DINGS'

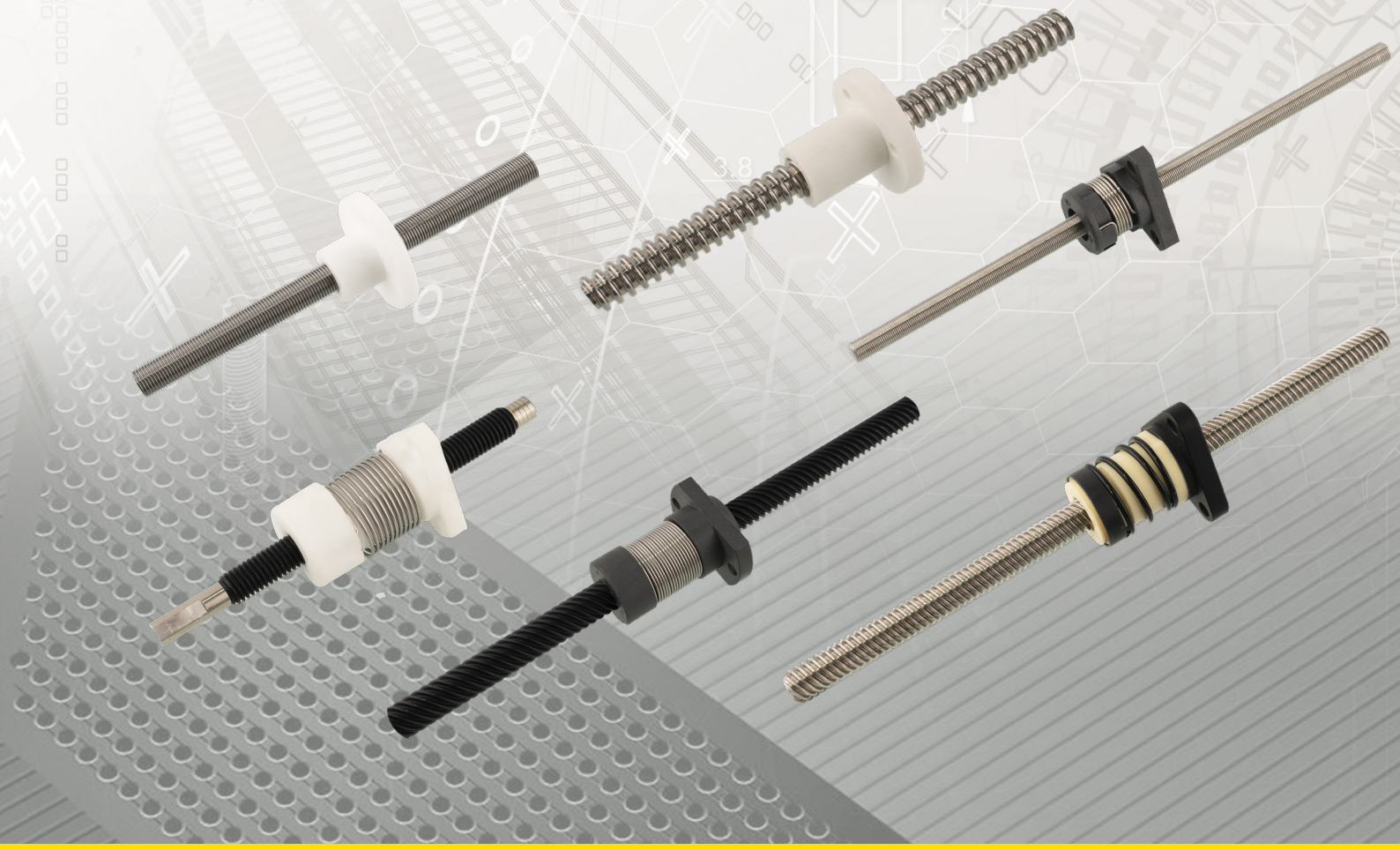
Precision Motion Specialist

UK & Ireland Official Distributor

MOTION CONTROL PRODUCTS

SCREW-NUTS

PRODUCT CATALOGUE



Jiangsu DINGS' Intelligent Control Technology Co., Ltd.

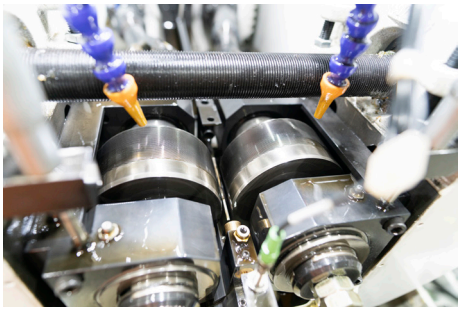
Content

Technical Briefs

DINGS' is continuously exploring and improving its Linear Actuator products with the goal of meeting customers' application requirements. DINGS' products are not ordinary screws and nuts. The design of screw threads takes into account the requirements of high precision, long life and low noise, and some special designs are made to increase the fluidity of the material when the screw is processed, which is very important for the screw. Finally, it is used with special material nuts of DINGS' to get the maximum economic value.

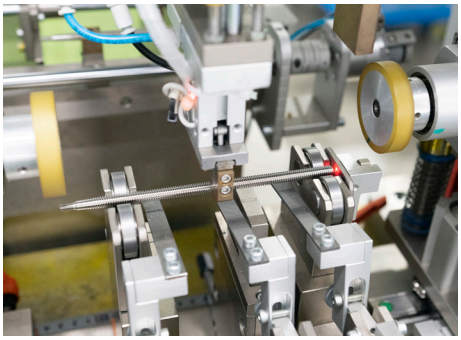
Lead Screw Material :

DINGS' standard screw material is SUS303/316, we believe that to get a high quality screw, the material performance is the key. We strictly inspect the size and hardness of the material of each batch; customers can find that DINGS' screws are very stable and have good anti-corrosion properties, which can be applied to a variety of strict environments.
In order to get a more accurate thread, the key lies in the stability of the process such as: speed, vibration, temperature and precise control of the flow of coolant. Precision CNC tumblers ensure that the process is stable and adjustable.



CNC Straightening :

Maximizing the straightness of the screw results in a smoother surface and longer product life. This process eliminates human error and minimizes vibration, noise and premature wear caused by axial play.



Excellent Lead Accuracy :

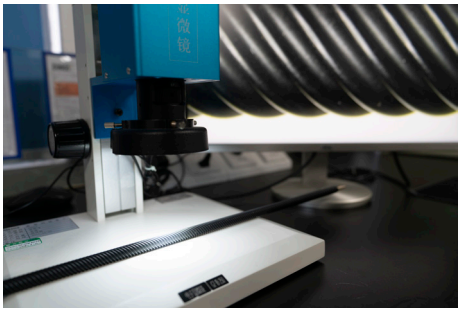
DINGS' has a dynamic lead accuracy measuring instrument, so that the lead accuracy already gets a stable detection in the manufacturing stage. Accuracy can be stably controlled within 0.07mm/300mm, 2 times higher than the industrial standard.

Quality Inspection :

Thread surface is inspected using a high magnification optical imager in the manufacturing and coating process.

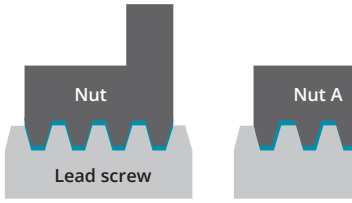
Teflon Coating Technology :

Teflon coating technology, developed and processed in-house, reduces the friction coefficient on the surface of the screw, improving its efficiency and extending its service life. Every coated screw is inspected with an optical imager to ensure that there is no flaking or unevenness in the layers.

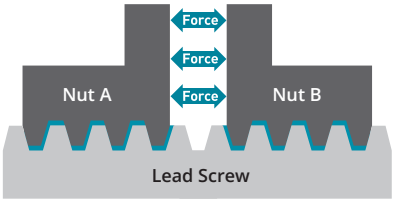


Terminology and technical parameters

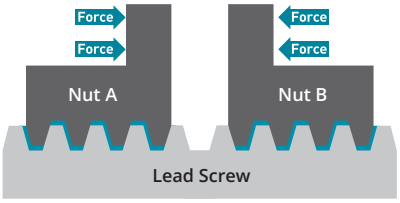
Backlash	Backlash (clearance) is the relative axial movement between a screw and a nut without rotating the screw or nut. Backlash increases with operating time. DINGS' has developed several unique methods to minimize or eliminate the clearance between a screw and a nut.
Center diameter	The center diameter is diameter of an imaginary cylindrical. The bushes of that cylinder pass through the threads with equal distances towards grooves and bosses. In an ideal product, each of these distances is equal to half of the pitch of the thread.
Helix angle	The helix angle is the angle formed by the pitch helix and the plane perpendicular to the axis.
Lead accuracy	Lead accuracy is the difference between the actual distance when traveling a lead and the theoretical lead.
Top of thread	Top of the thread.
Bottom of thread	Bottom of the thread.
Side surface	The side surface between the top and the bottom of thread.
Pitch	Pitch is the distance between the corresponding points on two adjacent threads parallel to the thread axis.
Lead	Lead is the axial distance the nut advances in one revolution of the screw. The lead is equal to the pitch multiplied by the number of thread heads. Pitch x number of heads = lead
Tooth shape angle	The flank angle is the angle between the side of the tooth and the vertical thread axis. The flank angle is sometimes referred to as the "half angle" of the thread, but this only applies when adjacent flanks have the same angle (i.e. when the thread is symmetrical).
Actual center diameter	The actual center diameter is determined by measuring the three-needle value and cotter angle in the projected profile perpendicular to the axis, and then calculating with the following formula. Three-needle value - needle diameter × (1 + 1 / sin flank angle) + 0.5 × pitch × cot flank angle = actual center diameter
Inner thread	Small diameters occur at the top of threaded teeth, while large diameters occur at the bottom of threaded teeth.
Outer thread	Small diameters occur at the bottom of threaded teeth, while large diameters occur at the top of threaded teeth.



