

## “STT Series” Precision Lead Screw Shaft

The high speed linear motion can be achieved at a very low speed, which is required in many types of mechanical equipment. Comparing with timing belt, chain, worm and gears, eccentric gear, crank etc., the design of high speed lead screws offer much better performance in cost, space, precision, reliability, long life, transmission efficiency. This STT Precision Lead Screw can even replace ballscrew under certain conditions.

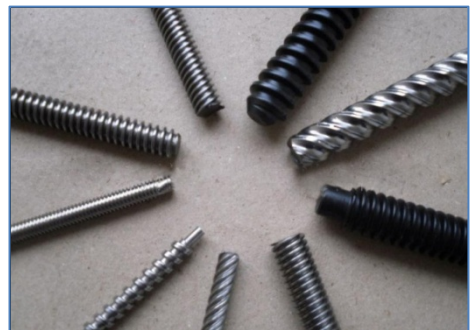
### Advantages compared with ballscrew:

- 1). Lower cost for manufacturing, free select of materials and free design of nut shape and size;
- 2). Lower noise and shake, better self-lubricant and abrasive resistance.

The STT lead screw assembly consists of lead screw shaft and lead screw nut as follows:

### Lead Screw Shaft

- 1). **Properties:** STT is a special kind of thread, which is developed on the base of trapezoidal and round thread. This STT thread can increase the life of nut a lot and produce much lower noise when it works together with anti-backlash nut. What's more, the STT lead screws provides high precision and repeat-accuracy.
- 2). **Standard Materials** are SS303 and S45C (carbon steel), and other materials available upon request.
- 3). **Coatings:** Xylan 1010 coating, surface alloy catalysts, PTFE coating. The coatings will increase the smoothness and working life a lot (3 times), and at the same time decrease the resistance.
- 4). **Nominal diameter** from 2.5mm(3/32") to 25mm(1") and **lead** from 0.3mm(0.012") to 200mm(8").
- 5). **Accuracy:** 0.02/30mm (0.0006inch/inch), **repeat accuracy** is less than 0.01mm and can reach 0.005mm after polishing, with **straightness** less than 0.1mm.
- 6). **Max length** can reach 3 meters (12"), and if longer length is required, please contact us.
- 7). **Left hand** thread is available upon request.
- 8). **End machining** available upon request.



### Lead Screw Nut

#### A. Anti-Backlash Plastic Nut

- a). “DFH” for Light Loads.
- b). “JCX” for Light Loads, Compact Design.
- c). “KTZ” for Adjustable Drag Torque, Ultra Smooth Travel.



#### B. General Purpose Nut

- a). polymer composite plastic nut: excellent abrasive resistance, temperature resistance, self-lubricant, maintenance free and long life.
- b). bronze and brass nut with properties of excellent high load, good abrasive resistance, anti-impact and anti-shake



Following Tables shows the sizes of Lead Screw Shaft available in mm.

List of sizes (in mm):

