

Lubrication

Tips & Hints for Lubrication with PBC Linear Products

OVERVIEW—LUBRICATION TIPS & HINTS

- Round Shaft Technology
 - Self-lubricating Simplicity® plain bearings
 - Shafting
- Cam Roller Technology
- Gliding Surface Technology
 - Self-lubricating
 - Lubrication for enhanced life

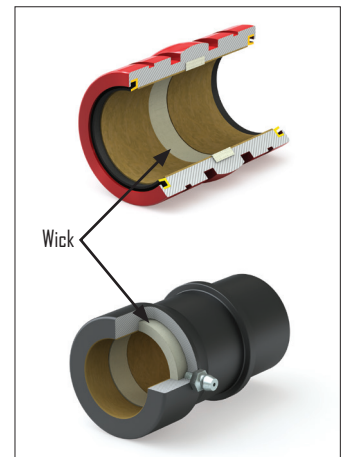
ROUND SHAFT TECHNOLOGY

SIMPLICITY PLAIN BEARINGS

- Using petroleum-based lubricants can increase performance and life of the bearing
- When using grease for lubrication, remove the felt wick from the bearing
- When using oil, retain the wick in the bearing

SHAFTING

- Proper lubrication promotes retention of lubrication
- Proper lubrication aides in a successful plain bearing transfer process
- Ball bearing lubrication is essential to avoid metal-to-metal contact



CAM ROLLER TECHNOLOGY

LUBRICATION

- Lubrication is always recommended on metal-to-metal contact points between raceway and rollers
- Reduces wear and stress on contact surfaces
- Reduces friction minimizing heat build-up
- Allows products to perform at the rated specifications
- Helps protect against corrosion on metal surfaces

LUBRICANTS

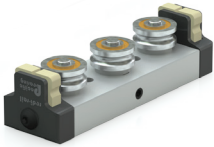
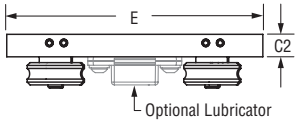
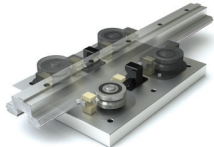
- To optimize performance, a lubrication expert should be contacted to review applications
- General purpose grease such as the Shell Alvania #3 or equivalent is a typical recommendation in lieu of application-specific lubrication

INITIAL LUBRICATION

- PBC Linear's linear guides and raceways are shipped with a preservative lubrication
- During installation it is necessary to apply additional lubrication at start up
- High quality lithium soap grease is recommended as an initial lubricant

LUBRICATION & CAM ROLLER TECHNOLOGY PRODUCTS


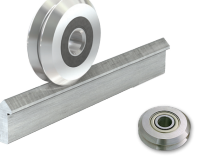
There are a number of Cam Roller Technology products that have lubrication options available to order with the products

		
<p>Metric Redi-Rail</p>	<p>Low Profile Redi-Rail</p>	<p>Integral-V™ Technology Carriages</p>

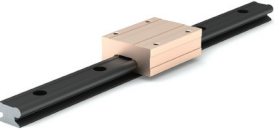
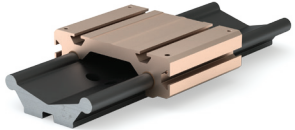

Hevi-Rail Bearings

- Lubrication is provided on fixed Hevi-Rail bearings HVB-055 and larger
- Lubrication is not provided on adjustable HVBEA Hevi-Rail bearings

Lubrication is still required between roller and raceways for these products, otherwise they will develop rust or other issues related to lack of lubrication on a metal-to-metal surface:

				
<p>Redi-Rail</p>	<p>Commercial Rail</p>	<p>Hardened Crown Rollers</p>	<p>V-Guide</p>	<p>Hevi-Rail</p>

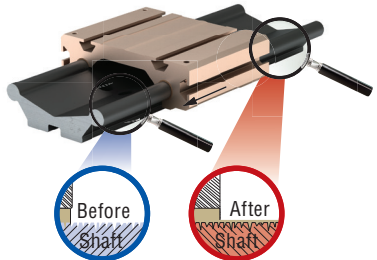
GLIDING SURFACE TECHNOLOGY

		
<p>Mini-Rail</p>	<p>Low Profile Uni-Guide</p>	<p>Uni-Guide</p>

All Gliding Surface Technology products utilize plain bearing, self-lubricating transfer of FrelonGOLD®

- Low profile carriages have optional lubrication feature
- Lubrication can increase performance when applied properly
 - FrelonGOLD without lubricant is rated up to 300 sfm
 - FrelonGOLD with lubricant is rated up to 825 sfm
- Similar to the RST product 8-12 rms finish
- For initial start-up, it is recommended to lubricate with a 3-in-1 type oil
- Typical break-in requires 50-100 cycles

Frelon® Transfer Process



At break-in, Frelon® deposits a microscopic film on the shaft and fills the valleys in the surface finish creating a Frelon-on-Frelon running condition that is true self-lubrication.