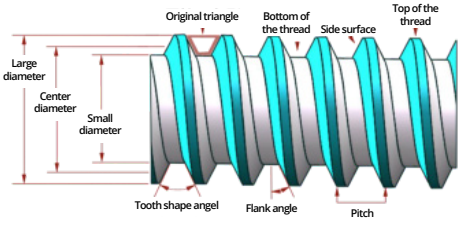
Standard nut

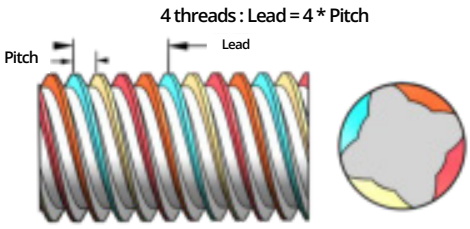


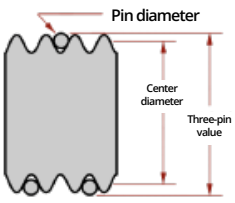
Torsional spring anti-backlash nut

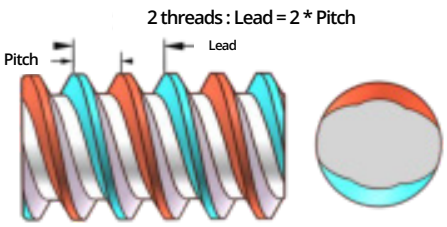


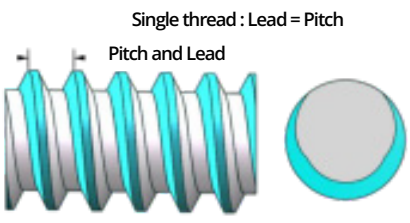
Compression spring anti-backlash nut



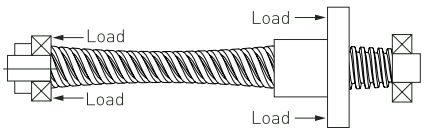
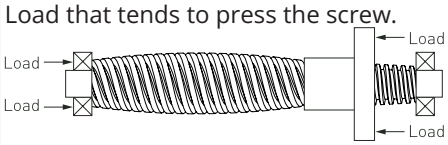
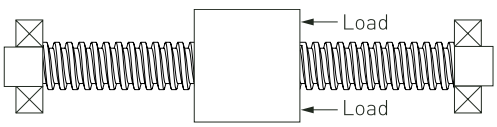
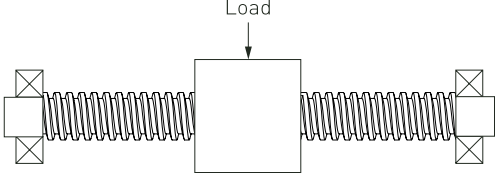








Pitch and Lead

Thread types	After more than 100 years of development, the ACME thread form replaced the square-threaded screw, which had straight sides and was difficult to manufacture and process, although it was mechanically efficient. There are three main types of ACME thread forms: universal, center and short trapezoidal. The general purpose and center type thread forms have a nominal thread depth of 0.50 x pitch and a thread angle of 29°. The trapezoidal thread form has a thread angle of 30°. High screw precision screw assemblies have an angle of 40°. Short trapezoidal threads follow the same basic design, but the thread depth is less than half the pitch. If the apex nut flank is subjected to radial loads, the large diameter of the screw will wedge into the large diameter of the nut when the nut thread flank contacts the screw thread flank. To prevent wedging, a smaller clearance and tighter tolerances are allowed between the nut's large diameter and the screw's large diameter. Note: Although lateral loads do not cause centering threads to wedge, the nut is still not suitable for lateral loads such as pulleys, drive belts, etc. Centering threads are manufactured to tighter tolerances and have less backlash on larger diameters than general purpose thread forms.
Static load	Maximum thrust load (including impact) applied to the non-moving nut assembly. The actual maximum static load may be reduced depending on the end mechanism and screw mounting hardware.
Dynamic load	The maximum recommended thrust load is applied to both the screw and the nut during movement.
PV load	Any material that carries sliding loads is limited by the heat buildup caused by friction. Factors affecting the rate of heat generation during application are the pressure on the nut in kilograms per square centimeter of contact area and the surface sliding speed in meters per minute at large diameters. The product of these factors can be used to assess the superiority of the device.
Tension load	Load that tends to stretch the screw. 
Compression load	Load that tends to press the screw. 
Axial load	A load parallel to and concentric with the axis of the screw. 
Radial load	Radial load applied to the nut. 
Rollover load	Rotate the load along the longitudinal axis of the screw toward the radius.

Lead screw components

Screw and Stepper Motor Selectio

The theoretical torque required to drive a load with a screw is :

$$\text{Driving torque} = \frac{\text{Load} * \text{Lead}}{2\pi * \text{screw efficiency}}$$

In order to properly use the above formula, the customer first needs to estimate the total axial load that must be driven by the screw system. The estimated total load should include all mass loads, acceleration loads, system friction loads and nut resistance loads. The frictional loads of the actuator or bearings and the rail system must also be considered - especially if flat bearings or bushings are used. In addition, moving parts and drag forces due to misalignment of the assembly need to be considered. Resistance Torque - Backlash nut assemblies are typically supplied with a resistance torque of 0.007Nm~0.049Nm. The amount of resistance torque depends on the standard shipment. The amount of drag torque depends on standard factory settings or customer specified settings. Generally, the higher the preset force, the better the backlash characteristics. See the Nut Details page for a description of its traction load.

Alternatively, the customer can create a table of estimated total loads at important application speeds and use the above formula to estimate the theoretical value of motor torque for each combination of screw diameter and lead wanted.

After estimating the required motor torque and determining the speed of the application, the customer can review the torque-speed graphs in the DINGS' Product Catalog and User's Guide to determine the specifications of the motor to be selected. Note that it is usually necessary to ensure that the stepper motor produces 1.5 to 2 times the thrust at all speeds at which it is operating. The 1.5 to 2 multiplier helps to compensate for variations in motor torque, friction, small misalignments, cable tray resistance, and other factors that were not taken into account when estimating the total load.

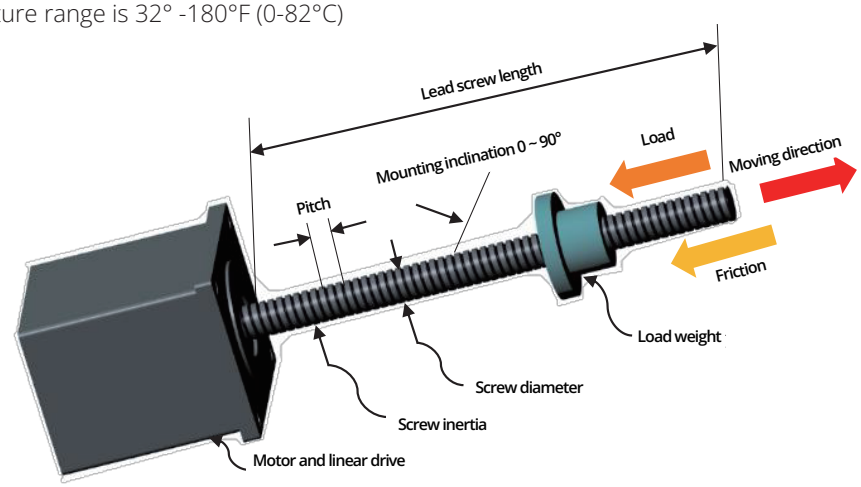
Reverse Drive of the Screw

The theoretical braking torque required to hold the load is :

$$\text{Holding torque} = \frac{\text{Load} * \text{Lead} * \text{Lead screw efficiency}}{2\pi}$$

Other Systemic Factors

The customer should also check that the 80% critical speed limit of the screw, the maximum compression column load of the screw and the PV derated nut load capacity do not exceed the charts on the following pages. Standard operating temperature range is 32° -180°F (0-82°C)

