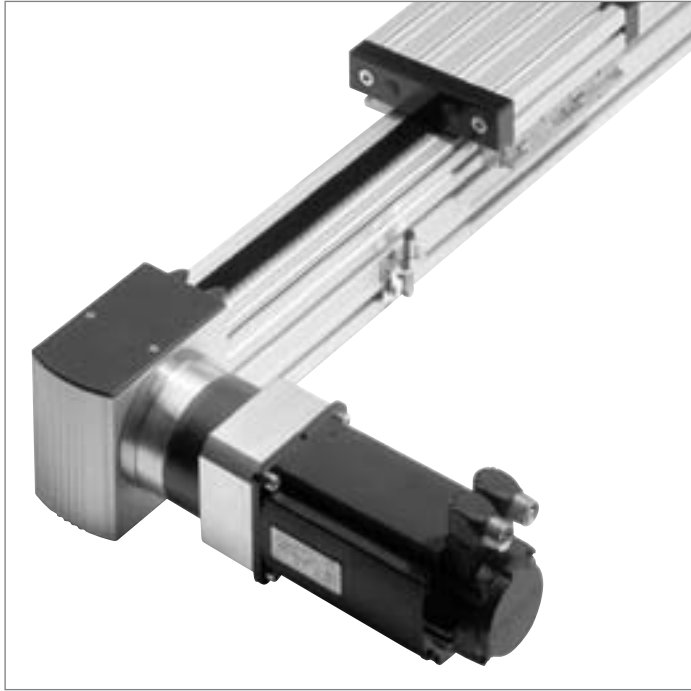




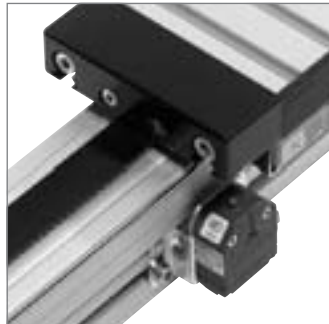
Linear guides

- ▶ For constructing linear guides based on cam roller guides
- ▶ Cam roller guides are suitable for applications with high speeds and medium loads, in particular for the construction of handling devices, feed systems, guides in work machines, and many other applications
- ▶ Fully pre-assembled in any required length or as individual components for assembly on site
- ▶ Without drive or with toothed-belt drive for attaching gears and motors
- ▶ All drive components for linear guides from a single source:
 - Mounting flanges
 - Matching gears
 - Motors
 - Position and limit switches



Gear with flange

- ▶ Matching gears for every size
- ▶ Simple mounting on the drive head with a matching flange



Motors from the Rexroth product line

- ▶ Servomotors perfectly matched to applications with our linear guides
- ▶ Two motors available for each size

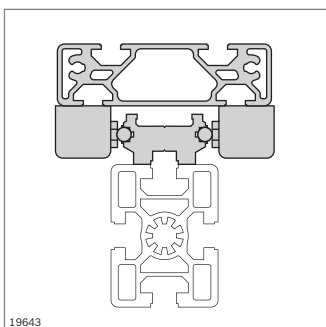
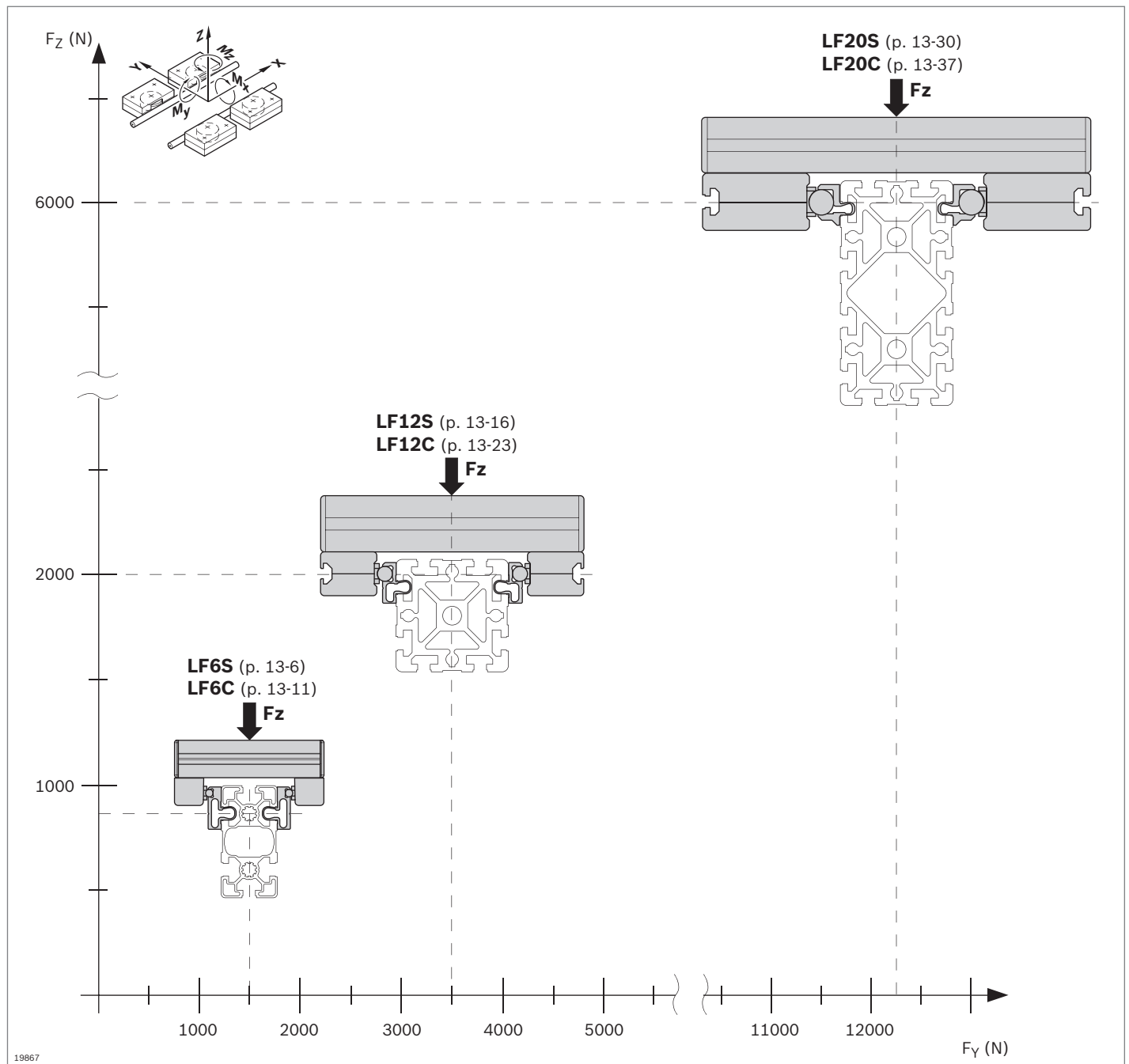
Switch unit

- ▶ Mechanical and inductive switches for safety and position inquiries
- ▶ With holder for fast, simple attachment to support profile

Actuating elements

- ▶ To actuate the switches, adapted to the specific linear guide
- ▶ Fastening to belt connector

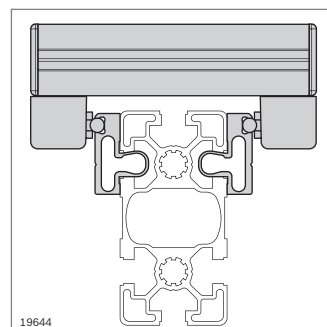
Linear guides – sizes, designs, and loads



LF...S

- ▶ Compact construction
- ▶ Fixed track width
- ▶ $v_{\max} = 5 \text{ m/s}$

19643



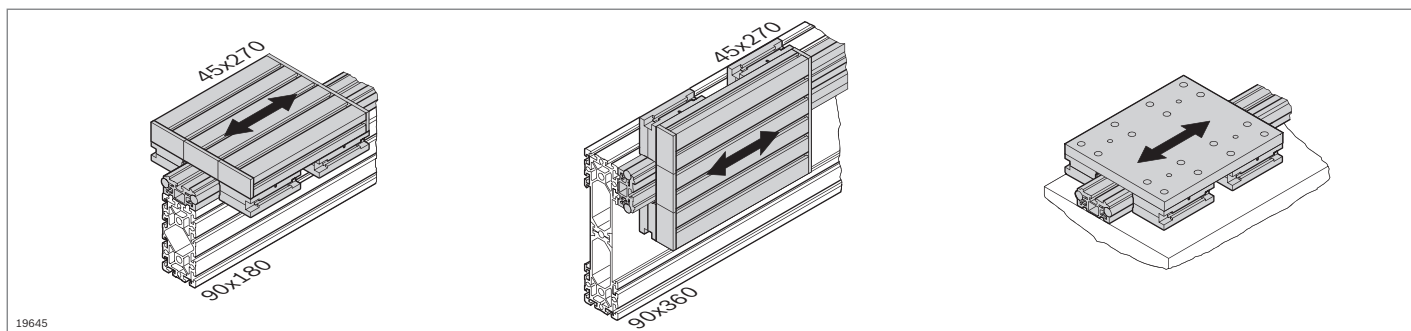
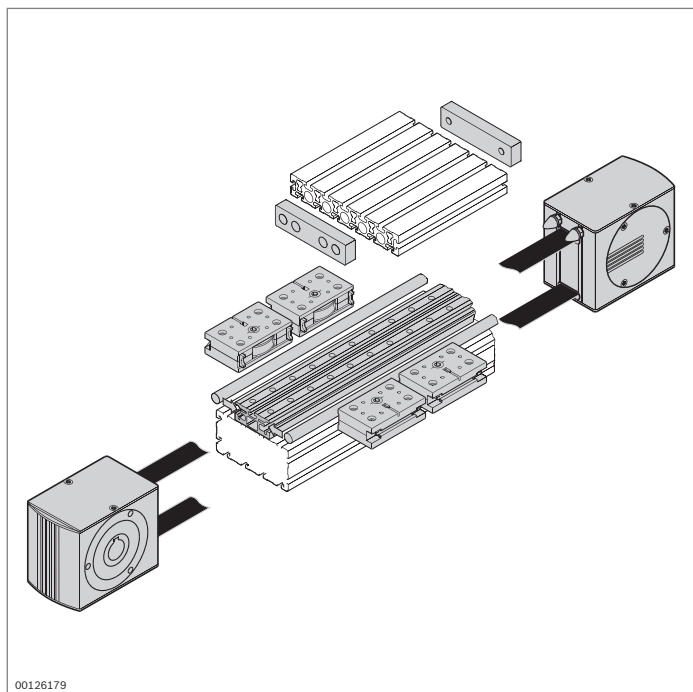
LF...C

- ▶ Freely selectable track width for higher moments
- ▶ $v_{\max} = 5 \text{ m/s}$

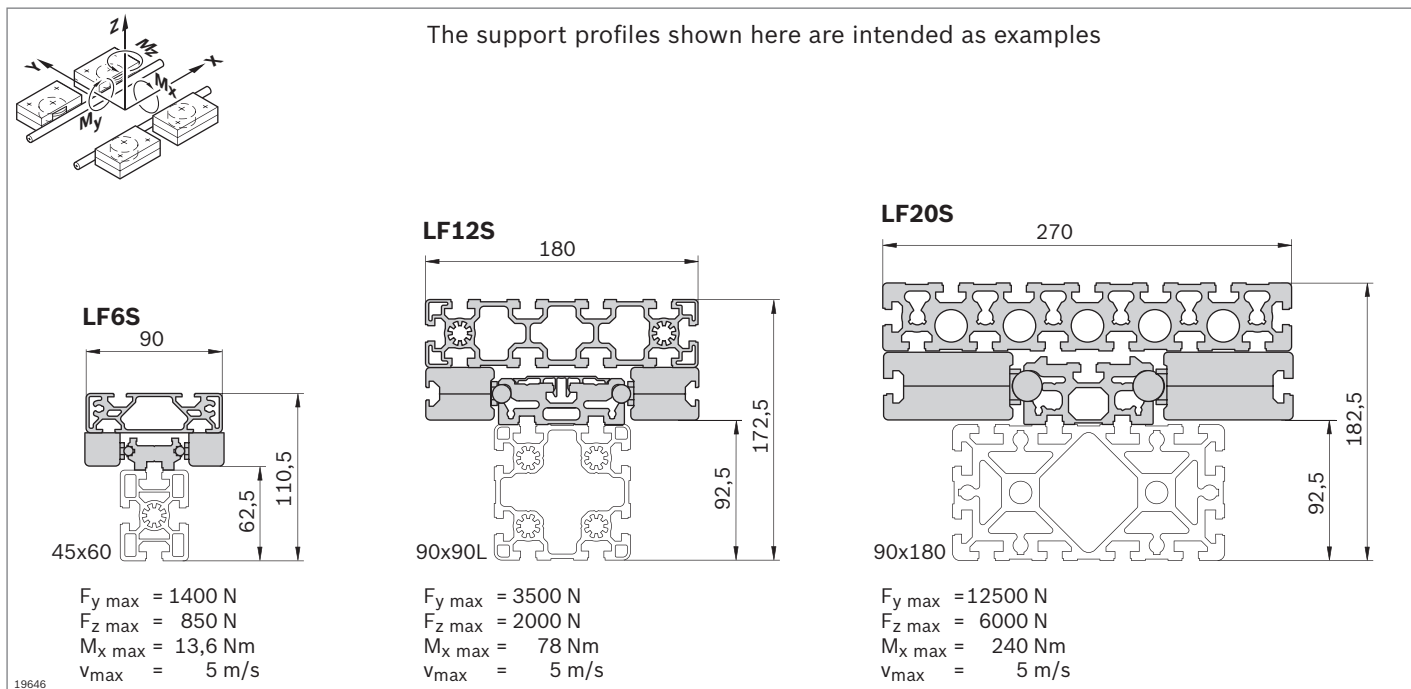
19644

Cam roller guides LF...S

- ▶ Cam roller guide LF...S with fixed track widths
- ▶ Guide rail made of aluminum with hardened and polished VA guide rods
- ▶ Simple mounting on strut profile or directly on flat surface, e.g. on a machine
- ▶ High precision, accuracy of size, and torsional rigidity
- ▶ Lighter and more economical than VA guide rods
- ▶ Light trolley with resistance against torsion
- ▶ Freely selectable trolley lengths
- ▶ Freely selectable stroke lengths possible
- ▶ High permissible speed



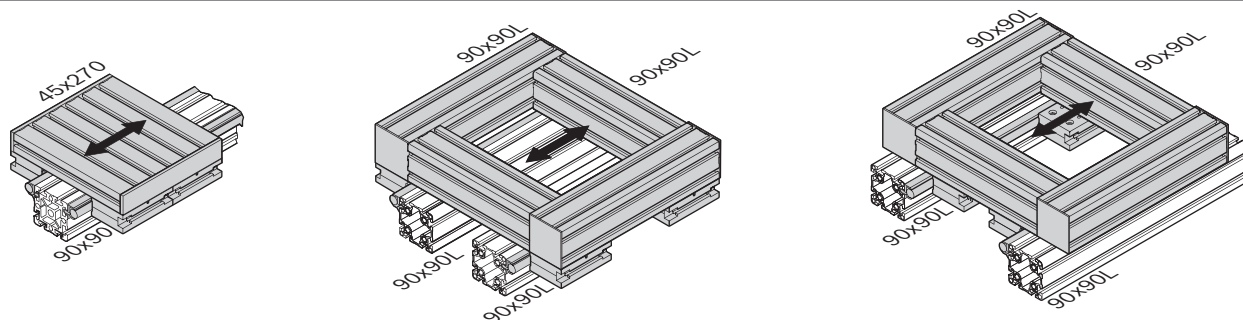
The support profiles shown here are intended as examples



Cam roller guides LF...C

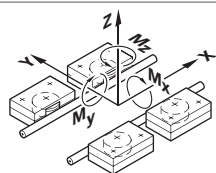
- ▶ Cam roller guide LF...C for free choice of track widths and large track widths
- ▶ Clamping profile made of aluminum with hardened and polished VA guide rods
- ▶ Easy assembly by clipping the clamping profile into the slots of any Rexroth profile with 10 mm slot
- ▶ Optimally adjustable to loads
- ▶ Higher moments due to a C construction and free choice of track width
- ▶ Light trolley with resistance against torsion
- ▶ Freely selectable runner block lengths and widths
- ▶ Freely selectable stroke lengths possible
- ▶ High permissible speed

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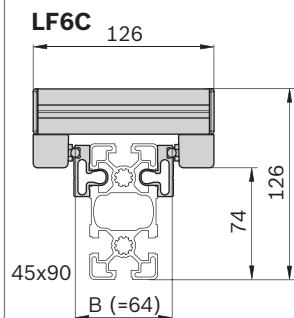


19874

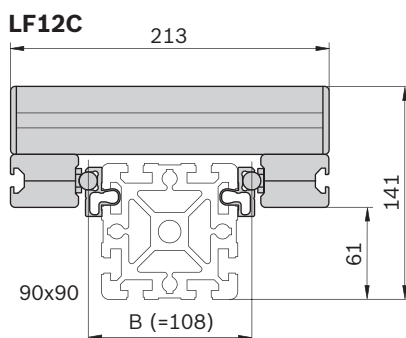
13



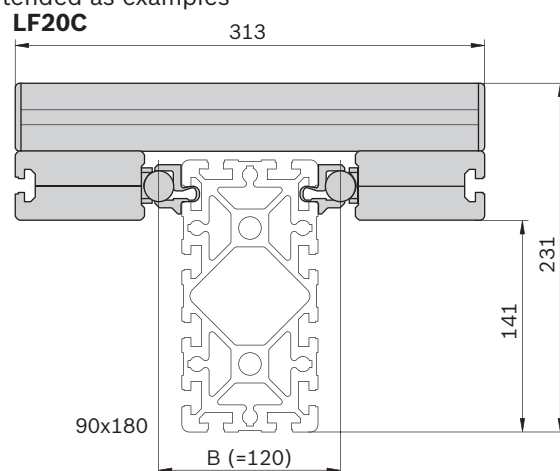
The support profiles shown here are intended as examples



$F_y \text{ max} = 1400 \text{ N}$
 $F_z \text{ max} = 850 \text{ N}$
 $M_x \text{ max} = 0,4 \times B \text{ Nm}$
 $M_x \text{ max} = 25,6 \text{ Nm (B=64mm)}$
 $v_{\text{max}} = 5 \text{ m/s}$

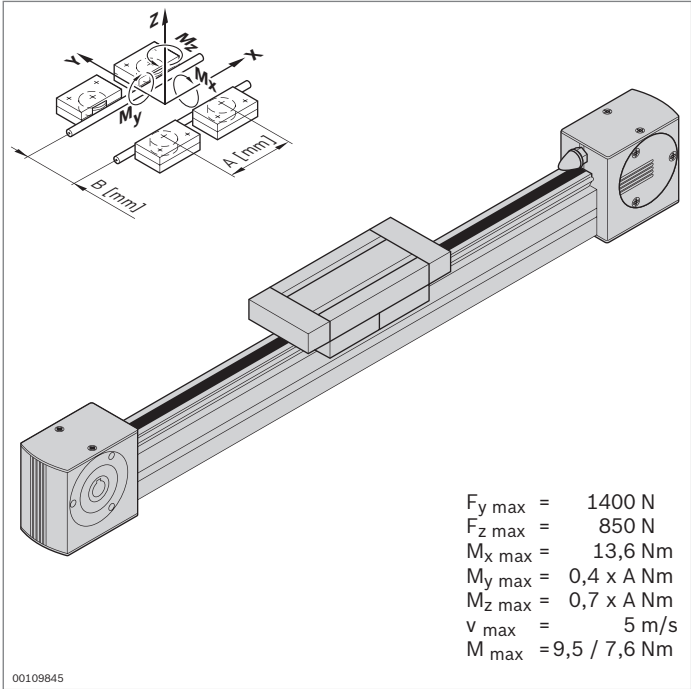


$F_y \text{ max} = 3500 \text{ N}$
 $F_z \text{ max} = 2000 \text{ N}$
 $M_x \text{ max} = 1,0 \times B \text{ Nm}$
 $M_x \text{ max} = 108 \text{ Nm (B=108mm)}$
 $v_{\text{max}} = 5 \text{ m/s}$



$F_y \text{ max} = 12500 \text{ N}$
 $F_z \text{ max} = 6000 \text{ N}$
 $M_x \text{ max} = 3,0 \times B \text{ Nm}$
 $M_x \text{ max} = 360 \text{ Nm (B=120 mm)}$
 $v_{\text{max}} = 5 \text{ m/s}$

19647



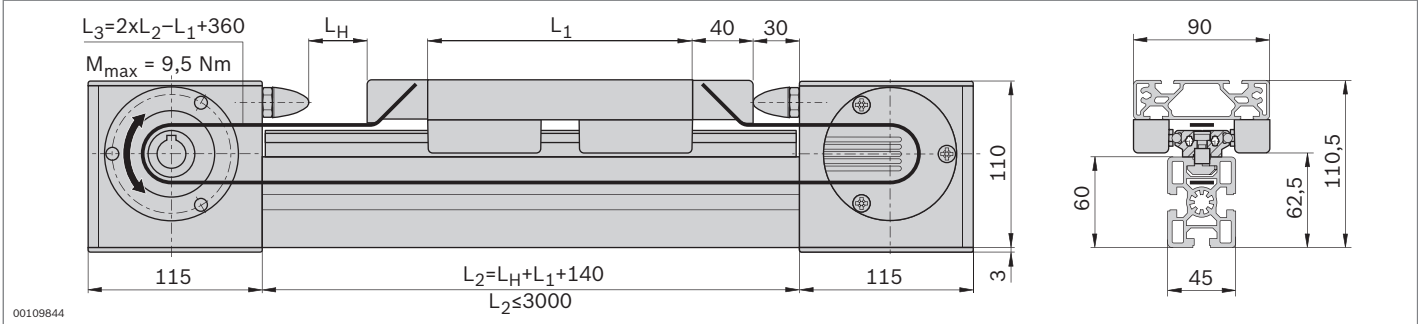
Cam roller guide LF6S – complete axis

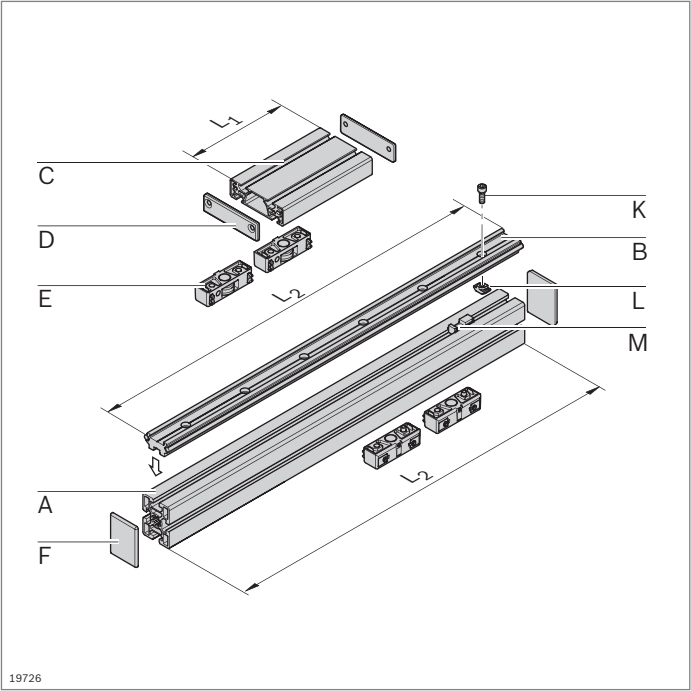


- Fully assembled cam roller guide
- Stroke and trolley length can be individually selected
- Rail profile mounted on strut profile 45x60
- Including toothed belt drive; additional notes on the drive concept (p. 13-44)

Accessories:

- MSK servomotor (p. 13-45)
- LF6 gear (p. 13-47)
- LF6 flange (p. 13-49)
- Switch unit (p. 13-53)
- LF6 actuating elements (p. 13-54)
- For information on controls, see page 13-48 and the IndraDrive catalog **R911308428**





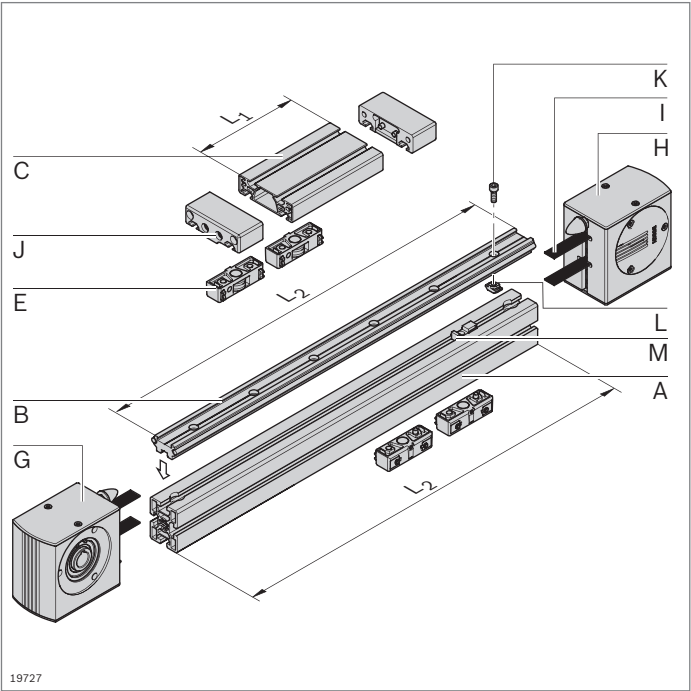
Cam roller guide LF6S – components

► Components for the individual assembly of cam roller guides, with or without drive

Parts list for cam roller guide LF6S without drive

Component	No.	Qty.	Page
A Profile 45x60	3 842 990 570/L ₂	1	2-39
B Guide profile LF6S	3 842 993 966/L ₂	1	13-8
C Trolley profile LF6S	3 842 993 061/L ₁	1	13-8
D Cap LF6S	3 842 535 645	2	13-9
E Guide bearing LF6	3 842 535 662	4	13-8
F Cap 45x60	3 842 515 122	2	2-39
K Cylinder screw M6x20 – DIN7984		n ¹⁾	
L T-nut M6, 10 mm slot	3 842 530 285	n ¹⁾	3-4
M Sliding block	3 842 146 877	n ¹⁾	13-8

¹⁾ See page 13-8 for identification

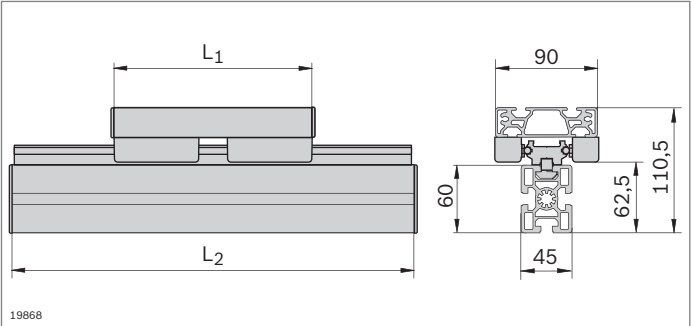


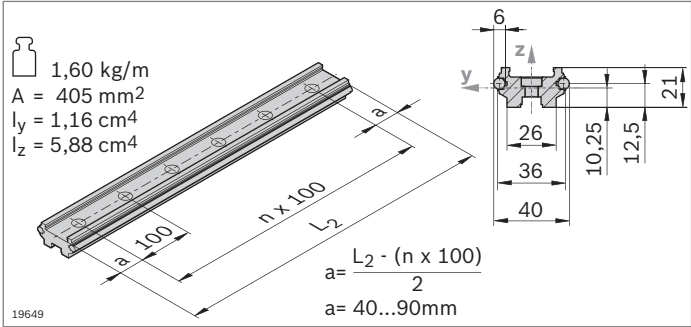
Parts list for cam roller guide LF6S with drive

