

## “STT Series” Anti-Backlash Nut

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.

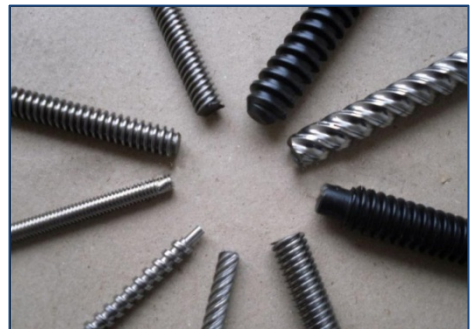
### Advantages compared with ballscrew:

- 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



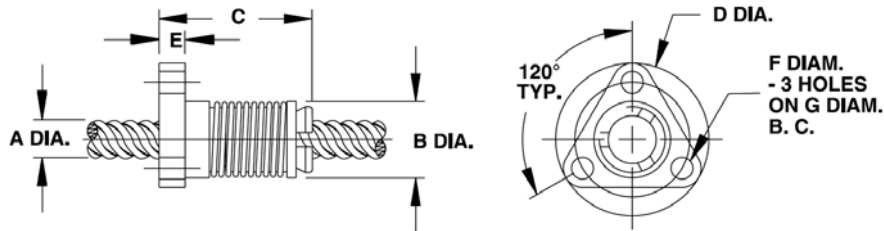
Please visit our website for details.

**1. “DFH” for Light Loads.**

The DFH assembly, through its unique transfer of loads, offers exceptional torque consistency and repeatability when traversing in either direction. The inherent damping qualities of the DFH design make it ideally suited for vertical applications requiring noise or vibration control.

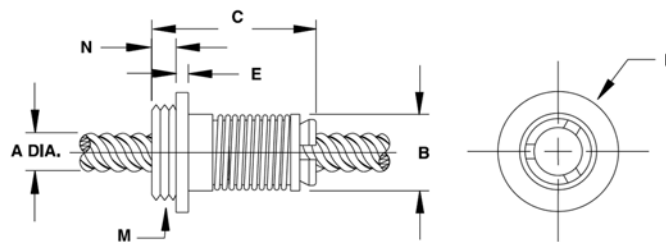


**1). DFH-F: DFH nut with flange mount**



Screw Ø	Nut Ø	Nut Length	Flange Ø	Flange Thk.	Mounting Hole Ø	Bolt Circle Ø	Dynamic Load	Drag Torque
A in. (mm)	B in. (mm)	C in. (mm)	D in. (mm)	E in. (mm)	F in. (mm)	G in. (mm)	lbs. (kg)	oz.-in. (Nm)
1/4 (6.00)	0.50 (12.70)	1.00 (26.00)	1.00 (25.40)	0.18 (4.60)	0.14 (3.60)	0.75 (19.10)	5.00 (2.30)	0.5-3 (.004-.02)
5/16 (8.00)	0.70 (17.80)	1.90 (48.00)	1.50 (38.10)	0.18 (4.60)	0.20 (5.08)	1.13 (28.60)	10.00 (5.00)	1-5 (.007-.03)
3/8 (10.00)	0.70 (17.70)	1.90 (48.00)	1.50 (38.10)	0.18 (4.60)	0.20 (5.08)	1.13 (28.60)	10.00 (5.00)	1-5 (.007-.03)
7/16 (11.00)	0.80 (20.30)	1.90 (48.00)	1.50 (38.10)	0.18 (4.60)	0.20 (5.08)	1.13 (28.60)	15.00 (7.00)	2-6 (.014-.04)
1/2 (13.00)	0.89 (22.60)	2.00 (51.00)	1.62 (41.20)	0.26 (6.60)	0.20 (5.08)	1.25 (31.80)	25.00 (11.00)	3-7 (.02-.05)
5/8 (16.00)	1.06 (26.92)	2.00 (51.00)	1.75 (44.50)	0.26 (6.60)	0.20 (5.08)	1.38 (34.90)	35.00 (16.00)	4-8 (.028-.055)

