

MLSM80Z

Belt Drive, Ball Guide

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General Specifications

Parameter	MLSM80Z
Profile size (w × h) [mm]	240 × 85
Type of belt	75 ATL 10
Carriage sealing system	plastic cover band
Adjustable belt tensioning	the belt can be retensioned by the customer if necessary
Lubrication	central lubrication of all parts that require lubrication
Included accessories	4 × mounting clamps

Performance Specifications

Parameter		MLSM80Z
Stroke length (S max), maximum	[mm]	5900
Linear speed, maximum	[m/s]	5,0
Acceleration, maximum	[m/s ²]	20
Repeatability	[± mm]	0,05
Input speed, maximum	[rpm]	1500
Operation temperature limits	[°C]	0 – 80
Dynamic load (Fx), maximum	[N]	5000 ³
Dynamic load (Fy), maximum	[N]	6400 ¹ / 71860 ²
Dynamic load (Fz), maximum	[N]	6400 ¹ / 71860 ²
Dynamic load torque (Mx), maximum	[Nm]	600 ¹ / 5890 ²
Dynamic load torque (My), maximum	[Nm]	720 ¹ / 6640 ²
Dynamic load torque (Mz), maximum	[Nm]	720 ¹ / 6640 ²
Drive shaft force (Frd), maximum	[N]	700
Drive shaft torque (Mta), maximum	[Nm]	150
Pulley diameter	[mm]	63,66
Stroke per shaft revolution	[mm]	200
Weight	[kg]	
of unit with zero stroke		30,8
of every 100 mm of stroke		2,2
of each carriage		9,6

¹ Value for the complete unit

² Value for the ball guide only

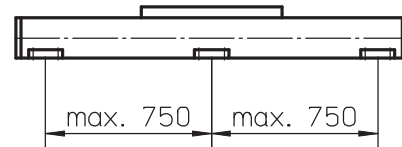
³ See diagram Force Fx

Carriage Idle Torque, (M idle) [Nm]

Input speed [rpm]	Idle torque [Nm]
150	8,5
750	12
1500	14,5

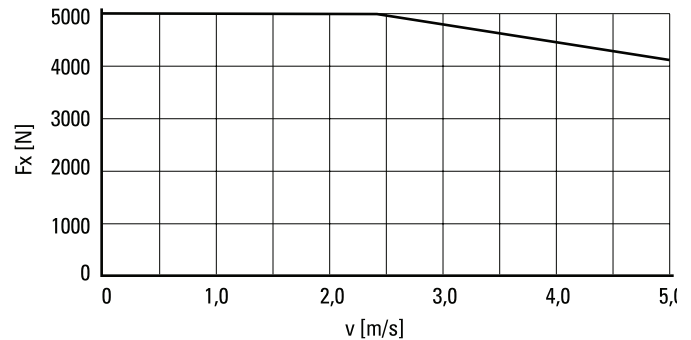
M idle = the input torque needed to move the carriage with no load on it.

Deflection of the Profile

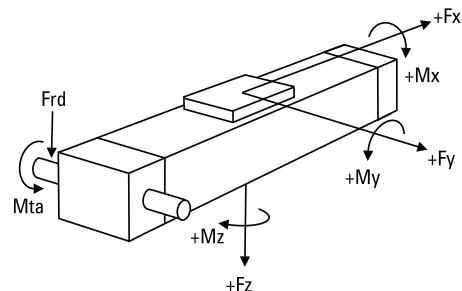


A mounting clamp must be installed at least at every 750 mm to be able to operate the maximum load. Less clamps may be required if less load is being operated, see the additional technical data for more information.

