

Linear guide rails

LFS-8-1 LFS-8-2

Figure:
LFS-8-1 with
aluminium slide WS 1/70



Figure:
LFS-8-2 with
aluminium slide WS 1/70

Features

- W 30 x H 20 mm (LFS-8-1)
W 30 x H 32.5 mm (LFS-8-2)
- 2 precision steel shafts Ø 8
- Anti-twist lock
- Aluminium shaft housing profile, naturally anodised
- Fixing from below with M6 tapped rails in the T-key insert
- Conditionally self-supporting
- Special lengths to order
- Weights: approx. 1.6 kg/m (LFS-8-1)
approx. 2.0 kg/m (LFS-8-2)

Options:

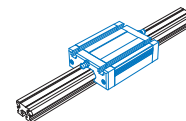
- Stainless steel version
- Drilled for M6 (LFS-8-1 only)

Ordering key

235 00X XXXX

LFS-8-1/standard = **0** Length in mm (in 100 mm raster)
LFS-8-1/stainless = **1** e.g. **0029** = Length 298
LFS-8-2/standard = **2** **0299** = Length 2998
LFS-8-2/stainless = **3** Steel shaft length: total length L - 3 mm

Profile up to 6000 mm available without impact connection, steel shafts divided.



Aluminium slide

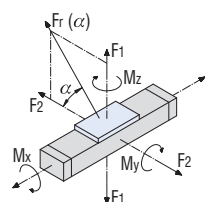
- With recirculating ball guide
- Clamping surface plane milled
- M6 T-key inserts
- Central lubrication option
- Adjustable for no play
- Option: stainless steel version

Load data

Shaft slide WS 1/70	
C ₀	3114 N
C	1846 N
F ₁ static	2659 N
F ₁ dynamic	1576 N
F ₂ static	3114 N
F ₂ dynamic	1846 N
M _x static	37.3 Nm
M _y static	100.5 Nm
M _z static	117.6 Nm
M _x dynamic	22.1 Nm
M _y dynamic	59.5 Nm
M _z dynamic	69.7 Nm

Shaft slide WS 1	
C ₀	4590 N
C	2390 N
F ₁ static	3920 N
F ₁ dynamic	2041 N
F ₂ static	4590 N
F ₂ dynamic	2390 N
M _x static	55.0 Nm
M _y static	148.1 Nm
M _z static	173.4 Nm
M _x dynamic	28.6 Nm
M _y dynamic	77.1 Nm
M _z dynamic	90.2 Nm

Trolley LW 6	
C ₀	2160 N
C	4000 N
F ₁ static	4320 N
F ₁ dynamic	3792 N
F ₂ static	2160 N
F ₂ dynamic	4000 N
M _x static	121.1 Nm
M _y static	194.4 Nm
M _z static	97.2 Nm
M _x dynamic	106.3 Nm
M _y dynamic	170.6 Nm
M _z dynamic	180.0 Nm



$$Fr(\alpha) = \frac{F_2}{\cos \alpha}$$

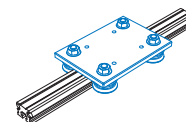
$$Fr(\alpha) = \frac{F_1}{\sin \alpha}$$

L 96 × W 72 × H 28.5 mm (WS 1/70)
(weight: approx. 0.4 kg)

Part no.: **223100 0070**
Stainless steel: **223101 0070**

L 126 × W 72 × H 28.5 mm (WS 1)
(weight: approx. 0.5 kg)

Part no.: **223100**
Stainless steel: **223101**



Trolley LW 6

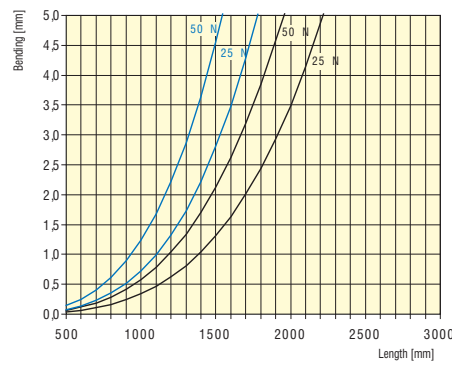
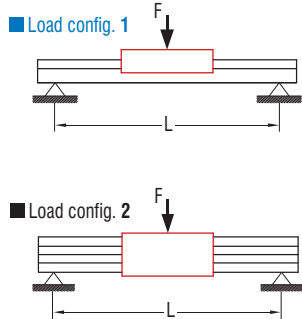
- L 125 x W 90 x H 7.7 mm
- ground steel plate
- 4 rollers Ø 31, sealed for life
- adjustable for no play
- weight: approx. 1 kg

