WM60S

Ball Screw Drive, Ball Guide, Single Ball Nut, Short Carriage

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General Specifications

Parameter	WM60S
Profile size (w × h) [mm]	60 × 60
Type of screw	ball screw with single nut
Carriage sealing system	self-adjusting 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 Short Carriage (S)[1]

Parameter		WM60S
Stroke length (Smax), maximum screw lead 5, 20 mm screw lead 50 mm	[mm]	 10390 5000
Total length (L tot), maximum screw lead 5, 20 mm screw lead 50 mm	[mm]	 11400 5650
Linear speed, maximum	[m/s]	2,5
Acceleration, maximum	[m/s²]	10
Repeatability	[± mm]	0,02
Input speed, maximum	[rpm]	3000
Operation temperature limits	[°C]	0 – 80
Dynamic load (Fx), maximum	[N]	2800
Dynamic load (Fy), maximum	[N]	1400
Dynamic load (Fz), maximum	[N]	1400
Dynamic load torque (Mx), maximum	[Nm]	50
Dynamic load torque (My), maximum	[Nm]	100
Dynamic load torque (Mz), maximum	[Nm]	100
Drive shaft force (Frd), maximum [2]	[N]	500
Input/drive shaft torque (Mta), maximum	[Nm]	35
Ball screw diameter (d0)	[mm]	20
Ball screw lead (p)	[mm]	5, 20, 50
Weight of unit with zero stroke of every 100 mm of stroke of each carriage	[kg]	 3,80 0,65 1,00

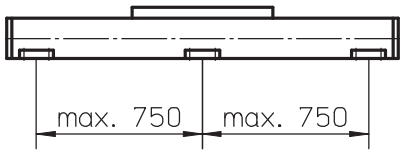
[1] See next page for deviating values of units with other carriage types.
[2] Only relevant for units without RediMount flange.

Carriage Idle Torque (M idle) [Nm]

Input speed [rpm]	Screw lead [mm]		
	p = 5	p = 20	p = 50
150	0,7	1,0	1,4
1500	1,1	1,6	2,0
3000	1,5	1,8	2,2

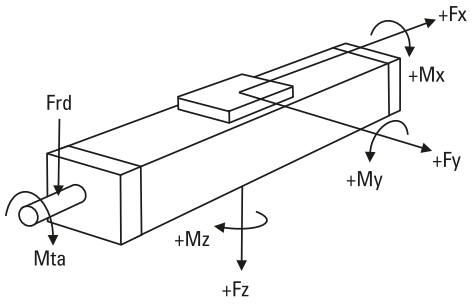
M idle = the input torque needed to move the carriage with no load on it.

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. Units with a profile length over 6300 mm consist of two profiles where the joint between the two profiles must be adequately supported on both sides.

Definition of Forces



WM60S

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

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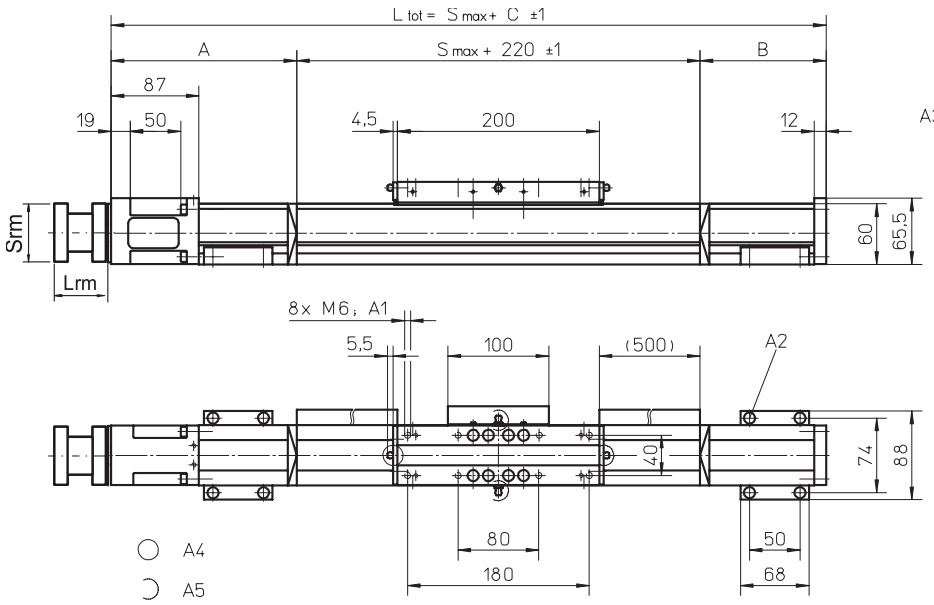

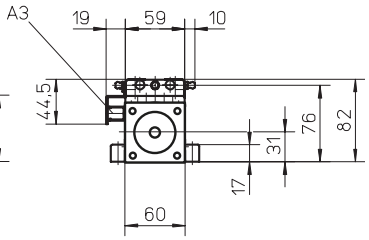

RediMount Flange Specifications

Parameter		Min	Max
Flange length (Lrm)	[mm]	83	145
Flange square (Srm)	[mm]	90	200
Flange weight *	[kg]	5,64	

* Max. weight including coupling and fastening screws

A1: depth 11
A2: socket cap screw ISO4762-M6×20 8.8
A3: ENF inductive sensor rail kit (optional - see page 166)

A4: tapered lubricating nipple to DIN71412 AM6 on fixed-bearing side as standard feature
A5: can be changed over to one of the three alternative lubricating points by the customer

Stroke length (Smax) [mm]	A [mm]	B [mm]	C [mm]
0 - 580	95	20	335
581 - 1140	110	60	390
1141 - 1805	130	80	430
1806 - 2460	155	105	480

Stroke length (Smax) [mm]	A [mm]	B [mm]	C [mm]
2461 - 3125	175	125	520
3126 - 3780	200	150	570
3781 - 4445	220	170	610
4446 - 5000	240	190	650
5001 - 10390	contact customer service		

Performance Specifications
for Units with Double Short Carriage (Y)

Parameter		WM60S
Stroke length (Smax), maximum screw lead 5, 20 mm screw lead 50 mm	[mm]	 10135 4745
Total length (L tot), maximum screw lead 5, 20 mm screw lead 50 mm	[mm]	 11400 5650
Minimum distance between carriages (Lc)	[mm]	255
Dynamic load (Fy), maximum	[N]	2800
Dynamic load (Fz), maximum	[N]	2800
Dynamic load torque (My), maximum	[Nm]	Lc[1] × 1,4
Dynamic load torque (Mz), maximum	[Nm]	Lc[1] × 1,4
Force required to move second carriage	[N]	18
Total length (L tot)	[mm]	Smax + C + Lc

[1] Value in mm