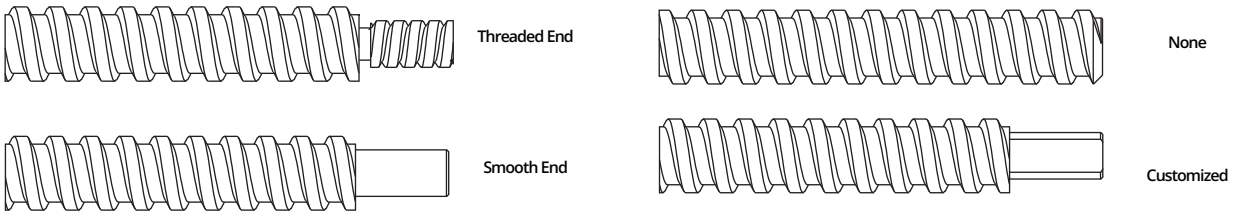


DINGS' lead screw, nut and hybrid linear actuator

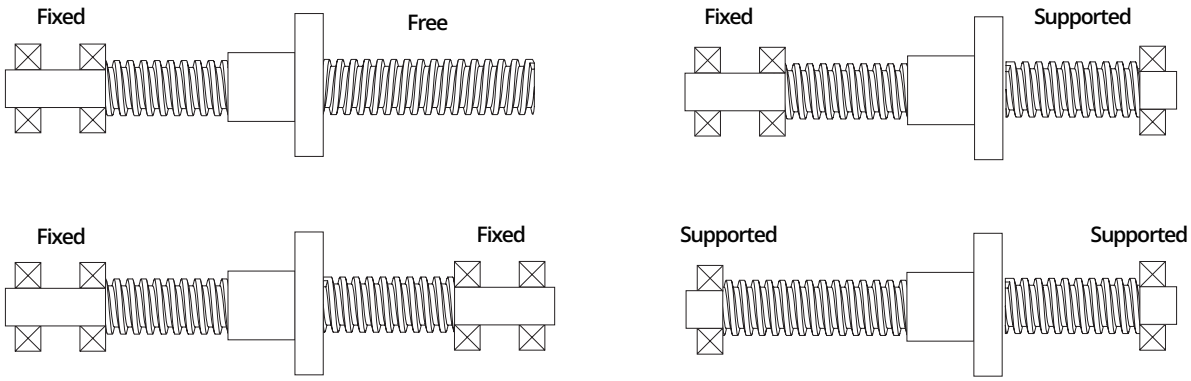
Fixed

End machining

Select the end machining specification according to the actual size of the outer diameter of the screw, and contact our technical support engineers for confirmation.



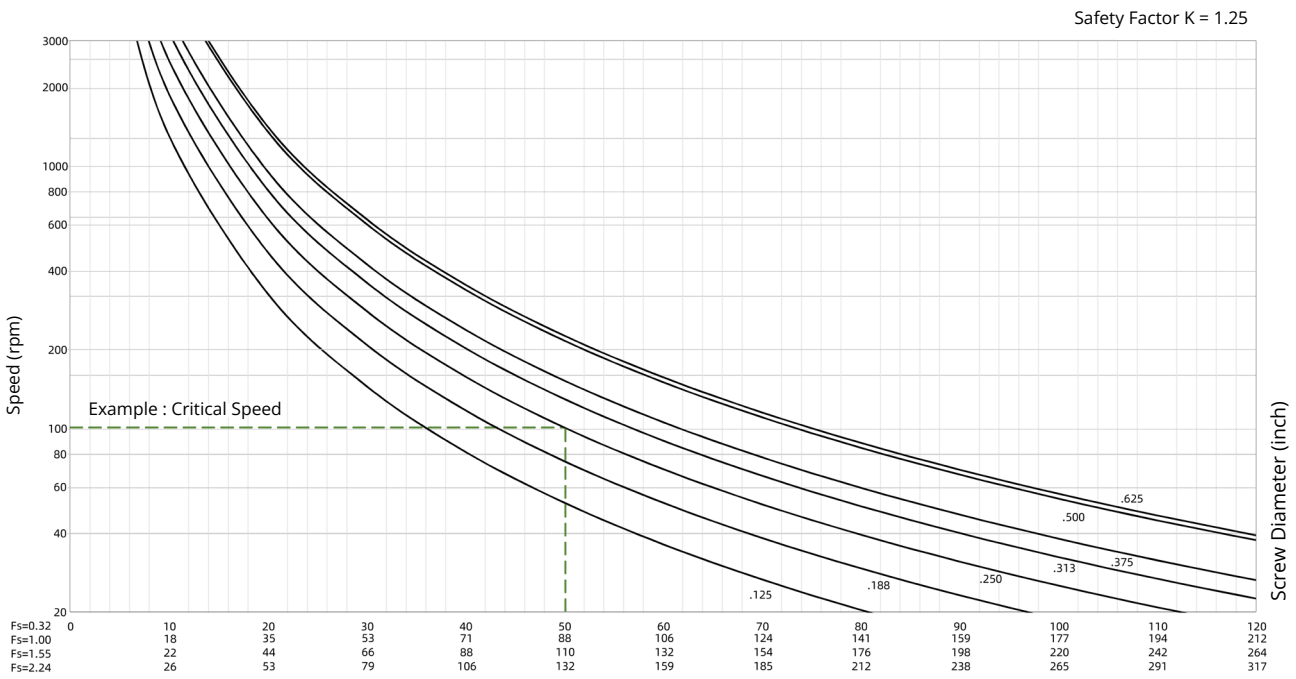
Type of end fixity



Critical speed of the screw

When customers use this chart, they need to determine the fixing method and linear speed of the screw ends, and then calculate the rotational speed based on the lead of the screw.

Note: The speed of the screw should be less than 80% of the critical speed.

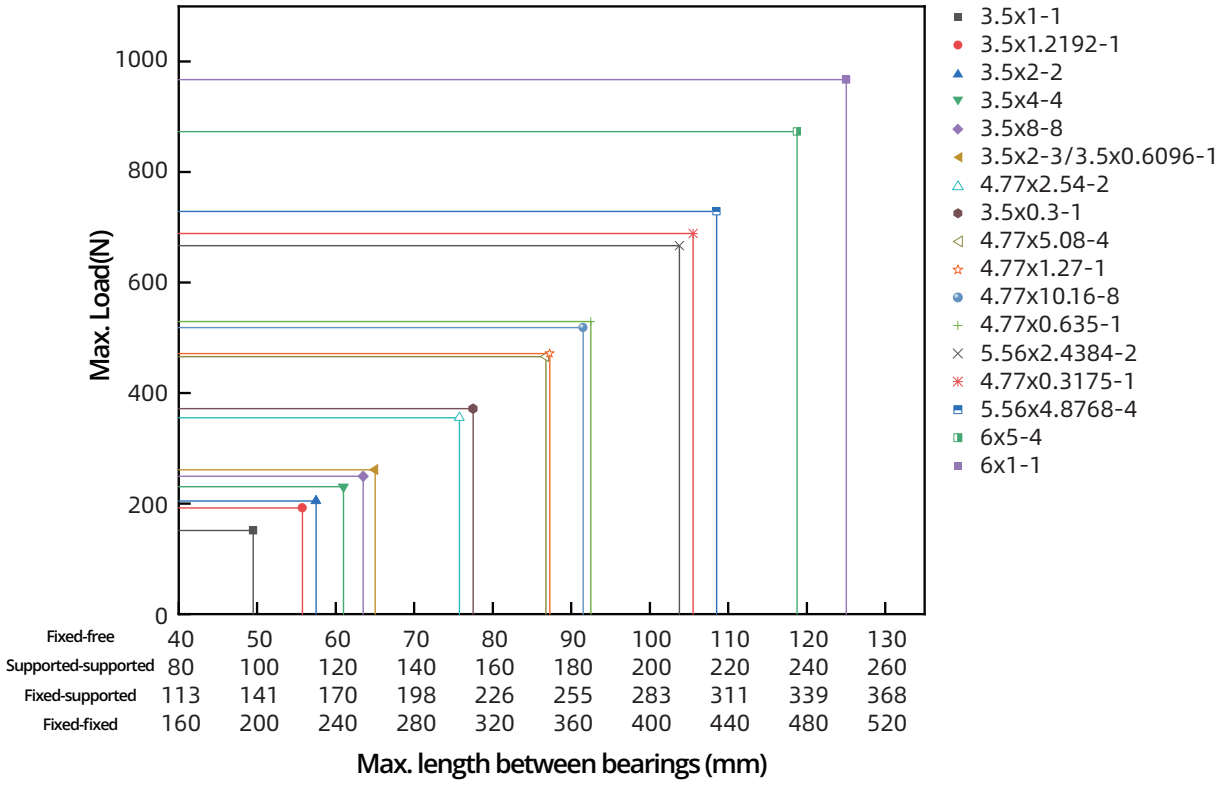


Fixed end distance adjusted according to support mode

Max. Load(N)