Part no.: **223011**

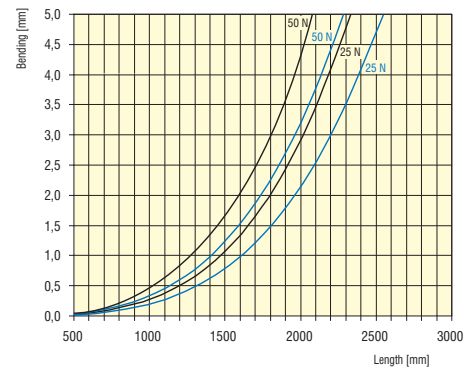
Linear guide rails

LFS-8-1 LFS-8-2

Bending



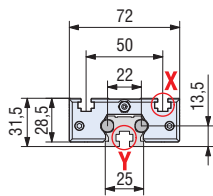
LFS-8-1



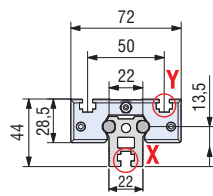
LFS-8-2

Dimensioned drawings

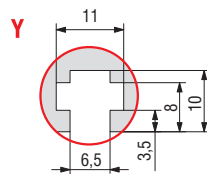
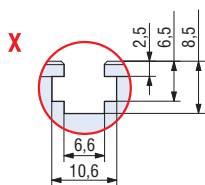
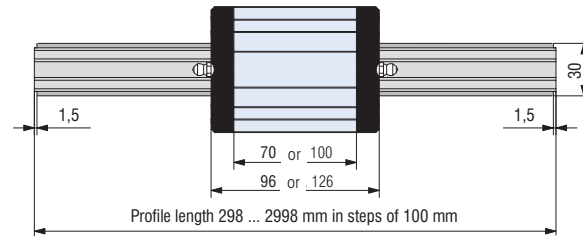
LFS-8-1 or LFS-8-2 with aluminium slide WS 1/70 or WS 1



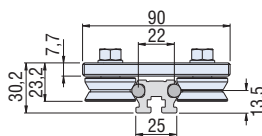
LFS-8-1



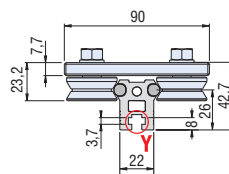
LFS-8-2



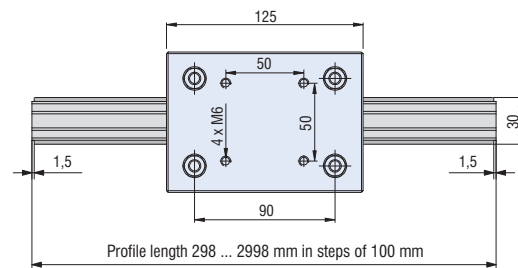
LFS-8-1 or LFS-8-2 with trolley LW6



LFS-8-1



LFS-8-2



Linear units with toothed belt drive

LEZ 1

Guides
and shaft slides
also available stainless.



with shaft slide



with trolley

Features

- Aluminium profile, miniature linear guide LFS-8-2
- No-play feed with toothed belt drive
 - toothed belt with 3 mm interval, width 9 mm
- Feed per turn: 60 mm
- Repeatability less than or equal to ± 0.2 mm
- Max. feed. 1.5 m/s

Accessories can be found on pages 2-94.

