



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 |



2RB12

Ball Screw Drive, Ball Guide

» Ordering key - see page 181

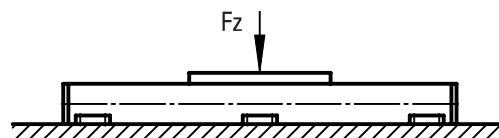
» Accessories - see page 117

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 |

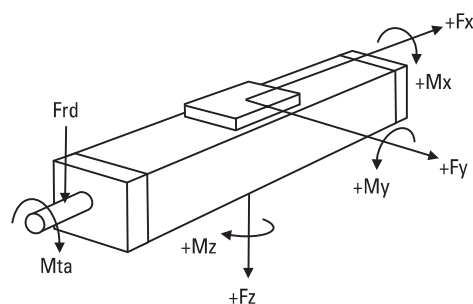
¹ Base width × carriage height.

Deflection of the Profile



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

Definition of Forces




Performance Specifications

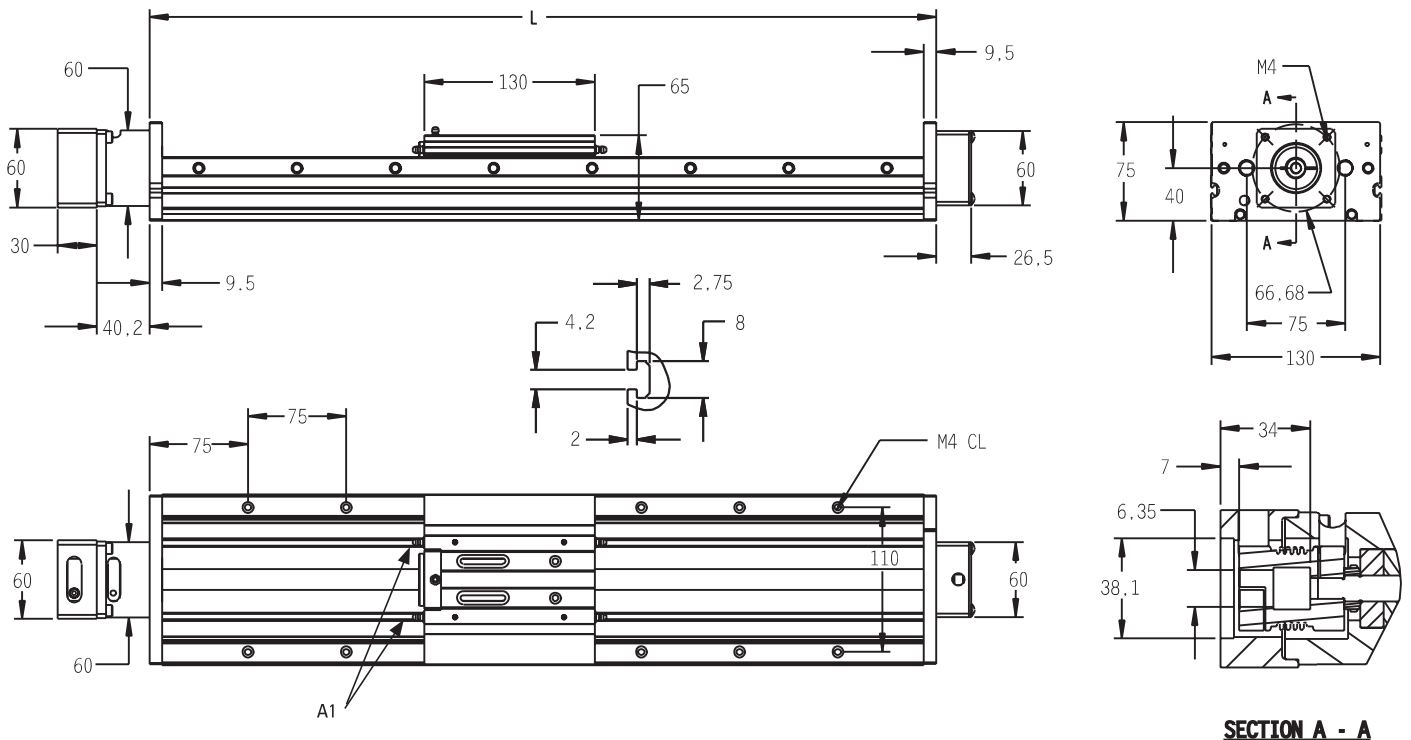
| Parameter | | 2RB12 |
|---|---------------------|----------------|
| Stroke length (Smax), maximum | [mm] | 1951 |
| Linear speed, maximum | [m/s] | 0,47 |
| Acceleration, maximum | [m/s ²] | 9,8 |
| Repeatability | [± mm] | 0,005 |
| Accuracy | [± mm] | 0,025 / 300 mm |
| Input speed, maximum | [rpm] | 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 (d ₀) | [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.

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 181
» Accessories - see page 117

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 |

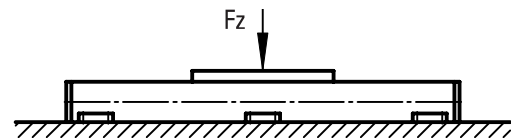
¹ Base width × carriage height.

