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

2HB10

Ball Screw Drive, Ball Guide

» Ordering key - see page 180
» Accessories - see page 117

General Specifications

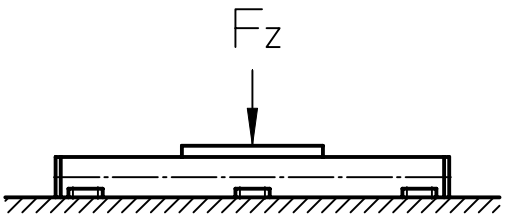
Parameter	2HB10
Profile size (w × h) [mm]	100 × 60
Type of screw	ball screw
Carriage sealing system	none (optional shroud or bellows)
Screw supports	none
Lubrication	lubrication of screw and guides
Included accessories	RediMount™ kit

Performance Specifications

Parameter		2HB10
Stroke length (Smax), maximum	[mm]	1375
Linear speed, maximum	[m/s]	0,47
Acceleration, maximum	[m/s²]	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 (d0)	[mm]	16
Ball screw lead (p)	[mm]	5, 10
Weight of unit with zero stroke of every 100 mm of stroke of each carriage	[kg]	 2,59 0,69 0,82

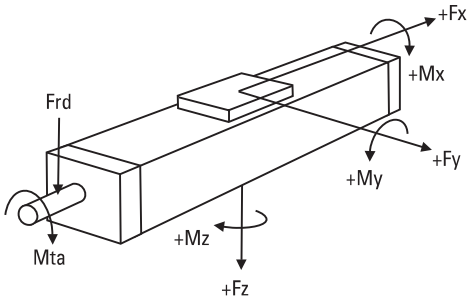
[1] Only relevant for units without RediMount flange.

