LINEAR SLIDES 15

Application example – linear systems
Linear slides, drives and accessories

1 Stable frame

- Made-to-measure construction using various profile lines
- Easily extended thanks to use of universal profile grooves

27 Section 1

2 Linear Units

- Customised solutions comprising guide, drive and slide
- Suitable for custom combination
- Also available as ready-to-install turnkey systems

545 Section 16

3 Synchroniser Shafts

- For connecting linear drives
- Torsionally rigid design

630 Section 16

4 Couplings

- For connecting virtually any motor to a linear drive
- For connecting Synchroniser Shafts
- For evening out angle errors

623 Section 16

5 Linear slides

- Shafts directly on the profile for high rigidity or rails for high load-carrying capacity
- With roller guides, Linear Guide Units, Ball-Bearing Guide Bushes or a criss-crossed roller guide

544 Section 15

6 Rack drive

- Excellent rigidity by incorporating rack in profile groove
- Linear slides with integrated sprocket
- Particularly suitable for vertical movement

614 Section 16

7 Customised slides

- Can be extended as required thanks to use of universal profile grooves
- Wide selection of Bearing Units
- Variable dimensions for large support widths

551 Section 15

8 Drive elements

- Systems for various types of application
- Modular building kit system with wide range of combination options

593 Section 16

9 Timing-belt drive

- High travelling speed
- Suitable for long stretches
- Maintenance-free with low wear

596 Section 16

10 C-Rail Guide

- Easy-running and compact
- Ideal for lifting and sliding doors
- Can also be automated with a drive

568 Section 15

Key: See page | 0 Products in this section | 0 Products in other sections

Linear slides
Products in this section

Shaft Clamp Profiles

- For fastening the Shafts for Linear Units to standard profile grooves
- Easy to install thanks to clip-in technology

550

Bearing Units

- Easy-running and strong rollers
- Suitable for any size of slide thanks to modular design

551

End Cap and Lubricating Systems

- Automatic lubrication for Bearing Units
- Oil reservoir for low-maintenance operation

555

Rollers

- For building customised Bearing Units
- Compatible Roller Profiles available

556

T-slot slider

- Sliding shoe uses a Line 8 groove as a guide
- Lubricant-free and low-maintenance

560

Linear Guide Unit 8 D14

- Particularly rigid and strong
- Particularly compact shaft guide

566

C-Rail, Bearing Units

- Secure roller guides for lifting and sliding doors
- Fully preassembled guides

570

Bearing Carriage

- Runs on easily alignable guide rails
- High carrying capacity thanks to full complement of balls

577

Linear Guide Rail

- Stable compact guide
- Fastening to the profile groove

578

Ball-Bearing Guide Bush Sets

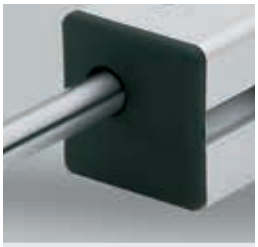
- Turnkey system up to 2,000 mm long
- One-piece slides or parallel slides

581

Ball-bush block guides

- Customisable thanks to modular design of blocks
- Special block profiles for different heights

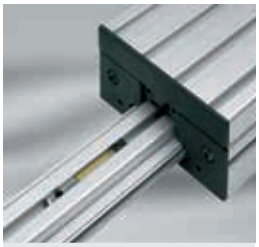
585



Shafts

- Hardened and polished guiding shafts
- Extremely versatile

588



Limit Stop

- Slide stop integrated into the profile groove
- Suitable for positioning anywhere along the groove

590

Slide Clamp 8 heavy-duty

- Hold slides in place
- Large clamping area for high holding force

591

Overview – the quickest route to the ideal linear slide

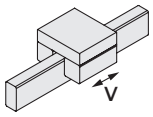
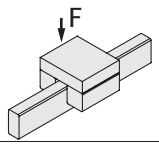
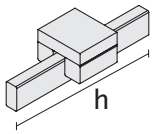
Five different linear slides are available to enable rapid and precise slide movements. Their modular design means they can be configured to create customised solutions in terms of stroke length, speed, drive and construction.

Four **guide variants** are available for various applications and loads:

- Innovative Shaft-Clamp Profiles from item can be used to fasten hardened steel shafts directly to the profile groove, which results in high rigidity and load-carrying capacity, even over long stretches.
- Sliders can move low loads, using the groove of a Line 8 profile as a guiding element.
- Ball bushes can be used to create particularly light lifting guides on unsupported shafts.
- In the case of particularly high requirements in terms of load-carrying capacity and rigidity, steel profile rails are used. A stable recirculating ball-bearing guide ensures smooth running even when carrying heavy loads.

Shafts anchored in the profile can be used with three different **bearing systems**:

- Roller guides are extremely easy to install, move easily and offer a broad range of construction sizes for a variety of purposes.
- Linear Guide Units deliver exceptional rigidity and load-carrying capacity in compact dimensions.
- The ideal linear guide for automated lifting and sliding doors are C-Rails, which ensure precise motion with low tolerances.

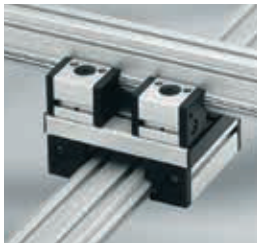
Linear slides – a comparison	Speed	Load-carrying capacity	Stroke length (max.)
			
Roller guide – variable and modular 546 ▪ Biggest selection of Bearing Units ▪ Can be adapted to a whole range of tasks using customised slides	10 m/s	400 - 7,600 N	Unlimited (shafts can be butt-joined)
T-slot slider – space saving and low maintenance 560 ▪ Uses a Line 8 groove as a guide and runs lubricant-free ▪ Highly space-saving solution for moving low loads	1 m/s	150 N	3860 mm
Linear Guide Unit – for maximum load-carrying capacity 566 ▪ More rigid and more compact than a roller guide ▪ Easy to construct thanks to completed slide	3 m/s	2,300 N	6,000 mm
C-Rail System – for suspended loads 568 ▪ Ideal for lifting and sliding doors ▪ Easy-running Bearing Units in a range of load-carrying classes.	10 m/s	50 - 750 N	Unlimited (shafts can be butt-joined)
Linear guide system – for high loads 576 ▪ High load-carrying capacity for heavy loads ▪ Excellent resistance to torsional moment inherent in design	5 m/s	1,000 - 2,500 N	3,800 mm
Ball-Bearing Guide Bush – simple and complete 580 ▪ Low friction and maintenance requirements ▪ Ideal for lifting guides	2 m/s	500 - 1,500 N	2,000 mm

Note:

Custom Linear Units can be ordered from item as ready-to-install turnkey systems. Standard components are configured and assembled as per customer specifications. Further information on the time and cost-saving item automation solutions is available online at item24.de/en

The “Mechanical drive elements” section contains Drives for building your own Linear Units.

Roller Guides



Roller Guide 5 D6 as a compound slide

Roller Guide 8 D6

Roller Guide 8 D14

The Roller Guides can be extended to any length

Two Roller Guides on one Profile

Roller Guide 8 D25

Roller guide unit with Double-Bearing Unit

Service

The modular roller guides are easy to assemble and offer high load-carrying capacity, virtually any stroke length and high travelling speed.
The low friction and generous dimensions contribute to the long service life.
Roller guides consist of a slide and guide profile.
The slides are of modular design constructed from Bearing Units with ball-bearing mounted, prismatic rollers from ball-bearing steel, End Cap and Lubricating Systems, and a carriage plate from a construction profile.

The roller guides are mounted on Line 5 or 8 Profiles using Shaft-Clamp Profiles, which are simply and cost-effectively clipped or screwed (Roller Guides D25) into the profile grooves. The hardened and polished steel shafts are then pressed into the Shaft-Clamp Profiles along the entire length of the guide. By selecting appropriate lengths and offset section joints for the supporting profile, the Shaft-Clamp Profile and the shaft, it is possible to construct virtually any length of roller guide. Shaft-Clamp Profiles must not be used on profile grooves of types “light” and “E”, because sufficient clamping will not be achieved.

The various available diameters of the guiding shafts together with suitable dimensioning of the supporting profile mean that a wide variety of permissible loads can be accommodated.
In addition, any number of Bearing Units can be used and, if necessary, they can be adjusted free from play by means of eccentric bolts.

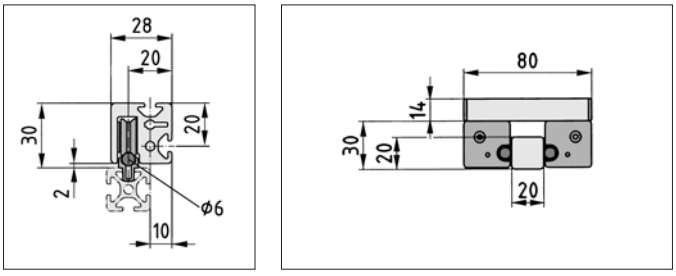
The Bearing Units offer a range of fastening options via Line 5 or 8 grooves, which makes it far easier to mount or align them on profiles and carriage plates.

Note:

Section 19 includes equations for calculating the statistically projected service life of all linear slides mounted on rolling elements.

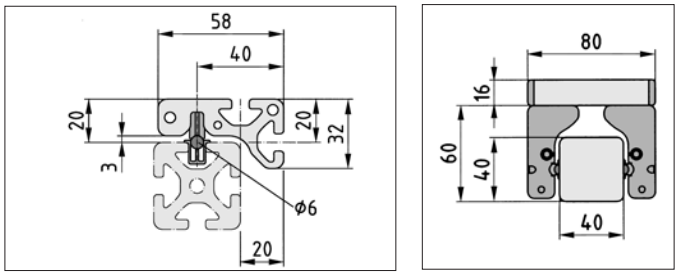
Guide Alternatives

5 D6



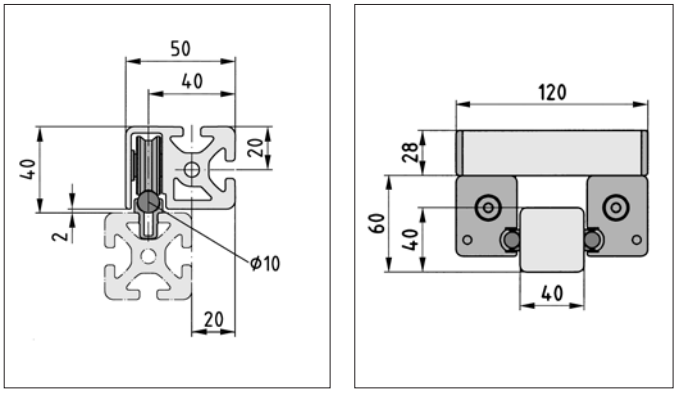
Basic construction of Profiles 5 with Roller Guide 5 on Shaft D6.

8 D6



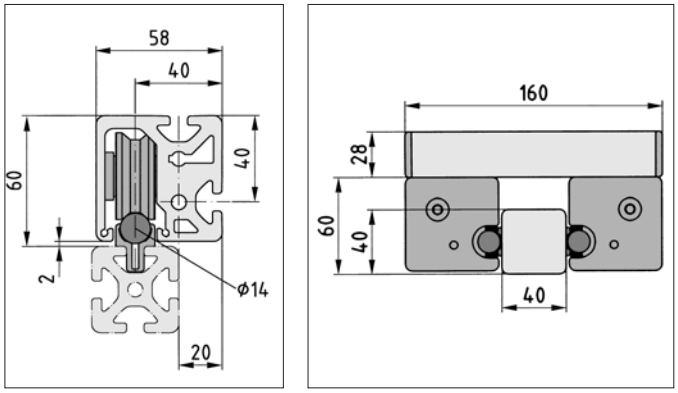
Basic construction of Profiles 8 with Roller Guide 8 on Shaft D6.

8 D10



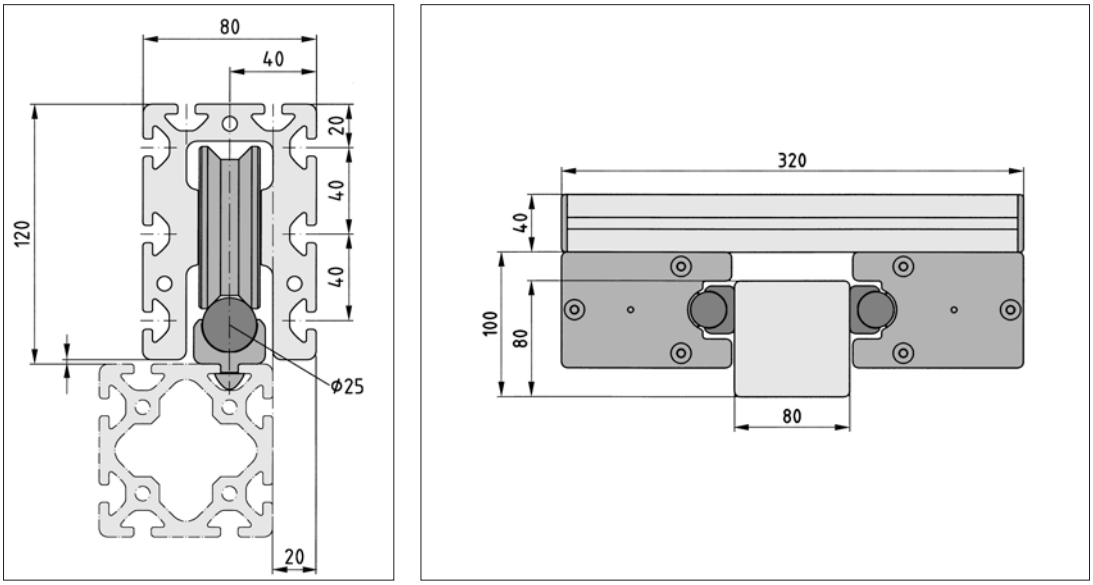
Basic construction of Profiles 8 with Roller Guide 8 on Shaft D10.

8 D14



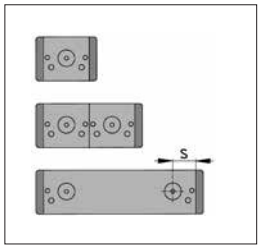
Basic construction of Profiles 8 with Roller Guide 8 on Shaft D14.

8 D25



Basic construction of Profiles 8 with Roller Guide 8 on Shaft D25.

Minimum Stroke Lengths



Possible arrangement of the End Cap and Lubricating Systems which are required in every instance.
The spring-loaded end cap and lubricating felt can be re-lubricated via the hole provided. Recommended re-lubricating cycle: every six months.
In order to ensure adequate lubrication, the minimum stroke lengths required for the slides must be observed.

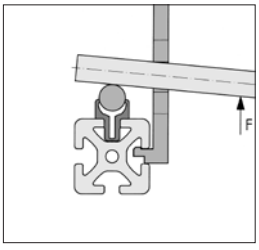
	5 D6	8 D6	8 D10	8 D14	8 D25
Bearing Unit	28 mm	60 mm	60 mm	60 mm	120 mm
Double-Bearing Unit	68 mm	80 mm	140 mm	140 mm	300 mm
Special Bearing Unit	s + 50 mm	s + 50 mm	s + 85 mm	s + 120 mm	s + 235 mm
	s = distance between centre of Roller and felt in mm				

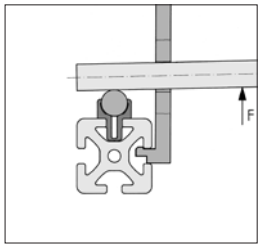
Frictional Forces

Frictional losses must be taken into consideration when designing drive units.
The quoted values refer to slides, each with 4 Rollers and 4 End Cap and Lubrication Systems.

Roller Guides 5 D6 and 8 D6	Roller Guide 8 D10	Roller Guide 8 D14	Roller Guide 8 D25 and 12 D25
F_R = 5 N	F_R = 10 N	F_R = 15 N	F_R = 25 N

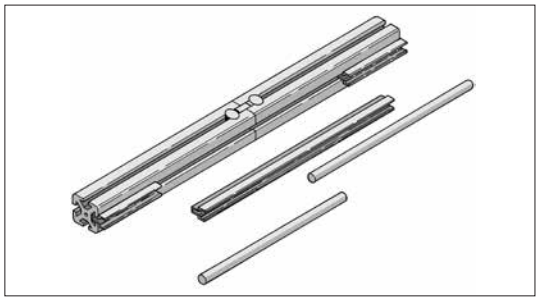
Assembly of Guiding Shafts





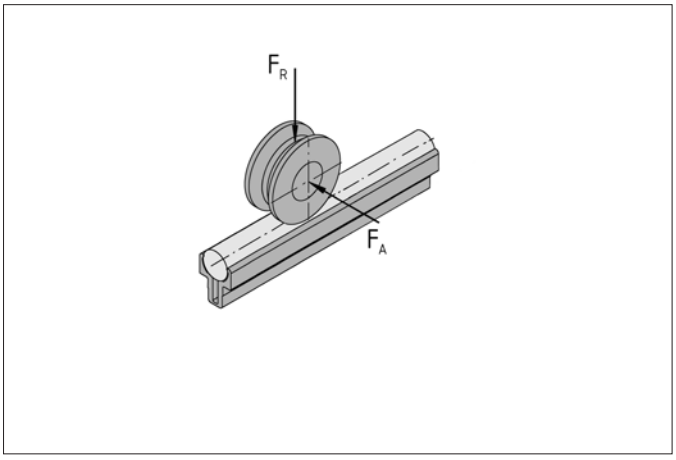
Follow the steps below to assemble Guiding Shafts:

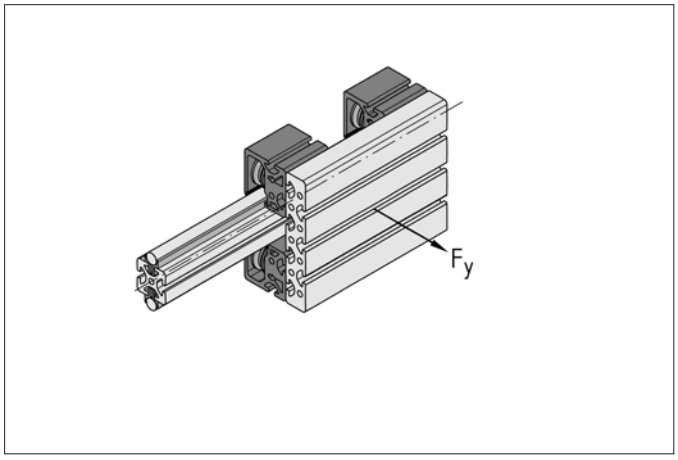
1. In order to prepare Shafts D10, D14 or D25 for pinning, drill blind holes into the Shaft and Shaft-Clamp Profile (for further details, see under Shaft Clamp Profiles).
2. Clean the Shaft-Clamp Profiles and the groove in the supporting profile.
3. Grease the contact faces of the Shaft-Clamp Profiles, supporting profile and guiding shafts with roller bearing grease.
4. Press in the Shaft-Clamp Profiles as far as they will go.
5. Press in the guiding shafts using the mounting aid.

