

Lead Screws



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

Phone: 800-882-8857
 Email: thomsonbsa@danahermotion.com
 Web: www.thomsonbsa.com

Lead Screws Product Overview

Offering smooth, precise, cost effective positioning, this is the “just right” solution for your application.

Thomson BSA precision lead screws are an excellent economical solution for your linear motion requirements. For more than 25 years, Thomson BSA has designed and manufactured the highest quality lead screw assemblies in the industry. Our precision rolling machines ensure accurate positioning to 0.003 in/ft and our PTFE coating process produces assemblies that have less drag torque and last longer.

Thomson BSA provides a large array of standard plastic nut assemblies in anti-backlash or standard Supernut® designs. All of our standard plastic nut assemblies use an internally lubricated Acetal — providing excellent lubricity and wear resistance with or without additional lubrication. With the introduction of our new unique patent pending zero backlash designs, Thomson BSA provides assemblies with high axial stiffness, zero backlash and the absolute minimum drag torque to reduce motor requirements. These designs produce products that cost less, perform better and last longer. Both designs automatically adjust for wear, insuring zero backlash for the life of the nut.

For significantly higher loads, standard bronze nuts are available. Thomson BSA uses SAE 660 bearing bronze, which provides high load capacity with good PV performance. We also offer end machining to your specification or can provide you with stock bearing mounts or motor mounts. Available from over 1800 distributors worldwide.

Thomson BSA also provides engineering design services to aid in your design requirements, producing a lead screw assembly to your specifications. Call the factory today to discuss your application with one of our experienced application engineers, 800-882-8857.



Lead Screws Product Overview

Lead Screw Product Summary

Series	Thomson BSA Precision Lead Screw	
	Inch	Metric
Lead accuracy	.010"/ft. for standard .003"/ft. for precision	250 micron/300mm for standard 75 micron/300mm for precision
Dia. x Lead	3/16" x .05" to 3" x 1/4"	10 x 2mm to 24 x 5mm
Backlash	zero to .010"	zero to .25mm
Dynamic Load	Up to 400 lbs	Up to 750N
Max. Static Load	Up to 115,000 lbs	Up to 500 kN
Catalog Pages	12 - 35	12 - 35

Lead Screw Product Availability

	Inch	Lead (in.)													
		0.050	0.063	0.083	0.100	0.125	0.167	0.200	0.250	0.375	0.500	0.800	1.000	1.200	2.000
Dia. (in.)	3/16	●													
	1/4	●	●						●		●				
	5/16			●				●	●		●				
	3/8		●	●	●	●	●	●	●	●	●		●	●	
	7/16					●			●		●				
	1/2		●		●	●		●	●		●	●	●		
	5/8				●	●		●	●		●				
	3/4				●	●	●	●	●		●		●		●
	1				●	●		●	●		●		●		
	1-1/4							●	●						
	1-1/2							●	●	●	●				
	2								●						
	2-1/4								●						
	2-1/2								●						
	2-3/4								●						
	3								●						

	Metric	Lead (mm)													
		2	3	4	5	6	8	10	12	15	16	20	25	35	45
Dia. (mm)	10	●	●		●	●		●				●		●	
	12		●	●	●	●		●		●			●	●	●
	16			●	●		●				●		●	●	
	20			●			●		●		●	●			●
	24				●										

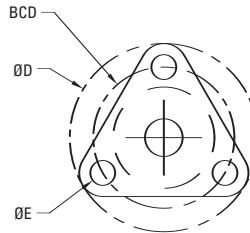
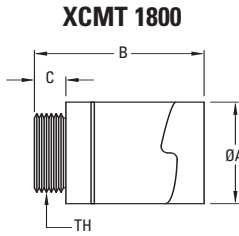
Advanced Anti-Backlash Supernuts®

XCM 1800

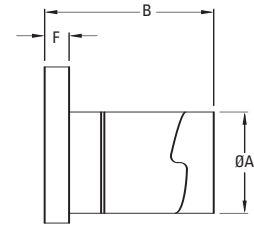


Our smallest anti-backlash nut design ever. The XCM 1800 uses the same patented† ActiveCAM™ mechanism as its larger siblings in a miniaturized package. This allows backlash free operation in space critical applications requiring high accuracy and low drag torque. This cost effective solution is available in either flanged or threaded versions. TriCoat® PTFE dry film lubricant is available as an option on most screws.

Note: See Screw Section on page 32. Specify XCMT or XCMF when ordering, see drawings at right.



XCMF 1800



Dia.	Lead	Part No.	Supernut® Dimensions								Design Load	Efficiency %	Drag Torque oz-in
			A	B	C	D	E	F	BCD	TH			
3/16"	0.050	XCM_1820	0.50	0.90 (max)	0.200	1.00	0.143	0.18	0.750	7/16"-20	5 lbs	49	< 1
6mm*	1mm	XCM_6x1										29	
1/4"	0.0125	XCM_2580										13	
	0.0208	XCM_2548										20	
	0.0250	XCM_2540										23	
	0.0278	XCM_2536										25	
	0.0313	XCM_2532										28	
	0.0357	XCM_2528										30	
1/4"	0.0417	XCM_2524										34	
	0.050	XCM_2520										41	
	0.063	XCM_2516										48	
	0.250	XCM_4-2516										76	
	0.500	XCM_7-2514										81	

* V-Thread screws, see page 35.

† Patent No. 5839321

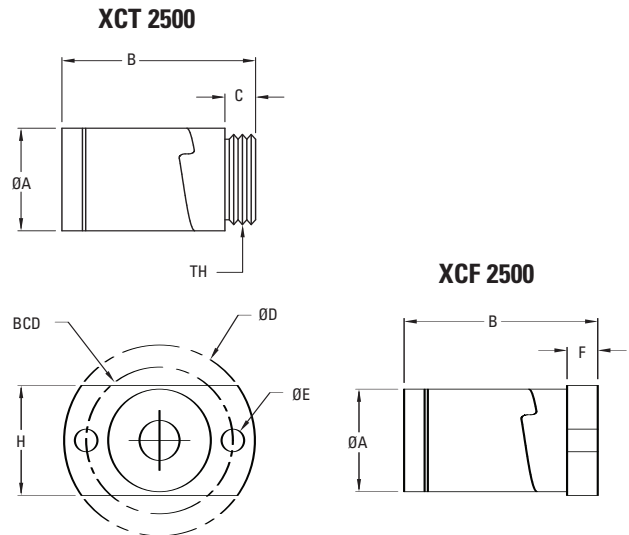
Advanced Anti-Backlash Supernuts®

XC 2500



The XC Model Anti-Backlash assembly is the most advanced Anti-Backlash nut design. The unique patented† ActiveCAM™ accomplishes high axial stiffness, zero backlash and the absolute minimum drag torque. This advantage produces assemblies that cost less, perform better and last longer. The ActiveCAM™ automatically adjusts for wear insuring zero backlash for the life of the nut.

