

WM40D

Ball Screw Drive, Ball Guide, Double Ball Nuts, Long Carriage

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- » Accessories - see page 131
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General Specifications

Parameter	WM40D
Profile size (w × h) [mm]	40 × 40
Type of screw	ball screw with double nuts
Carriage sealing system	plastic cover band
Screw supports	included in all units that require screw supports
Lubrication	central lubrication of all parts that require lubrication
Included accessories	4 × mounting clamps

Performance Specifications

for Units with Single Long Carriage (L)¹

Parameter		WM40D
Stroke length (Smax), maximum	[mm]	1950
Total length (L tot), maximum	[mm]	2300
Linear speed, maximum	[m/s]	0,25
Acceleration, maximum	[m/s ²]	20
Repeatability	[± mm]	0,01
Input speed, maximum	[rpm]	3000
Operation temperature limits	[°C]	0 – 80
Dynamic load (Fx), maximum	[N]	1000
Dynamic load (Fy), maximum	[N]	450
Dynamic load (Fz), maximum	[N]	600
Dynamic load torque (Mx), maximum	[Nm]	10
Dynamic load torque (My), maximum	[Nm]	30
Dynamic load torque (Mz), maximum	[Nm]	30
Drive shaft force (Frd), maximum ²	[N]	100
Input/drive shaft torque (Mta), maximum	[Nm]	3
Ball screw diameter (do)	[mm]	12
Ball screw lead (p)	[mm]	5
Weight	[kg]	
of unit with zero stroke		1,90
of every 100 mm of stroke		0,30
of each carriage		0,60

¹ See next page for deviating values of units with other carriage types.

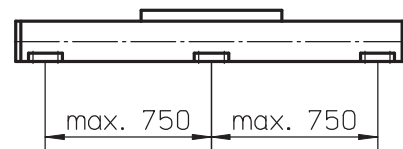
² Only relevant for units without RediMount flange.

Carriage Idle Torque (M idle) [Nm]

Input speed [rpm]	Screw lead [mm]
	p = 5
150	0,4
1500	0,6
3000	0,9

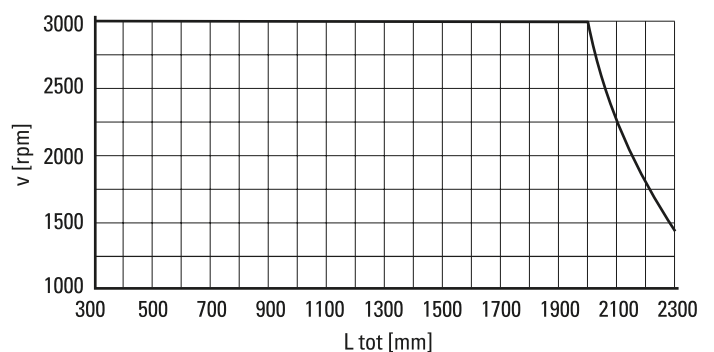
M idle = the input torque needed to move the carriage with no load on it.

Deflection of the Profile

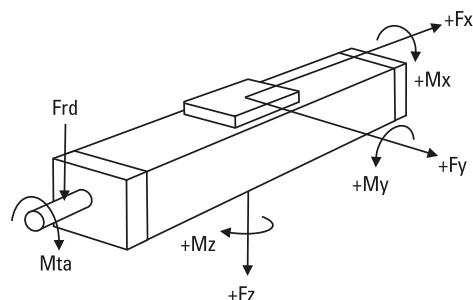


A mounting clamp must be installed at least every 750 mm to be able to operate at maximum load. Less clamps may be required if less load is being operated, see the additional technical data for more information.


