



**MiniTec**  
PROFILE SYSTEM

Product catalog 2019



# PROFILE SYSTEM

part no. 95.3010/3

All information in this catalog has been carefully checked. For any errors or incomplete information we can not accept any liability.  
We reserve the right for technical changes, particularly those serving the technical improvement.

Our kit is designed primarily for indoor use. Outdoor applications require separate consideration.

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#### THE COMPANY

We have been developing innovations for more than 30 years. From a modular system to a tailor-made complete solution. What began in 1986 with miniature linear guides has developed into a globally recognized full-service provider with more than 400 employees in 12 plants and more than 60 partners and service bases worldwide, as well as its own production facilities in Germany, France, Great Britain, China, Slovenia, Slovakia, Spain and the USA.

#### THE MODULAR SYSTEM

Our modular system and our linear technology are based on the same principle. Our designers and engineers are passionate about the principles that characterise all MiniTec products: the greatest possible simplicity, no machining, unlimited application possibilities with few components and consistent compatibility. We constantly strive to avoid senseless product diversity. Shortest assembly time, avoidance of processing and reduced storage have highest priority. We also pay special attention to ergonomic design of our components. Well-known companies worldwide use our components for equipment, automation technology and plant construction with success. In cooperation with leading research institutes, the system is constantly being further developed to meet the latest requirements. Our customers benefit from our intensive cooperation in scientific projects such as SmartFactory and the latest findings in workplace design. Future-oriented research results are thus incorporated into our development at an early stage.

#### COMPREHENSIVE SERVICE

Our engineers develop complete solutions for all branches of industry from our profile system. Our customers benefit from the many years of experience of our engineers. We guarantee quality and the shortest delivery time by maintaining and constantly developing all competences in our company. Expert teams for problem analysis, development and design, electrical planning, control cabinet construction, installation and commissioning ensure economical and technically mature solutions for every task of our customers. From equipment and workplace design with conveyor technology to complete production lines. Everything from a single source, without interfaces.

#### QUALITY

Our products are of reliable quality. All new products are thoroughly tested in our own laboratory under real operating conditions. Our quality management also subjects all existing products to the same strict tests at regular intervals. State-of-the-art machines and measuring methods guarantee consistent quality. Our quality management has been certified according to DIN EN ISO 9001 since 1996.

#### ENVIRONMENTAL PROTECTION

The careful use of resources and active environmental protection are among the principles of our corporate philosophy. Compliance with the environmental protection criteria is controlled in accordance with DIN EN ISO 14001 and regularly checked by external auditors. This also includes the responsible use of energy and the continuous improvement of energy efficiency.



#### OCCUPATIONAL HEALTH AND SAFETY

Our occupational safety system complies with OHSAS 18001 (Occupational Health and Safety Assessment Series) and has been certified since 2006. These principles are also strictly observed in all designs for our customers.

#### CORPORATE RESPONSIBILITY

We are aware of our social responsibility. With this in mind, we create challenging jobs at our locations, provide young people with future-oriented training and offer all employees opportunities for further training. We also deliberately rely on qualified older employees and thus ensure a heterogeneous age structure of our workforce.

#### SECURED PROCESSES

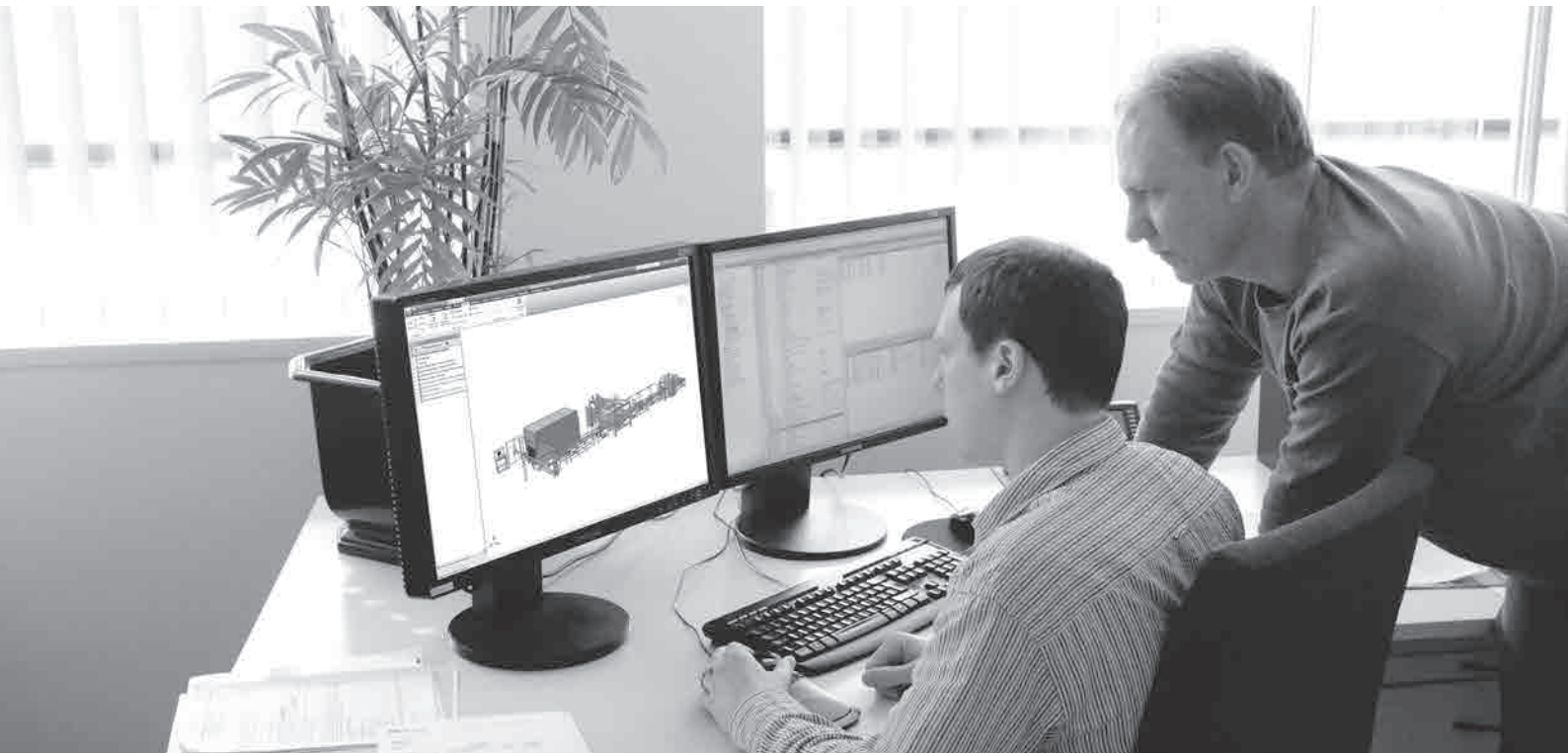
Our organization meets the strict criteria of the and is certified according to AEOC 115021. As an authorised economic operator, our customers benefit from the associated simplifications in customs law.

#### CAD SUPPORT

You can download 3D CAD data for all components from our website [www.minitec.de](http://www.minitec.de) In addition, our CAD tool iCADassembler contains a complete e-catalogue with CAD data.



customs simplifications



Our CAD tools are the logical complement to our modular hardware. All requirements of planning and execution are comprehensively considered. The combination of components and software unlocks the full potential for rational, flexible and modern mechanical engineering. iCADassembler is a CAD tool of the latest generation, which we make available to our customers free of charge. The tool contains electronic catalogs,

automatic parts lists and configurators for common applications such as ergonomic workstations, linear axes, conveyor belts, roller conveyors or protective devices. iCADassembler reduces design time by at least 60%, while reliably avoiding errors.

#### Benefit from the functionality of iCADassembler!

##### ADVANTAGES

- System independent 3D design tool for MiniTec components
- Time saving for the user of approx. 60 percent
- Planning and design of components and systems independent of CAD software
- CAD functionality without own CAD software
- Easy to operate with special anchors, line snap points and drag & drop
- Direct interfaces to all common CAD systems such as: Mechanical Desktop, ProEngineer, Solid Works, Solid-Edge, MegaCAD and more.
- More than 180 data output formats in 2D and 3D
- Automated design module for: Linear axes, sliding guides, conveyor belts, workstations
- Automatic creation of parts lists
- Integrated plausibility check
- Automatic machining drawings

By popular request MiniTec offers regular iCAD Assembler training courses. In one-day seminars we teach the time-saving features of this powerful tool with practical exercises. The courses are led by our experienced technicians and take place on individually agreed dates.

## TECHNICAL DATA

## ALUMINIUM PROFILE

Aluminium alloy by DIN EN 573-3		
Material	EN AW-Al Mg0,7Si status T66	EN-AW-6063 T66
	Specific Weight	2,75 g / cm <sup>3</sup>
	Material-N°	3.3206.72 (artificially aged)
	Tenacity	min. Rm = 245 N / mm <sup>2</sup>
	0,2 % twist boundary	min. Rp 0,2 = 200 N / mm <sup>2</sup>
	Ductile yield A 5	> 10%
	Ductile yield A 10	> 8%
	Modulus of elasticity	E: 70000 N / mm <sup>2</sup>
	Hear modulus	G: 27000 N / mm <sup>2</sup>
	Expansion hardness	ca. 75 HB 2,5 / 187,5
	Heat extension	23.8 · 10 - 6K-1

Anodizing by DIN 17611		
SURFACE	Eloxal E6/EV1, natur anodized, or EURAS C0	
	Layer thickness	ca. 10 - 15 µm
	Layer hardness	250 - 350 HV
TOLERANCES	Aluminium extruded profiles	DIN EN 12020 T 1 + 2
	Outer dimensions	0,2 to 0,4 mm
	Straightness deviatin	max. 1,5 mm / 2 m

Generally we confirm half the values according to the tolerances of DIN EN 12020 part 2.

Blanks	ISO 2768-m
Angle + Length	Usually half values of ISO 2768 m

PROFILE SERIES / BASIC GRID	Profile series	30	45
	Core boring	7,5 - 0,3	
	Standard thread	M8	

All profiles of the individual profile series are developed from the same grid. The tread grooves are uniform. All profiles can be combined with each other.

The M8 thread is formed with non-cutting thread formers. (It can be drilled up to M12)



## TECHNICAL DATA

## SST-PROFILES

## MATERIAL

X5 Cr Ni 18-10	stainless steel, DIN EN 10 088
Specific Weight	7,9 g / cm <sup>3</sup>
Material-N°	1.4301 (cold rolled)
Tenacity	min. Rm = 540 N / mm <sup>2</sup>
0,2 % twist boundary	min. Rp0,2 = 230 N / mm <sup>2</sup>
Ductile yield	> 35%
Modulus of elasticity Hear modulus	E: 200 000 N / mm <sup>2</sup> G: 80 000 N / mm <sup>2</sup>
Hardiness Vickers	220 - 260 HV
Heat extension	11,5 · 10 <sup>-6</sup> K <sup>-1</sup>

## TOLERANCE

	DIN ISO 2768 - c
Outer dimensions	± 0,3 mm
Straightness deviatin	0,001 x L

Generally we confirm half the values of the permissible tolerances.

Blanks	ISO 2768-m
Angle + Length	Usually half values of ISO 2768 m

## CORE BORING

Uniform 7,5 - 0,6 mm
----------------------

Thread M8 is made with a tap

## GRID

Basic grid 45 mm
------------------

Due to its identical groove the profile 45 x 45 SST is fully compatible with the aluminium profile system.

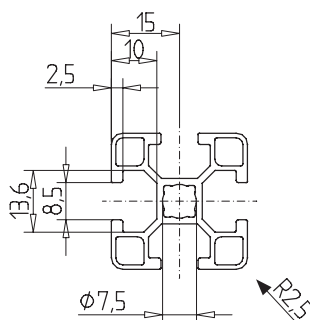
## TECHNICAL DATA

## PROFILE SERIES 30

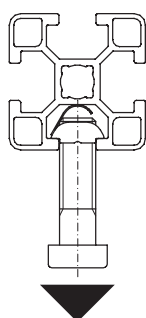
## GROOVES

One system for profiles 16 to 60 mm.  
The grooves are identical for all profiles. Groove width: 8,5 - 0,3 mm.

## BASIC DIMENSIONS

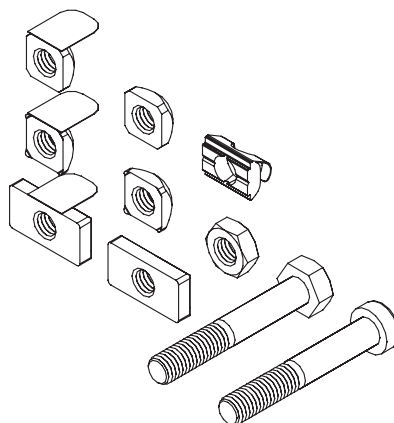


## LOAD CAPACITY



$F = 2600 \text{ N}$

## USABLE SCREWS AND NUTS



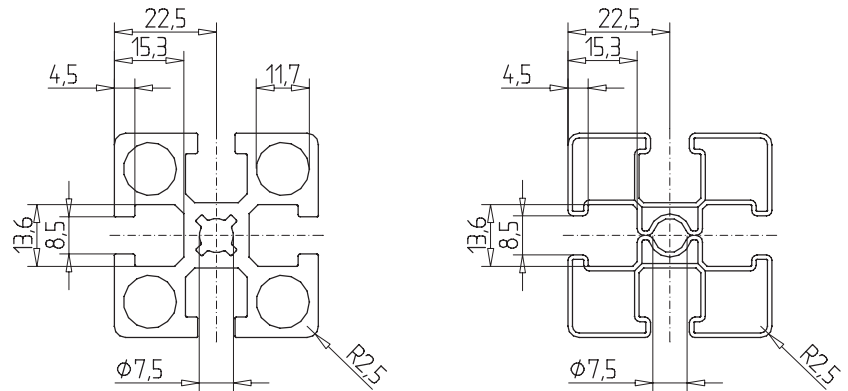
TECHNICAL DATA

PROFILE SERIES 45

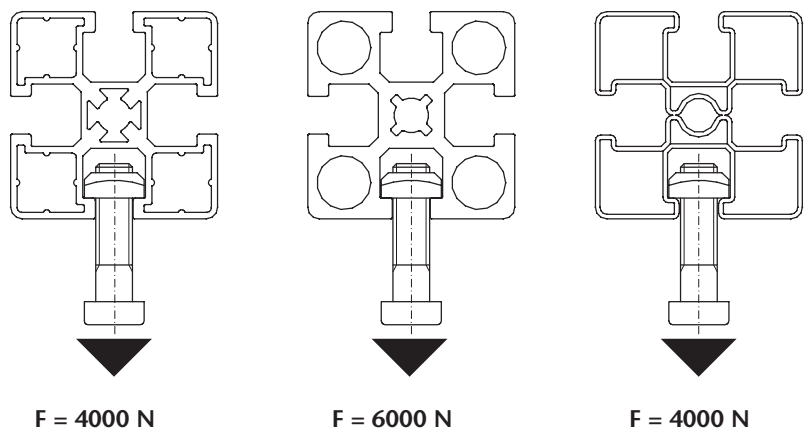
GROOVES

One system for profiles from 19 to 270 mm. The grooves are identical in all profiles. Groove width: 8.5 - 0.3 mm. The grooves are designed to accept DIN M8 screws with 13 mm head diameter and 13 mm outer nuts. Square and hexagon nuts and screws are secured against rotation

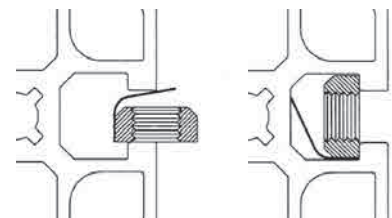
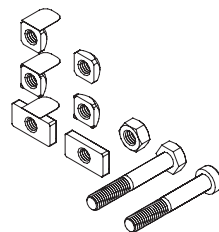
BASIC DIMENSIONS



LOAD CAPACITY



USABLE SCREWS AND NUTS

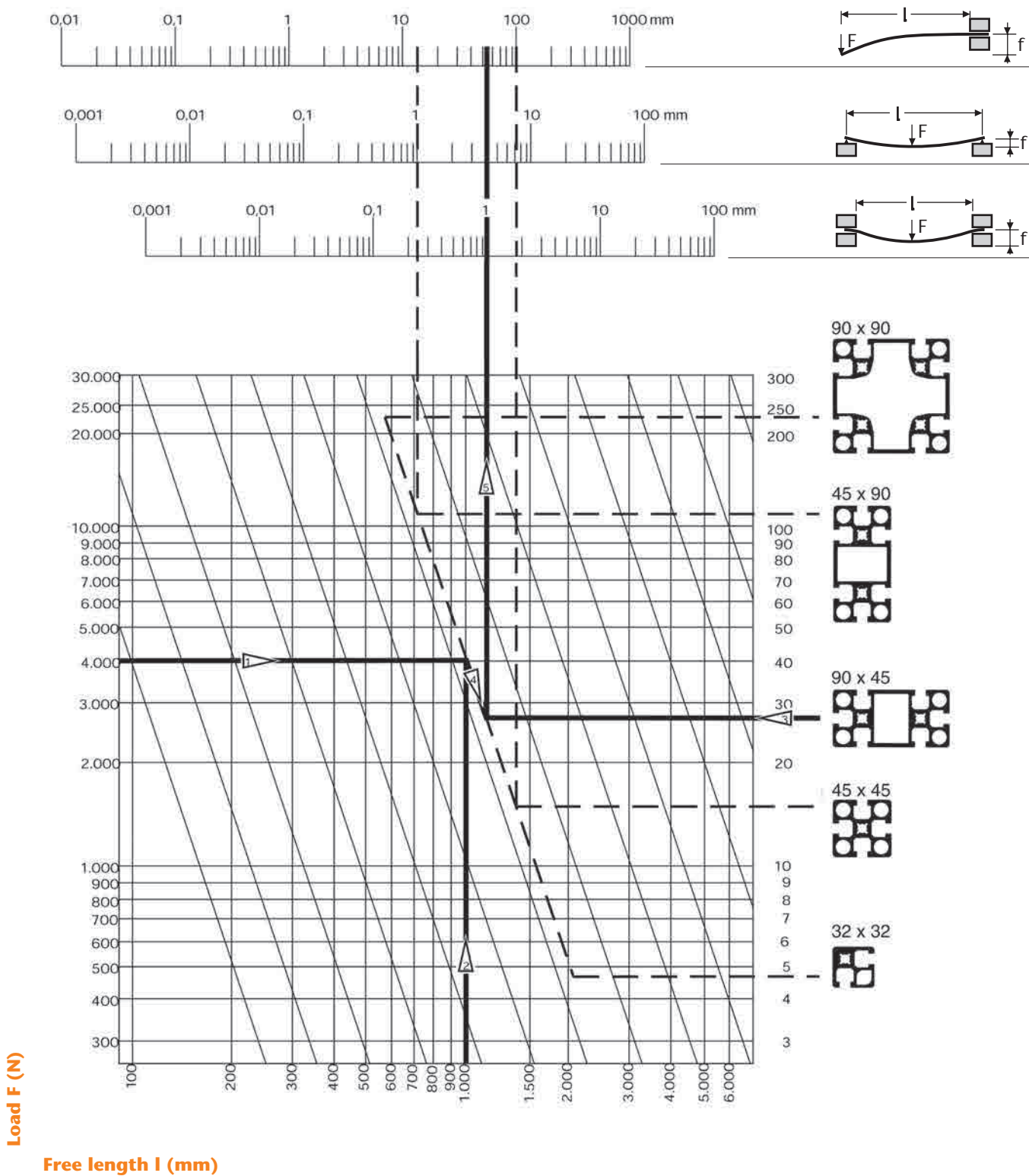


Sliding nuts can be swiveld in at any point of the profil.

TECHNICAL DATA

CALCULATION OF THE DEFLECTION OF MINITEC ALUMINIUM PROFILES

Deflection  $f$  (mm), calculated for static load in form of a point as shown below



TECHNICAL DATA

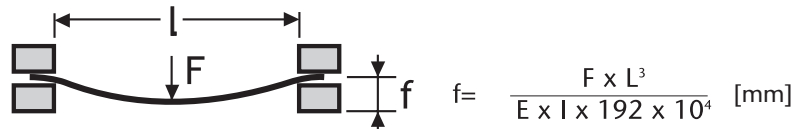
The following formulas and examples of calculation are for static load in the form of a point..  
 For the determination of other load, please use the equations in the relevant literature. In particular we want to point out that reduced values should be used for dynamic loads.

**CALCULATION OF DEFLECTION OF MINITEC PROFILES**

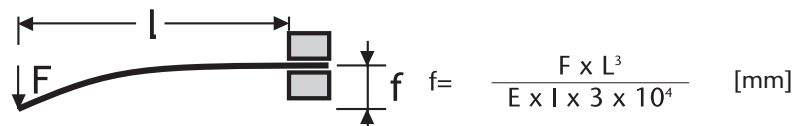
**EXAMPLE**

- f = Deflection [mm]
- F = Load [N]
- L = Free length [mm]
- I = Geometrical moment of inertia [cm<sup>4</sup>]
- E = Modulus of elasticity: Aluminum 70 000 N / mm<sup>2</sup>  
 Steel 200 000 N / mm<sup>2</sup>

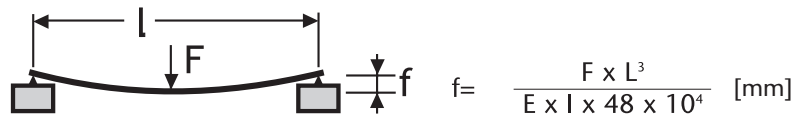
**EXAMPLE 1**



**EXAMPLE 2**



**EXAMPLE 3**



The above mentioned equations are easy to calculate using the diagram on the previous page.  
 Follow the steps in the given row for the respective value.

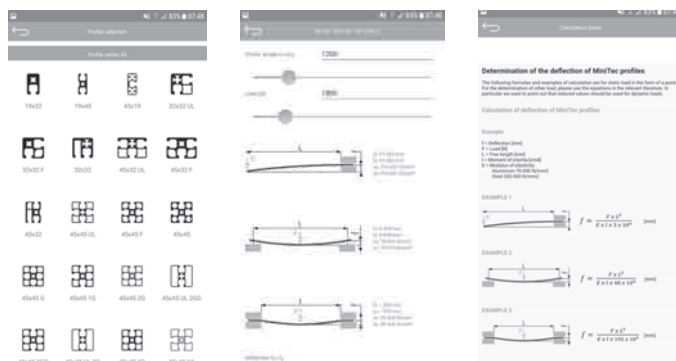
Deflection (f)	1	2	3	4	5
Max. load (F)	3	5	2	4	1
Profile determination (section)	1	2	5	4	3
Free length (L)	3	5	1	4	2

Calculate deflection via app



With the MiniTec App, designers, equipment manufacturers and production planners can easily calculate the load-dependent deflection of the aluminium profiles and linear axes from MiniTec’s modular system using their smartphone. This makes it easy to determine whether the profiles and axes of the static and point load are dimensioned correctly in the specific case. To determine the deflection, the app calculates the three most common load cases on the basis of a few entries: For vertical loading of a profile clamped on one side (outrigger), for a central vertical loading on a profile resting on both sides, and for a central vertical loading on a profile clamped on both sides. The calculation program of the MiniTec app immediately shows the user whether the profile or the built-in axis used was selected correctly for the application or whether the deflection is above the permissible limit values - and therefore a stronger component from the current MiniTec modular system is the better choice.

With the new calculation app for all smartphones with iOS or Android operating systems, MiniTec not only simplifies the work of planners and equipment manufacturers, but also makes a directly realisable contribution to safety at the workplace.



	1.1	ALUMINIUM PROFILE	15
	1.2	FASTENING ELEMENTS	64
	1.3	HINGES & JOINTS	104
	1.4	HANDLES, LOCKS, STOPS	120
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PROFILE SECTIONS - PROFILE SERIES 30

PROFILE SERIES 30



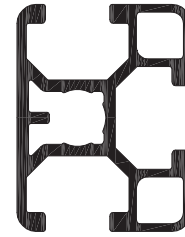
**23 x 16**  
20.1115/0



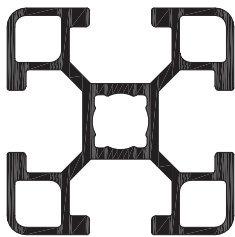
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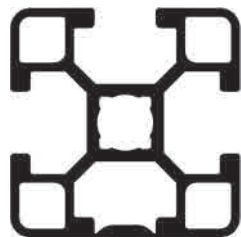
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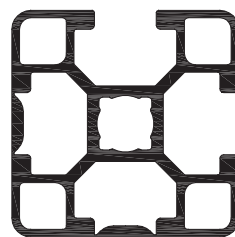
**23 x 30**  
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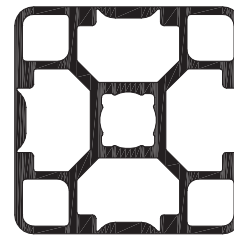
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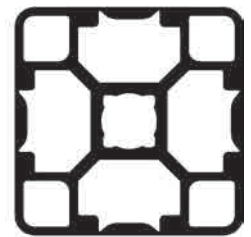
**30 x 30 1G**  
20.1139/0



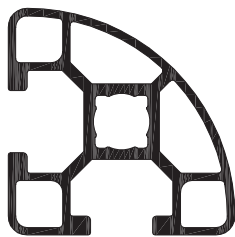
**30 x 30 2G**  
20.1124/0



**30 x 30 3G**  
20.1085/0



**30 x 30 G**  
20.1141/0



**30 R 90°**  
20.1125/0



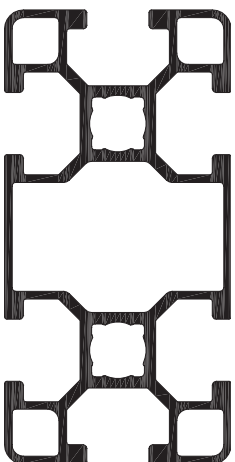
**30 R 60°**  
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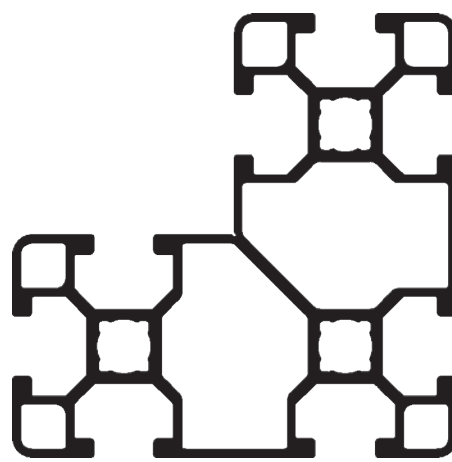
**30 R 45°**  
20.1135/0



**30 R 30°**  
20.1134/0



**30 x 60**  
20.0994/0

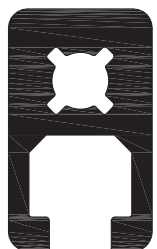


**60 x 60 x 30**  
20.0982/0



PROFILE SECTIONS - PROFILE SERIES 45

PROFILE SERIES 45



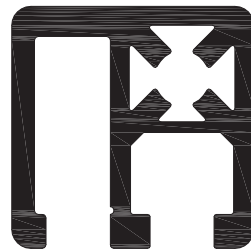
**19 x 32**  
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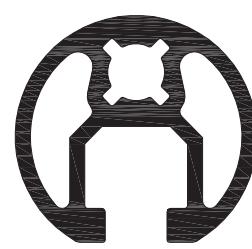
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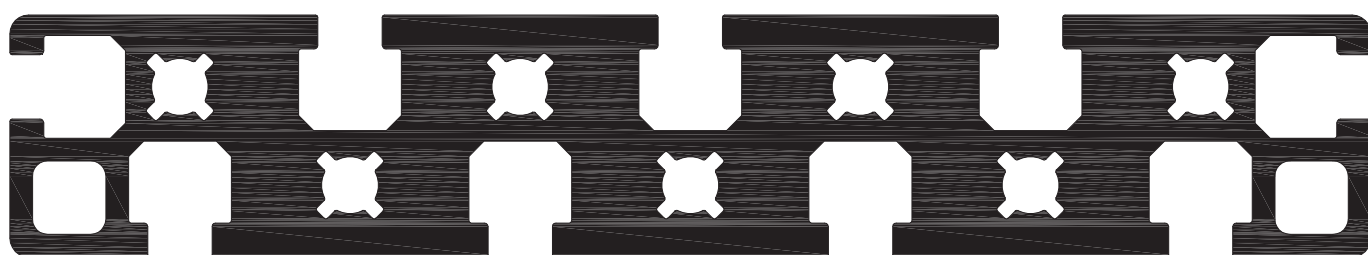
**32 x 32 F**  
20.1054/0



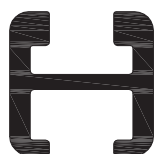
**Clamping profile**  
**32 x 32**  
20.1070/0



**Handle profile 32**  
20.1088/0



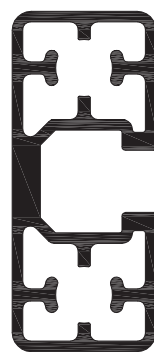
**32 x 180**  
20.1016/0



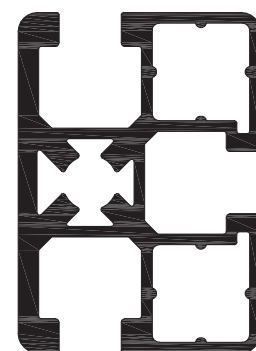
**19 x 19 S**  
20.1073/0



**19 x 45**  
20.1001/0



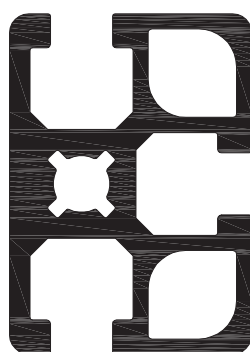
**45 x 19**  
20.0993/0



**45 x 32 UL**  
20.1065/0



**Clamp profile 45 x 45 F**  
20.1147/0



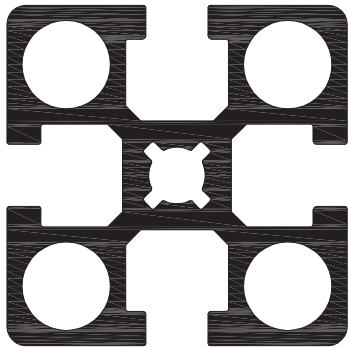
**45 x 32 F**  
20.105a5/0



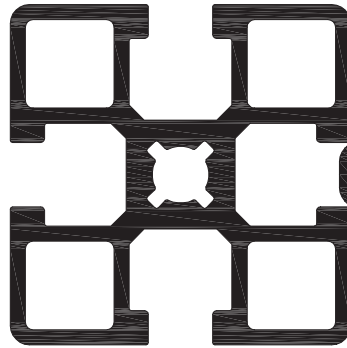
**Clamping profile**  
**45 x 32**  
20.1053/0

PROFILE SECTIONS - PROFILE SERIES 45

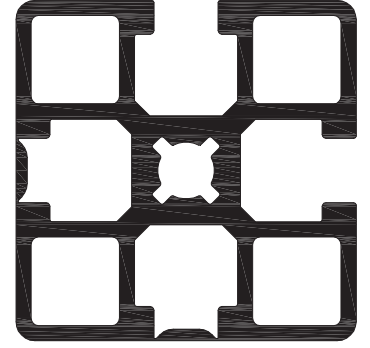
PROFILE SERIES 45



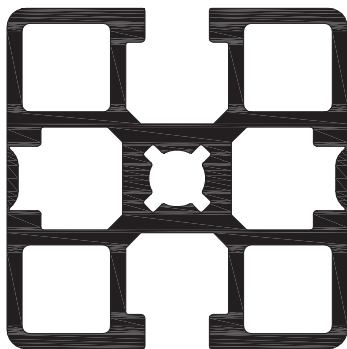
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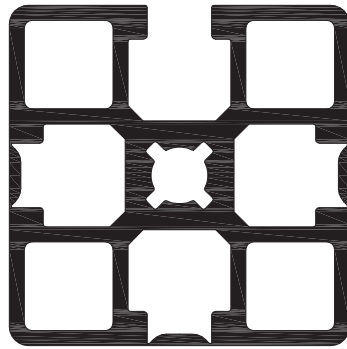
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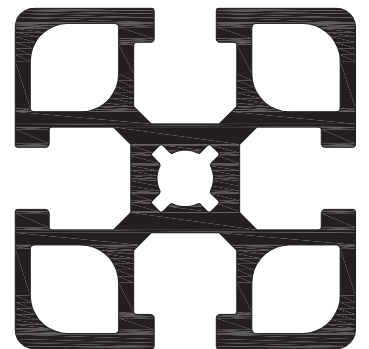
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20.1072/0



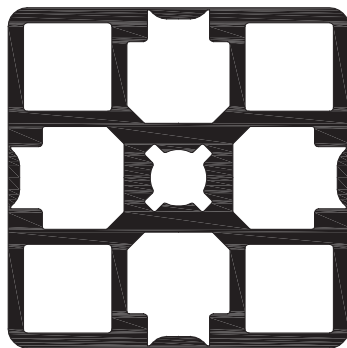
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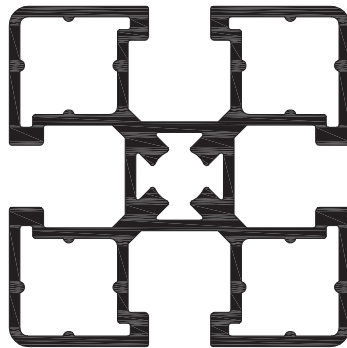
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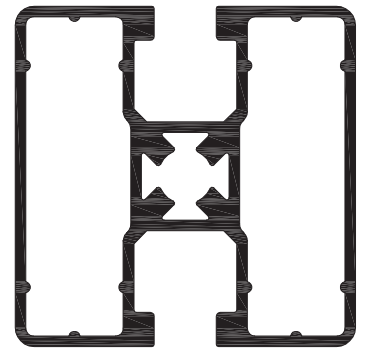
**45 x 45 F**  
20.1033/0



**45 x 45 G**  
20.1028/0



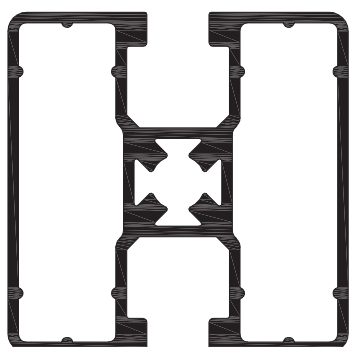
**45 x 45 UL**  
20.1063/0



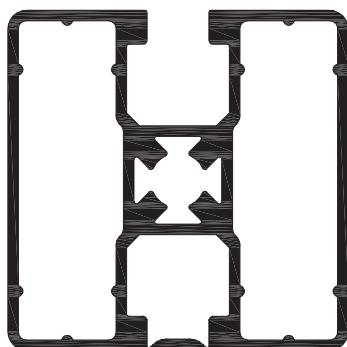
**45 x 45 UL 2GG**  
20.1122/0

PROFILE SECTIONS - PROFILE SERIES 45

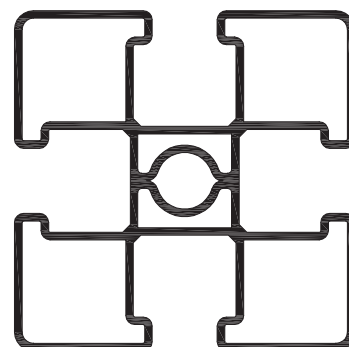
PROFILE SERIES 45



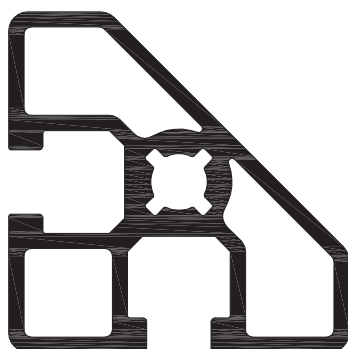
**45 x 45 UL 2GG**  
20.1122/0



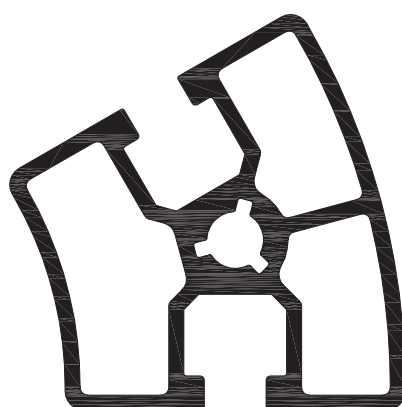
**45 x 45 UL 3G**  
20.1123/0



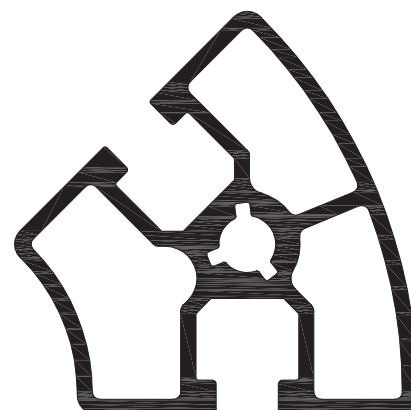
**45 x 45 VA**  
20.2000/0



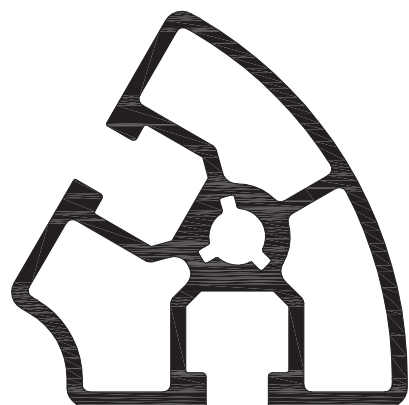
**45 / 45°**  
20.1029/0



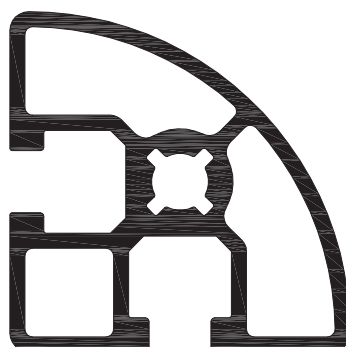
**45 R 30°**  
20.1094/0



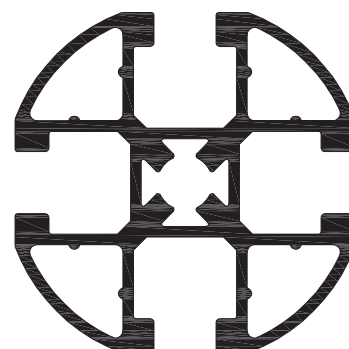
**45 R 45°**  
20.1095/0



**45 R 60°**  
20.1096/0



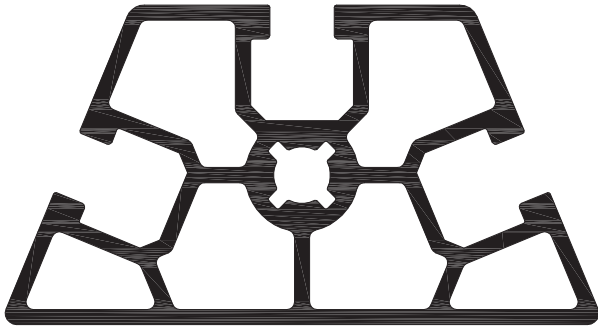
**45 R 90°**  
20.1069/0



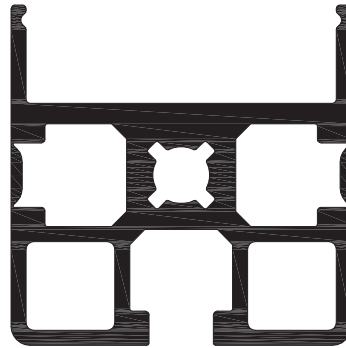
**45 R4**  
20.1120/0

PROFILE SECTIONS - PROFILE SERIES 45

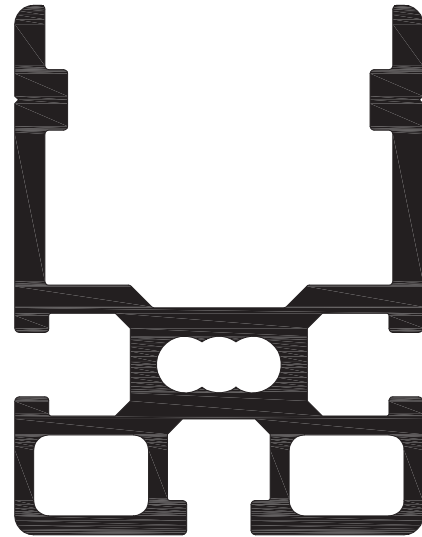
PROFILE SERIES 45



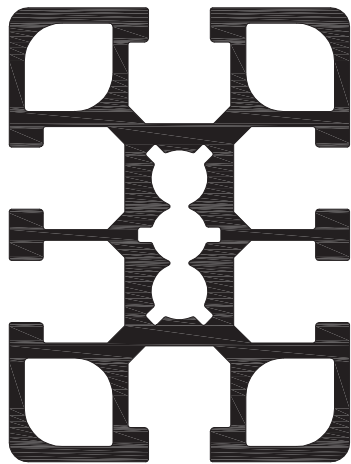
**45 / 22,5°**  
20.1030/0



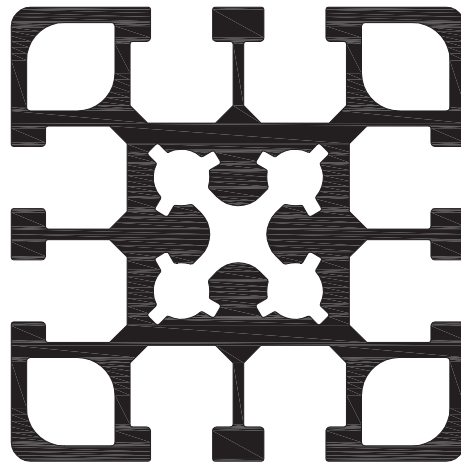
**45 x 45 R**  
20.1046/0



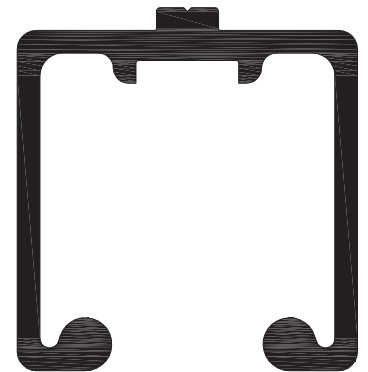
**Profile height adjustment**  
20.1143/0



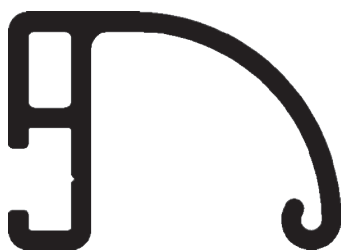
**45 x 60 F**  
20.1023/0



**60 x 60 F**  
20.1049/0



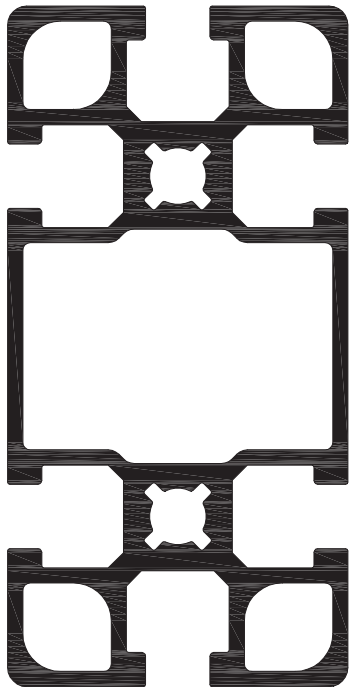
**Guide rail profile**  
20.1038/0



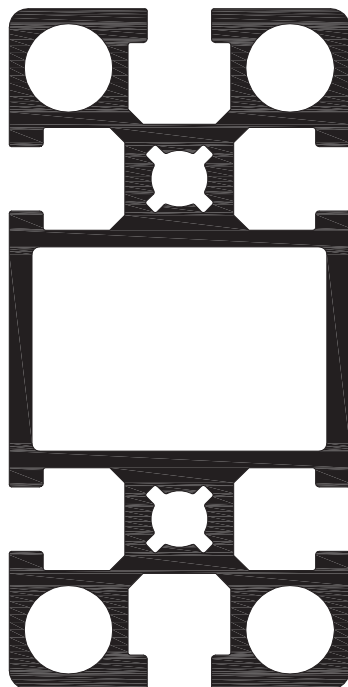
**Handle profile**  
20.1045/0

PROFILE SECTIONS - PROFILE SERIES 45

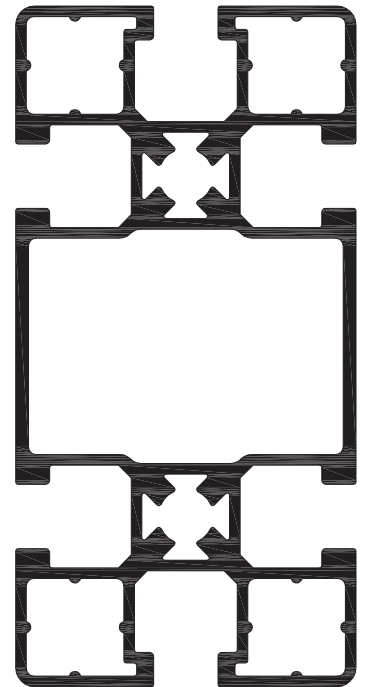
PROFILE SERIES 45



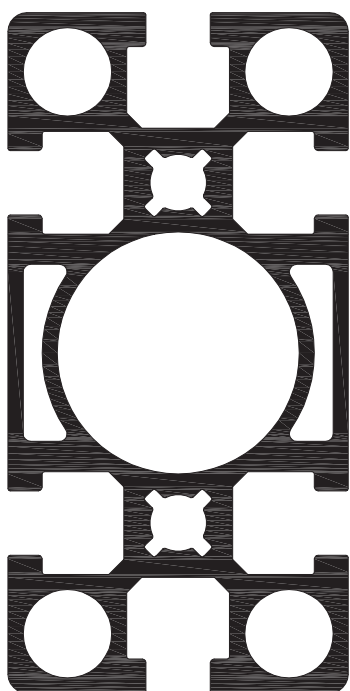
**45 x 90 F**  
20.1032/0



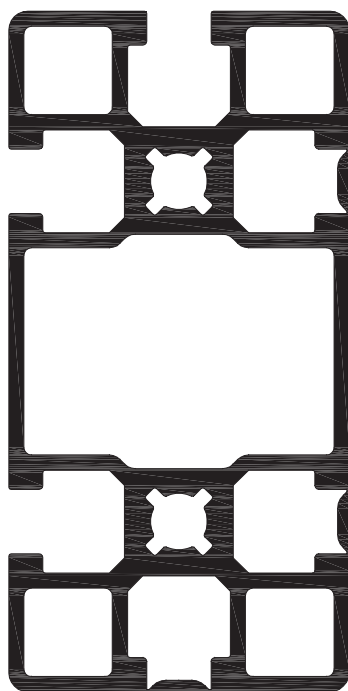
**45 x 90**  
20.1009/0



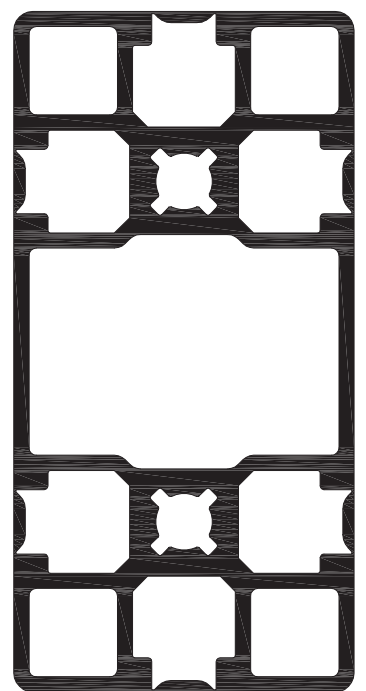
**45 x 90 UL**  
20.1067/0



**45 x 90 S**  
20.1017/0



**45 x 90 2G**  
20.1081/0



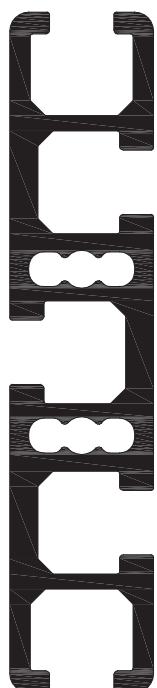
**45 x 90 G**  
20.1015/0

PROFILE SECTIONS - PROFILE SERIES 45

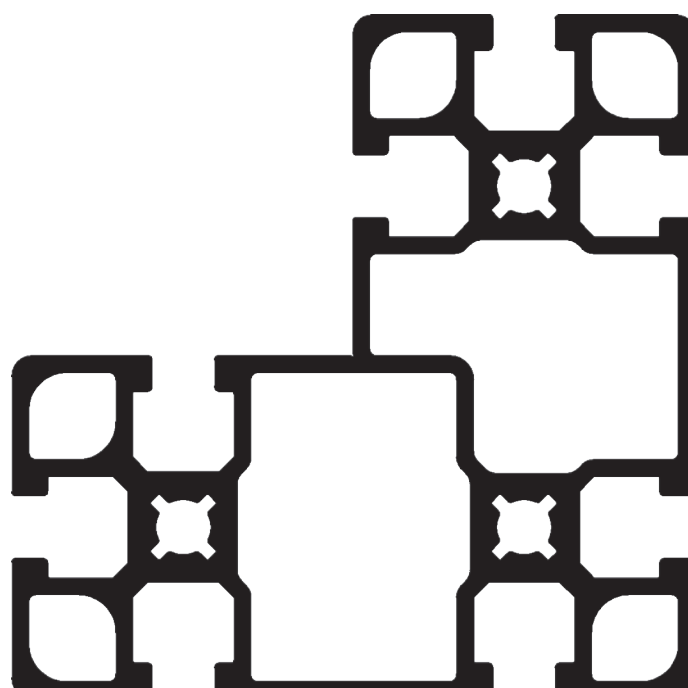
PROFILE SERIES 45



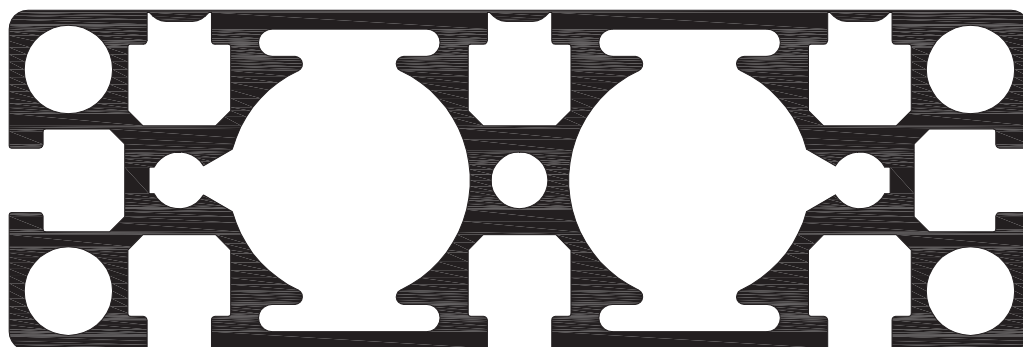
**90 x 32 UL**  
20.1066/0



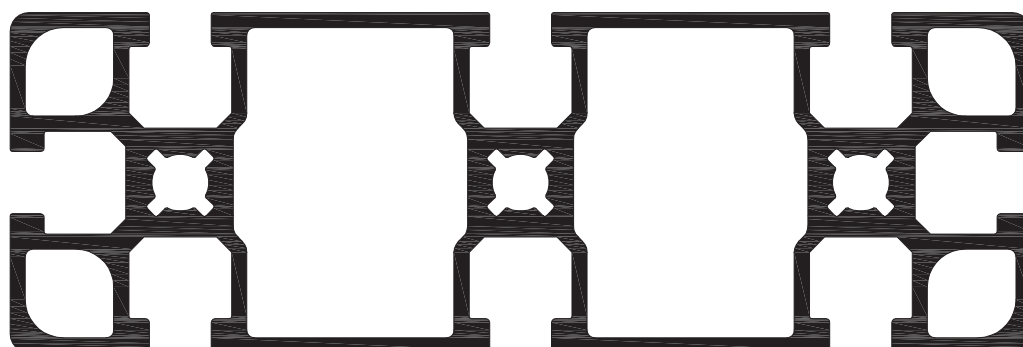
**19 x 90**  
20.0995/0



**90 x 90 x 45**  
20.0984/0



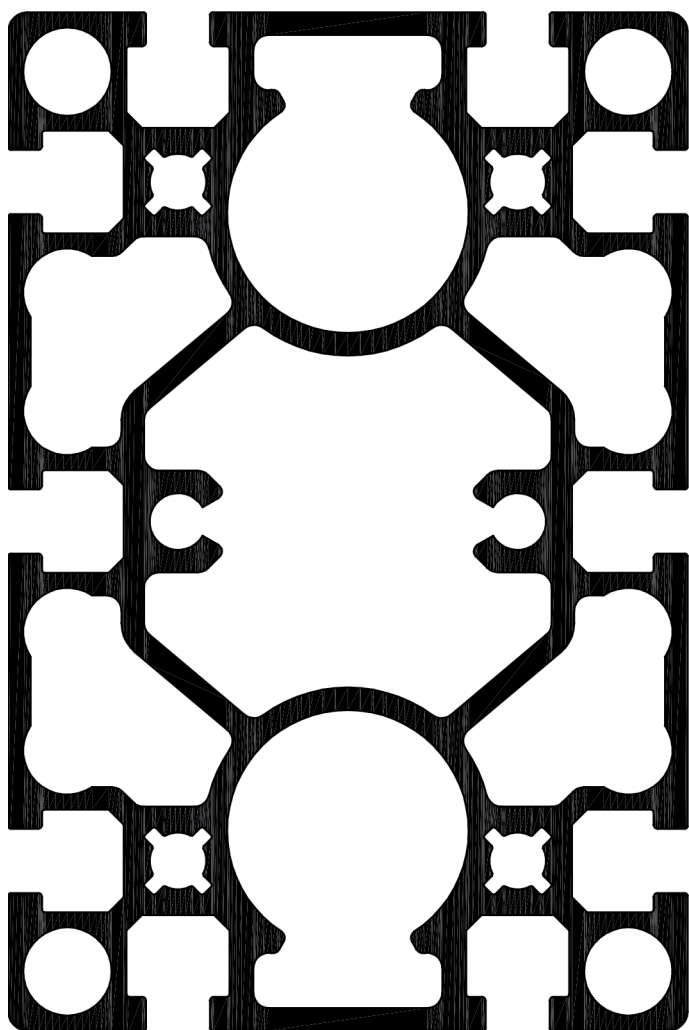
**45 x 135 1G**  
20.1078/0



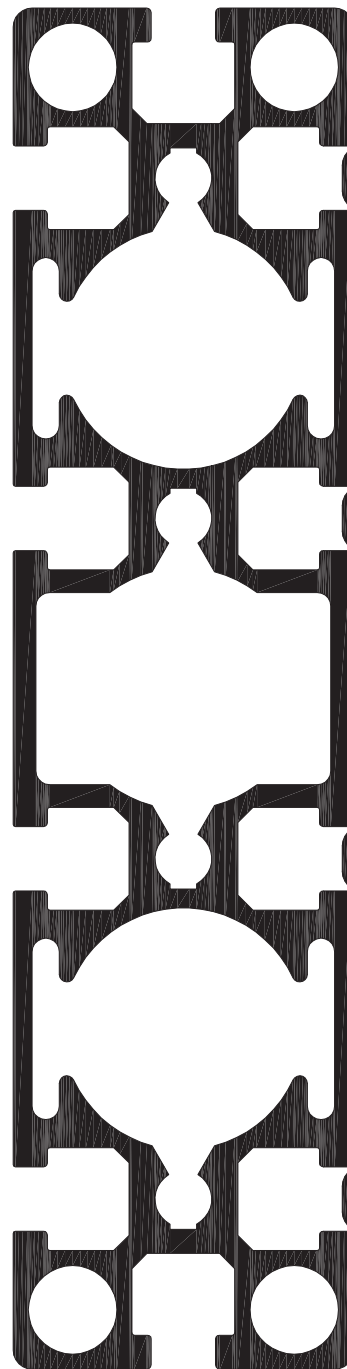
**45 x 135 F**  
20.1087/0

PROFILE SECTIONS - PROFILE SERIES 45

PROFILE SERIES 45



**90 x 135**  
20.1148/0



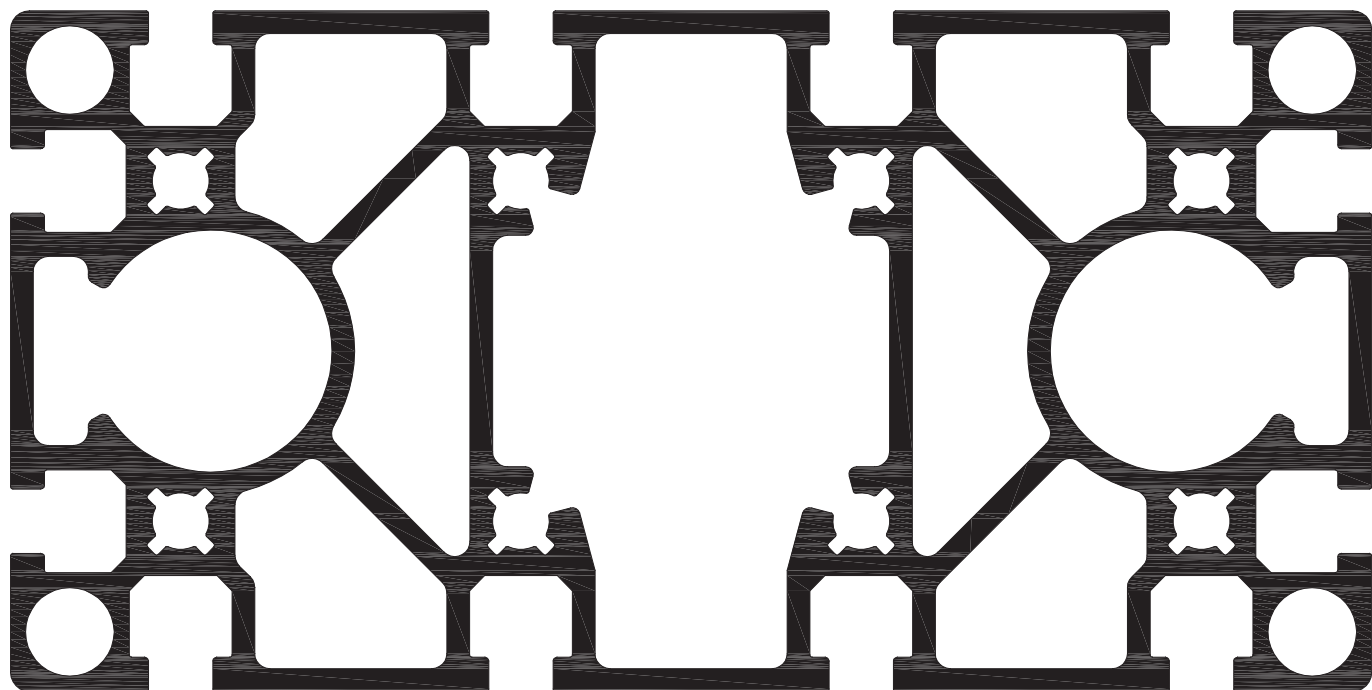
**45 x 180 1G**  
20.1079/0



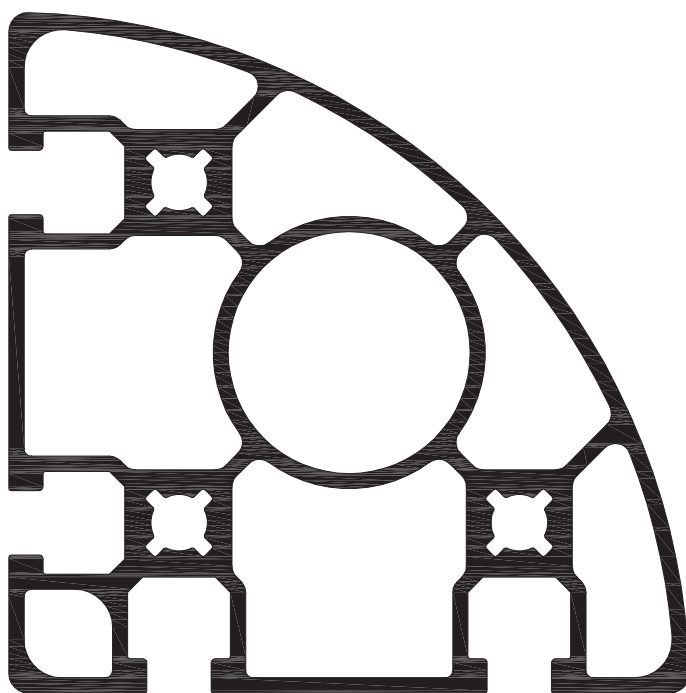
**270 x 19**  
20.1077/0

PROFILE SECTIONS - PROFILE SERIES 45

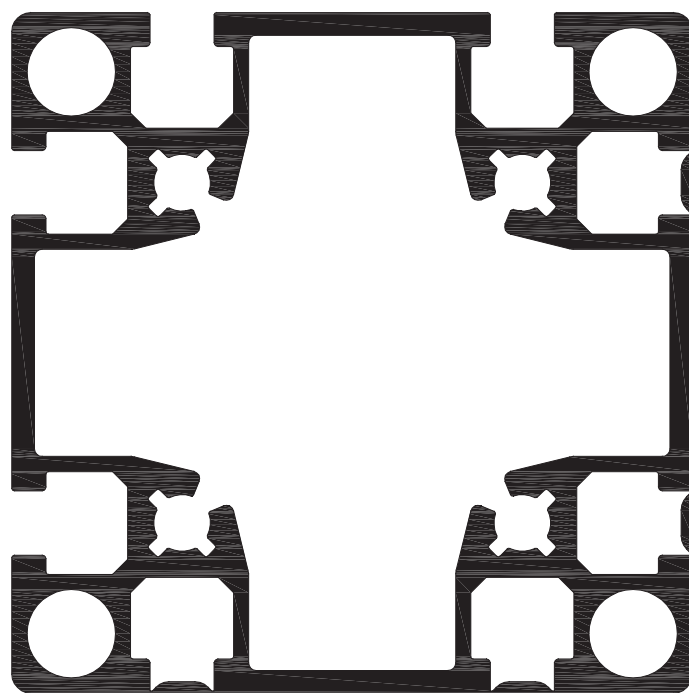
PROFILE SERIES 45



**90 x 180**  
20.1013/0



**90 R 90°**  
20.1091/0

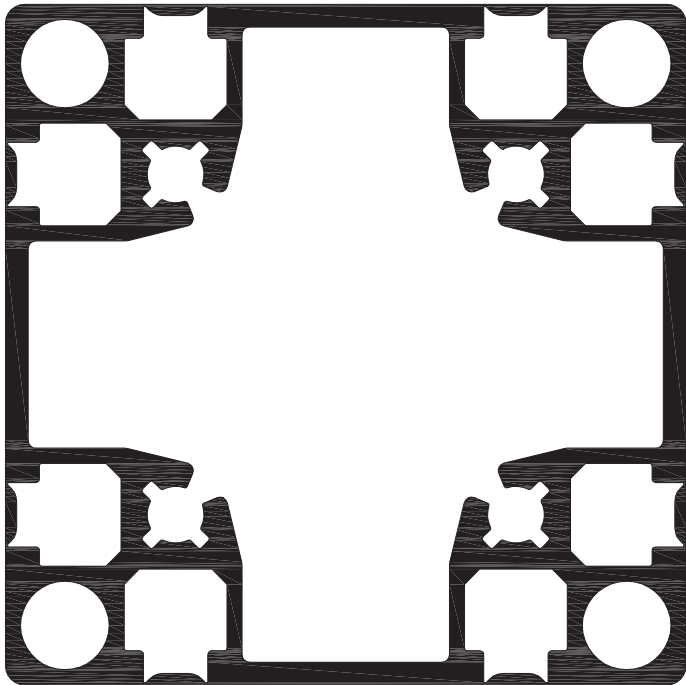


**90 x 90 2G**  
20.1044/0

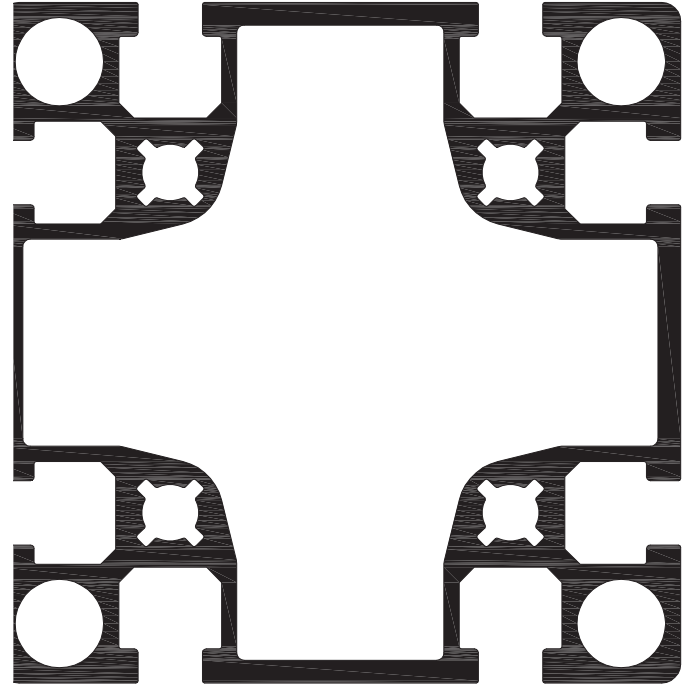


PROFILE SECTIONS - PROFILE SERIES 45

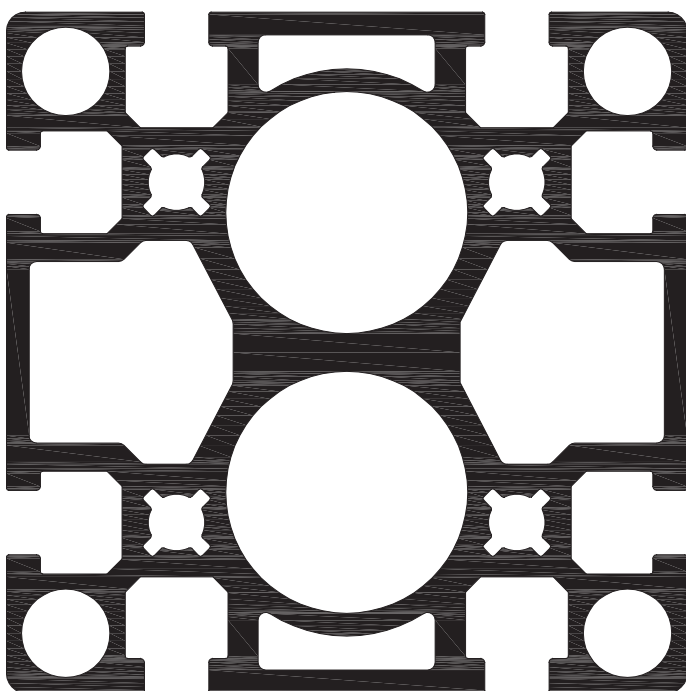
PROFILE SERIES 45



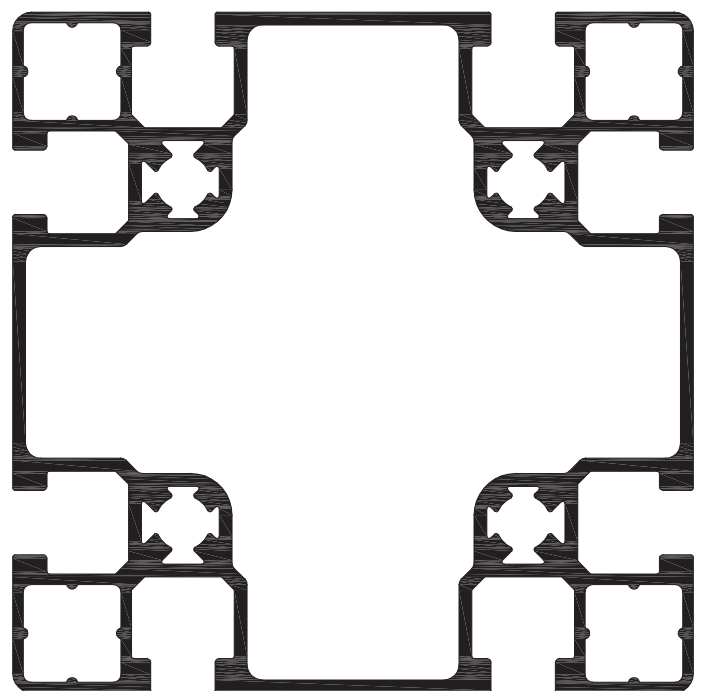
**90 x 90 G**  
20.1082/0



**90 x 90 L**  
20.1010/0



**90 x 90 S**  
20.1019/0

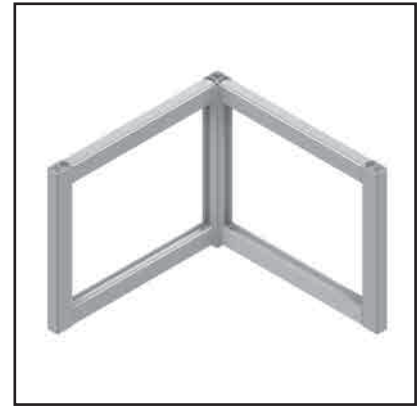
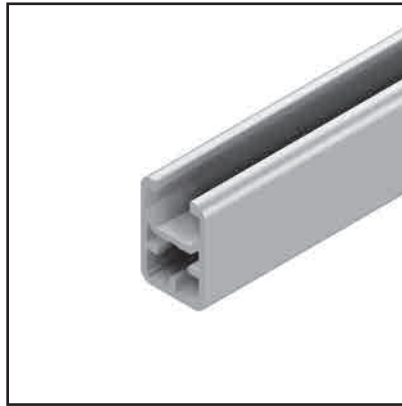
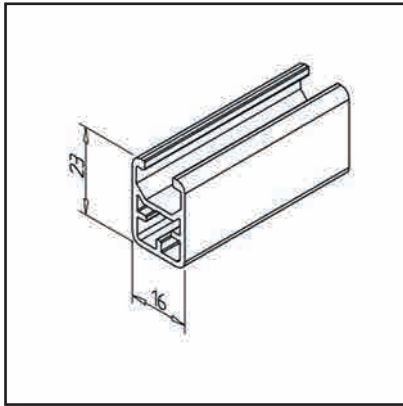


**90 x 90 UL**  
20.0999/0

**PROFILE 23 X 16**

Part no.

20.1115/0

**TECHN. DATA / ITEMS SUPPLIED**

- Aluminium, extruded, anodized E6/EV1
- $I_x = 0.602 \text{ cm}^4$
- $I_y = 0.442 \text{ cm}^4$
- $w_x = 0.472 \text{ cm}^3$
- $w_y = 0.552 \text{ cm}^3$
- Weight = 0.341 kg/m
- Bar length = 6 m
- Packing unit = 72 m

**APPLICATIONS**

- Light constructions with protective hoods, covers, etc.

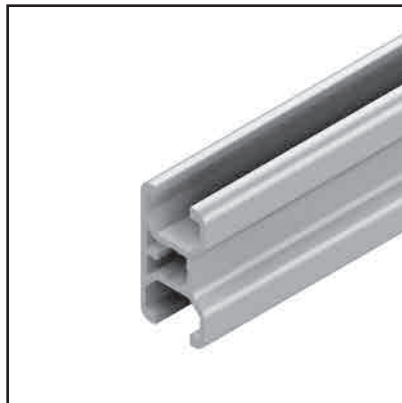
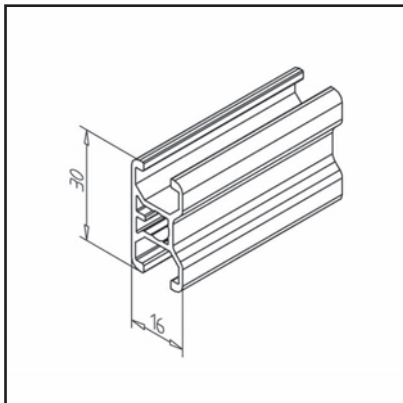
**ASSEMBLY**

- Power-lock fastener 30 / N 30
- Mitre connector 30
- Screw connection 30
- Angle 16
- Attaching accessories with sliding nut 30 M4 / M5 / M6 / M8

**PROFILE 16 X 30**

Part no.

20.0983/0

**TECHN. DATA / ITEMS SUPPLIED**

- Aluminium, extruded, anodized E6/EV1
- $I_x = 1.008 \text{ cm}^4$
- $I_y = 0.479 \text{ cm}^4$
- $w_x = 0.672 \text{ cm}^3$
- $w_y = 0.544 \text{ cm}^3$
- Weight = 0.382 kg/m
- Bar length = 6 m
- Packing unit = 72 m

**APPLICATIONS**

- Light constructions with protective hoods, covers, etc.

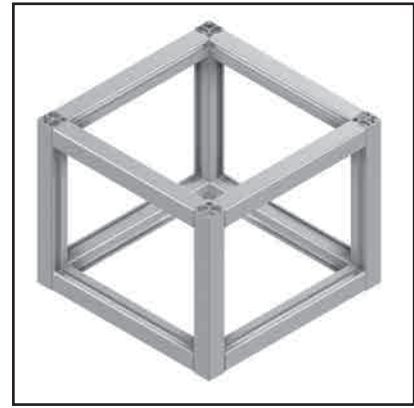
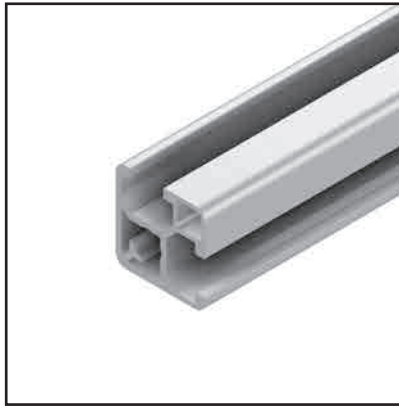
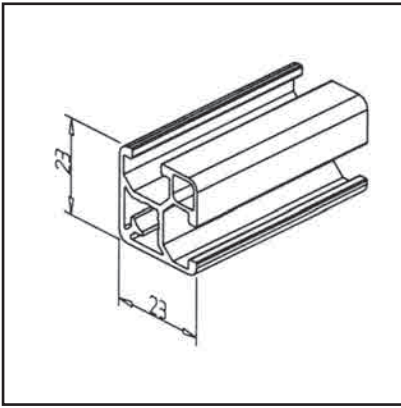
**ASSEMBLY**

- Power-lock fastener 30 / N 30
- Mitre connector 30
- Screw connection 30
- Angle 16
- Attaching accessories with sliding nut 30 M4 / M5 / M6 / M8

## PROFILE 23 X 23

Part no.

20.1116/0



### TECHN. DATA / ITEMS SUPPLIED

- Aluminium, extruded, anodized E6/EV1
- $I_x = 0.921 \text{ cm}^4$
- $I_y = 0.921 \text{ cm}^4$
- $w_x = 0.729 \text{ cm}^3$
- $w_y = 0.729 \text{ cm}^3$
- Weight = 0.443 kg/m
- Bar length = 6 m
- Packing unit = 72 m

### APPLICATIONS

- Light constructions with protective hoods, covers, etc.

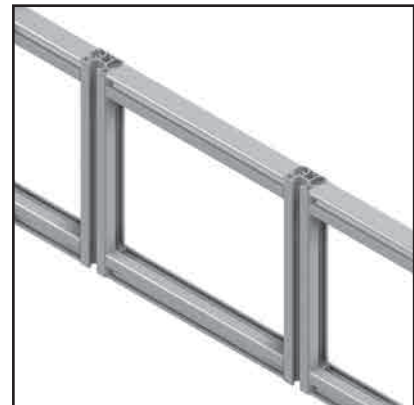
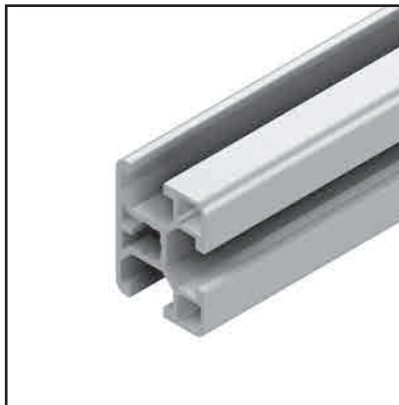
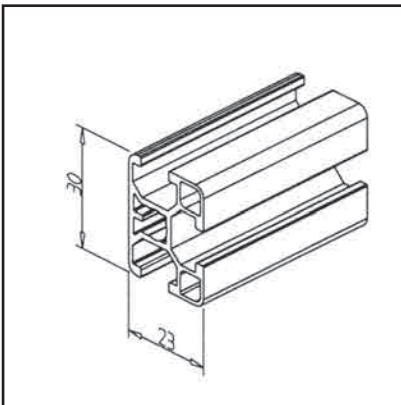
### ASSEMBLY

- Power-lock fastener 30 / N 30
- Mitre connector 30
- Screw connection 30
- Angle 16
- Attaching accessories with sliding nut 30 M4 / M5 / M6 / M8

## PROFILE 23 X 30

Part no.

20.1117/0



### TECHN. DATA / ITEMS SUPPLIED

- Aluminium, extruded, anodized E6/EV1
- $I_x = 1.565 \text{ cm}^4$
- $I_y = 1.187 \text{ cm}^4$
- $w_x = 1.043 \text{ cm}^3$
- $w_y = 0.975 \text{ cm}^3$
- Weight = 0.524 kg/m
- Bar length = 6 m
- Packing unit = 72 m

### APPLICATIONS

- Light constructions with protective hoods, covers, etc.

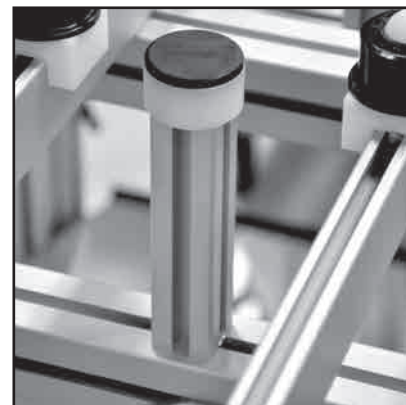
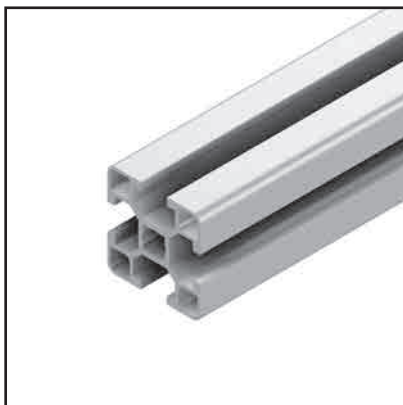
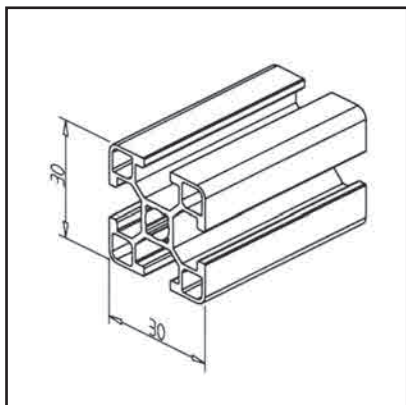
### ASSEMBLY

- Power-lock fastener 30 / N 30
- Mitre connector 30
- Screw connection 30
- Angle 16 / 30
- Attaching accessories with sliding nut 30 M4 / M5 / M6 / M8

**PROFILE 30 X 30**

Part no.

20.1068/0

**TECHN. DATA / ITEMS SUPPLIED**

- Aluminium, extruded, anodized E6/EV1
- $I_x = 2.133 \text{ cm}^4$
- $I_y = 2.133 \text{ cm}^4$
- $w_x = 1.422 \text{ cm}^3$
- $w_y = 1.422 \text{ cm}^3$
- Weight = 0.652 kg/m
- Bar length = 6 m
- Packing unit = 54 m

**APPLICATIONS**

- Light constructions with protective hoods, covers, etc.

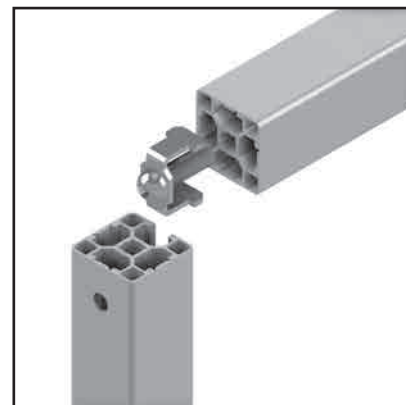
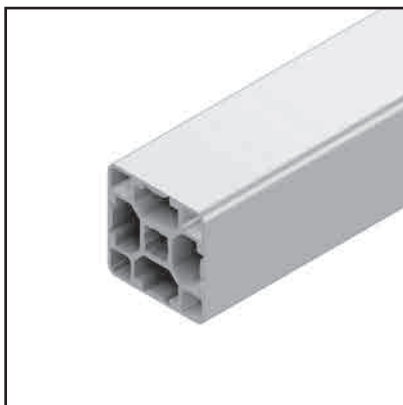
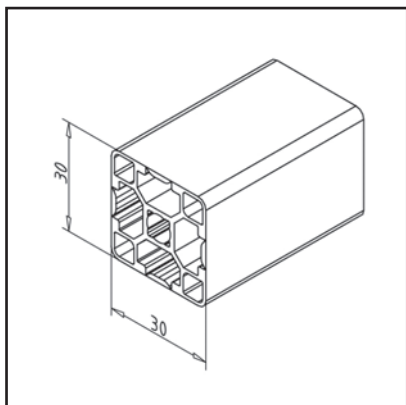
**ASSEMBLY**

- Power-lock fastener 30 / N 30
- Mitre connector 30
- Screw connection 30
- Angle 16 / 30
- Attaching accessories with sliding nut 30 M4 / M5 / M6 / M8

**PROFILE 30 X 30 G**

Part no.

20.1141/0

**TECHN. DATA / ITEMS SUPPLIED**

- Aluminium, extruded, anodized E6/EV1
- $I_x = 2.554 \text{ cm}^4$
- $I_y = 2.554 \text{ cm}^4$
- $w_x = 1.702 \text{ cm}^3$
- $w_y = 1.702 \text{ cm}^3$
- Weight = 0.749 kg/m
- Bar length = 6 m
- Packing unit = 54 m

**APPLICATIONS**

- Light constructions with protective hoods, covers, etc.
- Specifically for high hygiene requirements in the food industry, medical technology, bottling of beverages

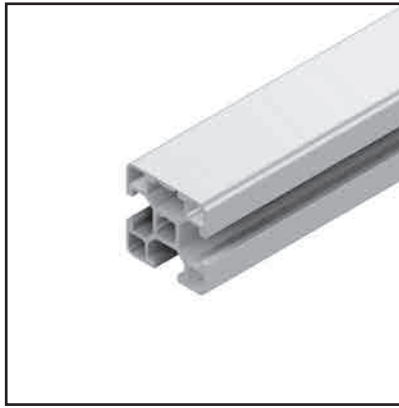
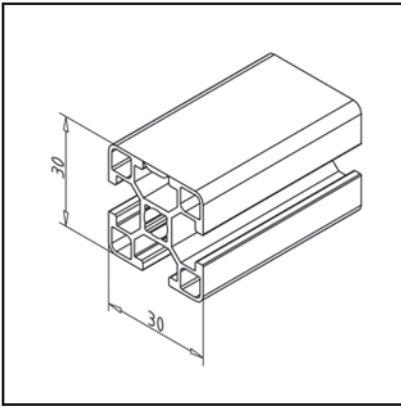
**ASSEMBLY**

- Power-lock fastener 30 / N 30
- Mitre connector 30
- Screw connection 30
- Angle 16 / 30
- Attaching accessories with sliding nut 30 M4 / M5 / M6 / M8

## PROFILE 30 X 30 1G

Part no.

20.1139/0



### TECHN. DATA / ITEMS SUPPLIED

- Aluminium, extruded, anodized E6/EV1
- $I_x = 2.311 \text{ cm}^4$
- $I_y = 2.112 \text{ cm}^4$
- $w_x = 1.481 \text{ cm}^3$
- $w_y = 1.408 \text{ cm}^3$
- Weight = 0.670 kg/m
- Bar length = 6 m
- Packing unit = 54 m

### APPLICATIONS

- Light constructions with protective hoods, covers, etc.
- Specifically for high hygiene requirements in the food industry, medical technology, bottling of beverages

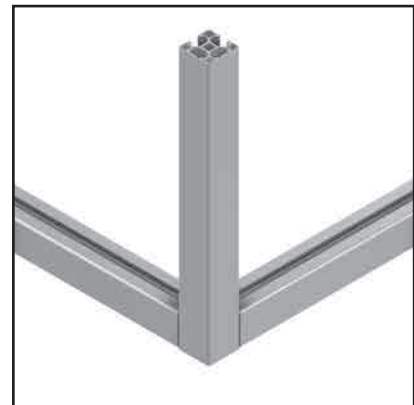
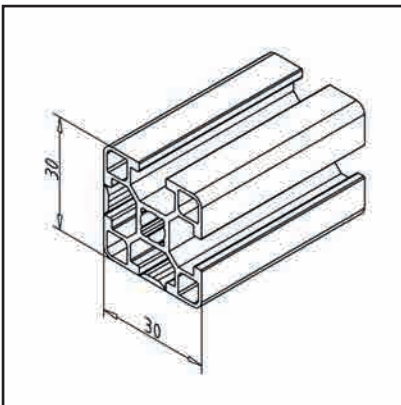
### ASSEMBLY

- Power-lock fastener 30 / N 30
- Mitre connector 30
- Screw connection 30
- Angle 16 / 30
- Attaching accessories with sliding nut 30 M4 / M5 / M6 / M8

## PROFILE 30 X 30 2G

Part no.

20.1124/0



### TECHN. DATA / ITEMS SUPPLIED

- Aluminium, extruded, anodized E6/EV1
- $I_x = 2.334 \text{ cm}^4$
- $I_y = 2.334 \text{ cm}^4$
- $w_x = 1.501 \text{ cm}^3$
- $w_y = 1.501 \text{ cm}^3$
- Weight = 0.695 kg/m
- Bar length = 6 m
- Packing unit = 54 m

### APPLICATIONS

- Light constructions with protective hoods, covers, etc.
- Specifically for high hygiene requirements in the food industry, medical technology, bottling of beverages

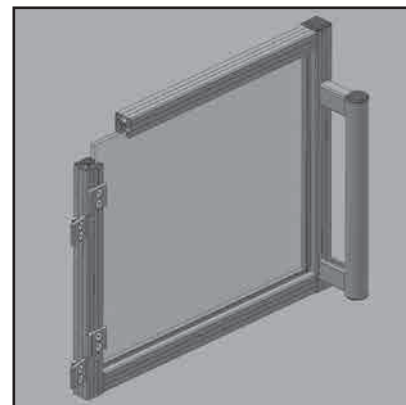
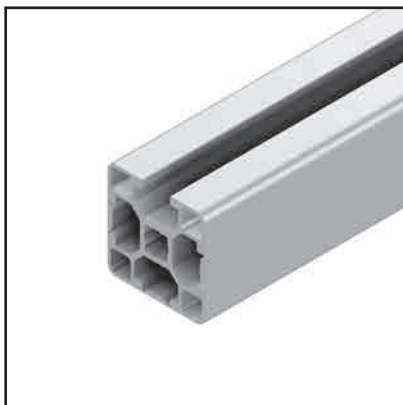
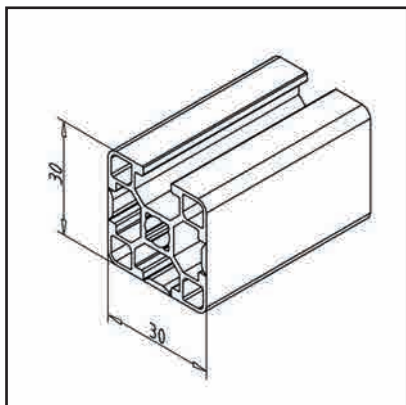
### ASSEMBLY

- Power-lock fastener 30 / N 30
- Mitre connector 30
- Screw connection 30
- Angle 16 / 30
- Attaching accessories with sliding nut 30 M4 / M5 / M6 / M8

**PROFILE 30 X 30 3G**

Part no.

20.1085/0

**TECHN. DATA / ITEMS SUPPLIED**

- Aluminium, extruded, anodized E6/EV1
- $I_x = 2.321 \text{ cm}^4$
- $I_y = 2.537 \text{ cm}^4$
- $w_x = 1.493 \text{ cm}^3$
- $w_y = 1.691 \text{ cm}^3$
- Weight = 0.722 kg/m
- Bar length = 6 m
- Packing unit = 54 m

**APPLICATIONS**

- Light constructions with protective hoods, covers, etc.
- Specifically for high hygiene requirements in the food industry, medical technology, bottling of beverages

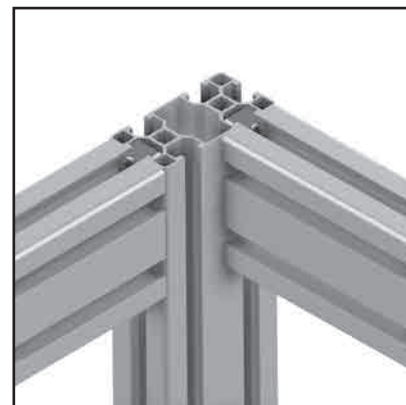
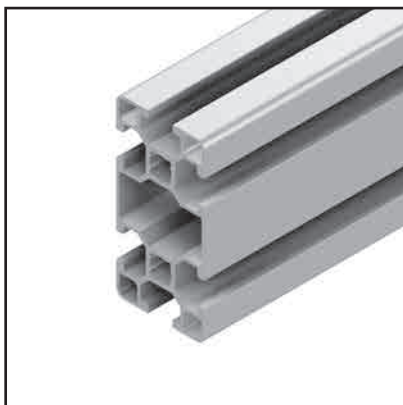
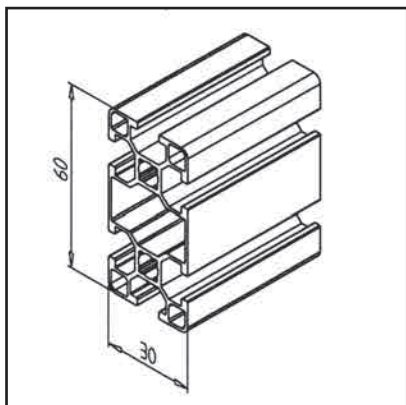
**ASSEMBLY**

- Power-lock fastener 30 / N 30
- Mitre connector 30
- Screw connection 30
- Angle 16 / 30
- Attaching accessories with sliding nut 30 M4 / M5 / M6 / M8

**PROFILE 30 X 60**

Part no.

20.0994/0

**TECHN. DATA / ITEMS SUPPLIED**

- Aluminium, extruded, anodized E6/EV1
- $I_x = 14.898 \text{ cm}^4$
- $I_y = 3.792 \text{ cm}^4$
- $w_x = 4.966 \text{ cm}^3$
- $w_y = 2.528 \text{ cm}^3$
- Weight = 1.069 kg/m
- Bar length = 6 m
- Packing unit = 54 m

**APPLICATIONS**

- Light constructions with protective hoods, covers, etc.

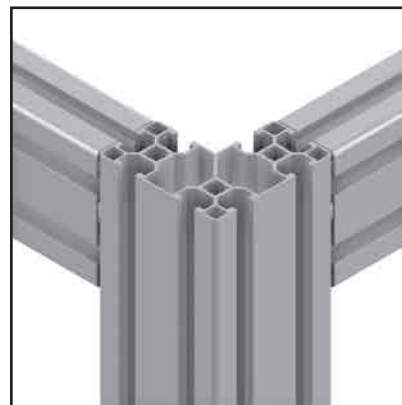
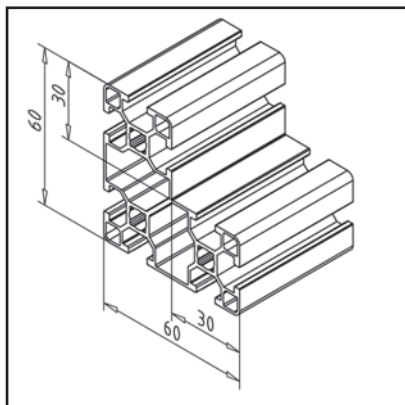
**ASSEMBLY**

- Power-lock fastener 30 / N 30
- Mitre connector 30
- Screw connection 30
- Angle 16 / 30
- Attaching accessories with sliding nut 30 M4 / M5 / M6 / M8

## PROFILE 60 X 60 X 30

Part no.

20.0982/0



### TECHN. DATA / ITEMS SUPPLIED

### APPLICATIONS

### ASSEMBLY

- Aluminium, extruded, anodized E6/EV1
- $I_x = 19.107 \text{ cm}^4$
- $I_y = 19.107 \text{ cm}^4$
- $w_x = 5.572 \text{ cm}^3$
- $w_y = 5.572 \text{ cm}^3$
- Weight = 1.534 kg/m
- Bar length = 6 m
- Packing unit = 36 m

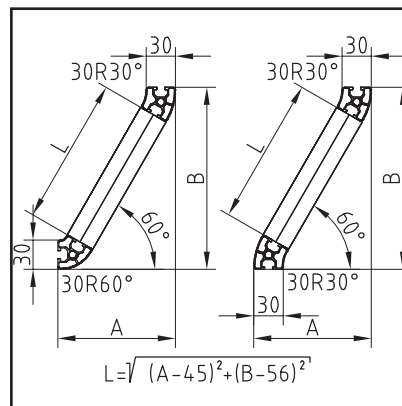
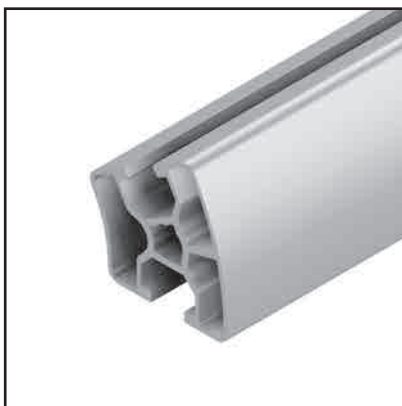
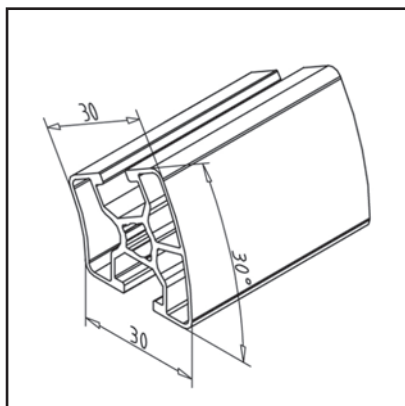
- Weight optimized constructions
- Tables
- Framework constructions
- display windows, showcases

- Power-lock fastener 30 / N 30
- Screw connection 30
- Angle 16 / 30
- Attaching accessories with sliding nut 30 M4 / M5 / M6 / M8
- Base and transport plate 60x60x30 **part no. 21.0038/0**

## PROFILE 30 R 30°

Part no.

20.1134/0



### TECHN. DATA / ITEMS SUPPLIED

### APPLICATIONS

### ASSEMBLY

- Aluminium, extruded, anodized E6/EV1
- $I_x = 1.939 \text{ cm}^4$
- $I_y = 1.909 \text{ cm}^4$
- $w_x = 0.982 \text{ cm}^3$
- $w_y = 1.006 \text{ cm}^3$
- Weight = 0.601 kg/m
- Bar length = 6 m
- Packing unit = 72 m

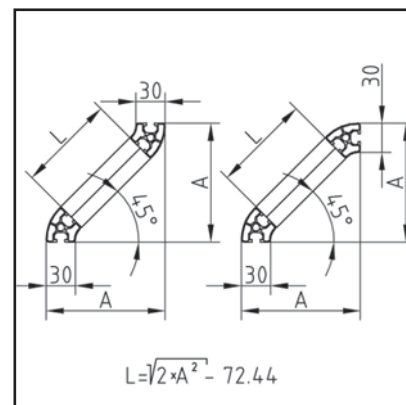
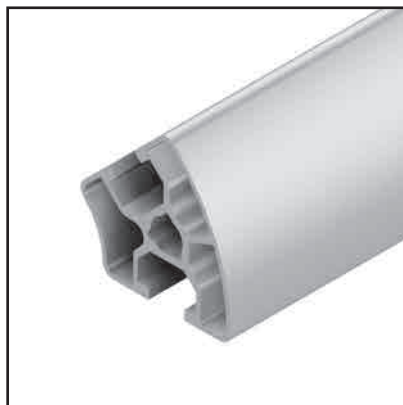
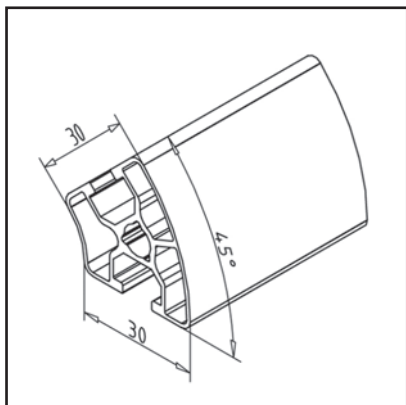
- Weight optimized constructions
- Tables
- Framework constructions
- display windows, showcases
- As cross beam:  
Calculate dimension L of the intermediate support according to calculating formula

- Power-lock fastener 30 / N 30
- Mitre connector 30
- Screw connection 30
- Angle 16 / 30
- Attaching accessories with sliding nut 30 M4 / M5 / M6 / M8

**PROFILE 30 R 45°**

Part no.

20.1135/0

**TECHN. DATA / ITEMS SUPPLIED**

- Aluminium, extruded, anodized E6/EV1
- $I_x = 1.909 \text{ cm}^4$
- $I_y = 1.812 \text{ cm}^4$
- $w_x = 0.924 \text{ cm}^3$
- $w_y = 0.951 \text{ cm}^3$
- Weight = 0.601 kg/m
- Bar length = 6 m
- Packing unit = 72 m

**APPLICATIONS**

- Weight optimized constructions
- Tables
- Framework constructions
- As cross beam:  
Calculate dimension L of the intermediate support according to calculating formula
- display windows, showcases

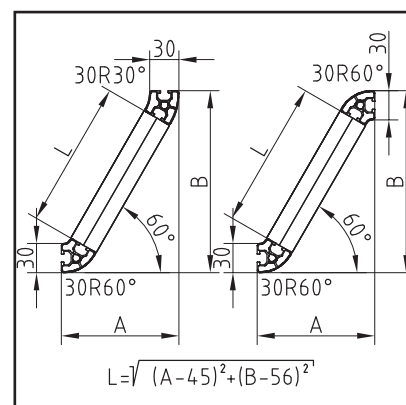
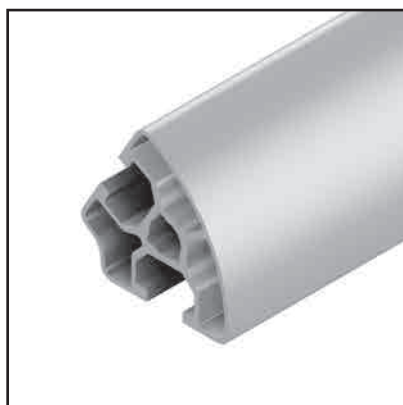
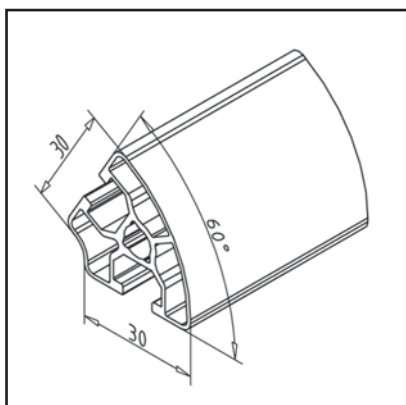
**ASSEMBLY**

- Power-lock fastener 30 / N 30
- Mitre connector 30
- Screw connection 30
- Angle 16 / 30
- Attaching accessories with sliding nut 30 M4 / M5 / M6 / M8

**PROFILE 30 R 60°**

Part no.

20.1136/0

**TECHN. DATA / ITEMS SUPPLIED**

- Aluminium, extruded, anodized E6/EV1
- $I_x = 1.847 \text{ cm}^4$
- $I_y = 1.721 \text{ cm}^4$
- $w_x = 0.904 \text{ cm}^3$
- $w_y = 0.951 \text{ cm}^3$
- Weight = 0.590 kg/m
- Bar length = 6 m
- Packing unit = 72 m

**APPLICATIONS**

- Weight optimized constructions
- Tables
- Framework constructions
- display windows, showcases
- As cross beam:  
Calculate dimension L of the intermediate support according to calculating formula

**ASSEMBLY**

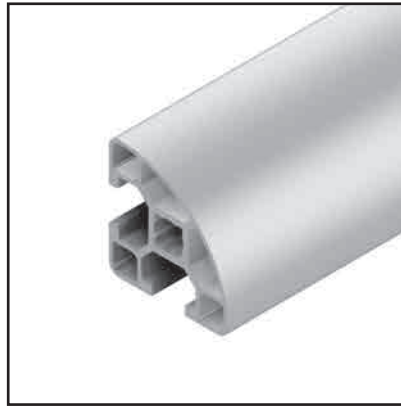
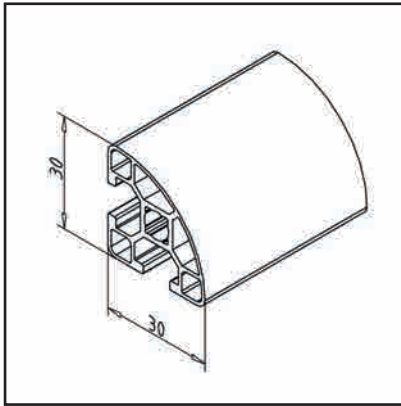
- Power-lock fastener 30 / N 30
- Mitre connector 30
- Screw connection 30
- Angle 16 / 30
- Attaching accessories with sliding nut 30 M4 / M5 / M6 / M8



## PROFILE 30 R 90°

Part no.

20.1125/0



### TECHN. DATA / ITEMS SUPPLIED

- Aluminium, extruded, anodized E6/EV1
- $I_x = 1.847 \text{ cm}^4$
- $I_y = 1.721 \text{ cm}^4$
- $w_x = 0.904 \text{ cm}^3$
- $w_y = 0.951 \text{ cm}^3$
- Weight = 0.580 kg/m
- Bar length = 6 m
- Packing unit = 54 m

### APPLICATIONS

- Weight optimized constructions
- Tables
- Framework constructions
- display windows, showcases

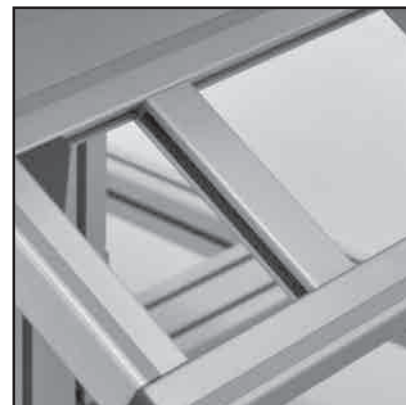
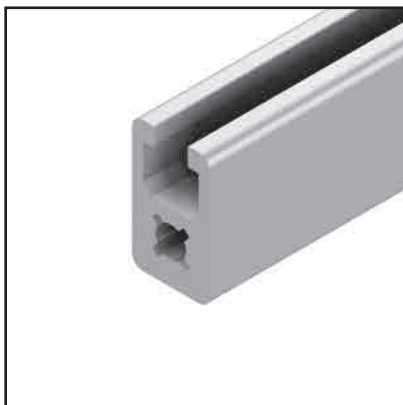
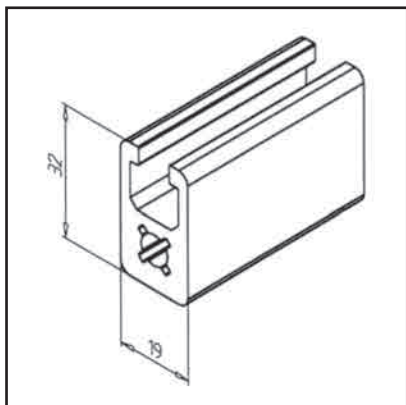
### ASSEMBLY

- Power-lock fastener 30 / N 30
- Mitre connector 30
- Screw connection 30
- Angle 16 / 30 / 30 R 90°
- Attaching accessories with sliding nut 30 M4 / M5 / M6 / M8

**PROFILE 19 X 32**

Part no.

20.1000/0

**TECHN. DATA / ITEMS SUPPLIED**

- Aluminium, extruded, anodized E6/EV1
- $I_x = 3.102 \text{ cm}^4$
- $I_y = 1.526 \text{ cm}^4$
- $w_x = 1.651 \text{ cm}^3$
- $w_y = 1.606 \text{ cm}^3$
- Weight = 0.987 kg/m
- Bar length = 6 m
- Packing unit = 60 m

**APPLICATIONS**

- Light constructions
- Handle bars
- Carrier for initiators, switches
- Frames

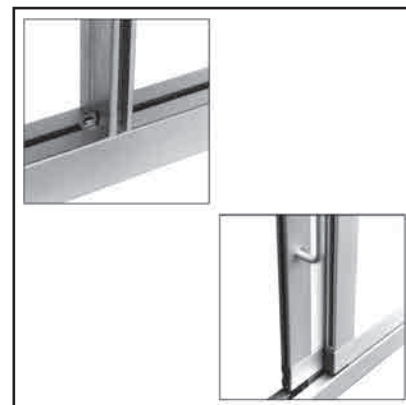
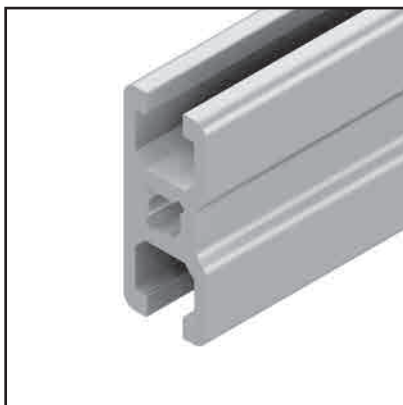
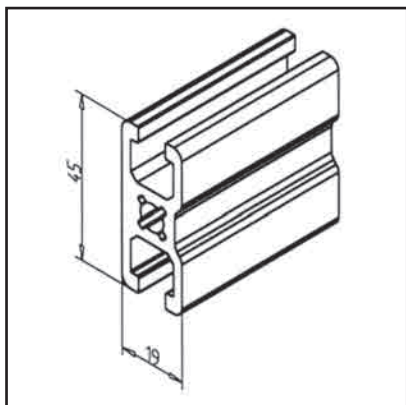
**ASSEMBLY**

- MiniTec power-lock fastener
- Angle 19 GD-Z, **part no. 21.2078/0**
- Bolt connector
- Screw connection

**PROFILE 19 X 45**

Part no.

20.1001/0

**TECHN. DATA / ITEMS SUPPLIED**

- Aluminium, extruded, anodized E6/EV1
- $I_x = 6.173 \text{ cm}^4$
- $I_y = 1.843 \text{ cm}^4$
- $w_x = 2.743 \text{ cm}^3$
- $w_y = 1.836 \text{ cm}^3$
- Weight = 1.101 kg/m
- Bar length = 6 m
- Packing unit = 60 m

**APPLICATIONS**

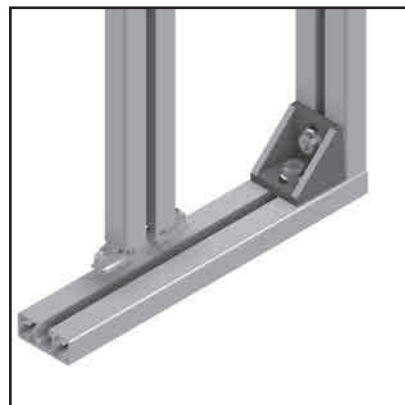
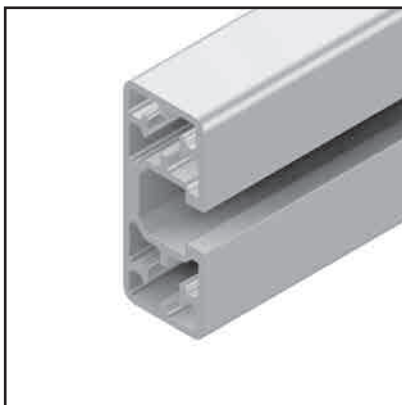
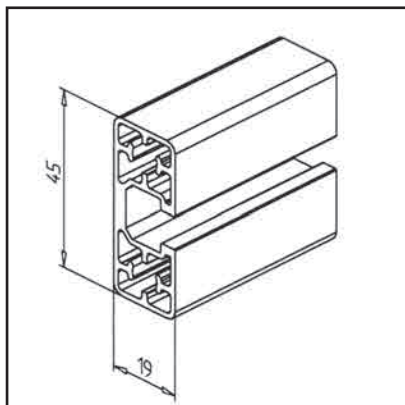
- Bracing, doors
- Guard units
- Weight optimized constructions
- Frames

**ASSEMBLY**

- MiniTec power-lock fastener
- Angle 19 GD-Z, **part no. 21.2078/0**
- Bolt connector
- Screw connection

## PROFILE 45 X 19

Part no. 20.0993/0



### TECHN. DATA / ITEMS SUPPLIED

- Aluminium, extruded, anodized E6/EV1
- $I_x = 6.106 \text{ cm}^4$
- $I_y = 1.384 \text{ cm}^4$
- $w_x = 2.71 \text{ cm}^3$
- $w_y = 1.45 \text{ cm}^3$
- Weight = 0.814 kg/m
- Bar length = 6 m
- Packing unit = 72 m

### APPLICATIONS

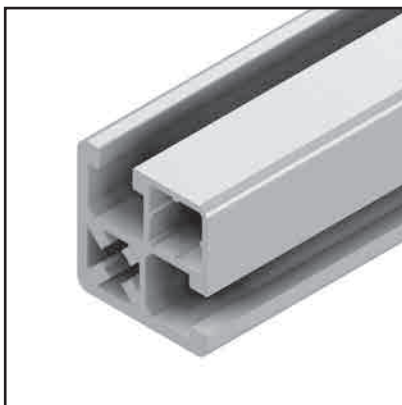
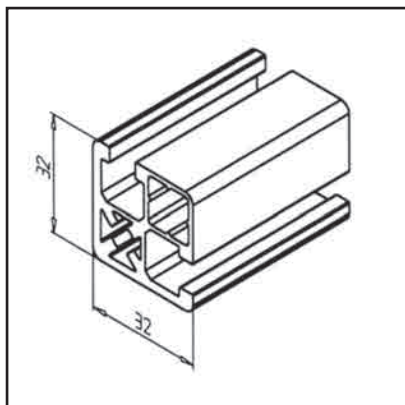
- Weight-optimized constructions
- Light constructions
- Light sliding windows
- Support plates
- Base plates

### ASSEMBLY

- side 19 with MiniTec power lock fastener, **part no. 21.0818/0**
- 45th page with angle mounting bracket, profile connector N or connector

## PROFILE 32 X 32 UL

Part no. 20.1064/0



### TECHN. DATA / ITEMS SUPPLIED

- Aluminium, extruded, anodized E6/EV1
- $I_x = 4.1 \text{ cm}^4$
- $I_y = 4.1 \text{ cm}^4$
- $w_x = 2.267 \text{ cm}^3$
- $w_y = 2.267 \text{ cm}^3$
- Weight = 1.052 kg/m
- Bar length = 6 m
- Packing unit = 48 m

### APPLICATIONS

- Weight-optimized constructions
- End table
- Swivel, lifting and sliding doors
- Bracings

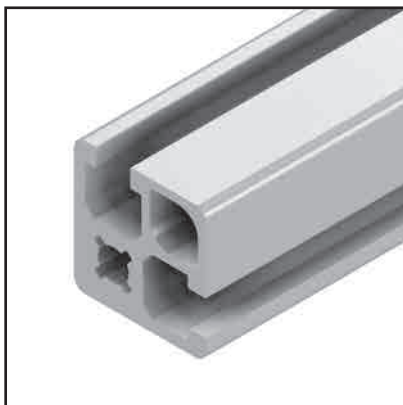
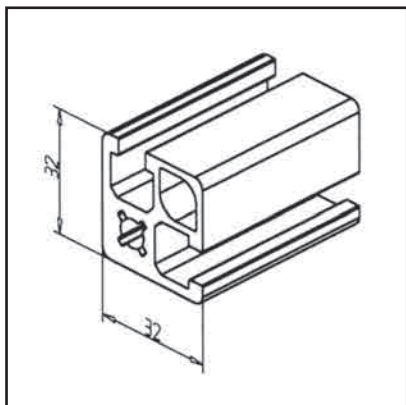
### ASSEMBLY

- MiniTec power-lock fastener
- Angle 19 GD-Z, **part no. 21.2078/0**
- Bolt connector
- Screw connection

## PROFILE 32 X 32 F

Part no.

20.1054/0



### TECHN. DATA / ITEMS SUPPLIED

- Aluminium, extruded, anodized E6/EV1
- $I_x = 4.825 \text{ cm}^4$
- $I_y = 4.825 \text{ cm}^4$
- $w_x = 2.703 \text{ cm}^3$
- $w_y = 2.703 \text{ cm}^3$
- Weight = 1.288 kg/m
- Bar length = 6 m
- Packing unit = 48 m

### APPLICATIONS

- Weight optimized constructions
- End table
- Swivel, lifting and sliding doors
- Bracings

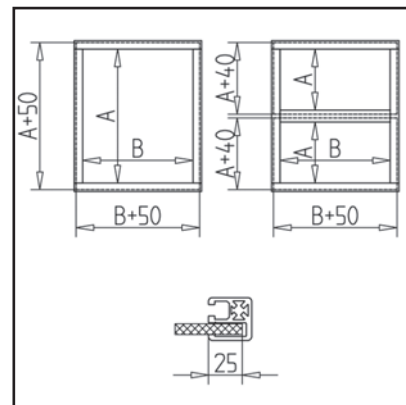
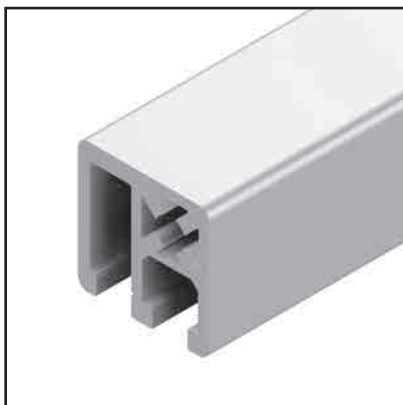
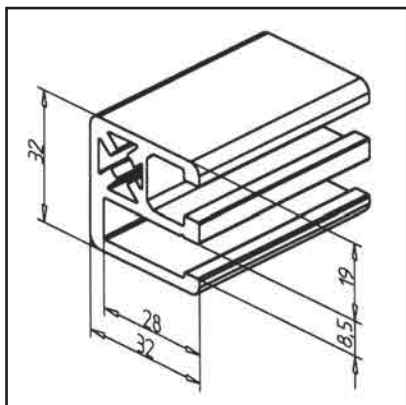
### ASSEMBLY

- MiniTec power-lock fastener
- Angle 19 GD-Z, **part no. 21.2078/0**
- Bolt connector
- Screw connection

## CLAMPING PROFILE 32 X 32

Part no.

20.1070/0



### TECHN. DATA / ITEMS SUPPLIED

- Aluminium, extruded, anodized E6/EV1
- $I_x = 5.024 \text{ cm}^4$
- $I_y = 4.418 \text{ cm}^4$
- $w_x = 3.041 \text{ cm}^3$
- $w_y = 2.398 \text{ cm}^3$
- Weight = 1.211 kg/m
- Bar length = 6 m
- Packing unit = 48 m

### APPLICATIONS

- All types of safety equipment
- For clamping of surface elements, such as woven mesh, panels, plates with a maximum strength of 8 mm
- In the case of larger protective fields, intermediate struts made of clamping profile 45 x 32 must be used in order to ensure adequate safety against pushing out of the surface elements; To do this, remove cover strips on clamping profile 45 x 32 mm
- Cut size of surface elements: Dimension A/B - 40/50 mm depending on application

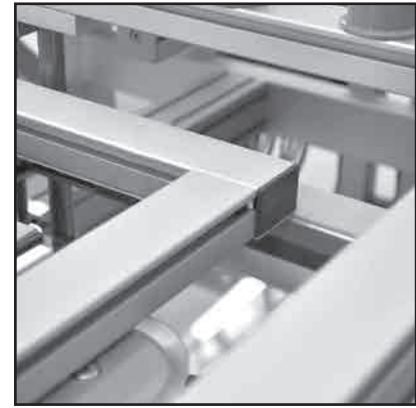
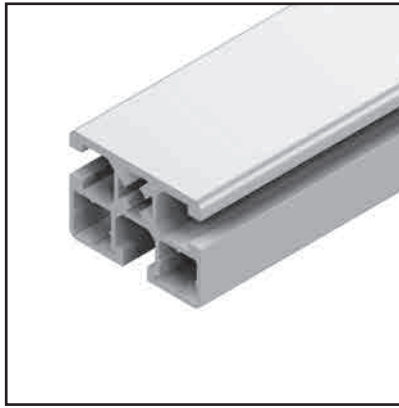
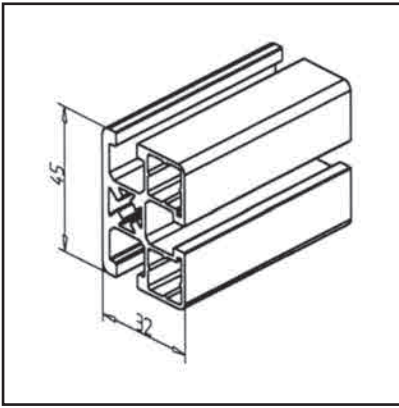
### ASSEMBLY

- MiniTec power-lock fastener; no bores required
- No release of panel element corners required
- Pre-assemble tripartite frame
- Insert panel element and install last profile brace
- Press in the distance profile **part no. 22.1039/0** on the inside or drive in with a flat tool
- For panel elements < Mount 6 mm with matching plug-in seal or < Mount 4 mm with spacer profile and additionally suitable plug-in seal on the opposite side

## PROFILE 45 X 32 UL

Part no.

20.1065/0



### TECHN. DATA / ITEMS SUPPLIED

- Aluminium, extruded, anodized E6/EV1
- $I_x = 8.292 \text{ cm}^4$
- $I_y = 5.178 \text{ cm}^4$
- $w_x = 3.685 \text{ cm}^3$
- $w_y = 2.815 \text{ cm}^3$
- Weight = 1.257 kg/m
- Bar length = 6 m
- Packing unit = 48 m

### APPLICATIONS

- All types of constructions, with a closed profile side
- Weight-optimized constructions
- Tables
- Frames
- Sliding doors

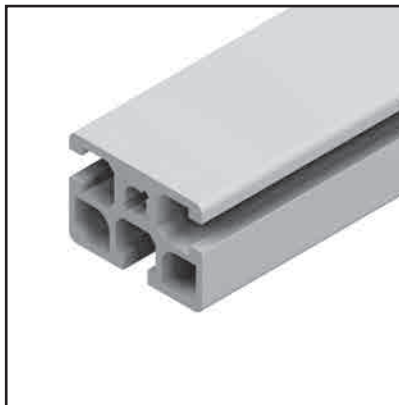
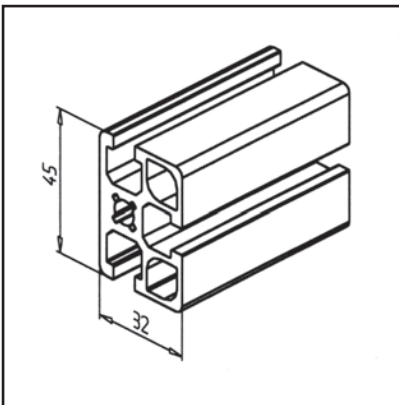
### ASSEMBLY

- MiniTec power-lock fastener
- Angle 19 / 25 / 45 / 45 x 90 GD-Z
- Bolt connector
- Screw connection

## PROFILE 45 X 32 F

Part no.

20.1055/0



### TECHN. DATA / ITEMS SUPPLIED

- Aluminium, extruded, anodized E6/EV1
- $I_x = 10.189 \text{ cm}^4$
- $I_y = 6.499 \text{ cm}^4$
- $w_x = 4.528 \text{ cm}^3$
- $w_y = 3.762 \text{ cm}^3$
- Weight = 1.588 kg/m
- Bar length = 6 m
- Packing unit = 48 m

### APPLICATIONS

- All types of constructions, with a closed profile side
- Tables
- Frames
- Sliding doors
- Rails

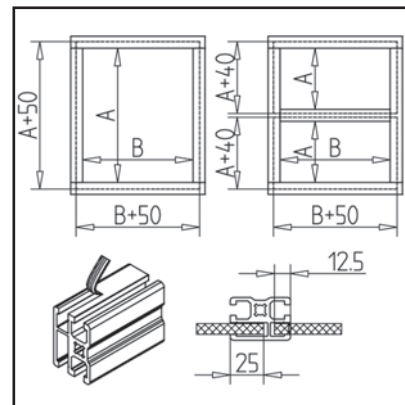
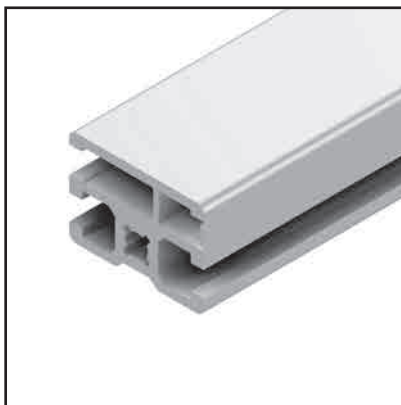
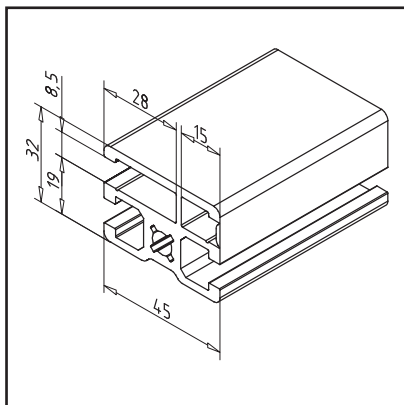
### ASSEMBLY

- MiniTec power-lock fastener
- Angle 19 / 25 / 45 / 45 x 90 GD-Z
- Bolt connector
- Screw connection

## CLAMPING PROFILE 45 X 32

Part no.

20.1053/0



### TECHN. DATA / ITEMS SUPPLIED

- Aluminium, extruded, anodized E6/EV1
- $I_x = 6.465 \text{ cm}^4$
- $I_y = 9.521 \text{ cm}^4$
- $w_x = 3.999 \text{ cm}^3$
- $w_y = 4.119 \text{ cm}^3$
- Weight = 1.615 kg/m
- Bar length = 6 m
- Packing unit = 48 m

### APPLICATIONS

- In the case of larger protective fields, intermediate struts made of clamping profile 45 x 32 must be used in order to ensure adequate safety against pushing out of the surface elements; To do this, remove cover strips on clamping profile 45 x 32 mm
- All types of safety equipment
- For clamping of surface elements, such as woven mesh, panels, plates with a maximum strength of 8 mm
- Cut size of surface elements:  
Dimension A/B - 40/50 mm depending on application

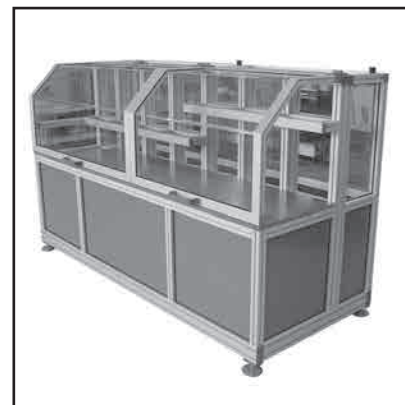
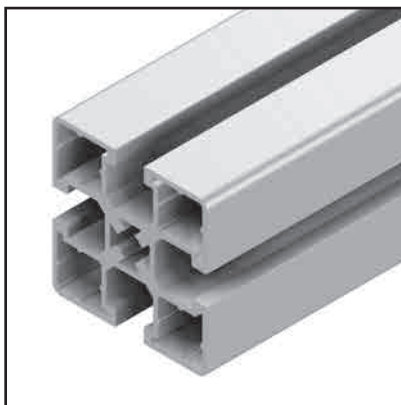
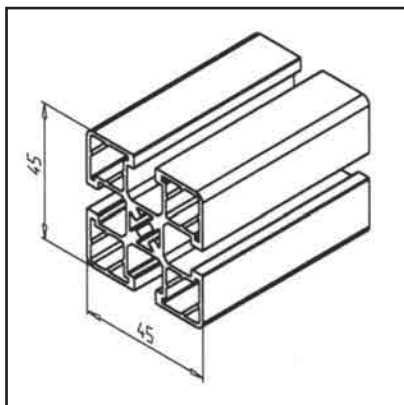
### ASSEMBLY

- MiniTec power-lock fastener; no bores required
- No release of panel element corners required
- Pre-assemble tripartite frame
- Insert panel element and install last profile brace
- Press in the distance profile **part no. 22.1039/0** on the inside or drive in with a flat tool
- For panel elements < Mount 6 mm with matching plug-in seal or < Mount 4 mm with spacer profile and additionally suitable plug-in seal on the opposite side

## PROFILE 45 X 45 UL

Part no.

20.1063/0



### TECHN. DATA / ITEMS SUPPLIED

- Aluminium, extruded, anodized E6/EV1
- $I_x = 9.953 \text{ cm}^4$
- $I_y = 9.953 \text{ cm}^4$
- $w_x = 4.423 \text{ cm}^3$
- $w_y = 4.423 \text{ cm}^3$
- Weight = 1.445 kg/m
- Bar length = 6 m
- Packing unit = 54 m

### APPLICATIONS

- Weight-optimized constructions
- All kinds of constructions

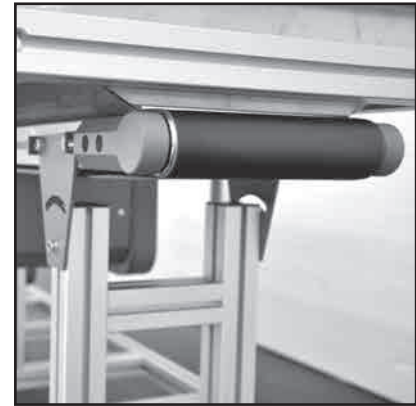
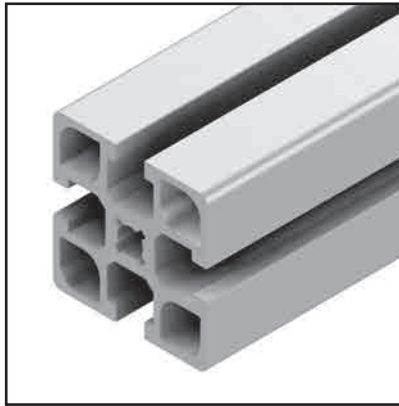
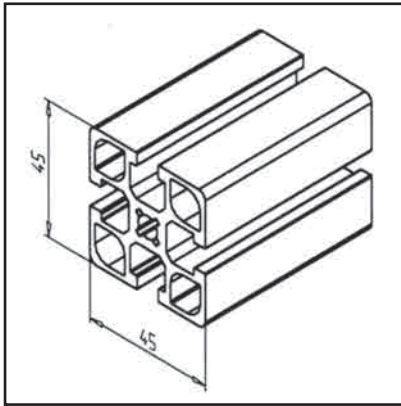
### ASSEMBLY

- MiniTec power-lock fastener
- Angle 19 / 25 / 45 / 45 x 90 GD-Z
- Bolt connector
- Screw connection

## PROFILE 45 X 45 F

Part no.

20.1033/0



### TECHN. DATA / ITEMS SUPPLIED

- Aluminium, extruded, anodized E6/EV1
- $I_x = 14.172 \text{ cm}^4$
- $I_y = 14.172 \text{ cm}^4$
- $w_x = 6.298 \text{ cm}^3$
- $w_y = 6.298 \text{ cm}^3$
- Weight = 2.005 kg/m
- Bar length = 6 m
- Packing unit = 36 m

### APPLICATIONS

- All kinds of constructions

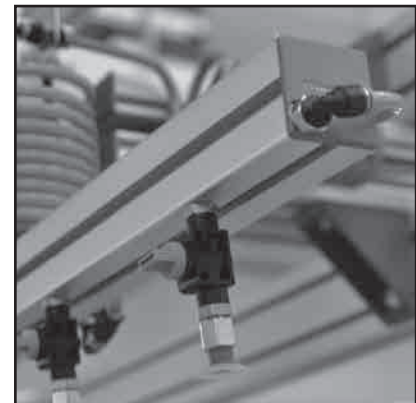
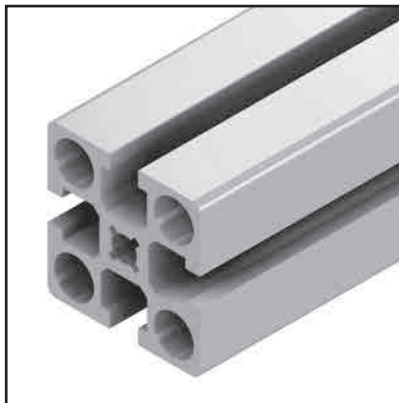
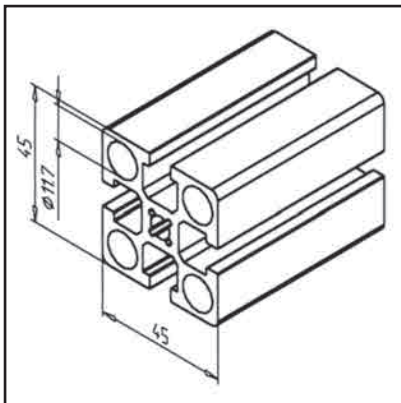
### ASSEMBLY

- MiniTec power-lock fastener
- Angle 19 / 25 / 45 / 45 x 90 GD-Z
- Bolt connector
- Screw connection

## PROFILE 45 X 45

Part no.

20.1006/0



### TECHN. DATA / ITEMS SUPPLIED

- Aluminium, extruded, anodized E6/EV1
- $I_x = 15.934 \text{ cm}^4$
- $I_y = 15.934 \text{ cm}^4$
- $w_x = 7.081 \text{ cm}^3$
- $w_y = 7.081 \text{ cm}^3$
- Weight = 2.205 kg/m
- Bar length = 6 m
- Packing unit = 36 m

### APPLICATIONS

- General constructions
- Compressed air piping
- Linear guides

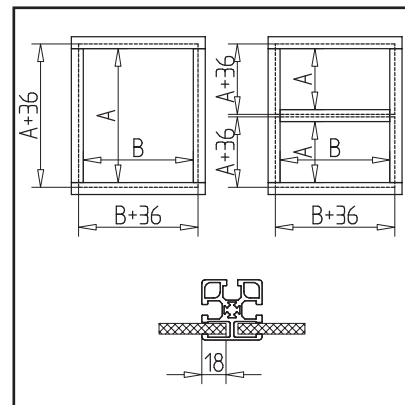
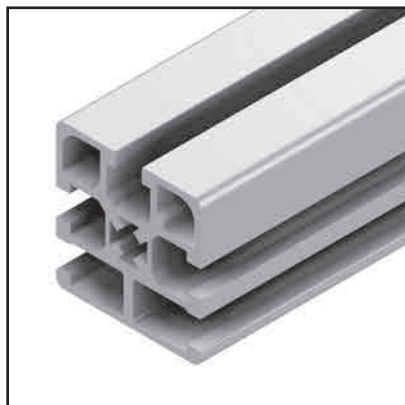
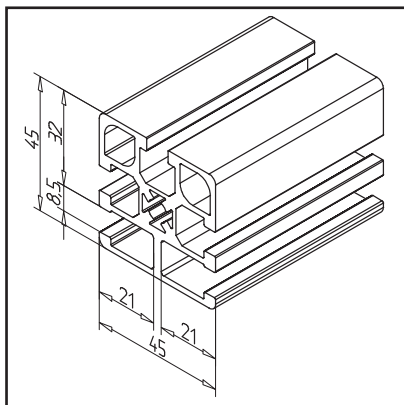
### ASSEMBLY

- MiniTec power-lock fastener
- Angle 25 / 45, bolt-fastener, screw connection
- The  $\varnothing 11.7 \text{ mm}$  holes can be bored with G 1/4 for holding screw plugs or pneumatic connections
- Lateral connections G 1/8" direct into the profile

## CLAMPING PROFILE 45 X 45 F

Part no.

20.1147/0



## TECHN. DATA / ITEMS SUPPLIED

- Aluminium, extruded, anodized E6/EV1
- $I_x = 13.521 \text{ cm}^4$
- $I_y = 12.308 \text{ cm}^4$
- $w_x = 5.836 \text{ cm}^3$
- $w_y = 5.470 \text{ cm}^3$
- Weight = 1.850 kg/m
- Bar length = 6 m
- Packing unit = 36 m

## APPLICATIONS

- For clamping of surface elements, such as woven mesh, panels, plates with a maximum strength of 8 mm
- All types of safety equipment
- Cut size of surface elements: Dimension A/B - 36 mm

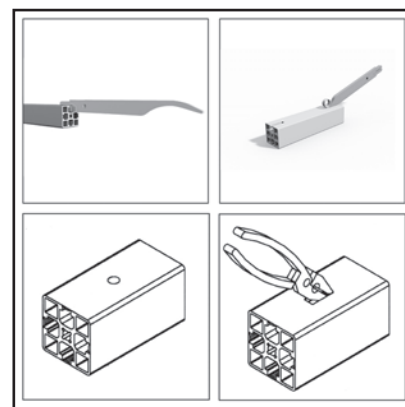
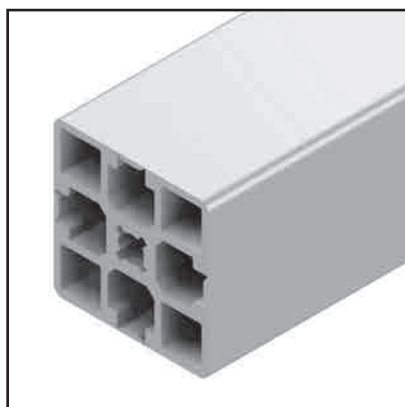
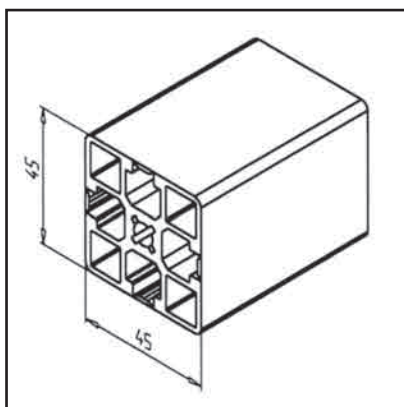
## ASSEMBLY

- MiniTec power-lock fastener; no bores required
- No release of panel element corners required
- Pre-assemble tripartite frame
- Insert panel element and install last profile brace
- Press in the distance profile **part no. 22.1039/0** on the inside or drive in with a flat tool
- For panel elements < Mount 6 mm with matching plug-in seal or < Mount 4 mm with spacer profile and additionally suitable plug-in seal on the opposite side

## PROFILE 45 X 45 G

Part no.

20.1028/0



## TECHN. DATA / ITEMS SUPPLIED

- Aluminium, extruded, anodized E6/EV1
- $I_x = 14.087 \text{ cm}^4$
- $I_y = 14.087 \text{ cm}^4$
- $w_x = 6.261 \text{ cm}^3$
- $w_y = 6.261 \text{ cm}^3$
- Weight = 1.997 kg/m
- Bar length = 6 m
- Packing unit = 36 m

## APPLICATIONS

- All types of constructions, specifically for high hygiene requirements in the food industry, medical technology, bottling of beverages
- To close open grooves with the cover profile L **part no. 20.1021/0**
- Silicon sealings for profile connections on request

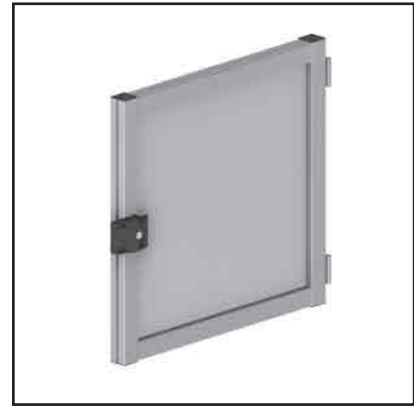
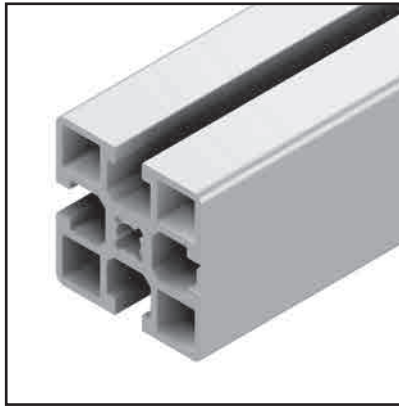
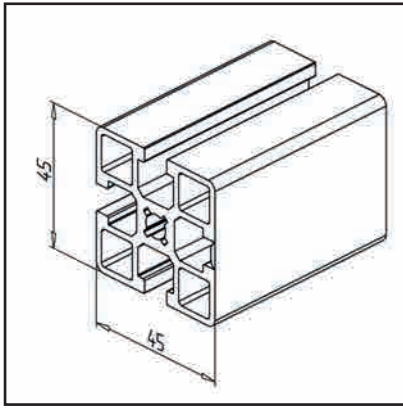
## ASSEMBLY

- For tightening the MiniTec power-lock fastener, the groove cover must be opened by tear-off lever **part no. 26.0815/0** at the profile end. Opening can be covered with end cap profile G **part no. 22.1056/1**
- Angle 25 / 45
- closed grooves can be opened with the groove opener **part no. 26.0815/0** to the desired length



## PROFILE 45 X 45 1G

Part no. 20.1126/0



### TECHN. DATA / ITEMS SUPPLIED

- Aluminium, extruded, anodized E6/EV1
- $I_x = 13.617 \text{ cm}^4$
- $I_y = 14.091 \text{ cm}^4$
- $w_x = 6.052 \text{ cm}^3$
- $w_y = 6.262 \text{ cm}^3$
- Weight = 1.897 kg/m
- Bar length = 6 m
- Packing unit = 36 m

### APPLICATIONS

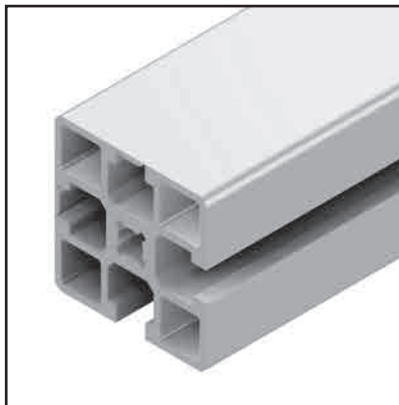
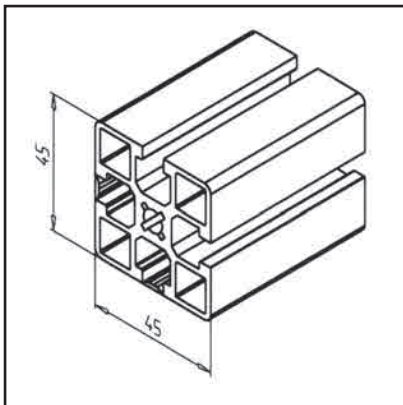
- Grooves expandable
- All types of constructions, specifically for high hygiene requirements in the food industry, medical technology, bottling of beverages
- To close open grooves with the cover profile L **part no. 20.1021/0**
- Silicon sealings for profile connections on request

### ASSEMBLY

- For tightening the MiniTec power-lock fastener, the groove cover must be opened by tear-off lever **part no. 26.0815/0** at the profile end. Opening can be covered with end cap profile G **part no. 22.1056/1**
- Angle 25 / 45
- closed grooves can be opened with the groove opener **part no. 26.0815/0** to the desired length

## PROFILE 45 X 45 2G

Part no. 20.1072/0



### TECHN. DATA / ITEMS SUPPLIED

- Aluminium, extruded, anodized E6/EV1
- $I_x = 13.549 \text{ cm}^4$
- $I_y = 13.549 \text{ cm}^4$
- $w_x = 5.938 \text{ cm}^3$
- $w_y = 5.938 \text{ cm}^3$
- Weight = 1.925 kg/m
- Bar length = 6 m
- Packing unit = 36 m

### APPLICATIONS

- All types of constructions, specifically for high hygiene requirements in the food industry, medical technology, bottling of beverages
- To close open grooves with the cover profile L **part no. 20.1021/0**
- Silicon sealings for profile connections on request

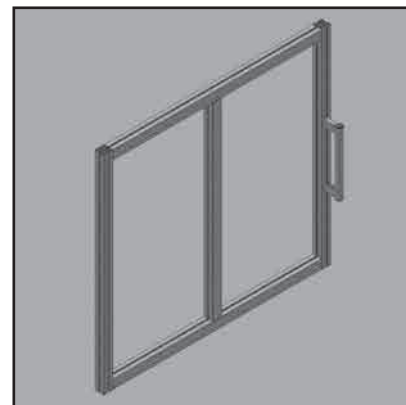
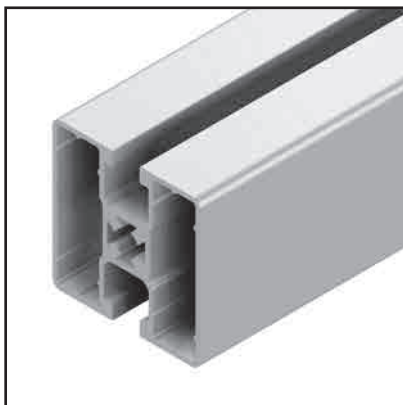
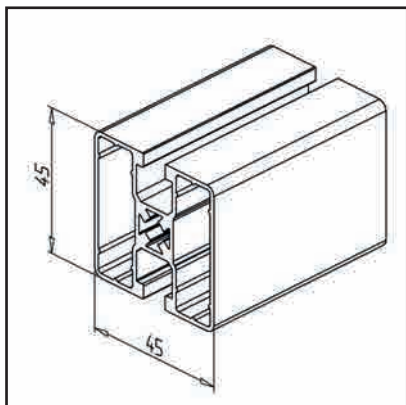
### ASSEMBLY

- For tightening the MiniTec power-lock fastener, the groove cover must be opened by tear-off lever **part no. 26.0815/0** at the profile end. Opening can be covered with end cap profile G **part no. 22.1056/1**
- Angle 25 / 45
- closed grooves can be opened with the groove opener **part no. 26.0815/0** to the desired length

## PROFILE 45 X 45 UL 2GG

Part no.

20.1122/0



### TECHN. DATA / ITEMS SUPPLIED

- Aluminium, extruded, anodized E6/EV1
- $I_x = 9.974 \text{ cm}^4$
- $I_y = 8.553 \text{ cm}^4$
- $w_x = 4.432 \text{ cm}^3$
- $w_y = 3.801 \text{ cm}^3$
- Weight = 1.254 kg/m
- Bar length = 6 m
- Packing unit = 54 m

### APPLICATIONS

- Weight-optimized constructions
- All types of constructions, specifically for high hygiene requirements in the food industry, medical technology, bottling of beverages
- Silicon sealings for profile connections on request

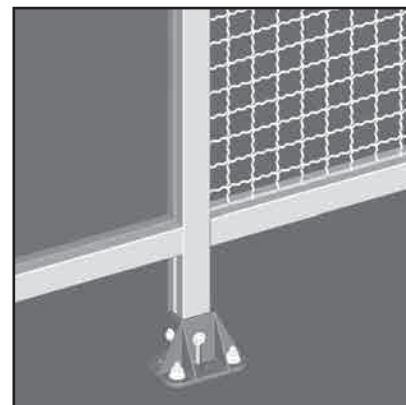
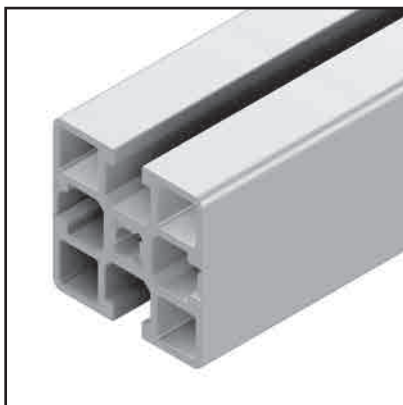
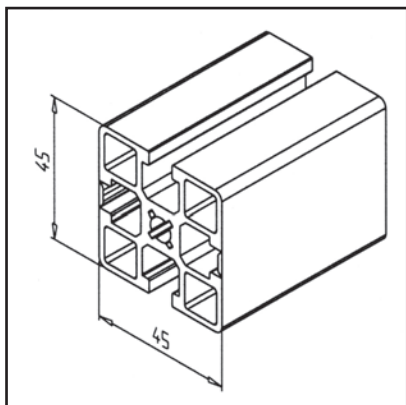
### ASSEMBLY

- MiniTec power-lock fastener
- Angle 19 / 25 / 45 / 45 x 90 GD-Z
- Bolt connector
- Screw connection

## PROFILE 45 X 45 2GG

Part no.

20.1099/0



### TECHN. DATA / ITEMS SUPPLIED

- Aluminium, extruded, anodized E6/EV1
- $I_x = 13.069 \text{ cm}^4$
- $I_y = 14.045 \text{ cm}^4$
- $w_x = 5.808 \text{ cm}^3$
- $w_y = 6.242 \text{ cm}^3$
- Weight = 1.925 kg/m
- Bar length = 6 m
- Packing unit = 36 m

### APPLICATIONS

- All types of constructions, specifically for high hygiene requirements in the food industry, medical technology, bottling of beverages
- To close open grooves with the cover profile L **part no. 20.1021/0**
- Silicon sealings for profile connections on request

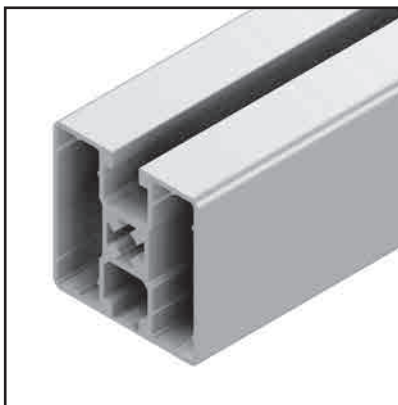
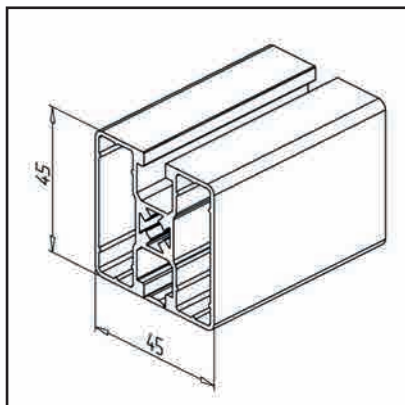
### ASSEMBLY

- For tightening the MiniTec power-lock fastener, the groove cover must be opened by tear-off lever **part no. 26.0815/0** at the profile end. Opening can be covered with end cap profile G **part no. 22.1056/1**
- Angle 25 / 45
- closed grooves can be opened with the groove opener **part no. 26.0815/0** to the desired length

## PROFILE 45 X 45 UL 3G

Part no.

20.1123/0



### TECHN. DATA / ITEMS SUPPLIED

### APPLICATIONS

### ASSEMBLY

- Aluminium, extruded, anodized E6/EV1
- $I_x = 10.44 \text{ cm}^4$
- $I_y = 8.557 \text{ cm}^4$
- $w_x = 4.64 \text{ cm}^3$
- $w_y = 3.803 \text{ cm}^3$
- Weight = 1.281 kg/m
- Bar length = 6 m
- Packing unit = 54 m

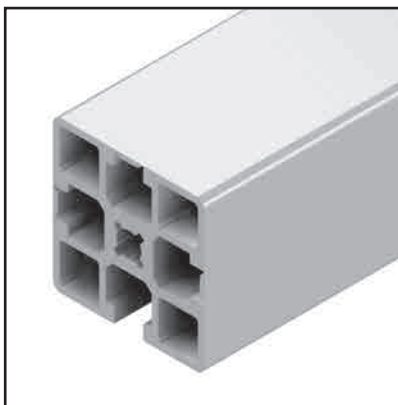
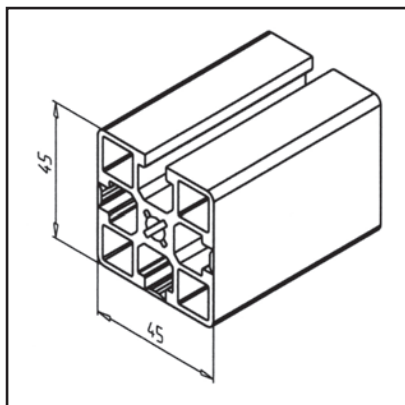
- Grooves expandable
- Weight-optimized constructions
- All types of constructions, specifically for high hygiene requirements in the food industry, medical technology, bottling of beverages
- Silicon sealings for profile connections on request

- MiniTec power-lock fastener
- Angle 19 / 25 / 45 / 45 x 90 GD-Z
- Screw connection

## PROFILE 45 X 45 3G

Part no.

20.1048/0



### TECHN. DATA / ITEMS SUPPLIED

### APPLICATIONS

### ASSEMBLY

- Aluminium, extruded, anodized E6/EV1
- $I_x = 13.554 \text{ cm}^4$
- $I_y = 14.049 \text{ cm}^4$
- $w_x = 5.941 \text{ cm}^3$
- $w_y = 6.244 \text{ cm}^3$
- Weight = 1.953 kg/m
- Bar length = 6 m
- Packing unit = 36 m

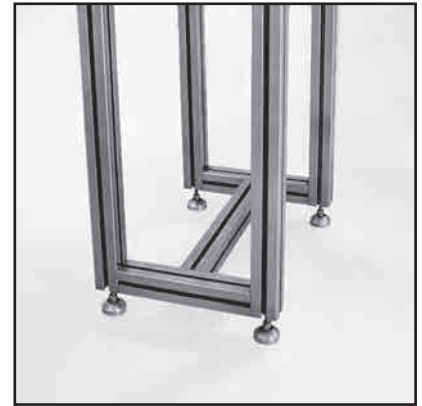
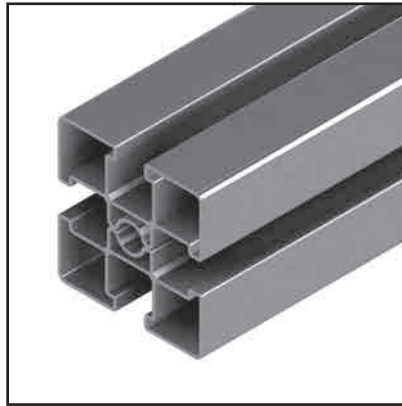
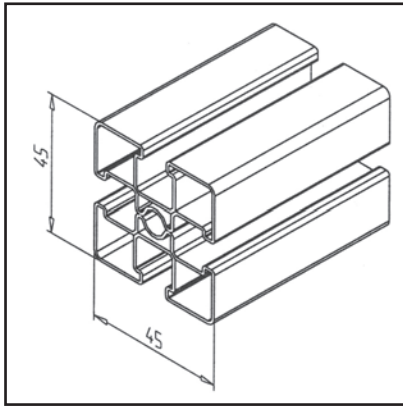
- All types of constructions, specifically for high hygiene requirements in the food industry, medical technology, bottling of beverages
- To close open grooves with the cover profile L **part no. 20.1021/0**
- Silicon sealings for profile connections on request

- For tightening the MiniTec power-lock fastener, the groove cover must be opened by tear-off lever **part no. 26.0815/0** at the profile end. Opening can be covered with end cap profile G **part no. 22.1056/1**
- Angle 25 / 45
- closed grooves can be opened with the groove opener **part no. 26.0815/0** to the desired length

**PROFILE 45 X 45 SST**

Part no.

20.2000/0

**TECHN. DATA / ITEMS SUPPLIED**

- Stainless steel, Rolled, bright
- $I_x = 6.47 \text{ cm}^4$
- $I_y = 6.47 \text{ cm}^4$
- $w_x = 2.88 \text{ cm}^3$
- $w_y = 2.88 \text{ cm}^3$
- Material: WN DIN 1.4301 (X5 Cr Ni 18-10, SUS 304)
- Weight = 2.712 kg/m
- Bar length = 6 m
- Packing unit = 24 m

**APPLICATIONS**

- Food and beverage industry
- Outdoor constructions
- Chemical industry
- Pharmaceutical industry
- High temperatures

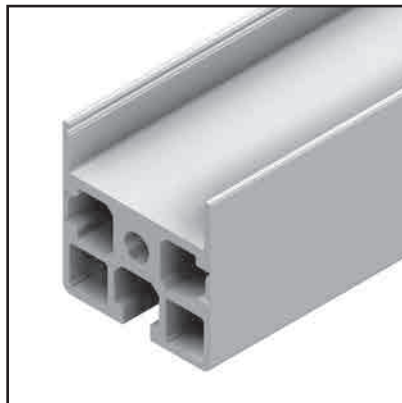
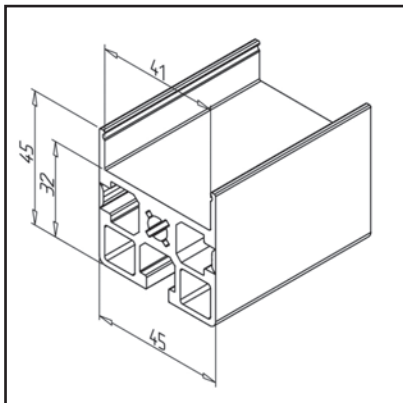
**ASSEMBLY**

- Power-lock fastener H, **part no. 21.1018/1**
- Angles
- Screws M8, stainless

**PROFILE 45 X 45 R**

Part no.

20.1046/0

**TECHN. DATA / ITEMS SUPPLIED**

- Aluminium, extruded, anodized E6/EV1
- $I_x = 8.296 \text{ cm}^4$
- $I_y = 12.997 \text{ cm}^4$
- $w_x = 3.247 \text{ cm}^3$
- $w_y = 5.776 \text{ cm}^3$
- Weight = 1.711 kg/m
- Bar length = 6 m
- Packing unit = 36 m

**APPLICATIONS**

- Combination of construction element and:
- Cable duct
- Guiding groove for belt conveyor
- Storage rail
- Guide for serpentine power chains

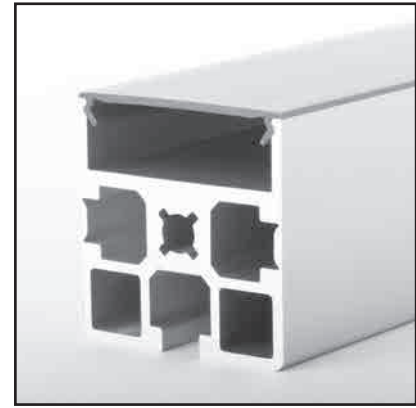
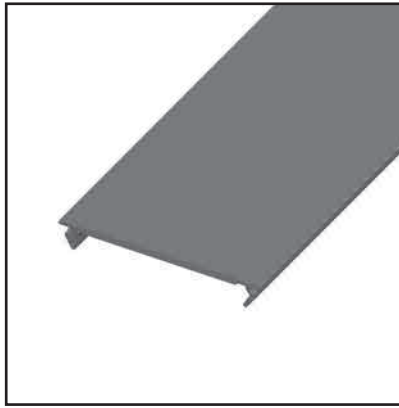
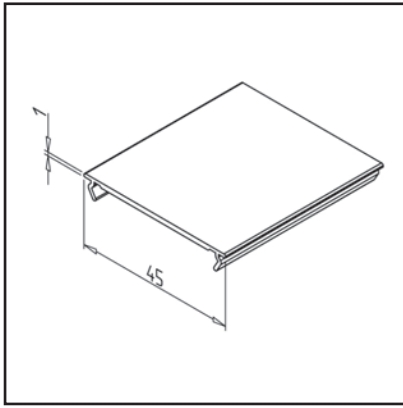
**ASSEMBLY**

- MiniTec power-lock fastener
- closed grooves can be opened with the groove opener **part no. 26.0815/0** to the desired length

## COVER PROFILE 45 X 45 R

Part no.

20.1037/0



### TECHN. DATA / ITEMS SUPPLIED

- PVC, extruded, grey
- Weight = 0.110 kg/m
- Bar length = 2 m

### APPLICATIONS

- Covering of profiles 45 x 45 R

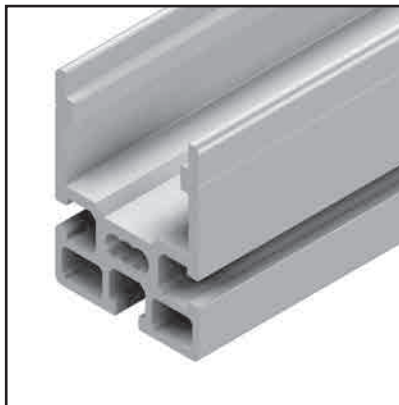
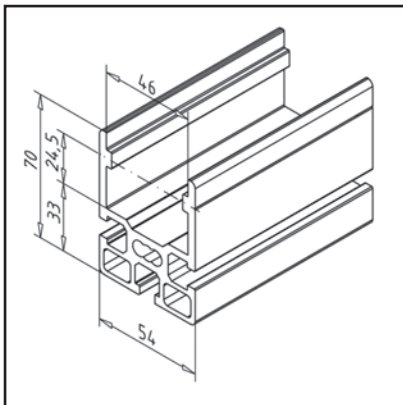
### ASSEMBLY

- Snaps onto profile

## PROFILE HEIGHT ADJUSTMENT

Part no.

20.1143/0



### TECHN. DATA / ITEMS SUPPLIED

- Aluminium, extruded, anodized E6/EV1
- $I_x = 40.251 \text{ cm}^4$
- $I_y = 39.822 \text{ cm}^4$
- $w_x = 9.624 \text{ cm}^3$
- $w_y = 14.749 \text{ cm}^3$
- Weight = 2.940 kg/m
- Bar length = 6 m
- Packing unit = 24 m

### APPLICATIONS

- Height adjustment
- Telescopic applications

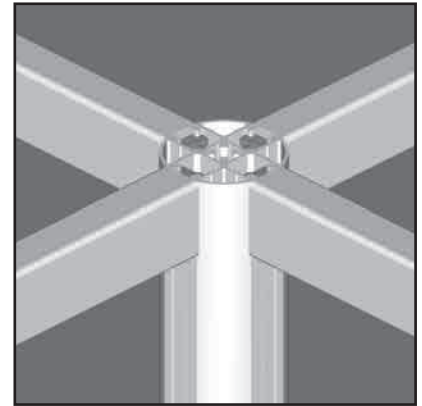
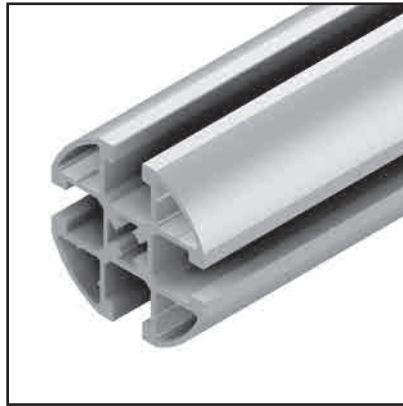
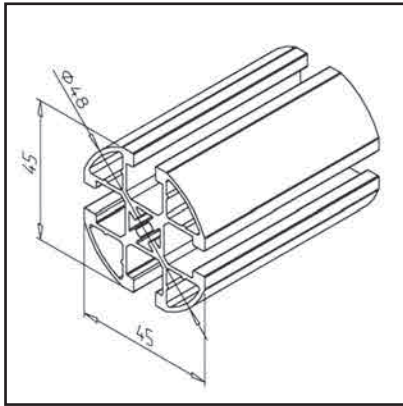
### ASSEMBLY

- For clamping or snap-in on the profile in the respective process.

**PROFILE 45 R 4**

Part no.

20.1120/0

**TECHN. DATA / ITEMS SUPPLIED**

- Aluminium, extruded, anodized E6/EV1
- $I_x = 8.163 \text{ cm}^4$
- $I_y = 8.163 \text{ cm}^4$
- $w_x = 3.628 \text{ cm}^3$
- $w_y = 3.628 \text{ cm}^3$
- Weight = 1.405 kg/m
- Bar length = 6 m
- Packing unit = 48 m

**APPLICATIONS**

- Weight-optimized constructions
- Handrail
- Connection of profiles 19
- Handles with different length for doors and drawers

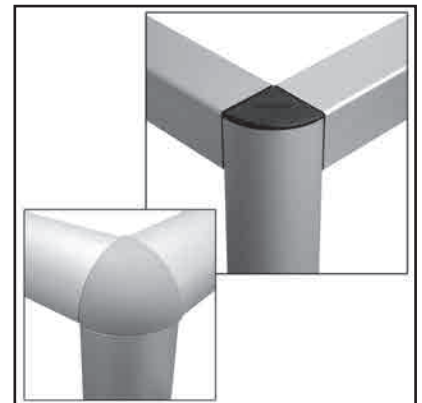
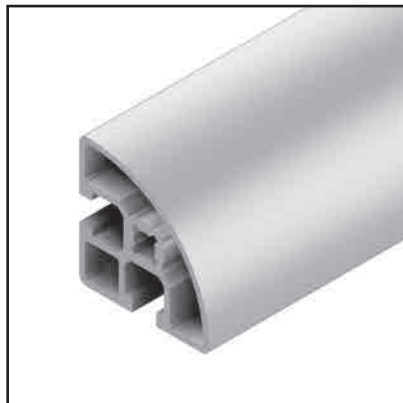
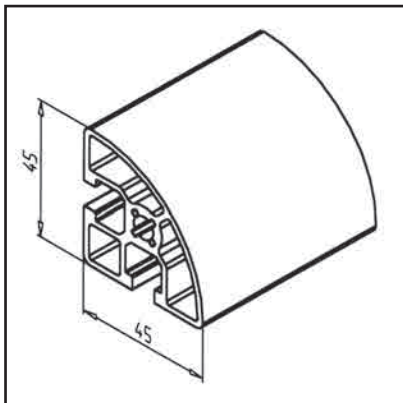
**ASSEMBLY**

- MiniTec power-lock fastener
- Screw connection
- Angle 19 GD-Z, **part no. 21.2078/0**

**PROFILE 45 R 90°**

Part no.

20.1069/0

**TECHN. DATA / ITEMS SUPPLIED**

- Aluminium, extruded, anodized E6/EV1
- $I_x = 9.138 \text{ cm}^4$
- $I_y = 9.138 \text{ cm}^4$
- $w_x = 3.581 \text{ cm}^3$
- $w_y = 3.581 \text{ cm}^3$
- Weight = 1.478 kg/m
- Bar length = 6 m
- Packing unit = 48 m

**APPLICATIONS**

- Weight optimized constructions
- Tables
- Framework constructions
- display windows, showcases

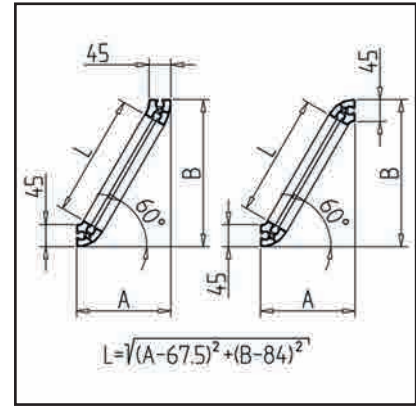
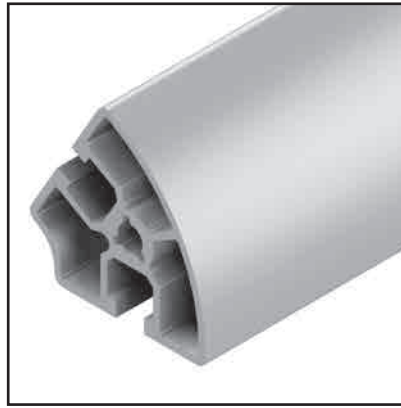
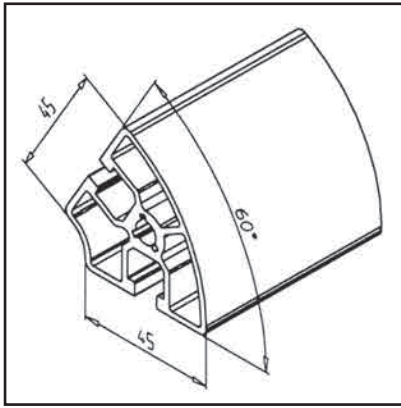
**ASSEMBLY**

- MiniTec power-lock fastener
- Angle 45 R 90°
- Bolt connector

## PROFILE 45 R 60°

Part no.

20.1096/0



### TECHN. DATA / ITEMS SUPPLIED

- Aluminium, extruded, anodized E6/EV1
- $I_x = 11.446 \text{ cm}^4$
- $I_y = 10.28 \text{ cm}^4$
- $w_x = 3.667 \text{ cm}^3$
- $w_y = 3.752 \text{ cm}^3$
- Weight = 1.575 kg/m
- Bar length = 6 m
- Packing unit = 48 m

### APPLICATIONS

- Angled enclosures
- Tables
- Framework constructions
- display windows, showcases
- As cross beam:  
Calculate dimension L of the intermediate support according to calculating formula

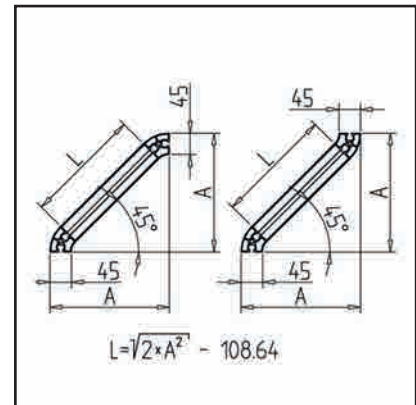
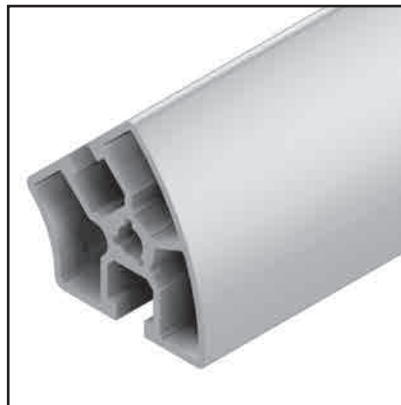
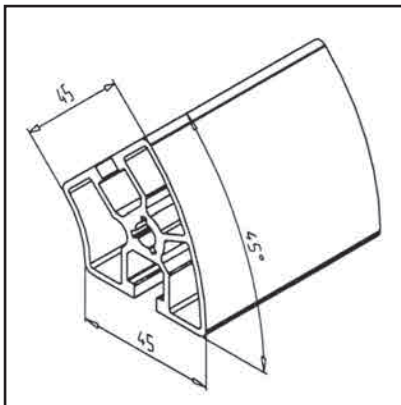
### ASSEMBLY

- MiniTec power-lock fastener
- Bolt connector

## PROFILE 45 R 45°

Part no.

20.1095/0



### TECHN. DATA / ITEMS SUPPLIED

- Aluminium, extruded, anodized E6/EV1
- $I_x = 12.457 \text{ cm}^4$
- $I_y = 11.296 \text{ cm}^4$
- $w_x = 3.976 \text{ cm}^3$
- $w_y = 3.837 \text{ cm}^3$
- Weight = 1.607 kg/m
- Bar length = 6 m
- Packing unit = 48 m

### APPLICATIONS

- Angled enclosures
- Tables
- Framework constructions
- display windows, showcases
- As cross beam:  
Calculate dimension L of the intermediate support according to calculating formula

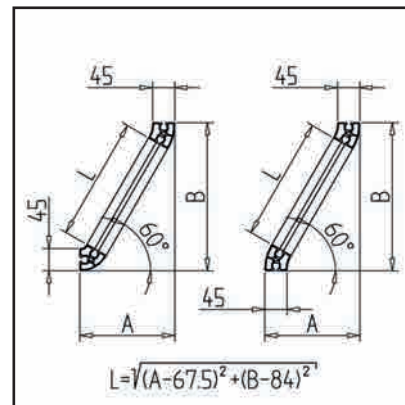
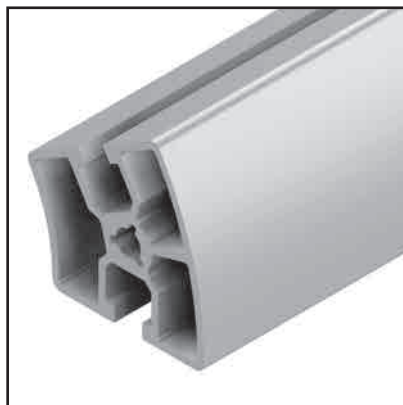
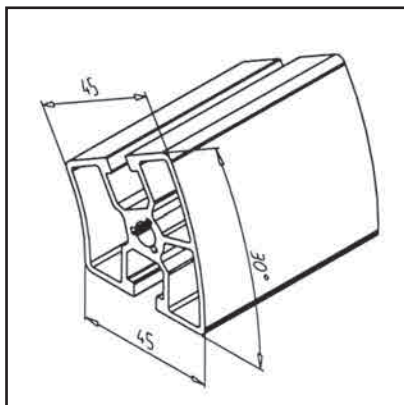
### ASSEMBLY

- MiniTec power-lock fastener
- Bolt connector

**PROFILE 45 R 30°**

Part no.

20.1094/0

**TECHN. DATA / ITEMS SUPPLIED**

- Aluminium, extruded, anodized E6/EV1
- $I_x = 12.138 \text{ cm}^4$
- $I_y = 11.006 \text{ cm}^4$
- $w_x = 4.018 \text{ cm}^3$
- $w_y = 3.883 \text{ cm}^3$
- Weight = 1.626 kg/m
- Bar length = 6 m
- Packing unit = 48 m

**APPLICATIONS**

- Angled enclosures
- Tables
- Framework constructions
- display windows, showcases
- As cross beam:  
Calculate dimension L of the intermediate support according to calculating formula

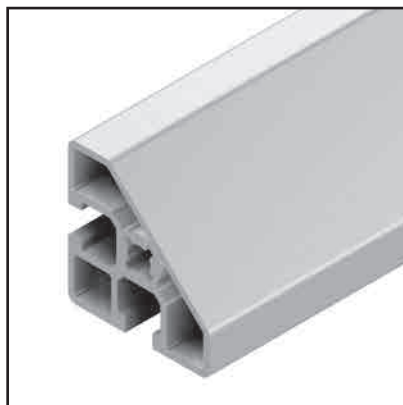
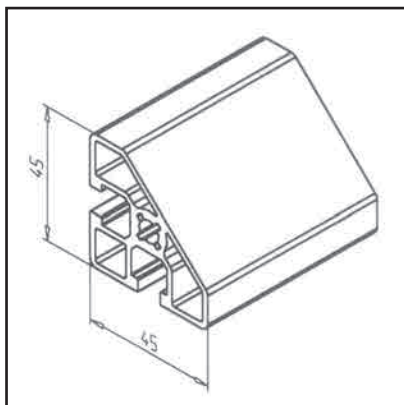
**ASSEMBLY**

- MiniTec power-lock fastener
- Bolt connector

**PROFILE 45 / 45°**

Part no.

20.1029/0

**TECHN. DATA / ITEMS SUPPLIED**

- Aluminium, extruded, anodized E6/EV1
- $I_x = 8.626 \text{ cm}^4$
- $I_y = 8.626 \text{ cm}^4$
- $w_x = 3.315 \text{ cm}^3$
- $w_y = 3.315 \text{ cm}^3$
- Weight = 1.443 kg/m
- Bar length = 6 m
- Packing unit = 48 m

**APPLICATIONS**

- Weight optimized constructions
- Tables
- Framework constructions
- Bracings

**ASSEMBLY**

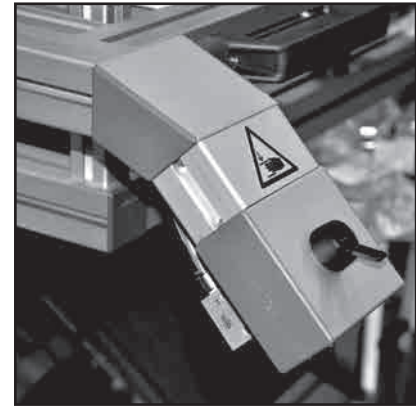
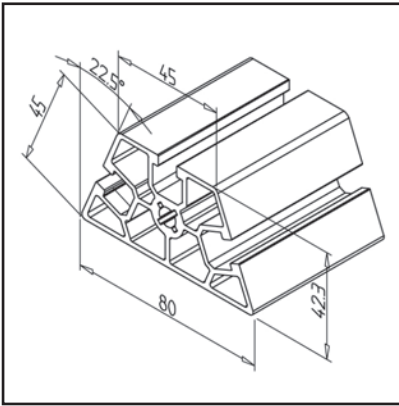
- MiniTec power-lock fastener
- Angle 45°
- Mounting bracket 45 or 90
- Bolt connector



## PROFILE 45 / 22,5°

Part no.

20.1030/0



### TECHN. DATA / ITEMS SUPPLIED

- Aluminium, extruded, anodized E6/EV1
- $I_x = 14.506 \text{ cm}^4$
- $I_y = 33.432 \text{ cm}^4$
- $w_x = 7.934 \text{ cm}^3$
- $w_y = 8.515 \text{ cm}^3$
- Weight = 2.225 kg/m
- Bar length = 6 m
- Packing unit = 36 m

### APPLICATIONS

- Guard units
- Tables
- Connection of construction elements at an angle of 45°
- Bracings

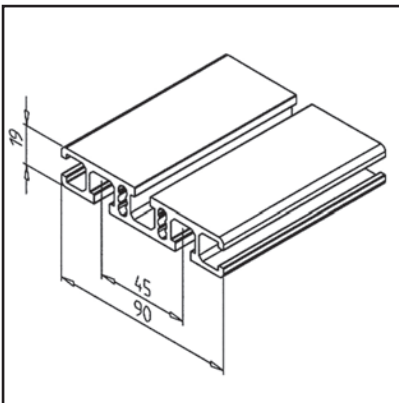
### ASSEMBLY

- MiniTec power-lock fastener
- Angles
- Bolt connector

## PROFILE 19 X 90

Part no.

20.0995/0



### TECHN. DATA / ITEMS SUPPLIED

- Aluminium, extruded, anodized E6/EV1
- $I_x = 3.436 \text{ cm}^4$
- $I_y = 45.455 \text{ cm}^4$
- $w_x = 3.493 \text{ cm}^3$
- $w_y = 10.101 \text{ cm}^3$
- Weight = 1.919 kg/m
- Bar length = 6 m
- Packing unit = 48 m

### APPLICATIONS

- Base plates, tensioning plates
- Contact areas
- Slide plates for linear slides
- Floor fastening plates
- Showcases

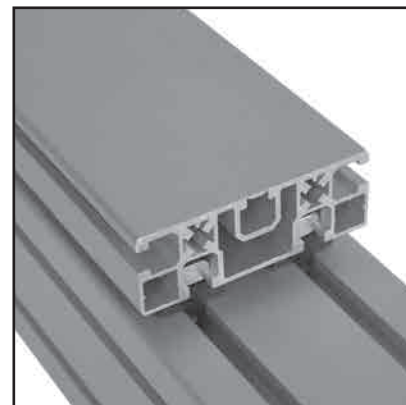
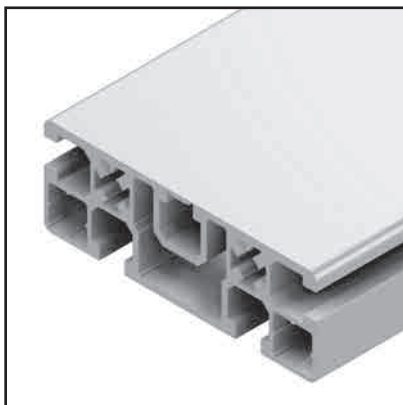
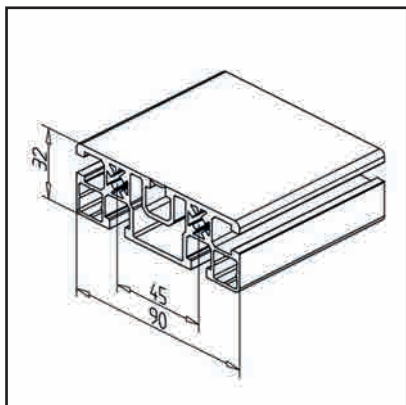
### ASSEMBLY

- Bolt connector
- Angles

## PROFILE 90 X 32 UL

Part no.

20.1066/0



### TECHN. DATA / ITEMS SUPPLIED

- Aluminium, extruded, anodized E6/EV1
- $I_x = 10.627 \text{ cm}^4$
- $I_y = 64.889 \text{ cm}^4$
- $w_x = 5.832 \text{ cm}^3$
- $w_y = 14.34 \text{ cm}^3$
- Weight = 2.464 kg/m
- Bar length = 6 m
- Packing unit = 36 m

### APPLICATIONS

- All types of constructions, with a closed profile side
- Weight-optimized constructions
- Tables
- Frames
- Safety equipment

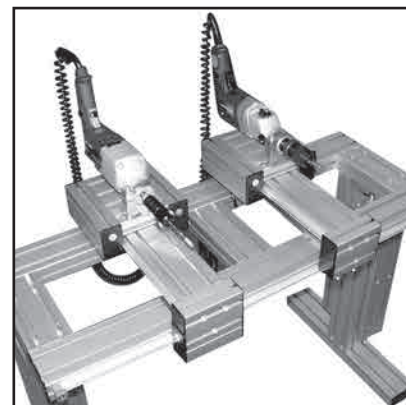
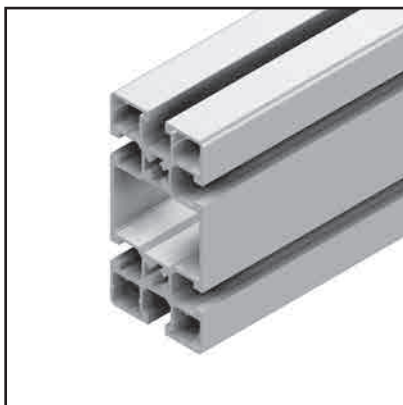
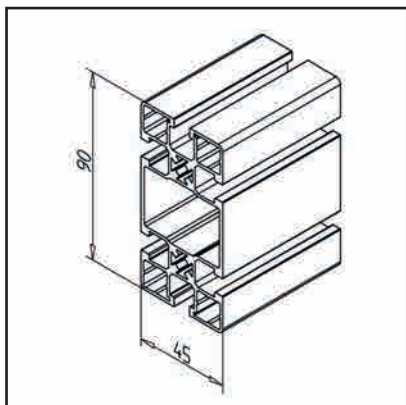
### ASSEMBLY

- MiniTec power-lock fastener
- Angles
- Screw connection
- closed grooves can be opened with the groove opener **part no. 26.0815/0** to the desired length

## PROFILE 45 X 90 UL

Part no.

20.1067/0



### TECHN. DATA / ITEMS SUPPLIED

- Aluminium, extruded, anodized E6/EV1
- $I_x = 73.907 \text{ cm}^4$
- $I_y = 19.194 \text{ cm}^4$
- $w_x = 16.423 \text{ cm}^3$
- $w_y = 8.53 \text{ cm}^3$
- Weight = 2.421 kg/m
- Bar length = 6 m
- Packing unit = 24 m

### APPLICATIONS

- Universal mounting for all types of weight optimised constructions
- The hollow chamber is designed for receiving and guiding counterweights

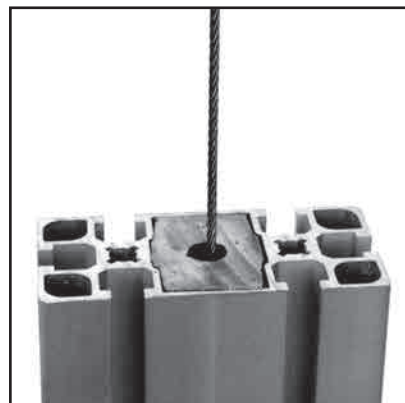
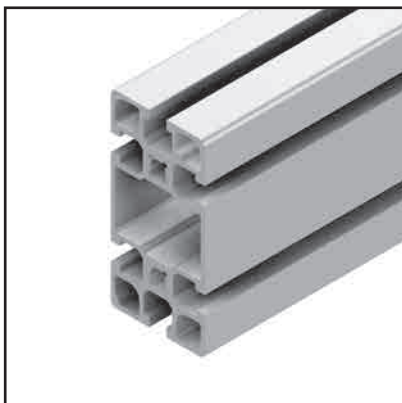
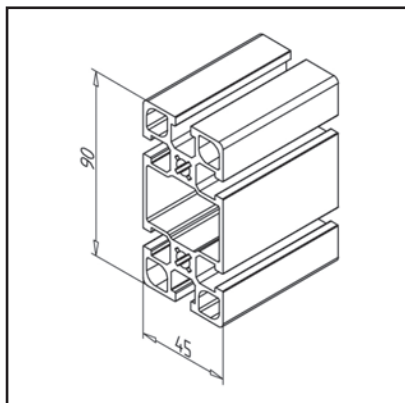
### ASSEMBLY

- MiniTec power-lock fastener
- Angle 19 / 25 / 45 / 45 x 90 GD-Z
- Bolt connector
- Screw connection

## PROFIL 45 X 90 F

Part no.

20.1032/0



### TECHN. DATA / ITEMS SUPPLIED

### APPLICATIONS

### ASSEMBLY

- Aluminium, extruded, anodized E6/EV1
- $I_x = 100.988 \text{ cm}^4$
- $I_y = 24.34 \text{ cm}^4$
- $w_x = 22.441 \text{ cm}^3$
- $w_y = 10.818 \text{ cm}^3$
- Weight = 3.134 kg/m
- Bar length = 6 m
- Packing unit = 24 m

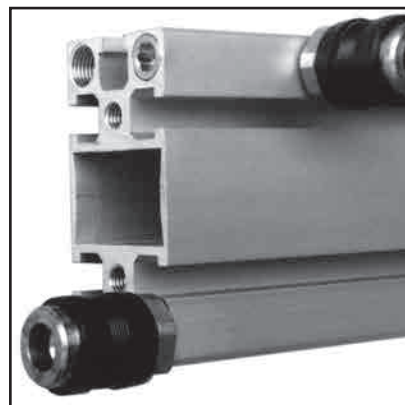
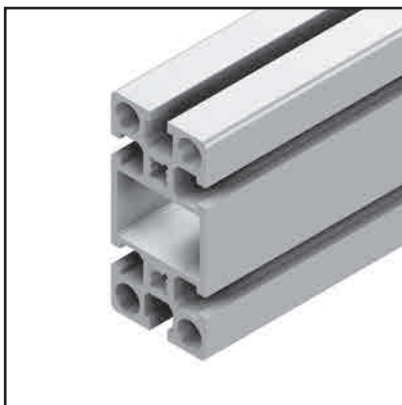
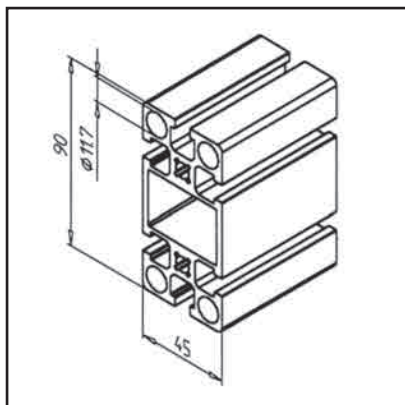
- General constructions
- The hollow chamber is designed for receiving and guiding counterweights

- MiniTec power-lock fastener
- Angle 19 / 25 / 45 / 45 x 90 GD-Z
- Bolt connector

## PROFILE 45 X 90

Part no.

20.1009/0



### TECHN. DATA / ITEMS SUPPLIED

### APPLICATIONS

### ASSEMBLY

- Aluminium, extruded, anodized E6/EV1
- $I_x = 113.205 \text{ cm}^4$
- $I_y = 28.584 \text{ cm}^4$
- $w_x = 25.156 \text{ cm}^3$
- $w_y = 12.704 \text{ cm}^3$
- Weight = 3.667 kg/m
- Bar length = 6 m
- Packing unit = 24 m

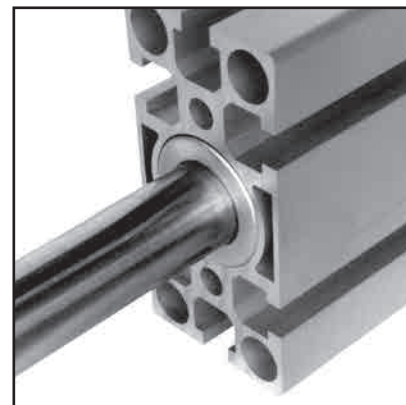
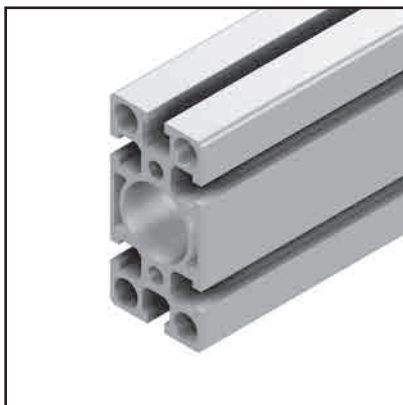
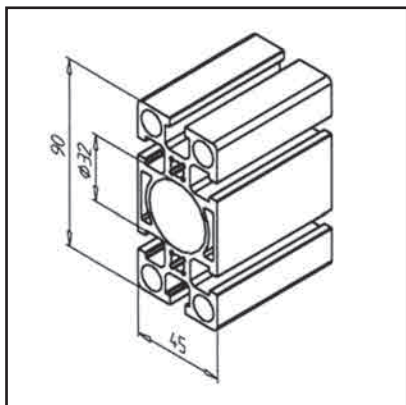
- General heavy duty construction
- 4 cavities for compressed air piping
- Cavity is not suitable for counterweights

- MiniTec power-lock fastener
- Angle 25 / 45 / 90
- Bolt connector
- The  $\varnothing 11.7 \text{ mm}$  holes can be bored with G 1/4 for holding screw plugs or pneumatic connections
- Lateral connections G 1/8" direct into the profile

## PROFILE 45 X 90 S

Part no.

20.1017/0



## TECHN. DATA / ITEMS SUPPLIED

- Aluminium, extruded, anodized E6/EV1
- $I_x = 113.487 \text{ cm}^4$
- $I_y = 30.719 \text{ cm}^4$
- $w_x = 25.219 \text{ cm}^3$
- $w_y = 13.653 \text{ cm}^3$
- Weight = 3.860 kg/m
- Bar length = 6 m
- Packing unit = 24 m

## APPLICATIONS

- All kinds of constructions
- Linear guides LB as slide
- Column guides
- Implementation as compressed air line with base and transport plate and sealing set
- Central bore  $\varnothing 32 \text{ mm}$  for ball-bushings LME 20, for ball-bearings 6201 or 6002, for compressed air piping or guiding of hydraulic add-in cylinders

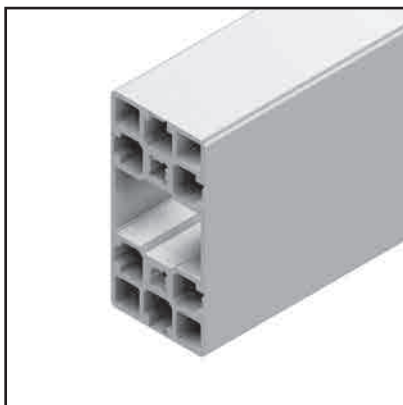
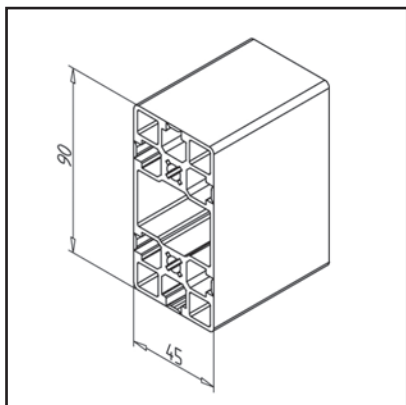
## ASSEMBLY

- MiniTec power-lock fastener
- Mounting bracket 45 or 90
- Screw connection

## PROFILE 45 X 90 G

Part no.

20.1015/0



## TECHN. DATA / ITEMS SUPPLIED

- Aluminium, extruded, anodized E6/EV1
- $I_x = 101.241 \text{ cm}^4$
- $I_y = 25.318 \text{ cm}^4$
- $w_x = 22.498 \text{ cm}^3$
- $w_y = 11.252 \text{ cm}^3$
- Weight = 3.191 kg/m
- Bar length = 6 m
- Packing unit = 24 m

## APPLICATIONS

- All types of constructions, specifically for high hygiene requirements in the food industry, medical technology, bottling of beverages
- Guide for internal counterweights in a central hollow chamber

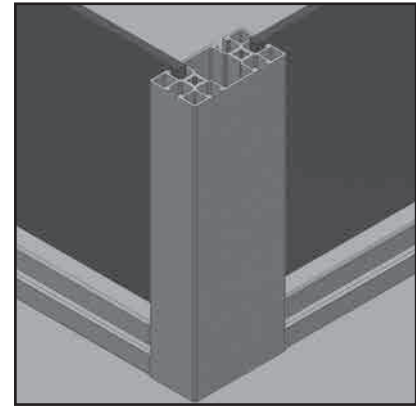
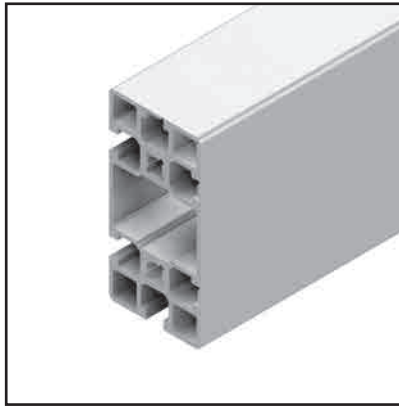
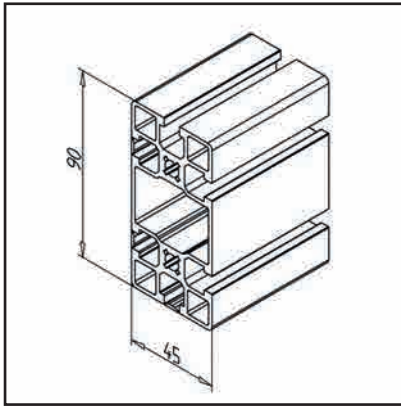
## ASSEMBLY

- MiniTec power-lock fastener
- All 6 grooves can be opened up to the length desired
- closed grooves can be opened with the groove opener **part no. 26.0815/0** to the desired length

## PROFILE 45 X 90 2 G

Part no.

20.1081/0



### TECHN. DATA / ITEMS SUPPLIED

- Aluminium, extruded, anodized E6/EV1
- $I_x = 98.137 \text{ cm}^4$
- $I_y = 24.317 \text{ cm}^4$
- $w_x = 21.808 \text{ cm}^3$
- $w_y = 10.807 \text{ cm}^3$
- Weight = 3.108 kg/m
- Bar length = 6 m
- Packing unit = 24 m

### APPLICATIONS

- Grooves expandable
- All types of constructions, specifically for high hygiene requirements in the food industry, medical technology, bottling of beverages
- Guide for internal counterweights in a central hollow chamber

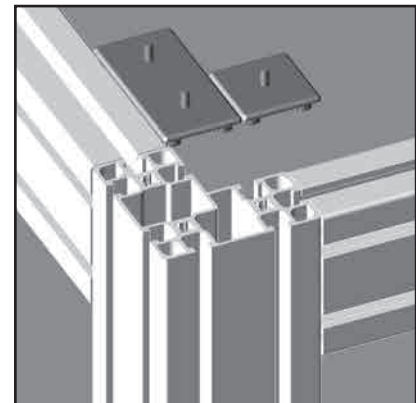
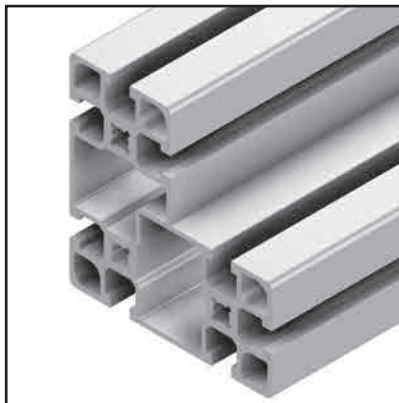
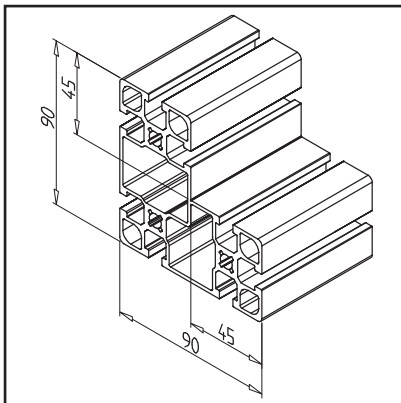
### ASSEMBLY

- MiniTec power-lock fastener
- closed grooves can be opened with the groove opener **part no. 26.0815/0** to the desired length

## PROFIL 90 X 90 X 45

Part no.

20.0984/0



### TECHN. DATA / ITEMS SUPPLIED

- Aluminium, extruded, anodized E6/EV1
- $I_x = 127.588 \text{ cm}^4$
- $I_y = 127.459 \text{ cm}^4$
- $w_x = 24.971 \text{ cm}^3$
- $w_y = 24.895 \text{ cm}^3$
- Weight = 4.458 kg/m
- Bar length = 6 m
- Packing unit = 12 m

### APPLICATIONS

- All kinds of constructions
- Tables
- display windows, showcases
- Framework constructions
- One chamber can be used to guide counterweight 45

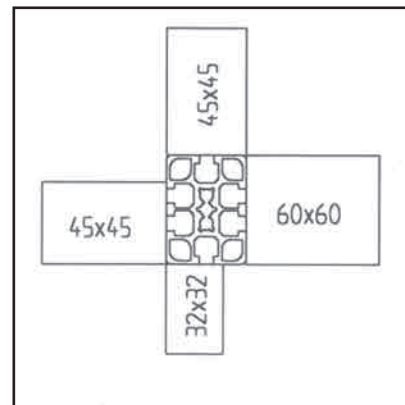
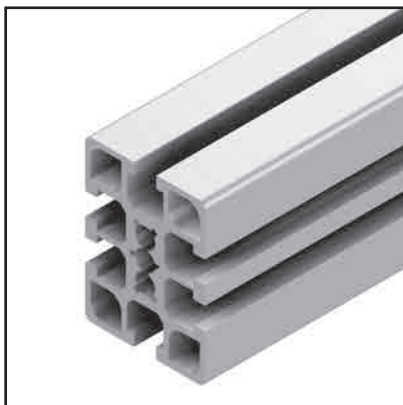
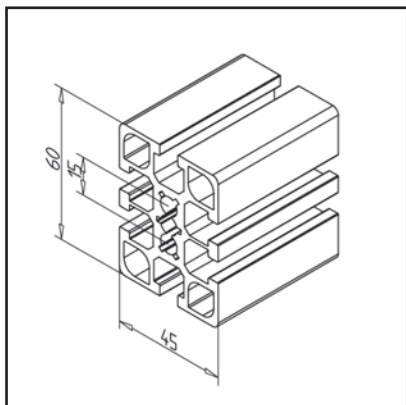
### ASSEMBLY

- MiniTec power-lock fastener
- Screw connection
- Mounting bracket 45 or 90
- Base and transport plate 90x90x45 **part no. 21.2505/0**

**PROFILE 45 X 60 F**

Part no.

20.1023/0

**TECHN. DATA / ITEMS SUPPLIED**

- Aluminium, extruded, anodized E6/EV1
- $I_x = 32.068 \text{ cm}^4$
- $I_y = 17.587 \text{ cm}^4$
- $w_x = 10.689 \text{ cm}^3$
- $w_y = 7.816 \text{ cm}^3$
- Weight = 2.603 kg/m
- Bar length = 6 m
- Packing unit = 24 m

**APPLICATIONS**

- General constructions
- Corner posts in large safety devices

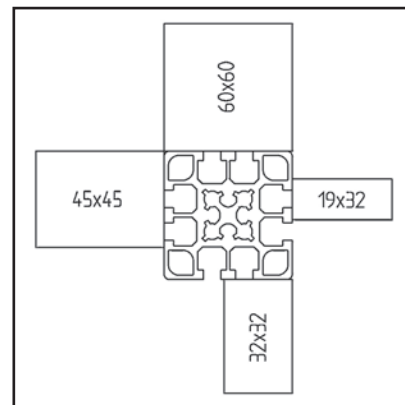
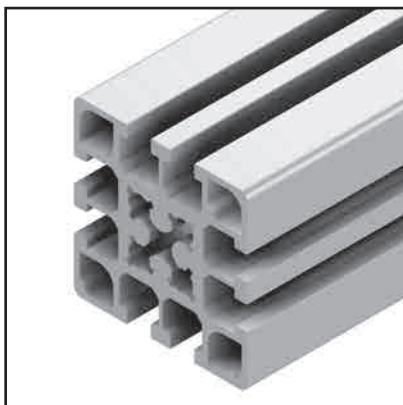
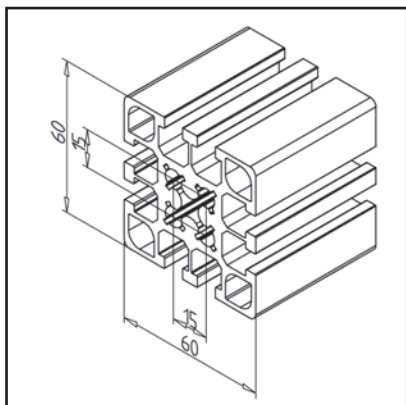
**ASSEMBLY**

- MiniTec power-lock fastener
- Angle 19 / 25 / 45 / 45 x 90 GD-Z
- Central boring for thread M8

**PROFILE 60 X 60 F**

Part no.

20.1049/0

**TECHN. DATA / ITEMS SUPPLIED**

- Aluminium, extruded, anodized E6/EV1
- $I_x = 40.715 \text{ cm}^4$
- $I_y = 40.715 \text{ cm}^4$
- $w_x = 13.571 \text{ cm}^3$
- $w_y = 13.571 \text{ cm}^3$
- Weight = 3.655 kg/m
- Bar length = 6 m
- Packing unit = 24 m

**APPLICATIONS**

- General constructions
- Corner posts in large safety devices

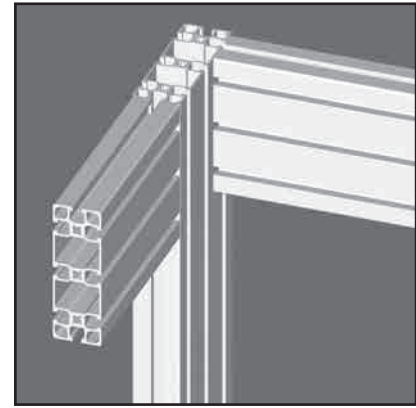
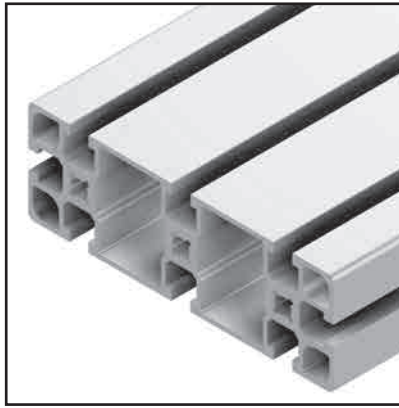
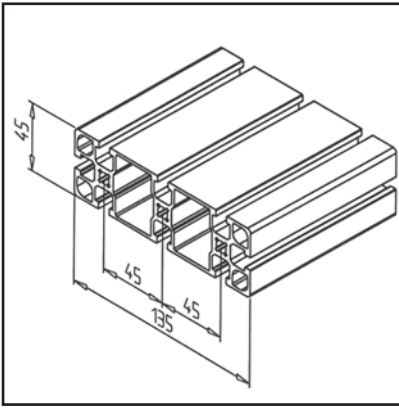
**ASSEMBLY**

- MiniTec power-lock fastener
- Angle 19 / 25 / 45 / 45 x 90 GD-Z
- Central boring for thread M10

## PROFILE 45 X 135 F

Part no.

20.1087/0



### TECHN. DATA / ITEMS SUPPLIED

- Aluminium, extruded, anodized E6/EV1
- $I_x = 34.958 \text{ cm}^4$
- $I_y = 307.866 \text{ cm}^4$
- $w_x = 15.537 \text{ cm}^3$
- $w_y = 45.609 \text{ cm}^3$
- Weight = 4.319 kg/m
- Bar length = 6 m
- Packing unit = 12 m

### APPLICATIONS

- General constructions
- The hollow chamber is designed for receiving and guiding counterweights

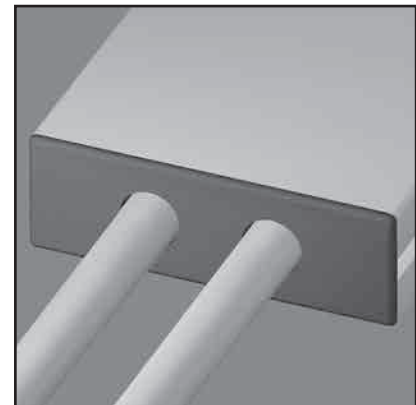
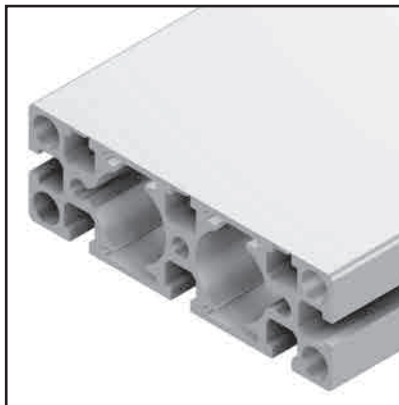
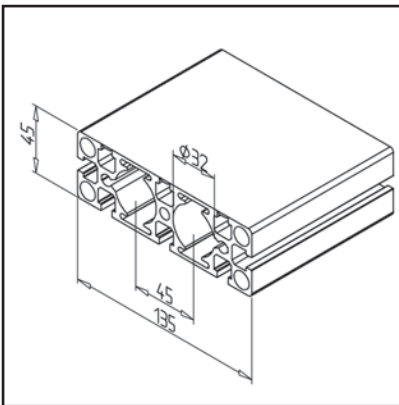
### ASSEMBLY

- MiniTec power-lock fastener
- Angle 19 / 25 / 45 / 45 x 90 GD-Z
- Bolt connector

## PROFILE 45 X 135 1G

Part no.

20.1078/0



### TECHN. DATA / ITEMS SUPPLIED

- Aluminium, extruded, anodized E6/EV1
- $I_x = 47.064 \text{ cm}^4$
- $I_y = 359.242 \text{ cm}^4$
- $w_x = 20.618 \text{ cm}^3$
- $w_y = 53.221 \text{ cm}^3$
- Weight = 5.570 kg/m
- Bar length = 6 m
- Packing unit = 12 m

### APPLICATIONS

- All types of constructions, specifically for high hygiene requirements in the food industry, medical technology, bottling of beverages
- Linear guides LB as slide
- Central bore  $\varnothing 32$  mm for ball-bushings LME 20, for ball-bearings 6201 or 6002, for compressed air piping or guiding of hydraulic add-in cylinders

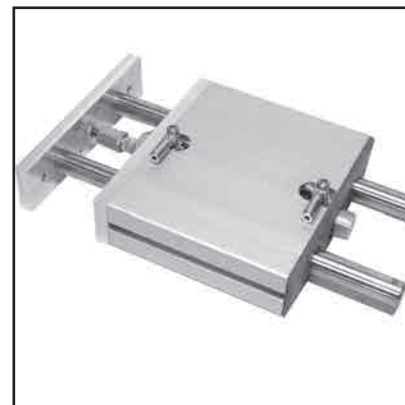
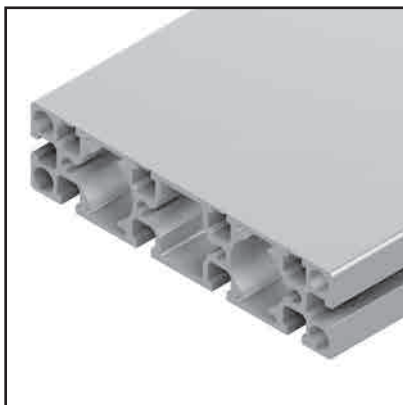
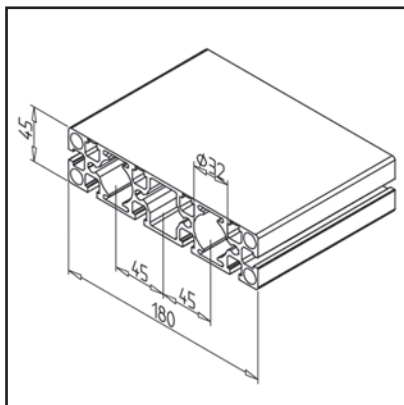
### ASSEMBLY

- MiniTec power-lock fastener
- closed grooves can be opened with the groove opener **part no. 26.0815/0** to the desired length

**PROFILE 45 X 180 1G**

Part no.

20.1079/0

**TECHN. DATA / ITEMS SUPPLIED**

- Aluminium, extruded, anodized E6/EV1
- $I_x = 61.015 \text{ cm}^4$
- $I_y = 810.885 \text{ cm}^4$
- $w_x = 26.704 \text{ cm}^3$
- $w_y = 90.097 \text{ cm}^3$
- Weight = 6.950 kg/m
- Bar length = 6 m
- Packing unit = 12 m

**APPLICATIONS**

- All types of constructions, specifically for high hygiene requirements in the food industry, medical technology, bottling of beverages
- Linear guides LB as slide
- Central bore  $\varnothing 32 \text{ mm}$  for ball-bushings LME 20, for ball-bearings 6201 or 6002, for compressed air piping or guiding of hydraulic add-in cylinders

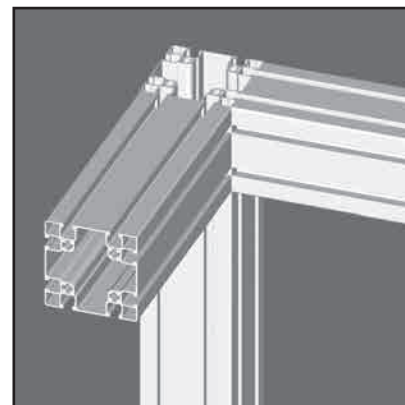
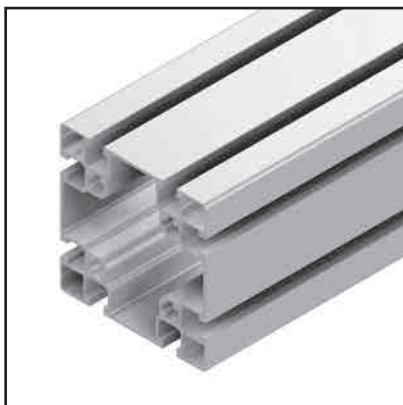
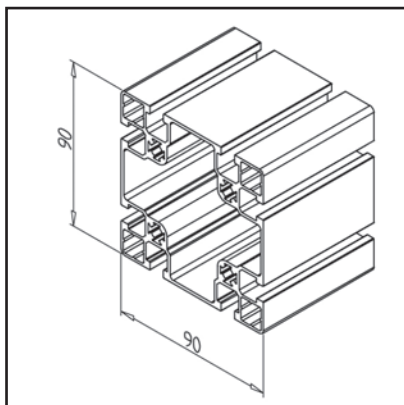
**ASSEMBLY**

- MiniTec power-lock fastener
- closed grooves can be opened with the groove opener **part no. 26.0815/0** to the desired length

**PROFILE 90 X 90 UL**

Part no.

20.0999/0

**TECHN. DATA / ITEMS SUPPLIED**

- Aluminium, extruded, anodized E6/EV1
- $I_x = 132.001 \text{ cm}^4$
- $I_y = 132.001 \text{ cm}^4$
- $w_x = 29.334 \text{ cm}^3$
- $w_y = 29.334 \text{ cm}^3$
- Weight = 3.776 kg/m
- Bar length = 6 m
- Packing unit = 12 m

**APPLICATIONS**

- Weight optimized constructions
- Guide in the central hollow chamber for internal balancing weight for lifting doors

**ASSEMBLY**

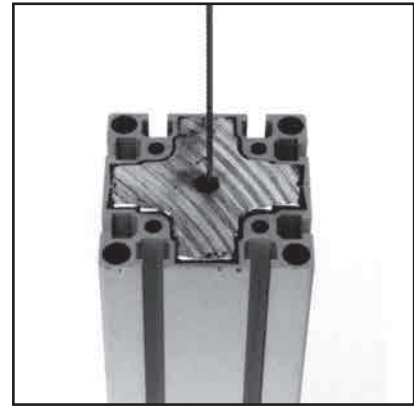
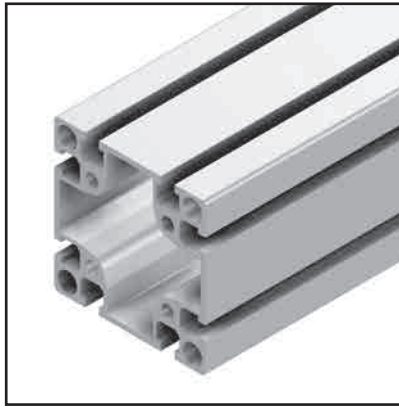
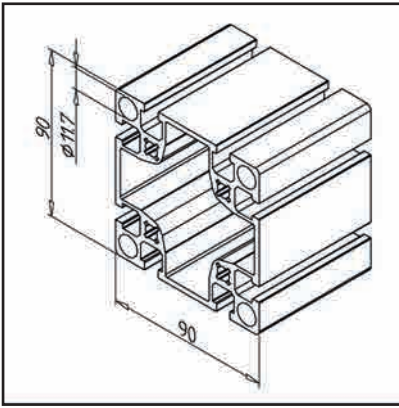
- MiniTec power-lock fastener
- Mounting bracket 45 or 90
- Screw connection
- Bolt connector



## PROFILE 90 X 90 L

Part no.

20.1010/0



### TECHN. DATA / ITEMS SUPPLIED

- Aluminium, extruded, anodized E6/EV1
- $I_x = 186.26 \text{ cm}^4$
- $I_y = 186.26 \text{ cm}^4$
- $w_x = 41.391 \text{ cm}^3$
- $w_y = 41.391 \text{ cm}^3$
- Weight = 5.222 kg/m
- Bar length = 6 m
- Packing unit = 12 m

### APPLICATIONS

- All types of heavy constructions, designed as 4-fold compressed air line and compressed air reservoir
- Guide in the central hollow chamber for internal balancing weight for lifting doors

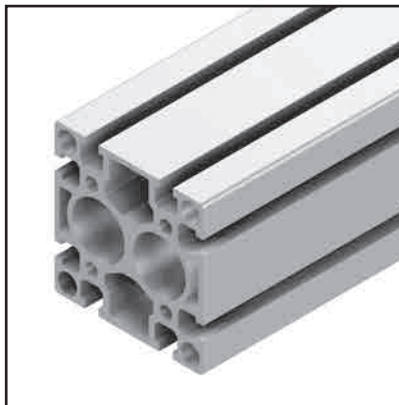
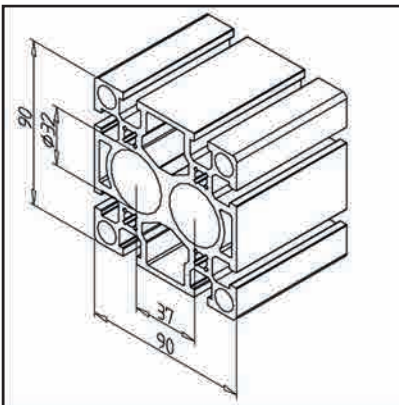
### ASSEMBLY

- MiniTec power-lock fastener
- Mounting bracket 45 or 90
- Screw connection
- Bolt connector

## PROFILE 90 X 90 S

Part no.

20.1019/0



### TECHN. DATA / ITEMS SUPPLIED

- Aluminium, extruded, anodized E6/EV1
- $I_x = 208.888 \text{ cm}^4$
- $I_y = 223.949 \text{ cm}^4$
- $w_x = 46.419 \text{ cm}^3$
- $w_y = 49.766 \text{ cm}^3$
- Weight = 7.514 kg/m
- Bar length = 6 m
- Packing unit = 12 m

### APPLICATIONS

- All types of heavy constructions
- Linear guides LB as slide
- Central bore  $\varnothing 32 \text{ mm}$  for ball-bushings LME 20, for ball-bearings 6201 or 6002, for compressed air piping or guiding of hydraulic add-in cylinders

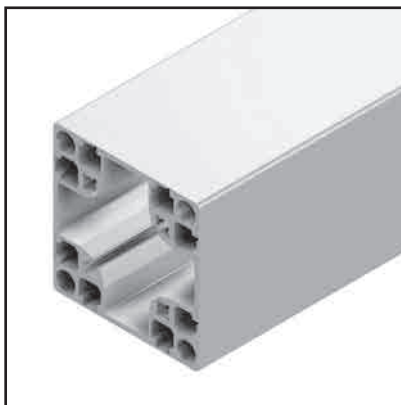
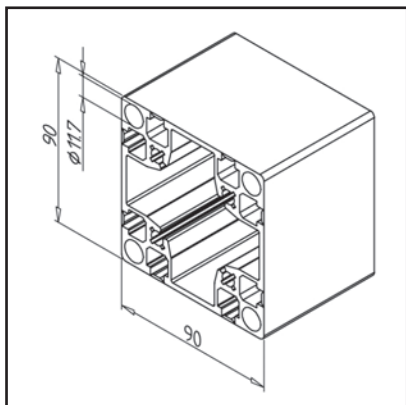
### ASSEMBLY

- MiniTec power-lock fastener
- Mounting bracket 45 or 90
- Screw connection

## PROFILE 90 X 90 G

Part no.

20.1082/0



### TECHN. DATA / ITEMS SUPPLIED

- Aluminium, extruded, anodized E6/EV1
- $I_x = 195.271 \text{ cm}^4$
- $I_y = 195.271 \text{ cm}^4$
- $w_x = 43.393 \text{ cm}^3$
- $w_y = 43.393 \text{ cm}^3$
- Weight = 5.329 kg/m
- Bar length = 6 m
- Packing unit = 12 m

### APPLICATIONS

- Grooves expandable
- All types of constructions, specifically for high hygiene requirements in the food industry, medical technology, bottling of beverages
- Guide for internal counterweights in a central hollow chamber

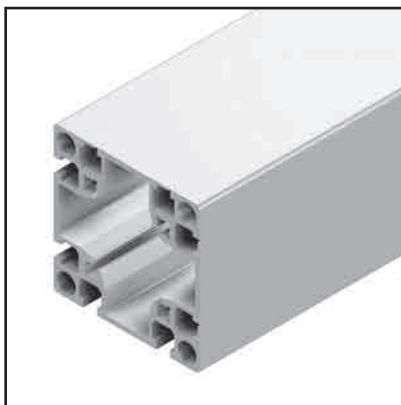
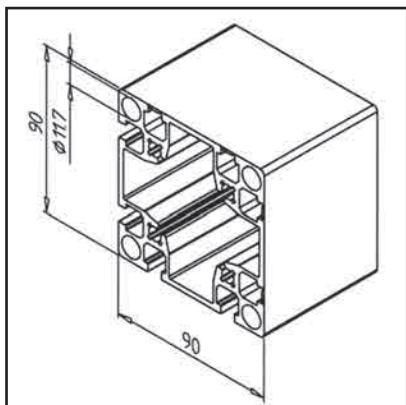
### ASSEMBLY

- MiniTec power-lock fastener
- closed grooves can be opened with the groove opener **part no. 26.0815/0** to the desired length

## PROFILE 90 X 90 2 G

Part no.

20.1044/0



### TECHN. DATA / ITEMS SUPPLIED

- Aluminium, extruded, anodized E6/EV1
- $I_x = 190.169 \text{ cm}^4$
- $I_y = 190.169 \text{ cm}^4$
- $w_x = 41.825 \text{ cm}^3$
- $w_y = 41.825 \text{ cm}^3$
- Weight = 5.217 kg/m
- Bar length = 6 m
- Packing unit = 12 m

### APPLICATIONS

- Grooves expandable
- All types of constructions, specifically for high hygiene requirements in the food industry, medical technology, bottling of beverages
- Guide for internal counterweights in a central hollow chamber

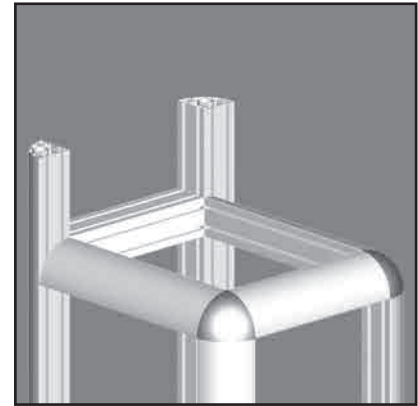
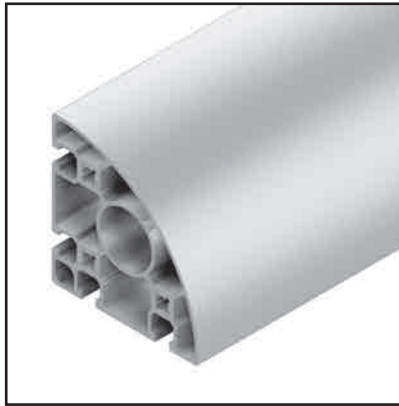
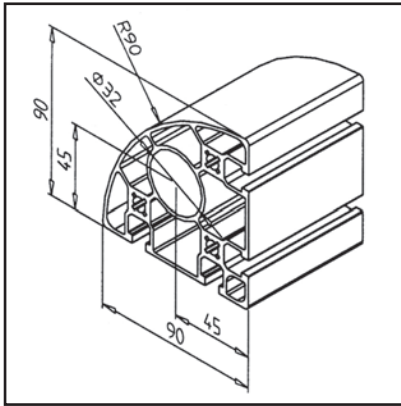
### ASSEMBLY

- MiniTec power-lock fastener
- closed grooves can be opened with the groove opener **part no. 26.0815/0** to the desired length

## PROFILE 90 R 90°

Part no.

20.1091/0



### TECHN. DATA / ITEMS SUPPLIED

- Aluminium, extruded, anodized E6/EV1
- $I_x = 113.389 \text{ cm}^4$
- $I_y = 113.389 \text{ cm}^4$
- $w_x = 21.874 \text{ cm}^3$
- $w_y = 21.874 \text{ cm}^3$
- Weight = 4.265 kg/m
- Bar length = 6 m
- Packing unit = 12 m

### APPLICATIONS

- Tables, frames
- All kinds of constructions

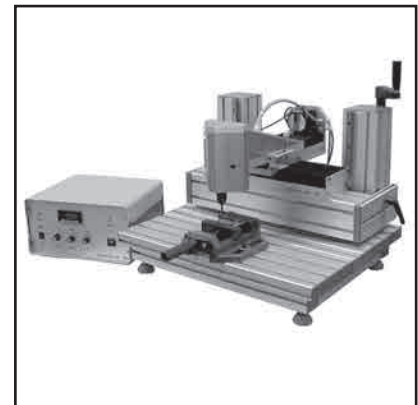
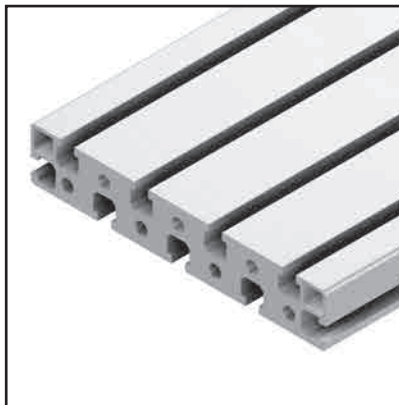
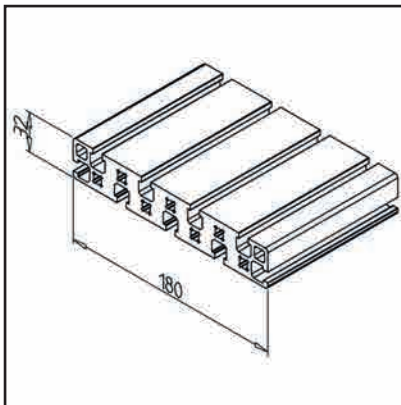
### ASSEMBLY

- MiniTec power-lock fastener
- Angles
- Bolt connector
- End cap, **part no. 22.1021/1**
- Connecting plate M10 - M20
- Corner Connection 90 R 90°

## PROFILE 32 X 180

Part no.

20.1016/0



### TECHN. DATA / ITEMS SUPPLIED

- Aluminium, extruded, anodized E6/EV1
- $I_x = 33.804 \text{ cm}^4$
- $I_y = 843.825 \text{ cm}^4$
- $w_x = 21.068 \text{ cm}^3$
- $w_y = 93.758 \text{ cm}^3$
- Weight = 9.539 kg/m
- Bar length = 6 m
- Packing unit = 6 m

### APPLICATIONS

- Slide plate LR
- Tensioning area
- Base plates
- All types of heavy constructions

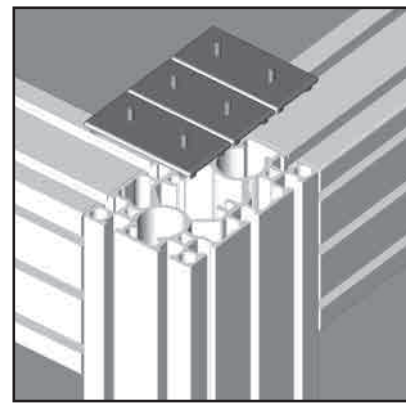
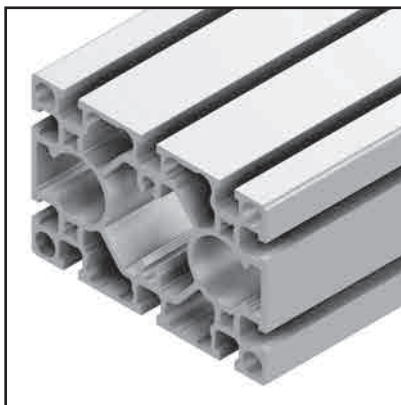
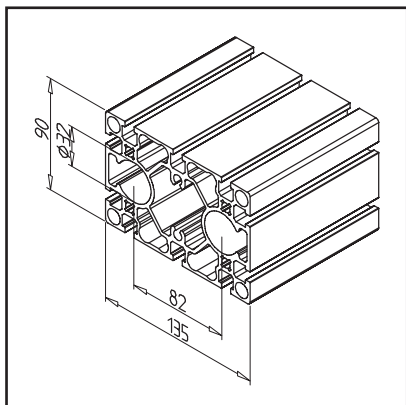
### ASSEMBLY

- MiniTec power-lock fastener
- Mounting bracket 45 or 90
- Screw connection

**PROFIL 90 X 135**

Part no.

20.1148/0

**TECHN. DATA / ITEMS SUPPLIED**

- Aluminium, extruded, anodized E6/EV1
- $I_x = 286.480 \text{ cm}^4$
- $I_y = 631.058 \text{ cm}^4$
- $w_x = 63.662 \text{ cm}^3$
- $w_y = 93.490 \text{ cm}^3$
- Weight = 8.992 kg/m
- Bar length = 6 m
- Packing unit = 6 m

**APPLICATIONS**

- Central bore  $\varnothing 32$  mm for ball-bushings LME 20, for ball-bearings 6201 or 6002, for compressed air piping or guiding of hydraulic add-in cylinders
- Linear guides LB as slide
- All types of heavy constructions

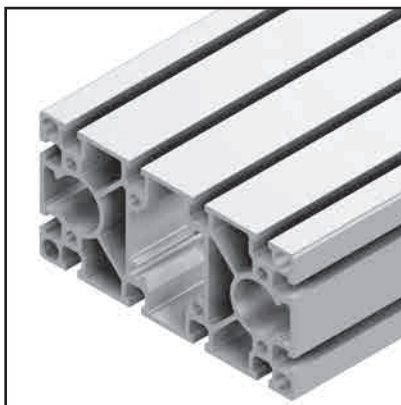
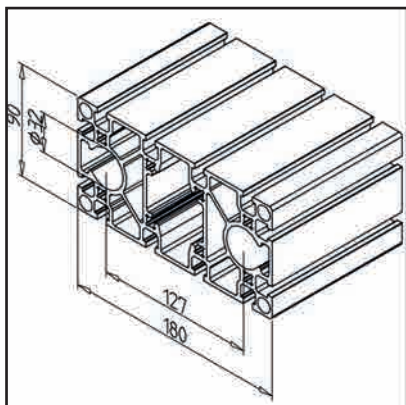
**ASSEMBLY**

- Screw connection
- MiniTec power-lock fastener
- Mounting bracket 45 or 90

**PROFILE 90 X 180 S**

Part no.

20.1013/0

**TECHN. DATA / ITEMS SUPPLIED**

- Aluminium, extruded, anodized E6/EV1
- $I_x = 376.784 \text{ cm}^4$
- $I_y = 1421.865 \text{ cm}^4$
- $w_x = 83.729 \text{ cm}^3$
- $w_y = 157.983 \text{ cm}^3$
- Weight = 11.482 kg/m
- Bar length = 6 m
- Packing unit = 6 m

**APPLICATIONS**

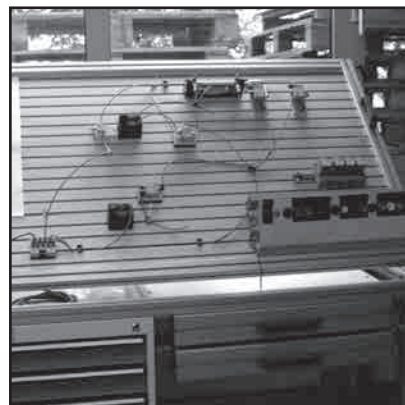
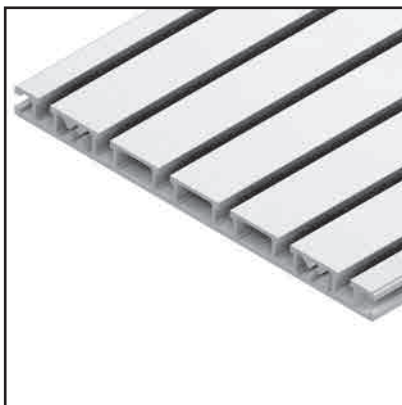
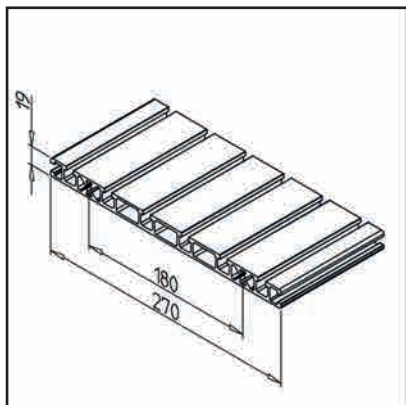
- All types of heavy constructions
- Linear guides LB as slide
- Central bore  $\varnothing 32$  mm for ball-bushings LME 20, for ball-bearings 6201 or 6002, for compressed air piping or guiding of hydraulic add-in cylinders

**ASSEMBLY**

- MiniTec power-lock fastener
- Mounting bracket 45 or 90
- Screw connection

## PROFILE 270 X 19

Part no. 20.1077/0



### TECHN. DATA / ITEMS SUPPLIED

### APPLICATIONS

### ASSEMBLY

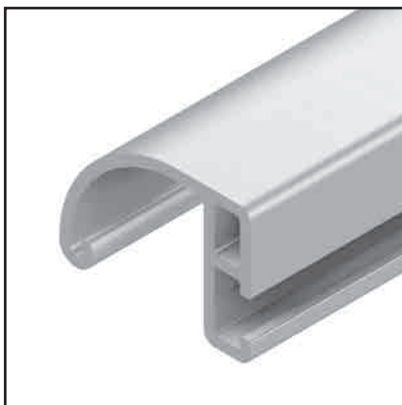
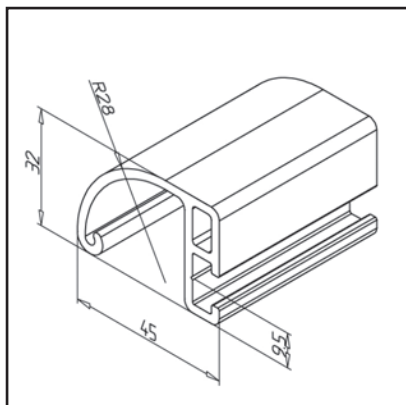
- Aluminium, extruded, anodized E6/EV1
- $I_x = 10.348 \text{ cm}^4$
- $I_y = 1352.197 \text{ cm}^4$
- $w_x = 10.167 \text{ cm}^3$
- $w_y = 100.162 \text{ cm}^3$
- Weight = 5.612 kg/m
- Bar length = 6 m
- Packing unit = 18 m

- Mounting plates
- Workstations
- Training set-ups for training and further education with universal clamping base **part no. P2.0060/0**
- Demonstration units

- MiniTec power-lock fastener
- Screw connection
- Bolt connector

## HANDLE PROFILE ALUMINIUM

Part no. 20.1045/0



### TECHN. DATA / ITEMS SUPPLIED

### APPLICATIONS

### ASSEMBLY

- Aluminium, extruded, anodized E6/EV1
- $I_x = 3.531 \text{ cm}^4$
- $I_y = 7.654 \text{ cm}^4$
- $w_x = 1.985 \text{ cm}^3$
- $w_y = 2.856 \text{ cm}^3$
- Weight = 0.890 kg/m
- Bar length = 6 m

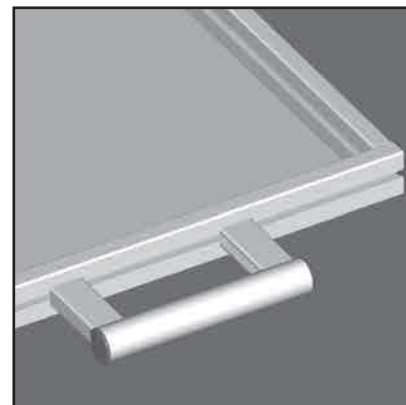
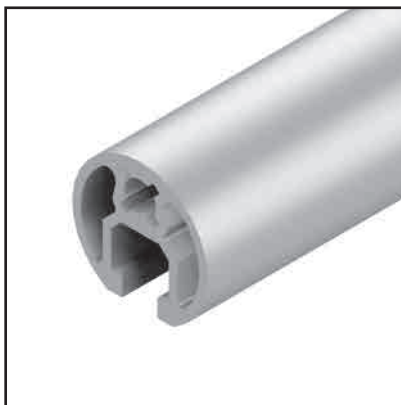
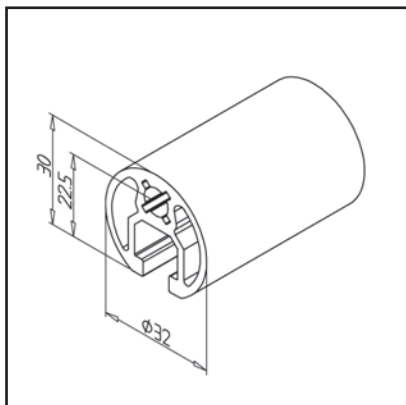
- Handle of diverse lengths
- Sheet edges
- Work station end points
- Cover ledge for cable, pneumatic conducts

- Screw connection
- Angles
- Lateral cover with end cap left **part no. 22.1055/0** and right **part no. 22.1054/0**

**HANDLE PROFILE 32**

Part no.

20.1088/0

**TECHN. DATA / ITEMS SUPPLIED**

- Aluminium, extruded, anodized E6/EV1
- $I_x = 2.601 \text{ cm}^4$
- $I_y = 2.636 \text{ cm}^4$
- $w_x = 1.682 \text{ cm}^3$
- $w_y = 1.649 \text{ cm}^3$
- Weight = 0.911 kg/m
- Bar length = 6 m
- Packing unit = 84 m

**APPLICATIONS**

- Handles of different lengths for doors, drawers, handrails
- Edging of surface elements or posters up to 8 mm
- Profile section for suspending roller tracks or similar

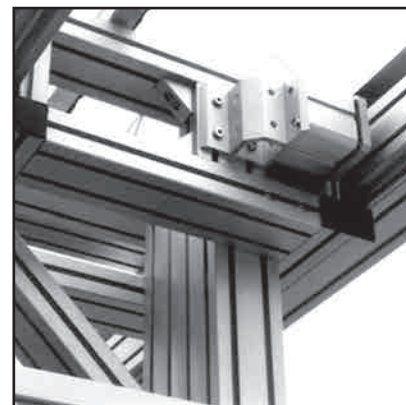
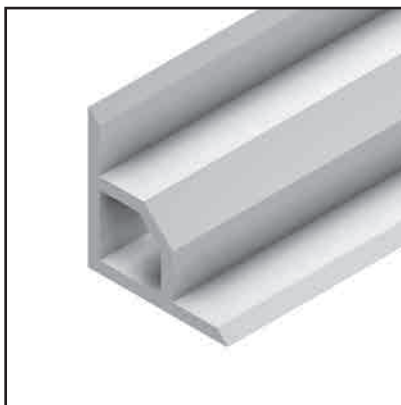
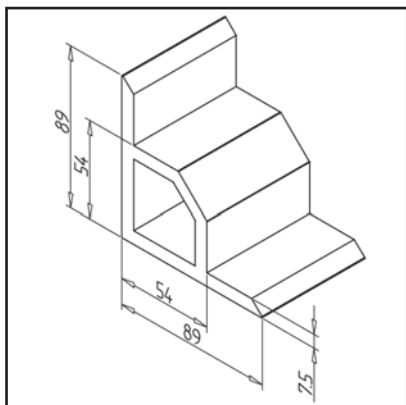
**ASSEMBLY**

- Angle 19 GD-Z, **part no. 21.2078/0**
- Bolt connector
- Screw connection
- Lateral cover with end cap for handle profile 32

**ANGULAR PROFILE 89 X 89**

Part no.

20.1011/0

**TECHN. DATA / ITEMS SUPPLIED**

- Aluminium, extruded, anodized E6/EV1
- $I_x = 105.416 \text{ cm}^4$
- $I_y = 105.416 \text{ cm}^4$
- $w_x = 17.413 \text{ cm}^3$
- $w_y = 17.413 \text{ cm}^3$
- Weight = 4.868 kg/m
- Bar length = 3 m
- Packing unit = 12 m

**APPLICATIONS**

- Consoles
- Contact areas
- Starting material for the production of custom mounting brackets

**ASSEMBLY**

- Screws M8 x 20 and square nuts M8

PROFILE CAPS

SELF-LOCKING PROFILE CAPS FOR ALUMINIUM PROFILES

Due to unprotected profile ends, dirt and foreign bodies can penetrate into the inside of the profiles, which can lead to hygienic problems not only in sensitive environments. All this is prevented by profile caps: The profiles remain clean and protected, the risk of cutting injuries is minimized. Last but not least, they harmoniously round off the look of the aluminium profiles. In practice, however, it is annoying for users when these functions are no longer guaranteed due to loose and falling out profile caps.

This problem is effectively solved with our self-locking profile

caps. These are permanently anchored in the profile by means of an integrated safety pin. It therefore remains at the intended location even under extreme conditions and under the toughest conditions. True to the motto "The Art of Simplicity", the Minitec profile caps are very easy to use: The locking pin is hammered flush into the profile using a plastic hammer. Nevertheless, the profile cap can be removed effortlessly: The pins are punched through with a pin four millimeters in diameter. Separately available spare pins make the profile caps reusable.



Insert cap



Hammer the pin



Profile stays clean and protected

MINITEC ALUMINIUM PROFILE CAPS FOR HEAVY LOADS



Thread M08 shape



Tighten the cap  
(Flat headed screw M08x10)



PROFILE CAPS

Profile sections	ABS grey	Al anodized (fastening screw included)	VA
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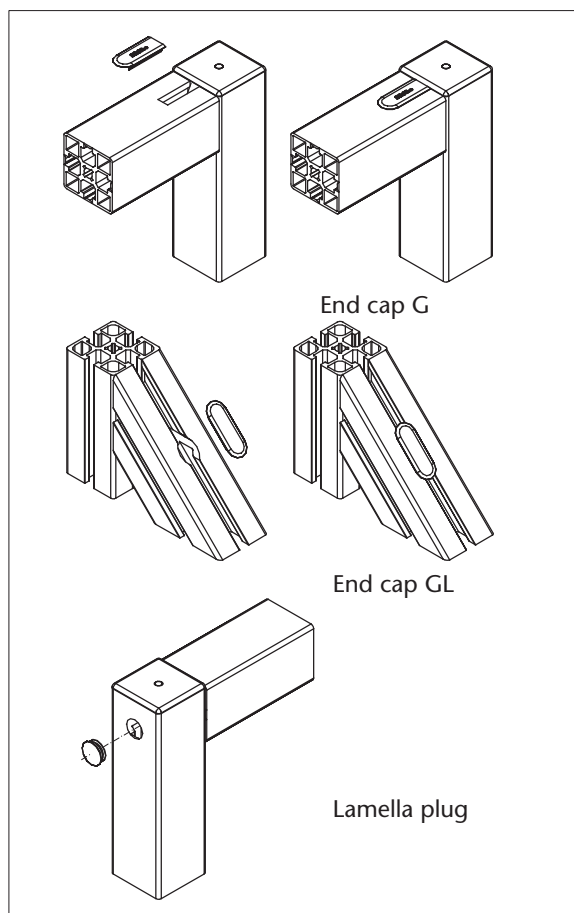
Profile series 30 (Thickness 3 mm)			
23x16	22.0994/1 *		
16x30	22.0981/1 *		
23x23	22.0992/1 *		
23x30	22.0993/1 *		
30x30	22.1146/1 *	22.1149/2	
30R90°	22.1144/1 *		
30R60°	22.1169/1 *		
30R45°	22.1168/1 *		
30R30°	22.1167/1 *		
30x60	22.1134/1 *		
60x60x30	22.0978/1 *		

Profile series 45 (Thickness 3 mm)			
19x32	22.1220/1 *	22.1060/2	
19x45	22.1001/1 *	22.1064/2	
45x19	22.1136/1 *		
32x32	22.1002/1 *	22.1062/2	
45x32	22.1003/1 *	22.1065/2	
45x32 clamp profile	22.1046/1	22.1065/2	
45x45	22.1004/1 *	22.1067/2	22.1067/5
45R4	22.1137/1 *		
45R90°	22.0996/1 *	22.0996/2	
45R60°	22.1018/1 *	22.1018/2	
45R45°	22.1017/1 *	22.1017/2	
45R30°	22.1019/1 *	22.1019/2	
Profile height adjustment	22.0979/1		
45/45°	22.0995/1 *		
45/22,5°	22.1052/1		
19x90	22.1014/1		
90x32	22.0982/1		
45x90	22.1007/1 *	22.1068/2	
45x60	22.1058/1		
60x60	22.1057/1		
45x135	22.1049/1		
45x180	22.1048/1		
90x90	22.0983/1 *	22.1008/2	
90R90°	22.1021/1		
32x180	22.1059/1		
90x180	2x 22.0983/1*	2x 22.1008/2	
270x19	3x 22.1014/1		
HANDLE PROFILE	right 22.1054/0 left 22.1055/0		
HANDLE PROFILE 32	22.1162/1 *		

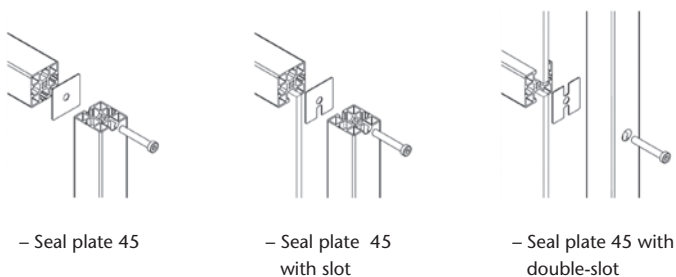
\* With pin

ACCESSORIES	material	Part No.
Flat head screw M8x10 for fixing caps made of aluminum or stainless steel	VA	21.1666/0
Replacement pins for caps with hammer taps (10 pack)	ABS grey	22.1009/1

Other covers	material	Part No.
End cap G for G-Profile 45	PA6 grey	22.1056/0
End cap GL for G-Profile 45	PA6 grey	22.1208/1
End cap G for G-Profile 30	PA6 grey	22.1182/1
End cap GL for G-Profile 30	PA6 grey	22.1183/1
Lamella plug 7	PE grey	22.1200/1
Plug 7	PE grey	22.1215/1
Lamella plug 9	PE grey	22.1201/1
Lamella plug 15	PE grey	22.1202/1
Lamella plug 22	PE grey	22.1209/1



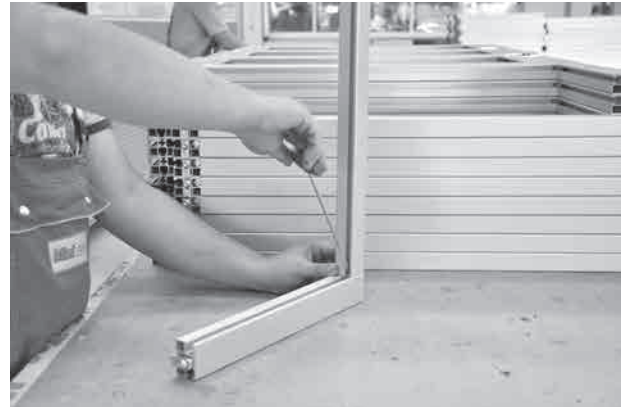
SEALING	material	Part No.
Seal plate 45	Silicon	24.1117/0
Seal plate 45 with slot	Silicon	24.1116/0
Seal plate 45 with double-slot	Silicon	24.1118/0





POWER-LOCK FASTENER

PROFILE CONNECTION WITHOUT MACHINING



Due to recent studies there is much optimization potential especially in connection technology for profile systems. The connection must be seen as a complete system.

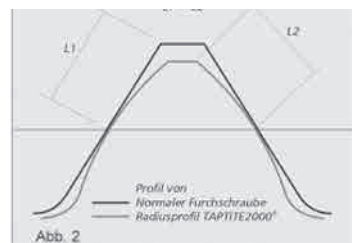
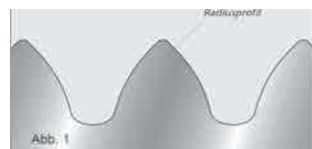
The total cost of a connection is composed of a number of factors:

- Design and dimensioning of bores and threads
- Providing equipment and devices
- Procurement and management of drilling and threading tools
- Work Preparation
- Working time for drilling, threading
- Internal transport

The decisive factor in this consideration is not the cost of the individual connectors. Fundamental cost factor is working time - both in design, production planning and workshop.

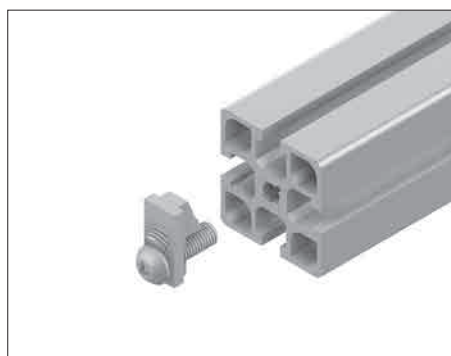
MiniTec power-lock fastener 45 SF

Apart from the cost and time advantages, the MiniTec power-lock fastener has numerous other advantages such as subsequent adjustment, ESD suitability, ergonomic design and optical advantages. The MiniTec power-lock fastener has become even faster with the thread-forming screws. The connector is simply screwed to the profile with the screw at the front. With a standard cordless screwdriver this whole process takes a maximum of 3 seconds. No preparation for drilling, threading, measuring or planning is required. Not only the economic superiority speaks for the MiniTec connector with self-tapping screw: Thanks to the trilobular shank shape combined with the radius profile shape of the thread flanks, the new screws develop low torques. The radius profile shape causes low material displacement and reduces the amount of forming work required. The torque moments are up to 50% lower. This ensures reliable assembly and higher clamping forces with less clamping force dispersion.

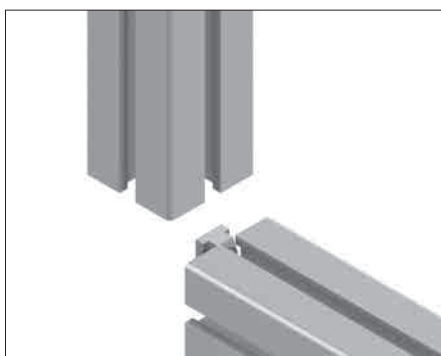


## POWER-LOCK FASTENER

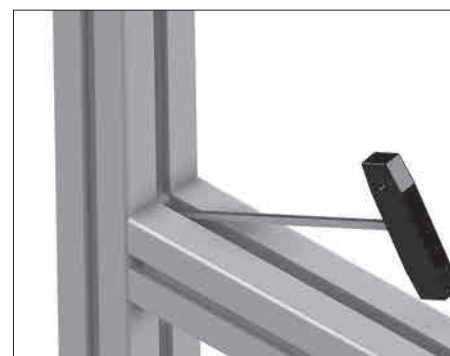
## PROFILE CONNECTION WITHOUT MACHINING



1



2



3

## ASSEMBLY

1. Slightly tighten pressure piece with screw M8 x 25 on the front side of the profile
2. Push profile 2 with its groove beneath the edges of the pressure piece until the desired position is reached
3. Tighten the screw M8 with hex screwdriver SW4. Recommended tightening torque approximately 12 Nm

## Advantages

- The corners of the profile connection remain free for surface elements
- The joint is invisible from the outside
- Secured against rotation
- Load capacity: 6000 N (UL-Profile: 4000N)
- Cross connections can be easily implemented
- For ESD applications, the electrical conductivity of the two profiles must be produced separately for this connector. \*
- Ergonomically optimized
- With the "SF" version, no thread needs to be inserted in the profile beforehand. The thread is produced automatically by screwing the screw into the central bore of the profile.

Name	Part no.	Description
Power-Lock fastener 45	21.1018/0	with filister screw M8/SW5
Power-Lock fastener 45 SF	21.0818/0	with self-tapping Torx screw M8/T40,
Power-Lock fastener 45 H	21.1018/1	Cylindrical screw M8/SW5, Corrosion resistant version for use in corrosive environments
Power-Lock fastener 45 SF short *	21.0020/0	with self-tapping Torx screw M8/T40, for profile connections with flush end cap
Power-Lock fastener 30	21.0014/0	with filister screw M8/SW5
Power-Lock fastener 30 SF	21.0016/0	with self-tapping Torx screw M8/T40



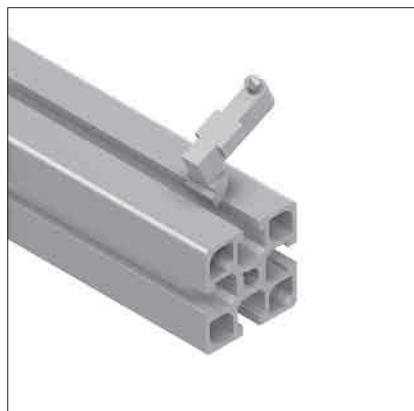
Impulse wrench **Part no. 26.0800/0**  
for particularly joint-gentle work.

## CROSS-CONNECTOR

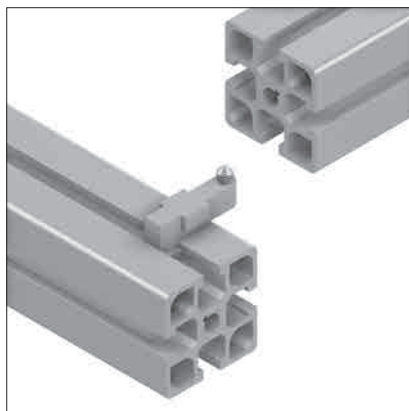
## FRICTIONAL CONNECTION OF INTERSECTING PROFILES WITHOUT MACHINING



Both profiles are adjustable in direction of the groove. Particularly suitable for the attachment of linear axes LR / LB to machine frames.



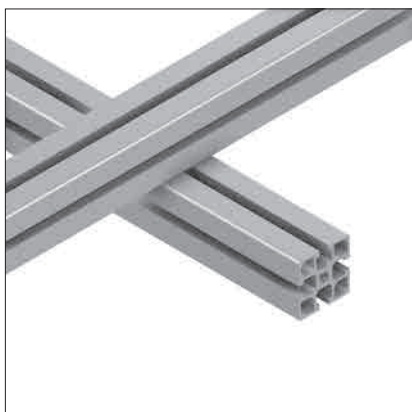
1



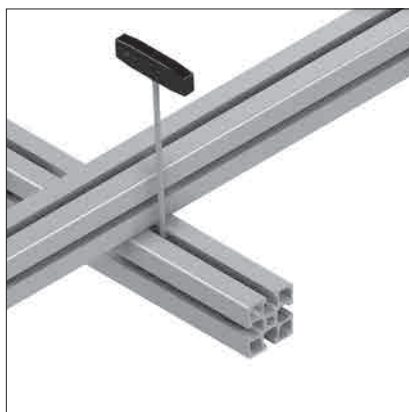
2

## ASSEMBLY

1. Swivel the connector into any existing base frame
2. Insert the profile to be connected over the connector
3. Position the brace profile
4. Tighten the set screw in the connector with a torque of 10 Nm



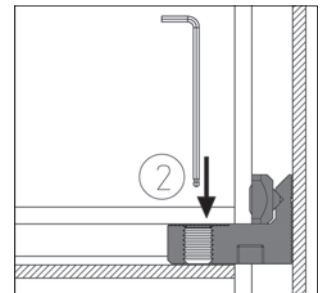
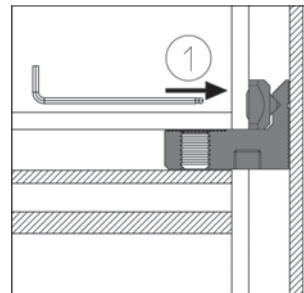
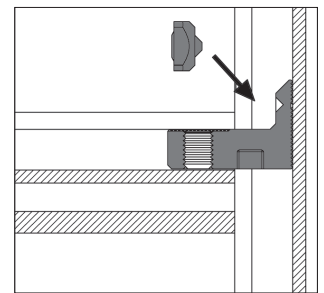
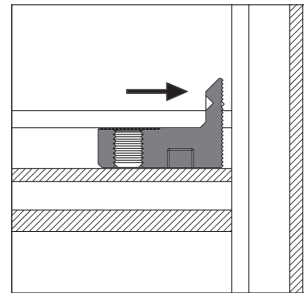
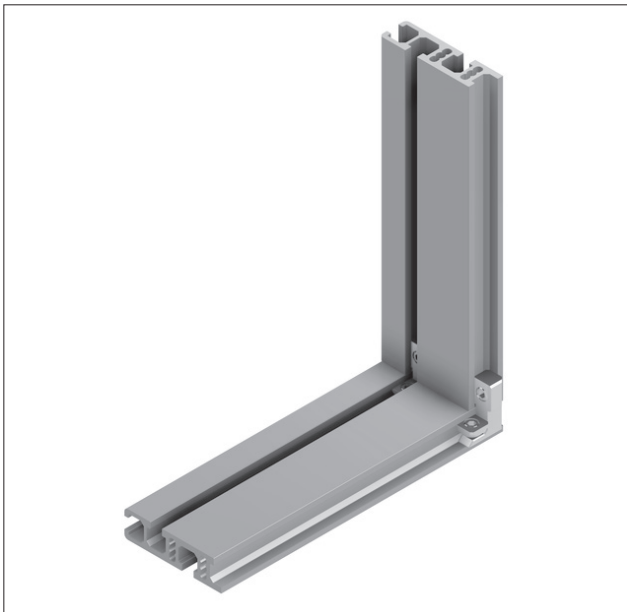
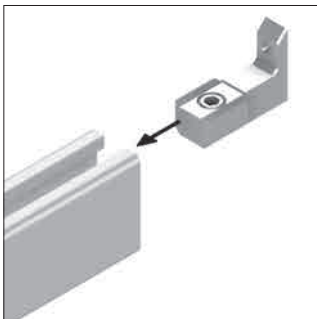
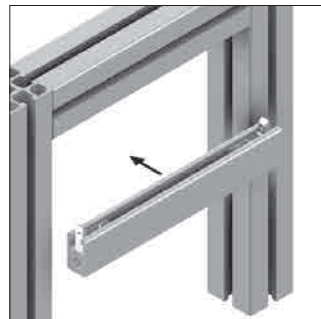
3



4

## POWER-LOCK FASTENER N

## FOR SUBSEQUENT FITTING OF PROFILES INTO EXISTING FRAMES WITHOUT MACHINING

**1****2****3****4**

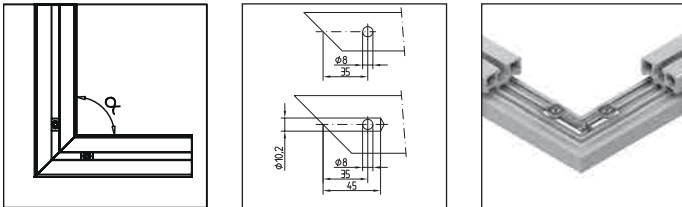
## ASSEMBLY

1. Slide the connector into the strut to be retrofitted
2. Position the strut in the construction
3. Slide connector into existing profile
4. Insert square nut with pre-assembled stud into the groove, position via connector and tighten, then tighten screw in connector (both 10 Nm).

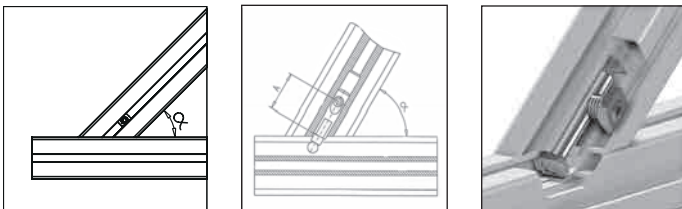
MITRE CONNECTIONS

CONSTRUCTIONS WITH HIGH VISUAL DEMANDS

Mitre connections are used for high visual requirements on design. It should be noted that the capacity of these compounds are less than standard connectors. For heavily loaded structures mitre connections should not be used!



**Mitre connector**  
for front side connection of profiles at any angle of 30° to 180°



**Mitre connector N**  
for connecting profiles with the grooves of continuous profiles at any angle of 30° to 90°

Description	Part no.	Description
<b>Mitre connector 45</b> for profiles series 45	21.1400/0	Drill Ø 10.2 mm bore in the profile core bore. Drill Ø 8.2 bore at the distance 36.5 mm from the profile end. Insert the mitre connector in both open profile ends, position the M8 square nut with the set screw and tighten it.
<b>Mitre connector 30</b> for profile series 30	21.1890/0	Core bore needs no machining. Other installation steps like mitre connector 45.
<b>Mitre connector N 45</b> for profile series 45	21.1401/0	Drill Ø 10.2 mm bore in the profile core bore. Drill Ø 8.2 bore depending on the angle and at distance A from the profile end /see table). Insert the mitre connector in the open profile end, position the M8 square nut with the set screw and tighten it.
<b>Mitre connector N 30</b> for profiles series 30	21.0945/0	Core bore needs no machining. Other installation steps like mitre connector N 45.

**TIPP**

- Drilling jig part no. 26.1050/0 for mitre connector 45
- Drilling jig part no. 26.1060/0 for mitre connector N45
- Drilling jig part no. 26.1063/0 for mitre connector 30
- Drilling jig part no. 26.1056/0 for mitre connector N30

## MITRE CONNECTIONS

## CONSTRUCTIONS WITH HIGH VISUAL DEMANDS

## Drilling jig for mitre connector N30 / N45

Distance A (position of the lateral bore of the threaded pin) depends on the mitre angle. The exact amount is to be taken from the middle bore core drilling of the mitred profile to the middle of the drilling. To safely exclude dimensional errors and ensure the correct functioning of the connection, we recommend the use of our drilling jig for mitre connector N30, part no. 26.1056/0 or N45 part no. 26.1060/0.

## Distances for common angles:

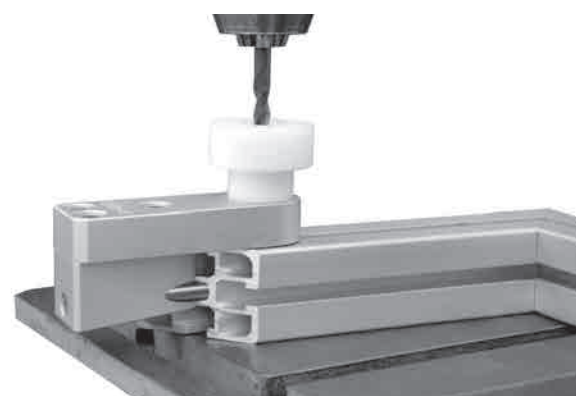
$\alpha$	30°	35°	40°	45°	50°	55°	60°	65°	70°	75°	80°	85°	90°
A(mm)	21,0	22,9	24,8	25,9	27,0	27,6	28,2	28,6	29,0	29,2	29,4	29,45	29,5



Mitre connection N

## Drilling jig for mitre connector 30 / 45

Distance A (position of the lateral bore of the threaded pin) for front-side connection of profiles is consistently 35 mm. The exact amount is to be taken from the middle bore core drilling of the mitred profile to the middle of the drilling. To safely exclude dimensional errors and ensure the correct junctioning of the connection, we recommend the use of our drilling jig for mitre connector 30, part no. 26.1063/0 or 45 part no. 26.1050/0.



## Use of MiniTec drilling jigs

Slide jig central bore of the mitred profile to the stopper. Tighten with screw. Insert into profile with bore through the drilling guide inside the fixing screw.

BOLT AND BUTT CONNECTORS

SUBSEQUENT ASSEMBLY OF PROFILES INTO EXISTING FRAMES, EXTENSION OF PROFILES

**Bolt connectors**

To compensate for the lower load capacity compared to our standard connectors, bolt connectors should always be used in pairs. The weakening of the profile cross-section must be taken into account.

The correct functioning of this connection requires precise machining of the connecting bore. The distance from the end of the profile of 22.5 mm  $\pm$ 0.3 mm must be observed. Another criterion is the precise shape of the connecting bore. Deviations from the circular shape lead to a reduction in the load-bearing surface of the connector. It is therefore necessary to drill the connecting bore on a milling machine.

This connection is not suitable for constructions with air flow in the profile for pneumatic applications.

**Butt connectors**

The machining of the profiles corresponds to the machining of the connectors. For the profile extension we recommend the combination of steel butt connectors and clamping strips.

**T-slot bar 90**

- Profile extension
- Slide into profile groove and clamp with set screws
- No machining required
- For larger profile cross-sections or higher loads, please use several t-slot bars.
- Can be used in combination with butt connectors

**Application**

For rectangular connection of profiles

- Subsequent mounting of profiles into existing frames
- Adjustable
- Extension of profiles

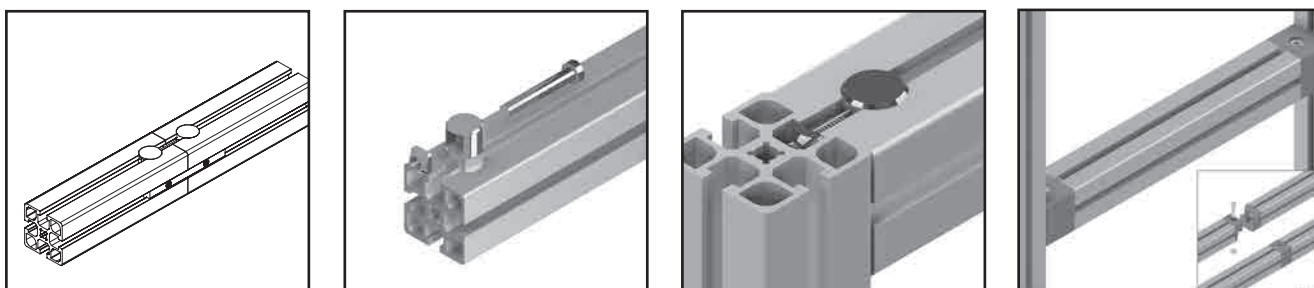
**Processing**

Step drilling  $\varnothing 7 / \varnothing 20$  mm, resp.  $\varnothing 9 / \varnothing 15$  mm, 16 mm depth: middle of the groove, 20 mm from profile end. Use drilling jig for positioning.