Note: See Screw Section on page 32. Specify XCT or XCF when ordering, see drawings at right.



Dia.	Lead	Part No.	Supernut® Dimensions									Design Load	Efficiency %	Drag Torque oz-in
			A	B	C	D	E	F	H	BCD	TH			
3/16"	0.050	XC 1820	0.64	1.18 (max)	0.187	1.19	0.141	0.16	0.66	0.900	9/16"-18	10 lbs	49	< 1
6mm*	1mm	XC_6x1											29	
1/4"	0.0125	XC_2580											13	
	0.0208	XC_2548											20	
	0.0250	XC_2540											23	
	0.0278	XC_2536											25	
	0.0313	XC_2532											28	
	0.0357	XC_2528											30	
1/4"	0.0417	XC_2524											34	
	0.050	XC_2520											41	
	0.063	XC_2516	48											
	0.250	XC_4-2516	76											
	0.500	XC_7-2514	81											

* V-Thread screws, see page 35.

† Patent No. 5839321

Advanced Anti-Backlash Supernuts®

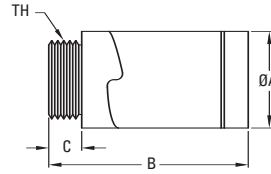
XC 3700



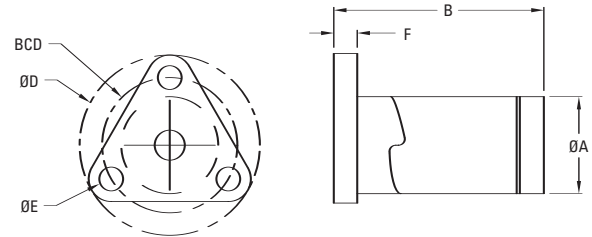
The XC Model Anti-Backlash assembly is the most advanced Anti-Backlash nut design. The unique patented† ActiveCAM™ accomplishes high axial stiffness, zero backlash and the absolute minimum drag torque. This advantage produces assemblies that cost less, perform better and last longer. The ActiveCAM™ automatically adjusts for wear insuring zero backlash for the life of the nut.

Note: See Screw Section on page 32. Specify XCT or XCF when ordering, see drawings at right.

XCT 3700



XCF 3700

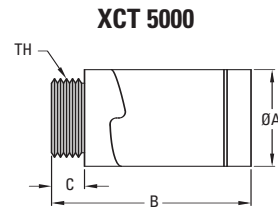


Dia.	Lead	Part No.	Supernut® Dimensions								Design Load	Efficiency %	Drag Torque oz-in
			A	B	C	D	E	F	BCD	TH			
5/16"	0.083	XC_3112	0.82	1.875 (max)	0.25	1.5	0.2	0.2	1.125	5/8"-18	25 lbs	49	1 - 3
	0.167	XC_2-3112										65	
	0.250	XC_2-3108										72	
	0.500	XC_4-3108										80	
3/8"	0.063	XC_3716										36	
	2mm	XC_37x2M										42	
	0.083	XC_3712										44	
	0.100	XC_3710										49	
	0.125	XC_3708										53	
	0.167	XC_2-3712										60	
	0.200	XC_2-3710										65	
	0.250	XC_2-3708										68	
	0.375	XC_4-3711										75	
10mm	0.500	XC_4-3708										79	
	2mm	XC_10x2M										41	
	3mm	XC_10x3M										53	
	5mm	XC_2-10x2.5M	64										
	6mm	XC_4-10x1.5M	67										
	10mm	XC_5-10x2M	76										
	20mm	XC_6-10x3.3M	81										
	35mm	XC_10-10x3.5M	81										

† Patent No. 5839321

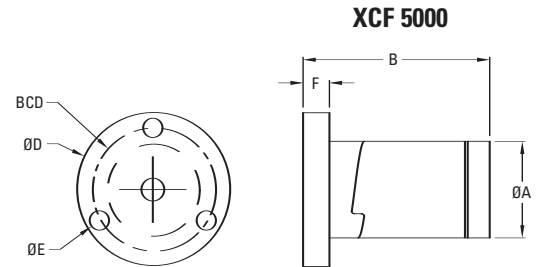
Advanced Anti-Backlash Supernuts®

XC 5000



The XC 5000 utilizes the same patented† ActiveCAM™ as found in the XC 3700 model. Along with the very low drag torque and high axial stiffness advantages, the XC 5000 has greater load capacity.

Note: See Screw Section on page 32. Specify XCT or XCF when ordering, see drawings at right.



Dia.	Lead	Part No.	Supernut® Dimensions								Design Load	Efficiency %	Drag Torque oz-in
			A	B	C	D	E	F	BCD	TH			
7/16"	0.125	XC_2-4316	1.12	2.25 (max)	0.375	1.75	0.2	0.3	15/16-16	1.406	125 lbs	55	1 - 3
	0.250	XC_2-4308										65	
	0.500	XC_4-4308										76	
12mm	3mm	XC_12x3M										48	
	4mm	XC_2-12x2M										54	
	5mm	XC_2-12x2.5M										59	
	6mm	XC_3-12x2M										63	
	10mm	XC_4-12x2.5M										73	
	15mm	XC_6-12x2.5M										78	
	25mm	XC_10-12x2.5M										82	
1/2"	45mm	XC_15-12x3M	81										
	.0625	XC_5016	30										
	0.100	XC_5010	41										
	0.200	XC_2-5010	57										
	0.250	XC_2-5008	62										
	0.500	XC_4-5008	75										
	0.800	XC_8-5010	80										
1.000	XC_8-5008	81											

† Patent No. 5839321

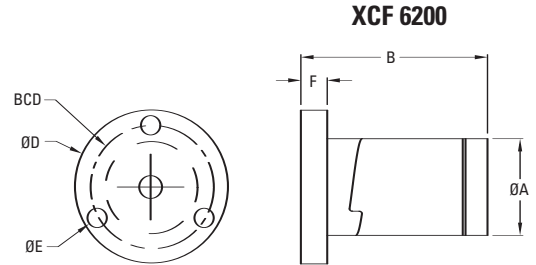
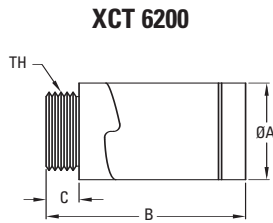
Advanced Anti-Backlash Supernuts®

XC 6200



The XC 6200 utilizes the same patented† ActiveCAM™ as found in the XC 5000 model. Along with the very low drag torque and high axial stiffness advantages, the XC 6200 has greater load capacity.

Note: See Screw Section on page 32. Specify XCT or XCF when ordering, see drawings at right.



