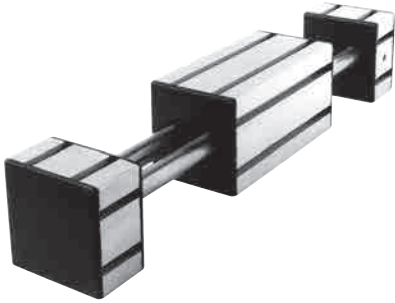


LINEAR SYSTEM LB

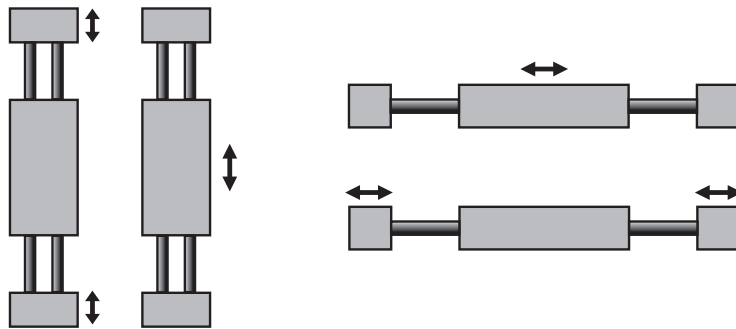


The LB guide is based on LME 20 linear ball bearings, which are incorporated in specially designed holes in our design profiles. Precision shafts D 20 mm give this guide high load capacity. Especially with short travel distances and high stroke frequency, the guide LB has significant advantages. Extremely 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.

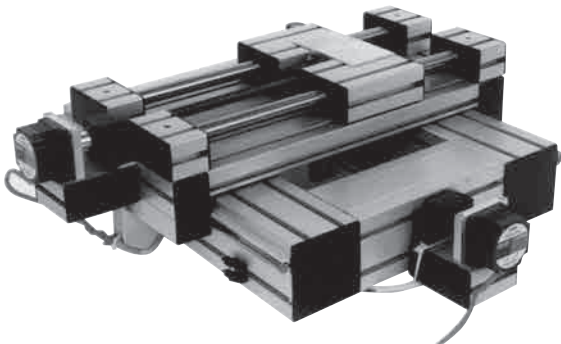
Calculation of the service life

$$L = \frac{C}{F} \cdot 10^5$$

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.



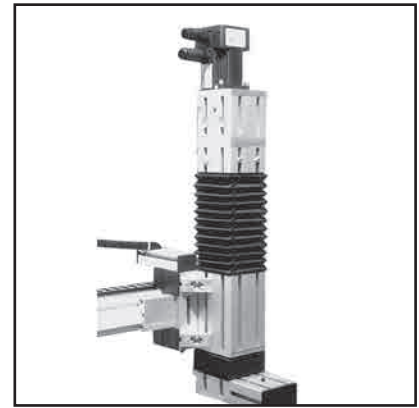
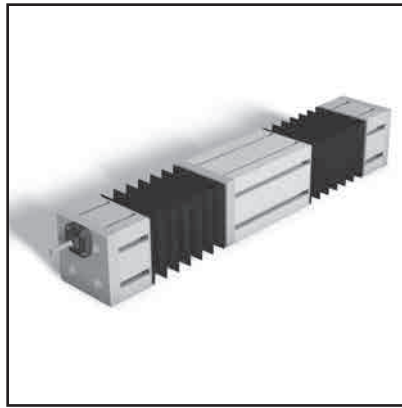
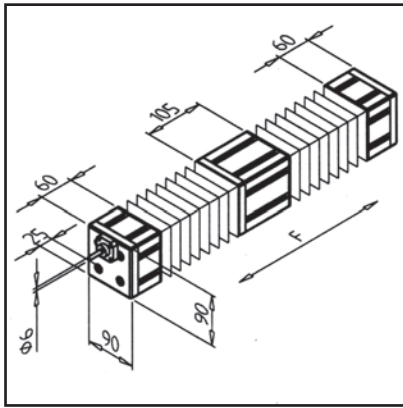
The axial securing takes place with one-component housing adhesive. The solid ball bushes ensure extreme ease of movement, play-free guidance and low noise with a long service life. When designing LB guide systems, it must be ensured that the shaft deflection does not exceed 0.5 ° due to the load.

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

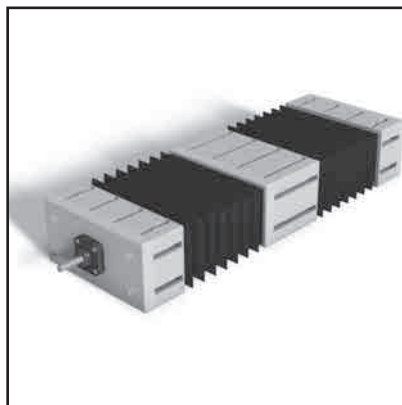
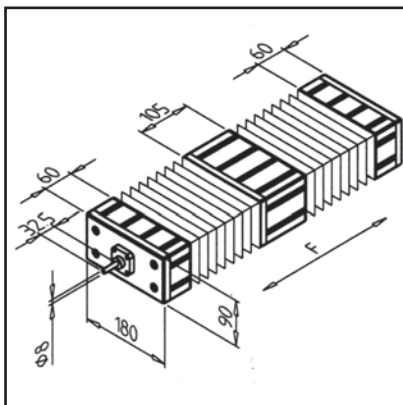
**APPLICATIONS**

