

Lead Screw Assemblies

HELIXTM
LINEAR TECHNOLOGIES

Partners



Certifications



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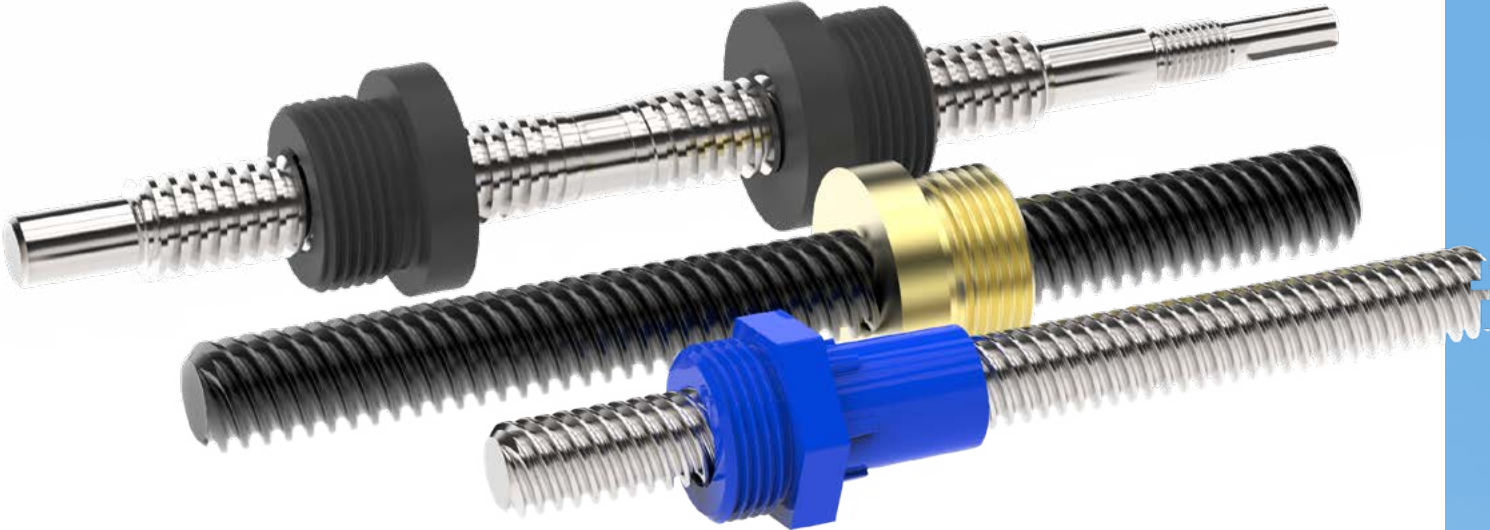
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Helix Linear Technologies, Inc., Beachwood, Ohio USA

Company

Helix Linear Technologies is a global supplier in the medical device, life science, security, semiconductor, aerospace, electromechanical, and defense industries. Leading the linear motion industry by manufacturing the highest quality linear actuation solutions in the world, we focus on helping our customers be productive and profitable. Our innovative product design solves real-world linear motion issues and builds a foundation for long term success.

Culture

Our culture is rooted in teamwork and consists of smart, happy, and competitive professionals focused on manufacturing innovative products and delivering precise electromechanical linear motion solutions. We are in the people business, as well as the product business. Our talented employees make and sell our products, and our extraordinary scope of teamwork keeps our company healthy.

History

Helix Linear Technologies was founded in 2011 to meet the demand for high-quality lead screws in the growing electromechanical actuation industry. Our rapid growth has included the addition of end-to-end linear actuator solutions, providing integrated solutions.

Linear Motion

Lead Screw Assemblies

Introduction

Lead screws are the most commonly used drivers of linear motion systems. They consist of a threaded shaft (screw) and an internally threaded nut.

Building a screw assembly

The selection of the correct lead screw and nut for an application involves four interrelated factors. Before attempting to determine the lead screw and nut combination, the following values must be known:

- Axial load
- Speed
- Length
- End fixity type *(see page 19)*

Speed

The linear speed (or travel rate) is calculated by the lead of the screw, multiplied by the rotations per minute of the screw or nut.

Length

The unsupported length of the screw.

Torque

The required motor torque to drive a lead screw assembly is the sum of three components: inertial torque, drag torque, and torque-to-move load. It must be noted that this is the torque necessary to drive the lead screw assembly alone. Additional torque when driving frictional bearings, motor shafts, moving components and drag due to general assembly misalignment must also be considered.

Inertial Torque

$$T_j = I\alpha$$

Where:
I = screw inertia
α = angular acceleration

Drag Torque: Helix anti-backlash assemblies are typically supplied with drag torque of 1 to 7 oz.-in. The magnitude of the drag torque is dependent on the standard factory settings or settings specified by the customer. Generally, the higher the preset force the higher the drag torque.

Torque-To-Move Load

$$T_L = \frac{\text{Load} \times \text{Lead}}{2\pi \times \text{Efficiency}}$$

Screw diameter		Screw inertia	
in	mm	oz-in-sec ² /in	g-cm ² /cm
.078	2	4.29×10 ⁻⁰⁸	1.26×10 ⁻⁰³
.125	3.2	2.83×10 ⁻⁰⁷	6.36×10 ⁻⁰³
.188	4.8	1.45×10 ⁻⁰⁶	2.01×10 ⁻⁰²
.220	5.5	2.67×10 ⁻⁰⁶	4.93×10 ⁻⁰²
.250	6.4	4.53×10 ⁻⁰⁶	0.10
.313	8.0	1.11×10 ⁻⁰⁵	0.32
.375	9.5	2.29×10 ⁻⁰⁵	0.79
.438	11.1	4.26×10 ⁻⁰⁵	1.15
.500	12.7	7.24×10 ⁻⁰⁵	2.24
.563	14.3	1.16×10 ⁻⁰⁴	3.02
.625	15.9	1.77×10 ⁻⁰⁴	5.15
.688	17.5	2.60×10 ⁻⁰⁴	8.24
.750	19.1	3.67×10 ⁻⁰⁴	10.24
.875	22.2	6.79×10 ⁻⁰⁴	18.40
1.000	25.4	1.16×10 ⁻⁰³	32.69

Linear Motion

Transporting a Load

Types of Loads

Loads that need to be considered are the static loads, dynamic loads, reaction forces, and any external forces affecting the screw.

Static Load: The maximum thrust load: including shock: that should be applied to a non-moving nut assembly. Actual maximum static load may be reduced based on end machining and screw mounting hardware.

Dynamic Load: The maximum recommended thrust load which should be applied to the lead screw and nut assembly while in motion. Calculated as the load at which the screw-nut pairing will survive 10^6 revolutions.

PV Load: Any material which carries a sliding load is limited by heat buildup caused by friction. The factors that affect heat generation rate in an application are the pressure on the nut in pounds per square inch of contact area and the surface velocity in feet per minute at the major diameter. The product of these factors provides a measure of the severity of an application.

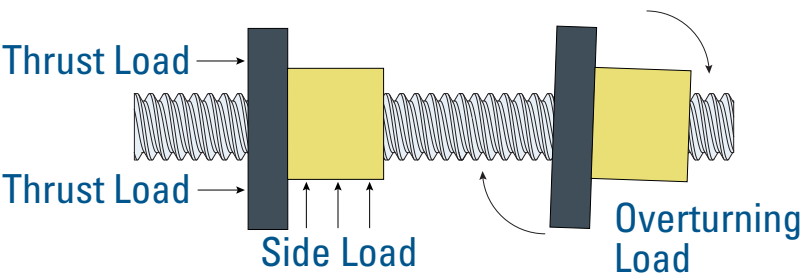
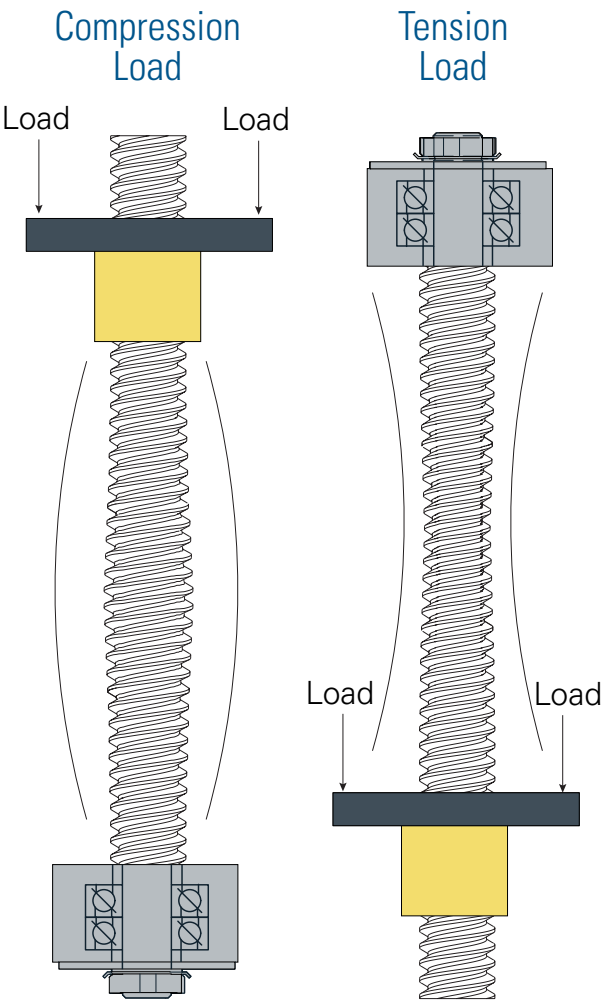
Tension Load: A load that tends to “stretch” the screw.

Compression Load: A load that tends to “squeeze” the screw.

Thrust Load: A load parallel to and concentric with the axis of the screw.

Overturning Load: A load that tends to rotate the nut radially around the longitudinal axis of the screw.

Side Load: A load that is applied radially to the nut.



