

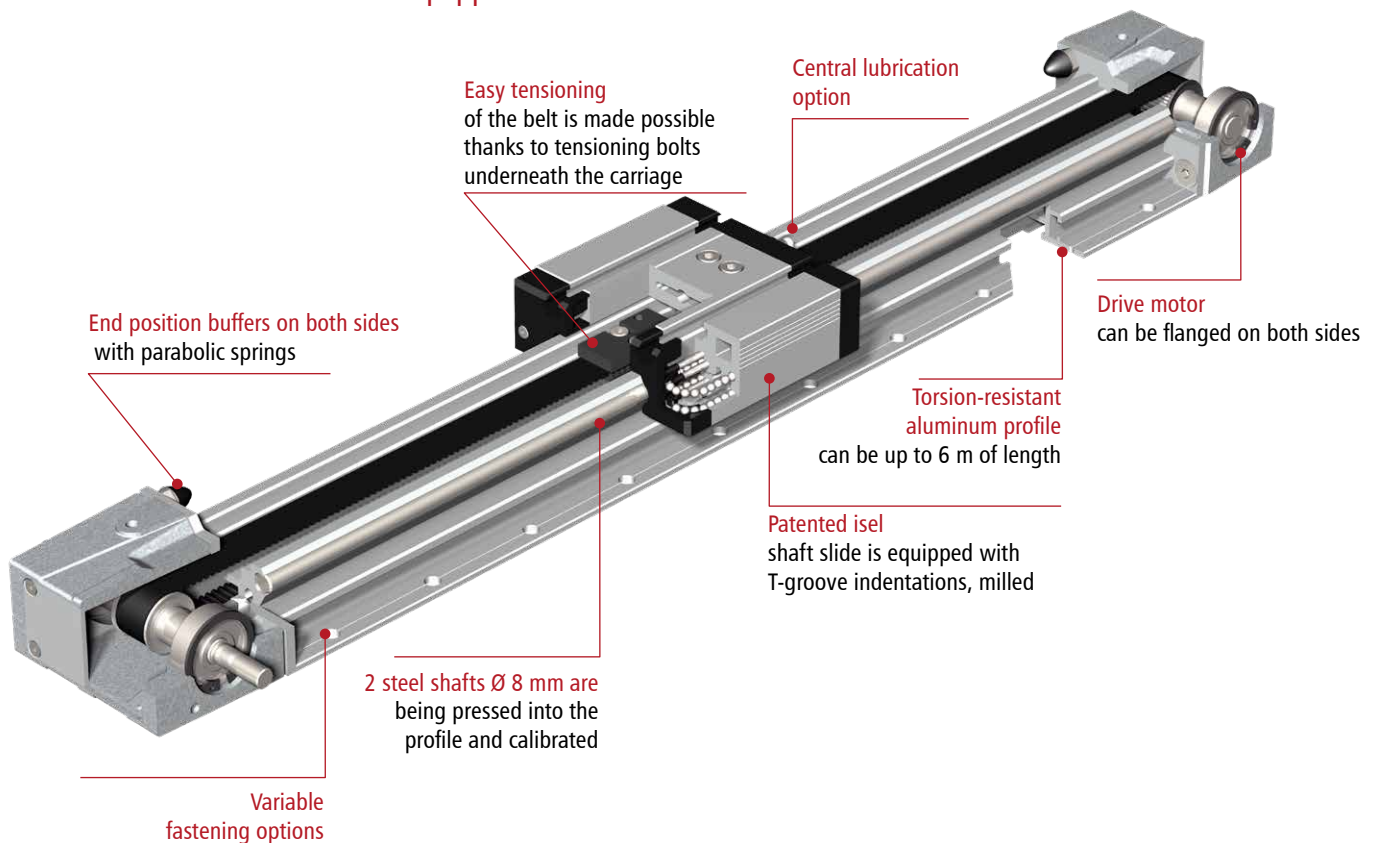


Precisely with high dynamics throughout long distances

The linear units equipped with toothed belt drives are the first choice when it comes to high speeds and long travel distances, thanks to the precise positioning and high repeat accuracy in the areas of handling, assembly automation and machine handling. The compact and flexible modules turn on greatly dynamic movements, and that is why short cycle times do not require big investments.

The linear units are, therefore, the best for both fast handling-positioning tasks, and for performing light to medium-heavy loads. The modules are designed of extruded aluminum casing profiles, linear rail guides are based on the recirculating ball principle equipped with shaft slides or roller guides. Different versions of the linear units, which are equipped with toothed belt drive, provide our customers a large variety of products. Since there are countless varieties of accessories and due to the modular design, we can also adapt linear units to your individual demands or combine them together into multi-axis systems.

