

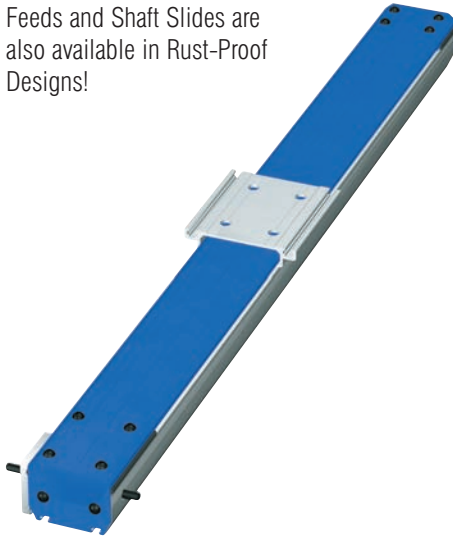
Timing Belt Feed Axis

Closed Timing Belt Feed Axis

LEZ 1 G

(BlueLine-Series 1)

Feeds and Shaft Slides are also available in Rust-Proof Designs!



Features

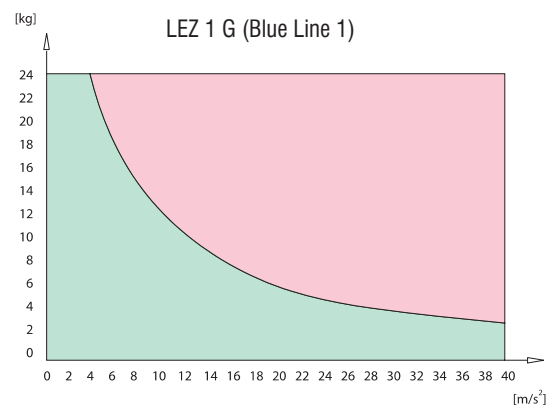
- Aluminium profile with midjet linear guide LFS-8-1
- Clearance-free feed with timing belt feed axis - timing belt with 3 mm pitch, width 15 mm
- Feed 2.4 m/s, at the most
- Shaft slide WS 1 L 126 x W 72 mm
- Repetitive accuracy less or equal ± 0.2 mm
- Limit and/or reference switch Accuracy < 0.1 mm
- Available in lengths up to 2.05 m
- Motor can be mounted on both sides due to an extended shaft end on the driving side
- Numerous combination possibilities due to additional special and angle profiles
- Integrated reference switch

Technical Data

Belt version.....HTD 3M, width 15 mm
 Mass of slide.....0.730 kg
 Weight without drive module.....1,000 mm \cong 6.25 kg
 Nominal mass of timing belt.....0.0375 kg/m
 Nominal weight of feed axis.....0.440 kg/100 mm
 Effective diameter of the synchronized pulleys... \varnothing 15.28 mm
 Moment of inertia of the synchronized pulleys... $1.461 \cdot 10^{-6}$ kgm²
 Feed per revolution.....48 mm

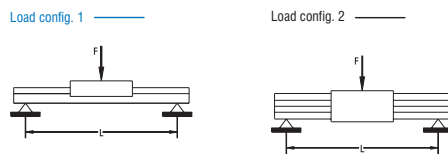
Load Diagram

Permissible accelerated masses related to belt strength*

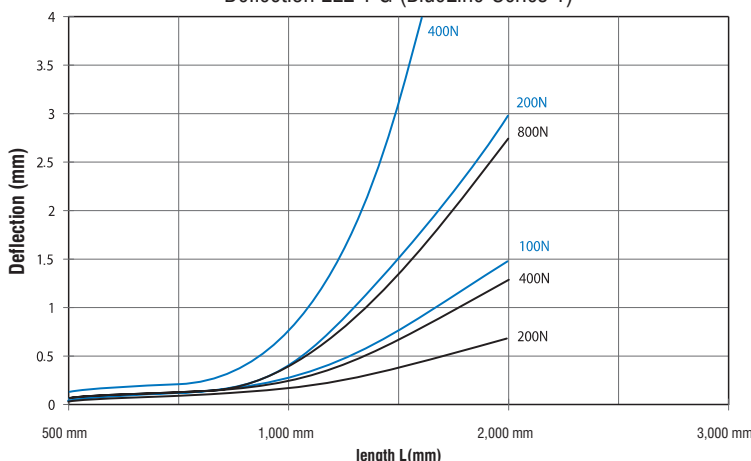


*At vertical assembly, the acceleration due to gravity ($g = 9.81$ m/s²) has to be taken into account

