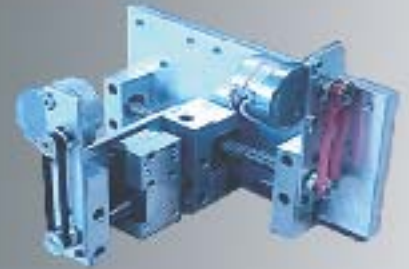
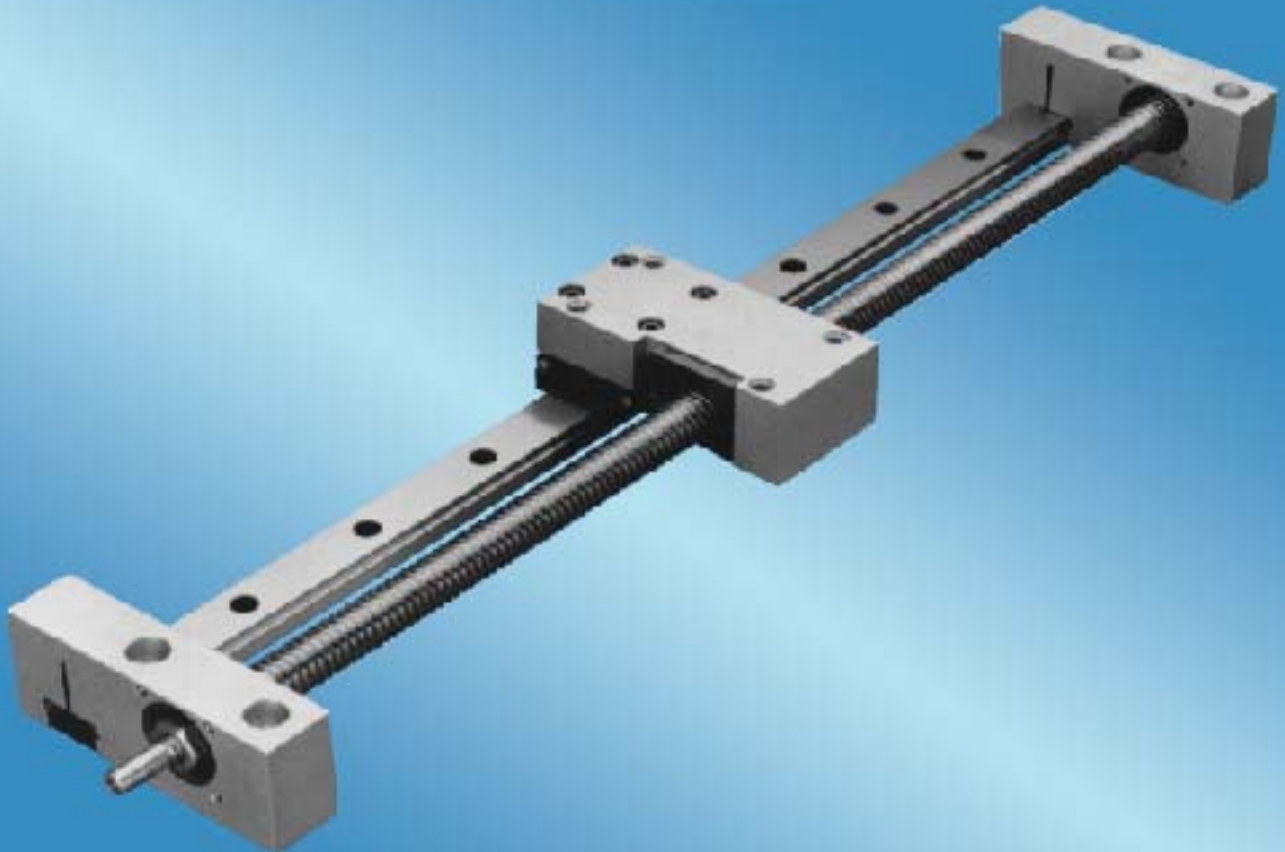