1. Insert hex screw M8 x 35 in bolt and - if possible - preassemble square nut into second profil.
  2. Insert bolt in step drilling and connect with square nut.
  3. Pretighten with ball-headed key SW5. Final tightening with L-key 5 A/F.
- Recommended locking torque: 15 Nm
  - Static load: 3500 N

**Mounting bracket 45**

- Profile extension
- Connection of profiles
- Subsequent insertion of profiles into existing constructions
- Removable attachments
- Movable in groove direction



Description	Part no.	Description
<b>Bolt connector 15</b>	21.1024/0	For profile series 32 and narrow side 19 9x15 stepped bore, 16 mm tief, 22,5 mm from the end of profile
<b>Bolt connector 20</b>	21.1021/0	For profile series 45 7x20 stepped bore, 16 mm deep, 22,5 mm from the end of profile
<b>Butt connector 20</b>	21.1020/0	For profile series 45 7x20 stepped bore, 16 mm deep, 22,5 mm from both ends of profile
<b>T-slot bar 90</b>	21.1029/0	For profiles with grid dimension 45 Slide into groove and fasten
<b>Mounting bracket 45</b>	21.1411/0	For profiles with grid dimension 45 Insert face front thread



Drilling jig part no. **26.1092/0** for correct position of the stepped bore

## SCREW CONNECTION

FORM-LOCKING CONNECTION WHICH MUST BE SECURED AGAINST DISLOCATION



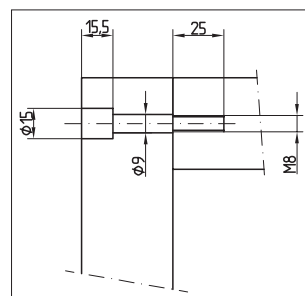
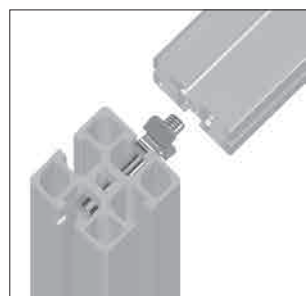
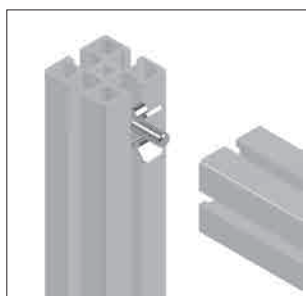
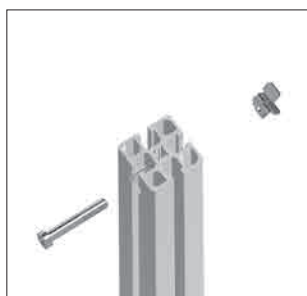
## APPLICATION

- Construction with high dynamic loads

## Processing

Thread M8; step drilling  $\varnothing 9 / \varnothing 15$  mm with drilling jig M8 x 50;

- Position anti-twist lock in the groove
- Push the screw through anti-twist lock
- Screw in and tighten the screw into threaded connection profile
- Recommended locking torque: 20 Nm
- Static load: 18 000 N



Stepped bore

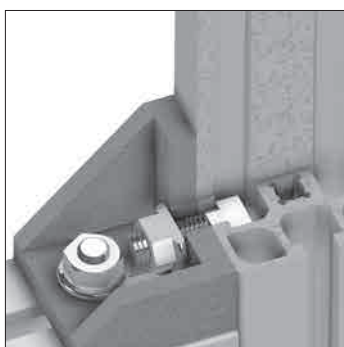


Drilling jig part no. **26.1092/0** for correct position of the stepped bore



MOUNTING ANGLES

EASY INSTALLATION WITHOUT PROCESSING



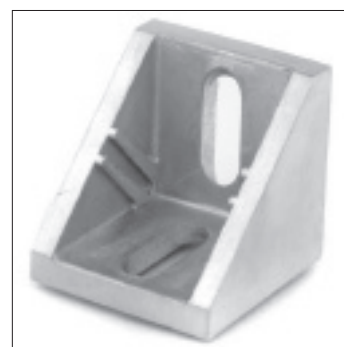
Angle aluminum die casting, powder coated, grey

- No processing
- Retrofitting of profiles possible
- Adjustable



Optional with cover

Caps made of oil resistant ABS, grey



ESD version

- Without powder coating
- With ESD square nuts Z

ASSEMBLY

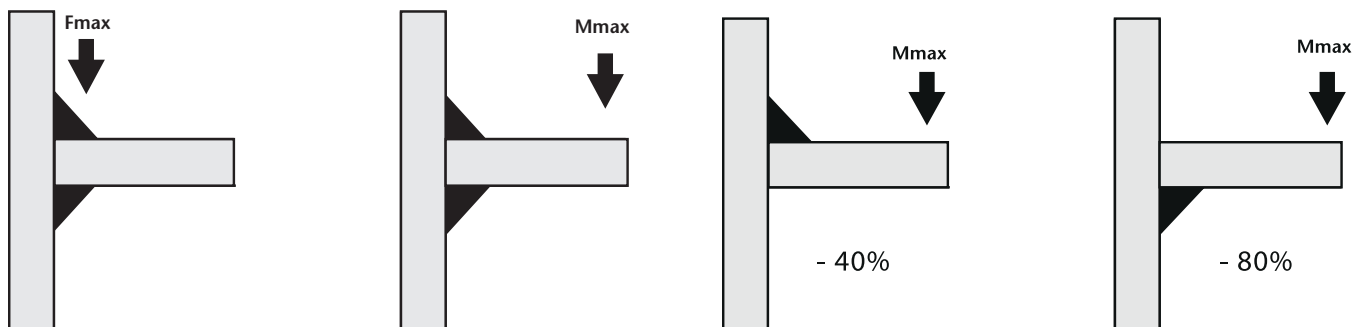
- Use fastening material from fastening kit.

LOAD CAPACITY

angle	Number of screws	Fmax (N)	Mmax (Nm)
Mounting angles 19	2	3.600	280
Mounting angle 25	2	3.600	280
Mounting angles 45	2	3.600	280
Mounting angles 45x90	4	7.200	560
Mounting angles 90	8	14.400	1.120

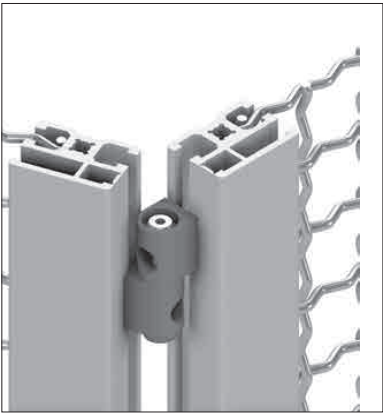
All values include double safety

These values are valid only for angles mounted in pairs if used one-sided, the load reduces as follows:

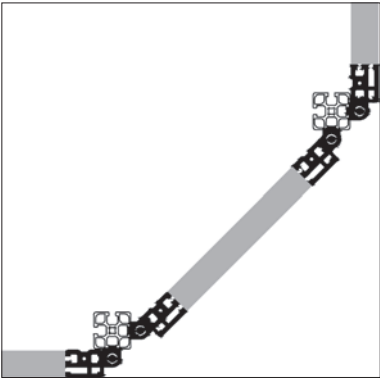
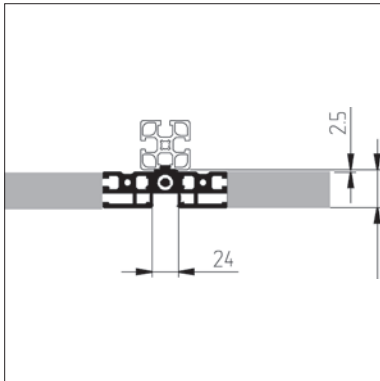
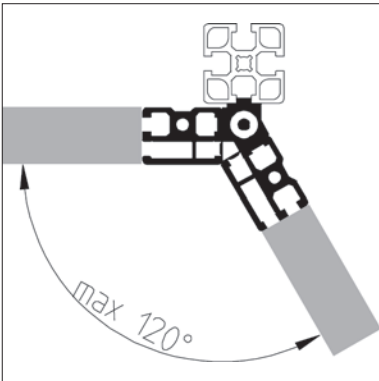
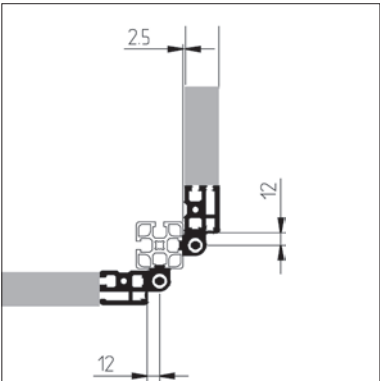


PROTECTIVE FIELD SUSPENSION, ADJUSTABLE ANGLE (part no. 21.1403/0)

CONNECTING PROTECTION FIELDS



MOUNTING POSSIBILITIES



SCREWS

OTHER STANDARDS AND DIMENSIONS ARE AVAILABLE ON REQUEST

CYLINDER SCREWS

M8 with flat head and hexagon socket



Thread	Galvanized	Stainless
M08 x 12	21.1264/0	
M08 x 16	21.1200/0	21.1200/1
M08 x 18	21.1268/0	
M08 x 20	21.1202/0	21.1202/2
M08 x 22	21.1280/0	21.2017/0
M08 x 25	21.1204/0	21.1204/1
M08 x 30	21.1206/0	21.1206/1
M08 x 35	21.1208/0	21.1208/1
M08 x 40	21.1210/0	21.1210/1
M08 x 45	21.1211/0	
M08 x 50	21.1212/0	21.1212/1
M08 x 55	21.1877/0	
M08 x 60	21.1214/0	
M08 x 65	21.1299/0	
M08 x 70	21.1282/0	
M08 x 75	21.1392/0	
M08 x 80	21.1225/0	
M08 x 90	21.1226/0	
M08 x 100	21.1662/0	

M6 with flat head and hexagon socket

Thread	Galvanized	Stainless
M06 x 12	21.1143/0	21.1143/1
M06 x 14	21.1367/0	
M06 x 16	21.1238/0	21.1238/1
M06 x 18	21.1239/0	
M06 x 20	21.1240/0	21.1340/1
M06 x 22	21.1265/0	
M06 x 25	21.1242/0	21.1242/1
M06 x 30	21.1243/0	21.1243/1
M06 x 35	21.1245/0	21.1693/0
M06 x 40	21.1247/0	21.1247/1
M06 x 45	21.1172/0	
M06 x 50	21.1171/0	21.1171/1
M06 x 55	21.1248/0	21.1248/1
M06 x 60	21.1154/0	
M06 x 65	21.1868/0	
M06 x 70	21.1591/0	

M5 with flat head and hexagon socket

Thread	Galvanized	Stainless
M05 x 08	21.1193/0	
M05 x 10	21.1279/0	
M05 x 12	21.1220/0	21.1220/1
M05 x 16	21.1235/0	
M05 x 20	21.1222/0	
M05 x 25	21.1224/0	21.1224/1
M05 x 30	21.1237/0	21.1237/1
M05 x 35	21.2195/0	
M05 x 40	21.1284/0	21.1284/1
M05 x 45	21.1219/0	
M05 x 50	21.1691/0	
M05 x 55	21.1353/0	

COUNTERSUNK SCREWS

M8 with hexagon socket



Thread	Galvanized	Stainless
M08 x 10	21.1552/0	21.1550/0
M08 x 12	21.1263/0	
M08 x 16	21.1513/0	21.1513/1
M08 x 20	21.1514/0	21.1514/1
M08 x 25	21.1520/0	
M08 x 30	21.1516/0	
M08 x 35	21.1947/0	
M08 x 40	21.1547/0	
M08 x 45	21.1645/0	
M08 x 50	21.1517/0	21.1517/1
M08 x 55	21.1546/0	
M08 x 60	21.1523/0	
M08 x 65	21.1949/0	
M08 x 70	21.1950/0	
M08 x 90	21.1946/0	

M6 with hexagon socket

Thread	Galvanized	Stainless
M06 x 10	21.2219/0	21.2219/1
M06 x 12	21.1518/0	
M06 x 16	21.1506/0	21.1506/1
M06 x 20	21.1507/0	
M06 x 25	21.1566/0	
M06 x 30	21.1508/0	
M06 x 35	21.1509/0	
M06 x 40	21.1510/0	
M06 x 45	21.1951/0	
M06 x 50		21.2236/1
M06 x 55	21.1511/0	
M06 x 60	21.1512/0	
M06 x 65	21.2156/0	
M06 x 70	21.2134/0	

M5 with hexagon socket

Thread	Galvanized	Stainless
M05 x 10	21.1532/0	
M05 x 12	21.1543/0	21.1595/0
M05 x 14	21.1519/0	
M05 x 16	21.1503/0	21.1503/1
M05 x 18	21.1537/0	
M05 x 20	21.1504/0	
M05 x 25	21.1505/0	
M05 x 30	21.1482/0	
M05 x 35	21.2215/0	
M05 x 40	21.2127/0	
M05 x 45	21.1945/0	21.1945/1
M05 x 50	21.2123/0	

M4 with hexagon socket

Thread	Galvanized	Stainless
M04 x 08	21.1500/0	
M04 x 10	21.1557/0	
M04 x 12	21.1948/0	
M04 x 16	21.1501/0	21.1501/1
M04 x 20	21.1502/0	
M04 x 25	21.1571/0	
M04 x 30	21.1203/0	

SQUARE NUTS, RHOMBUS NUTS AND SQUARE WASHERS

AVAILABLE FOR M3, M4, M5, M6 AND M8



Square nuts 30 with position-fixing, ESD-conductive

Description	Galvanized	Stainless
M8	21.1570/0	-
M6	21.1569/0	-
M5	21.1568/0	-
M4	21.1567/0	-

Square nuts



Description	Galvanized	Stainless
M8	21.1351/0	21.1351/1
M6	21.1330/0	21.1330/1
M5	21.1320/0	21.1320/1
M4	21.1310/0	21.1310/1
M3	21.1309/0	21.1309/1

Square nuts with position-fixing



Description	Galvanized	Stainless
M8	21.1351/2	21.1351/4
M6	21.1330/2	21.1330/4
M5	21.1320/2	21.1320/4
M4	21.1310/2	21.1310/4
M3	21.1309/2	21.1309/4

Square nuts Z, ESD conductive



Description	Galvanized	Stainless
M8	21.1390/0	-
M6	21.1391/0	-
M5	21.1627/0	-

Square nuts Z with position-fixing, ESD conductive



Description	Galvanized	Stainless
M8	21.1390/2	-
M6	21.1391/2	-
M5	21.1627/2	-

SPECIAL SCREWS

Screws for power-lock fastener



Fillister head screw	Galvanized	Stainless
M08 x 25	21.1189/0	-
M08 x 25 SF*	21.1492/0	-

\*self-tapping thread

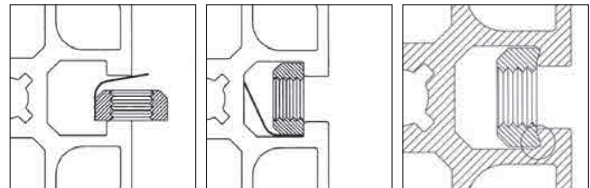
Screws for end caps VA/AL/LR



Flat head screw	Galvanized	Stainless
M08 x 10	-	21.1666/0

Square nuts can be pivoted at any point in the profile. When used in the vertical profile apply square nut with position-fixing. Can be pivoted like the standard square nut; the position-fixing holds the nut in the desired position.

Square nut Z must be used for ESD applications. Available from M5 to M8, with and without spring plate.



with position-fixing

ESD conductive

Square nuts M8 L



Description	Galvanized	Stainless
M8	21.1368/0	-

Square nuts M8 L with position-fixing



Description	Galvanized	Stainless
M8	21.1368/2	-

Rhombus nut F

(Thread M6 with pitch error for self-locking of the screw connection)



Description	Galvanized	Stainless
M6	21.1354/0	-

Square washers



Description	Galvanized	Stainless
Square washers 8	21.1360/0	21.1360/1
Square washers 6	21.1363/0	-
Square washers 5	21.1362/0	-

Hex nut with flange, self-locking



Description	Galvanized	Stainless
M8	21.1334/0	-

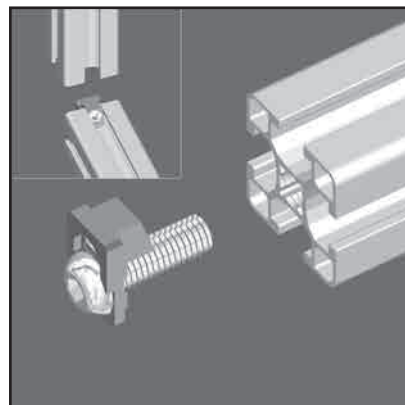
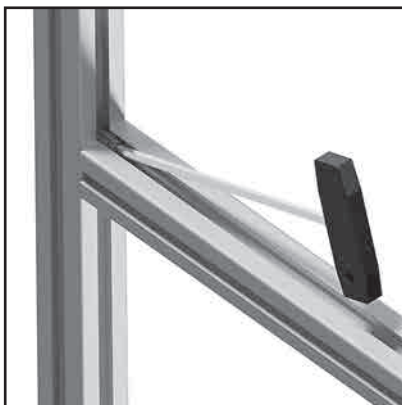
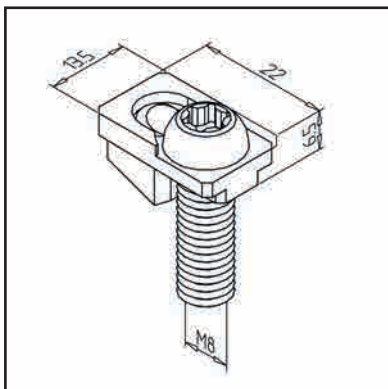
Screws for mounting surface elements



Flat head screw	Galvanized	Stainless
M06 x 12	21.2074/0	-
M06 x 16	21.1246/0	-
M06 x 20	21.1246/1	-

## POWER-LOCK FASTENER 30 SF

Part no. 21.0016/0



### TECHN. DATA / ITEMS SUPPLIED

- Steel, galvanized
- Self tapping torx screw T40
- Power-Lock fastener 30 (standard) **part no. 21.1014/0** with filister head screw A/F 5
- Package size of 100 pieces in Kantainer version SF **part no. 21.0016/0100** version Standard **part no. 21.0014/0100**
- Weight = 0.021 kg/piece

### APPLICATIONS

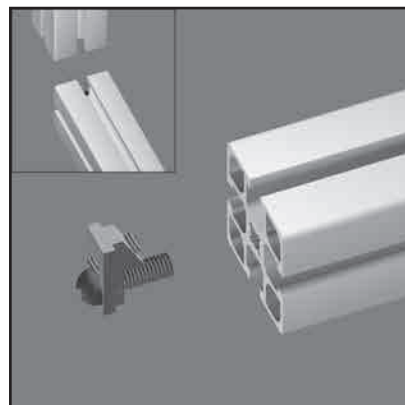
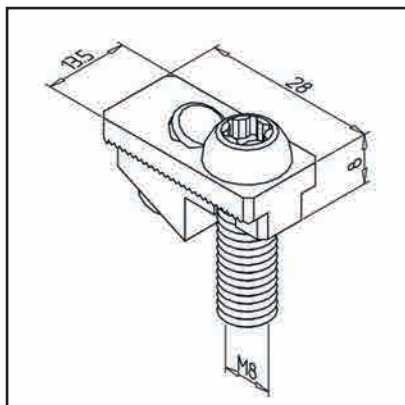
- For force-locked connection
- Also suitable for cross joints
- Appropriate for ESD implementations

### ASSEMBLY

- Fasten the connector frontally to the profile with the torx wrench T 40
- Tighten the set screw M8 with the wrench SW 4
- Recommended locking torque: 12 Nm
- For screwing in self-tapping screws for MiniTec power-lock fastener: Impulse wrench **part No. 26.0800/0**

## POWER-LOCK FASTENER 45 SF

Part no. 21.0818/0



### TECHN. DATA / ITEMS SUPPLIED

- Steel, galvanized
- Self tapping torx screw T40
- Power-lock fastener 45 (standard) **part no. 21.1018/0**, with filister head screw SW 5
- Power-Lock fastener 45 H - stainless version **part no. 21.1018/1** with cylinder head screw A/F 5
- Package size of 100 pieces in Kantainer version SF **part no. 21.0818/0100** version Standard **part no. 21.1018/0100**
- Weight = 0.030 kg/piece

### APPLICATIONS

- Power-lock connection for all profiles, also suitable for crossjoints
- For larger profile sections several fasteners can be used
- Appropriate for ESD implementations

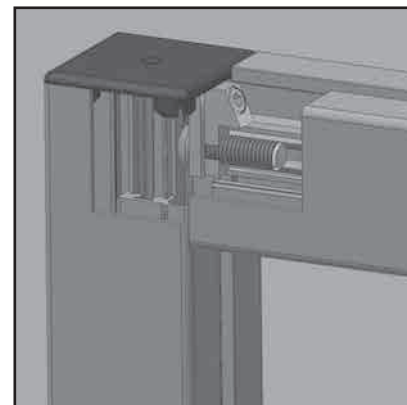
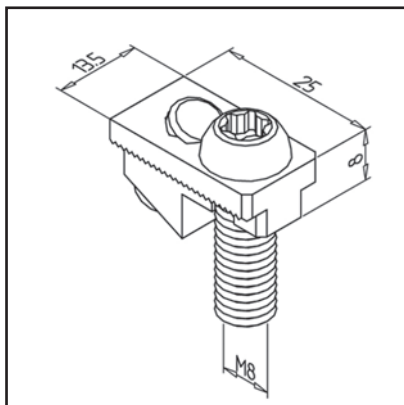
### ASSEMBLY

- Fasten the connector frontally to the profile with the torx wrench T 40
- Tighten the set screw M8 with the wrench SW 4
- Recommended locking torque: 12 Nm
- For screwing in self-tapping screws for MiniTec power-lock fastener: Impulse wrench **part No. 26.0800/0**

**POWER-LOCK FASTENER 45 SF SHORT**

Part no.

21.0020/0

**TECHN. DATA / ITEMS SUPPLIED**

- Steel, galvanized
- Self tapping torx screw T40
- Weight = 0.028 kg/piece

**APPLICATIONS**

- For mounting profiles with flush cover cap
- For ESD applications of the fastener electr. conductivity of the two profiles has to be produced.

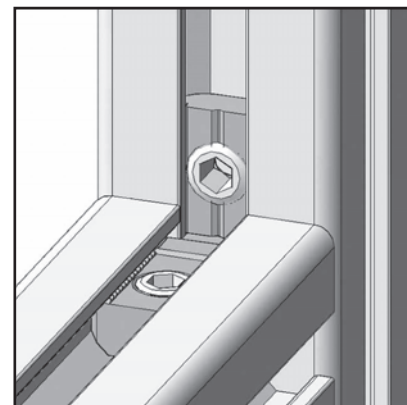
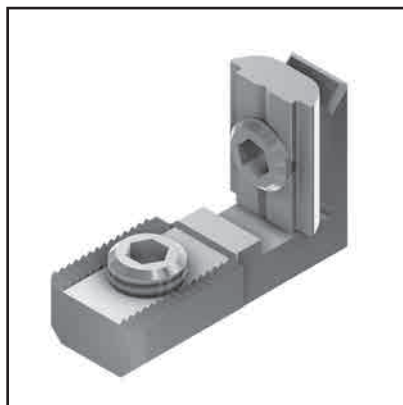
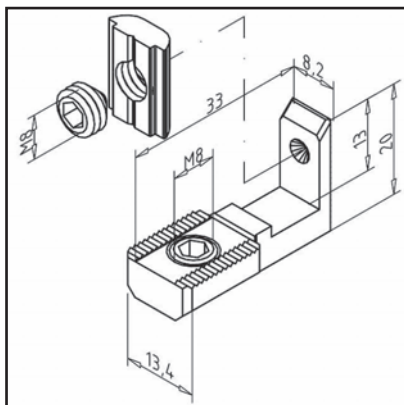
**ASSEMBLY**

- Fasten the connector frontally to the profile with the torx wrench T 40
- Tighten the set screw M8 with the wrench SW 4
- Recommended locking torque: 12 Nm
- For screwing in self-tapping screws for MiniTec power-lock fastener: Impulse wrench **part No. 26.0800/0**

**POWER-LOCK FASTENER N 30**

Part no.

21.0033/0

**TECHN. DATA / ITEMS SUPPLIED**

- Steel, galvanized
- Connection element with pre-assembled threaded pin M8
- 1 Slide nut M8 with pre-assembled setscrew
- Weight = 0.025 kg/piece

**APPLICATIONS**

- For force-locked connection
- Especially for post-mounting of additional profiles in existing constructions

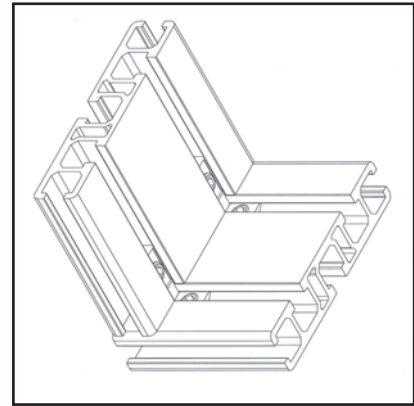
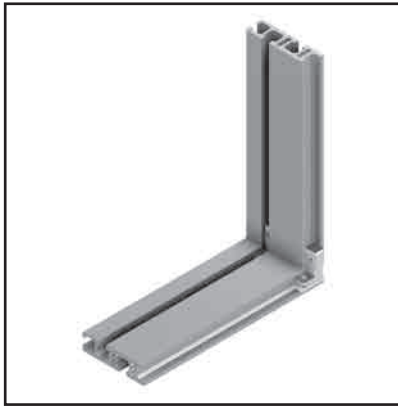
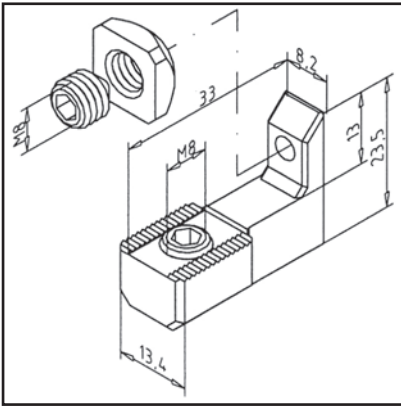
**ASSEMBLY**

- Position the profile with the connector
- Swing in and tighten sliding nut with threaded pin
- Tighten set screw of fastener
- Tighten both threaded pins with SW 4 and with 10 Nm torque

## POWER-LOCK FASTENER N 45

Part no.

21.0918/0



### TECHN. DATA / ITEMS SUPPLIED

- Steel, galvanized
- Connection element with pre-assembled threaded pin M8
- 1 Slide nut M8 with pre-assembled setscrew
- Weight = 0.036 kg/piece

### APPLICATIONS

- For connecting all profiles of the profile series 45
- Especially for post-mounting of additional profiles in existing constructions
- For profile sections bigger than 45 x 45 several fasteners can be used

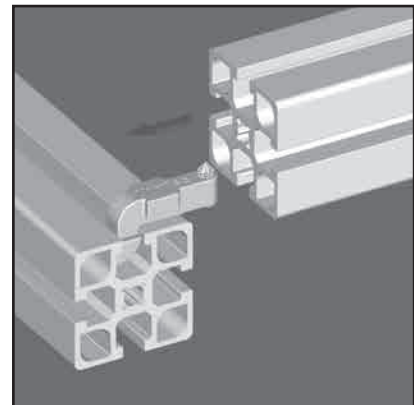
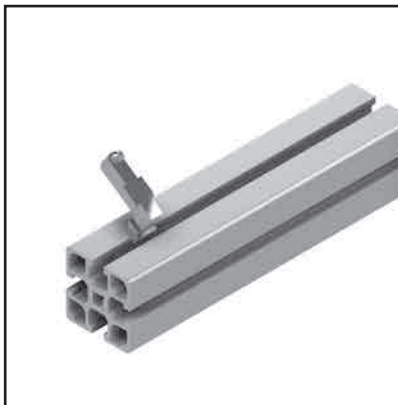
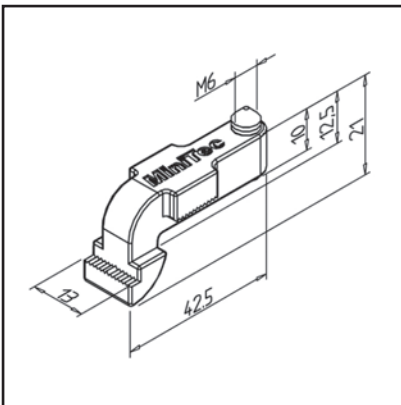
### ASSEMBLY

- Position the profile with the connector
- Swing in and tighten sliding nut with threaded pin
- Tighten set screw of fastener
- Tighten both threaded pins with SW 4 and with 10 Nm torque

## CROSS-CONNECTOR 45

Part no.

21.0006/0



### TECHN. DATA / ITEMS SUPPLIED

- Steel, galvanized
- Connection element with pre-assembled threaded pin M6
- Weight = 0.035 kg/piece

### APPLICATIONS

- For connecting all profiles of the profile series 45
- Especially for retrofitting profiles into existing constructions
- Suitable for ESD applications

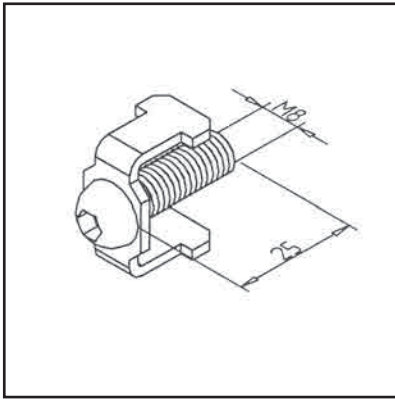
### ASSEMBLY

- Swing the connector into the existing frame
- Push the new profile over the connector
- Tighten set screw in connector with wrench size 3 to 10 Nm torque

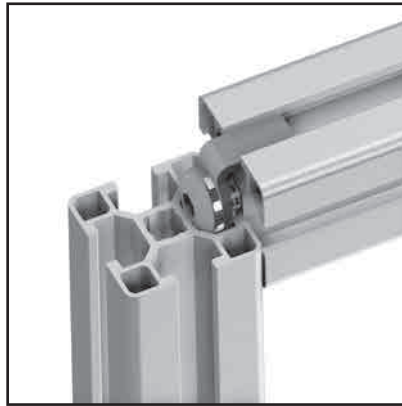
**SCREW-CONNECTION 30 N**

Part no.

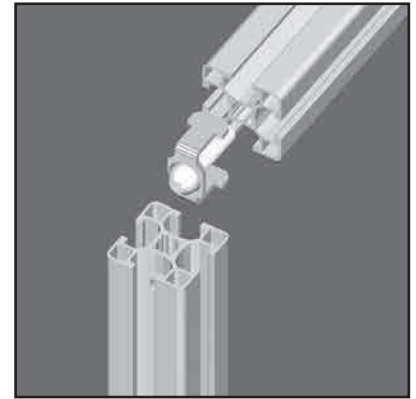
21.1385/0

**TECHN. DATA / ITEMS SUPPLIED**

- Steel, galvanized
- Anti-twist lock with cylinder-head screw
- Weight = 0.017 kg/piece

**APPLICATIONS**

- Connection of profiles

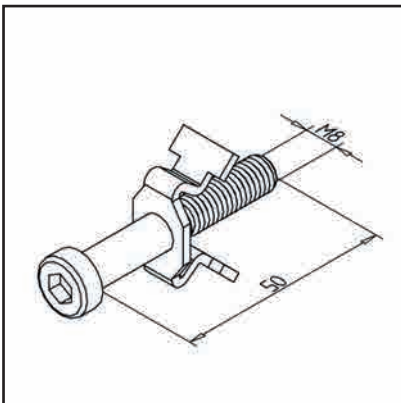
**ASSEMBLY**

- Bring in the Thread M8 x 25 in the centre borehole of the profile
- Insert bore  $\varnothing$  7 mm in profile 2
- Install screw and anti-rotation lock on profile 1 and insert in groove of profile 2
- Pull through hole  $\varnothing$  7 mm with Allen wrench
- Recommended locking torque: 20 Nm
- The bore  $\varnothing$  7 mm can be closed with plug 7 **part no. 22.1215/1**, should be used with our closed t-slot profiles

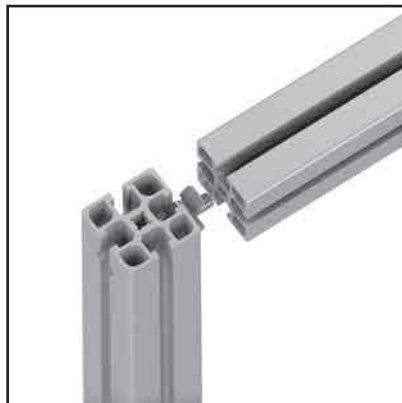
**SCREW CONNECTION 45**

Part no.

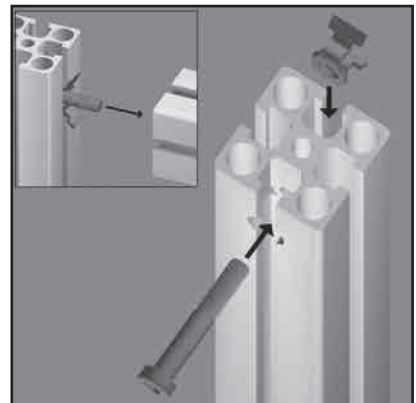
21.1017/0

**TECHN. DATA / ITEMS SUPPLIED**

- Steel, galvanized
- Anti-twist lock with cylinder-head screw
- Weight = 0.027 kg/piece

**APPLICATIONS**

- Effective against slipping
- Secured connection of all profiles

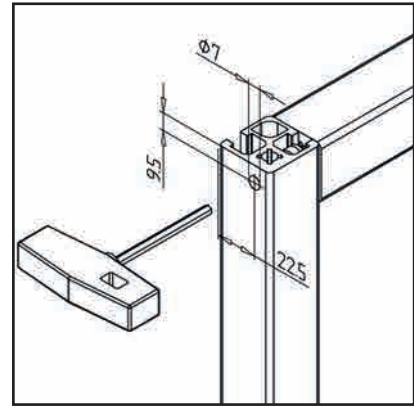
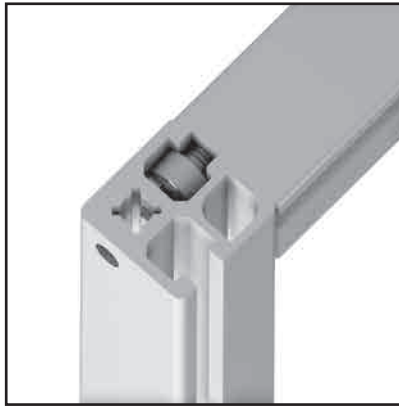
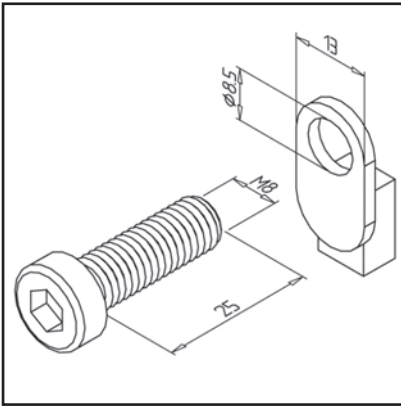
**ASSEMBLY**

- Insert the threaded screw M8 x 25 into the central bore of profile
- Insert the stepped bore  $\varnothing$  9 x 15 into profile 2
- Insert the anti-twist lock
- Insert the screw through the anti-rotation lock into the tapped hole in profile 2, tighten
- Recommended locking torque: 20 Nm



## SCREW CONNECTION 32

Part no. 21.1386/0



### TECHN. DATA / ITEMS SUPPLIED

- Aluminium, Pressure die-casting
- Hex socket cap screw M8 x 25
- Weight = 0.015 kg/piece

### APPLICATIONS

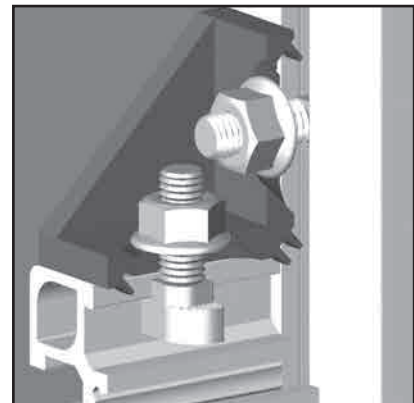
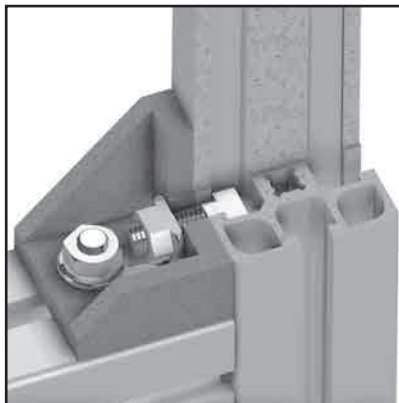
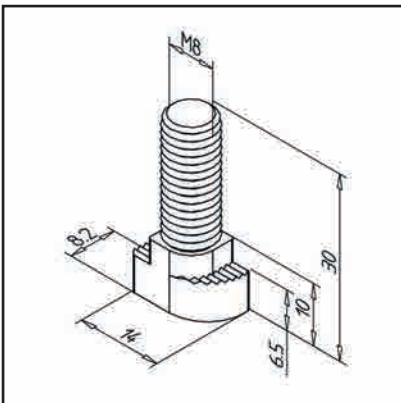
- Effective non-rotating connection for 32mm and 19mm profiles

### ASSEMBLY

- Insert the threaded screw M8 x 25 into the central bore of profile
- Insert bore  $\varnothing$  7 mm in profile 2
- Fasten the screw to the profile 1 with the anti-twist lock and insert it into profile 2
- Tighten the screw to 20 Nm
- The bore  $\varnothing$  7 mm can be closed with plug 7 **part no. 22.1215/1**, should be used with our closed t-slot profiles

## HAMMER SCREW

Part no. 21.1370/0



### TECHN. DATA / ITEMS SUPPLIED

- Steel, galvanized
- Thread (d) : M 8
- Length (l) : 23.5 mm
- Weight = 0.013 kg/piece

### APPLICATIONS

- Simple attachment of add-on parts or accessories on profiles
- Attachment of mounting bracket: 45 x 90 GD-Z **part no. 21.1397/0**, 45 GD **part no. 21.1133/0**, 45 GD-Z **part no. 21.1349/0**, 90 GD-Z **partno. 21.0978/0**

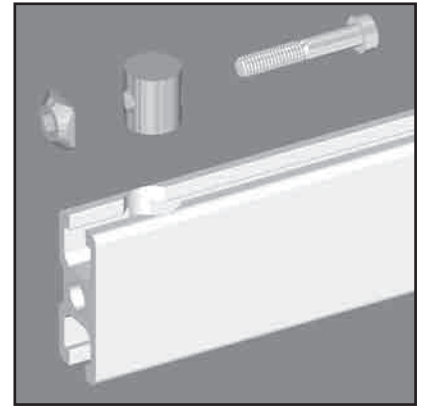
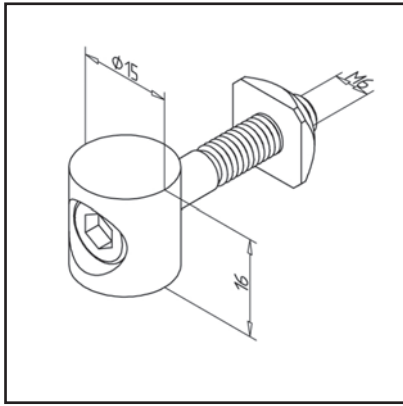
### ASSEMBLY

- Insert the hammer screw in the profile groove, screw on nut M8
- When tightening the nut, the hammer head will turn crosswise
- **Recommended nut:** Hexagon nut self-locking with flange **part no. 21.1334/0**

**BOLT CONNECTOR 15**

Part no.

21.1024/0

**TECHN. DATA / ITEMS SUPPLIED**

- Aluminium, anodized E6/EV1
- With fastening material steel, zinc plated
- Weight = 0.032 kg/piece

**APPLICATIONS**

- Connection of profiles 19 and 32
- Especially for post-mounting of additional profiles in existing constructions

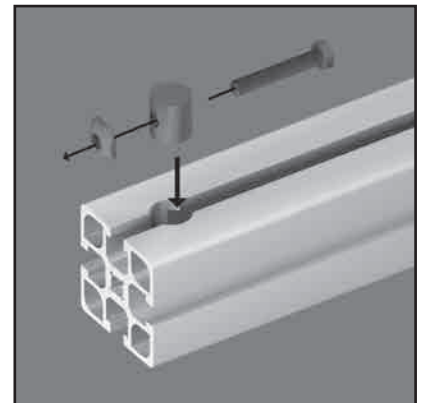
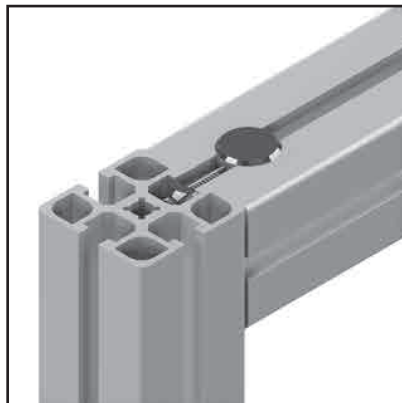
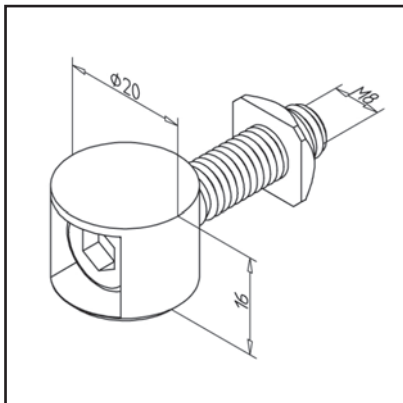
**ASSEMBLY**

- Insert the stepped bore  $\varnothing 9 \times 15$ , 16 mm deep, positioned 22.5 mm from the end of the profile to the center of the groove
- Insert the connector and pre-tighten the screw with the ball head wrench SW 4
- Fastening with Allen wrench
- Recommended locking torque: 15 Nm

**BOLT CONNECTOR 20**

Part no.

21.1021/0

**TECHN. DATA / ITEMS SUPPLIED**

- Zinc, Pressure die-casting, galvanized
- With fastening material steel, zinc plated
- Weight = 0.036 kg/piece

**APPLICATIONS**

- For connecting all profiles of the profile series 45
- Especially for post-mounting of additional profiles in existing constructions
- For connection of profile 45 x 19

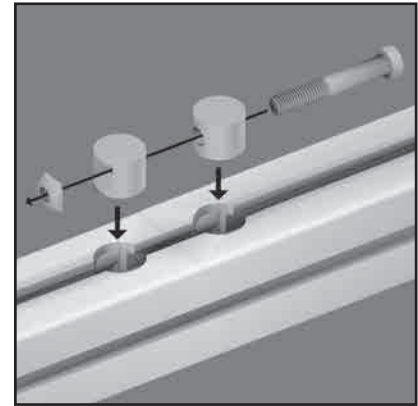
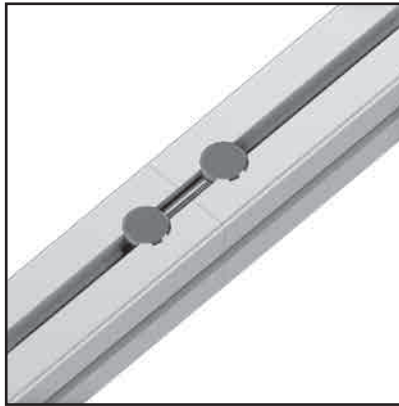
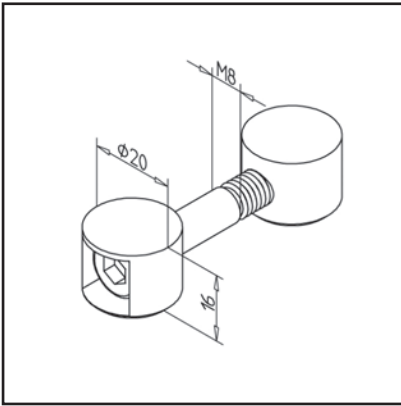
**ASSEMBLY**

- Insert the stepped bore  $\varnothing 7 \times 20$ , 16 mm deep, positioned 22.5 mm from the end of the profile to the center of the groove
- Insert the connector and pre-tighten the screw with the ball head wrench SW 5
- Fastening with Allen wrench
- Recommended locking torque: 15 Nm

## BUTT CONNECTOR 20

Part no.

21.1020/0



### TECHN. DATA / ITEMS SUPPLIED

- Zinc, Pressure die-casting, galvanized
- With fastening material steel, zinc plated
- Weight = 0.056 kg/piece

### APPLICATIONS

- Profile extension
- Butt connectors

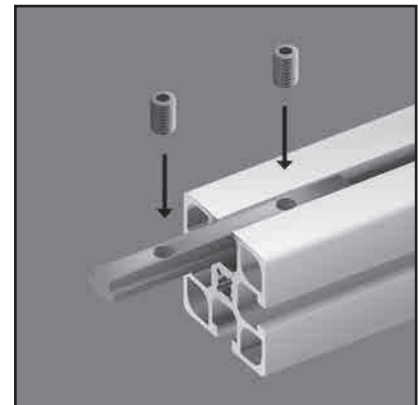
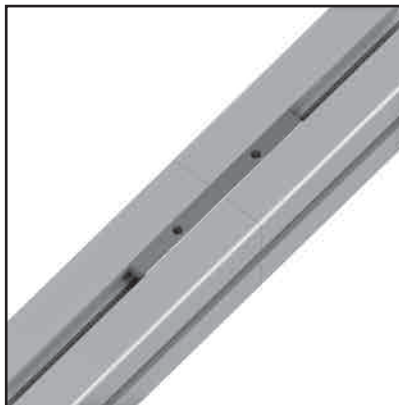
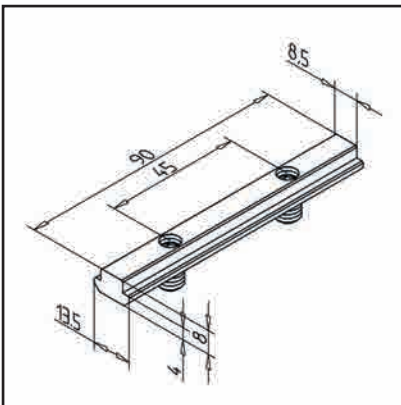
### ASSEMBLY

- Insert the stepped bore  $\varnothing 7 \times 20$ , 16 mm deep, positioned 22.5 mm from the end of the profile to the center of the groove
- Insert the connector and pre-tighten the screw with the ball head wrench SW 5
- Fastening with Allen wrench
- Recommended locking torque: 15 Nm

## T-SLOT BAR 90

Part no.

21.1029/0



### TECHN. DATA / ITEMS SUPPLIED

- Steel, galvanized
- 2 set screws M8, with hexagonal socket SW 4
- Stainless version **part no. 21.0992/0**
- Weight = 0.062 kg/piece

### APPLICATIONS

- Profile extension
- Fastening rollers in standard carriages LW

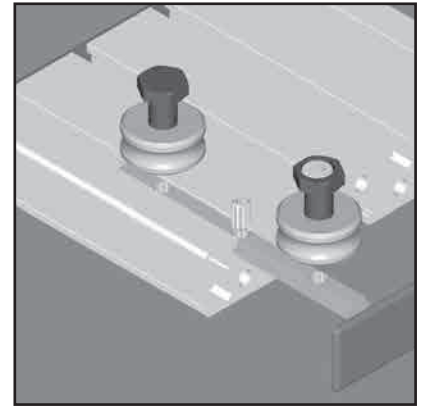
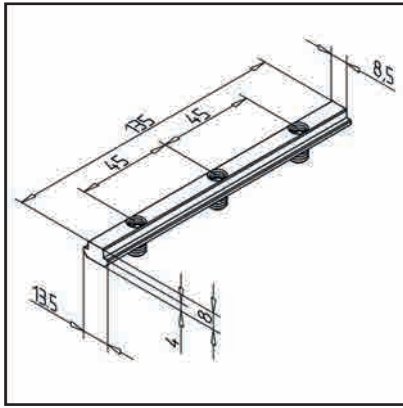
### ASSEMBLY

- Swing into profile groove
- Clamp with set screw
- No machining required
- For larger profile cross sections or higher loads, several clamping strips must be used

**T-SLOT BAR 135**

Part no.

21.0988/0

**TECHN. DATA / ITEMS SUPPLIED**

- Steel, galvanized
- 3 set screws M8, with hexagonal socket SW4
- Stainless version **part no. 21.0987/0**
- Weight = 0.094 kg/piece

**APPLICATIONS**

- Fastening rollers in standard carriages LW

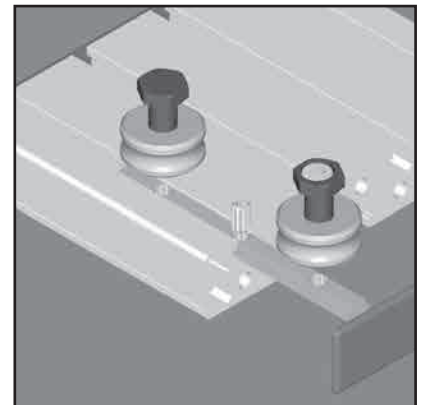
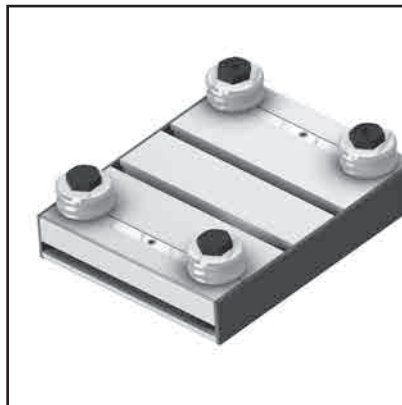
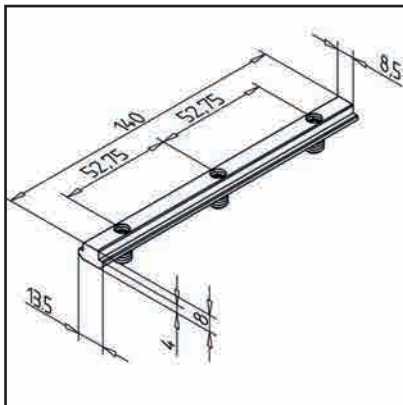
**ASSEMBLY**

- Swing into profile groove
- No machining required

**T-SLOT BAR 140**

Part no.

28.0026/0

**TECHN. DATA / ITEMS SUPPLIED**

- Steel, galvanized
- 3 set screws M8, with hexagonal socket SW4
- Stainless version **part no. 28.0030/0**
- Weight = 0.096 kg/piece

**APPLICATIONS**

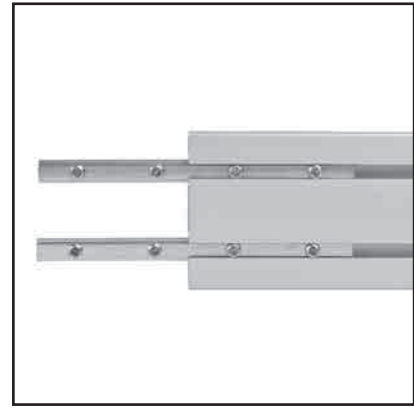
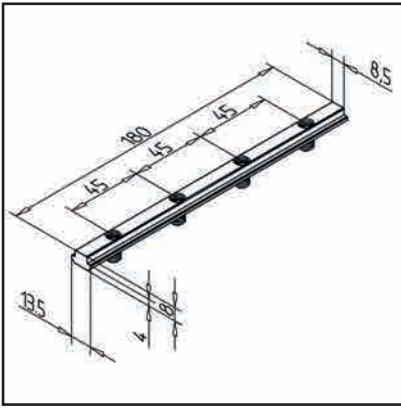
- Fastening of pulleys in linear slide LW 32 E

**ASSEMBLY**

- Swing into profile groove
- No machining required

## T-SLOT BAR 180

Part no. 21.1101/0



### TECHN. DATA / ITEMS SUPPLIED

- Steel, galvanized
- 4 set screws M8, with hexagon socket SW4
- Stainless version **part no. 21.0986/0**
- Weight = 0.125 kg/piece

### APPLICATIONS

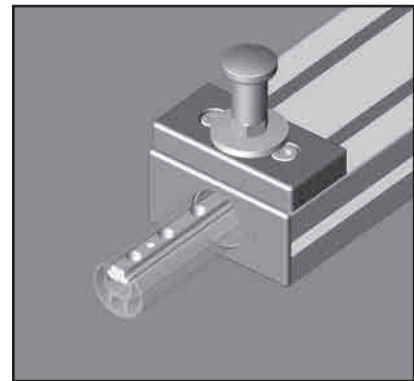
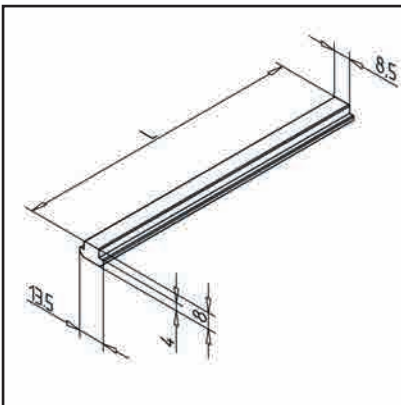
- Front side connection at joining line
- Profile extension
- Fastening rollers in standard carriages LW

### ASSEMBLY

- Swing into profile groove
- No machining required
- For larger profile cross sections or higher loads, several clamping strips must be used

## T-SLOT BAR PROFILE

Part no. 21.1030/0



### TECHN. DATA / ITEMS SUPPLIED

- Steel, bright
- Stainless version **part no. 21.1030/1**
- Weight = 0.650 kg/m
- Bar length = 3 m

### APPLICATIONS

- Manufacture of terminal blocks, connecting elements in special lengths
- Production of reinforcements
- Ledges with special perforation

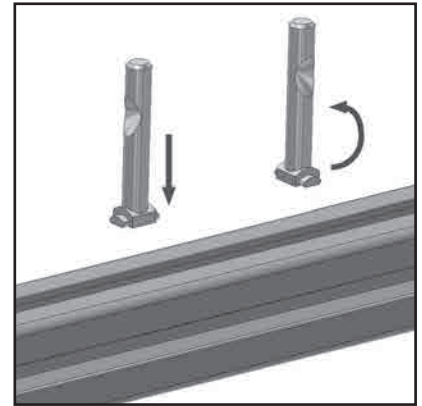
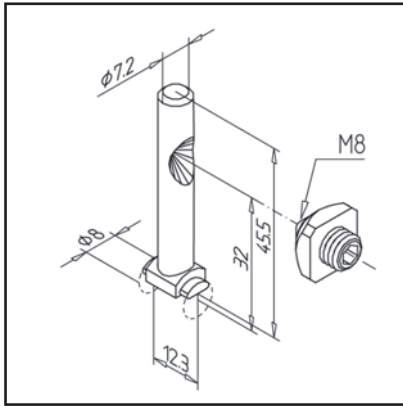
### ASSEMBLY

- Swing into profile groove

**MITRE CONNECTOR N 30**

Part no.

21.0945/0

**TECHN. DATA / ITEMS SUPPLIED**

- Steel, galvanized
- With fastening material steel, zinc plated
- Weight = 0.023 kg/piece

**APPLICATIONS**

- Mitre connection of profiles on profile groove
- For subsequent fitting in the groove

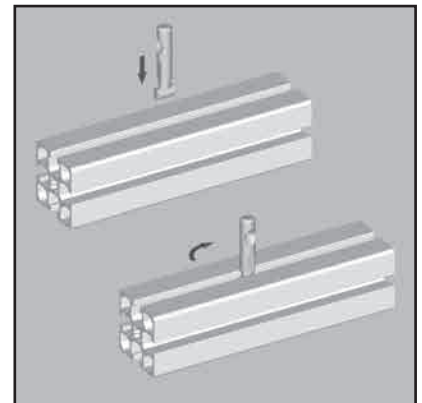
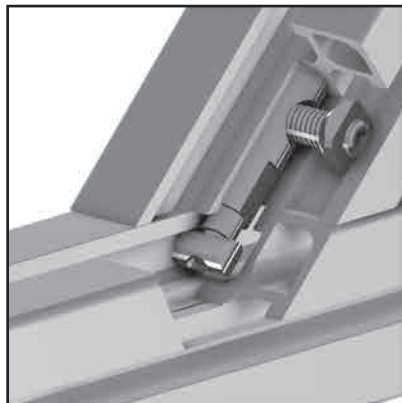
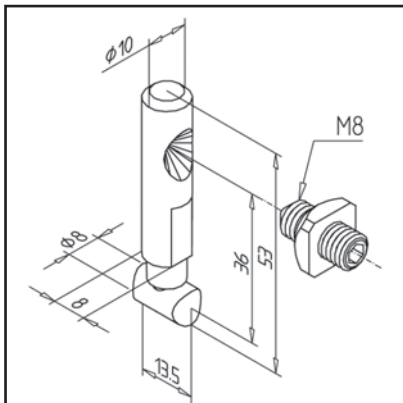
**ASSEMBLY**

- Insert into groove and central bore
- Use a drilling jig for mitre connector N30  
**part no. 26.1056/0**

**MITRE CONNECTOR N 45**

Part no.

21.1401/0

**TECHN. DATA / ITEMS SUPPLIED**

- Steel, galvanized
- With fastening material steel, zinc plated
- Weight = 0.035 kg/piece

**APPLICATIONS**

- Mitre connection of profiles on profile groove
- For subsequent fitting in the groove

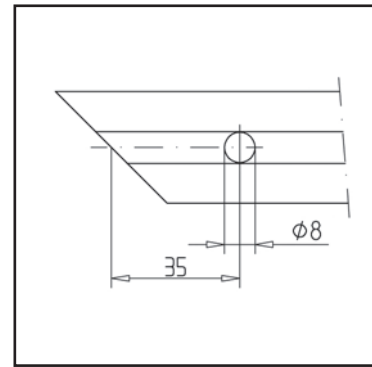
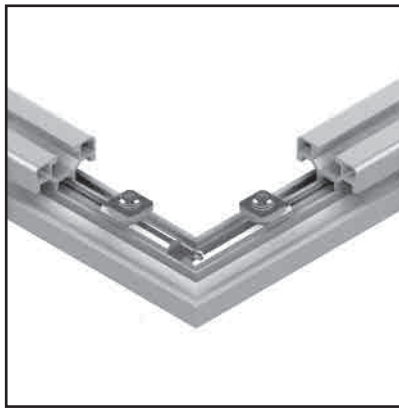
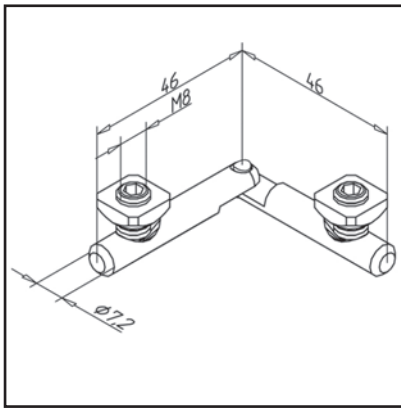
**ASSEMBLY**

- Drill profile bore of  $\phi 10.2$  mm
- Use a drilling jig for mitre-connector N45  
**part no. 26.1060/0**

## MITRE CONNECTOR 30

Part no.

21.1890/0



### TECHN. DATA / ITEMS SUPPLIED

- Steel, galvanized
- With fastening material steel, zinc plated
- Weight = 0.040 kg/piece

### APPLICATIONS

- display windows, showcases
- Store equipment
- Displays
- Frames

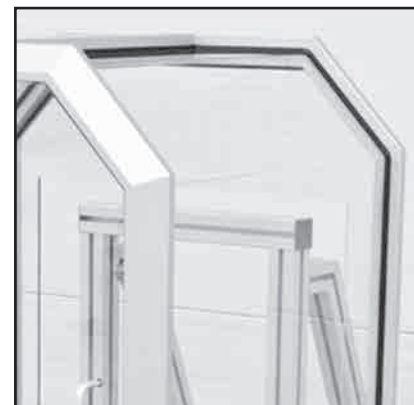
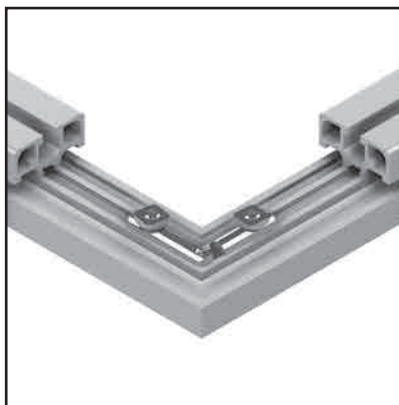
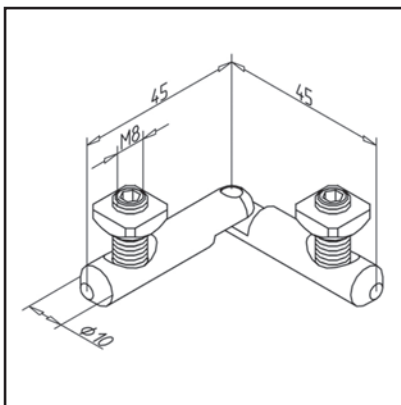
### ASSEMBLY

- Insert the miter connector 30 into both profile ends
- Position the sliding nuts M8 above the bores and screw in the threaded pin. Attach the connector with the threaded pin M8
- Drilling jig **part no. 26.1063/0**

## MITRE CONNECTOR 45

Part no.

21.1400/0



### TECHN. DATA / ITEMS SUPPLIED

- Steel, galvanized
- With fastening material steel, zinc plated
- Weight = 0.065 kg/piece

### APPLICATIONS

- display windows, showcases
- Store equipment
- Displays
- Frames

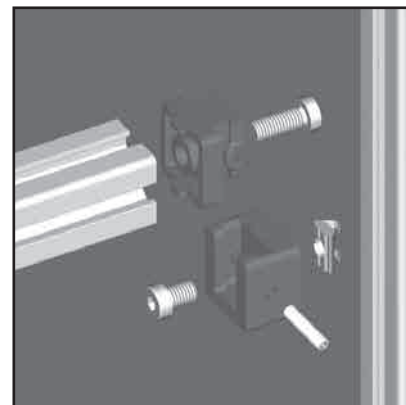
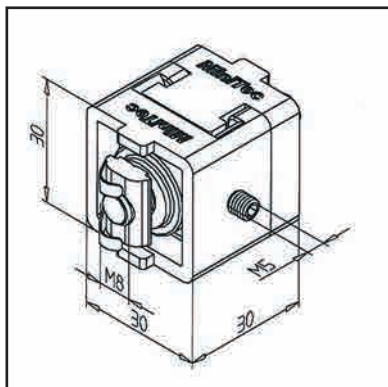
### ASSEMBLY

- Insert the miter connector into both profile ends
- Position the sliding nuts M8 above the bores and screw in the threaded pin. Attach the connector with the threaded pin M8
- Use a drilling jig for mitre-connector 45 **part no. 26.1050/0**

**MOUNTING BRACKET 30**

Part no.

21.2068/0

**TECHN. DATA / ITEMS SUPPLIED**

- PA, Injection Mould, grey
- With fastening material steel, zinc plated
- Weight = 0.041 kg/piece

**APPLICATIONS**

- Connection of profiles
- Profile extension
- Subsequent insertion of profiles into existing constructions, displaceable in groove direction
- Removable attachments

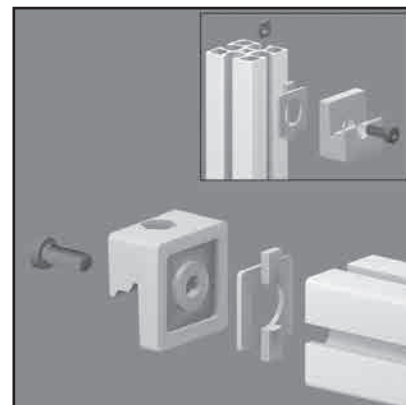
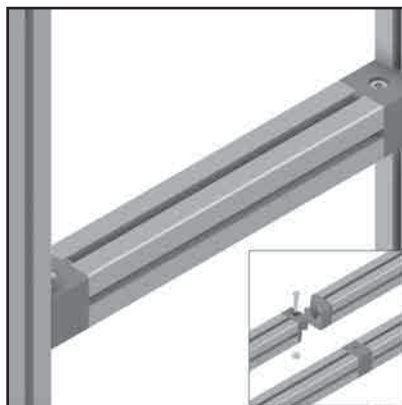
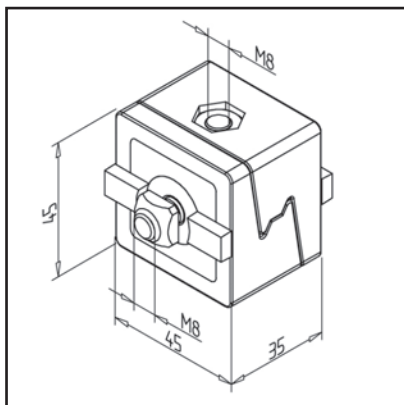
**ASSEMBLY**

- Fasten to profiles with supplied hardware
- Insert cross-tie profile into T-solt
- For adjustment use set screw M5

**MOUNTING BRACKET 45**

Part no.

21.1411/0

**TECHN. DATA / ITEMS SUPPLIED**

- Zinc, Pressure die-casting, powder-coated, grey
- With fastening material steel, zinc plated
- Weight = 0.429 kg/piece

**APPLICATIONS**

- Connection of profiles
- Profile extension
- Subsequent insertion of profiles into existing constructions
- Attaching bearing surfaces
- Removable attachments
- Slidable in the groove direction

**ASSEMBLY**

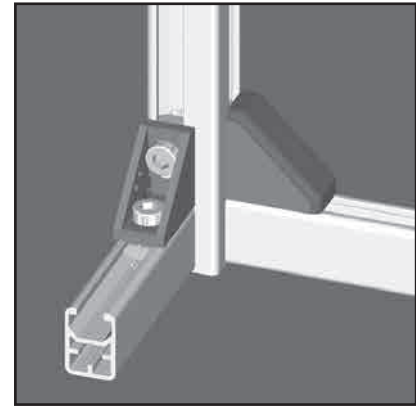
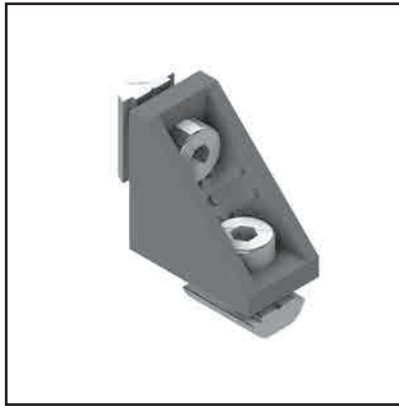
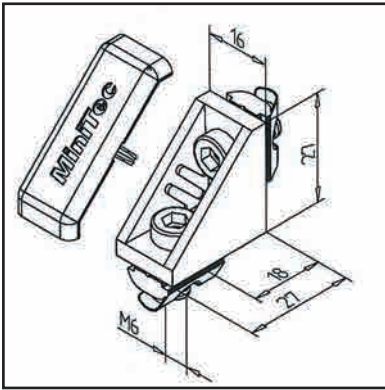
- Fasten to profile groove with supplied hardware
- When retrofitting on a vertical groove, preferably use square nut M8 with nut fixation **part no. 21.1351/2**
- Recommended locking torque: 20 Nm



## MOUNTING ANGLE 16 GD-Z

Part no.

21.2077/0



### TECHN. DATA / ITEMS SUPPLIED

- Aluminium, Pressure die-casting, powder-coated, grey
- With fastening material steel, zinc plated
- Removable centering tabs
- **Conductive version part no. 21.2077/6**
- Weight = 0.021 kg/piece

### APPLICATIONS

- Construction from profiles with width of 16 and 23; specifically suitable for the subsequent mounting of elements in existent constructions
- Fastening of surface elements, table tops
- Reinforcement of constructions made from profile series 16 or 23

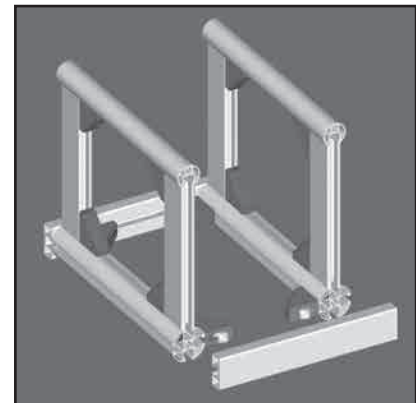
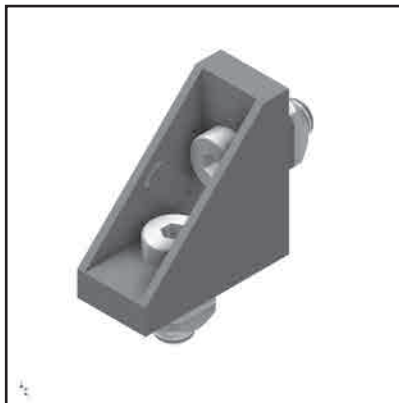
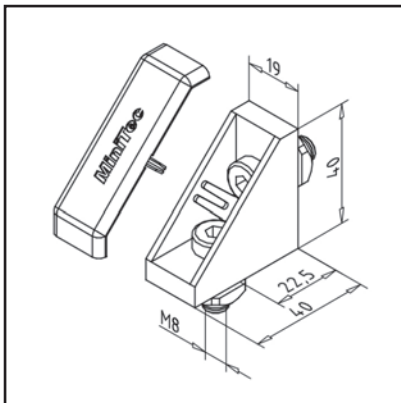
### ASSEMBLY

- Fasten to profile groove with supplied hardware
- Recommended torque: 8 Nm
- Fitting end cap MW 16 GD-Z grey, **part no. 22.1138/1**

## MOUNTING ANGLE 19 GD-Z

Part no.

21.2078/0



### TECHN. DATA / ITEMS SUPPLIED

- Aluminium, Pressure die-casting, powder-coated, grey
- With fastening material steel, zinc plated
- Package size of 50 pieces **part no. 21.2078/050**
- **Conductive version part no. 21.2078/6**
- Use on vertical struts **part no. 21.2078/7** (square nut with position-fixing)
- Weight = 0.055 kg/piece

### APPLICATIONS

- Connection of profiles 19 and 32
- Subsequent insertion of profiles into existing constructions
- Attaching bearing surfaces
- Slidable in the groove direction

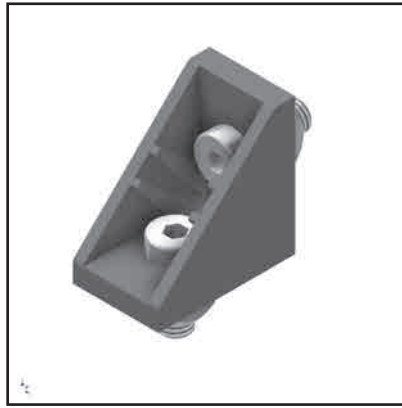
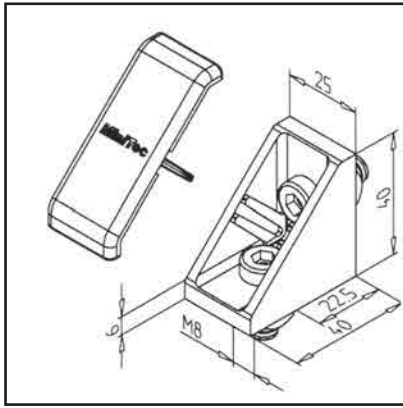
### ASSEMBLY

- Fasten to profile groove with supplied hardware
- Fitting end cap MW 19 GD-Z, grey, **part no. 22.1139/1**
- Recommended locking torque: 20 Nm

**MOUNTING ANGLE 25 GD-Z**

Part no.

21.0969/0

**TECHN. DATA / ITEMS SUPPLIED**

- Aluminium, Pressure die-casting, powder-coated, grey
- With fastening material steel, zinc plated
- Removable centering tabs
- Package size of 50 pieces **part no. 21.0969/050**
- **Conductive version part no. 21.0969/6**
- Use on vertical struts **part no. 21.0969/7** (square nut with position-fixing)
- Weight = 0.066 kg/piece

**APPLICATIONS**

- General constructions, particularly for subsequent insertion of profiles into existing constructions
- Fastening of surface elements, table tops
- Strengthening of profile constructions

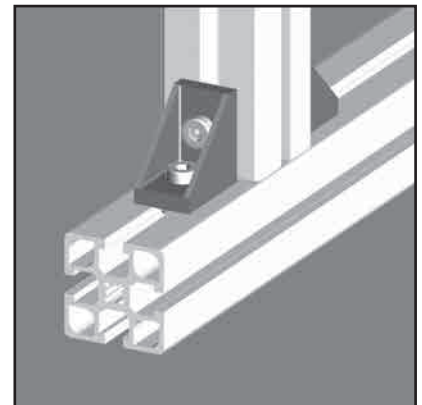
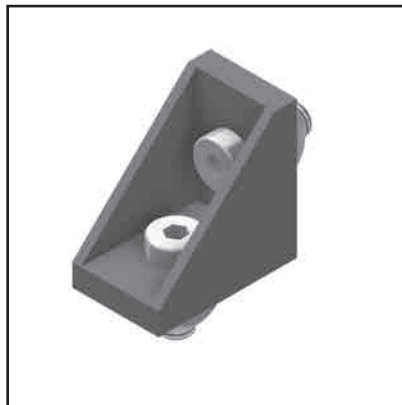
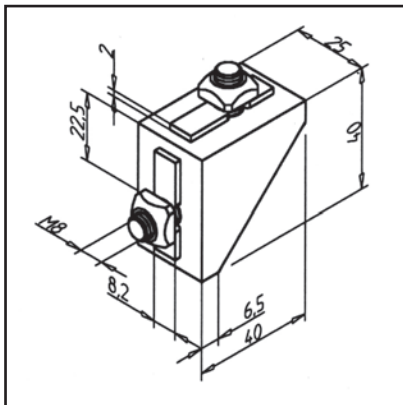
**ASSEMBLY**

- Fasten to profile groove with supplied hardware
- If non-aligning grooves, break centering tabs with pliers
- Fitting end cap MW 25 GD-Z, **part no. 22.0997/1**
- Recommended locking torque: 20 Nm

**MOUNTING ANGLE 25 S**

Part no.

21.1134/0

**TECHN. DATA / ITEMS SUPPLIED**

- Aluminium, Pressure die-casting, powder-coated, grey
- With fastening material steel, zinc plated
- With ridge as anti-twist device
- Package size of 50 pieces **part no. 21.1134/050**
- **Conductive version part no. 21.1134/6**
- Use on vertical struts **part no. 21.1134/7** (square nut with position-fixing)
- Weight = 0.067 kg/piece

**APPLICATIONS**

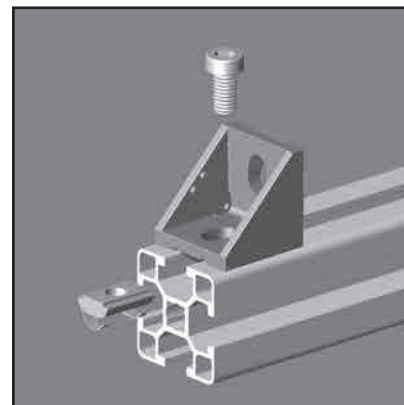
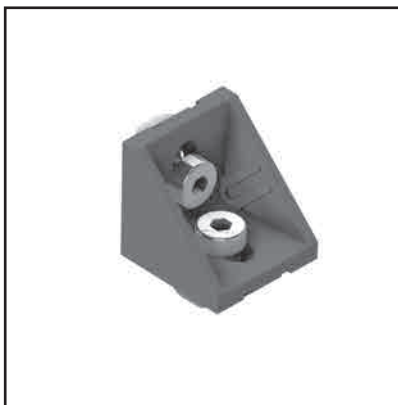
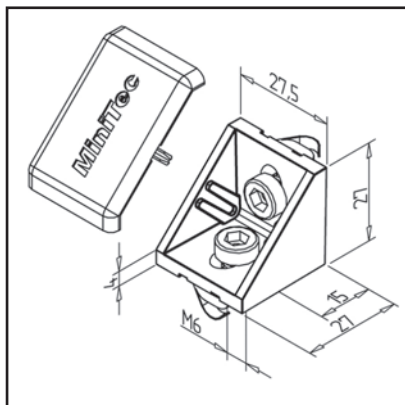
- General constructions, particularly for subsequent insertion of profiles into existing constructions
- Strengthening of profile constructions

**ASSEMBLY**

- Fasten to profile groove with supplied hardware
- Recommended locking torque: 20 Nm

## MOUNTING ANGLE 30 GD

Part no. 21.0905/0



### TECHN. DATA / ITEMS SUPPLIED

- Aluminium, Pressure die-casting, powder-coated, grey
- With fastening material steel, zinc plated
- Removable centering tabs
- Package size of 50 pieces **part no. 21.0905/050**
- conductive version **part no. 21.0905/6**
- Weight = 0.029 kg/piece

### APPLICATIONS

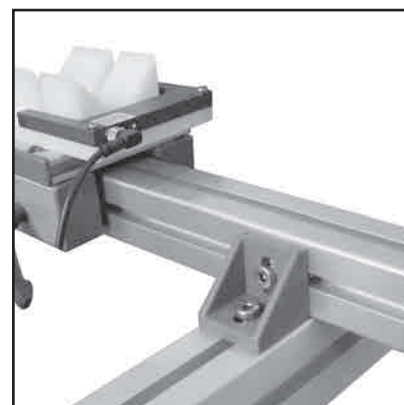
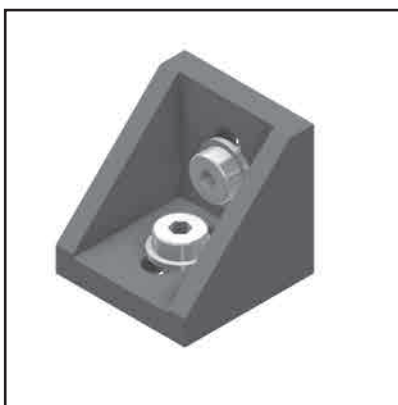
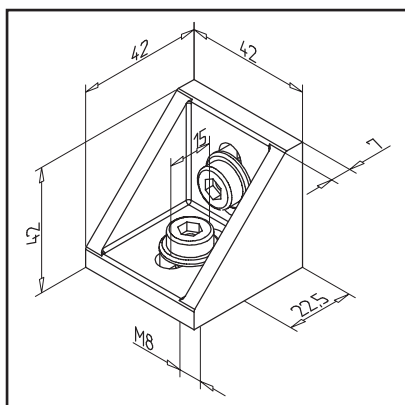
- All types of constructions; specifically suited for the subsequent mounting of elements in existing constructions
- Fastening of surface elements, table tops

### ASSEMBLY

- Strengthening of profile constructions
- Fasten to profile groove with supplied hardware
- Recommended torque: 8 Nm
- Fitting end cap MW 30 grey, **part no. 22.0989/1**

## MOUNTING ANGLE 45 GD

Part no. 21.1133/0



### TECHN. DATA / ITEMS SUPPLIED

- Aluminium, Pressure die-casting, powder-coated, grey
- With fastening material steel, zinc plated
- Package size of 50 pieces **part no. 21.1133/050**
- **Conductive version part no. 21.1133/6**
- Use on vertical struts **part no. 21.1133/7** (square nut with position-fixing)
- Weight = 0.114 kg/piece

### APPLICATIONS

- General constructions, particularly for subsequent insertion of profiles into existing constructions
- Fastening of surface elements, table tops
- Strengthening of profile constructions

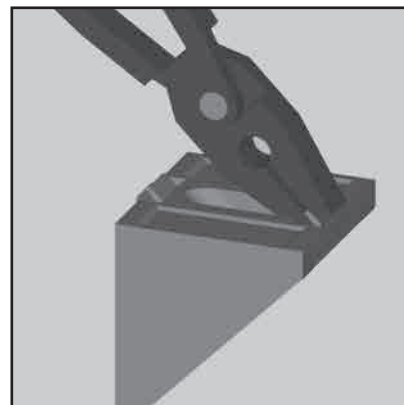
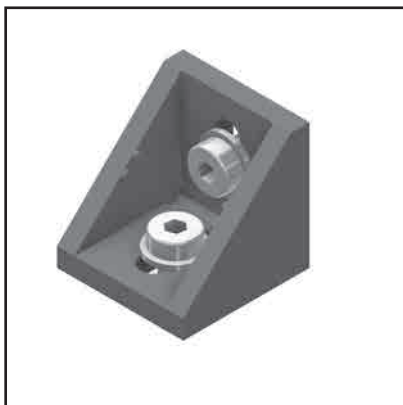
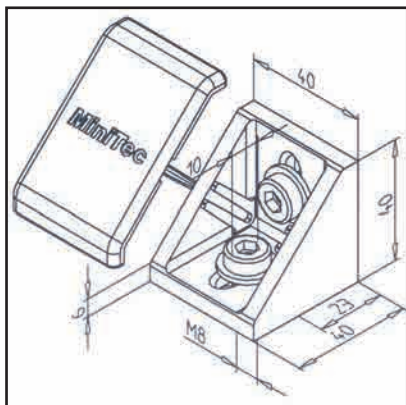
### ASSEMBLY

- Fasten to profile groove with supplied hardware
- Hammer head screw **part no. 21.1370/0** can be used
- Recommended locking torque: 20 Nm

### MOUNTING ANGLE 45 GD-Z

Part no.

21.1349/0



**TECHN. DATA / ITEMS SUPPLIED**

- Aluminium, Pressure die-casting, powder-coated, grey
- With fastening material steel, zinc plated
- Removable centering tabs
- Package size of 50 pieces **part no.. 21.1339/050**
- Package size of 50 pieces **part no.. 21.1349/750**
- Conductive version **part no. 21.1349/8**
- Use on vertical struts **part no. 21.1349/7** (square nut with position-fixing)
- Weight = 0.086 kg/piece

**APPLICATIONS**

- General constructions, particularly for subsequent insertion of profiles into existing constructions
- Fastening of surface elements, table tops
- Strengthening of profile constructions

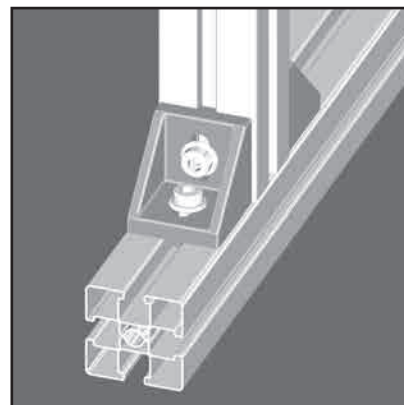
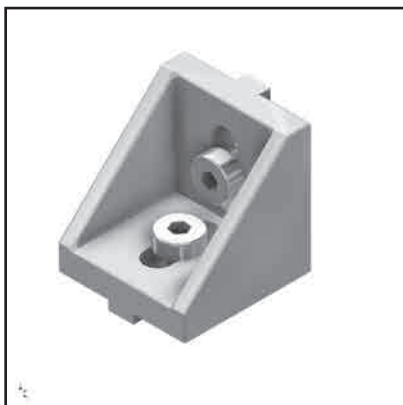
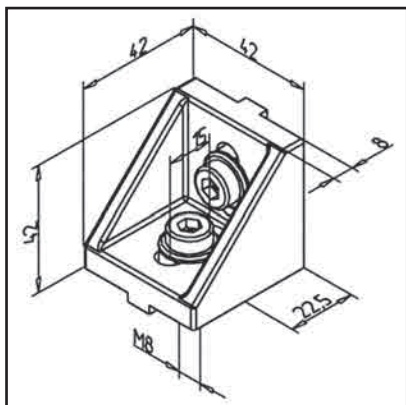
**ASSEMBLY**

- Fasten to profile groove with supplied hardware
- If non-aligning grooves, break centering tabs with pliers
- Hammer head screw **part no. 21.1370/0** can be used
- Fitting end cap MW 45 GD-Z, **part no. 22.1024/1**
- Recommended locking torque: 20 Nm

### MOUNTING ANGLE 45 SST

Part no.

21.0007/0



**TECHN. DATA / ITEMS SUPPLIED**

- Stainless steel, blasted
- Fastening kit
- Use on vertical struts **part no. 21.0007/7** (square nut with position-fixing)
- Weight = 0.255 kg/piece

**APPLICATIONS**

- General constructions, particularly for subsequent insertion of profiles into existing constructions
- Strengthening of profile constructions

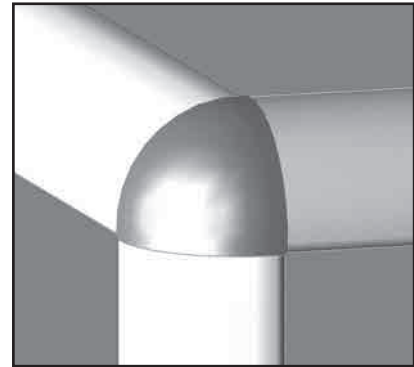
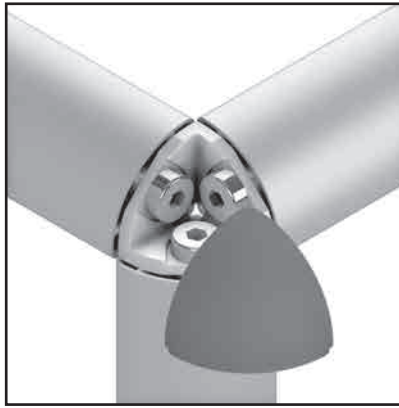
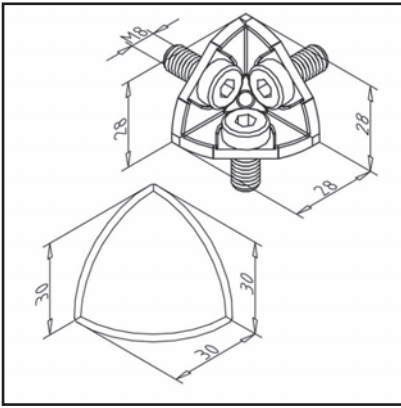
**ASSEMBLY**

- Fasten to profile groove with supplied hardware
- Recommended locking torque: 20 Nm

## MOUNTING ANGLE 30 R 90°

Part no.

21.2109/0



### TECHN. DATA / ITEMS SUPPLIED

- Aluminium, Pressure die-casting, bright
- With fastening material steel, zinc plated
- End cap MW 30 R 90° **part no. 22.1143/1**
- Weight = 0.043 kg/piece

### APPLICATIONS

- Corner fastening of profiles 30 R 90°
- Constructions for show cases, tables etc.

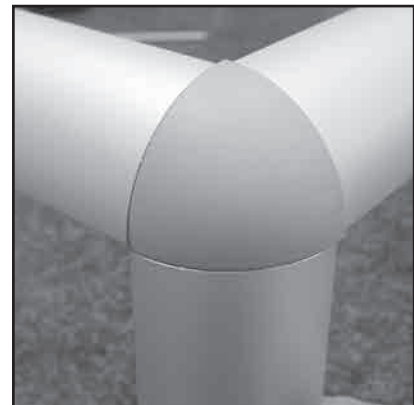
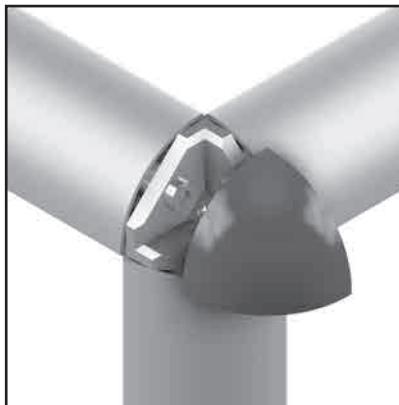
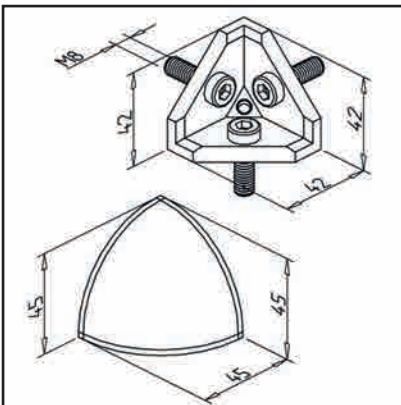
### ASSEMBLY

- in the central bore of the profile with supplied hardware
- Clip the end cap

## MOUNTING ANGLE 45 R 90°

Part no.

21.1710/1



### TECHN. DATA / ITEMS SUPPLIED

- Aluminium, Pressure die-casting, bright
- With fastening material steel, zinc plated
- End cap MW 45 R 90° **part no. 22.1033/1**
- Weight = 0.098 kg/piece

### APPLICATIONS

- Corner fastening of profiles 45 R 90°
- Constructions for show cases, tables etc.

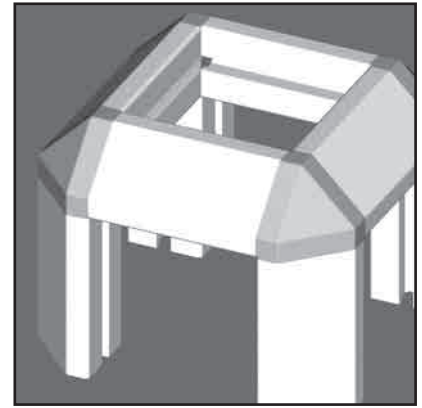
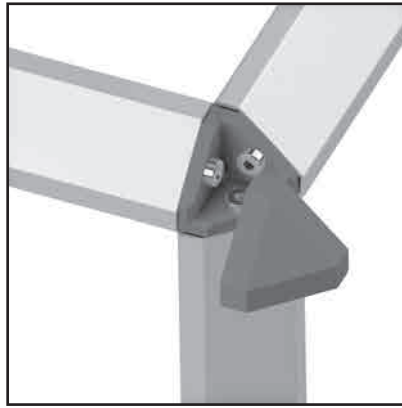
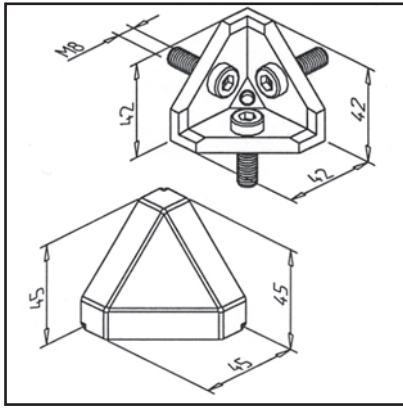
### ASSEMBLY

- in the central bore of the profile with supplied hardware
- Clip the end cap

**MOUNTING ANGLE 45°**

Part no.

21.1708/1

**TECHN. DATA / ITEMS SUPPLIED**

- Aluminium, Pressure die-casting, bright
- With fastening material steel, zinc plated
- End cap 45°/3, grey **part no. 22.1027/1**
- Weight = 0.107 kg/piece

**APPLICATIONS**

- Corner fastening of profiles 45 / 45°
- Constructions for show cases, tables etc.

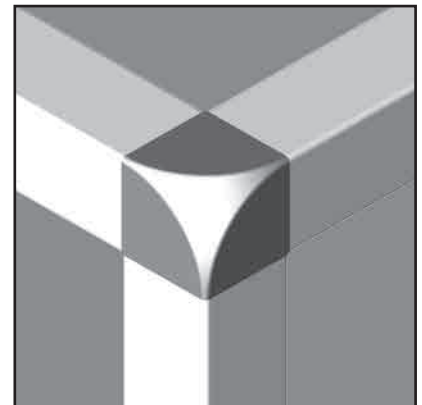
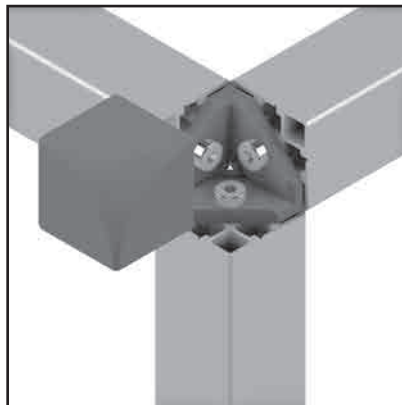
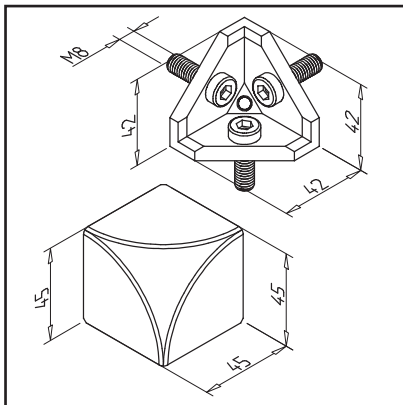
**ASSEMBLY**

- in the central bore of the profile with supplied hardware
- Clip the end cap

**MOUNTING ANGLE 45 G**

Part no.

21.2503/1

**TECHN. DATA / ITEMS SUPPLIED**

- Aluminium, Pressure die-casting, bright, grey
- With fastening material steel, zinc plated
- End cap MW 45/45/45 grey **part no. 22.1177/1**
- Weight = 0.121 kg/piece

**APPLICATIONS**

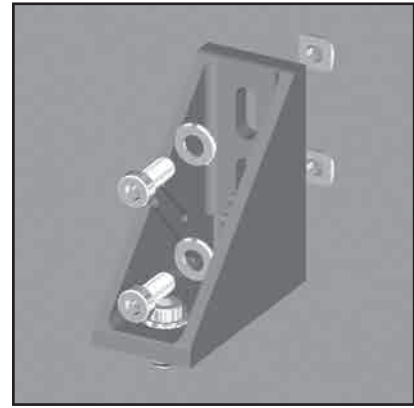
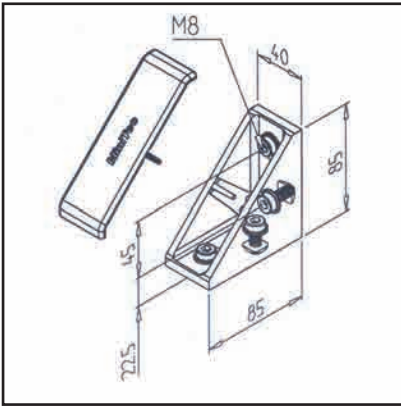
- Constructions for show cases, tables etc.
- Connection of profiles 45x45, preferably G-profile

**ASSEMBLY**

- Fasten to central profile bore with fixation material from delivery scope
- Clip the end cap

## MOUNTING ANGLE 45 X 90 GD-Z

Part no. 21.1397/0



### TECHN. DATA / ITEMS SUPPLIED

- Aluminium, Pressure die-casting, powder-coated, grey
- With fastening material steel, zinc plated
- Package size of 25 pieces **part no.. 21.1397/025**
- **Conductive version part no. 21.1397/6**
- Use on vertical struts **part no. 21.1397/7** (square nut with position-fixing)
- Weight = 0.281 kg/piece

### APPLICATIONS

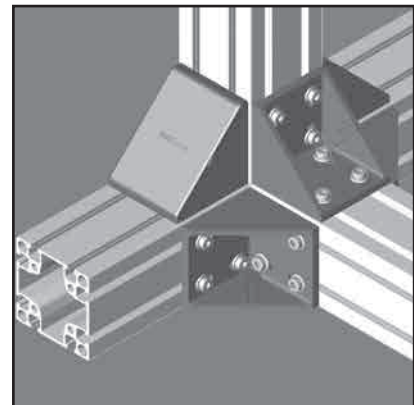
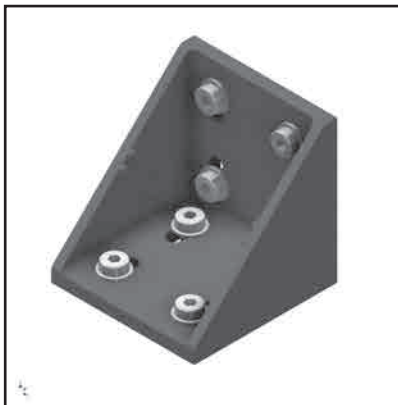
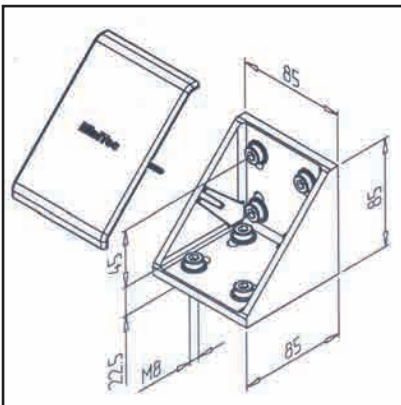
- General constructions, particularly for subsequent insertion of profiles into existing constructions
- Fastening of surface elements, table tops
- Strengthening of profile constructions

### ASSEMBLY

- Fasten to profile groove with supplied hardware
- Hammer head screw **part no. 21.1370/0** can be used
- Fitting end cap MW 45 x90 GD-Z, **part no. 22.0998/1**
- Recommended locking torque: 20 Nm

## MOUNTING ANGLE 90 GD-Z

Part no. 21.0978/0



### TECHN. DATA / ITEMS SUPPLIED

- Aluminium, Pressure die-casting, powder-coated, grey
- With fastening material steel, zinc plated
- Package size of 25 pieces **part no.. 21.0978/025**
- **Conductive version part no. 21.0978/6**
- Use on vertical struts **part no. 21.0978/7** (square nut with position-fixing)
- Weight = 0.497 kg/piece

### APPLICATIONS

- For profiles 90 and 180
- General constructions, particularly for subsequent insertion of profiles into existing constructions
- Strengthening of profile constructions

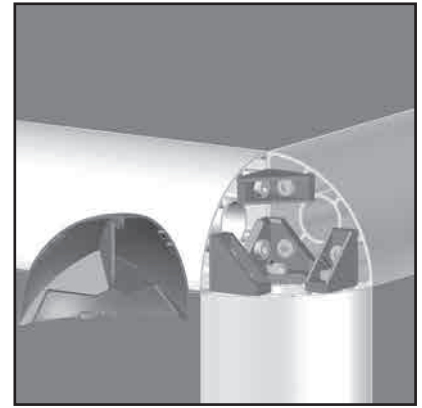
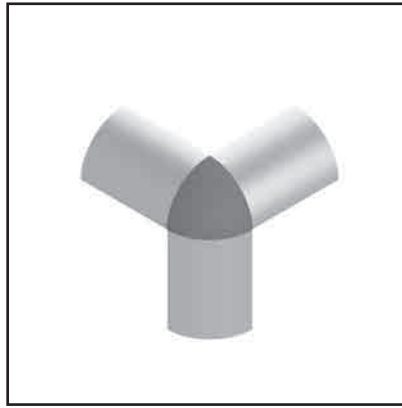
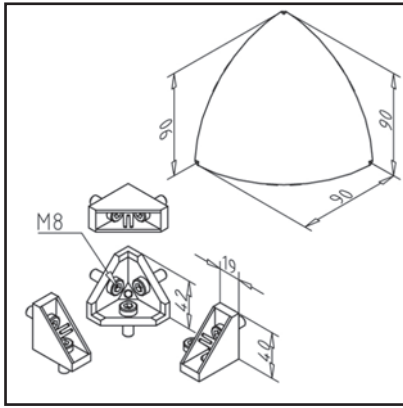
### ASSEMBLY

- Fasten to profile groove with supplied hardware
- Hammer head screw **part no. 21.1370/0** can be used
- Matching cap MW 90 GD-Z **part-No. 22.0999/1**
- Recommended locking torque: 20 Nm

**CORNER CONNECTION 90 R 90°**

Part no.

21.2199/0

**TECHN. DATA / ITEMS SUPPLIED**

- Aluminium, Pressure die-casting, bright
- With fastening material steel, zinc plated
- End cap MW 90 R 90° **part no. 22.0980/1**
- Angle 45°, **part no. 21.1708/2**
- Mounting bracket 19 GD-Z, **part no. 21.2078/2**
- Weight = 0.267 kg/piece

**APPLICATIONS**

- Corner connections of profiles 90 R 90°
- Constructions for show cases, tables etc.

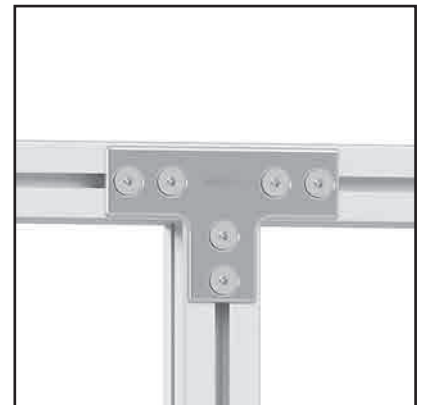
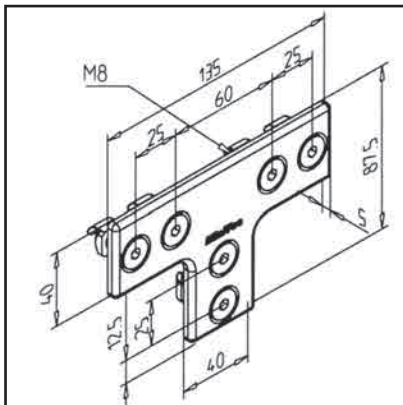
**ASSEMBLY**

- Fasten to central profile bore with fixation material from delivery scope
- Clip the end cap

**T-SHEET SST**

Part no.

21.0019/0

**TECHN. DATA / ITEMS SUPPLIED**

- Stainless steel, blasted
- Fastening kit
- Weight = 0.259 kg/piece

**APPLICATIONS**

- Strengthening of profile constructions

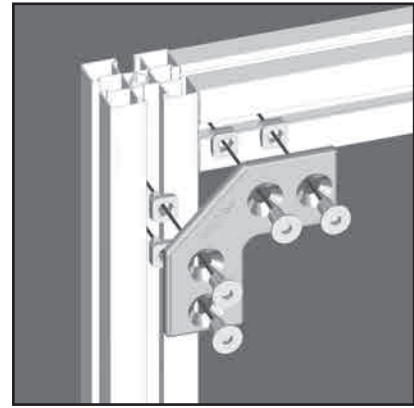
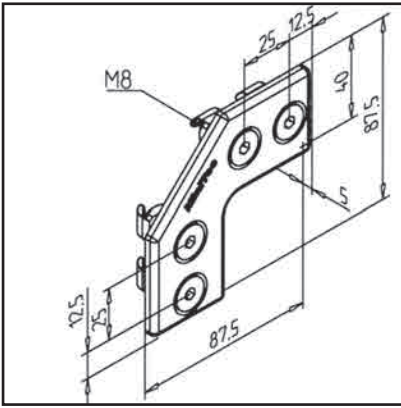
**ASSEMBLY**

- Attach to the profile with supplied hardware
- Use power-lock fasteners if tractive forces appear



### ANGLE-SHEET SST

Part no. 21.0018/0



**TECHN. DATA / ITEMS SUPPLIED**

- Stainless steel, blasted
- Fastening kit
- Weight = 0.163 kg/piece

**APPLICATIONS**

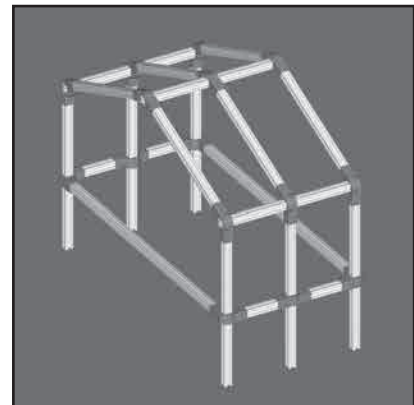
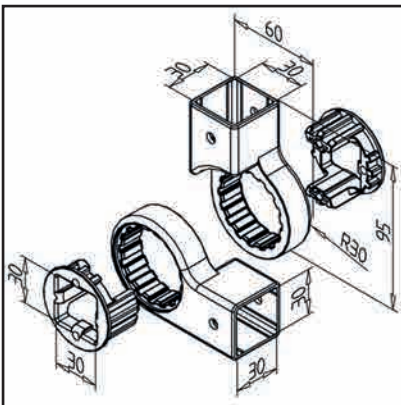
- Strengthening of profile constructions
- Also suitable for cross joints (double application)

**ASSEMBLY**

- Attach to the profile with supplied hardware
- Use power-lock fasteners if tractive forces appear

### MULTI CONNECTOR 30

Part no. 22.1140/0



**TECHN. DATA / ITEMS SUPPLIED**

- ABS, Injection Mould, grey
- With fastening material steel, zinc plated
- Weight = 0.135 kg/piece

**APPLICATIONS**

- Easy connection for profiles
- Angle adjustable in 22,5° raster

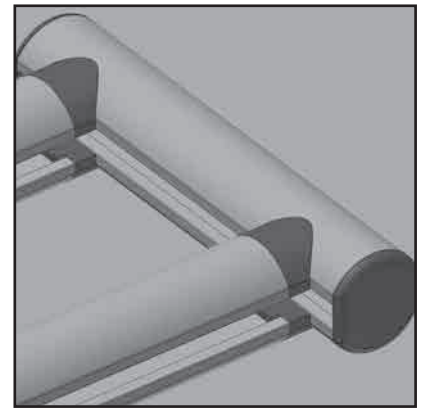
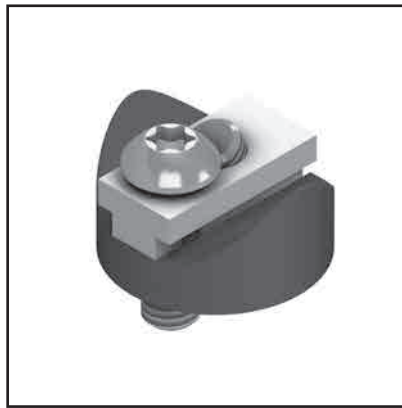
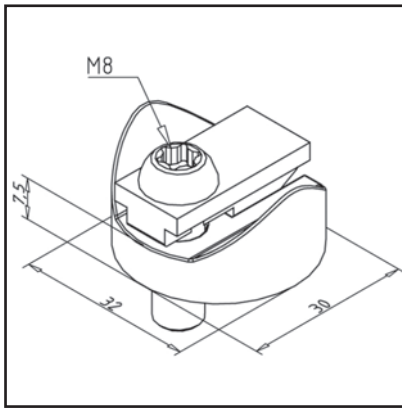
**ASSEMBLY**

- Fix swivel arm front to profile
- Insert socket from the side
- Insert other profile into socket and position it
- Secure with 2 cylinder screws against moving

**ADAPTER G32 / G32**

Part no.

21.0954/0

**TECHN. DATA / ITEMS SUPPLIED**

- Aluminium, Pressure die-casting, powder-coated, grey
- With fastening material steel, zinc plated
- Weight = 0.041 kg/piece

**APPLICATIONS**

- For connection of handle profile 32 with handle profile 32

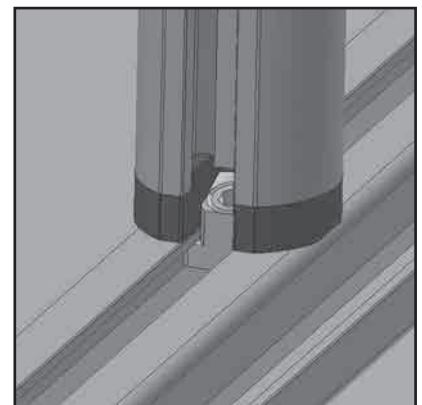
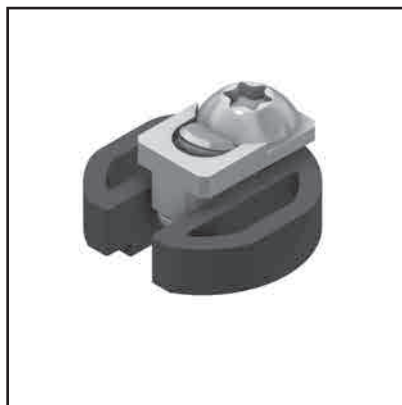
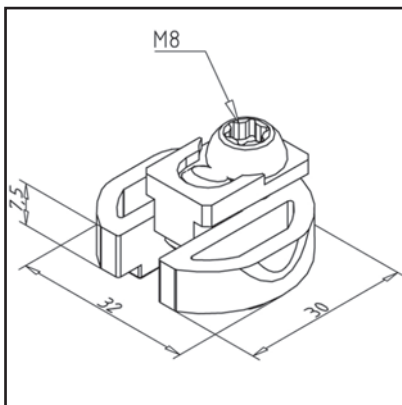
**ASSEMBLY**

- Screw on profile face and fasten with power-lock fastener
- Push in cross direction profile and attach it to the desired location

**ADAPTER G32 / 30 X 30**

Part no.

21.0955/0

**TECHN. DATA / ITEMS SUPPLIED**

- Aluminium, Pressure die-casting, powder-coated, grey
- With fastening material steel, zinc plated
- Weight = 0.032 kg/piece

**APPLICATIONS**

- For connection of handle profile 32 with profiles of width 30

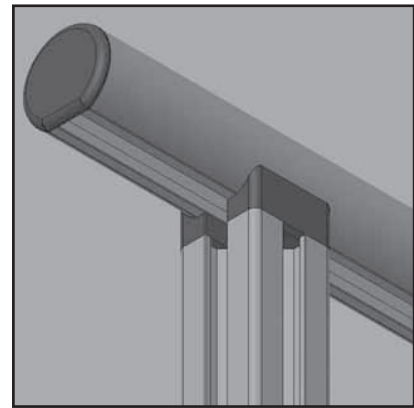
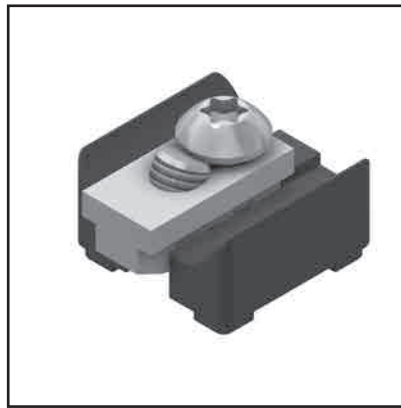
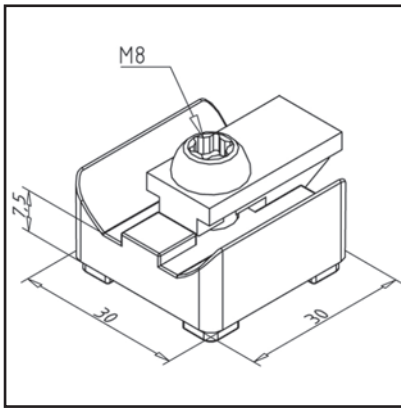
**ASSEMBLY**

- Screw on profile face and fasten with power-lock fastener
- Push in cross direction profile and attach it to the desired location

## ADAPTER 30 X 30 / G32

Part no.

21.0953/0



### TECHN. DATA / ITEMS SUPPLIED

- Aluminium, Pressure die-casting, powder-coated, grey
- With fastening material steel, zinc plated
- Weight = 0.046 kg/piece

### APPLICATIONS

- For connection of profile 30 x 30 with handle profile 32

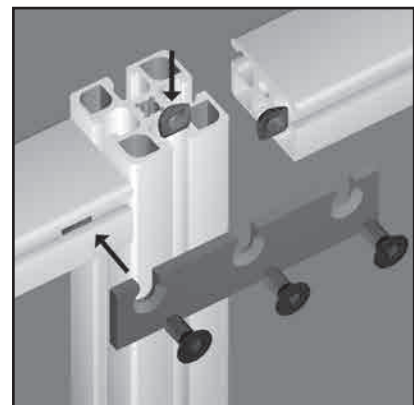
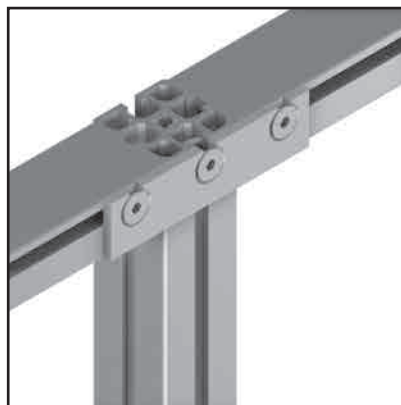
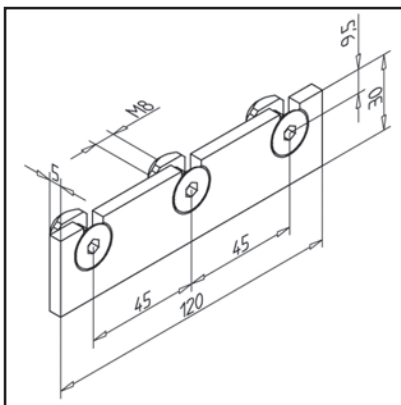
### ASSEMBLY

- Screw on profile face and fasten with power-lock fastener
- Push in cross direction profile and attach it to the desired location

## CONNECTING BAR

Part no.

21.1113/0



### TECHN. DATA / ITEMS SUPPLIED

- Steel, galvanized
- With fastening material steel, zinc plated
- Weight = 0.156 kg/piece

### APPLICATIONS

- Connection of different profiles
- Retrofitting profiles

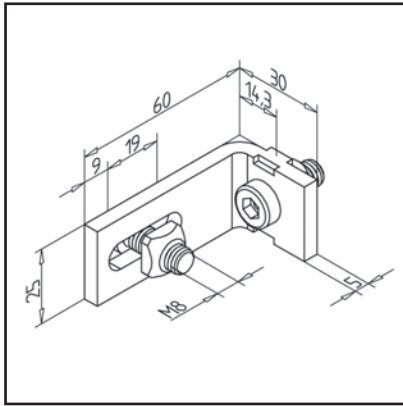
### ASSEMBLY

- Fasten to profile groove with supplied hardware
- No machining required

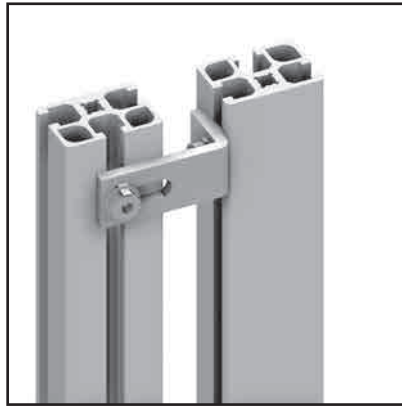
**PROTECTIVE FIELD SUSPENSION 45 ST**

Part no.

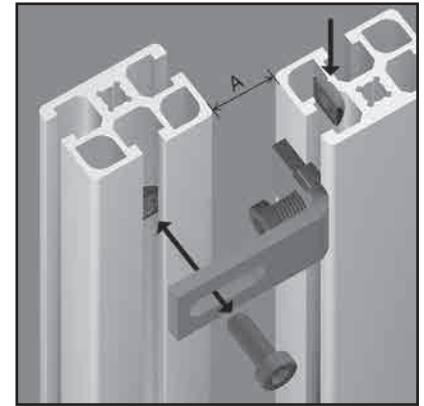
21.1404/0

**TECHN. DATA / ITEMS SUPPLIED**

- Steel, galvanized
- With fastening material steel, zinc plated
- Weight = 0.104 kg/piece

**APPLICATIONS**

- Fixation of guard units from profile 45 x 32
- Usable in frames made from any profile
- The protective field flush fits to the column

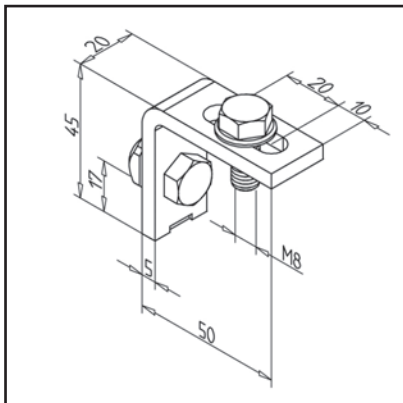
**ASSEMBLY**

- Fasten to profile groove with supplied hardware
- No machining required
- First attach the brackets to the standing profile, then connect the protective field from the rear to the brackets
- A = 10 mm - 28 mm

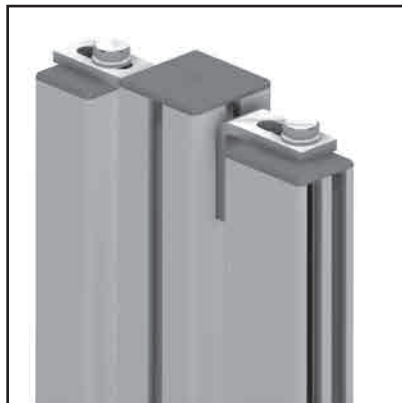
**PROTECTIVE FIELD SUSPENSION 19**

Part no.

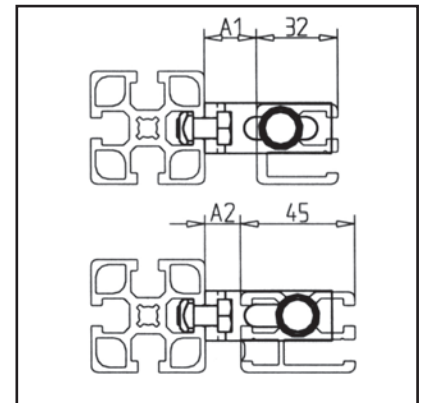
21.1399/0

**TECHN. DATA / ITEMS SUPPLIED**

- Steel, galvanized
- With fastening material steel, zinc plated
- Weight = 0.089 kg/piece

**APPLICATIONS**

- Fastening protective fields from clamping profile 32 x 32, 45 x 32 or standard profiles
- Attachment of protective fields at any angle
- When using clamping profile 32x32 use end cap **part no. 22.1032/3**
- When using clamping profile 45x32 use end cap **part no. 22.1046/3**

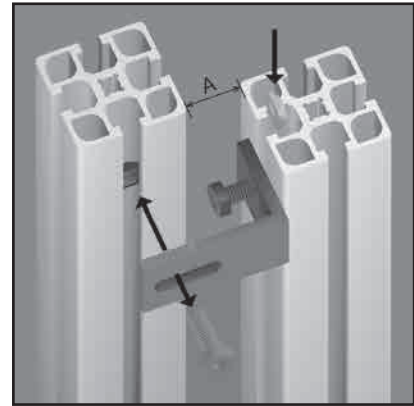
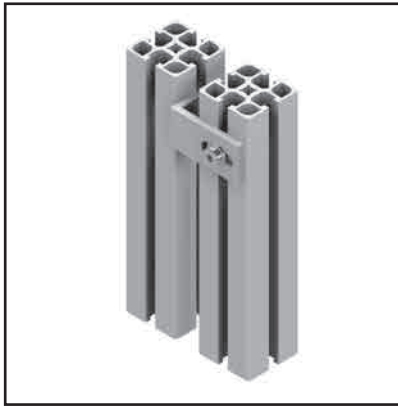
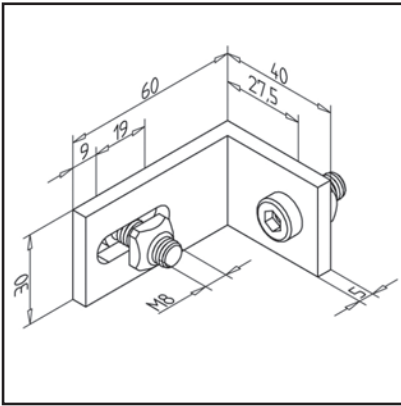
**ASSEMBLY**

- Spread screw threads M8 x 20 into the profile ending of the protective field
- Install protective field suspension on posts
- Fix guard with screws of fastening kit
- Alternatively: For very fast assembly, the lower two threads can be fitted with the retaining pin 25 **part no. 21.1758/0**. Screw fastening only on the two upper threads
- A1 = 10.5 mm - 30.5 mm A2 = 10.5 mm - 17.5 mm

## PROTECTIVE FIELD SUSPENSION 45 AL

Part no.

21.1407/0



### TECHN. DATA / ITEMS SUPPLIED

- Aluminium, anodized E6/EV1
- With fastening material steel, zinc plated
- Weight = 0.068 kg/piece

### APPLICATIONS

- Fixation of guard units from profile 45 x 45
- Usable in frames made from any profile
- The protective field flush fits to the column

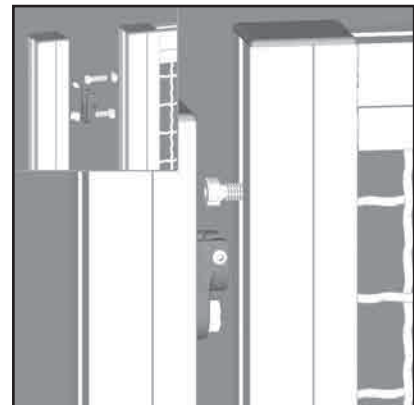
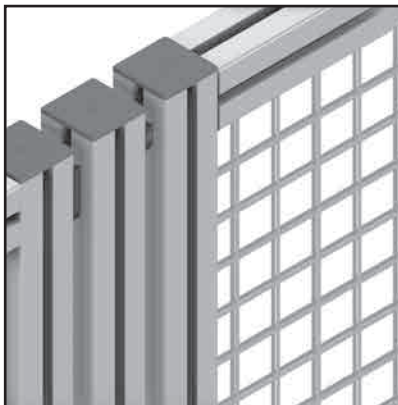
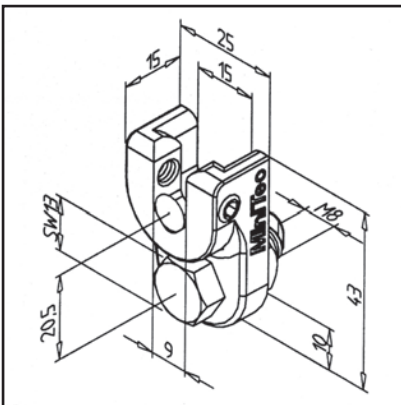
### ASSEMBLY

- Fasten to profile groove with supplied hardware
- No machining required
- First attach the brackets to the standing profile, then connect the protective field from the rear to the brackets
- A = 10 mm - 28 mm

## PROTECTIVE FIELD SUSPENSION GD-K

Part no.

21.0008/0



### TECHN. DATA / ITEMS SUPPLIED

- Aluminium, Pressure die-casting, powder-coated, grey
- With fastening material steel, zinc plated
- Weight = 0.039 kg/piece

### APPLICATIONS

- Guards from all profiles
- Movable flaps
- It is also possible to mount the guards at the front when fitting the suspensions to the front of the post

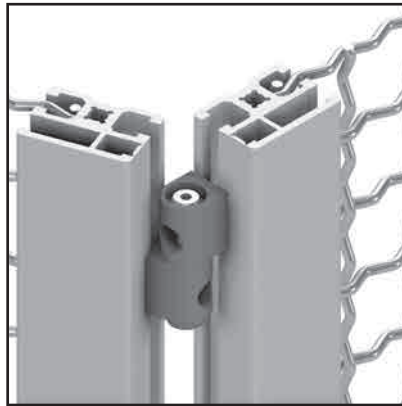
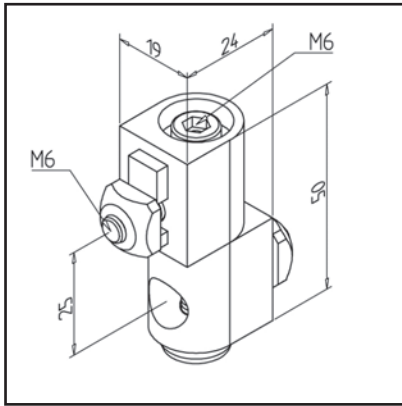
### ASSEMBLY

- Fasten protective field hanger assembly in place on columns
- Guard unit with cylinder screws M8 x 25 furnished
- Hang the guard in place, and tighten the set screw using an Allen key from the rear
- A = 16 mm ± 0.75
- **Guard cannot be removed from outside**

## PROTECTIVE FIELD SUSPENSION WITH ADJUSTABLE ANGLE

Part no.

21.1403/0



### TECHN. DATA / ITEMS SUPPLIED

- Aluminium, Pressure die-casting, powder-coated, grey
- With fastening material steel, zinc plated
- Weight = 0.114 kg/piece

### APPLICATIONS

- Connection of profile support under preferred angle
- Installation of safety fence elements at any angle

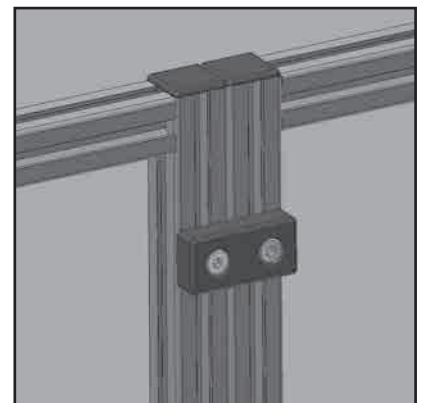
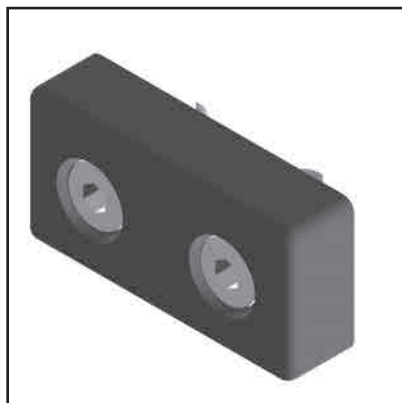
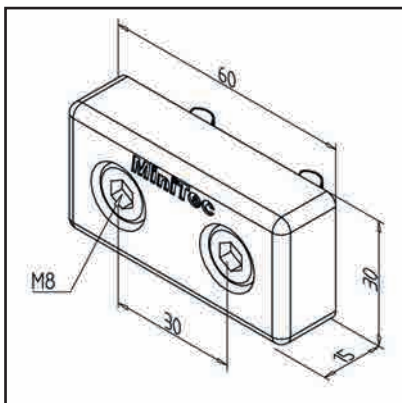
### ASSEMBLY

- Assemble and align lower halves onto posts
- Assemble and mount upper halves on guard unit
- Insert the cylinder head screw and tighten it with key 4 A/F. The inserted hexagon nut in the lower fixing half is secured against torsion

## CONNECTING PLATE 30 X 60

Part no.

21.2113/0



### TECHN. DATA / ITEMS SUPPLIED

- Aluminium, Pressure die-casting, powder-coated, grey
- With fastening material steel, zinc plated
- Weight = 0.085 kg/piece

### APPLICATIONS

- Connection of two guards without gap
- Strengthening of guard units
- Connection of pre-assembled modules

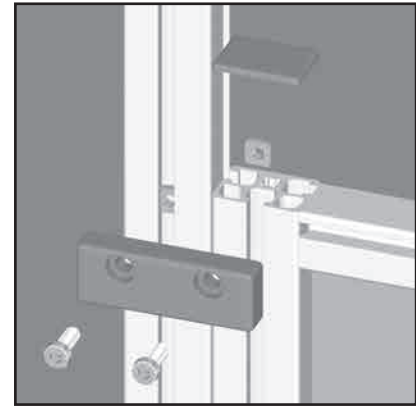
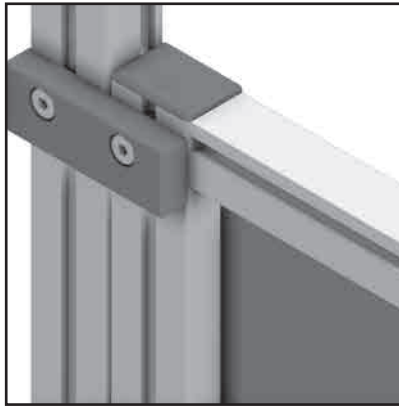
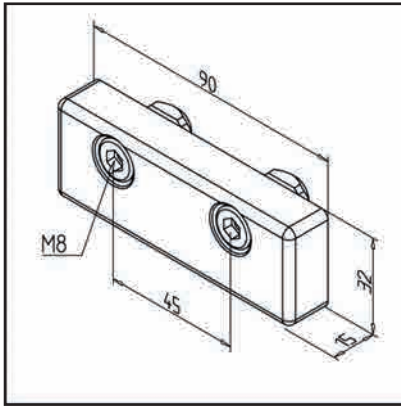
### ASSEMBLY

- Install to groove of protective field and posts with supplied hardware

## CONNECTING PLATE 90 X 32

Part no.

21.1346/0



### TECHN. DATA / ITEMS SUPPLIED

- Aluminium, Pressure die-casting, powder-coated, grey
- With fastening material steel, zinc plated
- Weight = 0.136 kg/piece

### APPLICATIONS

- Connection of two guards without gap
- Strengthening of guard units
- Connection of pre-assembled modules

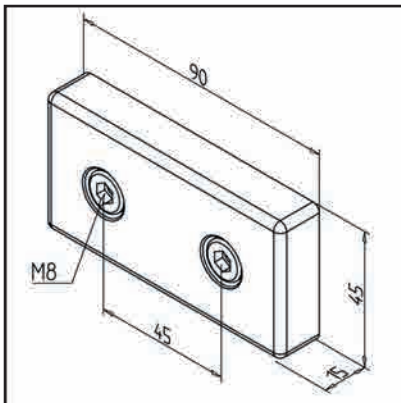
### ASSEMBLY

- Install to groove of protective field and posts with supplied hardware

## CONNECTING PLATE 45 X 90

Part no.

21.1472/0



### TECHN. DATA / ITEMS SUPPLIED

- Aluminium, Pressure die-casting, powder-coated, grey
- With fastening material steel, zinc plated
- Weight = 0.182 kg/piece

### APPLICATIONS

- Connection of two guards without gap
- Strengthening of guard units
- Connection of pre-assembled modules

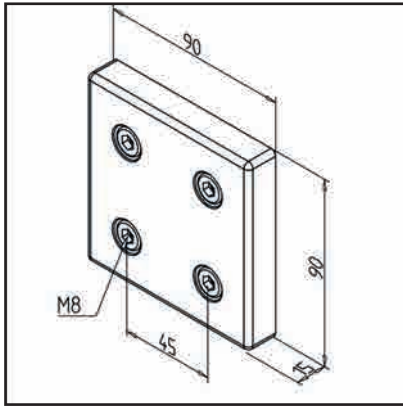
### ASSEMBLY

- Install to groove of protective field and posts with supplied hardware

**CONNECTING PLATE 90 X 90**

Part no.

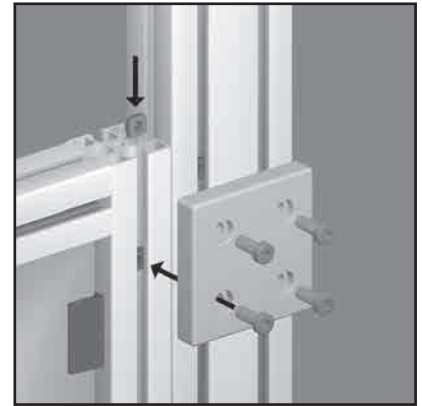
21.1473/0

**TECHN. DATA / ITEMS SUPPLIED**

- Aluminium, Pressure die-casting, powder-coated, grey
- With fastening material steel, zinc plated
- Weight = 0.366 kg/piece

**APPLICATIONS**

- Connection of two guards without gap
- Strengthening of guard units
- Connection of pre-assembled modules

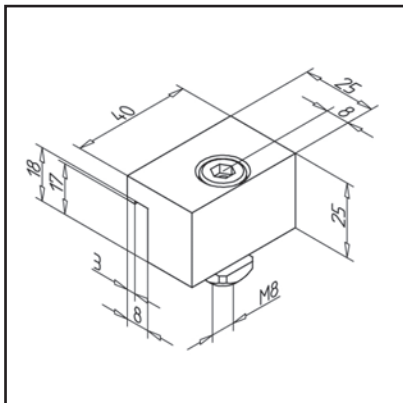
**ASSEMBLY**

- Install to groove of protective field and posts with supplied hardware

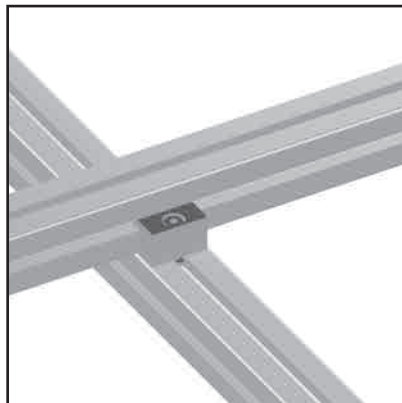
**CLAMPING CLAW**

Part no.

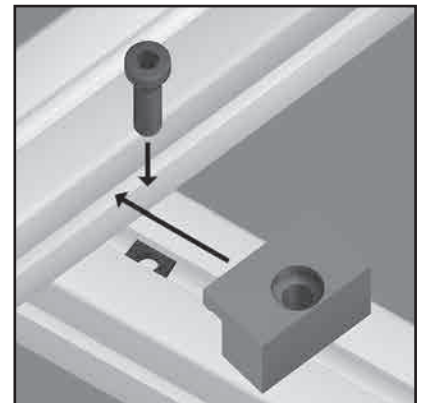
21.1027/0

**TECHN. DATA / ITEMS SUPPLIED**

- Aluminium, anodized E6/EV1
- With fastening material steel, zinc plated
- Weight = 0.063 kg/piece

**APPLICATIONS**

- Parallel connection of profiles at various angles

**ASSEMBLY**

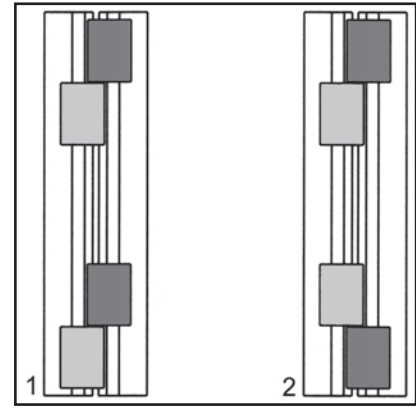
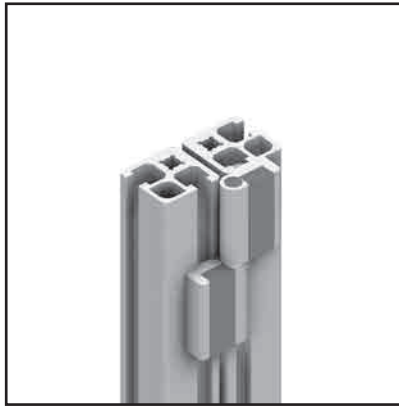
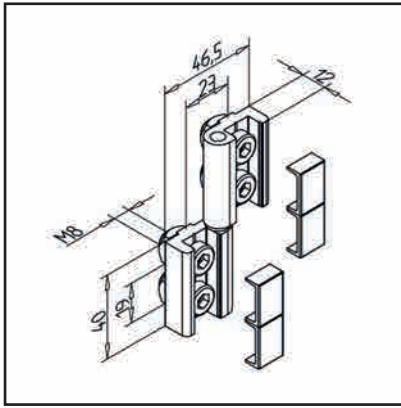
- Fasten to profile groove with supplied hardware
- No machining required



## DETACHABLE HINGE 19

Part no.

21.1100/0



### TECHN. DATA / ITEMS SUPPLIED

- Aluminium, anodized E6/EV1
- with stainless steel shaft
- With fastening material steel, zinc plated
- End caps
- Spring plate design **part no. 21.1100/7**
- load capacity up to 400 N
- Weight = 0.110 kg/piece

### APPLICATIONS

- Detachable doors, hatches, surface elements in a vertical arrangement
- If the hinges are arranged in the opposite direction, non-detachable and horizontally mounted structures can also be produced
- Connection of profiles 19 at various angles

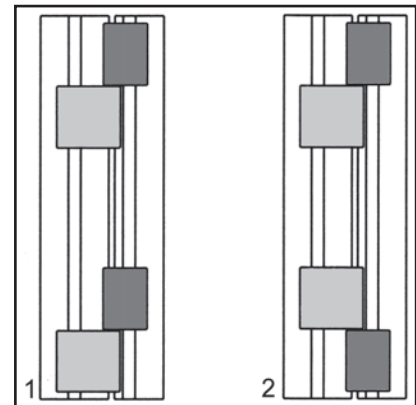
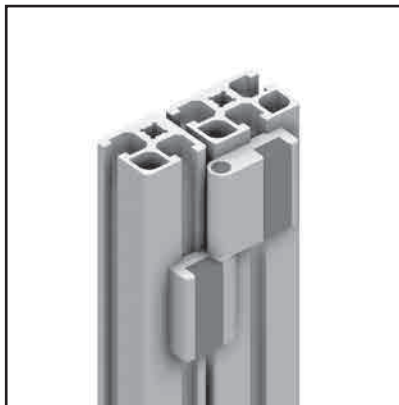
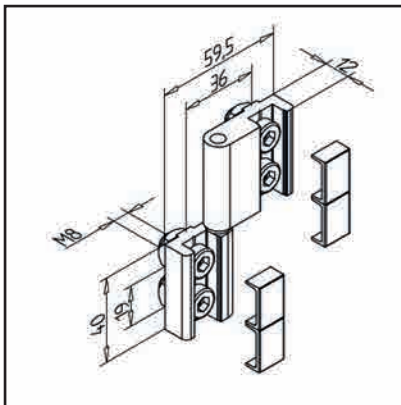
### ASSEMBLY

- Fasten to profile groove with supplied hardware.
- For fixing directly on surface elements or on profile surfaces we deliver hinge 19 without fixing element **part no. 21.1100/2**
- 1: lift removable
- 2: Arrangement is not detachable

## DETACHABLE HINGE 32

Part no.

21.1095/0



### TECHN. DATA / ITEMS SUPPLIED

- Aluminium, anodized E6/EV1
- with stainless steel shaft
- With fastening material steel, zinc plated
- End caps
- **Order with position fixing nuts, part no. 21.1095/7**
- load capacity up to 400 N
- Weight = 0.134 kg/piece

### APPLICATIONS

- Detachable doors, hatches, moving parts on profiles 32
- If the hinges are arranged in the opposite direction, non-detachable and horizontally mounted structures can also be produced
- Connecting profiles 19, 32 and 45 at any angle

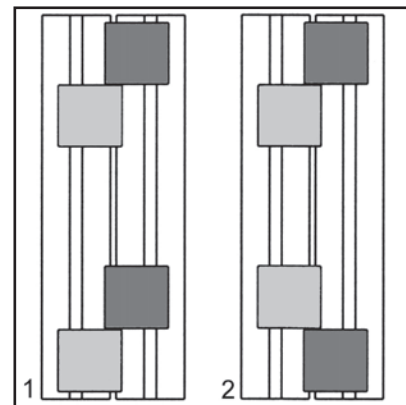
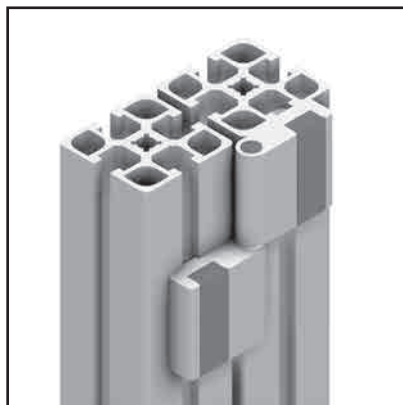
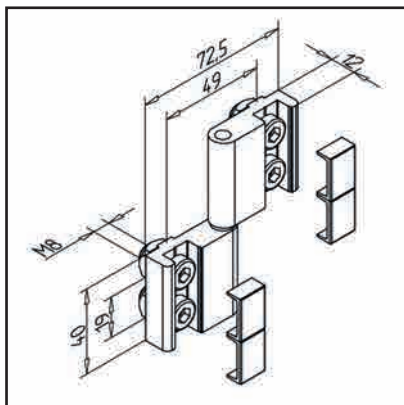
### ASSEMBLY

- Fasten to profile groove with supplied hardware.
- For fixing directly on surface elements or on profile surfaces we deliver hinge 32 without fixing element **part no. 21.1095/2**
- 1: lift removable
- 2: Arrangement is not detachable

**DETACHABLE HINGE 45**

Part no.

21.1096/0

**TECHN. DATA / ITEMS SUPPLIED**

- Aluminium, anodized E6/EV1
- with stainless steel shaft
- With fastening material steel, zinc plated
- End caps
- Order with position fixing nuts, **part no. 21.1096/7**
- load capacity up to 400 N
- Weight = 0.151 kg/piece

**APPLICATIONS**

- Detachable doors, hatches, moving parts on profiles 45
- Connection of profiles 45 at various angles
- Suspension of protective fields
- If the hinges are arranged in the opposite direction, non-detachable and horizontally mounted structures can also be produced

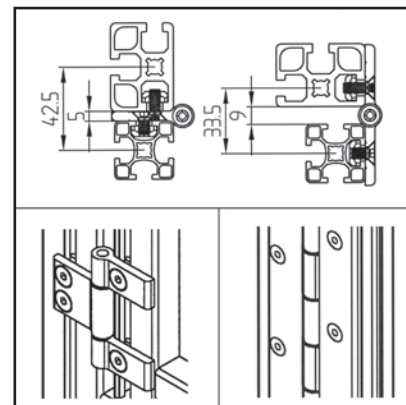
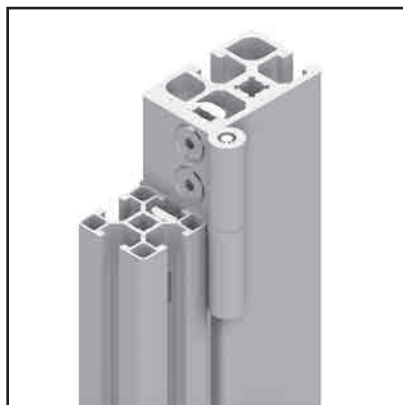
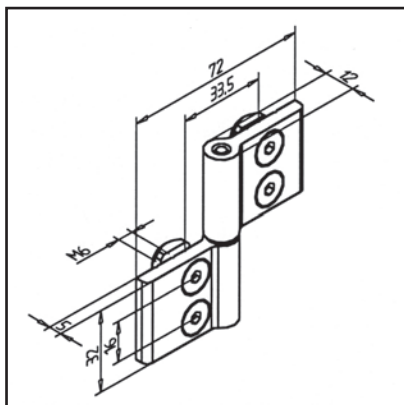
**ASSEMBLY**

- Fasten to profile groove with supplied hardware.
- For fixing directly on surface elements or on profile surfaces we deliver hinge 45 without fixing element **part no. 21.1096/2**
- 1: lift removable
- 2: Arrangement is not detachable

**DETACHABLE HINGE L 19/30**

Part no.

21.1374/0

**TECHN. DATA / ITEMS SUPPLIED**

- Aluminium, anodized E6/EV1
- with stainless steel shaft
- With fastening material steel, zinc plated
- load capacity up to 400 N
- Weight = 0.089 kg/piece

**APPLICATIONS**

- Detachable doors, hatches, moving parts to profiles 19, 32 and 45
- If the hinges are arranged in the opposite direction, non-detachable and horizontally mounted structures can also be produced
- Connecting profiles 19 and 30 at any angle

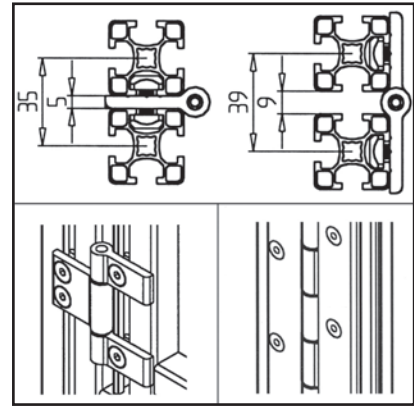
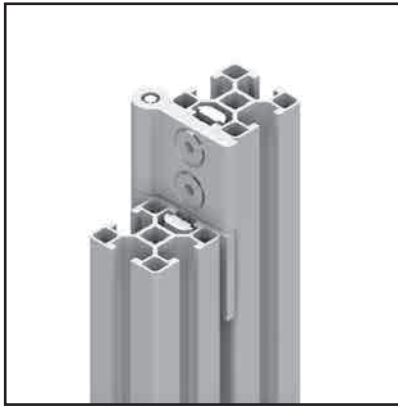
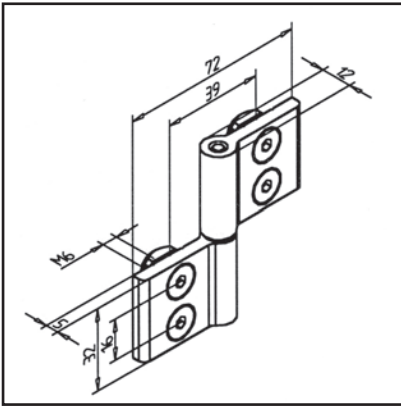
**ASSEMBLY**

- Fasten to profile groove with supplied hardware.
- The hinge profile 5GB **part no. 20.0093/0** (not anodized) is available for the production of hinges in variable lengths and bore spacings as well as piano hinges

### DETACHABLE HINGE L 30/30

Part no.

21.1376/0



#### TECHN. DATA / ITEMS SUPPLIED

- Aluminium, anodized E6/EV1
- with stainless steel shaft
- With fastening material steel, zinc plated
- load capacity up to 400 N
- Weight = 0.089 kg/piece

#### APPLICATIONS

- Detachable doors, hatches, movable attachments
- If the hinges are arranged in the opposite direction, non-detachable and horizontally mounted structures can also be produced
- Connection of profiles 30 under preferred angle

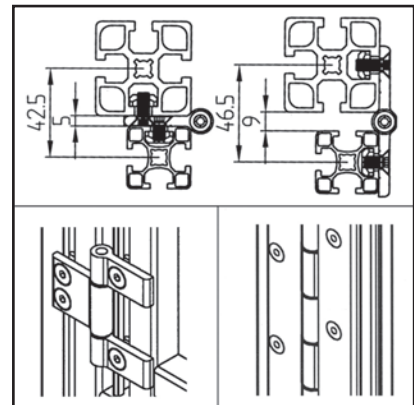
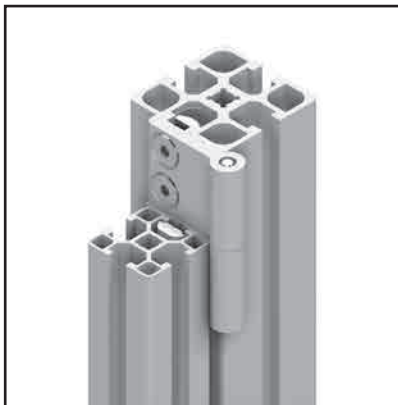
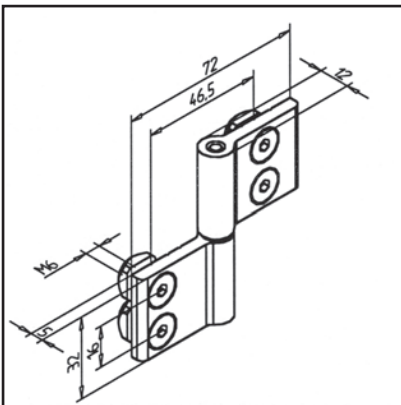
#### ASSEMBLY

- Fasten to profile groove with supplied hardware.
- The hinge profile 5GB **part no. 20.0093/0** (not anodized) is available for the production of hinges in variable lengths and bore spacings as well as piano hinges

### DETACHABLE HINGE L 30/45

Part no.

21.1377/0



#### TECHN. DATA / ITEMS SUPPLIED

- Aluminium, anodized E6/EV1
- with stainless steel shaft
- With fastening material steel, zinc plated
- load capacity up to 400 N
- Weight = 0.089 kg/piece

#### APPLICATIONS

- Detachable doors, hatches, movable attachments
- If the hinges are arranged in the opposite direction, non-detachable and horizontally mounted structures can also be produced
- Connection of profiles 30 and 45 at various angles

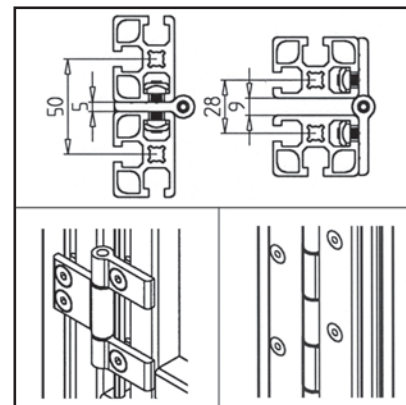
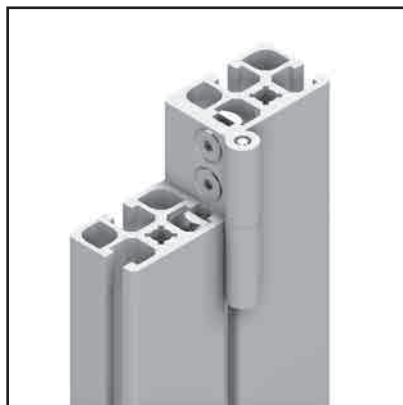
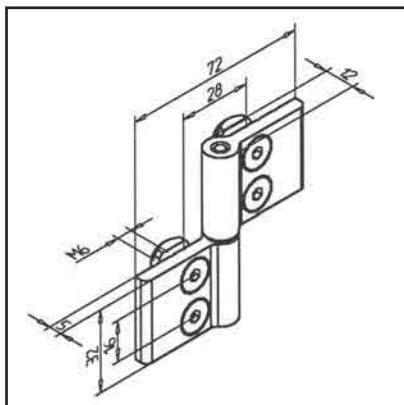
#### ASSEMBLY

- Fasten to profile groove with supplied hardware.
- The hinge profile 5GB **part no. 20.0093/0** (not anodized) is available for the production of hinges in variable lengths and bore spacings as well as piano hinges

**DETACHABLE HINGE L 19/19**

Part no.

21.1373/0

**TECHN. DATA / ITEMS SUPPLIED**

- Aluminium, anodized E6/EV1
- with stainless steel shaft
- With fastening material steel, zinc plated
- load capacity up to 400 N
- Weight = 0.089 kg/piece

**APPLICATIONS**

- Detachable doors, hatches, moving parts to profiles 19 and 32
- Suspension of protective fields
- If the hinges are arranged in the opposite direction, non-detachable and horizontally mounted structures can also be produced
- Connection of profiles 19 at various angles

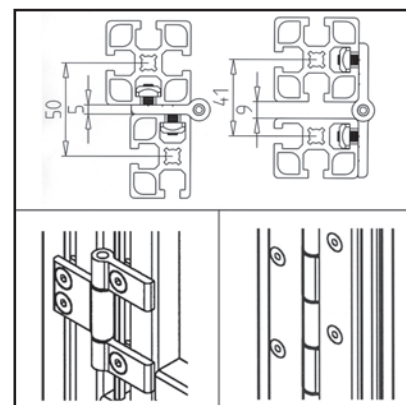
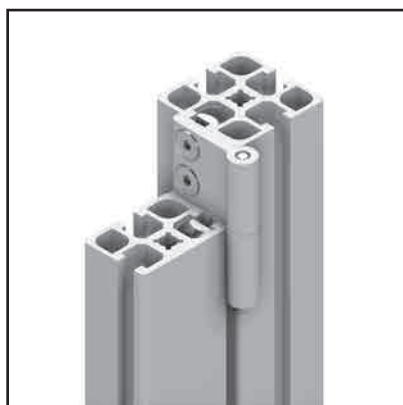
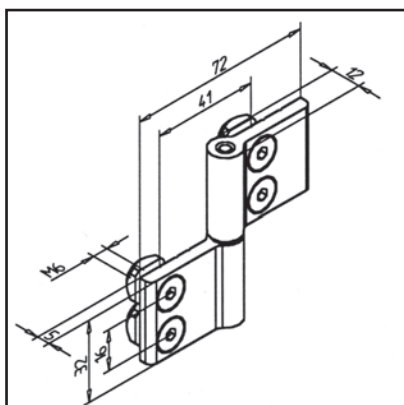
**ASSEMBLY**

- Fasten to profile groove with supplied hardware.
- The hinge profile 5GB **part no. 20.0093/0** (not anodized) is available for the production of hinges in variable lengths and bore spacings as well as piano hinges

**DETACHABLE HINGE L 19/45**

Part no.

21.1375/0

**TECHN. DATA / ITEMS SUPPLIED**

- Aluminium, anodized E6/EV1
- with stainless steel shaft
- With fastening material steel, zinc plated
- load capacity up to 400 N
- Weight = 0.089 kg/piece

**APPLICATIONS**

- Detachable doors, hatches, moving parts to profiles 19, 32 and 45
- Suspension of protective fields
- If the hinges are arranged in the opposite direction, non-detachable and horizontally mounted structures can also be produced
- Connecting profiles 19, 32 and 45 at any angle

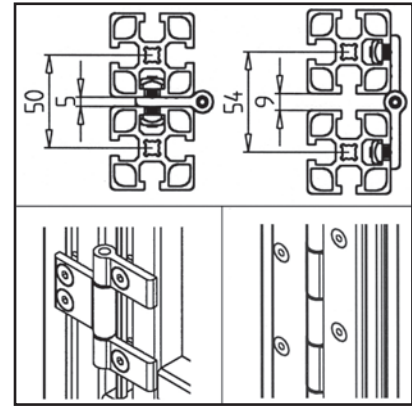
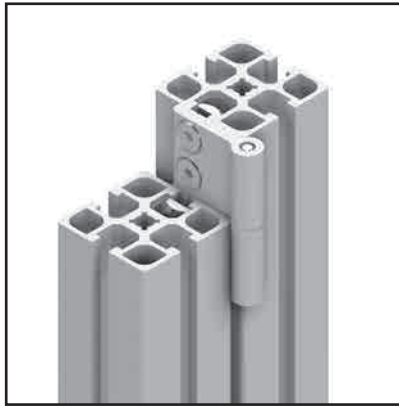
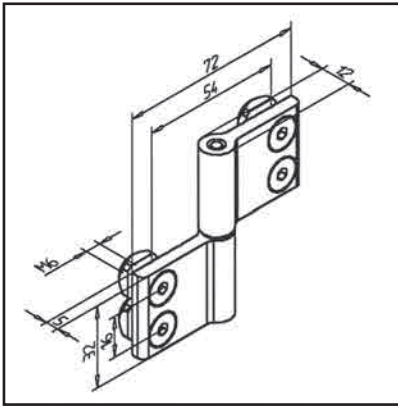
**ASSEMBLY**

- Fasten to profile groove with supplied hardware.
- The hinge profile 5GB **part no. 20.0093/0** (not anodized) is available for the production of hinges in variable lengths and bore spacings as well as piano hinges

## DETACHABLE HINGE L 45/45

Part no.

21.1378/0



### TECHN. DATA / ITEMS SUPPLIED

- Aluminium, anodized E6/EV1
- with stainless steel shaft
- With fastening material steel, zinc plated
- load capacity up to 400 N
- Weight = 0.089 kg/piece

### APPLICATIONS

- Detachable doors, hatches, moving parts on profiles 45
- Suspension of protective fields
- If the hinges are arranged in the opposite direction, non-detachable and horizontally mounted structures can also be produced
- Connection of profiles 45 at various angles

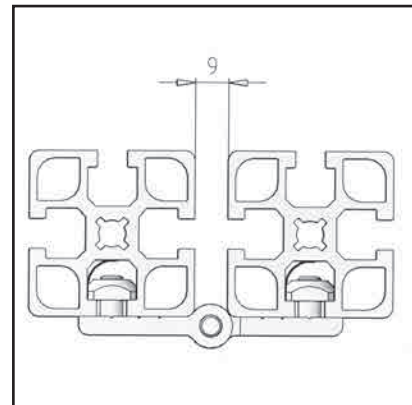
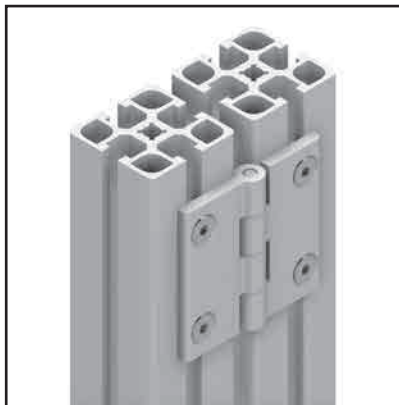
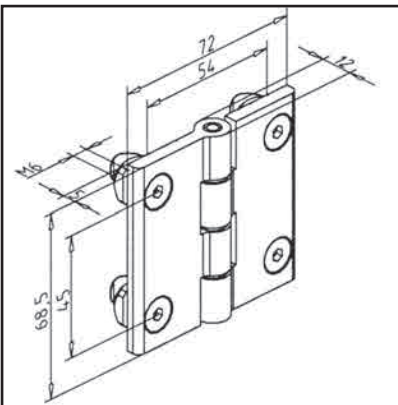
### ASSEMBLY

- Fasten to profile groove with supplied hardware.
- The hinge profile 5GB **part no. 20.0093/0** (not anodized) is available for the production of hinges in variable lengths and bore spacings as well as piano hinges

## DOOR HINGE SMALL

Part no.

21.0973/0



### TECHN. DATA / ITEMS SUPPLIED

- Aluminium, anodized E6/EV1
- with stainless steel shaft
- With fastening material steel, zinc plated
- Weight = 0.120 kg/piece

### APPLICATIONS

- Suitable for large doors and lids
- Guard units
- Connection of profiles at various angles

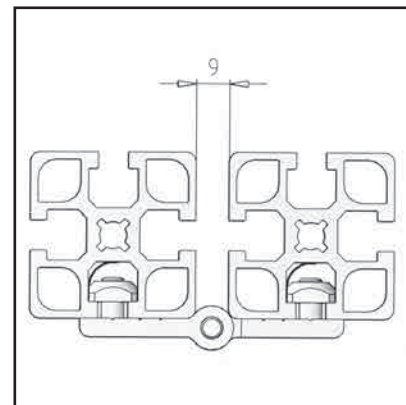
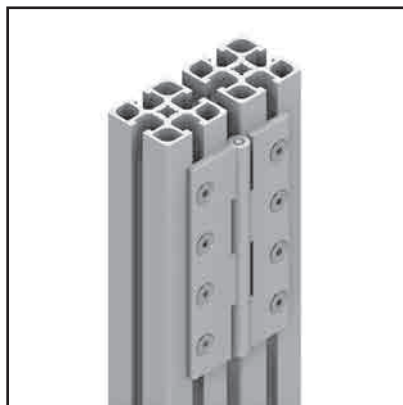
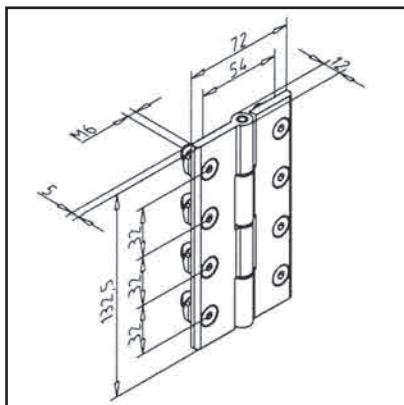
### ASSEMBLY

- Screw tight to the profile groove with supplied hardware

**DOOR HINGE LARGE**

Part no.

21.0970/0

**TECHN. DATA / ITEMS SUPPLIED**

- Aluminium, anodized E6/EV1
- with stainless steel shaft
- With fastening material steel, zinc plated
- Weight = 0.235 kg/piece

**APPLICATIONS**

- Suitable for large doors and lids
- Guard units
- Connection of profiles at various angles

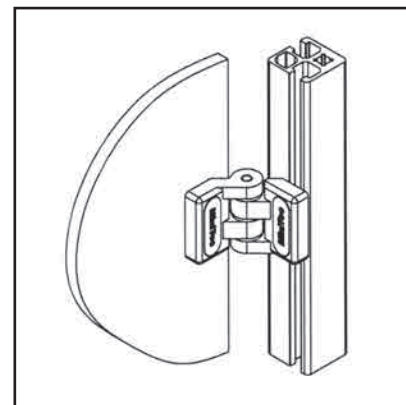
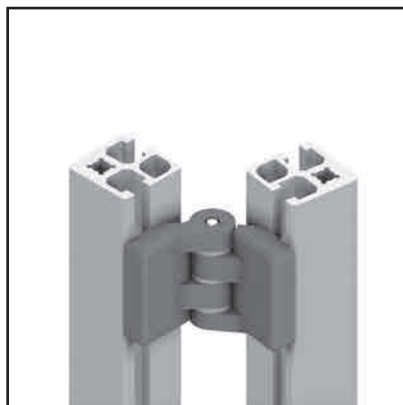
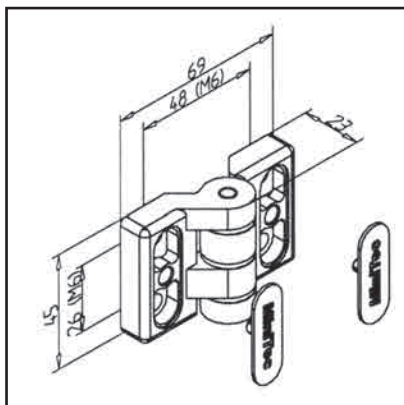
**ASSEMBLY**

- Screw tight to the profile groove with supplied hardware

**FOLDING HINGE 19 S**

Part no.

21.1044/0

**TECHN. DATA / ITEMS SUPPLIED**

- Aluminium, Pressure die-casting, powder-coated, grey
- Hinge pin, steel, galvanised
- End caps
- Without fastening kit
- load capacity up to 600 N
- Weight = 0.100 kg/piece

**APPLICATIONS**

- Suitable for larger doors and hatches of profiles 19 or 32
- Guard units
- Connection of profiles 19 and 32 at any angle

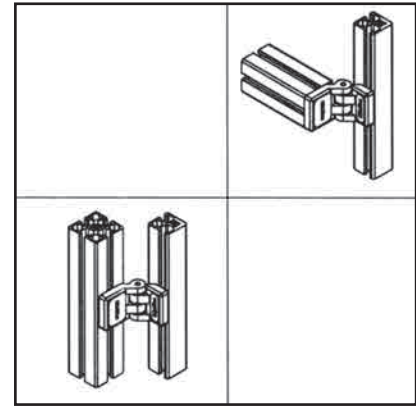
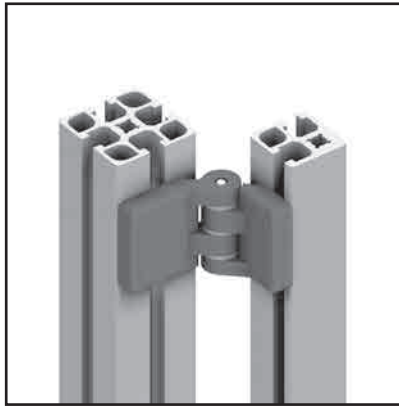
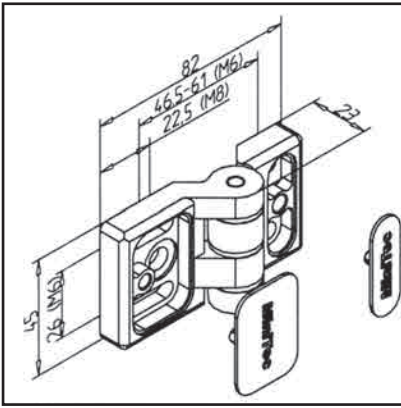
**ASSEMBLY**

- Fasten hinge halves each with 2 screws M6 x 18 and 2 square nut on profile, or fasten directly with screws on to surface elements according to material strength
- For heavy-duty applications use multiple hinges
- Swivel range up to 270°

## FOLDING HINGE 32 S

Part no.

21.1055/0



### TECHN. DATA / ITEMS SUPPLIED

- Aluminium, Pressure die-casting, powder-coated, grey
- Hinge pin, steel, galvanised
- End caps
- Without fastening kit
- load capacity up to 600 N
- Weight = 0.102 kg/piece

### APPLICATIONS

- Suitable for large doors and lids
- Guard units
- Connecting profiles 19, 32 and 45 at any angle

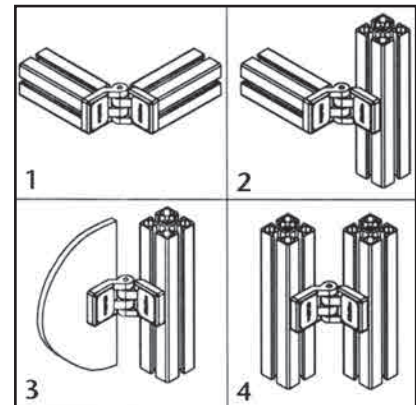
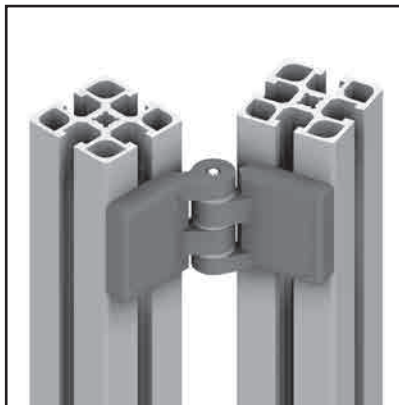
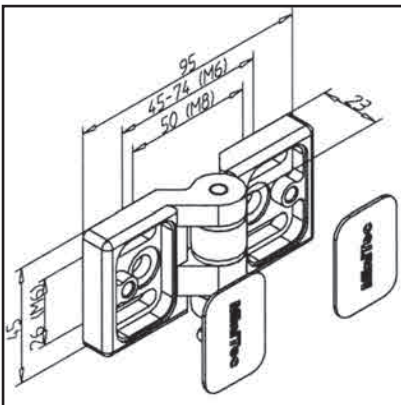
### ASSEMBLY

- Fasten hinge with 2 M6 x 18 bolts and 2 square nuts on the profile groove or with screws corresponding to the material thickness directly on the surface elements
- Fasten other hinge half onto profile 45 x 45 with screw M8 x 30 or 2 screws M6 x 18
- For heavy-duty applications use multiple hinges
- Swivel range up to 270°

## FOLDING HINGE 45 S

Part no.

21.1098/0



### TECHN. DATA / ITEMS SUPPLIED

- Aluminium, Pressure die-casting, powder-coated, grey
- Hinge pin, steel, galvanised
- End caps
- Without fastening kit
- load capacity up to 600 N
- Weight = 0.099 kg/piece

### APPLICATIONS

- Suitable for large doors and lids
- Guard units
- Connection of profiles at various angles
- For heavy-duty application use multiple hinges

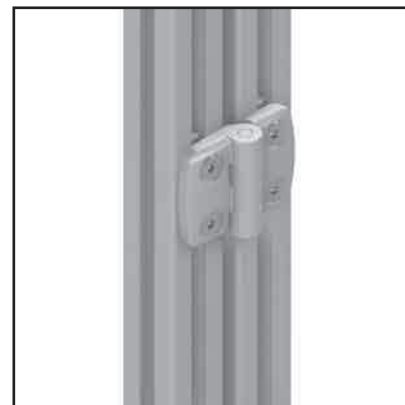
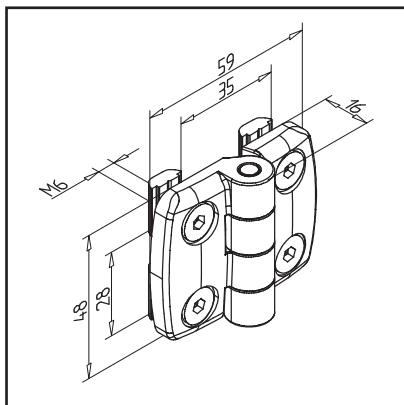
### ASSEMBLY

- 1: 2 screws M8 x 30
- 2: 2 screws M6 x 18, 2 square nut M6, 1 screw M8 x 30
- 3: 2 screws M6 x 18, 2 square nuts M6, for panel element 2 screws M6 according to the material thickness
- 4: 4 screws M6 x 18, 4 square nuts M6
- Swivel range up to 270°

**FOLDING HINGE 30 GD**

Part no.

21.2532/0

**TECHN. DATA / ITEMS SUPPLIED**

- Aluminium, Pressure die-casting, lacquered, silver
- with stainless steel shaft
- Fastening material steel, galvanized
- Load capacity up to 300 N
- Weight = 0.098 kg/piece

**APPLICATIONS**

- Suitable for all profiles of series 30
- Doors and lids
- Guard units
- Connection of profiles at various angles

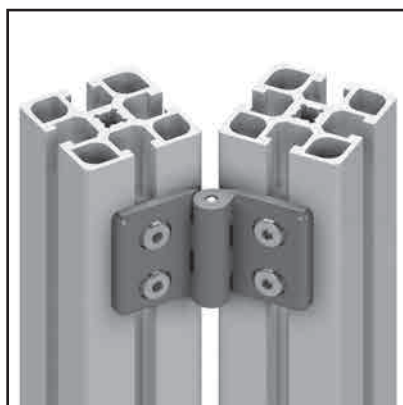
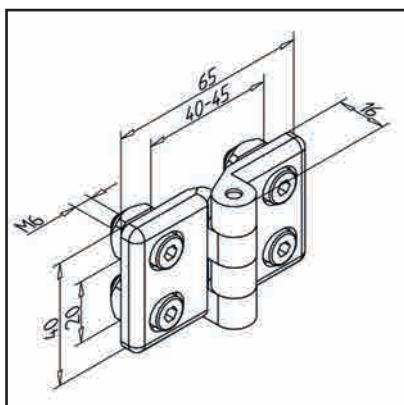
**ASSEMBLY**

- Screw tight to the profile groove with supplied hardware.

**FOLDING HINGE 45 M6**

Part no.

21.1175/0

**TECHN. DATA / ITEMS SUPPLIED**

- PA, grey
- With fastening material steel, zinc plated
- load capacity up to 160 N
- Weight = 0.061 kg/piece

**APPLICATIONS**

- Suitable for light doors and lids
- Guard units
- Connection of profiles at various angles

**ASSEMBLY**

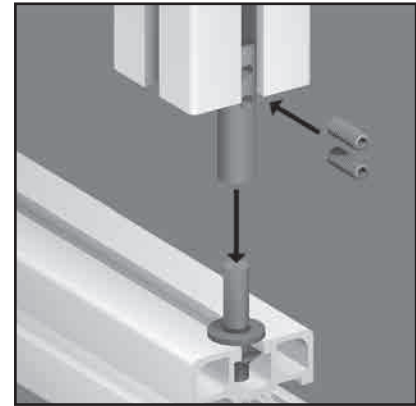
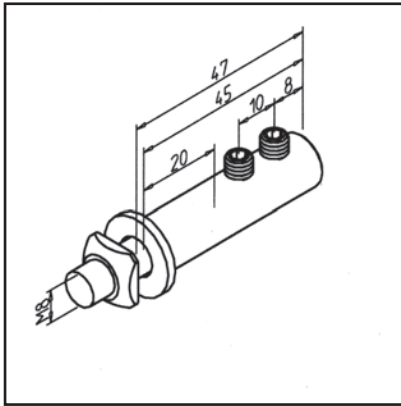
- Screw tight to the profile groove with supplied hardware.



## INTERNAL HINGE AL

Part no.

21.1142/0



### TECHN. DATA / ITEMS SUPPLIED

- Aluminium, anodized E6/EV1
- With fastening material steel, zinc plated
- load capacity up to 250 N
- Weight = 0.032 kg/piece

### APPLICATIONS

- Doors
- Lids
- Movable elements
- Retrofitting of doors

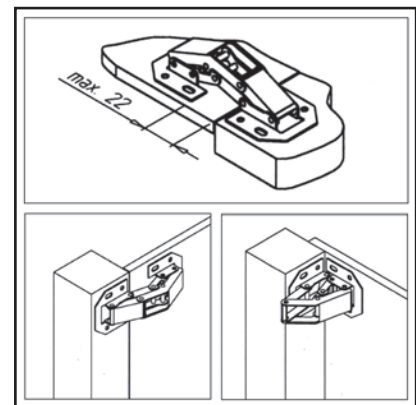
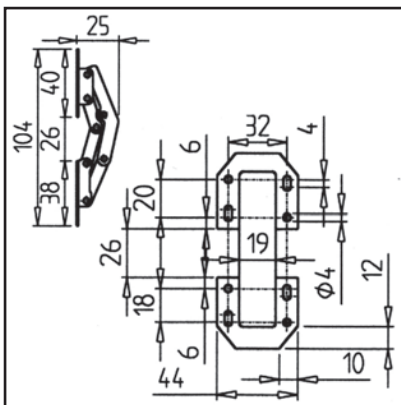
### ASSEMBLY

- Fix the retaining pins in the frame and place the plastic washer
- Insert hinge into door element
- Position the door element with the grooves over the retaining pins, push the hinges onto the retaining pins and tighten

## SWING-OUT HINGE

Part no.

21.1187/0



### TECHN. DATA / ITEMS SUPPLIED

- Steel, galvanized
- Without fastening kit
- load capacity up to 50 N
- Weight = 0.080 kg/piece

### APPLICATIONS

- For lightweight doors
- In windows, measuring devices, safety devices
- Doors latch gap-free either overlying outside or flush inside

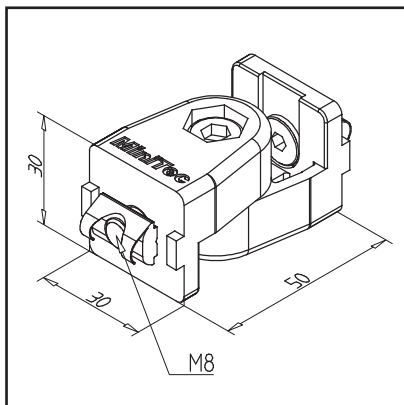
### ASSEMBLY

- On profile grooves with screws M4 x 16 and square nut M4
- Direct fixation to panel element, screw length must thus be selected according to material strength
- Fastening directly on the profile surface

**JOINT 30 S**

Part no.

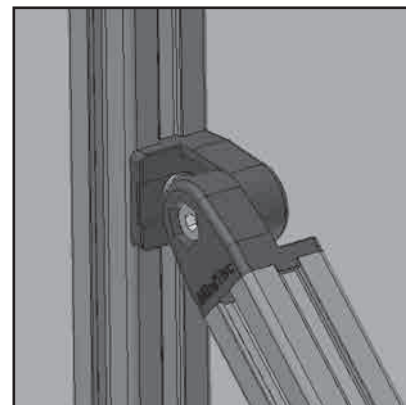
21.2106/0

**TECHN. DATA / ITEMS SUPPLIED**

- Aluminium, Pressure die-casting, powder-coated, grey
- With fastening material steel, zinc plated
- Locking device against torsion
- Weight = 0.087 kg/piece

**APPLICATIONS**

- Connection of profile support under preferred angle
- Retrofitting reinforcement in existing racks
- Alternative: Swivel joint 30 S with slide bushing **part no. 21.2222/0**
- Alternative: Swivel joint 30 S with clamping lever **part no. 21.2225/0**

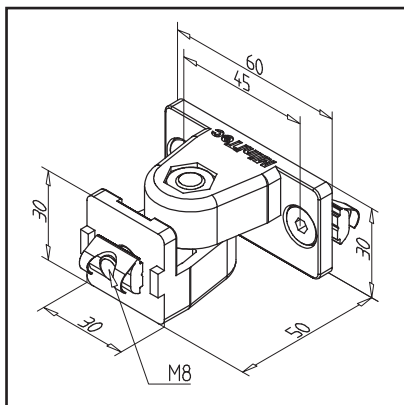
**ASSEMBLY**

- Attach the first joint half to the profile strut on the face side
- Fasten the second joint half to the supporting frame
- Screw both parts together on hinge point

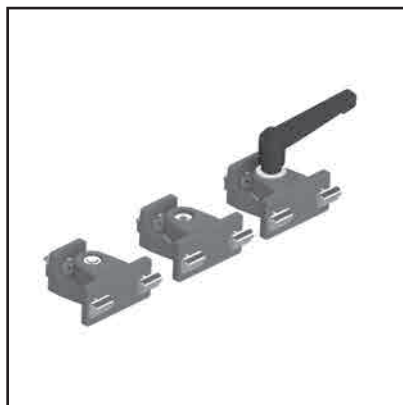
**JOINT 30 F/S**

Part no.

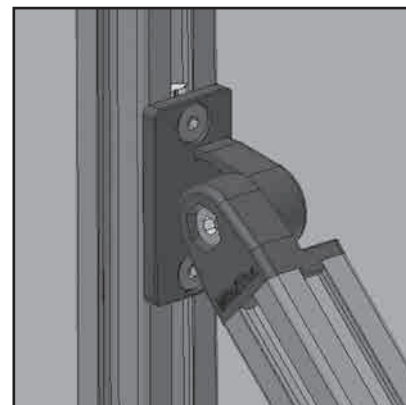
21.2105/0

**TECHN. DATA / ITEMS SUPPLIED**

- Aluminium, Pressure die-casting, powder-coated, grey
- With fastening material steel, zinc plated
- Locking device against torsion
- Weight = 0.105 kg/piece

**APPLICATIONS**

- Connection of profile support under preferred angle
- Retrofitting reinforcement in existing racks
- Alternative: Swivel joint 30 F / S with sliding bushing: **part no. 21.2221/0**
- Alternatively: Swivel joint 30 F/S with clamping lever **part no. 21.2224/0**

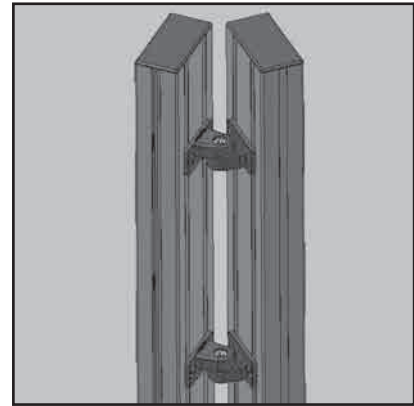
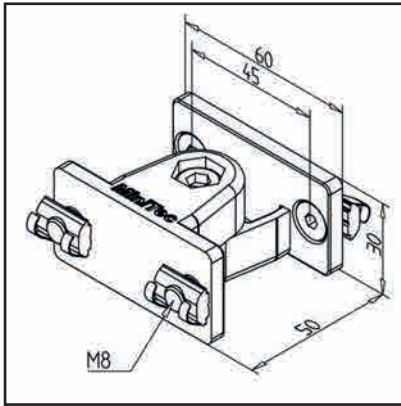
**ASSEMBLY**

- Attach the first joint half to the profile strut on the face side
- Fasten the second joint half to the supporting frame
- Screw both parts together on hinge point

## JOINT 30 F

Part no.

21.2111/0



### TECHN. DATA / ITEMS SUPPLIED

- Aluminium, Pressure die-casting, powder-coated, grey
- With fastening material steel, zinc plated
- Locking device against torsion
- Weight = 0.126 kg/piece

### APPLICATIONS

- Connection of profile support under preferred angle
- Retrofitting reinforcement in existing racks
- Alternative: Swivel joint 30 F with slide bushing **part no. 21.2223/0**
- Alternative: Swivel joint 30 F with clamping lever **part no. 21.2226/0**

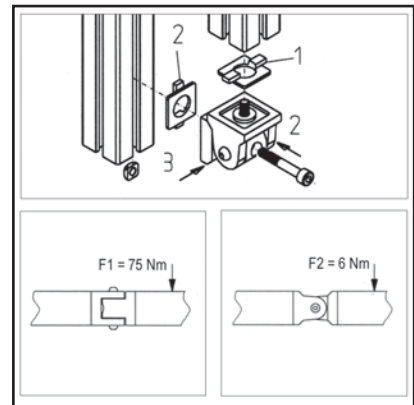
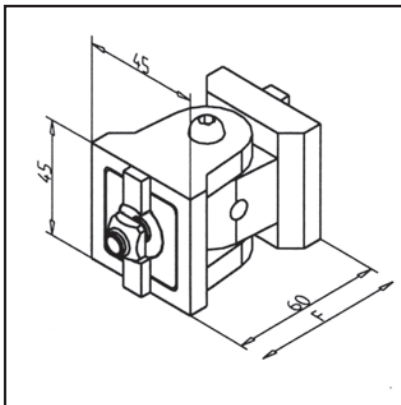
### ASSEMBLY

- Fasten link to profile face
- Screw both parts together on hinge point

## SWIVEL JOINT 45

Part no.

21.2030/0



### TECHN. DATA / ITEMS SUPPLIED

- Aluminium, Pressure die-casting, powder-coated, grey
- With fastening material steel, zinc plated
- Anti-rotation device AL GD
- Load  $F_{max}$  5000 N
- Use on vertical struts **part no. 21.2030/1**
- Weight = 0.250 kg/piece

### APPLICATIONS

- Connection of profiles at various angles
- Bracings
- Reinforcement of frame constructions
- Not to be used as a hinge

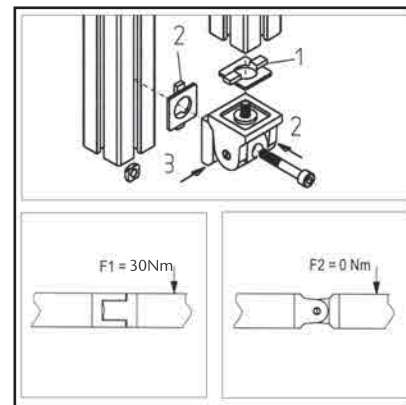
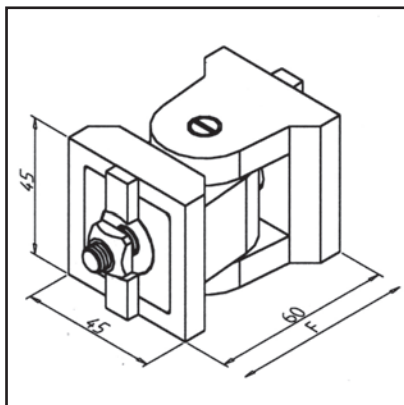
### ASSEMBLY

- 1: Joint half with pre-mounted screw to desired position fasten
- 2: Screw from scope of supply insert and joint half of 2 fix swivel (to it mobile side 90°)
- 3: Tighten lateral connecting screws

**SWIVEL JOINT 45**

Part no.

21.2020/0

**TECHN. DATA / ITEMS SUPPLIED**

- Aluminium, Pressure die-casting, powder-coated, grey
- With fastening material steel, zinc plated
- With low-friction sliding bearing
- Anti-rotation device AL GD
- Load  $F_{max}$  1500 N
- Use on vertical struts **part no. 21.2020/7**
- Weight = 0.240 kg/piece

**APPLICATIONS**

- Heavy duty swing doors, storage of moving parts
- Not lockable
- For heavy loads use multiple hinges

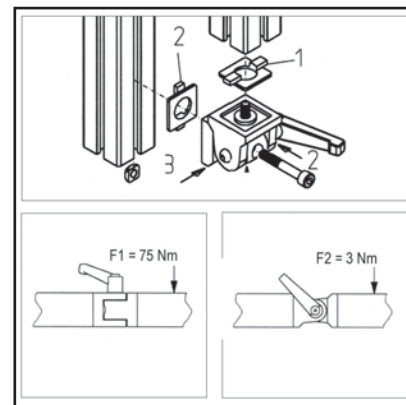
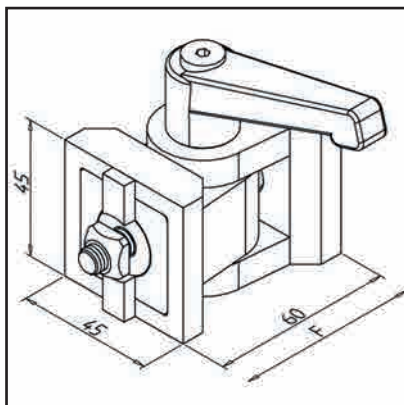
**ASSEMBLY**

- 1: Joint half with pre-mounted screw to desired position fasten
- 2: Put in the screws delivered and fix the joint half 2 (for this, swivel the movable side 90°, do not loosen the bearing pins!)

**SWIVEL JOINT 45 WITH CLAMPING LEVER**

Part no.

21.2010/0

**TECHN. DATA / ITEMS SUPPLIED**

- Aluminium, Pressure die-casting, powder-coated, grey
- With fastening material steel, zinc plated
- With low-friction sliding bearing
- Anti-rotation device AL GD
- Load  $F_{max}$  1500 N
- Use on vertical struts **part no. 21.2010/7**
- Weight = 0.339 kg/piece

**APPLICATIONS**

- Heavy duty swing doors, storage of moving parts
- Clamping lever for positioning of add-on parts
- Fastening of quick-to-adjust components such as gripping shells, measuring devices
- For heavy loads use multiple hinges

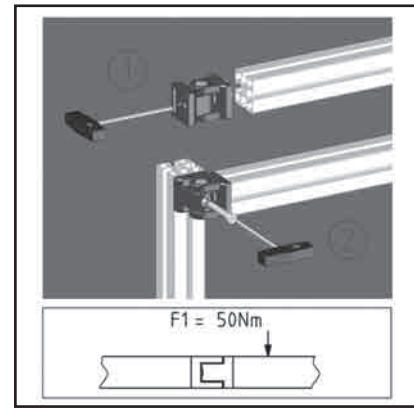
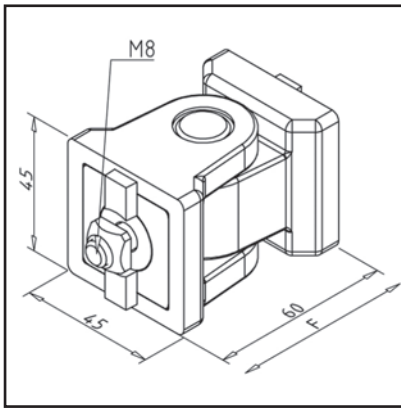
**ASSEMBLY**

- 1: Joint half with pre-mounted screw to desired position fasten
- 2: Fix with screws included
- 3: Tighten clamping lever

## SWIVEL JOINT 45/15

Part no.

21.2315/0



### TECHN. DATA / ITEMS SUPPLIED

- Aluminium, Pressure die-casting, powder-coated, grey
- With fastening material steel, zinc plated
- With low-friction sliding bearing
- Anti-rotation device AL GD
- Load  $F_{max}$  2700 N
- Weight = 0.312 kg/piece

### APPLICATIONS

- Heavy duty swing doors, storage of moving parts
- Not lockable
- For heavy loads use multiple hinges

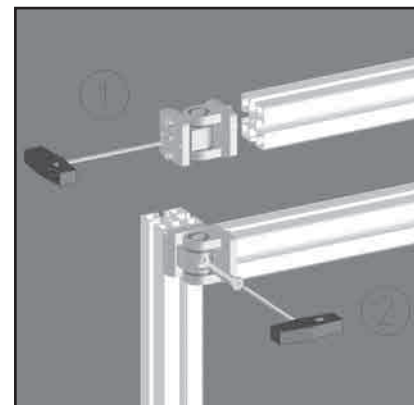
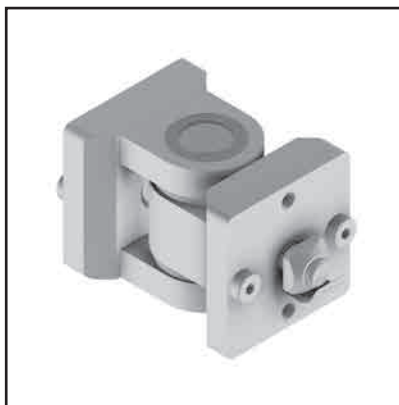
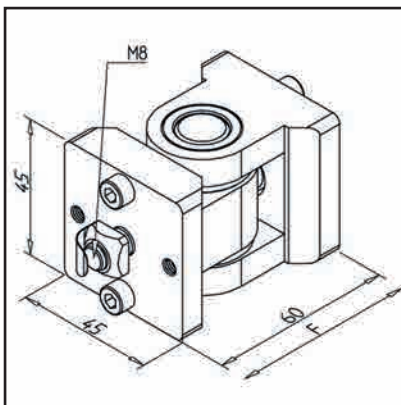
### ASSEMBLY

- Attach the first joint half to the profile strut on the face side
- Fasten the second joint half to the supporting frame

## HEAVY DUTY JOINT 45

Part no.

21.2034/0



### TECHN. DATA / ITEMS SUPPLIED

- Steel, galvanized
- With fastening material steel, zinc plated
- With low-friction sliding bearing
- Locking device against torsion
- Load  $F_{max}$  3500 N
- Load  $F_1$  max 75 Nm
- Weight = 0.680 kg/piece

### APPLICATIONS

- Heavy duty swing doors, storage of moving parts
- Not lockable
- For heavy loads use multiple hinges

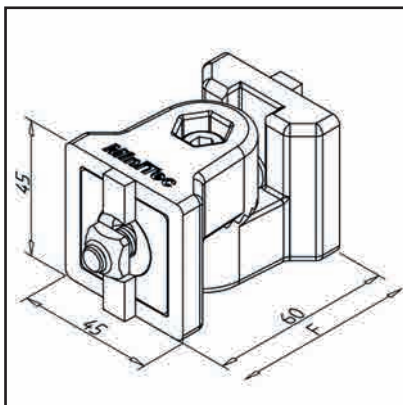
### ASSEMBLY

- Attach the first joint half to the profile strut on the face side
- Fasten the second joint half to the supporting frame

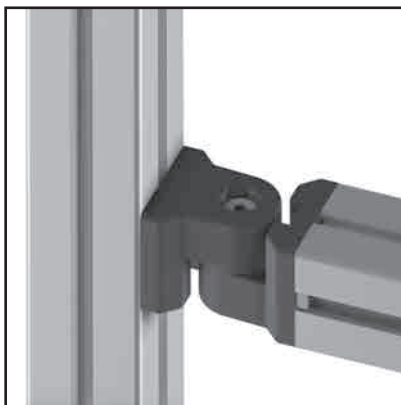
**JOINT 45 R**

Part no.

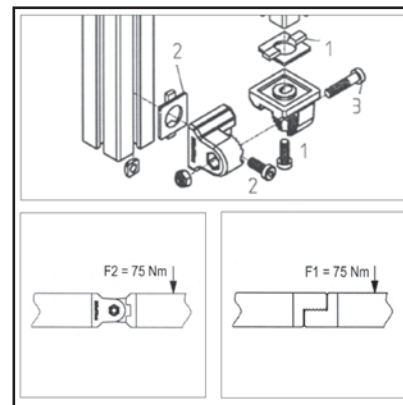
21.2041/0

**TECHN. DATA / ITEMS SUPPLIED**

- Aluminium, Pressure die-casting, powder-coated, grey
- With fastening material steel, zinc plated
- Anti-rotation device AL GD
- Load  $F_{max}$  5000 N
- Use on vertical struts **part no. 21.2041/7**
- Weight = 0.263 kg/piece

**APPLICATIONS**

- Setting angle  $180^\circ$  in steps of  $15^\circ$
- Fastening of heavy attachments such as extension arms, gripper cup holders, devices
- Safe adjustment through tooth system

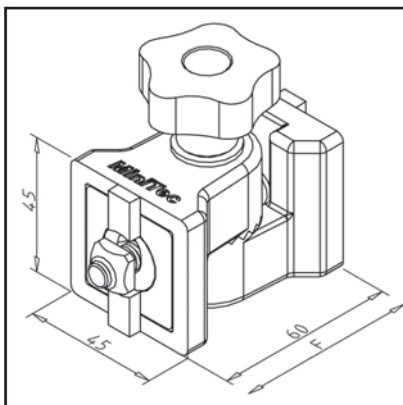
**ASSEMBLY**

- 1: Place locking device and screw first half of the bracket
- 2: Fix second half
- 3: Connect the 2 halves in desired angle and tighten

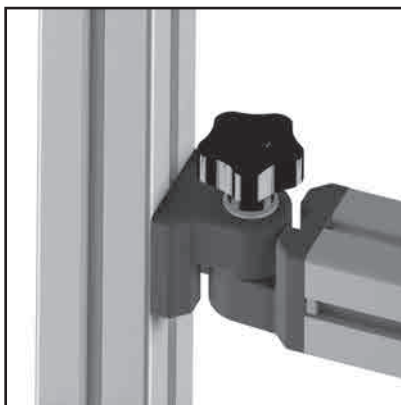
**JOINT 45 R WITH STAR GRIP**

Part no.

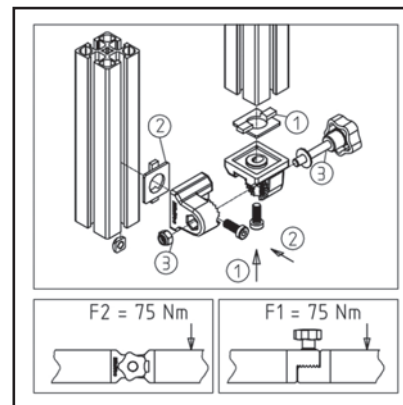
21.2230/0

**TECHN. DATA / ITEMS SUPPLIED**

- Aluminium, Pressure die-casting, powder-coated, grey
- With fastening material steel, zinc plated
- Anti-rotation device AL GD
- Load  $F_{max}$  5000 N
- Use on vertical struts **part no. 21.2230/7**
- Weight = 0.279 kg/piece

**APPLICATIONS**

- Setting angle  $180^\circ$  in steps of  $15^\circ$
- Fastening of heavy attachments such as extension arms, gripper cup holders, devices
- Safe adjustment through tooth system

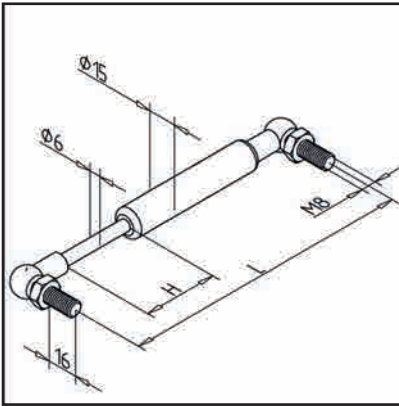
**ASSEMBLY**

- 1: Place locking device and screw first half of the bracket
- 2: Fix second half
- 3: Connect the 2 halves in desired angle and tighten

## GAS PRESSURE SPRING 6 / 15

Part no.

24.1126/0



H (mm)	L (mm)
20	115,5
40	155,5
60	194,5
80	235
100	273
120	316
150	375,5

### TECHN. DATA / ITEMS SUPPLIED

- Stroke (H) alternatively 20 / 40 / 60 / 80 / 100 / 120 / 150 mm
- Power (F) between 50 and 400 N (increments 50 N)
- **Please indicate desired length of stroke and force**

### APPLICATIONS

- For weight compensation with foldable elements
- Suitable for lift and swivel movements

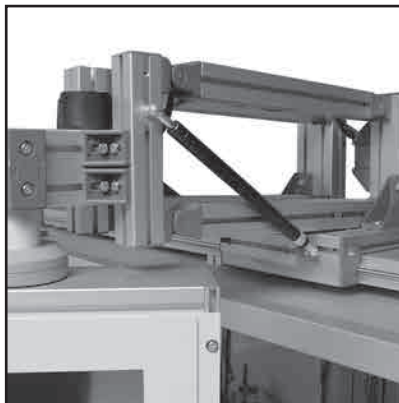
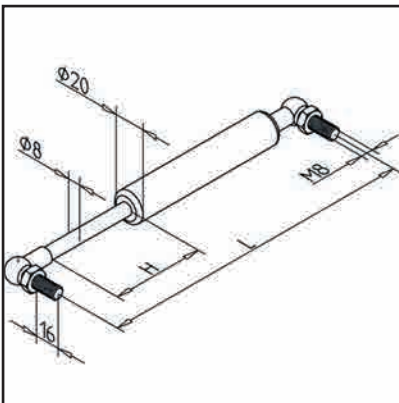
### ASSEMBLY

- Fix with thread bolt M8 to profile groove of other components

## GAS PRESSURE SPRING 8 / 20

Part no.

24.1127/0



H (mm)	L (mm)
57	206
80	244
100	286
120	326
140	366
160	405
180	446
200	485,5
220	527
250	585,5

### TECHN. DATA / ITEMS SUPPLIED

- Stroke (H) alternatively 57 / 80 / 100 / 120 / 140 / 160 / 180 / 200 / 220 / 250 mm
- Power (F) between 80 and 750 N (increments 50 N)
- **Please indicate desired length of stroke and force**

### APPLICATIONS

- For weight compensation with foldable elements
- Suitable for lift and swivel movements

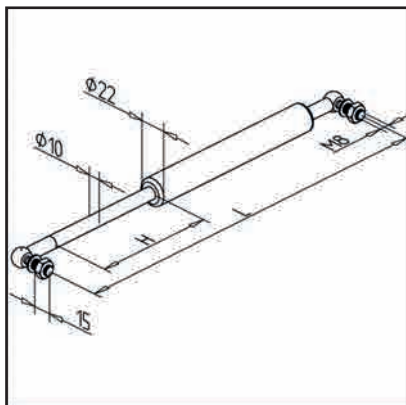
### ASSEMBLY

- Fix with thread bolt M8 to profile groove of other components

**GAS PRESSURE SPRING 10/22**

Part no.

24.1128/0



H (mm)	L (mm)
98	286
148	386
198	486
248	586
295	686
345	786
395	886
445	986
495	1086

**TECHN. DATA / ITEMS SUPPLIED**

- Stroke (H) alternatively 100 / 150 / 200 / 250 / 300 / 350 / 400 mm
- Power (F) between 100 and 1200 N (increments 50 N)
- **Please indicate desired length of stroke and force**

**APPLICATIONS**

- For weight compensation with foldable elements
- Suitable for lift and swivel movements

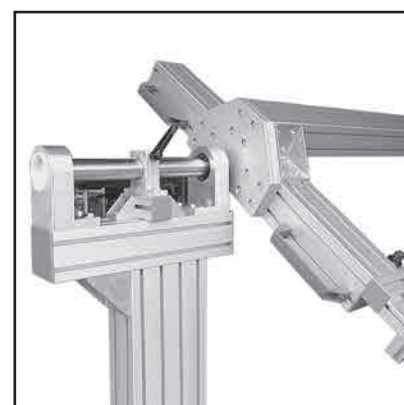
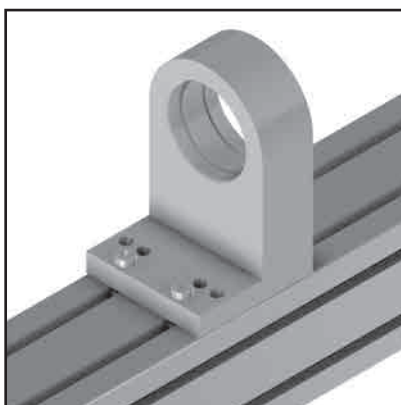
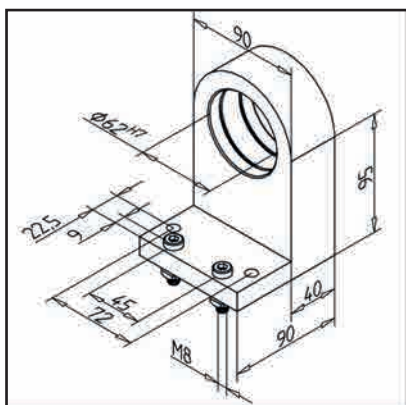
**ASSEMBLY**

- Fix with thread bolt M8 to profile groove of other components

**UPRIGHT BEARING**

Part no.

28.0158/0

**TECHN. DATA / ITEMS SUPPLIED**

- Aluminium, bright
- With fastening material steel, zinc plated
- Without ball bearing
- Weight = 1.180 kg/piece

**APPLICATIONS**

- Large swivelling frame
- Guiding of shafts, axles, drums, tires lengthwise and crosswise to the profile

**ASSEMBLY**

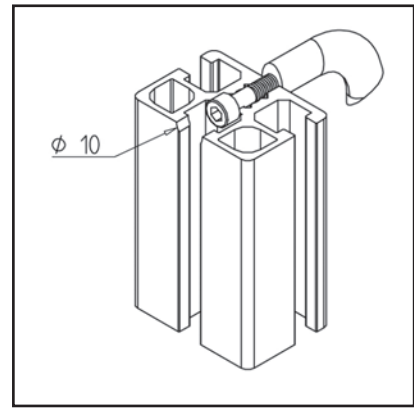
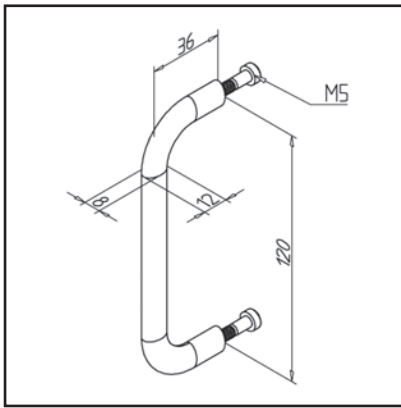
- Mounting hole suitable for radial ball bearings 6206 2RS **part no. 50.0977/1**
- Fasten to the profile with supplied hardware



## HANDLE AL

Part no.

21.1138/0



### TECHN. DATA / ITEMS SUPPLIED

- Aluminium, anodized E6/EV1
- With fastening material steel, zinc plated
- Weight = 0.050 kg/piece

### APPLICATIONS

- display windows, showcases
- Cabinets
- Doors

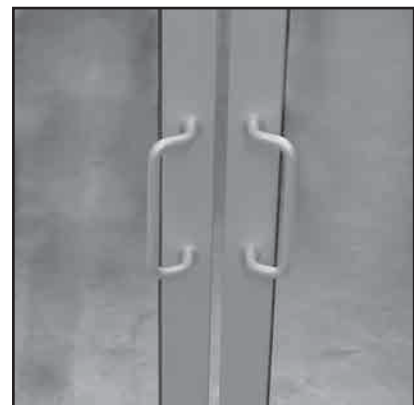
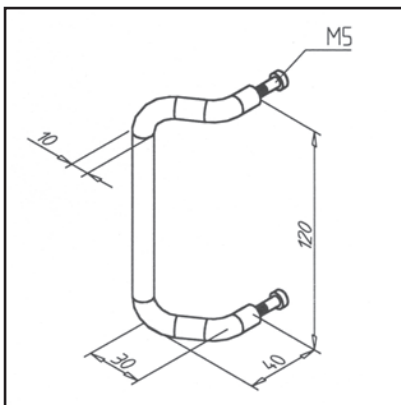
### ASSEMBLY

- Fasten to the profile with supplied hardware
- Provided with stepped bore  $\varnothing$  10 mm x 5.5 mm or through-hole  $\varnothing$  5.5 mm

## HANDLE AL ANGLED

Part no.

21.1348/0



### TECHN. DATA / ITEMS SUPPLIED

- Aluminium, anodized E6/EV1
- With fastening material steel, zinc plated
- Weight = 0.065 kg/piece

### APPLICATIONS

- display windows, showcases
- Cabinets
- Doors

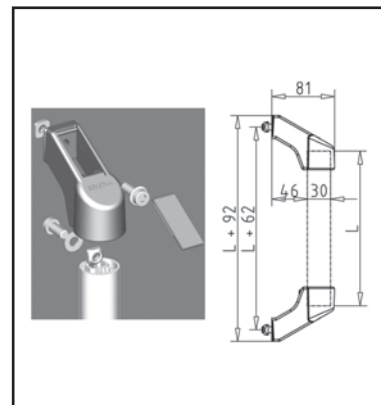
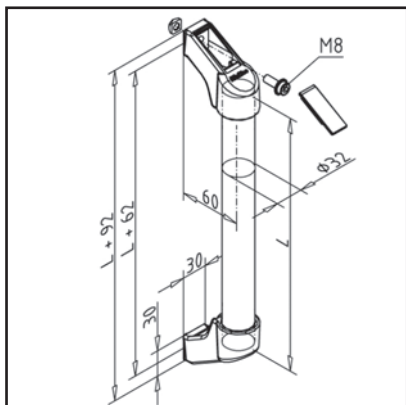
### ASSEMBLY

- Fasten to the profile with supplied hardware
- Provided with stepped bore  $\varnothing$  10 mm x 5.5 mm or through-hole  $\varnothing$  5.5 mm

## HANDLE GP

Part no.

21.2317/0



### TECHN. DATA / ITEMS SUPPLIED

- Handle profile aluminium, anodized E6/EV1
- Bracket ABS, grey
- Fastening material steel, galvanized
- Standard length (L) 300 mm
- **Other lengths on request**
- **In case of divergent length please specify dimension L**
- Construction set without profile **part no. 21.2317/1**
- Weight = 0.427 kg/piece

### APPLICATIONS

- Doors and lids
- Carriage
- Railing

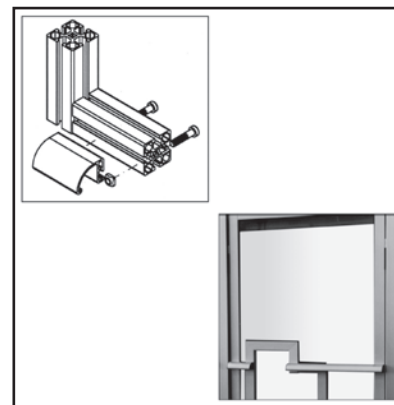
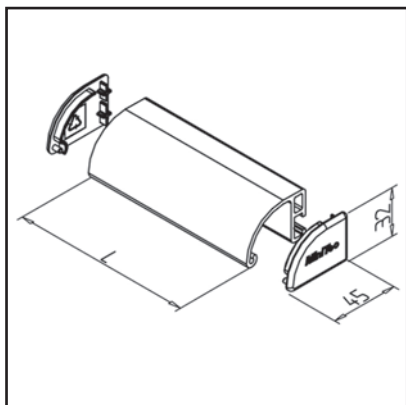
### ASSEMBLY

- Attach bracket to handle profile
- Use the included fastening material to attach the profile to the profile grooves

## HAND GRIP WITH REACH PROTECTOR

Part no.

21.1048/0



### TECHN. DATA / ITEMS SUPPLIED

- Aluminium, anodized E6/EV1
- End caps
- Without fastening kit
- Standard length (L) 120 mm
- **Other lengths on request**
- **In case of divergent length please specify dimension L**
- Weight = 0.110 kg/piece

### APPLICATIONS

- Doors
- Lids
- Guard units
- Furniture

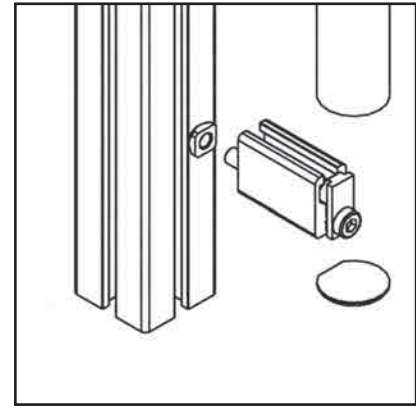
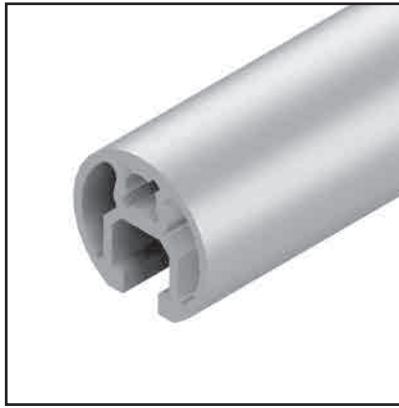
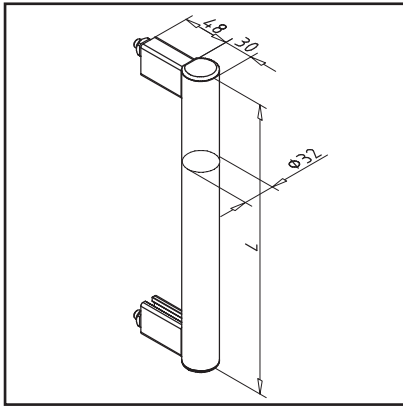
### ASSEMBLY

- On profile groove with 2 cylinder screws M6 x 16 and square nuts M6, at 15 mm, short hex keys SW 4 required
- Directly on panel element with cylinder screw M6, length according to material thickness
- Installation is also possible from the rear, insert the square nut M6

## HANDLE BAR 32

Part no.

21.0962/0



### TECHN. DATA / ITEMS SUPPLIED

- Aluminium, anodized E6/EV1
- Ready-to-install kit from MiniTec aluminum profiles
- With fastening material steel, zinc plated
- Standard length (L) 300 mm
- **Other lengths on request**
- **Please specify dimension L**
- Weight = 0.510 kg/piece

### APPLICATIONS

- Handle for very large doors, lids, trolleys, removable surface elements

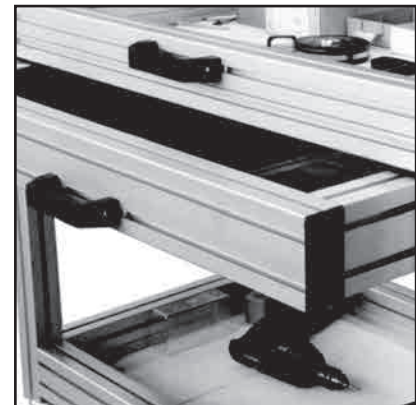
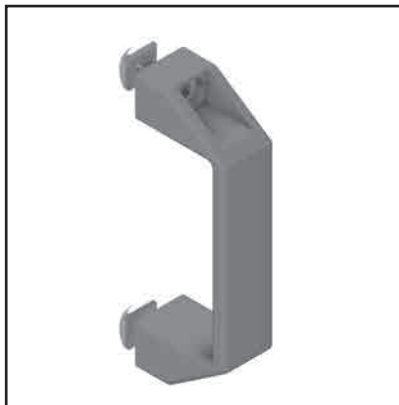
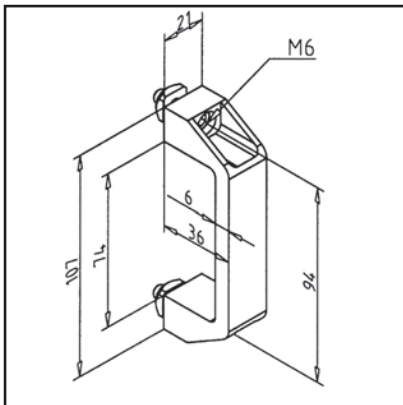
### ASSEMBLY

- Enter square nut in existing construction
- Pre-install spacers with a long screw and connector profile
- Insert the handle profile and tighten the profile connector to spacers
- Install caps

## HANDLE 90

Part no.

21.1099/1



### TECHN. DATA / ITEMS SUPPLIED

- PA, grey
- With fastening material steel, zinc plated
- Use on vertical struts **part no. 21.1099/4** (square nut with position-fixing)
- Upon request, available in black, **part no. 21.1099/0**
- Weight = 0.030 kg/piece

### APPLICATIONS

- Doors
- Lids
- Guard units

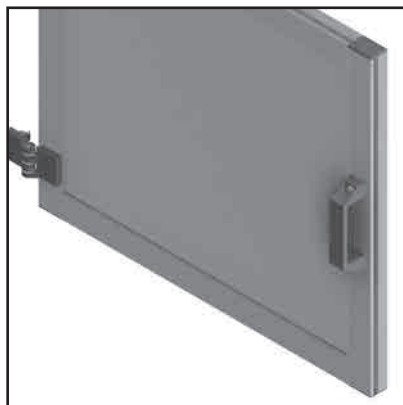
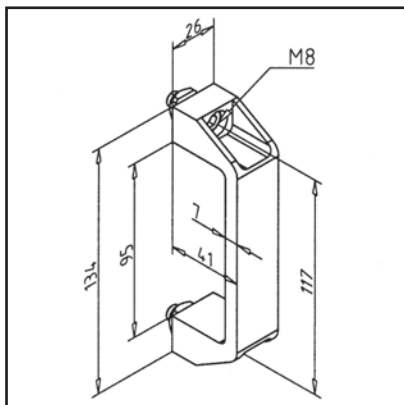
### ASSEMBLY

- Fasten to profile groove with supplied hardware.
- Directly on panel element with cylinder screw M6, length according to material thickness

**HANDLE 120**

Part no.

21.1092/1

**TECHN. DATA / ITEMS SUPPLIED**

- PA, grey
- With fastening material steel, zinc plated
- Use on vertical struts **part no. 21.1092/4** (square nut with position-fixing)
- Upon request, available in black, **part no. 21.1092/0**
- ESD-compatible, also available in black **part no. 32.1007/0**, upon request
- Weight = 0.070 kg/piece

**APPLICATIONS**

- Doors
- Lids
- Guard units

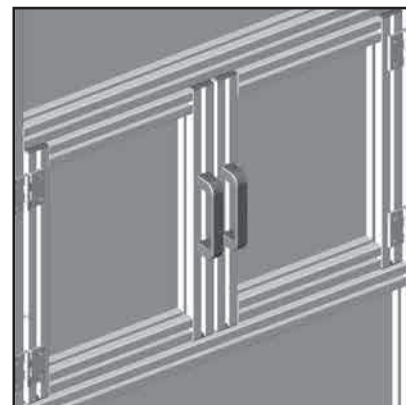
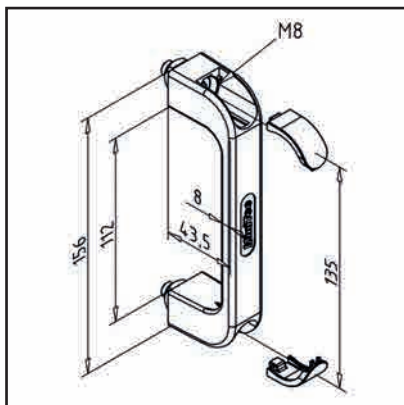
**ASSEMBLY**

- Fasten to profile groove with supplied hardware.
- Directly on surface element with cylinder head screw M8

**HANDLE 135**

Part no.

21.2530/1

**TECHN. DATA / ITEMS SUPPLIED**

- PA, grey
- With fastening material steel, zinc plated
- Use on vertical struts **part no. 21.2530/7**
- Weight = 0.080 kg/piece

**APPLICATIONS**

- Doors
- Lids
- Guard units

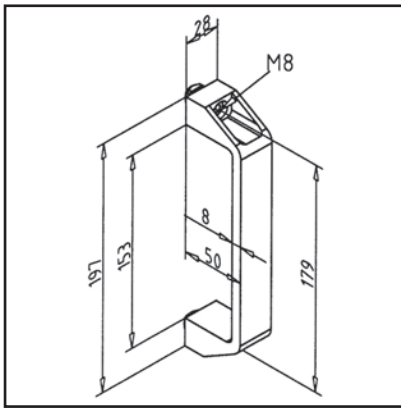
**ASSEMBLY**

- Fasten to profile groove with supplied hardware.
- Directly on surface element with cylinder head screw M8

## HANDLE 180

Part no.

21.1094/1



### TECHN. DATA / ITEMS SUPPLIED

- PA, grey
- With fastening material steel, zinc plated
- Use on vertical struts **part no. 21.1094/4** (square nut with position-fixing)
- Upon request, available in black, **part no. 21.1094/0**
- Weight = 0.100 kg/piece

### APPLICATIONS

- Doors
- Lids
- Guard units

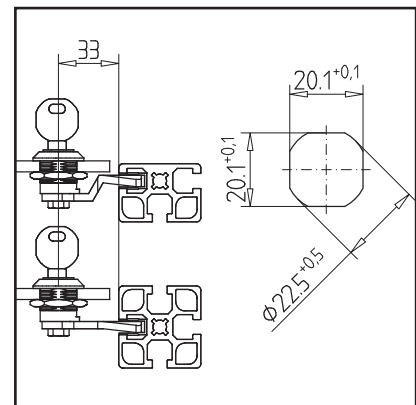
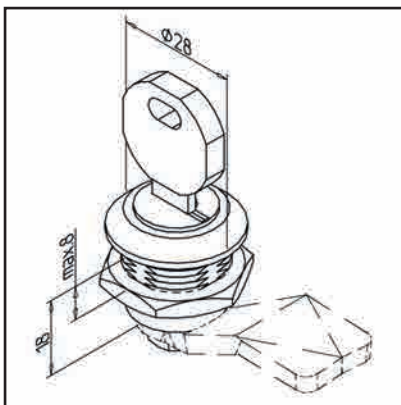
### ASSEMBLY

- Fasten to profile groove with supplied hardware.
- Directly on surface element with cylinder head screw M8

## LOCK CYLINDER

Part no.

21.1752/0



### TECHN. DATA / ITEMS SUPPLIED

- Zinc, Pressure die-casting, chromed
- With fastening nut steel, galvanized
- 2 keys
- Without locks
- Weight = 0.100 kg/piece

### APPLICATIONS

- Light doors from surface elements up to 8 mm thickness

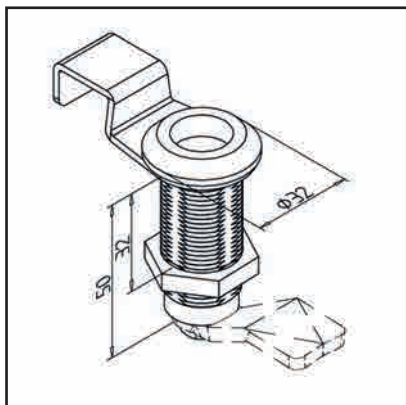
### ASSEMBLY

- Bore  $\varnothing$  22 mm in panel element
- As an alternative to torsion-protected mounting Milling according to sketch
- Select the locking tongue suitable for the application or profiles used.
- To prevent damage to the profile grooves, additional edging and cover profiles can be used.

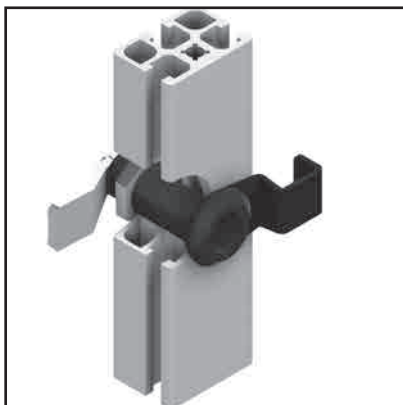
**DEADBOLT 32 WITH ALLEN WRENCH SW 10**

Part no.

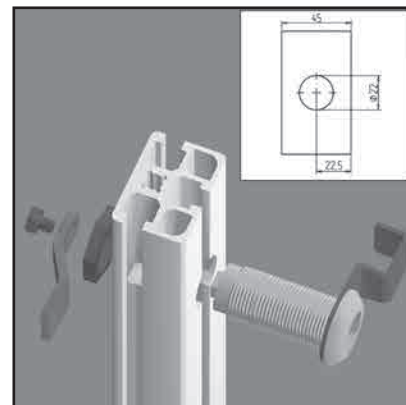
21.1087/8

**TECHN. DATA / ITEMS SUPPLIED**

- Zinc, Pressure die-casting, black
- For Allen wrench SW 10
- With fastening nut steel, galvanized
- With opening bracket, steel, black
- Without locks
- Weight = 0.102 kg/piece

**APPLICATIONS**

- For profiles 32
- Locking of doors and lids in guard units

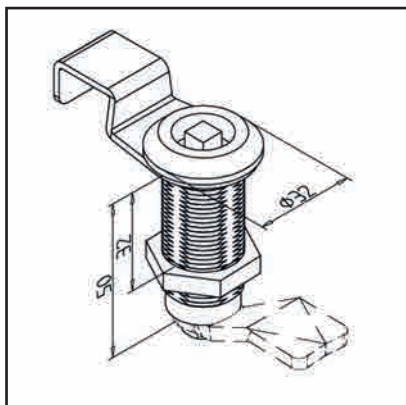
**ASSEMBLY**

- Drill hole  $\varnothing$  22 mm in the centre of the profile, recommended: anti-twist protection F **part no.. 21.0941/0.**
- To ensure the torsion protection, a pocket with SW 20.1 mm can alternatively be milled.
- Tighten using front handle from the back side with the fastening nut

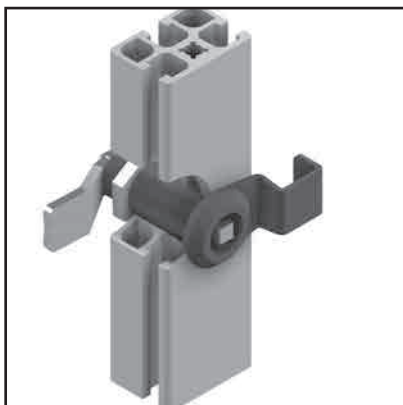
**DEADBOLT 32 WITH SQUARE KEY SW 7**

Part no.

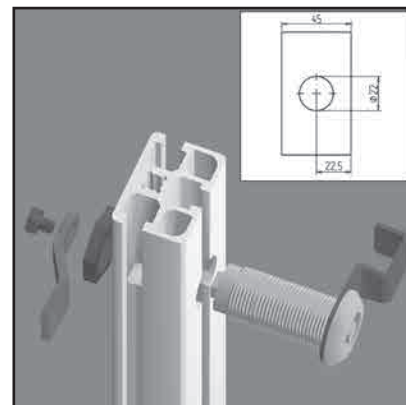
21.1087/6

**TECHN. DATA / ITEMS SUPPLIED**

- Zinc, Pressure die-casting, black
- With square box wrench
- With fastening nut steel, galvanized
- With opening bracket, steel, black
- Without locks
- Weight = 0.179 kg/piece

**APPLICATIONS**

- For profiles 32
- Locking of doors and lids in guard units

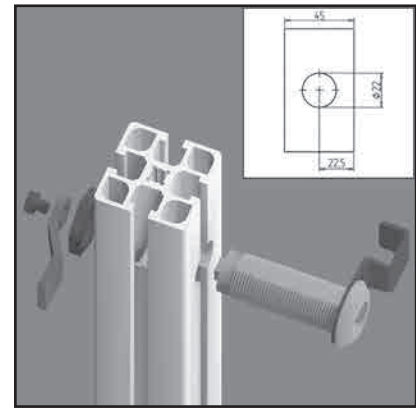
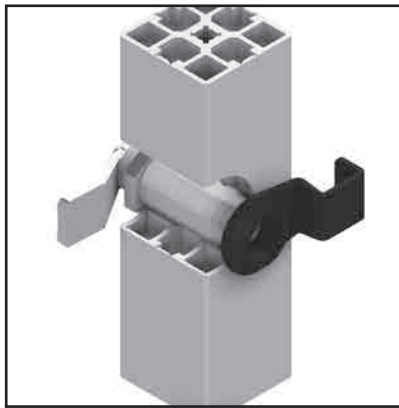
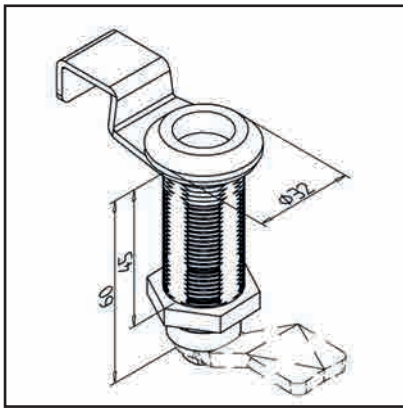
**ASSEMBLY**

- Drill hole  $\varnothing$  22 mm in the centre of the profile, recommended: anti-twist protection F **part no.. 21.0941/0.**
- To ensure the torsion protection, a pocket with SW 20.1 mm can alternatively be milled.
- Tighten using front handle from the back side with the fastening nut

## DEADBOLT 45 WITH ALLEN WRENCH SW 10

Part no.

21.1087/9



### TECHN. DATA / ITEMS SUPPLIED

- Zinc, Pressure die-casting, black
- For Allen wrench SW 10
- With fastening nut steel, galvanized
- With opening bracket, steel, black
- Without locks
- Weight = 0.111 kg/piece

### APPLICATIONS

- For profiles 45
- Locking of doors and lids in guard units

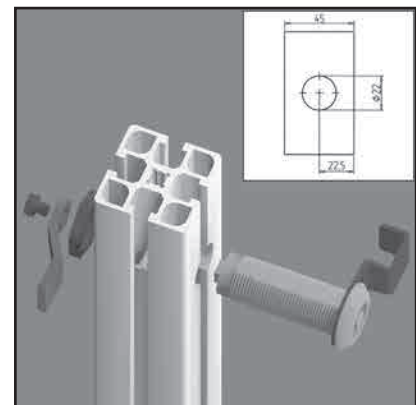
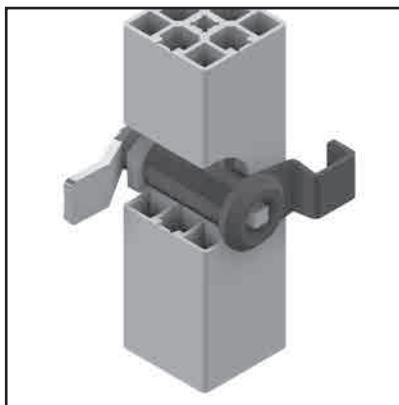
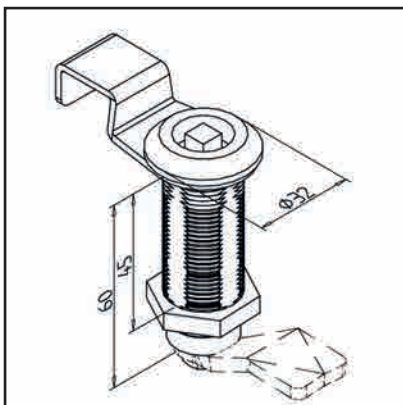
### ASSEMBLY

- Drill hole  $\varnothing$  22 mm in the centre of the profile, recommended: anti-twist protection F **part no.. 21.0941/0.**
- To ensure the torsion protection, a pocket with SW 20.1 mm can alternatively be milled.
- Tighten using front handle from the back side with the fastening nut

## DEADBOLT 45 WITH SQUARE KEY SW 7

Part no.

21.1087/7



### TECHN. DATA / ITEMS SUPPLIED

- Zinc, Pressure die-casting, black
- With square box wrench
- With fastening nut steel, galvanized
- With opening bracket, steel, black
- Without locks
- Weight = 0.197 kg/piece

### APPLICATIONS

- For profiles 45
- Locking of doors and lids in guard units

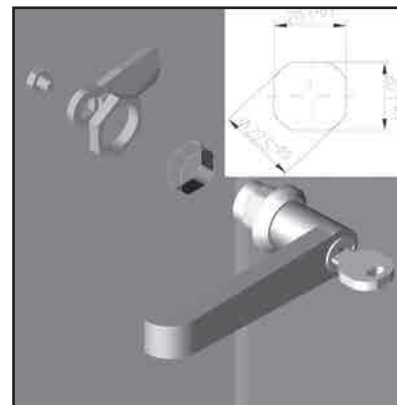
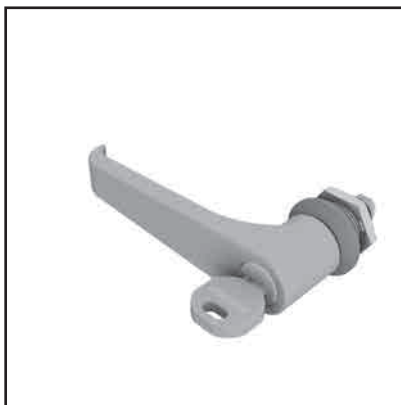
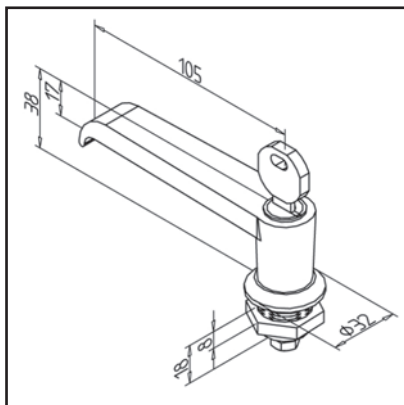
### ASSEMBLY

- Drill hole  $\varnothing$  22 mm in the centre of the profile, recommended: anti-twist protection F **part no.. 21.0941/0.**
- To ensure the torsion protection, a pocket with SW 20.1 mm can alternatively be milled.
- Tighten using front handle from the back side with the fastening nut

**RATCHET HANDLE 8**

Part no.

21.2305/0

**TECHN. DATA / ITEMS SUPPLIED**

- Handle PA, grey
- Housing DG Zn GD Zn, grey
- With fastening nut steel, galvanized
- Without locks
- Weight = 0.145 kg/piece

**APPLICATIONS**

- Locking of doors and lids in guard units
- For surface elements up to 8 mm thickness

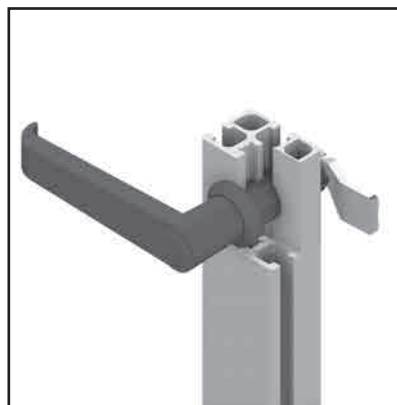
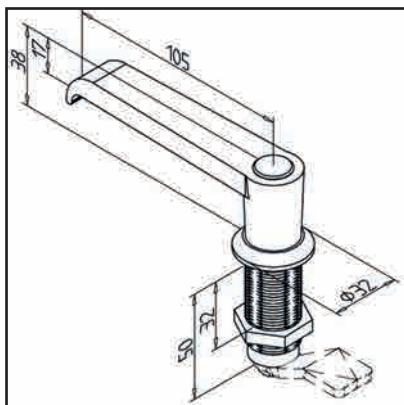
**ASSEMBLY**

- Drill the bore according to the sketch
- Using a ratchet handle, tighten the fastening nut from behind

**RATCHET HANDLE 32 WITHOUT PROFILE CYLINDER LOCK**

Part no.

21.1087/4

**TECHN. DATA / ITEMS SUPPLIED**

- Handle PA, grey
- Housing DG Zn GD Zn, grey
- With fastening nut steel, galvanized
- Without locks
- On request also available in black, **part no. 21.1087/2**
- Weight = 0.172 kg/piece

**APPLICATIONS**

- For profiles 32
- Locking of doors and lids in guard units

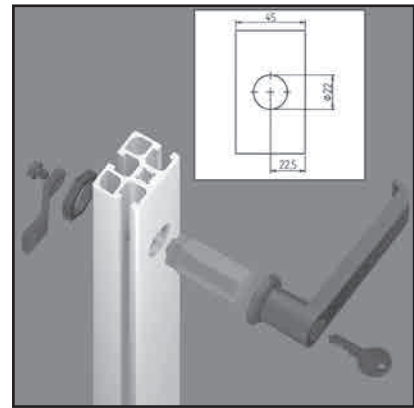
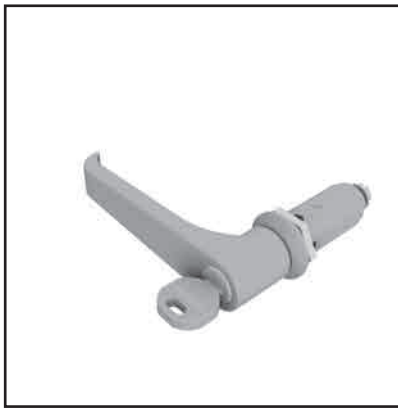
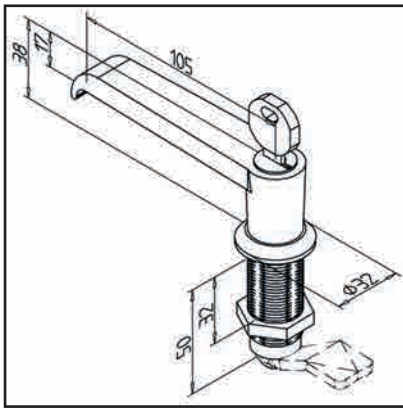
**ASSEMBLY**

- Drill hole  $\varnothing$  22 mm in the centre of the profile, recommended: anti-twist protection F **part no. 21.0941/0**.
- To ensure the torsion protection, a pocket with SW 20.1 mm can alternatively be milled.
- Using a ratchet handle, tighten the fastening nut from behind



## RATCHET HANDLE 32 WITH LOCK

Part no. 21.1091/4



### TECHN. DATA / ITEMS SUPPLIED

- Handle PA, grey
- Housing DG Zn GD Zn, grey
- With fastening nut steel, galvanized
- Without locks
- Upon request, available in black, **part no. 21.1091/2**
- Weight = 0.211 kg/piece

### APPLICATIONS

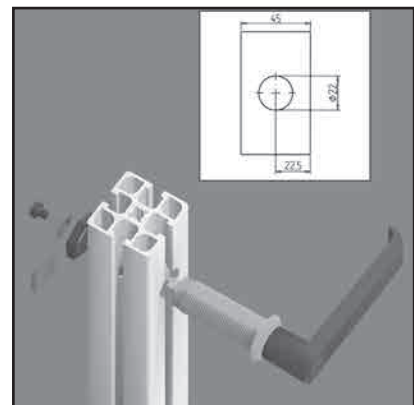
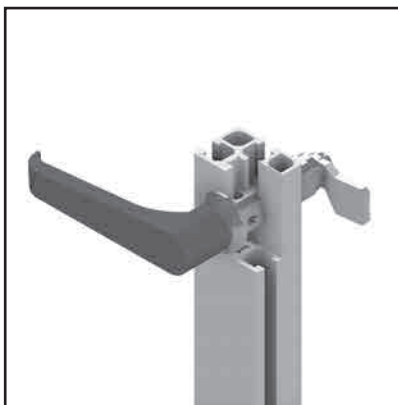
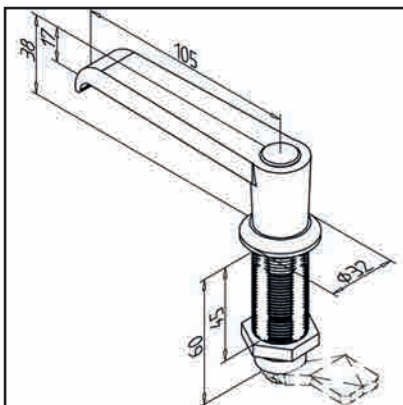
- For profiles 32
- Locking of doors and lids in guard units

### ASSEMBLY

- Drill hole  $\varnothing$  22 mm in the centre of the profile, recommended: anti-twist protection F **part no. 21.0941/0**.
- To ensure the torsion protection, a pocket with SW 20.1 mm can alternatively be milled.
- Using a ratchet handle, tighten the fastening nut from behind

## RATCHET HANDLE 45 WITHOUT LOCK

Part no. 21.1087/3



### TECHN. DATA / ITEMS SUPPLIED

- Handle PA, grey
- Housing DG Zn GD Zn, grey
- With fastening nut steel, galvanized
- Without locks
- Upon request, available in black, **part no. 21.1087/1**
- Weight = 0.194 kg/piece

### APPLICATIONS

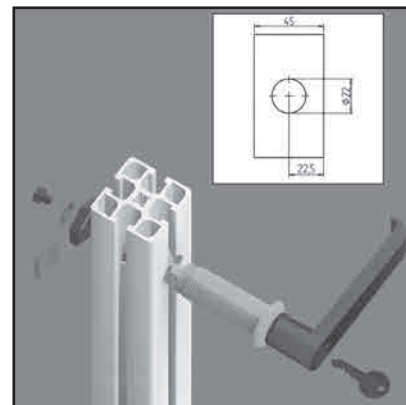
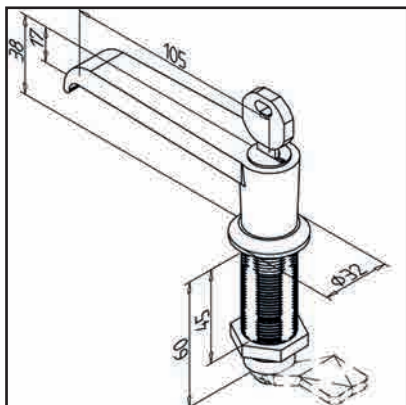
- For profiles 45
- Locking of doors and lids in guard units

### ASSEMBLY

- Drill hole  $\varnothing$  22 mm in the centre of the profile, recommended: anti-twist protection F **part no. 21.0941/0**.
- To ensure the torsion protection, a pocket with SW 20.1 mm can alternatively be milled.
- Using a ratchet handle, tighten the fastening nut from behind

**RATCHET HANDLE 45 WITH LOCK**

Part no. 21.1091/3

**TECHN. DATA / ITEMS SUPPLIED**

- Handle PA, grey
- Housing DG Zn GD Zn, grey
- With fastening nut steel, galvanized
- Without locks
- Upon request, available in black, **part no. 21.1091/1**
- Weight = 0.230 kg/piece

**APPLICATIONS**

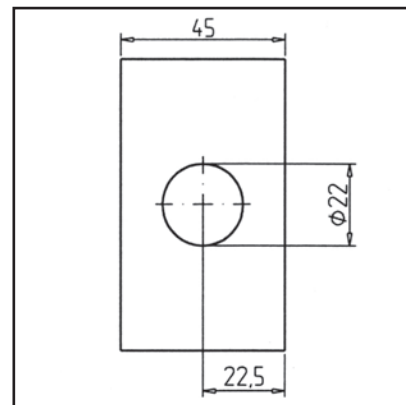
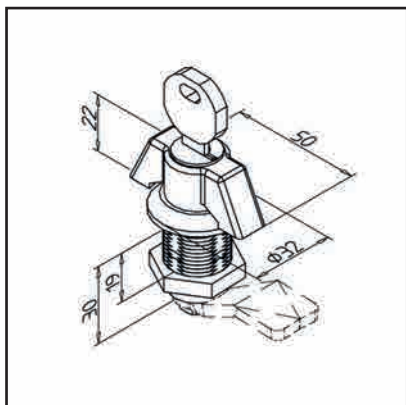
- For profiles 45
- Locking of doors and lids in guard units

**ASSEMBLY**

- Drill hole  $\varnothing$  22 mm in the centre of the profile, recommended: anti-twist protection F **part no. 21.0941/0**.
- To ensure the torsion protection, a pocket with SW 20.1 mm can alternatively be milled.
- Using a ratchet handle, tighten the fastening nut from behind

**TOGGLE HANDLE 19**

Part no. 21.1015/2

**TECHN. DATA / ITEMS SUPPLIED**

- Zinc, Pressure die-casting, chromed
- With fastening nut steel, galvanized
- Without locks
- Weight = 0.150 kg/piece

**APPLICATIONS**

- For profiles 19
- Locking of doors and lids in guard units

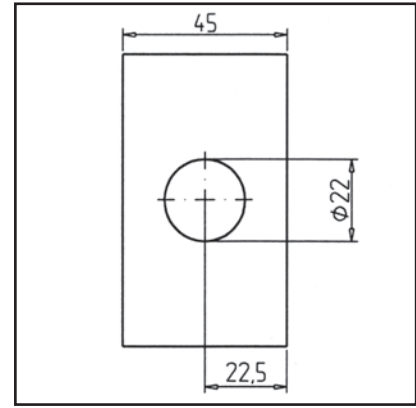
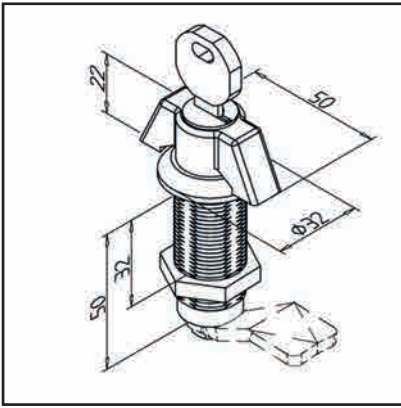
**ASSEMBLY**

- Drill hole  $\varnothing$  22 mm in the centre of the profile, recommended: anti-twist protection F **part no. 21.0941/0**.
- To ensure the torsion protection, a pocket with SW 20.1 mm can alternatively be milled.
- Using a ratchet handle, tighten the fastening nut from behind

## TOGGLE HANDLE 32

Part no.

21.1015/0



### TECHN. DATA / ITEMS SUPPLIED

- Zinc, Pressure die-casting, chromed
- With fastening nut steel, galvanized
- Without locks
- Weight = 0.190 kg/piece

### APPLICATIONS

- For profiles 32
- Locking of doors and lids in guard units

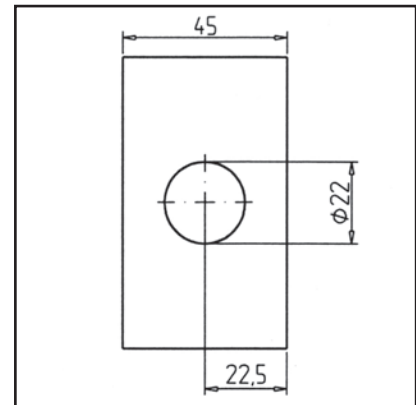
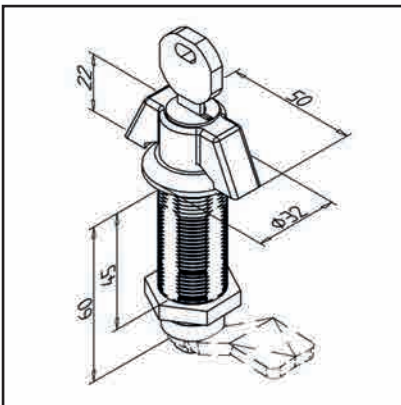
### ASSEMBLY

- Drill hole  $\varnothing$  22 mm in the centre of the profile, recommended: anti-twist protection F **part no.. 21.0941/0.**
- To ensure the torsion protection, a pocket with SW 20.1 mm can alternatively be milled.
- Using a ratchet handle, tighten the fastening nut from behind

## TOGGLE HANDLE 45

Part no.

21.1015/1



### TECHN. DATA / ITEMS SUPPLIED

- Zinc, Pressure die-casting, chromed
- With fastening nut steel, galvanized
- Without locks
- Weight = 0.210 kg/piece

### APPLICATIONS

- For profiles 45
- Locking of doors and lids in guard units

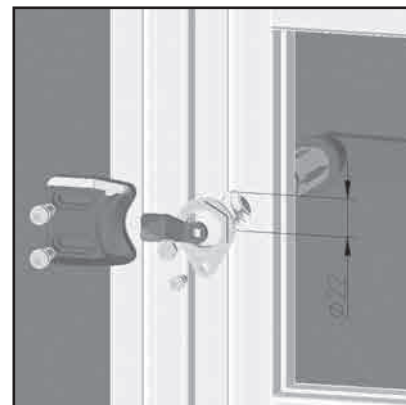
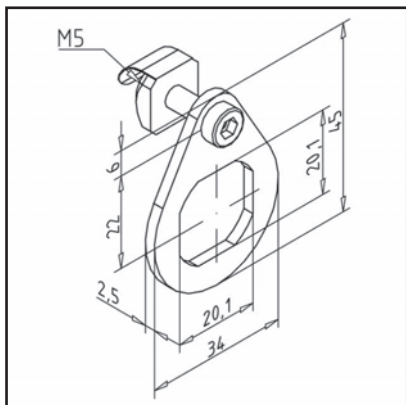
### ASSEMBLY

- Drill hole  $\varnothing$  22 mm in the centre of the profile, recommended: anti-twist protection F **part no.. 21.0941/0.**
- To ensure the torsion protection, a pocket with SW 20.1 mm can alternatively be milled.
- Using a ratchet handle, tighten the fastening nut from behind

## TWIST PROTECTION F

Part no.

21.0941/0



### TECHN. DATA / ITEMS SUPPLIED

- Stainless steel
- With fastening material steel, zinc plated
- Weight = 0.021 kg/piece

### APPLICATIONS

- Secure sash locks, latch handles and toggle handles against self-acting loosening or overturning
- Specifically intended for use with door stop S, **part no. 21.1767/0**

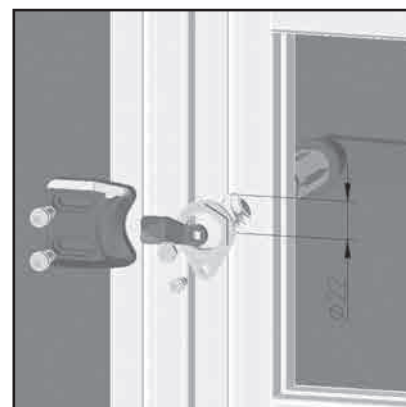
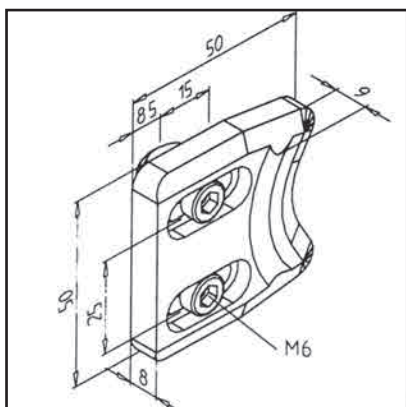
### ASSEMBLY

- Install front handle, T-handle or L-handle as usual, tighten hexagon nut
- Swivel in square nut and mount twist stop
- Install the latch

## DOOR CATCH S

Part no.

21.1767/0



### TECHN. DATA / ITEMS SUPPLIED

- Zinc, Pressure die-casting, black
- With fastening material steel, zinc plated
- Weight = 0.077 kg/piece

### APPLICATIONS

- Stop for doors and hatches
- Specifically suitable in connection with handle, T-handle and bolt lock
- Also door catch

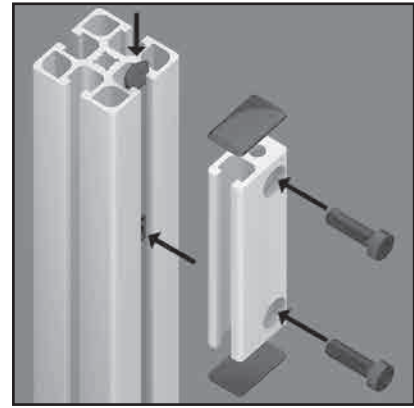
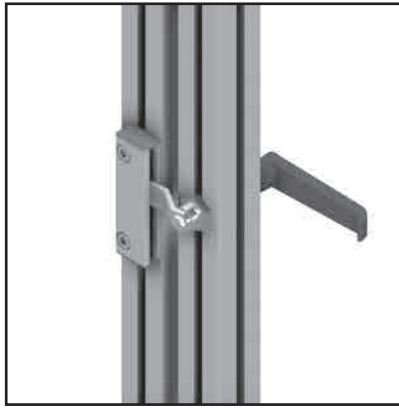
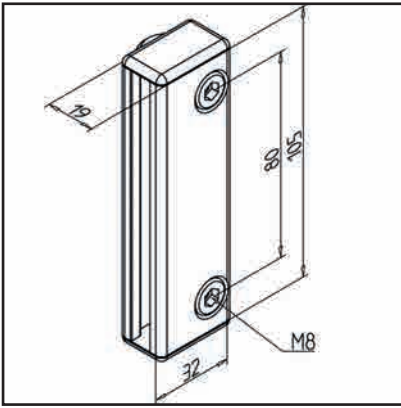
### ASSEMBLY

- Fasten to the posts with supplied hardware

## DOOR CATCH 19

Part no.

21.1755/0



### TECHN. DATA / ITEMS SUPPLIED

- Aluminium, anodized E6/EV1
- From profile 19 x 32
- End caps
- With fastening nut steel, galvanized
- Weight = 0.040 kg/piece

### APPLICATIONS

- Locking of doors and lids in connection with handles or bolt locks

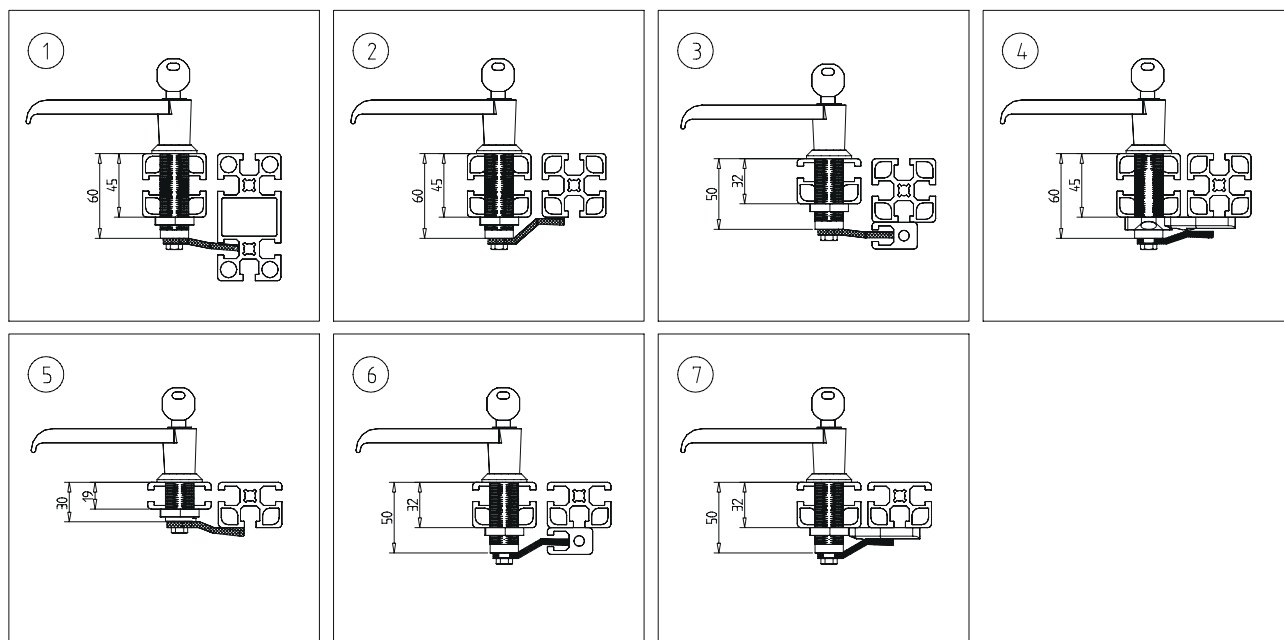
### ASSEMBLY

- Fasten to profile groove with supplied hardware.

LOCKS

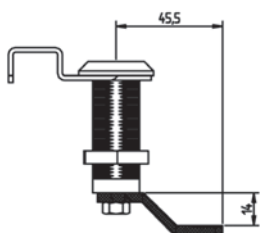
FITTING PRINCIPLES & SELECTION OF LOCKS

FITTING PRINCIPLES

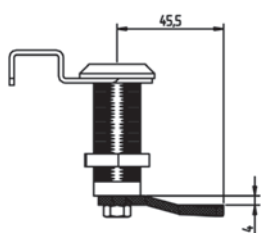


SELECTION OF LOCKS

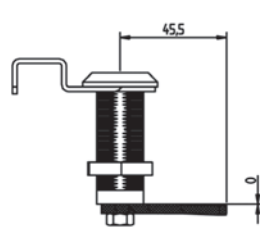
Door profile	Door profile 45 x 45 mm	Door profile 32 x 45 mm	Door profile 19 x 45 mm	Surface element 4-8 mm
	Handle, T-Handle or Bolt lock 45	Handle, T-Handle or Bolt lock 32	Handle, T-Handle or Bolt lock 19	cylinder lock
part no. of locks				
1 - 90 x 45	21.1093/1	21.1093/0	-	21.1093/2
2 - 45 x 45	21.1093/5	21.1093/3	21.1093/4 o. /0	21.1093/2
3 - with catch 19	21.1093/4	21.1093/2	-	-
4 - with door catch S	21.1093/3	21.1093/1	-	-
5 - 32 x 45	-	-	21.1093/1	-
6 - with catch 19	-	21.1093/5	-	21.1093/0
7 - with door catch S	-	21.1093/4	21.1093/0	-



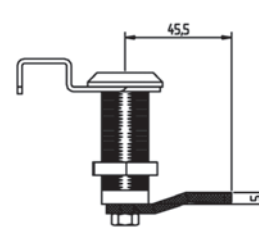
Part no. 21.1093/0



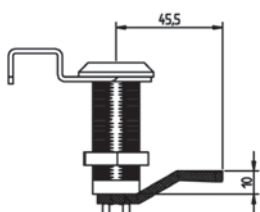
Part no. 21.1093/1



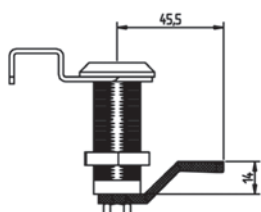
Part no. 21.1093/2



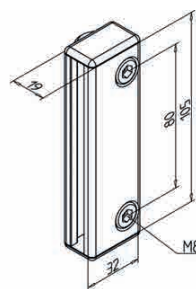
Part no. 21.1093/3



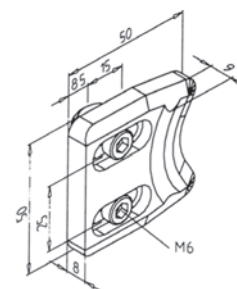
Part no. 21.1093/4



Part no. 21.1093/5



Part no. 21.1755/0



Part no. 21.1767/0

ROD LOCK

ONE OR TWO-SIDED LOCKING

Items Supplied

- Bolt lock, steel, black with square key
- Guiding element, steel, galvanized
- Latch with rollers (l = 1100 mm), steel, galvanized
- Rod guide, plastic, black with injected nut M6

Optional

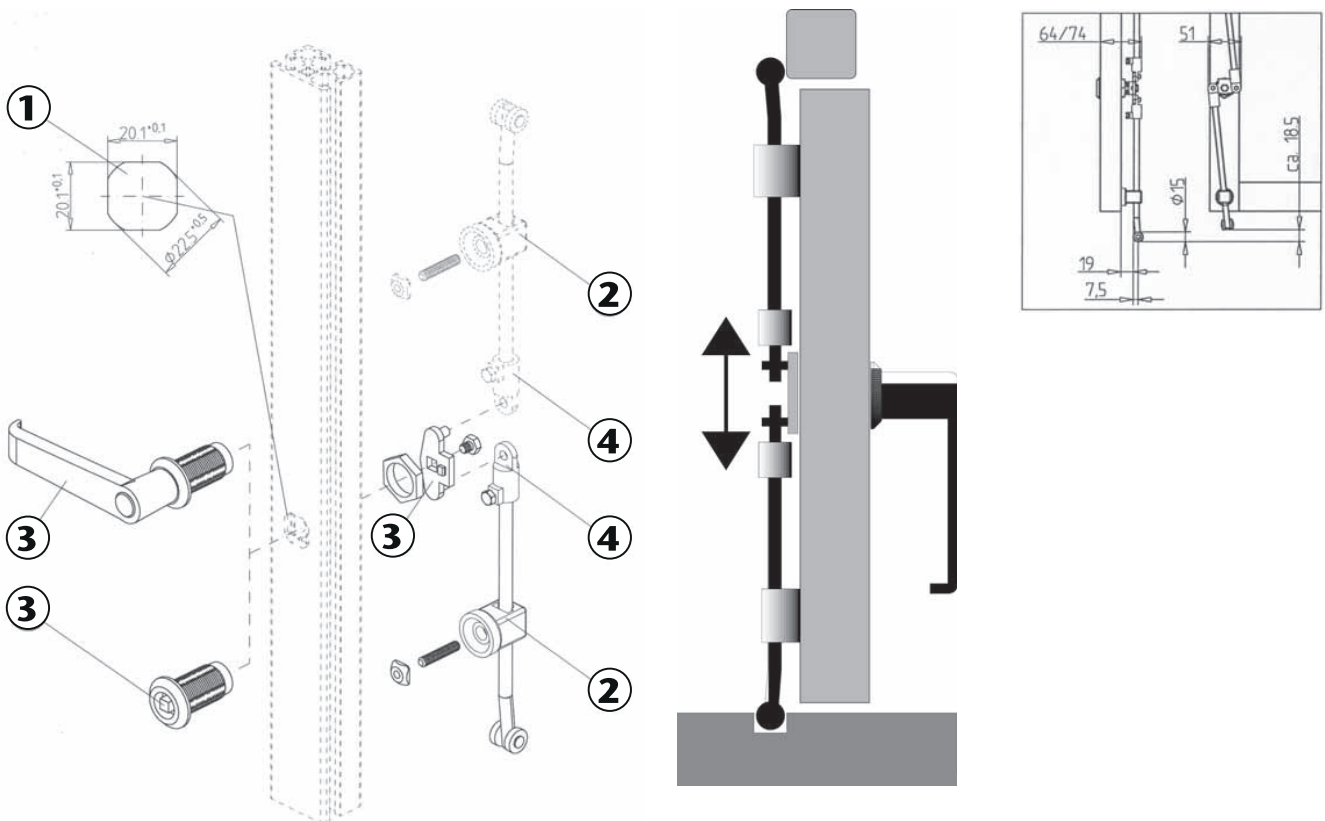
- Handle with or without lock

Application

- For locking doors at upper or lower beam
- Use 2 rods for 2-sided locking
- Order bolt lock, handle without lock or handle with cylinder lock
- Especially suited for control boxes or double-sided doors

Available versions

PROFILE	Bolt lock		Handle without lock		Handle with cylinder lock	
	1 rod	2 rods	1 rod	2 rods	1 rod	2 rods
32 x 45	21.1798/0	21.1798/2	21.1798/3	21.1798/4	21.1798/5	21.1798/6
45 x 45	21.1788/0	21.1788/2	21.1788/3	21.1788/4	21.1788/5	21.1788/6



Assembly

1. Insert square recess in vertical door profile
2. Screw in setscrew M6 x 30 in rod guide, screw nut loose onto threaded pin, insert sliding nut in groove and tighten rod guide to position
3. Tighten tongue with cam or handle
4. Insert the ramp in the rod guide and fix it to the tongue

## BAR LOCK WITH CASTLE TRAP

TWO-SIDED LOCK WITH LOCK TRAP, PART NO. 21.1490/0

## Items Supplied

1. Rod lock insert
2. Handle
3. Lock latch (2 pieces)
4. Adapter for round bars
5. Round bar with eye (Lmax = 1200) (2 pieces)

## Optional

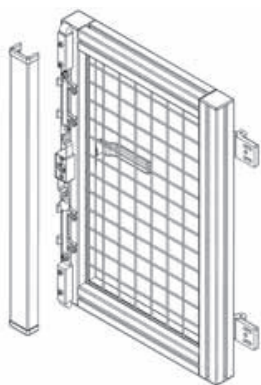
Cable duct 45 AL part no. 20.1071/0

Protective cap cable duct 45 part no. 22.1117/1

Cable clip 45 part no. 22.1210/0

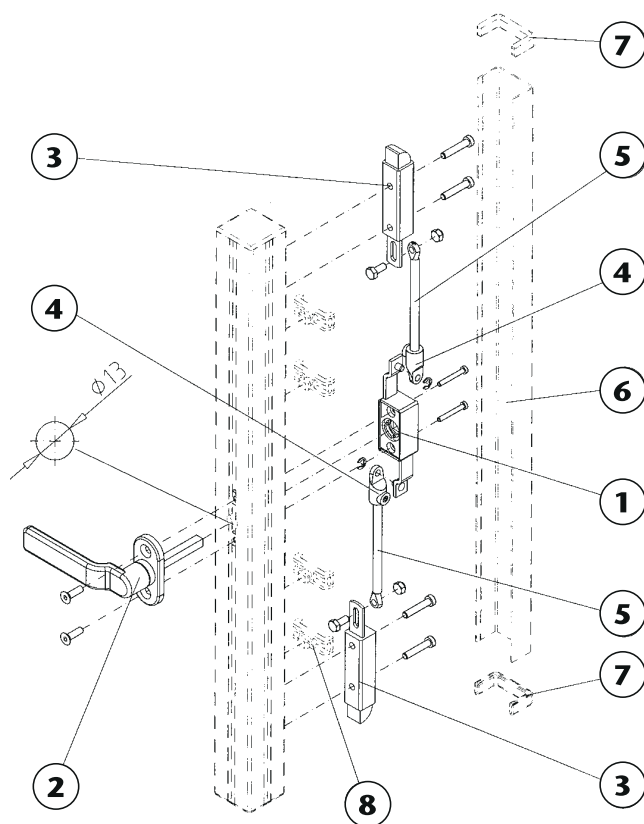
## Assembly

1. Insert hole  $\varnothing 13$  mm in vertical door profile
2. Attach the bar lock insert and lock latch with sliding nuts to the door profile
3. Shorten the round bars to the appropriate size and connect with lock latch and bar lock insert
4. Insert and fix the handle with square edging
5. Adjust lock latch



## Application

- For closing doors on the upper or lower cross member
- suitable for doors in racks
- max. door height 2750 mm



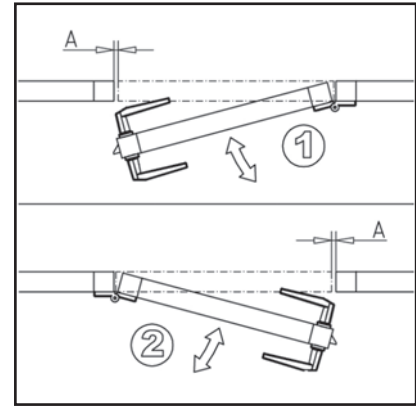
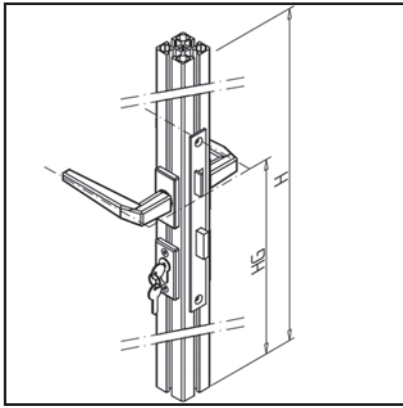
## Optional:

Rod cover with cable duct



## DOOR LOCK

Part no. 21.1748/0



### TECHN. DATA / ITEMS SUPPLIED

- Door Lock steel, zinc-plated, fitted in profile 45x45
- Fittings aluminum, anodized
- Profile cylinder with 3 keys, mounted
- **Standard design:** H = 2000mm  
HG = 1000mm
- **Other lengths and profiles on request**
- **Please specify dimension H and HG level**
- **Please specify a version 1 or 2**
- Construction set without profile **part no. 21.1748/2**

### APPLICATIONS

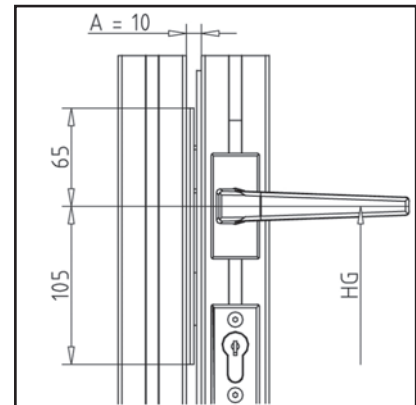
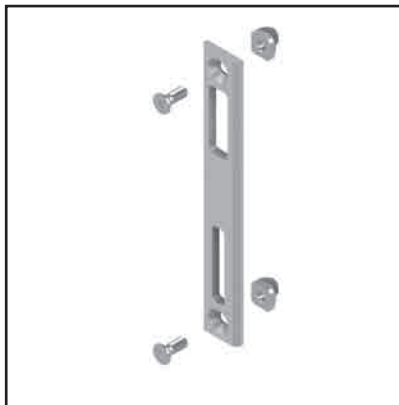
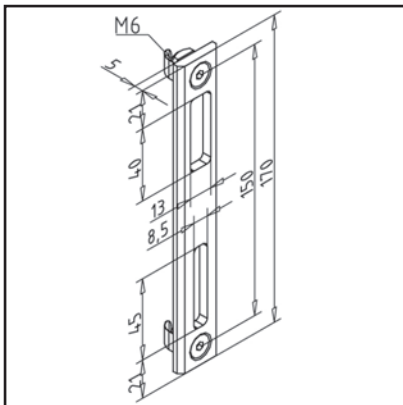
- Swing doors for guard units
- Other embodiments and profiles on request , for Example, G - sided profile with fixed knob but without lock mounting

### ASSEMBLY

- Allow 5mm space between door and frame
- Using lock plate **part no. 21.0966/0** with 10 mm gap
- Closing wedge engages in opposite groove
- If possible, position cross braces outside the lock area or screw in with countersunk screw M8 x 25

## LOCK PLATE FOR DOOR LOCK

Part no. 21.0966/0



### TECHN. DATA / ITEMS SUPPLIED

- Aluminium, anodized E6/EV1
- With fastening material steel, zinc plated
- Weight = 0.061 kg/piece

### APPLICATIONS

- To be used in conjunction with door lock **part no. 21.1748/0**
- No post processing on the profile groove of the door post required

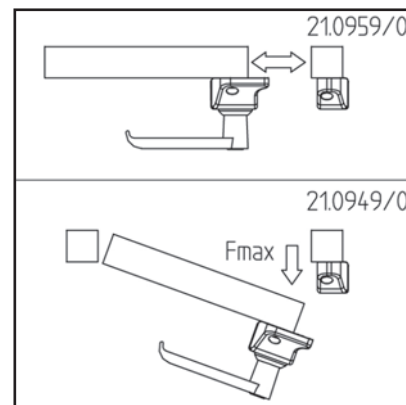
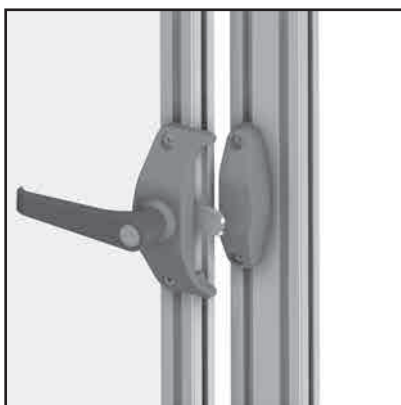
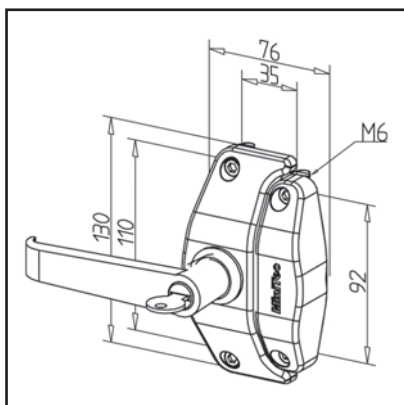
### ASSEMBLY

- Fasten to profile groove with supplied hardware.
- Door gap at lock 10 mm

**ROTARY LOCK 30**

Part no.

