

# M100

## Belt Drive, Slide Guide

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### General Specifications

Parameter	M100
Profile size (w × h) [mm]	108 × 100
Type of belt	STD8-50
Carriage sealing system	self-adjusting steel cover band
Adjustable belt tensioning	the belt can be retensioned by the customer if necessary
Lubrication	lubricated for life
Included accessories	none

### Performance Specifications

Parameter		M100
Stroke length (S max), maximum	[mm]	12000
Linear speed, maximum	[m/s]	5,0
Acceleration, maximum	[m/s <sup>2</sup> ]	40
Repeatability	[± mm]	0,2
Input speed, maximum	[rpm]	1700
Operation temperature limits	[°C]	-20 – 70
Dynamic load (F <sub>x</sub> ), maximum	[N]	
< 2,5 m/s		1250
> 2,5 m/s		625
Dynamic load (F <sub>y</sub> ), maximum	[N]	3005 <sup>1</sup>
Dynamic load (F <sub>z</sub> ), maximum	[N]	3005 <sup>1</sup>
Dynamic load torque (M <sub>x</sub> ), maximum	[Nm]	117 <sup>1</sup>
Dynamic load torque (M <sub>y</sub> ), maximum	[Nm]	279 <sup>1</sup>
Dynamic load torque (M <sub>z</sub> ), maximum	[Nm]	279 <sup>1</sup>
Drive shaft force (F <sub>rd</sub> ), maximum	[N]	1000
Drive shaft torque (M <sub>ta</sub> ), maximum	[Nm]	45
Pulley diameter	[mm]	56,02
Stroke per shaft revolution	[mm]	176
Weight	[kg]	
of unit with zero stroke		11,10
of every 100 mm of stroke		1,16
of carriage		2,40

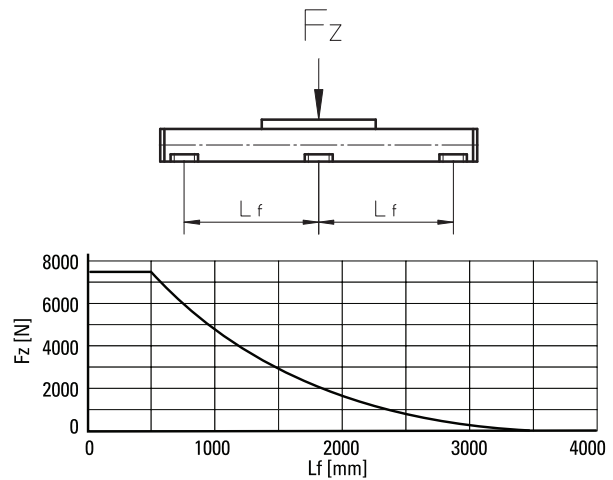
<sup>1</sup> Value for the complete unit

### Carriage Idle Torque (M<sub>idle</sub>) [Nm]

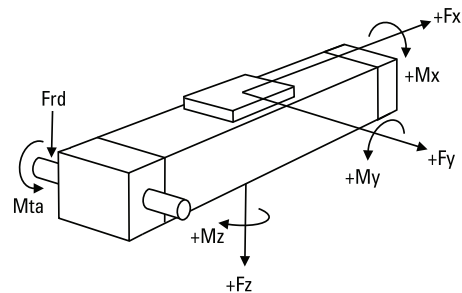
Input speed [rpm]	Single Carriage	Double Carriages
150	3,8	5,8