Functional overview – linear unit equipped with toothed belt drive

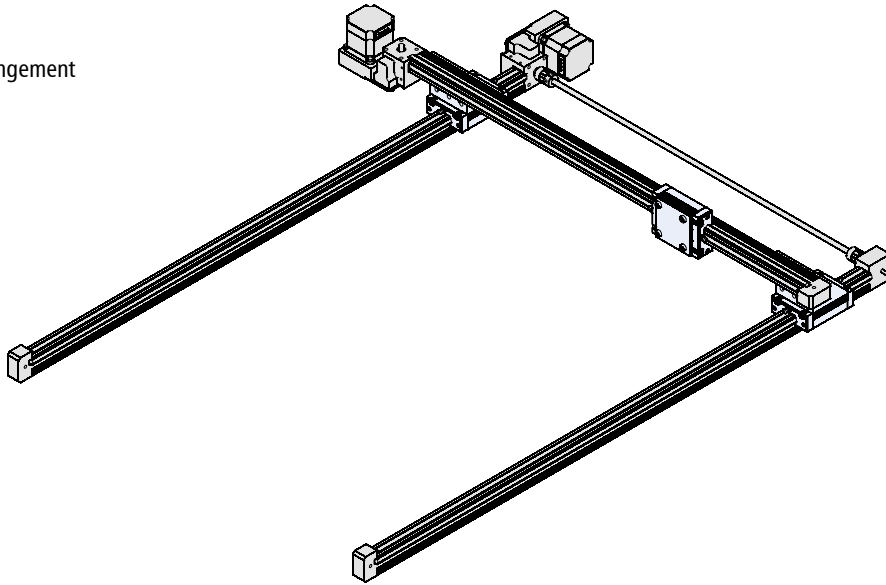




Combination examples

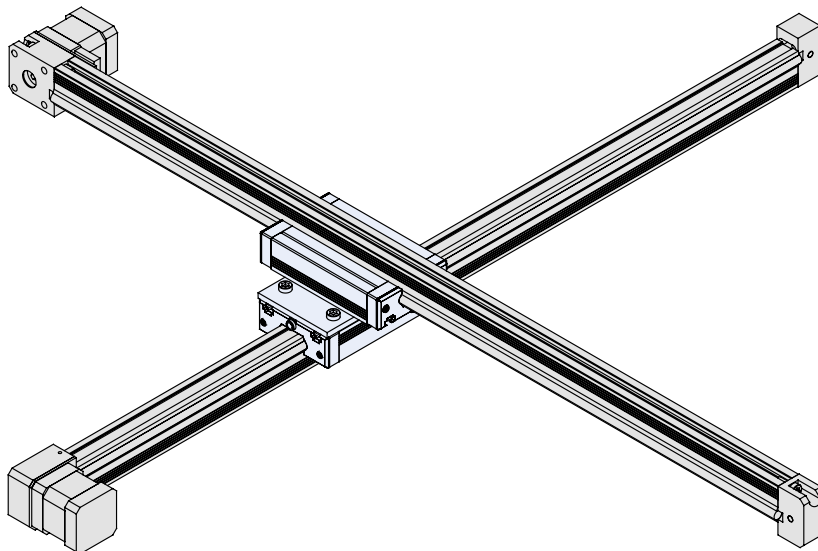
LEZ 1

- 2-axis flatbed arrangement



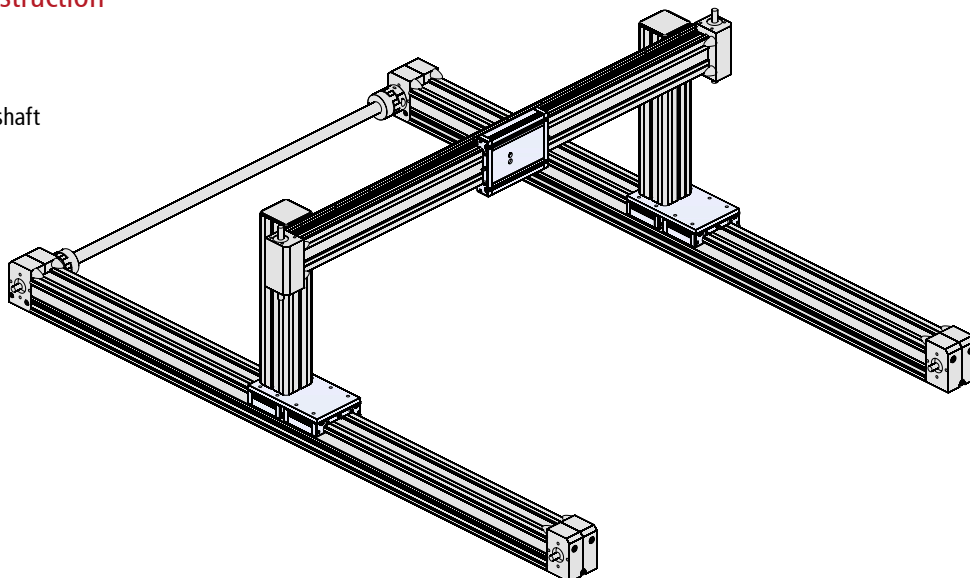
XY stage LEZ 1

- 2 x LEZ 1
- 1 x connection plate



2-axis H-construction

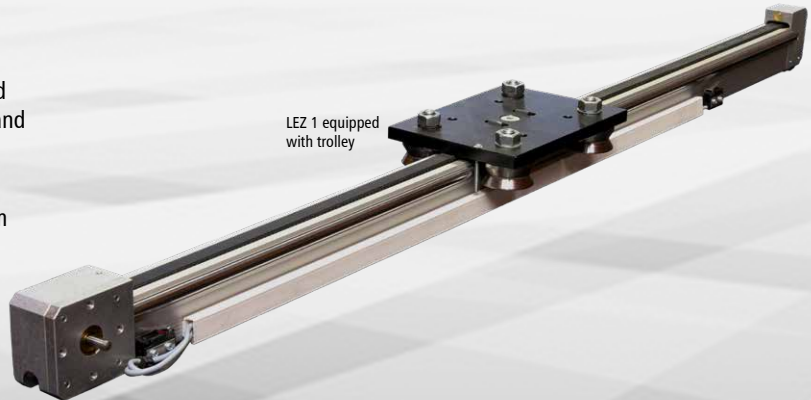
- 2 x LEZ 3
- 1 x LEZ2
- Transmission shaft





Linear unit equipped with toothed belt drive LEZ 1

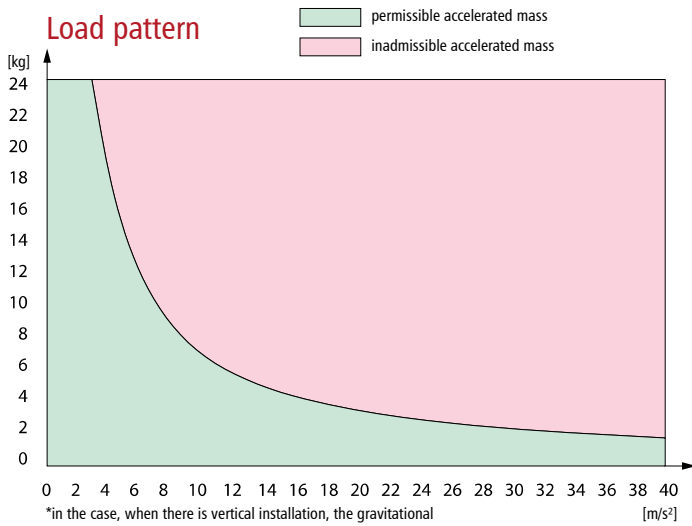
- Aluminum profile, Miniature linear guide LFS-8-2
- Clearance-free feed is equipped with toothed belt drive toothed belt with 3 mm gradient and width of 9 mm
- Feed per rotation: 60 mm
- Repeatability less than or equal to ± 0.2 mm
- Maximum feed of 1.5 m/s
- Overrun limit switch is equipped with connection cable
- Mechanical limit switches



Options:

- Special lengths in grid size of 100 mm upon request, maximum size - 6,000 mm
- Fastening done via integrated threaded rail M6, grid size of 50 mm
- Stepping motor drive module of 50Ncm, SubD Part No.: 396049 3010L
- Reed sensor

Load pattern



Technical data

Belt type	HTD 3 M, width 9mm
Slide weight	0.430 kg
Weight without drive module	1000 mm = 3 kg
specific mass of the toothed belt	0.0225 kg/m
Carriage weight	1.03 kg
specific guidance on weight	0.200 kg/100 mm
Feed per rotation	60 mm
Effective diameter of the synchronizing pulleys	$\varnothing 19.10 \text{ mm}$
Mass moment of inertia of the synchronizing pulleys	$5.585 \times 10^{-7} \text{ kg m}^2$