- 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

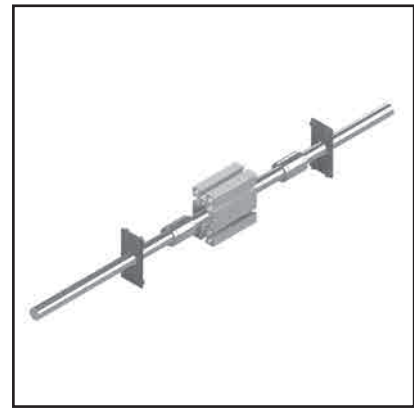
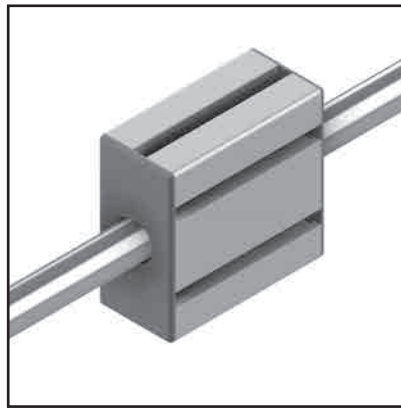
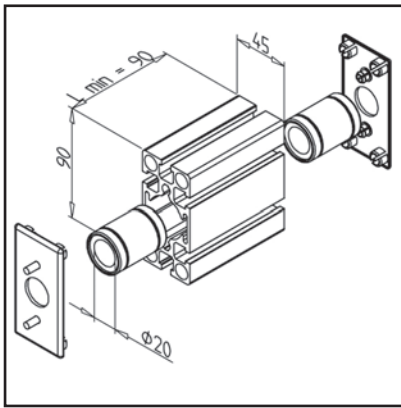
**APPLICATIONS**

- 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

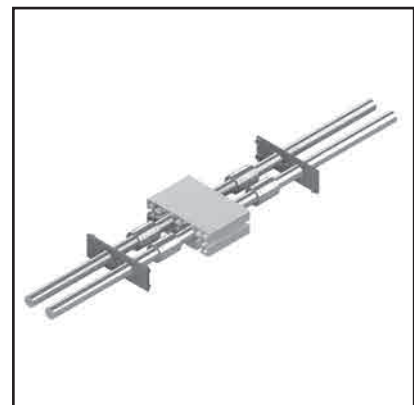
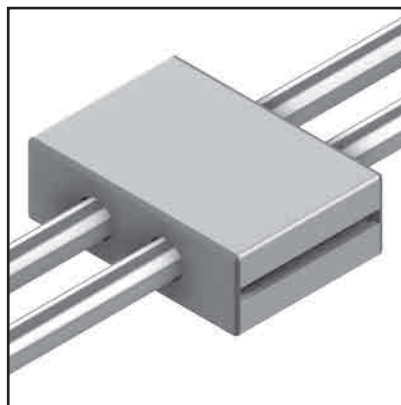
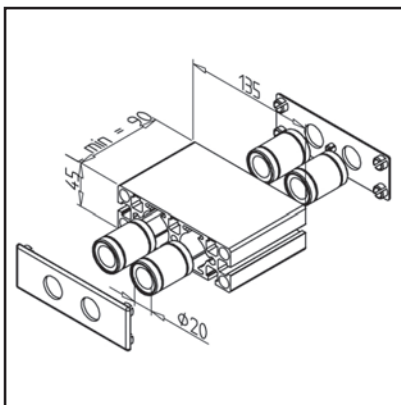
### ASSEMBLY

- 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

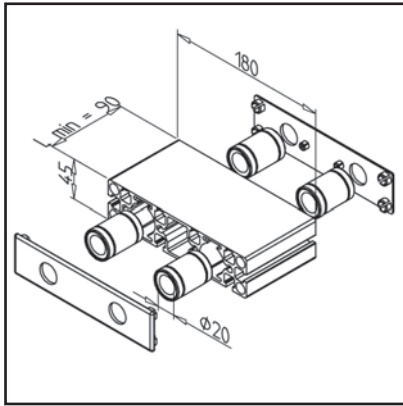
### ASSEMBLY

- Lead shaft through slide

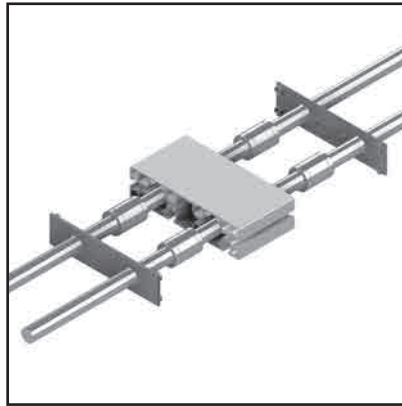
**SLIDE LB 45 X 180**

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

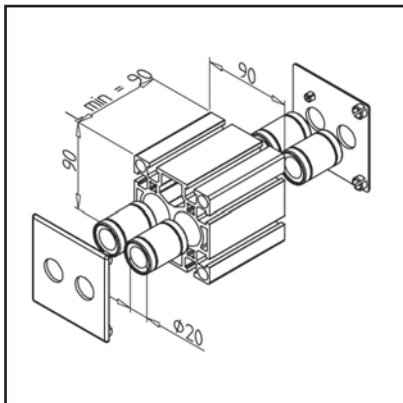
**ASSEMBLY**

- Lead shaft through slide

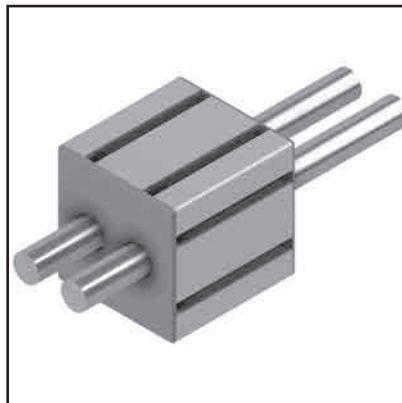
**SLIDE LB 90**

Part no.