Component	No.	Qty.	Page
A Profile 45x60 LF LF	3 842 993 085/L ₂	1	2-39
B Guide profile LF6S	3 842 993 966/L ₂	1	13-8
C Trolley profile LF6S	3 842 993 061/L ₁	1	13-8
E Guide bearing LF6	3 842 535 662	4	13-8
G Drive head LF6S	3 842 526 410	1	13-9
H Return head LF6S	3 842 526 411	1	13-10
I Toothed belt LF6S	3 842 994 659/L ₃ ¹⁾	1	13-10
J Belt connector LF6S	3 842 535 682	2	13-10
K Cylinder screw M6x20 – DIN7984		n ²⁾	
L T-nut M6, 10 mm slot	3 842 530 285	n ²⁾	3-4
M Sliding block	3 842 146 877	n ²⁾	13-8

¹⁾ L₃ = 2xL₂ - L₁ + 360

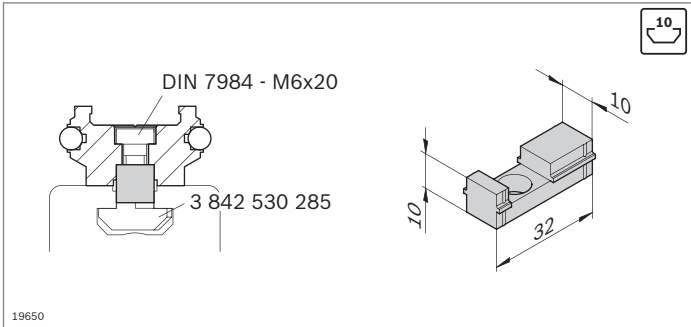
²⁾ See page 13-8 for identification





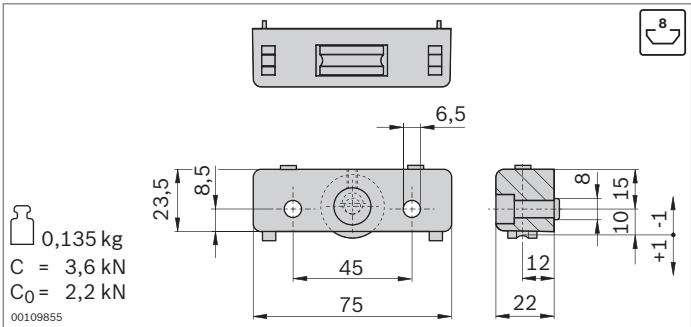
- ▶ Guide profile LF6S with integrated guide rods
- ▶ Mounting on MGE strut profiles with 10 mm slot or directly on a flat surface

Guide profile	L ₂ (mm)	No.
LF6S	1 pc 150 ... 3000	3 842 993 966/L₂
	10 pcs 3000	3 842 539 412
Material:	Guide profile: aluminum, anodized Guide rod: solid shaft VA, induction hardened, polished	
Condition on delivery:	Ungreased guide rods; greasing according to assembly instructions 3 842 527 226	
Required accessories:	Cylinder screw DIN 7984 – M6x20 T-nut M6, 10 mm slot, 3 842 530 285 (p. 3-4)	



- ▶ Sliding block as a centering aid for mounting the guide profile in a 10 mm profile slot

Sliding block	No.
50	3 842 146 877
Material:	PA, black



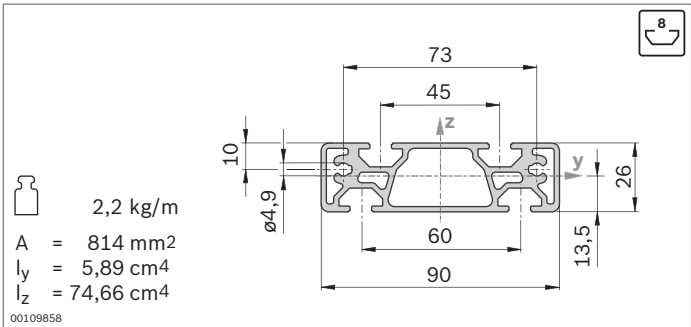
- ▶ Guide bearing for trolley construction
- ▶ Guiding via guide rod
- ▶ Rollers with ball bearings, permanently lubricated
- ▶ Lubricating felts with guide rod lubrication reservoir
- ▶ Secure roller adjustment via eccentric bolts

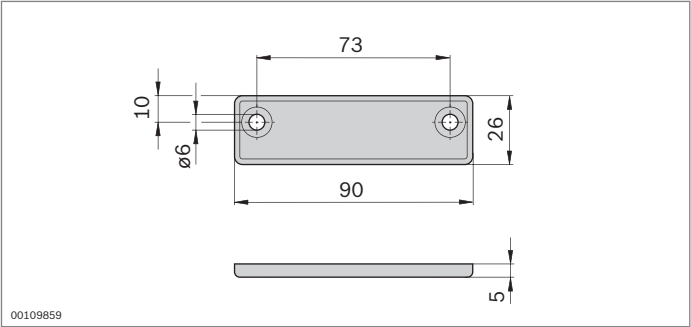
Guide bearing	No.	FS
LF6	2	3 842 535 662 2xFS1
Material:	Housing: diecast aluminum Roller: steel, hardened, polished	
Scope of delivery:	Incl. fastening material (FS)	
Condition on delivery:	Ungreased lubricating felts; greasing according to Assembly instructions 3 842 527 226	



- ▶ Trolley profile for the construction of trolley LF6S

Trolley profile	L ₁ (mm)	No.
LF6S	150 ... 3000	3 842 993 061/L₁
Material:	Aluminum, anodized	



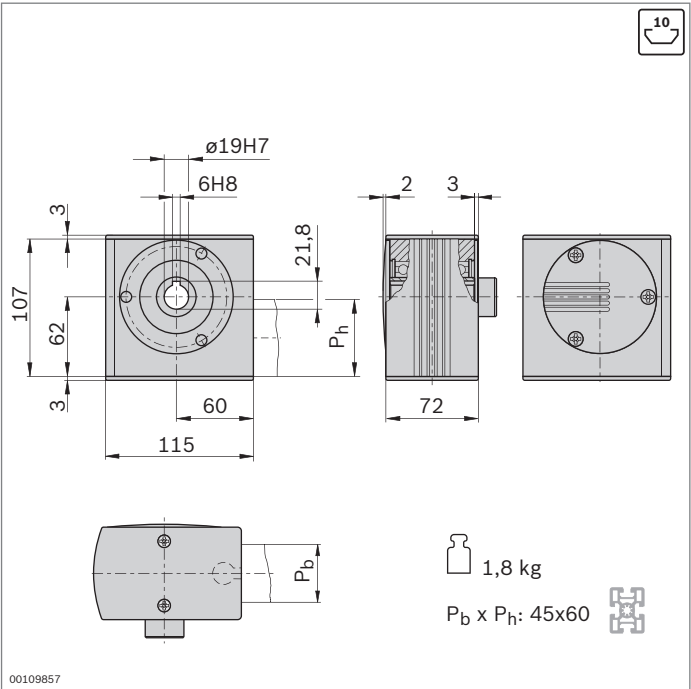
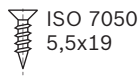


- Cap for trolley profile LF6S
- For use on trolleys not driven by a toothed belt

Cap		No.	FS
LF6S	2	3 842 535 645	2xFS2

Material: PA, black

FS2



- Drive head for drive torque transfer to a toothed belt
- To directly fit a motor or (in connection with a center shaft) a hollow shaft gear or a coupling
- Mounting with longitudinal end connector directly to profile 45x60
- Profile finishing: LF blind hole drilling for longitudinal end connector

Drive head	No.	FS
LF6S	3 842 526 410	2xFS3, FS4

Material: Aluminum, anodized
Hollow shaft: steel, galvanized
Caps: PA, black

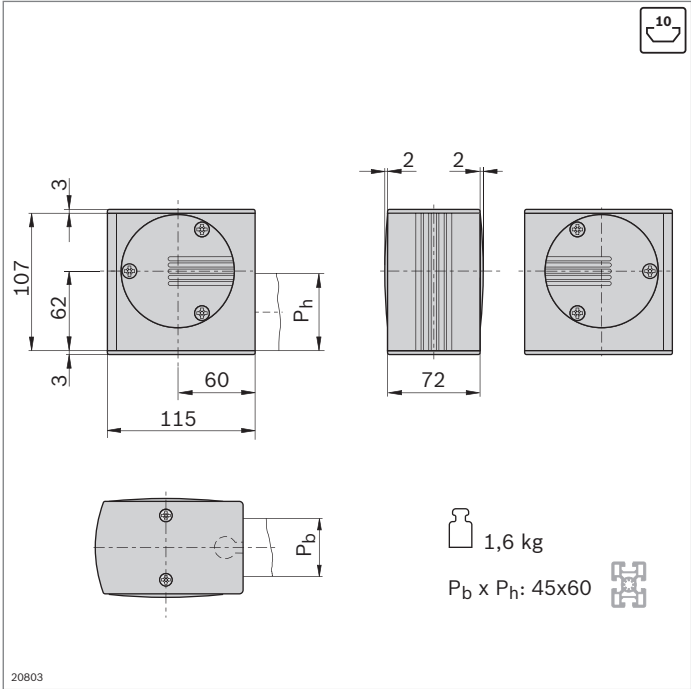
Scope of delivery: Including fastening material (FS), caps
Accessories: Flanges (p. 13-49), gears (p. 13-47), servomotors (p. 13-45)

FS3



FS4



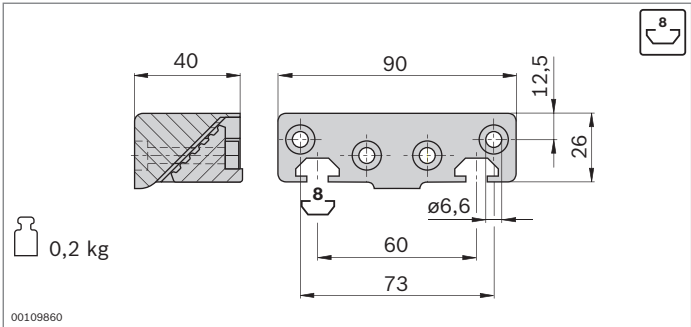
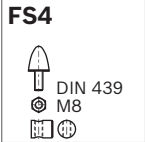


- Return head to tension the toothed belt and change its direction
- Mounting with longitudinal end connector directly to profile
- Profile finishing: LF blind hole drilling for longitudinal end connector

Return head	No.	FS
LF6S	3 842 526 411	2xFS3, FS4

Material: Aluminum, anodized
Hollow shaft: steel, galvanized
Caps: PA, black

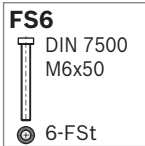
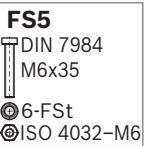
Scope of delivery: Including fastening material (FS), caps



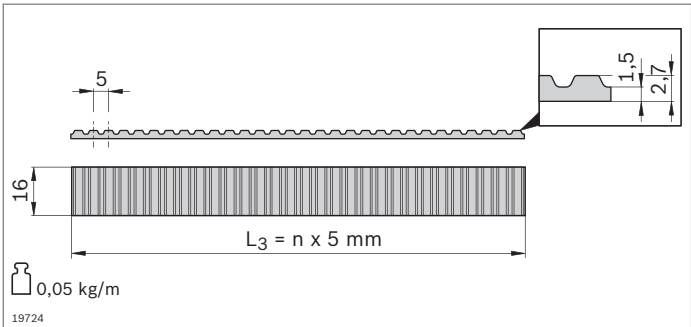
- Belt connector to fix the toothed belt at the end of the trolley
- All connecting parts included for mounting at the trolley profile LF6S

Belt connector	No.	FS
LF6S	2 3 842 535 682	2xFS5, 2xFS6

Material: Aluminum, painted black
Scope of delivery: Incl. fastening material (FS)



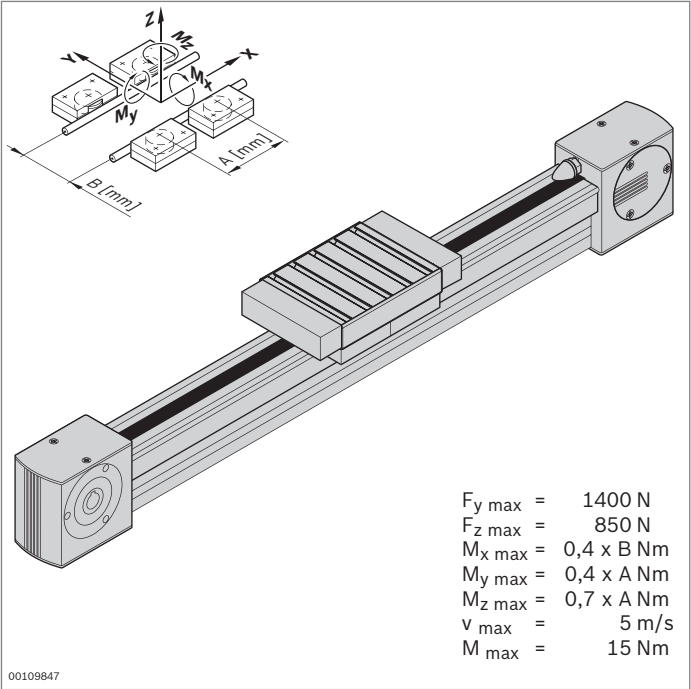
- Toothed belt as a trolley drive
- Pitch: AT5



Toothed belt	L ₃ (mm)	No.
LF6S	300 ... 50000	3 842 994 659/L ₃ ¹⁾
	50000	3 842 513 646

¹⁾ L₃ = 2xL₂ - L₁ + 360

Material: PU with embedded steel wires



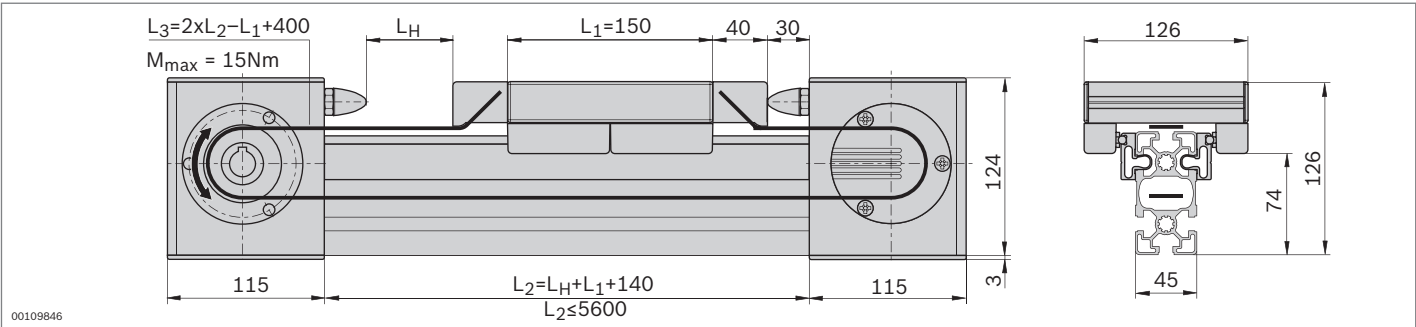
Cam roller guide LF6C – complete axis



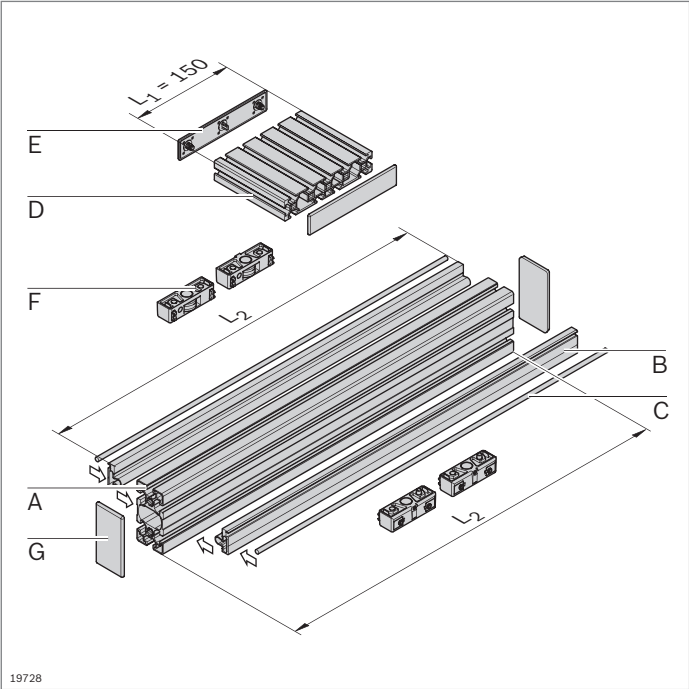
- Fully assembled cam roller guide
- Stroke can be individually selected
- Clamping profile clipped into strut profile 45x90L
- Including toothed belt drive; additional notes on the drive concept (p. 13-44)

Accessories:

- MSK servomotor (p. 13-45)
- LF6 gear (p. 13-47)
- LF6 flange (p. 13-49)
- Switch unit (p. 13-53)
- LF6 actuating elements (p. 13-54)
- For information on controls, see page 13-48 and the IndraDrive catalog **R911308428**



Complete axis	L_H (mm)	No.
LF6C	50 ... 5310	3 842 998 496/ L_H

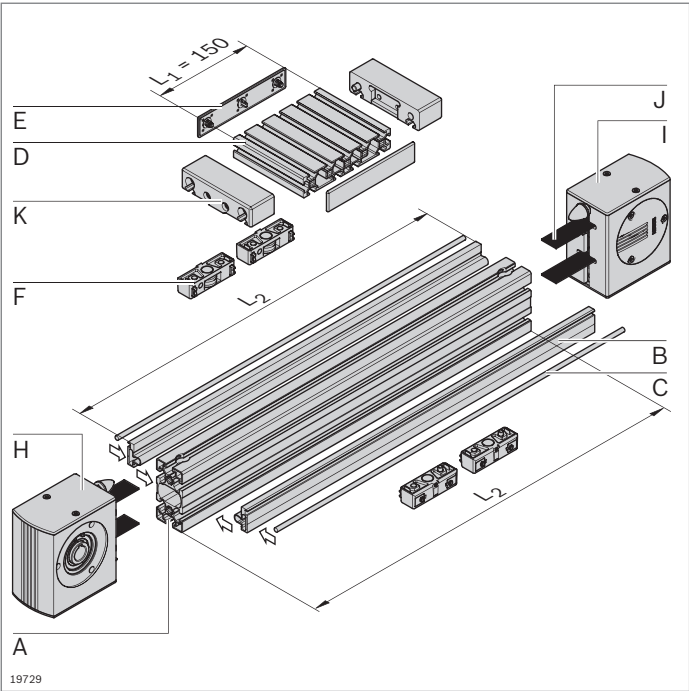


Cam roller guide LF6C – components

► Components for the individual assembly of cam roller guides, with or without drive

Parts list for cam roller guide LF6C without drive

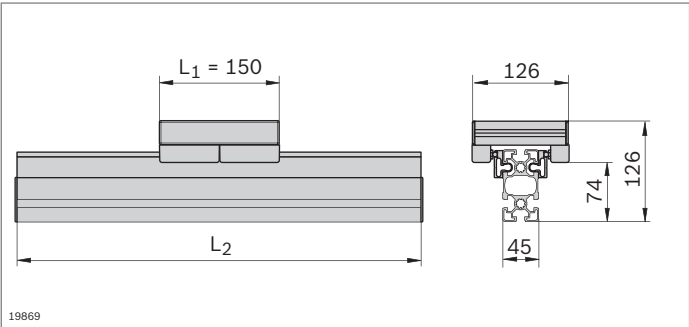
Component	No.	Qty.	Page
A Profile 45x90L	3 842 992 432/L ₂	1	2-40
B Clamping profile LF6C	3 842 992 925/L ₂	2	13-13
C Guide rod LF6	3 842 993 967/L ₂	2	13-13
D Trolley profile LF6C	3 842 993 952/120 mm	1	13-13
E Cap LF6C	3 842 539 120	2	13-14
f Guide bearing LF6	3 842 535 662	4	13-13
G Cap 45x90	3 842 511 783	2	2-40

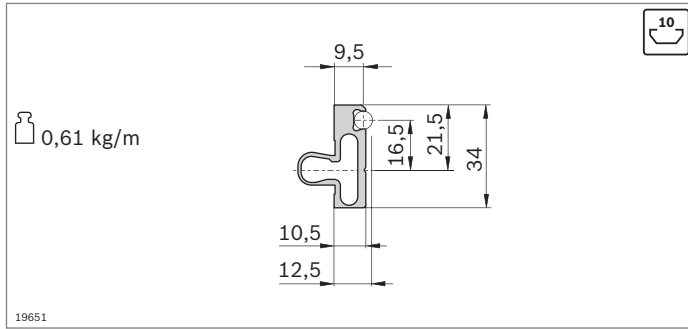


Parts list for cam roller guide LF6C with drive

Component	No.	Qty.	Page
A Profile 45x90L LF	3 842 993 084/L ₂	1	2-40
B Clamping profile LF6C	3 842 992 925/L ₂	2	13-13
C Guide rod LF	3 842 993 967/L ₂	2	13-13
D Trolley profile LF6C	3 842 993 952/120 mm	1	13-13
E Cap LF6C	3 842 539 120	2	13-14
F Guide bearing LF6	3 842 535 662	4	13-13
H Drive head LF6C	3 842 526 416	1	13-14
I Return head LF6C	3 842 526 417	1	13-15
J Toothed belt LF6C	3 842 994 711/L ₃ ¹⁾	1	13-15
K Belt connector LF6C	3 842 535 681	2	13-15

¹⁾ L₃ = 2xL₂ - L₁ + 400

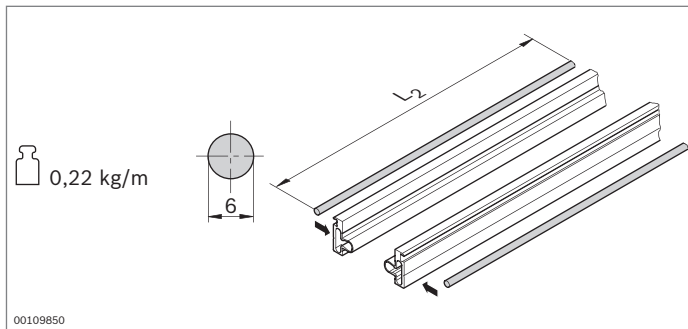




- The clamping profile is clipped into any 10 mm strut profile slot and holds the guide rods

Clamping profile	L ₂ (mm)	No.
LF6C	1 pc 150 ... 3000	3 842 992 925/L₂
	20 pcs 3000	3 842 518 896

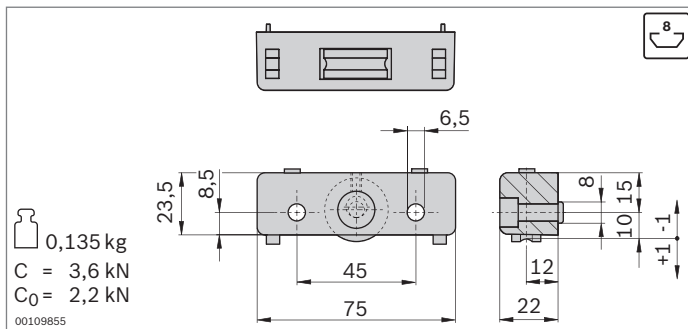
Material: Aluminum, anodized



- The guide rod is pressed into the clamping profile
- The guide rod guides the guide bearing

Guide rod	L ₂ (mm)	No.
LF6	150 ... 3000	1 3 842 993 967/L₂
	3000 20	3 842 539 414

Material: Solid shaft VA, induction hardened, polished
Condition on delivery: Ungreased; greasing according to assembly instructions **3 842 527 226**



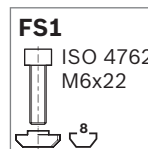
- Guide bearing for trolley construction
- Guiding via guide rod
- Rollers with ball bearings, permanently lubricated
- Lubricating felts with guide rod lubrication reservoir
- Secure roller adjustment via eccentric bolts

Guide bearing	No.	FS
LF6	2 3 842 535 662	2xFS1

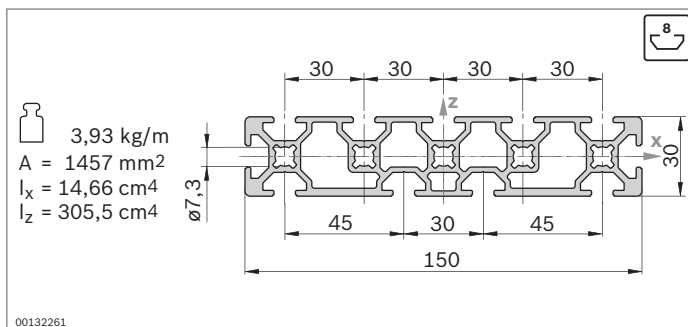
Material: Housing: diecast aluminum
Roller: steel, hardened, polished

Scope of delivery: Incl. fastening material (FS)

Condition on delivery: Ungreased lubricating felts; greasing according to assembly instructions **3 842 527 226**

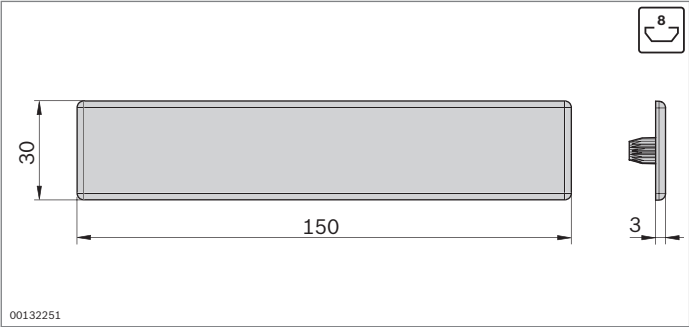


- Trolley profile for the construction of trolley LF6C



Trolley profile	L (mm)	No.
LF6C	150 ... 3000	3 842 993 952/L

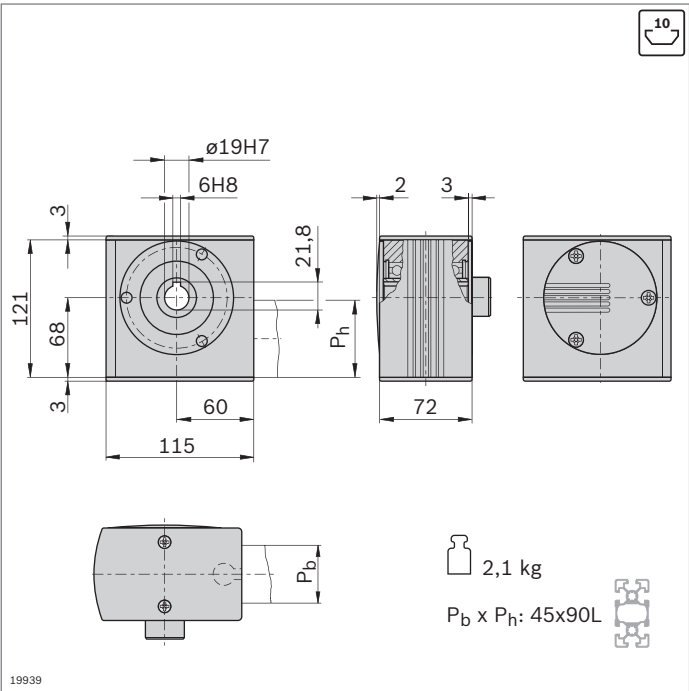
Material: Aluminum, anodized



- ▶ Cap for trolley profile LF6C
- ▶ For use on trolleys not driven by a toothed belt