Deflection of the Profile



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

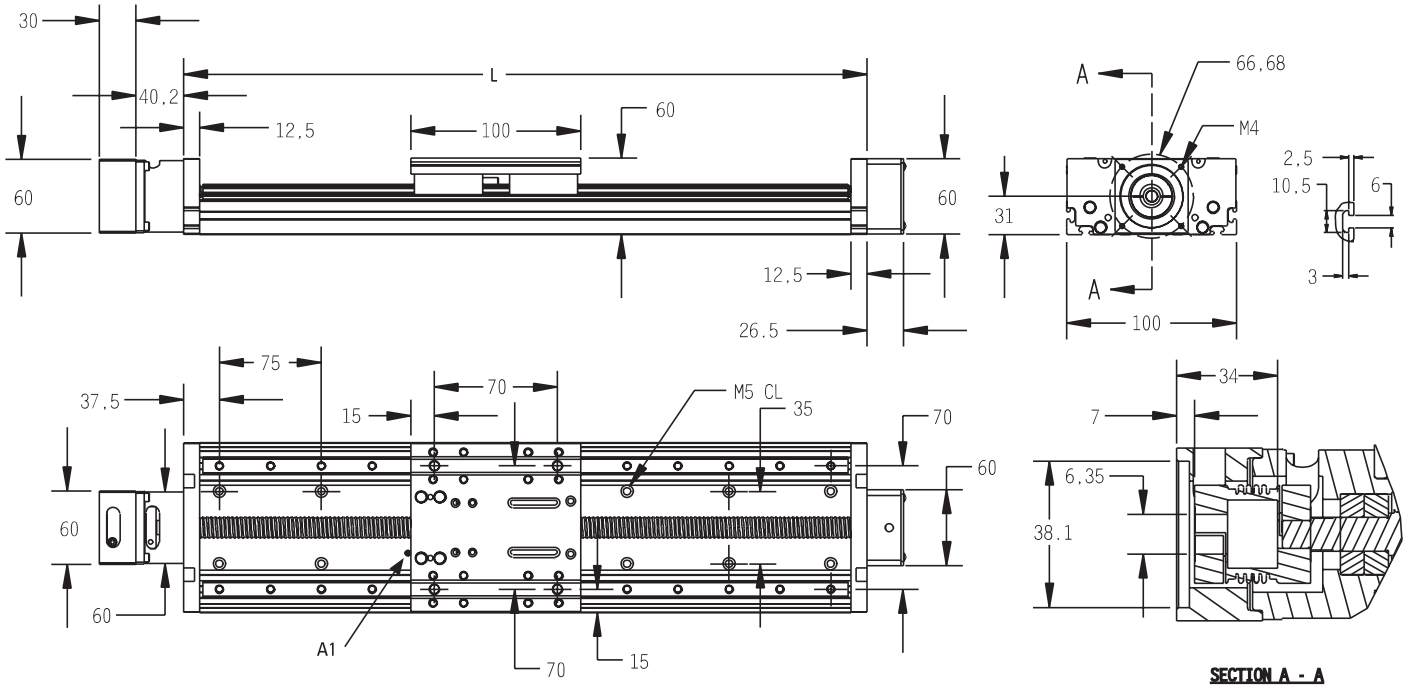
Definition of Forces



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 = Smax + 125

2HB20

Ball Screw Drive, Ball Guide

» Ordering key - see page 180
» Accessories - see page 117

General Specifications

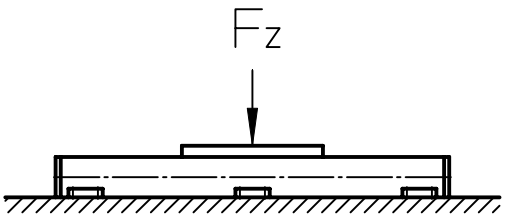
Parameter	2HB20
Profile size (w × h) [mm]	200 × 90
Type of screw	ball screw
Carriage sealing system	none (optional shroud or bellows)
Screw supports	none
Lubrication	lubrication of screw and guides
Included accessories	RediMount™ kit

Performance Specifications

Parameter		2HB20
Stroke length (Smax), maximum	[mm]	2760
Linear speed, maximum	[m/s]	0,75
Acceleration, maximum	[m/s²]	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 (d0)	[mm]	25
Ball screw lead (p)	[mm]	5, 10, 25
Weight of unit with zero stroke of every 100 mm of stroke of each carriage	[kg]	 13,32 1,70 4,47

[1] Only relevant for units without RediMount flange.