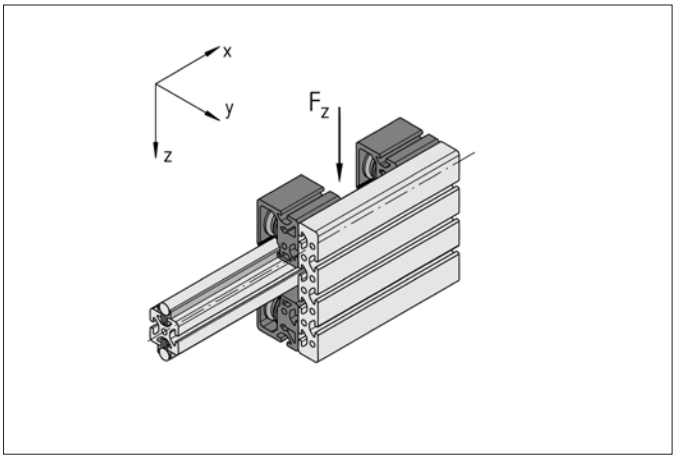


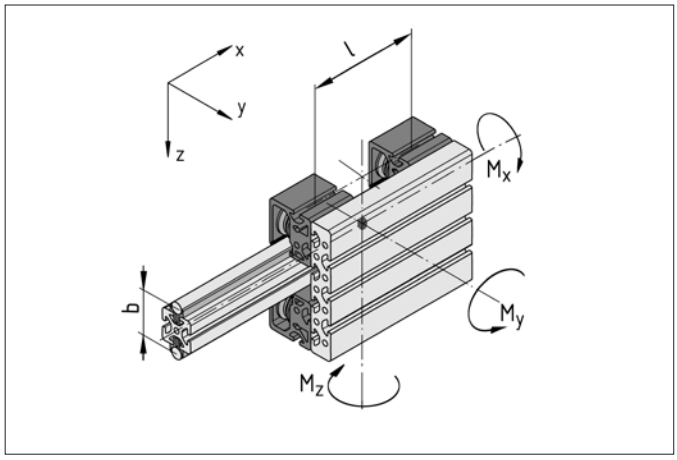
Note: Where Roller Guides are longer than 3 m, the Shafts, the Shaft-Clamp Profile and the supporting profile should be assembled with joints offset to each other.

Load Specifications









	5 D6 / 8 D6	8 D10	8 D14	8 D25
F_A	80 N	220 N	400 N	1300 N
F_R	200 N	650 N	1200 N	3800 N
F_y	320 N	880 N	1600 N	5200 N
F_z	400 N	1300 N	2400 N	7600 N
M_x	160 N x b	440 N x b	800 N x b	2600 N x b
M_y	200 N x l	650 N x l	1200 N x l	3800 N x l
M_z	160 N x l	440 N x l	800 N x l	2600 N x l

Lengths b and l quoted in m

When using stainless steel shafts and rollers, the permissible loading values must be reduced by 25%!

Performance at max. load: 10,000 km

Max. speed: 10 m/s

Shaft-Clamp Profiles

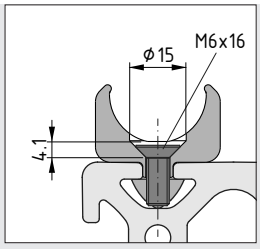
For using standard profiles as a basis for linear slides

- For fastening the Shafts for Linear Units to standard profiles
- Easy to install thanks to clip-in technology

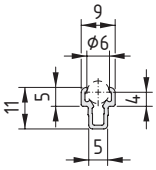
5 | 8 | item Innovation | www.item24.com | Service

These profiles connect Shafts D6, D10, D14 and D25 with the profile grooves of the corresponding lines.
First the Shaft-Clamp Profile is pressed into the profile groove then the Shaft is pressed into the Shaft-Clamp Profile.
Shafts D10, D14 and D25 must be fixed in position at a chosen location using a dowel DIN 6325, one per length of shaft.

Shafts 588



Shaft-Clamp Profile 8 D25 must be fixed to the profile groove with the appropriate number of Countersunk Screws DIN 7991 - M6x16 and T-Slot Nuts 8 M6.
The Shaft-Clamp Profiles D25 are provided with mounting holes (200 mm apart).

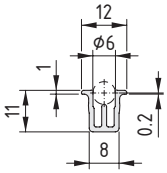


Shaft-Clamp Profile 5 D6 — 5

Al, anodized

A [cm²]	m [kg/m]
0.38	0.10

natural, cut-off max. 3000 mm	0.0.390.02
natural, 1 pce., length 3000 mm	0.0.448.23

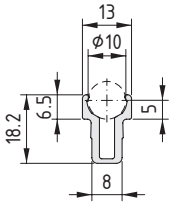


Shaft-Clamp Profile 8 D6 — 8

Al, anodized

A [cm²]	m [kg/m]
0.46	0.12

natural, cut-off max. 3000 mm	0.0.356.02
natural, 1 pce., length 3000 mm	0.0.453.67

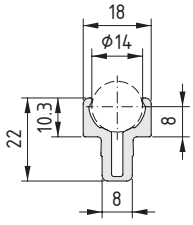


Shaft-Clamp Profile 8 D10 — 8

Al, anodized

A [cm²]	m [kg/m]
0.81	0.22

natural, cut-off max. 3000 mm	0.0.442.03
natural, 1 pce., length 3000 mm	0.0.452.23

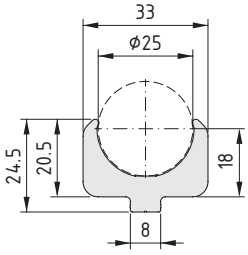


Shaft-Clamp Profile 8 D14 — 8

Al, anodized

A [cm²]	m [kg/m]
1.36	0.36

natural, cut-off max. 3000 mm	0.0.294.34
natural, 1 pce., length 3000 mm	0.0.453.68

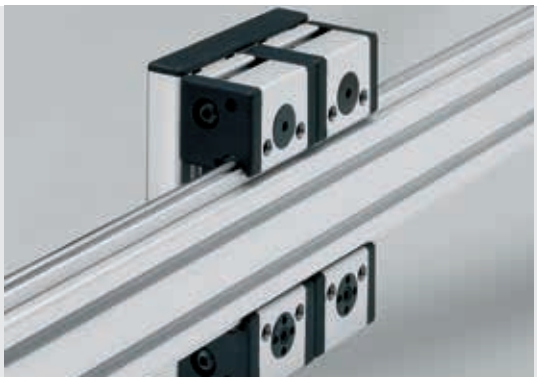


Shaft-Clamp Profile 8 D25 — 8

Al, anodized

A [cm²]	m [kg/m]
3.74	1.01

natural, cut-off max. 3000 mm	0.0.350.02
natural, 1 pce., length 3000 mm	0.0.453.69



Bearing Units

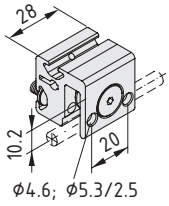
- Wide range of models for all load requirements
- Easy-running and strong rollers
- Suitable for any size of slide thanks to modular design

5 | 8 | item Innovation | www.item24.com | Service

Bearing Units are connected together by a carriage plate to form a sliding carriage.
Bearing Units e (eccentric) and c (centric) differ in terms of the geometry of their bolts.

The eccentric bolts can be readjusted to eliminate play in the guide unit. Bearing Units should therefore always be used in pairs comprising one centric and one eccentric version.

The Bearing Units must always be equipped with End Cap and Lubricating Systems in order to prevent premature wear.



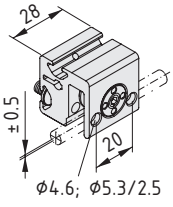
Bearing Unit 5 D6 c

5

Al, anodized, natural
Bolt 5 D6 c
Roller D6
2 Button-Head Screws ISO 7380-M5x8, St, bright zinc-pl.
2 washers DIN 125-5.3, St, bright zinc-plated
Notes on Use and Installation

M_{bolt} [Nm]	C [N]	C_0 [N]	m [g]
3	1,620	780	47.0

1 pce. 0.0.390.15



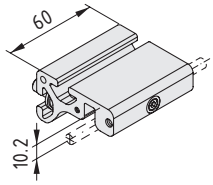
Bearing Unit 5 D6 e

5

Al, anodized, natural
Bolt 5 D6 e
Roller D6
2 Button-Head Screws ISO 7380-M5x8, St, bright zinc-pl.
2 washers DIN 125-5.3, St, bright zinc-plated
Notes on Use and Installation

$M_{lock\ nut}$ [Nm]	C [N]	C_0 [N]	m [g]
3	1,620	780	47.0

1 pce. 0.0.390.16



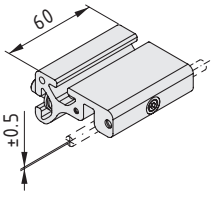
Bearing Unit 8 D6 c

8

Al, anodized, natural
Bolt 8 D6 c
Roller D6
2 Button-Head Screws ISO 7380-M8x16, St, bright zinc-pl.
2 washers DIN 125-8.4, St, bright zinc-plated
Notes on Use and Installation

$M_{grub\ screw}$ [Nm]	C [N]	C_0 [N]	m [g]
3	1,620	780	146.0

1 pce. 0.0.356.30



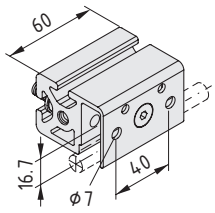
Bearing Unit 8 D6 e

8

Al, anodized, natural
Bolt 8 D6 e
Roller D6
2 Button-Head Screws ISO 7380-M8x16, St, bright zinc-pl.
2 washers DIN 125-8.4, St, bright zinc-plated
Notes on Use and Installation

$M_{grub\ screw}$ [Nm]	C [N]	C_0 [N]	m [g]
3	1,620	780	146.0

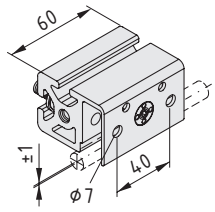
1 pce. 0.0.356.31



Bearing Unit 8 D10 c

Al, anodized, natural
Bolt 8 D10 c
Roller D10
2 Button-Head Screws ISO 7380-M8x16, St, bright zinc-pl.
2 washers DIN 125-8.4, St, bright zinc-plated
Notes on Use and Installation

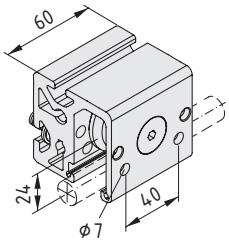
M_{bolt} [Nm]	C [N]	C_0 [N]	m [g]	
6	4,400	2,470	210.0	
1 pce.				0.0.442.10



Bearing Unit 8 D10 e

Al, anodized, natural
Bolt 8 D10 e
Roller D10
2 Button-Head Screws ISO 7380-M8x16, St, bright zinc-pl.
2 washers DIN 125-8.4, St, bright zinc-plated
Notes on Use and Installation

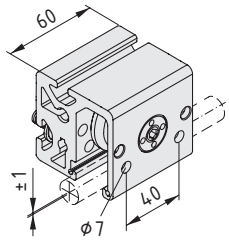
$M_{lock\ nut}$ [Nm]	C [N]	C_0 [N]	m [g]	
6	4,400	2,470	210.0	
1 pce.				0.0.442.09



Bearing Unit 8 D14 c

Al, anodized, natural
Bolt 8 D14 c
Roller D14
2 Button-Head Screws ISO 7380-M8x16, St, bright zinc-pl.
2 washers DIN 125-8.4, St, bright zinc-plated
Notes on Use and Installation

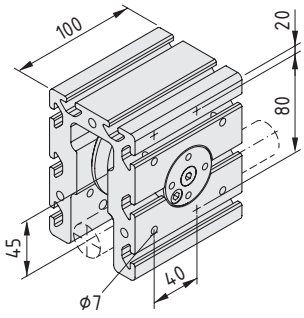
M_{bolt} [Nm]	C [N]	C_0 [N]	m [g]	
20	7,800	4,400	400.0	
1 pce.				0.0.294.14



Bearing Unit 8 D14 e

Al, anodized, natural
Bolt 8 D14 e
Roller D14
2 Button-Head Screws ISO 7380-M8x16, St, bright zinc-pl.
2 washers DIN 125-8.4, St, bright zinc-plated
Notes on Use and Installation

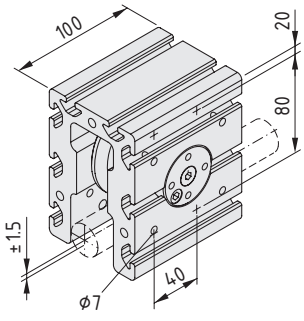
$M_{lock\ nut}$ [Nm]	C [N]	C_0 [N]	m [g]	
20	7,800	4,400	400.0	
1 pce.				0.0.294.15



Bearing Unit 8 D25 c

Al, anodized, natural
Bolt 8 D25 c
Roller D25
4 Button-Head Screws ISO 7380-M8x16, St, bright zinc-pl.
4 washers DIN 125-8.4, St, bright zinc-plated
Notes on Use and Installation

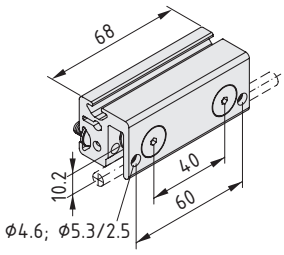
$M_{lock\ nut}$ [Nm]	$M_{locking\ screw}$ [Nm]	C [N]	C_0 [N]	m [kg]	
100	10	25,000	15,300	2.0	
1 pce.					0.0.350.12



Bearing Unit 8 D25 e

Al, anodized, natural
Bolt 8 D25 e
Roller D25
4 Button-Head Screws ISO 7380-M8x16, St, bright zinc-pl.
4 washers DIN 125-8.4, St, bright zinc-plated
Notes on Use and Installation

$M_{lock\ nut}$ [Nm]	$M_{locking\ screw}$ [Nm]	C [N]	C_0 [N]	m [kg]	
100	10	25,000	15,300	2.0	
1 pce.					0.0.350.11



Double-Bearing Unit 5 D6 c

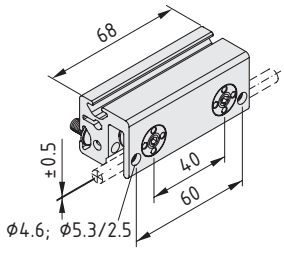
5

Al, anodized, natural

2 Bolts 5 D6 c
2 Rollers D6
2 Button-Head Screws ISO 7380-M5x8, St, bright zinc-pl.
2 washers DIN 125-5.3, St, bright zinc-plated
Notes on Use and Installation

M_{bolt} [Nm]	C [N]	C_0 [N]	m [g]
3	3,240	1,560	110.0

1 pce. 0.0.390.17



Double-Bearing Unit 5 D6 e

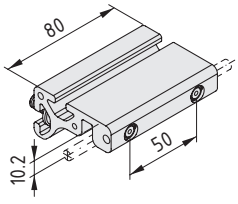
5

Al, anodized, natural

2 Bolts 5 D6 e
2 Rollers D6
2 Button-Head Screws ISO 7380-M5x8, St, bright zinc-pl.
2 washers DIN 125-5.3, St, bright zinc-plated
Notes on Use and Installation

$M_{lock\ nut}$ [Nm]	C [N]	C_0 [N]	m [g]
3	3,240	1,560	110.0

1 pce. 0.0.390.18



Double-Bearing Unit 8 D6 c

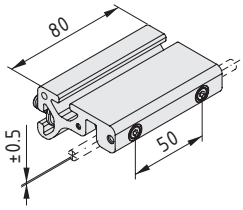
8

Al, anodized, natural

2 Bolts 8 D6 c
2 Rollers D6
2 Button-Head Screws ISO 7380-M8x16, St, bright zinc-pl.
2 washers DIN 125-8.4, St, bright zinc-plated
Notes on Use and Installation

$M_{grub\ screw}$ [Nm]	C [N]	C_0 [N]	m [g]
3	3,240	1,560	200.0

1 pce. 0.0.356.32



Double-Bearing Unit 8 D6 e

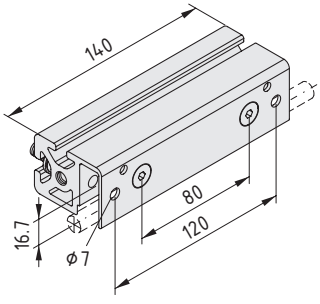
8

Al, anodized, natural

2 Bolts 8 D6 e
2 Rollers D6
2 Button-Head Screws ISO 7380-M8x16, St, bright zinc-pl.
2 washers DIN 125-8.4, St, bright zinc-plated
Notes on Use and Installation

$M_{grub\ screw}$ [Nm]	C [N]	C_0 [N]	m [g]
3	3,240	1,560	200.0

1 pce. 0.0.356.33



Double-Bearing Unit 8 D10 c

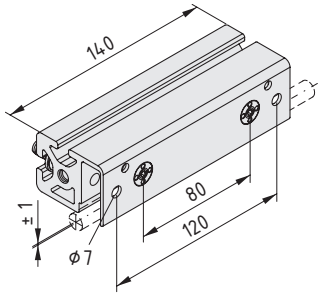
8

Al, anodized, natural

2 Bolts 8 D10 c
2 Rollers D10
2 Button-Head Screws ISO 7380-M8x16, St, bright zinc-pl.
2 washers DIN 125-8.4, St, bright zinc-plated
Notes on Use and Installation

M_{bolt} [Nm]	C [N]	C_0 [N]	m [g]
6	8,800	4,940	450.0

1 pce. 0.0.442.15



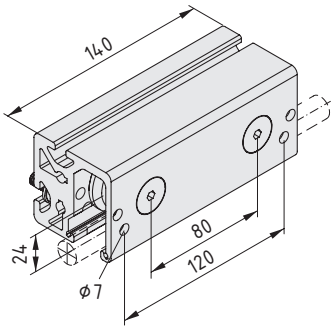
Double-Bearing Unit 8 D10 e

Al, anodized, natural

2 Bolts 8 D10 e
2 Rollers D10
2 Button-Head Screws ISO 7380-M8x16, St, bright zinc-pl.
2 washers DIN 125-8.4, St, bright zinc-plated
Notes on Use and Installation

$M_{lock\ nut}$ [Nm]	C [N]	C_0 [N]	m [g]
6	8,800	4,940	450.0

1 pce. 0.0.442.14



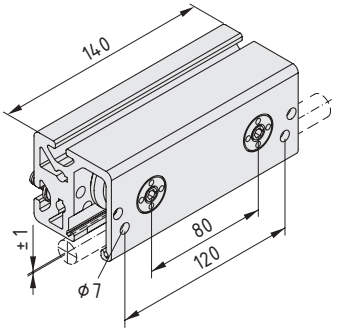
Double-Bearing Unit 8 D14 c

Al, anodized, natural

2 Bolts 8 D14 c
2 Rollers D14
2 Button-Head Screws ISO 7380-M8x16, St, bright zinc-pl.
2 washers DIN 125-8.4, St, bright zinc-plated
Notes on Use and Installation

M_{bolt} [Nm]	C [N]	C_0 [N]	m [g]
20	15,600	8,800	880.0

1 pce. 0.0.294.26



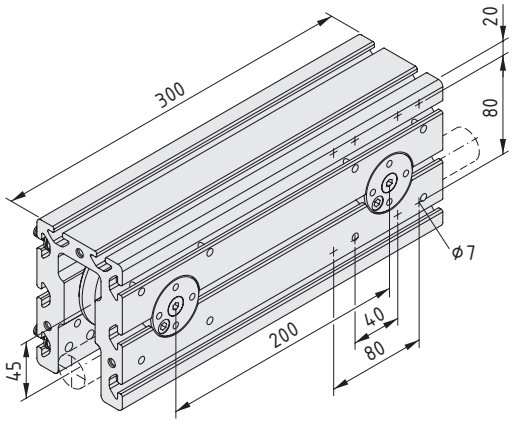
Double-Bearing Unit 8 D14 e

Al, anodized, natural

2 Bolts 8 D14 e
2 Rollers D14
2 Button-Head Screws ISO 7380-M8x16, St, bright zinc-pl.
2 washers DIN 125-8.4, St, bright zinc-plated
Notes on Use and Installation