Performance Specifications

| Parameter | | 2RB16 |
|--|---------------------|----------------|
| Stroke length (S _{max}), 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 (F _x), maximum | [N] | 2998 |
| Dynamic load (F _y), maximum | [N] | 2588 |
| Dynamic load (F _z), maximum | [N] | 5176 |
| Dynamic load torque (M _x), maximum | [Nm] | 243 |
| Dynamic load torque (M _y), maximum | [Nm] | 299 |
| Dynamic load torque (M _z), maximum | [Nm] | 150 |
| Drive shaft force (F _{rd}), maximum ¹ | [N] | 533 |
| Input/drive shaft torque (M _{ta}), maximum | [Nm] | 2,66 |
| Ball screw diameter (d ₀) | [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 |

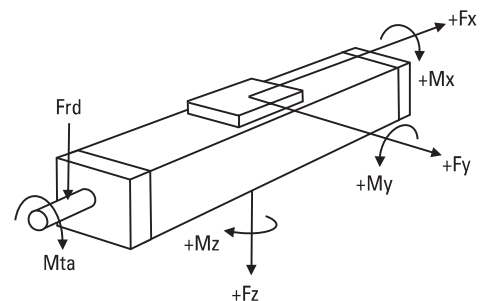
¹ Only relevant for units without RediMount flange.

Deflection of the Profile




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

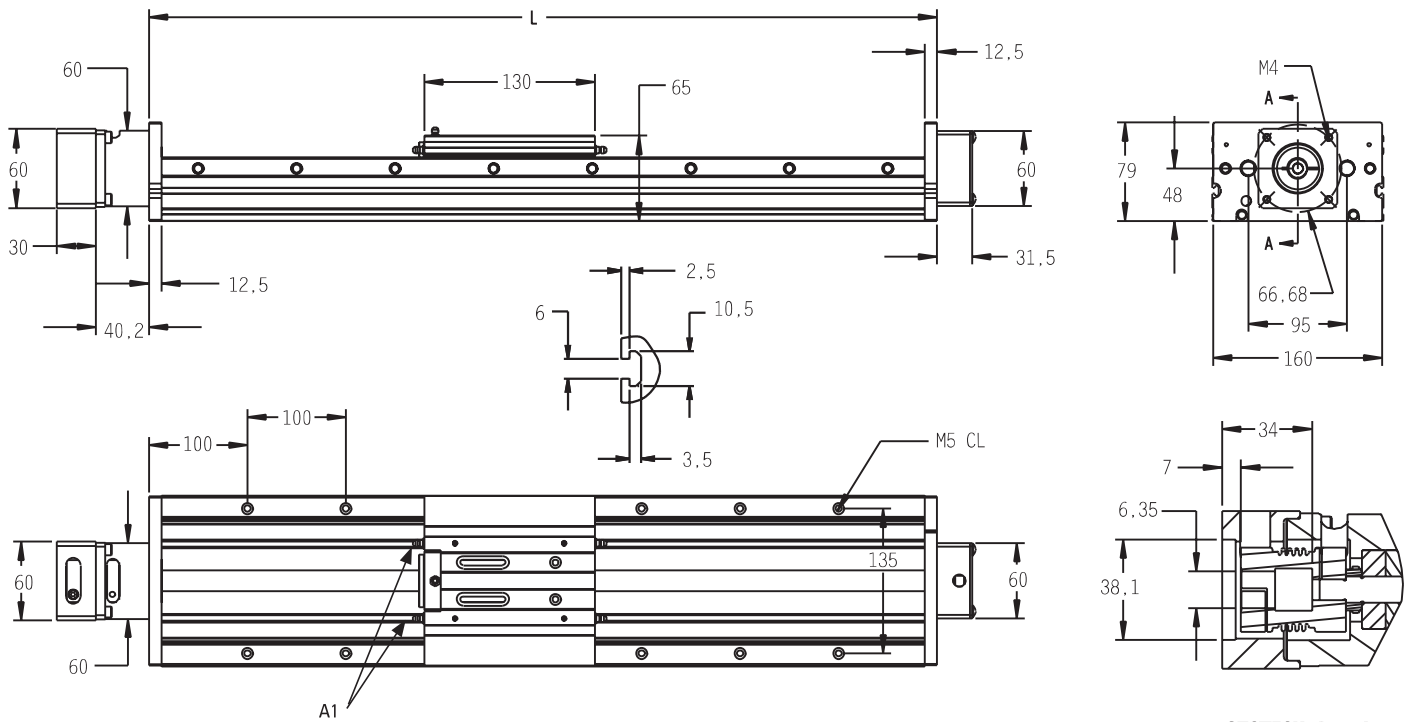
Definition of Forces



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)

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

Ordering Keys

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

| 2RB12, 2RB16 | | | | | | | | | | |
|--|----|-------|------|---|-----|---|---|---|----|----|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 |
| 2RB12 | J0 | N1000 | -100 | N | 002 | B | 0 | A | 0 | 0 |
| <p>1. Type of unit 2RB12 = 2RB12 unit 2RB16 = 2RB16 unit</p> <p>2. Ball screw diameter, lead and nut type G0 = 16 mm, 5 mm, preloaded (2RB12 only) H0 = 16 mm, 10 mm, preloaded (2RB12 only)</p> <p>I0 = 20 mm, 5 mm, preloaded (2RB16 only) J0 = 20 mm, 10 mm, preloaded (2RB16 only) K0 = 20 mm, 25 mm, preloaded (2RB16 only)</p> <p>3. Ordering length (L) N xxxx = distance in mm</p> <p>4. Y-distance - 075 = standard distance in mm between motor end plate to first set of mounting holes on 2RB12 - 100 = standard distance in mm between motor end plate to first set of mounting holes on 2RB16 - yyy = custom distance in mm between motor end plate to first set of mounting holes</p> <p>5. Brake option N = no brake B = brake</p> <p>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</p> | | | | | | <p>7. Ball guide shaft coating option A = standard, 60 Case B = stainless steel (440C) C = chrome plated E = armoloy</p> <p>8. Bearing option 0 = standard 1 = corrosion resistance</p> <p>9. Profile cover option A = none B = bellows (bellows will reduce stroke length app. 28%)</p> <p>10. Hardware option 0 = alloy plated 1 = stainless steel</p> <p>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</p> | | | | |