

MLSH80Z

Belt Drive, Wheel Guide

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- » Accessories - see page 137
- » Additional data - see page 193

General Specifications

| Parameter | MLSH80Z |
|----------------------------|--|
| Profile size (w × h) [mm] | 240 × 85 |
| Type of belt | 75ATL10 |
| Carriage sealing system | plastic cover band |
| Adjustable belt tensioning | the belt can be retensioned by the customer if necessary |
| Lubrication | no lubrication required |
| Included accessories | 4 × mounting clamps |

Performance Specifications

| Parameter | | MLSH80Z |
|--|---------------------|--|
| Stroke length (S max), maximum | [mm] | 5900 |
| Linear speed, maximum | [m/s] | 10,0 |
| Acceleration, maximum | [m/s ²] | 40 |
| Repeatability | [± mm] | 0,05 |
| Input speed, maximum | [rpm] | 3000 |
| Operation temperature limits | [°C] | 0 – 80 |
| Dynamic load (Fx), maximum | [N] | 5000 ³ |
| Dynamic load (Fy), maximum | [N] | 5000 ¹ / 55090 ² |
| Dynamic load (Fz), maximum | [N] | 5000 ¹ / 55090 ² |
| Dynamic load torque (Mx), maximum | [Nm] | 350 ¹ / 2890 ² |
| Dynamic load torque (My), maximum | [Nm] | 450 ¹ / 4490 ² |
| Dynamic load torque (Mz), maximum | [Nm] | 450 ¹ / 4490 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 of unit with zero stroke of every 100 mm of stroke of each carriage | [kg] | 30,7 2,4 10,0 |

¹ Value for the complete unit

² Value for the wheel guide only

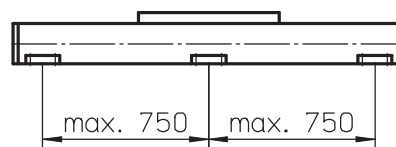
³ See diagram Force Fx

Carriage Idle Torque, (M idle) [Nm]

| Input speed [rpm] | Idle torque [Nm] |
|-------------------|------------------|
| 150 | 8,5 |
| 1500 | 12,5 |
| 3000 | 15,5 |

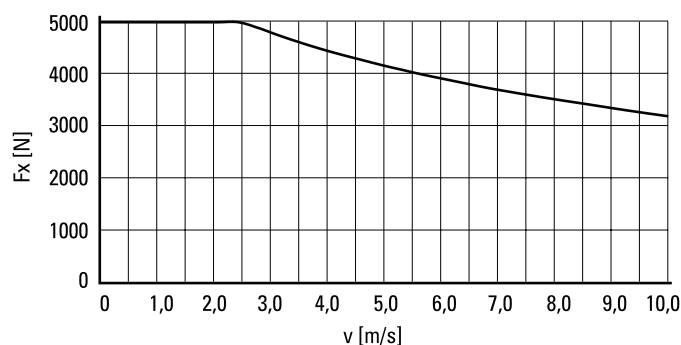
M idle = the input torque needed to move the carriage with no load on it.

Deflection of the Profile

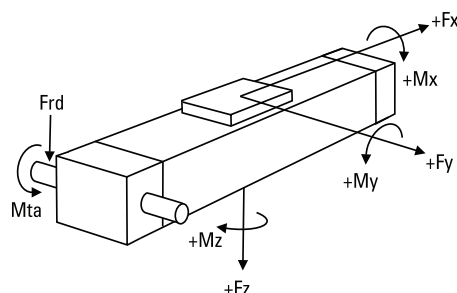


A mounting clamp must be installed at least at every 750 mm to be able to operate the maximum load. Less clamps may be required if less load is being operated, see the additional technical data for more information.