Cap		No.
LF6C	2	3 842 539 120

Material: PA, black

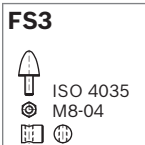
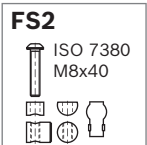


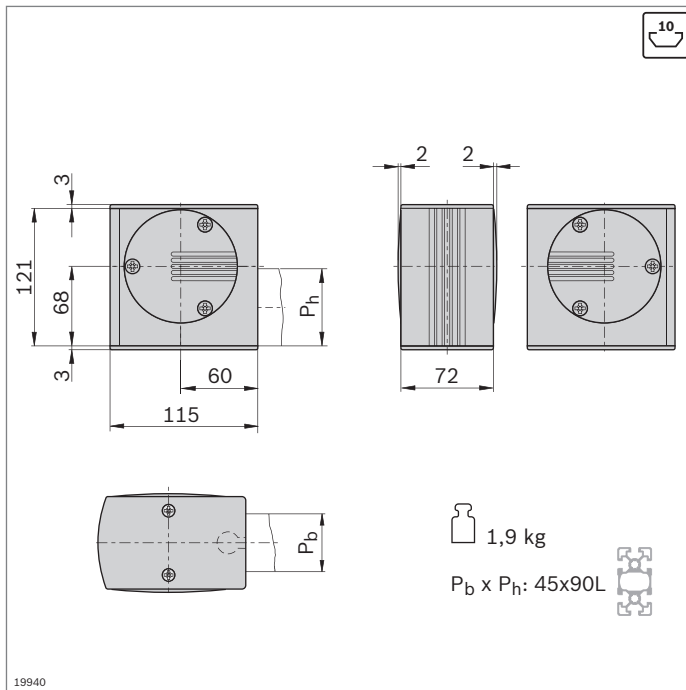
- ▶ Drive head for drive torque transfer to a toothed belt
- ▶ To directly fit a motor or (in connection with a center shaft) a hollow shaft gear or a coupling
- ▶ Mounting with longitudinal end connector directly to profile 45x90L
- ▶ Profile finishing: LF blind hole drilling for longitudinal end connector

Drive head	No.	FS
LF6C	3 842 526 416	2xFS2, FS3

Material: Aluminum, anodized
Hollow shaft: steel, galvanized
Caps: PA, black

Scope of delivery: Including fastening material (FS), caps
Accessories: Flanges (p. 13-49), gears (p. 13-47), servomotors (p. 13-45)



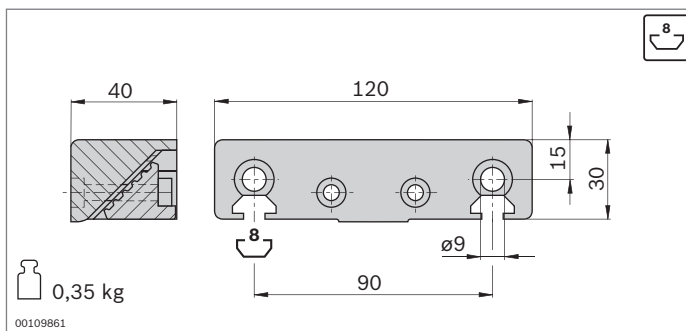
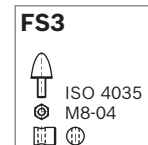


- Return head to tension the toothed belt and change its direction
- Mounting with longitudinal end connector directly to profile 45x90L
- Profile finishing: LF blind hole drilling for longitudinal end connector

Return head	No.	FS
LF6C	3 842 526 417	2xFS2, FS3

Material: Aluminum, anodized
Hollow shaft: steel, galvanized
Caps: PA, black

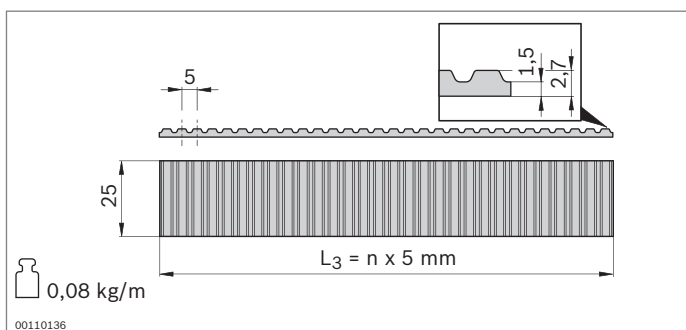
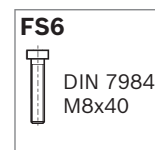
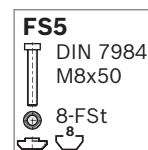
Scope of delivery: Including fastening material (FS), caps



- Belt connector to fix the toothed belt at the trolley slot
- All connecting parts included for mounting at the trolley profile LF6C

Belt connector	No.	FS
LF6C	2 3 842 535 681	2xFS4, 2xFS5, 2xFS6

Material: Aluminum, painted black
Scope of delivery: Incl. fastening material (FS)

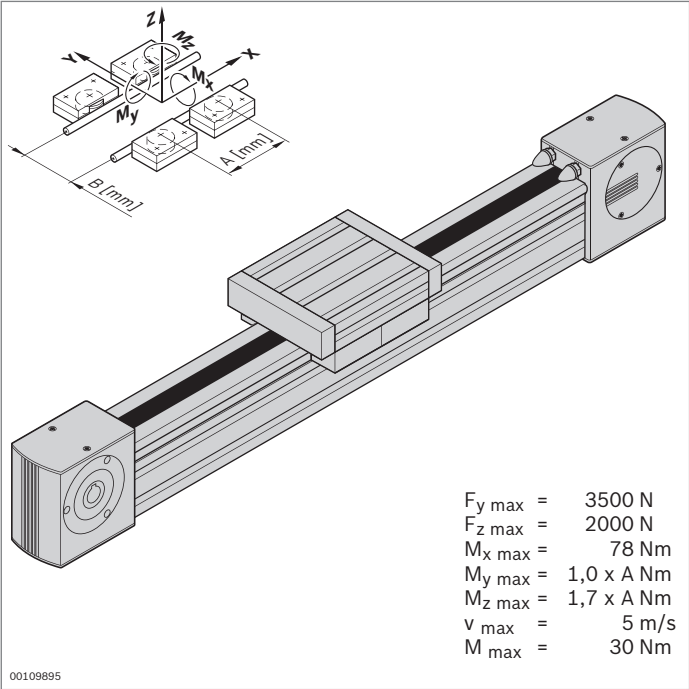


- Toothed belt as a trolley drive
- Pitch: AT5

Toothed belt	L ₃ (mm)	No.
LF6C	300 ... 50000	3 842 994 711/L₃¹⁾
	50000	3 842 518 856

¹⁾ L₃ = 2xL₂ - L₁ + 400

Material: PU with embedded steel wires



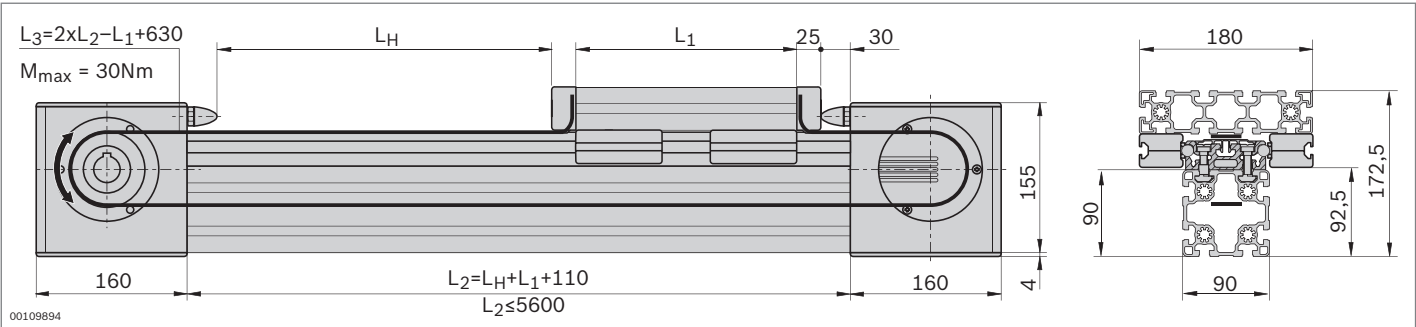
Cam roller guide LF12S – complete axis



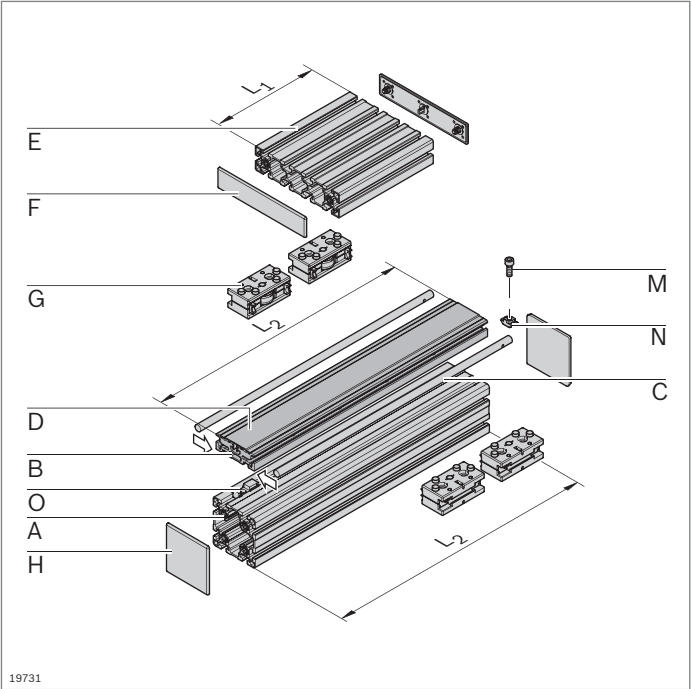
- Fully assembled cam roller guide
- Stroke and trolley length can be individually selected
- Rail profile mounted on strut profile 90x90L
- Including toothed belt drive; additional notes on the drive concept (p. 13-44)

Accessories:

- MSK servomotor (p. 13-45)
- Gear LF12 (p. 13-47)
- Flange LF12 (p. 13-49)
- Switch unit (p. 13-53)
- Actuating elements LF12 (p. 13-54)
- For information on controls, see page 13-48 and the IndraDrive catalog **R911308428**



Complete axis	L_H/L_1 (mm)	No.
LF12S	$L_1 + 50 \leq L_H \leq 5310$ $180 \leq L_1 \leq 1000$	3 842 998 497/ L_H/L_1



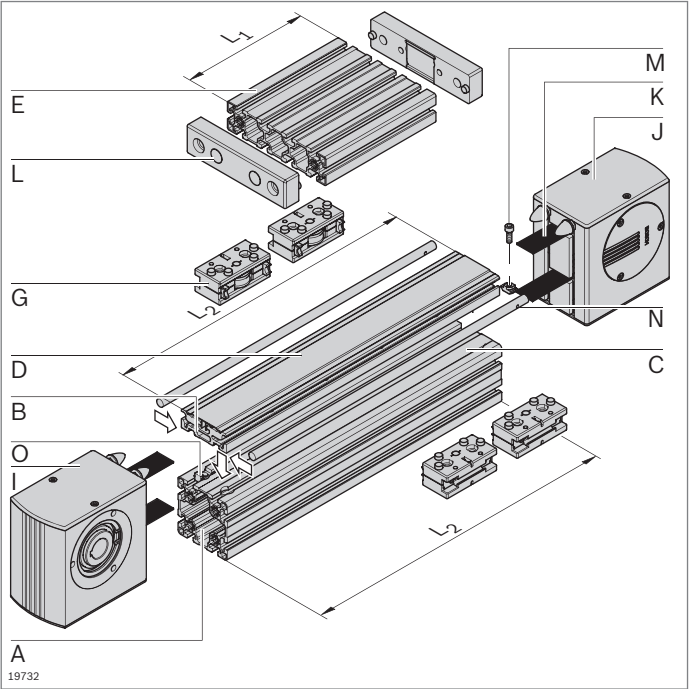
Cam roller guide LF12S – components

► Components for the individual assembly of cam roller guides, with or without drive

Parts list for cam roller guide LF12S without drive

Component	No.	Qty.	Page
A Profile 90x90L	3 842 992 415/L ₂	1	2-43
B Guide profile LF12S	3 842 992 438/L ₂	1	13-18
C Guide rod LF12	3 842 993 968/L ₂	2	13-18
D Cover profile LF12S	3 842 993 062/L ₂	1	13-18
E Profile 45x180	3 842 990 335/L ₁	1	2-41
F Cap 45x180	3 842 503 845	2	2-41
G Guide bearing LF12	3 842 535 664	4	13-19
H Cap 90x90	3 842 516 214	2	2-43
M Cylinder screw DIN 7984 – M8x30		n ¹⁾	
N T-nut M8, 10 mm slot	3 842 530 287	n ¹⁾	3-4
O Sliding block	3 842 146 877	n ¹⁾	13-18

1) See page 13-18 for identification

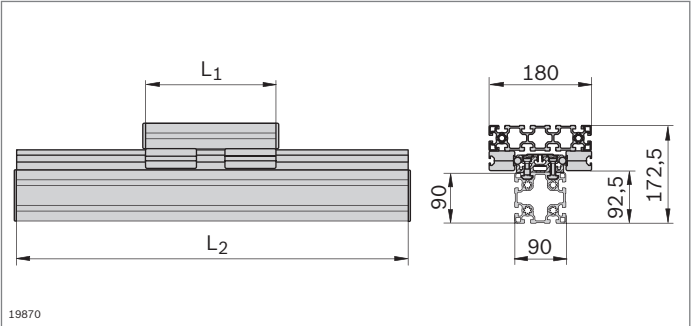


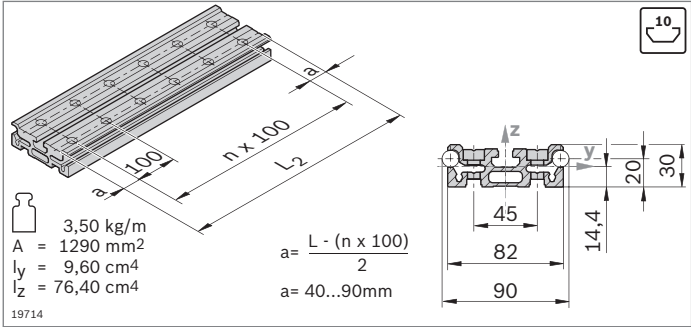
Parts list for cam roller guide LF12S with drive

Component	No.	Qty.	Page
A Profile 90x90L LF12S	3 842 992 418/L ₂	1	2-43
B Guide profile LF12S	3 842 992 438/L ₂	1	13-18
C Guide rod LF12	3 842 993 968/L ₂	2	13-18
D Cover profile LF12S	3 842 993 062/L ₂	1	13-18
E Profile 45x180 M12-M12	3 842 990 339/L ₁	1	2-41
G Guide bearing LF12	3 842 535 664	4	13-19
I Drive head LF12S	3 842 526 412	1	13-21
J Return head LF12S	3 842 526 413	1	13-21
K Toothed belt	3 842 994 821/L ₃ ¹⁾	1	13-22
L Belt connector	3 842 535 680	2	13-22
M Cylinder screw DIN 7984 – M8x30		n ²⁾	
N T-nut M8, 10 mm slot	3 842 530 287	n ²⁾	3-4
O Sliding block	3 842 146 877	n ²⁾	13-18

1) L₃ = 2xL₂ - L₁ + 630

2) See page 13-18 for identification

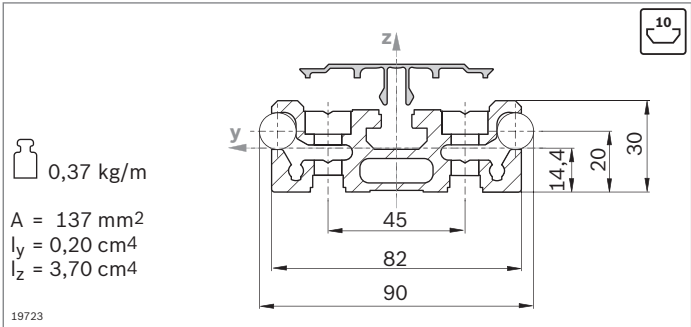




- ▶ Guide profile LF12S to hold guide rods
- ▶ Mounting on MGE strut profiles with 10 mm slot or directly on a flat surface

Guide profile		L_2 (mm)	No.
LF12S	1 pc	150 ... 5600	3 842 992 438/L₂
	5 pcs	5600	3 842 511 841

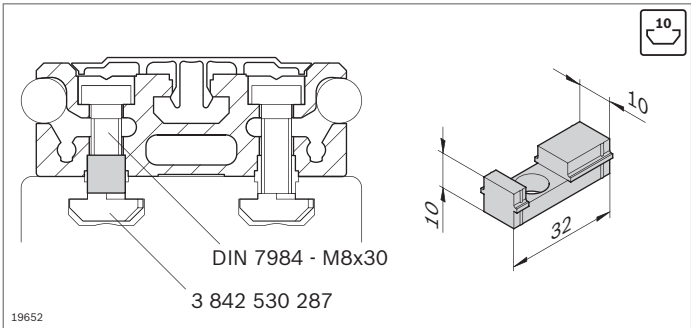
Material: Aluminum, anodized
Accessories: Cylinder screw DIN 7984 – M8x30
T-nut M8, 10 mm slot, **3 842 530 287**
Sliding block, cover profile, guide rod



- ▶ Cover profile to prevent contamination at threaded connections

Cover profile		L_2 (mm)	No.
LF12S		150 ... 5600	3 842 993 062/L₂

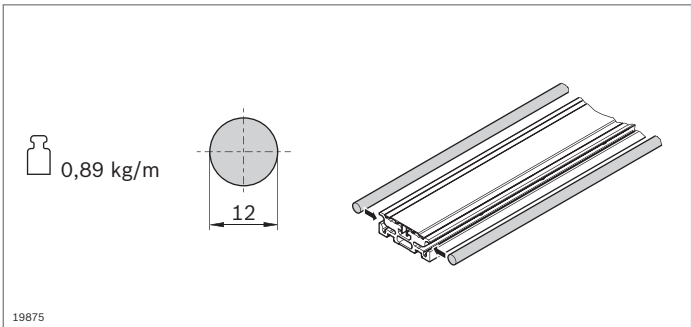
Material: PA, black



- ▶ Sliding block as a centering aid for mounting the guide profile in a 10 mm profile slot

Sliding block		No.
	50	3 842 146 877

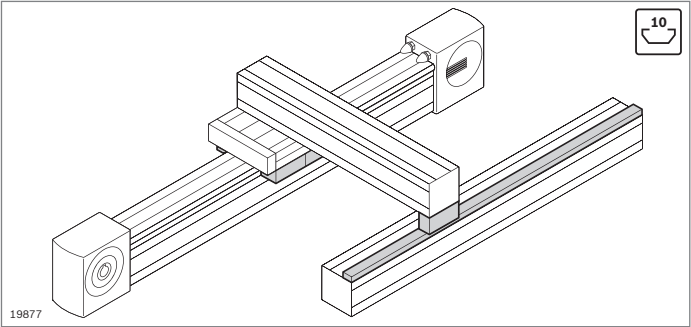
Material: PA, black



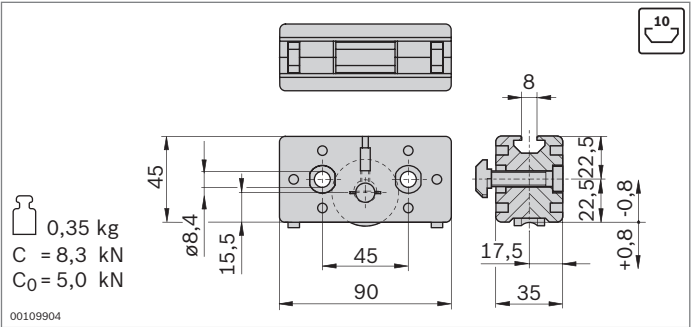
- ▶ The guide rod is pressed into the guide profile
- ▶ The guide rod guides the guide bearing

Guide rod		L_2 (mm)	No.
LF12	1	150 ... 2900	3 842 993 968/L₂
	20	2900	3 842 539 415

Material: Solid shaft VA, induction hardened and polished
Condition on delivery: Ungreased; greasing according to assembly instructions **3 842 527 226**

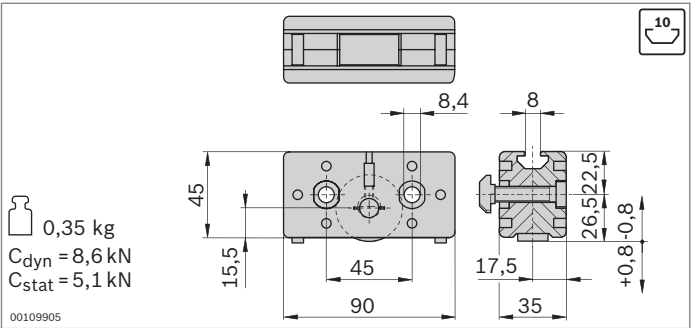


- ▶ Guide bearing for trolley construction
- ▶ Supporting bearing for brackets to withstand off-center forces
- ▶ Guide rail to hold supporting bearings (p. 13-20)



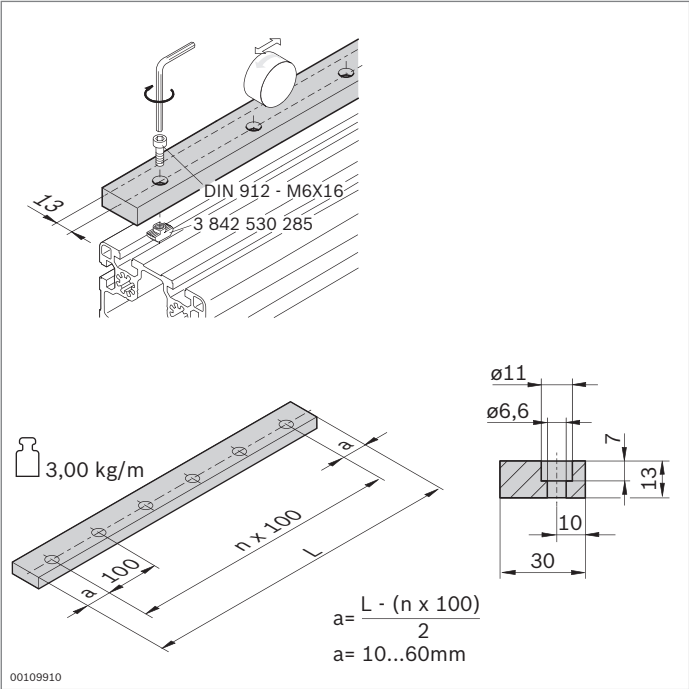
- ▶ Guide bearing for trolley construction
- ▶ Guiding via guide rod
- ▶ Rollers with ball bearings, permanently lubricated
- ▶ Lubricating felts with guide rod lubrication reservoir
- ▶ Secure roller adjustment via eccentric bolts
- ▶ Replacement of the lubricating felts possible from rear in installed state

Guide bearing	No.	FS
LF12	2 3 842 535 664	2xFS1
Material:	Housing: diecast aluminum Roller: steel, hardened, polished	
Scope of delivery:	Incl. fastening material (FS)	
Condition on delivery:	Ungreased lubricating felts; greasing according to assembly instructions 3 842 527 226	



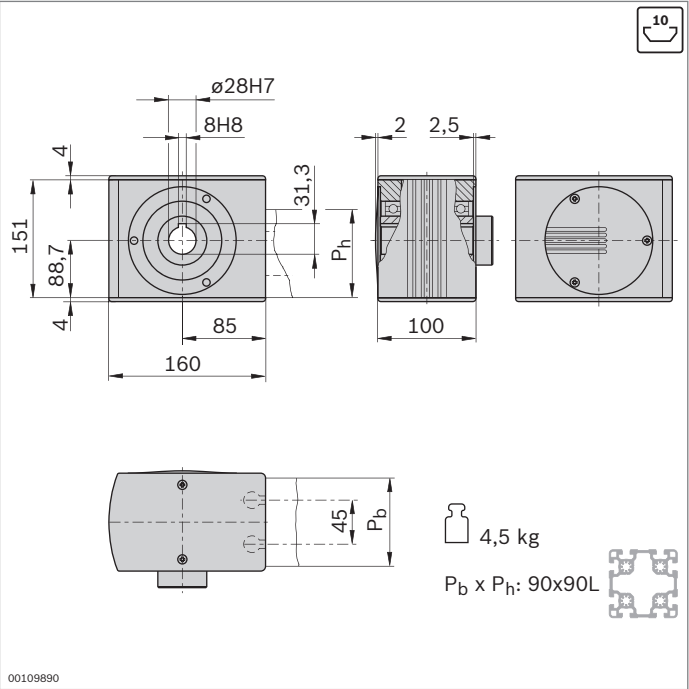
- ▶ Supporting bearing for brackets to withstand off-center forces
- ▶ For support on the guide rail
- ▶ Rollers with ball bearings, permanently lubricated
- ▶ Lubricating felts with guide rod lubrication reservoir
- ▶ Secure roller adjustment via eccentric bolts
- ▶ Replacement of the lubricating felts possible from rear in installed state

Supporting bearings	No.	FS
LF12	2 3 842 535 666	2xFS2
Material:	Housing: diecast aluminum Roller: steel, hardened, polished	
Scope of delivery:	Incl. fastening material (FS)	
Condition on delivery:	Ungreased lubricating felts; greasing according to assembly instructions 3 842 527 226	



► Guide rail to hold supporting bearings

Guide rail	L (mm)	No.
LF12	120 ... 2000	3 842 994 702/L
Material:	Steel, hardened, polished	
Condition on delivery:	Ungreased; greasing according to assembly instructions 3 842 527 226	
Accessories:	Cylinder-head screw DIN 912 – M6x16 T-nut M6, 10 mm slot (3 842 530 285)	



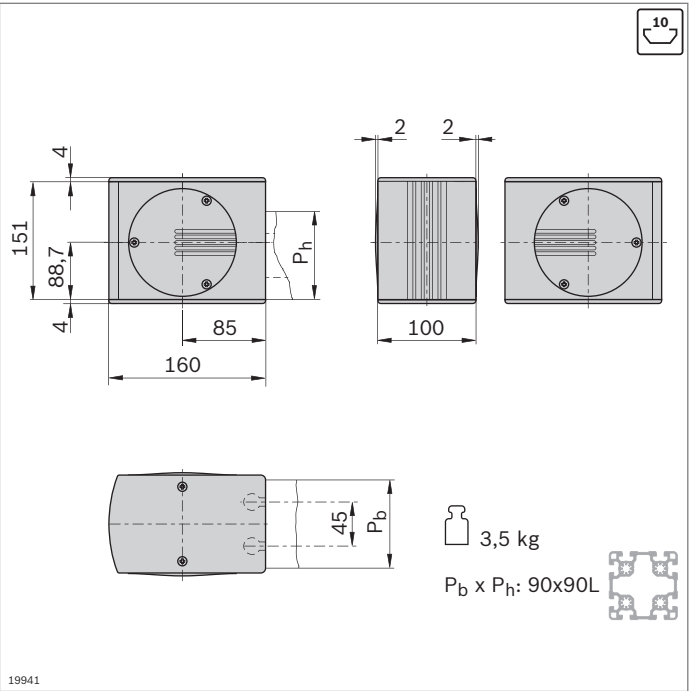
- Drive head for drive torque transfer to a toothed belt
- To directly fit a motor or (in connection with a center shaft) a hollow shaft gear or a coupling
- Mounting with longitudinal end connector directly to profile (connector included in scope of delivery)
- Profile finishing: LF blind hole drilling for longitudinal end connector

Drive head	No.	FS
LF12S	3 842 526 412	2xFS3, 2xFS4

Material: Drive head: aluminum, anodized
Caps: PA, black
Hollow shaft: steel, galvanized

