



Linear Motion Systems with Ball Screw Drive and Ball Guide

Overview

PowerLine WM



Features

- Can be installed in any orientation
- Patented guide system
- Patented self-adjusting plastic cover band¹
- Patented screw support system

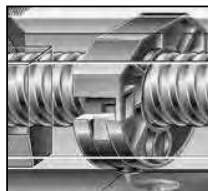
Parameter		WM40S	WM40D	WM60D	WM60S	WM60X	WM80D	WM80S	WM120D
Profile size (width × height)	[mm]	40 × 40	40 × 40	60 × 60	60 × 60	60 × 60	80 × 80	80 × 80	120 × 120
Stroke length (Smax), maximum	[mm]	2000	1950	11000	10390	10340	11000	10540	11000
Linear speed, maximum	[m/s]	0,25	0,25	2,5	2,5	0,25	2,5	2,5	2,0
Dynamic carriage load (Fz), maximum	[N]	600	600	2000	1400	2000	3000	2100	6000
Remarks		single ball nut	double ball nuts	double ball nuts	single ball nut	left/right screw	double ball nuts	single ball nut	double ball nuts
Page		14	16	18	20	22	24	26	28

¹ Not on WM40 units

WM-Series Technical Presentation

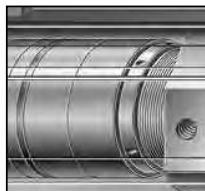
Screw support

Patented screw support system permits high speeds at long stroke lengths while reducing the available stroke with a minimum.



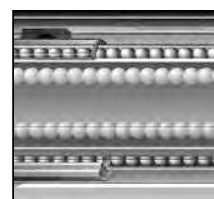
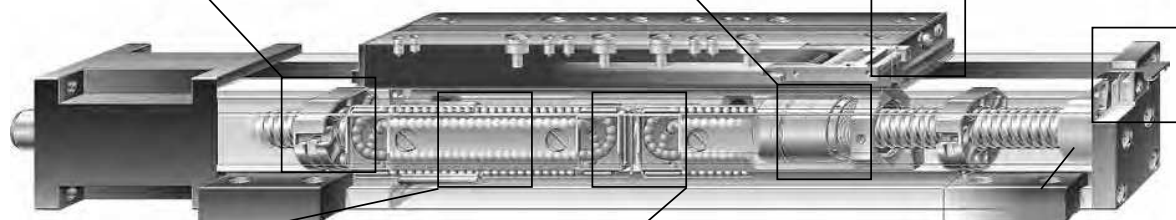
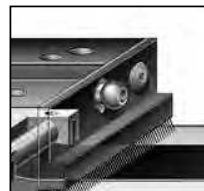
Double ball nuts

Double pre-tensioned ball nuts improve the accuracy and allow re-tensioning, increasing the lifetime of the unit.



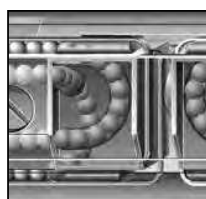
Central lubrication

One central lubrication point on the carriage services the entire unit resulting in a minimum maintenance requirement.



Ball guides

Integrated patented ball guides with hardened steel tracks for optimum performance.



Ball cages

The balls in the ball guides are protected by a ball cage which ensures a long life.



Cover band

The patented self-adjusting cover band protect the unit from the penetration of dirt, dust and liquids.

Note! the unit is pictured without a RediMount™ flange

Linear Motion Systems with Lead or Ball Screw Drive and Ball Guide

Overview

PowerLine WV



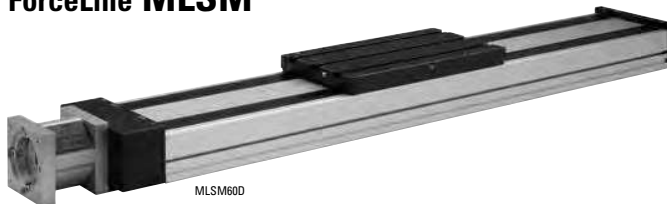
WV80

Features

- Can be installed in any orientation
- Patented self-adjusting plastic cover band
- Patented screw support system
- Require external guides

Parameter		WV60	WV80	WV120
Profile size (width × height)	[mm]	60 × 60	80 × 80	120 × 120
Stroke length (Smax), maximum	[mm]	11000	11000	11000
Linear speed, maximum	[m/s]	2,5	2,5	2,0
Dynamic carriage load (Fz), maximum	[N]	-	-	-
Remarks		double ball nuts the units has no guides	double ball nuts the units has no guides	double ball nuts the units has no guides
Page		30	32	34

ForceLine MLSM



MLSM60D

Features

- Can be installed in any orientation
- Patented guide system
- Patented plastic cover band
- Patented screw support system

Parameter		MLSM60D	MLSM80D
Profile size (width × height)	[mm]	160 × 65	240 × 85
Stroke length (Smax), maximum	[mm]	4985	4810
Linear speed, maximum	[m/s]	2,5	2,0
Dynamic carriage load (Fz), maximum	[N]	6000	8000
Remarks		double ball nuts	double ball nuts
Page		36	38

Linear Motion Systems with Lead or Ball Screw Drive and Ball Guide

Overview

Movopart M



Features

- Can be installed in any orientation
- Self-adjusting stainless steel cover band
- Internal ball guides
- Wash down protected versions available

Parameter		M55	M75	M100
Profile size (width × height)	[mm]	58 × 55	86 × 75	108 × 100
Stroke length (Smax), maximum	[mm]	2712	3772	5578
Linear speed, maximum	[m/s]	1,6	1,0	1,25
Dynamic carriage load (Fz), maximum	[N]	400	1450	3000
Remarks		ballscrew driven, single ball nut	ballscrew driven, single ball nut	ballscrew driven, single ball nut
Page		40	42	44

2HB



Features

- Can be installed in any orientation
- High load capabilities
- Low profile height
- Preloaded ballscrew and bearing carriages offer high stiffness / rigidity
- Corrosion resistant options available.

Parameter		2HB10	2HB20
Profile size (width × height)	[mm]	100 × 60	200 × 90
Stroke length (Smax), maximum	[mm]	1375	2760
Linear speed, maximum	[m/s]	0,47	0,95
Dynamic carriage load (Fz), maximum	[N]	8000	34000
Remarks		bellows or shroud options available	bellows or shroud options available
Page		46	48

2RB



Features

- Can be installed in any orientation
- High load capabilities
- Low profile height
- Preloaded ballscrew and Super Smart bearing configuration provides stiffness / rigidity
- Corrosion resistant options available.

Parameter		2RB12	2RB16
Profile size (width × height)	[mm]	130 × 40	160 × 48
Stroke length (Smax), maximum	[mm]	1951	2815
Linear speed, maximum	[m/s]	0,47	0,73
Dynamic carriage load (Fz), maximum	[N]	1760	5176
Remarks		bellows option available	bellows option available
Page		50	52

Linear Motion Systems with Lead or Ball Screw Drive and Ball Guide

Overview

MicroStage MS



MS33

Features

- Compact, lightweight package
- Stainless steel leadscrew with anti-backlash nut offers precise repeatability
- Segmented linear bearings provide smooth motion
- Corrosion resistant options available

Parameter		MS25	MS33
Profile size (width × height)	[mm]	50 × 25	60 × 33
Stroke length (Smax), maximum	[mm]	705,5	704
Linear speed, maximum	[m/s]	0,85	1,02
Dynamic carriage load (Fz), maximum	[N]	100	150
Remarks		bellows option available	bellows option available
Page		54	56

2DB



2DB12

INCH INTERFACE

Features

- Integrated dual-rail, webbed shaft ideal for loading in all orientations
- Low-profile height
- Super Smart bushings with low friction for smooth motion
- Easy mounting
- Corrosion resistant options available

Parameter		2DB08	2DB120	2DB12J	2DB160	2DB16J
Profile size (width × height)	[in]	4.5 × 1.625	6 × 2.125	6 × 2.562	7.5 × 2.625	7.5 × 3.062
Stroke length (Smax), maximum	[in]	41	63	63	84.5	84.5
Linear speed, maximum	[in/s]	33.3	10.0	25.0	8.3	41.67
Dynamic carriage load (Fz), maximum	[lbs]	336	2115	2115	3555	3555
Remarks		leadscrew driven	ballscrew driven integrated carriage	ballscrew driven modular carriage	ballscrew driven integrated carriage	ballscrew driven modular carriage
Page		58	60	62	64	66



WM40S

Ball Screw Drive, Ball Guide, Single Ball Nut

- » Ordering key - see page 193
- » Accessories - see page 131
- » Additional data - see page 188

General Specifications

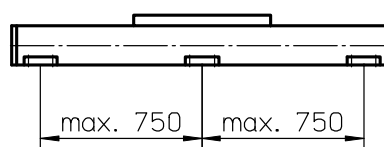
Parameter	WM40S
Profile size (w × h) [mm]	40 × 40
Type of screw	ball screw with single nut
Carriage sealing system	plastic cover band
Screw supports	included in all units that require screw supports
Lubrication	central lubrication of all parts that require lubrication
Included accessories	4 × mounting clamps

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

Input speed [rpm]	Screw lead [mm]
	p = 5
150	0,3
1500	0,5
3000	0,8

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.

Performance Specifications

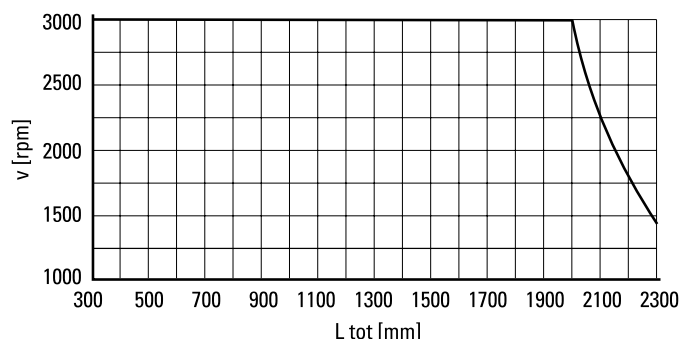
for Units with Single Standard Carriage (N)¹

Parameter		WM40S
Stroke length (S _{max}), maximum	[mm]	2000
Total length (L _{tot}), maximum	[mm]	2300
Linear speed, maximum	[m/s]	0,25
Acceleration, maximum	[m/s ²]	20
Repeatability	[± mm]	0,02
Input speed, maximum	[rpm]	3000
Operation temperature limits	[°C]	0 – 80
Dynamic load (F _x), maximum	[N]	1000
Dynamic load (F _y), maximum	[N]	450
Dynamic load (F _z), maximum	[N]	600
Dynamic load torque (M _x), maximum	[Nm]	10
Dynamic load torque (M _y), maximum	[Nm]	30
Dynamic load torque (M _z), maximum	[Nm]	30
Drive shaft force (F _{rd}), maximum ²	[N]	100
Input/drive shaft torque (M _{ta}), maximum	[Nm]	3
Ball screw diameter (d _o)	[mm]	12
Ball screw lead (p)	[mm]	5
Weight	[kg]	
of unit with zero stroke		1,50
of every 100 mm of stroke		0,30
of each carriage		0,36

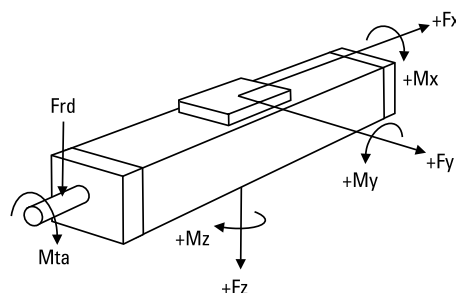
¹ See next page for deviating values of units with other carriage types.

² Only relevant for units without RediMount flange.

Critical Speed



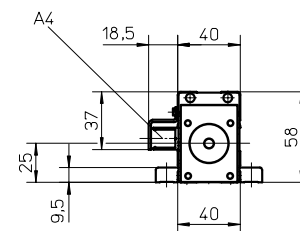
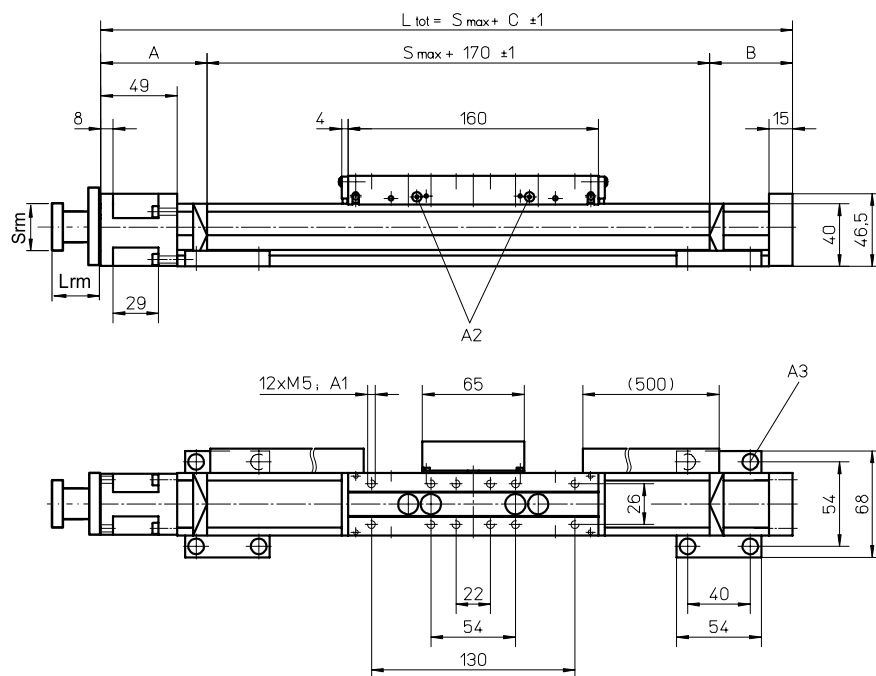
Definition of Forces



WM40S

Ball Screw Drive, Ball Guide, Single Ball Nut

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



RediMount Flange Specifications

Parameter	Min	Max
Flange length (L _{rm}) [mm]	59	94
Flange square (S _{rm}) [mm]	60	139
Flange weight * [kg]	1,86	

* Max. weight including coupling and fastening screws

A1: depth 7

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)

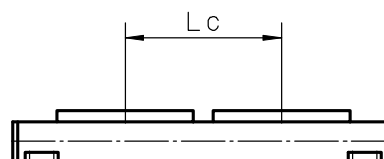
Stroke length (S _{max}) [mm]	A [mm]	B [mm]	C [mm]
0 – 500	65	35	270
501 – 1100	65	45	280
1101 – 2000	70	60	300

Performance Specifications

for Units with Double Standard Carriage (Z)

Parameter	WM40S
Stroke length (S _{max}), maximum [mm]	1825
Total length (L _{tot}), maximum [mm]	2300
Minimum distance between carriages (L _c) [mm]	175
Dynamic load (F _y), maximum [N]	900
Dynamic load (F _z), maximum [N]	1200
Dynamic load torque (M _y), maximum [Nm]	L _c ¹ × 0,45
Dynamic load torque (M _z), maximum [Nm]	L _c ¹ × 0,6
Force required to move second carriage [N]	4
Total length (L _{tot}) [mm]	S _{max} + C + L _c

¹ Value in mm



WM40D

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

» Ordering key - see page 193

» Accessories - see page 131

» Additional data - see page 188

General Specifications

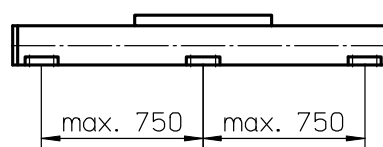
Parameter	WM40D
Profile size (w × h) [mm]	40 × 40
Type of screw	ball screw with double nuts
Carriage sealing system	plastic cover band
Screw supports	included in all units that require screw supports
Lubrication	central lubrication of all parts that require lubrication
Included accessories	4 × mounting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

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.

Performance Specifications

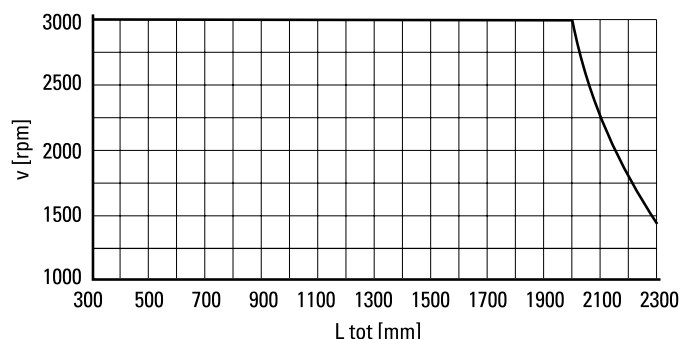
for Units with Single Long Carriage (L)¹

Parameter		WM40D
Stroke length (S_{max}), 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 (F_x), maximum	[N]	1000
Dynamic load (F_y), maximum	[N]	450
Dynamic load (F_z), maximum	[N]	600
Dynamic load torque (M_x), maximum	[Nm]	10
Dynamic load torque (M_y), maximum	[Nm]	30
Dynamic load torque (M_z), maximum	[Nm]	30
Drive shaft force (F_{rd}), maximum ²	[N]	100
Input/drive shaft torque (M_{ta}), maximum	[Nm]	3
Ball screw diameter (d_o)	[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

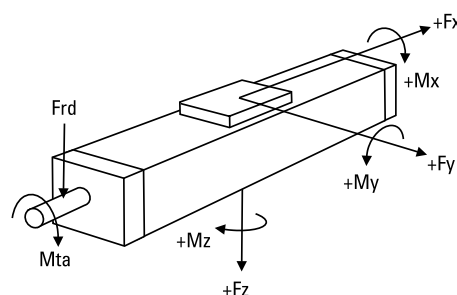
¹ See next page for deviating values of units with other carriage types.

² Only relevant for units without RediMount flange.

Critical Speed



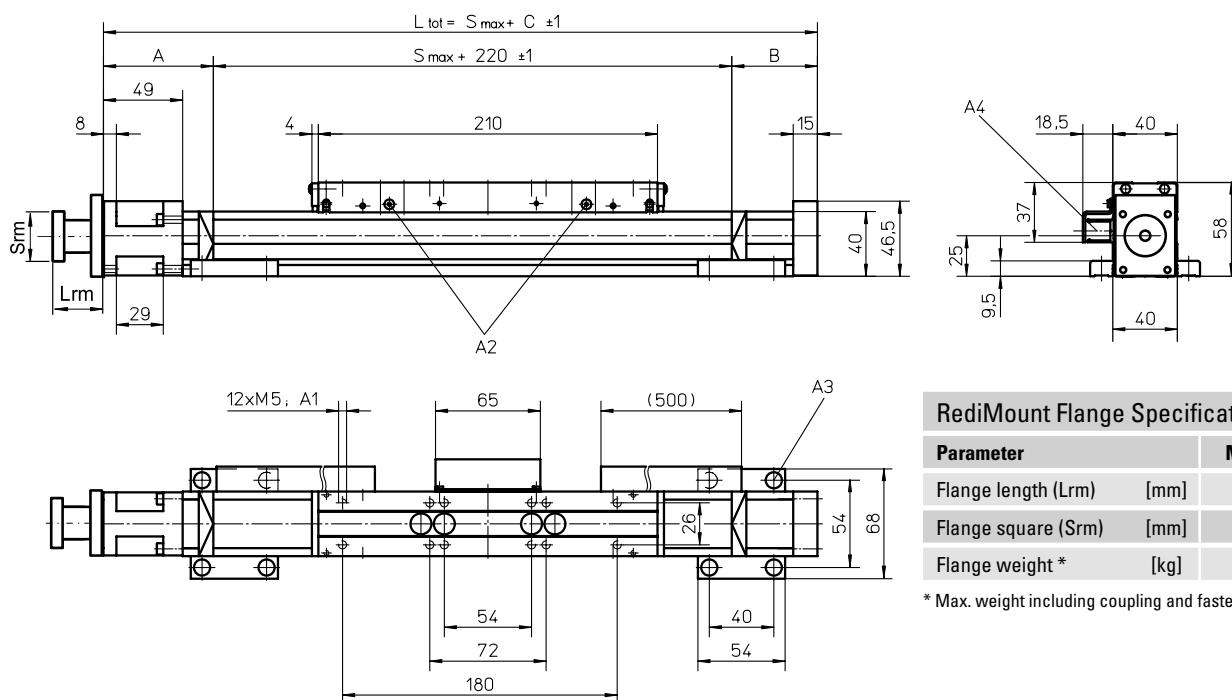
Definition of Forces



WM40D

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

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



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)

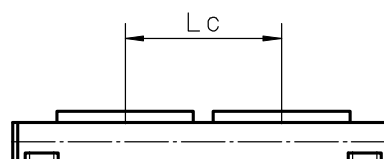
Stroke length (Smax) [mm]	A [mm]	B [mm]	C [mm]
0 – 450	65	35	320
451 – 1050	65	45	330
1051 – 1950	70	60	350

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



WM60D

Ball Screw Drive, Ball Guide, Double Ball Nuts

- » Ordering key - see page 193
- » Accessories - see page 131
- » Additional data - see page 188

General Specifications

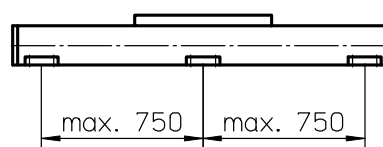
Parameter	WM60D
Profile size (w × h) [mm]	60 × 60
Type of screw	ball screw with double nut
Carriage sealing system	self-adjusting plastic cover band
Screw supports	included in all units that require screw supports
Lubrication	central lubrication of all parts that require lubrication
Included accessories	4 × mounting clamps

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

Input speed [rpm]	Screw lead [mm]		
	p = 5	p = 20	p = 50
150	0,8	1,3	1,6
1500	1,4	2,0	2,4
3000	1,8	2,3	2,6

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 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.