$M_{lock\ nut}$ [Nm]	C [N]	C_0 [N]	m [g]
20	15,600	8,800	880.0

1 pce. 0.0.294.28



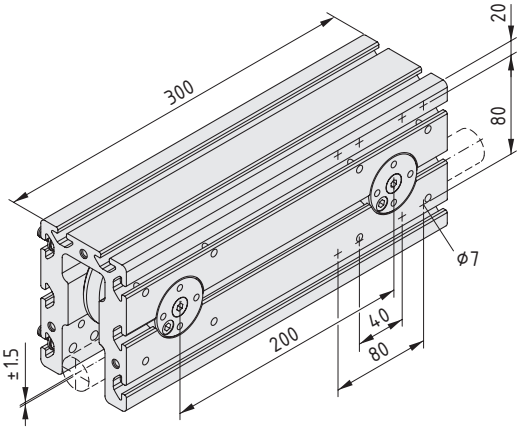
Double-Bearing Unit 8 D25 c

Al, anodized, natural

2 Bolts 8 D25 c
2 Rollers D25
8 Button-Head Screws ISO 7380-M8x16, St, bright zinc-pl.
8 washers DIN 125-8.4, St, bright zinc-plated
Notes on Use and Installation

$M_{lock\ nut}$ [Nm]	$M_{locking\ screw}$ [Nm]	C [N]	C_0 [N]	m [kg]
100	10	50,000	30,600	5.2

1 pce. 0.0.350.19



Double-Bearing Unit 8 D25 e

Al, anodized, natural

2 Bolts 8 D25 e
2 Rollers D25
8 Button-Head Screws ISO 7380-M8x16, St, bright zinc-pl.
8 washers DIN 125-8.4, St, bright zinc-plated
Notes on Use and Installation

$M_{lock\ nut}$ [Nm]	$M_{locking\ screw}$ [Nm]	C [N]	C_0 [N]	m [kg]
100	10	50,000	30,600	5.2

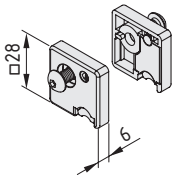
1 pce. 0.0.350.18

End Cap and Lubricating Systems

- Automatic lubrication for Bearing Units
- Clean and non-drip
- Oil reservoir for low-maintenance operation

5 8

Materials used in all the following products:
PA-GF

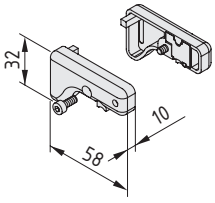


End Cap and Lubricating System 5 D6

5

End Cap and Lubricating System 5 D6, right
End Cap and Lubricating System 5 D6, left
2 Button-Head Screws ISO 7380-M5x10, St, bright zinc-pl.
m = 12.0 g

black, 1 set	0.0.390.12

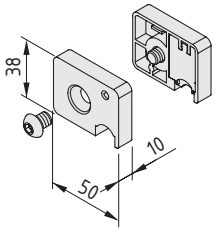


End Cap and Lubricating System 8 D6

8

End Cap and Lubricating System 8 D6, right
End Cap and Lubricating System 8 D6, left
2 Hexagon Socket Head Cap Screws DIN 912-M4x10, St, bright zinc-pl.
m = 20.0 g

black, 1 set	0.0.356.24
grey, 1 set	0.0.630.14

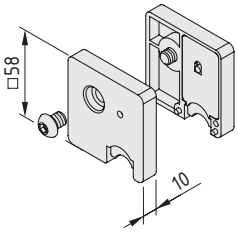


End Cap and Lubricating System 8 D10

8

End Cap and Lubricating System 8 D10, right
End Cap and Lubricating System 8 D10, left
2 Button-Head Screws ISO 7380-M8x10, St, bright zinc-pl.
m = 21.0 g

black, 1 set	0.0.442.23
grey, 1 set	0.0.630.01

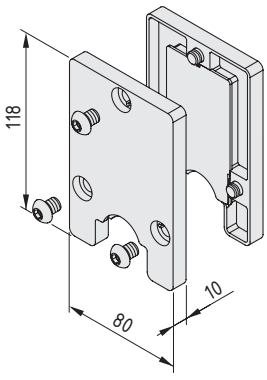


End Cap and Lubricating System 8 D14

8

End Cap and Lubricating System 8 D14, right
End Cap and Lubricating System 8 D14, left
2 Button-Head Screws ISO 7380-M8x10, St, bright zinc-pl.
m = 60.0 g

black, 1 set	0.0.294.46
grey, 1 set	0.0.630.10



End Cap and Lubricating System 8 D25

8

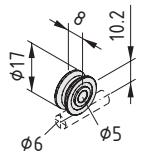
End Cap and Lubricating System 8 D25, right
End Cap and Lubricating System 8 D25, left
6 Button-Head Screws ISO 7380-M8x10, St, bright zinc-pl.
m = 170.0 g

black, 1 set	0.0.350.13
grey, 1 set	0.0.630.18

Rollers

- For building customised Bearing Units
- Compatible Roller Profiles available
- Maintenance-free

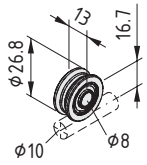
Service



Roller D6

St, 100 Cr 6, hardened, polished
Double ball bearing, shielded, maintenance-free

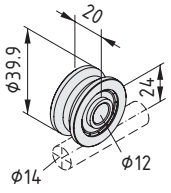
C [N]	C_0 [N]	$n_{max.}$ [min^{-1}]	m [g]	
1,620	780	10,000	8.0	
1 pce.				0.0.356.03



Roller D10

St, 100 Cr 6, hardened, polished
Double ball bearing, shielded, maintenance-free
Washer, St, bright zinc-plated

C [N]	C_0 [N]	$n_{max.}$ [min^{-1}]	m [g]	
4,400	2,470	7,500	28.0	
1 pce.				0.0.442.02



Roller D14

St, 100 Cr 6, hardened, polished
Double ball bearing, shielded, maintenance-free

C [N]	C_0 [N]	$n_{max.}$ [min^{-1}]	m [g]	
7,800	4,400	5,000	100.0	
1 pce.				0.0.294.03

Roller D14K

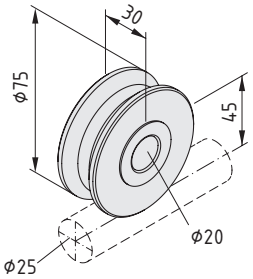
St, 100 Cr 6, hardened, polished
Double ball bearing, shielded, maintenance-free
Also corrosion-resistant and coated

C [N]	C_0 [N]	$n_{max.}$ [min^{-1}]	m [g]	
7,800	4,400	5,000	100.0	
black, 1 pce.				0.0.294.52

Roller D14, stainless

St, X 105 Cr Mo 17, hardened, polished
Double ball bearing, shielded, maintenance-free

C [N]	C_0 [N]	$n_{max.}$ [min^{-1}]	m [g]	
6,200	3,500	5,000	100.0	
1 pce.				0.0.488.20



Roller D25

St, 100 Cr 6, hardened, polished
Double ball bearing, shielded, maintenance-free

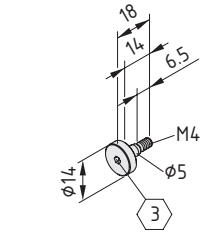
C [N]	C_0 [N]	$n_{max.}$ [min^{-1}]	m [g]	
25,000	15,300	2,500	590.0	
1 pce.				0.0.350.03

Bolts

■ For fastening Rollers to customised Bearing Units

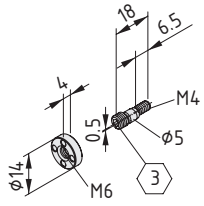
5 | 8 | www.item24.com | Service

Materials used in all the following products:
St



Bolt 5 D6 c — 5

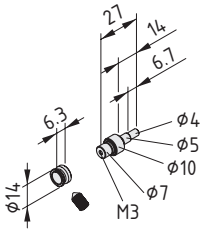
M [Nm]	m [g]	
3	5.0	
bright zinc-plated, 1 pce.		0.0.390.03



Bolt 5 D6 e — 5

Bolt and lock nut

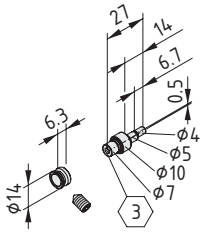
$M_{lock\ nut}$ [Nm]	m [g]	
3	5.0	
bright zinc-plated, 1 set		0.0.390.19



Bolt 8 D6 c — 8

Bolt and locking ring
Grub screw DIN 914-M6x10

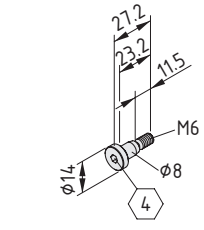
M [Nm]	m [g]	
3	6.0	
bright zinc-plated, 1 set		0.0.356.04



Bolt 8 D6 e — 8

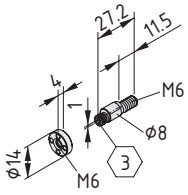
Bolt and locking ring
Grub screw DIN 914-M6x10

M [Nm]	m [g]	
3	6.0	
bright zinc-plated, 1 set		0.0.356.05



Bolt 8 D10 c — 8

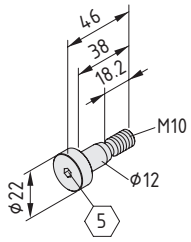
M [Nm]	m [g]	
6	12.0	
bright zinc-plated, 1 pce.		0.0.442.06



Bolt 8 D10 e — 8

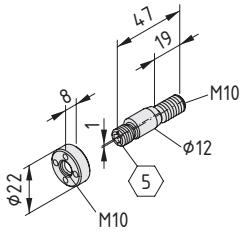
Bolt and lock nut

$M_{lock\ nut}$ [Nm]	m [g]	
6	10.0	
bright zinc-plated, 1 set		0.0.442.07



Bolt 8 D14 c

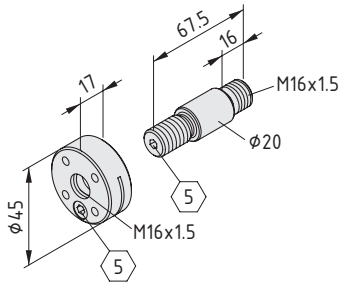
M [Nm]	m [g]	
20	48.0	
bright zinc-plated, 1 pce.		0.0.294.10



Bolt 8 D14 e

Bolt and lock nut

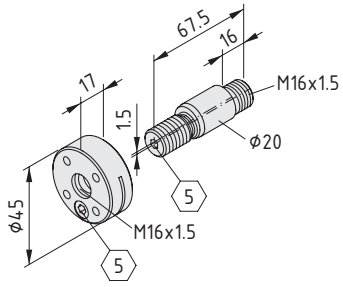
$M_{lock\ nut}$ [Nm]	m [g]	
20	46.0	
bright zinc-plated, 1 set		0.0.294.12



Bolt 8 D25 c

Bolt and lock nut

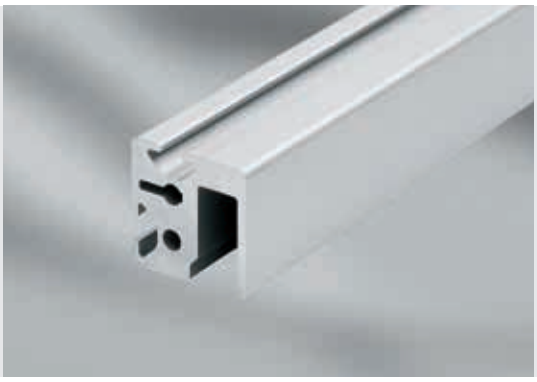
$M_{lock\ nut}$ [Nm]	$M_{locking\ screw}$ [Nm]	m [g]	
100	10	285.0	
bright zinc-plated, 1 set			0.0.350.04



Bolt 8 D25 e

Bolt and lock nut

$M_{lock\ nut}$ [Nm]	$M_{locking\ screw}$ [Nm]	m [g]	
100	10	285.0	
bright zinc-plated, 1 set			0.0.350.05



Roller Profiles

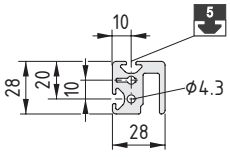
- For building customised Bearing Units up to 3,000 mm in length
- For use with compatible Rollers and Bolts

5 | 8 | www.item24.com | Service

Profiles for constructing Bearing Units of any length, using the appropriate Rollers, Bolts and End Cap and Lubricating Systems.

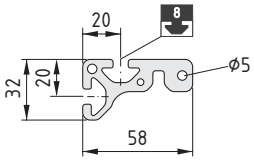
In conjunction with the End Cap and Lubricating Systems, the Roller Profile acts as a bearing shell and safety cover, as well as providing protection against soiling. This ensures uninterrupted operation, even under adverse operating conditions.

Materials used in all the following products:
Al, anodized



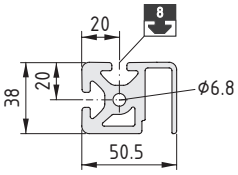
Roller Profile 5 D6

A [cm²]	m [kg/m]	I_x [cm⁴]	I_y [cm⁴]	I_t [cm⁴]	W_x [cm³]	W_y [cm³]	
4.30	1.16	2.99	3.06	0.82	1.98	2.05	
natural, cut-off max. 3000 mm							0.0.390.01
natural, 1 pce., length 3000 mm							0.0.448.01



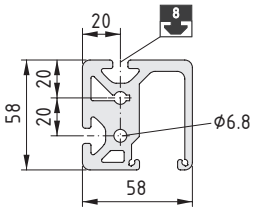
Roller Profile 8 D6

A [cm²]	m [kg/m]	I_x [cm⁴]	I_y [cm⁴]	I_t [cm⁴]	W_x [cm³]	W_y [cm³]	
7.54	2.03	4.46	24.14	1.66	2.09	8.05	
natural, cut-off max. 3000 mm							0.0.356.23
natural, 1 pce., length 3000 mm							0.0.452.31



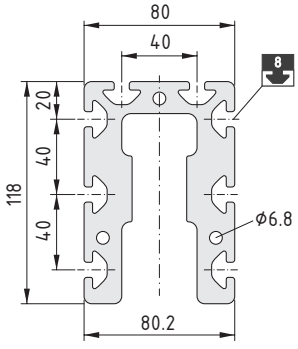
Roller Profile 8 D10

A [cm²]	m [kg/m]	I_x [cm⁴]	I_y [cm⁴]	I_t [cm⁴]	W_x [cm³]	W_y [cm³]	
9.35	2.52	12.64	18.89	4.84	6.52	6.54	
natural, cut-off max. 6000 mm							0.0.442.01
natural, 1 pce., length 6000 mm							0.0.452.37



Roller Profile 8 D14

A [cm²]	m [kg/m]	I_x [cm⁴]	I_y [cm⁴]	I_t [cm⁴]	W_x [cm³]	W_y [cm³]	
15.48	4.18	47.90	47.92	10.75	15.34	14.25	
natural, cut-off max. 6000 mm							0.0.294.02
natural, 1 pce., length 6000 mm							0.0.452.32



Roller Profile 8 D25

A [cm²]	m [kg/m]	I_x [cm⁴]	I_y [cm⁴]	I_t [cm⁴]	W_x [cm³]	W_y [cm³]	
44.19	11.93	508.41	331.49	26.61	79.98	82.87	
natural, cut-off max. 3000 mm							0.0.350.01
natural, 1 pce., length 3000 mm							0.0.452.33

Slide Set GSF 8 80x40

- Compact slide
- Sliding shoe uses profile groove as guide

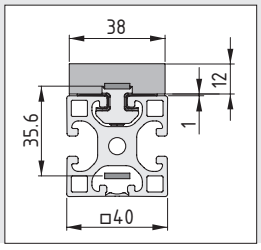
8

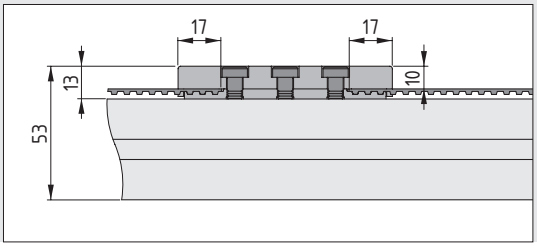
The space-saving carriage features a sliding shoe made of high-performance plastic. The solution thus requires no lubricants, is maintenance-free and uses a Line 8 profile groove as a guide. This reduces the number of components required.

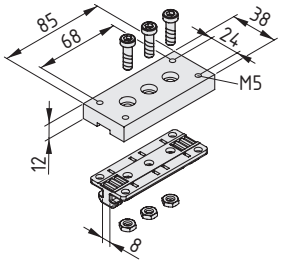
A timing belt can be installed between the carriage plate and T-Slot Slider in a space-saving arrangement. When used with Drive Unit GSF 8 40 R10, it produces linear units that can be installed in very small spaces.

Slide Set GSF 8 80x40 can also be used as a slide guide in a Line 8 profile groove without a timing-belt drive.

Drive Unit GSF 8 40 R10 604







Slide Set GSF 8 80x40	8
Carriage plate GSF 8 80x40, Al, natural T-Slot Slider 8 80x40 3 Hexagon Socket Head Cap Screws DIN 6912-M6x20, St, bright zinc-plated 3 hexagon nuts ISO 4035-M6, St, bright zinc-plated m = 173.0 g	
1 set	0.0.654.24

Slide LRF 8

- Time-saving, ready-to-install turnkey solution
- Slides with a flat surface
- Easy-adjust rollers

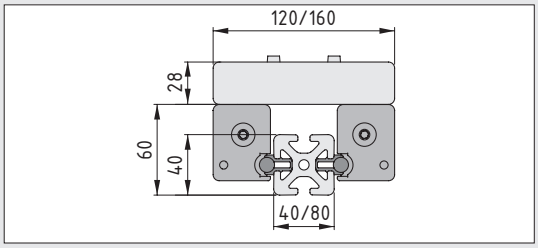
8

Everything runs smoothly with this solution. Slide LRF 8 is a practical complete system for roller guides that run on Shafts D10 or D14, which are fastened to a Line 8 groove using Shaft-Clamp Profiles. It is delivered ready for installation and comprises a Carriage Profile with a flat surface and two quiet-running Double-Bearing Units with End Cap and Lubricating Systems. Simply slot it onto the shafts, adjust the rollers from the side, tighten everything up and that's it – your torsion-resistant linear slide is good to go. Slide LRF 8 is available for linear slides in a width of 40 and 80 mm.

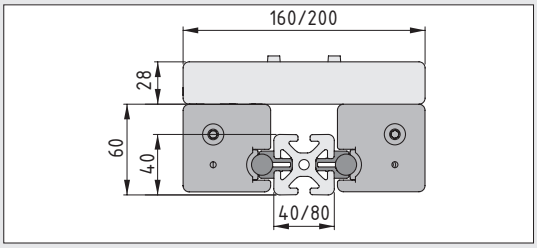
Fitting functional elements is also incredibly easy. The upper surface of the slide has been milled flat and features four openings for positioning collars. As a result, any application can be fastened to the Slide with outstanding precision, which makes maintenance work easier and reduces setup times.