21.0949/0

**TECHN. DATA / ITEMS SUPPLIED**

- Aluminium, Pressure die-casting, powder-coated, grey
- With fastening material steel, zinc plated
- Mounted handle: see **part no. 21.2305/0**
- Fmax. 1000 N
- Weight = 0.432 kg/piece

**APPLICATIONS**

- Rotary Lock 30 for swing doors: **part no. 21.0949/0**
- Sliding door lock 30 for sliding doors: **part no. 21.0959/0**
- For profiles series 30
- Locking of doors and panels
- No profile finishing required
- Position moveable

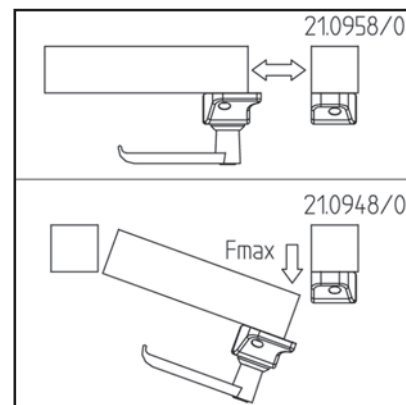
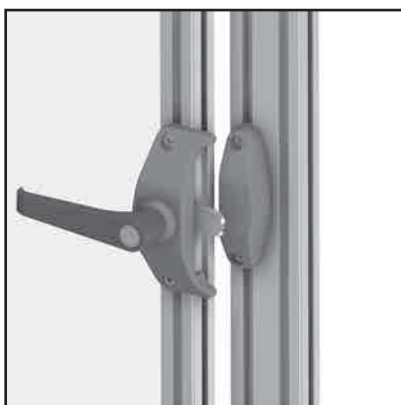
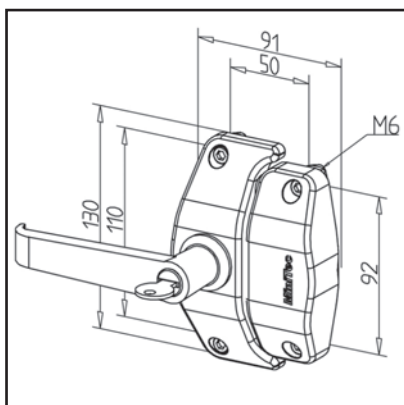
**ASSEMBLY**

- Fasten to profile groove with supplied hardware
- Fastening on profile groove - without processing/boring of profiles

**ROTARY LOCK 45**

Part no.

21.0948/0

**TECHN. DATA / ITEMS SUPPLIED**

- With fastening material steel, zinc plated
- Mounted handle: see **part no. 21.2305/0**
- Fmax. 2200 N
- Weight = 0.476 kg/piece

**APPLICATIONS**

- Rotary lock 45 for swivel doors: **part no. 21.0948/0**
- Sliding door lock 45 for sliding doors **part no. 21.0958/0**
- Locking of doors and panels
- No profile finishing required
- Position moveable

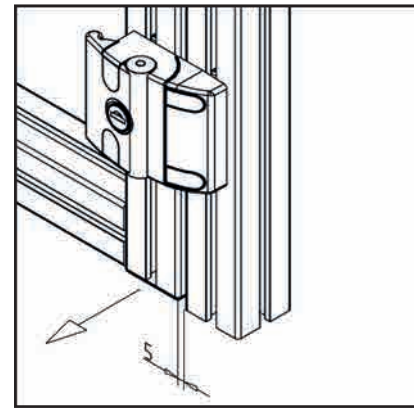
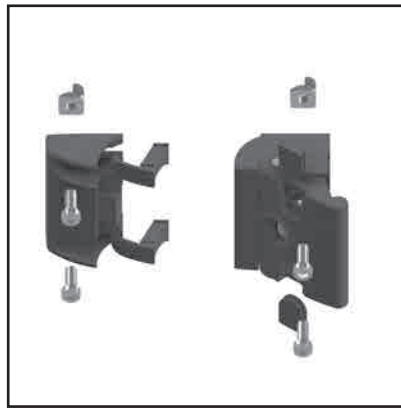
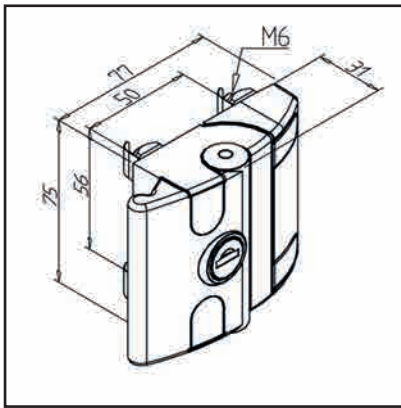
**ASSEMBLY**

- Fasten to profile groove with supplied hardware
- Fastening on profile groove - without processing/boring of profiles
- No separate door stop required

## TRUNK LOCK COMPACT

Part no.

21.2311/0



### TECHN. DATA / ITEMS SUPPLIED

- Zinc, Pressure die-casting, powder-coated, black
- With fastening material steel, zinc plated
- Locking cylinder with two keys
- Weight = 0.255 kg/piece

### APPLICATIONS

- Locking and securing of doors and panels in protective housings
- Door stop at the same time
- Also suitable for frameless doors
- Closed trunk can not be removed

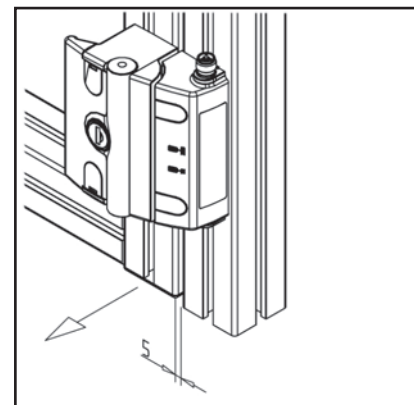
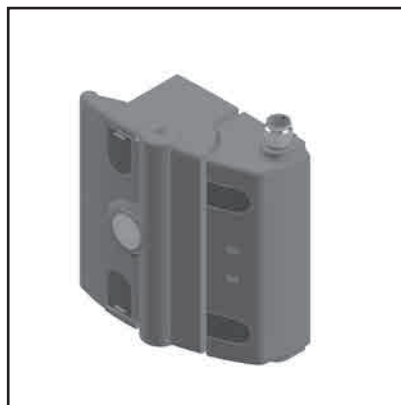
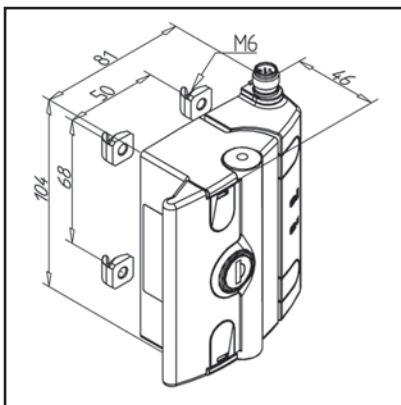
### ASSEMBLY

- Mount the latch lock to the door and posts and fit the screw cover
- No machining of the profile is necessary for assembly

## TRUNK LOCK WITH AN INQUIRY

Part no.

21.2323/0



### TECHN. DATA / ITEMS SUPPLIED

- Zinc, Pressure die-casting, powder-coated, black
- With fastening material steel, zinc plated
- Locking cylinder with two keys
- Reliability values according to EN ISO 13849-1 category 4 performance Level PL
- Operating voltage DC24V ±15%
- 2 safety outputs, p-switching, short-circuit protected
- Connection type M12, 8-pin
- UL-approved
- Weight = 0.448 kg/piece

### APPLICATIONS

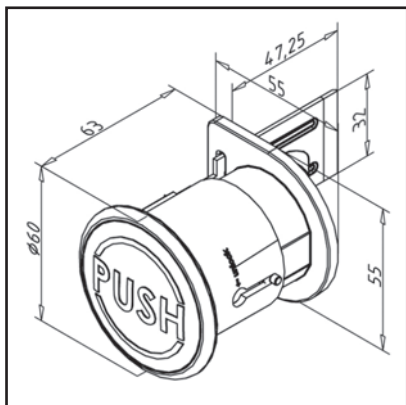
- Locking and securing of doors and hatches Cat. 4/PL
- Thanks to integrated transponder coded technology
- Door stop at the same time
- Closed trunk can not be removed

### ASSEMBLY

- Mount the latch lock to the door and posts and fit the screw cover
- Electrical connection can also be installed at the bottom
- No machining of the profile is necessary for assembly
- Suitable connecting cables on request

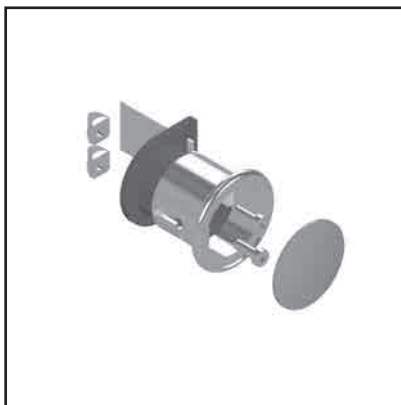
## EMERGENCY RELEASE FOR LATCH LOCK

Part no. 21.2316/0



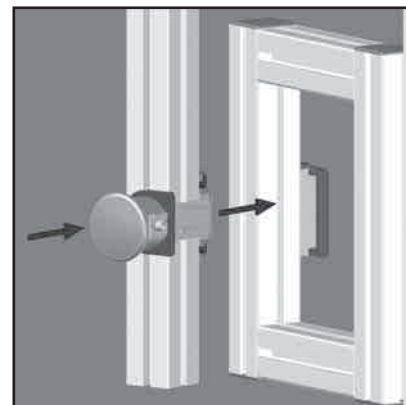
### TECHN. DATA / ITEMS SUPPLIED

- Plastic / steel zinc plated
- Fastening kit
- Weight = 0.123 kg/piece



### APPLICATIONS

- Assembly in connection with our trunk lock **part no. 21.2311/0** or trunk lock with request **part no. 21.2323/0**
- To open the door from the inside, on the outside lock attached
- Also works with closed latch lock
- When emergency release is snapped into place, closure of door is prevented

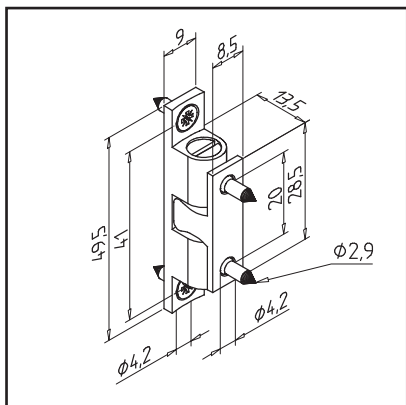


### ASSEMBLY

- Fasten with supplied hardware on the back of the post

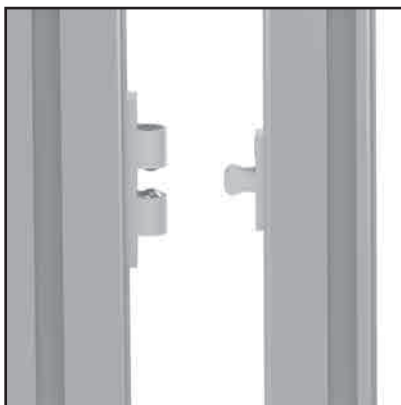
## BALL CATCH 50

Part no. 21.1763/0



### TECHN. DATA / ITEMS SUPPLIED

- Brass
- With fastening material steel, zinc plated
- Holding force approx. 10 N
- Weight = 0.030 kg/piece



### APPLICATIONS

- Stop and catch for sliding doors, swing doors, lids
- Ball latch 50 suitable for T-slots of reworked profiles. Allows gap-free closing of sliding doors
- Doors, lids, removable surface elements



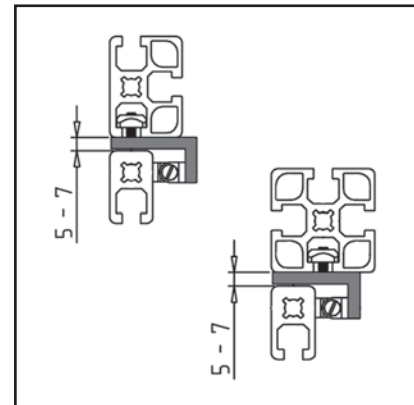
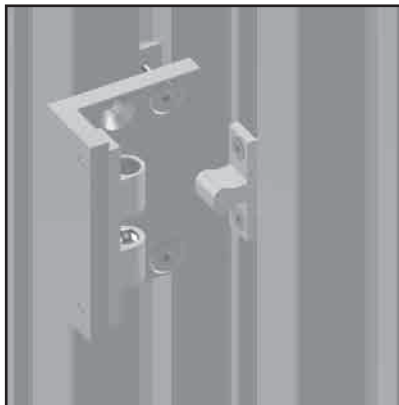
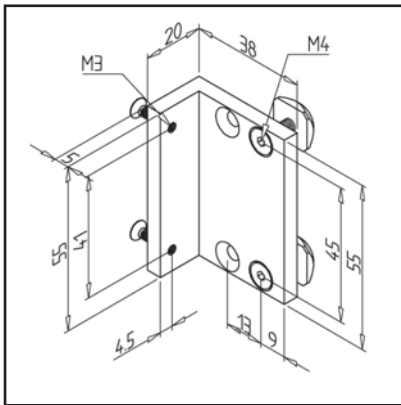
### ASSEMBLY

- Use fastening kit to fix the ball latch on any surface
- If applicable, use carrier for catch-bearing 50 **part no. 21.1139/0**

## BALL LATCH SUPPORT 50

Part no.

21.1139/0



### TECHN. DATA / ITEMS SUPPLIED

- Aluminium, anodized E6/EV1
- With fastening material steel, zinc plated
- Weight = 0.050 kg/piece

### APPLICATIONS

- Mounting of ball catch 50 in doors, hatches
- Removable surface elements
- Door stop at the same time

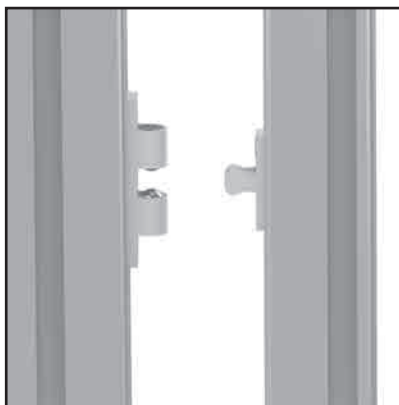
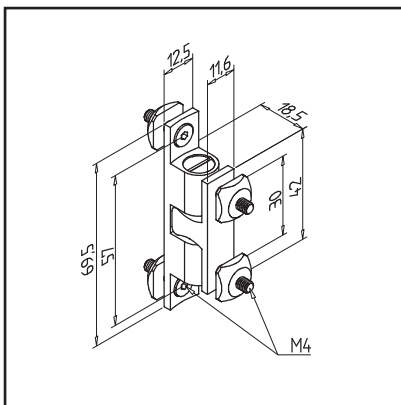
### ASSEMBLY

- Screw tight to the profile groove with supplied hardware.

## BALL CATCH 70

Part no.

21.1757/0



### TECHN. DATA / ITEMS SUPPLIED

- Brass
- With fastening material steel, zinc plated
- Holding force approx. 70 N
- Use on vertical struts **part no. 21.1757/2** (square nut with position-fixing)
- Weight = 0.095 kg/piece

### APPLICATIONS

- Fastening easily removable surface elements
- Stop and catch for sliding doors, swing doors, lids

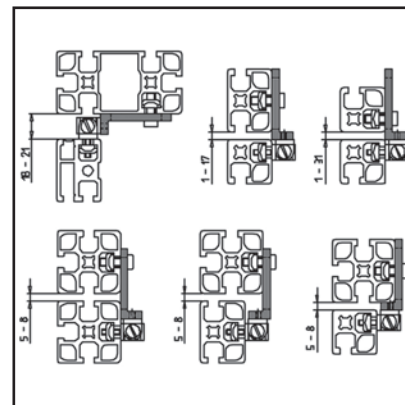
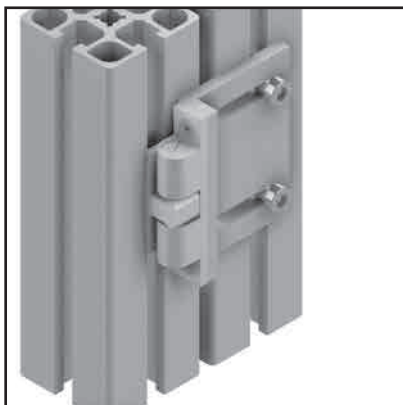
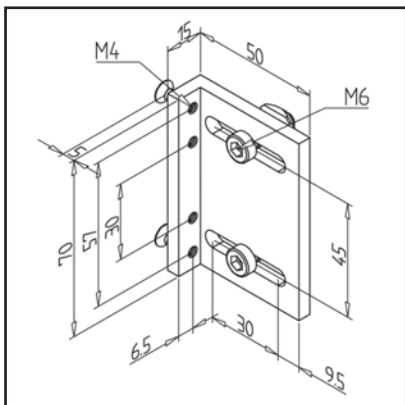
### ASSEMBLY

- Fasten to profile groove with supplied hardware.
- If applicable, use carrier for catch-bearing 70 **part no. 21.1137/0**

## BALL LATCH SUPPORT 70

Part no.

21.1137/0



### TECHN. DATA / ITEMS SUPPLIED

- Aluminium, anodized E6/EV1
- With fastening material steel, zinc plated
- Use on vertical struts **part no. 21.1137/7** (square nut with position-fixing)
- Weight = 0.050 kg/piece

### APPLICATIONS

- Mounting of ball catch 70 in doors, hatches, removable surface elements
- Door stop at the same time
- Shorten the carrier when using profile 32

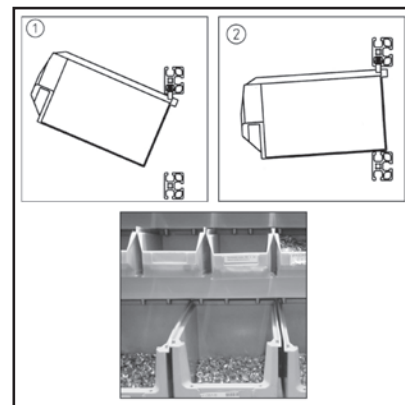
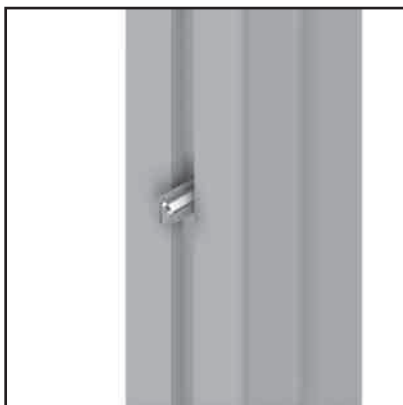
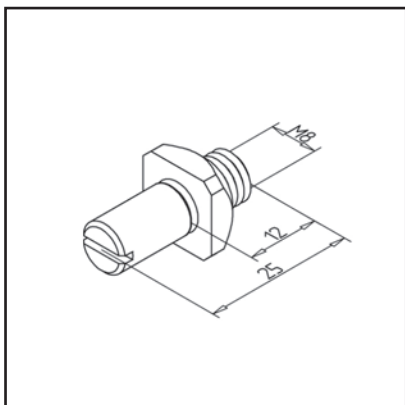
### ASSEMBLY

- Screw tight to the profile groove with supplied hardware.

## SNAP BOLT 25

Part no.

21.1758/0



### TECHN. DATA / ITEMS SUPPLIED

- Steel, galvanized
- Stainless version **part no. 21.1758/1**
- Weight = 0.012 kg/piece

### APPLICATIONS

- Holder of grab containers, oddment boxes
- Support plates

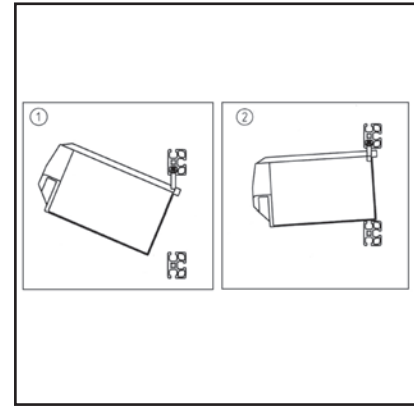
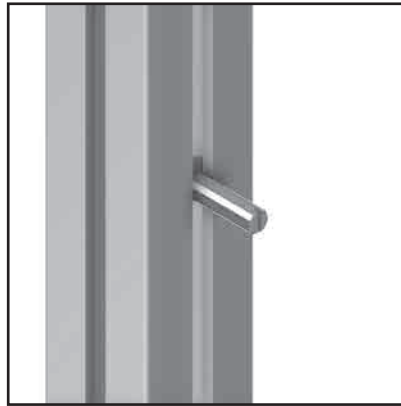
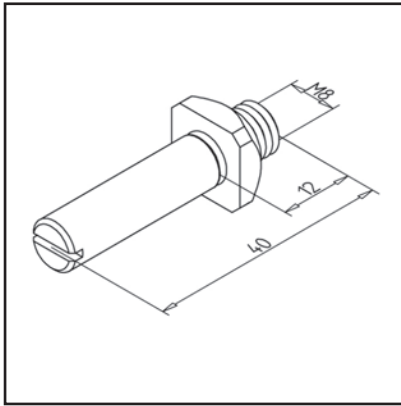
### ASSEMBLY

- Tighten in profile groove with sliding nut

## SNAP BOLT 40

Part no.

21.1760/0



### TECHN. DATA / ITEMS SUPPLIED

- Steel, galvanized
- Weight = 0.020 kg/piece

### APPLICATIONS

- Holder of grab containers, oddment boxes
- Support plates

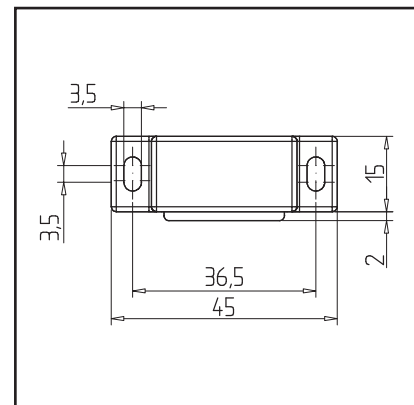
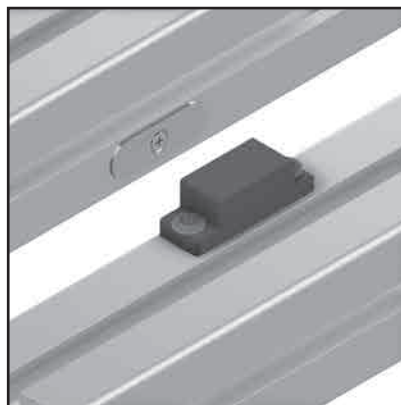
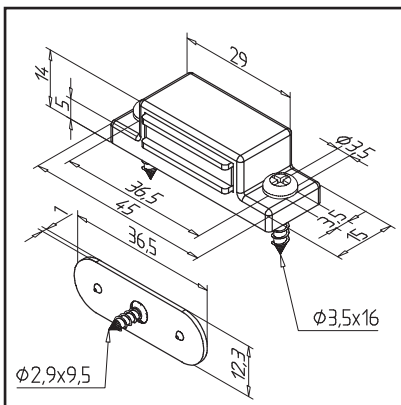
### ASSEMBLY

- Tighten in profile groove with sliding nut

## MAGNETIC CATCH

Part no.

21.1753/0



### TECHN. DATA / ITEMS SUPPLIED

- PA, black
- Holding plate, steel, zinc plated
- With fastening material steel, zinc plated
- Holding force: 20 N
- Weight = 0.021 kg/piece

### APPLICATIONS

- Stop and quick-release of swing doors
- Fastening of light surface elements

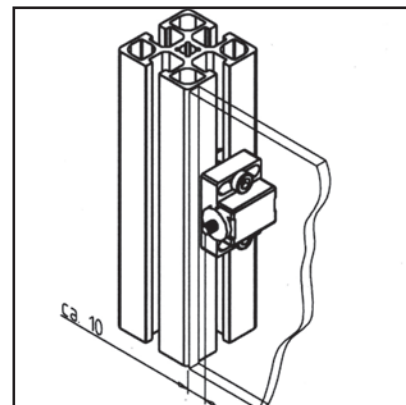
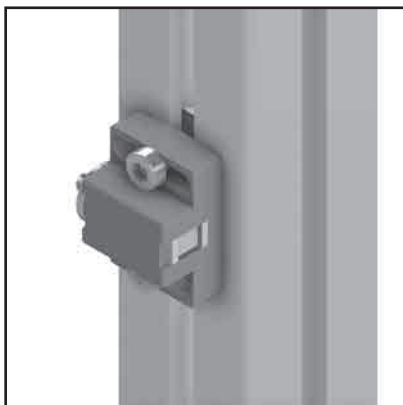
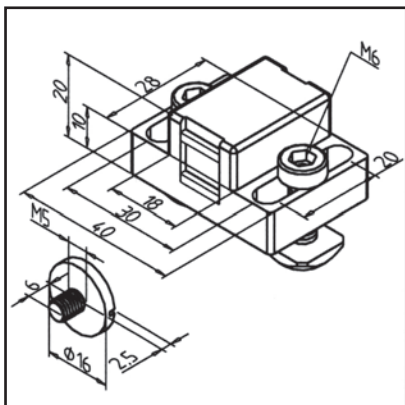
### ASSEMBLY

- Fasten with fixing material to profile panel

### MAGNETIC CATCH N

Part no.

21.1741/0



#### TECHN. DATA / ITEMS SUPPLIED

- PA, grey
- Holding plate, steel, zinc plated
- With fastening material steel, zinc plated
- Holding force approx. 30 N
- Use on vertical struts **part no. 21.1741/5** (square nut with position-fixing)
- Weight = 0.060 kg/piece

#### APPLICATIONS

- Stop and quick-release of swing doors
- Fastening of light surface elements

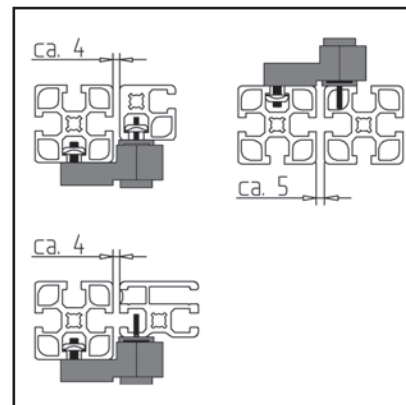
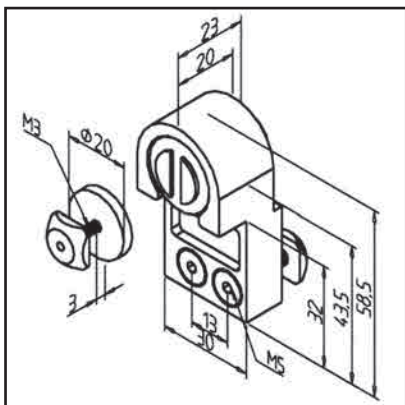
#### ASSEMBLY

- Fasten with fixing material to profile groove
- Opposite plate directly on profile surface or panel element; thread M5 required

### MAGNETIC CATCH S

Part no.

21.1740/0



#### TECHN. DATA / ITEMS SUPPLIED

- PA, grey
- Holder plate steel, burnished
- With fastening material steel, zinc plated
- Holding force approx. 70 N
- Weight = 0.080 kg/piece

#### APPLICATIONS

- Stop and quick-release of swing doors
- Fastening of light surface elements

#### ASSEMBLY

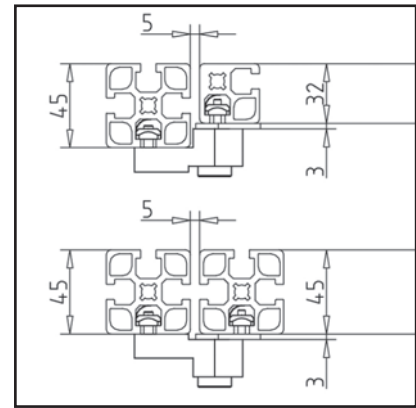
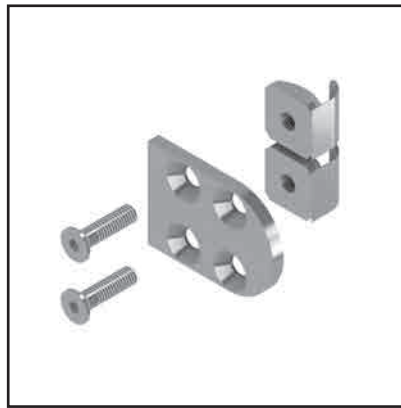
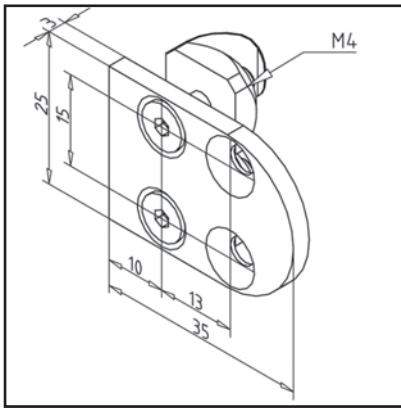
- Fasten with fixing material to profile groove
- Opposite plate directly on profile surface or panel element; thread M3 required



## MAGNET PLATE S

Part no.

21.2308/0



### TECHN. DATA / ITEMS SUPPLIED

- Steel, galvanized
- With fastening material steel, zinc plated
- Weight = 0.031 kg/piece

### APPLICATIONS

- For magnetic catch S **part no. 21.1740/0**

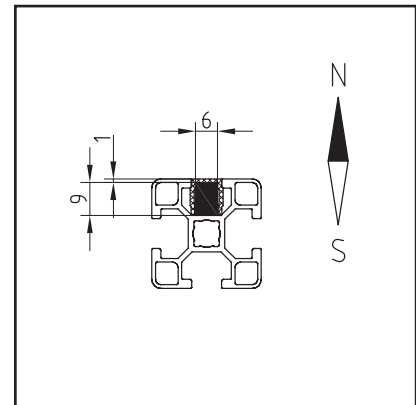
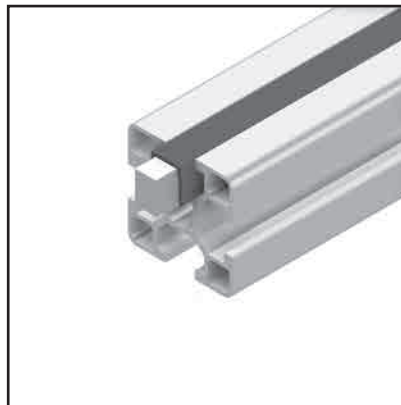
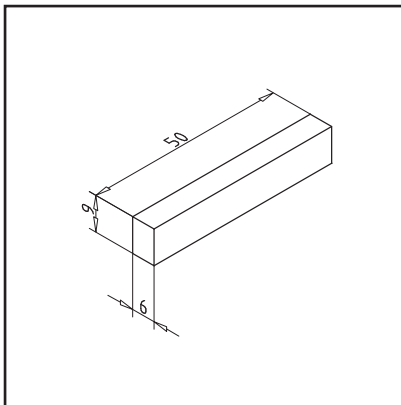
### ASSEMBLY

- Fasten on profile groove
- No drilling required

## MAGNET 6 X 9 X 50 MM

Part no.

21.0040/0



### TECHN. DATA / ITEMS SUPPLIED

- NeFeB N45, nickel-plated
- Without fastening kit
- Attention: Electric- and memory devices can be faulted by the magnet
- Power density,  $BH_{mx} = 342 \text{ kJ/m}^3$
- Remanence,  $B_r = 1320 \text{ mT}$
- coercive field strength  $H_{cj} = 955 \text{ kA/m}$
- max. service temperature  $+80 \text{ }^\circ\text{C}$
- Weight = 0.023 kg/piece

### APPLICATIONS

- Adhesive magnet for tools
- Use under conveyor belts as tracking, for magnetizable conveying products or at higher conveying speeds
- Fitting for all profiles of profile series 30

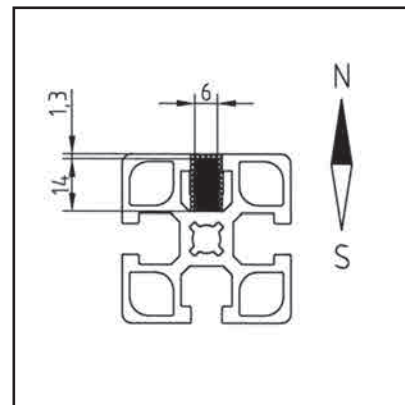
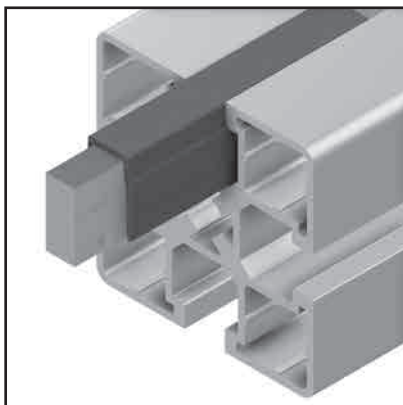
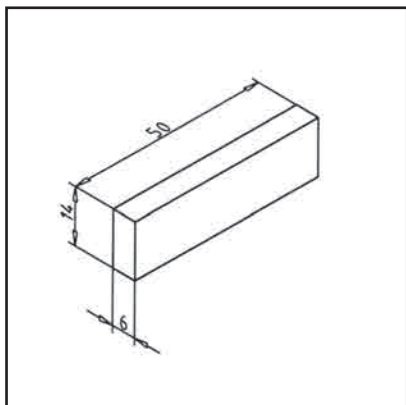
### ASSEMBLY

- Snap or slip the cover profile into profile groove
- Insert magnet into t-slot
- For fastening: (mightily recommended) Use end cap AL, set screw with square nut or t-slot bar

**MAGNET 6 X 14 X 50**

Part no.

21.0032/0

**TECHN. DATA / ITEMS SUPPLIED**

- NeFeB N35, nickel-plated
- Without fastening kit
- Attention: Electric- and memory devices can be faulted by the magnet
- Power density,  $BH_{mx} = 263 \text{ kJ/m}^3$
- Remanence,  $B_r = 1170 \text{ mT}$
- coercive field strength  $H_{cj} = 955 \text{ kA/m}$
- max. service temperature  $+80 \text{ }^\circ\text{C}$
- Weight = 0.030 kg/piece

**APPLICATIONS**

- Adhesive magnet for tools
- Use under conveyor belts as tracking, for magnetizable conveying products or at higher conveying speeds
- Fitting for all profiles of profile series 45

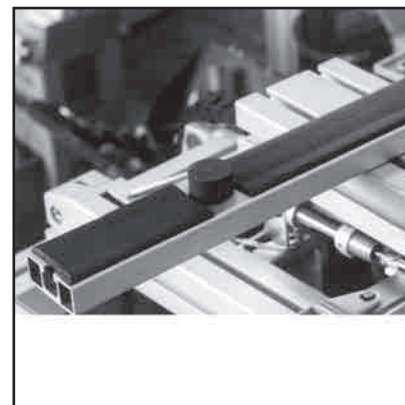
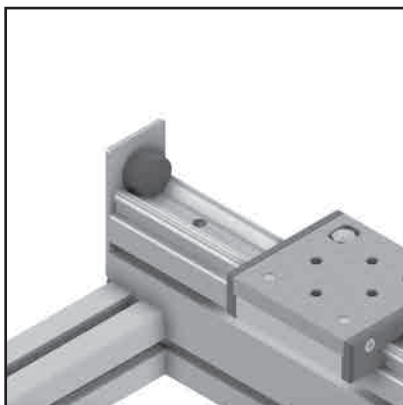
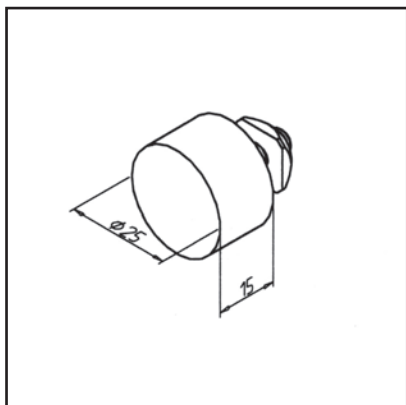
**ASSEMBLY**

- Snap or slip the cover profile into profile groove
- Insert magnet into t-slot
- For fastening: (mighty recommended) Use end cap AL, set screw with square nut or t-slot bar

**STOPPER 25**

Part no.

21.1759/0

**TECHN. DATA / ITEMS SUPPLIED**

- NBR, black
- With fastening material steel, zinc plated
- With sliding nut M6
- Weight = 0.020 kg/piece

**APPLICATIONS**

- Stop for doors, linear guides

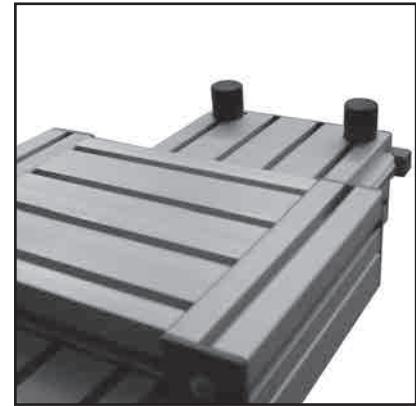
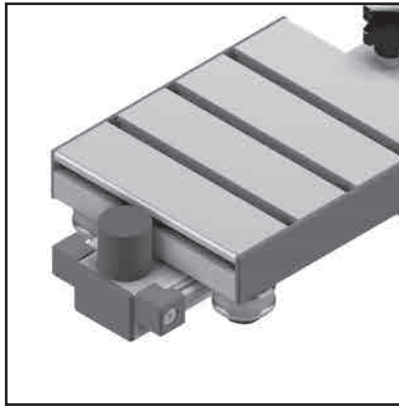
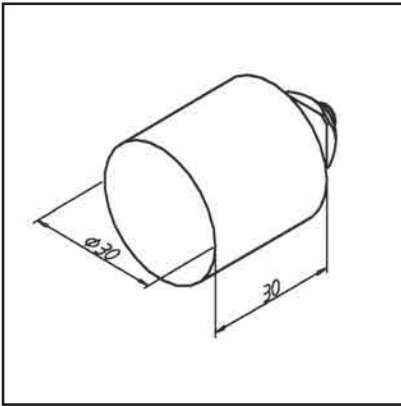
**ASSEMBLY**

- Fix with square nut M6 in profile groove

## STOPPER 30

Part no.

21.1759/1



### TECHN. DATA / ITEMS SUPPLIED

- NBR, black
- With fastening nut steel, galvanized
- With sliding nut M8
- Weight = 0.060 kg/piece

### APPLICATIONS

- Stop for heavy doors, long guides

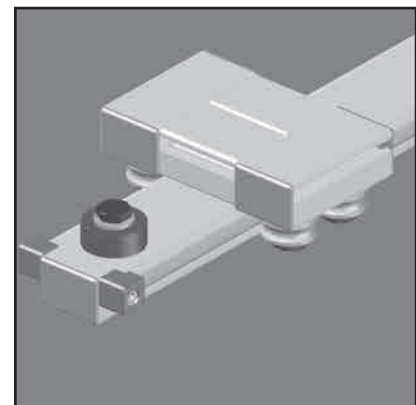
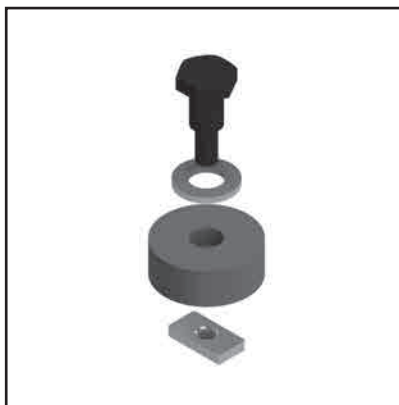
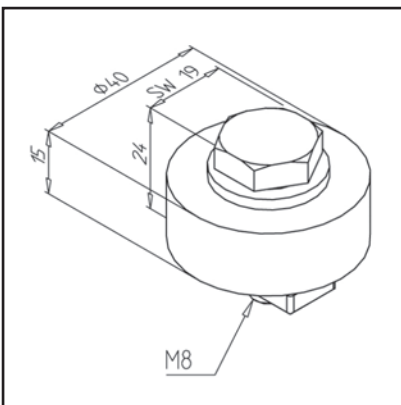
### ASSEMBLY

- Fix with square nut M6 in profile groove

## STOPPER 40

Part no.

21.2301/0



### TECHN. DATA / ITEMS SUPPLIED

- NBR, black
- Fixation screw steel, burnished
- Nut and washer steel, galvanised
- With sliding nut M8
- Weight = 0.055 kg/piece

### APPLICATIONS

- Stop for heavy doors, long guides

### ASSEMBLY

- Fix with square nut M6 in profile groove

CONNECTING PLATES

CONNECTING PLATE 30 x 60



Items Supplied

- Aluminium, powder coated, grey
- Fastening kit

Application

- Fixing of articulated feet and castors on profiles 30x60

Assembly

- Fasten with fastening material from the scope of supply to the profile

THREAD	STRENGTH	WEIGHT	Part no.
M8	15 mm	0,085 kg	21.2114/0
M10	15 mm	0,084 kg	21.2115/0
M12	15 mm	0,082 kg	21.2116/0

CONNECTING PLATE 32 x 90



Items Supplied

- Aluminium, powder coated, grey
- Fastening kit

Application

- Fixing of articulated feet to profiles 90x32 UL

Assembly

- Fasten with fastening material from the scope of supply to the profile

Thread	Thickness	Weight	Part no.
M8	15 mm	0,164 kg	21.1356/0
M10	15 mm	0,162 kg	21.1357/0
M12	15 mm	0,160 kg	21.1358/0

CONNECTING PLATE 45 x 90



Items Supplied

- Aluminium, powder coated, grey
- Fastening kit

Application

Fixing of articulated feet and castors on profiles 45x90

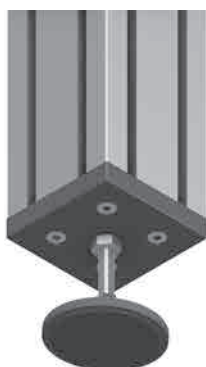
Assembly

Fasten with fastening material from the scope of supply to the profile

Thread	Thickness	Weight	Part no.
M10	15 mm	0,164 kg	21.1038/0
M12	15 mm	0,162 kg	21.1039/0
M16	15 mm	0,160 kg	21.1040/0
M20	15 mm	0,156 kg	21.1047/0

CONNECTING PLATES

CONNECTING PLATE 90 x 90



Items Supplied

- Aluminium, powder coated, grey
- Fastening kit

Application

- Fixing of articulated feet and castors on profiles 90x90

Assembly

- Fasten with fastening material from the scope of supply to the profile

Thread	Thickness	Weight	Part no.
M10	15 mm	0,332 kg	21.1041/0
M12	15 mm	0,330 kg	21.1042/0
M16	15 mm	0,345 kg	21.1043/0
M20	15 mm	0,290 kg	21.1057/0

CONNECTING PLATE 90 R 90°



Items Supplied

- Aluminium, powder coated, grey
- Fastening kit

Application

- Fixing of articulated feet and castors on profiles 90R90°

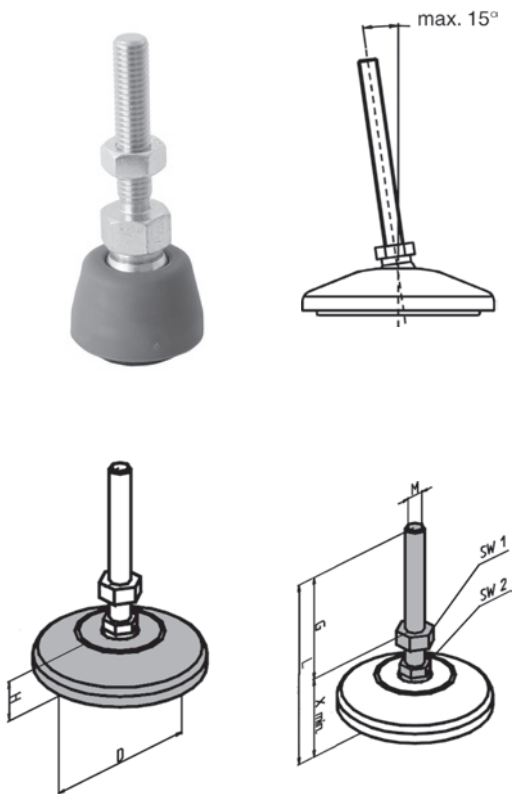
Assembly

- Fasten with fastening material from the scope of supply to the profile

Thread	Thickness	Weight	Part no.
M10	15 mm	0,277 kg	21.0009/0
M12	15 mm	0,275 kg	21.0010/0
M16	15 mm	0,272 kg	21.0011/0
M20	15 mm	0,268 kg	21.0012/0

HINGED FEET

HINGED FEET PA



Items Supplied

- Plate PA, grey
- Anti slip insert NBR
- Spindle steel, galvanized
- Lock nut steel, galvanized
- All spindles fit all plates

Application

Height adjustable constructions of all kinds  
 Protective equipment, tables, showcases  
 Conveyors, system workstations

Assembly

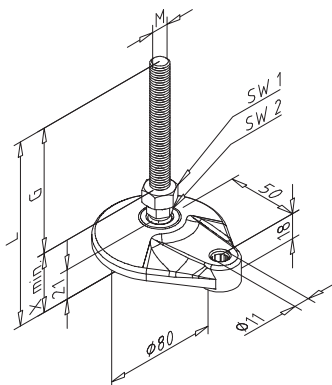
- Direct in central drilling of the profiles (depending on profile cross-section drilled up to thread M12)
- Larger threads in connection with connection plate
- For profiles 45 x 90 and 90 x 90, a connection plate is required if the feet should be positioned centrally

Spindle	Plate			
	Ø 30	Ø 45	Ø 60	Ø 80
M8	21.1851/0	21.1871/0	21.1881/0	21.1891/0
M10	21.1852/0	21.1872/0	21.1882/0	21.1892/0
M12	-	21.1873/0	21.1883/0	21.1893/0
M16	-	21.1874/0	21.1884/0	21.1894/0

Plate		
D mm	H mm	Load capacity
30	20	300 kg
45	20	500 kg
60	20	1000 kg
80	20	1000 kg

Spindle					
M	G	X	SW1	SW2	L
8	33,5	38,5	13	14	72,5
10	42	40,5	17	14	82,5
12	90	42,5	19	14	132,5
16	107	45,5	24	17	152,5

HINGED FEET PA WITH MOUNTING HOLE



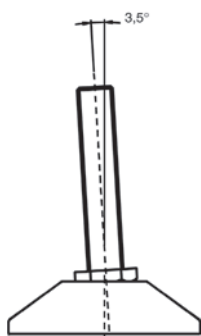
Items Supplied

- Plate PA, grey
- Spindle Steel, galvanized
- Lock nut steel, galvanized
- Anti slip insert NBR
- Load capacity: 1000 Kg

Part no.	Color	M	G	X	SW1	SW2	L
21.2510/0	grey	08	33,5	39	13	14	72,5
21.2511/0	grey	10	42	40,5	17	14	82,5
21.2512/0	grey	12	90	42,5	19	14	132,5
21.2513/0	grey	16	107	45,5	24	17	152,5

HINGED FEET

HINGED FEET GD



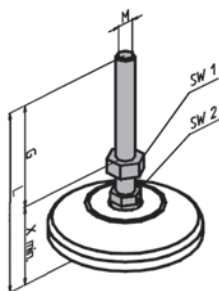
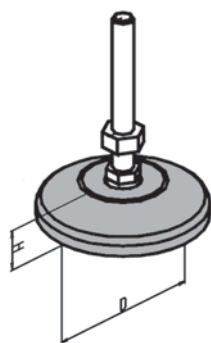
Items Supplied

- Plate die-cast aluminium powder-coated, grey
- Anti slip insert NBR
- Spindle Steel, galvanized
- Lock nut steel, galvanized
- All spindles fit all plates

Spindle	Plate	
	Ø 45	Ø 90
M10	21.1842/0	21.1862/0
M12	21.1843/0	21.1863/0
M16	21.1844/0	21.1864/0

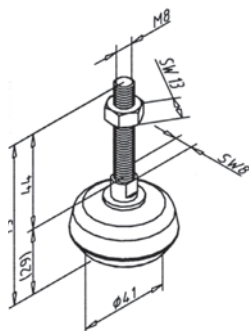
Plate		
D mm	H mm	Load capacity
45	25	3000 kg
90	27	4000 kg

Spindle					
M	G	X	SW1	SW2	L
10	52,6	37,5	17	17	89,5
12	50,5	41	19	19	91,2
16	68	45,6	24	24	112,6



FOOT SST

Part no. 21.2053/0



Items Supplied

- Plate Steel, VA
- Spindle insert steel VA
- Lock nut steel, VA
- Load capacity: 750 kg

Application

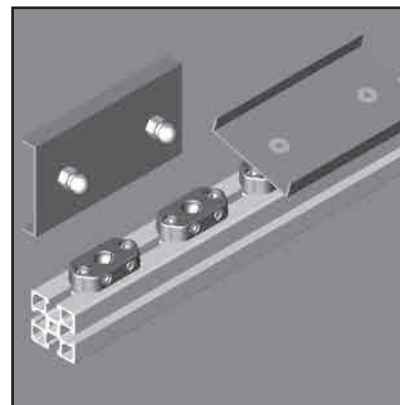
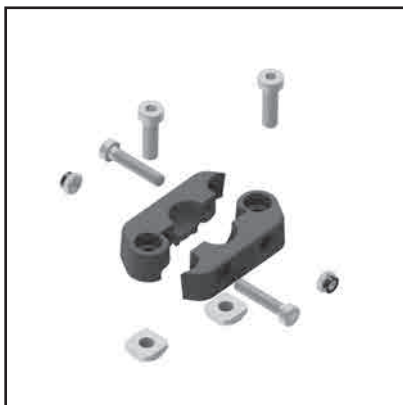
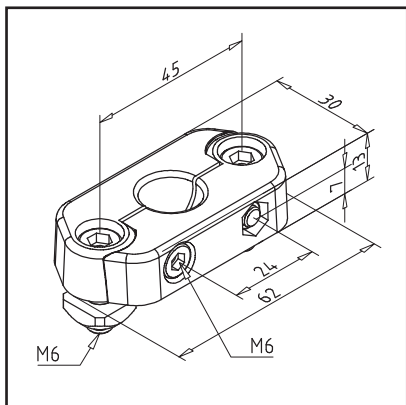
- Height adjustable constructions of all kinds
- Protective equipment, tables, showcases
- Conveyors, system workstations

Assembly

- Directly in central bore of the profiles, also in VA profile  
Cut thread M8,  
Mold in aluminum profile thread M8

### CLIP - BLOCK FOR BALL HEAD

Part no. 22.1181/0



#### TECHN. DATA / ITEMS SUPPLIED

- PA, Injection Mould, grey
- Ball Ø15 mm
- With fastening material steel, zinc plated
- Swivel area 15°
- Load capacity up to 150 kg standing vertically
- Weight = 0.054 kg/piece

#### APPLICATIONS

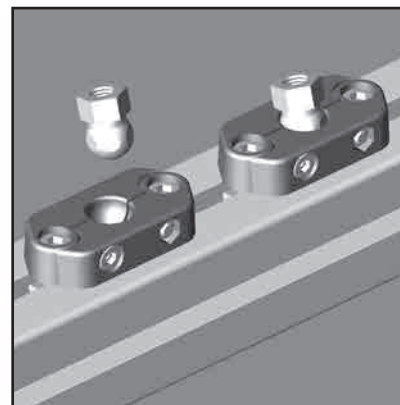
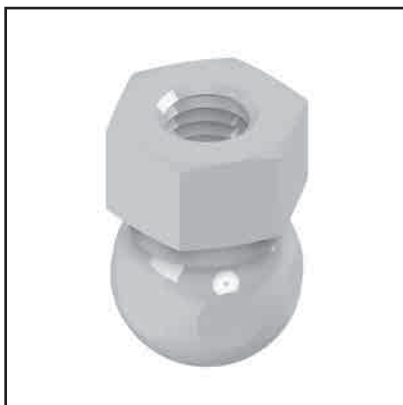
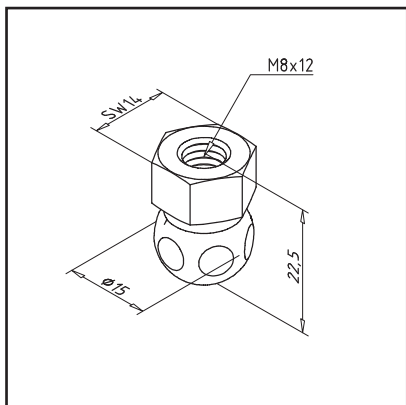
- For the preparation of self-adjusting lines and stoppers
- Exchangeable workpiece or worktool carriers
- To be used with ball head M8 **part no. 21.2506/0** or the ball screws made of hinged feet PA

#### ASSEMBLY

- Fasten with fixing material to profile groove
- Holding force adjustable 0 - 50 N

### BALL HEAD M8

Part no. 21.2506/0



#### TECHN. DATA / ITEMS SUPPLIED

- Steel, galvanized
- Ball Ø15 mm
- Internal thread M8x12
- Weight = 0.020 kg/piece

#### APPLICATIONS

- For use in combination with Clip Block **part no. 22.1181/0**
- For the preparation of linings or hinged feet in special design, see hinged feet PA

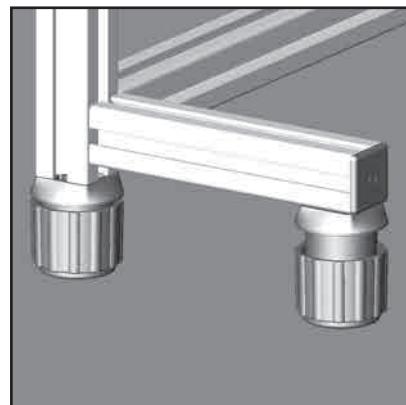
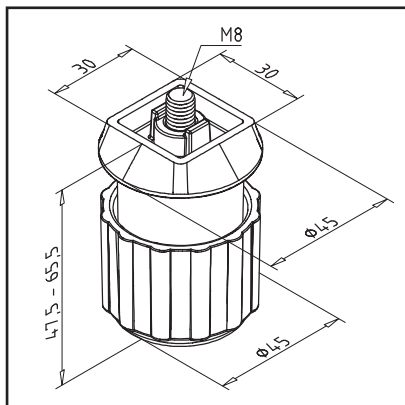
#### ASSEMBLY

- Fasten onto preferred component with screw M8
- Use for fastening to profile groove setscrew M8x20 and square nut M8



### FOOT 30 COMPACT

Part no. 21.2524/0



#### TECHN. DATA / ITEMS SUPPLIED

- PA, Injection Mould, grey
- With fastening material steel, zinc plated
- Max. load capacity: 100 Kg
- Adjustment area  $\pm 9$  mm
- With anti-skid rubber damper
- Weight = 0.121 kg/piece

#### APPLICATIONS

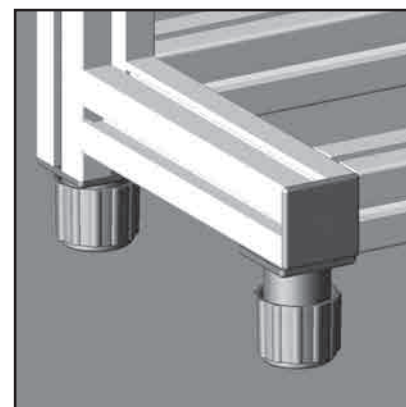
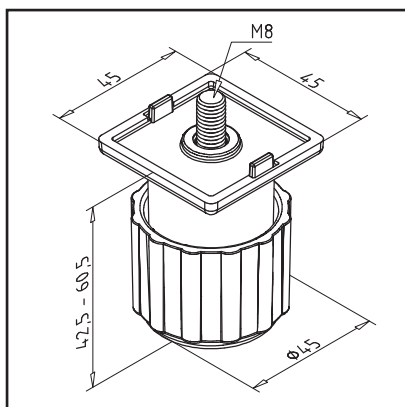
- For installation and levelling of smaller frames with nice design

#### ASSEMBLY

- Assembly with to profile end or on profile face with delivered fixation material

### FOOT 45 COMPACT

Part no. 21.2525/0



#### TECHN. DATA / ITEMS SUPPLIED

- PA, Injection Mould, grey
- With fastening material steel, zinc plated
- Max. load capacity: 100 Kg
- Adjustment area  $\pm 9$  mm
- With anti-skid rubber damper
- Weight = 0.117 kg/piece

#### APPLICATIONS

- For installation and levelling of smaller frames with nice design

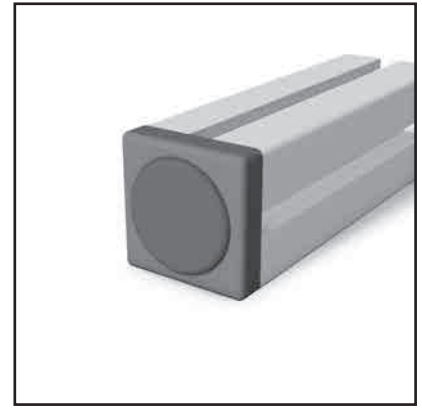
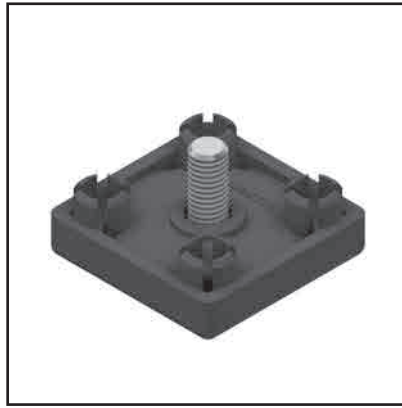
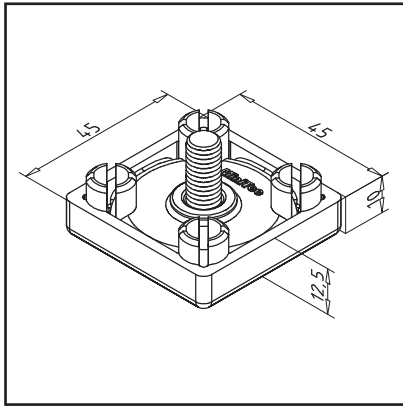
#### ASSEMBLY

- Assembly with to profile end or on profile face with delivered fixation material

## FLOOR MOUNTING PLATE 45X45 G

Part no.

22.1217/0



### TECHN. DATA / ITEMS SUPPLIED

- ABS, Injection Mould, grey
- Anti-slip license NBR, black
- With fastening screw M8, galvanized
- Load capacity: 1000 kg
- Weight = 0.032 kg/piece

### APPLICATIONS

- For use with all profiles with cross section 45x45
- For non-slip installation of tables and racks
- Reduces noise and protects the floor

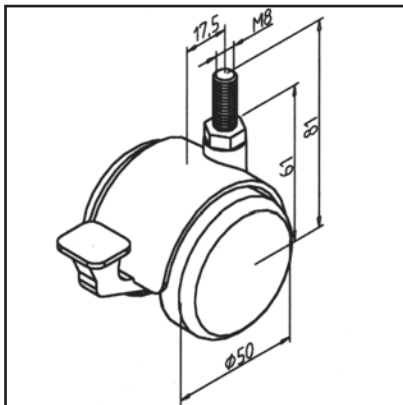
### ASSEMBLY

- Fasten to central profile bore with fixation material from delivery scope
- then insert anti-slip certificate

## FURNITURE WHEEL WITH LOCKING DEVICE

Part no.

21.1153/0



### TECHN. DATA / ITEMS SUPPLIED

- PA, black
- Double role with sliding bearing
- With fastening material steel, zinc plated
- Load capacity 30 kg
- Weight = 0.080 kg/piece

### APPLICATIONS

- Light movable tables
- Movable file box
- Furniture

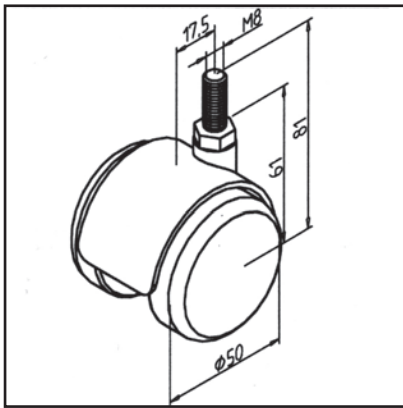
### ASSEMBLY

- Install directly in the center hole of the vertical profile with mounting material
- If the wheel must be positioned centrally for profile cross-sections 45 x 90 or greater, a base and transport plate with thread M8 is required

## FURNITURE WHEEL WITHOUT LOCKING DEVICE

Part no.

21.1105/0



### TECHN. DATA / ITEMS SUPPLIED

- PA, black
- Double role with sliding bearing
- With fastening material steel, zinc plated
- Load capacity 30 kg
- Weight = 0.076 kg/piece

### APPLICATIONS

- Light movable tables
- Movable file box
- Furniture

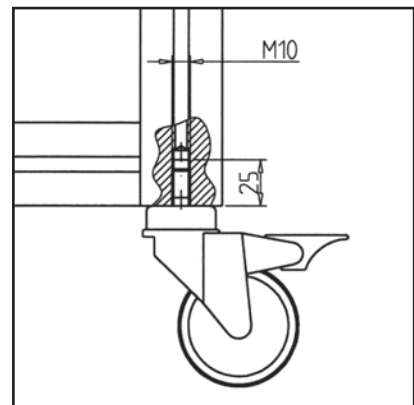
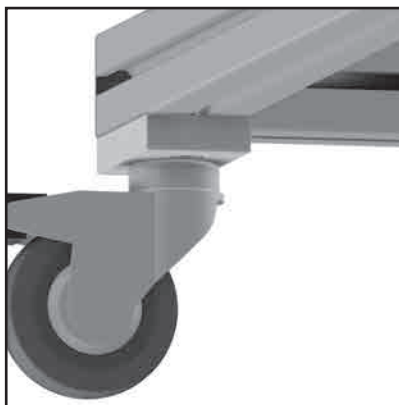
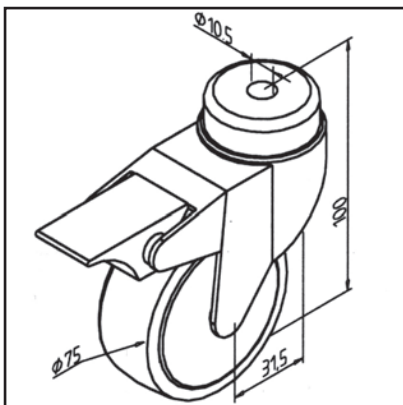
### ASSEMBLY

- Install directly in the center hole of the vertical profile with mounting material
- If the wheel must be positioned centrally for profile cross-sections 45 x 90 or greater, a base and transport plate with thread M8 is required

## SWIVELLING CASTOR WITH BRAKE D 75 X 100

Part no.

21.1120/0



### TECHN. DATA / ITEMS SUPPLIED

- Steel, galvanized
- Tire, rubber, grey
- With fastening material steel, zinc plated
- Load capacity 50 kg
- **Other versions upon request**
- Weight = 0.450 kg/piece

### APPLICATIONS

- Movable tables
- Work stands
- display windows, showcases

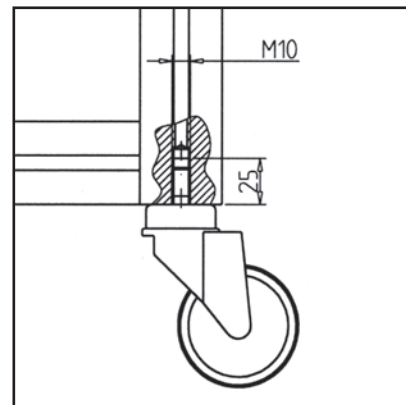
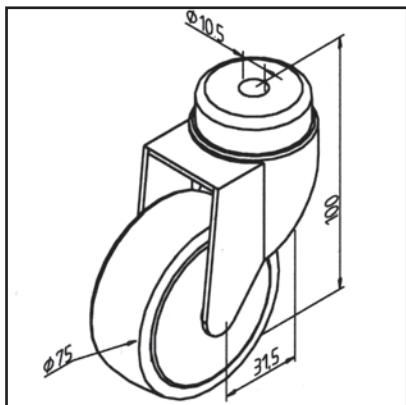
### ASSEMBLY

- Attach directly to the central bore of the vertical profile with fastening material, then drill and introduce thread M10
- A connection plate is required if the roller is to be positioned centrally with profile cross sections 45 x 90 or 90 x 90

### SWIVELLING CASTOR WITHOUT BRAKE D 75 X 100

Part no.

21.1118/0



#### TECHN. DATA / ITEMS SUPPLIED

- Steel, galvanized
- Tire, rubber, grey
- With fastening material steel, zinc plated
- Load capacity 50 kg
- **Other versions upon request**
- Weight = 0.372 kg/piece

#### APPLICATIONS

- Movable tables
- Work stands
- display windows, showcases

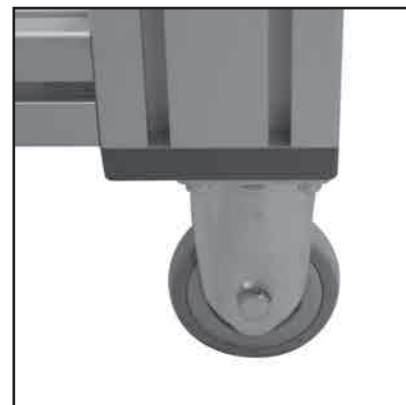
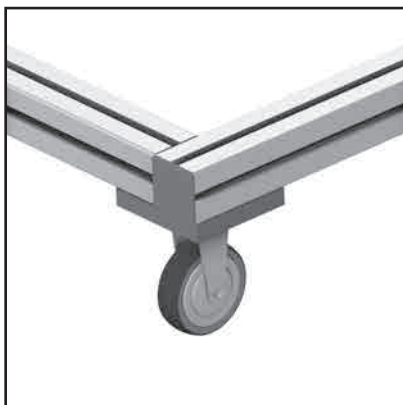
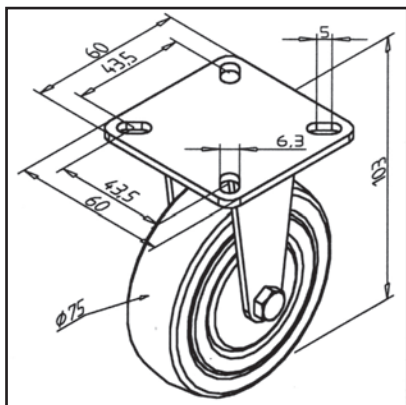
#### ASSEMBLY

- Attach directly to the central bore of the vertical profile with fastening material, then drill and introduce thread M10
- A connection plate is required if the roller is to be positioned centrally with profile cross sections 45 x 90 or 90 x 90

### FIXED CASTOR D 75 X 103

Part no.

21.1475/0



#### TECHN. DATA / ITEMS SUPPLIED

- Steel, galvanized
- Tire, rubber, grey
- With fastening material steel, zinc plated
- Load capacity 50 kg
- **Other versions upon request**
- Weight = 0.350 kg/piece

#### APPLICATIONS

- Work stands
- Frames
- Movable tables

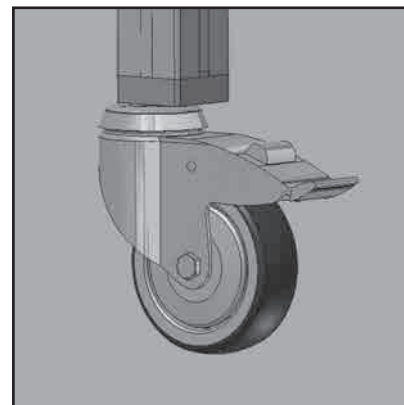
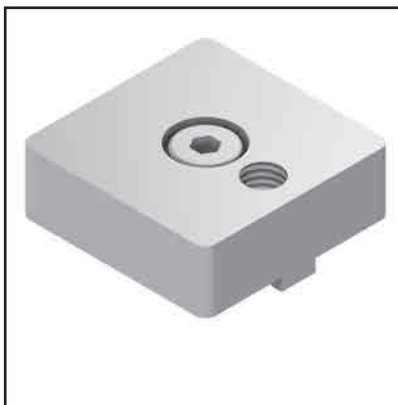
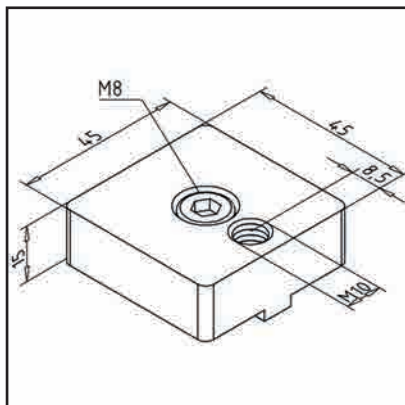
#### ASSEMBLY

- to the profile groove with supplied hardware
- With mounting plate for castor **Part no. 21.1476/0** attach to profile

## CONNECTING PLATE 45 X 45 VA M10

Part no.

21.2059/0



### TECHN. DATA / ITEMS SUPPLIED

- Stainless steel
- Fastening kit
- Weight = 0.230 kg/piece

### APPLICATIONS

- PROFILE 45 x 45
- Profile 45 x 45 VA
- Height compensation when mounting casters in combination with fixed casters on a movable base frame
- For using feet M10

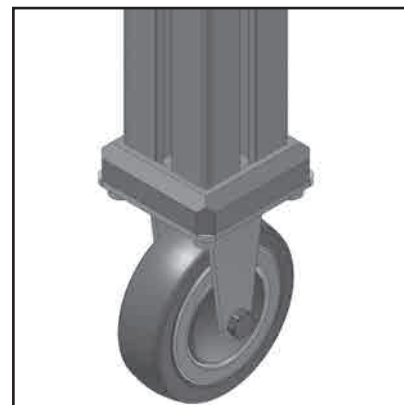
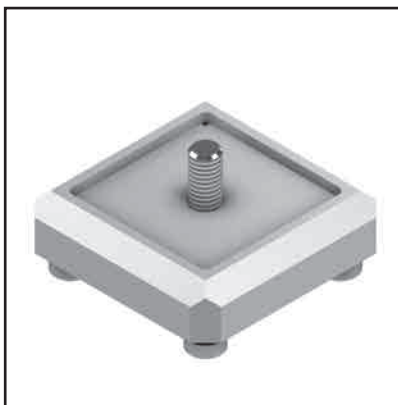
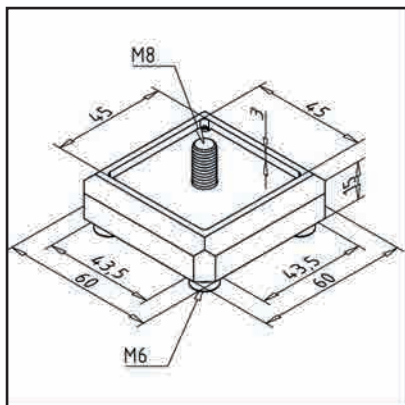
### ASSEMBLY

- Front attachment to profile with supplied hardware
- Fasten to profile with fastening material from the scope of delivery

## FASTENING PLATE 45 SST TO FIXED CASTOR

Part no.

21.2058/0



### TECHN. DATA / ITEMS SUPPLIED

- Stainless steel
- Fastening kit
- Weight = 0.360 kg/piece

### APPLICATIONS

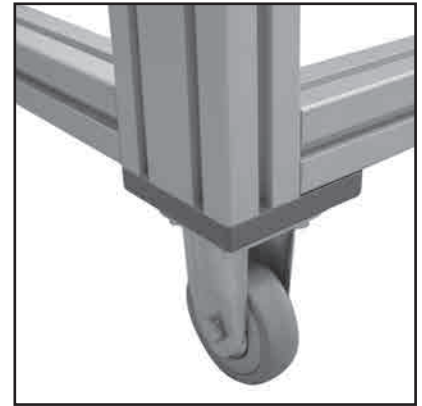
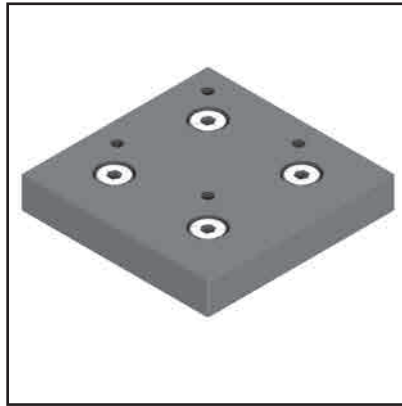
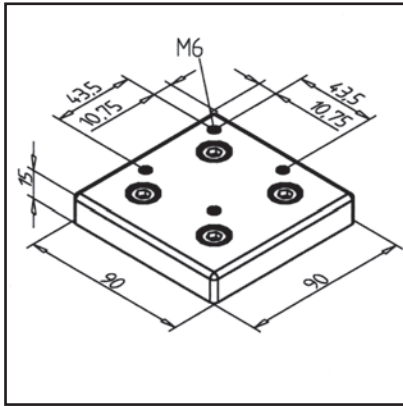
- PROFILE 45 x 45
- Profile 45 x 45 VA
- For attaching the fixed castor on the front side to profile 45 x 45 and 45 x 45 VA

### ASSEMBLY

- Front attachment to profile with supplied hardware

## FASTENING PLATE 90 TO FIXED CASTOR

Part no. 21.1476/0



### TECHN. DATA / ITEMS SUPPLIED

- Aluminium, Pressure die-casting, powder-coated, grey
- With fastening material steel, zinc plated
- Weight = 0.330 kg/piece

### APPLICATIONS

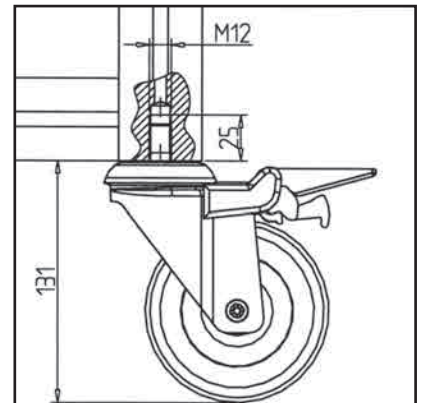
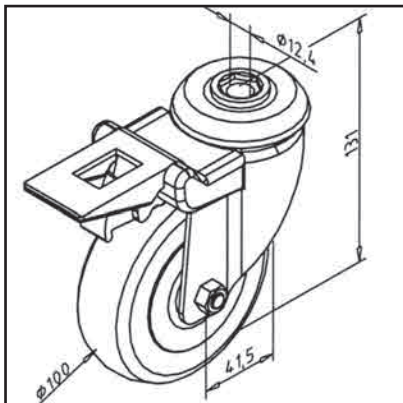
- To attach the castor **part no. 21.1475/0** frontally to profile 90 x 90

### ASSEMBLY

- Fasten to the profile end with supplied hardware

## SWIVELLING CASTOR WITH BRAKE D 100 X 131

Part no. 21.0031/0



### TECHN. DATA / ITEMS SUPPLIED

- Steel, galvanized
- Tire, rubber, grey
- With fastening material steel, zinc plated
- Load capacity 100 kg
- **Other versions upon request**
- Weight = 0.743 kg/piece

### APPLICATIONS

- Movable tables
- Work stands
- display windows, showcases

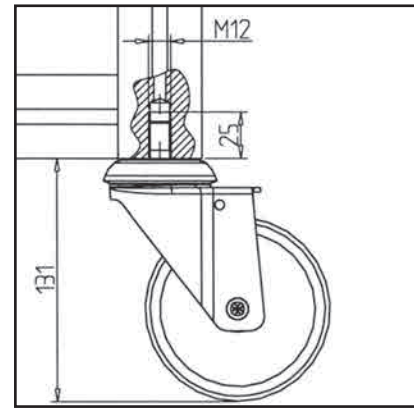
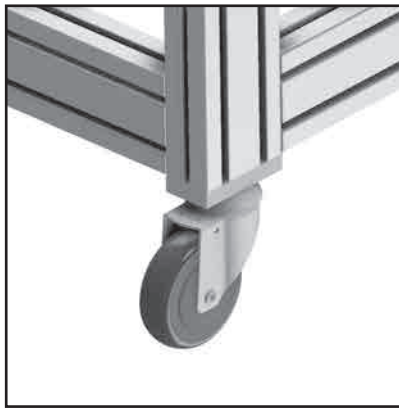
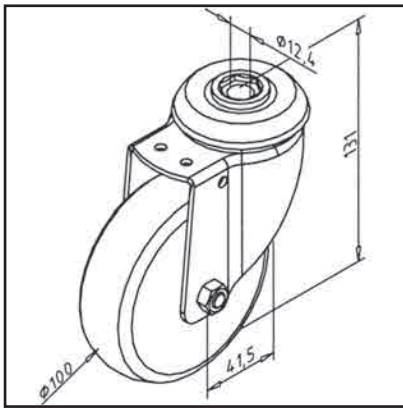
### ASSEMBLY

- Connect directly to the central bore of the vertical profile with supplied hardware, drill and introduce thread M12
- If the roller is to be centrally positioned for profile cross sections of 45 x 90 or 90 x 90, a connection plate is required

## SWIVELLING CASTOR WITHOUT BRAKE D 100 X 131

Part no.

21.0030/0



### TECHN. DATA / ITEMS SUPPLIED

- Steel, galvanized
- Tire, rubber, grey
- With fastening material steel, zinc plated
- Load capacity 100 kg
- **Other versions upon request**
- Weight = 0.660 kg/piece

### APPLICATIONS

- Movable tables
- Work stands
- display windows, showcases

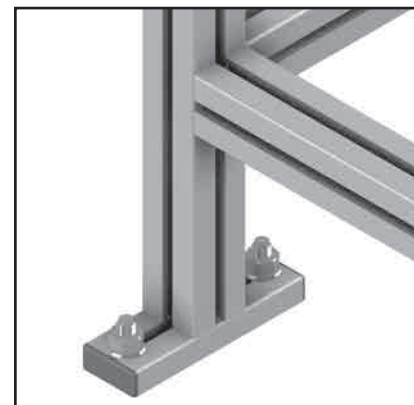
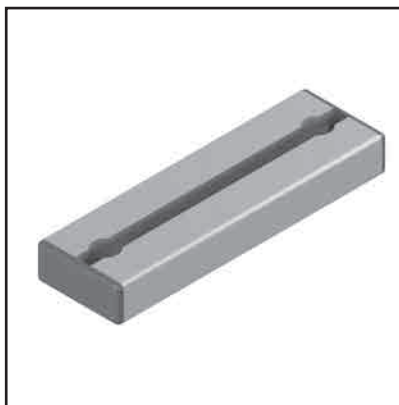
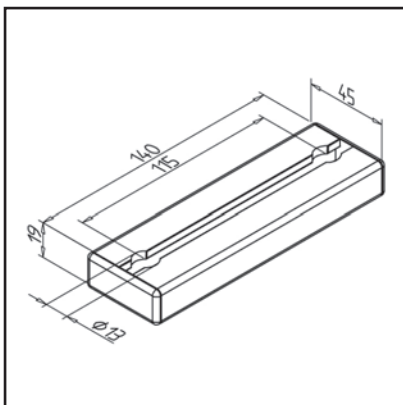
### ASSEMBLY

- Connect directly to the central bore of the vertical profile with supplied hardware, drill and introduce thread M12
- A connection plate is required if the roller is to be positioned centrally with profile cross sections 45 x 90 or 90 x 90

## FLOOR MOUNTING PLATE 45

Part no.

21.1730/0



### TECHN. DATA / ITEMS SUPPLIED

- Aluminium, anodized E6/EV1
- PROFILE 45 x 19
- With caps, grey
- Without fastening kit
- Weight = 0.130 kg/piece

### APPLICATIONS

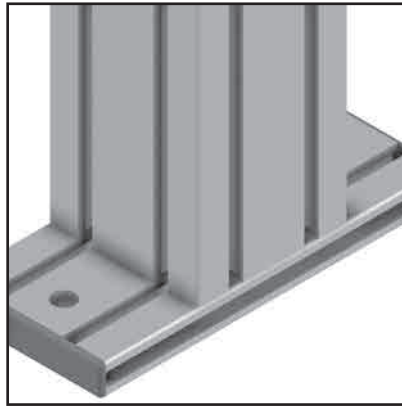
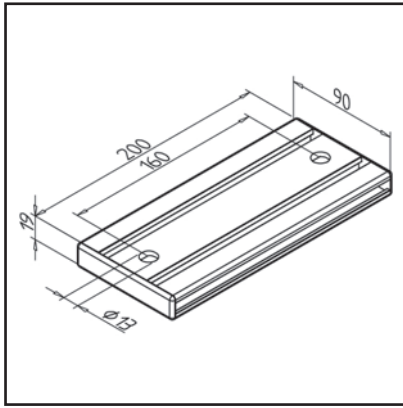
- Floor fixing of columns from profile 45 x 45

### ASSEMBLY

- Secure profile with MiniTec profile connector
- On floor side: 2 floor anchors **part no. 21.1082/0**

## FLOOR MOUNTING PLATE 90

Part no. 21.1733/0



### TECHN. DATA / ITEMS SUPPLIED

- Aluminium, anodized E6/EV1
- PROFILE 19 X 90
- With caps, grey
- Without fastening kit
- Weight = 0.470 kg/piece

### APPLICATIONS

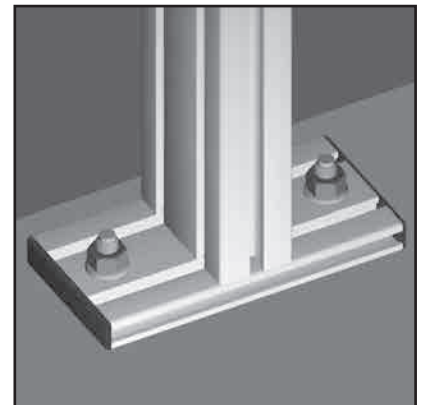
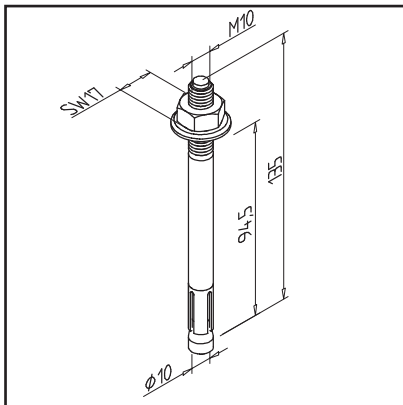
- Floor fixing of columns from profile 45 x 90 oder 90 x 90

### ASSEMBLY

- On profile side: 2 or 4 MiniTec power-lock fasteners
- On floor side: 2 floor anchors **part no. 21.1082/0**

## FLOOR ANCHOR 10

Part no. 21.1082/0



### TECHN. DATA / ITEMS SUPPLIED

- Steel, galvanized
- Ø 10
- With hexagonal nut and washer
- Weight = 0.084 kg/piece

### APPLICATIONS

- Secure and fasten constructions in connection with the floor mounting bracket, levelling plate or stationary plate

### ASSEMBLY

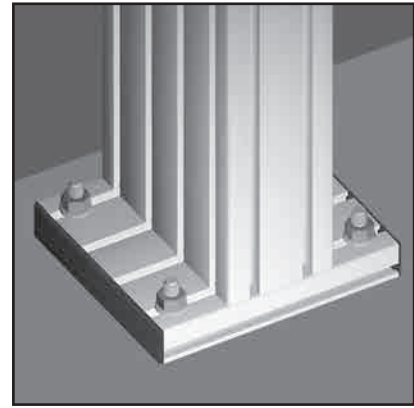
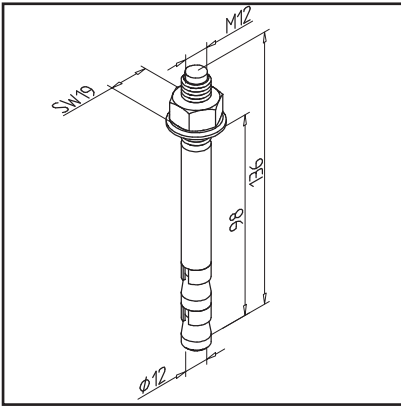
- Fit bore in the bottom
- Use floor anchor in connection with angle, levelling plate or floor mounting plate



## FLOOR ANCHOR 12

Part no.

21.1115/0



### TECHN. DATA / ITEMS SUPPLIED

- Steel, galvanized
- Ø 12
- With hexagonal nut and washer
- Weight = 0.116 kg/piece

### APPLICATIONS

- Secure and fasten constructions in connection with the floor mounting bracket, leveling plate or stationary plate

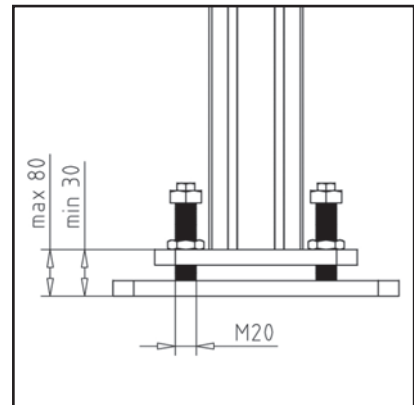
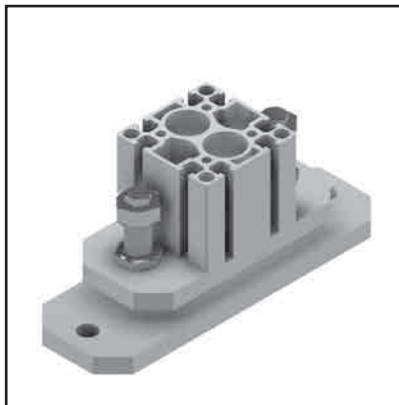
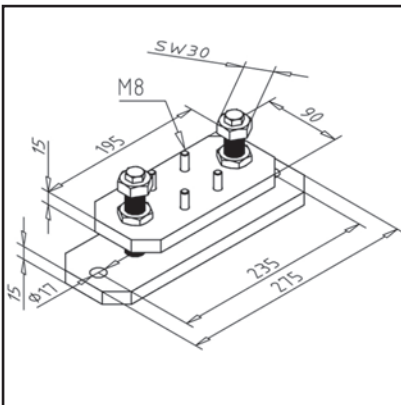
### ASSEMBLY

- Fit bore in the bottom
- Use floor anchor in connection with angle, levelling plate or floor mounting plate

## LEVELING PLATE 90 ST

Part no.

21.0976/0



### TECHN. DATA / ITEMS SUPPLIED

- Steel, galvanized
- With galvanized steel fastening material, for profile
- With leveling element
- Without dowels
- Weight = 5.146 kg/piece

### APPLICATIONS

- Precise alignment of heavy constructions with cross-section 90x90 as post profile

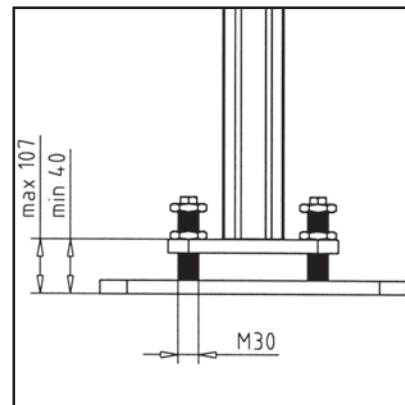
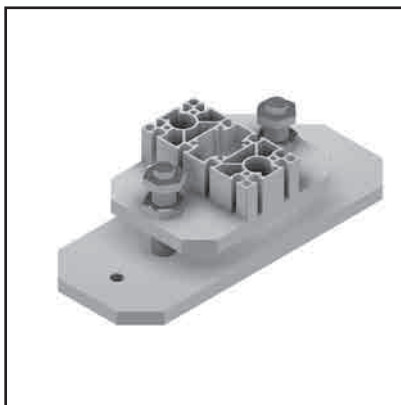
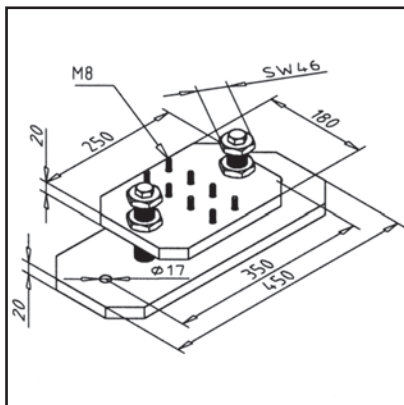
### ASSEMBLY

- Fasten footplate to the floor using a high performance anchor
- Fasten profile plate to the profile with supplied hardware
- Turn the M20 screw to set the height and secure it with the counter nut

## LEVELING PLATE 180 ST

Part no.

21.0977/0



### TECHN. DATA / ITEMS SUPPLIED

- Steel, galvanized
- With galvanized steel fastening material, for profile
- With leveling element
- Without dowels
- Weight = 20.347 kg/piece

### APPLICATIONS

- Precise alignment of heavy constructions with cross-section 90x180 as post profile

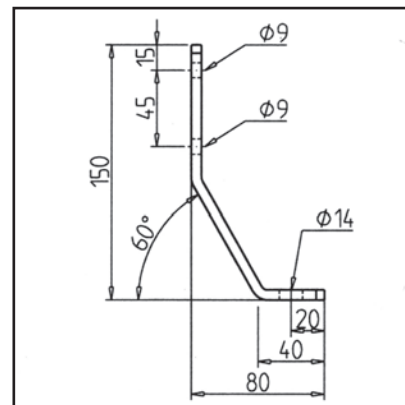
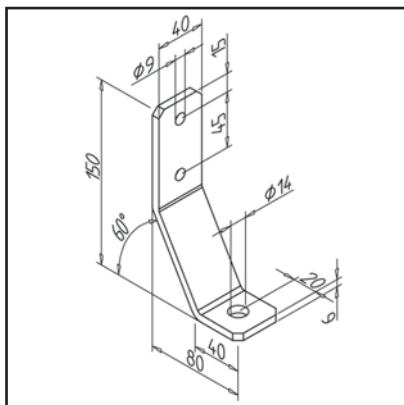
### ASSEMBLY

- Fasten footplate to the floor using a high performance anchor
- Fasten profile plate to the profile with supplied hardware
- Adjust height by turning screw M30 and secure with counter nut.

## FLOOR MOUNTING ANGLE

Part no.

21.1112/0



### TECHN. DATA / ITEMS SUPPLIED

- Steel, powder-coated, grey
- With fastening material steel, zinc plated
- Without dowels
- Weight = 0.389 kg/piece

### APPLICATIONS

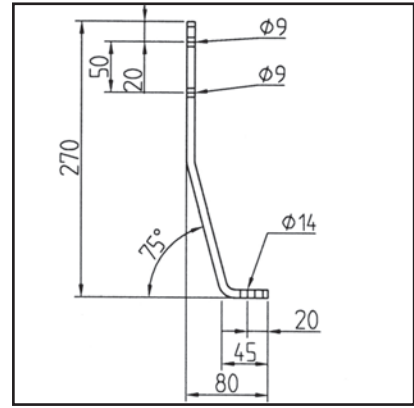
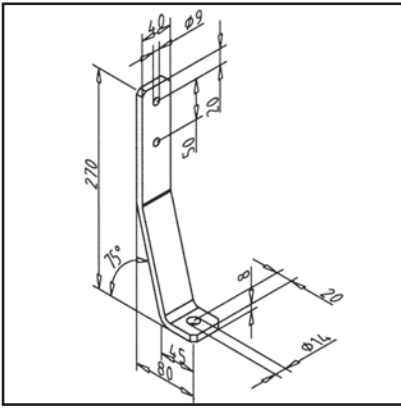
- Securing and fastening of constructions on floor or wall

### ASSEMBLY

- On profile side with cylinder screws M8 x 20, SW5
- Bottom side with high performance anchor 12 **part no. 21.1115/0**
- Also suitable for subsequent mounting

## FLOOR MOUNTING ANGLE

Part no. 21.0015/0



### TECHN. DATA / ITEMS SUPPLIED

- Steel, powder-coated, grey
- With fastening material steel, zinc plated
- Without dowels
- Weight = 0.786 kg/piece

### APPLICATIONS

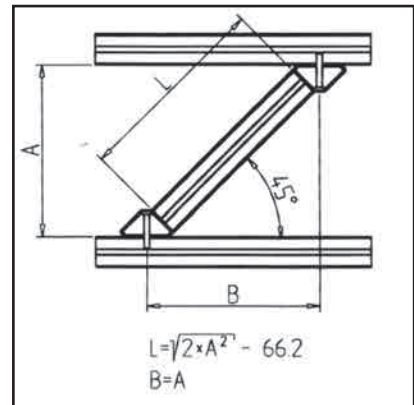
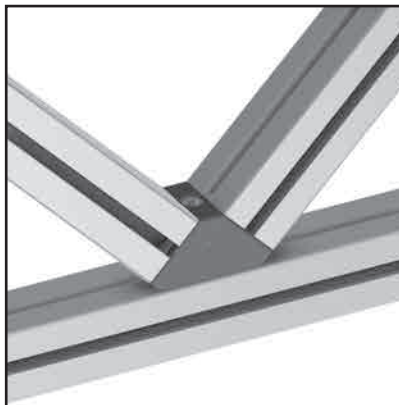
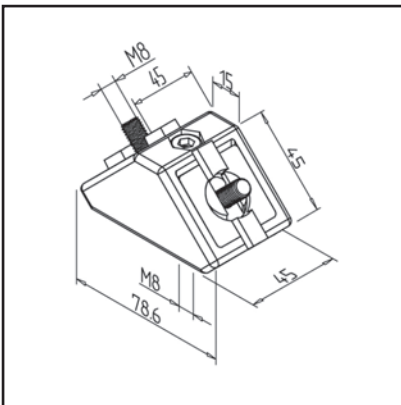
- For securing heavy constructions under dynamic load on floor or wall

### ASSEMBLY

- On the profile side with cylinder screw M8 x 20, SW 5
- Bottom side with high performance anchor 12 **part no. 21.1115/0**
- Also suitable for subsequent mounting

## STRUT SOCKET 45 GD

Part no. 21.1729/0



### TECHN. DATA / ITEMS SUPPLIED

- Aluminium, Pressure die-casting, powder-coated, grey
- With fastening material steel, zinc plated
- Use on vertical struts **part no. 21.1729/7** (square nut with position-fixing)
- Weight = 0.261 kg/piece

### APPLICATIONS

- Bracing in the composite structure

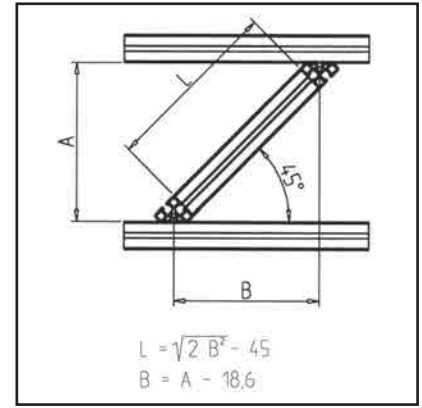
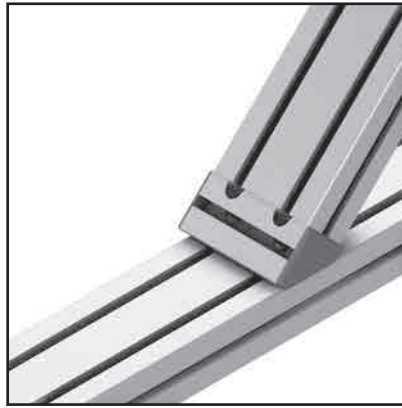
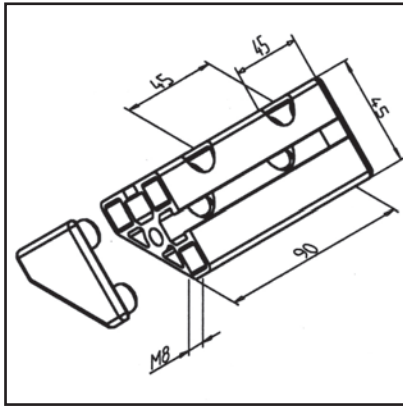
### ASSEMBLY

- Pre-assemble brace base and place in frame
- Screw the brace socket onto the frame

## STRUT SOCKET 45°/90

Part no.

21.1727/0



### TECHN. DATA / ITEMS SUPPLIED

- Aluminium, anodized E6/EV1
- From profile 45/45°
- With fastening material steel, zinc plated
- With caps, grey
- Use on vertical struts **part no. 21.1727/4** (square nut with position-fixing)
- Weight = 0.175 kg/piece

### APPLICATIONS

- Bracing in the composite structure

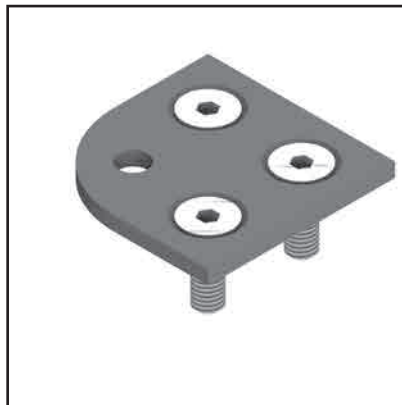
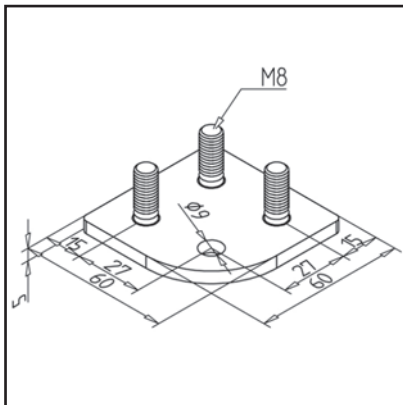
### ASSEMBLY

- Screw the brace socket onto the frame
- Insert supports by means of MiniTec power-lock fasteners and tighten
- Install caps

## CONNECTING PLATE 60 X 60 X 30

Part no.

21.0038/0



### TECHN. DATA / ITEMS SUPPLIED

- Steel, powder-coated, grey
- With fastening nut steel, galvanized
- Fastening kit
- Weight = 0.145 kg/piece

### APPLICATIONS

- Profile 60 x 60 x 30 **part no. 20.0982/0**
- For the construction of guide rollers
- Use of hinged foot M8

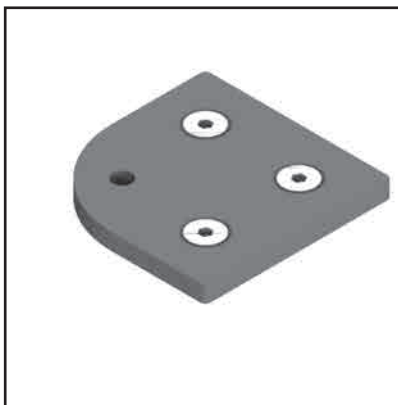
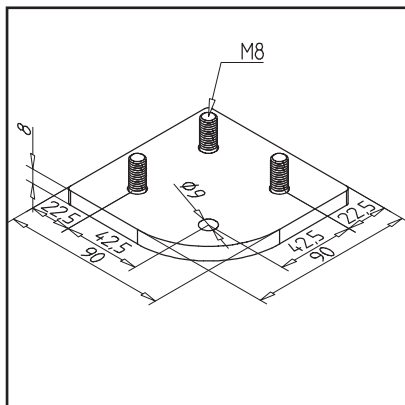
### ASSEMBLY

- Front attachment to profile with supplied hardware
- Fasten to profile with fastening material from the scope of delivery

## BASE AND TRANSPORT PLATE 90 X 90 X 45

Part no.

21.2505/0



### TECHN. DATA / ITEMS SUPPLIED

- Steel, powder-coated, grey
- With fastening material steel, zinc plated
- Weight = 0.488 kg/piece

### APPLICATIONS

- Use of hinged foot M8
- For the construction of guide rollers
- To profile 90 x 90 x 45 **part no. 20.0984/0**

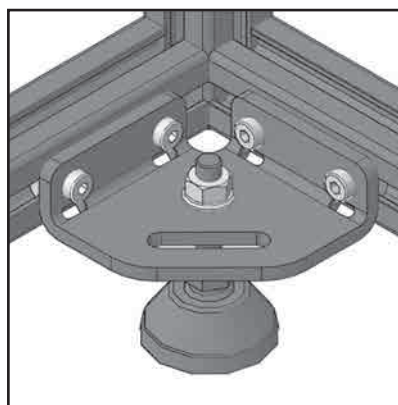
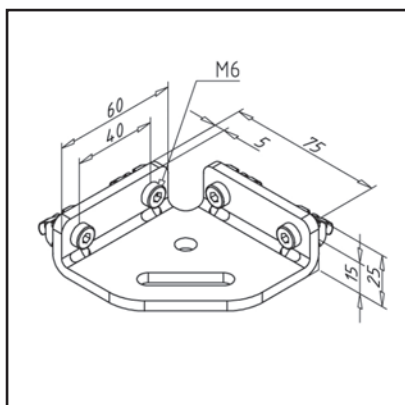
### ASSEMBLY

- Front attachment to profile with supplied hardware

## ADAPTER FLANGE 30

Part no.

21.2120/0



### TECHN. DATA / ITEMS SUPPLIED

- Steel, powder-coated, grey
- With fastening material steel, zinc plated
- Weight = 0.261 kg/piece

### APPLICATIONS

- Strengthening of profile constructions
- Fixation of internal feet or rollers
- Floor mounting and leveling constructions

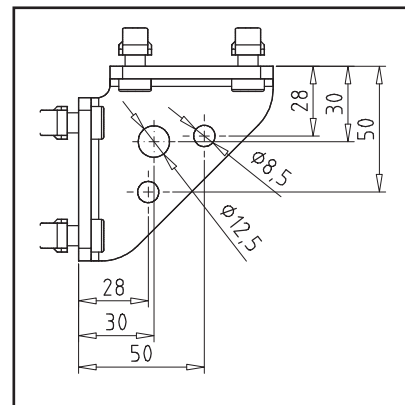
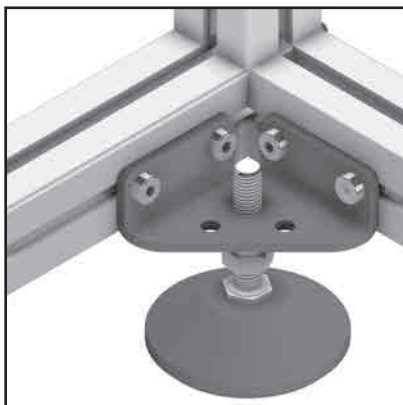
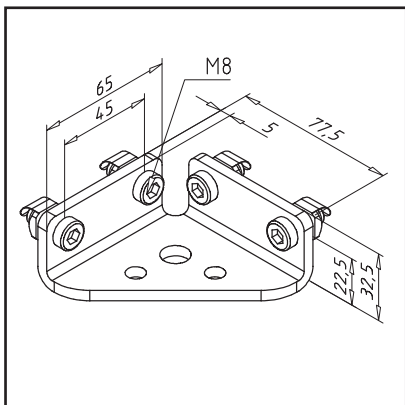
### ASSEMBLY

- Mount onto frame with fixation material from delivery scope

### ADAPTER FLANGE 45

Part no.

21.2300/0



#### TECHN. DATA / ITEMS SUPPLIED

- Steel, powder-coated, grey
- With fastening material steel, zinc plated
- Weight = 0.311 kg/piece

#### APPLICATIONS

- Strengthening of profile constructions
- Fixation of internal feet or rollers
- Floor mounting and leveling constructions

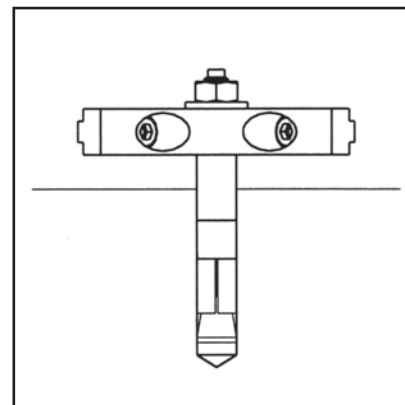
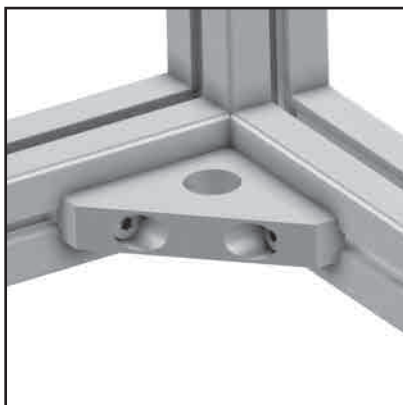
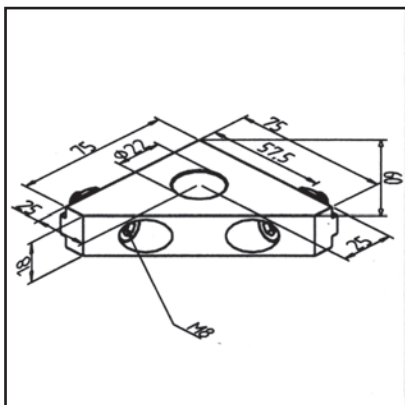
#### ASSEMBLY

- Mount onto frame with fixation material from delivery scope

### BEAM 90

Part no.

21.1783/0



#### TECHN. DATA / ITEMS SUPPLIED

- Aluminium, anodized E6/EV1
- With fastening material steel, zinc plated
- Use on vertical struts **part no. 21.1783/7**
- Weight = 0.170 kg/piece

#### APPLICATIONS

- Strengthening of constructions
- Fixation of internal feet or rollers
- Floor mounting and leveling constructions

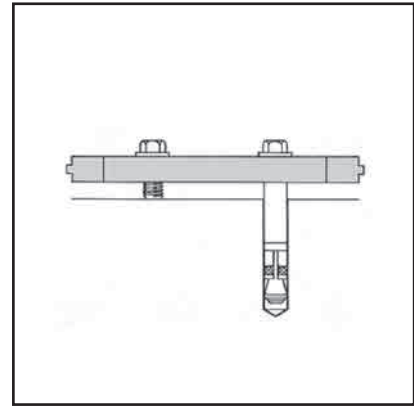
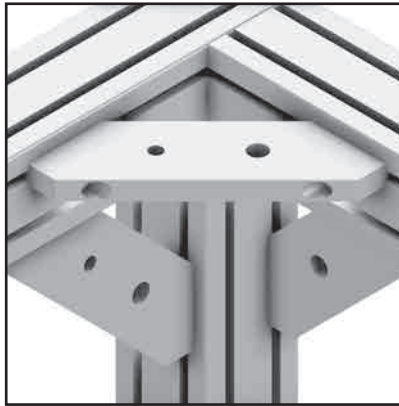
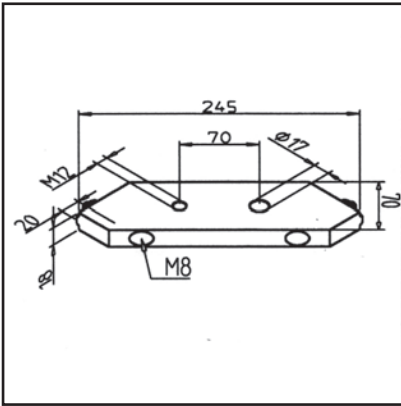
#### ASSEMBLY

- On profile side, with fastening kit
- On floor side, fasten with floor anchor

## BEAM 180

Part no.

21.1784/0



### TECHN. DATA / ITEMS SUPPLIED

- Aluminium, anodized E6/EV1
- With fastening material steel, zinc plated
- Use on vertical struts **part no. 21.1784/7**
- Weight = 0.690 kg/piece

### APPLICATIONS

- Strengthening of heavy constructions
- Fixation of internal feet or rollers
- Floor mounting and leveling heavy constructions

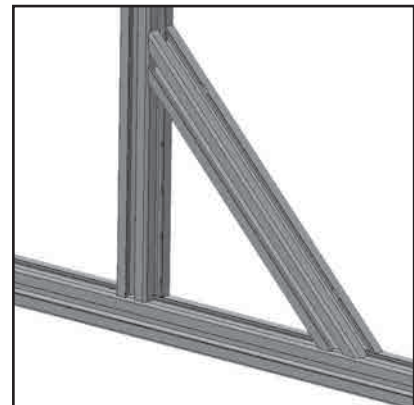
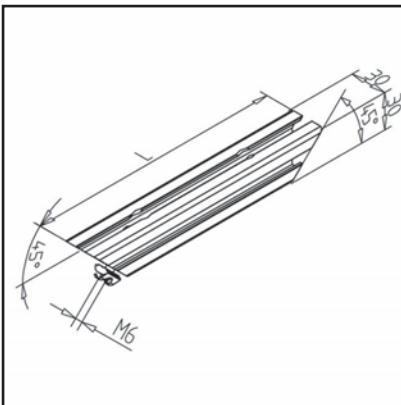
### ASSEMBLY

- On profile side, with fastening kit
- On floor side, fasten with floor anchor and levelling screw M 12

## STRENGTHENING ELEMENT 30

Part no.

21.2110/0



### TECHN. DATA / ITEMS SUPPLIED

- Aluminium, anodized E6/EV1
- Length (l) : 360 mm
- Profile 30 x 30, ready for use
- Both ends cut at 45° with counter-bores for fastening kit
- With fastening material steel, zinc plated
- **Other lengths and designs under part no. 21.1761/5 on request**
- **Please specify dimension L**
- Weight = 0.212 kg/piece

### APPLICATIONS

- Reinforcement of profile constructions in "timbered structure" principle

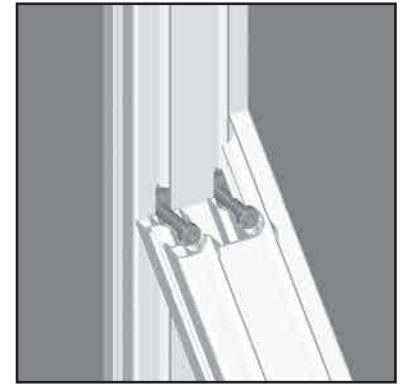
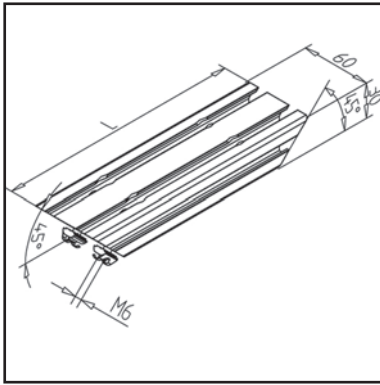
### ASSEMBLY

- Screw on the profile groove of the frame construction with supplied hardware

**STRENGTHENING ELEMENT 30 X 60**

Part no.

21.2210/0

**TECHN. DATA / ITEMS SUPPLIED**

- Aluminium, anodized E6/EV1
- Length (l) : 360 mm
- Profile 30 x 60, ready for use
- Both ends cut at 45° with counter-bores for fastening kit
- With fastening material steel, zinc plated
- **Other lengths and designs under part no. 21.2210/5 on request**
- **Please specify dimension L**
- Weight = 0.338 kg/piece

**APPLICATIONS**

- Reinforcement of profile constructions in "timbered structure" principle

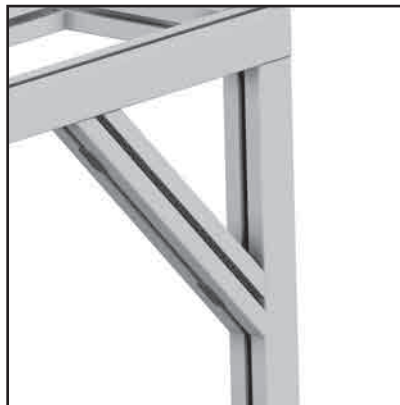
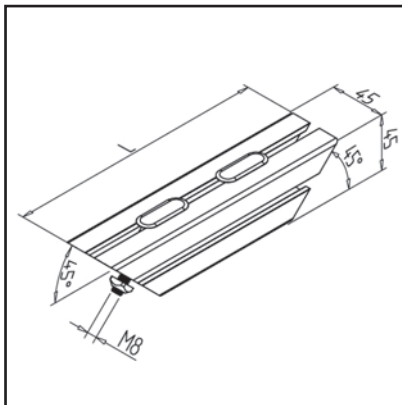
**ASSEMBLY**

- Screw on the profile groove of the frame construction with supplied hardware

**STRENGTHENING ELEMENT 45**

Part no.

21.1761/0

**TECHN. DATA / ITEMS SUPPLIED**

- Aluminium, anodized E6/EV1
- Length (l) : 360 mm
- Profile 45 x 45, ready for use
- Both ends cut at 45° with counter-bores for fastening kit
- With fastening material steel, zinc plated
- Use on vertical struts **part no. 21.1761/7** (square nut with position-fixing)
- **Other lengths and designs under part no. 21.1761/5 on request**
- **Please specify dimension L**
- Weight = 0.870 kg/piece

**APPLICATIONS**

- Reinforcement of profile constructions in "timbered structure" principle

**ASSEMBLY**

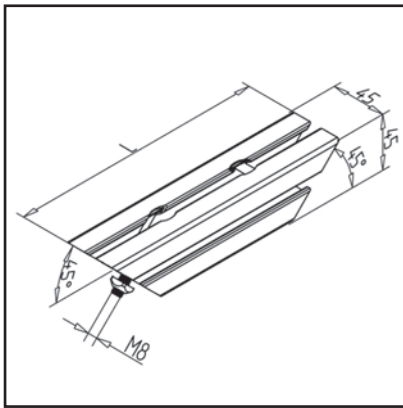
- Screw on the profile groove of the frame construction with supplied hardware



## STRENGTHENING ELEMENT 45 VA

Part no.

21.1706/0



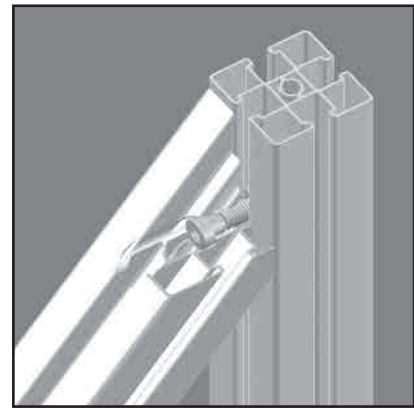
### TECHN. DATA / ITEMS SUPPLIED

- Stainless steel
- Length (l) : 360 mm
- Profile 45x45 VA, ready for installation
- Both ends cut at 45° with counter-bores for fastening kit
- Fastening kit
- **Other lengths on request**
- **Please specify dimension L**
- Weight = 0.890 kg/piece



### APPLICATIONS

- Reinforcement of profile constructions in "timbered structure" principle



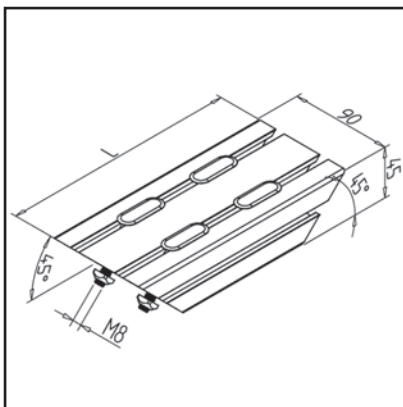
### ASSEMBLY

- Screw on the profile groove of the frame construction with supplied hardware

## STRENGTHENING ELEMENT 90

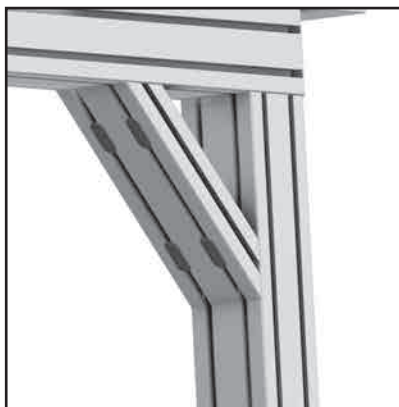
Part no.

21.1762/0



### TECHN. DATA / ITEMS SUPPLIED

- Aluminium, anodized E6/EV1
- Length (l) : 360 mm
- Profile 45 x 90, ready for use
- Both ends cut at 45° with 4 counter-bores for fastening kit
- With fastening material steel, zinc plated
- **Other lengths and designs under part no. 21.1762/5 on request**
- **Please specify dimension L**
- Weight = 1.416 kg/piece



### APPLICATIONS

- Reinforcement of profile constructions in "timbered structure" principle



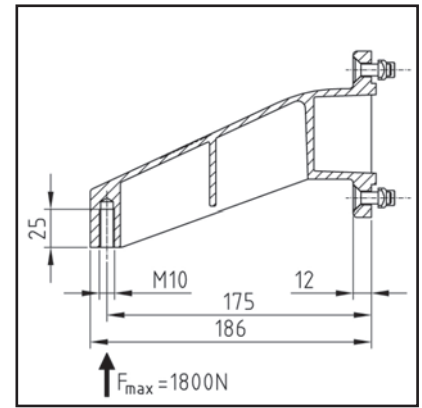
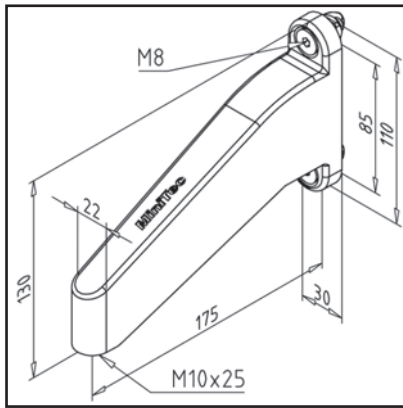
### ASSEMBLY

- Screw on the profile groove of the frame construction with supplied hardware

## CANTILEVER FOOT 175

Part no.

21.2191/0



### TECHN. DATA / ITEMS SUPPLIED

- Aluminium, Pressure die-casting, powder-coated, grey
- With fastening material steel, zinc plated
- Weight = 0.369 kg/piece

### APPLICATIONS

- Placing frames and attaching stands

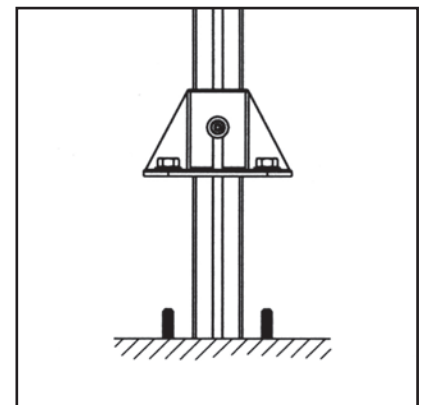
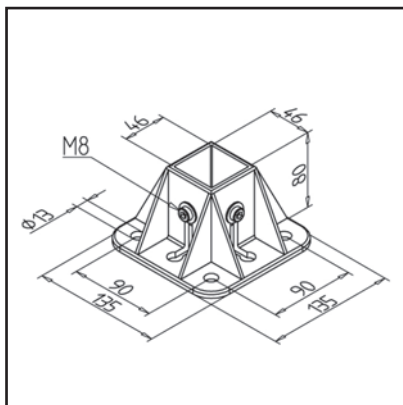
### ASSEMBLY

- Attachment to profile strut with fastening material
- Fastening of casters, articulated feet, and screws M10

## SUPPORTING FOOT 45 GD

Part no.

21.1731/0



### TECHN. DATA / ITEMS SUPPLIED

- Aluminium, Pressure die-casting, powder-coated, grey
- With galvanized steel fastening material, for profile
- Package size of 10 pieces **part no. 21.1731/010**
- Weight = 0.587 kg/piece

### APPLICATIONS

- Suitable for profiles up to dimension 45 x 45
- Floor fastening of protective fields, sign-boards, racks
- As connection element for wall attachment; can be used both-sided

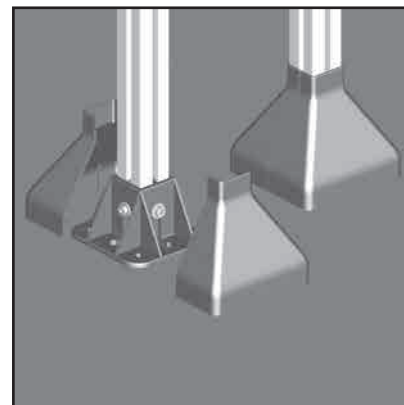
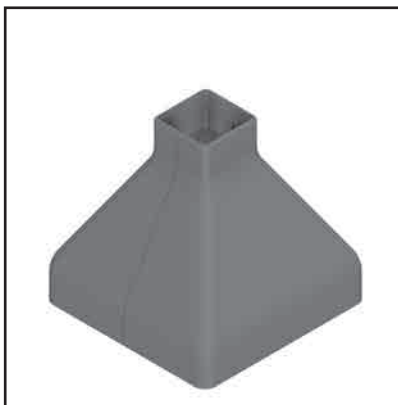
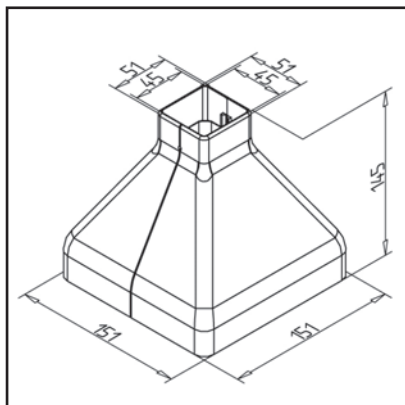
### ASSEMBLY

- Insert profile into foot
- Insert the square nut with spring steel sheet into the profile groove; preassemble the screws
- Fix the floor stand to the floor or wall, using the high-performance anchors or the universal pin with a hexagonal screw
- Tighten fastening screws

## COVER SUPPORTING FOOT 45

Part no.

22.1164/0



### TECHN. DATA / ITEMS SUPPLIED

- ABS, grey
- Weight = 0.166 kg/pair

### APPLICATIONS

- To cover the stand foot 45 GD and 45 GD open

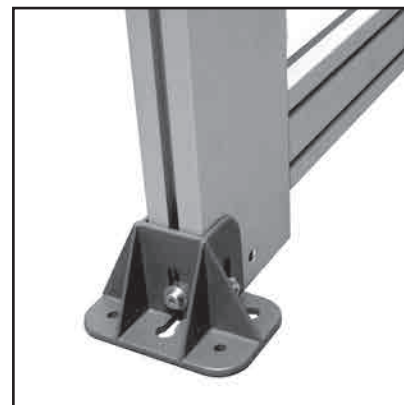
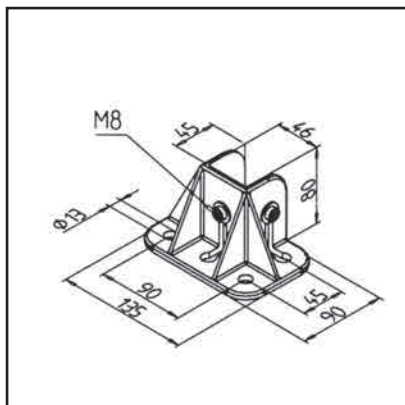
### ASSEMBLY

- Attach to profiles/stand foot

## SUPPORTING FOOT 45 GD OPEN

Part no.

21.1738/0



### TECHN. DATA / ITEMS SUPPLIED

- Aluminium, Pressure die-casting, powder-coated, grey
- With galvanized steel fastening material, for profile
- Package size of 10 pieces **part no.. 21.1738/010**
- Weight = 0.356 kg/piece

### APPLICATIONS

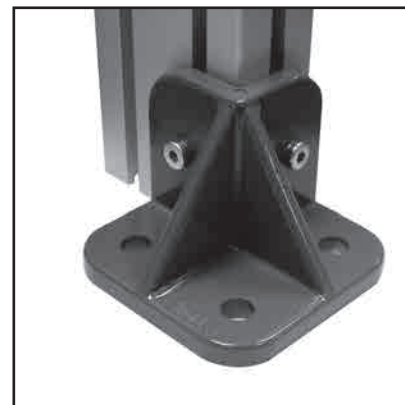
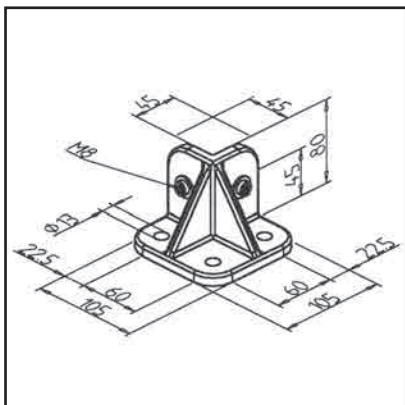
- Floor fastening of protective fields, signboards, racks
- As connection element for wall attachment; can be used both-sided

### ASSEMBLY

- Insert profile into foot
- Insert the square nut with spring steel sheet into the profile groove; preassemble the screws
- Fix the floor stand to the floor or wall, using the high-performance anchors or the universal pin with a hexagonal screw
- Tighten fastening screws

### SUPPORTING FOOT 45 GD S

Part no. 21.1723/0



#### TECHN. DATA / ITEMS SUPPLIED

- Aluminium, Pressure die-casting, powder-coated, grey
- With galvanized steel fastening material, for profile
- Package size of 10 pieces **part no.. 21.1723/010**
- Weight = 0.499 kg/piece

#### APPLICATIONS

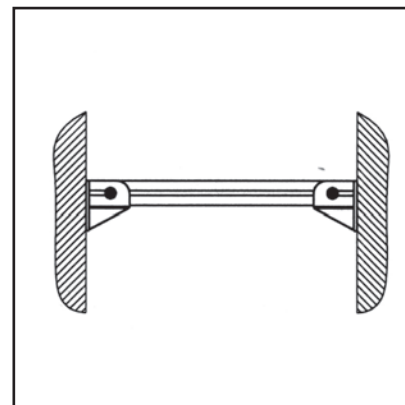
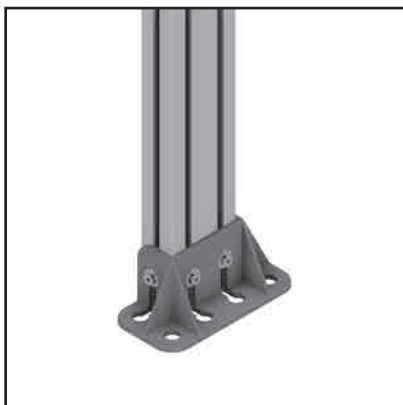
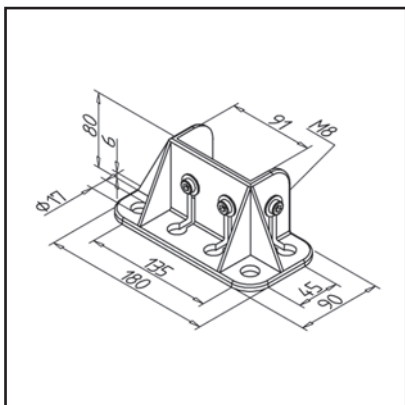
- Floor fastening of protective fields, sign-boards, racks
- As connection element for wall attachment; can be used both-sided
- For all profiles

#### ASSEMBLY

- Fix the floor stand to the floor or wall, using the high-performance anchors or the universal pin with a hexagonal screw
- Tighten fastening screws

### SUPPORTING FOOT 90 GD

Part no. 21.1737/0



#### TECHN. DATA / ITEMS SUPPLIED

- Aluminium, Pressure die-casting, powder-coated, grey
- With galvanized steel fastening material, for profile
- Package size of 10 pieces **part no.. 21.1737/010**
- Weight = 0.465 kg/piece

#### APPLICATIONS

- Fitting for profiles with maximum dimension of 45 x 90, 90 x 90 and 90 x 180
- Floor fastening of protective fields, sign-boards, racks
- As connection element for wall attachment; can be used both-sided

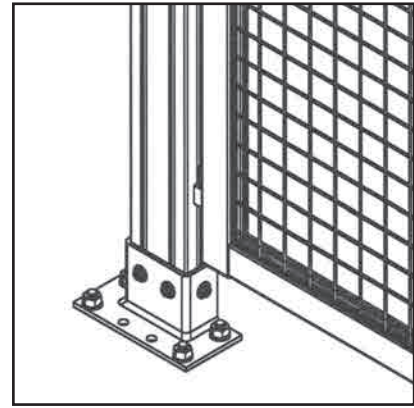
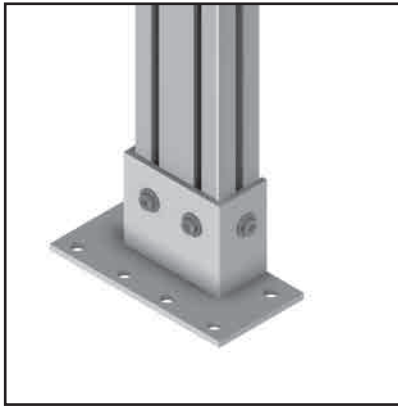
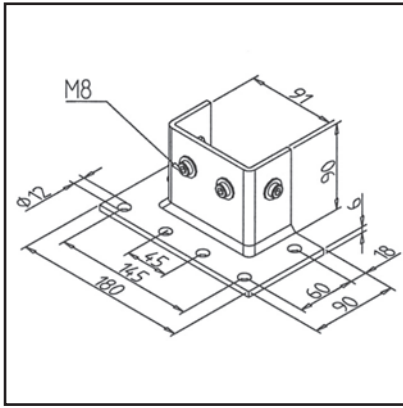
#### ASSEMBLY

- Insert profile into foot
- Insert the square nut with spring steel sheet into the profile groove; preassemble the screws
- Fix the floor stand to the floor or wall, using the high-performance anchors or the universal pin with a hexagonal screw
- Tighten fastening screws

## SUPPORTING FOOT 90 S

Part no.

21.1707/0



### TECHN. DATA / ITEMS SUPPLIED

- Steel, galvanized
- With galvanized steel fastening material, for profile
- Weight = 1.438 kg/piece

### APPLICATIONS

- Fitting for profiles with maximum dimension of 45 x 90, 90 x 90 and 90 x 180
- Floor fastening of protective fields, signboards, racks
- As connection element for wall attachment; can be used both-sided

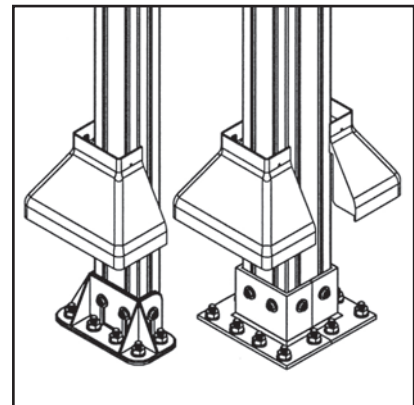
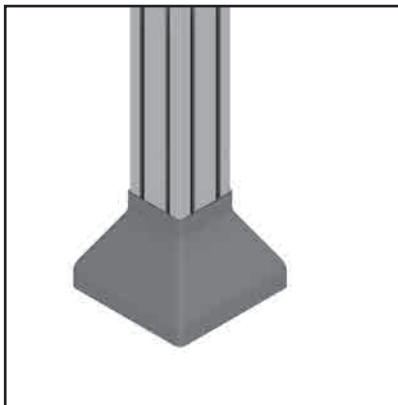
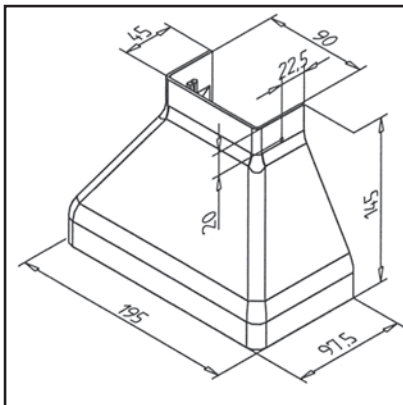
### ASSEMBLY

- Insert the square nut with spring steel sheet into the profile groove; preassemble the screws
- Fix the floor stand to the floor or wall, using the high-performance anchors or the universal pin with a hexagonal screw
- Tighten fastening screws

## COVER SUPPORTING FOOT 90

Part no.

22.1025/1



### TECHN. DATA / ITEMS SUPPLIED

- ABS, grey
- Weight = 0.131 kg/piece

### APPLICATIONS

- Suitable for foot 90 GD and 90 S
- Less dust and dirt deposit on the foot
- Easy to clean

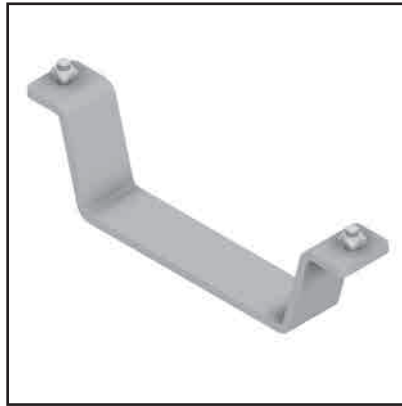
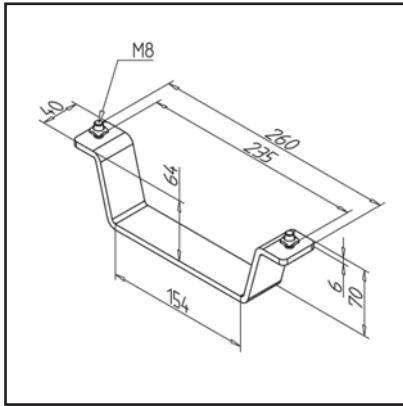
### ASSEMBLY

- Expand the cover manually and clip in the slots of the profile
- Push the cover downwards
- Fasten on the side with tapping screw 3.4 x 16, then drill hole Ø 2.5 mm at the marked location

**TRANSPORT AID**

Part no.

26.1101/0

**TECHN. DATA / ITEMS SUPPLIED**

- Steel, galvanized
- With fastening material steel, zinc plated
- Weight = 0.708 kg/piece

**APPLICATIONS**

- Securing of constructions when transported by forklift truck

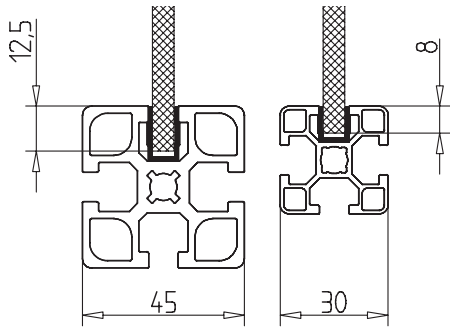
**ASSEMBLY**

- Mount under construction with fastening material from the scope of supply to the profile groove
- Use always in pairs

INSTALLATION OF SURFACE ELEMENTS

INSTALLING SURFACE ELEMENTS IN THE PROFILE GROOVE

Basically, a distinction must be made between installation in the profile groove and subsequent fastening of surface elements. For installation in the profile groove, the installation procedure must be planned accordingly. It is recommended to create complete protective fields which are inserted into a construction. This mounting method has particular advantages for large surfaces, when processing woven wire mesh and sealed constructions. The subsequent installation of panel elements is usually easier and the risk of damage is lower.



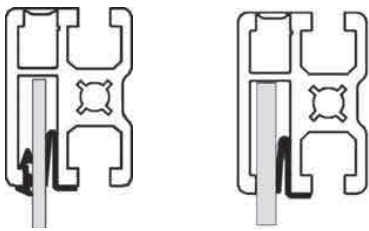
Clamp profile

Surface elements of 6 mm thickness can be combined with a clamp profile.

Install directly in the profile groove.

Allowance for surface elements in x and y direction for mounting in profile groove:

- 30er groove system +16 mm
- 45er groove system +25 mm



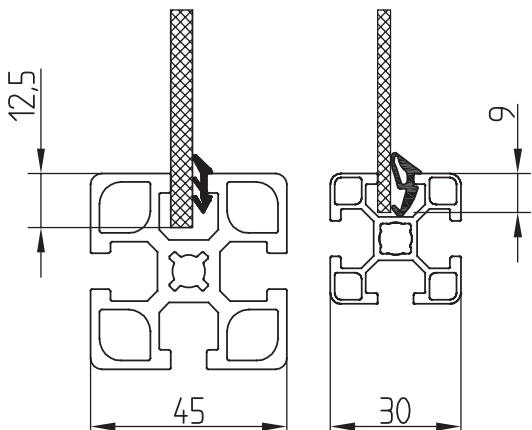
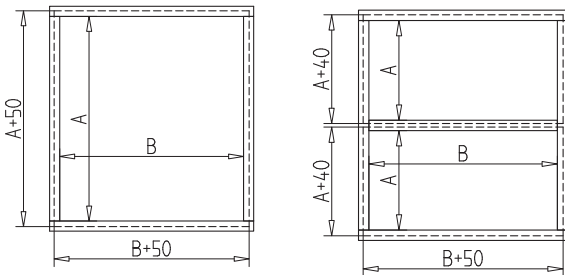
Clamping profile 45 x 32

The clamping profile 45 x 32 contains the properties of the system profiles and a safe, simple fastening of surface elements integrated.

This option is particularly recommended for large protective fields and wave grid constructions. The protective fields are prefabricated and can be easily installed with protective field suspensions in the frame of the construction. Quick removal of such protective fields is also possible.

Allowance for surface elements in x and y direction for mounting in profile groove:

- 1) Simple frame: +50 mm
- 2) Frame with one or more intermediate struts: +40 mm



Plug seals

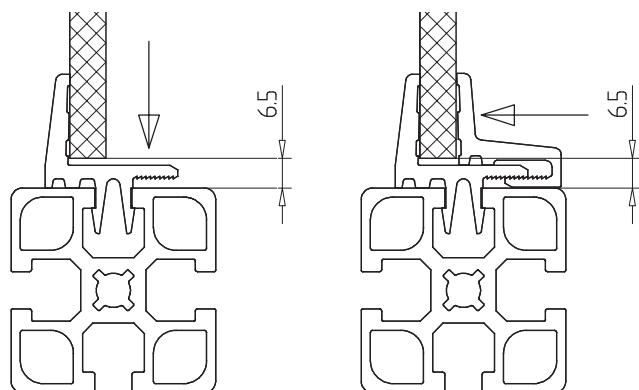
Panes of glass, PVC, composite material, acrylic or similar of 2 - 6 mm thickness can be filled with the plug-in seals 2, 4, 5 and 6 are secured and sealed in the profile. The plug-in seal is subsequently pressed into the gap between the disc and the profile groove flank. When using plug-in seal 4 on both sides, materials < 2 mm clamp.

Allowance for surface elements in x and y direction for mounting in profile groove:

- 30 groove system +18 mm with plug-in seal 30
- 45 groove system +25 mm with plug-in seal 2/4/5/6

## INSTALLATION OF SURFACE ELEMENTS

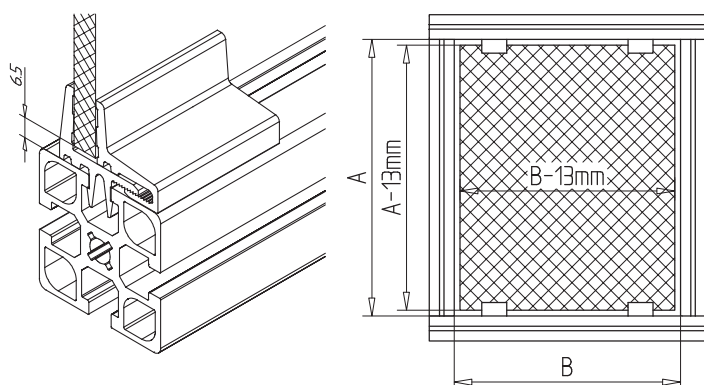
## INSTALLING SURFACE ELEMENTS IN THE PROFILE GROOVE

**Clamping profile PVC**

Optically appealing, simple and secure attachment of surface elements of all kinds, without circumferential gap between the construction profile and surface element.

Suitable for surface elements up to 8 mm thick, also for wavy grid.

Calculation of panel size: Clear opening - 13 mm

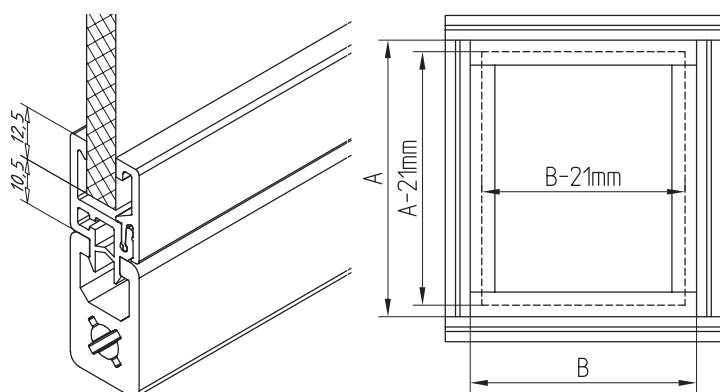
**Panel holder**

Extremely simple and cost-effective attachment of surface elements. The panel holders consist of 2 halves.

Suitable for all surface elements up to 8 mm thickness. For corrugated gratings, please use the PVC clamping profile at this point.

Calculation of panel size:

Clear opening - 13 mm (6.5 mm air circulating)

**Window Edging Profile**

Simple and economical installation of surface elements.

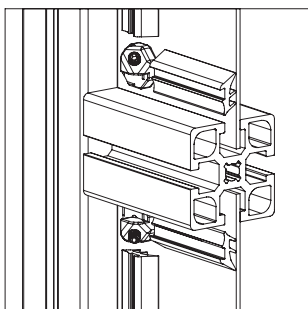
Also suitable for retrofitting into existing frames. No mitre cut required. Suitable for surface elements up to 8 mm thick. Dense attachment of panels < 8 mm with the plug-in gaskets.

For the subsequent installation of wave mesh, please use the PVC clamping profile.



INSTALLATION OF SURFACE ELEMENTS

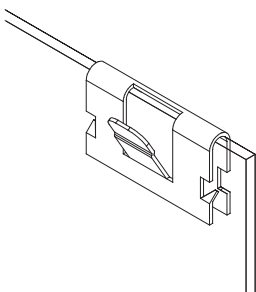
INSTALLING SURFACE ELEMENTS IN THE PROFILE GROOVE



Earthing / conductive connection

For conductive connection of aluminum or steel sheets with the profile frame in the thickness of 1.5mm - 2.5mm please use our earthing block **part no. 22.1163/0**.

One surface block is sufficient per surface element. In connection with our insert seal 2, the sheet metal is fastened in the profile frame.



Earthing clamp **part no.: E9.0141/0**

For grounding sheet metal and thin-walled components with wall thickness of 0.7 - 2 mm

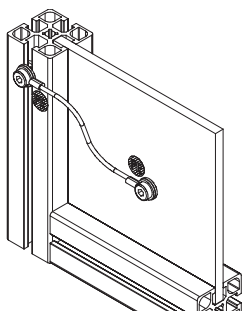
Especially suitable for:

Cable duct AL **part no. 20.1051/0**

Cable duct 45 AL **part no. 20.1071/0**

Cable duct 90 AL **part no. 20.1056/0**

- Attach to sheet metal edge
- Safe support and conductive connection is provided by claws
- For the connection of the earthing cable with 6 mm flat plug



Earthing cable for ESD areas

Wire line green-yellow 4mm<sup>2</sup> Length: ca. 200 mm

Attach to profile groove with fixing material from scope of delivery.

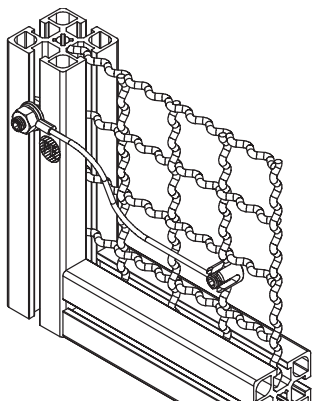
With standard accessory for grounding of surface elements with 8 mm

**part no. 32.1013/0**

Attachment with eyelet on both sides for M8

**part no. 32.1016/0**

Attachment with eyelet on one side for M8, other side for M6



Earthing clamp wave grid **part no. E9.0143/0**

Wire line green-yellow 4mm<sup>2</sup> Length: ca. 200 mm

Attach to profile groove with fixing material from scope of delivery.

Attach grounding clip to wave grid, fasten and connect with eyelet.

## INSTALLATION OF SURFACE ELEMENTS

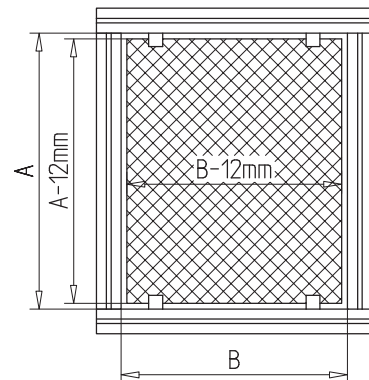
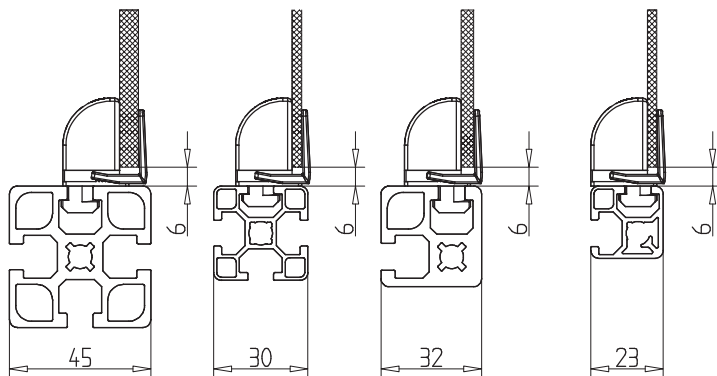
## INSTALLING SURFACE ELEMENTS IN THE PROFILE GROOVE

**Panel clamp**

Extremely simple and cost-effective fastening of panel elements. The terminal blocks consist of a base and locking clip. Suitable for all surface elements from 2 to 6 mm thick, except wavy grid.

Calculation of panel size:

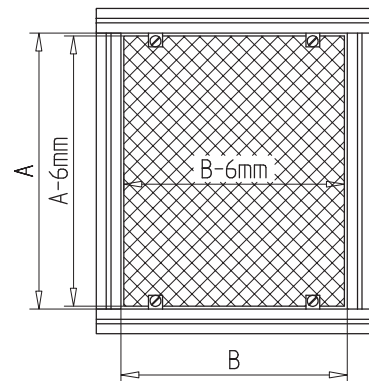
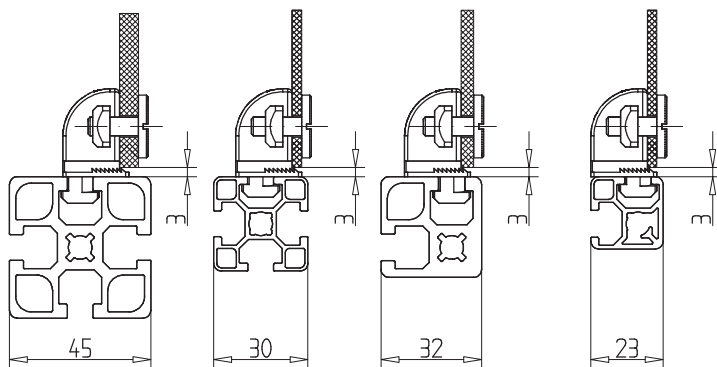
Clear opening A / B - 12mm (6mm air circulating)

**Screw block**

Suitable for panel material up to 6 mm thick, except for wave grid.

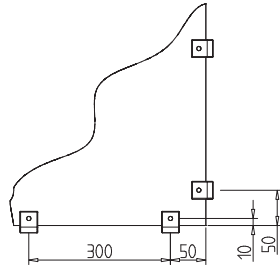
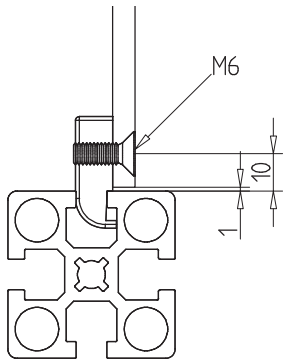
Calculation of panel size:

Clear opening A / B - 6mm (3mm air circulating)



INSTALLATION OF SURFACE ELEMENTS

INSTALLING SURFACE ELEMENTS IN THE PROFILE GROOVE

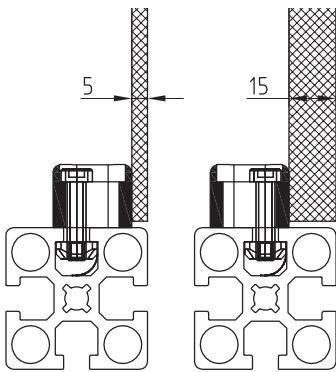


**Thread Socket**

Safe and easy attachment of surface elements of all kinds except wave grid. The threaded sockets are swiveled into the profile groove at intervals of approx. 300 mm. Select screw length and screw shape according to material thickness and type of surface element.

Calculation of panel size:

Clear opening -2 mm (1 mm air circulating)



**Multiblock**

The multiblocks are placed in the clear opening of the frame construction at a distance of approx. 300 mm with M6 cylinder screws and sliding nuts.

Suitable for acrylic, sheet metal, aluminum wave grid.

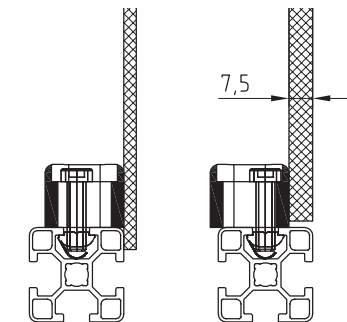
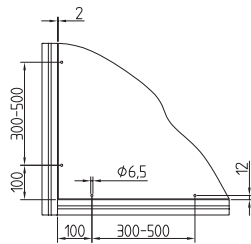
With the Multiblock 45, material of 5 to 15 mm thickness can be fastened flush.

With the Multiblock 30, material up to 7.5 mm thick can be fastened flush. Select screw length and screw shape according to material thickness and type of surface element.

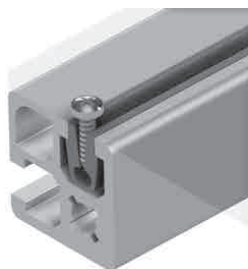
The hole in the surface element for the fixing screws is  $\varnothing 6.5$  mm and with 10 mm margin.

Calculation of panel size:

Clear opening -4 mm (~ 2 mm air circulating)



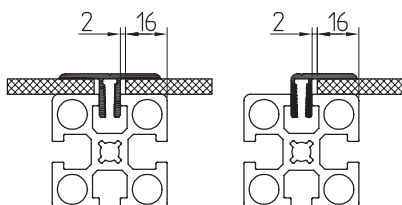
Furthermore, it is possible to mount surface elements on the Multiblock 30, so there is no air gap.



**Screw Bar**

Material: PVC

Fixing of surface elements or components at any place with sheet metal- or chipboard screws.



**Panel Clamping Profile**

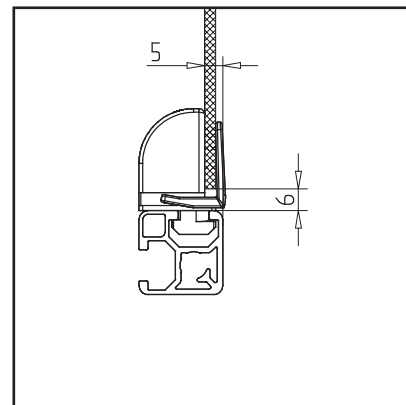
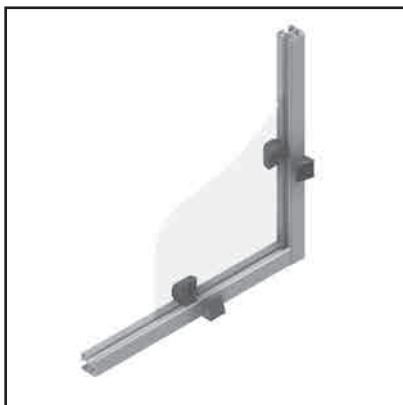
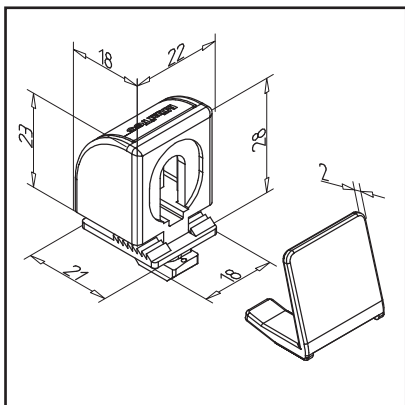
Suitable for surface elements from 2 to 10 mm thick. Insert boring  $\varnothing 5.5$  mm for M5 threaded pin with a spacing of ~ 250 mm into the profile groove and clamp with M5 x 16 threaded pin.

For panels, woven wire mesh and pressed wire mesh

### CLAMPING BLOCK 23

Part no.

22.1235/0



#### TECHN. DATA / ITEMS SUPPLIED

- ABS, Injection Mould, grey
- Weight = 0.008 kg/piece

#### APPLICATIONS

- Suitable for all profiles of series 30
- Retrofitting surface elements 2 mm to 6 mm thickness
- Circulating air gap 6 mm

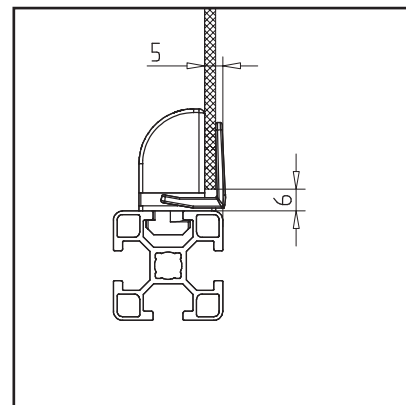
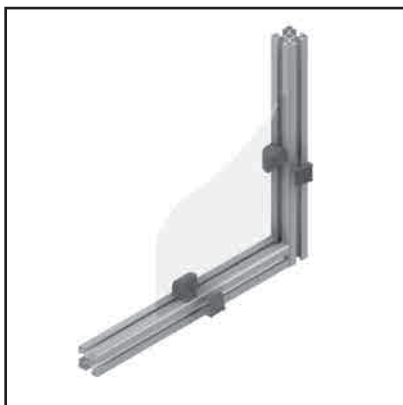
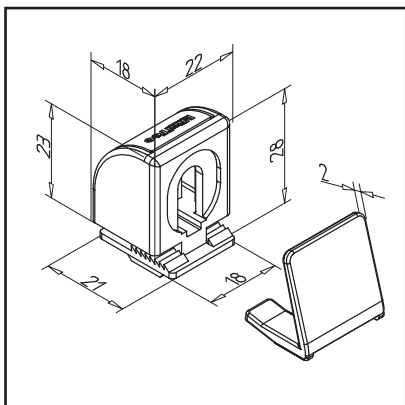
#### ASSEMBLY

- Insert socket into profile groove
- Insert surface elements
- Press on clip
- **Dismounting:** Lift snap-in clip slightly and pull it out

### CLAMPING BLOCK 30

Part no.

22.1230/0



#### TECHN. DATA / ITEMS SUPPLIED

- ABS, Injection Mould, grey
- Weight = 0.008 kg/piece

#### APPLICATIONS

- Suitable for all profiles of series 30
- Retrofitting surface elements 2 mm to 6 mm thickness
- Circulating air gap 6 mm

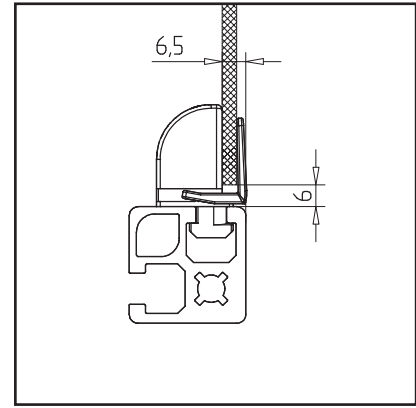
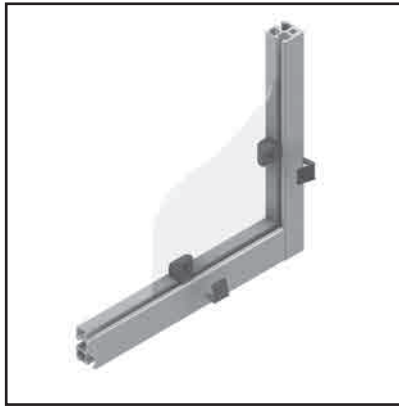
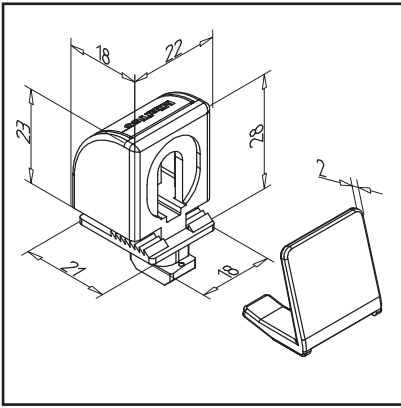
#### ASSEMBLY

- Insert socket into profile groove
- Insert surface elements
- Press on clip
- **Dismounting:** Lift snap-in clip slightly and pull it out

## CLAMPING BLOCK 32

Part no.

22.1245/0



### TECHN. DATA / ITEMS SUPPLIED

- ABS, Injection Mould, grey
- Weight = 0.008 kg/piece

### APPLICATIONS

- Suitable for profile series 45
- Retrofitting surface elements 2 mm to 6 mm thickness
- Circulating air gap 6 mm

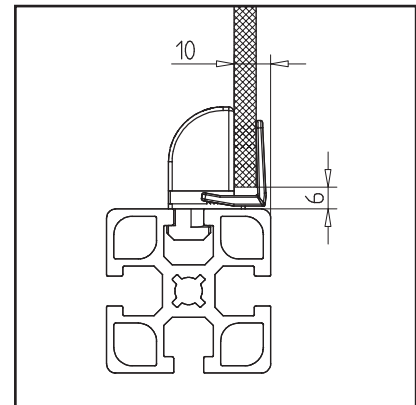
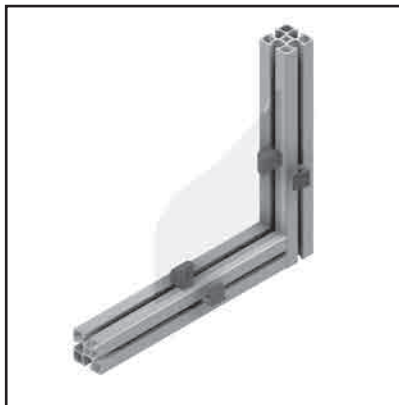
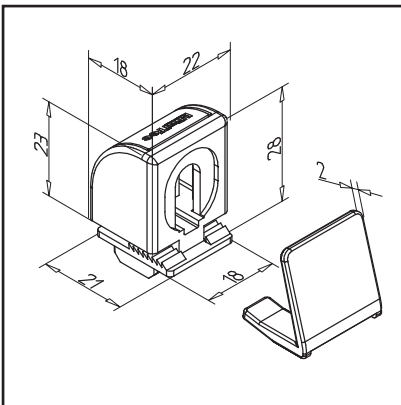
### ASSEMBLY

- Insert socket into profile groove
- Insert surface elements
- Press on clip
- **Dismounting:** Lift snap-in clip slightly and pull it out

## CLAMPING BLOCK 45

Part no.

22.1240/0



### TECHN. DATA / ITEMS SUPPLIED

- ABS, Injection Mould, grey
- Weight = 0.008 kg/piece

### APPLICATIONS

- Suitable for profile series 45
- Retrofitting surface elements 2 mm to 6 mm thickness
- Circulating air gap 6 mm

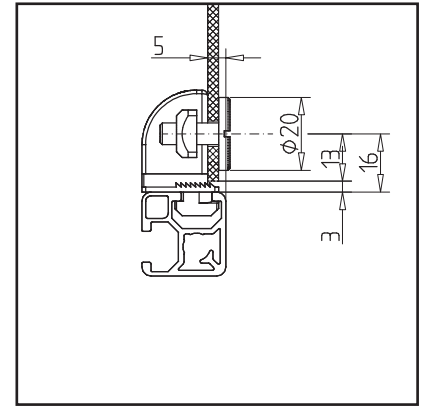
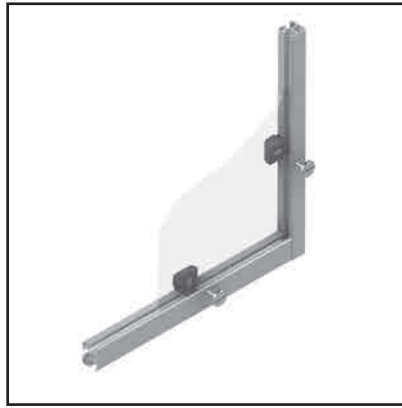
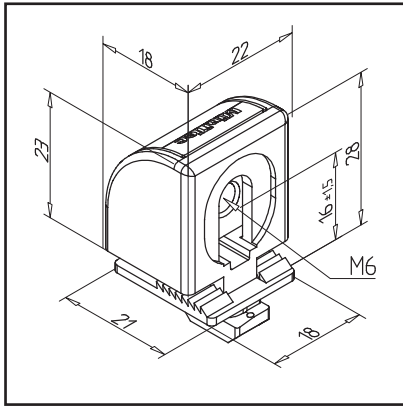
### ASSEMBLY

- Insert socket into profile groove
- Insert surface elements
- Press on clip
- **Dismounting:** Lift snap-in clip slightly and pull it out

**SCREW BLOCK 23**

Part no.

22.1255/0

**TECHN. DATA / ITEMS SUPPLIED**

- ABS, Injection Mould, grey
- Nut M6, steel, zinc-plated
- Also available with thread dimensions M4/M5/M8
- Weight = 0.011 kg/piece

**APPLICATIONS**

- Suitable for all profiles of series 30
- Retrofitting surface elements 2 mm to 6 mm thickness
- Circulating air gap 7 mm

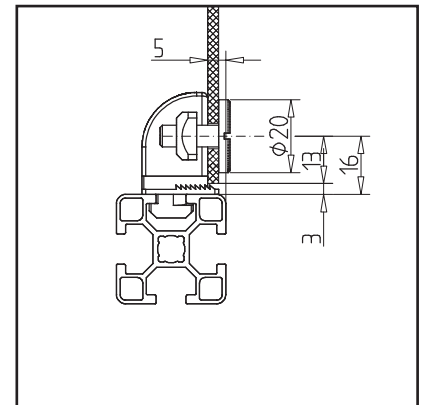
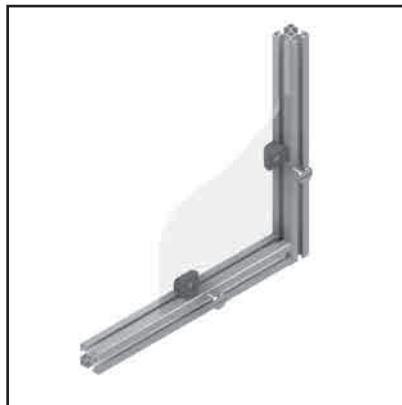
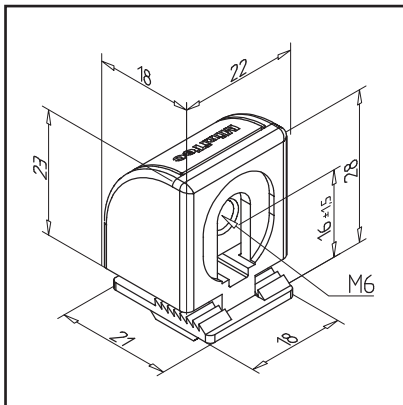
**ASSEMBLY**

- Insert socket into profile groove
- Insert bored surface elements
- Screw down the surface elements
- Recommended flat head screw M6x12 **part no. 21.2074/0** up to 3 mm disc thickness or M6x16 **part no. 21.1246/0** for greater strengths

**SCREW BLOCK 30**

Part no.

22.1250/0

**TECHN. DATA / ITEMS SUPPLIED**

- ABS, Injection Mould, grey
- Nut M6, steel, zinc-plated
- Also available with thread dimensions M4/M5/M8
- Weight = 0.011 kg/piece

**APPLICATIONS**

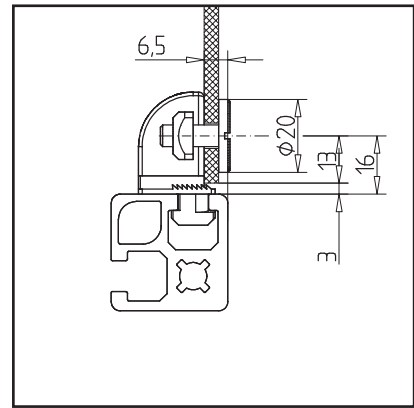
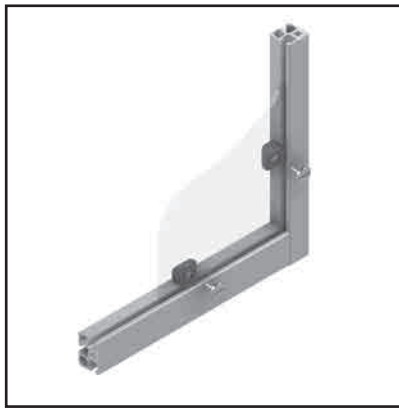
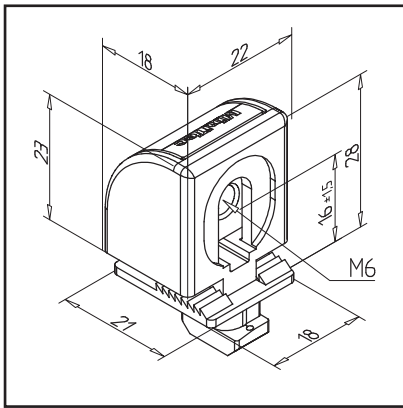
- Suitable for all profiles of series 30
- Retrofitting surface elements 2 mm to 6 mm thickness
- Circulating air gap 7 mm

**ASSEMBLY**

- Insert socket into profile groove
- Insert bored surface elements
- Screw down the surface elements
- Recommended flat head screw M6x12 **part no. 21.2074/0** up to 3 mm disc thickness or M6x16 **part no. 21.1246/0** for greater strengths

### SCREW BLOCK 32

Part no. 22.1265/0



#### TECHN. DATA / ITEMS SUPPLIED

- ABS, Injection Mould, grey
- Nut M6, steel, zinc-plated
- Also available with thread dimensions M4/M5/M8
- Weight = 0.011 kg/piece

#### APPLICATIONS

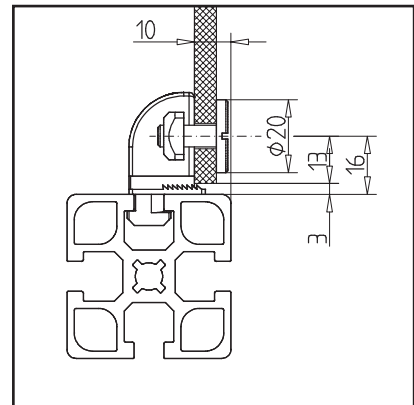
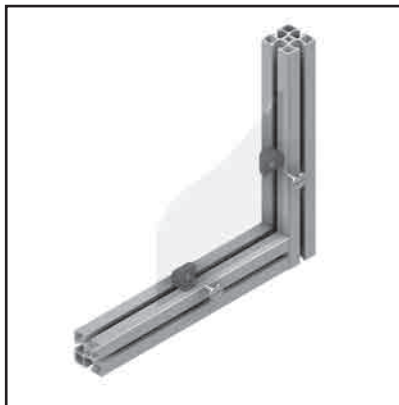
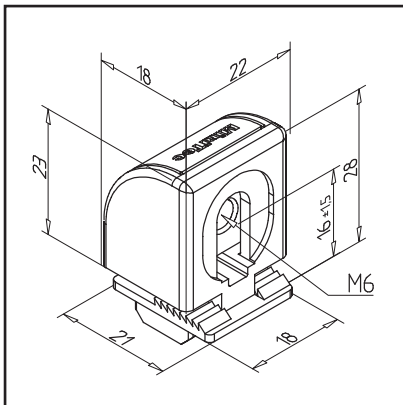
- Suitable for profile series 45
- Retrofitting surface elements 2 mm to 6 mm thickness
- Circulating air gap 7 mm

#### ASSEMBLY

- Insert socket into profile groove
- Insert bored surface elements
- Screw down the surface elements
- Recommended flat head screw M6x12 **part no. 21.2074/0** up to 3 mm disc thickness or M6x16 **part no. 21.1246/0** for greater strengths

### SCREW BLOCK 45

Part no. 22.1260/0



#### TECHN. DATA / ITEMS SUPPLIED

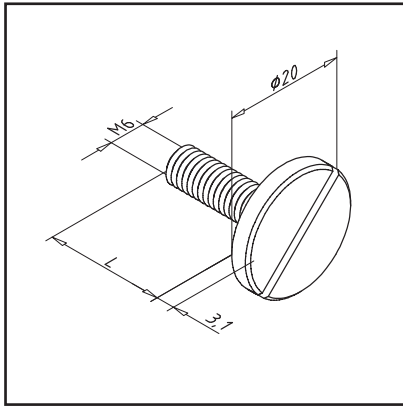
- ABS, Injection Mould, grey
- Nut M6, steel, zinc-plated
- Also available with thread dimensions M4/M5/M8
- Weight = 0.011 kg/piece

#### APPLICATIONS

- Suitable for profile series 45
- Retrofitting surface elements 2 mm to 6 mm thickness
- Circulating air gap 7 mm

#### ASSEMBLY

- Insert socket into profile groove
- Insert bored surface elements
- Screw down the surface elements
- Recommended flat head screw M6x12 **part no. 21.2074/0** up to 3 mm disc thickness or M6x16 **part no. 21.1246/0** for greater strengths

**PAN HEAD SCREW M6****TECHN. DATA / ITEMS SUPPLIED**

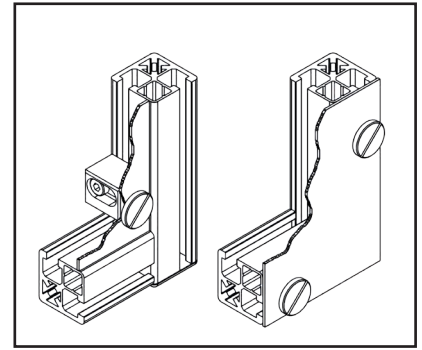
- Steel, galvanized
- Head diameter  $\phi$  20 mm
- M06x12 - **part no. 21.2074/0**, Weight 0,008 kg
- M06x16 - **part no. 21.1246/0**, Weight 0,009 kg
- M06x20 - **part no. 21.1246/1**, Weight 0,010 kg

**APPLICATIONS**

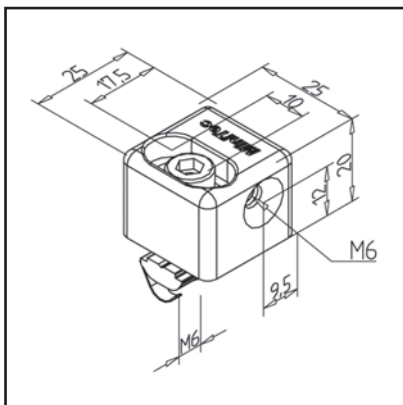
- Assembly of surface elements directly on profile groove
- In connection with screw blocks, multiblocks and thread socket

Part no.

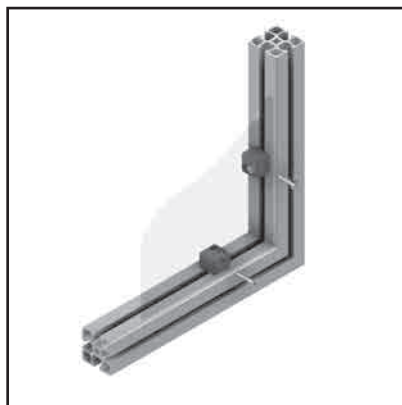
--..../-

**ASSEMBLY**

- Pre-drill surface elements:  $\phi$  6.5 mm
- Recommended grid dimensions: approx. 150 mm
- Edge distance: see screw block 32 and multi-block

**MULTIBLOCK 30 GD****TECHN. DATA / ITEMS SUPPLIED**

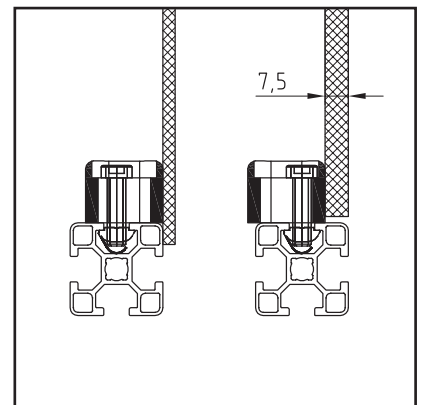
- Aluminium, Pressure die-casting, powder-coated, grey
- With fastening material steel, zinc plated
- Without pan head screw
- Weight = 0.032 kg/piece

**APPLICATIONS**

- Retrofitting surface elements and attachments
- Plate thickness of 6 to 7 mm can be continuously flush fit
- Alternatively, surface elements can also be mounted on-the-floor, so they can also be installed without an air gap.

Part no.

21.2220/0

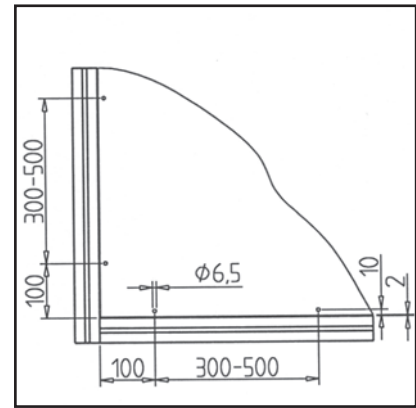
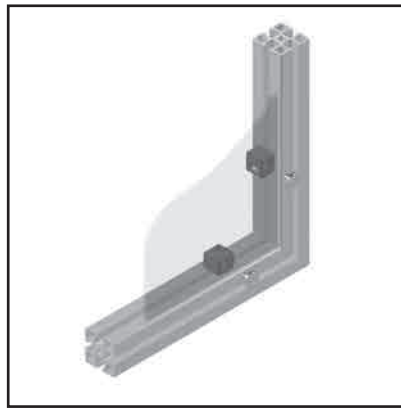
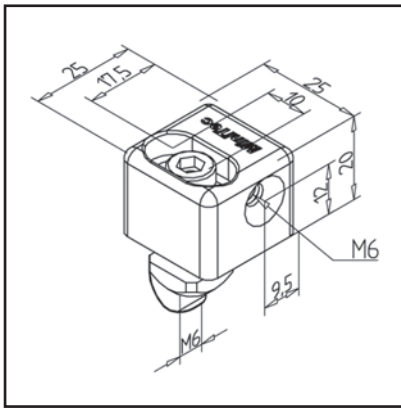
**ASSEMBLY**

- Fastening surface elements or components with screw M6 or flat head screw
- Determination of panel dimensions: Light opening -4mm (~2 mm circulating air)
- Bore for fixation screws  $\phi$  6.5 mm, edge distance 10 mm



## MULTIBLOCK GD

Part no. 21.1355/0



### TECHN. DATA / ITEMS SUPPLIED

- Aluminium, Pressure die-casting, powder-coated, grey
- With fastening material steel, zinc plated
- Without pan head screw
- Use on vertical struts **part no. 21.1355/6** (square nut with position-fixing)
- Weight = 0.035 kg/piece

### APPLICATIONS

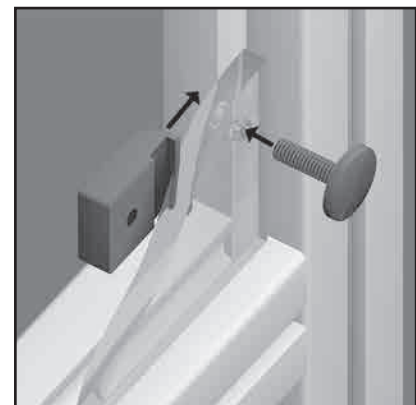
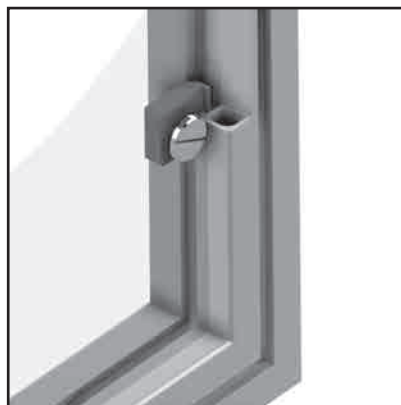
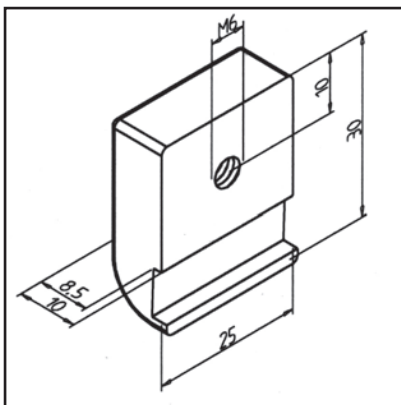
- Retrofitting surface elements and attachments
- Plate thickness of 5 to 15 mm can be continuously flush fit

### ASSEMBLY

- For all profile grooves
- Fastening surface elements or components with screw M6 or flat head screw
- Bore for fixation screws  $\varnothing 6.5$  mm, edge distance 10 mm

## THREAD SOCKET GD

Part no. 21.1117/1



### TECHN. DATA / ITEMS SUPPLIED

- Aluminium, Pressure die-casting, powder-coated, grey
- Without pan head screw
- Weight = 0.018 kg/piece

### APPLICATIONS

- Fix surface elements in profile frames
- Table tops

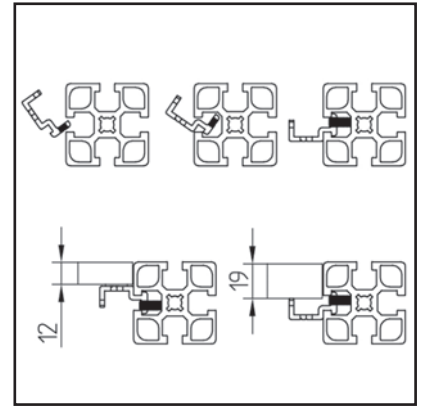
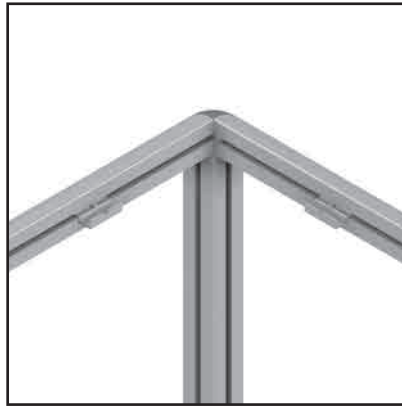
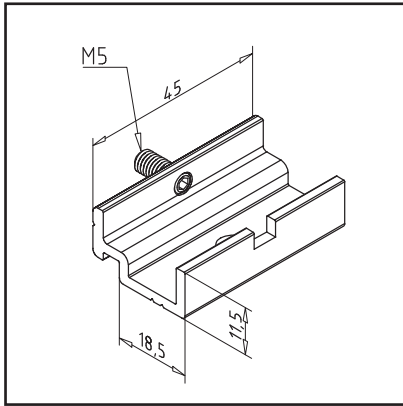
### ASSEMBLY

- Insert the thread socket into profile groove
- Fix element with screws M6 or flat head screw
- Distance from edge of the thread: 10 mm

### MOUNTING BASE N PIVOTED

Part no.

21.0036/0



#### TECHN. DATA / ITEMS SUPPLIED

- Aluminium, anodized E6/EV1
- Setscrew M05, galvanised
- Weight = 0.016 kg/piece

#### APPLICATIONS

- For the positioning and fastening of table tops and surface elements

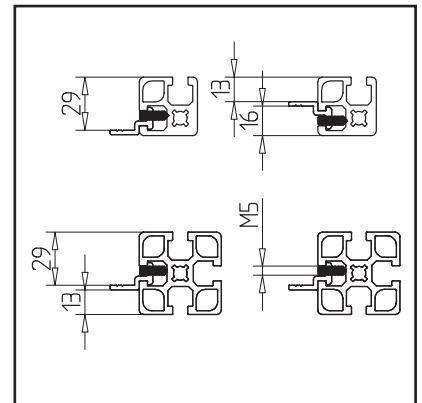
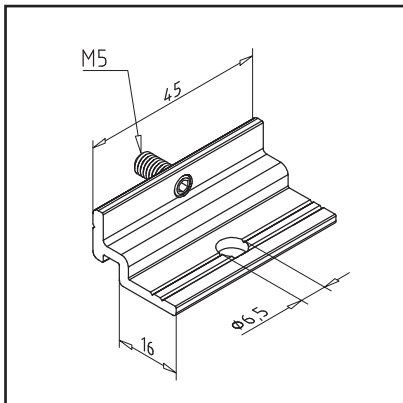
#### ASSEMBLY

- Swing into profile groove
- Clamp with set screw
- No machining required

### MOUNTING BASE F PIVOTED

Part no.

21.0041/0



#### TECHN. DATA / ITEMS SUPPLIED

- Aluminium, anodized E6/EV1
- Setscrew M05, galvanised
- Weight = 0.014 kg/piece

#### APPLICATIONS

- For the positioning and fastening of table tops and surface elements

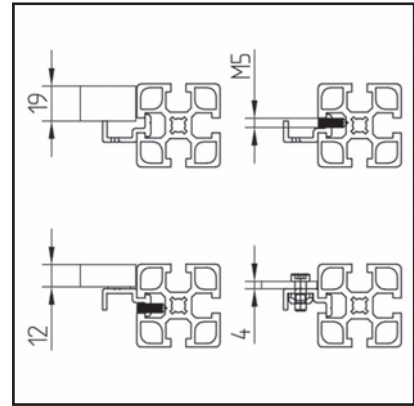
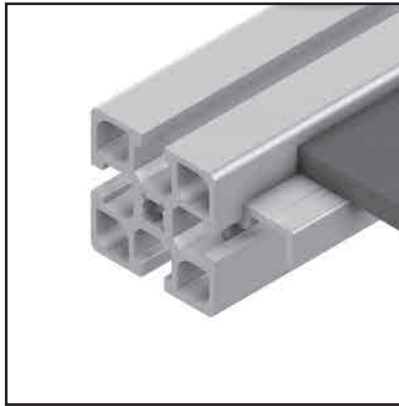
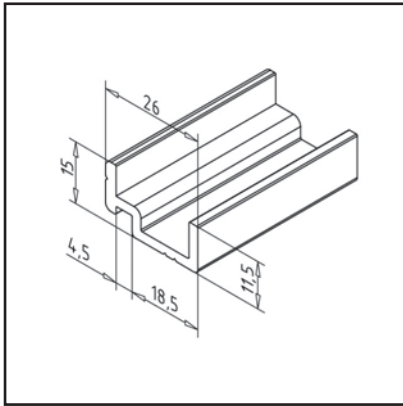
#### ASSEMBLY

- Swing into profile groove
- Clamp with set screw
- No machining required

## SUPPORT PROFILE N

Part no.

20.1121/0



### TECHN. DATA / ITEMS SUPPLIED

- Aluminium, extruded, anodized E6/EV1
- Weight = 0.339 kg/m
- Bar length = 6 m

### APPLICATIONS

- All types of safety equipment
- For installation of surface elements such as panels and plates up to a thickness of 19 mm
- Subsequent insertion

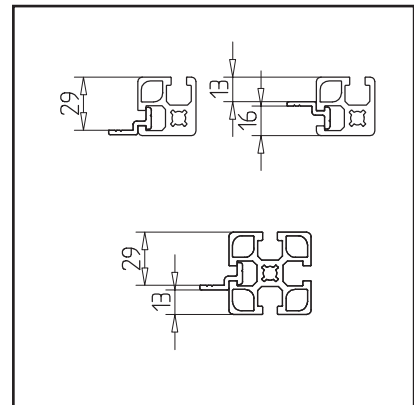
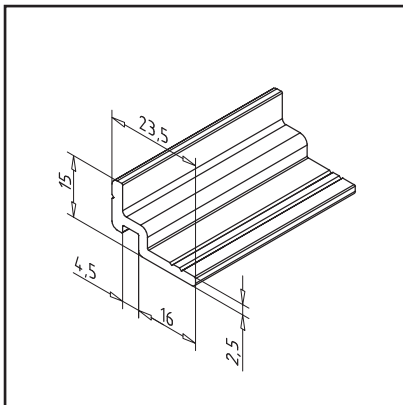
### ASSEMBLY

- Slide the carrier profile into the groove and if necessary, fix it with a threaded pin
- Surface element: clear opening x+y: -2 mm

## SUPPORT PROFILE F

Part no.

20.1149/0



### TECHN. DATA / ITEMS SUPPLIED

- Aluminium, extruded, anodized E6/EV1
- Weight = 0.262 kg/m
- Bar length = 6 m

### APPLICATIONS

- All types of safety equipment
- For installation of surface elements such as panels and plates up to a thickness of 19 mm
- Subsequent insertion

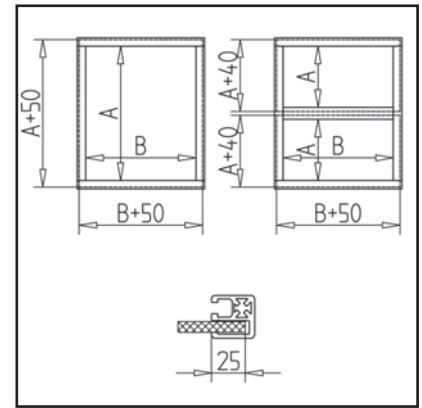
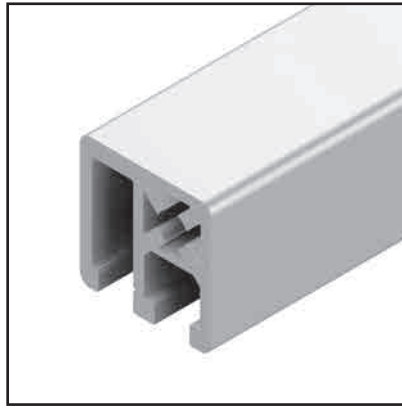
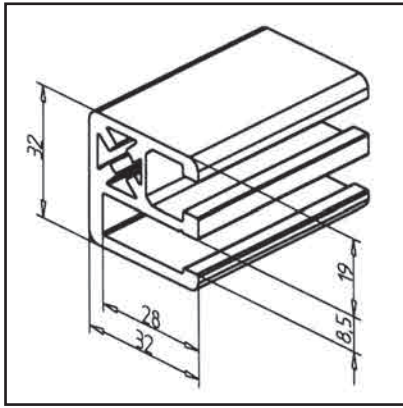
### ASSEMBLY

- Slide the carrier profile into the groove and if necessary, fix it with a threaded pin

## CLAMPING PROFILE 32 X 32

Part no.

20.1070/0



### TECHN. DATA / ITEMS SUPPLIED

- Aluminium, extruded, anodized E6/EV1
- $I_x = 5.024 \text{ cm}^4$
- $I_y = 4.418 \text{ cm}^4$
- $w_x = 3.041 \text{ cm}^3$
- $w_y = 2.398 \text{ cm}^3$
- Weight = 1.211 kg/m
- Bar length = 6 m
- Packing unit = 48 m

### APPLICATIONS

- All types of safety equipment
- For clamping of surface elements, such as woven mesh, panels, plates with a maximum strength of 8 mm
- In the case of larger protective fields, intermediate struts made of clamping profile 45 x 32 must be used in order to ensure adequate safety against pushing out of the surface elements; To do this, remove cover strips on clamping profile 45 x 32 mm
- Cut size of surface elements: Dimension A/B - 40/50 mm depending on application

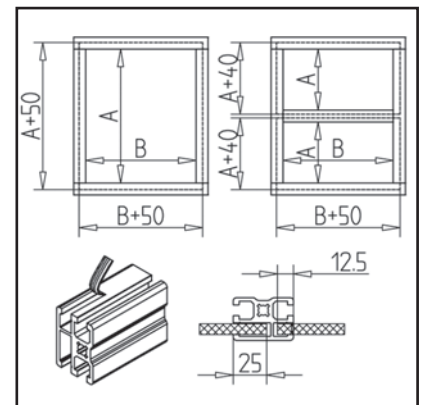
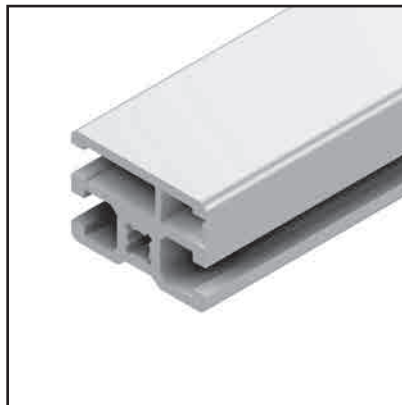
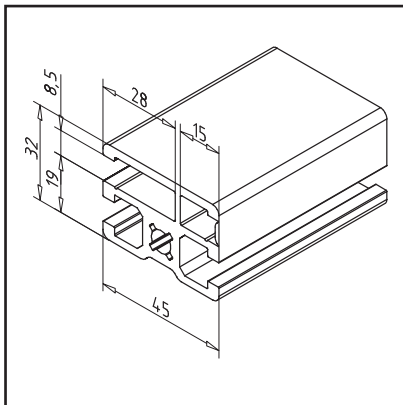
### ASSEMBLY

- MiniTec power-lock fastener; no bores required
- No release of panel element corners required
- Pre-assemble tripartite frame
- Insert panel element and install last profile brace
- Press in the distance profile **part no. 22.1039/0** on the inside or drive in with a flat tool
- For panel elements < Mount 6 mm with matching plug-in seal or < Mount 4 mm with spacer profile and additionally suitable plug-in seal on the opposite side

## CLAMPING PROFILE 45 X 32

Part no.

20.1053/0



### TECHN. DATA / ITEMS SUPPLIED

- Aluminium, extruded, anodized E6/EV1
- $I_x = 6.465 \text{ cm}^4$
- $I_y = 9.521 \text{ cm}^4$
- $w_x = 3.999 \text{ cm}^3$
- $w_y = 4.119 \text{ cm}^3$
- Weight = 1.615 kg/m
- Bar length = 6 m
- Packing unit = 48 m

### APPLICATIONS

- In the case of larger protective fields, intermediate struts made of clamping profile 45 x 32 must be used in order to ensure adequate safety against pushing out of the surface elements; To do this, remove cover strips on clamping profile 45 x 32 mm
- All types of safety equipment
- For clamping of surface elements, such as woven mesh, panels, plates with a maximum strength of 8 mm
- Cut size of surface elements: Dimension A/B - 40/50 mm depending on application

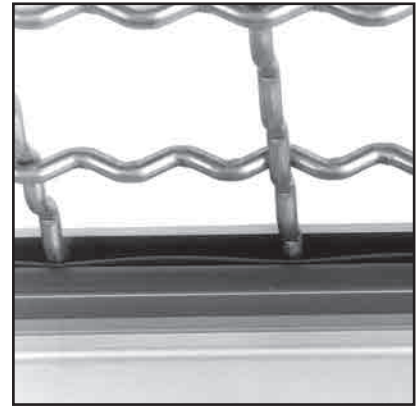
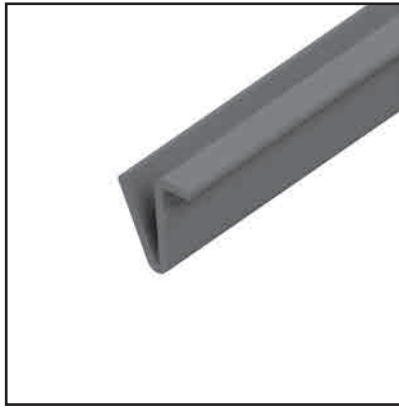
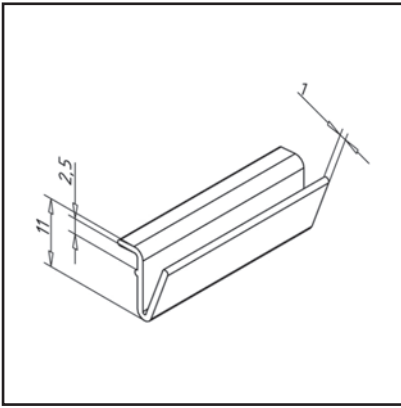
### ASSEMBLY

- MiniTec power-lock fastener; no bores required
- No release of panel element corners required
- Pre-assemble tripartite frame
- Insert panel element and install last profile brace
- Press in the distance profile **part no. 22.1039/0** on the inside or drive in with a flat tool
- For panel elements < Mount 6 mm with matching plug-in seal or < Mount 4 mm with spacer profile and additionally suitable plug-in seal on the opposite side

## DISTANCE PROFILE 30

Part no.

22.1158/0



### TECHN. DATA / ITEMS SUPPLIED

- ABS, extruded, grey
- Weight = 0.020 kg/m
- Bar length = 2 m

### APPLICATIONS

- For clamping surface elements such as corrugated mesh, panels and plates for profile series 30

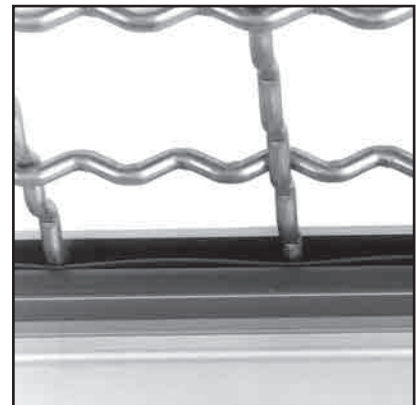
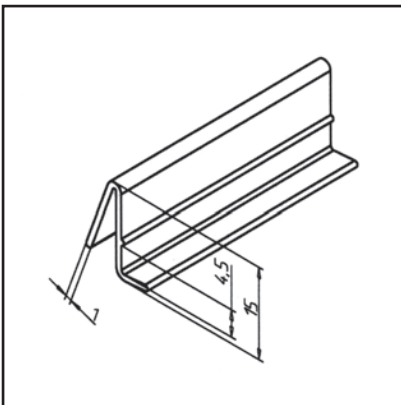
### ASSEMBLY

- Mount the profile frames with the surface elements
- Push in distance profile on the inside or knock in with a flat tool

## DISTANCE PROFILE

Part no.

22.1039/0



### TECHN. DATA / ITEMS SUPPLIED

- ABS, extruded, grey
- Weight = 0.028 kg/m
- Bar length = 2 m

### APPLICATIONS

- Use in clamping profile 45 x 32 **part no. 20.1053/0** and clamping profile 32 x 32 **part no. 20.1070/0** for clamping surface elements
- Also for use with all other profiles to fix surface elements

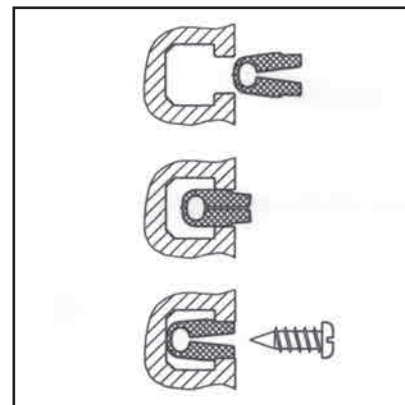
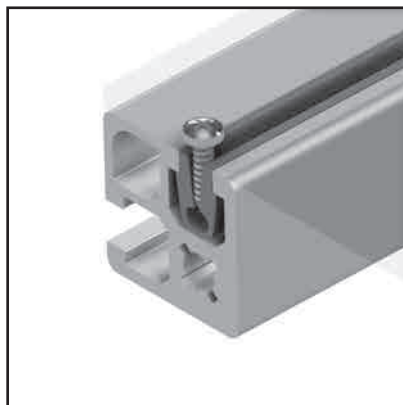
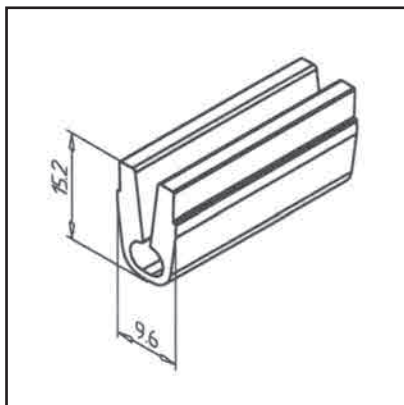
### ASSEMBLY

- Mount the profile frames with the surface elements
- Push in distance profile on the inside or knock in with a flat tool

## SCREW SOCKET PROFILE

Part no.

22.1076/0



## TECHN. DATA / ITEMS SUPPLIED

- PVC, extruded, grey
- Weight = 0.118 kg/m
- Bar length = 2 m

## APPLICATIONS

- Fastening surface elements or components at any location

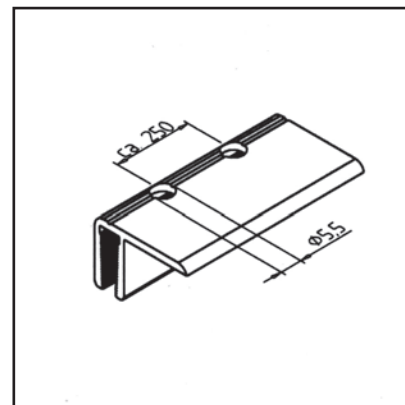
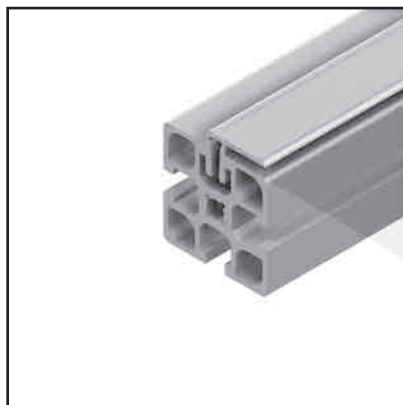
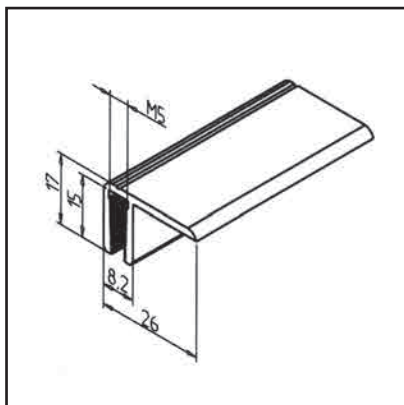
## ASSEMBLY

- Clip profile into groove
- Fasten element with commercial-type self-tapping screws  $\varnothing$  4-5 mm; Length min: 16 mm
- for material thickness of 1-6 mm, sheet metal screw 3,5 x 16 mm **part no. 21.1365/0**

## PANEL CLAMPING PROFILE

Part no.

20.1025/0



## TECHN. DATA / ITEMS SUPPLIED

- Aluminium, extruded, anodized E6/EV1
- Weight = 0.260 kg/m
- Bar length = 6 m

## APPLICATIONS

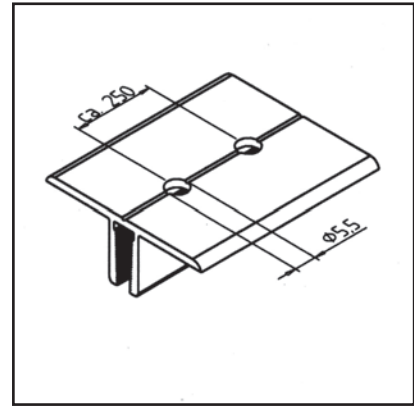
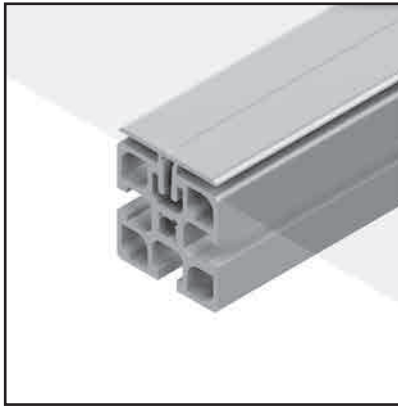
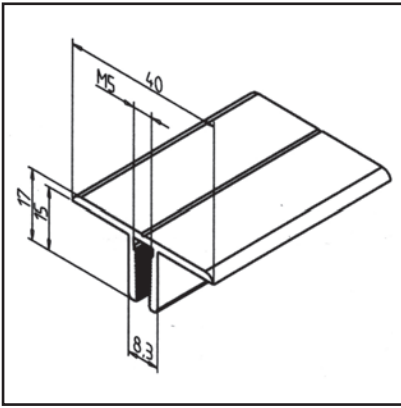
- Fastening of surface elements
- Post fitting of facing panels
- Reception of surface elements with a maximum strength of 10 mm

## ASSEMBLY

- Place the bore  $\varnothing$  5.5 for the threaded pin M5 in a grid size of approx. 250 mm
- Press in the profile groove and clamp with grub screw M5 x 12 **part no. 21.1381/0**

## DOUBLE PANEL CLAMPING PROFILE

Part no. 20.1018/0



### TECHN. DATA / ITEMS SUPPLIED

- Aluminium, extruded, anodized E6/EV1
- Weight = 0.375 kg/m
- Bar length = 6 m

### APPLICATIONS

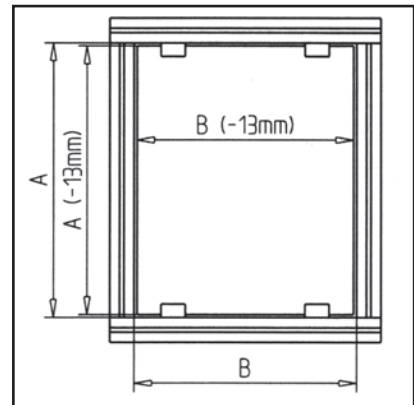
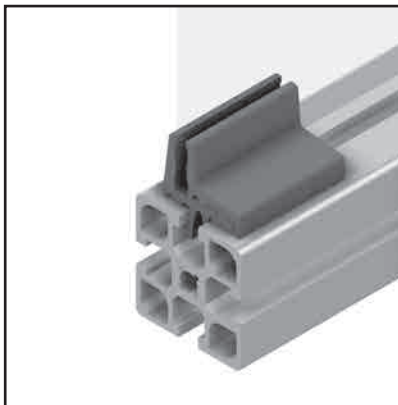
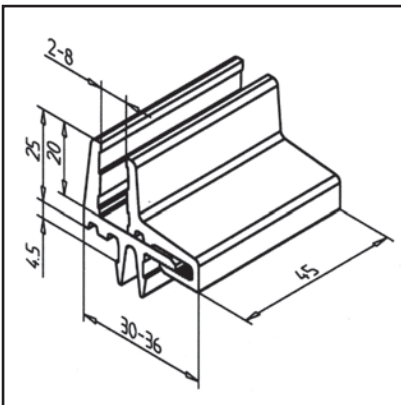
- Attachment of panels on the outer face in the region of a butt joint
- Reception of surface elements with a maximum strength of 10 mm

### ASSEMBLY

- Place the bore  $\varnothing 5.5$  for the threaded pin M5 in a grid size of approx. 250 mm
- Press in the profile groove and clamp with grub screw M5 x 12 **part no. 21.1381/0**
- See also surface clamping profile **part no. 20.1025/0**

## PANEL HOLDER GREY

Part no. 22.1090/1



### TECHN. DATA / ITEMS SUPPLIED

- PVC, extruded, grey
- On request also available in black, **part no. 22.1090/0**
- Weight = 0.011 kg/piece

### APPLICATIONS

- Fixation surface elements with a maximum strength of 8 mm
- For surface elements smaller than 4 mm, a moss rubber strip must be inserted
- Windows, doors
- Not suitable for corrugated mesh

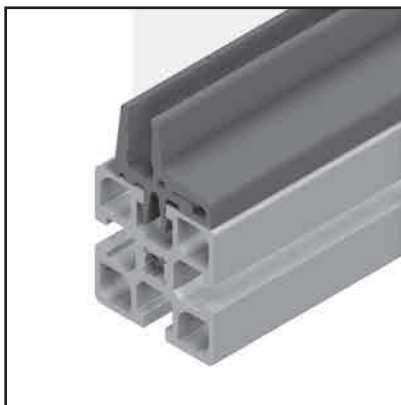
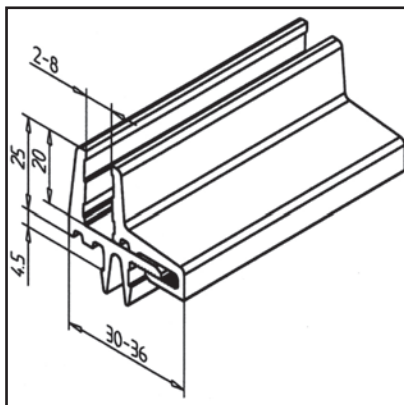
### ASSEMBLY

- Fold the sockets into the profile groove
- Insert the panel element
- Press clamping half firmly on socket half

## CLAMPING PROFILE PVC

Part no.

22.1092/0



### TECHN. DATA / ITEMS SUPPLIED

- PVC, extruded, grey
- On request also available in black, **part no. 22.1080/0**
- Weight = 0.550 kg/m
- Bar length = 2 m

### APPLICATIONS

- Fixation surface elements with a maximum strength of 8 mm
- For surface elements smaller than 4 mm, a moss rubber strip must be inserted
- Windows, doors
- No free space between profile and panel element
- Also suitable for corrugated mesh

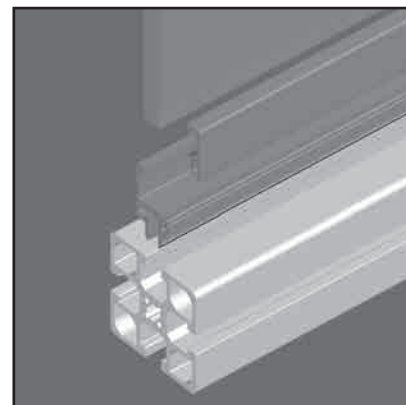
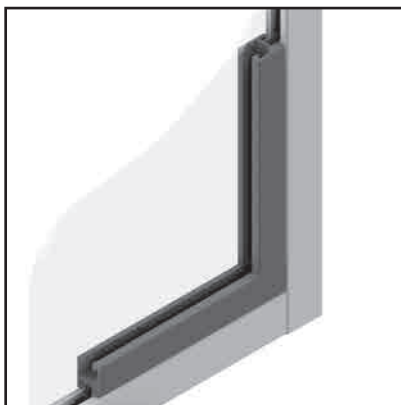
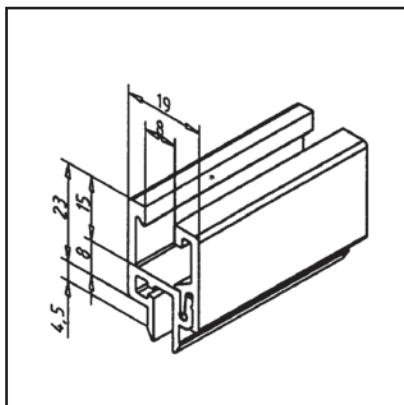
### ASSEMBLY

- Snap socket half into profile groove
- Insert the panel element
- Press clamping half firmly on socket half

## PANEL FRAMING PROFILE

Part no.

22.1107/1



### TECHN. DATA / ITEMS SUPPLIED

- ABS, extruded, grey
- On request also available in black **part no. 22.1107/0**
- Weight = 0.229 kg/m
- Bar length = 2 m

### APPLICATIONS

- For retrofitting surface elements in existing profile frames
- Fixation surface elements with a maximum strength of 8 mm
- For panels up to 8 mm use additional insert seal
- For subsequent installation of corrugated mesh please use clamp profile PVC
- Windows, doors
- No free space between profile and panel element

### ASSEMBLY

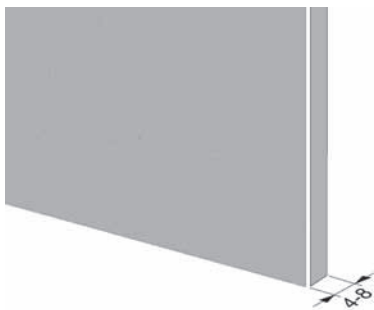
- Snap socket half into profile groove
- Insert the panel element
- Press clamping half firmly on socket half
- **No mitre cut necessary**



SURFACE ELEMENTS

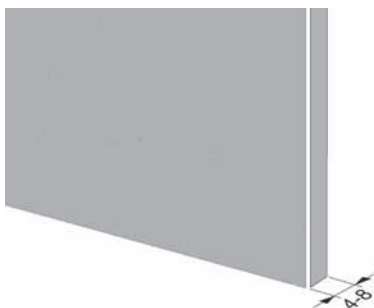
MATERIAL & CHOICES

ACRYL



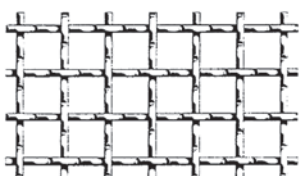
Part no.	STRENGTH	COLOUR	WEIGHT	PLATE SIZE
21.1832/0	4 mm	smoke-coloured	4,76 kg/m <sup>2</sup>	2050 x 3050 mm
21.1811/0	5 mm	smoke-coloured	5,95 kg/m <sup>2</sup>	2050 x 3050 mm
21.1812/0	6 mm	smoke-coloured	7,14 kg/m <sup>2</sup>	2050 x 3050 mm
21.1813/0	8 mm	smoke-coloured	9,52 kg/m <sup>2</sup>	2050 x 3050 mm
21.1826/0	4 mm	crystal clear	4,76 kg/m <sup>2</sup>	2050 x 3050 mm
21.1836/0	5 mm	crystal clear	5,95 kg/m <sup>2</sup>	2050 x 3050 mm
21.1827/0	6 mm	crystal clear	7,14 kg/m <sup>2</sup>	2050 x 3050 mm
21.1828/0	8 mm	crystal clear	9,52 kg/m <sup>2</sup>	2050 x 3050 mm

POLYCARBONATE



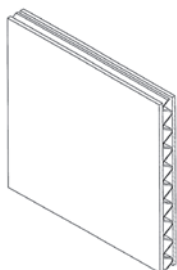
Part no.	STRENGTH	COLOUR	WEIGHT	PLATE SIZE
21.1809/0	4 mm	smoke-coloured	4,76 kg/m <sup>2</sup>	2050 x 3050 mm
21.1808/0	5 mm	smoke-coloured	5,95 kg/m <sup>2</sup>	2050 x 3050 mm
21.1807/0	6 mm	smoke-coloured	7,20 kg/m <sup>2</sup>	2050 x 3050 mm
21.1821/0	8 mm	smoke-coloured	9,78 kg/m <sup>2</sup>	2050 x 3050 mm
21.1829/0	4 mm	crystal clear	4,80 kg/m <sup>2</sup>	2050 x 3050 mm
21.1833/0	5 mm	crystal clear	5,95 kg/m <sup>2</sup>	2050 x 3050 mm
21.1830/0	6 mm	crystal clear	7,20 kg/m <sup>2</sup>	2050 x 3050 mm
21.1831/0	8 mm	crystal clear	9,78 kg/m <sup>2</sup>	2050 x 3050 mm

WAVE GRID



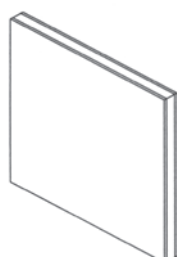
Part no.	WIRE STRENGTH	MESH WIDE	WEIGHT	PLATE SIZE	MATERIAL
21.1803/0	4 mm	30 mm	6,2 kg/m <sup>2</sup>	2000 x 3000 mm	pc, galvanized
21.1805/0	4 mm	40 mm	4,7 kg/m <sup>2</sup>	2000 x 3000 mm	pc, galvanized
21.1818/2	4 mm	30 mm	2,14 kg/m <sup>2</sup>	2000 x 2000 mm	ALMg3
21.1818/1	4 mm	40 mm	1,6 kg/m <sup>2</sup>	2000 x 2000 mm	ALMg3

ALUMINIUM-WAVE PANEL



Part no.	21.1853/0
Front	0,8 mm
Back	0,5 mm
Aluminium Shaft	0,2 mm
total thickness	6 mm
Weight	4,6 kg/m <sup>2</sup>
Plate size	1500 x 3000 mm
Material	Aluminum adhesive coated on both sides, paintable, printable, recyclable

COMPOSITE



Part no.	21.1834/0
Material outside	Aluminium (anodized)
Material inside	Polyethylene
total thickness	6 mm
Weight	7,3 kg/m <sup>2</sup>
Plate size	1250 x 2500 mm
Others	paintable, printable, recyclable

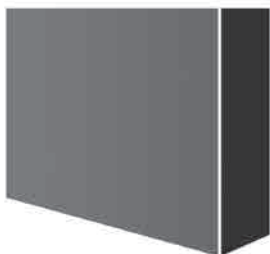
**ON DEMAND** Aluminium sheets, steel plates, perforated sheets, plywood panels

## SURFACE ELEMENTS

## MATERIAL &amp; CHOICES

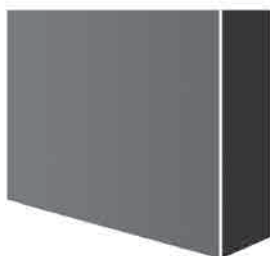
Extremely scratch-resistant, water-resistant and resistant to a variety of chemicals, acids and alkalis.

## HPL compact tabletop



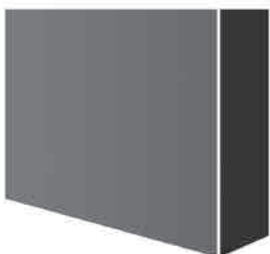
part no.	Color	Thickness	Weight	Size	ESD
32.6201/0	light grey	5	7 Kg/m <sup>2</sup>	2520 x 1280	Nein
32.6202/0	light grey	8	11,2 Kg/m <sup>2</sup>	2520 x 1280	Nein
32.6203/0	light grey	16	22,4 Kg/m <sup>2</sup>	2520 x 1280	Nein
32.6204/0	light grey	20	30 Kg/m <sup>2</sup>	2520 x 1280	Nein
32.6205/0	light grey	8	11,2 Kg/m <sup>2</sup>	2520 x 1280	Ja
32.6206/0	light grey	10	14 Kg/m <sup>2</sup>	2520 x 1280	Ja
32.6207/0	light grey	16	22,4 Kg/m <sup>2</sup>	2520 x 1280	Ja
32.6208/0	light grey	20	30 Kg/m <sup>2</sup>	2520 x 1280	Ja

## PVC-PLATE



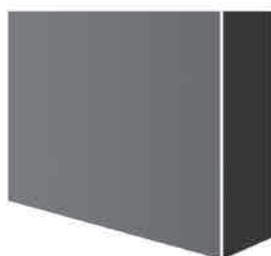
Part no.	21.1817/0
Thickness	20 mm
Color	grey, 7011 RAL
Weight	28 kg/m <sup>2</sup>
Plate size	1000 x 2000 mm
Others	other colours and strengths, Anti-static Tabletops on request

## RECYCLING-PLATE PE



Part no.	32.0406/0
Thickness	10 - 40 mm
Colour	black
Plate size	1000 x 2000 mm
Density	0,93 kg/dm <sup>3</sup>
Others	PE-Regenerated

## RECYCLING-PLATE PE CONFETTI

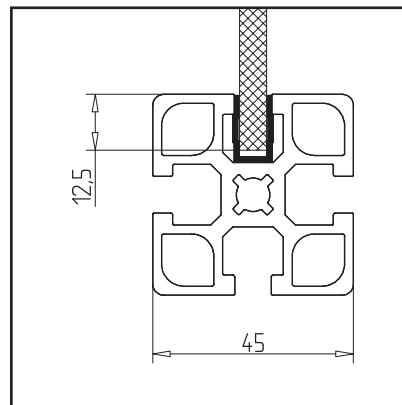
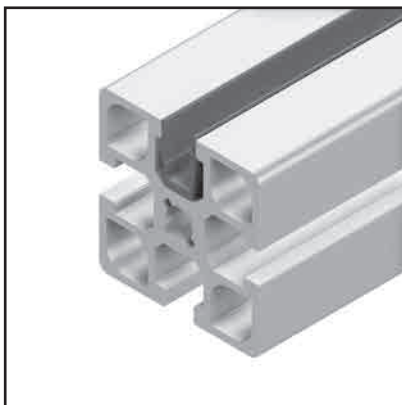
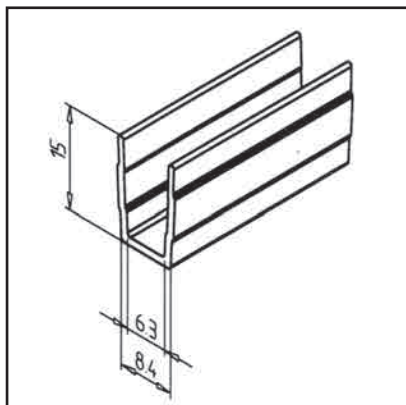


Part no.	32.0405/0
Thickness	10 - 40 mm
Colour	confetti
Plate size	1000 x 2000 mm
Density	0,93 kg/dm <sup>3</sup>
Others	PE-Regenerated

\*(The colour spread may vary depending on the delivery in shape, colour and size)

## EDGING AND COVER PROFILE

Part no. ---,----/-



### TECHN. DATA / ITEMS SUPPLIED

### APPLICATIONS

### ASSEMBLY

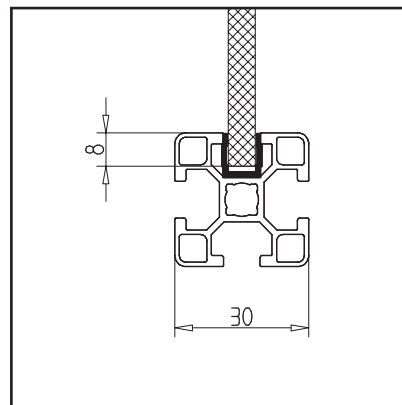
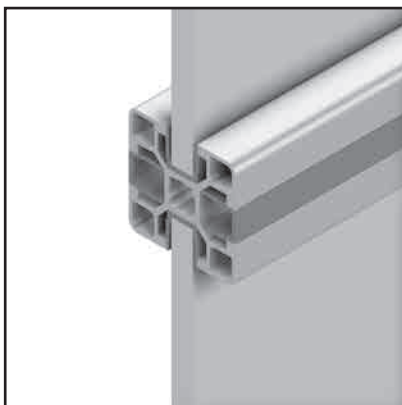
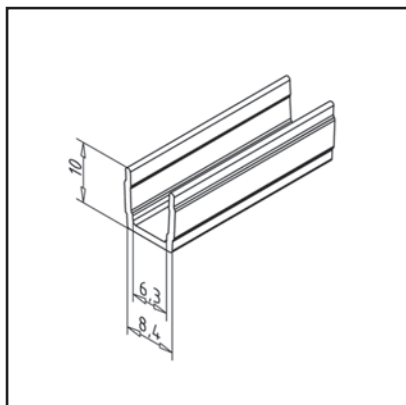
- PVC black **part no. 22.1070/0**
- PVC grey **part no. 22.1070/1**
- PVC light grey **part no. 22.1070/2**
- PVC blue **part no. 22.1072/0**
- PVC orange **part no. 22.1071/0**
- PVC yellow **part no. 22.1074/0**
- ABS silver **part no. 22.1179/0**
- Weight = 0.060 kg/m
- Bar length = 2 m

- Mounted with groove inwards: For closing profile grooves
- **Mounted with the groove to the outside:**  
For the absorption of surface elements up to 6 mm thickness, dimensional compensation by silicone or sponge rubber cord **part no. 22.1102/0**

- Snap or slip into profile groove

## COVER PROFILE 30

Part no. ---,----/-



### TECHN. DATA / ITEMS SUPPLIED

### APPLICATIONS

### ASSEMBLY

- PVC, extruded
- grey **part no. 22.1161/1**
- light grey **part no. 22.1161/2**
- Weight = 0.040 kg/m
- Bar length = 2 m

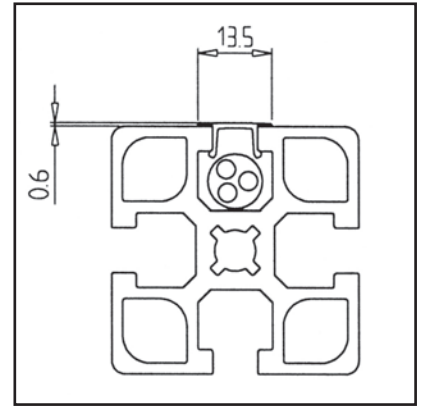
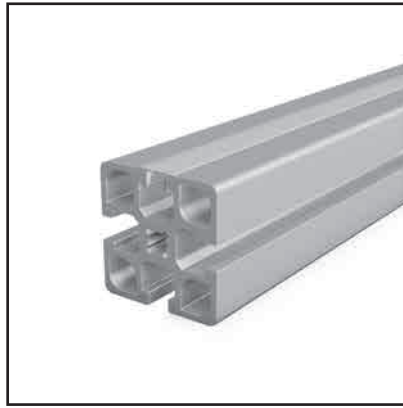
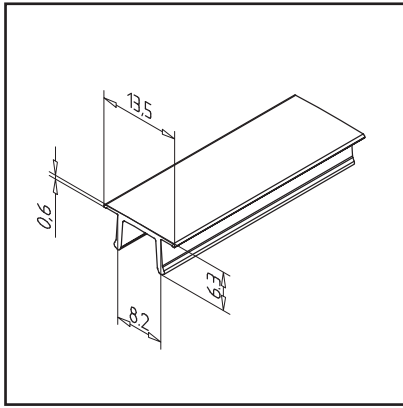
- Mounted with groove inwards: For closing profile grooves
- **Mounted with the groove to the outside:**  
For the absorption of surface elements up to 6 mm thickness, dimensional compensation by silicone or sponge rubber cord **part no. 22.1102/0**

- Press or slide into the profile groove

### COVER PROFILE K

Part no.

--...../-



#### TECHN. DATA / ITEMS SUPPLIED

- ABS, grey **part no. 22.1020/1**
- PP, transparent **part no. 22.1020/3**
- ABS, yellow **part no. 22.1020/4**
- Weight = 0.023 kg/m
- Bar length = 2 m

#### APPLICATIONS

- Dust-tight sealing of the profile grooves
- The groove cross-section remains largely free for laying cables or hoses.
- Information plates
- The transparent cover profile can be used to cover lighting elements in the profile groove, e.g. LED strips.

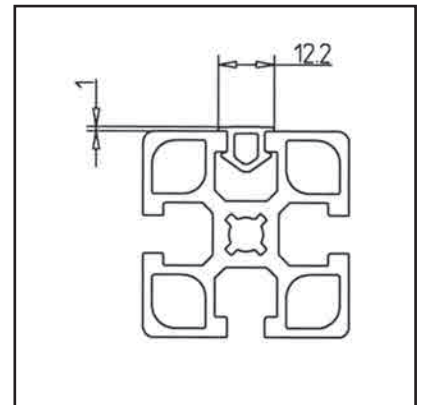
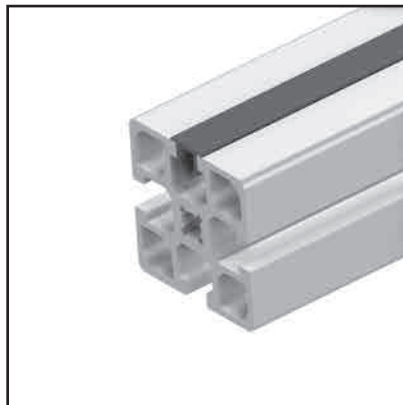
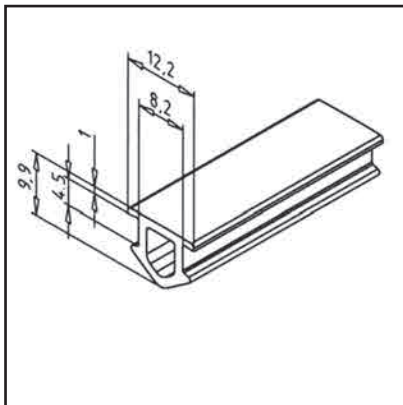
#### ASSEMBLY

- Press by hand onto profile groove

### COVER PROFILE G

Part no.

22.1010/0



#### TECHN. DATA / ITEMS SUPPLIED

- NBR, black
- Roll length 100 m
- Hardness (Shore A) 70°
- Weight = 0.072 kg/m

#### APPLICATIONS

- Dust-tight sealing of the profile grooves
- The groove cross-section remains largely free for laying cables or hoses.

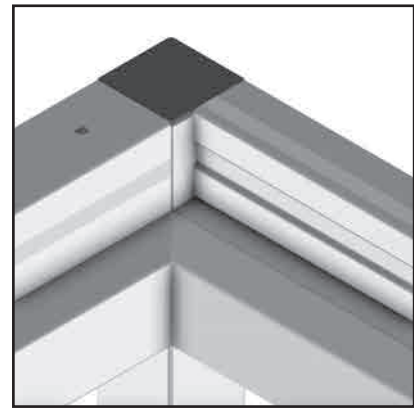
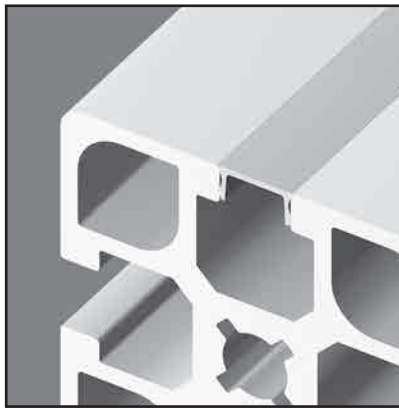
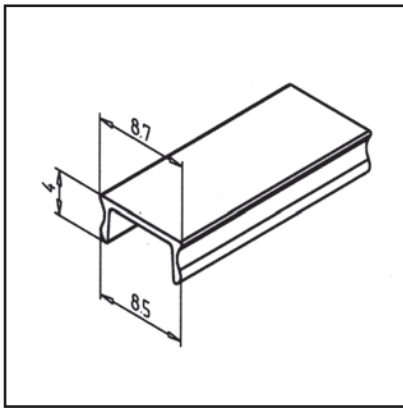
#### ASSEMBLY

- Press by hand onto profile groove

## COVER PROFILE L

Part no.

20.1021/0



### TECHN. DATA / ITEMS SUPPLIED

- Aluminium, extruded, bright
- **On request also anodized available part no. 20.1021/1**
- Weight = 0.030 kg/m
- Bar length = 2 m

### APPLICATIONS

- Flush, dust-tight sealing of the profile grooves
- The groove cross-section remains largely free for laying cables or hoses.
- Information plates

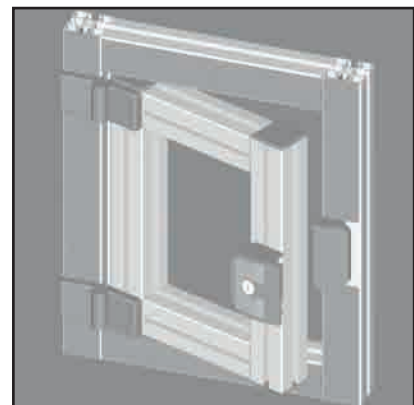
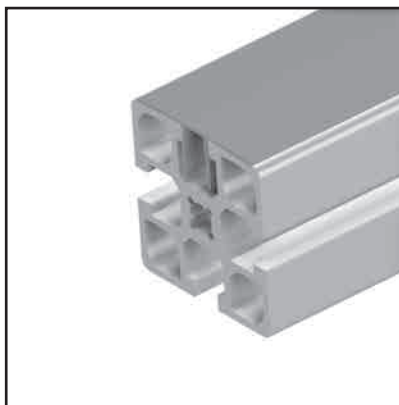
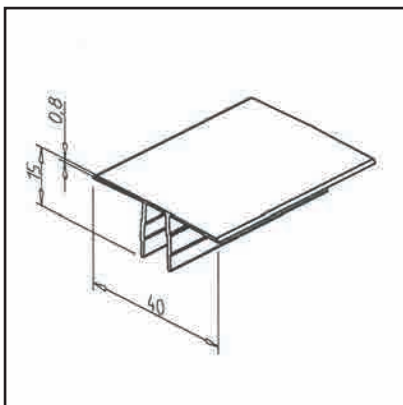
### ASSEMBLY

- Press by hand onto profile groove

## SIGNAL PROFILE

Part no.

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### TECHN. DATA / ITEMS SUPPLIED

- PVC, extruded
- yellow-orange **part no. 22.1097/2**
- fire red **part no. 22.1097/3**
- signal yellow **part no. 22.1097/4**
- Weight = 0.090 kg/m
- Bar length = 2 m

### APPLICATIONS

- Marking of safety relevant construction units such as doors and risk zones
- Coloured organization of constructions or parts

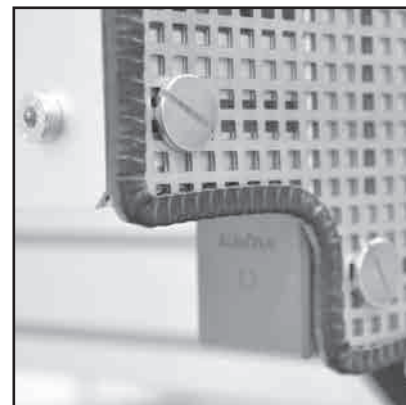
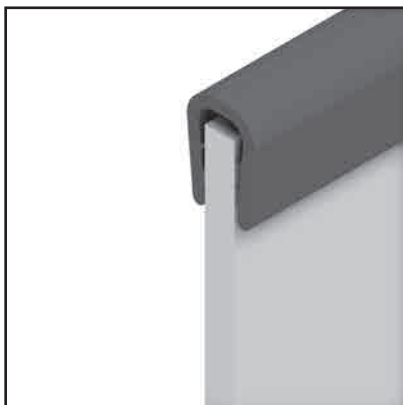
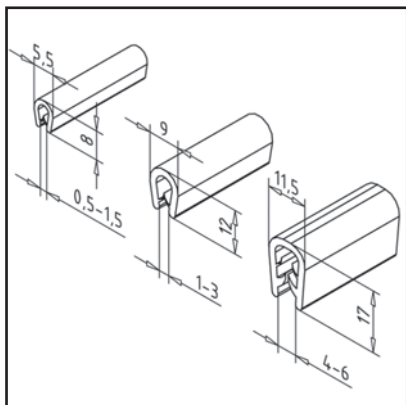
### ASSEMBLY

- Clip in profile groove

## EDGE PROTECTION

Part no.

--...../-



### TECHN. DATA / ITEMS SUPPLIED

- PVC, black
- Steel plate reinforced
- Edge protection 0,5-1,5 **part no. 22.1029/0**  
Weight: 0,050 kg/m, Roll length 50 m
- Edge protection 1,0-3,0 **part no. 22.1036/0**  
Weight: 0,120 kg/m, Roll length 100 m
- Edge protection 4,0-6,0 **part no. 22.1037/0**  
Weight: 0,190 kg/m, Roll length 100 m

### APPLICATIONS

- Edge protection for surface elements
- Protection of MiniTec conduit
- Protection of bores and openings

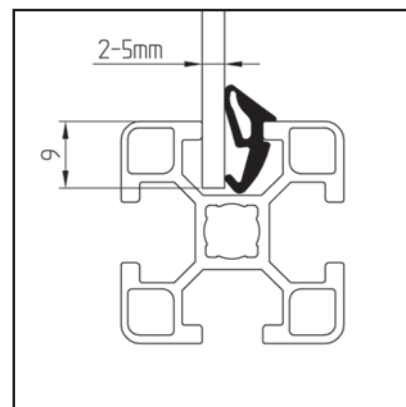
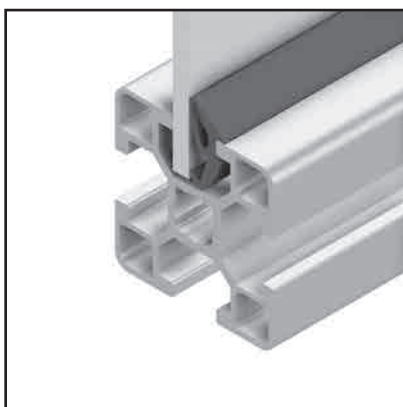
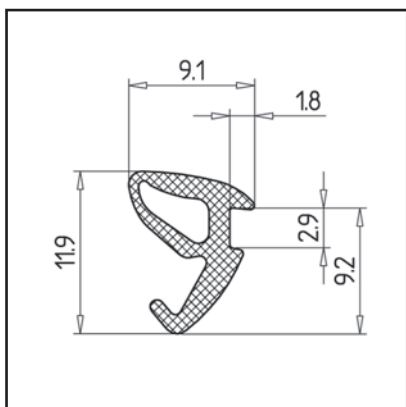
### ASSEMBLY

- Press onto edge of panel element

## PLUG SEAL 30

Part no.

22.1174/0



### TECHN. DATA / ITEMS SUPPLIED

- EPDM, black
- Roll length 100 m
- Weight = 0.050 kg/m

### APPLICATIONS

- Fastening and sealing of panels directly in the profile groove, for panels 2-5 mm thick

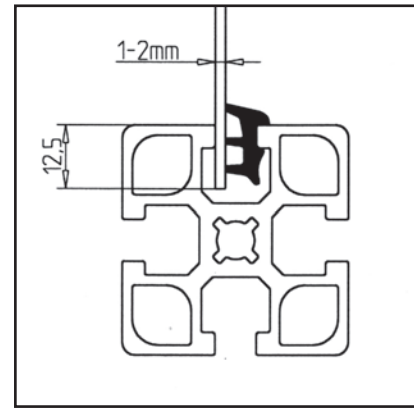
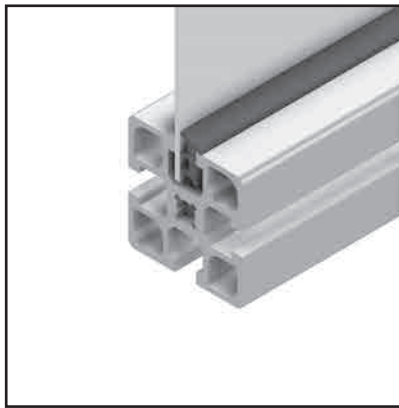
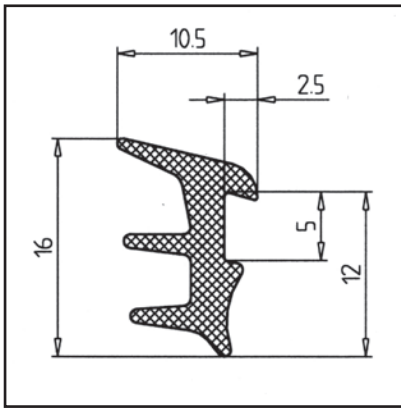
### ASSEMBLY

- Insert panel into profile groove, next push gasket in manually or with an appropriate, wooden or plastic tool
- When using profile connectors 30 for connecting the profiles, the surface elements should be given on 2 sides instead of 9 mm only an allowance of 7.5 mm

## PLUG SEAL 2

Part no.

22.1083/0



### TECHN. DATA / ITEMS SUPPLIED

- EPDM, black
- Roll length 100 m
- Weight = 0.096 kg/m

### APPLICATIONS

- Not suitable for acrylic glass and polycarbonate
- Fastening and sealing of surface elements directly in the profile groove up to 2 mm thickness

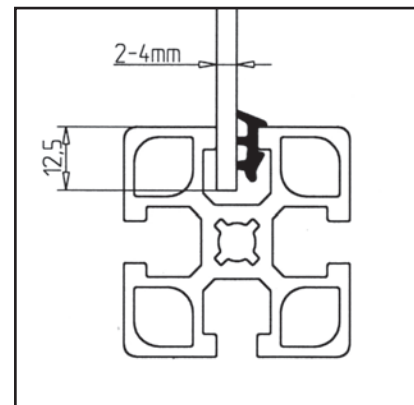
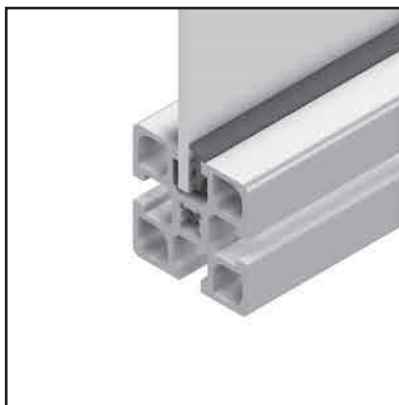
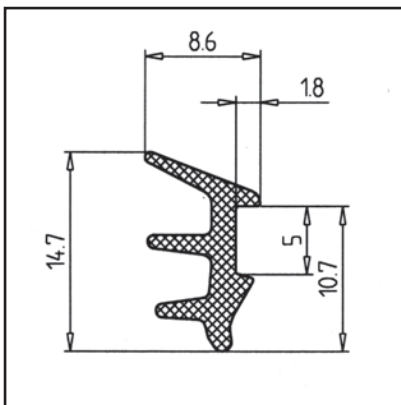
### ASSEMBLY

- Insert panel into profile groove
- Press insert seal subsequently into free space between panel element and profile groove with blunt tool made of wood or plastic
- Materials with <2 mm thickness can be clamped by using sealing gasket 6 on both sides, **part no. 22.1086/1**

## PLUG SEAL 4

Part no.

22.1081/0



### TECHN. DATA / ITEMS SUPPLIED

- EPDM, black
- Roll length 100 m
- Weight = 0.070 kg/m

### APPLICATIONS

- Fastening and sealing of panes directly in the profile groove, for panes 2-4 mm thick
- Also suitable for acrylic plastic and polycarbonate

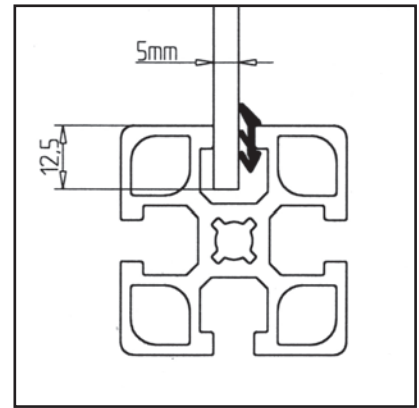
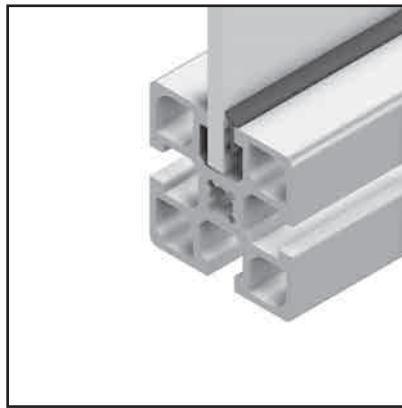
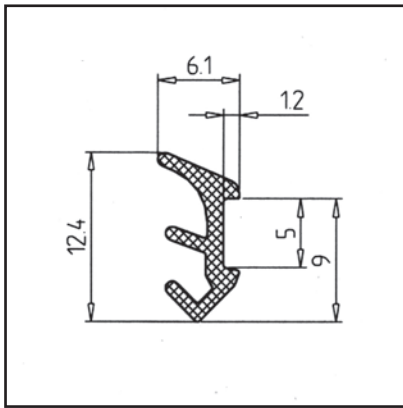
### ASSEMBLY

- Slide the pane into the profile groove, afterwards press the sealing gasket manually or with a suitable dull tool made of wood or plastic

### PLUG SEAL 5

Part no.

22.1099/0



#### TECHN. DATA / ITEMS SUPPLIED

- EPDM, black
- Roll length 100 m
- Weight = 0.040 kg/m

#### APPLICATIONS

- Fastening and sealing of panels directly in the profile groove, for panels up to 5 mm thick
- Also suitable for acrylic plastic and polycarbonate

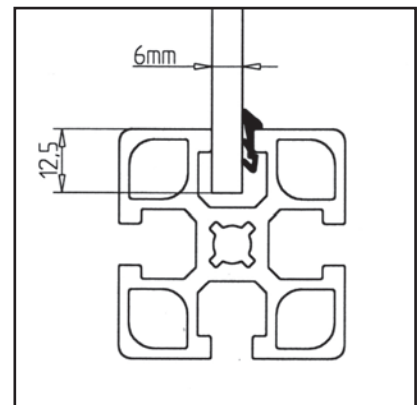
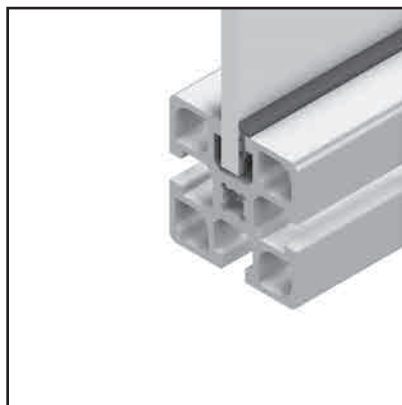
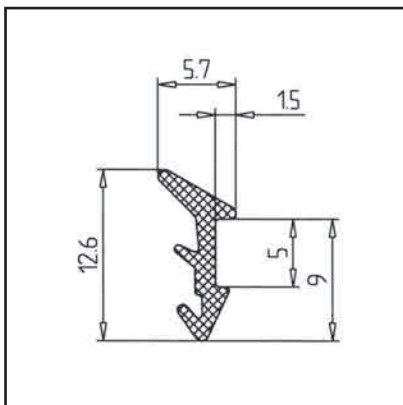
#### ASSEMBLY

- Slide the pane into the profile groove, afterwards press the sealing gasket manually or with a suitable dull tool made of wood or plastic

### PLUG SEAL 6

Part no.

22.1086/1



#### TECHN. DATA / ITEMS SUPPLIED

- EPDM, black
- Oil-resistant version insert seal NBR, **part no. 22.1086/3**
- Roll length 100 m
- Weight = 0.033 kg/m

#### APPLICATIONS

- Fastening and sealing of panels directly in the profile groove, for panels up to 6 mm thick
- Also suitable for acrylic plastic and polycarbonate

#### ASSEMBLY

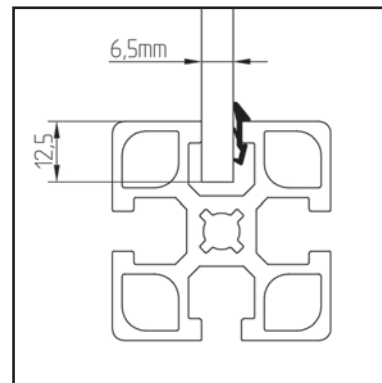
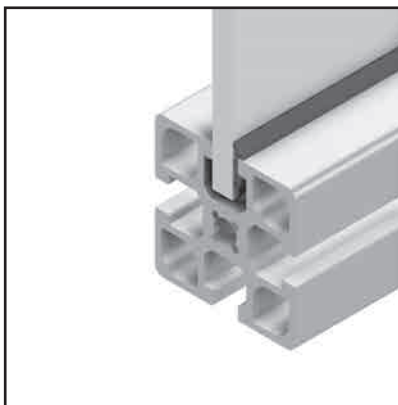
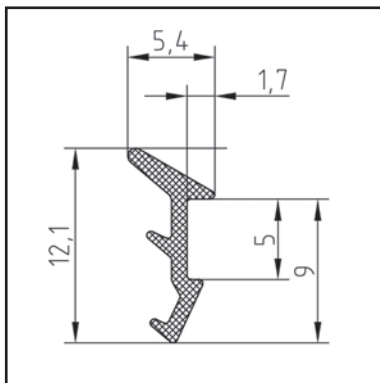
- Slide the pane into the profile groove, afterwards press the sealing gasket manually or with a suitable dull tool made of wood or plastic



## PLUG SEAL 6,5

Part no.

22.0991/0



### TECHN. DATA / ITEMS SUPPLIED

- EPDM, black
- Roll length 100 m
- Weight = 0.033 kg/m

### APPLICATIONS

- Mounting and sealing of discs directly in the profile groove, for panels up to 6.5 mm thickness
- Also suitable for acrylic plastic and polycarbonate

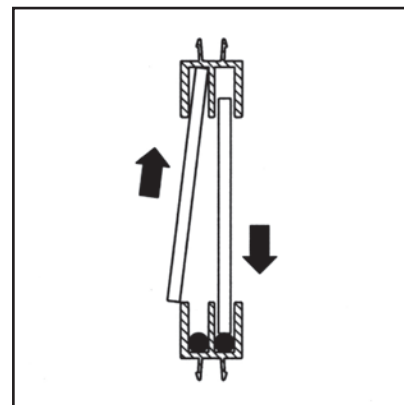
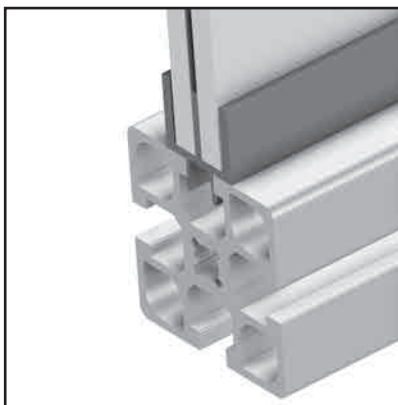
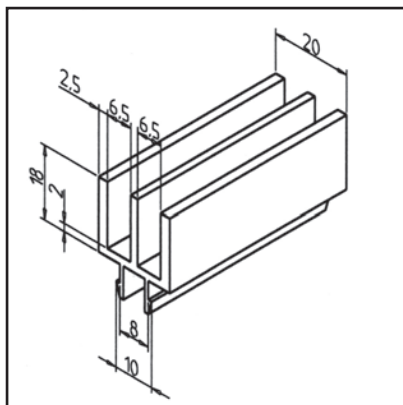
### ASSEMBLY

- Insert panel into profile groove, next push gasket in manually or with an appropriate, blunt wooden or plastic tool

## GUIDE PROFILE 2

Part no.

22.1073/1



### TECHN. DATA / ITEMS SUPPLIED

- PVC, extruded, grey
- On request also available in black, **part no. 22.1073/0**
- Weight = 0.270 kg/m
- Bar length = 2 m

### APPLICATIONS

- 2-fold sliding window made of surface elements up to 6 mm thick

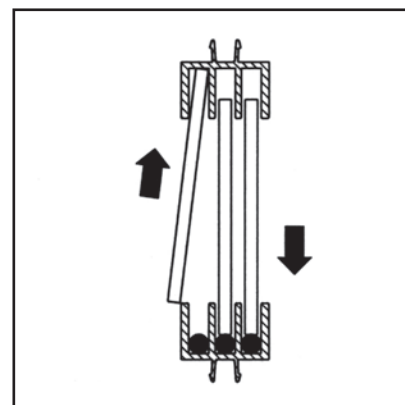
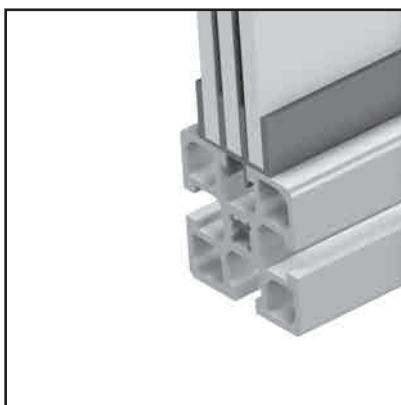
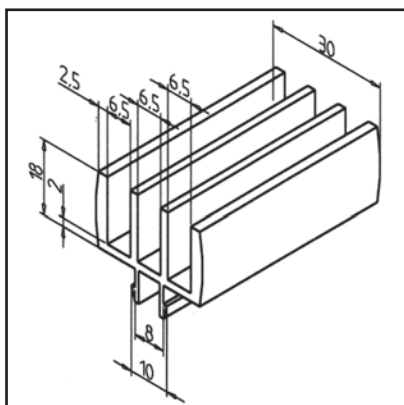
### ASSEMBLY

- Press into profile groove
- Suitable for subsequent mounting
- For retrofitting the surface elements must be inserted in the grooves of the lower guide profile round rods **part no. 22.1077/0**
- Determination of dimensions for surface elements for subsequent mounting: Light height- 20 mm, further light height - 10 mm

**GUIDE PROFILE 3**

Part no.

22.1075/1

**TECHN. DATA / ITEMS SUPPLIED**

- PVC, extruded, grey
- On request also available in black, **part no. 22.1075/0**
- Weight = 0.340 kg/m
- Bar length = 2 m

**APPLICATIONS**

- 3-fold sliding window made of surface elements up to 6 mm thick

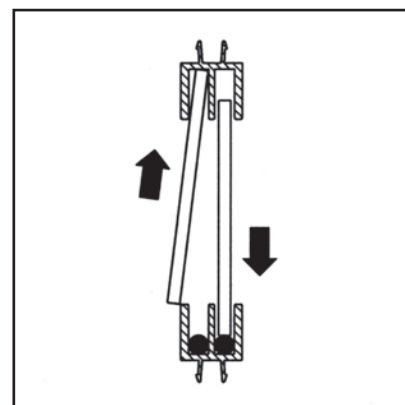
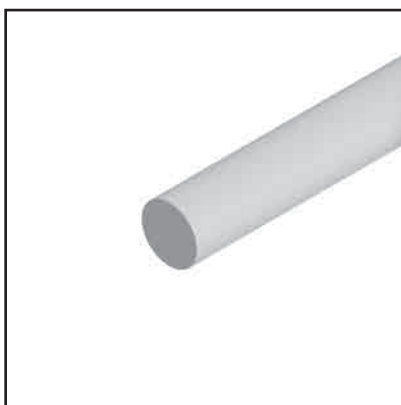
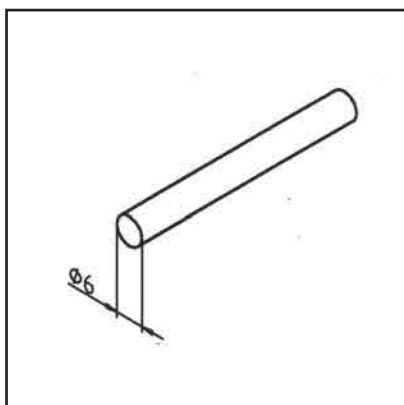
**ASSEMBLY**

- Press into profile groove
- Suitable for subsequent mounting
- For retrofitting the surface elements must be inserted in the grooves of the lower guide profile round rods **part no. 22.1077/0**
- Determination of dimensions for surface elements for subsequent mounting: Light height- 20 mm, further light height - 10 mm

**ROUND ROD**

Part no.

22.1077/0

**TECHN. DATA / ITEMS SUPPLIED**

- PA, extruded
- Ø 6 mm
- Weight = 0.040 kg/m
- Bar length = 3 m

**APPLICATIONS**

- Guiding of windows or doors in guide profiles

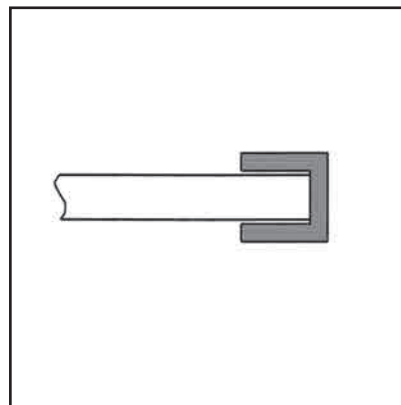
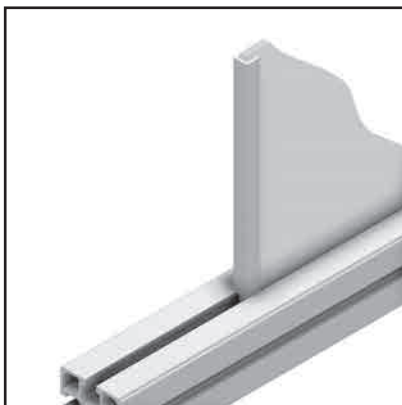
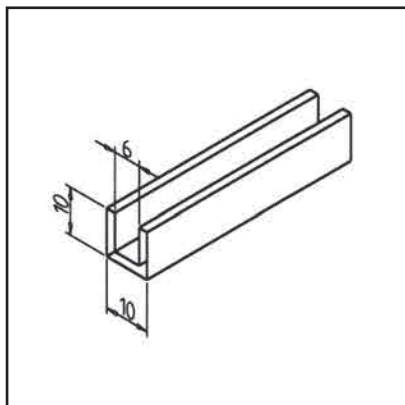
**ASSEMBLY**

- Insertion into lower guide grooves of guide profiles 2 and 3

## U-PROFILE

Part no.

21.1002/0



### TECHN. DATA / ITEMS SUPPLIED

- Aluminium, extruded, anodized E6/EV1
- Weight = 0.150 kg/m
- Bar length = 6 m

### APPLICATIONS

- Fitting panels, for surface elements of 5 mm thickness

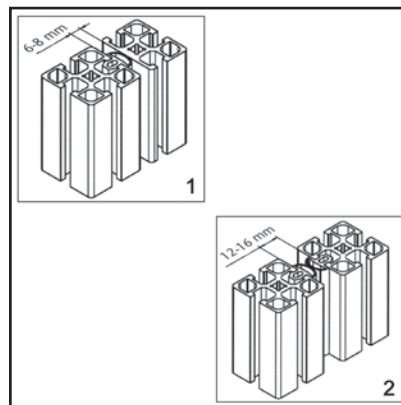
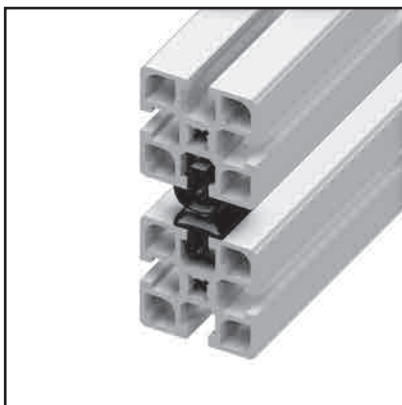
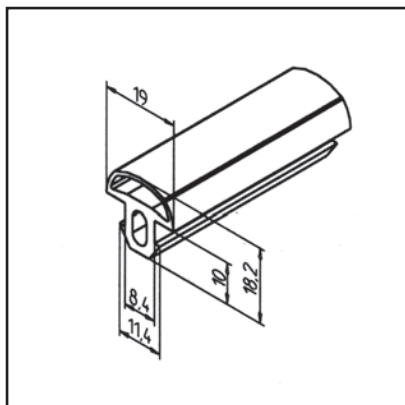
### ASSEMBLY

- Glue on edges of surface elements with suitable adhesive

## SEALING STRIP

Part no.

22.1078/0



### TECHN. DATA / ITEMS SUPPLIED

- NBR, black
- Hardness (Shore A) 70°
- Roll length 50 m
- Weight = 0.175 kg/m

### APPLICATIONS

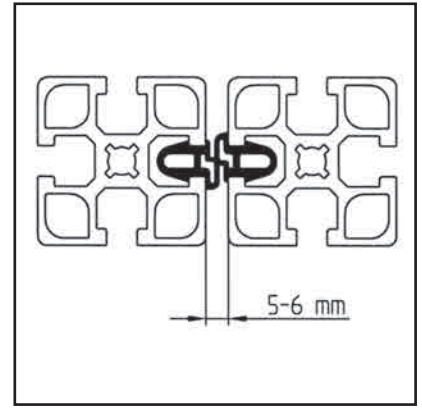
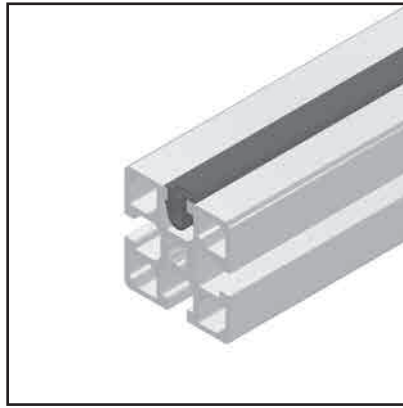
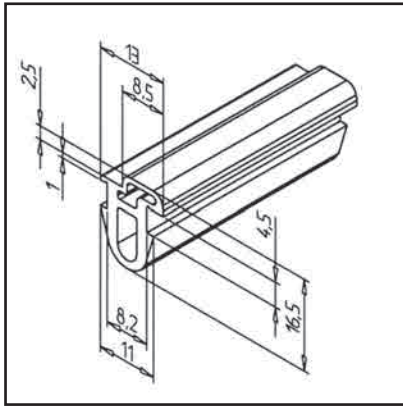
- Sealing of doors, lids and other constructions against water, dust and noise

### ASSEMBLY

- Press into profile groove
- 1. One-sided sealing: Gap width 6 - 8 mm
- 2. Double-sided sealing: Gap width 12 - 16 mm

### SEALING PROFILE

Part no. 22.1011/0



#### TECHN. DATA / ITEMS SUPPLIED

- NBR, black
- Hardness (Shore A) 70°
- Roll length 50 m
- Weight = 0.122 kg/m

#### APPLICATIONS

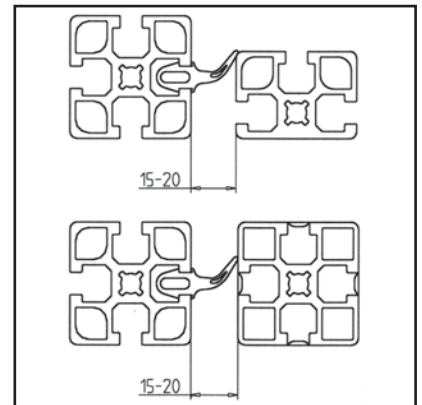
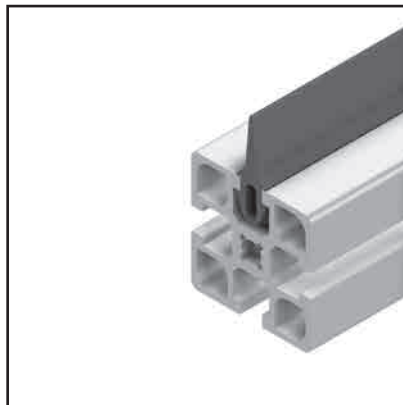
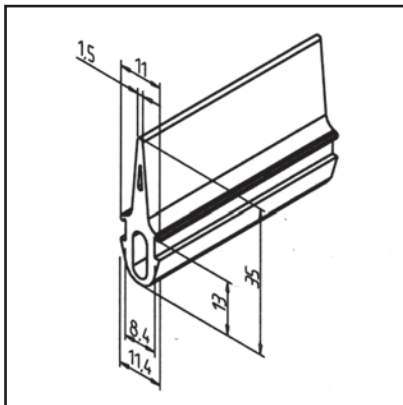
- Sealing of doors, lids and other constructions against water, dust and noise

#### ASSEMBLY

- Press into profile groove

### SEALING LIP PROFILE

Part no. 22.1038/0



#### TECHN. DATA / ITEMS SUPPLIED

- NBR, black
- Hardness (Shore A) 60°
- Roll length 75m
- Weight = 0.245 kg/m

#### APPLICATIONS

- Sealing of doors, lids and other constructions against water, dust and noise

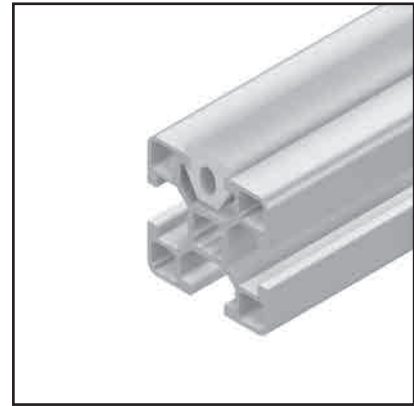
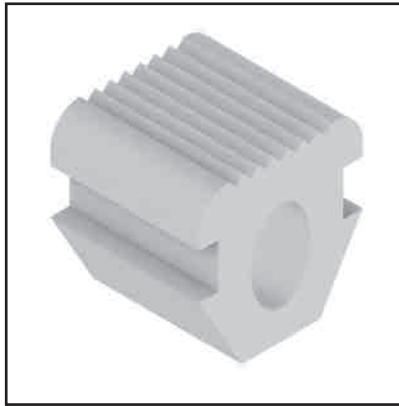
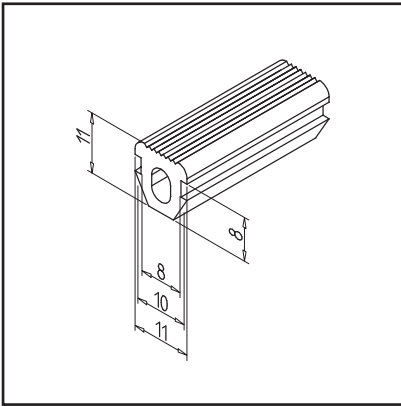
#### ASSEMBLY

- Press into profile groove

## COVER PROFILE 30

Part no.

22.1185/0



### TECHN. DATA / ITEMS SUPPLIED

- EPDM, grey
- Hardness (Shore A) 70°
- Roll length 50 m
- Weight = 0.087 kg/m

### APPLICATIONS

- Material shelves
- Edge Protection
- Support plates

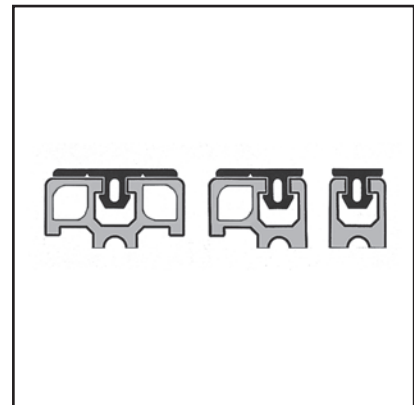
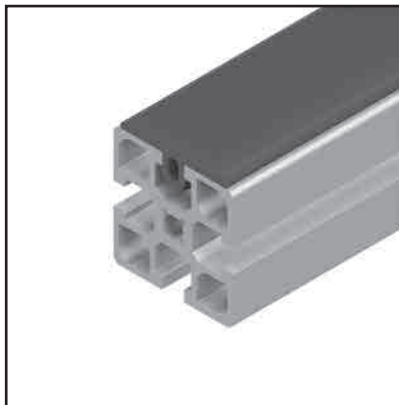
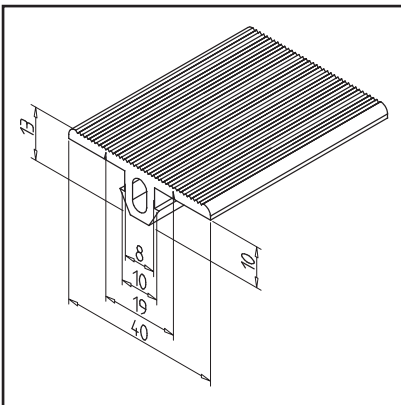
### ASSEMBLY

- Press into profile groove
- Suitable for the profiles of the profile series 30

## COVER PROFILE 45

Part no.

