

# High precision roller bearing slide assemblies

## Models LRS, HRS and DRS

Thank you for choosing a quality Gilman USA product. For best results, read the following product warnings.

Gilman USA slide assemblies are quality, high precision machine components that require special care and handling.

The following points should be followed to extend slide life and performance.

1. The mounting surface for high precision slide assembly should be rigid and of good surface quality. A surface flatness of .0005 in./ft. is required.
2. When additional machining is required, observe caution not to generate excessive heat which could cause distortion. Make sure machining debris does not enter the guide way area.
3. Slide must be properly lubricated with contamination free Mobil Vactra #2 oil or equivalent. **Do not use grease.** LRS slides do not require oiling at feed rates below 55 ipm. HRS and DRS slides should be lubricated with:
  - 1cc oil at 8 minute intervals, or
  - 2cc oil at 15 minute intervals.*These are minimum values and may have to be increased based on the applications.*

In design applications and installations using Gilman USA machine modules, it is imperative to observe recognized safety standards or other applicable codes set forth by corporate, government and industry regulators.

Some Gilman USA roller bearing slides are shipped with the saddle locked. These will be tagged and must be unbolted. The preload need not be adjusted before use. Preload may require periodic adjustment.

### 1. Preload adjustment:

- Preload adjustment is done only when mounting screws for the way at the adjusting side are temporarily tightened.
- Preload adjustment is started from the adjusting screw at the center of the way length, proceeding alternately to the left and right.
- While checking the clearance (deflection) at the side face of the table (→ Figure 1), gradually tighten each adjusting screw until a dial gauge indicates zero-clearance. During this process, note the tightening torque of the adjusting screws.
- When adjusting the screw close to the end of the way, gradually stroke the table and ensure that the roller cage is positioned at the adjusting screw.
- Using the preceding process, the internal clearance becomes zero or minimal preload, but the preload amount is not uniform. Therefore, using the same process but with the identical tightening torques, readjust all adjusting screws to a uniform amount.

### 2. Final fixing of way at adjusting side:

- These mounting screws should also be tightened to a uniform torque. Similar to the adjustment of the preload

adjusting screws, tighten the mounting screws at the adjusting side to a slightly lower tightening torque than the prescribed value. Start from the center screw of the way length, proceed alternately to the left and right.

- When tightening the mounting screw close to the end of the way, gradually stroke the table and ensure that the roller cage is positioned at the mounting screw.
- Finally, tighten all mounting screws at the adjusting side to the prescribed torque (→ Figure 3).

### 3. Final check (→ Figure 2)

- Stroke the table gradually to its full stroke length, ensuring that the stroke is smooth and quiet.
- Check the operating accuracy by measuring the upper and side faces of table with a dial gauge.

Figure 1, Preload adjustment

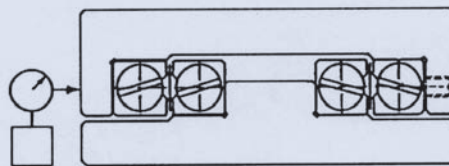
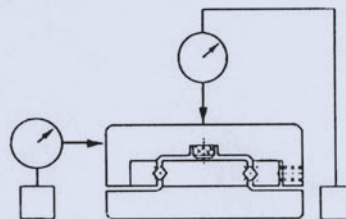


Figure 2, Final check of operating accuracy



The contents of this publication are the copyright of the publisher and may not be reproduced (even extracts) unless prior written permission is granted.

Every care has been taken to ensure the accuracy of the information contained in this publication but no liability can be accepted for any loss or damage whether direct, indirect or consequential arising out of use of the information contained herein.

©2011 Gilman USA, LLC

Version 12/2011

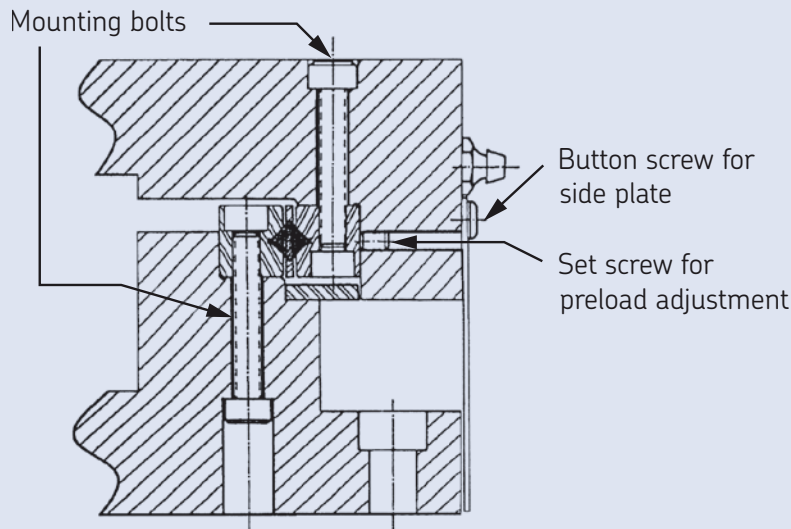
# Bolt tightening torques for roller slides



## Models LRS, HRS and DRS

Tightening torque of mounting screw is shown below. To prevent any subsequent loosening of the mounting screws, an adhesive can be used.

Figure 3, DRS slide section



### Mounting bolt tightening torque

Bolt size	Torque
M2 x 0.4mm	2 in. lb.
M3 x 0.5mm	11 in. lb.
M4 x 0.7mm	22 in. lb.
M5 x 0.8mm	45 in. lb.
M6 x 1.0mm	76 in. lb.
M8 x 1.25mm	180 in. lb.
M10 x 1.5mm	354 in. lb.

Preload	Torque
Standard	0 in. lb.
Light	2 in. lb.

Special applications may require higher preloads. Consult Gilman USA

The contents of this publication are the copyright of the publisher and may not be reproduced (even extracts) unless prior written permission is granted.

Every care has been taken to ensure the accuracy of the information contained in this publication but no liability can be accepted for any loss or damage whether direct, indirect or consequential arising out of use of the information contained herein.

©2011 Gilman USA, LLC  
Version 12/2011

**Gilman USA, LLC**  
1230 Cheyenne Avenue  
P.O. Box 5  
Grafton, WI 53204  
Telephone: 800-445-6267 or 262-204-2227  
Fax: 262-377-9438  
e-mail: sales@GilmanUSA.com  
www.gilmanusa.com