Performance Specifications

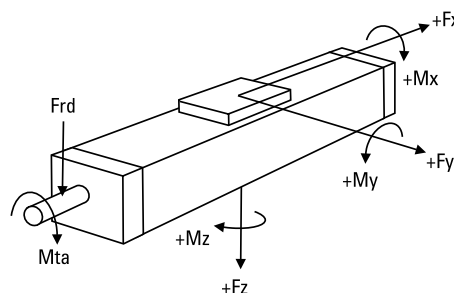
for Units with Single Standard Carriage (N)¹

Parameter		WM60D
Stroke length (S _{max}), maximum	[mm]	11000
screw lead 5, 20 mm		5000
screw lead 50 mm		
Total length (L _{tot}), maximum	[mm]	12130
screw lead 5, 20 mm		5780
screw lead 50 mm		
Linear speed, maximum	[m/s]	2,5
Acceleration, maximum	[m/s ²]	20
Repeatability	[± mm]	0,01
Input speed, maximum	[rpm]	3000
Operation temperature limits	[°C]	0 – 80
Dynamic load (F _x), maximum	[N]	4000
Dynamic load (F _y), maximum	[N]	2000
Dynamic load (F _z), maximum	[N]	2000
Dynamic load torque (M _x), maximum	[Nm]	100
Dynamic load torque (M _y), maximum	[Nm]	200
Dynamic load torque (M _z), maximum	[Nm]	200
Drive shaft force (F _{rd}), maximum ²	[N]	500
Input/drive shaft torque (M _{ta}), maximum	[Nm]	35
Ball screw diameter (d ₀)	[mm]	20
Ball screw lead (p)	[mm]	5, 20, 50
Weight	[kg]	
of unit with zero stroke		6,16
of every 100 mm of stroke		0,65
of each carriage		1,99

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

² Only relevant for units without RediMount flange.

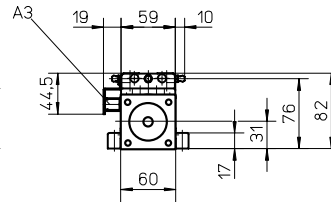
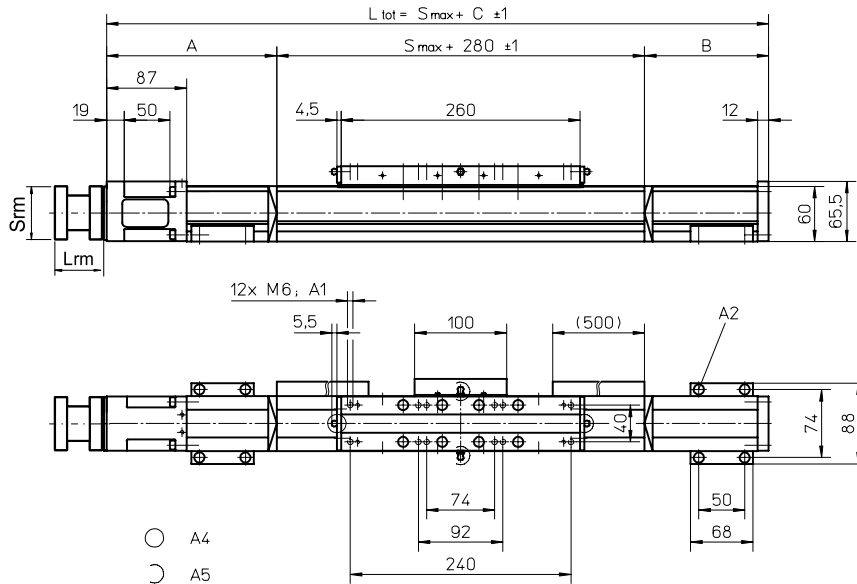
Definition of Forces



WM60D

Ball Screw Drive, Ball Guide, Double Ball Nuts

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



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-M6x20 8.8
 A3: ENF inductive sensor rail kit (optional - see page 166)

A4: tapered lubricating nipple to DIN7142 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 - 695 (0 - 505)	115	65	460 (650)
696 - 1335 (506 - 1145)	165	115	560 (750)
1336 - 2075 (1146 - 1885)	185	135	600 (790)
2076 - 2780 (1886 - 2590)	210	160	650 (840)

Values between brackets = for units with long carriage

Stroke length (Smax) [mm]	A [mm]	B [mm]	C [mm]
2781 - 3545 (2591 - 3355)	230	180	690 (880)
3546 - 4285 (3366 - 4095)	250	200	730 (920)
4286 - 5015 (4096 - 4825)	275	225	780 (970)
5016 - 11000 (4826 - 10810)	contact customer service		

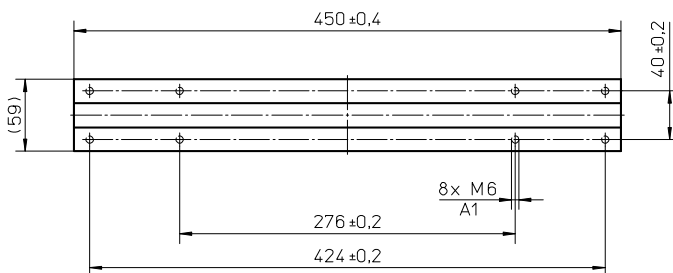
Performance Specifications for Units with Single Long Carriage (L)

Parameter	WM60D
Stroke length (Smax), maximum screw lead 5, 20 mm screw lead 50 mm	11000 4810
Total length (L tot), maximum screw lead 5, 20 mm screw lead 50 mm	12320 5780
Carriage length	450
Dynamic load torque (My), maximum	500
Dynamic load torque (Mz), maximum	500
Weight	3,1

Performance Specifications for Units with Double Standard Carriage (Z)

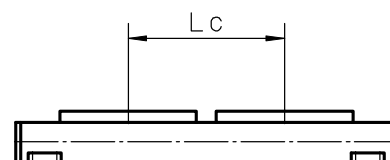
Parameter	WM60D
Stroke length (Smax), maximum screw lead 5, 20 mm screw lead 50 mm	10665 4665
Total length (L tot), maximum screw lead 5, 20 mm screw lead 50 mm	12130 5780
Minimum distance between carriages (Lc)	335
Dynamic load (Fy), maximum	4000
Dynamic load (Fz), maximum	4000
Dynamic load torque (My), maximum	L c' × 2
Dynamic load torque (Mz), maximum	L c' × 2
Force required to move second carriage	20
Total length (L tot)	Smax + C + Lc

¹ Value in mm



A1: depth 11

www.thomsonlinear.com



WM60S

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

- » Ordering key - see page 193
- » Accessories - see page 131
- » Additional data - see page 188

General Specifications

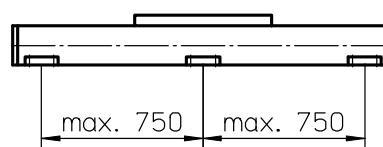
Parameter	WM60S
Profile size (w × h) [mm]	60 × 60
Type of screw	ball screw with single nut
Carriage sealing system	self-adjusting plastic cover band
Screw supports	included in all units that require screw supports
Lubrication	central lubrication of all parts that require lubrication
Included accessories	4 × mounting clamps

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.

Performance Specifications

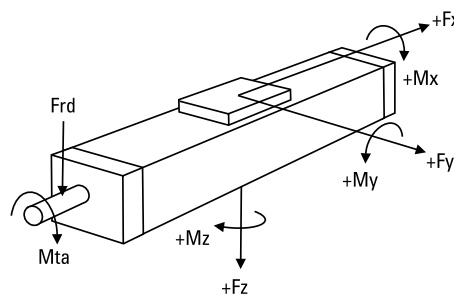
for Units with Single Short Carriage (S)¹

Parameter		WM60S
Stroke length (S_{max}), 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/s ²]	10
Repeatability	[± mm]	0,02
Input speed, maximum	[rpm]	3000
Operation temperature limits	[°C]	0 – 80
Dynamic load (F_x), maximum	[N]	2800
Dynamic load (F_y), maximum	[N]	1400
Dynamic load (F_z), maximum	[N]	1400
Dynamic load torque (M_x), maximum	[Nm]	50
Dynamic load torque (M_y), maximum	[Nm]	100
Dynamic load torque (M_z), maximum	[Nm]	100
Drive shaft force (F_{rd}), maximum ²	[N]	500
Input/drive shaft torque (M_{ta}), maximum	[Nm]	35
Ball screw diameter (d_o)	[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.

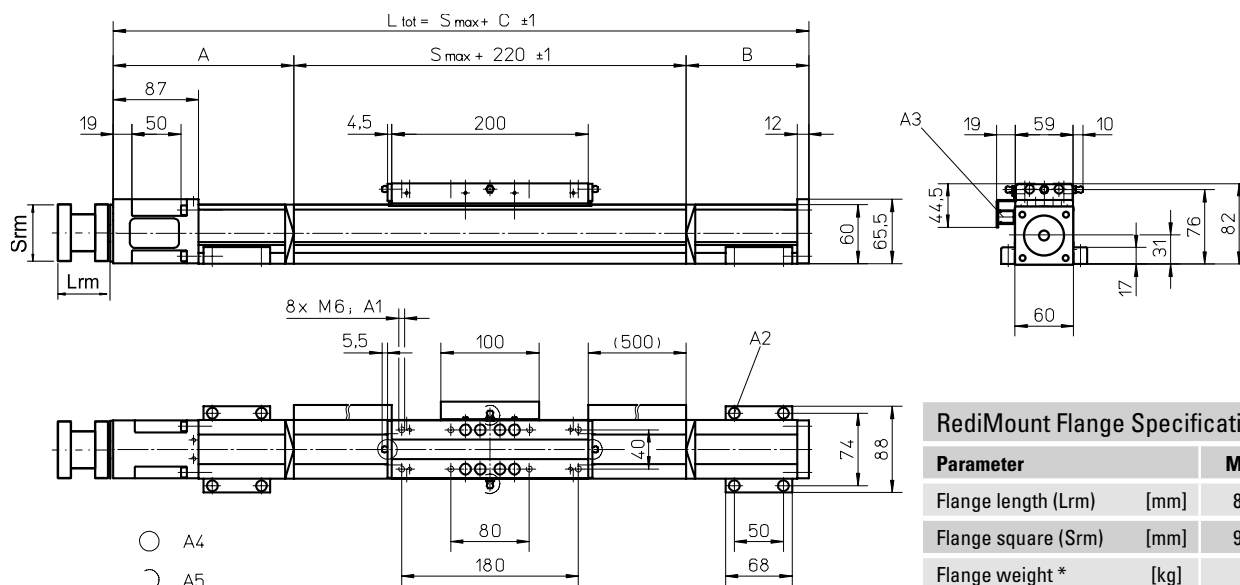
Definition of Forces



WM60S

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

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



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-M6x20 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

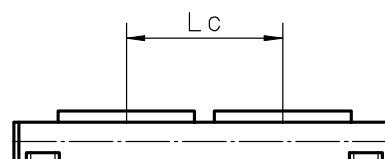
Stroke length (Smax) [mm]	A [mm]	B [mm]	C [mm]
0 - 580	95	20	335
581 - 1140	110	60	390
1141 - 1805	130	80	430
1806 - 2460	155	105	480

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

¹ Value in mm



WM60X

Ball Screw Drive, Ball Guide, Left/Right Moving Carriages

- » Ordering key - see page 193
- » Accessories - see page 131
- » Additional data - see page 188

General Specifications

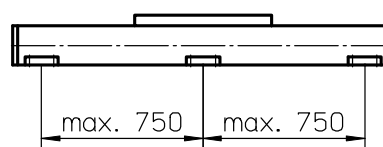
Parameter	WM60X
Profile size (w × h) [mm]	60 × 60
Type of screw	ball screw with double nut
Carriage sealing system	self-adjusting plastic cover band
Screw supports	included in all units that require screw supports
Lubrication	central lubrication of all parts that require lubrication
Included accessories	4 × mounting clamps

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

Input speed [rpm]	Screw lead [mm]
	p = 5
150	1,6
1500	2,8
3000	3,6

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 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.

Performance Specifications

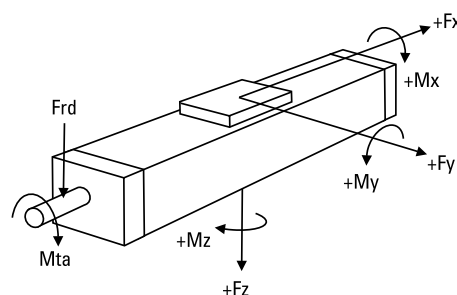
for Units with Single Standard Carriage (N)¹

Parameter		WM60X
Stroke length (S_{max}), maximum	[mm]	10340
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 (F_x), maximum	[N]	4000
Dynamic load (F_y), maximum	[N]	2000
Dynamic load (F_z), maximum	[N]	2000
Dynamic load torque (M_x), maximum	[Nm]	100
Dynamic load torque (M_y), maximum	[Nm]	200
Dynamic load torque (M_z), maximum	[Nm]	200
Drive shaft force (F_{rd}), maximum ²	[N]	500
Input/drive shaft torque (M_{ta}), maximum	[Nm]	35
Ball screw diameter (d_o)	[mm]	20
Ball screw lead (p)	[mm]	5
Weight	[kg]	
of unit with zero stroke		10,33
of every 100 mm of stroke		0,65
of each carriage		1,99

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

² Only relevant for units without RediMount flange.

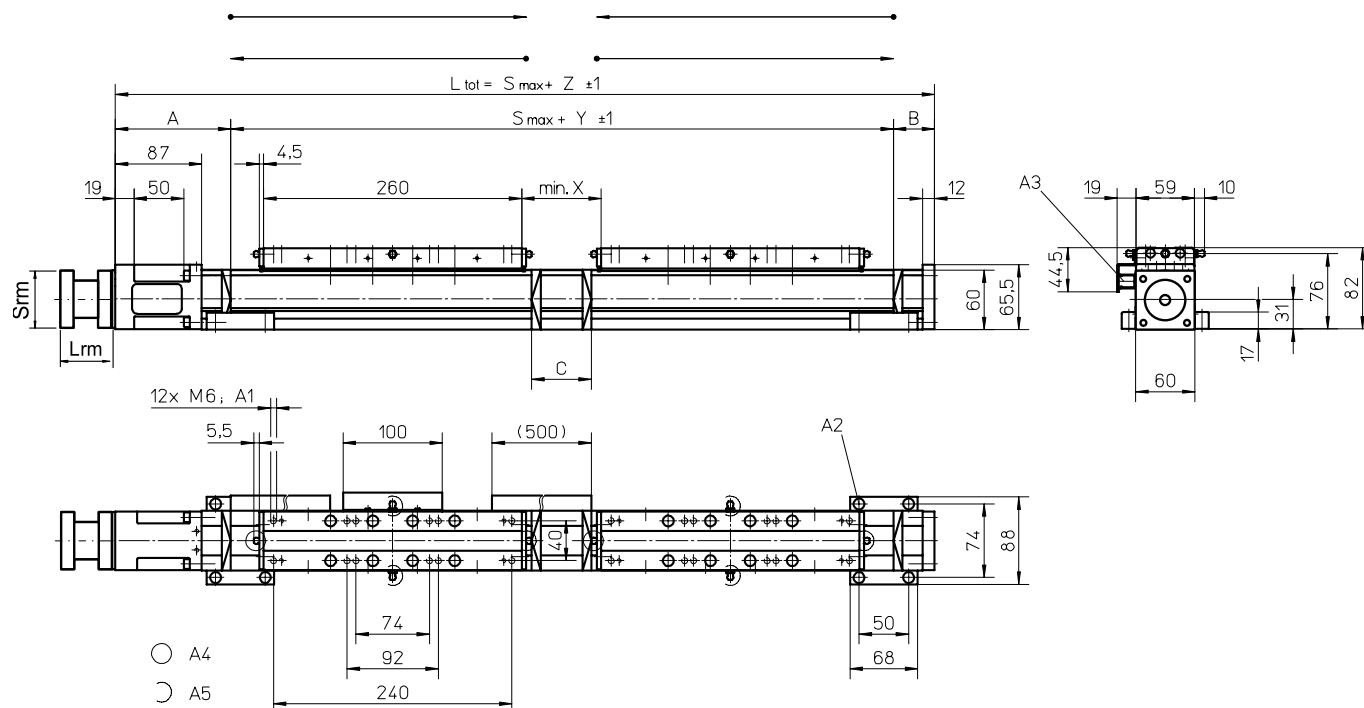
Definition of Forces



WM60X

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

Ball Screw Drive, Ball Guide, Left/Right Moving Carriages



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

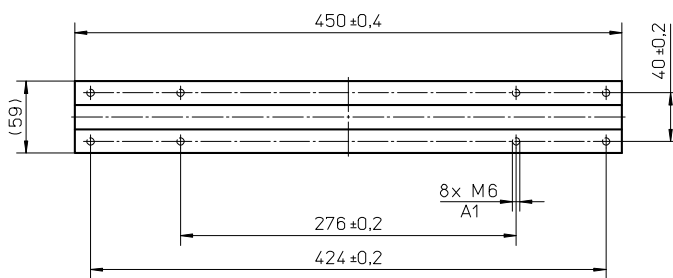
A1: depth 11
 A2: socket cap screw ISO4762-M6x20 8.8
 A3: ENF inductive sensor rail kit (optional - see page 166)

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]	X [mm]	Y [mm]	Z [mm]
0 - 1390 (0 - 1200)	115	65	60	80	620	800
1391 - 2670 (1201 - 2480)	165	115	210	230	770	1050
2671 - 4150 (2481 - 3960)	185	135	250	270	810	1130
4151 - 5560 (3961 - 5370)	210	160	300	320	860	1230
5561 - 10340 (5371 - 10150)	contact customer service					

Values between brackets = for units with long carriage

Parameter	WM60X
Carriage length [mm]	450
Dynamic load torque (My), maximum [Nm]	500
Dynamic load torque (Mz), maximum [Nm]	500
Weight [kg]	3,1



A1: depth 11

WM80D

Ball Screw Drive, Ball Guide, Double Ball Nuts

- » Ordering key - see page 193
- » Accessories - see page 131
- » Additional data - see page 188

General Specifications

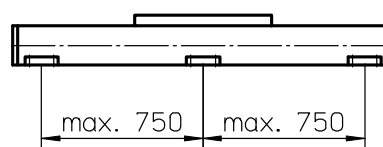
Parameter	WM80D
Profile size (w × h) [mm]	80 × 80
Type of screw	ball screw with double nuts
Carriage sealing system	self-adjusting plastic cover band
Screw supports	included in all units that require screw supports
Lubrication	central lubrication of all parts that require lubrication
Included accessories	4 × mounting clamps

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

Input speed [rpm]	Screw lead [mm]			
	p = 5	p = 10	p = 20	p = 50
150	1,1	1,5	1,8	2,3
1500	1,7	2,1	2,3	3,0
3000	2,1	2,5	2,6	3,6

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 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.

Performance Specifications

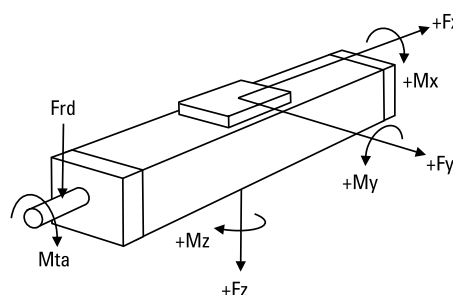
for Units with Single Standard Carriage (N)¹

Parameter		WM80D
Stroke length (S _{max}), maximum screw lead 5, 10, 20 mm	[mm]	11000
stroke lead 50 mm		4965
Total length (L _{tot}), maximum screw lead 5, 10, 20 mm	[mm]	12075
stroke lead 50 mm		5780
Linear speed, maximum	[m/s]	2,5
Acceleration, maximum	[m/s ²]	20
Repeatability	[± mm]	0,01
Input speed, maximum	[rpm]	3000
Operation temperature limits	[°C]	0 – 80
Dynamic load (F _x), maximum	[N]	5000
Dynamic load (F _y), maximum	[N]	3000
Dynamic load (F _z), maximum	[N]	3000
Dynamic load torque (M _x), maximum	[Nm]	350
Dynamic load torque (M _y), maximum	[Nm]	300
Dynamic load torque (M _z), maximum	[Nm]	300
Drive shaft force (F _{rd}), maximum ²	[N]	700
Input/drive shaft torque (M _{ta}), maximum	[Nm]	55
Ball screw diameter (d _o)	[mm]	25
Ball screw lead (p)	[mm]	5, 10, 20, 50
Weight	[kg]	
of unit with zero stroke		11,57
of every 100 mm of stroke		1,08
of each carriage		4,26

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

² Only relevant for units without RediMount flange.

