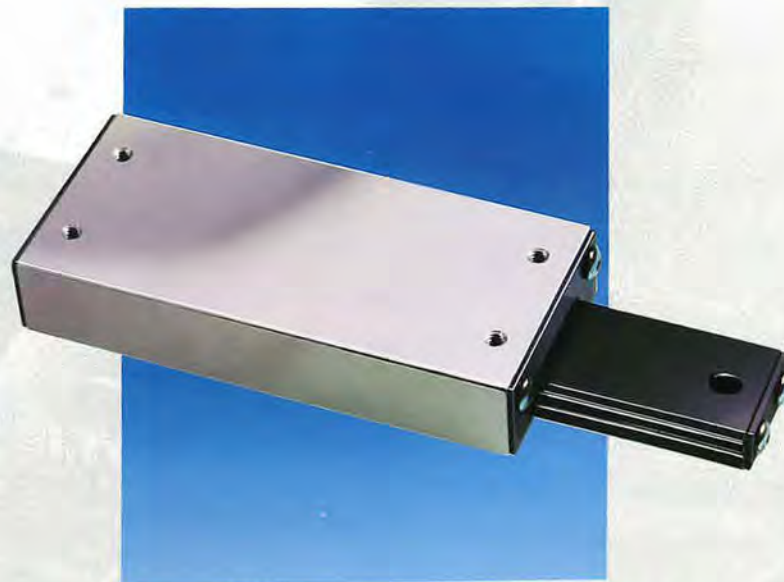
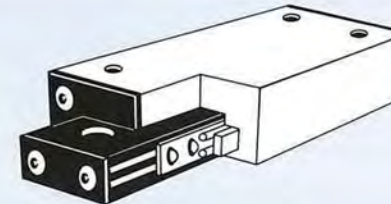


Ball Slide Assemblies



6 Reasons to choose Del-Tron® Ball Slides



1. Factory preload adjustment prevents sideplay and backlash.
2. Lightweight aluminum carriage and base with high load capacity.
3. Built-in holes simplify installation and component mounting.
4. Steel shafts, ground over the entire length, reduce coefficient of friction to 0.003.
5. Long life, self-cleaning ball bearing needs no lubrication.
6. Mounting surfaces, parallel to the line of motion, provide straight line accuracy to 0.0005"/" of travel.

Del-Tron Ball Slides

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 balls to run without friction, wear, or skidding at any preload. The typical coefficient of friction for Del-Tron ball slides is .003.

Del-Tron ball slides are lightly lubricated during assembly, and are self-cleaning in normal service. Additional lubrication is required 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 inch/inch 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.

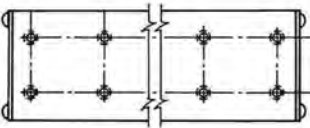
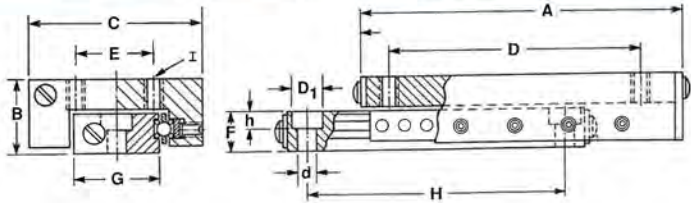


Ball Slide Assemblies

See page 60 for prices.

* Minimum Centered around Mean Position										
MODEL	TRAVEL*	LOAD CAPACITY LB	WEIGHT OZ	LENGTH A	HEIGHT B	WIDTH C	CARRIAGE HOLE SPACING		BASE DIMENSIONS	
							D	E	HEIGHT F	HOLE SPACING H
C-1	.50	1.5	.10	.75	.23	.38	.375	.156	.135	.375
C-2	1.00	1.5	.15	1.25	.23	.38	.875	.156	.135	.875
C-3	1.50	1.5	.25	1.75	.23	.38	1.375	.156	.135	1.375
D-1	.50	4	.30	1.06	.32	.56	.625	.218	.187	.750
D-2	1.00	8	.50	2.06	.32	.56	1.625	.218	.187	1.375
D-3	2.00	12	.80	3.06	.32	.56	2.625	.218	.187	2.375
D-4	3.00	14	1.1	4.06	.32	.56	3.625	.218	.187	3.375
D-5	4.00	16	1.2	5.06	.32	.56	4.625	.218	.187	3.500
D-6	5.00	18	1.5	6.06	.32	.56	5.625	.218	.187	4.500
E-1	.50	8	.40	1.06	.41	.75	.625	.375	.250	.750
E-2	1.00	10	.90	2.06	.41	.75	1.625	.375	.250	1.375
E-3	2.00	12	1.3	3.06	.41	.75	2.625	.375	.250	2.375
E-4	3.00	14	1.7	4.06	.41	.75	3.625	.375	.250	3.375
E-5	4.00	16	2.1	5.06	.41	.75	4.625	.375	.250	3.500
E-6	5.00	18	2.5	6.06	.41	.75	5.625	.375	.250	4.500
M-1	.50	10	1.2	1.56	.50	1.00	1.250	.437	.250	1.250
M-2	1.00	12	1.7	2.56	.50	1.00	2.250	.437	.250	2.250
M-2.5	1.50	13	1.9	3.06	.50	1.00	2.750	.437	.250	2.750
M-3	2.00	15	2.2	3.56	.50	1.00	3.250	.437	.250	3.250
M-4	3.00	18	5.0	4.56	.50	1.00	4.250	.437	.250	4.250