**2). DFH-F: DFH nut with thread mount**



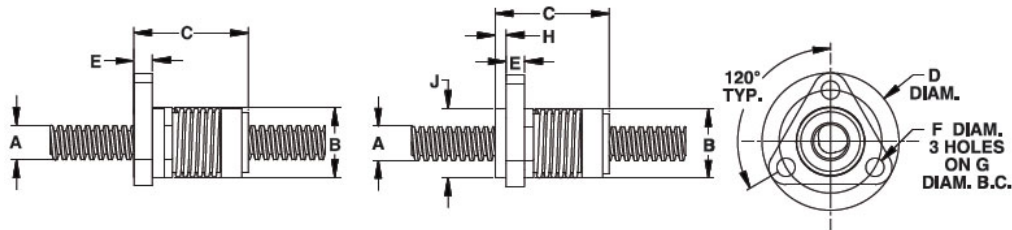
Screw Ø	Nut Ø	Nut Length	Flange Ø	Flange Thickness	Thread	Thread Length	Dynamic Load	Drag Torque
A in. (mm)	B in. (mm)	C in. (mm)	D in. (mm)	E in. (mm)	M in.	N in. (mm)	lbs. (kg)	oz.-in. (Nm)
1/4 (6.00)	0.50 (12.70)	1.30 (33.00)	0.80 (20.30)	0.22 (5.60)	5/8-18	0.16 (4.10)	5.00 (2.30)	0.5-3 (.004-.02)
5/16 (8.00)	0.70 (17.80)	2.20 (56.00)	1.00 (25.40)	0.17 (4.30)	5/8-18	0.38 (9.70)	10.00 (5.00)	1-5 (.007-.03)
3/8 (10.00)	0.70 (17.80)	2.20 (56.00)	1.00 (25.40)	0.17 (4.30)	5/8-18	0.38 (9.70)	10.00 (5.00)	1-5 (.007-.03)
7/16 (11.00)	0.80 (20.30)	2.30 (59.00)	1.00 (25.40)	0.12 (3.10)	15/16-16	0.38 (9.70)	15.00 (7.00)	2-6 (.015-.04)
1/2 (13.00)	0.89 (22.60)	2.30 (59.00)	1.02 (25.90)	0.12 (3.10)	15/16-16	0.38 (9.70)	25.00 (11.00)	3-7 (.02-.05)
5/8 (16.00)	1.06 (26.90)	2.40 (61.00)	1.06 (26.90)	0.15 (3.80)	15/16-16	0.50 (12.70)	35.00 (16.00)	4-8 (.028-.055)

## 2. "JCX" for Light Loads, Compact Design.

JCX anti-backlash lead screw assembly utilizes a general purpose self-compensating nut in an exceptionally compact package. This allows equipment designers to utilize smaller assemblies without sacrificing stroke length.

