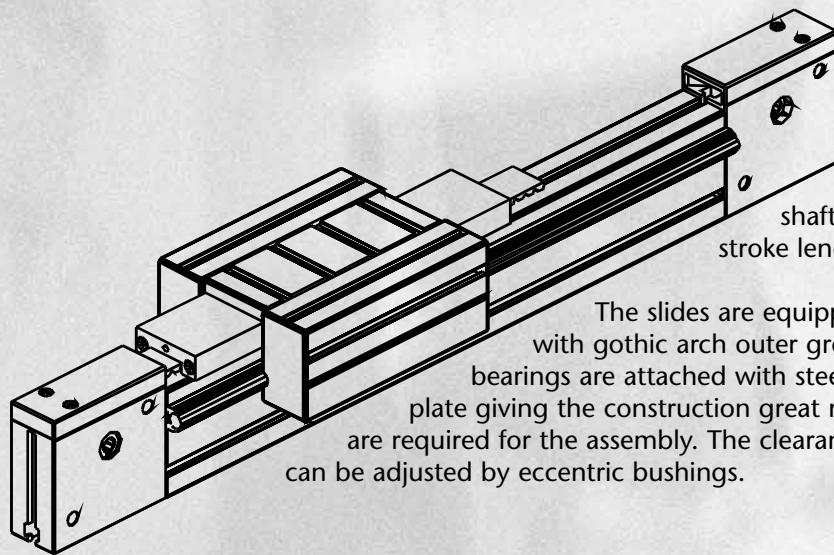


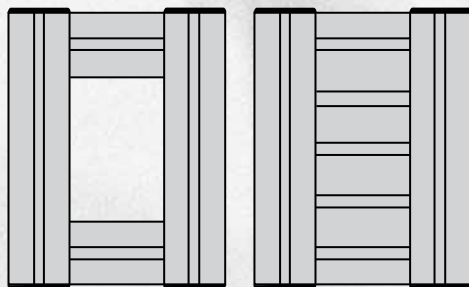
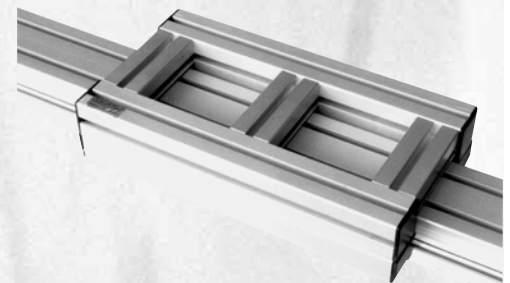
LINEAR SYSTEM LR



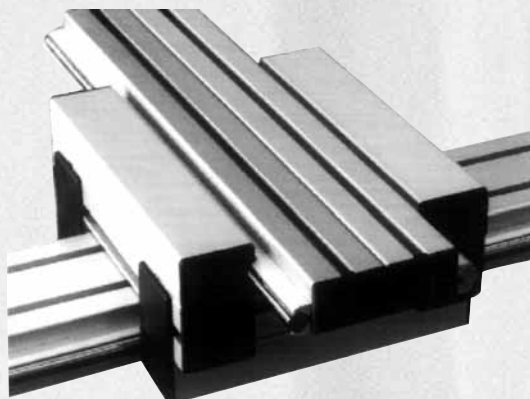
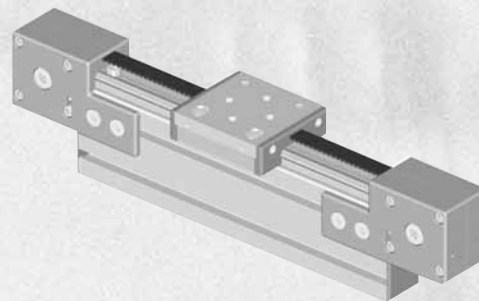
The profile system LR is based on double-row angular contact bearings made of bearing steel and hardened and ground precision shafts $\varnothing 12 \text{ mm} / \text{Cf } 53$. Any required stroke length can be implemented.

The slides are equipped with double-row roller bearings with gothic arch outer grooves. For very high loads multiple bearings are attached with steel-T-Slot bars directly to the slide-plate giving the construction great rigidity. No special bearing profiles are required for the assembly. The clearance between bearings and shafts can be adjusted by eccentric bushings.

The slides are completely covered, lubrication felts are fitted in the endcaps which clean and grease the shafts. For maintenance purposes the felts can be exchanged quickly and easily without tools. This advantage is important for applications in rough working conditions

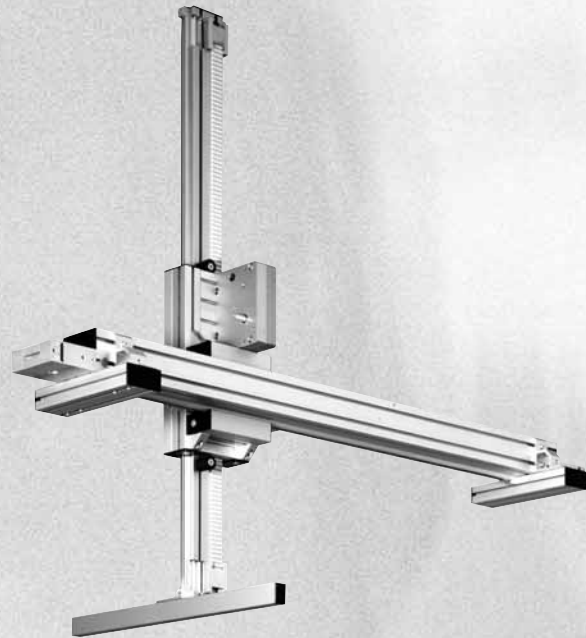


Both closed and open-frame slides with any desired length or width can be fabricated.

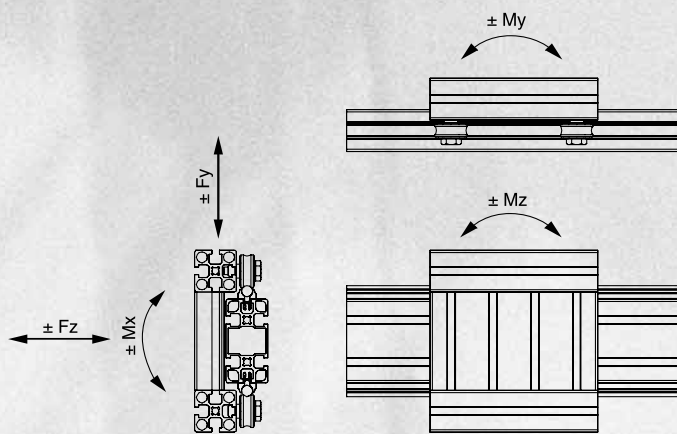


X/Y-tables are easily constructed by the attachment of 4 bearings on to the top of the slide. The guide rails for this configuration are made from profile 45 x 32. Caps LR and cover profile AL also fit the y-axis.

LINEAR SYSTEM LR



Load capacity



Calculation of max. moment loads as function of the slide length:

$$My \text{ max.} = 0,89 \cdot (L-45) \text{ Nm}$$

$$Mz \text{ max.} = 1,50 \cdot (L-45) \text{ Nm}$$

L = length of slide



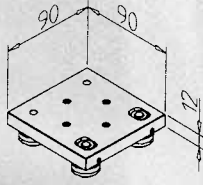
Linear system Slides	LR6	LR 12			Slide 180	Slide 180
	Slide LR 6 4 bearings L = 90 mm	Slide 45 4 bearings L = 180 mm	Slide 90 4 bearings L = 180 mm	Slide 135 4 bearings L = 180 mm	Slide 180 4 bearings L = 180 mm	Slide 180 8 bearings L = 360 mm
Mx max.	30 Nm	79 Nm	107 Nm	130 Nm	165 Nm	240 Nm
My max.	75 Nm	120 Nm	120 Nm	120 Nm	120 Nm	275 Nm
Mz max.	40 Nm	202 Nm	202 Nm	202 Nm	202 Nm	470 Nm
Fy max.	800 N	3500 N	3500 N	3500 N	3500 N	7000 N
Fz max.	640 N	1500 N	1500 N	1500 N	1500 N	3000 N

Linear system Slides	LR 16	Slides LR 16-90
	Slides LR 16-95	Slides LR 16-90
Mx max.	158 Nm	214 Nm
My max.	288 Nm	288 Nm
Mz max.	323 Nm	323 Nm
Fy max.	7000 N	7000 N
Fz max.	3000 N	3000 N

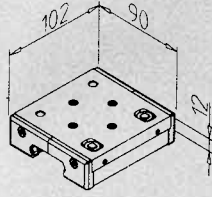
Maximal speed slide 45 - 180: 10 m/sec.
 Maximal speed slide LR 6: 5 m/sec.

EXAMPLES OF SLIDES

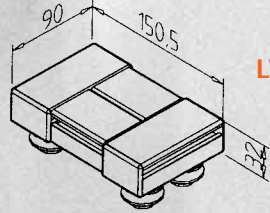
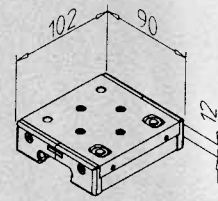
LR 6



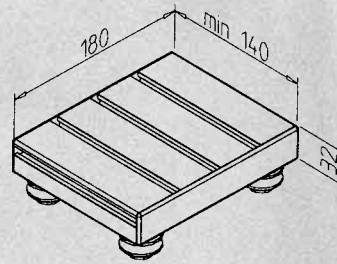
LR 6 Z with cover



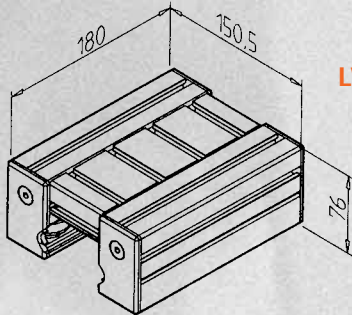
LR 6 Z



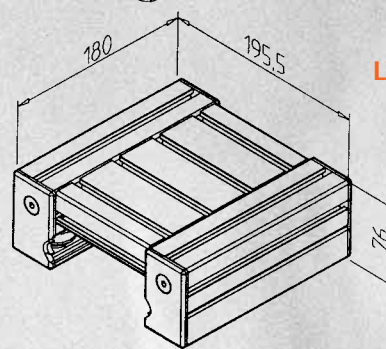
LW 32



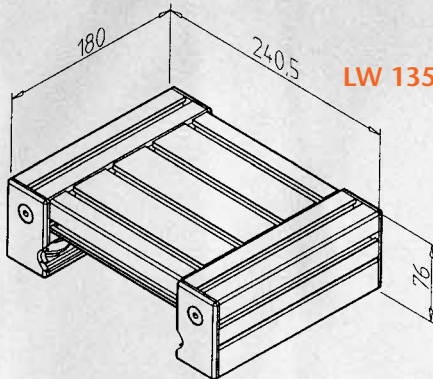
LW 32 E



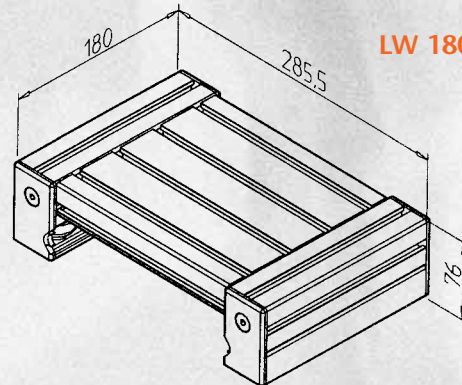
LW 45



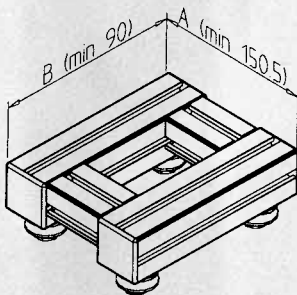
LW 90



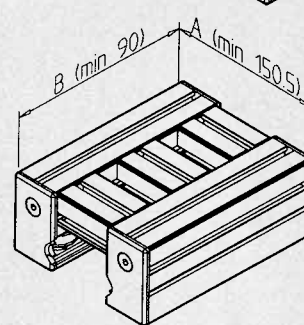
LW 135



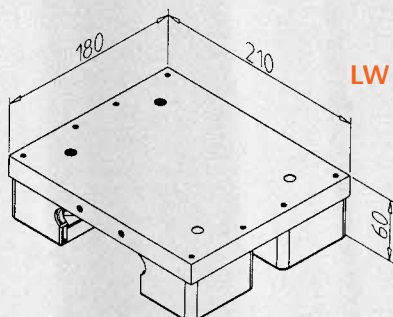
LW 180



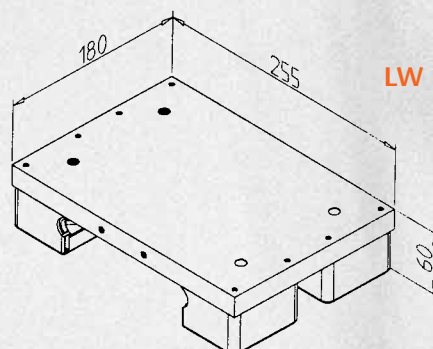
Open



Open



LW LR 16-45



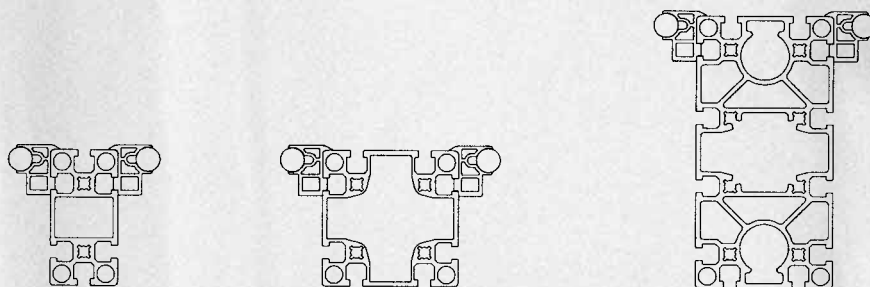
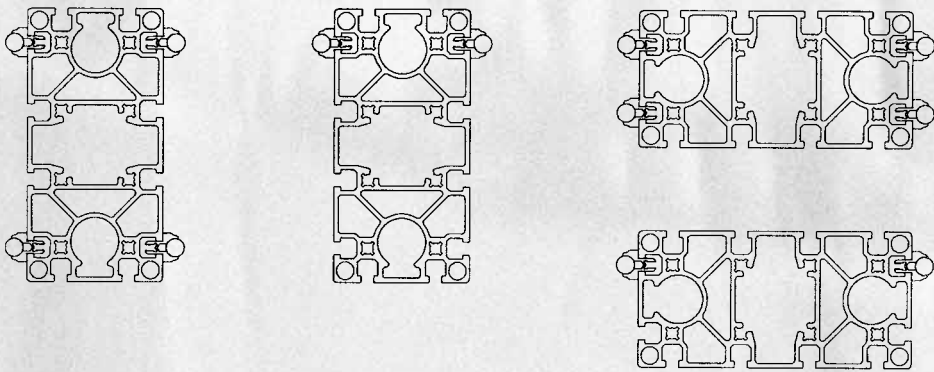
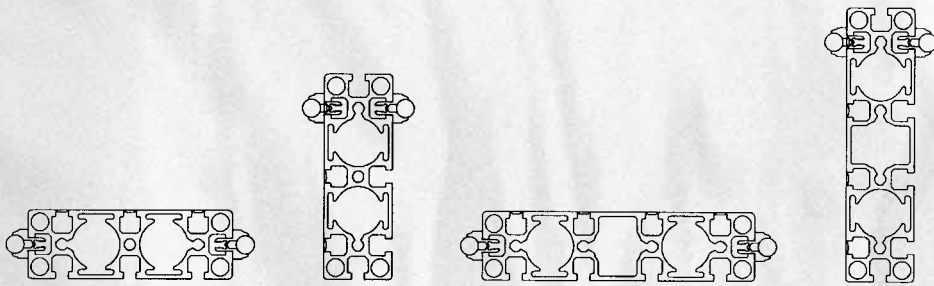
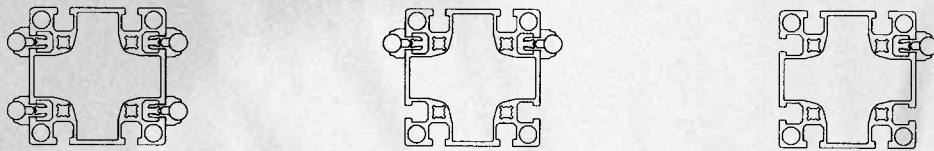
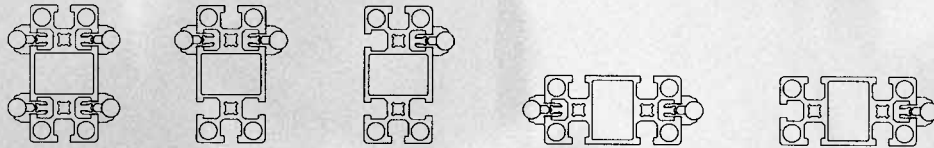
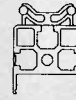
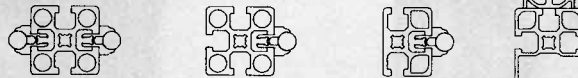
LW LR 16-90

POSSIBLE DESIGNS OF RAILS

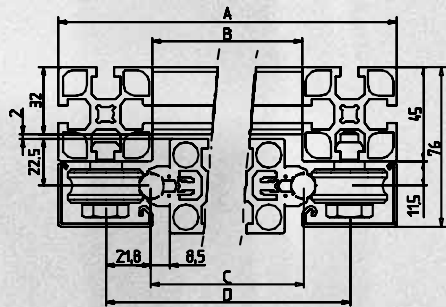
Calculation of rail length LR 12 + LR 16
(not for LR6)

Travel
+ Slide length
+ 2 x Belt tensioner
+ 40 mm Security distance

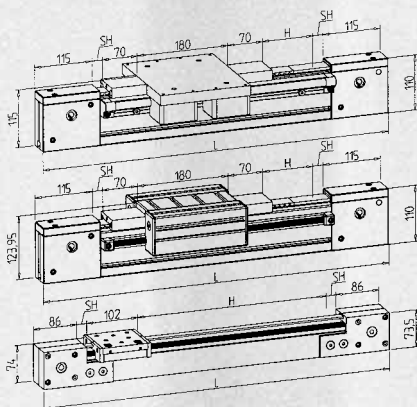
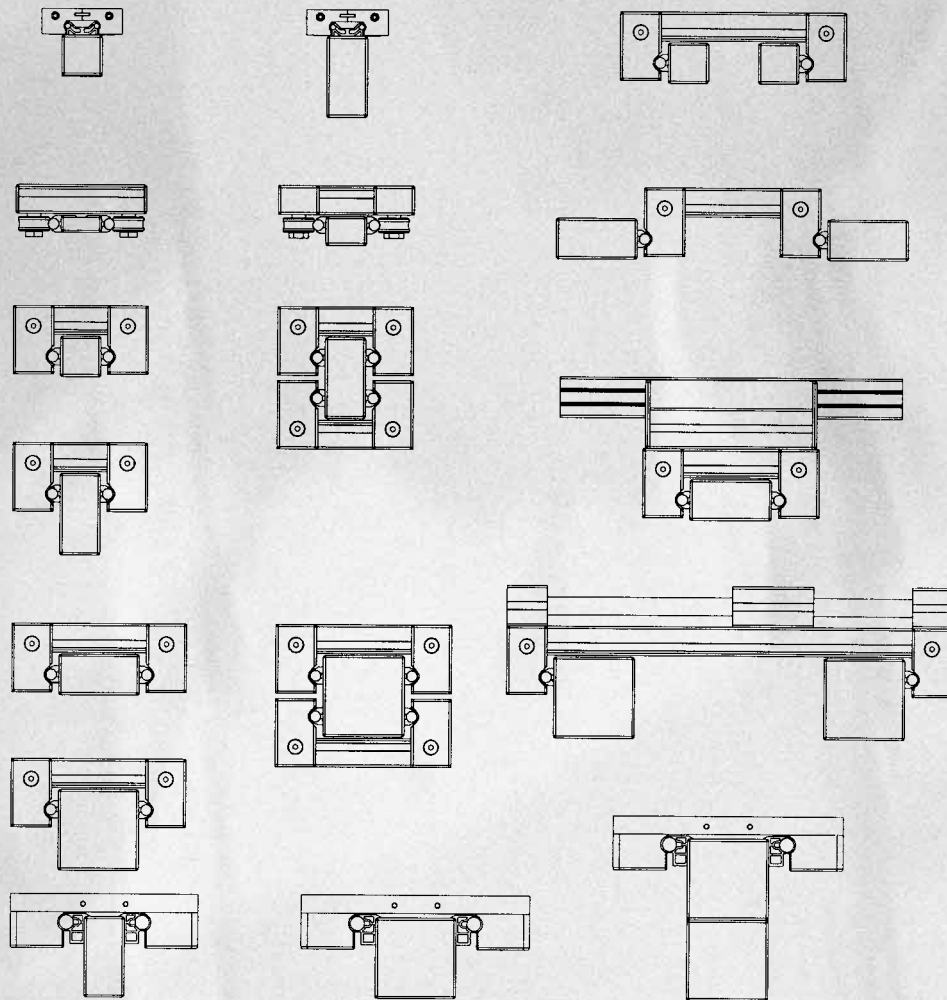
= Travel
+ Slide length
+ 180 mm



POSSIBLE COMBINATIONS OF RAILS AND SLIDES



Slide-type	LR 6	LW 45	LW 90	LW 135	LW 180	LR 16-45	LR 16-90
A	90	150,5	195,5	240,5	285,5	210	255
B	-	60,5	105,5	150,5	195,5	-	-
C	32	62	107	152	197	85	130
D	60	105,5	150,5	195,5	240,5	149,5	194,5



LR 12 + LR 16

Calculation of total length L:
 Travel H
 + Slide length
 + 2 x Reverse unit
 + 2 x Belt tensioner
 + 40 mm Security distance SH
 = Travel + slide length + 410 mm

*Da die Riemenspannung über die Zahnriemenumlenkung aufgebracht wird, gilt dies nur als Anhaltswert!

