

WH40

Belt Drive, Ball Guide

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General Specifications

Parameter	WH40
Profile size (w × h) [mm]	40 × 40
Type of belt	10 AT 5
Carriage sealing system	none
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		WH40
Stroke length (S max), maximum	[mm]	2000
Linear speed, maximum	[m/s]	3,0
Acceleration, maximum	[m/s ²]	40
Repeatability	[± mm]	0,05
Input speed, maximum	[rpm]	1800
Operation temperature limits	[°C]	0 – 80
Dynamic load (Fx), maximum	[N]	315 ¹
Dynamic load (Fy), maximum	[N]	450 ¹ / 5300 ²
Dynamic load (Fz), maximum	[N]	600 ¹ / 6790 ²
Dynamic load torque (Mx), maximum	[Nm]	10 ¹ / 32 ²
Dynamic load torque (My), maximum	[Nm]	30 ¹ / 190 ²
Dynamic load torque (Mz), maximum	[Nm]	30 ¹ / 190 ²
Drive shaft force (Frd), maximum	[N]	100
Drive shaft torque (Mta), maximum	[Nm]	6
Pulley diameter	[mm]	31,83
Stroke per shaft revolution	[mm]	100
Weight	[kg]	
of unit with zero stroke		1,19
of every 100 mm of stroke		0,15
of each carriage		0,28

¹ Value for the complete unit, also see diagram Force Fx

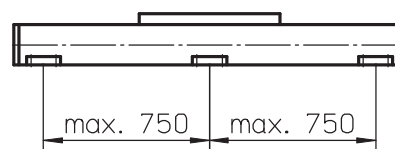
² Value for the ball guide only

Carriage Idle Torque, (M idle) [Nm]

Input speed [rpm]	Idle torque [Nm]
150	0,1
900	0,3
1800	0,6

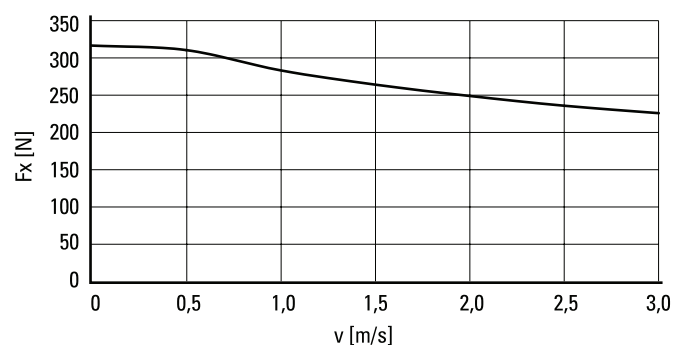
M idle = the input torque needed to move the carriage with no load on it.

Deflection of the Profile

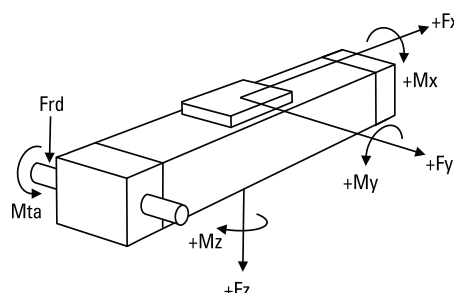


A mounting clamp must be installed at least at every 750 mm to be able to operate the maximum load. Less clamps may be required if less load is being operated, see the additional technical data for more information.