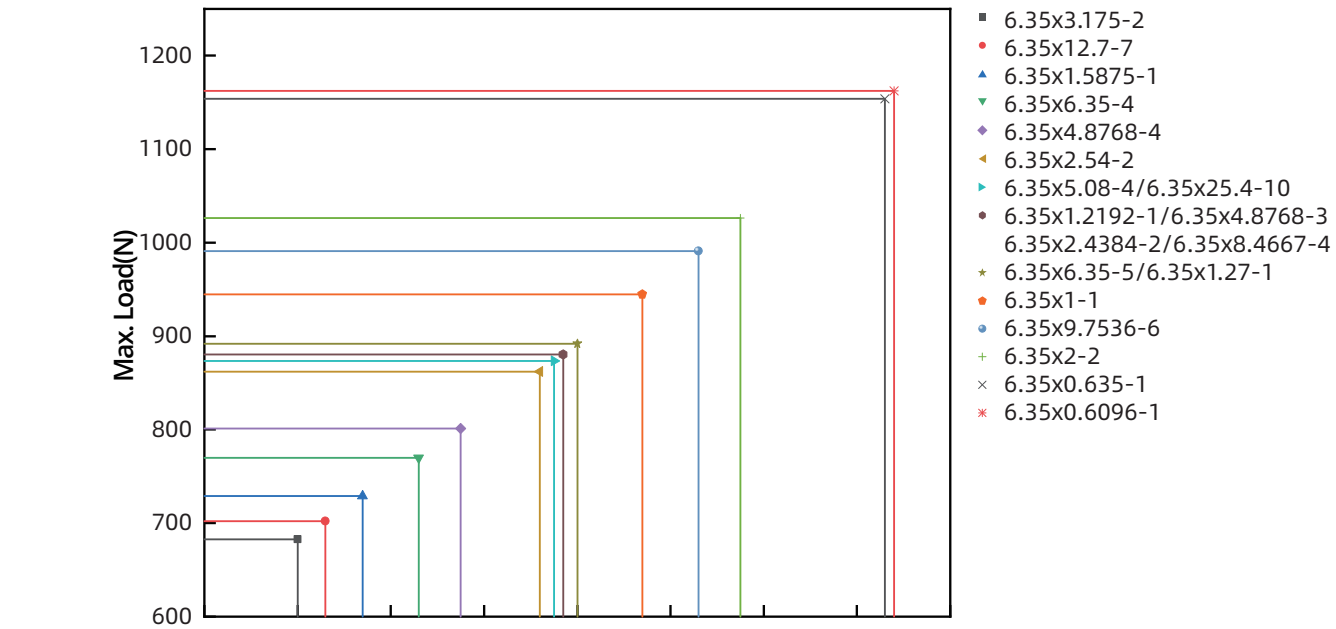
Critical load of the screw

To use this chart: first confirm the fixing method by locating the point where the maximum length between the bearing support and the trapezoidal nut intersects the maximum load, and then ensure that the selected screws are located above and to the right of this point.



Fixed-free	40	50	60	70	80	90	100	110	120	130
Supported-supported	80	100	120	140	160	180	200	220	240	260
Fixed-supported	113	141	170	198	226	255	283	311	339	368
Fixed-fixed	160	200	240	280	320	360	400	440	480	520

Max. length between bearings (mm)



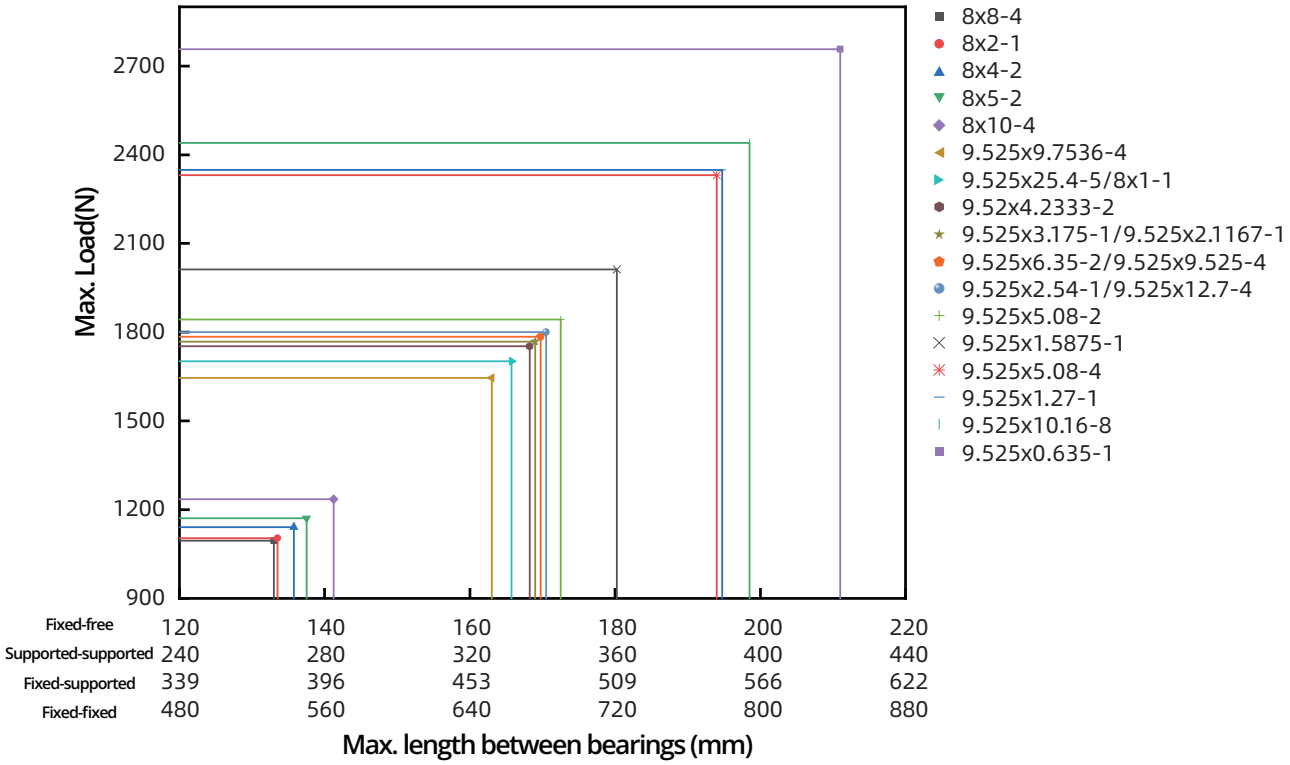
Fixed-free	100	105	110	115	120	125	130	135	140
Supported-supported	200	210	220	230	240	250	260	270	280
Fixed-supported	283	297	311	325	339	354	368	382	396
Fixed-fixed	400	420	440	460	480	500	520	540	560

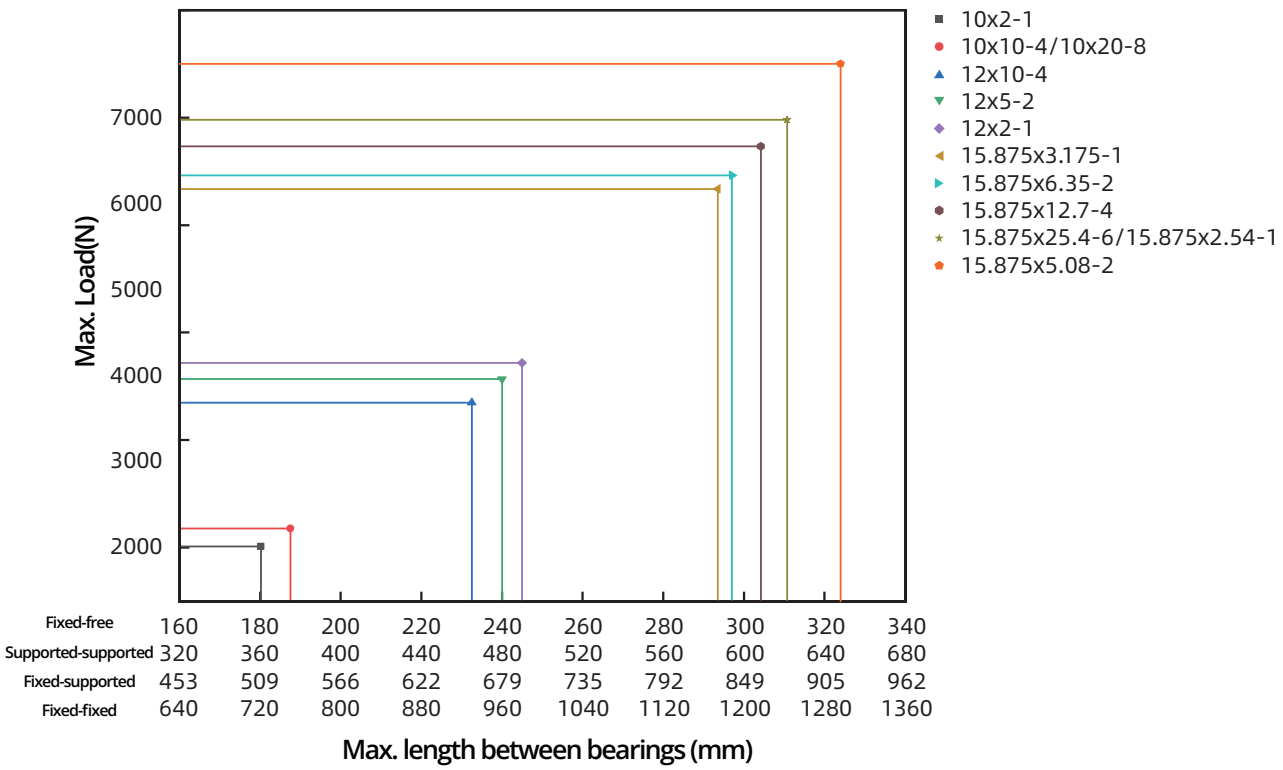
Max. length between bearings (mm)

Max. Load(N)

Critical Load of the Screw

To use this chart, first confirm the fixing method by locating the point where the maximum length between the bearing support and the trapezoidal nut intersects the maximum load, and then ensure that the selected screws are located above and to the right of this point.