Linear Motion

Thread Forms

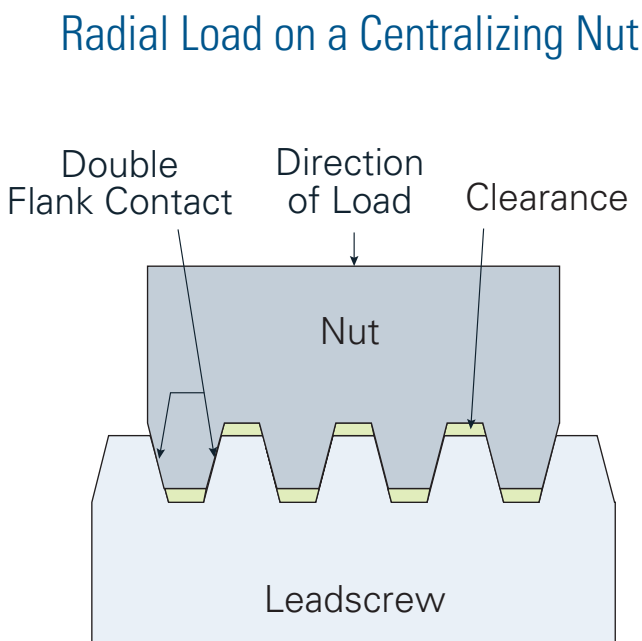
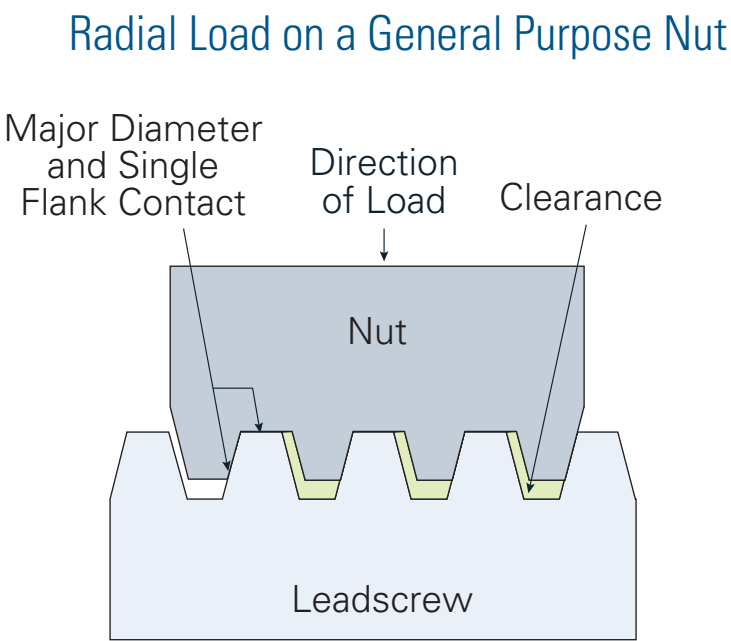
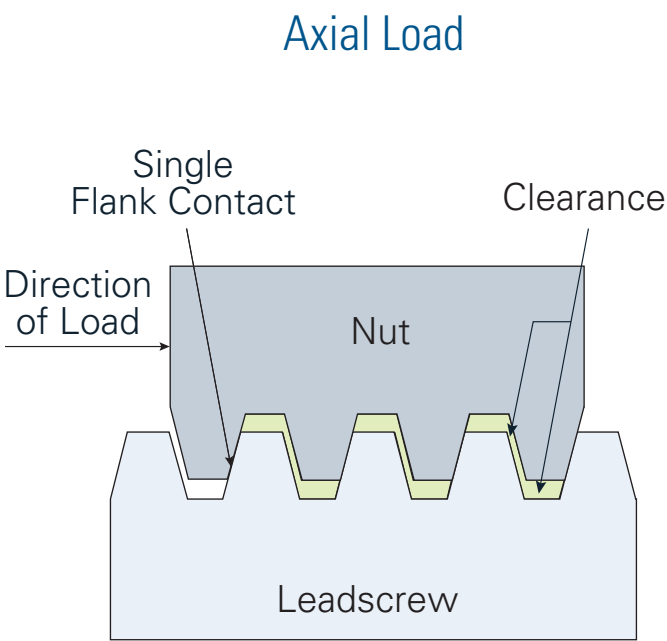
The acme thread form, established over 100 years ago, replaced square thread screws, which had straight-sided flanks and were difficult to manufacture.

There are three main classes of acme thread forms: general purpose (G), centralizing (C), and stub acme. The General Purpose and Centralizing thread forms have a nominal depth of thread of $0.50 \times \text{pitch}$ and have a 29° included thread angle. Compared to general-purpose thread forms, centralizing threads are manufactured with tighter tolerances and reduced clearance on the major diameter.

Stub acme threads follow the same basic design, but have a thread depth less than one half the pitch.

If an acme nut is side loaded with a radial load, a “G” class will “wedge” when the nut thread flanks come in contact with the screw thread flanks. To prevent wedging, less clearance and tighter tolerances are allowed between the major diameter of the nut and the major diameter of the screw.

CAUTION: Although a side load will not cause a centralizing thread to wedge, the nut is not designed to operate with a side load such as a pulley, drive belt, etc.



Lead Screws

Elements of a Screw

Definitions

Major Diameter: The outside diameter of the screw. Sometimes called Land Diameter.

Minor Diameter: The diameter of the screw measured at the bottom of the thread. Sometimes called Root Diameter.

Pitch Diameter: The diameter at which the thread thickness is equal to the space between threads. On a lead screw, this diameter is approximately halfway between the land diameter and the root diameter.

Pitch: The axial distance between threads. Pitch is equal to the lead in a single start screw.

Lead: The axial distance the nut advances in one evolution of the screw. The lead is equal to the pitch times the number of starts.

$$\text{Lead} = \text{Pitch} \times \text{Starts}$$

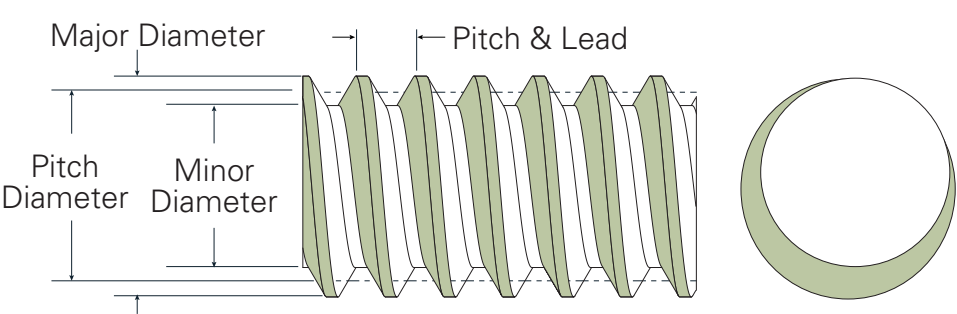
NOTE: Helix precision lead screw designations reference nominal diameter and lead. For example: 250125 screws advance 0.125" in one revolution and require eight turns for one inch of travel. A 250125 screw has 2 starts and a 0.062" pitch.

$$.062'' \text{ pitch} \times 2 \text{ starts} = .125'' \text{ lead}$$

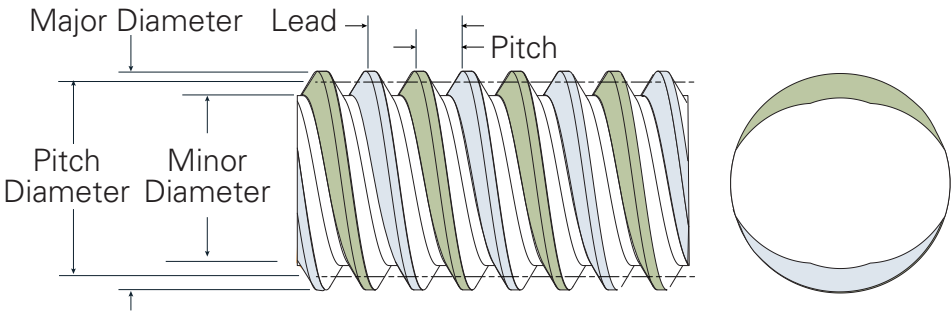
Lead Accuracy: Lead accuracy is the difference between the actual distance traveled versus the theoretical distance traveled based on lead. For example: a screw with a .500 inch lead and .0003 in/in lead accuracy rotated 24 times, theoretically moves the nut 12 inches (24 revolutions \times .500 inches per revolution = 12.000 inches of travel). With a lead accuracy of .0003 in/in, actual travel could be from 11.996 to 12.004 inches.

Screw Starts: The number of independent threads on the screw shaft; example one, two or four.

Single Start



Double Start



Four Start

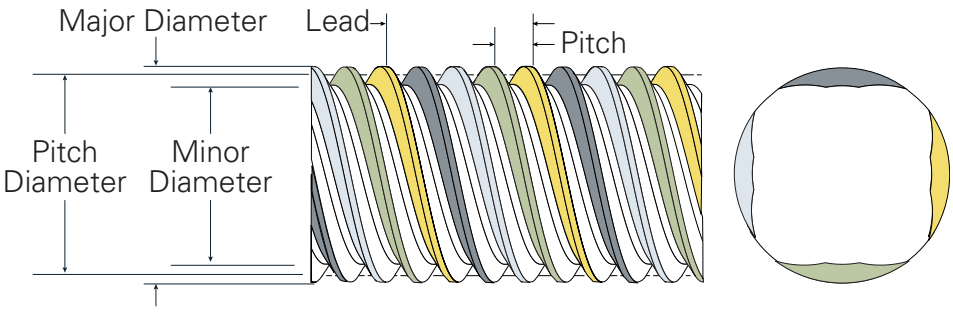


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Order Now

Lead Screws

Manufacturing Methods

Helix Linear Technologies manufactures precision lead screws by thread rolling, thread whirling, or thread grinding, featuring centralizing and custom thread forms for smooth, no-wedging performance.

Thread Rolling

Helix Linear Technologies offers the largest selection of rolled lead screw sizes in the industry. Rolled thread screws are precise, cost effective, and are stocked for quick delivery.

Thread Grinding

Ground thread screws offer higher lead accuracy for applications where positioning tolerances are extremely critical.

Thread Whirling

Thread whirling with Helix Linear Technologies results in increased productivity and design flexibility.

Screw Type	Material	Thread Class	Lead Accuracy	Screw Dia.	Screw Lengths	Minimum Hardness	Tensile Strength
Rolled	Alloy	2C or Stub	± .0003 in/in	.125" to 2"		200 Brinell	95,000 psi
	Stainless	2C or Stub	± .0003 in/in	.125" to 1.5"		170 Brinell	85,000 psi
Ground	Alloy	2C, 3C, 3G, 4C, 4G	± .0005 in/ft	.25" to 2"	up to 19"	200 Brinell	95,000 psi
	Stainless	2C, 2G, 3C, 4G	± .0005 in/ft	.25" to 4"	up to 19"	170 Brinell	85,000 psi

Lead Screws

Design Considerations

Straightness: Although Helix precision lead screws are manufactured from straight, cylindrical material, internal stresses may cause the material to bend. When ordering random lengths or cut material without end machining, straightening is recommended. Handling or machining of screws can also cause the material to bend. Before, during and after machining, additional straightening is required. When ordering screws with machined ends from Helix Linear Technologies, the following straightness tolerances can be expected:

Helix precision rolled and milled lead screws are straight within 0.010 inch/foot and will not exceed 0.030 inch in any 6-foot section when shipped from the factory.

Helix precision ground lead screws are straight within 0.001 inch/foot when shipped from the factory. If tighter straightness tolerances are required, contact Helix customer service.

Life: Helix precision lead screws are manufactured from high quality materials with excellent dynamic properties. Because of the variable effects of friction, lubrication and cleanliness, a specific life cannot be predicted. Proper lubrication, regular maintenance, and operation within specified limits will extend the life of lead screws.

Efficiency: Efficiency of Helix precision lead screw assemblies range from 15% to 85%. These efficiencies are dependent upon nut material, lubrication, lead and thread form. The efficiencies for each assembly are listed on the following pages.

Back driving: Normally, lead screws are used to convert rotary motion into linear motion. Back driving is the result of the load pushing axially on the screw or nut to create rotary motion. Generally, a nut with efficiency greater than 50% will have a tendency to back drive. If a self-locking assembly is required, select a nut with efficiency below 35%.

CAUTION: Vibration can cause any lead screw assembly to creep or back drive. When using lead screws, applications should be analyzed to determine the necessity of a brake, especially when the possibility of injury may occur.