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### TECHN. DATA / ITEMS SUPPLIED

- Hardness (Shore A) 70°
- NBR black **part no. 22.1098/0**
- EPDM grey **part no. 22.1098/1**
- Roll length 50 m
- Weight = 0.230 kg/m

### APPLICATIONS

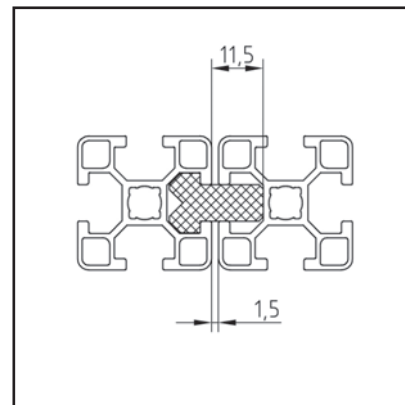
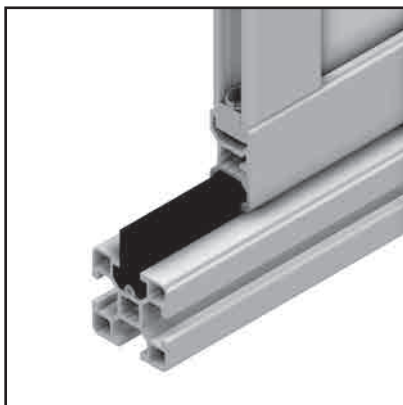
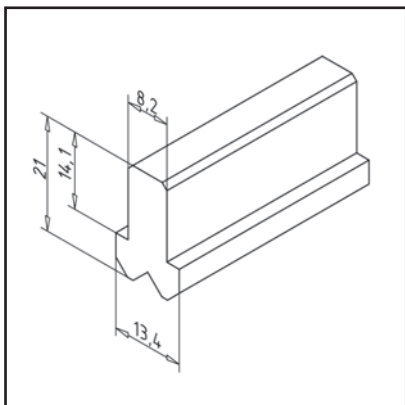
- Edge Protection
- Safety requirement step
- Ladders
- Material shelves

### ASSEMBLY

- Press into profile groove
- The lower side of the profile has 2 tear-off notches for adjustment of width to the aluminium profile

### SLIDE BAR 8 N 30

Part no. 22.1170/0



#### TECHN. DATA / ITEMS SUPPLIED

- PE-UHMW, black
- Highly wear-resistant
- Weight = 0.178 kg/m
- Bar length = 2 m

#### APPLICATIONS

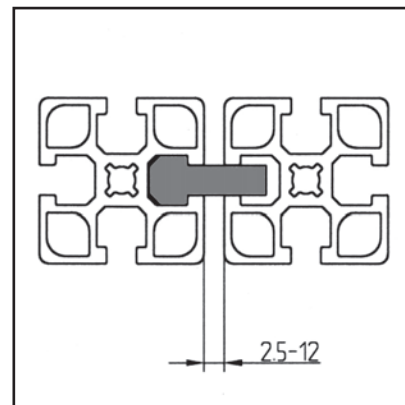
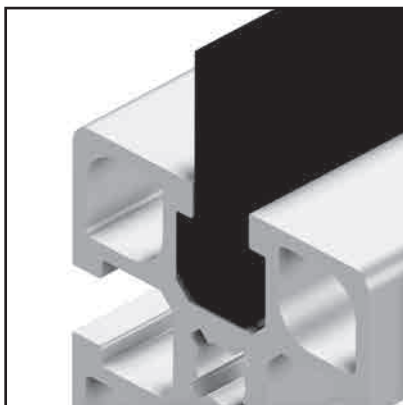
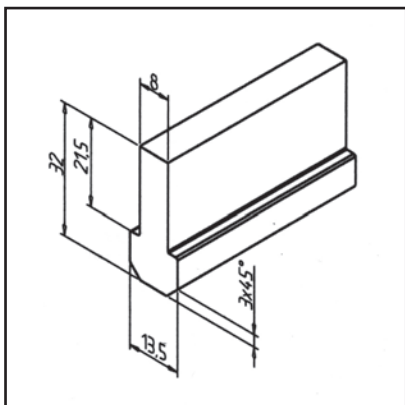
- Guiding sliding doors, pull-outs, fixtures

#### ASSEMBLY

- Slide into profile groove
- The slide rail can be fixed on request with a threaded pin M4
- To reduce friction in moving parts, we recommend using the slide rail in short pieces with a maximum length of 100 mm.

### SLIDE BAR 8 N 45

Part no. 22.1085/0



#### TECHN. DATA / ITEMS SUPPLIED

- PE-UHMW, black
- Highly wear-resistant
- Weight = 0.300 kg/m
- Bar length = 2 m

#### APPLICATIONS

- Guiding sliding doors, pull-outs, fixtures
- Lateral guide for conveyors

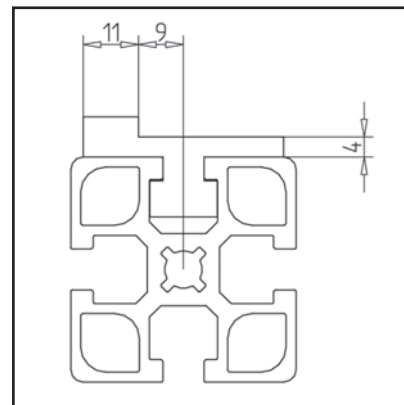
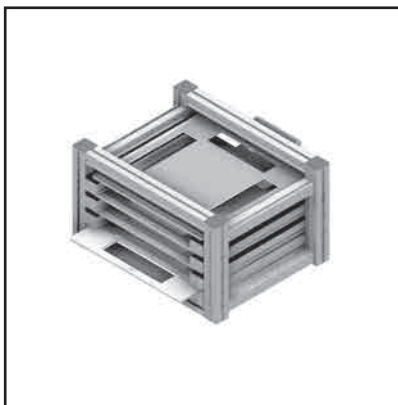
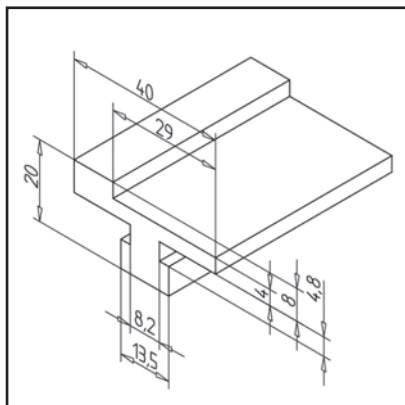
#### ASSEMBLY

- Slide into profile groove
- To reduce friction in moving parts, we recommend using the slide rail in short pieces with a maximum length of 100 mm.

## SLIDE RAIL 8-40 A

Part no.

29.8012/0



### TECHN. DATA / ITEMS SUPPLIED

- PE-UHMW, black
- Highly wear-resistant
- Weight = 0.317 kg/m
- Bar length = 2 m

### APPLICATIONS

- Sliding support
- Workpiece bearing
- Guide for lifting doors
- Slides

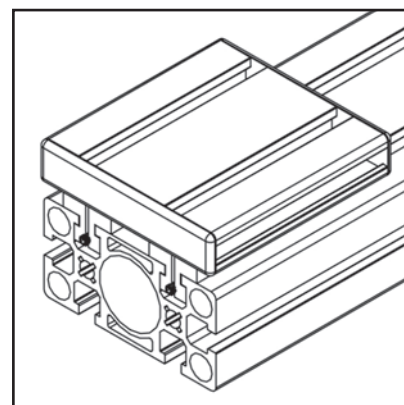
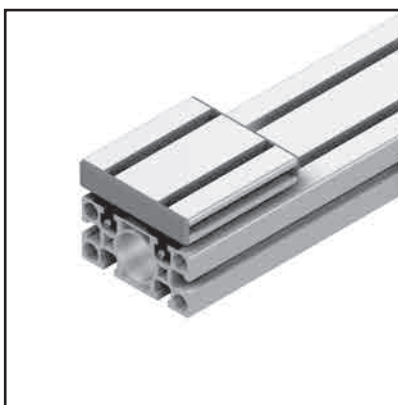
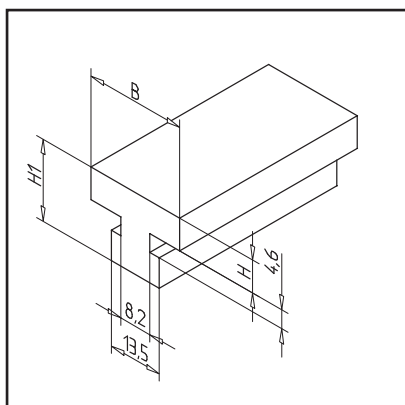
### ASSEMBLY

- Slide into profile groove
- To reduce friction in moving parts, we recommend using the slide rail in short pieces with a maximum length of 100 mm.

## SLIDE RAIL 8

Part no.

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### TECHN. DATA / ITEMS SUPPLIED

- PE-UHMW, black
- Highly wear-resistant
- B = 25 mm part no. **22.1088/0**  
H = 7,5 mm, H1 = 20 mm  
Weight 0,314 kg/m
- B = 40 mm part no. **22.1088/1**  
H = 8 mm, H1 = 18 mm  
Weight 0,400 kg/m
- B = 45 mm part no. **22.1088/3**  
H = 8 mm, H1 = 18 mm  
Weight 0,463 kg/m
- Bar length = 2 m

### APPLICATIONS

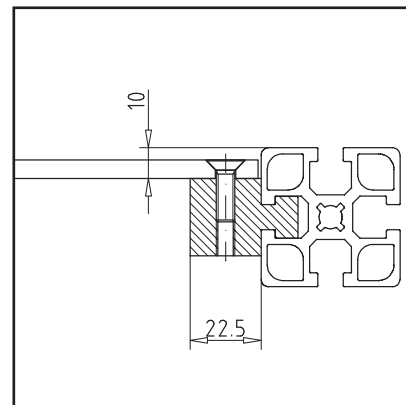
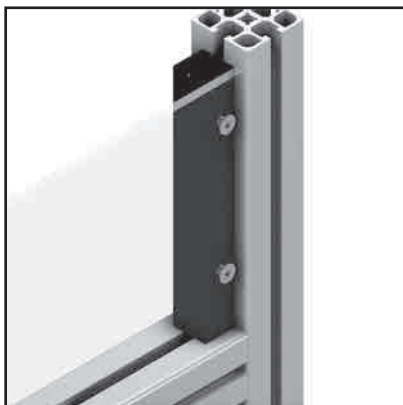
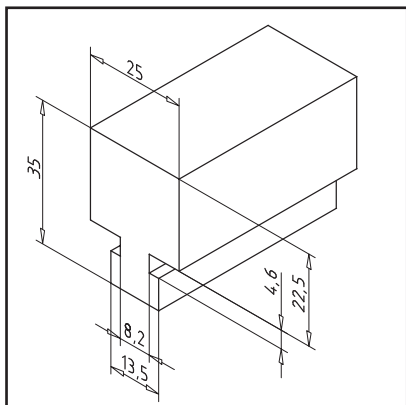
- Sliding support
- Workpiece bearing
- Guide for lifting doors
- Slides

### ASSEMBLY

- Slide into profile groove
- To reduce friction in moving parts, we recommend using the slide rail in short pieces with a maximum length of 100 mm.

### SLIDE RAIL 23

Part no. 22.1089/0



#### TECHN. DATA / ITEMS SUPPLIED

- PE-UHMW, black
- Highly wear-resistant
- Weight = 0.670 kg/m
- Bar length = 2 m

#### APPLICATIONS

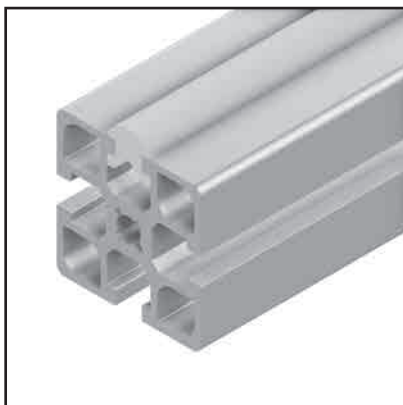
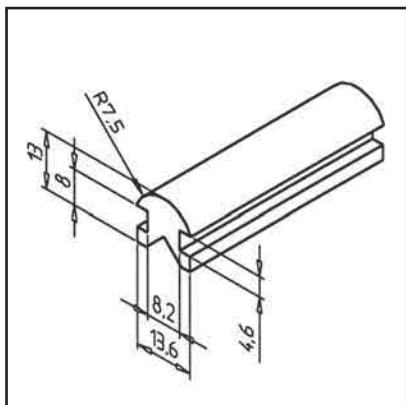
- Profile sled
- Slide supports, initiator holders
- Customer-friendly processing possible due to a greater addition of material

#### ASSEMBLY

- Slide into profile groove
- To reduce friction in moving parts, we recommend using the slide rail in short pieces with a maximum length of 100 mm.

### SLIDE STRIP R

Part no. 22.1104/0



#### TECHN. DATA / ITEMS SUPPLIED

- PE, white
- Highly wear-resistant
- Weight = 0.115 kg/m
- Bar length = 2 m

#### APPLICATIONS

- Lateral guides
- Support plates
- Sliding distance
- Jam tracks

#### ASSEMBLY

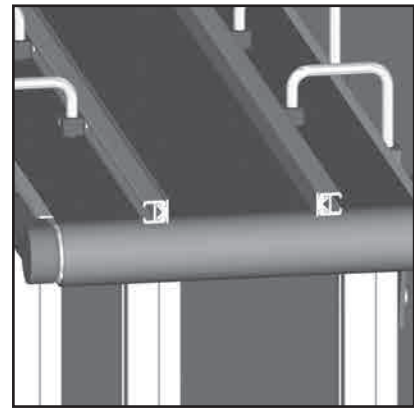
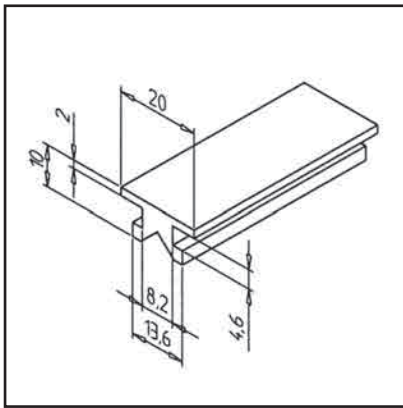
- Slide into profile groove
- Suitable for all profiles
- secure slide strip at both ends with set screw or adjustable end caps



## SLIDE STRIP F

Part no.

22.1135/0



### TECHN. DATA / ITEMS SUPPLIED

- PE, white
- Highly wear-resistant
- Weight = 0.098 kg/m
- Bar length = 2 m

### APPLICATIONS

- lateral guide for flat components
- slide for containers
- jam tracks

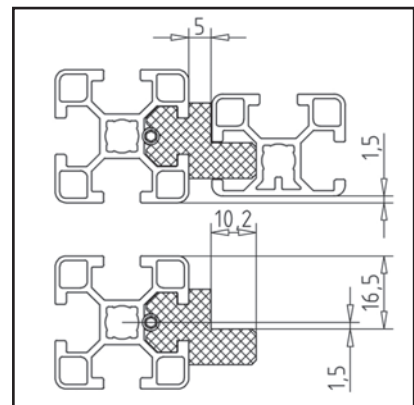
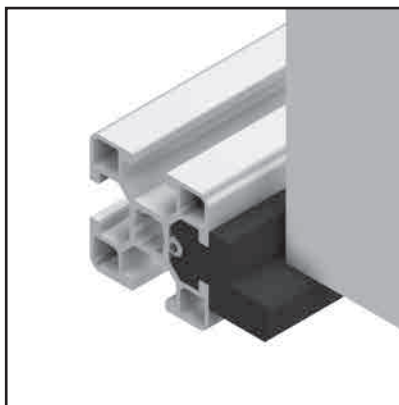
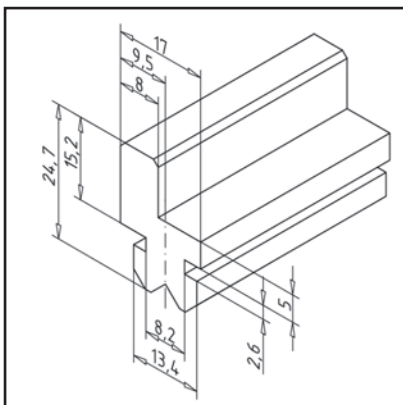
### ASSEMBLY

- Slide into profile groove
- Suitable for all profiles
- secure slide strip at both ends with set screw or adjustable end caps

## ANGULAR SLIDE RAIL 30

Part no.

22.1171/0



### TECHN. DATA / ITEMS SUPPLIED

- PE-UHMW, black
- Highly wear-resistant
- Weight = 0.248 kg/m
- Bar length = 2 m

### APPLICATIONS

- Guiding sliding doors, pull-outs, fixtures

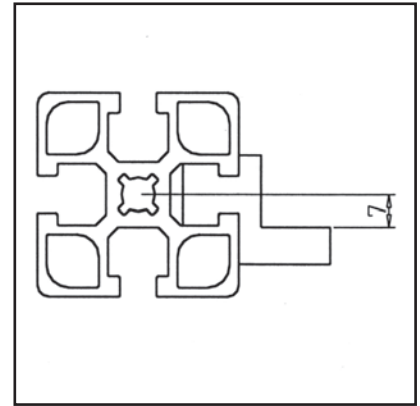
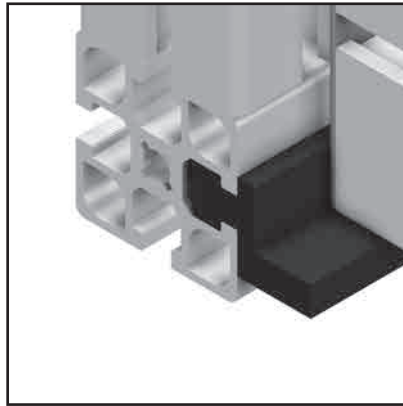
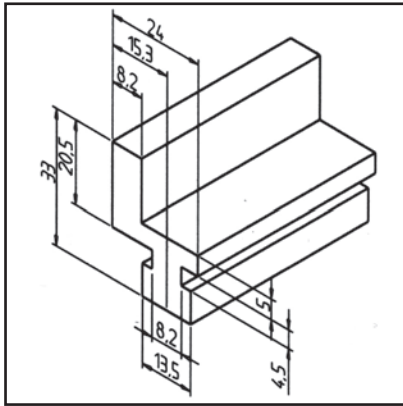
### ASSEMBLY

- Slide into profile groove
- The slide rail can be fixed on request with a threaded pin M4
- To reduce friction in moving parts, we recommend using the slide rail in short pieces with a maximum length of 100 mm.

**ANGULAR SLIDE RAIL 45**

Part no.

22.1040/0

**TECHN. DATA / ITEMS SUPPLIED**

- PE-UHMW, black
- Highly wear-resistant
- Weight = 0.480 kg/m
- Bar length = 2 m

**APPLICATIONS**

- Conveying systems
- Belt conveyors
- Side stop in conveyor sections

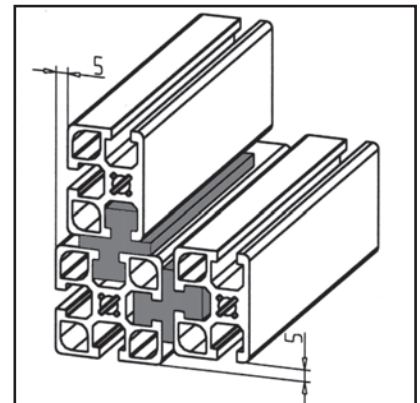
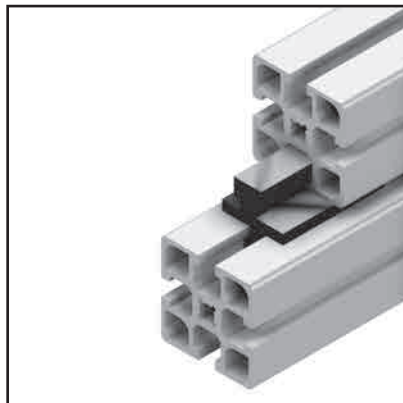
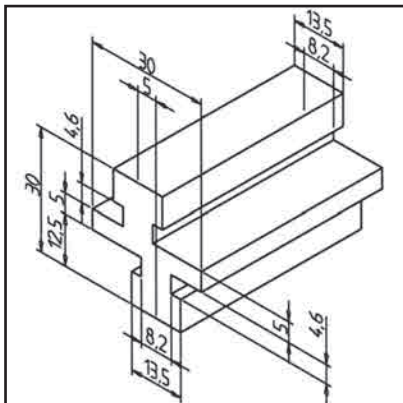
**ASSEMBLY**

- Insert in profile groove and if necessary with grub screw M6 x 16 **part no. 21.1324/0** secure.
- To reduce friction in moving parts, we recommend using the slide rail in short pieces with a maximum length of 100 mm.

**DOUBLE SLIDE RAIL**

Part no.

22.1087/0

**TECHN. DATA / ITEMS SUPPLIED**

- PE-UHMW, black
- Highly wear-resistant
- Weight = 0.420 kg/m
- Bar length = 2 m

**APPLICATIONS**

- Simple workpiece slides
- Guiding drawers in profile grooves

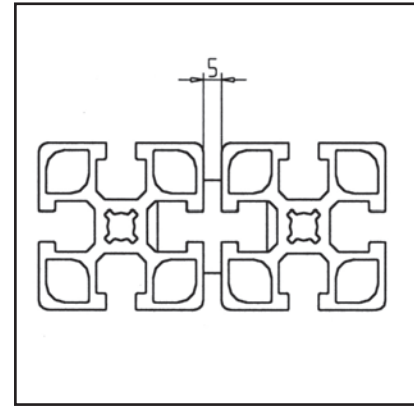
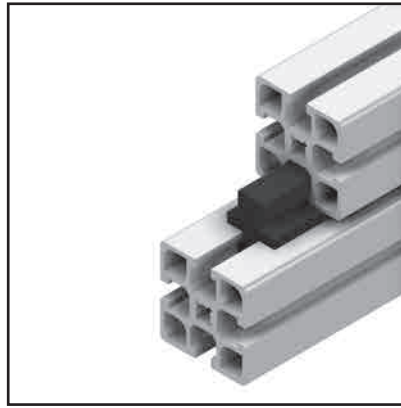
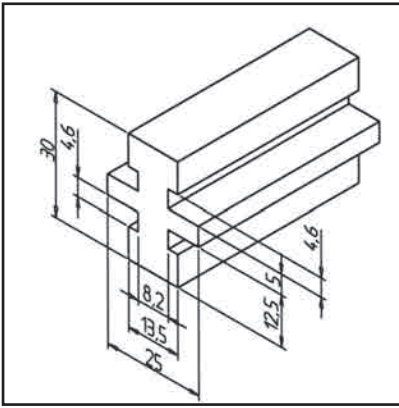
**ASSEMBLY**

- Slide into profile grooves of frame and drawers
- Secure drawers against falling out by cylinder screws M8 x 16 **part no. 21.1200/0** at both ends of the frame profile
- To reduce friction in moving parts, we recommend using the slide rail in short pieces with a maximum length of 100 mm.

## PARALLEL SLIDE RAIL

Part no.

22.1041/0



### TECHN. DATA / ITEMS SUPPLIED

- PE-UHMW, black
- Highly wear-resistant
- Weight = 0.390 kg/m
- Bar length = 2 m

### APPLICATIONS

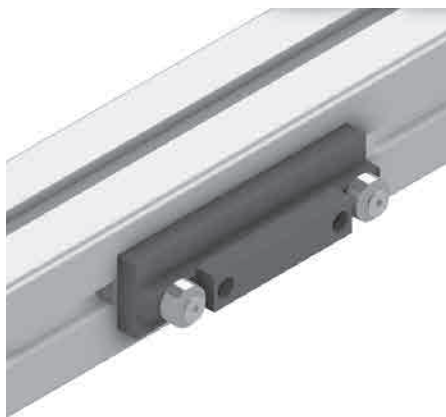
- Parallel guide without difference in height
- Externally flush sliding elements

### ASSEMBLY

- Slide into profile groove
- If necessary, one-sided by cylindrical pin M6 x 16 **part no. 21.1324/0** fix
- To reduce friction in moving parts, we recommend using the slide rail in short pieces with a maximum length of 100 mm.

## READY-TO-INSTALL ELEMENTS FOR LIFTING AND SLIDING DOORS

All elements are already pre-assembled for you from our products. They can be very easily attached to the construction profiles with our connectors. This eliminates the need to stock individual parts and considerably shortens planning and assembly times.

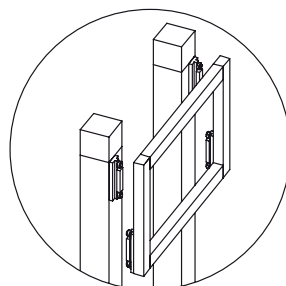
**Slide-Roller element**

A lifting door requires 4 elements:

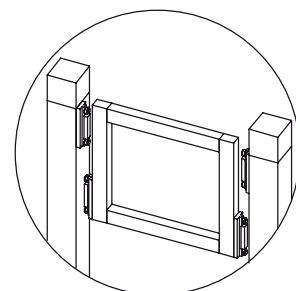
- One on each of the two columns in the upper end position.
- One on each side of the door element in the lower end position.

**Length determination guide column:** Stroke + 180 mm min.

1. Insert pre-assembled slide roller element in profile groove
2. Fasten in the desired position with Allen wrench SW4
3. Tighten self-locking screws with Allen wrench SW2.5



Installation possibility in front of the door pillars  
Gap width = 8 mm

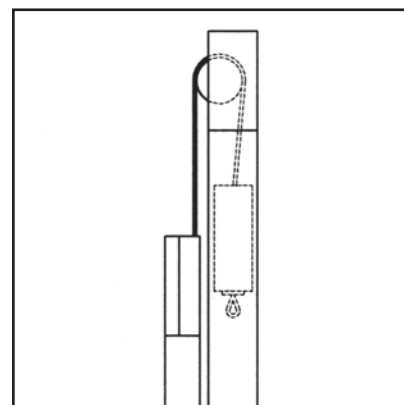
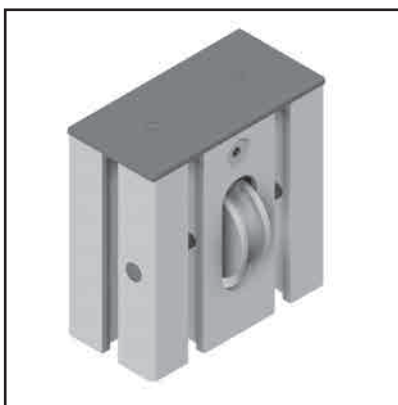
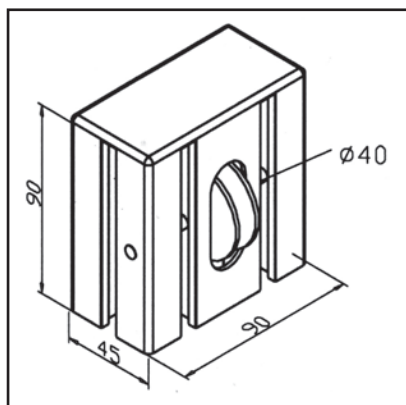


Installation possibility between the door pillars  
gap width = 8 mm

## CABLE PULLEY 45

Part no.

21.1775/0



### TECHN. DATA / ITEMS SUPPLIED

### APPLICATIONS

### ASSEMBLY

- Aluminium, anodized E6/EV1
- Housing from profile 45 x 90
- Pulley steel, galvanized, ready for installation
- End cap
- maximum weight of the lifting door with paired insertion of the pulley, 12kg
- Weight = 0.522 kg/piece

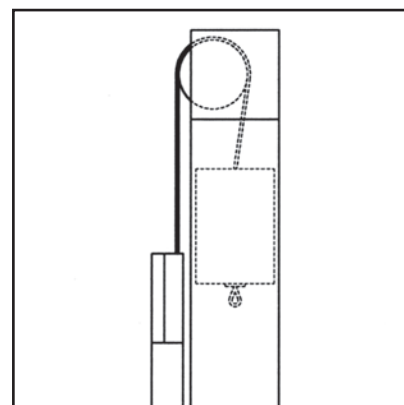
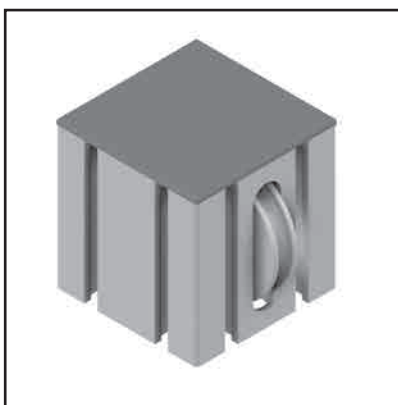
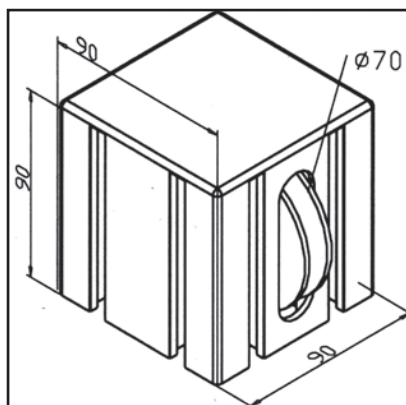
- Chain reverse unit of counterweights on lifting doors, for internal compensation weight in profile 45 x 90 L or 45 x 90 G
- For continuous movement and larger loads use >12 Kg chain redirector 45

- Attachment to the stand profile with 2 terminal strips 90 **part no. 21.1029/0**
- Associated rope **part no. 21.1777/0** is consumable and must be checked regularly and lubricated if necessary

## CABLE PULLEY 90

Part no.

21.1776/0



### TECHN. DATA / ITEMS SUPPLIED

### APPLICATIONS

### ASSEMBLY

- Aluminium, anodized E6/EV1
- Housing from profile 90 x 90
- Pulley steel, galvanized, ready for installation
- End cap
- maximum weight of the lifting door with paired insertion of the pulley, 30kg
- Weight = 0.680 kg/piece

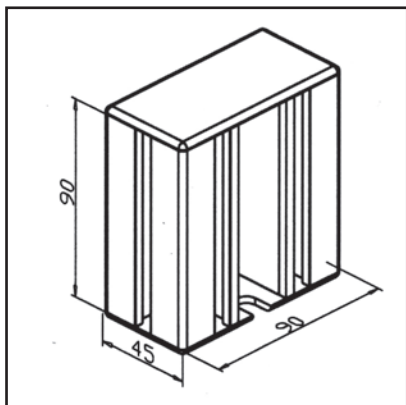
- Chain reverse unit of counterweights on lifting doors, for internal compensation weight in profile 90 x 90 L
- For continuous movement and loads use >30 Kg chain redirector 90

- Attachment to the stand profile with 4 terminal strips 90 **part no. 21.1029/0**
- Associated rope **part no. 21.1777/0** is consumable and must be checked regularly and lubricated if necessary

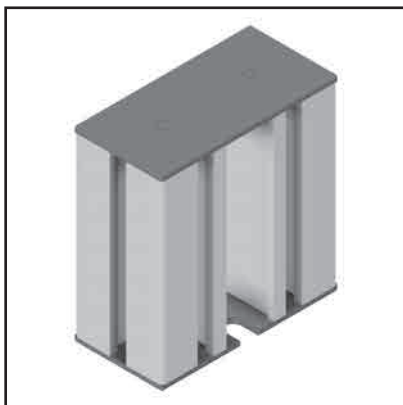
**HAND PROTECTION**

Part no.

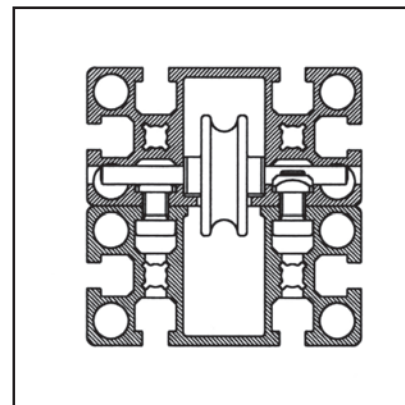
21.1780/0

**TECHN. DATA / ITEMS SUPPLIED**

- Aluminium, anodized E6/EV1
- With fastening nut steel, galvanized
- From profile 45 x 90
- Matching caps, one of them with recess for cable or chain passage
- Length 90 mm
- Weight = 0.290 kg/piece

**APPLICATIONS**

- Securing from squeezing points in the area of the cable or chain inlet

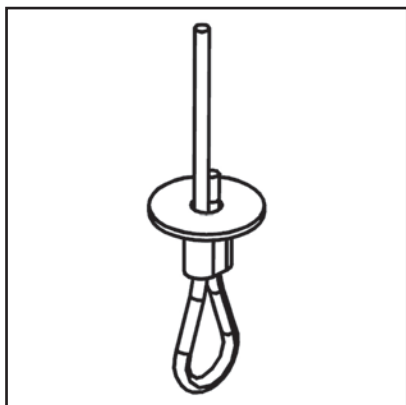
**ASSEMBLY**

- Mount with supplied hardware

**CABLE FOR COUNTERWEIGHT**

Part no.

21.1777/0

**TECHN. DATA / ITEMS SUPPLIED**

- Steel cable VA, 2,5 mm
- With clamping eye hook on one side, pressed
- **On request also deliverable in other lengths**
- Standard length 2.5 m
- Weight = 0.070 kg/piece

**APPLICATIONS**

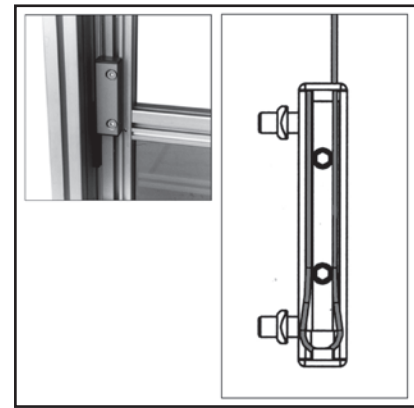
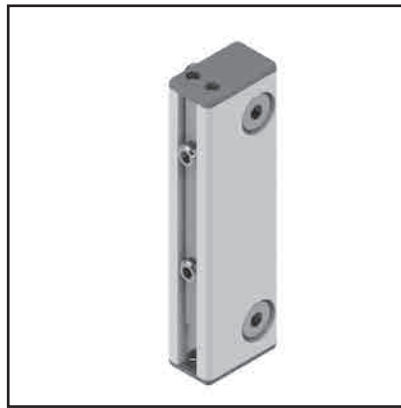
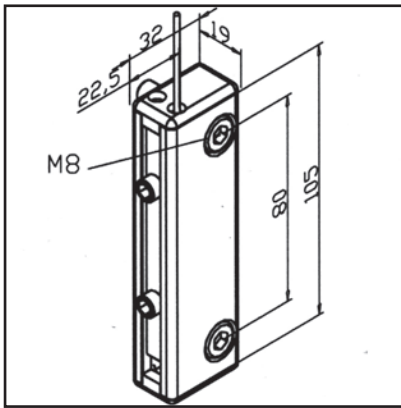
- Use in connection with counterweight 45 or 90 and cable pulley

**ASSEMBLY**

- Lead the cable through the center bore and into the counterweight
- Rope with rope clamp **part no. 21.1797/0** fasten to lifting door
- Cable is a wear part and must be regularly checked and lubricated if required

## CABLE CLAMP

Part no. 21.1797/0



### TECHN. DATA / ITEMS SUPPLIED

- Aluminium, anodized E6/EV1
- From profile 19 x 32
- 1 Clamping plate
- 2 hex socket cap screws with square nuts
- 2 suitable end caps, one of them bored
- Weight = 0.150 kg/piece

### APPLICATIONS

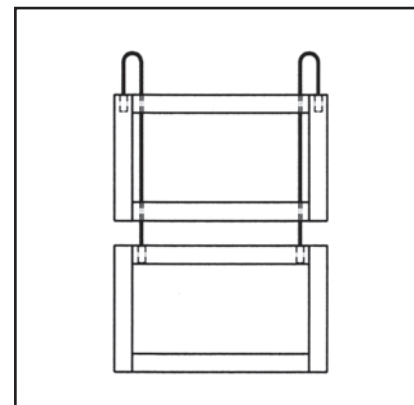
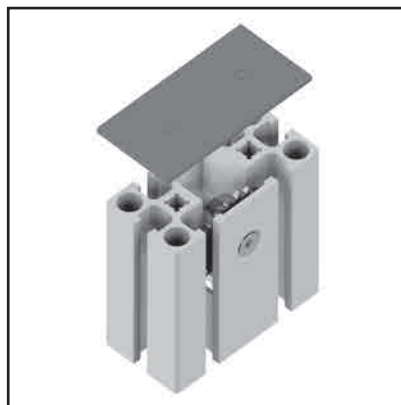
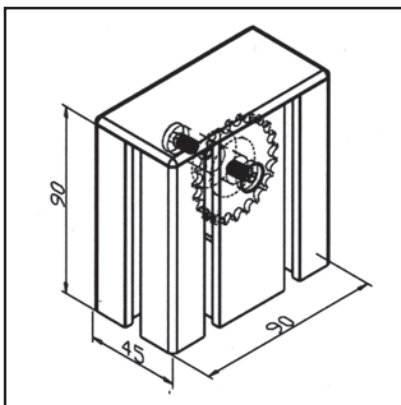
- Fixing the wire cable **part no. 21.1777/0** on the door element of a lifting door

### ASSEMBLY

- Remove the lower end cap
- Attach rope clamp with fastening kit at the top of the door element
- Pull the rope through the bore of the upper end cap
- Adjust balance weight to desired position
- Place the cable end around the clamping bar in the loop, insert it into the groove of the cable clamp and secure with a threaded pin
- If necessary, shorten the projecting end of the rope and replace the removed cap

## SYNCHRONOUS REVERSE UNIT 45

Part no. 21.1792/0



### TECHN. DATA / ITEMS SUPPLIED

- Aluminium, anodized E6/EV1
- Housing from profile 45 x 90
- Sprocket galvanized steel, ready for installation
- maximum weight of the lifting door with paired insertion of the pulley, 34kg
- Weight = 0.340 kg/piece

### APPLICATIONS

- Simultaneous opening and closing of two lifting doors running in the operate direction; doors are of similar weight
- Post preferably aus profile 45x90 or 90x90. The side profiles of the doors preferably made of profile 90x32 or 45x90 guided by sliding roll element in the post.

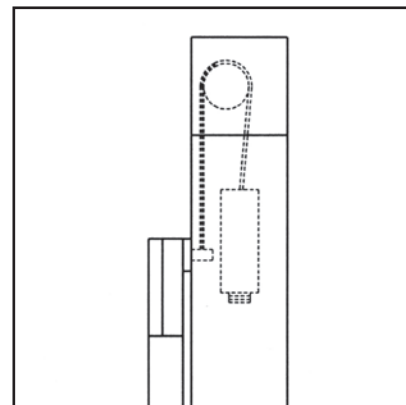
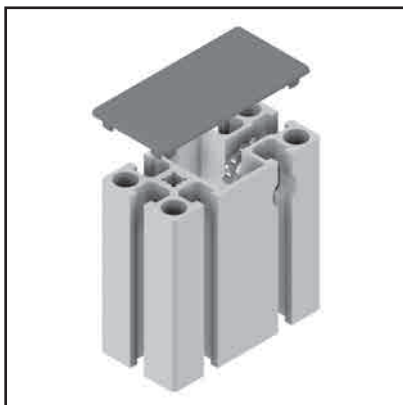
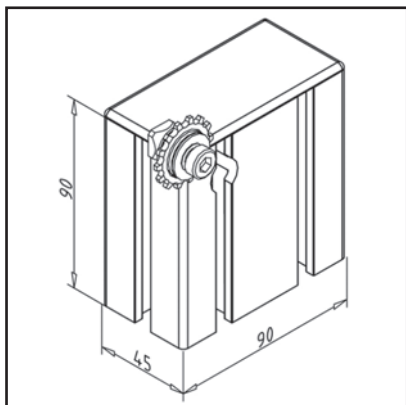
### ASSEMBLY

- Attachment to the stand profile with 2 terminal strips 90 **part no. 21.1029/0**
- Chain 04 **part no. 21.1713/0** insert in diversion, with chain clamping door **part no. 21.1712/0** attach to the two doors and insert in the stand profiles
- Chain is guided in the profile groove, thus no hand-protection is required

**CHAIN PULLEY 32**

Part no.

21.1774/0

**TECHN. DATA / ITEMS SUPPLIED**

- Aluminium, anodized E6/EV1
- Housing from profile 45 x 90
- Sprocket galvanized steel, ready for installation
- End cap
- maximum weight of the lifting door with paired insertion of the pulley, 50kg
- Weight = 0.388 kg/piece

**APPLICATIONS**

- Chain reverse unit of counterweights on lifting doors, for internal compensation weight in profile 45 x 90 F or 45 x 90 G

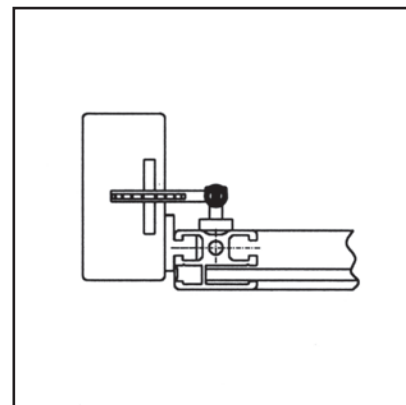
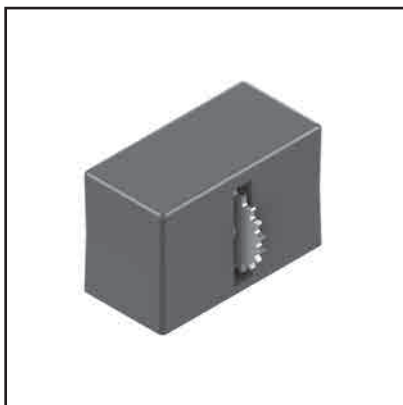
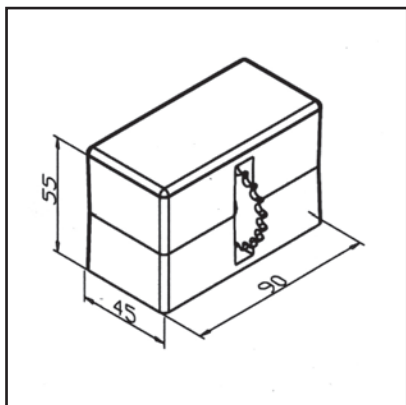
**ASSEMBLY**

- Attachment to the stand profile with 2 terminal strips 90 **part no. 21.1029/0**
- Use of chain 04 **part no. 21.1712/0** and chain clamping weight **part no. 21.1711/0**
- The cable is guided in the profile groove, thus no hand-protection is required

**CHAIN PULLEY 45 A**

Part no.

21.1838/0

**TECHN. DATA / ITEMS SUPPLIED**

- Aluminium, Pressure die-casting, powder-coated, grey
- Sprocket galvanized steel, ready for installation
- End cap
- With fastening material steel, zinc plated
- maximum weight of the lifting door with paired insertion of the pulley, 50kg
- Weight = 0.350 kg/piece

**APPLICATIONS**

- Chain reverse unit of counterweights on lifting doors, for internal compensation weight in profile 45 x 90 F or 45 x 90 G

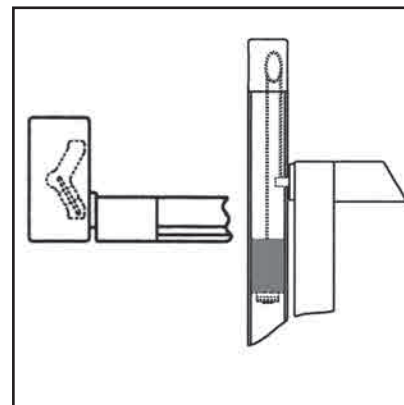
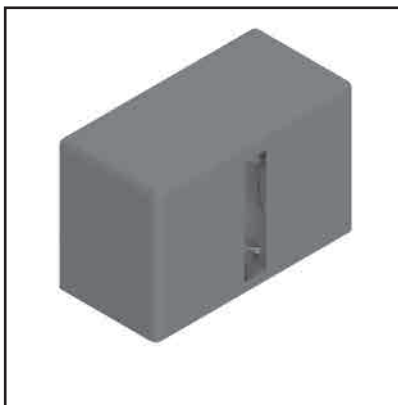
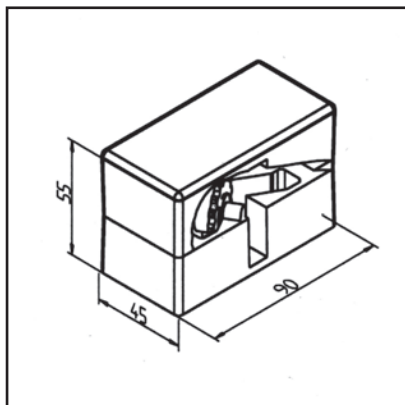
**ASSEMBLY**

- Install with supplied hardware, insert thread M8 into the stand profile
- Use of chain 04 **part no. 21.1713/0** with chain clamp door **part no. 21.1712/0** and chain clamping weight **part no. 21.1711/0**
- Chain runs outside center on wide side of profile, if necessary with hand protection **part no. 21.1780/0** cover



## CHAIN PULLEY 45 I

Part no. 21.1840/0



### TECHN. DATA / ITEMS SUPPLIED

### APPLICATIONS

### ASSEMBLY

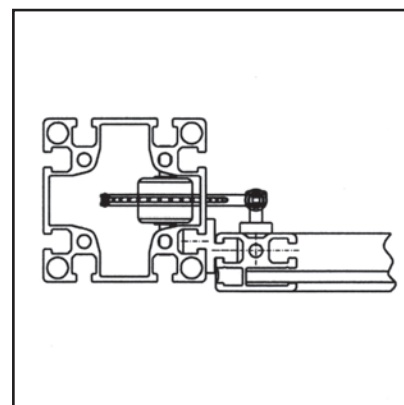
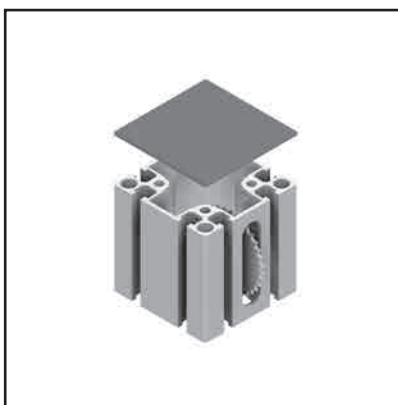
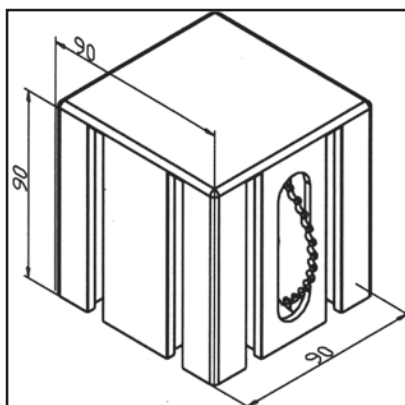
- Aluminium, Pressure die-casting, powder-coated, grey
- Sprocket galvanized steel, ready for installation
- End cap
- With fastening material steel, zinc plated
- maximum weight of the lifting door with paired insertion of the pulley, 50kg
- Weight = 0.350 kg/piece

- Chain reverse unit of counterweights on lifting doors, for internal compensation weight in profile 45 x 90 F or 45 x 90 G

- Install with supplied hardware, insert thread M8 into the stand profile
- Use of chain 04 **part no. 21.1713/0** with chain clamp door **part no. 21.1712/0** and chain clamping weight **part no. 21.1711/0**
- Chain runs on the broad side of the profile in the right or left profile groove (adjustable chain wheel), no hand-protection required

## CHAIN PULLEY 90

Part no. 21.1839/0



### TECHN. DATA / ITEMS SUPPLIED

### APPLICATIONS

### ASSEMBLY

- Aluminium, anodized E6/EV1
- Housing from profile 90 x 90
- Sprocket galvanized steel, ready for installation
- End cap
- maximum weight of the lifting door with paired insertion of the pulley, 70kg
- Weight = 0.680 kg/piece

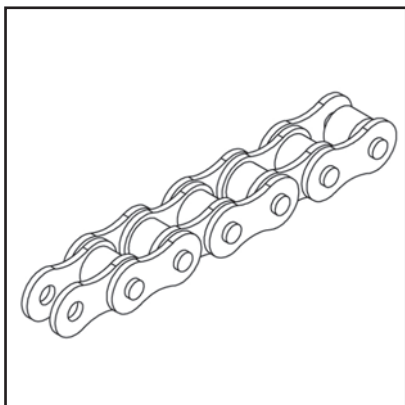
- Chain reverse unit of counterweights on lifting doors, for internal balancing weight in profile 90 x 90 L

- Attachment to the stand profile with 4 terminal strips 90 **part no. 21.1029/0**
- Use of chain 04 **part no. 21.1713/0** with chain clamp door **part no. 21.1712/0** and chain clamping weight **part no. 21.1711/0**
- Chain runs outside center on profile surface, if necessary with hand protection **part no. 21.1780/0** cover

## CHAIN 04

Part no.

21.1713/0



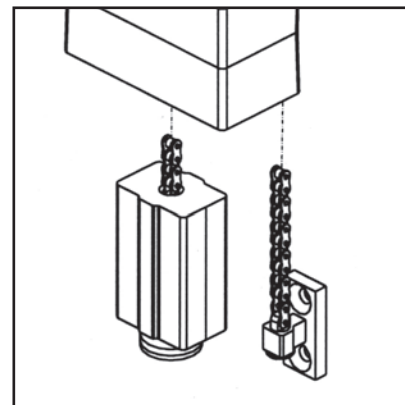
## TECHN. DATA / ITEMS SUPPLIED

- Steel
- Size 4
- **Please indicate desired length**
- Breaking force min. 3000N
- Weight = 0.150 kg/m



## APPLICATIONS

- Use in conjunction with balancing weight 45 or 90 and chain reverse unit.
- Use in conjunction with chain clamping door **part no. 21.1712/0** for attaching the chain to the door side
- Use in conjunction with chain clamp weight **part no. 21.1711/0** for attaching the chain to the balance weight



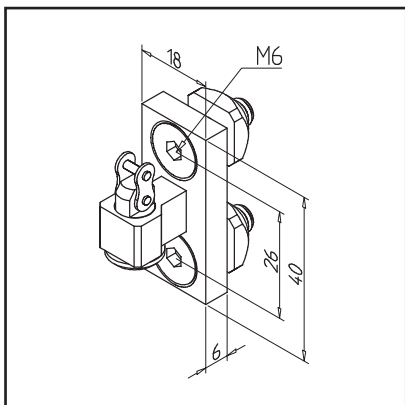
## ASSEMBLY

- Guide the chain through the balance weight and guide the chain clamp to the weight **part no. 21.1711/0** and install the chain lock
- When mounted on door, chain by mounted chain clamp door **part no. 21.1712/0** and install bolt with chain lock

## DOOR CHAIN CLAMPING DEVICE

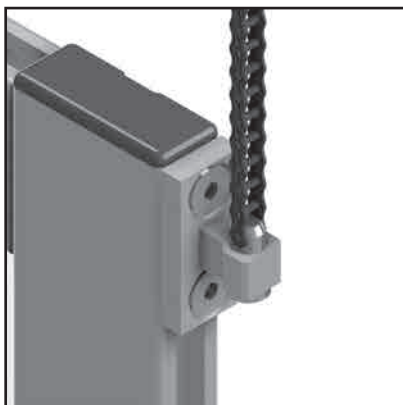
Part no.

21.1712/0



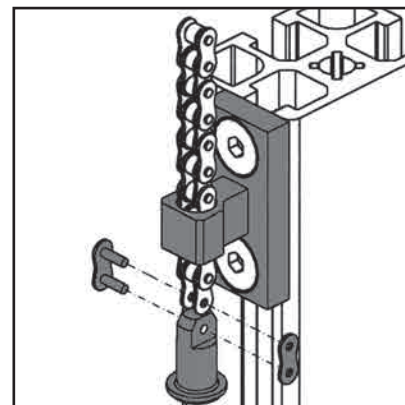
## TECHN. DATA / ITEMS SUPPLIED

- Steel, galvanized
- With fastening material steel, zinc plated
- Weight = 0.060 kg/piece



## APPLICATIONS

- Use in conjunction with balancing weight 45 or 90 and chain reverse unit.
- Use in conjunction with chain 04 **part no. 21.1713/0** for fixing to door side



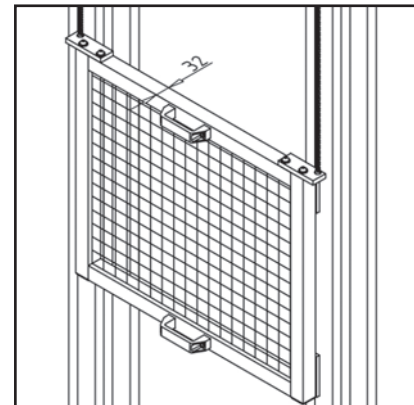
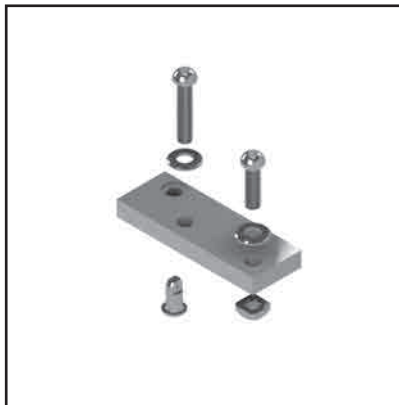
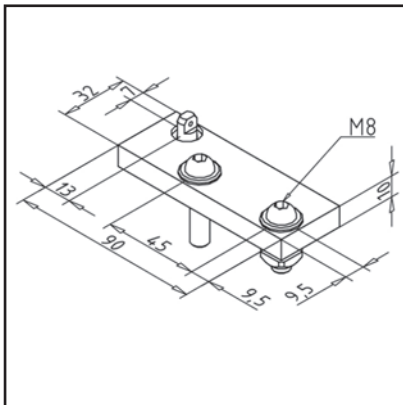
## ASSEMBLY

- Guide the chain through the balance weight and guide the chain clamp to the weight **part no. 21.1711/0** and install the chain lock
- When mounted on door, chain by mounted chain clamp door **part no. 21.1712/0** and install bolt with chain lock
- When making lift doors, where the chain is guided in the groove, we recommend the use of our sliding roller element **part no. 21.1796/0**. Here is a door gap to the post of 8 mm provided.

## DOOR CHAIN CLAMPING DEVICE KV-32

Part no.

21.1980/0



### TECHN. DATA / ITEMS SUPPLIED

- Steel, galvanized
- With fastening material and chain lock
- Weight = 0.247 kg/piece

### APPLICATIONS

- Use in connection with chain pulley 90 and chain 04
- Lifting plate made of profile 45x32 with sliding roller mounted in front of the posts

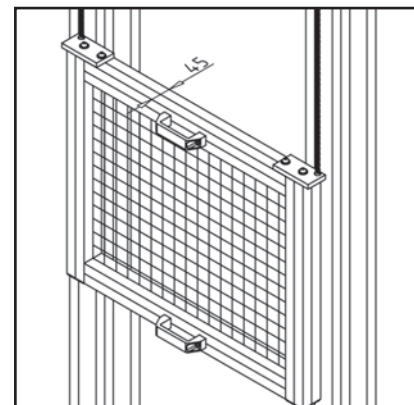
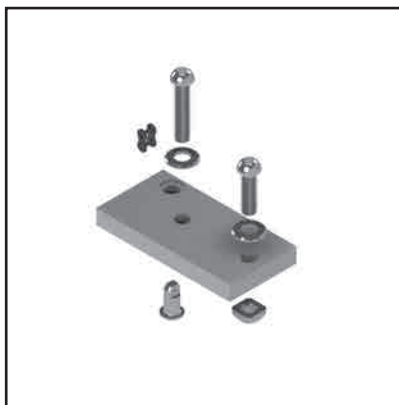
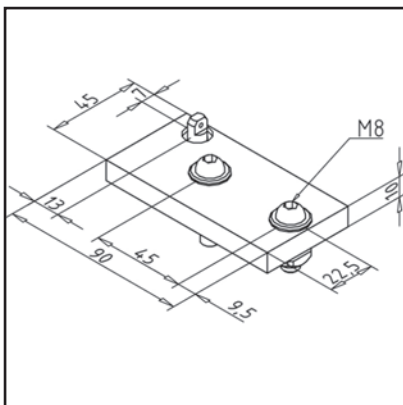
### ASSEMBLY

- Mount plate on lifting plate and secure the roller chain 04 using the supplied chain lock
- Two chain clamps are required for each lifting field

## DOOR CHAIN CLAMPING DEVICE KV-45

Part no.

21.1981/0



### TECHN. DATA / ITEMS SUPPLIED

- Steel, galvanized
- With fastening material and chain lock
- Weight = 0.345 kg/piece

### APPLICATIONS

- Use in connection with chain pulley 90 and chain 04
- Lifting plate made of profile 45x45 with sliding roller mounted in front of the posts

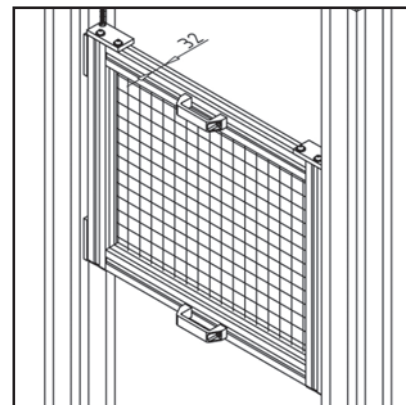
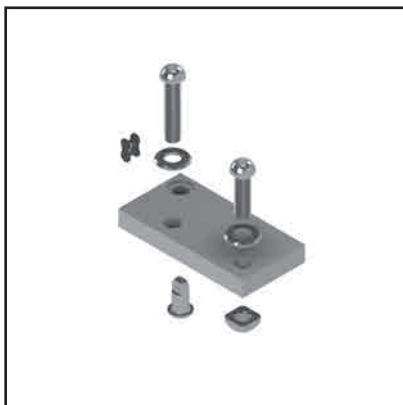
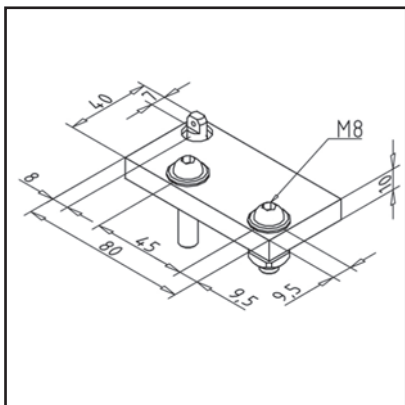
### ASSEMBLY

- Mount plate on lifting plate and secure the roller chain 04 using the supplied chain lock
- Two chain clamps are required for each lifting field

### DOOR CHAIN CLAMPING DEVICE KI-32

Part no.

21.1982/0



#### TECHN. DATA / ITEMS SUPPLIED

- Steel, galvanized
- With fastening material and chain lock
- Weight = 0.278 kg/piece

#### APPLICATIONS

- Use in connection with chain pulley 90 and chain 04
- Lifting plate made of profile 45x32 with sliding roller mounted between the posts

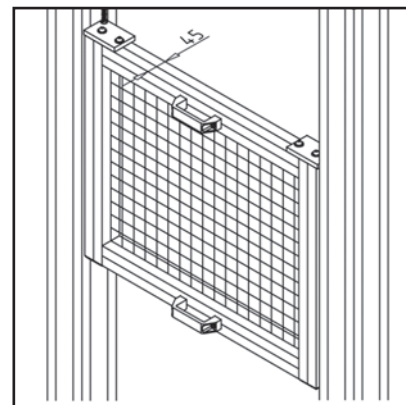
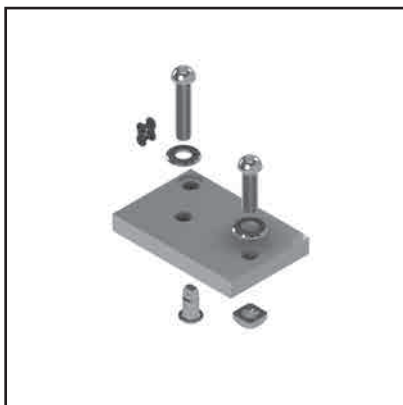
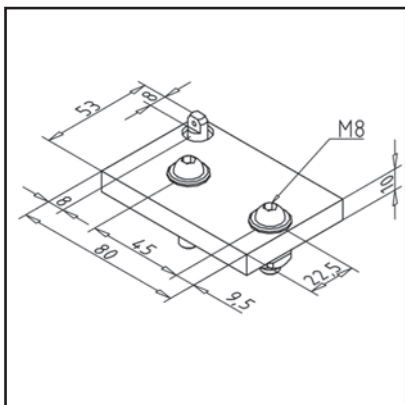
#### ASSEMBLY

- Mount plate on lifting plate and secure the roller chain 04 using the supplied chain lock
- Two chain clamps are required for each lifting field

### DOOR CHAIN CLAMPING DEVICE KI-45

Part no.

21.1983/0



#### TECHN. DATA / ITEMS SUPPLIED

- Steel, galvanized
- With fastening material and chain lock
- Weight = 0.360 kg/piece

#### APPLICATIONS

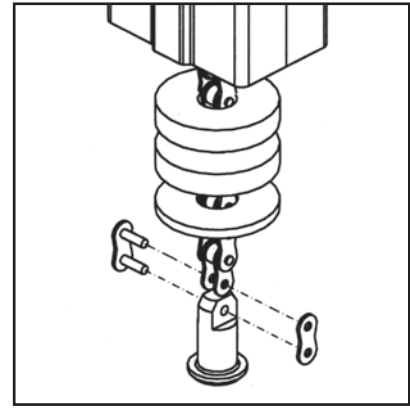
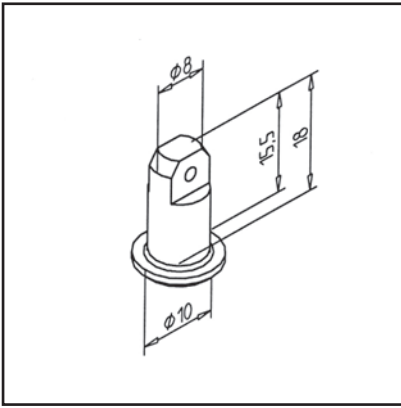
- Use in connection with chain pulley 90 and chain 04
- Lifting plate made of profile 45x45 with sliding roller mounted between the posts

#### ASSEMBLY

- Mount plate on lifting plate and secure the roller chain 04 using the supplied chain lock
- Two chain clamps are required for each lifting field

## CHAIN CLAMPING WEIGHT

Part no. 21.1711/0



### TECHN. DATA / ITEMS SUPPLIED

- Steel, galvanized
- Rubber-ring
- chain lock
- Weight = 0.015 kg/piece

### APPLICATIONS

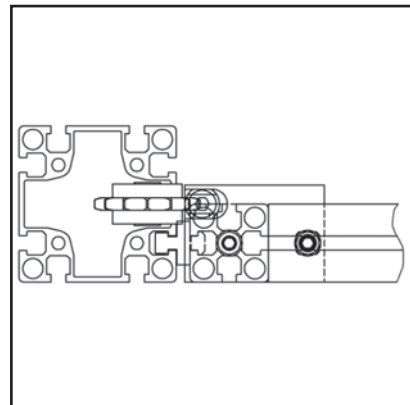
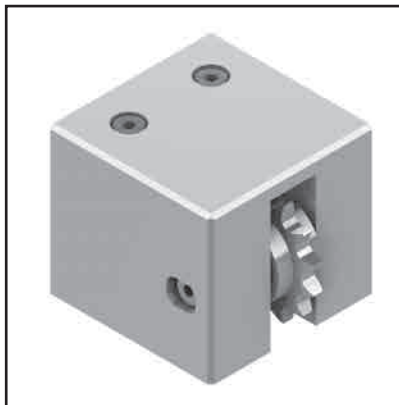
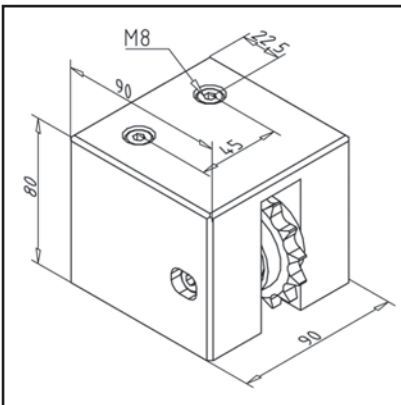
- Use in conjunction with balancing weight 45 or 90 and chain reverse unit.
- Use in conjunction with chain 04 **part no. 21.1713/0** for attaching the chain to the balance weight

### ASSEMBLY

- Guide the chain through the balance weight and guide the chain clamp to the weight **part no. 21.1711/0** and install the chain lock
- When mounted on door, chain by mounted chain clamp door **part no. 21.1712/0** and install bolt with chain lock

## CHAIN PULLEY 90 S

Part no. 21.0920/0



### TECHN. DATA / ITEMS SUPPLIED

- Aluminium, anodized E6/EV1
- With fastening material steel, zinc plated
- maximum weight of the lifting door with paired insertion of the pulley, 150kg
- Weight = 1.748 kg/piece

### APPLICATIONS

- Chain reverse unit of counterweights on lifting doors, for internal balancing weight in profile 90 x 90 L

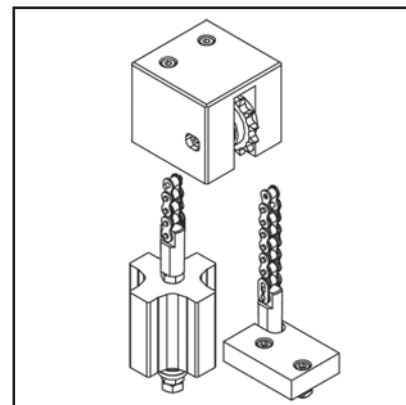
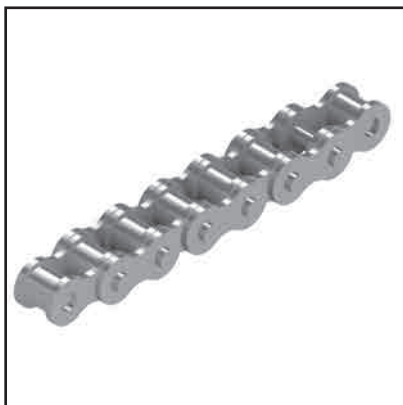
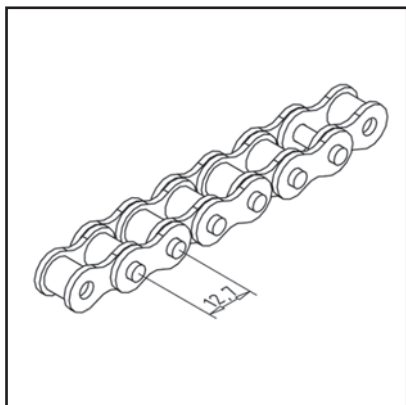
### ASSEMBLY

- Use fastening kit
- Use of chain 08 **part no. 29.0307/0**, chain clamping weight S **part no. 21.0925/0**

## CHAIN 08

Part no.

29.0307/0



### TECHN. DATA / ITEMS SUPPLIED

- Steel
- Size 8
- Breaking force min. 18,000 N
- **Please indicate desired length**
- Weight = 0.700 kg/m

### APPLICATIONS

- Use in conjunction with balancing weight 45 or 90 and chain clamping 90 S
- For this chain clamping weight S **part no. 21.0925/0** use

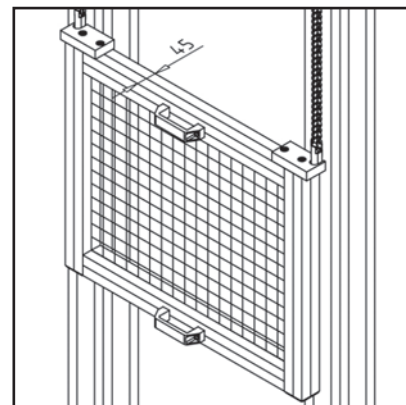
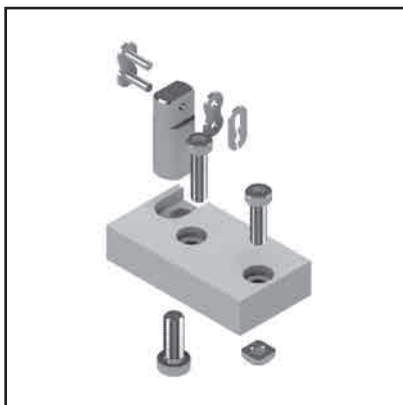
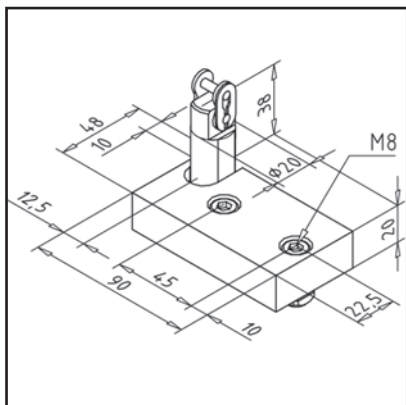
### ASSEMBLY

- Attachment to the stand profile with 4 terminal strips Fixing with chain clamp weight S **part no. 21.0925/0** on threaded rod M10 **part no. 21.1667/0** for receiving the balance weights

## DOOR CHAIN CLAMPING 90 S, AT THE FRONT

Part no.

21.0927/0



### TECHN. DATA / ITEMS SUPPLIED

- Aluminium, anodized E6/EV1
- With fastening material and chain lock
- Weight = 0.381 kg/piece

### APPLICATIONS

- Use in conjunction with chain reverse 90 S and chain 08
- Add a lifting plate from Profile 45x45 with sliding roller in front of the posts

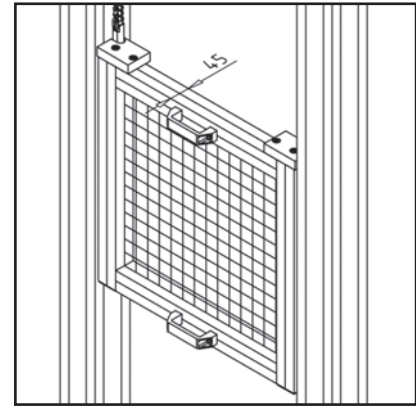
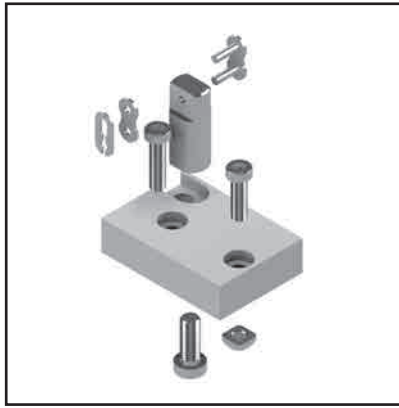
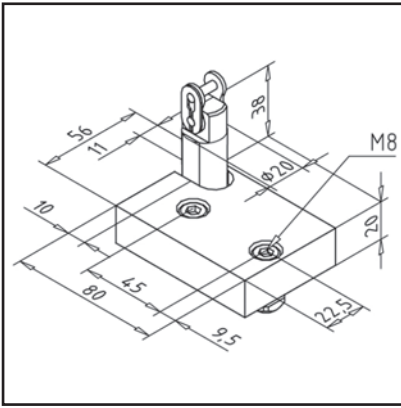
### ASSEMBLY

- Mount plate on lifting plate and secure the roller chain 08 using the supplied chain lock
- Each lifting plate requires 2 chain reversing unit

## DOOR CHAIN CLAMPING 90 S, ON THE SIDE

Part no.

21.0928/0



### TECHN. DATA / ITEMS SUPPLIED

- Aluminium, anodized E6/EV1
- With fastening material and chain lock
- Weight = 0.368 kg/piece

### APPLICATIONS

- Use in conjunction with chain reverse 90 S and chain 08
- Add a lifting plate from Profile 45x45 with sliding roller between the posts

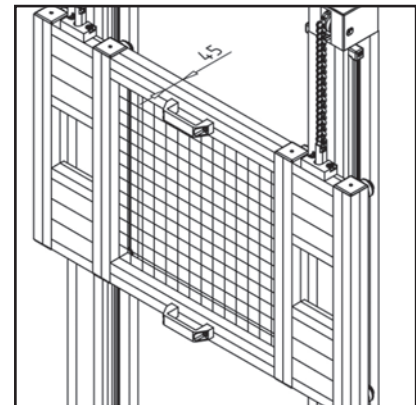
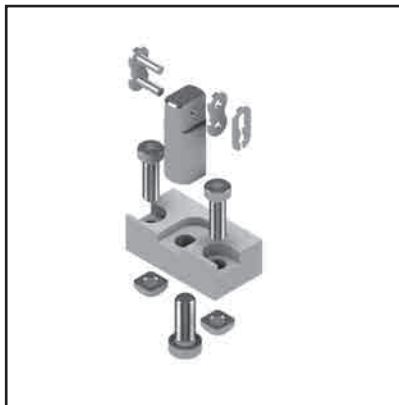
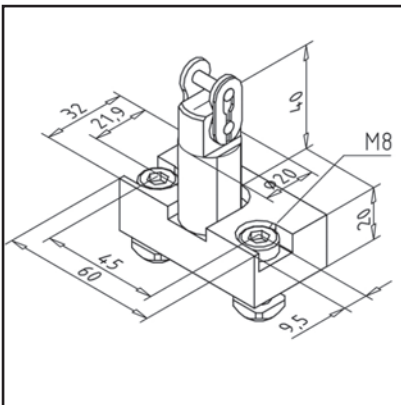
### ASSEMBLY

- Mount plate on lifting plate and secure the roller chain 08 using the supplied chain lock
- Each lifting plate requires 2 chain reversing unit

## CHAIN CLAMPING 90 S CARRIAGE

Part no.

21.0929/0



### TECHN. DATA / ITEMS SUPPLIED

- Aluminium, anodized E6/EV1
- With fastening material and chain lock
- Weight = 0.375 kg/piece

### APPLICATIONS

- Use in conjunction with chain reverse 90 S and chain 08
- For mounting on slide LW 45 or LW 90

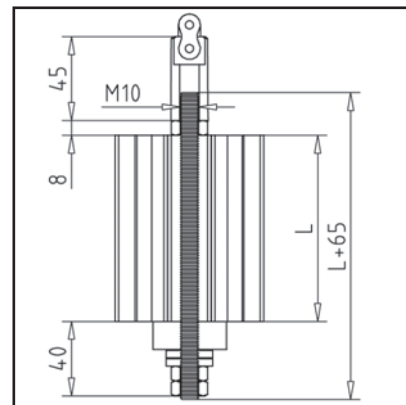
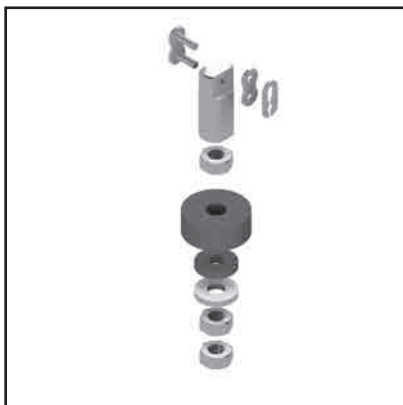
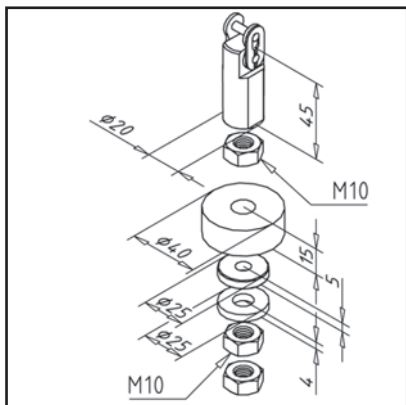
### ASSEMBLY

- Mount plate on carriage and secure the roller chain 08 using the supplied chain lock

## CHAIN CLAMPING WEIGHT S

Part no.

21.0925/0



### TECHN. DATA / ITEMS SUPPLIED

- Steel, galvanized
- Rubber-ring
- chain lock
- Please threaded rod M10 **part no. 21.1667/0** order additionally in the desired length
- Weight = 0.145 kg/piece

### APPLICATIONS

- Use in connection with roller chain 08 and balancing weight 45 or 90
- Length of the threaded rod = length of the weight +65mm

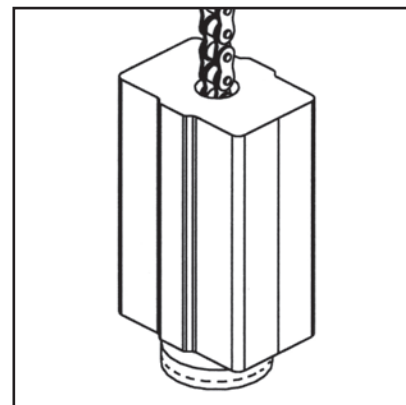
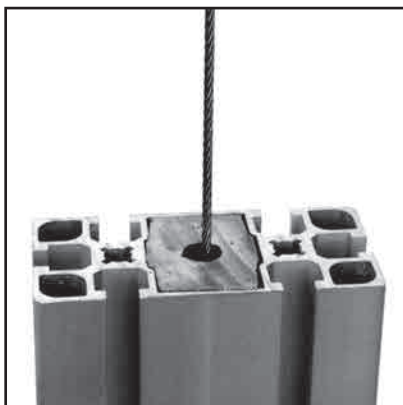
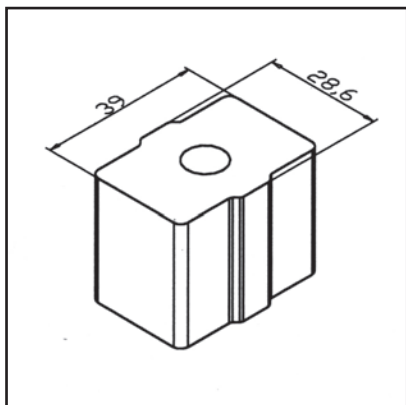
### ASSEMBLY

- Guide the threaded rod through the weight
- Attach the components included at both ends
- Connect threaded rod with enclosed chain lock chain

## COUNTERWEIGHT 45

Part no.

21.1772/0



### TECHN. DATA / ITEMS SUPPLIED

- Lead
- Fitting for profile 45 x 90 F or 45 x 90 G
- Length 0,330m
- Weight = 10.000 kg/m

### APPLICATIONS

- Weight compensation for lightweight lifting doors
- Suitable for cable or roller chain 04 or roller chain 08

### ASSEMBLY

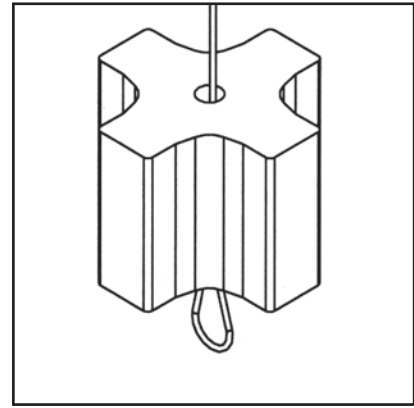
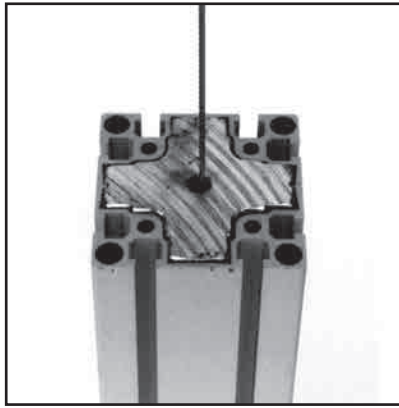
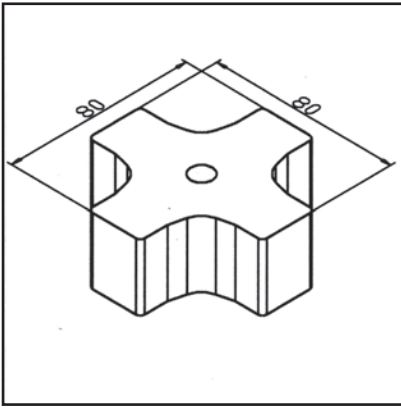
- Set it into profile with pre-assembled cable or pre-assembled chain



## COUNTERWEIGHT 90

Part no.

21.1778/0



### TECHN. DATA / ITEMS SUPPLIED

- Lead
- For profiles 90 x 90
- Length 0,260m
- Weight = 38.500 kg/m

### APPLICATIONS

- Weight compensation for lightweight lifting doors
- Suitable for cable or roller chain 04 or roller chain 08

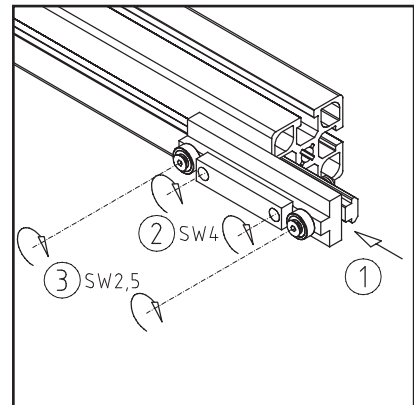
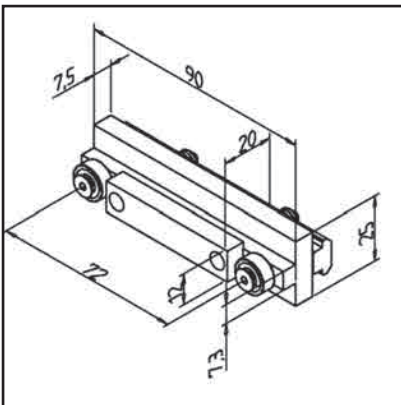
### ASSEMBLY

- Set it into profile with pre-assembled cable or pre-assembled chain

## SLIDE-ROLL ELEMENT

Part no.

21.1796/0



### TECHN. DATA / ITEMS SUPPLIED

- PE-UHMW, black
- 1 T-slot bar, steel, zinc plated
- 2 ball bearings, pre-assembled
- Fmax. 200 N
- Weight = 0.094 kg/piece

### APPLICATIONS

- Guide for lifting doors in the groove of the vertical profile
- Moving parts
- Bearing of workpieces, slides, brackets

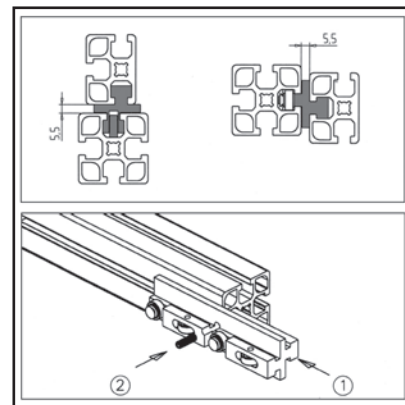
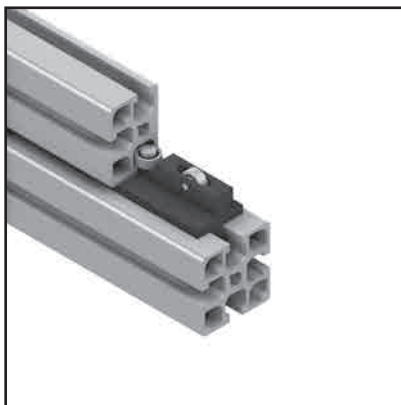
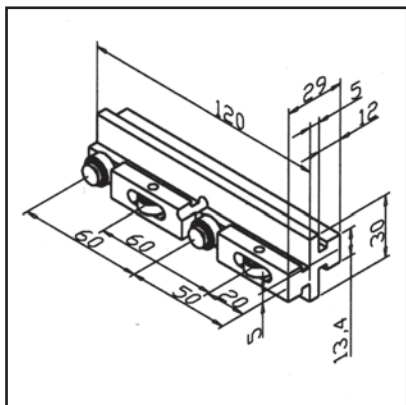
### ASSEMBLY

1. Insert pre-assembled slide roller element in profile groove
2. Fasten in the desired position with Allen wrench SW4
3. Tighten self-locking screws with Allen wrench SW2.5

**GLIDE ROLL ELEMENT**

Part no.

21.1799/0

**TECHN. DATA / ITEMS SUPPLIED**

- PE-UHMW, black
- 1 clamping screw, steel, zinc plated
- 4 built-in ball-bearings
- Fmax. 300 N
- Weight = 0.061 kg/piece

**APPLICATIONS**

- Guide for sliding doors, lifting-doors, work-piece-slides, light linear guides
- Both groove holders are arranged in parallel, for simplify the design of flush sliding doors

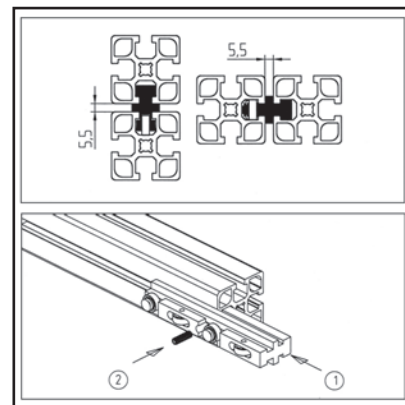
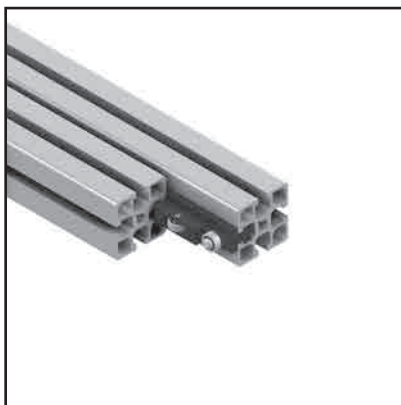
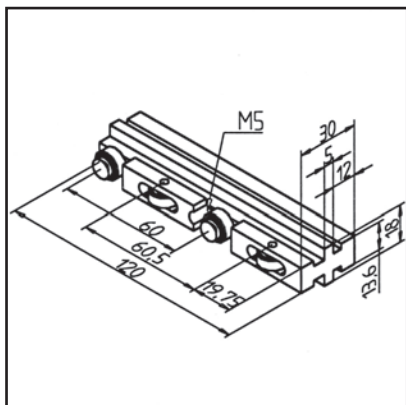
**ASSEMBLY**

- 1: Insert the element with screw side into profile groove of movable construction part
- 2: secure with threaded pin
- 3: Slide the completely mounted movable part into the grooves of the guiding profiles. Secure the movable part against falling out with screws at both ends

**GLIDE ROLL ELEMENT PARALLEL**

Part no.

21.1714/0

**TECHN. DATA / ITEMS SUPPLIED**

- PE-UHMW, black
- 1 clamping screw, steel, zinc plated
- 4 built-in ball-bearings
- Fmax. 300 N
- Weight = 0.055 kg/piece

**APPLICATIONS**

- Guide for sliding doors, lifting-doors, work-piece-slides, light linear guides
- Both groove holders are arranged in parallel, for simplify the design of flush sliding doors

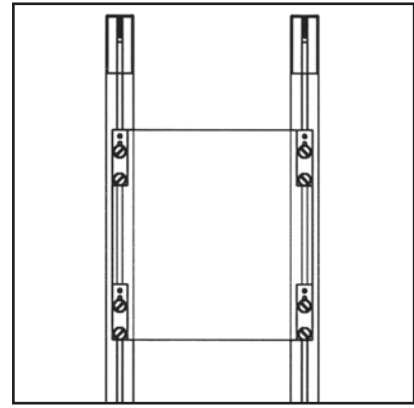
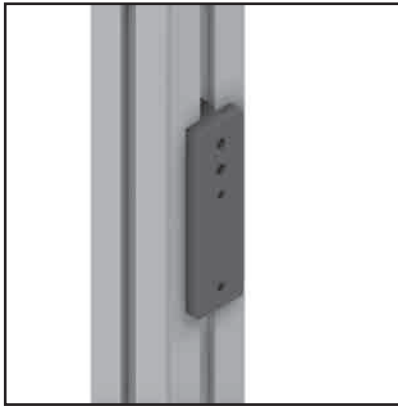
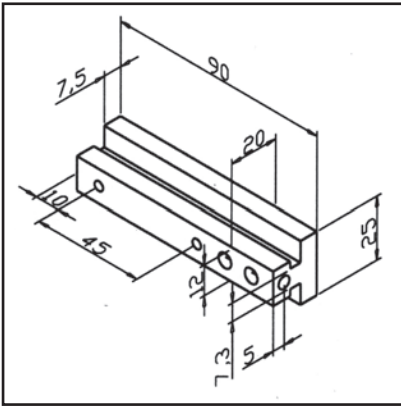
**ASSEMBLY**

- 1: Insert the element with screw side into profile groove of movable construction part
- 2: secure with threaded pin
- 3: Slide the completely mounted movable part into the grooves of the guiding profiles. Secure the movable part against falling out with screws at both ends

## SLIDE ELEMENT

Part no.

21.1795/0



### TECHN. DATA / ITEMS SUPPLIED

- PE-UHMW, black
- With fastening material steel, zinc plated
- Ready to install with cable ducting and clamping
- Weight = 0.029 kg/piece

### APPLICATIONS

- Guide for lightweight lifting doors and simultaneous connection of door element and balancing weight
- Especially suitable for direct attachment on surface elements without frame

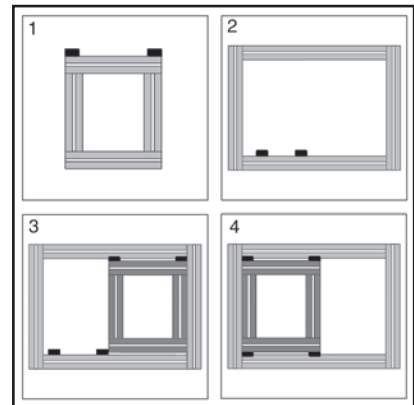
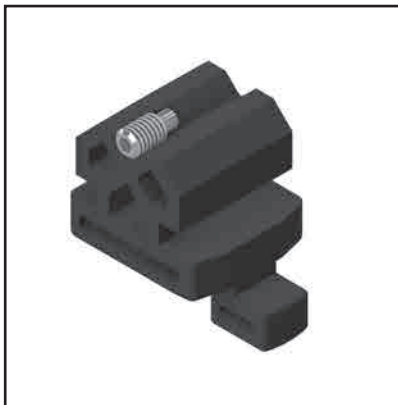
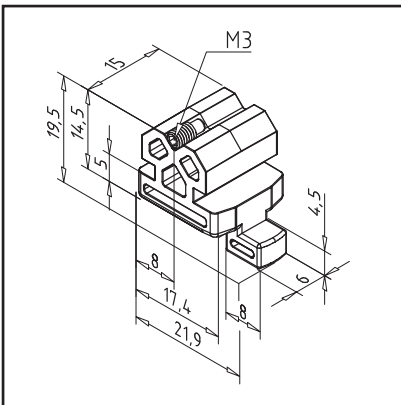
### ASSEMBLY

- Connect rope of counterweight with slide tensioning element
- Secure cable end with clamp
- Screw into the groove of the vertical profile
- Screw panel element

## GUIDE FOR SLIDING DOOR 30 V

Part no.

22.1184/0



### TECHN. DATA / ITEMS SUPPLIED

- PA, black
- 1 locking screw
- For 1 door element 4 guides are necessary
- Weight = 0.004 kg/piece

### APPLICATIONS

- Sliding doors
- sliding elements
- For a simultaneous guidance of 2 elements in 1 profile groove
- It is possible to retrofit sliding doors in existing constructions
- For use with door elements of profile series 30
- The outer frame construction can consist of profiles of series 45 as well as of series 30

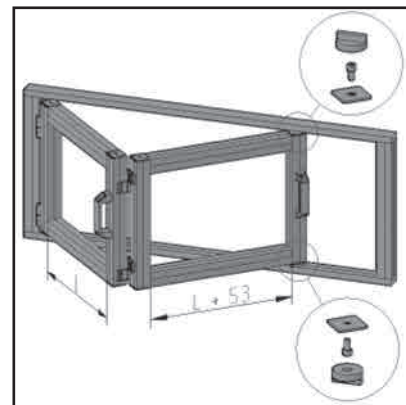
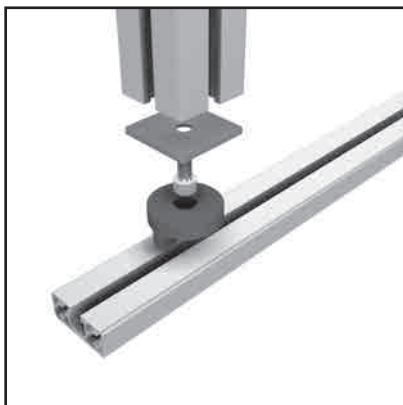
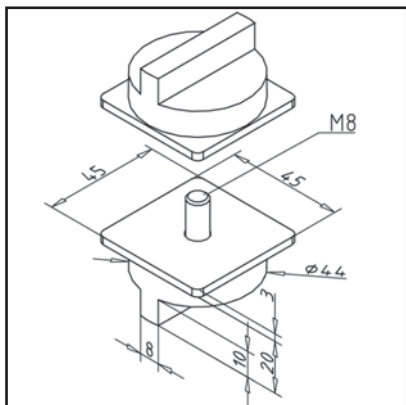
### ASSEMBLY

- 1: Fasten the upper guide to the frame of the door element
  - 2: Insert the lower guide into the frame construction
  - 3: Rotate the door element
  - 4: Slide it into the lower guide and secure at desired position
- Replace the second door element
  - **Height of door elements:**  
lichte Höhe der Einbauöffnung -11 mm
  - **Door element width (for 2 elements):**  
(inside + 24 mm) : 2

## FOLDING DOORWAY SET

Part no.

22.1148/0



### TECHN. DATA / ITEMS SUPPLIED

- PE-UHMW, black
- Delivery: 1 pair
- With galvanized mounting screws M8 and end caps 45x45 AL
- Weight = 0.082 kg/set

### APPLICATIONS

- For upper and lower guidance of folding doors made of aluminium profile
- Guiding in profile grooves

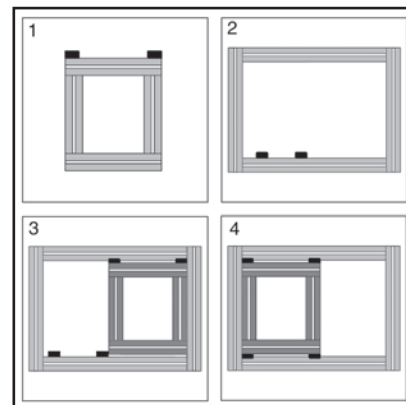
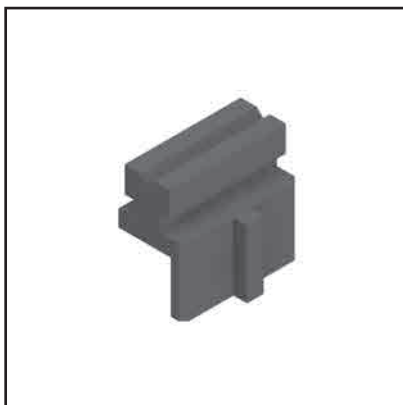
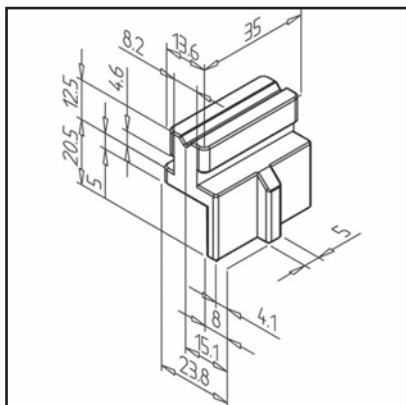
### ASSEMBLY

- Mount end caps onto front door profile with screws from delivery scope
- Insert sliding piece in guide profile
- Insert mounted screws into drill hole of slide element
- Use always in pairs
- Dimensions are for profile cross section 45x45 for the door with hinge **part no. 21.1378/0**

## GUIDE FOR SLIDING DOOR 45

Part no.

22.1079/0



### TECHN. DATA / ITEMS SUPPLIED

- PA, black
- 1 locking screw
- For 1 door element 4 guides are necessary
- Weight = 0.014 kg/piece

### APPLICATIONS

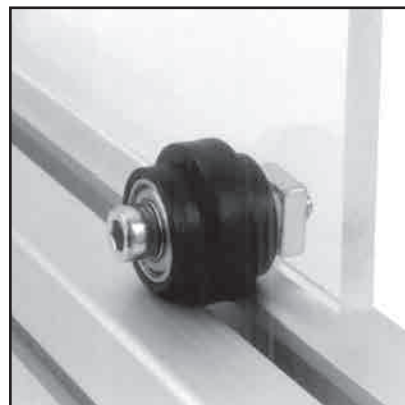
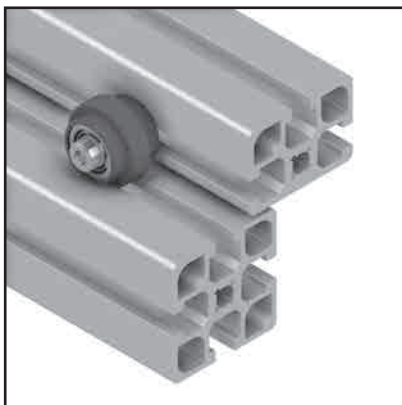
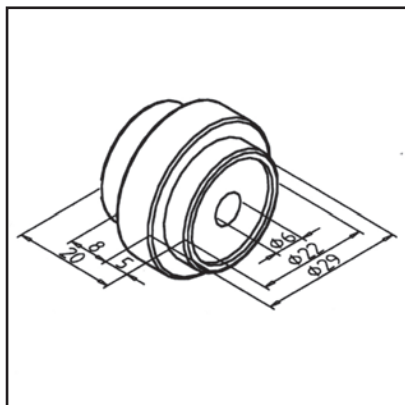
- Sliding doors
- sliding elements
- For a simultaneous guidance of 2 elements in 1 profile groove
- It is possible to retrofit sliding doors in existing constructions

### ASSEMBLY

- 1: Fasten the upper guide to the frame of the door element
- 2: Insert the lower guide into the frame construction
- 3: Rotate the door element
- 4: Slide it into the lower guide and secure at desired position
- Replace the second door element
- **Height of door elements:**  
lichte Höhe der Einbauöffnung -11 mm
- **Width of door elements** (with 2 elements):  
(lichte Weite + 49 mm) : 2

## ROLLER WHEEL

Part no. 21.1782/0



### TECHN. DATA / ITEMS SUPPLIED

- ABS, Injection Mould, grey
- With 2 ball-bearings 626 ZZ
- Fmax. 200 N
- Weight = 0.030 kg/piece

### APPLICATIONS

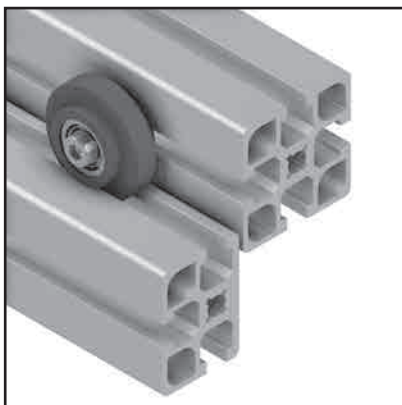
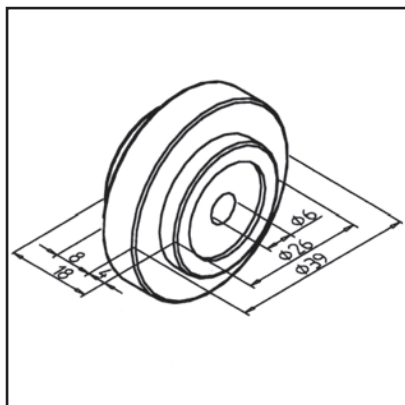
- Guide for sliding doors, lifting doors and drawers

### ASSEMBLY

- With cylinder head screw M6 x 35 **part no.:** 21.1245/0 and sliding nut M6 on profile grooves or directly on surface element

## ROLLER WHEEL S

Part no. 21.1781/0



### TECHN. DATA / ITEMS SUPPLIED

- PA, Injection Mould, grey
- With 2 ball-bearings 626 ZZ
- Fmax. 200 N
- Weight = 0.040 kg/piece

### APPLICATIONS

- Guide for sliding doors, lifting doors and drawers

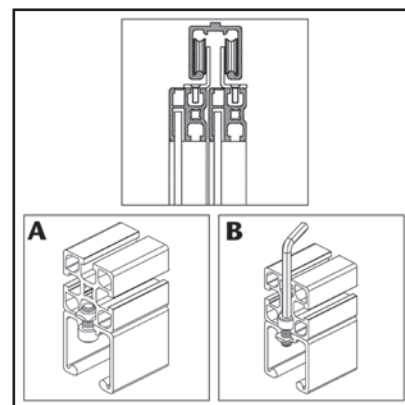
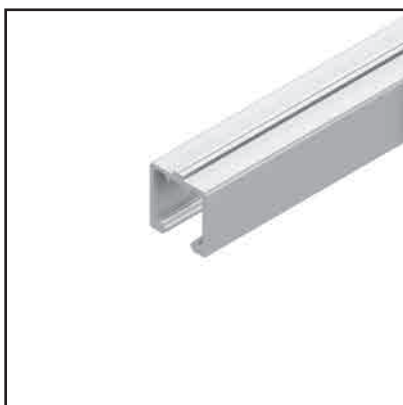
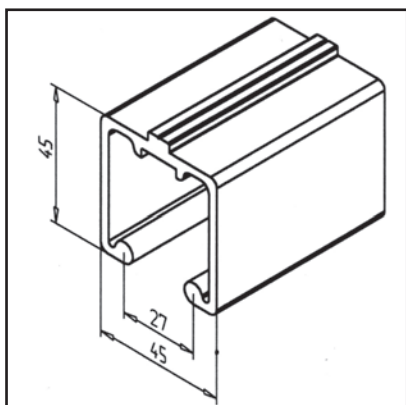
### ASSEMBLY

- With cylinder head screw M6 x 35 **part no.:** 21.1245/0 and sliding nut M6 on profile grooves or directly on surface element

## TRACK PROFILE

Part no.

20.1038/0



## TECHN. DATA / ITEMS SUPPLIED

- Aluminium, extruded, anodized E6/EV1
- $I_x = 15.347 \text{ cm}^4$
- $I_y = 15.597 \text{ cm}^4$
- $w_x = 5.912 \text{ cm}^3$
- $w_y = 6.932 \text{ cm}^3$
- Weight = 1.470 kg/m
- Bar length = 6 m
- Packing unit = 48 m

## APPLICATIONS

- Multi-leaf sliding doors
- Single-leaf sliding doors

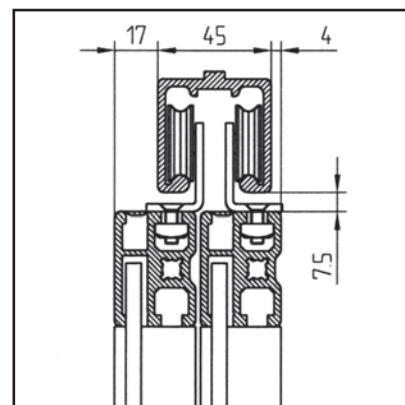
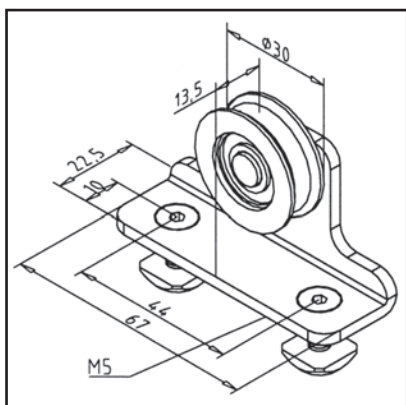
## ASSEMBLY

- Drill  $\varnothing 8,5$  mm holes in centering groove; bore pitch: 250 - 400 mm depending on the load
- A) Position M8 F square nuts in the supporting profile and fasten the sliding door profile with M8 x 25 hex socket cap screw
- B) Drill through or step holes into the carrier profile and insert square nut into the profile of the runner. Nuts are torsion-proof

## ROLLER ELEMENT FOR SLIDING DOOR

Part no.

21.2000/0



## TECHN. DATA / ITEMS SUPPLIED

- Plastic roller with ball-bearing
- Zinc plated steel support
- With fastening material steel, zinc plated
- Weight = 0.080 kg/piece

## APPLICATIONS

- Easy-running, multi-wing sliding doors in guard units, exhibition stands, testing units, etc.

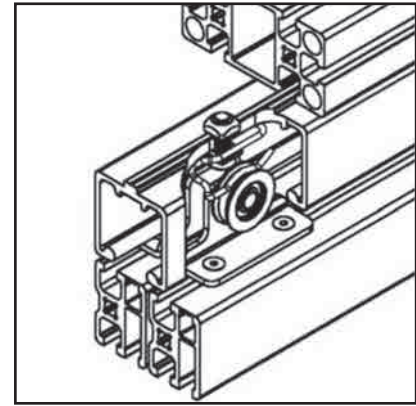
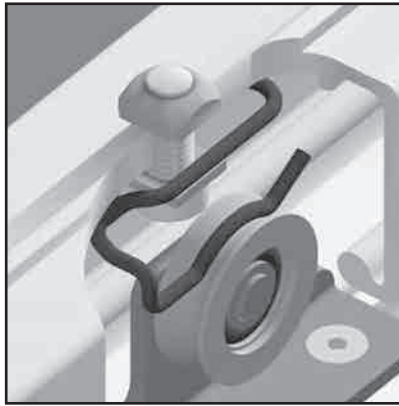
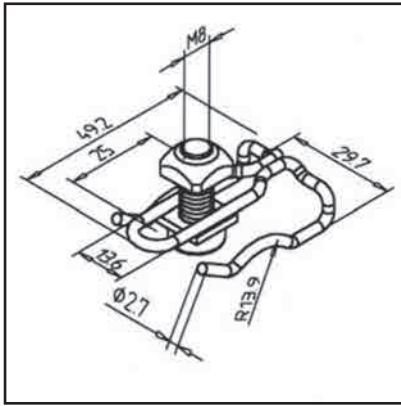
## ASSEMBLY

- Attach the rollers to the profile groove using the mounting kit
- Mount the doors into the track profile, slightly swing out the doors at the bottom
- Sliding door at bottom with retaining pins, sliding bar 8N **part no. 22.1085/0** oder U-Führung Schiebetür **part no. 21.2002/1** secure against swinging away

## INTERLOCK SLIDING DOOR K

Part no.

21.2019/0



### TECHN. DATA / ITEMS SUPPLIED

- Stainless steel
- Spring steel wire
- With fastening material steel, zinc plated
- Weight = 0.026 kg/piece

### APPLICATIONS

- Interlock sliding doors in their end positions (open / closed)

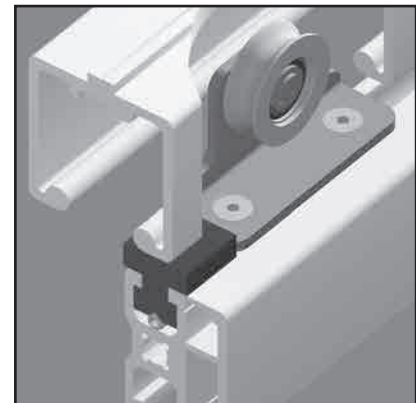
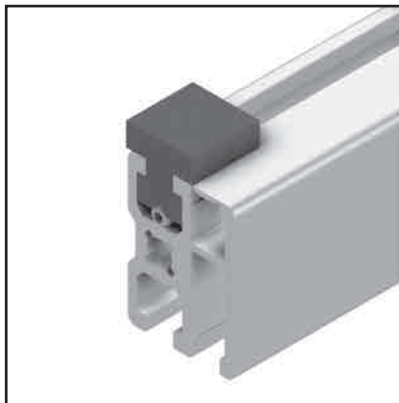
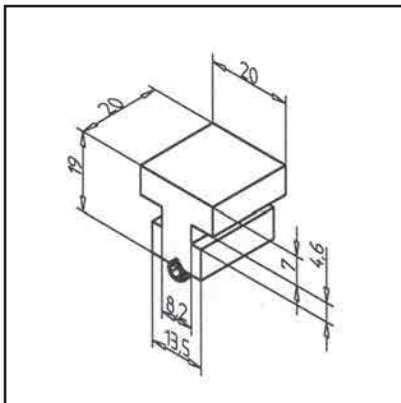
### ASSEMBLY

- Mark the end position of the roll
- Bore drill Ø 8,5 in sliding door profile
- Screw into rail with carrier profile using mounting kit included

## SAFETY CATCH FOR SLIDING DOOR

Part no.

21.2003/0



### TECHN. DATA / ITEMS SUPPLIED

- PE-UHMW, black
- With fastening material steel, zinc plated
- Weight = 0.009 kg/piece

### APPLICATIONS

- Securing of sliding doors against lift off
- Reduction of pendulum motion

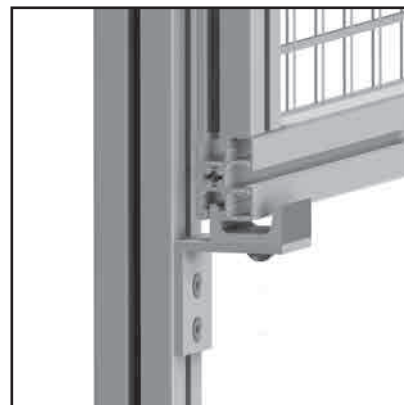
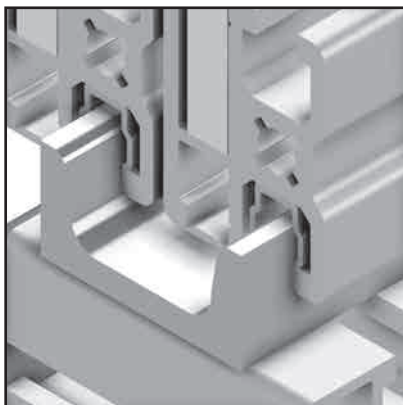
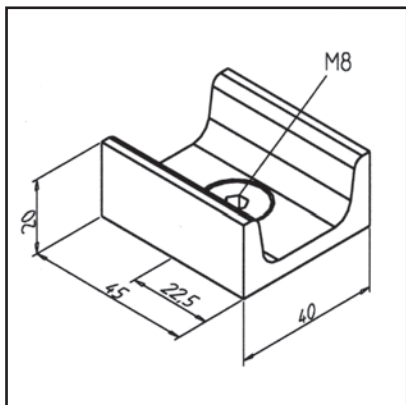
### ASSEMBLY

- Insert the safety catch on the front side into the upper sliding door profile
- Fasten to the groove base through face-side screw using the threaded pin provided
- Install end cap

## U-BAR FOR SLIDING DOOR

Part no.

21.2002/0



### TECHN. DATA / ITEMS SUPPLIED

- Steel, galvanized
- With fastening material steel, zinc plated
- Weight = 0.150 kg/piece

### APPLICATIONS

- Securing of sliding doors against lateral swinging

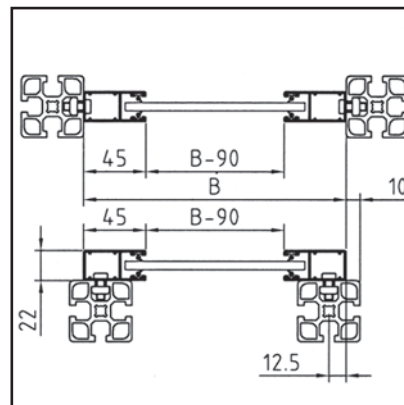
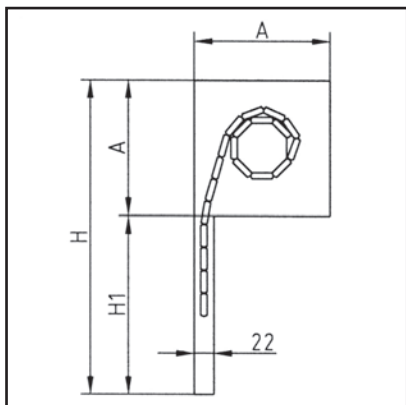
### ASSEMBLY

- Hang up the doors
- Mount the U-rail on the profile piece and slide it into position
- Provide doors below with edging and cover profiles, if necessary

## ROLLER SHUTTER WITH DRIVE

Part no.

29.0402/0



### TECHN. DATA / ITEMS SUPPLIED

- Aluminium, powder coated, silver
- 2 sides Guide rails; roller shutter box with drive
- Electr. drive 230 V
- without switch
- Max. Width: 2,70 m
- Cable length 2 m
- **Please indicate width B and dimension H**

### APPLICATIONS

- Cupboard for instruments
- Tool cabinets
- Output switch
- Computer racks
- Machine guards

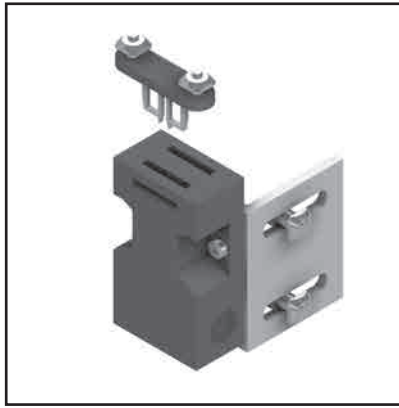
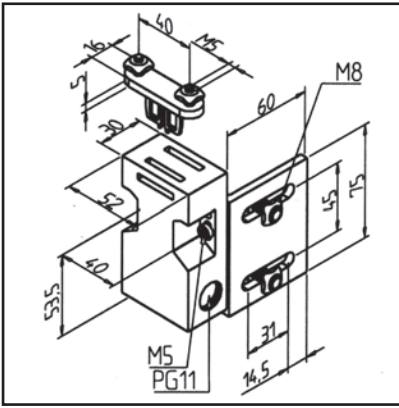
### ASSEMBLY

- Connect the roller shutter box to the guide rails
- Fasten the guide rails and roller shutter box to the profile frame
- Roller Shutter Case A = 152, H bis 1,70 m, **part no. 29.0402/0**
- Roller Shutter Case A = 167,5, H bis 2,20 m, **part no. 29.0403/0**
- Roller Shutter Case A = 181, H bis 2,70 m, **part no. 29.0404/0**
- Stroke H1: H-A



## SECURITY SWITCH AZ 16 ZVRK

Part no. 21.1110/0



### TECHN. DATA / ITEMS SUPPLIED

- Security switch, complete with switching pad, type B1, standard, IP 67
- 1 NC contact, 1 NO contact
- Fastening angle, aluminium, natural anodized
- Fastening kit
- Latching force 30 N
- Weight = 0.343 kg/piece

### APPLICATIONS

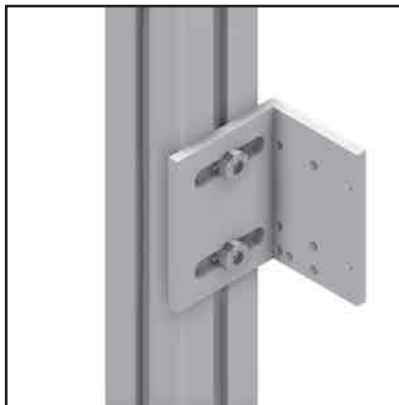
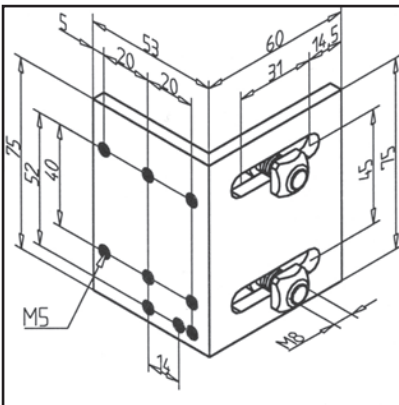
- Protection for doors, lifting devices, panels in all types of protective installations
- Suitable for all 45er profiles

### ASSEMBLY

- Fasten with fastening material to profile groove
- Easy adjustment in x-, y- and z-axis by means of long holes in the angle-bracket
- For small radii, operating bars B2 **part no. 21.1110/2** or B3 **part no. 21.1110/3** use

## MOUNTING ANGLE BRACKET FOR SAFETY SWITCH

Part no. 21.1359/0



### TECHN. DATA / ITEMS SUPPLIED

- Aluminium, anodized E6/EV1
- With fastening material steel, zinc plated
- Use on vertical struts **part no. 21.1359/7** (square nut with position-fixing)
- Weight = 0.128 kg/piece

### APPLICATIONS

- For safety switch according to DIN EN 50041
- Adjust the switch in two directions

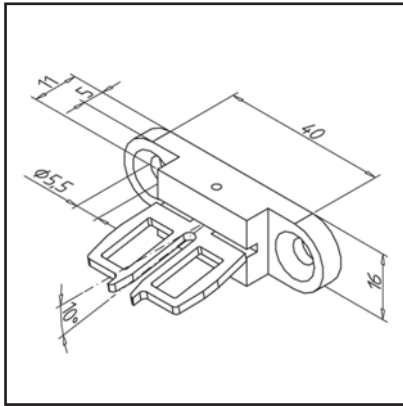
### ASSEMBLY

- Fasten with fixing material to profile groove

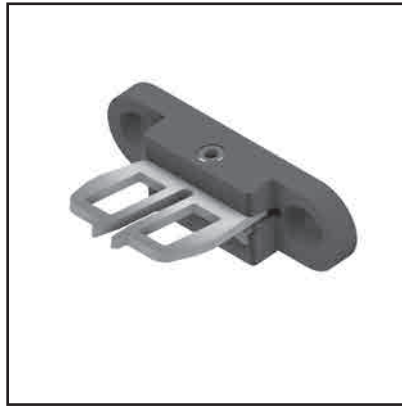
**ACTUATING BOW FOR SECURITY SWITCH B3**

Part no.

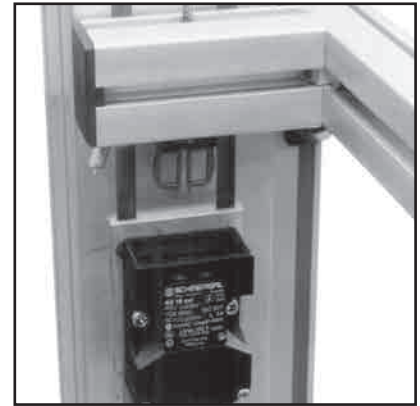
21.1110/3

**TECHN. DATA / ITEMS SUPPLIED**

- Separator guide, typ B3, for particularly small operating radius over the narrow side of the bracket
- Weight = 0.030 kg/piece

**APPLICATIONS**

- Operating handle for small operating radii in conjunction with safety switch **part no. 21.1110/0**, replaces the standard strap

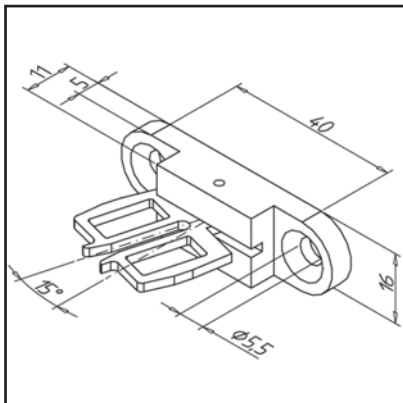
**ASSEMBLY**

- With fastening kit from items supplied secure the safety switch to the profile groove
- Directly on panel element with countersunk screws M5 according to material thickness

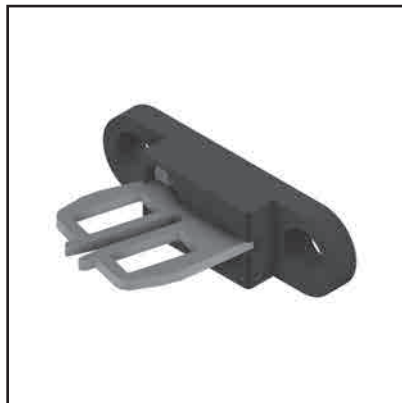
**ACTUATING BOW FOR SECURITY SWITCH B2**

Part no.

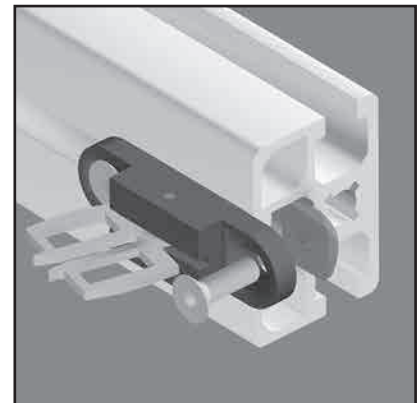
21.1110/2

**TECHN. DATA / ITEMS SUPPLIED**

- Separator guide, B2, for particularly small operating radius over the wide side of the bracket
- Weight = 0.030 kg/piece

**APPLICATIONS**

- Operating handle for small operating radii in conjunction with safety switch **part no. 21.1110/0**, replaces the standard strap

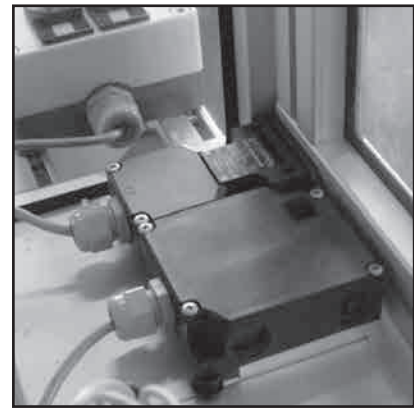
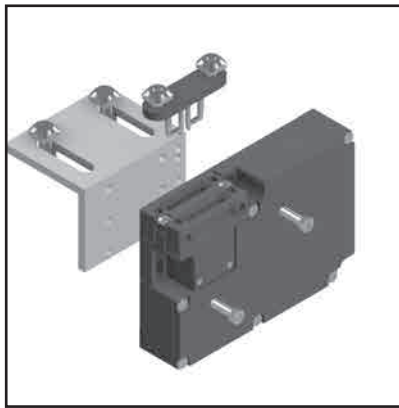
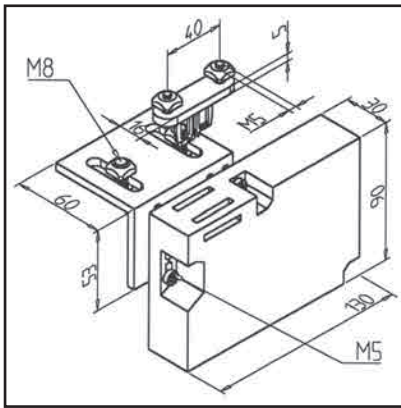
**ASSEMBLY**

- With fastening kit from items supplied secure the safety switch to the profile groove
- Directly on panel element with countersunk screws M5 according to material thickness

## SECURITY SWITCH WITH LOCK

Part no.

21.1766/0



### TECHN. DATA / ITEMS SUPPLIED

- Switch, type AZM 161SK-12/12RK-024
- Thermoplastic housing, black, self-extinguishing
- Protective system IP67, nominal operating current 10 A (230 V), driving voltage 24 V AC/DC, power consumption 10 W
- Fastening kit
- Optionally also with control voltage 110 V AC or 230 V AC available
- Weight = 0.480 kg/piece

### APPLICATIONS

- For protective equipment with high safety requirements

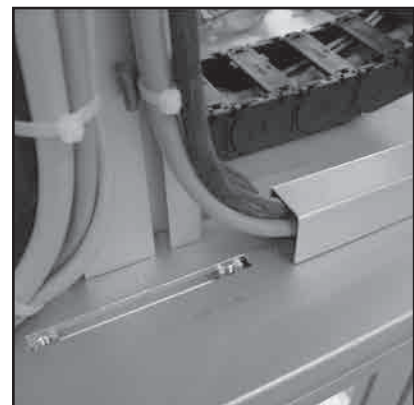
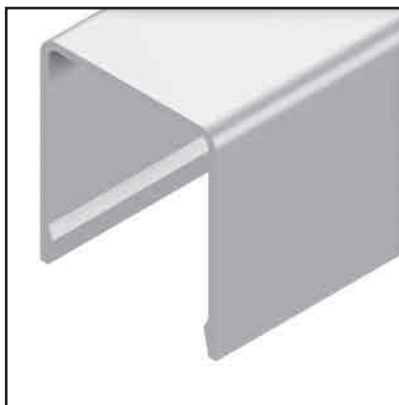
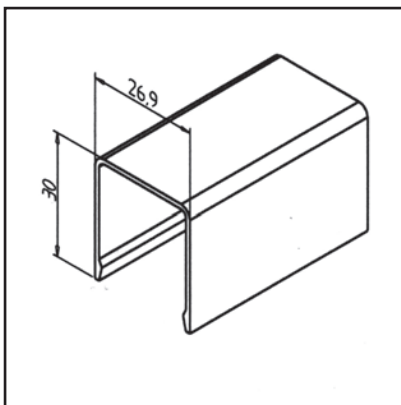
### ASSEMBLY

- Fasten with fixing material to profile groove
- For small radii, use actuating yoke B6 **part no. 21.1766/2**.

## CABLE DUCT 27 AL

Part no.

20.1051/0



### TECHN. DATA / ITEMS SUPPLIED

- Aluminium, extruded, anodized E6/EV1
- Weight = 0.193 kg/m
- Bar length = 6 m

### APPLICATIONS

- Cover for cables and pneumatic hoses

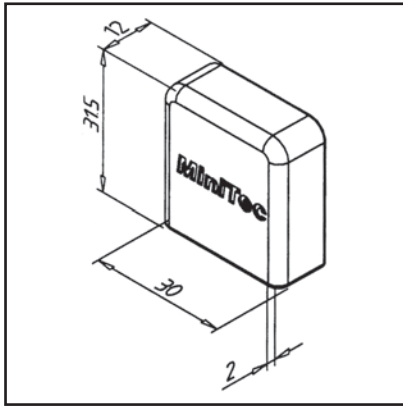
### ASSEMBLY

- On clamp **part no. 22.1204/0** or **part-no. 22.1212/0** clipping on
- Earthing brackets for optional grounding **part no. E9.0141/0** can be used

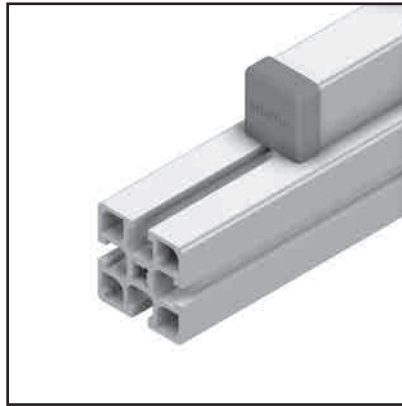
**END CAP CABLE DUCT 27 AL**

Part no.

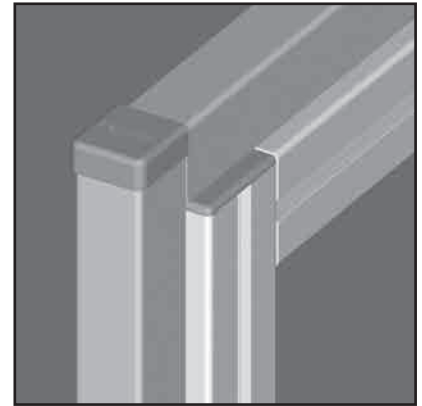
22.1119/1

**TECHN. DATA / ITEMS SUPPLIED**

- ABS, Injection Mould, grey
- Weight = 0.004 kg/piece

**APPLICATIONS**

- End cap for conduit AL
- Manufacture external angles with cable duct AL

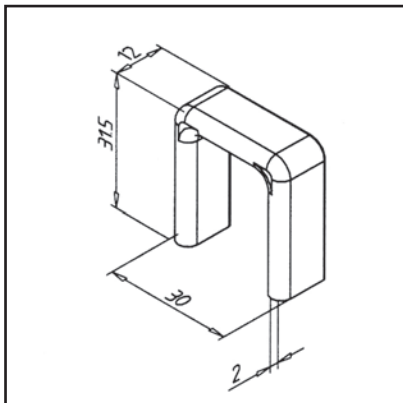
**ASSEMBLY**

- Simply push onto the end of the cable duct

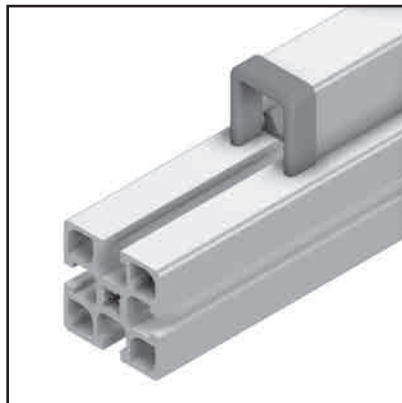
**EDGE PROTECTION FOR CABLE DUCT 27 AL**

Part no.

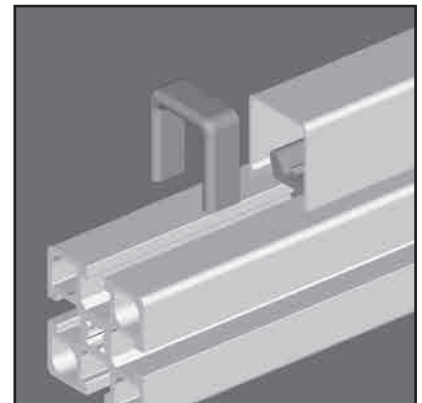
22.1120/1

**TECHN. DATA / ITEMS SUPPLIED**

- ABS, Injection Mould, grey
- Weight = 0.003 kg/piece

**APPLICATIONS**

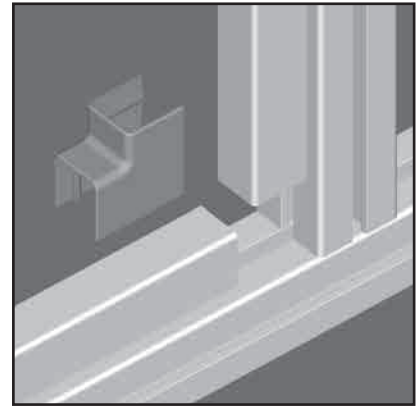
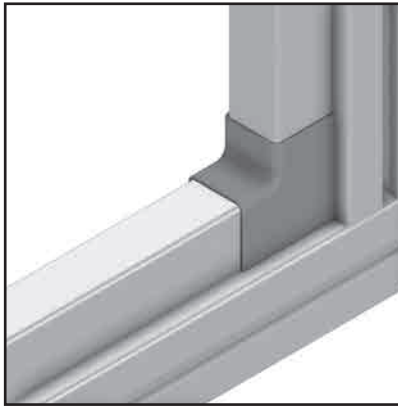
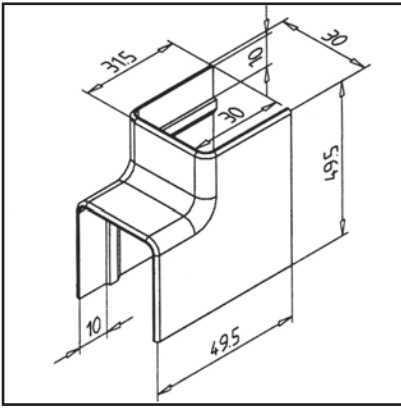
- Edge protection for conduit AL

**ASSEMBLY**

- Simply push onto the end of the cable duct

## INNER ANGLE CABLE DUCT 27 AL

Part no. 22.1121/1



### TECHN. DATA / ITEMS SUPPLIED

- ABS, Injection Mould, grey
- Weight = 0.009 kg/piece

### APPLICATIONS

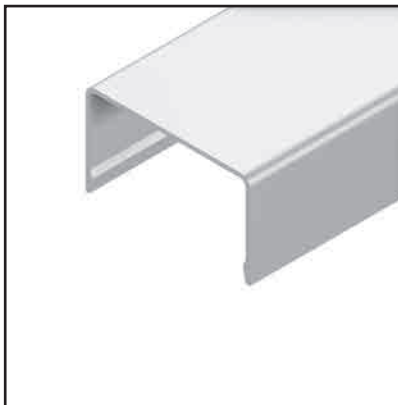
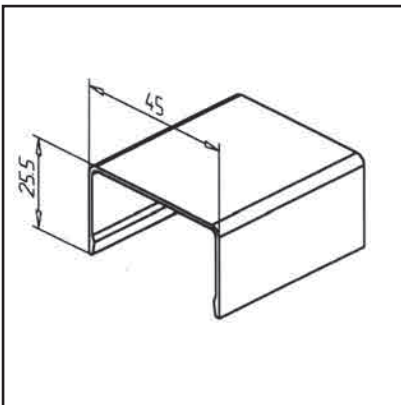
- Connect the cable duct AL to the inner angle

### ASSEMBLY

- Clip the first side of cable duct on clamps.
- Insert the angle
- Click on the second side of the cable duct and slide along as far as the stop

## CABLE DUCT 45 AL

Part no. 20.1071/0



### TECHN. DATA / ITEMS SUPPLIED

- Aluminium, anodized E6/EV1
- Weight = 0.301 kg/m
- Bar length = 6 m

### APPLICATIONS

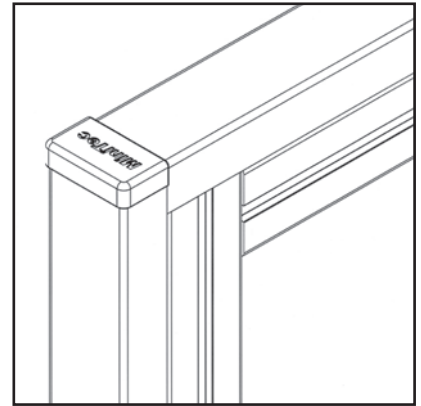
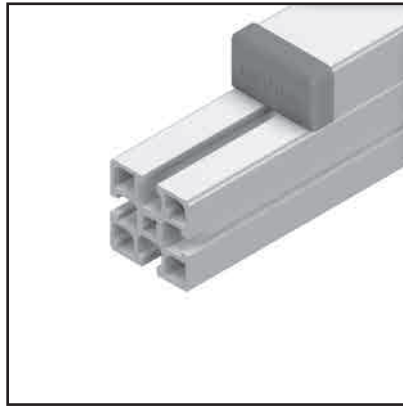
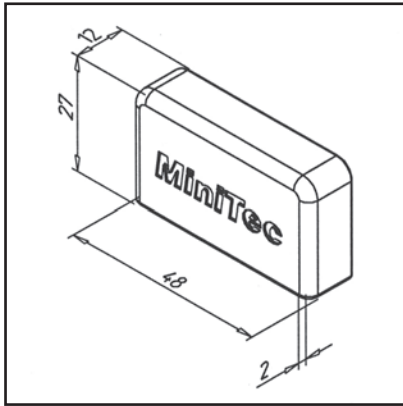
- Cover for cables and pneumatic hoses

### ASSEMBLY

- On clamp 45 **part no. 22.1210/0** clipping on
- Earthing brackets for optional grounding **part no. E9.0141/0** can be used

### CAP CABLE DUCT 45 AL

Part no. 22.1116/1



#### TECHN. DATA / ITEMS SUPPLIED

- ABS, Injection Mould, grey
- Weight = 0.006 kg/piece

#### APPLICATIONS

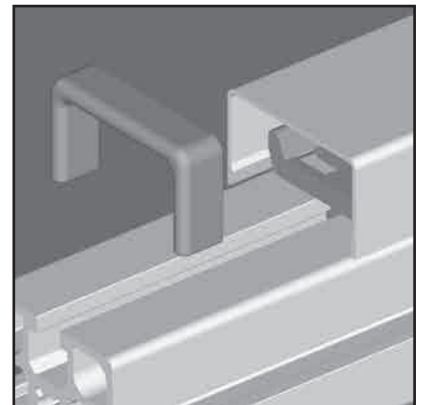
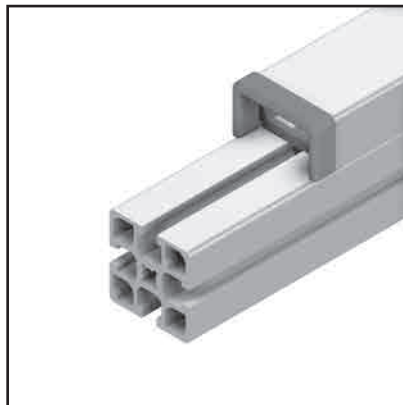
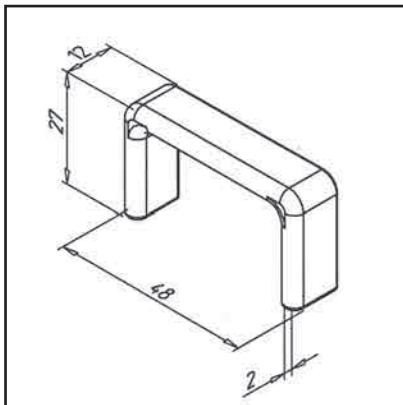
- Finish the cable duct 45
- Production of external angle with cable canal 45 AL

#### ASSEMBLY

- Simply push onto the end of the cable duct

### PROTECTION CAP CABLE DUCT 45 AL

Part no. 22.1117/1



#### TECHN. DATA / ITEMS SUPPLIED

- ABS, Injection Mould, grey
- Weight = 0.005 kg/piece

#### APPLICATIONS

- Edge protection for Cabel Canal 45 AL

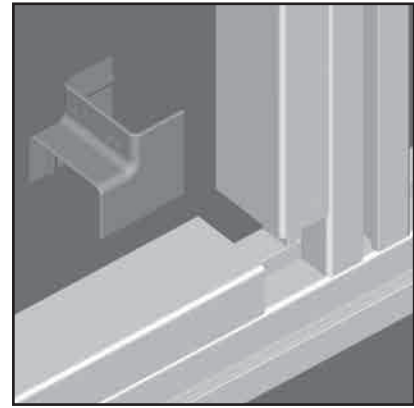
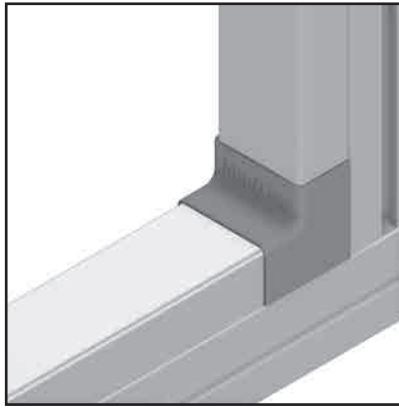
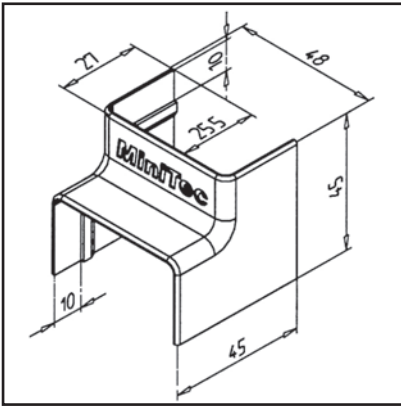
#### ASSEMBLY

- Simply push onto the end of the cable duct

### INSIDE ANGLE CABLE DUCT 45 AL

Part no.

22.1118/1



**TECHN. DATA / ITEMS SUPPLIED**

- ABS, Injection Mould, grey
- Weight = 0.010 kg/piece

**APPLICATIONS**

- Connecting cable canal 45 AL to internal angles

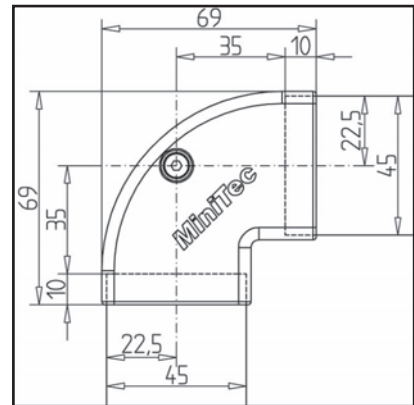
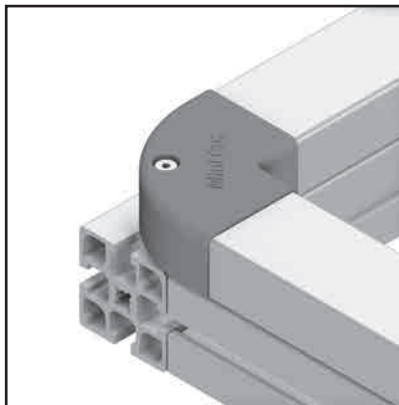
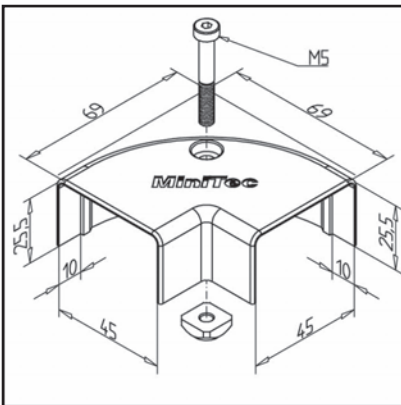
**ASSEMBLY**

- Clip the first side of cable duct on clamps.
- Insert the angle
- Click on the second side of the cable duct and slide along as far as the stop

### ANGLE 90° FOR CABLE DUCT 45 AL

Part no.

22.1156/0



**TECHN. DATA / ITEMS SUPPLIED**

- ABS, Injection Mould, grey
- Fastening kit
- Weight = 0.026 kg/piece

**APPLICATIONS**

- Connection of cable canal 45 AL

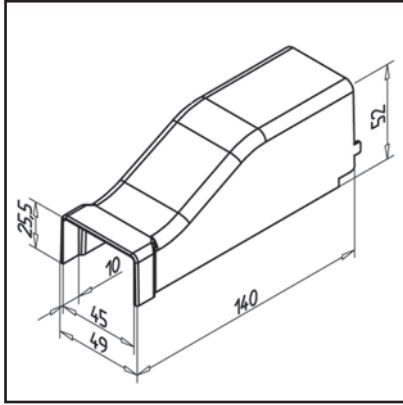
**ASSEMBLY**

- Push on both channel ends 45, tighten the screw

## ADAPTER CAP CONNECTOR STRIP FOR CABLE DUCT 45 AL

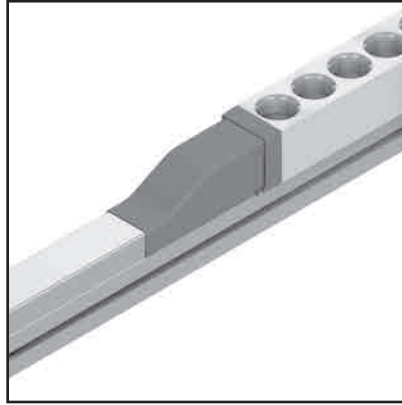
Part no.

22.1154/1



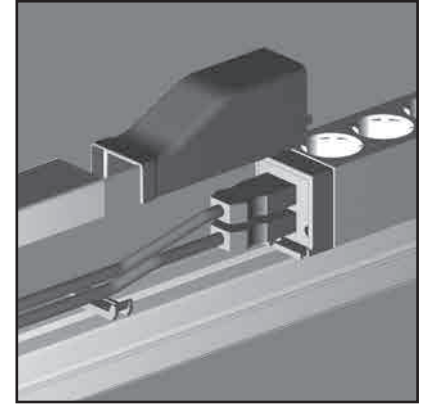
### TECHN. DATA / ITEMS SUPPLIED

- ABS, Injection Mould, grey
- Weight = 0.034 kg/piece



### APPLICATIONS

- Cover of cable canal 45 AL



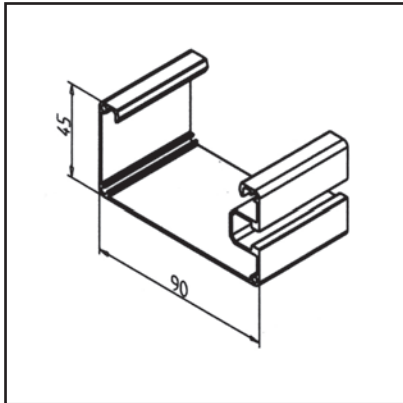
### ASSEMBLY

- Clip onto cable conduit 45

## CABLE DUCT 90 AL

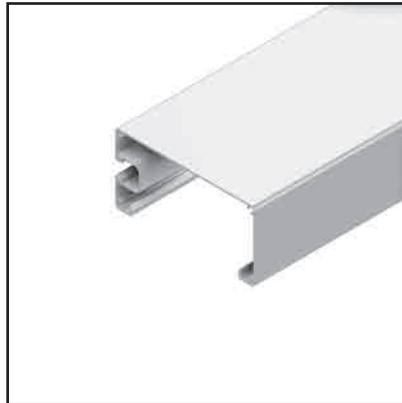
Part no.

20.1056/0



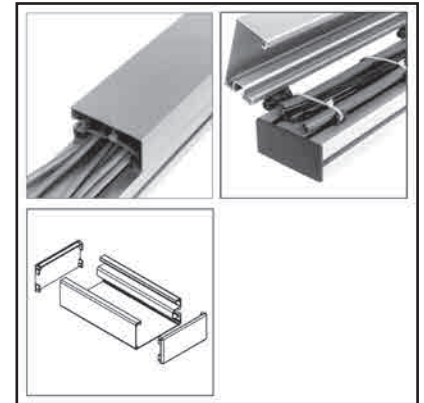
### TECHN. DATA / ITEMS SUPPLIED

- Aluminium, anodized E6/EV1
- Weight = 0.971 kg/m
- Bar length = 6 m



### APPLICATIONS

- Cover for cables and pneumatic hoses
- Suitable for MiniTec profiles, grid dimension: 90
- Can also be swung open, when used with hinges
- End ledges with integrated energy supply



### ASSEMBLY

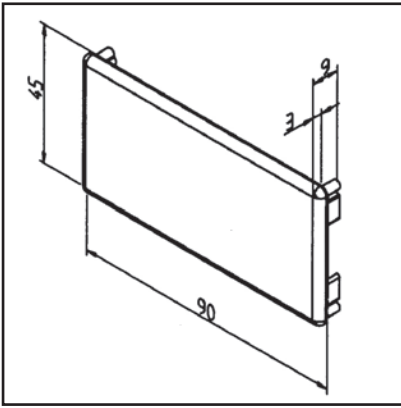
- On clamp **part no. 22.1204/0** or **part-no. 22.1212/0** clipping on
- Cap **part no. 22.1045/0**
- Earthing brackets for optional grounding **part no. E9.0141/0** can be used



## END CAP FOR CABLE DUCT 90 AL

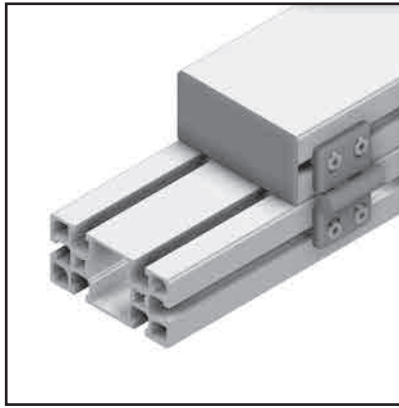
Part no.

22.1045/0



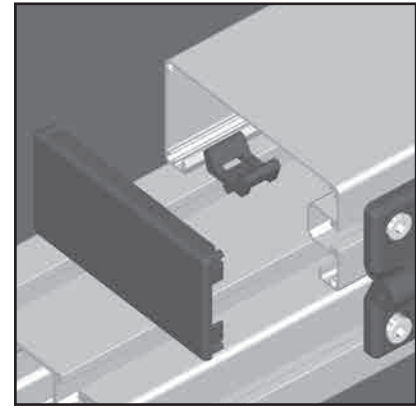
### TECHN. DATA / ITEMS SUPPLIED

- ABS, Injection Mould, grey
- Weight = 0.011 kg/piece



### APPLICATIONS

- Termination of cable canal 90 AL
- Constructions of corners on outside face



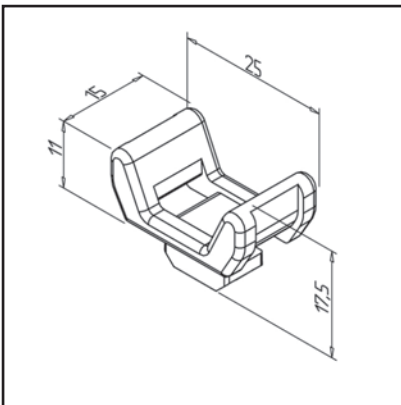
### ASSEMBLY

- Simply push onto the end of the cable duct

## CABLE CLIP 27-30

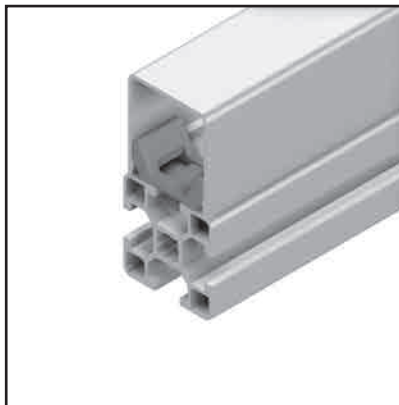
Part no.

22.1212/0



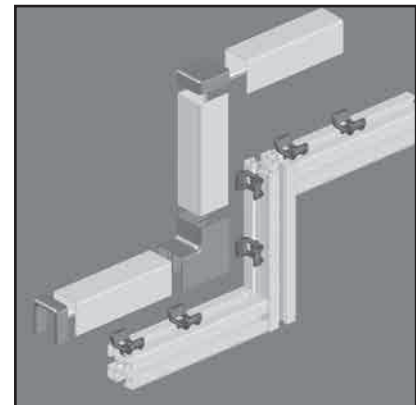
### TECHN. DATA / ITEMS SUPPLIED

- PA, Injection Mould, grey
- Weight = 0.002 kg/piece



### APPLICATIONS

- Simple and rational fastening of cables and pneumatic hoses
- Fixing of cable canal 27 AL
- For use of all profile types of profile series 30



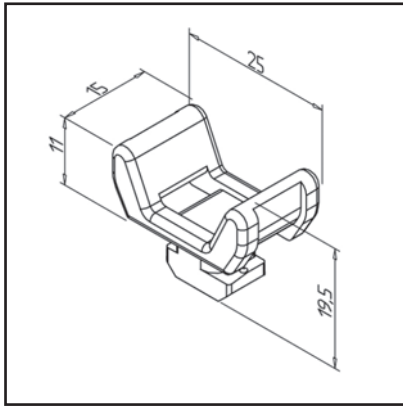
### ASSEMBLY

- Insert in profile groove and fix by 90° rotation
- Insert cable tie band through the cable clip and around the cable. Bind together, cut off any excessive length

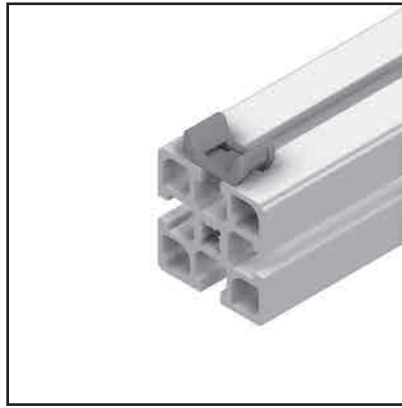
**CABLE CLIP 27-45**

Part no.

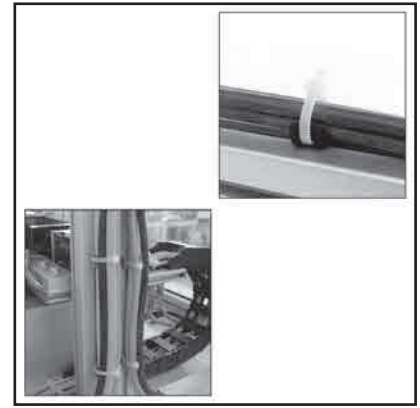
22.1204/0

**TECHN. DATA / ITEMS SUPPLIED**

- PA, Injection Mould, grey
- Weight = 0.003 kg/piece

**APPLICATIONS**

- Simple and rational fastening of cables and pneumatic hoses
- Fixing of cable canal 27 AL and cable canal 90 AL
- Use with all profiles of the 45 profile series

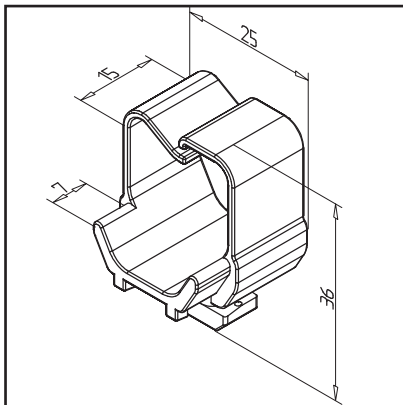
**ASSEMBLY**

- Insert in profile groove and fix by 90° rotation
- Insert cable tie band through the cable clip and around the cable. Bind together, cut off any excessive length

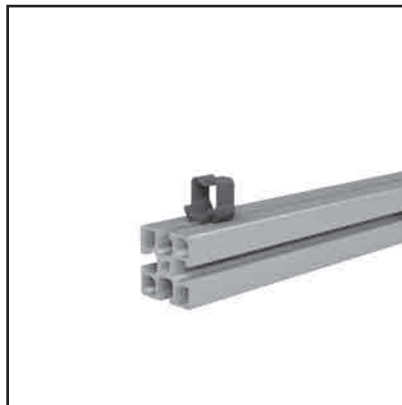
**CLAMP 27-45 C**

Part no.

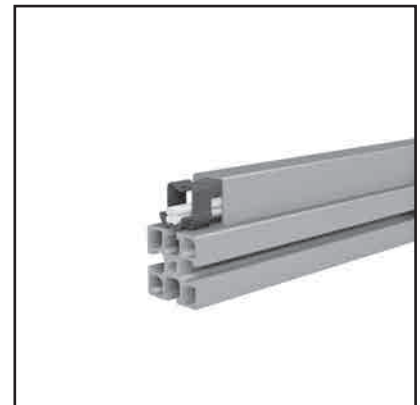
22.1216/0

**TECHN. DATA / ITEMS SUPPLIED**

- PP, Injection Mould, grey
- Weight = 0.004 kg/piece

**APPLICATIONS**

- Simple and rational fastening of cables and pneumatic hoses
- Fixing of cable canal 27 AL and cable canal 90 AL
- Use with all profiles of the 45 profile series
- Preferably to be used for laying cables and hoses overhead or for frequent changes to the installation.

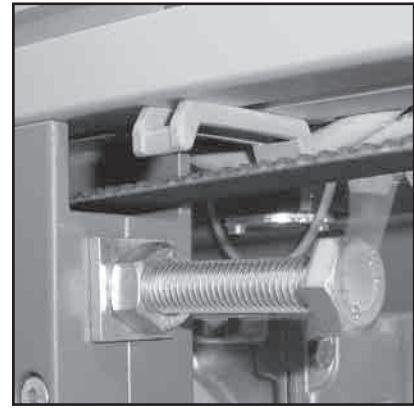
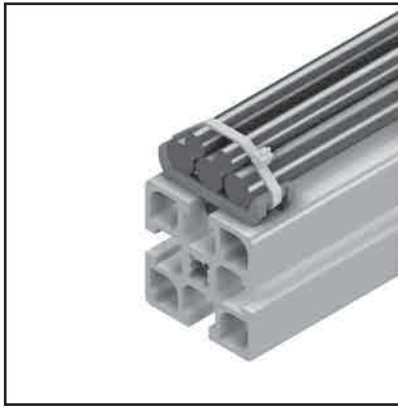
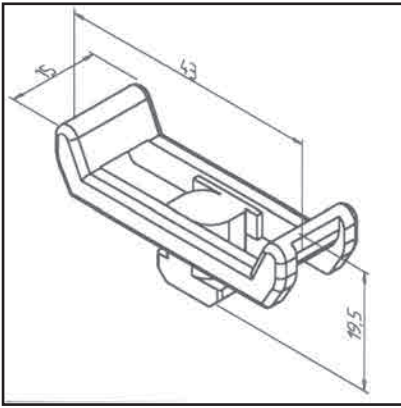
**ASSEMBLY**

- Insert in profile groove and fix by 90° rotation
- Simply clip cables and hoses up to 8 mm diameter into the clamp. Removal is also possible.
- If necessary, fasten cables with cable ties. Thread the cable ties into the end of the clamp (7mm) and tighten.

## CABLE CLIP 45

Part no.

22.1210/0



### TECHN. DATA / ITEMS SUPPLIED

- PA, Injection Mould, grey
- Weight = 0.004 kg/piece

### APPLICATIONS

- Simple and rational fastening of cables and pneumatic hoses
- Suitable for conduit 45 AL

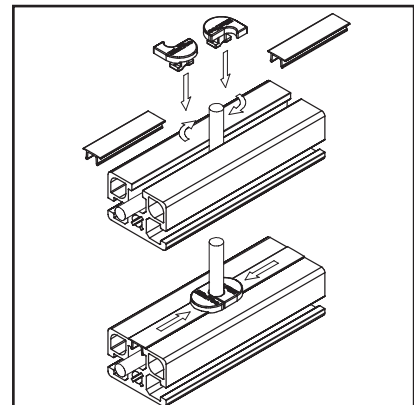
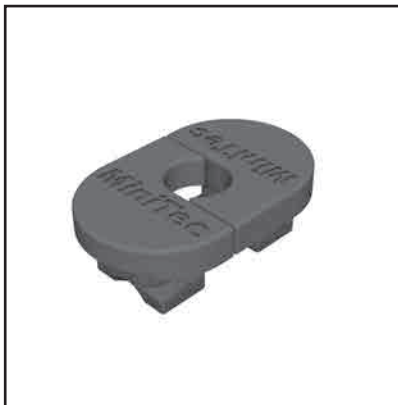
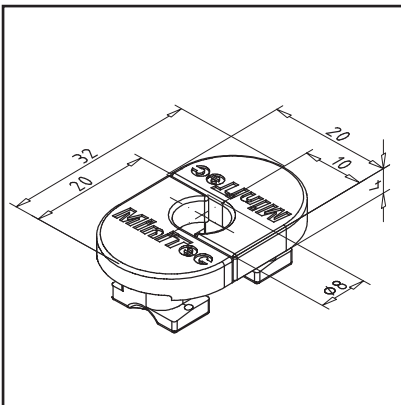
### ASSEMBLY

- Insert in profile groove and fix by 90° rotation
- Insert cable tie band through the cable clip and around the cable. Bind together, cut off any excessive length
- Cover of timing belt, chains etc.

## CABLE CLAMP 45

Part no.

22.1270/0



### TECHN. DATA / ITEMS SUPPLIED

- ABS, Injection Mould, grey
- The cable clamp (2-part) consists of 2 identical components
- Weight = 0.028 kg/pair

### APPLICATIONS

- For fixing cables and hoses laid in the profile groove
- For cables up to 8 mm diameter
- Please note the bending radius of the cables.
- Use with all profiles of the 45 profile series

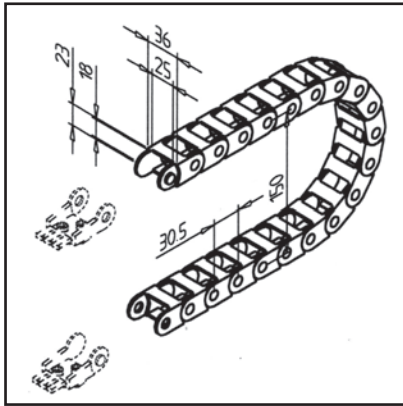
### ASSEMBLY

- Swing both parts to the left and right of the cable into the profile groove, then push them together.
- When using cover profiles to close the grooves, this can be pushed under the cable clamp approx. 4 mm deep.

## ENERGY CHAIN R

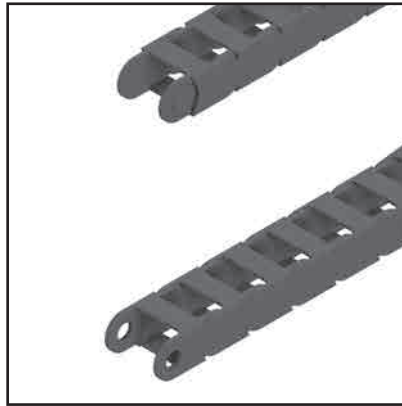
Part no.

33.0410/0



### TECHN. DATA / ITEMS SUPPLIED

- Plastic, black
- Without fastening kit
- Weight = 0.341 kg/m



### APPLICATIONS

- Energy chain to bind cables and hoses on slides and movable elements



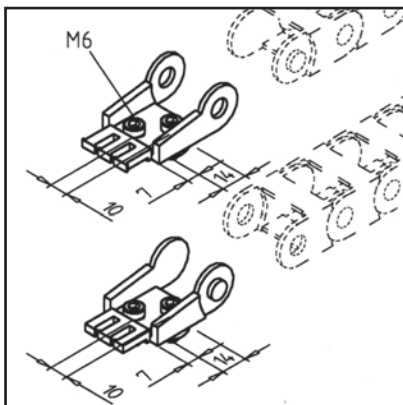
### ASSEMBLY

- Fixing the energy chain means of connection elements **part no. 33.0411/0**

## MOUNTING BRACKETS FOR ENERGY CHAIN R

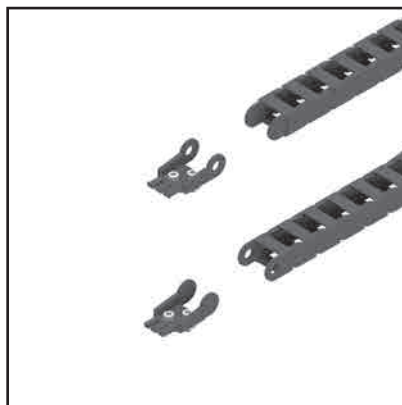
Part no.

33.0411/0



### TECHN. DATA / ITEMS SUPPLIED

- Plastic, black
- With fastening material steel, zinc plated
- One element to the right and to the left
- Weight = 0.058 kg/piece



### APPLICATIONS

- To attach the energy chain R **part no. 33.0410/0** to profile construction

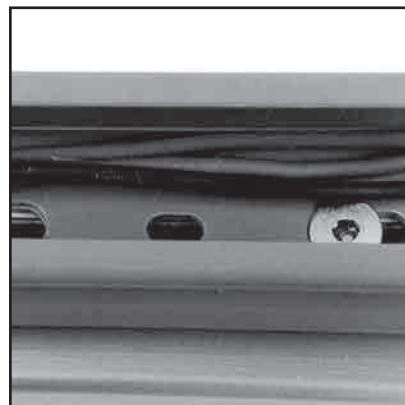
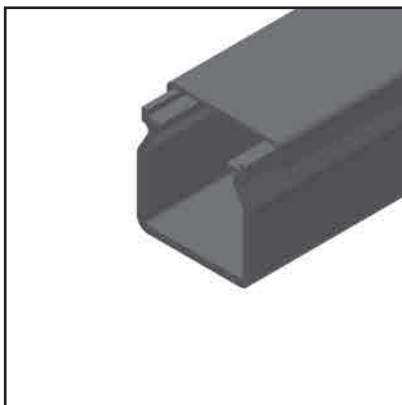
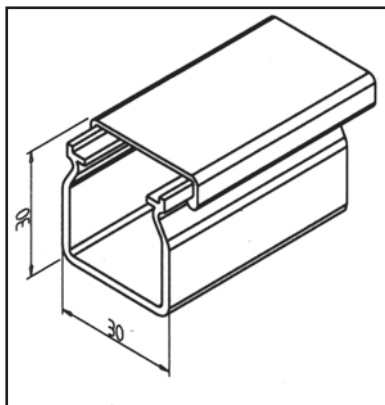


### ASSEMBLY

- Fasten at a suitable place with supplied hardware
- Use cable tie band to fix cables and hoses

## CABLE DUCT 32

Part no. 22.1082/0



### TECHN. DATA / ITEMS SUPPLIED

### APPLICATIONS

### ASSEMBLY

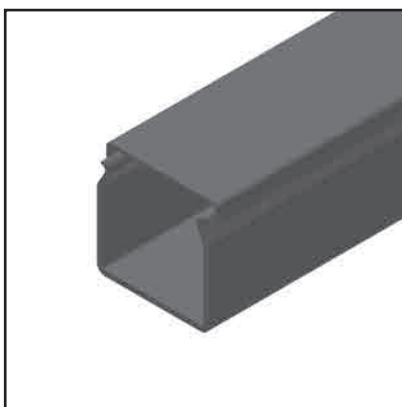
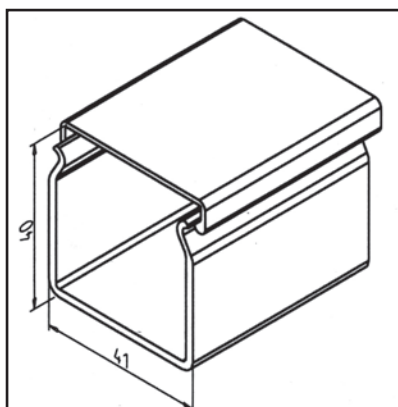
- PVC, grey
- Snap-cover
- Weight = 0.275 kg/m
- Bar length = 2 m

- Installation of cables and hoses of all kinds

- Fastening with screws M6 x 12 and rhombus-nut M6

## CABLE DUCT 45

Part no. 22.1084/0



### TECHN. DATA / ITEMS SUPPLIED

### APPLICATIONS

### ASSEMBLY

- PVC, grey
- Snap-cover
- Weight = 0.402 kg/m
- Bar length = 2 m

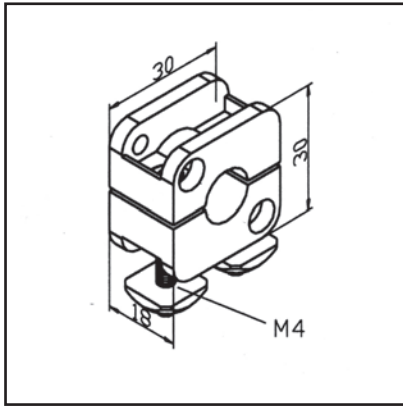
- Installation of cables and hoses of all kinds

- Fastening with screws M6 x 12 and rhombus-nut M6

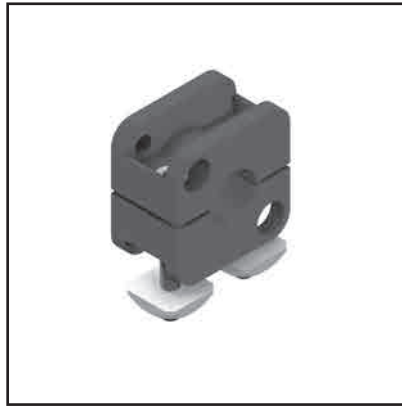
**PROXIMITY SWITCH HOLDER 12**

Part no.

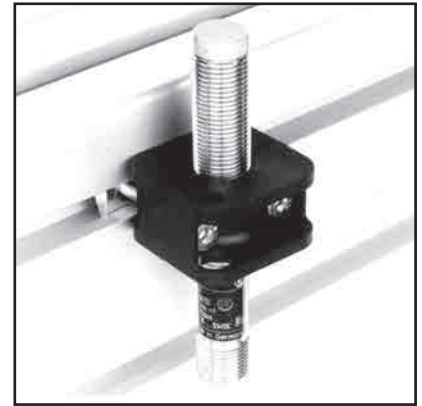
28.0120/0

**TECHN. DATA / ITEMS SUPPLIED**

- Plastic, black
- With fastening material steel, zinc plated
- Ø 12
- Weight = 0.036 kg/piece

**APPLICATIONS**

- Fastening of proximity switches Ø 12 mm in profile constructions and linear guides

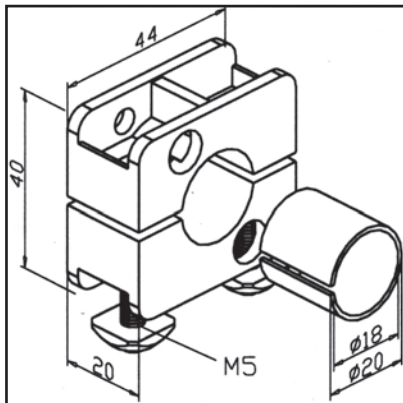
**ASSEMBLY**

- Fasten to profile groove with supplied hardware.

**PROXIMITY SWITCH HOLDER 18**

Part no.

28.0121/0

**TECHN. DATA / ITEMS SUPPLIED**

- Plastic
- With fastening material steel, zinc plated
- Ø 18 mm
- Ø 20 mm
- Weight = 0.046 kg/piece

**APPLICATIONS**

- Fastening of proximity switches Ø 18 mm and Ø 20 mm in profile constructions and linear guides

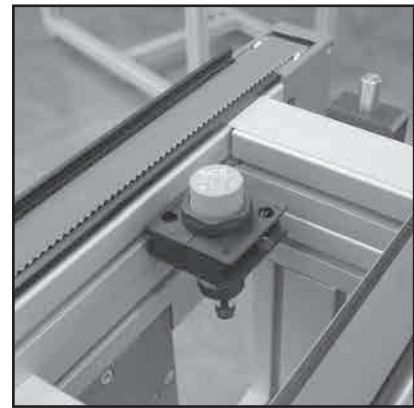
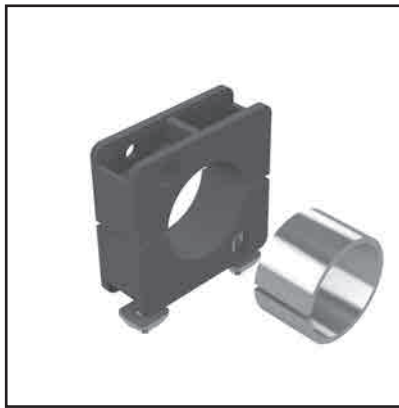
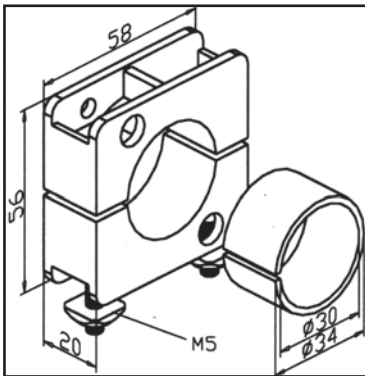
**ASSEMBLY**

- Fasten to profile groove with supplied hardware.

## PROXIMITY SWITCH HOLDER 30

Part no.

28.0122/0



### TECHN. DATA / ITEMS SUPPLIED

- Plastic, black
- With fastening material steel, zinc plated
- Ø 30 mm
- Ø 34 mm
- Weight = 0.068 kg/piece

### APPLICATIONS

- Fixation of proximity switches Ø 30 and Ø 34 in profile constructions and linear axes

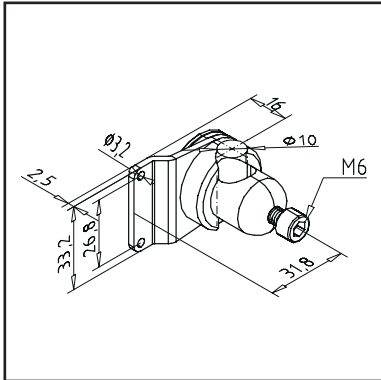
### ASSEMBLY

- Fasten to profile groove with supplied hardware.

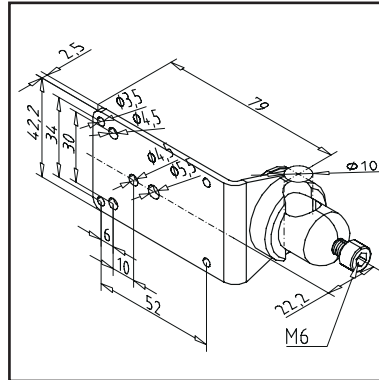
SENSOR HOLDERS

ALL SIDE SUPPORTS CAN BE COMBINED WITH ALL BEAMS

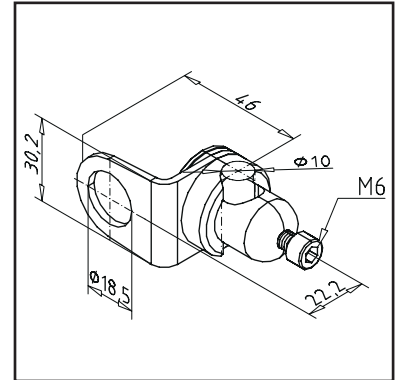
Carriers



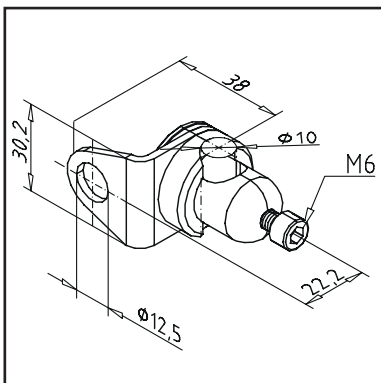
Part no. E1.0055/0



Part no. E1.0070/0

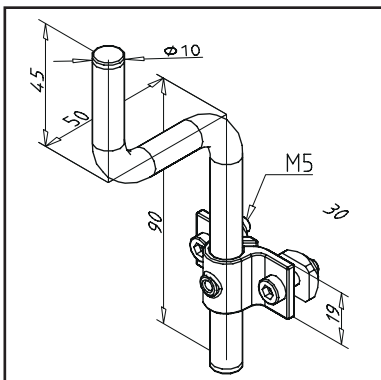


Part no. E1.0068/0

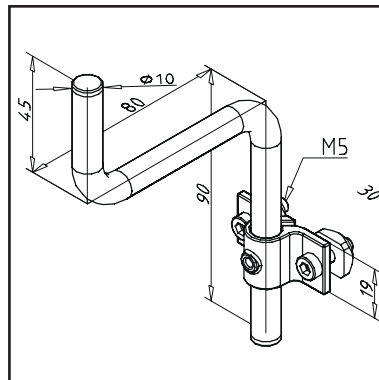


Part no. E1.0069/0

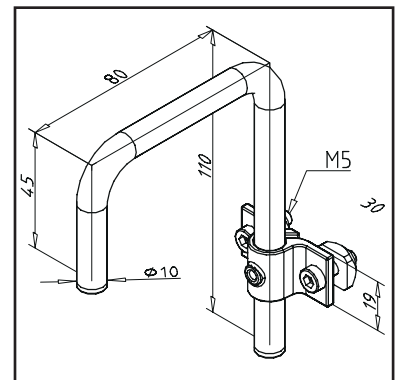
Lateral holders



Part no. 29.5046/2



Part no. 29.5047/2



Part no. 29.5048/2



## DRIVE AND CONTROL TECHNOLOGY

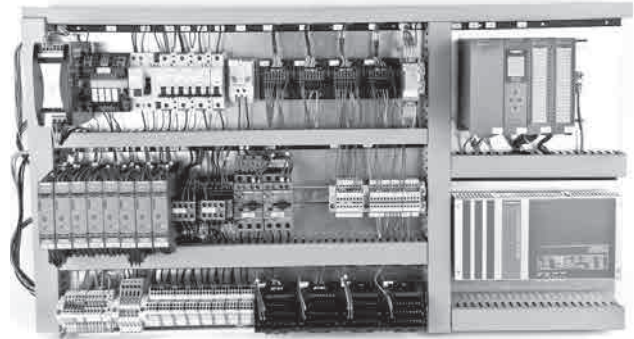
## ELECTRICAL DESIGN, SWITCH CABINET PRODUCTION, SOFTWARE DEVELOPMENT AND VISUALIZATION

## Comprehensive solutions from a single source

From problem analysis to commissioning: we not only offer proven components for plant construction and automation technology, but also project and implement individual overall concepts for material flow and assembly technology with our experienced team. In this way, resources are used in a targeted and effective manner. The basis for this is our flexible modular system consisting of profiles, linear technology and elements for ergonomic workplace design. These are supplemented by pneumatic and control technology components as well as conveyor systems, workpiece carrier transport systems and drives. From these parts, experienced specialists create modules which then grow together to form complete automation solutions for very individual tasks. Our goal is to develop the optimum solution for every task. Already in the planning phase, our customers benefit from our cross-industry experience. From the initial concept to commissioning, you will be expertly and seamlessly accompanied by our team.

## Electrical constructions

The basis of the electrical design is the planning of the hardware. Thanks to our experience with tasks from a wide variety of industrial sectors and our many years of cooperation with all capable manufacturers, we are able to select the optimum configuration for the respective task. We create the hardware plans with the most modern CAD software E-Plan Electric P8. A meaningful documentation is thus generated for each development. As a rule, we create control concepts on a modular basis with decentralized intelligence. Different bus systems such as ProfiNet or I/O Link are used according to the requirements of our customers and the task at hand. Our specialists take over the design of the drives, taking into account the economic efficiency and the mechanics used. State-of-the-art servo technology with integrated safety functions is standard in our systems.



## Switch cabinet production

Switch cabinets are assembled and wired in-house by our specialists according to the specifications of the electrical planning and approval by our customers. An intensive in-house functional test with the latest test equipment guarantees the quality and safe functioning of our systems.



## DRIVE AND CONTROL TECHNOLOGY

**Software development**

The sequence programs of our systems are created for PLC or PC control. Programming is carried out by our specialists using Simatic Step 7 and the TIA Portal according to IEC standards. Manufacturer independent CoDe-Sys programming is also possible.

The integration of our complete solutions into the customer's existing ERP can also be realized on request.

**Visualization - safe operation and monitoring**

Clear mapping of the control processes is an indispensable prerequisite for safe operation of the system. With WinCC flexible we create user interfaces that not only visualize the process, but also visually signal error messages or display help texts that are easy for the operator to understand. Our mobile HMI panels make it much easier to operate and set up complex systems. With different user levels the visualization can be activated and adapted according to the respective logged in user.

....Your partner for the complete conception:

- Consultation
- Planning
- Mechanical and electrical engineering
- Software development and visualization
- Commissioning
- CE compliant design
- Documentation
- Service such as remote maintenance

DRIVE UNITS

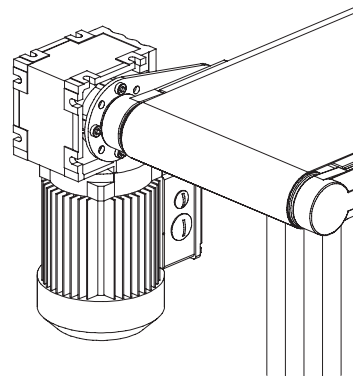
PLUG-ON DRIVE UNIT SUITABLE FOR CONVEYOR BELT SERIES 45\*

Technical Data

- Nominal voltage 230 / 400 V
- 50 Hz
- Protection IP 54
- Weight ca. 6kg

For attachment to a drum bearing 45, a torque arm WA 10 **part no. 295040/0** is required.

Optionally available with holding brake or thermocouple, also with different position of the terminal box and cable input (data sheets on request)



Type	Part no.	Power [W]	Output speed	Output torque	Conveyor belt 45 Conveyor speed	Center drive KR Belt speed
WA10 DT56 M4 - 17	33.0015/0	90	17 U/min	20 Nm	2,6 m/min	2,4 m/min
WA10 DT56 M4 - 22	33.0016/0	90	22 U/min	18 Nm	3,4 m/min	3,1 m/min
WA10 DT56 M4 - 33	33.0017/0	90	33 U/min	15 Nm	5,1 m/min	4,6 m/min
WA10 DT56 L4 - 53	33.0023/0	120	53 U/min	15 Nm	8,3 m/min	6,1 m/min
WA10 DT56 L4 - 67	33.0018/0	120	67 U/min	13 Nm	10,5 m/min	7,5 m/min
WA10 DT56 L4 - 79	33.0019/0	120	79 U/min	11 Nm	12,4 m/min	11,2 m/min
WA10 DT56 L4 - 127	33.0020/0	120	127 U/min	7,7 Nm	19,9 m/min	18,0 m/min
WA10 DT56 L4 - 159	33.0021/0	120	159 U/min	6,3 Nm	24,9 m/min	22,5 m/min

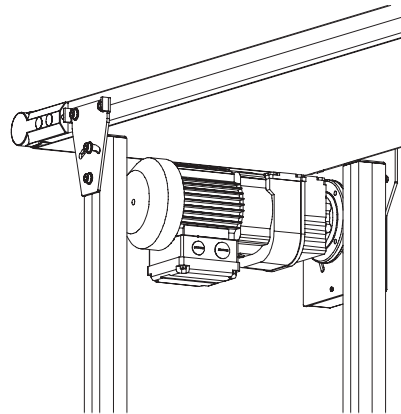
\* from this motor series, other services and translations are available on request.

FLANGED GEAR MOTOR SUITABLE FOR MOTOR ATTACHMENT KIT 45\* Ø20

Technical Data

- Nominal voltage 230 / 400 V
- 50 Hz
- Protection IP 54
- Weight ca. 7 - 9 kg

Optionally available with holding brake, thermocouple or external fan, also with different position of terminal box and cable input (data sheets on request)



Type	Part no.	Power [W]	Output speed	Output torque	Kit engine attachment 45 Conveyor Speed
DGM-120-17 / F	33.0086/0	120	17 U/min	68 Nm	3,3 m/min
DGM-120-31 / F	33.0087/0	120	31 U/min	37 Nm	6,1 m/min
DGM-120-47 / F	33.0088/0	120	47 U/min	24 Nm	9,2 m/min
DGM-180-61 / F	33.0089/0	180	61 U/min	28 Nm	11,9 m/min
DGM-180-79 / F	33.0090/0	180	79 U/min	22 Nm	15,5 m/min
DGM-250-92 / F	33.0091/0	250	92 U/min	26 Nm	18,0 m/min
DGM-370-123 / F	33.0092/0	370	123 U/min	29 Nm	24,1 m/min
DGM-370-153 / F	33.0093/0	370	153 U/min	22 Nm	30,0 m/min

\* From this motor series, other services and translations are available on request.

## DRIVE UNITS

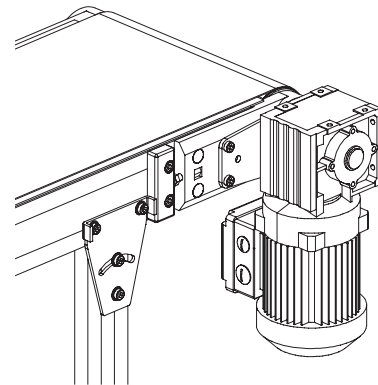
## PLUG-ON DRIVE UNIT SUITABLE FOR CONVEYOR BELT SERIES 90\*

## Technical Data

- Nominal voltage 230 / 400 V 50 Hz
- Protection IP 54
- Weight ca. 7 - 13kg

For attachment to a drum bearing 90 a torque arm is required. Torque arm WA20 (part no. 295036/0) or torque arm WA30 (part no. 295037/0).

Optionally available with holding brake, thermocouple or external fan, also with different position of terminal box and cable input (data sheets on request)



Type	Part no.	Power [W]	Output speed	Output torque	Conveyor belt 90 Conveyor speed	Torque arm
DSGM 180-15	33.0080/0	180	15 U/min	48 Nm	4,4 m/min	WA20
DSGM 250-27	33.0081/0	250	27 U/min	44 Nm	8,0 m/min	WA20
DSGM 370-35	33.0082/0	370	35 U/min	63 Nm	10,4 m/min	WA30
DSGM 370-50	33.0083/0	370	50 U/min	49 Nm	14,9 m/min	WA30
DSGM 370-71	33.0084/0	370	71 U/min	38 Nm	21,1 m/min	WA30
DSGM 550-115	33.0085/0	550	115 U/min	32 Nm	34,3 m/min	WA30

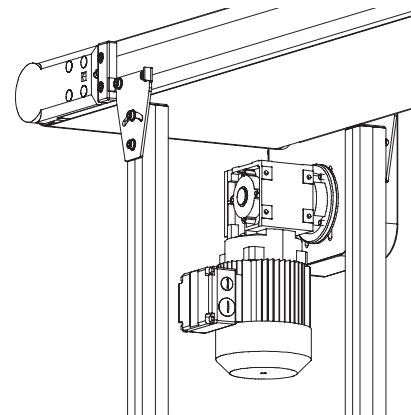
\* From this motor series, other services and translations are available on request.

## FLANGED GEAR MOTOR SUITABLE FOR MOTOR ATTACHMENT KIT 90\*

## Technical Data

- Nominal voltage 230 / 400 V
- 50 Hz
- Protection IP 54
- Weight ca. 7 - 13 kg

Optionally available with holding brake, thermocouple or external fan, also with different position of the terminal box and cable input (data sheets on request)



Type	Part no.	Power [W]	Output speed	Output torque	Kit engine attachment Conveyor speed	Center drive 3R Belt speed
DSGM 180 - 15 / F	33.0080/1	180	15 U/min	48 Nm	4,4 m/min	3,8 m/min
DSGM 250 - 27 / F	33.0081/1	250	27 U/min	44 Nm	8,0 m/min	6,8 m/min
DSGM 370 - 35 / F	33.0082/1	370	35 U/min	63 Nm	10,4 m/min	8,8 m/min
DSGM 370 - 50 / F	33.0083/1	370	50 U/min	49 Nm	14,9 m/min	12,6 m/min
DSGM 370 - 71 / F	33.0084/1	370	71 U/min	38 Nm	21,1 m/min	17,8 m/min
DSGM 550 - 115 / F	33.0085/1	550	115 U/min	35 Nm	34,3 m/min	28,9 m/min

\* From this motor series, other services and translations are available on request.

## FREQUENCY CONVERTER FU 370 PP

## Technical Data

- Built-in on / off switch
- Mode 1Q (without brake - chopper)
- Mains overvoltage and undervoltage monitoring
- Engine load monitoring
- Short-circuit monitoring phase / phase, phase / earth
- Adjustable acceleration and deceleration ramp
- Adjustable voltage boost at low output frequency
- Power cord with earthing contact plug 230 V and motor cable, ELPUR, 5 m long with earthing contact plug, colour orange
- EMC filter class B
- IP 66/ NEMA-4X-casing
- Equipped as standard with an operator panel that allows operation and setup of the drives without the need for additional equipment
- Output power motor side max. Motor power 0.37 kW
- Output rated current max. 2.3 A
- Output voltage 3 x 20 - 250 V
- Overload 150% for 60 seconds
- Input voltage mains side rated voltage 230V
- Input current 6,7 A
- Power frequency 50 - 60 Hz
- Ambient temperature -10 ° C to + 40 ° C
- Heat loss at rated power 11 W
- Dimensions H / W / D: 232 x 161 x 179 mm



ART.-NR. 33.0126/0

## MAGNETIC MEASURING SYSTEM

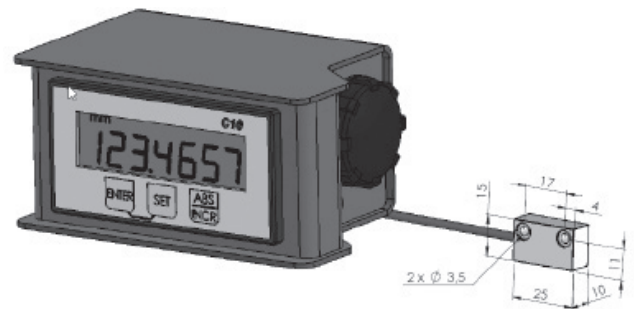
## MAGNETIC MEASURING SYSTEM ML

Length or distance measurement is one of the standard tasks in mechanical engineering and construction. A modern and reasonably priced solution is the ML magnetic length measuring system with magnetic tape, magnetic sensor and measuring display. The advantages of this system are mainly in the direct measuring method, the wear-free, the simple and inexpensive installation and high possible accuracy.

At the heart of this measuring system is the magnetic tape, a flexible plastic tape filled with magnetic particles. This is glued to the profile surface and protected with a stainless steel strip, also glued. About this band is at a small distance, but non-contact, guided along a magnetic sensor and thus scanned the magnetic field. Movement direction and increments are then derived from these scanning signals and further processed in a controller or displayed by means of a measuring display.

### LCD meter with battery operation incl. magnetic sensor (Part No. 33.0038/0)

- 6-digit LCD display, with 14mm digit height
- Surface-mount housing, aluminum powder-coated RAL 5010, dimensions W = 125mm, H = 65mm, depth = 85mm
- Power supply battery C (baby 1,5V)
- Battery compartment on the right side
- With attached magnetic sensor (cable length 0.5m)
- for mounting on stop slides via brackets
- Operating temperatur -5 to +45° C
- Travel speed max. 3m / sec, counting frequency up to 1MHz
- Actual value memory / offset value, selectable
- Absolute - incremental - conversion
- Measuring tolerance  $\pm 0,1$  mm/m



### Measuring display for 230V connection Part no. 33.0036/0

- 6-digit LED display, with 14mm digit height
- Surface-mount housing, aluminum powder-coated RAL 5010, dimensions W = 115mm, H = 70mm, depth = 120mm
- Power supply 230V AC pluggable.
- Sensor connection via SuB-D 9-pin. pluggable, TTL 5VDC
- Operating temperatur -5 to +45° C
- Travel speed max. 3m / sec, counting frequency up to 1MHz
- Actual value memory / offset value, selectable
- Magnetic sensor Part no. 33.0037/0 please order separately, specifying the desired cable length

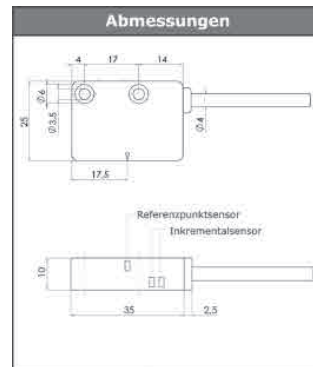


MAGNETIC MEASURING SYSTEM



**Magnetic sensor with integrated evaluation unit Part no. 33.0037/0**

- Non-contact measuring scanner with integrated digital evaluation electronics.
- Detecting the magnetic signals, with index pulse, resolution 10µm
- In conjunction with the above displayed measuring display
- suitable for MiniTec profiles, connection cable integrated (2 m) and D-Sub connector (longer cable lengths on request up to 20 m).



**Magnetic Tape Part no. 33.0028/0**

Technical Data / delivery

- Magnetic tape for sticking to MiniTec profiles incl. Stainless steel masking tape
- Length max. 80 m, width 10 mm (option: Band width 5 mm for gluing into the profile groove)

Application

- For all MiniTec linear guides with rails made of system profiles
- Length measuring stops
- Material feed

Mounting

- Stick magnetic tape to profile surface, glue masking tape onto magnetic tape.
- Attach sensor to carriage
- Distance to the magnetic tape: 1.1 ± 0.9 mm

**Please specify desired magnetic tape length (round up to full meters)**



PNEUMATIC SYSTEM

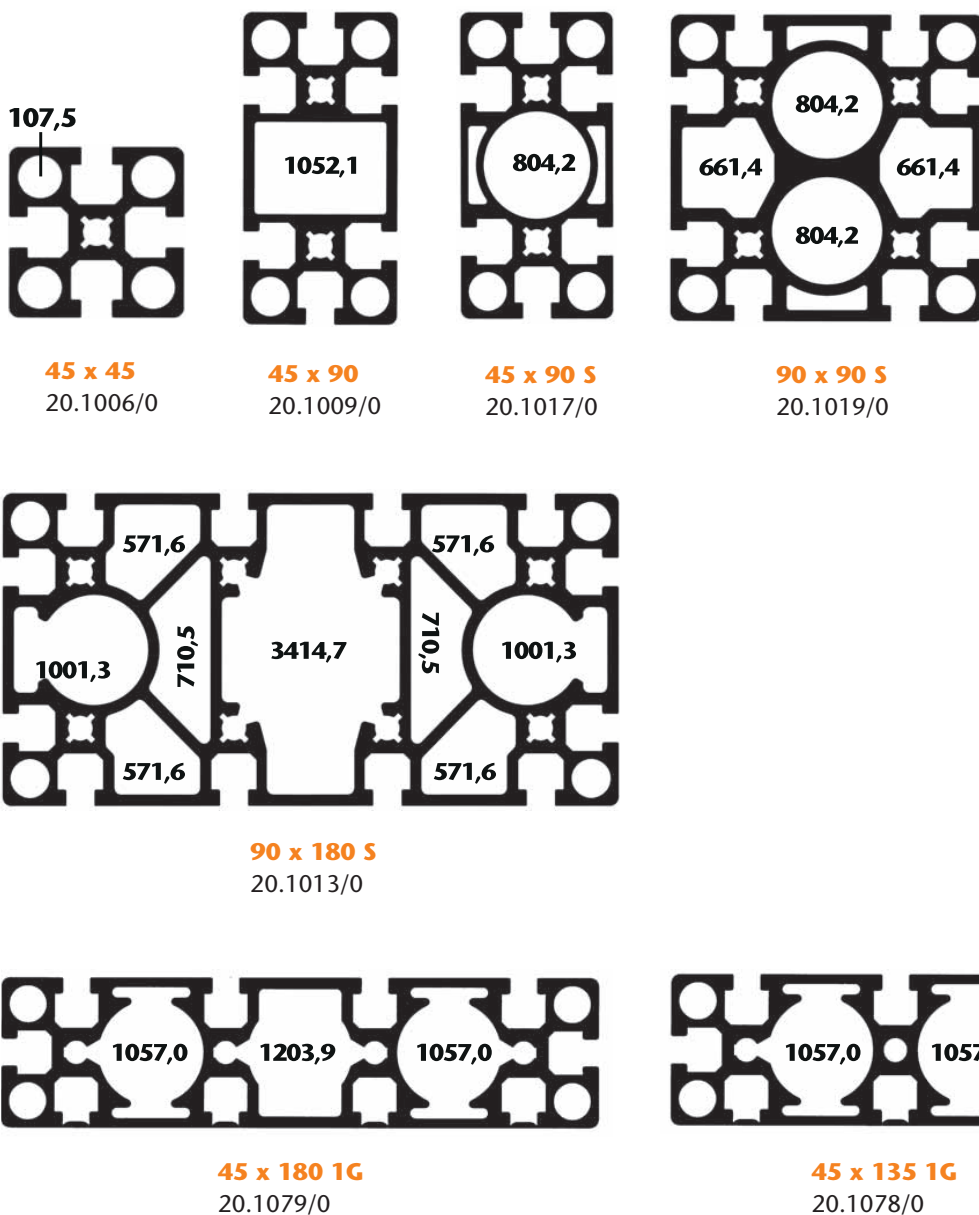
Optically attractive and economical solutions are possible with simultaneous use of the construction profiles as an air duct. The MiniTec standard profiles are particularly well suited for compressed air guidance. Commercially available connections can be used without special connection components.

All standard profiles with round corner holes can be used as compressed air lines. Bore  $\varnothing$  11.7 can be drilled to G 1/4 to accommodate pneumatic connections or screw plugs. Air extraction at any point.

All MiniTec standard profiles can be used as a single or multi-chamber system. Connections are possible at any point. Maximum pressure for round chambers ( $\varnothing$  11.7) 20 bar, otherwise max. 8 bar.

Usable cavities for compressed air ducts

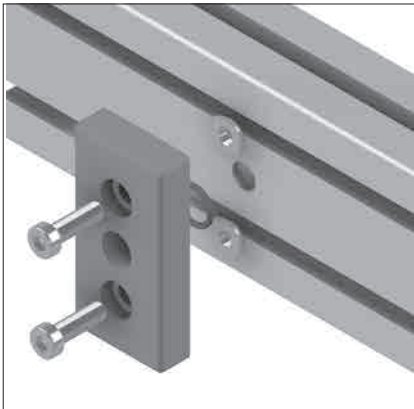
All area information in mm<sup>2</sup>



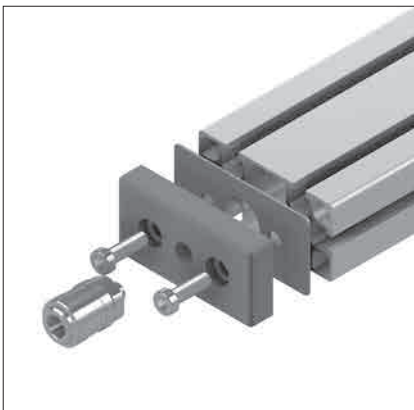


PNEUMATIC SYSTEM

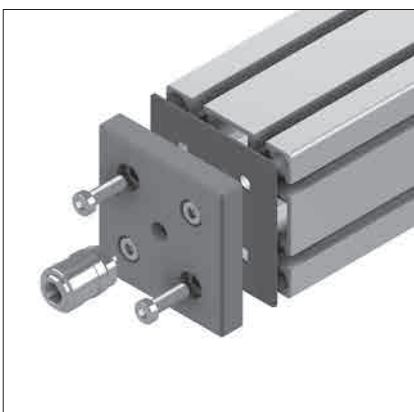
PNEUMATIC-PLATE 45, 45 x 90 and 90



Thread	WEIGHT	Part no.
G 1/8"	0,170 kg	24.1107/0
G 1/4"	0,168 kg	24.1107/2
G 3/8"	0,165 kg	24.1107/3



Thread	WEIGHT	Part no.
G 1/8"	0,181 kg	24.1105/0
G 1/4"	0,178 kg	24.1105/2
G 3/8"	0,174 kg	24.1105/3



Thread	WEIGHT	Part no.
G 1/8"	0,434 kg	24.1106/0
G 1/4"	0,429 kg	24.1106/2
G 3/8"	0,421 kg	24.1106/3

PNEUMATIC-PLATE 45

Technical Data/Items Supplied

- Die-cast aluminum, powder-coated grey
- 1x O-Ring
- with fastening material

Application

- Side connection for compressed air supply or removal on profiles 45 x 90 and 90 x 90

Assembly

- mount with fastening material of items supplied
- Insert bore Ø 12 mm in the center of the profile

PNEUMATIC-PLATE 45 X 90

Technical Data/Items Supplied

- Die-cast aluminum, powder-coated grey
- with sealing plate made of NBR
- with fastening material

Application

- Closure of the hollow chamber ends of profiles 45 x 90 for connection of pneumatic connections

Assembly

- Apply sealing plate
- with fastening material from items supplied screw on 2 central holes Ø 7.5 mm (tightening torque 12 Nm)

PNEUMATIC PLATE 90

Technical Data/Items Supplied

- Die-cast aluminum, powder-coated grey
- with sealing plate made of NBR
- with fastening material

Application

- Closure of the hollow chamber ends of profiles 90 x 90 for connection of pneumatic connections

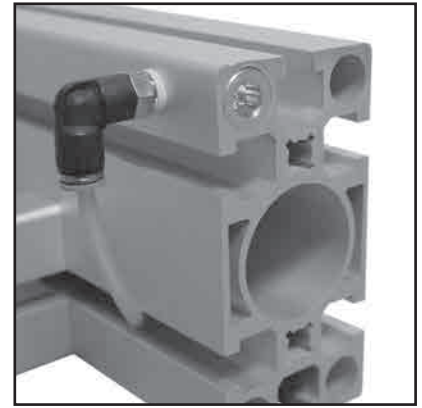
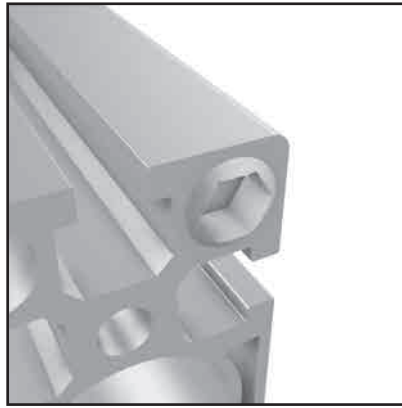
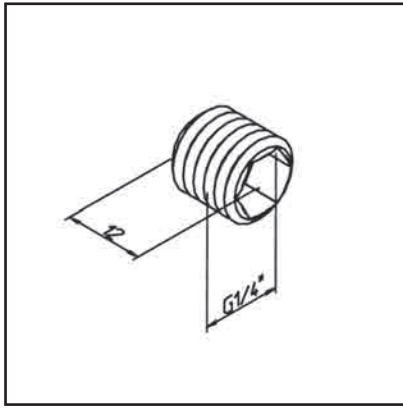
Mounting

- Apply sealing plate
- with fastening material from scope of supply screw on 4 central holes Ø 7.5 mm (tightening torque 12 Nm)

**PLUG G1/4"**

Part no.

24.1104/0

**TECHN. DATA / ITEMS SUPPLIED**

- Brass
- Weight = 0.005 kg/piece

**APPLICATIONS**

- Closure for profile chambers  $\varnothing$  11,7 mm

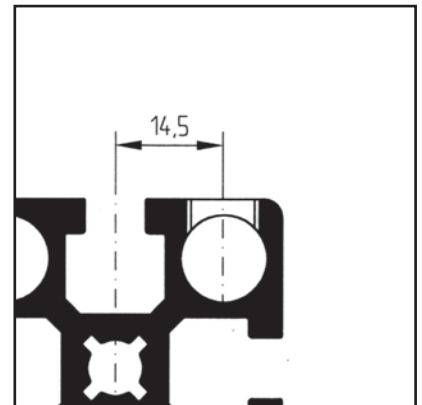
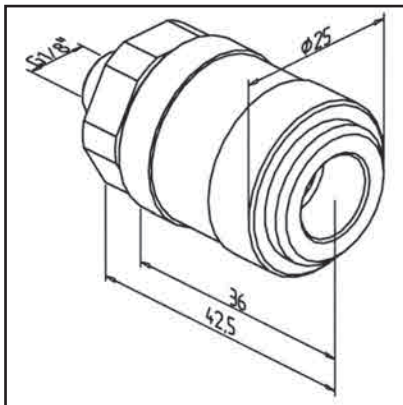
**ASSEMBLY**

- Cut Thread G 1/4" in central hole d 11.7.
- Screw in the plug by using sealing tape

**QUICK CONNECTOR 1/8**

Part no.

24.1109/0

**TECHN. DATA / ITEMS SUPPLIED**

- Brass, nickel-plated
- NW 7 mm
- Connecting thread G 1/8", SW 22
- Weight = 0.087 kg/piece

**APPLICATIONS**

- To connect directly to the profile panel or frontally at the bore  $\varnothing$  11.7

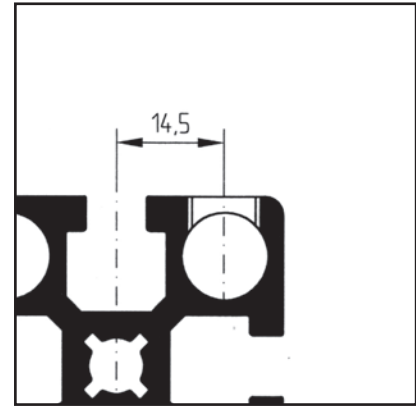
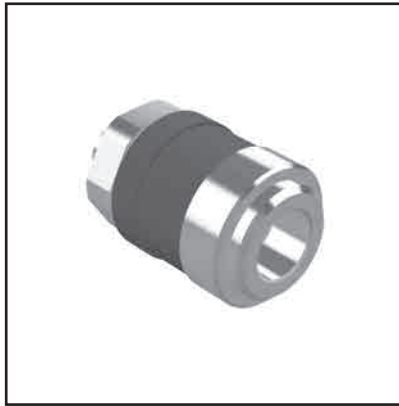
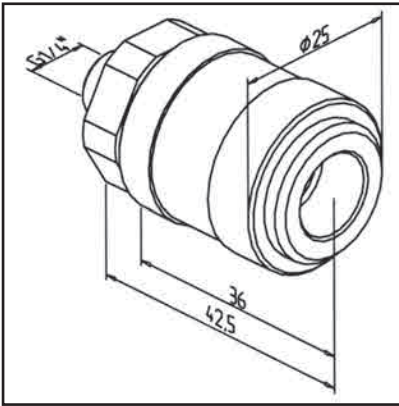
**ASSEMBLY**

- Thread G 1/8 in profile face, distance thread centre from centre of profile groove: 14.5 mm

## QUICK CONNECTOR 1/4

Part no.

24.1110/0



### TECHN. DATA / ITEMS SUPPLIED

- Brass, nickel-plated
- NW 7 mm
- Connecting thread G 1/4", SW 22
- Weight = 0.087 kg/piece

### APPLICATIONS

- To connect directly to the profile panel or frontally at the bore  $\varnothing$  11.7

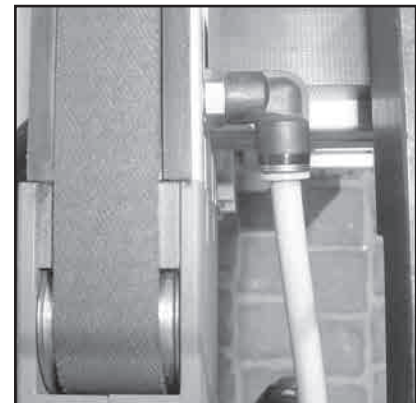
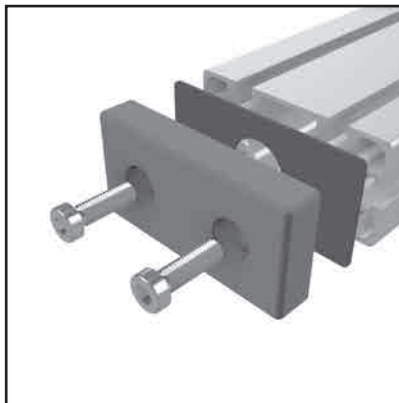
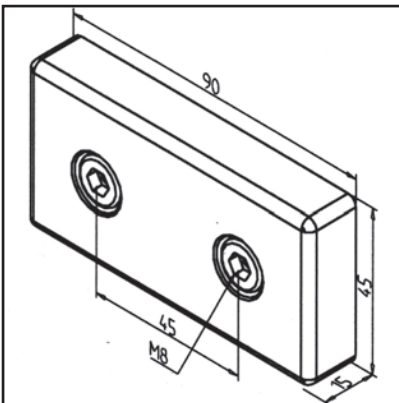
### ASSEMBLY

- Thread G 1/4 in profile face, distance thread centre from centre of profile groove: 14.5 mm

## PNEUMATIC END PLATE 45 X 90

Part no.

24.1105/7



### TECHN. DATA / ITEMS SUPPLIED

- Aluminium, Pressure die-casting, powder-coated, grey
- With sealing plate of NBR, black
- Fastening kit
- Weight = 0.180 kg/piece

### APPLICATIONS

- Closing of chamber ends of profiles 45 x 90

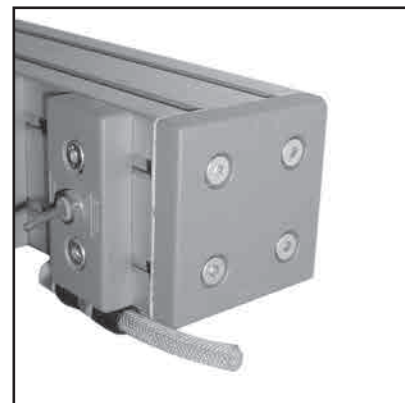
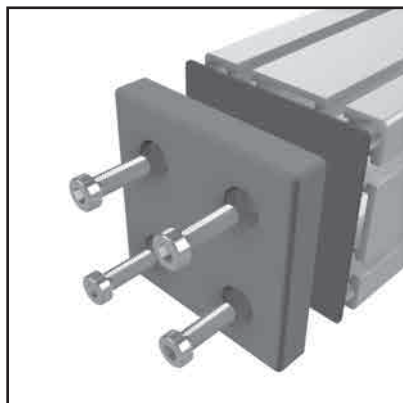
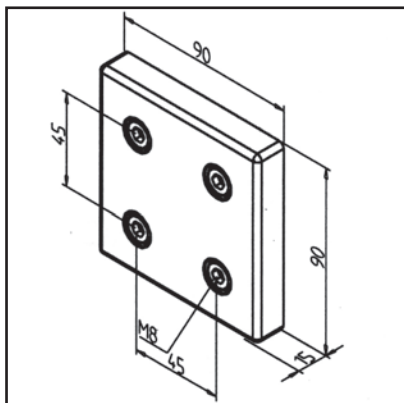
### ASSEMBLY

- Insert sealing plate
- Screw in with fastening material from items supplied.

**PNEUMATIC END PLATE 90 X 90**

Part no.

24.1106/7

**TECHN. DATA / ITEMS SUPPLIED**

- Aluminium, Pressure die-casting, powder-coated, grey
- With sealing plate of NBR, black
- Fastening kit
- Weight = 0.430 kg/piece

**APPLICATIONS**

- Closing of chambers of profiles 90 x 90 for connection of pneumatic couplings

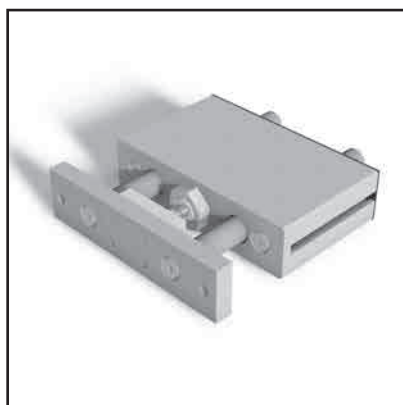
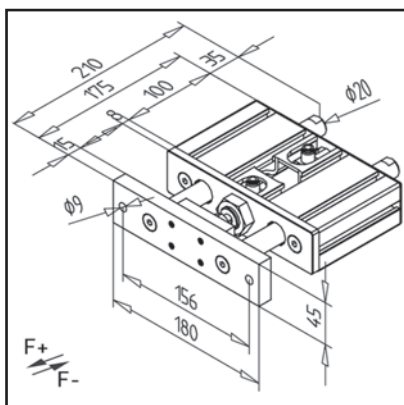
**ASSEMBLY**

- Insert sealing plate
- Screw in with fastening material from items supplied.

**PNEUMATIC LIFTING UNIT 15**

Part no.

24.1201/0

**TECHN. DATA / ITEMS SUPPLIED**

- Incorporated into profile 45 x 180
- Overall cylinder size  $\varnothing$  25 mm
- Guide shafts  $\varnothing$  20 mm
- Fully assembled with double acting pneumatic cylinder
- F+ at 6 bar = 256 N
- F- at 6 bar = 220 N
- Stroke = 15 mm
- Weight = 3.405 kg/piece

**APPLICATIONS**

- Lifting and lowering of loads
- Attachment for grips or similar
- Positioning of parts

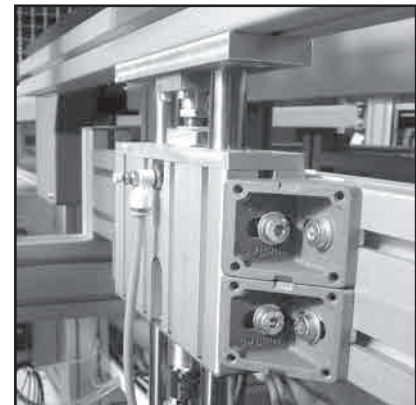
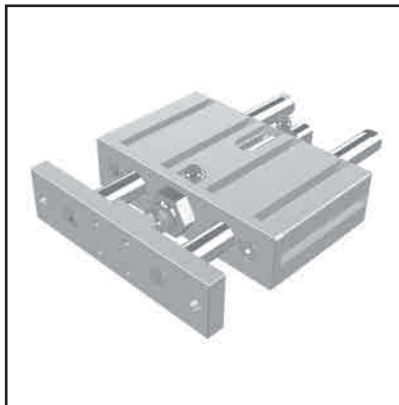
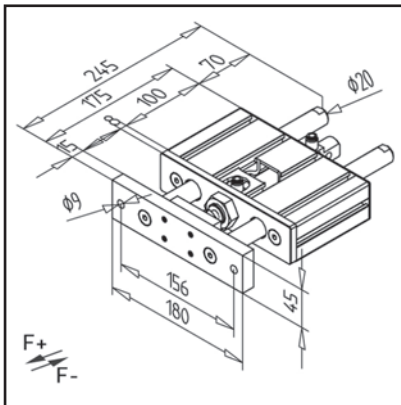
**ASSEMBLY**

- with mounting angle bracket on profile construction
- Other stroke lengths on request

## PNEUMATIC LIFTING UNIT 50

Part no.

24.1205/0



### TECHN. DATA / ITEMS SUPPLIED

- Incorporated into profile 45 x 180
- Overall cylinder size  $\varnothing$  25 mm
- Guide shafts  $\varnothing$  20 mm
- Fully assembled with double acting pneumatic cylinder
- F+ at 6 bar = 265 N
- F- at 6 bar = 220 N
- Stroke = 50 mm
- Weight = 3.452 kg/piece

### APPLICATIONS

- Lifting and lowering of loads
- Attachment for grips or similar
- Positioning of parts

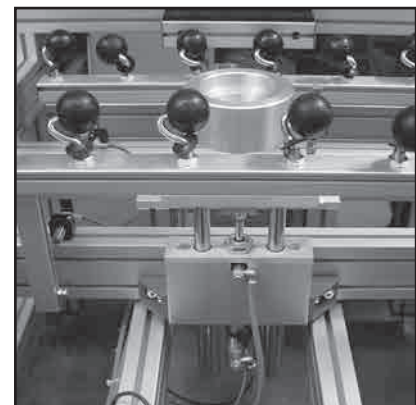
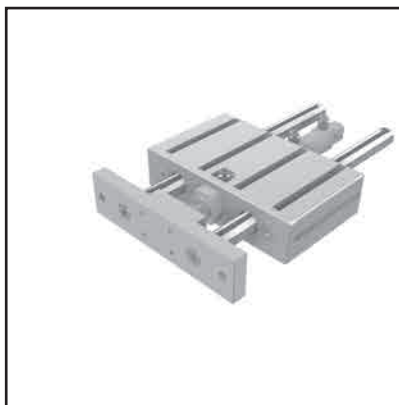
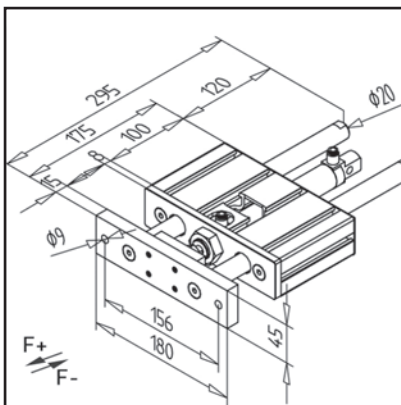
### ASSEMBLY

- with mounting angle bracket on profile construction
- Other stroke lengths on request

## PNEUMATIC LIFTING UNIT 100

Part no.

24.1210/0



### TECHN. DATA / ITEMS SUPPLIED

- Incorporated into profile 45 x 180
- Overall cylinder size  $\varnothing$  25 mm
- Guide shafts  $\varnothing$  20 mm
- Fully assembled with double acting pneumatic cylinder
- F+ at 6 bar = 265 N
- F- at 6 bar = 220 N
- Stroke = 100 mm
- Weight = 3.507 kg/piece

### APPLICATIONS

- Lifting and lowering of loads
- Attachment for grips or similar
- Positioning of parts

### ASSEMBLY

- with mounting angle bracket on profile construction
- Other stroke lengths on request

## HYDRAULICS

## Items supplied

- Hydraulic pump for 1 to 6 cylinders
- Alternatively with hand crank or electric drive
- Add-on or built-in cylinders with 150 - 500 mm stroke length
- 5 mm stroke per crank revolution or 15mm/sec with electrical drive
- Hydraulic hoses PA 4 mm
- Cylinders are single-acting
- Minimum load for retraction approx. 5 kg
- Temperature range from -20°C bis + 45°C

## Application

- Lifting, lowering, tilting tables, countertops, desks, workbenches, fixtures, etc.

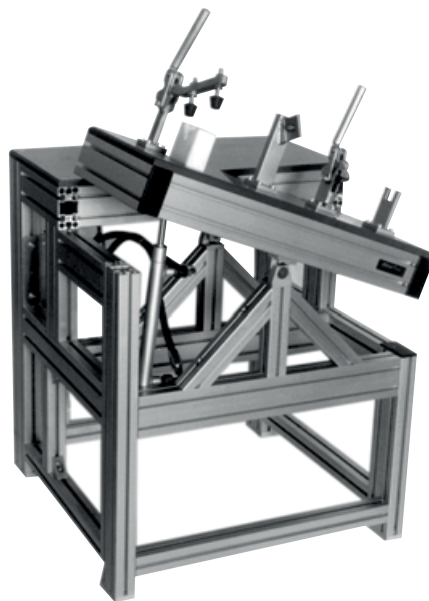
## Assembly

- Tighten the pump at the appropriate place in the construction with screws M6 to the profile groove
- Mount built-in cylinder in aluminum profile "S"
- Mount the add-on cylinder to the profile groove using the adapter plate

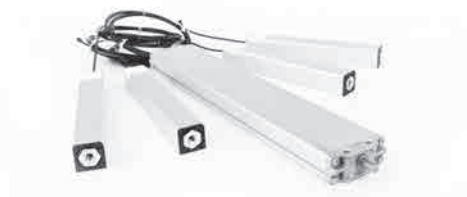
## Available special versions and equipment

- Fasteners for pumps according to customer requirements
- Mounting parts for mounting cylinder according to customer requirements
- Fastening kit 45 for installation cylinder  
**part no. 27.0005/0** for all profiles with hollow chamber  $\varnothing$  32 except for profile 90 x 90 S and 90 x 180 s.  
 For these, please use the fixing kit 90  
**part no. 27.0006/0**
- Service kit with oil, fittings, special wrench, tube cutter and filling syringe

When working on the hydraulics, great care should be taken. In order to prevent air bubbles from forming in the system, we recommend having this work carried out by us.



HYDRAULICS



Complete system with add-on cylinder LA - manual

PUMP	PA	PA	PB	PB	PB	PB
System load	150 kg	300 kg	350 kg			
Number of cylinders	1	2	3	4	5	6
LA 150 man.	27.0118/1	27.0118/2	27.0118/3	27.0118/4	27.0118/5	27.0118/6
LA 200 man.	27.0122/1	27.0122/2	27.0122/3	27.0122/4	27.0122/5	27.0122/6
LA 300 man.	27.0126/1	27.0126/2	27.0126/3	27.0126/4	27.0126/5	27.0126/6
LA 400 man.	27.0130/1	27.0130/2	27.0130/3	27.0130/4	27.0130/5	27.0130/6
LA 500 man.	27.0134/1	27.0134/2	27.0134/3	27.0134/4	27.0134/5	27.0134/6

Complete system with add-on cylinder LA - electric

LA 150 elektr.	27.0119/1	27.0119/2	27.0119/3	27.0119/4	27.0119/5	27.0119/6
LA 200 elektr.	27.0123/1	27.0123/2	27.0123/3	27.0123/4	27.0123/5	27.0123/6
LA 300 elektr.	27.0127/1	27.0127/2	27.0127/3	27.0127/4	27.0127/5	27.0127/6
LA 400 elektr.	27.0131/1	27.0131/2	27.0131/3	27.0131/4	27.0131/5	27.0131/6
LA 500 elektr.	27.0135/1	27.0135/2	27.0135/3	27.0135/4	27.0135/5	27.0135/6



Complete system with built-in cylinder LB - manual

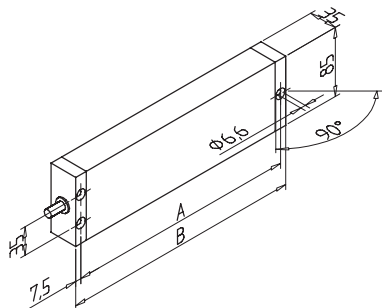
PUMP	PA	PA	PB	PB	PB	PB
System load	150 kg	300 kg	350 kg			
Number of cylinders	1	2	3	4	5	6
LB 150 man.	27.0120/1	27.0120/2	27.0120/3	27.0120/4	27.0120/5	27.0120/6
LB 200 man.	27.0124/1	27.0124/2	27.0124/3	27.0124/4	27.0124/5	27.0124/6
LB 300 man.	27.0128/1	27.0128/2	27.0128/3	27.0128/4	27.0128/5	27.0128/6
LB 400 man.	27.0132/1	27.0132/2	27.0132/3	27.0132/4	27.0132/5	27.0132/6
LB 500 man.	27.0136/1	27.0136/2	27.0136/3	27.0136/4	27.0136/5	27.0136/6

Complete system with built-in cylinder LB - electric

LB 150 elektr.	27.0121/1	27.0121/2	27.0121/3	27.0121/4	27.0121/5	27.0121/6
LB 200 elektr.	27.0125/1	27.0125/2	27.0125/3	27.0125/4	27.0125/5	27.0125/6
LB 300 elektr.	27.0129/1	27.0129/2	27.0129/3	27.0129/4	27.0129/5	27.0129/6
LB 400 elektr.	27.0133/1	27.0133/2	27.0133/3	27.0133/4	27.0133/5	27.0133/6
LB 500 elektr.	27.0137/1	27.0137/2	27.0137/3	27.0137/4	27.0137/5	27.0137/6

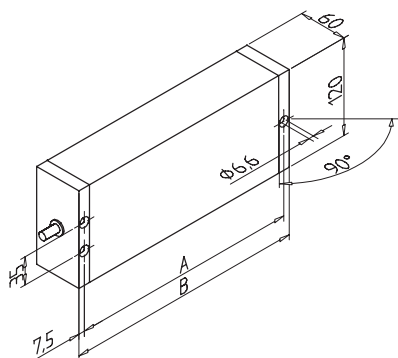
HYDRAULICS

HYDRAULIC PUMPS PA FOR 1-2 CYLINDERS  
 HYDRAULIC PUMPS PB FOR 3-6 CYLINDERS  
 ADD-ON CYLINDER LA



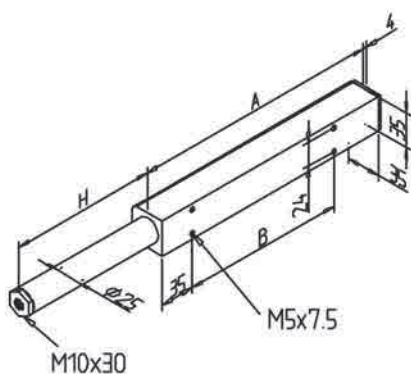
Hydraulic pumps PA for 1-2 cylinders

TYPE	Stroke H mm	Dimension A mm	Dimension B mm
PA 150	150	283,5	298,5
PA 200	200	343,5	358,5
PA 300	300	465,5	480,5
PA 400	400	585,5	600,5
PA 500	500	707,5	722,5



Hydraulic pumps PB for 3-6 cylinders

TYPE	Stroke H mm	Dimension A mm	Dimension B mm
PB 150	150	283,5	298,5
PB 200	200	343,5	358,5
PB 300	300	465,5	480,5
PB 400	400	585,5	600,5
PB 500	500	707,5	722,5



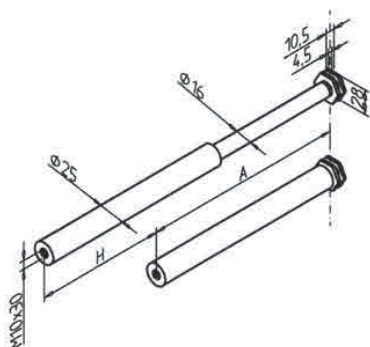
Add-on cylinder LA

TYPE	Stroke H mm	Length A mm	Length B mm	lateral load kg max.
LA 150	150	252	165	130
LA 200	200	317	240	97
LA 300	300	442	340	65
LA 400	400	542	340	48
LA 500	500	667	450	29

For attachment to a wide variety of constructions using adapter plates.

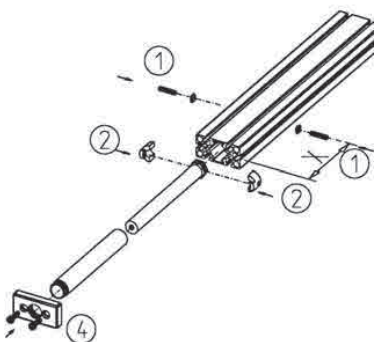


**MOUNTING CYLINDER LB, FASTENING KIT 45 FOR MOUNTING CYLINDER, FASTENING KIT 90 FOR MOUNTING CYLINDER**



Add-on cylinder LB

TYPE	Stroke H mm	Length A mm	lateral load kg max.
LB 150	150	235	130
LB 200	200	300	97
LB 300	300	425	65
LB 400	400	525	48
LB 500	500	650	29

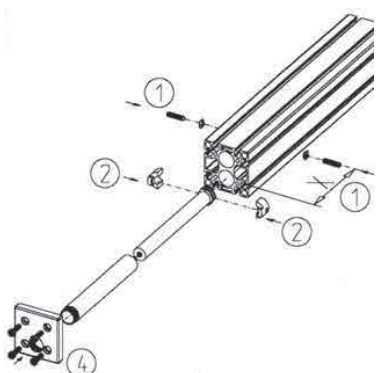
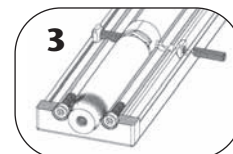


Fastening kit 45 for installation cylinder (Part No. 27.0005/0)

Suitable for all stroke lengths as well as for profile 45x90S, 45x135G and 45x180G

Assembly

1. Drill profile according to measurement table (dimension X) Ø 8,5 mm
2. Place 2 holders on cylinder and insert in profile chamber Ø 32
3. Insert the centering hole into the mounting pieces (through hole distance X), then fix with threaded pin
4. Screw guide tube into connection plate, insert in profile and fasten

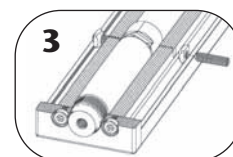


Fastening kit 90 for installation cylinder (Part No. 27.0006/0)

Suitable for all stroke lengths as well as for profile 90x90s, 90x180

Assembly

1. Drill profile according to measurement table (dimension X) Ø 8,5 mm
2. Place 2 holders on cylinder and insert in profile chamber Ø 32
3. Insert the centering hole into the mounting pieces (through hole distance X), then fix with threaded pin
4. Screw guide tube into connection plate, insert in profile and fasten



Measurements for fastening kit 45 and 90

Cylinder	LB 150	LB 200	LB 300	LB 400	LB 500
Dimension X (mm)	224	289	414	514	639



2.1

LINEAR MODULE LMS 90

266



2.2

LINEAR MODULE LMZ 90

271



2.3

LINEAR SYSTEM LR

273



2.4

MINI-ADJUSTING UNITS

328



2.5

ADJUSTING UNITS

332



2.6

SLIDING GUIDES

336



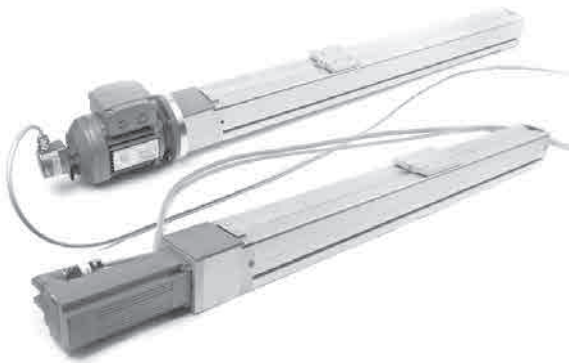
2.7

LINEAR SYSTEM LB

344

## LINEAR MODULE LMS 90

The linear module LMS 90 is designed for applications requiring precision and durability with minimal installation space. It is constructed for a stroke up to 2845 mm. The guide with the standard grid dimension 90 x 90 mm of our modular system is based on highly accurate rail systems which are integrated into a profile system. The high performance linear rail guides are built to perform 10000 km.



## GUIDANCE OPTIONS

- Heavy-duty rail guides with permanent lubrication, versions S1 and S2
- Plastic sliding guides for very economical applications (version G)

## COP VERSIONS

- Ball screw tolerance class T7, right-handed, axial clearance max. 0.04 mm, repeatability 52 µm / 300 mm
- Trapezoidal thread spindle 16x4, optional right-handed biased with increased accuracy

For all units, the spindle nuts are designed for relubrication.

## SPECIFICATIONS

- Compact support profile 90x90 with standard profile grooves, compatible with all MiniTec construction profiles
- Fully enclosed module, guide groove covered with stainless steel tape
- Guides and spindle easily accessible through removable cover profiles
- Special grooves for external mounting of position detection sensors
- Easy installation of external switches on lateral profile grooves
- Carriage made of aluminum, precision-machined on all sides, prepared for attachments with 4 or 6 connecting threads M8 at intervals of 45 mm
- Travel up to 2845 mm
- 2 bearing units with precision ball bearings, lubricated for life, with tenon Ø 10 mm
- Optional version with keyway or adapter plate machined according to engine specification

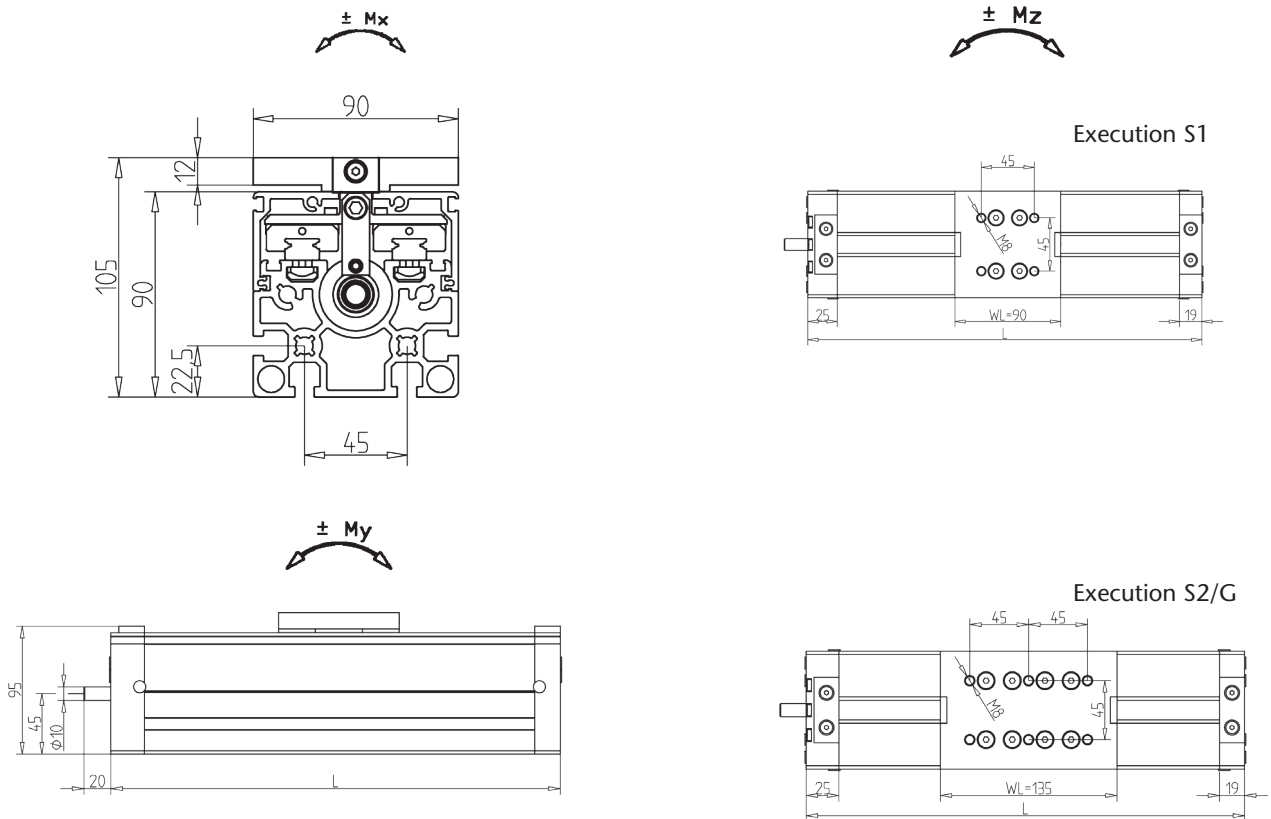
TECHNICAL DATA

Model series	Spindle	Execution	Number Linear slide	Part no.	max. Traversing	Car length WL	max. Stroke
LMS 90	T 16x4	G	4	28.1001/0	0,03 m/s	135 mm	1845 mm
LMS 90	K 16x5	S1	2	28.1000/0	0,25 m/s	90 mm	2845 mm
LMS 90	K 16x10	S1	2	28.1000/1	0,5 m/s	90 mm	2845 mm
LMS 90	K 16x16	S1	2	28.1000/2	0,8 m/s	90 mm	2845 mm
LMS 90	K 16x5	S2	4	28.1002/0	0,25 m/s	135 mm	2800 mm
LMS 90	K 16x10	S2	4	28.1002/1	0,5 m/s	135 mm	2800 mm
LMS 90	K 16x16	S2	4	28.1002/2	0,8 m/s	135 mm	2800 mm

Execution	Load rating N		Permissible stat. tilting moments (Nm)		
	Cdyn	Cstat	Mx	My	Mz
S1	7620	11180	54	54	54
S2	15240	22360	108	108	108
G	2800	2800	22	22	22

- Spindle**
- Acme screw K
  - Ballscrew T

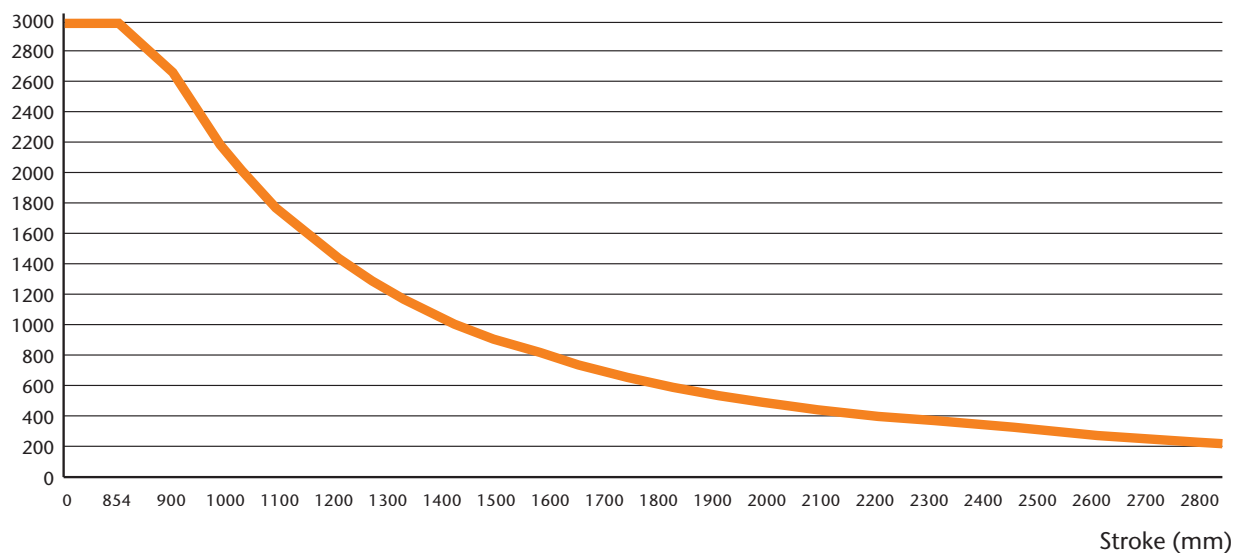
- Guidance**
- 2 sliding guides each with 2 linear slides Gr. 15 G (S1)
  - 2 rail guides each with 1 linear slide Gr. 15 (S2)
  - 2 rail guides with 2 linear slides Gr. 15 (S2)



## TECHNICAL DATA

## Maximum speed depending on stroke

Speed (rpm.)



On request, the unit can also be equipped with an internal spindle support. As a result, the speed can be increased considerably with a corresponding stroke.

As a guideline can be set:

Spindle support simple Part no.: 28.1050/0 - nmax x 2

When using the simple spindle support, the stroke is shortened by 25mm

Spindle support double Part no.: 28.1051/0 - nmax x 3

When using the double spindle supports, the stroke is shortened by 60 mm

## Calculation of the maximum speed (nmax.):

$$n_{\max} = \frac{1,963 \times 10^9}{(H-45)^2}$$

## ORDERING

Please enter the article number plus the desired stroke length H or the total length L. (xx.xxxx / x + stroke length or total length)

- Overall length (L) = stroke length (H) + carriage length (WL) + 50 mm
- Stroke (H)
- Car length (WL)

If you have any questions about the product or the ordering process, please do not hesitate to contact our team of Lineartechnik by phone +49 (0) 6373 8127-0 or by e-mail [info@minitec.de](mailto:info@minitec.de).

## ENGINE KITS &amp; DRIVE PACKAGES

## ENGINE KITS FOR LMS 90

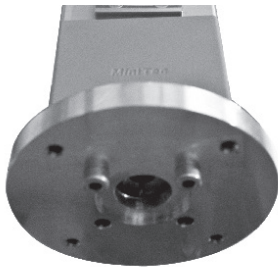
**Motor fastening kit LMS 90 DRM**

(MiniTec Part No: 28.1040/0)

Motor fastening kit LMS for three-phase motor (for drive package with three-phase asynchronous motor, MiniTec Part no. 33.1010/0 bzw. 33.1020/0), without motor.

**Items Supplied**

- Coupling housing made of profile incl. adapter plate
- Coupling
- Screws and equipment

**Motor fastening kit LMS 90 SERVO**

(MiniTec part no: 28.1041/0)

Motor fastening kit LMS for servomotors (for drive package with synchronous servomotor, MiniTec Part no. 33.1030/0), without motor.

**Items Supplied**

- Coupling housing made of profile incl. adapter plate
- Coupling
- Screws and equipment

**Options**

- Adapted adapter plates and couplings for special motors



## DRIVE PACKAGES FOR LMS 90

**DRIVE PACKAGE LMS 90 DRM-POSI**

(MiniTec Part No: 33.1020/0)

Three-phase asynchronous motor with encoder feedback with drive inverter for table positioning

**Items Supplied**

- Three-phase asynchronous motor 0.18kW; 1320 1 / min at 50Hz, version with pulse generator and temperature sensor
- Motor cable, length 5m
- Encoder cable, length 5m
- Drive inverter MDX61B for table positioning via IO for customer installation in the control cabinet
- 2 pieces of inductive proximity switch for T-slot for axial end position (NC)
- 1 piece of inductive proximity switch for T-slot for axial end position (NO) including motor fastening kit LMS 90 DRM (Part No .: 28.1040/0)

**DRIVE PACKAGE LMS 90 DRM-ECO**

(MiniTec Part No: 33.1010/0)

Three-phase asynchronous motor without encoder feedback with frequency converter for easy positioning via switch

**Items Supplied**

- Three-phase asynchronous motor 0.18kW; 1320 1 / min at 50Hz, version with temperature sensor
- Motor cable, length 5m
- Drive inverter MC07B, control via IO for customer installation in the control cabinet
- 2 pieces of inductive proximity switch for T-slot for axial end position (NC)
- 1 piece inductive proximity switch for T-slot for axial end position (NO)
- including motor fastening kit LMS 90 DRM (Part no: 28.1040/0)



## ENGINE KITS &amp; DRIVE PACKAGES

## DRIVE PACKAGES FOR LMS 90

**DRIVE PACKAGE LMS 90 SERVO**

(MiniTec Part No: 33.1030/0)

Synchronous servo motor with drive inverter for dynamic applications for table positioning

**Items Supplied**

Synchronous servo motor with 2.4 Nm nominal torque, 3000 1 / min, version with resolver and temperature sensor

Motor cable, length 5m

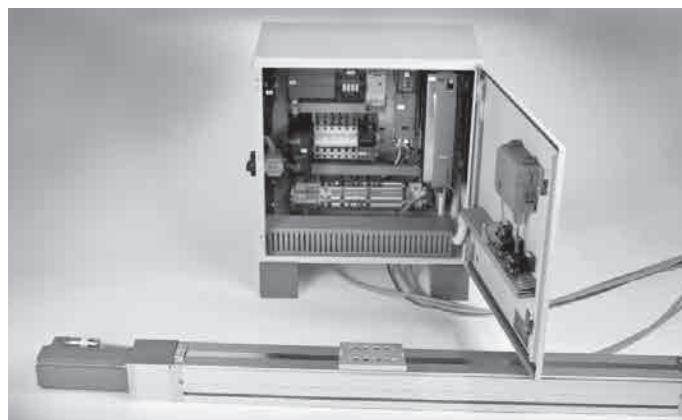
Encoder cable, length 5m

Drive inverter MDX61B for table positioning via IO for customer installation in the control cabinet

2 pieces of inductive proximity switch for T-slot for axial end position (NC)

1 piece inductive proximity switch for T-slot for axial end position (NO)

including motor fastening kit LMS 90 Servo (Part No: 28.1041/0)

**Options**

Motor with holding brake

Motor version with absolute encoder

PROFIBus / PPOFIsafe / PROFINET / Ethercat Interface cards for the drive inverter

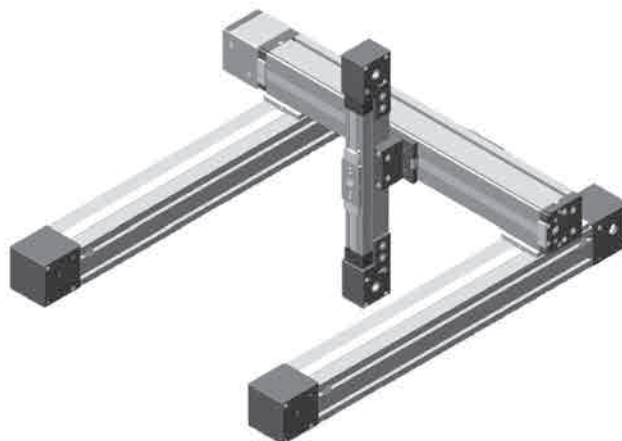
Additional sensors e.g. additional creep / stop positions

**READY-TO-INSTALL POSITIONING SYSTEMS**

The new high-performance module LMS 90 is also available as a ready-to-install system with drive package and control unit.

A suitable complete package is available for every task - from the particularly economical ECO design to the highly dynamic servo drive. Upon request, we also take over the commissioning and application programming for you.

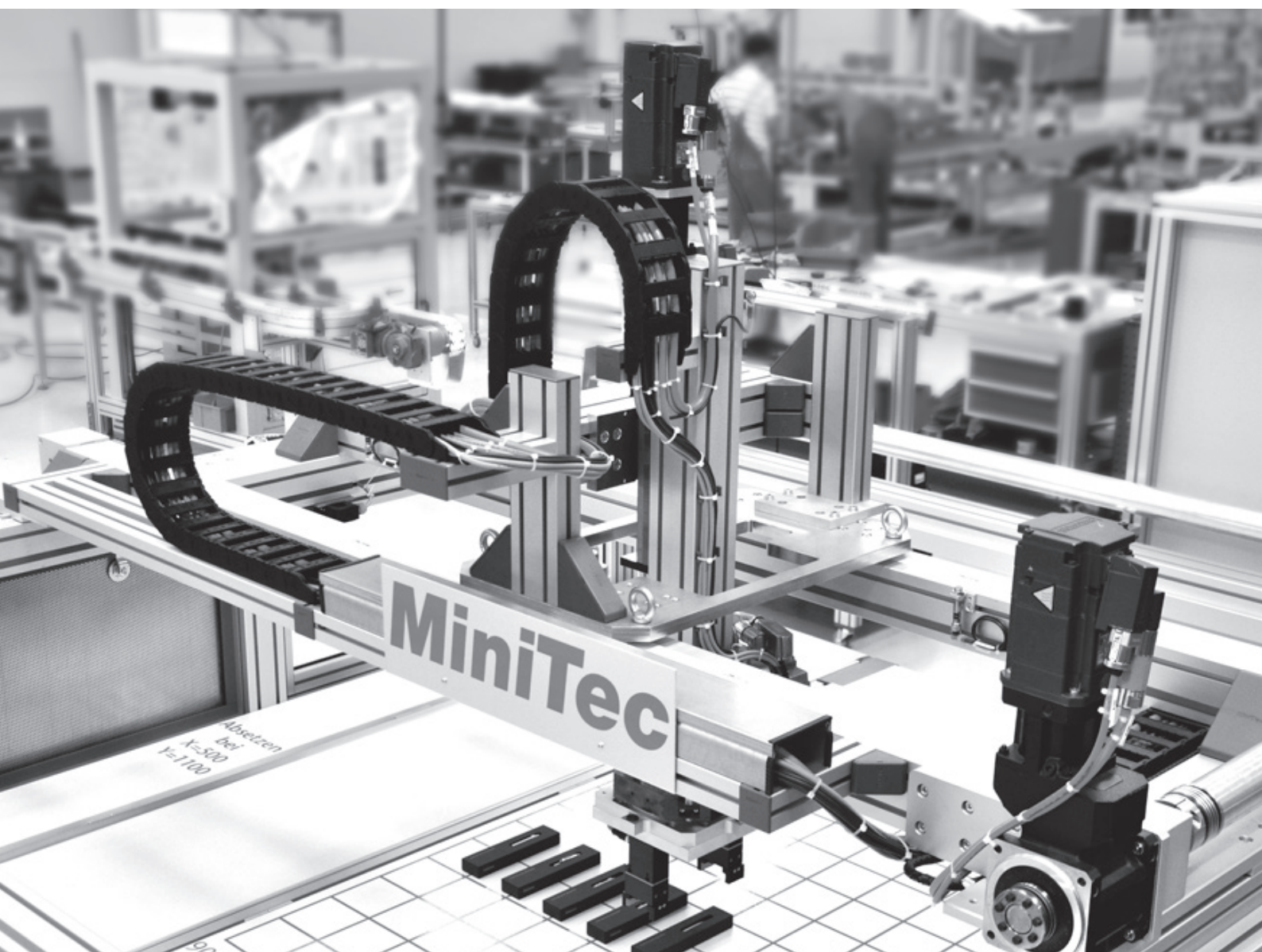
Thanks to the standardized profile geometry, the LMS axes can be variably combined with each other or with all other linear modules from MiniTec to form multi-axis systems.



## LINEAR MODULE LMZ 90 WITH TIMING BELT DRIVE

(Part no. 28.0400/0)

- Compact beam profile, with standard profile grooves, compatible with MiniTec construction profiles
- Integrated rail guide size 20
- With 2 slides covered by the timing belt
- Lubrication with intentional lubrication units for mileage up to 10000 km
- Slides made of aluminum, machined on all sides, with integrated timing belt tensioners for attachments with 6 connection threads M8
- 2 deflection units with precision ball bearings, mounted on carrier profile with MiniTec profile connectors, prepared for motor mounting with connecting shaft  $\varnothing$  17 mm with feather key, adapter plate according to the desired engine specification processed. Other diameters for drive shafts on request.
- Feed: 200 mm / turn
- Max. permissible belt tension: 3500 N
- Timing belt 25 AT 10, reinforced steel wire, pre-tensioned
- assembled
- Max. travel X = 3,800 mm
- Attachment of switches on side profile grooves with standard components from the MiniTec profile system Travel speed: max. 3 m/s
- Basis weight: 5,200 g
- Weight per 100 mm travel: approx. 800 g





LINEAR MODULE LMZ 90 WITH TIMING BELT DRIVE

(Part no. 28.0400/0)

Delivery forms

- Fully assembled module with connection processing for the desired drive
- Fully assembled module with gearbox and motor to customer specification
- Fully assembled module with gearbox, motor and control according to customer specification

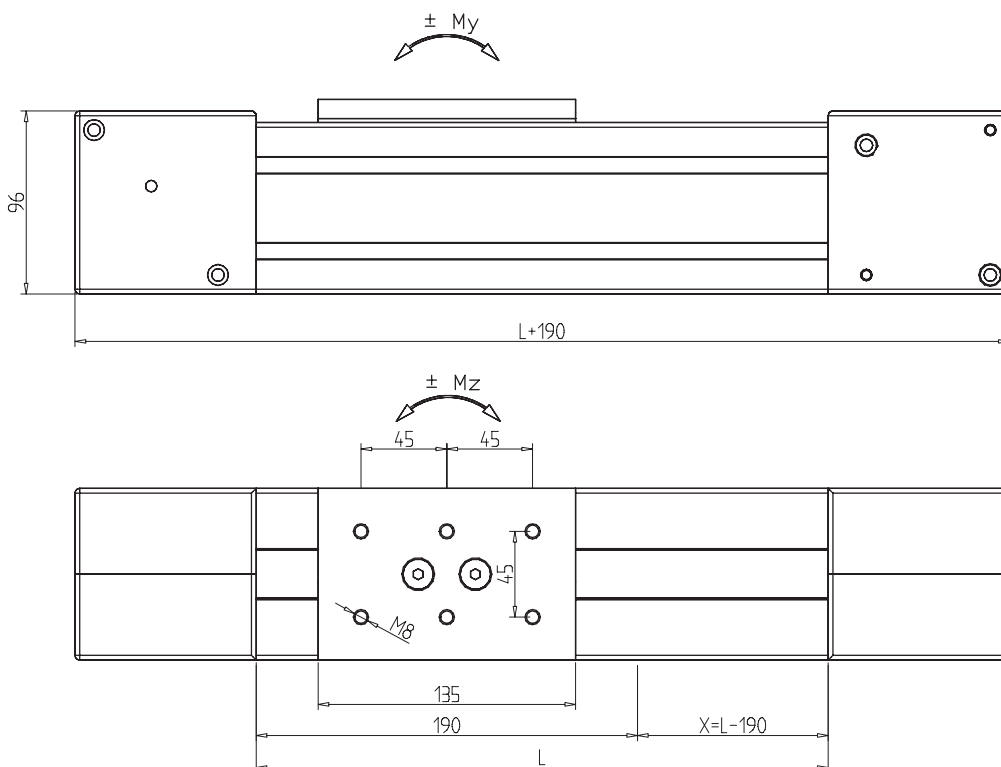
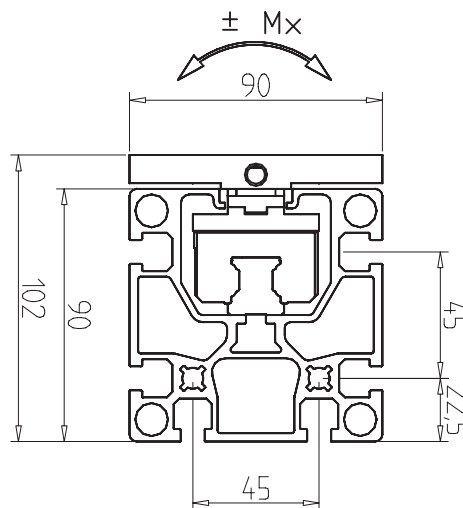
Assembly

- Pick-and-Place
- Gantry robot
- Measuring equipment
- Supply
- Handling facilities

Operating conditions

For self-supporting installation, the maximum permissible deflection from approx 3.5 mm to 4000 mm must be observed. It is recommended - especially at high dynamic load - to support the module at a distance of 300 to 600 mm.

Load rating N		Permissible stat tilting moments Nm		
Cdyn	Cstat	Mx	My	Mz
18800	24400	128	240	128

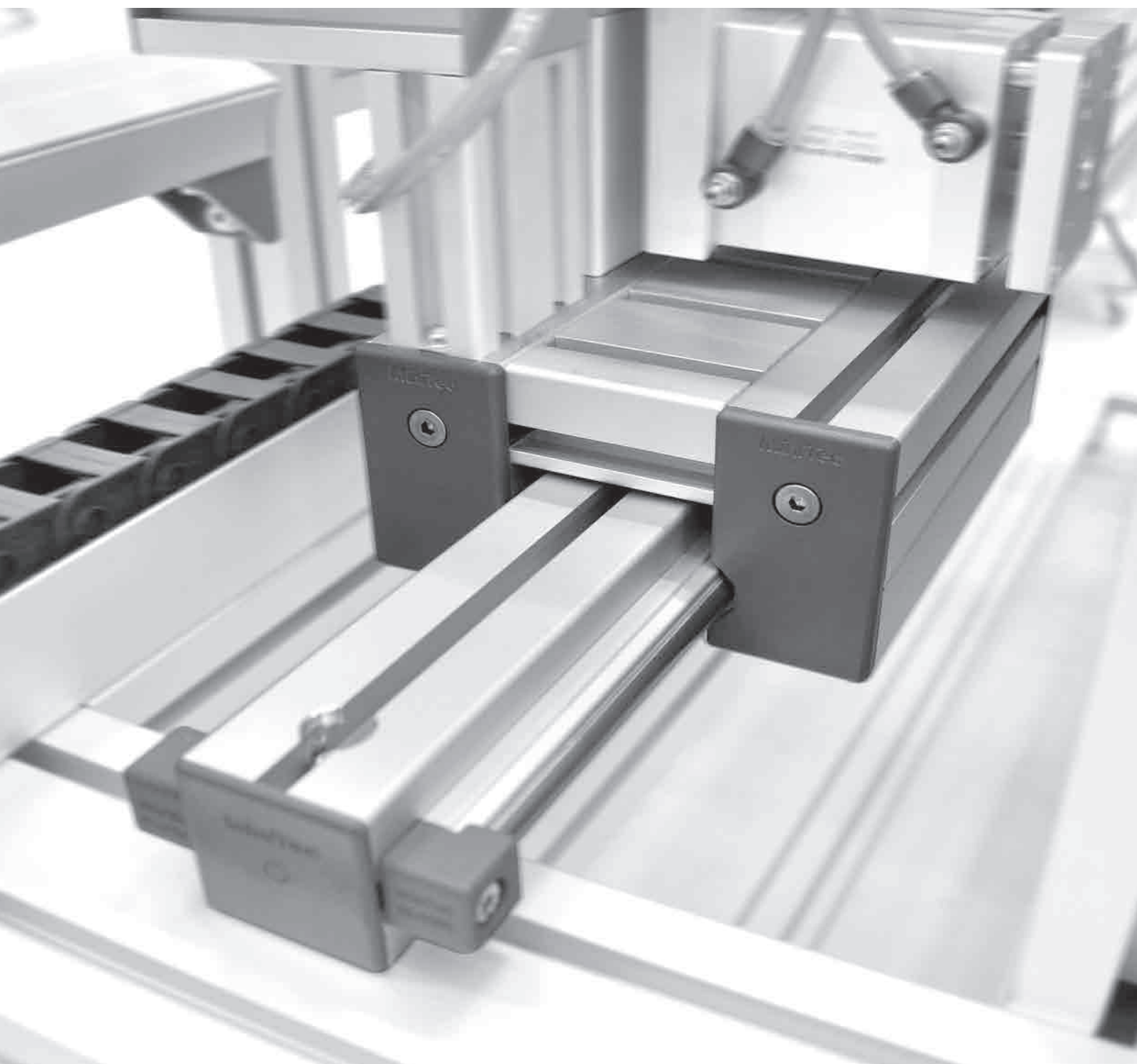


## READY-TO-INSTALL MODULES - LINEAR SYSTEM LR

**On the following pages you will find our ready-to-install LR modules. For an order, only the stroke/total length and the desired deflection must be defined.**

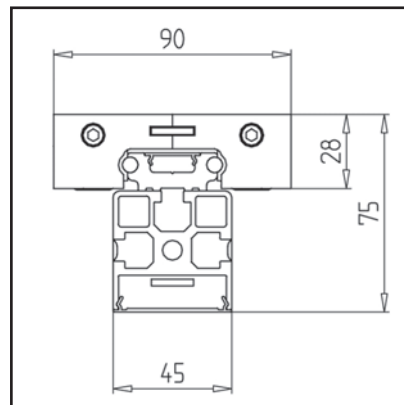
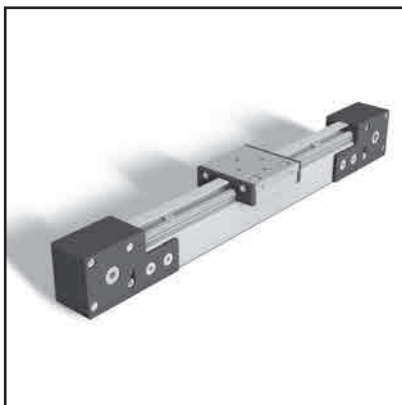
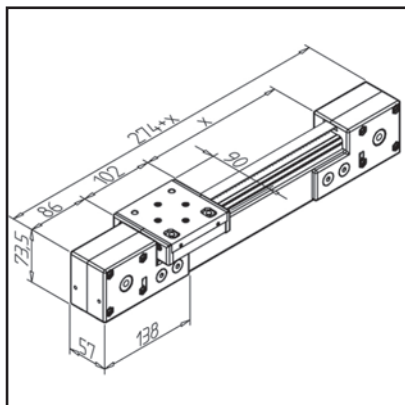
This system is based on double-row profiled rollers made of ball bearing steel and hardened precision shafts made of material 1.1214 (Cf 53). Our carriages are equipped with 2-row profiled rollers whose shaft tracks are designed as Gothic arches. For very high loads, the trolleys can be equipped with any number of track rollers. The profiled rollers are fastened directly to

the carriage plate with steel strips. No special roller profiles are required for the construction of the trolleys. This gives the construction maximum rigidity. The carriages are completely encapsulated, scraper felts are integrated in the cover caps, which simultaneously remove coarse dirt and supply the shafts with lubricant. The felts can be replaced quickly and easily after loosening the lateral screw connection. This advantage has an extremely positive effect, especially in dirty or rough operating conditions.



## LINEAR AXIS LR 6 Z-45X45R

Part no. 28.0500/0



### TECHN. DATA / ITEMS SUPPLIED

- Linear guide, ready for use, consisting of:
- 1x rail LR 6 with precision steel shafts h6,  $\varnothing$  6 mm, on carrier profile 45 x 45 R
- 1x slide LR 6 Z with integrated timing belt admission
- 2x timing belt pulleys
- 1x timing belt 16 AT 5, steel reinforced
- **Please specify stroke length X and reverse unit**
- Stainless version **part no. 28.0500/1**
- Weight = (basic weight) 2.25 kg
- Extra weight = 0.322 kg / 100 mm stroke

### APPLICATIONS

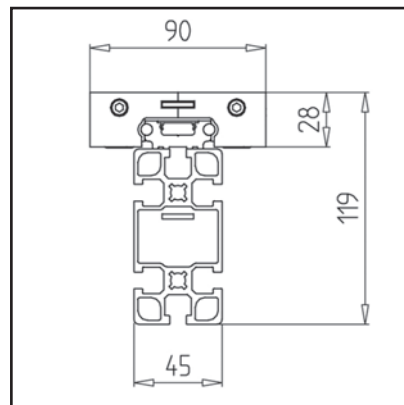
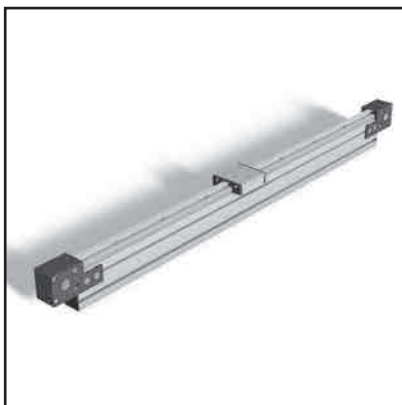
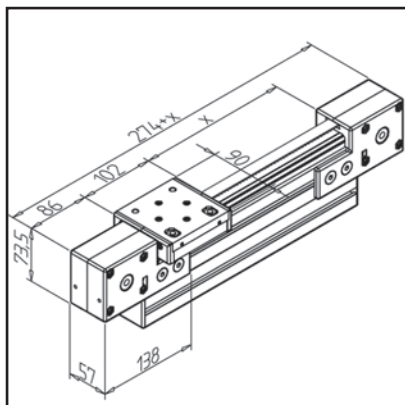
- Handling devices
- Measuring devices
- Calibration devices
- Precise guidance of doors or large extracts

### ASSEMBLY

- Strap is tensioned over the reversing unit

## LINEAR AXIS Z LR 6 - 45X90

Part no. 28.0501/0



### TECHN. DATA / ITEMS SUPPLIED

- Linear guide, ready for use, consisting of:
- 1x rail LR 6 S with precision steel shafts h6,  $\varnothing$  6 mm, on carrier profile 45 x 90 F
- 1x carriage LR 6 Z with integrated timing belt mounting
- 2x timing belt deflectors
- 1x timing belt 16 AT 5, steel reinforced
- **Please specify stroke length X and reverse unit**
- Stainless version **part no. 28.0501/1**
- Weight = (basic weight) 2.25 kg
- Extra weight = 0.453 kg / 100 mm stroke

### APPLICATIONS

- Handling devices
- Measuring devices
- Calibration devices
- Precise guidance of doors or large extracts

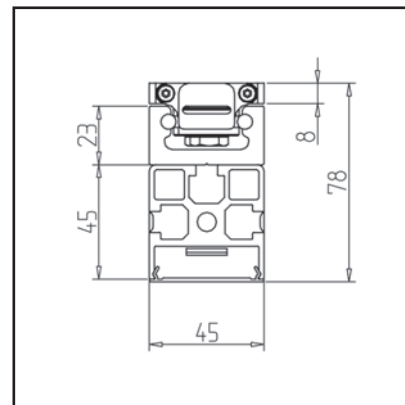
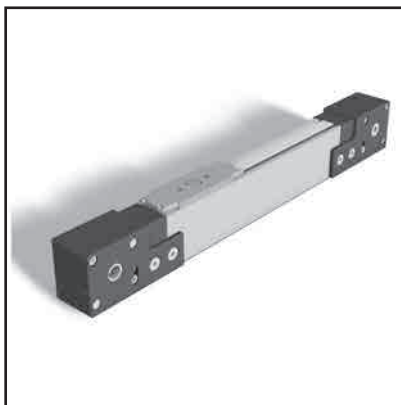
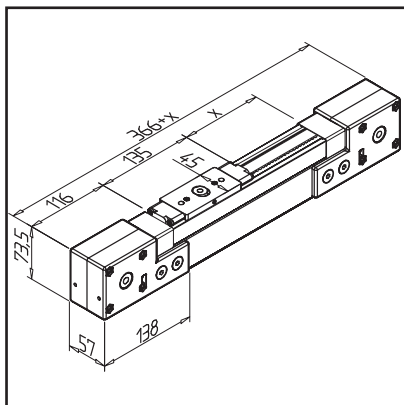
### ASSEMBLY

- Strap is tensioned over the reversing unit

## LINEAR AXIS LR 6 Z COMPACT - 45X45R

Part no.

28.0503/0



### TECHN. DATA / ITEMS SUPPLIED

- Linear guide, ready for use, consisting of:
- 1x rail LR 6 compact with precision steel shafts h6, Ø 6 mm, on support profile 45 x 45 R
- 1x carriage LR 6 Z compact with integrated timing belt mount
- 2x timing belt deflectors
- 1x timing belt 16 AT 5, reinforced steel
- **Please specify stroke length X and reverse unit**
- Stainless version **part no. 28.0503/1**
- Weight = (basic weight) 2.977 kg
- Extra weight = 0.407 kg / 100 mm stroke

### APPLICATIONS

- Handling devices
- Measuring devices
- Calibration devices

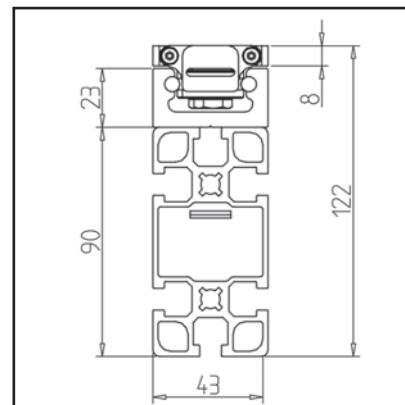
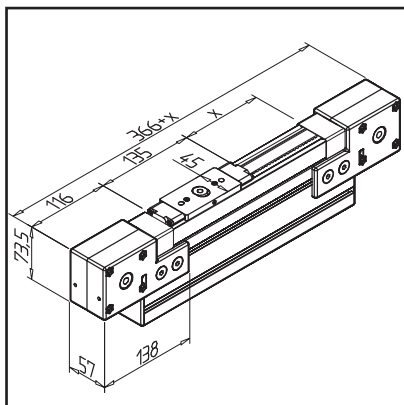
### ASSEMBLY

- Strap is tensioned over the reversing unit

## LINEAR AXIS LR 6 Z COMPACT - 45X90

Part no.

28.0504/0



### TECHN. DATA / ITEMS SUPPLIED

- Linear guide, ready for use, consisting of:
- 1x rail LR 6 with precision steel shafts h6, Ø 6 mm, on carrier profile 45 x 90, 1 Slide LW 6 Z with integrated timing belt admission, 2x timing belt pulleys 1 tooth belt 16 AT 5, steel reinforced
- **Please specify stroke length X and reverse unit**
- Stainless version **part no. 28.0504/1**
- Weight = (basic weight) 3.305 kg
- Extra weight = 0.547 kg / 100 mm stroke

### APPLICATIONS

- Handling devices
- Measuring devices
- Calibration devices

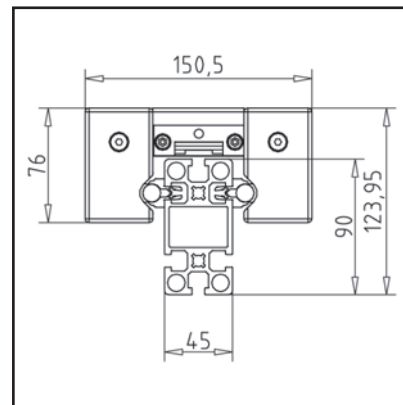
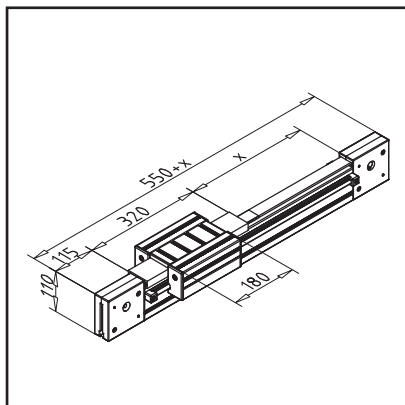
### ASSEMBLY

- Strap is tensioned over the reversing unit

## LINEAR AXIS LR 12 - 45X90

Part no.