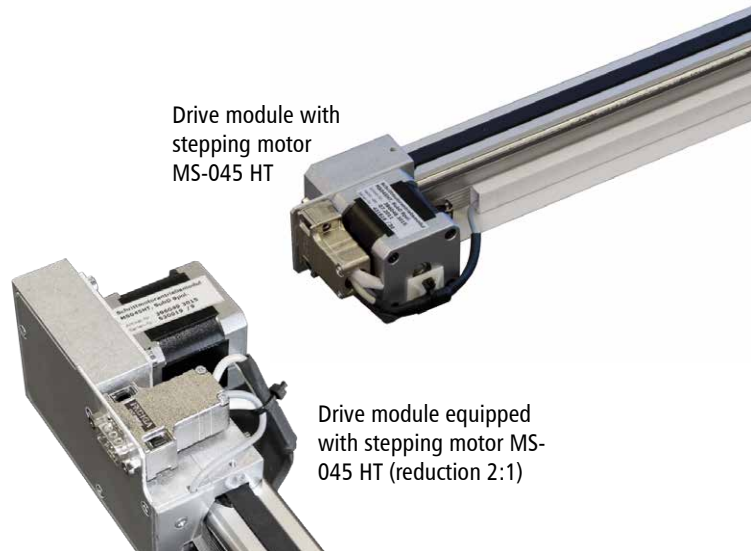
Order key

232005 XXXX

Drive/slide carriage
8 = without motor, with shaft slide
9 = without motor, with carriage

Profile lengths LFS-8-2 (mm)
 298, 398, 498, 598, 675, 698, 798, 998, 1,498, 1,798, 1,998, 2,498, 2,998
 (for example 398 mm = 040
 675 mm = 068)
 Option: up to 6,000 mm

Drive module with stepping motor MS-045 HT

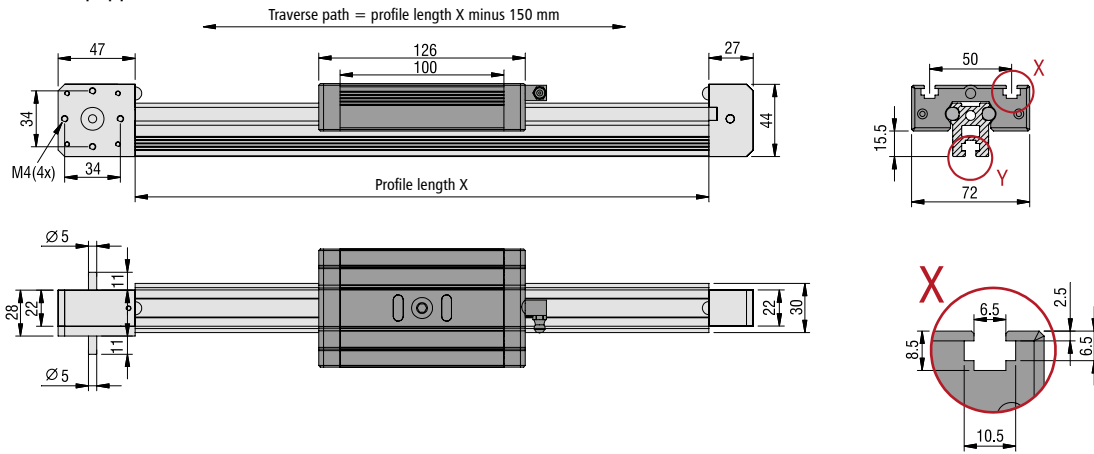


Drive module equipped with stepping motor MS-045 HT (reduction 2:1)