Dia.	Lead	Part No.	Supernut® Dimensions								Design Load	Efficiency %	Drag Torque oz-in
			A	B	C	D	E	F	BCD	TH			
5/8"	0.100	XC_6210	1.40	2.60 (max)	0.5	2.13	0.22	0.5	1.688	1.25-16	175 lbs	35	2 - 6
	0.125	XC_6208										40	
	4mm	XC_62x4M										46	
	0.200	XC_2-6210										51	
	0.250	XC_2-6208										57	
	0.500	XC_4-6208										71	
16mm	4mm	XC_16x4M	1.40	2.60 (max)	0.5	2.13	0.22	0.5	1.688	1.25-16	175 lbs	47	2 - 6
	5mm	XC_2-16x2.5M										52	
	8mm	XC_4-16x2M										63	
	16mm	XC_7-16x2.3M										75	
	25mm	XC_5-16x5M										80	
	35mm	XC_7-16x5M										82	

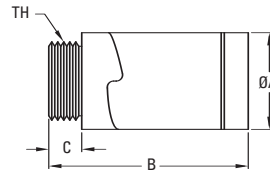
† Patent No. 5839321

Advanced Anti-Backlash Supernuts®

XC 7500



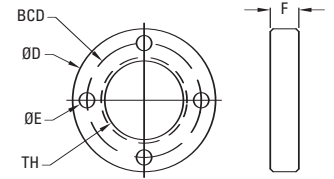
XCT 7500



The XC 7500 utilizes the same patented† ActiveCAM™ as found in the XC 5000 model. Along with the very low drag torque and high axial stiffness advantages, the XC 7500 has greater load capacity.

Note: See Screw Section on page 32.

Flange F75



Dia.	Lead	Part No.	Nut Dimensions			TH	Flange Dimensions (Optional)				Design Load	Efficiency %	Drag Torque oz-in
			A	B	C		D	E	F	BCD			
3/4"	0.100	XCT7510	1.63	2.9 (max)	0.5	1 3/8 - 16	2.5	0.27	0.50	2.00	250 lbs	31	3 - 10
	0.125	XCT7508										36	
	0.167	XCT7506										44	
	0.200	XCT7505										49	
	0.500	XCT5-7510										69	
	1.000	XCT8-7508										79	
	2.000	XCT10-7505										82	
20mm	4mm	XCT20x4M	1.63	2.9 (max)	0.5	1 3/8 - 16	2.5	0.27	0.50	2.00	250 lbs	41	3 - 10
	8mm	XCT2-20x4M										59	
	12mm	XCT3-20x4M										67	
	16mm	XCT4-20x4M										72	
	20mm	XCT5-20x4M										76	
	45mm	XCT9-20x5M										82	

† Patent No. 5839321

Advanced Anti-Backlash Supernuts®

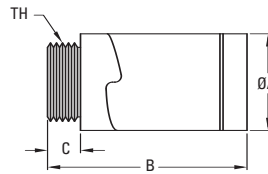
XC 10000



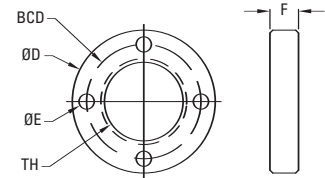
The XC 10000 utilizes Thomson BSA's patented† ActiveCAM™ technology to provide very low drag torque, high axial stiffness and maximum wear life. This self compensating design produces excellent positional repeatability while insuring consistent performance for the long run.

Note: See Screw Section on page 32.

XCT 1000



Flange F100

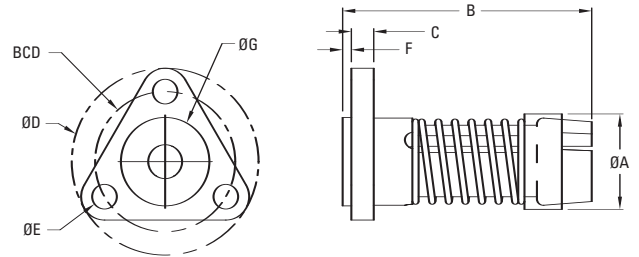


Dia.	Lead	Part No.	Nut Dimensions			TH	Flange Dimensions (Optional)				Design Load	Efficiency %	Drag Torque oz-in
			A	B	C		D	E	F	BCD			
24mm	5mm	XCT24x5M	1.88	3.0 (max)	0.60	1 9/16-18	3.0	0.27	0.60	2.37	350 lbs	42	5-15
1"	0.100	XCT1010										25	
	0.125	XCT1008										29	
	0.200	XCT1005										41	
	0.250	XCT1004										47	
	0.500	XCT5-1010										61	
	1.000	XCT10-1010										74	

† Patent No. 5839321

Advanced Anti-Backlash Supernuts®

AFT

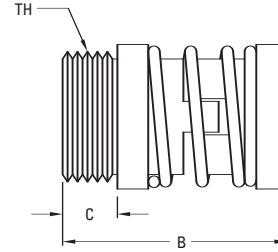
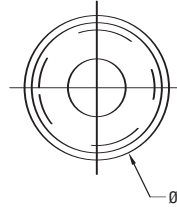


The low cost AFT Supernut is designed for light load OEM applications and offers smooth movement and low drag torque for axial loads up to 10 pounds. The AFT anti-backlash collar automatically adjusts for wear for the life of the nut.

Dia.	Lead	Part No.	Supernut® Dimensions								Design Load	Efficiency %	Drag Torque oz-in
			A	B	C	D	E	F	G	BCD			
3/8"	0.063	AFT3716	0.77	2.00	0.20	1.50	0.20	0.06	0.71	1.125	10 lbs	36	2 - 5
	2mm	AFT37x2M										42	
	0.083	AFT3712										44	
	0.100	AFT3710										49	
	0.125	AFT3708										53	
	0.167	AFT2-3712										60	
	0.200	AFT2-3710										65	
	0.250	AFT2-3708										68	
	0.375	AFT4-3711										75	
	0.500	AFT4-3708										79	
	1.000	AFT5-3705										82	
1.200	AFT5-3704	82											
10mm	2mm	AFT10x2M	0.77	2.00	0.20	1.50	0.20	0.06	0.71	1.125	10 lbs	41	2 - 5
	3mm	AFT10x3M										53	
	5mm	AFT2-10x2.5M										64	
	6mm	AFT4-10x1.5M										67	
	10mm	AFT5-10x2M										76	
	20mm	AFT6-10x3.3M										81	
	35mm	AFT10-10x3.5M										81	
7/16	0.125	AFT2-4316	0.77	2.00	0.20	1.50	0.20	0.06	0.71	1.125	10 lbs	55	2 - 5
	0.250	AFT2-4308										65	
	0.500	AFT4-4308										76	

Anti-Backlash Supernuts®

SNAB Thread Mount Style



Our SNAB Model has the greatest design flexibility allowing anti-backlash assemblies through 1" diameters. All SNABs are made from our internally lubricated Acetal providing excellent lubricity and very low wear.