Lead Screws

Critical Speed

Once the load, speed, length and end fixity are identified, the next factor to consider is the critical speed. The speed that excites the natural frequency of the screw is referred to as the critical speed. Resonance at the natural frequency of the screw will occur regardless of the screw orientation (vertical, horizontal etc.) or if the system is designed so the nut rotates about the screw. The critical speed will vary with the diameter, unsupported length, end fixity and rpm. Since critical speed can also be affected by shaft straightness and assembly alignment, it is recommended that the maximum speed be limited to 80% of the calculated critical speed. The theoretical formula to calculate critical speed in rpm is:

$$N = \frac{C_s \times 4.76 \times 10^6 \times d}{L^2}$$

Where:

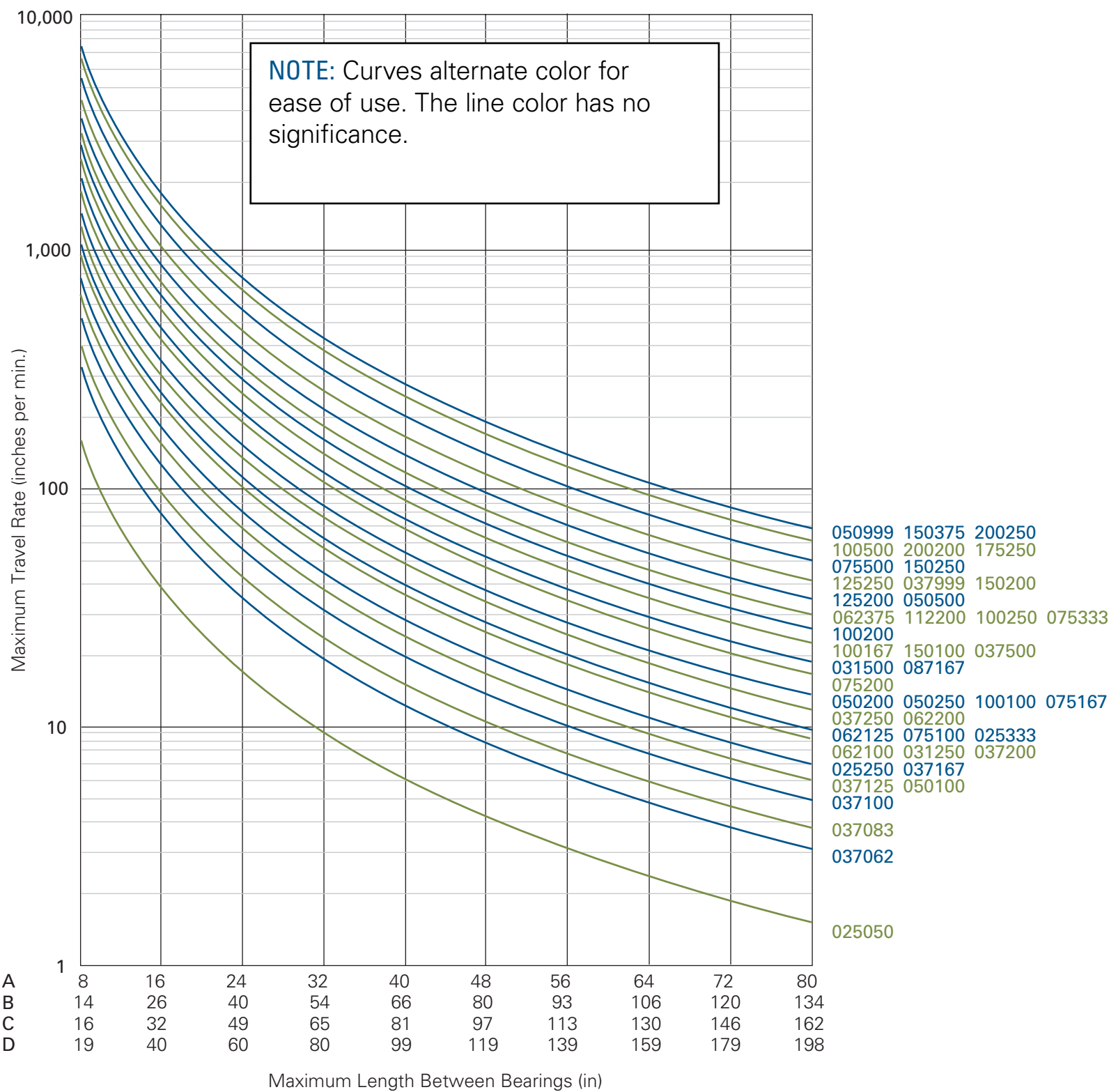
- N = Critical Speed (rpm)
- d = Root Diameter of Screw (inch)
- L = Length Between Bearing Supports (inch)
- C_s = 0.36 for fixed/free, 1.00 for simple/simple, 1.47 for fixed/simple, 2.23 for fixed/fixed

If the selected lead screw does not meet critical speed criteria, consider the following options:

- Increase screw lead and reduce rpm
- Change end fixity (e.g. simple to fixed)
- Increase screw diameter

To Use This Chart: Determine maximum travel rate required. Determine screw length L. Find point at which travel rate and screw length intersect and select a screw above and to the right of that point.

Speed indicated by curves are 80% of theoretical critical speed. See [page 19](#) for reference description on A-B-C-D end fixity.



Lead Screws

Column Strength

When a screw is loaded in compression (see compression load definition on [page 5](#)), its limit of elastic stability can be exceeded and the screw will fail through bending or buckling. The theoretical formula to calculate the column strength in pounds is:

$$P_{cr} = \frac{14.03 \times 10^6 \times F_c \times d^4}{L^2}$$

Where:

- P_{cr} = Maximum Load (lb.)
- F_c = End Fixity Factor- 0.25 for fixed/free, 1.00 for simple/simple, 2.00 for simple/fixed, 4.00 for fixed/fixed
- d = Minor diameter of screw (in inches)
- L = Distance between nut and load carrying bearing (in inches)

If the selected screw does not meet compression load criteria, consider changing end fixity (e.g. simple to fixed), designing your applications to use the screw in tension, or using a larger diameter screw.

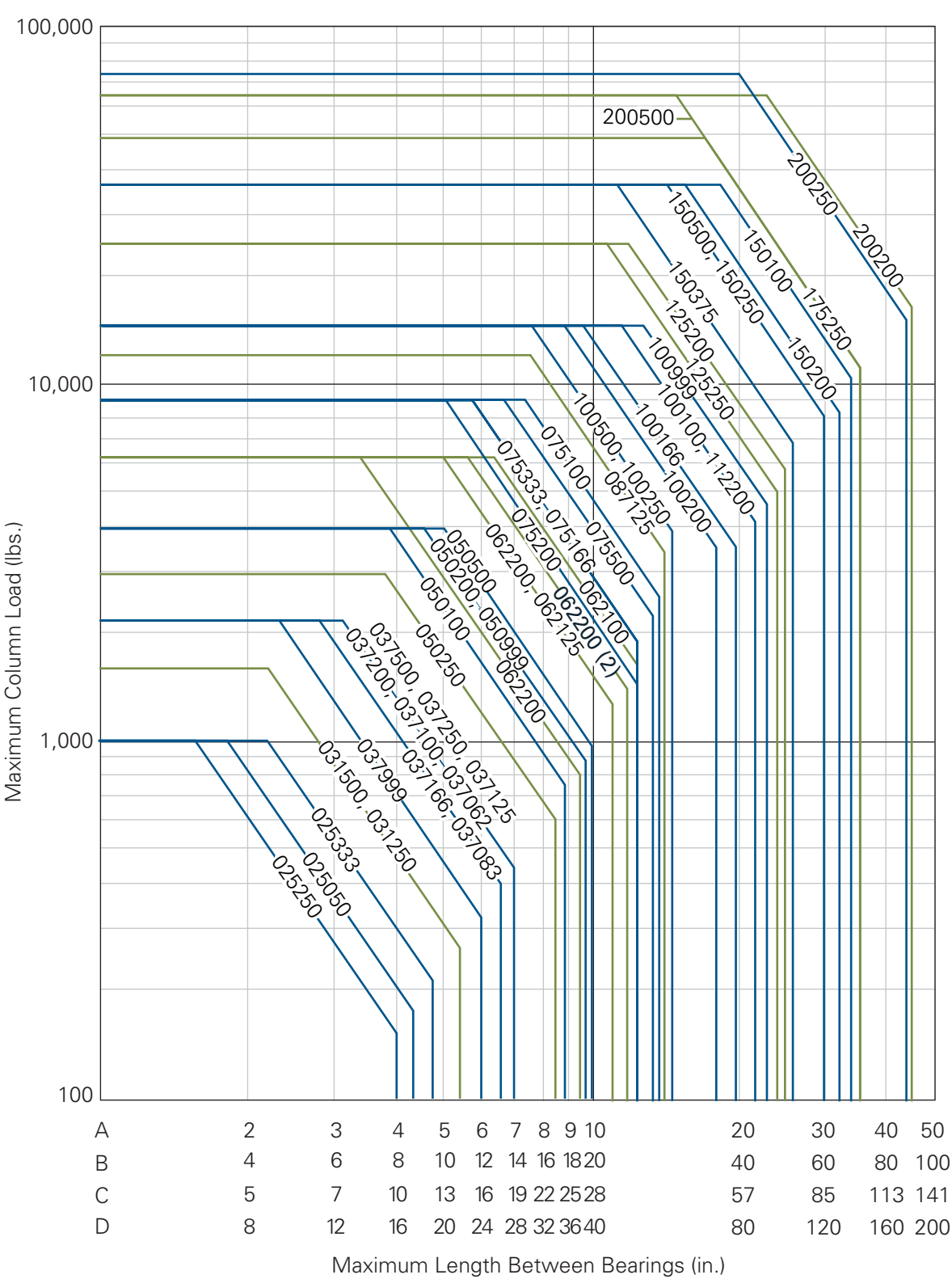
PV Value: For plastic nuts, the PV value needs to be checked (see the PV load definition on [page 5](#)). The operating load values for the plastic nuts are based on a pressure of 1,450 lb. per square inch. Any loads less than the operating load can be evaluated by using the following:

$$P = \frac{\text{Actual Operating Load}}{\text{Chart Operating Load}} \times 1,450$$

V is the relative speed between the nut and the screw in feet per minute. V can be calculated by using the following:

$$V = \frac{\text{Major Diameter} \times \pi \times \text{Operating Speed (rpm)}}{12}$$

It is recommended that $P \times V$ be limited to values less than 2,700.



Lead Screw Nuts

Materials

Acetal/PTFE blend

The high strength and inherent lubricity of our proprietary plastic nut material can result in product life that can equal or exceed conventional nut materials.

- Tensile Strength @70° F: 8,000 psi
- PV Limit: 12,500 lubricated
- Coefficient of Friction: 0.08 lubricated

Bronze

Special high tensile bronze is selected for our smooth running, anti-wedging bronze nuts.

- Tensile Yield : 50,000 psi
- Hardness: HB75
- Dynamic Coefficient of Friction: 0.15 with Helix Lubricant

Delrin AF

A high-performance engineering plastic offering low-friction, chemical resistance, and low moisture absorption

- Tensile Yield : 10,300 psi
- PV Limit : 15,000 psi-ft/min
- Coefficient of Friction: 0.08 lubricated

Heavy Load Resin

A plastic blend of lubricious & strengthening additives results in a low friction nut with high load capacities.

- Tensile Yield : 10,900 psi
- PV Limit : 40,000 psi-ft/min
- Coefficient of Friction: 0.12 lubricated

Lead Screw Nuts

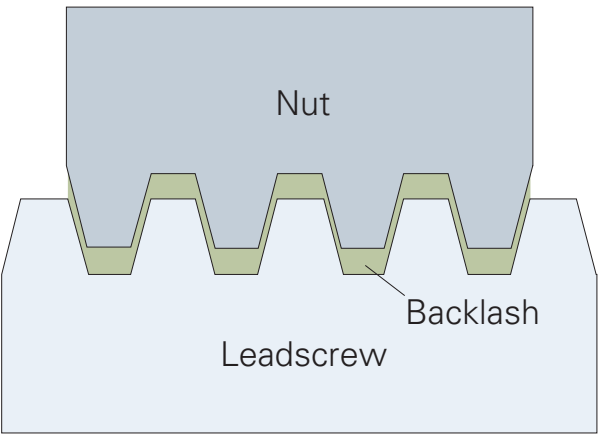
Standard Freewheeling Nuts

Freewheeling Nuts

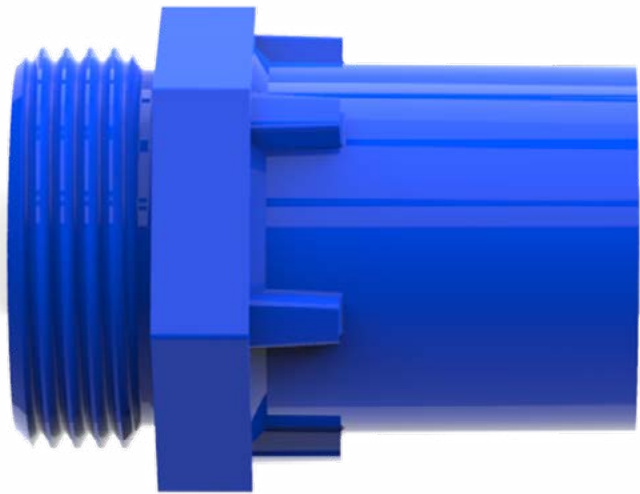
Freewheeling nuts are beneficial in motion control applications where the highest precision is not necessary. They have low drag torque because they are designed with clearance between the nut and screw thread, which results in a small amount of lost motion. They therefore may not provide the same level of precision and accuracy as anti-backlash nuts.