Slide LRF can also be combined with a Timing-Belt Drive or chain drive to form automated solutions.

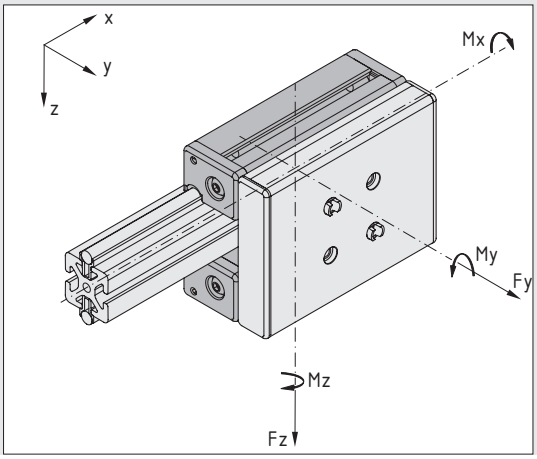
Slide Sets LRF and Slide Profiles LRF can also be ordered separately to build slides in customised lengths.



LRF 8 D10



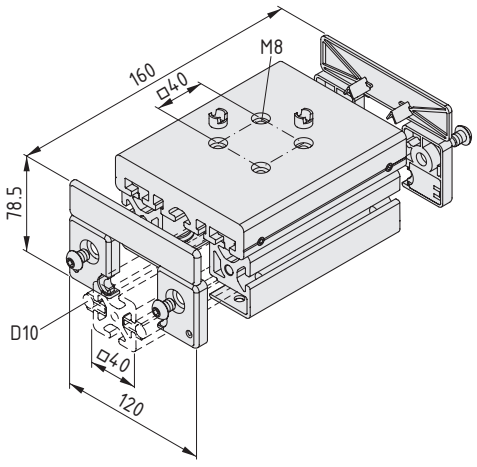
LRF 8 D14



Simplified method for determining the maximum permissible load for Slide Sets LRF 8:

	8 D10		8 D14	
	120	160	160	200
F_y	880 N		1600 N	
F_z	1300 N		2400 N	
M_x	22 Nm	39 Nm	40 Nm	76 Nm
M_y	52 Nm		96 Nm	
M_z	35 Nm		64 Nm	

Run length under max. load: 10000 km
Max. speed: 10 m/s

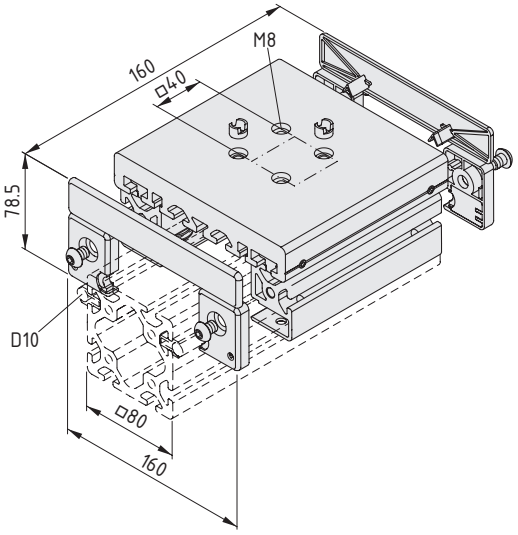


Slide LRF 8 D10 120x160 8

Slide LRF 8 D10 120x160, preassembled
2 End Cap and Lubricating Systems 8 D10, black
2 Caps LRF 8 D10 120x28, PA-GF, black
2 positioning collars, St
Installation guide
m = 2.1 kg

1 set	0.0.658.32

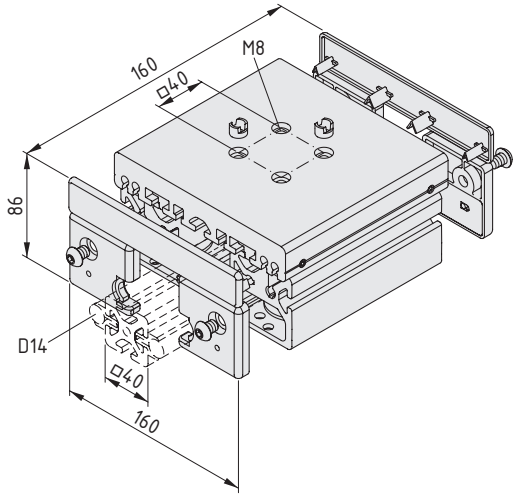
15



Slide LRF 8 D10 160x160

Slide LRF 8 D10 160x160, preassembled
2 End Cap and Lubricating Systems 8 D10, black
2 Caps LRF 8 D10 160x28, PA-GF, black
2 positioning collars, St
Installation guide
m = 2.5 kg

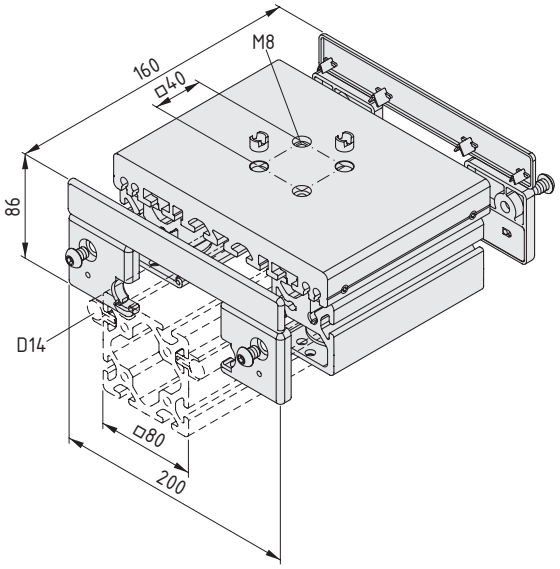
1 set	0.0.658.37



Slide LRF 8 D14 160x160

Slide LRF 8 D14 160x160, preassembled
2 End Cap and Lubricating Systems 8 D14, black
2 Caps LRF 8 D14 160x28, PA-GF, black
2 positioning collars, St
Installation guide
m = 3.5 kg

1 set	0.0.656.27



Slide LRF 8 D14 200x160

Slide LRF 8 D14 200x160, preassembled
2 End Cap and Lubricating Systems 8 D14, black
2 Caps LRF 8 D14 200x28, PA-GF, black
2 positioning collars, St
Installation guide
m = 3.8 kg

1 set	0.0.658.21

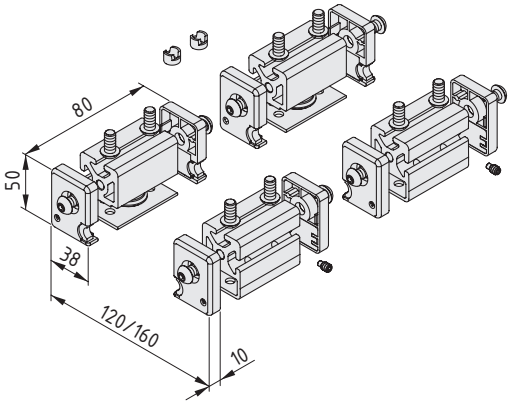
Slide Sets LRF 8

- For building carriages in custom lengths
- For carriage profiles with a flat surface

The ideal solution for customised slides! Slide Sets LRF 8, Slide Profiles LRF 8 and Adjuster Profile 8 can be used to design and build customised linear slides up to 3000 mm in length.Slide Set LRF 8 contains everything that a roller unit needs – Bearing Units, End Cap and Lubricating Systems and all the fastening elements required to install the four modules of the Slide Set with exceptional speed. There is no need for pinning.

Sets are available with either D10 or D14 rollers as appropriate to the loads involved. The Slide Sets are screwed to Adjuster Profile 8 (0.0.657.20). Two grub screws installed in the side of Slide Profile LRF 8 are used to adjust the Bearing Units so as to eliminate play.

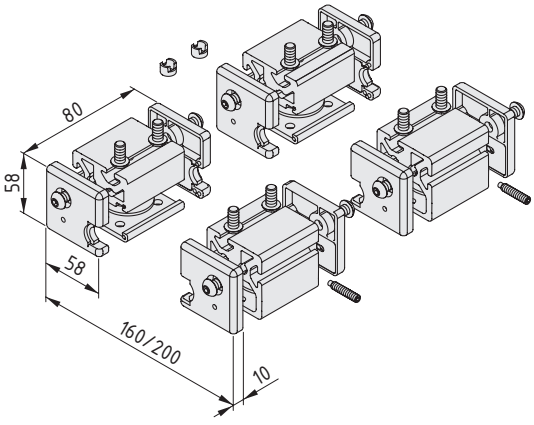
Note: Fully preassembled Slides LRF 8 are also available in standard sizes.



Slide Set LRF 8 D10

4 Bearing Units 8 D10 c
4 End Cap and Lubricating Systems 8 D10, black
2 grub screws DIN 915-M6x10, St, bright zinc-plated
8 Button-Head Screws ISO 7380-M8x16, St, bright zinc-plated
8 washers DIN 125-8.4, St, bright zinc-plated
2 positioning collars, St
Installation guide
m = 1.0 kg

1 set	0.0.658.83



Slide Set LRF 8 D14

4 Bearing Units 8 D14 c
4 End Cap and Lubricating Systems 8 D14, black
2 grub screws DIN 915-M6x30, St, bright zinc-plated
8 Button-Head Screws ISO 7380-M8x16, St, bright zinc-plated
8 washers DIN 125-8.4, St, bright zinc-plated
2 positioning collars, St
Installation guide
m = 2.0 kg

1 set	0.0.658.67

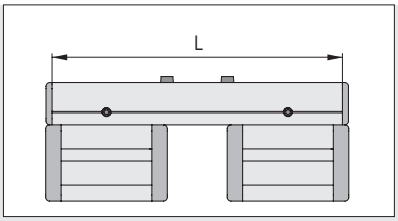
Adjuster Profile 8

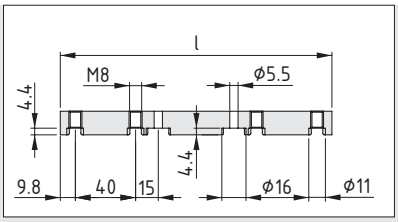
- Optimum hold, even on long carriages
- Connects together Slide Profile and Slide Sets LRF 8

Adjuster Profile 8 ensures there is no play between the roller units and shaft, even on long slides. The bearing units of Slide Sets LRF 8 don't exhibit displacement over long-term use either. Consequently, Slide Profile LRF 8 runs with very little wear, even in the case of very long slides.

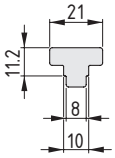
Slide Sets LRF 8 are fastened to the Adjuster Profile via a screw connection. The Profile is inserted into the special groove and runs the entire length of the slide.

Note: The Adjuster Profile needs to be machined before the Slide Set can be installed. Your item partner can do this as an additional service.





The length of the slide (L) determines how long the Adjuster Profile (l) needs to be.
l = L - 12.4 mm



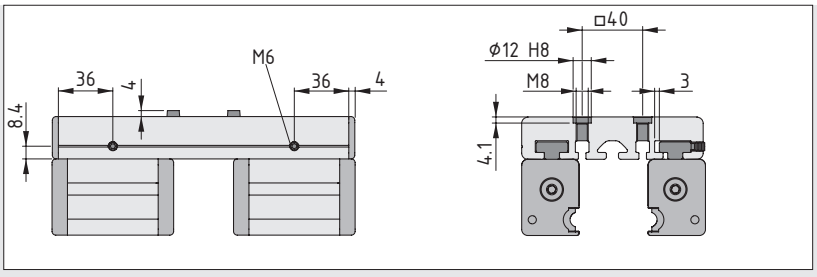
Adjuster Profile 8	
Al m = 592.0 g/m	
natural, cut-off max. 6000 mm	0.0.657.21
natural, 1 pce., length 6000 mm	0.0.657.20

Slide Profiles LRF 8

- For building strong custom carriages
- Available in four widths
- Up to 3000 mm in length

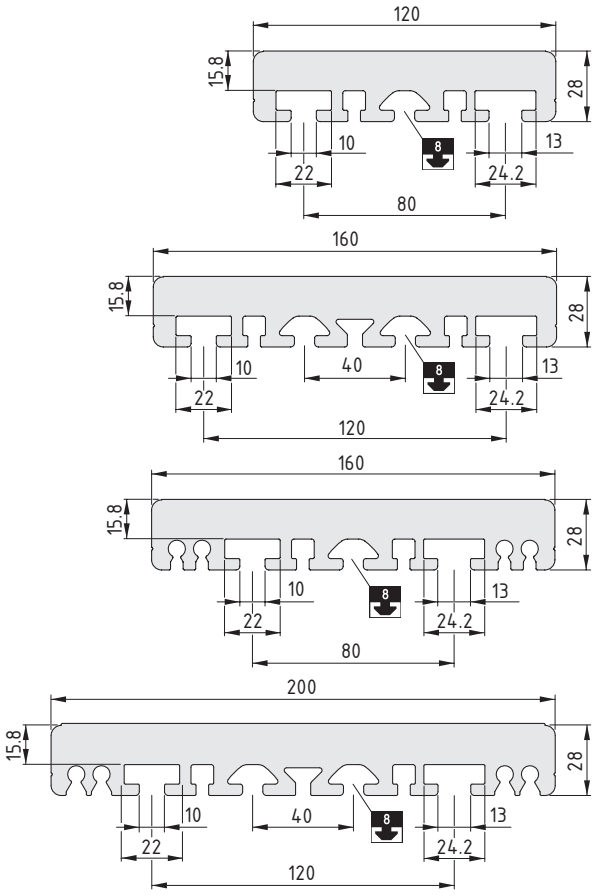
The surface of Slide Profile LRF 8 is flat and face-milled. The underside of the Slide Profile features a Line 8 groove as well as special grooves to accommodate Adjuster Profile 8, to which the Slide Set LRF 8 is fastened. Two threaded bores need to be machined to enable adjustment of the rollers. One of the special grooves for the Adjuster Profile is wider than the other in order that the rollers can be adjusted via a grub screw so as to eliminate play.

Note: Please note the tightening torques recommended in the installation guide.



Machining requirements when using Slide Profiles LRF 8 in customised lengths. The indentations at the side offer a good point of orientation. The Slide Profiles allow users to locate mounting bores at will. The positioning collars can be used as necessary.

Materials used in all the following products:
Al, anodized



Slide Profile LRF 8 D10 120x28						
A [cm²]	m [kg/m]	I_x [cm⁴]	I_y [cm⁴]	W_x [cm³]	W_y [cm³]	
26.08	7.04	16.36	320.81	9.73	13.32	
natural, cut-off max. 3000 mm						0.0.658.20
natural, 1 pce., length 3000 mm						0.0.658.03

Slide Profile LRF 8 D10 160x28						
A [cm²]	m [kg/m]	I_x [cm⁴]	I_y [cm⁴]	W_x [cm³]	W_y [cm³]	
34.99	9.45	21.91	751.43	13.07	93.29	
natural, cut-off max. 3000 mm						0.0.658.23
natural, 1 pce., length 3000 mm						0.0.658.08

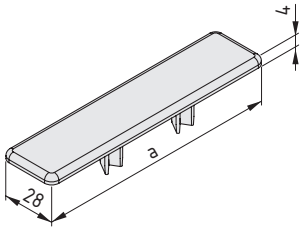
Slide Profile LRF 8 D14 160x28						
A [cm²]	m [kg/m]	I_x [cm⁴]	I_y [cm⁴]	W_x [cm³]	W_y [cm³]	
35.13	9.49	21.80	777.78	13.07	96.79	
natural, cut-off max. 3000 mm						0.0.655.95
natural, 1 pce., length 3000 mm						0.0.645.39

Slide Profile LRF 8 D14 200x28						
A [cm²]	m [kg/m]	I_x [cm⁴]	I_y [cm⁴]	W_x [cm³]	W_y [cm³]	
44.03	11.49	27.40	1,501.23	16.36	150.12	
natural, cut-off max. 3000 mm						0.0.655.97
natural, 1 pce., length 3000 mm						0.0.647.04

Caps LRF 8

- End-face closure for Slide Profiles LRF 8
- Glass-fibre-reinforced plastic covers over cut edges cleanly

Materials used in all the following products:
PA-GF



Cap LRF 8 D10 120x28	
a = 120 mm m = 14.0 g	
black, 1 pce.	0.0.657.72

Cap LRF 8 D10 160x28	
a = 160 mm m = 18.0 g	
black, 1 pce.	0.0.658.30

Cap LRF 8 D14 160x28	
a = 160 mm m = 18.0 g	
black, 1 pce.	0.0.656.26

Cap LRF 8 D14 200x28	
a = 200 mm m = 22.0 g	
black, 1 pce.	0.0.657.00

Linear Guide Units 8 D14

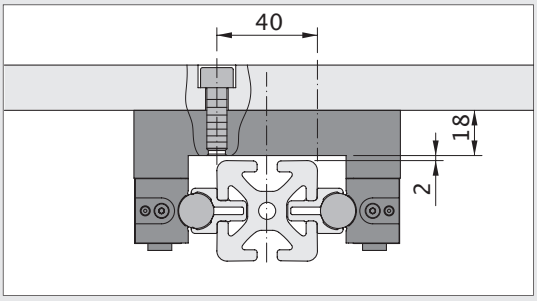
The compact shaft guide

- Particularly rigid and strong
- Runs securely on Shafts D14
- Can be driven via a Timing Belt or spindle

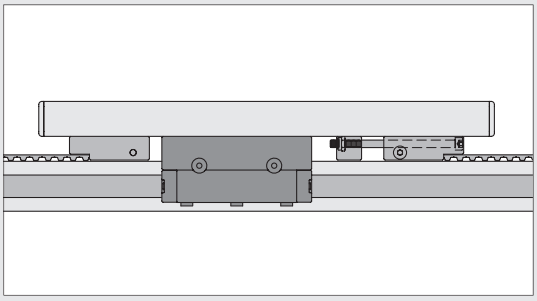
8 Service

Looking for a linear slide that is more rigid and compact than roller guides but just as modular and easy to fit to standard profiles?
The linear guide units from item are exactly what you need! Complete carriages for profile widths of 40 and 80 mm that are mounted on shafts in Shaft-Clamp Profiles. Other benefits of these guide elements include ease of assembly, lower moving mass and simple adjustability.

Guiding shafts D14 can be fitted to Profiles 8 (not the light or E variants) in widths of 40 or 80 mm. Maximum guide length: 6,000 mm. The guide is particularly suitable for tensile and compressive loads on the carriage plate.

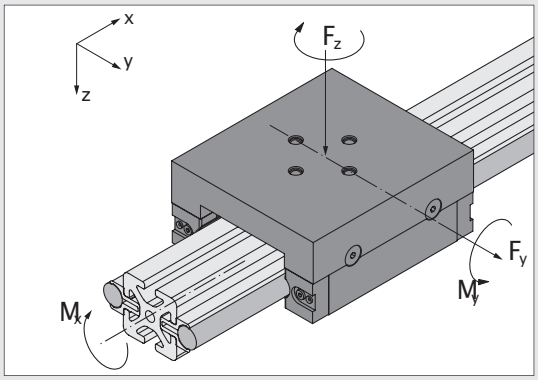


Universal connection bores in the carriage plate:
M8 threaded holes for fastening profiles or any other structures.