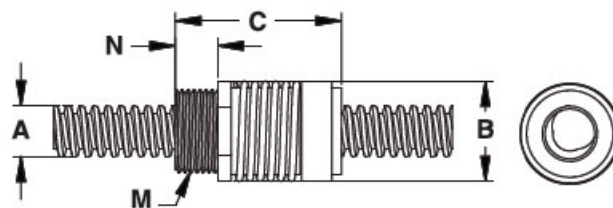


### 1). JCX-F: JCX nut with flange mount



Screw Ø	Nut Ø	Nut Length	Flange Ø	Flange Thk.	Mounting Hole Ø	Bolt Circle Ø	Hub Length	Hub Ø	Dynamic Load	Drag Torque (max.)
A in. (mm)	B in. (mm)	C in. (mm)	D in. (mm)	E in. (mm)	F in. (mm)	G in. (mm)	H in. (mm)	J in. (mm)	lbs. (kg)	oz-in (NM)
3/16 (4)	0.63 (16.00)	1.05 (26.60)	1.13 (28.60)	0.16 (4.10)	0.14 (3.70)	0.88 (22.20)	0.08 (2.04)	0.63 (15.90)	5.00 (2.30)	4.00 (0.03)
7/32 (5)	0.63 (16.00)	1.05 (26.60)	1.13 (28.60)	0.16 (4.10)	0.14 (3.70)	0.88 (22.20)	0.08 (2.04)	0.63 (15.90)	5.00 (2.30)	4.00 (0.03)
1/4 (6)	0.63 (16.00)	1.05 (26.60)	1.13 (28.60)	0.16 (4.10)	0.14 (3.70)	0.88 (22.20)	0.08 (2.04)	0.63 (15.90)	5.00 (2.30)	4.00 (0.03)
5/16 (8)	0.75 (19.00)	1.32 (33.50)	1.50 (38.10)	0.20 (5.01)	0.20 (5.01)	1.13 (28.60)	0.12 (3.05)	0.75 (19.10)	8.00 (3.60)	5.00 (0.04)
3/8 (10)	0.75 (19.00)	1.32 (33.50)	1.50 (38.10)	0.20 (5.01)	0.20 (5.01)	1.13 (28.60)	0.12 (3.05)	0.75 (19.10)	8.00 (3.60)	5.00 (0.04)

### 2). JCX-T: JCX nut with thread mount



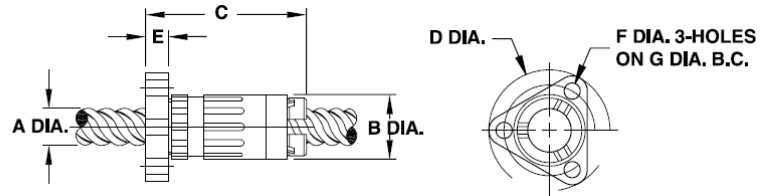
Screw Ø	Nut Ø	Nut Length	Thread	Thread Length	Dynamic Load	Drag Torque(max.)
A in. (mm)	B in. (mm)	C in. (mm)	M*	N in. (mm)	lbs. (kg)	oz-in (NM)
3/16 (4.00)	0.63 (16.00)	1.05 (26.60)	9/16 - 18	0.24 (16.10)	5.00 (2.30)	4.00 (0.03)
7/32 (5.00)	0.63 (16.00)	1.05 (26.60)	9/16 - 18	0.24 (16.10)	5.00 (2.30)	4.00 (0.03)
1/4 (6.00)	0.63 (16.00)	1.05 (26.60)	9/16 - 18	0.24 (16.10)	5.00 (2.30)	4.00 (0.03)
5/16 (8.00)	0.75 (19.00)	1.32 (33.50)	5/8 - 18	0.32 (18.10)	8.00 (3.60)	5.00 (0.04)
3/8 (10.00)	0.75 (19.00)	1.32 (33.50)	5/8 - 18	0.32 (18.10)	8.00 (3.60)	5.00 (0.04)

### 3. "KTZ" for Adjustable Drag Torque, Ultra Smooth Travel.

KTZ nut offers a cost-effective anti-backlash assembly for applications requiring precise positional accuracy. The KTZ has been developed specifically for those applications that require very smooth and consistent motion such as printing, scanning, and coordinate measurement systems. Another benefit of the KTZ design is the ability to manually adjust the drag torque setting to match the specific requirements of the application.