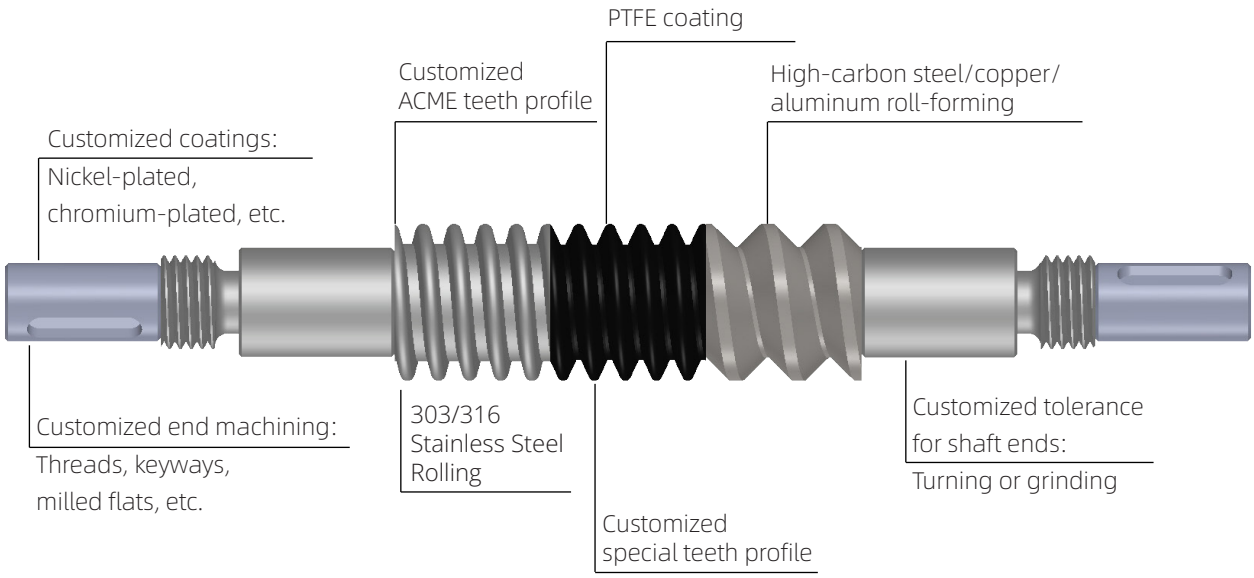
Customized screw components

Customized Nuts

DINGS' can machine nuts from a wide range of high performance engineered materials such as polyacetal, polyamide, polyphenylene sulfide, polyester or custom engineered polymers including fillers, PTFE, carbon fibers, aramid fibers, glass fibers, etc. In your R&D phase we can provide you with rapid prototyping through machining or 3D printing. In the mass production phase, if you have significant cost and design constraints, then our engineers can help you to reduce costs and optimize your design by opening molds.

Customized Screws

DINGS' manufactures world-class precision screws. Over the years, we have continuously optimized our screw design and rolling process, and we also have the ability to grind and turn screws, all in order to satisfy our customers' requirements. We have customized hundreds of non-standard screws in sizes that are not in our catalog, and we are experts in rolled screws in non-standard materials such as aluminum, copper, high carbon steel, 300 and 400 series stainless steel, etc.



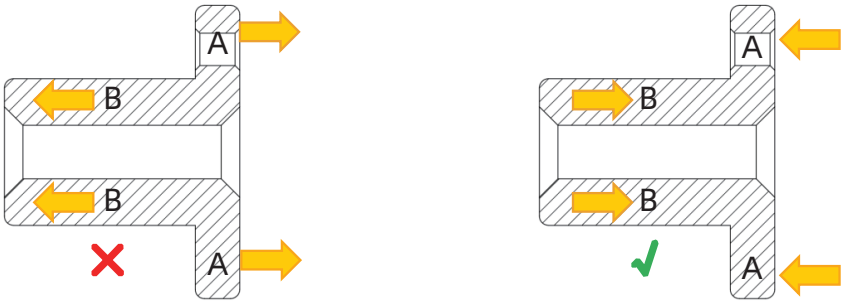
Installation and maintenance of trapezoidal screw

Mounting Screws

The screw must be carefully aligned with the aid of a measuring tool to ensure that the axis is horizontal or vertical. If no measuring tool is available, rotate the screw manually over its entire length before installing the drive unit. Unevenness of force or traces of movement on the outer diameter of the screw may result in axial deviation between the screw shaft and the guide element. In this case the corresponding fixing bolts should be loosened and the screw manually rotated again until the strength is even.

Mounting Nuts

The installation of the nut usually requires attention to coincide with the axis of the screw and is usually commissioned using the same method as for the installation of the screw. It should also be noted that the direction of the load should not attempt to separate flange A from cylinder B, as this is detrimental to the strength of the mechanism.



Lubrication

1. Lubricating oil: Not commonly used, special cases only (e.g. strict costs, short-term use, inability to get the right grease fast enough)
2. Grease: The lubrication method in common cases, will generally give a long service life. It is recommended to clean the screws before lubrication.
3. Type of grease: Bearing grease without solid lubricant or with very fine solid lubricant.

Operating Temperature

Depends on the nut material used, lubrication conditions and operating conditions. For temperatures above 100°C, please consult our engineers.

Wear and Maintenance

The lubricating frequency of the screws depend on the operating conditions :

1. Smaller loads and speeds and proper installation are generally associated with a longer service life, which is usually maintenance-free, as we simply wait for the nut to reach the end of its service life and then replace it.
2. Moderate loads and speeds usually require periodic inspection of the condition of the screw and nut. We recommend annual maintenance to remove dust from the surface of the screw and then re-grease the screw, which will prolong its service life.
3. For higher loads and speeds, we recommend that the screws be maintained every three months by cleaning the surface of the screws of dust and replenishing the grease.
4. During maintenance, the screw needs to be rotated manually, if the backlash exceeds the customer's ideal value, then the nut needs to be replaced. If the customer has no requirements for backlash, then according to DINGS' standard, the nut must be replaced when the backlash exceeds 1/3 of the pitch.

Service

We can carry out professional repair work on screws within a short period of time, either at DINGS' or at the customer's premises. This service is also available for third party products. If DINGS' has the standardized product, it can be obtained within a very short period of time.