LR 6

Calculation of total length L:
 Travel H
 + Slide length (102)
 + 2 x Belt tensioner
 + 40 mm Security distance SH
 = Travel + 314 mm*

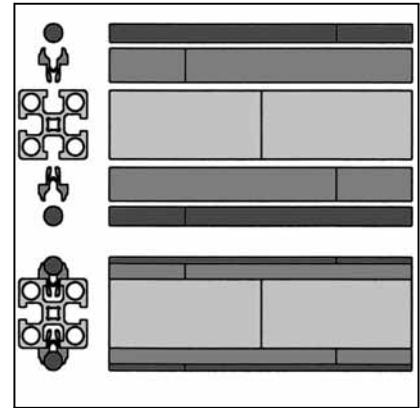
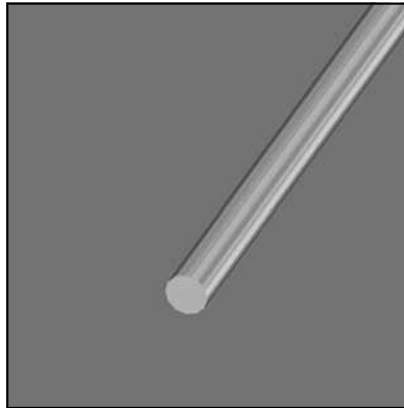
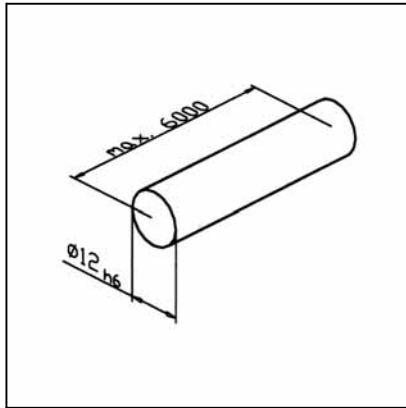


COMPONENTS
LR



SHAFT 12

Part. N° 17.1741/0



TECH. DATA / ITEM SUPPLIED

- Cf 53, hardened 60 + 5 HRC, precision ground h6

- Weight 0,888 kg/m

- max. Length 6 m

- Stainless version Part N° 17.1760/0

APPLICATION

- All MiniTec linear guides LR

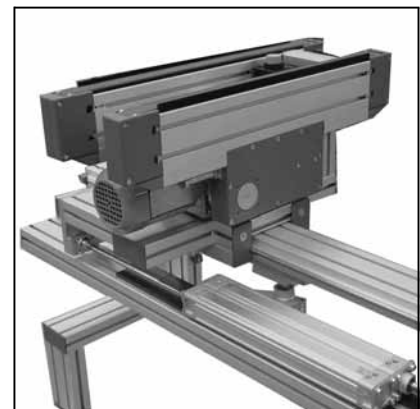
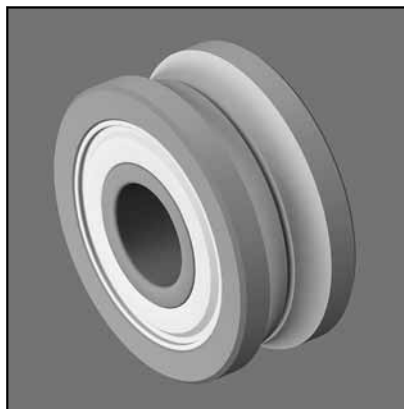
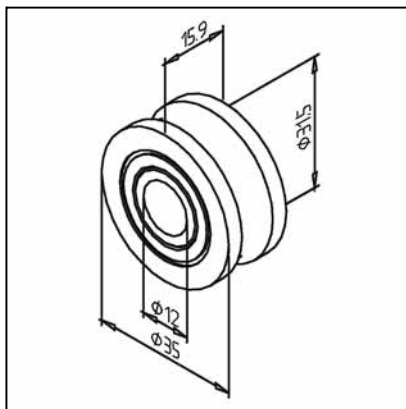
ASSEMBLY

- Press shaft into supporting profile with appropriate tool (plastic mallet)

- For rails L > 6000 mm assemble profile, shaft supporting profile and shaft with offset joints

BALL BEARING LR 12

Part. N° 28.0001/0



TECH. DATA / ITEM SUPPLIED

- Double-row angular contact bearing

- For shaft 12

- Load capacity:

- dyn. C = 10.500 N

- stat. C₀ = 6.000 N

- Weight 0,068 kg

- Stainless version Part N° 28.0001/1

APPLICATION

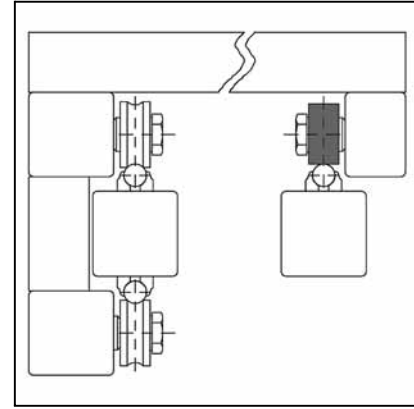
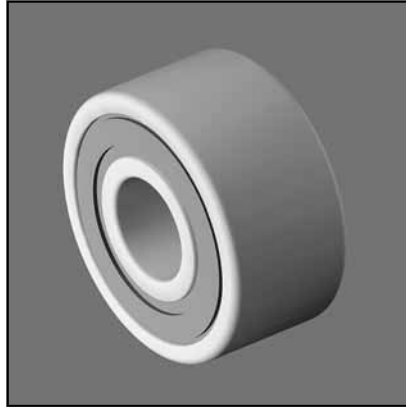
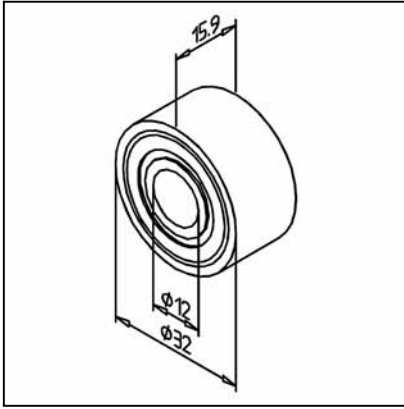
- All MiniTec linear guides LR

ASSEMBLY

- With fixing kit LRK Part N° 28.0021/0 or LRE Part N° 28.0022/0

BALL BEARING LR 12 L

Part. N° 28.0005/0



TECH. DATA / ITEM SUPPLIED

- Double-row angular contact bearing
- Load capacity:
- dyn. C = 8.600 N
- stat. C₀ = 5.100 N
- Weight 0,060 kg

APPLICATION

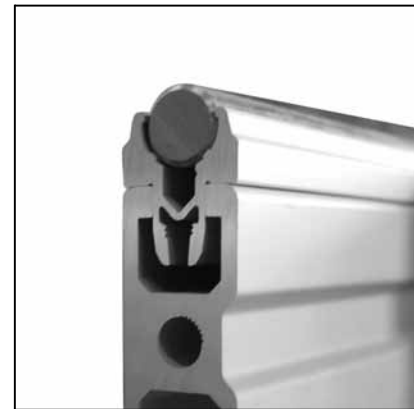
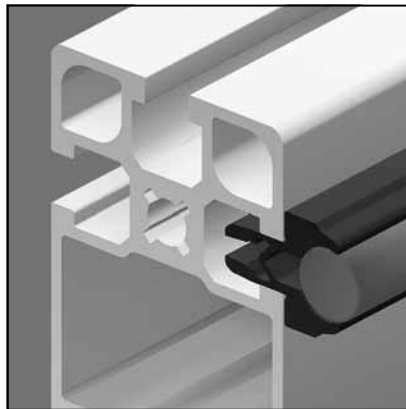
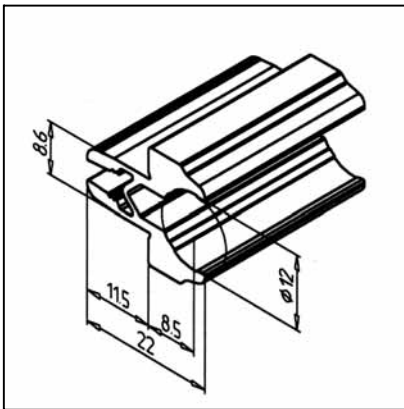
- MiniTec linear guiding systems with movable and fixed bearing side
- Balancing deviations in distance in parallel linear systems

ASSEMBLY

- With fixing kit LRK Part N° 28.0021/0 or LRE Part N° 28.0022/0

SHAFT SUPPORTING PROFILE

Part. N° 28.0002/0



TECH. DATA / ITEM SUPPLIED

- Aluminium, natural anodized E6/EV1
- Weight 0,365 kg/m
- Length 6 m

APPLICATION

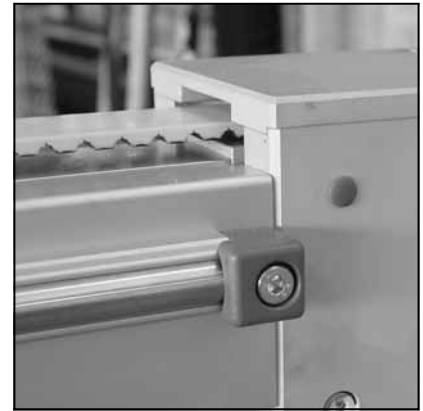
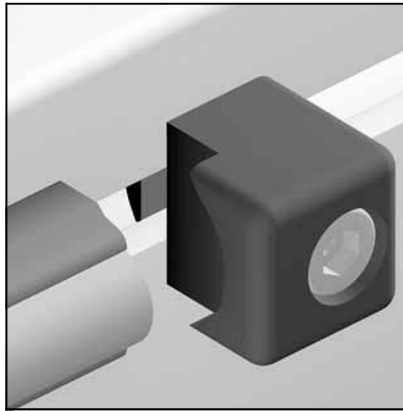
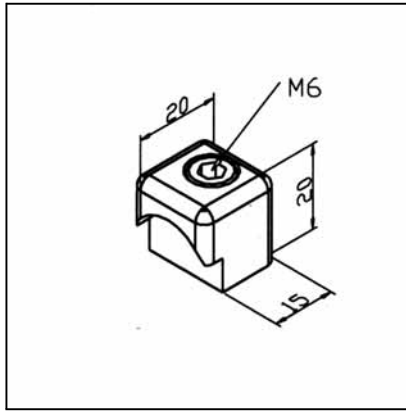
- MiniTec linear guides LR/LG

ASSEMBLY

- Press into the groove of rail profile
- If necessary clamp with set-screw M5 x 10 in position
- Press shaft into supporting profile with appropriate tool (plastic mallet)

SHAFT RETENTION DEVICE

Part. N° 28.0052/0



TECH. DATA / ITEM SUPPLIED

- Aluminium , powder coated, grey
- Fixing kit
- Weight 0,030 kg
- Stainless version Part N° 28.0053/0

APPLICATION

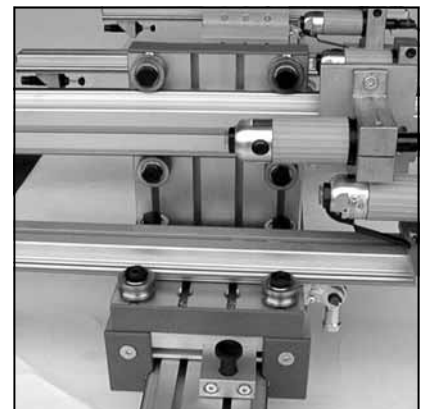
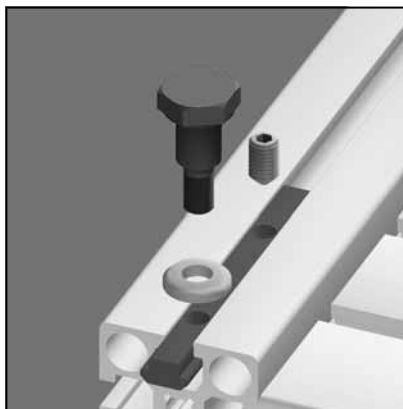
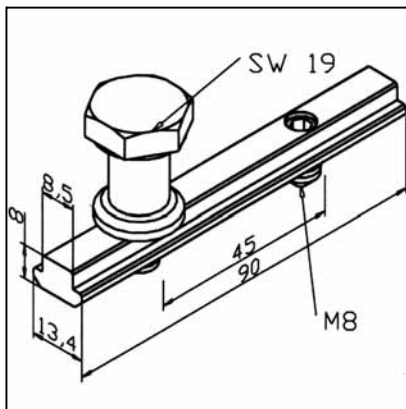
- Axial retention of shafts in dynamically stressed linear guides

ASSEMBLY

- Fix the retention device at both shaft ends with fixing kit from supply schedule
- No processing required

FIXING KIT LRK

Part. N° 28.0021/0



TECH. DATA / ITEM SUPPLIED

- 1 T-slot bar, steel, zinc-plated with set-screw
- 1 Bolt M8 concentric, steel, black finished
- 1 Washer 3,5 mm, steel, precision ground, back finished
- Weight 0,100 kg
- Stainless version Part N° 28.0021/1

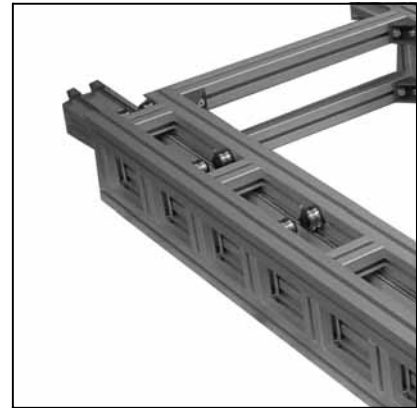
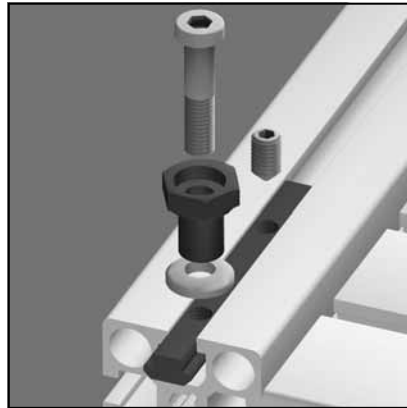
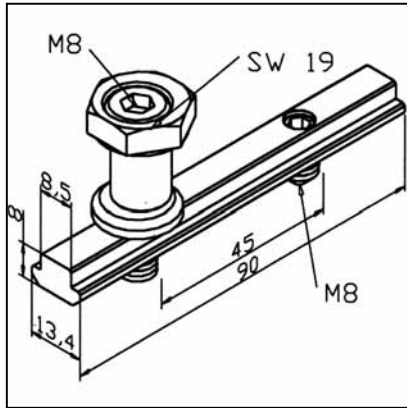
APPLICATION

- All MiniTEec linear guides LR
- Concentric attachment of ball bearings LR 12

ASSEMBLY

- Fix T-slot bar in groove of lower slide side with the set-screws at inner position
- Threads M8 without set-screws are used for the fixing bolts
- Insert bolt in the bearing and washer bore, Tighten firmly on T-slot bar with spanner 19 A/F
- Recommended locking torque: 25 Nm

FIXING KIT LRE



Part. N° 28.0022/0

TECH. DATA / ITEM SUPPLIED

- T-slot bar, steel, zinc plated with set-screw
- Eccentric bush, steel black finished
- Bolt M8, steel, black finished
- Washer 3,5 mm, steel, precision ground, black finished
- Weight 0,1 kg
- **Stainless version Part N° 28.0022/1**

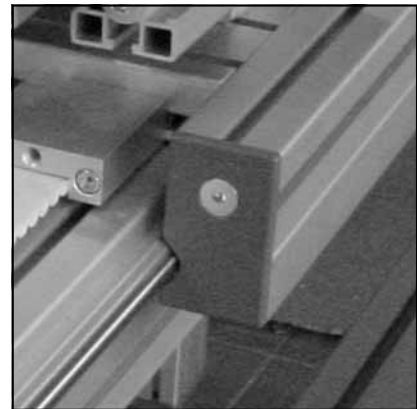
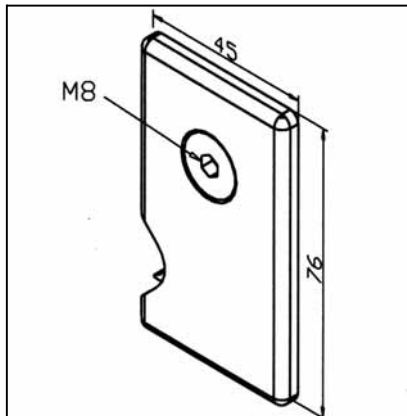
APPLICATION

- All MiniTec linear guides LR
- Eccentric attachment of ball bearings LR 12

ASSEMBLY

- Mounting of T-slot bar: see fixing kit LRK
- Insert eccentric bush in the bearing and washer bore, retighten T-slot bar with key 4 A/F
- Adjust bush with ring spanner width 19 mm (turn for freedom from clearance with 0,9 - 1 Nm) and fix bolt
- Recommended locking torque: 25 Nm

END CAP LR (RIGHT)



Part. N° 28.0004/1

TECH. DATA / ITEM SUPPLIED

- ABS with integrated, spring-mounted stripping and greasin felt
- Fixing kit
- Weight 0,030 kg
- Also deliverable in black, **Part. N° 28.0004/0**

APPLICATION

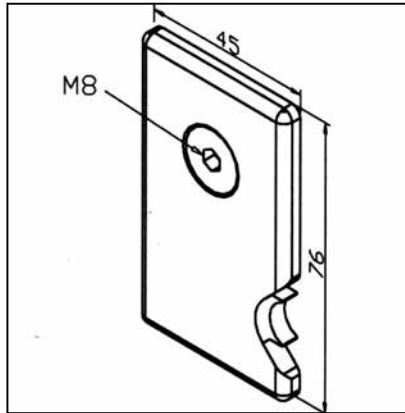
- All MiniTec linear guides LR

ASSEMBLY

- Insert cover profile between the end caps
- Insert the lubricated felts and press fastening peg in profile 45 x 45 of the slide plate
- Use fixing kit from supply schedule
- Clean and relubricate the felt or replace it when necessary **Part N° 28:0004/8**

END CAP LR (LEFT)

Part. N° 28.0004/3



TECH. DATA / ITEM SUPPLIED

- ABS with integrated, spring-mounted stripping and greasin felt
- Fixing kit
- Weight 0,030 kg
- Also deliverable in black,
Part. N° 28.0004/2

APPLICATION

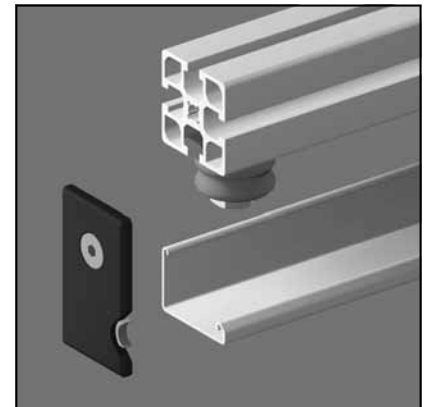
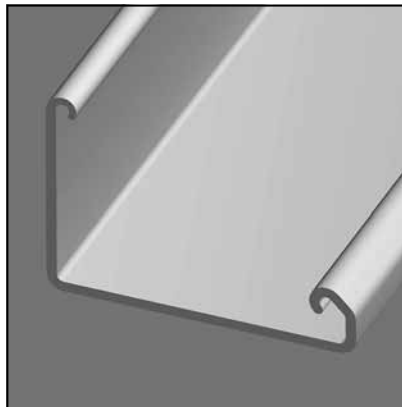
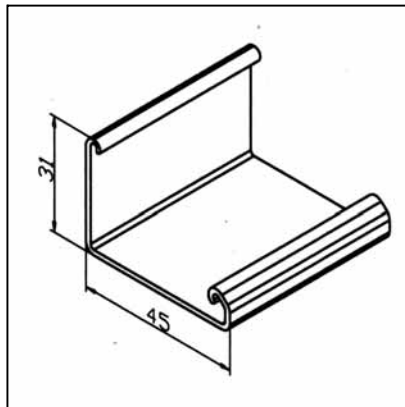
- All MiniTec linear guides LR

ASSEMBLY

- Insert cover profile between the end caps
- Insert the lubricated felts and press fastening peg in profile 45 x 45 of the slide plate
- Use fixing kit from supply schedule
- Clean and relubricate the felt or replace it
Part N° 28.0004/8 when necessary

COVER PROFILE LR

Part. N° 28.0049/0



TECH. DATA / ITEM SUPPLIED

- Aluminium, naural anodized E6/EV1
- Weight 0,362 kg/m
- Lenght 6,000 m

APPLICATION

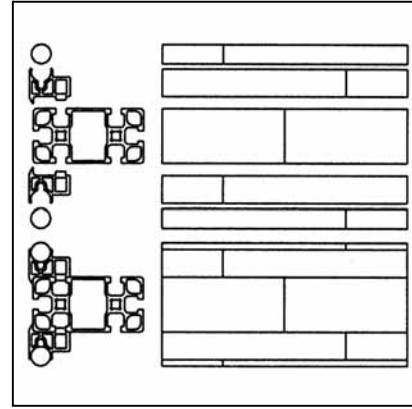
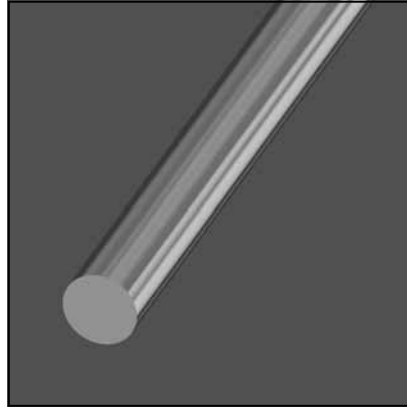
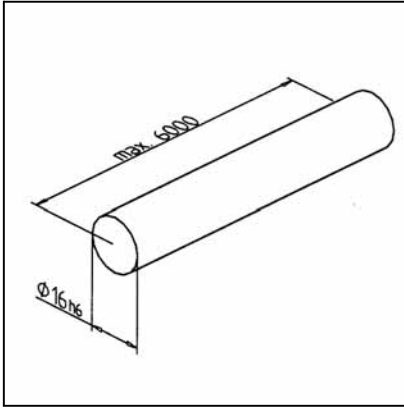
- All MiniTec linear guides LR