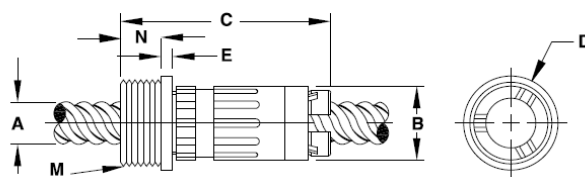


#### 1). KTZ-F: KTZ nut with flange mount



Screw Ø	Nut Ø	Nut Length	Flange Ø	Flange Thickness	Mounting Hole Ø	Bolt Circle Ø	Dynamic Load	Drag Torque
A	B in. (mm)	C in. (mm)	D in. (mm)	E in. (mm)	F in. (mm)	G in. (mm)	lbs. (kg)	oz.-in. (Nm)
1/4 (6)	0.53 (13.5)	1.0 (26)	1.00 (25.4)	0.18 (4.6)	0.143 (3.6)	.750 (19.05)	5 (2.3)	.5-2 (0.004-0.014)
5/16 (8)	0.74 (18.8)	1.9 (48)	1.50 (38.1)	0.18 (4.6)	0.200 (5.08)	1.125 (28.58)	10 (5)	1-3 (0.007-0.02)
3/8 (9)	0.74 (18.8)	1.9 (48)	1.50 (38.1)	0.18 (4.6)	0.200 (5.08)	1.125 (28.58)	10 (5)	1-3 (0.007-0.02)
7/16 (11)	0.80 (20.3)	1.9 (48)	1.50 (38.1)	0.18 (4.6)	0.200 (5.08)	1.125 (28.58)	15 (7)	2-5 (0.014-0.03)
1/2 (13)	0.89 (22.6)	2.0 (51)	1.62 (41.2)	0.28 (7.1)	0.200 (5.1)	1.250 (31.75)	25 (11)	2-5 (0.014-0.03)
5/8 (16)	1.06 (26.9)	2.0 (51)	1.75 (44.5)	0.28 (7.1)	0.200 (5.08)	1.375 (34.93)	35 (16)	3-7 (0.02-0.05)
3/4 (19)	1.70 (43.2)	2.88 (73.2)	2.63 (66.8)	0.38 (9.6)	0.218 (5.5)	2.25 (57.2)	55 (25)	5-9 (0.03-0.064)
7/8 (22)	1.70 (43.2)	2.88 (73.2)	2.63 (66.8)	0.38 (9.6)	0.218 (5.5)	2.25 (57.2)	55 (25)	5-9 (0.03-0.064)
15/16 (24)	1.70 (43.2)	2.88 (73.2)	2.63 (66.8)	0.38 (9.6)	0.218 (5.5)	2.25 (57.2)	55 (25)	5-9 (0.03-0.064)

#### 2). KTZ-F: KTZ nut with thread mount



Screw Ø	Nut Ø	Nut Length	Flange Ø	Flange Thickness	Thread	Mounting Thread Length	Dynamic Load	Drag Torque
A in. (mm)	B in. (mm)	C in. (mm)	D in. (mm)	E in. (mm)	M in.	N in. (mm)	lbs. (kg)	oz.-in. (Nm)
1/4 (6)	0.53 (13.5)	1.3 (33)	0.80 (20.3)	0.12 (3.1)	5/8-18	0.16 (4.1)	5 (2.3)	.5-2 (0.004-0.014)
5/16 (8)	0.74 (18.8)	2.2 (56)	1.00 (25.4)	0.15 (3.8)	5/8-18	0.38 (9.7)	10 (5)	1-3 (0.007-0.02)
3/8 (10)	0.74 (18.8)	2.2 (56)	1.00 (25.4)	0.15 (3.8)	5/8-18	0.38 (9.7)	10 (5)	1-3 (0.007-0.02)
7/16 (11)	0.80 (20.3)	2.3 (59)	1.00 (25.4)	0.10 (2.5)	15/16-16	0.38 (9.7)	15 (7)	2-5 (0.014-0.03)
1/2 (13)	0.89 (22.6)	2.3 (59)	1.04 (26.4)	0.10 (2.5)	15/16-16	0.38 (9.7)	25 (11)	2-5 (0.014-0.03)
5/8 (16)	1.06 (26.9)	2.3 (58.9)	1.06 (26.9)	0.14 (3.6)	15/16-16	0.50 (12.7)	35 (16)	3-7 (0.02-0.05)