Scope of delivery: Including fastening material (FS), caps

Accessories: Flanges (p. 13-49), gears (p. 13-47), servomotors (p. 13-45)

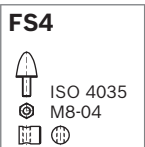
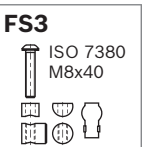


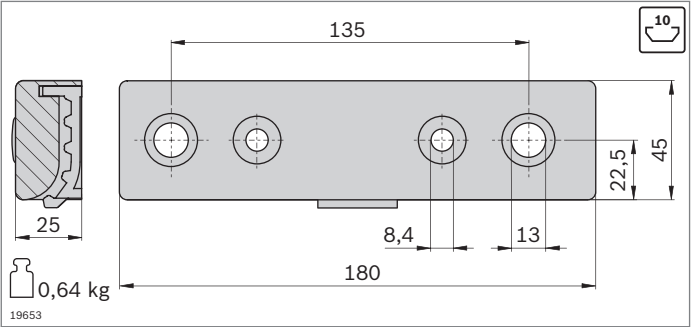
- Return head to tension the toothed belt and change its direction
- Mounting with longitudinal end connector directly to profile (connector included in scope of delivery)
- Profile finishing: LF blind hole drilling for longitudinal end connector

Return head	No.	FS
LF12S	3 842 526 413	2xFS3, 2xFS4

Material: Aluminum, anodized
Hollow shaft: steel, galvanized
Caps: PA, black

Scope of delivery: Including fastening material (FS), caps





- ▶ Belt connector to match trolley constructed with strut profile 45x180
- ▶ All connecting parts included for mounting at the profile end (LF12S) or the slot (LF12C)
- ▶ Profile finish for strut profile 45x180 for trolley LF12S: M12

Belt connector		No.	FS
LF12	2	3 842 535 680	2xFS5, 2xFS6, 2xFS7, 2xFS8, 4xFS9

Material: Aluminum, painted black
Scope of delivery: Incl. fastening material (FS)

FS5

DIN 7984
M12x40

FS6

DIN 7984
M8x30
DIN 125
A8,4
10

FS7

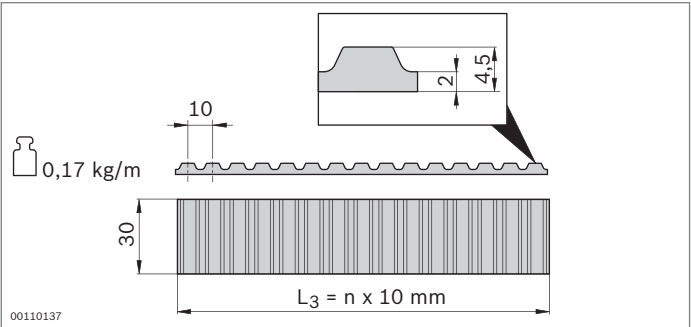
DIN 7991
M8x30
10

FS8

ø18x7

FS9

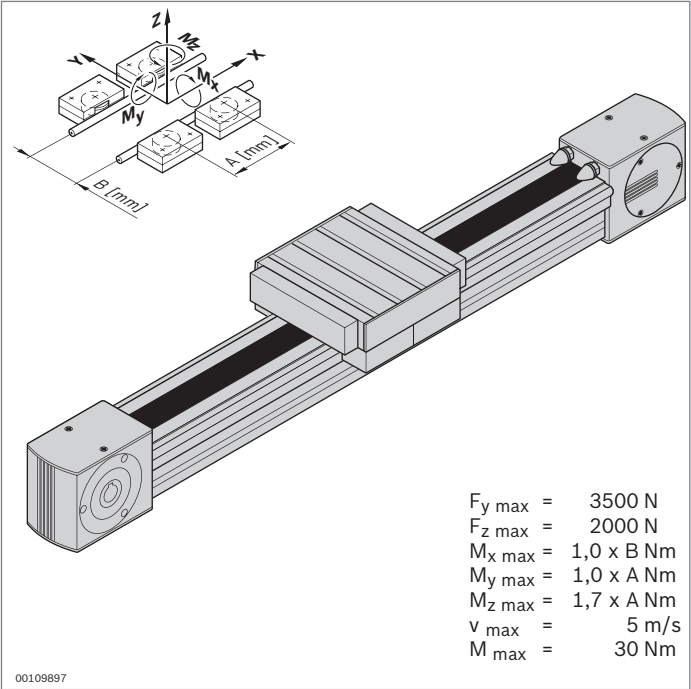
ø10xø5x11



- ▶ Toothed belt as a trolley drive
- ▶ Pitch: AT10

Toothed belt	L ₃ (mm)	No.
LF12	300 ... 50000	3 842 994 821/L ₃ ¹⁾
	50000	3 842 526 422

¹⁾ L₃ = 2xL₂ - L₁ + 630
Material: PU with embedded steel wires



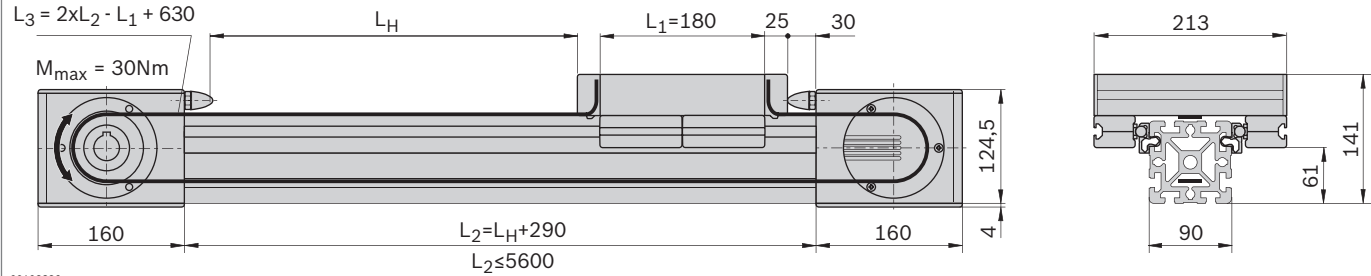
Cam roller guide LF12C – complete axis



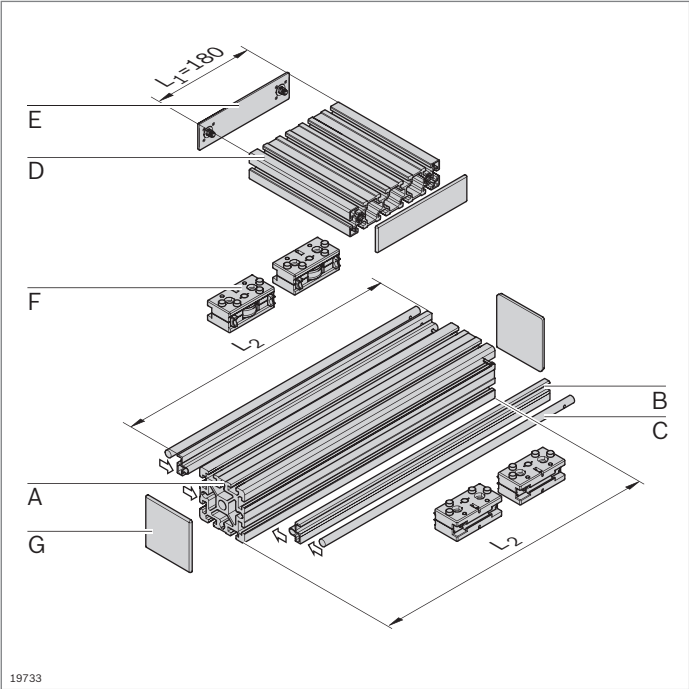
- Fully assembled cam roller guide
- Stroke can be individually selected
- Clamping profile clipped into strut profile 90x90
- Including toothed belt drive; additional notes on the drive concept (p. 13-44)

Accessories:

- MSK servomotor (p. 13-45)
- Gear LF12 (p. 13-47)
- Flange LF12 (p. 13-49)
- Switch unit (p. 13-53)
- Actuating elements LF12 (p. 13-54)
- For information on controls, see page 13-48 and the IndraDrive catalog **R911308428**



Complete axis	L_H (mm)	No.
LF12C	50 ... 5310	3 842 998 498/ L_H

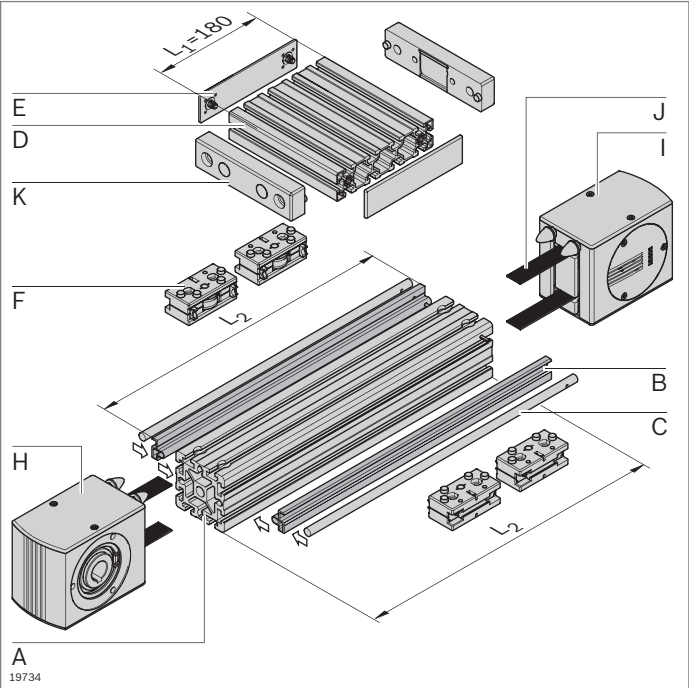


Cam roller guide LF12C – components

► Components for the individual assembly of cam roller guides, with or without drive

Parts list for cam roller guide LF12C without drive

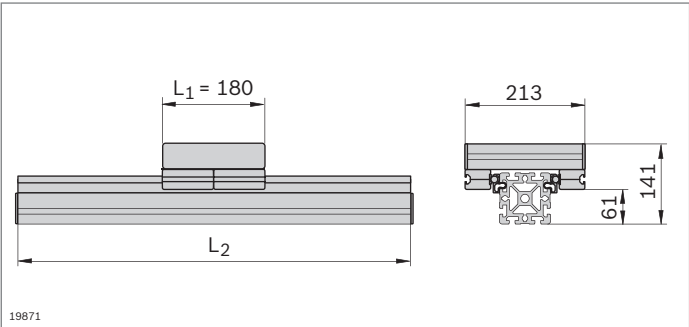
Component	No.	Qty.	Page
A Profile 90x90	3 842 990 500/L ₂	1	2-44
B Clamping profile LF12C	3 842 992 440/L ₂	2	13-25
C Guide rod LF12	3 842 993 968/L ₂	2	13-25
D Profile 45x180	3 842 990 335/205 mm	1	2-41
E Cap 45x180	3 842 503 845	2	2-41
F Guide bearing LF12	3 842 535 664	4	13-26
G Cap 90x90	3 842 242 400	2	2-44

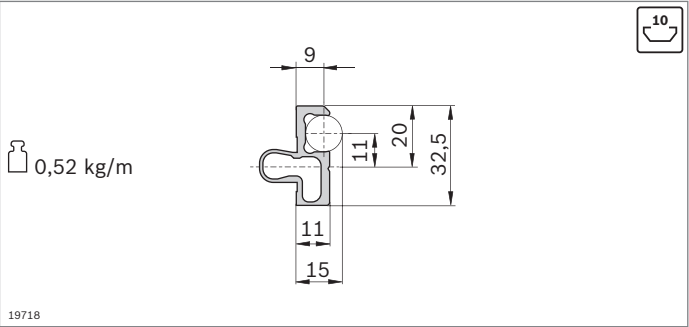


Parts list for cam roller guide LF12C with drive

Component	No.	Qty.	Page
A Profile 90x90 LF	3 842 993 082/L ₂	1	2-44
B Clamping profile LF12C	3 842 992 440/L ₂	2	13-25
C Guide rod LF12	3 842 993 968/L ₂	2	13-25
D Profile 45x180	3 842 990 335/205 mm	1	2-41
E Cap 45x180	3 842 503 845	2	2-41
F Guide bearing LF12	3 842 535 664	4	13-26
H Drive head LF12C	3 842 526 863	1	13-28
I Return head LF12C	3 842 526 865	1	13-28
J Toothed belt LF12	3 842 994 821/L ₃ ¹⁾	1	13-29
K Belt connector LF12	3 842 535 680	2	13-29

¹⁾ L₃ = 2xL₂ - L₁ + 630

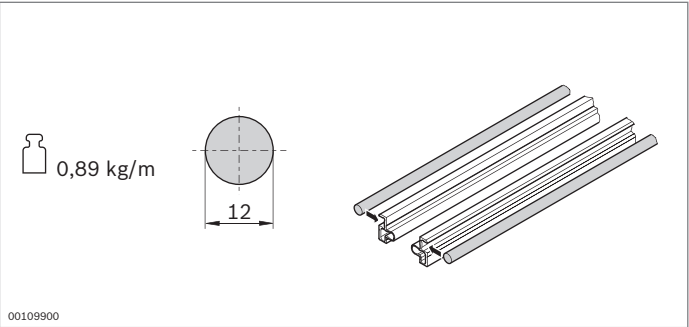




- The clamping profile is clipped into any strut profile with a 10 mm slot and holds the guide rods

Clamping profile		L ₂ (mm)	No.
LF12C	1 pc	150 ... 3000	3 842 992 440/L₂
	20 pcs	3000	3 842 518 897

Material: Aluminum, anodized

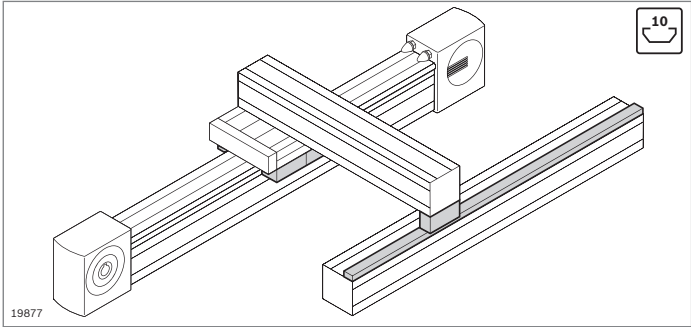


- The guide rod is pressed into the clamping profile
- The guide rod guides the guide bearing

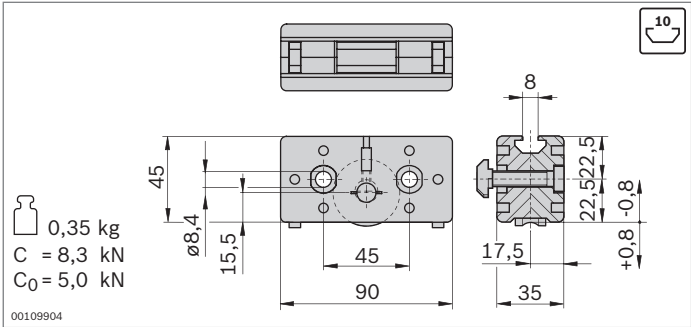
Guide rod	L ₂ (mm)	No.
LF12	150 ... 2900	1 3 842 993 968/L₂
	2900	20 3 842 539 415

Material: Solid shaft VA, induction hardened and polished

Condition on delivery: Ungreased; greasing according to assembly instructions **3 842 527 226**



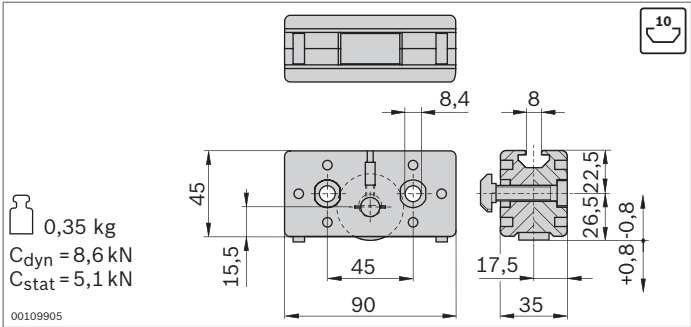
- ▶ Guide bearing for trolley construction
- ▶ Supporting bearing for brackets to withstand off-center forces
- ▶ Guide rail to hold supporting bearings (p. 13-27)



- ▶ Guide bearing for trolley construction
- ▶ Guiding via guide rod
- ▶ Rollers with ball bearings, permanently lubricated
- ▶ Lubricating felts with guide rod lubrication reservoir
- ▶ Secure roller adjustment via eccentric bolts
- ▶ Replacement of the lubricating felts possible from rear in installed state

Guide bearing	No.	FS
LF12	2	3 842 535 664 2xFS1

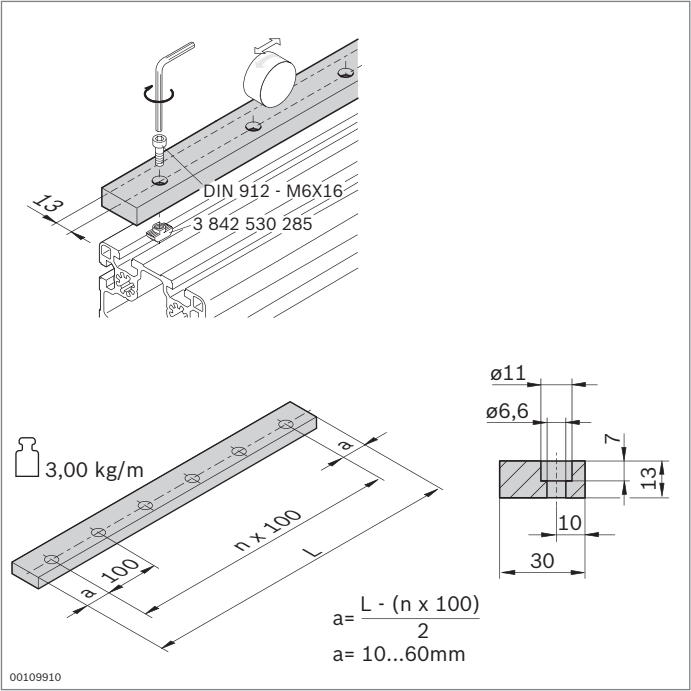
- Material: Guide bearing: diecast aluminum
Roller: steel, hardened, polished
- Scope of delivery: Incl. fastening material (FS)
- Condition on delivery: Ungreased lubricating felts; greasing according to assembly instructions **3 842 527 226**



- ▶ Supporting bearing for brackets to withstand off-center forces
- ▶ For support on the guide rail
- ▶ Rollers with ball bearings, permanently lubricated
- ▶ Lubricating felts with guide rod lubrication reservoir
- ▶ Secure roller adjustment via eccentric bolts
- ▶ Replacement of the lubricating felts possible from rear in installed state

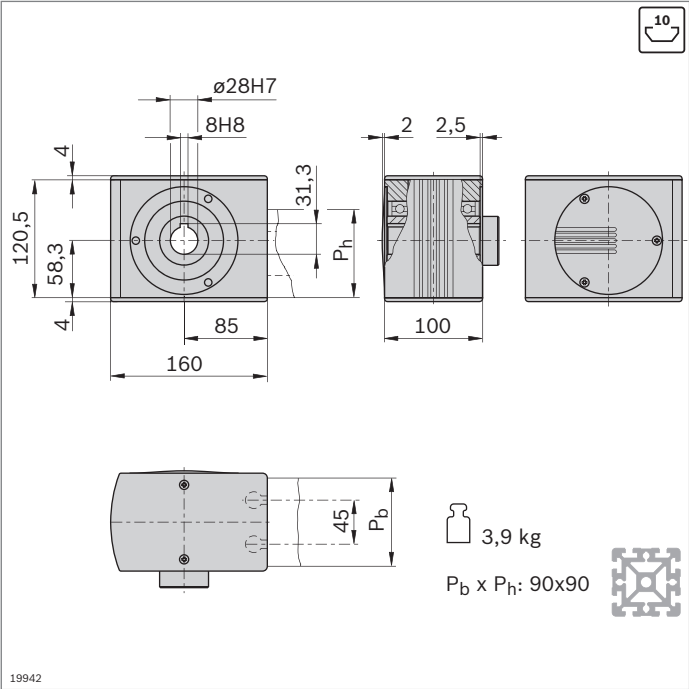
Supporting bearings	No.	FS
LF12	2	3 842 535 666 2xFS1

- Material: Guide bearing: diecast aluminum
Roller: steel, hardened, polished
- Scope of delivery: Incl. fastening material (FS)
- Condition on delivery: Ungreased lubricating felts; greasing according to assembly instructions **3 842 527 226**



► Guide rail to hold supporting bearings

Guide rail	L (mm)	No.
LF12	120 ... 2000	3 842 994 702/L
Material:	Steel, hardened, polished	
Condition on delivery:	Ungreased; greasing according to assembly instructions 3 842 527 226	
Accessories:	Cylinder-head screw DIN 912 – M6x16 T-nut M6, 10 mm slot (3 842 530 285)	



- ▶ Drive head for drive torque transfer to a toothed belt
- ▶ To directly fit a motor or (in connection with a center shaft) a hollow shaft gear or a coupling
- ▶ Mounting with longitudinal end connector directly to profile (connector included in scope of delivery)
- ▶ Profile finishing: LF blind hole drilling for longitudinal end connector

Drive head	No.	FS
LF12C	3 842 526 863	4xFS2, 2xFS3

Material: Drive head: aluminum, anodized
Hollow shaft: steel, galvanized
Caps: PA, black

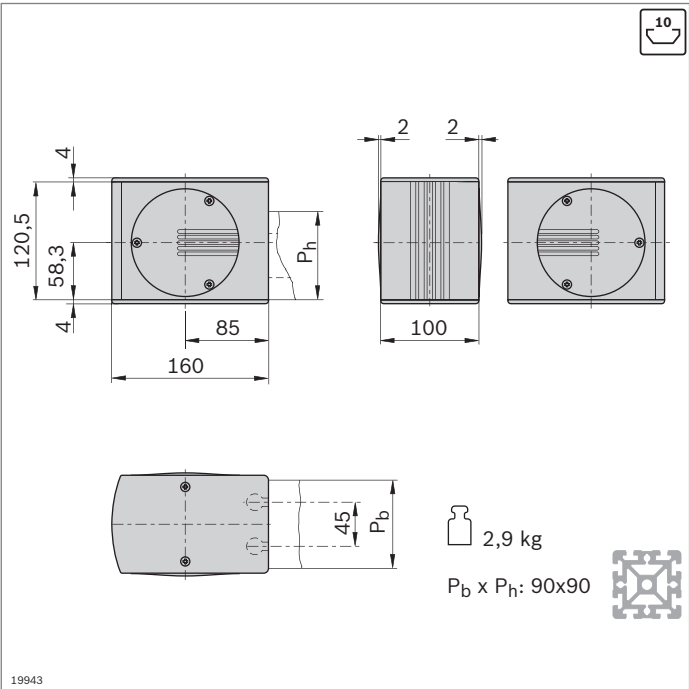
Scope of delivery: Including fastening material (FS), caps

Accessories: Flanges (p. 13-49), gears (p. 13-47), servomotors (p. 13-45)

FS2



FS3



- ▶ Return head to tension the toothed belt and change its direction
- ▶ Mounting with longitudinal end connector directly to profile (connector included in scope of delivery)
- ▶ Profile finishing: LF blind hole drilling for longitudinal end connector

Return head	No.	FS
LF12C	3 842 526 865	4xFS2, 2xFS3

Material: Return head: aluminum, anodized
Hollow shaft: steel, galvanized
Caps: PA, black

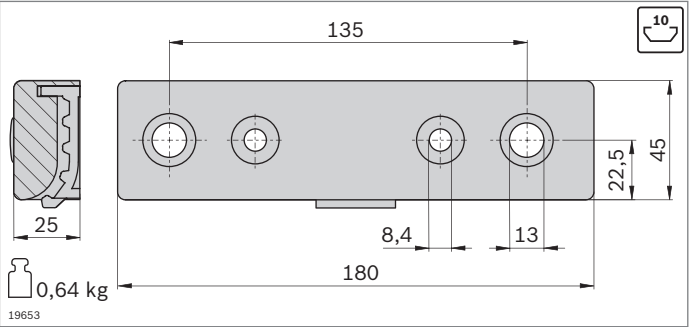
Scope of delivery: Including fastening material (FS), caps

FS2



FS3

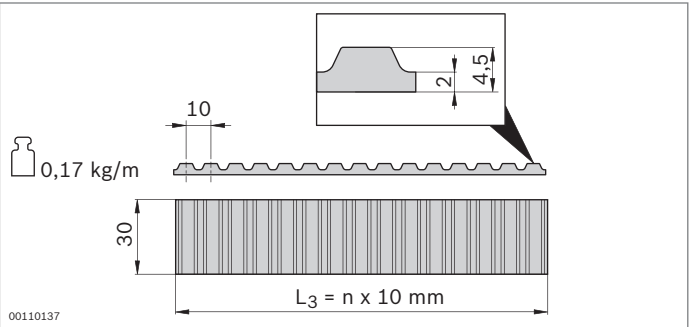
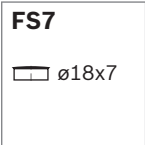
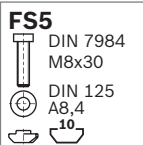




- ▶ Belt connector to match trolley constructed with strut profile 45x180
- ▶ All connecting parts included for mounting at the profile end (LF12S) or the slot (LF12C)
- ▶ Profile finish for strut profile 45x180 for trolley LF12S: M12

Belt connector		No.	FS
LF12	2	3 842 535 680	2xFS4, 2xFS5, 2xFS6, 2xFS7, 4xFS8

Material: Aluminum, painted black
Scope of delivery: Incl. fastening material (FS)

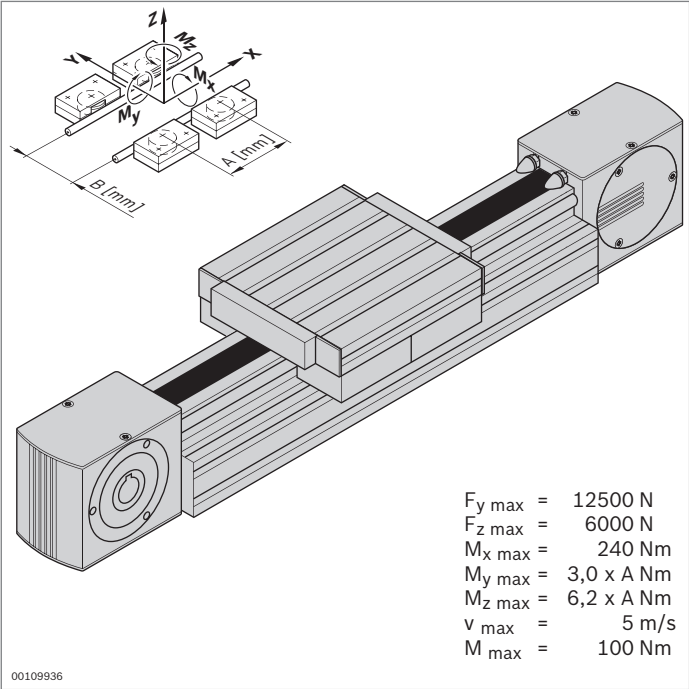


- ▶ Toothed belt as a trolley drive
- ▶ Pitch: AT10

Toothed belt	L ₃ (mm)	No.
LF12	300 ... 50000	3 842 994 821/L ₃ ¹⁾
	50000	3 842 526 422