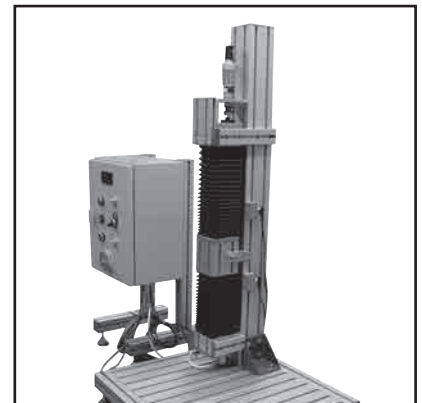
28.0152/0

**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

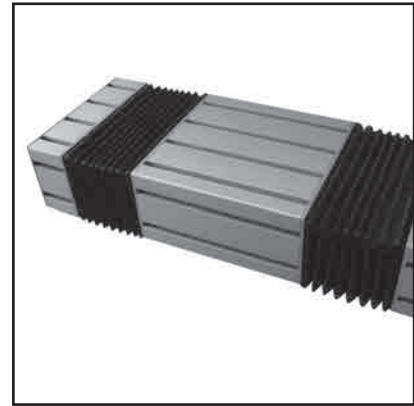
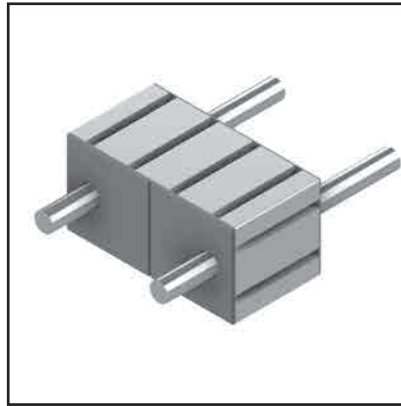
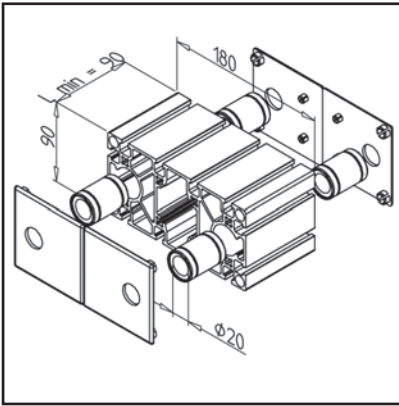
**ASSEMBLY**

- 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

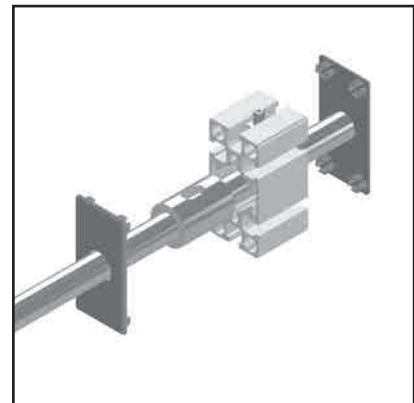
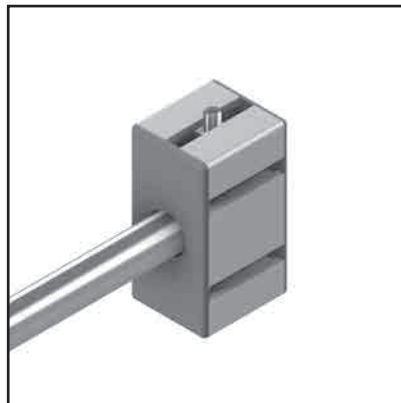
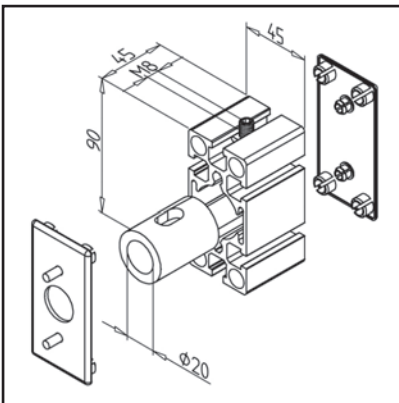
### ASSEMBLY

- 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  $\varnothing$  20 mm in MiniTec-Linear systems LB 45

