



NON-MAGNETIC BALL SLIDES

SERIES	LOAD CAPACITY, LB.	TRAVEL	LENGTH	ACCURACY
D-NMS-S3-NMS	1.2-61.5	.50-12.00	1.00-15.00	0.0005"/"

Load Ratings and Life Estimates

The rated load capacity of Del-Tron ball slides may be a mass load on a horizontal slide, or a force load normal to the mounting surface in any position. The rated load must be centered and distributed over the slide, and the base must be fully supported on a flat mounting surface so that the ball slide does not act as a beam subject to concentrated or distributed bending forces. Loads supported by protruding arms reduce accuracy and load capacity by acting as levers or ratio arms, and should be avoided even when load forces are small.

When used at the rated load capacity and moderate speeds, a life of 10 million inches of travel can be expected. The expected life at one half the rated load is 100 million inches.

Friction and Lubrication

The coefficient of friction is lower for linear ball bearings than for rotary bearings, where the peripheral track is shorter on the inner race than on the outer race, causing the ball to skid on one or the other. The balls run exactly equal distances on the pair of tracks in linear bearings, permitting the ball to run without friction, wear, or skidding at any preload. The typical coefficient of friction for Del-Tron ball slides is 0.003.

Lubrication is recommended for speeds above 1800 inches/min, and is advisable at lower speeds where high loads are applied in continuous duty applications.

Mounting and Accuracy

The mounting surfaces of the ball slide are machined flat and smooth, and parallel to each other and the line of motion. They must be mounted on smooth, flat supports that will not deflect under load. Especially with long slides of small cross section, binding may be caused by distortion of the bottom member when mounted on irregular surfaces. If so, round shims or spacers may be placed over the mounting screws to raise the slide above the surface asperities. Bedding in epoxy resin is also recommended.

The specified accuracy for all standard Del-Tron ball slides is .0005"/" of travel. This is measured by comparison of the line of travel to a master straight edge, using a gage or indicator mounted on the slide.

For more information on Del-Tron's Non-Magnetic Slides, [click here](#).