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

### Deflection of the Profile

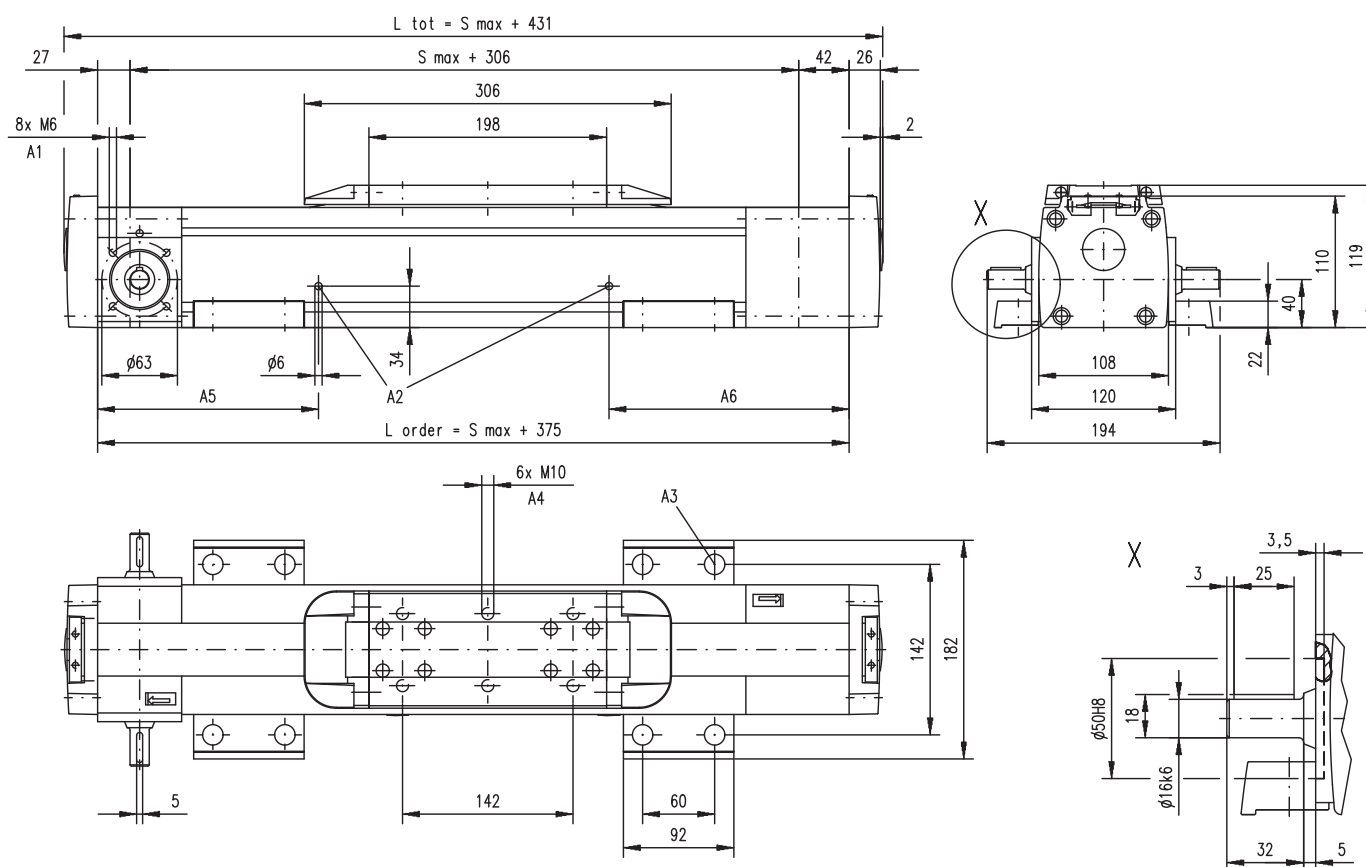


### Definition of Forces



# M100

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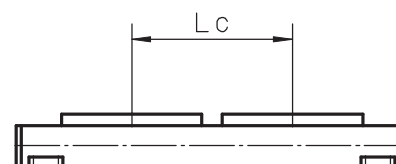


A1: Depth 9, Heli coil  
 A2: lubrication holes  
 A3: ø17/ø10,5 for socket head cap screw M10

A4: depth 10, Heli coil  
 A5: 170 (L order ≤ 1 m), 270 (L order > 1 m)  
 A6: 186 (L order ≤ 1 m), 436 (L order > 1 m)

### Double Carriages

Parameter	M100
Minimum distance between carriages (Lc) [mm]	350
Dynamic load (Fy), maximum [N]	4508
Dynamic load (Fz), maximum [N]	4508
Dynamic load torque (My), maximum [Nm]	Lc <sup>1</sup> × 2,254
Dynamic load torque (Mz), maximum [Nm]	Lc <sup>1</sup> × 2,254
Force required to move second carriage [N]	45
Ordering length (L order) [mm]	S max + Lc + 375
Total length (L tot) [mm]	L order + 56
Weight of unit with zero stroke of carriages [kg]	17,40 4,80



<sup>1</sup> Value in mm