Deflection



Deflection LEZ 1 G (BlueLine-Series 1)



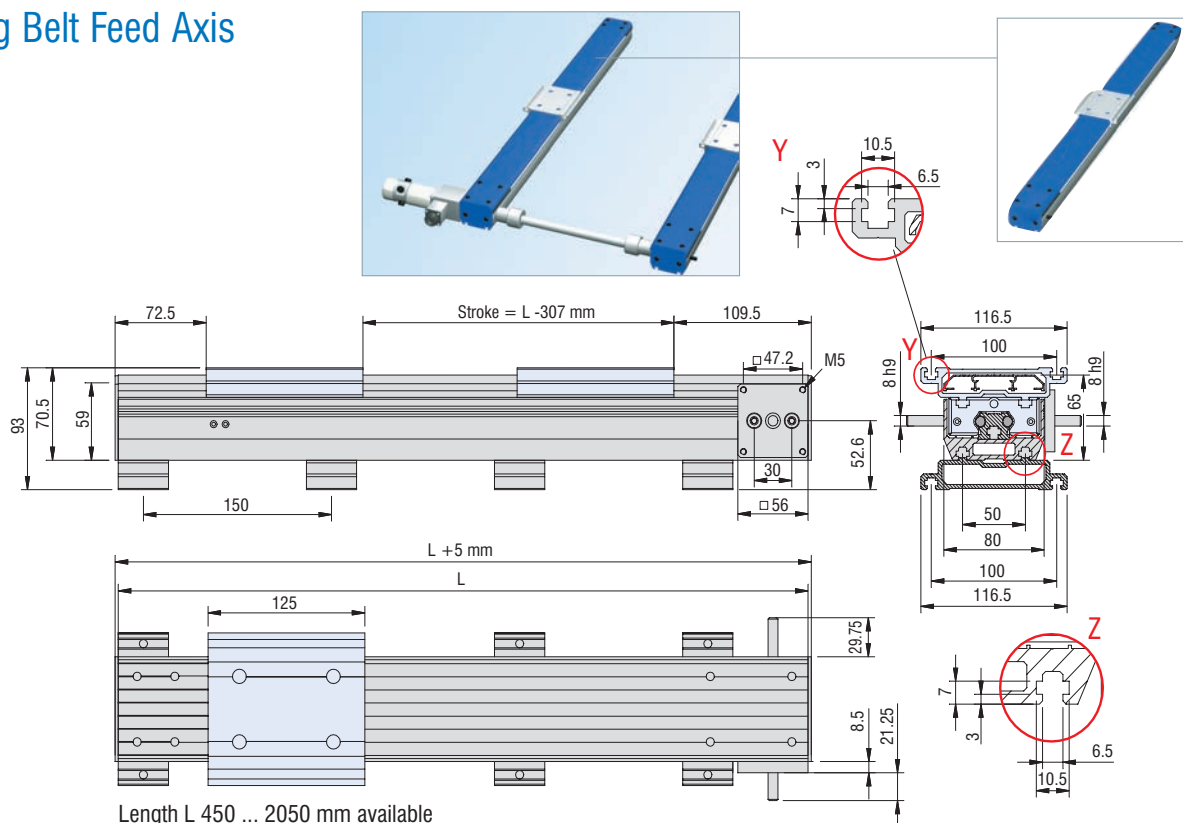
Idle Torques

Revolution [1/min]	Idle torque [Nm]
500	0.06
1,500	0.09
3,000	0.13

Timing Belt Feed Axis

LEZ 1 G (BlueLine-Series 1)

