

TSMX-T/TSEFX-T

3-Piece, Heat Treated Alloy Steel Body,
PTFE Lined



Rod Ends Precision/ Heavy Duty

Suitable for many heavy load, high precision motion control applications, the Tuthill TSMX-T/TSEFX-T Series brings an upgrade of heavy duty performance to a Teflon* lined, 3-piece precision rod end design (housing uses a heat treated alloy material instead of standard steels used in other 2- and 3-piece designs).

The ball is produced from bearing quality steel that is thru hardened and finish ground, adding to its precision fit and increased wear performance. The body is produced from heat treated alloy steel. The raceway is machined from low carbon steel. Permanently bonded PTFE liner minimizes wear within the body's inner bearing surface reducing maintenance and increasing rod end life. Body and raceway materials are zinc plated for extended corrosion resistance with a clear chromate finish for high visibility exposed surfaces requiring "aesthetically pleasing" bright metal surfaces. Studded and right or left-handed thread versions are available.

The TSMX-T/TSEFX-T Series is just one of many within our broad line of precision rod ends. For full product line detail, contact us for a comprehensive catalog or visit www.tuthill.com and download individual product data sheets and other product information.



Description:

TSMX-T/TSEFX-T
Precision/Heavy Duty Rod Ends
3-Piece, Heat Treated Alloy
Steel Body, PTFE Lined

Applications:

Higher load, precision motion control devices and applications, including:

- Racing
- Construction equipment
- Scales
- Wide range of heavy industrial equipment

Features:

- 3-piece metal to metal design uses an upgraded alloy steel body and raceway for increased rod end strength
- PTFE lined design minimizes wear between working surfaces (lower maintenance, increased life)
- Can be used in a wide range of temperatures: -65°F — 250°F (-54°C — 121°C)
- Offered in studded and right or left-handed versions
- Custom assemblies can be built to your specifications
- Meets SAE spec J1120

Other Related Products:

- MTSM/MTSF
Precision/Heavy Duty,
3-Piece, Metal to Metal
- TSMX/TSEFX
Precision/Heavy Duty,
3-Piece, Metal to Metal

TSMX-T/TSEFX-T

3-Piece, Heat Treated Alloy Steel Body, PTFE Lined

Material

Ball

- 52100 Steel
- Rc 56 Min.
- Hard Chrome Plated

Body

- Alloy Steel, Heat Treated
- Zinc Plated, Clear Chromate Treated

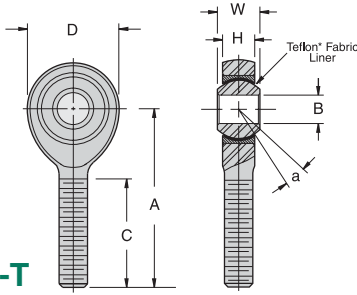
Race

- Low Carbon Steel
- Zinc Plated, Clear Chromate Treated

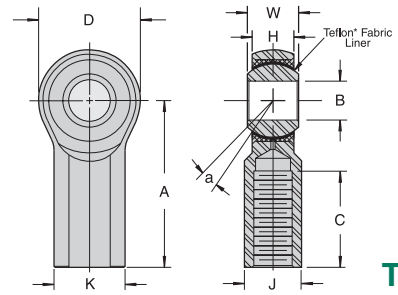
Liner

- PTFE Fabric, Permanently Bonded to I.D.