¹⁾ L₃ = 2xL₂ - L₁ + 630

Material: PU with embedded steel wires



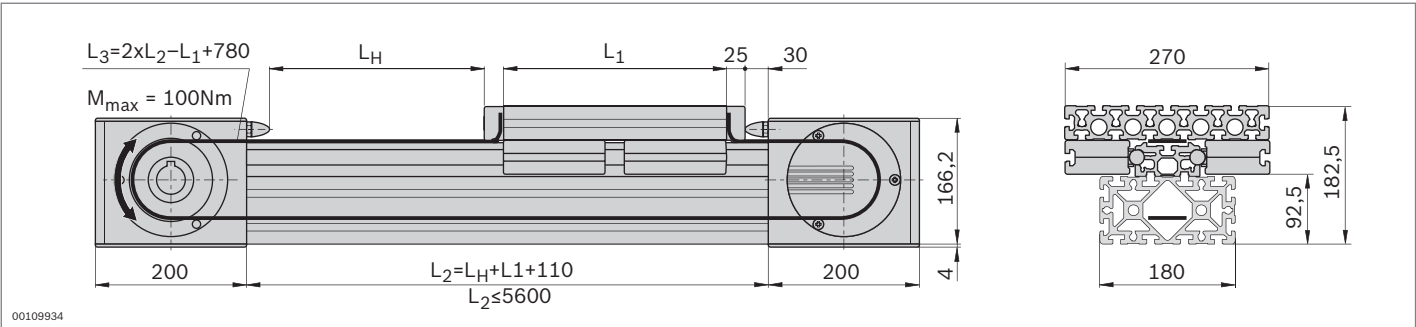
Cam roller guide LF20S – complete axis



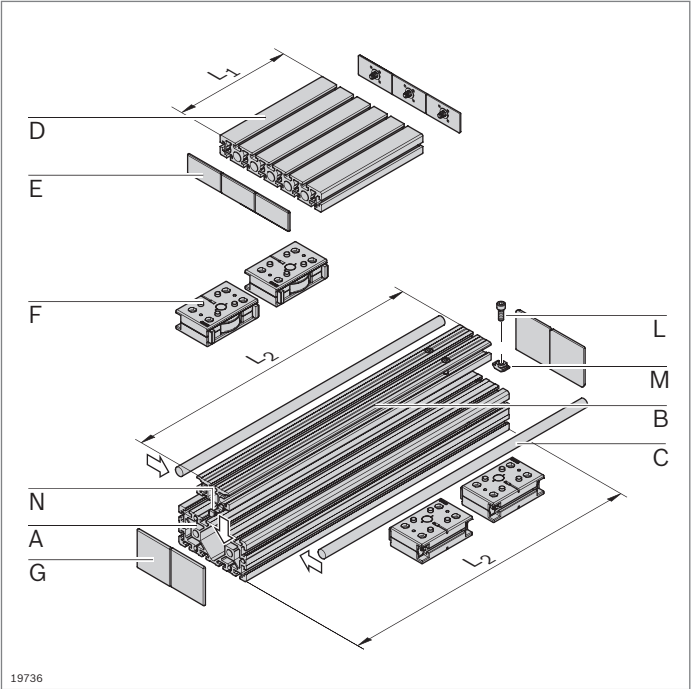
- Fully assembled cam roller guide
- Stroke and trolley length can be individually selected
- Rail profile mounted on strut profile 90x180
- Including toothed belt drive; additional notes on the drive concept (p. 13-44)

Accessories:

- MSK servomotor (p. 13-45)
- LF20 gear (p. 13-47)
- LF20 flange (p. 13-49)
- Switch unit (p. 13-53)
- LF20 actuating elements (p. 2-37)
- For information on controls, see page 13-48 and the IndraDrive catalog **R911308428**



Complete axis	L_H/L_1 (mm)	No.
LF20S	$L_1 + 50 \leq L_H \leq 5220$ $270 \leq L_1 \leq 1000$	3 842 998 499/ L_H/L_1



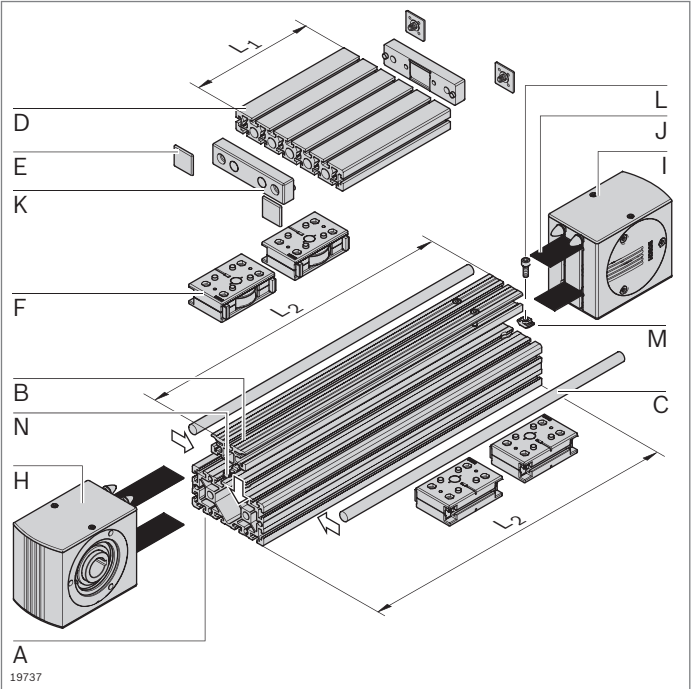
Cam roller guide LF20S – components

- Components for the individual assembly of cam roller guides, with or without drive

Parts list for cam roller guide LF20S without drive

Component	No.	Qty.	Page
A Profile 90x180	3 842 990 416/L ₂	1	2-45
B Guide profile LF20S	3 842 993 080/L ₂	1	13-32
C Guide rod LF20	3 842 993 969/L ₂	2	13-32
D Profile 45x270	3 842 992 927/L ₁	1	2-42
E Cap 45x90	3 842 511 783	6	2-42
F Guide bearing LF20	3 842 535 663	4	13-33
G Cap 90x90	3 842 242 400	4	2-44
L Cylinder screw DIN 7984 – M8x45	n ¹⁾		
M T-nut M8, 10 mm slot	3 842 530 287	n ¹⁾	3-4
N Sliding block	3 842 146 877	n ¹⁾	13-32

1) See page 13-32 for identification

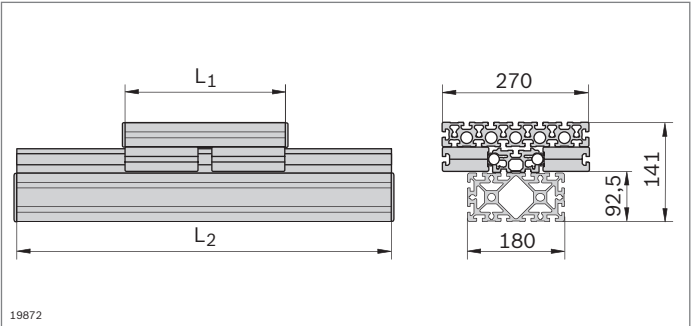


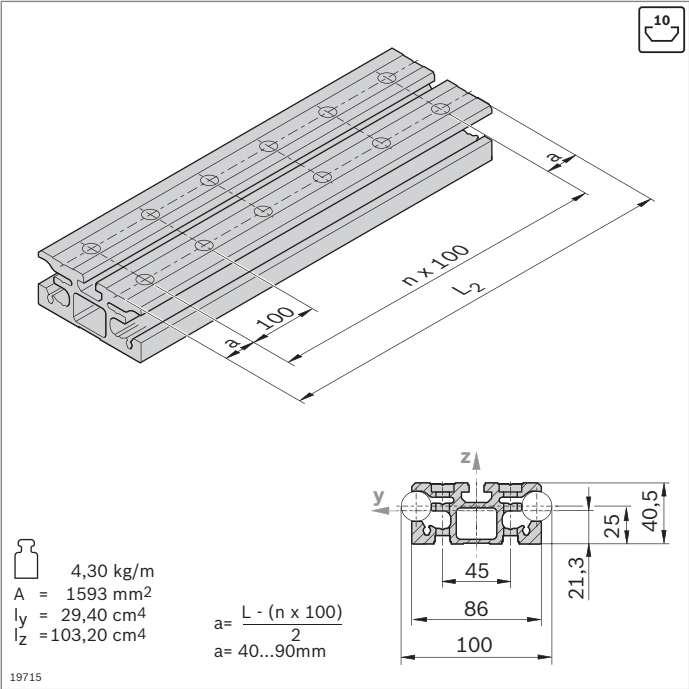
Parts list for cam roller guide LF20S with drive

Component	No.	Qty.	Page
A Profile 90x180	3 842 993 081/L ₂	1	2-45
LF-S ₁ LF-S			
B Guide profile LF20S	3 842 993 080/L ₂	1	13-32
C Guide rod LF20	3 842 993 969/L ₂	2	13-32
D Profile 45x270 M12	3 842 992 928/L ₁	1	2-42
E Cap 45x45	3 842 502 674	4	2-38
F Guide bearing LF20	3 842 535 663	4	13-33
H Drive head LF20S	3 842 526 414	1	13-35
I Return head LF20S	3 842 526 415	1	13-35
J Toothed belt LF20	3 842 994 662/L ₃ ¹⁾	1	13-36
K Belt connector LF20	3 842 535 680	2	13-36
L Cylinder screw DIN 7984 – M8x45	n ²⁾		
M T-nut M8, 10 mm slot	3 842 530 287	n ²⁾	3-4
N Sliding block	3 842 146 877	n ²⁾	13-32

1) L₃ = 2xL₂ - L₁ + 780

2) See page 13-32 for identification

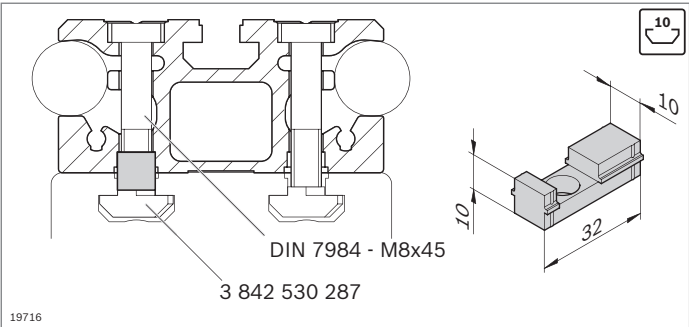




- ▶ Guide profile LF20S to hold guide rods
- ▶ Mounting on MGE strut profiles with 10 mm slot or directly on a flat surface

Guide profile	L ₂ (mm)	No.
LF20S	1 pc 150 ... 5600	3 842 993 080/L₂
	5 pcs 5600	3 842 526 878

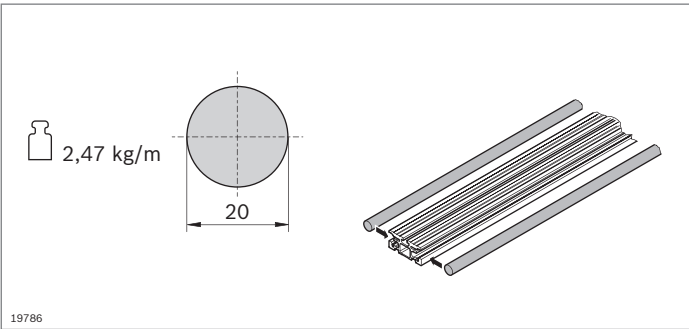
Accessories: Cylinder screw DIN 7984 – M8x45
T-nut M8, 10 mm slot (p. 3-4)
Sliding block



- ▶ Sliding block as a centering aid for mounting the guide profile in a 10 mm profile slot

Sliding block	No.
50	3 842 146 877

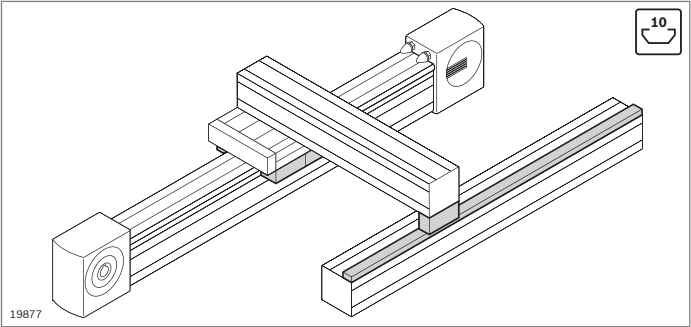
Material: PA, black



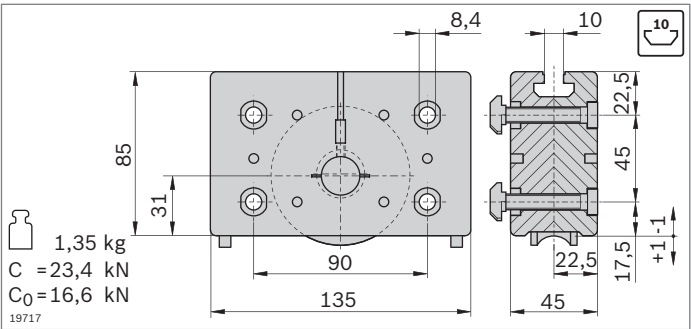
- ▶ The guide rod is pressed into the guide profile
- ▶ The guide rod guides the guide bearing

Guide rod	L ₂ (mm)	No.
LF20	150 ... 2900 1	3 842 993 969/L₂
	2900 20	3 842 539 416

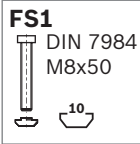
Material: Solid shaft VA, induction hardened, polished
Condition on delivery: Ungreased; greasing according to assembly instructions **3 842 527 226**



- ▶ Guide bearing for trolley construction
- ▶ Supporting bearing for brackets to withstand off-center forces
- ▶ Guide rail to hold supporting bearings (p. 13-34)



1,35 kg
C = 23,4 kN
C₀ = 16,6 kN
19717



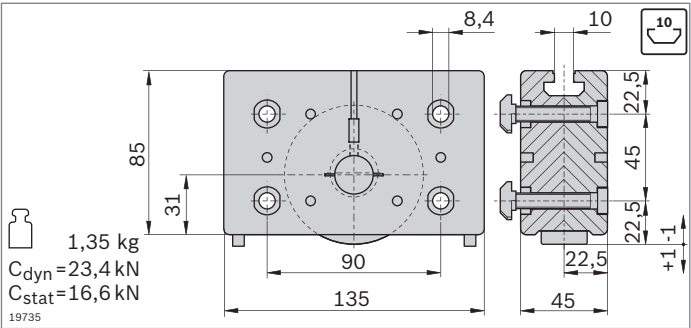
- ▶ Guide bearing for trolley construction
- ▶ Guiding via guide rod
- ▶ Rollers with ball bearings, permanently lubricated
- ▶ Lubricating felts with guide rod lubrication reservoir
- ▶ Secure roller adjustment via eccentric bolts
- ▶ Replacement of the lubricating felts possible from rear in installed state

Guide bearing	No.	FS
LF20	2 3 842 535 663	4xFS1

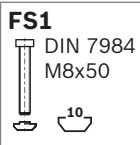
Material: Housing: diecast aluminum
Roller: steel, hardened, polished

Scope of delivery: Incl. fastening material (FS)

Condition on delivery: Ungreased lubricating felts; greasing according to assembly instructions **3 842 527 226**



1,35 kg
C_{dyn} = 23,4 kN
C_{stat} = 16,6 kN
19735



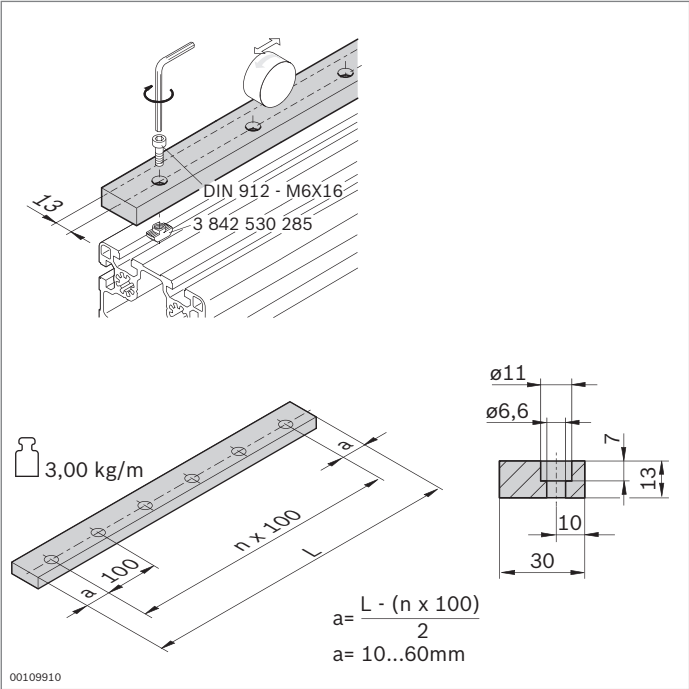
- ▶ Supporting bearing for brackets to withstand off-center forces
- ▶ For support on the guide rail
- ▶ Rollers with ball bearings, permanently lubricated
- ▶ Lubricating felts with guide rod lubrication reservoir
- ▶ Secure roller adjustment via eccentric bolts
- ▶ Replacement of the lubricating felts possible from rear in installed state

Supporting bearings	No.	FS
LF20	2 3 842 535 665	4xFS1

Material: Housing: diecast aluminum
Roller: steel, hardened, polished

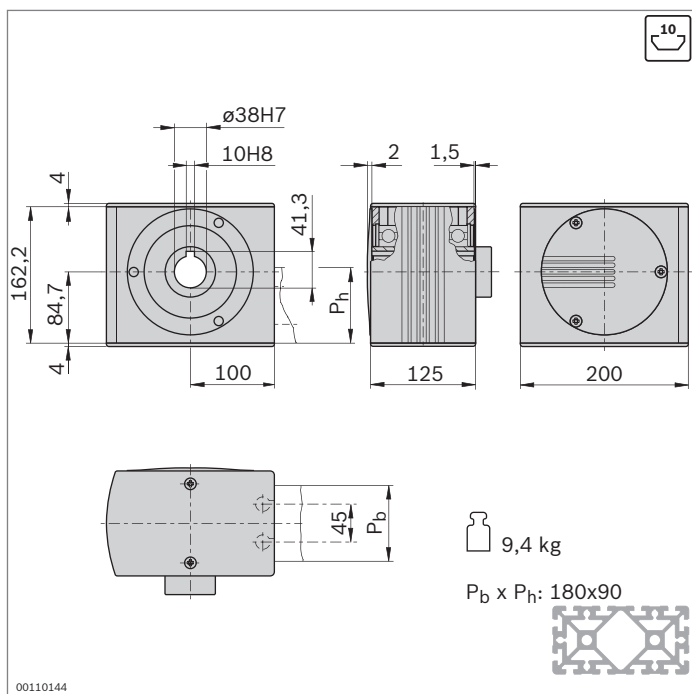
Scope of delivery: Incl. fastening material (FS)

Condition on delivery: Ungreased lubricating felts; greasing according to assembly instructions **3 842 527 226**



► Guide rail to hold supporting bearings

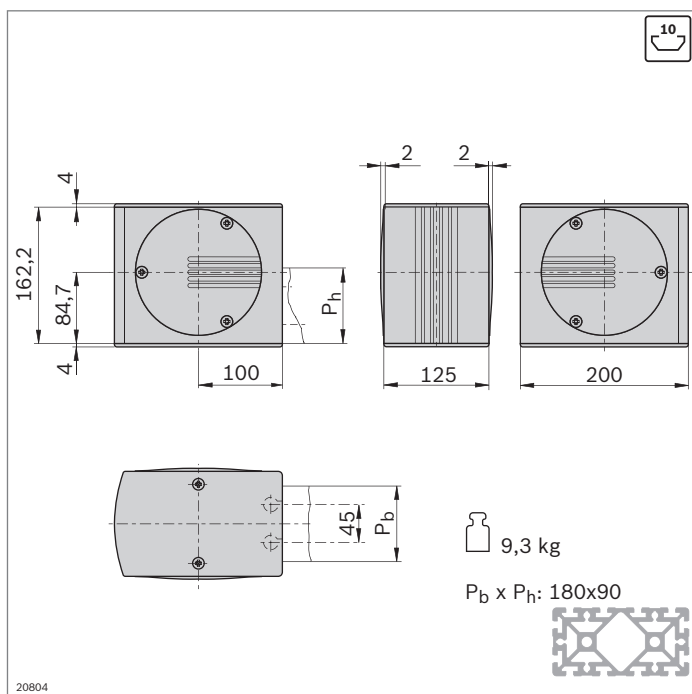
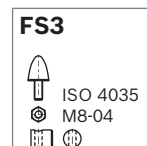
Guide rail	L (mm)	No.
LF20	120 ... 2000	3 842 994 702/L
Material:	Steel, hardened, polished	
Condition on delivery:	Ungreased; greasing according to assembly instructions 3 842 527 226	
Accessories:	Cylinder-head screw DIN 912 – M6x16 T-nut M6, 10 mm slot (3 842 530 285)	



- ▶ Drive head for drive torque transfer to a toothed belt
- ▶ To directly fit a motor or (in connection with a center shaft) a hollow shaft gear or a coupling
- ▶ Mounting with longitudinal end connector directly to profile (connector included in scope of delivery)
- ▶ Profile finishing: LF-S blind hole drilling for longitudinal end connector

Drive head	No.	FS
LF20S	3 842 526 414	4xFS2, 2xFS3

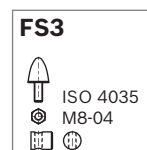
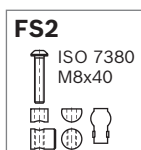
Material:	Drive head: aluminum, anodized Hollow shaft: steel, galvanized
Scope of delivery:	Including fastening material (FS), caps
Accessories:	Flanges (p. 13-49), gears (p. 13-47), servomotors (p. 13-45)

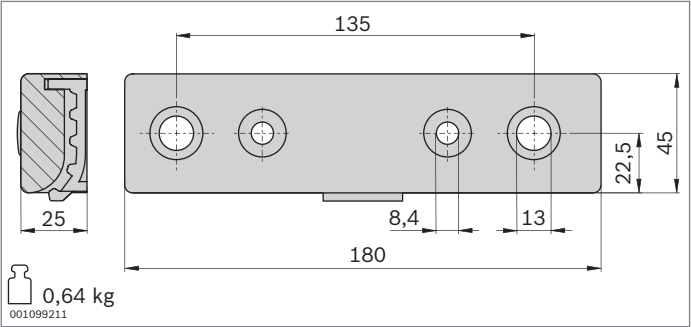


- ▶ Return head to tension the toothed belt and change its direction
- ▶ Mounting with longitudinal end connector directly to profile (connector included in scope of delivery)
- ▶ Profile finishing: LF-S blind hole drilling for longitudinal end connector

Return head	No.	FS
LF20S	3 842 526 415	4xFS2, 2xFS3

Material:	Return head: aluminum, anodized Hollow shaft: steel, galvanized Caps: PA, black
Scope of delivery:	Including fastening material (FS), caps





- ▶ Belt connector to fix the toothed belt at the end of the trolley
- ▶ Profile finish for strut profile 45x270 for trolley LF20S: M12
- ▶ All connecting parts included for mounting at the profile end (LF20S) or the slot (LF20C)

Belt connector		No.	FS
LF20	2	3 842 535 680	2xFS4, 2xFS5, 2xFS6, 2xFS7, 4xFS8

Material: Aluminum, painted black
Scope of delivery: Incl. fastening material (FS)

FS4

DIN7984
M12x40

FS5

DIN 7984
M8x30
DIN 125
A8,4
10

FS6

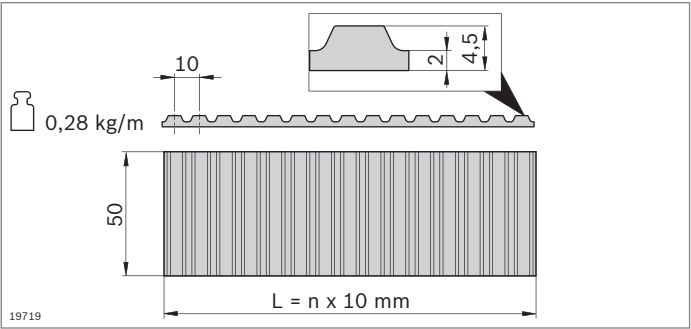
DIN 7991
M8x30
10

FS7

ø18x7

FS8

ø10xø5x11

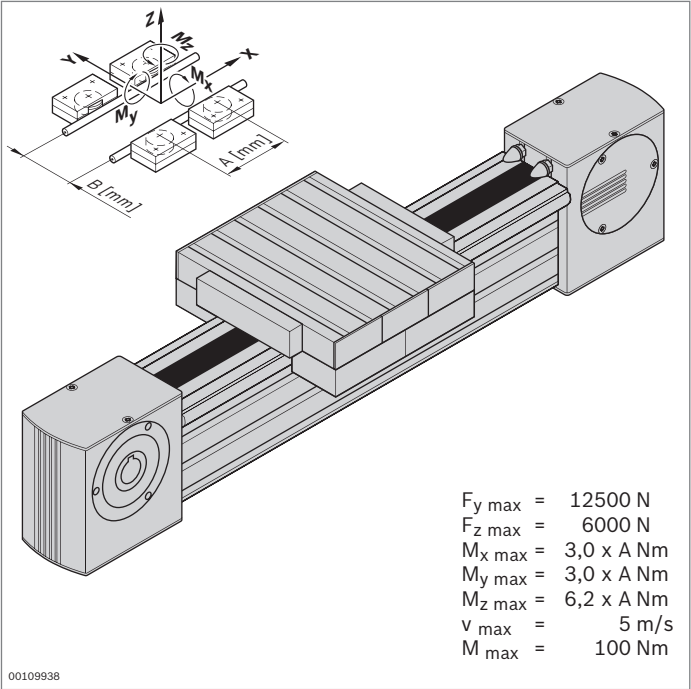


- ▶ Toothed belt as a trolley drive
- ▶ Pitch: AT10

Toothed belt	L ₃ (mm)	No.
LF20	300 ... 50000	3 842 994 662/L ₃ ¹⁾
	50000	3 842 513 648

¹⁾ L₃ = 2xL₂ - L₁ + 780

Material: PU with embedded steel wires



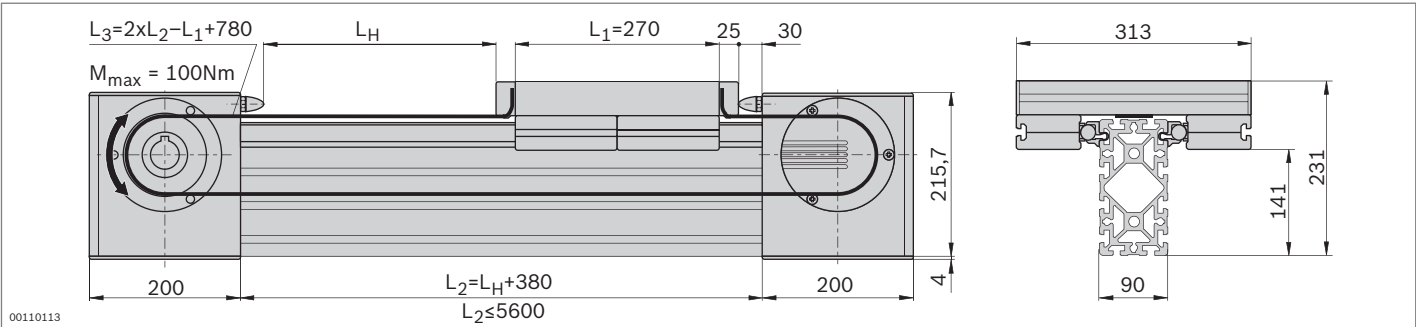
Cam roller guide LF20C – complete axis



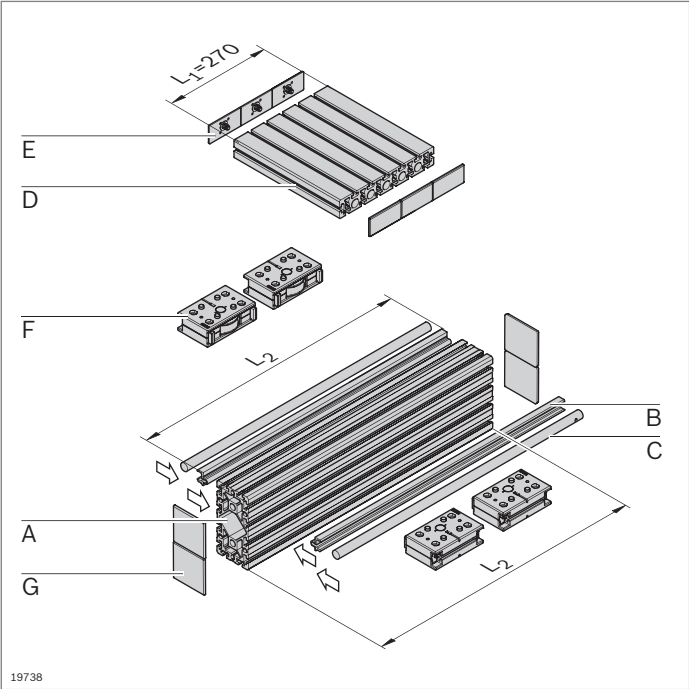
- Fully assembled cam roller guide
- Stroke can be individually selected
- Clamping profile clipped into strut profile 90x180
- Including toothed belt drive; additional notes on the drive concept (p. 13-44)