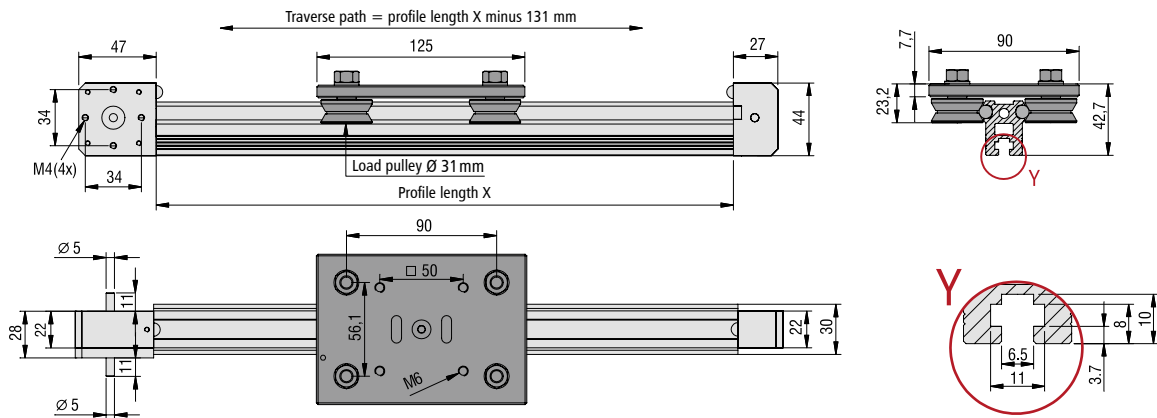


Dimensional drawings

without motor, equipped with shaft slide



without motor, equipped with trolley



Drive modules

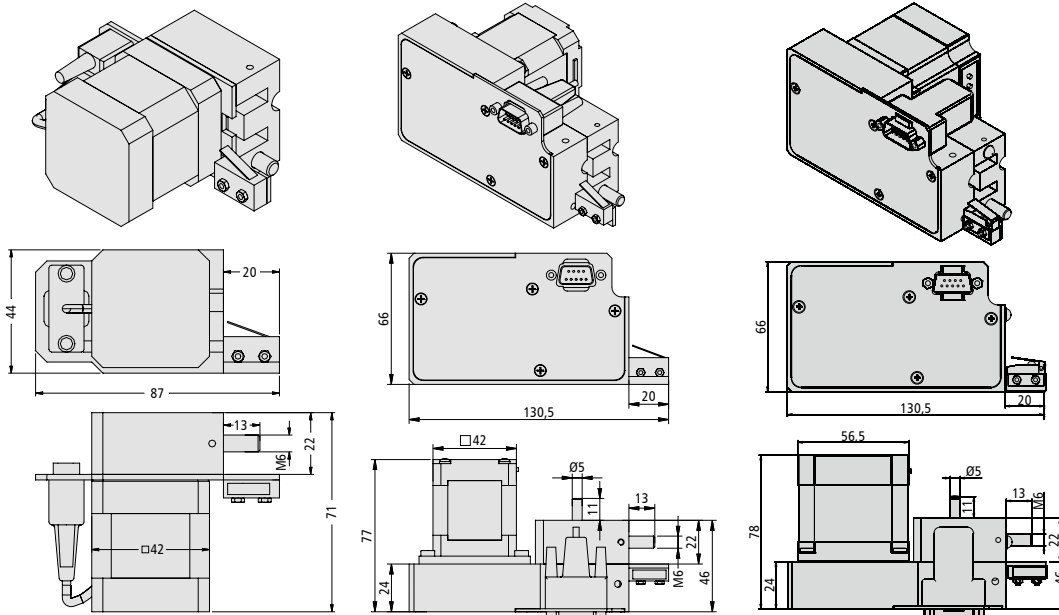
Drive module is with stepper motor MS-048 HT (direct drive)
feed: 60 mm / revolution
Part No.: 396048 3015

Drive module is with stepper motor MS-048 HT (reduction 2:1)
Feed: 30 mm / rotation
Part No.: 396049 3015

Drive module is with stepper motor MS-135 HT (reduction 2:1)
Feed: 30 mm / rotation
Part No.: 396056 3015

Drive module equipped with servo motor EC-42 (Reduction 2:1)
Feed: 30 mm / rotation
Part No.: 396407 3060

Total length including the motor module:
Profile length + 163.5 mm





Linear unit equipped with toothed belt drive LEZ 2

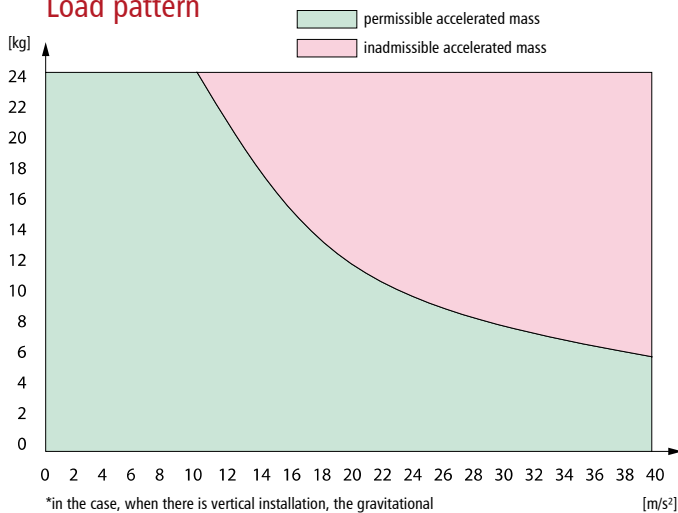
- Aluminum profile, with miniature linear guide LFS-8-5
- Clearance-free feed is equipped with toothed belt drive toothed belt with 5 mm gradient and width of 25 mm
- Maximum feed of 5 m/s
- Shaft slide WS 3, L 176 x W 130 mm
- Feed per rotation: 70 mm
- Repeatability less than or equal to ± 0.2 mm
- available in lengths up to 6,000 mm
- Overrun limit switch is equipped with connection cable
- Mechanical limit switches