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

SHAFT 16

Part. N° 17.1743/0



TECHN. DATA / ITEMS SUPPLIED

- Cf 53, hardened 60 ± 5 HRC, precision ground h6
- Weight 1,578 kg/m
- max. Length 6 m

APPLICATIONS

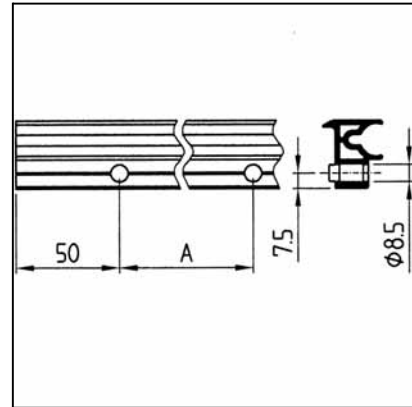
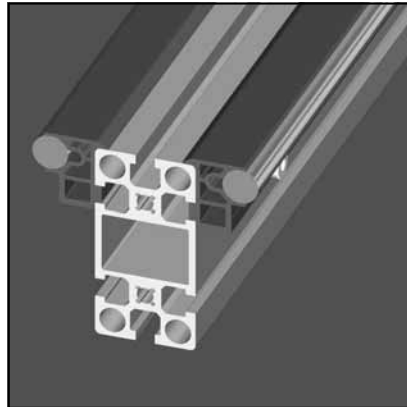
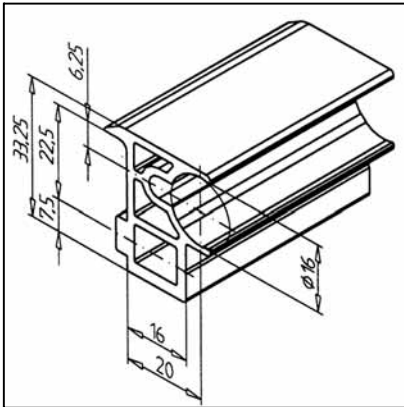
- MiniTec linear guide LR 16

ASSEMBLY

- Carefully hammer into the shaft carrier profile with a plastic-tipped hammer
- On guides with $L > 6000$ mm assemble profile, shaft support and shaft with offset joints

SHAFT SUPPORTING PROFILE LR 16

Part. N° 28.0019/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium natur, eloxiert E6 / EV1
- Weight 0,845 kg/m
- Length 6 m

APPLICATIONS

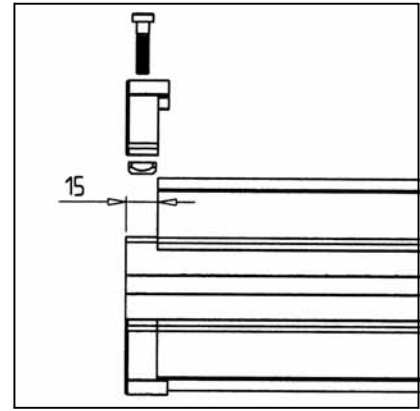
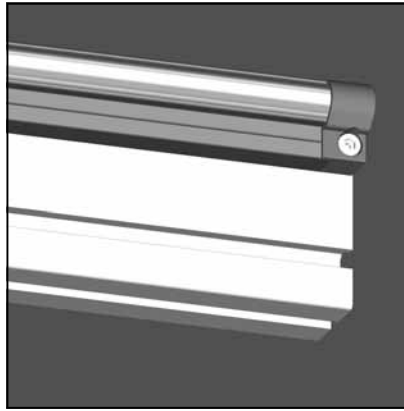
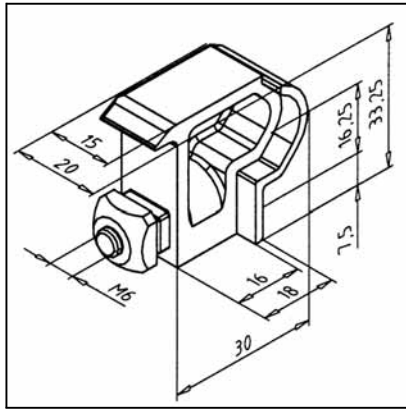
- MiniTec linear guide LR16

ASSEMBLY

- Make holes with diameter 8.5 in the shaft carrier profile
- Recommended distance: 50 mm from the edge, then approximately every 200 - 300 mm
- Fasten to the carrier profile using M8 x 30 cheese-head screw and M8 slide nut
- Hammer the shaft into the shaft carrier profile with a plastic-tipped hammer

SHAFT FASTENER LEFT LR 16

Part. N° 28.0809/0



TECHNICAL DATA / INCLUDED ITEMS

- Aluminium GD, powder coated, grey
- With fastening materials
- Weight 0,04 kg

APPLICATIONS

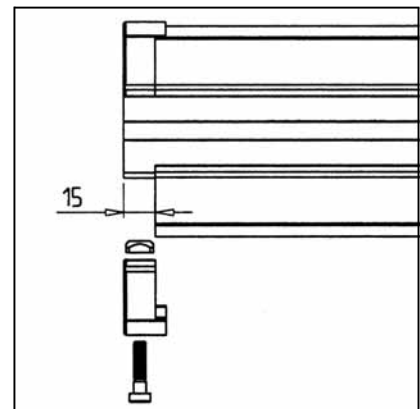
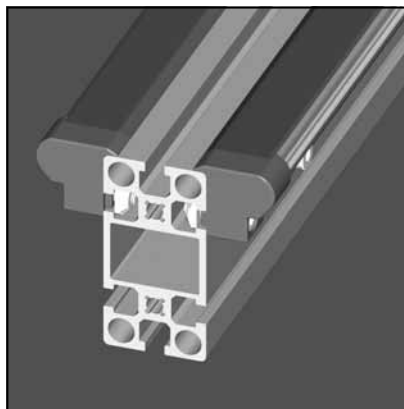
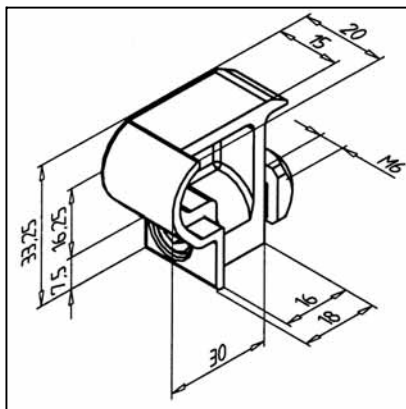
- Axial fastening of shafts in linear guides subject to heavy dynamic stress

ASSEMBLY

- Shaft carrier profile and shafts must be 15 mm shorter on each side than the carrier profile
- Attach the shaft fastening at both ends of the shaft with supplied fastening materials
- No machining is necessary

SHAFT RETENTION DEVICE RIGHT LR 16

Part. N° 28.0808/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium GD, powder coated, grey
- Fixing kit
- Weight 0,04 kg

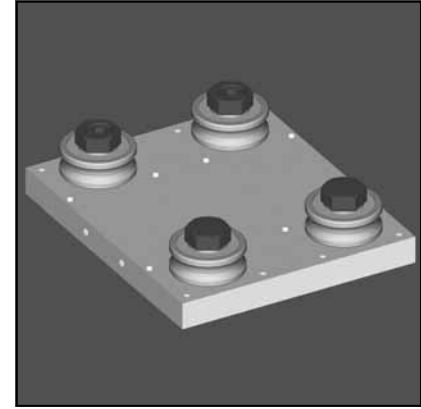
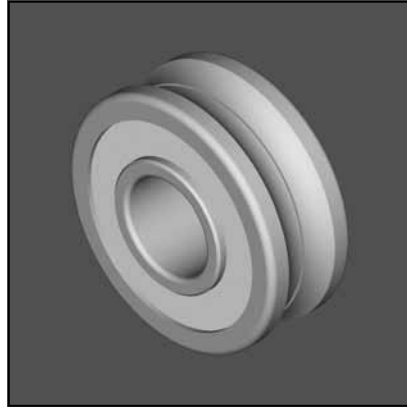
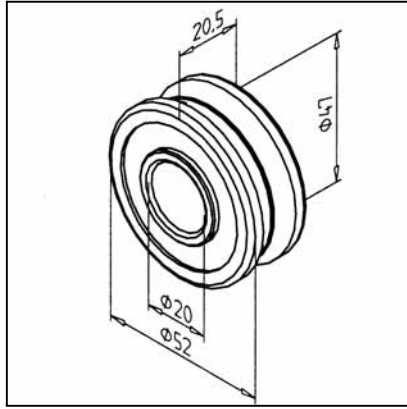
APPLICATIONS

- Axial fastening of shafts in linear guides subject to heavy dynamic stress

ASSEMBLY

- Shaft carrier profile and shafts must be 15 mm shorter on each side than the carrier profile
- Attach the shaft fastening at both ends of the shaft with supplied fastening materials
- No machining is necessary

BALL BEARING LR 16



Part. N° 50.1726/0

TECHN. DATA / ITEMS SUPPLIED

- Double-row angular contact bearing	
- For shaft 16	
- Load capacity	
- dyn. C =	19.90 N
- stat. Co =	12.60 N
- Weight	0,2 kg

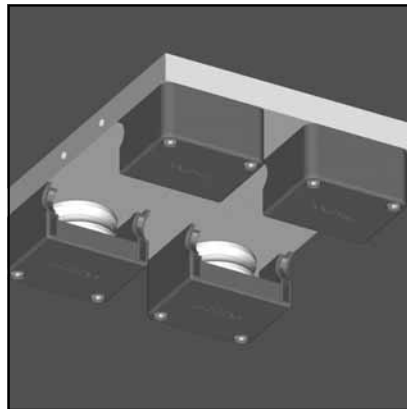
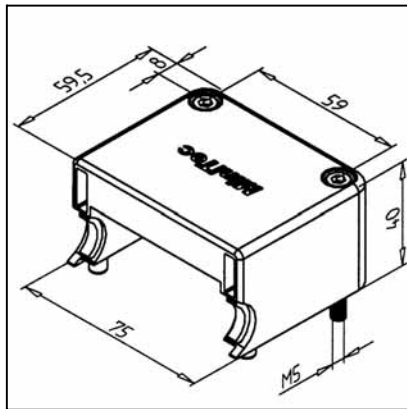
APPLICATIONS

- MiniTec linear guides LR 16

ASSEMBLY

- Fastening with central bush Part. N° 28.0814/0 or adjustable with eccentric bush Part N° 28.0813/0 and M 12 x 40 bolt Part N° 21.1257/0

END CAP LR 16



Part. N° 28.0815/0

TECHN. DATA / ITEMS SUPPLIED

- ABS with integrated, spring-mounted stripping and greasin felt	
- Fixing kit	
- Weight	0,055 kg

APPLICATIONS

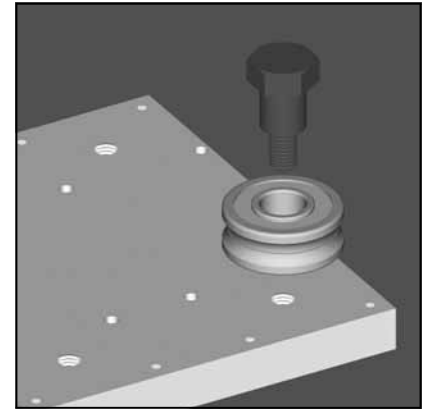
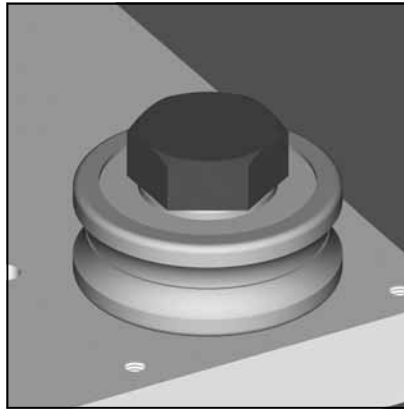
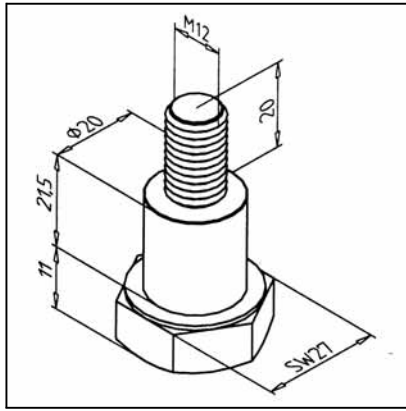
- MiniTec linear guides LR 16

ASSEMBLY

- Use fixing kit from supply schedule
- Depending on the conditions, clean and soak the felt or insert a replacement felt Part. N° 28.0816/0

BOLT CONCENTRIC LR 16

Part. N° 28.0814/0



TECHNICAL DATA / INCLUDED ITEMS

- Bolt M12 concentric, steel, black gunmetal finish

- Weight 0,12 kg

APPLICATIONS

- MiniTec linear guides LR 16

- Concentric fastening of ball bearings LR 16

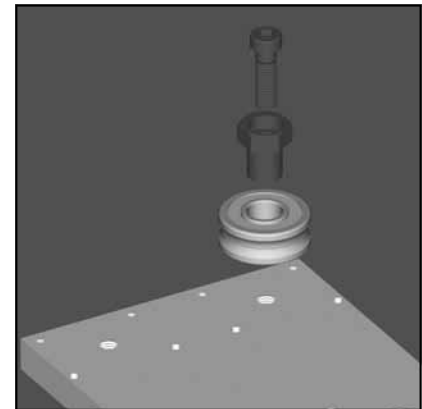
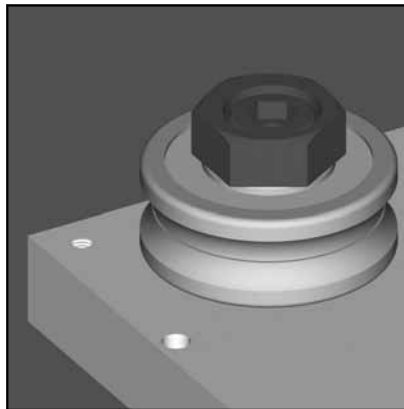
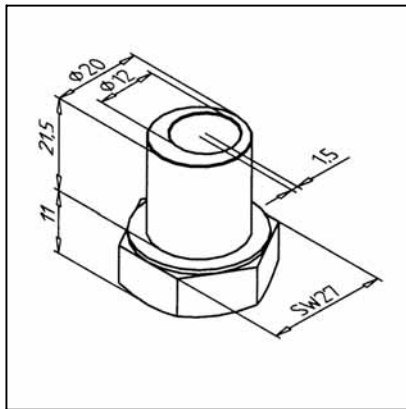
ASSEMBLY

- MiniTec linear guides LR 16

- Recommended tightening torque:50 Nm

ECCENTRIC BUSH

Part. N° 28.0813/0



TECHN. DATA / ITEMS SUPPLIED

- Eccentric bush, steel, black gunmetal finish

- Weight 0,059 kg

APPLICATIONS

- MiniTec linear guides LR 16

- Eccentric fastening of ball bearings LR 16

ASSEMBLY

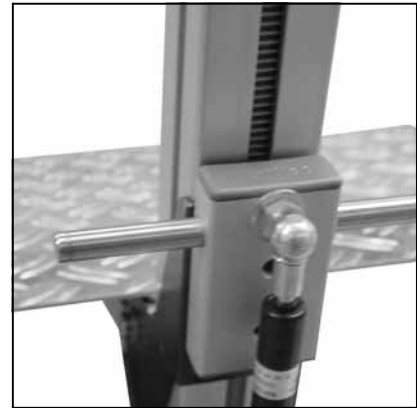
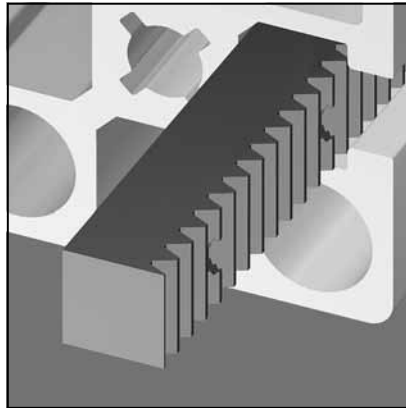
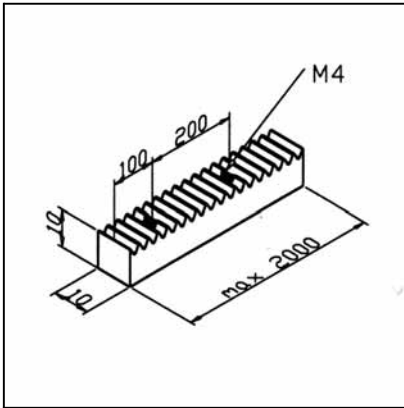
- Insert screw M12 x 40 Part. N° 21.1257/0 into eccentric bush and assemble loosely with bearing

- 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 tightening torque:50 Nm

TOOTHED RACK 8

Part. N° 28.0051/0



TECH. DATA / ITEM SUPPLIED

- Steel

- Modul 1

- 1 set-screw M4 x 8 in 200 mm grid

- Weight 0,785 kg/m

- Length 2 m

APPLICATION

- Linear guides with extremely long travels

- Linear guides with compact dimension overall

- Recurring height sectioning and longitudinal sectioning in 3,14 mm grid (e.g. sorting frame)

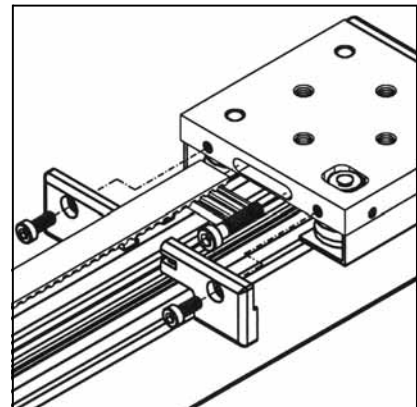
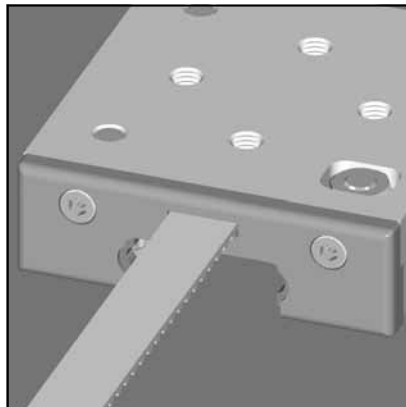
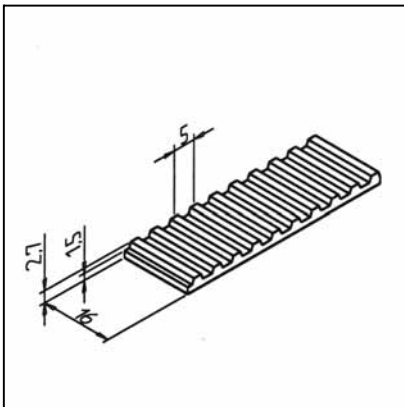
ASSEMBLY

- Push toothed rack into profile groove

- Secure with set-screw M4

TIMING BELT 16 AT 5

Part. N° 28.0502/0



TECH. DATA / ITEM SUPPLIED

- PUR white, steel-wire reinforced

- Typ 16 AT 5

- Weight 0,052 kg/m

- Load max. 1260 N

APPLICATION

- Suitable for all MiniTec linear guides LR 6 Z

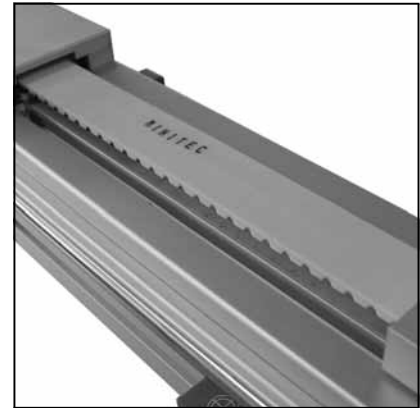
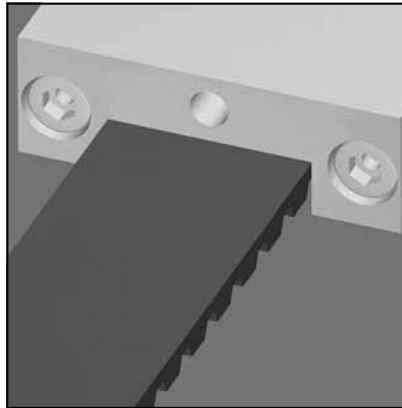
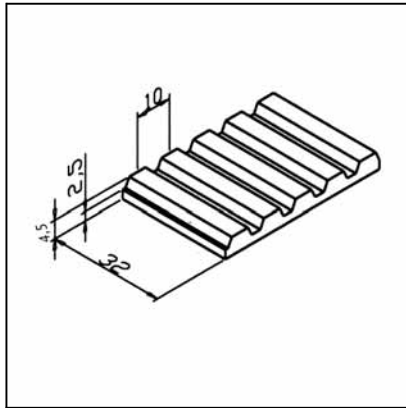
ASSEMBLY