Backlash

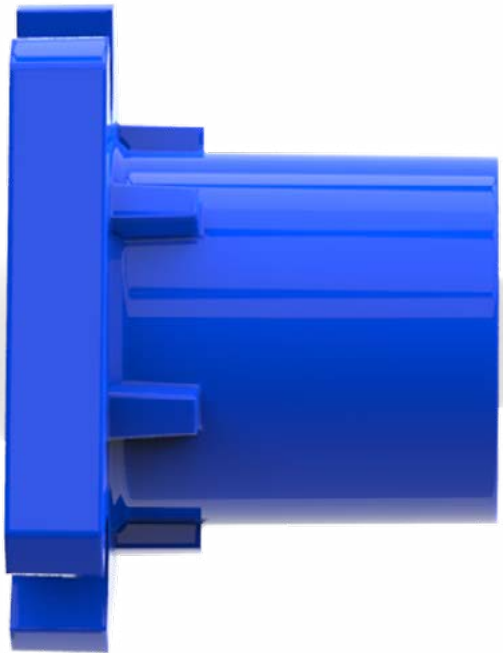
Backlash is the relative clearance between a screw and nut without rotation of the screw or nut. Backlash is typically defined as either radial or axial. Radial backlash refers to the clearance between the screw and nut perpendicular to the axis of the screw, whereas axial backlash refers to the clearance between the screw and nut along the axis of the screw. Backlash information for Helix precision lead screws and nuts is listed within the data section of this catalog. Lash will always increase with use. Helix Linear Technologies has developed several unique ways to reduce or remove the lash between the screw and nut.



Backlash in a Standard Freewheeling Nut



Threaded Freewheeling Nut



Flanged Freewheeling Nut

Lead Screw Nuts

Anti-Backlash Nuts

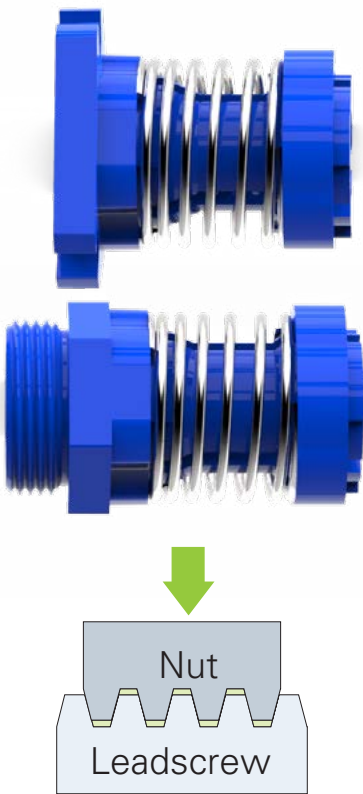
Anti-backlash nuts are ideal for applications that require high precision and accuracy in linear motion. They incorporate a spring-loaded mechanism that minimizes or eliminates backlash, resulting in more accurate and repeatable linear motion. They do however require more maintenance than freewheeling nuts.

Their design compensates for wear over time.

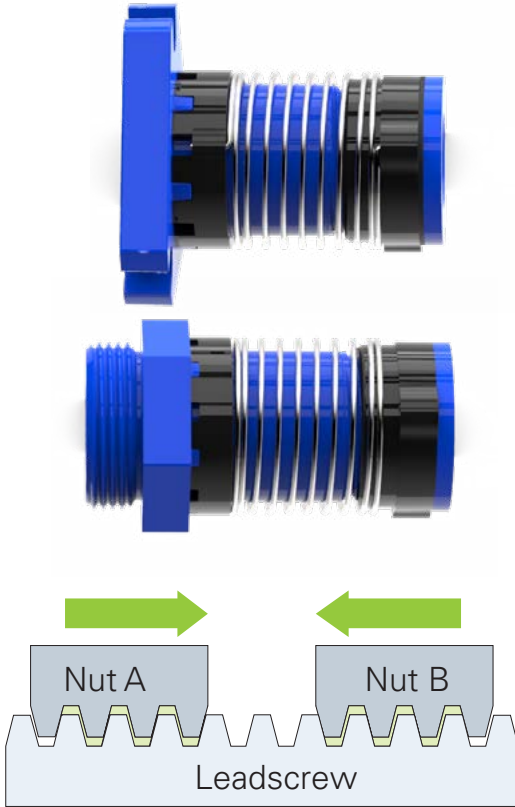
Axial Anti-Backlash nuts have different spring options: high force, normal, and micro force. They are easy to manufacture & customize and are good for use with light loads.



Radial Anti-Backlash are good for use in vertical and vibration-prone applications. They have lower drag torque than axial style.



Torsional Anti-Backlash Nuts are perfect for use in high load, high speed, and low torque applications. They are stiff in compression and are the lowest drag torque option Helix has to offer.

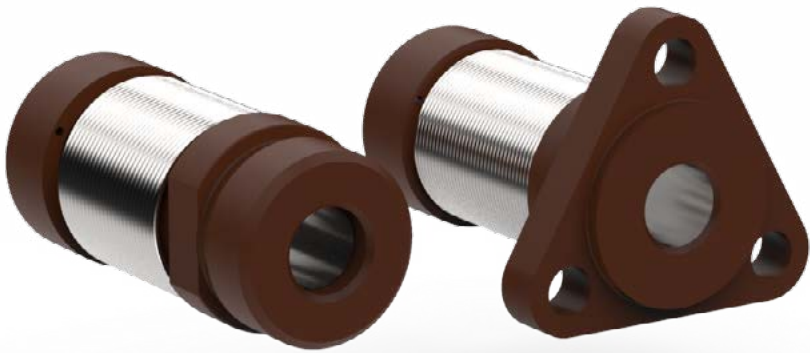


Lead Screw Nuts

Specialty Nut Styles

Compact Torsional Anti-Backlash Nuts

The simplified design of the torsional anti-backlash nut by Helix Linear Technologies gives customers the benefit of high performance with an economic solution. This nut style offers the stiffness of a torsional anti-backlash nut compensation method with minimal added drag due to the preloaded condition of the nut. The nut assembly has fewer components, and therefore custom nut designs can be leveraged such as external nut geometry for mounting, nut body length changes, and even material options as well.

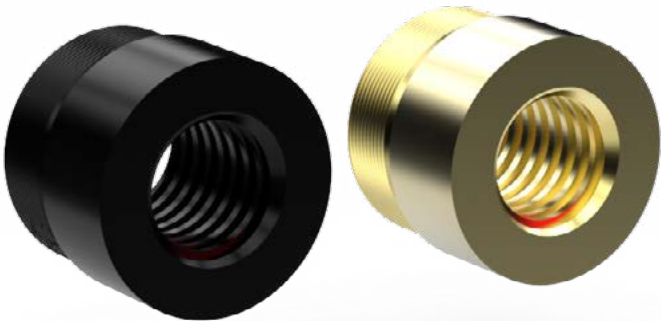
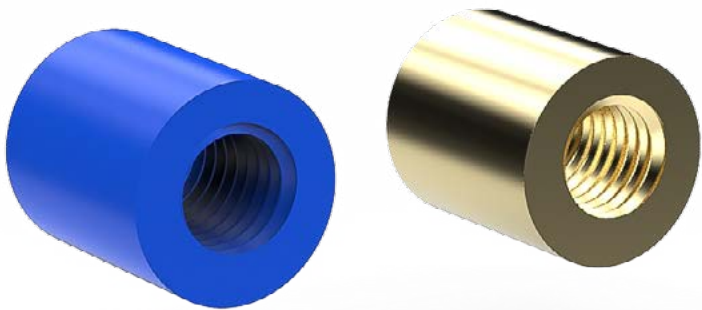


Heavy Load Nuts

These plastic nuts utilize a blend of lubricious and strengthening additives which result in a low friction nut with high load capacities for the most demanding applications. If a low-friction or a non-lubricated screw assembly is required, even when a metal nut is not usable, the heavy load nut can offer a solution for special application requirements.

Sleeve Nuts

With a simple and cylindrical nut body, sleeve nuts can be altered to fit into mating components with ease. The round body makes them easy to hold for post-processing. Given its simplicity, the option to use different materials or to change lengths and outer diameters can be achieved with little economic or logistical impact.



PowerAc™ Acme Nuts

PowerAc Acme nuts use a centralizing type C thread form which reduces wedging, preventing the nut from locking up under load. Compared to standard type G nuts, PowerAc nuts have tighter thread tolerances and reduced clearance on the major diameter.

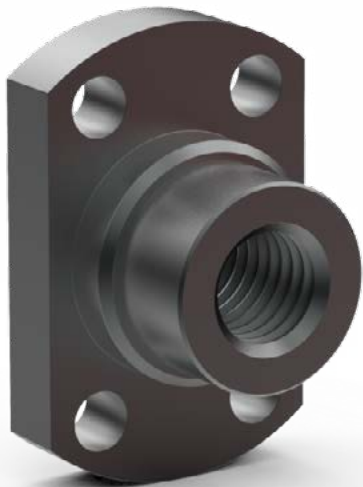
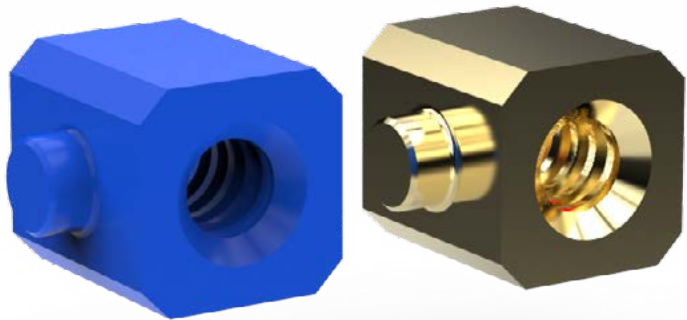
Table of Contents	Compact Torsional Threaded	Compact Torsional Flanged	Sleeve Acetal	Sleeve Bronze	Heavy Load Compact Flange	Heavy Load Round Flange	PowerAc Acetal	PowerAc Bronze	Order Now
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Lead Screw Nuts

Specialty Nut Styles (continued)

Trunnion Mounting Nuts

The trunnion style nut can be used to allow a pivot point about the nut body, or an anti-rotation via mating components, in order to eliminate extra components in the screw assembly. The high strength internal threads along with the square nut body and bosses on either side of the nut make the trunnion nut versatile for wide variety of applications.



Ball Nut Replacement Nut

When a ball screw assembly is being replaced by a lead screw the ball nut replacer option can be a drop in replacement to mount directly to existing mating components. The lead of the assemblies is also manufactured to match existing ball screw assemblies as well so driving the assembly does not require significant program changes.

Hurricane Nuts

These patented plastic nuts offer a combination of materials which offer the lowest coefficient of friction possible. The over-molded helix threaded insert provides low friction without compensating the structural integrity of the standard plastic nut.