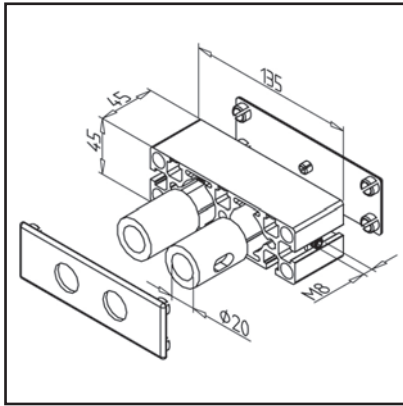
### ASSEMBLY

- Insert shaft
- Tighten with set screw M8 x 35

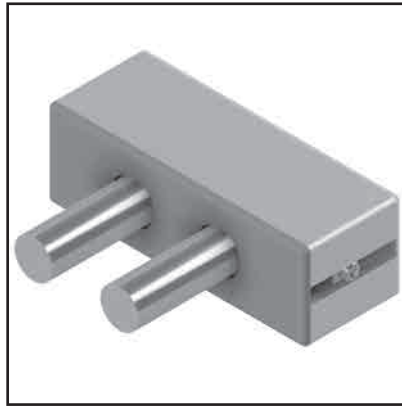
**SHAFT SUPPORT WB 45 X 135**

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

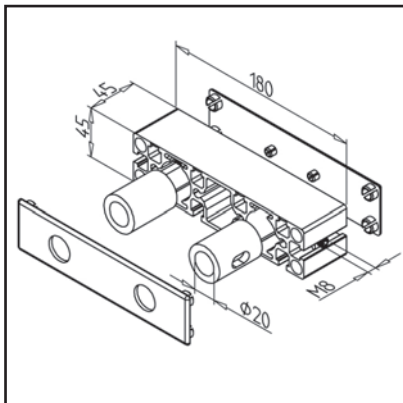
**ASSEMBLY**

- Insert shaft
- Tighten with set screw M8 x 35

**SHAFT SUPPORT WB 45 X 180**

Part no.

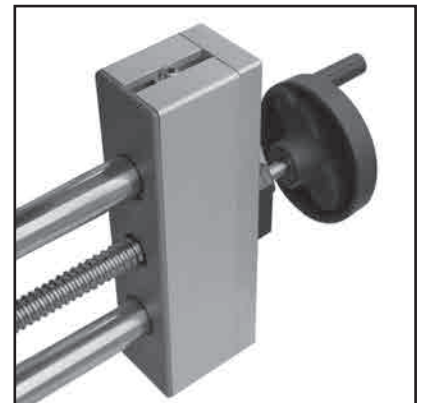
28.0159/0

**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

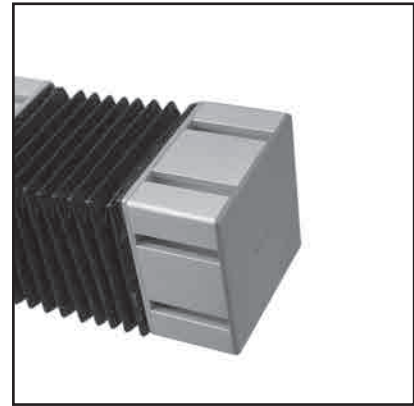
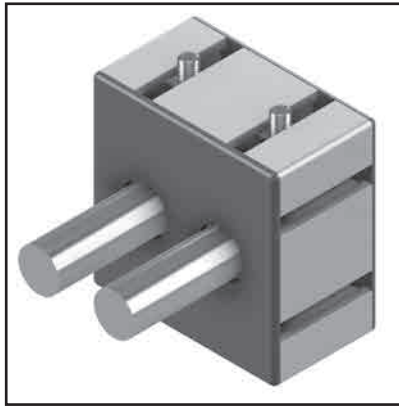
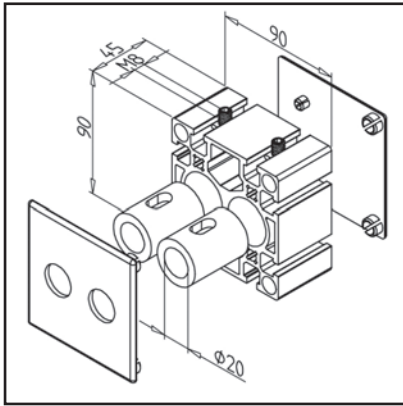
**ASSEMBLY**

- 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  $\varnothing$  20 mm in MiniTec-Linear systems LB 90

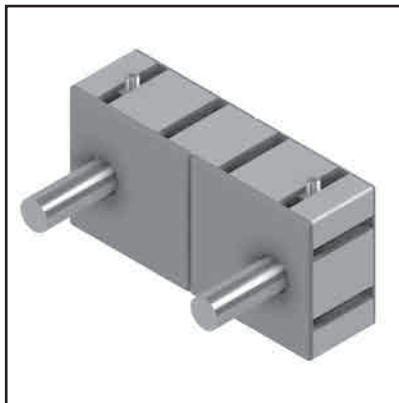
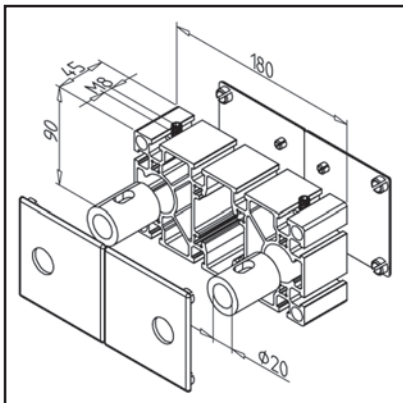
### ASSEMBLY

- 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  $\varnothing$  20 mm in MiniTec-Linear systems LB 180