- Fix both sides in slide LR 6 Z

- Belt length calculation:
2 x rail length + 260 mm

TIMING BELT 32 AT 10

Part. N° 28.0093/0



TECH. DATA / ITEM SUPPLIED

- PUR white, reinforced with integrated wires
- Typ 32 AT 10
- Weight 0,190 kg/m
- Load max. 4750 N

APPLICATION

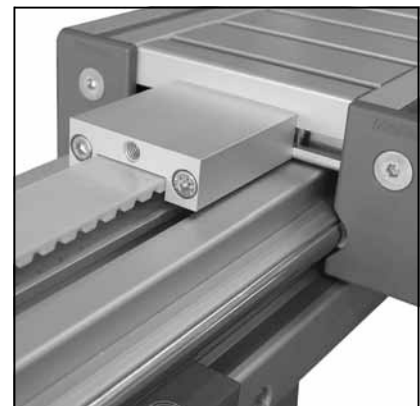
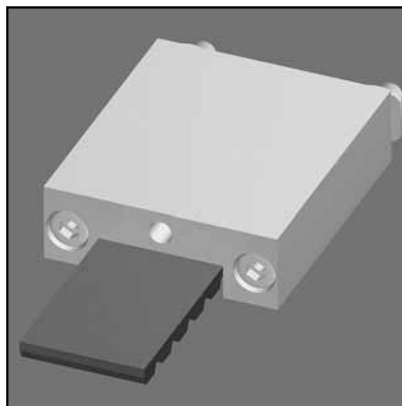
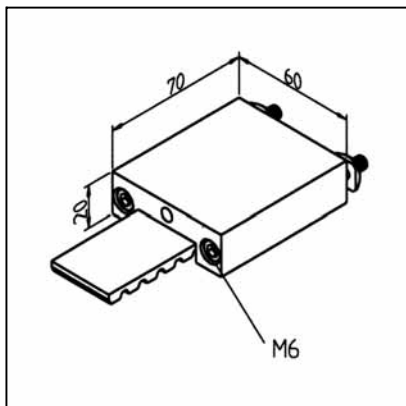
- For all MiniTec linear guides LR
- For belt drives

ASSEMBLY

- Fix timing belt o timing belt tensioner
- Calculations belt length: see page 265

TIMING BELT TENSIONER

Part. N° 28.0090/0



TECH. DATA / ITEM SUPPLIED

- Housing, aluminium, natural anodized
- Tensioning plug, steel, zinc plated with mateling with 3 teeth
- Fitting for tming belt AT 10
- Fixing kit
- Weight 0,236 kg
- Stainless version Part N° 28.0090/1

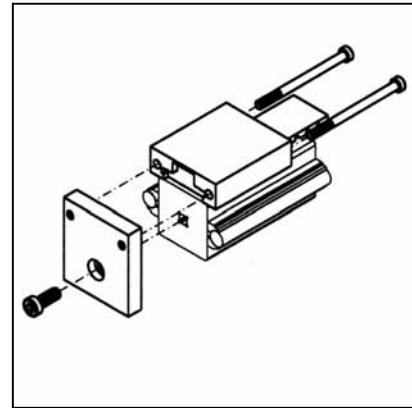
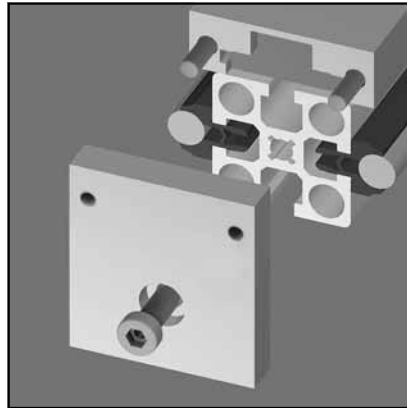
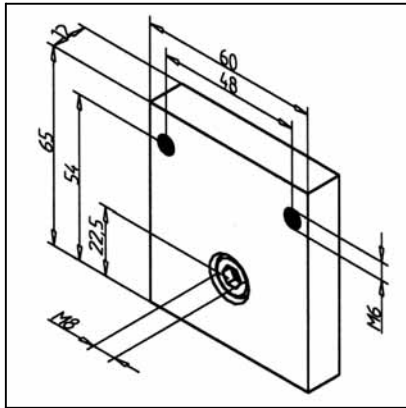
APPLICATION

- For each end of the timing belt a tming belt tensioner is necessary
- For all MiniTec linear guides LR
- For MiniTec belt drive

ASSEMBLY

- Subsequent fixing on the face of the slide with fixing kit from supply schedue
- After fixing on slide face, tension the belt central tensioning screw M8, 5 A/F
- Recommed stretching: after coordination

FASTENING KIT FOR TIMING BELT TENSIONING DEVICE 45 Part. N° 28.0054/0



TECH. DATA / ITEM SUPPLIED

- Plate aluminium, natural anodized

- Fixing kit

- Weight 0,089 kg

APPLICATION

- **In connection with belt drive**

- For each timing belt tensioner one fastening kit is necessary

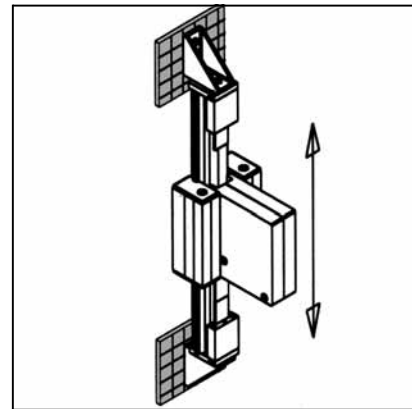
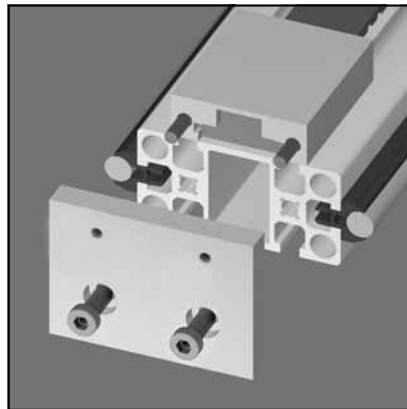
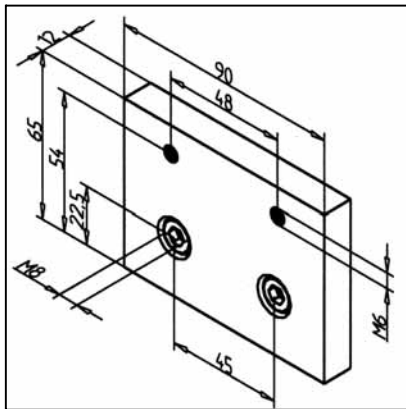
- Attachment of timing belt tensioner on rail 45

ASSEMBLY

- Fasten with fixing kit from supply schedule on rail end; thread M8 required

- Mount timing belt tensioner

FASTENING KIT FOR TIMING BELT TENSIONING DEVICE 45 X 90 F Part. N° 28.0055/0



TECH. DATA / ITEM SUPPLIED

- Plate aluminium, natural anodized

- Fixing kit

- Weight 0,089 kg

APPLICATION

- For each timing belt tensioner one fastening kit is necessary

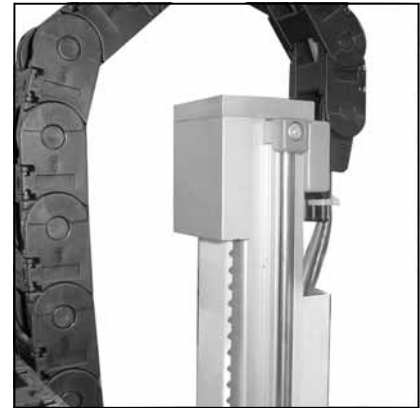
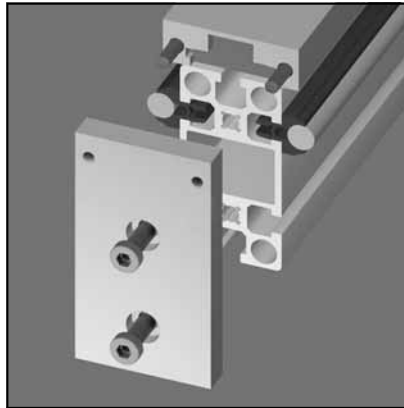
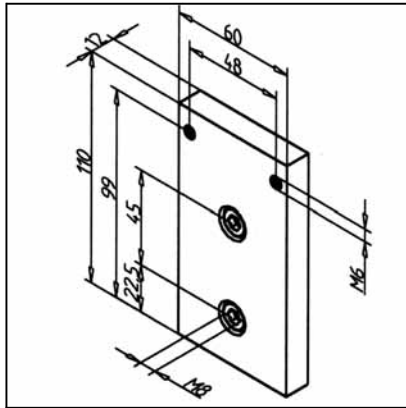
- Attachment of timing belt tensioner on rail 45 x 90 F in connection with belt drive

ASSEMBLY

- Fasten with fixing kit from supply schedule on rail end; thread M8 required

- Mount timing belt tensioner

FASTENING KIT FOR TIMING BELT TENSIONING DEVICE 45X90H Part. N° 28.0056/0



TECH. DATA / ITEM SUPPLIED

- Plate aluminium, natural anodized
- Fixing kit
- Weight 0,089 kg

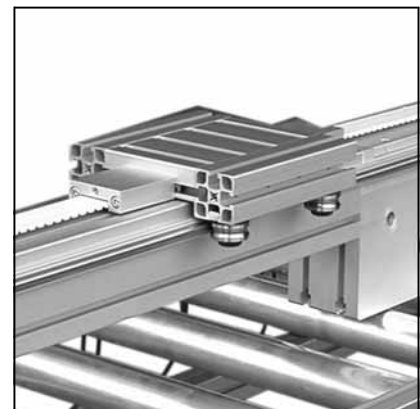
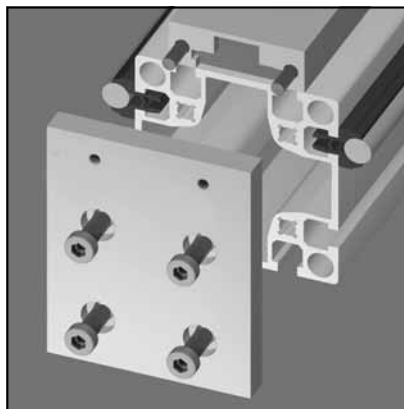
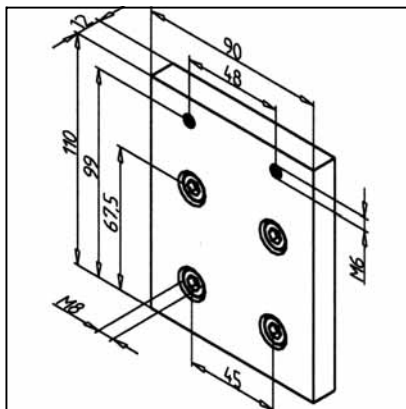
APPLICATION

- For each timing belt tensioner one fastening kit is necessary
- Attachment of timing belt tensioner on rail 45 x 90 H in connection with belt drive

ASSEMBLY

- Fasten with fixing kit from supply schedule on rail end; thread M8 required
- Mount timing belt tensioner

FASTENING KIT FOR TIMING BELT TENSIONING DEVICE 90 Part. N° 28.0057/0



TECH. DATA / ITEM SUPPLIED

- Plate aluminium, natural anodized
- Fixing kit
- Weight 0,089 kg

APPLICATION

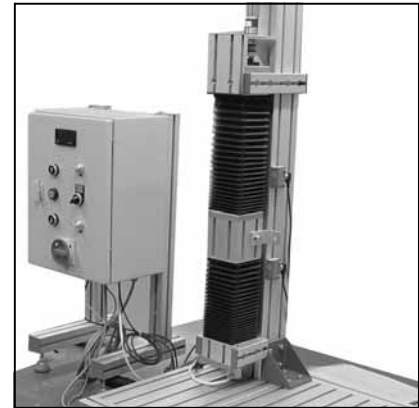
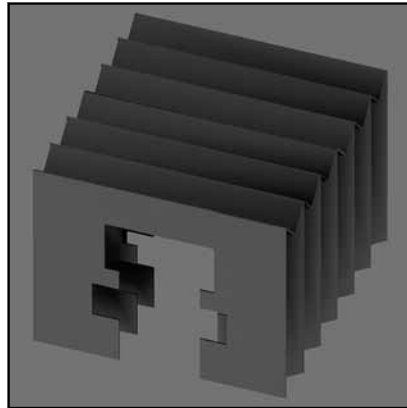
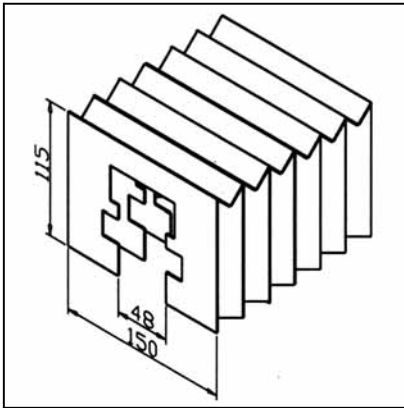
- For each timing belt tensioner one fastening kit is necessary
- Attachment of timing belt tensioner on rail 90 in connection with belt drive

ASSEMBLY

- Fasten with fixing kit from supply schedule on rail end; thread M8 required
- Mount timing belt tensioner

PROTECTIVE BELLOW LR 45

Part. N° 33.3007/0



TECH. DATA / ITEM SUPPLIED

- Plastic, black with plastic frame

- Without fixing kit

- Length when pushed together for 1 m travel: - 110 mm

- Weight 0,650 kg/m

- max. Length 6 m

APPLICATION

- Cover of MiniTec linear guides LR 45

- Rough working conditions, dust, chips

ASSEMBLY

- Push bellow onto rail

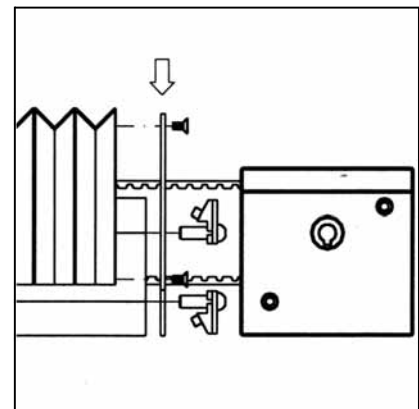
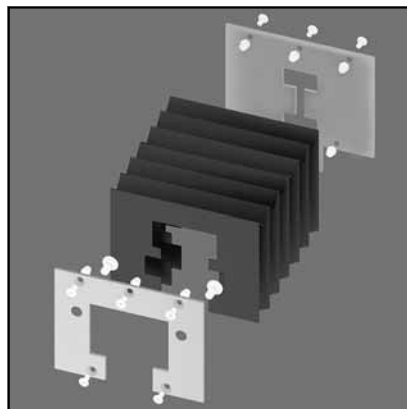
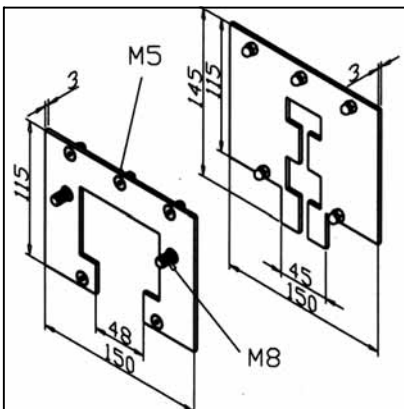
- Fix ends with fastening kit for protective bellow **Part N° 33.3010/0**

- The travel length is reduced by approx. 22% when bellow is used

- Caution: Consider higher friction moment when dimensioning drive unit!

FASTENING KIT FOR PROTECTIVE BELLOW LR 45

Part. N° 33.3010/0



TECH. DATA / ITEM SUPPLIED

- 1 End frame slide

- 1 End frame pulley

- Fixing kit for frame and bellow

APPLICATION

- Fastening of protective bellow LR 45 on slide LW 45

- Fastening of protective bellow LR 45 on timing belt pulley T 45

ASSEMBLY

- Fasten end frame on slide

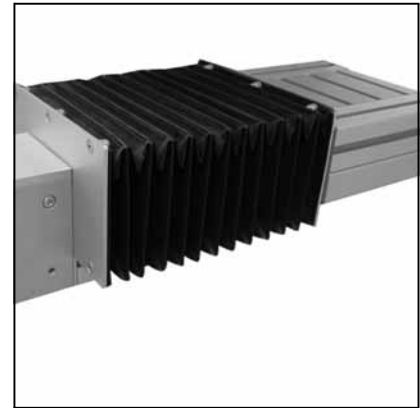
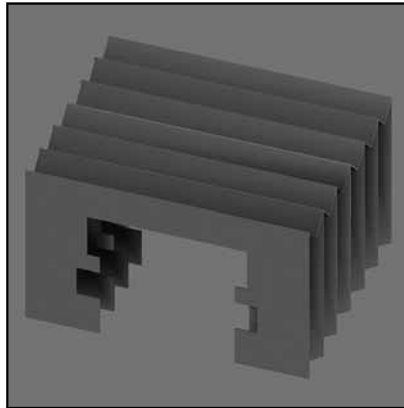
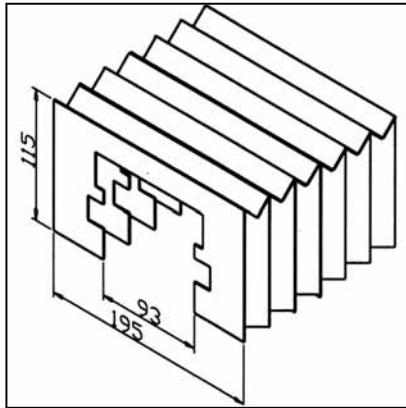
- Push protective bellow on rail

- 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

PROTECTIVE BELLOW LR 90

Part. N° 33.3008/0



TECH. DATA / ITEM SUPPLIED

- Plastic, black with plastic frame

- Without fixing kit

- Length when pushed together for 1 m travel: - 110 mm

- Weight 0,750 kg/m

- max. Length 6 m

APPLICATION

- Cover of MiniTec linear guides LR 90

- Rough working conditions, dust, chips

ASSEMBLY

- Push bellow onto rail

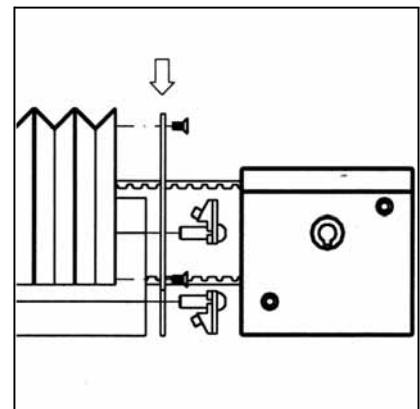
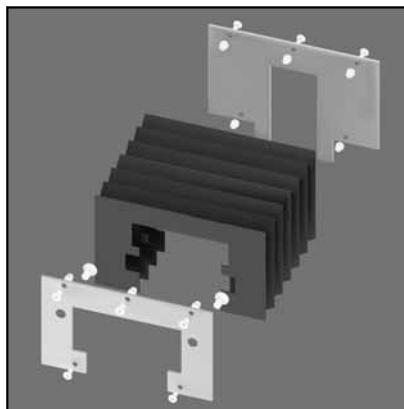
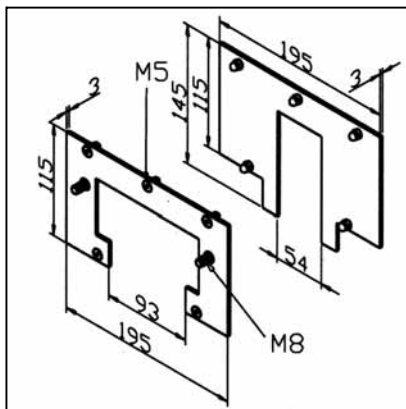
- Fix ends with fastening kit for protective bellow a **Part N° 33.3011/0** at slide or reverse unit

- The travel length is reduced by approx. 22% when bellow is used

- Caution: Consider higher friction moment when dimensioning drive unit!

FASTENING KIT FOR PROTECTIVE BELLOW LR 90

Part. N° 33.3011/0



TECH. DATA / ITEM SUPPLIED

- 1 End frame slide

- 1 End frame pulley

- Fixing kit for frame and bellow

APPLICATION

- Cover of MiniTec linear guides LR 90

- Rough working conditions, dust, chips

ASSEMBLY

- Push bellow onto rail

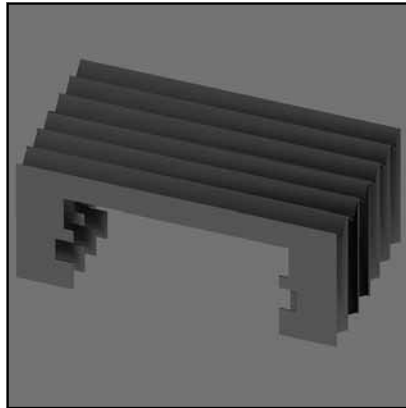
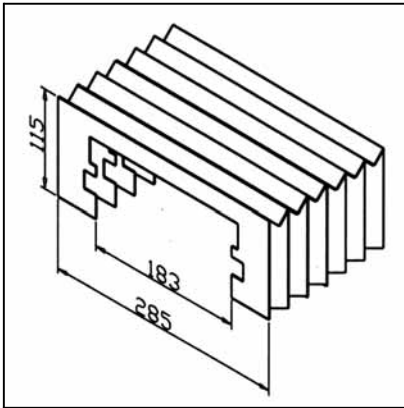
- Fix ends with fastening kit for protective bellow **Part N° 33.3011/0** at slide or reverse unit

- The travel length is reduced by approx. 22% when bellow is used

- Caution: Consider higher friction moment when dimensioning drive unit!