Options:

- Special lengths in grid size of 100 mm upon request, maximum size - 6,000 mm
- Also as a direct drive, which is equipped with a stepping motor servo motor
- inductive limit switches

Load pattern



Technical data

Belt type	HTD 5M, width 25 mm
Slide weight	0.940 kg
Weight without drive module	1000 mm \cong 7.9 kg
specific mass of the toothed belt	0.09 kg/m
Carriage weight	2.03 kg
specific guidance on weight	0.472 kg/100 mm
Feed per rotation	70 mm
Effective diameter of the synchronizing pulleys	$\varnothing 22.28 \text{ mm}$
Mass moment of inertia of the synchronizing pulleys	$5.58 \cdot 10^{-6} \text{ kgm}^2$

Order key

232002 XXXX

Drive/slide carriage
8 = without motor, with shaft slide
9 = without motor, with carriage

Profile lengths (mm)
 696, 996, 1496, 1996, 2496, 2996
 (e.g. 696 mm = 070
 1496 mm = 150)
 Option: up to 6000 mm

Drive module is equipped with servo motor EC 60





Linear unit equipped with toothed belt drive LEZ 3

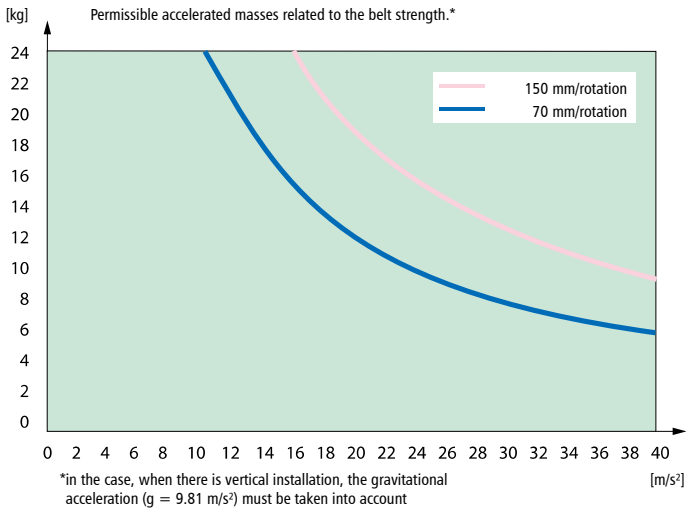
- Aluminum profile, miniature linear guide LFS-8-4
- Clearance-free feed is equipped with toothed belt drive toothed belt with 5 mm gradient and width of 25 mm
- Maximum feed of 5 m/s
- Shaft slide WS 3, L 176 x W 130 mm
- Feed per rotation: 70 mm or 150 mm
- Repeatability less than or equal to ± 0.2 mm
- Limit and/or reference switch accuracy < 0.1 mm
- available in lengths up to 6,000 mm
- Motor modules can be flanged on the right and left side
- Mechanical limit switches



Options:

- Special lengths in grid size of 100 mm upon request, maximum size - 6000 mm

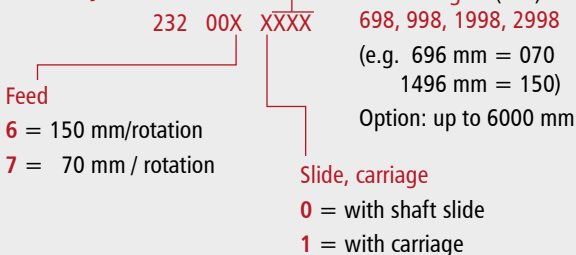
Load pattern



Technical data

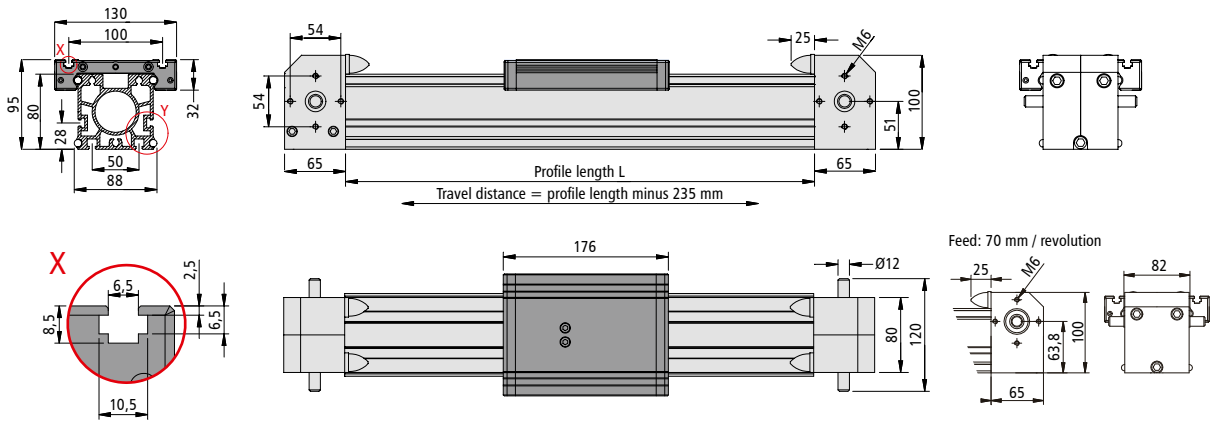
Belt type	HTD 5M, width 25 mm
Slide weight	0.940 kg
Weight without drive module	1000 mm $\hat{=}$ 10.5 kg
specific mass of the toothed belt	0.09 kg/m
Carriage weight	2.03 kg
specific guidance on weight	0.648 kg/100 mm
Feed per rotation	70 mm or 150 mm
Effective diameter of the synchronizing pulleys at 70 mm feed/rotation	$\varnothing 22.28$ mm
Effective diameter of the synchronizing pulleys at 150 mm feed/rotation	$\varnothing 47.75$ mm
The synchronizing pulleys have a mass moment of inertia at 70 mm feed/rotation	$5.58 \cdot 10^{-6} \text{ kgm}^2$
The synchronizing pulleys have a mass moment of inertia at 150 mm feed/rotation	$1.796 \times 10^{-4} \text{ kg m}^2$

Order key

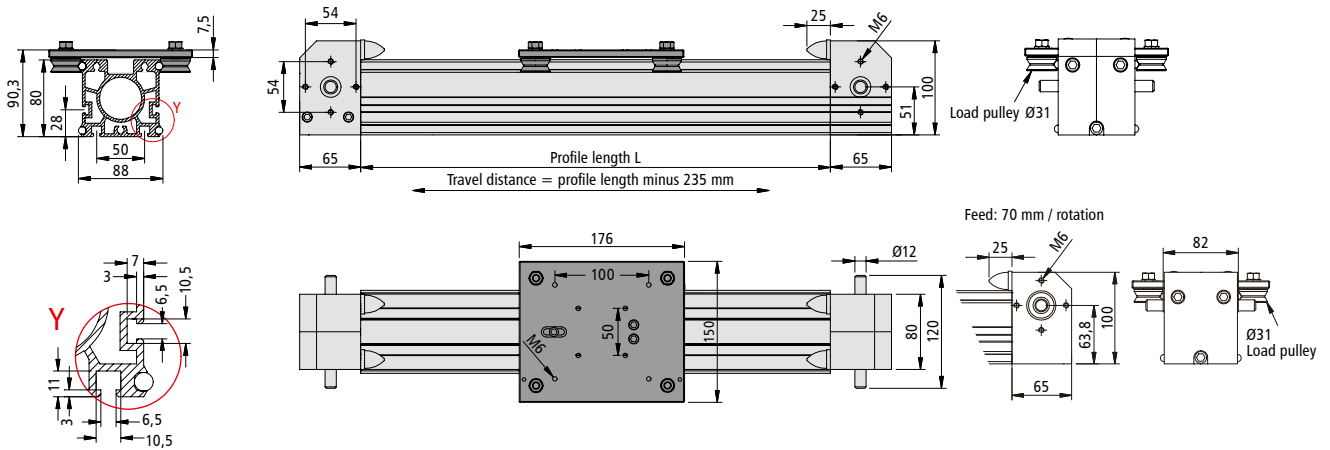




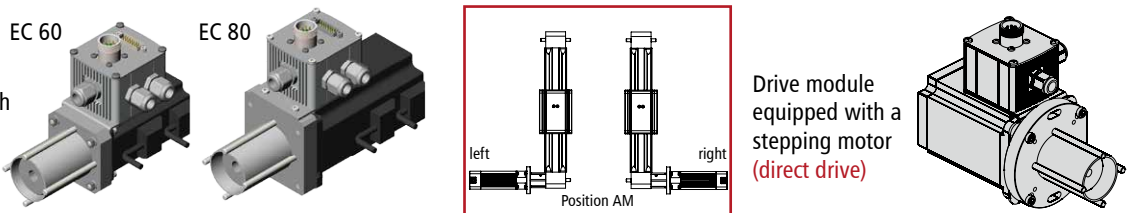
Dimensional drawings
equipped with shaft slide