Flanges

3/16" to 1/4"	F25
5/16" to 3/8" (10mm)	F37

Dimensions available on page 31.

SNAB* 3/16" to 3/8" (10mm) Diameter

Dia.	Lead	Part No.	Supernut® Dimensions					Preload Force (lbs)	Design Load	Max Static Load	Efficiency %	Drag Torque oz-in
			A	B (min)	B (max)	C	TH					
3/16"	0.050	SNAB1820X	0.625	1.125	1.250	0.187	9/16-18	1-3	10 lbs	150 lbs	49	2 - 4
1/4"	0.050	SNAB2520X	0.625	1.125	1.250	0.187	9/16-18	1-3	25 lbs	225 lbs	41	2 - 4
	0.063	SNAB2516X									48	
	0.250	SNAB4-2516X									76	
	0.500	SNAB7-2514X									81	
5/16"	0.083	SNAB3112X	0.750	1.160	1.340	0.250	5/8-18	2-5	50 lbs	350 lbs	49	2 - 4
	0.167	SNAB2-3112X									65	
	0.250	SNAB2-3108X									72	
	0.500	SNAB4-3108X									80	
3/8"	0.063	SNAB3716X	0.750	1.160	1.340	0.250	5/8-18	2-5	70 lbs	350 lbs	36	2 - 4
	2mm	SNAB37x2M									42	
	0.083	SNAB3712X									44	
	0.100	SNAB710X									49	
	0.125	SNAB3708X									53	
	0.167	SNAB2-3712X									60	
	0.200	SNAB2-3710X									65	
	0.250	SNAB2-3708X									68	
	0.375	SNAB4-3711X									75	
	0.500	SNAB4-3708X									79	
	1.000	SNAB5-3705X									82	
1.200	SNAB5-3704X	82										
10mm	2mm	SNAB10x2M	0.750	1.160	1.340	0.250	5/8-18	2-5	70 lbs	350 lbs	41	2 - 4
	3mm	SNAB10x3M									53	
	5mm	SNAB2-10x2.5M									64	
	6mm	SNAB4-10x1.5M									67	
	10mm	SNAB5-10x2M									76	
	20mm	SNAB6-10x3.3M									81	
	35mm	SNAB10-10x3.5M									81	

* SNAB nuts are only as axially stiff as the spring force in one direction.

Anti-Backlash Supernuts®

SNAB Thread Mount Style

Flanges

7/16" to 5/8" (16mm)	F50
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Dimensions available on page 31.

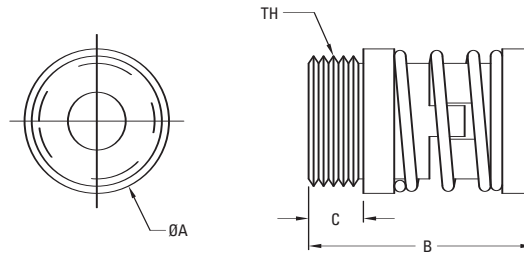
SNAB*
7/16" to 5/8" (16mm) Diameter

Dia.	Lead	Part No.	Supernut® Dimensions					Preload Force (lbs)	Design Load	Max Static Load	Efficiency %	Drag Torque oz-in
			A	B (min)	B (max)	C	TH					
7/16"	0.125	SNAB2-4316X	1.000	1.700	2.000	0.375	15/16-16	4-9	100 lbs	500 lbs	55	3 - 5
	0.250	SNAB2-4308X									65	
	0.500	SNAB4-4308X									76	
12mm	3mm	SNAB12x3M	1.000	1.700	2.000	0.375	15/16-16	4-9	100 lbs	500 lbs	48	3 - 5
	4mm	SNAB2-12x2M									54	
	5mm	SNAB2-12x2.5M									59	
	6mm	SNAB3-12x2M									63	
	10mm	SNAB4-12x2.5M									73	
	15mm	SNAB6-12x2.5M									78	
	25mm	SNAB10-12x2.5M									82	
	45mm	SNAB15-12x3M									81	
1/2"	0.0625	SNAB5016	1.000	1.700	2.000	0.375	15/16-16	4-9	150 lbs	750 lbs	30	5 - 8
	0.100	SNAB5010X									41	
	0.200	SNAB2-5010X									57	
	0.250	SNAB2-5008X									62	
	0.500	SNAB4-5008X									75	
	0.800	SNAB8-5010X									80	
	1.000	SNAB8-5008X									81	
5/8"	0.100	SNAB6210X	1.000	1.700	2.000	0.375	15/16-16	4-9	160 lbs	800 lbs	35	7 - 10
	0.125	SNAB6208X									40	
	4mm	SNAB2-62x4M									46	
	0.200	SNAB2-6210X									51	
	0.250	SNAB2-6208X									57	
	0.500	SNAB4-6208X									71	
16mm	4mm	SNAB16x4M	1.000	1.700	2.000	0.375	15/16-16	4-9	160 lbs	800 lbs	47	7 - 10
	5mm	SNAB2-16x2.5M									52	
	8mm	SNAB4-16x2M									63	
	16mm	SNAB7-16x2.3M									75	
	25mm	SNAB5-16x5M									80	
	35mm	SNAB7-16x5M									82	

* SNAB nuts are only as axially stiff as the spring force in one direction.

Anti-Backlash Supernuts®

SNAB Thread Mount Style



Flanges

3/4" to 1"	F100
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Dimensions available on page 31.

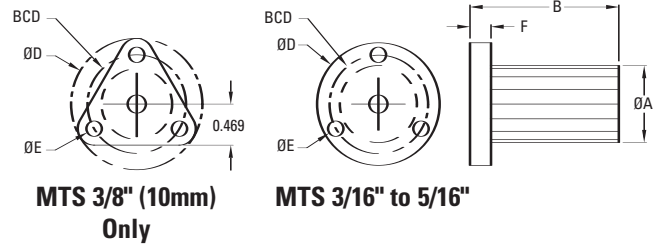
SNAB* 3/4" to 1" Diameter

Dia.	Lead	Part No.	Supernut® Dimensions					Preload Force (lbs)	Design Load	Max Static Load	Efficiency %	Drag Torque oz-in
			A	B (min)	B (max)	C	TH					
3/4"	0.100	SNAB7510X	1.750	2.500	3.000	0.600	1-9/16 - 18	10-20	300 lbs	1500 lbs	31	15 - 20
	0.125	SNAB7508X									36	
	0.167	SNAB7506X									44	
	0.200	SNAB7505X									49	
	0.500	SNAB5-7510X									69	
	1.000	SNAB8-7508X									79	
	2.000	SNAB10-7505X									82	
20mm	4mm	SNAB20x4M	1.750	2.500	3.000	0.600	1-9/16 - 18	10-20	300 lbs	1500 lbs	41	15 - 20
	8mm	SNAB2-20x4M									59	
	12mm	SNAB3-20x4M									67	
	16mm	SNAB4-20x4M									72	
	20mm	SNAB5-20x4M									76	
	45mm	SNAB9-20x5M									82	
24mm	5mm	SNAB24x5M	1.750	2.500	3.000	0.600	1-9/16 - 18	10-20	300 lbs	1500 lbs	42	15 - 20
1"	0.100	SNAB1010X	1.750	2.500	3.000	0.600	1-9/16 - 18	10-20	400 lbs	2000 lbs	25	15 - 20
	0.125	SNAB1008X									29	
	0.200	SNAB1005X									41	
	0.250	SNAB1004X									47	
	0.500	SNAB5-1010X									61	
	1.000	SNAB10-1010X									74	

* SNAB nuts are only as axially stiff as the spring force in one direction.