PROTECTIVE BELLOW LR 180

Part. N° 33.3009/0



TECH. DATA / ITEM SUPPLIED

- Plastic, black with plastic frame

- Without fixing kit

- Length when pushed together for 1 m travel: - 110 mm

- Weight 0,95 kg/m

- max. Length 6 m

APPLICATION

- Cover of MiniTec linear guides LR 180

- Rough working conditions, dust, chips

ASSEMBLY

- Push bellow onto rail

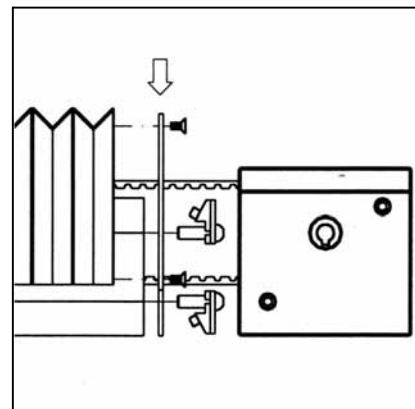
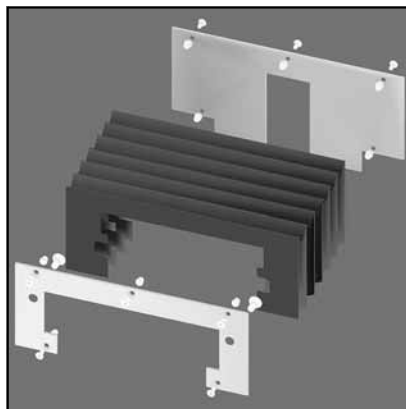
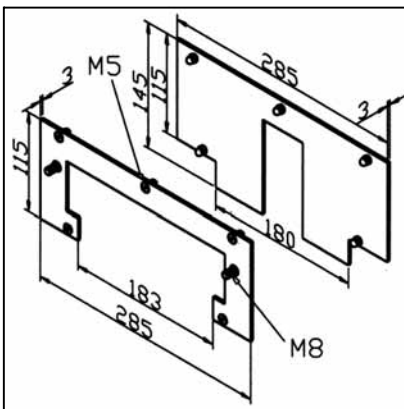
- Fix ends with fastening kit for protective bellow a **Part N° 33.3012/0** at slide or reverse unit

- The travel length is reduced by approx. 22% when bellow is used

- Caution: Consider higher friction moment when dimensioning drive unit!

FASTENING KIT FOR PROTECTIVE BELLOW LR 180

Part. N° 33.3012/0



TECH. DATA / ITEM SUPPLIED

- 1 End frame slide

- 1 End frame pulley

- Fixing kit for frame and bellow

APPLICATION

- Fastening of protective bellow LR 180 on slide LW 180

ASSEMBLY

- Fasten end frame on slide

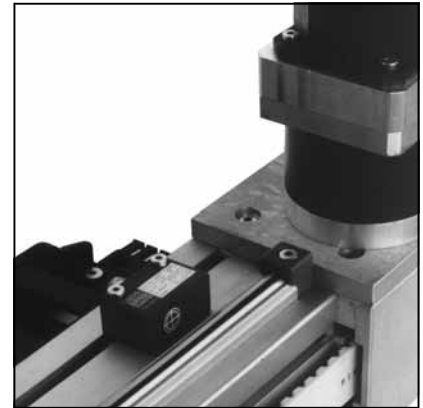
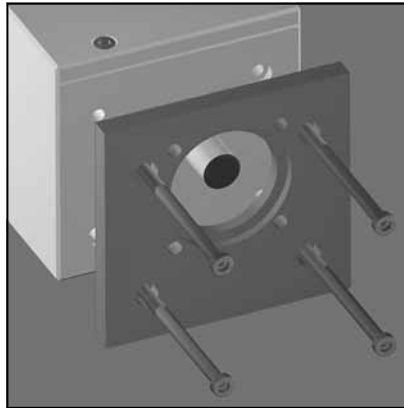
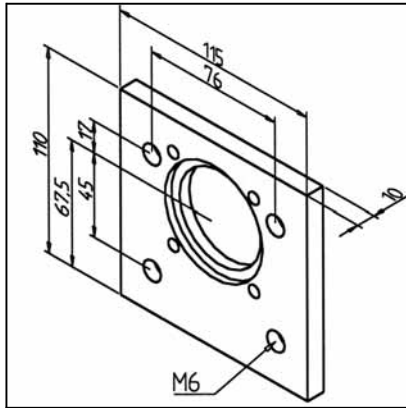
- Push protective bellow on rail

- 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

ADAPTOR PLATE

Part. N° 28.0112/0



TECH. DATA / ITEM SUPPLIED

- Aluminium, natural
- Dimension according to customers specification

APPLICATION

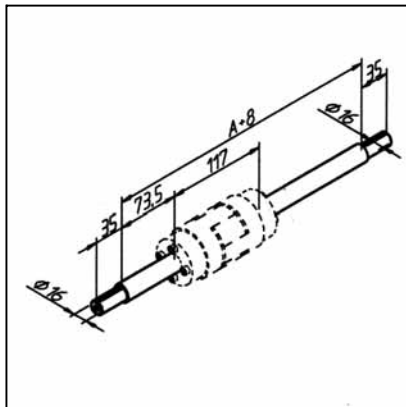
- Attachment of motors, timing belt pulley and counter

ASSEMBLY

- Mount on timing belt pulley

CONNECTING SHAFT 45

Part. N° 17.1706/0



TECH. DATA / ITEM SUPPLIED

- Steel, Ø 20 mm
- Length and processing of ends according to customer specification
- 2 pieces, clutch not included
- Fixing kit
- Weight 2,470 kg/m
- + Spring

APPLICATION

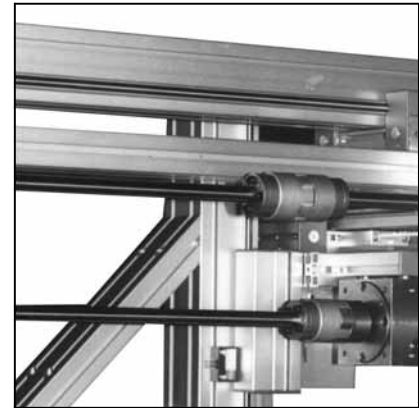
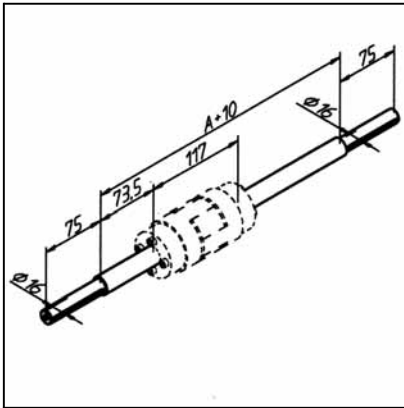
- Simultaneous transmission of 2 parallel linear guides
- Install support bearing for longer shafts

ASSEMBLY

- Fasten shafts with spring in timing belt pulley
- Connect both shaft pieces with clutch Part N° 28.0180/0

CONNECTING SHAFT 90

Part. N° 17.1706/1



TECH. DATA / ITEM SUPPLIED

- Steel, Ø 20 mm
- Length and processing of ends according to customer specification
- 2 pieces, clutch not included
- Fixing kit
- Weight 2,470 kg/m
- + Spring

APPLICATION

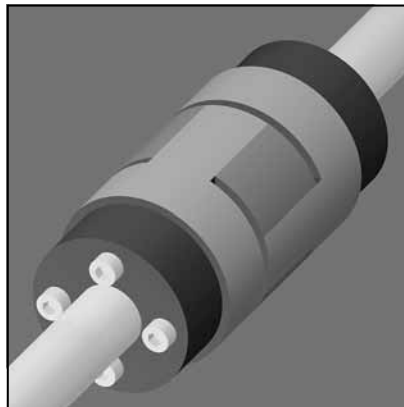
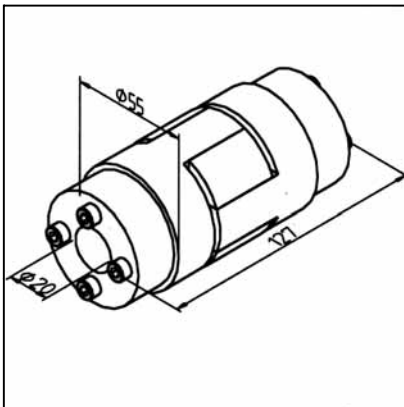
- Simultaneous transmission of 2 parallel linear guides
- For longer shafts use additional support bearing

ASSEMBLY

- Fasten shaft with spring in timing belt pulley
- Connect both shaft pieces with clutch **Part N° 28.0180/0**

CLUTCH 20

Part. N° 28.0180/0



TECH. DATA / ITEM SUPPLIED

- Clutch, steel with plastic inlay
- 2 tensioning sets, steel
- Weight 0,500 kg
- Locking torque max. 30 Nm

APPLICATION

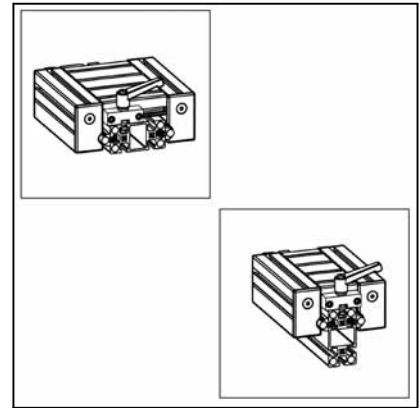
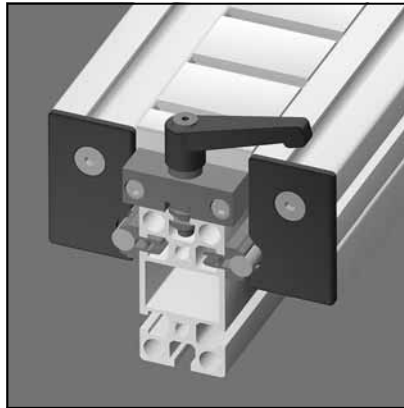
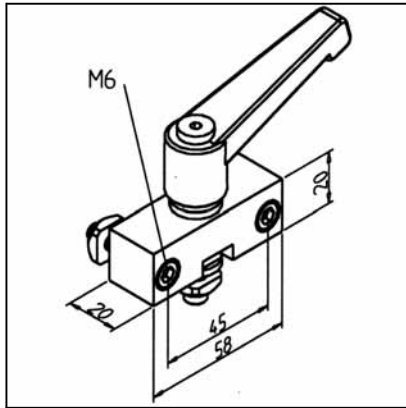
- Correction of motors to reverse unit
- Correction of misalignment for simultaneous transmission of 2 parallel linear guides with connecting shaft 45 a **Part N° 17.1706/0** or connecting shaft **Part N° 17.1706/1**

ASSEMBLY

- Attachment with integrated tensioning device
- Position of both reverse units continuously adjustable

SLIDE CLAMPING UNIT (TOP) LWG / LWN / LW

Part. N° 28.0270/0



TECH. DATA / ITEM SUPPLIED

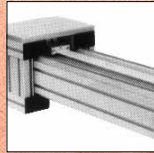
- Housing, aluminium, anodized E2/E6/EV1
- Clamp
- Fixing kit
- Weight 0,225 kg

APPLICATION

- 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
- Mount housing block
- Secure clamping lever with mounting adhesive on clamping shaft



CONNECTION OF MOTORS



Timing belt pulley T 45

Rotary-current-, step or servo-motors with max. shaft diameter of 16 mm are suitable. Assemble directly on the timing belt pulley. The pulley bore with fitting key groove and the connection side of the reverse unit will be designed according to customer specification.

Timing belt pulley T 90

Rotary-current-, step or servo-motors with max. shaft diameter of 24 mm are suitable. Assemble directly on the timing belt pulley. The pulley bore with fitting key groove and the connection side of the reverse unit will be designed according to customer specification.

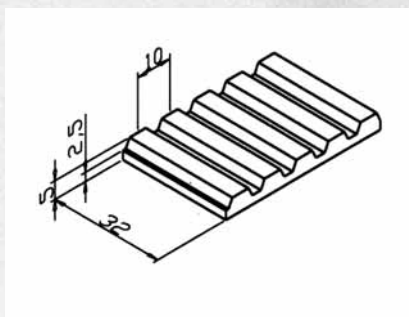
Belt drive 45 und 90

Motors with hollow shafts can be attached directly on the slide-plate. Step and servo motors are connected via a coupling on the drive of the belt drive, diameter 17. Shaft, slide-plate or adapter plate are also available according to customer specification.

Technical Data

Timing belt pulley:	LR6	T 45	T 90	Belt drive
Pulley				
D =	56,05 mm	58,6 mm	58,6 mm	58,6 mm
W =	16 mm	32 mm	32 mm	32 mm
Teeth	36	19	19	19
Bore	10 mm	8 mm	8 mm	8 mm
Reborable to max.	14 mm	16 mm	30 mm	drive shaft d 17
Travel (1 revolution)	180 mm	190 mm	190 mm	190 mm
Timing belt	16AT5	32AT10	32AT10	32AT10
Belt length in the reverse unit	160 mm	210 mm	210 mm	420 mm
Friction moment at 1/1000				
Belt tensioning	0,30 Nm	0.35 Nm	0.35 Nm	0.35 Nm
Maximal Load	30 Nm	70 Nm	130 Nm	30 Nm

Calculation of the timing belt



When using T 45 and T 90

2 x rail length
 +2 x 210 mm belt length in reverse
 - slide length
 - 2 x 20 mm in belt tensioner
 = 2 x rail length - slide length + 380 mm

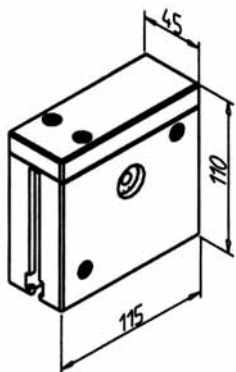
When using belt drive

Rail length + 212 mm

When using LR6

2 x Rail length + 260 mm

TIMING BELT PULLEY T 45 (LR 12 + LR 16)



Techn. data/items supplied

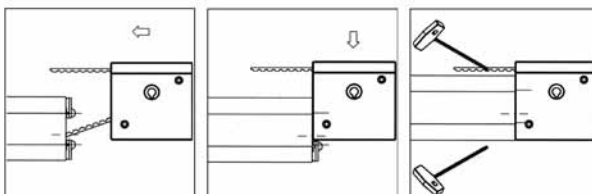
- Aluminium, anodized E6/EV1
- Completely assembled with pulley
- 2 ball bearings

Applications

- For MiniTec linear guides LR

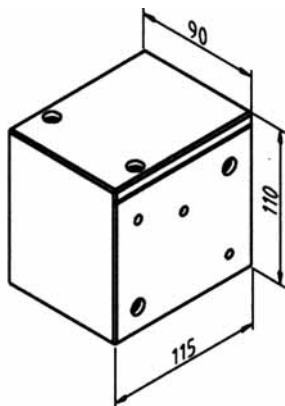
Assembly

- Form threads M8 in both rail ends and mount power lock fastener **Part N° 21.1018/0**
- Pass belt through the rail and through pulley unit
- Insert pulley unit from top
- Tighten set screw



Bore	Weight	Part N°	Part N° stainless steel
without	1,170 kg	28.0083/0	28.0046/0
Ø 11 mm	1,168 kg	28.0083/2	28.0046/2
Ø 14 mm	1,167 kg	28.0083/3	28.0046/3
Ø 15 mm	1,165 kg	28.0083/5	28.0046/5
Ø 16 mm	1,165 kg	28.0083/4	28.0046/4

TIMING BELT PULLEY T 90 (LR 12 + LR 16)



Techn. data/items supplied

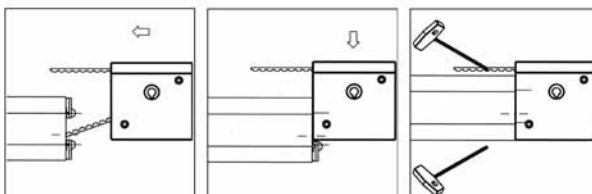
- Aluminium, anodized E6/EV1
- Completely assembled with pulley
- 2 ball bearings

Applications

- For MiniTec linear guides LR

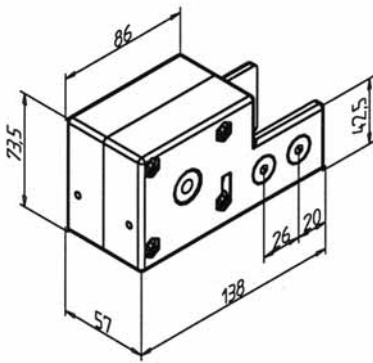
Assembly

- Form threads M8 in both ends of rail and mount power lock fastener **Part N° 21.1018/0**
- Pass belt through the rail and through pulley unit
- Insert pulley unit from top
- Tighten set screw



Bore	Weight	Part N°	Part N° stainless steel
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

TIMING BELT PULLEY LR 6



Techn. data/items supplied

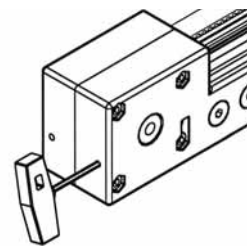
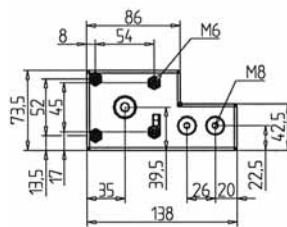
- Aluminium GD, powder coated, grey
- Assembled ready for use
- With fixing kit

Applications

- For MiniTec linear guides LR 6 Z

Assembly

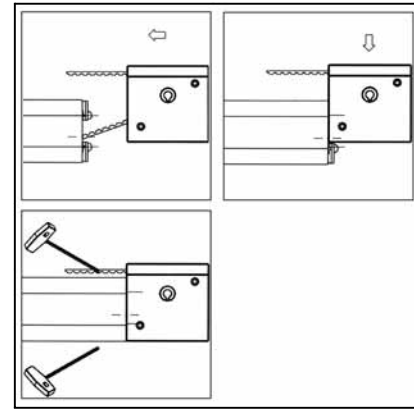
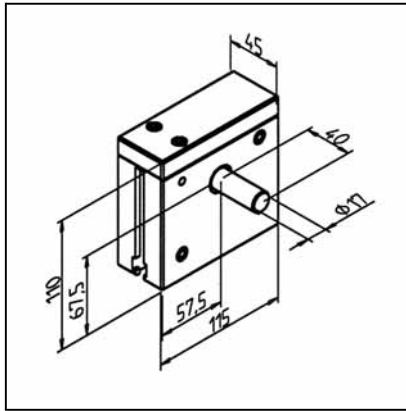
- Insert square-nuts M8 in rail
- Lead timing belt through reverse unit
- Slip reverse unit on rail and prefix screws
- Fix timing belt on slide
- Tighten timing belt at reverse unit with key 3 A/F - if necessary from both sides
- Tighten fixing screws



Bore	Weight	Part no.
without	0,96 kg	28.0510/0
Ø 10 mm	0,96 kg	28.0510/1
Ø 11 mm	0,96 kg	28.0510/2
Ø 14 mm	0,96 kg	28.0510/3

TIMING BELT PULLEY T 45 Z

Part. N° 28.0083/1



TECH. DATA / ITEMS SUPPLIED

- Anodized E6 / EV1
- Completely assembled with pulley and shaft end
- 2 ball-bearings
- Top cover mounted
- Weight 1,200 kg
- **Stainless version Part N° 28.0046/1**

APPLICATIONSS

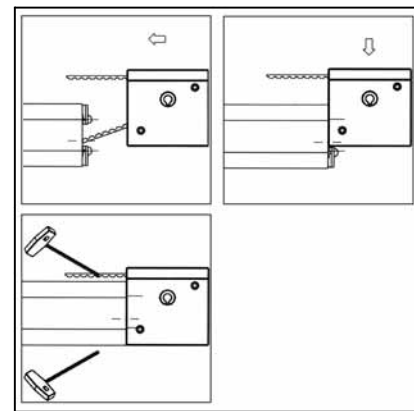
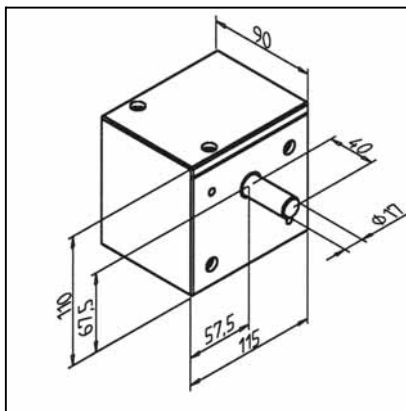
- All MiniTec linear guides

ASSEMBLY

- Form thread M8 and mount MiniTec power-lock fastener **Part N° 21.1018/0**
- Pass belt through the rail and through pulley unit
- Insert pulley unit from top
- Tighten power-lock fastener
- Tighten the timing belt

TIMING BELT PULLEY T 90 Z

Part. N° 28.0082/1



TECH. DATA / ITEMS SUPPLIED

- Aluminium, anodized E6 / EV1
- Main casting completely assembled with pulley and shaft end
- 2 ball-bearings
- Top cover mounted
- Weight 2,850 kg
- **Stainless version Part N° 28.0045/1**