Force Fx as a Function of the Speed

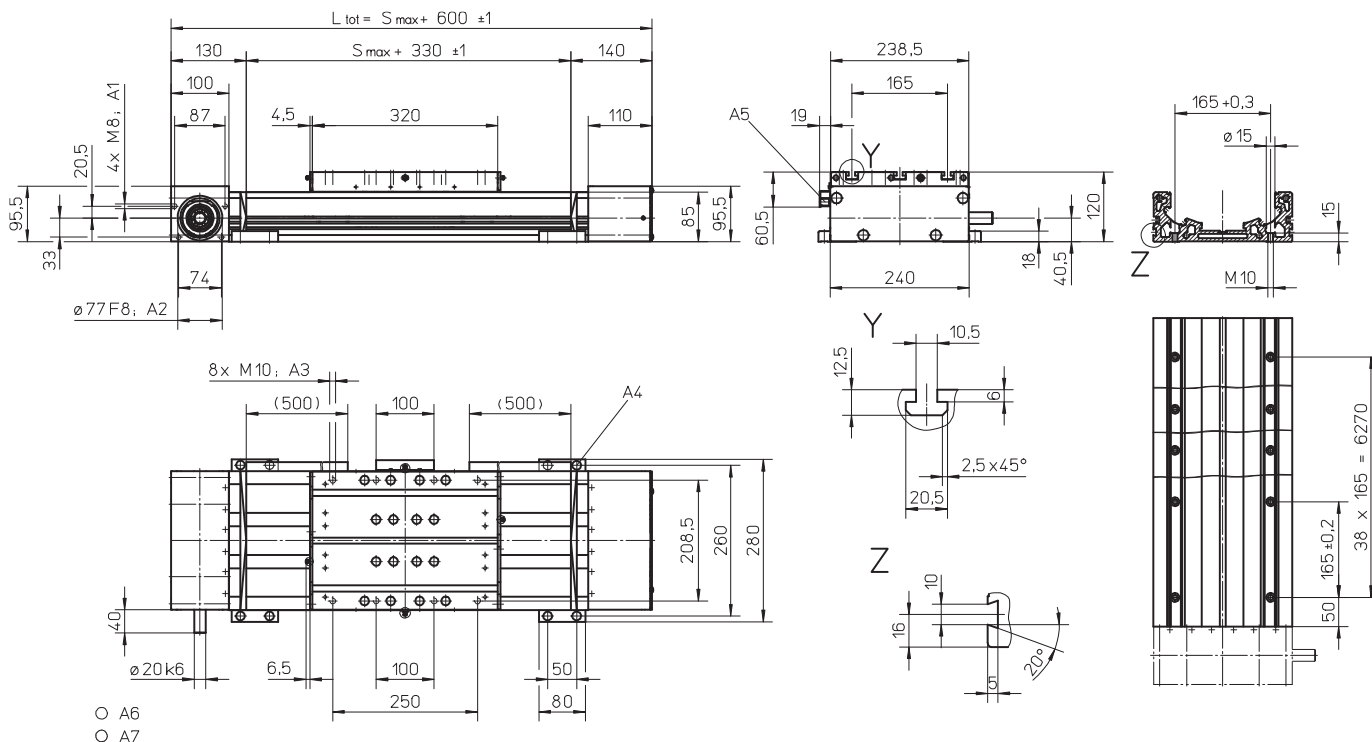


Definition of Forces



MLSM80Z

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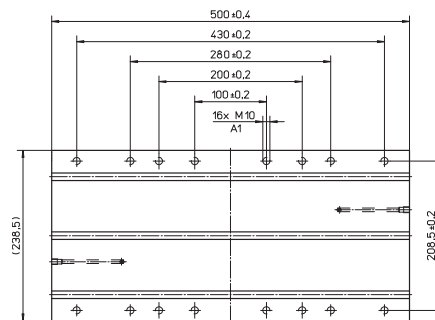


- A1: depth 18
- A2: depth 4
- A3: depth 15
- A4: socket cap screw ISO4762-M8x20 8.8

- A5: ENF inductive sensor rail option kit (optional)
- A6: tapered lubricating nipple to DIN71412 M8x1 on fixed-bearing side as standard feature
- A7: can be changed over to one of the three alternative lubricating points by the customer

Long Carriage

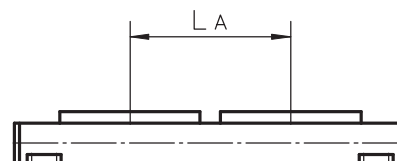
Parameter	MLSM80Z	
Carriage length	[mm]	500
Dynamic load torque (My), maximum	[Nm]	1400
Dynamic load torque (Mz), maximum	[Nm]	1400
Weight	[kg]	14



A1: depth 15

Double Carriages

Parameter	MLSM80Z	
Minimum distance between carriages (LA)	[mm]	400
Dynamic load (Fy), maximum	[N]	12800
Dynamic load (Fz), maximum	[N]	12800
Dynamic load torque (My), maximum	[Nm]	$L A^1 \times 6,4$
Dynamic load torque (Mz), maximum	[Nm]	$L A^1 \times 6,4$
Force required to move second carriage	[N]	350
Total length (L tot)	[mm]	$S_{max} + 600 + L A$



¹ Value in mm