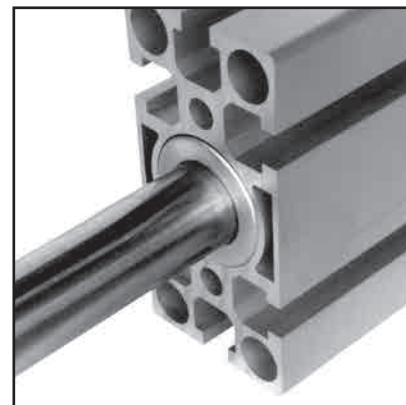
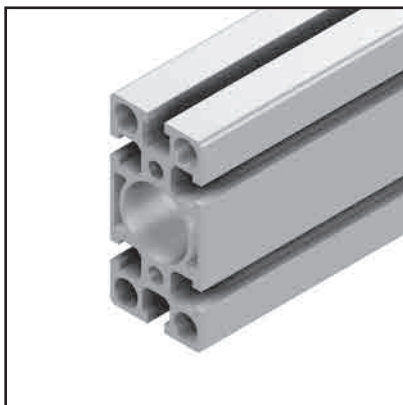
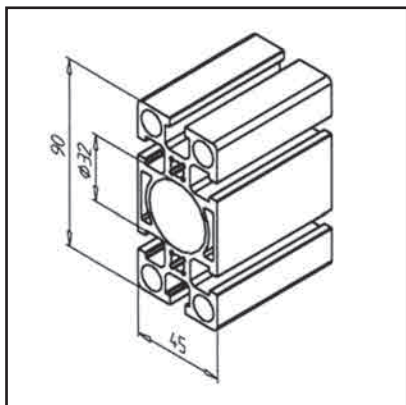
### ASSEMBLY

- 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

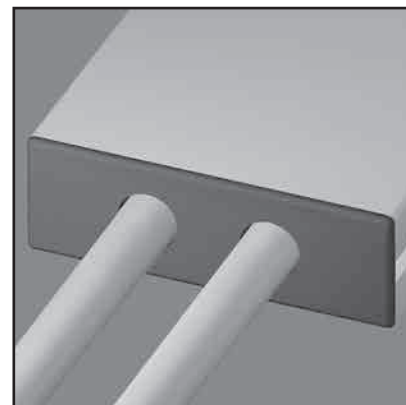
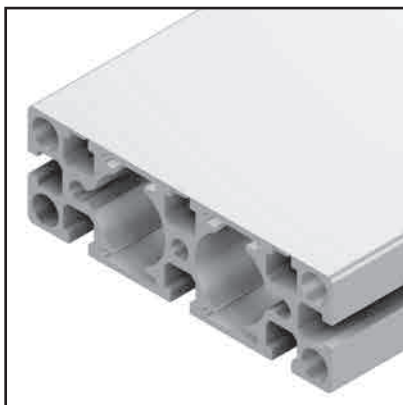
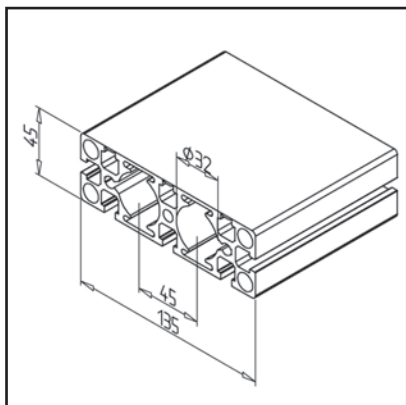
**ASSEMBLY**

- 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**

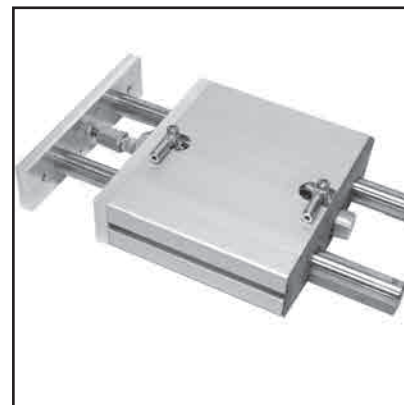
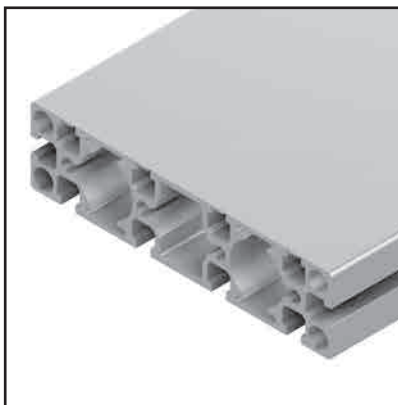
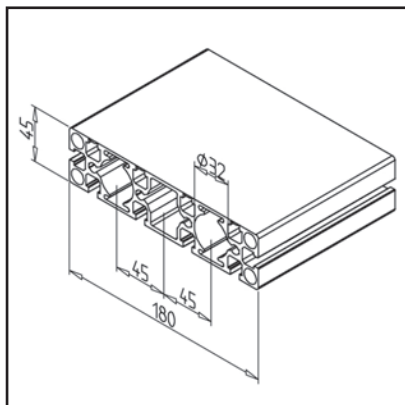
- MiniTec power-lock fastener
- closed grooves can be opened with the groove opener **part no. 26.0815/0** to the desired length