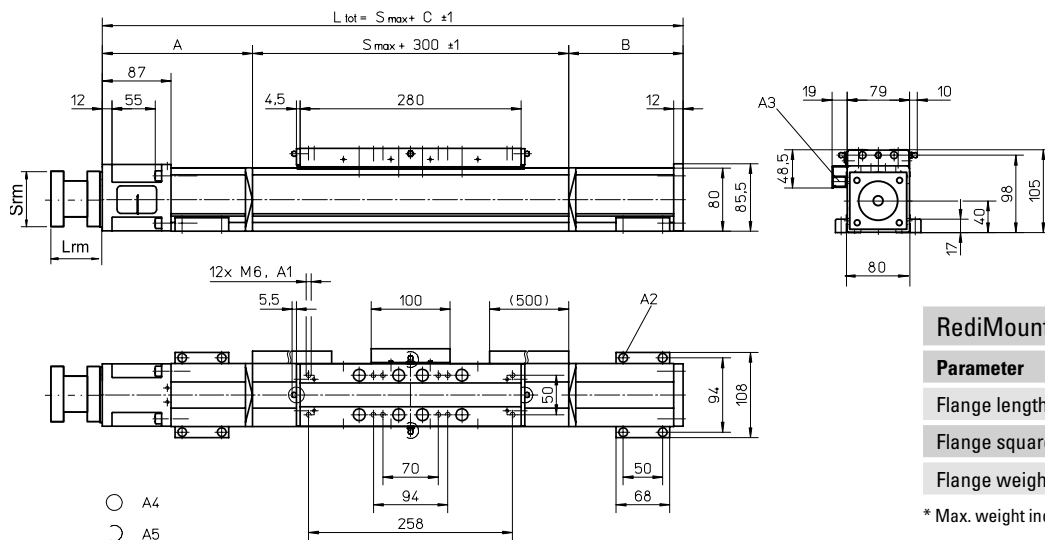
Definition of Forces



WM80D

Ball Screw Drive, Ball Guide, Double Ball Nuts

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



RediMount Flange Specifications

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

* Max. weight including coupling and fastening screws

- A1: depth 12 mm
- A2: socket cap screw ISO4762-M6x20 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 three alternative lubrication points by customer

Stroke length (Smax) [mm]	A [mm]	B [mm]	C [mm]
0 - 780 (0 - 610)	120	80	500 (670)
781 - 1535 (611 - 1365)	170	125	595 (765)
1536 - 2375 (1366 - 2205)	190	145	635 (805)
2376 - 3205 (2206 - 3035)	215	170	685 (855)

Values between brackets = for units with long carriage

Stroke length (Smax) [mm]	A [mm]	B [mm]	C [mm]
3206 - 4045 (3036 - 3875)	235	190	725 (895)
4046 - 4885 (3876 - 4715)	255	210	765 (935)
4886 - 5000 (4716 - 4830)	280	235	815 (985)
5001 - 11000 (4717 - 10830)	contact customer service		

Performance Specifications

for Units with Single Long Carriage (L)

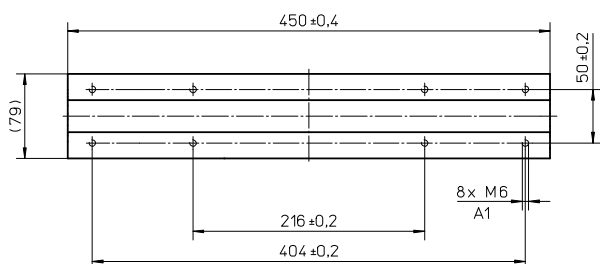
Parameter	WM80D
Stroke length (Smax), maximum screw lead 5, 10, 20 mm screw lead 50 mm	10830 4795
Total length (L tot), maximum screw lead 5, 10, 20 mm screw lead 50 mm	12075 5780
Carriage length	450
Dynamic load torque (My), maximum	750
Dynamic load torque (Mz), maximum	750
Weight	6,4

Performance Specifications

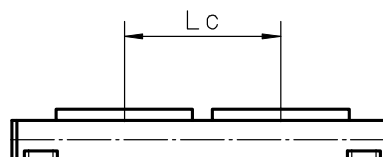
for Units with Double Standard Carriage (Z)

Parameter	WM80D
Stroke length (Smax), maximum screw lead 5, 10, 20 mm screw lead 50 mm	10640 4655
Total length (L tot), maximum screw lead 5, 10, 20 mm screw lead 50 mm	12075 5780
Minimum distance between carriages (Lc)	360
Dynamic load (Fy), maximum	6000
Dynamic load (Fz), maximum	6000
Dynamic load torque (My), maximum	L C' × 3
Dynamic load torque (Mz), maximum	L C' × 3
Force required to move second carriage	25
Total length (L tot)	Smax + C + Lc

¹ Value in mm



A1: depth 12 mm



WM80S

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

- » Ordering key - see page 193
- » Accessories - see page 131
- » Additional data - see page 188

General Specifications

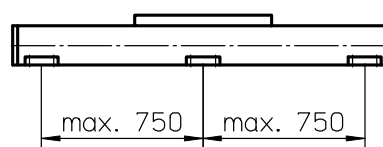
Parameter	WM80S
Profile size (w × h) [mm]	80 × 80
Type of screw	ball screw with single nut
Carriage sealing system	self-adjusting plastic cover band
Screw supports	included in all units that require screw supports
Lubrication	central lubrication of all parts that require lubrication
Included accessories	4 × mounting clamps

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

Input speed [rpm]	Screw lead [mm]			
	p = 5	p = 10	p = 20	p = 50
150	0,9	1,1	1,3	2,0
1500	1,3	1,5	1,8	2,4
3000	1,7	1,8	2,0	2,9

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. 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.

Performance Specifications

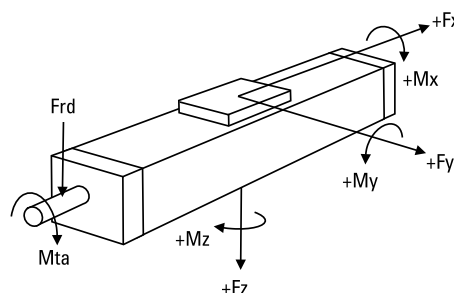
for Units with Single Short Carriage (S)¹

Parameter		WM80S
Stroke length (S_{max}), maximum screw lead 5, 10, 20 mm	[mm]	10540
stroke lead 50 mm		5000
Total length (L_{tot}), maximum screw lead 5, 10, 20 mm	[mm]	11495
stroke lead 50 mm		5645
Linear speed, maximum	[m/s]	2,5
Acceleration, maximum	[m/s ²]	20
Repeatability	[± mm]	0,02
Input speed, maximum	[rpm]	3000
Operation temperature limits	[°C]	0 – 80
Dynamic load (F_x), maximum	[N]	3500
Dynamic load (F_y), maximum	[N]	2100
Dynamic load (F_z), maximum	[N]	2100
Dynamic load torque (M_x), maximum	[Nm]	150
Dynamic load torque (M_y), maximum	[Nm]	180
Dynamic load torque (M_z), maximum	[Nm]	180
Drive shaft force (F_{rd}), maximum ²	[N]	700
Input/drive shaft torque (M_{ta}), maximum	[Nm]	55
Ball screw diameter (d_o)	[mm]	25
Ball screw lead (p)	[mm]	5, 10, 20, 50
Weight	[kg]	
of unit with zero stroke		7,0
of every 100 mm of stroke		1,1
of each carriage		1,6

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

² Only relevant for units without RediMount flange.

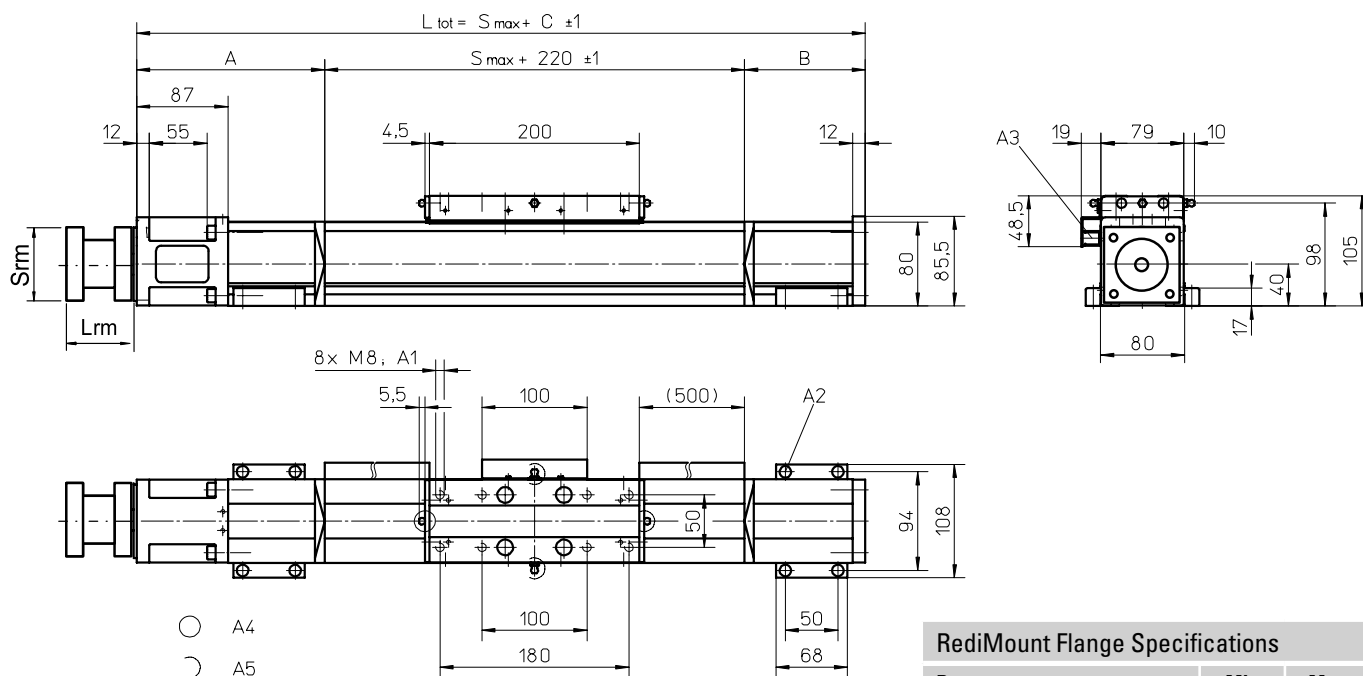
Definition of Forces



WM80S

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

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



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 12 mm
 A2: socket cap screw ISO4762-M6x20 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 three alternative lubrication points by customer

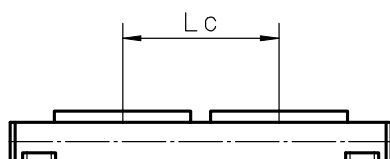
Stroke length (Smax) [mm]	A [mm]	B [mm]	C [mm]
0 - 680	95	35	350
681 - 1310	125	80	425
1311 - 2065	150	105	475
2066 - 2830	170	125	515
2831 - 3590	195	150	565
3591 - 4355	215	170	605
4356 - 5000	235	190	645

Performance Specifications

for Units with Double Short Carriage (Y)

Parameter	WM80S
Stroke length (Smax), maximum screw lead 5, 10, 20 mm screw lead 50 mm	10260 4720
Total length (L tot), maximum screw lead 5, 10, 20 mm screw lead 50 mm	11495 5645
Minimum distance between carriages (Lc)	280
Dynamic load (Fy), maximum	4200
Dynamic load (Fz), maximum	4200
Dynamic load torque (My), maximum	L c ¹ × 2,1
Dynamic load torque (Mz), maximum	L c ¹ × 2,1
Force required to move second carriage	22,5
Total length (L tot)	Smax + C + Lc

¹ Value in mm



WM120D

Ball Screw Drive, Ball Guide, Double Ball Nuts

- » Ordering key - see page 193
- » Accessories - see page 131
- » Additional data - see page 188

General Specifications

Parameter	WM120D
Profile size (w × h) [mm]	120 × 120
Type of screw	ball screw with double nuts
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 Standard Carriage (N)¹

Parameter		WM120D
Stroke length (Smax), maximum screw lead 5, 10, 20 mm screw lead 40 mm	[mm]	11000 4765
Total length (L tot), maximum screw lead 5, 10, 20 mm screw lead 40 mm	[mm]	12415 5780
Linear speed, maximum	[m/s]	2,0
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 screw lead 5, 10, 20 mm screw lead 40 mm	[N]	12000 8000
Dynamic load (Fy), maximum	[N]	6000
Dynamic load (Fz), maximum	[N]	6000
Dynamic load torque (Mx), maximum	[Nm]	500
Dynamic load torque (My), maximum	[Nm]	600
Dynamic load torque (Mz), maximum	[Nm]	600
Drive shaft force (Frd), maximum ²	[N]	1000
Input/drive shaft torque (Mta), maximum	[Nm]	80
Ball screw diameter (do)	[mm]	32
Ball screw lead (p)	[mm]	5, 10, 20, 40
Weight	[kg]	
of unit with zero stroke		25,91
of every 100 mm of stroke		1,93
of each carriage		9,25

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

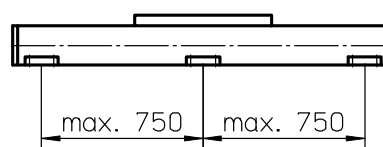
² Only relevant for units without RediMount flange.

Carriage Idle Torque (M idle) [Nm]

Input speed [rpm]	Screw lead [mm]			
	p = 5	p = 10	p = 20	p = 40
150	1,4	2,0	2,3	2,4
1500	2,5	3,0	3,3	3,8
3000	3,0	3,7	4,0	4,3

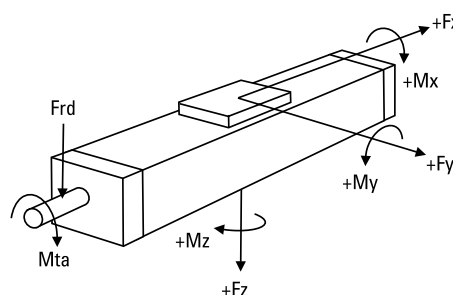
M idle = the input torque needed to move the carriage with no load on it.

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 5400 mm consist of two profiles where the joint between the two profiles must be adequately supported on both sides.

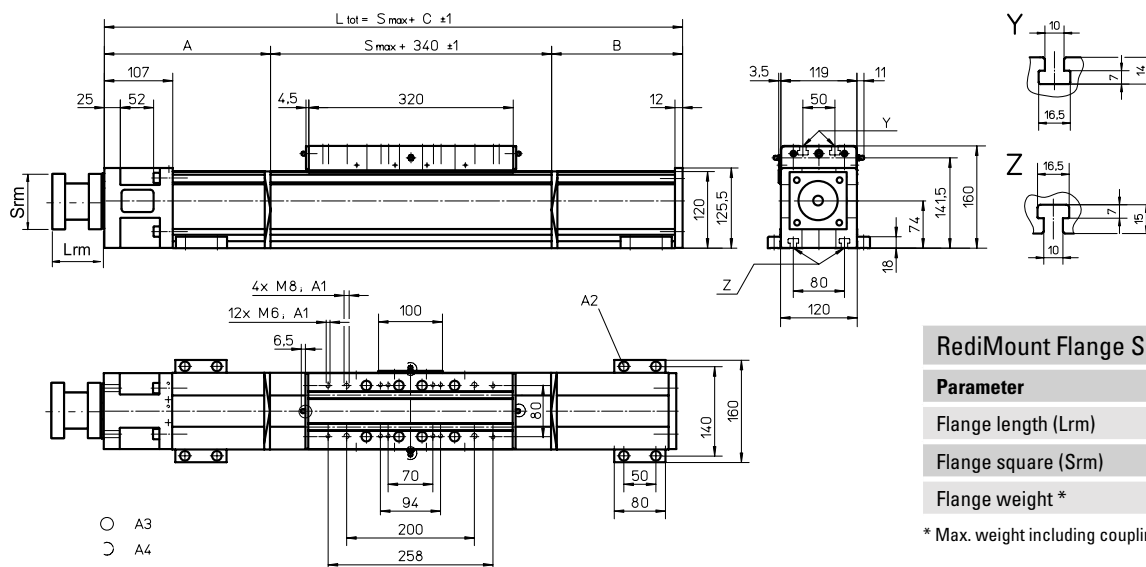
Definition of Forces



WM120D

Ball Screw Drive, Ball Guide, Double Ball Nuts

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



Parameter	Min	Max
Flange length (Lrm) [mm]	87	149
Flange square (Srm) [mm]	90	200
Flange weight * [kg]	6,03	

* Max. weight including coupling and fastening screws

A1: depth 22
A2: socket cap screw ISO4762-M8x20 8.8

A3: tapered lubricating nipple to DIN71412 M8x1 on fixed-bearing side as standard feature
A4: 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 - 890 (0 - 710)	155	100	595 (775)
891 - 1695 (711 - 1515)	225	170	735 (915)
1696 - 2625 (1516 - 2445)	260	205	805 (985)
2626 - 3555 (2446 - 3375)	295	240	875 (1055)

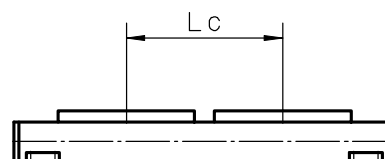
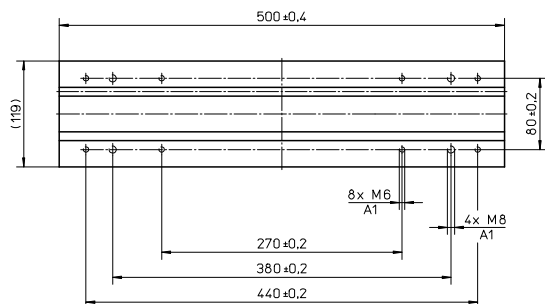
Stroke length (Smax) [mm]	A [mm]	B [mm]	C [mm]
3556 - 4485 (3376 - 4305)	330	275	945 (1125)
4486 - 5000 (4306 - 4820)	365	310	1015 (1195)
5001 - 11000 (4307 - 10820)	contact customer service		

Values between brackets = for units with long carriage

Parameter	WM120D
Stroke length (Smax), maximum screw lead 5, 10, 20 mm screw lead 40 mm	11000 4585
Total length (L tot), maximum screw lead 5, 10, 20 mm screw lead 40 mm	12595 5780
Carriage length	500
Dynamic load torque (My), maximum	1500
Dynamic load torque (Mz), maximum	1500
Weight	14,2

Parameter	WM120D
Stroke length (Smax), maximum screw lead 5, 10, 20 mm screw lead 40 mm	10730 4385
Total length (L tot), maximum screw lead 5, 10, 20 mm screw lead 40 mm	12595 5780
Minimum distance between carriages (Lc)	450
Dynamic load (Fy), maximum	12000
Dynamic load (Fz), maximum	12000
Dynamic load torque (My), maximum	L C ¹ × 6
Dynamic load torque (Mz), maximum	L C ¹ × 6
Force required to move second carriage	30
Total length (L tot)	Smax + C + Lc

¹ Value in mm



A1: depth 22
www.thomsonlinear.com

WV60

Ball Screw Drive, No Guides

- » Ordering key - see page 194
- » Accessories - see page 131
- » Additional data - see page 188

General Specifications

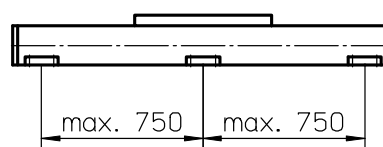
Parameter	WV60
Profile size (w × h) [mm]	60 × 60
Type of screw	ball screw with double nut
Carriage sealing system	self-adjusting plastic cover band
Screw supports	included in all units that require screw supports
Lubrication	central lubrication of all parts that require lubrication
Included accessories	4 × mounting clamps

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

Input speed [rpm]	Screw lead [mm]		
	p = 5	p = 20	p = 50
150	0,7	0,9	1,1
1500	1,3	1,5	1,5
3000	1,7	1,9	2,1

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

Deflection of the Profile



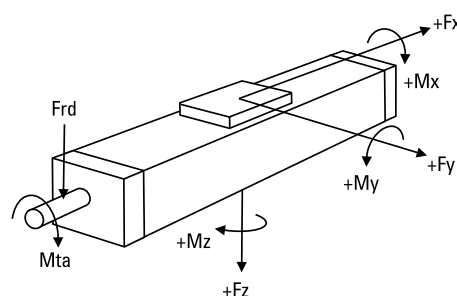
A mounting clamp must be installed at least every 750 mm to be able to operate at maximum load. Less clamps may be required if less load is being operated, see the additional technical data for more information. Units with a profile length over 6300 mm consist of two profiles where the joint between the two profiles must be adequately supported on both sides.

Performance Specifications

Parameter		WV60
Stroke length (S_{max}), maximum screw lead 5, 20 mm screw lead 50 mm	[mm]	11000 5000
Total length (L_{tot}), maximum screw lead 5, 20 mm screw lead 50 mm	[mm]	12050 5700
Linear speed, maximum	[m/s]	2,5
Acceleration, maximum	[m/s ²]	20
Repeatability	[± mm]	0,01
Input speed, maximum	[rpm]	3000
Operation temperature limits	[°C]	0 – 80
Dynamic load (F_x), maximum	[N]	4000
Dynamic load (F_y), maximum	[N]	0
Dynamic load (F_z), maximum	[N]	0
Dynamic load torque (M_x), maximum	[Nm]	0
Dynamic load torque (M_y), maximum	[Nm]	0
Dynamic load torque (M_z), maximum	[Nm]	0
Drive shaft force (F_{rd}), maximum ¹	[N]	500
Input/drive shaft torque (M_{ta}), maximum	[Nm]	35
Ball screw diameter (d_o)	[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]	4,72 0,55 1,42

¹ Only relevant for units without RediMount flange.

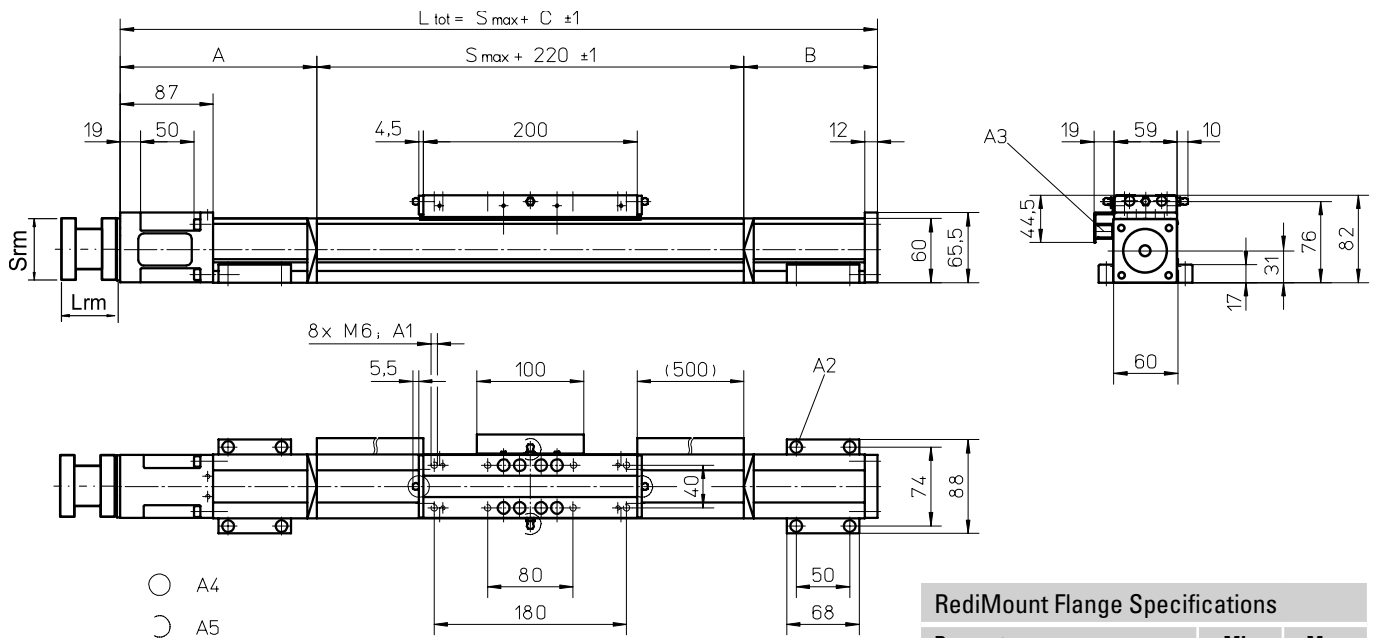
Definition of Forces



WV60

Ball Screw Drive, No Guides

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



- A1: depth 11
- A2: socket cap screw ISO4762-M6x20 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

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

Stroke length (Smax) [mm]	A [mm]	B [mm]	C [mm]	Stroke length (Smax) [mm]	A [mm]	B [mm]	C [mm]
0 - 690	130	80	430	2886 - 3625	220	170	610
691 - 1415	155	105	480	3626 - 4355	245	195	660
1416 - 2155	175	125	520	4256 - 5095	265	215	700
2156 - 2885	200	150	570	5096 - 11000	contact customer service		

WV80

Ball Screw Drive, No Guides

- » Ordering key - see page 194
- » Accessories - see page 131
- » Additional data - see page 188

General Specifications

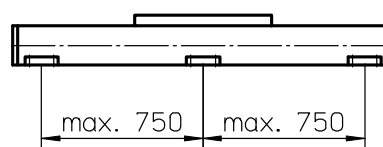
Parameter	WV80
Profile size (w × h) [mm]	80 × 80
Type of screw	ball screw with double nuts
Carriage sealing system	self-adjusting plastic cover band
Screw supports	included in all units that require screw supports
Lubrication	central lubrication of all parts that require lubrication
Included accessories	4 × mounting clamps

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

Input speed [rpm]	Screw lead [mm]			
	p = 5	p = 10	p = 20	p = 50
150	0,9	1,1	1,3	1,4
1500	1,6	1,9	2,1	2,3
3000	2,0	2,4	2,6	3,0

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

Deflection of the Profile



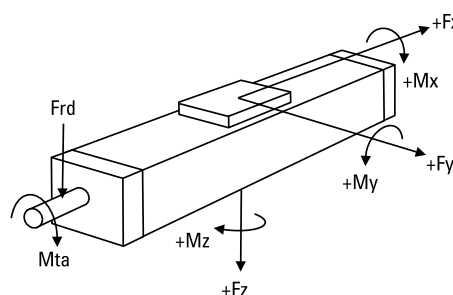
A mounting clamp must be installed at least every 750 mm to be able to operate at maximum load. Less clamps may be required if less load is being operated, see the additional technical data for more information. Units with a profile length over 6300 mm consist of two profiles where the joint between the two profiles must be adequately supported on both sides.