Accessories:

- MSK servomotor (p. 13-45)
- Gear LF20 (p. 13-47)
- Flange LF20 (p. 13-49)
- Switch unit (p. 13-53)
- Actuating elements LF20 (p. 13-54)
- For information on controls, see page 13-48 and the IndraDrive catalog **R911308428**



Complete axis	L_H (mm)	No.
LF20C	50 ... 5220	3 842 998 500/ L_H

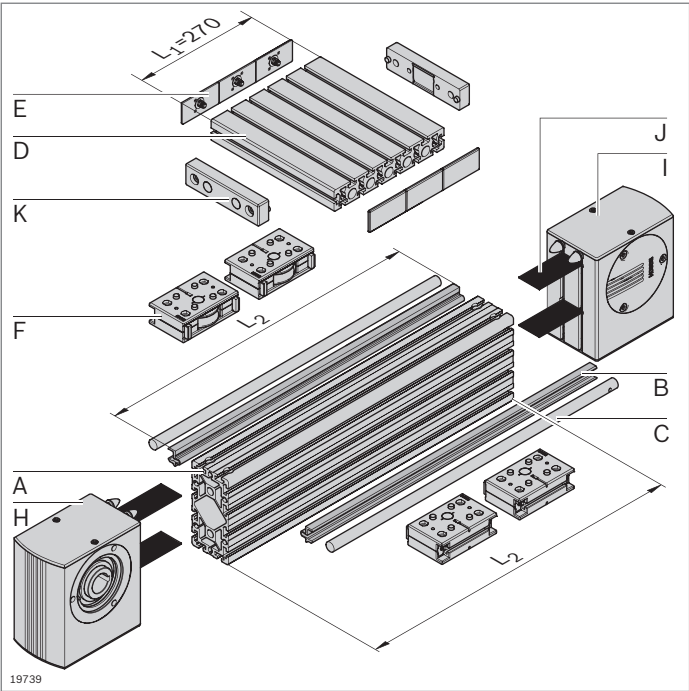


Cam roller guide LF20C – components

► Components for the individual assembly of cam roller guides, with or without drive

Parts list for cam roller guide LF20C without drive

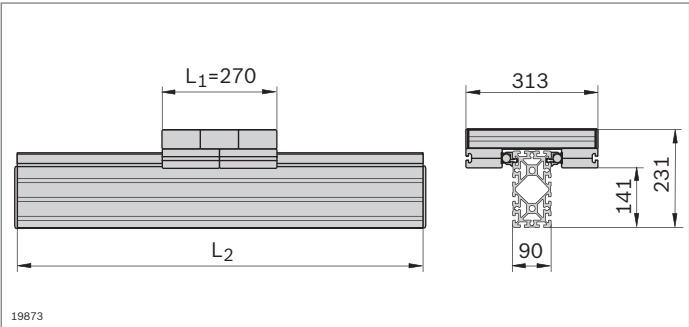
Component	No.	Qty.	Page
A Profile 90x180	3 842 990 416/L ₂	1	2-45
B Clamping profile LF20C	3 842 992 441/L ₂	2	13-39
C Guide rod LF20	3 842 993 969/L ₂	2	13-39
D Profile 45x270	3 842 992 927/ 305 mm	1	2-42
E Cap 45x90	3 842 511 783	6	2-41
F Guide bearing LF20	3 842 535 663	4	13-40
G Cap 90x90	3 842 242 400	4	2-44

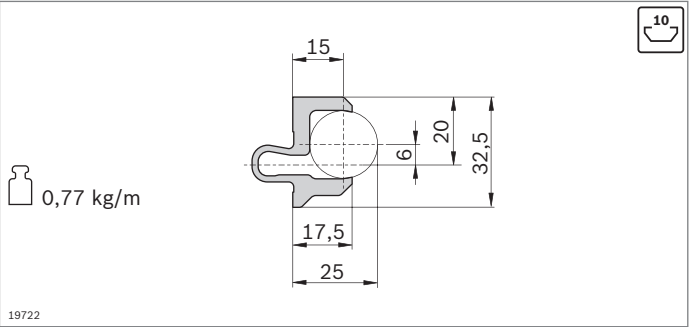


Parts list for cam roller guide LF20C with drive

Component	No.	Qty.	Page
A Profile 90x180 LF LF	3 842 992 898/L ₂	1	2-45
B Clamping profile LF20C	3 842 992 441/L ₂	2	13-39
C Guide rod LF20	3 842 993 969/L ₂	2	13-39
D Profile 45x270	3 842 992 927/ 305 mm	1	2-42
E Cap 45x90	3 842 511 783	6	2-41
F Guide bearing LF20	3 842 535 663	4	13-40
H Drive head	3 842 526 867	1	13-42
I Return head	3 842 526 869	1	13-42
J Toothed belt	3 842 994 662/L ₃ ¹⁾	1	13-43
K Belt connector	3 842 535 680	2	13-43

¹⁾ L₃ = 2xL₂ - L₁ + 780

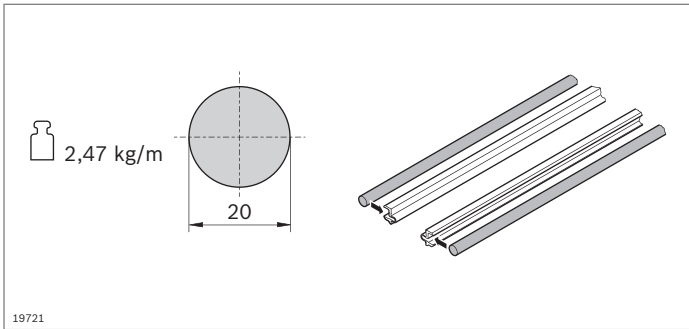




- The clamping profile is clipped into any 10 mm strut profile slot and holds the guide rods

Clamping profile	L (mm)		No.
LF20C	1 pc	150 ... 3000	3 842 992 441/L
	20 pcs	3000	3 842 518 898

Material: Aluminum, anodized

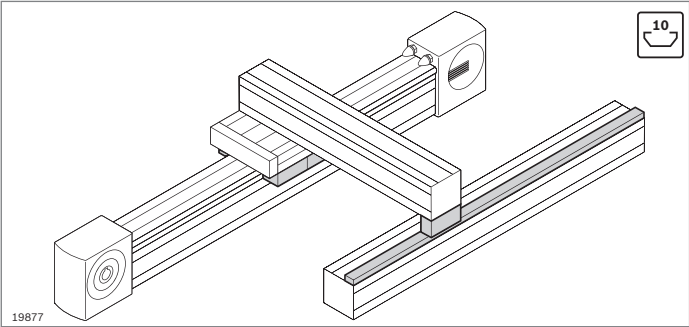


- The guide rod is pressed into the clamping profile
- The guide rod guides the guide bearing

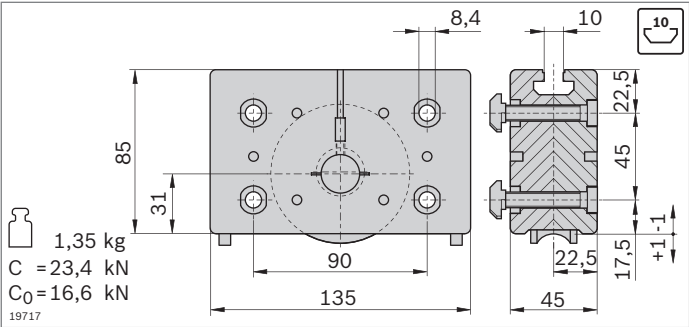
Guide rod	L (mm)		No.
LF20	150 ... 2900	1	3 842 993 969/L
	2900	20	3 842 539 416

Material: Solid shaft VA, induction hardened, polished

Condition on delivery: Ungreased; greasing according to assembly instructions **3 842 527 226**



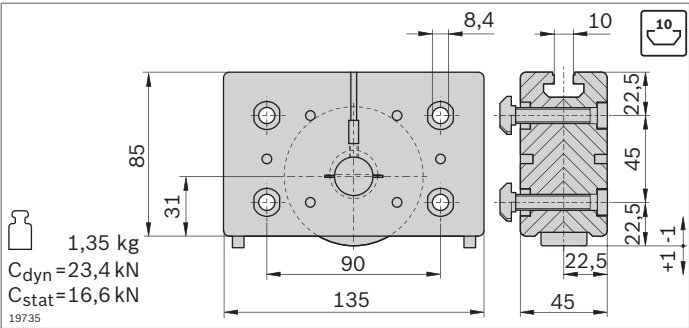
- ▶ Guide bearing for trolley construction
- ▶ Supporting bearing for brackets to withstand off-center forces
- ▶ Guide rail to hold supporting bearings (p. 13-41)



- ▶ Guide bearing for trolley construction
- ▶ Guiding via guide rod
- ▶ Rollers with ball bearings, permanently lubricated
- ▶ Lubricating felts with guide rod lubrication reservoir
- ▶ Secure roller adjustment via eccentric bolts
- ▶ Replacement of the lubricating felts possible from rear in installed state

Guide bearing	No.	FS
LF20	2	3 842 535 663 4xFS1

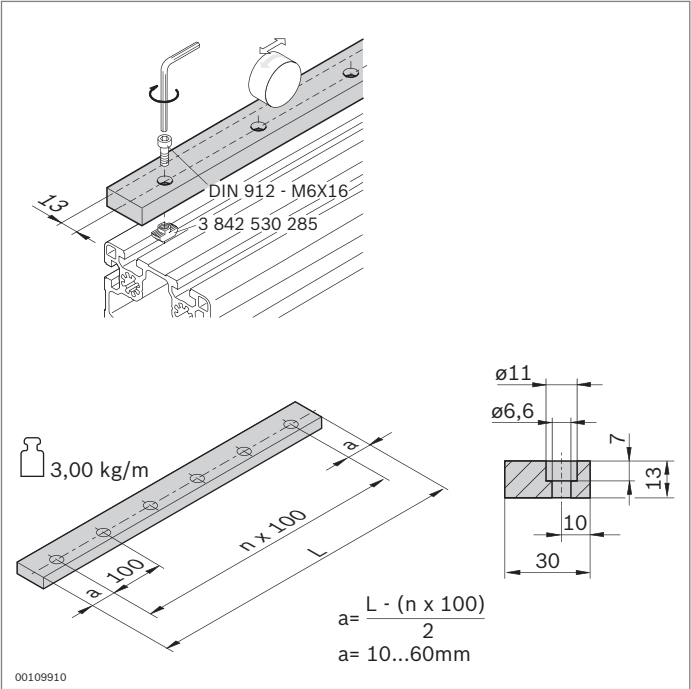
- Material: Housing: diecast aluminum
Roller: steel, hardened, polished
- Scope of delivery: Incl. fastening material (FS)
- Condition on delivery: Ungreased lubricating felts; greasing according to assembly instructions **3 842 527 226**



- ▶ Supporting bearing for brackets to withstand off-center forces
- ▶ For support on the guide rail
- ▶ Rollers with ball bearings, permanently lubricated
- ▶ Lubricating felts with guide rod lubrication reservoir
- ▶ Secure roller adjustment via eccentric bolts
- ▶ Replacement of the lubricating felts possible from rear in installed state

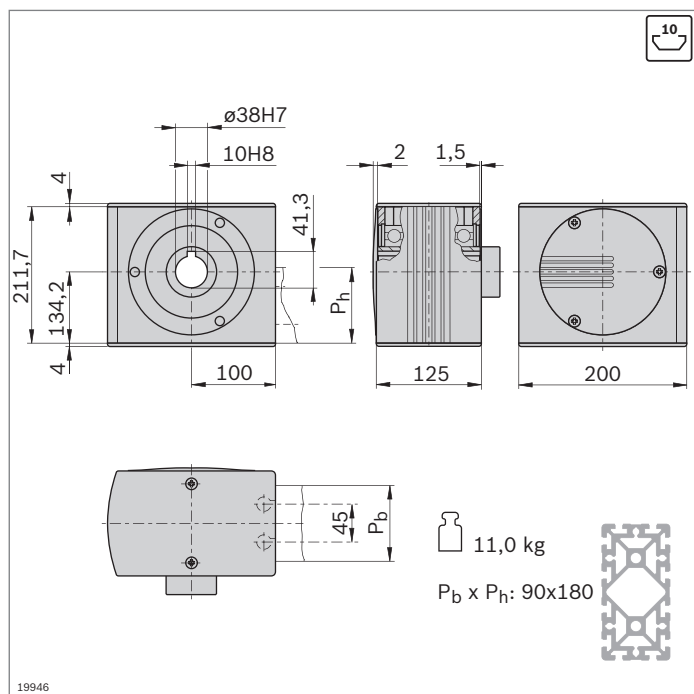
Supporting bearings	No.	FS
LF20	2	3 842 535 665 4xFS1

- Material: Housing: diecast aluminum
Roller: steel, hardened, polished
- Scope of delivery: Incl. fastening material (FS)
- Condition on delivery: Ungreased lubricating felts; greasing according to assembly instructions **3 842 527 226**



► Guide rail to hold supporting bearings

Guide rail	L (mm)	No.
LF20	120 ... 2000	3 842 994 702/L
Material:	Steel, hardened, polished	
Accessories:	Cylinder-head screw DIN 912 – M6x16 T-nut M6, 10 mm slot (3 842 530 285)	
Condition on delivery:	Ungreased; greasing according to assembly instructions 3 842 527 226	



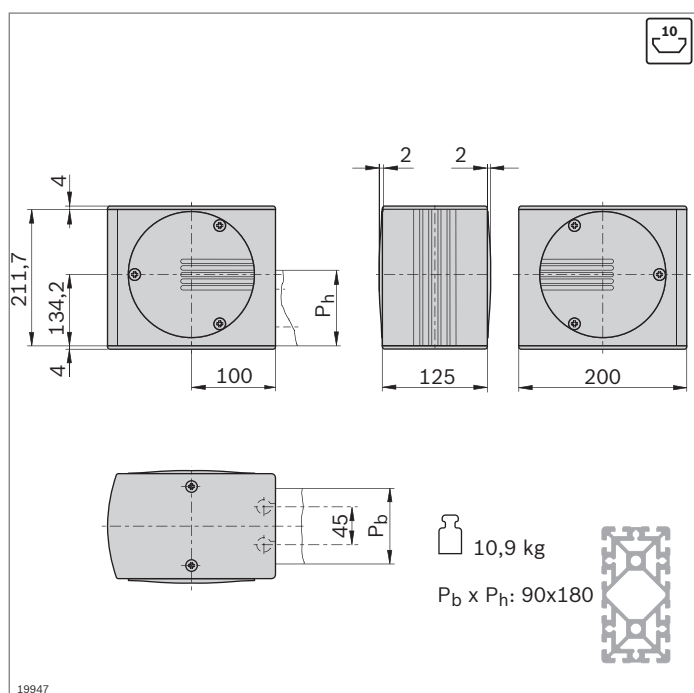
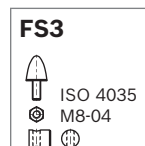
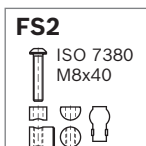
- ▶ Drive head for drive torque transfer to a toothed belt
- ▶ To directly fit a motor or (in connection with a center shaft) a hollow shaft gear or a coupling
- ▶ Mounting with longitudinal end connector directly to profile (connector included in scope of delivery)
- ▶ Profile finishing: LF blind hole drilling for longitudinal end connector

Drive head	No.	FS
LF20C	3 842 526 867	4xFS2, 2xFS3

Material:	Drive head: aluminum, anodized Hollow shaft: steel, galvanized
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Scope of delivery:	Including fastening material (FS), caps
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Accessories: Flanges (p. 13-49), gears (p. 13-47), servomotors (p. 13-45)

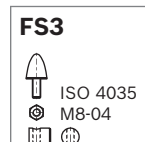


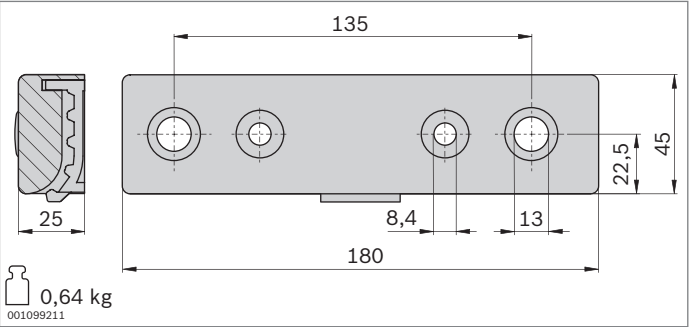
- ▶ Return head to tension the toothed belt and change its direction
- ▶ Mounting with longitudinal end connector directly to profile (connector included in scope of delivery)
- ▶ Profile finishing: LF blind hole drilling for longitudinal end connector

Return head	No.	FS
LF20C	3 842 526 869	4xFS2, 2xFS3

Material:	Return head: aluminum, anodized Hollow shaft: steel, galvanized Caps: PA, black
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Scope of delivery: Including fastening material (FS), caps

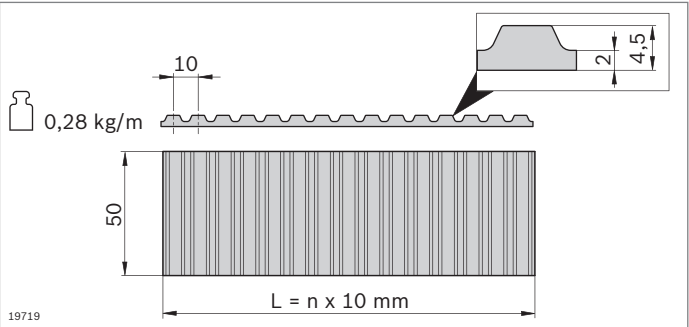
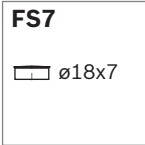
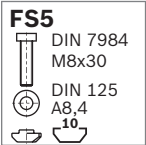




- ▶ Belt connector to fix the toothed belt at the trolley slot
- ▶ Profile finish for strut profile 45x270 for trolley LF20S: M12
- ▶ All connecting parts included for mounting at the profile end (LF20S) or the slot (LF20C)

Belt connector		No.	FS
LF20	2	3 842 535 680	2xFS4, 2xFS5, 2xFS6, 2xFS7, 4xFS8

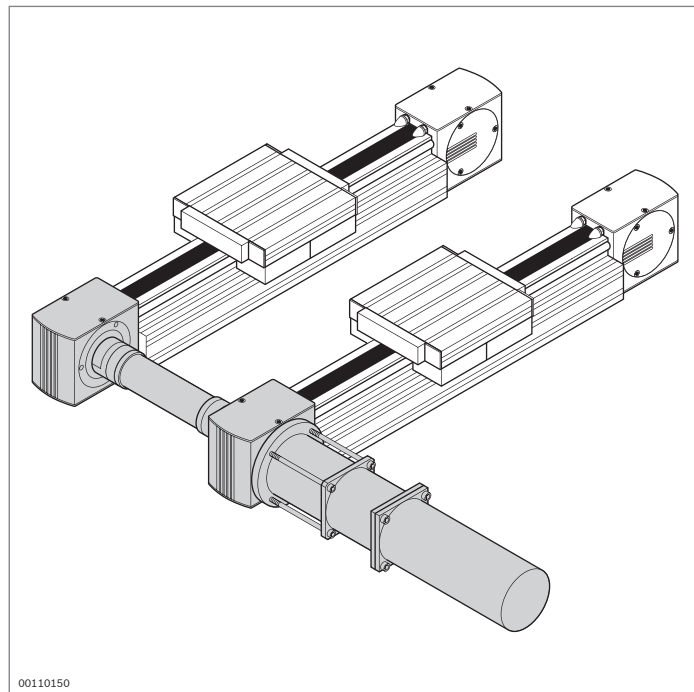
Material: Aluminum, painted black
Scope of delivery: Incl. fastening material (FS)



- ▶ Toothed belt as a trolley drive
- ▶ Pitch: AT10

Toothed belt	L (mm)	No.
LF20	300 ... 50000	3 842 994 662/L ₃ ¹⁾
	50000	3 842 513 648

¹⁾ $L_3 = 2 \times L_2 - L_1 + 780$
Material: PU with embedded steel wires



Linear guide drives

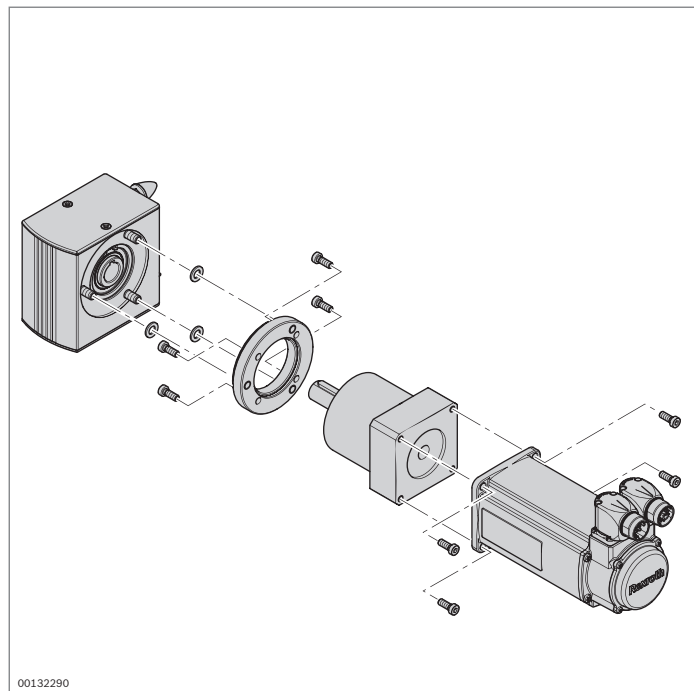
Drive concept

Linear guides are driven via the hollow shaft in the drive head. The drive head is used to directly fit a motor or (in connection with a center shaft) a hollow shaft gear or a coupling. According to the desired speeds of movement for the application, it is necessary to use various motor types in conjunction with intermediate gears. Due to the multitude of drive components available on the market, there are a large number of possible combinations. On the following pages we have selected the suitable accessories for each size: motors, gears, flanges, inductive/mechanical switches, brackets and actuating elements.

Connection

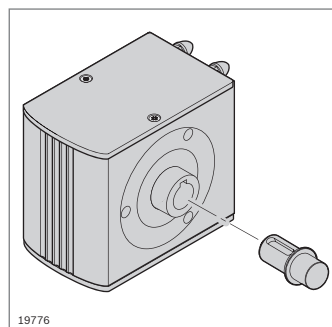
The drive head is directly secured on the profile with longitudinal end connectors.

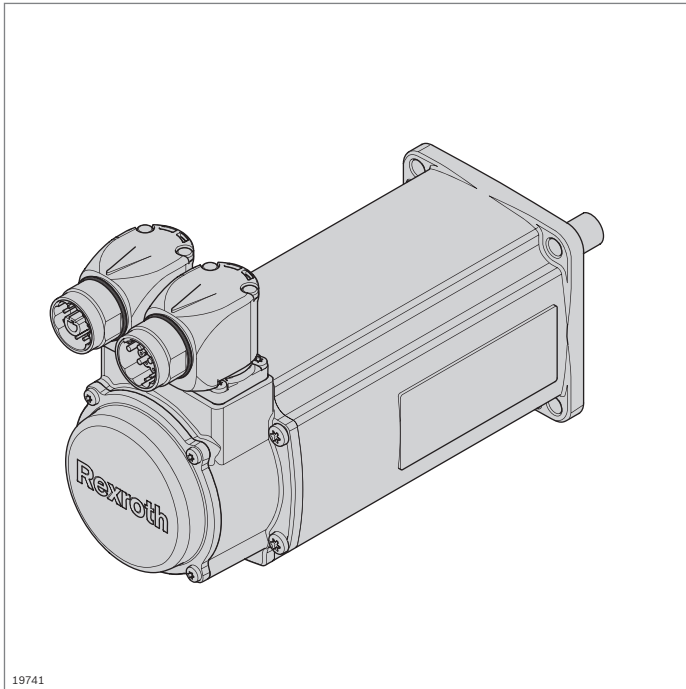
The motor, or the intermediate gear flange, can be fitted as a complete unit with the drive head from the inside, from left or from right.



Synchronous shafts

By using synchronous shafts (p. 13-51), several linear axes can be operated with one drive.





19741

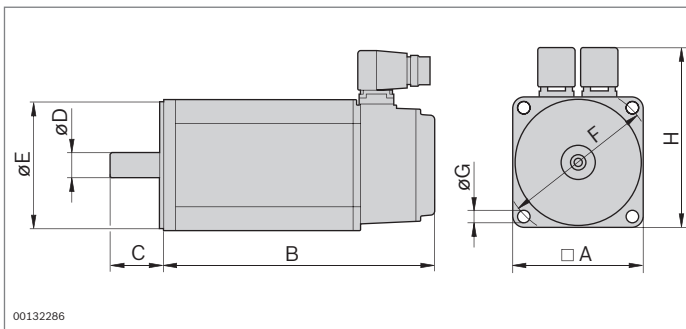
MSK servomotors

The MSK motor series stands out with its broad performance range and fine size graduation. The high torque density of these synchronous servomotors enables a particularly compact design with maximum torques up to 230 Nm. Additional technical details for the motors shown here can be found in the “Technical data” section.

The servomotors listed here are designed for applications with our cam roller guides.

The MSK servomotors are equipped with an absolute multi-turn encoder (Hiperface, 128 increments with 4096 rotations), smooth motor shafts, and no brakes.

To achieve the optimal drive configuration for an individual application, as well as for the selection of additional motor parameters, we recommend that you contact our sales consultants. You will find additional information on the motors in the latest IndraDrive catalog **R911308428**.