Options:

- Special 100 mm raster lengths to order, max. 6000 mm
- Securing with integrated M6 tapped rail, raster 50 mm

Ordering key

232 005 XXXX

Drives/Slides

Trolley

- 8 = without motor, with shaft slide
- 9 = without motor, with trolley

Profile lengths LFS-8-2 (mm)

- 298, 398, 498, 598, 675, 698, 798, 998, 1498, 1798, 1998, 2498, 2998
(e. g. 398 mm = 040
675 mm = 068)
Option: up to 6000 mm

Technical specification

Belt type.....	HTD 3M, width 9 mm
Slide weight.....	0.430 kg
Weight without drive module.....	1000 mm = 3 kg
specific weight of the toothed belt.....	0.0225 kg/m
Trolley weight.....	1.03 kg
specific guide weight.....	0.200 kg/100 mm
Effective \varnothing of the synchronous disks.....	19.10 mm
Moment of inertia of the synchronous discs.....	5.585×10^{-7} kgm ²
Feed per turn.....	60 mm

Drive module with stepper motor MS-045 HT

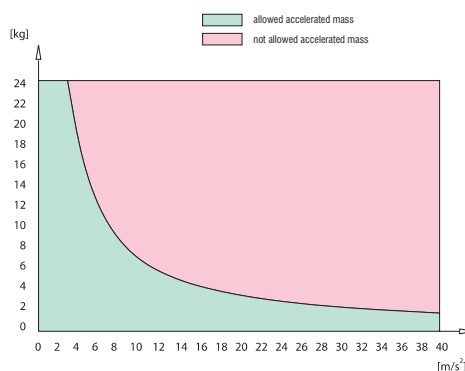


Drive module with stepper motor MS-135 HT



Load diagram

Permitted accelerated weights relative to the belt strength.*



* with vertical construction, the acceleration due to gravity ($g = 9.81$ m/s²) must be taken into account

Bending data is on page 2-23.

