WH50

Belt Drive, Wheel Guide

» Ordering key - see page 207
» Accessories - see page 131
» Additional data - see page 180

General Specifications

Parameter	WH50
Profile size (w × h) [mm]	50 × 50
Type of belt	16ATL5
Carriage sealing system	none
Adjustable belt tensioning	the belt can be retensioned by the customer if necessary
Lubrication	lubrication og guiding surfaces
Included accessories	4 × mounting clamps

Performance Specifications

for Units with Single Standard Carriage (N)[1]

Parameter		WH50
Stroke length (Smax), maximum	[mm]	3000
Total length (L tot), maximum	[mm]	3440
Linear speed, maximum	[m/s]	6,5
Acceleration, maximum	[m/s²]	40
Repeatability	[± mm]	0,05
Input speed, maximum	[rpm]	3250
Operation temperature limits	[°C]	0 – 80
Dynamic load (Fx), maximum	[N]	670 [2]
Dynamic load (Fy), maximum	[N]	415
Dynamic load (Fz), maximum	[N]	730
Dynamic load torque (Mx), maximum	[Nm]	16
Dynamic load torque (My), maximum	[Nm]	87
Dynamic load torque (Mz), maximum	[Nm]	50
Drive shaft force (Frd), maximum [3]	[N]	150
Input/drive shaft torque (Mta), maximum	[Nm]	17
Pulley diameter	[mm]	38,2
Stroke per shaft revolution	[mm]	120
Weight	[kg]	
of unit with zero stroke		3,50
of every 100 mm of stroke		0,44
of each carriage		0,90

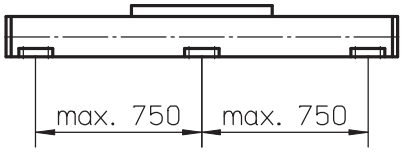
[1] See next page for deviating values of units with other carriage types.
[2] See diagram Force Fx.
[3] Only relevant for units without RediMount flange.

Carriage Idle Torque, (M idle) [Nm]

Input speed [rpm]	Idle torque [Nm]
150	1,7
1500	2,4
3250	3,8

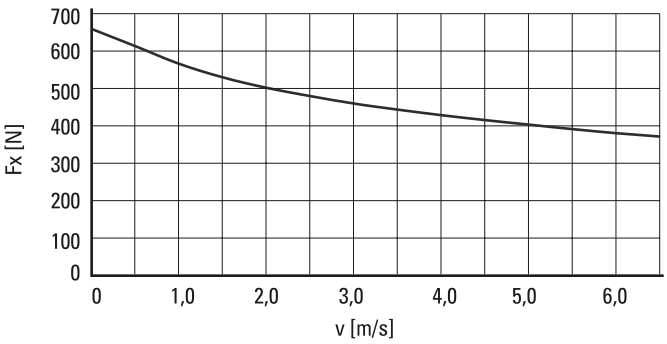
M idle = the input torque needed to move the carriage with no load on it.

Deflection of the Profile

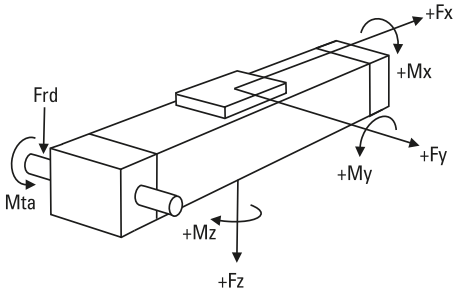


A mounting clamp must be installed at least every 750 mm to be able to operate at maximum load. Less clamps may be required if less load is being operated, see the additional technical data for more information.