Force Fx as a Function of the Speed

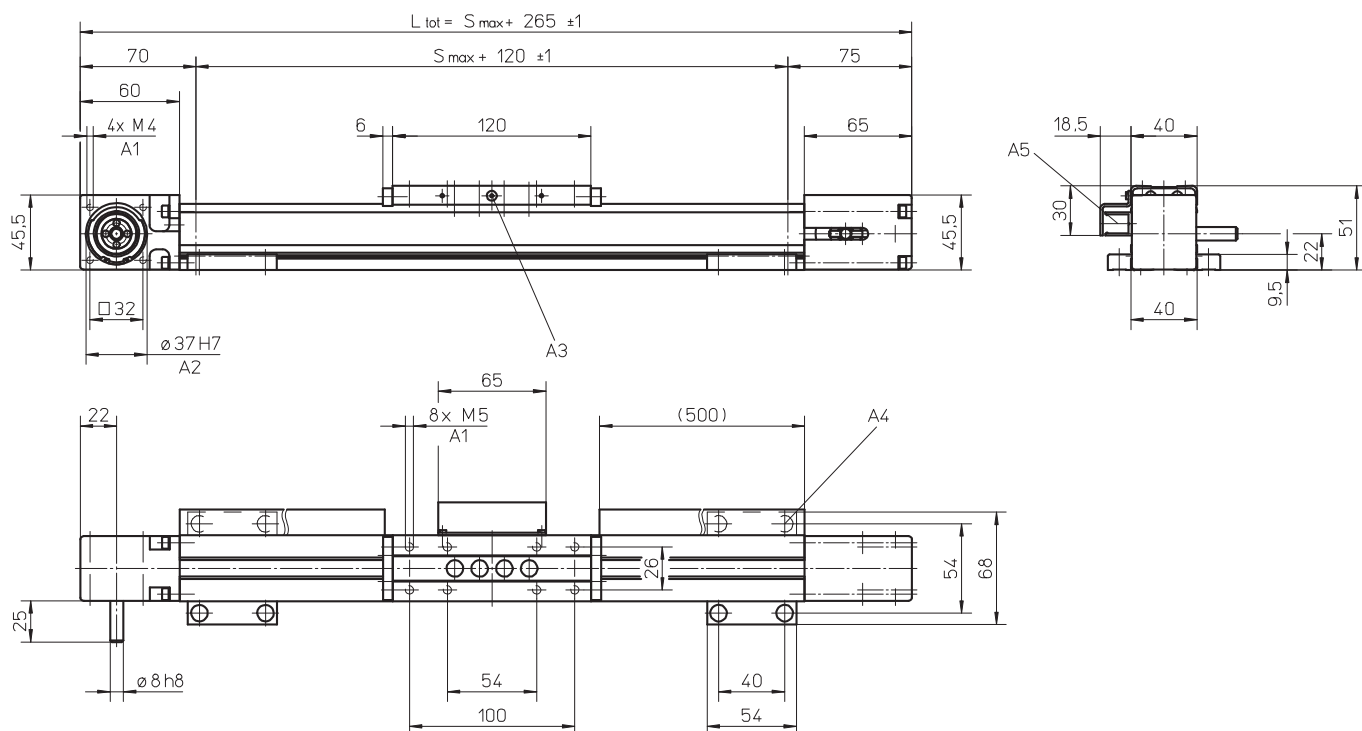


Definition of Forces



WH40

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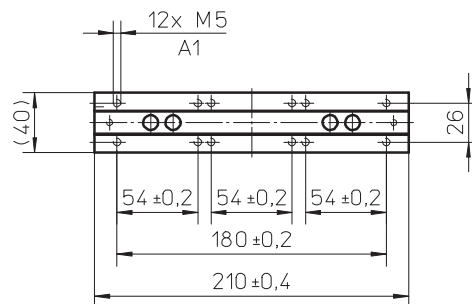


A1: depth 10
 A2: depth 3
 A3: lubricating nipple on both sides

A4: socket cap screw ISO4762-M5x12 8.8
 A5: ENF inductive sensor rail option kit (optional)

Long Carriage

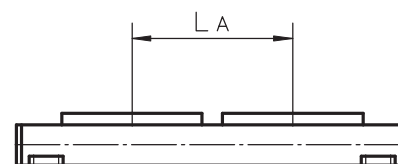
Parameter	WH40	
Carriage length	[mm]	210
Dynamic load torque (M_y), maximum	[Nm]	50
Dynamic load torque (M_z), maximum	[Nm]	50
Weight	[kg]	0,43



A1: depth 10

Double Carriages

Parameter	WH40	
Minimum distance between carriages (L_A)	[mm]	135
Dynamic load (F_y), maximum	[N]	900
Dynamic load (F_z), maximum	[N]	1200
Dynamic load torque (M_y), maximum	[Nm]	$L A^1 \times 0,45$
Dynamic load torque (M_z), maximum	[Nm]	$L A^1 \times 0,60$
Force required to move second carriage	[N]	2
Total length (L_{tot})	[mm]	$S_{max} + 265 + L A$



¹ Value in mm