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13

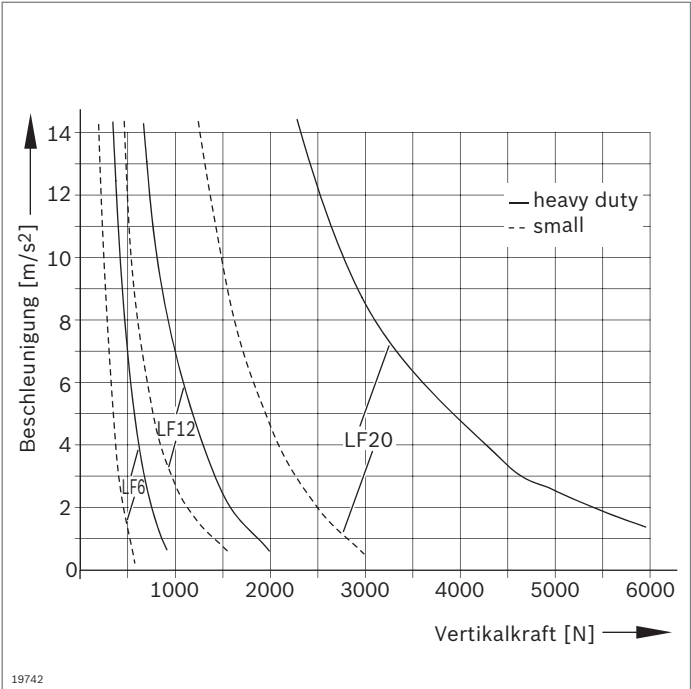
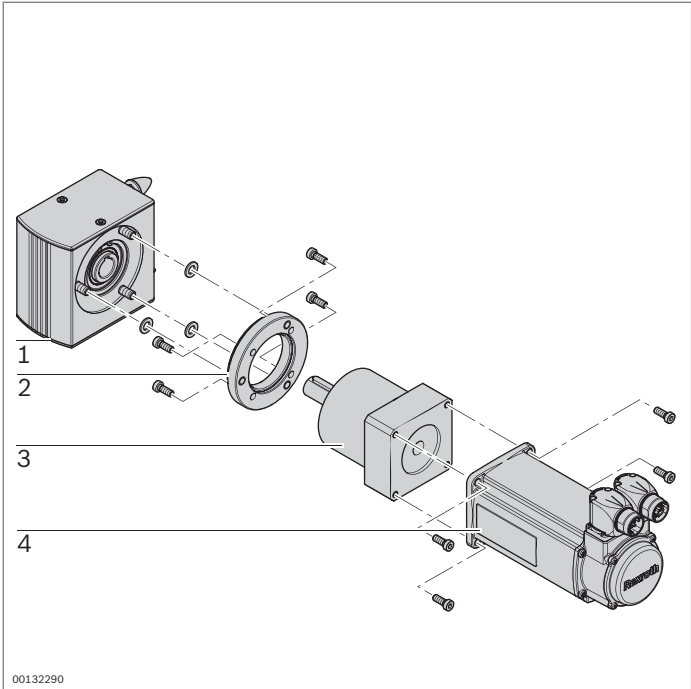
		Unit	MSK 040C	MSK 050B	MSK 060C	MSK 070C	MSK 070E	MSK 100B
BRC part number			R911 306 060	R911 299 935	R911 307 219	R911 299 754	R911 316 908	R911 315 705
Maximum usable speed¹⁾	$n_{\max}$	min ⁻¹	7500	6000	4900	6000	5300	4750
Nominal torque	M_N	Nm	2.7	3.0	8.0	13.0	23.0	28.0
Maximum torque	$M_{\max}$	Nm	8.1	9.0	24.0	33.0	60.0	102.0
Continuous current at standstill	I_0	A	3.1	3.7	4.8	12.3	15.4	17.4
Maximum current	$I_{\max}$	A	12.4	14.8	19.2	36.9	46.3	78.3
Moment of inertia	J_R	10 ⁻⁶ kgm ²	140	280	800	2910	4580	19200
Mass	m	kg	3.6	4.0	8.4	11.7	16.2	34.0

¹⁾ $n_{\max}$ = 19200 rpm at 750 V intermediate circuit voltage

Motor data for servomotors

Motor type	A (mm)	B (mm)	C (mm)	Ø D (mm)	Ø E (mm)	Ø F (mm)	Ø G (mm)	H (mm)
MSK 040C	82	185.5	30	14	50	95	6.6	124.5
MSK 050B	98	173.0	40	19	95	115	9.0	134.5
MSK 060C	116	226.0	50	24	95	130	9.0	156.0
MSK 070C	140	238.0	58	32	130	165	11.0	202.0
MSK 070E	140	298.0	58	32	130	165	11.0	202.0
MSK 100B	192	368.0	60	32	130	215	11.0	211.5

Selection help – recommended combinations

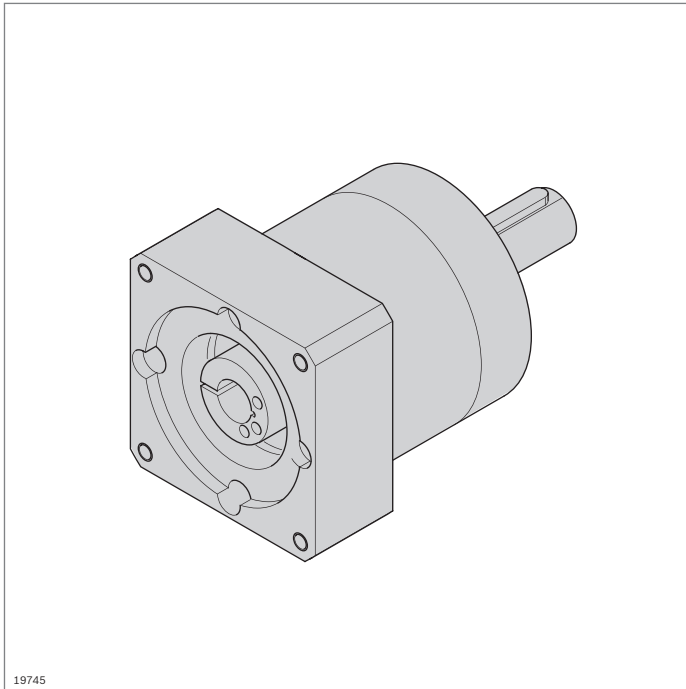


The diagram specifies the potential acceleration for horizontal applications based on the vertical force F_z , the linear guide size, and the drive version (**heavy duty**, **small**). This allows you to preselect the best axis for your application.

Linear guides

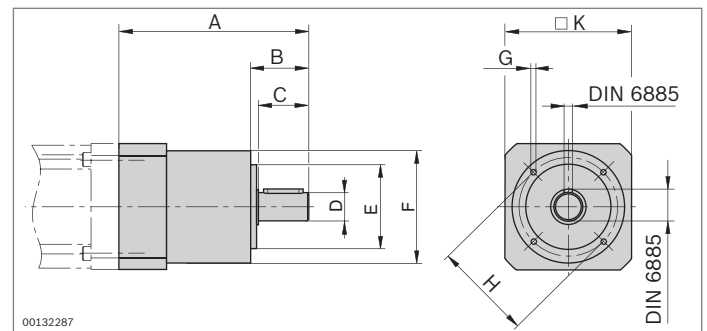
You can quickly and conveniently find the suitable accessories for the axis you have selected with the Table provided here.

Model	Drive version	1 Complete axis No.	2 Flange No.	3 Gear No.	Drive No.	4 Motor designation
LF6S	small	3 842 998 495	3 842 539 382	3 842 540 018	R 911 306 060	MSK040C-0600
	heavy duty	3 842 998 495	3 842 539 383	3 842 540 019	R 911 299 935	MSK050B-0600
LF6C	small	3 842 998 496	3 842 539 382	3 842 540 018	R 911 306 060	MSK040C-0600
	heavy duty	3 842 998 496	3 842 539 383	3 842 540 019	R 911 299 935	MSK050B-0600
LF12S	small	3 842 998 497	3 842 539 384	3 842 540 020	R 911 307 219	MSK060C-0300
	heavy duty	3 842 998 497	3 842 539 385	3 842 540 021	R 911 299 754	MSK070C-0450
LF12C	small	3 842 998 498	3 842 539 384	3 842 540 020	R 911 307 219	MSK060C-0300
	heavy duty	3 842 998 498	3 842 539 385	3 842 540 021	R 911 299 754	MSK070C-0450
LF20S	small	3 842 998 499	3 842 539 386	3 842 540 022	R 911 316 908	MSK070E-0300
	heavy duty	3 842 998 499	3 842 539 387	3 842 540 023	R 911 315 705	MSK100B-0300
LF20C	small	3 842 998 500	3 842 539 386	3 842 540 022	R 911 316 908	MSK070E-0300
	heavy duty	3 842 998 500	3 842 539 387	3 842 540 023	R 911 315 705	MSK100B-0300



Gear

- ▶ Matching planetary gear for each size
- ▶ Simple mounting on the drive head using a flange
- ▶ The gear output shaft matches the inner cross-section of the hollow shaft in the drive head, making a coupling unnecessary
- ▶ **Small** version for lightweight applications
- ▶ **Heavy duty** version for tough applications



Model	Drive version	Motor	Gear No.	A (mm)	B (mm)	K (mm)	C (mm)	D (mm)	E (mm)	F (mm)	G (mm)	H (mm)
LF6	small	MSK040C	3 842 540 018	143.5	50	□80	46	Ø 19h7	Ø 60h7	Ø 80	M6x15	Ø 95
LF6	heavy duty	MSK050B	3 842 540 019	176.5	55	□115	50	Ø 19h7	Ø 80h7	Ø 115	M8x20	Ø 115
LF12	small	MSK060C	3 842 540 020	196.5	65	□115	60	Ø 28h7	Ø 80h7	Ø 115	M8x20	Ø 130
LF12	heavy duty	MSK070C	3 842 540 021	263.5	87	□140	80	Ø 28h7	Ø 130h7	Ø 160	M10x25	Ø 165
LF20	small	MSK070E	3 842 540 022	263.5	87	□140	80	Ø 38h7	Ø 130h7	Ø 160	M10x25	Ø 165
LF20	heavy duty	MSK100B	3 842 540 023	245.6	85	□190	82	Ø 38h7	Ø 130h6	□ 141	M12x29	Ø 215

Performance data

	Unit	3 842 540 018	3 842 540 019	3 842 540 020	3 842 540 021	3 842 540 022	3 842 540 023
Max. input rpm	rpm	4000	3500	3500	3500	3000	2000
Nominal output torque	Nm	50	100	100	100	300	420
Mass moment of inertia	kg cm ²	0.52	1.79	1.79	7.78	7.78	6.75
Ratio	i	4	4	4	4	4	4
Torsion play	arc min.	<9	<8	<8	<6	<6	<4
Service life	H	30000	30000	30000	30000	30000	20000
Lubrication		Lifetime lubrication, closed system					
Permissible ambient temperature	°C	0...+40	0...+40	0...+40	0...+40	0...+40	0...+40
Noise level	dB (A)	≤60	≤65	≤65	≤70	≤70	≤72
Mass	kg	2.1	6.0	6.0	18	18	11.5



Information on drive control

Complete hardware and software, safe application, and intelligent functions.

With IndraDrive and IndraDyn you can solve your automation tasks economically, intelligently, and future-proof – no matter what industry you call home.

Additional information on control components can be found in the Rexroth IndraDrive catalog **R911308428**.

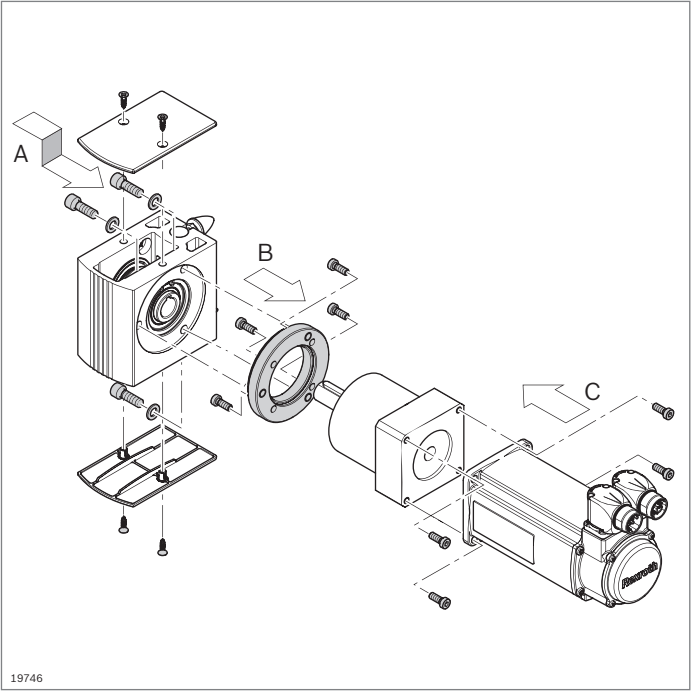
			small			heavy duty		
		No.	LF6	LF12	LF20	LF6	LF12	LF20
Converter:								
IndraDrive compact converter, single axis	HCS02. 1E-W0012-A-03-NNNN	R 911 298 371	•			•		
	HCS02. 1E-W0028-A-03-NNNN	R 911 298 374		•	•		•	
	HCS02. 1E-W0054-A-03-NNNN	R 911 298 373						•
Cable:								
Power cable, ready-to-use 5 m	RKL4303/005.0	R 911 310 652	•					
	RKL4302/005.0	R 911 310 648		•		•		
	RKL4306/005.0	R 911 310 655			•		•	
	RKL4321/005.0	R 911 310 460						•
Sensor cable, ready-to-use 5 m	RKG4200/005,0	R 911 310 645	•	•	•	•	•	•

Control module for converter

			No.
IndraDrive control module BASIC, single axis	CSB01.1C-PB-ENS-NNN-NN-S-NN-FW		R 911 305 278
IndraDrive firmware	FWA-INDRV-MPB-04VRS-D5-1-NNN-NN		R 911 312 231
Program module	PFM02.1-016-FW		R 911 296 958

Control

			No.
IndraDrive controller L40	CML40.1-NP-220-NA-NNNN-NW		1 070 170 261
L40 firmware	FWA-CML40*-IL*02VRS-D0-0008-NNN-NN		R 911 309 170
Interface module L40	R-IB IL CML S01-PLSET		R 911 299 856



Flange

Every gear is designed so that its output shaft fits directly into the hollow shaft of the drive head. Intermediate couplings are not required - flat adapter flanges can be used.

Small version for lightweight applications, **heavy duty** for tough applications.

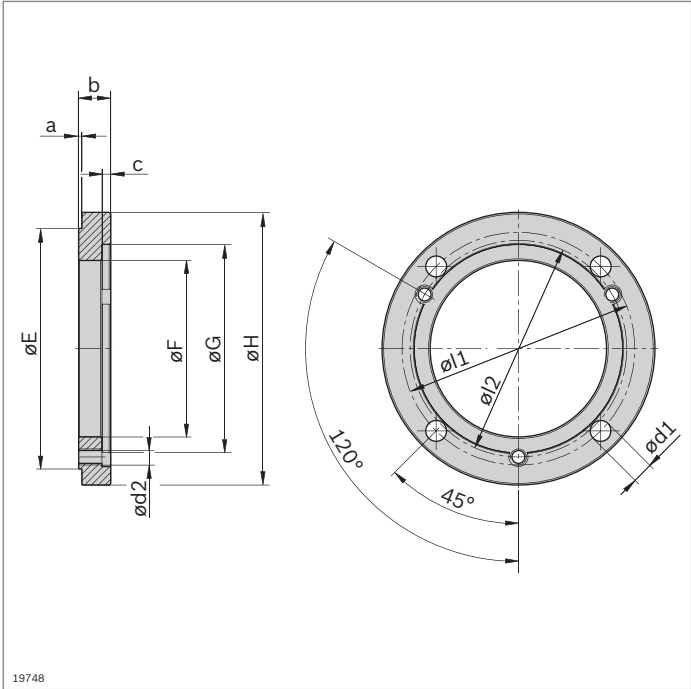
Fastening material for drive components

small	LF6	LF12	LF20
A Drive head – flange	ISO 4762 – M8x22	ISO 4762 – M8x25	ISO 4762 – M10x30
	ISO 7092 – 8	ISO 7092 – 8	ISO 7092 – 10
B Flange – gear	ISO 4762 – M6x16	ISO 4762 – M10x20	DIN 7984 – M12x25
C Gear – motor	ISO 4762 – M6x20	ISO 4762 – M8x25	ISO 4762 – M10x40

Material: Steel, nickel-plated

heavy duty	LF6	LF12	LF20
A Drive head – flange	ISO 4762 – M8x22	ISO 4762 – M8x25	ISO 4762 – M10x30
	ISO 7092 – 8	ISO 7092 – 8	ISO 7092 – 10
B Flange – gear	ISO 4762 – M10x20	DIN 7984 – M12x25	ISO 4762 – M10x30
C Gear – motor	ISO 4762 – M8x20	ISO 4762 – M10x40	ISO 4762 – M12x35

Material: Steel, nickel-plated



Flange

Small flange	No.
LF6	3 842 539 382
LF12	3 842 539 384
LF20	3 842 539 386

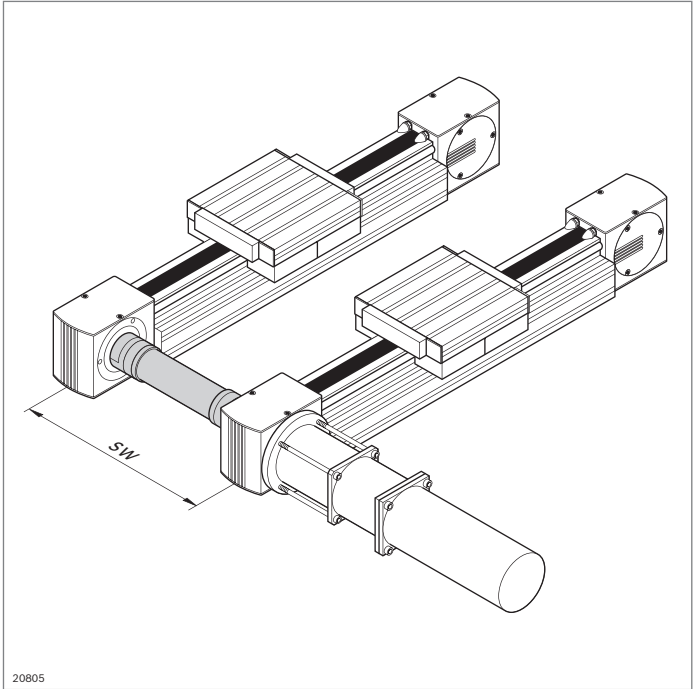
Heavy duty flange	No.
LF6	3 842 539 383
LF12	3 842 539 385
LF20	3 842 539 387

Small flange

Dimension parameter	Unit	LF6	LF12	LF20
a	mm	3.5 ± 0.15	3.5 ± 0.15	2 ± 0.15
b	mm	14.5	20	20
c	mm	3.5 +0.3	–	5.5 +0.3
E	mm	Ø 88 -0.1/-0.3	Ø 111 -0.1/-0.3	Ø 150 -0.1/-0.3
F	mm	Ø 55	Ø 80	Ø 110
G	mm	Ø 60 H7	Ø 80 H7	Ø 130 H7
H	mm	Ø 94	Ø 120	Ø 170
I1	mm	Ø 70	Ø 100	Ø 145
I2	mm	Ø 78	Ø 100	Ø 135
d1	mm	Ø 6.6	Ø 10.5	Ø 13
d2	mm	M8	M8	M10
m	kg	0.441	0.81	1.52

Heavy duty flange

Dimension parameter	Unit	LF6	LF12	LF20
a	mm	3.5 ± 0.15	3.5 ± 0.15	2 ± 0.15
b	mm	20	20	45
c	mm	5 +0.3	5.5 +0.3	30.5 +0.3
E	mm	Ø 88 -0.1/-0.3	Ø 111 -0.1/-0.3	Ø 150 -0.1/-0.3
F	mm	Ø 65	Ø 80	Ø 110
G	mm	Ø 80 H7	Ø 130 H7	Ø 130 H7
H	mm	Ø 119	Ø 169	Ø 185
I1	mm	Ø 100	Ø 145	Ø 165
I2	mm	Ø 78	Ø 100	Ø 135
d1	mm	Ø 10.5	Ø 13	M10
d2	mm	M8	M8	M10
m	kg	0.91	1.98	4.94



SW = Support separation

Center shafts, synchronous shafts

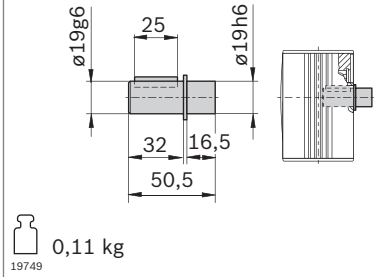
Center shafts

- Enables the installation of individual drive solutions

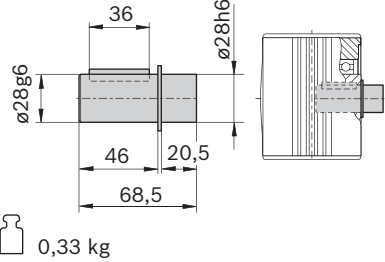
Center shaft	No.
LF6	3 842 526 893
LF12	3 842 526 894
LF20	3 842 526 895

Material: Steel, galvanized

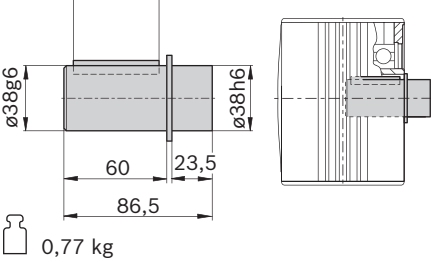
LF6

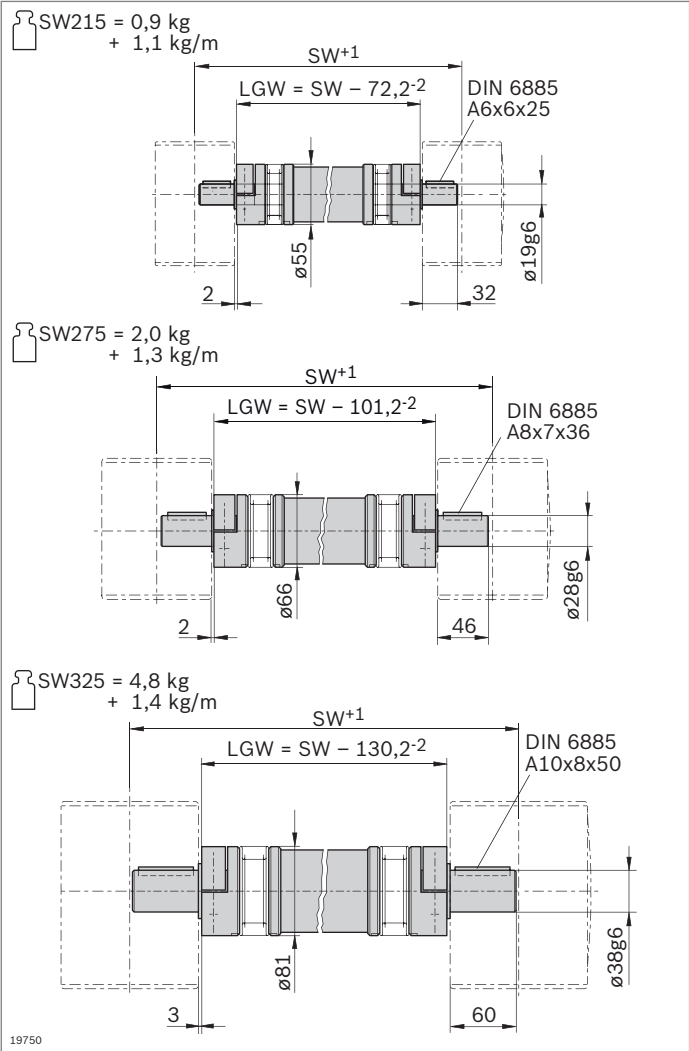


LF12



LF20





SW = Support separation
LGW = Long synchronous shaft

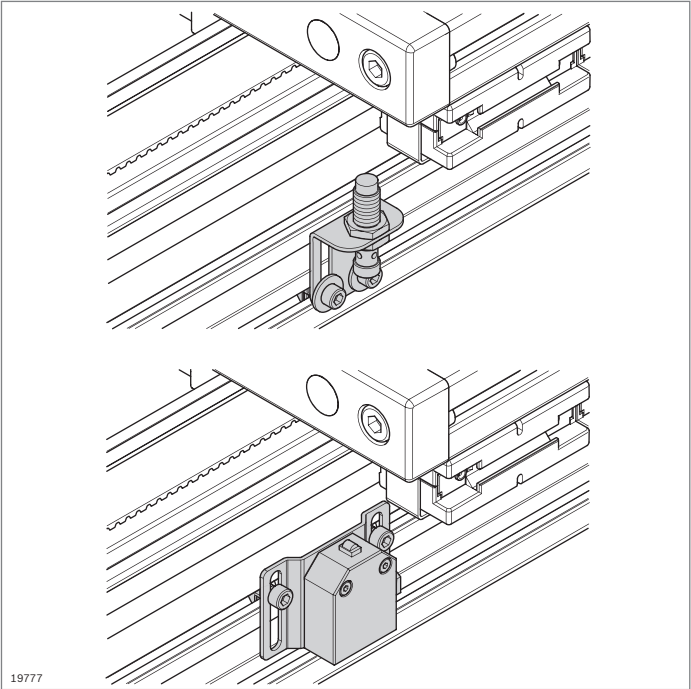
Synchronous shafts

- Allow several linear guides to be driven synchronously by a common motor
- Synchronous shafts can be replaced without disassembling the drive heads

The selection diagrams on pages 13-60 and 13-61 specify maximum values without safety margins.