Performance Specifications

Parameter		WV80
Stroke length (S_{max}), maximum screw lead 5, 10, 20 mm	[mm]	11000
stroke lead 50 mm		5000
Total length (L_{tot}), maximum screw lead 5, 10, 20 mm	[mm]	11945
stroke lead 50 mm		5635
Linear speed, maximum	[m/s]	2,5
Acceleration, maximum	[m/s ²]	20
Repeatability	[± mm]	0,01
Input speed, maximum	[rpm]	3000
Operation temperature limits	[°C]	0 – 80
Dynamic load (F_x), maximum	[N]	5000
Dynamic load (F_y), maximum	[N]	0
Dynamic load (F_z), maximum	[N]	0
Dynamic load torque (M_x), maximum	[Nm]	0
Dynamic load torque (M_y), maximum	[Nm]	0
Dynamic load torque (M_z), maximum	[Nm]	0
Drive shaft force (F_{rd}), maximum ¹	[N]	700
Input/drive shaft torque (M_{ta}), maximum	[Nm]	55
Ball screw diameter (d_o)	[mm]	25
Ball screw lead (p)	[mm]	5, 10, 20, 50
Weight of unit with zero stroke	[kg]	7,95
of every 100 mm of stroke		0,99
of each carriage		2,25

¹ Only relevant for units without RediMount flange.

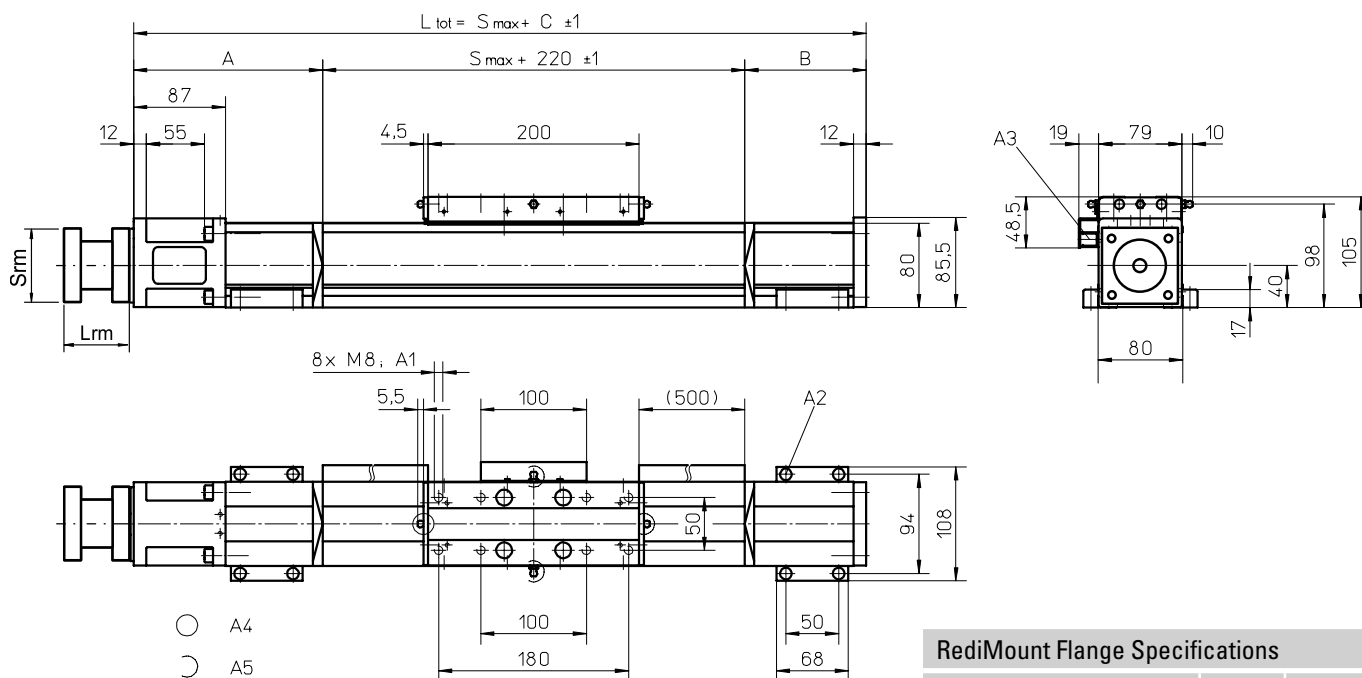
Definition of Forces



WV80

Ball Screw Drive, No Guides

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



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

- A1: depth 12 mm
- A2: socket cap screw ISO4762-M6x20 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 three alternative lubrication points by customer

* Max. weight including coupling and fastening screws

Stroke length (Smax) [mm]	A [mm]	B [mm]	C [mm]
0 - 775	125	50	395
776 - 1670	145	95	460
1671 - 2505	170	115	505
2506 - 3340	190	140	550

Stroke length (Smax) [mm]	A [mm]	B [mm]	C [mm]
3341 - 4175	210	160	590
4176 - 5015	235	180	635
5016 - 11000	contact customer service		

WV120

Ball Screw Drive, No Guides

- » Ordering key - see page 194
- » Accessories - see page 131
- » Additional data - see page 188

General Specifications

Parameter	WV120
Profile size (w × h) [mm]	120 × 120
Type of screw	ball screw with double nuts
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

Parameter		WV120
Stroke length (S _{max}), maximum screw lead 5, 10, 20 mm screw lead 40 mm	[mm]	11000 5000
Total length (L _{tot}), maximum screw lead 5, 10, 20 mm screw lead 40 mm	[mm]	12260 5845
Linear speed, maximum	[m/s]	2,0
Acceleration, maximum	[m/s ²]	20
Repeatability	[± mm]	0,01
Input speed, maximum	[rpm]	3000
Operation temperature limits	[°C]	0 – 80
Dynamic load (F _x), maximum screw lead 5, 10, 20 mm screw lead 40 mm	[N]	12000 8000
Dynamic load (F _y), maximum	[N]	0
Dynamic load (F _z), maximum	[N]	0
Dynamic load torque (M _x), maximum	[Nm]	0
Dynamic load torque (M _y), maximum	[Nm]	0
Dynamic load torque (M _z), maximum	[Nm]	0
Drive shaft force (F _{rd}), maximum ¹	[N]	1000
Input/drive shaft torque (M _{ta}), maximum	[Nm]	80
Ball screw diameter (d _o)	[mm]	32
Ball screw lead (p)	[mm]	5, 10, 20, 40
Weight	[kg]	
of unit with zero stroke		18,10
of every 100 mm of stroke		1,94
of each carriage		4,75

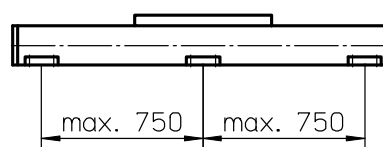
¹ Only relevant for units without RediMount flange.

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

Input speed [rpm]	Screw lead [mm]			
	p = 5	p = 10	p = 20	p = 40
150	1,0	1,1	1,4	1,5
1500	2,1	2,2	2,5	2,8
3000	2,4	2,6	3,0	3,5

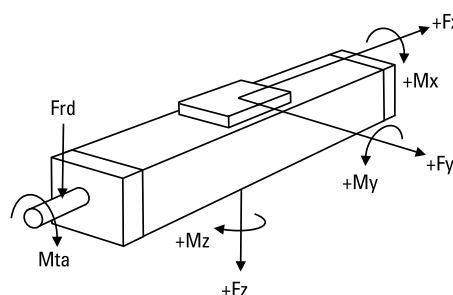
M_{idle} = the input torque needed to move the carriage with no load on it.

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 5400 mm consist of two profiles where the joint between the two profiles must be adequately supported on both sides.

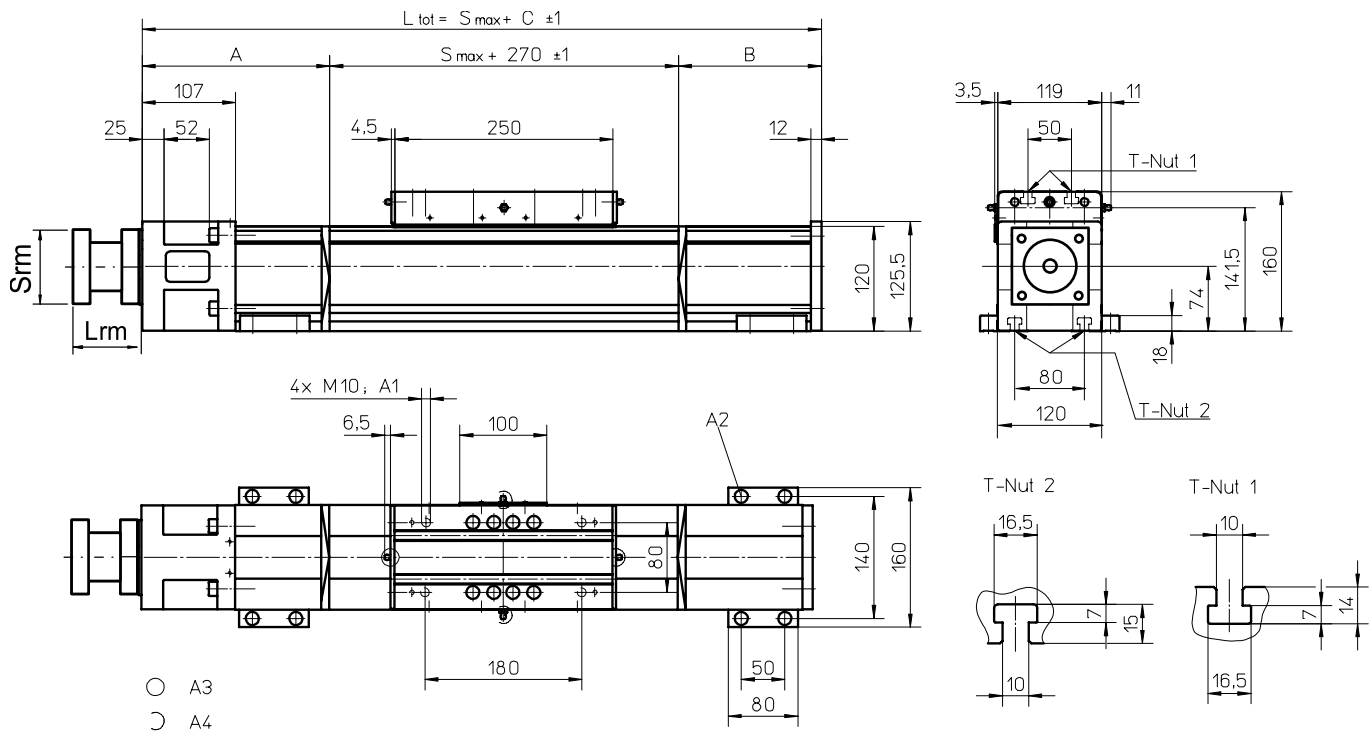
Definition of Forces



WV120

Ball Screw Drive, No Guides

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



- A1: depth 22
- A2: socket cap screw ISO4762-M8x20 8.8
- A3: tapered lubricating nipple to DIN71412 M8x1 on fixed-bearing side as standard feature
- A4: can be changed over to one of the three alternative lubricating points by the customer

Parameter	Min	Max
Flange length (Lrm) [mm]	87	149
Flange square (Srm) [mm]	90	200
Flange weight * [kg]	6,03	

* Max. weight including coupling and fastening screws

Stroke length (Smax) [mm]	A [mm]	B [mm]	C [mm]
0 - 940	145	50	465
941 - 1860	180	120	570
1861 - 2790	215	155	640
2791 - 3720	250	190	710

Stroke length (Smax) [mm]	A [mm]	B [mm]	C [mm]
3721 - 4650	285	225	780
4651 - 5000	320	255	845
5001 - 11000	contact customer service		

MLSM60D

Ball Screw Drive, Ball Guide

- » Ordering key - see page 195
- » Accessories - see page 131
- » Additional data - see page 188

General Specifications

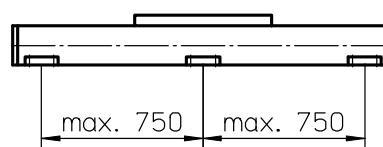
Parameter	MLSM60D
Profile size (w × h) [mm]	160 × 65
Type of screw	ball screw with double nuts
Carriage sealing system	plastic cover band
Screw supports	included in all units that require screw supports
Lubrication	central lubrication of all parts that require lubrication
Included accessories	4 × mounting clamps

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

Input speed [rpm]	Screw lead [mm]			
	p = 5	p = 10	p = 20	p = 50
150	1,0	1,6	1,9	2,7
1500	1,6	2,2	2,3	3,4
3000	2,0	2,6	2,6	4,0

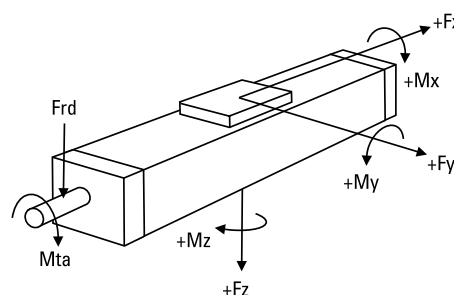
M_{idle} = the input torque needed to move the carriage with no load on it.

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.

Definition of Forces



Performance Specifications

for Units with Single Standard Carriage (N)¹

Parameter		MLSM60D
Stroke length (S_{max}), maximum	[mm]	4985
Total length (L_{tot}), maximum	[mm]	5700
Linear speed, maximum	[m/s]	2,5
Acceleration, maximum	[m/s ²]	20
Repeatability	[± mm]	0,01
Input speed, maximum	[rpm]	3000
Operation temperature limits	[°C]	0 – 80
Dynamic load (F_x), maximum	[N]	5000
Dynamic load (F_y), maximum	[N]	6000
Dynamic load (F_z), maximum	[N]	6000
Dynamic load torque (M_x), maximum	[Nm]	400
Dynamic load torque (M_y), maximum	[Nm]	460
Dynamic load torque (M_z), maximum	[Nm]	460
Drive shaft force (F_{rd}), maximum ²	[N]	350
Input/drive shaft torque (M_{ta}), maximum	[Nm]	60
Ball screw diameter (d_o)	[mm]	25
Ball screw lead (p)	[mm]	5, 10, 20, 50
Weight	[kg]	
of unit with zero stroke		14,40
of every 100 mm of stroke		1,65
of each carriage		5,70

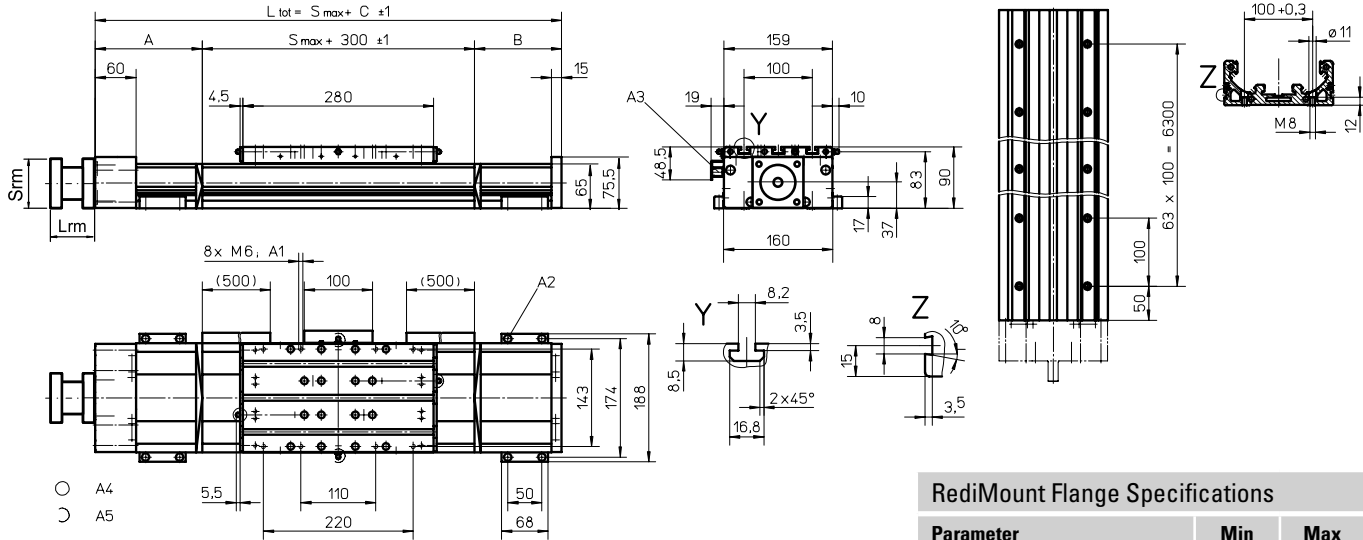
¹ See next page for deviating values of units with other carriage types.

² Only relevant for units without RediMount flange.

MLSM60D

Ball Screw Drive, Ball Guide

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



- A1: depth 10
- A2: socket cap screw ISO4762-M6x20 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

Parameter	Min	Max
Flange length (Lrm) [mm]	81	143
Flange square (Srm) [mm]	90	200
Flange weight * [kg]	5,58	

* Max. weight including coupling and fastening screws

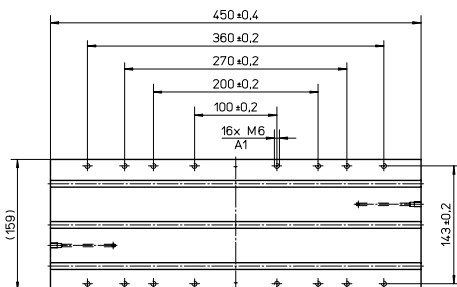
Stroke length (Smax) [mm]	A [mm]	B [mm]	C [mm]
0 - 750 (0 - 580)	90	45	435 (605)
751 - 1220 (581 - 1050)	105	90	495 (665)
1221 - 1980 (1051 - 1810)	125	110	535 (705)
1981 - 2730 (1811 - 2560)	150	135	585 (765)

Values between brackets = for units with long carriage

Stroke length (Smax) [mm]	A [mm]	B [mm]	C [mm]
2731 - 3490 (2561 - 3320)	170	155	625 (795)
3491 - 4240 (3321 - 4070)	195	180	675 (845)
4241 - 5000 (4071 - 4830)	215	200	715 (885)
5001 - 5500 (4831 - 5330)	235	220	755 (925)

Performance Specifications for Units with Single Long Carriage (L)

Parameter	MLSM60D
Stroke length (Smax), maximum [mm]	4815
Total length (L tot), maximum [mm]	5700
Carriage length [mm]	450
Dynamic load torque (My), maximum [Nm]	940
Dynamic load torque (Mz), maximum [Nm]	940
Weight [kg]	6,5

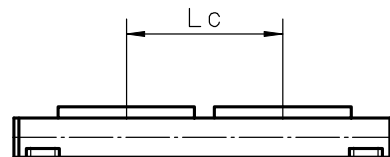


A1: depth 10

Performance Specifications for Units with Double Standard Carriage (Z)

Parameter	MLSM60D
Stroke length (Smax), maximum [mm]	4665
Total length (L tot), maximum [mm]	5700
Minimum distance between carriages (Lc) [mm]	320
Dynamic load (Fy), maximum [N]	12000
Dynamic load (Fz), maximum [N]	12000
Dynamic load torque (My), maximum [Nm]	L C ¹ × 6
Dynamic load torque (Mz), maximum [Nm]	L C ¹ × 6
Force required to move second carriage [N]	27
Total length (L tot) [mm]	Smax + C + Lc

¹ Value in mm



MLSM80D

Ball Screw Drive, Ball Guide

- » Ordering key - see page 195
- » Accessories - see page 131
- » Additional data - see page 188

General Specifications

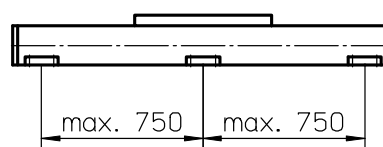
Parameter	MLSM80D
Profile size (w × h) [mm]	240 × 85
Type of screw	ball screw with double nuts
Carriage sealing system	plastic cover band
Screw supports	included in all units that require screw supports
Lubrication	central lubrication of all parts that require lubrication
Included accessories	4 × mounting clamps

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

Input speed [rpm]	Screw lead [mm]			
	p = 5	p = 10	p = 20	p = 40
150	1,6	2,2	2,5	2,8
1500	2,7	3,2	3,4	4,0
3000	3,2	4,0	4,2	4,5

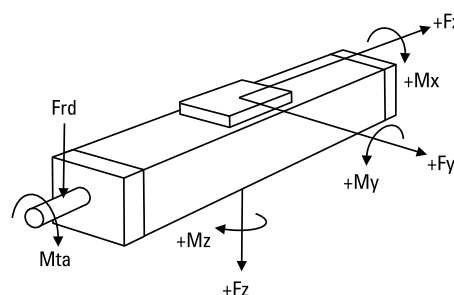
M_{idle} = the input torque needed to move the carriage with no load on it.