Model No.	Dia.	Lead	Pitch	Start	Height of thread	Minor Dia.	Major Dia.	Efficiency (%)	
								Plastic	Bronze
STT4x1-1	4	1	1	1	0.71	3.29	4.71	38	27
STT4x2-2		2	1	2	0.50	3.2	4.2	50	38
STT5x5-4	5	5	1.25	4	0.90	3.6	5.4	70	58
STT5x10-4		10	2.5	4	0.71	4.29	5.71	76	65
STT5x15-6		15	2.5	6	0.71	3.29	4.71	76	64
STT5x20-16		20	1.25	16	0.50	5	6	86	78
STT6x1-1	6	1	1	1	0.71	4.58	6	32	22
STT6x1.5-1		1.5	1.5	1	1.0	2	6	42	31
STT6x2-1		2	2	1	1.11	3.97	6	49	38
STT6x3-2		3	1.5	2	0.95	4.1	6	58	46
STT6x5-2		5	2.5	2	0.99	4.02	6	68	56
STT6x9-4		9	2.25	4	0.99	4.02	6	76	64
STT6x10-4		10	2.5	4	1.015	3.97	6	76	65
STT6x18-4		18	4.5	4	0.99	4.02	6	77	64
STT6x25-20		25	1.25	20	0.55	6.3	7.4	86	78
STT7.5x7.5-6		7.5	7.5	1.25	6	0.9	5.9	7.7	70
STT8x1-1	8	1	1	1	1.0	1	8	28	19
STT8x1.5-1		1.5	1.5	1	0.68	6.65	8	33	23
STT8x2-1		2	2	1	1.25	5.5	8	48	30
STT8x4-1		4	2	2	1.25	5.5	8	58	45
STT8x10-4		10	2.5	4	1.35	5.5	8.2	74	62
STT8x12-4		12	3	4	1.20	5.6	8	75	64
STT8x15-6		15	2.5	6	1.35	5.5	8.2	77	66
STT8x24-6		24	4	6	1.20	5.6	8	77	64
STT8x30-24		30	1.25	24	0.55	7.5	8.6	78	68
STT9x20-5	9	20	4	5	1.55	5.8	8.9	77	66
STT10x1-1	10	1	1	1	0.56	8.88	10	21	14
STT10x1.4-1	10	1.4	1.4	1	0.92	7.7	9.53	28	20
STT10x1.5-1		1.5	1.5	1	0.97	7.95	9.88	29	20
STT10x2-1		2	2	1	1.41	6.71	9.53	37	27
STT10x3-2		3	1.5	2	0.81	7.92	9.53	45	34
STT10x4-2		4	2	2	1.29	6.96	9.53	53	41
STT10x5-2		5	2.5	2	1.39	6.76	9.53	59	46
STT10x6-4		6	1.5	4	1.05	7.9	10	61	48
STT10x10-8		10	1.25	8	0.90	8.2	10	70	58
STT10x10-4		10	2.5	4	1.39	7.23	10	71	59
Model No.	Dia.	Lead	Pitch	Start	Height of thread	Minor Dia.	Major Dia.	Efficiency (%)	
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Model No.	Dia.	Lead	Pitch	Start	Height of thread	Minor Dia.	Major Dia.	Efficiency (%)	
								Plastic	Bronze
STT10x12-4	10	12	3	4	1.45	7.1	10	73	62
STT10x15-5		15	3	5	1.45	7.1	10	75	64
STT10x20-8		20	2.5	8	0.80	8.4	10	77	66
STT10x25-10		25	2.5	10	1.44	6.65	9.53	77	65
STT10x35-28		35	1.25	28	0.60	8.9	10.1	86	78
STT10x50-10		50	5	10	1.30	7.4	10	84	75
STT11x2-1	11	2	2	1	1.41	8.28	11.1	31	21
STT11x3-1		3	3	1	2.0	7.13	11.13	40	28
STT11x4-2		4	2	2	1.33	8.79	11.45	49	36
STT11x5-2		5	2.5	2	1.55	8.03	11.13	48	55
STT11x6-3		6	2	3	1.53	7.95	11	59	47
STT11x10-4		10	2.5	4	1.46	8.41	11.33	68	56
STT11x12-4		12	3	4	1.53	8.08	11.13	72	60
STT11x40-32		40	1.25	32	0.65	10.2	11.5	86	78
STT11x60-12		60	5	12	1.30	9.1	11.9	84	75
STT12x2-1	12	2	2	1	1.50	9.02	12.01	32	22
STT12x2.5-1		2.5	2.5	1	1.49	9.73	12.7	36	25
STT12x3-1		3	3	1	2.0	8	12	42	31
STT12x4-2		4	2	2	1.33	9.34	12	47	35
STT12x5-2		5	2.5	2	1.55	8.9	12	53	41
STT12x6-2		6	3	2	1.90	8.2	12	58	46
STT12x9-3		9	3	3	1.92	8.16	12	66	54
STT12x10-4		10	2.5	4	1.72	9.19	12.62	67	55
STT12x15-6		15	2.5	6	1.65	8.7	12	74	62
STT12x15-5		15	3	5	1.50	9.2	12.2	73	62
STT12x16-5		16	3.2	5	1.60	9.5	12.7	73	62
STT 12x18-6		18	3	6	1.50	9	12	75	64
STT12x25-10		25	2.5	10	1.40	9.2	12	76	64
STT12x25-5		25	5	5	1.95	8	11.9	77	66
STT12x45-36		45	1.25	36	0.70	11.4	12.8	86	78
STT12x45-15		45	3	15	1.20	9.6	12	87	78
STT12.5x12.5-10		12.5	12.5	1.25	10	0.95	10.4	12.3	70
STT13x20-4	13	20	5	4	2.25	8.8	13.3	76	64
STT13x35-7		35	5	7	1.95	9.1	13	77	65
STT13x70-14		70	5	14	1.30	10.9	13.5	84	75
STT14x8-2	14	8	4	2	2.15	9.7	14	61	48
STT14x10-4		10	2.5	4	1.63	10.37	13.62	65	53
STT14x12-3		12	4	3	2.15	9.7	14	68	56
STT14x18-6		18	3	6	1.45	11.4	14.3	73	62
STT14x30-6		30	5	6	1.90	10.1	13.9	77	66
Model No.	Dia.	Lead	Pitch	Start	Height of thread	Minor Dia.	Major Dia.	Efficiency (%)	