Lead Screw Nuts

Anti-Backlash Life and Traverse Speed

Anti-Backlash Life

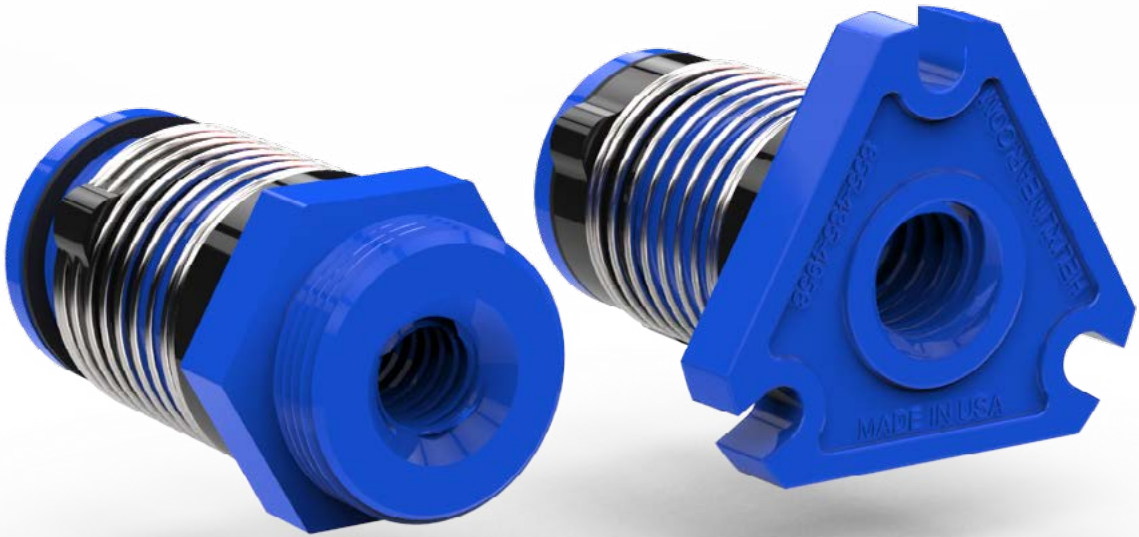
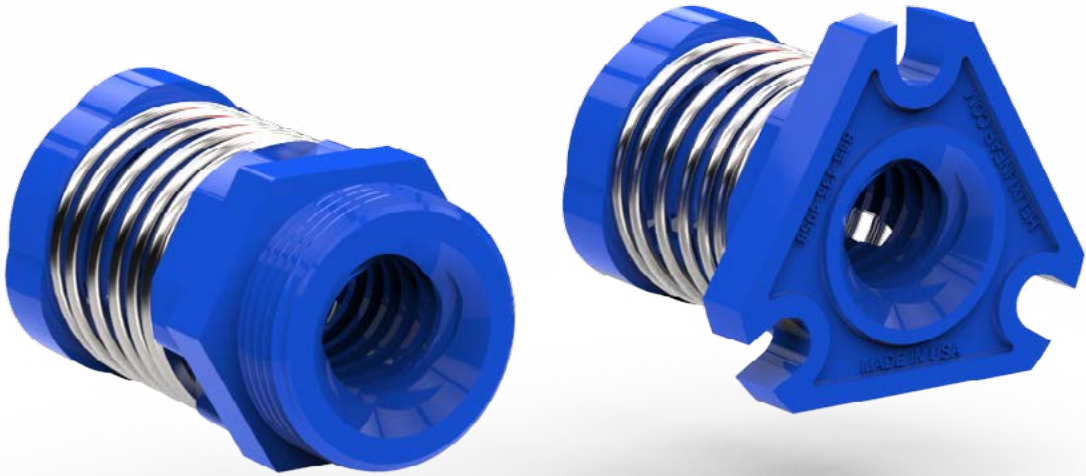
Style	without H10X PTFE Coating		with H10X PTFE Coating	
	in	cm	in	cm
Axial	20-50M	50-130M	50-100M	130-250M
Radial	40M–60M	100M–150M	150–200M	250–315M
Compact Torsional	80–100M	200–250M	180–230M	450–580M
Torsional	100–125M	250–315M	200–250M	500–635M

Anti-backlash life is defined as the nut’s ability to compensate for wear while maintaining its zero backlash properties. The above life data is based on 30% of dynamic load rating. Life will vary with loading, operating environment and duty cycle. The longer screw leads generally provide longer life.

Traverse Speed

The nut materials we use offer long wear-life for a wide variety of conditions. However, very high loads and/or speeds can accelerate nut wear. Special materials may be required for these situations. We offer the following guidelines for continuous duty linear traversing speeds for optimum life:

Lead		Traverse Speed	
in	mm	in/sec	mm/sec
.1–.5	1–12	4	100
.5–1.0	12–25	10	250
1.0– 2.5	25–60	30	760



Lead Screw Assemblies

Building a Linear Motion Application

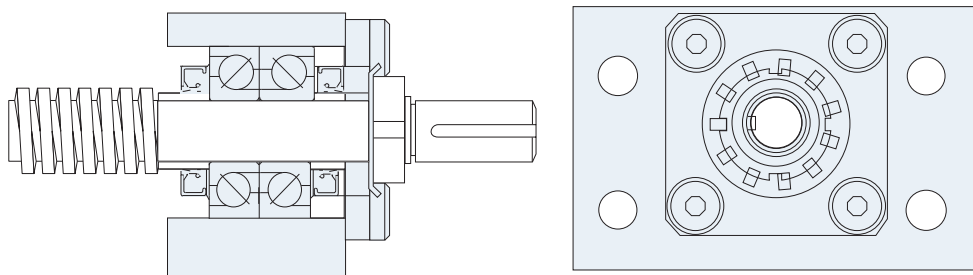
EZZE-Mount™

EZZE-Mount bearing blocks contain precision anti-friction bearings and are designed to be used with all screw types. Mount and flange versions of EZZE-Mount bearing blocks are available in both single and double bearing bases.

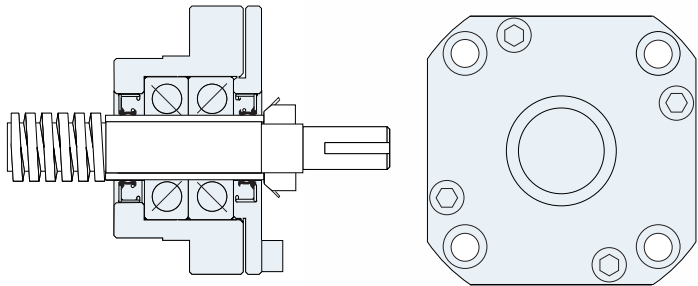
For data and design specifications, consult the Lead Screw Assemblies section of this catalog on [pages 64 -78](#).



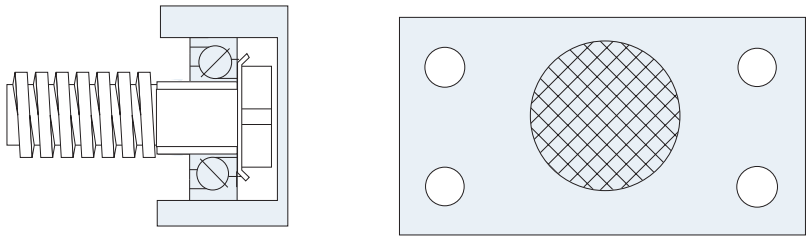
Universal Double Bearing Mount
Fixed



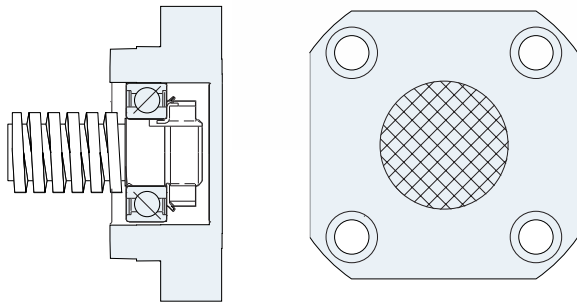
Flanged Double Bearing Mount
Fixed



Universal Single Bearing Mount
Simple



Flanged Single Bearing Mount
Simple



Lead Screw Assemblies

Building a Linear Motion Application

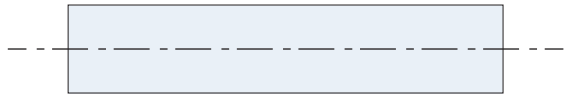
End Fixity

End fixity refers to the method by which the ends of the screw are supported. The degree of end fixity is related to the amount of restraint of the ends of the screw. The three basic types of end fixity are:

Three basic types of end fixity

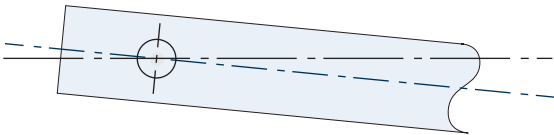
Free

No support



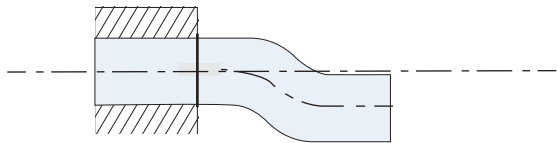
Simple

Restrained against radial and/or axial loads



Fixed

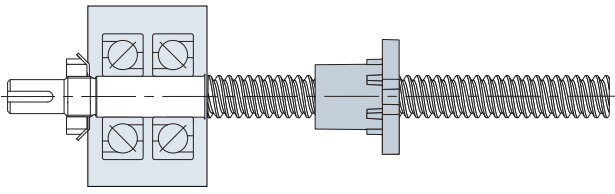
Shaft rigidly restrained against radial, axial and moment loads



Multiple or Spaced Pairs of bearings are more rigid than a Simple support, but because of their compliance are not truly Fixed.

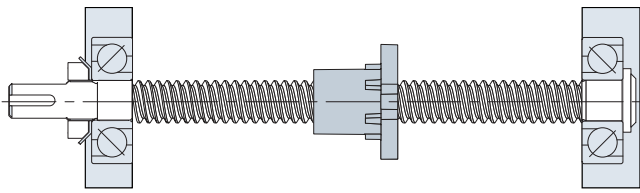
These can be configured in four different ways:

Fixed/Free



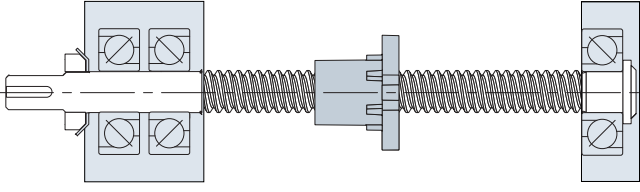
fixedfree

Simple/Simple



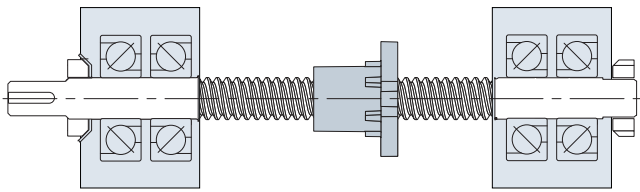
simplesimple

Fixed/Simple



fixedsimple

Fixed/Fixed



fixedfixed

Lead Screw Assemblies

Building a Linear Motion Application

End Machining

We offer four types of standard end machining on a lead screw:

Use:

Type 1	for single bearing mounts
Type 2	for double bearing mounts
Type 3	for multiple sets of double bearing mounts
Type 4	for pillow block mounts

Each of the four types can be designed to accommodate a drive method, indicated by the letters K, L, or N.

Drive method	
K	contains shaft extension and keyway for square keys
L	contains shaft extension with no keyway
N	designed for a non-driven support end

Where standard ends do not satisfy the application requirements, special ends may be machined to customer specifications. Please submit a print for a prompt and competitive quotation.

For data and design considerations for end machining options at Helix Linear Technologies, consult the charts on **pages 79-82**.

Precision Locknuts

Helix offers precision ground locknuts for extreme applications requiring ground face and precision ground thread with extra thread engagement. These locknuts have a lock washer to ensure secure positioning.

Locknut Threads: Locknut threads are machined to allow the bearing retention on the screw shaft by means of a locknut. The thread used on standard machined ends follows American National Form UNS-3A. Precision ground locknuts are available on special order.