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.

Definition of Forces



Performance Specifications

for Units with Single Standard Carriage (N)¹

Parameter		MLSM80D
Stroke length (S _{max}), maximum	[mm]	4810
Total length (L _{tot}), maximum	[mm]	5700
Linear speed, maximum	[m/s]	2,0
Acceleration, maximum	[m/s ²]	20
Repeatability	[± mm]	0,01
Input speed, maximum	[rpm]	3000
Operation temperature limits	[°C]	0 – 80
Dynamic load (F _x), maximum	[N]	12000
screw lead 5, 10, 20 mm		8000
screw lead 40 mm		
Dynamic load (F _y), maximum	[N]	8000
Dynamic load (F _z), maximum	[N]	8000
Dynamic load torque (M _x), maximum	[Nm]	780
Dynamic load torque (M _y), maximum	[Nm]	900
Dynamic load torque (M _z), maximum	[Nm]	900
Drive shaft force (F _{rd}), maximum ²	[N]	700
Input/drive shaft torque (M _{ta}), maximum	[Nm]	85
Ball screw diameter (d _o)	[mm]	32
Ball screw lead (p)	[mm]	5, 10, 20, 40
Weight	[kg]	
of unit with zero stroke		29,5
of every 100 mm of stroke		2,7
of each carriage		11,5

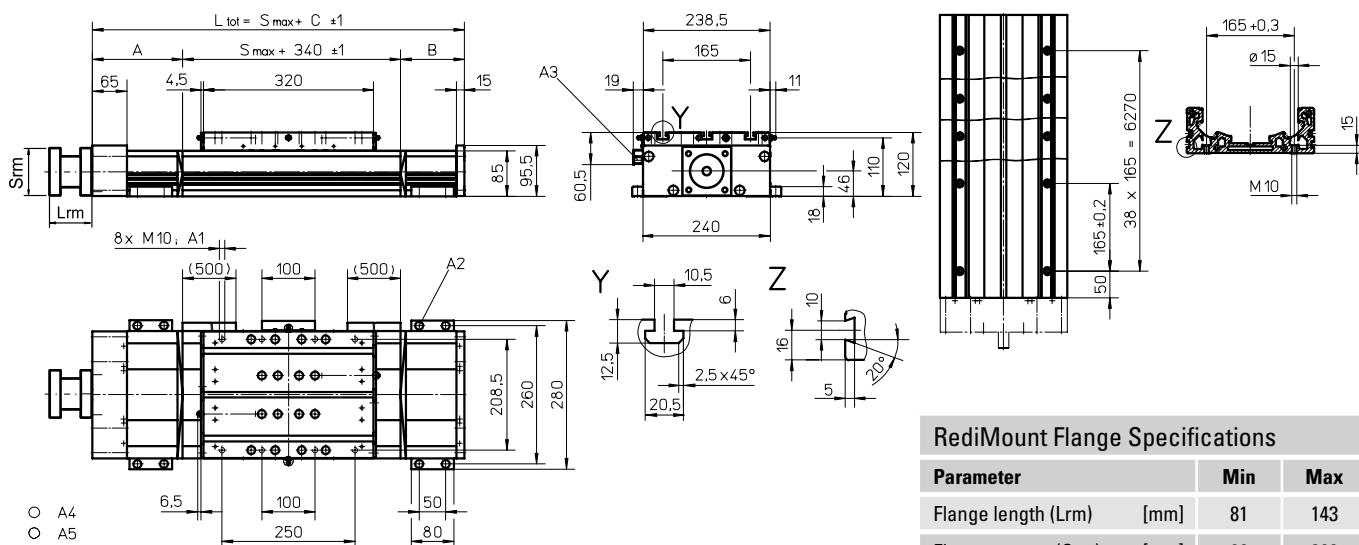
¹ See next page for deviating values of units with other carriage types.

² Only relevant for units without RediMount flange.

MLSM80D

Ball Screw Drive, Ball Guide

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



- A1: depth 15
- A2: socket cap screw ISO4762-M8x20 8.8
- A3: ENF inductive sensor rail kit (optional - see page 166)
- A4: tapered lubricating nipple to DIN71412 M8x1 on fixed-bearing side as standard feature
- A5: can be changed over to one of the three alternative lubricating points by the customer

Parameter	Min	Max
Flange length (L _{rm}) [mm]	81	143
Flange square (S _{rm}) [mm]	90	200
Flange weight * [kg]	5,67	

* Max. weight including coupling and fastening screws

Stroke length (S _{max}) [mm]	A [mm]	B [mm]	C [mm]
0 - 750 (0 - 570)	100	90	530 (710)
751 - 1140 (571 - 960)	130	120	590 (770)
1141 - 1880 (961 - 1700)	160	150	650 (830)
1881 - 2620 (1701 - 2440)	190	180	710 (890)

Values between brackets = for units with long carriage

Stroke length (S _{max}) [mm]	A [mm]	B [mm]	C [mm]
2621 - 3360 (2441 - 3180)	220	210	770 (950)
3361 - 4100 (3181 - 3920)	250	240	830 (1010)
4101 - 4840 (3921 - 4660)	280	270	890 (1070)
4841 - 5000 (4661 - 4820)	310	300	950 (1130)

Performance Specifications

for Units with Single Long Carriage (L)

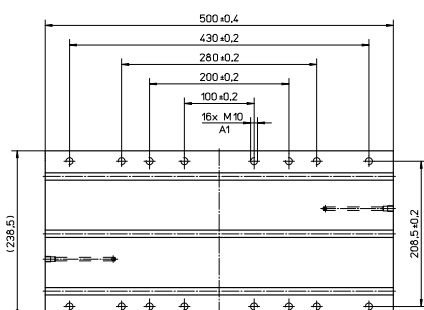
Parameter	MLSM80D
Stroke length (S _{max}), maximum [mm]	4630
Total length (L _{tot}), maximum [mm]	5700
Carriage length [mm]	500
Dynamic load torque (M _y), maximum [Nm]	1750
Dynamic load torque (M _z), maximum [Nm]	1750
Weight [kg]	16

Performance Specifications

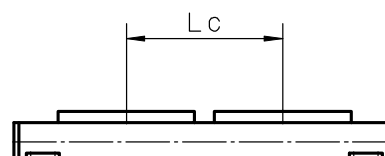
for Units with Double Standard Carriage (Z)

Parameter	MLSM80D
Stroke length (S _{max}), maximum [mm]	4410
Total length (L _{tot}), maximum [mm]	5700
Minimum distance between carriages (L _c) [mm]	400
Dynamic load (F _y), maximum [N]	16000
Dynamic load (F _z), maximum [N]	16000
Dynamic load torque (M _y), maximum [Nm]	L C' × 8
Dynamic load torque (M _z), maximum [Nm]	L C' × 8
Force required to move second carriage [N]	35
Total length (L _{tot}) [mm]	S _{max} + C + L _c

¹ Value in mm



A1: depth 15





M55

Ball Screw Drive, Ball Guide

» Ordering key - see page 196
 » Accessories - see page 131
 » Additional data - see page 188

General Specifications

Parameter	M55
Profile size (w × h) [mm]	58 × 55
Type of screw	ball screw with single nut
Carriage sealing system	self-adjusting steel cover band
Screw supports	number of screw supports to be specified by customer at order
Lubrication	lubrication of ball screw
Included accessories	none

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

Input speed [rpm]	Screw lead [mm]		
	p = 5	p = 10	p = 20
500 - no screw supports	0,02	0,03	0,04
500 - with screw supports	0,03	0,05	0,07

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

Performance Specifications

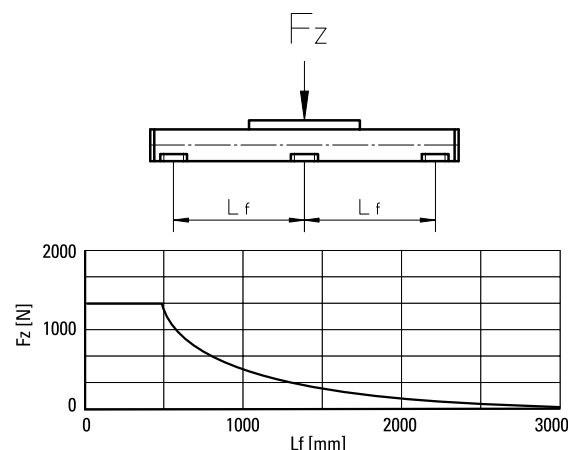
for Units with Single Standard Carriage (A)¹

Parameter		M55
Stroke length (S _{max}), maximum	[mm]	2712
Total length (L _{tot}), maximum	[mm]	2975
Linear speed, maximum	[m/s]	1,6
Acceleration, maximum	[m/s ²]	8
Repeatability	[± mm]	0,05
Input speed, maximum	[rpm]	3000
Operation temperature limits	[°C]	-20 – 70
Dynamic load (F _x), maximum	[N]	1000
Dynamic load (F _y), maximum	[N]	900
Dynamic load (F _z), maximum	[N]	900
Dynamic load torque (M _x), maximum	[Nm]	9
Dynamic load torque (M _y), maximum	[Nm]	48
Dynamic load torque (M _z), maximum	[Nm]	48
Drive shaft force (F _{rd}), maximum ²	[N]	200
Input/drive shaft torque (M _{ta}), maximum	[Nm]	12
Screw diameter (d ₀)	[mm]	16
Screw lead (p)	[mm]	5, 10, 20
Weight	[kg]	
of unit with zero stroke		3,90
of every 100 mm of stroke		0,56
of carriage		1,20
of option single screw support		0,83
of option double screw supports		1,88

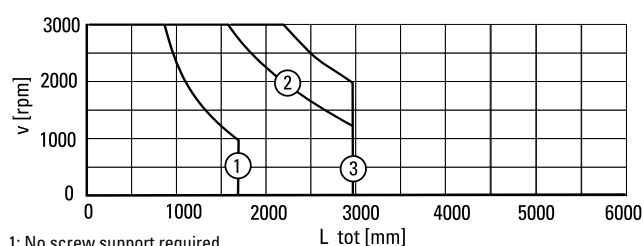
¹ See next page for deviating values of units with other carriage types.

² Only relevant for units without RediMount flange.

Deflection of the Profile

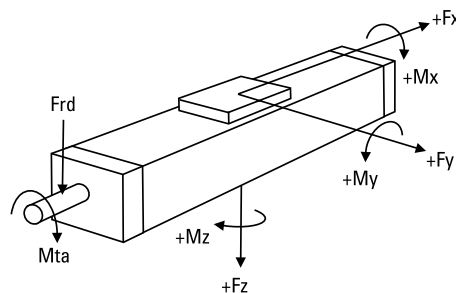


Critical Speed



- 1: No screw support required
- 2: Single screw support required
- 3: Double screw supports required

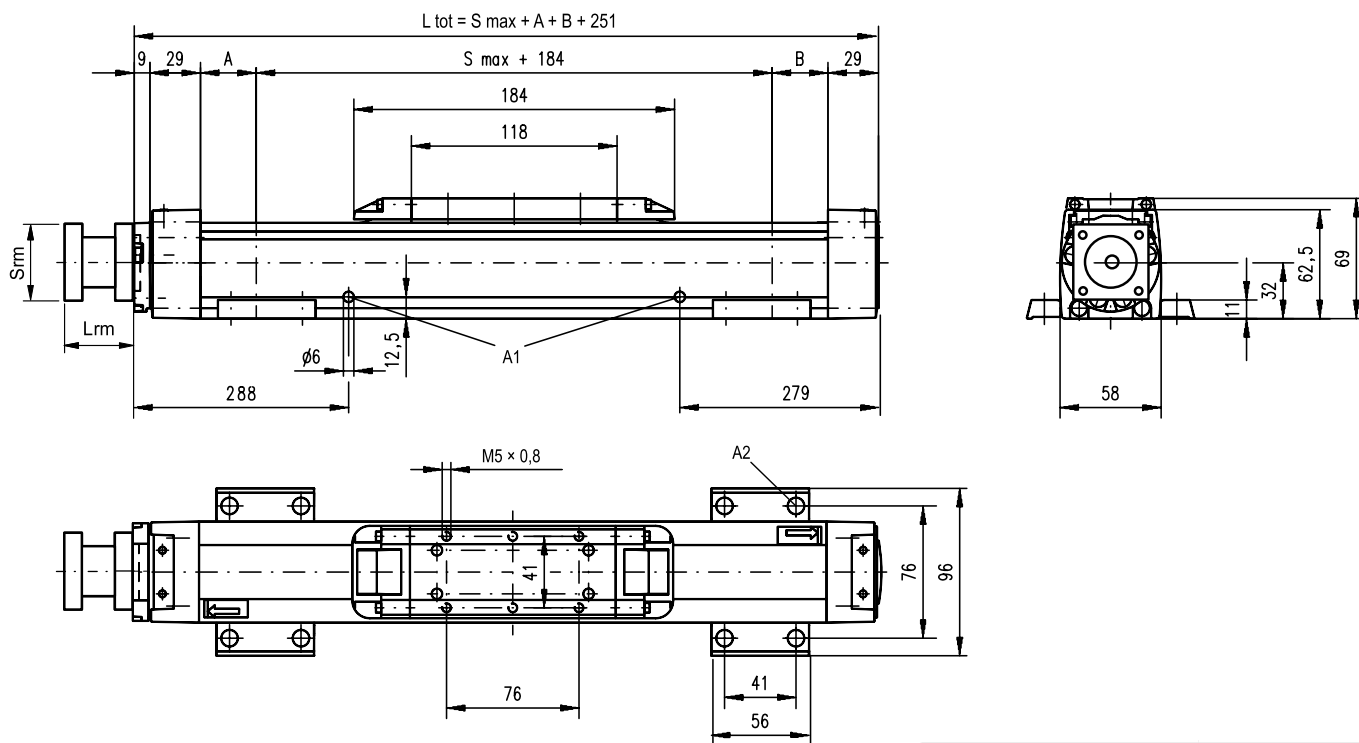
Definition of Forces



M55

Ball Screw Drive, Ball Guide

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



A1: lubrication holes
A2: ø9,5/ø5,5 for socket head cap screw M5

Screw support configuration	A [mm]	B [mm]	Total length (L tot) [mm]
No screw support	6	6	$L_{tot} = S_{max} + A + B + 251$
Single screw support	40	40	$L_{tot} = S_{max} + A + B + 251$
Double screw supports	92	92	$L_{tot} = S_{max} + A + B + 251$

RediMount Flange Specifications

Parameter	Min	Max
Flange length (Lrm) [mm]	57	92
Flange square (Srm) [mm]	60	139
Flange weight * [kg]	1,84	

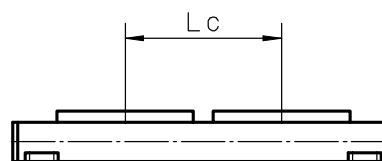
* Max. weight including coupling and fastening screws

Performance Specifications

for Units with Double Standard Carriage (C)

Parameter	M55
Stroke length (Smax), maximum [mm]	2512
Total length (L tot), maximum [mm]	2975
Minimum distance between carriages (Lc) [mm]	200
Dynamic load (Fy), maximum [N]	1350
Dynamic load (Fz), maximum [N]	1350
Dynamic load torque (My), maximum [Nm]	$L_c^1 \times 0,675$
Dynamic load torque (Mz), maximum [Nm]	$L_c^1 \times 0,675$
Force required to move second carriage [N]	2
Weight of unit with zero stroke of carriages [kg]	6,5 2,4

Screw support configuration	A [mm]	B [mm]	Total length (L tot) [mm]
No screw support	6	6	$L_{tot} = S_{max} + A + B + L_c + 251$
Single screw support	40	40	$L_{tot} = S_{max} + A + B + L_c + 251$
Double screw supports	92	92	$L_{tot} = S_{max} + A + B + L_c + 251$





M75

Ball Screw Drive, Ball Guide

» Ordering key - see page 196
 » Accessories - see page 131
 » Additional data - see page 188

General Specifications

Parameter	M75
Profile size (w × h) [mm]	86 × 75
Type of screw	ball screw with single nut
Carriage sealing system	self-adjusting steel cover band
Screw supports	number of screw supports to be specified by customer at order
Lubrication	lubrication of ball screw
Included accessories	none

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

Input speed [rpm]	Screw lead [mm]		
	p = 5	p = 12,7	p = 20
500 - no screw supports	0,04	0,1	0,16
500 - with screw supports	0,06	0,12	0,2

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

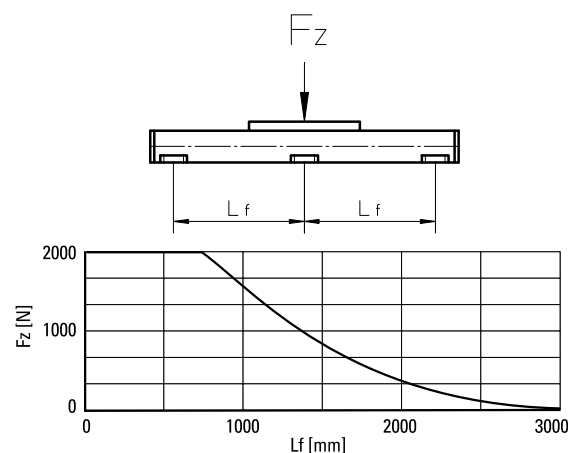
Performance Specifications

for Units with Single Standard Carriage (A)¹

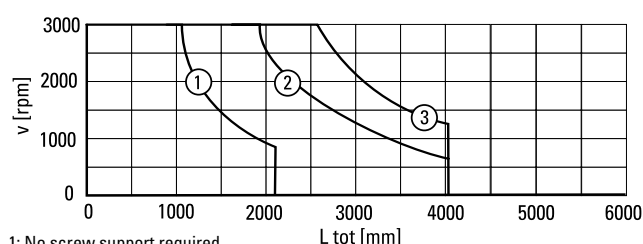
Parameter	M75
Stroke length (S _{max}), maximum	[mm]
screw lead 5, 20 mm	3772
screw lead 12,7 mm	2665
Total length (L _{tot}), maximum	[mm]
screw lead 5, 20 mm	4075
screw lead 12,7 mm	2968
Linear speed, maximum	[m/s]
	1,0
Acceleration, maximum	[m/s ²]
	8
Repeatability	[± mm]
	0,05
Input speed, maximum	[rpm]
	3000
Operation temperature limits	[°C]
	-20 – 70
Dynamic load (F _x), maximum	[N]
	2500
Dynamic load (F _y), maximum	[N]
	2000
Dynamic load (F _z), maximum	[N]
	2000
Dynamic load torque (M _x), maximum	[Nm]
	18
Dynamic load torque (M _y), maximum	[Nm]
	130
Dynamic load torque (M _z), maximum	[Nm]
	130
Drive shaft force (F _{rd}), maximum ²	[N]
	600
Input/drive shaft torque (M _{ta}), maximum	[Nm]
	30
Screw diameter (d ₀)	[mm]
	20
Screw lead (p)	[mm]
	5, 12,7, 20
Weight	[kg]
of unit with zero stroke	6,90
of every 100 mm of stroke	1,05
of carriage	2,50
of option single screw support	1,70
of option double screw supports	3,58

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

Deflection of the Profile

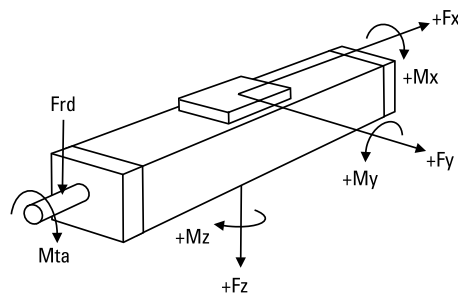


Critical Speed



1: No screw support required
 2: Single screw support required
 3: Double screw supports required

Definition of Forces

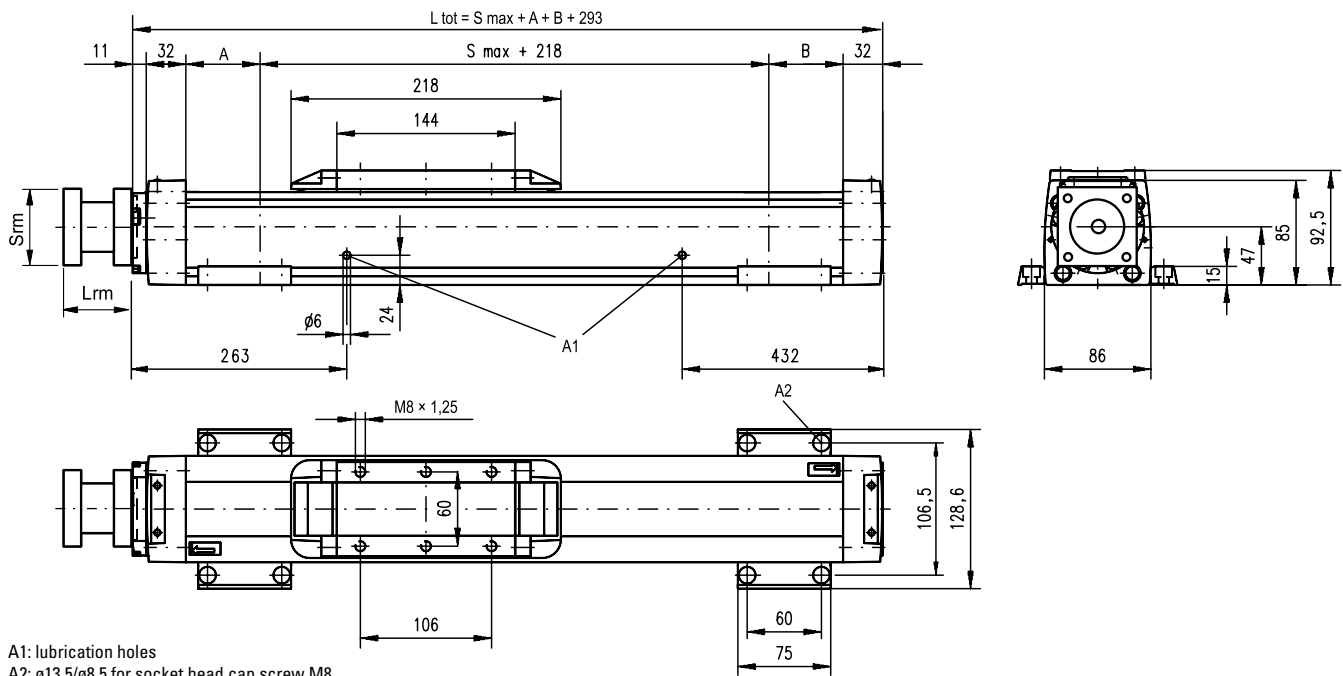


www.thomsonlinear.com

M75

Ball Screw Drive, Ball Guide

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



A1: lubrication holes
 A2: $\phi 13,5/\phi 8,5$ for socket head cap screw M8

Screw support configuration	A [mm]	B [mm]	Total length (L tot) [mm]
No screw support	5	5	$L_{tot} = S_{max} + A + B + 293$
Single screw support	60	60	$L_{tot} = S_{max} + A + B + 293$
Double screw supports	126	126	$L_{tot} = S_{max} + A + B + 293$