28.0600/0



### TECHN. DATA / ITEMS SUPPLIED

### APPLICATIONS

### ASSEMBLY

- Linear guide, ready for use, consisting of:
- 1x rail 45 x 90 H with shaft fixation
- 2x timing belt pulley T45
- 2x timing belt tensioner
- 1x slide LW 45
- 1x timing belt 32AT10
- **Please specify stroke length X and reverse unit**
- Stainless version **part no. 28.0600/1**
- Weight = (basic weight) 7.37 kg
- Extra weight = 0.656 kg / 100 mm stroke

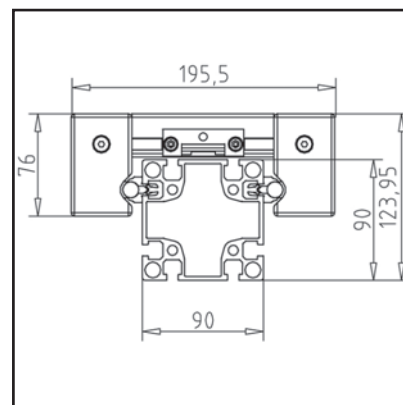
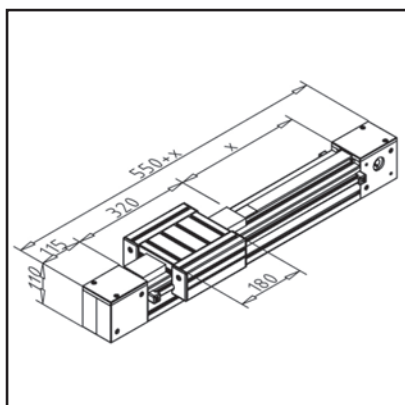
- Handling devices
- Measuring devices
- Calibration devices

- Belt is fastened and tensioned with the aid of timing belt tensioner

## LINEAR AXIS LR 12 - 90X90

Part no.

28.0601/0



### TECHN. DATA / ITEMS SUPPLIED

### APPLICATIONS

### ASSEMBLY

- Linear guide, ready for use, consisting of:
- 1x rail LR 12 - 90 with shaft fixation
- 2x timing belt pulley T90
- 2x timing belt tensioner
- 1x slide LW 90
- 1x timing belt 32AT10
- **Please specify stroke length X and reverse unit**
- Stainless version **part no. 28.0601/1**
- Weight = (basic weight) 11.65 kg
- Extra weight = 0.827 kg / 100 mm stroke

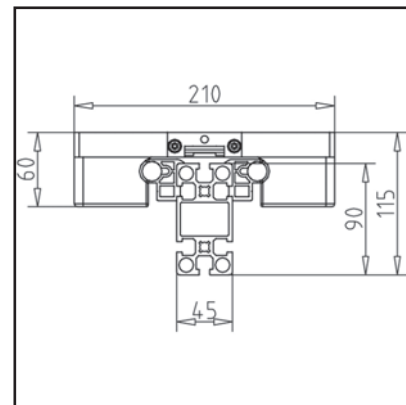
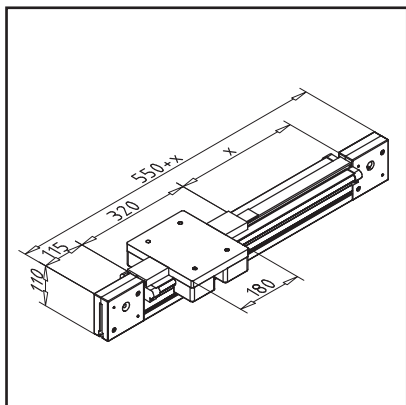
- Handling devices
- Measuring devices
- Calibration devices

- Belt is fastened and tensioned with the aid of timing belt tensioner

**LINEAR AXIS LR 16 - 45X90**

Part no.

28.0802/0

**TECHN. DATA / ITEMS SUPPLIED**

- Linear guide, ready for use, consisting of:
- 1x rail LR 16 - 45x90 with shaft fixation
- 2x timing belt pulley T90
- 2x timing belt tensioner
- 1x slide LR16-45
- 1x timing belt 32AT10
- **Please specify stroke length X and reverse unit**
- Weight = (basic weight) 10.19 kg
- Extra weight = 0.908 kg / 100 mm stroke

**APPLICATIONS**

- Handling devices
- Measuring devices
- Calibration devices

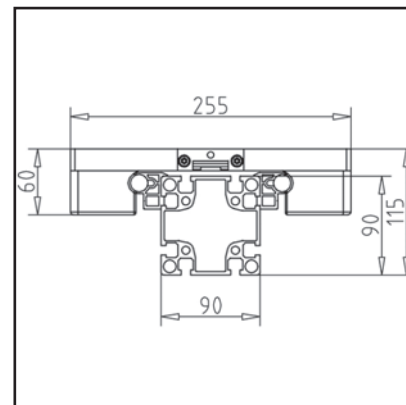
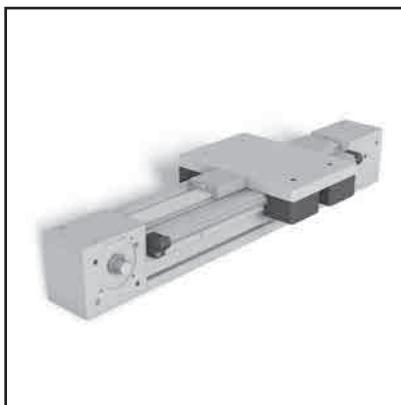
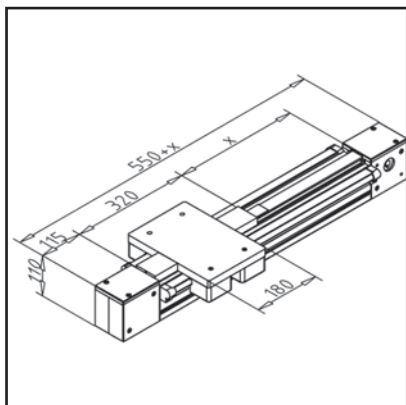
**ASSEMBLY**

- Belt is fastened and tensioned with the aid of timing belt tensioner

**LINEAR AXIS LR 16 - 90X90**

Part no.

28.0800/0

**TECHN. DATA / ITEMS SUPPLIED**

- Linear guide, ready for use, consisting of:
- 1x rail LR 16 - 90 with shaft fixation
- 2x timing belt pulley T90
- 2x timing belt tensioner
- 1x slide LR16-90
- 1x timing belt 32AT10
- **Please specify stroke length X and reverse unit**
- Weight = (basic weight) 14.45 kg
- Extra weight = 1.08 kg / 100 mm stroke

**APPLICATIONS**

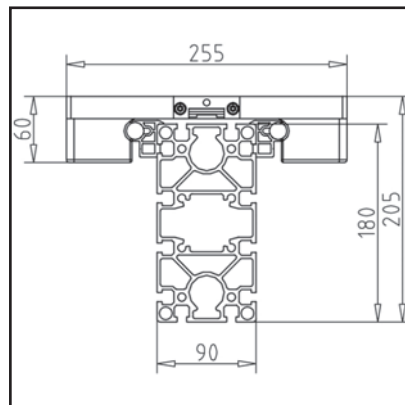
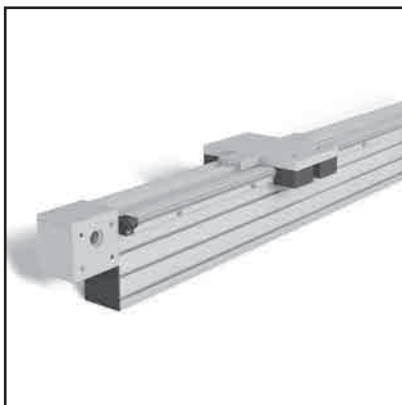
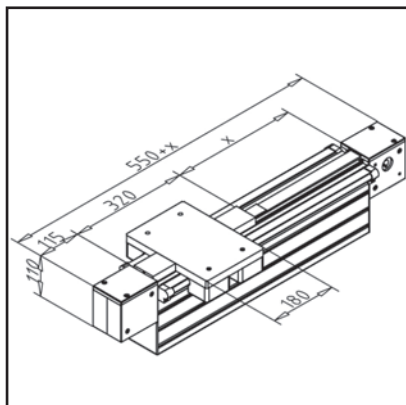
- Handling devices
- Measuring devices
- Calibration devices

**ASSEMBLY**

- Belt is fastened and tensioned with the aid of timing belt tensioner

## LINEAR AXIS LR 16 - 90X180

Part no. 28.0801/0



### TECHN. DATA / ITEMS SUPPLIED

- Linear guide, ready for use, consisting of:
- 1x rail LR 16 - 90x180 with shaft fixation
- 2x timing belt pulley T90
- 2x timing belt tensioner
- 1x slide LR16-90
- 1x timing belt 32AT10
- **Please specify stroke length X and reverse unit**
- Weight = (basic weight) 17.51 kg
- Extra weight = 1.741 kg / 100 mm stroke

### APPLICATIONS

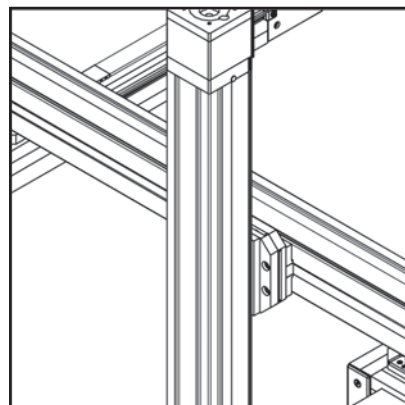
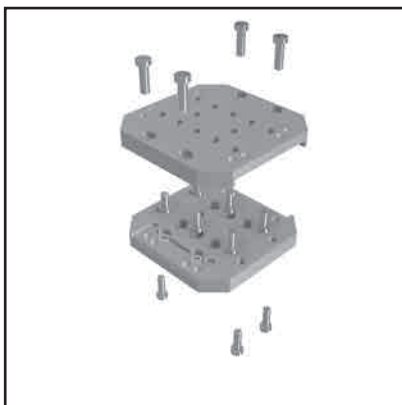
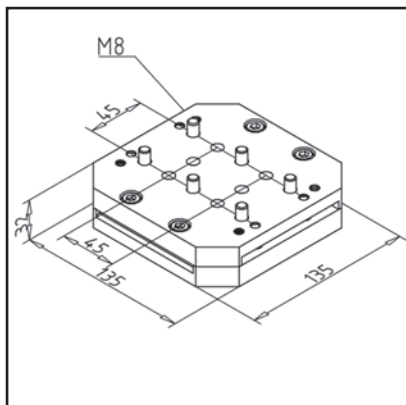
- Handling devices
- Measuring devices
- Calibration devices

### ASSEMBLY

- Belt is fastened and tensioned with the aid of timing belt tensioner

## FASTENING KIT 90 S-S

Part no. 28.0264/0



### TECHN. DATA / ITEMS SUPPLIED

- Aluminium, anodized E6/EV1
- Adapter plate 90
- With fastening material steel, zinc plated
- Weight = 1.487 kg/piece

### APPLICATIONS

- For connection of 2 axes under 90°

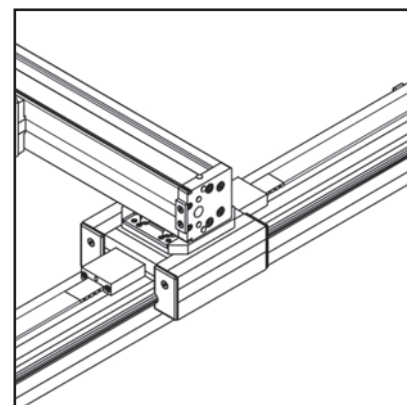
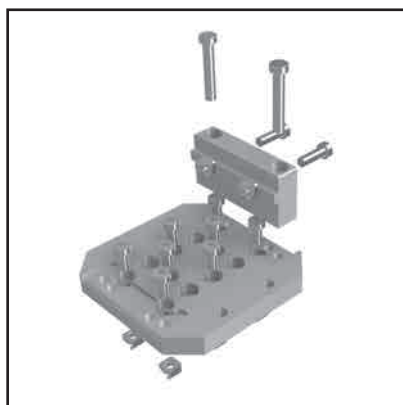
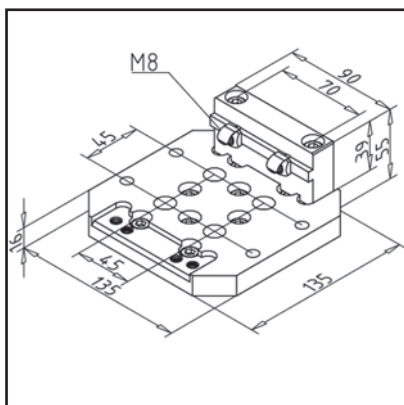
### ASSEMBLY

- Both slide-mounted plates are connected:
- LMS with LMS / LMZ or
- LMZ with LMZ / LMS or
- LR12 with LMS / LMZ

**FASTENING KIT 90 S-A 90°**

Part no.

28.0173/0

**TECHN. DATA / ITEMS SUPPLIED**

- Aluminium, anodized E6/EV1
- Adapter plate 90
- With fastening material steel, zinc plated
- Weight = 1.039 kg/piece

**APPLICATIONS**

- For connection of 2 axes under 90°

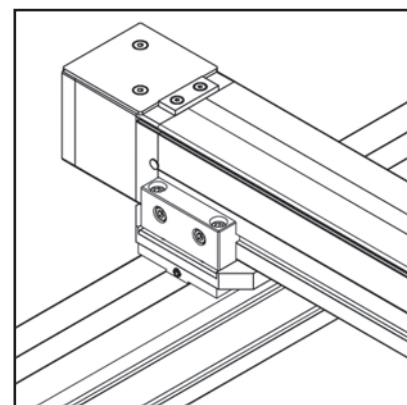
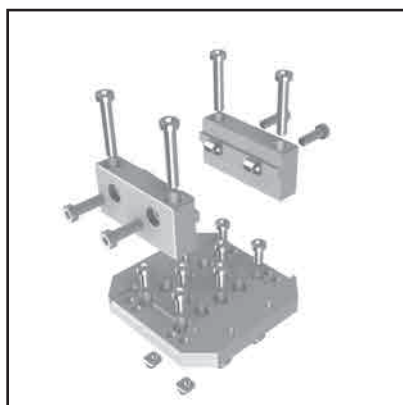
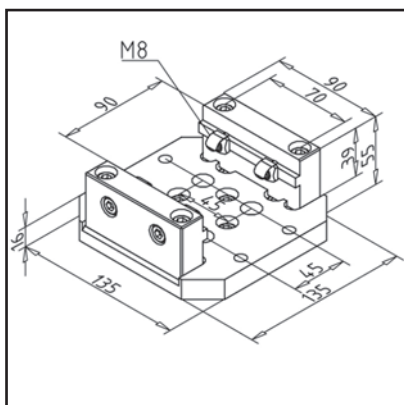
**ASSEMBLY**

- Large plate is mounted on slide of:
  - LR6 or
  - LR6 compact or
  - LMS or- LMZ or
  - LR12 z.B. LW 45 / LW 90 or
  - slide of adjusting units
- No plate is mounted on: Carrier profile of the cross-sectional axis

**FASTENING KIT 90 S-A 180°**

Part no.

28.0265/0

**TECHN. DATA / ITEMS SUPPLIED**

- Aluminium, anodized E6/EV1
- Adapter plate 90
- With fastening material steel, zinc plated
- Weight = 1.359 kg/piece

**APPLICATIONS**

- For connection of 2 axes under 90°

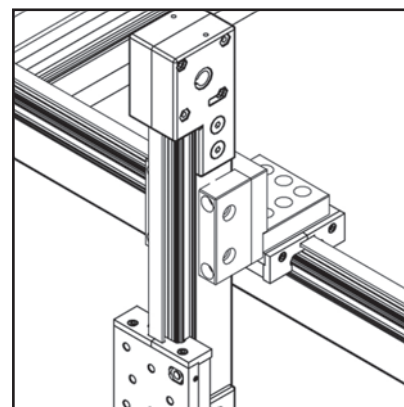
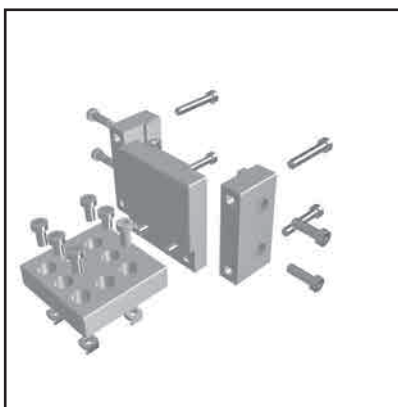
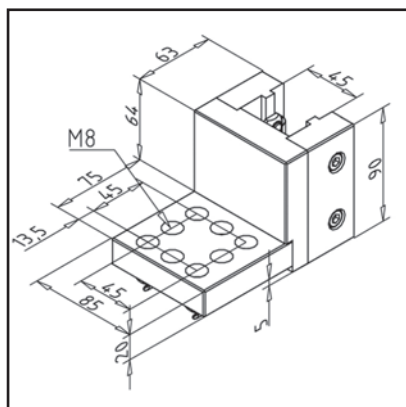
**ASSEMBLY**

- Large plate is mounted on slide of:
  - LR6 or
  - LR6 compact or
  - LMS or- LMZ or
  - LR12 z.B. LW 45 / LW 90 or
  - slide of adjusting units
- Small plates are mounted on: Carrier profile of the cross-sectional axis



## FASTENING KIT 45 S-A 90°

Part no. 28.0174/0



### TECHN. DATA / ITEMS SUPPLIED

- Aluminium, anodized E6/EV1
- Adapter plate 90
- With fastening material steel, zinc plated
- Weight = 1.548 kg/piece

### APPLICATIONS

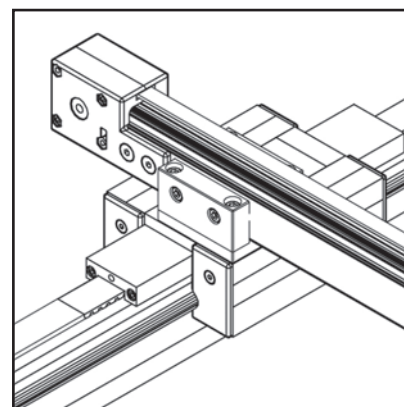
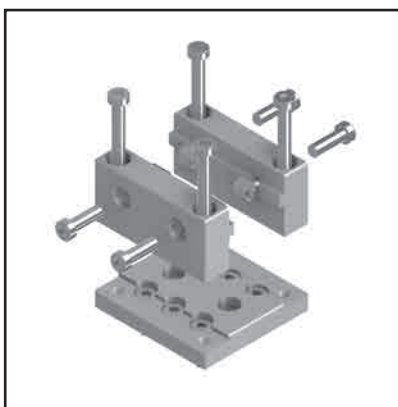
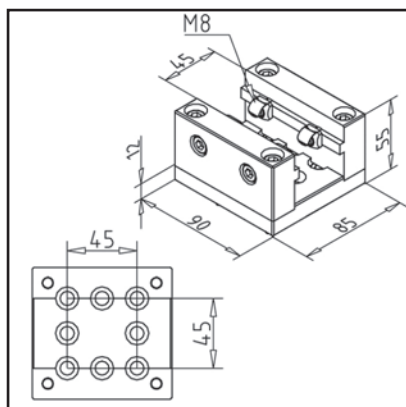
- For connection of 2 axes under 90°

### ASSEMBLY

- Large plate is mounted on slides of:
  - LR6 or
  - LR6 compact
- Small plates are mounted on: Carrier profile of the cross-sectional axis

## FASTENING KIT 45 S-A 180°

Part no. 28.0175/0



### TECHN. DATA / ITEMS SUPPLIED

- Aluminium, anodized E6/EV1
- Adapter plate 90
- With fastening material steel, zinc plated
- Weight = 0.938 kg/piece

### APPLICATIONS

- For connection of 2 axes under 90°

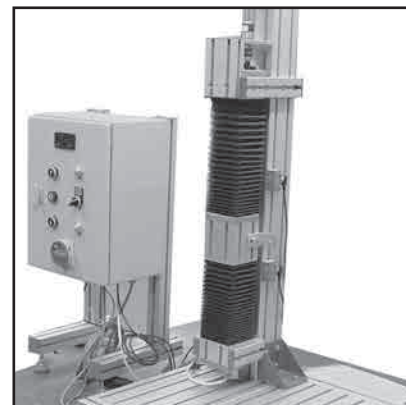
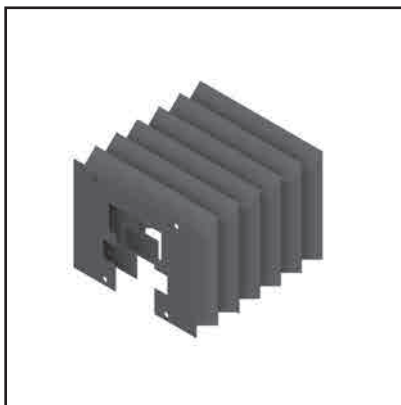
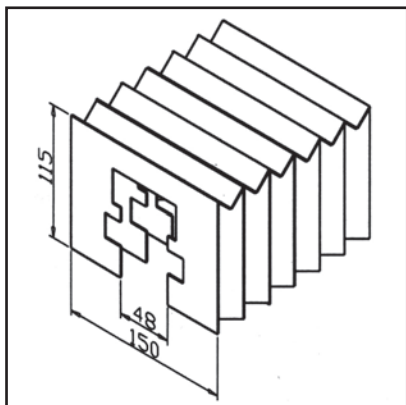
### ASSEMBLY

- Large plate is mounted on slide of:
  - LR6 or
  - LR6 compact or
  - LMS or- LMZ or
  - LR12 z.B. LW 45 / LW 90 or
  - slide of adjusting units
- Small plates are mounted on: Carrier profile of the cross-sectional axis

**BELLOW LR 45**

Part no.

33.3007/0

**TECHN. DATA / ITEMS SUPPLIED**

- Plastic, black with plastic frame
- Without fastening kit
- max. length 6 m
- Length when pushed together for 1 m travel:
  - 130 mm
- Temperature resistant (-30° to +90°C)
- Resistant to most acids and oils
- Weight = 0.650 kg/m

**APPLICATIONS**

- Cover of MiniTec linear guides LR 45
- Rough working conditions, dust, chips

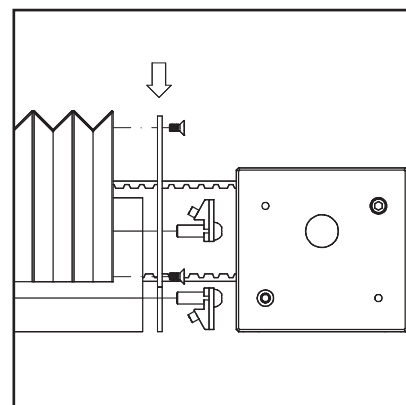
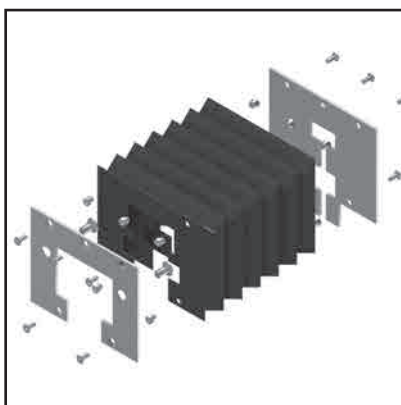
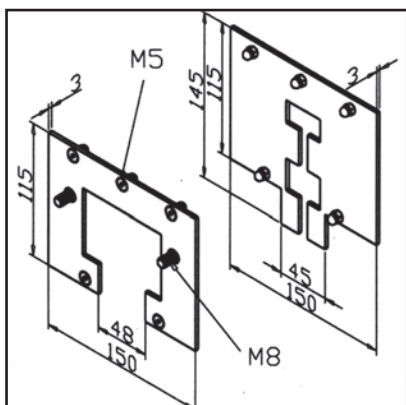
**ASSEMBLY**

- Push bellow onto rail
- Fasten to slide or pulley with fastening kit for bellow **part no. 33.3010/0**
- Bellow is supplied without perforation
- Due to the bellows, the usable travel distance is reduced by approx. 22%
- Caution: Consider higher friction moment when dimensioning drive unit!

**FASTENING FOR BELLOW LR 45**

Part no.

33.3010/0

**TECHN. DATA / ITEMS SUPPLIED**

- Aluminium, anodized E6/EV1
- 1 End frame slide
- 1 End frame pulley
- Fastening kit for frame and bellow
- Weight = 0.275 kg/piece

**APPLICATIONS**

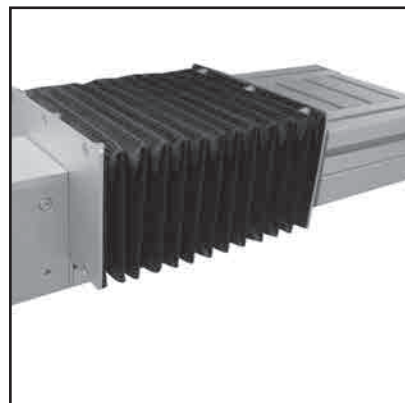
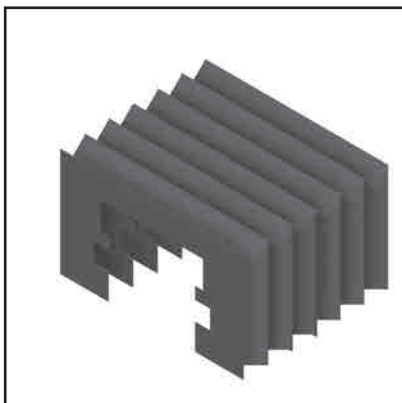
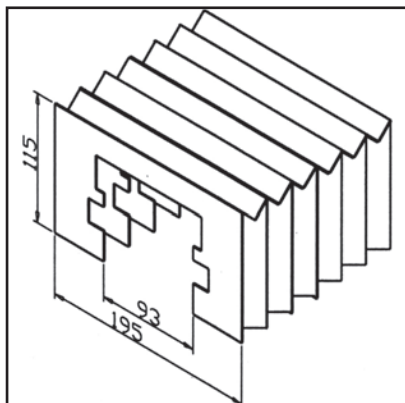
- Fastening bellows LR 45 to carriages LW 45
- Fastening bellows LR 45 to timing belt reversing unit LW 45

**ASSEMBLY**

- Fasten end frame on slide
- Push bellow onto rail
- Loosen power-lock fastener on the pulley side and insert end frame pulley between rail and timing belt pulley; tighten power-lock fastener
- Fasten protective bellow by means of the supplied screws on the end frame

## BELLOW LR 90

Part no. 33.3008/0



### TECHN. DATA / ITEMS SUPPLIED

- Plastic, black with plastic frame
- Without fastening kit
- Length when pushed together for 1 m travel:
  - 130 mm
- max. length 6 m
- Temperature resistant (-30° to +90°C)
- Resistant to most acids and oils
- Weight = 0.750 kg/m

### APPLICATIONS

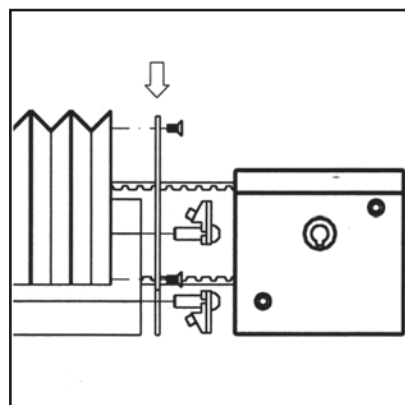
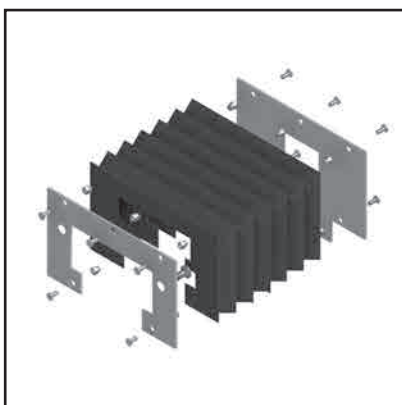
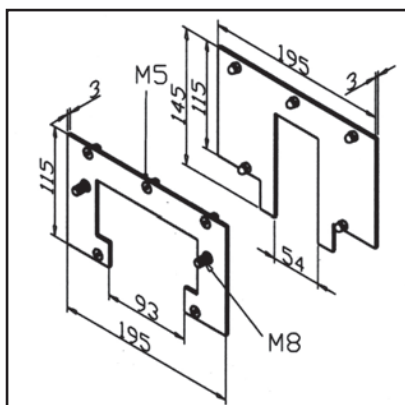
- Cover of MiniTec linear guides LR 90
- Rough working conditions, dust, chips

### ASSEMBLY

- Push bellow onto rail
- Fasten ends with attachment for bellows **part no. 33.3011/0** to carriages or reverse unit
- Bellow is supplied without perforation
- Due to the bellows, the usable travel distance is reduced by approx. 22%
- Caution: Consider higher friction moment when dimensioning drive unit!

## FASTENING FOR BELLOW LR 90

Part no. 33.3011/0



### TECHN. DATA / ITEMS SUPPLIED

- Aluminium, anodized E6/EV1
- 1 End frame slide
- 1 End frame pulley
- Fastening kit for frame and bellow
- Weight = 0.750 kg/piece

### APPLICATIONS

- Fastening bellows LR 90 to carriages LW 90
- Fastening bellows LR 90 to timing belt reversing unit LW 90

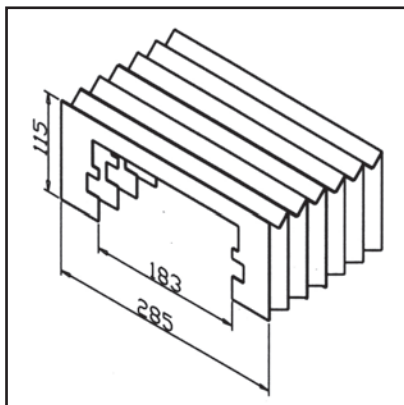
### ASSEMBLY

- Fasten end frame on slide
- Push bellow onto rail
- Loosen power-lock fastener on the pulley side and insert end frame pulley between rail and timing belt pulley; tighten power-lock fastener
- Fasten protective bellow by means of the supplied screws on the end frame

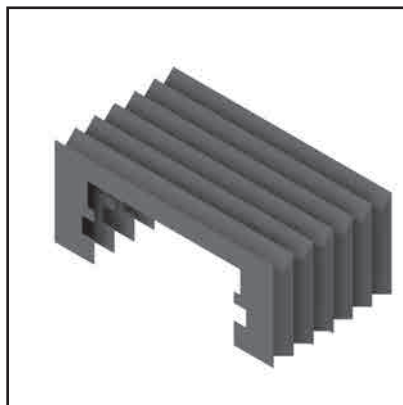
**BELLOW LR 180**

Part no.

33.3009/0

**TECHN. DATA / ITEMS SUPPLIED**

- Plastic, black with plastic frame
- Without fastening kit
- Length when pushed together for 1 m travel:
  - 130 mm
- max. length 6 m
- Temperature resistant (-30° to +90°C)
- Resistant to most acids and oils
- Weight = 0.950 kg/m

**APPLICATIONS**

- Cover of MiniTec linear guides LR 180
- Rough working conditions, dust, chips

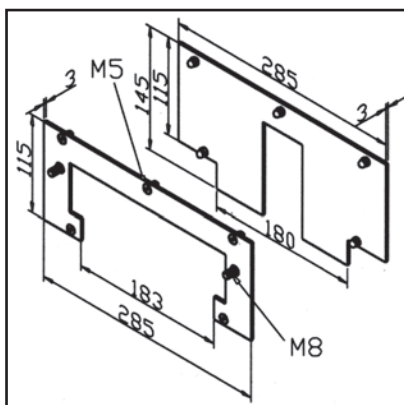
**ASSEMBLY**

- Push bellow onto rail
- Fasten ends with attachment for bellows **part no. 33.3012/0** to carriage or reverse unit
- Bellow is supplied without perforation
- Due to the bellows, the usable travel distance is reduced by approx. 22%
- Caution: Consider higher friction moment when dimensioning drive unit!

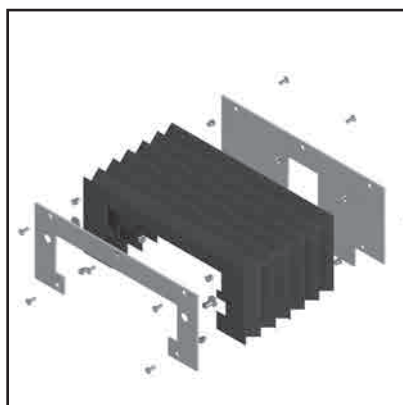
**FASTENING FOR BELLOW LR 180**

Part no.

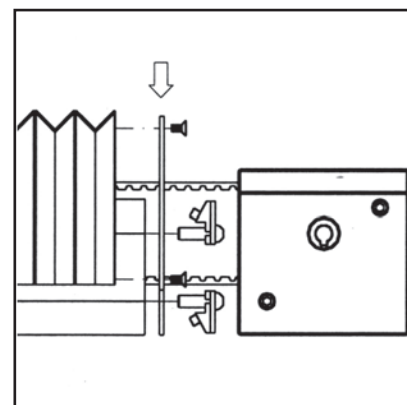
33.3012/0

**TECHN. DATA / ITEMS SUPPLIED**

- Aluminium, anodized E6/EV1
- 1 End frame slide
- 1 End frame pulley
- Fastening kit for frame and bellow
- Weight = 0.463 kg/piece

**APPLICATIONS**

- Fastening bellows LR 180 to carriages LW 180

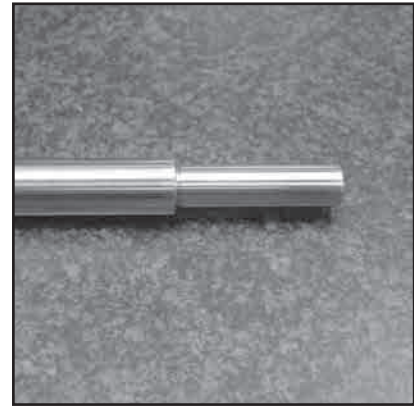
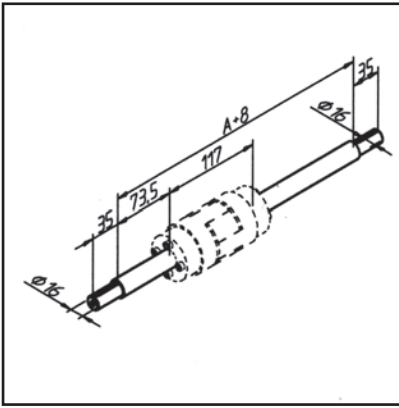
**ASSEMBLY**

- Fasten end frame on slide
- Push bellow onto rail
- Loosen power-lock fastener on the pulley side and insert end frame pulley between rail and timing belt pulley; tighten power-lock fastener
- Fasten protective bellow by means of the supplied screws on the end frame

## CONNECTING SHAFT 45

Part no.

17.1706/0



### TECHN. DATA / ITEMS SUPPLIED

- Steel shaft  $\varnothing$  20 mm
- 2 pieces, clutch not included
- With fastening material and feather key
- Length A = light distance between timing belt pulleys
- **Please indicate distance A**
- Other lengths and finishes available upon customer request
- Weight = 2,47 kg/m

### APPLICATIONS

- Simultaneous transmission of 2 parallel linear guides
- Install support bearing for longer shafts

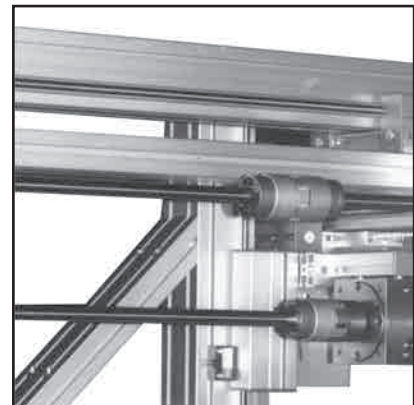
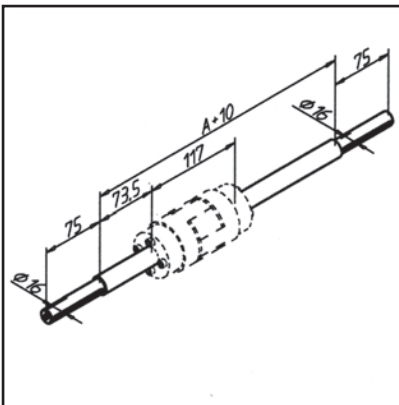
### ASSEMBLY

- Push the shafts with the feather key and the pressure plate into the timing belt reverse unit and secure with the pressure plate and the countersunk screw included
- Connect both shaft pieces with clutch **part no. 28.0180/0**

## CONNECTING SHAFT 90

Part no.

17.1706/1



### TECHN. DATA / ITEMS SUPPLIED

- Steel shaft  $\varnothing$  20 mm
- 2 pieces, clutch not included
- With fastening material and feather key
- Length A = light distance between timing belt pulleys
- **Please indicate distance A**
- Other lengths and finishes available upon customer request
- Weight = 2,47 kg/m

### APPLICATIONS

- Simultaneous transmission of 2 parallel linear guides
- Install support bearing for longer shafts

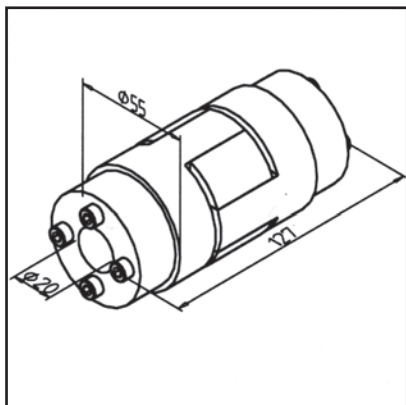
### ASSEMBLY

- Push the shafts with the feather key and the pressure plate into the timing belt reverse unit and secure with the pressure plate and the countersunk screw included
- Connect both shaft pieces with clutch **part no. 28.0180/0**

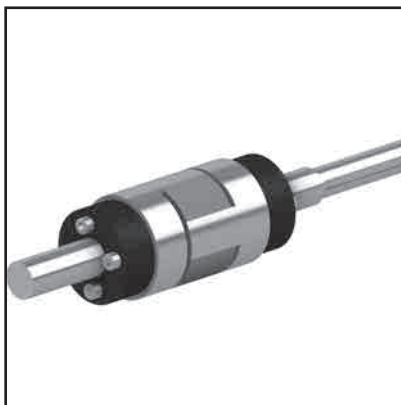
**CLUTCH 20**

Part no.

28.0180/0

**TECHN. DATA / ITEMS SUPPLIED**

- Clutch, steel with plastic inlay
- 2 tensioning sets, steel
- max. torque 30Nm
- Weight = 0.984 kg/piece

**APPLICATIONS**

- Connection of motors to reverse unit
- Misalignment compensation with simultaneous drive of 2 parallel linear axes with connection shaft 45 **part no. 17.1706/0** or 90 **part no. 17.1706/1**

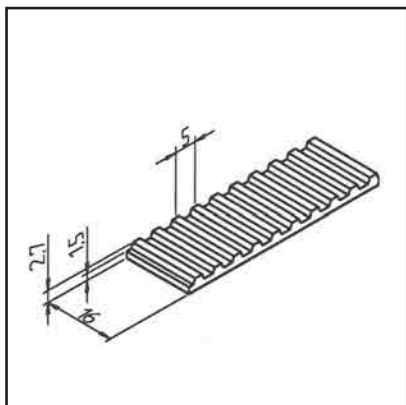
**ASSEMBLY**

- Attachment with integrated tensioning device
- Adjust the axes synchronously and fasten clamping sets

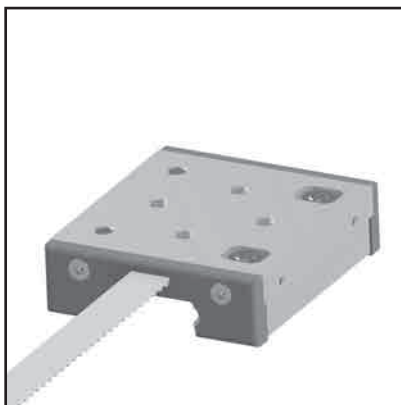
**TIMING BELT 16 AT 5**

Part no.

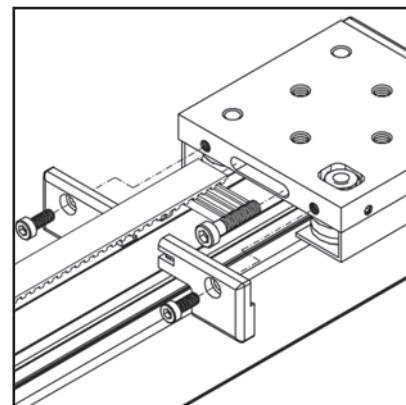
28.0502/0

**TECHN. DATA / ITEMS SUPPLIED**

- PUR white, steel-wire reinforced
- Type 16 AT 5
- load capacity up to 1260 N
- Weight = 0.053 kg/m

**APPLICATIONS**

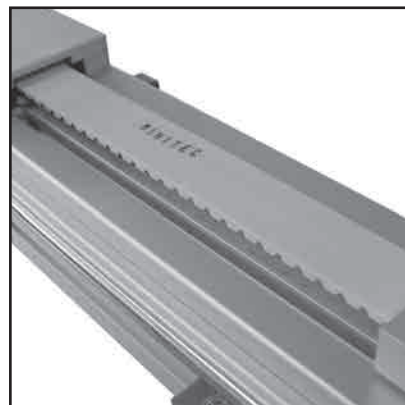
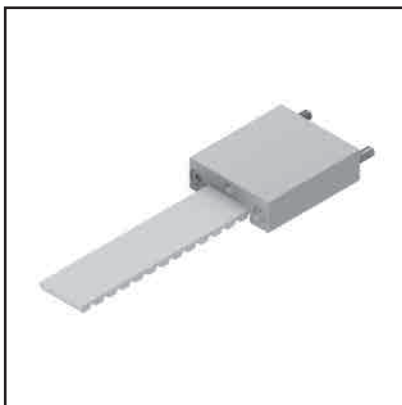
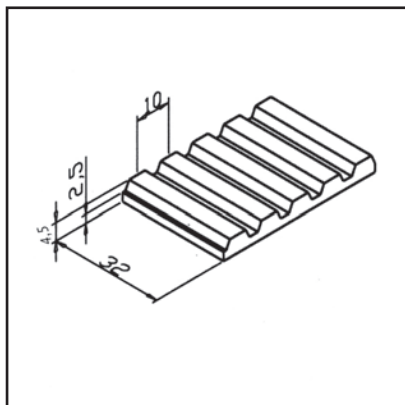
- For MiniTec linear guides LR 6 Z

**ASSEMBLY**

- Insert timing belt of corresponding length into the carriage LR 6 Z
- Length determination: 2x rail length + 260 mm

## TIMING BELT 32 AT 10

Part no. 28.0093/0



### TECHN. DATA / ITEMS SUPPLIED

- PUR white, steel-wire reinforced
- Type 32 AT 10
- load capacity up to 4750 N
- Weight = 0.190 kg/m

### APPLICATIONS

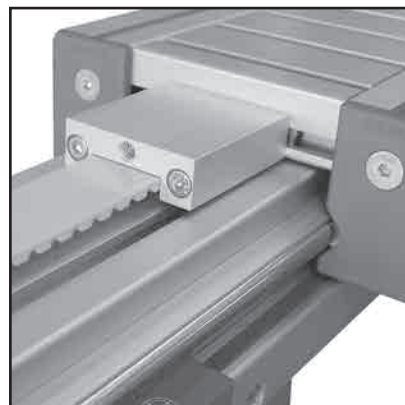
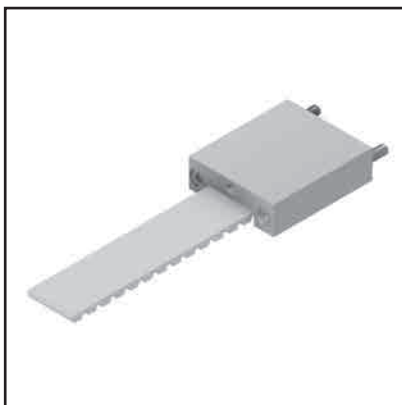
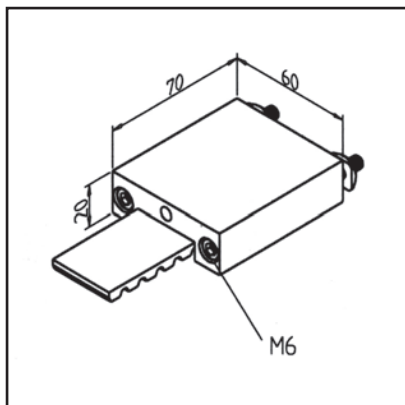
- For MiniTec-Linear guides LR 12 and LR 16
- Belt conveyors

### ASSEMBLY

- Attach the timing belt in the appropriate length to the belt tensioner

## TIMING BELT TENSIONER

Part no. 28.0090/0



### TECHN. DATA / ITEMS SUPPLIED

- Aluminium, anodized E6/EV1
- With fastening material steel, zinc plated
- Housing Aluminum natural anodized
- Tension slide steel, galvanized, with inserted counterpart with 3 teeth
- For timing belt 32 AT 10
- Stainless version **part no. 28.0090/1**
- Weight = 0.244 kg/piece

### APPLICATIONS

- For MiniTec-Linear guides LR 12 and LR 16
- For MiniTec belt drive

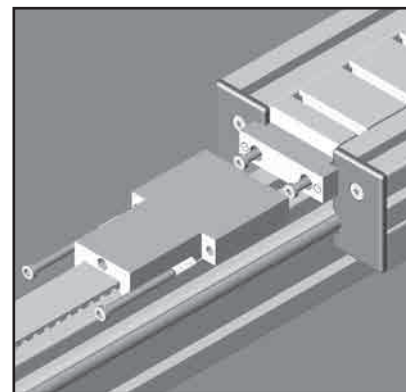
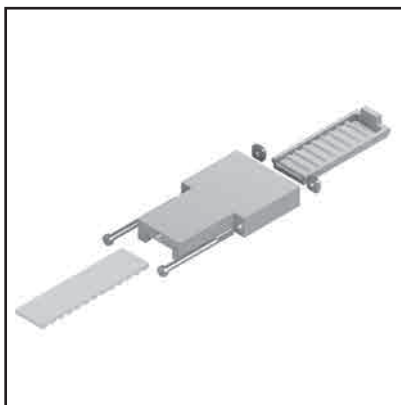
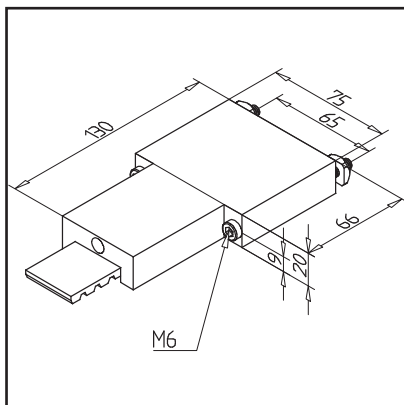
### ASSEMBLY

- Screw tight on the front of the carriage with supplied hardware
- After fixing on slide face, tension the belt central tensioning screw M8, 5 A/F
- Recommended voltage: according to design
- 1 timing belt tensioner requested per belt end

## TIMING BELT TENSIONER REINFORCED TO CARRIAGE LW90

Part no.

28.0386/0



### TECHN. DATA / ITEMS SUPPLIED

- Aluminium, anodized E6/EV1
- With fastening material steel, zinc plated
- Cocking slide steel, galvanized, with inlaid counterpart with 9 teeth
- For attachment to carriage LW 45 please use the timing belt tensioner with adapter **part no. 28.0386/1**
- Weight = 0.473 kg/piece

### APPLICATIONS

- For linear axes with higher safety requirements
- For vertically arranged axles (lifting axles) it is usually sufficient to use the upper timing belt tensioner in reinforced version

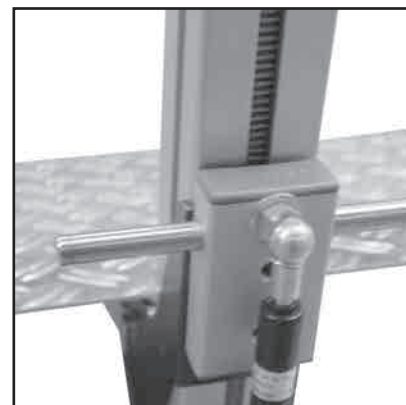
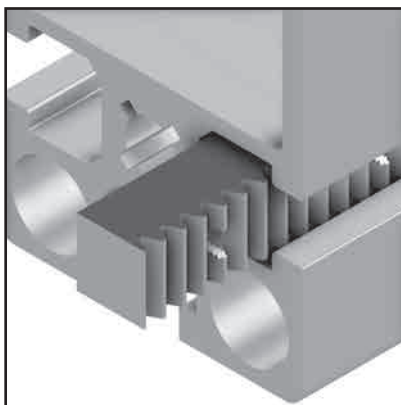
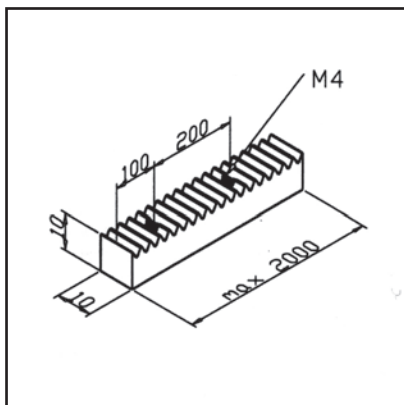
### ASSEMBLY

- Screw tight on the front of the carriage with supplied hardware
- After fixing on slide face, tension the belt central tensioning screw M8, 5 A/F
- Recommended voltage: according to design

## TOOTHED RACK 8

Part no.

28.0051/0



### TECHN. DATA / ITEMS SUPPLIED

- Steel, bright
- Modul 1
- Weight = 0,785 kg/m
- Bar length = 2 m

### APPLICATIONS

- Linear guides with very long travels
- Linear guides for short building room
- Repeated height and length settings in grid 3.14 mm (for ex. sorting frame)

### ASSEMBLY

- Insert timing rack into profile groove
- Secure with setscrew from delivery scope - Grid 200 mm



CONNECTION OF MOTORS

**Timing belt pulley LR 6 & LR 6 compact**

Three-phase, stepper or servo motors with drive pins up to a maximum Ø 14 mm are fastened directly to the deflection. The bore of the pulley with keyway and the adapter plate are also made to customer specification.

**Timing belt pulley T 45**

Three-phase, stepper or servo motors with drive pins up to a maximum Ø 16 mm are fastened directly to the deflection. The bore of the pulley with keyway and the adapter plate are also made to customer specification.

**Timing belt pulley T 90**

Three-phase, stepper or servo motors with drive pins up to a maximum Ø 24 mm are fastened directly to the deflection. The bore of the pulley with keyway and the adapter plate are also made to customer specification.

**Determination of the timing belt length**

**When using T45 and T90**

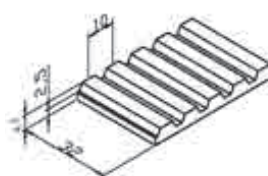
2 x rail length + 2 x 210 mm (redirection)  
 - Carriage length - 2 x 20 mm (timing belt tensioner)  
 = 2 x rail length - carriage length + 380 mm

**When using LR6**

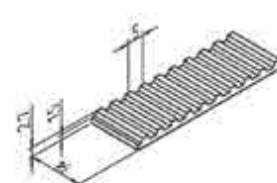
2 x rail length + 260 mm

**When using LR6 compact (timing belt 16 AT 5)**

2 x rail length + 220 mm



**Timing belt 32 AT 10  
Part no. 28.0093/0**



**Timing belt 16 AT 5  
Part no. 28.0502/0**

**Specifications of the pulleys in the timing belt deflection**

Timing belt-redirection	LR 6	T 45 (LR 12 & LR 16)	T 90 (LR 12 & LR 16)
Effective diameter	57,3 mm	60,48 mm	60,48 mm
Width of timing belt	16 mm	32 mm	32 mm
Number of teeth	36	19	19
Drill hole for drive shaft	10 mm	8 mm	8 mm
rillable to max.	14 mm	16 mm	30 mm
Travel distance (1 turn)	180 mm	190 mm	190 mm
TIMING BELT	16AT5	32AT10	32AT10
Belt length in deflection	160 mm	210 mm	210 mm
Maximum torque	30 Nm	70 Nm	130 Nm

## COMPONENTS – LINEAR SYSTEM LR

This system is based on double-row profiled rollers made of ball bearing steel and hardened precision shafts made of material 1.1213 (CF 53). Guides of any length can be produced with this system. The carriages are equipped with 2-row profiled rollers whose shaft raceway is designed as a Gothic arch. For very high loads, the trolleys can be equipped with any number of track rollers. The profiled rollers are fastened directly to the carriage plate with steel strips. No special roller profiles are required for the construction of the trolleys. This gives the construction maximum rigidity. The backlash-free adjustment of the guides is carried out with eccentric bushes.

The carriages are completely encapsulated, scraper felts are integrated into the cover caps, which simultaneously remove coarse dirt from the shafts and supply them with lubricant. The felts can be replaced quickly and easily after loosening the lateral screw connection. This advantage has an extremely positive effect, especially in dirty or rough operating conditions. Both closed and open-frame trolleys in any length and width are possible. Please indicate the desired dimensions A and B

when ordering.

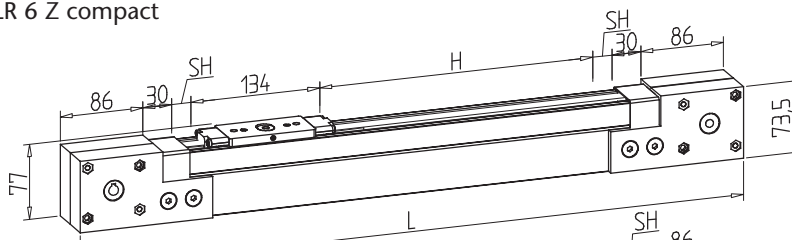
(see special versions on page XXX above).

X/Y tables can be produced simply by attaching 4 castors to the top of the trolley. In this configuration, the running rail of the Y-axis is made of profile 45 x 32. Cover caps LR and cover profile LR fit for the Y-axis.



X/Y-Table

## LR 6 Z compact



## LR 6 Z compact

## Calculation of the total length L:

Required traverse H  
 + Car length (134)  
 + 2 x Timing belt pulley (172)  
 + 2 x Trap guard (60)  
 = Traverse + 366 mm \*

## LR 6

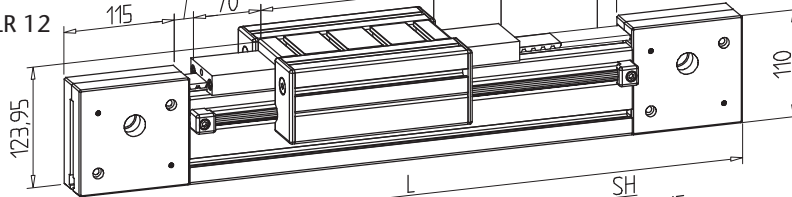


## LR 6

## Calculation of the total length L:

Required traverse H  
 + Car length (102)  
 + 2 x Timing belt pulley (172)  
 = Traverse + 274 mm \*

## LR 12

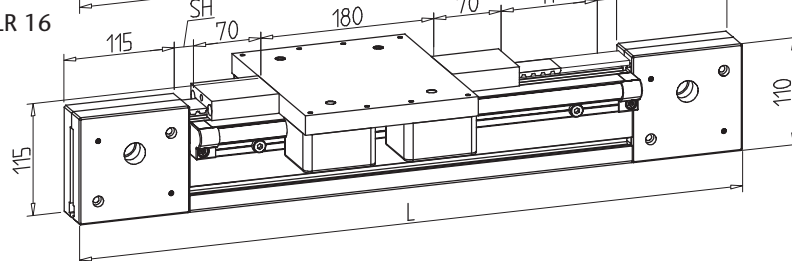


## LR 12 + LR 16

## Calculation of the total length L:

Required traverse H  
 + Car length (180)  
 + 2 x Timing belt pulley (230)  
 + 2 x Timing belt tensioner (140)  
 = Traverse + 550 mm

## LR 16



\*Since the belt tension is applied via the timing belt deflection, this is only an indication!

Safety distances „SH“ if necessary, additionally calculate and specify!

RAILS



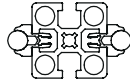
**LR 6 compact**  
Part no. 28.0119/0



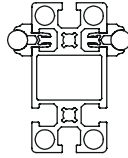
**LR 6 S**  
Part no. 28.0525/0



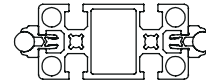
**LR 12**  
**Rail 19**  
Part no. 28.0009/0



**LR 12**  
**Rail 32**  
Part no. 28.0010/0

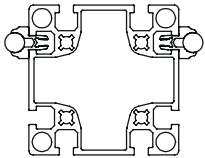


**LR 12**  
**Rail 45**  
Part no. 28.0006/0

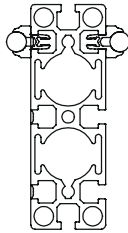


**LR 12**  
**Rail 45 x 90 H**  
Part no. 28.0007/2

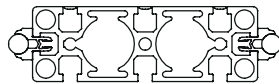
**LR 12**  
**Rail 45 x 90 F**  
Part no. 28.0007/1



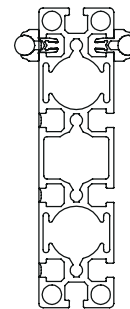
**LR 12**  
**Rail 90**  
Part no. 28.0008/0



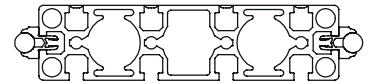
**LR 12**  
**Rail 135 H**  
Part no. 28.0012/2



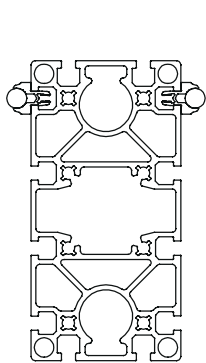
**LR 12**  
**Rail 135 F**  
Part no. 28.0012/1



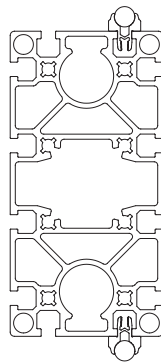
**LR 12**  
**Rail 45 x 180 H**  
Part no. 28.0013/2



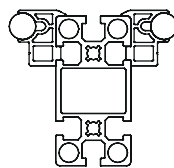
**LR 12**  
**Rail 45 x 180 F**  
Part no. 28.0013/1



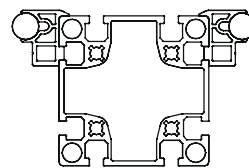
**LR 12**  
**Rail 180 H**  
Part no. 28.0011/2



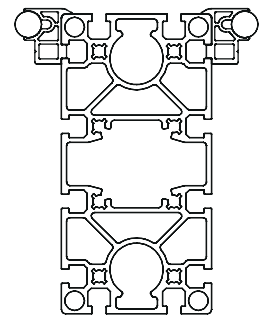
**LR 12**  
**Rail 180 F**  
Part no. 28.0011/1



**LR 16**  
**Rail LR16 - 45 x 90H**  
Part no. 28.0820/0

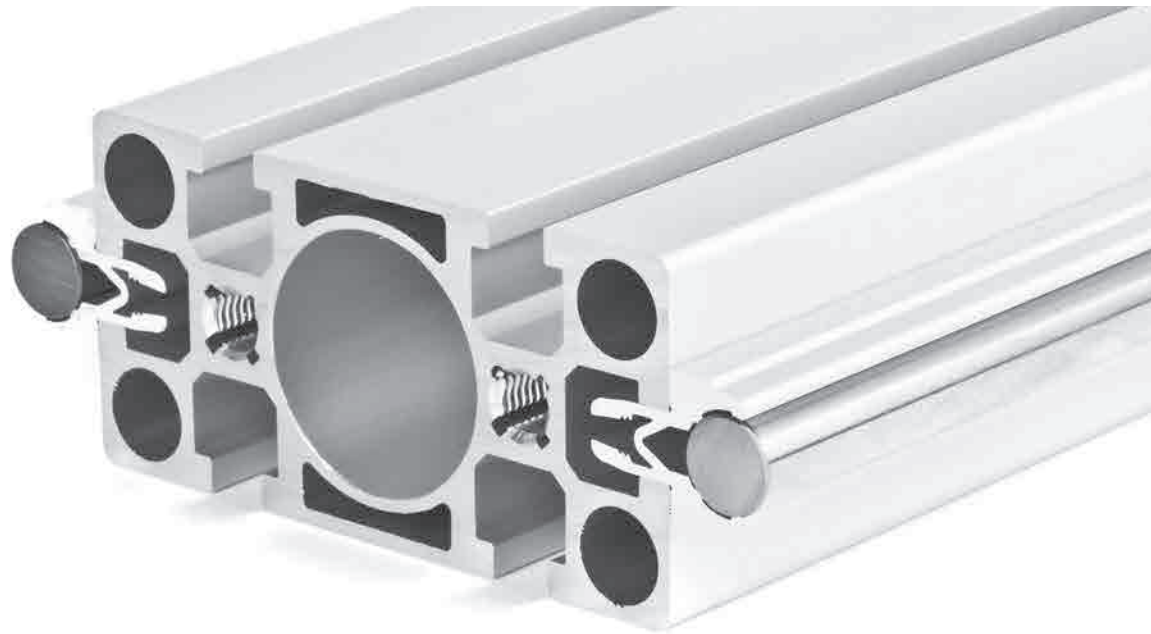


**LR 16**  
**Rail LR16 - 90**  
Part no. 28.0821/0

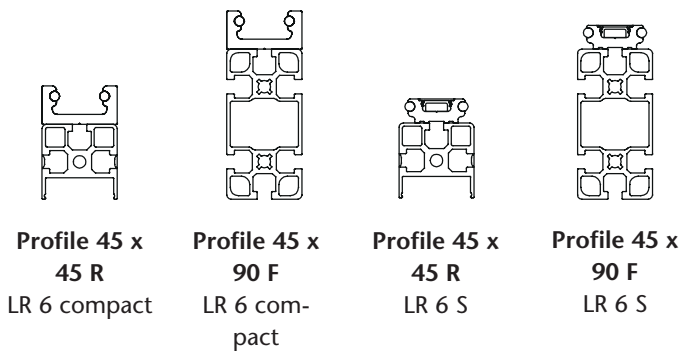


**LR 16**  
**Rail LR16 - 90 x 180H**  
Part no. 28.0822/0

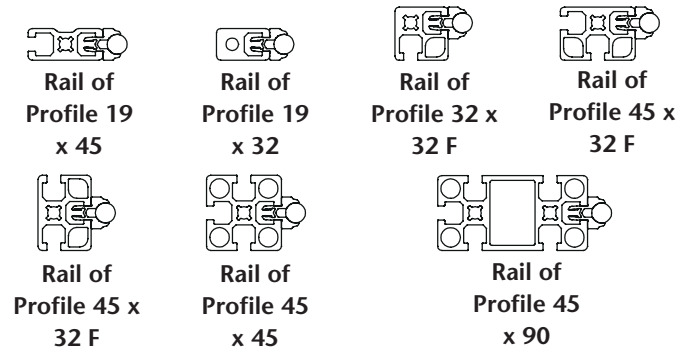
RAILS



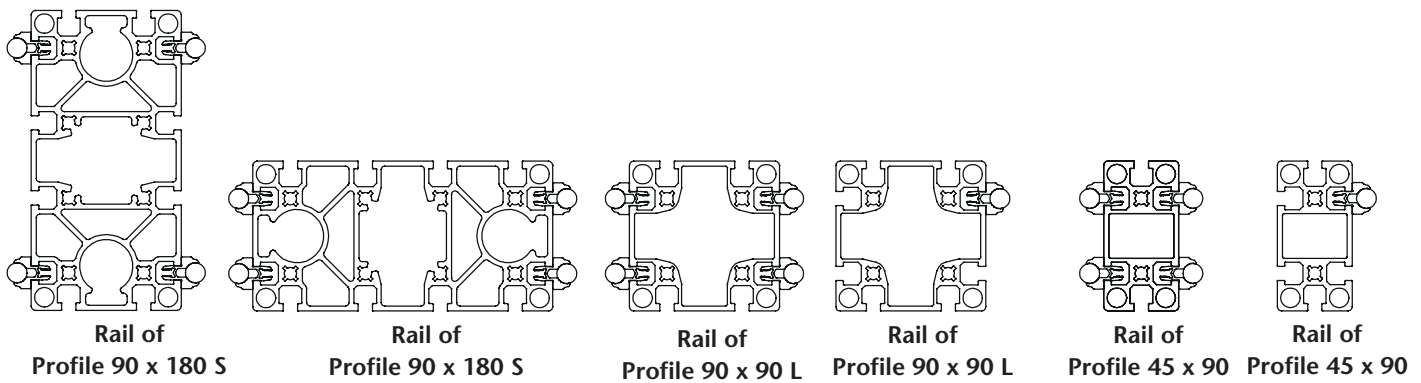
LR 6 compact and LR 6 S - further combination possibilities:



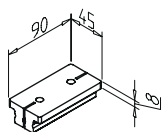
LR 12 - further combination possibilities:



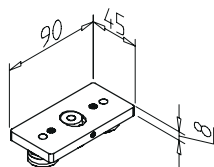
LR 12 - further combination possibilities:



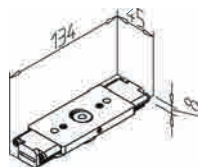
CARRIAGE MODELS



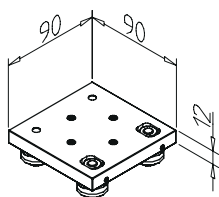
**Sliding carriage**  
**LR 6 compact**  
Part no. 28.0127/0



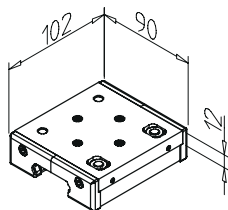
**LR 6 compact**  
Part no. 28.0140/0



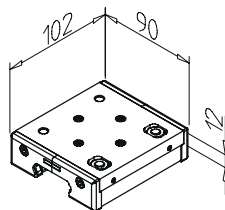
**LR 6 Z compact**  
Part no. 28.0520/0



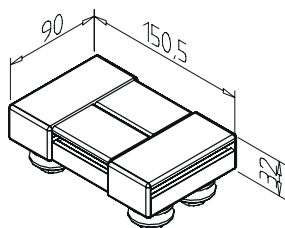
**LR 6**  
Part no. 28.0138/0



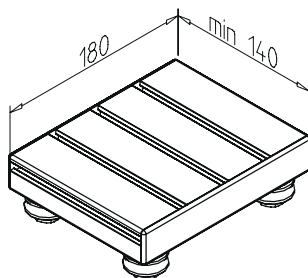
**LR 6 with cover**  
Part no. 28.0138/1



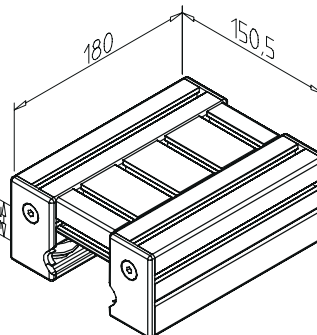
**LR 6 Z**  
Part no. 28.0138/2



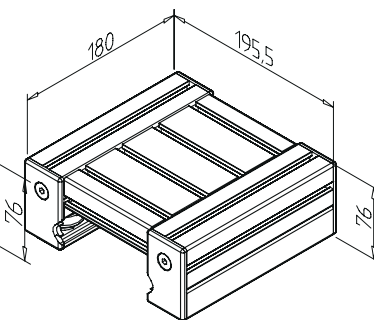
**LW 32**  
Part no. 28.0088/0



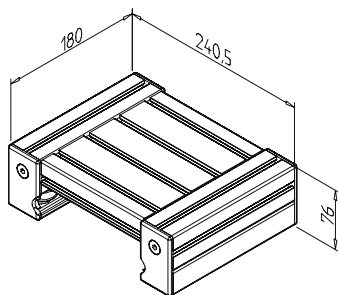
**LW 32 E**  
Part no. 28.0089/0



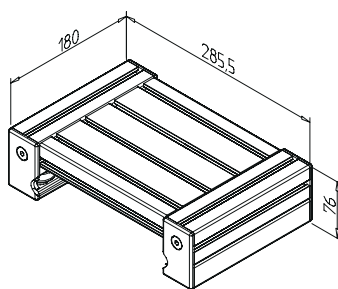
**LW 45**  
Part no. 28.0091/0



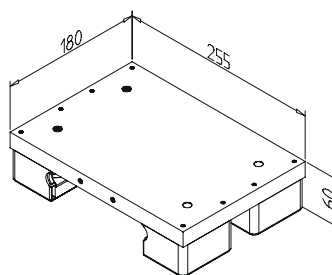
**LW 90**  
Part no. 28.0092/0



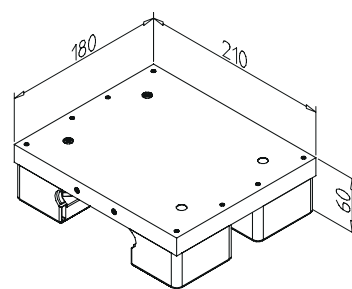
**LW 135**  
Part no. 28.0084/0



**LW 180**  
Part no. 28.0087/0



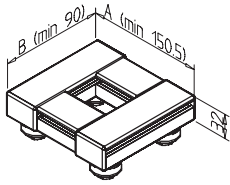
**LR 16 - 90**  
Part no. 28.0811/0



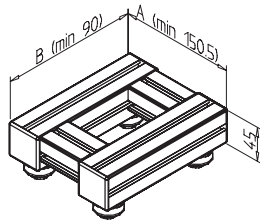
**LR 16 - 45**  
Part no. 28.0810/0

## CARRIAGE MODELS

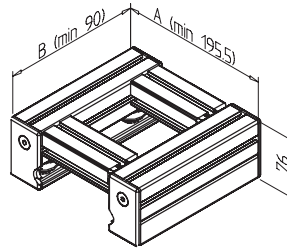
## Carriage special versions



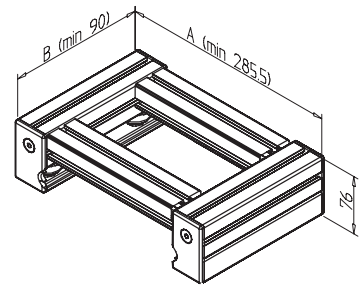
LW 32 Special version  
(Open Frame)  
Part no. 28.0089/2



LW 45 Special version  
(Open Frame)  
Part no. 28.0091/4



LW 90 Special version  
(Open Frame)  
Part no. 28.0092/3

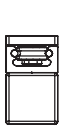


LW 180 Special version  
(Open Frame)  
Part no. 28.0087/2



CARRIAGE MODELS

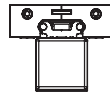
COMBINATION POSSIBILITIES CARRIAGES AND RAILS



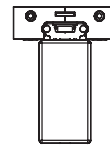
LW LR 6 compact  
Rail LR 6 compact



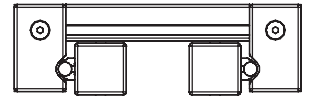
LW LR 6 compact  
Rail made of profile  
45x90F



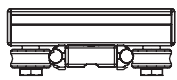
Carriage LR 6  
Rail LR 6 S/45



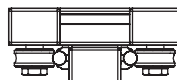
Carriage LR 6  
Rail LR 6 S/90



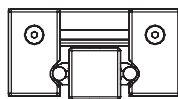
Carriage LW 135  
2x Special rail made of  
profile 45 x 45



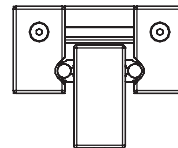
LW 32 E  
Rail 19



LW 32  
Rail 32



LW 45  
Rail 45



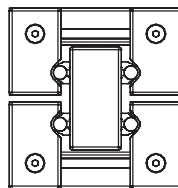
LW 45  
Rail 45 x 90H



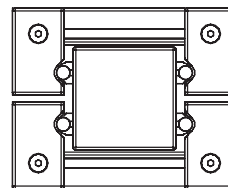
Special carriages  
2x Special rail made of profile 45x90



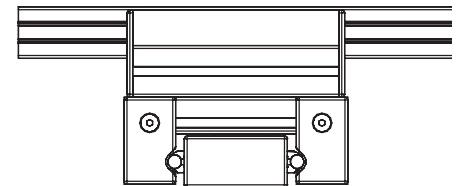
LW 90  
Rail 45 x 90 F



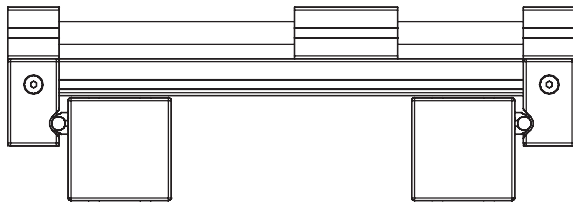
2x LW 45  
Special rail made of  
profile 45 x 90



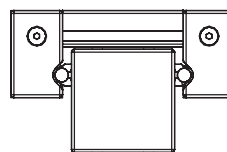
2x LW 90  
Special rail made of  
profile 90 x 90 L



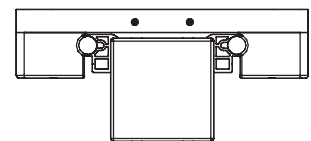
2x LW 90  
Rail 45 x 90 F



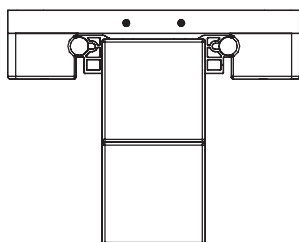
Special carriage  
2x Special rail made of profile 90 x 90 L



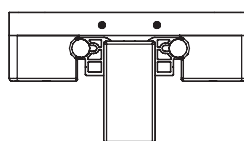
LW 90  
Rail 90



LR 16-90  
Rail LR 16 - 90



LR 16 - 90  
Rail LR 16 - 90 x 180H



LR 16 - 45  
Rail LR 16 - 45

PERMITTED LOADS

Linear-system	LR 6			LR 12				LR 16	
Car	LR 6 COMPACT	Car LR 6 with 4 Bearing L = 90 mm	Car 45 with 4 Bearing L = 180 mm	Car 90 with 4 Bearing L = 180 mm	Car 135 with 4 Bearing L = 180 mm	Car 180 with 4 Bearing L = 180 mm	Car 180 with 8 Bearing L = 360 mm	Car LR 16-45	Car LR 16-90
Mx max.	40 Nm	30 Nm	79 Nm	107 Nm	130 Nm	165 Nm	240 Nm	158 Nm	214 Nm
My max.	40 Nm	75 Nm	120 Nm	120 Nm	120 Nm	120 Nm	275 Nm	288 Nm	288 Nm
Mz max.	40 Nm	40 Nm	202 Nm	202 Nm	202 Nm	202 Nm	470 Nm	323 Nm	323 Nm
Fy max.	700 N	800 N	3500 N	3500 N	3500 N	3500 N	7000 N	7000 N	7000 N
Fz max.	1100 N	640 N	1500 N	1500 N	1500 N	1500 N	3000 N	3000 N	3000 N

Maximum traverse

Car 45 - 180: 10 m/sec

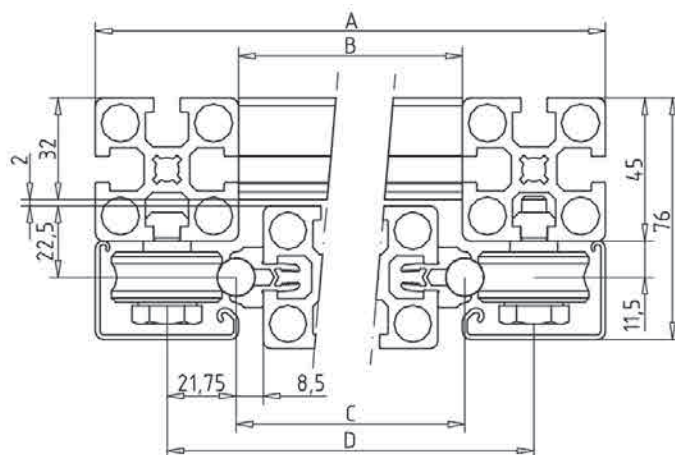
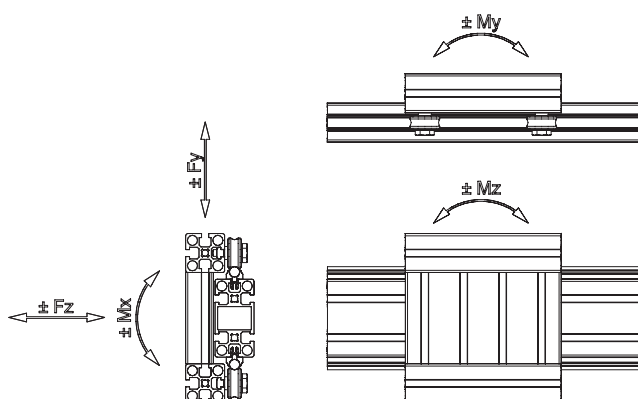
Car LR 6: 5 m/sec

Calculation of the permissible moment load depending on the car length, at 4 Bearing:

$$My \text{ max.} = 0,89 \times (L-45) \text{ Nm}$$

$$Mz \text{ max.} = 1,50 \times (L-45) \text{ Nm}$$

L = Car length



Command variable

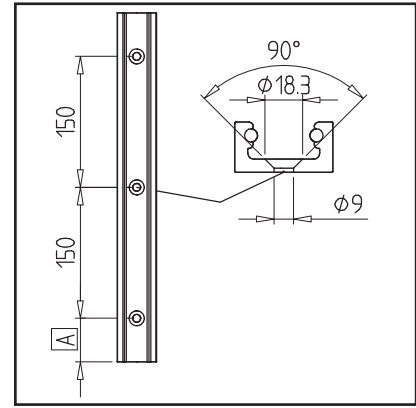
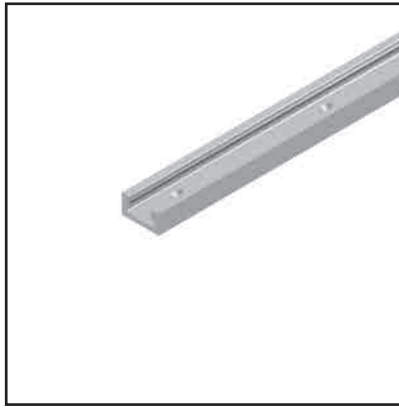
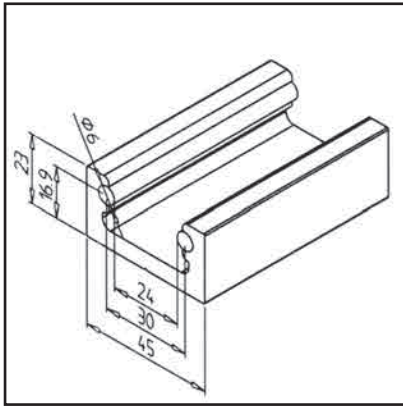
Car type	LR 6 compact	LR 6	LW 45	LW 90	LW 135	LW 180	LR 16-45	LR 16-90
MEASURE								
A	45	90	150,5	195,5	240,5	285,5	210	255
B	-	-	60,5	105,5	150,5	195,5	-	-
C	30	32	62	107	152	197	85	130
D	2	60	105,5	150,5	195,5	240,5	149,5	194,5



## RAIL LR 6 COMPACT

Part no.

28.0119/0



### TECHN. DATA / ITEMS SUPPLIED

- Aluminium, anodized E6/EV1
- 2 shafts  $\varnothing$  6 h6 steel
- Drilled ready for assembly  $\varnothing$  8 mm, Division 150 mm
- Stainless version **part no. 28.0149/0**
- Weight = 1.781 kg/m
- Bar length = 6 m

### APPLICATIONS

- Handling devices
- Guide large drawers
- Doors

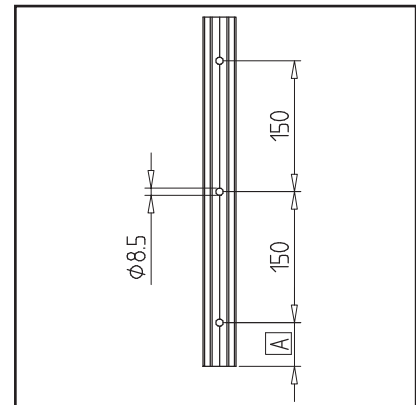
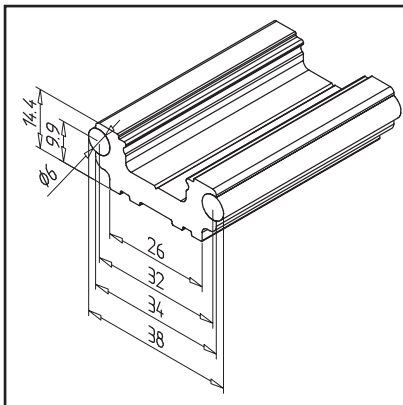
### ASSEMBLY

- Fasten the rail with the countersunk screw M8 x 20 and the square nut M8 to the MiniTec profile
- The hole pattern is cut to size centrally. If a different edge distance is required, please specify dimension A.
- Additional hole spacing is also possible.

## RAIL LR 6 S

Part no.

28.0525/0



### TECHN. DATA / ITEMS SUPPLIED

- Aluminium, anodized E6/EV1
- 2 shafts  $\varnothing$  6 h6 steel
- Drilled ready for assembly  $\varnothing$  8 mm, Division 150 mm
- Stainless version **part no. 28.0526/0**
- Weight = 0.959 kg/m
- Bar length = 6 m

### APPLICATIONS

- MiniTec linear guide systems LR 6
- Handling devices
- Guide large drawers
- Doors

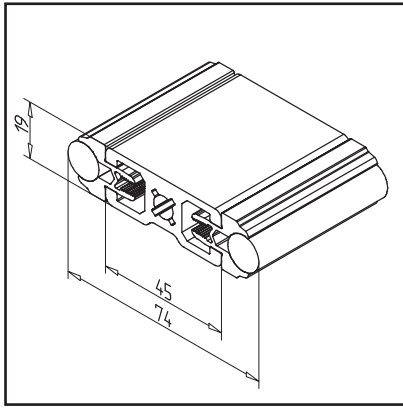
### ASSEMBLY

- Fasten the rail with the countersunk screw M8 x 20 and the square nut M8 to the MiniTec profile
- Optional cover profile, **part no. 22.1160/0**
- The hole pattern is cut to size centrally. If a different edge distance is required, please specify dimension A.
- Additional hole spacing is also possible.

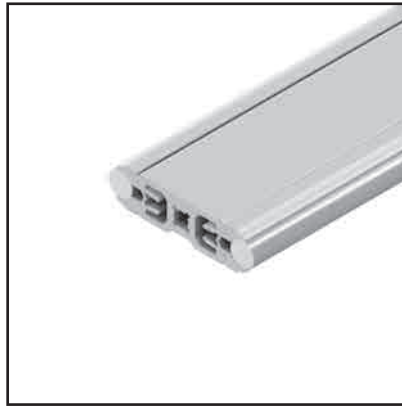
**RAIL 19**

Part no.

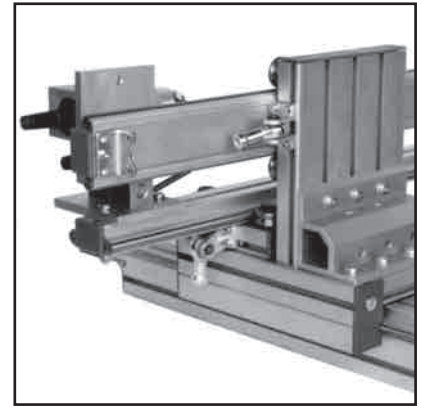
28.0009/0

**TECHN. DATA / ITEMS SUPPLIED**

- Aluminium, anodized E6/EV1
- Profile 19 x 45
- On both sides with shaft supporting profile and shafts  $\varnothing$  12 h6, pre-finished installed
- Without end caps
- Stainless version **part no. 28.0009/3**
- Weight = 3,666 kg/m
- Bar length = 6 m

**APPLICATIONS**

- Linear and column guides
- Longer rails with composite shafts possible

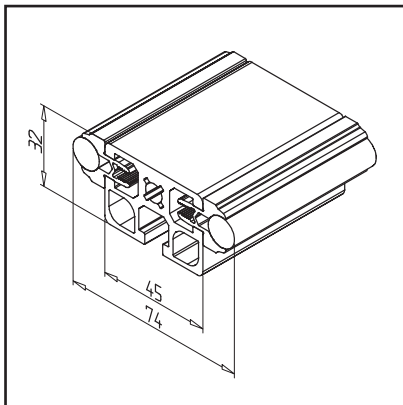
**ASSEMBLY**

- For vertical use or for high speed applications, we recommend the use of shaft retention devices **part no. 28.0052/0**
- To use shaft locking devices on both sides, the shaft and shaft carrier should be at least 30 mm shorter than the total length.

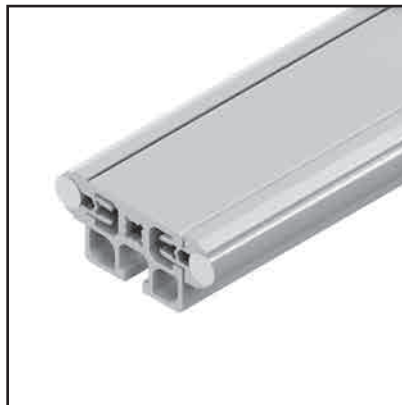
**RAIL 32**

Part no.

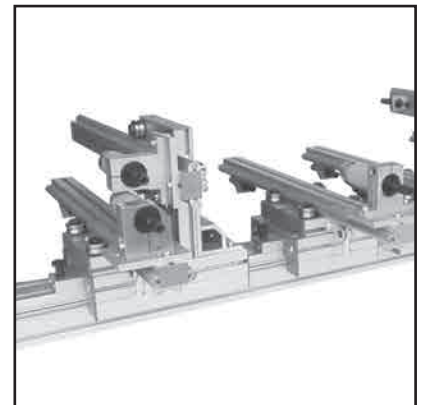
28.0010/0

**TECHN. DATA / ITEMS SUPPLIED**

- Aluminium, anodized E6/EV1
- Profile 45 x 32 F
- On both sides with shaft supporting profile and shafts  $\varnothing$  12 h6, pre-finished installed
- Without end caps
- Stainless version **part no. 28.0010/3**
- Weight = 4,161 kg/m
- Bar length = 6 m

**APPLICATIONS**

- Linear and column guides
- Longer rails with composite shafts possible

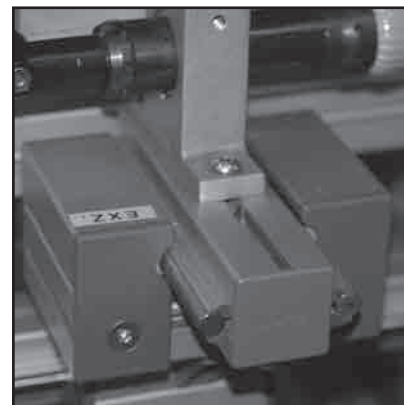
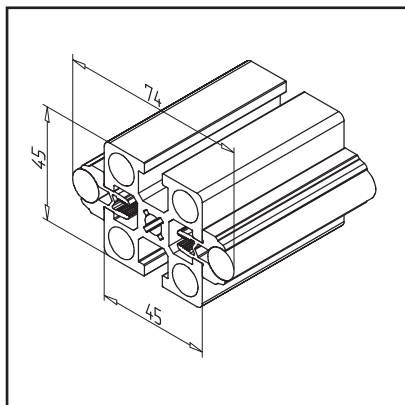
**ASSEMBLY**

- For vertical use or for high speed applications, we recommend the use of shaft retention devices **part no. 28.0052/0**
- To use shaft locking devices on both sides, the shaft and shaft carrier should be at least 30 mm shorter than the total length.

**RAIL 45**

Part no.

28.0006/0

**TECHN. DATA / ITEMS SUPPLIED**

- Aluminium, anodized E6/EV1
- On both sides with shaft supporting profile and shafts  $\varnothing 12$  h6, pre-finished installed
- Without end caps
- Stainless version **part no. 28.0006/3**
- Weight = 4,796 kg/m
- Bar length = 6 m

**APPLICATIONS**

- Linear and column guides
- Longer rails with composite shafts possible

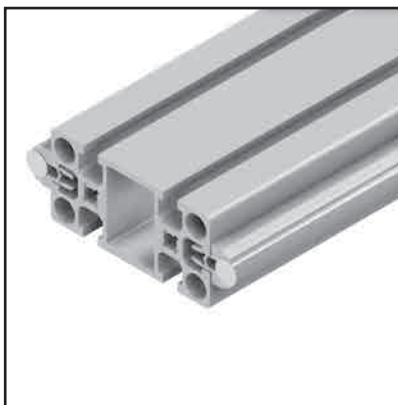
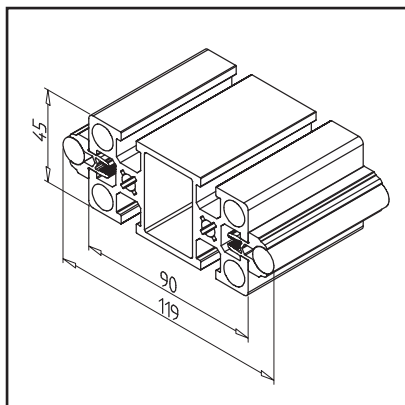
**ASSEMBLY**

- For vertical use or for high speed applications, we recommend the use of shaft retention devices **part no. 28.0052/0**
- To use shaft locking devices on both sides, the shaft and shaft carrier should be at least 30 mm shorter than the total length.

**RAIL 45X90 F**

Part no.

28.0007/1

**TECHN. DATA / ITEMS SUPPLIED**

- Aluminium, anodized E6/EV1
- Profile 45 x 90
- On both sides with shaft supporting profile and shafts  $\varnothing 12$  h6, pre-finished installed
- Without end caps
- Stainless version **part no. 28.0007/3**
- Weight = 6,190 kg/m
- Bar length = 6 m

**APPLICATIONS**

- Linear and column guides
- Longer rails with composite shafts possible

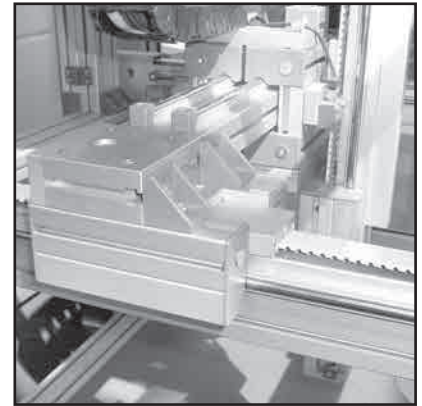
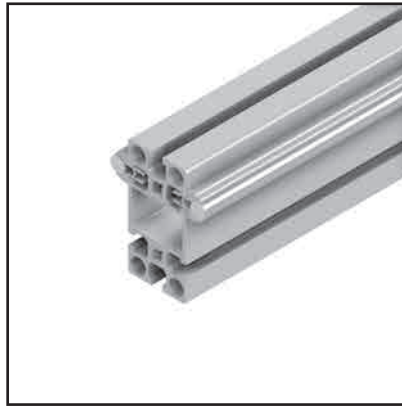
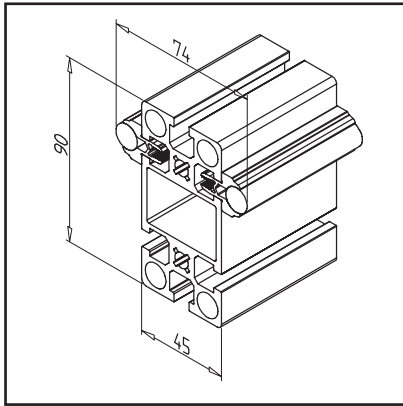
**ASSEMBLY**

- For vertical use or for high speed applications, we recommend the use of shaft retention devices **part no. 28.0052/0**
- To use shaft locking devices on both sides, the shaft and shaft carrier should be at least 30 mm shorter than the total length.

**RAIL 45X90 H**

Part no.

28.0007/2

**TECHN. DATA / ITEMS SUPPLIED**

- Aluminium, anodized E6/EV1
- Profile 45 x 90
- On both sides with shaft supporting profile and shafts  $\varnothing$  12 h6, pre-finished installed
- Without end caps
- Stainless version **part no. 28.0007/4**
- Weight = 6,190 kg/m
- Bar length = 6 m

**APPLICATIONS**

- Linear and column guides
- Belt return in profile
- Longer rails with composite shafts possible

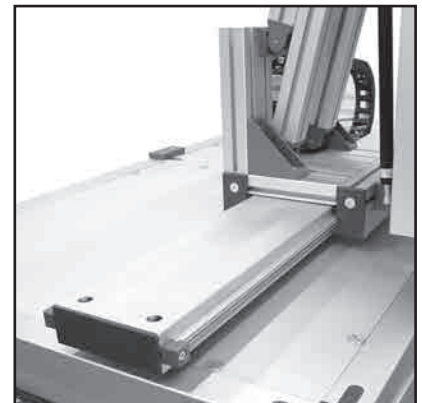
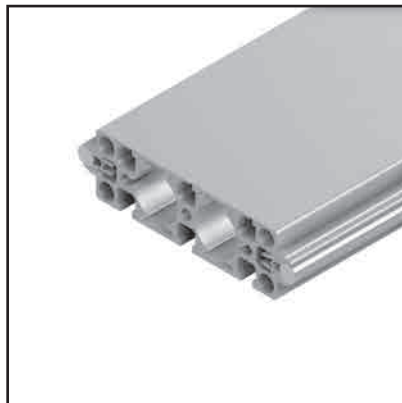
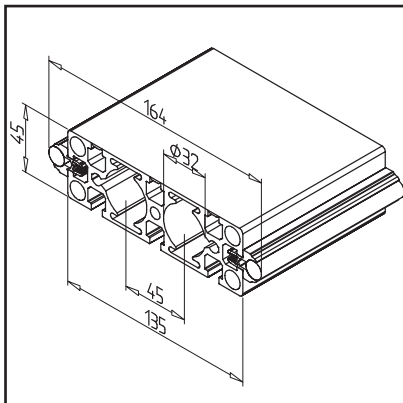
**ASSEMBLY**

- For vertical use or for high speed applications, we recommend the use of shaft retention devices **part no. 28.0052/0**
- To use shaft locking devices on both sides, the shaft and shaft carrier should be at least 30 mm shorter than the total length.

**RAIL 135 F**

Part no.

28.0012/1

**TECHN. DATA / ITEMS SUPPLIED**

- Aluminium, anodized E6/EV1
- Profile 45 X 135 1G
- On both sides with shaft supporting profile and shafts  $\varnothing$  12 h6, pre-finished installed
- Without end caps
- Stainless version **part no. 28.0012/3**
- Weight = 8,09 kg/m
- Bar length = 6 m

**APPLICATIONS**

- Linear and column guides
- Longer rails with composite shafts possible

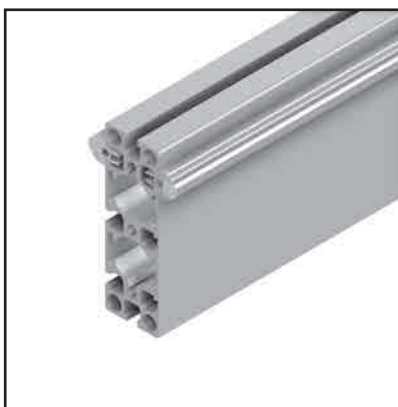
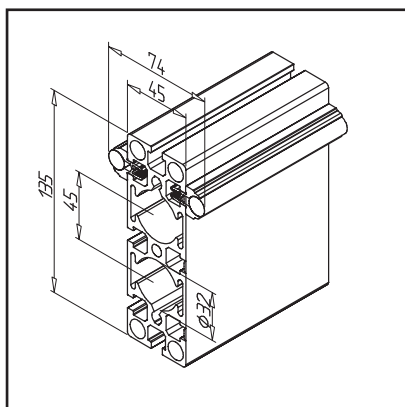
**ASSEMBLY**

- For vertical use or for high speed applications, we recommend the use of shaft retention devices **part no. 28.0052/0**
- To use shaft locking devices on both sides, the shaft and shaft carrier should be at least 30 mm shorter than the total length.

**RAIL 135 H**

Part no.

28.0012/2

**TECHN. DATA / ITEMS SUPPLIED**

- Aluminium, anodized E6/EV1
- Profile 45 X 135 1G
- On both sides with shaft supporting profile and shafts Ø 12 h6, pre-finished installed
- Without end caps
- Stainless version **part no. 28.0012/4**
- Weight = 8,09 kg/m
- Bar length = 6 m

**APPLICATIONS**

- Linear and column guides
- Longer rails with composite shafts possible

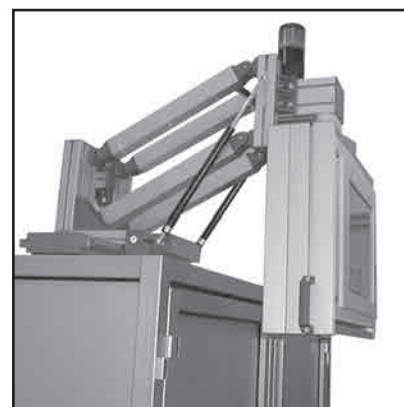
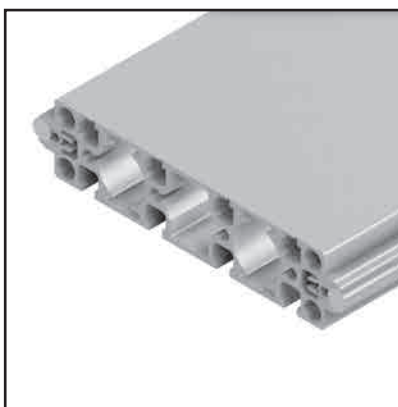
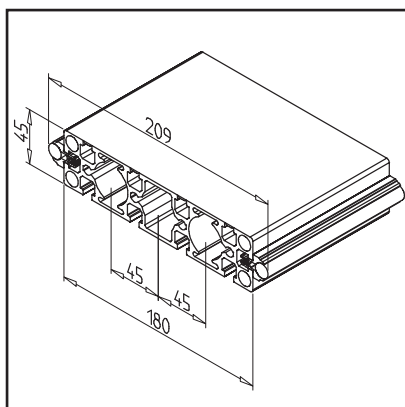
**ASSEMBLY**

- For vertical use or for high speed applications, we recommend the use of shaft retention devices **part no. 28.0052/0**
- To use shaft locking devices on both sides, the shaft and shaft carrier should be at least 30 mm shorter than the total length.

**RAIL 45X180 F**

Part no.

28.0013/1

**TECHN. DATA / ITEMS SUPPLIED**

- Aluminium, anodized E6/EV1
- Profile 45 X 180 1G
- On both sides with shaft supporting profile and shafts Ø 12 h6, pre-finished installed
- Without end caps
- Stainless version **part no. 28.0013/3**
- Weight = 9,466 kg/m
- Bar length = 6 m

**APPLICATIONS**

- Linear and column guides
- Longer rails with composite shafts possible

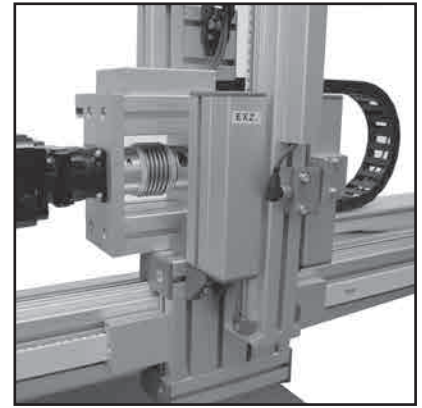
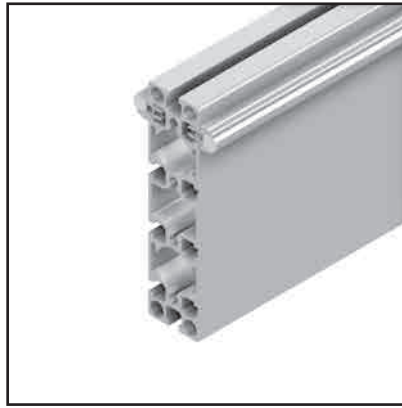
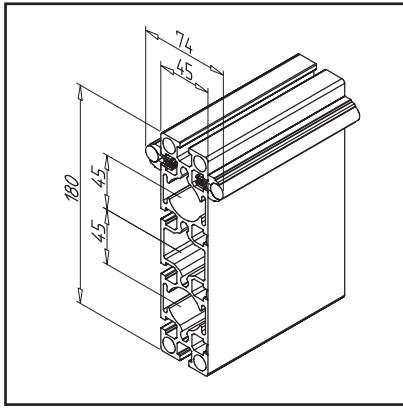
**ASSEMBLY**

- For vertical use or for high speed applications, we recommend the use of shaft retention devices **part no. 28.0052/0**
- To use shaft locking devices on both sides, the shaft and shaft carrier should be at least 30 mm shorter than the total length.

**RAIL 45X180 H**

Part no.

28.0013/2

**TECHN. DATA / ITEMS SUPPLIED**

- Aluminium, anodized E6/EV1
- Profile 45 X 180 1G
- On both sides with shaft supporting profile and shafts  $\varnothing$  12 h6, pre-finished installed
- Without end caps
- Stainless version **part no. 28.0013/4**
- Weight = 9,466 kg/m
- Bar length = 6 m

**APPLICATIONS**

- Linear and column guides
- Longer rails with composite shafts possible

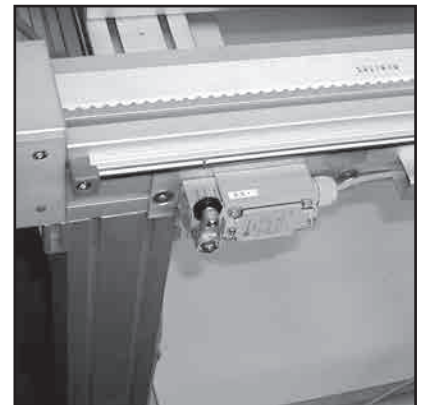
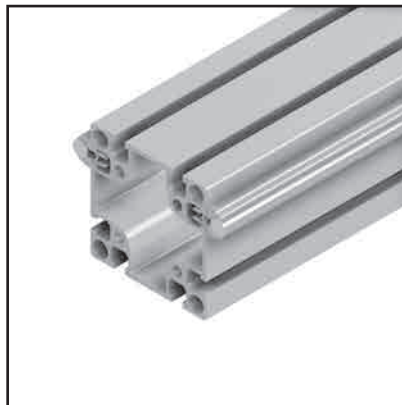
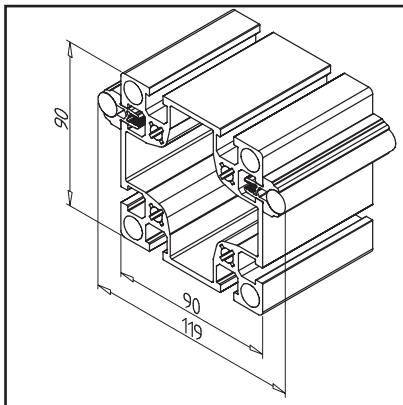
**ASSEMBLY**

- For vertical use or for high speed applications, we recommend the use of shaft retention devices **part no. 28.0052/0**
- To use shaft locking devices on both sides, the shaft and shaft carrier should be at least 30 mm shorter than the total length.

**RAIL 90**

Part no.

28.0008/0

**TECHN. DATA / ITEMS SUPPLIED**

- Aluminium, anodized E6/EV1
- Profile 90 x 90 L
- On both sides with shaft supporting profile and shafts  $\varnothing$  12 h6, pre-finished installed
- Without end caps
- Stainless version **part no. 28.0008/3**
- Weight = 7,88 kg/m
- Bar length = 6 m

**APPLICATIONS**

- Linear and column guides for high load
- Belt return in profile
- Longer rails with composite shafts possible

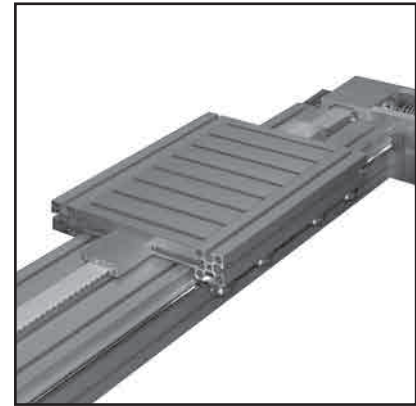
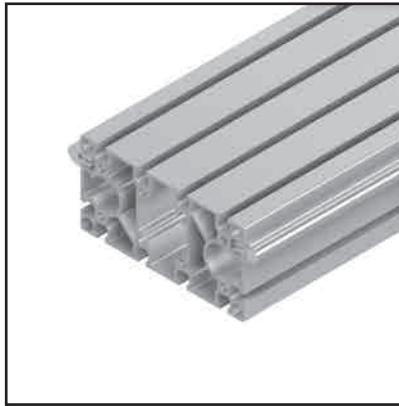
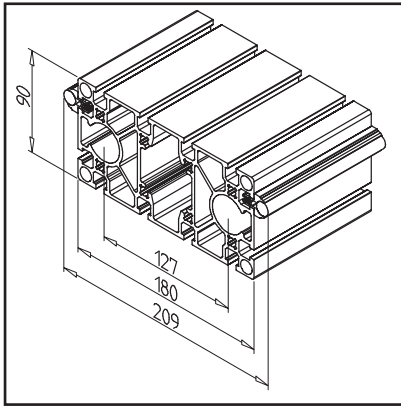
**ASSEMBLY**

- For vertical use or for high speed applications, we recommend the use of shaft retention devices **part no. 28.0052/0**
- To use shaft locking devices on both sides, the shaft and shaft carrier should be at least 30 mm shorter than the total length.

## RAIL 180 F

Part no.

28.0011/1



### TECHN. DATA / ITEMS SUPPLIED

- Aluminium, anodized E6/EV1
- Profile 90 X 180 S
- On both sides with shaft supporting profile and shafts  $\varnothing$  12 h6, pre-finished installed
- Without end caps
- Stainless version **part no. 28.0011/3**
- Weight = 14,516 kg/m
- Bar length = 6 m

### APPLICATIONS

- Linear and column guides for high load
- Belt return in profile
- Longer rails with composite shafts possible

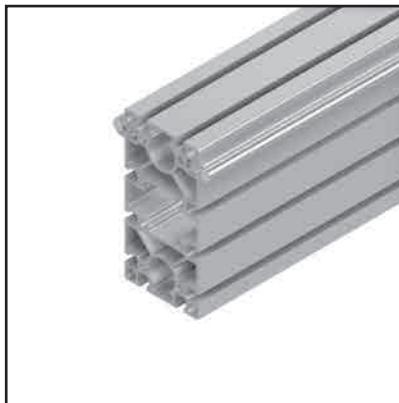
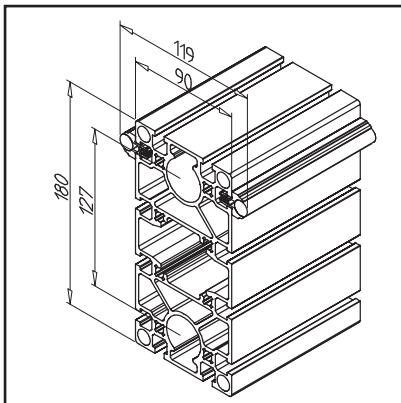
### ASSEMBLY

- For vertical use or for high speed applications, we recommend the use of shaft retention devices **part no. 28.0052/0**
- To use shaft locking devices on both sides, the shaft and shaft carrier should be at least 30 mm shorter than the total length.

## RAIL 180 H

Part no.

28.0011/2



### TECHN. DATA / ITEMS SUPPLIED

- Aluminium, anodized E6/EV1
- Profile 90 X 180 S
- On both sides with shaft supporting profile and shafts  $\varnothing$  12 h6, pre-finished installed
- Without end caps
- Stainless version **part no. 28.0011/4**
- Weight = 14,516 kg/m
- Bar length = 6 m

### APPLICATIONS

- Linear and column guides for high load
- Belt return in profile
- Longer rails with composite shafts possible

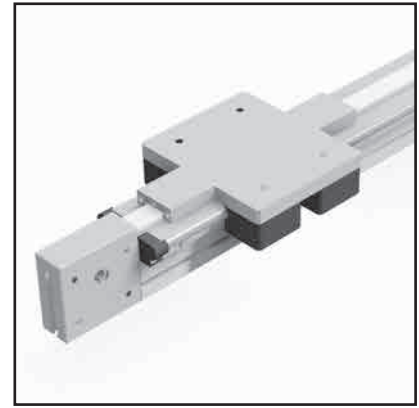
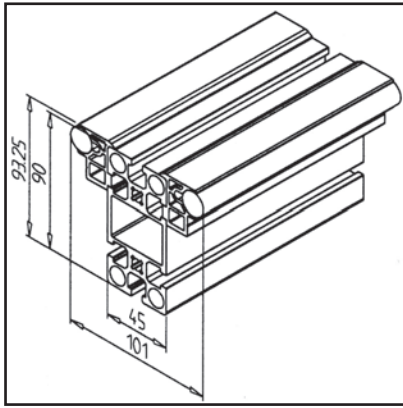
### ASSEMBLY

- For vertical use or for high speed applications, we recommend the use of shaft retention devices **part no. 28.0052/0**
- To use shaft locking devices on both sides, the shaft and shaft carrier should be at least 30 mm shorter than the total length.

**RAIL LR16 - 45X90H**

Part no.

28.0820/0

**TECHN. DATA / ITEMS SUPPLIED**

- Aluminium, anodized E6/EV1
- Profile 45 x 90
- On both sides with shaft carrier profile LR 16 and shafts  $\varnothing$  16 h6, installed pre-assembled
- Without end caps
- Weight = 7,979 kg/m
- Bar length = 6 m

**APPLICATIONS**

- Linear and column guides for high load
- Belt return in profile
- Longer rails with composite shafts possible

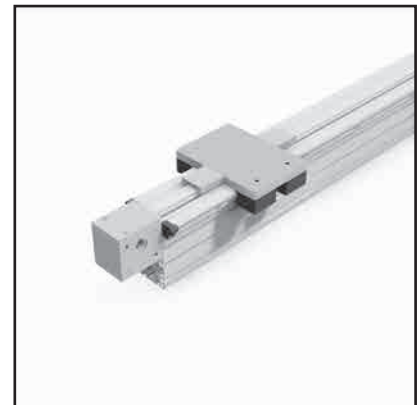
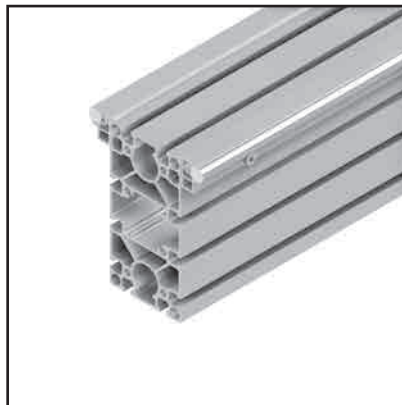
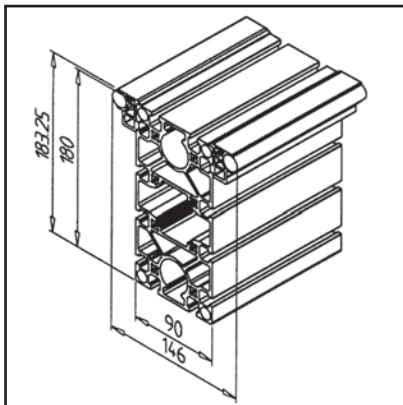
**ASSEMBLY**

- For vertical use or high speed applications we recommend the use of shaft retention device LR 16 **part no. 28.0808/0** and **part no. 28.0809/0**
- To use shaft locking devices on both sides, the shaft and shaft carrier should be at least 30 mm shorter than the total length.

**RAIL LR16 - 90X180H**

Part no.

28.0822/0

**TECHN. DATA / ITEMS SUPPLIED**

- Aluminium, anodized E6/EV1
- Profile 90 X 180 S
- On both sides with shaft carrier profile LR 16 and shafts  $\varnothing$  16 h6, installed pre-assembled
- Without end caps
- Weight = 16,278 kg/m
- Bar length = 6 m

**APPLICATIONS**

- Linear and column guides for high load
- Belt return in profile
- Longer rails with composite shafts possible

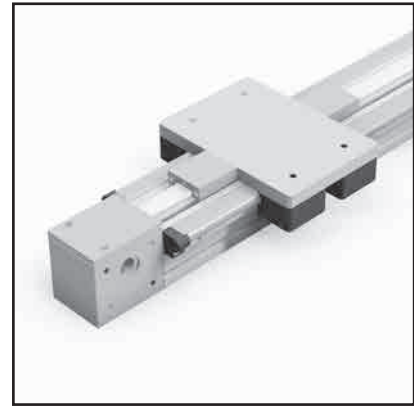
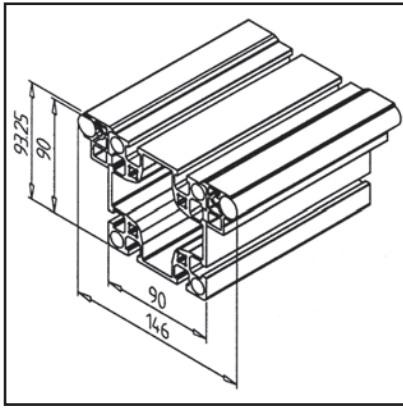
**ASSEMBLY**

- For vertical use or high speed applications we recommend the use of shaft retention device LR 16 **part no. 28.0808/0** and **part no. 28.0809/0**
- To use shaft locking devices on both sides, the shaft and shaft carrier should be at least 30 mm shorter than the total length.



## RAIL LR16 - 90

Part no. 28.0821/0



### TECHN. DATA / ITEMS SUPPLIED

- Aluminium, anodized E6/EV1
- Profile 90 x 90 L
- On both sides with shaft carrier profile LR 16 and shafts  $\varnothing 16$  h6, installed pre-assembled
- Without end caps
- Weight = 10,067 kg/m
- Bar length = 6 m

### APPLICATIONS

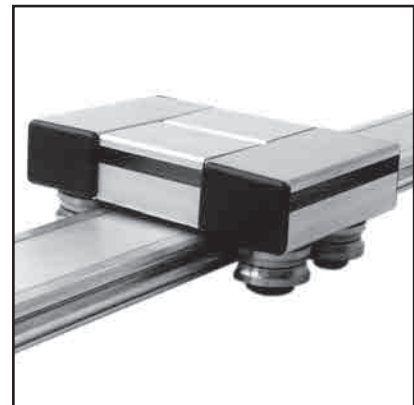
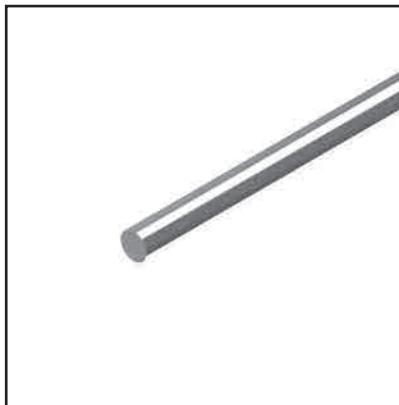
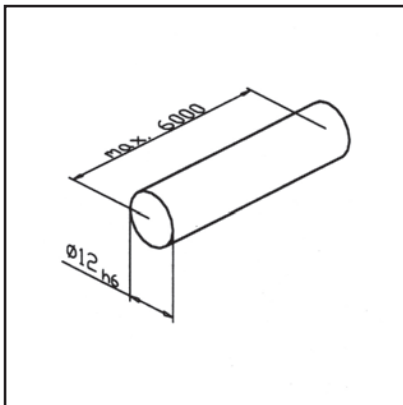
- Linear and column guides for high load
- Belt return in profile
- Longer rails with composite shafts possible

### ASSEMBLY

- For vertical use or high speed applications we recommend the use of shaft retention device LR 16 **part no. 28.0808/0** and **part no. 28.0809/0**
- To use shaft locking devices on both sides, the shaft and shaft carrier should be at least 30 mm shorter than the total length.

## SHAFT 12

Part no. 17.1741/0



### TECHN. DATA / ITEMS SUPPLIED

- Steel, pulled, hardened, polished
- Cf.53, hardened to  $62 \pm 4$  HRC, polished h6
- Stainless version **part no. 17.1741/1**
- Weight = 0.888 kg/m
- Bar length = 6 m

### APPLICATIONS

- All MiniTec-linear guides LR 12

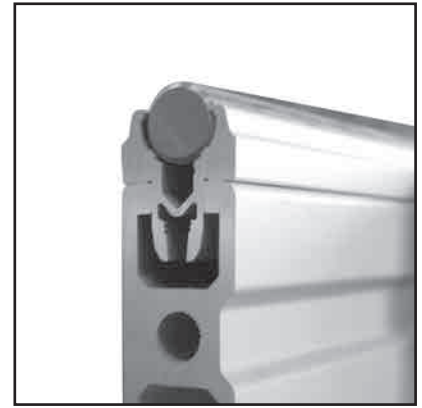
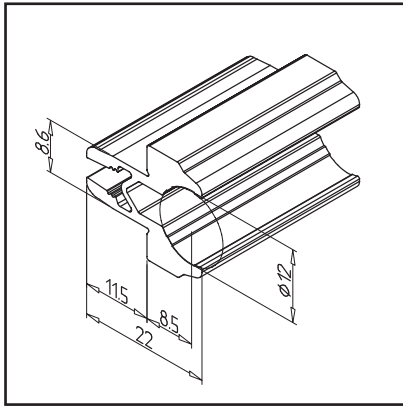
### ASSEMBLY

- Press shaft into supporting profile with appropriate tool (plastic mallet)
- For guides  $L > 6000$  mm assemble shaft with offset joints

**SHAFT SUPPORTING PROFILE LR 12**

Part no.

28.0002/0

**TECHN. DATA / ITEMS SUPPLIED**

- Aluminium, extruded, anodized E6/EV1
- Weight = 0.370 kg/m
- Bar length = 6 m

**APPLICATIONS**

- MiniTec linear guides LR/LG

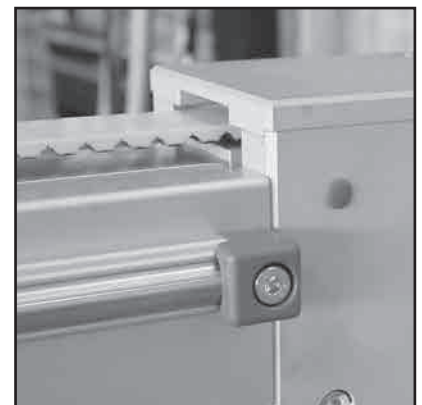
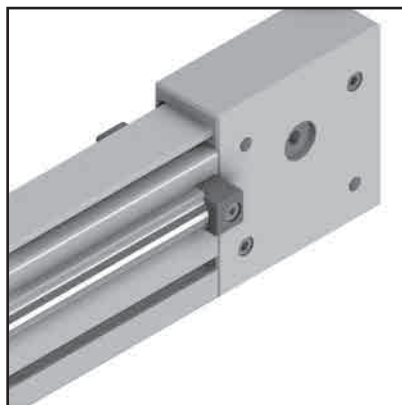
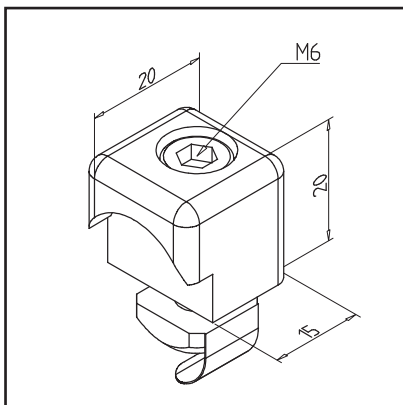
**ASSEMBLY**

- Press into the groove of rail profile
- If necessary clamp with set screw M5 x 10 in position
- Hammer the shaft into the rod holder profile with a plastic hammer

**SHAFT LOCKING CLIP**

Part no.

28.0052/0

**TECHN. DATA / ITEMS SUPPLIED**

- Aluminium, Pressure die-casting, powder-coated, grey
- With fastening material steel, zinc plated
- Stainless version **part no. 28.0053/0**
- Weight = 0.026 kg/piece

**APPLICATIONS**

- Axial fastening of shafts in dynamically stressed linear guides

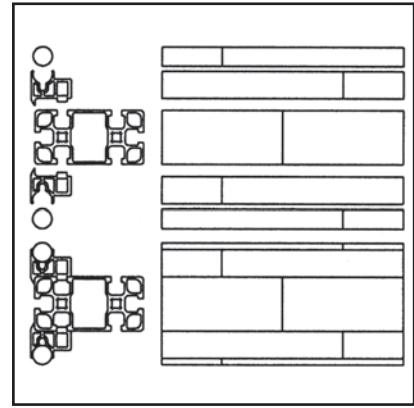
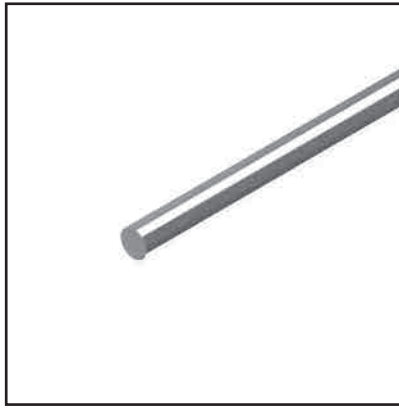
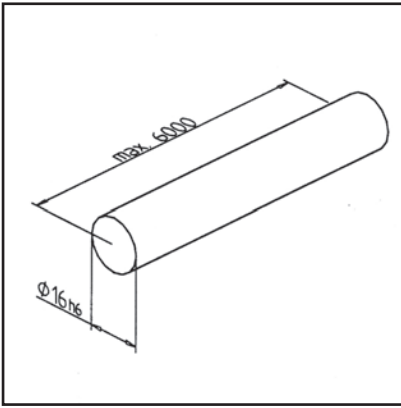
**ASSEMBLY**

- Fasten the retention device at both shaft ends with fastening kit
- No machining required
- The shaft carrier profile and shafts must be 15 mm shorter than the carrier profile

## SHAFT 16

Part no.

17.1743/0



### TECHN. DATA / ITEMS SUPPLIED

- Steel, pulled, hardened, polished
- Cf.53, hardened to  $62 \pm 4$  HRC, polished h6
- Weight = 1.587 kg/m
- Bar length = 6 m

### APPLICATIONS

- MiniTec linear guide LR 16

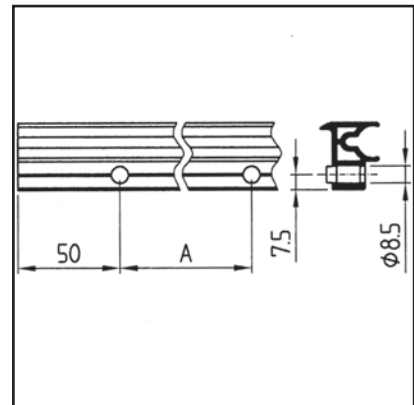
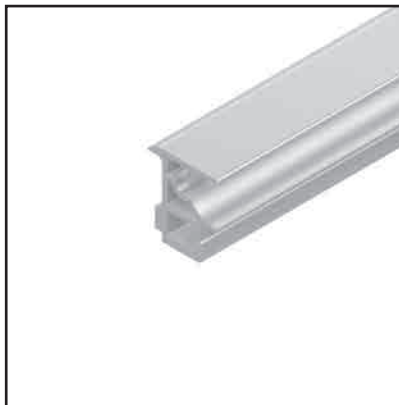
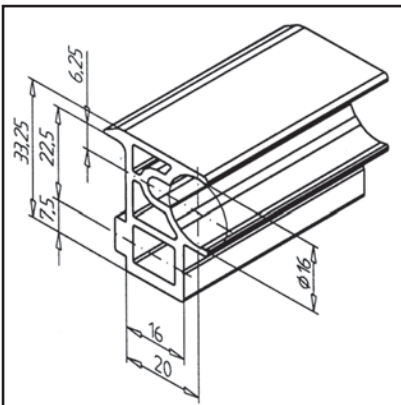
### ASSEMBLY

- Press shaft into supporting profile with appropriate tool (plastic mallet)
- For guides  $L > 6000$  mm assemble shaft with offset joints

## SHAFT SUPPORTING PROFILE LR 16 WITHOUT BORE

Part no.

28.0019/0



### TECHN. DATA / ITEMS SUPPLIED

- Aluminium, extruded, anodized E6/EV1
- Please order design with bore at **part no. 28.0019/1**  
grid dimension  $A = 250$  mm
- Weight = 0.845 kg/m
- Bar length = 6 m

### APPLICATIONS

- MiniTec linear guide LR16

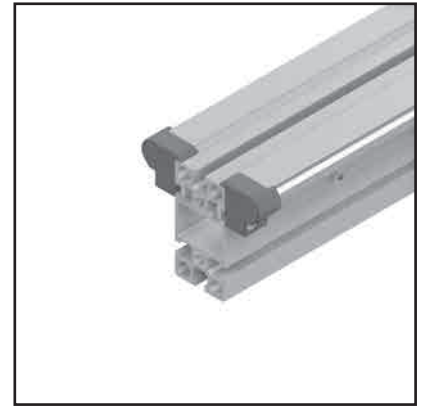
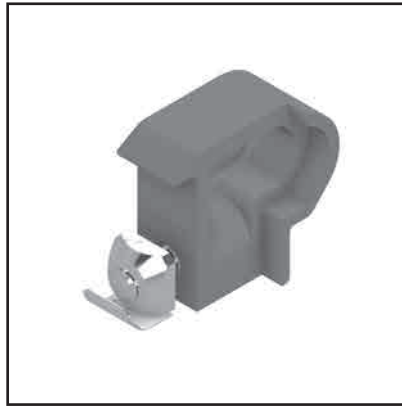
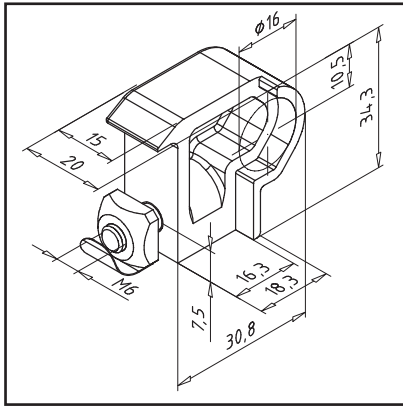
### ASSEMBLY

- Bore  $\phi 8.5$  in the shaft supporting profile
- Recommended distance: 50 mm from the edge, then approximately every 200 - 300 mm
- Fasten to the support profile using cylinder screw M8 x 30 and sliding nut M8.
- Hammer the shaft into the rod holder profile with a plastic hammer

**SHAFT LOCK LEFT LR16**

Part no.

28.0809/0

**TECHN. DATA / ITEMS SUPPLIED**

- Aluminium, Pressure die-casting, powder-coated, grey
- With fastening material steel, zinc plated
- Weight = 0.037 kg/piece

**APPLICATIONS**

- Axial fastening of shafts in dynamically stressed linear guides

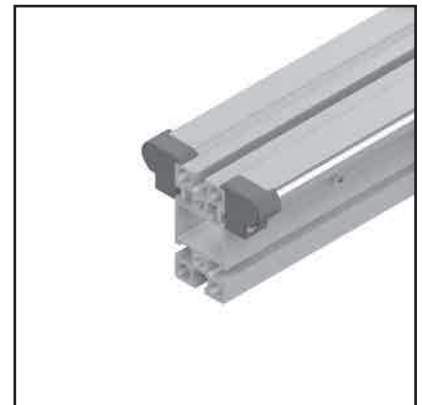
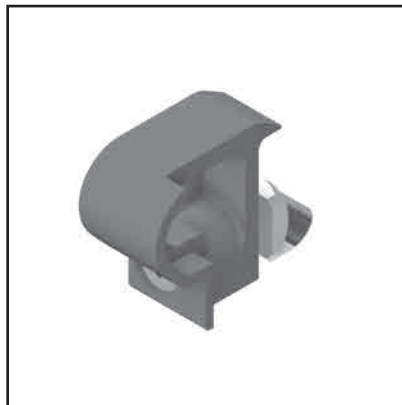
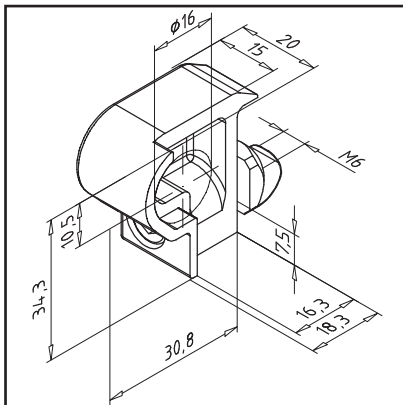
**ASSEMBLY**

- Fasten the retention device at both shaft ends with fastening kit
- No machining required
- The shaft carrier profile and shafts must be 15 mm shorter than the carrier profile

**SHAFT LOCK RIGHT LR16**

Part no.

28.0808/0

**TECHN. DATA / ITEMS SUPPLIED**

- Aluminium, Pressure die-casting, powder-coated, grey
- With fastening material steel, zinc plated
- Weight = 0.037 kg/piece

**APPLICATIONS**

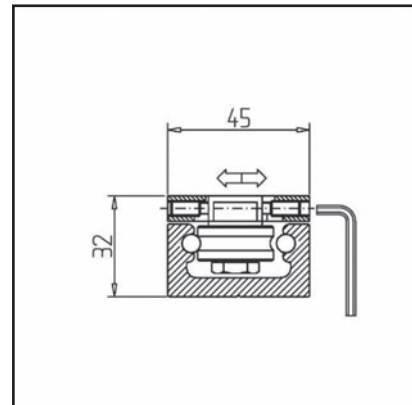
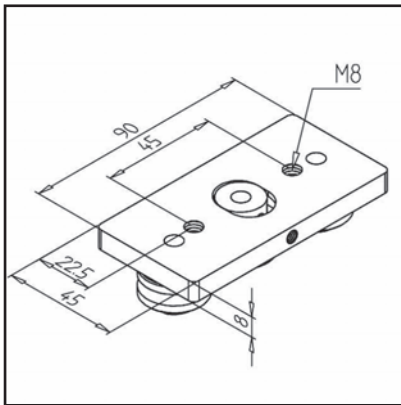
- Axial fastening of shafts in dynamically stressed linear guides

**ASSEMBLY**

- Fasten the retention device at both shaft ends with fastening kit
- No machining required
- The shaft carrier profile and shafts must be 15 mm shorter than the carrier profile

## SLIDE LR 6 COMPACT

Part no. 28.0140/0



### TECHN. DATA / ITEMS SUPPLIED

- Aluminium, anodized E6/EV1
- 3 double row casters LR 6
- Installed with concentric mounting bolts
- Stainless version **part no. 28.0148/0**
- Weight = 0.194 kg/piece

### APPLICATIONS

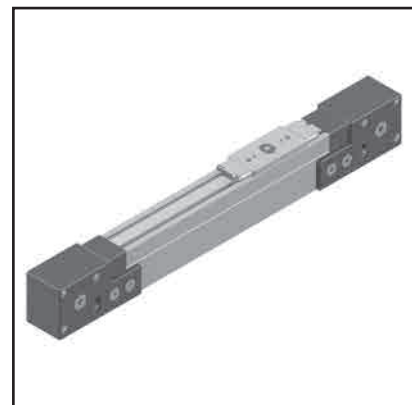
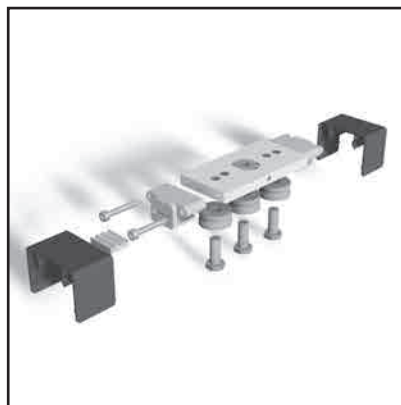
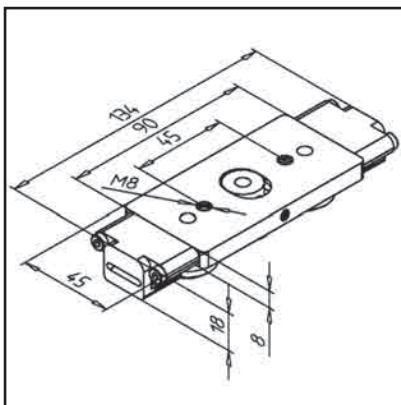
- MiniTec linear guide systems LR 6
- Handling devices
- Guide large drawers
- Doors
- Rail **part no. 28.0119/0**

### ASSEMBLY

- Slip slide onto rail
- Adjust casters with an Allen wrench SW 2.5 free play

## SLIDE LR 6 Z COMPACT

Part no. 28.0520/0



### TECHN. DATA / ITEMS SUPPLIED

- Aluminium, anodized E6/EV1
- Aluminum carriage plate, machined on all sides
- 3 double row casters LR 6
- Installed with concentric mounting bolts
- Stainless version **part no. 28.0524/0**
- Weight = 0.192 kg/piece

### APPLICATIONS

- MiniTec linear guide systems LR 6
- material-handling in areas with shortage of space
- Fitting rail LR6 compact **part no. 28.0119/0** and Timing belt pulley LR6

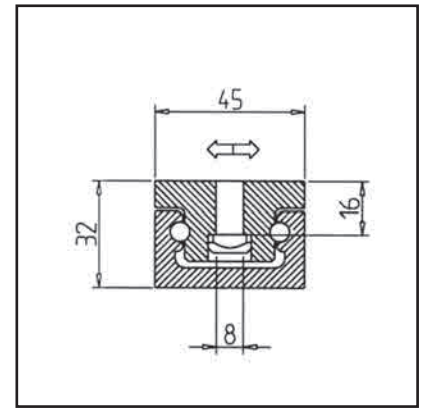
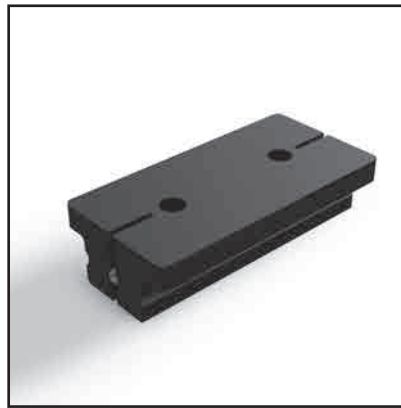
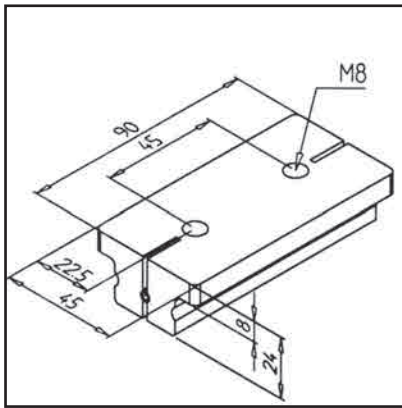
### ASSEMBLY

- Slip slide onto rail
- Set the caster wheel with Allen wrench SW2 SW2.5 without play
- Set up the load to be carried on existing threads M8

**SLIDE LR 6 COMPACT**

Part no.

28.0127/0

**TECHN. DATA / ITEMS SUPPLIED**

- PE-UHMW, black
- With square nut M8, steel zinc plated
- Weight = 0.068 kg/piece

**APPLICATIONS**

- Handling devices
- Guide large drawers
- Doors
- Rail **part no. 28.0119/0**

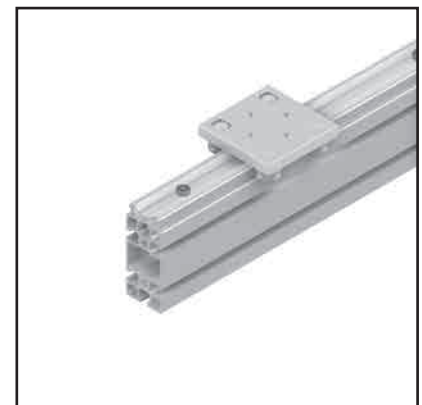
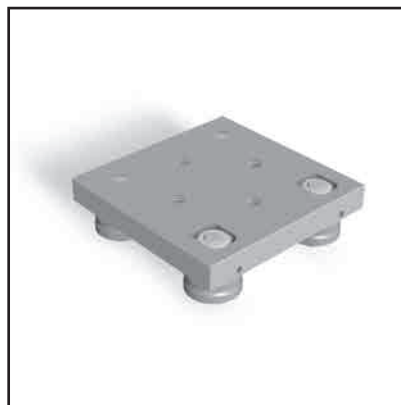
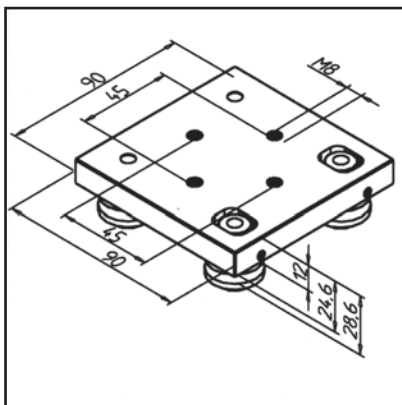
**ASSEMBLY**

- Slip slide onto rail
- Adjust slide clearance with hexagon key

**SLIDE LR 6**

Part no.

28.0138/0

**TECHN. DATA / ITEMS SUPPLIED**

- Aluminium, anodized E6/EV1
- 4 double row casters LR 6
- Installed with concentric mounting bolts
- Stainless version **part no. 28.0139/0**
- Weight = 0.400 kg/piece

**APPLICATIONS**

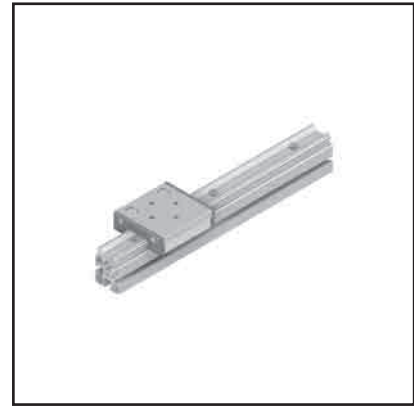
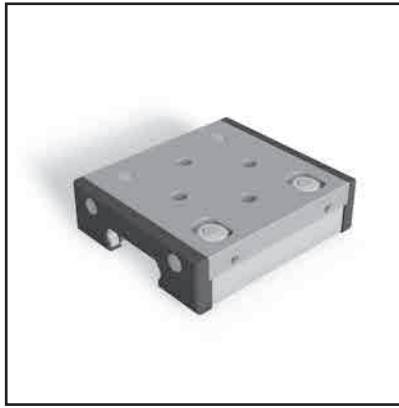
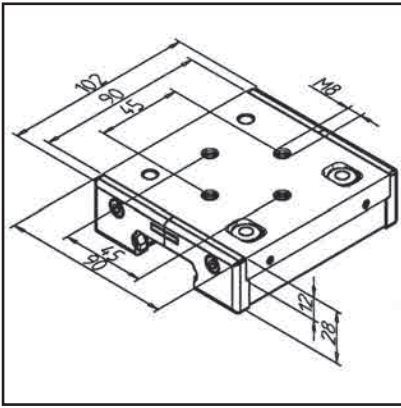
- MiniTec linear guide systems LR 6
- Handling devices
- Doors
- For rail **part no. 28.0119/0**

**ASSEMBLY**

- Slip slide onto rail
- Adjust casters with an Allen wrench SW 2.5 free play
- Tighten casters with 15 Nm
- When used in extreme environment, use slide LR6 with cover, **part no. 28.0138/1**

## SLIDE LR 6 WITH COVER

Part no. 28.0138/1



### TECHN. DATA / ITEMS SUPPLIED

- Aluminium, anodized E6/EV1
- 4 double row casters LR 6
- Installed with concentric mounting bolts
- Covers with lubricating felt
- Stainless version **part no. 28.0139/1**
- Weight = 0.458 kg/piece

### APPLICATIONS

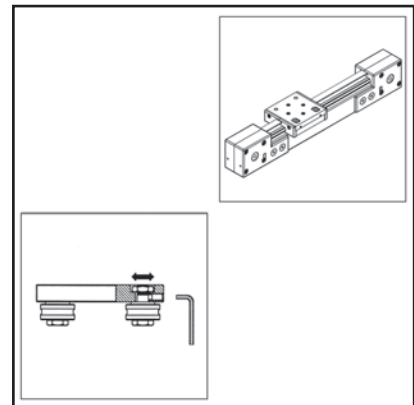
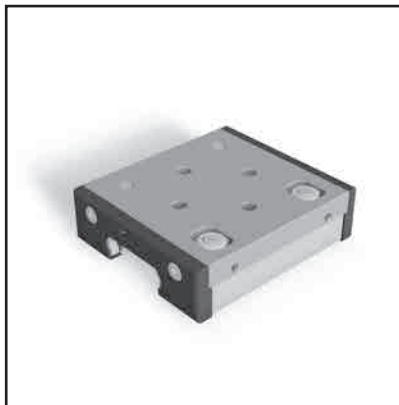
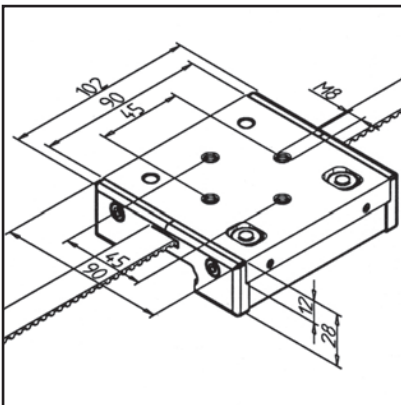
- MiniTec linear guide systems LR 6
- Handling devices
- Guide large drawers
- Doors
- For rail **part no. 28.0119/0**

### ASSEMBLY

- Slip slide onto rail
- Adjust casters with an Allen wrench SW 2.5 free play
- Tighten casters with 15 Nm
- Saturate greasing felts with appropriate oil

## SLIDE LR 6 Z

Part no. 28.0138/2



### TECHN. DATA / ITEMS SUPPLIED

- Aluminium, anodized E6/EV1
- 4 double row casters LR 6
- Installed with concentric mounting bolts
- Covers with lubricating felt
- Integrated admission for timing belts
- Stainless version **part no. 28.0139/2**
- Weight = 0.502 kg/piece

### APPLICATIONS

- MiniTec linear guide systems LR 6
- Handling devices
- For rail **part no. 28.0119/0**

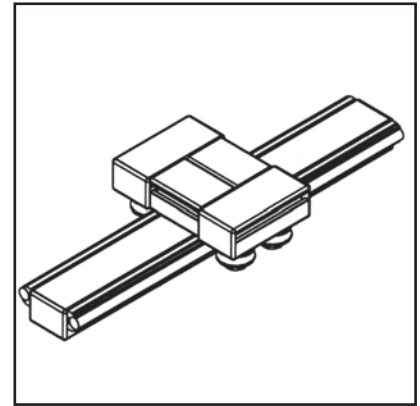
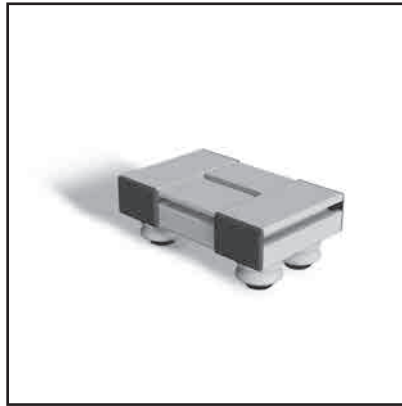
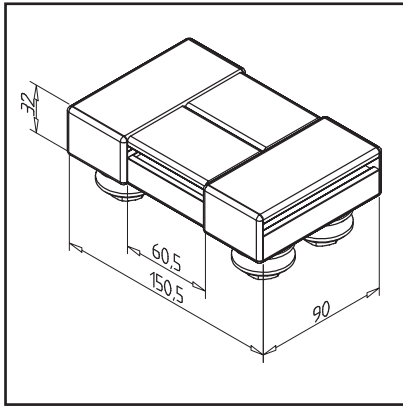
### ASSEMBLY

- Slip slide onto rail
- Adjust casters with an Allen wrench SW 2.5 free play
- Tighten casters with 15 Nm
- Insert the timing belt into the vehicle and fasten it
- Installed cover caps

**SLIDE LW 32**

Part no.

28.0088/0

**TECHN. DATA / ITEMS SUPPLIED**

- Aluminium, anodized E6/EV1
- Fully mounted carriage
- 2 concentric and 2 eccentric bearing units
- End caps
- Stainless version **part no. 28.0088/1**
- Weight = 1.060 kg/piece

**APPLICATIONS**

- Handling devices
- Measuring devices
- Slide units
- For rails 19 and 32

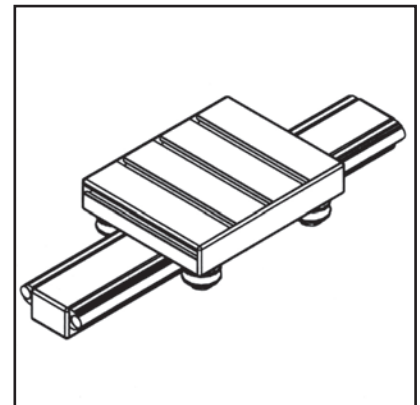
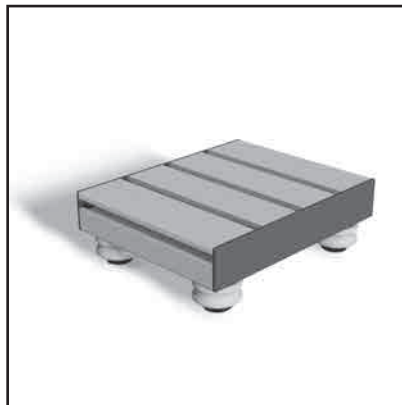
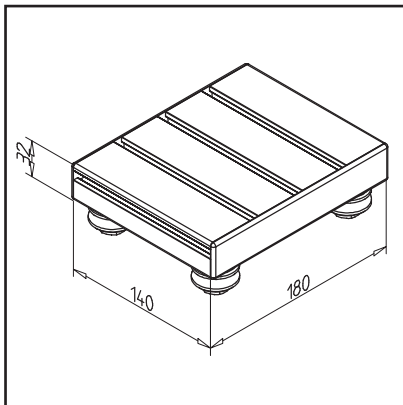
**ASSEMBLY**

- Slip slide on rail 19 or 32; adjust clearance with eccentric bush

**SLIDE LW 32 E**

Part no.

28.0089/0

**TECHN. DATA / ITEMS SUPPLIED**

- Aluminium, anodized E6/EV1
- Fully mounted carriage
- 2 concentric and 2 eccentric bearing units
- End caps
- Stainless version **part no. 28.0089/1**
- Weight = 1.920 kg/piece

**APPLICATIONS**

- 1- or multi-axis guides
- Handling devices
- Measuring devices
- For rails 19 and 32

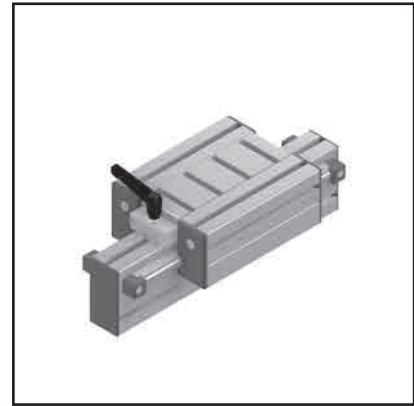
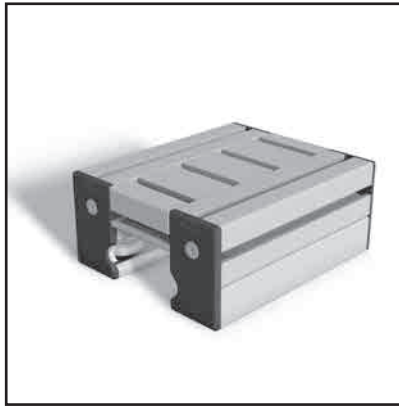
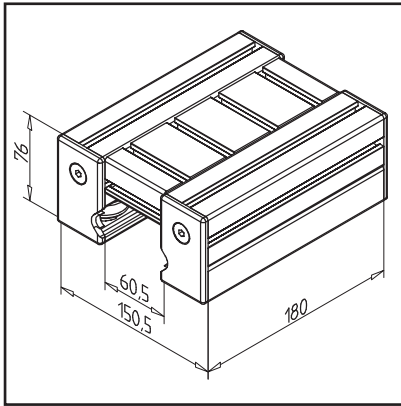
**ASSEMBLY**

- Slip slide on rail 19 or 32; adjust clearance with eccentric bush



## SLIDE LW 45

Part no. 28.0091/0



### TECHN. DATA / ITEMS SUPPLIED

- Aluminium, anodized E6/EV1
- Fully mounted carriage
- 2 concentric and 2 eccentric bearing units
- End caps LR and 2 cover profiles LR
- Stainless version **part no. 28.0091/3**
- Weight = 2.260 kg/piece

### APPLICATIONS

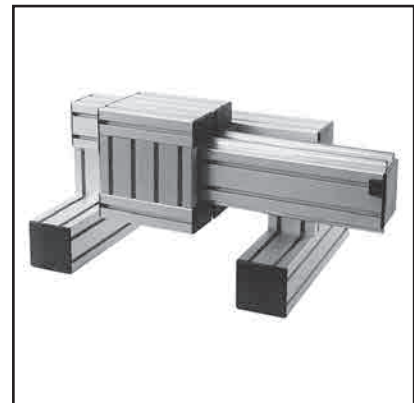
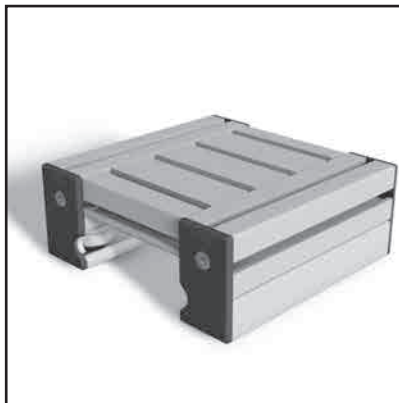
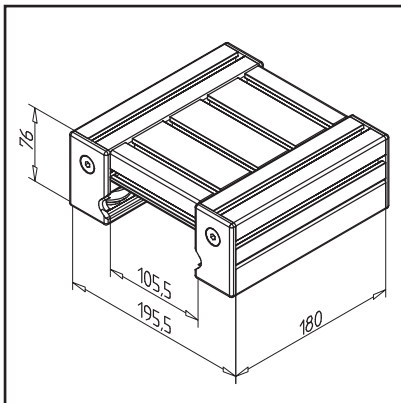
- 1- or multi-axis guides
- Linear robots
- Handling devices
- Measuring devices
- For rails 45, 45 x 90 H, 45 x 180 H and 135 H

### ASSEMBLY

- Assemble slide on rail 45 or 45 x 90 H, adjust clearance with eccentric bush
- Install the cover and lubrication system
- Slide clamping unit **part no. 28.0270/0**

## SLIDE LW 90

Part no. 28.0092/0



### TECHN. DATA / ITEMS SUPPLIED

- Aluminium, anodized E6/EV1
- Fully mounted carriage
- 2 concentric and 2 eccentric bearing units
- End caps LR and Cover profiles LR
- **Stainless version part no. 28.0092/2**
- Weight = 2.720 kg/piece

### APPLICATIONS

- 1- or multi-axis guides
- Linear robots
- Handling devices
- Measuring devices
- For rails 45 x 90 F, 90 x 90, 90 x 180 H

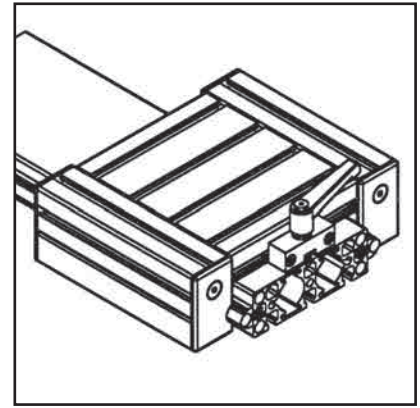
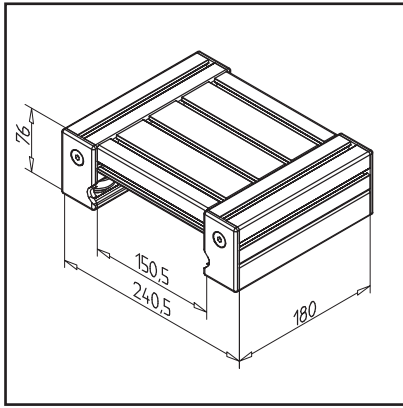
### ASSEMBLY

- Assemble slide on rail 45 x 90 F, rail 90 or rail 90 x 180 H; adjust clearance with eccentric bush
- Install the cover and lubrication system
- Slide clamping unit **part no. 28.0270/0**

**SLIDE LW 135**

Part no.

28.0084/0

**TECHN. DATA / ITEMS SUPPLIED**

- Aluminium, anodized E6/EV1
- Fully mounted carriage
- 2 concentric and 2 eccentric bearing units
- End caps LR and Cover profiles LR
- Stainless version **part no. 28.0084/1**
- Weight = 3.150 kg/piece

**APPLICATIONS**

- 1- or multi-axis guides
- Linear robots
- Handling devices
- Measuring devices
- For rails 135 F

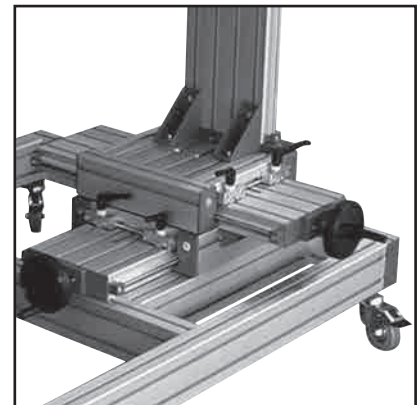
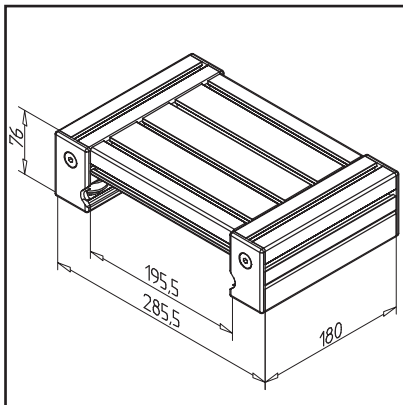
**ASSEMBLY**

- Assemble slide on rail 45 x 135; adjust clearance with eccentric bush
- Install the cover and lubrication system
- Slide clamping unit **part no. 28.0270/0**

**SLIDE LW 180**

Part no.

28.0087/0

**TECHN. DATA / ITEMS SUPPLIED**

- Aluminium, anodized E6/EV1
- Fully mounted carriage
- 2 concentric and 2 eccentric bearing units
- End caps LR and Cover profiles LR
- Stainless version **part no. 28.0087/1**
- Weight = 3.590 kg/piece

**APPLICATIONS**

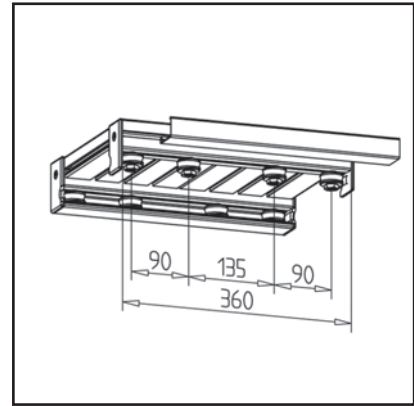
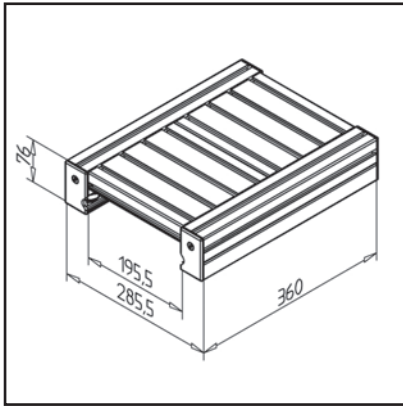
- 1- or multi-axis guides
- Linear robots
- Handling devices
- Measuring devices
- For rails 45 x 180 F and 90 x 180 F

**ASSEMBLY**

- Assemble slide on rail 90 x 180; adjust clearance with eccentric bush
- Install the cover and lubrication system
- Slide clamping unit **part no. 28.0270/0**

## SLIDE LW 180 WITH 8 BEARINGS

Part no. 28.0087/3



### TECHN. DATA / ITEMS SUPPLIED

- Aluminium, anodized E6/EV1
- Fully mounted carriage
- With 8 concentric and 8 eccentric bearing units
- End caps LR and Cover profiles LR
- Stainless version **part no. 28.0087/1**
- Weight = 7.379 kg/piece

### APPLICATIONS

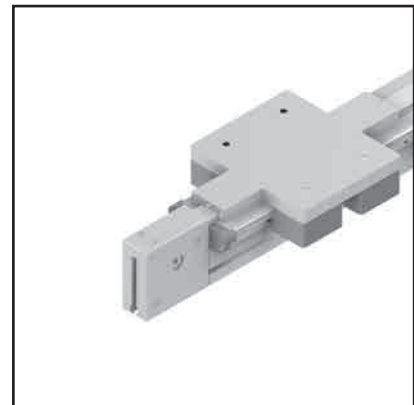
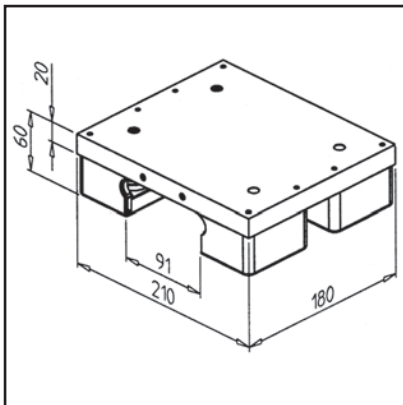
- 1- or multi-axis guides
- Linear robots
- Handling devices
- Measuring devices
- For rails 45 x 180 F and 90 x 180 F

### ASSEMBLY

- Assemble slide on rail 90 x 180; adjust clearance with eccentric bush
- Install the cover and lubrication system
- Slide clamping unit **part no. 28.0270/0**

## SLIDE LR 16 - 45

Part no. 28.0810/0



### TECHN. DATA / ITEMS SUPPLIED

- Aluminium, anodized E6/EV1
- 2 concentric and 2 eccentric bearing units
- Weight = 3.638 kg/piece

### APPLICATIONS

- 1- or multi-axis guides
- Linear robots
- Handling devices
- Measuring devices
- For rail LR16 45 x 90 H

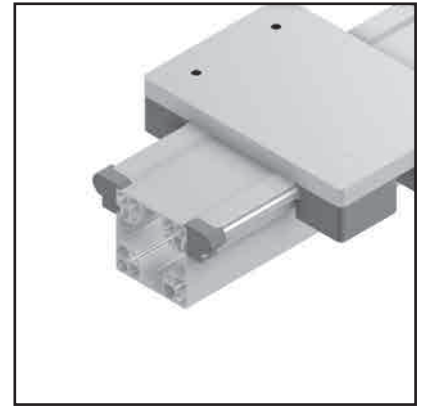
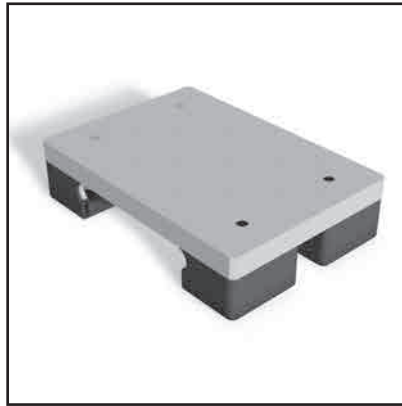
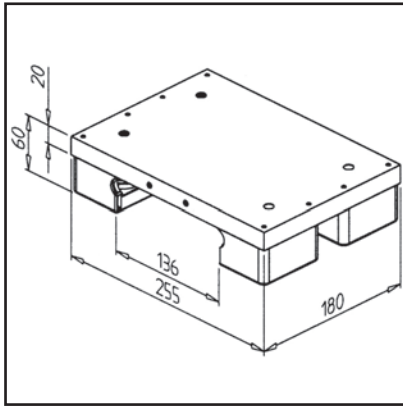
### ASSEMBLY

- Push the trolley onto the rails, adjust for zero play with eccentric fastening set
- Install the cover and lubrication system

**SLIDE LR 16 - 90**

Part no.

28.0811/0

**TECHN. DATA / ITEMS SUPPLIED**

- Aluminium, anodized E6/EV1
- Fully mounted carriage
- 2 concentric and 2 eccentric bearing units
- Weight = 4.076 kg/piece

**APPLICATIONS**

- 1- or multi-axis guides
- Linear robots
- Handling devices
- Measuring devices
- For rail LR16 90 and LR16 90x180 H

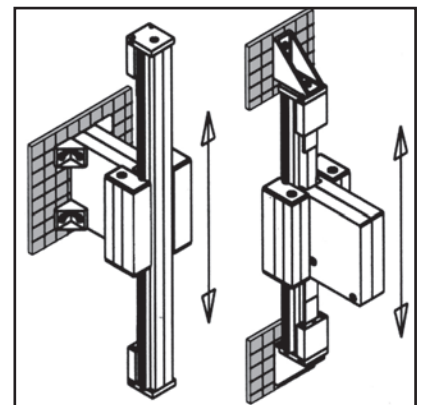
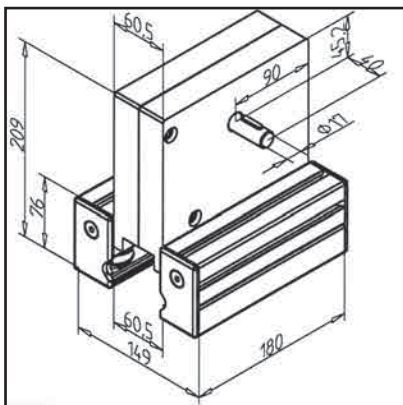
**ASSEMBLY**

- Push the trolley onto the rails, adjust for zero play with eccentric fastening set
- Install the cover and lubrication system

**BELT DRIVE 45**

Part no.

28.0248/0

**TECHN. DATA / ITEMS SUPPLIED**

- Aluminium, anodized E6/EV1
- Shaft end  $\varnothing 17$  for motor connection
- 2 idler pulleys aluminium, integrated in linear slide LW 45
- Weight = 6.320 kg/piece

**APPLICATIONS**

- MiniTec linear guides LR with extremely long travels, z-axis
- Use with rail 45, 45 x 90 H, 45 x 135 H and 45 x 180 H

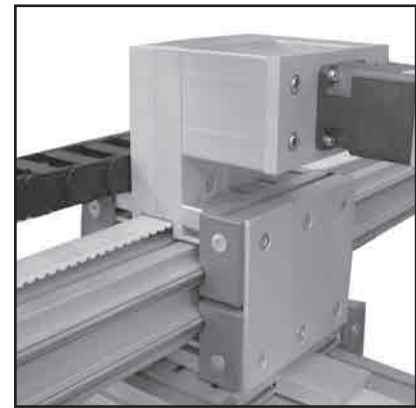
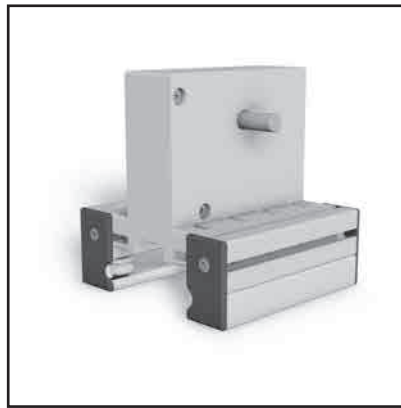
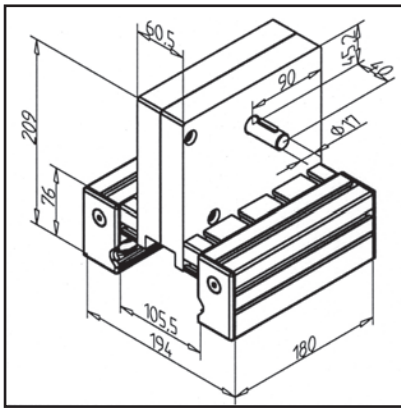
**ASSEMBLY**

- Guide the timing belt through the timing belt drive, slide it onto the rail and adjust it without play
- Fix timing belt end to rail end with timing belt tensioner **part no. 28.0090/0** and fastening plate for rail 45 **part no. 28.0054/0** or for rail 45 x 90 H **part no. 28.0056/0**
- Tighten the timing belt
- Belt length: Rail length + 212 mm

## BELT DRIVE 90

Part no.

28.0249/0



### TECHN. DATA / ITEMS SUPPLIED

- Aluminium, anodized E6/EV1
- Shaft end Ø 17 for motor connection
- 2 idler pulleys aluminium, integrated in linear slide LW 90
- Weight = 6.789 kg/piece

### APPLICATIONS

- MiniTec linear guides LR with extremely long travels, z-axis
- Use with rail 45 x 90 F, rail 90 or 90 x 180 H

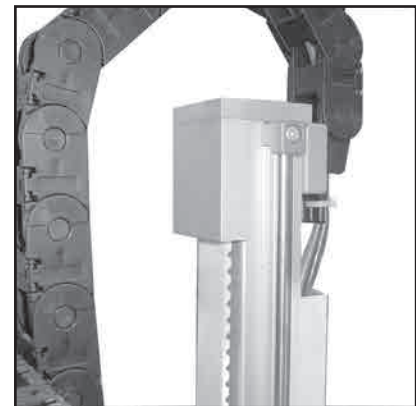
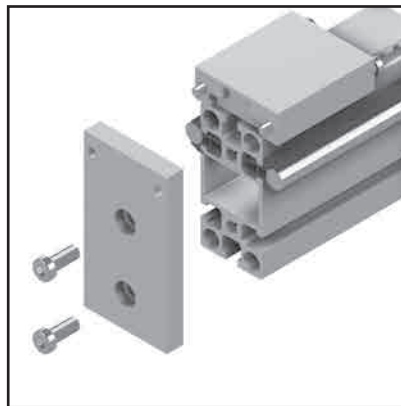
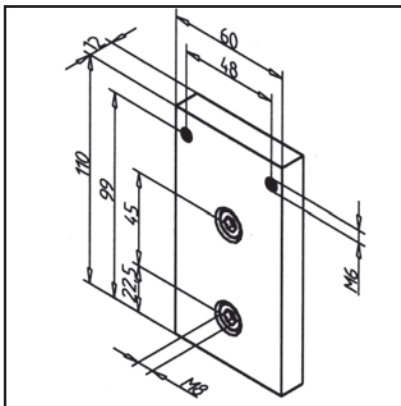
### ASSEMBLY

- Guide the timing belt through the timing belt drive, slide it onto the rail and adjust it without play
- Fix timing belt end to rail end with timing belt tensioner **part no. 28.0090/0** and fastening plate for rail 90 **part no. 28.0057/0** or for rail 45 x 90 F **part no. 28.0055/0**
- Tighten the timing belt
- Belt length: Rail length + 212 mm

## FASTENING KIT FOR TIMING BELT TENSIONER 45 X 90 H

Part no.

28.0056/0



### TECHN. DATA / ITEMS SUPPLIED

- Aluminium, anodized E6/EV1
- With fastening material steel, zinc plated
- Weight = 0.090 kg/piece

### APPLICATIONS

- For each timing belt tensioner one fastening kit is necessary
- Connection of timing belt tensioner to rail 45 x 90 H in connection with timing belt drive

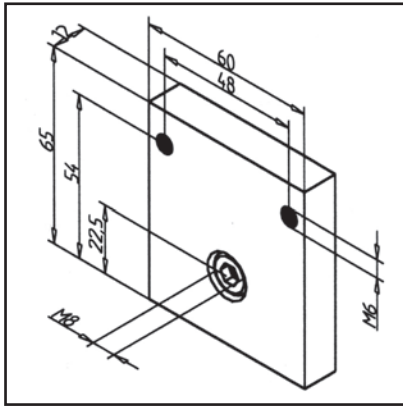
### ASSEMBLY

- Fasten with supplied hardware to the end of the rail, then introduce thread M8
- Install timing belt tensioner

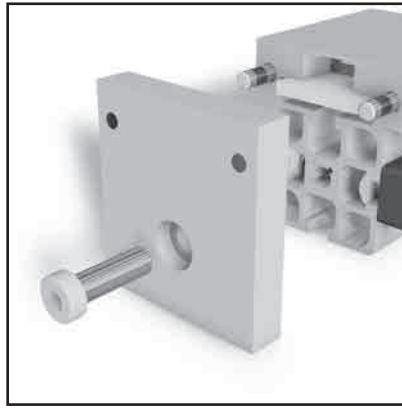
**FASTENING KIT FOR TIMING BELT TENSIONER 45**

Part no.

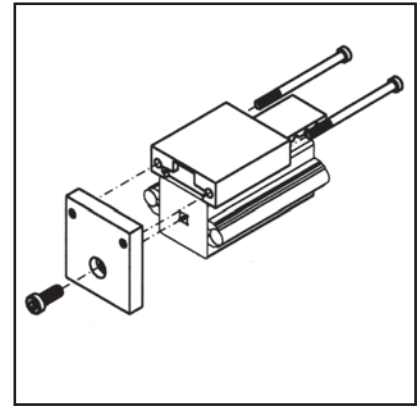
28.0054/0

**TECHN. DATA / ITEMS SUPPLIED**

- Aluminium, anodized E6/EV1
- With fastening material steel, zinc plated
- Weight = 0.090 kg/piece

**APPLICATIONS**

- **In connection with belt drive**
- For each timing belt tensioner one fastening kit is necessary
- Connection of timing belt tensioner to rail 45

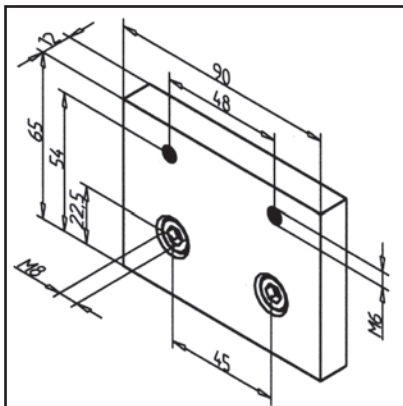
**ASSEMBLY**

- Fasten with supplied hardware to the end of the rail, then introduce thread M8
- Install timing belt tensioner

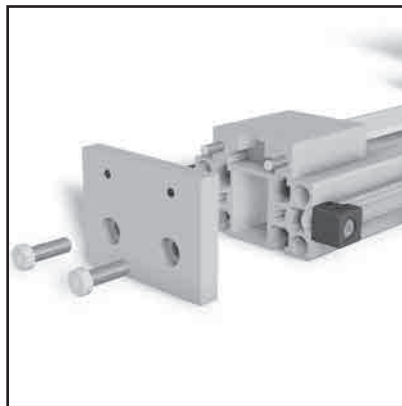
**FASTENING KIT FOR TIMING BELT TENSIONER 45 X 90 F**

Part no.

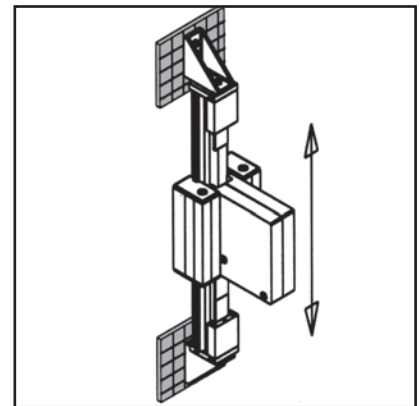
28.0055/0

**TECHN. DATA / ITEMS SUPPLIED**

- Aluminium, anodized E6/EV1
- With fastening material steel, zinc plated
- Weight = 0.090 kg/piece

**APPLICATIONS**

- For each timing belt tensioner one fastening kit is necessary
- Connection of timing belt tensioner to rail 45 x 90 F in conjunction with timing belt drive

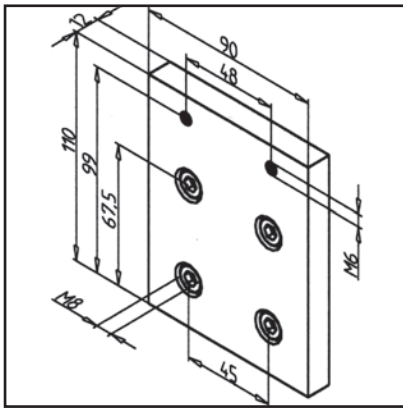
**ASSEMBLY**

- Fasten with supplied hardware to the end of the rail, then introduce thread M8
- Install timing belt tensioner

## FASTENING KIT FOR TIMING BELT TENSIONER 90

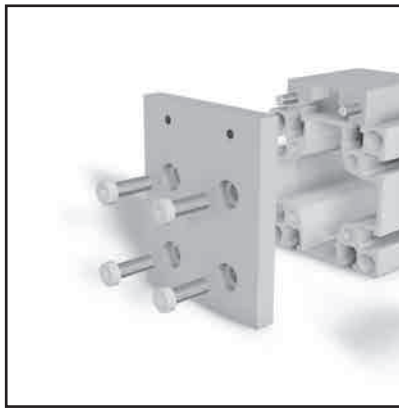
Part no.

28.0057/0



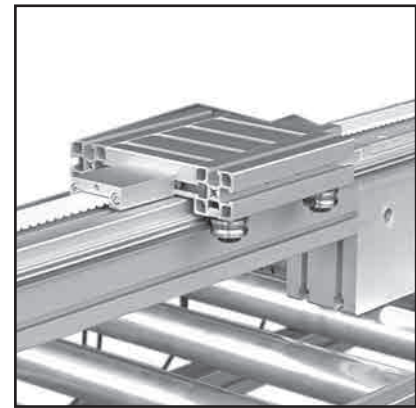
## TECHN. DATA / ITEMS SUPPLIED

- Aluminium, anodized E6/EV1
- With fastening material steel, zinc plated
- Weight = 0.090 kg/piece



## APPLICATIONS

- For each timing belt tensioner one fastening kit is necessary
- Connection of timing belt tensioner to rail 90 in conjunction with timing belt drive



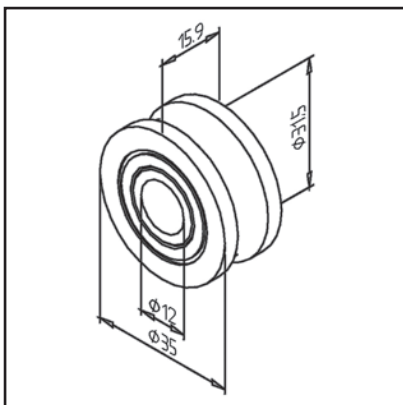
## ASSEMBLY

- Fasten with supplied hardware to the end of the rail, then introduce thread M8
- Install timing belt tensioner

## BALL BEARING LR 12

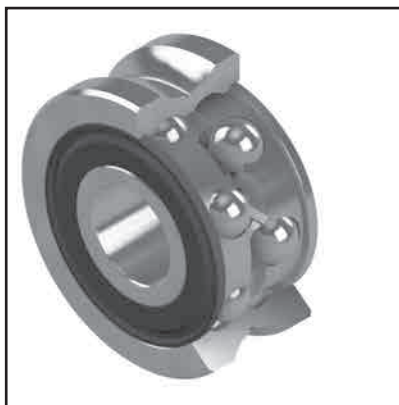
Part no.

28.0001/0



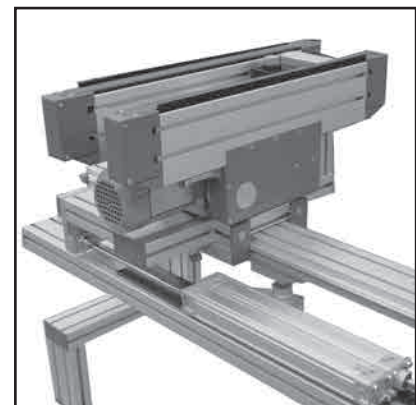
## TECHN. DATA / ITEMS SUPPLIED

- Steel, hardened, polished
- 2-row angular ball bearing, wave groove executed as Gothic arch
- For shaft  $\varnothing 12$
- Load capacity:
  - dyn.  $C = 10,5$  kN
  - stat.  $C_0 = 6,0$  kN
- Stainless version **part no. 28.0001/1**
- Weight = 0.068 kg/piece



## APPLICATIONS

- All MiniTec-linear guides LR 12



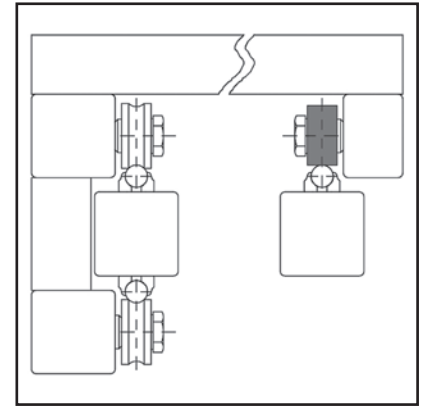
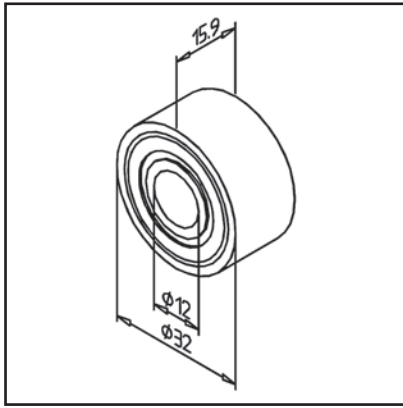
## ASSEMBLY

- Fastening kit LRK **part no. 28.0021/0** or LRE **part no. 28.0022/0**

**BALL BEARING LR 12 L**

Part no.

28.0005/0

**TECHN. DATA / ITEMS SUPPLIED**

- Steel, hardened, polished
- Double-row angular contact bearing
- Load capacity:
- dyn. C = 8,6 kN
- stat. C<sub>0</sub> = 5,1 kN
- Weight = 0.053 kg/piece

**APPLICATIONS**

- Construction of MiniTec linear guidance systems with fixed and floating bearing block
- Compensation of distance deviations in parallel linear systems

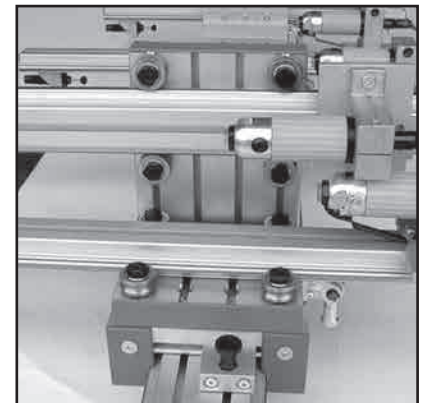
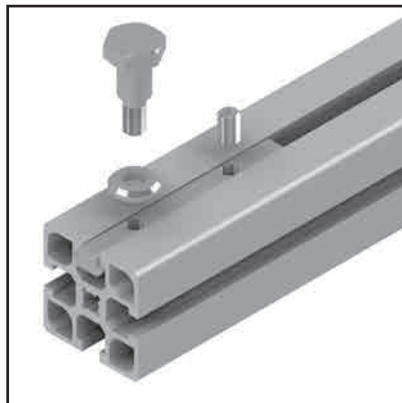
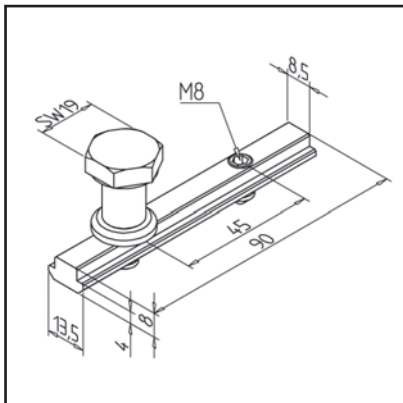
**ASSEMBLY**

- Fastening kit LRK **part no. 28.0021/0** or LRE **part no. 28.0022/0**

**FASTENING KIT LRK**

Part no.

28.0021/0

**TECHN. DATA / ITEMS SUPPLIED**

- 1 T-slot bar, steel, zinc plated with set screw
- Bolt M8 concentric, steel, black bronze finish
- Spacer 3.5 mm, polished, steel, black bronze finish
- Stainless version **part no. 28.0021/1**
- Weight = 0.100 kg/piece

**APPLICATIONS**

- MiniTec-linear guides LR 12
- Concentric attachment of ball bearings LR 12

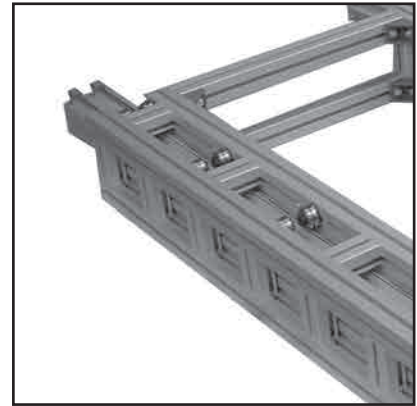
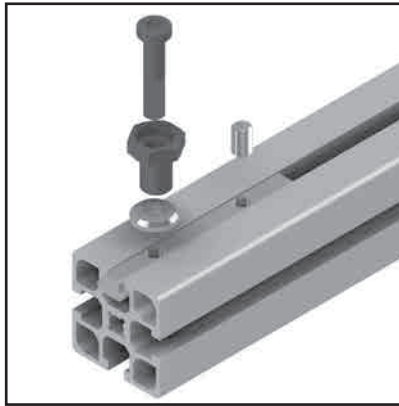
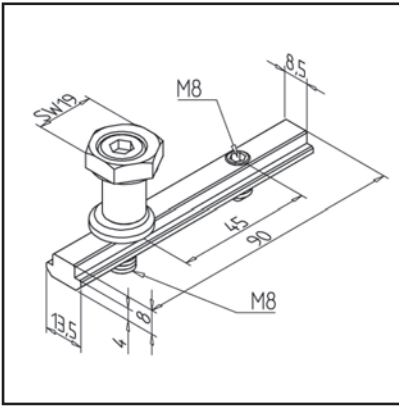
**ASSEMBLY**

- Fit the clamping strips into the underside of the profile of the carriage plate, the threaded pins being fastened into the center of the carriage
- The two threaded holes M8 without threaded pins are designed to receive the mounting bolts
- Pass the bolt through the bearing hole, place the spacer washer, and tighten with key SW 19 to the clamping strip
- Recommended torque: 25 Nm



## FASTENING KIT LRE

Part no. 28.0022/0



### TECHN. DATA / ITEMS SUPPLIED

- 1 T-slot bar, steel, zinc plated with set screw
- Eccentric bushing, steel, black bronze finish
- Bolt M8 concentric, steel, black bronze finish
- Spacer 3.5 mm, polished, steel, black bronze finish
- Stainless version **part no. 28.0022/1**
- Weight = 0.100 kg/piece

### APPLICATIONS

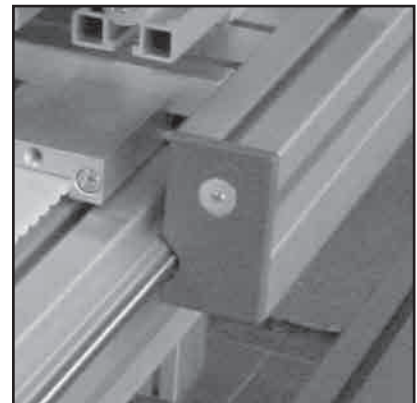
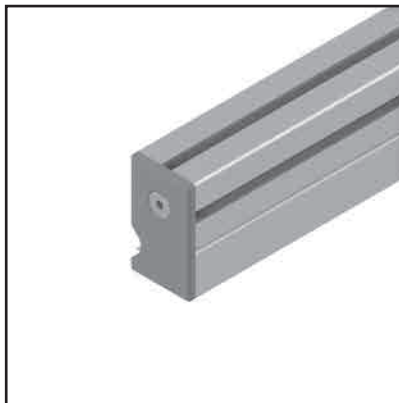
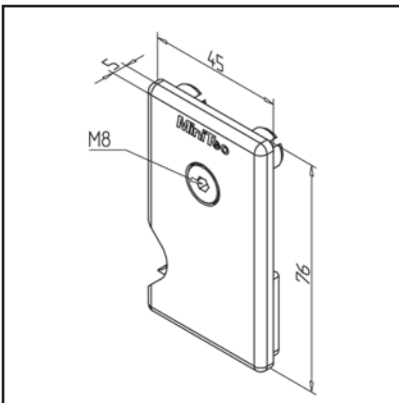
- MiniTec-linear guides LR 12
- Concentric attachment of ball bearings LR 12

### ASSEMBLY

- Fit the clamping strip similar to LRK
- Insert bolt M8 into the eccentric bushing pre-installed in the bearing bore and place the spacer washer. Pre-tighten the bolt with the Allen wrench SW4 onto the clamping bar
- Adjust bush with ring spanner width 19 mm (turn for freedom from clearance with 0,9 - 1 Nm) and fix bolt
- Recommended torque: 25 Nm

## END CAP LR (RIGHT)

Part no. 28.0004/1



### TECHN. DATA / ITEMS SUPPLIED

- ABS, Injection Mould, grey
- With integrated, sprung wiping and lubrication felt
- Fastening kit
- Also available in black, **part no. 28.0004/0**
- Weight = 0.031 kg/piece

### APPLICATIONS

- All MiniTec-linear guides LR 12

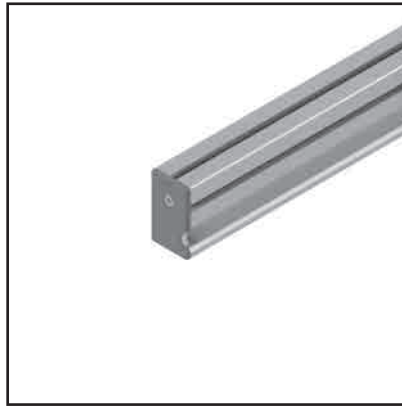
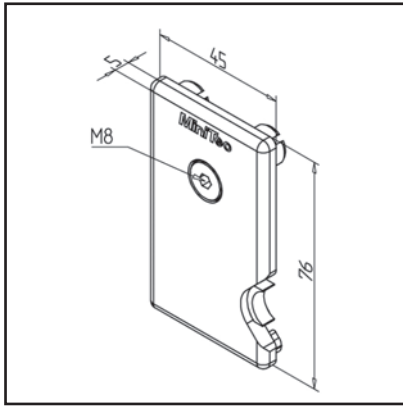
### ASSEMBLY

- Insert the lubricated felts and press fastening peg in profile 45 x 45 of the slide plate
- Fasten with supplied hardware
- Insert cover profile between the end caps
- Clean and soak felt according to implementation conditions or use a spare felt **part no. 28.0004/8**

**END CAP LR (LEFT)**

Part no.

28.0004/3

**TECHN. DATA / ITEMS SUPPLIED**

- ABS, Injection Mould, grey
- With integrated, sprung wiping and lubrication felt
- Fastening kit
- Also available in black, **part no. 28.0004/2**
- Weight = 0.031 kg/piece

**APPLICATIONS**

- All MiniTec-linear guides LR 12

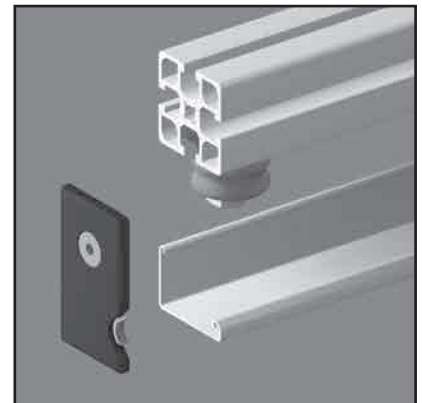
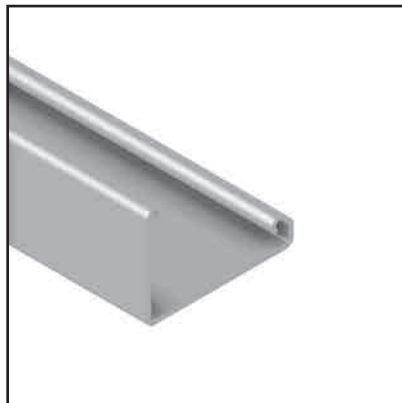
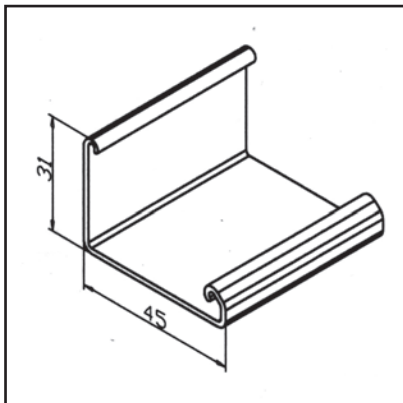
**ASSEMBLY**

- Insert the lubricated felts and press fastening peg in profile 45 x 45 of the slide plate
- Fasten with supplied hardware
- Insert cover profile between the end caps
- Clean and soak felt according to implementation conditions or use a spare felt **part no. 28.0004/8**

**COVER PROFILE LR**

Part no.

28.0049/0

**TECHN. DATA / ITEMS SUPPLIED**

- Aluminium, extruded, anodized E6/EV1
- Weight = 0.362 kg/m
- Bar length = 6 m

**APPLICATIONS**

- MiniTec-linear guides LR 12

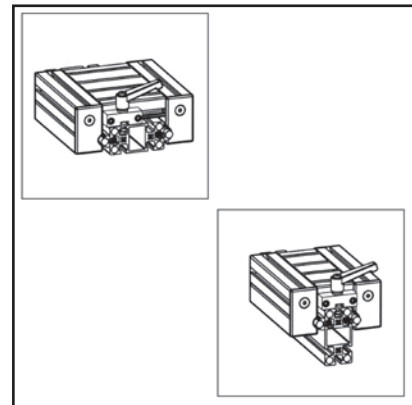
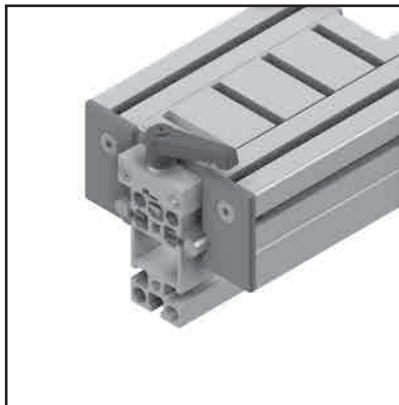
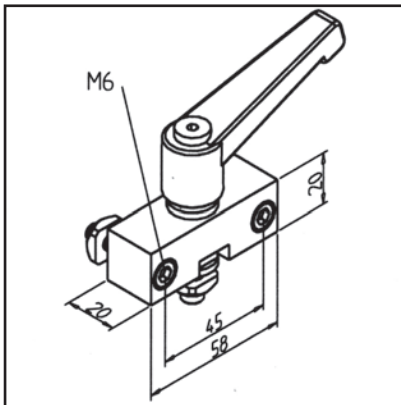
**ASSEMBLY**

- Cut profile according to the length of the slide
- Insert the cover profile between the end caps; insert the felts; fasten the end caps LR on the slide by means of the supplied screws

## SLIDE CLAMPING UNIT (TOP) LWG / LWN / LW

Part no.

28.0270/0



## TECHN. DATA / ITEMS SUPPLIED

- Aluminium, anodized E6/EV1
- With fastening material steel, zinc plated
- With clamping device
- Weight = 0.199 kg/piece

## APPLICATIONS

- Clamping of MiniTec slide LW and slides LWN / LWG on rail surface
- Clamping of MiniTec adjusting units

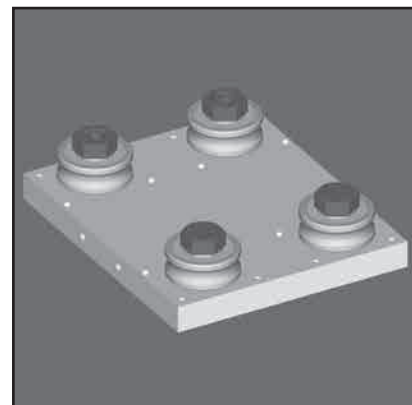
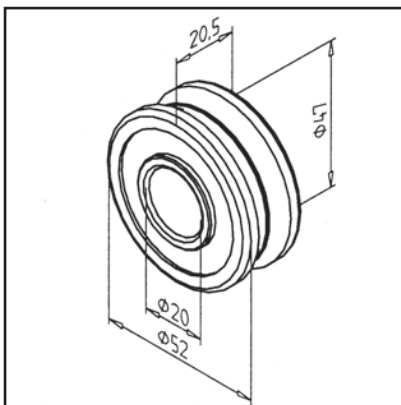
## ASSEMBLY

- Preadjust clamping shaft and lead it in profile groove
- Insert plastic element
- Install the housing block
- Secure clamping lever with installation glue Loctite 243

## BALL BEARING LR 16

Part no.

50.1726/0



## TECHN. DATA / ITEMS SUPPLIED

- Steel, hardened, polished
- 2-row angular ball bearing, wave groove executed as Gothic arch
- For shaft  $\varnothing 16$
- Load capacity:
- dyn.  $C = 19,90$  kN
- stat.  $C_0 = 12,60$  kN
- Weight = 0.230 kg/piece

## APPLICATIONS

- MiniTec linear guide LR16

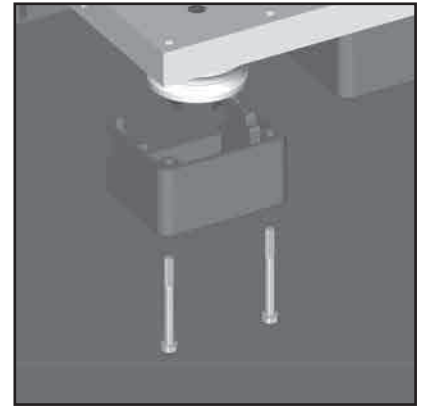
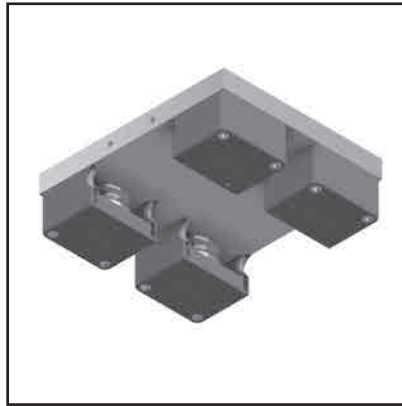
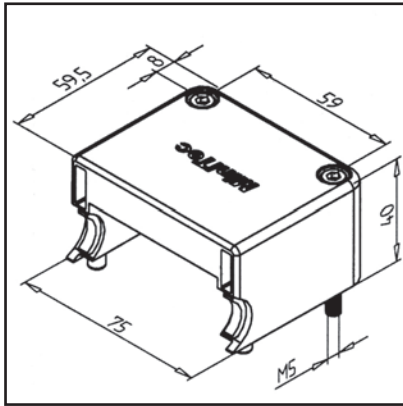
## ASSEMBLY

- Fastening using concentric bolts, **part no. 28.0814/0** or adjustable with eccentric bushing **part no. 28.0813/0** and screw M 12x40 **part no. 21.1257/0**

**END CAP LR 16**

Part no.

28.0815/0

**TECHN. DATA / ITEMS SUPPLIED**

- PA, Injection Mould, grey
- With fastening material steel, zinc plated
- With integrated, sprung wiping and lubrication felt
- Weight = 0.071 kg/piece

**APPLICATIONS**

- MiniTec linear guide LR16

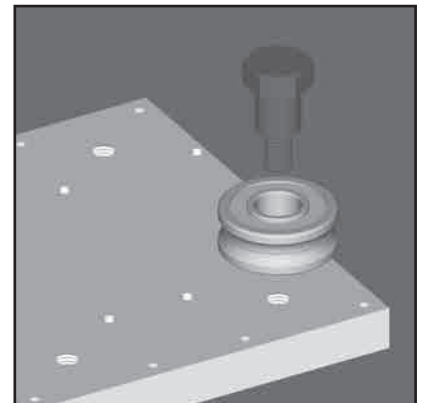
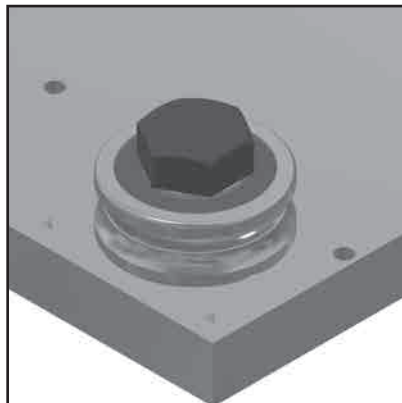
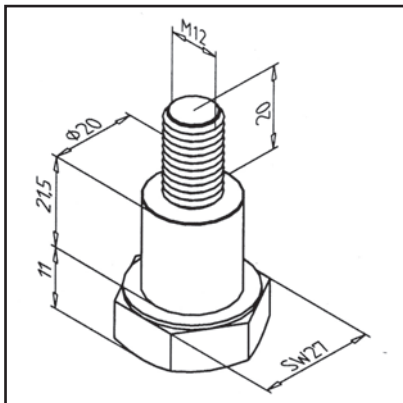
**ASSEMBLY**

- Fasten with supplied hardware
- Clean and soak fillet according to implementation conditions or spare fillet **part no. 28.0816/0**

**BOLT CONCENTRIC LR 16**

Part no.

28.0814/0

**TECHN. DATA / ITEMS SUPPLIED**

- Steel, burnished, black
- Bolt M12 concentric
- Weight = 0.121 kg/piece

**APPLICATIONS**

- MiniTec linear guide LR16
- Concentric mounting of ball bearings LR 16

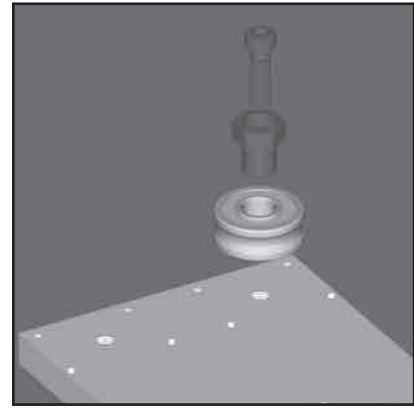
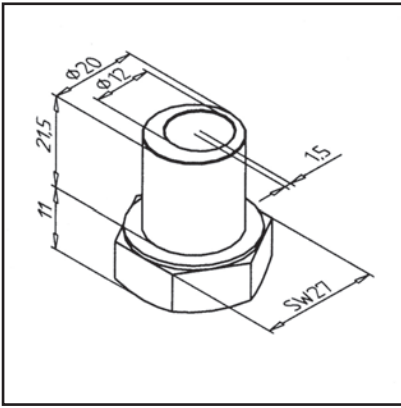
**ASSEMBLY**

- MiniTec linear guides LR 16
- Recommended torque: 50 Nm

## ECCENTRIC BUSHING LR 16

Part no.

28.0813/0



### TECHN. DATA / ITEMS SUPPLIED

- Steel, burnished, black
- Weight = 0.059 kg/piece

### APPLICATIONS

- MiniTec linear guide LR16
- Eccentric fastening of ball bearings LR 16

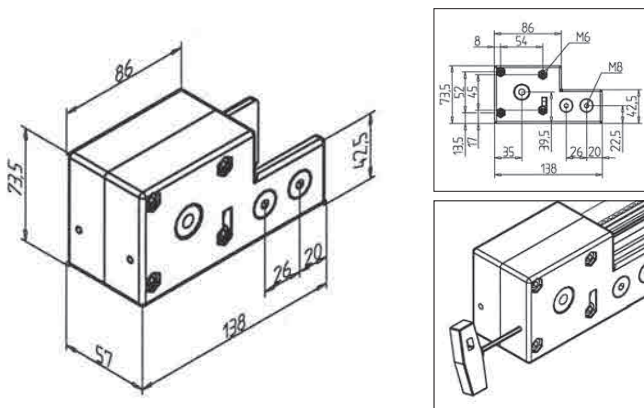
### ASSEMBLY

- Screw M12 x 45 **part no. 21.1157/0** Insert in eccentric bushing and mount loose with bearing
- Adjust the bearing by turning the eccentric bush with the spanner (wrench size 27) for zero play (with 0.9 - 1 Nm torque resistance) and hold the eccentric bush in this position. Tighten the bolt.
- Recommended torque: 50 Nm

## TIMING BELT PULLEY

## LR6 &amp; LR6 COMPACT / T45 (LR12 + LR16)

## LR 6 &amp; LR 6 COMPACT



## Techn. Data/Items supplied

Aluminum GD, powder coated, grey  
Body complete with pulley

## Application

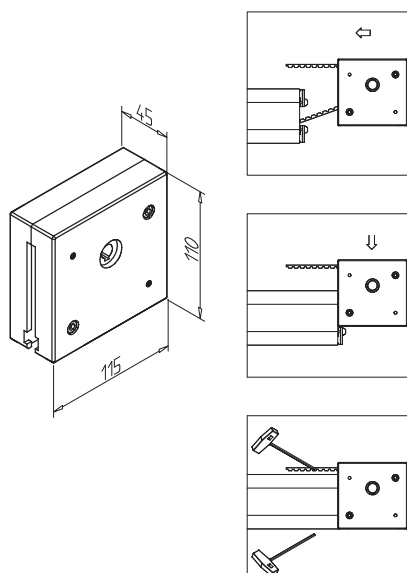
- For MiniTec linear guides LR 6 Z

## Assembly

- Insert sliding nut M8 into rail and pre-position it
- Guide timing belt through deflection
- Slide the deflection onto the end of the rail
- Pre-assemble fastening screws
- Attach timing belt to slide with hexagon socket wrench SW3 to tension the deflection
- Tighten fixing screws

Drill hole for drive shaft	Weight	Part no.	Part no. corrosion resistant design
without	0,96 kg	28.0510/0	28.0509/0
Ø 10 mm	0,96 kg	28.0510/1	28.0509/1
Ø 11 mm	0,96 kg	28.0510/2	28.0509/2
Ø 14 mm	0,96 kg	28.0510/3	28.0509/3

## T 45 (LR 12 + LR 16)



## Technical Data/Items Supplied

- Anodized aluminum E6/EV1
- Body complete with pulley
- 2 Precision ball bearings

## Application

- For MiniTec Linear Guides LR 12 & LR 16, freely combinable

## Assembly

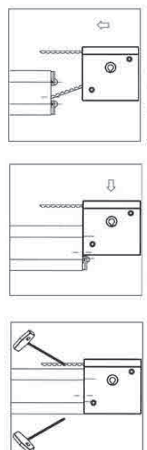
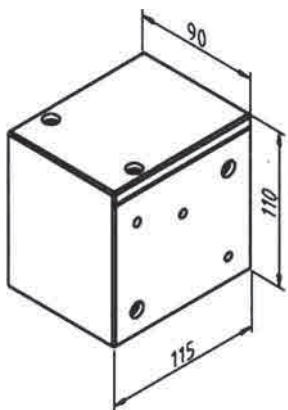
- Rail frontally provided at both ends with thread M8
- Power-lock Fastener Part no. 21.0818/0 screw in
- Guide timing belt through deflection
- Slide the deflector from above over the profile connector
- Tighten power-lock fastener
- Tighten timing belt
- For mounting use the corrosion resistant version power-lock fastener H Part no. 21.1018/1.

Drill hole for drive shaft	Weight	part no.	Part no. corrosion resistant design
without	1,170 kg	28.0614/0	28.0615/0
Ø 11 mm	1,168 kg	28.0614/2	28.0615/2
Ø 12 mm	1,168 kg	28.0614/6	28.0615/6
Ø 14 mm	1,167 kg	28.0614/3	28.0615/3
Ø 15 mm	1,165 kg	28.0614/5	28.0615/5
Ø 16 mm	1,165 kg	28.0614/4	28.0615/4

For the connection of motors and encoders we can produce special adapter plates suitable for the application. Please refer part no. 28.0112/0

TIMING BELT PULLEY

T 90 (LR 12 + LR 16)



Technical Data/Items Supplied

- Anodized aluminum E6/EV1
- Body complete with pulley
- 2 Precision ball bearings
- top cover mounted

Application

- For MiniTec-linear guides LR 12, LR 16, LR 45 x 90 F, LR 90, LR 180,

Assembly

- Rail frontally provided at both ends with thread M8
- Power-lock Fastener Part no. 21.0818/0 screw in
- Guide timing belt through deflection
- Slide the deflector from above over the profile connector
- Tighten profile connectors
- Tighten timing belt
- For mounting use the corrosion resistant version power-lock fastener H Part no. 21.1018/1.

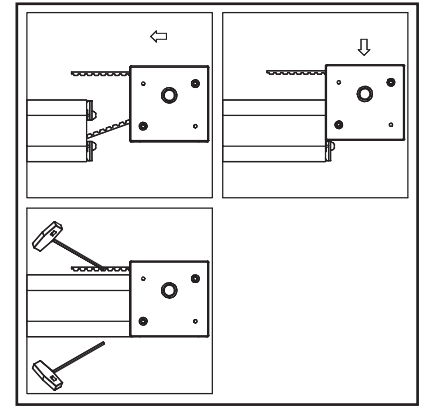
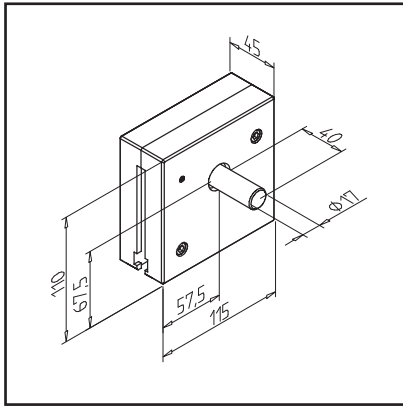
Drill hole for drive shaft	Weight	part no.	Part no. corrosion resistant design
without	2,800 kg	28.0082/0	28.0045/0
Ø 11 mm	2,798 kg	28.0082/2	28.0045/2
Ø 14 mm	2,795 kg	28.0082/3	28.0045/3
Ø 16 mm	2,789 kg	28.0082/4	28.0045/4
Ø 19 mm	2,775 kg	28.0082/5	28.0045/5
Ø 20 mm	2,773 kg	28.0082/7	28.0045/7
Ø 24 mm	2,164 kg	28.0082/6	28.0045/6

For the connection of motors and encoders we can produce special adapter plates suitable for the application. Please refer part no. 28.0112/0

## TIMING BELT PULLEY T45 Z

Part no.

28.0614/1



## TECHN. DATA / ITEMS SUPPLIED

- Aluminium, anodized E6/EV1
- Base body complete with belt pulley and shaft stub
- 2 ball-bearings
- **Stainless version part no. 28.0615/1**
- Drive taps also available in different diameters, lengths and with keyways
- Weight = 1.369 kg/piece

## APPLICATIONS

- All MiniTec linear guides

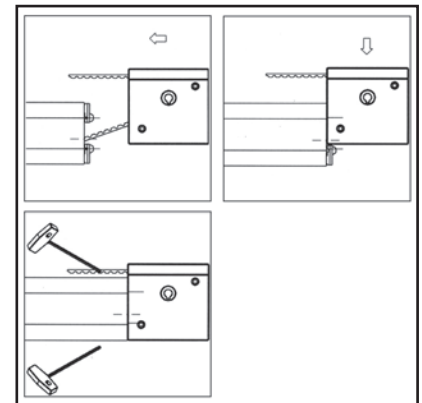
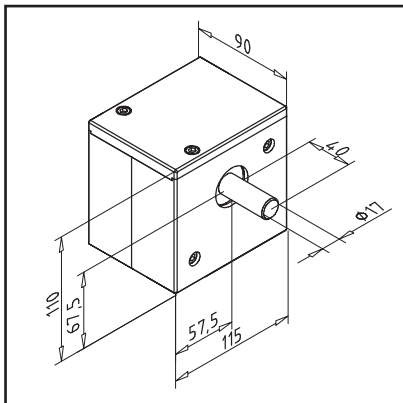
## ASSEMBLY

- Provide rails with thread M8 at both sides, screw in Power lock fastener **part no. 21.1018/0**
- Guide the timing belt through the reverse unit
- Insert pulley unit from top
- Tighten power-lock fastener
- Tighten the timing belt
- For mounting the corrosion-resistant version, use profile connector H **part no.21.1018/1**

## TIMING BELT REVERSE UNIT T 90 Z

Part no.

28.0082/1



## TECHN. DATA / ITEMS SUPPLIED

- Steel, anodized E6/EV1
- Base body complete with belt pulley and shaft stub
- 2 ball-bearings
- Top cover installed
- **Stainless version part no. 28.0045/1**
- Drive taps also available in different diameters, lengths and with keyways
- Weight = 2.850 kg/piece

## APPLICATIONS

- All MiniTec linear guides

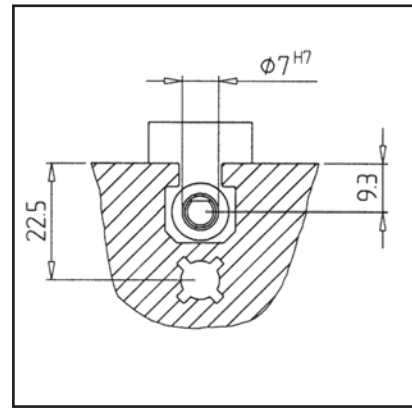
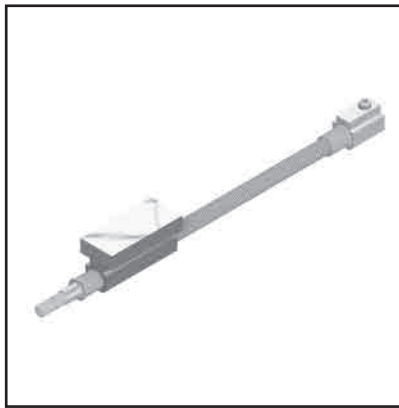
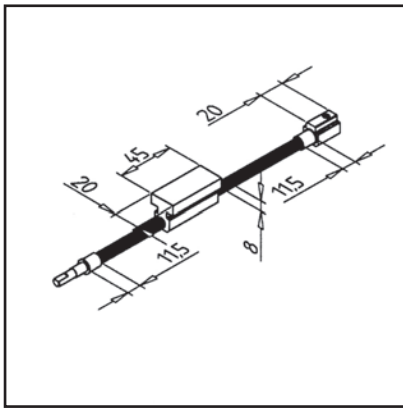
## ASSEMBLY

- Provide rails with thread M8 at both sides, screw in Power lock fastener **part no. 21.1018/0**
- Guide the timing belt through the reverse unit
- Insert pulley unit from top
- Tighten power-lock fastener
- Tighten the timing belt
- For mounting the corrosion-resistant version, use profile connector H **part no.21.1018/1**



## MINI-ADJUSTING UNIT MOUNTING KIT

Part no. 28.0350/0



### TECHN. DATA / ITEMS SUPPLIED

- Without carrier profile, handwheel and bearing block for mounting into existing equipment
- VA spindle M8 x 1.25
- Brass slide
- Max. load 1 - 2 kg
- **Please indicate desired length of stroke**

### APPLICATIONS

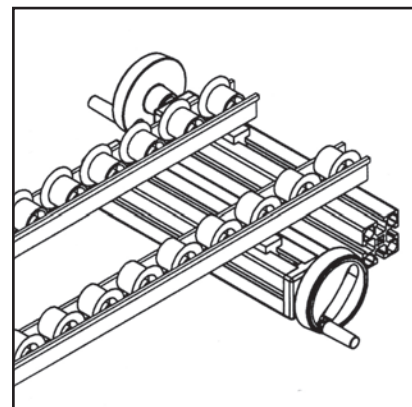
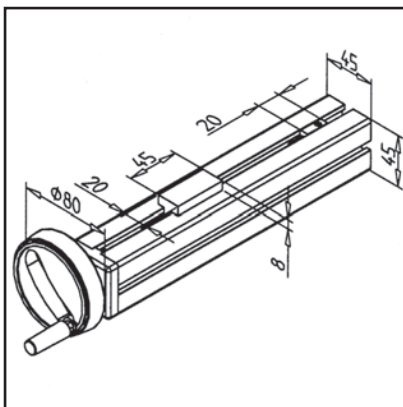
- For adjustment of the lateral guides on conveying equipment
- For adjusting sensor holders or light barriers
- For simple equipment

### ASSEMBLY

- Make bearing block according to sketch
- Push into the profile groove and fasten the end block

## MINI-ADJUSTING UNIT WITH PROFILE 45X45

Part no. 28.0354/0



### TECHN. DATA / ITEMS SUPPLIED

- With carrier profile 45 x 45 F
- VA spindle M8 x 1.25
- Brass slide
- Max. load 1 - 2 kg
- **Please indicate desired length of stroke**

### APPLICATIONS

- For adjustment of the lateral guides on conveying equipment
- For adjusting sensor holders or light barriers
- For simple equipment

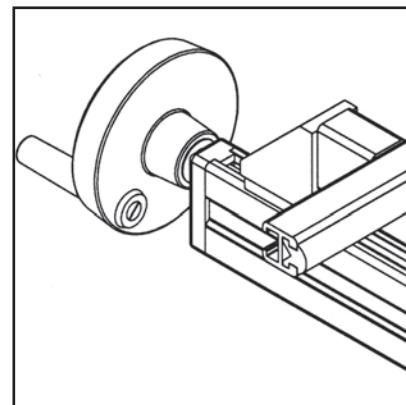
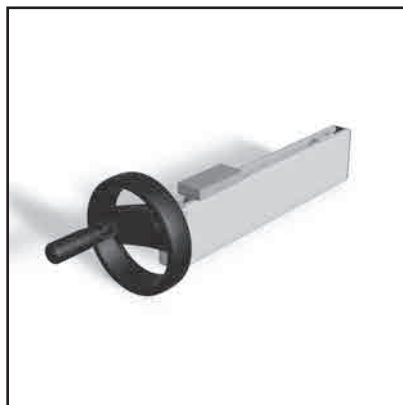
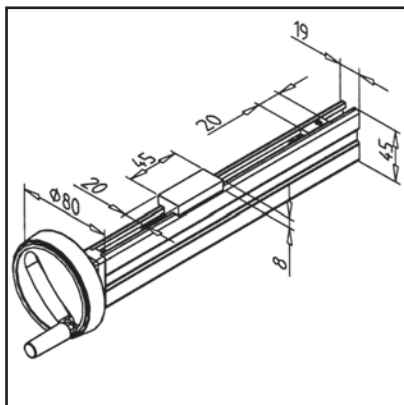
### ASSEMBLY

- With MiniTec power-lock fastener
- Can also be fastened with a mounting bracket
- Also available without carrier profile, **part no. 28.0354/1**

## MINI-ADJUSTING UNIT WITH PROFILE 19X45

Part no.

28.0352/0



### TECHN. DATA / ITEMS SUPPLIED

- With carrier profile 19 x 45
- VA spindle M8 x 1.25
- Brass slide
- Max. load 1 - 2 kg
- **Please indicate desired length of stroke**

### APPLICATIONS

- For adjustment of the lateral guides on conveying equipment
- For adjusting sensor holders or light barriers
- For simple equipment

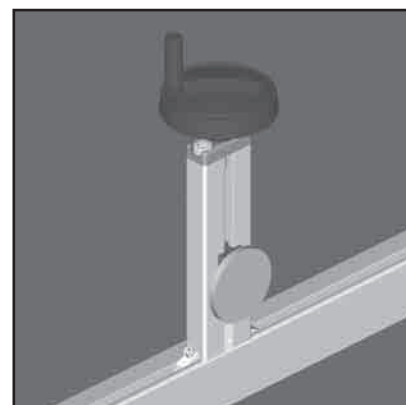
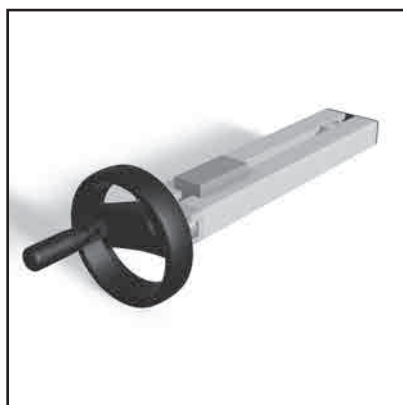
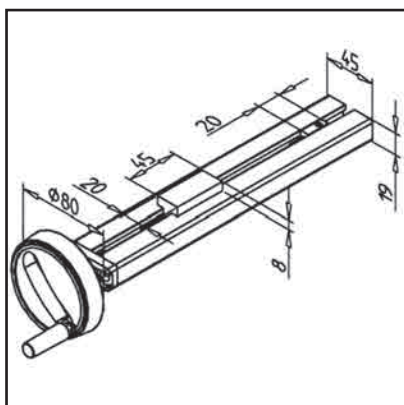
### ASSEMBLY

- With MiniTec power-lock fastener
- Can also be fastened with a mounting bracket
- Also available without carrier profile, **part no. 28.0352/1**

## MINI ADJUSTING UNIT WITH PROFILE 45X19

Part no.

28.0359/0



### TECHN. DATA / ITEMS SUPPLIED

- With carrier profile 19 x 45
- VA spindle M8 x 1.25
- Brass slide
- Max. load 1 - 2 kg
- **Please indicate desired length of stroke**

### APPLICATIONS

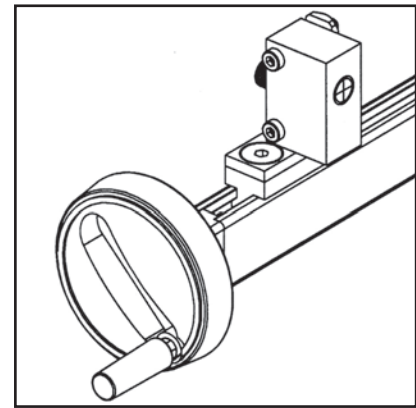
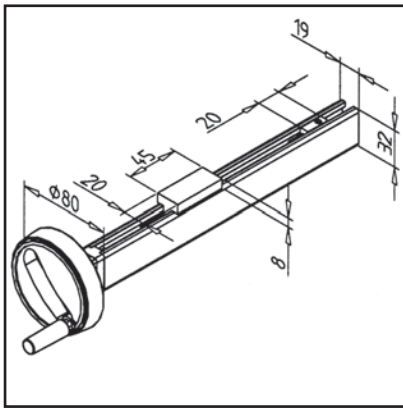
- For adjustment of the lateral guides on conveying equipment
- For adjusting sensor holders or light barriers
- For simple equipment

### ASSEMBLY

- With MiniTec power-lock fastener
- Can also be fastened with a mounting bracket
- Also available without carrier profile, **part no. 28.0359/1**

## MINI-ADJUSTING UNIT WITH PROFILE 19X32

Part no. 28.0351/0



### TECHN. DATA / ITEMS SUPPLIED

- With carrier profile 19 x 32
- VA spindle M8 x 1.25
- Brass slide
- Max. load 1 - 2 kg
- **Please indicate desired length of stroke**

### APPLICATIONS

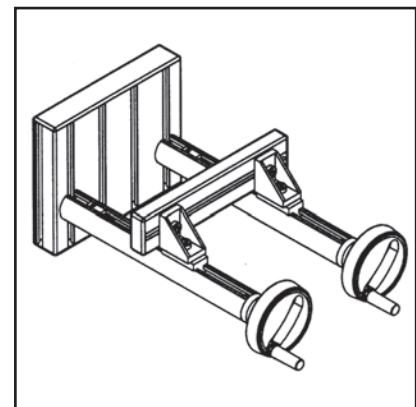
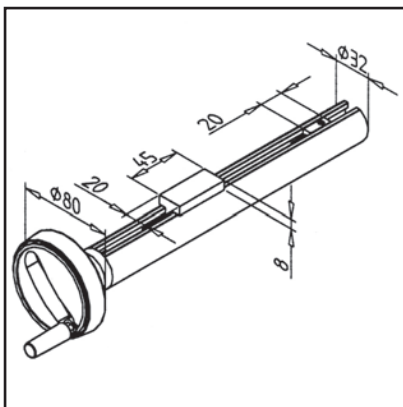
- For adjustment of the lateral guides on conveying equipment
- For adjusting sensor holders or light barriers
- For simple equipment

### ASSEMBLY

- With MiniTec power-lock fastener
- Can also be fastened with a mounting bracket
- Also available without carrier profile, **part no. 28.0351/1**

## MINI-ADJUSTING UNIT WITH HANDLE PROFILE 32

Part no. 28.0353/0



### TECHN. DATA / ITEMS SUPPLIED

- With carrier profile handle profile 32
- VA spindle M8 x 1.25
- Brass slide
- Max. load 1 - 2 kg
- **Please indicate desired length of stroke**

### APPLICATIONS

- For adjustment of the lateral guides on conveying equipment
- For adjusting sensor holders or light barriers
- For simple equipment

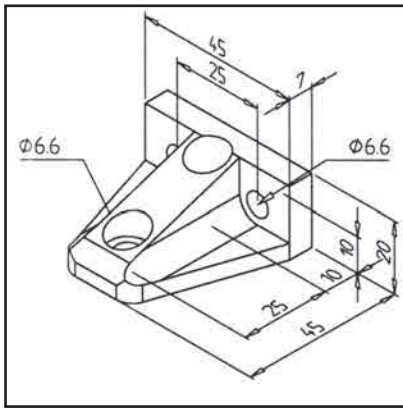
### ASSEMBLY

- With MiniTec power-lock fastener
- Can also be fastened with a mounting bracket
- Fasten handle profile 32 with clip, **part no. 22.1022/0**
- Also available without carrier profile, **part no. 28.0353/1**

## ANGLE CONSOLE FOR MINI-ADJUSTING UNIT

Part no.

28.0371/0



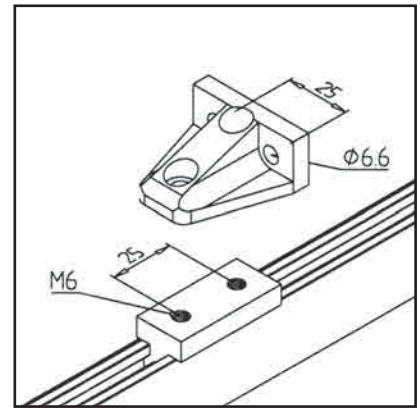
### TECHN. DATA / ITEMS SUPPLIED

- Aluminium, anodized E6/EV1
- Without fastening kit
- Weight = 0.044 kg/piece



### APPLICATIONS

- For connection of two adjustment units **part no. 28.0351/0, 28.0352/0 and 28.0353/0**
- For adjusting small loads such as light barriers, sensors, etc.



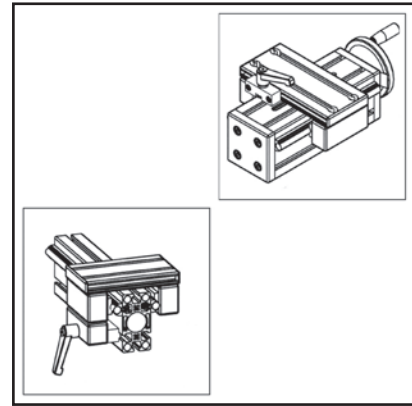
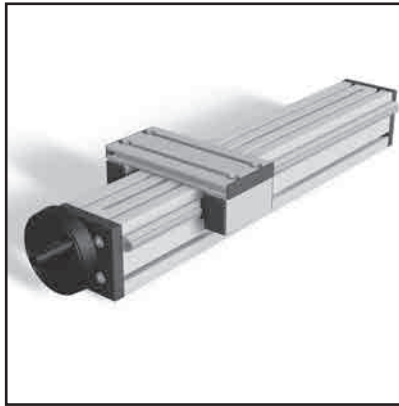
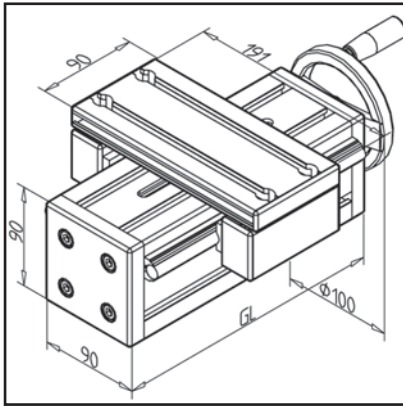
### ASSEMBLY

- Insert two M6 threads each, 10 mm deep with a clearance of 25 mm in the slide
- With cylinder head bolts M6 x 16 **part no. 21.1238/0** Connect adjustment units together

## ADJUSTING UNIT VEW 90

Part no.

28.0183/0



### TECHN. DATA / ITEMS SUPPLIED

- Aluminium, anodized E6/EV1
- Slide plate of profile 19 x 90
- Spindle 16 x 4
- Basic length (GL) 120 mm (0 mm stroke)
- **Please indicate desired length of stroke**
- Weight = (basic weight) 3.03 kg
- Extra weight = 1.12 kg/100mm stroke

### APPLICATIONS

- Adjustment of conveyors
- Adjustment of feeders
- Adjustable devices

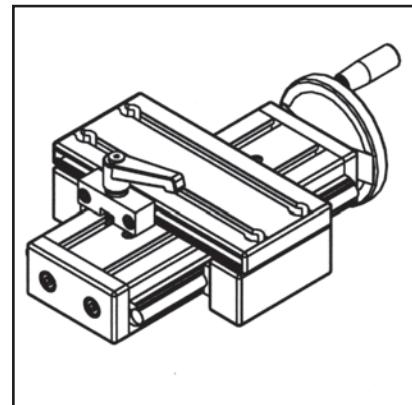
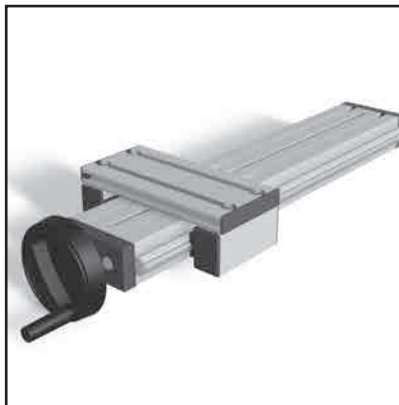
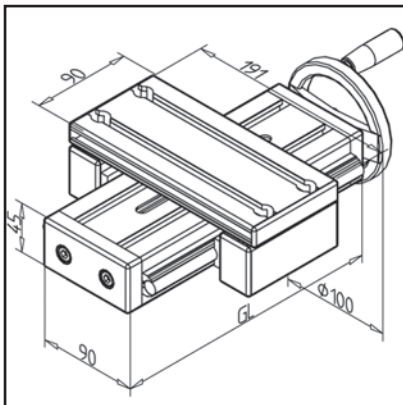
### OTHER VERSIONS

- Slide plate made of profile 32 x 180
- Deviating wagon length
- Digital display
- Angular drive
- Spindle cover
- Shafts stainless
- Options:  
With carriage clamp up **part no. 28.0183/1**  
With carriage clamping laterally **part no. 28.0183/2**

## ADJUSTING UNIT VEW 45X90 F

Part no.

28.0181/0



### TECHN. DATA / ITEMS SUPPLIED

- Aluminium, anodized E6/EV1
- Slide plate of profile 19 x 90
- Spindle 16 x 4
- Basic length (GL) 120 mm (0 mm stroke)
- **Please indicate desired length of stroke**
- Weight = (basic weight) 2.31 kg
- Extra weight = 0.75 kg/100mm stroke

### APPLICATIONS

- Adjustment of conveyors
- Adjustment of feeders
- Adjustable devices

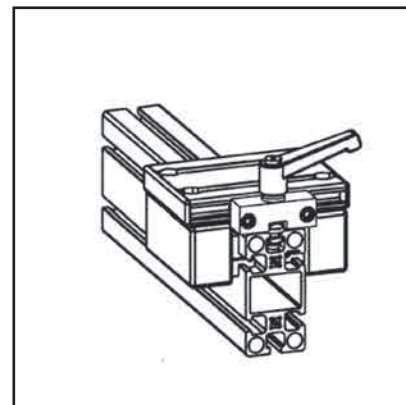
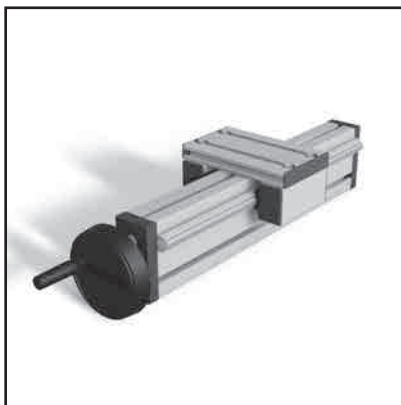
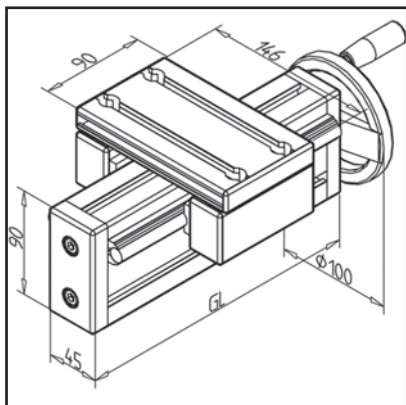
### OTHER VERSIONS

- Slide plate made of profile 32 x 180
- Deviating wagon length
- Digital display
- Angular drive
- Spindle cover
- Shafts stainless
- OPTIONS: With slide clamping device at top **part no. 28.0181/1**

**ADJUSTING UNIT VEW 45X90 H**

Part no.

28.0182/0

**TECHN. DATA / ITEMS SUPPLIED**

- Aluminium, anodized E6/EV1
- Slide plate of profile 19 x 90
- Spindle 16 x 4
- Basic length (GL) 120 mm (0 mm stroke)
- **Please indicate desired length of stroke**
- Weight = (basic weight) 2.109 kg
- Extra weight = 0.74 kg/100mm stroke

**APPLICATIONS**

- Adjustment of conveyors
- Adjustment of feeders
- Adjustable devices

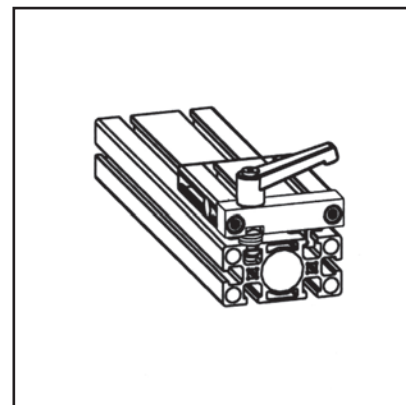
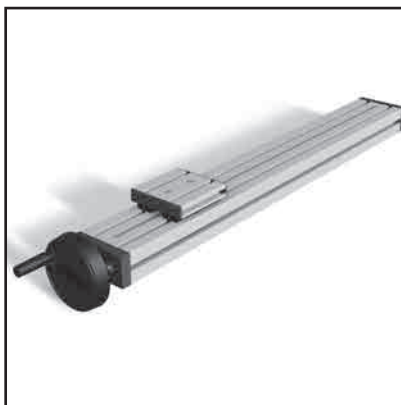
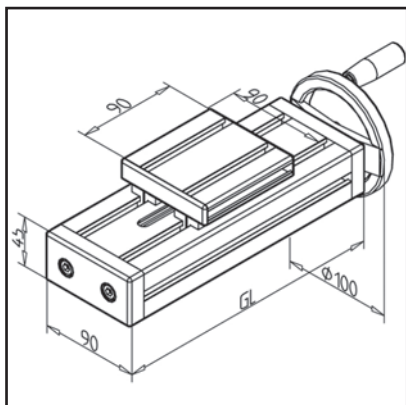
**OTHER VERSIONS**

- Slide plate made of profile 32 x 180
- Deviating wagon length
- Digital display
- Angular drive
- Shafts stainless
- Options:  
With carriage clamp up **part no. 28.0182/1**  
With clamping laterally **part no. 28.0182/2**

**ADJUSTING UNIT VEN 45X90S**

Part no.

28.0187/0

**TECHN. DATA / ITEMS SUPPLIED**

- Aluminium, anodized E6/EV1
- Slide plate of profile 19 x 90
- Spindle 16 x 4
- Basic length (GL) 120 mm (0 mm stroke)
- **Please indicate desired length of stroke**
- Weight = (basic weight) 2.280 kg
- Extra weight = 0.5 kg/100mm stroke

**APPLICATIONS**

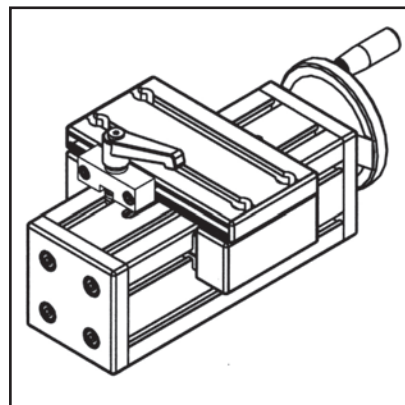
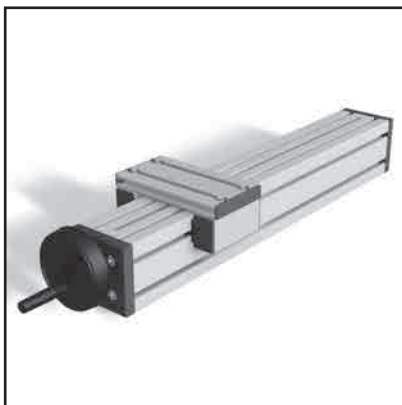
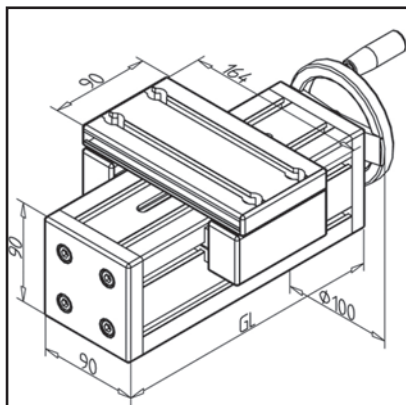
- Adjustment of conveyors
- Adjustment of feeders
- Adjustable devices

**OTHER VERSIONS**

- Slide plate made of profile 32 x 180
- Deviating wagon length
- Digital display
- Angular drive
- Options:  
With slide clamping unit (Top) **part no. 28.0187/1**

## ADJUSTING UNIT VEN 90

Part no. 28.0186/0



### TECHN. DATA / ITEMS SUPPLIED

- Aluminium, anodized E6/EV1
- Slide plate of profile 19 x 90
- Spindle 16 x 4
- Basic length (GL) 120 mm (0 mm stroke)
- **Please indicate desired length of stroke**
- Weight = (basic weight) 2.75 kg
- Extra weight = 0.87 kg/100mm stroke

### APPLICATIONS

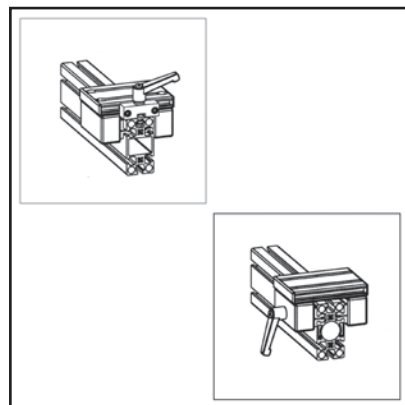
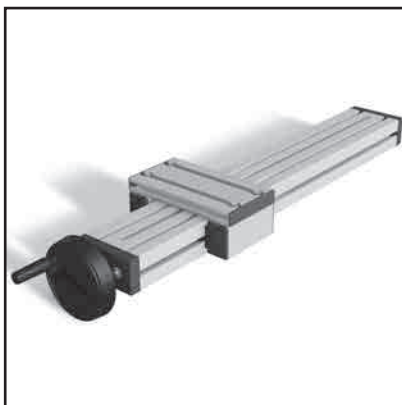
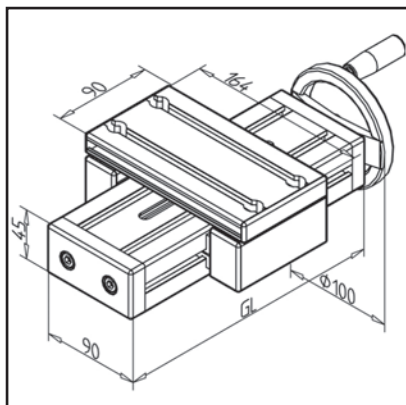
- Adjustment of conveyors
- Adjustment of feeders
- Adjustable devices

### OTHER VERSIONS

- Slide plate made of profile 32 x 180
- Deviating wagon length
- Digital display
- Angular drive
- Spindle cover
- Options:
- With carriage clamp up **part no. 28.0186/1**
- With carriage clamping laterally **part no. 28.0186/2**

## ADJUSTING UNIT VEN 45X90

Part no. 28.0188/0



### TECHN. DATA / ITEMS SUPPLIED

- Aluminium, anodized E6/EV1
- Slide plate of profile 19 x 90
- Spindle 16 x 4
- Basic length (GL) 120 mm (0 mm stroke)
- **Please indicate desired length of stroke**
- Weight = (basic weight) 2.05 kg
- Extra weight = 0.5 kg/100mm stroke

### APPLICATIONS

- Adjustment of conveyors
- Adjustment of feeders
- Adjustable devices

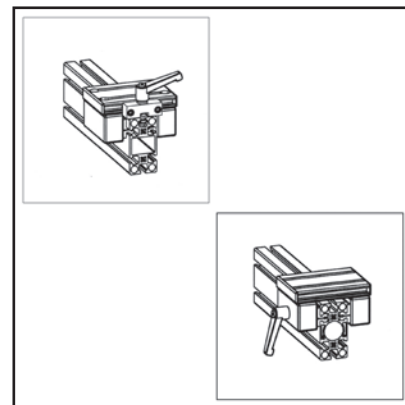
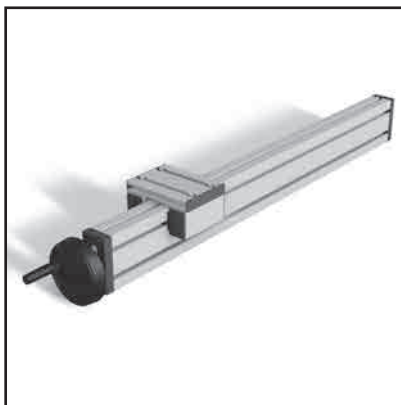
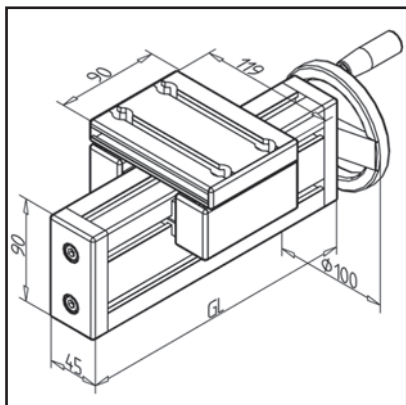
### OTHER VERSIONS

- Slide plate made of profile 32 x 180
- Deviating wagon length
- Digital display
- Angular drive
- Spindle cover
- Options:
- With carriage clamp up **part no. 28.0188/1**
- With carriage clamping laterally **part no. 28.0188/2**

**ADJUSTING UNIT VEN 45X90 H**

Part no.

28.0185/0

**TECHN. DATA / ITEMS SUPPLIED**

- Aluminium, anodized E6/EV1
- Slide plate of profile 19 x 90
- Spindle 16 x 4
- Basic length (GL) 120 mm (0 mm stroke)
- **Please indicate desired length of stroke**
- Weight = (basic weight) 1.97 kg
- Extra weight = 0.49 kg/100mm stroke

**APPLICATIONS**

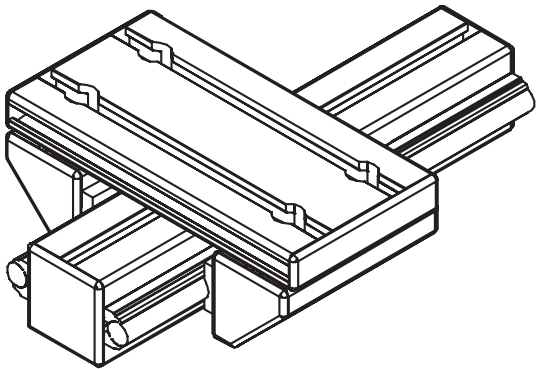
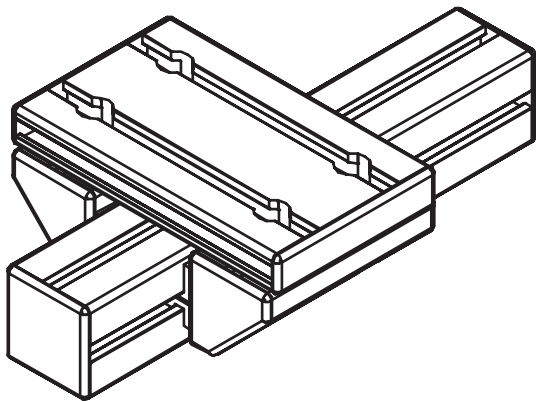
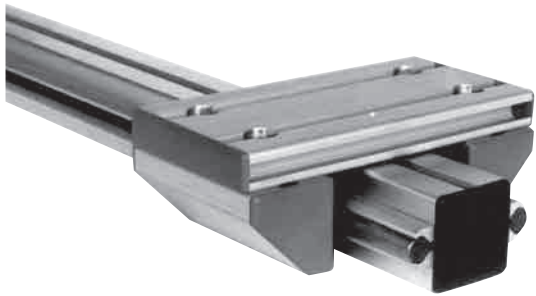
- Adjustment of conveyors
- Adjustment of feeders
- Adjustable devices

**OTHER VERSIONS**

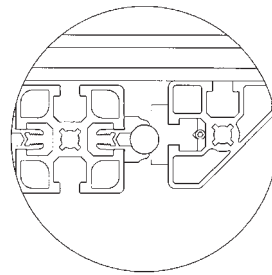
- Slide plate made of profile 32 x 180
- Deviating wagon length
- Digital display
- Angular drive
- Options:
  - With carriage clamp up **part no. 28.0185/1**
  - With carriage clamping laterally **part no. 28.0185/2**



## SLIDING GUIDES

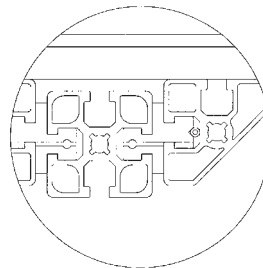


The sliding guides LN / LG were created for applications that do not place high demands on guidance accuracy, but in which extreme operating conditions prevail. Especially for wet operation, high dust or lack of lubrication, these guides are suitable. The carriages of the series LN / LG are built on the same modular principle as the linear series LR.



## Series LN

Guide the carriages in profile groove or profile surface. This series is characterized by a small installation space.



## Series LG

Guiding of carriages on ground and hardened shafts h6 made of material Cf53. Particularly advantageous is the use of guides LG in wet operation in conjunction with our stainless shafts.

## Precision

$\pm 0,15$  mm (Series LG) and  $\pm 0,20$  mm (Series LN). The guides can be adjusted without play by providing the lateral guide rails.

## Permitted loads

50 N/cm carrying sliding strip (= carriage length)

## Sliding friction

0,05 on steel shaft (LG series) 0.1 on anodized profile surface (LN series)

This storage can be operated without lubrication. An increased slip-stick effect has to be considered.

## Traversing

1 m/sec (max.)

## Continuous temperature

50°C (max.)

## Short-term peak load

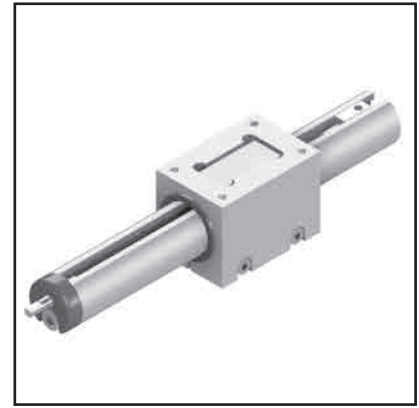
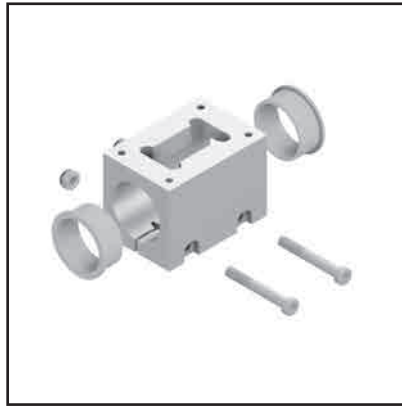
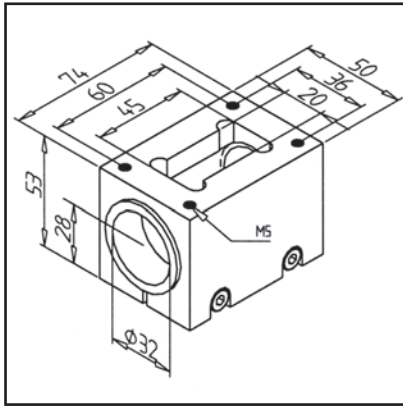
70°C (max.)

The sliding strip is resistant to organic acids, alkalis, aqueous solutions, inorganic salts, organic acids and alcohols. Against hydrocarbons and halogenated hydrocarbons, the material is only partially resistant.

**SLIDE G 32**

Part no.

28.0355/0

**TECHN. DATA / ITEMS SUPPLIED**

- Aluminium, anodized E6/EV1
- With low-friction sliding bearing
- Without adjusting units
- Weight = 0.314 kg/piece

**APPLICATIONS**

- To adjust light barriers, reflectors, lateral guides etc.

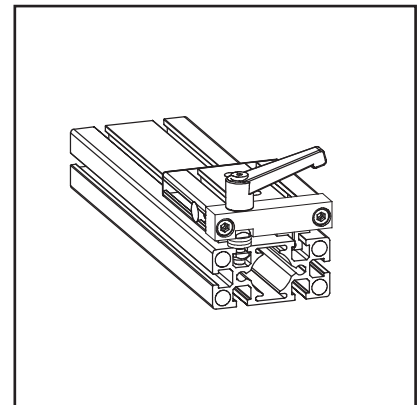
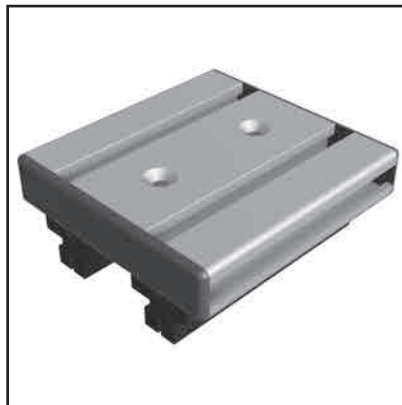
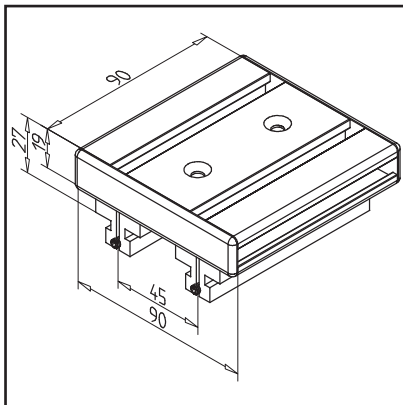
**ASSEMBLY**

- Insert slide of mini-adjustment unit into sliding carriage and screw in the spindle
- Adjust with tensioning screws M6
- Fasten the spindle bearing to the handle profile 32

**SLIDE LWN-S**

Part no.

28.0170/0

**TECHN. DATA / ITEMS SUPPLIED**

- Aluminium, anodized E6/EV1
- Fully mounted carriage
- 2 slide rails LN-S
- End caps
- Clearance adjusted
- load capacity up to 450 N
- Weight = 0.260 kg/piece

**APPLICATIONS**

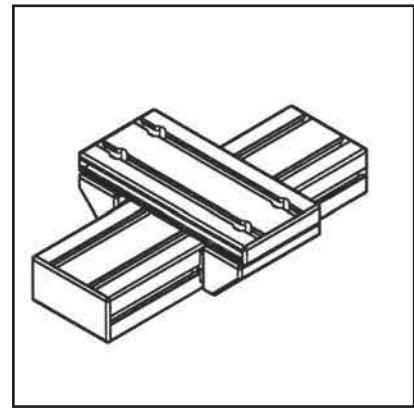
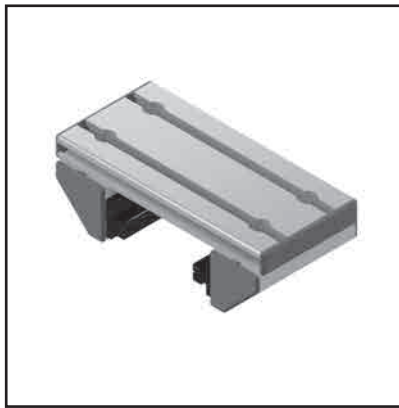
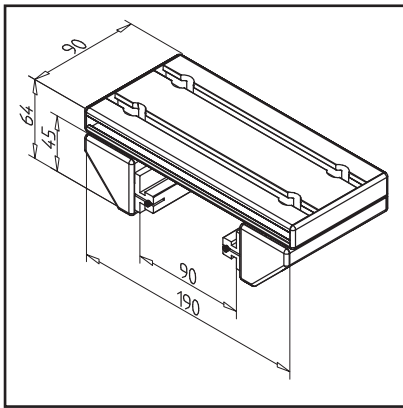
- Simple linear guides
- Slide units

**OTHER VERSIONS**

- With slide clamping device at top **part no. 28.0170/1**
- Slide plate made of profile 32 x 180
- Different slide lengths

## SLIDE LWN 45/45° - 90

Part no. 28.0197/0



### TECHN. DATA / ITEMS SUPPLIED

- Aluminium, anodized E6/EV1
- Fully mounted carriage
- 2 slide rails LN
- End caps
- Clearance adjusted
- load capacity up to 450 N
- Weight = 0.783 kg/piece

### APPLICATIONS

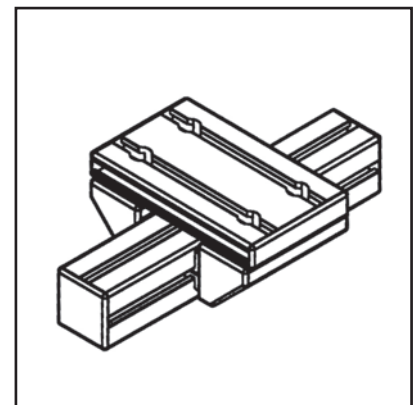
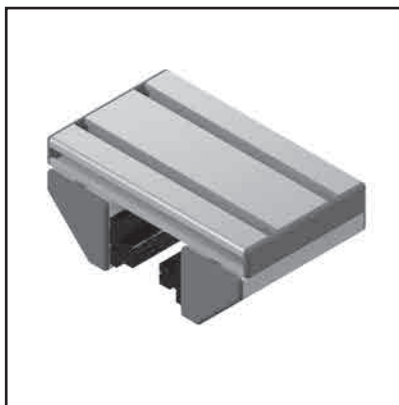
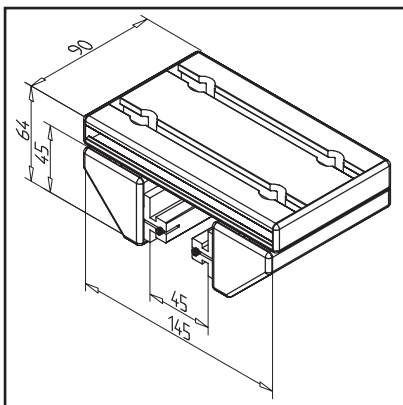
- Simple linear guides
- Slide units

### OTHER VERSIONS

- With slide clamping device at top **part no. 28.0197/1**
- Slide plate made of profile 32 x 180
- Different slide lengths

## SLIDE LWN 45/45° - 45

Part no. 28.0196/0



### TECHN. DATA / ITEMS SUPPLIED

- Aluminium, anodized E6/EV1
- Fully mounted carriage
- 2 slide rails LN
- End caps
- Clearance adjusted
- load capacity up to 450 N
- Weight = 0.699 kg/piece

### APPLICATIONS

- Simple linear guides
- Slide units

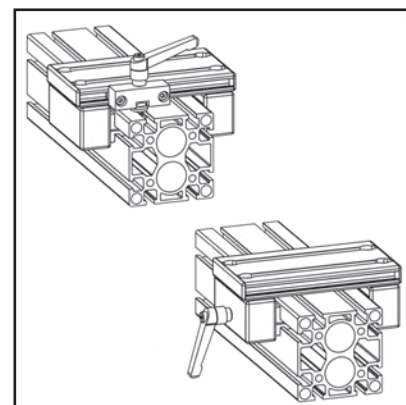
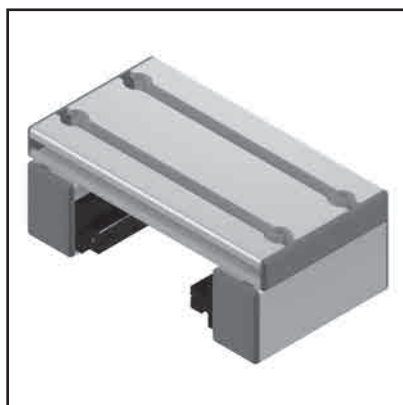
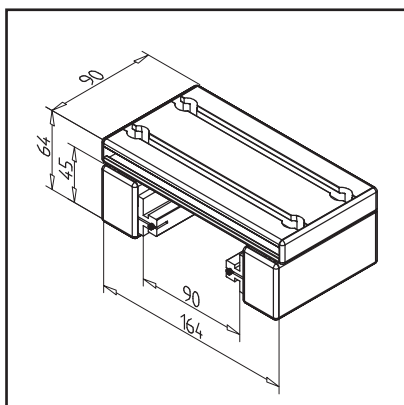
### OTHER VERSIONS

- With slide clamping device at top **part no. 28.0196/1**
- Slide plate made of profile 32 x 180
- Different slide lengths

**SLIDE LWN 32 X 45 - 90**

Part no.

28.0193/0

**TECHN. DATA / ITEMS SUPPLIED**

- Aluminium, anodized E6/EV1
- Fully mounted carriage
- 2 slide rails LN
- End caps
- Clearance adjusted
- load capacity up to 450 N
- Weight = 0.762 kg/piece

**APPLICATIONS**

- Simple linear guides
- Slide units

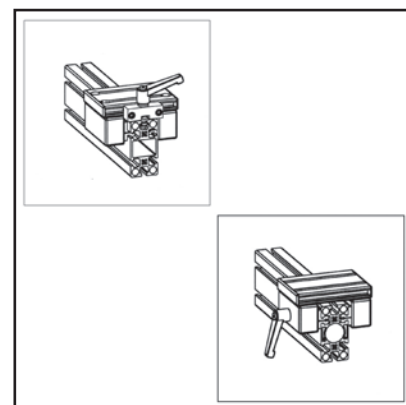
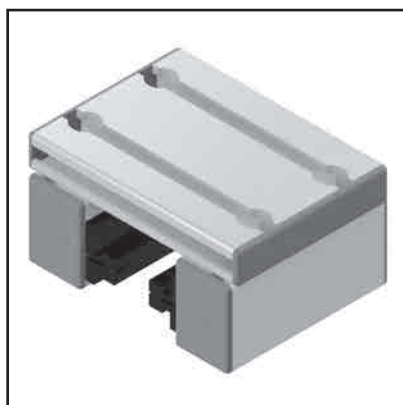
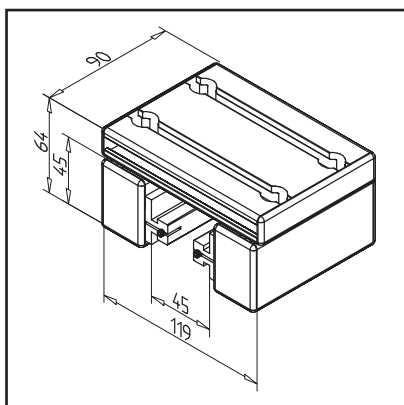
**OTHER VERSIONS**

- With slide clamping device at top **part no. 28.0193/1**
- With slide clamping device lateral **part no. 28.0193/2**
- Slide plate made of profile 32 x 180
- Different slide lengths

**SLIDE LWN 32 X 45 - 45**

Part no.

28.0192/0

**TECHN. DATA / ITEMS SUPPLIED**

- Aluminium, anodized E6/EV1
- Fully mounted carriage
- 2 slide rails LN
- End caps
- Clearance adjusted
- load capacity up to 450 N
- Weight = 0.678 kg/piece

**APPLICATIONS**

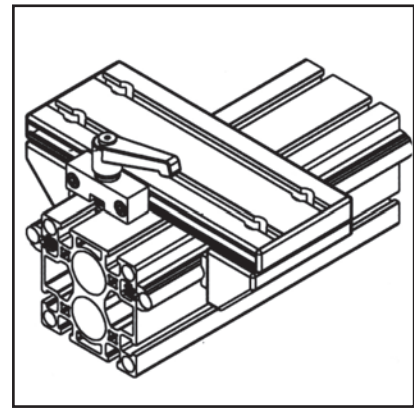
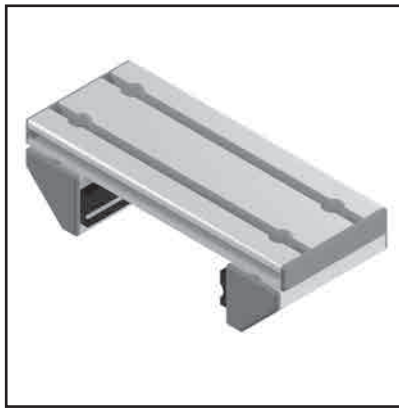
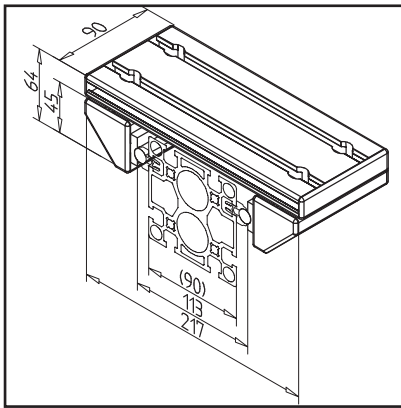
- Simple linear guides
- Slide units

**OTHER VERSIONS**

- With slide clamping device at top **part no. 28.0192/1**
- With slide clamping device lateral **part no. 28.0192/2**
- Slide plate made of profile 32 x 180
- Different slide lengths

### SLIDE LWG 45/45°-90

Part no. 28.0137/0



#### TECHN. DATA / ITEMS SUPPLIED

- Aluminium, anodized E6/EV1
- Fully mounted carriage
- 2 slide rails LG
- End caps
- Clearance adjusted
- load capacity up to 450 N
- Weight = 0.831 kg/piece

#### APPLICATIONS

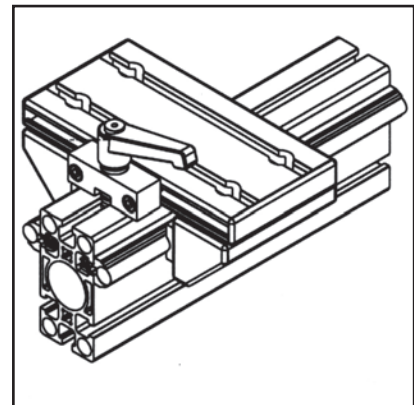
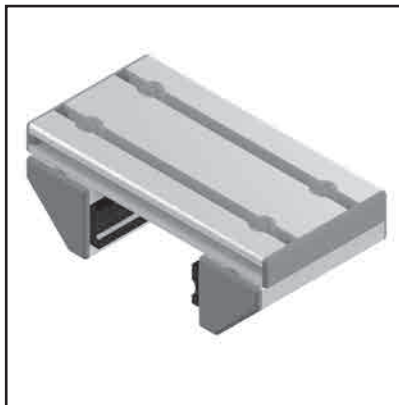
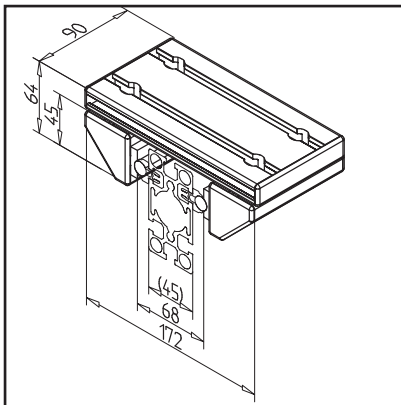
- Simple linear guides
- Slide units
- For rail 90 with shafts Ø 12 mm

#### OTHER VERSIONS

- With slide clamping at top **part no. 28.0137/1**
- Slide plate made of profile 32 x 180
- Different slide lengths

### SLIDE LWG 45/45° - 45

Part no. 28.0136/0



#### TECHN. DATA / ITEMS SUPPLIED

- Aluminium, anodized E6/EV1
- Fully mounted carriage
- 2 slide rails LG
- End caps
- Clearance adjusted
- load capacity up to 450 N
- Weight = 0.741 kg/piece

#### APPLICATIONS

- Simple linear guides
- Slide units
- For rail 45 with shafts Ø 12 mm

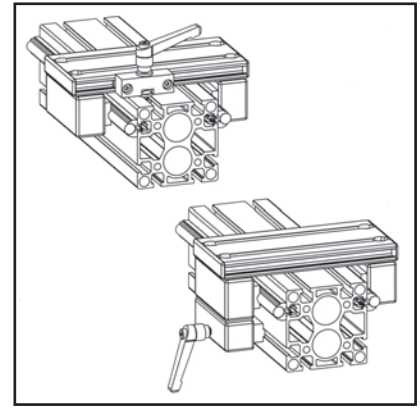
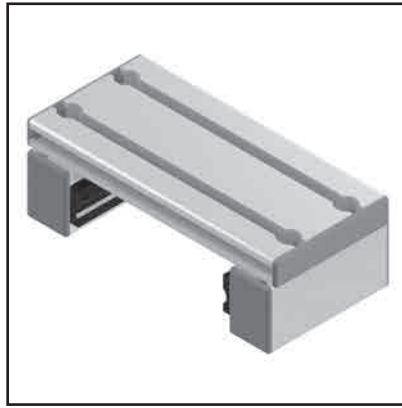
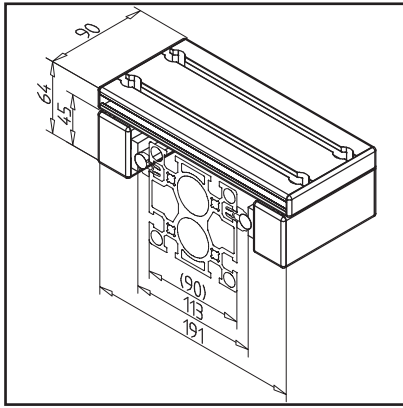
#### OTHER VERSIONS

- With slide clamping at top **part no. 28.0136/1**
- Slide plate made of profile 32 x 180
- Different slide lengths

**SLIDE LWG 32 X 45 - 90**

Part no.

