

Precision Plus Ground Ball Screws — Inch Series



**High accuracy and stiffness with zero backlash,
for stringent applications where ball screw performance
is critical.**

Thomson Precision Plus Ground Ball Screw Assemblies provide the positioning accuracy and repeatability required for the most stringent positioning applications. Thomson assemblies are designed and manufactured to provide 8 times the lead accuracy of conventional ball screws ($\pm .0005$ in/ft), and provide consistent, zero-backlash, preload for high repeatability. All ball nuts feature an integral flange for optimal precision and mounting ease, and specially designed seals/wipers that provide superior lubricant retention while keeping out harmful contaminants. Precision Plus Ground Assemblies are ideal for machine tools, robots, semiconductor/electronic assembly systems, and many more applications where high-level ball screw performance is required.

Need a quote or have a question about an application?
Contact us in North America at:

Phone: 540-633-3400

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Lead Accuracy: $\pm .0005$ in/ft



Preloaded, Round Ball Nut with Integral Flange and Wiper

- Precision ground for highly accurate and smooth running performance
- Long-lasting preload for minimal backlash and consistent stiffness
- Standard sizes stocked for quick delivery. Additional sizes are available as custom product.

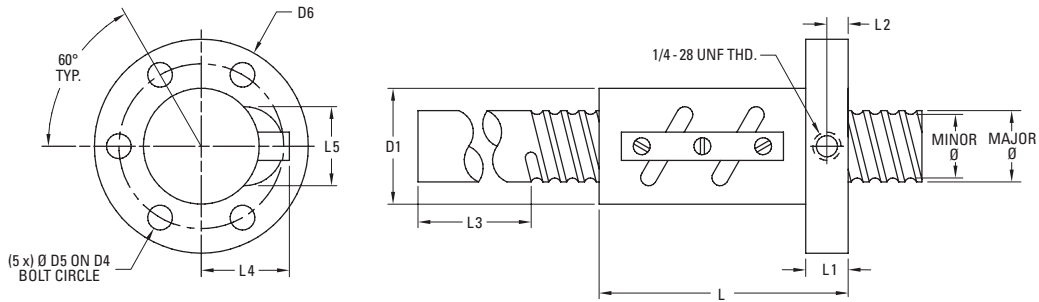
Nominal Diameter (size)	Lead	Ball Screw and Nut Assembly P/N ⁽¹⁾⁽²⁾⁽³⁾	Ball Nut Details		Performance Data			Screw Specifications			
			Direction	No. of Return Tubes	Dynamic Load Capacity (C _{am})	Static Load Capacity (C _o)	Max. Axial Backlash	Major Diameter (max.)	Minor Diameter	Max. Length	Screw Weight
(in.)	(in.)				(lbf)	(lbf)	(in.)	(in.)	(in.)	(in.)	(lb/ft)
0.631	0.200	7820396	Right Hand	2	440	2,110	0.00	0.611	0.496	42	0.48
0.750	0.200	5700974	Right Hand	2	1,473	9,916	0.00	0.750	0.599	42	1.45
0.875	0.200	7820397	Right Hand	2	1,375	10,780	0.00	0.875	0.740	60	1.78
1.000	0.200	5700975	Right Hand	2	1,565	13,073	0.00	1.000	0.865	72	2.20
1.000	0.250	7820477	Right Hand	2	2,285	15,815	0.00	1.000	0.833	72	2.20
1.150	0.200	5700976	Right Hand	2	1,680	14,886	0.00	1.130	1.015	72	3.18
1.250	0.200	5700977	Right Hand	2	1,800	16,625	0.00	1.250	1.115	72	3.75
1.250	0.200	7820830	Left Hand	2	1,800	16,625	0.00	1.235	1.115	72	3.75
1.250	0.500	7820399	Right Hand	2	1,765	11,080	0.00	1.250	1.050	96	3.77
1.500	0.200	7820375	Right Hand	4	4,745	45,073	0.00	1.500	1.349	120	5.18
1.500	0.250	7820965	Right Hand	4	4,250	27,250	0.00	1.500	1.333	120	5.18
1.500	0.500	7820401	Right Hand	2	5,075	35,770	0.00	1.500	1.236	120	4.79
1.750	0.200	5700979	Right Hand	4	4,464	47,446	0.00	1.750	1.615	96	7.56
2.000	0.200	7820402	Right Hand	6	6,181	65,903	0.00	2.000	1.849	120	9.81
2.250	0.500	7820484	Right Hand	2	20,160	108,325	0.00	2.250	1.858	120	10.87
2.500	0.250	7820483	Right Hand	6	8,945	93,165	0.00	2.500	2.333	120	15.46

(1) All Precision Plus Ground product is sold in matched sets as ball screw and nut assemblies.

(2) Dimensional information on bearing supports and standard end machining is available on page 142.

(3) Information on required lubrication is on page 211.

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Nominal Diameter (size)	Lead	Nut Specifications											
		D1	D4	D5	D6	L	L1	L2	L3	L4 (max.)	L5 (max.)	Nut Weight	Ball Diameter
(in.)	(in.)	(in.)	(in.)	(in.)	(in.)	(in.)	(in.)	(in.)	(in.)	(in.)	(in.)	(lb)	(in.)
0.631	0.200	1.130	1.562	0.281	2.000	2.200	0.375	0.200	2.750	0.849	0.710	0.66	0.125
0.750	0.200	1.370	1.875	0.281	2.320	3.000	0.500	0.312	2.750	0.996	0.855	1.26	0.141
0.875	0.200	1.250	1.750	0.281	2.250	3.000	0.500	0.312	2.750	0.891	1.024	0.92	0.125
1.000	0.200	1.620	2.250	0.281	2.750	3.000	0.500	0.312	3.750	1.042	1.134	1.63	0.125
1.000	0.250	1.685	2.250	0.344	2.875	3.370	0.500	0.312	3.750	1.100	1.203	1.98	0.156
1.150	0.200	1.685	2.280	0.344	2.875	3.000	0.500	0.312	3.750	1.067	1.287	1.61	0.125
1.250	0.200	1.645	2.312	0.344	2.770	3.000	0.500	0.312	3.750	1.109	1.248	1.31	0.125
1.250	0.200	1.650	2.312	0.344	2.770	3.000	0.500	0.312	3.750	1.109	1.248	1.31	0.125
1.250	0.500	1.990	3.124	0.406	3.865	3.580	0.625	0.410	3.750	1.356	1.531	3.43	0.188
1.500	0.200	2.020	2.750	0.344	3.500	5.000	0.625	0.375	3.750	1.273	1.758	3.17	0.141
1.500	0.250	2.020	2.750	0.344	3.500	5.000	0.625	0.375	3.750	1.290	1.520	3.17	0.156
1.500	0.500	2.250	3.125	0.406	3.875	4.625	0.625	0.410	3.750	1.575	1.900	4.27	0.250
1.750	0.200	2.265	3.250	0.406	4.000	5.000	0.625	0.375	4.750	1.352	1.878	3.81	0.125
2.000	0.200	2.500	3.250	0.406	4.000	5.750	0.700	0.438	4.750	1.550	1.900	4.39	0.141
2.250	0.500	3.375	4.375	0.656	5.375	8.125	1.250	0.812	4.750	2.259	2.535	16.29	0.375
2.500	0.250	3.375	4.000	0.344	4.625	6.250	0.750	0.500	4.750	2.010	2.609	8.81	0.156