Synchronous shaft	SW (mm)	No.
LF6	215 ... 3000	3 842 994 811/SW
LF12	275 ... 3500	3 842 994 812/SW
LF20	325 ... 3500	3 842 994 813/SW

Material: Steel, galvanized

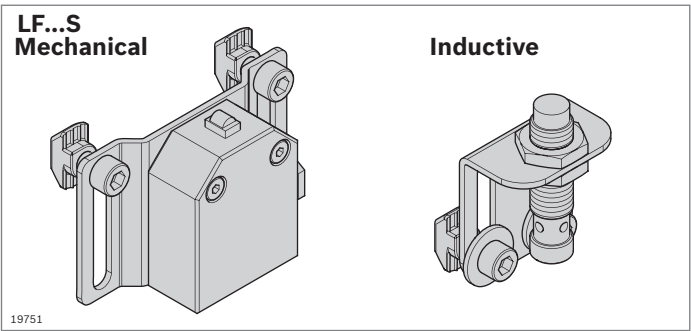


Switch unit, actuating element

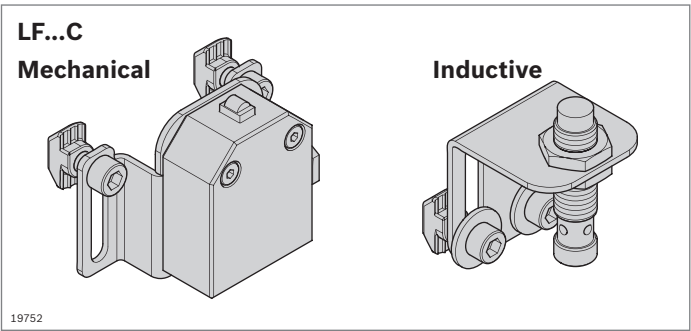
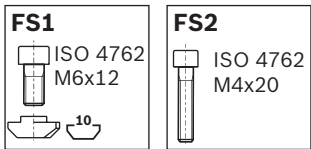
- Inductive and mechanical switch

Switch unit

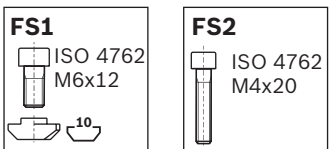
- The brackets for the switches are fitted on the support profile
- The switch unit fits all sizes
- The mechanical switch is only for use as a safety shut-off after overrunning the end position

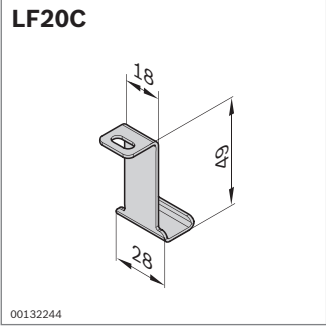
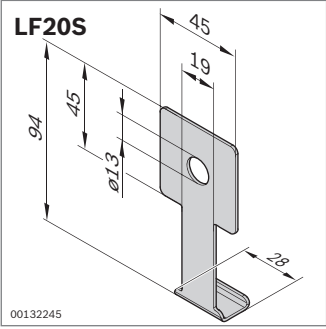
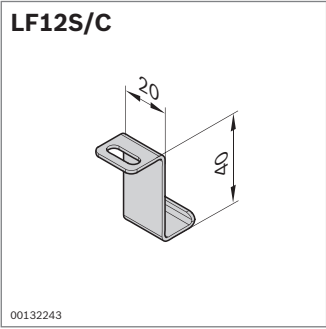


Switch unit LF...S	No.	FS
Inductive	3 842 539 520	2xFS1
Mechanical	3 842 539 522	2xFS1, 2xFS2
Material:	Brackets: steel, galvanized	
Scope of delivery:	Proximity switch, inductive, or mechanical switch (p. 13-55); holder; fastening material (FS)	



Switch unit LF...C	No.	FS
Inductive	3 842 539 521	2xFS1
Mechanical	3 842 539 523	2xFS1, 2xFS2
Material:	Brackets: steel, galvanized	
Scope of delivery:	Proximity switch, inductive, or mechanical switch (p. 13-55); holder; fastening material (FS)	

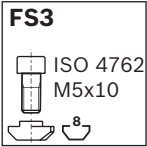




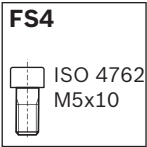
Actuating element

- The actuating elements are fixed to the respective belt connector

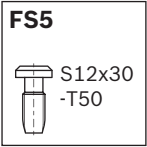
Actuating element	No.	FS
LF6S/C	3 842 539 367	1xFS3
Material: Steel, galvanized		



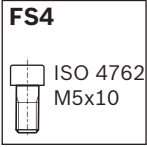
Actuating element	No.	FS
LF12S/C	3 842 539 368	1xFS4
Material: Steel, galvanized		

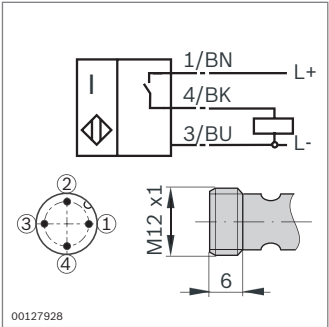
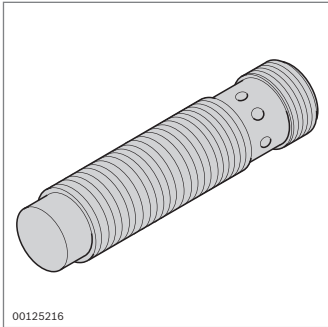
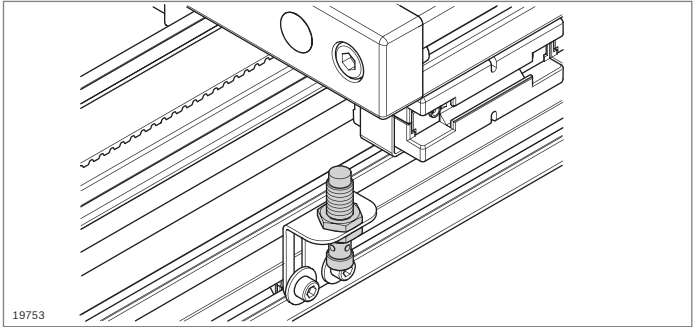


Actuating element	No.	FS
LF20S	3 842 539 370	1xFS5
Material: Steel, galvanized		



Actuating element	No.	FS
LF20C	3 842 539 369	1xFS4
Material: Steel, galvanized		



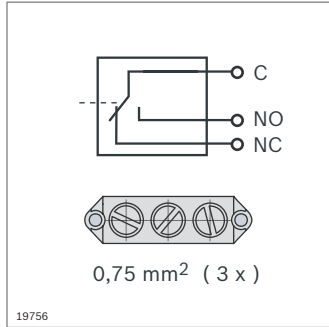
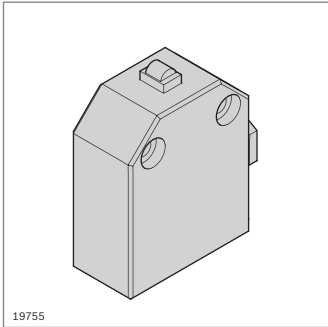
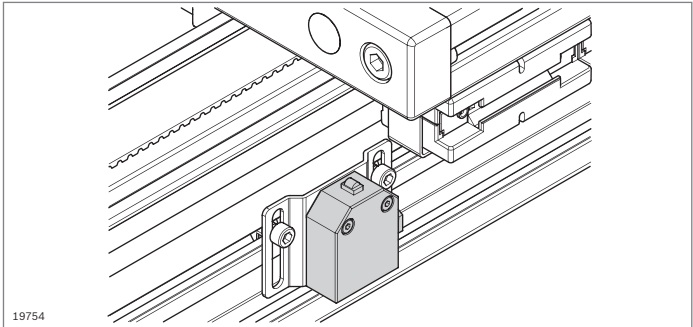


Switch

Proximity switch, inductive

- ▶ NO PNP according to IEC/EN 60947-5-2-2004
- ▶ Connection via V1 plug (M12)
- ▶ Suitable for installation in switch bracket with integrated stop
- ▶ Resistant to media such as test oil and test fuel
- ▶ Optical LED function display
- ▶ Gold-plated contacts
- ▶ Compact length of 50 mm
- ▶ Metal thread M12x1
- ▶ Switch distance $S_N = 7$ mm
- ▶ Operating voltage: 0 to 30 V
- ▶ Switching frequency: 300 Hz
- ▶ Operating current: 150 mA
- ▶ No-load current: max. 15 mA
- ▶ Protection class: IP 67
- ▶ Ambient temperature: -25 to 70 °C

Proximity switch	No.
	3 842 537 995



Switch, mechanical

- ▶ Single-pole change-over contact, connection for cable fitting M12x1.5
- ▶ Gold-plated contacts, screw-in connection
- ▶ Continuous current: 5 A
- ▶ Operating voltage: 250 V AC
- ▶ Switching frequency: 3 Hz
- ▶ Isolation: group C according to VDE 0110
- ▶ Protection class: IP67
- ▶ Ambient temperature: -25 to 70 °C
- ▶ Starting speed: 0.5 m/s
- ▶ Switch distance: 2.5 + 0.2 mm

Technical data for cam roller guides, design notes, mounting instructions

General technical data and calculations

Travel speed

$$v_{\max} = 5 \text{ m/s}$$

Acceleration

$$a_{\max} = 15 \text{ m/s}^2$$

Temperature resistance

$$-10^{\circ}\text{C} < \vartheta < 40^{\circ}\text{C}$$

Lubrication

All cam roller guide ball bearings are delivered with ready-mounted lubrication felts.

Condition on delivery

Ungreased (greasing with Klüber Isoflex Topas NCA 52; see assembly instructions **3 842 527 226**)

Ungreased lubricating felts with reservoir

Ungreased guide rods

Definition of dynamic load capacity C

The radial loading of constant magnitude and direction which a linear rolling bearing can theoretically endure for a nominal life of 100 km distance traveled (acc. to ISO 14728 Part 1).

Note on maximum load $F_{\max}$

The maximum loads apply for individual loads. Combining loads decreases the expected service life.

Definition and calculation of nominal life

The calculated service life which an individual linear rolling bearing, or a group of apparently identical rolling element bearings operating under the same conditions, can attain with a 90% probability, with contemporary, commonly used materials and manufacturing quality under conventional operating conditions (acc. to ISO 14728 Part 1) and optimal installation conditions.

Nominal life at constant speed

$$L = \left(\frac{C}{F} \right)^3 \cdot 10^5$$

$$L_h = \left(\frac{L}{2 \cdot s \cdot n_s \cdot 60} \right)$$

L = nominal life (m)

L_h = nominal life (h)

C = dynamic load capacity (N)

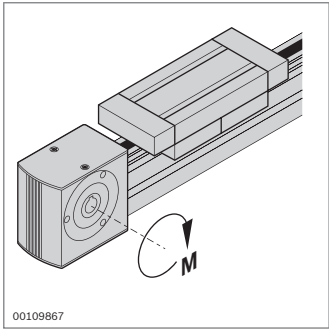
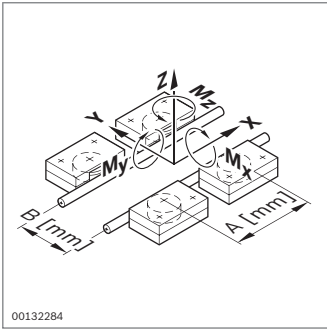
F = equivalent load (N)

s = length of stroke* (m)

n_s = stroke repetition rate (full cycles) (rpm)

*) The load capacities are reduced for $s < 2 \times L_1$ (long trolleys).

Please consult us.



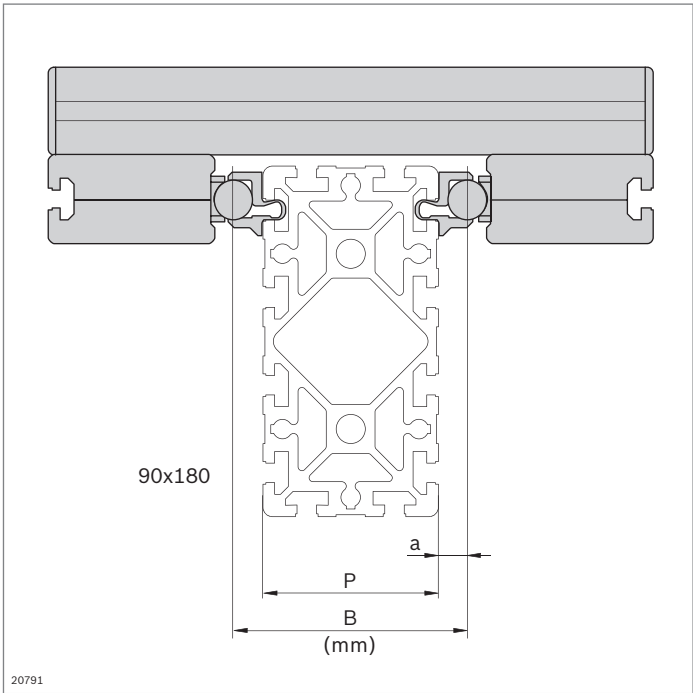
Load-dependent size selection

- The specified values are maximum single loads, which are reduced when loads are combined

	F_z (N)	F_y (N)	M_x (Nm)	M_z (Nm)	M_y (Nm)	v_{max} (m/s)	M_{max} (Nm)
LF6S	850	1400	13.6	$0.7 \times A^{1)}$	$0.4 \times A^{1)}$	5	9.5 / 7.6
LF6C	850	1400	$0.4 \times B^{1)}$	$0.7 \times A^{1)}$	$0.4 \times A^{1)}$	5	15
LF12S	2000	3500	78.0	$1.7 \times A^{1)}$	$1.0 \times A^{1)}$	5	30
LF12C	2000	3500	$1.0 \times B^{1)}$	$1.7 \times A^{1)}$	$1.0 \times A^{1)}$	5	30
LF20S	6000	12500	240.0	$6.2 \times A^{1)}$	$3.0 \times A^{1)}$	5	100
LF20C	6000	12500	$3.0 \times B^{1)}$	$6.2 \times A^{1)}$	$3.0 \times A^{1)}$	5	100

¹⁾ Note: A (support wheel spacing, see image above) in mm; see below for calculation of B (track width)

Do not exceed the maximum loading of the screwed connections for rails, slides and mounting.
Take account of the general service life of lubricants!

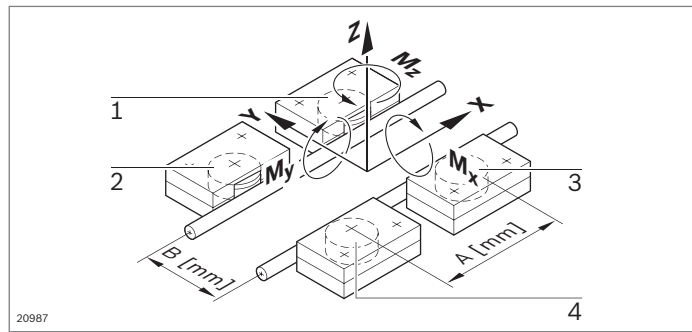


Calculating the track width B

$$B = P + 2 \times a$$

- B = Track width (in mm)
- P = Profile width (in mm)
- a = Rod distance (in mm)

Values for a: for LF6C = 9.5 mm (p. 13-13)
for LF12C = 9 mm (p. 13-25)
for LF20C = 15 mm (p. 13-39)



Roller 1:

$$F_r = -\left(\frac{F_y}{2}\right) - \left(\frac{M_z}{A}\right)$$

$$F_a = \left(\frac{F_z}{4}\right) + \left(\frac{M_x}{2 \cdot B}\right) - \left(\frac{M_y}{2 \cdot A}\right)$$

Roller 3:

$$F_r = +\left(\frac{F_y}{2}\right) + \left(\frac{M_z}{A}\right)$$

$$F_a = \left(\frac{F_z}{4}\right) - \left(\frac{M_x}{2 \cdot B}\right) - \left(\frac{M_y}{2 \cdot A}\right)$$

Roller 2:

$$F_r = -\left(\frac{F_y}{2}\right) + \left(\frac{M_z}{A}\right)$$

$$F_a = \left(\frac{F_z}{4}\right) + \left(\frac{M_x}{2 \cdot B}\right) + \left(\frac{M_y}{2 \cdot A}\right)$$

Roller 4:

$$F_r = +\left(\frac{F_y}{2}\right) - \left(\frac{M_z}{A}\right)$$

$$F_a = \left(\frac{F_z}{4}\right) - \left(\frac{M_x}{2 \cdot B}\right) + \left(\frac{M_y}{2 \cdot A}\right)$$

Table 1: Load factors for rollers

	Load case: $F_r \geq F_a $				Load case: $F_r < F_a $			
	x	y	x_0	y_0	x	y	x_0	y_0
LF6	1	3.1	1.2	3.5	0.5	3.6	1	3.7
LF12	1	4.2	1.2	5.2	0.5	4.7	1	5.4
LF20	1	4	1.2	4.9	0.5	4.5	1.1	5

Table 2: rollers - load capacities

	C related to 10^5 m (N)	C_0 (N)
LF6	3670	2280
LF12	8300	5000
LF20	23400	16600

Calculation of load on bearing for a trolley

Load of the individual rollers

- A mm: distance of the roller rotational axis
- B mm: center-to-center distance of the guide rods
- Only pressure forces can be transferred between rollers and guide rods in the radial direction. The following therefore applies for radial forces:
 $F_r \leq 0: F_r = 0$
- Rollers can be loaded equally in both directions. For this reason only the level of force F_a is required to calculate P and P_0

Equivalent dynamic and static loads

To calculate the service life of a cam roller guide, the roller with the greatest load has to be examined.

The following must be determined:

$$P = \max(P_1, \dots, P_4)$$

$$P_0 = \max(P_{01}, \dots, P_{04})$$

Equivalent dynamic load P

$$P = x \cdot |F_r| + y \cdot |F_a|$$

Equivalent static load P_0

$$P_0 = x_0 \cdot |F_r| + y_0 \cdot |F_a|$$

F_r (N): radial load of the roller

The following applies: $F_r \leq 0: F_r = 0$

F_a (N): axial load of the roller

x, x_0 : radial factor (Table 1)

y, y_0 : axial factor (Table 1)

C: dynamic load capacity (Table 2)

C_0 : static load capacity (Table 2)

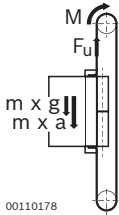
Static safety values:

$S_0 \geq 4$ recommended!

$$S_0 = \left(\frac{C_0}{P_0}\right)$$

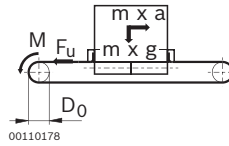
Linear guide

1. Peripheral force F_u

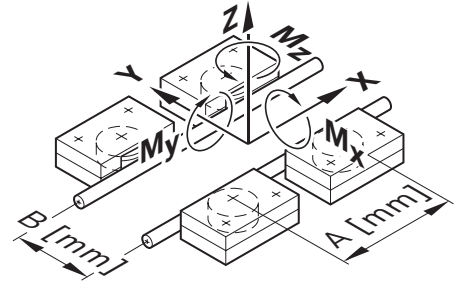


$$F_u = m \cdot a + m \cdot g + F_0 + \mu \cdot m \cdot g$$

$$F_u \leq F_{u \text{ perm}} !$$



$$F_u = m \cdot a + F_0 + \mu \cdot m \cdot g \leq F_{u \text{ perm}} !$$



F_0 : frictional force on return units
 μ : coefficient of friction

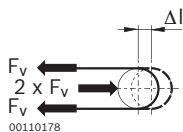
2. Required drive torque M

$$M = 1/2 \cdot D_0 \cdot F_u \leq M_{\text{perm}} !$$

	v (m/s)	$F_{u \text{ perm}}$ (N)	M_{perm} (Nm)	F_0 (N)	μ	D_0 (mm)	$D_0 \cdot \pi$ (mm)
LF6S	≤ 2.0	500	9.5	10	0.025	38.21	120
LF6S	2.01...5.0	400	7.6	10	0.025	38.21	120
LF6C	≤ 5.0	600	15.0	10	0.025	50.94	160
LF12S	≤ 5.0	820	30.0	30	0.020	73.20	230
LF12C	≤ 5.0	820	30.0	30	0.020	73.20	230
LF20S	≤ 5.0	2000	100.0	35	0.015	101.86	320
LF20C	≤ 5.0	2000	100.0	35	0.015	101.86	320

Calculating the drive

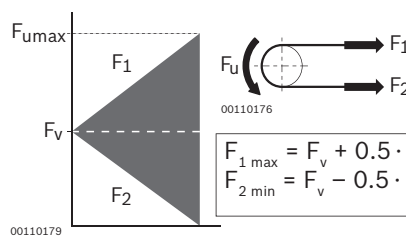
1. Preload force F_v of toothed belt



$$0.5 \cdot F_u \leq F_v \leq F_u$$

Recommended: $F_v = 0.5 \cdot F_u$

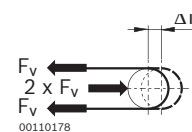
2. Maximum toothed belt force $F_{1 \text{ max}}$



$$F_{1 \text{ max}} = F_v + 0.5 \cdot F_u \leq F_{1 \text{ perm}} !$$

$$F_{2 \text{ min}} = F_v - 0.5 \cdot F_u > 0 !$$

3. Required preload length Δl



$$\Delta l = 0.5 \cdot F_v \cdot L / C_{\text{spec}} \leq \Delta l_{\text{max}} !$$

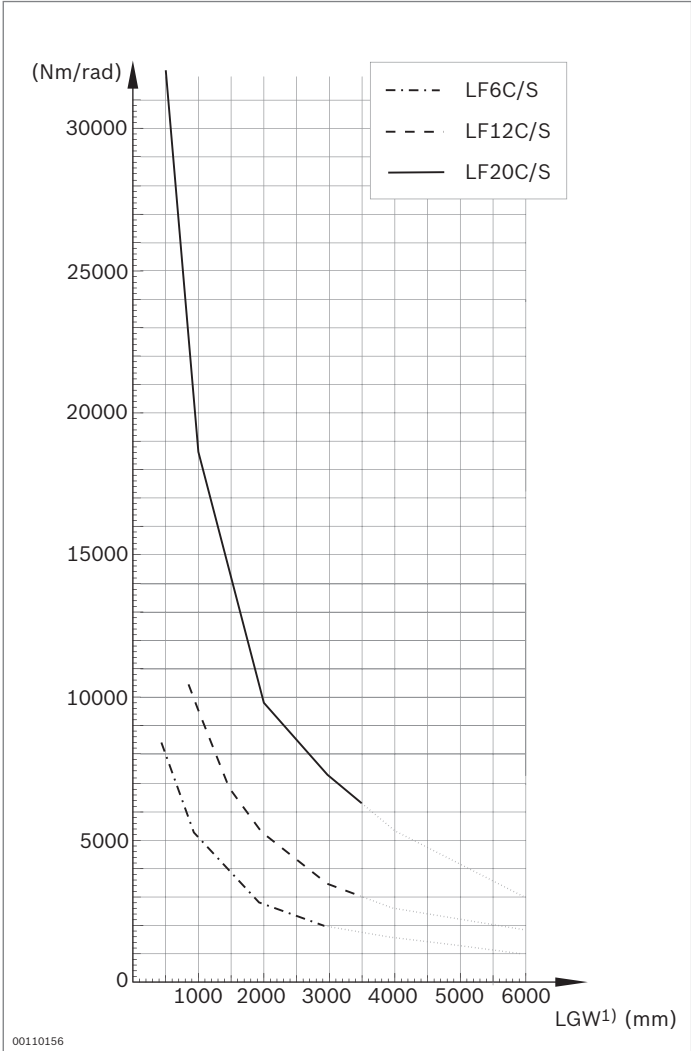
C_{spec} : belt rigidity; L: toothed belt length

	$F_{1 \text{ perm}}$ (N)	C_{spec} (N)	Δl_{max} (N)	L (mm)
LF6S	750	315000	11	$2 \cdot L_2 - L_1 + 360$
LF6C	900	420000	13	$2 \cdot L_2 - L_1 + 400$
LF12S	1230	1250000	16	$2 \cdot L_2 - L_1 + 630$
LF12C	1230	1250000	16	$2 \cdot L_2 - L_1 + 630$
LF20S	3000	1870000	23	$2 \cdot L_2 - L_1 + 780$
LF20C	3000	1870000	23	$2 \cdot L_2 - L_1 + 780$

Dimensioning of synchronous shafts

			LF6	LF12	LF20
Support separation SW	Horizontal		215 ... 3000 mm	275 ... 3500 mm	325 ... 3500 mm
	Vertical		215 ... 2000 mm	275 ... 2000 mm	325 ... 1100 mm
Nominal torque			max. 30 Nm	max. 60 Nm	max. 150 Nm
Permitted rpm			Diagram 3 (p. 13-61) max. 0.7 · nk	Diagram 3 (p. 13-61) max. 0.7 · nk	Diagram 3 (p. 13-61) max. 0.7 · nk
Elasticity	Axial		max. 2 mm	max. 3 mm	max. 4 mm
	Lateral		Diagram 4 (p. 13-61)	Diagram 4 (p. 13-61)	Diagram 4 (p. 13-61)
	Torsion angle		Diagram 5 (p. 13-61)	Diagram 5 (p. 13-61)	Diagram 5 (p. 13-61)

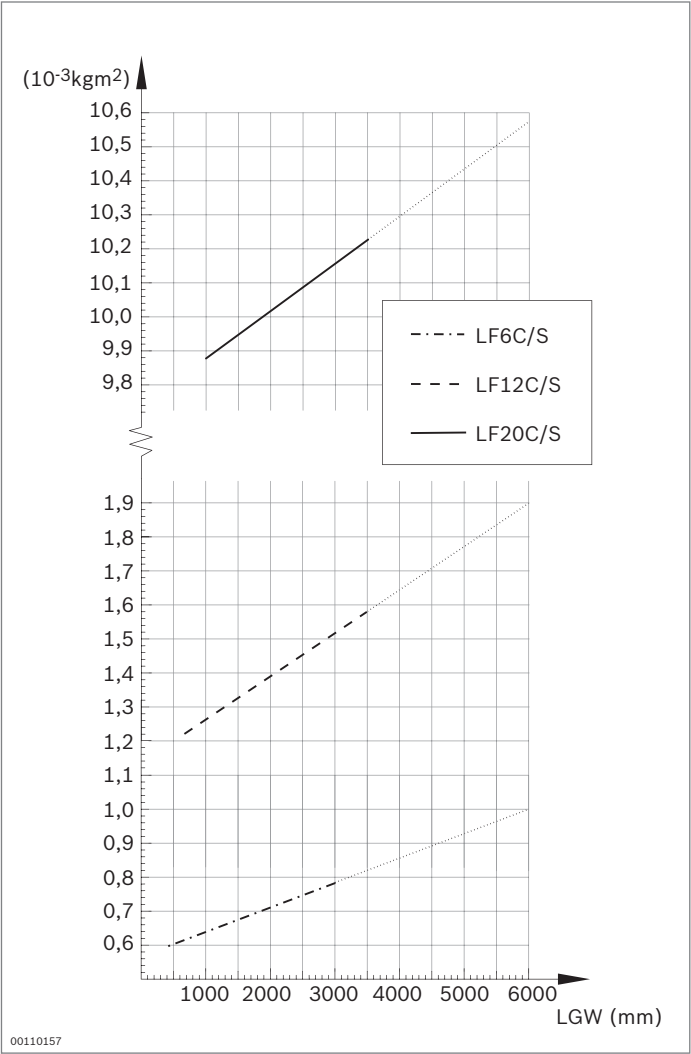
Tab. 1: Torsion resistance



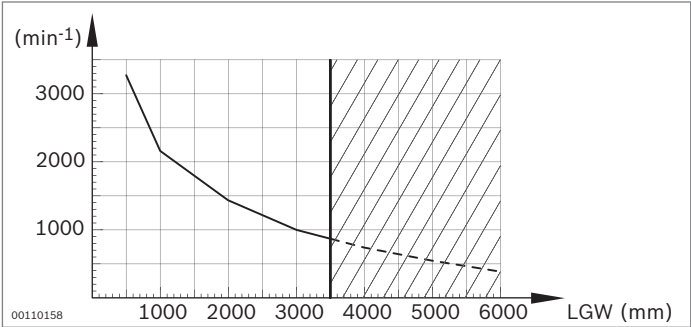
1) Long synchronous shaft LGW

- LF6 LGW = SW - 72
- LF12 LGW = SW - 101
- LF20 LGW = SW - 130

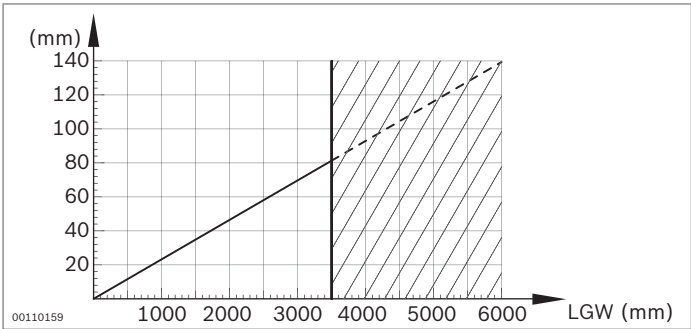
Tab. 2: Mass inertia



Tab. 3: Bending rpm nk



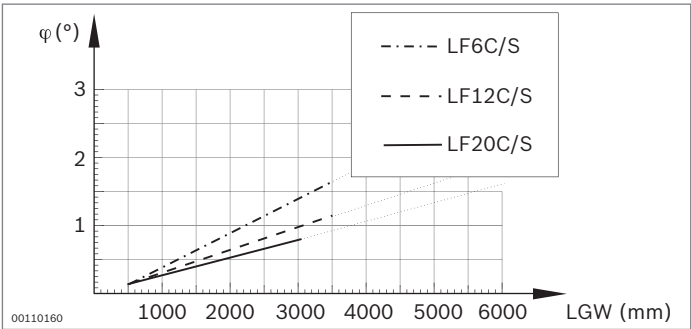
Tab. 4: Lateral offset



Aligned shafts are recommended.

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Tab. 5: Torsion angle



Planning tool for MGE linear guides

Automation from a single source

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- ▶ Clear result display and documentation

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