Timing Belt Feed Axis



Mounting Foot and Mounting Angle

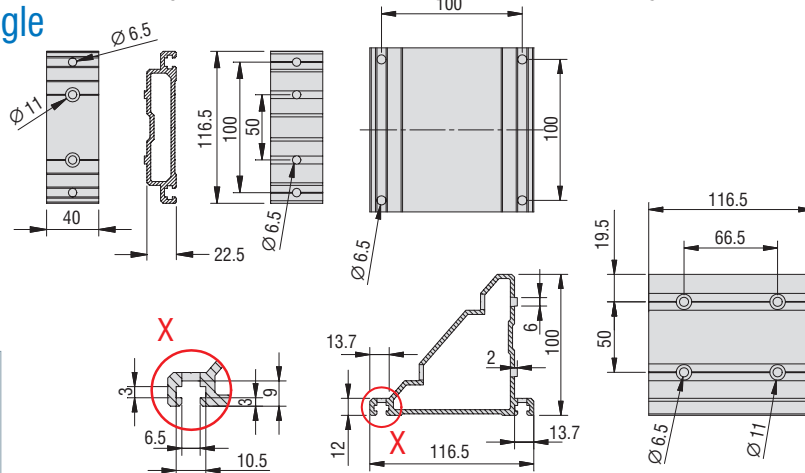


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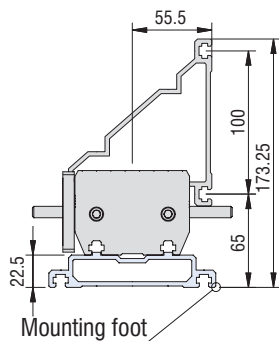
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Mounting foot

Mounting bracket



Mounting Angle as Angle Slide



Timing Belt Feed Axis

LEZ 1 G (BlueLine-Series 1)

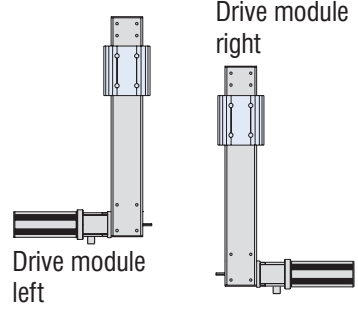
Drive Modules

DC Servo Motor MV 120

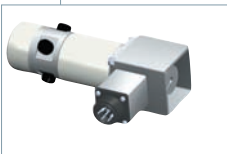
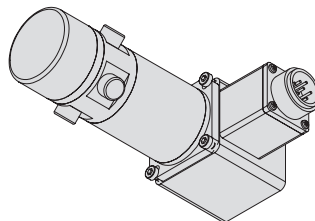
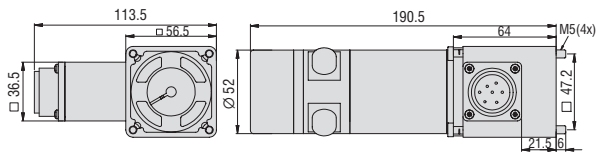
Nominal power.....	120 W
Nominal speed.....	3,000 rpm
Nominal torque.....	38 Ncm
Current at nominal torque.....	2.8 A
Nominal voltage.....	65 V
Max. torque.....	220 Ncm
Current at max. torque.....	13 A
Ambient temperature.....	0 - 40 °C

Stepping Motor MS 160

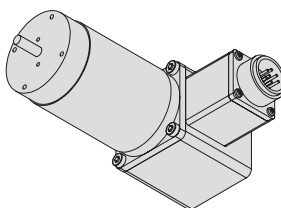
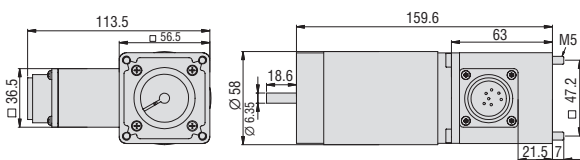
Holding torque – bipolar.....	160 Ncm
Stepping angle, full step.....	1.8 degree
half step.....	0.9 degree
Nominal voltage – bipolar.....	1.7 V
Resistance of winding.....	1.2 Ω
Inductance of winding.....	2.2 mH
Current of winding – bipolar....	4.1 A



