

2HBE10

Ball Screw Drive, Ball Guide

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General Specifications

Parameter	2HBE10
Profile size (w × h) [mm]	100 × 33,5
Type of screw	ball screw with double nut
Carriage sealing system	none
Screw supports	none
Lubrication	lubrication of screw and guides
Included accessories	none

Performance Specifications

Parameter		2HBE10
Stroke length (S max), maximum	[mm]	850
Linear speed, maximum	[m/s]	0,5
Acceleration, maximum	[m/s ²]	20
Repeatability	[± mm]	0,005
Input speed, maximum	[rpm]	3000
Operation temperature limits	[°C]	-20 – 70
Dynamic load (F _x), maximum	[N]	2500
Dynamic load (F _y), maximum	[N]	2065 ¹ / 8250 ²
Dynamic load (F _z), maximum	[N]	2065 ¹ / 8250 ²
Dynamic load torque (M _x), maximum	[Nm]	290 ¹ / 395 ²
Dynamic load torque (M _y), maximum	[Nm]	225 ¹ / 305 ²
Dynamic load torque (M _z), maximum	[Nm]	225 ¹ / 305 ²
Drive shaft force (F _{rd}), maximum	[N]	0
Drive shaft torque (M _{ta}), maximum	[Nm]	4,4
Ball screw diameter (d _o)	[mm]	16
Ball screw lead (p)	[mm]	5, 10
Weight	[kg]	
of unit with zero stroke		2,59
of every 100 mm of stroke		0,69
of each carriage		0,82

¹ Value for the complete unit

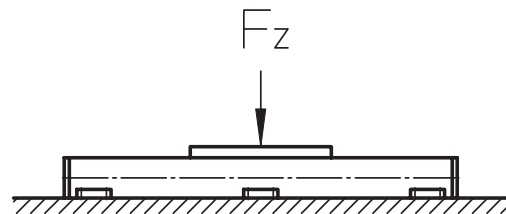
² Value for the ball guide only

Carriage Idle Torque (M_{idle}) [Nm]

Input speed [rpm]	Screw lead [mm]	
	p = 5	p = 10
150	0,1	0,1
1500	0,1	0,1
3000	0,1	0,1

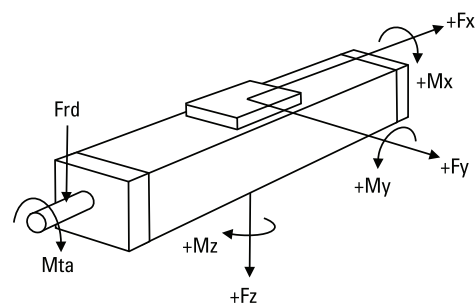
M_{idle} = the input torque needed to move the carriage with no load on it.