# Mini Compact Slides

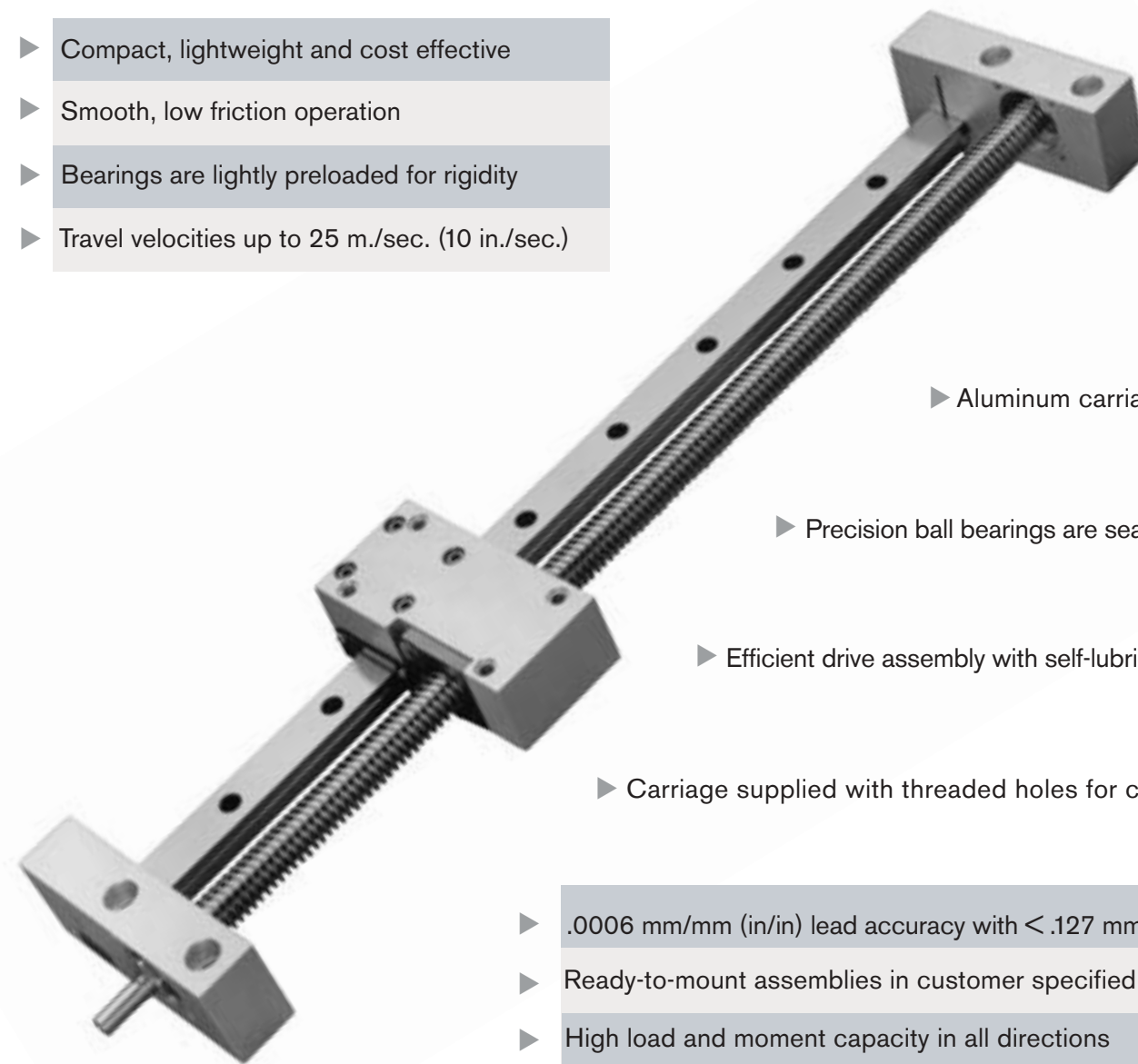


The Economical Miniature Solution



## Product Overview

- ▶ Compact, lightweight and cost effective
- ▶ Smooth, low friction operation
- ▶ Bearings are lightly preloaded for rigidity
- ▶ Travel velocities up to 25 m./sec. (10 in./sec.)



▶ Aluminum carriage and endplates

▶ Precision ball bearings are sealed & lubed for life

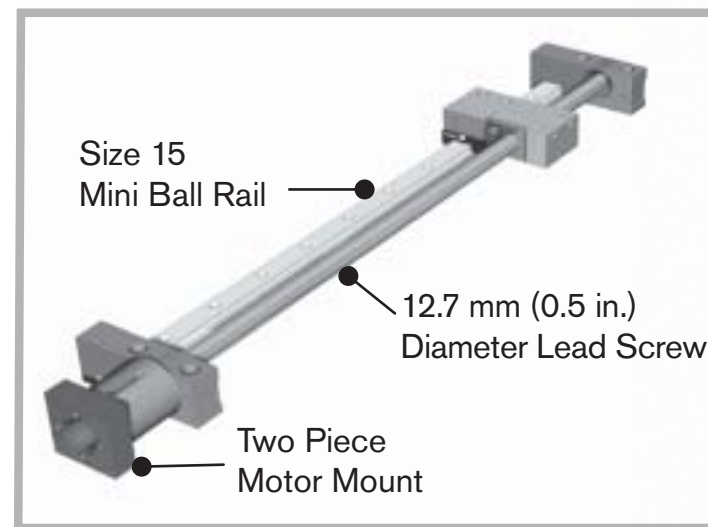
▶ Efficient drive assembly with self-lubricating polymer nut