The driving force:
A Timing Belt or spindle drive KGT can be connected to a Profile 8 that is screwed to the carriage plate.

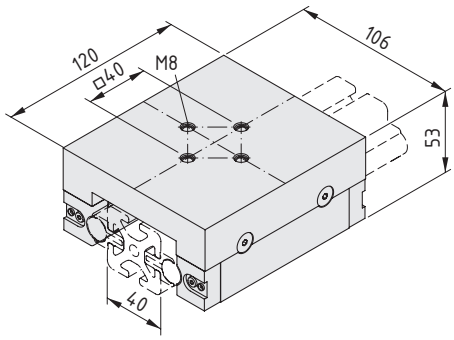
Load Specifications



	8 D14 120x40	8 D14 120x80
$F_y = F_z$	2,300 N	2,300 N
M_x	237 Nm	355 Nm
$M_y = M_z$	95 Nm	95 Nm
C	10,800 N	10,800 N
C_0	13,400 N	13,400 N
$v_{max.}$	3 m/s	3 m/s
ϑ	-10 – +100 °C	-10 – +100 °C
$h_{min.}$	120 mm	120 mm

Note:

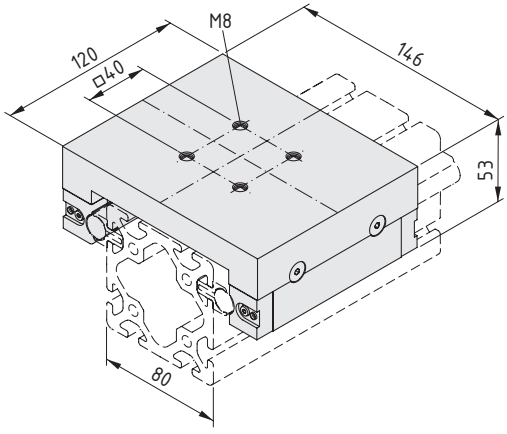
Section 19 includes equations for calculating the statistically projected service life of all linear slides mounted on rolling elements.



Linear Guide Carriage Unit 8 D14 120x40

2 Linear Guide Units
Carriage plate, Al
4 sets crews 8 M5, St, bright zinc-plated
6 Hexagon Socket Head Cap Screws DIN 6912-M5x40, St, bright zinc-plated
Notes on Use and Installation
m = 1.3 kg

1 set	0.0.629.19



Linear Guide Carriage Unit 8 D14 120x80

2 Linear Guide Units
Carriage plate, Al
4 sets crews 8 M5, St, bright zinc-plated
6 Hexagon Socket Head Cap Screws DIN 6912-M5x40, St, bright zinc-plated
Notes on Use and Installation
m = 1.5 kg

1 set	0.0.634.63

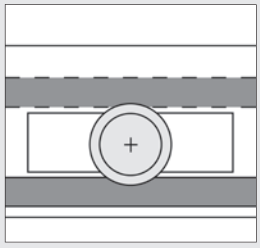
C-Rail Systems

- Variable roller guide for large doors
- Three design variants, each available in three versions for different lines
- Can be adjusted to be free from play if required

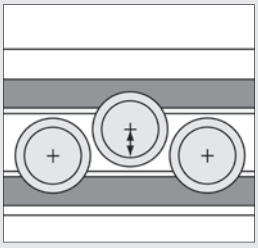
Service

C-Rail Systems are specialised Roller Guides and are ideal for constructing compact guides, lifting doors, sliding doors, movable guards and enclosures etc.

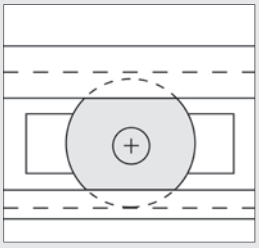
The C-Rail Systems for Profiles 5, 6 and 8 are each available in 3 versions:



C-Rail System 1R with slides on prismatic steel rollers mounted on ball bearings and a polished guiding shaft. A second guiding shaft can also be fitted in order to prevent the sliding door from tilting when moved.



C-Rail System 3R with guide slides that can be adjusted via eccentrics. The 3 steel rollers mounted on ball bearings run free from play on 2 polished shafts and are ideal for cases where particular requirements are placed on the precision of the guides. This version can accommodate high loads in the vertical downward plane and features particularly low-friction running.

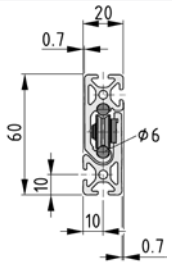
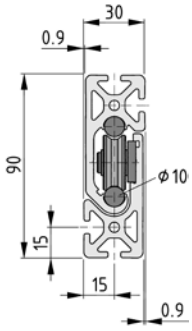
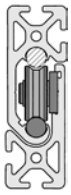
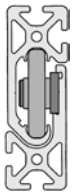
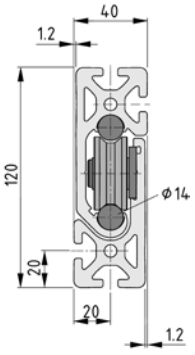
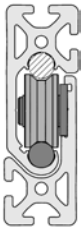
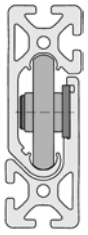


C-Rail System K with slide consisting of plastic rollers running directly on the aluminium rail profile.
This variant can accommodate low hanging loads as shown in the illustration opposite and is adequate for simple guide operations.

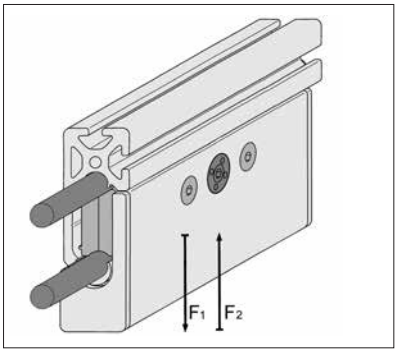
Note:

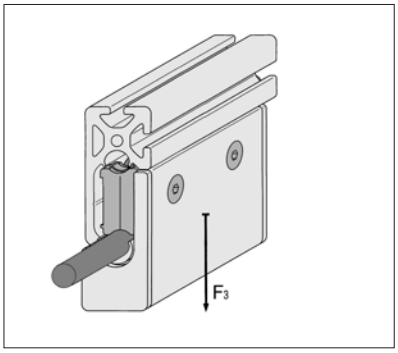
Section 19 includes equations for calculating the statistically projected service life of all linear slides mounted on rolling elements.

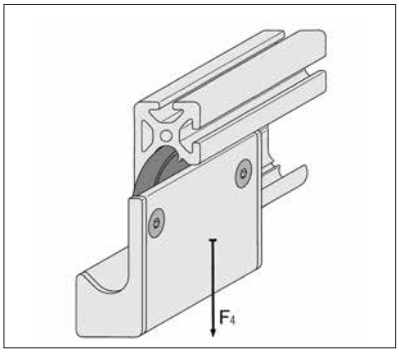
Guide Alternatives

Line	C-Rail System 3R	C-Rail System 1R	C-Rail System K
5			
6			
8			

Load Specifications







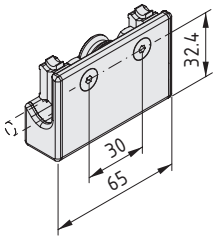
C-Rail System 5 D6 3R F_1 = 250 N, F_2 = 125 N	C-Rail System 5 D6 1R F_3 = 125 N	C-Rail System 5 K F_4 = 50 N
C-Rail System 6 D10 3R F_1 = 750 N, F_2 = 350 N	C-Rail System 6 D10 1R F_3 = 350 N	C-Rail System 6 K F_4 = 125 N
C-Rail System 8 D14 3R F_1 = 1500 N, F_2 = 750 N	C-Rail System 8 D14 1R F_3 = 750 N	C-Rail System 8 K F_4 = 250 N

C-Rail, Bearing Units

Secure roller guides for lifting and sliding doors

- Fully preassembled, compact guides
- C-Rail System enclosed on three sides
- Ideal for movable guards and enclosures

5 6 8

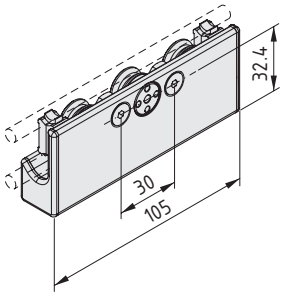


C-Rail, Bearing Unit 5 D6 1R

5

C-Rail, Slide Profile segment, Al, anodized, natural
C-Rail, Slide Profile Cap Set 5
C-Rail, Bearing Set 5 D6 1R
m = 64.0 g

1 pce. 0.0.460.31

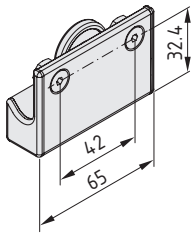


C-Rail, Bearing Unit 5 D6 3R

5

C-Rail, Slide Profile segment, Al, anodized, natural
C-Rail, Slide Profile Cap Set 5
C-Rail, Bearing Set 5 D6 3R
m = 117.0 g

1 pce. 0.0.460.30

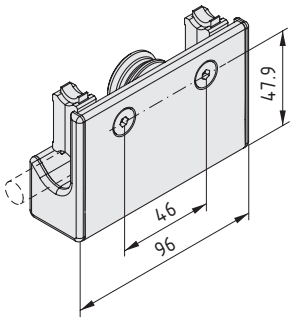


C-Rail, Bearing Unit 5 K

5

C-Rail, Slide Profile segment, Al, anodized, natural
C-Rail, Slide Profile Cap Set 5
C-Rail, Bearing Set 5 K
m = 60.0 g

1 pce. 0.0.460.33

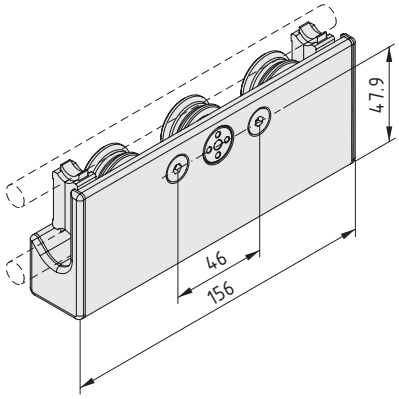


C-Rail, Bearing Unit 6 D10 1R

6

C-Rail, Slide Profile segment, Al, anodized, natural
C-Rail, Slide Profile Cap Set 6
C-Rail, Bearing Set 6 D10 1R
m = 231.0 g

1 pce. 0.0.461.31

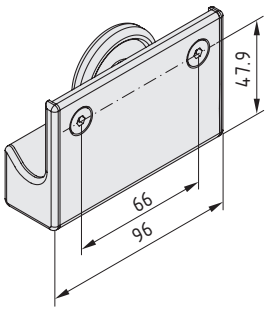


C-Rail, Bearing Unit 6 D10 3R

6

C-Rail, Slide Profile segment, Al, anodized, natural
C-Rail, Slide Profile Cap Set 6
C-Rail, Bearing Set 6 D10 3R
m = 425.0 g

1 pce. 0.0.461.30

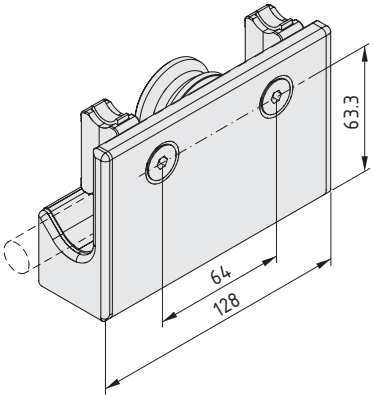


C-Rail, Bearing Unit 6 K

6

C-Rail, Slide Profile segment, Al, anodized, natural
C-Rail, Slide Profile Cap Set 6
C-Rail, Bearing Set 6 K
m = 209.0 g

1 pce.	0.0.461.33

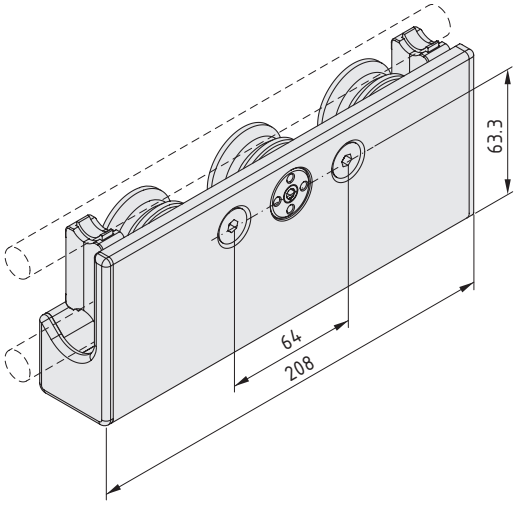


C-Rail, Bearing Unit 8 D14 1R

8

C-Rail, Slide Profile segment, Al, anodized, natural
C-Rail, Slide Profile Cap Set 8
C-Rail, Bearing Set 8 D14 1R
m = 576.0 g

1 pce.	0.0.462.31

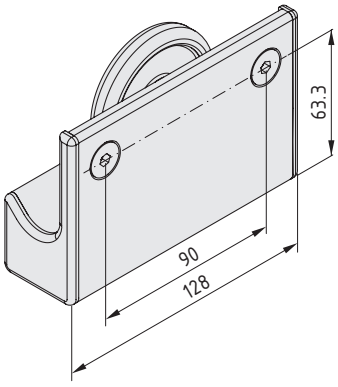


C-Rail, Bearing Unit 8 D14 3R

8

C-Rail, Slide Profile segment, Al, anodized, natural
C-Rail, Slide Profile Cap Set 8
C-Rail, Bearing Set 8 D14 3R
m = 1.1 kg

1 pce.	0.0.462.30



C-Rail, Bearing Unit 8 K

8

C-Rail, Slide Profile segment, Al, anodized, natural
C-Rail, Slide Profile Cap Set 8
C-Rail, Bearing Set 8 K
m = 492.0 g

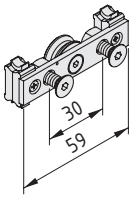
1 pce.	0.0.462.33

C-Rail, Bearing Sets

- Durable rollers for constructing customised C-Rail Guides

5 6 8 Service

Pre-assembled Bearing Sets for special bearing units for creating continuous guide profiles using Slide Profiles.
The Slide Profiles must be machined appropriately for installing the Bearing Sets.

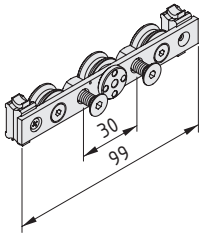


C-Rail, Bearing Set 5 D6 1R

5

C-Rail, slide plate complete, St, bright zinc-plated
Roller D6, centric
2 C-Rail, Lubricating Systems 5 D6
2 Countersunk Screws DIN 7991-M5x10, St, bright zinc-pl.
m = 21.0 g

1 set	0.0.460.35

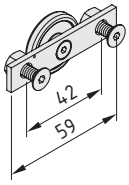


C-Rail, Bearing Set 5 D6 3R

5

C-Rail, slide plate complete, St, bright zinc-plated
2 Rollers D6, centric
Roller D6, eccentric
2 C-Rail, Lubricating Systems 5 D6
2 Countersunk Screws DIN 7991-M5x10, St, bright zinc-pl.
m = 51.0 g

1 set	0.0.460.34

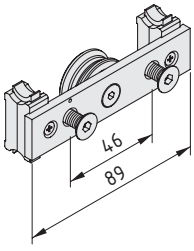


C-Rail, Bearing Set 5 K

5

C-Rail, slide plate complete, St, bright zinc-plated
C-Rail, Roller 5 K, PA
2 Countersunk Screws DIN 7991-M5x10, St, bright zinc-pl.
m = 21.0 g

1 set	0.0.460.37

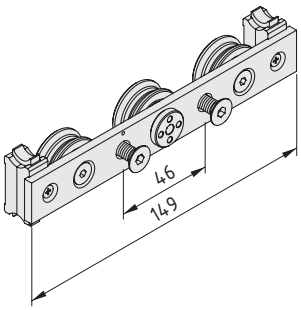


C-Rail, Bearing Set 6 D10 1R

6

C-Rail, slide plate complete, St, bright zinc-plated
Roller D10, centric
2 C-Rail, Lubricating Systems 6 D10
2 Countersunk Screws DIN 7991-M6x12, St, bright zinc-pl.
m = 103.0 g

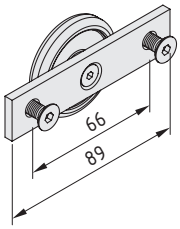
1 set	0.0.461.35



C-Rail, Bearing Set 6 D10 3R 6

C-Rail, slide plate complete, St, bright zinc-plated
2 Rollers D10, centric
Roller D10, eccentric
2 C-Rail, Lubricating Systems 6 D10
2 Countersunk Screws DIN 7991-M6x12, St, bright zinc-pl.
m = 214.0 g

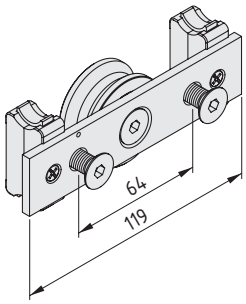
1 set	0.0.461.34



C-Rail, Bearing Set 6 K 6

C-Rail, slide plate complete, St, bright zinc-plated
C-Rail, Roller 6 K, PA
2 Countersunk Screws DIN 7991-M6x12, St, bright zinc-pl.
m = 79.0 g

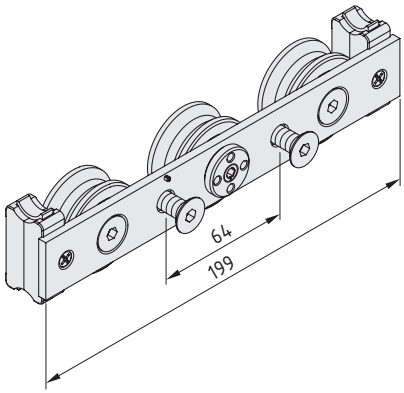
1 set	0.0.461.37



C-Rail, Bearing Set 8 D14 1R 8

C-Rail, slide plate complete, St, bright zinc-plated
Roller D14, centric
2 C-Rail, Lubricating Systems 8 D14
2 Countersunk Screws DIN 7991-M8x16, St, bright zinc-plated
m = 257.0 g

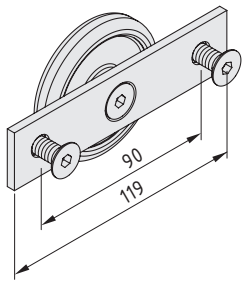
1 set	0.0.462.35



C-Rail, Bearing Set 8 D14 3R 8

C-Rail, slide plate complete, St, bright zinc-plated
2 Rollers D14, centric
Roller D14, eccentric
2 C-Rail, Lubricating Systems 8 D14
2 Countersunk Screws DIN 7991-M8x16, St, bright zinc-plated
m = 576.0 g

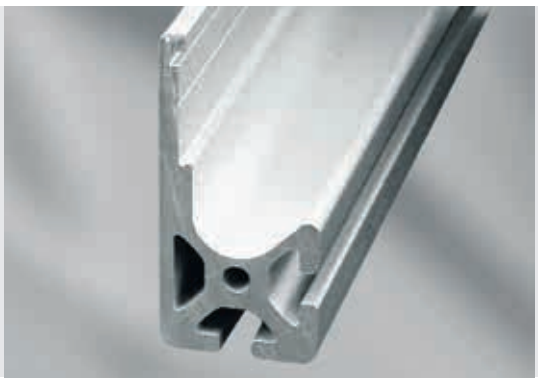
1 set	0.0.462.34



C-Rail, Bearing Set 8 K 8

C-Rail, slide plate complete, St, bright zinc-plated
C-Rail, Roller 8 K, PA
2 Countersunk Screws DIN 7991-M8x16, St, bright zinc-plated
m = 158.0 g

1 set	0.0.462.37



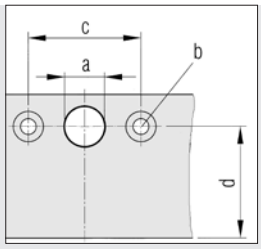
C-Rail, Slide Profiles
C-Rail, Rail Profiles

■ For constructing customised slides and C-Rail Guides

5 6 8 Service

For constructing slides for C-Rail System 5, 6, or 8 using Bearing Sets.
The positions of the holes are identified by marking grooves in the profiles.