Deflection of the Profile



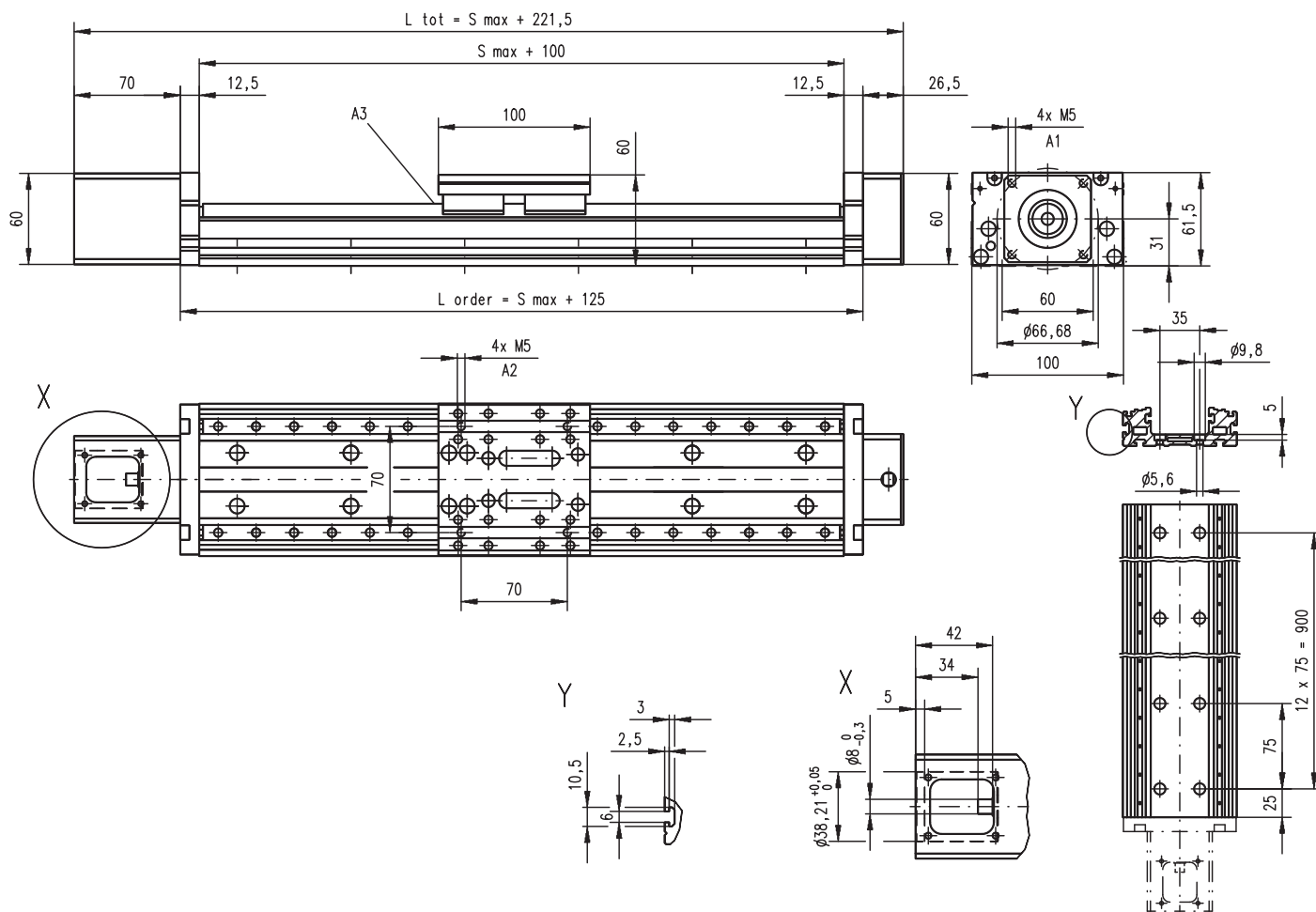
The unit must be continuously supported by a machined surface under its entire length.

Definition of Forces



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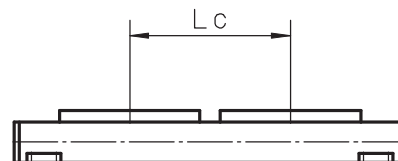


A1: depth 10
A2: depth 10 Heli coil

A3: lubrication nipple (using the unit with the nipple mounted makes stroke 10 mm shorter)

Double Carriages

Parameter		2HBE10
Minimum distance between carriages (Lc)	[mm]	112
Dynamic load (Fy), maximum	[N]	4130
Dynamic load (Fz), maximum	[N]	4130
Dynamic load torque (My), maximum	[Nm]	$Lc^1 \times 8,25$
Dynamic load torque (Mz), maximum	[Nm]	$Lc^1 \times 8,25$
Force required to move second carriage	[N]	12
Ordering length (L order)	[mm]	$S_{max} + Lc + 125$
Total length (L tot)	[mm]	$L_{order} + 96,5$
Weight of unit with zero stroke of carriages	[kg]	4,3 1,6



¹ Value in mm