Matched Lead: When multiple screws are used in unison to move a load with precise synchronicity, screws of similar lead accuracy can be factory selected and supplied as sets. Consult factory for matched lead set tolerances.

Approval Drawings: If custom ends or special dimensions are desired, we are happy to create an approval drawing for your review. These drawings will show all the critical dimensions with appropriate tolerance and require customer approval prior to manufacture.

Lead Screw Assemblies

Mounting and Pinning of Flanges

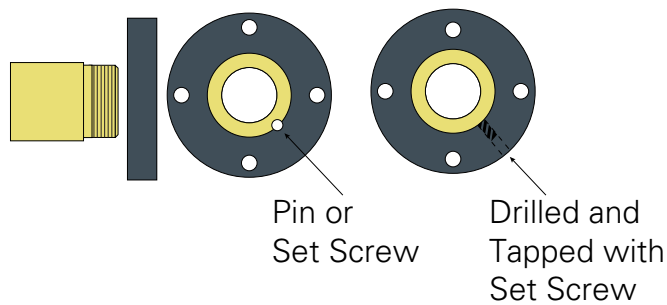
For PowerAC™ Acme Nuts

The preferred method of locking a flange to a nut is a pin or set screw parallel to the screw which intersects the flange/nut mounting thread . Because of the dissimilarity of materials, the hole may need to be milled, not drilled.

Alternatively, the flange may be drilled and tapped radially for a set screw. After assembly of the flange to the nut, spot drill the nut threads through the flange and install a dog point set screw from the flange O.D. into the nut O.D. threads. Avoid getting metal chips in the nut when drilling.

Commercially available thread adhesives may be used for light load applications. Follow the manufacturers’ recommendations to ensure a satisfactory bond. Avoid getting the adhesive onto the lead screw thread.

Diameter	Description
.25 to .625	.125" × .25" Slotted Spring Pin
.75 to 1.0	#10–24 × .25" Set Screw



Coefficient of Friction Acetal Nut to Screw

	No Coating	With Helix H10X PTFE Coating
Static	0.15	0.09
Dynamic	0.15	0.08

Maintenance

Temperature

With proper lubrication, Helix Lead screws with bronze nuts operate efficiently between 15°F and 350°F, and plastic nuts between 15°F and 175°F. A complete lead screw assembly has a standard operating temperature range between 32°F and 200°F (0°C - 93°C)

*Very high or low temperatures may cause significant changes in the nut fit or drag torque. Please call Helix Linear Technologies for optional temperature range materials.

Optional Surface Coatings

Consult Helix engineers for specific surface coatings for anti-corrosion and lubrication.

Lubrication

Proper lubrication must be provided to achieve satisfactory service life. Helix Linear produces both “wet” and dry lubricants for lead screws. Helix PTFE dry coating is excellent for food, medical and semiconductor applications. Helix acme screw lubricant (E-100 spray lube or PAG-1 grease) is recommended for applications using precision lead screws without PTFE coating.

Lubrication intervals are determined by the application. It is required that screw assemblies are lubricated often enough to maintain a film of lubricant on the screw.

Grease Compatibility Chart

Nut Type	Grease	Lubrication Coatings	
		Helix H10X®	HC1 Ceramic Coating®
Axial	Yes	Yes	Yes
Radial	Yes	Yes	Yes
Compact Torsional	No	Yes	Yes
Torsional	No	Yes	Yes
Freewheeling	Yes	Yes	Yes

Custom Lead Screw Assemblies

Available Materials

- Carbon Steels
- Alloy Steels
- Alloy Heat Treated Steels
- Stainless Steel, Aluminum
- Titanium, Exotic Metals
- Brass

Available Diameters

- 0.039" - 2.50"
(1mm- 63.5mm)

Available Lengths

- 36", 72", 144" length available from stock
- Custom lengths up to 360"

Custom Nuts

At Helix, we mold and machine a wide array of lead screw nuts and actuator components from standard polymers such as PEEK, Torlon®, Acetal, Polypropylene, Turcite®, and custom engineered polymers that incorporate fillers like PTFE, PFPE, silicone, carbon fibers, graphite, glass fibers and molybdenum disulfide. Should cost or design constraints require a more integrated package, our engineering staff can help you simplify your design by combining several different components into a molded nut.

Custom Screws

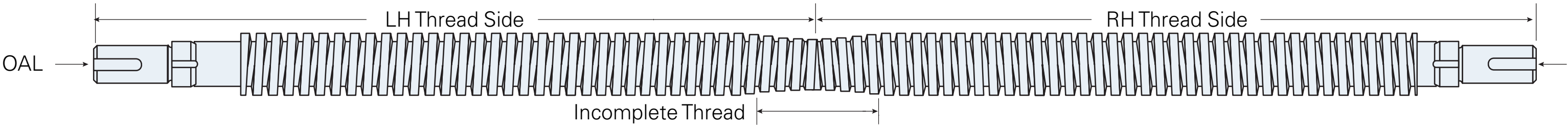
At Helix Linear Technologies, we manufacture the most precise lead screws in the world. We have perfected the thread-rolling process over four decades and today offer the widest range of thread rolling capacity globally. We have manufactured hundreds of custom screw diameters and leads for our customers who require a size that is not in our catalog. We are also the experts in thread-rolling non-standard materials and produce screws from titanium, aluminum, high-carbon steel, 300 and 400 series stainless steels, PH grades (17-4, 13-8), plastics and special chemistry alloys.

Custom Machining

We offer extensive machining services on our lead screws and nuts. Simply e-mail us your sketch, drawing, or 3D model and we will provide a quotation in 24 hours.

- | | | |
|-----------------------------------|---------------------------------|---------------------------|
| • Screws cut to precision lengths | • Specialized material handling | • Counterbores |
| • Annealing | • Custom packaging | • Electropolish |
| • Straightening | • Journals | • Mag particle inspection |
| • CNC turning and milling | • Keyways | • Anodizing |
| • Grinding | • Flats | • Specialty platings |
| • Assembly of bearing mounts | • Centers | |
| • Inspection | • Snap ring grooves | |

Twin-Lead Screw Assemblies



Twin-lead screws offer dual opposing motion using a single drive system. These one-piece high-performance screws are made from either stainless steel or a high alloy steel with a black oxide coating applied for protection. They can be assembled with Helix lead screw nuts and EZZE-Mount™ bearing supports to form cost effective systems.

Twin-lead screws that are stocked for delivery without machined ends can be found on [pages 40-41](#)

Consult the Part Number Configuration Guide on [page 26](#) to complete your part number.

Twin-lead screws can be used in molding machines, packaging equipment, food processing machinery, robotics, material handling equipment, tire manufacturing and assembly applications. To order a twin-lead screw cut to a custom length and/or with machined ends, select a size from the chart below, determine overall length (OAL), LH and RH thread length, nut, and, if required, EZZE-Mount™ bearing support.

Ordering a Lead Screw Assembly

Part Number Configuration Guide



KTA 025062 RA / 1K / 4N / 6.00 / TS

Nut Code _____
See table to the right

Screw Code _____
See tables on pages 27-41

Helix Direction

R = Right Hand Thread
L = Left Hand Thread

Material _____

A = Alloy Steel, Rolled

S = Stainless Steel, Rolled

First End Configuration
End Type —————
Type 1, 2, 3, 4

Shaft Extension _____

K = With Keyway
L = Without Keyway
N = No Shaft Extension

Second End Configuration

End Type _____
Type 1, 2, 3, 4

Shaft Extension _____

K = With Keyway
L = Without Keyway
N = No Shaft Extension

Overall Length (OAL) _____
In inches, to two decimal places. "00" if ordering screw only

Modifier List - S or M Required

S = Standard
M = Modified
F = Round Flange
T = PTFE Coating

Nut Codes

Code	Description
NTA	Standard Freewheeling Threaded
NFA	Standard Freewheeling Flanged
ATA	Axial Anti-Backlash Threaded
AFA	Axial Anti-Backlash Flanged
RTA	Radial Anti-Backlash Threaded
RFA	Radial Anti-Backlash Flanged
KTA	Torsional Anti-Backlash Threaded
KFA	Torsional Anti-Backlash Flanged
GTD	Compact Torsional Anti-Backlash Threaded
GFD	Compact Torsional Anti-Backlash Flanged
BNR	Ball Nut Replacement
TMA	Plastic Trunnion Mounting Nut
TMB	Bronze Trunnion Mounting Nut
HLC	Heavy Load Nut Compact Flanged
HLR	Heavy Load Nut Round Flanged
SNA	Sleeve Nut (GP Acetal)
SNB	Sleeve Nut Bronze
HAFA	Hurricane Axial Anti-Backlash Flanged
HNFA	Hurricane Freewheeling Standard Flanged
NPA	Acme Plastic Threaded
NPB	Acme Bronze Threaded

Table of Contents

Screws

Nuts

EZZE-Mounts™

End Machining

FIRST END CONFIGURATION

Note: Both Ends must be specified.

Single Bearing Supports are used in conjunction with Type 1N end machining.

Double Bearing Supports are used in conjunction with Type 3K, 3L, or 3N end machining.

Flanged Fixed Bearing Mounts are used in conjunction with Type 5 end machining.

SECOND END CONFIGURATION

Refer to the First End Configuration section

Note: Both Ends must be specified.

EZZE-MOUNT™
End Machining

- 1 = Type 1
- 2 = Type 2
- 3 = Type 3
- 4 = Type 4
- 5 = Type 5

B = Universal Double Bearing Support
End Cap Facing Screw Thread

C = Universal Single Bearing Support

D = Flanged Single Bearing Support
Flange Facing Screw Thread

E = Universal Double Bearing Support End
Cap Facing Away From Screw Thread

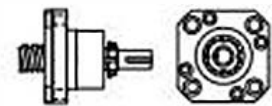
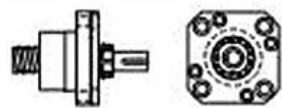
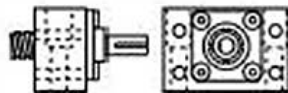
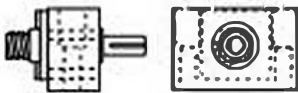
F = Flanged Double Bearing Support
Flange Facing Screw Thread

G = Flanged Single Bearing Support Flange
Facing Away From Screw Thread

H = Flanged Double Bearing Support Flange
Facing Away From Screw Thread

R = Flanged Fixed Bearing Support Flange
Facing Screw Thread

EK EK = Universal Double Bearing
Support, with Keyway



Shaft Extension

N = No Shaft

Q = Handwheel

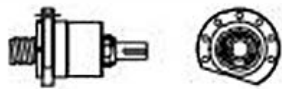
K = Shaft Extension with Keyway

L = Shaft Extension without Keyway

U = Universal Double Bearing
Support with Motor Mount



V = Flanged Fixed Bearing Support
Flange Facing Away From
Screw Thread



Y = Flanged Double Bearing
Support with Motor Mount



00 = No End Machining (Screw will be cut to desired length).