List of Screw Specifications

Standard Diameter		Diameter Code	Lead		Lead Code	Outer Diameter (Reference)		Bottom Diameter (Reference)		Corresponding to Left-Handed Thread	Efficiency %*
Imperial (inches)	Metric (mm)		Imperial (inches)	Metric (mm)		Imperial (inches)	Metric (mm)	Imperial (inches)	Metric (mm)		
0.098	2.50	009	0.0394	1.0000	AB	0.0976	2.48	0.0780	1.98		55
9/64	3.50	014	0.0118	0.3000	AF	0.1370	3.48	0.1213	3.08	**	24
			0.0240	0.6096	AA	0.1358	3.45	0.1020	2.59	**	40
			0.0394	1.0000	AB	0.1283	3.26	0.0780	1.98	**	58
			0.0480	1.2192	B	0.1366	3.47	0.0878	2.23	**	61
			0.0787	2.0000	G	0.1370	3.48	0.0874	2.22	yes	72
			0.1575	4.0000	M	0.1366	3.47	0.0961	2.44	**	79
			0.3150	8.0000	T	0.1366	3.47	0.1000	2.54	**	81
3/16	4.77	018	0.0125	0.3175	AL	0.1882	4.78	0.1661	4.22	**	21
			0.0250	0.6350	A	0.1874	4.76	0.1457	3.70	**	33
			0.0500	1.2700	D	0.1882	4.78	0.1374	3.49	yes	58
			0.0625	1.5875	F	0.1878	4.77	0.1563	3.97	**	60
			0.1000	2.5400	K	0.1882	4.78	0.1193	3.03	**	69
			0.1920	4.8768	Q	0.1878	4.77	0.1378	3.50	**	79
			0.2000	5.0800	R	0.1874	4.76	0.1366	3.47	**	80
			0.4000	10.1600	X	0.1874	4.76	0.1441	3.66	**	82
0.24	6.00	024	0.0394	1.0000	AB	0.2354	5.9800	0.1961	4.9800	**	40
			0.0787	2.0000	G	0.2303	5.8500	0.1752	4.4500	**	59
			0.1969	5.0000	E	0.2354	5.9800	0.1862	4.7300	**	76
1/4	6.35	025	0.0240	0.6096	AA	0.2492	6.33	0.2157	5.48	**	26
			0.0250	0.6350	A	0.2500	6.35	0.2150	5.46	**	27
			0.0313	0.7940	N	0.2492	6.33	0.2106	5.35	**	32
			0.0394	1.0000	AB	0.2500	6.35	0.1945	4.94	**	37
			0.0480	1.2192	B	0.2492	6.33	0.1878	4.77	**	45
			0.0500	1.2700	D	0.2492	6.33	0.1894	4.81	**	46
			0.0625	1.5875	F	0.2469	6.27	0.1894	4.81	yes	46
			0.0960	2.4384	J	0.2496	6.34	0.1886	4.79	**	61
			0.1000	2.5400	K	0.2488	6.32	0.1886	4.79	yes	62
			0.1250	3.1750	L	0.2488	6.32	0.1669	4.24	**	67
			0.1920	4.8768	Q	0.2492	6.33	0.1791	4.55	**	76
			0.2000	5.0800	R	0.2496	6.34	0.1870	4.75	**	76
			0.2500	6.3500	S	0.2488	6.32	0.1890	4.80	**	76
			0.2500	6.3500	S	0.2488	6.32	0.1756	4.4600	**	78
			0.3333	8.4667	U	0.2492	6.33	0.1886	4.79	**	78
			0.3840	9.7536	W	0.2492	6.33	0.1992	5.06	**	78
			0.5000	12.7000	Y	0.2480	6.30	0.1677	4.26	**	82
			1.0000	25.4000	Z	0.2496	6.34	0.1870	4.75	**	84

Installation and maintenance of trapezoidal screw

Standard Diameter		Diameter Code	Lead		Lead Code	Outer Diameter (Reference)		Bottom Diameter (Reference)		Corresponding to Left-Handed Thread	Efficiency %*
Imperial (inches)	Metric (mm)		Imperial (inches)	Metric (mm)		Imperial (inches)	Metric (mm)	Imperial (inches)	Metric (mm)		
0.315	8.000	032	0.0394	1.0000	AB	0.3118	7.92	0.2638	6.70	**	34
			0.0787	2.0000	G	0.3122	7.93	0.2102	5.34	**	53
			0.1575	4.0000	M	0.3146	7.99	0.2138	5.43	**	68
			0.1969	5.0000	E	0.3142	7.98	0.2165	5.50	**	73
			0.3150	8.0000	T	0.3209	8.15	0.2087	5.30	**	80
			0.3937	10.0000	C	0.3142	7.98	0.2165	5.50	**	82
3/8	9.525	0.37	0.0250	0.6350	A	0.3740	9.50	0.3323	8.44	**	19
			0.0500	1.2700	D	0.3740	9.50	0.3067	7.79	**	36
			0.0625	1.5875	F	0.3732	9.48	0.2839	7.21	**	41
			0.0833	2.1167	H	0.3728	9.47	0.2673	6.79	**	48
			0.1000	2.5400	K	0.3732	9.48	0.2677	6.80	yes	53
			0.1250	3.1750	L	0.3728	9.47	0.2657	6.75	**	59
			0.1667	4.2333	P	0.3728	9.47	0.2650	6.73	**	61
			0.2000	5.0800	R	0.3736	9.49	0.2398	7.75	**	68
			0.2500	6.3500	S	0.3728	9.47	0.2665	6.77	**	71
			0.3750	9.5250	V	0.3736	9.49	0.2673	6.79	**	77
			0.3840	9.7536	W	0.3732	9.48	0.2567	6.52	**	77
			0.4000	10.1600	X	0.3720	9.45	0.3126	7.94	**	78
			0.5000	12.7000	Y	0.3740	9.50	0.2685	6.82	**	80
			1.0000	25.4000	Z	0.3732	9.48	0.2610	6.63	**	84
0.394	10.000	039	0.0787	2.0000	G	0.3902	9.91	0.2839	7.21	**	47
			0.3937	10.0000	C	0.3929	9.98	0.2953	7.50	**	79
			0.7874	20.0000	I	0.3929	9.98	0.2953	7.50	**	82
0.470	12.000	047	0.0787	2.0000	G	0.4717	11.98	0.3858	9.80	**	39
			0.1965	5.0000	E	0.4717	11.98	0.3780	9.60	**	60
			0.3937	10.0000	C	0.4717	11.98	0.3661	9.30	**	73
			0.5906	15.0000	CE	0.4717	11.98	0.3591	9.12	**	78
			0.9843	25.0000	IE	0.4717	11.98	0.3543	9.00	**	80
0.625	15.875	062	0.1000	2.5400	K	0.6228	15.82	0.4886	12.41	**	40
			0.1250	3.1750	L	0.6236	15.84	0.4622	11.74	**	47
			0.2000	5.0800	R	0.6205	15.76	0.5102	12.96	**	58
			0.2500	6.3500	S	0.6220	15.80	0.4677	11.88	**	63
			0.5000	12.7000	Y	0.6217	15.79	0.4791	12.17	**	74
			1.0000	25.4000	Z	0.6228	15.82	0.4894	12.43	**	80

DINGS' Precision Motion Specialist

CS Circular Flange Standard Nut

Part Number Construction

Example : L CS M1 G R - 014AB - 0150.00 - N - 001

L

Screw Type
L = Sliding Screw

001

Customization serial number

G

Screw surface Treatment
G = Standard lubrication grease
T = PTFE Coating
S = No oil, No coating
D = Non-standard customization

CS

Nut Model
S = No Nut
CS = Circular flange standard nut
CTS = Circular flange trimming standard nut
TTA = Triangle flange torsion spring anti-backlash nut
TCA = Triangle flange compression spring anti-bachlash nut
CTC = Circular flange trimming compression spring antibacklash nut
TTB = Triangle flange torsion spring anti-backlash nut
NS = Non-standard customization nut

R

Thread direction
R = Right hand thread
L = Left hand thread
C = Non-standard customization

M1

Nut material
M1 = POM Option
M2 = PBT Option
M3 = PPS Option
M4 = Bronze

N

Screw end type
M = Metric thread (P8-9)
S = Smooth end
B = Non-standard customization
N = No processing

014AB

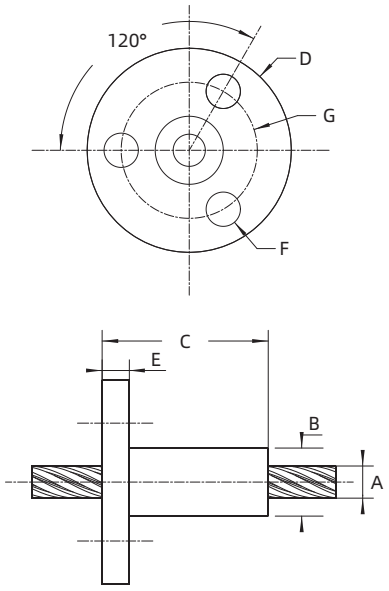
Screw standard
014 = Diameter code
AB = Lead code

For details P8-9

0150.00

Screw length
Imperial: 0000.00
Metric: 0000

Mechanical dimension



Material	Operation Temperature
POM	5℃-80℃ (41℉-176℉)
PBT	-40℃-120℃ (-40℉-248℉)
PPS	-40℃-220℃ (-40℉-428℉)

Screw diameter A mm(inch)	3.5 (9/64)	4.77 (3/16)	6 (0.24)	6.35 (1/4)	8 (0.315)	9.5 (3/8)	10 (0.394)	12 (0.47)	15.8 (0.625)
Nut diameter B mm(inch)	6.35 (0.25)	8 (0.31)	12 (0.47)	12 (0.47)	12 (0.47)	15.88 (0.63)	15.88 (0.63)	19 (0.75)	28.6 (1.13)
Nut length C mm(inch)	15.5 (0.61)	9.5 (0.37)	13.4 (0.52)	13.4 (0.52)	13.4 (0.52)	25.4 (1)	25.4 (1)	25 (0.98)	31.7 (1.25)
Flange diameter D mm(inch)	19.05 (0.75)	19.05 (0.75)	25.4 (1)	25.4 (1)	25.4 (1)	31.75 (1.25)	31.75 (1.25)	38.1 (1.5)	57.15 (2.25)
Flange thickness E mm(inch)	2.54 (0.1)	3.2 (0.126)	3.8 (0.15)	3.8 (0.15)	3.8 (0.15)	4.76 (0.19)	4.76 (0.19)	4.8 (0.19)	12.7 (0.5)
Installation hole diameter F mm(inch)	3.2 (0.126)	3.2 (0.126)	3.2 (0.126)	3.2 (0.126)	3.2 (0.126)	3.5 (0.14)	3.5 (0.14)	5.16 (0.2)	7 (0.28)
Screw hole center diameter G mm(inch)	12.7 (0.5)	12.7 (0.5)	19.05 (0.75)	19.05 (0.75)	19.05 (0.75)	22.22 (0.87)	22.22 (0.87)	28.58 (1.125)	44.45 (1.75)
Dynamic allowable load max Kg(lbs)	11 (24)	15 (33)	20 (44)	20 (44)	20 (44)	35 (75)	35 (75)	68 (149)	100 (220)
Torque max N-m(oz-in)	No torque	No torque	No torque	No torque	No torque	No torque	No torque	No torque	No torque