Force Fx as a Function of the Speed

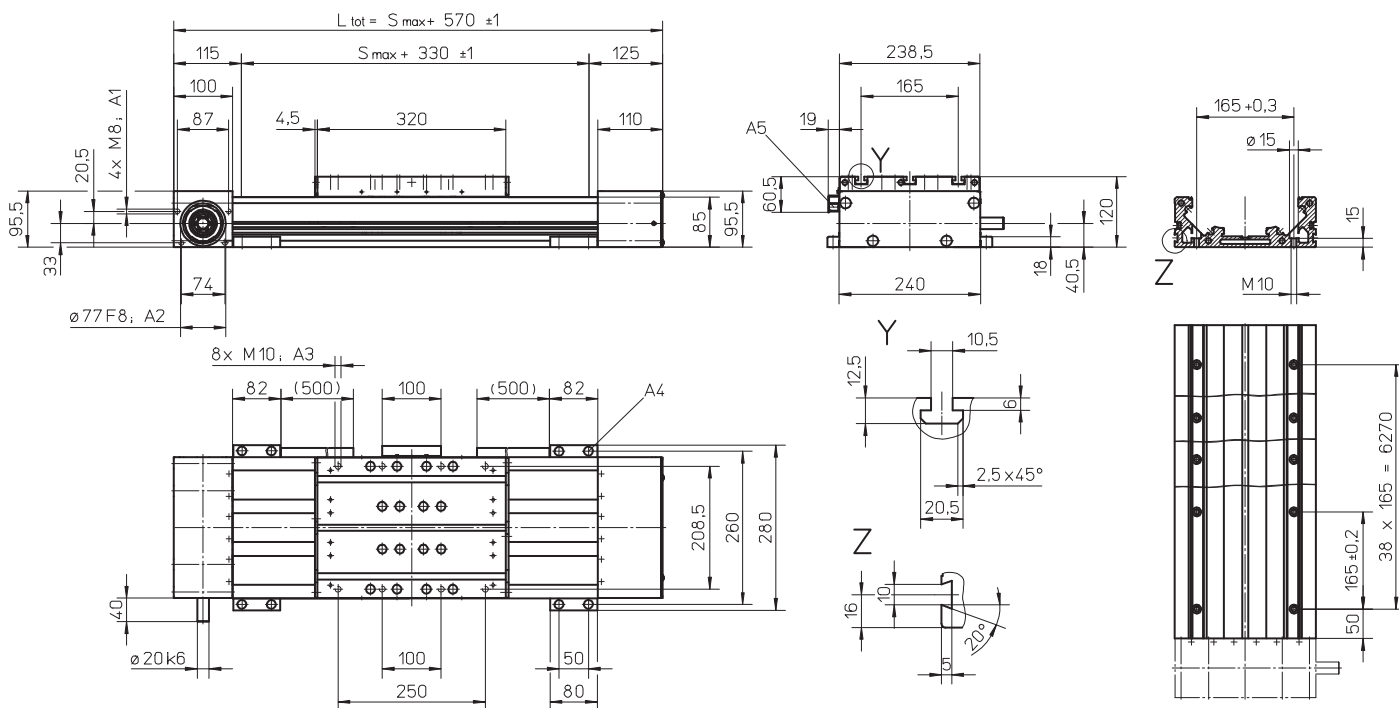


Definition of Forces



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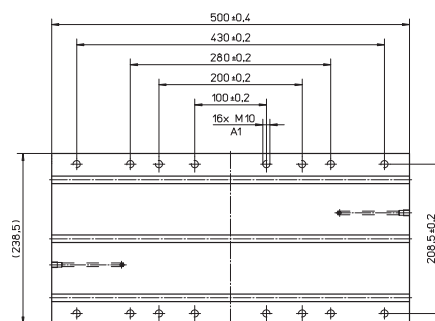


A1: depth 18
A2: depth 4
A3: depth 15

A4: socket cap screw ISO4762-M8x20 8.8
A5: ENF inductive sensor rail option kit (optional)

Long Carriage

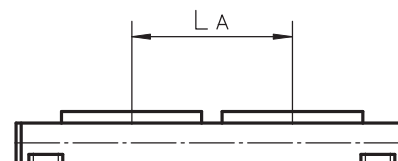
| Parameter | MLSH80Z | |
|-----------------------------------|---------|------|
| Carriage length | [mm] | 500 |
| Dynamic load torque (My), maximum | [Nm] | 700 |
| Dynamic load torque (Mz), maximum | [Nm] | 700 |
| Weight | [kg] | 14,1 |



A1: depth 15

Double Carriages

| Parameter | MLSH80Z | |
|---|---------|-----------------------|
| Minimum distance between carriages (LA) | [mm] | 340 |
| Dynamic load (Fy), maximum | [N] | 10000 |
| Dynamic load (Fz), maximum | [N] | 10000 |
| Dynamic load torque (My), maximum | [Nm] | $L A^1 \times 5$ |
| Dynamic load torque (Mz), maximum | [Nm] | $L A^1 \times 5$ |
| Force required to move second carriage | [N] | 200 |
| Total length (L tot) | [mm] | $S_{max} + 570 + L A$ |



¹ Value in mm