RediMount Flange Specifications			
Parameter		Min	Max
Flange length (Lrm)	[mm]	81	143
Flange square (Srm)	[mm]	90	200
Flange weight *	[kg]	5,60	

* Max. weight including coupling and fastening screws

Performance Specifications

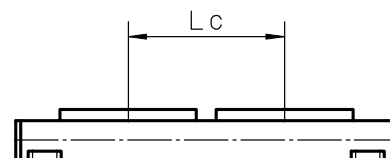
for Units with Double Standard Carriage (C)

Parameter		M75
Stroke length (Smax), maximum	[mm]	3522 2415
Total length (L tot), maximum	[mm]	4075 2968
Minimum distance between carriages (Lc)	[mm]	250
Dynamic load (Fy), maximum	[N]	3000
Dynamic load (Fz), maximum	[N]	3000
Dynamic load torque (My), maximum	[Nm]	$L_c^1 \times 1,5$
Dynamic load torque (Mz), maximum	[Nm]	$L_c^1 \times 1,5$
Force required to move second carriage	[N]	2
Weight of unit with zero stroke of carriages	[kg]	12,2 5,0

Screw support configuration	A [mm]	B [mm]	Total length (L tot) [mm]
No screw support	5	5	$L_{tot} = S_{max} + A + B + L_c + 293$
Single screw support	60	60	$L_{tot} = S_{max} + A + B + L_c + 293$
Double screw supports	126	126	$L_{tot} = S_{max} + A + B + L_c + 293$

¹ Value in mm

www.thomsonlinear.com





M100

Ball Screw Drive, Ball Guide

» Ordering key - see page 196
 » Accessories - see page 131
 » Additional data - see page 188

General Specifications

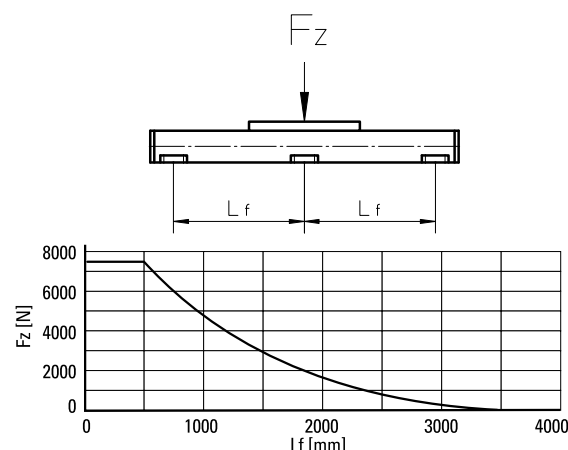
Parameter	M100
Profile size (w × h) [mm]	108 × 100
Type of screw	ball screw with single nut
Carriage sealing system	self-adjusting steel cover band
Screw supports	number of screw supports to be specified by customer at order
Lubrication	lubrication of ball screw
Included accessories	none

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

Input speed [rpm]	Screw lead [mm]		
	p = 5	p = 10	p = 25
500 - no screw supports	0,08	0,14	0,32
500 - with screw supports	0,1	0,16	0,37

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

Deflection of the Profile

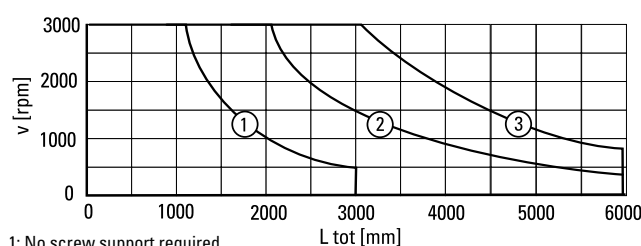


Performance Specifications

for Units with Single Standard Carriage (A)¹

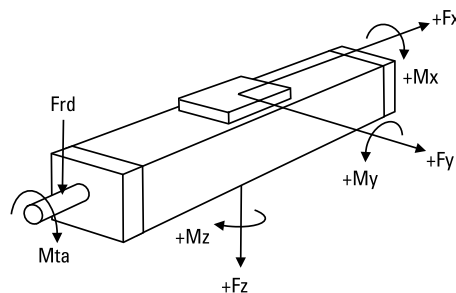
Parameter		M100
Stroke length (S _{max}), maximum	[mm]	
screw lead 5, 10 mm		5578
screw lead 25 mm		4378
Total length (L _{tot}), maximum	[mm]	
screw lead 5, 10 mm		5974
screw lead 25 mm		4774
Linear speed, maximum	[m/s]	1,25
Acceleration, maximum	[m/s ²]	8
Repeatability	[± mm]	0,05
Input speed, maximum	[rpm]	3000
Operation temperature limits	[°C]	-20 – 70
Dynamic load (F _x), maximum	[N]	5000
Dynamic load (F _y), maximum	[N]	5000
Dynamic load (F _z), maximum	[N]	5000
Dynamic load torque (M _x), maximum	[Nm]	60
Dynamic load torque (M _y), maximum	[Nm]	400
Dynamic load torque (M _z), maximum	[Nm]	400
Drive shaft force (F _{rd}), maximum ²	[N]	1000
Input/drive shaft torque (M _{ta}), maximum	[Nm]	45
Screw diameter (d ₀)	[mm]	25
Screw lead (p)	[mm]	5, 10, 25
Weight	[kg]	
of unit with zero stroke		14,3
of every 100 mm of stroke		1,72
of carriage		4,00
of option single screw support		1,86
of option double screw supports		4,42

Critical Speed



1: No screw support required
 2: Single screw support required
 3: Double screw supports required

Definition of Forces

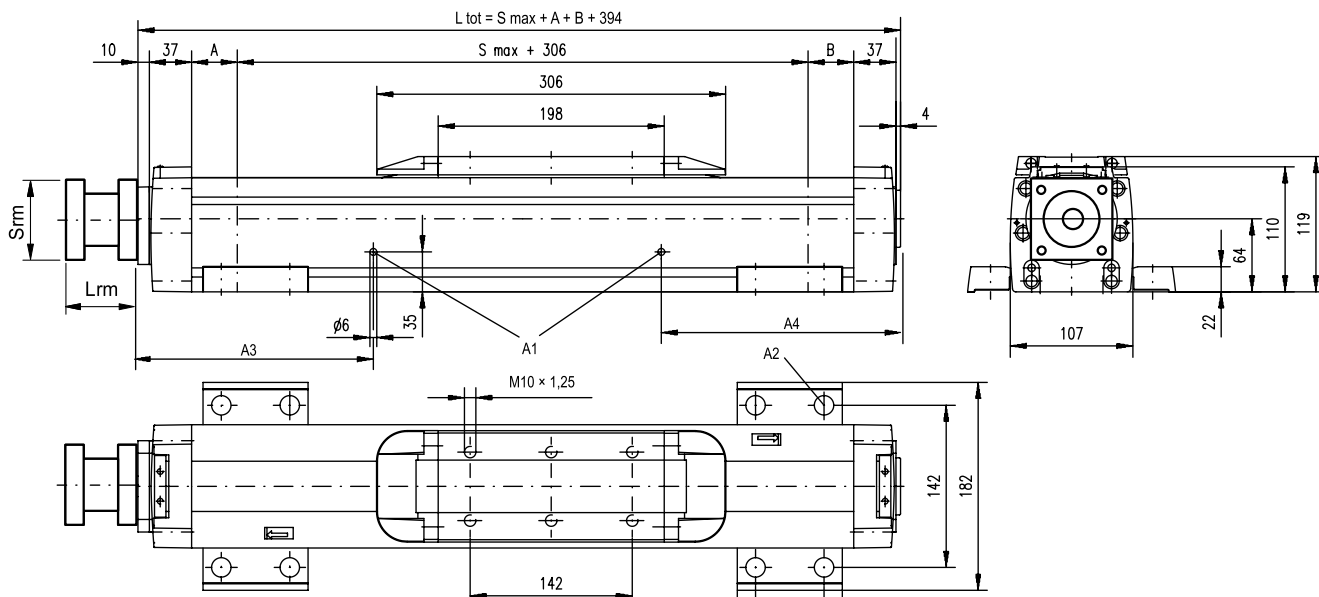


¹ See next page for deviating values of units with other carriage types.
² Only relevant for units without RediMount flange.

M100

Ball Screw Drive, Ball Guide

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



- A1: lubrication holes
- A2: $\phi 17/\phi 10,5$ for socket head cap screw M10
- A3: 147 (L tot \leq 1088 mm), 367 (L tot $>$ 1088 mm)
- A4: 141 (L tot \leq 1088 mm), 471 (L tot $>$ 1088 mm)

Screw support configuration	A [mm]	B [mm]	Total length (L tot) [mm]
No screw support	1	1	$L_{tot} = S_{max} + A + B + 394$
Single screw support	31	31	$L_{tot} = S_{max} + A + B + 394$
Double screw supports	86	86	$L_{tot} = S_{max} + A + B + 394$

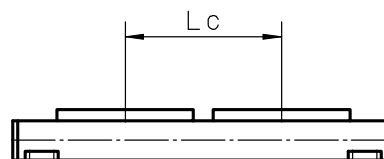
Parameter	Min	Max
Flange length (Lrm) [mm]	81	143
Flange square (Srm) [mm]	90	200
Flange weight * [kg]	5,60	

* Max. weight including coupling and fastening screws

Performance Specifications

for Units with Double Standard Carriage (C)

Parameter	M100
Stroke length (Smax), maximum [mm]	
screw lead 5, 10 mm	5228
screw lead 25 mm	4028
Total length (L tot), maximum [mm]	
screw lead 5, 10 mm	5974
screw lead 25 mm	4774
Minimum distance between carriages (Lc) [mm]	350
Dynamic load (Fy), maximum [N]	7500
Dynamic load (Fz), maximum [N]	7500
Dynamic load torque (My), maximum [Nm]	$L_c^1 \times 3,75$
Dynamic load torque (Mz), maximum [Nm]	$L_c^1 \times 3,75$
Force required to move second carriage [N]	2
Weight of unit with zero stroke of carriages [kg]	25,3 8,0



Screw support configuration	A [mm]	B [mm]	Total length (L tot) [mm]
No screw support	1	1	$L_{tot} = S_{max} + A + B + L_c + 394$
Single screw support	31	31	$L_{tot} = S_{max} + A + B + L_c + 394$
Double screw supports	86	86	$L_{tot} = S_{max} + A + B + L_c + 394$

¹ Value in mm

2HB10

Ball Screw Drive, Ball Guide

» Ordering key - see page 197

» Accessories - see page 131

General Specifications

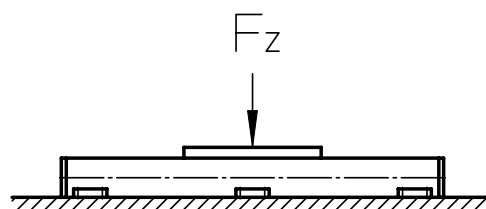
Parameter	2HB10
Profile size (w × h) [mm]	100 × 60
Type of screw	ball screw
Carriage sealing system	none (optional shroud or bellows)
Screw supports	none
Lubrication	lubrication of screw and guides
Included accessories	RediMount™ kit

Performance Specifications

Parameter		2HB10
Stroke length (Smax), maximum	[mm]	1375
Linear speed, maximum	[m/s]	0,47
Acceleration, maximum	[m/s ²]	9,8
Repeatability	[± mm]	0,005
Input speed, maximum	[rpm]	2800
Operation temperature limits	[°C]	-20 – 80
Dynamic load (Fx), maximum	[N]	2100
Dynamic load (Fy), maximum	[N]	8000
Dynamic load (Fz), maximum	[N]	8000
Dynamic load torque (Mx), maximum	[Nm]	279
Dynamic load torque (My), maximum	[Nm]	216
Dynamic load torque (Mz), maximum	[Nm]	216
Drive shaft force (Frd), maximum ¹	[N]	533
Input/drive shaft torque (Mta), maximum	[Nm]	1,86
Ball screw diameter (do)	[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

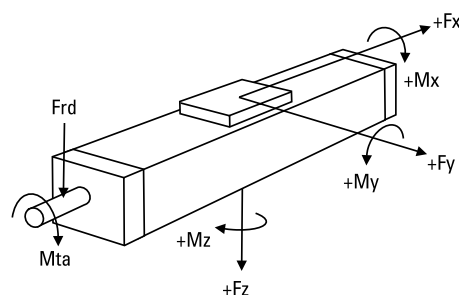
¹ Only relevant for units without RediMount flange.

Deflection of the Profile




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

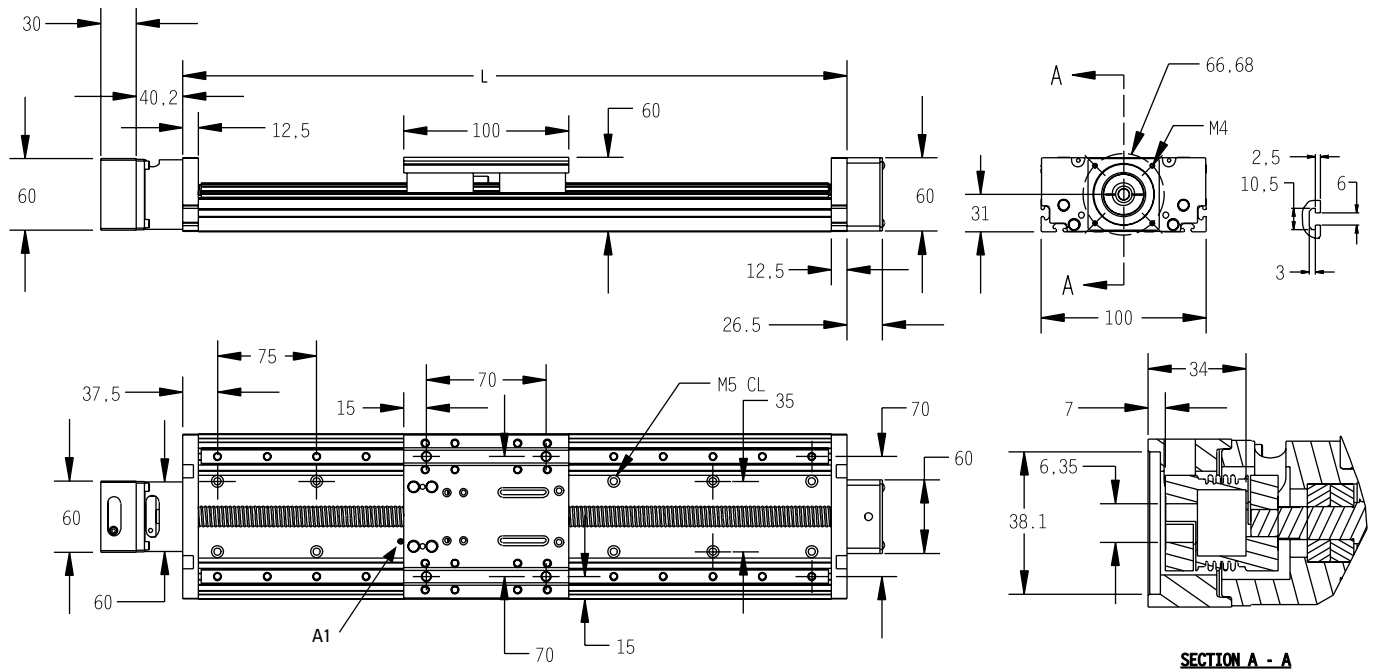
Definition of Forces



2HB10

Ball Screw Drive, Ball Guide

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



A1: lubrication nipple (using the unit with the nipple mounted makes the stroke 10 mm shorter).

Standard NEMA23 motor dimensions are shown. Other mounting sizes are available and easily configured. Please see www.LinearMotioneering.com for details.

Ordering Length (L) and Maximum Stroke (Smax)

$$L = S_{max} + 125$$



2HB20

Ball Screw Drive, Ball Guide

» Ordering key - see page 197
» Accessories - see page 131

General Specifications

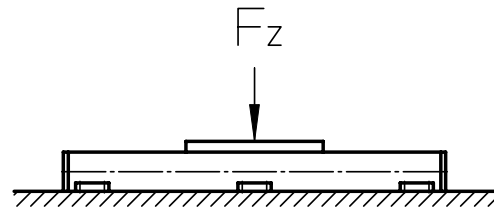
Parameter	2HB20
Profile size (w × h) [mm]	200 × 90
Type of screw	ball screw
Carriage sealing system	none (optional shroud or bellows)
Screw supports	none
Lubrication	lubrication of screw and guides
Included accessories	RediMount™ kit

Performance Specifications

Parameter		2HB20
Stroke length (Smax), maximum	[mm]	2760
Linear speed, maximum	[m/s]	0,75
Acceleration, maximum	[m/s ²]	9,8
Repeatability	[± mm]	0,005
Input speed, maximum	[rpm]	1800
Operation temperature limits	[°C]	-20 – 80
Dynamic load (Fx), maximum	[N]	4697
Dynamic load (Fy), maximum	[N]	34000
Dynamic load (Fz), maximum	[N]	34000
Dynamic load torque (Mx), maximum	[Nm]	2463
Dynamic load torque (My), maximum	[Nm]	1903
Dynamic load torque (Mz), maximum	[Nm]	1903
Drive shaft force (Frd), maximum ¹	[N]	533
Input/drive shaft torque (Mta), maximum	[Nm]	15,5
Ball screw diameter (do)	[mm]	25
Ball screw lead (p)	[mm]	5, 10, 25
Weight	[kg]	
of unit with zero stroke		13,32
of every 100 mm of stroke		1,70
of each carriage		4,47

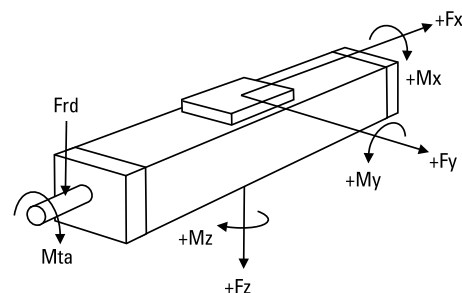
¹ Only relevant for units without RediMount flange.

Deflection of the Profile




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

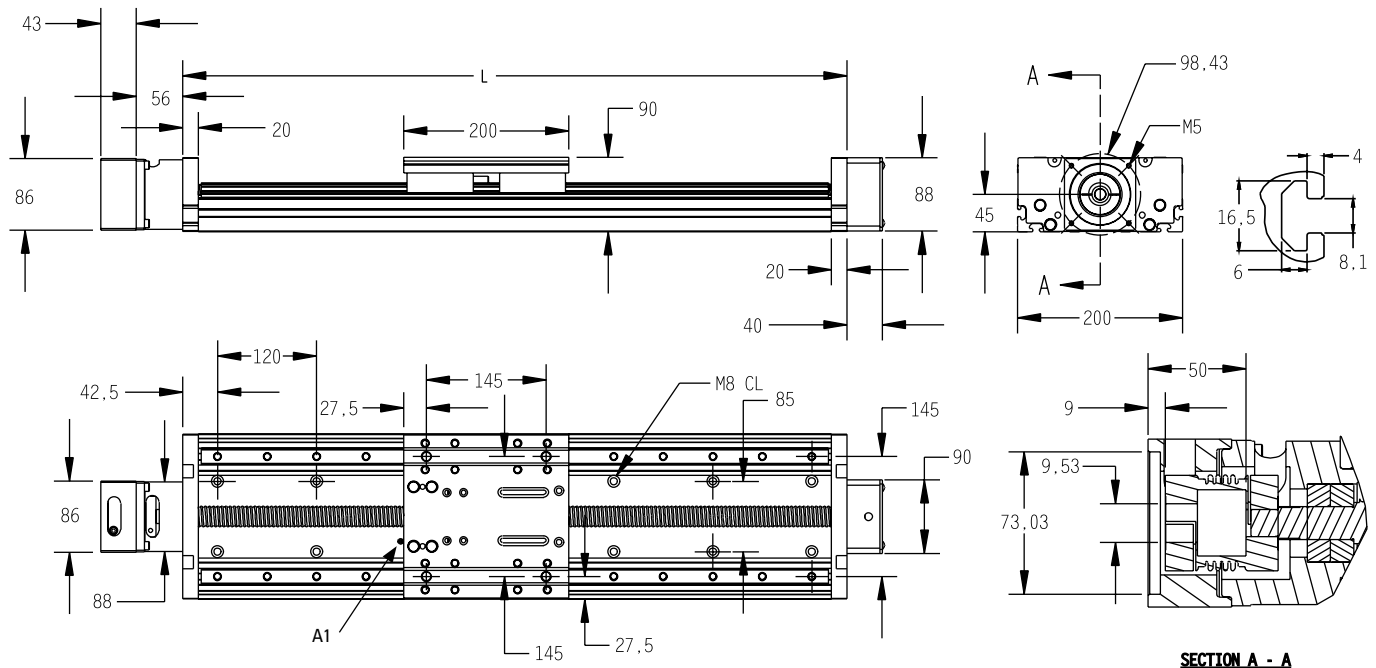
Definition of Forces



2HB20

Ball Screw Drive, Ball Guide

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



A1: lubrication nipple (using the unit with the nipple mounted makes the stroke 10 mm shorter).

Standard NEMA23 motor dimensions are shown. Other mounting sizes are available and easily configured. Please see www.LinearMotioneering.com for details.

Ordering Length (L) and Maximum Stroke (Smax)

$$L = S_{max} + 240$$

2RB12

Ball Screw Drive, Ball Guide

» Ordering key - see page 198

» Accessories - see page 131

General Specifications

Parameter	2RB12
Profile size (w × h) [mm] ¹	130 × 40
Type of screw	ball screw
Carriage sealing system	none (optional bellows)
Screw supports	none
Lubrication	lubrication of screws and guides
Included accessories	RediMount™ kit

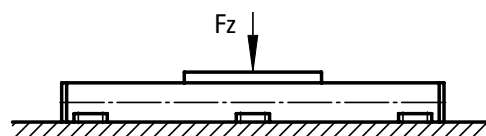
¹ Base width × carriage height.