## 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

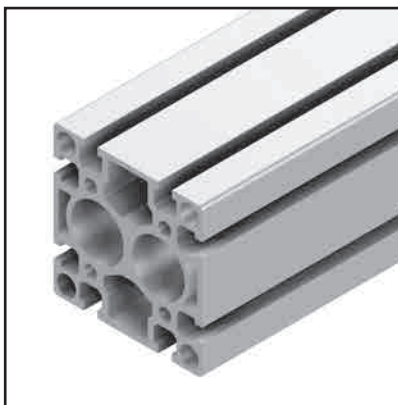
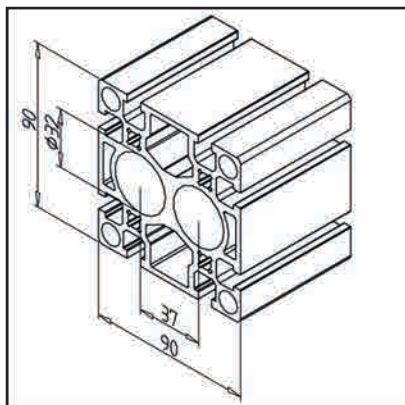
### ASSEMBLY

- 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

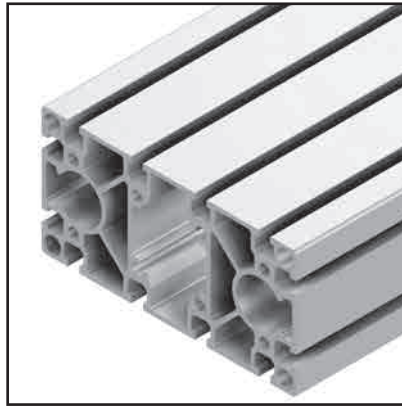
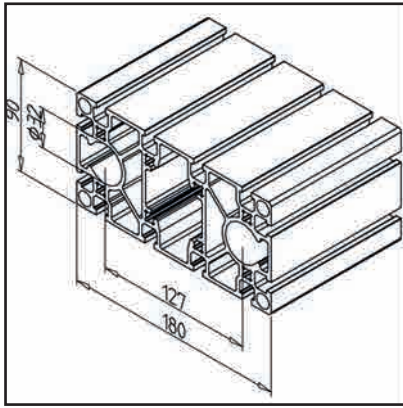
### ASSEMBLY

- 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

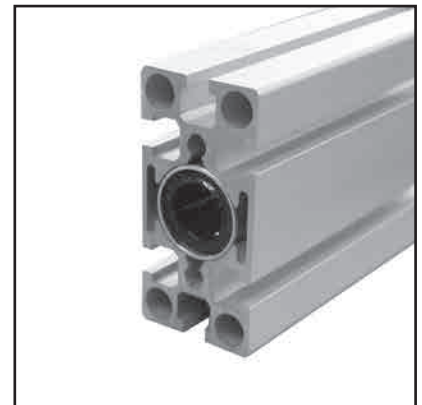
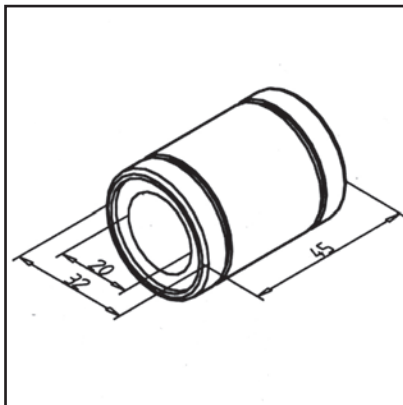
**ASSEMBLY**

- 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 N
- stat.  $C_0 = 1400 \text{ N}$
- Weight = 0.090 kg/piece

**APPLICATIONS**

- Precision linear guides
- Linear slide system LB
- Lifting-tables
- Quattro-units

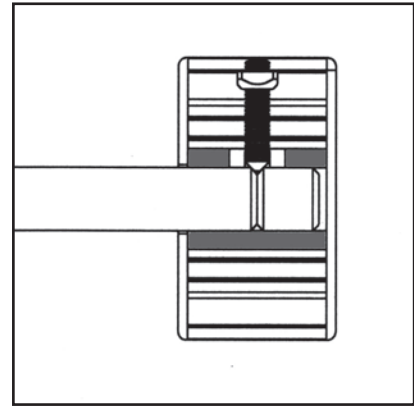
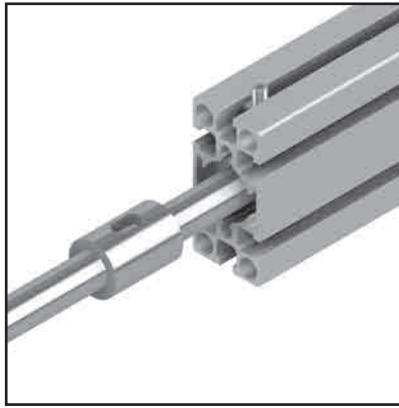
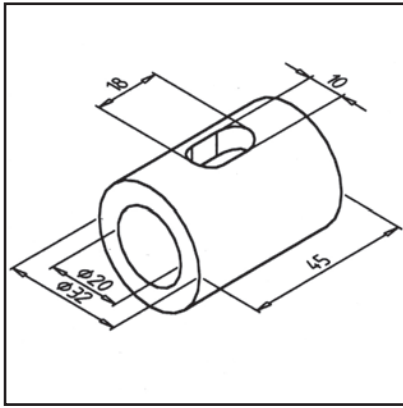
**ASSEMBLY**