28.0133/0

**TECHN. DATA / ITEMS SUPPLIED**

- Aluminium, anodized E6/EV1
- Fully mounted carriage
- 2 slide rails LG
- End caps
- Clearance adjusted
- load capacity up to 450 N
- Weight = 0.810 kg/piece

**APPLICATIONS**

- Simple linear guides
- Slide units
- For rail 90 with shafts  $\varnothing$  12 mm

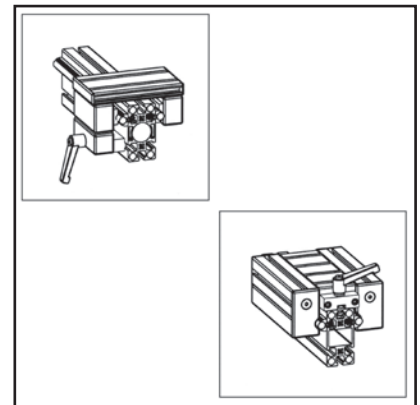
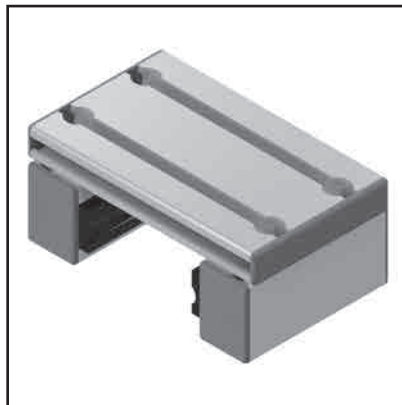
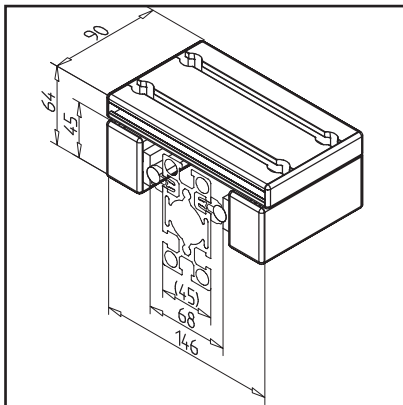
**OTHER VERSIONS**

- With slide clamping at top **part no. 28.0133/1**
- With slide clamping lateral **part no. 28.0133/2**
- Slide plate made of profile 32 x 180
- Different slide lengths

**SLIDE LWG 32 X 45 - 45**

Part no.

28.0132/0

**TECHN. DATA / ITEMS SUPPLIED**

- Aluminium, anodized E6/EV1
- Fully mounted carriage
- 2 slide rails LG
- End caps
- Clearance adjusted
- load capacity up to 450 N
- Weight = 0.726 kg/piece

**APPLICATIONS**

- Simple linear guides
- Slide units
- For rail 45 with shafts  $\varnothing$  12 mm

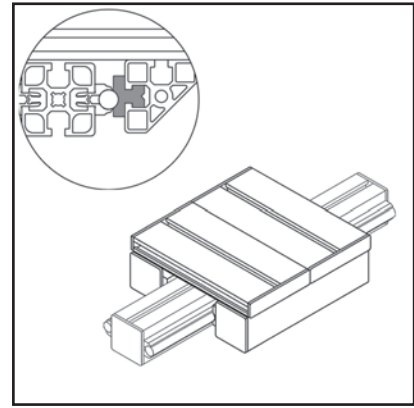
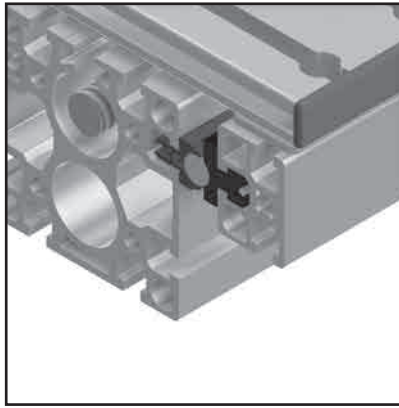
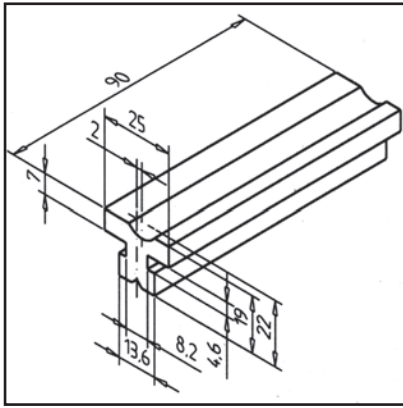
**OTHER VERSIONS**

- With slide clamping at top **part no. 28.0132/1**
- With slide clamping lateral **part no. 28.0132/2**
- Slide plate made of profile 32 x 180
- Different slide lengths

### SLIDE RAIL LG

Part no.

22.1094/0



#### TECHN. DATA / ITEMS SUPPLIED

- PE-UHMW, black
- Fastening kit
- Allowed panel pressure: max. 10 N/mm<sup>2</sup>
- Weight = 0.029 kg/piece

#### APPLICATIONS

- Slide guides LG

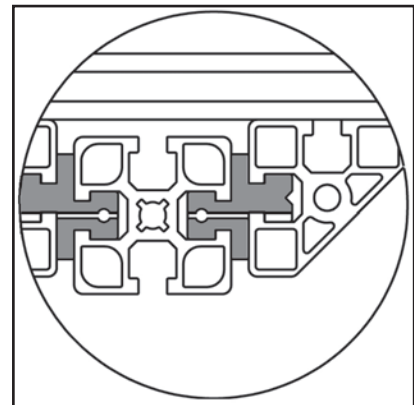
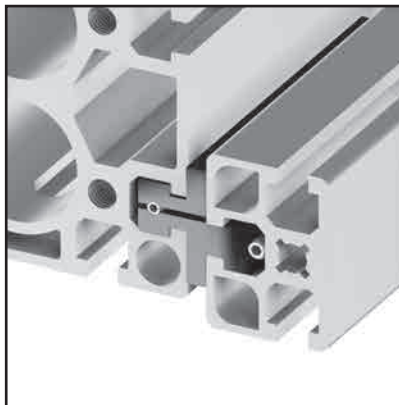
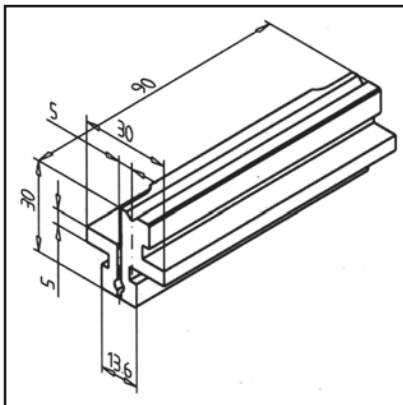
#### ASSEMBLY

- Insert into groove of lateral guide profile
- Secure with fastening material

### SLIDE RAIL LN

Part no.

22.1095/0



#### TECHN. DATA / ITEMS SUPPLIED

- PE-UHMW, black
- Fastening kit
- Allowed panel pressure: max. 10 N/mm<sup>2</sup>
- Weight = 0.030 kg/piece

#### APPLICATIONS

- Slide guides LN
- Adjusting units
- Heavy sliding doors
- Drawers

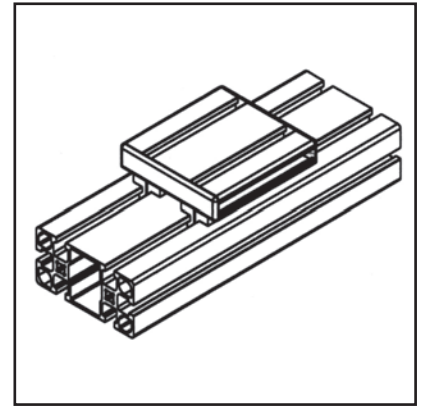
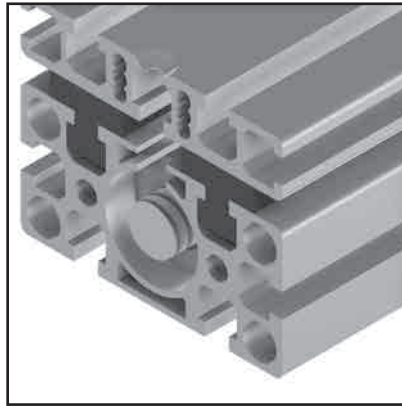
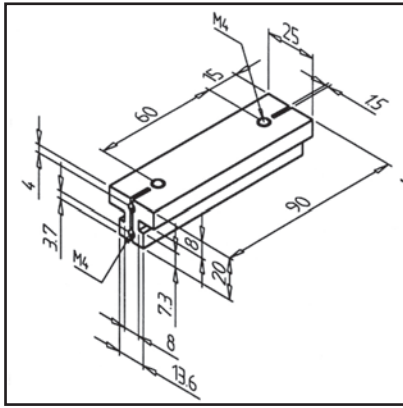
#### ASSEMBLY

- Connect with slide plate
- Insert into grooves of the guide profile
- Adjust without clearance, use fastening kit

**SLIDE RAIL LN-S**

Part no.

22.1096/0

**TECHN. DATA / ITEMS SUPPLIED**

- PE-UHMW, black
- Fastening kit
- Allowed panel pressure: max. 10 N/mm<sup>2</sup>
- Weight = 0.036 kg/piece

**APPLICATIONS**

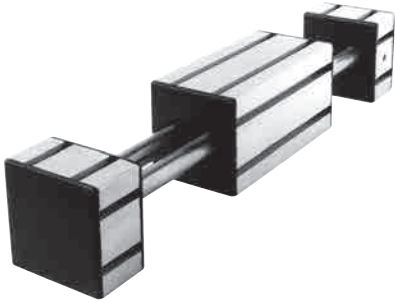
- Slide guides LN-S
- Adjusting units
- Slide units
- Workpiece carrier

**ASSEMBLY**

- Insert into grooves of the guide profile
- Adjust sliding rails without play
- Connect with slide plate



LINEAR SYSTEM LB

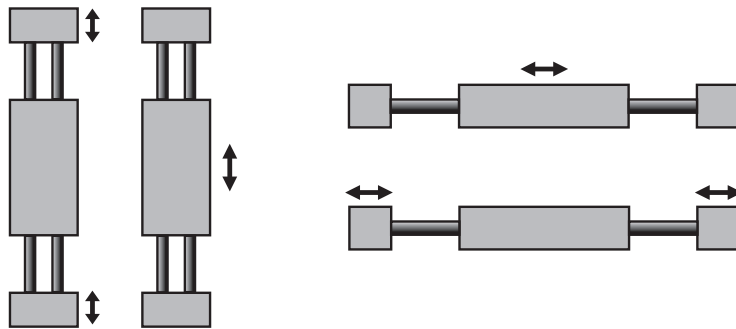


The LB guide is based on LME 20 linear ball bearings, which are incorporated in specially designed holes in our design profiles. Precision shafts D 20 mm give this guide high load capacity. Especially with short travel distances and high stroke frequency, the guide LB has significant advantages. Extremely compact and economical guide elements based on our LME series of precision ball bearings with integrated sealing rings, which underlie rough operating conditions ensure high functional reliability.

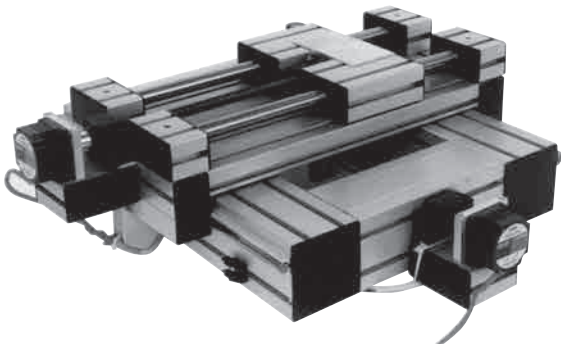
Calculation of the service life

$$L = \frac{C}{F} \cdot 10^5$$

L = Lifetime  
 C = dyn. Load rating  
 F = resulting external forces



The MiniTec guides of the LB series are particularly suitable for strokes up to 1000 mm. The modular design gives the designer complete design freedom in a small footprint. The ball bushings with solid outer sheath made of hardened ball bearing steel are directly mounted in the holes Ø 32 mm of the specially designed construction profiles 45 x 135, 45 x 180, 90 x 180, 90 x 45 S and 90 x 90 S.



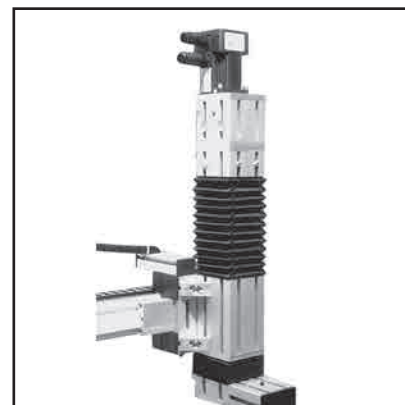
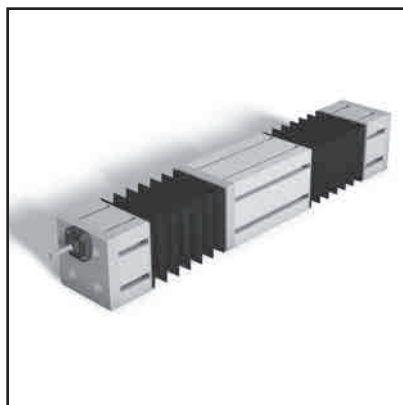
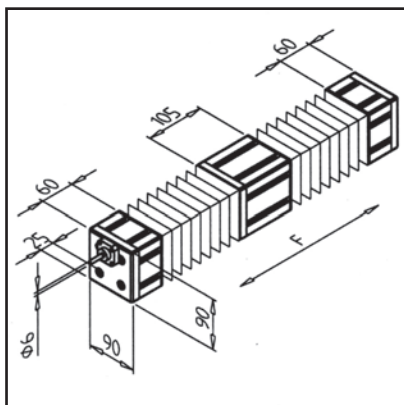
The axial securing takes place with one-component housing adhesive. The solid ball bushes ensure extreme ease of movement, play-free guidance and low noise with a long service life. When designing LB guide systems, it must be ensured that the shaft deflection does not exceed 0.5 ° due to the load.

Further Technical Data can be found in the MiniTec linear catalog. We also offer the linear guide LB complete with threaded or ball screw. All components are also available in stainless version.

**LINEAR MODULE LB 90**

Part no.

28.0178/0

**TECHN. DATA / ITEMS SUPPLIED**

- Aluminium, anodized E6/EV1
- Ready-to-mount linear module of profile 90 x 90
- Drive unit with rolled circulating ball spindle RNCT 1003 Ø 10 mm, incline 3
- Incline fault/300: 12 µm (class C3)
- Slide guidance on 4 linear ball bearings with

- hardened ground precision shafts Ø 20 mm, total length max. 760 mm
- Shaft end on the fixed side machined according to customer specifications for engine or crank connection
- Shafts and spindles covered with protective bellows
- Positioning accuracy: ± 0,1 mm

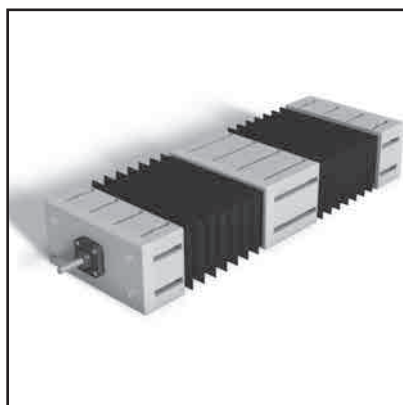
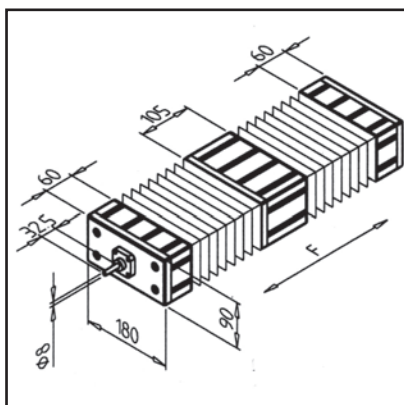
**APPLICATIONS**

- Handling systems
- Z-axis in portals
- Multiple axis systems
- Grabbing units

**LINEAR MODULE LB 180**

Part no.

28.0179/0

**TECHN. DATA / ITEMS SUPPLIED**

- Aluminium, anodized E6/EV1
- Ready-to-mount linear module of profile 90 x 180
- Drive unit with rolled circulated ball spindle RNCT 1404-3,4 Ø 14 mm, incline 4
- Incline fault/300: 12 µm (class C3)
- Slide guidance on 4 linear ball bearings with

- hardened ground precision shafts Ø 20 mm, total length max. 950 mm
- Shaft end on the fixed side machined according to customer specifications for engine or crank connection
- Shafts and spindles covered with protective bellows
- Positioning accuracy: ± 0,1 mm

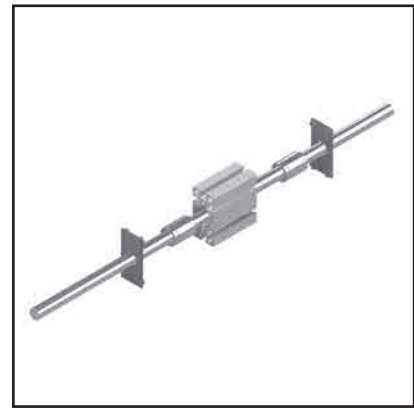
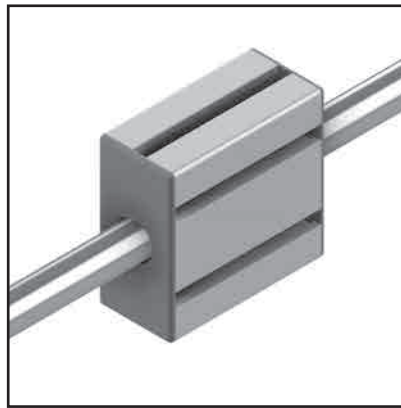
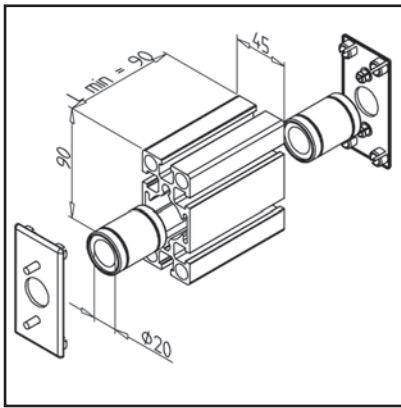
**APPLICATIONS**

- Handling systems
- Z-axis in portals
- Multiple axis systems
- Grabbing units

## SLIDE LB 45

Part no.

28.0150/0



### TECHN. DATA / ITEMS SUPPLIED

- Aluminium, anodized E6/EV1
- Standard length (L) 90 mm
- Profile 45 X 90 S
- Fully assembled with 2 ball bearing bushings LME 20 UU
- Profile closed on the front with cover plates LB 45
- **Other lengths on request**
- Weight = 0.550 kg/piece

### APPLICATIONS

- All MiniTec linear systems LB

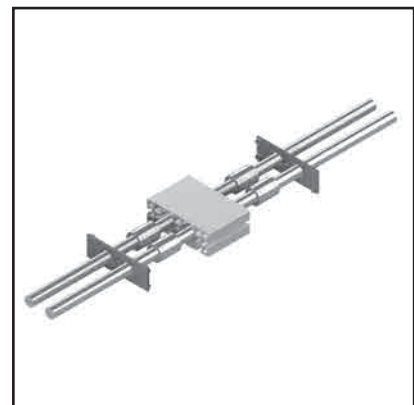
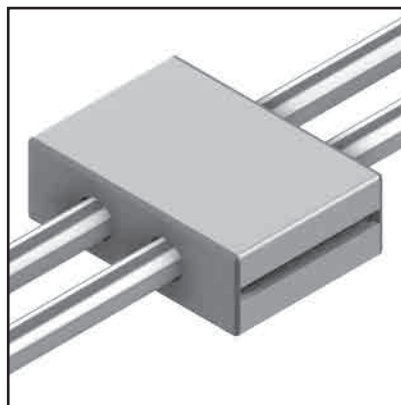
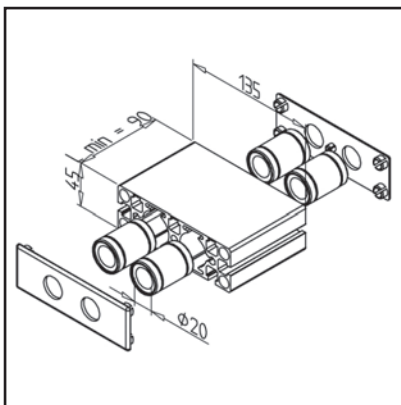
### ASSEMBLY

- Lead shaft through slide

## SLIDE LB 45 X 135

Part no.

28.0155/0



### TECHN. DATA / ITEMS SUPPLIED

- Aluminium, anodized E6/EV1
- Standard length (L) 90 mm
- Profile 45 x 135
- Fully assembled with 2 ball bearing bushings LME 20 UU
- Profile face covered with end caps LB 45 x 135, grey
- **Other lengths on request**
- Weight = 0.865 kg/piece

### APPLICATIONS

- All MiniTec linear systems LB

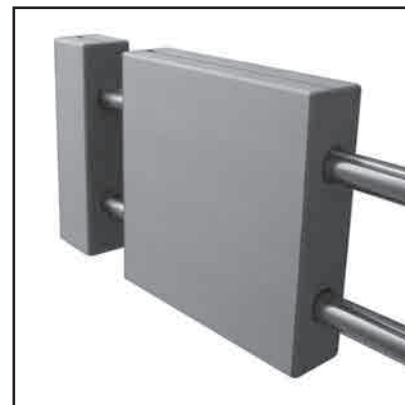
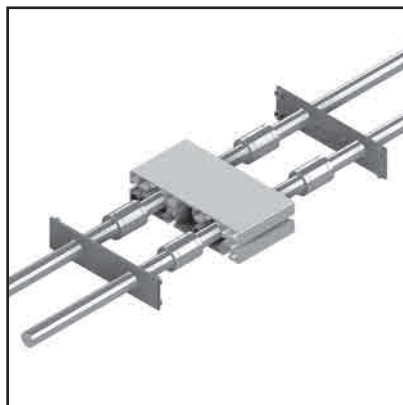
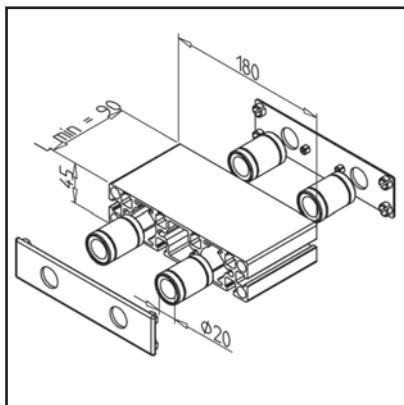
### ASSEMBLY

- Lead shaft through slide

**SLIDE LB 45 X 180**

Part no.

28.0156/0

**TECHN. DATA / ITEMS SUPPLIED**

- Aluminium, anodized E6/EV1
- Standard length (L) 90 mm
- Profile 45 x 180
- Fully assembled with 2 ball bearing bushings LME 20 UU
- Profile face covered with end caps LB 45 x 180, grey
- **Other lengths on request**
- Weight = 1.007 kg/piece

**APPLICATIONS**

- All MiniTec linear systems LB

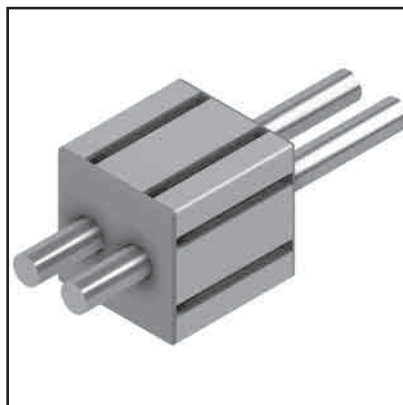
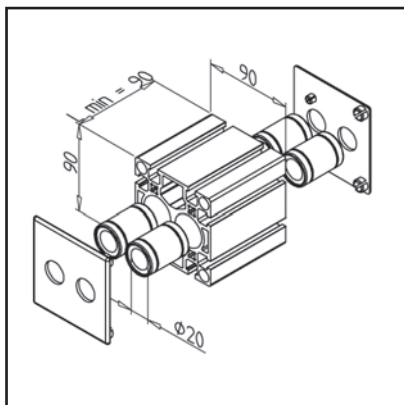
**ASSEMBLY**

- Lead shaft through slide

**SLIDE LB 90**

Part no.

28.0152/0

**TECHN. DATA / ITEMS SUPPLIED**

- Aluminium, anodized E6/EV1
- Standard length (L) 90 mm
- Profile 90 X 90 S
- Fully assembled with 4 ball bearing bushings LME 20 UU
- Profile face covered with end caps LB 90, grey
- **Other lengths on request**
- Weight = 1.070 kg/piece

**APPLICATIONS**

- All MiniTec linear systems LB

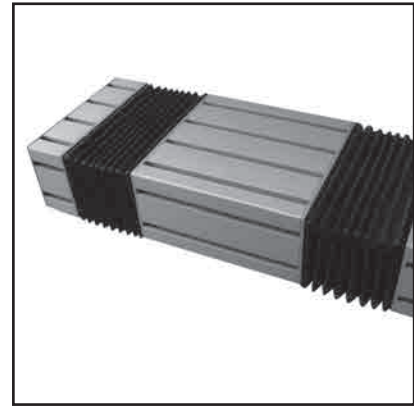
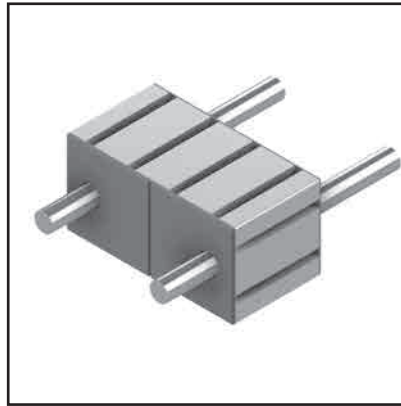
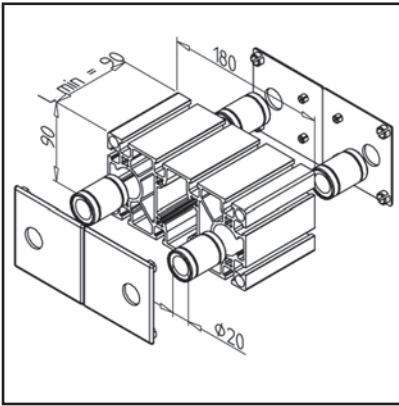
**ASSEMBLY**

- Lead shaft through slide

## SLIDE LB 180

Part no.

28.0143/0



### TECHN. DATA / ITEMS SUPPLIED

- Aluminium, anodized E6/EV1
- Standard length (L) 90 mm
- Profile 90 X 180 S
- Fully assembled with 4 ball bearing bushings LME 20 UU
- Profile face covered with end caps LB 180, grey
- **Other lengths on request**
- Weight = 1.500 kg/piece

### APPLICATIONS

- All MiniTec linear systems LB

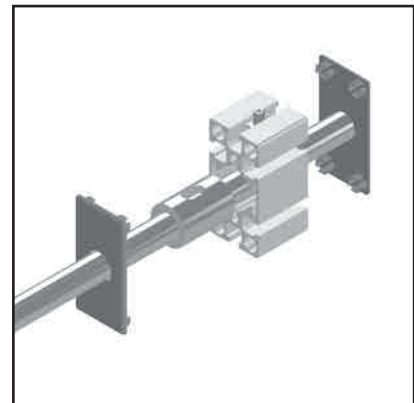
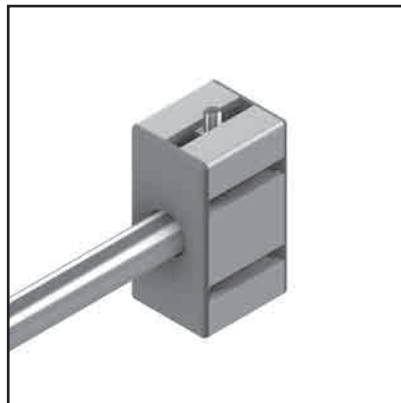
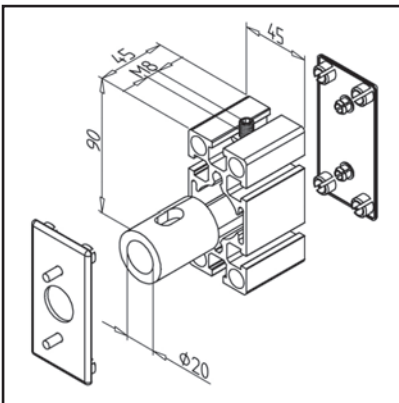
### ASSEMBLY

- Lead shaft through slide

## SHAFT SUPPORT WB 45

Part no.

28.0151/0



### TECHN. DATA / ITEMS SUPPLIED

- Aluminium, anodized E6/EV1
- Profile 45 X 90 S
- Fully assembled with centering bushing
- Shaft side with end cap LB 45, grey
- Outer side with end cap 45 x 90, grey
- Weight = 0.266 kg/piece

### APPLICATIONS

- Bearing and fastening of shaft Ø 20 mm in MiniTec-Linear systems LB 45

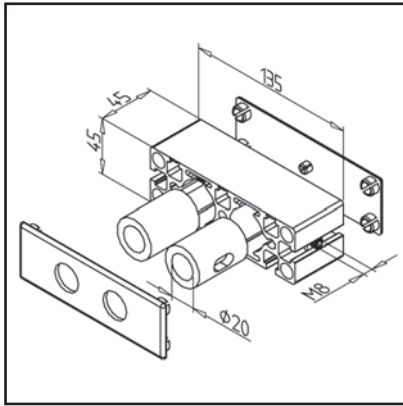
### ASSEMBLY

- Insert shaft
- Tighten with set screw M8 x 35

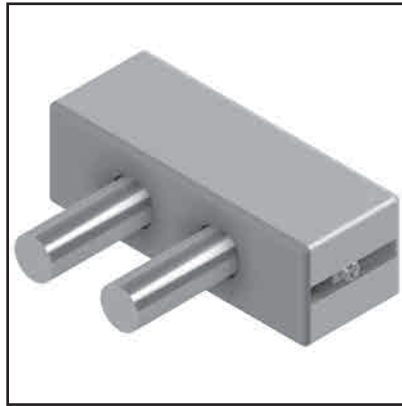
**SHAFT SUPPORT WB 45 X 135**

Part no.

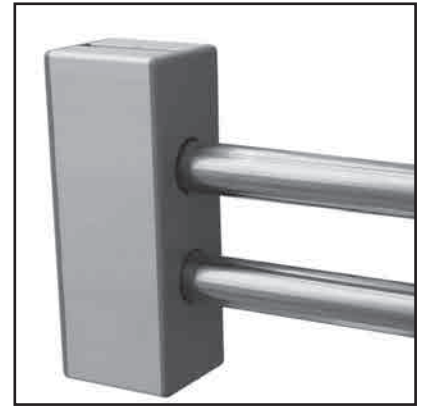
28.0157/0

**TECHN. DATA / ITEMS SUPPLIED**

- Aluminium, anodized E6/EV1
- Profile 45 x 135
- Fully assembled with centering bushing
- Shaft side with end cap LB 45 x 135, grey
- Outer side with end cap 45 x 135, grey
- Weight = 0.416 kg/piece

**APPLICATIONS**

- Bearing and fastening of shaft  $\varnothing$  20 mm in MiniTec-Linear systems LB 45 x 135

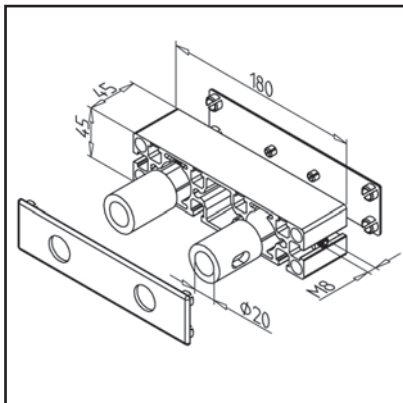
**ASSEMBLY**

- Insert shaft
- Tighten with set screw M8 x 35

**SHAFT SUPPORT WB 45 X 180**

Part no.

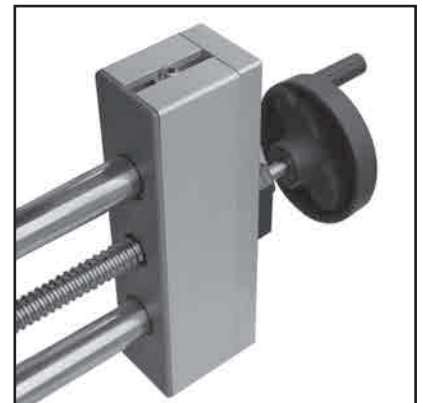
28.0159/0

**TECHN. DATA / ITEMS SUPPLIED**

- Aluminium, anodized E6/EV1
- Profile 45 x 180
- Fully assembled with centering bushing
- Shaft side with end cap LB 45 x 180, grey
- Outer side with end cap 45 x 180, grey
- Weight = 0.486 kg/piece

**APPLICATIONS**

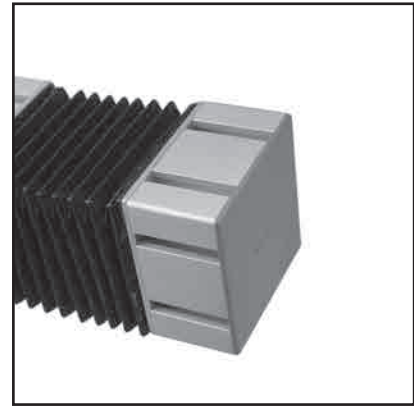
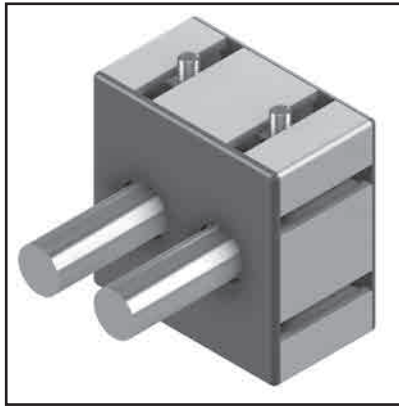
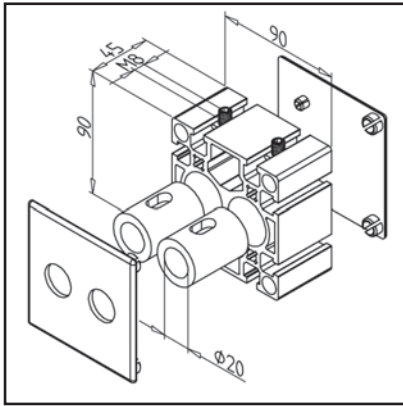
- Bearing and fastening of shaft  $\varnothing$  20 mm in MiniTec-Linear systems LB 45 x 180

**ASSEMBLY**

- Insert shaft
- Tighten with set screw M8 x 35

### SHAFT SUPPORT WB 90

Part no. 28.0153/0



#### TECHN. DATA / ITEMS SUPPLIED

- Aluminium, anodized E6/EV1
- Profile 90 X 90 S
- Fully assembled with 2 centering bushings
- Shaft side with end cap LB 90, grey
- Outer side with end cap 90 x 90, grey
- Weight = 0.521 kg/piece

#### APPLICATIONS

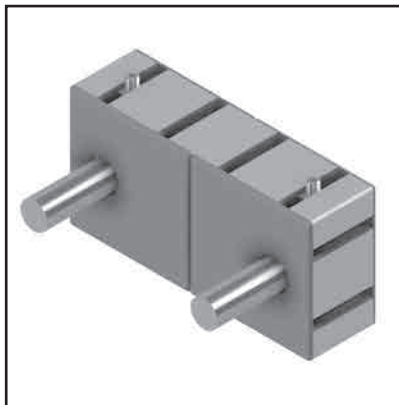
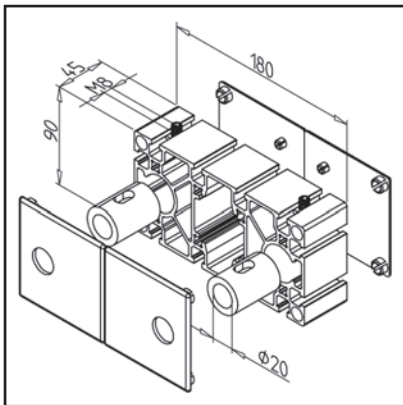
- Bearing and fastening of shaft Ø 20 mm in MiniTec-Linear systems LB 90

#### ASSEMBLY

- Insert shaft
- Tighten with set screw M8 x 35

### SHAFT SUPPORT WB 180

Part no. 28.0144/0



#### TECHN. DATA / ITEMS SUPPLIED

- Aluminium, anodized E6/EV1
- Profile 90 X 180 S
- Fully assembled with 2 centering bushings
- Shaft side with end cap LB 180, grey
- External side with 2 end caps 90 x 90, grey
- Weight = 0.755 kg/piece

#### APPLICATIONS

- Bearing and fastening of shaft Ø 20 mm in MiniTec-Linear systems LB 180

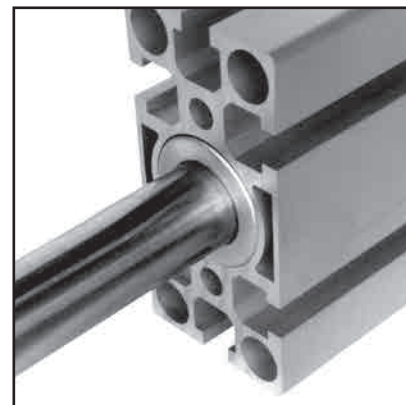
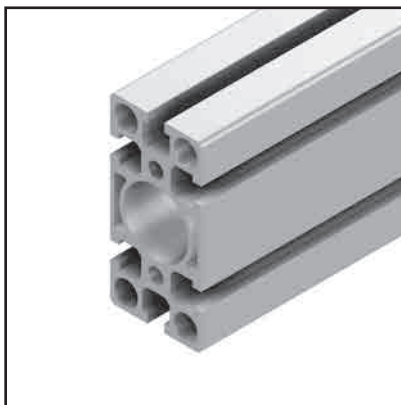
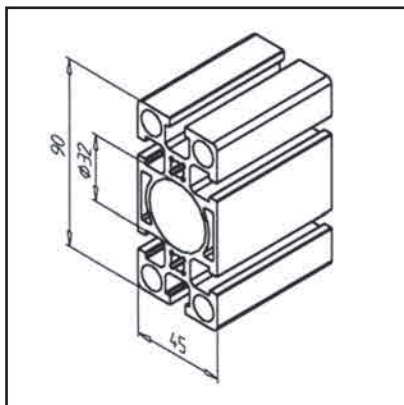
#### ASSEMBLY

- Insert shaft
- Tighten with set screw M8 x 35

**PROFILE 45 X 90 S**

Part no.

20.1017/0

**TECHN. DATA / ITEMS SUPPLIED**

- Aluminium, extruded, anodized E6/EV1
- $I_x = 113.487 \text{ cm}^4$
- $I_y = 30.719 \text{ cm}^4$
- $w_x = 25.219 \text{ cm}^3$
- $w_y = 13.653 \text{ cm}^3$
- Weight = 3.860 kg/m
- Bar length = 6 m
- Packing unit = 24 m

**APPLICATIONS**

- All kinds of constructions
- Linear guides LB as slide
- Column guides
- Implementation as compressed air line with base and transport plate and sealing set
- Central bore  $\varnothing 32$  mm for ball-bushings LME 20, for ball-bearings 6201 or 6002, for compressed air piping or guiding of hydraulic add-in cylinders

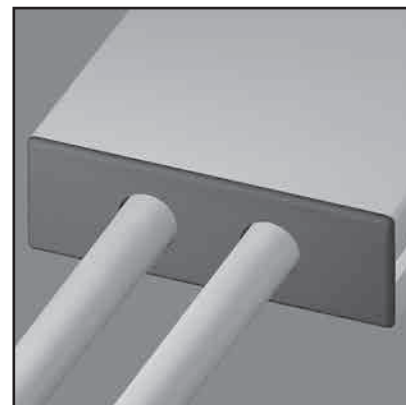
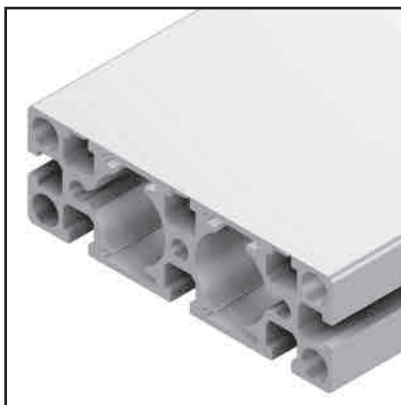
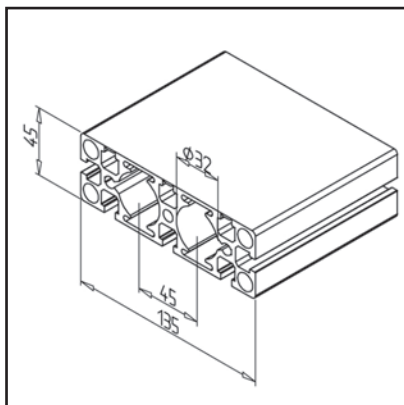
**ASSEMBLY**

- MiniTec power-lock fastener
- Mounting bracket 45 or 90
- Screw connection

**PROFILE 45 X 135 1G**

Part no.

20.1078/0

**TECHN. DATA / ITEMS SUPPLIED**

- Aluminium, extruded, anodized E6/EV1
- $I_x = 47.064 \text{ cm}^4$
- $I_y = 359.242 \text{ cm}^4$
- $w_x = 20.618 \text{ cm}^3$
- $w_y = 53.221 \text{ cm}^3$
- Weight = 5.570 kg/m
- Bar length = 6 m
- Packing unit = 12 m

**APPLICATIONS**

- All types of constructions, specifically for high hygiene requirements in the food industry, medical technology, bottling of beverages
- Linear guides LB as slide
- Central bore  $\varnothing 32$  mm for ball-bushings LME 20, for ball-bearings 6201 or 6002, for compressed air piping or guiding of hydraulic add-in cylinders

**ASSEMBLY**

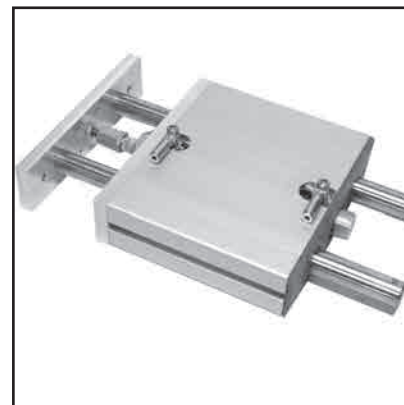
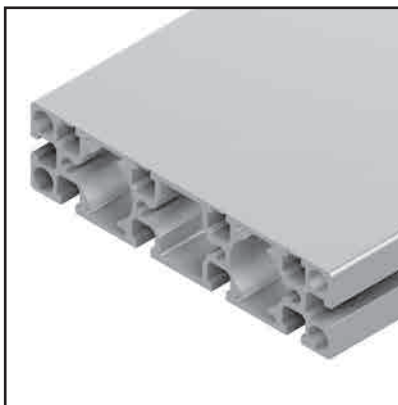
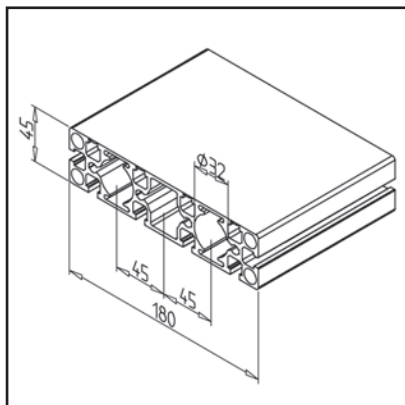
- MiniTec power-lock fastener
- closed grooves can be opened with the groove opener **part no. 26.0815/0** to the desired length



## PROFILE 45 X 180 1G

Part no.

20.1079/0



### TECHN. DATA / ITEMS SUPPLIED

- Aluminium, extruded, anodized E6/EV1
- $I_x = 61.015 \text{ cm}^4$
- $I_y = 810.885 \text{ cm}^4$
- $w_x = 26.704 \text{ cm}^3$
- $w_y = 90.097 \text{ cm}^3$
- Weight = 6.950 kg/m
- Bar length = 6 m
- Packing unit = 12 m

### APPLICATIONS

- All types of constructions, specifically for high hygiene requirements in the food industry, medical technology, bottling of beverages
- Linear guides LB as slide
- Central bore  $\varnothing 32$  mm for ball-bushings LME 20, for ball-bearings 6201 or 6002, for compressed air piping or guiding of hydraulic add-in cylinders

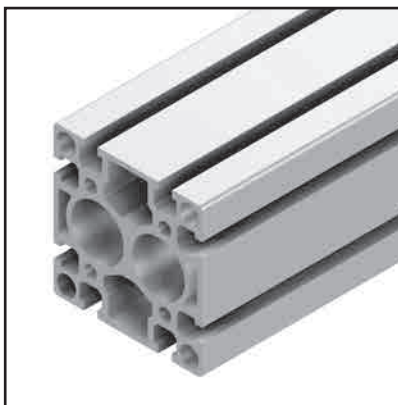
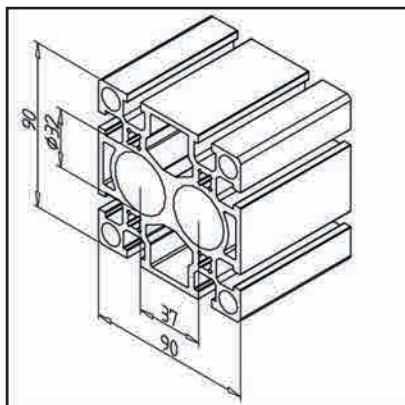
### ASSEMBLY

- MiniTec power-lock fastener
- closed grooves can be opened with the groove opener **part no. 26.0815/0** to the desired length

## PROFILE 90 X 90 S

Part no.

20.1019/0



### TECHN. DATA / ITEMS SUPPLIED

- Aluminium, extruded, anodized E6/EV1
- $I_x = 208.888 \text{ cm}^4$
- $I_y = 223.949 \text{ cm}^4$
- $w_x = 46.419 \text{ cm}^3$
- $w_y = 49.766 \text{ cm}^3$
- Weight = 7.514 kg/m
- Bar length = 6 m
- Packing unit = 12 m

### APPLICATIONS

- All types of heavy constructions
- Linear guides LB as slide
- Central bore  $\varnothing 32$  mm for ball-bushings LME 20, for ball-bearings 6201 or 6002, for compressed air piping or guiding of hydraulic add-in cylinders

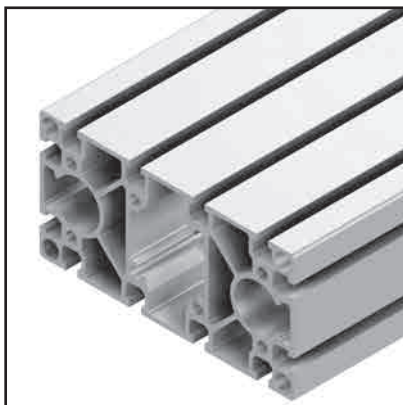
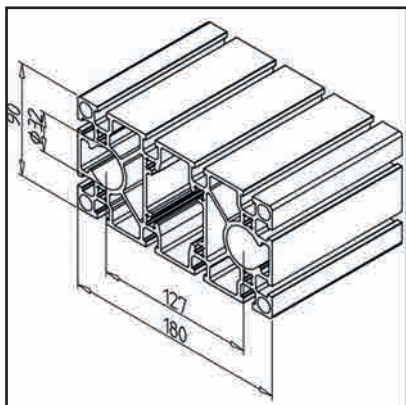
### ASSEMBLY

- MiniTec power-lock fastener
- Mounting bracket 45 or 90
- Screw connection

**PROFILE 90 X 180 S**

Part no.

20.1013/0

**TECHN. DATA / ITEMS SUPPLIED**

- Aluminium, extruded, anodized E6/EV1
- $I_x = 376.784 \text{ cm}^4$
- $I_y = 1421.865 \text{ cm}^4$
- $w_x = 83.729 \text{ cm}^3$
- $w_y = 157.983 \text{ cm}^3$
- Weight = 11.482 kg/m
- Bar length = 6 m
- Packing unit = 6 m

**APPLICATIONS**

- All types of heavy constructions
- Linear guides LB as slide
- Central bore  $\varnothing 32 \text{ mm}$  for ball-bushings LME 20, for ball-bearings 6201 or 6002, for compressed air piping or guiding of hydraulic add-in cylinders

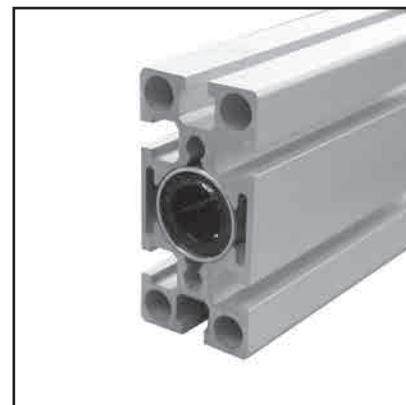
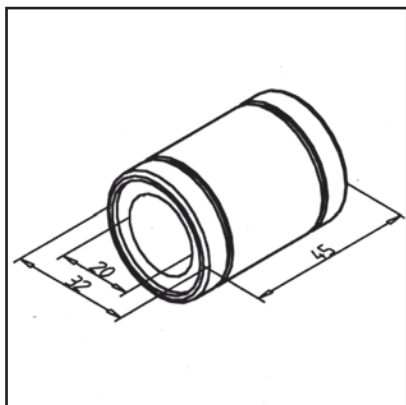
**ASSEMBLY**

- MiniTec power-lock fastener
- Mounting bracket 45 or 90
- Screw connection

**BALL BEARING LME 20 UU**

Part no.

10.1745/0

**TECHN. DATA / ITEMS SUPPLIED**

- Precision ball bushing with massive external sheath of 100Cr6
- 2 integrated sealing rings, heat resistant up to 80°C
- Load capacity:
- dyn.  $C = 880 \text{ N}$
- stat.  $C_0 = 1400 \text{ N}$
- Weight = 0.090 kg/piece

**APPLICATIONS**

- Precision linear guides
- Linear slide system LB
- Lifting-tables
- Quattro-units

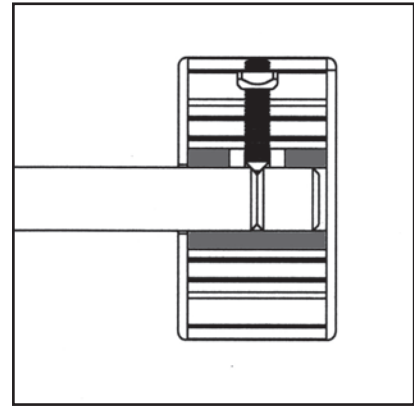
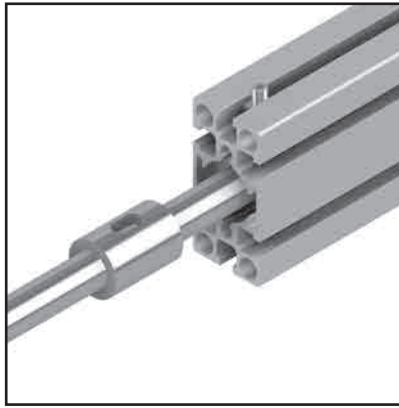
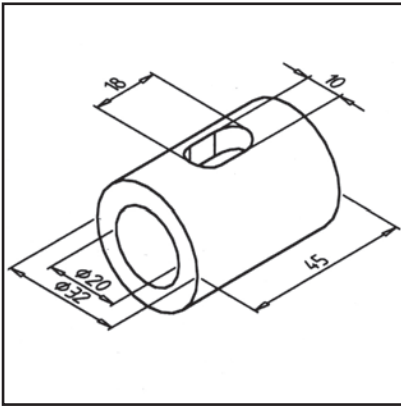
**ASSEMBLY**

- Press into bore  $\varnothing 32 \text{ mm}$  of the profile
- Axial securing with single component adhesive for joining slide unit housing

## CENTERING BUSHING

Part no.

28.0146/0



### TECHN. DATA / ITEMS SUPPLIED

- Aluminium, bright
- Weight = 0.056 kg/piece

### APPLICATIONS

- Central shaft clamping in all shaft blocks of the MiniTec linear systems LB

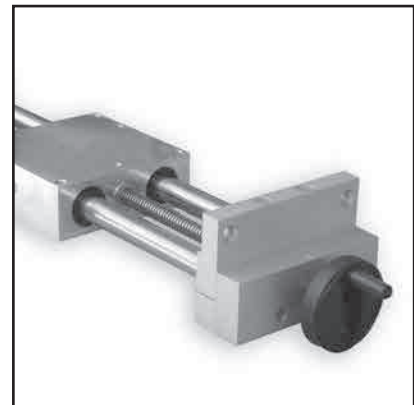
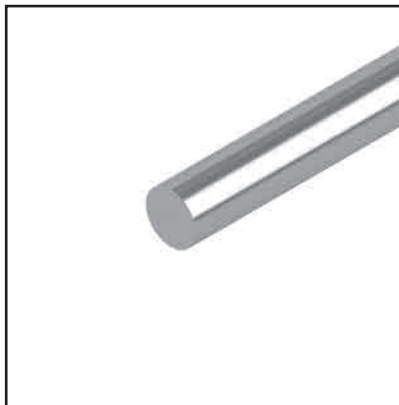
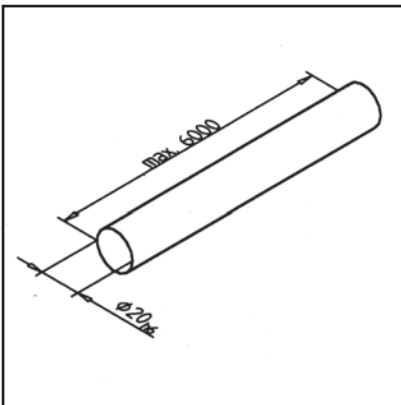
### ASSEMBLY

- Insert centering bush in bore  $\varnothing$  32 mm
- Insert shaft
- Clamps with threaded pin M8 x 35 **part no. 21.1304/1** and sliding nut **part no. 21.1351/0**

## SHAFT 20

Part no.

17.1744/0



### TECHN. DATA / ITEMS SUPPLIED

- Steel, pulled, hardened, polished
- Cf.53, hardened to  $62 \pm 4$  HRC, polished h6
- Weight = 2.470 kg/m

### APPLICATIONS

- Linear guide system LB

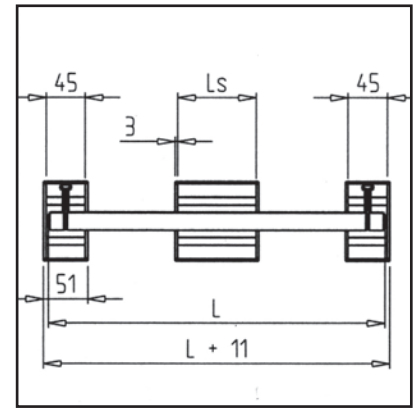
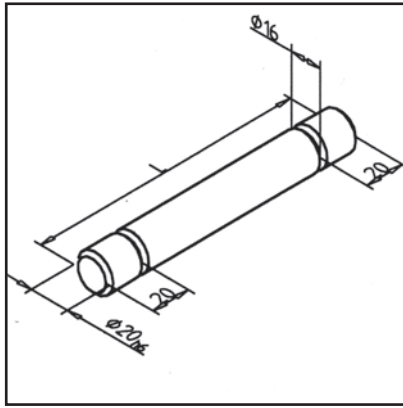
### ASSEMBLY

- Secure with centering bushing into shaft bracket

## SHAFT D 20 FOR LINEAR GUIDE LB

Part no.

28.0154/0



## TECHN. DATA / ITEMS SUPPLIED

- Steel
- Cf53, surface-hardened to 60 + 5 HRC and pre-sharpened
- Tolerance h6
- Processed for shaft support block WB
- **Please specify dimension L**
- Weight = 2,470 kg/m

## APPLICATIONS

- All MiniTec linear systems LB
- In each direction usable

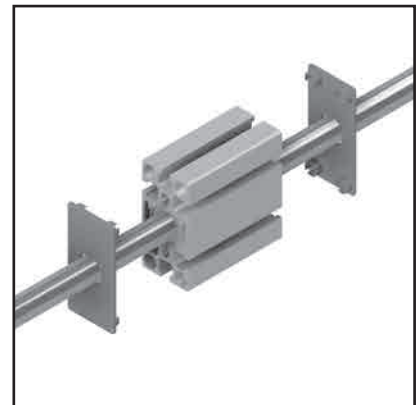
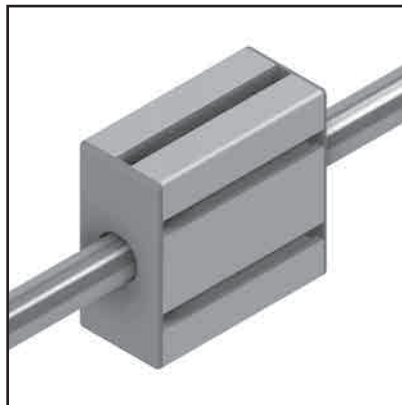
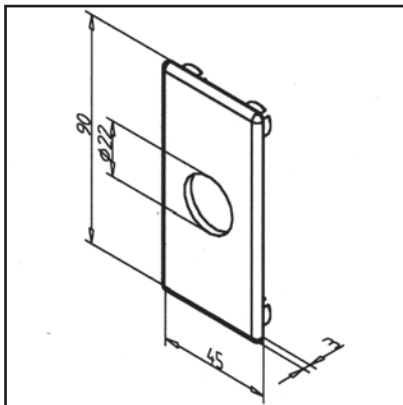
## ASSEMBLY

- Insert in shaft support
- Clamps with threaded pin M8 x 35 **part no. 21.1304/1**

## END CAP LB 45

Part no.

28.0094/1



## TECHN. DATA / ITEMS SUPPLIED

- ABS, Injection Mould, grey
- Aging and oil resistant
- On request also available in black, **part no. 28.0094/0**
- 1 centric bore  $\varnothing$  22 mm
- Weight = 0.010 kg/piece

## APPLICATIONS

- Front slide cover LB 45
- Face covering of shaft support block WB 45 (shaft side)

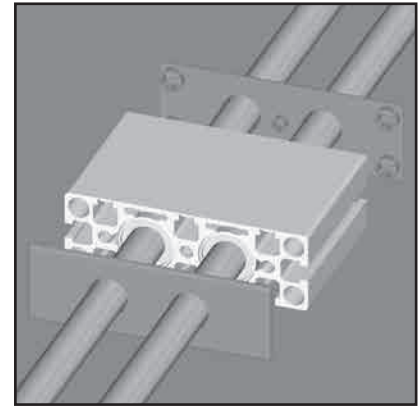
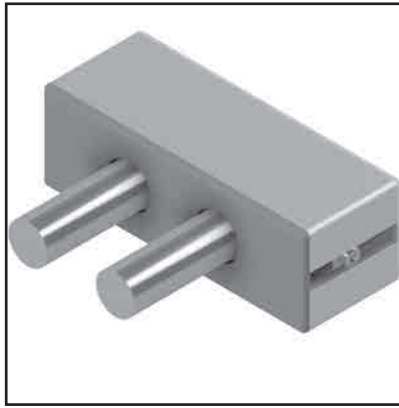
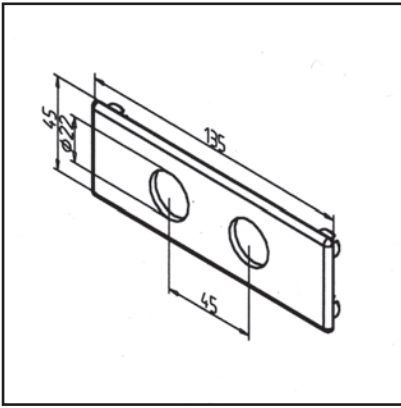
## ASSEMBLY

- Press the fastening pins into the profile holes

## END CAP LB 45 X 135

Part no.

28.0101/1



### TECHN. DATA / ITEMS SUPPLIED

- ABS, Injection Mould, grey
- Aging and oil resistant
- On request also available in black, **part no. 28.0101/0**
- 2 bores  $\varnothing$  22 mm
- Weight = 0.010 kg/piece

### APPLICATIONS

- Front slide cover LB 45 x 135
- Front cover of shaft blocks WB 45 x 135

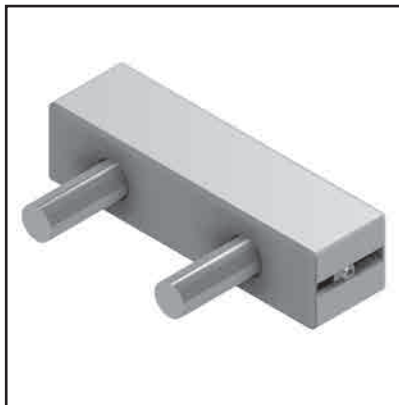
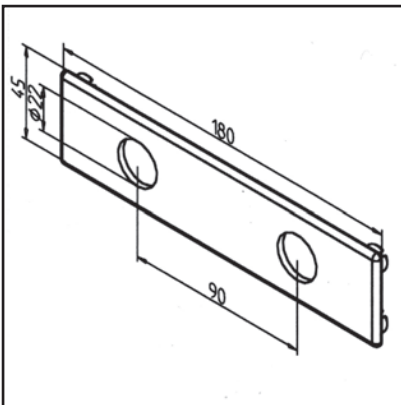
### ASSEMBLY

- Press the fastening pins into the profile holes

## END CAP LB 45 X 180

Part no.

28.0102/1



### TECHN. DATA / ITEMS SUPPLIED

- ABS, Injection Mould, grey
- Aging and oil resistant
- On request also available in black, **part no. 28.0102/0**
- 2 bores  $\varnothing$  22 mm
- Weight = 0.010 kg/piece

### APPLICATIONS

- Front slide cover LB 45 x 180
- Front cover of shaft blocks WB 45 x 180

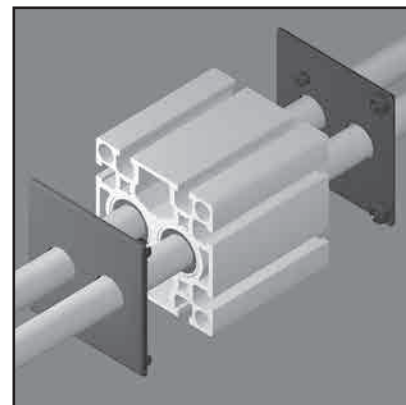
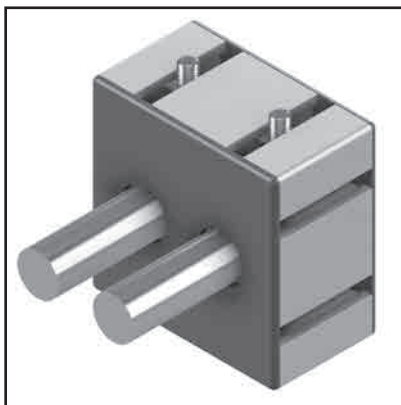
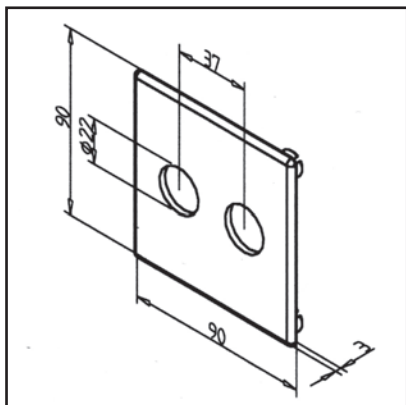
### ASSEMBLY

- Press the fastening pins into the profile holes

**END CAP LB 90**

Part no.

28.0095/1

**TECHN. DATA / ITEMS SUPPLIED**

- ABS, Injection Mould, grey
- Aging and oil resistant
- On request also available in black, **part no. 28.0095/0**
- 2 bores  $\varnothing 22$  mm
- Weight = 0.018 kg/piece

**APPLICATIONS**

- Front slide cover LB 90
- Front cover of shaft blocks WB 90

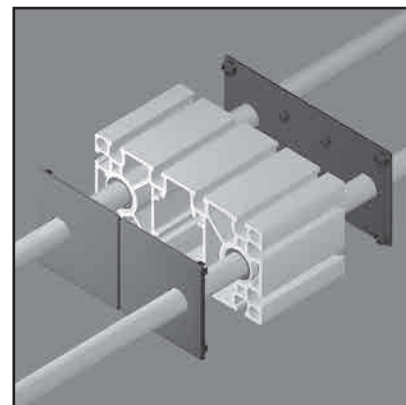
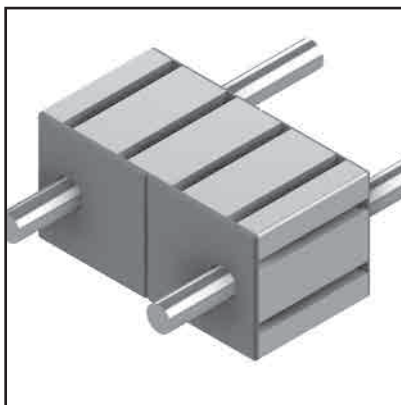
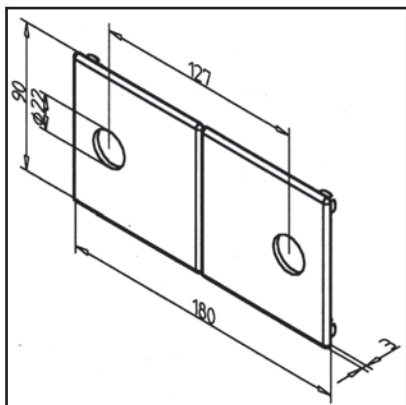
**ASSEMBLY**

- Press the fastening pins into the profile holes

**END CAP LB 180**

Part no.

28.0103/1

**TECHN. DATA / ITEMS SUPPLIED**

- ABS, Injection Mould, grey
- Aging and oil resistant
- On request also available in black, **part no. 28.0103/0**
- 2 bores  $\varnothing 22$  mm
- Weight = 0.037 kg/piece

**APPLICATIONS**

- Front slide cover LB 180
- Front cover of shaft blocks WB 180

**ASSEMBLY**

- Press the fastening pins into the profile holes

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## WORKPLACE DESIGN



The MiniTec profile system and the MiniTec iCADassembler have been setting standards for many years in the design of production flow, workstations, factory automation and machine protection.

Tailor-made workplaces avoid disadvantageous compromises. The MiniTec modular system with the corresponding software are the basis for economical and fast realization of the optimal problem solution. All system components are compatible and can be combined into production systems. Flexibility and economy do not have to be competing goals. Manual workstations allow a highly flexible reaction to changing requirements or are ideal for individual production. In combination with the many linking possibilities from the MiniTec range, even complex manufacturing systems can be designed economically. Manual components - such as roller conveyors, roller tracks for KanBan solutions or material trolleys - are available for linking the workstations. Automatic linking is produced with linear axes, belt



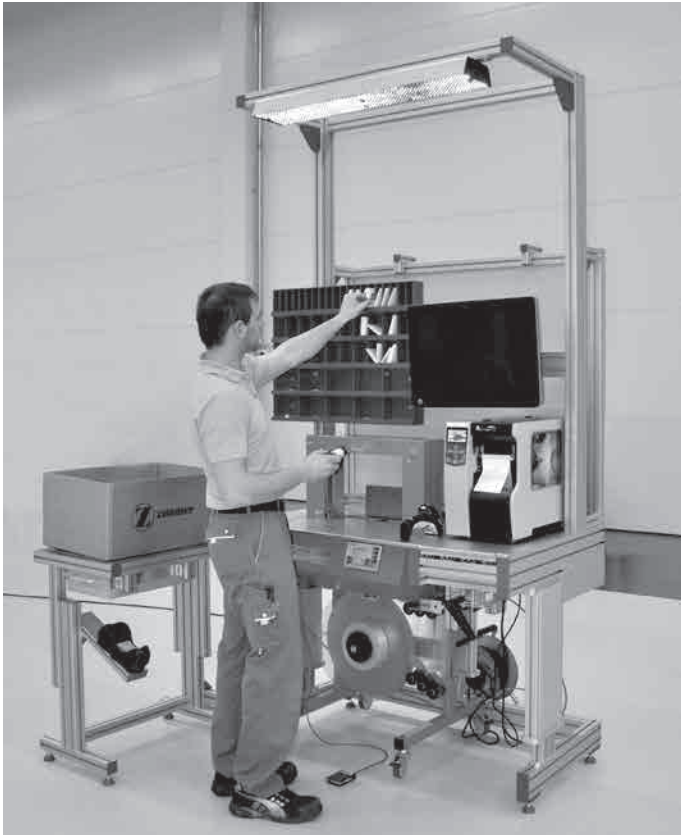
conveyors or the flexible transfer system TSG.

Our design software MiniTec iCADassembler is freely available for designing the workstations. Workstations in a wide variety of designs are designed individually by the software in the shortest possible time. The system automatically creates the bill of materials and, if required, an assembly plan. Automatic design modules for linear technology, protective devices and conveyor systems are also available.

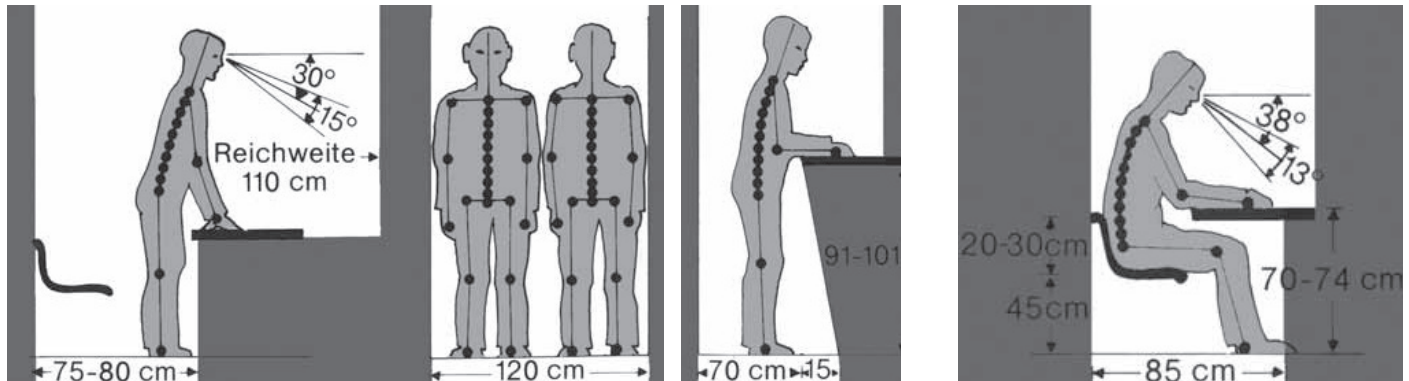
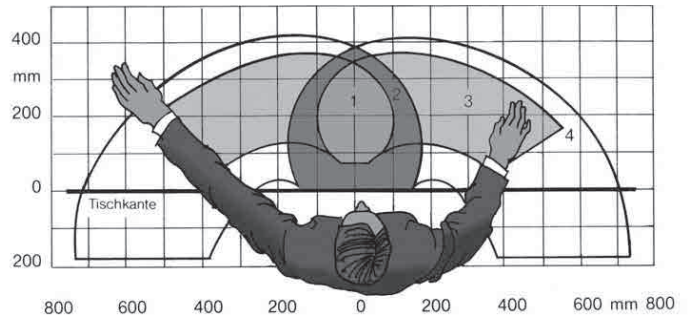
Our electronic catalogue also contains all components of the MiniTec modular system with interfaces to all common CAD systems.



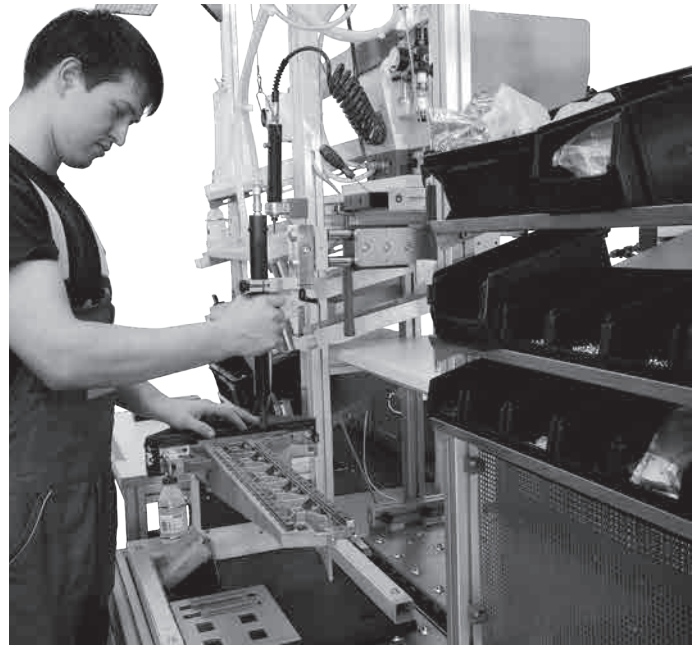
WORKPLACE DESIGN



The design of the workstations is described according to ergonomic findings in DIN EN ISO 6385. The task of ergonomic design is, among other things, to adapt the workplace, work area, environment and lighting to the characteristics and abilities of the human being. The modular system for designing individual workstations enables optimum adaptation to the respective task and the individual employee.



EXAMPLE PICTURES



## WORKSTATIONS

The workstation belongs to the standard equipment in the productive areas of many companies. Due to its flexible, ergonomic and goal-oriented Design is the basis for extremely economical flexible workstation systems. On the next pages we introduce the different worktable models.



## BASIC WORKSTATIONS

Individual. The MiniTec workstations from the modular system.

MiniTec offers you different base frames with or without portal construction. You can either define the dimensions yourself or use standard variants with given dimensions.

Workstation



Workstation L with portal



Workstation S with reinforced portal construction

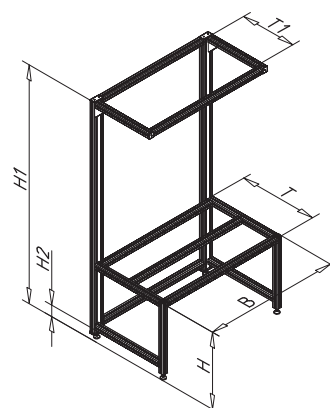
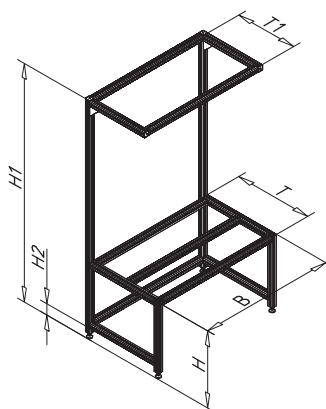
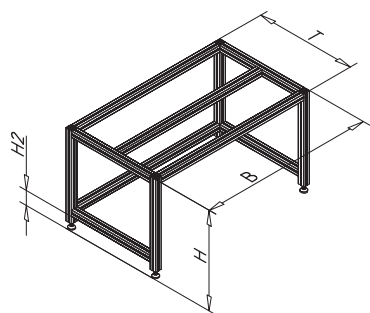


Sample application

Sample application

Sample application

		Workstations			
		Preferred dimensions			
Width (B)	variable	1000	1200	1500	2000
Depth (T)	variable	700			
Depth (T1)	variable	555			
Height (H)	variable	678			
Height (H1)	variable	2100			
Height (H2)	variable	100			
max. load capacity [N] Type L/S	variable	1500	1000	800	800/1200
Workstation	32.0111/0	32.0111/1	32.0111/2	32.0111/3	32.0111/4
Workstation L with portal	32.0112/0	32.0112/1	32.0112/2	32.0112/3	32.0112/4
Container table S with portal	32.0113/0	32.0113/1	32.0113/2	32.0113/3	32.0113/3



- Our basic workstations are available without a portal, with portal or reinforced portal
- The base frame of our workstations consists of the profile 45 x 45 F, anodised E6 /EV1.
- The frame is mounted electrically conductive with the MiniTec power-lock fastener.
- To compensate for uneven floors, the bases are equipped with articulated feet PA, spindle M10 plate Ø45mm.
- The racks are supplied without Tabletops and the necessary mounting brackets for tabletops.
- The workstation S with portal has a reinforced portal structure and can be loaded more heavily with a table width of 2000mm

## HEIGHT ADJUSTABLE WORKSTATIONS

## Always at the right height.

Ergonomic design represents a particular challenge in workplace design, as it significantly influences the health, performance, endurance, concentration and not least the motivation of the workers.

The height-adjustable MiniTec workstations are also available hydraulic and electric height adjustment. In addition to a se-

lection of standard tables with fixed dimensions, the tables can also be freely configured and easily supplemented with portal structures if required.

HYDRAULICALLY ADJUSTABLE  
WORKSTATIONS

Example application - stroke 300 (hydraulic)

ELECTRICALLY HEIGHT ADJUSTABLE  
WORKSTATIONS

Example application - stroke 400 (electrical)

- The base frame of the hydraulically height-adjustable tables consists of the profile 45x90 F and 45x45 F, anodised E6/EV1.
- To compensate for uneven floors (+/- 10 mm), the base frames are equipped with PA articulated feet, M10 spindle Ø80mm disc.
- A large selection of Tabletops can be found page373
- The height adjustment is available with either 300 or 400 mm stroke. Lifting speed: 5 mm / crank rotation.

## PORTAL CONSTRUCTIONS



Portal construction



Electr. height adjustable workstation  
with portal

- Thanks to the modular principle, both hydraulically and electrically height-adjustable worktables can be quickly and easily supplemented with portal structures if required.

## HEIGHT ADJUSTABLE WORKSTATIONS

## Hydraulically height adjustable workstations

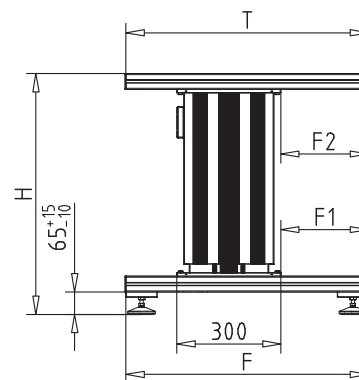
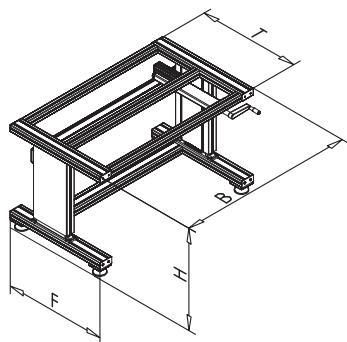


Table - stroke 300



Sample application

Hydraulically height adjustable tables					
		Preferred dimensions in mm			
Width (B)	variable	1000	1200	1500 U/min	2000
Depth (T)	variable	700			
Height (H)		695 (stroke 300) / 795 (stroke 400)			
F	variable	700			
F1	variable	253			
F2	variable	253			
max. Load [N]	variable	1500	1000	800	1200
Hydraulically height adjustable table - stroke 300	32.0170/0	32.0170/1	32.0170/2	32.0170/3	32.0170/4
Hydraulically height adjustable table - stroke 400	32.0171/0	32.0171/1	32.0171/2	32.0171/3	32.0171/4



- The base frame of the hydraulically height adjustable tables consists of the profile 45x90 F and 45x45 F, anodised E6/EV1.
- To compensate for uneven floors (+/- 10 mm), the base frames are equipped with PA articulated feet, M10 spindle Ø80mm disc.
- The racks are supplied without tabletops and the necessary mounting brackets for tabletops.
- A large selection of Tabletops can be found page 373
- The height adjustment is available with either 300 or 400 mm stroke. Lifting speed: 5 mm / crank rotation.
- The hand pump with retractable hand crank is mounted under the Tabletop.

HEIGHT ADJUSTABLE WORKSTATIONS

Electrically height adjustable workstations

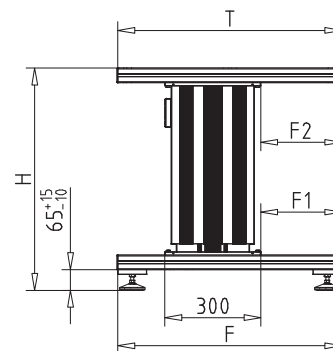
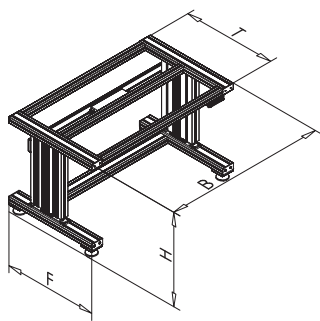


Stroke 300 mm



Sample application

Electrically height-adjustable tables					
		Preferred dimensions in mm			
Width (B)	variable	1000	1200	1500	2000
Depth (T)	variable	700			
Height (H)		695 (stroke 300) / 795 (stroke 400)			
F	variable	700			
F1	variable	253			
F2	variable	253			
max. Load [N]	variable	1500	1000	800	1200
Electrically height-adjustable table - stroke 300	32.0172/0	32.0172/1	32.0172/2	32.0172/3	32.0172/4
Electrically height-adjustable table - stroke 400	32.0173/0	32.0173/1	32.0173/2	32.0173/3	32.0173/4



- The base frame of the electrically height-adjustable tables consists of the profile 45x90 F and 45x45 F, anodized E6/EV1.
- To compensate for uneven floors (+/- 10 mm), the base frames are equipped with PA articulated feet, M10 spindle Ø80mm disc.
- The racks are supplied without Tabletops and the necessary mounting brackets for Tabletops.
- A large selection of Tabletops can be found page373
- The height adjustment is available with either 300 or 400 mm stroke. The max. Lifting speed is 9 mm/s.
- Operation is via a manual switch with 3-digit display, two buttons for up / down function and four storable positions.

Portal constructions

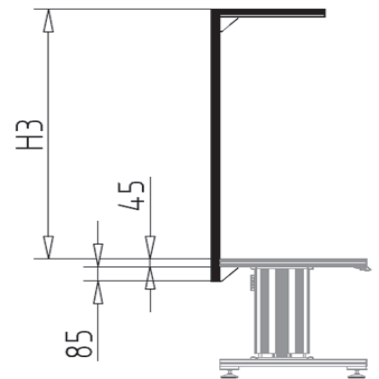
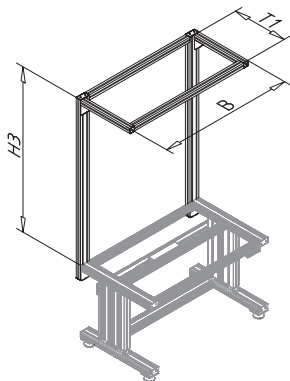


Portal construction



Sample application

Portal constructions					
Width (B)	variable	Preferred dimensions in mm			
		1000	1200	1500	2000
Depth (T1)	variable	500			
Height (H3)	variable	1455			
Portal constructions	320174/0	320174/1	320174/2	320174/3	320174/4



- Thanks to the modular design principle, both the hydraulically and electrically height-adjustable worktables can be quickly and easily supplemented with portal structures if required.
- The portal structures can either be freely configured or ordered in predefined standard dimensions.



The ergonomically optimal working height for every application

The workers expect that their desks and the tools and objects to be gripped are adapted to their individual needs and arranged at the correct height. A fatigue or even damage to the body must be avoided from the outset. In order to meet this requirement - regardless of the respective application - MiniTec offers

three different flexible lift systems made of colourless anodized aluminum profiles with different lifting and installation heights at.

Hydraulic lift system „HLS 1G“

Electric lift system „ELS 1G“

Electric lift system „ELS“



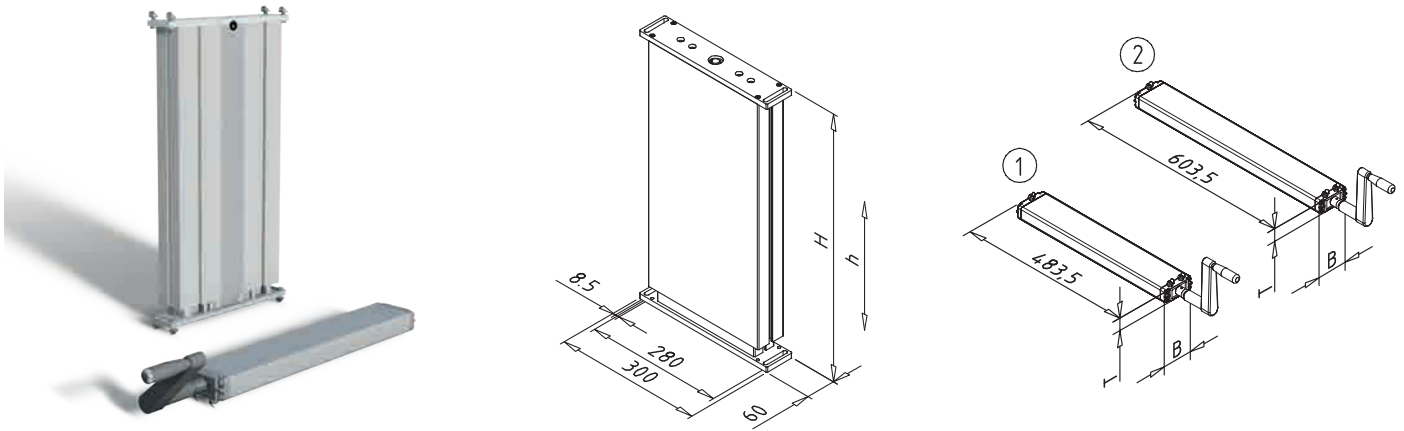
	HLS 1G		ELS 1G		ELS L		ELS S	
	Stroke 300	Stroke 400	Stroke 300	Stroke 400	Stroke 350	Stroke 400	Stroke 350	Stroke 400
Max. system load capacity [N] for 2-3 columns	3000		6000		3200		6400	
Pressure force per column [N]	1500		3000		1600		3200	
Tensile force dyn/stat [N]	0		50/500		800		1600	
Installation height	540	640	540	640	545	595	545	595
Number of fixing grooves	4		4		6		6	
Suitable for mobile solutions	yes		no		no		no	
Lifting speed	5mm per turn of the crank		9 mm/s		9 mm/s		9 mm/s	
Synchronous operation possible up to max.	10 lifting columns		12 lifting columns		12 lifting columns		12 lifting columns	
Flexible number of columns by user	no		yes*		no		no	
Number of lifting columns is automatically detected by the controller	-		yes*		no		no	

\* 1 to 3 columns are automatically recognized - more than 3 columns on request

APPLICATIONS

- Height adjustment of individual workplaces & complete packaging, assembly and manufacturing equipment as well as office units & furniture in general, material supply, fixtures

Hydraulic lift system „HLS 1G“



Hydraulic lift system HLS 1G							
Type	Stroke h	Installation height H	Pump type	Number of columns			
				1	2	3	4
HLS-300S-1G	300 mm	540 mm	1	HLS-300S/540-1000-1G-1	HLS-300S/540-3000-1G-2	HLS-300S/540-3000-1G-3	HLS-300S/540-3000-1G-4
				Part no. 32.0182/1	Part no. 32.0182/2	Part no. 32.0182/3	Part no. 32.0182/4
HLS-400S-1G	400 mm	640 mm	2	HLS-400S/640-1000-1G-1	HLS-400S/640-3000-1G-2	HLS-400S/640-3000-1G-3	HLS-400S/640-3000-1G-4
				Part no. 32.0183/1	Part no. 32.0183/2	Part no. 32.0183/3	Part no. 32.0183/4
Max. system load capacity				1000 N	3000 N	3000 N	3000 N
Pump width/depth				85/35 mm		120/60 mm	
Higher loads and more than 4 lifting columns on request							

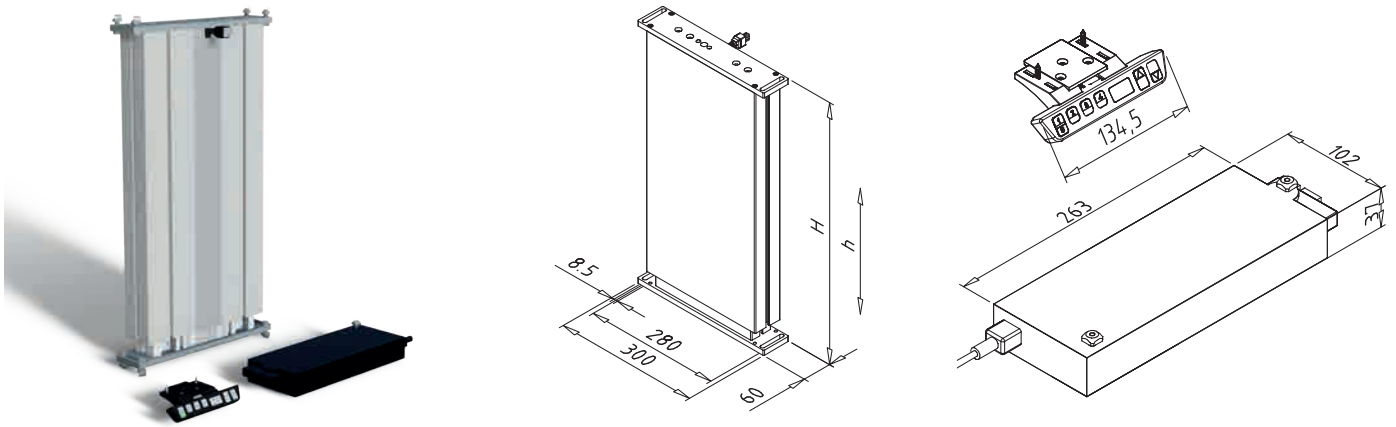
APPLICATION

- Height adjustment of individual workplaces & complete packaging, assembly and manufacturing equipment as well as office units & furniture in general, material supply, fixtures, material supply

TECHNICAL DATA

- Anodised aluminum profile E6 / EV1 with plastic glides
- 4 mounting grooves on 3 sides allow on total
- Column length attachment of trusses, clipboards as well as attachments and superstructures
- Lifting speed: 5 mm each turn of the crank
- max. static bending moment: 1500 Nm
- max. dynamic bending moment: 150 Nm Single-acting hydraulics: restoring force necessary!
- Restoring force = [(1.5kg x hose length in m) + 6kg] x number of columns
- Hose length per column: 4m
- Installation position: only pressing. The system must not be loaded with tension (if necessary, provide for transport lock)
- Synchronous operation: up to max. 10 columns possible
- Ambient temperature: + 10 ° to + 40 ° C
- IP 30

## Electric lift system „ELS 1G“



Electric lift system ELS 1G					
Type	Stroke h	Installation height H	Anzahl der Säulen		
			1	2	3
ELS-300-1G	300 mm	540 mm	ELS-300/540-3000-1G-1	ELS-300/540-6000-1G-2	ELS-300/540-6000-1G-3
			Part no. 32.0180/1	Part no. 32.0180/2	Part no. 32.0180/3
ELS-400-1G	400 mm	640 mm	ELS-400/640-3000-1G-1	ELS-400/640-6000-1G-2	ELS-400/640-6000-1G-3
			Part no. 32.0181/1	Part no. 32.0181/2	Part no. 32.0181/3
Max. system load capacity			3000 N	6000 N	6000 N
Higher loads and more than 3 columns on request					

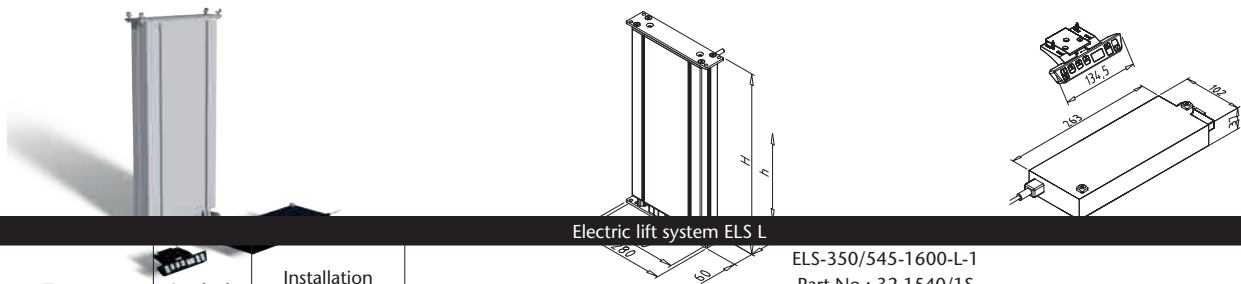
## APPLICATION

- Height adjustment of individual workplaces & complete packaging, assembly and manufacturing equipment as well as office units & furniture in general

## TECHNICAL DATA

- Anodised aluminum profile E6 / EV1 with plastic glides
- 4 mounting grooves on 3 sides make it possible to mount trusses, clipboards as well as attachments and superstructures over the entire leg length
- Lifting speed: 9mm/s
- Drive: Internal DC drive with built-in limit switches and 2 Hall sensors
- max. bending moments / column: in the longitudinal direction 1200 Nm static, 450 Nm dynamic; in the transverse direction 550 Nm static, 200Nm dynamic
- max. tensile load/column: 500N static, 50N dynamic
- Cable feed per column: L=1700mm
- Cable outlet on the large profile on the inside
- IP 30
- Duty cycle: 10 % (S3) during periodic operation and max. load (2 min. ON /18 min. OFF)
- Installation position: preferably pushing
- Synchronous operation: up to max. 12 columns possible
- Ambient temperature: +10° bis +40°C
- Control system: Synchronous control for controlling up to 3 columns „Plug & Play“ (bis zu 12 auf Anfrage)
- Manual switch: with display and memory function
- Items supplied: Electric lifts with mounting hardware, synchronous control and manual switch
- Accessories: motor extension cable, Part no.: 27.0109/0  
Manual switch extension cable, Part no.: 27.0110/0

## Electric lift system „ELS”



Electric lift system ELS L					
Type	Stroke h	Installation height H	ELS-350/545-1600-L-1 Part No.: 32.1540/1S		
			1	2	3
ELS-350 L	350 mm	545 mm	ELS-350/545-1600-L-1	ELS-350/545-3200-L-2	ELS-350/545-3200-L-3
			Part no. 32.1540/1	Part no. 32.1540/2	Part no. 32.1540/3
ELS-400 L	400 mm	595 mm	ELS-400/595-1600-L-1	ELS-400/595-3200-L-2	ELS-400/595-3200-L-3
			Part no. 32.1510/1	Part no. 32.1510/2	Part no. 32.1510/3
Max. system load capacity			1600 N	3200 N	3200 N
Higher loads and more than 3 columns on request					

Electric lift system ELS S - for higher loads					
Type	Stroke h	Installation height H	ELS-350/545-1600-L-1 Part No.: 32.1540/1S		
			1	2	3
ELS-350 S	350 mm	545 mm	ELS-350/545-3200-S-1	ELS-350/545-6400-S-2	ELS-350/545-6400-S-3
			Part no. 32.1530/1	Part no. 32.1530/2	Part no. 32.1530/3
ELS-400 S	400 mm	595 mm	ELS-400/595-3200-S-1	ELS-400/595-6400-S-2	ELS-400/595-6400-S-3
			Part no. 32.1500/1	Part no. 32.1500/2	Part no. 32.1500/3
Max. system load capacity			3200 N	6400 N	6400 N
Higher loads and more than 3 columns on request					

## APPLICATION

- Height adjustment of individual workplaces & complete packaging, assembly and manufacturing equipment as well as office units & Furniture in general - for ergonomically optimal working height

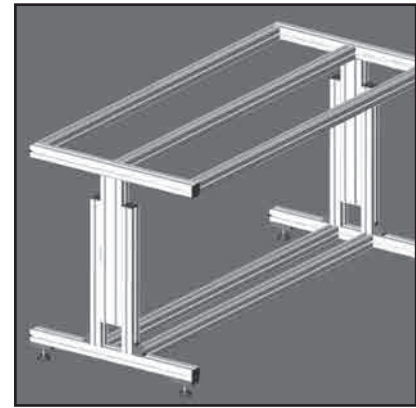
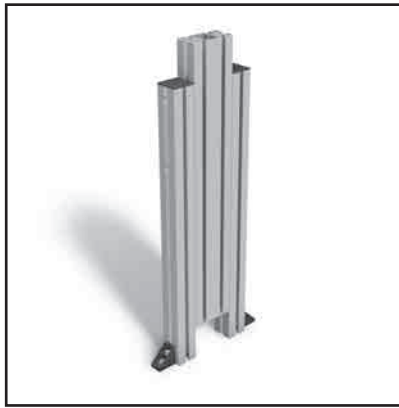
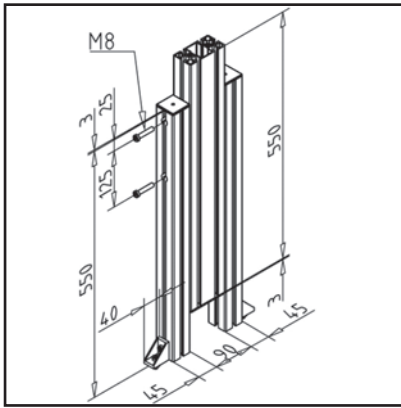
## TECHNICAL DATA

- Anodised aluminum profile E6 / EV1 with plastic glides
- 4 mounting grooves on 3 sides make it possible to mount trusses, clipboards as well as attachments and superstructures over the entire leg length
- Lifting speed: 9mm/s
- Drive: Internal DC drive with built-in limit switches and 2 Hall sensors
- Max. Bending moments / column: in the longitudinal direction 1200 Nm static, 500 Nm dynamic; in the transverse direction 450 Nm static, 255Nm dynamic
- Max. tensile load/column: 500N static, 50N dynamic
- Cable supply per column: L=1200mm;
- Cable outlet on large profile on the inside
- IP 30 Duty cycle: 10% (S3) for periodic operation and max. Load (2 min. ON / 18 min. OFF)
- Installation position: preferably pushing
- Synchronous operation: up to max. 12 columns possible
- Ambient temperature: + 10 ° to + 40 ° C
- Control: Synchronous control for up to 3 columns „Plug & Play” (up to 12 on request)
- Handset: Handset with display and memory function
- Scope of delivery: Electric lifts with fixing material, synchronous control and handset
- Accessories: Motor extension cable, part no.: 32.0042/0  
Handset extension cable, part no.: 27.0110/0

## HEIGHT SETTING FOR WORKTABLE

Part no.

32.0335/0



### TECHN. DATA / ITEMS SUPPLIED

- from profile 45x45 F and 45x90 F, anodized E6/EV1
- Installation dimension: 553mm
- Adjustable range: 385mm

- ESD-compatible **part no. 32.0335/6**
- 1x height adjustment fully assembled.
- Weight = 3.192 kg/piece

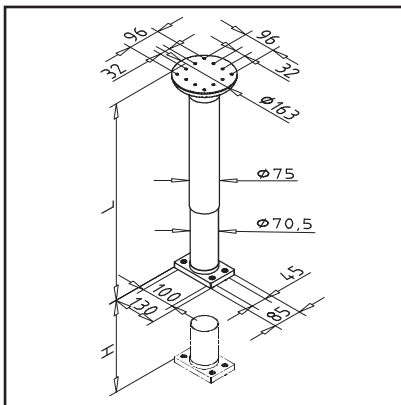
### APPLICATIONS

- Simple height-adjustment through double profiles
- Adjustable through release of the screwed fastening

## PNEUMATIC LIFT SYSTEM PLS - 415

Part no.

32.0360/0



### TECHN. DATA / ITEMS SUPPLIED

- With adapter plate at the bottom and fastening material
- Diameter 75mm
- Lifting capacity: 120 N
- Stroke (H): 415mm
- Installation dimension (L) retracted: 640mm
- Optionally also **part no. 32.0361/0**  
Stroke (H): 225 mm  
Installation dimension (L): 450 mm
- Weight = 5.383 kg/piece

### APPLICATIONS

- For raising and lowering the work tables and other equipment
- Activation / release: Bowden cable L=280mm

### ASSEMBLY

- Install to the profile groove with supplied hardware

## TABLETOPS



For the different assembly tasks, a selection of Tabletops is available.

The maximum plate sizes can also be found on the following pages in the item description.

Within the listed dimensions we can realize every special dimension.

The Tabletops are fixed to the base frame with mounting bracket 25 GD-Z and chipboard screws.

	Scratch	Abrasion	Stroke	Warmth	Humidity	Oil	Chemicals	ESD, antistatic	Light reflection	Layer thickness
Melamine	●	●	●	●	●	●	●	○	●	0,2
Laminate	●	●	●	●	●	●	●	○	●	0,8
HPL	●	●	●	●	●	●	●	○	●	3
Multiplex	●	●	●	●	●	●	●	○	●	-
Melamine conductive	●	●	●	●	●	●	●	●	●	0,2
PE 500 R	●	●	●	●	●	●	●	○	○	-
HPL Compact tabletop	●	●	●	●	●	●	●	○	●	-
HPL ESD Compact tabletop	●	●	●	●	●	●	●	●	●	-

● Very suitable

● conditionally suitable

● little suitable

○ not suitable

## TABLETOPS

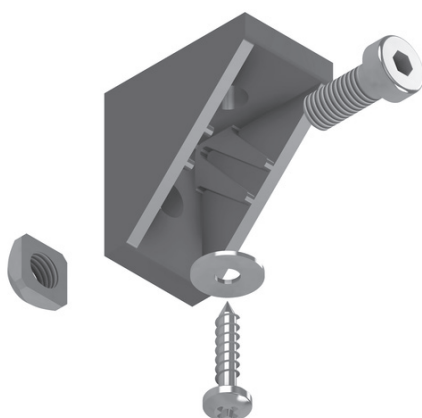
part no.	Article	Color	Thickness (mm)	Width W (mm)	Depth D (mm)
32.0410/0	Tabletop melamine	Light grey RAL 7035	22mm	B= (≤2760mm)	T= (≤2060mm)
32.4110/0	Tabletop melamine	Light grey RAL 7035	22mm	1000mm	700mm
32.4120/0	Tabletop melamine	Light grey RAL 7035	22mm	1200mm	700mm
32.4140/0	Tabletop melamine	Light grey RAL 7035	22mm	1500mm	700mm
32.4160/0	Tabletop melamine	Light grey RAL 7035	22mm	2000mm	700mm
32.4200/0	Tabletop hard laminate	Light grey RAL 7035	20mm	B= (≤2750mm)	T= (≤1250mm)
32.4210/0	Tabletop hard laminate	Light grey RAL 7035	20mm	1000mm	700mm
32.4220/0	Tabletop hard laminate	Light grey RAL 7035	20mm	1200mm	700mm
32.4240/0	Tabletop hard laminate	Light grey RAL 7035	20mm	1500mm	700mm
32.4260/0	Tabletop hard laminate	Light grey RAL 7035	20mm	2000mm	700mm
32.4700/0	Tabletop hard laminate	Light grey RAL 7035	40mm	B= (≤2750mm)	T= (≤1250mm)
32.4710/0	Tabletop hard laminate	Light grey RAL 7035	40mm	1000mm	700mm
32.4720/0	Tabletop hard laminate	Light grey RAL 7035	40mm	1200mm	700mm
32.4740/0	Tabletop hard laminate	Light grey RAL 7035	40mm	1500mm	700mm
32.4760/0	Tabletop hard laminate	Light grey RAL 7035	40mm	2000mm	700mm
32.0440/0	Tabletop multiplex beech	Polished, natural	20mm	B = (≤2460mm)	T = (≤1460mm)
32.4410/0	Tabletop multiplex beech	Polished, natural	20mm	1000mm	700mm
32.4420/0	Tabletop multiplex beech	Polished, natural	20mm	1200mm	700mm
32.4440/0	Tabletop multiplex beech	Polished, natural	20mm	1500mm	700mm
32.4460/0	Tabletop multiplex beech	Polished, natural	20mm	2000mm	700mm
32.0490/0	Tabletop multiplex beech	Polished, natural	40mm	B = (≤2460mm)	T = (≤1460mm)
32.4910/0	Tabletop multiplex beech	Polished, natural	40mm	1000mm	700mm
32.4920/0	Tabletop multiplex beech	Polished, natural	40mm	1200mm	700mm
32.4940/0	Tabletop multiplex beech	Polished, natural	40mm	1500mm	700mm
32.4960/0	Tabletop multiplex beech	Polished, natural	40mm	2000mm	700mm
Clearcoating or oiled on request					

## TABLETOPS

part no.	Article	Color	Thickness (mm)	Width W (mm)	Depth D (mm)
32.0460/0	ESD-Tabletop melamine	Light grey RAL 7035	25mm	B = ( $\leq 2760$ mm)	T = ( $\leq 2060$ mm)
32.4610/0	ESD-Tabletop melamine	Light grey RAL 7035	25mm	1000mm	700mm
32.4620/0	ESD-Tabletop melamine	Light grey RAL 7035	25mm	1200mm	700mm
32.4640/0	ESD-Tabletop melamine	Light grey RAL 7035	25mm	1500mm	700mm
32.4660/0	ESD-Tabletop melamine	Light grey RAL 7035	25mm	2000mm	700mm
32.6100/0	Tabletop PE 500 R	Confetti	25mm	B= ( $\leq 3000$ mm)	32.6100/0
32.6110/0	Tabletop PE 500 R	Confetti	25mm	1000mm	700mm
32.6120/0	Tabletop PE 500 R	Confetti	25mm	1200mm	700mm
32.6140/0	Tabletop PE 500 R	Confetti	25mm	1500mm	700mm
32.6160/0	Tabletop PE 500 R	Confetti	25mm	2000mm	700mm
The colour spread may vary in shape, size and colour depending on the delivery.					
32.6000/0	Tabletop PE 500 R	black	25mm	B= ( $\leq 3000$ mm)	T= ( $\leq 1250$ mm)
32.6010/0	Tabletop PE 500 R	black	25mm	1000mm	700mm
32.6020/0	Tabletop PE 500 R	black	25mm	1200mm	700mm
32.6040/0	Tabletop PE 500 R	black	25mm	1500mm	700mm
32.6060/0	Tabletop PE 500 R	black	25mm	2000mm	700mm
plate made of aluminium, PVC, stainless steel or requested material					
32.6204/0	HPL Compact tabletop	Light grey	20mm	B= ( $\leq 2520$ mm)	T= ( $\leq 1280$ mm)
32.6208/0	HPL ESD Compact tabletop	Light grey	20mm	B= ( $\leq 2520$ mm)	T= ( $\leq 1280$ mm)

## Mounting angle for tabletops

Part no.  
32.0401/0



## Technical Data:

- Mounting angle 25; Chip-board screw with washer; Cylinder head screw with sliding nut
- For Tabletops from 22 mm
- Für EPA/ESD Anwendungen Part no. 32.0401/6
- Weight 0,058 kg

## Application:

- Fixing Tabletops from 22 mm on the profile frame

## Assembly:

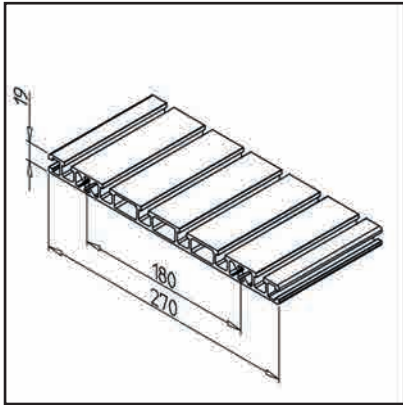
- Fasten with fastening material from the scope of delivery to the profile groove
- For retrofitting to a vertical groove, preferably square nut M8 with groove fixing, Part no. 21.1351/2 use
- Screw chipboard screw with washer into Tabletop, if necessary pre-drill



**PROFILE 270 X 19**

Part no.

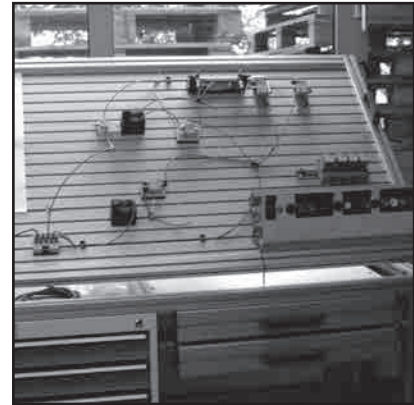
20.1077/0

**TECHN. DATA / ITEMS SUPPLIED**

- Aluminium, extruded, anodized E6/EV1
- $I_x = 10.348 \text{ cm}^4$
- $I_y = 1352.197 \text{ cm}^4$
- $w_x = 10.167 \text{ cm}^3$
- $w_y = 100.162 \text{ cm}^3$
- Weight = 5.612 kg/m
- Bar length = 6 m
- Packing unit = 18 m

**APPLICATIONS**

- Mounting plates
- Workstations
- Training set-ups for training and further education with universal clamping base **part no. P2.0060/0**
- Demonstration units

**ASSEMBLY**

- MiniTec power-lock fastener
- Screw connection
- Bolt connector

## DRAWER BASE CABINETS

Drawer base cabinets ensure perfect order at the workplace. There are the right ones for every need. Usable heights, subdivisions or deposits. All base cabinets are available for right or left extension.

**Casing:**

- Sheet steel construction
- Load-bearing capacity: to 200 kg
- Standard with central lock, single pullout lock and cylinder lock with 2 keys
- Easy construction

**Drawers:**

- The individual drawers can be loaded up to 35 kg, 80% extendable, perforated bottom
- Standard with large handle with label
- Standard paint:
  - Casing light grey RAL 7035
  - Drawer / Door brilliant blue RAL 5007
- Standard painting in ESD version:
  - Completely light grey RAL 7035

■ **Paintings Optional\*:**

- grey green, HF 0001 (similar. RAL 6000)
- resedagreen, RAL 6011
- light grey, RAL 7035
- light blue, RAL 5012
- ruby red, RAL 3003
- water blue, RAL 5021
- anthracite, RAL 7016
- red orange, RAL 2001
- brilliant blue, RAL 5007
- alu-silver, (similar) RAL 9006

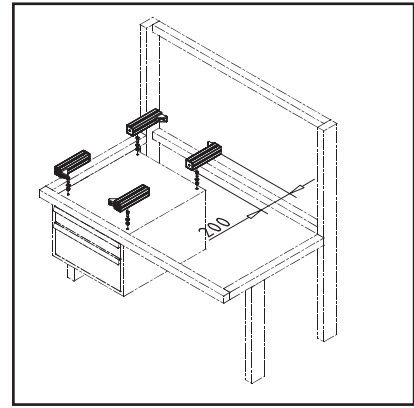
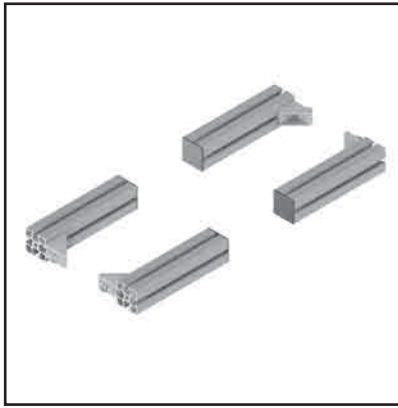
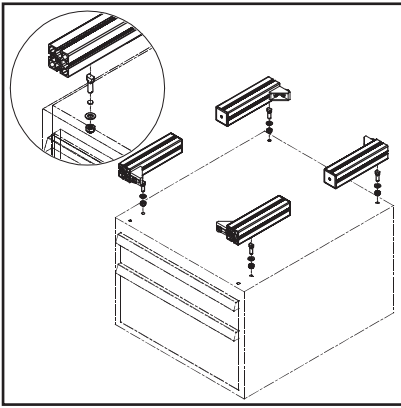
\*at the same price as standard



## FASTENING SET FLOOR CABINET

Part no.

32.0806/0



### TECHN. DATA / ITEMS SUPPLIED

- Aluminium, anodized E6/EV1
- Composed of:
  - 4x Profile 45x45 - L=200 mm
  - 4x Mounting bracket 25 S
  - 4x Hammer head screw M8 with nut
- Suitable for ESD-designs
- Weight = 1.951 kg/piece

### APPLICATIONS

- For the attachment of floor cabinets on table frame

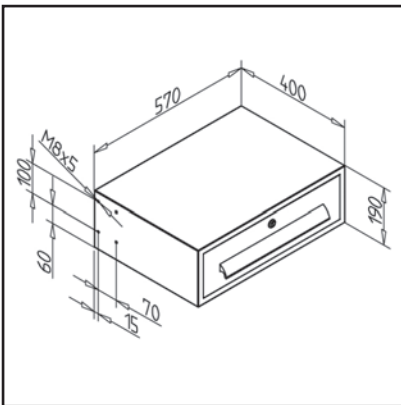
### ASSEMBLY

- With fastening material included
- Screw fastening set on base frame
- Remove drawers from counter cabinet
- Place the hammer screws on the cabinet
- Swing in the cabinet with the hammer screws in the profile groove, tighten the nuts

## DRAWER BASE CABINET 200

Part no.

32.0809/0



### TECHN. DATA / ITEMS SUPPLIED

- Steel, lacquered
- Without fastening kit
- Color:
  - Corpus light grey RAL 7035
  - Drawer brilliant blue RAL 5007

- Cylinder lock with 2 keys
- Max. load capacity: 35kg
- Large handle bar with label adapter
- Can be pulled out up to 80 %
- Weight = 10.410 kg/piece

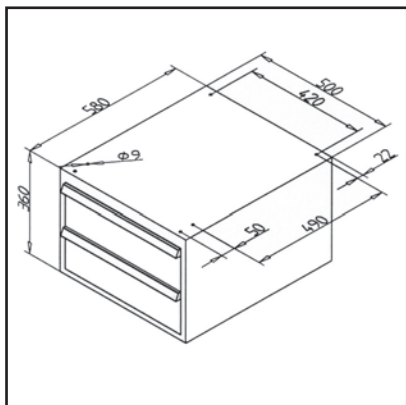
### ASSEMBLY

- Use side threads or drill your own holes
- Alternatively with mounting set for under counter cabinet **part no. 32.0806/0** Insert 4 x 8.5 holes at the appropriate location

**DRAWER BASE CABINET 150/150**

Part no.

32.0810/0

**TECHN. DATA / ITEMS SUPPLIED**

- Steel, lacquered
- With fastening material steel, zinc plated
- Color:
  - Corpus light grey RAL 7035
  - Drawer brilliant blue RAL 5007
- Cylinder lock with 2 keys, center locking for all drawers
- Individual drawer locking
- 2 drawers, H = 150 mm, with perforated bottom
- Large handle bar with label adapter
- Can be pulled out up to 80 %
- Drawer inside W = 425 mm T = 550 mm, effective height = H-10 mm
- Max. load capacity per compartment 35kg
- Max. load capacity per cabinet: 200 kg
- Weight = 22.570 kg/piece

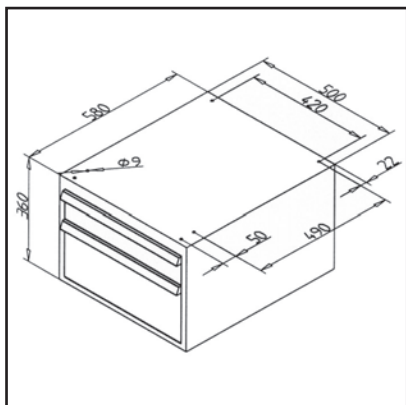
**ASSEMBLY**

- Use fastening kit to fasten to base frame
- Alternatively attach with mounting set **part no. 32.0806/0** to strut profiles of the base frame
- Also in ESD version **part no. 32.0810/6**
- Optionally available in different colors **part no. 32.0810/2**

**DRAWER BASE CABINET 100/200**

Part no.

32.0811/0

**TECHN. DATA / ITEMS SUPPLIED**

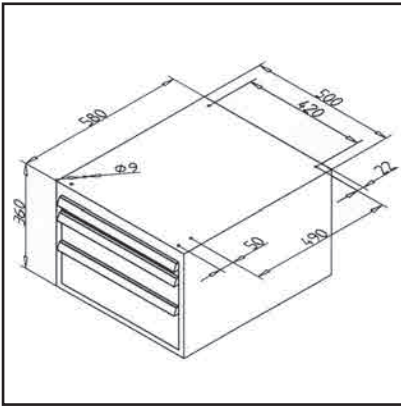
- Steel, lacquered
- With fastening material steel, zinc plated
- Color:
  - Corpus light grey RAL 7035
  - Drawer brilliant blue RAL 5007
- Cylinder lock with 2 keys, center locking for all drawers
- Individual drawer locking
- 1 drawer H = 100 mm, 1 drawer H = 200 mm, with perforated bottom
- Large handle bar with label adapter
- Can be pulled out up to 80 %
- Drawer inside W = 425 mm T = 550 mm, effective height = H-10 mm
- Max. load capacity per compartment 35kg
- Max. load capacity per cabinet: 200 kg
- Weight = 22.570 kg/piece

**ASSEMBLY**

- Use fastening kit to fasten to base frame
- Alternatively attach with mounting set **part no. 32.0806/0** to strut profiles of the base frame
- Also available in ESD version **part no. 32.0811/6**
- Optionally available in different colors **part no. 32.0811/2**

## DRAWER BASE CABINET 50/100/150

Part no. 32.0812/0



### TECHN. DATA / ITEMS SUPPLIED

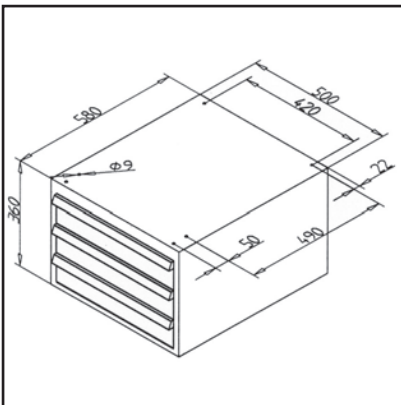
- Steel, lacquered
- With fastening material steel, zinc plated
- Color:
  - Corpus light grey RAL 7035
  - Drawer brilliant blue RAL 5007
- Cylinder lock with 2 keys, center locking for all drawers
- Individual drawer locking
- 1 drawer H = 50 mm, 1 drawer H = 100 mm
- mm, 1 drawer H = 150 mm, with perforated bottom
- Large handle bar with label adapter
- Can be pulled out up to 80 %
- Drawer inside W = 425 mm T = 550 mm, effective height = H-10 mm
- Max. load capacity per compartment 35kg
- Max. load capacity per cabinet: 200 kg
- Weight = 33.000 kg/piece

### ASSEMBLY

- Use fastening kit to fasten to base frame
- Alternatively attach with mounting set **part no. 32.0806/0** to strut profiles of the base frame
- Also in ESD version **part no. 32.0812/6**
- Optionally available in different colors **part no. 32.0812/2**

## DRAWER CABINET 100/100/100

Part no. 32.0813/0



### TECHN. DATA / ITEMS SUPPLIED

- Steel, lacquered
- With fastening material steel, zinc plated
- Color:
  - Corpus light grey RAL 7035
  - Drawer brilliant blue RAL 5007
- Cylinder lock with 2 keys, center locking for all drawers
- Individual drawer locking
- 3 drawers H = 100 mm, with perforated bottom
- Large handle bar with label adapter
- Can be pulled out up to 80 %
- Drawer inside W = 425 mm T = 550 mm, effective height = H-10 mm
- Max. load capacity per compartment 35kg
- Max. load capacity per cabinet: 200 kg
- Weight = 33.000 kg/piece

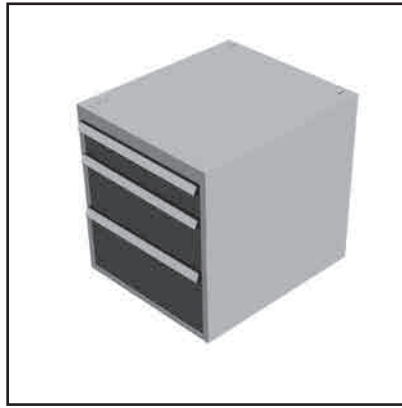
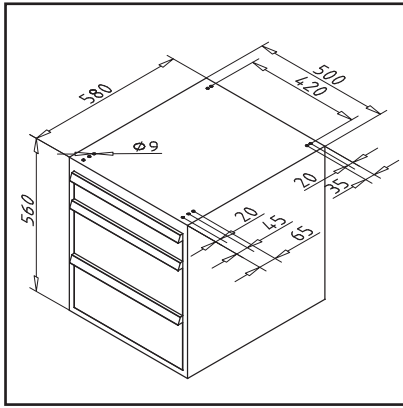
### ASSEMBLY

- Use fastening kit to fasten to base frame
- Alternatively attach with mounting set **part no. 32.0806/0** to strut profiles of the base frame
- Also in ESD version **part no. 32.0813/6**
- Optionally available in different colors **part no. 32.0813/2**

**DRAWER BASE CABINET 100/200/200**

Part no.

32.0819/0

**TECHN. DATA / ITEMS SUPPLIED**

- Steel, lacquered
- With fastening material steel, zinc plated
- Color:
  - Corpus light grey RAL 7035
  - Drawer brilliant blue RAL 5007
- Cylinder lock with 2 keys, center locking for all drawers
- Individual drawer locking
- 1 drawer H = 100 mm, 2 drawers H = 200 mm, with perforated bottom
- Large handle bar with label adapter
- Can be pulled out up to 80 %
- Drawer inside W = 425 mm T = 550 mm, effective height = H-10 mm
- Max. load capacity per compartment 35kg
- Max. load capacity per cabinet: 200 kg
- Weight = 34.220 kg/piece

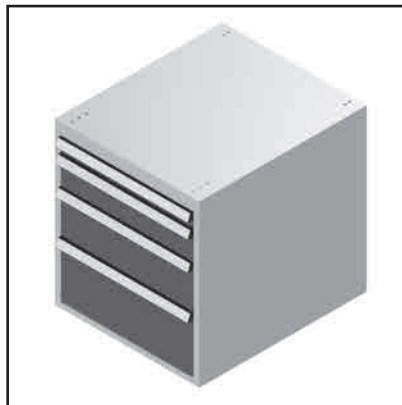
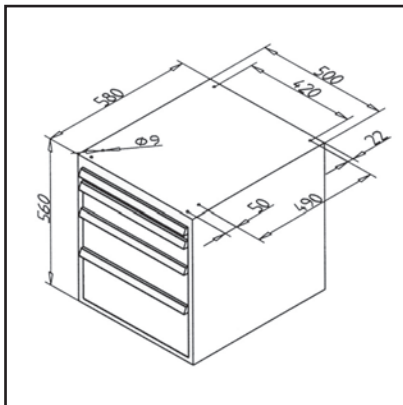
**ASSEMBLY**

- Use fastening kit to fasten to base frame
- Alternatively attach with mounting set **part no. 32.0806/0** to strut profiles of the base frame
- Also in ESD version **part no. 32.0819/6**
- Optionally available in different colors **part no. 32.0819/2**

**DRAWER BASE CABINET 50/100/150/200**

Part no.

32.0814/0

**TECHN. DATA / ITEMS SUPPLIED**

- Steel, lacquered
- With fastening material steel, zinc plated
- Color:
  - Corpus light grey RAL 7035
  - Drawer brilliant blue RAL 5007
- Cylinder lock with 2 keys, center locking for all drawers
- Individual drawer locking
- 1 drawer H = 50 mm, 1 drawer H = 100 mm, with perforated bottom
- Large handle bar with label adapter
- Can be pulled out up to 80 %
- Drawer inside W = 425 mm T = 550 mm, effective height = H-10 mm
- Max. load capacity per compartment 35kg
- Max. load capacity per cabinet: 200 kg
- Weight = 35.330 kg/piece

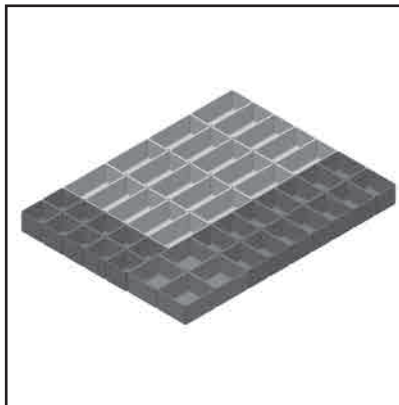
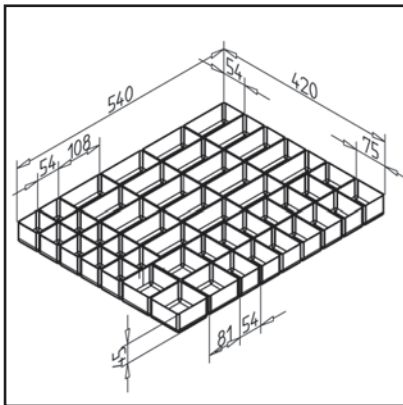
**ASSEMBLY**

- Use fastening kit to fasten to base frame
- Alternatively attach with mounting set **part no. 32.0806/0** to strut profiles of the base frame
- Also in ESD version **part no. 32.0814/6**
- Optionally available in different colors **part no. 32.0814/2**

## DRAWER CONTAINER SET 1

Part no.

32.0807/0



### TECHN. DATA / ITEMS SUPPLIED

- B x T 425 x 550 mm
- For panel height 100-300 mm
- 20 x Container yellow 54 x 108 x 45 mm
- 14 x Container red 54 x 75 x 45 mm
- 10 x Container red 54 x 54 x 45 mm

- 4 x Container green 75 x 81 x 45 mm
- Other arrangements on request
- High impact polystyrene
- Weight = 1.060 kg/piece

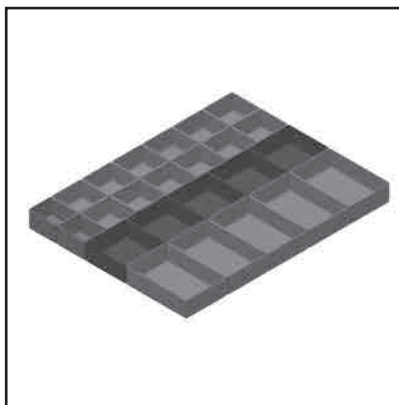
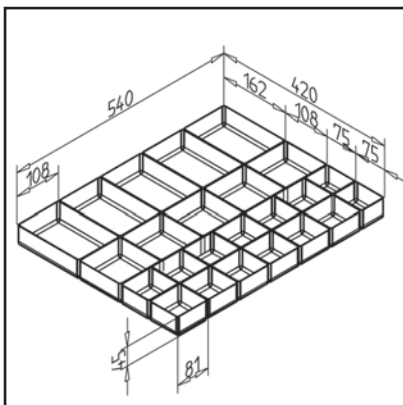
### ASSEMBLY

- Easy to remove and reinstall

## DRAWER CONTAINER SET 2

Part no.

32.0808/0



### TECHN. DATA / ITEMS SUPPLIED

- B x T 425 x 550 mm
- For panel height 100-300 mm
- 12 x Container green 75 x 81 x 45 mm
- 5 x case 108 x 108 x 45 mm
- 5 x Container green 108 x 162 x 45 mm

- 2 x Container red 54 x 75 x 45 mm
- Other arrangements on request
- High impact polystyrene
- Weight = 0.965 kg/piece

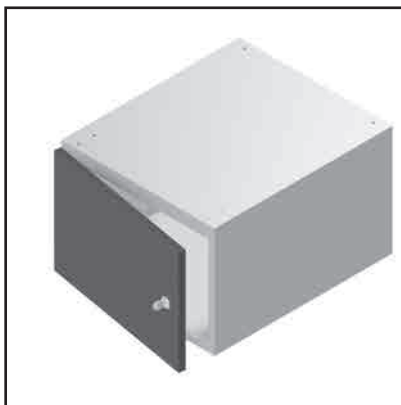
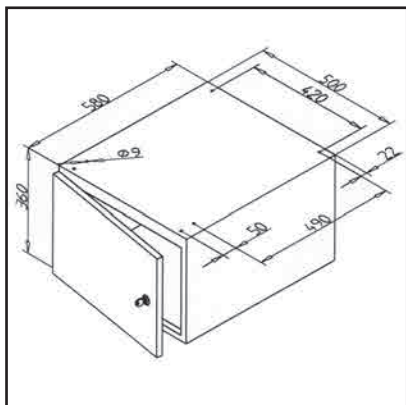
### ASSEMBLY

- Easy to remove and reinstall

**DOORS BASE CABINET SMALL**

Part no.

--...../-

**TECHN. DATA / ITEMS SUPPLIED**

- Steel, lacquered
  - With fastening material steel, zinc plated
  - Color:
    - body light grey RAL 7035
    - door brilliant blue RAL 5007
  - Cylinder lock with 2 keys, 1 shelf
  - Max.load capacity per cabinet: 200 kg
- Left version (as shown) **part no. 32.0815/0**
  - Right version **part no. 32.0815/1**
  - Other colors:
    - left version under **part no. 32.0815/2**
    - Right version at **part no. 32.0815/3**
  - Weight = 34.000 kg/piece

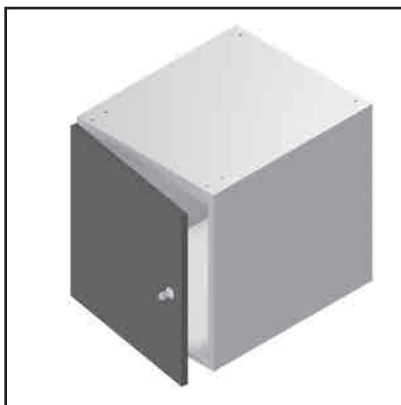
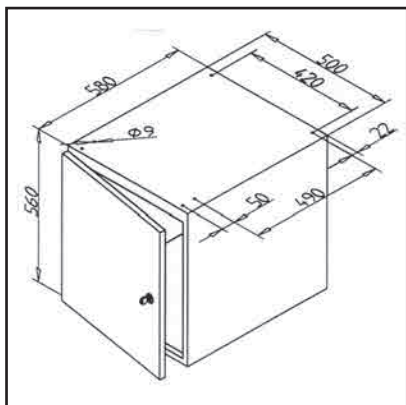
**ASSEMBLY**

- Use fastening kit to fasten to base frame
- Alternatively attach with mounting set **part no. 32.0806/0** to strut profiles of the base frame

**DOORS BASE CABINET LARGE**

Part no.

--...../-

**TECHN. DATA / ITEMS SUPPLIED**

- Steel, lacquered
  - With fastening material steel, zinc plated
  - Color:
    - body light grey RAL 7035
    - door brilliant blue RAL 5007
  - Cylinder lock with 2 keys, 1 shelf
  - Max.load capacity per cabinet: 200 kg
- Left version (as shown) **part no. 32.0816/0**
  - Right version **part no. 32.0816/1**
  - Other colors:
    - left version under **part no. 32.0816/2**
    - Right-hand version at **part no. 32.0816/3**
  - Weight = 43.500 kg/piece

**ASSEMBLY**

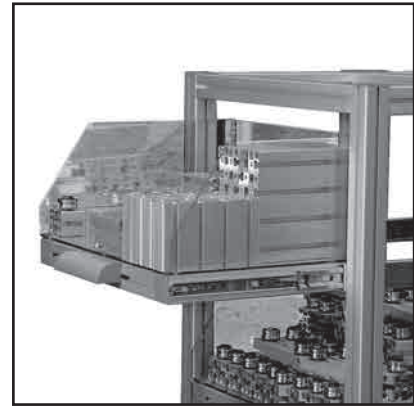
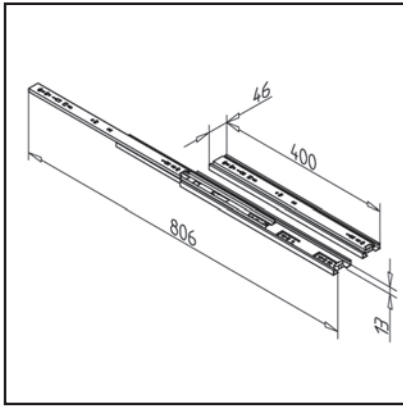
- Use fastening kit to fasten to base frame
- Alternatively attach with mounting set **part no. 32.0806/0** to strut profiles of the base frame



## TELESCOPIC GUIDE FULL EXTENSION 400

Part no.

32.0801/0



### TECHN. DATA / ITEMS SUPPLIED

- Steel, galvanized
- with a self-closing feature
- Max. load capacity per compartment 35kg
- Mounting length 400 mm, pull-out length

406 mm

- **Other lengths on request**
- Items supplied: 2 pieces
- Weight = 1.225 kg/pair

### ASSEMBLY

- Fasten to the side of drawers and profile

## SYSTEM WORKPLACE LUMINAIRE LED-S | LED-M | LED-L

LED-S: Part no. **32.1160/0**LED-M: Part no. **32.1161/0**LED-L: Part no. **32.1162/0****PRODUCT DESCRIPTION**

- Compact and robust luminaire housing made of self-supporting aluminium profile, natural anodised
- Integrated mounting groove 30 (8 mm)
- Mains connection via 3 m supply cable with Schuko plug
- Integrated ON / OFF switch
- Very good glare protection thanks to micro prism screen plus additional diffuser foil. By turning the film, the reflected glare on high-gloss surfaces can be significantly reduced. The light distribution is softer, but the illuminance is reduced by about 14%.
- Profile end caps made of sheet steel grey, RAL 7012
- Absolutely flicker-free due to DC operation of the LEDs, extremely low-loss integrated electronic LED converter
- Complete with LED light-engine, neutral white (840) of the latest generation
- High luminous efficacy thanks to high-gloss anodised reflectors

**PRODUCT ADVANTAGES**

- Durable, virtually maintenance-free luminaire: LED life up to 50,000h
- High energy efficiency, approx. 25% more light with half energy consumption
- Smooth, easy to clean, closed construction
- Ready for mains voltage, no separate power supply

**Technical Data LED****LED-S**

- Dimensions: 302 x 61 x 80 mm
- Protection: IP 20
- Protection class: I
- Supply voltage: 220-240V, 0/50...60 Hz
- Rated input current at 230 V: 0,045 A
- Lamp: 1 x LED light-engine à 8 W
- Total luminous flux (typical): 1400 lm, or 1000 LUX at 750 mm distance
- Light colour: 5000 K
- colour rendering (CRI): 1B (Ra >80)

**LED-M**

- Dimensions: 587 x 61 x 80 mm
- Protection: IP 20
- Protection class: I
- Supply voltage: 220-240 V, 0/50...60 Hz
- Rated input current at 230 V: 0,08 A
- Lamp: 1 x LED light-engine à 13,6 W
- Total luminous flux (typical): 2500 lm, or 1000 LUX at 1000 mmdistance
- light colour: 5000 K
- colour rendering (CRI): 1B (Ra >80)

**LED-L**

- Dimensions: 872 x 61 x 80 mm
- Protection: IP 20
- Protection class: I
- Supply voltage: 220-240 V, 0/50...60 Hz
- Rated input current at 230 V: 0,1 A
- Lamp: 2 x LED light-engine à 20,4 W gesamt
- Total luminous flux (typical): 3800 lm, or 1350 LUX at 1000 mm distance
- light colour: 5000 K
- colour rendering (CRI): 1B (Ra >80)

**STANDARDS AND GUIDELINES**

The product complies with the European standards for electrical luminaires, DIN EN 60598 (VDE 0711) and the European standards for electromagnetic compatibility EN 55015, EN 61547, EN 61000-3-2 and thus the EU low-voltage and EU EMC Directive.

**INSTALLATION AND OPERATING INSTRUCTIONS**

LED-S / M: max.28 lights on a circuit breaker C13.

LED-L: max.22 lights on a circuit breaker C13

**ITEMS SUPPLIED**

- Luminaire with 3m supply cable and Schuko plug
- Without fastening kit



System workplace luminaire available in different lengths

## SYSTEM WORKPLACE LUMINAIRE LED-M / LED-L - DIMMABLE

Dimmable via lamp switch  
 LED-M: Part no. **32.1163/0**  
 LED-L: Part no. **32.1165/0**

## PRODUCT ADVANTAGES

- Durable, virtually maintenance-free luminaire:
- LED-Lifespan up to 50.000 h
- Smooth, easy to clean, closed construction
- Ready for mains voltage, no separate power supply
- SwitchDIM-Function: infinitely dimmable by integrated or external button, the dimming process adapted to the eye sensitivity
- Memory function: Lamp starts after switching back on in last dimming position

## SYSTEM WORKPLACE LUMINAIRE LED-M DIMMABLE

- Dimensions: 587 x 61 x 80 mm
- Protection class: IP 20
- Protection class: I
- Supply voltage: 220-240 V, 0/50...60 Hz
- Nominal input current at 230 V: approx.. 0,1 A
- Bulb: 1 x LED light-engine à 16 W
- Total luminous flux (typical): 2800 lm, resp. 1100 LUX at 1000 mm distance
- Light color: neutral white 5000 K (840)
- Color rendering (CRI): 1B (Ra >80)
- Dimming: 1 - 100%

Dimmable via external push-button LED-M:  
 Part no. **32.1164/0**  
 LED-L: Part no. **32.1166/0**

## INSTALLATION AND OPERATING INSTRUCTIONS

- Operate max. 20 lights on one circuit breaker C13 (max 10 pcs / B13).

## ITEMS SUPPLIED

- Luminaire with 3m supply cable and Schuko plug with internal
- Luminaire with 4m supply cable without plug with external
- Without fastening material

## SYSTEM WORKPLACE LUMINAIRE LED-L DIMMABLE

- Dimensions: 872 x 61 x 80 mm
- Protection class: IP 20
- Protection class: I
- Supply voltage: 220-240 V, 0/50...60 Hz
- Nominal input current at 230 V: approx. 0,13 A
- Bulb: 2 x LED light-engine à 24 W
- Total luminous flux (typical): 4250 lm, resp. 1500 LUX at 1000 mm distance
- Light color: neutral white 5000 K (840)
- Color rendering: (CRI): 1B (Ra >80)
- Dimming: 1 - 100%

## FASTENING OPTIONS



Fastening kit  
 system workplace luminaire PA  
 Part no. 32.1130/0



Fastening kit system work-  
 place luminaire angle adjust-  
 able  
 Part no. 32.1131/0



Fastening kit  
 system workplace luminaire steel  
 part no. 32.1132/0

## PROFILE LUMINAIRE LUCIDUS

Profile luminaire S Part no. **32.1169/0**

Profile luminaire M Part no. **32.1170/0**

Profile luminaire L Part no. **32.1171/0**



– Luminaire embedded in the profile

#### Product description

- The profile luminaire Lucidus optimally illuminates the work area. At the workbench, at machines, at home, in the office and in many other places.
- Profile light dimensions suitable for MiniTec profile 45 x 45
- Can be integrated into MiniTec frame constructions
- Load capacity according to MiniTec profile
- Standard lengths 446 mm, 646 mm and 1016 mm, also special lengths available
- High luminosity
- Built-in power supply unit, electrical connection on site via terminals
- The luminaire can also be dimmed via a separate 0-10V control line
- IP68 waterproof design (outdoor) possible
- Flicker-free light without UV / IR component
- Colour rendering index RA (CRI): 83
- Suitable for manual workplaces, exhibition stands, machines, milling machines, lathes, designer lamps, advertising lighting, trade fair technology

#### PRODUCT ADVANTAGES

- Can be used directly as a profile
- Fastening possible with all fastening elements from the MiniTec modular profile system
- Durable, virtually maintenance-free luminaire: LED service life up to 50000 hours
- High energy efficiency
- Slightly dimmable
- Special lengths available

#### Specifications

EN55015:2006, EN61000 and EN61547:2009

#### Items supplied

- Luminaires in respective length, with attached power supply.
- The luminaires can also be supplied dimmable on request

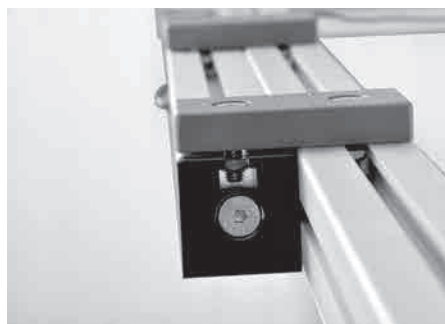
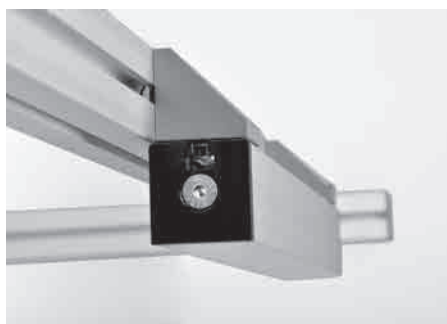
PROFILE LUMINAIRE LUCIDUS

Profile plate for profile luminaire,  
Fastening possible with all fastening elements from the MiniTec profile construction kit.

FASTENING OPTIONS



Lateral bracket  
height adjustable/rotatable



Upper bracket  
adjustable/rotatable

TECHNICAL DATA

TYPE	Profilleuchte S L=446mm	Profilleuchte M L=646mm	Profilleuchte L L=1016mm
Part no.	32.1169/0	32.1170/0	32.1171/0
Total length in mm	446	646	1016
Illuminated length in mm	430	630	1000
Illuminated width in mm	40	40	40
Luminaire profile width in mm	45	45	45
Luminaire profile height in mm	45	45	45
Mounting groove (top side) in mm	8	8	8
Lamp	SMD LED	SMD LED	SMD LED
Supply voltage	240 V	240 V	240 V
Power in W	30	40	60
Illuminance in lx (at 1000 mm distance)	3200	4600	7300
colour temperature SMD LED in K	approx. 6000 (daylight white)	approx. 6000 (daylight white)	approx. 6000 (daylight white)
Expected life in hours	> 50000	> 50000	> 50000

## ENERGY SUPPLY



The MiniTec power supply duct for electrics and compressed air for the individual arrangement of the installation elements of the power supply: Exactly equipped according to your needs and completely wired cable ducts simplify the installation of your workplace considerably. Our experienced specialists take over the assembly for you. The cable channel with 4 m supply line is equipped for immediate connection with Schuko or CEE plug. The installation by certified electricians in your house will be eliminated.

With the cable channel we have equipped and installed, you will receive a meaningful test certificate. The cable duct and the cover are made of aluminum, natural anodised. Only high-quality

branded products are used as built-in elements. The following overview simplifies the definition of the equipment you require. Subsequent installation of other elements is possible at any time by an authorized electrician.

**CABLE DUCT 130 AL****Part no. 32.0715/0**

Manufacturing length 6m, power supply of sockets, switches, telecommunication connections, circuit breakers etc.

**COVER FOR CABLE DUCT 130****Part no. 32.0716/0**

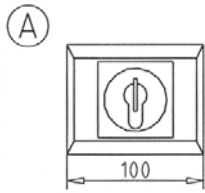
Manufacturing length 6m, Press cover on cable duct

**END CAP FOR CABLE DUCT 130****Part no. 32.0717/0**

Plastic molding, painted aluminum color

ASSEMBLY ENERGY SUPPLY DUCT

**KEY SWITCH** Part no. 32.0720/0



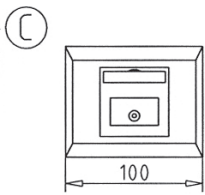
- 16 A, 2-pole

**SWITCH** Part no. 32.0725/0



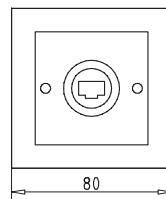
- 16 A, 1 -pin

**OVERVOLTAGE PROTECTION** Part no. 32.0721/0



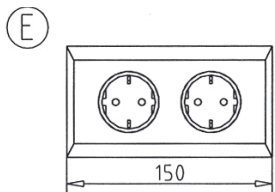
- UN = 230V AC

**DATA PORT CAT6** Part no. 32.0729/0



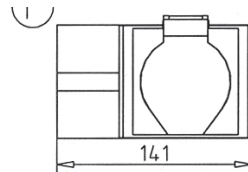
- RJ 45. link E, up to 250 MHz
- Complete junction box with output socket and frame for installation in cable duct

**CHANNEL SOCKET** Part no. 32.0723/0



- With earthing contact according to DIN

**SOCKET CEE 16A** Part no. 32.0724/0



- for plug DIN, 5-pin, 16 A
- Machine installation unit with 3 PLE
- Complete with mounting plate
- Can be equipped with automatic circuit breaker C10 with 1 PLE
- Automatic circuit breaker C 13 with 1 PLE
- Residual current device 1-pole 16A / 30mA with 2 PLE

**INSTALLATION DISTRIBUTION** Part no. 32.0730/0



**PNEUMATICS SIMPLE** Part no. 32.0740/0



**PNEUMATICS DOUBLE** Part no. 32.0741/0

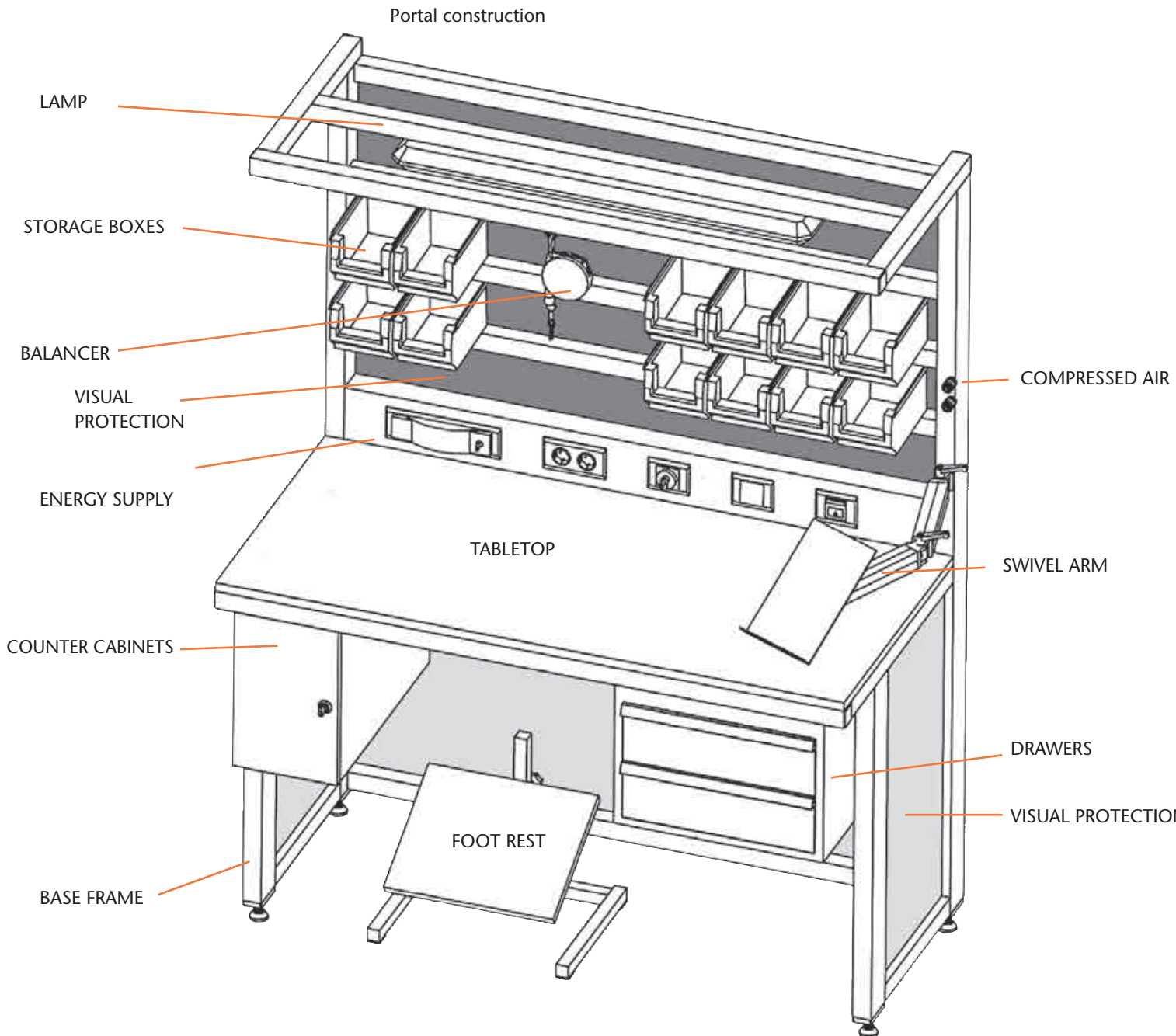


## EQUIPMENT

In the day-to-day life it is the small things that matter. Practical accessories are the necessary supplement to the perfect design of an optimal workplace. Everything must have its place, instructions or information must be clean and visible. Additional

devices that avoid stress and provide an overview in the workplace help to noticeably increase efficiency while reducing the workload of employees.

## SYSTEM WORKSTATION COMPONENTS




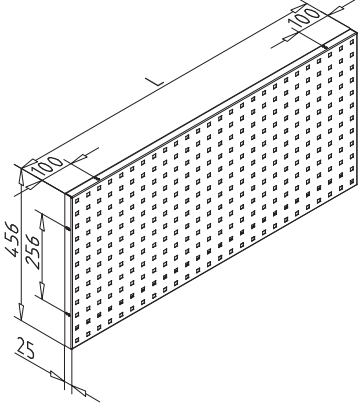


EQUIPMENT

■ For overview and order in the workplace

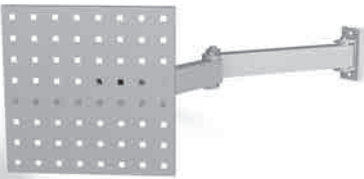
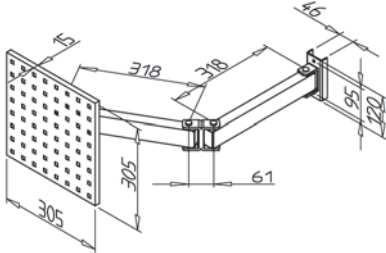
With the MiniTec assortment of tool holder plates, tool carriers and various tool holders, you can create an overview and order at your workplace. With this program, the operator has the right holder for every tool.

Tool holder plates

		Tool holder plates	
		Size 500:	L = 494 mm
		Part No.	32.0660/0
		Size 1000:	L = 988 mm
		Part No.	32.0665/0
		Size 1200:	L = 1178 mm
		Part No.	32.0670/0
		Size 1500:	L = 1482 mm
		Part No.	32.0675/0
		Size 2000:	L = 1976 mm
		Part No.	32.0680/0

- Steel, powder coated, grey, RAL 7035
- ESD capability
- Is simply attached to the portal structure
- Square perforation 10 x 10mm in grid 38mm

Tool carrier with double-joint swivel arm


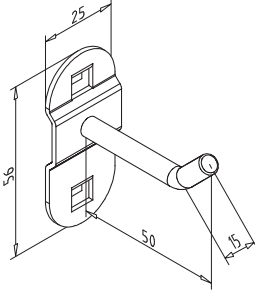
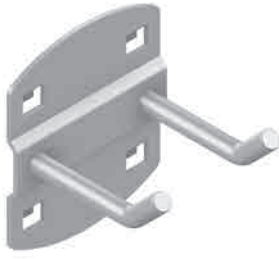
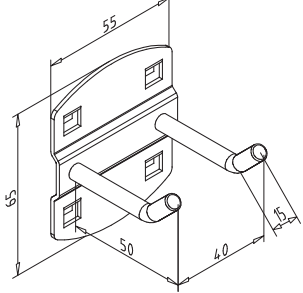
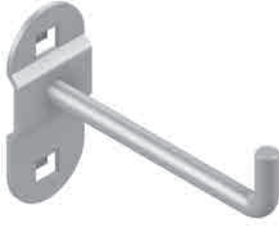
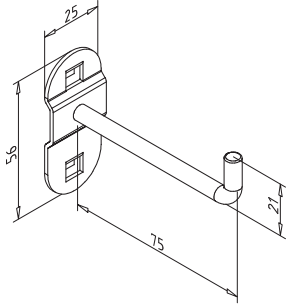

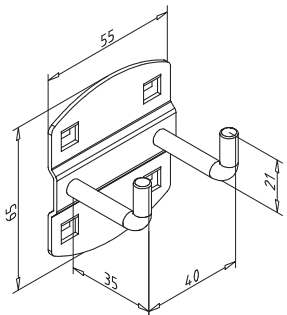

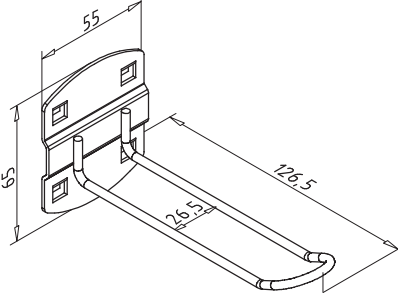
		Tool carrier with double joint swivel arm	
		Part no.	32.0510/0
		ESD tool carrier with double joint swivel arm	
		Part no.	32.0510/6

- Steel, painted light grey, RAL 7035
- Capacity 150 N
- Is simply attached to the portal structure
- Square perforation 10 x 10mm in grid 38mm


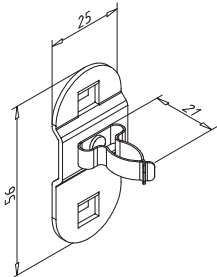

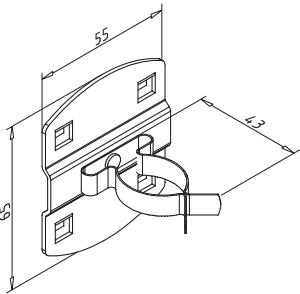

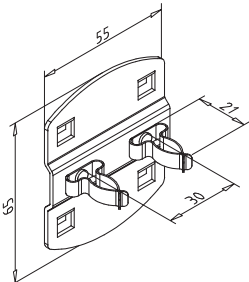

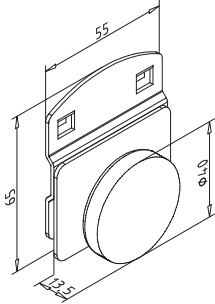

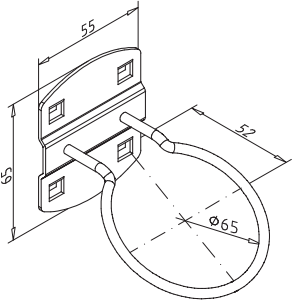
## EQUIPMENT

The aluminum-colored tool holders have a shock- and scratch-resistant plastic coating and a 1.5mm thick, embossed base plate. The holders are matched to the tool holder plates and the tool carrier.


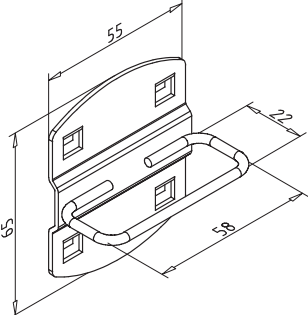

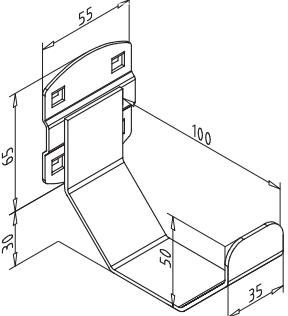

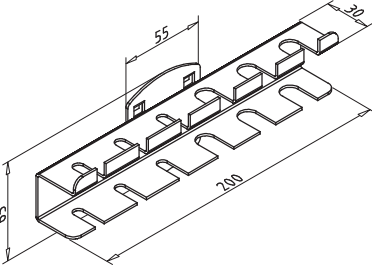

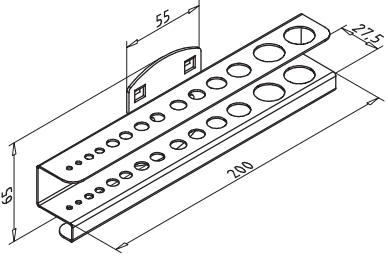

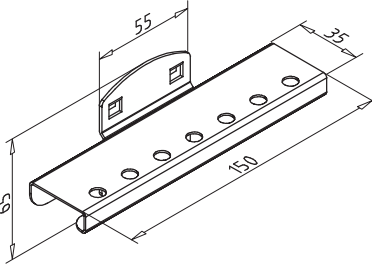
All products are also available in ESD version on request.

		<p><b>Tool holder with angled hook end</b></p> <p>Hook Ø 6,3 mm</p> <p>L= 50mm      Part No.    32.0527/0</p> <p>L=100mm     Part No.    32.0651/0</p>
		<p><b>Double tool holder with inclined hook end</b></p> <p>Hook Ø 6,3 mm</p> <p>L= 50mm      Part No.    32.0653/0</p> <p>L= 75mm      Part No.    32.0654/0</p>
		<p><b>Tool holder with vertical hook end</b></p> <p>Hook Ø 6,3 mm</p> <p>L= 75mm      Part No.    32.0652/0</p>
		<p><b>Double tool holder with vertical hook end</b></p> <p>Hook Ø 6,3 mm</p> <p>L= 35mm      Part No.    32.0508/0</p> <p>L= 50mm      Part No.    32.0655/0</p> <p>L= 75mm      Part No.    32.0656/0</p>
		<p><b>Tool holder for self-service packaging</b></p> <p>Hanger Ø 3,7 mm</p> <p>L= 125mm, W= 30mm      Part No.    32.0658/0</p>

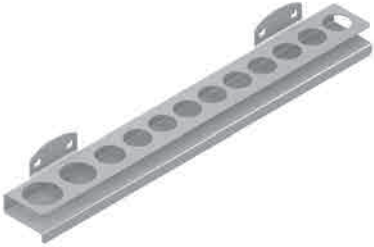
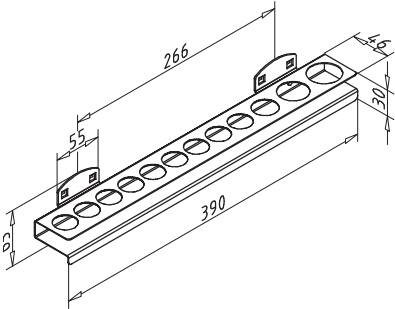

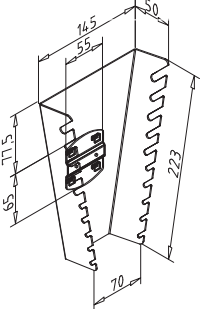

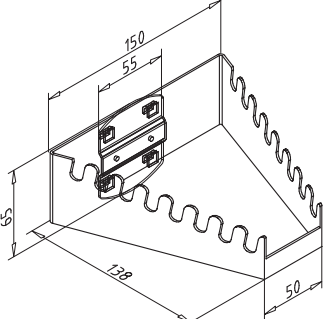

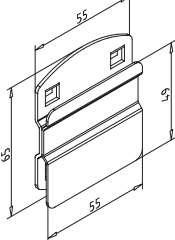

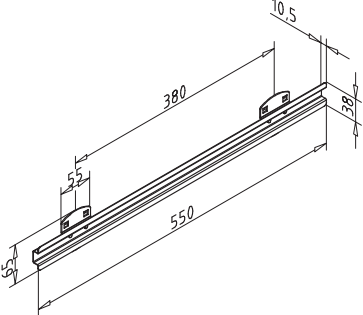
EQUIPMENT

		<p><b>Tool clamp simple, small base plate</b></p> <p>For clamping tools with <math>\varnothing</math> 7-10 mm</p> <p>Part No. 32.0529/0</p>
		<p><b>Tool clamp simple, large base plate</b></p> <p>For clamping tools with <math>\varnothing</math> 20-25 mm</p> <p>Part No. 32.0528/0</p>
		<p><b>Double tool clamp</b></p> <p>For clamping tools with <math>\varnothing</math> 7-10 mm</p> <p>Part No. 32.0506/0</p>
		<p><b>Magnetic holder</b></p> <p>Holding force approx. 5 kg</p> <p>Part No. 32.0515/0</p>
		<p><b>Machine holder</b></p> <p>For tools up to <math>\varnothing</math> 60 mm</p> <p>Part No. 32.0657/0</p>


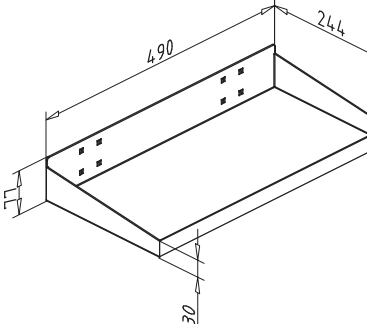

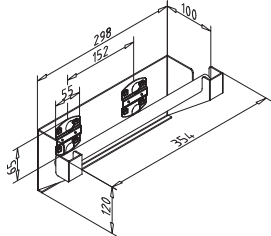
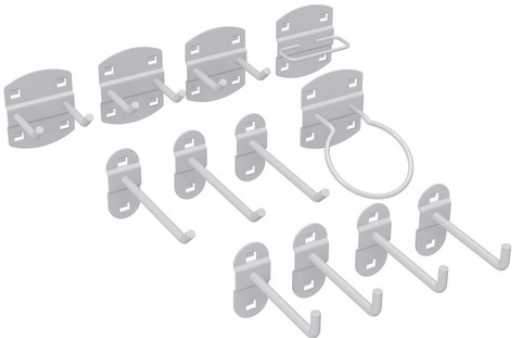
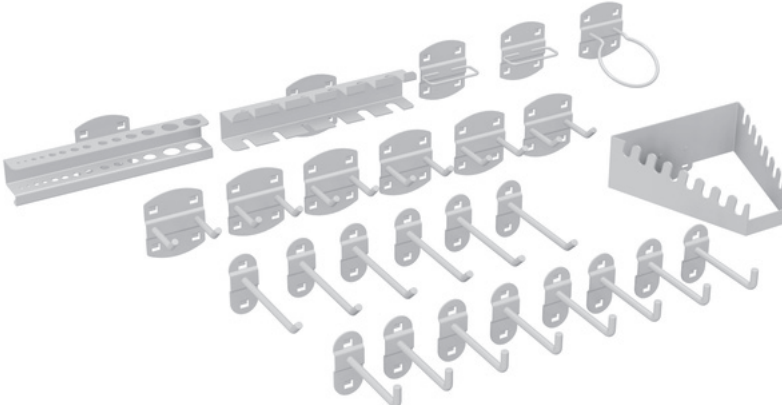
## EQUIPMENT

		<p><b>Chuck holder</b></p> <p>For tools with a cross section of up to 54 x 19 mm</p> <p>Part No. 32.0531/0</p>
		<p><b>Pipe holder, also for hoses, cables etc.</b></p> <p>For hoses and cables up to 100 mm in diameter</p> <p>Part No. 32.0564/0</p>
		<p><b>Screwdriver holder for 6 parts</b></p> <p>3 receiving slots 6.5 mm wide and 23 mm deep 3 receiving slots 12.5 mm wide and 23 mm deep</p> <p>Part No. 32.0649/0</p>
		<p><b>Drill / hex socket holder, for 14 parts</b></p> <p>Mounting holes</p> <p>2 x Ø 3,2 mm 2 x Ø 4,7 mm 2 x Ø 6,7 mm 2 x Ø 7,7 mm 2 x Ø 8,7 mm 1 x Ø 10,7 mm 1 x Ø 12,7 mm 2 x Ø 16,7 mm</p> <p>Part No. 32.0504/0</p>
		<p><b>Bit holder for 7 bits</b></p> <p>Mounting holes 7x Ø 7,2 mm</p> <p>Part No. 32.0503/0</p>

EQUIPMENT

		<p><b>Nut holder for 12 nuts</b></p> <p>Mounting holes</p> <p>9 x Ø 24,7 mm          1 x Ø 27,3 mm          1 x Ø 31,7 mm          1 x Ø 34,7 mm</p> <p>Part No. 32.0519/0</p>
		<p><b>Wrench holder vertical for 10 keys</b></p> <p>Receiving slots</p> <p>1 x 7,5 x 30 mm          2 x 6,5 x 23 mm          2 x 5,5 x 20 mm          2 x 4,5 x 15 mm          3 x 4,0 x 10 mm</p> <p>Part No. 32.0521/0</p>
		<p><b>Wrench holder horizontally for 8 keys</b></p> <p>8 receiving slots 6.5 x 15 mm</p> <p>Part No. 32.0523/0</p>
		<p><b>View storage boxes for 1 box size 7 and 8</b></p> <p>Max. material thickness for hanging 4 mm</p> <p>B= 55mm Part No. 32.0509/0</p>
		<p><b>View storage boxes for 5 boxes up to size 8</b></p> <p>L= 550mm, H= 38mm Part No. 32.0532/0</p>

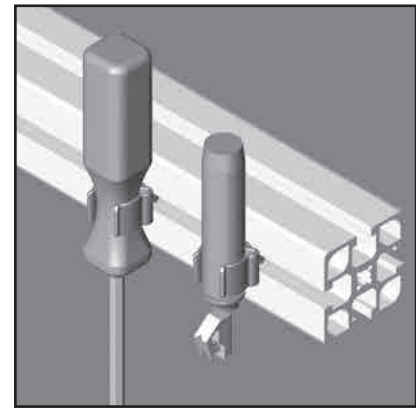
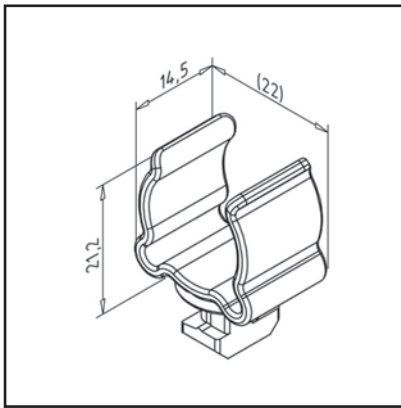
EQUIPMENT

		<p><b>Steel floor with roll-off edge</b></p> <p>W= 490mm, D= 243mm      Part No.      32.0659/0</p>
		<p><b>Dispensers</b></p> <p>Roller axis Ø 22 mm Distance between roller axis and rear wall approx. 50 mm</p> <p>Part No.      32.0611/0</p>
	<p><b>Tool holder assortment, 12 pieces</b> <b>Part no. 32.0607/0</b> <b>consisting of:</b></p> <p>4 x Toolholder      Part No.      32.0652/0</p> <p>3 x Toolholder      Part No.      32.0651/0</p> <p>3 x Double tool holder      Part No.      32.0653/0</p> <p>1 x Machine holder      Part No.      32.0657/0</p> <p>1 x Chuck holder      Part No.      32.0531/0</p>	
	<p><b>Tool holder assortment, 26 pieces</b> <b>Part no. 32.0606/0</b> <b>consisting of:</b></p> <p>8 x Toolholder      Part No.      32.0652/0</p> <p>6 x Toolholder      Part No.      32.0651/0</p> <p>6 x Double tool holder      Part No.      32.0653/0</p> <p>1 x Machine holder      Part No.      32.0657/0</p> <p>2 x Chuck holder      Part No.      32.0531/0</p> <p>1 x Screwdriver holders      Part No.      32.0523/0</p> <p>1 x Drill / hex socket holder      Part No.      32.0504/0</p> <p>1 x Screwdriver holders      Part No.      32.0649/0</p>	

## UNIVERSAL HOLDER

Part no.

22.1175/0



### TECHN. DATA / ITEMS SUPPLIED

- PA, grey
- Polyamide, grey
- Weight = 0.003 kg/piece

### APPLICATIONS

- Holding for all kinds of worktools
- Tools with a diameter of ca. 15 - 21 mm
- Max. weight 160 g

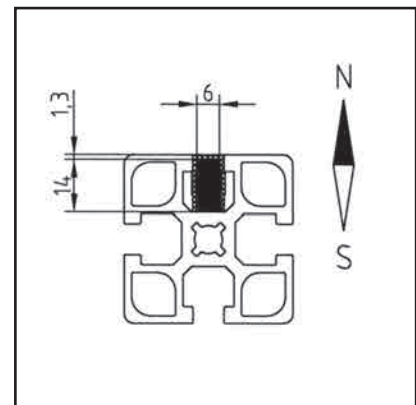
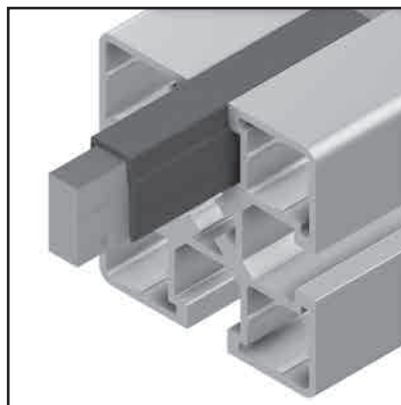
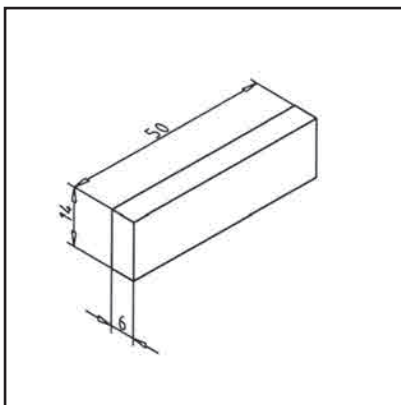
### ASSEMBLY

- Insert in profile groove and turn 90°

## MAGNET 6 X 14 X 50

Part no.

21.0032/0



### TECHN. DATA / ITEMS SUPPLIED

- NeFeB N35, nickel-plated
- Without fastening kit
- Attention: Electric- and memory devices can be faulted by the magnet
- Power density,  $BH_{mx} = 263 \text{ kJ/m}^3$
- Remanence,  $B_r = 1170 \text{ mT}$
- coercive field strength  $H_{cj} = 955 \text{ kA/m}$
- max. service temperature  $+80 \text{ }^\circ\text{C}$
- Weight = 0.030 kg/piece

### APPLICATIONS

- Adhesive magnet for tools
- Use under conveyor belts as tracking, for magnetizable conveying products or at higher conveying speeds
- Fitting for all profiles of profile series 45

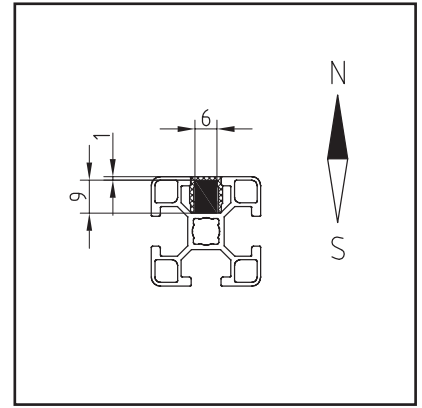
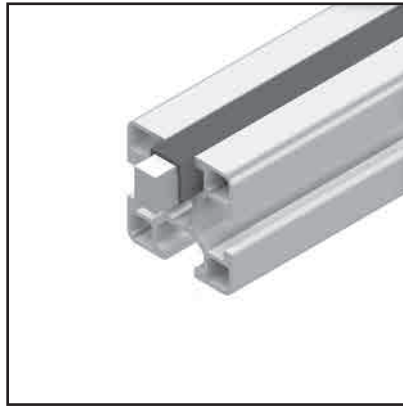
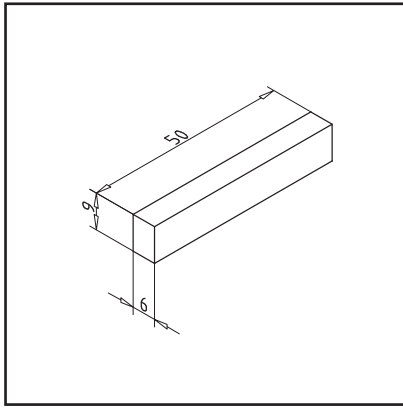
### ASSEMBLY

- Snap or slip the cover profile into profile groove
- Insert magnet into t-slot
- For fastening: (mighty recommended) Use end cap AL, set screw with square nut or t-slot bar

**MAGNET 6 X 9 X 50 MM**

Part no.

21.0040/0

**TECHN. DATA / ITEMS SUPPLIED**

- NeFeB N45, nickel-plated
- Without fastening kit
- Attention: Electric- and memory devices can be faulted by the magnet
- Power density,  $BH_{mx} = 342 \text{ kJ/m}^3$
- Remanence,  $B_r = 1320 \text{ mT}$
- coercive field strength  $H_{cj} = 955 \text{ kA/m}$
- max. service temperature  $+80 \text{ }^\circ\text{C}$
- Weight = 0.023 kg/piece

**APPLICATIONS**

- Adhesive magnet for tools
- Use under conveyor belts as tracking, for magnetizable conveying products or at higher conveying speeds
- Fitting for all profiles of profile series 30

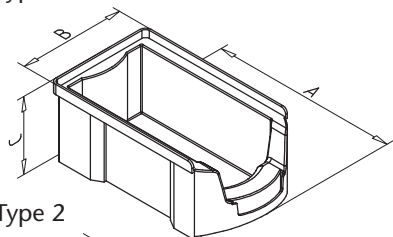
**ASSEMBLY**

- Snap or slip the cover profile into profile groove
- Insert magnet into t-slot
- For fastening: (might recommended) Use end cap AL, set screw with square nut or t-slot bar

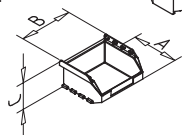


STORAGE BOXES

Type 1



Type 2



TECHNICAL DATA

- Optimal overview and convenient access to the content
- Large handles on the front and back for easy handling
- Dimensionally stable
- Resistant to most acids and oils
- temperature resistance (-20° to +80°C)

APPLICATION

- Provision of small parts, screws, nuts etc. at assembly workstations
- Ergonomic workplace systems

ASSEMBLY

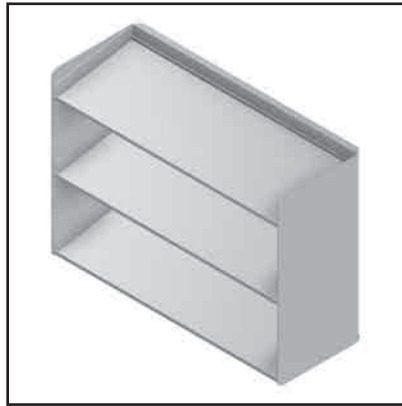
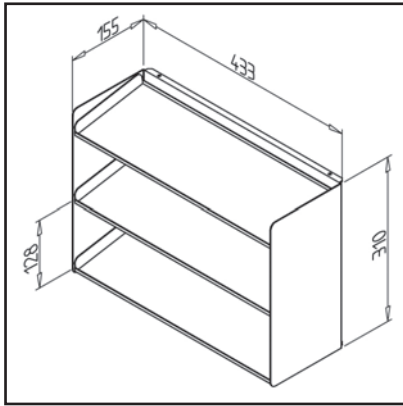
- Mount storage boxes with storage box holder, 1-fold part no. 32.0509/0 or with multiple storage box holder part no. 32.0532/0 on tool holder plate or carrier

Type	Part no.	Measure A	Measure B	Dimension C	Color
1	32.0540/0	360	210	147	blue
	32.0540/5	350	200	145	black ESD
1	32.0541/0	229	148	122	blue
	32.0541/5	235	145	125	black ESD
1	32.0542/0	167	104	76	blue
	32.0542/5	175	100	75	black ESD
2	32.0543/0	85	100	50	blue
	32.0543/5	95	100	50	black ESD

**STORAGE BOX SHELF**

Part no.

32.0514/0

**TECHN. DATA / ITEMS SUPPLIED**

- Steel, powder-coated, grey
- 3 levels
- Weight = 3.800 kg/piece

**APPLICATIONS**

- For semi open front containers and small hardware
- For max. 12 semi open front containers, L= 165 mm, W= 105 mm, H= 75 mm

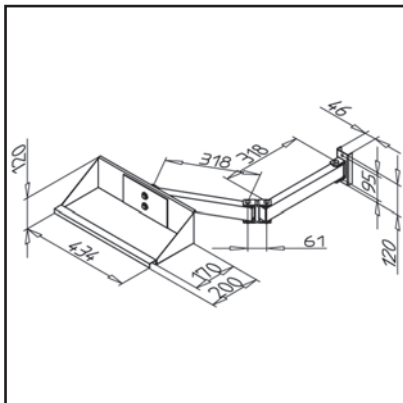
**ASSEMBLY**

- Fasten to the portal structure
- Freestanding or in combination with box holder **part no. 32.0516/0** swiveling
- Optional: in ESD-design **part no. 32.0514/6**

**STORAGE BOX HOLDER**

Part no.

32.0516/0

**TECHN. DATA / ITEMS SUPPLIED**

- Steel, powder-coated, grey
- Fastening material
- Front handle bar
- With double articulated arm 700 mm long
- Load capacity 150 N
- Weight = 4.300 kg/piece

**APPLICATIONS**

- As storage area for semi open front containers and semi open front container racks

**ASSEMBLY**

- Installation on the vertical strut of the portal structure
- Optional: in ESD-design **part no. 32.0516/6**

## KANTAINER

The newly developed KanTainer offers the ideal prerequisite for implementing the principles of lean production in your company using Kanban control.



In combination with the mounting solutions and the ergonomic designed working places of MiniTec, a complete, safe and economic all-round-package for your manual production is ensured. The Kantainer is designed for maximum space utilization in the warehouse with optimal material provision at the workplace. The Kantainer offers all the prerequisites to make

storage, order picking and assembly easier and safer. Thanks to the compatible system components of our extensive MiniTec modular system, we are able to optimally solve virtually every task in manual assembly.

## FUNCTIONS

- For continuous kanban system: no transfer - no error-prone refilling
- Total storage rack use by retractable grip plate
- Ergonomically optimized grip plate eases the removal
- Transparent cover against soiling and mixing of parts
- Cover as protection against unintentional opening or loss of parts
- Simple content control
- Transparent dosing disc: easy recognition of residual quantities
- Dosing disc prevents uncontrolled trickling out of small parts
- Secure stacking through locating pins and eyelets
- Double-sided labelling
- Retaining device at the back of the container
- Bottom guide rails for longitudinal and transverse transport

## TECHNICAL DATA

- Dimensions: 175x126x88 [mm]
- Superimposed load 50 kg
- Content load: 5 kg
- Temperature resistance: -20°C to +90°C
- Material: polypropylene, polystyrene
- Color:
  - Basalt grey (RAL 7012) [Part no.: 32.0870/0]
  - Orange (RAL 2004) [Part no.: 32.0870/1]
  - Black ESD conductive [Part no.: 32.0870/5]

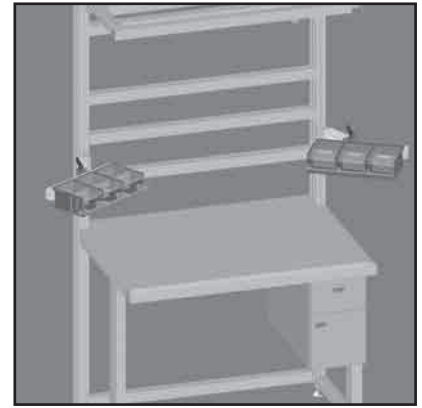
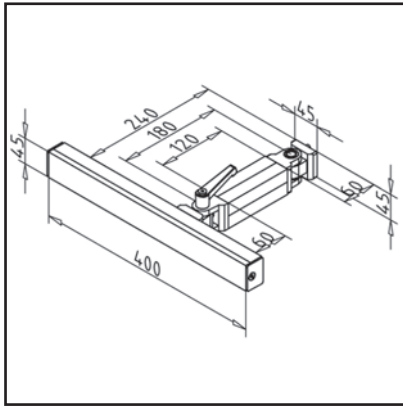
The ESD-conductive Kantainer is the optimal and logical addition to our ESD workstation systems.



**KANTAINER-SWIVEL CANTILEVER, 3-FOLD**

Part no.

32.0877/0

**TECHN. DATA / ITEMS SUPPLIED**

- Profile 45 x 32 F and 45 x 45 F
- heavy duty joint and swivel joint with clamping lever with supplied hardware
- Load capacity: max.= 100 N
- Weight = 1.916 kg/piece

**APPLICATIONS**

- Accepting 3 KanTainers

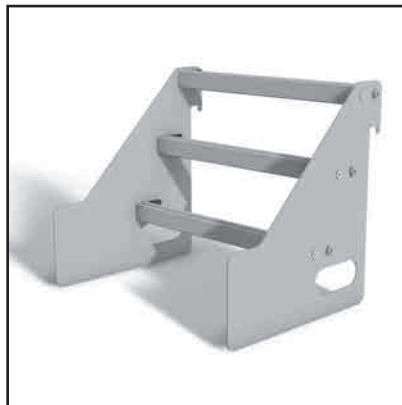
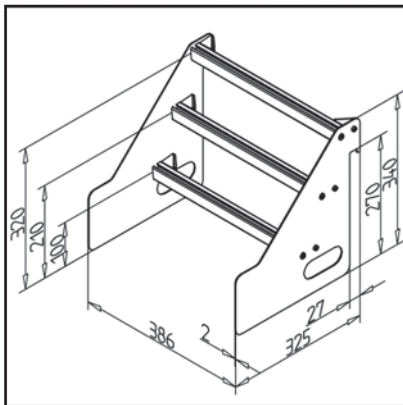
**ASSEMBLY**

- Mount the heavy load hinge on the table

**KANTAINER - SHELF (STRAIGHT)**

Part no.

32.0876/0

**TECHN. DATA / ITEMS SUPPLIED**

- Side panels steel, powder coated, grey
- Intermediate struts of profile 23 x 30
- Delivery as construction set
- Fastening kit
- Weight = 3.400 kg/piece

**APPLICATIONS**

- Accepting 9 KanTainers
- Adjustable inclination
- With the hooks on the back, the shelf can also be hung in our profile grooves

**ASSEMBLY**

- Screw profiles to side panels with supplied mounting angles and mounting hardware

## MONITOR SUPPORT LX AND LX HD





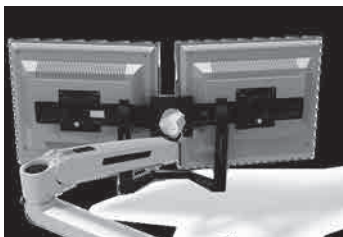


## APPLICATION

The LX and LX HD monitor supports are suitable for a wide range of applications: suitable for large monitors, medium-sized televisions and all-in-one computers weighing up to 13.6 kg. The LX offers a large range of motion and is suitable for both sedentary and standing users, allows vertical adjustment of up to 51 cm and lateral adjustment of 157 cm.

## ADVANTAGES

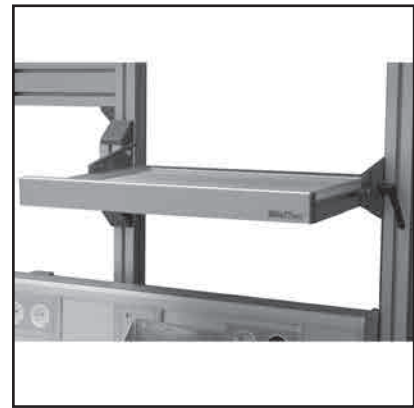
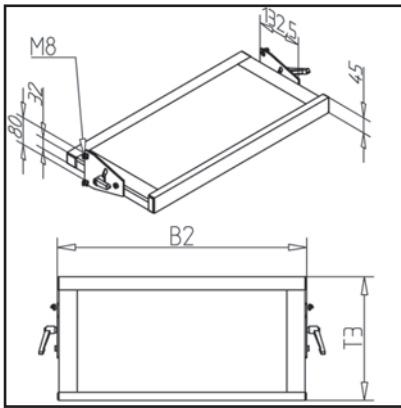
- More freedom and flexibility through maximum ergonomic comfort
- Maximum comfort when positioning the monitor
- Integrated cable management
- Up to 51 cm stepless height adjustment, meets the ergonomic principles of more than 90% of all users
- Arm can be pulled back over the base plate and fold up; suitable for storage in shelves or cupboards in confined spaces
- Outstanding viewing comfort prevents health risks in the neck and back
- LCD range up to 88 cm. Simply slide the screen to the side if you are not using it

		
	LX HD arm for wall mounting	LX arm for wall mounting
Part No.	32.0623/0	32.0622/0
Scope of delivery	LX HD sit-stand-arm, extension, wall mounting base, VESA brackets incl. mounting material	LX LCD-arm, bracket arms, wall bracket base. Direct mounting on solid vertical surfaces incl. mounting material
Maximum screen size	46"	24"
Screen size may vary. Details refer to the screen diagonal.		
Load-bearing capacity	6,3–13,6 kg	3.2-9.1 kg monitor depth can be greater than 5 cm reduce capacity
Height adjustment	51 cm	33 cm
Tilt function	80° 75° / 5°	75° 70° / 5°
Swivel function	360°	360°
Rotation	90° Rotation with portrait / landscape mode	90° Rotation with portrait / landscape mode
VESA	75x75mm/100x100mm/200x100mm/200x200mm	75x75mm/100x100mm
Depth	Foldable to 12 cm	Foldable to 13.4 cm
Reach up	84 cm	64 cm
Transport weight	9,1 kg	3,2 kg
Transport dimensions	64 x 38 x 19 cm	53 x 29 x 19 cm
<b>ACCESSORIES</b>		
32.0612/0	Keyboard tray	
	Keyboard shelf made of sheet steel, powder-coated matt black for mounting on monitor carrier LX / LX HD. Rear cable entry for mouse and keyboard. The distance to the monitor is adjustable. For fastening the existing VESA holes are used. When used, the arm is additionally loaded with 2.4kg.	
32.0624/0	Monitor handle Kit	
	Can be attached to many mounts using a bolt circle of 50 x 50mm, 100 x 100mm or 200 x 100mm. Robust design ensures long service life. Suitable for displays up to a size of 32 inches. When used, the arm is additionally loaded with 1.3 kg.	
39.0118/0	Dual monitor support for LX HD	
	<p>Recording for 2 monitors and a handle</p> <ul style="list-style-type: none"> <li>- Integrated cable management</li> <li>- Load capacity: 6.3 - 10.5 kg</li> <li>- Height adjustment: 510 mm</li> <li>- Extension: up to 840 mm</li> <li>- Tilt function: 80°</li> <li>- Rotation: 90°</li> <li>- VESA mounting standard: 75 x 75 mm 100 x 100 mm</li> <li>- Maximum display size: 46 "</li> </ul> <p>- When used the arm is additionally loaded with 2.7 kg.</p>	

## STORAGE CONSOLE WITH CLAMPING LEVER

Part no.

32.0501/0



### TECHN. DATA / ITEMS SUPPLIED

- Sturdy frame made of aluminum profiles anodized E6 / EV1
- Shelf for cabinet, chipboard, light grey
- Front edge 13 mm raised edges
- ESD on request
- **Please state table width B2 and depth T3**
- Load capacity: 400 N

### APPLICATIONS

- Continuously inclinable from  $-30^\circ$  to  $+30^\circ$
- Rack is adjustable

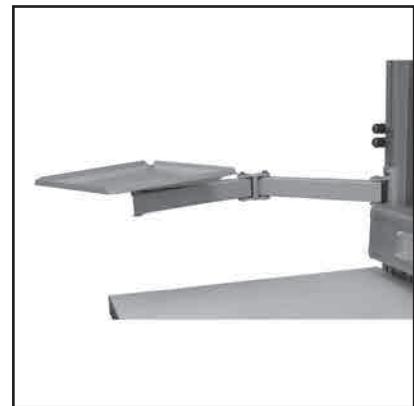
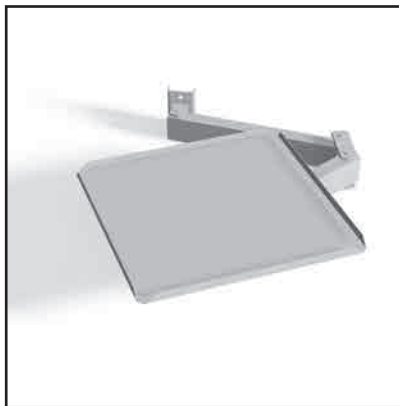
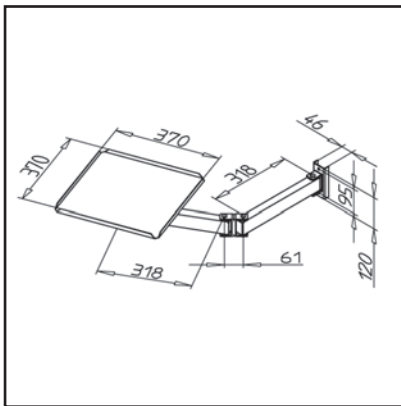
### ASSEMBLY

- Fastening with 2 swivel plates to the portal structure
- without clamp lever **part no. 32.0501/1**

## STORAGE SHELF / MONITOR SUPPORT ROTATING CRT

Part no.

32.0512/0



### TECHN. DATA / ITEMS SUPPLIED

- Steel, powder coated, light grey
- Double joint design, length 430 mm
- Monitor and keyboard panel rotatable
- Monitor panel: 370 x 370 mm
- Load capacity 150 N
- Weight = 4.200 kg/piece

### APPLICATIONS

- Provision of IT data, guidelines, Internet connection

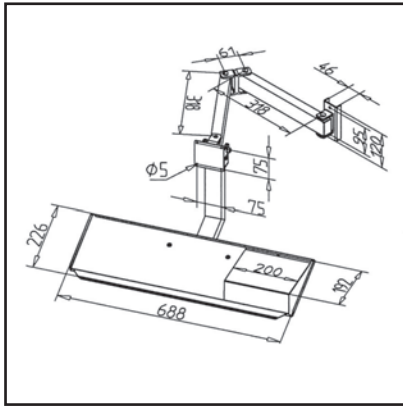
### ASSEMBLY

- Screw onto the portal structure
- Optional as ESD version **Part no. 32.0512/6**

## MONITOR SUPPORT WITH KEYBOARD TRAY TFT

Part no.

32.0517/0



### TECHN. DATA / ITEMS SUPPLIED

- Steel, powder-coated, grey
- Monitor and keyboard carrier with mouse rack
- With double-articulated swing boom
- Delivery as construction set
- ESD on request
- Load capacity 150 N
- Weight = 7.400 kg/piece

### APPLICATIONS

- The mouse rack is shiftable and therefore suitable for right and left-handers

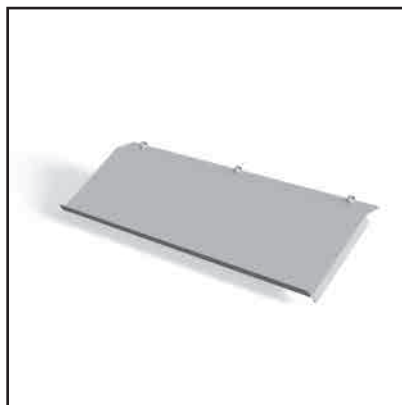
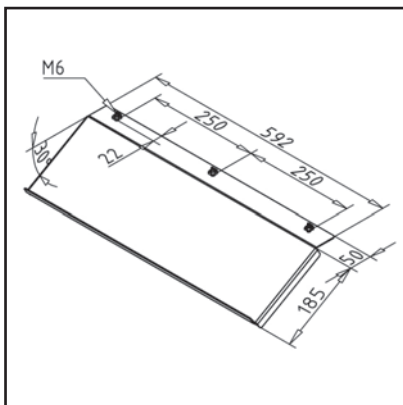
### OTHER VERSIONS

- Support with keyboard shelf with VESA connection adapter 75 mm **part no. 32.0517/0**
- Support with keyboard shelf with VESA connection adapter 100 mm **part no. 32.0517/1**
- Support without keyboard shelf with VESA connection adapter 75 mm **part no. 32.0525/0**
- Support without keyboard shelf with VESA connection adapter 100 mm **part no. 32.0526/0**

## KEYBOARD STORAGE

Part no.

32.0518/0



### TECHN. DATA / ITEMS SUPPLIED

- Stainless steel
- Stainless steel 2mm, grounded
- Rustproof
- For standard keyboards
- With slide nuts M6Z, ESD-compatible
- Fastening material
- Load capacity 150 N
- Weight = 2.477 kg/piece

### APPLICATIONS

- For setting the keyboard on the workplace

### ASSEMBLY

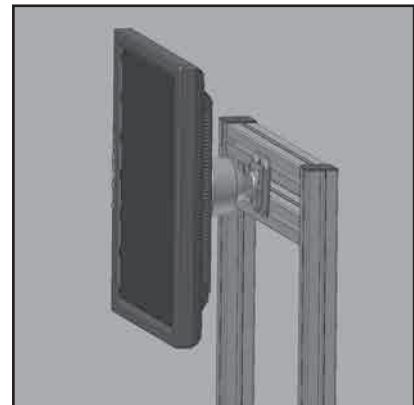
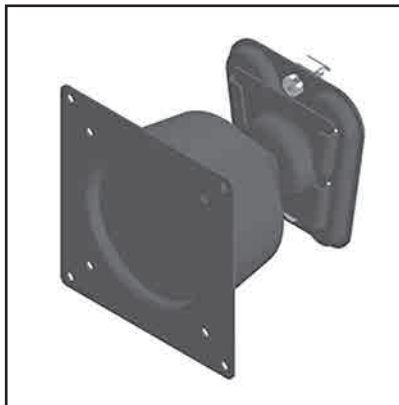
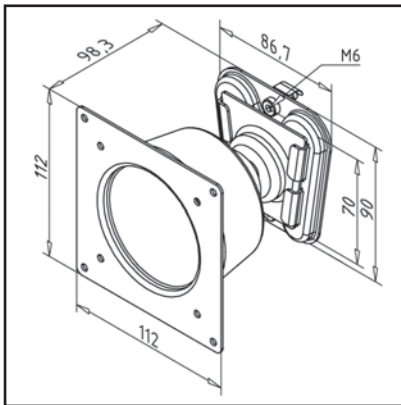
- Fasten to profile groove with supplied hardware



**MONITOR CARRIER V 100**

Part no.

32.0053/0

**TECHN. DATA / ITEMS SUPPLIED**

- Steel, powder coated black
- Fastening kit
- Load capacity 150 N
- Weight = 0.568 kg/piece

**APPLICATIONS**

- Swiveling with ball joint
- Monitor can be rotated through 180°
- For VESA standard 75 x 75 mm / 100 x 100 mm

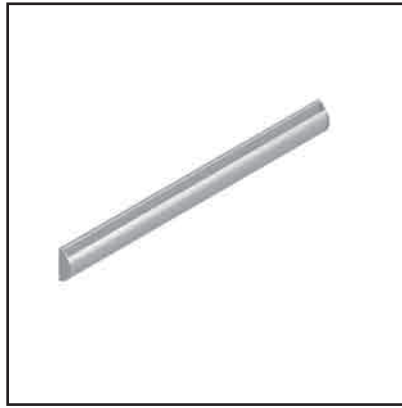
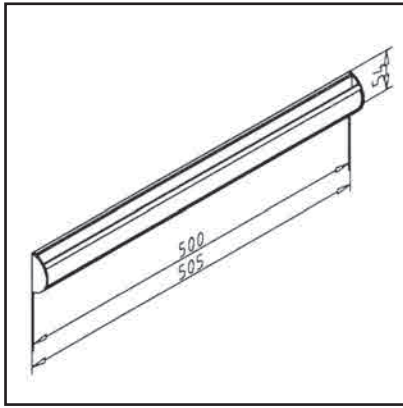
**ASSEMBLY**

- Fasten to profile groove with supplied hardware.

## DOCUMENT BAR

Part no.

32.0610/0



### TECHN. DATA / ITEMS SUPPLIED

- Aluminium anodized
- With clamping balls made of special glass
- Length: 505 mm
- Other dimensions upon request
- Weight = 0.300 kg/piece

### APPLICATIONS

- Safe attachment of large drawings, instructions, plans
- Simply slip-in papers from below
- Attach to portal construction by screwing or gluing with double-faced adhesive tape

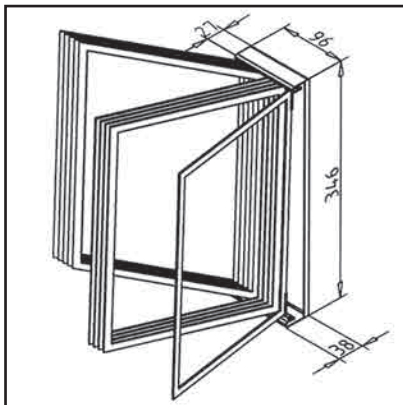
### ASSEMBLY

- Use the screws of fastening kit or fasten with adhesive tape on the back

## DOCUMENT SUPPORT

Part no.

32.0605/0



### TECHN. DATA / ITEMS SUPPLIED

- Steel bracket, powder coated light grey
- 10 DIN A4 boards, transparent
- Border per 5 in blue and red
- 5 Slip-on tabs
- Weight = 1.240 kg/piece

### APPLICATIONS

- Provision of job instructions, maintenance notes
- Control boards, general information
- Screw tight onto portal construction

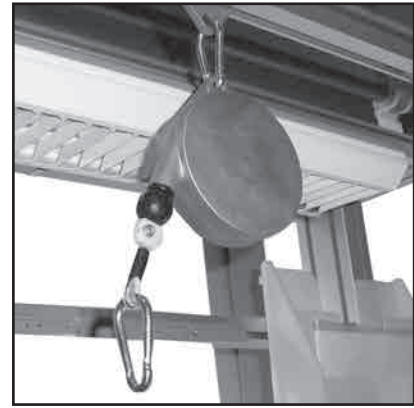
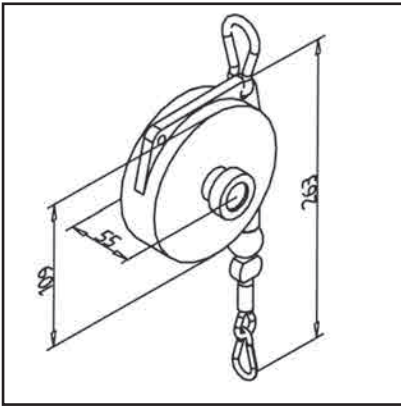
### ASSEMBLY

- Fastening with 2 hex socket cap screws M 06 x 16, 2 square nut M6 into profile groove
- ESD-design **part no. 32.0605/6**

## BALANCER

Part no.

29.0111/0



### TECHN. DATA / ITEMS SUPPLIED

- For tool weights 2-3 kg
- For higher weights upon request
- Weight = 0.753 kg/piece

### APPLICATIONS

- Grab-supportive tool suspensions

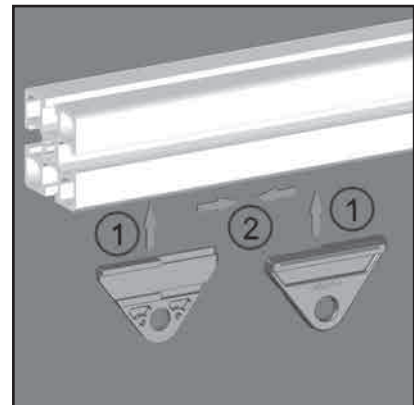
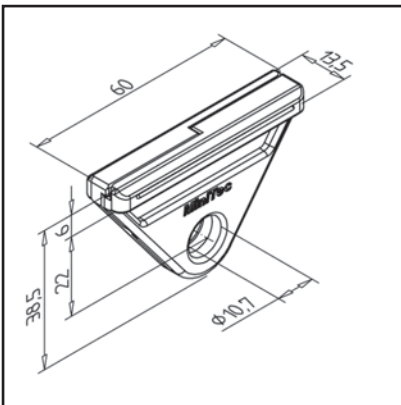
### ASSEMBLY

- With snap hook from scope of delivery in tool glider **part no. 22.1213/0**

## TOOL SLIDER H

Part no.

22.1213/0



### TECHN. DATA / ITEMS SUPPLIED

- ABS, Injection Mould, grey
- load capacity up to 600 N
- Weight = 0.010 kg/piece

### APPLICATIONS

- Grab-supportive tool suspensions
- Suitable for all 45er profiles

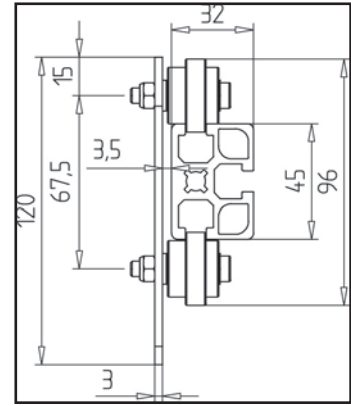
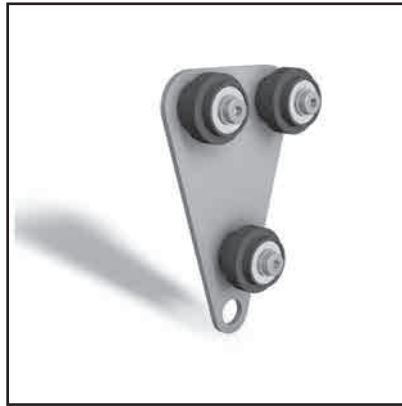
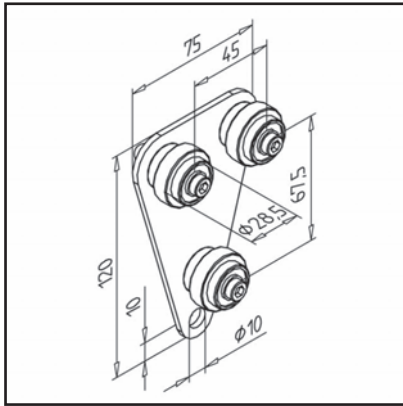
### ASSEMBLY

- insert both halves in profile groove and press together
- Optional: spring clip 60x6 **part no. 21.1699/0**

**TOOL SLIDE**

Part no.

32.0545/0

**TECHN. DATA / ITEMS SUPPLIED**

- Stainless steel
- Caster wheel ABS grey
- Load capacity F: 400 N
- Weight = 0.263 kg/piece

**APPLICATIONS**

- For guiding of tools on working tables

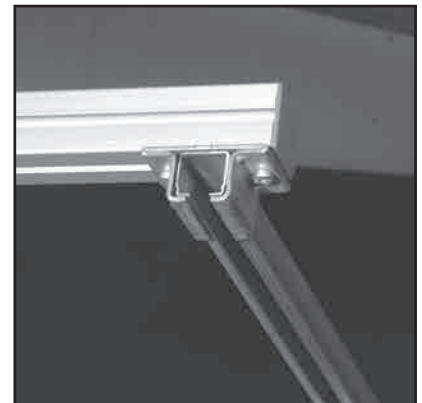
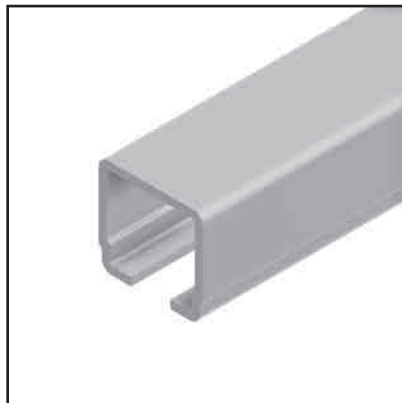
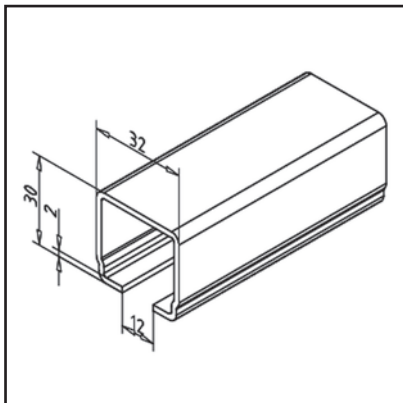
**ASSEMBLY**

- Slide into profile end
- Possibly before disassembly of the lower roller
- Can be used in connection with balancer, **part no. 29.0111/0**

**C-SECTION RAIL 30**

Part no.

32.0220/0

**TECHN. DATA / ITEMS SUPPLIED**

- Steel, galvanized
- $I_x = 2.42 \text{ cm}^4$
- $I_y = 1.45 \text{ cm}^4$
- ESD-compatible
- Weight = 1.560 kg/m
- Bar length = 6 m

**APPLICATIONS**

- Reception and guide of cable trolleys
- Reception and guide of tool trolleys to provide heavy tools

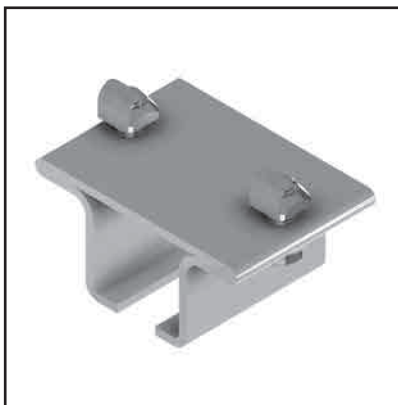
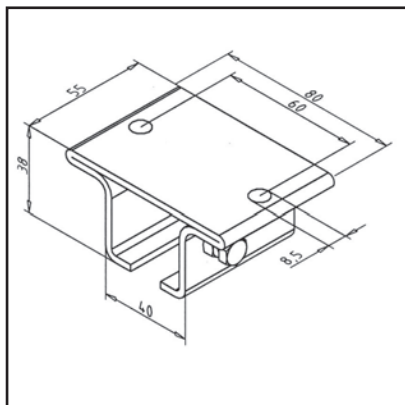
**ASSEMBLY**

- Attach to portal structure with rail holder **part no. 32.0222/0**

## RAIL HOLDER

Part no.

32.0222/0



### TECHN. DATA / ITEMS SUPPLIED

- Steel, galvanized
- Square nut Z, ESD capable
- Weight = 0.250 kg/piece

### APPLICATIONS

- Fastening the C-section rail onto the portal structure
- Fixation for C-rail 30 **part no. 32.0220/0**

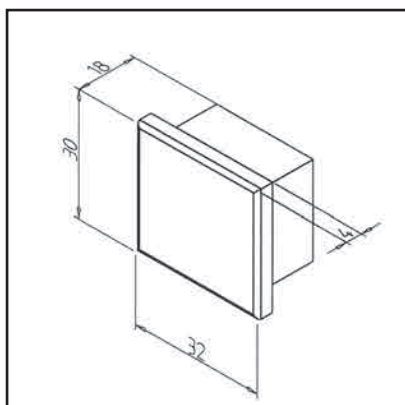
### ASSEMBLY

- Fasten to the portal construction with supplied hardware

## CLOSURE CAP FOR C-RAIL

Part no.

32.0223/0



### TECHN. DATA / ITEMS SUPPLIED

- Plastic, black
- Weight = 0.006 kg/piece

### APPLICATIONS

- Closing of both rail ends

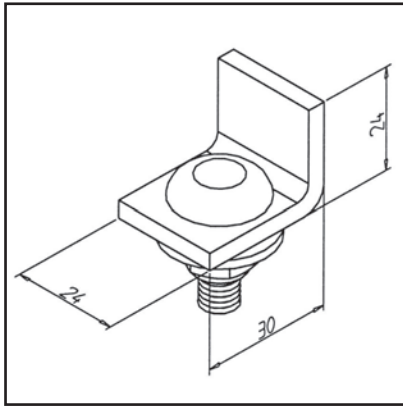
### ASSEMBLY

- Press onto C-profile rail

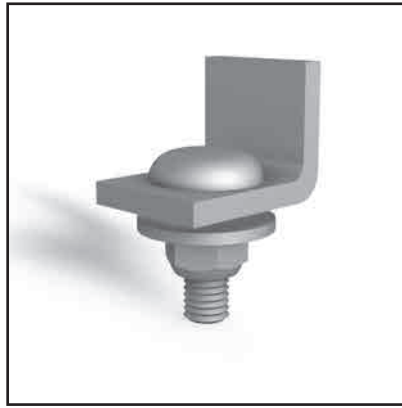
**END STOP C-RAIL**

Part no.

32.0226/0

**TECHN. DATA / ITEMS SUPPLIED**

- Steel, galvanized
- Fastening material
- ESD-compatible
- Weight = 0.060 kg/piece

**APPLICATIONS**

- Fasten the cable trolley **part no. 32.0225/0** and tool trolley **part no. 32.0224/0** at the end of the rail

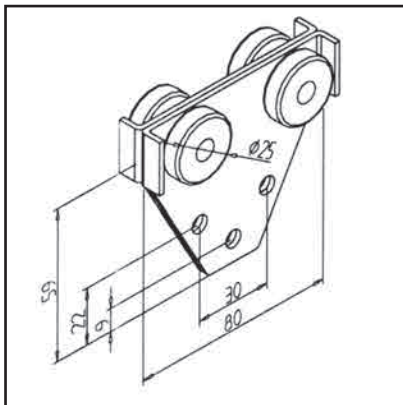
**ASSEMBLY**

- Screw into end of C-section rail

**TOOL TROLLEY**

Part no.

32.0224/0

**TECHN. DATA / ITEMS SUPPLIED**

- Steel, galvanized
- 4 rollers, zinc plated, ball bearings sealed on both sides
- ESD-compatible
- Load capacity: 16 kg
- Weight = 0.210 kg/piece

**APPLICATIONS**

- Suspension of tools in the work area

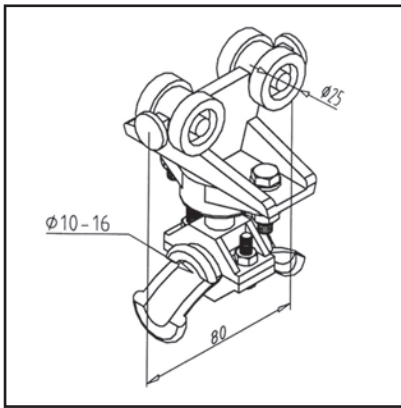
**ASSEMBLY**

- Push into C-section rail, secure ends with limit stop

## CABLE TROLLEYS FOR ROUND CABLES

Part no.

32.0225/0



### TECHN. DATA / ITEMS SUPPLIED

- Plastic, yellow
- Supporting body: plastic, yellow
- 4 plastic rollers
- Load capacity: 8 kg
- Weight = 0.135 kg/piece

### APPLICATIONS

- Smooth running guidance of lines
- Suspension of hoses and pipes

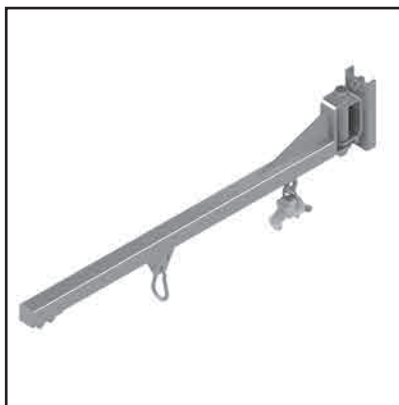
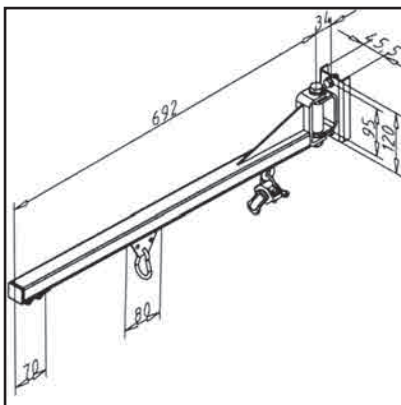
### ASSEMBLY

- Push into C-section rail, secure ends with limit stop

## SWIVEL CANTILEVER C-RAIL 30

Part no.

32.0230/0



### TECHN. DATA / ITEMS SUPPLIED

- Steel, powder-coated, grey
- 180° swiveling
- Fastening material
- Length: 692 mm
- Load capacity: 200 N
- Weight = 2.310 kg/piece

### APPLICATIONS

- For compressed air and power tools

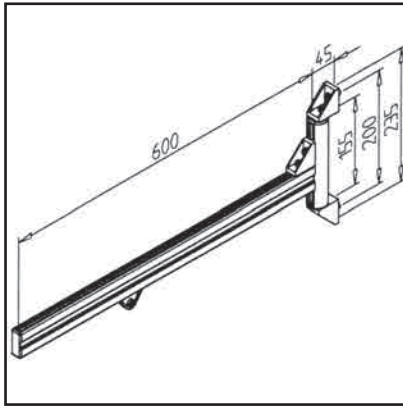
### ASSEMBLY

- Slight slope to the rear, so that unused tool slides automatically from work area
- Fasten to the portal construction with supplied hardware
- Optional: as ESD design **part no. 32.0230/6**

**SWIVEL ARM ECO**

Part no.

32.0201/0

**TECHN. DATA / ITEMS SUPPLIED**

- Aluminium
- 200° swiveling
- Fastening material
- plain bearing
- Length: 600 mm
- Load capacity: max.= 100 N
- Weight = 1.100 kg/piece

**APPLICATIONS**

- For compressed air and power tools

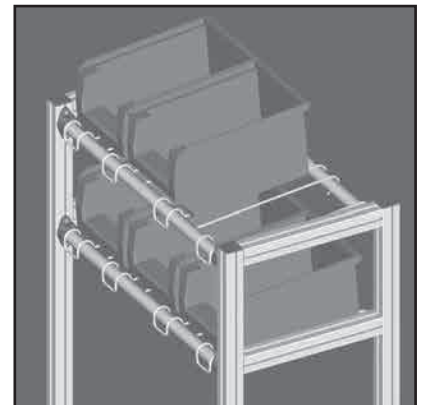
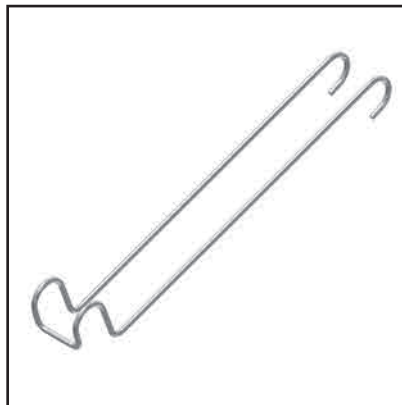
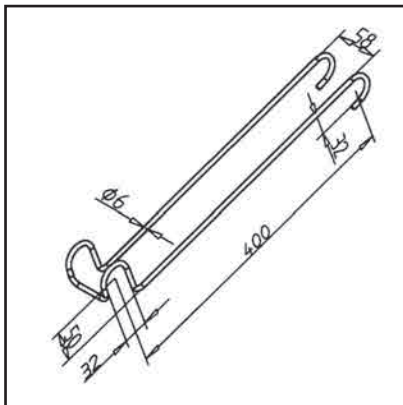
**ASSEMBLY**

- Fixing to portal with angle
- Fasten to the portal construction with supplied hardware

**CONTAINER HOLDER 32-400**

Part no.

32.0306/0

**TECHN. DATA / ITEMS SUPPLIED**

- Steel, galvanized
- Without fastening kit
- Weight = 0.268 kg/piece

**APPLICATIONS**

- as depositing rack for semi-open front containers and storage containers

**ASSEMBLY**

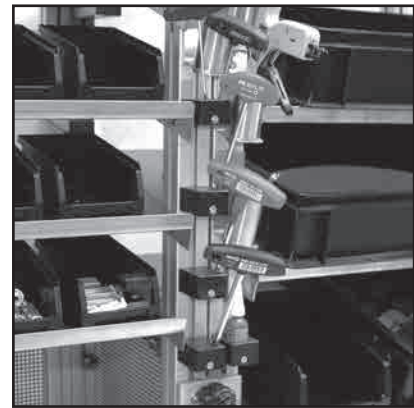
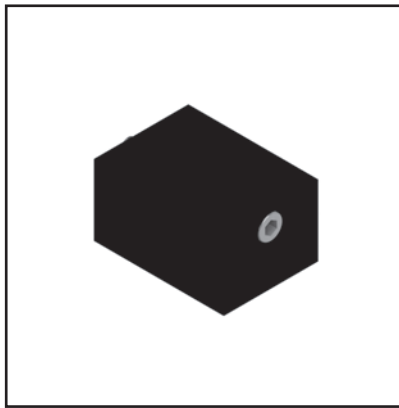
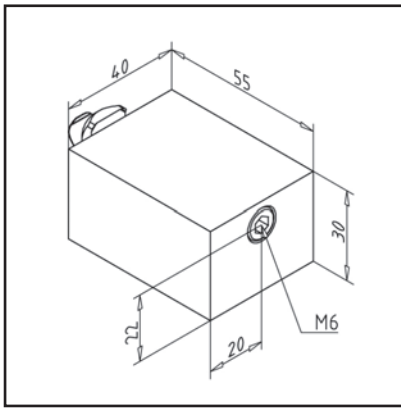
- simply hooked into handle profile 32 from both sides
- Recommended: If required, secure laterally against sliding of snap bolt 25 **part no. 21.1758/0**



## MOUNTING BLOCK

Part no.

32.0539/0



### TECHN. DATA / ITEMS SUPPLIED

- Plastic
- Color: black
- Fastening kit
- Square nut Z, ESD capable
- Weight = 0.078 kg/piece

### APPLICATION

- For self drilling of individual hole patterns
- To provide tools etc.

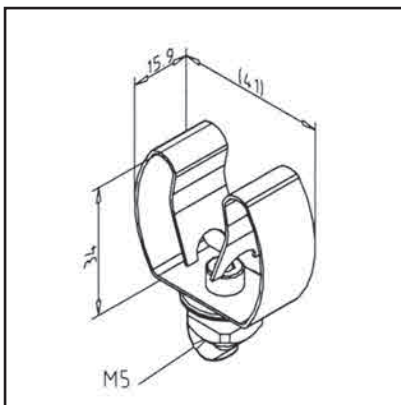
### ASSEMBLY

- Fasten into profile groove with fastening kit

## ATTACHMENT CLIP 16

Part no.

32.0538/0



### TECHN. DATA / ITEMS SUPPLIED

- Steel
- Stainless steel 1.4319
- Attachment clip with fastening kit
- Square nut Z, ESD capable
- Weight = 0.028 kg/piece

### APPLICATIONS

- Holder for various tools with  $\varnothing$  16 - 25 mm

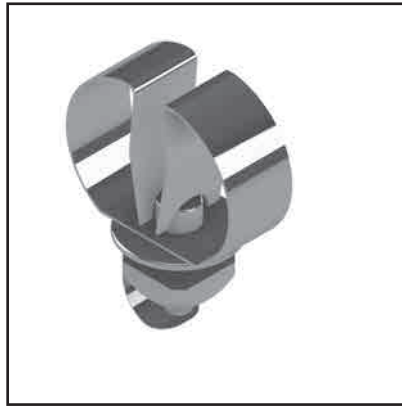
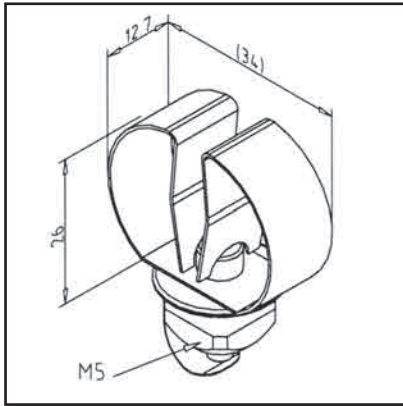
### ASSEMBLY

- Fasten into the profile groove with supplied hardware and tighten the fastening screw

**ATTACHMENT CLIP 8**

Part no.

32.0537/0

**TECHN. DATA / ITEMS SUPPLIED**

- Steel
- Stainless steel 1.4319
- Attachment clip with fastening kit
- Square nut Z, ESD capable
- Weight = 0.017 kg/piece

**APPLICATIONS**

- Holder for various tools with  $\varnothing$  8 - 12 mm

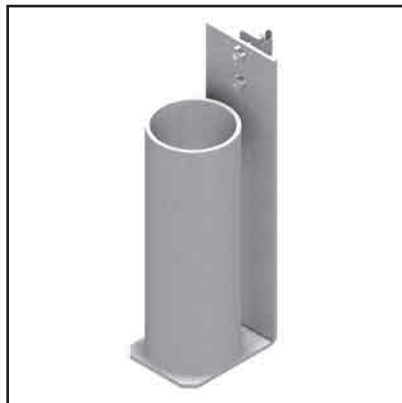
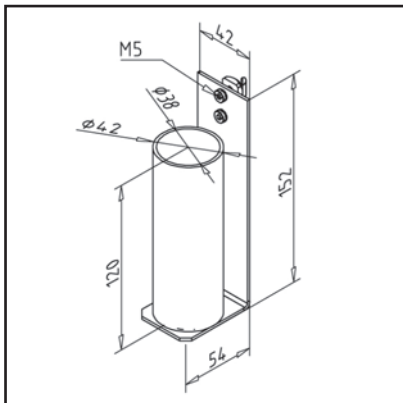
**ASSEMBLY**

- Fasten into the profile groove with supplied hardware and tighten the fastening screw

**ROUND TOOL HOLDER 38 - 120**

Part no.

32.0536/0

**TECHN. DATA / ITEMS SUPPLIED**

- Stainless steel
- Material V2A, polished
- Fastening kit
- Square nut Z, ESD capable
- Weight = 0.402 kg/piece

**APPLICATIONS**

- Tool holder for storage of tools, pins, etc.
- Adjustable angle

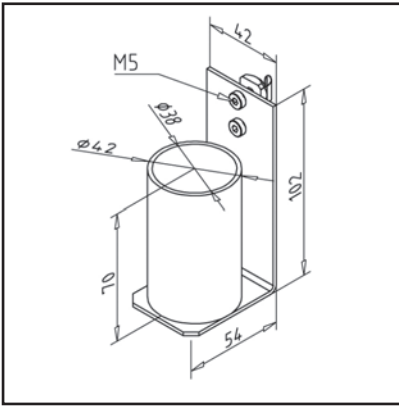
**ASSEMBLY**

- Attach with fastening kit from items supplied to profile strut

## ROUND TOOL HOLDER 38-70

Part no.

32.0535/0



### TECHN. DATA / ITEMS SUPPLIED

- Stainless steel
- Material V2A, polished
- Fastening kit
- Square nut Z, ESD capable
- Weight = 0.263 kg/piece

### APPLICATIONS

- Tool holder for storage of tools (files, marking tools, sharpening stones, etc.)
- Adjustable angle

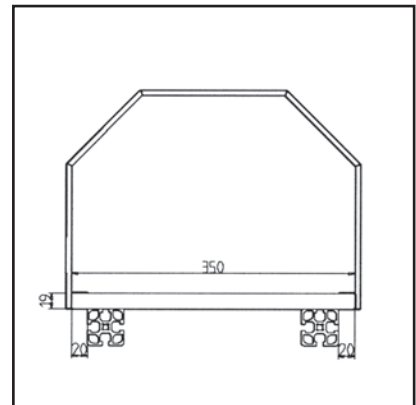
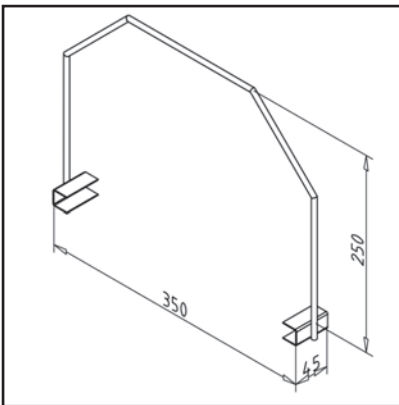
### ASSEMBLY

- Attach with fastening kit from items supplied to profile strut

## STEEL BRACKET 250

Part no.

32.0533/0



### TECHN. DATA / ITEMS SUPPLIED

- Steel, powder-coated, grey
- With welded-on clamps for setting on a 19 mm chipboard, for example
- Clamped using pretensioning and can be secured additionally with wood screws
- Weight = 0.214 kg/piece

### APPLICATIONS

- As separating web for cartons
- Magazine for flat parts

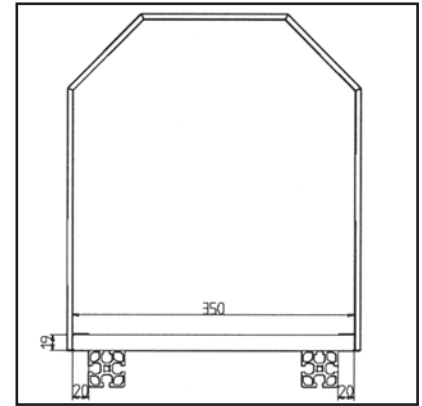
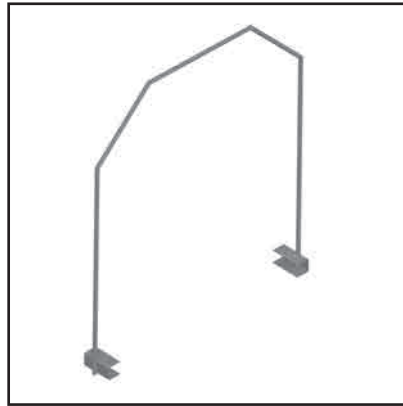
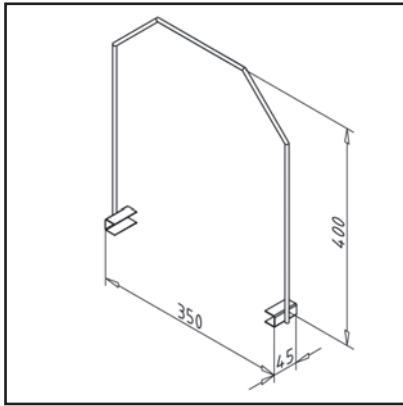
### ASSEMBLY

- Pull apart gently, stick on at the correct position and secure with suitable screw

**STEEL BRACKET 400**

Part no.

32.0534/0

**TECHN. DATA / ITEMS SUPPLIED**

- Steel, powder-coated, grey
- With welded-on clamps for setting on a 19 mm chipboard, for example
- Clamped using pretensioning and can be secured additionally with wood screws
- Weight = 0.278 kg/piece

**APPLICATIONS**

- As separating web for cartons
- Magazine for flat parts

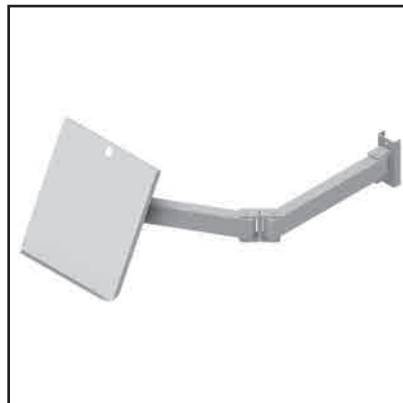
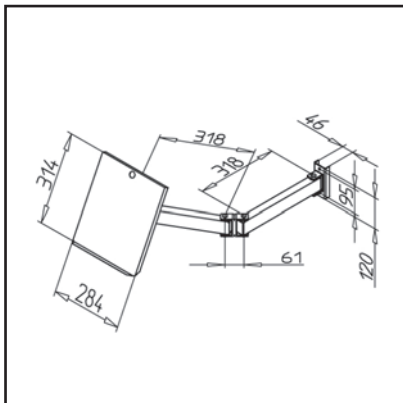
**ASSEMBLY**

- Pull apart gently, stick on at the correct position and secure with suitable screw

**DRAWING HOLDER**

Part no.

32.0608/0

**TECHN. DATA / ITEMS SUPPLIED**

- Steel light grey, powder coated
- With double-articulated swing boom
- For DIN A4 format
- Load capacity 150 N
- Delivery as construction set
- ESD on request
- Weight = 4.000 kg/piece

**APPLICATIONS**

- For documents, control charts and drawings

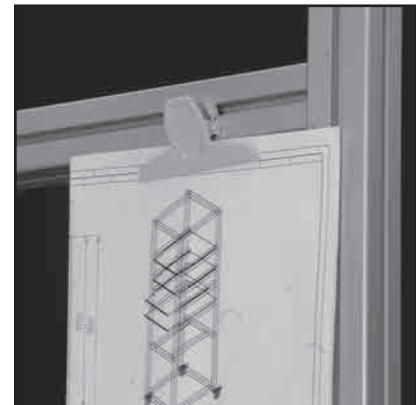
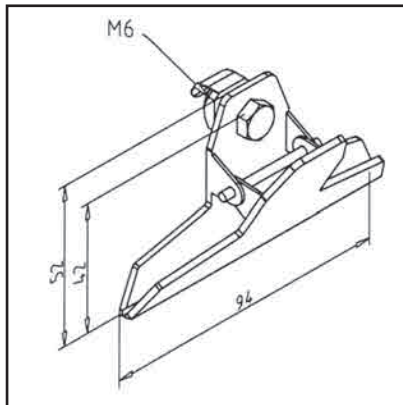
**ASSEMBLY**

- Fasten to the portal structure

## DOCUMENT CLIP

Part no.

32.0609/0



## TECHN. DATA / ITEMS SUPPLIED

- Steel light grey, powder coated
- With fastening bore  $\varnothing$  6mm
- Width x height 94 x 52 mm
- Weight = 0.048 kg/piece

## APPLICATIONS

- To fastening work instructions, work plans or the like to workbenches or other profile constructions

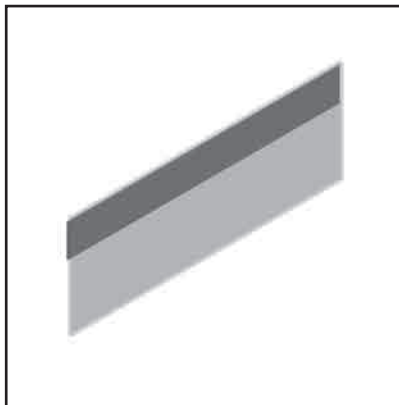
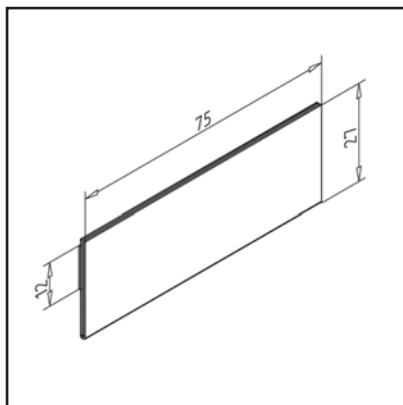
## ASSEMBLY

- Insert square nut M6 into profile groove and fasten with the screw

## QUICK LABEL 27 X 75

Part no.

32.0601/0



## TECHN. DATA / ITEMS SUPPLIED

- Front, transparent
- Back, self-adhesive
- Open at the sides and on top
- Weight = 0.003 kg/piece

## APPLICATIONS

- Storage compartment identification
- Error-free scanning of barcodes
- For profile width 32

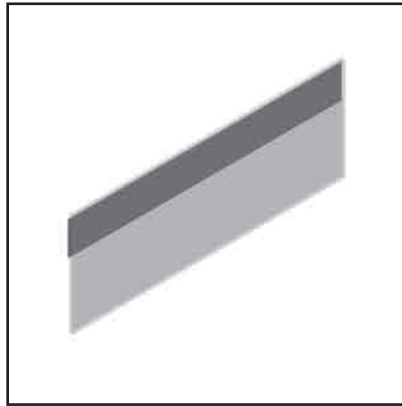
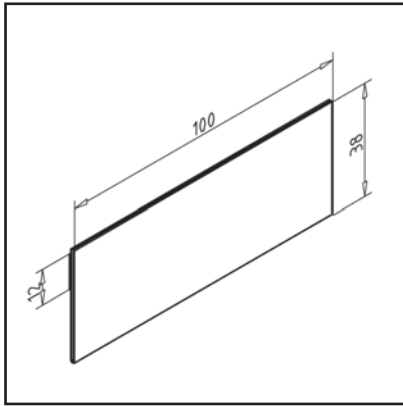
## ASSEMBLY

- Attach with self-adhesive back
- Push in carton insert
- Cardboard insert not included in delivery scope, bows 20 pieces **part no. 32.0601/1** please order separately

**QUICK LABEL 38 X 100**

Part no.

32.0602/0

**TECHN. DATA / ITEMS SUPPLIED**

- Front, transparent
- Back, self-adhesive
- Open at the sides and on top
- Weight = 0.007 kg/piece

**APPLICATIONS**

- Storage compartment identification
- Error-free scanning of barcodes
- For profile width 45

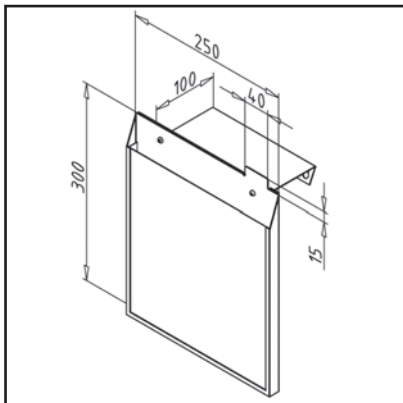
**ASSEMBLY**

- Attach with self-adhesive back
- Push in carton insert
- Cardboard insert not included in delivery scope, bows 14 pieces **part no. 32.0602/1** please order separately

**SEMI-OPEN COMPARTMENT BASE ELEMENT**

Part no.

32.0615/0

**TECHN. DATA / ITEMS SUPPLIED**

- Steel light grey, powder coated
- With fastening bores  $\varnothing 9$ , spacing 160 mm
- Optical edge 45 mm for optimum overview
- Filling capacity = 15 mm, sufficient for approx. 120 sheets of paper
- With grey closing plate
- clear semi-open compartment (front plate)
- Weight = 0.634 kg/piece

**APPLICATIONS**

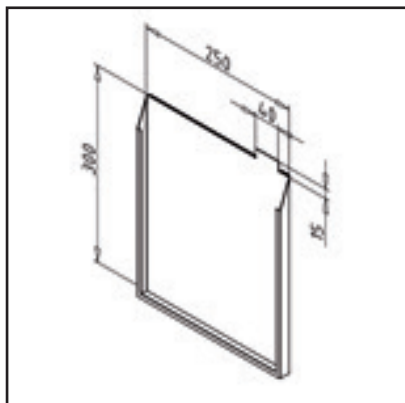
- For size DIN A4 documents

**ASSEMBLY**

- Fasten to the portal structure
- Any time expandable with **part no. 32.0616/0**
- Extract the front panel during extension and attach it to the last extension element again

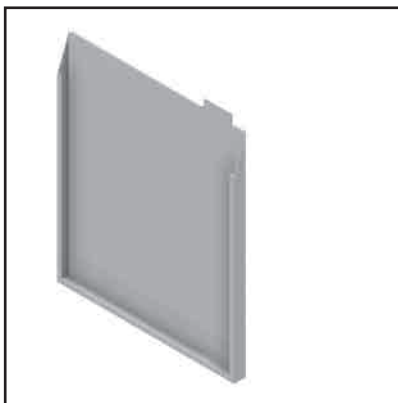
## SEMI-OPEN COMPARTMENT EXTENSION ELEMENT

Part no. 32.0616/0



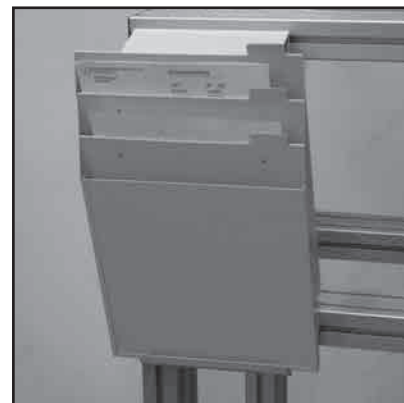
## TECHN. DATA / ITEMS SUPPLIED

- Steel, powder coated, light grey
- Filling capacity = 15 mm, sufficient for approx. 120 sheets of paper
- Weight = 0.392 kg/piece



## APPLICATIONS

- For size DIN A4 documents

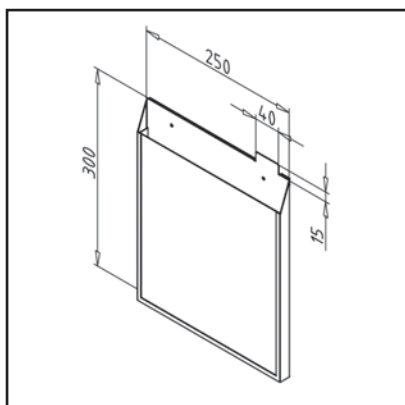


## ASSEMBLY

- Place base element on compartment **part no. 32.0615/0**

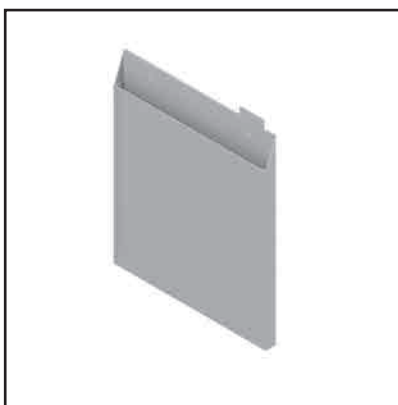
## SEMI-OPEN COMPARTMENT, SINGLE

Part no. 32.0617/0



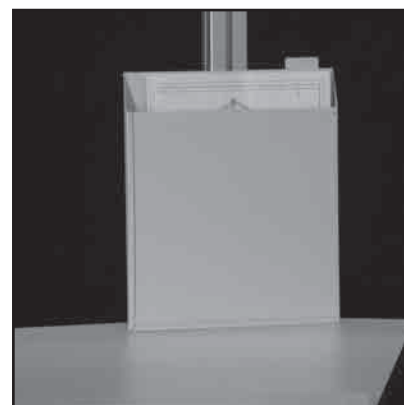
## TECHN. DATA / ITEMS SUPPLIED

- Steel, powder coated, light grey
- With fastening bores  $\varnothing$  4 mm, spacing approx. 16 mm
- With grey closing plate
- Weight = 0.500 kg/piece



## APPLICATIONS

- For size DIN A4 documents
- Optional: compartment single element DIN A4 portrait format with transparent locking plate **part no. 32.0619/0**



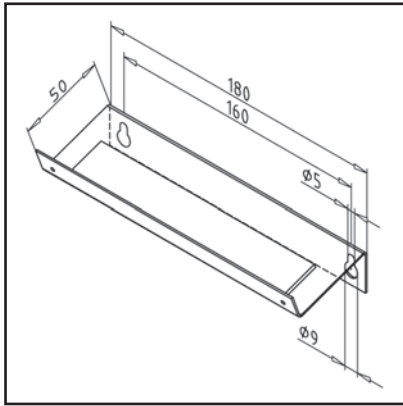
## ASSEMBLY

- Attach to the portal structure or use as an extension element for the base element

**ADDITIONAL ANGLE FOR VIEWING COMPARTMENT**

Part no.

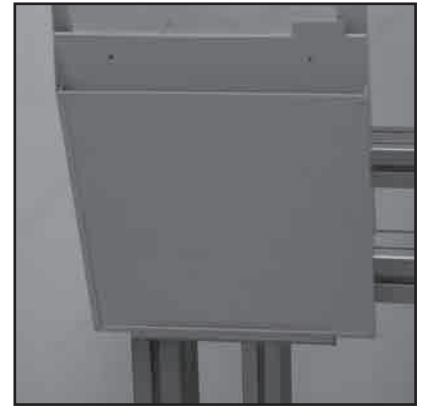
32.0618/0

**TECHN. DATA / ITEMS SUPPLIED**

- Steel light grey, powder coated
- With magnet strips
- Weight = 0.123 kg/piece

**APPLICATIONS**

- For additional stabilisation on the bottom edge of the semi-open compartments

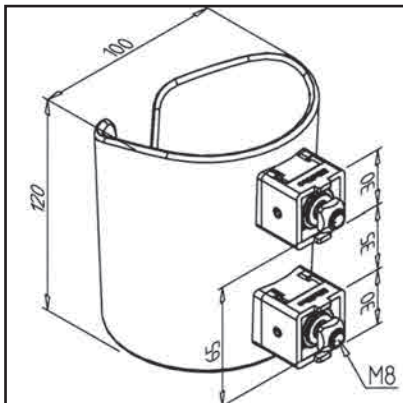
**ASSEMBLY**

- Fasten to the portal structure

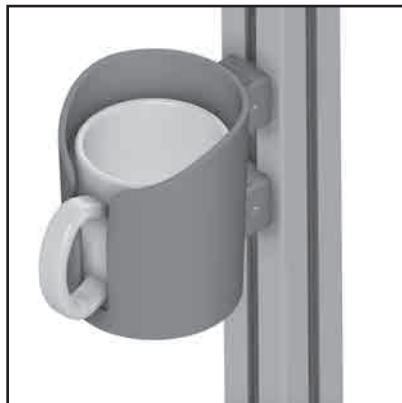
**CUP HOLDER**

Part no.

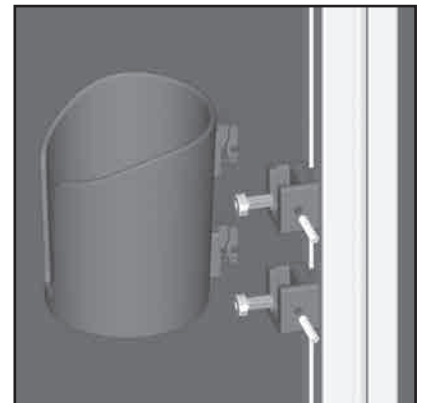
32.0547/0

**TECHN. DATA / ITEMS SUPPLIED**

- PA, grey
- Cup with MiniTec company logo
- Fastening kit
- Weight = 0.388 kg/piece

**APPLICATIONS**

- Cup or bottle holder for workplace systems
- With cut-out for cup handle

**ASSEMBLY**

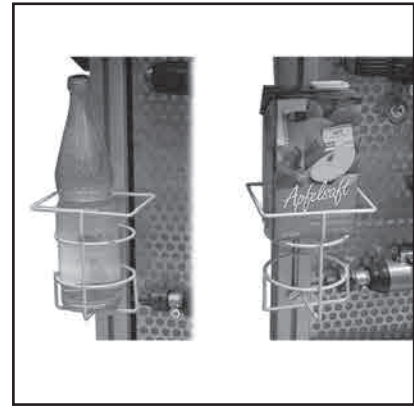
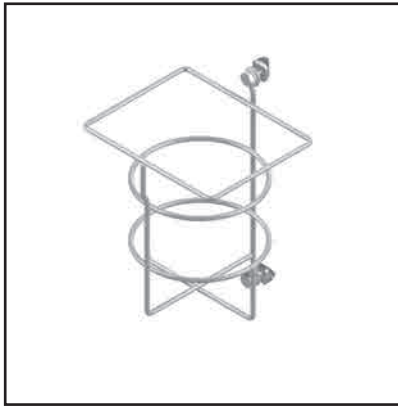
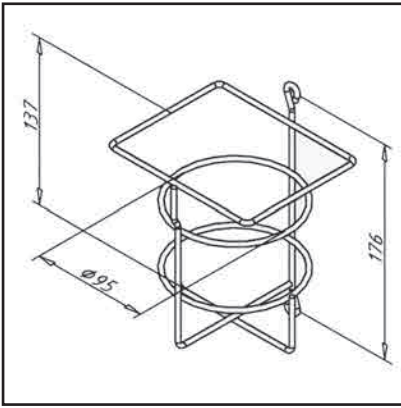
- Fasten rectangular connectors to post profile with supplied hardware at a distance of 35 mm
- Insert cup holder in t-slot
- For adjustment use set screw M5



## BOTTLES/DRINK CARTON HOLDER

Part no.

32.0507/0



### TECHN. DATA / ITEMS SUPPLIED

- Steel wire, coated light grey
- Inside Ø 95 mm
- 2 screws M6 x 16
- 2 square nuts M6 with spring plate
- Weight = 0.195 kg/piece

### APPLICATIONS

- Commercially available beverage bottles and beverage bags

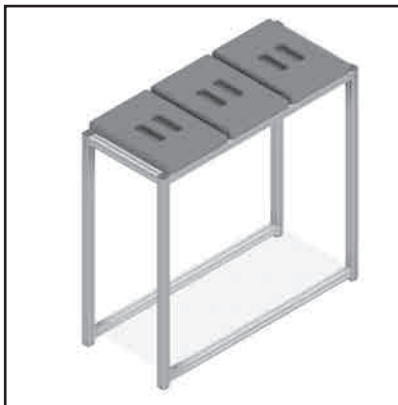
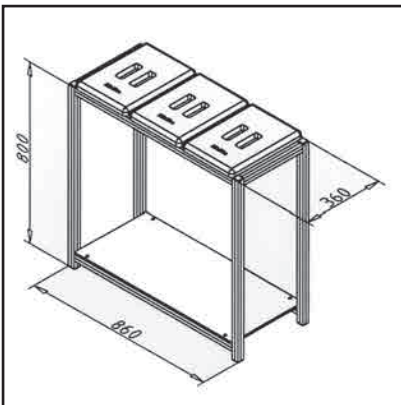
### ASSEMBLY

- Screw down with fastening material

## WASTE SEPARATION

Part no.

29.0022/0



### TECHN. DATA / ITEMS SUPPLIED

- Sturdy frame of profile 30 x 30, anodized E6 / EV1
- Delivery as construction set
- With shelf
- 3 covers ABS, grey
- Weight = 7.023 kg/piece

### APPLICATIONS

- For separate collection of 3 kinds of recyclable materials
- Just put plastic bags over the screw heads
- Also suitable for outdoor deployment

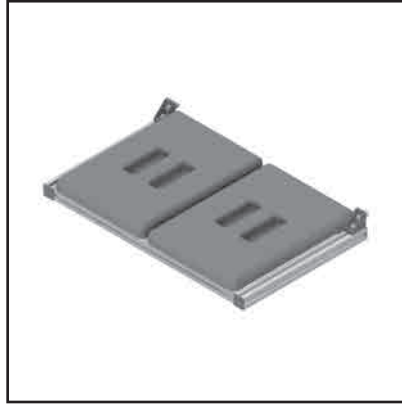
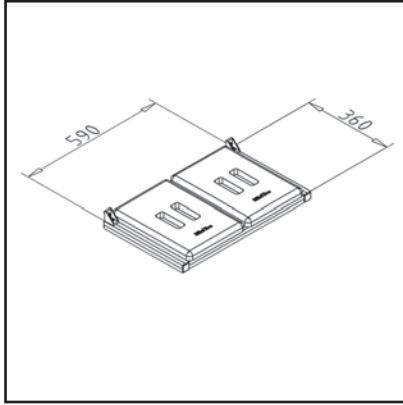
### ASSEMBLY

- According to enclosed installation instructions

## RECYCLABLE MATERIAL COLLECTOR FOR ATTACHMENT

Part no.

32.0024/0



### TECHN. DATA / ITEMS SUPPLIED

- Frame made of profile 30 x 30, anodized E6 / EV1
- 2 covers ABS, grey
- 2 mounting angles 25
- Weight = 1.915 kg/piece

### APPLICATIONS

- For separate collection of 2 kinds of recyclable materials
- Just put plastic bags over the screw heads

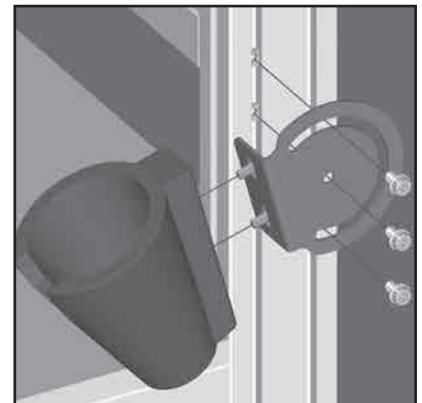
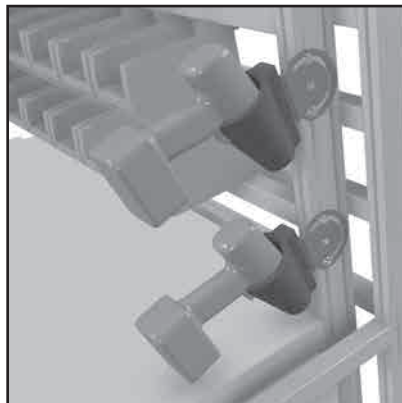
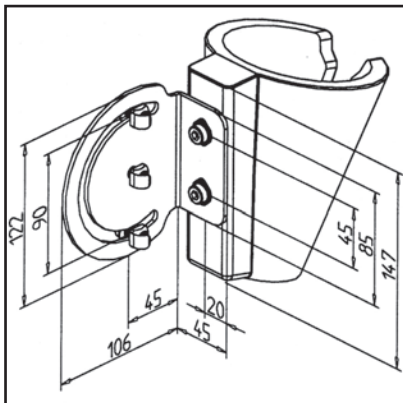
### ASSEMBLY

- Attach to profile frame with fastening materials included

## TOOL CASE S AS SET

Part no.

26.3001/0



### TECHN. DATA / ITEMS SUPPLIED

- Tool quiver, rubber, black
- Swivel bracket, steel, grey, powder-coated
- With fastening material steel, zinc plated
- Weight = 0.830 kg/piece

### APPLICATIONS

- For secure storage of drills, battery-operated screwdrivers and other tools
- Adjustable angle

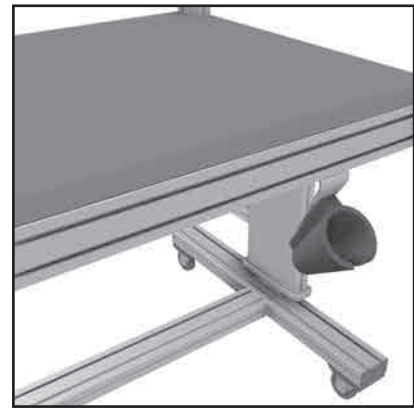
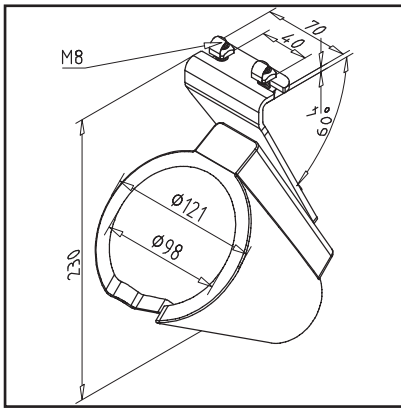
### ASSEMBLY

- Fasten to the profile brace with supplied hardware

### BASE SET TOOL CASE

Part no.

26.3004/0



#### TECHN. DATA / ITEMS SUPPLIED

- Tool quiver, rubber, black
- Holder, stainless steel
- With fastening material steel, zinc plated
- Weight = 0.885 kg/piece

#### APPLICATIONS

- For secure storage of drills, battery-operated screwdrivers and other tools
- For ergonomic provision of tools below the work surface

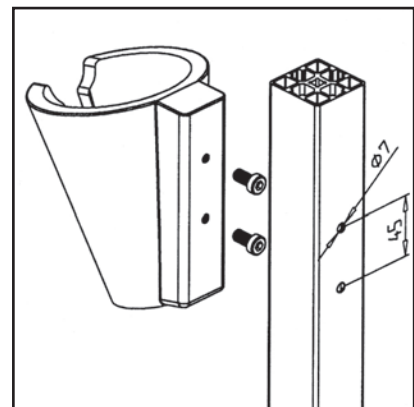
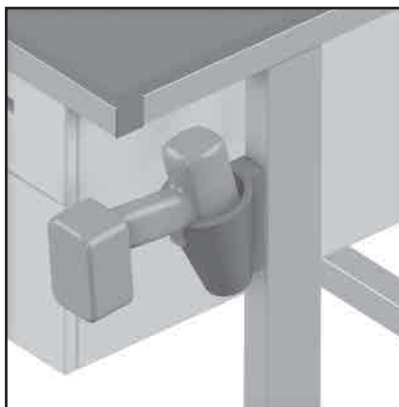
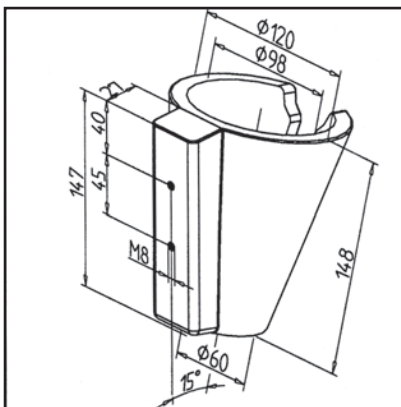
#### ASSEMBLY

- Fasten to the profile brace with supplied hardware

### TOOL CASE S

Part no.

26.3001/1



#### TECHN. DATA / ITEMS SUPPLIED

- Rubber, black
- Weight = 0.492 kg/piece

#### APPLICATIONS

- For secure storage of drills, battery-operated screwdrivers and other tools

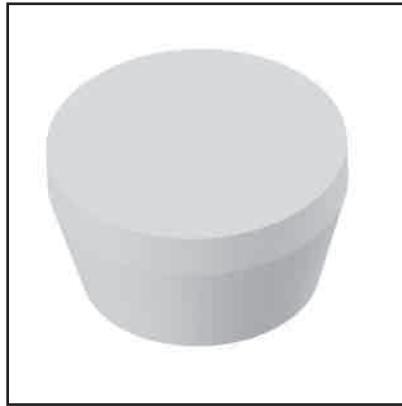
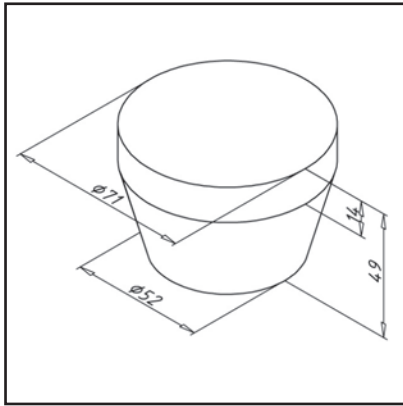
#### ASSEMBLY

- Drill 2 bores  $\varnothing 7$  mm, distance of 45 into profile
- Fasten with screws M8 x 16

**ADAPTER FOR TOOL CASE**

Part no.

26.3002/0

**TECHN. DATA / ITEMS SUPPLIED**

- POM, white
- Standard: without machining  
Optional: with machining eg. aptly drilled or milled for special tools
- Weight = 0.225 kg/piece

**APPLICATIONS**

- Adapter for rod screwdrivers, special screwdrivers, pneumatic screwdrivers and smaller hand tools

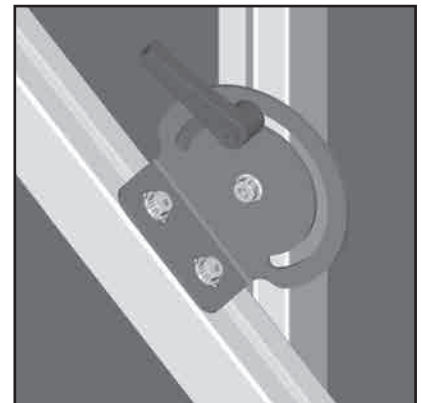
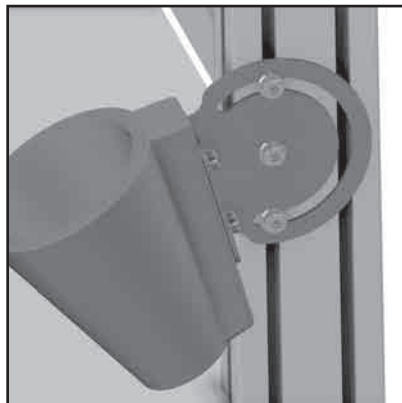
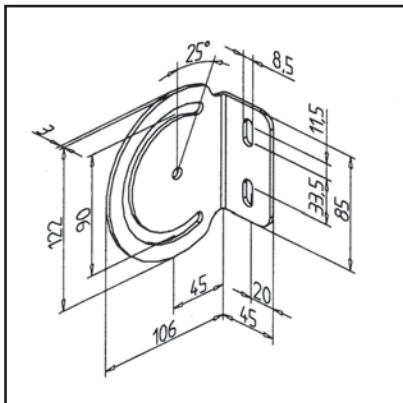
**ASSEMBLY**

- Press into tool quiver

**SWIVEL HOLDER**

Part no.

26.3001/2

**TECHN. DATA / ITEMS SUPPLIED**

- Steel, powder-coated, grey
- Powder coated RAL 7012
- Weight = 0.283 kg/piece

**APPLICATIONS**

- For swiveling attachment of toolboxes, profiles or shelves

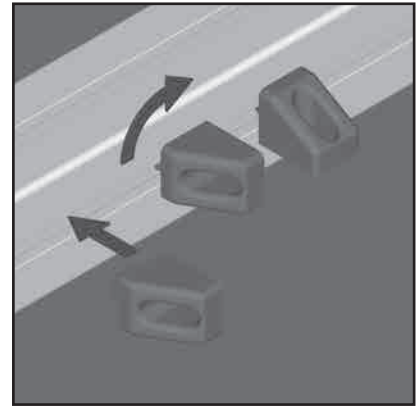
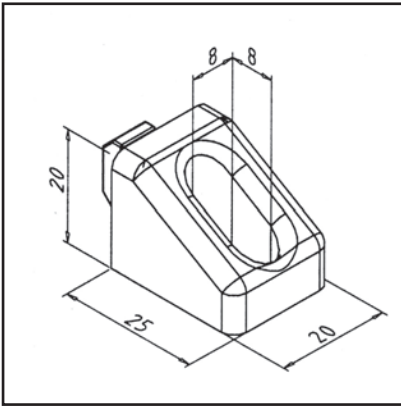
**ASSEMBLY**

- With screws M8 x 16 or clamping lever and M8 sliding nut

## SCREWDRIVER HOLDER

Part no.

32.0502/0



### TECHN. DATA / ITEMS SUPPLIED

- PA, Injection Mould, grey
- Weight = 0.006 kg/piece

### APPLICATIONS

- Ergonomic storage of screwdrivers at the workbench

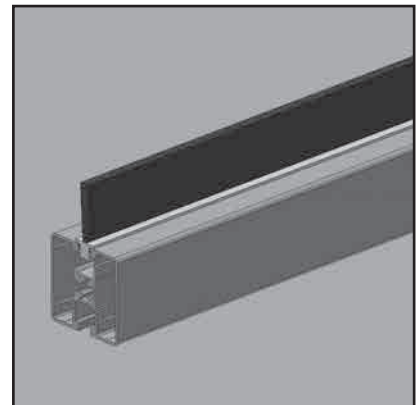
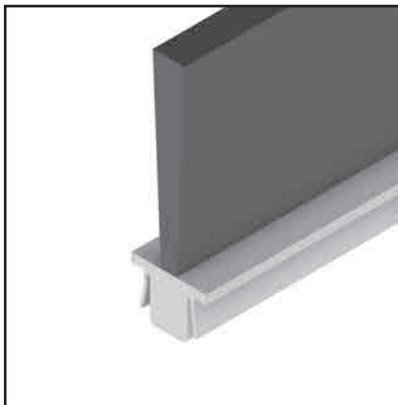
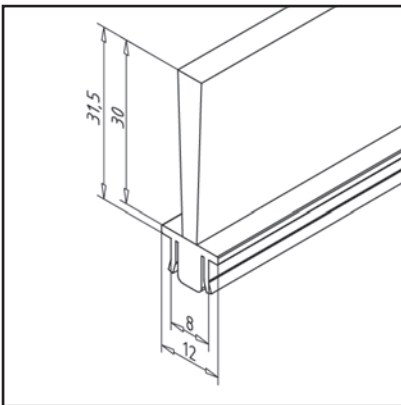
### ASSEMBLY

- Push into the groove and then turn 90°

## BRUSH STRIP 30

Part no.

22.1150/0



### TECHN. DATA / ITEMS SUPPLIED

- PVC strip with brush
- Manufacturing length: 1000 mm
- Weight = 0.128 kg/m

### APPLICATIONS

- Sealing of doors, lids
- Static strap cleaning in case of minor soiling
- Guiding and carrying in conveyor technology

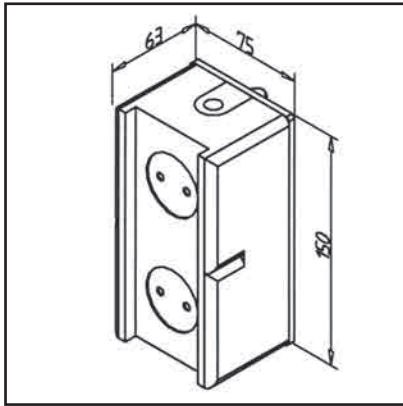
### ASSEMBLY

- Insert or clip into profile groove

**VERTICAL DOUBLE OUTLET**

Part no.

32.0773/0

**TECHN. DATA / ITEMS SUPPLIED**

- Schuko 10 / 16 A 250 V
- IP 44 shatter-proof
- Housing 75 x 75 x 58 mm
- Fastening material
- With adapter plate and screws
- Weight = 0.389 kg/piece

**APPLICATIONS**

- For power supply at the workplace

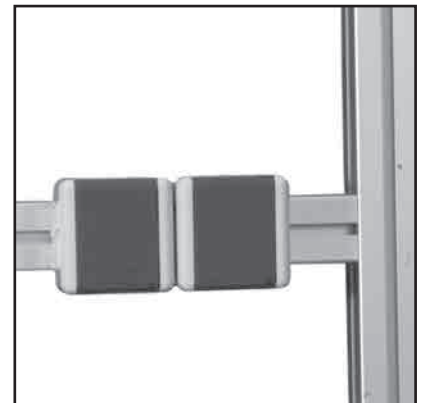
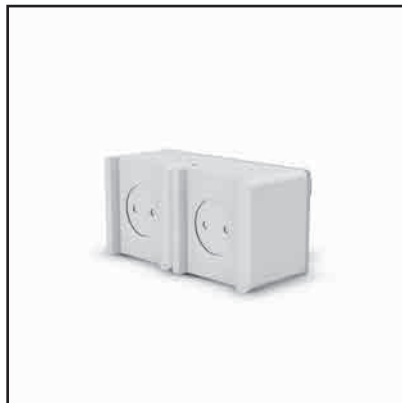
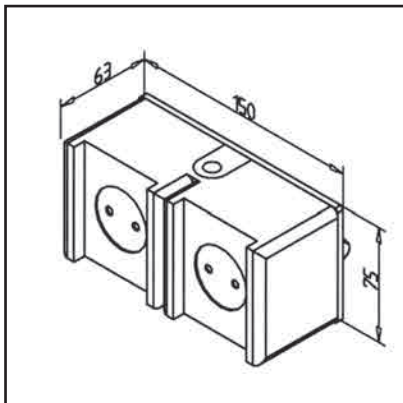
**ASSEMBLY**

- Attach the adapter plate to the profile
- Fasten double outlet to the adapter plate

**HORIZONTAL DOUBLE OUTLET**

Part no.

32.0774/0

**TECHN. DATA / ITEMS SUPPLIED**

- Schuko 10 / 16 A 250 V
- IP 44 shatter-proof
- Housing 75 x 75 x 58 mm
- Fastening material
- With adapter plate and screws
- Weight = 0.389 kg/piece

**APPLICATIONS**

- For power supply at the workplace

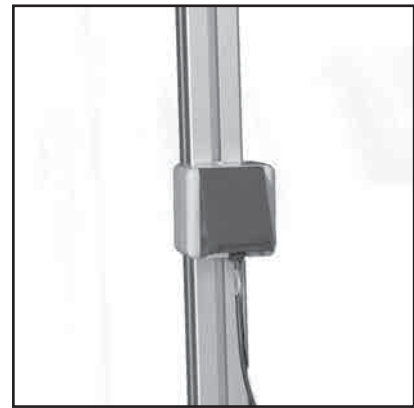
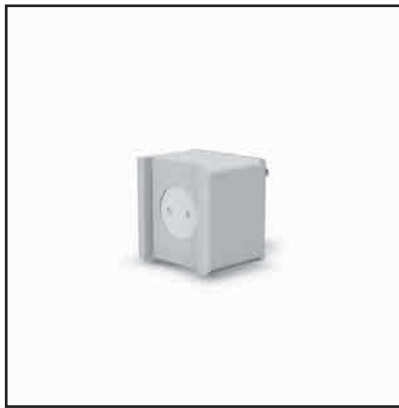
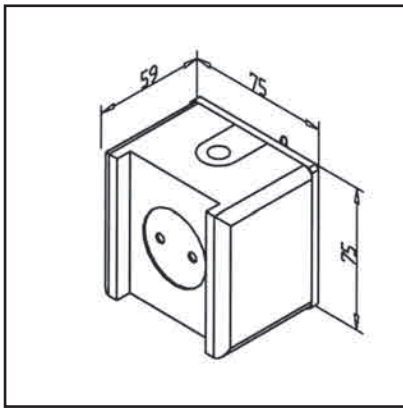
**ASSEMBLY**

- Attach the adapter plate to the profile
- Fasten double outlet to the adapter plate

**POWER OUTLET**

Part no.