APPLICATIONSS

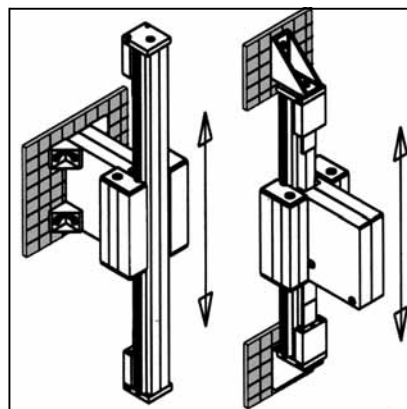
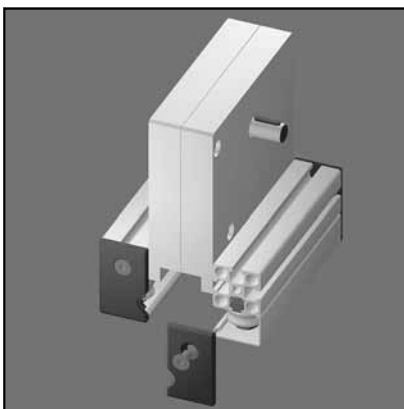
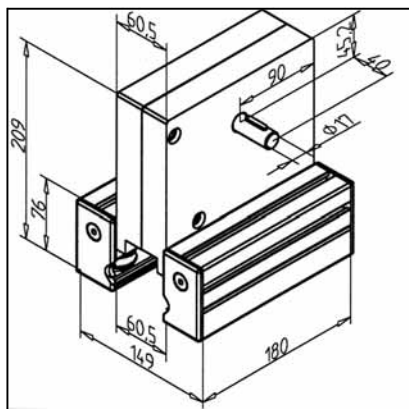
- All MiniTec linear guides

ASSEMBLY

- Form thread M8 and mount MiniTec power-lock fastener **Part N° 21.1018/0** einschrauben
- Pass belt through the rail and through pulley unit
- Insert pulley unit from top
- Tighten power-lock fastener
- Tighten the timing belt

BELT DRIVE 45

Part. N° 28.0248/0



TECH. DATA / ITEMS SUPPLIED

- Aluminium

- Shaft end Ø 17 for motor connection

- 2 idler pulleys aluminium, integrated in linear slide LW 45

- Weight 6,320 kg

APPLICATIONS

- MiniTec linear guides LR with extremely long travels, z-axis

- Use rail 45, 45 x 90 H, 45 x 135 H and 45 x 180 H

ASSEMBLY

- Push the timing belt through the drive, slide drive on the rail and adjust clearance

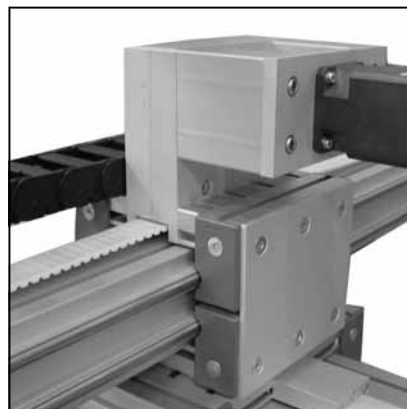
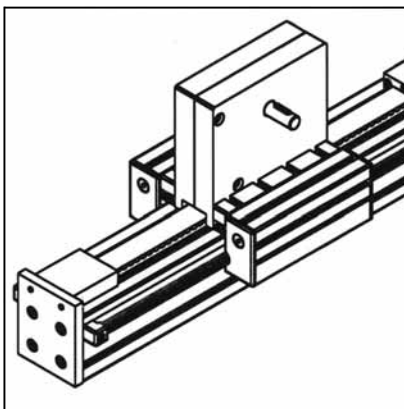
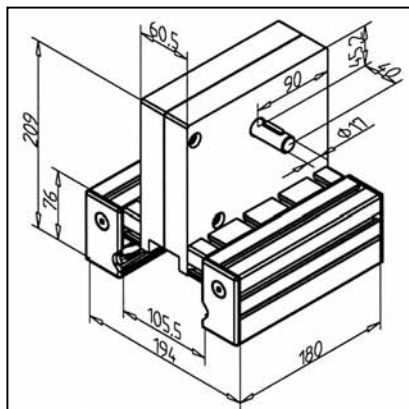
- Fasten timing belt ends with timing belt tensioner **Part N° 28.0090/0** and fastening plate for rail 45 **Part N° 28.0054/0** or for rail 45 x 90 H **Part N° 28.0056/0** on the rail ends

- Tighten the timing belt

- Calculation of the timing belt: rail length + 212 mm

BELT DRIVE 90

Part. N° 28.0249/0



TECH. DATA / ITEMS SUPPLIED

- Aluminium

- Shaft end Ø 17 for motor connection

- 2 idler pulleys aluminium, integrated in linear slide LW 90

- Weight 6,790 kg

APPLICATIONS

- MiniTec linear guides with extremely long travels, z-axis

- Use rail 45 x 90 F, rail 90 or 90 x 180 H

ASSEMBLY

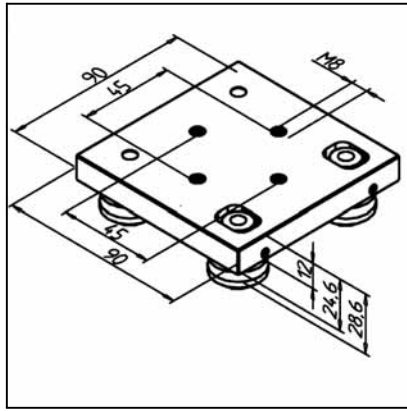
- Push the timing belt through the drive, slide drive on the rail and adjust clearance

- Fasten timing belt ends with timing belt tensioner **Part N° 28.0090/0** and fastening plate for rail 45 **Part N° 28.0057/0** or for rail 45 x 90 H **Part N° 28.0055/0** on the rail ends

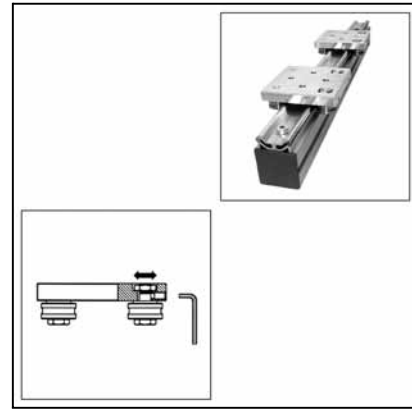
- Tighten the timing belt

- Calculation of the timing belt: rail length + 212 mm

SLIDE LR 6



Part. N° 28.0138/0



TECH. DATA / ITEMS SUPPLIED

- Aluminium, all faces machined
- Double row, angular-contact bearings
- Assembled ready for use
- Load capacity: see page 241
- Weight 0,396 kg

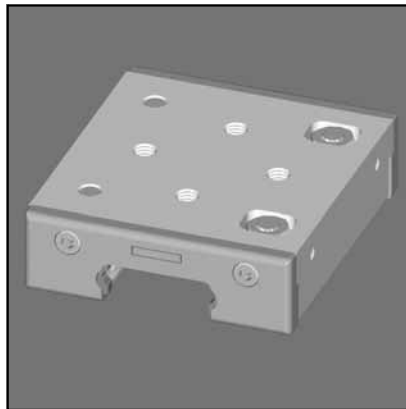
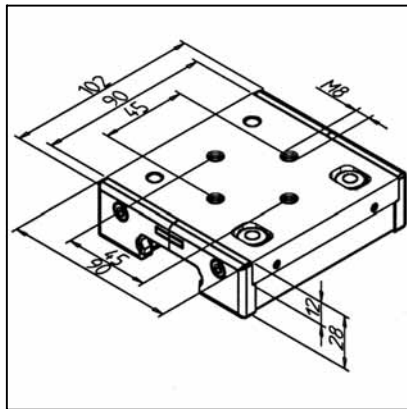
APPLICATIONS

- MiniTec linear guide systems LR 6
- Material-handling
- Measuring devices
- Doors

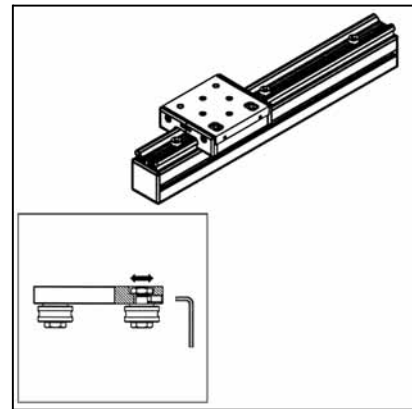
ASSEMBLY

- Slip slide onto rail
- Adjust clearance with key 2,5 A/F
- Tighten fixing screw with a torque of 20 Nm
- When used in extreme environment, use slide LR6 with cover, Part N° 28.0138/1

SLIDE LR 6 WITH COVER



Part. N° 28.0138/1



TECH. DATA / ITEMS SUPPLIED

- Aluminium, all faces machined
- Double row, angular-contact bearings LR6
- 4 concentric fixing bush
- 4 covers, plastic grey, with spring loaded greasing-felts
- Load capacity: see page 241
- Weight 0,458 kg

APPLICATIONS

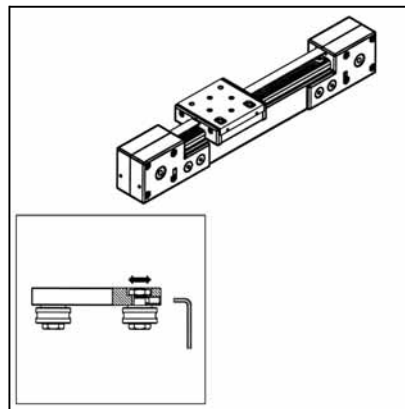
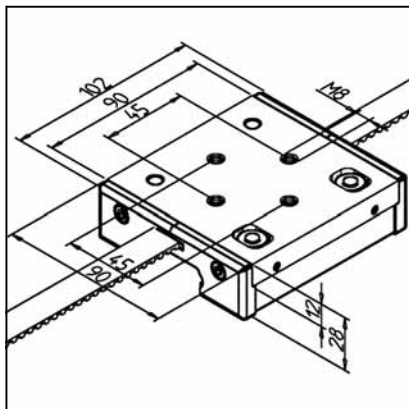
- MiniTec linear guide systems LR 6
- Jigs
- Sliding doors
- Large drawers

ASSEMBLY

- Slip slide onto rail
- Adjust clearance with key 2,5 A/F
- Recommended torque: 20 Nm
- Saturate greasing felts with appropriate oil

SLIDE LR 6 Z

Part. N° 28.0138/2



TECH. DATA / ITEMS SUPPLIED

- Aluminium, all faces machined
- Double row, angular-contact bearings LR6
- 4 concentric fixing bush
- 4 covers, plastic grey, with spring loaded greasing-felts
- Belt fixing device integrated into slide-plate
- Load capacity: see page 241
- Weight 0,502 kg

APPLICATIONS

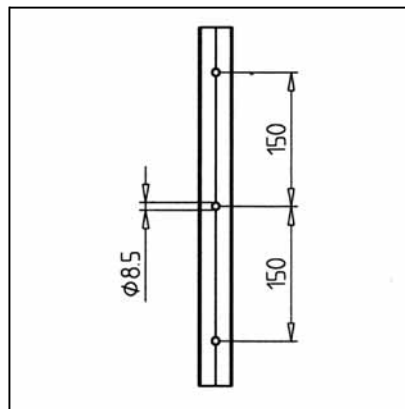
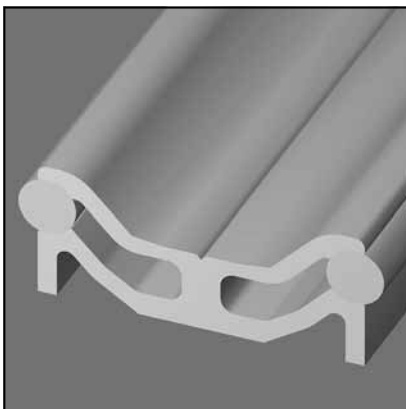
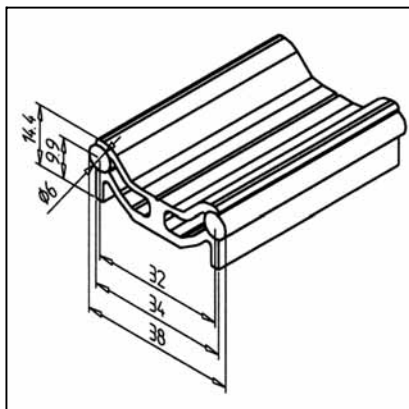
- MiniTec linear guide systems LR 6
- Material-handling devices

ASSEMBLY

- Slip slide onto rail
- Adjust clearance with key 2,5 A/F
- Recommended torque: 20 Nm
- Saturate greasing felts with appropriate oil
- Screw end-caps clamping lower covers

RAIL LR 6

Part. N° 28.0016/0



TECH. DATA / ITEMS SUPPLIED

- Aluminium, natural anodized E6/EV 1
- 2 Shafts Cf 53 h6, 60±3 HRC
- With fixing bores Ø 8,5 mm, grid: 150 mm
- Weight 0,958 kg/m
- Length 4 m

APPLICATIONS

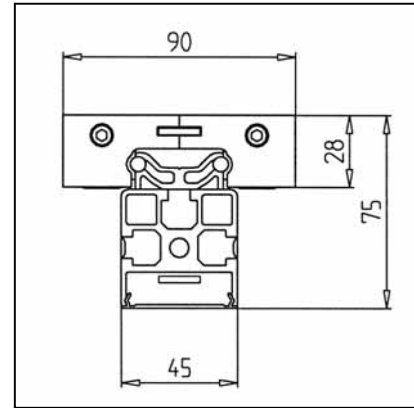
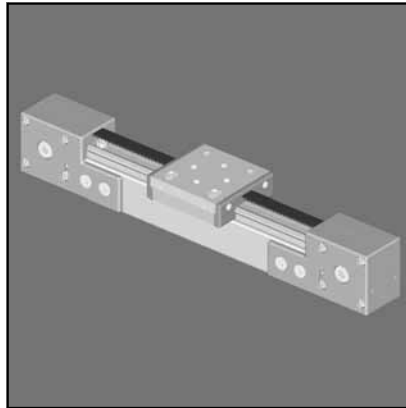
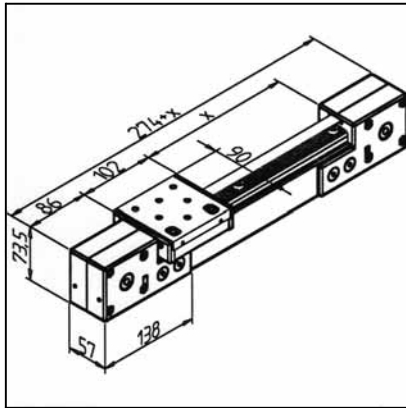
- MiniTec linear guide systems LR 6
- Material-handling
- Measuring devices
- Doors

ASSEMBLY

- Fasten rail with cap screws M8 x 20 and square nut M8 on MiniTec profile

MODULE LR 6 Z 45

Part. N° 28.0500/0



TECH. DATA / ITEMS SUPPLIED

- Linear-guide, ready for use assembled from:
- 1 Rail LR 6 with precision-steel-shafts \varnothing , 6mm, h6, with profile 45 x 45 R 1 Slide LW 6 Z with timing belt fastener 2 timing-belt reverse units 1 timing belt 16 AT 5, steel-reinforced
- Weight (without profile) 2,250 kg
- Weight/100 mm stroke 0,322 kg
- Please specify travel "X" and bore of timing belt reverse unit (\varnothing 11 mm/ \varnothing 14 mm/None)

APPLICATIONS

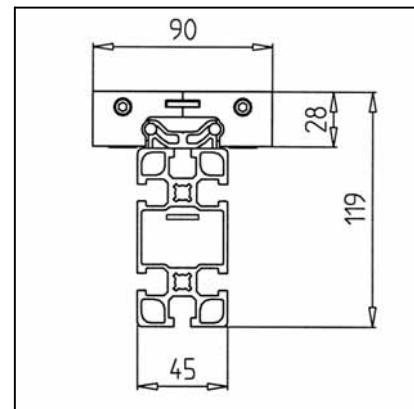
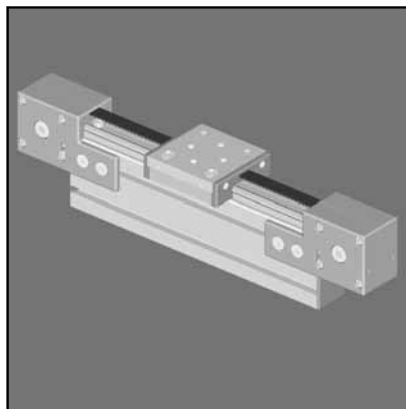
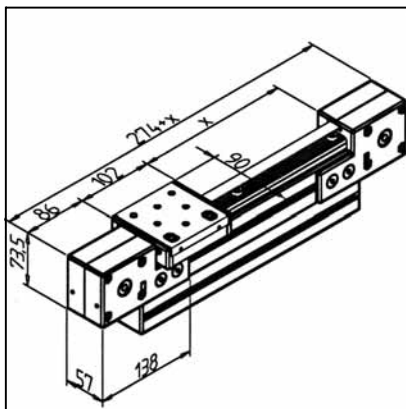
- MiniTec linear guide systems LR 6
- Material-handling
- Measuring devices
- Doors

ASSEMBLY

- Timing-belt tensioners integrated in reverse-units

MODULE LR 6 Z 90

Part. N° 28.0501/0



TECH. DATA / ITEMS SUPPLIED

- Linear-guide, ready for use assembled from:
- 1 Rail LR 6 with precision-steel-shafts \varnothing , 6mm, h6, with profile 45 x 45 R
- 1 Slide LW 6 Z with timing belt fastener,
- 2 timing- belt reverse units 1 timing belt 16 AT 5, steel-reinforced
- Basis weight (without profile) 2,250kg
- Weight/100 mm stroke 0,453 kg
- Please specify travel "X" and bore of timing belt reverse unit (\varnothing 11 mm/ \varnothing 14 mm/None)

APPLICATIONS

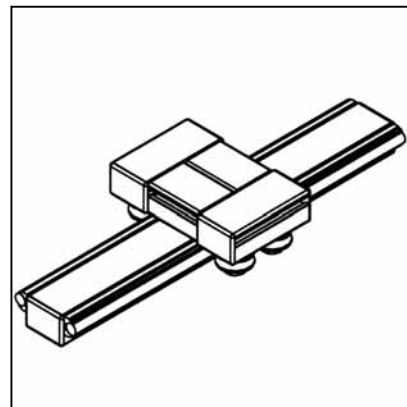
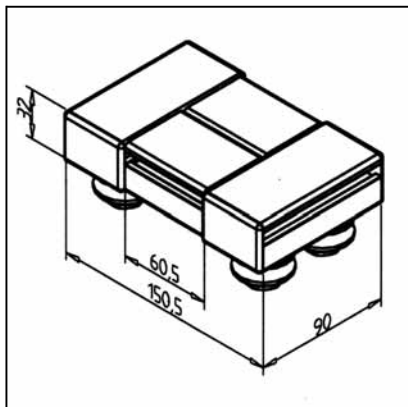
- MiniTec linear guide systems LR 6
- Material-handling
- Measuring devices
- Doors

ASSEMBLY

- Timing-belt tensioners integrated in reverse-units

SLIDE LW 32

Part. N° 28.0088/0



TECH. DATA / ITEMS SUPPLIED

- Slide completely assembled
- 2 concentric and 2 eccentric bearing units
- End caps
- Load capacity: see page 241
- Weight 1,060 kg
- Stainless version Part N° 28.0088/1

APPLICATIONS

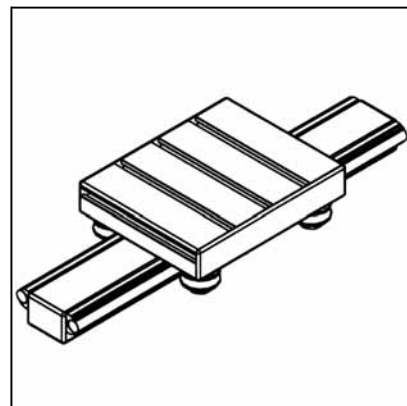
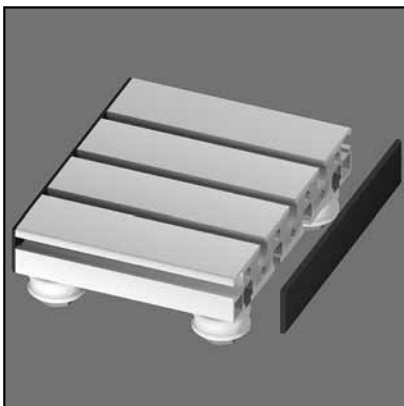
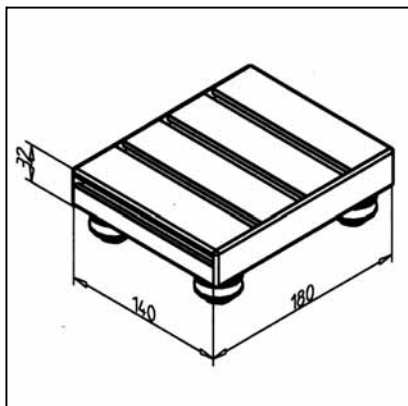
- Handling systems
- Measuring devices
- Automatic advance units
- For rails 19 and 32

ASSEMBLY

- Slip slide on rail 19 or 32; adjust clearance with eccentric bush

SLIDE LW 32 E

Part. N° 28.0089/0



TECH. DATA / ITEMS SUPPLIED

- Slide completely assembled
- 2 concentric and 2 eccentric bearing units
- End caps
- Load capacity: see page 241
- Weight 1,920 kg
- Stainless version Part N° 28.0089/1