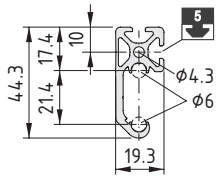
Bearing Units K (without guiding shaft) or 1R (with 1 or 2 guiding shafts) or 3R are guided in the Rail Profiles.



The relevant holes (a) for the lock nuts and countersinks DIN 74 (b) for the Countersunk Screws must be provided to secure the Bearing Sets.

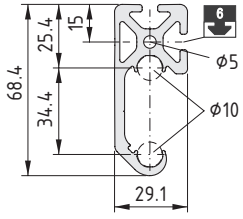
	a [mm]	b DIN 74	c [mm]	d [mm]
5	∅ 14.5	Bf5	30 / 42	32.4
6	∅ 16.5	Bf6	46 / 66	47.9
8	∅ 22.5	Bm8	64 / 90	63.3

Materials used in all the following products:
Al, anodized



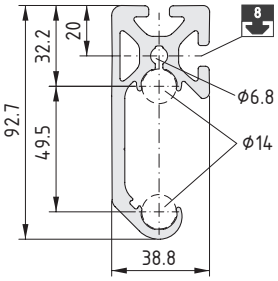
C-Rail, Rail Profile 5 5

A [cm²]	m [kg/m]	I_x [cm⁴]	I_y [cm⁴]	I_t [cm⁴]	W_x [cm³]	W_y [cm³]	
2.62	0.71	4.64	0.91	0.20	1.76	0.76	
natural, cut-off max. 6000 mm							0.0.460.01
natural, 1 pce., length 6000 mm							0.0.448.25



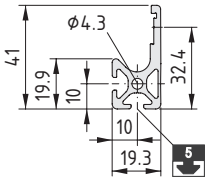
C-Rail, Rail Profile 6 6

A [cm²]	m [kg/m]	I_x [cm⁴]	I_y [cm⁴]	I_t [cm⁴]	W_x [cm³]	W_y [cm³]	
6.23	1.68	25.89	5.19	1.09	6.13	2.94	
natural, cut-off max. 6000 mm							0.0.461.01
natural, 1 pce., length 6000 mm							0.0.451.52



C-Rail, Rail Profile 8 8

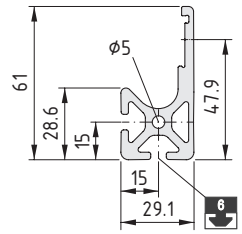
A [cm²]	m [kg/m]	I_x [cm⁴]	I_y [cm⁴]	I_t [cm⁴]	W_x [cm³]	W_y [cm³]	
11.41	3.10	84.49	16.61	2.41	14.34	6.99	
natural, cut-off max. 6000 mm							0.0.462.01
natural, 1 pce., length 6000 mm							0.0.452.52



C-Rail, Slide Profile 5 5

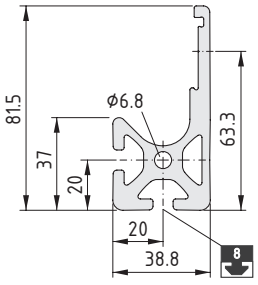
A [cm²]	m [kg/m]	I_x [cm⁴]	I_y [cm⁴]	I_t [cm⁴]	W_x [cm³]	W_y [cm³]	
2.46	0.67	2.83	0.97	0.23	1.09	0.71	
natural, cut-off max. 6000 mm							0.0.460.02
natural, 1 pce., length 6000 mm							0.0.448.27

15



C-Rail, Slide Profile 6

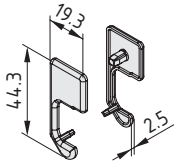
A [cm²]	m [kg/m]	I_x [cm⁴]	I_y [cm⁴]	I_t [cm⁴]	W_x [cm³]	W_y [cm³]	
5.44	1.47	13.08	5.00	1.07	3.24	2.79	
natural, cut-off max. 6000 mm							0.0.461.02
natural, 1 pce., length 6000 mm							0.0.451.54



C-Rail, Slide Profile 8

A [cm²]	m [kg/m]	I_x [cm⁴]	I_y [cm⁴]	I_t [cm⁴]	W_x [cm³]	W_y [cm³]	
9.81	2.65	41.90	16.09	3.36	7.62	6.71	
natural, cut-off max. 6000 mm							0.0.462.02
natural, 1 pce., length 6000 mm							0.0.452.54

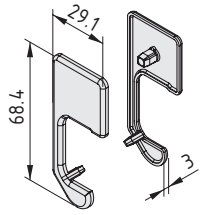
Materials used in all the following products:
PA-GF



C-Rail, Rail Profile Cap Set 5

C-Rail, Rail Profile Cap right
C-Rail, Rail Profile Cap left
m = 2.0 g

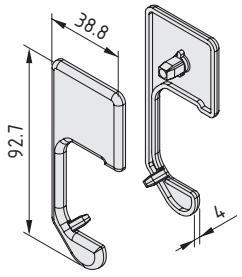
black, 1 set	0.0.460.38



C-Rail, Rail Profile Cap Set 6

C-Rail, Rail Profile Cap right
C-Rail, Rail Profile Cap left
m = 5.0 g
5.0

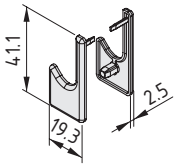
black, 1 set	0.0.461.38



C-Rail, Rail Profile Cap Set 8

C-Rail, Rail Profile Cap right
C-Rail, Rail Profile Cap left
m = 13.0 g
13.0

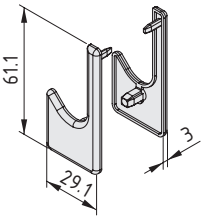
black, 1 set	0.0.462.38



C-Rail, Slide Profile Cap Set 5

C-Rail, Slide Profile Cap right
C-Rail, Slide Profile Cap left
m = 2.0 g

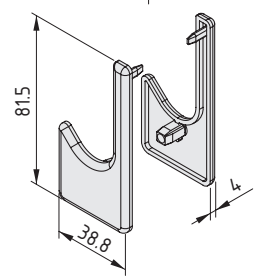
black, 1 set	0.0.460.39



C-Rail, Slide Profile Cap Set 6

C-Rail, Slide Profile Cap right
C-Rail, Slide Profile Cap left
m = 4.0 g

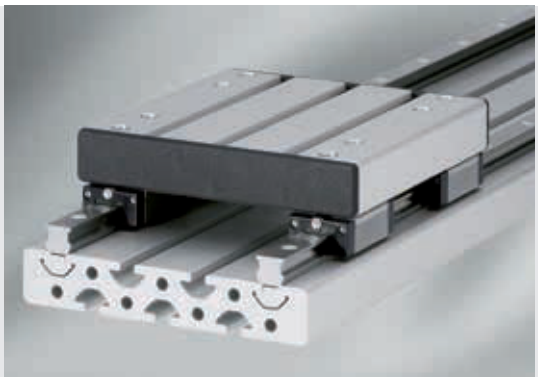
black, 1 set	0.0.461.39



C-Rail, Slide Profile Cap Set 8

C-Rail, Slide Profile Cap right
C-Rail, Slide Profile Cap left
m = 11.0 g

black, 1 set	0.0.462.39



Profiled Steel Rail Guide Systems

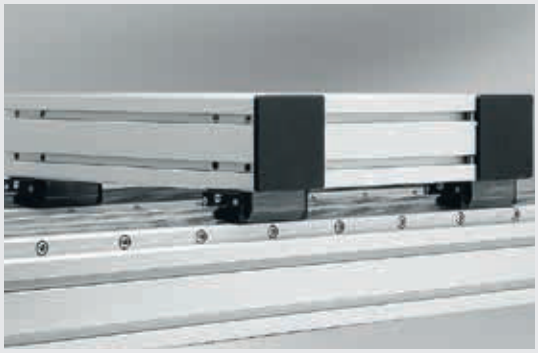
- Four-row linear guide systems (with full complement) on profiled rails
- Bearing Carriages can carry loads from all directions
- High load-carrying capacity and rigidity

Four-row linear guide systems (with full complement) on profiled rails whose special fastening geometry makes them ideal for use on profile constructions.

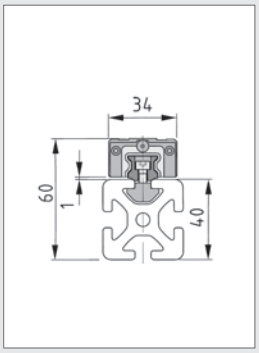
The individual linear guide system carriages can be loaded from all directions and can absorb moments around all axes. The key features of linear guide systems PS are high load-carrying capacity, rigidity and compact design.
Each linear guide system carriage can be freely combined with every Linear Guide Rail within a given Line, so that one, two or more carriages are possible per rail and carriages can be exchanged.

In a number of application cases, particularly involving high forces and moments that need to be absorbed by greater support distances, the carriages should not be used individually, but rather in combination.
Solutions involving several carriages on a single rail and several carriages on parallel rails are also possible.

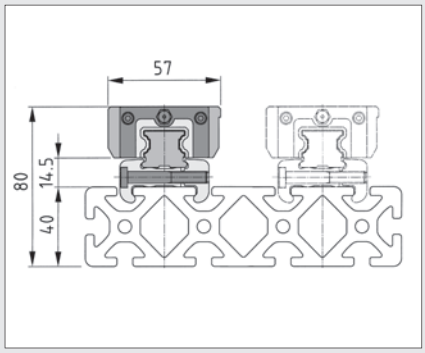
Rail Attachment



Guide systems with parallel rails on a single supporting profile can be constructed on the profile groove without elaborate alignment measures due to the special fastening geometry employed by the rail. The use of parallel rails on independent profiles or different support constructions will require the amount of alignment and fastening which is typical for profile rail guides (machining of location surfaces, use of parallel segments etc.).



Guide rail PS 4-15 is attached to the Profile 8 groove. The rail has been shaped for this purpose and centres automatically when screwed against Groove Profile 8 AI M4-60.



item Innovation

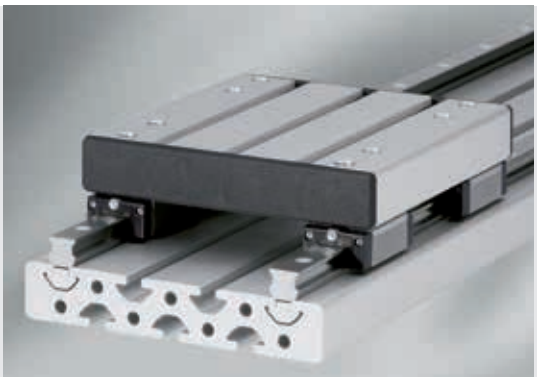
A guide PS 4-25 with one or more guide carriages, one guide rail and one rail clamp on a Support Profile.

The self-centring rail clamp also serves as a support for the guide rail and secures this to any Support Profile 8 with a minimum width of 80 mm. Profile 8 lightweight and 8 E should not be used for the support profiles.

15

Note:

Section 19 includes equations for calculating the statistically projected service life of all linear slides mounted on rolling elements.



Bearing Carriages

- High load-carrying capacity and rigidity in a compact package
- Full complement of balls ensures low wear

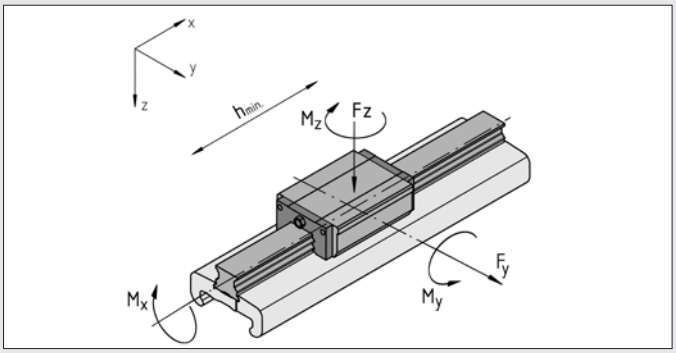
8 www.item24.com

The Bearing Carriages can be used either individually or in various combinations on one or more rails.
The Bearing Carriage has four polished tracks on which the bearings are in linear rolling-ball contact with the profiled rail.

The bearings are recirculated through the end-face reverse units and closed return conduits. The carriages are fitted with end-face wipers and additional longitudinal wipers in order to minimise sensitivity to external influences.

Button-Head Screws ISO 7380 and Locating Washers 8 are used to fasten Profiles 8 to the Bearing Carriage.

Button-Head Screws ISO 7380 153
Locating Washers 161

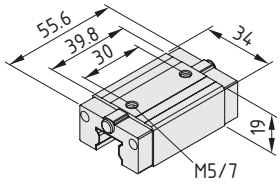


	PS 4-15	PS 4-25
$F_y = F_z$	1,000 N *	2,500 N
M_x	15 Nm	60 Nm
$M_y = M_z$	10 Nm	25 Nm
C	7,200 N	17,900 N
C_0	14,500 N	37,000 N
$v_{max.}$	5 m/s	5 m/s
ϑ	-40 – +100 °C	-40 – +100 °C
$h_{min.}$	40 mm	60 mm

The permissible load for a linear guide system depends on the load bearing capacity of the guide elements but also on the strength of the screw connections and the construction of the profile frame.
The minimum stroke length ($h_{min.}$) is required if the rolling-ball contact is to be adequately lubricated. The carriage is charged at the factory with lithium-based grease. Lithium-based grease with a mineral-oil base can be used for re-lubrication.

Given the contact pressure of the wipers, a displacement force of 10 N must be taken into account irrespective of the load.

*Note: The fastening of the guide rail does not enable the stated tensile forces of the PS4-15 linear guide system to be utilised to the full in all directions.

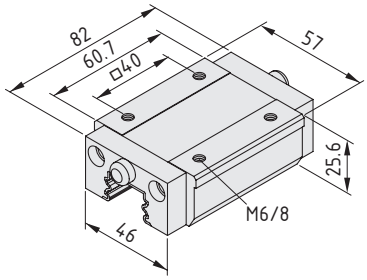


Bearing Carriage PS 4-15

8

Housing, St, hardened
2 wipers, PA, black
2 lubricating nipples
Notes on Use and Installation
m = 140.0 g

1 pce. 0.0.443.06

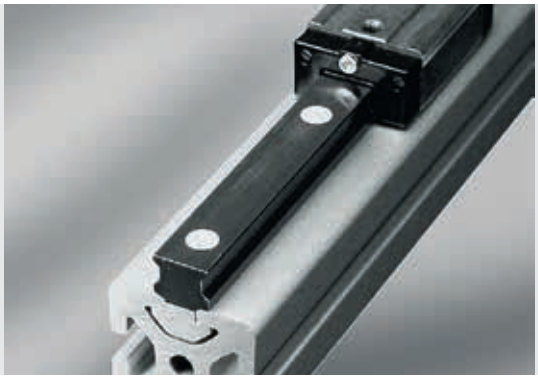


Bearing Carriage PS 4-25

8

Housing, St, hardened
2 wipers, PA, black
2 lubricating nipples DIN 3405 A M6-120°
m = 545.0 g

1 pce. 0.0.443.16



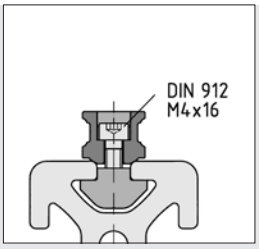
Linear Guide Rail PS 4-15

- Stable guide for two-sided raceway
- Self-centring fastening to the profile groove

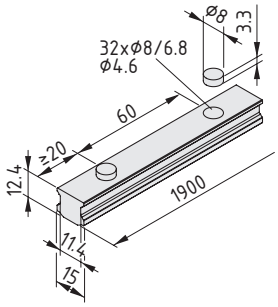
8 | www.item24.com | item Innovation

Profiled Linear Guide Rail with special fastening geometry for grooves of Profile 8 at the base of the rail. The rails are provided with fastening bores and countersinks for Hexagon Socket Head Cap Screws DIN 912-M4. Following installation, the countersinks must be covered flush using the caps provided in order to increase the service life of the end-face wiper systems.

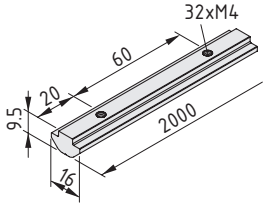
Hexagon Socket Head Cap Screws 158



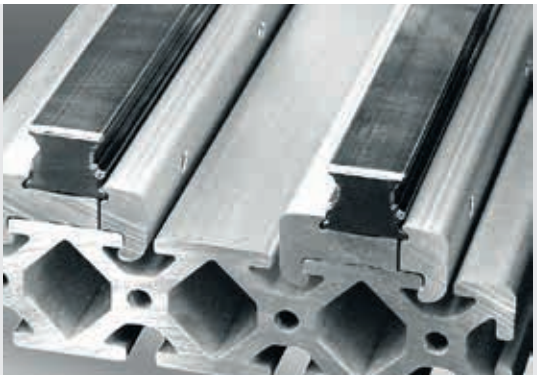
The rails are best fastened to the Profile 8 using Groove Profile 8 Al M4/60 and Hex. Socket Head Cap Screws DIN 912-M4x16.



Linear Guide Rail PS 4-15	8
St, Cf 53, hardened, polished Caps, PA m = 1.30 kg/m	
cut-off max. 1900 mm	0.0.443.32
1 pce., length 1900 mm	0.0.443.31



Groove Profile 8 Al M4-60	8
Al, anodized m = 590 g/m	
natural, 1 pce., length 2000 mm	0.0.443.02

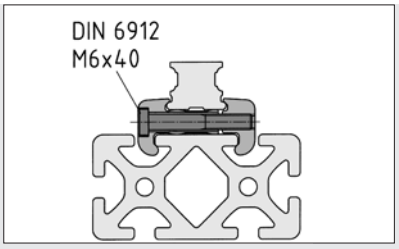


Linear Guide Rail PS 4-25

- Exceptional rigidity thanks to Guide Rail Clamping Profile
- Simple assembly with no additional profile machining

8 www.item24.com item Innovation

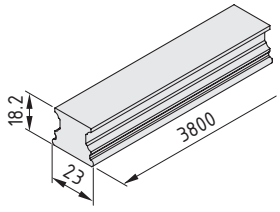
Profiled Linear Guide Rail with special rail base geometry. Clamping using the Guide Rail Mounting Profile and Guide Rail Clamping Profile makes it possible to use rails without holes that do not require Caps, or subsequent machining.