CTS Circular Flange Standard Nut

Part Number Construction

Example : L CTS M1 G R - 014AB – 0150.00 – N - 001

L

Screw Type
L = Sliding Screw

001

Customization serial number

G

Screw surface Treatment
G = Standard lubrication grease
T = PTFE Coating
S = No oil, No coating
D = Non-standard customization

CS

Nut Model
S = No Nut
CS = Circular flange standard nut
CTS = Circular flange trimming standard nut
TTA = Triangle flange torsion spring anti-backlash nut
TCA = Triangle flange compression spring anti-bachlash nut
CTC = Circular flange trimming compression spring antibacklash nut
TTB = Triangle flange torsion spring anti-backlash nut
NS = Non-standard customization nut

R

Thread direction
R = Right hand thread
L = Left hand thread
C = Non-standard customization

014AB

Screw standard
014 = Diameter code
AB = Lead code

For details P8-9

M1

Nut material
M1 = POM Option
M2 = PBT Option
M3 = PPS Option
M4 = Bronze

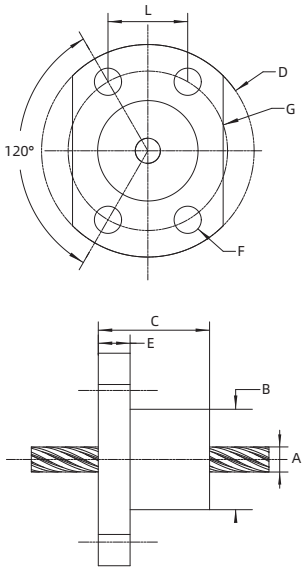
N

Screw end type
M = Metric thread (P8-9)
S = Smooth end
B = Non-standard customization
N = No processing

0150.00

Screw length
Imperial: 0000.00
Metric: 0000

Mechanical dimension



Material	Operation Temperature
POM	5℃-80℃ (41℉-176℉)
PBT	-40℃-120℃ (-40℉-248℉)
PPS	-40℃-220℃ (-40℉-428℉)

Screw diameter A mm(inch)	6 (0.24)	6.35 (1/4)	8 (0.315)	9.5 (3/8)	10 (0.394)
Nut diameter B mm(inch)	12 (0.47)	12 (0.47)	12 (0.47)	15.8 (0.62)	15.8 (0.62)
Nut length C mm(inch)	13.3 (0.52)	13.3 (0.52)	13.3 (0.52)	25.25 (0.99)	25.25 (0.99)
Flange diameter D mm(inch)	24.4 (0.96)	24.4 (0.96)	24.4 (0.96)	31.8 (1.25)	31.8 (1.25)
Flange thickness E mm(inch)	3.8 (0.15)	3.8 (0.15)	3.8 (0.15)	4.7 (0.185)	4.7 (0.185)
Installation hole diameter F mm(inch)	3.25 (0.13)	3.25 (0.13)	3.25 (0.13)	4.2 (0.165)	4.2 (0.165)
Screw hole center diameter G mm(inch)	19.05 (0.75)	19.05 (0.75)	19.05 (0.75)	22.22 (0.87)	22.22 (0.87)
Mounting hole distance L mm(inch)	9.45 (0.37)	9.45 (0.37)	9.45 (0.37)	11.05 (0.435)	11.05 (0.435)
Dynamic allowable load max Kg(lbs)	20 (44)	20 (44)	20 (44)	35 (75)	35 (75)
Torque max N-m(oz-in)	无阻力	无阻力	无阻力	无阻力	无阻力

DINGS' Precision Motion Specialist

TTA Triangle flange torsion spring anti-backlash nut A

Part Number Construction

Example : L TTA M1 G R - 014AB – 0150.00 – N - 001

L

Screw Type
L = Sliding Screw

001

Customization serial number

G

Screw surface Treatment
G = Standard lubrication grease
T = PTFE Coating
S = No oil, No coating
D = Non-standard customization

CS

Nut Model
S = No Nut
CS = Circular flange standard nut
CTS = Circular flange trimming standard nut
TTA = Triangle flange torsion spring anti-backlash nut
TCA = Triangle flange compression spring anti-bachlash nut
CTC = Circular flange trimming compression spring antibacklash nut
TTB = Triangle flange torsion spring anti-backlash nut
NS = Non-standard customization nut

R

Thread direction
R = Right hand thread
L = Left hand thread
C = Non-standard customization

M1

Nut material
M1 = POM Option
M2 = PBT Option
M3 = PPS Option
M4 = Bronze

N

Screw end type
M = Metric thread (P8-9)
S = Smooth end
B = Non-standard customization
N = No processing

014AB

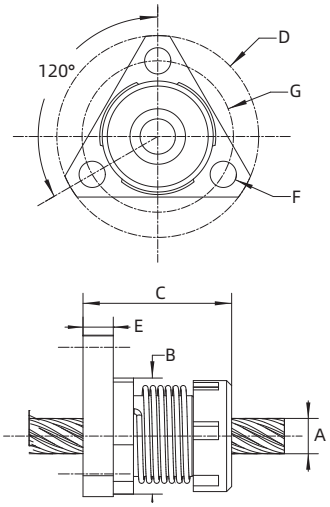
Screw standard
014 = Diameter code
AB = Lead code

For details P8-9

0150.00

Screw length
Imperial: 0000.00
Metric: 0000

Mechanical dimension



Material	Operation Temperature
POM	5℃-80℃ (41℉-176℉)
PA66	-5℃-100℃ (-23℉-212℉)

Screw diameter A mm(inch)	3.5 (9/64)	4.77(3/16)
Nut diameter B mm(inch)	11.5 (0.45)	11.5 (0.45)
Nut length C mm(inch)	14.5 (0.57)	14.5 (0.58)
Flange diameter D mm(inch)	20 (0.79)	20 (0.79)
Flange thickness E mm(inch)	3 (0.12)	3 (0.12)
Installation hole diameter F mm(inch)	2.6 (0.1)	2.6 (0.1)
Screw hole center diameter G mm(inch)	15 (0.59)	15 (0.59)
Dynamic allowable load max Kg(lbs)	2.3 (5)	2.3 (5)
Torque max N-m(oz-in)	0.004 (0.5)	0.004 (0.5)

TC Triangle flange compression spring anti-backlash nut

Part Number Construction

Example : L TC M1 G R - 014AB – 0150.00 – N - 001

L

Screw Type
L = Sliding Screw

001

Customization serial number

G

Screw surface Treatment
G = Standard lubrication grease
T = PTFE Coating
S = No oil, No coating
D = Non-standard customization

CS

Nut Model
S = No Nut
CS = Circular flange standard nut
CTS = Circular flange trimming standard nut
TTA = Triangle flange torsion spring anti-backlash nut
TCA = Triangle flange compression spring anti-bachlash nut
CTC = Circular flange trimming compression spring antibacklash nut
TTB = Triangle flange torsion spring anti-backlash nut
NS = Non-standard customization nut

R

Thread direction
R = Right hand thread
L = Left hand thread
C = Non-standard customization

M1

Nut material
M1 = POM Option
M2 = PBT Option
M3 = PPS Option
M4 = Bronze

N

Screw end type
M = Metric thread (P8-9)
S = Smooth end
B = Non-standard customization
N = No processing

014AB

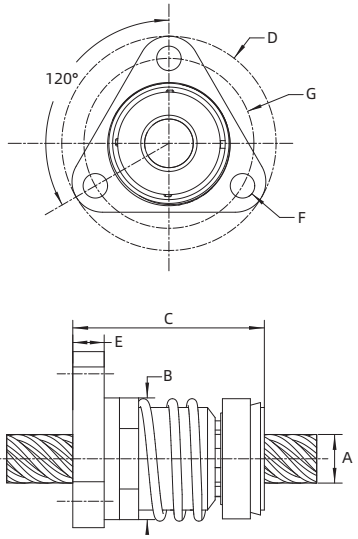
Screw standard
014 = Diameter code
AB = Lead code

For details P8-9

0150.00

Screw length
Imperial: 0000.00
Metric: 0000

Mechanical dimension



Material	Operation Temperature
POM	5℃-80℃ (41℉-176℉)
PA66	-5℃-100℃ (-23℉-212℉)