32.0771/0

**TECHN. DATA / ITEMS SUPPLIED**

- Schuko 10 / 16 A 250 V
- IP 44 shatter-proof
- Housing 75 x 75 x 58 mm
- With adapter plate and screws
- Weight = 0.211 kg/piece

**APPLICATIONS**

- For power supply at the workplace

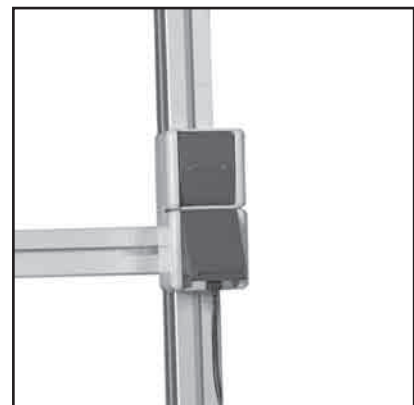
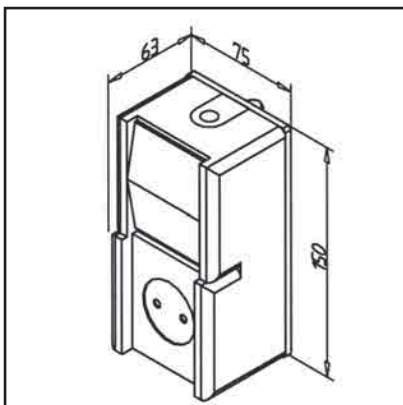
**ASSEMBLY**

- Attach the adapter plate to the profile
- Fasten double outlet to the adapter plate

**TOGGLE SWITCH/POWER OUTLET**

Part no.

32.0772/0

**TECHN. DATA / ITEMS SUPPLIED**

- OFF switch, 10A x 250V
- Schuko 10 / 16 A 250 V, IP 44 shatter-proofed
- Housing 75 x 75 x 58 mm
- Fastening material
- With adapter plate
- Weight = 0.389 kg/piece

**APPLICATIONS**

- For switching lights on and off

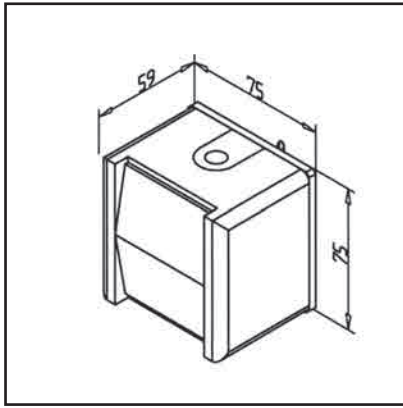
**ASSEMBLY**

- Attach the adapter plate to the profile
- Fasten the switch on the adapter plate

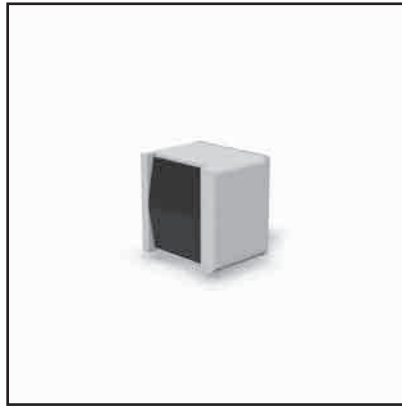
**TOGGLE SWITCH**

Part no.

32.0770/0

**TECHN. DATA / ITEMS SUPPLIED**

- OFF switch
- 10A x 250V
- Housing 75 x 75 x 58 mm
- Fastening material
- With adapter plate
  
- Weight = 0.211 kg/piece

**APPLICATIONS**

- For switching lights on and off

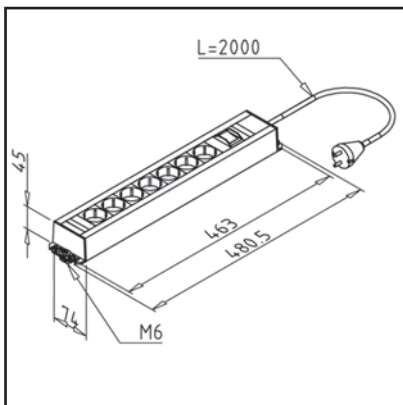
**ASSEMBLY**

- Attach the adapter plate to the profile
- Fasten the switch on the adapter plate

**SOCKET STRIPS 7-FOLD**

Part no.

32.0703/0

**TECHN. DATA / ITEMS SUPPLIED**

- 7-fold with additional switch
- Rocker switch, illuminated
- Cable length 2 m
- Max. 3500W / 16A / 230V
- Weight = 0.858 kg/piece

**APPLICATIONS**

- Oblique socket arrangement

**ASSEMBLY**

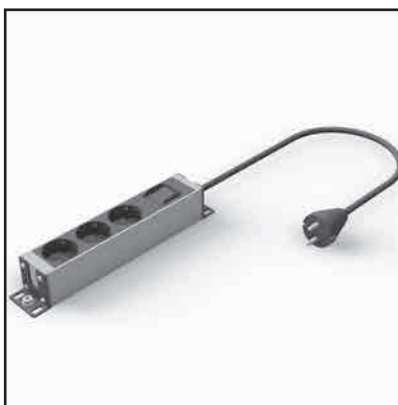
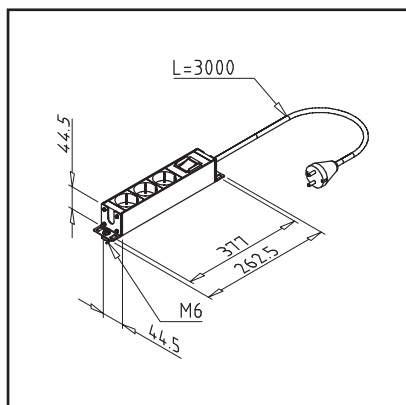
- Fasten to profile groove with supplied hardware



**SOCKET STRIP ALU 3-FOLD**

Part no.

32.0704/0

**TECHN. DATA / ITEMS SUPPLIED**

- Rocker switch, illuminated
- Max. 3500W / 16A / 230V
- Cable length 3 m
- Housing Aluminum natural anodized
- Weight = 0.718 kg/piece

**APPLICATIONS**

- Oblique socket arrangement

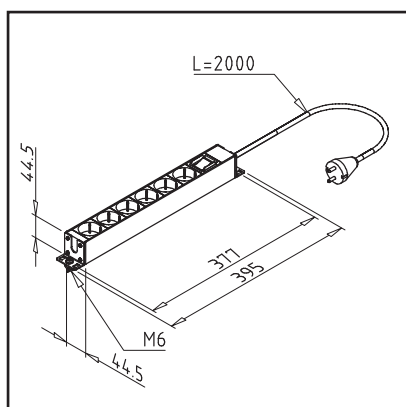
**ASSEMBLY**

- Fasten to profile groove with supplied hardware

**SOCKET STRIP ALU 6-FOLD**

Part no.

32.0705/0

**TECHN. DATA / ITEMS SUPPLIED**

- Housing Aluminum natural anodized
- Rocker switch, illuminated
- Max. 3500W / 16A / 230V
- Cable length 2 m
- Weight = 0.848 kg/piece

**APPLICATIONS**

- Oblique socket arrangement

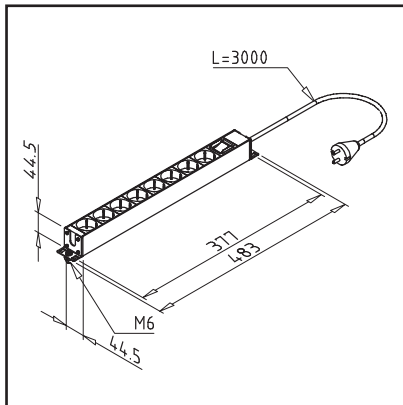
**ASSEMBLY**

- Fasten with fastening material to profile groove

**SOCKET STRIP ALU 8-FOLD**

Part no.

32.0706/0

**TECHN. DATA / ITEMS SUPPLIED**

- Rocker switch, illuminated
- Max. 3500W / 16A / 230V
- Cable length 3 m
- Housing Aluminum natural anodized
- Weight = 0.848 kg/piece

**APPLICATIONS**

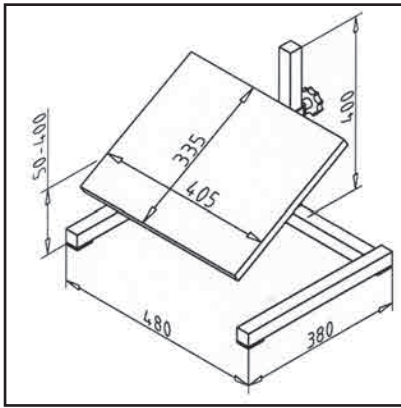
- Oblique socket arrangement

**ASSEMBLY**

- Fasten to profile groove with supplied hardware

## FOOT REST ECO

Part no. 32.0155/0



### TECHN. DATA / ITEMS SUPPLIED

- Stable tubular steel frame made of 30 mm square tube
- Fully assembled
- Foot rest: Grooved anti skid rubber
- W x L x H= 400 x 330 x 410 mm

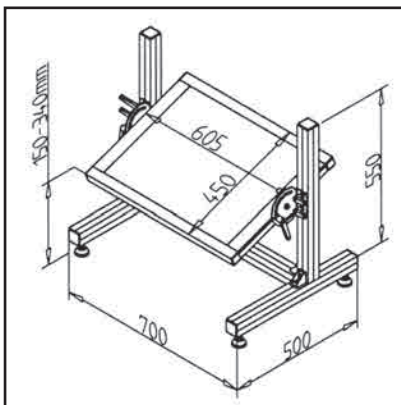
- ESD on request
- Height-adjustable and inclinable
- Inclination adjustable by foot
- Free-standing
- Weight = 5.700 kg/piece

### APPLICATIONS

- Facilitates proper sitting at the table

## FOOT REST STANDARD

Part no. 32.0160/0



### TECHN. DATA / ITEMS SUPPLIED

- Base construction profile 45x45 under tables, workstations
- Fully assembled
- Footrest: chipboard, coated, basalt grey, oil resistant

- ESD on request
- Height and inclination manually adjustable
- Free-standing
- Weight = 9.475 kg/piece

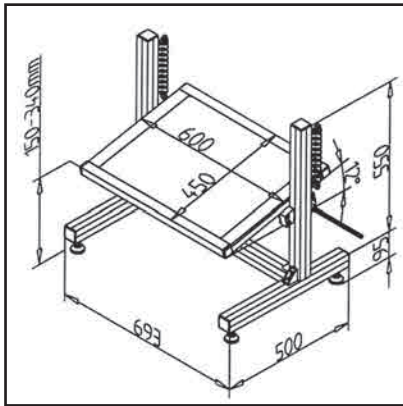
### APPLICATIONS

- Facilitates proper sitting at the table

**FOOT REST COMFORT**

Part no.

32.0165/0

**TECHN. DATA / ITEMS SUPPLIED**

- Base construction profile 45x45 under tables, workstations
- Fully assembled
- Footrest: chipboard, coated, basalt grey, oil resistant
- ESD on request
- Spring-tensioned height adjustment, height adjustable from seating position
- Free-standing
- Weight = 10.200 kg/piece

**APPLICATIONS**

- Facilitates proper sitting at the table

## PNEUMATICS



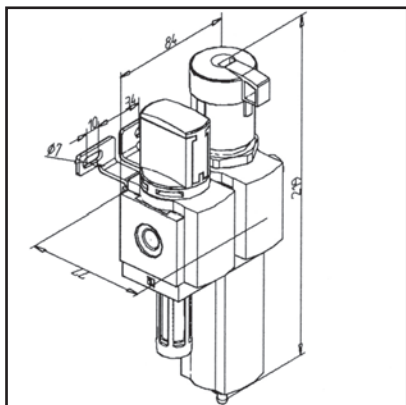
Compressed air is often used in the workplace systems for the operation of pneumatic cylinders in mounting devices or for the drive of compressed air tools. In order to minimize contamination at the workplace and to keep the health burden on employees as low as possible, one should always try to work with clean and dry compressed air.



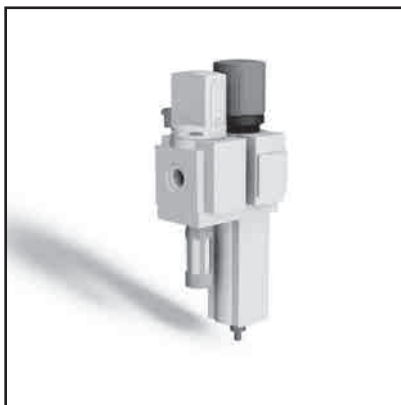
**FILTER REGULATOR AND MANUAL START-UP VALVE**

Part no.

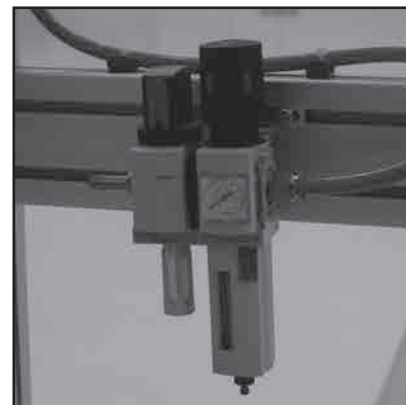
32.0580/0

**TECHN. DATA / ITEMS SUPPLIED**

- The compressed air service module consists of: Manual start-up valve with ventilation via filter, filter regulator, rotary knob with integrated lock and manometer
- Filter mesh 40 µm
- Condensate drain
- Pressure control range: 1-12 bar
- Connection inlet 1/4" thread
- Connection outlet connector system hose D=10 mm
- Standard nominal flow 800 - 1.400 l/min
- Weight = 0.575 kg/piece

**APPLICATIONS**

- Compressed air provision on the work table

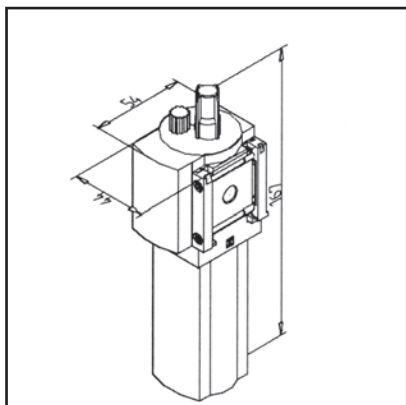
**ASSEMBLY**

- 2x Cyl. Screw M6 x 12 **part no. 21.1143/0**
- 2x square nuts M6 x 13 with retaining plate **part no. 21.1330/2**

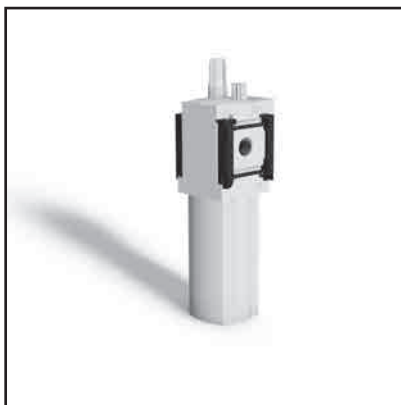
**LUBRICATOR**

Part no.

32.0581/0

**TECHN. DATA / ITEMS SUPPLIED**

- Proportional lubricator with precise oil dosing
- Easy and fast to refill
- Weight = 0.225 kg/piece

**APPLICATIONS**

- Micro-mist oil for compressed air

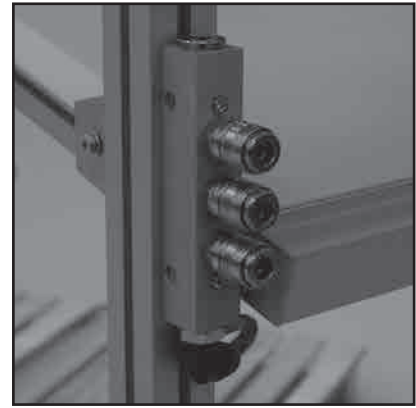
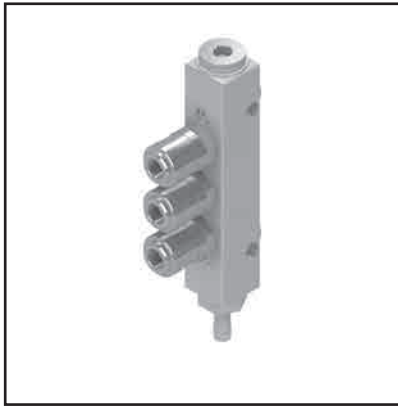
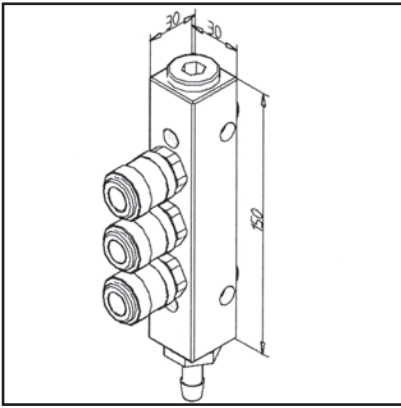
**ASSEMBLY**

- Attach to the filter regulator with the enclosed coupling package

## PNEUMATIC 3-WAY DISTRIBUTOR

Part no.

32.0901/0



### TECHN. DATA / ITEMS SUPPLIED

- Aluminium housing
- 1x connection hose nozzle for hose NW 9
- 3x quick-connect NW 7
- Operating range 0-10 bar
- Temperature range -10 to +70°C
- Connection with push-on fitting on request
- Weight = 0.665 kg/piece

### APPLICATIONS

- Compressed air distribution at the workplace
- Fast connection and disconnection of pressurized compressed air lines
- Plug nipple rotatable in the coupling

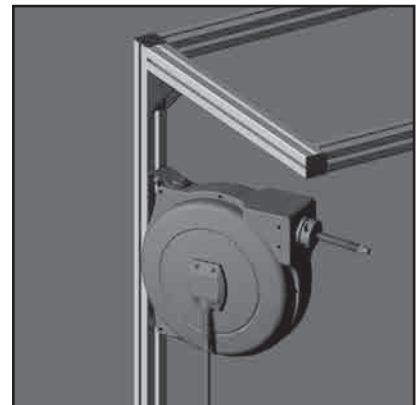
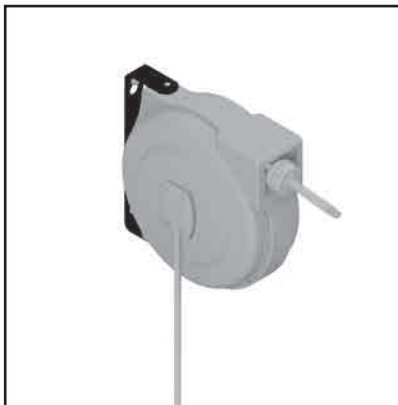
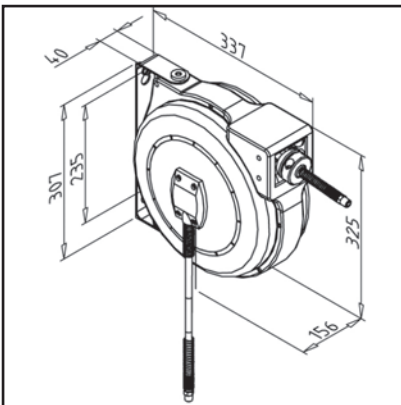
### ASSEMBLY

- Fasten to profile with supplied hardware
- Push on hose and secure with suitable hose clamp

## AUTOM. HOSE REEL

Part no.

32.0583/0



### TECHN. DATA / ITEMS SUPPLIED

- Plastic, blue/ black
- 1x hose recoiler with PU-hose and stopper incl. 1m connecting hose
- Dimensions (LxWxH) 325 x 275 x 185 mm
- Hose length 8 m
- Connection In/outlet 1/4"
- max. pressure 10 bar
- Weight = 3.433 kg/piece

### APPLICATIONS

- Automatic hose reel made of plastic
- Multiple arrester per turn
- disengageable locking

### ASSEMBLY

- Fasten to profile with supplied hardware

## KANBAN-SYSTEM

Low stock levels and avoidance of waste are constant challenges in mass production. With consumption-based disposition procedures according to the kanban principle, these goals can be achieved with simple means. The required parts in production are requested by the consuming point in the production process with a simple kanban card from the upstream stage. The card is usually located on the material and triggers a production order when the minimum stock is reached. In order to ensure the consumption-controlled production and thus the minimization of stocks, no order may be started without this kanban card. The products are provided directly at the point of consumption in so-called kanban shelves. These shelves are equipped with inclined roller conveyors, which transport by gravity the containers or products to the collection point. The shelves are loaded from the back. The size of the shelves depends on the stock at the workplace determined according to kanban rules. So that the containers are transported safely and

gently on the shelf, the inclination of the roller tracks is easily adjustable. To avoid damage caused by impacts, brake plates or brake rollers are available which are easy to assemble. Especially with higher weights, the use of these brake plates may be required. All components required to build customized kanban shelves are available in our product range.

**Especially suitable for the management of small parts according to the kanban principle is our Kantainer.**

(Part no. 32.0870/0)

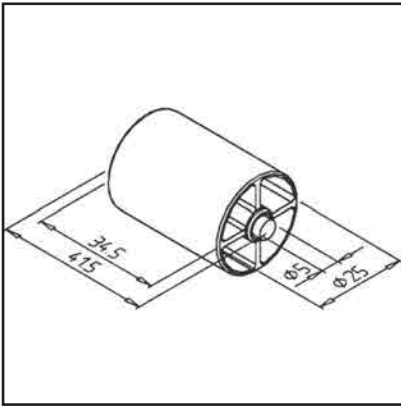




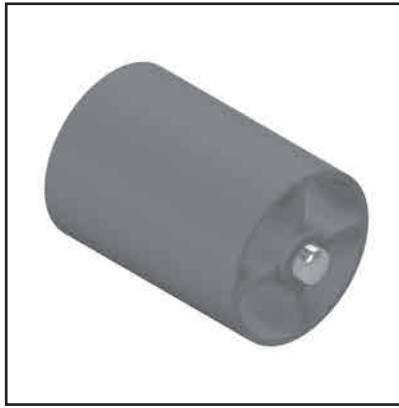
**CONVEYOR ROLLER D 25**

Part no.

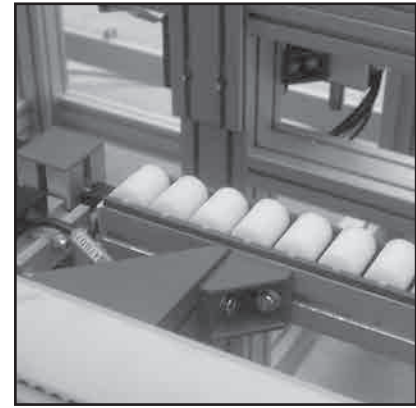
21.1701/0

**TECHN. DATA / ITEMS SUPPLIED**

- ABS, blue
- Axle  $\varnothing 5$ , stainless steel
- Bearing capacity per roller 20 N
- For higher loads use Pulley D 25 compact **part no. 21.1703/0**
- Weight = 0.008 kg/piece

**APPLICATIONS**

- Production of small roller conveyors in connection with profile 45 x 45 R, **part no. 20.1046/0**

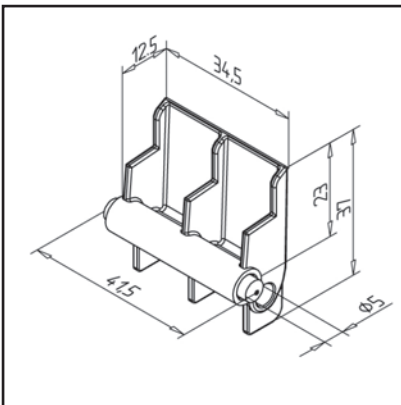
**ASSEMBLY**

- Press rollers in desired number and pitch into roller carrier
- Roller carrier 45 x 45 R with cover **part no. 22.1151/0**
- Roller carrier 45 x 45 R with SF cover **part no. 22.1152/0**

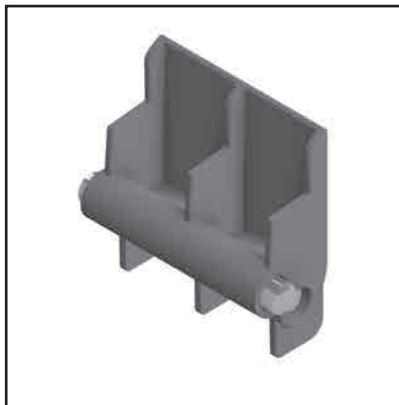
**RETURN STOP**

Part no.

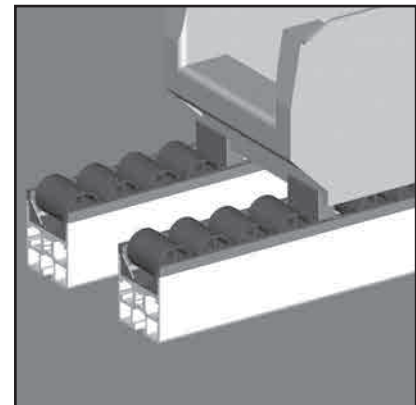
32.0586/0

**TECHN. DATA / ITEMS SUPPLIED**

- ABS, grey
- Weight = 0.015 kg/piece

**APPLICATIONS**

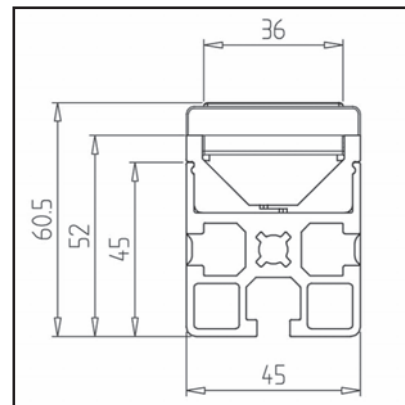
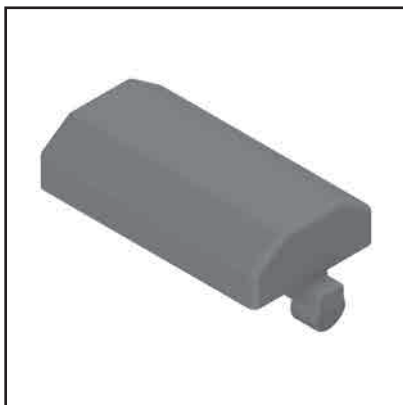
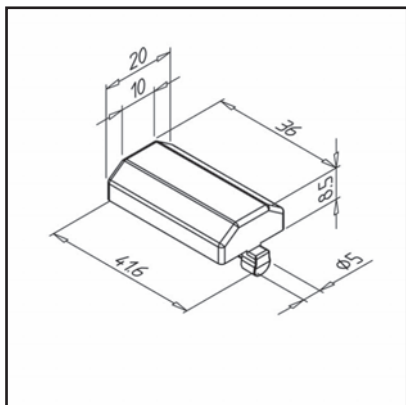
- used for decline-roller conveyors to prevent transported material from running back
- in combination with pulley carrier 45x45R

**ASSEMBLY**

- Clip into the roller carrier instead of a roller

**ROLLER CARRIER BACKING PADS**

Part no. 21.0940/0

**TECHN. DATA / ITEMS SUPPLIED**

- POM, grey RAL 7012
- Suitable for roller carrier
- Weight = 0.004 kg/piece

**APPLICATIONS**

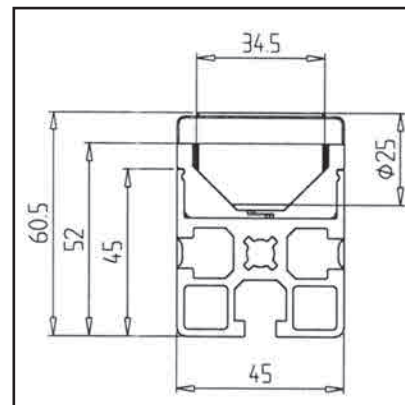
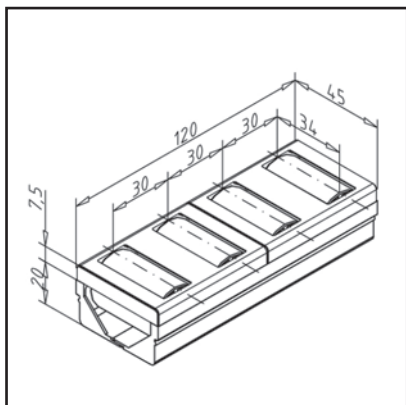
- For use in roller carriers instead of D25 roller for braking transport material
- To prevent a roll away on the installation site

**ASSEMBLY**

- Clip into the roller carrier instead of a roller

**ROLLER CARRIER 45 X 45 R WITH COVER**

Part no. 22.1151/0

**TECHN. DATA / ITEMS SUPPLIED**

- POM, grey
- 2 x pulley carriers base part POM-RAL 7012, **part no. 22.1126/0**
- 1 x Cover POM-RAL 7012 - **part no. 22.1127/0**
- 4 x pulley carriers ABS blue, **part no. 21.1701/0**
- Length: 120 mm
- Weight = 0.076 kg/piece

**APPLICATIONS**

- Production of small roller conveyors in connection with profile 45 x 45 R, **part no. 20.1046/0**

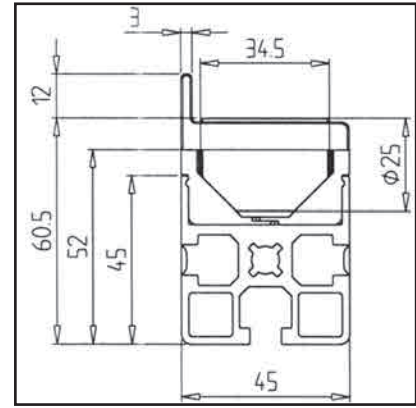
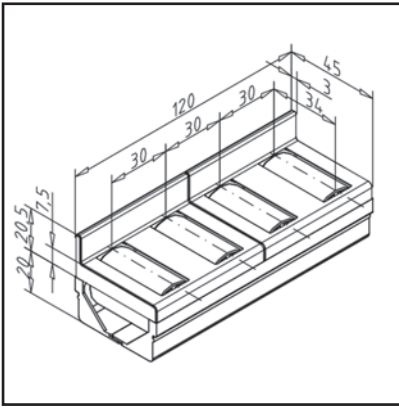
**ASSEMBLY**

- Insert roller carrier in profile
- Insert conveyor rollers
- Clipoff cap

**ROLLER CARRIER 45 X 45 R WITH SF COVER**

Part no.

22.1152/0

**TECHN. DATA / ITEMS SUPPLIED**

- POM, grey
- 2 x pulley carriers base part POM-RAL 7012, **part no. 22.1126/0**
- 1 x cover POM-RAL 7012, **part no. 22.1128/0**
- 4 x pulley carriers ABS blue, **part no. 21.1701/0**
- Length: 120 mm
- Weight = 0.083 kg/piece

**APPLICATIONS**

- Production of small roller conveyors in connection with profile 45 x 45 R, **part no. 20.1046/0**

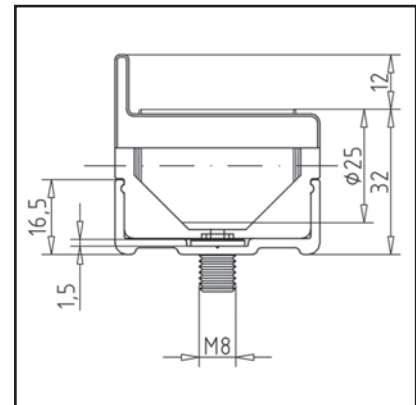
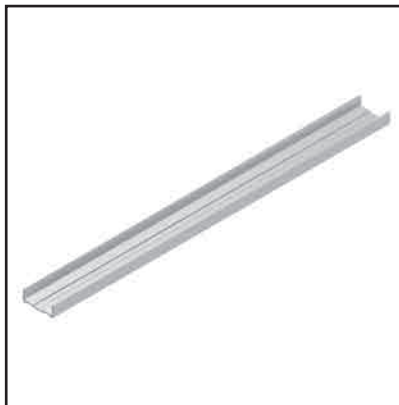
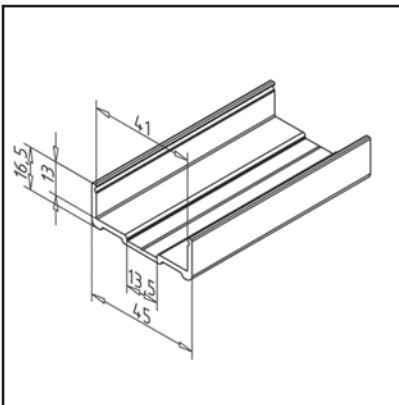
**ASSEMBLY**

- Insert roller carrier in profile
- Insert conveyor rollers
- Clipoff cap

**CARRIER PROFILE 45 R**

Part no.

20.1133/0

**TECHN. DATA / ITEMS SUPPLIED**

- Aluminium, anodized E6/EV1
- $I_x = 0.289 \text{ cm}^4$
- $I_y = 0.428 \text{ cm}^4$
- $w_x = 0.128 \text{ cm}^3$
- $w_y = 0.966 \text{ cm}^3$
- Weight = 0.414 kg/m
- Bar length = 6 m

**APPLICATIONS**

- For the manufacture of miniature roller tracks
- For use with the following roll carriers:  
roll carrier 45 x 45R with cover **part no. 22.1151/0**  
Roller carrier 45 x 45R with SF cover **part no. 22.1152/0**

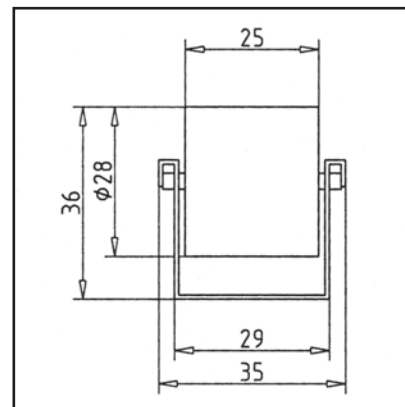
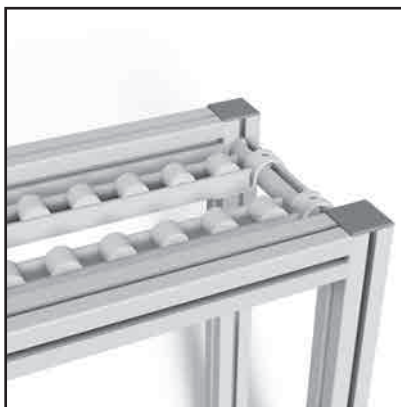
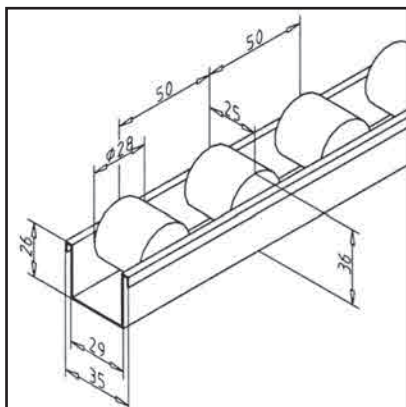
**ASSEMBLY**

- Bore  $\varnothing 8,5$  bring in desired positions
- Assemble with pan head screw **part no. 21.1666/0** and sliding nut 08 with spring sheet **part no. 21.1351/2**
- Put in desired roller carrier

## MINIATURE ROLLER STRIP WITH CYL. MINIATURE ROLLER

Part no.

32.0550/0



### TECHN. DATA / ITEMS SUPPLIED

- Length according to costumers specification
- max. length 6 m
- Division 50 mm
- Supporting profile: Steel, zinc plated
- Roller colour: yellow
- Weight = 0.595 kg/m

### APPLICATIONS

- The rollers can be used over a temperature range from -30°C up to +100°C
- **part no. 32.0555/0** highly conductive roller to avoid electrostatic charge. Roller colour: black

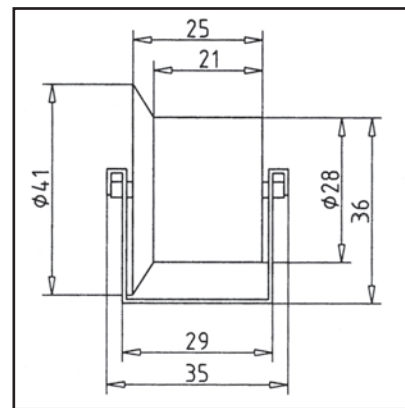
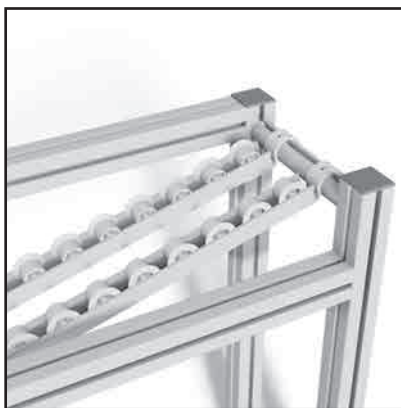
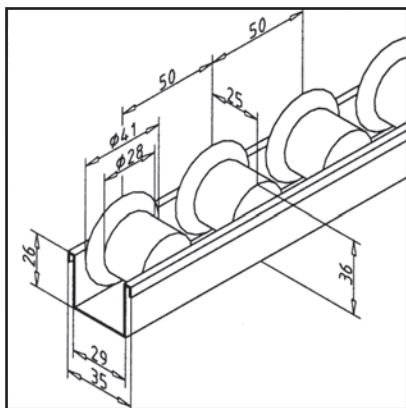
### ASSEMBLY

- Fasten with fastening **part no. 32.0574/0** and end stop **part no. 32.0569/0** onto profile
- With screws directly on the carrier profile

## MINIATURE ROLLER STRIP WITH MINIATURE FLANGE ROLLERS

Part no.

32.0560/0



### TECHN. DATA / ITEMS SUPPLIED

- Length according to costumers specification
- max. length 6 m
- Division 50 mm
- Supporting profile: Steel, zinc plated
- Roller colour: yellow
- Weight = 0.615 kg/m

### APPLICATIONS

- The rollers can be used over a temperature range from -30°C up to +100°C
- **Part no. 32.0565/0** Highly conductive wheels to prevent static charges. Roller colour: black

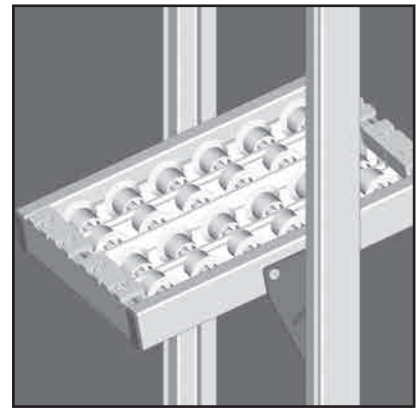
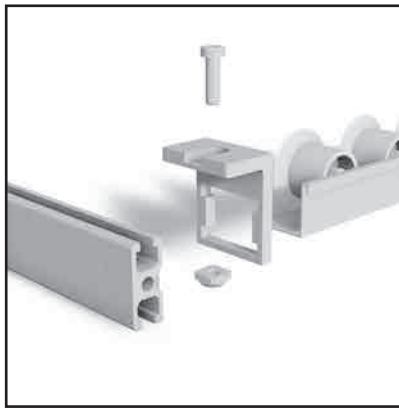
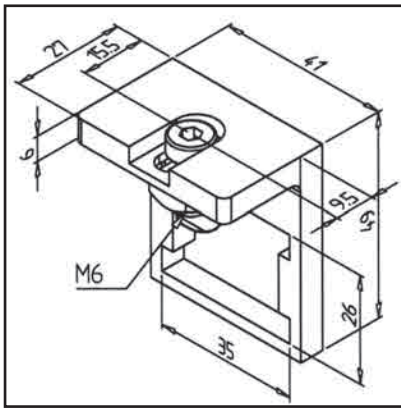
### ASSEMBLY

- Fasten with fastening **part no. 32.0574/0** and end stop **part no. 32.0569/0** onto profile
- With screws directly on the carrier profile

## BRACKET FOR MINIATURE ROLLER STRIP 19

Part no.

32.0575/0



### TECHN. DATA / ITEMS SUPPLIED

- Steel, galvanized
- Fastening kit
- Thickness 6 mm
- Weight = 0.095 kg/piece

### APPLICATIONS

- For attaching miniature roller strip to profiles 19 and 32
- Holder also serves as bedstop
- also available for profile 30 serie (see **part nr. 32.0575/1**)
- Fitting for all profiles of profile series 45

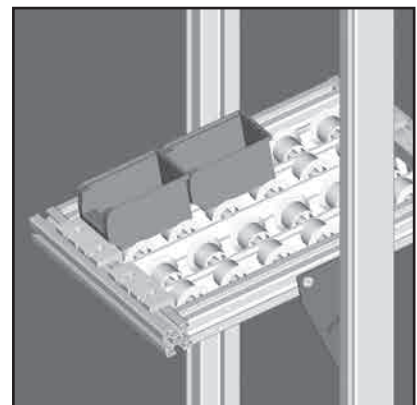
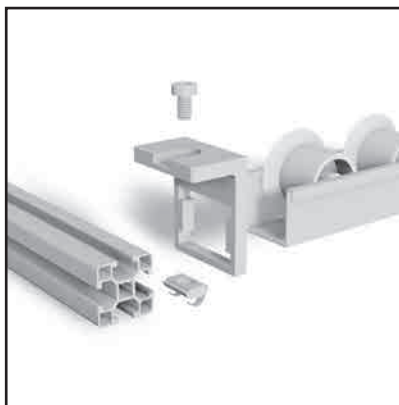
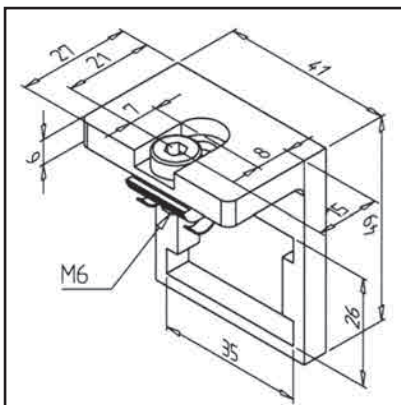
### ASSEMBLY

- Cut out the miniature roller strip
- Insert the miniature roller strip into the holder and screw it to the profile using the fastening material included

## BRACKET FOR MINIATURE ROLLER STRIP 30

Part no.

32.0575/1



### TECHN. DATA / ITEMS SUPPLIED

- Steel, galvanized
- Fastening kit
- Thickness 6 mm
- Weight = 0.092 kg/piece

### APPLICATIONS

- For fastening roller bars
- Fitting for all profiles of profile series 30

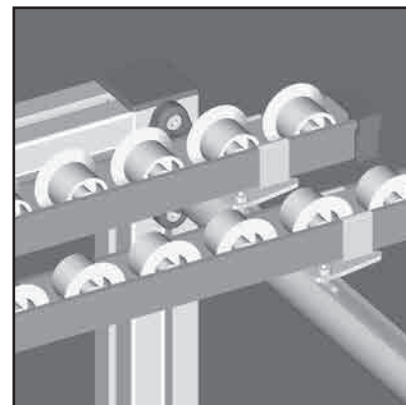
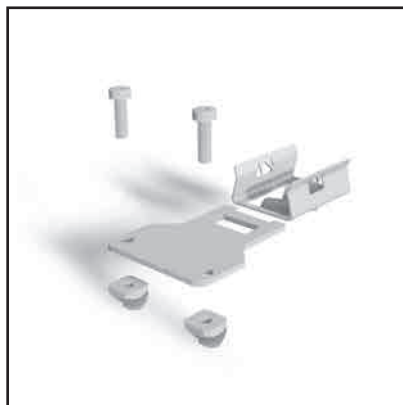
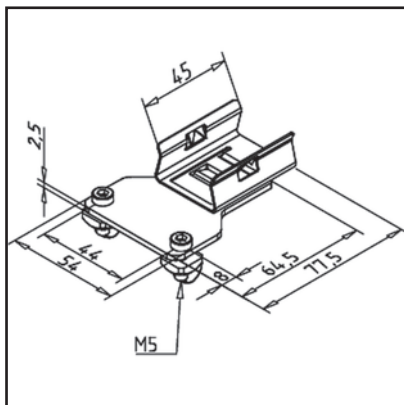
### ASSEMBLY

- Cut out the miniature roller strip
- Insert the miniature roller strip into the bracket; screw it to the profile using the fastening material included

## ROLLER STRIP FASTENING

Part no.

32.0574/0



### TECHN. DATA / ITEMS SUPPLIED

- Stainless steel
- Thickness 3 mm
- With fastening material and spring clip for miniature roller strip
- Weight = 0.091 kg/piece

### APPLICATIONS

- For attaching miniature roller strip without machining
- Fitting for all profiles of profile series 45

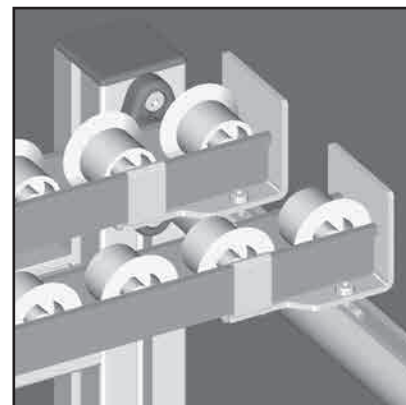
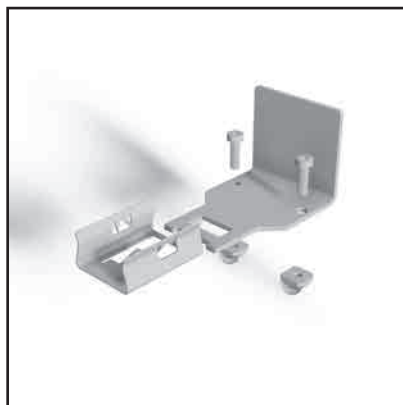
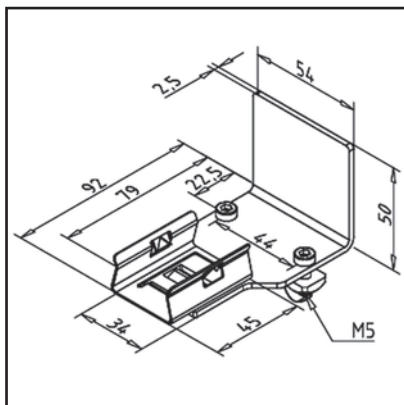
### ASSEMBLY

- For roller conveyors use handle profile **part no. 20.1088/0** in connection with flange bearing 32 **part no. 22.1016/0** or clip 32 **part no. 22.1022/0**

## END STOP MINIATURE ROLLER STRIP

Part no.

32.0569/0



### TECHN. DATA / ITEMS SUPPLIED

- Steel
- Stainless steel end stop
- Thickness 3 mm
- With fastening material and spring clip for miniature roller strip
- Weight = 0.166 kg/piece

### APPLICATIONS

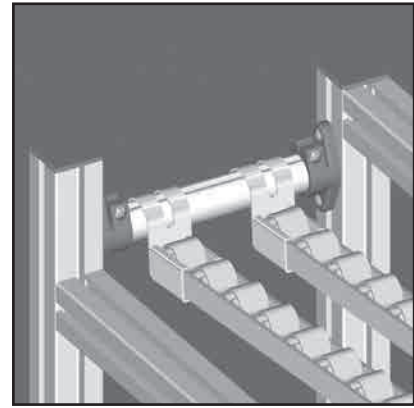
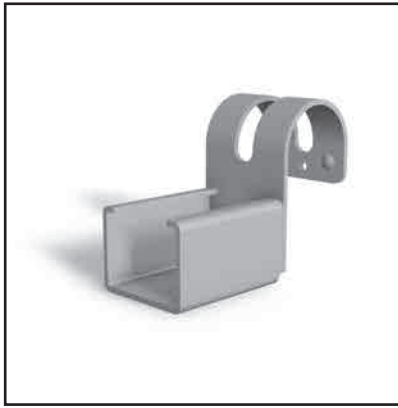
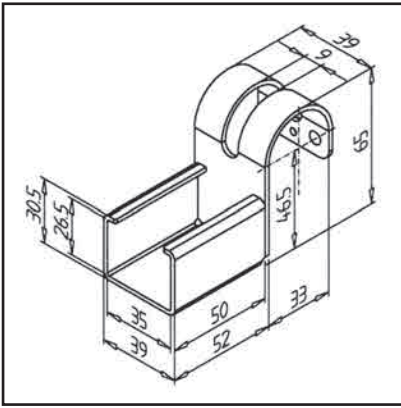
- Use as end stop for miniature roller strip
- Install without drilling
- Fitting for all profiles of profile series 45

### ASSEMBLY

- Fasten to any profile groove with the fastening material provided
- For roller conveyors use handle profile **part no. 20.1088/0** in connection with flange bearing 32 **part no. 22.1016/0** or clip 32 **part no. 22.1022/0**

### MINIATURE ROLLER STRIP BRACKET H

Part no. 32.0553/0



#### TECHN. DATA / ITEMS SUPPLIED

- Steel, galvanized
- Thickness: 2 mm
- Weight = 0.141 kg/piece

#### APPLICATIONS

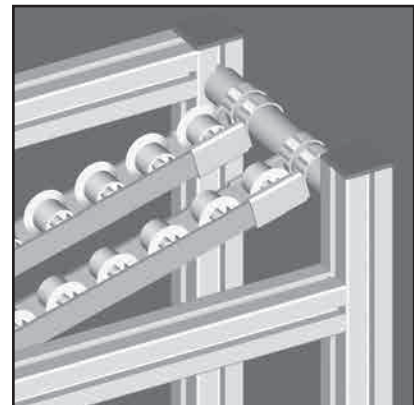
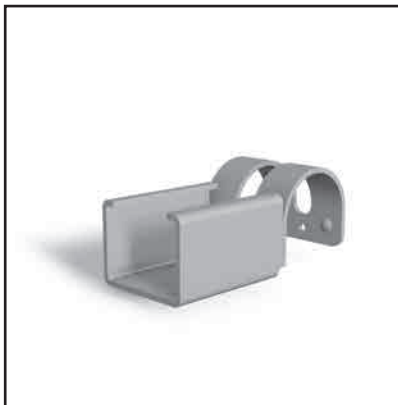
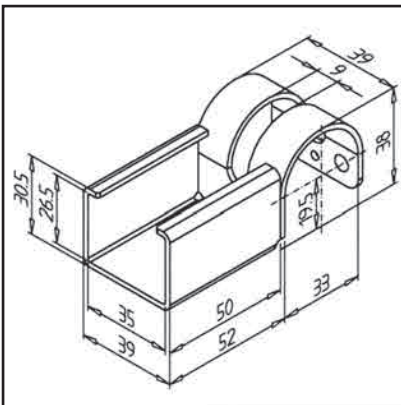
- For attaching roller tracks to grip profile 32  
**part no.: 20.1088/0**
- used as end stop for e.g. containers

#### ASSEMBLY

- Cut out the miniature roller strip
- Attach bracket to the miniature roller strip
- Hang over handle profile 32
- If necessary, the bracket can be secured with a setscrew

### MINIATURE ROLLER STRIP BRACKET F

Part no. 32.0554/0



#### TECHN. DATA / ITEMS SUPPLIED

- Steel, galvanized
- Thickness: 2 mm
- Weight = 0.124 kg/piece

#### APPLICATIONS

- For attaching roller tracks to grip profile 32  
**part no.: 20.1088/0**
- Height of edges on the bracket corresponds the travelling height of rollers

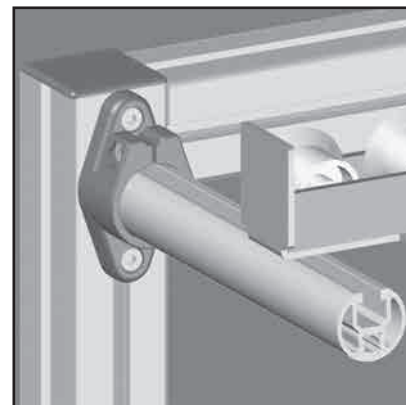
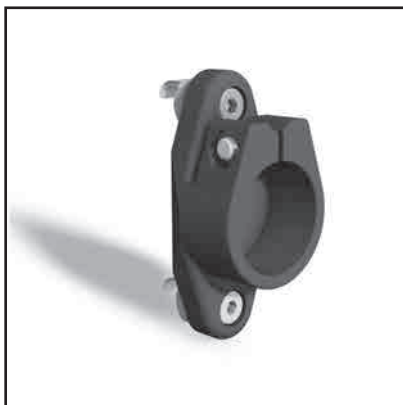
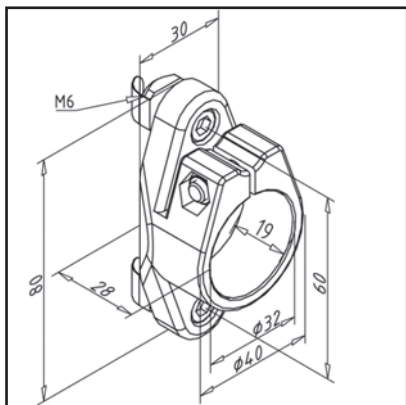
#### ASSEMBLY

- Cut out the miniature roller strip
- Attach bracket to the miniature roller strip
- Hang over handle profile 32
- If necessary, the bracket can be secured with a setscrew

## FLANGE BEARING 32

Part no.

22.1016/0



### TECHN. DATA / ITEMS SUPPLIED

- ABS, grey
- Fastening kit
- Weight = 0.050 kg/piece

### APPLICATIONS

- For angle-adjustable assembly of handle profile 32 for roller track **part no. 20.1088/0**

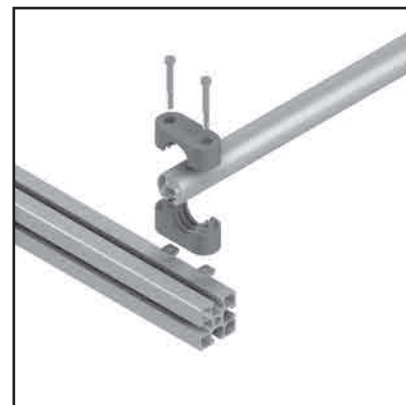
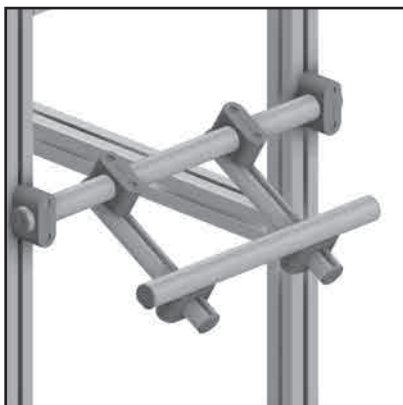
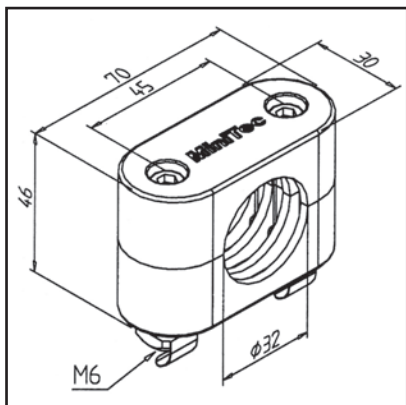
### ASSEMBLY

- Use fastening kit to fasten to base frame
- Push in handle profile 32 and clamp using screws

## GRIP PROFILE CLAMP 32

Part no.

22.1022/0



### TECHN. DATA / ITEMS SUPPLIED

- ABS, grey
- Fastening kit
- Weight = 0.036 kg/piece

### APPLICATIONS

- For handle profile 32 **part no. 20.1088/0**
- Handle with adjustable angle
- Simple equipment and frames

### ASSEMBLY

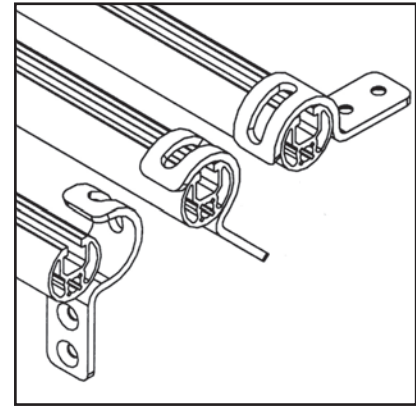
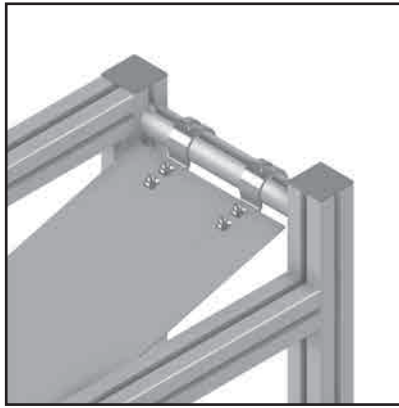
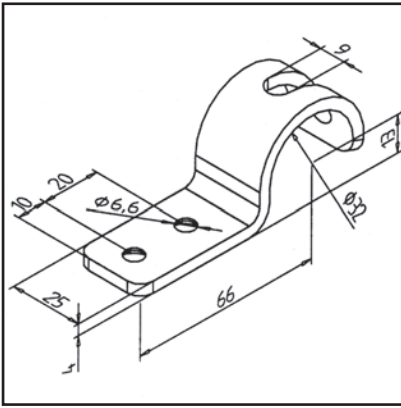
- Swivel the sliding nuts
- Insert handle profile into the 2 half-shells
- Fasten with screws



## CATCH 32 FOR HANDLE PROFILE

Part no.

21.0005/0



### TECHN. DATA / ITEMS SUPPLIED

- Steel, galvanized
- Countersunk screw M6 x 16
- With sliding nut M6
- Weight = 0.100 kg/piece

### APPLICATIONS

- Angle-independent attachment of roller conveyors, plates, shelves, etc. on the handle profile 32nd **part no. 20.1088/0**

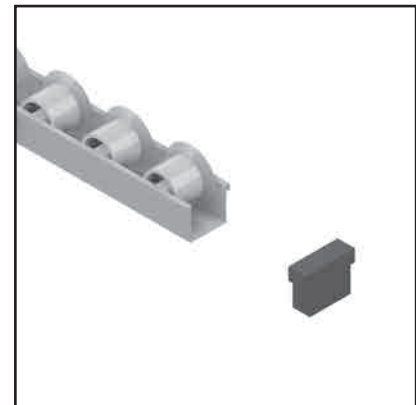
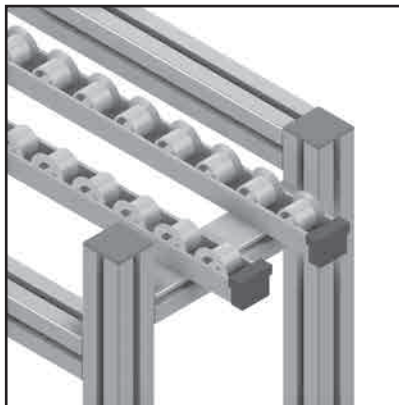
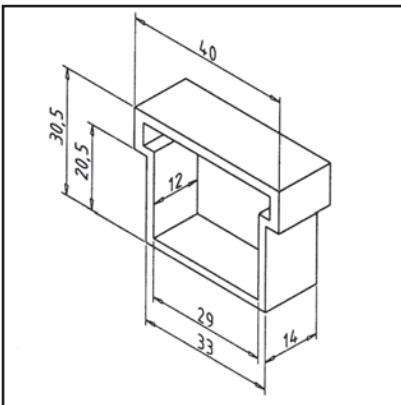
### ASSEMBLY

- Attach plates or similar with M6 countersunk screw
- Hang over handle profile 32
- If necessary, secure against dislocation with set screw M8 x 20 and sliding nut M8

## EDGE PROTECTION

Part no.

32.0572/0



### TECHN. DATA / ITEMS SUPPLIED

- Plastic, black
- ESD-compatible
- Weight = 0.004 kg/piece

### APPLICATIONS

- Protection against injury

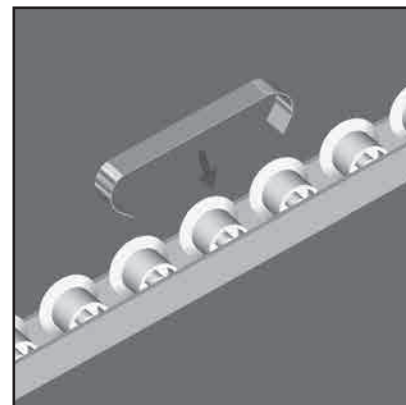
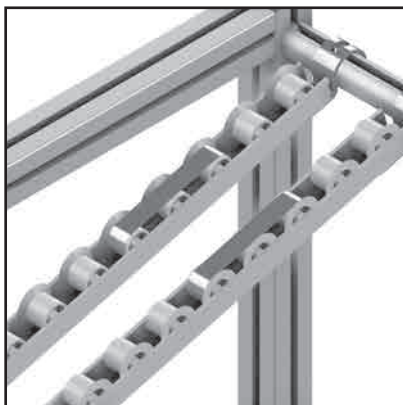
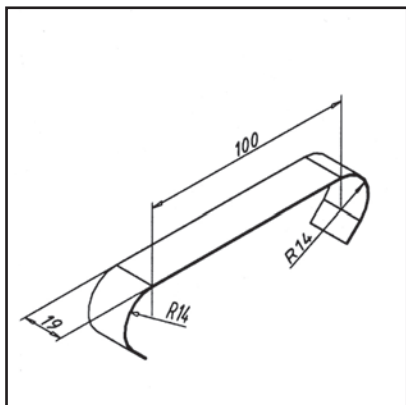
### ASSEMBLY

- Attach to the miniature roller strip

**BRAKE PLATE**

Part no.

32.0571/0

**TECHN. DATA / ITEMS SUPPLIED**

- Steel
- Brake plate on spring steel for 50 mm division
- In connection with conductive roller ESD conductive
- Weight = 0.017 kg/piece

**APPLICATIONS**

- The brake plate can be fastened at any desired location

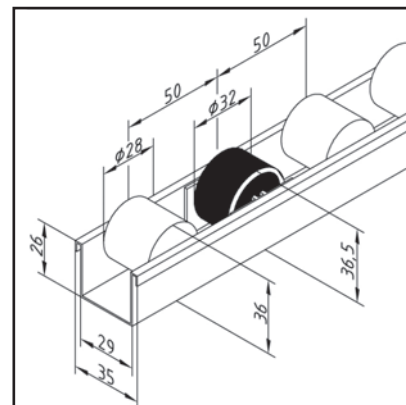
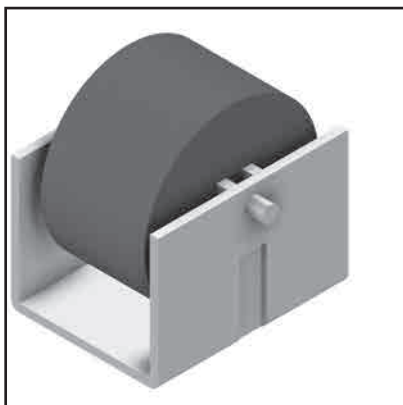
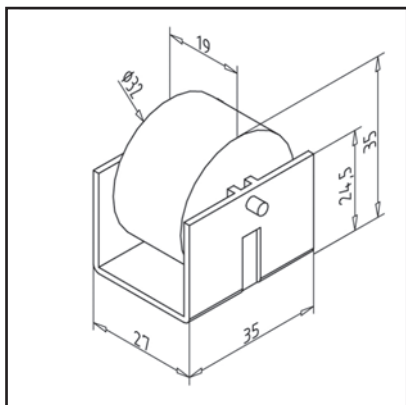
**ASSEMBLY**

- Attach to the miniature roller strip

**MINIATURE ROLLER BRAKE**

Part no.

32.0562/0

**TECHN. DATA / ITEMS SUPPLIED**

- Plastic, black
- Weight = 0.022 kg/set

**APPLICATIONS**

- For use with roller rails with a slope, for braking the conveyed material

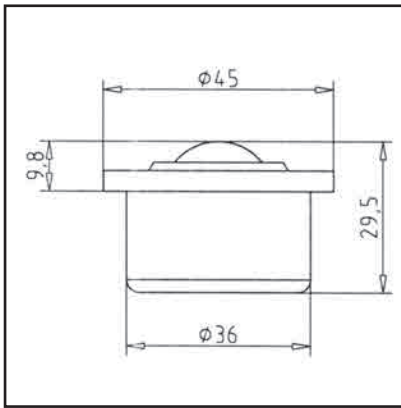
**ASSEMBLY**

- Remove the existing miniature rollers from the roller strip
- insert support at the same place and clip brake-roller in
- When installing, pay attention to the direction of the bracket and the miniature rollers

**BALL ROLLER**

Part no.

35.0041/0

**TECHN. DATA / ITEMS SUPPLIED**

- Housing made of steel sheet, galvanized, steel balls
- DW 22,2 mm
- Load factor C 1200 N
- Weight = 0.130 kg/piece

**APPLICATIONS**

- Ball rollers for conveyor systems and automation systems
- Enable a simultaneous longitudinal and transverse movement
- Installation in work tables or roller tracks
- Ball roller also as suspension for boxes, devices, furniture and appliances

**ASSEMBLY**

- Insert into prepared bore
- Or install with tolerance ring **part no. 35.0001/0**
- Caution: for mounting with tolerance ring of other bore diameter ( $37.7 + 0.2$  mm)

The optimal working height - also with the material supply.

The lifter ensures ergonomic conditions in the workplace, because during loading and unloading the containers automatically remain in the optimum position and height for the respective worker. The working height can be adjusted continuously and remains the same even with different height

containers. This is ensured by an easily adjustable precision reflex switch. A removable control panel as well as various loading options ensure flexibility and user-friendliness.

Lifter 1000



Lifter 1400



Example application Lifter 1000 with equipment - lateral loading

Example application Lifter 1400 with equipment - frontal loading

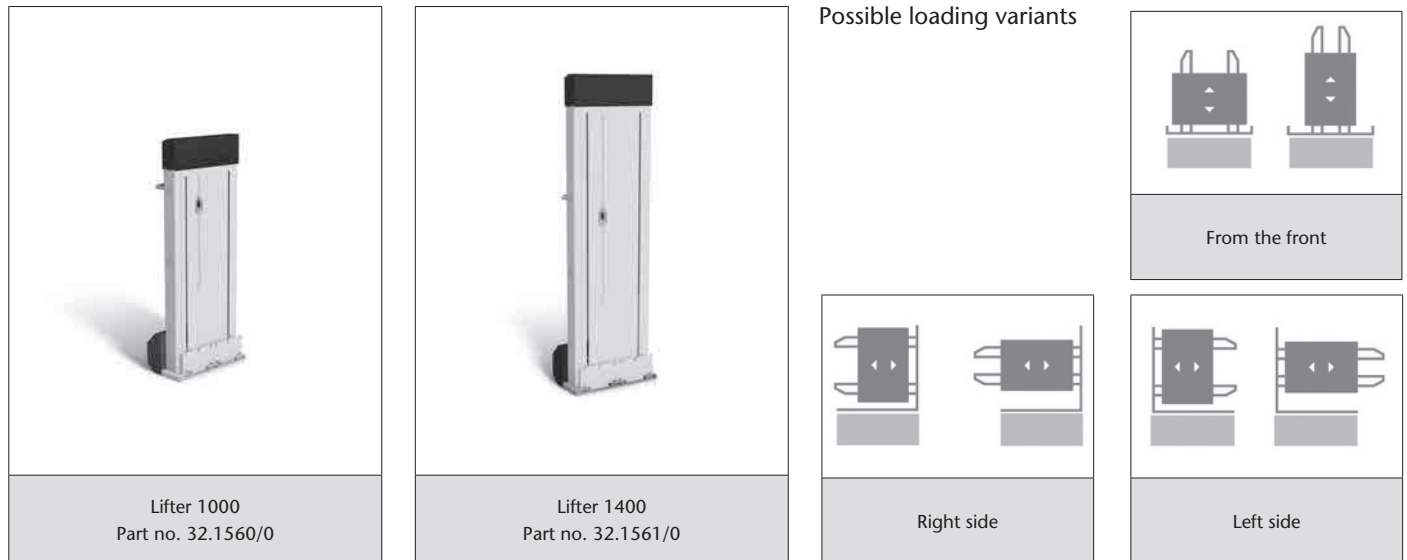
	Lifter 1000	Lifter 1400
Dimensions (without fork) W x H x D	560 x 1382 x 283 mm	560 x 1782 x 283 mm
Gabelhubhöhe	115 bis 1000 mm	115 bis 1400 mm
Max. Load capacity	200 kg	200 kg
Max. Lifting speed	< 40 mm/s	< 40 mm/s
Supply	230V / 50Hz, 10A	230V / 50Hz, 10A
Protection	IP54 IEC 529	IP54 IEC 529
Part no.	32.1560/0	32.1561/0
Lifter HD for loads up to 1,000 kg on request (also with Euro pallet holder)		

TECHNICAL DATA

- Electric geared motor with brake
- Low-maintenance ball screw
- Automatic height recognition
- Automatic loading and unloading mode
- Removable manual control panel ensures flexibility and user-friendliness
- Siemens logic module
- Surface powder-coated resp. galvanized
- Easily adjustable proximity switch ensures optimum working height
- Low space requirements
- Quick adjustment of the desired working height
- Simple connection to a 230V/50 Hz socket
- With tool-free mounting of the accessories, various loading variants can be implemented quickly and easily

Simple and flexible to the right configuration for your application.

Simply choose the lifter suitable for your needs (stroke 1000 or 1400mm) and equip it with the accessories necessary for your application.














Depending on the loading variant you need at least one pair of forks in addition to the lifter, possibly an adaptation angle and one or two support plates.

Ordering example for a Lifter 1000 with side loading left / right as shown



Loading variants with fork pair, support plate and adaptation angle combinations








	Pair of forks 400	Pair of forks 600	Adapter angle 400	Adapter angle 600	Supporting plate 400	Supporting plate 600
	Part no. 32.1562/0	Part no. 32.1563/0	Part no. 32.1565/0	Part no. 32.1564/0	Part no. 32.1567/0	Part no. 32.1566/0
						
	X				X	
		X				X
	X			X	X	X
		X	X		X	X
	X			X	X	X
		X	X		X	X

## Overview accessories

Due to the additional adjustment options - lateral and longitudinal - the lifter is suitable for the use of a wide variety of floor scooters and material trolleys.

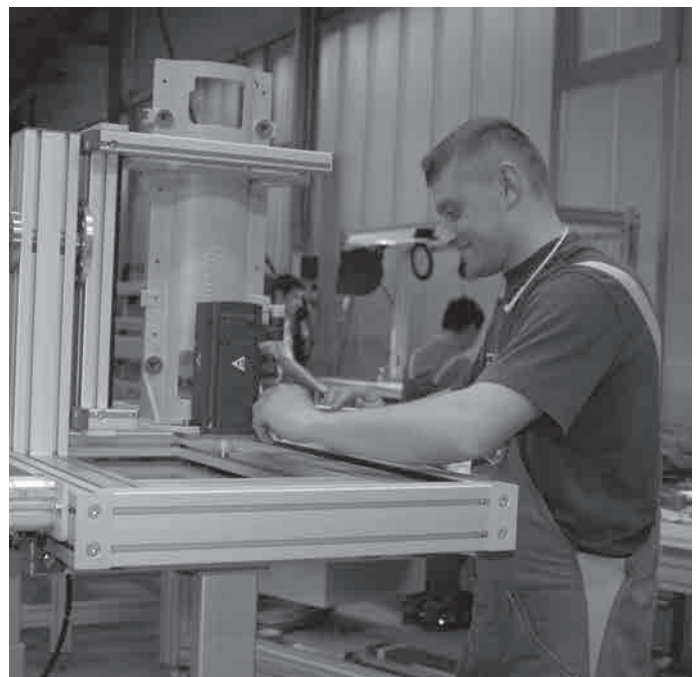
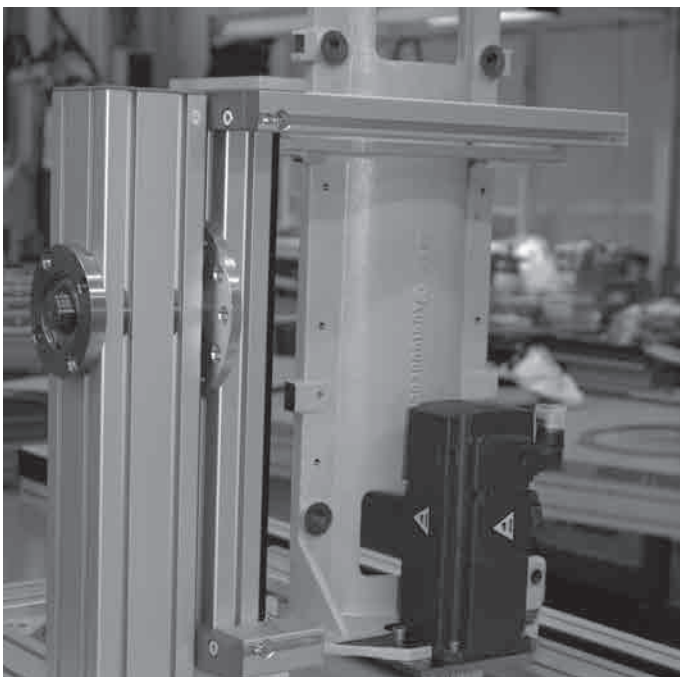
**Optional equipment for the lift is available:**

- Increase for proximity switch
- Different sensors for height detection
- Various adaptations for various floor rollers
- Specially adapted fork pairs / load holders

<p>Adapter angle It allows lateral loading.</p>		<p>Adapter bracket 400    Part no.    32.1565/0</p> <p>Adapter angle 600    Part no.    32.1564/0</p>
<p>Fork pairs Depending on size and load variant Fork pair 400 or 600.</p>		<p>Pair of forks 400    Part no.    32.1562/0</p> <p>Pair of forks 600    Part no.    32.1563/0</p>
<p>Support plates Provide the safe position of the lift even with heavy loads.</p>		<p>Supporting plate 400    Part no.    32.1567/0</p> <p>Supporting plate 600    Part no.    32.1566/0</p>
<p>Floor roller The transport floor roller is made of sheet steel and has a double edge.</p> <p>Load capacity up to 450 kg Track width: 305 or 318</p>		<p>Trolley 400 x 600, gauge 305 Part no.    32.1569/0</p> <p>Trolley 400 x 600, track width 318 Part no.    32.1570/0</p> <p>ESD version: Floor roller 400 x 600, track width 305 Part no.    32.1571/0</p>
<p>Hand drawbar / drawbar cart For easy transport the floor roller. In combination with the towing eye and drawbar, a ground roller train can be formed.</p>		<p>Hand draw    Part no.    32.1572/0</p> <p>Pedestrian cart    Part no.    32.1573/0</p>
<p>Magnetic control panel holder With magnets, it can be flexibly attached to the appropriate place of the lift cover. Above, on the side or on the back.</p>		<p>Control panel holder magnetic    Part no.    32.1568/0</p>
<p>Boxes</p>		<p>Box 600 (L) x 400 (W) x 150 (H) Part no.    32.1574/0</p> <p>Box 600(L) x 400(B) x 236(H) Part no.    32.1575/0</p> <p>Box 600(L) x 400(B) x 420(H) Part no.    32.1576/0</p>

## ASSEMBLY DEVICES

In the development of assembly devices it is important to not only reduce set-up times but also to increase reusability, i.e. flexibility. In combination with the Minitec profile system, adaptability to different workpieces is always guaranteed with minimal changeover effort and time.

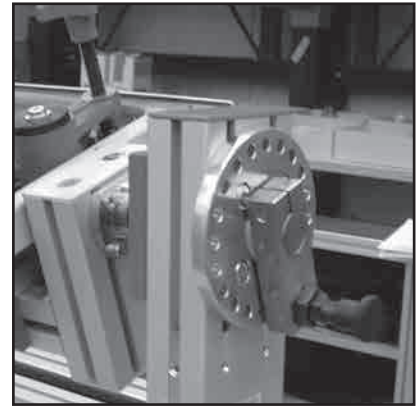
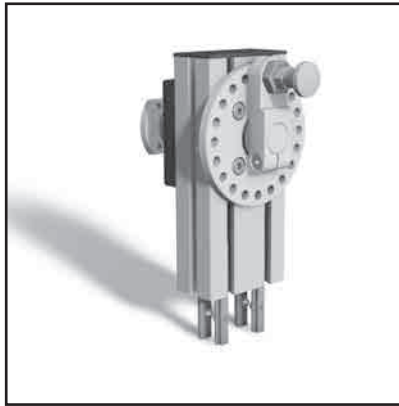
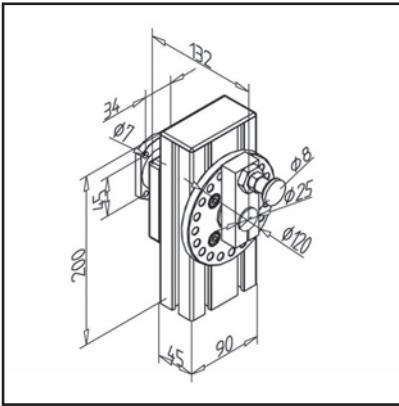




## TURNING DEVICE 45 X 90

Part no.

32.2011/0



### TECHN. DATA / ITEMS SUPPLIED

- Fmax. 1500 N
- Mmax. 150 Nm
- Screening 18°
- Indexing bolt with lock
- Bearing over 2 sliding bushings
- Weight = 3.320 kg/piece

### APPLICATIONS

- Reproducibly accurate positioning of components for assembly purposes
- Remote controlled pneumatic locking on request

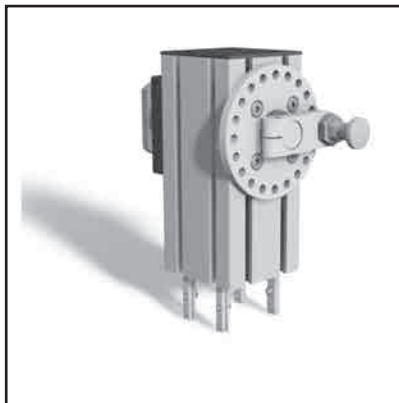
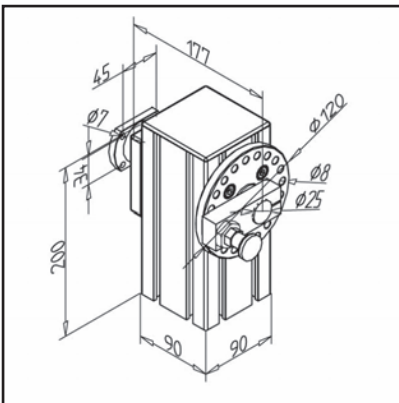
### ASSEMBLY

- Fastening with clamping strip as profile extension or profile connector
- Clearance and turning position adjustable using clamp connection

## TURNING DEVICE 90X90

Part no.

32.2010/0



### TECHN. DATA / ITEMS SUPPLIED

- Fmax. 1500 N
- Mmax. 150 Nm
- Screening 18°
- Indexing bolt with lock
- Bearing over 2 sliding bushings
- 4 T-slot bars for installation on profile construction
- Weight = 4.374 kg/piece

### APPLICATIONS

- Reproducibly accurate positioning of components for assembly purposes
- Remote controlled pneumatic locking on request

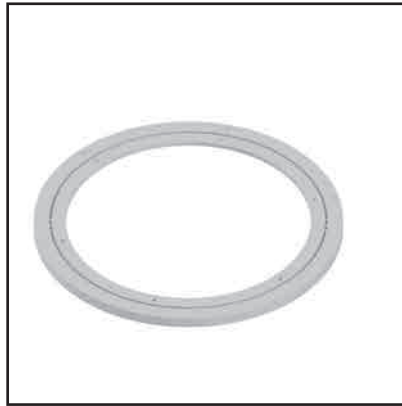
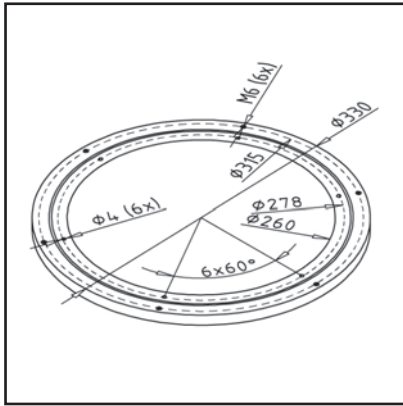
### ASSEMBLY

- Fastening with clamping strip as profile extension or profile connector
- Clearance and turning position adjustable using clamp connection

**SLEWING RING 330 / 260 / 14 MM**

Part no.

32.2005/1

**TECHN. DATA / ITEMS SUPPLIED**

- Aluminium, Pressure die-casting, blasted
- Turntable with steel balls
- Axial load up to 300 kg
- ESD-compatible
- Ø 330 x 13.5 mm
- Low maintenance
- Circular aluminum blanks upon request
- Weight = 0.580 kg/piece

**APPLICATIONS**

- Used in the industry, in furniture display construction, simple turning device for mounting devices for horizontal use

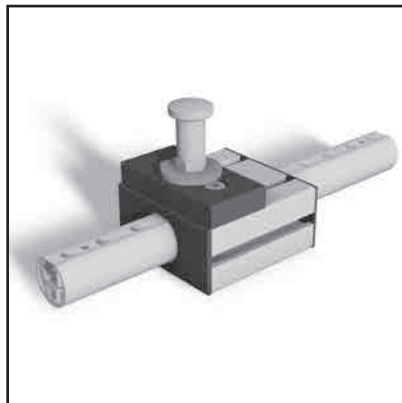
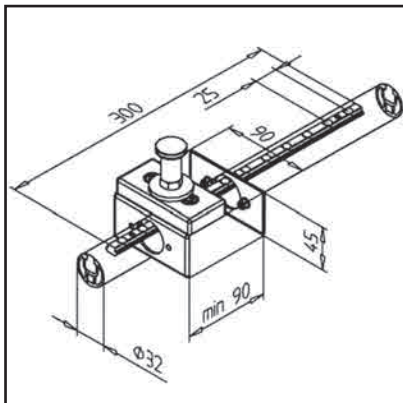
**ASSEMBLY**

- Screw through the holes  $D = 4$  mm onto the profile frame or the table plate
- Screw turntable or similar onto the outer ring

**LOCKING BOLT ADJUSTMENT F**

Part no.

29.0852/0

**TECHN. DATA / ITEMS SUPPLIED**

- Locking bolt with rest position
- Drilled clamping strip for detent with step 25 mm, length 300 mm
- End caps
- Connecting plate for receiving the locking bolt
- Profile 45 x 90S machined **part no. 29.0857/0** and handle profile 32 **part no. 20.1088/0** not included in delivery scope
- Weight = 0.460 kg/piece

**APPLICATIONS**

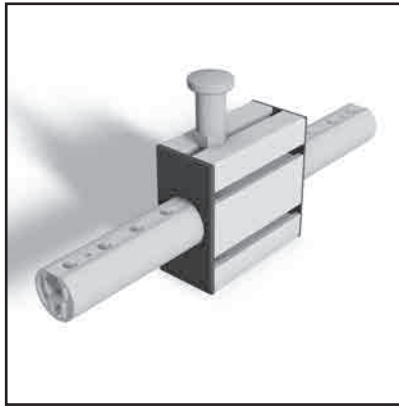
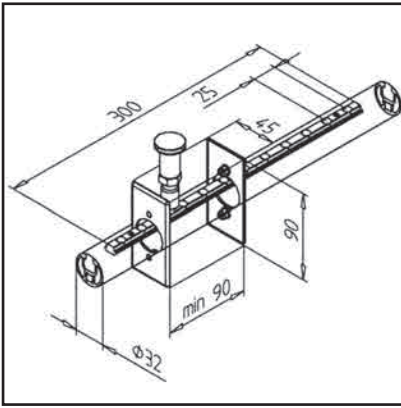
- for height-adjustable tables, conveyors etc.
- for lock in place adjustment of lateral guides
- for adjustable devices and clampings

**ASSEMBLY**

- fasten perforated t-slot bar onto handle profile 32
- Insert the locking bolts in the connection plate and profile 45 x 90 S
- **please indicate length of handle profile 32 ( min. 300 mm) and profile 45x90S ( min. 90 mm)!**

## LOCKING BOLT ADJUSTMENT H

Part no. 29.0851/0



### TECHN. DATA / ITEMS SUPPLIED

- Locking bolt with rest position
- Drilled clamping strip for detent with step 25 mm, length 300 mm
- End caps
- Profile 45 x 90S machined **part no. 29.0858/0** and handle profile 32 **part no. 20.1088/0** not included in delivery scope
- Weight = 0.241 kg/piece

### APPLICATIONS

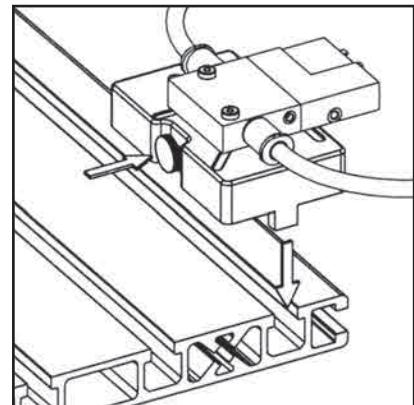
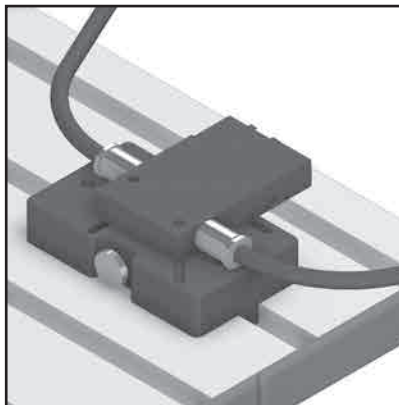
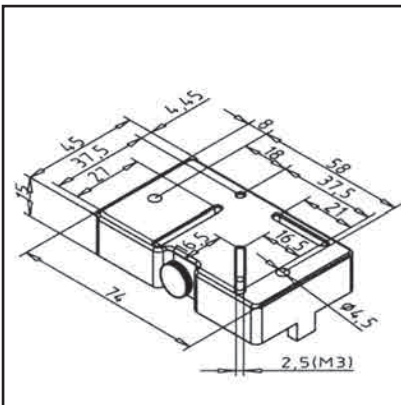
- for height-adjustable tables, conveyors etc.
- for lock in place adjustment of lateral guides
- for adjustable devices and clampings

### ASSEMBLY

- fasten perforated t-slot bar onto handle profile 32
- Screw in the locking bolts in profile 45 x 90 S
- **please indicate length of handle profile 32 ( min. 300 mm) and profile 45x90S ( min. 90 mm)!**

## UNIVERSAL CLAMPING SOCKET

Part no. P2.0060/0



### TECHN. DATA / ITEMS SUPPLIED

- Housing PA 6 GF
- Actuator made of steel
- Weight = 0.037 kg/piece

### APPLICATIONS

- For assembly of pneumatic switches for learning and training purposes
- To fasten diverse pneumatic switches
- Mounting of valves or similar from various manufacturers

### ASSEMBLY

- Simple pneumatic accessories fastened with M3 screws (not in scope of delivery) onto the clamping socket
- By pressing the button, the clamping socket can be fit into the slot
- When released, an automatic locking takes place

## ESD-ACCESSORIES

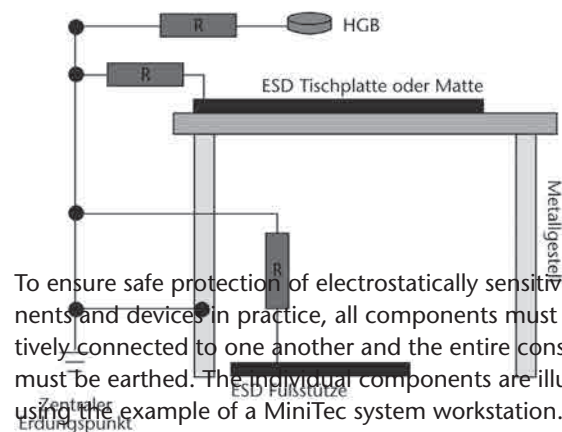


ESD (Electro Static Discharge) is the electrostatic discharge of charged objects or persons by direct contact or sparks. The cause of ESD are electrical charges which are generated by charge separations or as a result of influences in electrical fields. Sources of this charge may be people and their clothes

- workplace equipment including floors,
- packaging equipment and tools

Electrostatically sensitive devices, especially semiconductor components

Protective measures for electrostatically sensitive components

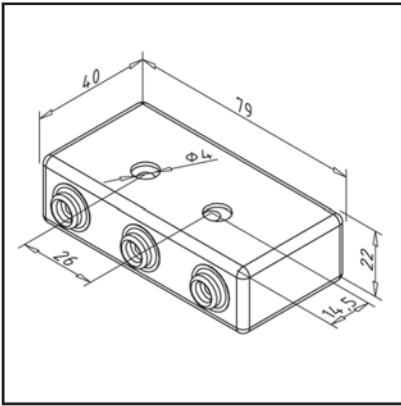


To ensure safe protection of electrostatically sensitive components and devices in practice, all components must be conductively connected to one another and the entire construction must be earthed. The individual components are illustrated using the example of a MiniTec system workstation.

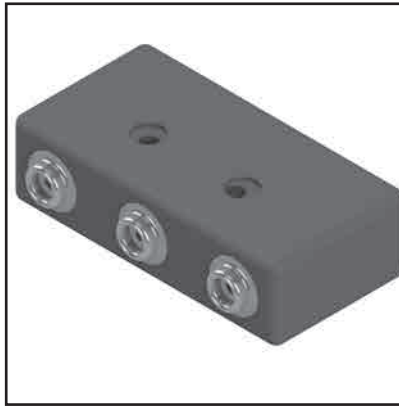
**EARTHING BOX ESD**

Part no.

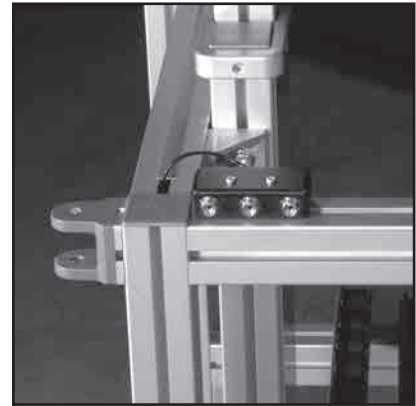
32.1002/0

**TECHN. DATA / ITEMS SUPPLIED**

- Earthing cable 2 m length
- Connection type: 4mm eye
- 1 MOhm safety resistor per connection
- 3x 10 mm push button connection
- Weight = 0.061 kg/piece

**APPLICATIONS**

- Earth connection point EBP for personnel grounding

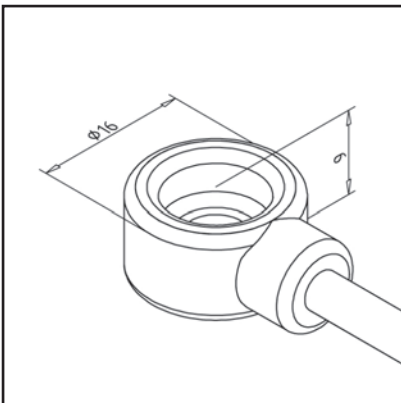
**ASSEMBLY**

- Tighten to table plate with chipboard screw  $\varnothing 4 \times 30$
- Fix with cyl. screw M4 x 30 **part no. 21.1285/0** and 2x square nut M4 **part no. 21.1310/2** onto profile

**EARTH CONDUCTOR ESD**

Part no.

32.1004/0

**TECHN. DATA / ITEMS SUPPLIED**

- 1 MOhm safety resistance
- 10 mm push button / 4 mm eye
- Length: 3 m
- Weight = 0.019 kg/piece

**APPLICATIONS**

- For table and floor coverings

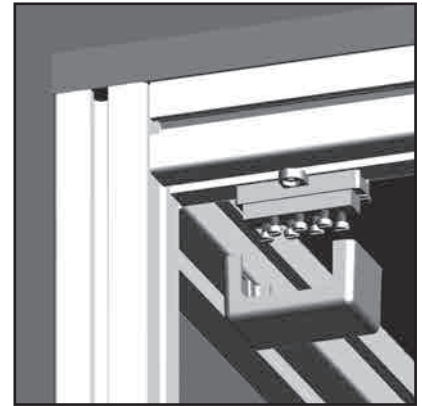
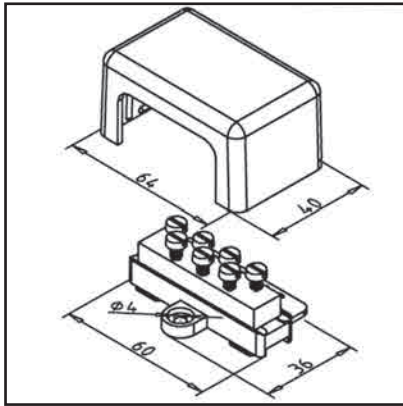
**ASSEMBLY**

- Connect as central grounding **part no. 32.1003/0** box ESD
- Clip onto table pad

**CENTRAL EARTHING BOX ESD**

Part no.

32.1003/0

**TECHN. DATA / ITEMS SUPPLIED**

- Terminal strip for connection of max. 7 earthing cables
- With screw connections for lugs with 4 mm eye
- Weight = 0.072 kg/piece

**APPLICATIONS**

- Suitable for contacting earthing conductors to ESD or protective ground

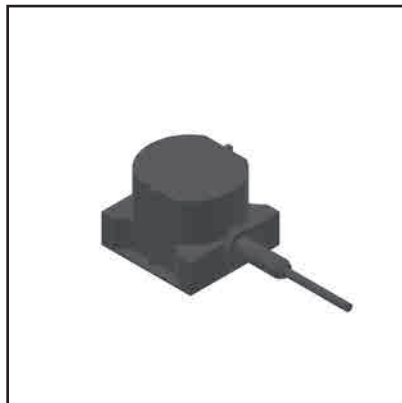
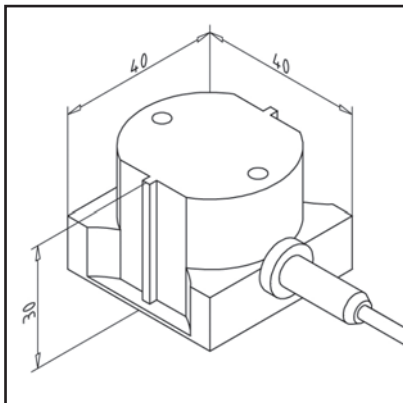
**ASSEMBLY**

- Attach to the tabletop with accessories from scope of supply

**DUMMY PLUG WITHOUT RESISTOR**

Part no.

32.1001/0

**TECHN. DATA / ITEMS SUPPLIED**

- Dummy plug for Schuko outlet
- With 2m smooth cable
- Connection type: 4mm eye
- Weight = 0.048 kg/piece

**APPLICATIONS**

- For direct earthing of tabletops and floor coverings or the central earthing strip

**ASSEMBLY**

- Connect to central grounding box **part no. 32.1003/0**
- Plug into suitable Schuko outlet

## SPIRAL CABLE HIGHLY ELASTIC

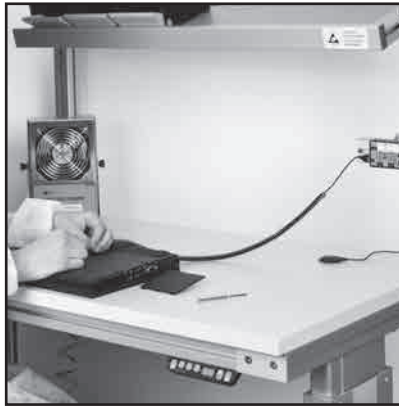
Part no.

32.1017/0



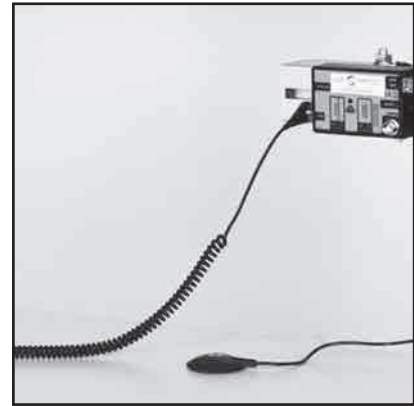
### TECHN. DATA / ITEMS SUPPLIED

- Spiral cable; highly elastic, black
- 10mm / 10mm pushbutton
- 1 MOhm
- Length: 1,80 m
- Weight = 0.041 kg/piece



### APPLICATIONS

- For connecting wristlets onto earthing box



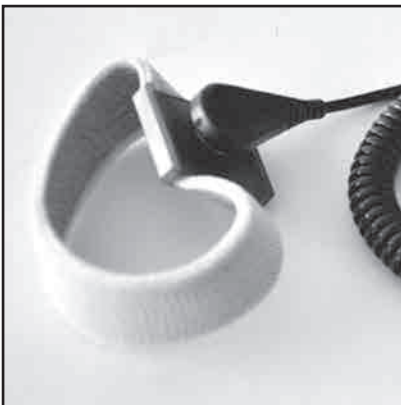
### ASSEMBLY

- Fasten spircal cable with push button onto earthing box and wristlet

## ELASTIC WRIST STRAP

Part no.

32.1018/0



### TECHN. DATA / ITEMS SUPPLIED

- Wristlet blue
- Push-button 10mm
- Weight = 0.013 kg/piece



### APPLICATIONS

- Earthing of humans



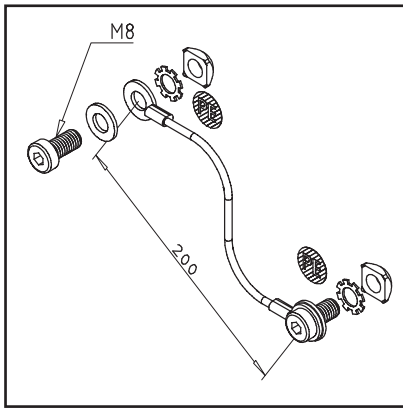
### ASSEMBLY

- Attach to the wrist and connect to the grounding box via spiral cable

**EARTHING CABLE ESD AREA**

Part no.

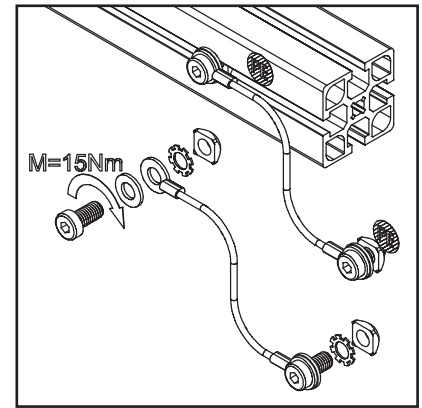
32.1013/0

**TECHN. DATA / ITEMS SUPPLIED**

- Earthing cable for ESD areas
- Core H07V-K 4mm<sup>2</sup> Length: 200 mm
- Weight = 0.053 kg/piece

**APPLICATIONS**

- For earthing work tables and structures between profile and profile
- For earthing of work tables and constructions between profiles and panel element

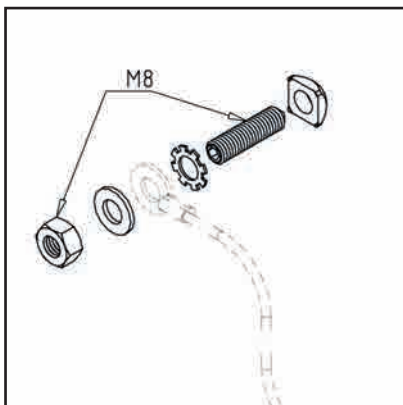
**ASSEMBLY**

- Fasten both sides with M8
- Fasten to profile groove with supplied hardware.

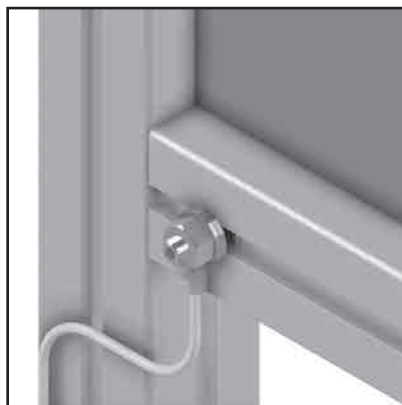
**EARTHING POINT**

Part no.

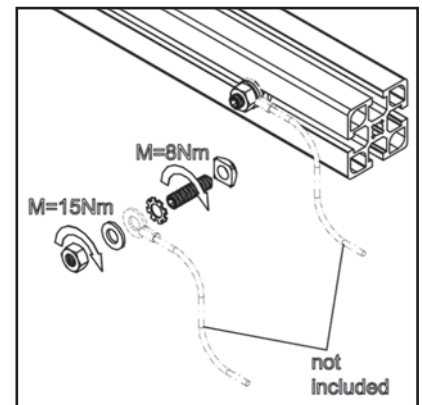
32.0769/0

**TECHN. DATA / ITEMS SUPPLIED**

- Threaded pin M8x30
- Sliding nut - Z M8
- Tooth lock washer
- washer
- hexagon nut
- Weight = 0.022 kg/piece

**APPLICATIONS**

- For earthing workstations and constructions

**ASSEMBLY**

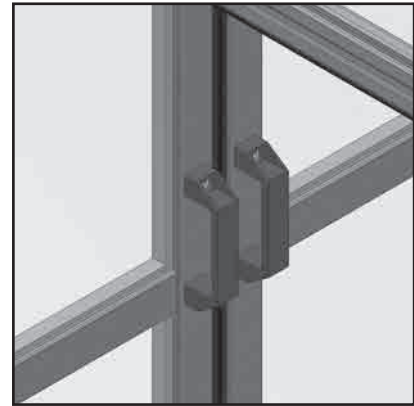
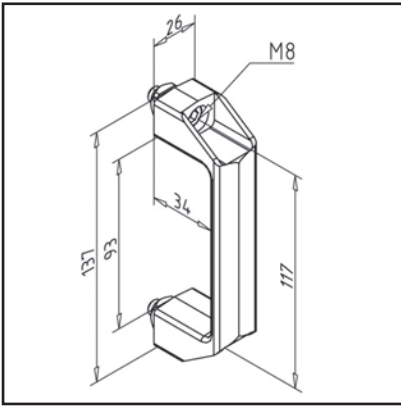
- Mount in the profile groove according to the enclosed installation drawing



## HANDLE 120 ESD, BLACK

Part no.

32.1007/0



### TECHN. DATA / ITEMS SUPPLIED

- PA, black
- Fastening kit
- Weight = 0.073 kg/piece

### APPLICATIONS

- Doors
- Lids
- Guard units

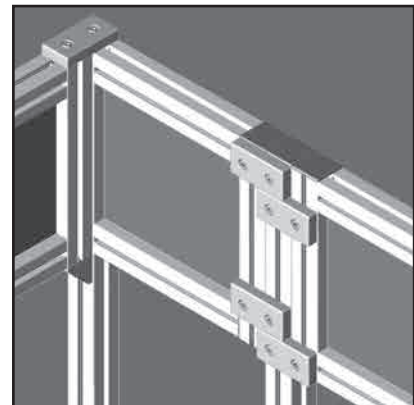
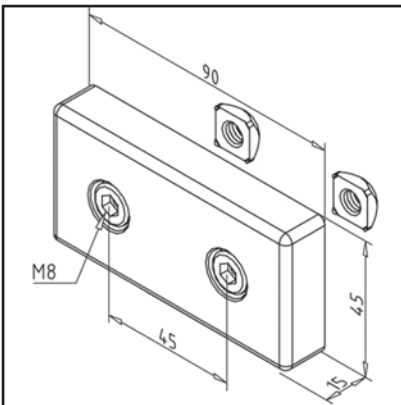
### ASSEMBLY

- Fasten to profile groove with supplied hardware.
- Directly on surface element with cylinder head screw M8
- Also assembly possible from rear side

## CONNECTING PLATE 45X90, CONDUCTIVE

Part no.

21.1472/6



### TECHN. DATA / ITEMS SUPPLIED

- Aluminium, Pressure die-casting, bright
- With fastening material steel, zinc plated
- Weight = 0.180 kg/piece

### APPLICATIONS

- Connection of two guards without gap
- Strengthening of guard units
- Connection of pre-assembled modules

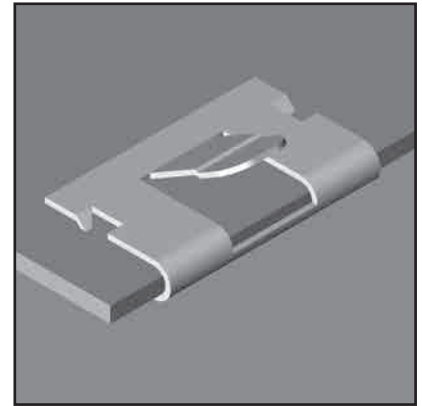
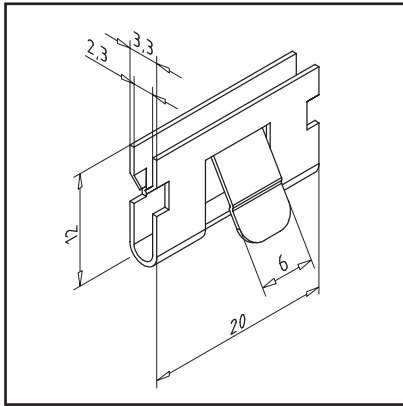
### ASSEMBLY

- Install to groove of protective field and posts with supplied hardware

**EARTHING CLAMP**

Part no.

E9.0141/0

**TECHN. DATA / ITEMS SUPPLIED**

- Steel, Pressed, galvanized
- Weight = 0.002 kg/piece

**APPLICATIONS**

- For grounding sheet metal and thin-walled components with wall thickness of 0.7 - 2 mm
- Especially suitable for:
  - Cable duct AL **part no. 20.1051/0**
  - Cable duct 45 AL **part no. 20.1071/0**
  - Cable duct 90 AL **part no. 20.1056/0**

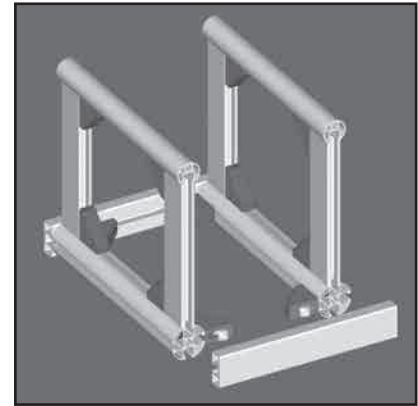
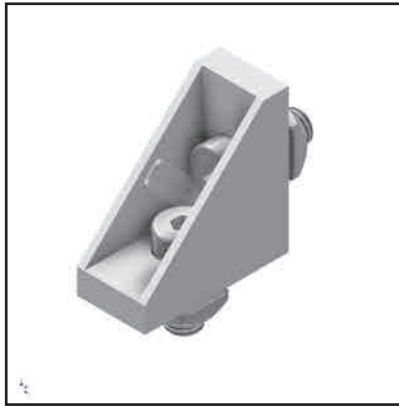
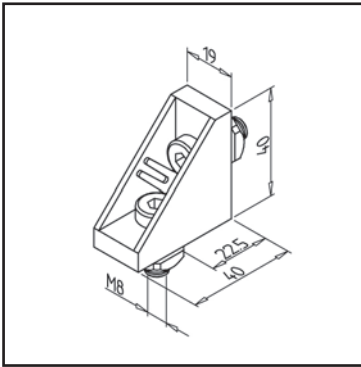
**ASSEMBLY**

- Attach to sheet metal edge
- Safe support and conductive connection is provided by claws
- For the connection of the earthing cable with 6 mm flat plug

## MOUNTING ANGLE 19 GD-Z CONDUCTIVE

Part no.

21.2078/6



### TECHN. DATA / ITEMS SUPPLIED

- Aluminium, Pressure die-casting, blasted
- With fastening material steel, zinc plated
- Aluminium GD-Z
- Weight = 0.055 kg/piece

### APPLICATIONS

- Connection of profiles 19 and 32
- Subsequent insertion of profiles into existing constructions
- Attaching bearing surfaces
- Slidable in the groove direction

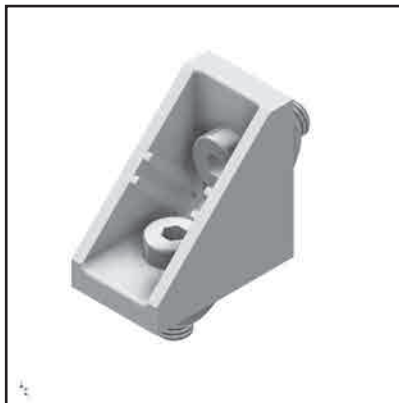
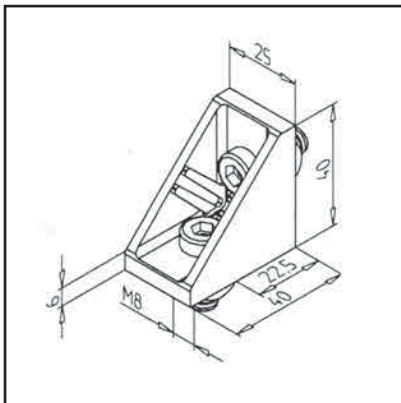
### ASSEMBLY

- Fasten to profile groove with supplied hardware
- For subsequent mounting on vertical nut, a square nut M8 Z with nut fixation, **part no. 21.1390/2** is preferred
- Recommended locking torque: 20 Nm

## MOUNTING ANGLE 25 GD-Z CONDUCTIVE

Part no.

21.0969/6



### TECHN. DATA / ITEMS SUPPLIED

- Aluminium, Pressure die-casting, blasted
- With fastening material steel, zinc plated
- Removable centering tabs
- Weight = 0.066 kg/piece

### APPLICATIONS

- General constructions, particularly for subsequent insertion of profiles into existing constructions
- Fastening of surface elements, table tops
- Strengthening of profile constructions

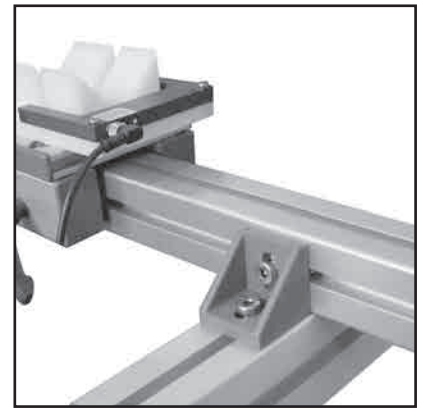
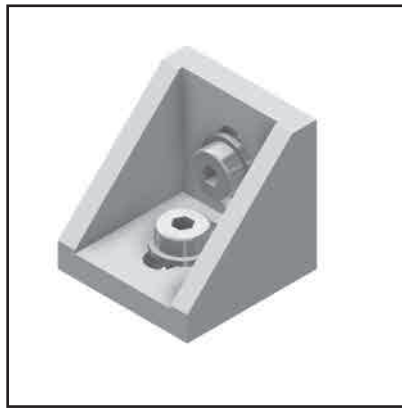
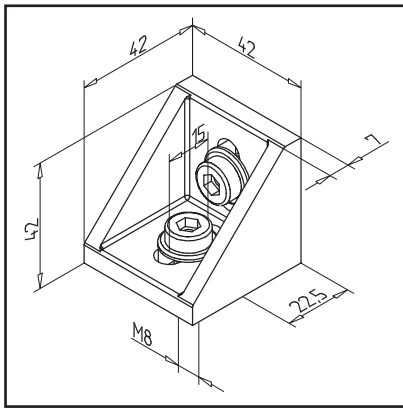
### ASSEMBLY

- Fasten to profile groove with supplied hardware
- For subsequent mounting on vertical nut, a square nut M8 Z with nut fixation, **part no. 21.1390/2** is preferred
- Recommended locking torque: 20 Nm

**MOUNTING ANGLE 45 GD-Z, CONDUCTIVE**

Part no.

21.1133/6

**TECHN. DATA / ITEMS SUPPLIED**

- Aluminium, Pressure die-casting, blasted
- With fastening material steel, zinc plated
- Mounting angle bracket with sliding nut Z with spring panel: **part no. 21.1133/8**
- Weight = 0.101 kg/piece

**APPLICATIONS**

- General constructions, particularly for subsequent insertion of profiles into existing constructions
- Fastening of surface elements, table tops
- Strengthening of profile constructions

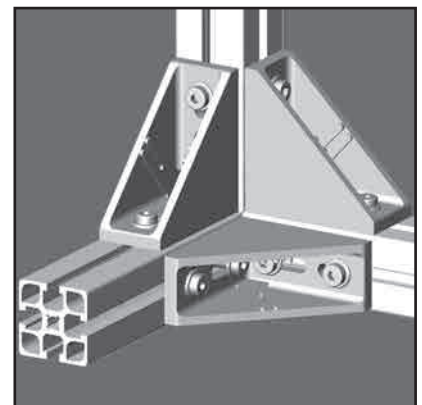
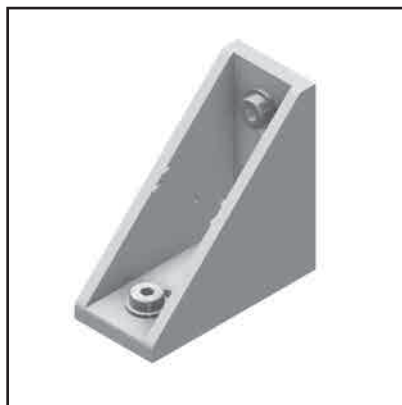
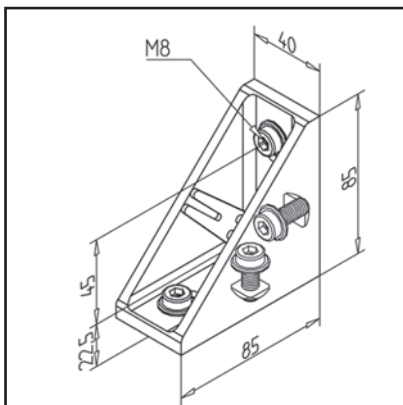
**ASSEMBLY**

- Fasten to profile groove with supplied hardware
- For subsequent mounting on vertical nut, a square nut M8 Z with nut fixation, **part no. 21.1390/2** is preferred
- Hammer head screw **part no. 21.1370/0** can be used
- Recommended locking torque: 20 Nm

**MOUNTING ANGLE 45 X 90 GD-Z, CONDUCTIVE**

Part no.

21.1397/6

**TECHN. DATA / ITEMS SUPPLIED**

- Aluminium, Pressure die-casting, blasted
- With fastening material steel, zinc plated
- Angle with slide nut Z with spring steel sheet: **part no. 21.1397/8**
- Weight = 0.281 kg/piece

**APPLICATIONS**

- General constructions, particularly for subsequent insertion of profiles into existing constructions
- Fastening of surface elements, table tops
- Strengthening of profile constructions

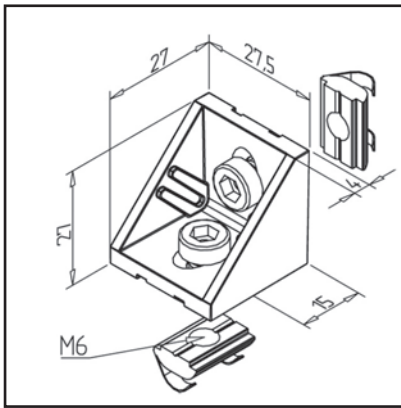
**ASSEMBLY**

- Fasten to profile groove with supplied hardware
- For subsequent mounting on vertical nut, a square nut M8 Z with nut fixation, **part no. 21.1390/2** is preferred
- Recommended locking torque: 20 Nm

## MOUNTING ANGLE 30 GD-Z CONDUCTIVE

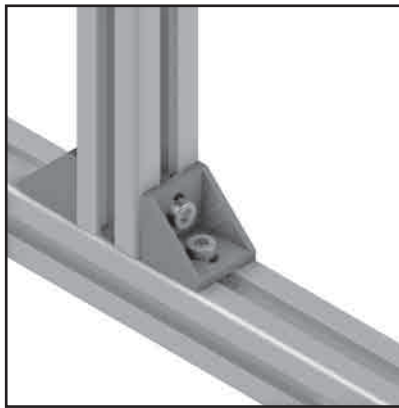
Part no.

21.0905/6



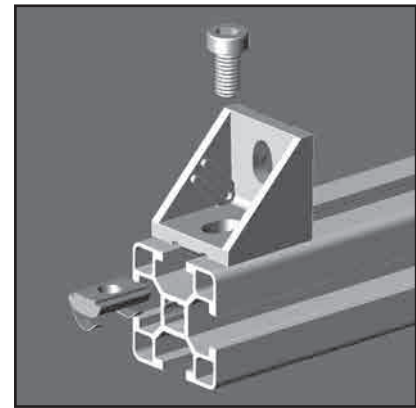
### TECHN. DATA / ITEMS SUPPLIED

- Aluminium, Pressure die-casting, blasted
- With fastening material steel, zinc plated
- Removable centering tabs
- Weight = 0.029 kg/piece



### APPLICATIONS

- Fastening of surface elements, table tops
- All types of constructions; specifically suited for the subsequent mounting of elements in existing constructions



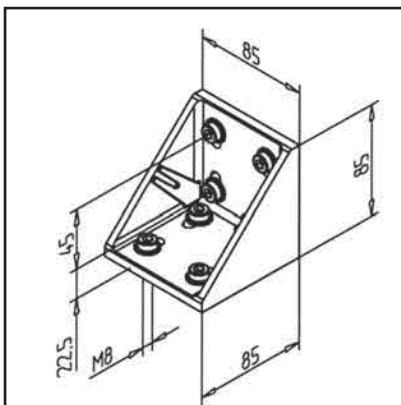
### ASSEMBLY

- Strengthening of profile constructions
- Recommended locking torque: 20 Nm
- For subsequent mounting on vertical nut, a square nut M8 Z with nut fixation, **part no. 21.1390/2** is preferred
- Fasten to the profile with supplied hardware

## MOUNTING ANGLE 90 GD-Z CONDUCTIVE

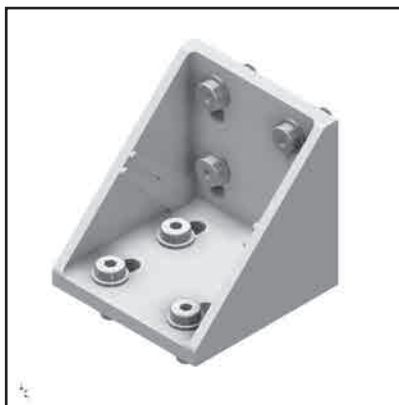
Part no.

21.0978/6



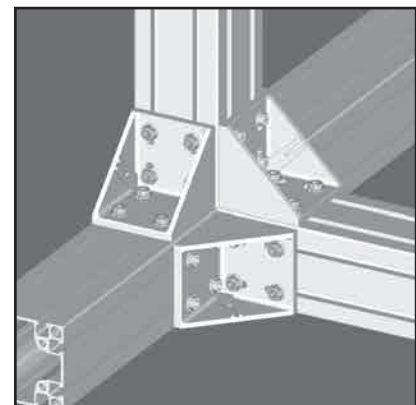
### TECHN. DATA / ITEMS SUPPLIED

- Aluminium, Pressure die-casting, blasted
- With fastening material steel, zinc plated
- Locking device against rotation
- Angle with slide nut Z with spring steel sheet: **part no. 21.0978/8**
- Weight = 0.497 kg/piece



### APPLICATIONS

- For profiles 90 and 180
- General constructions, particularly for subsequent insertion of profiles into existing constructions
- Fastening of surface elements, table tops
- Strengthening of profile constructions



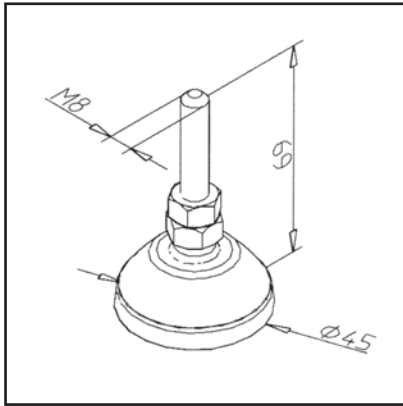
### ASSEMBLY

- Fasten to profile groove with supplied hardware
- For subsequent mounting on vertical nut, a square nut M8 Z with nut fixation, **part no. 21.1390/2** is preferred
- Recommended locking torque: 20 Nm

**FOOT D45 CONDUCTIVE**

Part no.

32.1011/0

**TECHN. DATA / ITEMS SUPPLIED**

- Plate PA, black
- Anti-slip insert
- Spindle steel, galvanized M8
- Counter nut, steel, zinc plated
- All spindles fit all plates
- Conductive
- Hinged foot ESD D=45 m with spindle M10  
**part no. 32.1012/0**
- Weight = 0.062 kg/piece

**APPLICATIONS**

- Height adjustable heavy constructions of all types
- Guards, tables, show cases, Conveying systems, workstations
- Height adjustable constructions of all kinds
- Protective equipment, tables, showcases
- Conveyors, system workstations

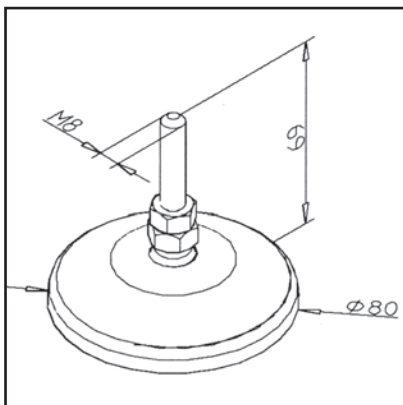
**ASSEMBLY**

- Directly in the central bore of the profile (can be drilled with thread up to M12)
- Larger threads in connection with connection plate
- Direct in central drilling of the profiles
- For threads larger than M12, the hinged feet must be mounted in conjunction with the connection plate
- For profiles 45 x 90 und 90 x 90 a base and transport plate is required, if the feet are to be positioned centrally.

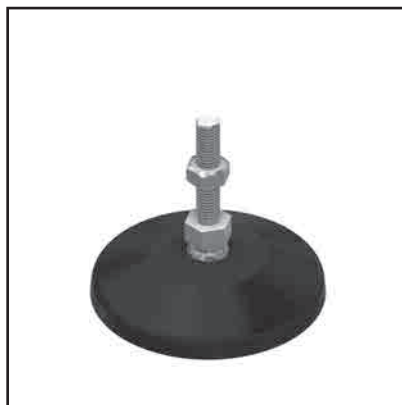
**FOOT D80 CONDUCTIVE**

Part no.

32.1021/0

**TECHN. DATA / ITEMS SUPPLIED**

- Plate PA, black
- Anti-slip insert
- Spindle steel, galvanized M8
- Counter nut, steel, zinc plated
- All spindles fit all plates
- Conductive
- Hinged foot ESD D=80 m with spindle M10  
**part no. 32.1012/0**
- Weight = 0.108 kg/piece

**APPLICATIONS**

- Height adjustable heavy constructions of all types
- Guards, tables, show cases, Conveying systems, workstations
- Height adjustable constructions of all kinds
- Protective equipment, tables, showcases
- Conveyors, system workstations

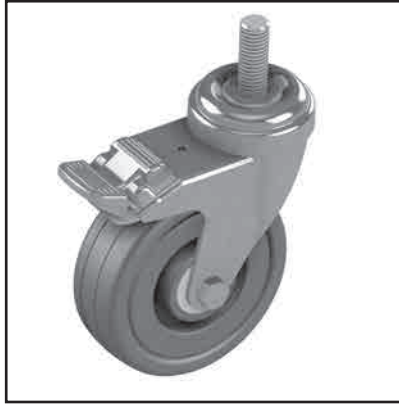
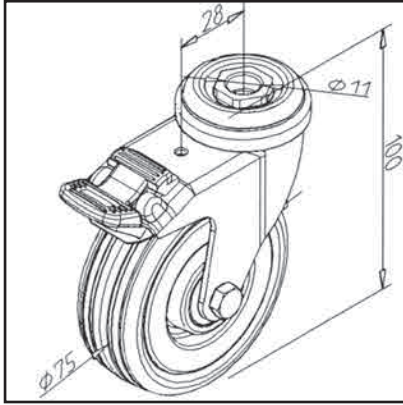
**ASSEMBLY**

- Directly in the central bore of the profile (can be drilled with thread up to M12)
- Larger threads in connection with connection plate
- Direct in central drilling of the profiles
- For threads larger than M12, the hinged feet must be mounted in conjunction with the connection plate
- For profiles 45 x 90 und 90 x 90 a base and transport plate is required, if the feet are to be positioned centrally.

## SWIVEL CASTER WITH WHEEL LOCK D75 X 100, CONDUCTIVE

Part no.

32.1030/0



### TECHN. DATA / ITEMS SUPPLIED

- With fastening material steel, zinc plated
- Housing steel, galvanized
- Conductive
- Load capacity 50 kg
- **Other versions upon request**
- Weight = 0.322 kg/piece

### APPLICATIONS

- Movable tables
- Work stands
- display windows, showcases

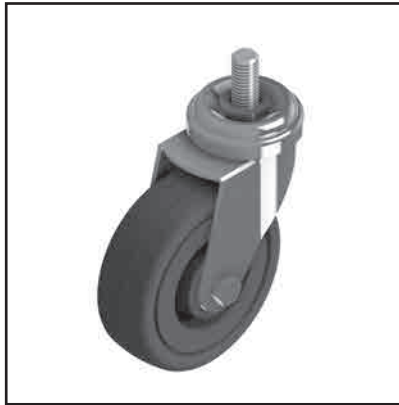
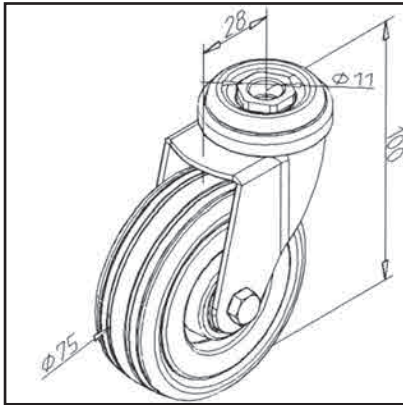
### ASSEMBLY

- Attach directly to the central bore of the vertical profile with fastening material, then drill and introduce thread M10
- If the roller is to be centrally positioned for profile cross sections greater than 45 x 45, a connection plate is required

## SWIVEL CASTER WITHOUT WHEEL LOCK D75 X 100, CONDUCTIVE

Part no.

32.1031/0



### TECHN. DATA / ITEMS SUPPLIED

- With fastening material steel, zinc plated
- Housing steel, galvanized
- Conductive
- Load capacity 50 kg
- **Other versions upon request**
- Weight = 0.292 kg/piece

### APPLICATIONS

- Movable tables
- Work stands
- display windows, showcases

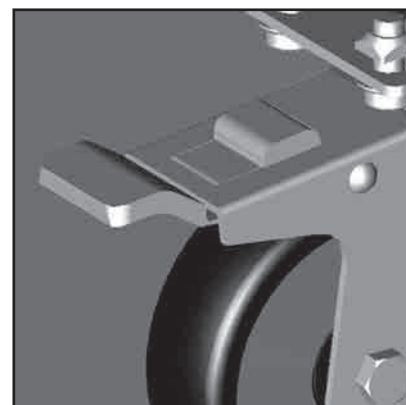
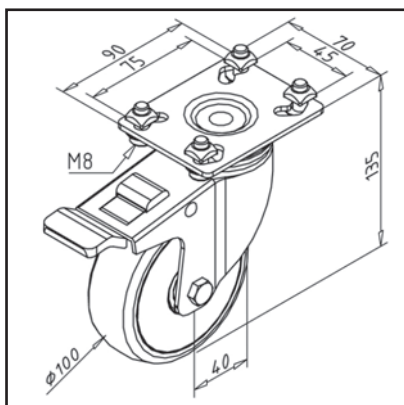
### ASSEMBLY

- Attach directly to the central bore of the vertical profile with fastening material, then drill and introduce thread M10
- If the roller is to be centrally positioned for profile cross sections greater than 45 x 45, a connection plate is required

**SWIVEL CASTOR WITH BRAKE D100 X 135, ESD**

Part no.

32.1034/0

**TECHN. DATA / ITEMS SUPPLIED**

- With fastening material steel, zinc plated
- Housing steel, galvanized
- Conductive
- Load capacity 90 kg
- Weight = 0.881 kg/piece

**APPLICATIONS**

- Movable tables
- Work stands
- display windows, showcases

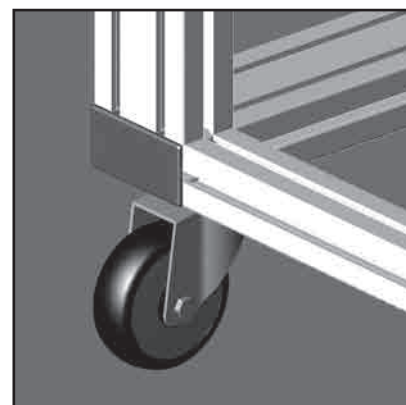
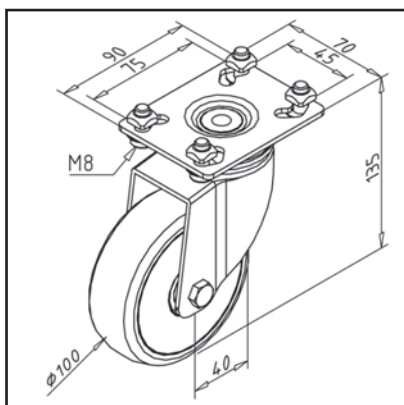
**ASSEMBLY**

- Fasten mounting plate in the profile groove with supplied hardware

**SWIVEL CASTOR WITHOUT BRAKE D100 X 135, ESD**

Part no.

32.1035/0

**TECHN. DATA / ITEMS SUPPLIED**

- With fastening material steel, zinc plated
- Housing steel, galvanized
- Conductive
- Load capacity 90 kg
- Weight = 0.765 kg/piece

**APPLICATIONS**

- Movable tables
- Work stands
- display windows, showcases

**ASSEMBLY**

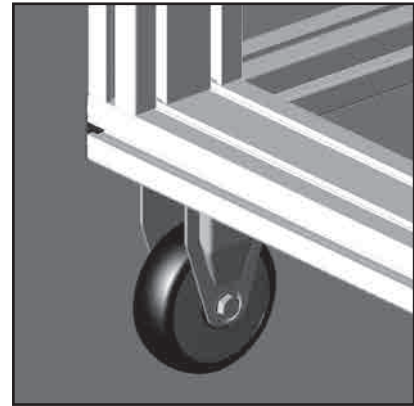
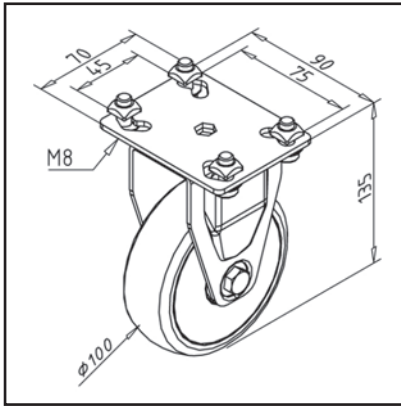
- Fasten mounting plate in the profile groove with supplied hardware



## FIXED CASTOR D100 X 135, ESD

Part no.

32.1036/0



### TECHN. DATA / ITEMS SUPPLIED

- With fastening material steel, zinc plated
- Housing steel, galvanized
- Conductive
- Load capacity 90 kg
- Weight = 0.695 kg/piece

### APPLICATIONS

- Movable tables
- Work stands
- display windows, showcases

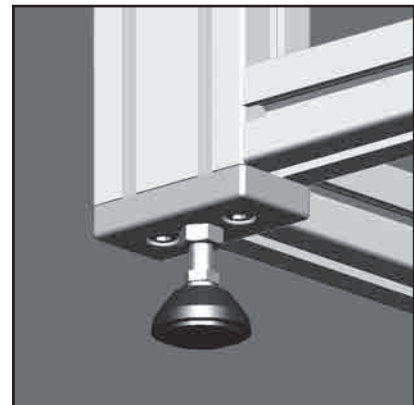
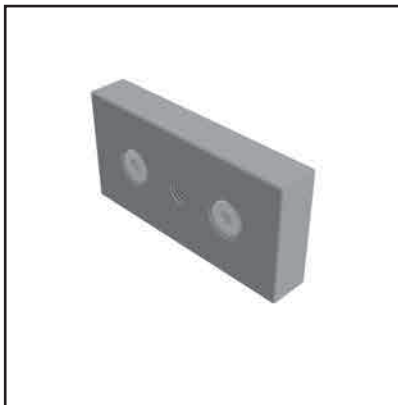
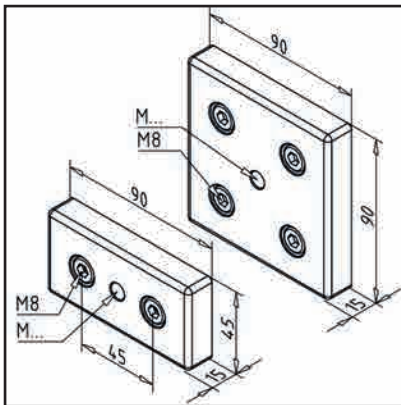
### ASSEMBLY

- Fasten mounting plate in the profile groove with supplied hardware

## CONNECTION PLATE 45X90 M10 CONDUCTIVE

Part no.

21.1038/6



### TECHN. DATA / ITEMS SUPPLIED

- Aluminium, Pressure die-casting, blasted
- With fastening material steel, zinc plated
- Fastening kit
- Weight = 0.172 kg/piece

### APPLICATIONS

- Central fixation of support feet on profiles 45 x 90 or 90 x 90
- Fixation of guide rollers
- Centric attachment of hinged feet to profiles 45 x 90

### ASSEMBLY

- Fasten to the profile with supplied hardware
- Fasten to profile with fastening material from the scope of delivery



4.1

BELT CONVEYORS

474



4.2

ROLLER CONVEYOR

483



4.3

TIMING BELT CONVEYOR

488



4.4

COMPONENTS

491



4.5

TRANSFER SYSTEM TSG

517



4.6

SEGMENTED CHAIN CONVEYOR GKF

534



4.7

FLEXIBLE ASSEMBLY LINES FMS

538



4.8

ROLLER CONVEYORS RMS

540



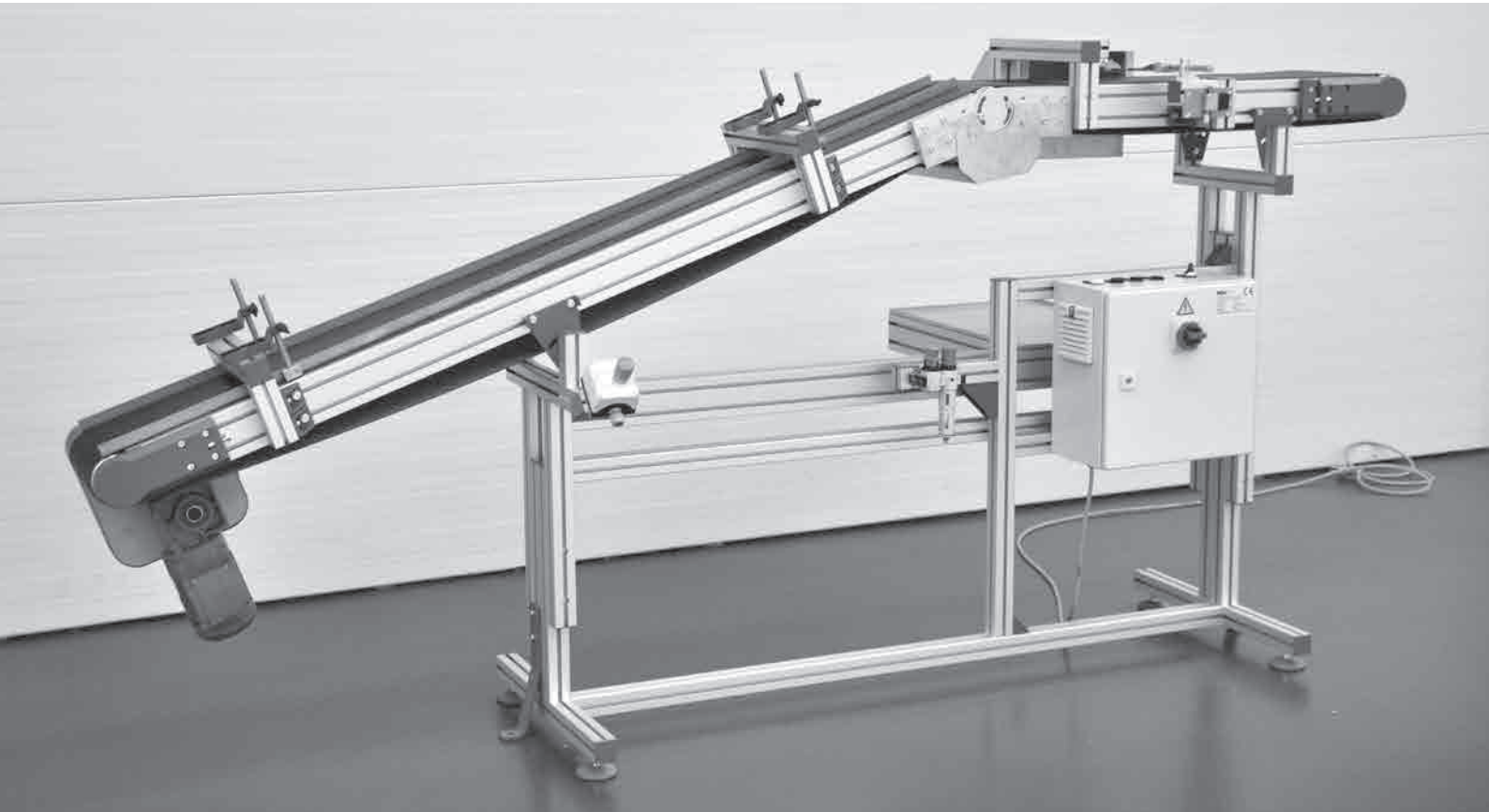
4.9

PALLET CIRCULATION SYSTEM UMS

542

BELT CONVEYORS

EXAMPLES



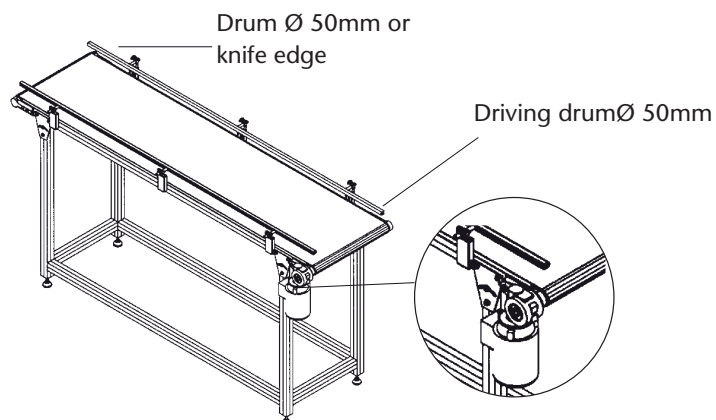
## BELT CONVEYORS

## SERIES 45

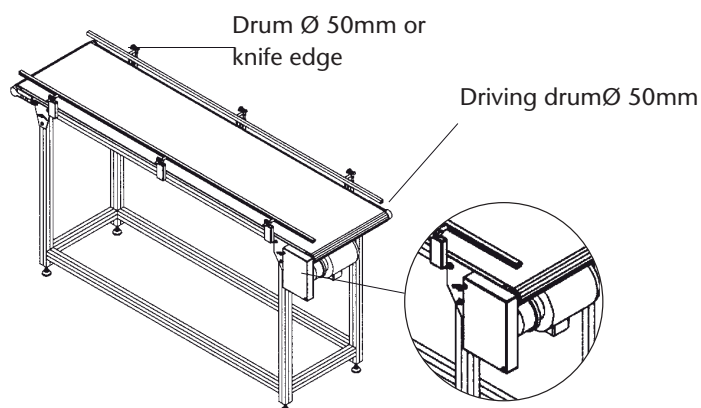
The conveyor belt module in our MiniTec iCADassembler design software automatically designs your conveyor belt according to your specifications, calculates the deflection, suggests the number of supports and generates the parts list. Within a few minutes. Assembly is just as quick and easy thanks to our tried-and-tested components.

## ENGINE ARRANGEMENT

## Plug-on

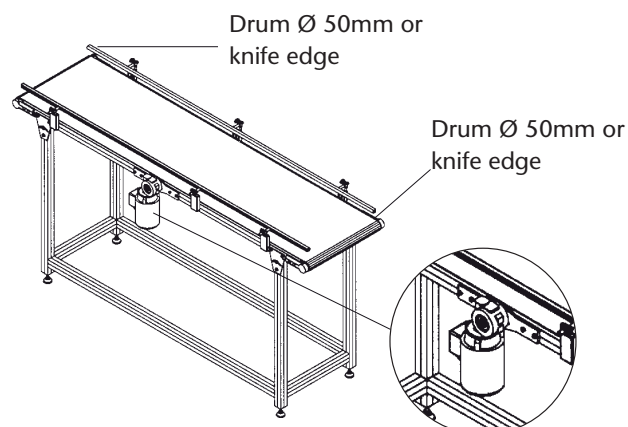


## Flange motor with cover



## Center drive (direct drive)

- Belt width max. 300 mm at knife edge
- Belt width max. 800 mm with drum Ø 50

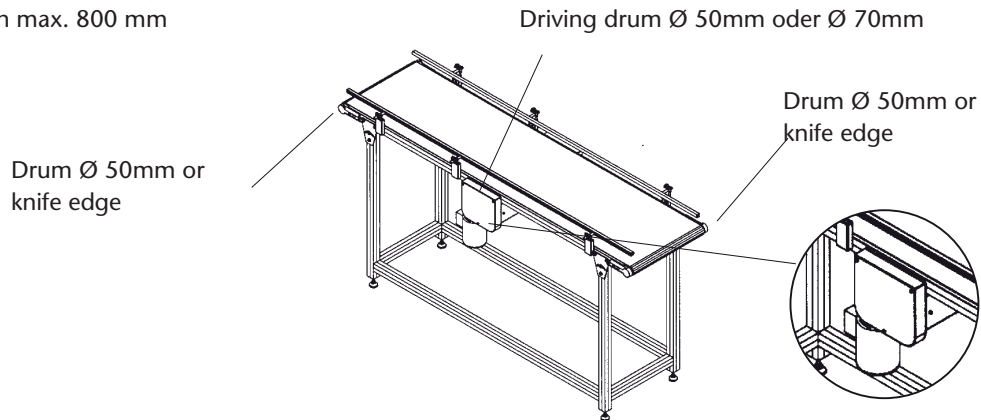


BELT CONVEYORS

SERIES 45

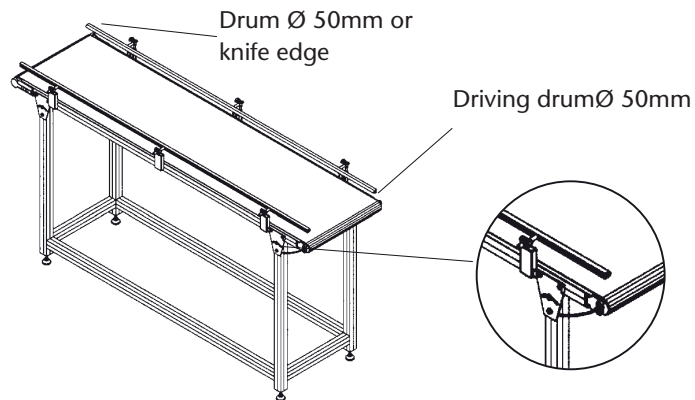
**Center drive (direct drive)**

- Belt width max. 800 mm

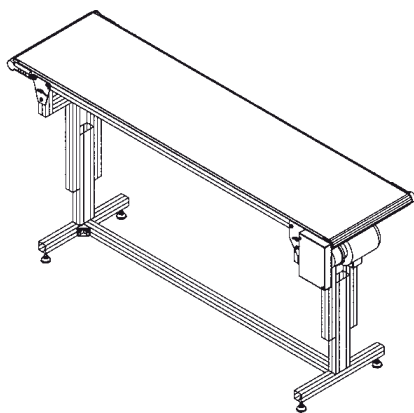


**Drum motor**

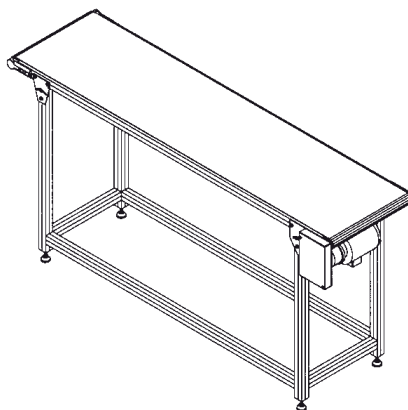
- Belt width min. 260 mm
- Belt width max. 500 mm
- max. length 2000 mm
- max. 20 kg total load



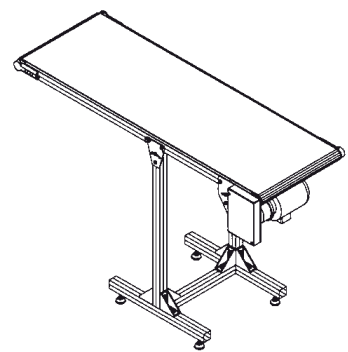
Subconstruction



Height adjustable



Standard



with stand

BELT CONVEYORS

REQUEST STANDARD CONVEYOR BELT 45

**Basic dimensions**

Center distance A  mm

Belt width L  mm

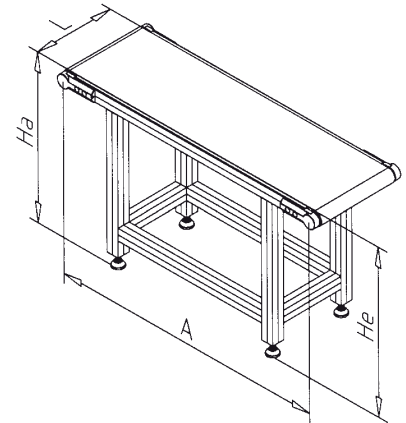
Operating conditions

Conveyed

Units weight  kg

Total load on tape  kg

Temperature conveyed  °C



**Subconstruction**

Inlet height He  mm

Discharge height Ha  mm

Number of pillars  Pcs.

Pillars height adjustable from  mm to  mm

Lateral guiding  one-sided  both-sided  short  long

Floor assembly angel  Part no. 21.1112/0

High performance anchor 12  Part no. 21.1115/0

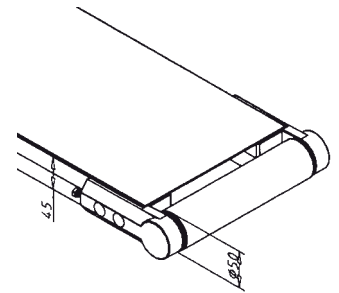
Roll  Part no.

Stand  Part no.

**Options**

Belt  Part no.

Intermediate plate  Aluminium  Inox



**Drive**

Engine location  Plug-on  Flange

Drum motor  Center drive (direct drive)

Center drive 3-roller system

Speed  m/min.

Speed adjustable from  m/min. to  m/min.

**Contact details**

Company   Please call me back

Contact   I ask for a written offer

Phone number

Fax number

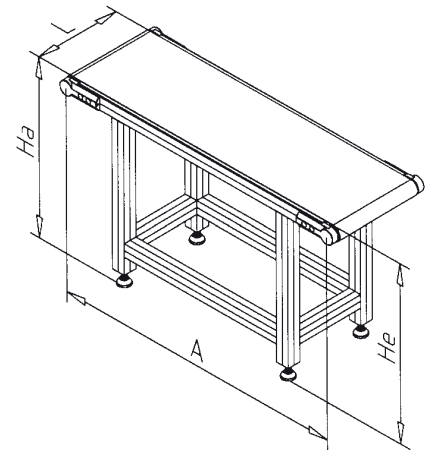
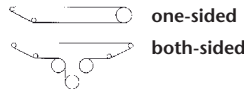
E-Mail

BELT CONVEYORS

INQUIRY KNIFE EDGE TAPE

Basic dimensions

Center distance A	<input type="text"/>	mm
Belt width L	<input type="text"/>	mm (max.300mm)
Operating conditions		
Conveyed	<input type="text"/>	
Units weight	<input type="text"/>	kg
Total load on tape	<input type="text"/>	kg
Temperature conveyed	<input type="text"/>	°C



Subconstruction

Inlet height He	<input type="text"/>	mm
Discharge height Ha	<input type="text"/>	mm
Number of pillars	<input type="text"/>	Pcs.
Pillars height adjustable from	<input type="text"/>	mm <input type="text"/>
Lateral guiding	<input type="checkbox"/> one-sided <input type="checkbox"/> both-sided <input type="checkbox"/> short <input type="checkbox"/> long	mm
Floor assembly angel	<input type="checkbox"/> Part no. 21.1112/0	
High performance anchor 12	<input type="checkbox"/> Part no. 21.1115/0	
Roll	<input type="checkbox"/> Part no.	
Stand	<input type="checkbox"/> Part no. <input type="text"/>	

Options

Belt	<input type="checkbox"/> Part no. <input type="text"/>
Intermediate plate	<input type="checkbox"/> Aluminium <input type="checkbox"/> Inox

Drive

Engine location	<input type="checkbox"/> Plug-on <input type="checkbox"/> Flange
	<input type="checkbox"/> Drum motor <input type="checkbox"/> Center drive (direct drive)
	<input type="checkbox"/> Center drive 3-roller system

Speed	<input type="text"/>	m/min.
Speed adjustable from	<input type="text"/>	m/min. <input type="text"/>

Contact details

Company	<input type="text"/>	<input type="checkbox"/> Please call me back
Contact	<input type="text"/>	<input type="checkbox"/> I ask for a written offer
Phone number	<input type="text"/>	
Fax number	<input type="text"/>	
E-Mail	<input type="text"/>	

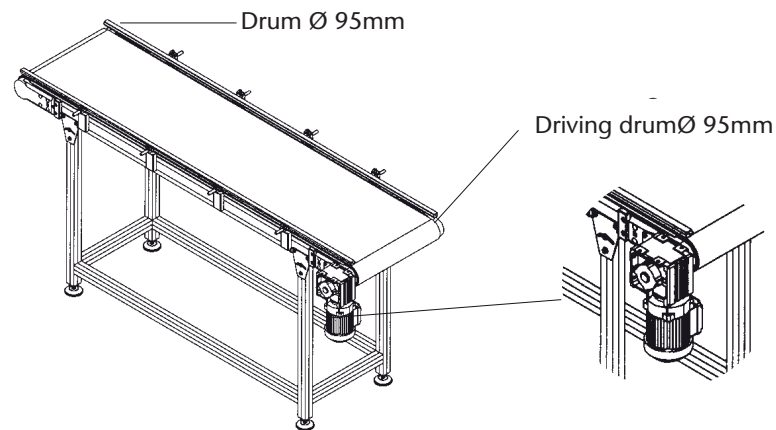
## BELT CONVEYORS

## CONVEYOR BELT - SERIES 90

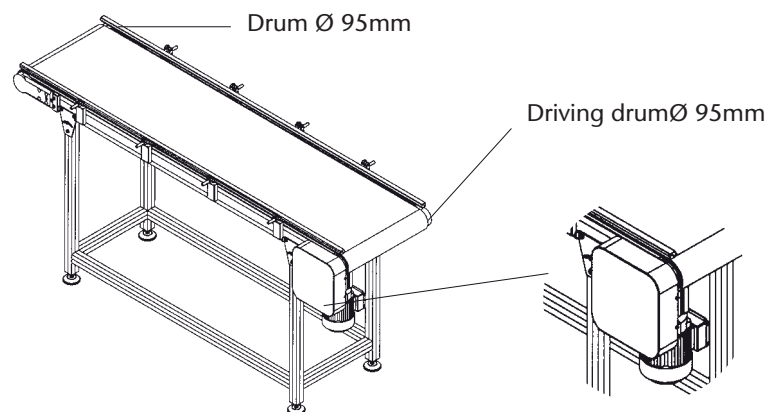
The conveyor belt module in our MiniTec iCADassembler design software automatically designs your conveyor belt according to your specifications, calculates the deflection, suggests the number of supports and generates the parts list. Within a few minutes. Assembly is just as quick and easy thanks to our tried-and-tested components.

## ENGINE ARRANGEMENT

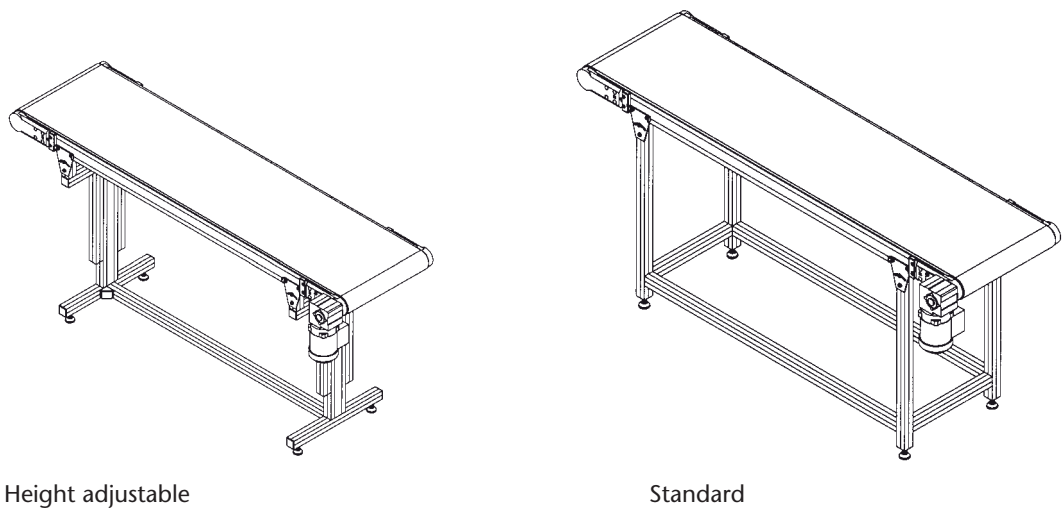
## Plug-on



## Flange



## Subconstruction



Height adjustable

Standard



BELT CONVEYORS

INQUIRY STANDARD CONVEYOR BELT 90

**Basic dimensions**

Center distance A	<input type="text"/>	mm
Belt width L	<input type="text"/>	mm
<b>Operating conditions</b>		
Conveyed	<input type="text"/>	
Units weight	<input type="text"/>	kg
Total load on tape	<input type="text"/>	kg
Temperature conveyed	<input type="text"/>	°C

**Subconstruction**

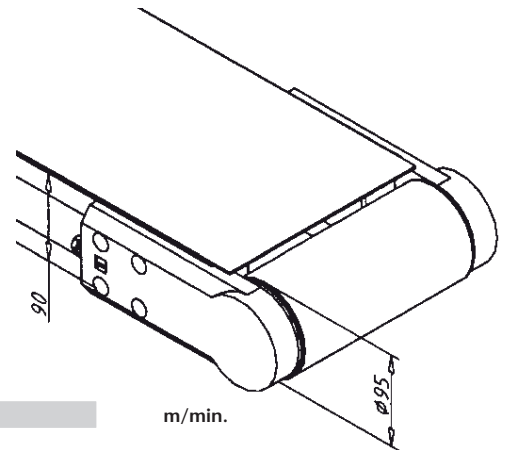
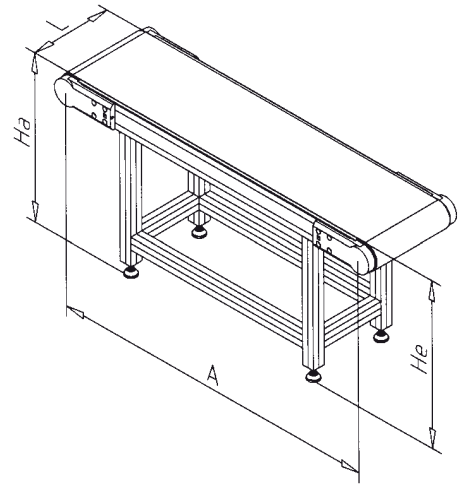
Inlet height He	<input type="text"/>	mm			
Discharge height Ha	<input type="text"/>	mm			
Number of pillars	<input type="text"/>	Pcs.			
Pillars height adjustable from	<input type="text"/>	mm	to	<input type="text"/>	mm
Lateral guiding	<input type="checkbox"/> one-sided	<input type="checkbox"/> both-sided	<input type="checkbox"/> short	<input type="checkbox"/> long	
Floor assembly angel	<input type="checkbox"/> Part no. 21.1112/0				
High performance anchor 12	<input type="checkbox"/> Part no. 21.1115/0				
Roll	<input type="checkbox"/> Part no. <input type="text"/>				
Stand	<input type="checkbox"/> Part no. <input type="text"/>				

**Options**

Belt	<input type="checkbox"/> Part no. <input type="text"/>
Intermediate plate	<input type="checkbox"/> Aluminium <input type="checkbox"/> Inox

**Drive**

Engine location	<input type="checkbox"/> Plug-on	<input type="checkbox"/> Flange			
Speed	<input type="text"/>	m/min.			
Speed adjustable from	<input type="text"/>	m/min.	to	<input type="text"/>	m/min.



**Contact details**

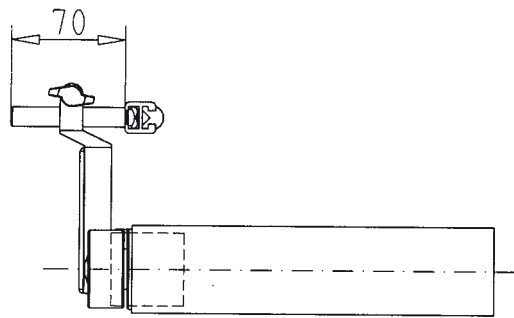
Company	<input type="text"/>	<input type="checkbox"/> Please call me back
Contact	<input type="text"/>	<input type="checkbox"/> I ask for a written offer
Phone number	<input type="text"/>	
Fax number	<input type="text"/>	
E-Mail	<input type="text"/>	

## BELT CONVEYORS

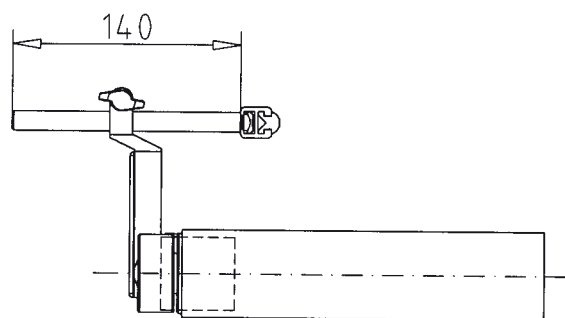
## OVERVIEW SIDE GUIDANCE

## Conveyor belt 45 and 90

short



long



## Roller conveyor without drive

LOW



HIGH



BELT CONVEYORS

CONVEYOR BELTS

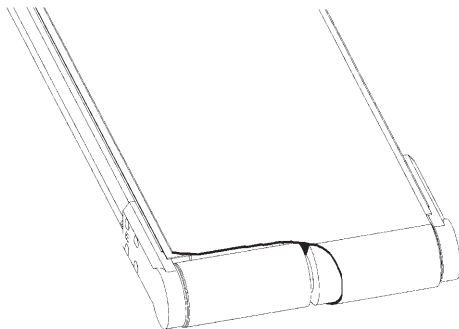
CONVEYOR BELT	Part no.
PVC, black, smooth, antistatic	29.5019/1
PVC, green, grip, antistatic	29.5019/2
PVC, green, checkered, adhesive, antistatic	29.5019/3
PVC, green, smooth, antistatic	29.5019/4
PU, blue, smooth	29.5019/5
PU, white, smooth, antistatic	29.5019/6
PVC, white, smooth	29.5019/7
PU, green, smooth, antistatic	29.5019/8
Fabric, white, antistatic	29.5019/9
Special belt on request	29.5019/0
PU, petrol smooth, antistatic	29.5057/0

Calculation of the endless length EL

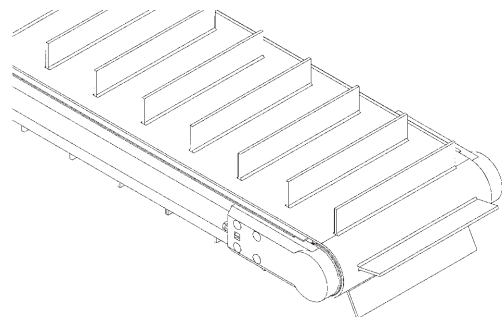
For drum 45:  $EL = 2 \times \text{Axle distance } A + 165 \text{ mm}$

For drum 90:  $EL = 2 \times \text{Axle distance } A + 305 \text{ mm}$

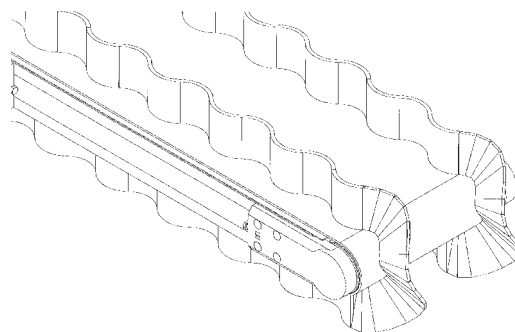
EXAMPLES OF SPECIAL BELTS



Cuneiform ledge



welded cams



Well edge

ROLLER CONVEYOR

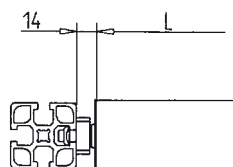
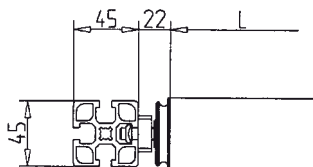
ROLLER TRACK WITHOUT DRIVE

Conveyor roller with bearing

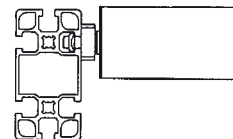
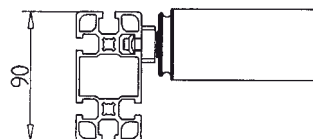
Conveyor rollers S with roller bearings

Carrier profile

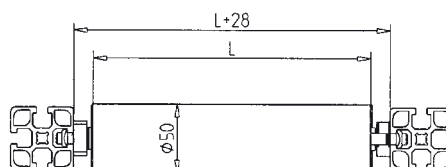
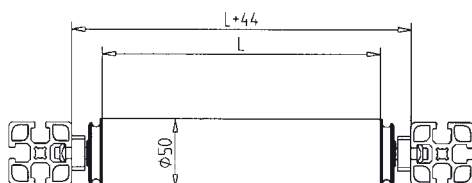
45 x 45



45 x 90



Conveyor rollers



Storage



Pipe lengths

max. pipe lengths L	PVC-Pipe	600 mm
	AL-Pipe	1000 mm
	Steel-Pipe	1000 mm

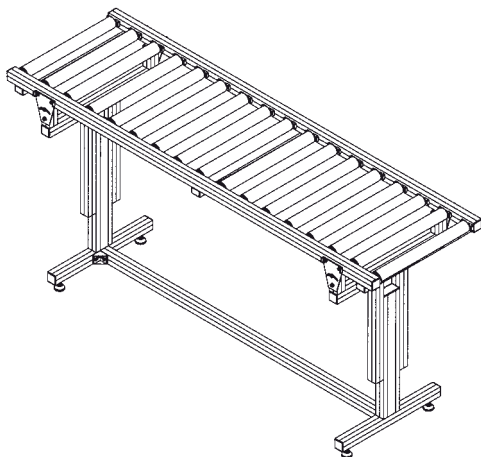
ROLLER CONVEYOR

ROLLER TRACK WITHOUT DRIVE

APPLICATION EXAMPLES



Subconstruction



Height adjustable



Standard

ROLLER CONVEYOR

INQUIRY ROLLER TRACK WITHOUT DRIVE

**Basic dimensions**

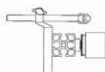
Center distance A	<input type="text"/>	mm
Roll length L	<input type="text"/>	mm
Division of roles	<input type="text"/>	mm
Carrier profile	45 x 45      45 x 90	

**Operating conditions**

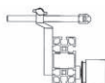
Conveyed	<input type="text"/>	
Units weight	<input type="text"/>	kg
Total load on tape	<input type="text"/>	kg
Temperature conveyed	<input type="text"/>	°C

**Subconstruction**

Inlet height He	<input type="text"/>	mm
Discharge height Ha	<input type="text"/>	mm
Distance A	<input type="text"/>	mm
Number of pillars	<input type="text"/>	Pcs.
Pillars height adjustable from	<input type="text"/>	mm to <input type="text"/> mm
Lateral guiding	one-sided      both-sided	short      long
Lateral guiding 45 x 45	without      low	variable



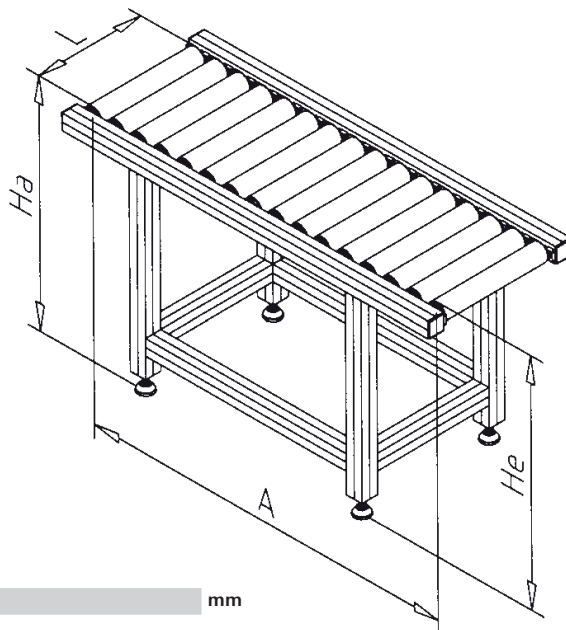
Lateral guiding 45 x 90	without      high	variable
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Floor assembly angel	Part no. 21.1112/0
High performance anchor 12	Part no. 21.1115/0
Roll	Part no. <input type="text"/>
Stand	Part no. <input type="text"/>

**Options**

Roll material	PVC      Aluminium      Steel
Storage	Bearings      Roller bearings



**Contact details**

Company	<input type="text"/>
Contact	<input type="text"/>
Phone number	<input type="text"/>
Fax number	<input type="text"/>
E-Mail	<input type="text"/>

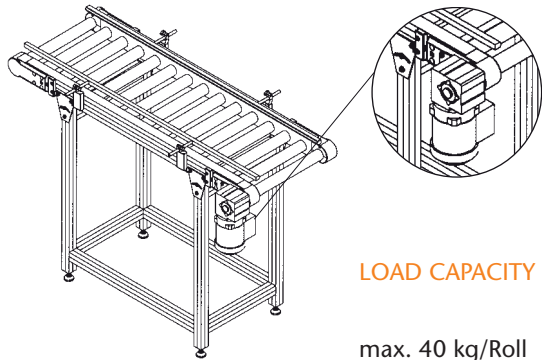
Please call me back  
I ask for a written offer

ROLLER CONVEYOR

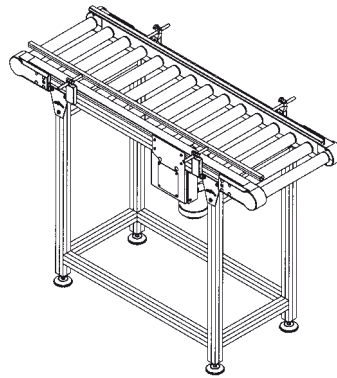
ROLLER TRACK WITH DRIVE

ENGINE ARRANGEMENT

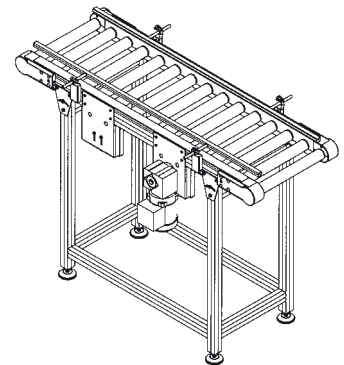
Plug-on



Engine inside



Motor outside, clamping station



LOAD CAPACITY

max. 40 kg/Roll  
max. 300 kg/Drive

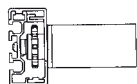
Pipe lengths

max. pipe lengths L	PVC-Pipe	600 mm
	AL-Pipe	1000 mm
	Steel Pipe	1000 mm

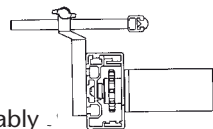
Roller design

firmly driven  
accumulating, accumulation pressure adjustable

Side execution

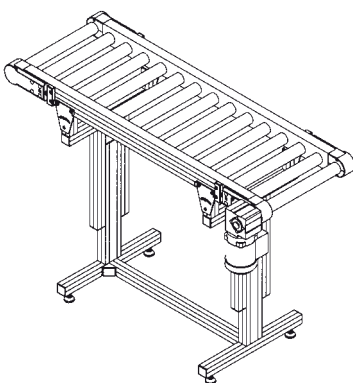


without

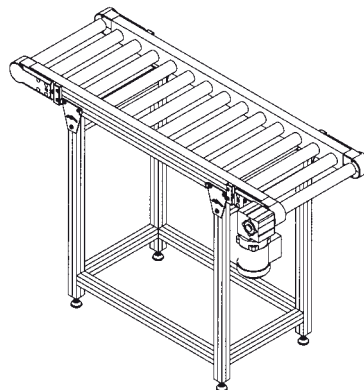


variably

Subconstruction



Height adjustable



Standard

ROLLER CONVEYOR

**Basic dimensions**

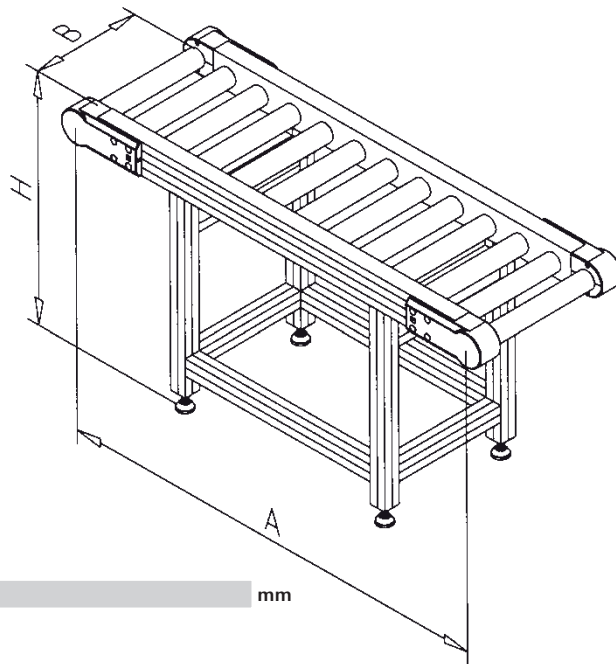
Center distance A  mm  
 Conveyor width W  mm  
 Division of roles  mm  
 Carrier profile  one-sided  both-sided

**Operating conditions**

Conveyed   
 Units weight  kg  
 Total load on tape  kg  
 Temperature conveyed  °C

**Subconstruction**

Height H  mm  
 Distance A  mm  
 Number of pillars  Pcs.  
 Pillars height adjustable from  mm to  mm  
 Lateral guiding  one-sided  both-sided  
 Floor assembly angel  Part no. 21.1112/0  
 High performance anchor 12  Part no. 21.1115/0  
 Roll Part no.   
 Stand Part no.



**Drive**

Engine location  Plug-on  with clamping station  
 inside  outside  
 Speed  m/min.  
 Speed adjustable from  m/min. to  m/min.

**Options**

Roll material  PVC  Aluminium  Steel  
 Accumulating rollers  Hard drive

**Contact details**

Company   
 Contact   
 Phone number   
 Fax number   
 E-Mail   
 Please call me back  
 I ask for a written offer

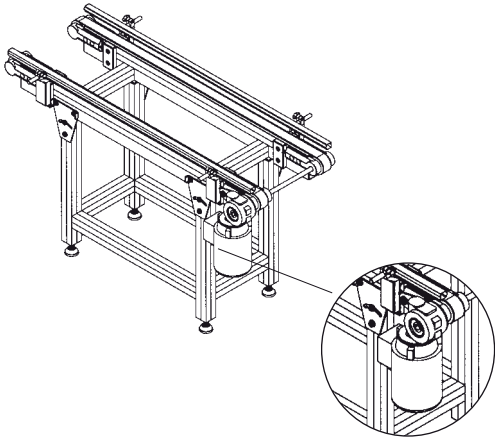


TIMING BELT CONVEYOR

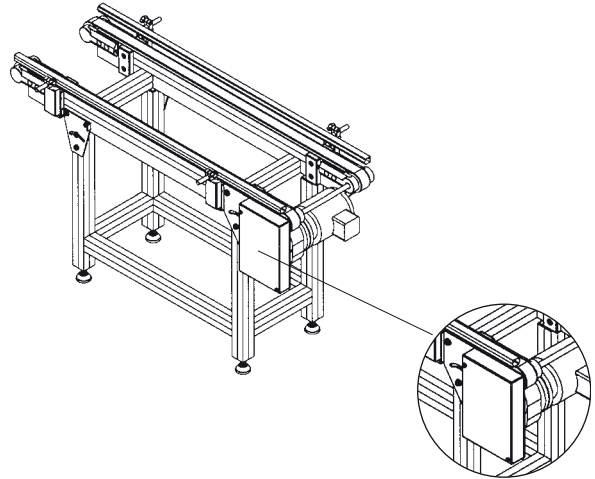
TIMING BELT CONVEYOR 32

ENGINE ARRANGEMENT

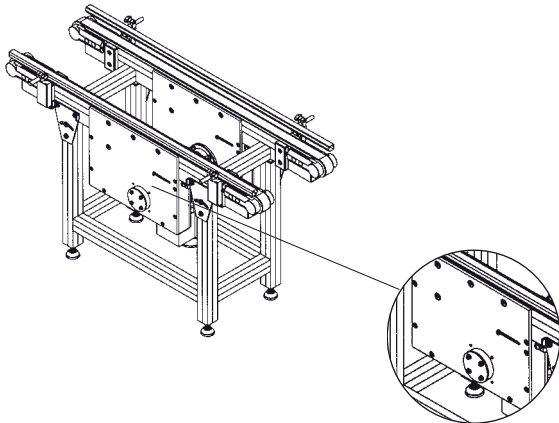
Plug-on



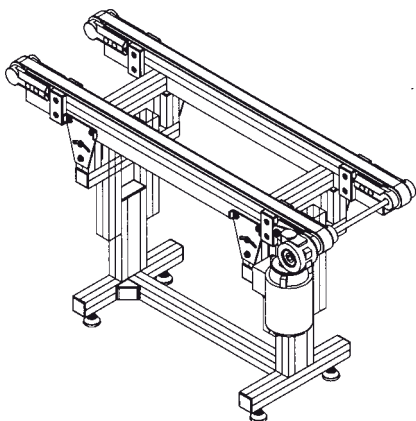
Flange



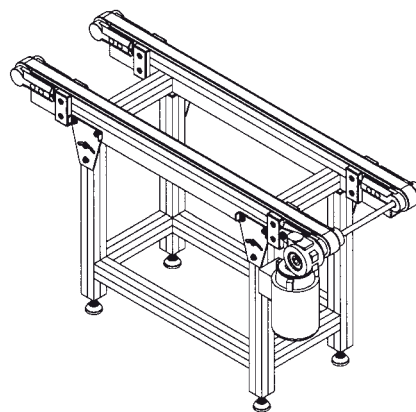
Center drive



Subconstruction



Height adjustable

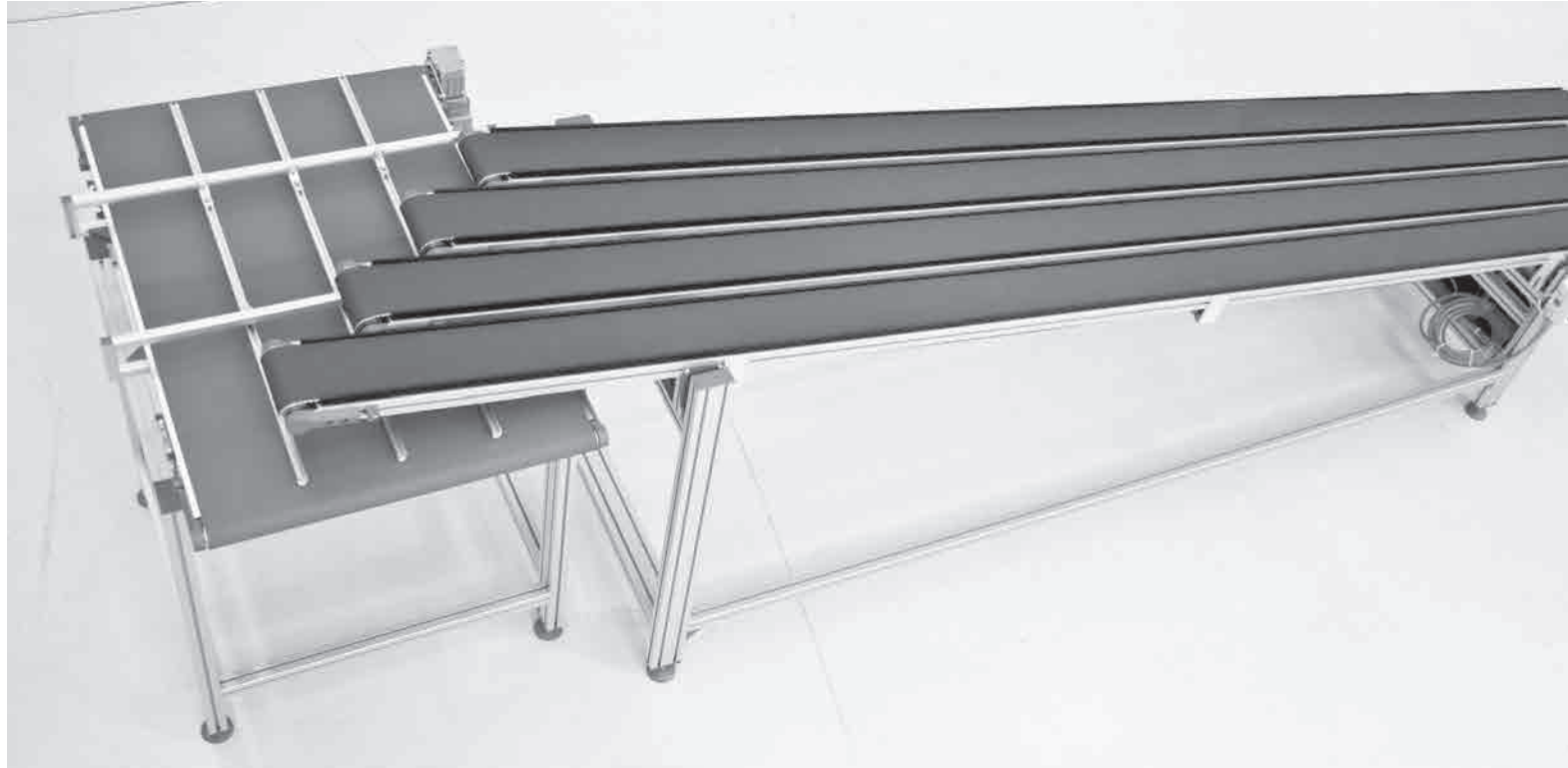


Standard

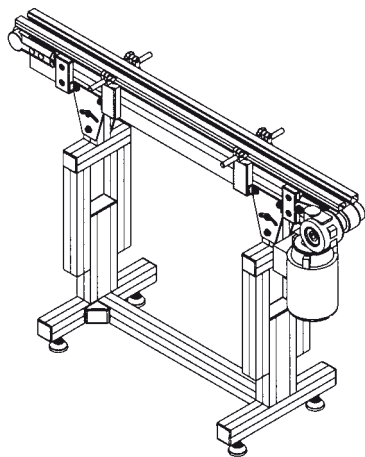
TIMING BELT CONVEYOR

TIMING BELT CONVEYOR 32

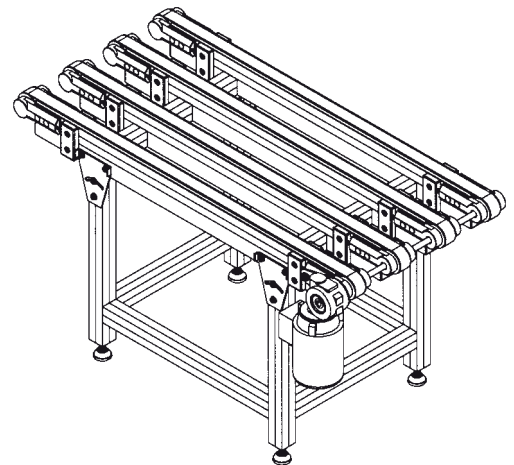
APPLICATION EXAMPLES



Example timing belt conveyor



1 lane with variable support



4 lanes with standard support

TIMING BELT CONVEYOR

**Basic dimensions**

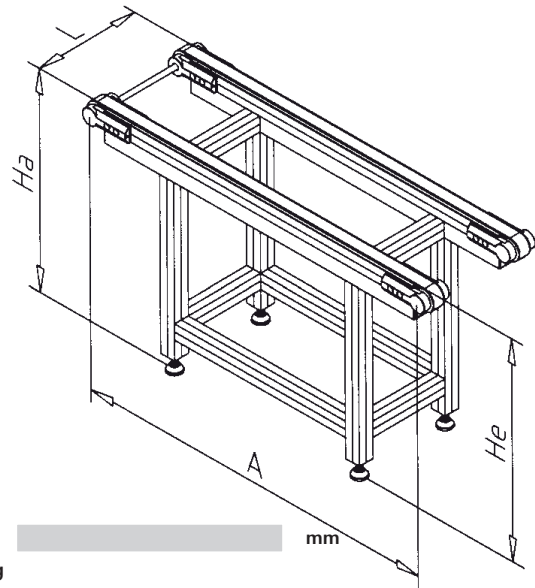
Center distance A  mm  
 External distance timing belt L  mm  
 single lane  multiple lane

**Operating conditions**

Conveyed   
 Units weight  kg  
 Total load on tape  kg  
 Temperature conveyed  °C

**Subconstruction**

Inlet height He  mm  
 Discharge height Ha  mm  
 Number of pillars  Pcs.  
 Pillars height adjustable from  mm to  mm  
 Lateral guiding  one-sided  both-sided long  
 Floor assembly angel  Part no. 21.1112/0  
 High performance anchor 12  Part no. 21.1115/0  
 Roll  Part no.   
 Stand  Part no.



**Options**

Special coating for timing belts

**Drive**

Engine location  Plug-on  Flange  
 Center drive  
 Speed  m/min.  
 Speed adjustable from  m/min. to  m/min.

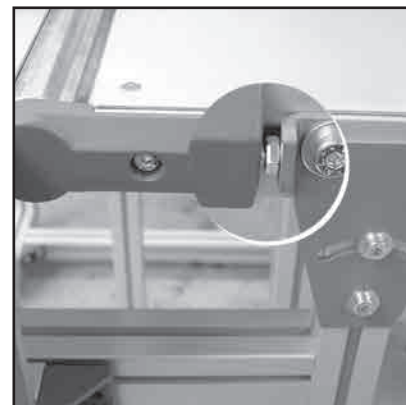
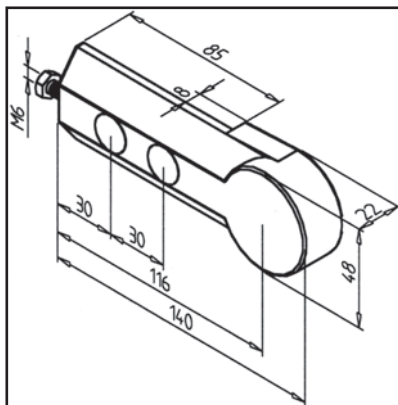
**Contact details**

Company   Please call me back  
 Contact   I ask for a written offer  
 Phone number   
 Fax number   
 E-Mail

**DRUM BEARING 45**

Part no.

21.0993/0

**TECHN. DATA / ITEMS SUPPLIED**

- Aluminium, Pressure die-casting, powder-coated, grey
- Self-aligning bearing with bore  $\varnothing$  17 mm, sealed on both sides
- Version in aluminium GD, with stainless bearing and fastening kit, conveyor bearing 45 H, **part no. 21.0993/5**
- Stainless version, conveyor bearing 45 VA, **part no. 21.0979/0**
- Weight = 0.287 kg/piece

**APPLICATIONS**

- Reversing unit and driving drums bearing of conveyor belts
- Drum storage 45 with intervention protection **part no. 21.0909/0**
- In the rust-resistant drum bearings the intervention protection can be retrofitted **part no. 21.0909/9**

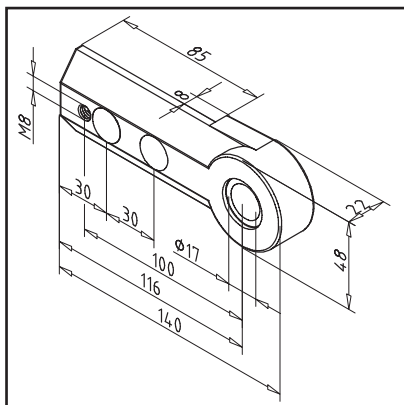
**ASSEMBLY**

- Pre-mount drum bearing to profile end
- When using swivel plates **part no. 29.5001/0** for mounting the substructure, these serve as counter-bearings for clamping, otherwise use multi-block or mounting angle bracket
- Tighten the conveyor belt by unscrewing the set screw, if necessary reset the tool
- Firmly tighten the drum bearing (recommended tightening torque: 25 Nm)

**DRUM BEARING 45 WITH BORE**

Part no.

21.0993/1

**TECHN. DATA / ITEMS SUPPLIED**

- Aluminium, Pressure die-casting, powder-coated, grey
- With bore for drive adapter
- Self-aligning bearing with bore  $\varnothing$  17 mm, sealed on both sides
- Version in aluminium GD, with stainless bearing and fastening kit, conveyor bearing 45 H, **part no. 21.0993/6**
- Stainless version, conveyor bearing 45 VA with bore, **part no. 21.0980/0**
- Weight = 0.287 kg/piece

**APPLICATIONS**

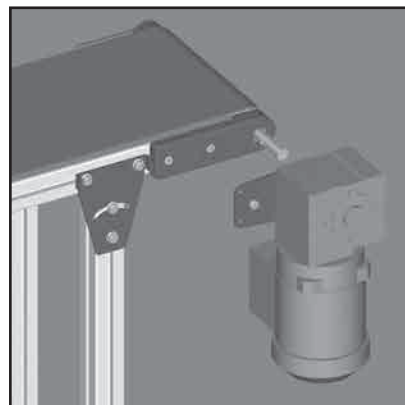
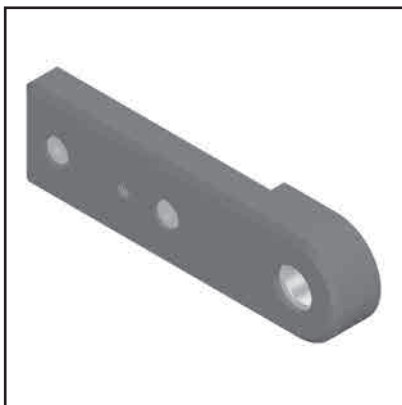
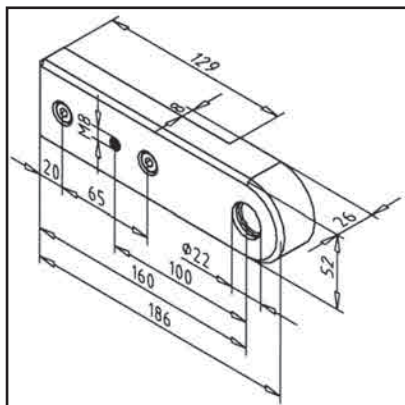
- Reversing unit and driving drums bearing of conveyor belts
- Attachment of plug in motors or chain wheels to through shaft up to max.  $\varnothing$  17 mm
- Can be retrofitted with intervention protection **part no. 21.0909/9**

**ASSEMBLY**

- Pre-mount drum bearing to profile end
- When using swivel plates **part no. 29.5001/0** for mounting the substructure, these serve as counter-bearings for clamping, otherwise use multi-block or mounting angle bracket
- Tighten the conveyor belt by unscrewing the set screw, if necessary reset the tool
- Firmly tighten the drum bearing (recommended tightening torque: 25 Nm)

### DRUM BEARING 45 - 20

Part no. 21.0917/0



#### TECHN. DATA / ITEMS SUPPLIED

- Aluminium, powder-coated, grey
- With fastening material steel, zinc plated
- Self-aligning bearing with hole  $\varnothing$  20 mm, sealed on both sides
- Weight = 0.582 kg/piece

#### APPLICATIONS

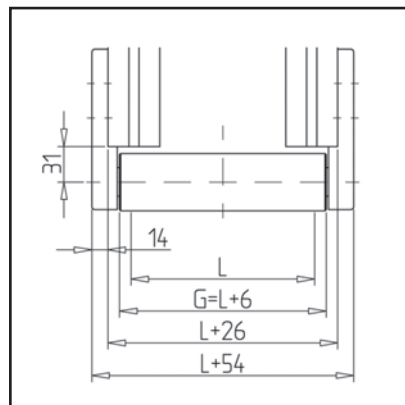
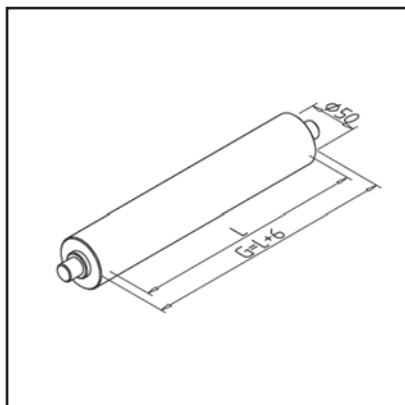
- MiniTec conveyor belts for plug-on motors with hollow shaft  $\varnothing$  20 mm in conjunction with torque arms **part no. 29.0536/0** or **29.0537/0** and drum **part no. 29.5042/0**
- Can be retrofitted with intervention protection **part no. 21.0909/9**

#### ASSEMBLY

- Pre-mount drum bearing to profile end
- Firmly tighten the drum bearing (recommended tightening torque: 25 Nm)

### BELT TENSIONING CYLINDER 45 ST

Part no. 21.0994/1



#### TECHN. DATA / ITEMS SUPPLIED

- Stainless steel
- Turned round
- **Please specify dimension L (belt width)**
- **Attention: L is not the external dimensions(G) of the conveyor  $\varnothing$ 50**
- Weight = (basic weight) 0.186 kg
- Extra weight = 1.541 kg/100mm belt width

#### APPLICATIONS

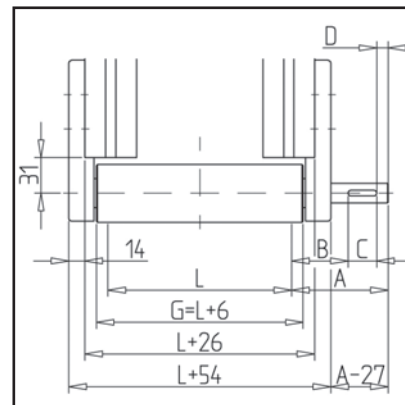
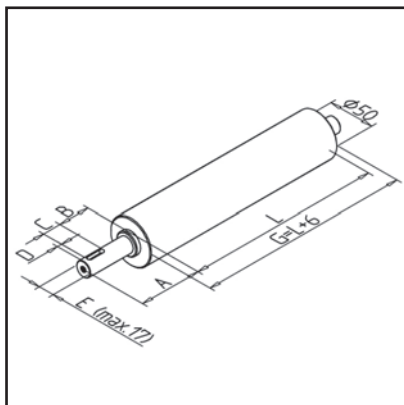
- MiniTec belt conveyor system
- Suitable for drum storage, e.g. **part no. 21.0993/0**
- On request we can deliver the drum with mounted ball bearings. The bearings are gentle on material, hot pressed. Please additionally following **part no. 21.0901/0** order.

#### ASSEMBLY

- Insert the axes into the bore of the drum bearing
- The drum is guided axially by the self-aligning bearing
- The self-aligning bearing compensates for small misalignments

## DRIVE DRUM 45 ST

Part no. 21.0995/0



## TECHN. DATA / ITEMS SUPPLIED

- Stainless steel
- Turned round
- Shaft journal max.  $\varnothing$  17 mm
- **Please indicate belt width as dimensions A, B, C, D and E (if  $\varnothing$  17 mm)**
- **Attention: L is not the external dimensions(G) of the conveyor  $\varnothing$ 50**
- Weight = (basic weight) approx. 0.3 kg
- Extra weight = 1.541 kg/100mm belt width

## APPLICATIONS

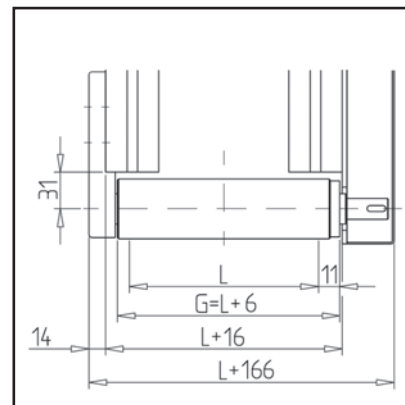
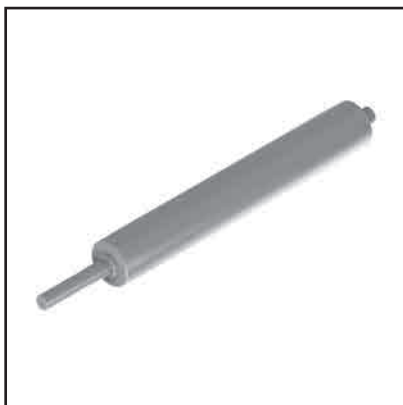
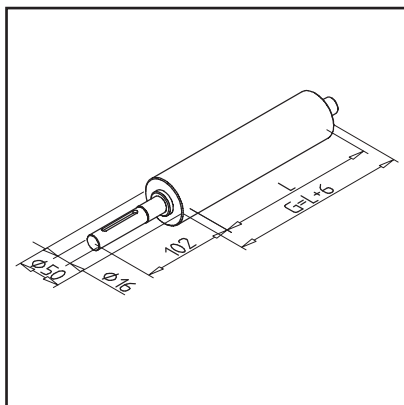
- MiniTec belt conveyor system
- Suitable for drum storage, e.g. **part no. 21.0993/0**
- On request we can deliver the drum with mounted ball bearings. The bearings are gentle on material, hot pressed. Please additionally following **part no. 21.0900/0** order.

## ASSEMBLY

- Driving drum in drum bearing with bore e.g. **part no. 21.0993/1** insert
- On the opposite side drum storage e.g. **part no. 21.0993/0** mount
- The drum is sealed between the inner rings of the self-aligning bearing and the drum bearing

## DRIVE DRUM 45 ST FOR PLUG-ON MOTOR D16

Part no. 29.5023/1



## TECHN. DATA / ITEMS SUPPLIED

- Stainless steel
- Turned round
- Shaft pin  $\varnothing$  16 mm, drive side machined for mounting of plug-on motor
- **Please specify dimension L (belt width)**
- **Attention: L is not the external dimensions(G) of the conveyor  $\varnothing$ 50**
- Weight = (basic weight) approx. 0.3 kg
- Extra weight = 1.541 kg/100mm belt width

## APPLICATIONS

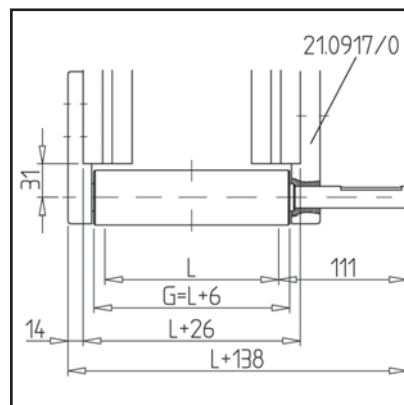
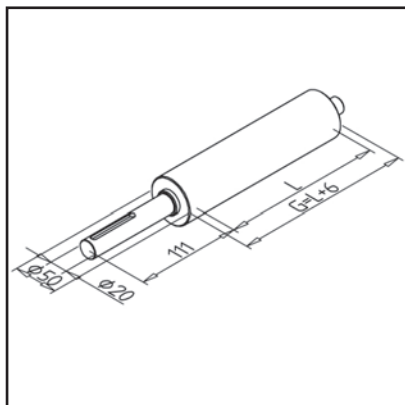
- Suitable for MiniTec motor with torque arm of series 45
- On request we can deliver the drum with mounted ball bearings. The bearings are gentle on material, hot pressed. Please additionally following **part no. 21.0900/0** order.

## ASSEMBLY

- Drive drum in drum storage for slip-on motor e.g. **part no. 21.0993/1** insert
- On the opposite side drum storage e.g. **part no. 21.0993/0** mount

## DRIVE DRUM 45ST FOR PLUG-ON MOTOR D20

Part no. 29.5042/0



### TECHN. DATA / ITEMS SUPPLIED

- Stainless steel
- Turned round
- Shaft journal  $\varnothing 20$  mm, drive side machined for installing the chain wheel from kit engine
- **Please specify dimension L (belt width)**
- **Attention: L is not the external dimensions(G) of the conveyor  $\varnothing 50$**
- Weight = (basic weight) approx. 0.3 kg
- Extra weight = 1.541 kg/100mm belt width

### APPLICATIONS

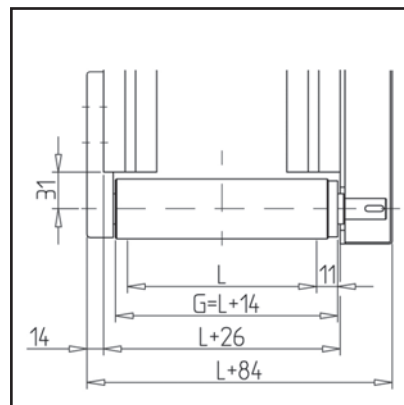
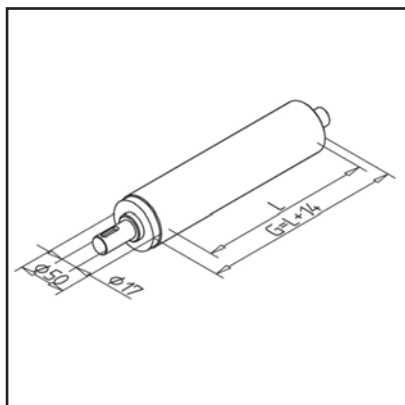
- MiniTec belt conveyor systems DSGM with torque support Wa 20 and WA 30
- Suitable for MiniTec motor with torque arm of series 90
- On request we can deliver the drum with mounted ball bearings. The bearings are gentle on material, hot pressed. Please additionally following **part no. 21.0900/0** order.

### ASSEMBLY

- Insert the belt driving cylinder in the conveyor bearing for plug-on motor 45-20 **Part-N° 21.0917/0**
- On the opposite side drum storage e.g. **part no. 21.0993/0** mount

## DRIVE DRUM 45 ST FOR MOTOR ATTACHMENT KIT 45

Part no. 29.5022/0



### TECHN. DATA / ITEMS SUPPLIED

- Stainless steel
- Turned round
- Shaft journal  $\varnothing 17$  mm, drive side machined for installing the chain wheel from kit engine
- **Please specify dimension L (belt width)**
- **Attention: L is not the external dimensions(G) of the conveyor  $\varnothing 50$**
- Weight = (basic weight) approx. 0.3 kg
- Extra weight = 1.541 kg/100mm belt width

### APPLICATIONS

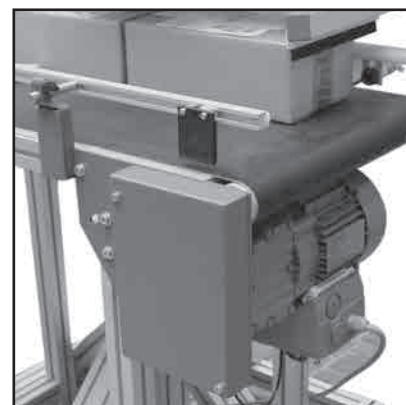
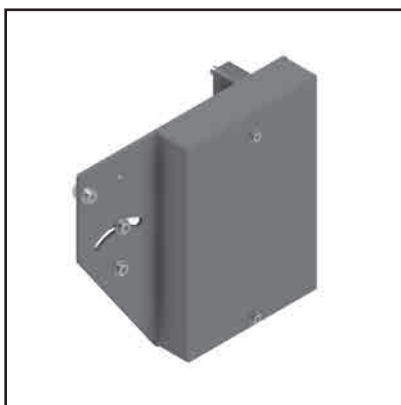
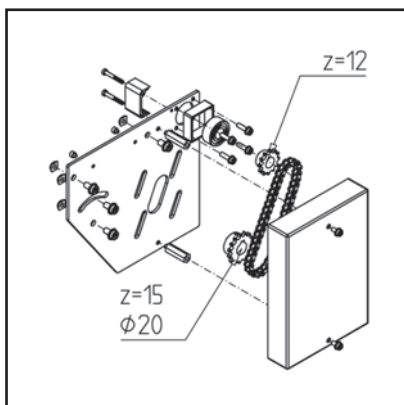
- Can only be used with the MiniTec belt conveyor kit 45
- On request we can deliver the drum with mounted ball bearings. The bearings are gentle on material, hot pressed. Please additionally following **part no. 21.0900/0** order.

### ASSEMBLY

- Insert the belt driving cylinder in the bearing housing on the motor side
- On the opposite side drum storage e.g. **part no. 21.0993/0** mount
- The drum is sealed between the inner rings of the pendulums

**MOTOR MOUNTING KIT 45 Ø 20 MM**

Part no. 29.5031/0

**TECHN. DATA / ITEMS SUPPLIED**

- With fastening material steel, zinc plated
- Motor plate and cover, steel, powder coated, grey
- Bearing housing with self-aligning bearing
- 2 sprockets with drive chain, 1 sprocket drilled for motor shaft diameter Ø 20 mm
- Weight = 3.266 kg/piece

**APPLICATIONS**

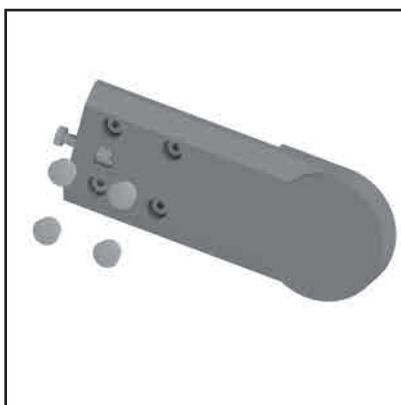
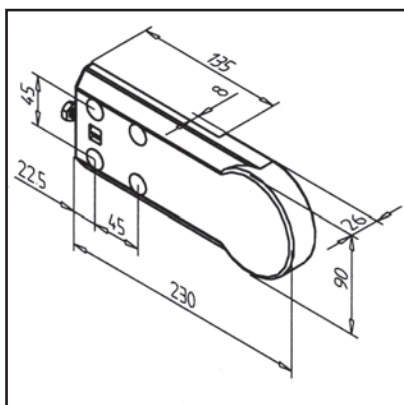
- Belt-conveyors made of MiniTec aluminium profiles
- Suitable for mounting spur gear motors with flange diameter Ø 120 mm
- Fitting drive drum **part no. 29.5022/0** and tensioning drum **part no. 21.0994/0**

**ASSEMBLY**

- Screw the flange plate to the base frame, install the bearing housing with the self-aligning bearing
- Insert drive drum, on the opposite side, eg. drum storage **part no. 21.0993/0** use
- Mount engine, install chain wheels and tighten the chain
- Fit the cover

**DRUM BEARING 90**

Part no. 21.0985/0

**TECHN. DATA / ITEMS SUPPLIED**

- Aluminium, Pressure die-casting, powder-coated, grey
- Self-aligning bearing with bore Ø 25 mm, sealed on both sides
- Weight = 0.830 kg/piece

**APPLICATIONS**

- Reversing unit and driving drums bearing of conveyor belts

**ASSEMBLY**

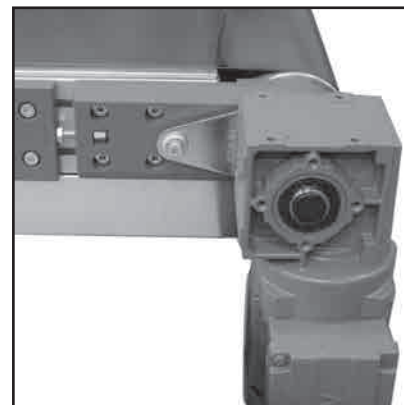
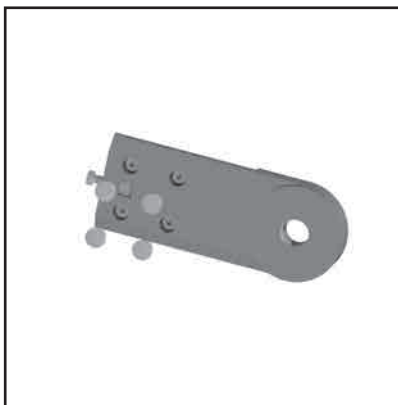
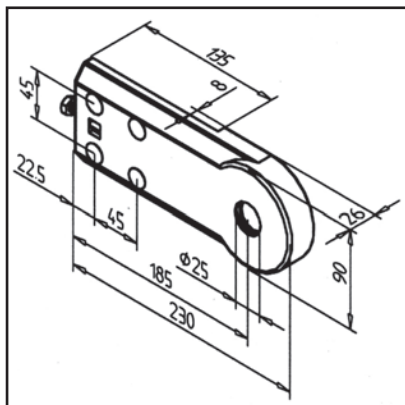
- Pre-mount drum bearing to profile end
- As counter bearing for tightening of connection plate 45 x 90
- Tighten the conveyor belt by unscrewing the set screw, if necessary reset the tool
- Firmly tighten the drum bearing (recommended tightening torque: 25 Nm)



## DRUM BEARING 90 WITH BORE

Part no.

21.0985/1



### TECHN. DATA / ITEMS SUPPLIED

- Aluminium, Pressure die-casting, powder-coated, grey
- With bore for drive adapter
- Self-aligning bearing with bore  $\varnothing$  25 mm, sealed on both sides
- Weight = 0.830 kg/piece

### APPLICATIONS

- Reversing unit and driving drums bearing of conveyor belts
- Attachment of motors or chain wheels, or belt pulleys on shaft; max.  $\varnothing$  25 mm

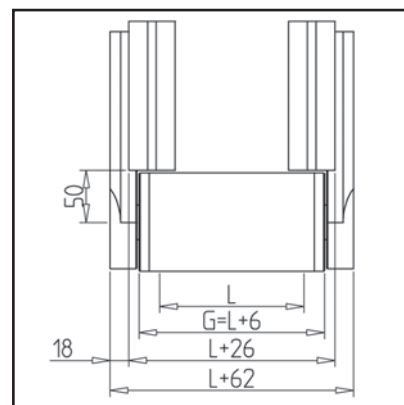
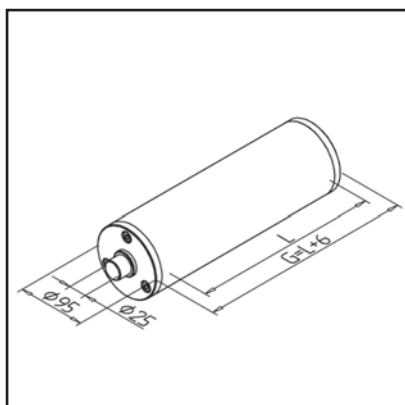
### ASSEMBLY

- Pre-mount drum bearing to profile end
- As counter bearing for tightening of connection plate 32 x 90 or 45 x 90
- Tighten the conveyor belt by unscrewing the set screw, if necessary reset the tool
- Firmly tighten the drum bearing (recommended tightening torque: 25 Nm)

## BELT TENSIONING CYLINDER 90

Part no.

21.0982/0



### TECHN. DATA / ITEMS SUPPLIED

- Aluminium with shaft made of steel
- Turned round
- Shaft journal  $\varnothing$  25 mm
- **Please specify dimension L (belt width)**
- **Attention: L is not the outer diameter of the conveyor  $\varnothing$ 95**
- Weight = (basic weight) 0.465 kg
- Extra weight = 1.506 kg/100 mm belt width

### APPLICATIONS

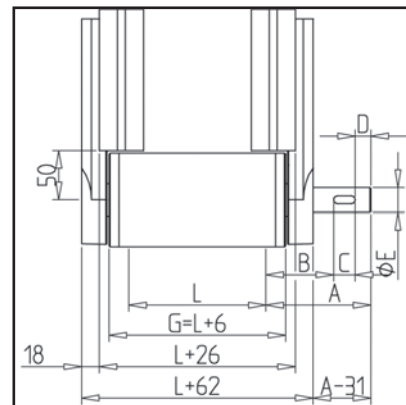
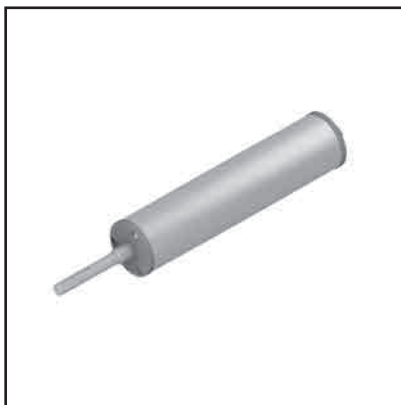
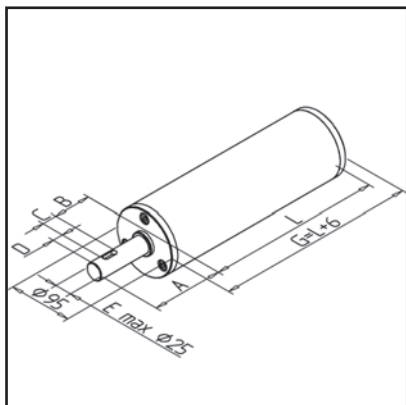
- MiniTec belt conveyor system
- Fitting drum bearing **part no. 21.0985/0**
- Upon request, we can supply the drum with mounted ball bearings. The bearings are hot pressed in a material-friendly manner. In addition, please order the following **part no. 21.0903/0**

### ASSEMBLY

- Insert axes in the bore of the self-aligning bearings of the conveyor bearing
- The drum is guided axially by the self-aligning bearing
- The self-aligning bearing compensates for small misalignments

**DRIVE DRUM 90**

Part no. 21.0981/0

**TECHN. DATA / ITEMS SUPPLIED**

- Aluminium with shaft made of steel
- Turned round
- Shaft journal max.  $\varnothing$  25 mm
- **Please specify dimension L (belt width) as well as dimensions A, B, C, D and E (if  $>$   $\varnothing$  25 mm)**
- **Attention: L is not the outer diameter of the conveyor  $\varnothing$ 95**
- Weight = (basic weight) approx. 0.7 kg
- Extra weight = 1.506 kg/100 mm belt width

**APPLICATIONS**

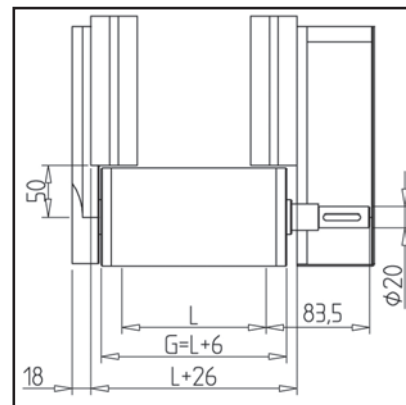
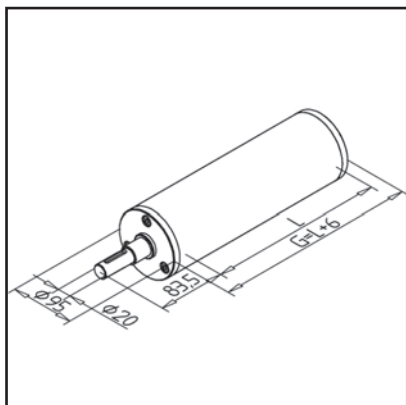
- MiniTec belt conveyor system
- Use fitting drum bearing **part no. 21.0985/0** and **part no. 21.0985/1**
- Upon request, we can supply the drum with mounted ball bearings. The bearings are hot pressed in a material-friendly manner. In addition, please order the following **part no. 21.0902/0**.

**ASSEMBLY**

- Insert belt driving cylinder in conveyor bearing with bore **part no. 21.0985/1**
- Mount drum bearing at opposite part **part no. 21.0985/0**
- The drum is sealed between the inner rings of the self-aligning bearing and the drum bearing

**DRIVE DRUM 90 FOR ENGINE MOUNTING KIT 90**

Part no. 29.5069/0

**TECHN. DATA / ITEMS SUPPLIED**

- Aluminium with shaft made of steel
- Turned round
- Shaft journal  $\varnothing$  20 mm
- **Please specify dimension L (belt width)**
- **Attention: L is not the outer diameter of the conveyor  $\varnothing$ 95**
- Weight = (basic weight) approx. 0.7 kg
- Extra weight = 1.506 kg/100 mm belt width

**APPLICATIONS**

- MiniTec belt conveyor system with motor kit 90 **part no. 29.5031/0** and drum bearing **part no. 21.0985/0**
- Upon request, we can supply the drum with mounted ball bearings. The bearings are hot pressed in a material-friendly manner. In addition, please order the following **part no. 21.0902/0**.

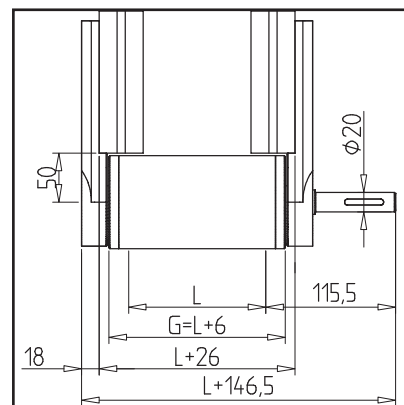
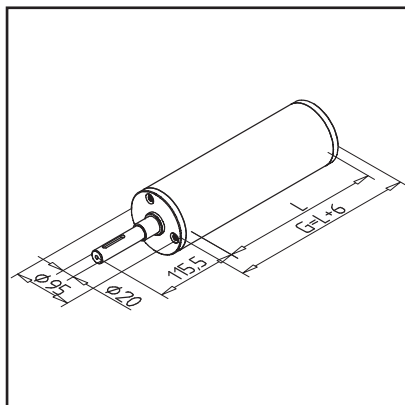
**ASSEMBLY**

- Insert the belt driving cylinder in the bearing housing on the motor side
- Mount drum bearing at opposite part **part no. 21.0985/0**

## DRIVE DRUM 90 L FOR PLUG-ON MOTOR D20

Part no.

29.5035/0



### TECHN. DATA / ITEMS SUPPLIED

- Aluminium with shaft made of steel
- Turned round
- Shaft journal  $\varnothing 20$  mm
- **Please specify dimension L (belt width)**
- **Attention: L is not the outer diameter of the conveyor  $\varnothing 95$**
- Weight = (basic weight) approx. 0.7 kg
- Extra weight = 1.506 kg/100 mm belt width

### APPLICATIONS

- MiniTec belt conveyor system with motor kit 90 **part no. 29.5031/0** and drum bearing **part no. 21.0985/0**
- Upon request, we can supply the drum with mounted ball bearings. The bearings are hot pressed in a material-friendly manner. In addition, please order the following **part no. 21.0902/0**.

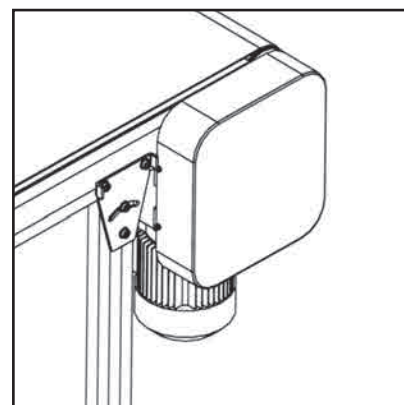
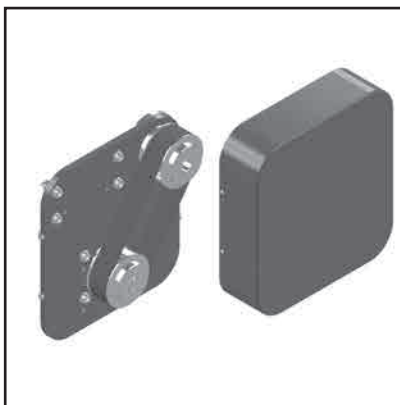
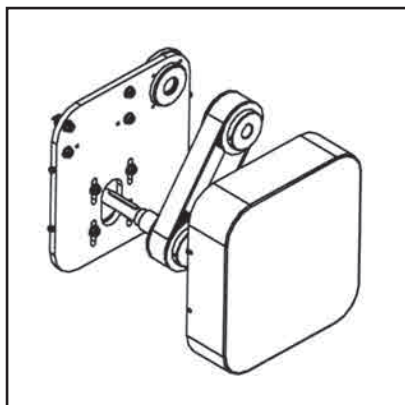
### ASSEMBLY

- Insert the belt driving cylinder in the bearing housing on the motor side
- Mount drum bearing at opposite part **part no. 21.0985/0**

## MOTOR MOUNTING KIT 90

Part no.

29.5060/0



### TECHN. DATA / ITEMS SUPPLIED

- Motor plate and cover, steel, powder coated, grey
- Bearing housing with self-aligning bearing
- Belt driving cylinder  $\varnothing 20$  mm
- Timing belt 32 AT 10
- Fastening kit
- Weight = 5.973 kg/piece

### APPLICATIONS

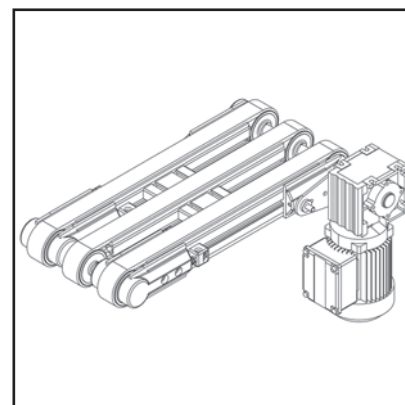
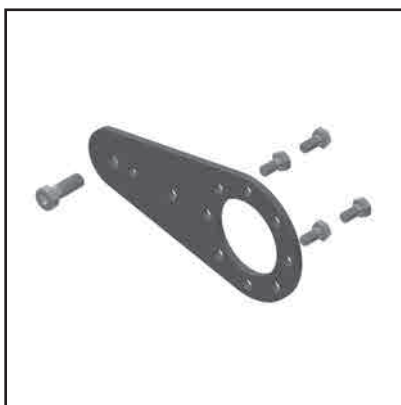
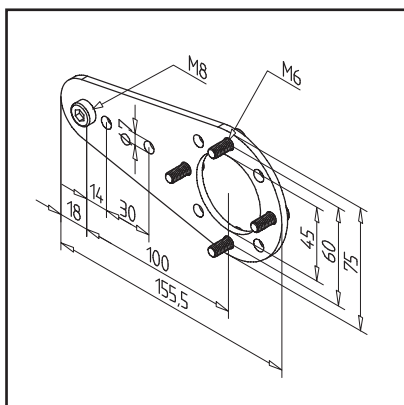
- Belt-conveyors made of MiniTec aluminium profiles 90
- Suitable for mounting spur gear motors with hollow shaft  $\varnothing 20$  mm flange  $\varnothing 120$  mm

### ASSEMBLY

- Screw the flange plate to the base frame, install the bearing housing with the self-aligning bearing
- Install and tension the motor and timing belt drive
- Insert drive drum, use drum bearing at opposite side **part no. 21.0985/0**
- Fit the cover

## TORQUE SUPPORT WA 10

Part no. 29.5040/0



### TECHN. DATA / ITEMS SUPPLIED

- Stainless steel, blasted
- with fastening material for Series 45
- Weight = 0.341 kg/piece

### APPLICATIONS

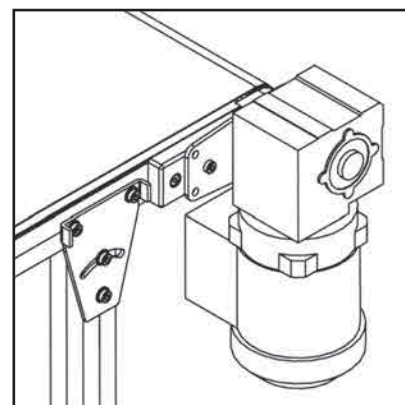
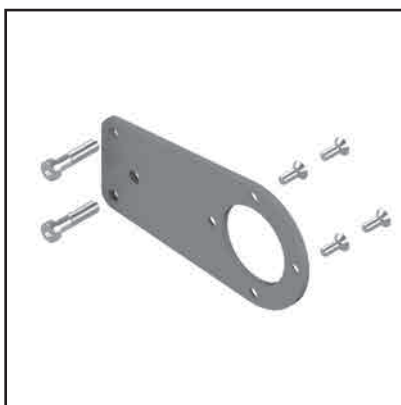
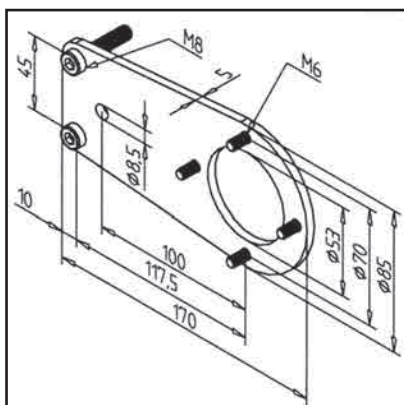
- Belt-conveyors made of MiniTec aluminium profiles
- Attachment of plug-on motor DSGM 370 and DSGM 550 for MiniTec belt conveyors 90
- Type 90: Use suitable belt driving cylinder **part no. 29.5035/0** and conveyor bearing **part no. 21.0985/1**
- Type 45: Use suitable belt driving cylinder **part no. 29.5042/0** and conveyor bearing **part no. 21.0917/0**

### ASSEMBLY

- Fasten torque support onto motor
- Attach motor on belt driving cylinder
- Fasten torque support
- Type 45: use screw M8 x 20 (not in scope of delivery)

## TORQUE SUPPORT WA 20

Part no. 29.5036/0



### TECHN. DATA / ITEMS SUPPLIED

- Steel, powder-coated, grey
- Fastening kit for type 90
- Weight = 0.430 kg/piece

### APPLICATIONS

- Belt-conveyors made of MiniTec aluminium profiles
- Attachment of plug-on motor DSGM 180 and DSGM 250 for MiniTec belt conveyors 45 and 90
- Type 90: Use suitable belt driving cylinder **part no. 29.5035/0** and conveyor bearing **part no. 21.0985/1**
- Type 45: Use suitable belt driving cylinder **part no. 29.5042/0** and conveyor bearing **part no. 21.0917/0**

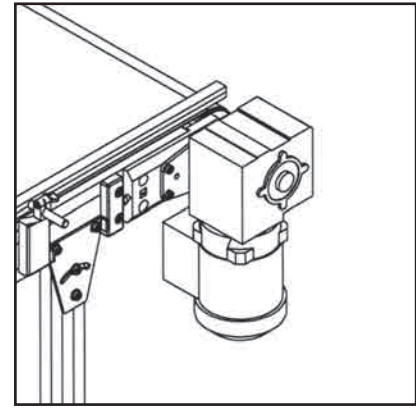
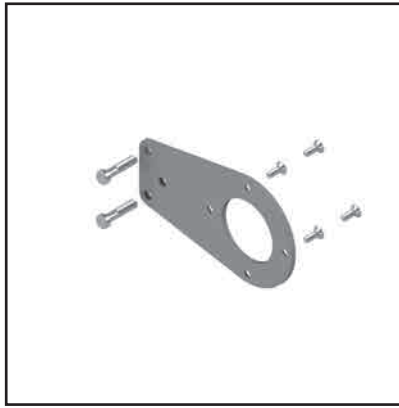
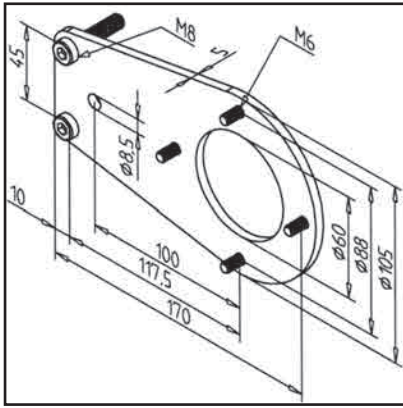
### ASSEMBLY

- Fasten torque support onto motor
- Attach motor on belt driving cylinder
- Fasten torque support
- Type 45: use screw M8 x 20 (not in scope of delivery)

## TORQUE SUPPORT WA 30

Part no.

29.5037/0



### TECHN. DATA / ITEMS SUPPLIED

- Steel, powder-coated, grey
- Fastening kit for type 90
- Weight = 0.514 kg/piece

### APPLICATIONS

- Belt-conveyors made of MiniTec aluminium profiles
- Attachment of plug-on motor DSGM 370 and DSGM 550 for MiniTec belt conveyors 90
- Type 90: Use suitable belt driving cylinder **part no. 29.5035/0** and conveyor bearing **part no. 21.0985/1**
- Type 45: Use suitable belt driving cylinder **part no. 29.5042/0** and conveyor bearing **part no. 21.0917/0**

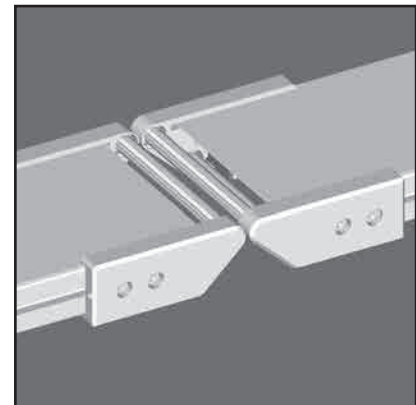
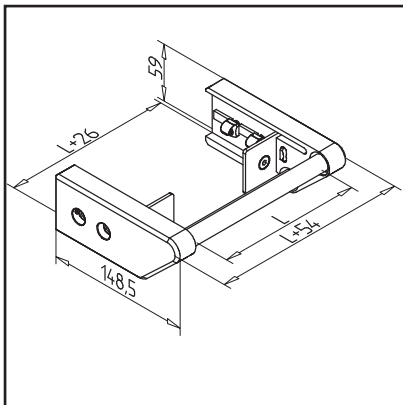
### ASSEMBLY

- Fasten torque support onto motor
- Attach motor on belt driving cylinder
- Fasten torque support
- Type 45: use screw M8 x 20 (not in scope of delivery)

## KNIFE EDGE 16

Part no.

29.5310/0



### TECHN. DATA / ITEMS SUPPLIED

- Aluminium, natural anodized
- With fastening material steel, zinc plated
- Ball bearing with bore  $\varnothing$  8 mm
- Cylindrical deflection shaft made of steel
- Shaft journal  $\varnothing$  8 mm
- **Please specify belt width L (max 300 mm)**
- Weight = (basic weight) 0.93 kg
- Extra weight = 0.318 kg/100 mm belt width

### APPLICATIONS

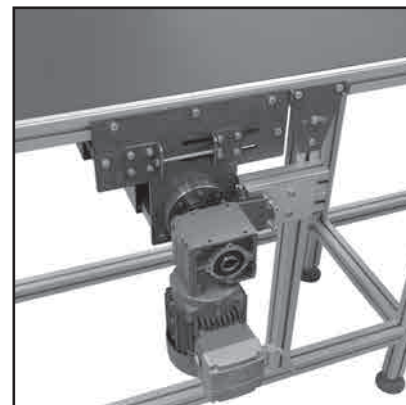
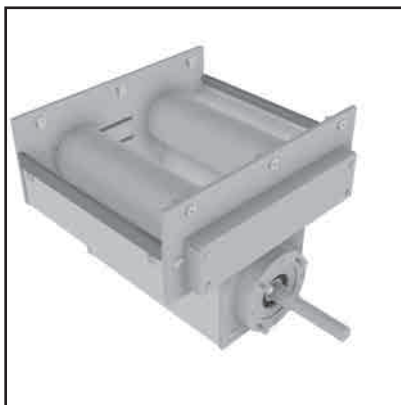
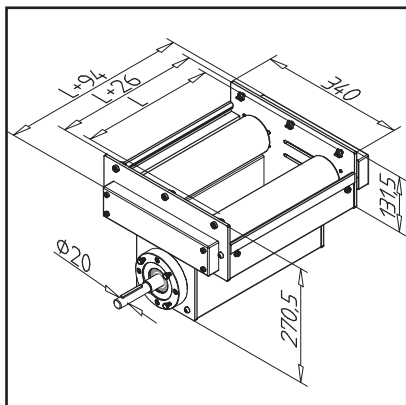
- For small transport goods and light loads
- Transfer of conveyed goods with the smallest possible gap to the adjacent construction

### ASSEMBLY

- Attach to the profile end with supplied hardware
- Align shaft exactly with angle to avoid offset for the bearing

## CENTER DRIVE CONVEYOR BELT

Part no. 29.5280/0



### TECHN. DATA / ITEMS SUPPLIED

- 2 tension drums and 1 drive drum
- Ball bearings on both sides
- With complete mounting material, without motor
- Weight = (basic weight) 15.643 kg
- Extra weight = 10.966 kg/100 mm belt width

### APPLICATIONS

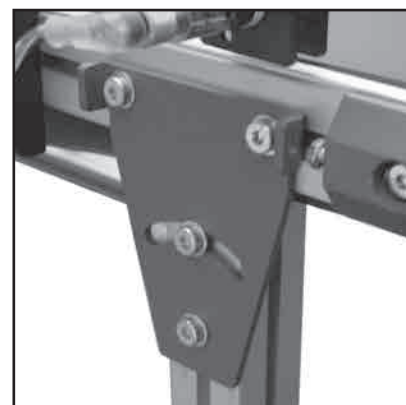
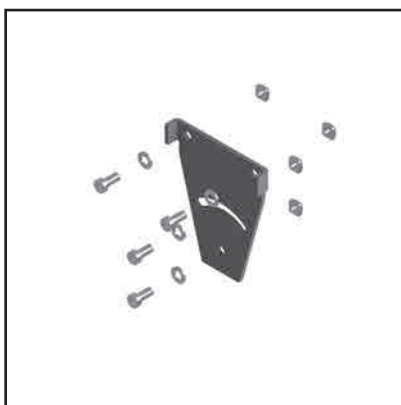
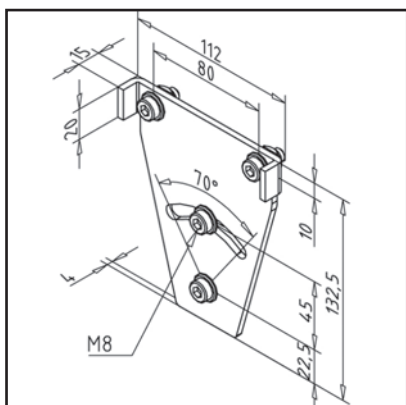
- Space saving drive
- Motor below conveyor
- Suitable for nosebar on both ends

### ASSEMBLY

- Pre-assemble the side plates
- Install drive and tensioning drum with bearing housing
- Install engine, then adjust belt tension and track!
- A selection of suitable motors:  
Please refer **Chapter 1.9 Drive & control**

## SWIVEL PLATE

Part no. 29.5001/0



### TECHN. DATA / ITEMS SUPPLIED

- Steel, powder-coated, grey
- Stainless version **part no. 29.5012/0**
- Weight = 0.377 kg/piece

### APPLICATIONS

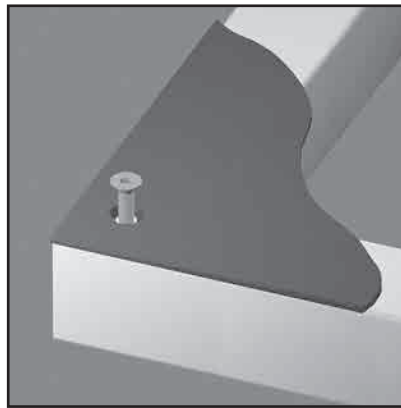
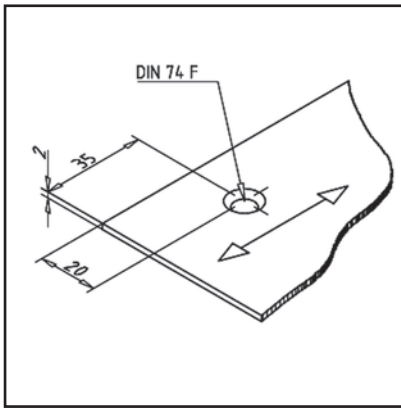
- Connection of the substructure to the MiniTec conveyor belt
- Also suitable for inclined conveyor belts
- The swivel plate simultaneously serves as a counter-bearing for tensioning the belt
- Range  $\pm 35^\circ$

### ASSEMBLY

- Fasten to the side walls of the conveyor belt and to the substructure with supplied hardware

## INTERMEDIATE PLATE

Part no. 29.5010/0



### TECHN. DATA / ITEMS SUPPLIED

- Aluminium, anodized E6/EV1
- Thickness: 2 mm
- Drilled ready for installation
- Stainless version **part no. 29.5010/1**

### APPLICATIONS

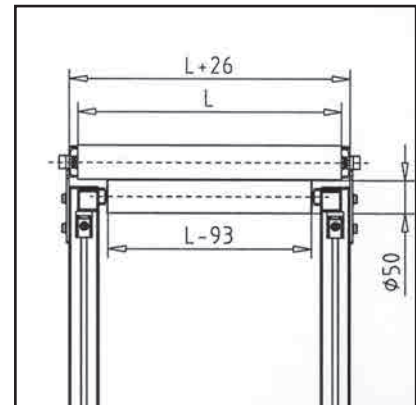
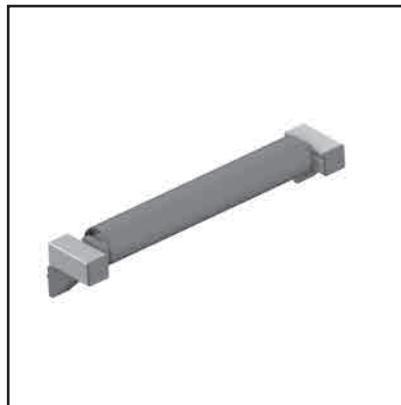
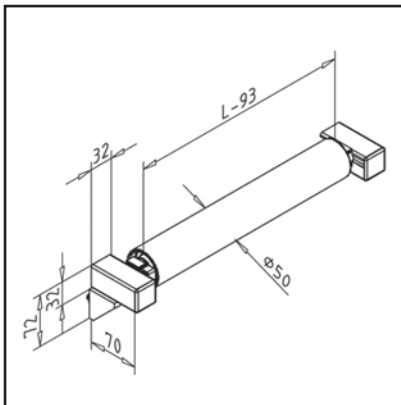
- Sliding support for conveyor belts
- For MiniTec conveyor systems

### ASSEMBLY

- Screw onto the profile using countersunk screws M5 x 16 and sliding nut M5

## SUPPORT ROLLER CONVEYOR BELT

Part no. 29.5002/0



### TECHN. DATA / ITEMS SUPPLIED

- With fastening material steel, zinc plated
- Support roller made of tube PVC
- Ball bearings on both sides
- Two holders from profile
- 2 mounting angles
- Max. tightening torque: 5 Nm
- **Please specify dimension L (belt width)**

### APPLICATIONS

- MiniTec belt conveyor system
- As a support for the lower side of long belt conveyors
- We recommend to install one support roller for each intermediate support on the belt conveyor
- Use this support roller kit only with belt width > 115 mm

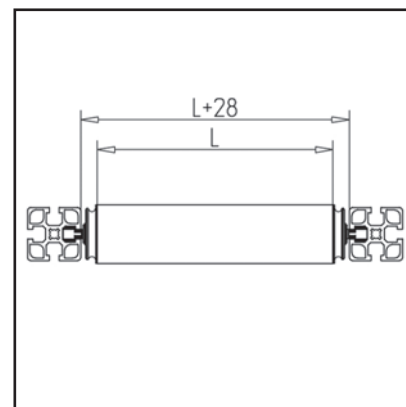
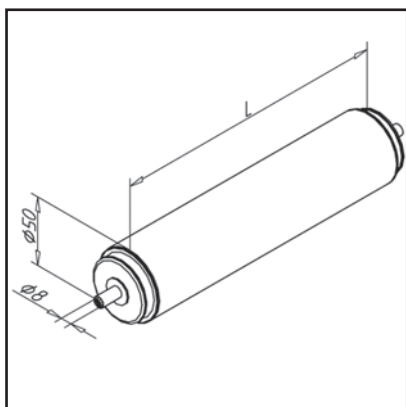
### ASSEMBLY

- Reassemble the roller mount from the profile to the conveyor supports
- Clip support roller into fastening kit
- Slide the roller in appropriate position and tighten the screws

**TRANSPORT ROLLER 50-25**

Part no.

--...../-

**TECHN. DATA / ITEMS SUPPLIED**

- Completely assembled conveyor roller optionally with PVC pipe in grey or Al-tube mill finished
- Load/roller max. 20 kg
- **Please specify dimension L** (pipe length)
- Conveyor roller PVC **part no. 21.0890/0**
- Conveyor roller Al **part no. 21.0892/0**
- On request also available with anodized aluminum tube or stainless steel tube

**APPLICATIONS**

- Production of roller conveyors with or without drive
- When requesting high concentricity, the conveyor roller AL is to be preferred

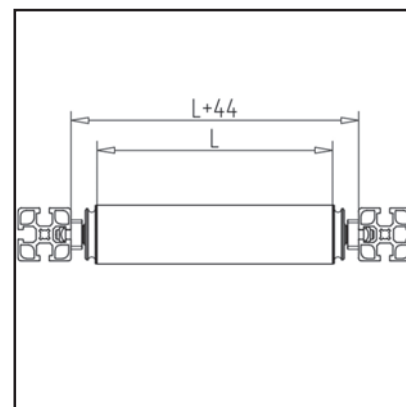
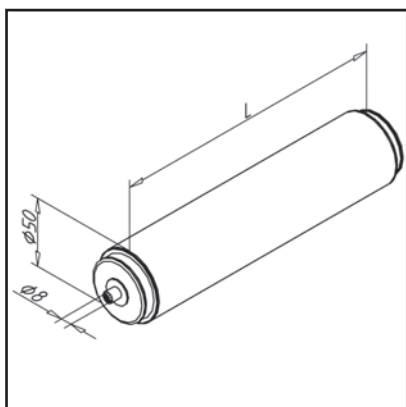
**ASSEMBLY**

- Simply attach roller carrier and insert in profile groove
- Use with roller carrier 25 **part no. 22.1196/0**

**TRANSPORT ROLLER 50-36**

Part no.

--...../-

**TECHN. DATA / ITEMS SUPPLIED**

- Completely assembled conveyor roller optionally with PVC pipe in grey or Al-tube mill finished
- Load/roller max. 20 kg
- **Please specify dimension L** (pipe length)
- Conveyor roller PVC **part no. 21.1717/0**
- Conveyor roller Al **part no. 21.1716/0**
- On request also available with anodized aluminum tube or stainless steel tube

**APPLICATIONS**

- Production of roller conveyors with or without drive
- When requesting high concentricity, the conveyor roller AL is to be preferred

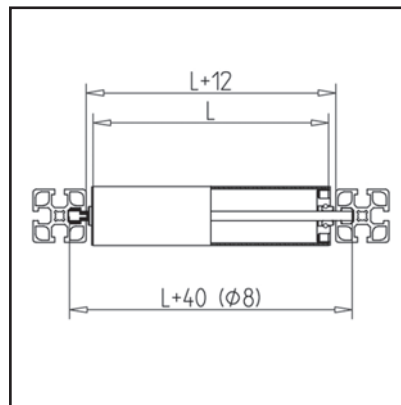
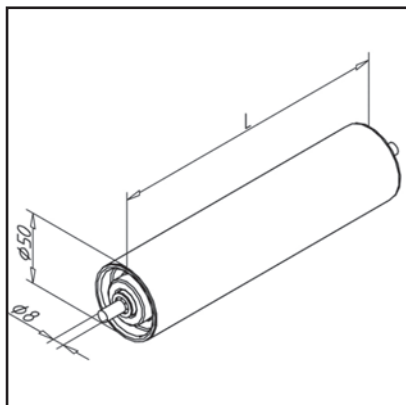
**ASSEMBLY**

- Clip in roller support
- Use with roller carrier 36 **part no. 22.1190/0**



### TRANSPORT ROLLER S 50-25

Part no. ---,----/-



#### TECHN. DATA / ITEMS SUPPLIED

- Completely assembled conveyor roller optionally with PVC pipe in grey or Al-tube mill finished
- with ball bearing sets and continuous shaft
- Load/roller max. 33 kg
- **Please specify dimension L** (pipe length)
- Conveyor roller PVC **part no. 21.0891/0**
- Conveyor roller Al **part no. 21.0895/0**
- On request also available with anodized aluminum tube or stainless steel tube

#### APPLICATIONS

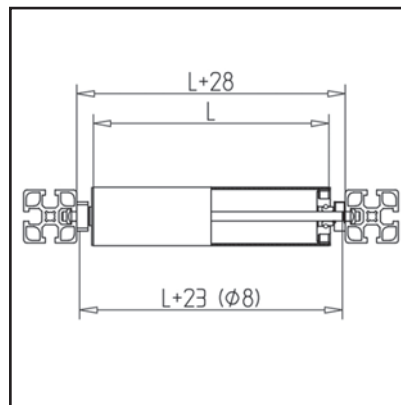
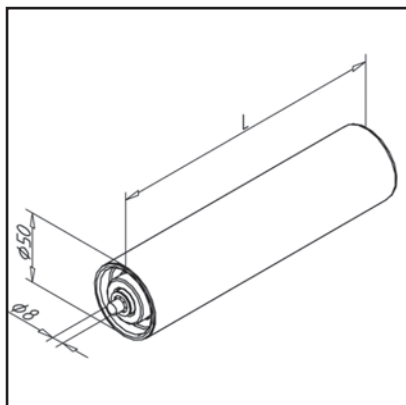
- Production of roller conveyors without drive
- When requesting high concentricity, the conveyor roller AL is to be preferred

#### ASSEMBLY

- Simply attach roller carrier and insert in profile groove
- Use with roller carrier 25 **part no. 22.1196/0**

### TRANSPORT ROLLER S 50-36

Part no. ---,----/-



#### TECHN. DATA / ITEMS SUPPLIED

- Completely assembled conveyor roller optionally with PVC pipe in grey or Al-tube mill finished
- with ball bearing sets and continuous shaft
- Load/roller max. 33 kg
- **Please specify dimension L** (pipe length)
- Conveyor roller PVC **part no. 21.1719/0**
- Conveyor roller Al **part no. 21.1718/0**
- On request also available with anodized aluminum tube or stainless steel tube

#### APPLICATIONS

- Production of roller conveyors without drive
- When requesting high concentricity, the conveyor roller AL is to be preferred

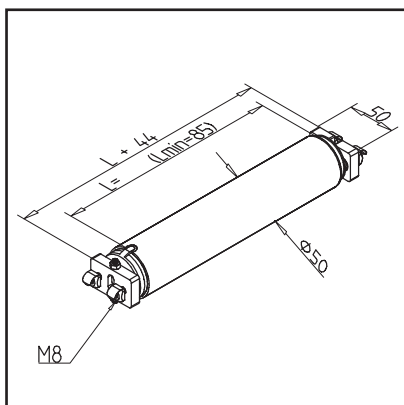
#### ASSEMBLY

- Clip in roller support
- Use with roller carrier 36 **part no. 22.1190/0**

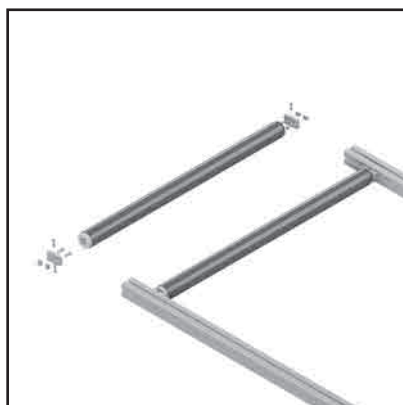
**BRAKE ROLLER PVC 50**

Part no.

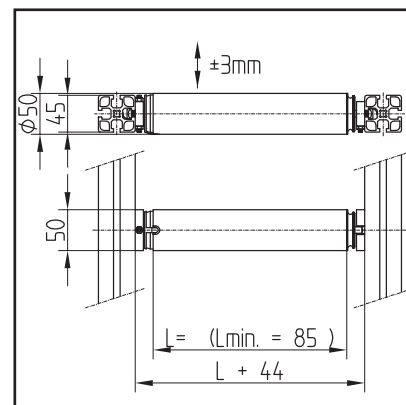
21.2250/0

**TECHN. DATA / ITEMS SUPPLIED**

- With fastening material steel, zinc plated
- PVC, blue
- **Please specify dimension L** (pipe length)
- On request also available with tube in aluminum mill finished, anodized or stainless steel
- Weight = (basic weight) 0.295 kg
- Extra weight = 0.45 kg/m tube length

**APPLICATIONS**

- To decelerate transport boxes on sloped roller conveyors
- When it comes to the requirement for high concentricity, a tube made of aluminum or stainless steel is to be preferred

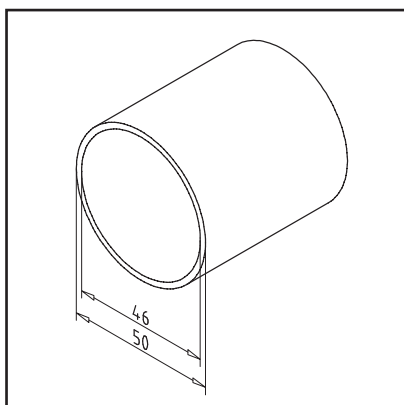
**ASSEMBLY**

- Mount lateral support on frame of roller conveyor
- Clamp the roller and adjust the height above the lower studs
- The brake-roller can be adjusted in height +/- 3 mm

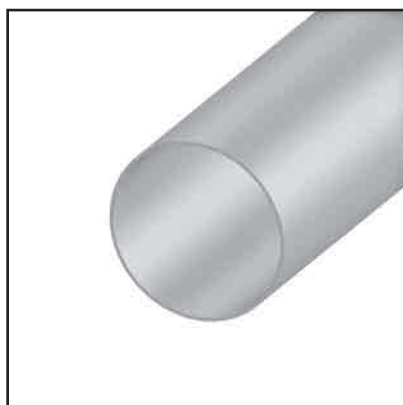
**PIPE 50 X 2**

Part no.

--...../-

**TECHN. DATA / ITEMS SUPPLIED**

- PVC, grey **part no. 20.0992/0**  
Weight: 0,45 kg/m, bar length 3 m
- Alu, bright rolled **part no. 20.1041/0**  
Weight: 0,83 kg/m, bar length 6 m
- Alu, anodized **part no. 20.1041/1**  
Weight: 0,83 kg/m, bar length 6 m
- SST **part no. 20.1089/0**  
Weight: 2,37 kg/m, bar length 6 m

**APPLICATIONS**

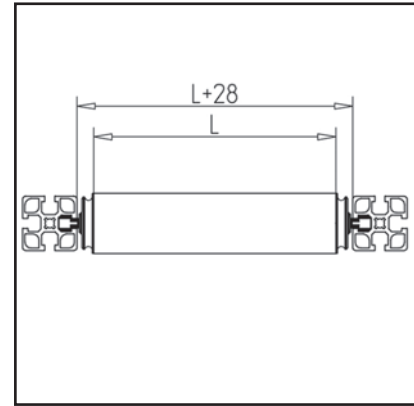
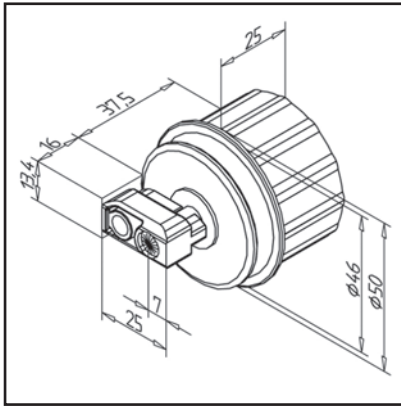
- Production of conveyor rollers in any length for roller tracks with or without drive

**ASSEMBLY**

- Exemplary application see conveyor rollers 50 and conveyor rollers S 50

### SET OF BEARINGS FOR CONVEYOR ROLLERS 25

Part no. 21.0894/0



#### TECHN. DATA / ITEMS SUPPLIED

- Bearing bushing, PA 6
- Axle bolt, steel
- Roller carrier, ABS grey
- For conveyor rollers from 60 - 1000 mm
- Load/roller max. 20 kg
- Weight = 0.044 kg/piece

#### APPLICATIONS

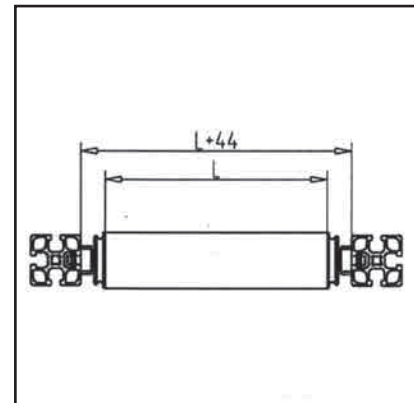
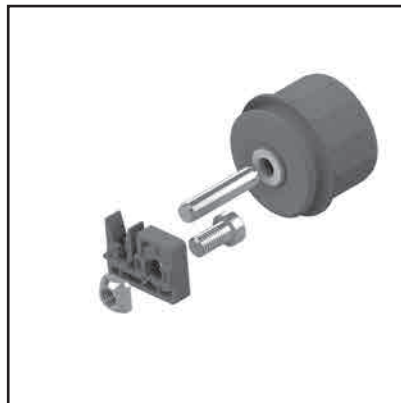
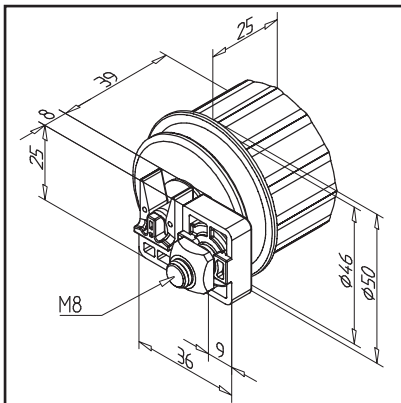
- Roller tracks of unlimited length
- Drive via round belt  $\phi$  5 mm possible

#### ASSEMBLY

- Assembly of the roller carrier on all profiles of profile series 45 possible
- Press bearing bush into the pipe
- Insert axle bolt in bearing bush
- Place roller carrier on axle and insert in profile groove
- For axial securing of the roller carriers we recommend to fix the terminal strips in the profile groove or to close the profile end with a cover AL

### SET OF BEARINGS FOR CONVEYOR ROLLERS 36

Part no. 21.1056/0



#### TECHN. DATA / ITEMS SUPPLIED

- With fastening material steel, zinc plated
- Bearing bushing, PA 6
- Axle bolt, steel
- Roller carrier, PP grey
- For conveyor rollers from 60 - 1000 mm
- Load/roller max. 20 kg
- Max. tightening torque: 5 Nm
- Weight = 0.057 kg/piece

#### APPLICATIONS

- Roller tracks of unlimited length
- Drive via round belt  $\phi$  5 mm possible
- Roles are individually interchangeable

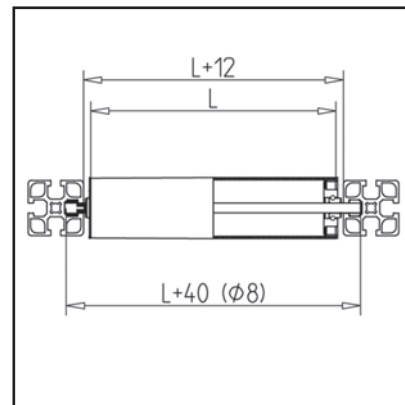
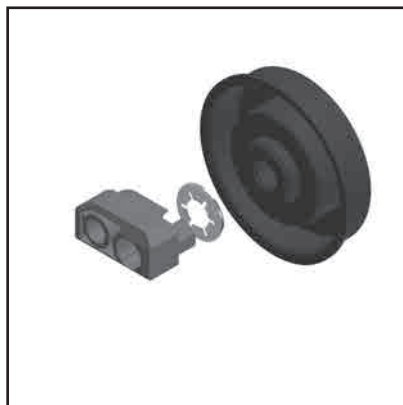
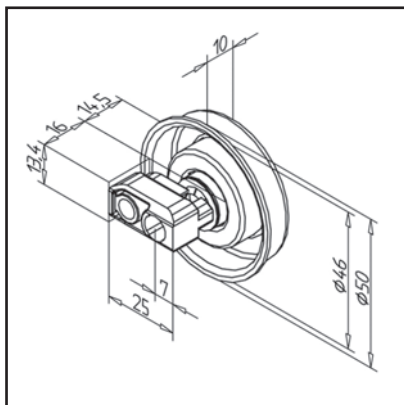
#### ASSEMBLY

- Assembly of the roller carrier on all profiles of profile series 45 possible
- Mount roller carrier to the profile
- Press bearing bush into the pipe
- Insert axle bolt in bearing bush
- Clip in transport roller

## SET OF BEARINGS S 25

Part no.

21.0893/0



## TECHN. DATA / ITEMS SUPPLIED

- Bearing bushing, steel, with ball bearing
- Locking clip, steel
- Roller carrier, ABS grey
- For conveyor rollers from 60 - 1000 mm
- Load/roller max. 33 kg
- Weight = 0.056 kg/piece

## APPLICATIONS

- Roller tracks of unlimited length
- For the production of a conveyor roller is required:
  - 2x bearing set
  - 1x pipe PVC, aluminum or stainless steel in appropriate length
  - 1x steel shaft with  $\varnothing 8$  mm **part no. 17.1840/0** in appropriate length

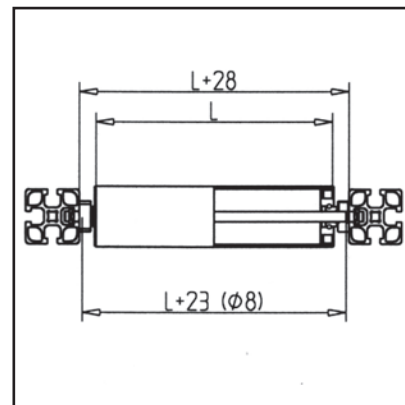
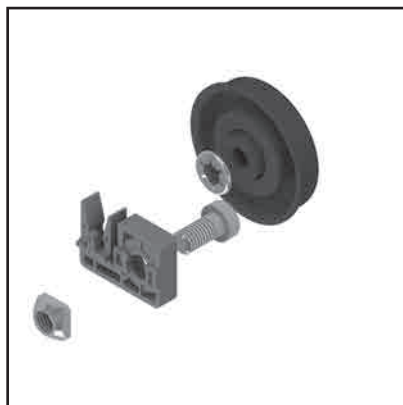
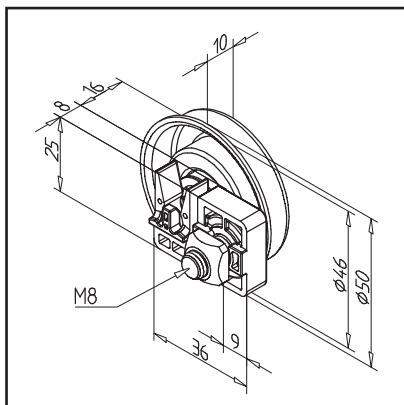
## ASSEMBLY

- Assembly of the roller carrier on all profiles of profile series 45 possible
- Press bearing bush into the pipe
- Install shaft  $\varnothing 8$  mm and secure with locking clip
- Place roller carrier on axle and insert in profile groove
- For axial securing of the roller carriers we recommend to fix the terminal strips in the profile groove or to close the profile end with a cover AL

## SET OF BEARINGS S 36

Part no.

21.1722/0



## TECHN. DATA / ITEMS SUPPLIED

- With fastening material steel, zinc plated
- Bearing bushing, steel, with ball bearing
- Locking clip, steel
- Roller carrier, PP grey
- For conveyor rollers from 60 - 1000 mm
- Load/roller max. 33 kg
- Max. tightening torque: 5 Nm
- Weight = 0.070 kg/piece

## APPLICATIONS

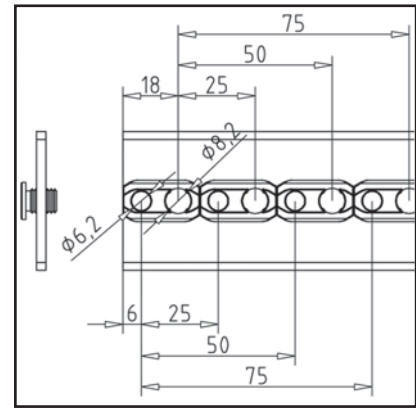
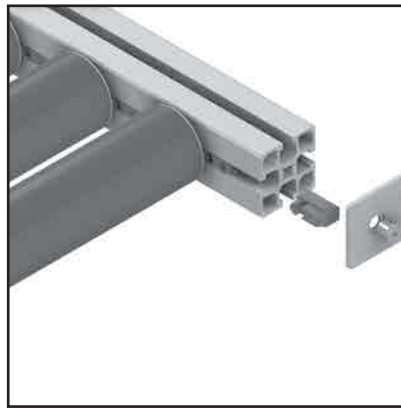
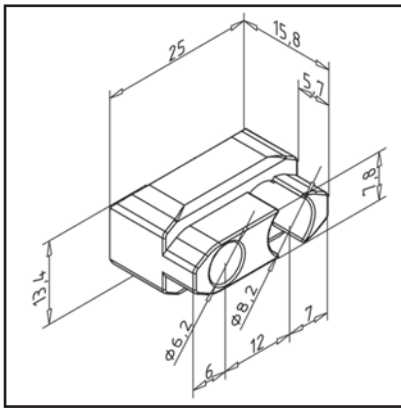
- Roller tracks of unlimited length
- Roles are individually interchangeable
- For the production of a conveyor roller is required:
  - 2x bearing set
  - 1x pipe PVC, aluminum or stainless steel in appropriate length
  - 1x steel shaft with  $\varnothing 8$  mm **part no. 17.1840/0** in appropriate length

## ASSEMBLY

- Assembly of the roller carrier on all profiles of profile series 45 possible
- Mount roller carrier to the profile
- Press bearing bush into the pipe
- Install shaft  $\varnothing 8$  mm and secure with locking clip
- Clip in transport roller

## ROLLER CARRIER 25

Part no. 22.1196/0



### TECHN. DATA / ITEMS SUPPLIED

- ABS, Injection Mould, grey
- Load capacity 15 kg/carrier
- Weight = 0.003 kg/piece

### APPLICATIONS

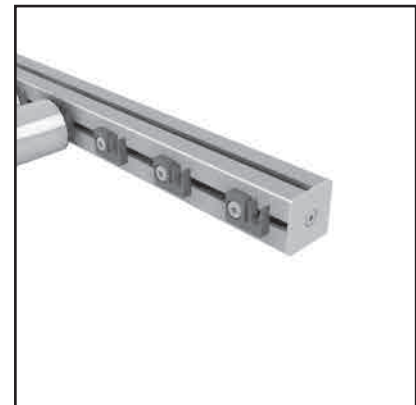
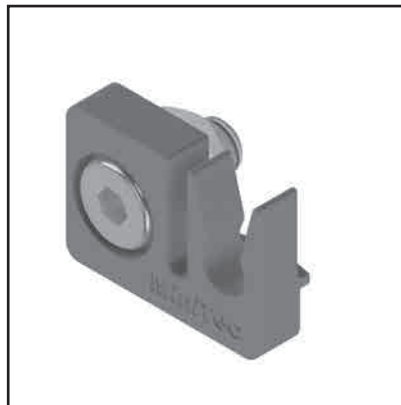
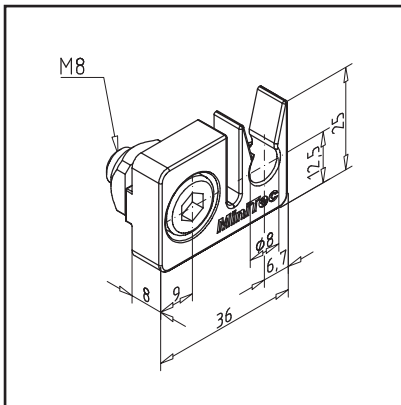
- For producing roller tracks with any roller division
- Minimum possible roll pitch 25 mm
- Roller axis  $\varnothing$  8 mm

### ASSEMBLY

- Place pulley carrier left and right onto the transport roller
- Insert transport roller with the pulley carrier into the profile grooves
- For axial support we recommend to insert an end cap AL according to the profile cross-section.
- Alternatively, also a T-slot bar or square nut with setscrew can be used

## ROLLER CARRIER 36

Part no. 22.1190/0



### TECHN. DATA / ITEMS SUPPLIED

- PA, Injection Mould, grey
- Fastening material steel, galvanized
- Load capacity 15 kg/carrier
- Max. tightening torque: 5 Nm
- Weight = 0.017 kg/piece

### APPLICATIONS

- For producing roller tracks with any roller division
- Smallest possible division of roles 36 mm
- Roller axis  $\varnothing$  8 mm

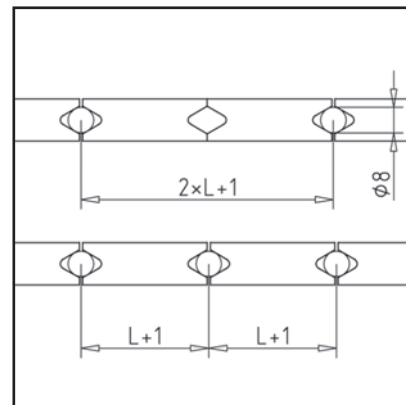
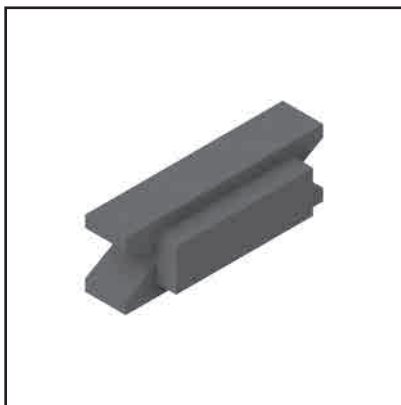
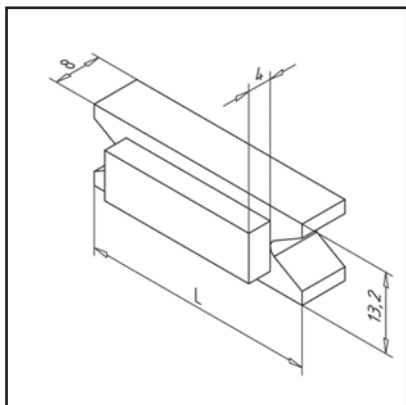
### ASSEMBLY

- Attach the roller carrier to the profile at the desired distance
- Insert axle of transport roller into pulley carrier

## SPACER

Part no.