Flange Mount Supernuts®

MTS



Integral Flange Mount

The MTS models provide the excellent lubricity and dimensional stability of our proprietary Acetal with the convenience of an integral flange.

MTS

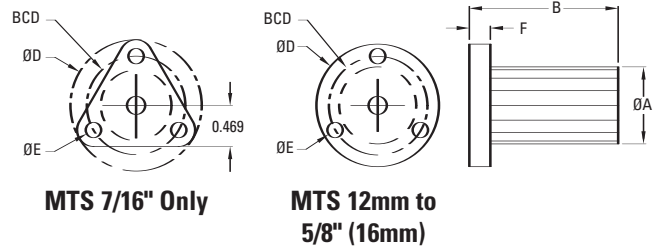
3/16" to 3/8" (10mm) Diameter

Dia.	Lead	Part No.	Supernut® Dimensions						Design Load	Efficiency %	Drag Torque oz-in
			A	B	D	E	F	BCD			
3/16"	0.050	MTS1820	0.50	0.75	1.00	0.14	0.15	0.75	10 lbs	49	Free Wheeling
1/4"	0.050	MTS2520	0.50	0.75	1.00	0.14	0.15	0.75	25 lbs	41	
	0.063	MTS2516								48	
	0.250	MTS4-2516								76	
	0.500	MTS7-2514								81	
5/16"	0.083	MTS3112	0.50	0.75	1.00	0.14	0.15	0.75	50 lbs	49	
	0.167	MTS2-3112								65	
	0.250	MTS2-3108								72	
	0.500	MTS4-3108								80	
3/8"*	0.063	MTS3716	0.71	1.50	1.5	0.20	0.20	1.125	60 lbs	36	
	2mm	MTS37x2M								42	
	0.083	MTS3712								44	
	0.100	MTS3710								49	
	0.125	MTS3708								53	
	0.167	MTS2-3712								60	
	0.200	MTS2-3710								65	
	0.250	MTS2-3708								68	
	0.375	MTS4-3711								75	
	0.500	MTS4-3708								79	
	1.000	MTS5-3705								82	
	1.200	MTS5-3704								82	
10mm*	2mm	MTS10x2M	0.71	1.50	1.5	0.2	0.200	1.125	75 lbs	41	
	3mm	MTS10x3M								53	
	5mm	MTS2-10x2.5M								64	
	6mm	MTS4-10x1.5M								67	
	10mm	MTS5-10x2M								76	
	20mm	MTS6-10x3.3M								81	
	35mm	MTS10-10x3.5M								81	

* 3/8" and 10mm with tri-flange

Flange Mount Supernuts®

MTS



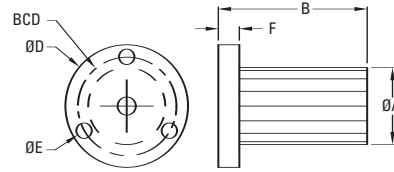
MTS
7/16" to 5/8" (16mm) Diameter

Dia.	Lead	Part No.	Supernut® Dimensions						Design Load	Efficiency %	Drag Torque oz-in
			A	B	D	E	F	BCD			
7/16**	0.125	MTS2-4316	0.71	1.50	1.5	0.20	0.200	1.125	75 lbs	55	Free Wheeling
	0.250	MTS2-4308								65	
	0.500	MTS4-4308								76	
12mm	3mm	MTS12x3M	0.75	1.50	1.5	0.20	0.250	1.125	125 lbs	48	
	4mm	MTS2-12x2M								54	
	5mm	MTS2-12x2.5M								59	
	6mm	MTS3-12x2M								63	
	10mm	MTS4-12x2.5M								73	
	15mm	MTS6-12x2.5M								78	
	25mm	MTS10-12x2.5M								82	
	45mm	MTS15-12x3M								81	
1/2"	0.0625	MTS5016	0.75	1.50	1.5	0.20	0.250	1.125	125 lbs	30	
	0.100	MTS5010								41	
	0.200	MTS2-5010								57	
	0.250	MTS2-5008								62	
	0.500	MTS4-5008								75	
	0.800	MTS8-5010								80	
	1.000	MTS8-5008								81	
5/8"	0.100	MTS6210	0.88	1.63	1.5	0.20	0.300	1.188	175 lbs	35	
	0.125	MTS6208								40	
	4mm	MTS62x4M								46	
	0.200	MTS2-6210								51	
	0.250	MTS2-6208								57	
	0.500	MTS4-6208								71	
16mm	4mm	MTS16x4M	0.88	1.63	1.5	0.20	0.300	1.188	175 lbs	47	
	5mm	MTS2-16x2.5M								52	
	8mm	MTS4-16x2M								63	
	16mm	MTS7-16x2.3M								75	
	25mm	MTS5-16x5M								80	
	35mm	MTS7-16x5M								82	

* 7/16" with tri-flange

Flange Mount Supernuts®

MTS



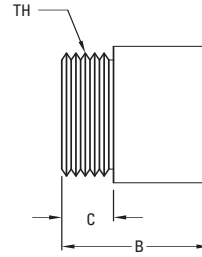
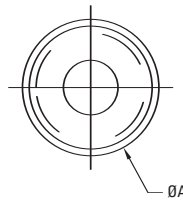
MTS 3/4" (20mm)

MTS
3/4" (20mm) Diameter

Dia.	Lead	Part No.	Supernut® Dimensions						Design Load	Efficiency %	Drag Torque oz-in
			A	B	D	E	F	BCD			
3/4"	0.100	MTS7510	1.125	1.75	2.0	0.20	0.300	1.438	275 lbs	31	Free Wheeling
	0.125	MTS7508								36	
	0.167	MTS7506								44	
	0.200	MTS7505								49	
	0.500	MTS5-7510								69	
	1.000	MTS8-7508								79	
	2.000	MTS10-7505								82	
20mm	4mm	MTS20x4M	1.125	1.75	2.0	0.20	0.300	1.438	275 lbs	42	Free Wheeling
	8mm	MTS2-20x4M								59	
	12mm	MTS3-20x4M								67	
	16mm	MTS4-20x4M								72	
	20mm	MTS5-20x4M								76	
	45mm	MTS9-20x5M								82	

Thread Mount Supernuts®

SN



Flanges

3/16" to 1/4"	F25
5/16" to 10mm	F37
7/16" to 16mm	F50
3/4" to 1"	F75
1-1/4"	F100
1-1/2"	R54-3

Dimensions available on page 31 or online.