Performance Specifications

Parameter		2RB12
Stroke length (Smax), maximum	[mm]	1951
Linear speed, maximum	[m/s]	0,47
Acceleration, maximum	[m/s ²]	9,8
Repeatability	[± mm]	0,005
Accuracy	[± mm]	0,025 / 300 mm
Input speed, maximum	[rpm]	2800
Operation temperature limits	[°C]	-20 – 80
Dynamic load (Fx), maximum	[N]	2100
Dynamic load (Fy), maximum	[N]	880
Dynamic load (Fz), maximum	[N]	1760
Dynamic load torque (Mx), maximum	[Nm]	65,5
Dynamic load torque (My), maximum	[Nm]	76,8
Dynamic load torque (Mz), maximum	[Nm]	38,4
Drive shaft force (Frd), maximum ¹	[N]	533
Input/drive shaft torque (Mta), maximum	[Nm]	1,86
Ball screw diameter (do)	[mm]	16
Ball screw lead (p)	[mm]	5, 10
Weight	[kg]	
of unit with zero stroke		3,88
of every 100 mm of stroke		0,93
of each carriage		1,32

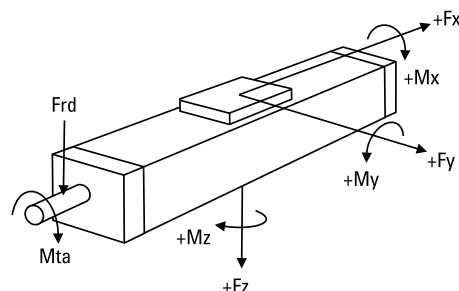
¹ Only relevant for units without RediMount flange.

Deflection of the Profile




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

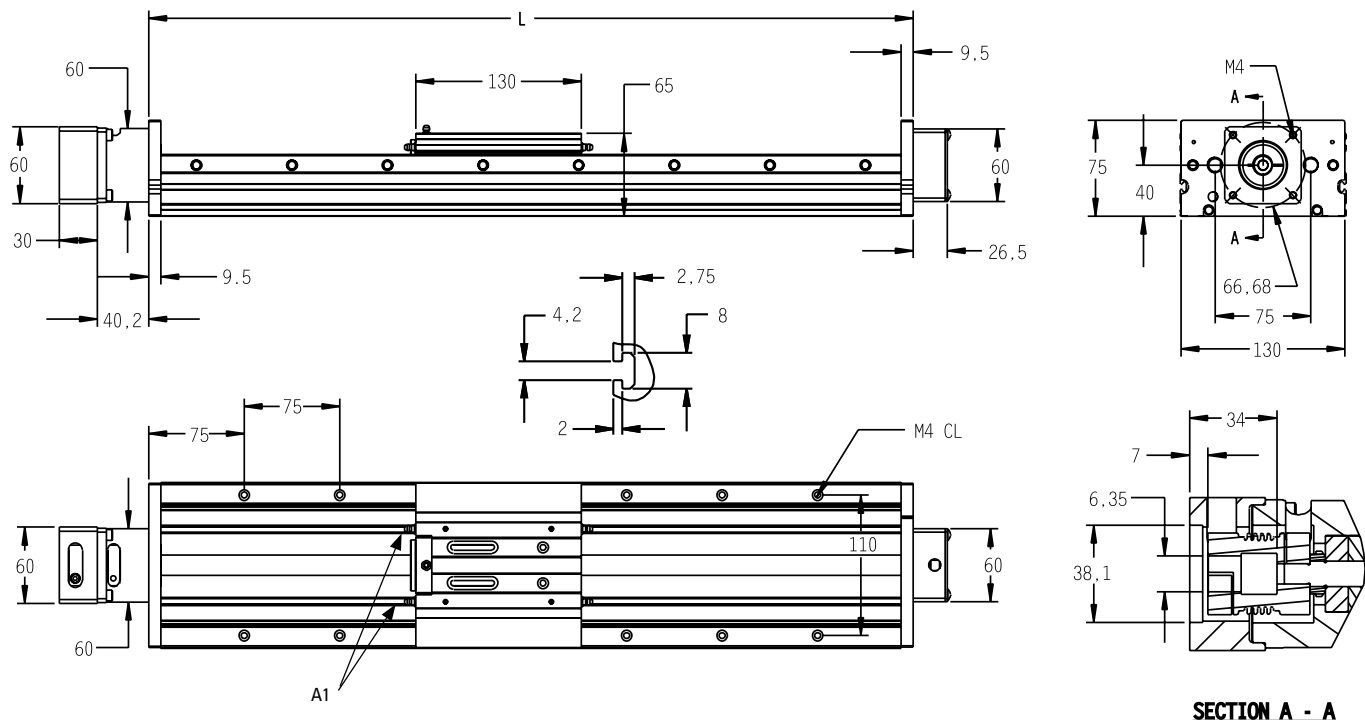
Definition of Forces



2RB12

Ball Screw Drive, Ball Guide

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



A1: lubrication nipples (using the unit with the nipples mounted makes the stroke 10 mm shorter).

Standard NEMA23 motor dimensions are shown. Other mounting sizes are available and easily configured. Please see www.LinearMotioneering.com for details.

Ordering Length (L) and Maximum Stroke (Smax)

$$L = S_{max} + 149$$

2RB16

Ball Screw Drive, Ball Guide

» Ordering key - see page 198

» Accessories - see page 131

General Specifications

Parameter	2RB16
Profile size (w × h) [mm] ¹	160 × 48
Type of screw	ball screw
Carriage sealing system	none (optional bellows)
Screw supports	none
Lubrication	lubrication of screws and guides
Included accessories	RediMount™ kit

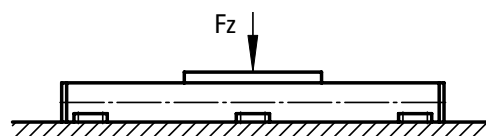
¹ Base width × carriage height.

Performance Specifications

Parameter		2RB16
Stroke length (Smax), maximum	[mm]	2815
Linear speed, maximum	[m/s]	0,73
Acceleration, maximum	[m/s ²]	9,8
Repeatability	[± mm]	0,005
Accuracy	[± mm]	0,025 / 300 mm
Input speed, maximum	[rpm]	2200
Operation temperature limits	[°C]	-20 – 80
Dynamic load (Fx), maximum	[N]	2998
Dynamic load (Fy), maximum	[N]	2588
Dynamic load (Fz), maximum	[N]	5176
Dynamic load torque (Mx), maximum	[Nm]	243
Dynamic load torque (My), maximum	[Nm]	299
Dynamic load torque (Mz), maximum	[Nm]	150
Drive shaft force (Frd), maximum ¹	[N]	533
Input/drive shaft torque (Mta), maximum	[Nm]	2,66
Ball screw diameter (do)	[mm]	20
Ball screw lead (p)	[mm]	5, 10, 20
Weight	[kg]	
of unit with zero stroke		6,17
of every 100 mm of stroke		1,44
of each carriage		2,25

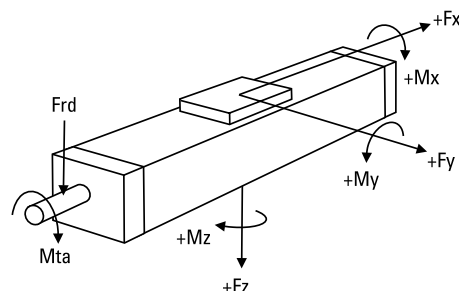
¹ Only relevant for units without RediMount flange.

Deflection of the Profile




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

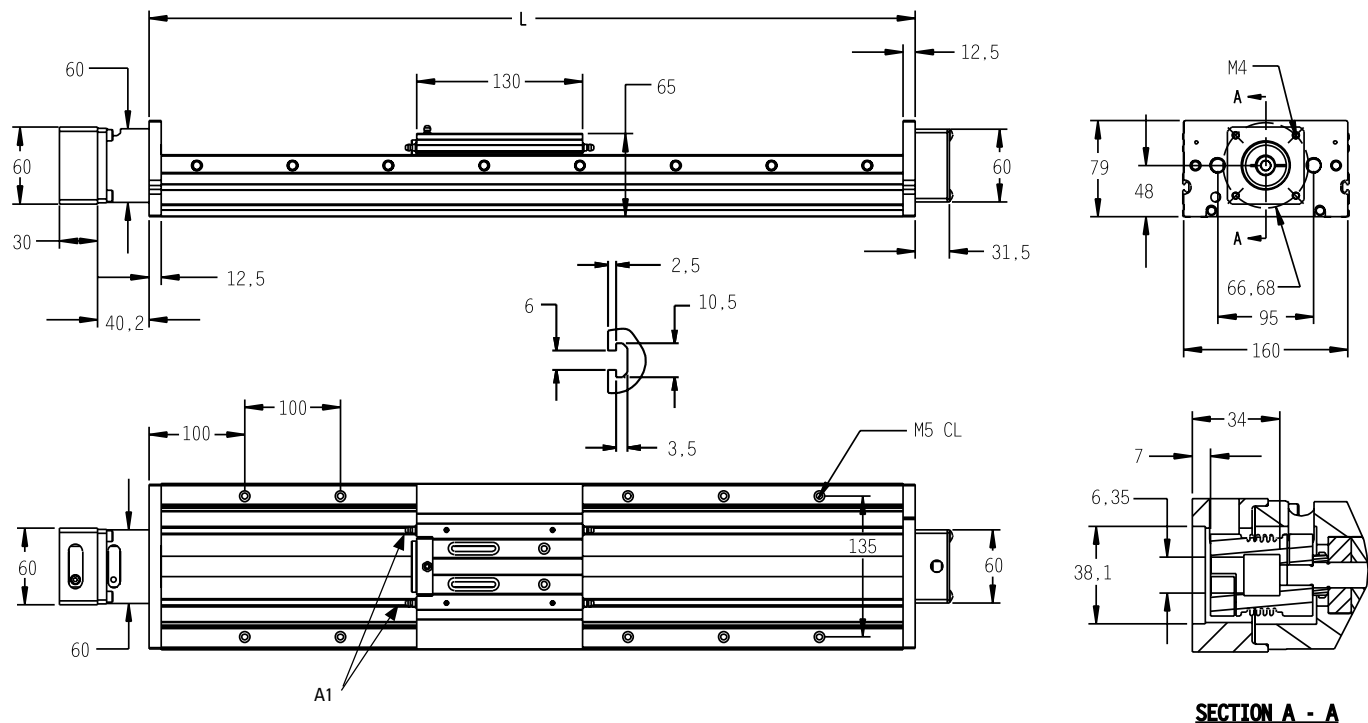
Definition of Forces



2RB16

Ball Screw Drive, Ball Guide

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



A1: lubrication nipples (using the unit with the nipples mounted makes the stroke 10 mm shorter).

Standard NEMA23 motor dimensions are shown. Other mounting sizes are available and easily configured. Please see www.LinearMotioneering.com for details.

Ordering Length (L) and Maximum Stroke (Smax)

$$L = S_{max} + 185$$

MS25

Lead Screw Drive, Ball Guide

» Ordering key - see page 199

» Accessories - see page 131

General Specifications

Parameter	MS25
Profile size (w × h) [mm] ¹	50 × 25
Type of screw	lead screw
Carriage sealing system	none (optional bellows)
Screw supports	none
Lubrication	lubrication of screws and guides
Included accessories	RediMount™ kit

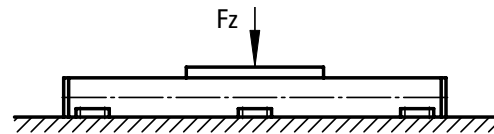
¹ Base width × carriage height.

Performance Specifications

Parameter		MS25
Stroke length (Smax), maximum	[mm]	705,5
Linear speed, maximum	[m/s]	0,85
Acceleration, maximum	[m/s ²]	9,8
Repeatability	[± mm]	0,005
Accuracy	[± mm]	0,18 / 300 mm
Input speed, maximum	[rpm]	2000
Operation temperature limits	[°C]	-20 – 80
Dynamic load (Fx), maximum	[N]	17,8
Dynamic load (Fy), maximum	[N]	100
Dynamic load (Fz), maximum	[N]	100
Dynamic load torque (Mx), maximum	[Nm]	1,4
Dynamic load torque (My), maximum	[Nm]	1,3
Dynamic load torque (Mz), maximum	[Nm]	2,7
Drive shaft force (Frd), maximum ¹	[N]	222
Input/drive shaft torque (Mta), maximum	[Nm]	0,08
Lead screw diameter (d0)	[mm]	6,35
Lead screw lead (p)		
inch leads	[inch]	0,025, 0,05, 0,062, 0,2, 0,25, 0,5, 1,0
metric leads	[mm]	1,5, 2, 3
Weight	[kg]	
of unit with zero stroke		0,47
of every 100 mm of stroke		0,18
of each carriage		0,065

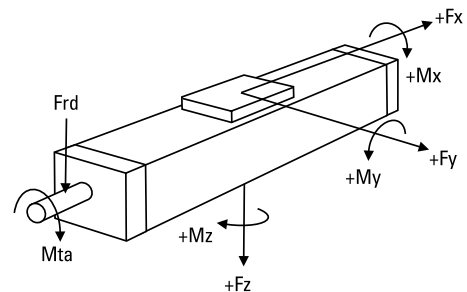
¹ Only relevant for units without RediMount flange.

Deflection of the Profile



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

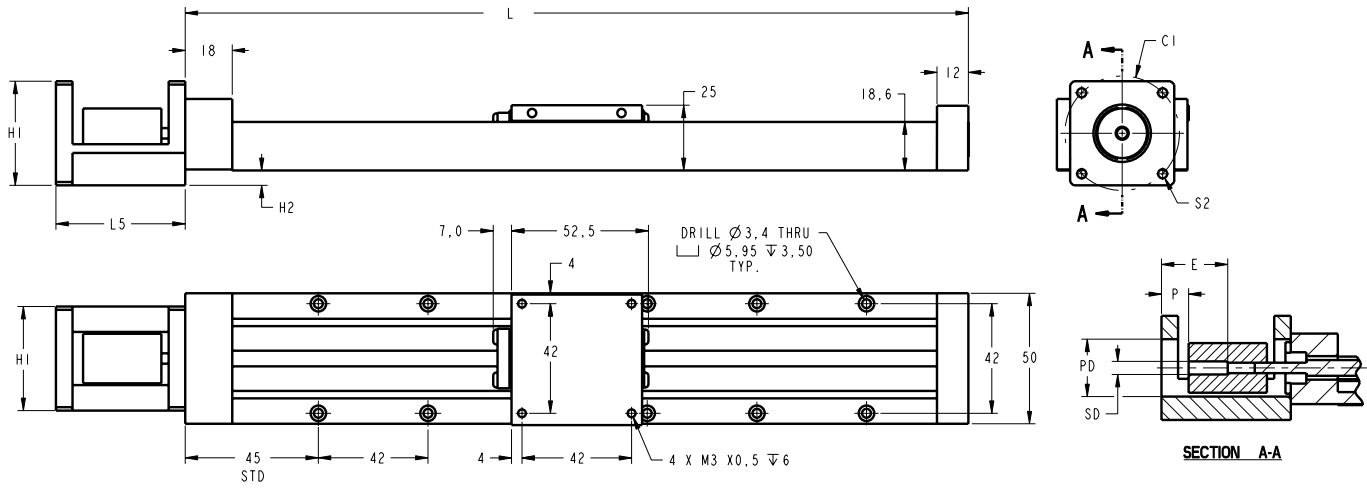
Definition of Forces



MS25

Lead Screw Drive, Ball Guide

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



Ordering Length (L) and Maximum Stroke (Smax)

$$L = S_{max} + 95$$

Motor block frame size ¹	H1	H2	SD	PD	P	E (max.)	S2	L5	C1
NEMA-17	39,9	5,7	5,0	22,0	10,4	28,0	∅ 0,136	49,5	43,8
NEMA-23	57,2	14,3	6,35	38,2	14,5	33,0	M4	55,9	66,7

¹ Other sizes are easily configured. See www.LinearMotioneering.com for the motor mounting configurator.

MS33

Lead Screw Drive, Ball Guide

» Ordering key - see page 199

» Accessories - see page 131

General Specifications

Parameter	MS33
Profile size (w × h) [mm] ¹	60 × 33
Type of screw	lead screw
Carriage sealing system	none (optional bellows)
Screw supports	none
Lubrication	lubrication of screws and guides
Included accessories	RediMount™ kit

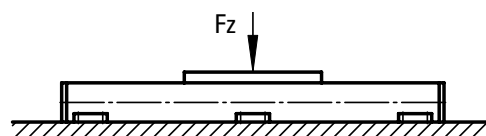
¹ Base width × carriage height.

Performance Specifications

Parameter		MS33
Stroke length (Smax), maximum	[mm]	704
Linear speed, maximum	[m/s]	1,02
Acceleration, maximum	[m/s ²]	9,8
Repeatability	[± mm]	0,005
Accuracy	[± mm]	0,18 / 300 mm
Input speed, maximum	[rpm]	2000
Operation temperature limits	[°C]	-20 – 80
Dynamic load (Fx), maximum	[N]	80,1
Dynamic load (Fy), maximum	[N]	150
Dynamic load (Fz), maximum	[N]	150
Dynamic load torque (Mx), maximum	[Nm]	2,8
Dynamic load torque (My), maximum	[Nm]	2,5
Dynamic load torque (Mz), maximum	[Nm]	5,1
Drive shaft force (Frd), maximum ¹	[N]	222
Input/drive shaft torque (Mta), maximum	[Nm]	0,43
Lead screw diameter (d0)	[mm]	9,525
Lead screw lead (p)		
inch leads	[inch]	0,0625, 0,1, 0,125, 0,2, 0,25, 0,375, 0,5, 1,0, 1,2
metric leads	[mm]	2
Weight	[kg]	
of unit with zero stroke		0,69
of every 100 mm of stroke		0,31
of each carriage		0,12

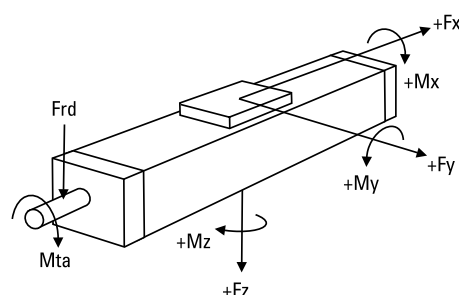
¹ Only relevant for units without RediMount flange.

Deflection of the Profile



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

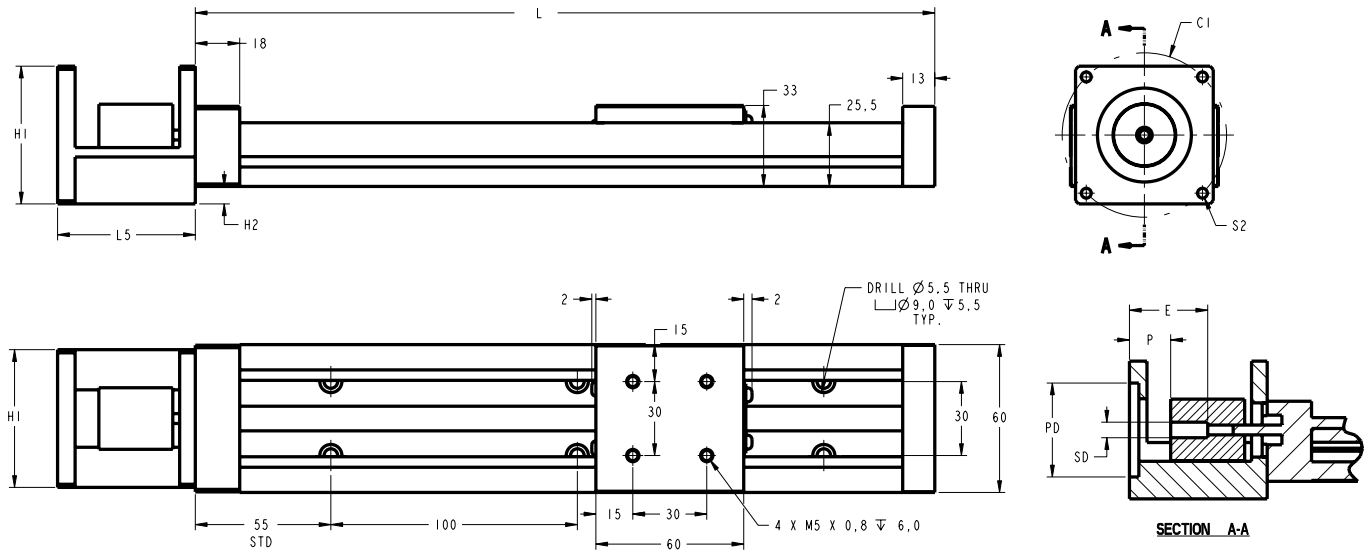
Definition of Forces



MS33

Lead Screw Drive, Ball Guide

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



Ordering Length (L) and Maximum Stroke (Smax)

$L = Smax + 96$

Motor block frame size ¹	H1	H2	SD	PD	P	E (max.)	S2	L5	C1
NEMA-17	39,9	1,2 ²	5,0	22,0	7,8	28,0	∅ 0,136	49,5	43,8
NEMA-23	57,2	7,5	6,35	38,2	14,0	33,0	M4	55,9	66,7

¹ Other sizes are easily configured. See www.LinearMotioneering.com for the motor mounting configurator.
² Above base.

2DB08

Lead Screw Drive, Ball Guide – Inch Interface

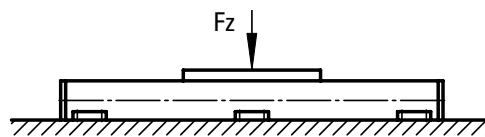
» Ordering key - see page 200

» Accessories - see page 131

General Specifications

Parameter	2DB08
Profile size (w × h) [inch]	4.50 × 1.625
Type of screw	lead screw
Carriage sealing system	none (optional bellows)
Screw supports	none
Lubrication	lubrication of screws and guides
Included accessories	RediMount™ kit

Deflection of the Profile



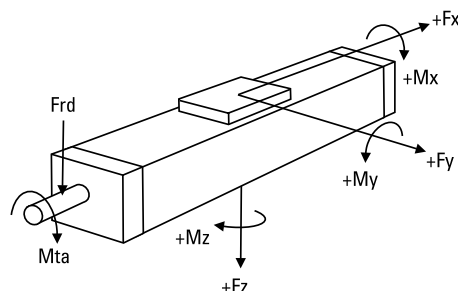
The unit must be continuously supported by a machined surface under its entire length.