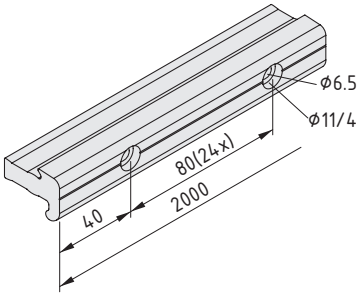
Linear Guide Rail PS 4-25 uses fastening profiles to create a clamping effect. A Guide Rail Mounting Profile, a Guide Rail Clamping Profile and the appropriate number of Hexagon Socket Head Cap Screws DIN 6912-M6x40 are required to mount each guide rail. The screws connect the two components of the linear guide system while the fastening profiles do not need to be machined.

Recommended tightening torque for the screws M_A = 10 Nm.

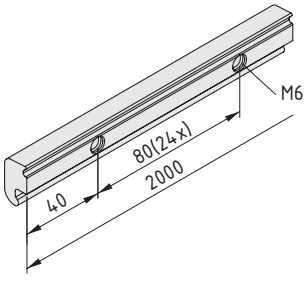
Hexagon Socket Head Cap Screw DIN 6912 M6x40 159



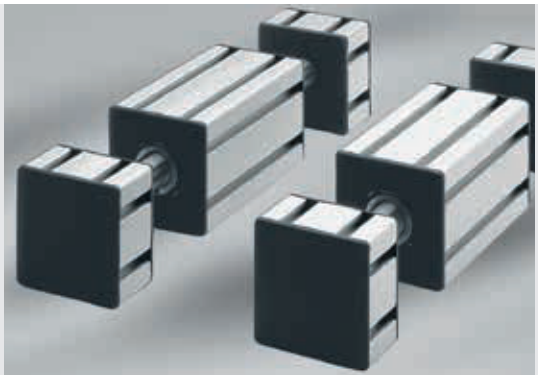
Linear Guide Rail PS 4-25	8
St, Cf 53, hardened, polished m = 2.50 kg/m	
cut-off max. 3800 mm	0.0.443.34
1 pce., length 3800 mm	0.0.602.04



Guide Rail Mounting Profile PS 4-25	8
Al, anodized m = 940 g/m	
natural, 1 pce., length 2000 mm	0.0.443.17



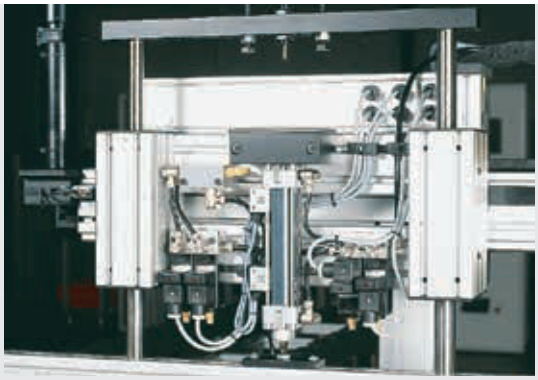
Guide Rail Clamping Profile PS 4-25	8
Al, anodized m = 529 g/m	
natural, 1 pce., length 2000 mm	0.0.443.18



Ball-bearing guide bushes

- Grooves all the way round for fastening purposes
- Available to suit 2 shaft diameters
- Ideal for vertical lifting movements

Service



Ball-bearing guide bushes can be integrated as compact linear slides in profile constructions.
The length of the guide is determined solely by the length of the guiding shaft.
The Ball Bushes offer low friction and are characterised by high linearity of motion.

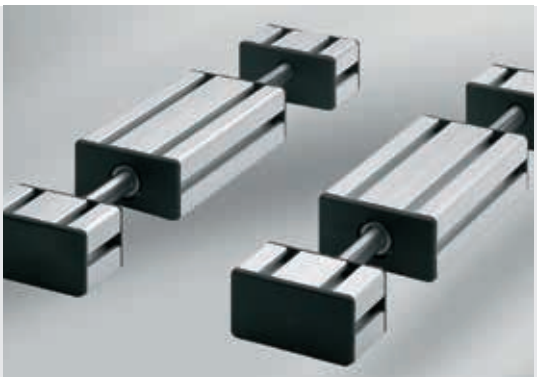
The heart of a ball-bearing guide bush is the recirculating ball bearing which runs on a hardened steel guiding shaft. Ball Bushes and guiding shafts are integrated into the profile cavities with the minimum of ancillary components.

Two sizes, based on shaft diameters D14 and D25, are designed to withstand slide loads of 500 and 1500 N. The maximum travelling speed is 2 m/s.
The double-sided seal of the Ball Bush, together with a high-quality grease filling, guarantee a long service life for the guide units, even under unfavourable operating conditions.

It is recommended that an evaluation should be made of the load-bearing capacity and service life, together with an allowance for deflection of the guiding shafts in the case of longer strokes.

Note:

Section 19 includes equations for calculating the statistically projected service life of all linear slides mounted on rolling elements.



Ball-Bearing Guide Bush Sets

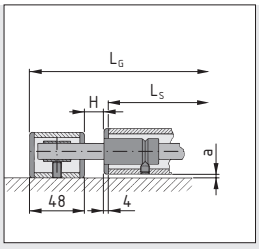
The easy way to achieve a customised slide

- Turnkey system up to 2,000 mm long
- Easily combined to achieve increased load-carrying capacity
- Available in two variants – one-piece or parallel slides

Complete guide systems based on Shafts D14 or D25 with variable slide (S) and stroke lengths (H) (please indicate when ordering).
The slightly shorter shaft length allows adjustments during installation.

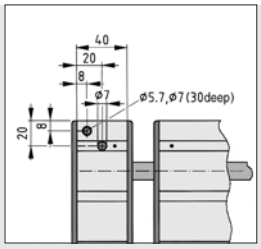
The maximum length of guide is 2000 mm.
The load ratings of the slides are governed by the type and number of Ball-Bearing Guide Bush Units used.

Guide Alternatives	a [mm]
80x40 D14 160x40 D14	3,3
80x80 D25 160x80 D25	4,3

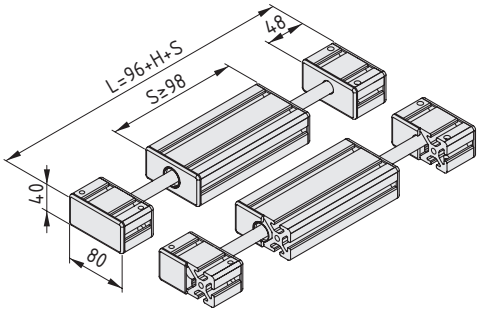


L_G = Overall length of the guide

$L_G = (L_S + 2x4mm) + H + 2x48mm$



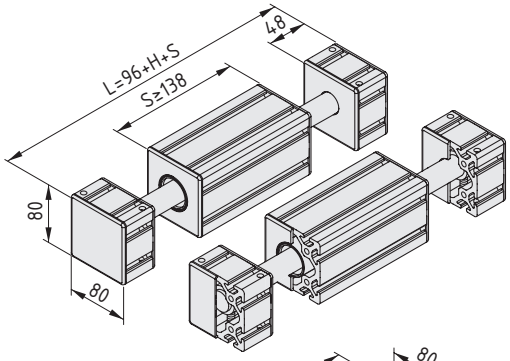
Recommended arrangement for a fixing or mounting hole.



Ball-Bearing Guide Bush Set 8 80x40 D14

Fully machined and pre-assembled
2 slides 8 80x40 D14, Al, anodized, natural
4 Clamp Blocks 8 80x40 D14
4 Caps 8 80x40
4 Clamp-Block Caps 8 80x40 D14
4 Slide Caps 8 80x40 D14
4 Ball-Bearing Guide Bush Units 8 D14
4 Shaft-Clamping Bushes 8 D14
2 Shafts D14

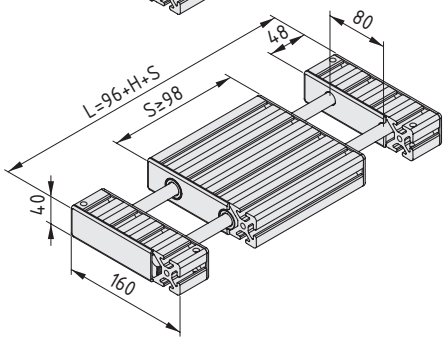
1 set	0.0.386.11



Ball-Bearing Guide Bush Set 8 80x80 D25

Fully machined and pre-assembled
2 slides 8 80x80 D25, Al, anodized, natural
4 Clamp Blocks 8 80x80 D25
4 Caps 8 80x80
4 Clamp-Block Caps 8 80x80 D25
4 Slide Caps 8 80x80 D25
4 Ball-Bearing Guide Bush Units 8 D25
4 Shaft-Clamping Bushes 8 D25
2 Shafts D25

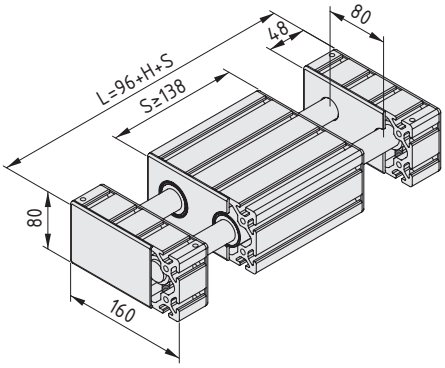
1 set	0.0.387.11



Ball-Bearing Guide Bush Set 8 160x40 D14

Fully machined and pre-assembled
Slide 8 160x40 D14, Al, anodized, natural
2 Clamp Blocks 8 160x40 D14
2 Caps 8 160x40
2 Clamp-Block Caps 8 160x40 D14
2 Slide Caps 8 160x40 D14
4 Ball-Bearing Guide Bush Units 8 D14
4 Shaft-Clamping Bushes 8 D14
2 Shafts D14

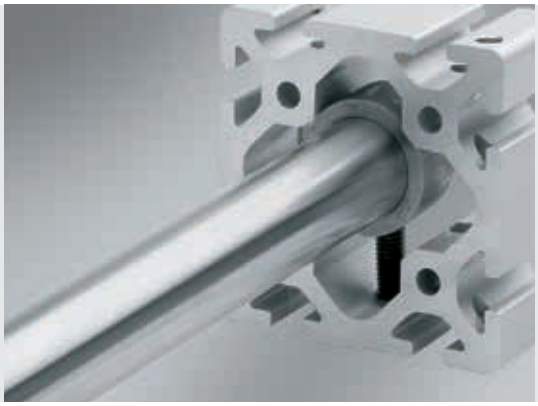
1 set	0.0.386.10



Ball-Bearing Guide Bush Set 8 160x80 D25 8

Fully machined and pre-assembled
Slide 8 160x80 D25, Al, anodized, natural
2 Clamp Blocks 8 160x80 D25
2 Caps 8 160x80
2 Clamp-Block Caps 8 160x80 D25
2 Slide Caps 8 160x80 D25
4 Ball-Bearing Guide Bush Units 8 D25
4 Shaft-Clamping Bushes 8 D25
2 Shafts D25

1 set	0.0.387.10

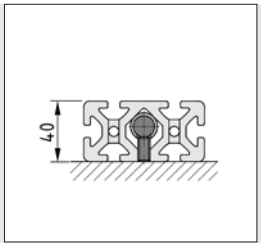


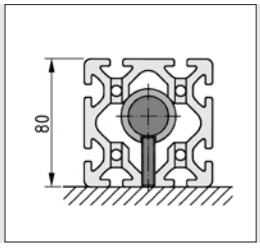
Shaft-Clamping Bushes

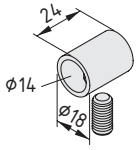
- For holding Shafts firmly and securely in the hollow chamber of a profile
- For building customised ball-bearing clamp blocks

8 Service

For clamping Shafts D14 and D25.
The Shaft-Clamping Bushes are fixed in the cavities of Profiles 8 using grub screw DIN 913-M8.



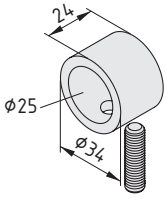




Shaft-Clamping Bush 8 D14 8

St, black
Grub screw DIN 913-M8x16, St, bright zinc-plated
m = 22.0 g

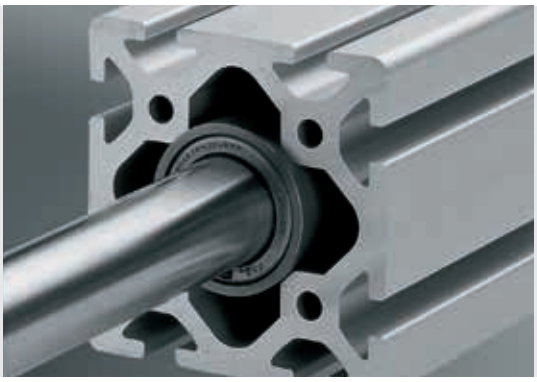
1 pce.	0.0.386.03



Shaft-Clamping Bush 8 D25 8

St, black
Grub screw DIN 913-M8x27, St, bright zinc-plated
m = 85.0 g

1 pce.	0.0.387.03

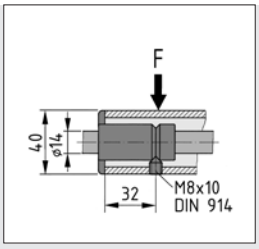


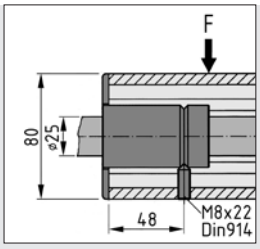
Ball-Bearing Guide Bush Units

- For compact and maintenance-free Linear Units
- Easily installed in Profiles 8
- For customised ball-bearing guide bush slides

Service

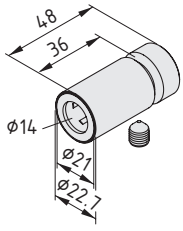
Ball-Bearing Guide Bush Units consist of sleeves accommodating the Ball Bushes. They form the guide elements for a ball-bearing guide bush.





The Ball-Bearing Guide Bush Units are fixed in the cavities of Profiles 8 using grub screw DIN 914-M8.

The direction of the load for the Ball-Bearing Guide Bush Unit should be selected such that the operating load presses the Ball-Bearing Guide Bush Unit into the prism of the profile cavity and not against the grub screw.

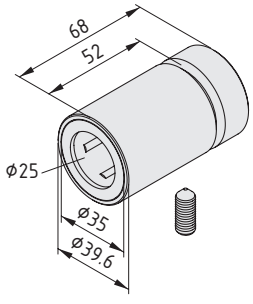


Ball-Bearing Guide Bush Unit 8 D14

8

Sleeve, St, black
Ball Bush D14, sealed both ends, maintenance-free
Grub screw DIN 914-M8x10, St, bright zinc-plated

C [N]	C_0 [N]	$v_{max.}$ [m/s]	m [g]	
620	520	2	62.0	
1 pce.				0.0.386.12



Ball-Bearing Guide Bush Unit 8 D25

8

Sleeve, St, black
Ball Bush D25, sealed both ends, maintenance-free
Grub screw DIN 914-M8x22, St, bright zinc-plated

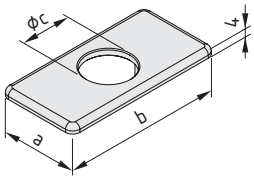
C [N]	C_0 [N]	$v_{max.}$ [m/s]	m [g]	
1,990	1,670	2	300.0	
1 pce.				0.0.387.12

Slide Caps
Clamp-Block Caps

- Safe covering for the end face
- Prevents soiling
- For constructing customised ball-bearing guide bushes

Rounded face covering for cut profile end of the slides or Clamp Blocks of ball-bearing guide bushes.

Materials used in all the following products:
PA-GF

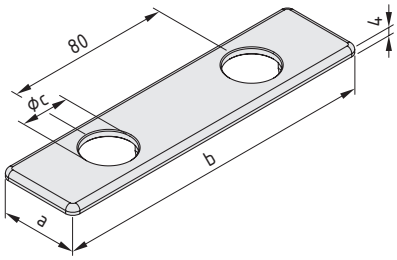


Slide Cap 8 80x40 D14

a = 40 mm	b = 80 mm	c = 24 mm	m = 13.0 g
black, 1 pce.			0.0.386.08

Slide Cap 8 80x80 D25

a = 80 mm	b = 80 mm	c = 42 mm	m = 24.0 g
black, 1 pce.			0.0.387.08

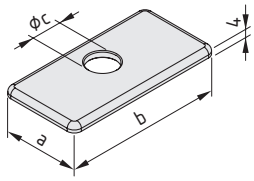


Slide Cap 8 160x40 D14

a = 40 mm	b = 160 mm	c = 24 mm	m = 26.0 g
black, 1 pce.			0.0.386.06

Slide Cap 8 160x80 D25

a = 80 mm	b = 160 mm	c = 42 mm	m = 53.0 g
black, 1 pce.			0.0.387.06

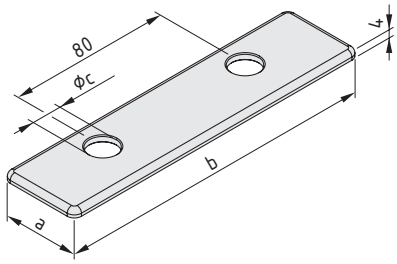


Clamp-Block Cap 8 80x40 D14

a = 40 mm	b = 80 mm	c = 15 mm	m = 14.0 g
black, 1 pce.			0.0.386.09

Clamp-Block Cap 8 80x80 D25

a = 80 mm	b = 80 mm	c = 26 mm	m = 28.0 g
black, 1 pce.			0.0.387.09

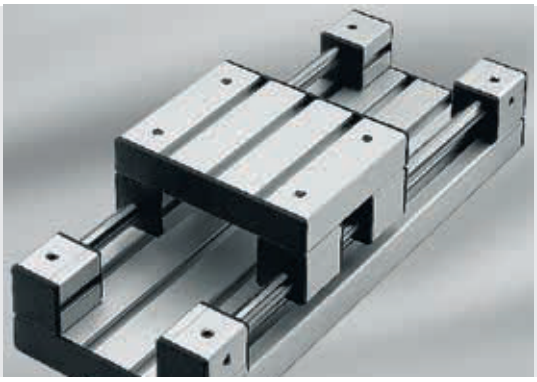


Clamp-Block Cap 8 160x40 D14

a = 40 mm	b = 160 mm	c = 15 mm	m = 28.0 g
black, 1 pce.			0.0.386.07

Clamp-Block Cap 8 160x80 D25

a = 80 mm	b = 160 mm	c = 26 mm	m = 56.0 g
black, 1 pce.			0.0.387.07



Ball-bush block guides

- Modular blocks enable customisation
- Special block profiles for different heights

Service

The application and characteristics of the modular ball-bush block guides are similar to those of the ball-bearing guide bushes. By separating the sliding carriage into two units, the distance between the points of support on the guides can be selected in accordance with the applied loads.

The special profiles of sizes 40x40 and 60x60 (with Line 8 grooves) accommodate both the shaft and the Ball Bushes.

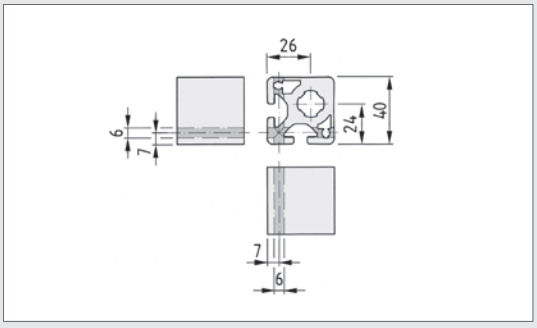
The range of sizes and the different shaft diameters are designed to withstand applied loads ranging from 500 to 1500 N at a maximum travelling speed of 2 m/s. The Ball Bushes, which are sealed at both ends, and the high-quality grease filling ensure a long service life, even under difficult operating conditions.