Our standard SN nuts have proven themselves for the past twenty years. Available in sizes from 3/16" to 1-1/2" with or without mounting flanges.

SN

3/16" to 7/16" Diameter*

Dia.	Lead	Part No.	Supernut® Dimensions				Design Load	Max. Static Load	Efficiency %	Flange
			A	B	C	TH				
3/16"	0.050	SN1820X	0.625	0.500	0.187	9/16-18	30 lbs	150 lbs	49	F25
1/4"	0.050	SN2520X	0.625	0.500	0.187	9/16-18	45 lbs	225 lbs	41	
	0.063	SN2516X							48	
	0.250	SN4-2516X							76	
	0.500	SN7-2514X							81	
5/16"	0.083	SN3112X	0.750	0.750	0.250	5/8-18	70 lbs	350 lbs	49	F37
	0.167	SN2-3112X							65	
	0.250	SN2-3108X							72	
	0.500	SN4-3108X							80	
3/8"	0.063	SN3716X	0.750	0.750	0.250	5/8-18	70 lbs	350 lbs	36	
	2mm	SN37x2M							42	
	0.083	SN3712X							44	
	0.100	SN3710X							49	
	0.125	SN3708X							53	
	0.167	SN2-3712X							60	
	0.200	SN2-3710X							65	
	0.250	SN2-3708X							68	
	0.375	SN4-3711X							75	
	0.500	SN4-3708X							79	
	1.000	SN5-3705X							82	
10mm	2mm	SN10x2M	0.750	0.750	0.250	5/8-18	70 lbs	350 lbs	41	F50
	3mm	SN10x3M							53	
	5mm	SN2-10x2.5M							64	
	6mm	SN4-10x1.5M							67	
	10mm	SN5-10x2M							76	
	20mm	SN6-10x3.3M							67	
	35mm	SN10-10x3.5M							81	
7/16"	0.125	SN2-4316X	1.000	1.000	0.375	15/16-16	100 lbs	500 lbs	55	
	0.250	SN2-4308X							65	
	0.500	SN4-4308X							76	

* For all sizes shown on this page Drag Torque = Free Wheeling

Thread Mount Supernuts®

SN

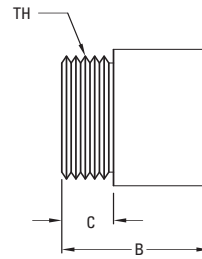
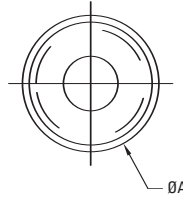
SN
1/2" (12mm) to 5/8" (16mm) Diameter*

Dia.	Lead	Part No.	Supernut® Dimensions				Design Load	Max. Static Load	Efficiency %	Flange
			A	B	C	TH				
12mm	3mm	SN12x3M	1.000	1.000	0.375	15/16-16	100 lbs	500 lbs	48	F50
	4mm	SN2-12x2M							54	
	5mm	SN2-12x2.5M							59	
	6mm	SN3-12x2M							63	
	10mm	SN4-12x2.5M							73	
	15mm	SN6-12x2.5M							78	
	25mm	SN10-12x2.5M							82	
	45mm	SN15-12x3M							81	
1/2"	0.0625	SN5016X	1.000	1.000	0.375	15/16-16	150 lbs	750 lbs	30	F50
	0.100	SN5010X							41	
	0.200	SN2-5010X							57	
	0.250	SN2-5008X							62	
	0.500	SN4-5008X							75	
	0.800	SN8-5010X							80	
	1.000	SN8-5008X							81	
5/8"	0.100	SN6210X	1.000	1.000	0.375	15/16-16	160 lbs	800 lbs	35	F50
	0.125	SN6208X							40	
	4mm	SN62x4M							46	
	0.200	SN2-6210X							51	
	0.250	SN2-6208X							57	
	0.500	SN4-6208X							71	
16mm	4mm	SN16x4M	1.000	1.000	0.375	15/16-16	160 lbs	800 lbs	47	F50
	5mm	SN2-16x2.5M							52	
	8mm	SN4-16x2M							63	
	16mm	SN7-16x2.3M							75	
	25mm	SN5-16x5M							80	
	35mm	SN7-16x5M							82	

* For all sizes shown on this page Drag Torque = Free Wheeling

Thread Mount Supernuts®

SN



Flanges

3/16" to 1/4"	F25
5/16" to 10mm	F37
7/16" to 16mm	F50
3/4" to 1"	F75
1-1/4"	F100
1-1/2"	R54-3

Dimensions available on page 31 or online.

SN

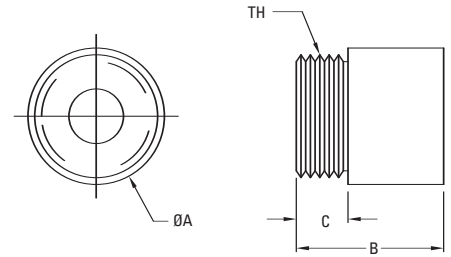
3/4" to 1 1/2" Diameter*

Dia.	Lead	Part No.	Supernut® Dimensions				Design Load	Max. Static Load	Efficiency %	Flange
			A	B	C	TH				
3/4"	0.100	SN7510X	1.500	1.500	0.500	1 3/8-16	300 lbs	1500 lbs	31	F75
	0.125	SN7508X							36	
	0.167	SN7506X							44	
	0.200	SN7505X							49	
	0.500	SN5-7510X							69	
	1.000	SN8-7508X							79	
	2.000	SN10-7505X							82	
20mm	4mm	SN20x4M	1.500	1.500	0.500	1 3/8-16	300 lbs	1500 lbs	41	F75
	8mm	SN2-20x4M							59	
	12mm	SN3-20x4M							67	
	16mm	SN4-20x4M							72	
	20mm	SN5-20x4M							76	
	45mm	SN9-20x5M							82	
24mm	5mm	SN24x5M	1.500	1.500	0.500	1 3/8-16	300 lbs	1500 lbs	42	
1"	0.100	SN1010X	1.500	1.500	0.500	1 3/8-16	400 lbs	2000 lbs	25	F100
	0.125	SN1008X							29	
	0.200	SN1005X							41	
	0.250	SN1004X							47	
	0.500	SN5-1010X							61	
	1.000	SN10-1010X							74	
1 1/4"	0.200	SN1205X	2.000	2.000	0.600	1 9/16-18	400 lbs	2000 lbs	35	F100
	0.250	SN1204X							41	
1 1/2"	0.200	SN1505X	2.000	2.500	0.530	1.967-18	400 lbs	2000 lbs	31	R54-3
	0.250	SN1504X							36	
	0.375	SN1503X							47	
	0.500	SN2-1504X							52	

* For all sizes shown on this page Drag Torque = Free Wheeling

Thread Mount Bronze Nuts

For Acme Screws



For standard bronze nuts, Thomson BSA uses SAE 660 bearing bronze which provides excellent load carrying ability, good wear resistance and is less susceptible to damage from impact and shock loading. Custom bronzes can be selected if required.