equipped with trolley

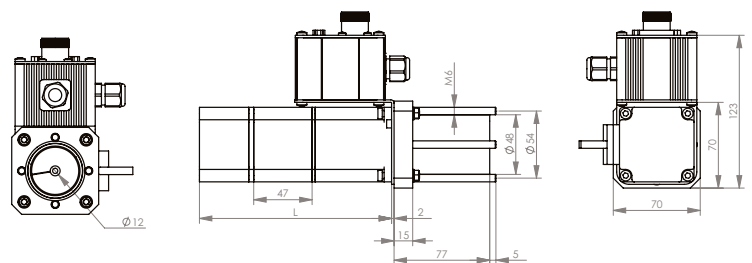


Drive modules



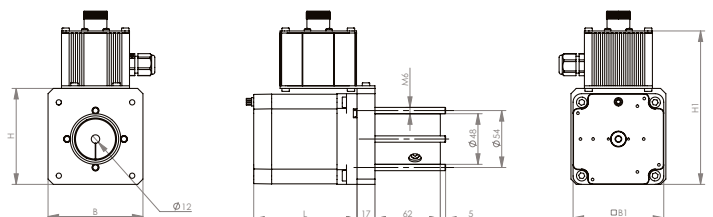
Dimensional drawing EC 60

Part No.	Motor module	Length, L
396421 006012	EC 60TM 200W 48V	103.5 mm
396421 026012	EC 60 TM 200W 48V equipped with brake	150.5 mm
396421 007012	EC 60 TM 200W 310V	107.7 mm
396421 027012	EC 60 TM 200W 310V equipped with brake	154.7 mm
396440 008012	EC 60 TM 400W 48V	131.5 mm
396440 028012	EC 60 TM 400W 48V equipped with brake	178.5 mm
396440 007012	EC 60 TM 400W 310V	135.7 mm
396440 027012	EC 60 TM 400W 310V equipped with brake	178.5 mm



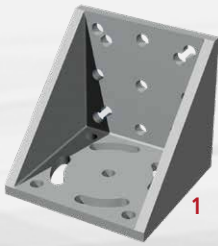
Dimension drawing motor module 2

Part No.	Motor module	L [mm]	H [mm]	H1 [mm]	B [mm]	B1 [mm]
396475 007012	EC 80 TM 750W	143	85	139.5	80	80
396475 027012	EC 80 TM 750W equipped with brake	191				
396085 006012	MS 600 HT	96	91	145.5	90	86
396088 006012	MS 900 HT	126				





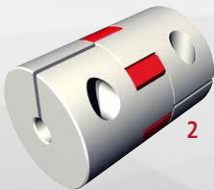
Accessories LEZ



1



3



2



4

LEZ 1

Wire angle

- made for LEZ 1

Part No.: 209110 0010 (image 1)

20/30 coupling

- made for LEZ 1
- 1 PU = 1 coupling

Part No.: 218001 5081 (image 2)

Shaft slide 1/70

- L 96 x W 72 x H 28.5 mm
- Milled clamping surface, M6 T-slot indentations
- centered Lubrication option, adjustable without clearance
- Weight: 0.35 kg
- Option: stainless design

Part No.: 223100 0070

stainless: 223101 0070

Transmission shaft

Length 1 m

Part No.: 227008 1000

LEZ 2

Motor mounting plate

- made for LEZ 2
- Including mounting material
- made for direct drive

Part No.: 232199 0004 (image 3)

Coupling for the transmission shaft

- made for LEZ 2
- 1 PU = 2 pieces couplings

Part No.: 218050 0002 (image 4)

Transmission shaft Ø 25 mm

Length 1 m

Part No.: 219001 0125

Length 2 m

Part No.: 219001 0225

Pillow block bearing designed for transmission shaft

PU 1 piece

Part No.: 896202 5562

LEZ 3

Coupling for the transmission shaft

- made for LEZ 3
- 1 PU = 2 pieces couplings

Part No.: 218050 0002 (image 5)

Transmission shaft Ø 25 mm

Length 1 m

Part No.: 219001 0125

Length 2 m

Part No.: 219001 0225

Pillow block bearing is designed for transmission shaft

PU 1 piece

Part No.: 896202 5562