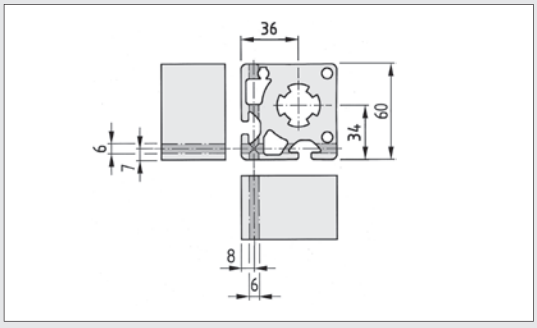
It is advisable to carry out calculations to check the load-bearing capacity and service life and to make an allowance for the deflection of the guiding shafts in the case of longer strokes.

The Direct-Fastening Set is particularly suitable for connecting the profiles of the ball-bush block guides to other profiles, so that the profiles can be moved and no machining is required.

Ball-bush block guides, size 40x40, Shaft D14

Ball-bush block guides, size 60x60, Shaft D25

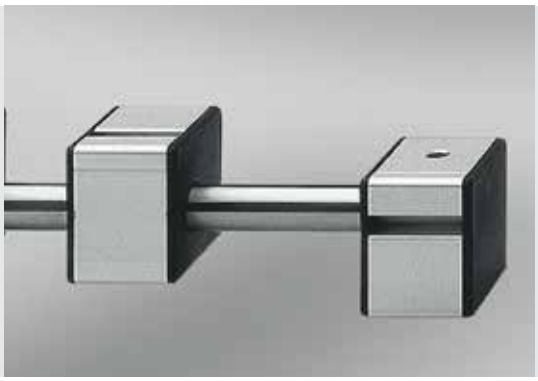




The blocks can be pinned in the areas marked (depending on requirements).

Note:

Section 19 includes equations for calculating the statistically projected service life of all linear slides mounted on rolling elements.

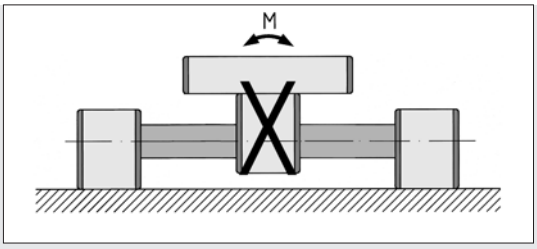


Shaft-Clamp Block Sets
Ball-Bush Block Sets

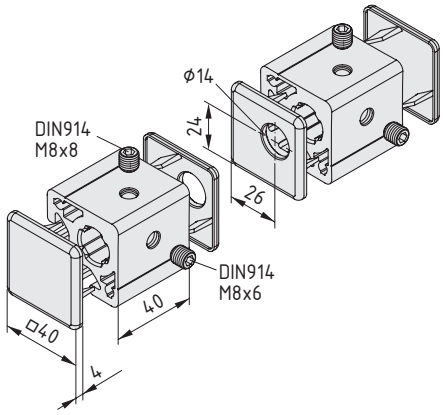
- Compact components for customised linear slides
- All necessary components in one package
- Stable hold for Shafts

The Shaft-Clamp Blocks hold and clamp the shafts.
The shafts are clamped by means of appropriate grub screws.

The Ball-Bush Blocks serve as the guide elements with integral press-fitted recirculating Ball Bushes.



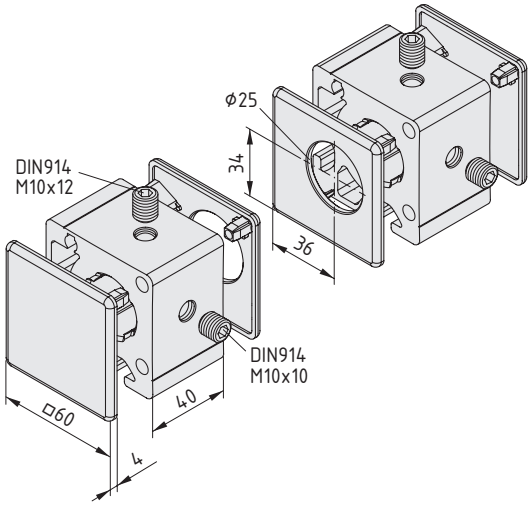
An individual Ball Bush is unable to absorb any moment. It is therefore always necessary to use two shafts for a guide system, with at least two Ball Bushes being located one after the other on a single shaft.
The distances must be appropriate for the moment loads.



Shaft-Clamp Block Set 8 D14

2 Shaft-Clamp Blocks 8 D14, Al, anodized, natural
1 Block-End Cap Set 8 40x40, PA-GF, black
1 Block-Cap Set 8 D14, PA-GF, black
m = 220.0 g

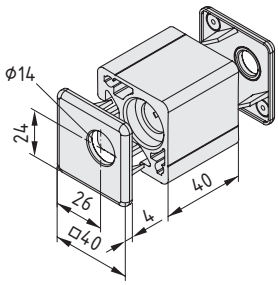
1 set	0.0.629.05



Shaft-Clamp Block Set 8 D25

2 Shaft-Clamp Blocks 8 D25, Al, anodized, natural
1 Block-End Cap Set 8 60x60, PA-GF, black
1 Block-Cap Set 8 D25, PA-GF, black
m = 537.0 g

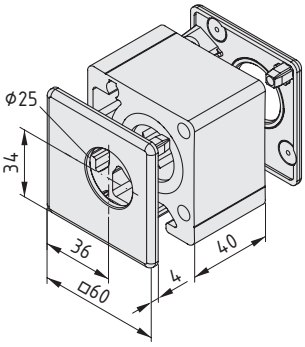
1 set	0.0.629.08



Ball-Bush Block Set 8 D14

1 Ball-Bush Block 8 D14, Al, anodized, natural
1 Block-Cap Set 8 D14, PA-GF, black

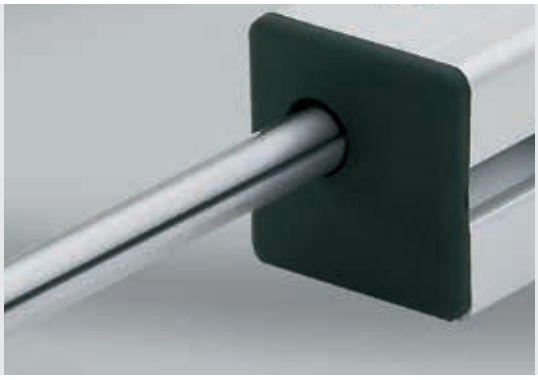
C [N]	C_0 [N]	$v_{max.}$ [m/s]	m [g]	
620	520	2	112.0	
1 set				0.0.629.16



Ball-Bush Block Set 8 D25

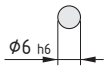
Ball-Bush Block 8 D25, Al, anodized, natural
Block-Cap Set 8 D25, PA-GF, black

C [N]	C_0 [N]	$v_{max.}$ [m/s]	m [g]	
1,990	1,670	2	260.0	
1 set				0.0.629.17



Shafts

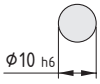
- Hardened and polished guiding shafts
- Extremely versatile – for use with linear slides, roller guides, linear guide elements, C-Rails, ball-bearing guide bushes, ball-bush block guides
- Available with additional corrosion-resistant coating (Shaft D14K)
- Shaft D14 also available in stainless steel



Shaft D6

St, Cf 53, hardened, polished
Hardness HRc 60 ± 2
Roughness Ra = 0.3 µm, Rz = 1.6 µm
Hardening depth min. 0.4 mm
Roundness 4 µm, Parallelism 5 µm/1000 mm
m = 0.22 kg/m

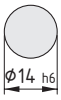
bright, cut-off max. 3000 mm	0.0.356.01
bright, 1 pce., length 3000 mm	0.0.453.75



Shaft D10

St, Cf 53, hardened, polished
Hardness HRc 60 ± 2
Roughness Ra = 0.3 µm, Rz = 1.6 µm
Hardening depth min. 0.4 mm
Roundness 4 µm, Parallelism 6 µm/1000 mm
m = 0.62 kg/m

bright, cut-off max. 6000 mm	0.0.401.09
bright, 1 pce., length 3000 mm	0.0.453.76
bright, 1 pce., length 6000 mm	0.0.615.19



Shaft D14

St, Cf 53, hardened, polished
Hardness HRc 60 ± 2
Roughness Ra = 0.3 µm, Rz = 1.6 µm
Hardening depth min. 0.6 mm
Roundness 5 µm, Parallelism 8 µm/1000 mm
m = 1.21 kg/m

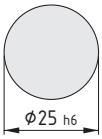
bright, cut-off max. 6000 mm	0.0.294.01
bright, 1 pce., length 3000 mm	0.0.453.77
bright, 1 pce., length 6000 mm	0.0.614.59

Shaft D14 K

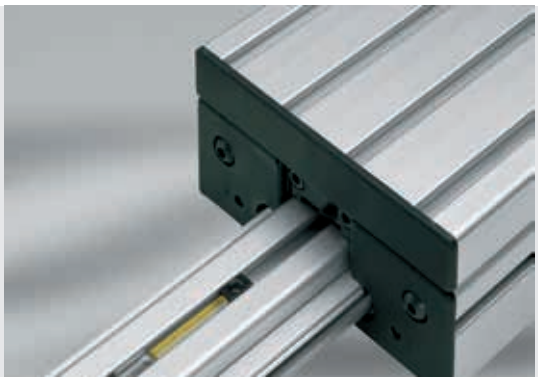
St, Cf 53, hardened, polished
Hardness HRc 60 ± 2
Roughness Ra = 0.3 µm, Rz = 1.6 µm
Hardening depth min. 0.6 mm
Roundness 5 µm, Parallelism 8 µm/1000 mm
With corrosion-resistant coating
m = 1.21 kg/m

black, cut-off max. 3000 mm	0.0.294.55
black, 1 pce., length 3000 mm	0.0.453.78

Shaft D14	
St, X 46 Cr 13, hardened, polished Hardness HRc 54 ± 2 Roughness Ra = 0.3 µm, Rz = 2 µm Hardening depth min. 0.6 mm Roundness 5 µm, Parallelism 8 µm/1000 mm m = 1.21 kg/m	
stainless, cut-off max. 3000 mm	0.0.472.30
stainless, 1 pce., length 3000 mm	0.0.472.31



Shaft D25	
St, Cf 53, hardened, polished Hardness HRc 60 ± 2 Roughness Ra = 0.3 µm, Rz = 1.6 µm Hardening depth min. 0.9 mm Roundness 6 µm, Parallelism 9 µm/1000 mm m = 3.85 kg/m	
bright, cut-off max. 6000 mm	0.0.350.09
bright, 1 pce., length 3000 mm	0.0.453.80
bright, 1 pce., length 6000 mm	0.0.615.23

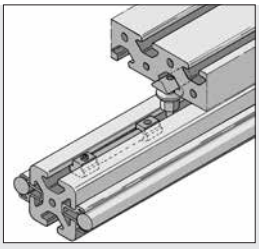


Limit Stop

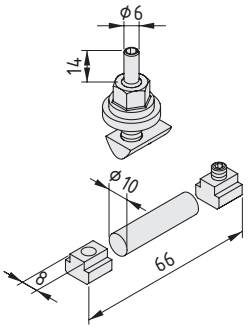
- Slide stop integrated into the profile groove
- No protruding components
- Suitable for positioning anywhere along the groove

8

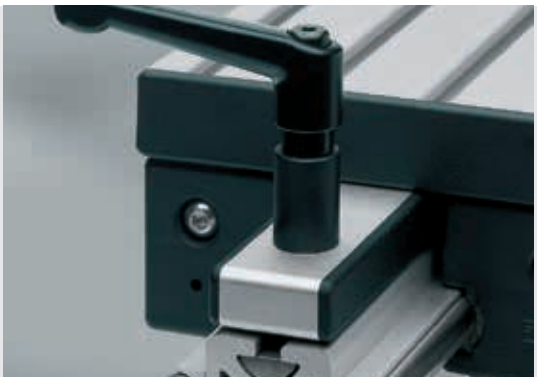
Limit Stop for hand-operated sliding carriage or additional mechanical safeguard.
A Limit Stop is required for each terminal position.
The Limit Stop can also be located in the area of the groove covered by a Timing Belt.



Arrangement of the plastic buffer in the groove of the supporting profile. Grub screw M8x44 is secured in the opposing groove of the moving carriage.



Limit Stop 8	8
T-Slot Nut 8 St M8, bright zinc-plated Grub screw DIN 916-M6x12, St, bright zinc-plated T-Slot Nut M6x8 with thrust piece, St, bright zinc-plated Nut DIN 508-M6x8, St, bright zinc-plated Plastic buffer ∅ 10x40 mm, PUR yellow, 90 Shore A Grub screw M8x44, St, bright zinc-plated Washer DIN 6340-8.4, St, bright zinc-plated Hexagon nut DIN 6331-M8, St, bright zinc-plated m = 65.0 g	
1 set	0.0.337.11



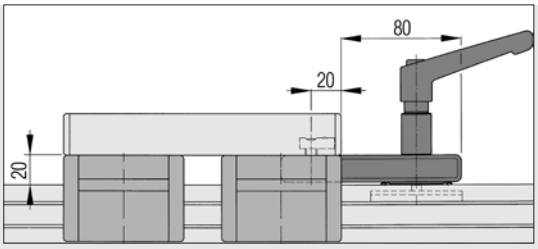
Slide Clamp 8 heavy-duty

- Hold slides in place
- Large clamping area for high holding force
- Can be used with any slide design

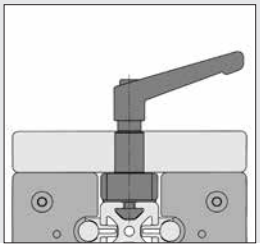
8

Slide Clamp 8 heavy-duty is used for securing the guide slide relative to the guide profile.
It can be screw-connected under any carriage of item's linear slides where there is a clearance of 20 mm to the guide profile.

It is advisable to additionally pin Slide Clamp 8 heavy-duty to the sliding profile (dowel DIN 6325-5m6 x 30).
Fixing bores have already been provided in Slide Clamp 8 heavy-duty for this purpose.

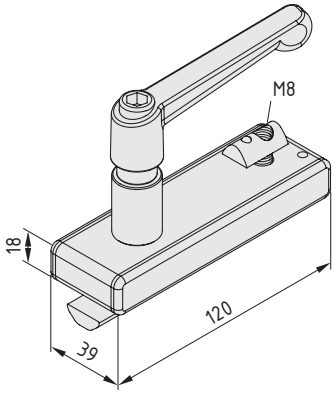


The special design of Slide Clamp 8 heavy-duty prevents undue force being applied to the bearings as a result of the clamping action.



Clamping elements	F* [N]
dry	Approx. 1,500 N
oily	Approx. 1,000 N

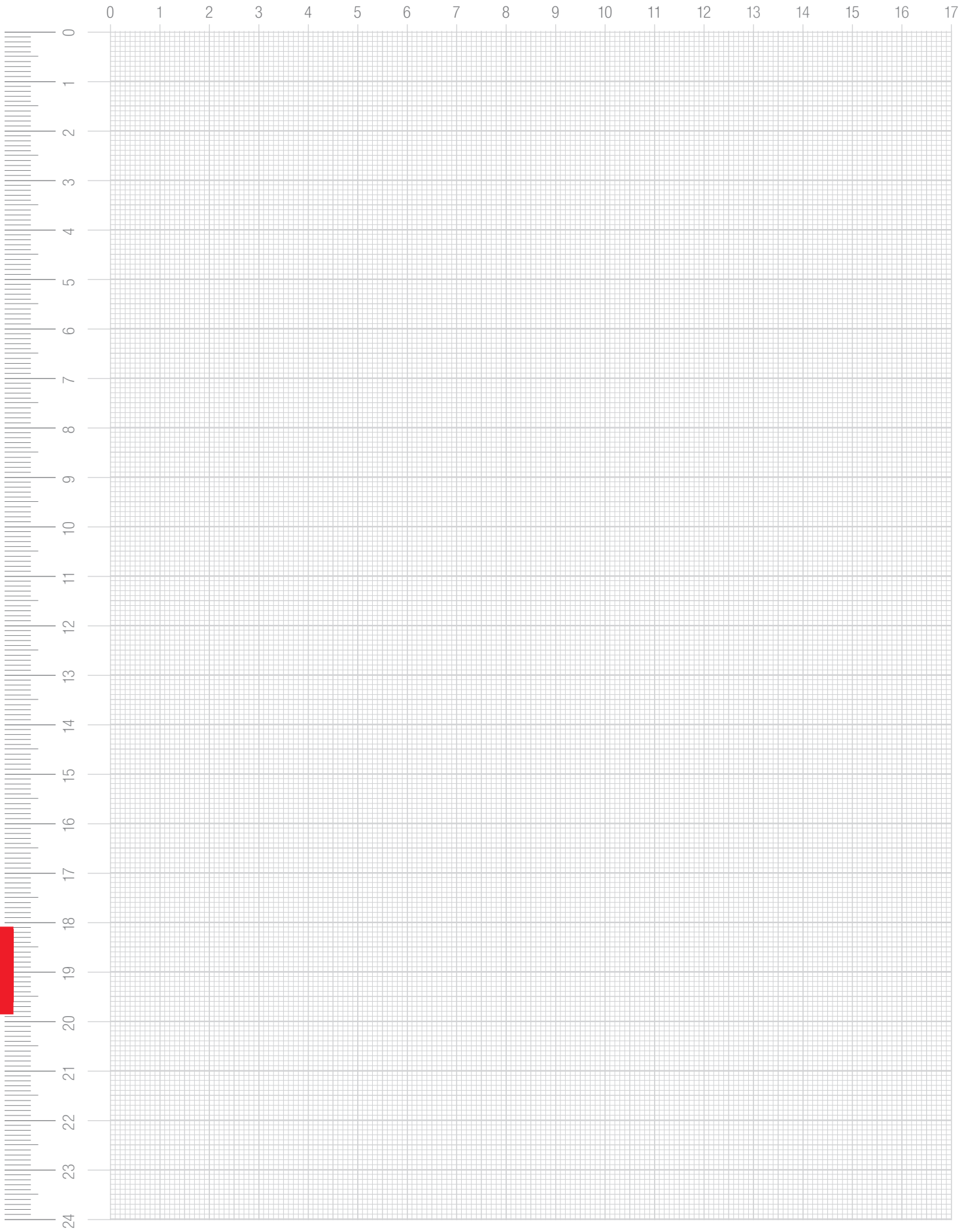
*Holding force for maximum tightening torque of 15 Nm



Slide Clamp 8 heavy-duty 8

Slide Clamp Profile 8, Al, anodized, natural
2 Caps, PA, black
Special clamping nut, St, black
Spacer sleeve, St
2 wipers
Hexagon Socket Head Cap Screw DIN912 M8x20, St
T-Slot Nut 8 St M8
Clamp lever, black
m = 385.0 g

1 pce.	0.0.463.65


0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24