Drive Module with DC Servo Motor MV 120



Drive Module with Stepping Motor MS 160



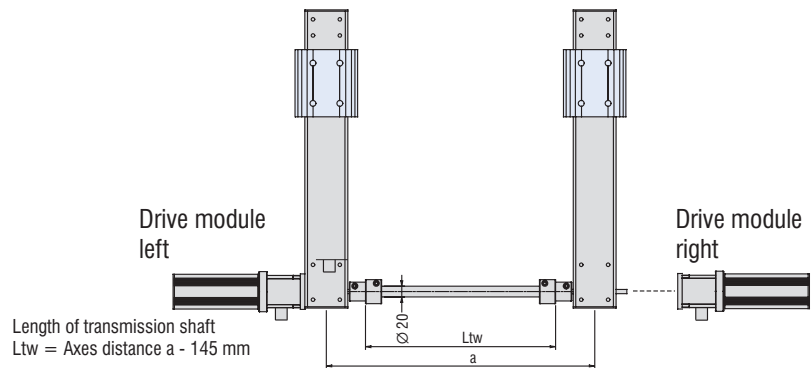
Timing Belt Feed Axis

LEZ 1 G

(BlueLine-Series 1)

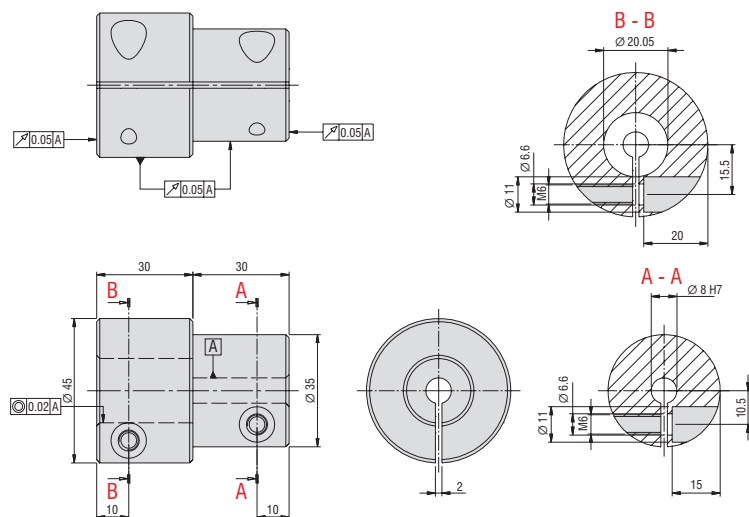
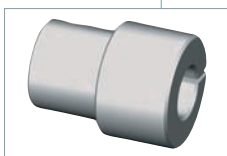
Connection of two Timing Belt Feed Axes

Transmission Shaft



Connection of two Timing Belt Feed Axes

Coupling for Transmission Shaft



Moments of Inertia

for Coupling and Transmission Shaft

Coupling

$$J_k = 4.258 \cdot 10^{-5} \text{ kgm}^2$$

Transmission shaft (per 100 mm)

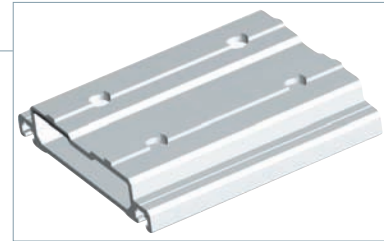
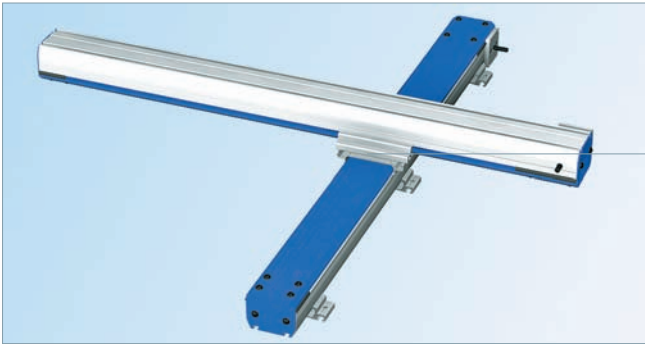
$$J_{Trs} = 2.513 \cdot 10^{-6} \text{ kgm}^2/100 \text{ mm}$$

Timing Belt Feed Axis

LEZ 1 G (BlueLine-Series 1)