▶ Carriage supplied with threaded holes for customer interface

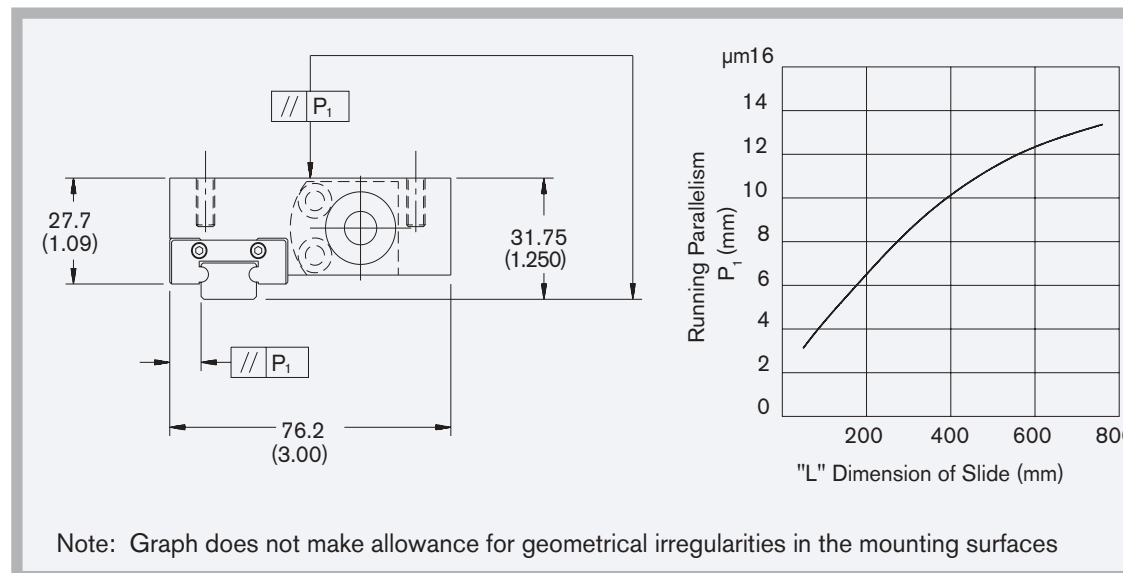
- ▶ .0006 mm/mm (in/in) lead accuracy with < .127 mm (.005") backlash
- ▶ Ready-to-mount assemblies in customer specified lengths
- ▶ High load and moment capacity in all directions
- ▶ Strokes up to 715 mm (28.14 inches)

# Typical Application Arrangement

## Straight Drive



## Travel Accuracy



# Life & Load Ratings

## Life Definition

The failure of a linear bearing system occurs when the operating stresses from the rolling elements cause material fatigue. Rolling surface material inconsistencies will cause variation in fatigue life for linear bearing systems of the same configuration and operating conditions. Due to this inherent variation, linear bearing systems have adopted a life rating similar to other bearing products.

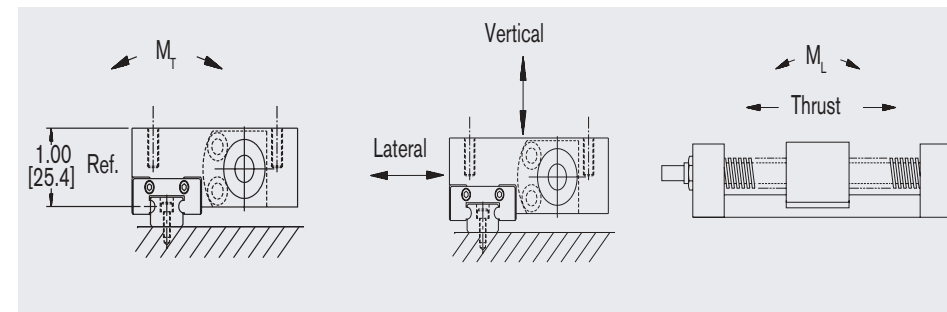
The rated life "L" of a linear slide is the length of travel endured by the slide under a specified condition. Since in reality, life varies from one slide to another, industry normally uses the **L10** life rating which is defined as the length of travel that 90% of apparently identical slides will complete before the first evidence of fatigue.