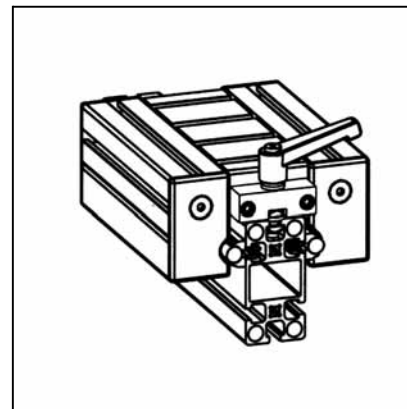
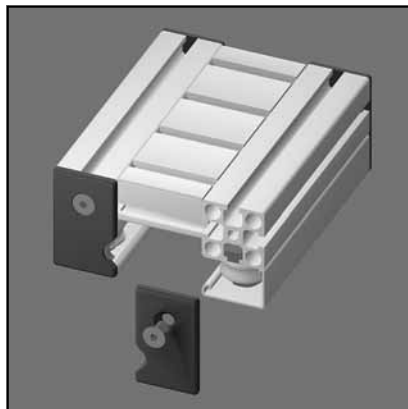
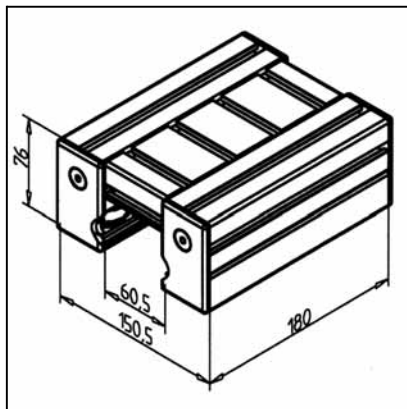
APPLICATIONS

- 1- or multi-axis guides
- Handling systems
- Measuring devices
- For rails 19 and 32

ASSEMBLY

- Slip slide on rail 19 or 32; adjust clearance with eccentric bush

SLIDE LW 45



Part. N° 28.0091/0

TECH. DATA / ITEMS SUPPLIED

- Slide completely assembled
- 2 concentric and 2 eccentric bearing units
- End caps LR and 2 cover profiles LR
- Load capacity: see page 241
- Weight 2,260 kg
- Stainless version Part N° 28.0091/3

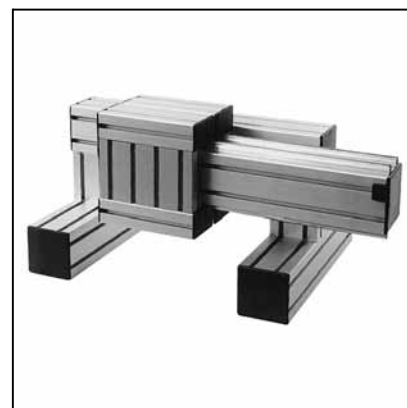
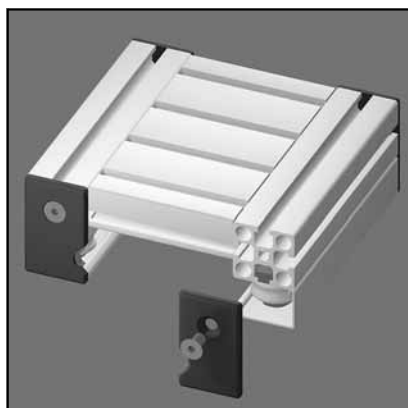
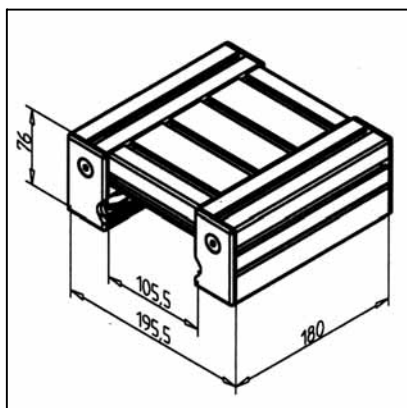
APPLICATIONS

- 1- or multi-axis guides
- Linear robots
- Handling systems
- 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
- Assemble cover and greasing system
- OPTIONS:
- Slide clamping unit Part N° 28.0270/0

SLIDE LW 90



Part. N° 28.0092/0

TECH. DATA / ITEMS SUPPLIED

- Slide completely assembled
- 2 concentric and 2 eccentric bearing units
- End caps LR and Cover profiles LR
- Load capacity: see page 241
- Weight 2,700 kg
- Stainless version Part N° 28.0092/2

APPLICATIONS

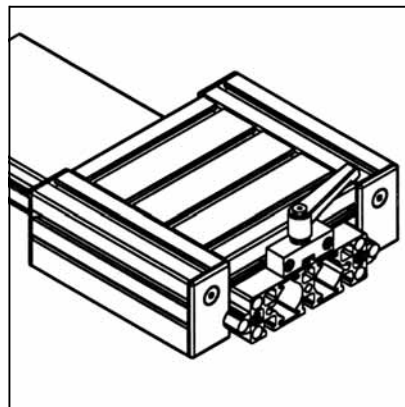
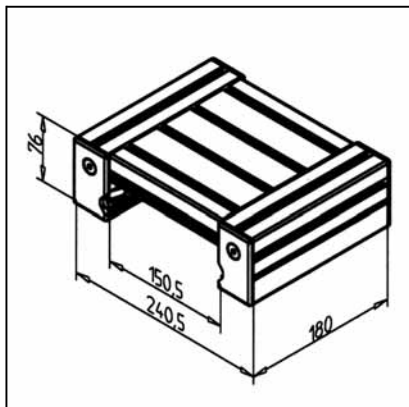
- 1- or multi-axis guides
- Linear robots
- Handling systems
- Measuring devices
- For rails 45 x 90 F, 90 x 90, 90 x 180 H

ASSEMBLY

- Assemble slide on rail 45 x 90 F, rail 90 or rail 90 x 180 H; adjust clearance with eccentric bush
- Assemble cover and greasing system
- OPTIONS:
- Slide clamping Part N° 28.0270/0

SLIDE LW 135

Part. N° 28.0084/0



TECH. DATA / ITEMS SUPPLIED

- Slide completely assembled
- 2 concentric and 2 eccentric bearing units
- End caps LR and Cover profiles LR
- Load capacity: see page 241
- Weight 3,150 kg
- **Stainless version Part N° 28.0084/1**

APPLICATIONS

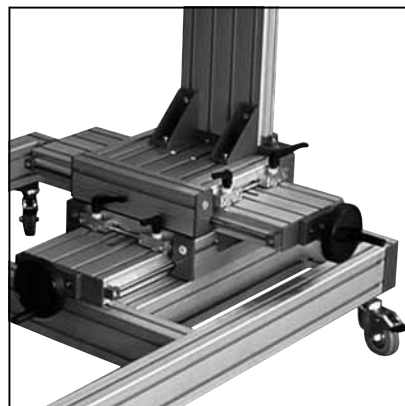
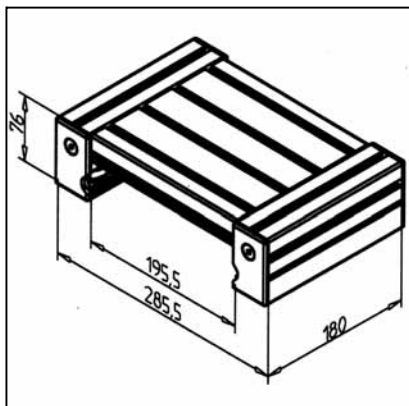
- 1- or multi-axis guides
- Linear robots
- Handling systems
- Measuring devices
- For rails 135 F

ASSEMBLY

- Assemble slide on rail 45 x 135; adjust clearance with eccentric bush
- Assemble cover and greasing system
- **OPTIONS:**
- Slide clamping unit **Part N° 28.0270/0**

SLIDE LW 180

Part. N° 28.0087/0



TECH. DATA / ITEMS SUPPLIED

- Slide completely assembled
- 2 concentric and 2 eccentric bearing units
- End caps LR and Cover profiles LR
- Load capacity: see page 241
- Weight 3,590 kg
- **Stainless version Part N° 28.0087/1**

APPLICATIONS

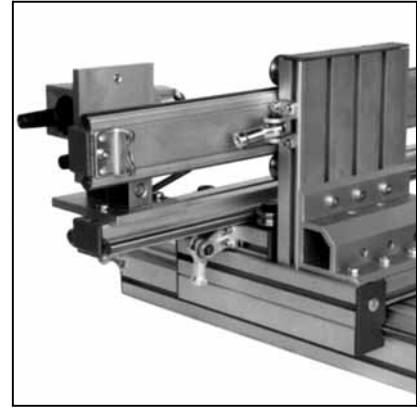
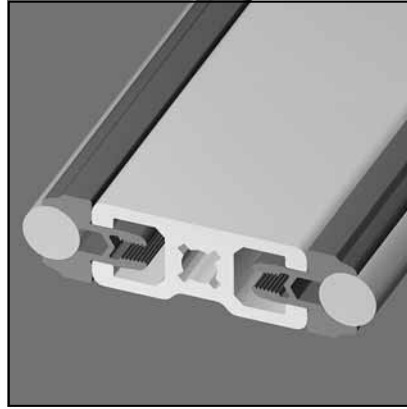
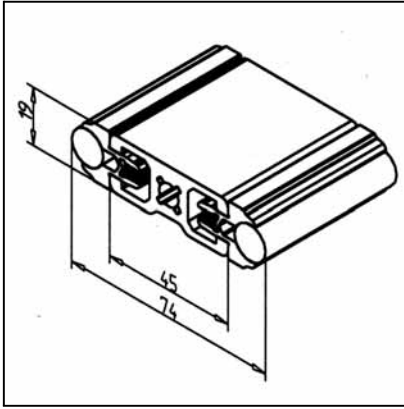
- 1- or multi-axis guides
- Linear robots
- Handling systems
- Measuring devices
- For rails 45 x 180 F and 90 x 180 F

ASSEMBLY

- Assemble slide on rail 90 x 180; adjust clearance with eccentric bush
- Assemble cover and greasing system
- **OPTIONS:**
- Slide clamping unit **Part N° 28.0270/0**

RAIL 19

Part. N° 28.0009/0



TECH. DATA / ITEMS SUPPLIED

- Profile 19 x 45
- Both sides with shaft supporting profile and shafts Ø 12 h6, ready for use
- Without end caps
- Weight 3,666 kg/m
- Length 6 m
- **Stainless version Part N° 28.0009/3**

APPLICATIONS

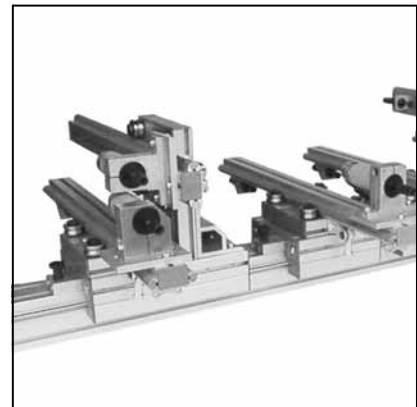
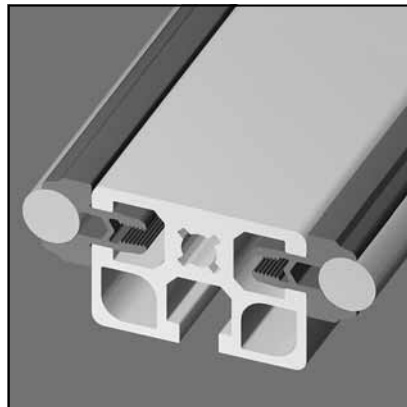
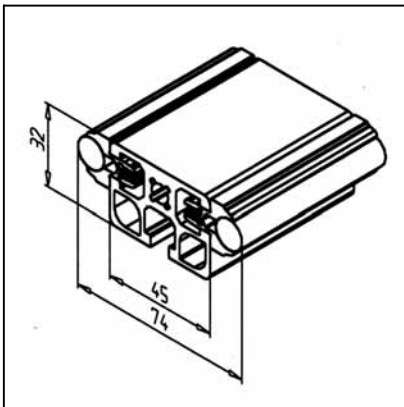
- Linear-guides
- Longer rails with composite shafts possible

ASSEMBLY

- For vertical use or for high speed Applications, we recommend the use of shaft retention devices **Part N° 28.0052/0**
- Load capacity: see page 240

RAIL 32

Part. N° 28.0010/0



TECH. DATA / ITEMS SUPPLIED

- Profile 45 x 32 F
- Both sides with shaft supporting profile and shafts Ø 12 h6, ready for use
- Without end caps
- Weight 4,161 kg/m
- Length 6 m
- **Stainless version Part N° 28.0010/3**

APPLICATIONS

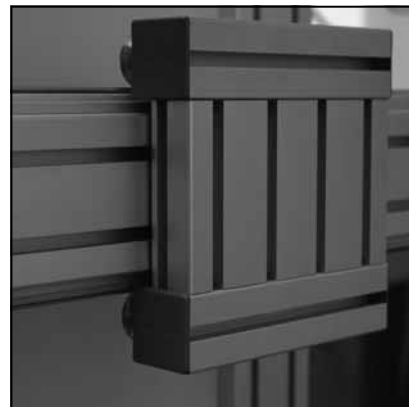
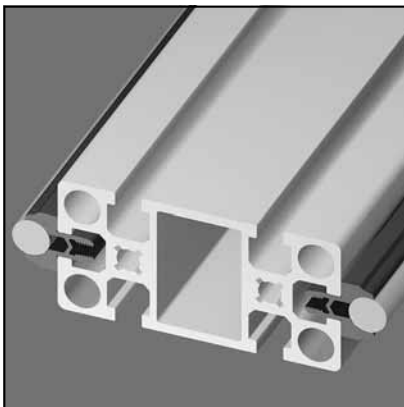
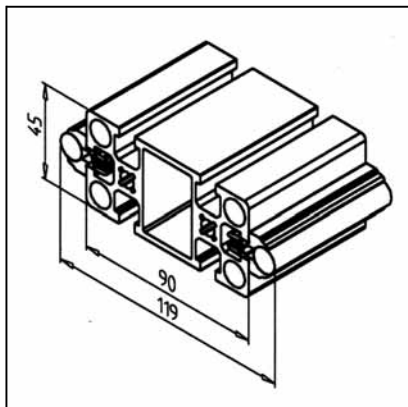
- Linear-guides
- Longer rails with composite shafts possible

ASSEMBLY

- For vertical use or for high speed Applications, we recommend the use of shaft retention devices **Part N° 28.0052/0**
- Load capacity: see page 240

RAIL 45

Part. N° 28.0006/0



TECH. DATA / ITEMS SUPPLIED

- Profile 45 x 45
- Both sides with shaft supporting profile and shafts Ø 12 h6, ready for use
- Without end caps
- Weight 4,720 kg/m
- Length 6 m
- Stainless version Part N° 28.0006/3

APPLICATIONS

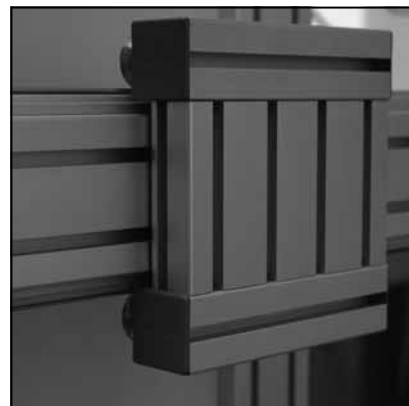
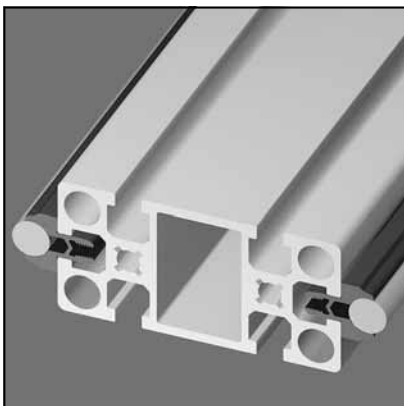
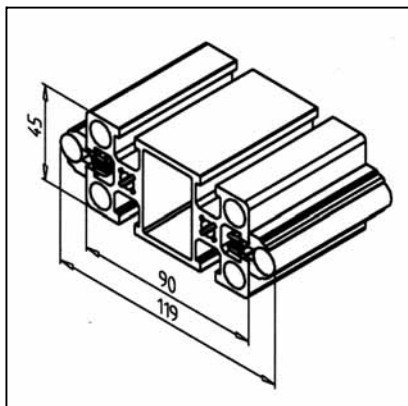
- Linear-guides
- Longer rails with composite shafts possible

ASSEMBLY

- For vertical use or for high speed Applications, we recommed the use of shaft retention devices **Part N° 28.0052/0**
- Load capacity: see page 240

RAIL 45 X 90 F

Part. N° 28.0007/1



TECH. DATA / ITEMS SUPPLIED

- Profile 45 x 90
- Both sides with shaft supporting profile and shafts Ø 12 h6, ready for use
- Without end caps
- Weight 6,190 kg/m
- Length 6 m
- Stainless version Part N° 28.0007/3

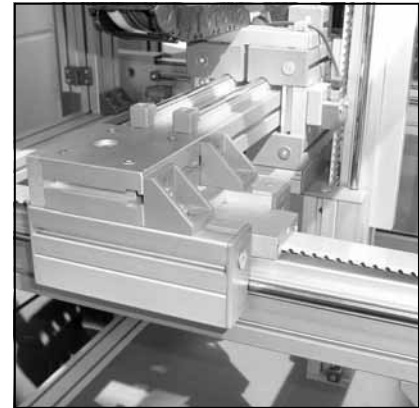
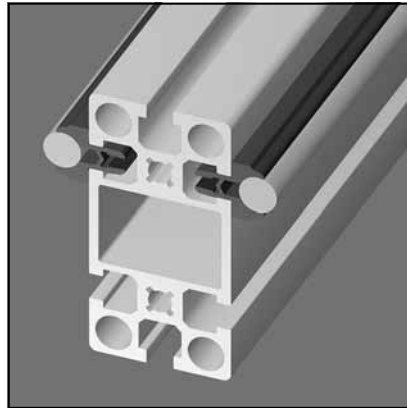
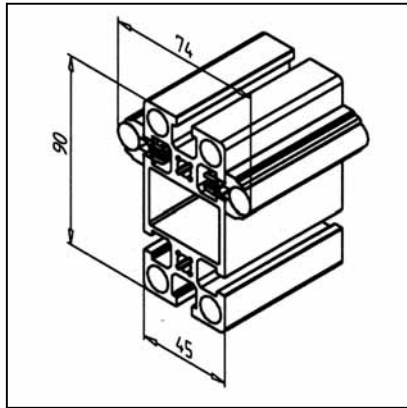
APPLICATIONS

- Linear-guides
- Longer rails with composite shafts possible

ASSEMBLY

- For vertical use or for high speed Applications, we recommed the use of shaft retention devices **Part N° 28.0052/0**
- Load capacity: see page 240

RAIL 45 X 90 H



Part. N° 28.0007/2

TECH. DATA / ITEMS SUPPLIED

- Profile 45 x 90
- Both sides with shaft supporting profile and shafts $\varnothing 12$ h6, ready for use
- Without end caps
- Weight 6,190 kg/m
- Length 6 m
- **Stainless version Part N° 28.0007/4**

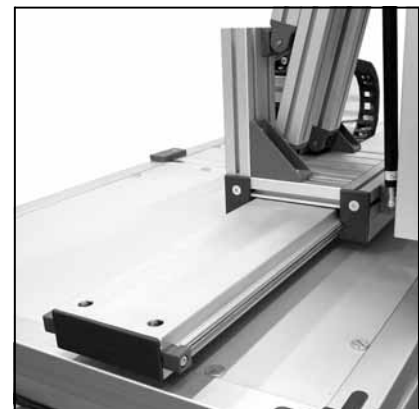
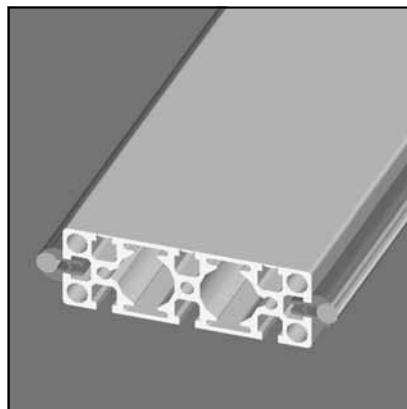
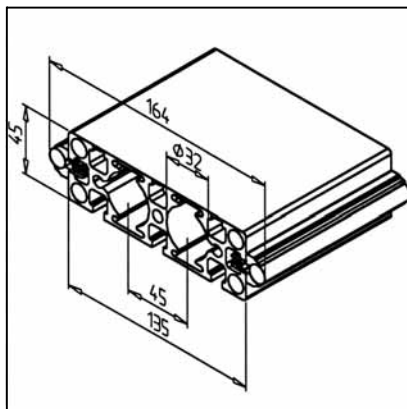
APPLICATIONS

- Linear and lifting guides
- Belt return in profile
- Longer rails with shafts put together

ASSEMBLY

- For vertical use or for high speed Applications, we recommend the use of shaft retention devices **Part N° 28.0052/0**
- Load capacity: see page 240

RAIL 135 F



Part. N° 28.0012/1

TECH. DATA / ITEMS SUPPLIED

- Profile 45 x 135 G
- Both sides with shaft supporting profile and shafts $\varnothing 12$ h6, ready for use
- Without end caps
- Weight 8,09 kg/m
- Length 6 m
- **Stainless version Part N° 28.0012/3**

APPLICATIONS

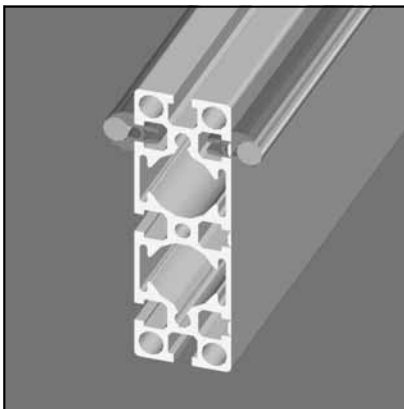
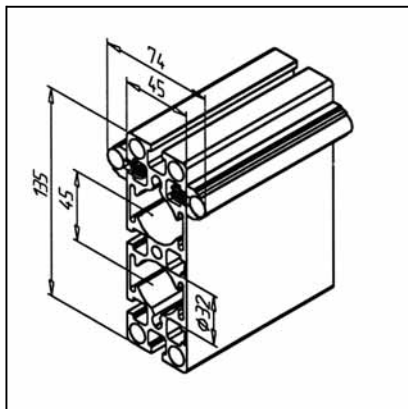
- Linear and lifting guides
- Longer rails with shafts put together