Force Fx as a Function of the Speed



Definition of Forces



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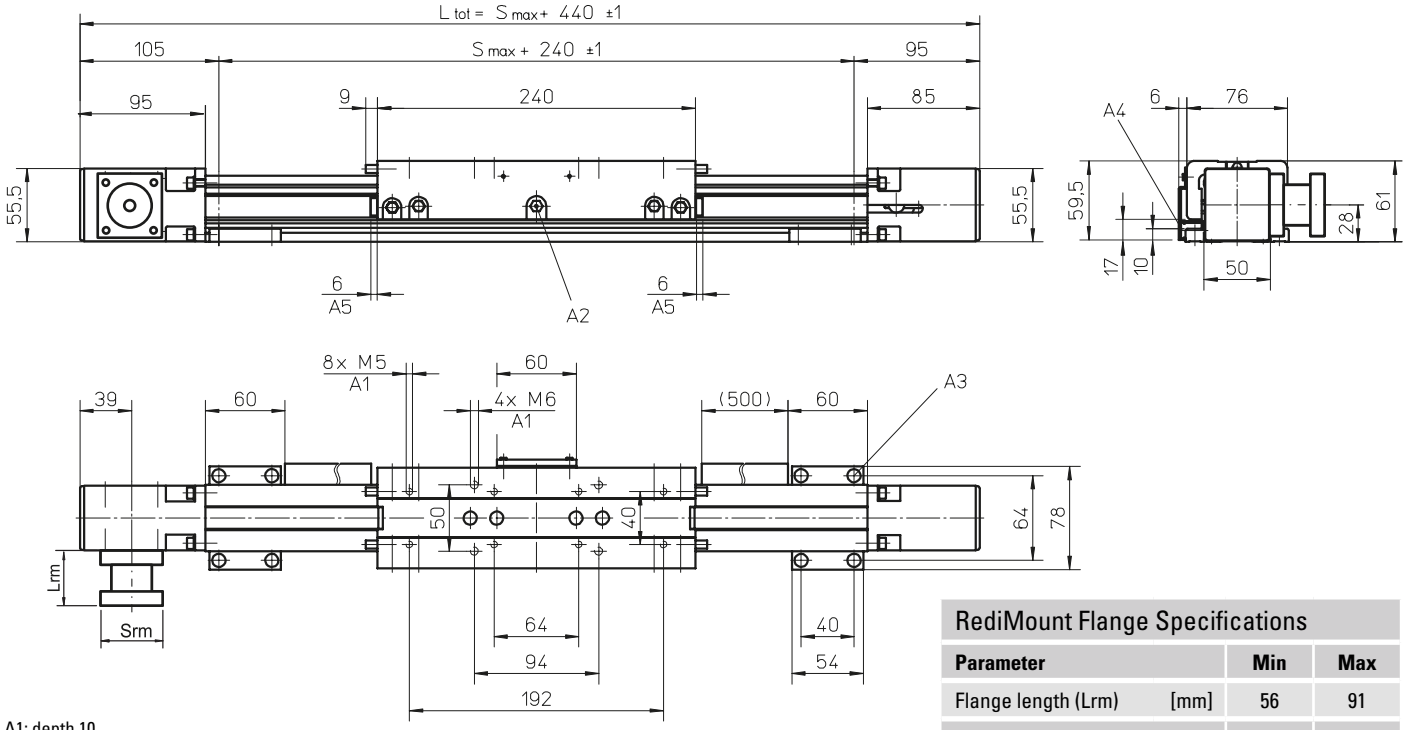
Dimensions	Projection	Online Sizing & Selection!
METRIC		www.LinearMotioneering.com



A1: depth 10
A2: funnel type lubricating nipple DIN3405-M6×1-D1
A3: socket cap screw ISO4762-M5×12 8.8
A4: ENF inductive sensor rail kit (optional - see page 166)
A5: felt pad wipers on both sides of the carriage

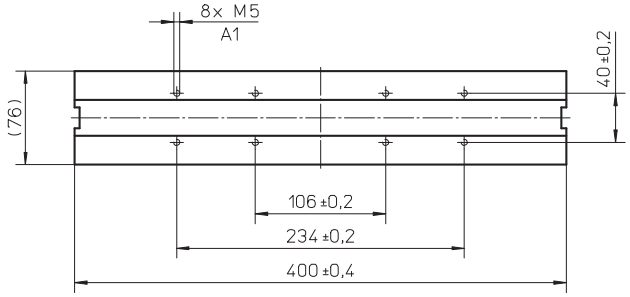
RediMount Flange Specifications

Parameter		Min	Max
Flange length (Lrm)	[mm]	56	91
Flange square (Srm)	[mm]	60	139
Flange weight *	[kg]	1,81	

* Max. weight including coupling and fastening screws

Performance Specifications
for Units with Single Long Carriage (L)

Parameter		WH50
Stroke length (Smax), maximum	[mm]	3000
Total length (L tot), maximum	[mm]	3600
Carriage length	[mm]	400
Dynamic load torque (My), maximum	[Nm]	130
Dynamic load torque (Mz), maximum	[Nm]	75
Weight	[kg]	1,47



A1: depth 10

Performance Specifications
for Units with Double Standard Carriage (Z)

Parameter		WH50
Stroke length (Smax), maximum	[mm]	2900
Total length (L tot), maximum	[mm]	3600
Minimum distance between carriages (Lc)	[mm]	260
Dynamic load (Fy), maximum	[N]	830
Dynamic load (Fz), maximum	[N]	1460
Dynamic load torque (My), maximum	[Nm]	Lc[1] × 0,415
Dynamic load torque (Mz), maximum	[Nm]	Lc[1] × 0,73
Force required to move second carriage	[N]	16
Total length (L tot)	[mm]	Smax + 440 + Lc

[1] Value in mm