XX = Custom Machining (Print or specified data must be provided)

Ordering a Twin Lead Screw Assembly

Part Number Configuration Guide



		KTA	025062	TA / 1K / 4N / 12.00 / 6.00 / 6.00 / TS
Nut Code (See table to the right)				
Screw Code See tables on pages 27-41				
Twin Lead Screw				
Material A = Alloy Steel, Rolled S = Stainless Steel, Rolled				
First End Configuration (LH Thread) End Type Type 1, 2, 3, 4 Shaft Extension K = With Keyway L = Without Keyway N = No Shaft Extension				
Second End Configuration (RH Thread) End Type Type 1, 2, 3, 4 Shaft Extension K = With Keyway L = Without Keyway N = No Shaft Extension				
Overall Length (OAL) In inches, to two decimal places				
Left Hand Thread Length In inches, to two decimal places				
Right Hand Thread Length In inches, to two decimal places				
Coating T = PTFE Coating, 00 = no coating				
Standard S = Standard configuration F = With Flanges				

Nut Codes

Code	Description
NTA	Standard Freewheeling Threaded
NFA	Standard Freewheeling Flanged
ATA	Axial Anti-Backlash Threaded
AFA	Axial Anti-Backlash Flanged
RTA	Radial Anti-Backlash Threaded
RFA	Radial Anti-Backlash Flanged
KTA	Torsional Anti-Backlash Threaded
KFA	Torsional Anti-Backlash Flanged
GTD	Compact Torsional Anti-Backlash Threaded
GFD	Compact Torsional Anti-Backlash Flanged
BNR	Ball Nut Replacement
TMA	Plastic Trunnion Mounting Nut
TMB	Bronze Trunnion Mounting Nut
HLC	Heavy Load Nut Compact Flanged
HLR	Heavy Load Nut Round Flanged
SNA	Sleeve Nut (GP Acetal)
SNB	Sleeve Nut Bronze
HAFA	Hurricane Axial Anti-Backlash Flanged
HNFA	Hurricane Freewheeling Standard Flanged
NPA	Acme Plastic Threaded
NPB	Acme Bronze Threaded



Lead Screws
HELIX[™]
LINEAR TECHNOLOGIES

Available Screw Sizes

.078" - .127" Diameter Range

Diameter		Lead		Screw Code	Pitch		Starts	End Machining		LH Available	Efficiency %
in	mm	in	mm		in	mm		Types 1,2,3	Type 4		
.079	2.0	.012	0.300	008012	.0120	.30	1			yes	24
.079	2.0	.016	0.400	008016	.0000	.02	1			yes	18
.079	2.0	.019	0.500	008020	.0190	.50	1			yes	36
.079	2.0	.039	1.000	008039	.0190	.50	2			**	52
.079	2.0	.078	2.000	008078	.0190	.50	4			**	66
.125	3.18	.012	0.30	012012	.012	0.30	1	2*	1*	yes	23
.125	3.18	.023	0.58	012023	.023	0.58	1	2*	1*	yes	0
.125	3.18	.024	0.61	012024	.024	0.61	1	2*	1*	yes	44
.125	3.18	.025	0.64	012025	.025	0.64	1	2*	1*	yes	45
.125	3.18	.031	0.79	012031	.031	0.79	1	2*	1*	yes	53
.125	3.18	.039	1.00	012039	.039	1.00	1	2*	1*	yes	57
.125	3.18	.048	1.22	RD012048	.024	0.61	2	2*	1*	**	-
.125	3.18	.048	1.22	012048	.024	0.61	2	2*	1*	**	61
.125	3.18	.063	1.59	012062	.031	0.79	2	2*	1*	yes	67
.125	3.18	.075	1.91	012075	.025	0.64	3	2*	1*	yes	70
.125	3.18	.079	2.00	012078	.039	1.00	2	2*	1*	yes	72
.125	3.18	.096	2.44	012096	.024	0.61	4	2*	1*	yes	75
.125	3.18	.125	3.18	012125	.031	0.79	4	2*	1*	yes	80
.125	3.18	.157	4.00	012157	.039	1.00	4	2*	1*	yes	81
.125	3.18	.200	5.08	012200	.025	0.64	8	2*	1*	yes	82
.125	3.18	.250	6.35	012250	.042	1.06	6	2*	1*	yes	83
.127	3.22	.021	0.53	RD013020	.021	0.53	1	2*	1*	yes	-

Available Screw Sizes

.130” - .158” Diameter Range

Diameter		Lead		Screw Code	Pitch		Starts	End Machining		LH Available	Efficiency %
in	mm	in	mm		in	mm		Types 1,2,3	Type 4		
.130	3.30	.315	8.00	RD013315	.039	1.00	8	2*	1*	yes	-
.133	3.39	.020	0.50	RD014020	.020	0.50	1	2*	1*	yes	-
.137	3.48	.031	0.79	RD014031	.031	0.79	1	2*	1*	yes	-
.137	3.48	.063	1.59	RD014062	.031	0.79	2	2*	1*	yes	-
.140	3.5	.0310	0.790	014031	.0310	0.79	1	2*	1*	**	48
.140	3.5	.0620	1.590	014062	.0310	0.79	2	2*	1*	**	63
.157	4.00	.012	0.30	016012	.012	0.30	1	3	1	yes	24
.157	4.00	.024	0.61	016024	.024	0.61	1	2	1	yes	43
.157	4.00	.039	1.00	016039	.039	1.00	1	2	1	yes	45
.157	4.00	.048	1.22	016048	.024	0.61	2	2*	1*	yes	59
.157	4.00	.094	2.38	016093	.031	0.79	3	2	1	yes	67
.157	4.00	.096	2.44	016096	.024	0.61	4	2*	1*	yes	69
.157	4.00	.125	3.18	016125	.031	0.79	4	2	1	yes	74
.157	4.00	.250	6.35	016250	.031	0.79	8	3	1	yes	83
.157	4.00	.375	9.53	016375	.031	0.79	12	3	1	yes	85
.157	4.00	.394	10.00	016393	.049	1.25	8	3*	1*	yes	85
.157	4.00	.500	12.70	016500	.031	0.79	16	3	1	yes	86

Available Screw Sizes

.188" - .236" Diameter Range

Diameter		Lead		Screw Code	Pitch		Starts	End Machining		LH Available	Efficiency %
in	mm	in	mm		in	mm		Types 1,2,3	Type 4		
.188	4.76	.024	0.61	018024	.024	0.61	1	4	2	yes	36
.188	4.76	.025	0.64	018025	.025	0.64	1	4	2	yes	39
.188	4.76	.031	0.79	018031	.031	0.79	1	4	2	yes	42
.188	4.76	.039	1.00	018039	.039	1.00	1	4*	2	yes	47
.188	4.76	.048	1.22	018048	.048	1.22	1	4*	2	yes	51
.188	4.76	.050	1.27	SP018050	.050	1.27	1	-	-	**	-
.188	4.76	.050	1.27	018050	.050	1.27	1	4*	2	**	58
.188	4.76	.063	1.59	018062	.031	0.79	2	4	2	yes	60
.188	4.76	.079	2.00	018078	.039	1.00	2	4*	2	yes	64
.188	4.76	.096	2.44	018096	.048	1.22	2	4*	2	yes	67
.188	4.76	.100	2.54	018100	.050	1.27	2	4*	2	yes	69
.188	4.76	.108	2.75	018108	.054	1.38	2	4	2	yes	70
.188	4.76	.125	3.18	018125	.031	0.79	4	4	2	yes	72
.188	4.76	.157	4.00	018157	.039	1.00	4	4*	2	yes	75
.188	4.76	.188	4.76	018187	.023	0.60	8	4*	2	yes	78
.188	4.76	.192	4.88	018192	.048	1.22	4	4*	2	yes	80
.188	4.76	.200	5.08	018200	.050	1.27	4	4*	2	yes	82
.188	4.76	.427	10.85	018427	.031	0.78	14	-	-	yes	-
.195	4.95	.031	0.80	M5×0.8-6g	.031	0.80	1	4*	2	**	-
.197	5.00	.197	5.00	020196	.049	1.25	4	4*	2	yes	82
.216	5.50	.020	0.50	022020	.020	0.50	1	4*	2	yes	78
.236	6.00	.039	1.00	024039	.039	1.00	1	4*	2	yes	40
.236	6.00	.236	6.00	024236	.059	1.50	4	4	2	yes	68
.236	6.00	.472	12.00	024472	.059	1.50	8	4	2	yes	85
.236	6.00	.787	20.00	024787	.049	1.25	16	5	3	yes	86

Available Screw Sizes

.250" Diameter

Diameter		Lead		Screw Code	Pitch		Starts	End Machining		LH Available	Efficiency %
in	mm	in	mm		in	mm		Types 1,2,3	Type 4		
.250	6.35	.024	0.61	025024	.024	0.61	1	5	3	yes	28
.250	6.35	.025	0.64	025025	.025	0.64	1	5	3	yes	30
.250	6.35	.031	0.79	025031	.031	0.79	1	5	3	yes	34
.250	6.35	.039	1.00	025039	.039	1.00	1	5*	3	yes	40
.250	6.35	.048	1.22	025048	.048	1.22	1	4	3*	yes	45
.250	6.35	.050	1.27	025050	.050	1.27	1	4	3*	**	46
.250	6.35	.050	1.27	¼-20	.050	1.27	1	4	3*	**	-
.250	6.35	.063	1.59	025062	.063	1.59	1	4	3*	yes	46
.250	6.35	.063	1.59	¼-16	.063	1.59	1	4	3*	**	-
.250	6.35	.079	2.00	025078	.039	1.00	2	5*	3	yes	59
.250	6.35	.083	2.12	¼-12	.083	2.12	1	5*	3	**	-
.250	6.35	.096	2.44	025096	.048	1.22	2	4	3*	yes	61
.250	6.35	.100	2.54	025100	.050	1.27	2	4	3*	yes	62
.250	6.35	.118	3.00	025118	.059	1.50	2	4	3*	yes	68
.250	6.35	.125	3.18	025125	.063	1.59	2	4	3*	yes	67
.250	6.35	.157	4.00	025157	.039	1.00	4	5*	3	yes	69
.250	6.35	.197	5.00	025196	.039	1.00	5	5*	3	yes	72
.250	6.35	.200	5.08	025200	.050	1.27	4	4	3*	yes	65
.250	6.35	.250	6.35	025250	.063	1.59	4	4	3*	yes	79
.250	6.35	.333	8.46	025333	.083	2.11	4	4	3*	yes	82
.250	6.35	.394	10.00	025393	.033	0.83	12	4	3*	yes	78
.250	6.35	.400	10.16	025400	.080	2.03	5	4	3*	yes	84
.250	6.35	.500	12.70	RD025500	.071	1.81	7	4	3*	**	-
.250	6.35	.500	12.70	025500	.083	2.12	6	4	3*	**	85
.250	6.35	1.000	25.40	RD025999	.125	3.18	8	4	3*	**	-
.250	6.35	1.000	25.40	025999	.100	2.54	10	4	3*	**	84

Available Screw Sizes

.276” - .319” Diameter Range

Diameter		Lead		Screw Code	Pitch		Starts	End Machining		LH Available	Efficiency %
in	mm	in	mm		in	mm		Types 1,2,3	Type 4		
.276	7.00	.020	0.50	027020	.020	0.50	1	6	4*	yes	73
.312	7.94	.100	2.54	031100	.100	2.54	1	4	3	yes	72
.312	7.94	.200	5.08	031200	.100	2.54	2	4	3	yes	72
.312	7.94	.250	6.35	031250	.125	3.18	2	5	3	yes	76
.312	7.94	.500	12.70	031500	.125	3.18	4	5	3	yes	83
.315	8.00	.012	0.30	032012	.012	0.30	1	6*	3	yes	21
.315	8.00	.024	0.61	032024	.024	0.61	1	6*	3	yes	26
.319	8.10	.059	1.50	032059	.059	1.50	1	6*	3	yes	43
.319	8.10	.157	4.00	032157	.079	2.00	2	6*	3	yes	71
.319	8.10	.295	7.50	032295	.049	1.25	6	6*	4*	yes	74
.319	8.10	.315	8.00	032315	.079	2.00	4	6*	4*	yes	79
.319	8.10	.394	10.00	032393	.098	2.50	4	6*/5	3	yes	80
.319	8.10	.472	12.00	032472	.094	2.40	5	6*	4*	yes	83
.319	8.10	.591	15.00	032590	.098	2.50	6	6*	4*	yes	84
.319	8.10	.787	20.00	032787	.157	4.00	5	6*	4*	yes	86
.319	8.10	.984	25.00	032984	.049	1.25	20	6	4*	yes	88
.319	8.10	1.181	30.00	032M30	.049	1.25	24	7	4	yes	89