Material Properties

Maximum Temperature	Friction Coefficient	Material*	Tensile Strength
max. 250°F	0.2 to 0.3	SAE 660	35,000 psi

* Other materials available on a custom basis.

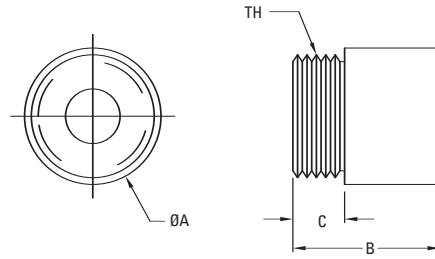
1/4" to 5/8" Diameter

Dia.	Lead	Nut Part No. for R.H. Screws	Nut Part No. for L.H. Screws	Bronze Nut Dimensions				Fits Flange No.	Design Load†	Maximum Static Load	Torque to Raise 1 Pound (in-oz)
				A	B	C	TH				
1/4"	.050	BN2520	BN2520L	0.625	0.625	0.187	9/16-18	F25	110 lbs	550 lbs	.41
	.0625	BN2516	—								.43
	.250	BN4-2516	—								1.00
3/8"	.0625	BN3716	—	0.750	0.750	0.250	5/8-18	F37	300 lbs	1,500 lbs	.61
	.083	BN3712	BN3712L								.64
	.100	BN3710	BN3710L								.67
	.125	BN3708S	—								.76
	.167	BN2-3712S	—								.86
1/2"	.100	BN5010	BN5010L	1.00	1.00	0.375	15/16-16	F50	620 lbs	3,100 lbs	.83
	.200	BN2-5010	—								1.10
5/8"	.100	BN6210	BN6210L	1.00	1.00	0.375	15/16-16	F50	860 lbs	4,300 lbs	.99
	.125	BN6208S	—								1.06
	.200	BN2-6210	—								1.26

† Load ratings based on using Thomson BSA grease. See page 211.

Thread Mount Bronze Nuts

For Acme Screws



3/4" to 3" Diameter

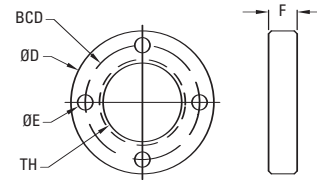
Dia.	Lead	Nut Part No. for R.H. Screws	Nut Part No. for L.H. Screws	Bronze Nut Dimensions				Fits Flange No.	Design Load†	Maximum Static Load	Torque to Raise 1 Pound (in-oz)
				A	B	C	TH				
3/4"	.100	BN7510	BN7510L	1.50	1.50	0.500	1-3/8 - 16	F75	1,500 lbs	7,500 lbs	1.15
	.125	BN7508	—								1.21
	.167	BN7506	BN7506L								1.28
	.200	BN7505	BN7505L								1.35
1"	.100	BN1010	—	1.50	1.50	0.500	1-3/8 - 16	F75	1,900 lbs	9,500 lbs	1.47
	.125	BN1008	—								1.52
	.200	BN1005	—								1.67
	.250	BN1004	—								1.76
	.500	BN5-1010	—								2.55
	1.000	BN10-1010	—								3.91
1-1/4"	.200	BN1205*	—	1.75	1.75	0.625	1-9/16 - 18	R1004-3	3,000 lbs	15,000 lbs	1.99
	.250	BN1204*	—								2.09
1-1/2"	.200	BN1505*	—	2.25	2.25	0.530	1.967-18	R54-3	4,600 lbs	23,000 lbs	2.31
	.250	BN1504*	—								2.41
	.375	BN1503*	—								2.56
	.500	BN2-1504*	—								3.08
2"	.250	BN2004*	—	2.75	3.50	0.780	2.548-18	R50-3	8,000 lbs	40,000 lbs	3.04
2-1/4"	.250	BN2204*	—	3.37	3.00	1.56	3.137-12	R2202-3	12,800 lbs	64,000 lbs	3.70
2-1/2"	.250	BN2504*	—	3.37	3.00	1.56	3.137-12	R2202-3	16,000 lbs	80,000 lbs	3.90
2-3/4"	.250	BN2704*	—	4.00	4.00	1.75	3.625-12	R2501-3	20,000 lbs	100,000 lbs	4.20
3"	.250	BN3004*	—	4.00	4.00	1.75	3.625-12	R2501-3	23,000 lbs	115,000 lbs	4.50

† Load ratings based on using Thomson BSA grease. See page 211.

* Non-stock item

Standard Mounting Flanges

For Bronze Nuts and Supernuts®



These mounting flanges are designed for easy mounting when fixed to a bronze nut or Supernut®.

Aluminum (6061-T6) Flanges for Bronze Nuts and Supernuts®

Part No.	Flange Dimensions				
	D	E	F	BCD	TH
F25	1.25	0.140 (4X)	0.187	1.00	9/16 - 18
F37	1.60	0.177 (4X)	0.250	1.24	5/8 - 18
F50	2.00	0.266 (4X)	0.375	1.50	15/16 - 16
F75	2.50	0.266 (4X)	0.500	2.00	1-3/8 - 16
F100	3.00	0.266 (4X)	0.600	2.37	1-9/16 - 18

Aluminum flanges do not have a set screw which could deform the Supernut® and possibly cause binding. Aluminum flanges should be pinned or bonded to Supernuts® to prevent unwanted disassembly during operation.