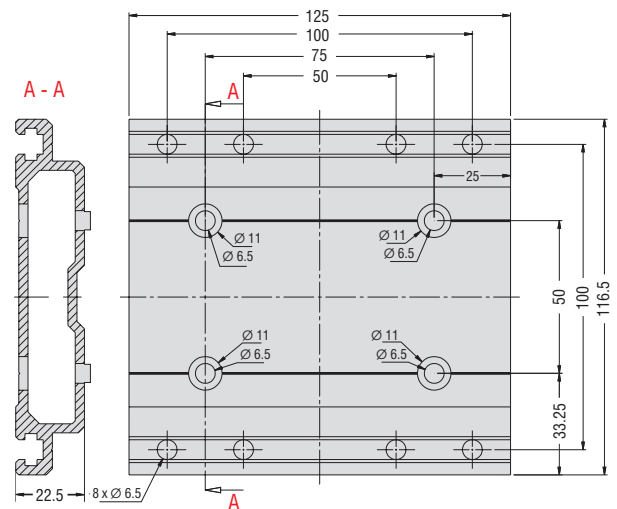
Compound Table Construction

Connecting Slides for Compound Tables



One of the timing belt feed axes has to be supplied with a connecting slide for compound tables in order to make the compound table construction possible.

The assembly takes place in the factory.



Timing Belt Feed Axis

LEZ 1 G

(BlueLine-Series 1)

Order Key

232 1XX XXXX

Motor

- 0 = without motor
- 1 = with stepping motor MS 160
- 2 = with DC servo motor MV 120

Driving Side

- 0 = motor connection, right*
 - 1 = motor connection, left*
- * Motor flange for drive is mounted on the right resp. left side

Slide / Connection

- 0 = with standard slide profile
- 1 = with connecting slides for compound tables
- 2 = with angle slide, right
- 3 = with angle slide, left

Basic Profile Lengths (mm)

- 450, 550, 650, 750, 850, 950,
1,050, 1,150, 1,250, 1,350, 1,450,
1,550, 1,650, 1,750, 1,850, 1,950,
2,050
- (e. g. 450 mm = 045
2,050 mm = 205)

Travel = L -307 mm

Order Samples



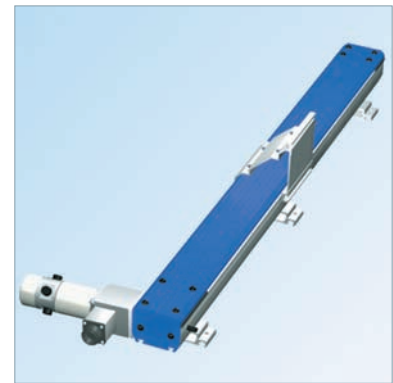
- without motor
- motor connection, left
- with standard slide profile
- basic profile length 750 mm

Item no.: **232101 0075**



- with stepping motor MS 160
- motor connection, left
- with standard slide profile
- basic profile length 750 mm

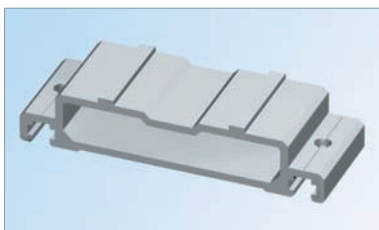
Item no.: **232111 0075**



- with DC servo motor MV 120
- motor connection, left
- with angle slide, right
- basic profile length 750 mm

Item no.: **232121 2075**

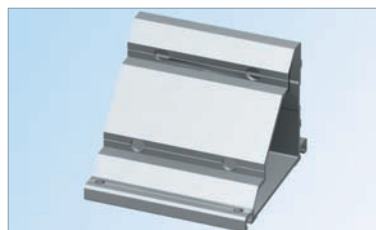
Accessory



Feet

- for BlueLine series 1
- 116.5 x 40 x 22.5 mm
- packing unit: 2 pieces

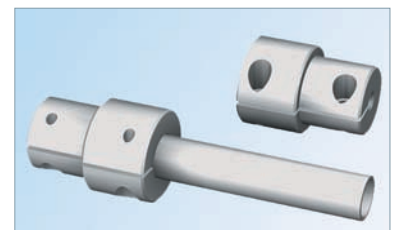
Item no.: **232199 0001**



Angle slide as angle bracket

- for BlueLine series 1
- incl. fastening

Item no.: **232199 0002**



Coupling for transmission shaft

- for BlueLine series 1
- packaging unit: 2 couplings

Item no.: **218050 0001**

Transmission shaft Ø 20 mm

- for BlueLine-Series 1

Length 1 m, item no.: **219001 0120**
Length 2 m, item no.: **219001 0220**