Critical Speed



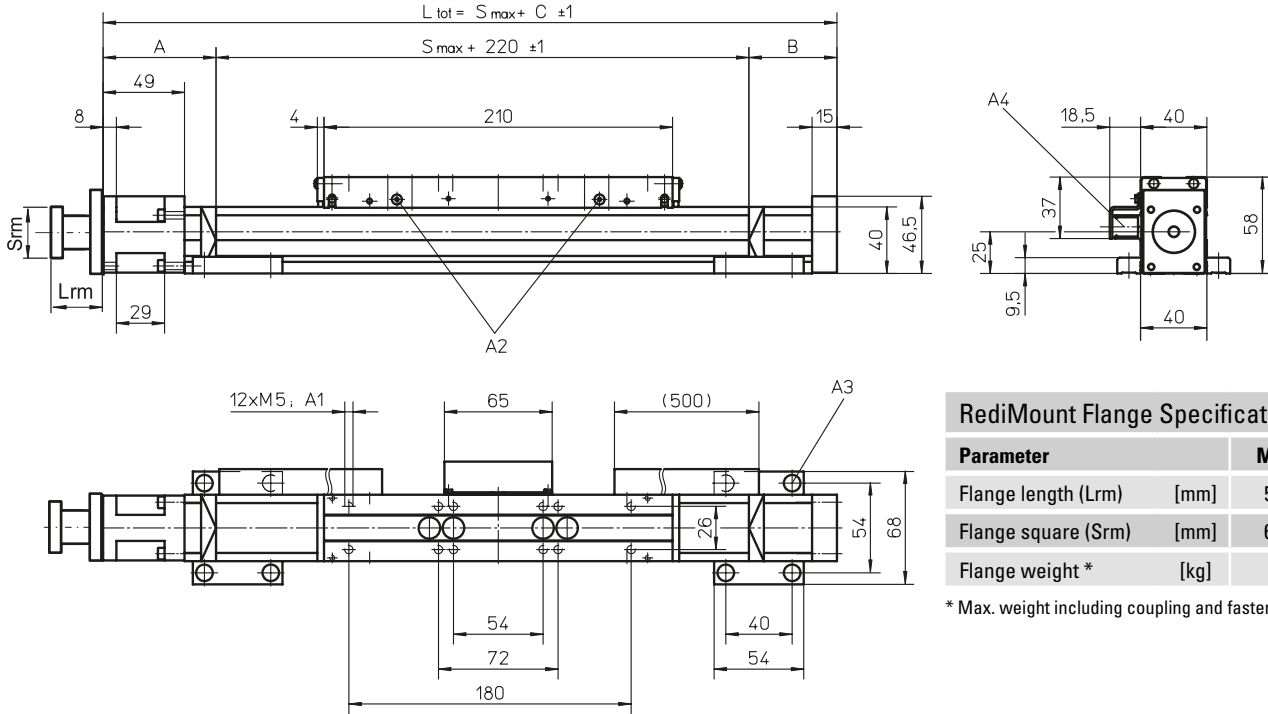
Definition of Forces



WM40D

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

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Parameter	Min	Max
Flange length (Lrm) [mm]	59	94
Flange square (Srm) [mm]	60	139
Flange weight * [kg]	1,86	

* Max. weight including coupling and fastening screws

A1: depth 6
A2: lubricating nipple on both sides DIN3405 D 1/A

A3: socket cap screw ISO4762-M5x12 8.8
A4: ENF inductive sensor rail kit (optional - see page 166)

Stroke length (Smax) [mm]	A [mm]	B [mm]	C [mm]
0 – 450	65	35	320
451 – 1050	65	45	330
1051 – 1950	70	60	350

Performance Specifications

for Units with Double Long Carriage (M)

Parameter	WM40D
Stroke length (Smax), maximum [mm]	1725
Total length (L tot), maximum [mm]	2300
Minimum distance between carriages (Lc) [mm]	225
Dynamic load (Fy), maximum [N]	900
Dynamic load (Fz), maximum [N]	1200
Dynamic load torque (My), maximum [Nm]	$L C^1 \times 0,45$
Dynamic load torque (Mz), maximum [Nm]	$L C^1 \times 0,6$
Force required to move second carriage [N]	4
Total length (L tot) [mm]	$Smax + C + Lc$

¹ Value in mm