Screw diameter A mm(inch)	6 (0.24)	6.35 (1/4)	8 (0.315)	9.5 (3/8)	10 (0.394)
Nut diameter B mm(inch)	15.9 (0.625)	15.9 (0.625)	15.9 (0.625)	19.15 (0.75)	19.15 (0.75)
Nut length C mm(inch)	25 (0.98)	25 (0.98)	25 (0.98)	30 (1.18)	30 (1.18)
Flange diameter D mm(inch)	28 (1.1)	28 (1.1)	28 (1.1)	38.3 (1.5)	38.3 (1.5)
Flange thickness E mm(inch)	4.1 (0.16)	4.1 (0.16)	4.1 (0.16)	5.15 (0.2)	5.15 (0.2)
Installation hole diameter F mm(inch)	3.2 (0.126)	3.2 (0.126)	3.2 (0.126)	5.1 (0.2)	5.1 (0.2)
Screw hole center diameter G mm(inch)	22.22 (0.87)	22.22 (0.87)	22.22 (0.87)	28.4 (1.12)	28.4 (1.12)
Dynamic allowable load max Kg(lbs)	2.3 (5)	2.3 (5)	3.6 (8)	3.6 (8)	3.6 (8)
Torque max N-m(oz-in)	0.03 (4)	0.03 (4)	0.04 (5)	0.04 (5)	0.04 (5)

DINGS' Precision Motion Specialist

CTS Circular flange trimming standard nut

Part Number Construction

Example : L CTC M1 G R - 014AB – 0150.00 – N - 001

L

Screw Type
L = Sliding Screw

001

Customization serial number

G

Screw surface Treatment
G = Standard lubrication grease
T = PTFE Coating
S = No oil, No coating
D = Non-standard customization

CS

Nut Model
S = No Nut
CS = Circular flange standard nut
CTS = Circular flange trimming standard nut
TTA = Triangle flange torsion spring anti-backlash nut
TCA = Triangle flange compression spring anti-bachlash nut
CTC = Circular flange trimming compression spring antibacklash nut
TTB = Triangle flange torsion spring anti-backlash nut
NS = Non-standard customization nut

R

Thread direction
R = Right hand thread
L = Left hand thread
C = Non-standard customization

014AB

Screw standard
014 = Diameter code
AB = Lead code

For details P8-9

M1

Nut material
M1 = POM Option
M2 = PBT Option
M3 = PPS Option
M4 = Bronze

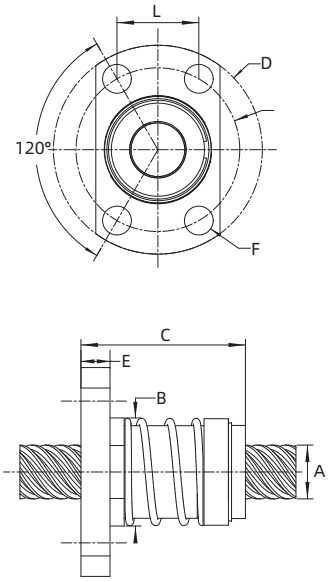
N

Screw end type
M = Metric thread (P8-9)
S = Smooth end
B = Non-standard customization
N = No processing

0150.00

Screw length
Imperial: 0000.00
Metric: 0000

Mechanical dimension



Material	Operation Temperature
POM	5℃-80℃ (41℉-176℉)
PA66	-5℃-100℃ (-23℉-212℉)

Screw diameter A mm(inch)	6 (0.24)	6.35 (1/4)	8 (0.315)	9.5 (3/8)	10 (0.394)
Nut diameter B mm(inch)	15.9 (0.625)	15.9 (0.625)	15.9 (0.625)	19.15 (0.75)	19.15 (0.75)
Nut length C mm(inch)	25 (0.98)	25 (0.98)	25 (0.98)	30 (1.18)	30 (1.18)
Flange diameter D mm(inch)	31 (1.22)	31 (1.22)	31 (1.22)	37 (1.46)	37 (1.46)
Flange thickness E mm(inch)	4.1 (0.16)	4.1 (0.16)	4.1 (0.16)	5.15 (0.20)	5.15 (0.20)
Installation hole diameter F mm(inch)	3.2 (0.126)	3.2 (0.126)	3.2 (0.126)	5.1 (0.2)	5.1 (0.2)
Screw hole center diameter G mm(inch)	25 (0.98)	25 (0.98)	25 (0.98)	29 (1.14)	29 (1.14)
Mounting hole distance L mm(inch)	12.5 (0.49)	12.5 (0.49)	12.5 (0.49)	14.5 (0.57)	14.5 (0.57)
Dynamic allowable load max Kg(lbs)	2.3 (5)	2.3 (5)	3.6 (8)	3.6 (8)	3.6 (8)
Torque max N-m(oz-in)	0.03 (4)	0.03 (4)	0.04 (5)	0.04 (5)	0.04 (5)

TTB Triangle flange torsion spring anti-backlash nut B

Part Number Construction

Example : L TTB M1 G R - 014AB – 0150.00 – N - 001

L
Screw Type
L = Sliding Screw

001
Customization serial number

G
Screw surface Treatment
G = Standard lubrication grease
T = PTFE Coating
S = No oil, No coating
D = Non-standard customization

CS
Nut Model
S = No Nut
CS = Circular flange standard nut
CTS = Circular flange trimming standard nut
TTA = Triangle flange torsion spring anti-backlash nut
TCA = Triangle flange compression spring anti-bachlash nut
CTC = Circular flange trimming compression spring antibacklash nut
TTB = Triangle flange torsion spring anti-backlash nut
NS = Non-standard customization nut

R
Thread direction
R = Right hand thread
L = Left hand thread
C = Non-standard customization

M1
Nut material
M1 = POM Option
M2 = PBT Option
M3 = PPS Option
M4 = Bronze

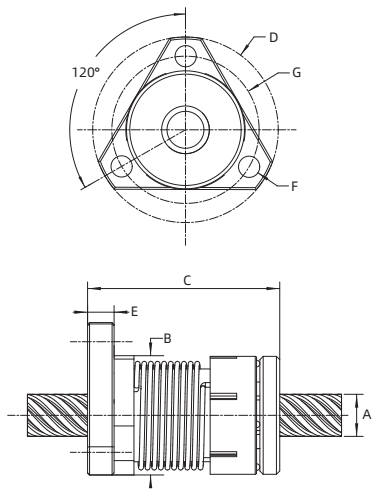
N
Screw end type
M = Metric thread (P8-9)
S = Smooth end
B = Non-standard customization
N = No processing

014AB
Screw standard
014 = Diameter code
AB = Lead code

For details P8-9

0150.00
Screw length
Imperial: 0000.00
Metric: 0000

Mechanical dimension



Material	Operation Temperature
POM	5℃-80℃ (41℉-176℉)
PBT	-40℃-120℃ (-40℉-248℉)
PPS	-40℃-220℃ (-40℉-428℉)

Screw diameter A mm(inch)	6 (0.24)"	6.35 (1/4)"	8 (0.315)	9.5 (3/8)	10 (0.394)
Nut diameter B mm(inch)	18 (0.7)	18 (0.7)	18 (0.7)	20 (0.79)	20 (0.79)
Nut length C mm(inch)	30 (1.18)	30 (1.18)	30 (1.18)	40 (1.57)	40 (1.57)
Flange diameter D mm(inch)	28 (1.1)	28 (1.1)	28 (1.1)	38.1 (1.5)	38.1 (1.5)
Flange thickness E mm(inch)	4 (0.157)	4 (0.157)	4 (0.157)	7 (0.276)	7 (0.276)
Installation hole diameter F mm(inch)	3.2 (0.126)	3.2 (0.126)	3.2 (0.126)	5.1 (0.2)	5.1 (0.2)
Screw hole center diameter G mm(inch)	22.22 (0.87)	22.22 (0.87)	22.22 (0.87)	28.6 (1.125)	28.6 (1.125)
Dynamic allowable load max Kg(lbs)	5 (11)	5 (11)	10 (20)	10 (20)	10 (20)
Torque max N-m(oz-in)	0.004-0.014 (0.5-2)	0.004-0.014 (0.5-2)	0.007-0.020 (1-3)	0.007-0.020 (1-3)	0.007-0.020 (1-3)

DINGS'

Precision Motion Specialist

Headquarter „ CHINA

Jiangsu DINGS' Intelligent Control Technology Co., LTD

Building 1#, 355 Longjin Road, Changzhou Economic Development Zone, Jiangsu, China

Phone : +86-519-85177825
Fax : +86-519-85177807
E-mail : info@dingsmotion.com
www.dingsmotion.com

Shenzhen Office

Room 1105, Block C, CIMC industry demonstation park, Qiaoming Road, Guangming district, Shenzhen City

E-mail : info@dingsmotion.com

UK & Ireland Official Distributor

Motion Control Products Ltd.

11-15 Francis Avenue
Bournemouth
Dorset, UK, BH11 8NX
Tel.: +44 (0)1202 599922
enquiries@motioncontrolproducts.com
www.motioncontrolproducts.com

www.dingsmotion.com