- 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

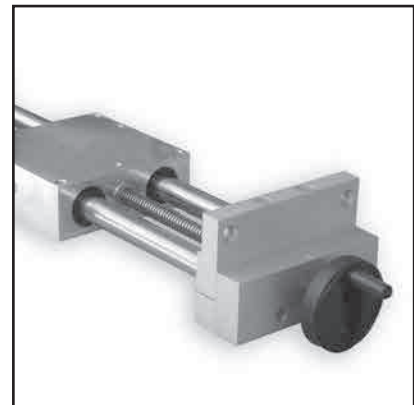
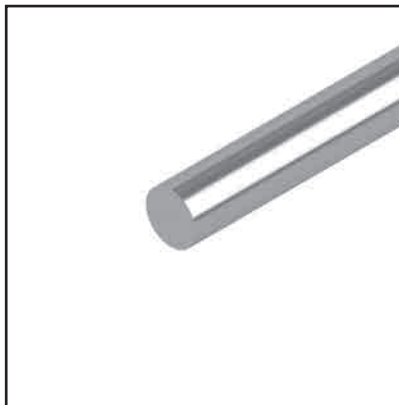
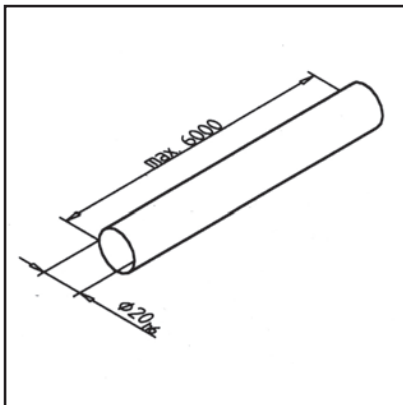
### ASSEMBLY

- 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

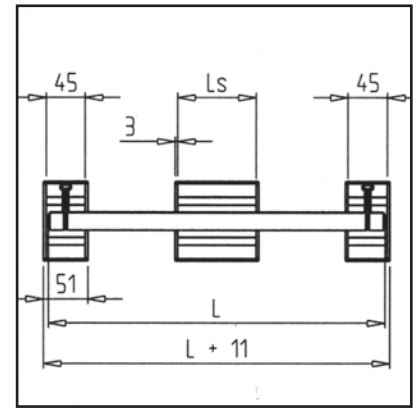
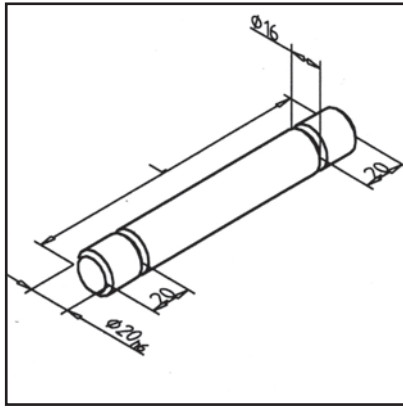
### ASSEMBLY

- 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

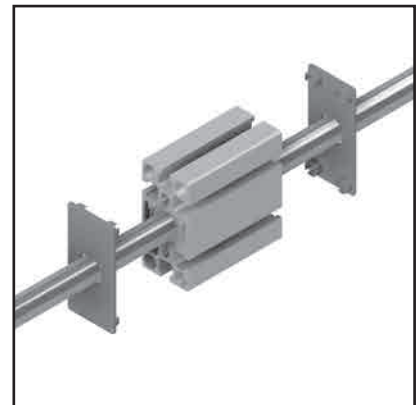
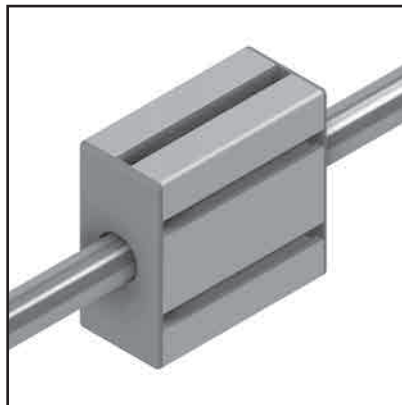
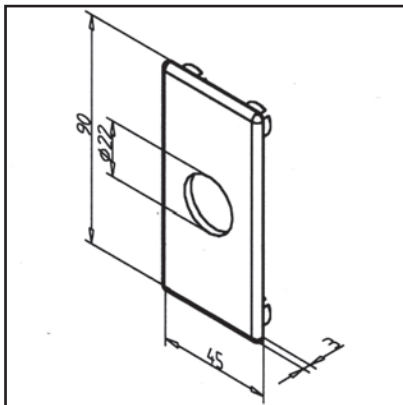
## ASSEMBLY

- 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)

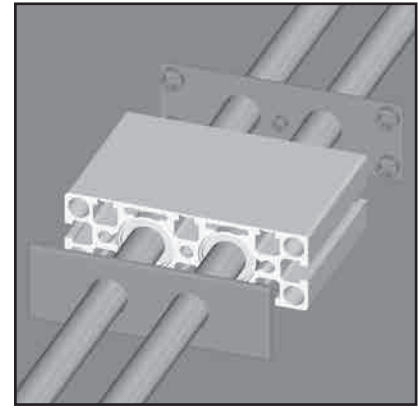
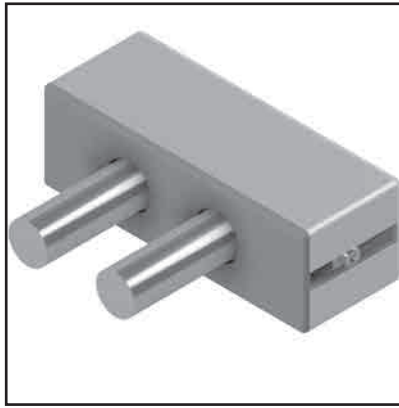
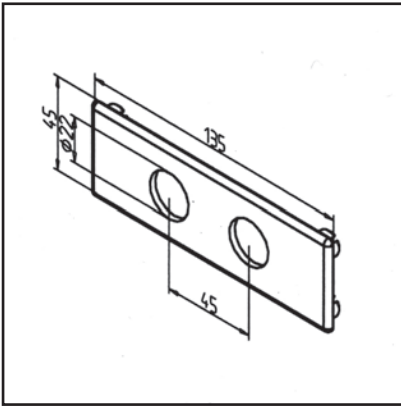
## ASSEMBLY