## Basic Dynamic Load Rating

For comparison purposes, the basic dynamic load rating for the mini compact module is defined as the load (C), which allows the **L<sub>10</sub>** life to equal a traveling distance of approx. 100 km.

## Basic Static Load Rating

The basic static load rating ( $C_0$ ) is defined as a static load of constant magnitude and direction which results in a permanent deformation of the ball rail raceway of 0.0001 times the diameter of the ball. This amount of permanent deformation will prevent smooth movement of the linear bearing and therefore should never be exceeded.



Load Direction	Dynamic Load Rating		Static Load Rating	
Vertical	4200 N	944 lbs	6260 N	1407 lbs
Lateral	4200 N	944 lbs	6260 N	1407 lbs
Thrust	44 N	10 lbs	222 N	50 lbs
Moment ML	18.3 N-m	162 in-lb	27.0 N-m	239 in-lb
Moment MT	31.2 N-m	276 in-lb	46.3 N-m	410 in-lb

## Technical Data

### Life Rating

$$L = \left(\frac{C}{P}\right)^3 \cdot 10^5$$

L	Life Rating	m
P	Load	N
C	Dynamic Capacity	N

### Example

Vertical Load P = 75 N                      Dynamic Capacity = 1543 N

$$L = \left(\frac{C}{P}\right)^3 \cdot 10^5 = \left(\frac{1543}{75}\right)^3 \cdot 10^5 = 8.7 \times 10^8 \text{ meters of travel}$$

### Lubrication

Mini Compact Slides are lubricated with antifriction bearing quality lithium soap based (NLGI#2) and can be immediately installed in the application. Depending on the operating conditions, relubrication will be required at periodic intervals. For general usage, we suggest the following relubrication interval:

- Every month of operation or
- Every 500 hours of operation (whichever occurs first)

### Operating Temperatures

Minimum operating temperature    0°C ( 32°F)  
 Maximum operating temperature    80°C (176°F)

### Leadscrew Performance Data

Screw Lead	Maximum RPM	Travel Velocity at Maximum RPM
2.54 mm .100 in.	2000	(85 mm/second) 3.33 inches/second
5.08 mm .200 in.	1800	(152 mm/second) 6.00 inches/second
12.7 mm .500 in.	1200	(254 mm/second) 10.00 inches/second

### Mounting

Mini Compact Slides are designed to be mounted by means of bolts placed through the end blocks. Additionally, the bearing rail mounting holes can be used for more rigidity and is recommended for slides with an "L" dimension in excess of 250mm. The end block mounting holes will accommodate metric M6 x 1 or # 10-32-UNF socket head cap screws. The bearing rail mounting holes will accommodate metric M3 x .5 or # 5-40-UNC socket head cap screws.

### Maximum "L" Dimension

The maximum permissible "L" dimension is 760 mm (29.9 inches)





Bosch Rexroth Corporation  
Linear Motion and  
Assembly Technologies  
14001 South Lakes Drive  
Charlotte, NC 28273  
Phone: 800-438-5983  
Fax: 704-583-0523  
info.chr@boschrexroth-us.com  
www.boschrexroth-us.com

Bosch Rexroth Corporation  
5150 Prairie Stone Parkway  
Hoffman Estates, IL 60192-3707  
Phone: 847-645-3600  
Fax: 847-645-0811

Bosch Rexroth Corporation  
Industrial Hydraulics  
2315 City Line Road  
Bethlehem, PA 18017-2131  
Phone: 610-694-8300  
Fax: 610-694-8467

Bosch Rexroth Corporation  
Electric Drives and Controls  
5150 Prairie Stone Parkway  
Hoffman Estates, IL 60192-3707  
Phone: 847-645-3600  
Fax: 847-645-6201

Bosch Rexroth Corporation  
Pneumatics  
1953 Mercer Road  
Lexington, KY 40511-1021  
Phone: 859-254-8031  
Fax: 859-281-3483

Bosch Rexroth Corporation  
Mobile Hydraulics  
P.O. Box 394  
1700 Old Mansfield Road  
Wooster, OH 44692-0394  
Phone: 330-263-3300  
Fax: 330-263-3333