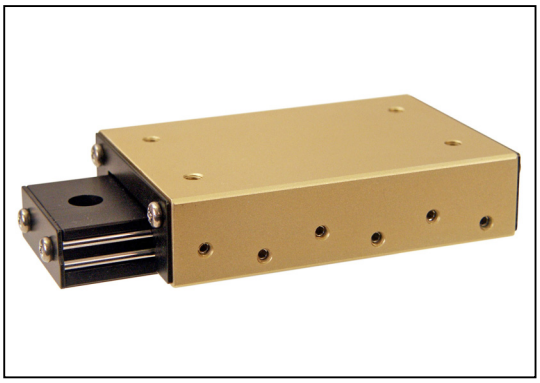
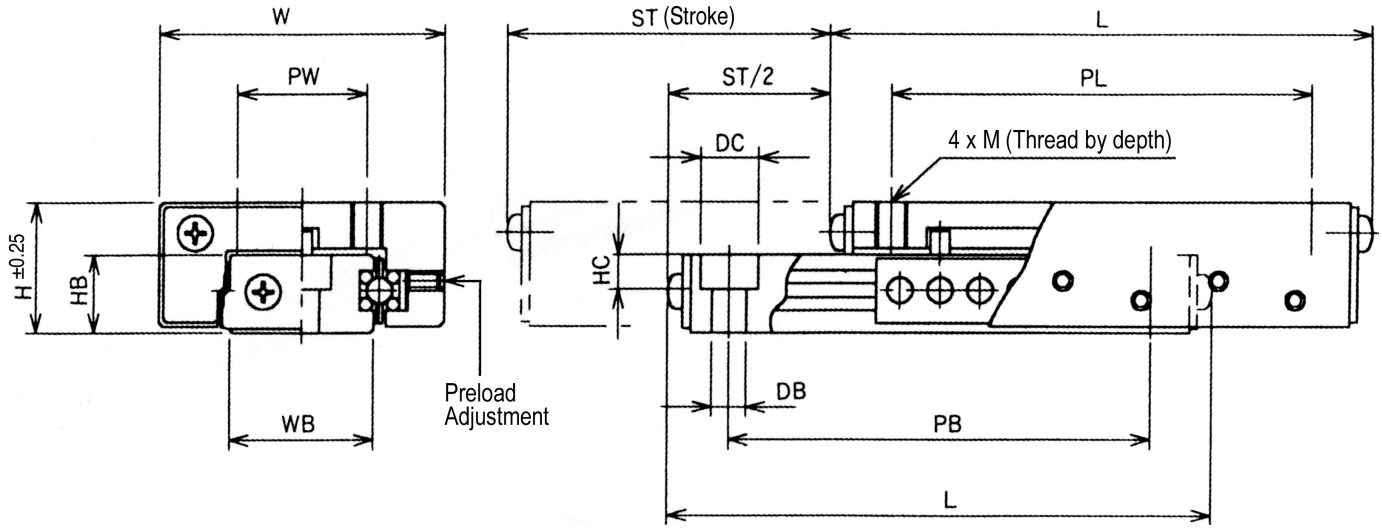
TBS

LINEAR MOTION

Smooth Precision Motion Ball Slide Units

Preload Adjustable





As Basic Dynamic Load Rating (C) is the basis for calculating the running time, it is recommended, if smooth and high precision motion is necessary, to use the unit with the load under half of the value designated in the above list.
Basic Static Load Rating is the value in the case of load put on the middle when the centre of the table comes above that of the base.