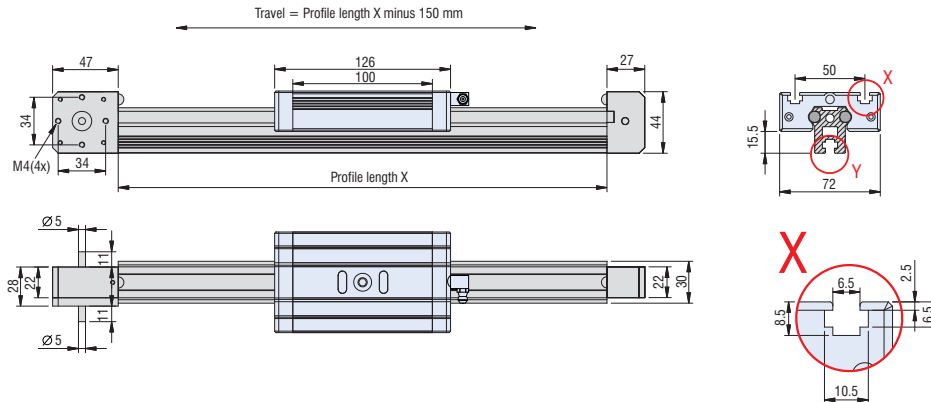
Linear units

with toothed belt drive

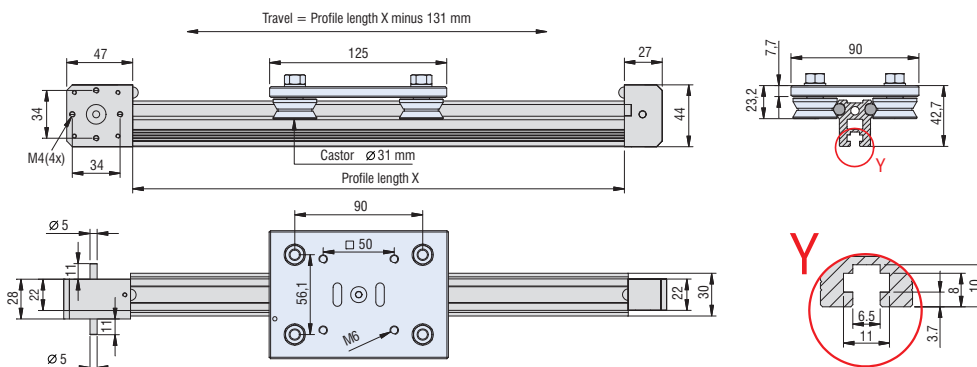
LEZ 1

Dimensioned drawings

without motor, with shaft slides



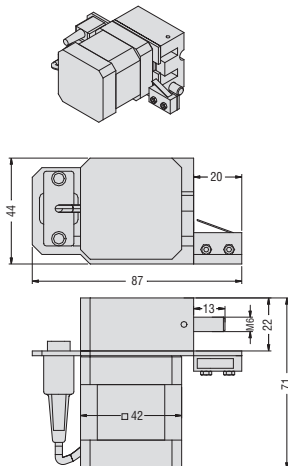
without motor, with trolley



Motor modules (Motor pin assignments are on Page 2-70.)

Drive module with stepper motor
MS-045 HT (direct drive)
Feed: 60 mm / turn

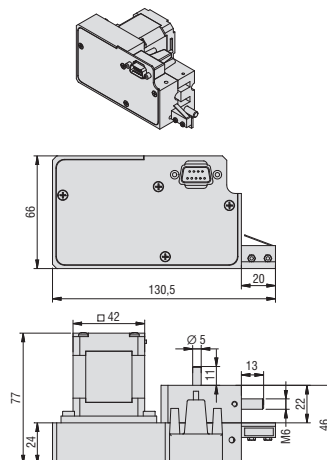
Part no.: **396048 3015**



Total length with motor module: profile length + 94 mm

Drive module with stepper motor
MS-045 HT (reduction 2:1)
Feed: 30 mm / turn

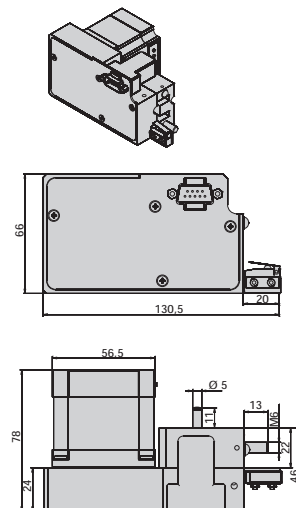
Part no.: **396049 3015**



Total length with motor module: profile length + 138 mm

Drive module with stepper motor
MS-135 HT (reduction 2:1)
Feed: 30 mm / turn

Part no.: **396056 3015**



Accessories

LEZ 1



Angle bracket

- for LEZ 1

Part no.: **209110 0010**



20/30 coupling

- for LEZ 1
- 1 VE = 1 coupling

Part no.: **218001 5081**

Shaft slides 1/70

- L 96 x W 72 x H 28.5mm
- Clamping surface plane milled, T-slide thread M6
- Central greasing option, adjustable for no-play
- Weight: 0.35 kg
- Option: stainless steel version

Part no.: 223 100 0070
stainless steel: **223 101 0070**

Transmission shaft

Length 1 m
Part no.: **227008 1000**

LEZ 2



Motor fixing plate

- for LEZ 2
- incl. fixing material
- for direct drive see page C78 et seq.

Part no.: **232199 0004**



Coupling for Transmission shaft

- for LEZ 2
- 1 VE = 2 unit couplings

Part no.: **218050 0002**

Transmission shaft ø 25 mm

Length 1 m
Part no.: **219001 0125**

Length 2 m
Part no.: **219001 0225**

Stationary bearing for transmission shaft

VE 1 unit
Part no.: **896202 5562**

LEZ 3



Coupling for transmission shaft

- for LEZ 3
- 1 VE = 2 unit couplings

Part no.: **218050 0002**

Transmission shaft ø 25 mm

Length 1 m
Part no.: **219001 0125**

Length 2 m
Part no.: **219001 0225**

Stationary bearing for transmission shaft

VE 1 unit
Part no.: **896202 5562**

LEZ 9



30/40 coupling

- for LEZ 9
- 1 VE = 1 coupling

Part no.: **218002 8081**

Shaft slides WS 11/70

- L 96 x W 96 x H 32 mm
- Clamping surface plane milled, T-slide thread M6
- Central greasing option, adjustable for zero play
- Weight: 0.4 kg
- Option: stainless steel version

Part no.: **223111 0070**
Stainless steel: **223111 1070**

Transmission shaft

Length 1 m
Part no.: **227008 1000**