--...../-



### TECHN. DATA / ITEMS SUPPLIED

- PP, black
- Different versions:  
Spacer 39, PP black, **part no. 22.1197/0**  
Spacer 44, PP black, **part no. 22.1198/0**
- For shaft Ø 8 mm

### APPLICATIONS

- For the preparation of roller conveyors with same division distances
- Suitable for all system grooves
- possible divisions 40 mm and 79 mm

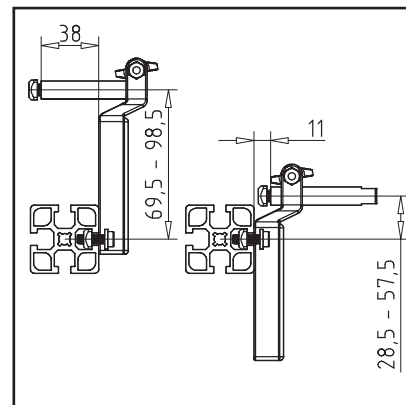
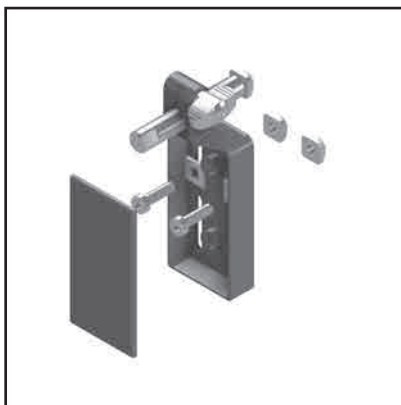
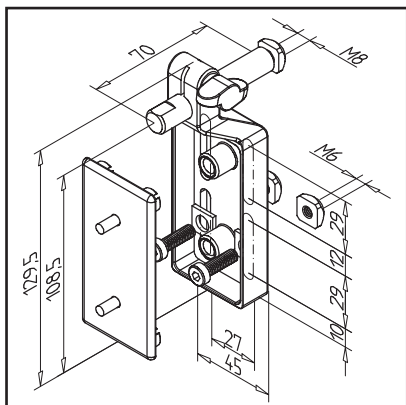
### ASSEMBLY

- Alternatively insert the spacer and the conveyor roller into the groove
- Clamp the first and the last spacer

## LATERAL GUIDE 70 SUPPORT

Part no.

29.5025/0



### TECHN. DATA / ITEMS SUPPLIED

- PA, grey
- Distance bolt, stainless steel
- With fastening material steel, zinc plated
- Weight = 0.162 kg/piece

### APPLICATIONS

- Adjustable lateral guides for MiniTec belt conveyors
- Recommended distance from single holder approx. 500 mm

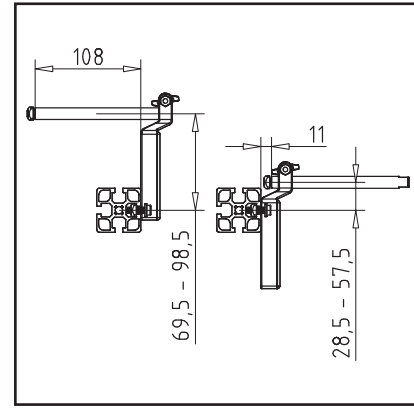
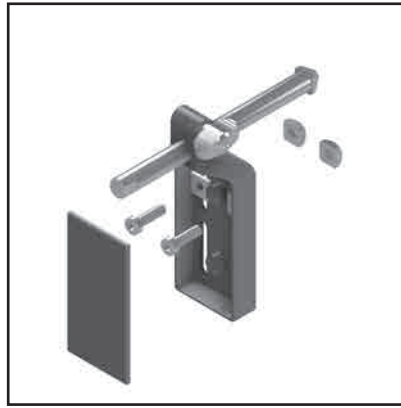
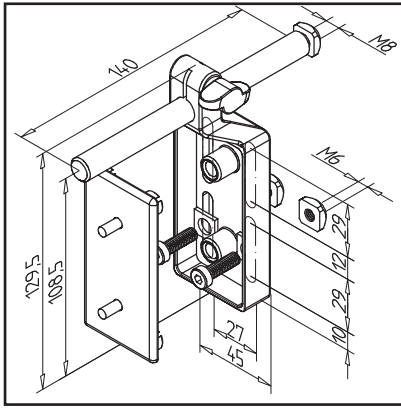
### ASSEMBLY

- Set the height and tighten the screws
- Install lateral guidance, lateral guidance F or lateral guidance 40F
- Adjust lateral distance bolt

## LATERAL GUIDE 140 SUPPORT

Part no.

29.5028/0



### TECHN. DATA / ITEMS SUPPLIED

- PA, grey
- Distance bolt, stainless steel
- With fastening material steel, zinc plated
- Weight = 0.223 kg/piece

### APPLICATIONS

- Adjustable side guide on MiniTec roller tracks
- Recommended distance from single holder approx. 500 mm

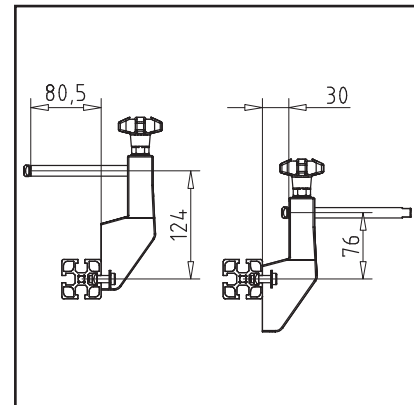
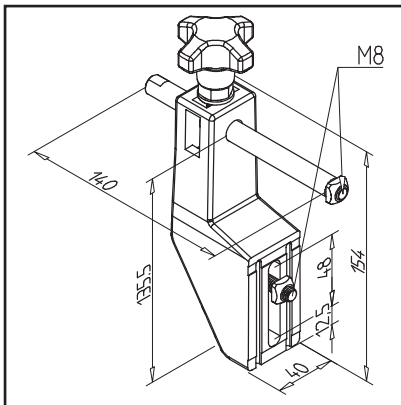
### ASSEMBLY

- Set the height and tighten the screws
- Install lateral guidance, lateral guidance F or lateral guidance 40F
- Adjust lateral distance bolt

## LATERAL GUIDE 140 SUPPORT S

Part no.

29.5055/0



### TECHN. DATA / ITEMS SUPPLIED

- PA, grey
- With fastening material steel, zinc plated
- Distance bolt, stainless steel
- Weight = 0.350 kg/piece

### APPLICATIONS

- Adjustable lateral guides for MiniTec belt conveyors
- Recommended distance from single holder approx. 500 mm

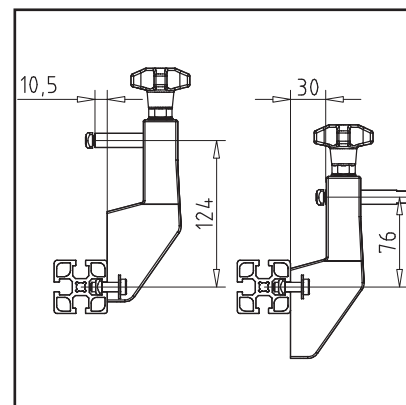
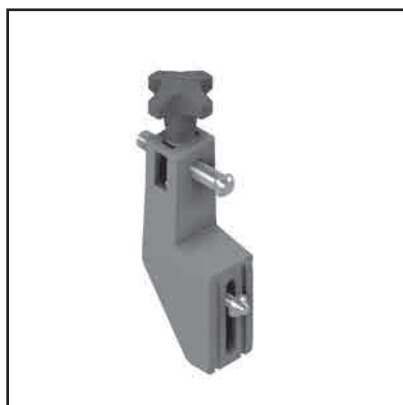
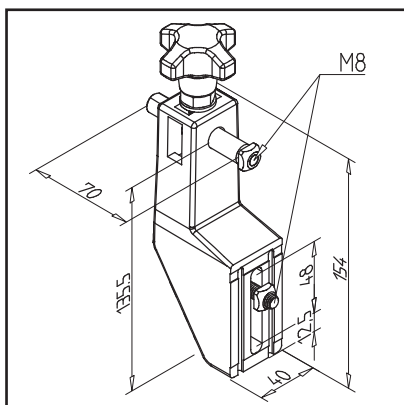
### ASSEMBLY

- Set the height and tighten the screws
- Install lateral guidance, lateral guidance F or lateral guidance 40F
- Adjust lateral distance bolt

**LATERAL GUIDE 70 SUPPORT S**

Part no.

29.5056/0

**TECHN. DATA / ITEMS SUPPLIED**

- PA, grey
- With fastening material steel, zinc plated
- Distance bolt, stainless steel
- Weight = 0.288 kg/piece

**APPLICATIONS**

- Adjustable lateral guides for MiniTec belt conveyors
- Recommended distance from single holder approx. 500 mm

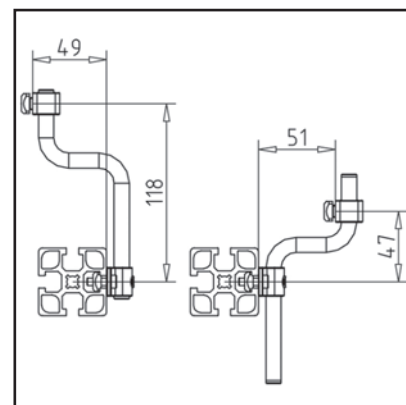
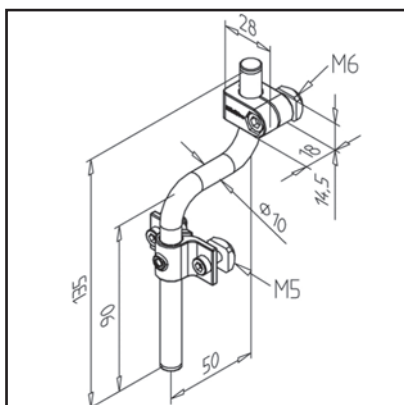
**ASSEMBLY**

- Set the height and tighten the screws
- Install lateral guidance, lateral guidance F or lateral guidance 40F
- Adjust lateral distance bolt

**LATERAL GUIDE SUPPORT, SHORT**

Part no.

29.5046/0

**TECHN. DATA / ITEMS SUPPLIED**

- Stainless steel
- Holder on top, ABS, grey
- Adjusting rod and holder at the bottom, stainless steel
- With fastening material steel, zinc plated
- Weight = 0.097 kg/piece

**APPLICATIONS**

- Adjustable lateral guide for MiniTec roller conveyor, conveyor belt etc.
- we recommend approx. 300 mm distance between the supports

**ASSEMBLY**

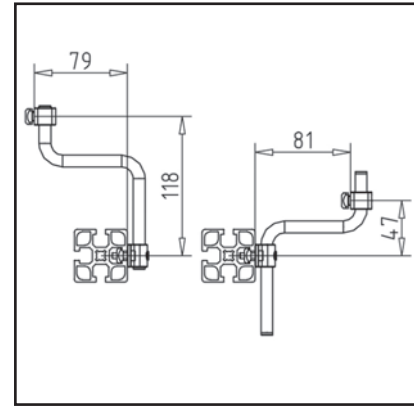
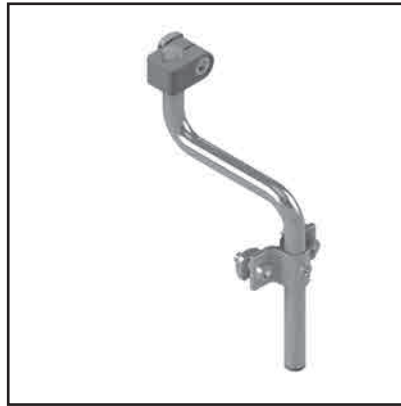
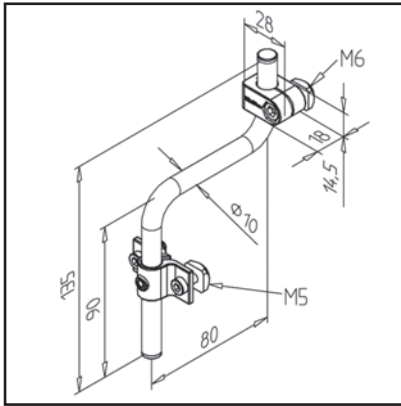
- slide square nut into base frame of conveyor and adjust the support
- adjust height and distance
- Install lateral guidance, lateral guidance F or lateral guidance 40F



## LATERAL GUIDE SUPPORT, LONG

Part no.

29.5047/0



### TECHN. DATA / ITEMS SUPPLIED

- Stainless steel
- Holder on top, ABS, grey
- Adjusting rod and holder at the bottom, stainless steel
- With fastening material steel, zinc plated
- Weight = 0.104 kg/piece

### APPLICATIONS

- Adjustable lateral guide for MiniTec roller conveyor, conveyor belt etc.
- we recommend approx. 300 mm distance between the supports
- Larger adjustment range of lateral support **part no. 29.5047/0**

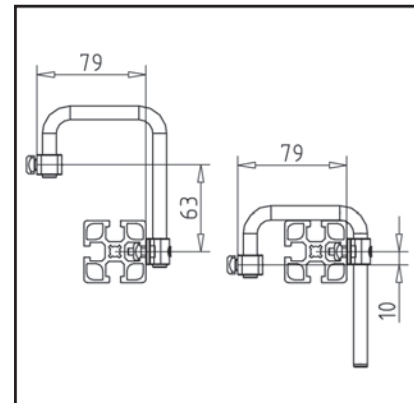
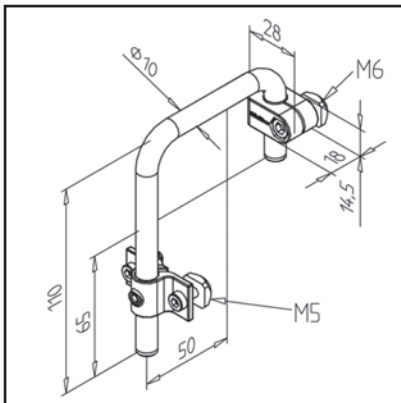
### ASSEMBLY

- slide square nut into base frame of conveyor and adjust the support
- adjust height and distance
- Install lateral guidance, lateral guidance F or lateral guidance 40F

## LATERAL GUIDE SUPPORT U-SHAPED

Part no.

29.5048/0



### TECHN. DATA / ITEMS SUPPLIED

- Stainless steel
- Holder on top, ABS, grey
- Adjusting rod and holder at the bottom, stainless steel
- With fastening material steel, zinc plated
- Weight = 0.108 kg/piece

### APPLICATIONS

- Adjustable lateral guide for MiniTec roller conveyor, conveyor belt etc.
- we recommend approx. 300 mm distance between the supports
- Lateral guide can be completely pushed down onto the roller conveyor or belt conveyor, for flat goods to be conveyed

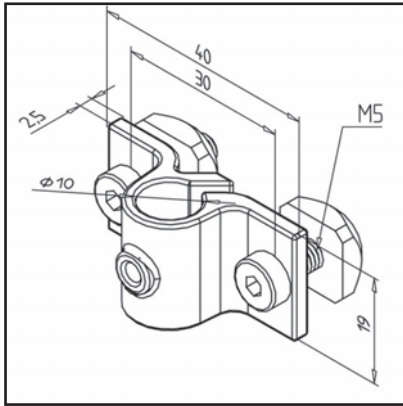
### ASSEMBLY

- slide square nut into base frame of conveyor and adjust the support
- adjust height and distance
- Install lateral guidance, lateral guidance F or lateral guidance 40F

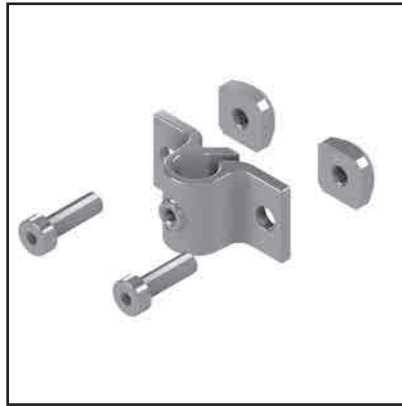
**CLAMP HOLDER 10**

Part no.

29.5052/0

**TECHN. DATA / ITEMS SUPPLIED**

- Stainless steel, blasted
- With fastening material steel, zinc plated
- 1.4301 / steel zinc plated
- Weight = 0.043 kg/piece

**APPLICATIONS**

- Adjustable lateral guides for MiniTec belt conveyors
- Recommended distance from single holder approx. 500 mm

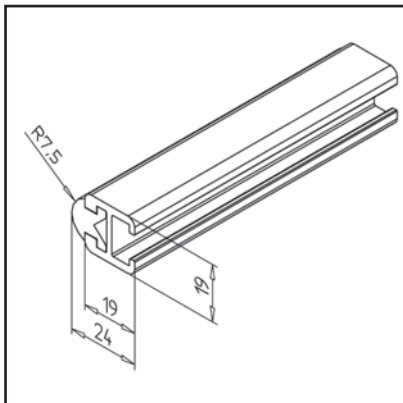
**ASSEMBLY**

- Fasten on profile groove

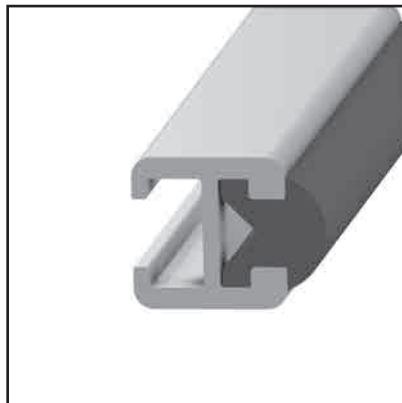
**LATERAL GUIDE CONVEYOR BELT**

Part no.

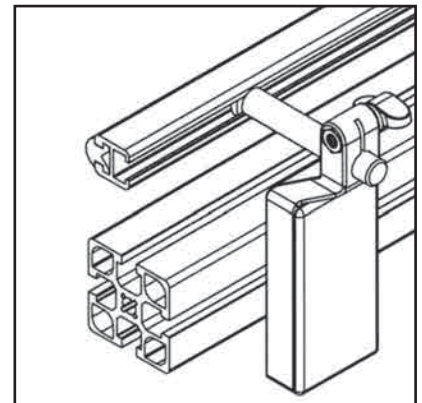
29.5034/0

**TECHN. DATA / ITEMS SUPPLIED**

- Aluminium, E6/EV1
- Slide profile, PE, natural
- Bar length = 6 m

**APPLICATIONS**

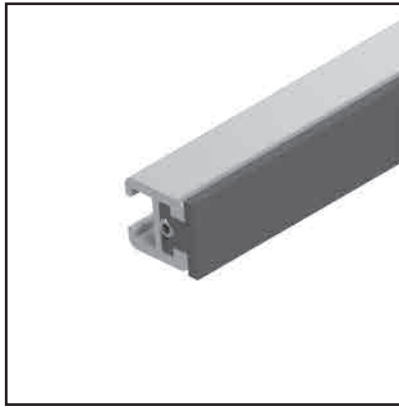
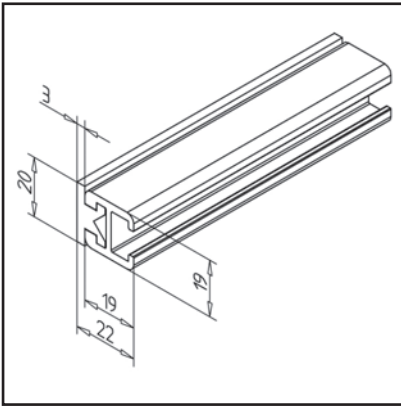
- Recommended length: axial distance A + 40 mm
- Adjustable lateral guides for MiniTec belt conveyors

**ASSEMBLY**

- Square nut M8 from mounting kit for holder side guide into receiving groove
- Screw the lateral guide on the distance bolt
- suitable end cap **part no. 22.1180/0**

## LATERAL GUIDE F

Part no. 29.5049/0



### TECHN. DATA / ITEMS SUPPLIED

- Aluminium, E6/EV1
- Slide profile, PE, natural
- Bar length = 6 m

### APPLICATIONS

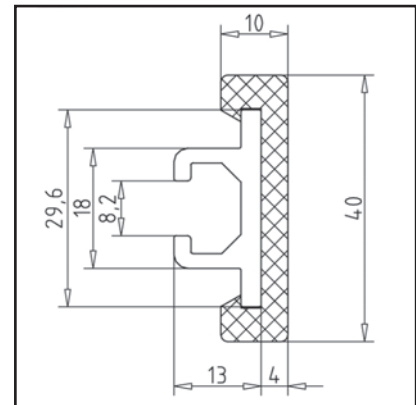
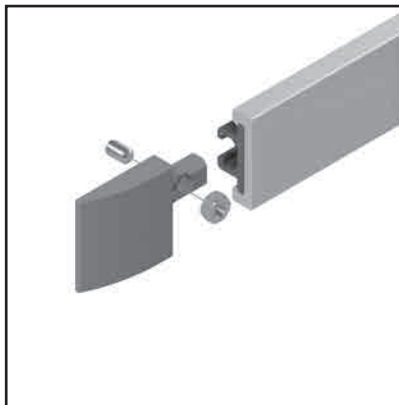
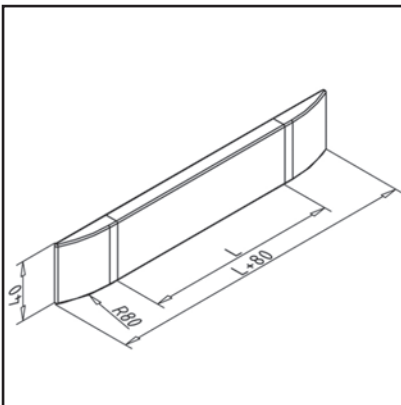
- adjustable lateral guidance for MiniTec chain conveyors, belt conveyors and roller conveyors

### ASSEMBLY

- Square nut M8 from mounting kit for holder side guide into receiving groove
- Fix the holder to the side guide and adjust it
- suitable end cap **part no. 22.1180/0**

## SIDE GUIDE 40 F WHITE

Part no. 29.5051/0



### TECHN. DATA / ITEMS SUPPLIED

- Aluminium, E6/EV1
- Sliding profile PE, white
- 2 x slide PA, grey
- Other colours and designs on request, e.g. green, black, grey, black antistatic
- Bar length = 6 m

### APPLICATIONS

- adjustable lateral guidance for MiniTec chain conveyors, belt conveyors and roller conveyors

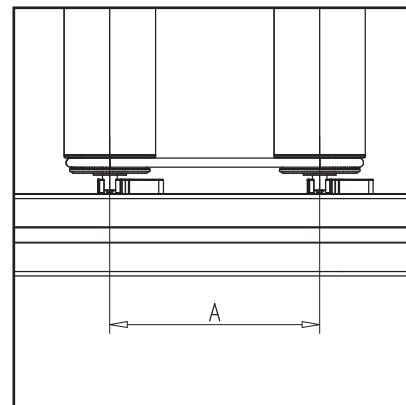
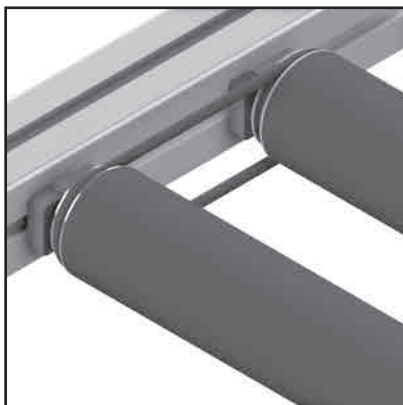
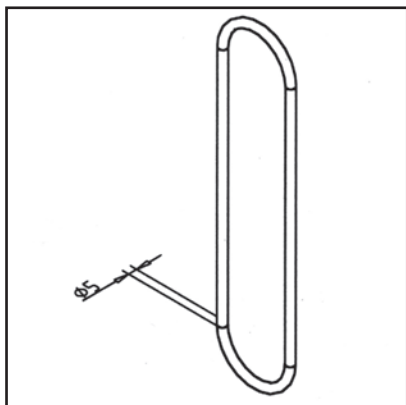
### ASSEMBLY

- Square nut M8 from mounting kit for holder side guide into receiving groove
- Fix the holder to the side guide and adjust it

**DRIVE BELT NBR**

Part no.

--...../-

**TECHN. DATA / ITEMS SUPPLIED**

- NBR, black
- Ø 5 mm
- Available lengths:
  - part no.. 21.1050/1** for A = 66 mm
  - part no.. 21.1050/2** for A = 90 mm
  - part no.. 21.1050/3** for A = 121 mm
  - part no.. 21.1050/4** for A = 149 mm
  - part no.. 21.1050/5** for A = 176 mm
  - part no.. 21.1050/6** for A = 215 mm
  - other lengths and designs on request

**APPLICATIONS**

- Drive the rollers with each other via the groove in the bearing sets. Preferably realize inaccessible places

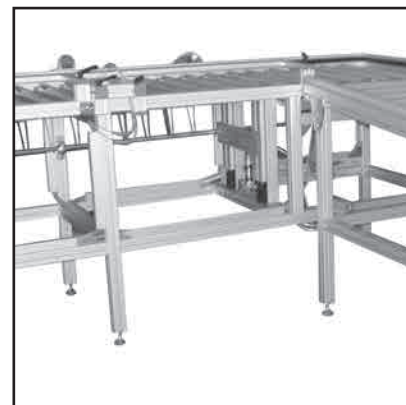
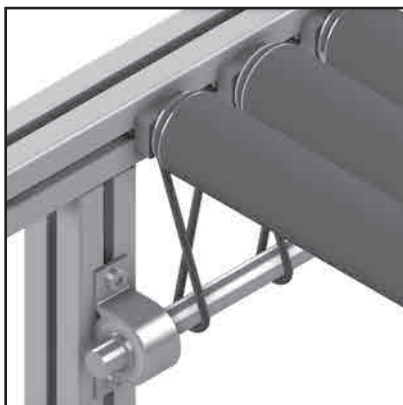
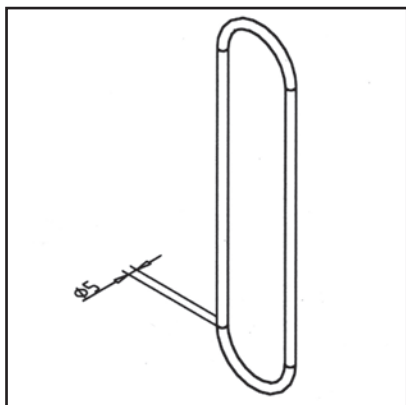
**ASSEMBLY**

- Insert the belt into the groove of the first roller and clip the roller into the bearing set
- Strap the belt over the second roller and, under tension, clip the roller into the bearing set

**DRIVE BELT PU**

Part no.

21.1050/7

**TECHN. DATA / ITEMS SUPPLIED**

- PU, green
- Ø 5 mm
- Endless length 550 mm
- Weight = 0.050 kg/piece

**APPLICATIONS**

- Drive of conveyor rollers via king shaft
- When driving roller pairs, one obtains a center distance A = 207 mm

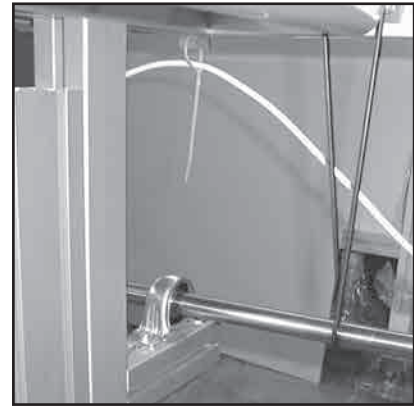
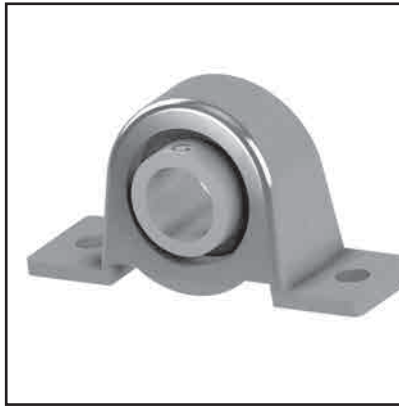
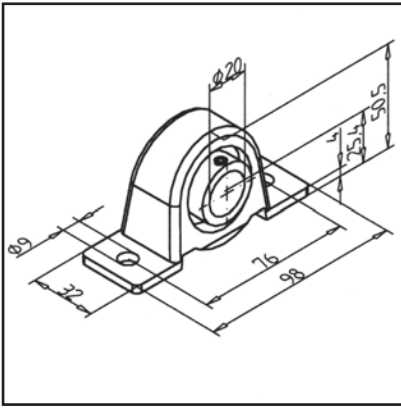
**ASSEMBLY**

- Strip driving belt over driving shaft
- Strap the belt over individual rollers and clip
- Rolls in inaccessible places with drive belt NBR **part no. 21.1050/1** bis **part no. 21.1050/6** connect

## SUPPORT BEARING 20

Part no.

50.0128/0



### TECHN. DATA / ITEMS SUPPLIED

- With fastening material steel, zinc plated
- Pedestal bearing steel, galvanized
- Bore  $\varnothing$  20 mm
- stat. C0 = 6350 N
- dyn. C = 13000 N
- Weight = 0.210 kg/piece

### APPLICATIONS

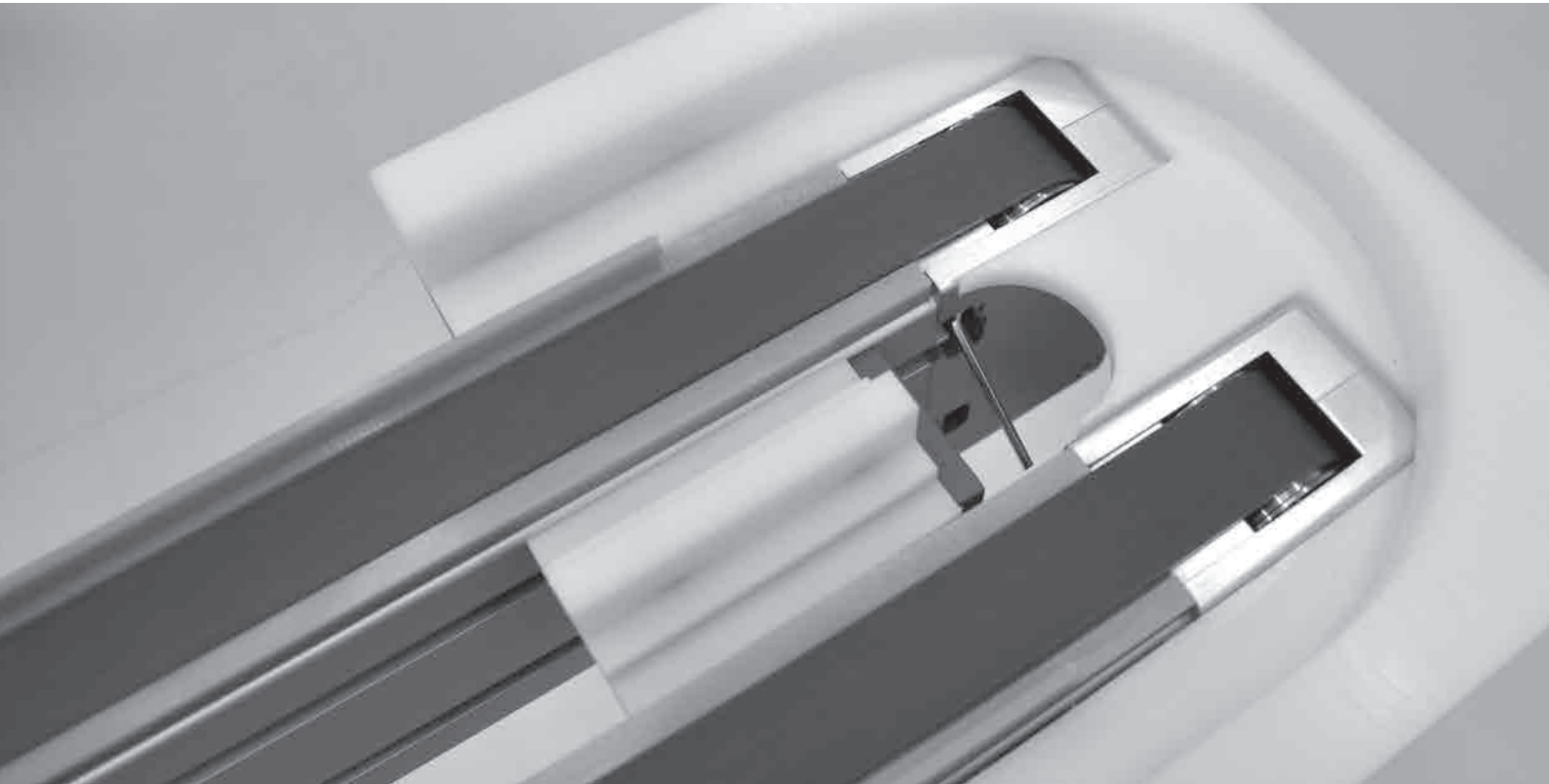
- Production of roller tracks with drive in any length
- Drive of conveyor rollers via king shaft

### ASSEMBLY

- With fastening material included
- Lead shaft trough bearing and secure with set screw

## TRANSFER SYSTEM TSG

MODULAR, ECONOMICAL, ROBUST



Flexibility in production is becoming increasingly important. Quick and easy adaptation to product development or changed market requirements are a decisive factor for success. The TSG transfer system corresponds to this trend. All advantages of our modular system for mechanical engineering and the precision of our linear system are used in this system. TSG is fully compatible with the proven MiniTec profile system with workstations, protective equipment, conveyor systems, handling equipment etc. Manual stations and complex automated processes can be realized economically with the TSG transfer system. It is a particularly economical solution for low unit weights. The TSG

transfer system consists of standardized modules that can be combined as required to form customized systems. Robust timing belts 25 T5 with steel reinforcement ensure continuous operation without re-tensioning. The TSG transfer systems are available as modules for installation by the customer or as ready-to-operate systems, including commissioning. Planning and layout of the plant can also be carried out by us according to customer specifications. For simple requirements, checklists can be used in the appendix of this catalogue.

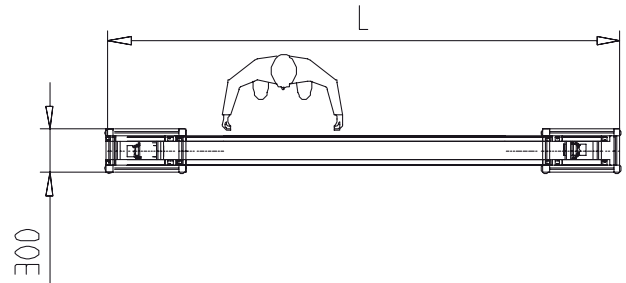
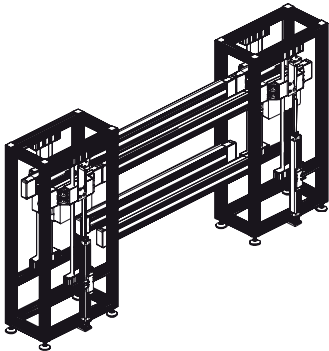
**Technical Data****Travel Speed:** 11 m/min\***Motor Rated Power:** 120 W**Rated voltage (without frequency converter):** 400 V/50 Hz**Rated voltage (with frequency converter):** 230 V/50 Hz  
**Rated current:** 0,29 A**Output speed:** 64 1/min**Output torque:** 13 Nm**Line load:** 1710 N**Ambient temperature:** 0° to 50°C

\*Further travel speeds are available in the range 5.5 to 21 m/min. The maximum line load is 1710 N. At speeds greater than 11 m/min, the maximum line load is reduced.

TRANSFER SYSTEM TSG

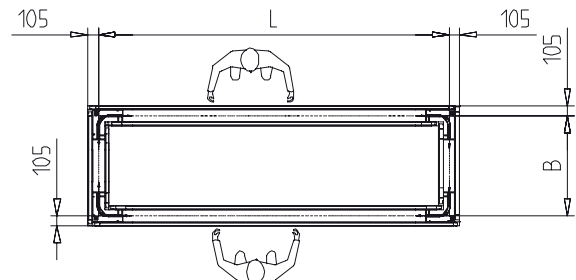
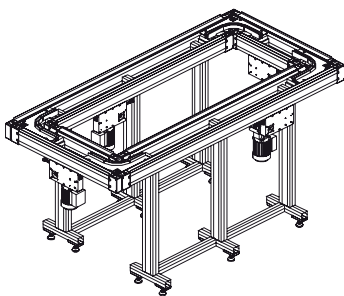
POSSIBLE CONSTRUCTIONS & VERSIONS

Vertical circulation



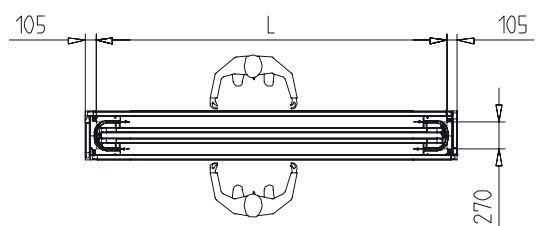
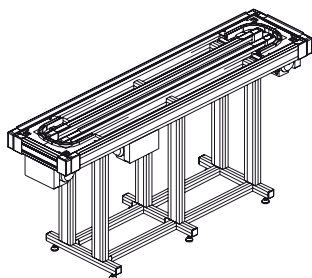
Advantage: low space requirement

Base circulation 90°



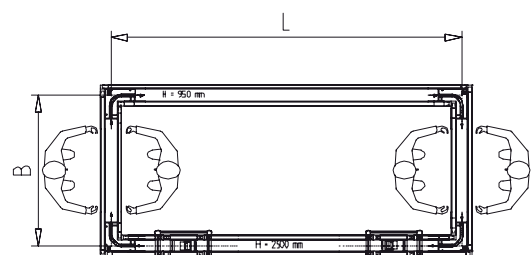
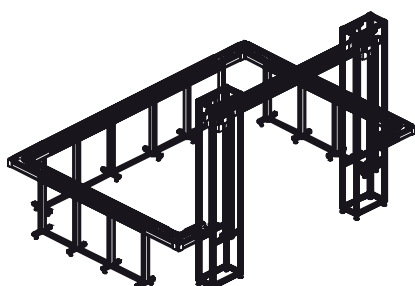
Advantages: low investment, simple installation, minimal control effort

Compact Circulating 180°



Advantage: low space requirement and capital expenditure, simple installation, minimal control effort

U-Circulation with lifting station

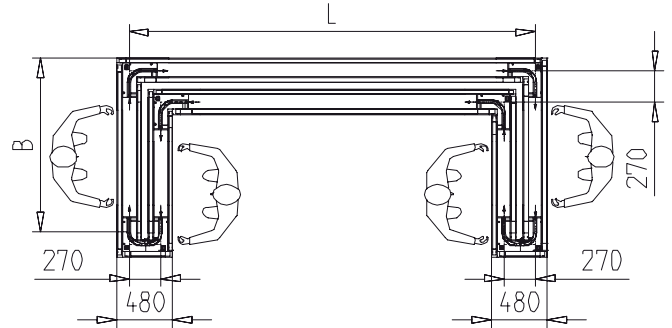
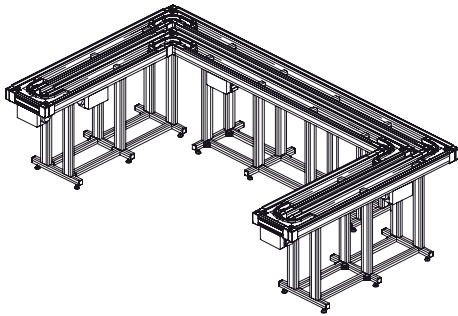


Advantage: great accessibility and optimal land use

TRANSFER SYSTEM TSG

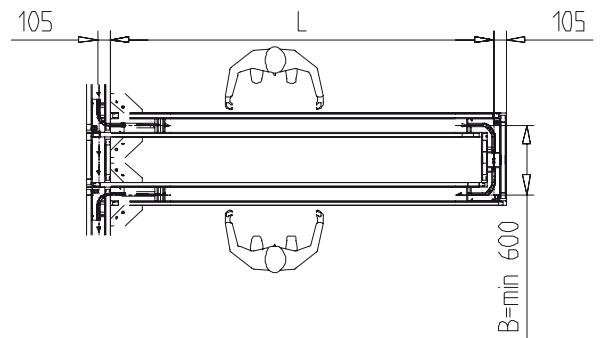
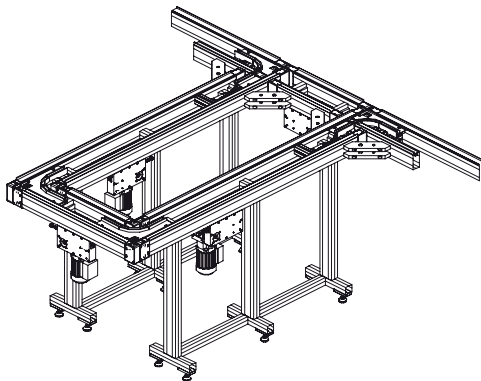
POSSIBLE CONSTRUCTIONS & VERSIONS

Double U-circulation



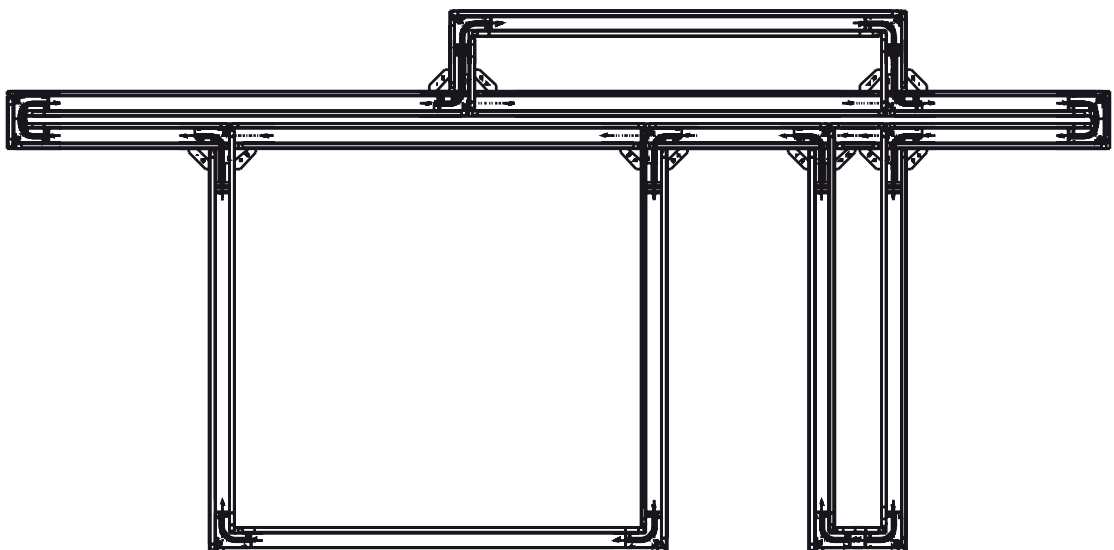
Advantage: optimal use of space, availability of the entire conveyor line

Inquiry Sub-Enclosure



Advantage: Cycle-decoupled production, high conversion and quantity flexibility

Combination of different variants

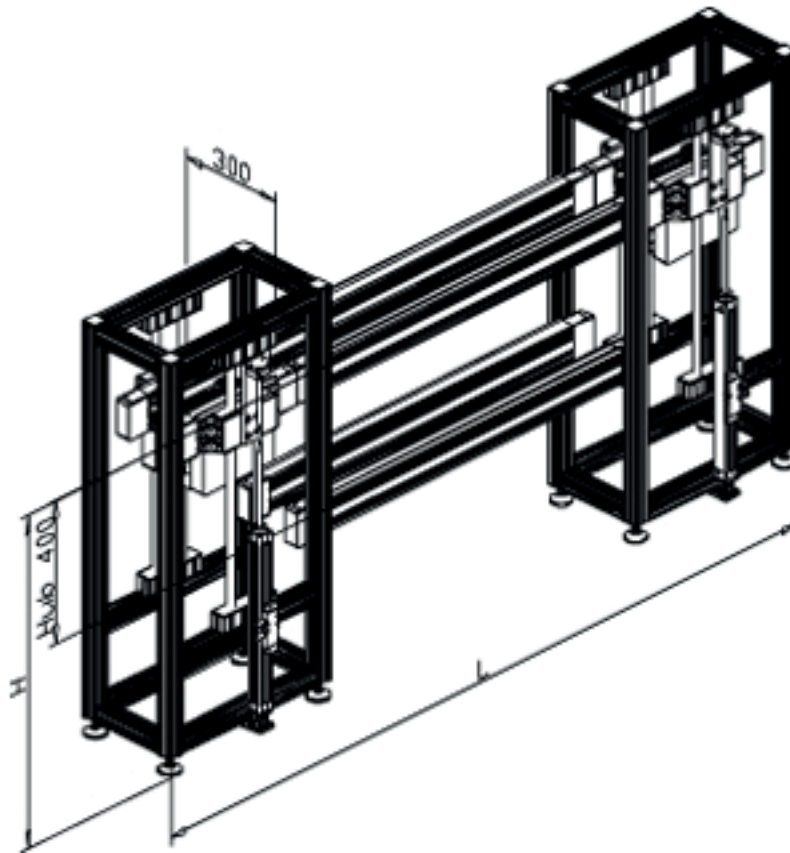


Advantage: optimal use of space, availability of the entire conveyor line



TRANSFER SYSTEM TSG

INQUIRY VERTICAL CIRCUIT TSG 200



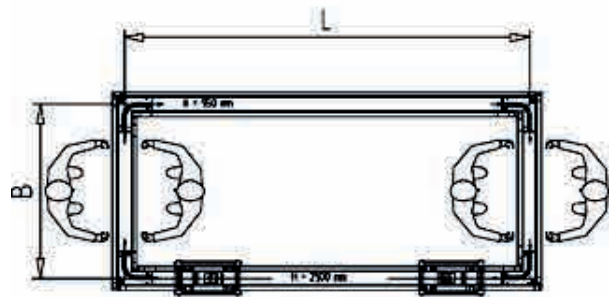
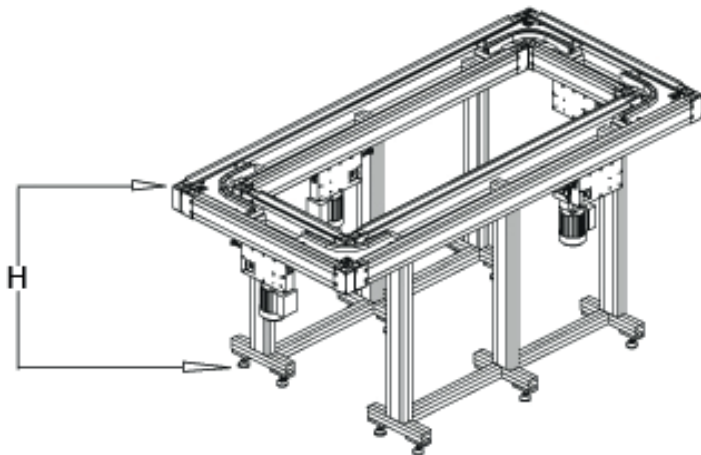
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Working height	<input type="text"/>	mm
Number of stoppers	<input type="text"/>	Pcs.
Number of positioners	<input type="text"/>	Pcs.
Number of lifting stations	<input type="text"/>	
Transport direction	<input type="checkbox"/> right <input type="checkbox"/> left	
Speed	<input type="text"/>	m/min.
Frequency converter	<input type="checkbox"/> yes <input type="checkbox"/> no	
Control	<input type="text"/>	
Number of sensors	<input type="text"/>	Pcs.
Number of workpiece carriers	<input type="text"/>	Pcs.

Contact details

Company	<input type="text"/>	<input type="checkbox"/> Please call me back
Contact	<input type="text"/>	<input type="checkbox"/> I ask for a written offer
Phone number	<input type="text"/>	
Fax number	<input type="text"/>	
E-Mail	<input type="text"/>	

TRANSFER SYSTEM TSG

INQUIRY BASIC CIRCUIT 90° TSG 200



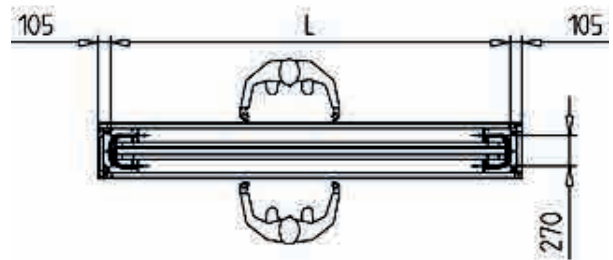
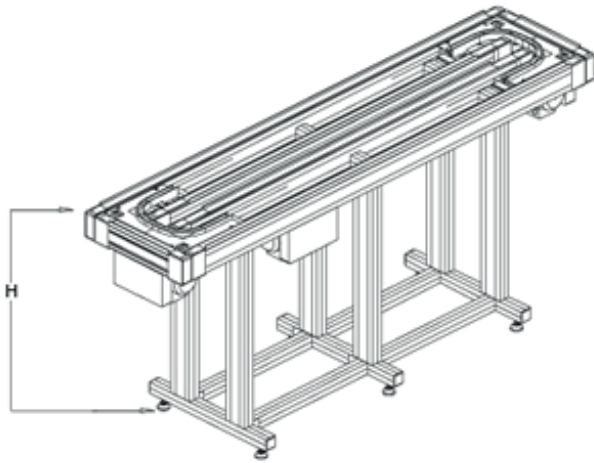
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Working height H (WT upper edge)	<input type="text"/>	mm
Number of stoppers	<input type="text"/>	Pcs.
Number of positioners	<input type="text"/>	Pcs.
Number of lifting stations	<input type="text"/>	
Transport direction	<input type="checkbox"/> right <input type="checkbox"/> left	
Speed	<input type="text"/>	m/min.
Frequency converter	<input type="checkbox"/> yes <input type="checkbox"/> no	
Control	<input type="text"/>	
Number of sensors	<input type="text"/>	Pcs.
Number of workpiece carriers	<input type="text"/>	Pcs.

Contact details

Company	<input type="text"/>	<input type="checkbox"/> Please call me back
Contact	<input type="text"/>	<input type="checkbox"/> I ask for a written offer
Phone number	<input type="text"/>	
Fax number	<input type="text"/>	
E-Mail	<input type="text"/>	

TRANSFER SYSTEM TSG

INQUIRY COMPACT CIRCUIT 180° TSG 200



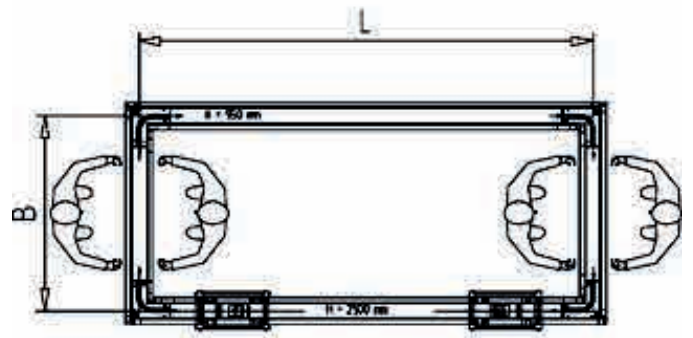
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Number of stoppers	<input type="text"/>	Pcs.
Number of positioners	<input type="text"/>	Pcs.
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Transport direction	<input type="checkbox"/> right <input type="checkbox"/> left	
Speed	<input type="text"/>	m/min.
Frequency converter	<input type="checkbox"/> yes <input type="checkbox"/> no	
Control	<input type="text"/>	
Number of sensors	<input type="text"/>	Pcs.
Number of workpiece carriers	<input type="text"/>	Pcs.

Contact details

Company	<input type="text"/>	<input type="checkbox"/> Please call me back
Contact	<input type="text"/>	<input type="checkbox"/> I ask for a written offer
Phone number	<input type="text"/>	
Fax number	<input type="text"/>	
E-Mail	<input type="text"/>	

TRANSFER SYSTEM TSG

INQUIRY U-CIRCUIT WITH LIFTING STATION TSG 200



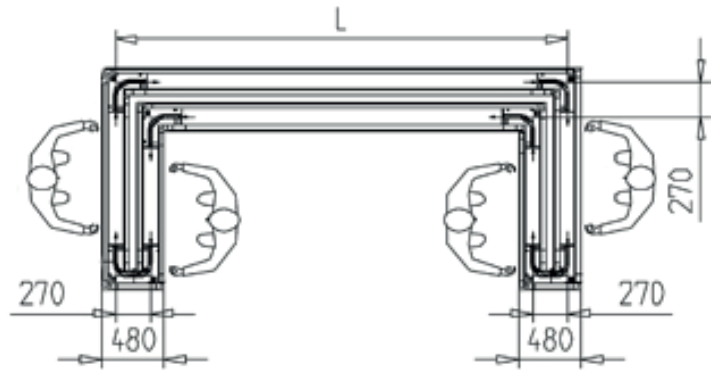
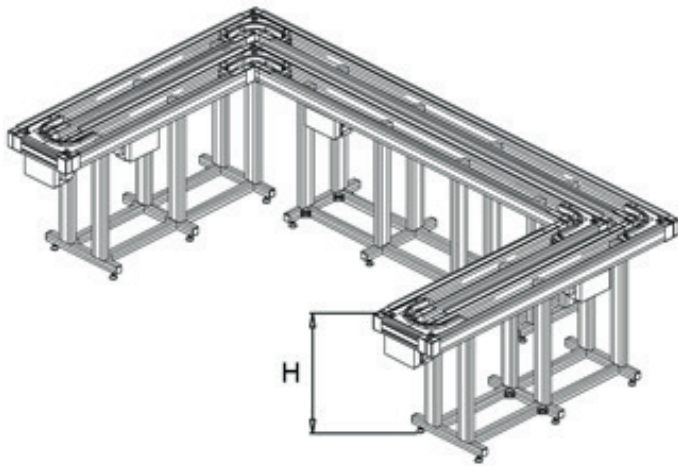
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Working height H (WT upper edge)	<input type="text"/>	mm
Number of stoppers	<input type="text"/>	Pcs.
Number of positioners	<input type="text"/>	Pcs.
Number of lifting stations	<input type="text"/>	
Transport direction	<input type="checkbox"/> right <input type="checkbox"/> left	
Speed	<input type="text"/>	m/min.
Frequency converter	<input type="checkbox"/> yes <input type="checkbox"/> no	
Control	<input type="text"/>	
Number of sensors	<input type="text"/>	Pcs.
Number of workpiece carriers	<input type="text"/>	Pcs.

Contact details

Company	<input type="text"/>	<input type="checkbox"/> Please call me back
Contact	<input type="text"/>	<input type="checkbox"/> I ask for a written offer
Phone number	<input type="text"/>	
Fax number	<input type="text"/>	
E-Mail	<input type="text"/>	

TRANSFER SYSTEM TSG

INQUIRY DOUBLE-U CIRCUIT TSG 200



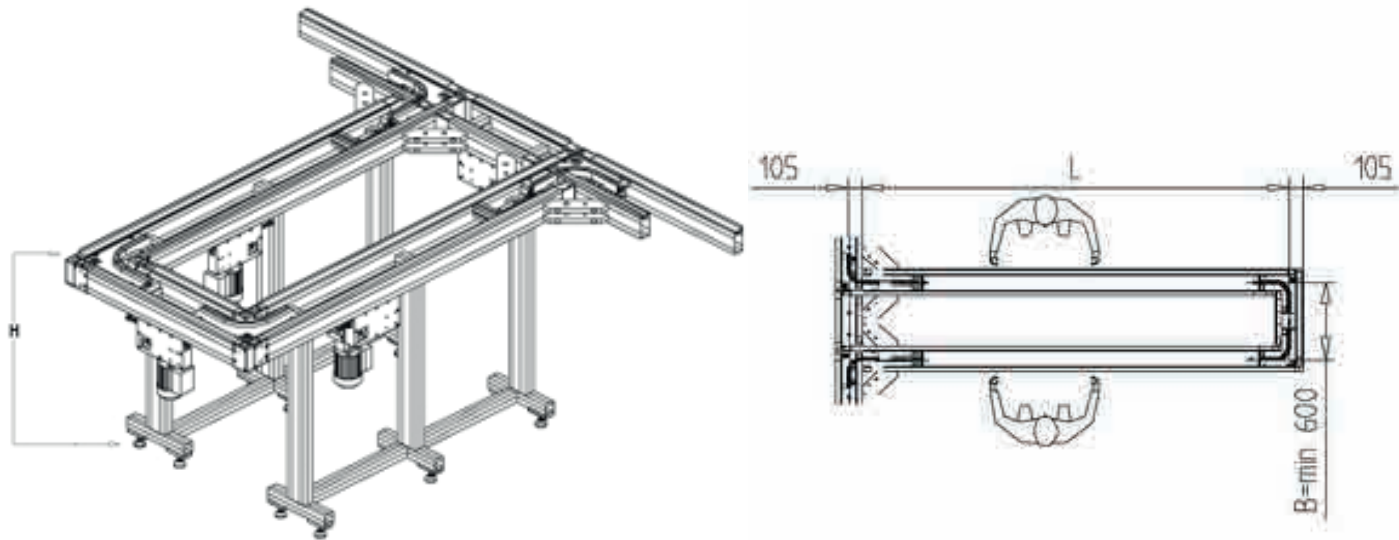
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Number of stoppers	<input type="text"/>	Pcs.
Number of positioners	<input type="text"/>	Pcs.
Number of lifting stations	<input type="text"/>	
Transport direction	<input type="checkbox"/> right <input type="checkbox"/> left	
Speed	<input type="text"/>	m/min.
Frequency converter	<input type="checkbox"/> yes <input type="checkbox"/> no	
Control	<input type="text"/>	
Number of sensors	<input type="text"/>	Pcs.
Number of workpiece carriers	<input type="text"/>	Pcs.

Contact details

Company	<input type="text"/>	<input type="checkbox"/> Please call me back
Contact	<input type="text"/>	<input type="checkbox"/> I ask for a written offer
Phone number	<input type="text"/>	
Fax number	<input type="text"/>	
E-Mail	<input type="text"/>	

TRANSFER SYSTEM TSG

INQUIRY SUB-ENCLOSURE TSG 200



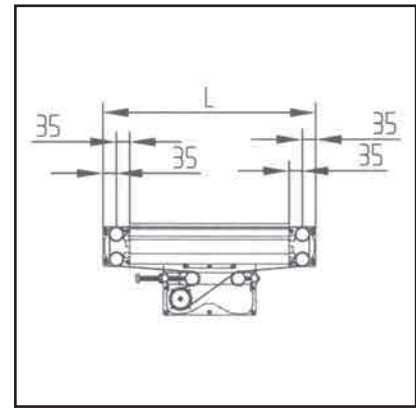
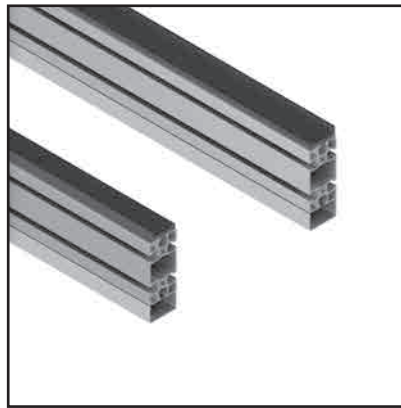
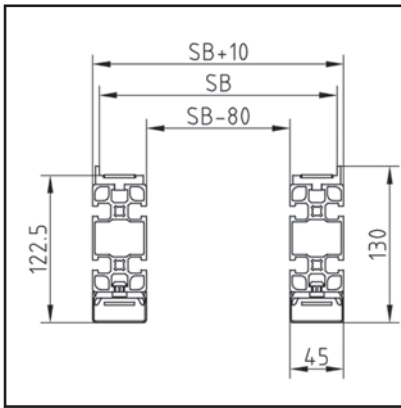
Measure L	<input type="text"/>	mm
Working height H (WT upper edge)	<input type="text"/>	mm
Number of stoppers	<input type="text"/>	Pcs.
Number of positioners	<input type="text"/>	Pcs.
Number of lifting stations	<input type="text"/>	
Transport direction	<input type="checkbox"/> right <input type="checkbox"/> left	
Speed	<input type="text"/>	m/min.
Frequency converter	<input type="checkbox"/> yes <input type="checkbox"/> no	
Control	<input type="text"/>	
Number of sensors	<input type="text"/>	Pcs.
Number of workpiece carriers	<input type="text"/>	Pcs.

Contact details

Company	<input type="text"/>	<input type="checkbox"/> Please call me back
Contact	<input type="text"/>	<input type="checkbox"/> I ask for a written offer
Phone number	<input type="text"/>	
Fax number	<input type="text"/>	
E-Mail	<input type="text"/>	

## BASIC TRACK

Part no. 43.0020/0



### TECHN. DATA / ITEMS SUPPLIED

- $I_x = 112.823 \text{ cm}^4$
- $I_y = 28.526 \text{ cm}^4$
- Profile 45 x 90F, anodized, E6/EV1
- Sliding strip made of PE, black, extremely abrasion resistant, L max: 2 m
- Cover profile for belt return with clip fastening
- Timing belt for drive
- Spreading width (SB): universal
- Route length = L-140 mm
- Track length min. 270 mm
- Track length min. 4000 mm

### APPLICATIONS

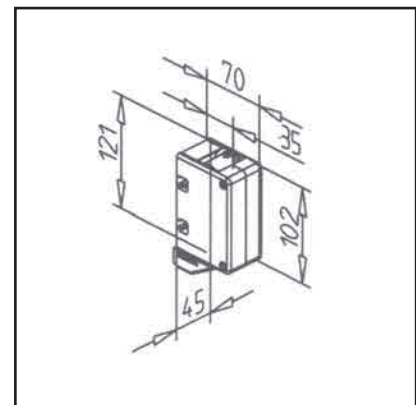
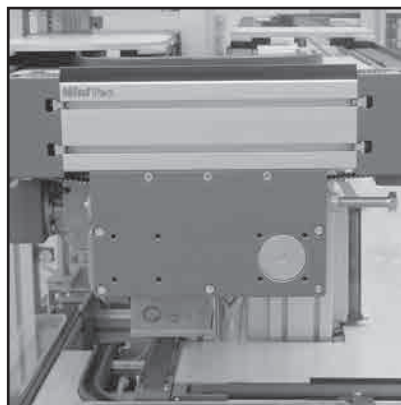
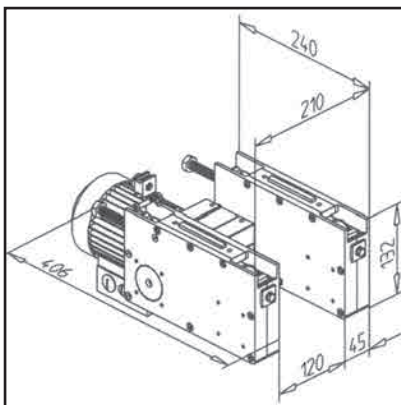
- Implementation in all TSG transfer systems
- Max. track load depending on drive concept (see table Technical data)
- When exceeding the total load per section, please divide into several sections
- Timing belt length calculation formula:  
Length of timing belt =  $(L - 70) \times 2 + 473 \text{ mm}$   
round up to 5 mm pitch

### ASSEMBLY

- Screw the basic distance with supports
- After attachment of drive unit, diversions and timing belts, clip cover profile onto underside of profile
- Free profile grooves for attaching stoppers, sensors, switches, ect. With standard screws

## BASIC MODULE 200

Part no. 43.0010/0



### TECHN. DATA / ITEMS SUPPLIED

- Drive unit with integrated belt tensioners comprising 2 belt drives with connecting shaft and 1 motor
- 4 timing belt reverse units for 25 T5 timing belt
- Track width: 200 mm

### APPLICATIONS

- All TSG transfer systems with 25 T5 timing belt

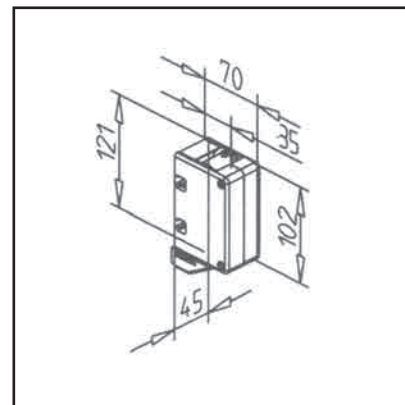
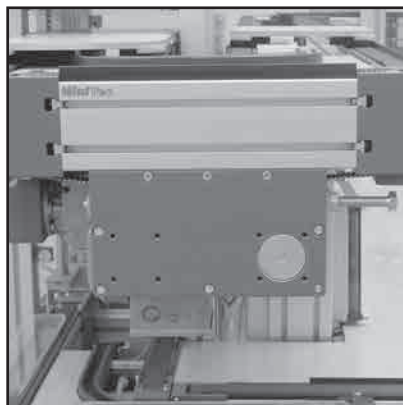
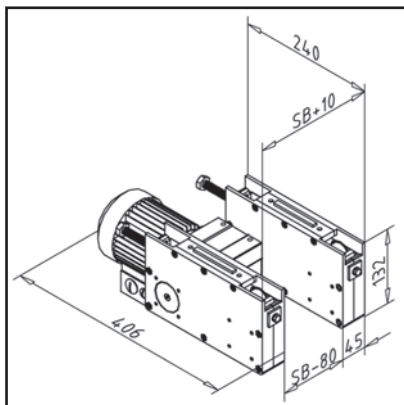
### ASSEMBLY

- Remove drive unit cover
- Screw drive unit securely with attachment set centrally on the bottom of the basic line
- Remove covers from reverse units
- Fasten reverse units with profile connectors at the ends of the base section
- Insert timing belt
- Install cover of drive units and reverse units
- Tighten the timing belt
- Easy re-tightening of timing belt at drive unit, without prior disassembly, also during operation

**BASIC MODULE VARIABLE**

Part no.

43.0011/0

**TECHN. DATA / ITEMS SUPPLIED**

- Drive unit with integrated belt tensioners comprising 2 belt drives with connecting shaft and 1 motor
- 4 timing belt reverse units for 25 T5 timing belt
- **Please specify the desired track width**

**APPLICATIONS**

- Transfer systems with deviant track width
- Width according to dimension L of basic line

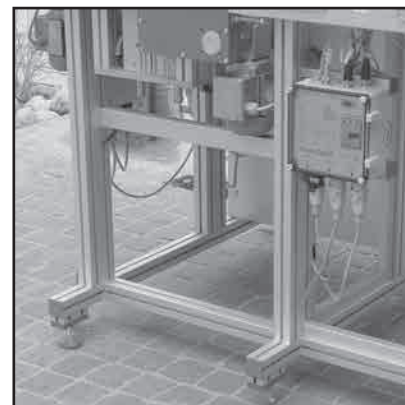
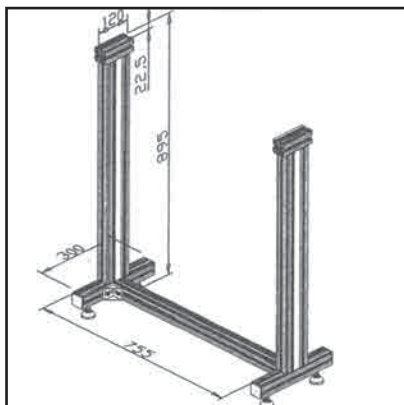
**ASSEMBLY**

- Remove drive unit cover
- Screw drive unit securely with attachment set centrally on the bottom of the basic line
- Remove covers from reverse units
- Fasten reverse units with profile connectors at the ends of the base section
- Insert timing belt
- Install cover of drive units and reverse units
- Tighten the timing belt
- Easy re-tightening of timing belt at drive unit, without prior disassembly, also during operation
- Base frames, corner transfer and workpiece carrier upon request

**BASE FRAME 200**

Part no.

43.0030/0

**TECHN. DATA / ITEMS SUPPLIED**

- Aluminium, anodized E6/EV1
- Profile 45 x 45 F, completely assembled
- with fastening material for connecting to the base section
- 4 height adjustable feet
- Create longer lines with additional add-on supports
- Height 895 mm for standard working height of 950 mm
- Length 755 mm for line length of 1000 mm

**APPLICATIONS**

- Subframe for transfer system with standard work height of 950 mm
- Suitable for track width 200

**ASSEMBLY**

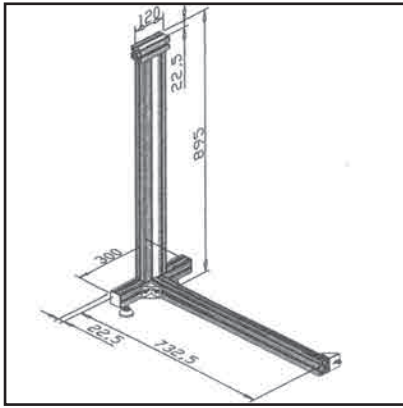
- Install transverse profiles with mounting brackets on the lower profile groove between the base section.
- Secure to floor with angles and floor anchors



## EXPANDED BASE FRAME 200

Part no.

43.0040/0



### TECHN. DATA / ITEMS SUPPLIED

- Aluminium, anodized E6/EV1
- Profile 45 x 45 F, completely assembled
- with fixation material for the connection with the base track and base support
- 2 adjustable feet
- Height 895 mm for standard working height of 950 mm

### APPLICATIONS

- Substructure for transfer systems with standard working height of 950 mm
- Suitable for track width 200

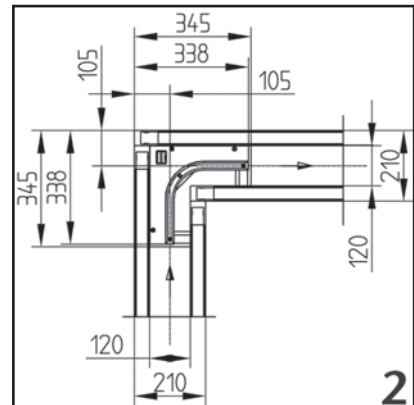
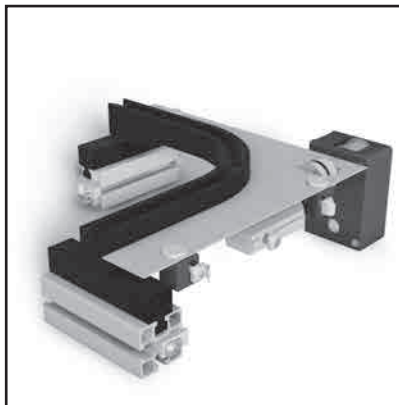
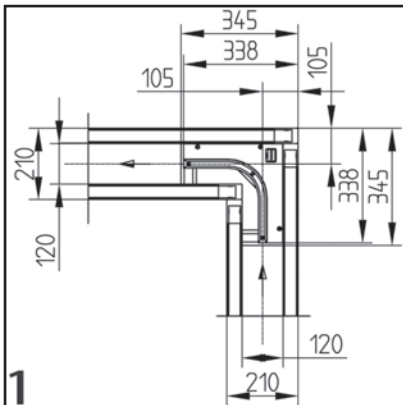
### ASSEMBLY

- Create lengthwise connection with base support
- Install transverse profile L = 120 mm with mounting angles on the lower profile groove between the base section
- Secure to floor with angles and floor anchors

## CURVE 90° RIGHT / LEFT

Part no.

43.0050/0



### TECHN. DATA / ITEMS SUPPLIED

- 1 Traverse
- Friction wheel with drive roller
- Curved guide made of PE
- Cover AL
- Fastening material

### APPLICATIONS

- No separation before curve required
- Production of compact transfer systems, auxiliary connections or combined system concepts
- Suitable for track width 200

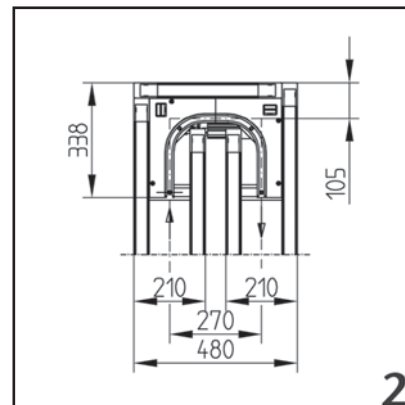
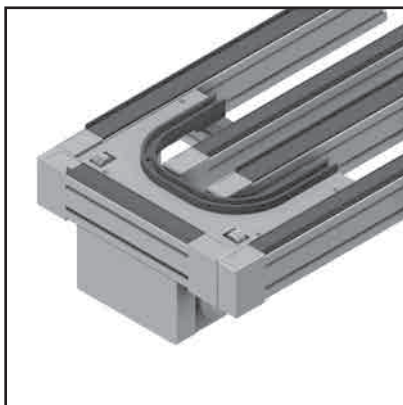
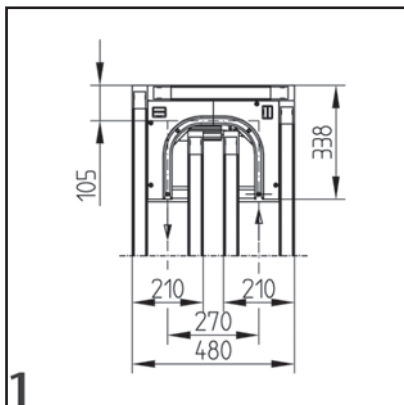
### ASSEMBLY

- Place the friction wheel on the reverse unit (on the inlet side in the conveying direction)
- Assemble corners with curvilinear guide
- Screw on cover
- Through appropriate assembly design 1, alternative design 2 can be produced

**CURVE 200 - 180° RIGHT**

Part no.

43.0060/0

**TECHN. DATA / ITEMS SUPPLIED**

- 1 transverse section with drive module, motor mounted
- Beams with curve guidance made of PE
- 2-part cover
- Friction wheel with drive roller
- Fastening material
- Weight = 13.860 kg/piece

**APPLICATIONS**

- No separation before curve required
- Production of compact transfer systems, auxiliary connections or combined system concepts
- Suitable for track width 200

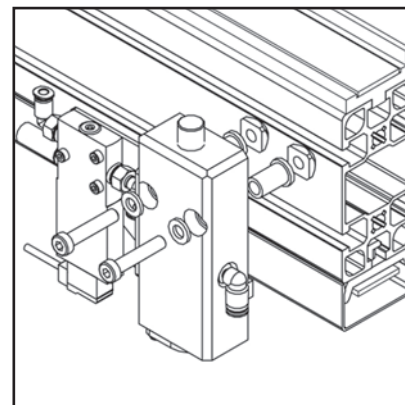
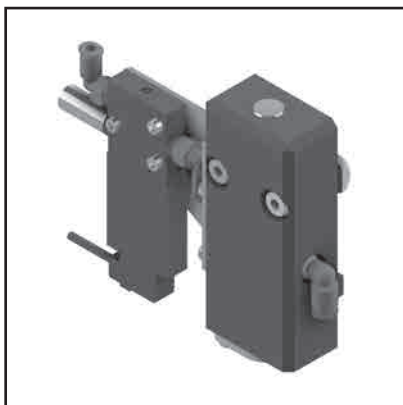
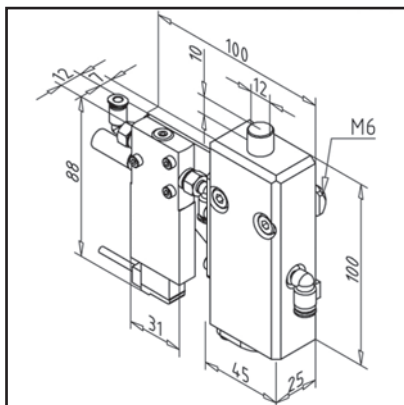
**ASSEMBLY**

- Place the friction wheel on the reverse unit (on the inlet side in the conveying direction)
- Assemble corners with curvilinear guide
- Install transverse transport with assembled drive module
- Screw on cover
- Through appropriate assembly design 1, alternative design 2 can be produced

**STOPPER**

Part no.

43.1510/0

**TECHN. DATA / ITEMS SUPPLIED**

- Pneumatically actuated
- Housing PE, black
- Fixing pins  $\varnothing$  12 mm made of stainless steel, hardened
- Prepared for connection to internal air supply
- Cylinder and valves integrated
- Fastening kit
- Weight = 0.482 kg/piece

**APPLICATIONS**

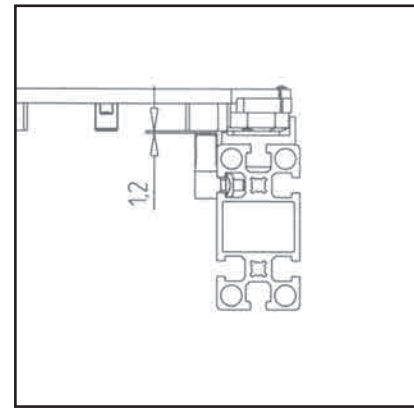
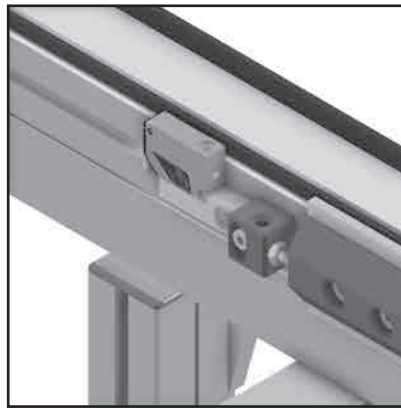
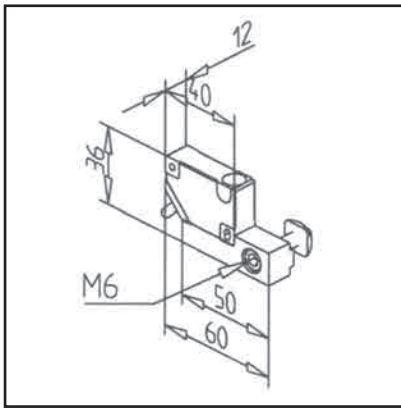
- Separation of workpiece trays before infeed and discharge, lift or lift stations
- Control of priorities in WT flow

**ASSEMBLY**

- Tighten on the inner side of the conveyor line at the top profile groove
- Make connection to air supply
- Position can be adjusted horizontally
- Separation of tray's by combination of 2 stoppers

## PROXIMITY SWITCH

Part no. 43.0090/0



### TECHN. DATA / ITEMS SUPPLIED

- Inductive proximity switch PNP type "NO contact"
- Operating distance 4 mm
- Cubic, plastic PBTp
- Operating voltage (V) Oct 36 DC
- Continuous current load 250 mA
- Protection type IP 67
- Fastening kit
- Weight = 0.047 kg/piece

### APPLICATIONS

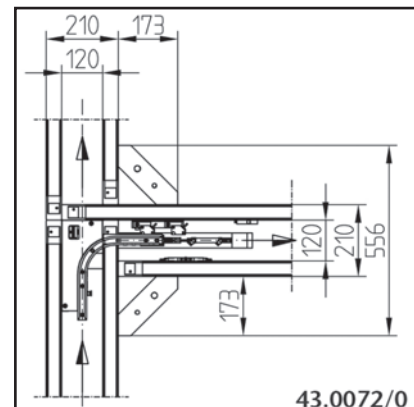
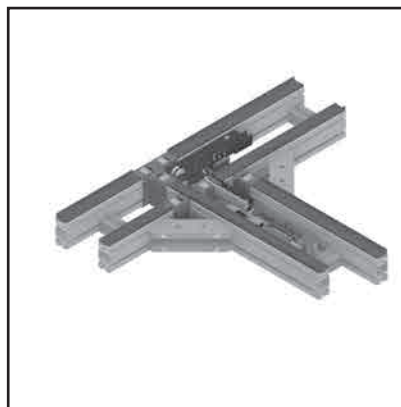
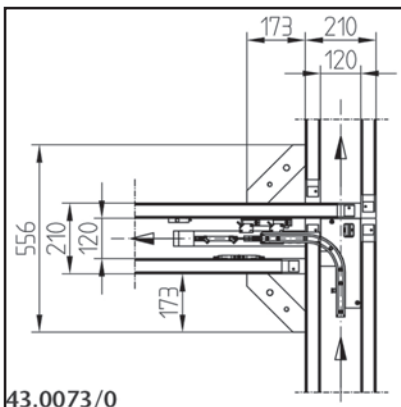
- Switching operations
- Control of system in front of locks, lifting stations and stoppers

### ASSEMBLY

- Tighten on the inner side of the conveyor line at the top profile groove
- Position can be adjusted horizontally

## OUTWARD TRANSFER 200

Part no. 43.0073/0



43.0073/0

43.0072/0

### TECHN. DATA / ITEMS SUPPLIED

- Pneumatically actuated
- Carrier profile 45 x 90
- WT-guide 2 parts, PE
- Cover PE
- Friction wheel with drive roller
- 2 Pneumatic cylinders
- 4 beams
- Fastening material

### APPLICATIONS

- Deflect WT's from secondary sections into the base circuit
- Separation of work procedures from machine cycle
- Inserting further processing stations
- Forming storage units
- With active outward transfer, the WT is swung out at 90° from the track in transverse transport. The orientation of the WT is not changed.
- If the chute is inactive, the WT remains in the basic circuit
- Status query of the chute via the sensor
- Suitable for track width 200

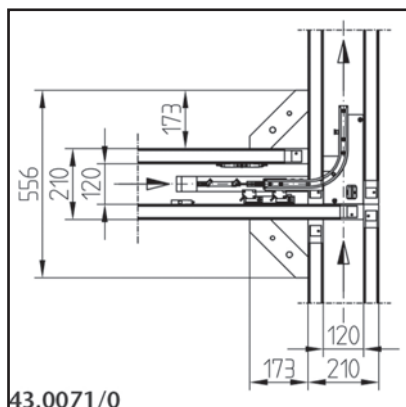
### ASSEMBLY

- Outflow on the left **part no. 43.0073/0**
- Outflow on the right **part no. 43.0072/0**
- Mount friction wheel on pulley (in conveyor direction, at the longer conveyor side)
- Install pneumatic cylinder
- Install the guide curve
- Screw on cover
- Connect and align the transverse transport with beams
- Connect pneumatic cylinder to compressed air supply

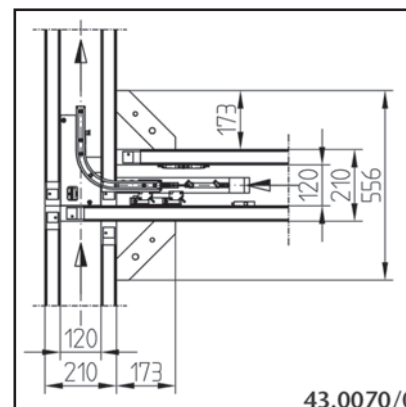
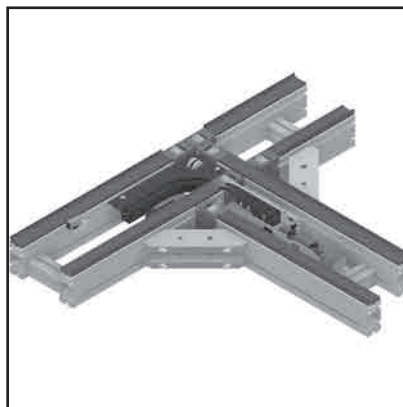
**INWARD TRANSFER 200**

Part no.

43.0071/0



43.0071/0



43.0070/0

**TECHN. DATA / ITEMS SUPPLIED**

- Pneumatically actuated
- Carrier profile 45 x 90
- WT-guide 2 parts, PE
- Cover PE
- Friction wheel with drive roller
- 2 Pneumatic cylinders
- 4 beams
- Fastening material

**APPLICATIONS**

- Return WT's from secondary sections into the base circuit
- Separation of work procedures from machine cycle
- Inserting further processing stations
- Forming storage units
- When the inlet is active, the WT is deflected from the secondary section into the base circuit
- The orientation of the WT is not changed. Status request of transfer with sensor
- Suitable for track width 200

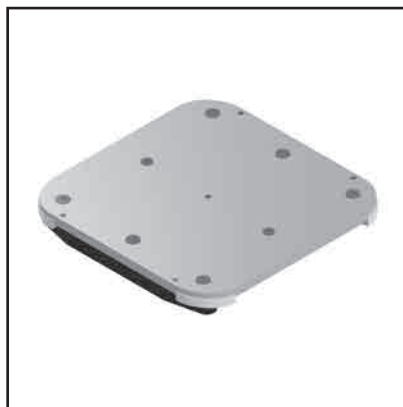
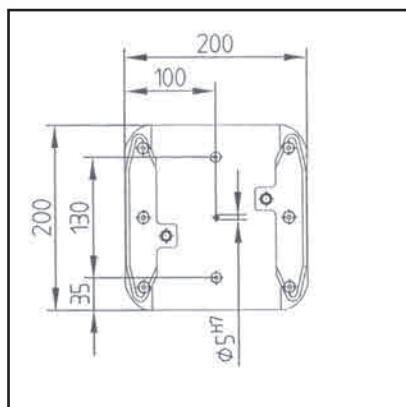
**ASSEMBLY**

- Inward transfer right **part no. 43.0071/0**
- Inward transfer left **part no. 43.0070/0**
- Mount friction wheel on pulley (in conveyor direction, at the longer conveyor side)
- Install pneumatic cylinder
- Install the guide curve
- Screw on cover
- Connect and align the transverse transport with beams
- Connect pneumatic cylinder to compressed air supply

**WORKPIECE TRAY 200**

Part no.

43.1000/0

**TECHN. DATA / ITEMS SUPPLIED**

- Carrier plate Al, progressed on all sides and anodized with centering hole 5H7
- 4 positioning pins, st
- Sliding shoe made of extremely abrasion-resistant PE, with integrated stop for brake
- 2 damping pins, St, for proximity switches
- dimensions 200 x 200 mm
- Max. load capacity: 100 N
- Weight = 1.152 kg/piece

**APPLICATIONS**

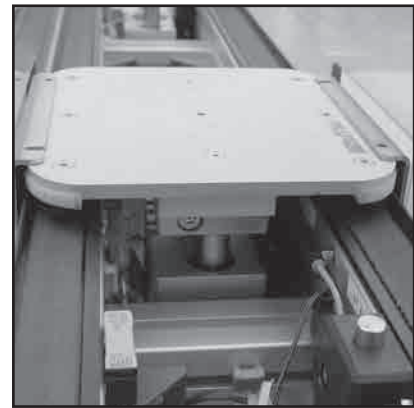
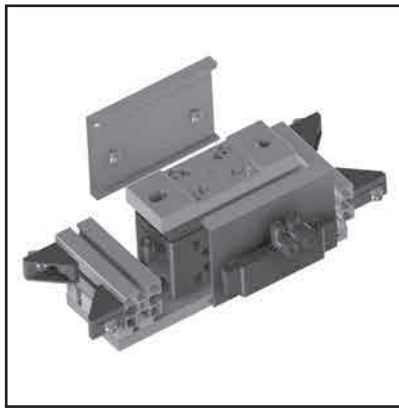
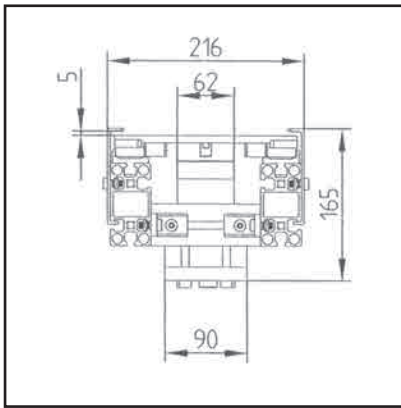
- Recording of workpieces, devices, identification and data storage systems

**ASSEMBLY**

- Standard-WTs are delivered without holder holes
- Mounting holes for workpieces, devices or identification systems are manufactured according to customer specifications

## POSITIONER

Part no. 43.0110/0



### TECHN. DATA / ITEMS SUPPLIED

- Ready-to-install module with double-acting pneumatic cylinder and valve
- WT mount
- 2 override strips, galvanized steel
- Max. load capacity: 100 Kg
- Positioning accuracy:  $\pm 0,03$  mm
- Lifting height over conveyor 5 mm
- Weight = 7.693 kg/piece

### APPLICATIONS

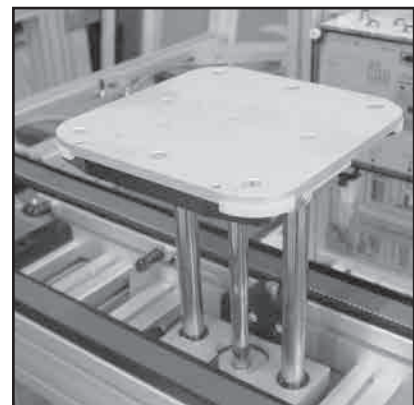
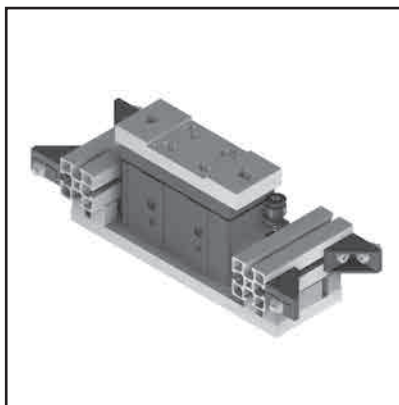
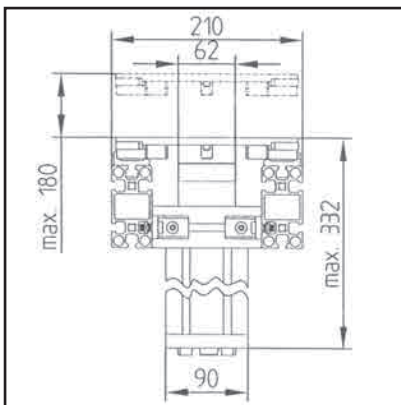
- Exact positioning of workpieces on the work-piece tray for processing or inspection

### ASSEMBLY

- Fasten lifting unit to profile section with supplied hardware
- Screw the override strips on the outside of the track, align exactly with the positioner
- Make connection to internal compressed air supply
- Suitable stopper **part no. 43.1510/0** and proximity switch **part no. 43.0090/0**

## LIFT STATION 200

Part no. 43.0100/0



### TECHN. DATA / ITEMS SUPPLIED

- Ready-to-install module with double-acting pneumatic cylinder and valve
- WT mount
- Lift height: Can be set from 5 mm to 180 mm above belt
- Weight = 6.900 kg/piece

### APPLICATIONS

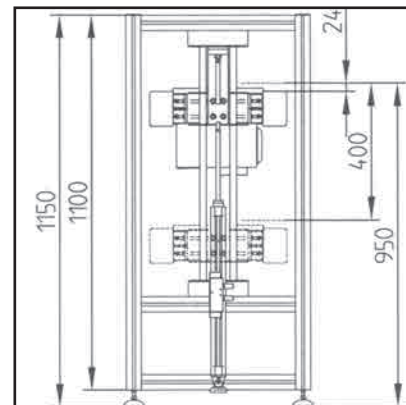
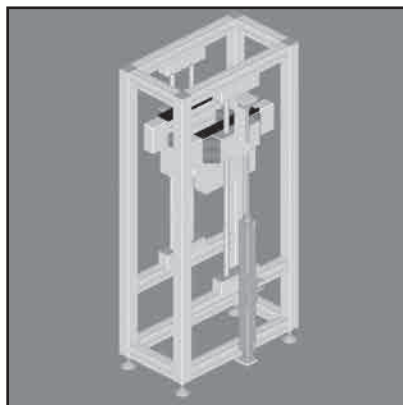
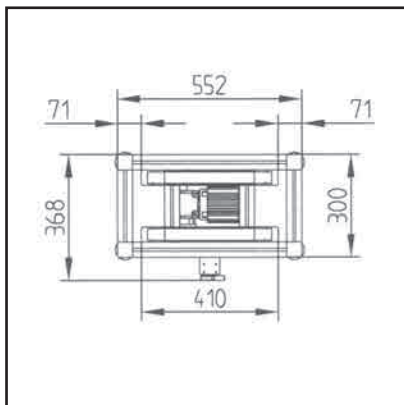
- Exact positioning of workpieces on the work-piece tray for processing or inspection

### ASSEMBLY

- Fasten lifting station to profile section with supplied hardware
- Make connection to internal compressed air supply
- Suitable stopper **part no. 43.1510/0** and proximity switch **part no. 43.0090/0**

## LIFT STATION

Part no. 43.0080/0



### TECHN. DATA / ITEMS SUPPLIED

- Aluminium
- Ready assembled module according to customer specification
- Frame structure from construction profiles 45 x 45
- installed on lifting carriages, driven double-track line
- Lift carriage with dual-functioning pneumatic cylinder
- sturdy guidance of the lifting carriage with precision shafts  $\varnothing 20$  mm and linear units LB series
- Lift height variable according to customer specification
- Max. load capacity: 480 N

### APPLICATIONS

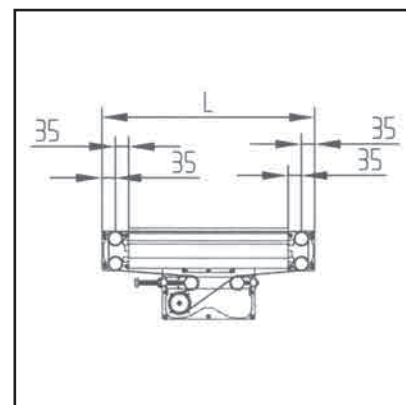
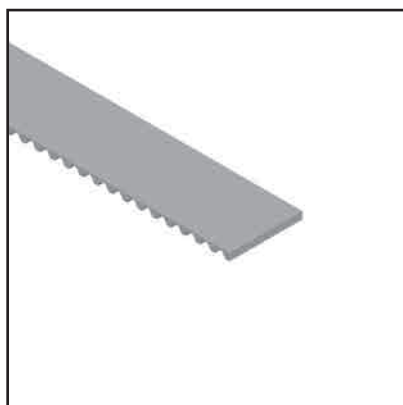
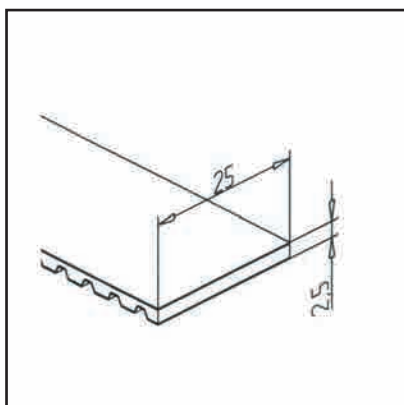
- Production of conveyor rollers in any length for roller tracks with or without drive

### ASSEMBLY

- Align lift station with transport levels

## TIMING BELT

Part no. 43.1411/0



### TECHN. DATA / ITEMS SUPPLIED

- Endless belts, reinforced with steel inlay
- Covered with plastic fabric on both sides to improve sliding characteristics and reduce friction
- Colour: green
- **When ordering spare parts, specify total length**
- Weight = 0.055 kg/m

### APPLICATIONS

- All transfer systems TSG
- Timing belt length calculation formula:  
Length of timing belt =  $(L - 70) \times 2 + 473$  mm  
round up to 5 mm pitch

### ASSEMBLY

- Remove belt cover (clip lock)
- Remove cover of drive unit and timing belt reverse units
- Insert belt
- Mount cover and belt cover
- Tighten the timing belt

## SEGMENTED CHAIN CONVEYOR GKF

## FROM ICE COLD TO HOT

The segmented chain conveyor GKF has already proven its reliability in numerous applications. Due to the different requirements, the series has been expanded to include field-tested components. At the same time, the highest level of energy efficiency and utmost flexibility were accorded great importance by our proven modular design.

Like all MiniTec constructions, the GKF series is based on the proven MiniTec profile system. The new route profile was constructed according to the same principles, so that the modular system was fully retained. All components are suitable for extensions, attachments or any necessary protective devices. The new conveyor system can be perfectly combined with the proven solutions of MiniTec in the areas of material handling, image processing, labeling, workplace design.

The link chain made of plastic or corrosion-resistant stainless steel allows straightforward and curved horizontal and vertical movements.

The flexible routing allows space-saving constructions, whereby vertical curve guidance or lifting devices allow the use in several levels.

**Application examples segmented chain conveyor GKF**

Transport in test facilities. Combination of individual and re-packaging systems, labeling, shipping logistics, connection of workstations, assembly lines

**Car parts**

Filters, gears, fuel pumps, ball bearings, castings, lamps

**Cosmetics + Pharma**

Pharmaceutical packs, gauze bandages, paper rolls, spray cans, body care products, shampoo, toothpaste and toothbrushes, dental instruments.

**Foods**

Trays with fruit, beverage cans, food cans, packaged textiles, coffee cans, coffee packs, plastic bottles, yogurt, animal feed

**Electronics**

Electronics components, audio and video equipment, equipment, batteries, mobile phones, computer parts,

**Note**

Not suitable for bulk material!

**System selection 90 to 314 mm**

The systems are available with 8 different plastic chains made of modified acetal and 3 stainless steel versions 1.4016.

Chain pins on all chains made of stainless steel 1.4305

Chain pitch uniform: 38,1 mm,

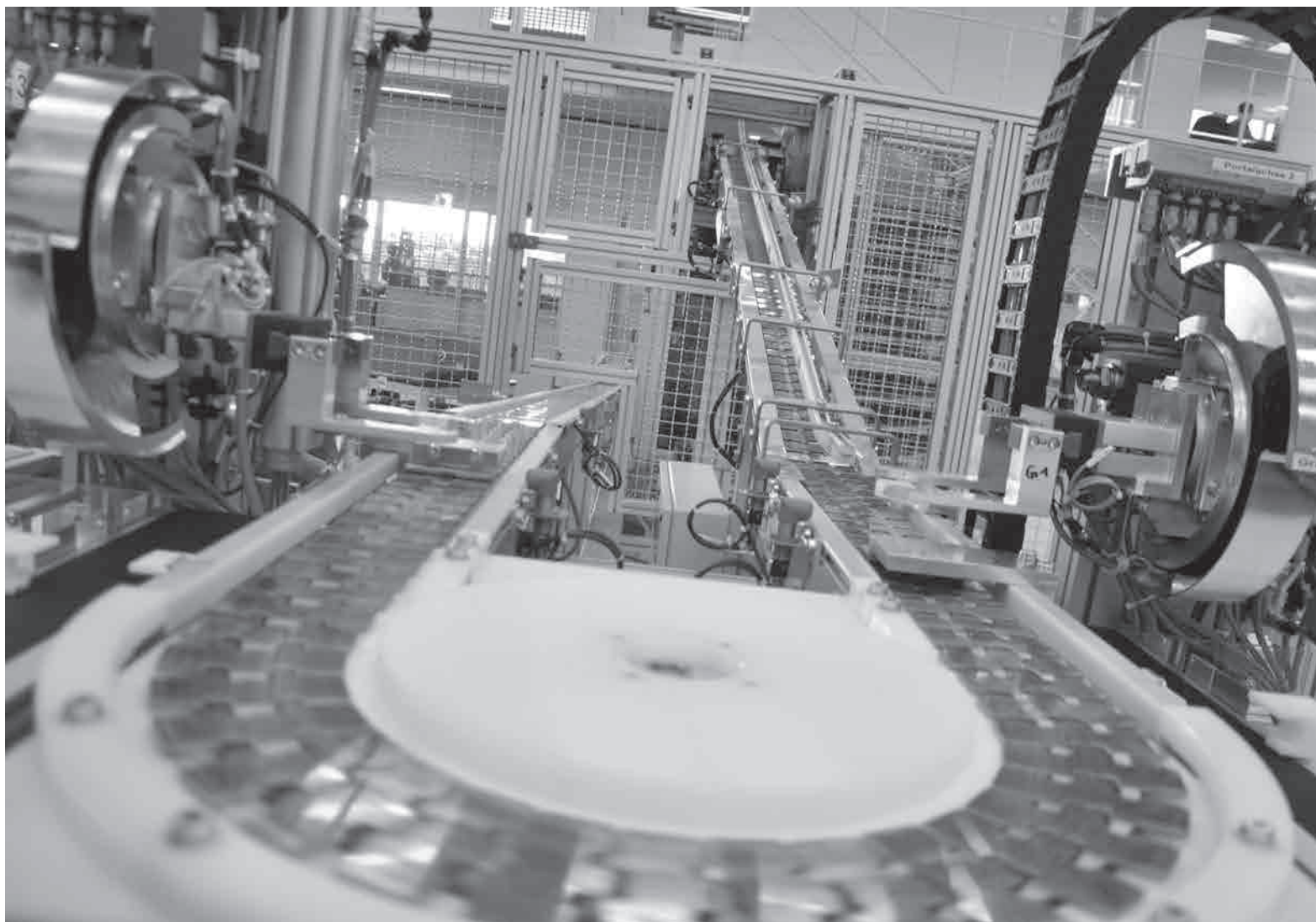
The almost gap-free surface also allows the transport of small components!

- Product width 0-428 mm
- Maximum conveyed weight during horizontal transport 10 kg/m
- Maximum transported goods weight for vertical transport 2 kg/m
- Maximum load on the conveyor 150 kg
- Max. straight line of the conveyor line 40 m

**HOLISTIC SOLUTIONS**

The system is available in assemblies for self-assembly, as well as a ready-to-use system. On request, we take over the complete planning and installation, as well as the commissioning in your company. Our services also include the ergonomic design of workplaces with material and information provision.

## SEGMENTED CHAIN CONVEYOR GKF



Depending on conveyed material, routing and chain, the system is suitable for high conveying speeds of up to 30 m / min. All motors used are provided with overload protection. Optionally, variable frequency drives are available.

■ Temperature limits

- Plastic chain (dry) -20°C to +80°C
- Plastic chain (wet) 0 ° C to + 60 ° C
- Stainless steel chain -3 ° C to +130 ° C

All chains are suitable for direct transport of products or pallet transport.

**For reasons of energy savings and lower maintenance intensity, we recommend the use of cam wheels instead of horizontal arches. Cam wheels are available with a minimum radius of 200 mm.**

Noise development as a function of the conveying speed, measured according to DIN 45 635 T1 on the motor side

	m/min	dB-A
VA-Chain	10	57,3
	30	73,2
Acetal Chain	10	62,8
	30	77,9

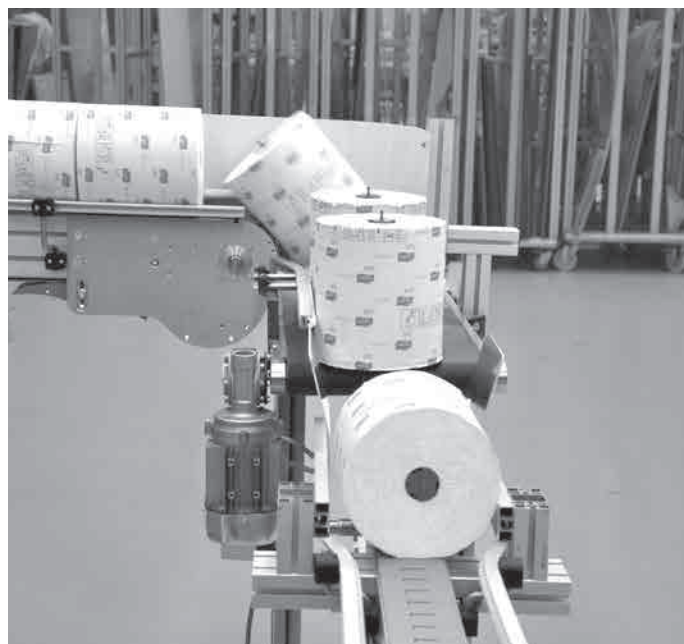


SEGMENTED CHAIN CONVEYOR GKF

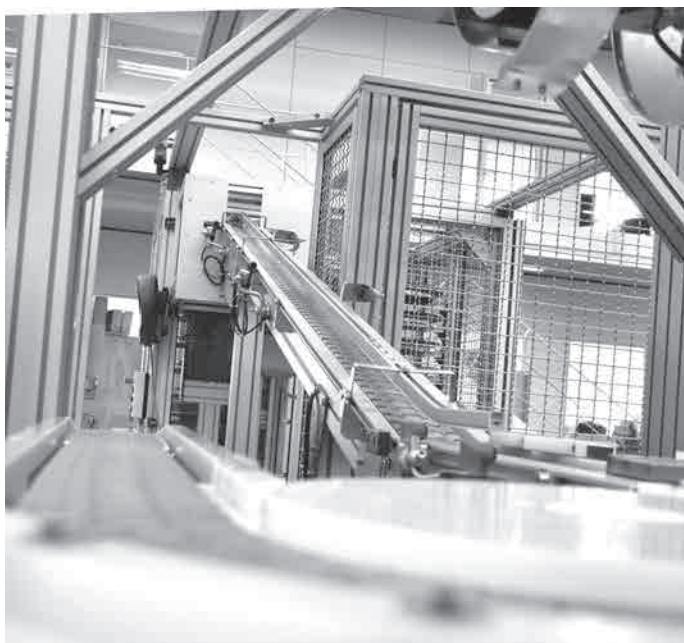
APPLICATION EXAMPLES



Transportation of coffee doses below hall roof



Transport and packaging of hygiene towels



Loading and unloading of lathes



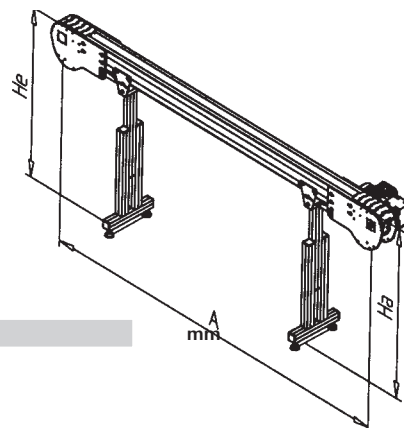
Surface inspection of car parts

SEGMENTED CHAIN CONVEYOR GKF

INQUIRYGKF

**Basic dimensions**

Center distance A  mm  
 according to Layout  see other  attached seperately



**Operating conditions**

Conveyed   
 Dimensions W x L x H   
 Units weight  kg  
 Total load on tape  kg  
 Temperature conveyed  °C  
 Congestion area

**Subconstruction**

Inlet height He  mm  
 Discharge height Ha  mm  
 Number of pillars  Pcs.  
 Pillars height adjustable from  mm to  mm  
 Lateral guiding  one-sided  both-sided  
 Floor assembly angel  Part no. 21.1112/0  
 High performance anchor 12  Part no. 21.1115/0  
 Roll  Part no.   
 Stand  Part no.

**Options**

Chain type  Part no.

**Drive**

Engine location  right  left  
 Speed  m/min.  
 Speed adjustable from  m/min. to  m/min.

**Other / Layout**

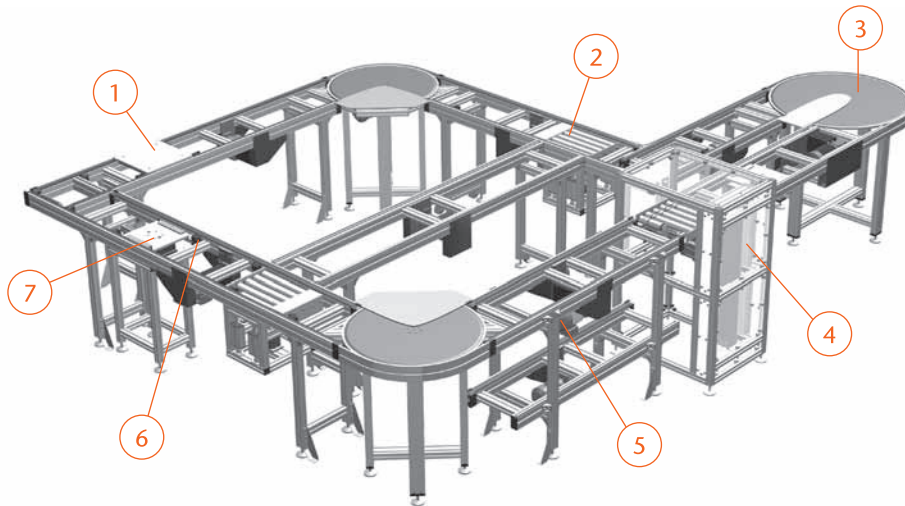
**Contact details**

Company   Please call me back  
 Contact   I ask for a written offer  
 Phone number   
 Fax number   
 E-Mail

## FLEXIBLE ASSEMBLY LINES FMS

FMS is a flexible assembly system with workpiece carriers that are transported on accumulation roller chains, special belts or chains. Standardized modules for exact positioning, lifting or turning enable the very fast realization of complete assembly lines. Numerous installations at renowned automotive suppli-

ers have proven the reliability and economy of this system for years. The patented deflection technology reduces the control effort for the entire system to a minimum.



### Modular assembly lines

- A complete “workpiece carrier” transport and positioning system, the fastest and most versatile form for process optimization in series production
- Thanks to the modular design and the structure and planning based on extruded aluminum profiles, complete systems are calculated in a very short time.

#### 1. Workpiece carrier

- Precision-milled carrier plate
- Accessible from all sides, also from the bottom
- Anti-static polyethylene sliding strips
- Wheels in the corners reduce lateral friction and improve guiding properties
- Exact position detection with centering bushes

#### 2. Cross transport

- Infeed and outfeed, direction change
- Very small space requirement
- Easy to integrate into the system

#### 3. Turntable

- Without controls
- Virtually maintenance free
- Consistent orientation

#### 4. Lifts up / down

- Vertical method with pneumatic or electric drive
- Precise guidance with linear units

#### 5. Belt and chain conveyor

- Variations: double belt, chain drive or combination
- Suitable for accumulation mode
- Structure made of aluminum profiles
- Easy to expand and reusable

#### 6. Separating

- Separator: with or without damping from 3 to 220 kg
- Switch holder: Various holders for M12 inductive proximity switches ensure the absence and passage control of the workpiece carriers

#### 7. Lifting and positioning device

- Exact positioning of the WT for machining operations
- max. load 100 kg
- Optionally with turning device for changing direction

FLEXIBLE ASSEMBLY LINES FMS

INQUIRY FMS

**Operating conditions**

Dimensions W x L x H	<input type="text"/>	<input type="text"/>	<input type="text"/>	mm
Conveyed good B x L x H	<input type="text"/>	<input type="text"/>	<input type="text"/>	mm
Units weight	<input type="text"/>			kg
Temperature conveyed	<input type="text"/>			°C
	<input type="text"/>			m/min.
Main emphasis	<input type="checkbox"/> Centered	<input type="checkbox"/> Distance		mm
Workpiece receiving	<input type="checkbox"/> yes	<input type="checkbox"/> no		
WT base plate (L x W)	<input type="text"/>			mm
Number of WT	<input type="text"/>			Pcs.
Ambient temperature	<input type="text"/>			°C
Environmental conditions	<input type="text"/>			
Number of stoppers	<input type="text"/>			Pcs.
Number of positioners	<input type="text"/>			Pcs.
Number of sensors	<input type="text"/>			Pcs.

**Other / Layout**

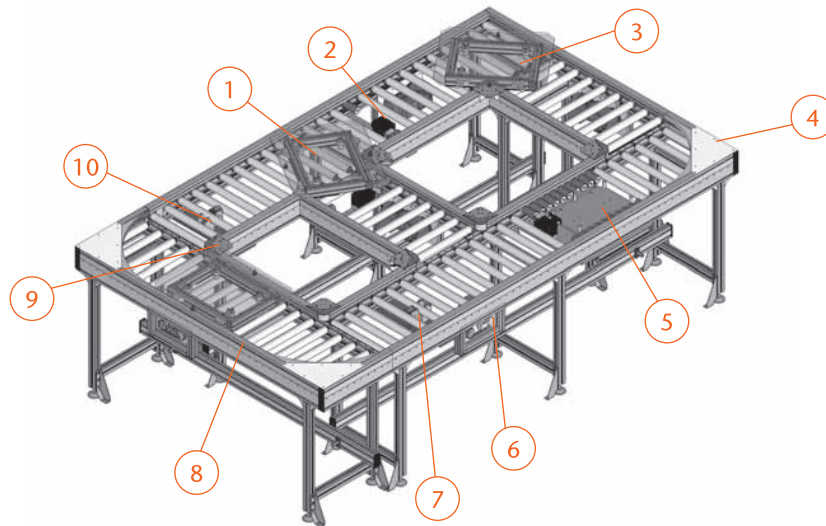
**Contact details**

Company	<input type="text"/>	<input type="checkbox"/>	Please call me back
Contact	<input type="text"/>	<input type="checkbox"/>	I ask for a written offer
Phone number	<input type="text"/>		
Fax number	<input type="text"/>		
E-Mail	<input type="text"/>		

## ROLLER CONVEYORS RMS

RMS is a pallet transfer system based on friction rollers and designed for very high loads. Among other things, transmissions, vehicle seats or engines are assembled on these systems. The workpiece carriers are moved over highly precise accumulator rollers, which are driven by means of a continuous tangential steel chain. The RMS specific workpiece carriers are guided by side-attached guide rollers into the line. Due to the

special shape of the workpiece carrier in combination with the patented DELTA -offset, the direction changes are realised with a minimum of control and drive effort. Special covers between the rollers make the transport system accessible for service work from the interior of the system.

**System description**

- Flexible modular concept
- Precise rollers with adjustable friction
- Load per pallet holder: up to 250 kg
- Standard WT widths: 400 and 500 mm
- Transport speeds: up to 15m/min
- Ingeniously simple and patented bypass
- Newly developed robust workpiece carriers
- Delta" deflection system

**1. Bypass**

- Driven turnout for diversion from main to branch line

**2. Rolles**

- Steel pipe 3 mm
- Nitrided surface
- Adjustable friction

**3. Workpiece carrier**

- Base frame made of aluminium profile
- Sliding elements made of antistatic polyethylene
- Plate carriers according to customer specification

**4. Deflection 90°**

- WT deflection without additional drive

**5. Stroke index unit**

- Loadable up to 300 kg

**6. Drive unit**

- Reversible running direction
- Up to 9 m distance per drive
- Automatic chain tension

**7. Separating stop**

- Adjustable damping

**8. Structure**

- Anodised aluminium profile

**9. Deflection system**

- The "Delta" deflector system is a standardized and universally applicable system that enables all deflector variants in 3 versions:
- Delta 1 fixed for simple 90° deflections
- Delta 2 spring-mounted for inward transfer into a main or secondary route
- Delta 3 controllable and pneumatically operated for use at junctions with changing deflections

**10. Hydraulically damped separating stops**

- The specially developed separating stop allows the use of continuous rollers instead of stub rollers
- High flexibility through simple change of the installation position
- Translated with [www.DeepL.com/Translator](http://www.DeepL.com/Translator)

ROLLER CONVEYORS RMS

INQUIRY RMS

**Operating conditions**

Dimensions W x L x H	<input type="text"/>	<input type="text"/>	<input type="text"/>	mm
Conveyed good B x L x H	<input type="text"/>	<input type="text"/>	<input type="text"/>	mm
Conveyor width	<input type="checkbox"/> 400mm	<input type="checkbox"/> 500mm	<input type="checkbox"/> different width	
Roller distance	<input type="checkbox"/> 120mm	<input type="checkbox"/> 180mm		
Head	<input type="text"/>			
Conveyor width	<input type="text"/>			
Conveyor speed	<input type="text"/>			m/min.
Main emphasis	<input type="checkbox"/> Centered	<input type="checkbox"/> Distance	<input type="text"/>	mm
Workpiece receiving	<input type="checkbox"/> yes	<input type="checkbox"/> no		
WT base plate (L x W)	<input type="text"/>			mm
Number of WT	<input type="text"/>			Pcs.
Ambient temperature	<input type="text"/>			°C
Environmental conditions	<input type="text"/>			
Number of stoppers	<input type="text"/>			Pcs.
Number of positioners	<input type="text"/>			Pcs.
Number of sensors	<input type="text"/>			Pcs.

**Other / Layout**

**Contact details**

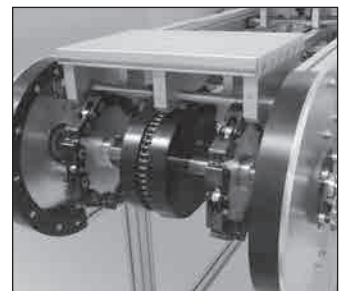
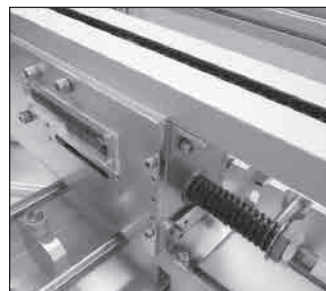
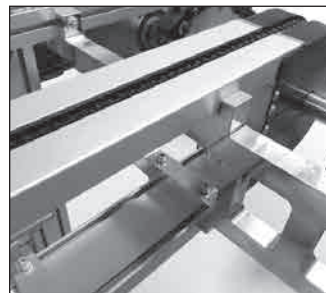
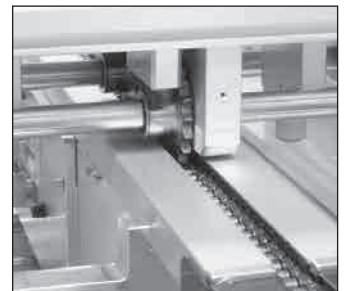
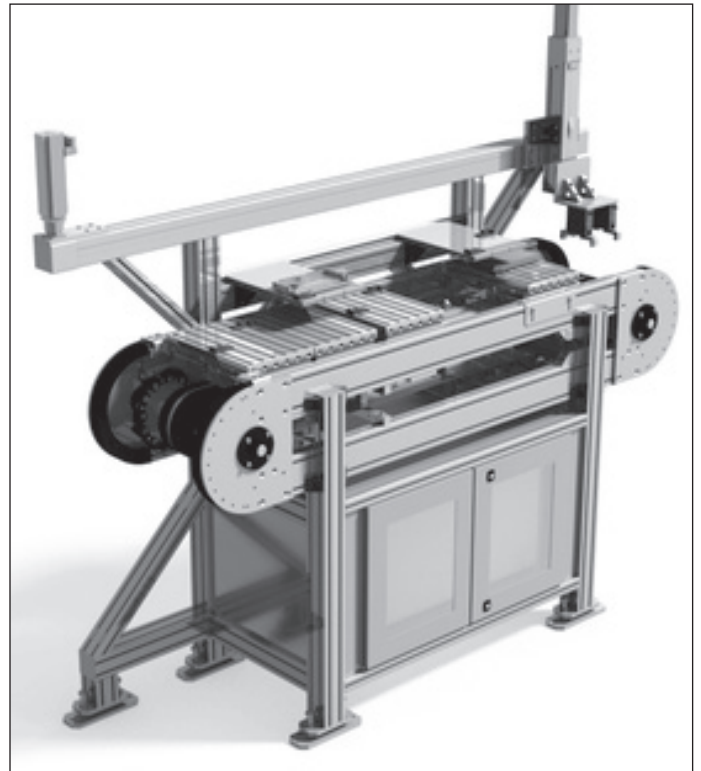
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Contact	<input type="text"/>	<input type="checkbox"/>	I ask for a written offer
Phone number	<input type="text"/>		
Fax number	<input type="text"/>		
E-Mail	<input type="text"/>		

## PALLET CIRCULATION SYSTEMS UMS

The new UMS pallet circulation system is a very economical solution with minimum space requirements for the interlinking of processing machines, workplaces, handling devices or robot feeders. In the new system, the pallets are guided on precise linear guides with maintenance-free rollers. This ensures the exact positioning of the pallets and significantly reduces energy consumption. At the end of the conveyor section, the unloaded pallets are vertically deflected by a form-fitting gripper and transported back hanging on the underside. Pallet accumulation is possible both on the conveyor level and during return transport of the unloaded workpiece carriers (WT). The system even allows the use as overhead conveyor with pallet return on the top side. The pallets are driven by a continuously rotating central chain, the automatic chain tensioning ensures safe operation. The system is available in standard widths of 400, 500 and 1000 millimeters, other widths are also available on request. The maximum length of the individual pallets is 270 millimetres, whereby the pallets can be connected to each other. The maximum weight / pallet is 100 kilograms and the total load up to 1,200 kilograms. The positioning accuracy of  $\pm 0.15$  millimeters allows automatic loading and unloading of the pallets. At the insertion station, pallets can be added or removed from the system within minutes.

With one drive, conveyor distances of up to 100 meters with speeds of 6 m/min up to 12 m/min can be realized. The control effort for the UMS is very low, since no inward or outward transfer or redirection has to be programmed. MiniTec also relied on the high-quality standard components of its modular system for the development of the pallet circulation system UMS and thus enables its customers to work with a flexibly integrable conveyor system that is virtually maintenance-free and low-wear. MiniTec supports its customers with experienced engineers and technicians in the planning and implementation of entire conveyor systems as well as the adaptation of such systems.

- Max. length: 15 m
- Load on pallet: max. 100 kg
- Workpiece carrier width: 400 mm to 1000 mm
- Workpiece carrier length: 270 mm (several individual WTs can be interlinked)
- Speeds: 6, 9, 12 m/min
- Positioning accuracy of  $\pm 0.15$  mm
- Other dimensions, speed, weights on request





5.1

MACHINE PROTECTION

544



5.2

PROTECTION SYSTEM SAFE GUARD

550



5.3

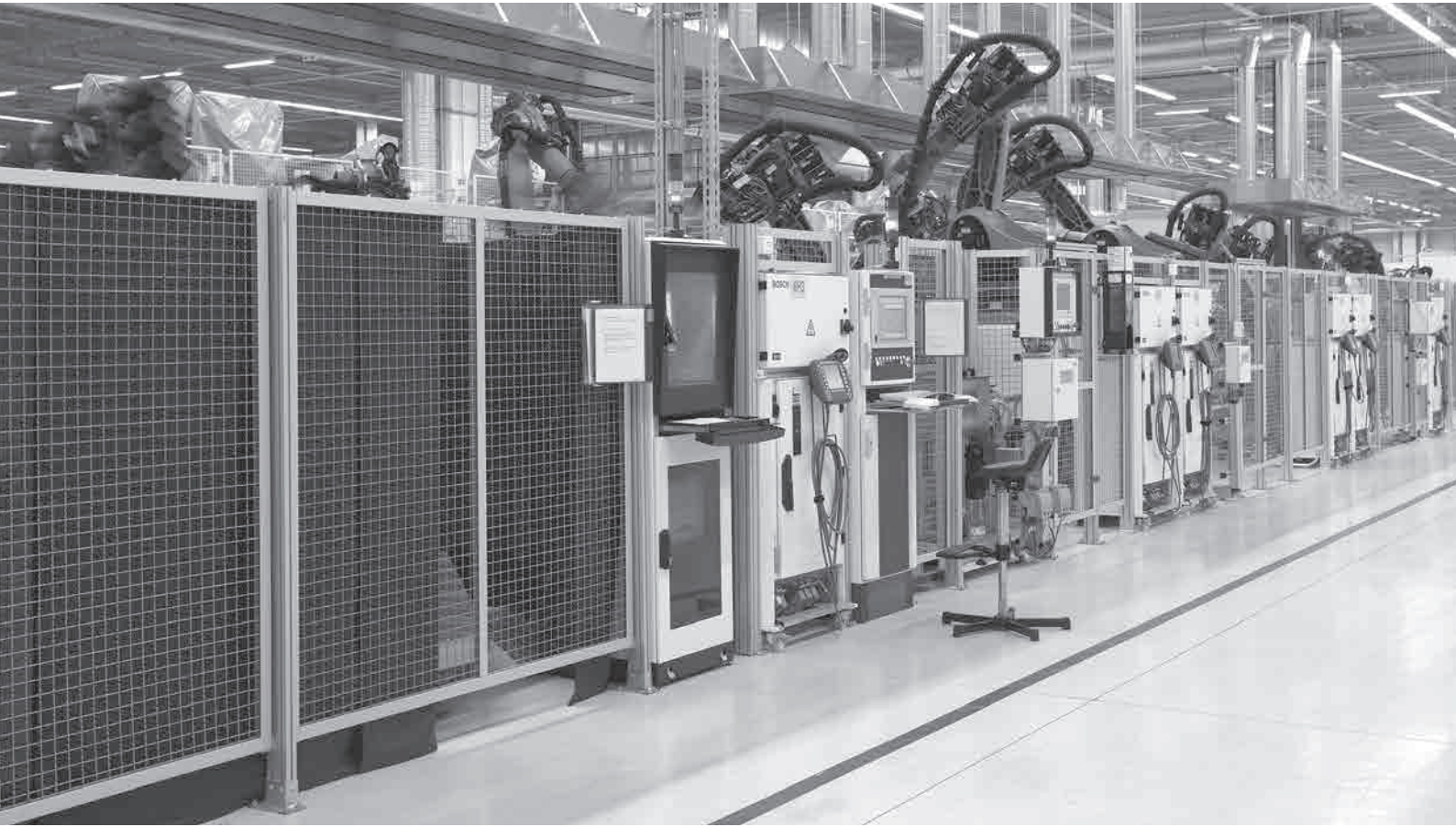
NOISE PROTECTION

561



MACHINE PROTECTION

EXAMPLES



MACHINE PROTECTION

EXAMPLES

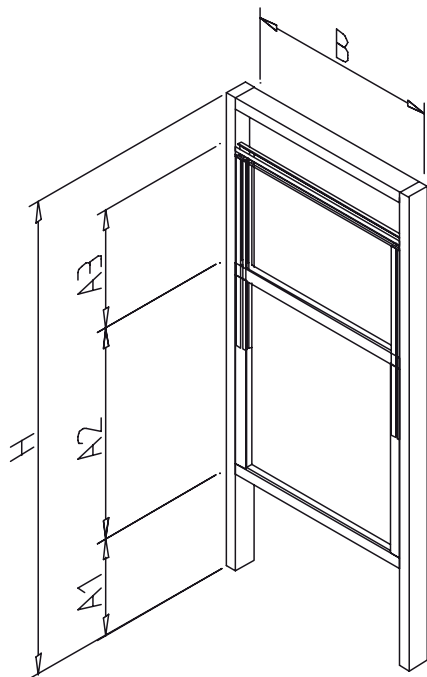


MACHINE PROTECTION

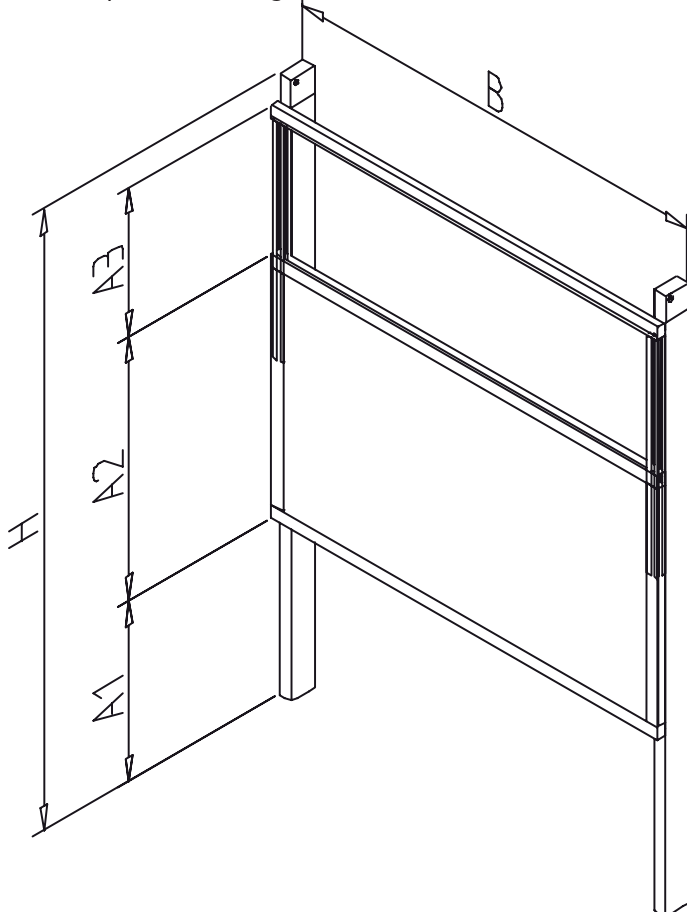
LIFTING DOORS

Completely assembled and prepared for final assembly. Aluminum profile construction with internal counterweights and a selection of different surface elements.

Table protection lifting door



Machine protection lifting door



## LIFTING DOOR WITH FALL PROTECTION

**Part no.: 23.0200/0**

## Description

Modular lift door system with fall protection for manually operated doors up to a sash weight of 35 kg.

The lifting door is made individually from profiles of the 45 series.

With our lift doors you can choose between different surface elements - depending on the task and requirements.

In contrast to the standard MiniTec lifting doors, which are guided laterally via sliding elements in a groove, the lifting door with fall arrest is guided over two ground steel shafts.

To counterbalance weight, two counterweights serve as a bal-

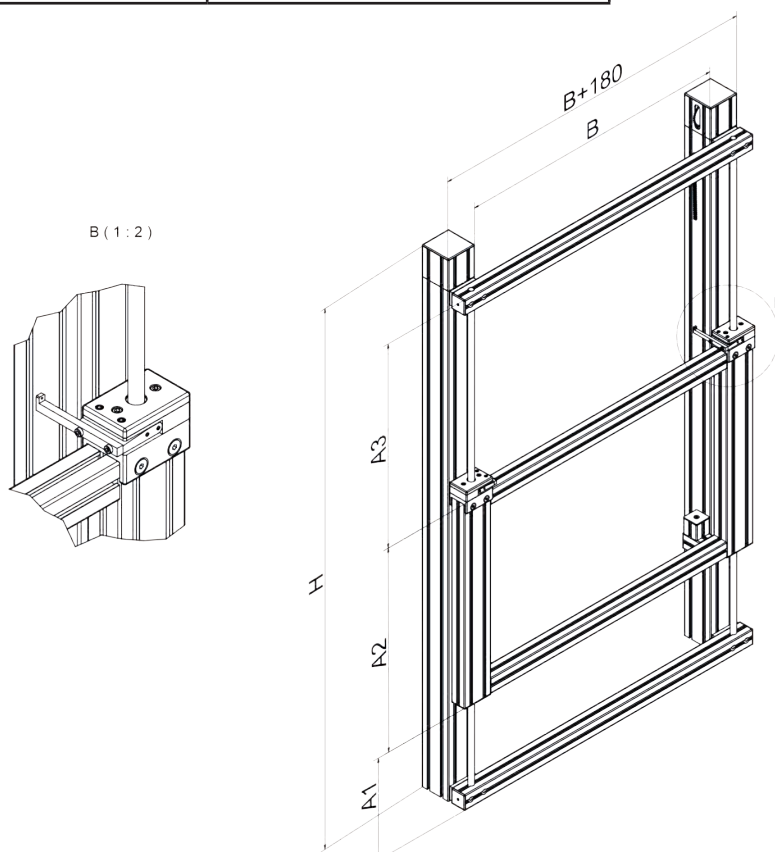
ancer for the movable sash.

These counterweights run over a chain deflection in the central hollow chamber of a 90 x 90 L or 90 x 90 UL profile.

This MiniTec ensures an absolutely uniform and virtually power-free run.

Should a chain of the lift door break, the fall arrest will be activated, i.e. the lifting door is immediately braked by a clamping bush by the frictional resistance on the steel shaft.

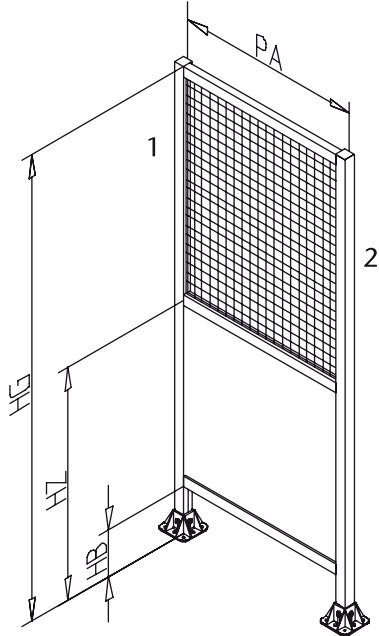
Lifting door with fall protection	
Power unit	manually
Total width	Opening width + 180mm
Frame construction	Profile 45x45 & 90x90
Surface element selectable	Plastic, aluminum, aluminum composite, safety glass, polycarbonate and acrylic
Applications	Hand guard
Clear width	mm
External dimension B + 180	mm
Bearing dimension A1	mm
Height lifting frame	mm
Stroke A3	mm
Total height H	mm
Surface element	



## MACHINE PROTECTION

## PROTECTION FIELDS

Protective and partition wall element with fixed frame

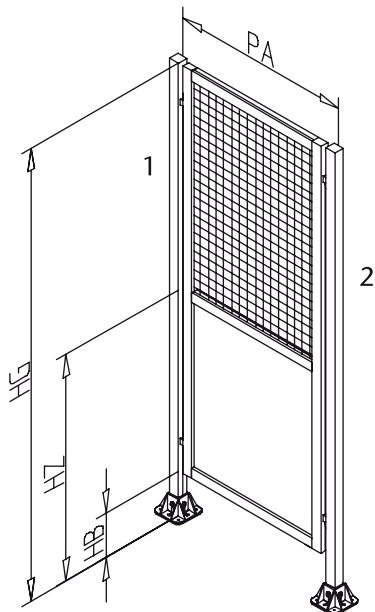


Items Supplied

- 1 Pillar
- 2 Crossbars
- 1 Surface element mounted:
  - Wave grid, mesh size 40 mm, wire gauge 4 mm, galvanized

The profile column 2 is included in the delivery of the next field. For single installation order additional profile column.

Protective and partition wall element with removable frame



Items Supplied:

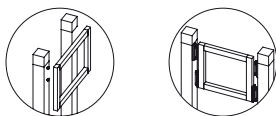
- 1 Protective field mounted: wave mesh, mesh size 40 mm, wire gauge 4 mm, galvanized
- 1 Profile column with floor mounting and 2 protective field suspensions

The profile column 2 is included in the delivery of the next field. For single installation order additional profile column.

MACHINE PROTECTION

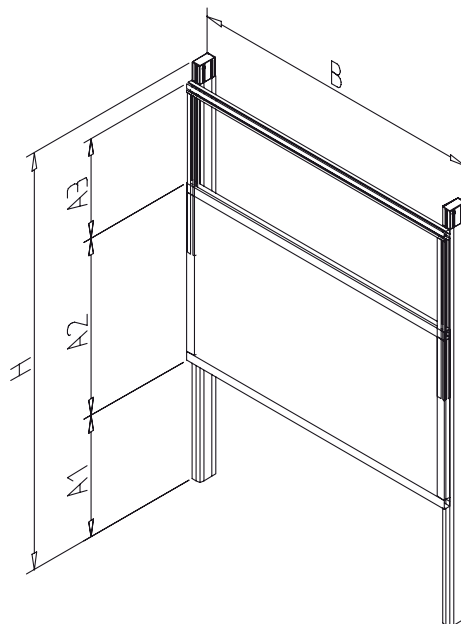
INQUIRY LIFTING DOOR & PROTECTION FIELD

Lifting Door



Lifting door arrangement	<input type="checkbox"/> outside	<input type="checkbox"/>
Lifting field width	<input type="text"/>	
Lifting field height A2	<input type="text"/>	
Stroke A3	<input type="text"/>	
Rally A1	<input type="text"/>	
Operation	<input type="checkbox"/> hand	<input type="checkbox"/>
Surface element	Part no. <input type="text"/>	
Strokes per hour	<input type="text"/>	
Additional field fixed	above	<input type="checkbox"/> yes <input type="checkbox"/> no
	below	<input type="checkbox"/> yes <input type="checkbox"/> no

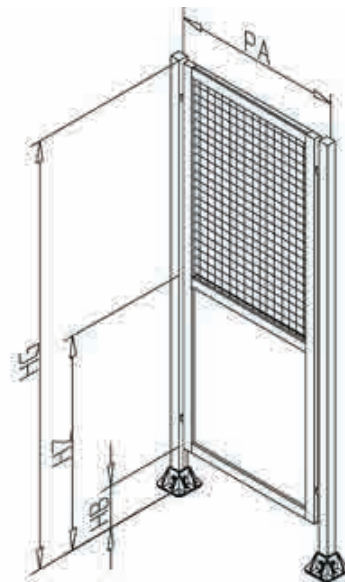
inside	<input type="checkbox"/>
mm	<input type="text"/>
mm	<input type="text"/>
mm	<input type="text"/>
mm	<input type="text"/>
pneumatic	<input type="checkbox"/>
no	<input type="checkbox"/>
no	<input type="checkbox"/>



Protection field

Protection field frame	<input type="checkbox"/> firmly	<input type="checkbox"/>
Total height HG	<input type="text"/>	
Ground clearance HB	<input type="text"/>	
Pole distance PA	<input type="text"/>	
Intermediate support	<input type="checkbox"/> yes	<input type="checkbox"/>
Height intermediate strut HZ	<input type="text"/>	
Surface element above	Part no. <input type="text"/>	
Surface element below	Part no. <input type="text"/>	
Foot	<input type="checkbox"/> Stand	<input type="checkbox"/> Base plate <input type="checkbox"/> without

Exchangeable frame	<input type="checkbox"/>
no	<input type="checkbox"/>



Contact details

Company	<input type="text"/>
Contact	<input type="text"/>
Phone number	<input type="text"/>
Fax number	<input type="text"/>
E-Mail	<input type="text"/>

<input type="checkbox"/>	Please call me back
<input type="checkbox"/>	I ask for a written offer

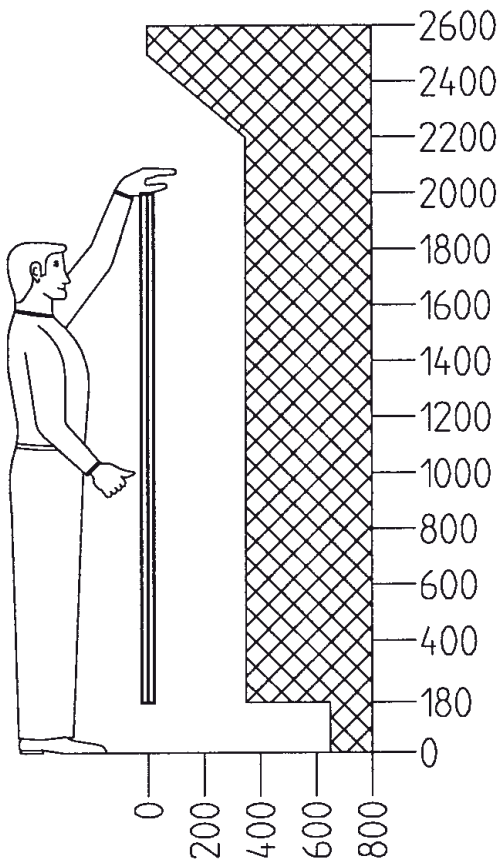
PROTECTION SYSTEM SAFE GUARD

PROTECTION SYSTEM SAFE GUARD SAFETY DISTANCE

SAFETY SYSTEMS

Individually arranged protection devices are a common field of application of the comprehensive MiniTec profile system. With our design software MiniTec CADmenu, separating protection systems can be designed and calculated in the shortest time. These are exactly adapted to customer requirements, with high demands on safety standards and optical effect. Our standardized modules are particularly cost-effective solutions, taking into account the current standards and the Machinery Directive. separating guards must prevent access to the source of danger and at the same time protect against ejected parts, moving machine parts or escaping liquids. The device must be designed in such a way that it cannot be removed without tools, but the design of the protective device must always be preceded by a risk assessment according to EN ISO 12100-1 by the system manufacturer.

Safety distances



Passing over protective constructions - low risk

The required safety distances for the upper limbs are specified in DIN EN 13857.

Protective field

Height: 2000 mm

Distance to danger zone: 350 mm  
The safety distances for the lower limb are specified in EN 811. The safety distance to the source of danger depends on the ground clearance of the protective field.

Protective field

Ground clearance: 180 mm

Distance to danger area: 665 mm

## PROTECTION SYSTEM SAFE GUARD

## LOADABILITY GRID SYSTEM

## Load-bearing capacity

The load capacity of the standard protective fields was determined in empirical tests. In the middle of the field, a plate 200x200 mm was loaded statically until the wavy grid is pressed out of the clamping profile. The specified values apply to protective fields made of clamping profile 32x32 with corrugated grid, galvanized steel, 40x40x4 mm.

Field height HS mm	Field size B mm	Weight F N
1820	500	1200
1820	750	1200
1820	1000	1000
1820	1250	1000
1820	1500	1200
1820	1750	1100
1820	2000	1000

The dynamic load capacity of the protective fields was tested in pendulum impact tests with a mass of 100 kg by TÜV Saarland. All required parameters of the EC Machinery Directive 2006/42 / EC have been met.

## Grid system

The standardised Safe Guard system is an especially economic and quick solution for most applications. Individual heights, field sizes, special designs for noise protection or splash water protection and optional fastening types are available for special tasks.



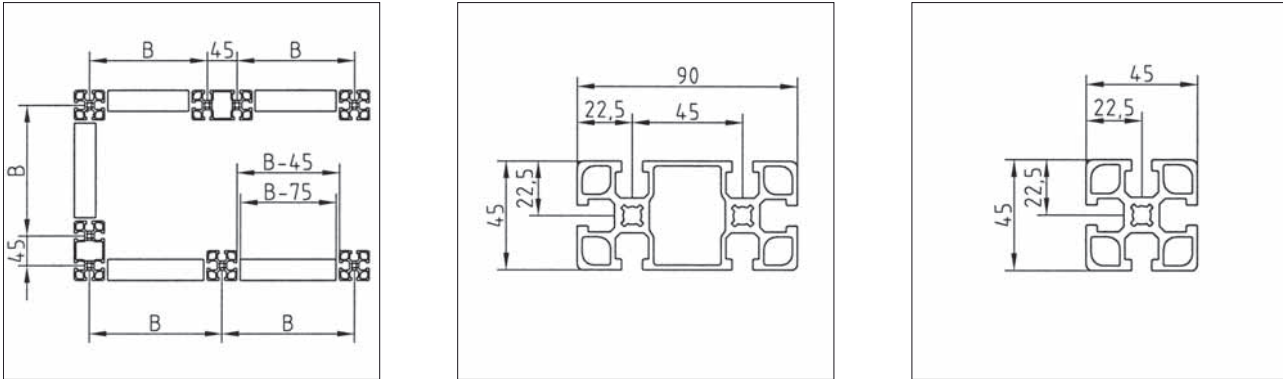


SCHUTZSYSTEM SAFE GUARD

MONTAGEBEISPIEL

Feldbreiten

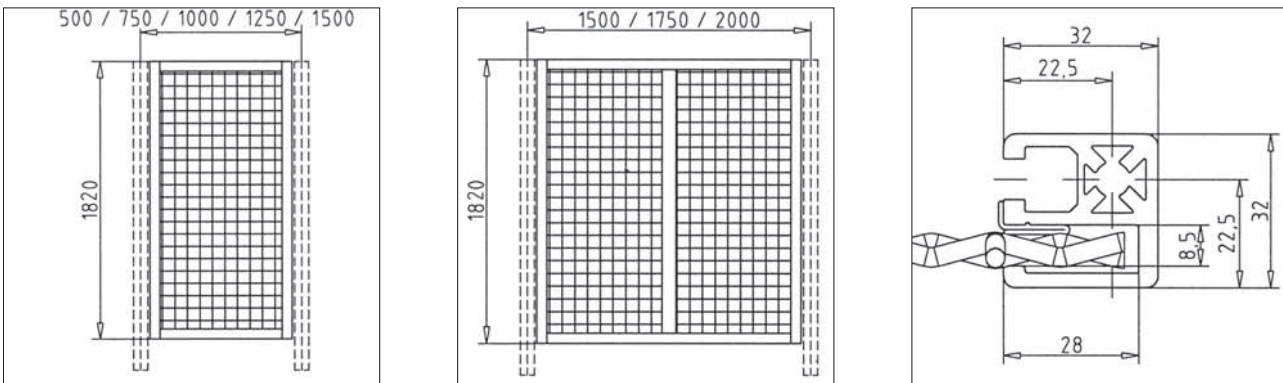
Nutenmittenabstand der Pfosten „B“



Standardbreiten

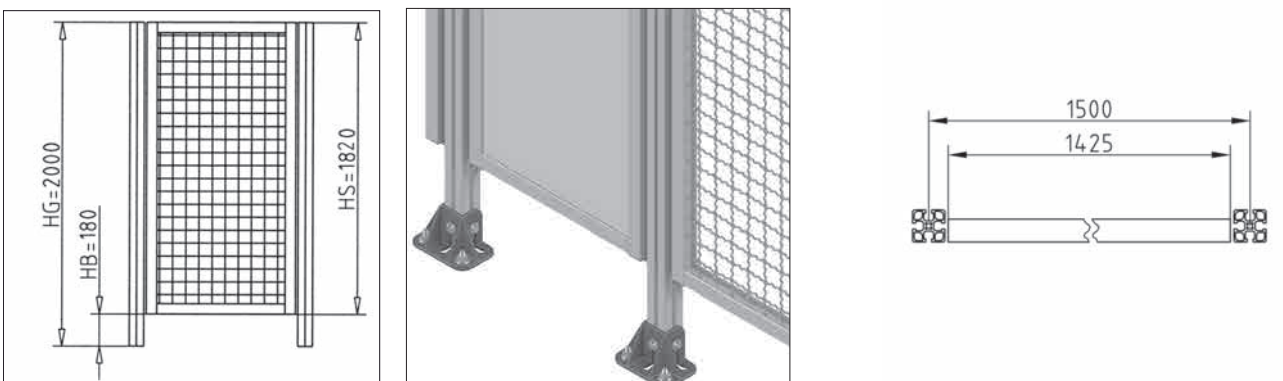
500, 750, 1000, 1250, 1500 mm  
 1500, 1750, 2000 mm mit zusätzlicher vertikaler Mittenstrebe

Die Schutzfeldrahmen bestehen aus speziell konstruierten Klemmprofilen 32x32 mm. Durch die große Tiefe der Aufnahme für die Flächenelemente in Verbindung mit der Sicherung durch Distanzprofil wird große Stabilität erreicht. Zur Befestigung von Anbauteilen können alle Komponenten des MiniTec Profilsystems verwendet werden.



Höhe

Standard Gesamthöhe „HG“= 2000 mm,  
 Schutzfeldhöhe HS 1820 mm, 180 mm Bodenfreiheit für behinderungsfreies Reinigen



## SCHUTZSYSTEM SAFE GUARD

## MONTAGE



Die Montage der vormontierten Felder an Ort und Stelle kann von einer Person durchgeführt werden. Mit stabilen Standfüßen werden die Pfosten mit Schwerlastdübeln am Boden befestigt. Die Pfosten sind mit Winkeln versehen, in die die Schutzfelder eingehängt und verschraubt werden. Die Felder können beliebig ausgerichtet werden, mittels Langlöchern in den Winkeln lassen sich Abstandstoleranzen der Pfosten ausgleichen.



SCHUTZSYSTEM KOMPONENTEN

FELD SG 500/750/1000/1250/1500 (OHNE MITTELSTREBE)

Techn. Daten / Lieferumfang

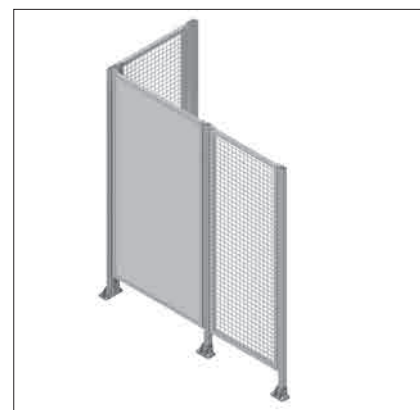
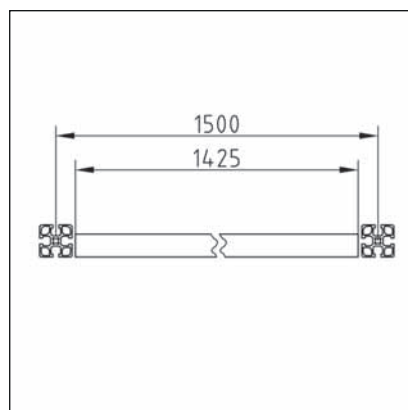
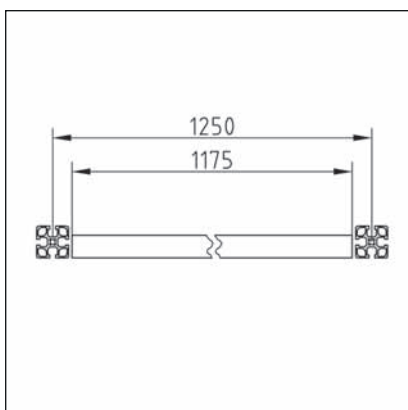
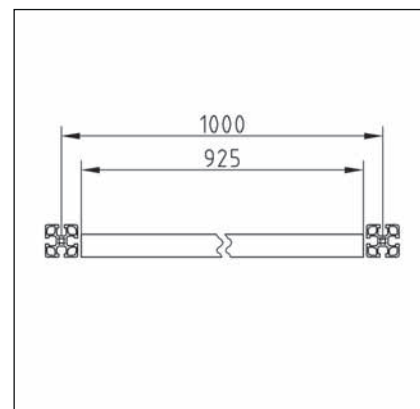
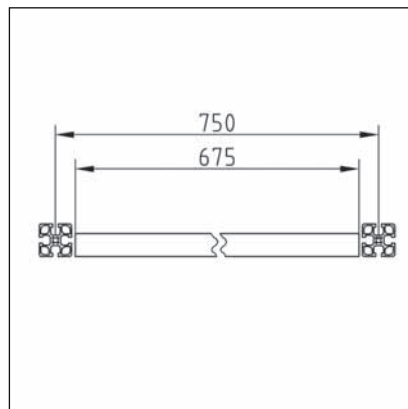
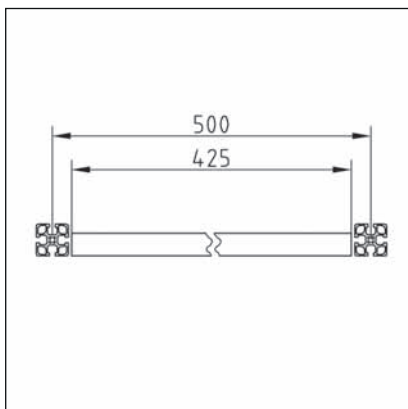
- aus Klemmprofil 32 x 32 UL, komplett vormontiert
- mit Wellengitter 40 x 40 x 4 mm, Stahl verzinkt oder mit Polycarbonat 5
- Standardhöhe HS: 1820 mm

Anwendung

- zur Abtrennung von Gefahrenbereichen
- als Maschinenschutz

Montage

Schutzfeld unter Verwendung von Befestigungssatz 19 Art.-Nr. 23.0010/0 oder Befestigungssatz für SG Felder Art.-Nr. 23.0011/0 an Schutzfeldpfosten montieren



Feldgröße B mm	Wellengitter Art.-Nr.	Polycarbonat 5 Art.-Nr.
500	23.0102/0	23.0112/0
750	23.0103/0	23.0113/0
1000	23.0104/0	23.0114/0
1250	23.0105/0	23.0115/0
1500	23.0109/0	23.0119/0

## SCHUTZSYSTEM KOMPONENTEN

## FELD SG 1500/1750/2000 (MIT MITTELSTREBE)

## Techn. Daten / Lieferumfang

- aus Klemmprofil 32 x 32 UL, komplett vormontiert
- mit Wellengitter 40 x 40 x 4 mm, Stahl verzinkt oder mit Polycarbonat 5
- Standardhöhe HS: 1820 mm
- Senkrechte Mittelstrebe aus Klemmprofil 45 x 32
- zusätzliche senkrechte Zwischenstrebe

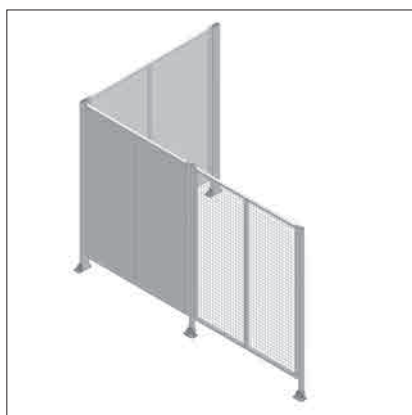
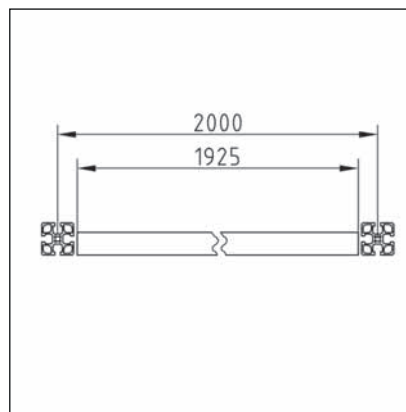
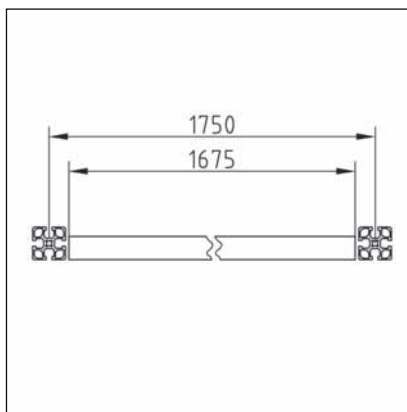
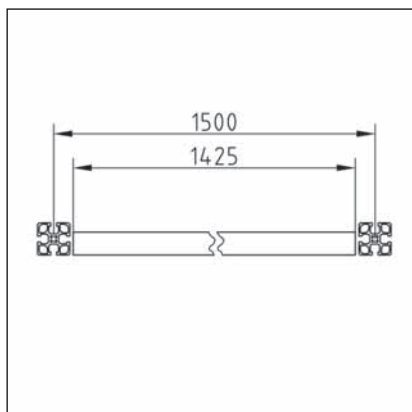
## Anwendung

- zur Abtrennung von Gefahrenbereichen
- als Maschinenschutz

## Montage

Schutzfeld unter Verwendung von Befestigungssatz 19 Art.-Nr. 23.0010/0

- oder Befestigungssatz für SG Felder Art.-Nr. 23.0011/0 an Schutzfeldpfosten montieren



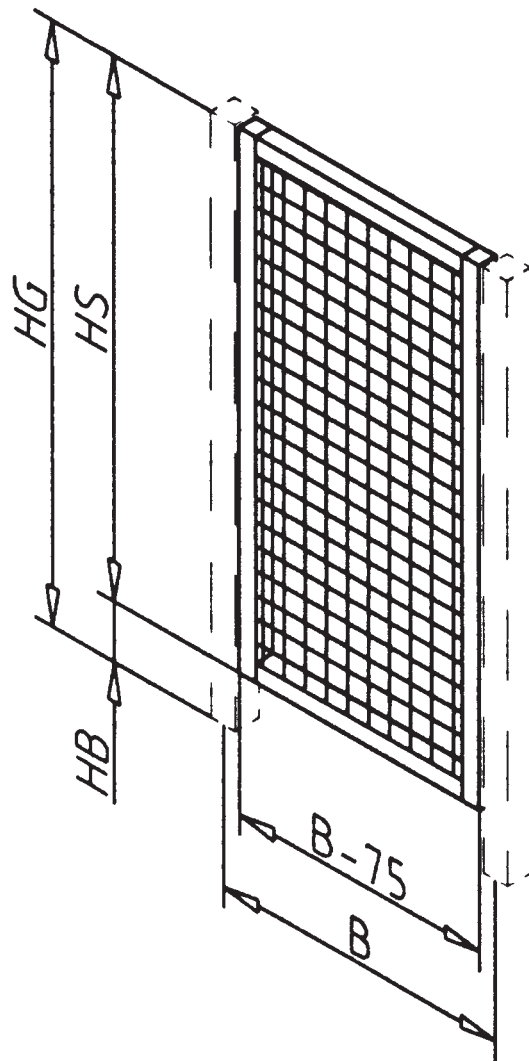
Feldgröße B mm	Wellengitter Art.-Nr.	Polycarbonat 5 Art.-Nr.
1500	23.0106/0	23.0116/0
1750	23.0107/0	23.0117/0
2000	23.0108/0	23.0118/0

SCHUTZSYSTEM ANFRAGE

PASSFELD

Passfeld

Höhe Schutzfeld HS	<input type="text"/>	mm (Standard 1820 mm)
Breite Schutzfeld B (bis 75mm)	<input type="text"/>	mm
oder		
Höhe gesamt HG	<input type="text"/>	mm (Standard 2000 mm)
Bodenfreiheit HB	<input type="text"/>	mm (Standard 180 mm)
Nutenmittenabstand B	<input type="text"/>	
Flächenelement	<input type="checkbox"/> Wellengitter <input type="checkbox"/> Polycarbonat	



Kontaktdaten

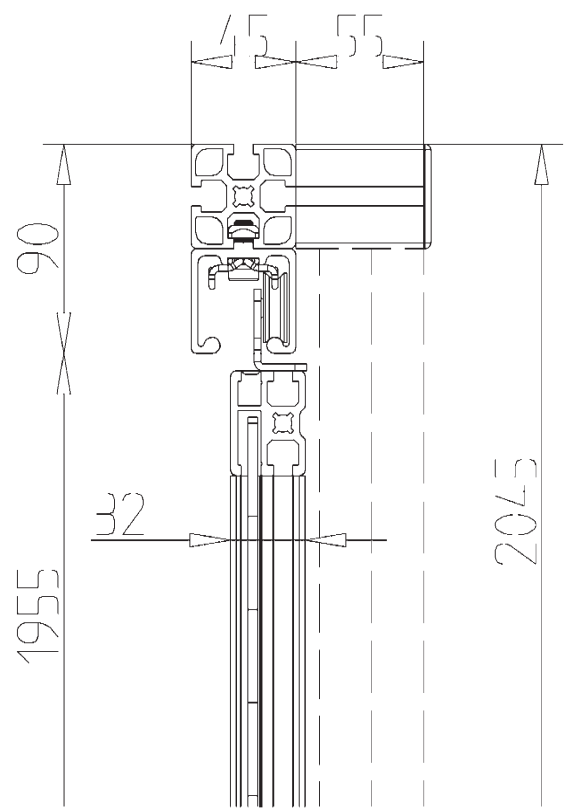
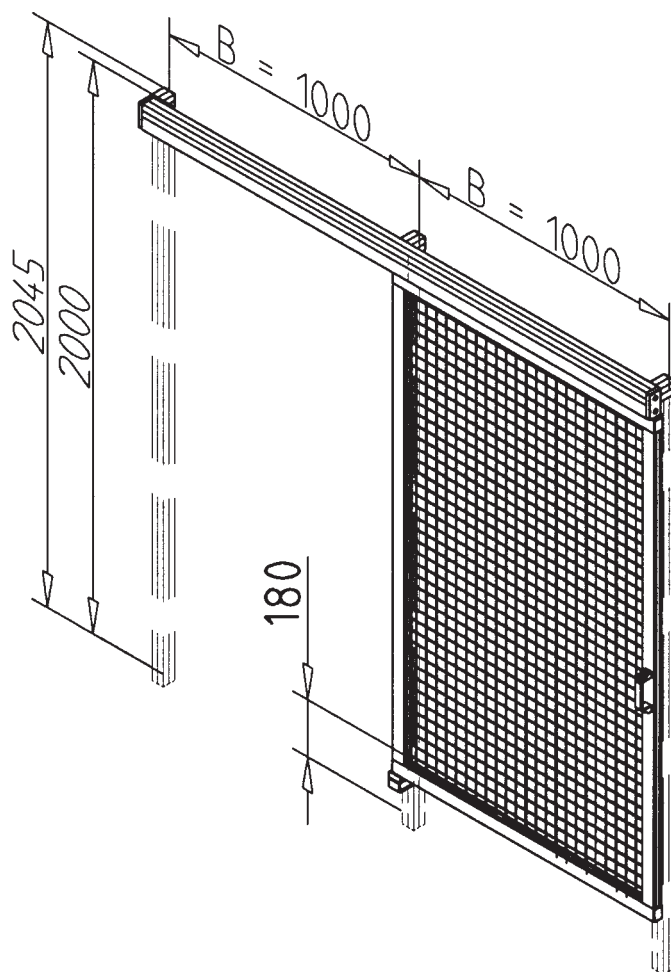
Firma	<input type="text"/>	<input type="checkbox"/> Ich bitte um Rückruf
Ansprechpartner	<input type="text"/>	<input type="checkbox"/> Ich bitte um ein schriftliches Angebot
Telefonnummer	<input type="text"/>	
Faxnummer	<input type="text"/>	
E-Mail	<input type="text"/>	

SCHUTZSYSTEM ANFRAGE

SCHIEBETÜR

Schiebetür

- Pfostenabstand B  mm (Standard 1000 mm)
- Pfostenhöhe HG  mm (Standard 2000 mm)
- Griff  einseitig  beidseitig
- Flächenelement  Wellengitter  Polycarbonat
- Zusätzliches Feld feststehend
- rechts  ja  nein
- links  ja  nein

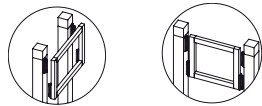


Kontaktdaten

- Firma   Ich bitte um Rückruf
- Ansprechpartner   Ich bitte um ein schriftliches Angebot
- Telefonnummer
- Faxnummer
- E-Mail

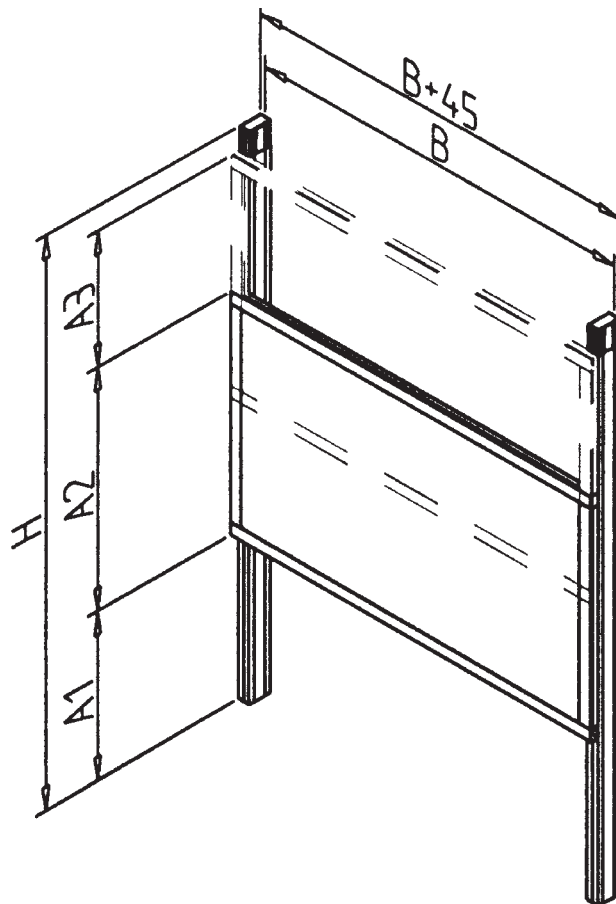
SCHUTZSYSTEM ANFRAGE

HUBTÜR



Hubtür

Hubtüranordnung	<input type="checkbox"/> außen	<input type="checkbox"/> innen	
Nutenmittenabstand B	<input type="text"/>		mm
Hubfeldhöhe A2	<input type="text"/>		mm
Hub A3	<input type="text"/>		mm
Aufstehmaß A1	<input type="text"/>		mm
Betätigung	<input type="checkbox"/> Hand	<input type="checkbox"/> Pneumatisch	
Flächenelement	<input type="checkbox"/> Wellengitter	<input type="checkbox"/> Polycarbonat	
Hübe pro Stunde	<input type="text"/>		
Zusätzliches Feld feststehend			
rechts	<input type="checkbox"/> ja	<input type="checkbox"/> nein	
links	<input type="checkbox"/> ja	<input type="checkbox"/> nein	

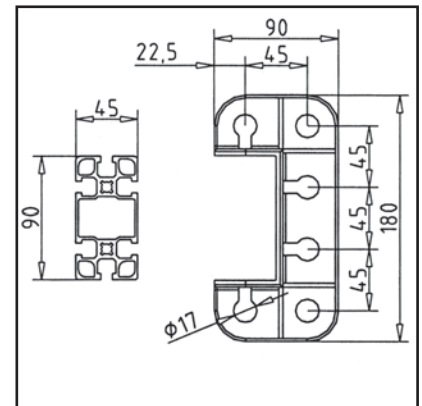
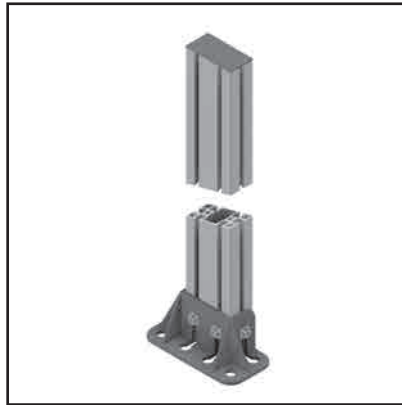
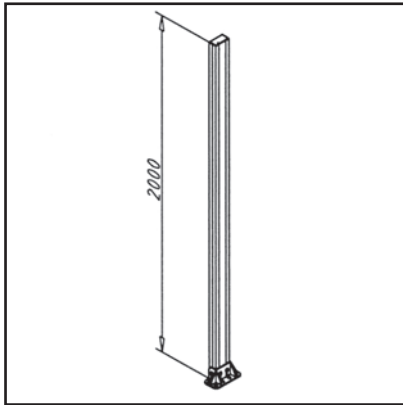


Kontaktdaten

Firma	<input type="text"/>	<input type="checkbox"/> Ich bitte um Rückruf
Ansprechpartner	<input type="text"/>	<input type="checkbox"/> Ich bitte um ein schriftliches Angebot
Telefonnummer	<input type="text"/>	
Faxnummer	<input type="text"/>	
E-Mail	<input type="text"/>	

## Pfosten SG 45 x 90

Art.-Nr. 23.0060/0



## TECHN. DATEN / LIEFERUMFANG

- Aluminium, stranggepresst, eloxiert E6/EV1
- Aus Profil 45 x 90 F
- Standfuß 90 GD vormontiert
- Ohne Bodenanker
- Gewicht = 6,740 kg/Stück

## ANWENDUNG

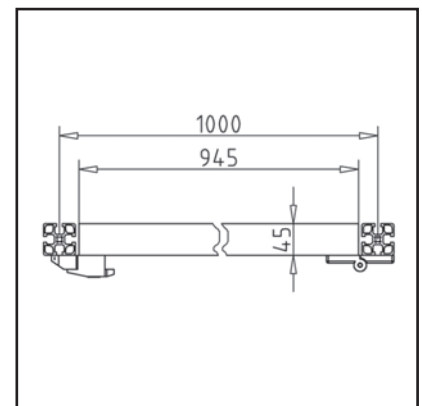
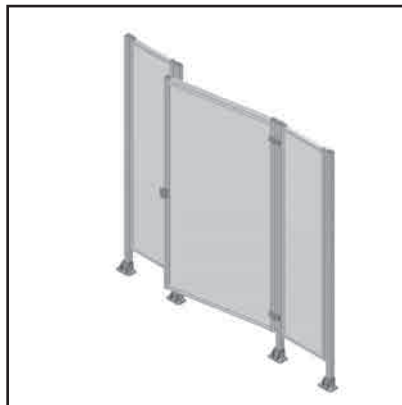
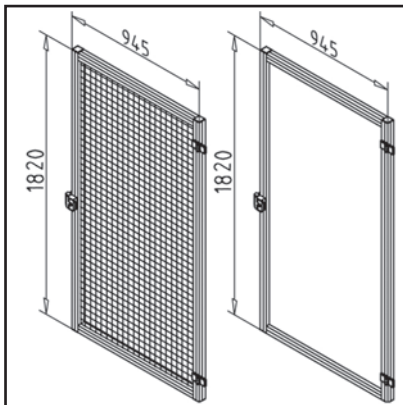
- Verwendung als Eckpfosten für Schutzfelder oder bei höheren seitlichen Belastungen von normalen Feldern

## MONTAGE

- Standfuß auf entsprechender Stelle positionieren
- Bohrungen auf Boden anzeichnen
- Bodenanker setzen und festziehen

## TÜR SG 1000 WG

Art.-Nr. 23.1404/0



## TECHN. DATEN / LIEFERUMFANG

- Aus Profil 45 x 45 F
- Komplett vormontiert mit Schloss und Scharnieren
- Mit Polycarbonat 5, **Art.-Nr. 23.1414/0**
- **Weitere Ausführungen auf Anfrage**
- Gewicht = 18,577 kg/Stück

## ANWENDUNG

- Als Zugang für Einhausungen z. B. bei Wartungsarbeiten

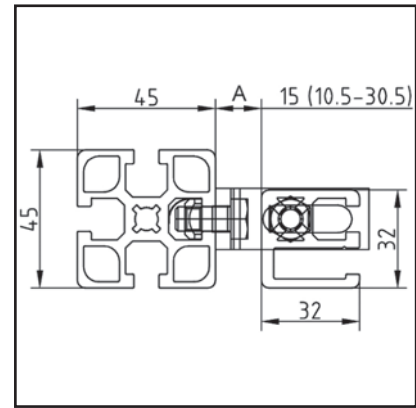
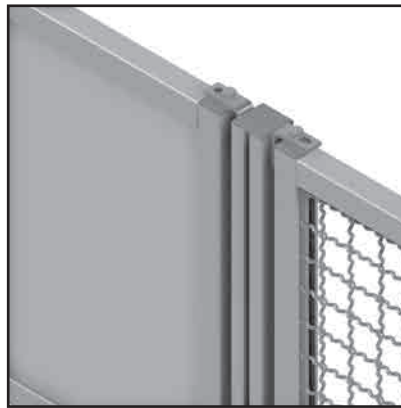
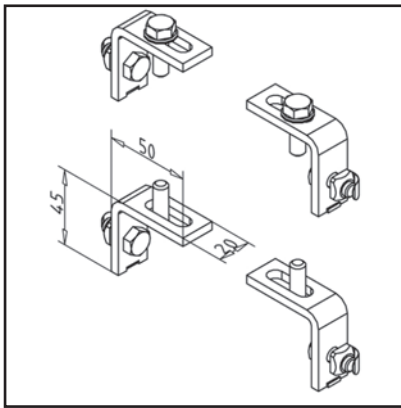
## MONTAGE

- Zwischen zwei Pfosten mit Nutabstand 1000 mm montieren
- Schlossanschlag mit 2 Bohrungen an Pfosten anbringen
- Für linken und rechten Anschlag verwendbar



## BEFESTIGUNGSSATZ 19 FÜR SCHUTZFELDER

Art.-Nr. 23.0010/0



### TECHN. DATEN / LIEFERUMFANG

- Stahl, verzinkt
- Mit Befestigungsmaterial Stahl, verzinkt
- 4 Schutzfeldaufhängungen
- Gewicht = 0,500 kg/Satz

### ANWENDUNG

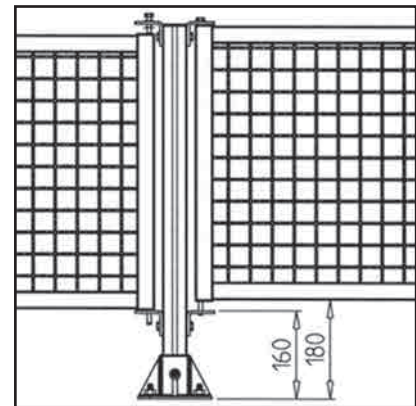
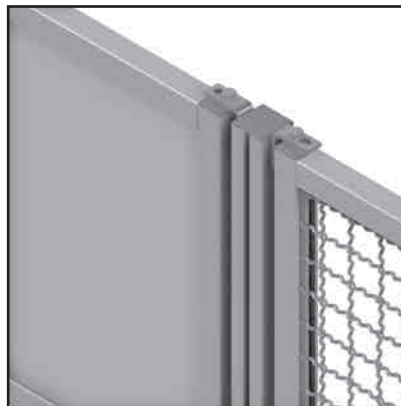
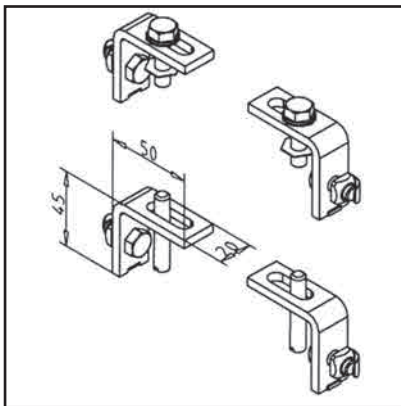
- Befestigung von Schutzfeldern aus Klemmprofil 32 x 32, 45 x 32 oder Standardprofilen
- Befestigung von Schutzfeldern in beliebigem Winkel

### MONTAGE

- Schutzfeld in vormontierte untere Aufhängung einsetzen, oben mit Schrauben aus Lieferumfang festziehen
- A = 10,5 mm bis 30,5 mm

## BEFESTIGUNGSSATZ FÜR SG FELDER MIT UNVERLIERBARER SCHRAUBE

Art.-Nr. 23.0011/0



### TECHN. DATEN / LIEFERUMFANG

- Stahl, verzinkt
- Mit Befestigungsmaterial Stahl, verzinkt
- 4 Schutzfeldaufhängungen
- mit Aufkleber „Wartungsfeld“
- Obere Schrauben in unverlierbarer Ausführung
- Gewicht = 0,366 kg/Satz

### ANWENDUNG

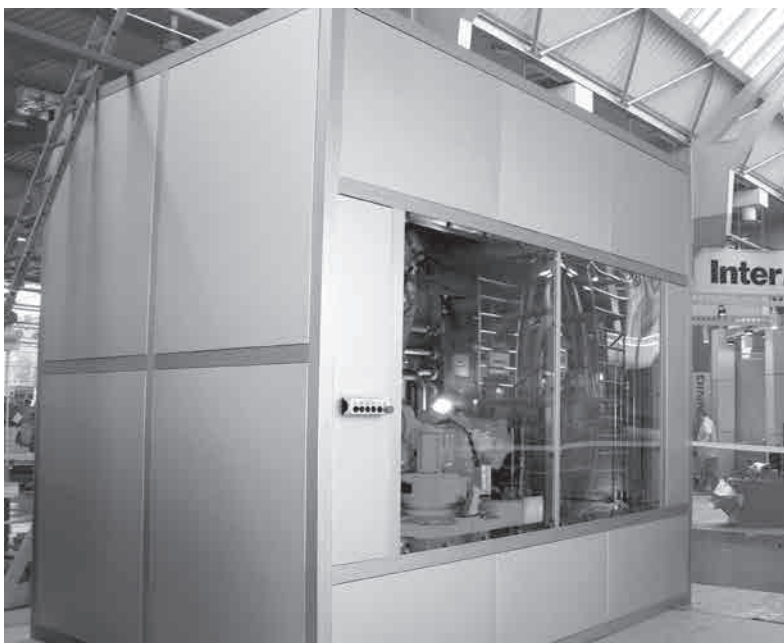
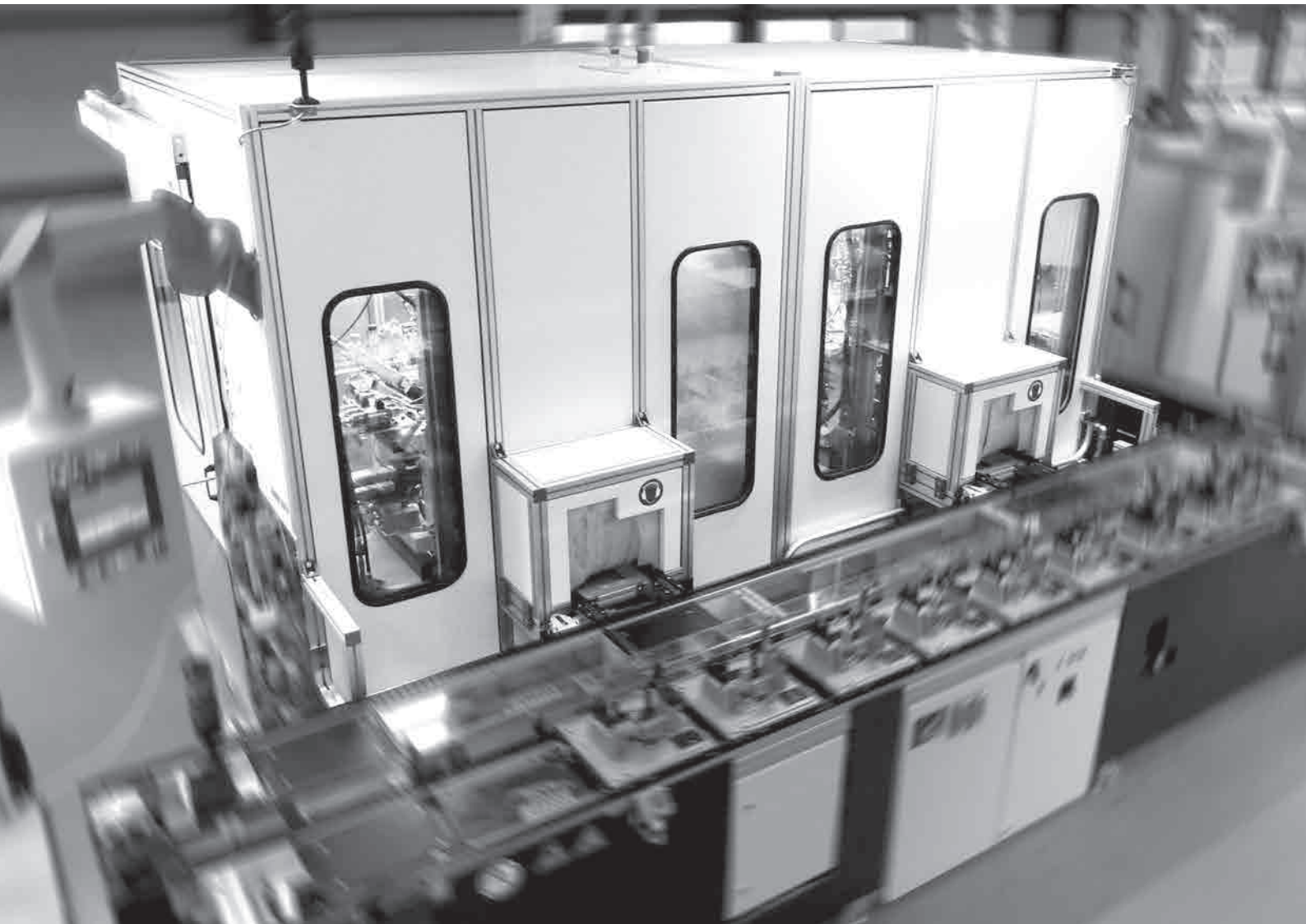
- Befestigung von Schutzfeldern die zu Wartungszwecken demontiert werden. Die hierfür zu lösenden Schrauben sind in unverlierbarer Ausführung.
- Für Klemmprofile 32 x 32 und 45 x 32
- Befestigung der Felder in beliebigem Winkel

### MONTAGE

- Schutzfeld in vormontierte untere Aufhängung einsetzen, oben mit Schrauben aus Lieferumfang festziehen
- A = 10,5 mm bis 30,5 mm

# LÄRMSCHUTZ

## BEISPIELE



## LÄRMSCHUTZ

## 2033/10/EG - EUROPÄISCHE ARBEITSSCHUTZ-RICHTLINIE ZU LÄRM

Zum Schutz der Arbeitnehmer wurde die europäische Arbeitsschutz-Richtlinie zu Lärm (2033/10/EG) am 6. März 2007 in nationales Recht umgesetzt. Mit der neuen Verordnung ergeben sich um 5 dB(A) auf 80 dB(A) reduzierte Auslösewerte für Präventionsmaßnahmen. Passiver Lärmschutz durch die Bereitstellung von geeigneten Gehörschützern ist eine Möglichkeit der Prävention. Nachteilig dabei ist die erschwerte Kommunikation, die schlechtere Erkennbarkeit von Alarm- und Warnsignalen oder unkomfortable Schutzausrüstung. Besser ist aktiver Lärmschutz durch Reduktion der Lärmemission oder Einhausung der Lärmquellen. Es bestehen einschlägige gesetzliche Vorgaben zur Vermeidung von Lärmbelastungen, die den Unternehmer zu geeigneten Maßnahmen entsprechend dem jeweiligen Stand der Technik verpflichten.

In Zusammenarbeit mit dem auf Lärmschutz spezialisierten Unternehmen Scharenberg in Tarmstedt wurde das neue Baukastensystem für Schutzkabinen und Lärm reduzierende Einhausungen entwickelt. Der Baukasten basiert auf dem bewährten MiniTec-Profilsystem verbunden mit 20 mm starken Lärmschuttmatten oder 34 mm starken Lärmschutzkassetten. Bei der Gestaltung des Baukastens wurde der einfachsten Montage und größtmöglichen Zugänglichkeit zur Maschine besondere Beachtung geschenkt. Lärmreduktion von 25 dB(A) wird bei sachgerechter Auslegung der Einhausung in Ausführung p34 regelmäßig erreicht.





## LÄRMSTRESS VERURSACHT GESUNDHEITSSCHÄDEN



Abhängig von der Intensität und der Dauer der Lärmexposition können sich akute und langfristige Beeinträchtigungen von Gesundheit, Leistung und Wohlbefinden der Mitarbeiter ergeben.

- Psychosoziale Wirkungen wie nachlassende Konzentration, Nervosität, Reizbarkeit, Aggressivität
- Physiologische und vegetative Reaktionen wie Gehörschäden, Verengung der Blutgefäße, Bluthochdruck, Herz- und Kreislauferkrankungen, Kopfschmerzen
- Leistungsminderungen und erhöhte Unfallgefahr, Beeinträchtigung der Kommunikation, Fehlentscheidungen aufgrund von Missverständnissen, erhöhte Fehlerquote, Verringerung der Motivation

Steigende Gesundheitskosten und die dadurch entstehenden Produktionsausfälle machen Lärmschutz so wichtig. Durch Reduzierung des Geräuschpegels steigt die Leistungsfähigkeit.



### Vorteile der MiniTec-Lärmschutzlösungen

- Sichere Lärmreduktion
- Wirtschaftlich durch Verwendung des Baukastensystems
- Einfachste Montage und Konstruktion mit Standard-Kassetten
- Optimale Zugänglichkeit mit Türen, Hubtüren, Kontrollfenster
- Einfach demontierbare Wände
- Optional mit Wärmeabführung

LÄRMSCHUTZ

KOMPONENTEN & AUSFÜHRUNGEN

**Ausführung „p20“**

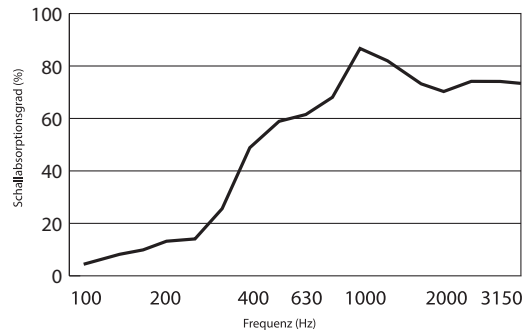
- Grundaufbau mit MiniTec Aluminiumprofilen
- Flächenelement
- Schallabsorptionsplatte, PU-Schaum 20 mm stark, schwarz, Art. Nr. 21.1879/0, zum Verkleben auf Flächenelementen Gewicht ca. 650 g/m<sup>2</sup>, Temperaturbeständigkeit: -40 bis +100° C

**Auswahl Flächenelemente**

- Aluminiumblech 2 mm, eloxiert, Art.-Nr. 21.1011/0, eingebaut mit Steckdichtung 2, Art.-Nr. 22.1083/0
- Stahlblech 1 bis 2 mm, lackiert oder verzinkt, eingebaut mit Steckdichtung 2, Art.-Nr. 22.1083/0
- Spanplatten 8 mm, beidseitig beschichtet weiß, Art.-Nr. 21.1815/2
- Spanplatten 8 mm, beidseitig beschichtet lichtgrau, Art.-Nr. 21.1855/0

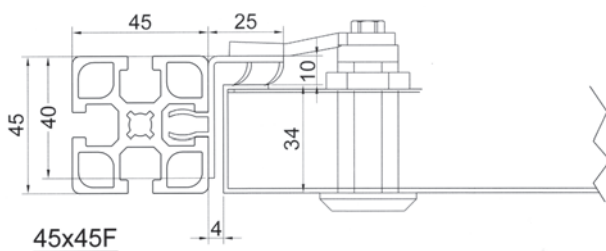


Schallabsorptionsgrad  
Messung nach DIN-EN-ISO 103534-2



**Ausführung „p34“**

- Grundaufbau mit MiniTec Aluminiumprofilen
- Lärmschutzleiste, Art.-Nr. 22.1130/1
- Lärmschutzkassetten 34 mm stark
- Innenseite Lochblech, Füllung aus hochwertiger Mineralwolle, mit Glasvlies als Rieselschutz, nicht brennbar nach DIN 4102, Baustoffklasse A2
- Außenseite Stahlblech verzinkt, optional lackiert nach RAL
- Kassettengröße (B/H) = lichte Weite der Rahmenkonstruktion - 8 mm

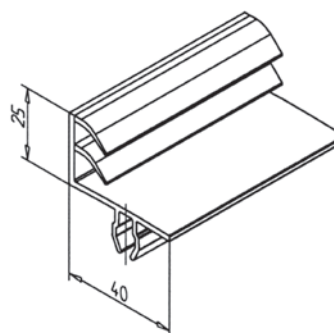


## LÄRMSCHUTZ

## KOMponenten &amp; AUSFÜHRUNGEN

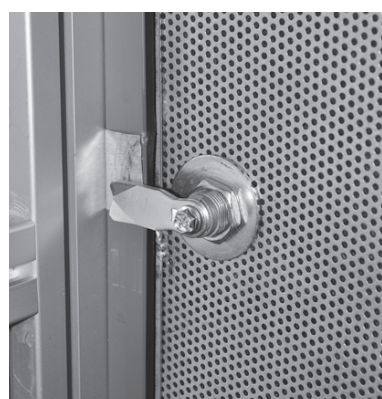
## Lärmschutzleiste (Art.-Nr. 22.1130/1)

- Material: ABS grau
- mit zwei angespritzten Dichtlippen
- Gewicht 0,232 kg/m
- Werkzeugloser Einbau der Leiste, kein Schrauben erforderlich
- Nachträglicher Einbau möglich
- Einfach zu bearbeiten, leicht auswechselbar
- Geringe Montagezeiten
- Abdichtung von aushängbaren Wänden, Türanschlägen
- kein Gehrungsschnitt erforderlich



## Lärmschutzkassette p34

- Stärke 34 mm
- 1,5 mm Stahlblech verzinkt, wahlweise lackiert nach RAL
- Dämm-Material Mineralfaser kaschiert, ca. 90 kg/m<sup>3</sup>
- 1,0 mm Lochblech innen, verzinkt, ca. 35 % Lochanteil
- Schalldämm-Maß nach ISO 140-3 gem. Zertifikat
- Kassettengewicht 27 kg/m<sup>2</sup>



Aushängbar mit Vorreiber



Kassette fest verschraubt

## Ausführungen

- Kassette fest verschraubt
- Kassette aushängbar mit Vorreiber
- Tür mit Klinkengriff

## Optionen

- Fenster 1-fach oder 2-fach
- Lackierung nach RAL
- Plattenschalldämpfer
- Kanalschalldämpfer
- Ventilator mit Thermostat
- Schiebetüren
- Regendach



Tür mit Klinkengriff

## LÄRMSCHUTZ

## KOMponenten &amp; AUSFÜHRUNGEN

## BEISPIEL EINES GRUNDAUFBAUS

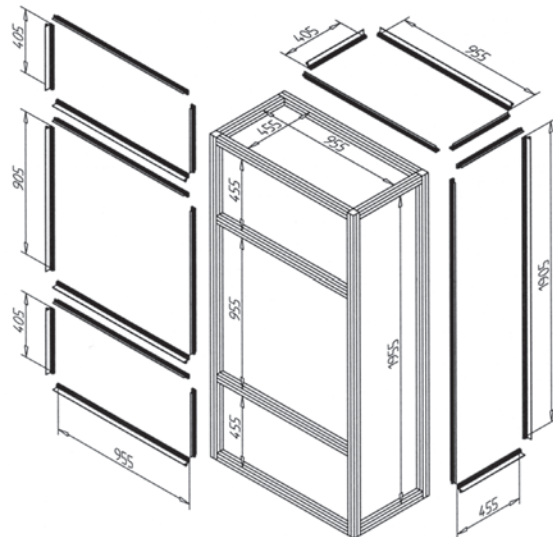
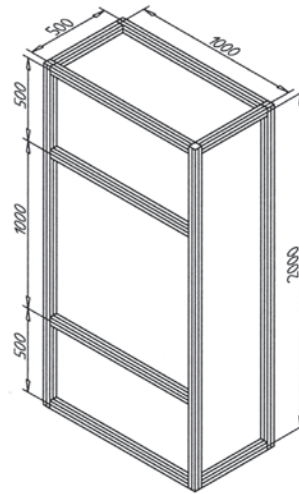
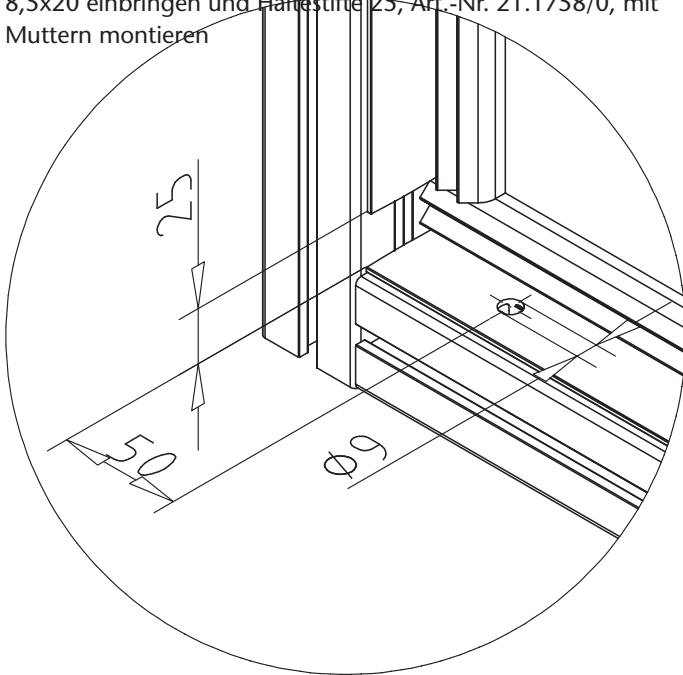
## 1. Konstruktion

- bei der Konstruktion des Trägergestells möglichst mit Standard Nutmittenabstand N von 250 - 2000 mm arbeiten

## 2. Einsetzen der Schallschutzleiste

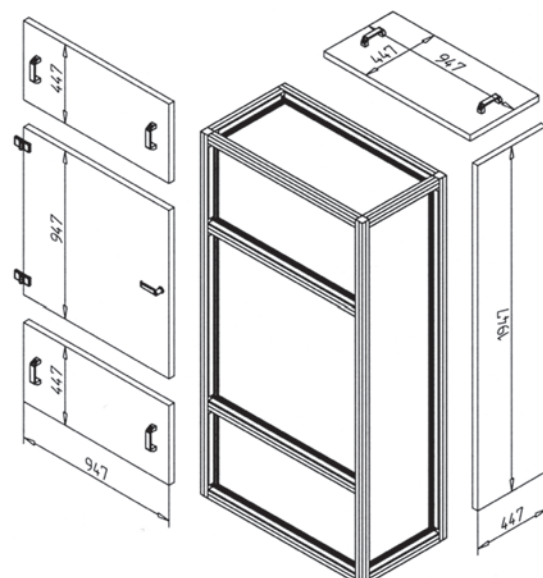
- Ermittlung der Länge der Schallschutzleiste Horizontal N - 45mm, Vertikal N - 95mm
- Leisten zuschneiden und einsetzen

Bei demontierbaren Elementen zusätzlich unten 2 Langlöcher  $\varnothing$  8,5x20 einbringen und Haltestifte 25, Art.-Nr. 21.1758/0, mit Muttern montieren



## 3. Einsetzen bzw. Befestigen der Schallschutzelemente

- fest verschraubte Elemente werden von der Rückseite verschraubt
- demontierbare Elemente unten in die Haltestifte 25 einsetzen, dann in Trägergestell einschwenken und verriegeln
- Türelemente bzw. Klappen an Vorderseite befestigen



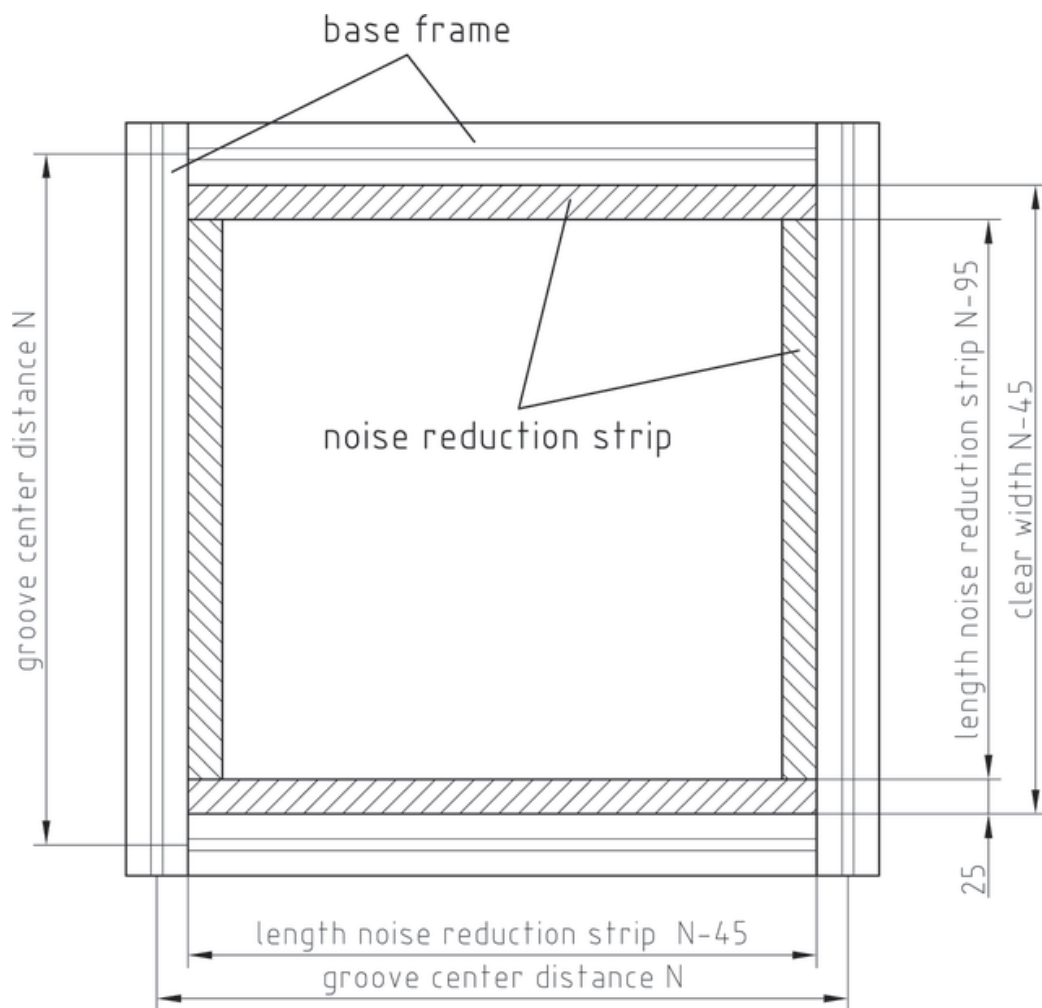
## LÄRMSCHUTZ

## KOMponenten &amp; AUSFÜHRUNGEN

## Vorzugskassettengrößen Lärmschutz p34

Nutmittenabstand N mm	Kassettengröße mm	Kassette fest verschraubt Art.-Nr.	Kassette ein- hängbar Art.-Nr.	Tür Art.-Nr.
250 x 250	197 x 197	56.0011/0	56.0012/0	56.0013/0
500 x 250	447 x 197	56.0021/0	56.0022/0	56.0023/0
1000 x 250	947 x 197	56.0031/0	56.0032/0	56.0033/0
250 x 500	197 x 447	56.0041/0	56.0042/0	56.0043/0
500 x 500	447 x 447	56.0051/0	56.0052/0	56.0053/0
1000 x 500	947 x 447	56.0061/0	56.0062/0	56.0063/0
250 x 1000	197 x 947	56.0071/0	56.0072/0	56.0073/0
500 x 1000	447 x 947	56.0081/0	56.0082/0	56.0083/0
1000 x 1000	947 x 947	56.0091/0	56.0092/0	56.0093/0
250 x 2000	197 x 1947	56.0101/0	56.0102/0	56.0103/0
500 x 2000	447 x 1947	56.0111/0	56.0112/0	56.0113/0
1000 x 2000	947 x 1947	56.0121/0	56.0122/0	56.0123/0

## Ermittlung der Länge der Lärmschutzleiste und der Kassettengröße





## LÄRMSCHUTZ

### ANFRAGE LÄRMSCHUTZ

#### Abmessungen der Maschine

Breite  mm

Länge  mm

Höhe  mm

Art der Maschine

Aktuelle Lärmemission  dB(A)

Gewünschte Lärmreduktion um  dB(A)

Frequenzbereich  Hz

Wärmeabführung erforderlich  ja  nein

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#### Kontaktdaten

Firma   Ich bitte um Rückruf

Ansprechpartner   Ich bitte um ein schriftliches Angebot

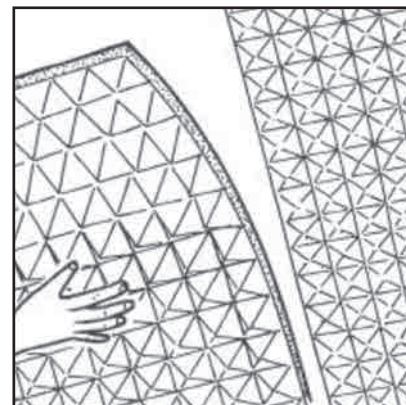
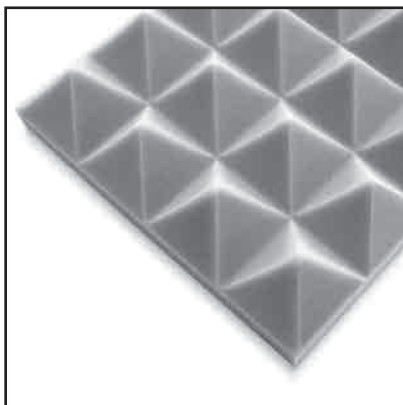
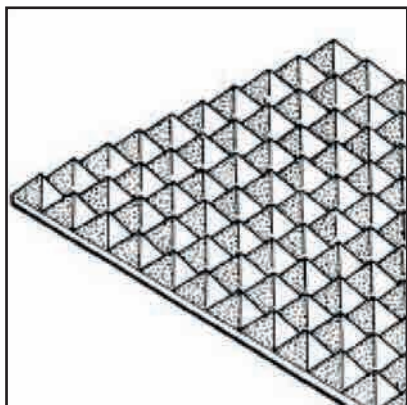
Telefonnummer

Faxnummer

E-Mail

## SCHALLABSORPTIONSPLATTE PYRAMIDE

Art.-Nr. 21.1819/0



### TECHN. DATEN / LIEFERUMFANG

- Material: PUR-Schaum, antrazit, 70mm
- Brandschutzklasse 3
- **Andere Stärken und Ausführungen auf Anfrage**
- Wärmeleitzahl bei 0°C 0,032 W/mK
- Plattengröße max. 1000x1000mm
- Gewicht = 1,500 kg/m<sup>2</sup>

### ANWENDUNG

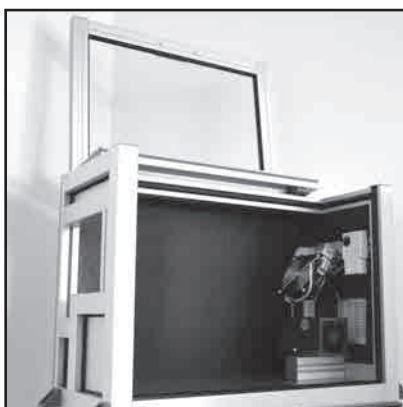
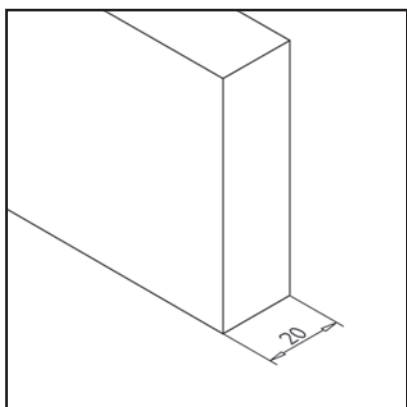
- Primärer Schallschutz durch Einhausung von Lärmquellen
- Sekundärer Schallschutz in Aufenthaltsräumen, Meisterbüros etc.

### MONTAGE

- Befestigung durch Verkleben mit dem Untergrund
- Je nach Untergrund passender Kleber auf Anfrage

## SCHALLABSORPTIONSPLATTE 20MM

Art.-Nr. 21.1879/0



### TECHN. DATEN / LIEFERUMFANG

- Material: PU-Schaum, 20mm, schwarz, selbstklebend
- Plattengröße max. 2000x1000mm
- Temperaturbeständig -40 bis +100°C
- Gewicht = 0,650 kg/m<sup>2</sup>

### ANWENDUNG

- Durch die schwarze PU-Haut unempfindlich gegen Verschmutzung

### MONTAGE

- Schutzfolie abziehen und aufkleben



6.1

LÄNGENANSCHLÄGE

570



6.2

FAHRZEUGAUSBAU

573

## LÄNGENANSCHLÄGE



Die MiniTec-Längenanschlätze sind bewährte Komplettlösungen, aufgebaut aus den Standardelementen unseres MiniTec-Profilsystems. Der modulare Aufbau dieser Anschätze ermöglicht für jede Anwendung die optimale Lösung. Alle Längenanschlätze sind einseitig mit einem höhenverstellbaren Standfuß versehen, mit Bohrungen für Bodenbefestigung. Für den Anschluß an die Maschine ist eine Adapterplatte mit Befestigungsbohrungen vorgesehen. Die digitale Meßanzeige befindet sich in Sichthöhe unmittelbar an der Maschine. Über das Display lassen sich einfach Maßkorrekturen z.B. für verschiedene Sägeblattstärken oder Abstandsänderungen zwischen Anschlag und Werkzeug eingeben.

Standard-Längen bis 6000 mm (Meßlänge: 5500 mm),  
größere Längen auf Anfrage

Tragrollenbreite: 200-600 mm

Tragrollenabstand: 200 mm

Höhenverstellung:  $\pm 100$  mm

Standardhöhe: 850 mm

Standard-Anschluß: Rechts

Längenmessung: Magnettape

Meßgenauigkeit:  $\pm 0,15$  mm

Meßanzeige: LCD, zweizeilig

#### Schlittenführung

Linearführung LR mit 4 Präzisionslaufrollen, spielfrei eingestellt, Wellen  $\varnothing 12$  mm aus gehärtetem Edelstahl Cf 53, Wkst.-Nr. 1.1213

#### Schlittenklemmung

Bei motorischem Antrieb automatisch (elektrisch) bei Erreichen der Anschlagposition, bei manuellem Antrieb über Schalter (pneumatisch) oder über Klemmhebel

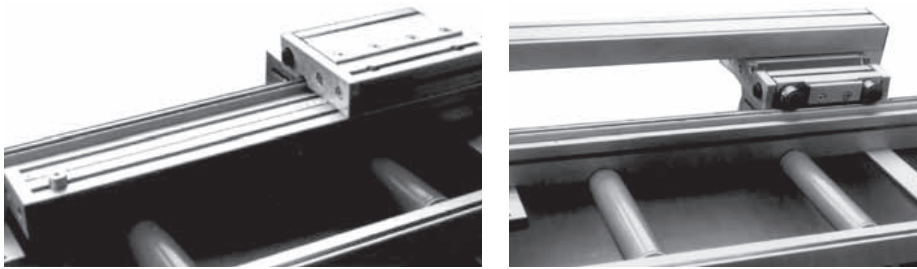
#### Motorischer Antrieb

AC-Motor mit Positioniersteuerung, in Gehäuse eingebaut. Verfahrensgeschwindigkeit: 0,6 m/s

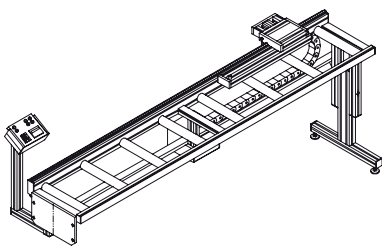
#### Maßeingabe bei motorischem Antrieb

Eingabe-Terminal mit Folientastatur und LED-Anzeige, montiert in Arbeitshöhe unmittelbar neben der Maschine

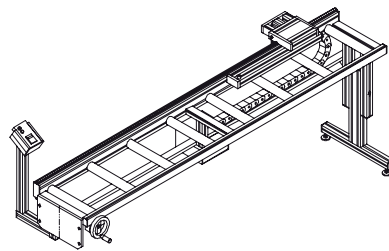
ANFRAGE LÄNGENANSCHLÄGE



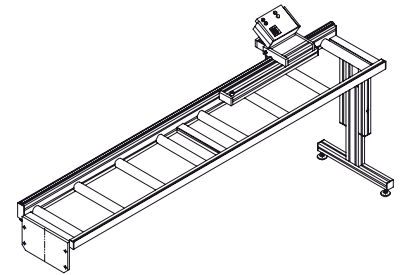
Der gesamte Anschlagkopf lässt sich aus der Tragrollenbahn um 180° ausschwenken zur einfachen Durchführung von Anschnitten. Verstellbarer Meßlängenausgleich mit Maßskala, L = 400 mm, auf Schlitten montiert.



– Motorischer Antrieb mit stationärer Anzeige, in Gehäuse eingebaut



– Manueller Kurbelantrieb mit stationärer 230V-Anzeige



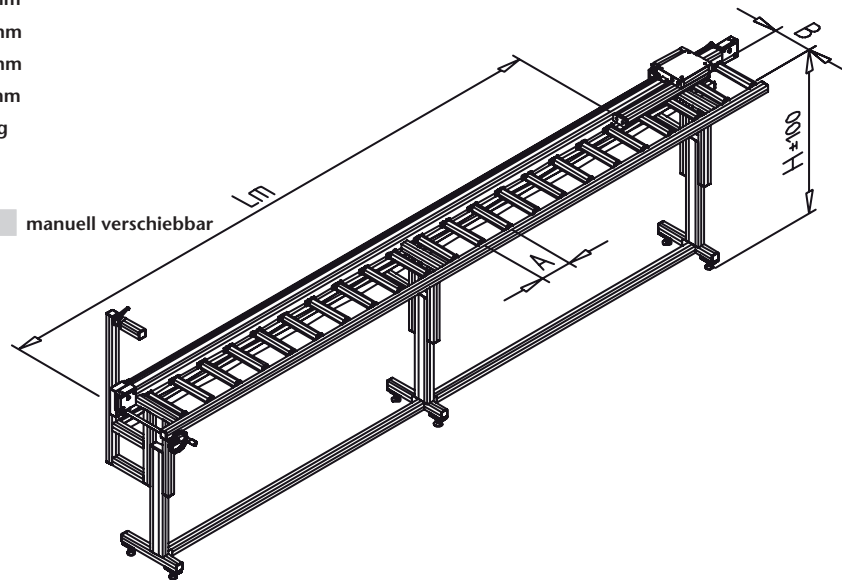
– Manuelle Schlittenverschiebung mit batteriebetriebener Digitalanzeige auf Anschlagsschlitten

Grundabmessungen

Messlänge Lm	<input type="text"/>	mm
Rollenabstand	<input type="text"/>	mm
Rollenbreite	<input type="text"/>	mm
Auflagehöhe	<input type="text"/>	mm
Belastung	<input type="text"/>	kg

Steuerung

Antriebsart	<input type="checkbox"/> motorisch	<input type="checkbox"/> kurbel	<input type="checkbox"/> manuell verschiebbar
Anschlag	<input type="checkbox"/> rechts	<input type="checkbox"/> links	



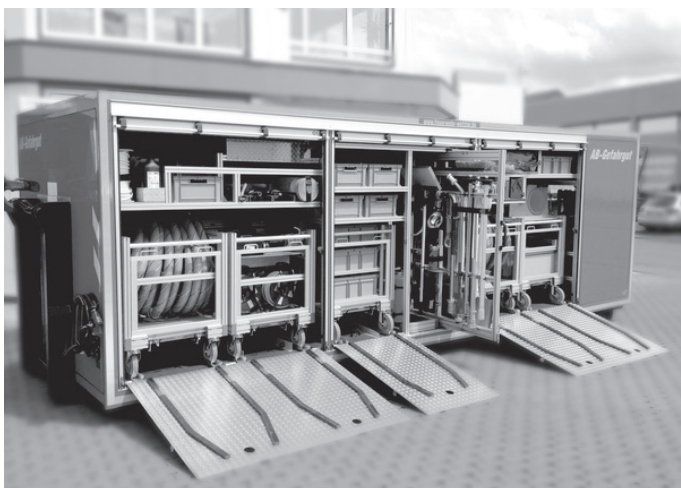
Kontaktdaten

Firma	<input type="text"/>	<input type="checkbox"/> Ich bitte um Rückruf
Ansprechpartner	<input type="text"/>	<input type="checkbox"/> Ich bitte um ein schriftliches Angebot
Telefonnummer	<input type="text"/>	
Faxnummer	<input type="text"/>	
E-Mail	<input type="text"/>	

## FAHRZEUGAUSBAU

Durch das einheitliche Nutsystem und die patentierte Verbindungstechnik ohne mechanische Bearbeitung hat sich das Profilsystem in fast allen Industriebereichen bewährt. Auch im Sonder-Fahrzeugbau wird das MiniTec - Aluminiumprofilsystem häufig eingesetzt - sowohl von professionellen Fahrzeugbauern als auch von Rettungsorganisationen und Feuerwehren, die durch die Einhaltung des Baukastenprinzips nachträgliche

Einbauten oder Regalsysteme in Fahrzeugen in Eigenregie anfertigen können. Auch Werkstattbereich mit maßgefertigten Montageplätzen, Regalsysteme für Schläuche und andere Gerätschaften oder auch Transportwagen angepasst auf ihre Anforderungen - können durch den Baukasten kinderleicht realisiert werden.





7.1

WERKZEUGE

575



7.2

BEARBEITUNG

586

**MAGNET-BIT-HALTER TORX**

Art.-Nr. 26.1820/0

**TECHN. DATEN / LIEFERUMFANG**

- Automatic-Halter mit starkem Dauermagnet
- Inklusive Torx Bit T 40 x 25 **Art.-Nr. 26.1822/0**
- Gewicht = 0,046 kg/Stück

**ANWENDUNG**

- Aufnahme von Bits Torx 40 für selbstformende Schrauben M8 zur Montage von Profilverbindern

**MONTAGE**

- Fixiert die Schrauben optimal auf dem Bit und hält sie in allen Positionen, auch bei großen Drehzahlen, sicher fest

**STIFTSCHLÜSSEL TORX T40**

Art.-Nr. 26.1814/0

**TECHN. DATEN / LIEFERUMFANG**

- Werkzeug verchromt
- Kunststoff-Quergriff, schwarz
- Gewicht = 0,085 kg/Stück

**ANWENDUNG**

- Befestigung von MiniTec-Profilverbinder SF



**6-KT-STIFTSCHLÜSSEL MIT QUERGRIFF**

Art.-Nr. --,----/-

**TECHN. DATEN / LIEFERUMFANG**

- Werkzeug verchromt
- Kunststoff-Quergriff, schwarz
- SW 4 **Art.-Nr. 26.1810/0**  
Gewicht 0,032 kg
- SW 5 **Art.-Nr. 26.1083/0**  
Gewicht 0,053 kg

**ANWENDUNG**

- Befestigung von MiniTec Profilverbinder und Schrauben aller Art

**KOMBI-6-KT STIFTSCHLÜSSEL**

Art.-Nr. --,----/-

**TECHN. DATEN / LIEFERUMFANG**

- Werkzeug verchromt
- einseitig mit Kugelkopf
- SW 4 **Art.-Nr. 26.1811/0**  
Gewicht 0,016 kg
- SW 5 **Art.-Nr. 26.1085/0**  
Gewicht 0,030 kg

**ANWENDUNG**

- Befestigung von MiniTec Profilverbinder und Schrauben aller Art

**6-KT-STIFTSCHLÜSSEL KUGELKOPF**

Art.-Nr. --.----/-

**TECHN. DATEN / LIEFERUMFANG**

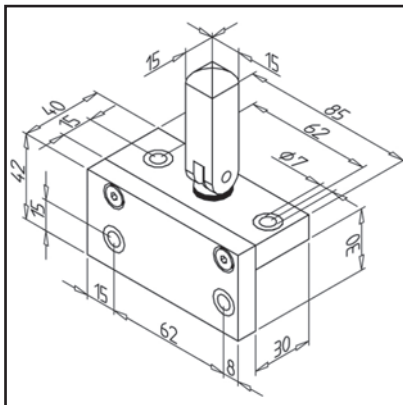
- Werkzeug verchromt
- Kunststoffheft grün
- SW 4 **Art.-Nr. 26.1817/0**  
Gewicht 0,038 kg
- SW 5 **Art.-Nr. 26.1084/0**  
Gewicht 0,056 kg

**ANWENDUNG**

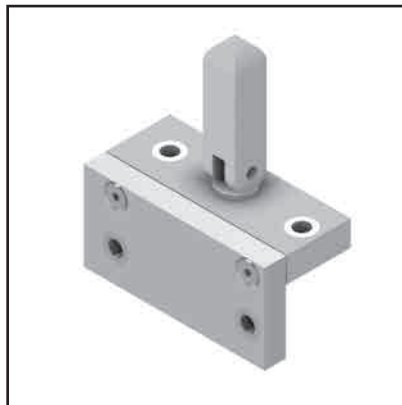
- Befestigung von MiniTec Profilverbinder und Schrauben aller Art

**BOHRLEHRE 30**

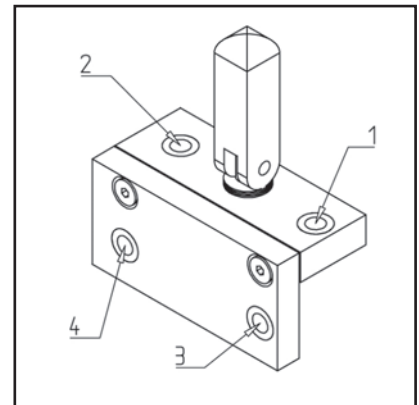
Art.-Nr. 26.1065/0

**TECHN. DATEN / LIEFERUMFANG**

- Stahl-Bohrbuchsen Ø 7 mm
- Exzenter-Klemmvorrichtung
- Material: Aluminium
- Gewicht = 0,282 kg/Stück

**ANWENDUNG**

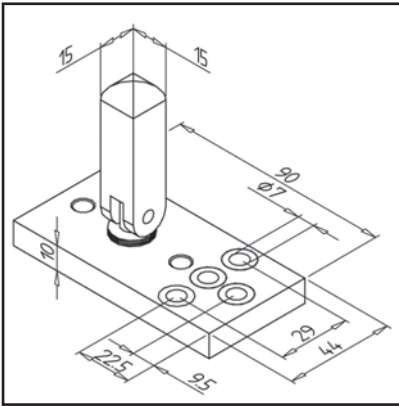
- 1) Vorbohrung für Schraubverbindung
- 2) Anschlussbohrung auf Profilfläche für Pneumatikverschraubungen
- 3) Vorbohrung für Stufenbohrung für Schraubverbindung von Profil 32 x 32
- Passend für alle Profile der Profilsérie 30

**MONTAGE**

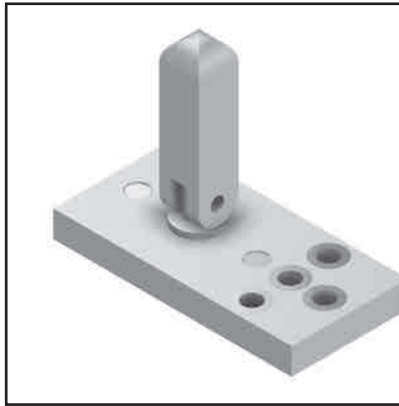
- Bohrlehre an Profilnut festklemmen und mit entsprechendem Bohrer durch vorgesehene Buchse bohren
- Die Bohrung Ø 7 mm kann mit Verschluss-Stopfen 7 **Art.-Nr. 22.1215/1** verschlossen werden, insbesondere sollte dieser bei unseren geschlossenen G-Profilen verwendet werden

**BOHRLEHRE 45**

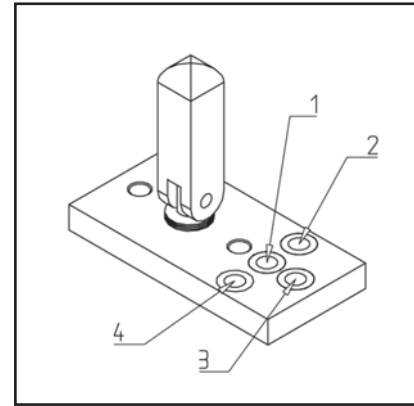
Art.-Nr. 26.1092/0

**TECHN. DATEN / LIEFERUMFANG**

- Stahl-Bohrbuchsen  $\varnothing$  7 mm
- Exzenter-Klemmvorrichtung
- Material: Aluminium
- Gewicht = 0,220 kg/Stück

**ANWENDUNG**

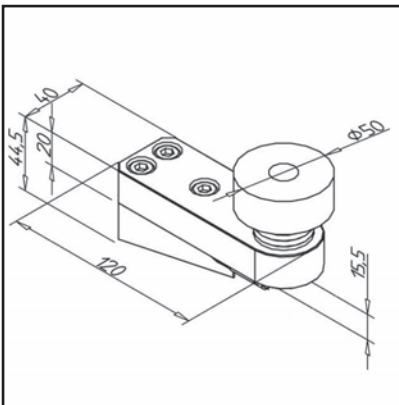
- 1) Vorbohrung für Schraubverbindung
- 2) Anschlussbohrung auf Profilfläche für Pneumatikverschraubungen
- 3) Vorbohrung für Stufenbohrung für Schraubverbindung von Profil 32 x 32
- Passend für alle Profile der Profilsreihe 45

**MONTAGE**

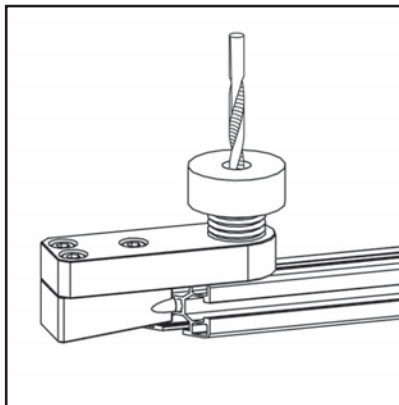
- Bohrlehre an Profilveranker festklemmen und mit entsprechendem Bohrer durch vorgesehene Buchse bohren
- Die Bohrung  $\varnothing$  7 mm kann mit Verschlussstopfen 7 **Art.-Nr. 22.1215/1** verschlossen werden, insbesondere sollte dieser bei unseren geschlossenen G-Profilen verwendet werden

**BOHRLEHRE FÜR GEHRUNGSVERBINDER 30**

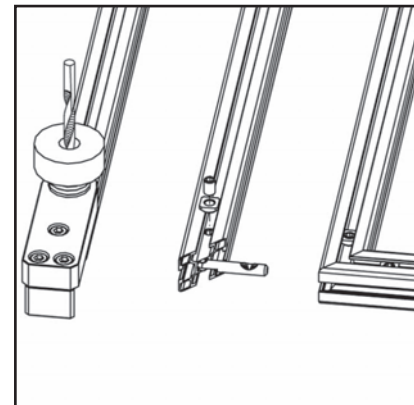
Art.-Nr. 26.1063/0

**TECHN. DATEN / LIEFERUMFANG**

- Zentrierdorn: Stahl
- Fixierschraube: Kunststoff mit Stahl-Bohrbuchse
- Material: Aluminium
- Gewicht = 0,408 kg/Stück

**ANWENDUNG**

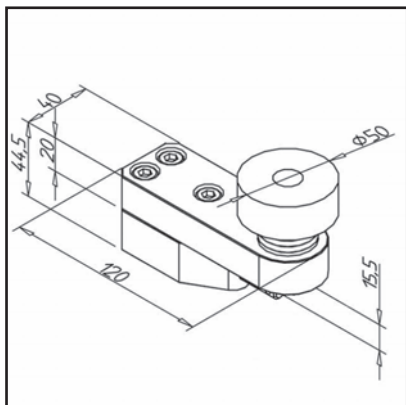
- Herstellung der Befestigungsbohrung für Gehrungsverbinder 30 in Abhängigkeit vom Gehrungswinkel
- Passend für alle Profile der Profilsreihe 30

**MONTAGE**

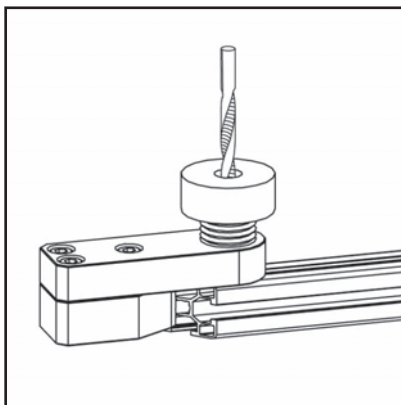
- Profil im gewünschten Winkel schneiden
- Lehrdorn bis Anschlag einschieben, Kunststoff-Fixierschraube anziehen
- Bohrung  $\varnothing$  8,0 mm in entsprechender Tiefe durch Bohrbuchse ins Profil einbringen
- Gehrungsverbinder 30 **Art.-Nr. 21.1890/0** einsetzen

**BOHRLEHRE FÜR GEHRUNGSVERBINDER N30**

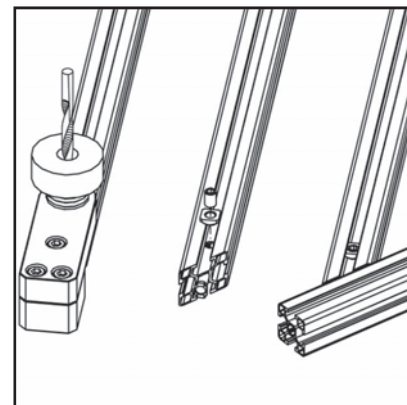
Art.-Nr. 26.1056/0

**TECHN. DATEN / LIEFERUMFANG**

- Zentrierdorn: Stahl
- Fixierschraube: Kunststoff mit Stahl-Bohrbuchse
- Gewicht = 0,477 kg/Stück

**ANWENDUNG**

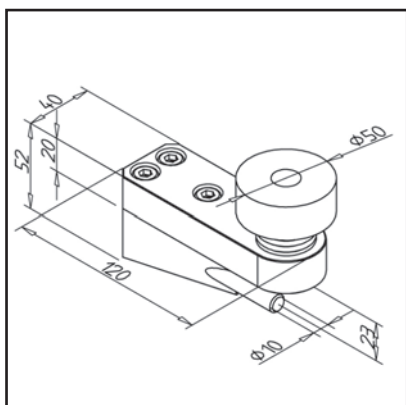
- Herstellung der Befestigungsbohrung für Gehrungsverbinder N30 in Abhängigkeit vom Gehrungswinkel
- Passend für alle Profile der Profilsreihe 30

**MONTAGE**

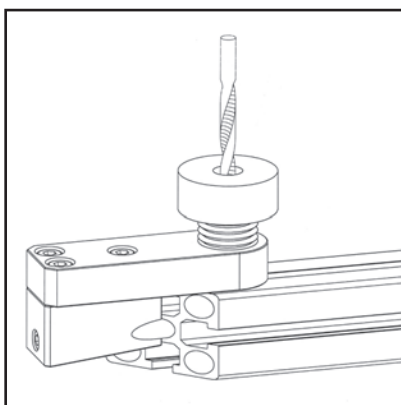
- Profil im gewünschten Winkel schneiden
- Lehdorn bis Anschlag einschieben, Kunststoff-Fixierschraube anziehen
- Bohrung  $\varnothing$  8,0 mm in entsprechender Tiefe durch Bohrbuchse ins Profil einbringen
- Gehrungsverbinder N30 **Art.-Nr. 21.0945/0** einsetzen

**BOHRLEHRE FÜR GEHRUNGSVERBINDER 45**

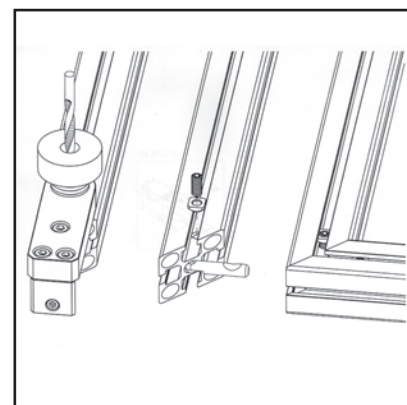
Art.-Nr. 26.1050/0

**TECHN. DATEN / LIEFERUMFANG**

- Material: Aluminium
- Zentrierdorn: Stahl
- Fixierschraube: Kunststoff mit Stahl-Bohrbuchse
- Gewicht = 0,450 kg/Stück

**ANWENDUNG**

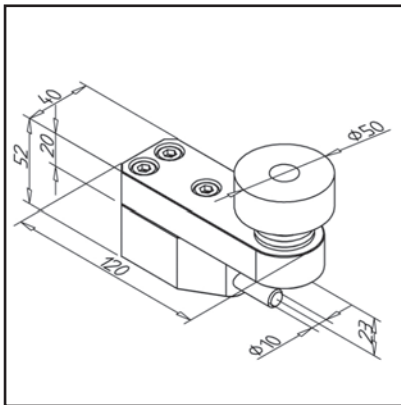
- Herstellung der Befestigungsbohrung für Gehrungsverbinder 45 in Abhängigkeit vom Gehrungswinkel
- Passend für alle Profile der Profilsreihe 45

**MONTAGE**

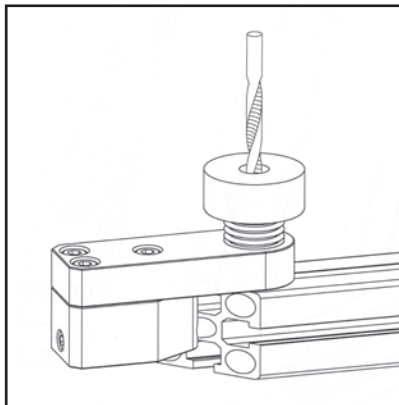
- Profil im gewünschten Winkel schneiden, Zentralbohrung auf  $\varnothing$  10,1 mm aufbohren mit Stufenbohrer **Art.-Nr. 26.1816/0**
- Lehdorn bis Anschlag einschieben, Kunststoff-Fixierschraube anziehen
- Bohrung  $\varnothing$  8,0 mm in entsprechender Tiefe durch Bohrbuchse ins Profil einbringen
- Gehrungsverbinder einsetzen

**BOHRLEHRE FÜR GEHRUNGSVERBINDER N 45**

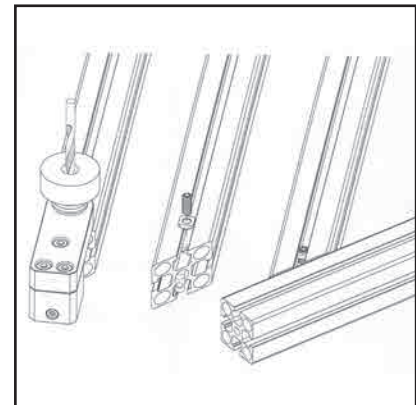
Art.-Nr. 26.1060/0

**TECHN. DATEN / LIEFERUMFANG**

- Material: Aluminium
- Zentrierdorn: Stahl
- Fixierschraube: Kunststoff mit Stahl-Bohrbuchse
- Gewicht = 0,556 kg/Stück

**ANWENDUNG**

- Herstellung der Befestigungsbohrung für Gehrungsverbinder N45 in Abhängigkeit vom Gehrungswinkel
- Passend für alle Profile der Profilsreihe 45

**MONTAGE**

- Profil im gewünschten Winkel schneiden, Zentralbohrung auf  $\varnothing 10,1$  mm aufbohren mit Stufenbohrer **Art.-Nr. 26.1816/0**
- Lehdorn bis Anschlag einschieben, Kunststoff-Fixierschraube anziehen
- Bohrung  $\varnothing 8,0$  mm in entsprechender Tiefe durch Bohrbuchse ins Profil einbringen
- Gehrungsverbinder einsetzen

**MASCHINEN-GEWINDEFORMER M8**

Art.-Nr. 26.1082/0

**TECHN. DATEN / LIEFERUMFANG**

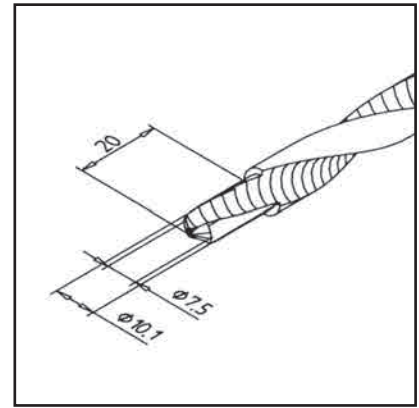
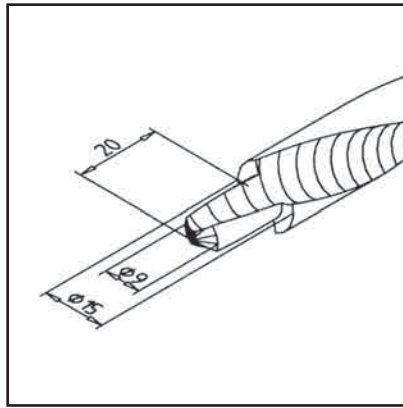
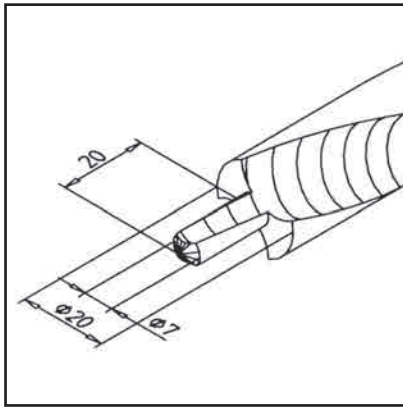
- HSS-Werkzeugstahl
- Gewicht = 0,031 kg/Stück

**ANWENDUNG**

- Spanlose Herstellung von Zentralgewinde M8 in allen Profilen

## STUFENBOHRER

Art.-Nr. --,----/-



## TECHN. DATEN / LIEFERUMFANG

- HSS-Werkzeugstahl
- Stufenbohrer 20 **Art.-Nr. 26.1813/0**  
Stufen:  $\varnothing$  7 mm /  $\varnothing$  20 mm  
Schaft: MK 2  
Gewicht: 0,2650 kg
- Stufenbohrer 15 **Art.-Nr. 26.1815/0**  
Stufen:  $\varnothing$  9 mm /  $\varnothing$  15 mm  
Schaft: zylindrisch  $\varnothing$  15 mm  
Gewicht: 0,1350 kg

- Stufenbohrer 10,1 **Art.-Nr. 26.1816/0**  
Stufen:  $\varnothing$  7,5 mm /  $\varnothing$  10,1 mm  
Schaft: zylindrisch  $\varnothing$  10,1 mm  
Gewicht: 0,0520 kg

## ANWENDUNG

- Stufenbohrer 20  
Herstellung von Stufenbohrungen für Anschluss- und Stoßverbinder 20 in Profilen der Serie 45
- Stufenbohrer 15  
Herstellung von Stufenbohrungen für Anschluss- und Stoßverbinder 15 in Profilen der Serie 45, Schmalseiten 19 und 32
- Stufenbohrer 10,1  
Aufbohren der Zentralbohrung in Profilen der Serie 45 für Gehrungsverbindungen

## IMPULSSCHRAUBER PISTOLENFORM

Art.-Nr. 26.0800/0



## TECHN. DATEN / LIEFERUMFANG

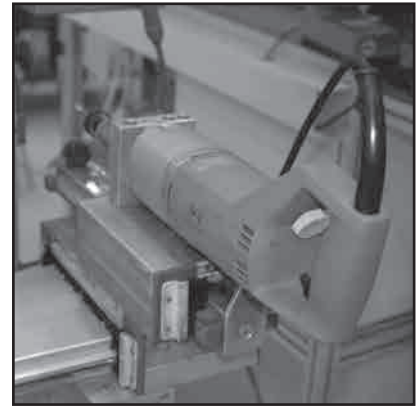
- Impulsschrauber pneumatisch angetrieben
- Schnellwechselfutter 1/4"
- Anschluss mit 1/4" Schnellkupplung
- Magnet-Bit-Halter mit Torx-Bit T40
- Luftverbrauch ca. 0,4 m<sup>3</sup>/min
- Drehzahl im Leerlauf ca. 7000 Rpm
- Drehmoment ca. 20 Nm  
(ohne Drehmomentabschaltung)
- Gewicht = 0,991 kg/Stück

## ANWENDUNG

- Zum Einschrauben von selbstformenden Schrauben für MiniTec Profilverbinder
- Durch Vorschalten eines Hydraulikelementes wird ein weicher Schlag erzeugt, dadurch besonders gelenkschonendes Arbeiten

**GEWINDEFORMMASCHINE**

Art.-Nr. 26.1910/0

**TECHN. DATEN / LIEFERUMFANG**

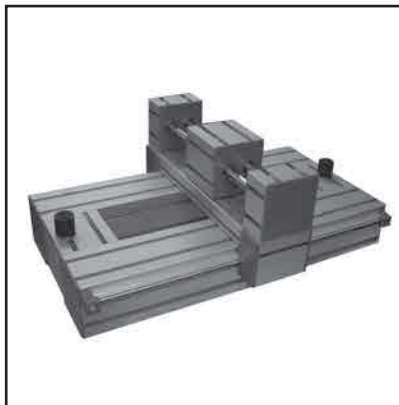
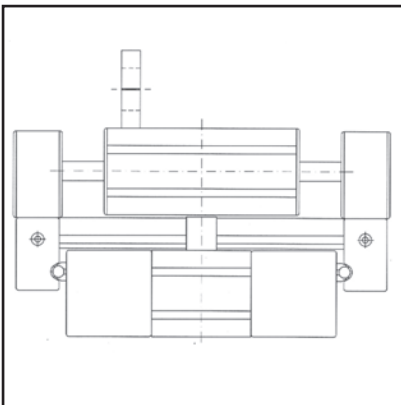
- Automatischer Drehrichtungswechsel, Schnellrücklauf, 230 V, 450 W
- Für Gewinde bis M10
- Komplett mit Futter
- Spindelhalshalbes Ø 43 mm
- Gewicht = 1,700 kg/Stück

**ANWENDUNG**

- Rationelle Gewindeherstellung in Verbindung mit Gewindeformvorrichtung

**GEWINDEFORMVORRICHTUNG**

Art.-Nr. 26.1970/0

**TECHN. DATEN / LIEFERUMFANG**

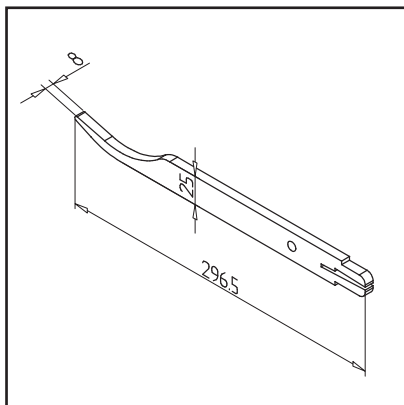
- Aus MiniTec-Aluminiumprofilen
- Zweiachsenschlitten mit Maschinenaufnahme für Gewindeschneid- oder Bohrmaschinen mit Spindelhalshalbes Ø 43 mm
- Komplett mit Untergestell
- Ohne Maschine
- Gewicht = 16,000 kg/Stück

**ANWENDUNG**

- Rationelle Gewindeherstellung
- Rationelles Ansenken oder Aufbohren der Zentralbohrung
- Wahlweise mit 1 - 4 Oberschlitten für bis zu 4 Maschinen lieferbar

**NUTENÖFFNER**

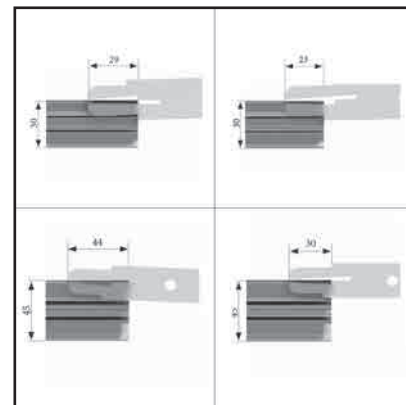
Art.-Nr. 26.0815/0

**TECHN. DATEN / LIEFERUMFANG**

- Stahl, rostfrei, gestrahlt
- Gewicht = 0,356 kg/Stück

**ANWENDUNG**

- Rationelles Öffnen geschlossener Nuten an MiniTec-Aluminiumprofilen, z. B. zum Einbau von Flächenelementen, Anbau von Linearführungen etc.
- Rationelles Ausbrechen der Nutenabdeckung zur Montage von MiniTec-Profilverbindern
- Passend zu Profilerie 30
- Passend zu Profilerie 45

**VERWENDUNG**

- Geschlitztes Ende des Werkzeuges an Profillende auf Nutenabdeckung aufstecken und durch mehrmaliges Schwenken nach oben aufbrechen. Die entstandene Ausbrechung ist ausgelegt zur Montage von MiniTec-Profilverbindern
- Nach Montage wird diese mit Abdeckkappe G **Art.-Nr. 22.1056/0** bei 45er Profilerie und Abdeckkappe G **Art.Nr. 22.1182/1** bei 30er Profilerie verschlossen
- Gebogenes Ende des Werkzeuges an Profillende unter die Nutabdeckung schieben und in gewünschte Länge aufhebeln. Zu weit geöffnete Nuten mit Abdeckprofil verschließen

**ENTGRATWERKZEUG**

Art.-Nr. 26.0813/0

**TECHN. DATEN / LIEFERUMFANG**

- Kunststoffgriff
- Austauschbares Entgratwerkzeug
- Gewicht = 0,090 kg/Stück

**ANWENDUNG**

- Zum Entgraten der Profilnut nach Öffnen der Nuten bei geschlossenen Profilen
- Zum Entgraten von Bohrungen
- Ausziehbar von ca 150-235 mm

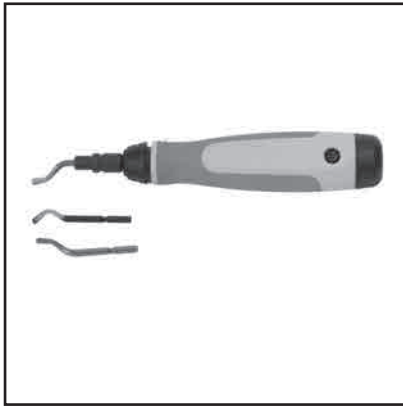
**MONTAGE**

- An Kante der zu entgratenden Stelle ansetzen und darüber entlang ziehen



**UNIVERSAL - ENTGRATER MIT S - KLINGE**

Art.-Nr. 26.1150/0

**TECHN. DATEN / LIEFERUMFANG**

- Kunststoffgriff
- Austauschbares Entgratwerkzeug
- 3 unterschiedliche Klingen
- Gewicht = 0,082 kg/Stück

**ANWENDUNG**

- Zum Entgraten der Profilnut nach Öffnen der Nuten bei geschlossenen Profilen
- Zum Entgraten von Bohrungen
- Ausziehbar von ca 150-235 mm

**MONTAGE**

- An Kante der zu entgratenden Stelle ansetzen und darüber entlang ziehen

**NUTENENTGRATER**

Art.-Nr. 26.0818/0

**TECHN. DATEN / LIEFERUMFANG**

- Kunststoffgriff
- Austauschbares Entgratwerkzeug
- Gewicht = 0,084 kg/Stück

**ANWENDUNG**

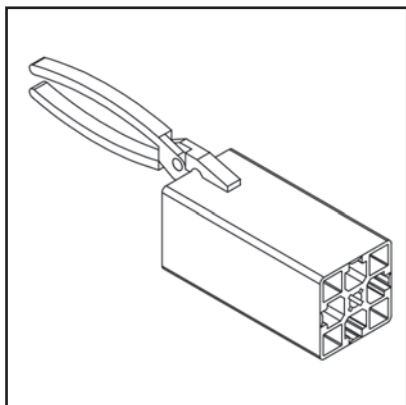
- Zum Entgraten der Profilnut nach Öffnen der Nuten bei geschlossenen Profilen
- Zum Entgraten von Bohrungen
- Ausziehbar von ca 150-235 mm

**MONTAGE**

- An Kante der zu entgratenden Stelle ansetzen und darüber entlang ziehen

**FLACHZANGE**

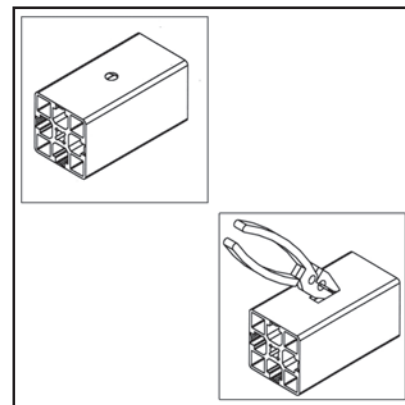
Art.-Nr. 26.0814/0

**TECHN. DATEN / LIEFERUMFANG**

- Metallzange mit Kunststoffgriff
- Gewicht = 0,150 kg/Stück

**ANWENDUNG**

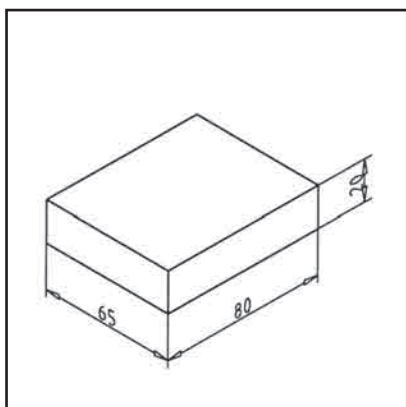
- Zum Aufbrechen der Profilnut bei geschlossenen Profilen

**MONTAGE**

- Flachzange an geschlossene Nut ansetzen und durch mehrmaliges Schwenken Nut ausbrechen

**ELOXALRADIERER**

Art.-Nr. 26.0811/0

**TECHN. DATEN / LIEFERUMFANG**

- Elastisch gebundenes Schleifmittel
- Gewicht = 0,138 kg/Stück

**ANWENDUNG**

- Zum Entfernen von kleinen Kratzern in der Eloxalschicht
- Zum Angleichen von „Schattierungen“ der Eloxalschicht

**MONTAGE**

- Auch für schwer zugängliche Stellen (einfach mit dem Messer zuschneiden)
- Trocken und nass anwendbar – Wasser verstärkt die Wirkung
- Gleichmäßiges Schlibbild ohne Körperkraft
- Wasser- und ölbeständig
- Umweltfreundlich, da keine Reinigungs- oder Hilfsmittel erforderlich sind
- Lange Lebensdauer

NEUE ANWENDUNGSMÖGLICHKEITEN MIT GEBOGENEN PROFILLEN

- Dekorative Designs für Messe oder Büro
- Funktionale Gestaltung für schwenkbare Konstruktionen
- Maschinenverkleidung
- Sicherheitseinrichtungen in Maschinenkontur
- Kurvengeführte Rollenbahnen
- Ergonomische Gestaltung von Arbeitsplätzen

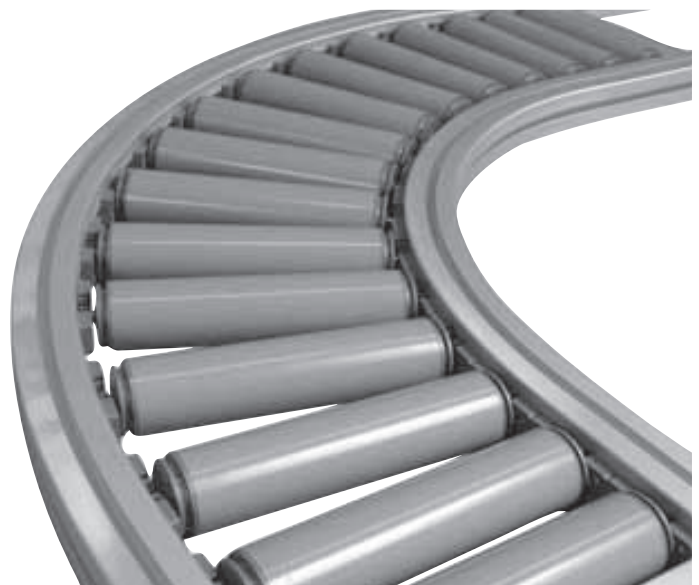
Technische Merkmale

Für Standard-Anwendungen werden eloxierte Profile eingesetzt. Kleine Risse in der Eloxalschicht können in dem gebogenen Bereich allerdings auftreten. Nachträgliches Eloxieren ist nur bei kleinen Radien oder hohen optischen Ansprüchen erforderlich.

Der Profilquerschnitt wird beim Biegeprozess nicht verändert. Alle Komponenten sind weiter einsetzbar. Für die Verwendung des MiniTec-Profilverbinders ist ein Mindestradius von 400 mm zu beachten.

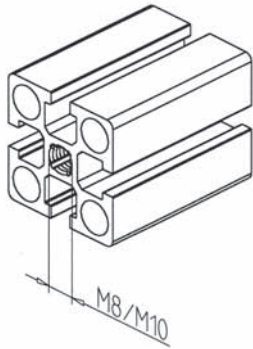
G-Profile mit geschlossenen Nuten und UL-Profile sind für den Biegeprozess nicht geeignet.

Der Biegevorgang ist CNC-gesteuert und kontrolliert. Mit dieser Biegetechnologie lassen sich verschiedene Radien am gleichen Profilstab realisieren.

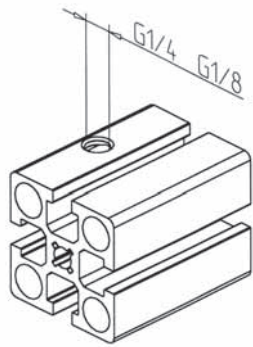


profile	POSITION	MIN. RADIUS
19 X 45		250
19 X 32		200 500
32 X 32 F		300
45 X 32 F		350 600
45 X 45 F 45 X 45		500
45 X 90 S		750

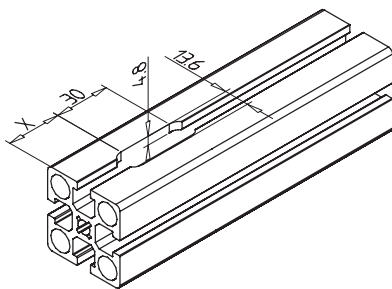
Das MiniTec-Profilssystem kommt mit einem Minimum an Bearbeitung aus. Die wesentlichen Arbeitsgänge sind Ablängen und Gewindeformen, in wenigen Ausnahmefällen sind Bohrarbeiten notwendig.



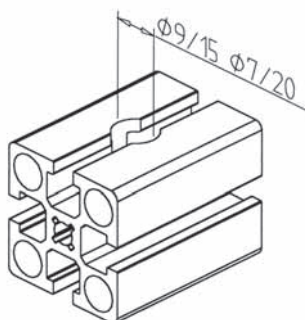
– Gewinde M8 / M10



– Gewinde G1/4 G1/8



– Bearbeitung Einführtasche



– Stufenbohrung

**Gewinde M8 x 20** Art.-Nr. 25.1087/0  
stirnseitig in Zentralbohrung

**Gewinde M10 x 25** Art.-Nr. 25.1088/0  
stirnseitig in Zentralbohrung für Stellfüsse

**Gewinde G 1/4** Art.-Nr. 25.1089/0  
auf Profilfläche für Pneumatikanschluss

**Gewinde G 1/8** Art.-Nr. 25.1090/0  
auf Profilfläche für Pneumatikanschluss

**Gewinde G 1/4** Art.-Nr. 25.1091/0  
stirnseitig in Bohrung Ø 11,7 mm für  
Verschlusschraube,  
Pneumatikanschluss

**Durchgangsbohrung Ø 7 mm** Art.-Nr. 25.1092/0  
für Schraubverbindung

**Einführtasche** Art.-Nr. 25.0315/0  
auf Profileroberfläche zur nachträglichen  
Montage von Profilverbindern

**Stufenbohrung Ø9 / Ø15** Art.-Nr. 25.1085/0  
für Anschlussverbinder 15  
Art.-Nr. 25.1085/1

**Stufenbohrung Ø7 / Ø20** Art.-Nr. 25.1097/0  
für Anschluß- und Stoßverbinder

**Bearbeitung Gehrungsverbindung** Art.-Nr. 25.1072/0  
für Gehrungsverbinder (ohne Schnitt)

**Gehringsschnitt** Art.-Nr. 25.1072/1  
für Gehrungsverbinder  
(Siehe Kapitel Verbindungselemente/Gehrungsverbinder)

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20.1001/0 33

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21.0016/0 65, 76

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21.0818/0 65, 76

21.0893/0 507

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21.0905/0 90

21.0905/6 468

21.0917/0 492

21.0918/0 78

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21.0927/0 221

21.0928/0 222

21.0929/0 222

21.0940/0 441

21.0941/0 131

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21.0948/0 137

21.0949/0 137

21.0953/0 98

21.0954/0 97

21.0955/0 97

21.0962/0 122

21.0966/0 136

21.0969/0 89

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21.0993/0 491

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21.0994/1 492

21.0995/0 493

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21.1015/2 129

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21.1018/1 65

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21.1027/0 103

21.1029/0 70, 82

21.1030/0 84

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21.1057/0	148	21.1138/0	120	21.1235/0	74
21.1082/0	159	21.1139/0	140	21.1237/0	74
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21.1087/9	126	21.1171/0	74	21.1242/0	74
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21.1091/4	128	21.1172/0	74	21.1243/0	74
21.1092/1	123	21.1175/0	111	21.1243/1	74
21.1093/0	133	21.1187/0	112	21.1245/0	74
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21.1110/3	233	21.1212/0	74	21.1346/0	102

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21.1788/4	134	21.1883/0	149	21.2110/0	166
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21.1797/0	214	21.1894/0	149	21.2120/0	164
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21.1798/2	134	21.1945/1	74	21.2127/0	74
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21.2323/0	138
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21.2525/0	152
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21.2532/0	111

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22.1144/1	63
22.1146/1	63
22.1148/0	227
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22.1152/0	442
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22.1156/0	238
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22.1209/1	63
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23.0060/0	559
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24.1105/0	256
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24.1105/2	256
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24.1105/3	256
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24.1105/7	258
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24.1106/0	256
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24.1106/2	256
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24.1106/3	256
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24.1106/7	259
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24.1107/0	256
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24.1107/2	256
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24.1107/3	256
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24.1109/0	257
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24.1110/0	258
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24.1117/0	63
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24.1118/0	63
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24.1126/0	118
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24.1127/0	118
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24.1128/0	119
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24.1201/0	259
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24.1205/0	260
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24.1210/0	260
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26.0800/0	581
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26.0811/0	585
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26.0813/0	583
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26.0814/0	585
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26.0815/0	583
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26.0818/0	584
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26.1050/0	579
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26.1056/0	579
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26.1060/0	580
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26.1063/0	578
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26.1065/0	577
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26.1082/0	580
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26.1092/0	578
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26.1101/0	173
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26.1150/0	584
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26.1814/0	575
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26.1820/0	575
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26.1910/0	582
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26.1970/0	582
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26.3001/0	425
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26.3001/1	426
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26.3001/2	427
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26.3002/0	427
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26.3004/0	426
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27.0118/1	262
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27.0118/2	262
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27.0118/3	262
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27.0118/4	262
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27.0118/6	262
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27.0119/1	262	27.0125/3	262	27.0131/5	262
27.0119/2	262	27.0125/4	262	27.0131/6	262
27.0119/3	262	27.0125/5	262	27.0132/1	262
27.0119/4	262	27.0125/6	262	27.0132/2	262
27.0119/5	262	27.0126/1	262	27.0132/3	262
27.0119/6	262	27.0126/2	262	27.0132/4	262
27.0120/1	262	27.0126/3	262	27.0132/5	262
27.0120/2	262	27.0126/4	262	27.0132/6	262
27.0120/3	262	27.0126/5	262	27.0133/1	262
27.0120/4	262	27.0126/6	262	27.0133/2	262
27.0120/5	262	27.0127/1	262	27.0133/3	262
27.0120/6	262	27.0127/2	262	27.0133/4	262
27.0121/1	262	27.0127/3	262	27.0133/5	262
27.0121/2	262	27.0127/4	262	27.0133/6	262
27.0121/3	262	27.0127/5	262	27.0134/1	262
27.0121/4	262	27.0127/6	262	27.0134/2	262
27.0121/5	262	27.0128/1	262	27.0134/3	262
27.0121/6	262	27.0128/2	262	27.0134/4	262
27.0122/1	262	27.0128/3	262	27.0134/5	262
27.0122/2	262	27.0128/4	262	27.0134/6	262
27.0122/3	262	27.0128/5	262	27.0135/1	262
27.0122/4	262	27.0128/6	262	27.0135/2	262
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27.0122/6	262	27.0129/2	262	27.0135/4	262
27.0123/1	262	27.0129/3	262	27.0135/5	262
27.0123/2	262	27.0129/4	262	27.0135/6	262
27.0123/3	262	27.0129/5	262	27.0136/1	262
27.0123/4	262	27.0129/6	262	27.0136/2	262
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27.0123/6	262	27.0130/2	262	27.0136/4	262
27.0124/1	262	27.0130/3	262	27.0136/5	262
27.0124/2	262	27.0130/4	262	27.0136/6	262
27.0124/3	262	27.0130/5	262	27.0137/1	262
27.0124/4	262	27.0130/6	262	27.0137/2	262
27.0124/5	262	27.0131/1	262	27.0137/3	262
27.0124/6	262	27.0131/2	262	27.0137/4	262
27.0125/1	262	27.0131/3	262	27.0137/5	262
27.0125/2	262	27.0131/4	262	27.0137/6	262

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28.0011/2	302
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28.0013/1	300
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28.0082/6	326
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28.0151/0	348
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28.0174/0	280
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28.0264/0	278
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28.0265/0	279
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28.0270/0	322
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28.0350/0	328
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28.0352/0	329
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28.0353/0	330
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28.0354/0	328
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28.0502/0	285
28.0503/0	275
28.0504/0	275
28.0509/0	325
28.0509/1	325
28.0509/2	325
28.0509/3	325
28.0510/0	325
28.0510/1	325
28.0510/2	325
28.0510/3	325
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28.0600/0	276
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28.0614/0	325
28.0614/1	327
28.0614/2	325
28.0614/3	325
28.0614/4	325
28.0614/5	325
28.0614/6	325
28.0615/0	325
28.0615/2	325
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28.0615/6	325
28.0800/0	277
28.0801/0	278
28.0802/0	277
28.0808/0	307
28.0809/0	307
28.0810/0	314

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28.0811/0	315
28.0813/0	324
28.0814/0	323
28.0815/0	323
28.0820/0	303
28.0821/0	304
28.0822/0	303
28.1000/0	267
28.1000/1	267
28.1000/2	267
28.1001/0	267
28.1002/0	267
28.1002/1	267
28.1002/2	267

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29.0851/0	458
29.0852/0	457
29.5001/0	501
29.5002/0	502
29.5010/0	502
29.5019/0	482
29.5019/1	482
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29.5019/3	482
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29.5019/5	482
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29.5019/7	482
29.5019/8	482
29.5019/9	482
29.5022/0	494
29.5023/1	493
29.5025/0	509
29.5028/0	510

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29.5031/0	495
29.5034/0	513
29.5035/0	498
29.5036/0	499
29.5037/0	500
29.5040/0	499
29.5042/0	494
29.5046/0	511
29.5047/0	512
29.5048/0	512
29.5049/0	514
29.5051/0	514
29.5052/0	513
29.5055/0	510
29.5056/0	511
29.5057/0	482
29.5060/0	498
29.5069/0	497
29.5280/0	501
29.5310/0	500
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32.0111/3	363
32.0111/4	363
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32.0112/2	363
32.0112/3	363
32.0112/4	363
32.0113/0	363
32.0113/1	363
32.0113/2	363
32.0113/3	363

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32.0155/0	434	32.0541/5	400	32.0771/0	430
32.0160/0	434	32.0542/0	400	32.0772/0	430
32.0165/0	435	32.0542/5	400	32.0773/0	429
32.0201/0	415	32.0543/0	400	32.0774/0	429
32.0220/0	411	32.0543/5	400	32.0801/0	384
32.0222/0	412	32.0545/0	411	32.0806/0	378
32.0223/0	412	32.0547/0	423	32.0807/0	382
32.0224/0	413	32.0550/0	443	32.0808/0	382
32.0225/0	414	32.0553/0	446	32.0809/0	378
32.0226/0	413	32.0554/0	446	32.0810/0	379
32.0230/0	414	32.0560/0	443	32.0811/0	379
32.0306/0	415	32.0562/0	449	32.0812/0	380
32.0335/0	372	32.0569/0	445	32.0813/0	380
32.0360/0	372	32.0571/0	449	32.0814/0	381
32.0405/0	193	32.0572/0	448	32.0819/0	381
32.0406/0	193	32.0574/0	445	32.0876/0	403
32.0410/0	374	32.0575/0	444	32.0877/0	403
32.0440/0	374	32.0575/1	444	32.0901/0	438
32.0460/0	375	32.0580/0	437	32.1001/0	461
32.0490/0	374	32.0581/0	437	32.1002/0	460
32.0501/0	406	32.0583/0	438	32.1003/0	461
32.0502/0	428	32.0586/0	440	32.1004/0	460
32.0507/0	424	32.0601/0	420	32.1007/0	464
32.0512/0	406	32.0602/0	421	32.1011/0	469
32.0514/0	401	32.0605/0	409	32.1013/0	463
32.0516/0	401	32.0608/0	419	32.1017/0	462
32.0517/0	407	32.0609/0	420	32.1018/0	462
32.0518/0	407	32.0610/0	409	32.1021/0	469
32.0533/0	418	32.0615/0	421	32.1030/0	470
32.0534/0	419	32.0616/0	422	32.1031/0	470
32.0535/0	418	32.0617/0	422	32.1034/0	471
32.0536/0	417	32.0618/0	423	32.1035/0	471
32.0537/0	417	32.0703/0	431	32.1036/0	472
32.0538/0	416	32.0704/0	432	32.1169/0	388
32.0539/0	416	32.0705/0	432	32.1170/0	388
32.0540/0	400	32.0706/0	433	32.1171/0	388
32.0540/5	400	32.0769/0	463	32.2005/1	457
32.0541/0	400	32.0770/0	431	32.2010/0	456

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33.0021/0 250

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33.0080/1 251

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33.0081/0 251

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33.0081/1 251

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33.0086/0 250

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33.0087/0 250

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33.0089/0 250

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56.0101/0	567
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56.0103/0	567
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56.0122/0	567
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## **E9**

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## **P2**

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## A

Actuating Bow for security switch B2	233
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ADAPTER G32 / G32	97
Adapter 30 x 30 / G32	98
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Adapter flange 45	165
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Adjusting Unit VEW 45x90 F	332
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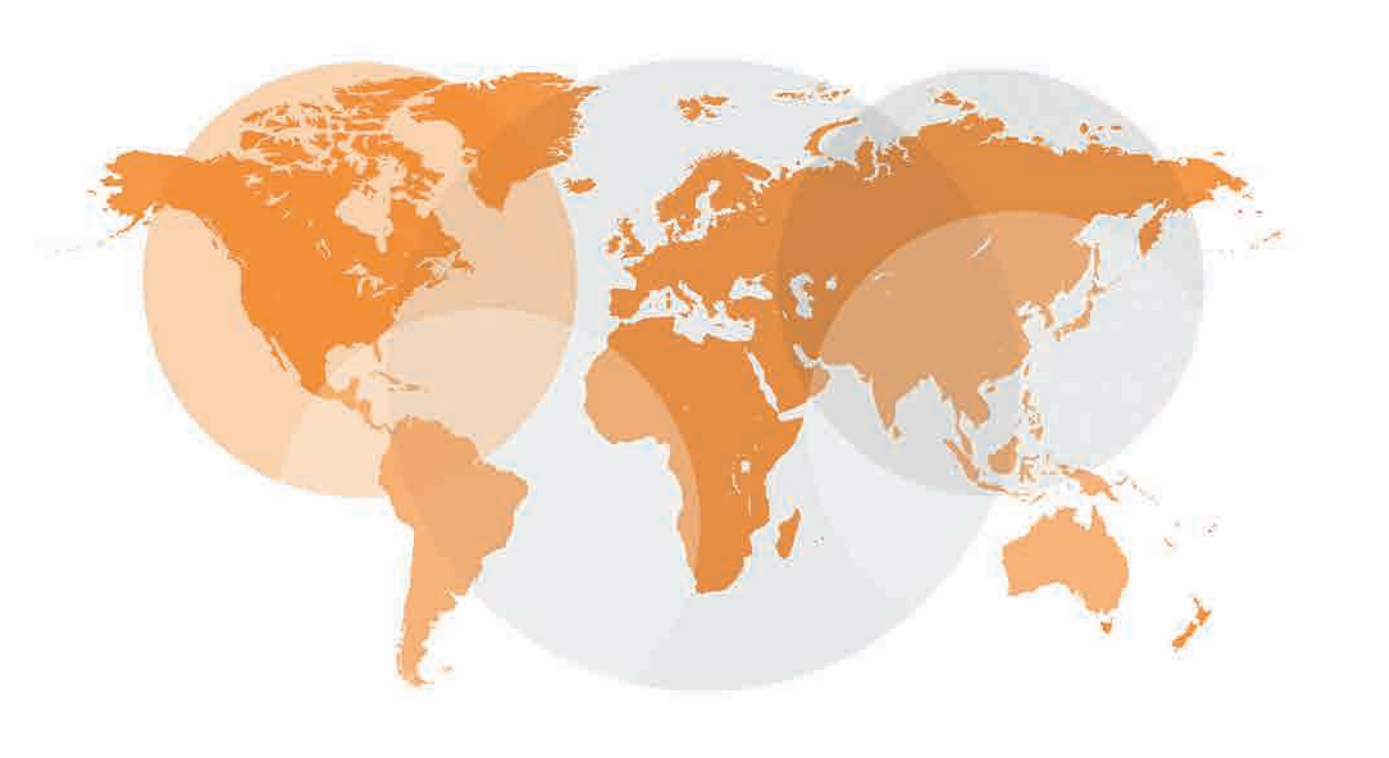
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**MINITEC WORLDWIDE**

**LOCATIONS AND SERVICE PARTNERS**



### MiniTec-Partners

Canada | USA | Venezuela | Brazil | Great Britain | France | Portugal | Spain | Italy | Belgium | Netherlands  
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Greece | Turkey | Israel | South Africa | India | Japan | Singapore | China | Australia | New Zealand