SERIES	C	D	E	M	N	S1	S2	S3
CARRIAGE 4 HOLES (I)	2-56 UNC-2B THREAD	2-56 UNC-2B THREAD	4-40 UNC-2B THREAD	6-32 UNC-2B THREAD	6-32 UNC-2B THREAD	6-32 UNC-2B THREAD	6-32 UNC-2B THREAD	10-32 UNF-2B THREAD
BASE HOLE d	2-56 UNC	.101	.125	.125	.157	.157	.157	.204
BASE HOLE D ₁	-	.144	.198	.198	.244	.244	.244	.328
BASE HOLE h	-	.100	.125	.125	.150	.150	.150	.205



MODEL	# OF HOLES
S3-6	6
S3-9	8
S3-12	10

SPECIFICATIONS:

Straight Line Accuracy
.0005"/inch of travel

Positional Repeatability
.0002"

Finish
Clear anodize standard
Black anodize available at no extra cost.

Coefficient of Friction
0.003 typical

Construction
Aluminum carriage and base, hardened steel shafts and balls, mild steel end caps.

For all metric slides please call for our metric catalog.

See page 60 for prices.

* Minimum Centered around Mean Position										
MODEL	TRAVEL*	LOAD CAPACITY LB	WEIGHT OZ	LENGTH A	HEIGHT B	WIDTH C	CARRIAGE HOLE SPACING		BASE DIMENSIONS	
							D	E	HEIGHT F	HOLE SPACING H
N-1	.75	15	1.3	1.56	.53	1.06	1.250	.437	.312	.500
N-2	1.50	18	2.3	2.56	.53	1.06	2.250	.437	.312	.500
N-3	2.00	20	3.0	3.56	.53	1.06	3.250	.437	.312	.500
N-4	3.00	25	5.2	4.56	.53	1.06	4.000	.437	.312	.500
N-6	4.00	30	6.0	6.00	.53	1.06	5.500	.437	.312	.500
N-8	6.00	35	7.0	8.00	.53	1.06	7.500	.437	.312	.500
N-10	8.00	40	8.0	10.00	.53	1.06	9.500	.437	.312	.500
S1-1	1.00	15	2.9	2.00	.62	1.50	1.375	.625	.340	.750
S1-2	2.00	20	4.3	3.00	.62	1.50	2.375	.625	.340	.750
S1-3	3.00	25	6.0	4.00	.62	1.50	3.375	.625	.340	.750
S1-3.5	3.50	30	6.7	5.00	.62	1.50	4.375	.625	.340	.750
S1-4	4.00	35	8.2	6.00	.62	1.50	5.375	.625	.340	.750
S1-6	6.00	45	9.2	8.00	.62	1.50	7.375	.625	.340	.750
S1-8	8.00	55	11.5	10.00	.62	1.50	9.375	.625	.340	.750
S2-1	1.00	20	4.0	2.00	.75	1.75	1.375	.875	.400	.875
S2-1.5	1.50	30	6.0	2.75	.75	1.75	2.125	.875	.400	.875
S2-2	2.00	42	6.5	3.25	.75	1.75	2.625	.875	.400	.875
S2-3	3.00	52	8.0	4.00	.75	1.75	3.375	.875	.400	.875
S2-4	4.00	60	11.8	6.00	.75	1.75	5.500	.875	.400	.875
S2-6	6.00	75	15.7	8.00	.75	1.75	7.500	.875	.400	.875
S2-8	8.00	90	19.5	10.00	.75	1.75	9.500	.875	.400	.875
S3-1	1.00	30	10.0	2.62	1.00	2.62	2.125	1.250	.625	1.500
S3-1.5	1.50	35	10.0	2.62	1.00	2.62	1.625	1.250	.625	1.500
S3-2	2.00	62	15.0	4.00	1.00	2.62	3.000	1.250	.625	1.500
S3-3	3.00	88	20.8	5.00	1.00	2.62	4.000	1.250	.625	1.500
S3-4	4.00	118	27.2	6.00	1.00	2.62	5.000	1.250	.625	1.500
S3-5	5.00	135	31.0	8.00	1.00	2.62	7.000	1.250	.625	1.500
S3-6	6.00	150	35.2	9.00	1.00	2.62	*3.000	1.250	.625	1.500
S3-9	9.00	185	46.5	12.00	1.00	2.62	*3.000	1.250	.625	1.500
S3-12	12.00	205	58.0	15.00	1.00	2.62	*3.000	1.250	.625	1.500