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Model No.	Dia.	Lead	Pitch	Start	Height of thread	Minor Dia.	Major Dia.	Efficiency (%)		
								Plastic	Bronze	
STT15x20-8	15	20	2.5	8	1.35	12.5	15.2	73	62	
STT15x80-16		80	5	16	1.35	12.6	15.2	84	74	
STT16x2-1	16	2	2	1	1.20	13.6	16	25	17	
STT16x3-1		3	3	1	1.50	13	16	34	24	
STT16x4-1		4	4	1	2.35	11.3	16	41	30	
STT16x5-2		5	2.5	2	1.90	12.2	16	46	34	
STT16x8-2		8	4	2	1.70	12.53	15.93	57	44	
STT16x16-7		16	2.29	7	1.70	12.6	16	70	58	
STT16x16-4		16	4	4	2.25	11.5	16	71	59	
STT16x16-4		16	4	4	1.80	12.4	16	70	58	
STT16x21-7		21	3	7	1.45	13.6	16.5	73	62	
STT16x25-5		25	5	5	2.25	11.5	16	76	64	
STT16x35-7		35	5	7	1.90	12.1	15.9	77	66	
STT16x90-18		90	5	18	1.35	14.3	17	86	74	
STT17x24-4		17	24	6	4	2.10	12.9	17.1	75	63
STT17x18-4			18	4.5	4	2.0	13.3	17.3	71	59
STT18x16-4	18	16	4	4	1.85	14.3	18	68	56	
STT18x18-4		18	4.5	4	1.80	14.4	18	70	58	
STT18x24-8		24	3	8	1.50	15.7	18.7	73	62	
STT18x40-8		40	5	8	1.90	14.1	17.9	77	66	
STT18x60-10		60	6	10	1.95	13.9	18			
STT18x100-20		100	5	20	1.30	16.2	18.8	84	74	
STT19x2.5-1	19	2.5	2.5	1	1.48	15.9	18.85	26	18	
STT19x5-2		5	2.5	2	1.54	15.85	18.92	41	30	
STT19x6-1		6	6	1	2.85	14.3	19	47	35	
STT19x7-2		7	3.5	2	1.60	15.85	19.05	49	37	
STT19x15-5		15	3	5	1.60	15.82	19.02	66	53	
STT19x18-6		18	3	6	1.65	16.51	19.81	68	56	
STT19x19-6		19	3.167	6	1.59	13.89	17.07	71	60	
STT19x20-5		20	4	5	1.68	16.46	19.81	70	58	
STT19x24-8		24	3	8	1.28	16.08	18.64	73	61	
STT19x30-6		30	5	6	2.30	14.2	18.8	76	64	
STT19x50-10		50	5	10	1.67	15.75	19.08	77	66	
STT19x92-23		92	4	23	1.48	16.1	19.05		88	
STT20x4-1	20	4	4	1	2.35	15.3	20	35	25	
STT20x8-2		8	4	2	2.60	14.8	20	52	40	
STT20x12-4		12	3	4	2.10	15.8	20	61	48	
STT20x16-4		16	4	4	2.50	15	20	67	55	
STT20x18-3		18	6	3	3.17	13.66	20	67	48	
STT20x20-5		20	4	5	2.50	15	20	70	59	
Model No.	Dia.	Lead	Pitch	Start	Height of thread	Minor Dia.	Major Dia.	Efficiency (%)		
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Model No.	Dia.	Lead	Pitch	Start	Height of thread	Minor Dia.	Major Dia.	Efficiency (%)	
								Plastic	Bronze
STT20x45-9	20	45	5	9	1.95	16.1	20	77	66
STT21x10-4	21	10	2.5	4	1.60	18.4	21.6	54	42
STT21x27-9		27	3	9	1.45	17.9	20.8	73	62
STT21x35-7		35	5	7	2.25	17	21.5	76	64
STT22x4-1	22	4	4	1	2.35	17.3	22	33	24
STT22x6-3		6	2	3	0.96	19.63	21.54	41	30
STT22x10-4		10	2.5	4	1.71	18.82	22.23	54	41
STT22x16-4		16	4	4	1.71	18.82	22.23	64	51
STT22x20-5		20	4	5	1.85	18.3	22	68	56
STT22x24-6		24	4	6	1.71	18.82	22.23	71	59
STT22x50-10		50	5	10	1.95	18.1	22	77%	66
STT23x30-10	23	30	3	10	1.50	20	23	73	62
STT24x5-1	24	5	5	1	2.75	18.5	24	36	26
STT24x40-8		40	5	8	2.25	19.8	24.3	76	64
STT24x55-11		55	5	11	1.90	20.1	24	77	66
STT26x10-2	26	10	5	2	1.68	23.32	26.68	49	37
STT26x16-4		16	4	4	2.10	21.8	26	61	48
STT26x20-5		20	4	5	1.63	23.37	26.63	64	52
STT26x24-6		24	4	6	1.80	22.3	26	68	56
STT26x50-10		50	5	10	1.63	23.37	26.63	76	
STT26x60-12		60	5	12	1.90	22.2	26	77	
STT26x75-15		75	5	15	1.63	23.37	26.63	77	
STT27x45-9	27	45	5	9	2.25	22.5	27	76	
STT28x65-15	28	65	5	15	1.90	24.2	28	77	
STT30x28-7	30	28	4	7	1.75	26.5	30	68	
STT30x50-6		50	5	10	2.25	25.3	29.8	76	
STT30x70-14		70	5	14	1.90	26.2	30	78	
STT32x20-5	32	20	4	5	2.10	27.8	32	61	
STT32x75-15		75	5	15	1.90	28.2	32	77	
STT34x32-8	34	32	4	8	1.80	30.5	34	68	
STT34x80-16		80	5	16	1.90	30.2	34	77	
STT36x200-40	36	200	5	40	1.30	33.4	36	88	
Model No.	Dia.	Lead	Pitch	Start	Height of thread	Minor Dia.	Major Dia.	Efficiency (%)	
								Plastic	Bronze