- 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

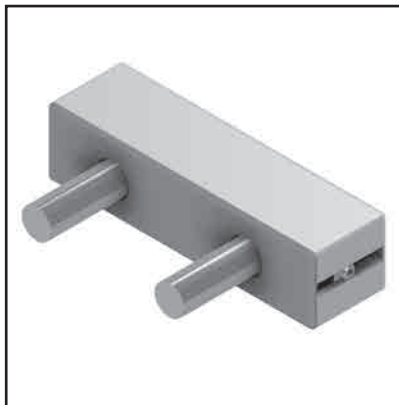
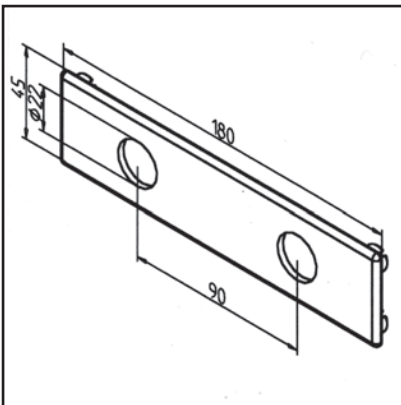
### ASSEMBLY

- 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

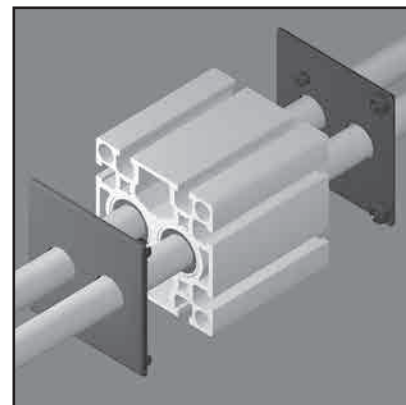
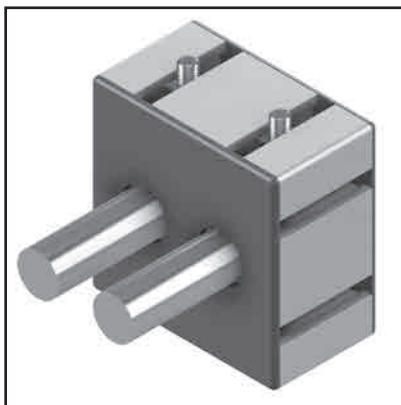
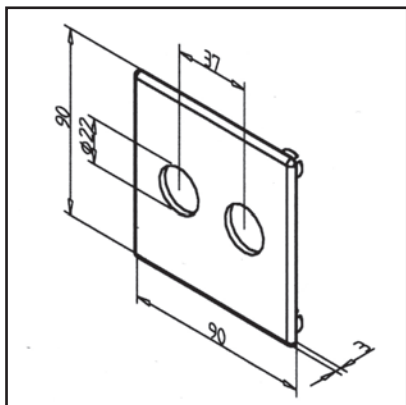
### ASSEMBLY

- 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

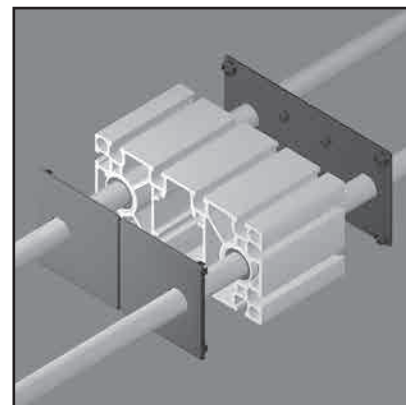
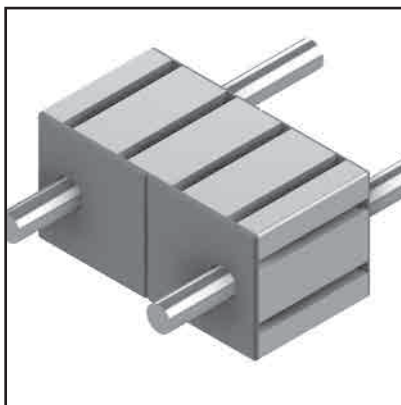
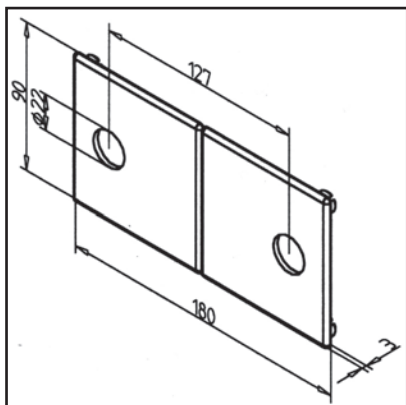
**ASSEMBLY**

- 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