Part Number	Max. Stroke ST	H	W	L	PW	PL	M	WB	HB	DBxDCxHC	PB	Basic Load Ratings (N) Dynamic C	Static Co	Weight (g)	Price Each
TBS827	13	8	14.2	28.6	5.5	16	M2x2.8	6.2	4.8	2.2x4.0x1.6	19	29.4	58.8	9	**£39.81**
TBS852	25	8	14.2	53.6	5.5	41	M2x2.8	6.2	4.8	2.2x4.0x1.6	35	49.0	117.7	17	**£50.33**
TBS877	50	8	14.2	78.6	5.5	66	M2x2.8	6.2	4.8	2.2x4.0x1.6	60	58.8	166.7	23	**£60.16**
TBS1027	13	10	19.0	28.6	8.5	16	M3x3.5	9.6	6.0	3.3x6.0x3.0	19	49.0	88.3	13	**£49.11**
TBS1052	25	10	19.0	53.6	8.5	41	M3x3.5	9.6	6.0	3.3x6.0x3.0	35	68.6	166.7	25	**£56.54**
TBS1077	50	10	19.0	78.6	8.5	66	M3x3.5	9.6	6.0	3.3x6.0x3.0	60	88.3	255.0	37	**£65.85**
TBS1340	15	13	25.0	42.4	11.0	30	M3x4.5	12.2	8.0	3.3x6.0x3.3	30	117.7	264.8	36	**£80.69**
TBS1365	25	13	25.0	67.4	11.0	55	M3x4.5	12.2	8.0	3.3x6.0x3.3	55	166.7	441.3	59	**£86.90**
TBS1390	50	13	25.0	92.4	11.0	80	M3x4.5	12.2	8.0	3.3x6.0x3.3	80	196.1	568.8	81	**£99.31**
TBS2050	25	20	44.0	54.2	20.0	35	M5x7.0	22.3	12.0	5.3x9.0x5.3	35	205.9	421.7	120	**£69.82**
TBS2080	50	20	44.0	84.2	20.0	65	M5x7.0	22.3	12.0	5.3x9.0x5.3	65	255.0	598.2	184	**£87.94**
TBS20110	75	20	44.0	104.2	20.0	85	M5x7.0	22.3	12.0	5.3x9.0x5.3	85	304.0	764.9	228	**£115.35**
TBS25100	50	25	66.0	105.6	35.0	75	M5x7.8	38.0	16.0	5.3x9.0x5.3	75	460.9	1127.8	440	**£121.57**
TBS25125	75	25	66.0	130.6	35.0	100	M5x7.8	38.0	16.0	5.3x9.0x5.3	100	500.1	1274.9	540	**£139.68**
TBS25150	100	25	66.0	155.6	35.0	125	M5x7.8	38.0	16.0	5.3x9.0x5.3	125	578.6	1559.3	650	**£162.44**

Material

Table: Gold Anodised Aluminium (A6N01S-T5)
Base: Black Anodised Aluminium (A6N01S-T5)
Precision Balls: Stainless Steel (similar to 440C)
Ball Retainer: Plastic resin
Linear Tracks: Stainless Steel
Note: No lubrication

Performance

Tolerance on H: ±0.25
Parallelism: 0.01 max per 10mm stroke
Max. Operating Temperature Range: 80°C
Friction Coefficient: μ = 0.001
Max. Speed: 30m/min (0.5m/sec)

Other Info.

Discounts may be available for higher quantities, please check with sales.

+44 (0)1246 455500
+44 (0)1246 455522
ondrives
sales@ondrives.com
www.ondrives.com

Smooth Precision Motion Ball Slide Units

Technical Information

Load Rating and Running Life

$$L = \left(\frac{C \bullet ft}{fs \bullet fp \bullet P}\right)^3 \times 50km$$

$$Lh = \left(\frac{L \bullet 10^6}{2 \bullet \ell s \bullet n \bullet 60}\right)$$

L	=	Rated Running Life
C	=	Basic Dynamic Load Rating
P	=	Working Load
Ft	=	Working Temperature Factor (up to 60°C 1.0, up to 100°C = 0.95)
Fs	=	Shock and Vibration Factor (see fig.1)
Fp	=	Load Factor (see fig.2)

If the drive stroke length and the reciprocal numbers per minute are fixed, the following formula is used for calculating the running life time from the rated life.

Ln	=	Running Life Hours
L	=	Rated Running Life
Ls	=	Stroke Length
n	=	Reciprocal Numbers per Minute

The value of Basic Load Rating is equal against the load given from above, side or under, but it will be lowered slightly against the load obliquely from the angle 45°, for only a pair of shafts may bear the load.

fig.1 (fs) Impact/Vibration Factor

Driving Conditions	fs
No impact and vibration	1.0~1.2
Slight impact and vibration	1.2~1.8
Considerable impact and vibration	1.8~3.5

fig.2 (fp) Load Factor

Driving Conditions	fp
Radial load only and slow speed	1.0~1.2
Load variances by changes of medium speed	1.2~3.0
Moment load and fast speed	3.0~10.0

Features

- As high precision balls run between the track set in the fixed part and that on the moving part, with each track consisting of two paralleled linear shafts, the friction is very low. Therefore the movement is truly light and smooth.
- As the base and the table are made of aluminium, the moving part is capable of quick and speedy motion.
- As the balls are held in plastic retainers and the contacting area between balls and tracks is very small with no slip caused, the unit can operate lightly without any lubrication.
- As the balls and shafts are made of stainless steel, and the anodic oxidation coatings are formed on the surfaces of aluminium of the base and table, anti-corrosion is effectively potent.
- As the set screws for adjusting the clearance are set in the side of the table, pre-load can be applied to the movement of the table.
- As the unit can operate without any lubrication with effective anti-corrosion, the maintenance of the slide is simple and pollution-free.
- Any damage originating from over-running the table beyond the tracks would not be expected as the over-running is prevented by the stopping mechanism set inside the device.
- As the tapped holes for the set screws are bored on to the table and base, it is easy to set them on other machines without dismantling the unit.

TECHNICAL