Lead Screws

Lead Screws — 3/16" to 7/16" Diameter



Nominal Major Diameter	Lead	Precision Prefix	Standard Prefix	BSA Part No.	Avail in Left Hand	Material	Root Diameter	Recommended Bearing
3/16"	0.050	SPR	SRA	1820	L	Stainless Steel	0.12	N/A
1/4"	0.050	SPR	SRA	2520	L	Stainless Steel	0.19	4mm
	0.063			2516	L		0.17	
	0.250			4-2516			0.17	
	0.500	N/A		7-2514			0.16	
5/16"	0.083	SPR	SRA	3112	L	Stainless Steel	0.22	4mm
	0.167			2-3112			0.20	
	0.250			2-3108S			0.22	
	0.500			4-3108S			0.21	
3/8"	0.0625	SPR	SRA	3716	L	Stainless Steel	0.30	4mm
	2mm			37x2M	L		0.28	
	0.083			3712	L		0.28	
	0.100			3710	L		0.26	
	0.125			3708S	L		0.29	
	0.167			2-3712S			0.31	
	0.200			2-3710			0.26	
	0.250			2-3708S	L		0.29	
	0.375			4-3711	L		0.27	
	0.500			4-3708S	L		0.27	
	1.00	N/A		5-3705			0.24	
	1.20			5-3704			0.24	
10mm	2mm	SPT	SRT	10x2M	L	Stainless Steel	0.31	4mm
	3mm			10x3M	L		0.25	
	5mm	SPR	SRA	2-10x2.5M			0.27	
	6mm			4-10x1.5M			0.31	
	10mm			5-10x2M			0.29	
	20mm			6-10x3.3M			0.30	
	35mm	N/A	10-10x3.5M		0.29			
7/16"	0.125	SPR	SRA	2-4316		Stainless Steel	0.35	6mm
	0.250			2-4308S			0.36	
	0.500			4-4308S			0.33	

Lead Screws

Lead Screws — 1/2" (12mm) to 3/4" (20mm) Diameter

Nominal Major Diameter	Lead	Precision Prefix	Standard Prefix	BSA Part No.	Avail in Left Hand	Material	Root Diameter	Recommended Bearing
12mm	3mm	SPT	SRT	12x3M		Stainless Steel	0.31	6mm
	4mm	SPR	SRA	2-12x2M			0.36	
	5mm	SPT	SRT	2-12x2.5M			0.35	
	6mm	SPR	SRA	3-12x2M			0.35	
	10mm	SPT	SRT	4-12x2.5M			0.35	
	15mm	SPR	SRA	6-12x2.5M			0.34	
	25mm	—	SRA	10-12x2.5M			0.36	
	45mm	—	SRA	15-12x3M			0.37	
1/2"	0.0625	SPR	SRA	5016		Stainless Steel	0.41	6mm
	0.100			5010	L		0.37	
	0.200			2-5010			0.39	
	0.250			2-5008			0.38	
	0.500			4-5008			0.36	
	0.800	N/A		8-5010			0.37	
	1.000			8-5008			0.39	
5/8"	0.100	SPR	SRA	6210	L	Stainless Steel	0.52	8 to 10mm
	0.125			6208S	L		0.52	
	0.200	SPR		2-6210			0.52	
	0.250			2-6208S			0.52	
	0.500			4-6208			0.48	
16mm	4mm	N/A	SRT	16x4M	L	Stainless Steel	0.45	8 to 10mm
	5mm	SPR	SRA	2-16x2.5M			0.48	
	8mm			4-16x2M			0.51	
	16mm			7-16x2.3M			0.49	
	25mm	N/A		5-16x5M			0.45	
	35mm			7-16x5M			0.48	
3/4"	0.100	SPR	SRA	7510	L	Stainless Steel	0.63	12mm
	0.125			7508	L		0.61	
	0.167			7506	L		0.56	
	0.200			7505	L		0.53	
	0.500	N/A		5-7510			0.62	
	1.000			8-7508			0.61	
	2.000			10-7505†	L		0.59	
20mm	4mm	SPT	SRT	20x4M	L	Stainless Steel	0.61	12mm
	8mm	SPR	SRA	2-20x4M			0.58	
	12mm			3-20x4M			0.59	
	16mm			4-20x4M			0.59	
	20mm	—		5-20x4M			0.59	
	45mm	—		9-20x5M			0.62	

† Nominal O.D. is .734"

Lead Screws

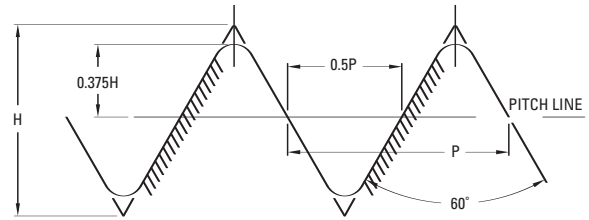
Lead Screws — 1" (24mm) to 3" Diameter



Nominal Major Diameter	Lead	Precision Prefix	Standard Prefix	BSA Part No.	Avail in Left Hand	Material	Root Diameter	Recommended Bearing	
24mm	5mm	SPT	SRT	24x5M	L	Stainless Steel	0.73	12 to 15mm	
1"	0.100	SPR	SRA	1010	L	Stainless Steel	0.88	12 to 20mm	
	0.125			1008	L		0.86		
	0.200			1005	L		0.78		
	0.250	N/A	RA	1004	L	Carbon Steel	0.72	12 to 15mm	
	0.500			SRA	5-1010		Stainless Steel	0.88	12 to 20mm
	1.000				10-1010			0.88	
1-1/4"	0.200	N/A	RA	1205	L	Low Carbon Steel	1.03	20mm	
	0.250			1204	L		0.98		
1-1/2"	0.200	N/A	RA	1505	L	Low Carbon Steel	1.28	25mm	
	0.250			1504	L		1.23		
	0.375			1503			1.11		
	0.500			2-1504			1.23		
2"	0.250	N/A	RA	2004	L	Low Carbon Steel	1.73	*	
2-1/4"	0.250	N/A	RA	2204	L		1.98	*	
2-1/2"	0.250	N/A	RA	2504	L		2.23	*	
2-3/4"	0.250	N/A	RA	2704	L		2.48	*	
3"	0.250	N/A	RA	3004	L		2.73	*	

V-Thread Screws

Burnished Finish 303 Stainless Steel



- Some sizes available in 1018 Steel
- Matching Supernuts and Left Hand Screws on special request
- Lead Accuracy is .015 in/ft

Diameter	Lead	Size	Part No.	Recommended Bearing
6mm	1mm	6 x 1	SV6x1	4mm
1/4"	0.0125	1/4-80	SV2580	4mm
	0.0208	1/4-48	SV2548	
	0.0250	1/4-40	SV2540	
	0.0278	1/4-36	SV2536	
	0.0313	1/4-32	SV2532	
	0.0357	1/4-28	SV2528	
	0.0417	1/4-24	SV2524	
3/8"	0.0500	1/4-20	SV2520	4 to 6mm
	0.0250	3/8-40	SV3740	
	0.0313	3/8-32	SV3732	
	0.0417	3/8-24	SV3724	
	0.0500	3/8-20	SV3720	
	0.0625	3/8-16	SV3716	
1/2"	0.0833	3/8-12	SV3712	6 to 8mm
	0.0250	1/2-40	SV5040	
	0.0333	1/2-30	SV5030	
	0.0500	1/2-20	SV5020	
	0.0625	1/2-16	SV5016	
	0.0769	1/2-13	SV5013	