ASSEMBLY

- For vertical use or for high speed Applications, we recommend the use of shaft retention devices **Part N° 28.0052/0**
- Load capacity: see page 240

RAIL 135 H

Part. N° 28.0012/2



TECH. DATA / ITEMS SUPPLIED

- Profile 45 x 135 G
- Both sides with shaft supporting profile and shafts Ø 12 h6, ready for use
- Without end caps
- Weight 8,090 kg/m
- Length 6 m
- Stainless version Part N° 28.0012/4

APPLICATIONS

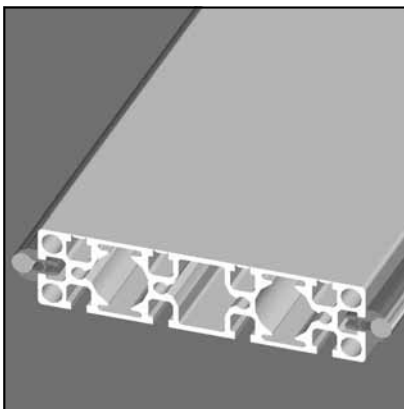
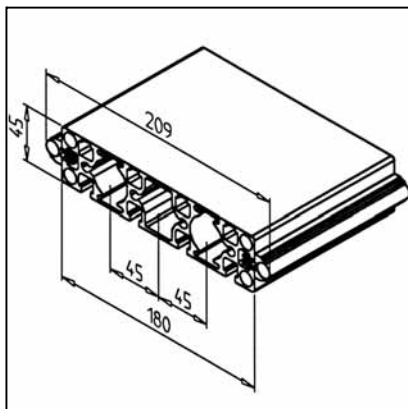
- Linear-guides
- Longer rails with composite shafts possible

ASSEMBLY

- For vertical use or for high speed Applications, we recommed the use of shaft retention devices **Part N° 28.0052/0**
- Load capacity: see page 240

RAIL 45 X 180 F

Part. N° 28.0013/1



TECH. DATA / ITEMS SUPPLIED

- Profile 45 x 180 G
- Both sides with shaft supporting profile and shafts Ø 12 h6, ready for use
- Without end caps
- Weight 10,020 kg/m
- Length 6 m
- Stainless version Part N° 28.0013/3

APPLICATIONS

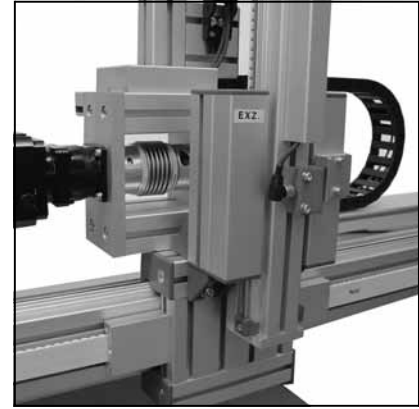
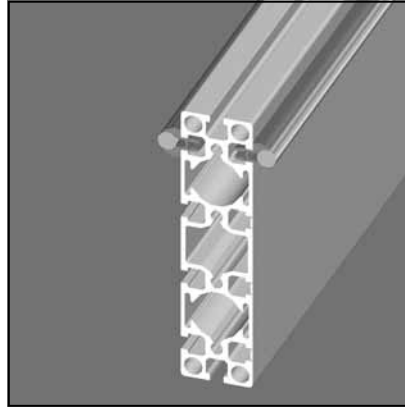
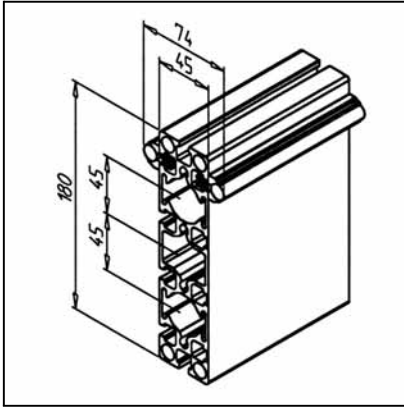
- Linear-guides
- Longer rails with composite shafts possible

ASSEMBLY

- For vertical use or for high speed Applications, we recommed the use of shaft retention devices **Part N° 28.0052/0**
- Load capacity: see page 240

RAIL 45 X 180 H

Part. N° 28.0013/2



TECH. DATA / ITEMS SUPPLIED

- Profile 45 x 180 G
- Both sides with shaft supporting profile and shafts $\varnothing 12$ h6, ready for use
- Without end caps
- Weight 10,020 kg/m
- Length 6 m
- Stainless version Part N° 28.0013/4

APPLICATIONS

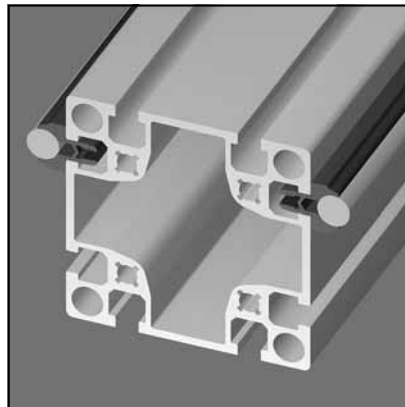
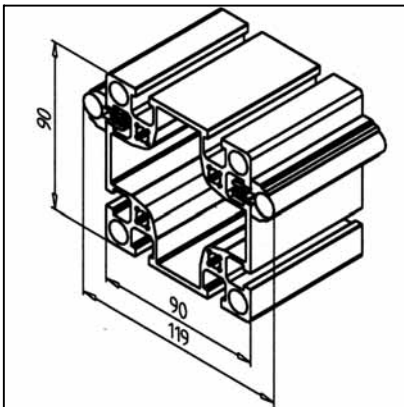
- Linear-guides
- Longer rails with composite shafts possible

ASSEMBLY

- For vertical use or for high speed Applications, we recommend the use of shaft retention devices Part N° 28.0052/0
- Load capacity: see page 240

RAIL 90

Part. N° 28.0008/0



TECH. DATA / ITEMS SUPPLIED

- Profile 90 x 90 L
- Both sides with shaft supporting profile and shafts $\varnothing 12$ h6, ready for use
- Without end caps
- Weight 7,88 kg/m
- Length 6 m
- Stainless version Part N° 28.0008/3

APPLICATIONS

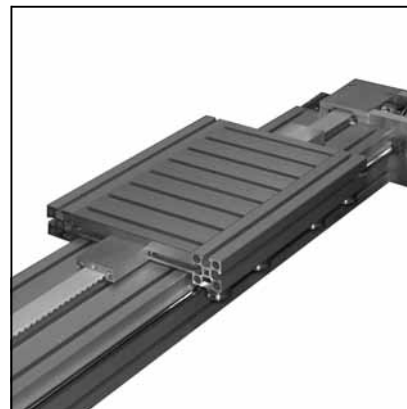
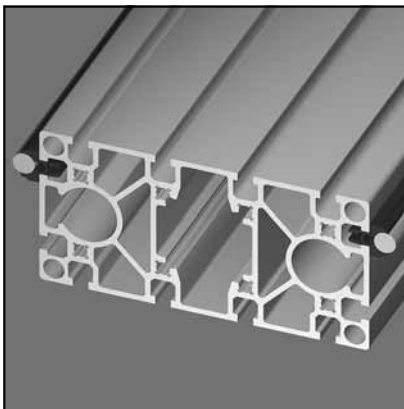
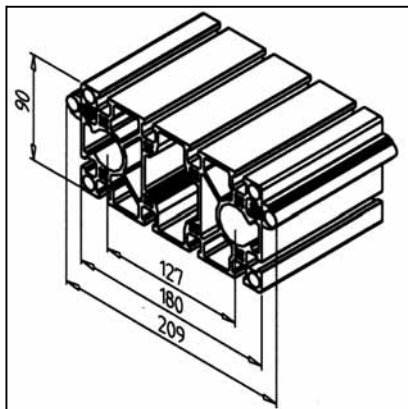
- Linear-guides
- Timing belt return inside the profile
- Longer rails with composite shafts possible

ASSEMBLY

- For vertical use or for high speed Applications, we recommend the use of shaft retention devices Part N° 28.0052/0
- Load capacity: see page 240

RAIL 180 F

Part. N° 28.0011/1



TECH. DATA / ITEMS SUPPLIED

- Profile 90 x 180 S
- Both sides with shaft supporting profile and shafts Ø 12 h6, ready for use
- Without end caps
- Weight 14,220 kg/m
- Length 6 m
- Stainless version Part N° 28.0011/3

APPLICATIONS

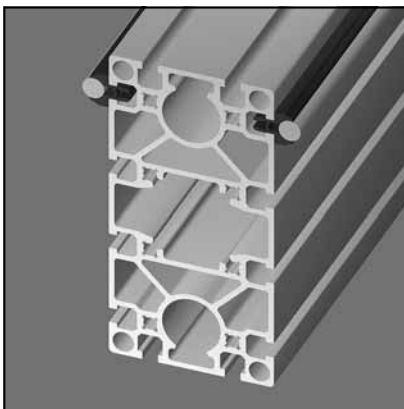
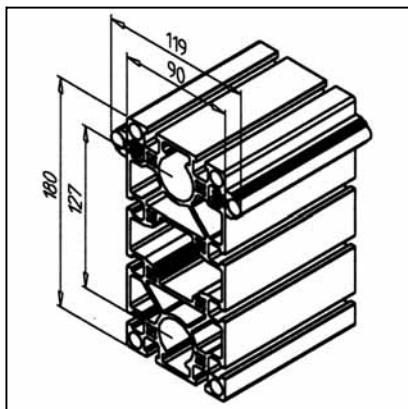
- Linear-guides
- Timing belt return inside the profile
- Longer rails with composite shafts possible

ASSEMBLY

- For vertical use or for high speed Applications, we recommed the use of shaft retention devices **Part N° 28.0052/0**
- Load capacity: see page 240

RAIL 180 H

Part. N° 28.0011/2



TECH. DATA / ITEMS SUPPLIED

- Profile 90 x 180 S
- Both sides with shaft supporting profile and shafts Ø 12 h6, ready for use
- Without end caps
- Weight 14,220 kg/m
- Length 6 m
- Stainless version Part N° 28.0011/4

APPLICATIONS

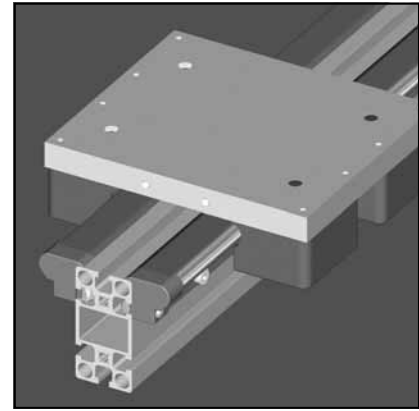
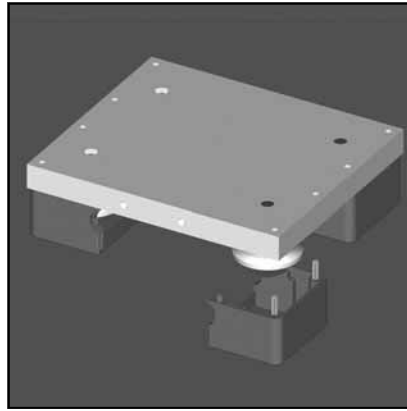
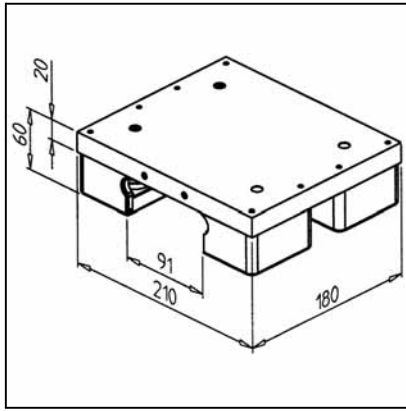
- Linear-guides
- Timing belt return inside the profile
- Longer rails with composite shafts possible

ASSEMBLY

- For vertical use or for high speed Applications, we recommed the use of shaft retention devices **Part N° 28.0052/0**
- Load capacity: see page 240

SLIDE LR16 - 45

Part. N° 28.0810/0



TECHN. DATA / ITEMS SUPPLIED

- With 2 concentric and 2 eccentric bearing units

- Load / Bearing:

- dyn. C = 19.90 N

- stat. Co = 12.60 N

- Weight 3,640 kg

APPLICATIONSS

- Single and multi-axis guidance

- Linear robot

- Handling equipment

- Measuring equipment

- For rail LR16 45x90 H

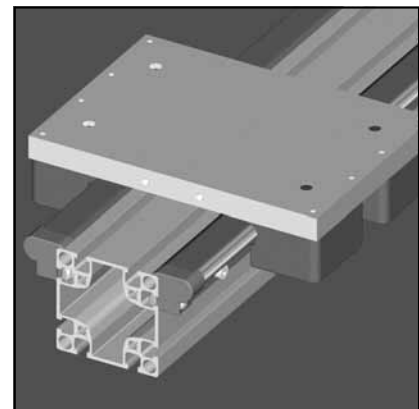
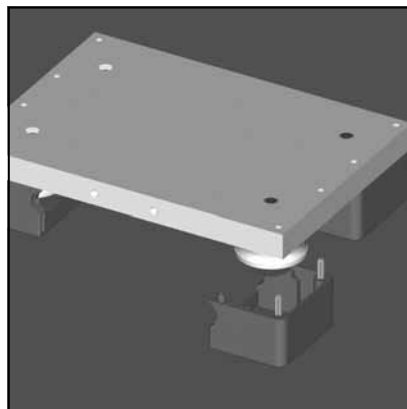
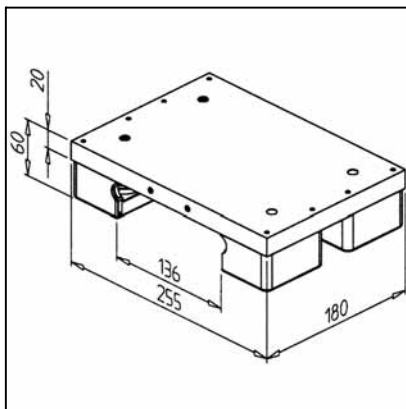
ASSEMBLY

- Push the trolley onto the rails, adjust for zero play with eccentric fastening set

- Mount the covering and lubrication system

SLIDE LR 16 - 90

Part. N° 28.0811/0



TECHN. DATA / ITEMS SUPPLIED

- Fully assembled trolley

- With 2 concentric and 2 eccentric bearing units

- Load / Bearing:

- dyn. C = 19.90 N

- stat. Co = 12.60 N

- Weight 4,078 kg

APPLICATIONSS

- Single and multi-axis guidance

- Linear robot

- Handling equipment

- Measuring equipment

- For rail LR16 90 and LR16 90x180 H

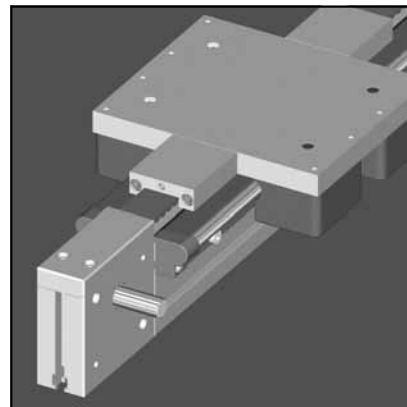
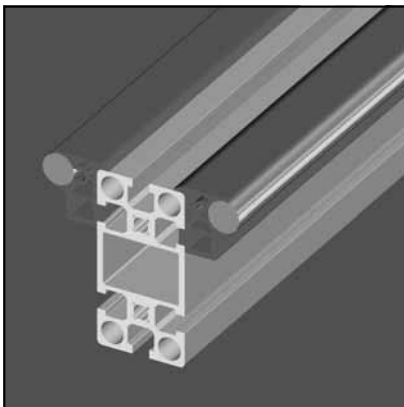
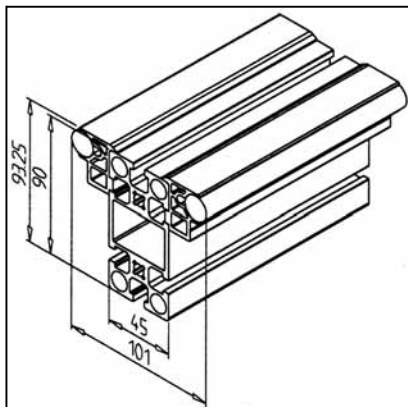
ASSEMBLY

- Push the trolley onto the rails, adjust for zero play with eccentric fastening set

- Mount the covering and lubrication system

RAIL LR 16 45X90 H

Part. N° 28.0820/0



TECHN. DATA / ITEMS SUPPLIED

- Profile 45 x 90
- With shaft carrier profile LR 16 and shaft with diameter 16 h6 on both sides, assembled ready to fit
- Without end caps
- Weight 7,979 kg/m
- Length 6 m

APPLICATIONS

- Linear and column guides for high loading capacity
- Toothed belt return in profile
- Greater lengths are possible with compound shafts

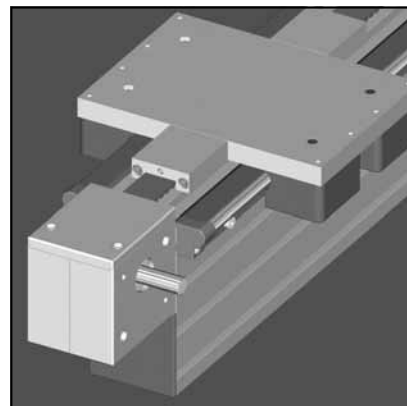
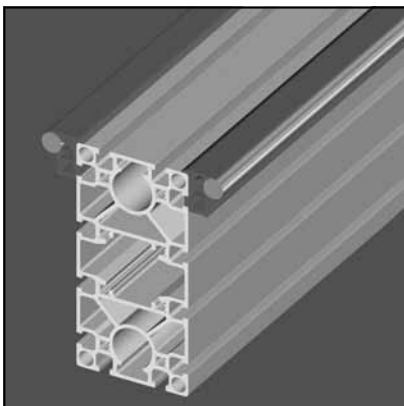
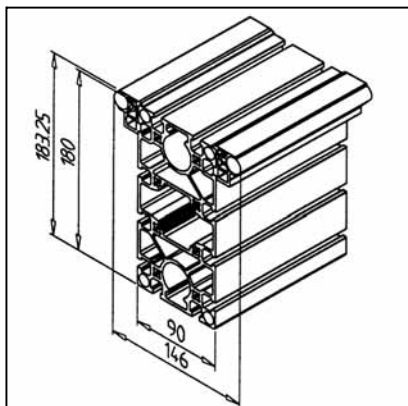
ASSEMBLY

- When used vertically, or with high acceleration figures, we recommend the use of shaft fastener LR 16

Part. N° 28.0808/0 and 28.0809/0

RAIL LR 16 90X180 H

Part. N° 28.0822/0



TECHN. DATA / ITEMS SUPPLIED

- Profile 90 x 180 S
- With shaft carrier profile and shaft with diameter 16 h6 on both sides, assembled ready to fit
- Without end caps
- Weight 16,278 kg/m
- Length 6 m

APPLICATIONS

- Linear and column guides for high loading capacity
- Toothed belt return in profile
- Greater lengths are possible with compound shafts

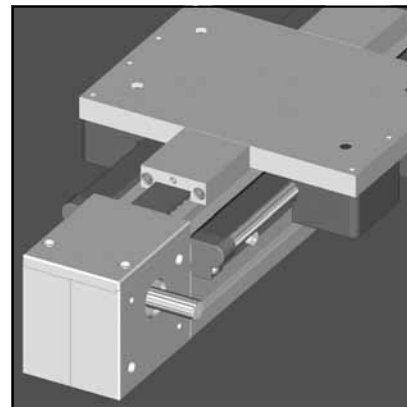
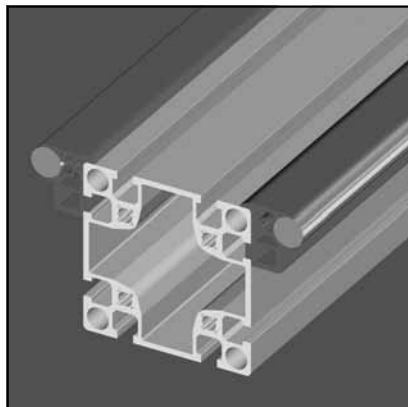
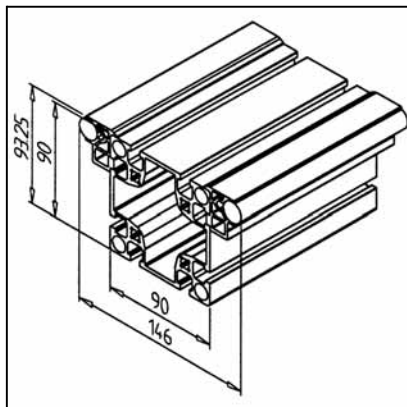
ASSEMBLY

- When used vertically, or with high acceleration figures, we recommend the use of shaft fastener LR 16

Part. N° 28.0808/0 and 28.0809/0

RAIL LR 16 90

Part. N° 28.0821/0



TECHN. DATA / ITEMS SUPPLIED

- Profile 90 x 90
- With shaft carrier profile LR 16 and shaft with diameter 16 h6 on both sides, assembled ready to fit
- Without end caps
- Weight 10,067 kg/m
- Length 6 m

APPLICATIONS

- Linear and column guides for high loading capacity
- Toothed belt return in profile
- Greater lengths are possible with compound shafts

ASSEMBLY

- When used vertically, or with high acceleration figures, we recommend the use of shaft fastener LR 16 **Part. N° 28.0808/0 and 28.0809/0**