Deflection of the Profile



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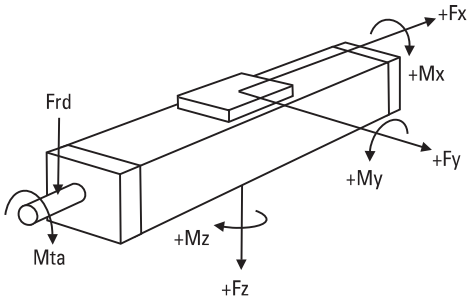
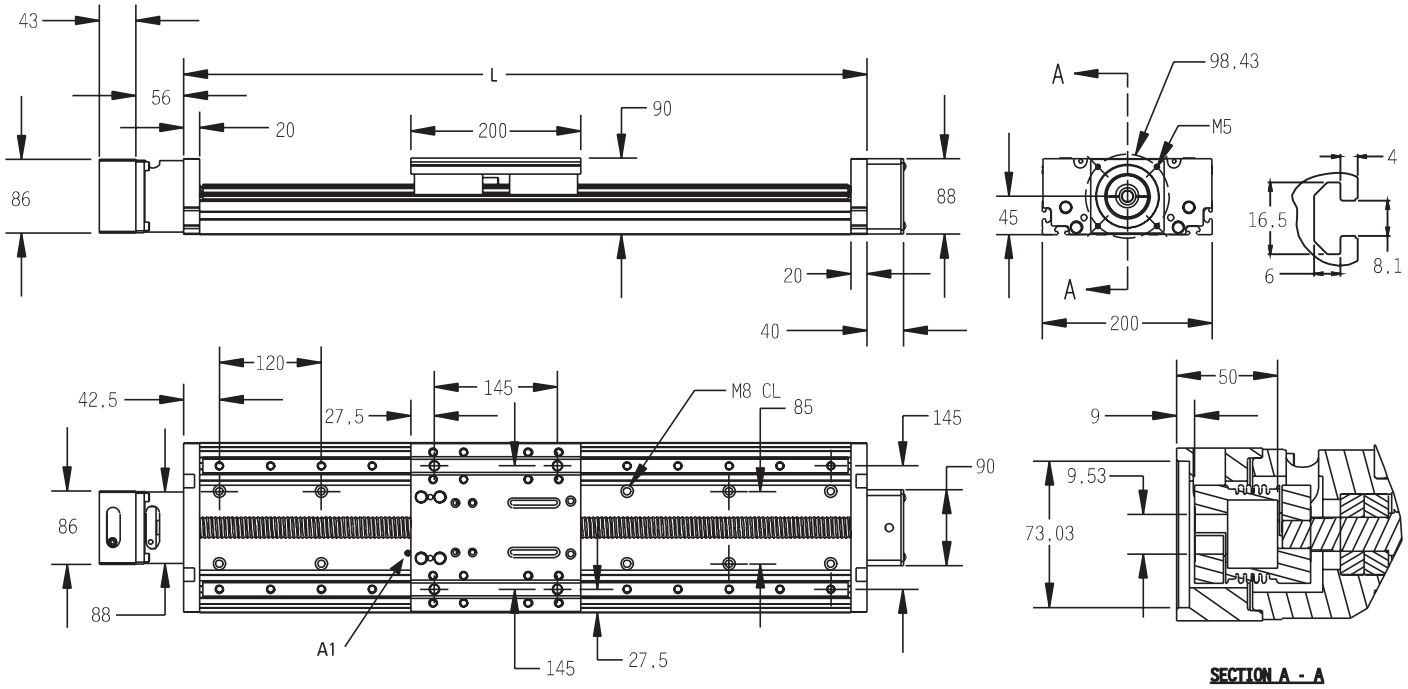
Definition of Forces



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 = Smax + 240

Ordering Keys

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

2HB10, 2HB20

1	2	3	4	5	6	7	8	9	10	11
2HB10	H0	N1285	-038	N	001	A	0	A	0	0

1. Type of unit
2HB10 = 2HB10 unit
2HB20 = 2HB20 unit

2. Ball screw diameter, lead and nut type
G0 = 16 mm, 5 mm, preloaded (2HB10 only)
H0 = 16 mm, 10 mm, preloaded (2HB10 only)

L0 = 25 mm, 5 mm, preloaded (2HB20 only)
M0 = 25 mm, 10 mm, preloaded(2HB20 only)
N0 = 25 mm, 25 mm, preloaded (2HB20 only)

3. Ordering length (L)
N xxxxx = distance in mm

4. Y-distance
- 038 = standard distance in mm between motor end plate to first set of mounting holes on 2HB10
- 043 = standard distance in mm between motor end plate to first set of mounting holes on 2HB20
- yyy = custom distance in mm between motor end plate to first set of mounting holes

5. Brake option
N = no brake
B = brake

6. RediMount motor ID code
001 = NEMA 23
002 = NEMA 34
zzz = consult www.LinearMotioneering.com for complete list of available standard RediMount motor flanges

7. Ball guide rail coating option
A = standard
D = Duralloy

8. Ball guide carriage coating option
0 = standard
1 = Duralloy

9. Profile cover option
A = none
B = bellows (bellows will reduce stroke length app. 28%)
C = shrouds

10. Hardware option
0 = alloy plated
1 = stainless steel

11. Home and end of stroke sensor option
0 = no sensors
1 = home sensor, NPN type
2 = end of stroke sensors, NPN type
3 = home and end of stroke sensors, NPN type
4 = home sensor, PNP type
5 = end of stroke sensors, PNP type
6 = home and end of stroke sensors, PNP type