TSMX-T



TSFX-T



TSMX-T CHART

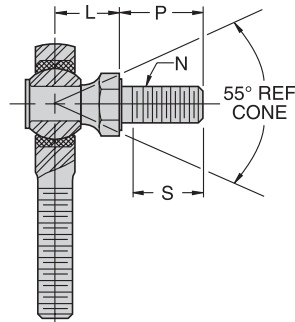
Part Number		B +.0025 -.0005	W +.000 -.005	H ±.015	A ±.015	D ±.010	REF	C +.062 -.031	UNF-3A	a°	Ultimate Radial Static Load Capacity (Pounds)	Approx. Weight (Pounds)
Right Hand	Left Hand	Ball Bore	Ball Width	Housing Width	Centerline Length	Head Diameter	Ball Diameter	Thread Length	Thread Size	Misalign Angle		
TSMX3T	TSMXL3T	.1900	.312	.250	1.250	.625	.437	.750	10-32	13	2,851	.028
TSMX4T	TSMXL4T	.2500	.375	.281	1.562	.750	.500	1.000	1/4-28	16	5,260	.043
TSMX5T	TSMXL5T	.3125	.437	.344	1.875	.875	.625	1.250	5/16-24	14	7,639	.072
TSMX6T	TSMXL6T	.3750	.500	.406	1.938	1.000	.719	1.250	3/8-24	12	9,544	.112
TSMX7T	TSMXL7T	.4375	.562	.437	2.125	1.125	.812	1.375	7/16-20	14	10,285	.160
TSMX8T	TSMXL8T	.5000	.625	.500	2.438	1.312	.937	1.500	1/2-20	12	16,238	.249
TSMX10T	TSMXL10T	.6250	.750	.562	2.625	1.500	1.125	1.625	5/8-18	16	17,955	.382
TSMX12T	TSMXL12T	.7500	.875	.687	2.875	1.750	1.312	1.750	3/4-16	14	28,081	.602

TSFX-T CHART

Part Number		B +.0025 -.0005	W +.000 -.005	H ±.015	A ±.015	D ±.010	K ±.010	J ±.010	REF	C +.062 -.031	UNF-2B	a°	Ultimate Radial Static Load Capacity (Pounds)	Approx. Weight (Pounds)
Right Hand	Left Hand	Ball Bore	Ball Width	Housing Width	Centerline Length	Head Diameter	Shank Diameter	Wrench Flat	Ball Diameter	Thread Length	Thread Size	Misalign Angle		
TSFX3T	TSFXL3T	.1900	.312	.250	1.062	.625	.406	.312	.437	.500	10-32	13	3,733	.038
TSFX4T	TSFXL4T	.2500	.375	.281	1.312	.750	.469	.375	.500	.687	1/4-28	16	6,190	.059
TSFX5T	TSFXL5T	.3125	.437	.344	1.375	.875	.500	.437	.625	.687	5/16-24	14	7,639	.092
TSFX6T	TSFXL6T	.3750	.500	.406	1.625	1.000	.687	.562	.719	.812	3/8-24	12	9,544	.152
TSFX7T	TSFXL7T	.4375	.562	.437	1.812	1.125	.750	.625	.812	.937	7/16-20	14	10,285	.198
TSFX8T	TSFXL8T	.5000	.625	.500	2.125	1.312	.875	.750	.937	1.062	1/2-20	12	15,336	.329
TSFX10T	TSFXL10T	.6250	.750	.562	2.500	1.500	1.000	.875	1.125	1.375	5/8-18	16	17,955	.477
TSFX12T	TSFXL12T	.7500	.875	.687	2.875	1.750	1.125	1.000	1.312	1.562	3/4-16	14	28,081	.723

Chart Notes: 1. This series is also available in a studded configuration. Specify by adding "S" to suffix. Example: TSMX10TS

Studded Dimensions



Rod End Bore Size	L REF	P ±.030	S Min. Thread Length	N Thread Size UNF-2A
3/16"	.437	.438	.375	10-32
1/4"	.469	.563	.500	1/4-28
5/16"	.531	.688	.594	5/16-24
3/8"	.625	.875	.781	3/8-24
7/16"	.844	1.062	.937	7/16-20
1/2"	.875	1.125	1.000	1/2-20
5/8"	1.000	1.125	1.000	5/8-18
3/4"	1.187	1.812	1.625	3/4-16

Product Selector Guide

- Rod Ends — Industrial/Commercial
- Rod Ends — Precision/Heavy Duty
- Spherical Bearings
- Ball Joints
- Swivels
- Clevises/Safety Fasteners/Pins

Linking Motion & Control...
The Tuthill Solution



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• Please refer to the Warning statement and appropriate installation usage information in the Tuthill Technical/Application Data brochure
• For application assistance/technical questions, please contact (ttech@tuthill.com) or phone (260-749-5105)