Performance Specifications

Parameter		2DB08
Stroke length (Smax), maximum	[inch]	41
Linear speed, maximum	[inch/sec]	33.3
Acceleration, maximum	[inch/s ²]	385
Repeatability	[± inch]	0.0002
Accuracy	[± inch]	0.007 / 11.81 in
Input speed, maximum	[rpm]	2000
Operation temperature limits	[°F]	-4 – 176
Dynamic load (Fx), maximum	[lbs]	20
Dynamic load (Fy), maximum	[lbs]	168
Dynamic load (Fz), maximum	[lbs]	336
Dynamic load torque (Mx), maximum	[lbf-in]	500
Dynamic load torque (My), maximum	[lbf-in]	500
Dynamic load torque (Mz), maximum	[lbf-in]	250
Drive shaft force (Frd), maximum ¹	[lbf]	50
Input/drive shaft torque (Mta), maximum	[lbf-in]	3.54
Lead screw diameter (d0)	[inch]	0.375
Lead screw lead (p)	[inch]	0.1, 0.25, 0.5, 0.75, 1
Weight	[lb]	
of unit with zero stroke		5.93
of every 100 mm of stroke		1.16
of each carriage		1.89

¹ With radial mount option only

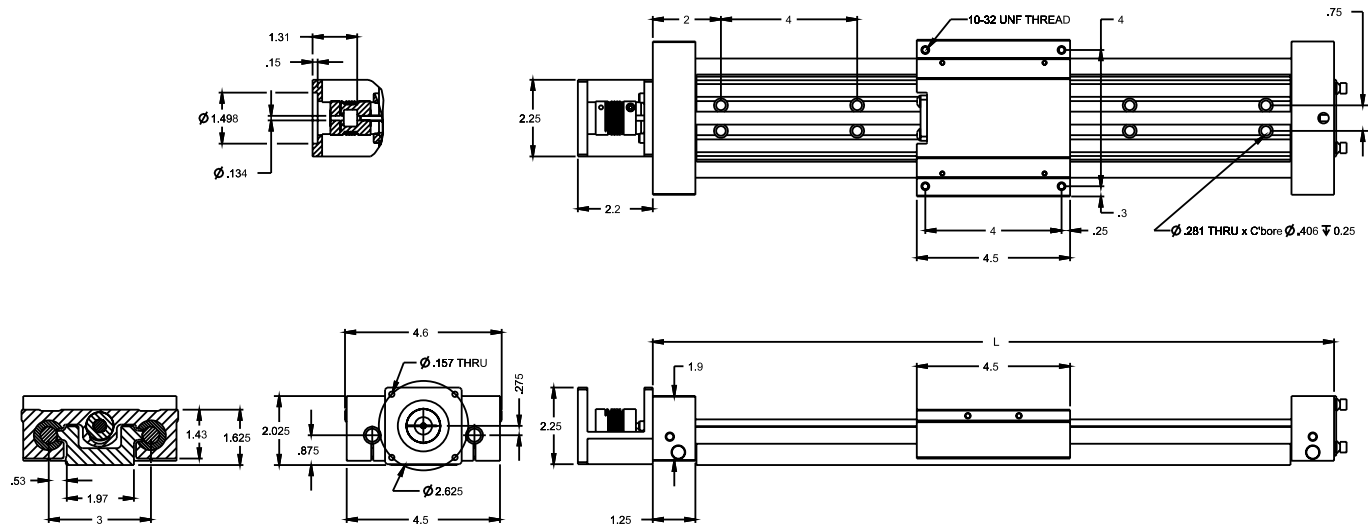
Definition of Forces



2DB08

Lead Screw Drive, Ball Guide – Inch Interface

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



Standard NEMA23 motor dimensions are shown. Other mounting sizes are available and easily configured. Please see www.LinearMotioneering.com for details.

Ordering Length (L) and Maximum Stroke (Smax)

$$L = S_{max} + 7.0$$

2DB120

Ball Screw Drive, Ball Guide – Inch Interface

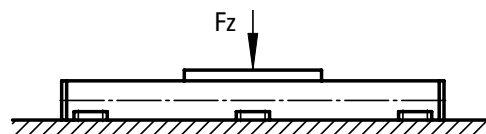
» Ordering key - see page 200

» Accessories - see page 131

General Specifications

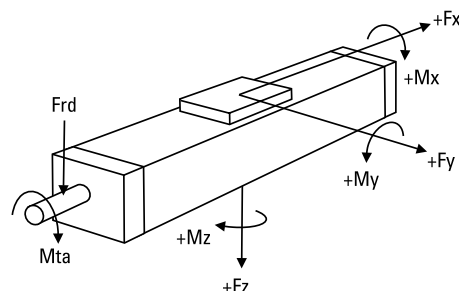
Parameter	2DB120
Profile size (w × h) [inch]	6 × 2.125
Type of screw	ball screw
Carriage sealing system	none (optional bellows)
Screw supports	none
Lubrication	lubrication of screws and guides
Included accessories	RediMount™ kit

Deflection of the Profile



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

Definition of Forces




Performance Specifications

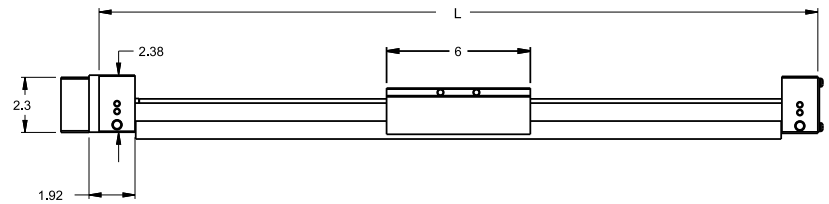
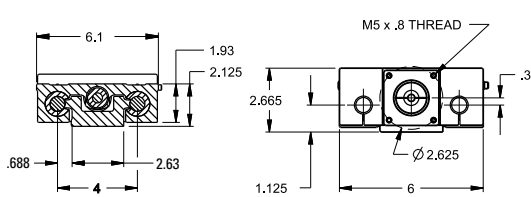
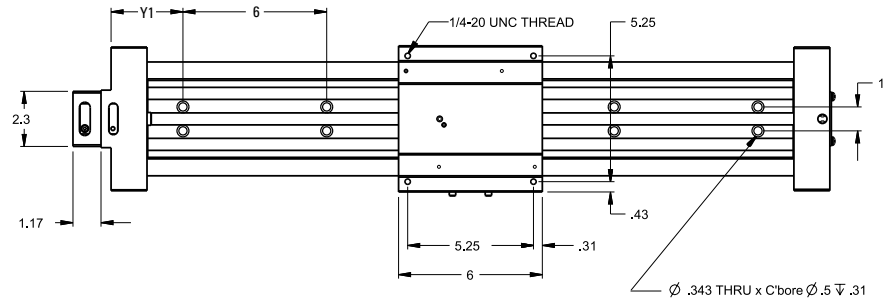
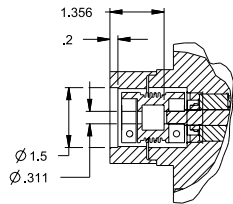
Parameter		2DB120
Stroke length (Smax), maximum	[inch]	63
Linear speed, maximum	[inch/sec]	10.0
Acceleration, maximum	[inch/s ²]	385
Repeatability standard nut preloaded nut	[± inch]	0.0020 0.0002
Accuracy	[± inch]	0.002 / 12 in
Input speed, maximum	[rpm]	3000
Operation temperature limits	[°F]	-4 – 176
Dynamic load (Fx), maximum	[lbs]	190
Dynamic load (Fy), maximum	[lbs]	1058
Dynamic load (Fz), maximum	[lbs]	2115
Dynamic load torque (Mx), maximum	[lbf-in]	4150
Dynamic load torque (My), maximum	[lbf-in]	4150
Dynamic load torque (Mz), maximum	[lbf-in]	2071
Drive shaft force (Frd), maximum ¹	[lbf]	120
Input/drive shaft torque (Mta), maximum	[lbf-in]	6.73
Ball screw diameter (do)	[inch]	0.5
Ball screw lead (p)	[inch]	0.631
Weight of unit with zero stroke of every 100 mm of stroke of each carriage	[lb]	13.17 2.30 4.29

¹ With radial mount option only.

2DB120

Ball Screw Drive, Ball Guide – Inch Interface

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



Standard NEMA23 motor dimensions are shown. Other mounting sizes are available and easily configured. Please see www.LinearMotioneering.com for details.

Ordering Length (L) and Maximum Stroke (Smax)

$$L = S_{max} + 9.0$$

2DB12J

Ball Screw Drive, Ball Guide – Inch Interface

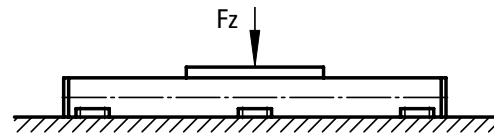
» Ordering key - see page 200

» Accessories - see page 131

General Specifications

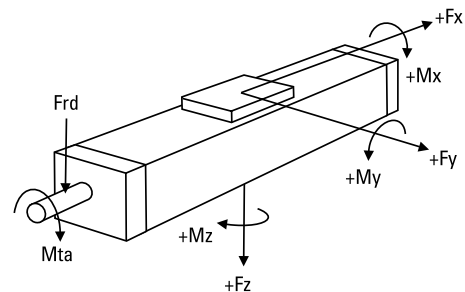
Parameter	2DB12J
Profile size (w × h) [inch]	6 × 2.562
Type of screw	ball screw
Carriage sealing system	none (optional bellows)
Screw supports	none
Lubrication	lubrication of screws and guides
Included accessories	RediMount™ kit

Deflection of the Profile



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

Definition of Forces




Performance Specifications

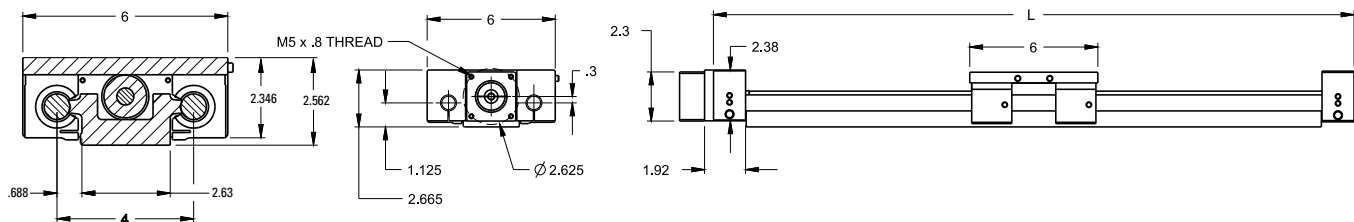
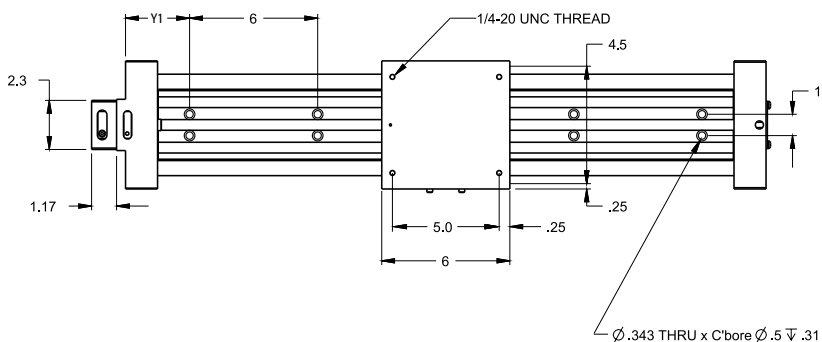
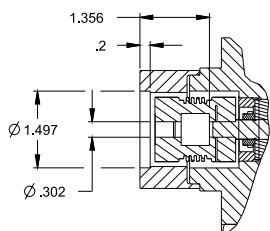
Parameter		2DB12J
Stroke length (Smax), maximum	[inch]	63
Linear speed, maximum	[inch/sec]	25.0
Acceleration, maximum	[inch/s ²]	385
Repeatability	[± inch]	0.0002
Accuracy	[± inch]	0.002 / 12 in
Input speed, maximum	[rpm]	3000
Operation temperature limits	[°F]	-4 – 176
Dynamic load (Fx), maximum	[lbs]	375
Dynamic load (Fy), maximum	[lbs]	1058
Dynamic load (Fz), maximum	[lbs]	2115
Dynamic load torque (Mx), maximum	[lbf-in]	4150
Dynamic load torque (My), maximum	[lbf-in]	4150
Dynamic load torque (Mz), maximum	[lbf-in]	2071
Drive shaft force (Frd), maximum ¹	[lbf]	120
Input/drive shaft torque (Mta), maximum	[lbf-in]	33.19
Ball screw diameter (do)	[inch]	0.50
Ball screw lead (p)	[inch]	0.5
Weight	[lb]	
of unit with zero stroke		13.58
of every 100 mm of stroke		2.296
of each carriage		4.850

¹ With radial mount option only.

2DB12J

Ball Screw Drive, Ball Guide – Inch Interface

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



Standard NEMA23 motor dimensions are shown. Other mounting sizes are available and easily configured. Please see www.LinearMotioneering.com for details.

Ordering Length (L) and Maximum Stroke (Smax)
 $L = Smax + 9.0$

2DB160

Ball Screw Drive, Ball Guide – Inch Interface

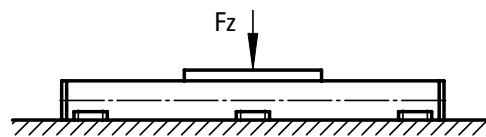
» Ordering key - see page 200

» Accessories - see page 131

General Specifications

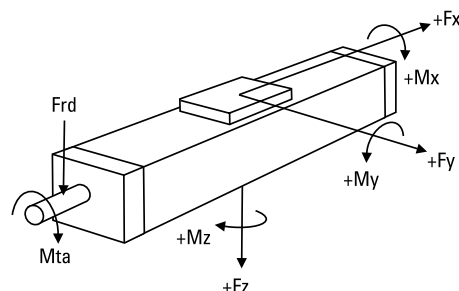
Parameter	2DB160
Profile size (w × h) [inch]	7.5 × 2.625
Type of screw	ball screw
Carriage sealing system	none (optional bellows)
Screw supports	none
Lubrication	lubrication of screws and guides
Included accessories	RediMount™ kit

Deflection of the Profile



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

Definition of Forces




Performance Specifications

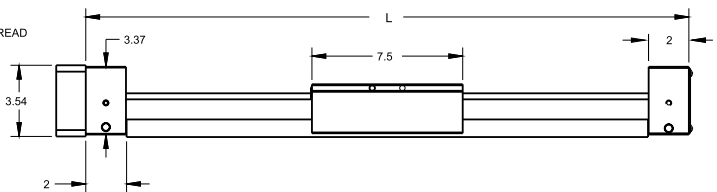
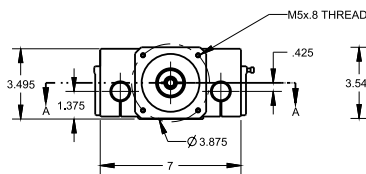
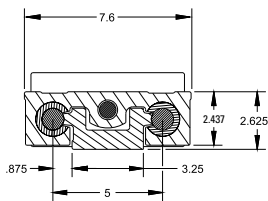
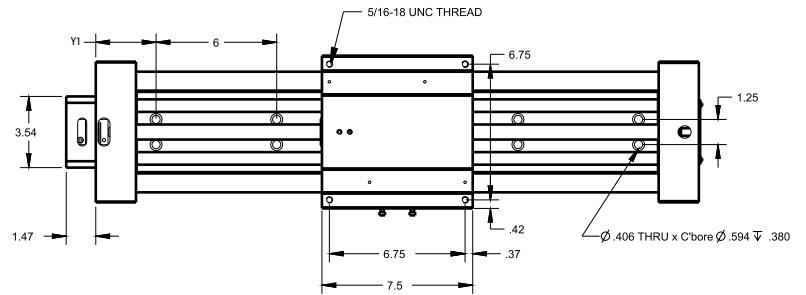
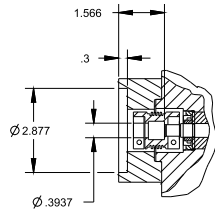
Parameter		2DB160
Stroke length (Smax), maximum	[inch]	84.5
Linear speed, maximum	[inch/sec]	8.3
Acceleration, maximum	[inch/s ²]	385
Repeatability standard nut preloaded nut	[± inch]	0.0020 0.0002
Accuracy	[± inch]	0.002 / 12 in
Input speed, maximum	[rpm]	2500
Operation temperature limits	[°F]	-4 – 176
Dynamic load (Fx), maximum	[lbs]	350
Dynamic load (Fy), maximum	[lbs]	1777
Dynamic load (Fz), maximum	[lbs]	3555
Dynamic load torque (Mx), maximum	[lbf-in]	8850
Dynamic load torque (My), maximum	[lbf-in]	8450
Dynamic load torque (Mz), maximum	[lbf-in]	4195
Drive shaft force (Frd), maximum ¹	[lbf]	120
Input/drive shaft torque (Mta), maximum	[lbf-in]	12.39
Ball screw diameter (do)		
inch diameters	[inch]	0.75
metric diameters	[mm]	20
Ball screw lead (p)		
inch leads	[inch]	0.2
metric leads	[mm]	5,0
Weight	[lb]	
of unit with zero stroke		26.74
of every 100 mm of stroke		3.86
of each carriage		8.61

¹ With radial mount option only.

2DB160

Ball Screw Drive, Ball Guide – Inch Interface

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



Standard NEMA23 motor dimensions are shown. Other mounting sizes are available and easily configured. Please see www.LinearMotioneering.com for details.

Ordering Length (L) and Maximum Stroke (Smax)

$$L = S_{max} + 11.5$$

2DB16J

Ball Screw Drive, Ball Guide – Inch Interface

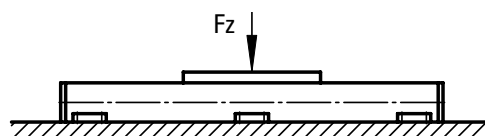
» Ordering key - see page 200

» Accessories - see page 131

General Specifications

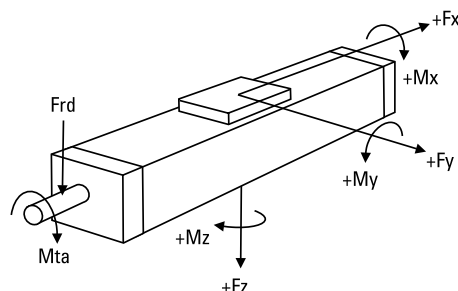
Parameter	2DB16J
Profile size (w × h) [inch]	7.5 × 3.062
Type of screw	ball screw
Carriage sealing system	none (optional bellows)
Screw supports	none
Lubrication	lubrication of screws and guides
Included accessories	RediMount™ kit

Deflection of the Profile



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

Definition of Forces




Performance Specifications

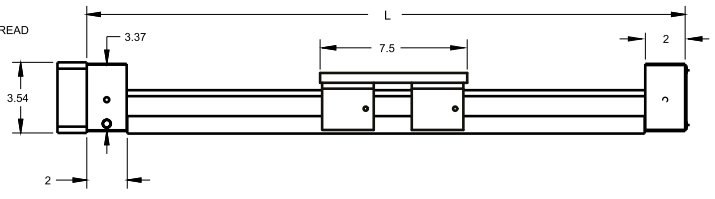
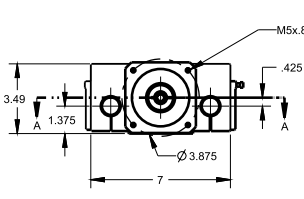
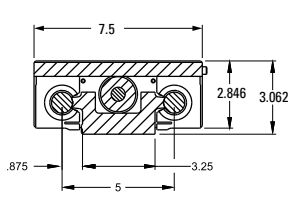
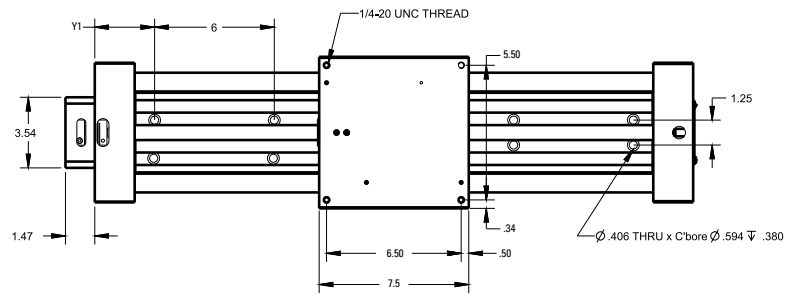
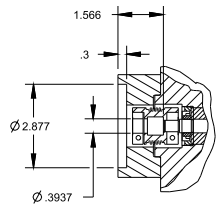
Parameter		2DB16J
Stroke length (Smax), maximum	[inch]	84.5
Linear speed, maximum	[inch/sec]	41.67
Acceleration, maximum	[inch/s ²]	385
Repeatability	[± inch]	0.0002
Accuracy	[± inch]	0.002 / 12 in
Input speed, maximum	[rpm]	2500
Operation temperature limits	[°F]	-4 – 176
Dynamic load (Fx), maximum	[lbs]	350
Dynamic load (Fy), maximum	[lbs]	1777
Dynamic load (Fz), maximum	[lbs]	3555
Dynamic load torque (Mx), maximum	[lbf-in]	8877
Dynamic load torque (My), maximum	[lbf-in]	8098
Dynamic load torque (Mz), maximum	[lbf-in]	4053
Drive shaft force (Frd), maximum ¹	[lbf]	120
Input/drive shaft torque (Mta), maximum	[lbf-in]	30.98
Ball screw diameter (do)	[inch]	0.631, 0.750
Ball screw lead (p)	[inch]	0.5, 1.0
Weight	[lb]	
of unit with zero stroke		25.73
of every 100 mm of stroke		3.86
of each carriage		7.70

¹ With radial mount option only.

2DB16J

Ball Screw Drive, Ball Guide – Inch Interface

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



Standard NEMA23 motor dimensions are shown. Other mounting sizes are available and easily configured. Please see www.LinearMotioneering.com for details.

Ordering Length (L) and Maximum Stroke (Smax)

$$L = S_{max} + 11.5$$