Available Screw Sizes

.375" Diameter Range (part)

Diameter		Lead		Screw Code	Pitch		Starts	End Machining		LH Available	Efficiency %
in	mm	in	mm		in	mm		Types 1,2,3	Type 4		
.375	9.53	.025	0.64	037025	.025	0.64	1	8	4	yes	21
.375	9.53	.039	1.00	037039	.039	1.00	1	8	4	yes	28
.375	9.53	.050	1.27	037050	.050	1.27	1	7	4	yes	36
.375	9.53	.063	1.59	3⁄8-16	.063	1.59	1	7	4	**	-
.375	9.53	.063	1.59	037062	.063	1.59	1	7	4	**	41
.375	9.53	.079	2.00	037078	.079	2.00	1	7*	4	yes	47
.375	9.53	.083	2.12	3⁄8-12	.083	2.12	1	7*	4	**	-
.375	9.53	.083	2.12	037083	.083	2.12	1	7*	4	**	48
.375	9.53	.100	2.54	3⁄8-10	.100	2.54	1	7	4	**	-
.375	9.53	.100	2.54	037100	.100	2.54	1	6	4*	**	53
.375	9.53	.125	3.18	037125	.063	1.59	2	7	4	yes	59
.375	9.53	.125	3.18	3⁄8-8	.125	3.18	1	7	4	**	-
.375	9.53	.157	4.00	037157	.079	2.00	2	7*	4	yes	65
.375	9.53	.167	4.23	037166	.083	2.12	2	7*	4	yes	61
.375	9.53	.167	4.23	3⁄8-6	.083	2.12	2	7	4	**	-
.375	9.53	.197	5.00	037196	.039	1.00	5	8	4	yes	69
.375	9.53	.200	5.08	037200	.100	2.54	2	6	4*	**	69
.375	9.53	.200	5.08	3⁄8-5	.100	2.54	2	7*	4	**	-
.375	9.53	.250	6.35	3⁄8-4(3)	.083	2.12	3	7*	4	**	-
.375	9.53	.250	6.35	3⁄8-4	.125	3.18	2	7	4	**	-
.375	9.53	.250	6.35	037250	.063	1.59	4	7	4	**	70
.375	9.53	.333	8.47	037333	.083	2.12	4	7*	4	yes	78
.375	9.53	.375	9.53	037375	.094	2.38	4	7*	4	yes	79
.375	9.53	.394	10.00	037393	.079	2.00	5	7*	4	yes	79
.375	9.53	.400	10.16	037400	.100	2.54	4	6	4*	yes	79
.375	9.53	.500	12.70	3⁄8-2(4)	.125	3.18	4	7	4	**	-
.375	9.53	.500	12.70	037500	.125	3.18	4	7	4	**	81

Available Screw Sizes

.375” (cont) - .453” Diameter Range

Diameter		Lead		Screw Code	Pitch		Starts	End Machining		LH Available	Efficiency %
in	mm	in	mm		in	mm		Types 1,2,3	Type 4		
.375	9.53	.667	16.94	037667	.095	2.42	7	7	4	yes	83
.375	9.53	.750	19.05	037750	.125	3.18	6	7*	4	yes	84
.375	9.53	1.000	25.40	037999	.200	5.08	5	6	4*	yes	84
.375	9.53	1.500	38.10	037M38	.167	4.23	9	7*	4	yes	83
.393	10.00	.059	1.50	039059	.059	1.50	1	8*	4	yes	38
.393	10.00	.079	2.00	039078	.079	2.00	1	7	4	yes	47
.393	10.00	.118	3.00	039118	.059	1.50	2	8*	4	yes	52
.393	10.00	.157	4.00	039157	.079	2.00	2	7	4	yes	65
.393	10.00	.354	9.00	039354	.118	3.00	3	6	4*	yes	73
.393	10.00	.394	10.00	039393	.049	1.25	8	8	4	yes	79
.393	10.00	.472	12.00	039472	.118	3.00	4	7	4	yes	80
.393	10.00	.500	12.70	039500	.125	3.18	4	7	4	yes	80
.393	10.00	.591	15.00	039590	.118	3.00	5	7	4	yes	81
.393	10.00	1.378	35.00	039M35	.049	1.25	28	8	4	yes	82
.393	10.00	1.969	50.00	039M50	.197	5.00	10	7	4	yes	85
.393	10.00	.039	1.00	039039	.039	1.00	1	8	4	yes	79
.393	10.00	.236	6.00	039236	.059	1.50	4	6	4	**	-
.433	11.00	.236	6.00	043236	.118	3.00	2	7	4	yes	70
.438	11.11	.250	6.35	043250	.125	3.18	2	8	4	yes	70
.438	11.11	.500	12.70	043500	.125	3.18	4	8	4	yes	80
.438	11.11	1.201	30.50	043M31	.200	5.08	6	8	4	yes	84
.453	11.50	.500	12.70	RD043500	.125	3.18	4	8	4	yes	-

Available Screw Sizes

.472” - .500” Diameter Range

Diameter		Lead		Screw Code	Pitch		Starts	End Machining		LH Available	Efficiency %
in	mm	in	mm		in	mm		Types 1,2,3	Type 4		
.472	12.00	.079	2.00	047078	.079	2.00	1	9	4	yes	41
.472	12.00	.118	3.00	047118	.118	3.00	1	7	4	yes	49
.472	12.00	.236	6.00	047236	.118	3.00	2	7	4	yes	65
.472	12.00	.394	10.00	047393	.098	2.50	4	8	4	yes	76
.472	12.00	.591	15.00	047590	.118	3.00	5	9	4	yes	80
.472	12.00	.984	25.00	047984	.197	5.00	5	9*	4	yes	84
.472	12.00	1.575	40.00	047M40	.049	1.25	32	10	6	yes	85
.472	12.00	1.772	45.00	047M45	.049	1.25	36	10	6	yes	86
.472	12.00	2.362	60.00	047M60	.197	5.00	12	9	4	yes	88
.500	12.70	.050	1.27	050050	.050	1.27	1	9	6	yes	29
.500	12.70	.100	2.54	050100	.100	2.54	1	9	6*	yes	46
.500	12.70	.125	3.18	050125	.125	3.18	1	9*	6*	yes	51
.500	12.70	.197	5.00	050197	.098	2.50	2	9	6	yes	62
.500	12.70	.200	5.08	0.492-5	.100	2.54	2	9	6*	**	-
.500	12.70	.200	5.08	050200	.100	2.54	2	9	6	**	63
.500	12.70	.250	6.35	050250	.125	3.18	2	8	4	yes	67
.500	12.70	.400	10.16	050400	.100	2.54	4	10	6	yes	76
.500	12.70	.500	6.35	0.488-2	.125	3.18	4	9*	4	**	-
.500	12.70	.500	6.35	1½-2(4)	.125	3.18	4	9*	4	**	-
.500	12.70	.500	6.35	050500	.100	2.54	5	10	6	**	79
.500	12.70	.800	20.32	050800	.100	2.54	8	10	6	yes	83
.500	12.70	1.000	25.40	050999	.125	3.18	8	9	6	yes	84
.500	12.70	1.402	35.60	050M36	.200	5.09	7	9	6	yes	85

Available Screw Sizes

.551” - .625” Diameter Range

Diameter		Lead		Screw Code	Pitch		Starts	End Machining		LH Available	Efficiency %
in	mm	in	mm		in	mm		Types 1,2,3	Type 4		
.551	14.00	.118	3.00	055118	.118	3.00	1	10	6	yes	48
.551	14.00	.157	4.00	055157	.157	4.00	1	9	4	yes	58
.551	14.00	.315	8.00	055315	.158	4.00	2	9	6	yes	71
.551	14.00	.709	18.00	055708	.118	3.00	6	10	6	yes	79
.551	14.00	.787	20.00	055787	.197	5.00	4	9	4	yes	82
.551	14.00	1.181	30.00	055M30	.197	5.00	6	10	6	yes	85
.551	14.00	2.756	70.00	055M70	.197	5.00	14	10	6	yes	88
.563	14.29	1.598	40.60	056M41	.200	5.07	8	10	6	yes	86
.625	15.88	.100	2.54	062100	.100	2.54	1	12	8	yes	40
.625	15.88	.125	6.35	062125	.125	3.18	1	10	6	yes	45
.625	15.88	.200	6.35	062200	.100	2.54	2	12	6	**	53
.625	15.88	.200	6.35	5⁄8-5	.200	5.08	1	9	6	**	-
.625	15.88	.250	6.35	062250	.125	3.18	2	10	6	yes	63
.625	15.88	.375	9.53	062375	.125	3.18	3	10	6	yes	70
.625	15.88	.500	12.70	062500	.125	3.18	4	10	6	yes	76
.625	15.88	.625	15.88	062625	.125	3.18	5	10	6	yes	78
.625	15.88	2.000	50.80	062M51	.167	4.23	12	10	6	yes	86

Available Screw Sizes

.630” - .709” Diameter Range

Diameter		Lead		Screw Code	Pitch		Starts	End Machining		LH Available	Efficiency %
in	mm	in	mm		in	mm		Types 1,2,3	Type 4		
.630	16.00	.079	2.00	063078	.079	2.00	1	10	6	yes	41
.630	16.00	.158	4.00	063157	.158	4.00	1	10	6	yes	58
.630	16.00	.197	5.00	063196	.098	2.50	2	10	6	yes	62
.630	16.00	.236	6.00	063236	.118	3.00	2	10	6	yes	55
.630	16.00	.315	8.00	063315	.157	4.00	2	10	6	yes	68
.630	16.00	.787	20.00	063787	.098	2.50	8	12	6	yes	82
.630	16.00	.827	21.00	063826	.118	3.00	7	12	6	yes	83
.630	16.00	.984	25.00	063984	.197	5.00	5	10	6	yes	84
.630	16.00	1.378	35.00	063M35	.197	5.00	7	12	6	yes	85
.630	16.00	1.800	45.72	063M46	.200	5.08	9	12	8	yes	86
.630	16.00	3.150	80.00	063M80	.197	5.00	16	12	8*	yes	87
.630	16.00	3.543	90.00	063M90	.197	5.00	18	12	8	yes	88
.709	18.00	.079	2.00	071078	.079	2.00	1	12	8	yes	41
.709	18.00	.158	4.00	071157	.158	4.00	1	12	8	yes	58
.709	18.00	.630	16.00	071629	.157	4.00	4	12	8	yes	76
.709	18.00	.945	24.00	071944	.118	3.00	8	15	8	yes	84
.709	18.00	1.181	30.00	071M30	.197	5.00	6	12	8	yes	85
.709	18.00	1.575	40.00	071M40	.197	5.00	8	12	8	yes	86
.709	18.00	2.000	50.80	071M51	.200	5.08	10	12	8	yes	86
.709	18.00	3.937	100.00	071M00	.197	5.00	20	15	10	yes	88

Available Screw Sizes

.750” - .945” Diameter Range

Diameter		Lead		Screw Code	Pitch		Starts	End Machining		LH Available	Efficiency %
in	mm	in	mm		in	mm		Types 1,2,3	Type 4		
.750	19.05	.100	2.54	075100	.100	2.54	1	15	8	yes	35
.750	19.05	.167	4.23	075166	.167	4.23	1	12	8	yes	47
.750	19.05	.200	5.08	075200	.200	5.08	1	12	8	yes	52
.750	19.05	.250	6.35	075250	.125	3.18	2	12	8	yes	57
.750	19.05	.333	8.47	075333	.167	4.23	2	12	8	yes	64
.750	19.05	.500	12.70	075500	.125	3.18	4	12	8	yes	73
.787	20.00	.158	4.00	079157	.158	4.00	1	12	8	yes	37
.787	20.00	.315	8.00	079315	.157	4.00	2	12	8	yes	61
.787	20.00	.472	12.00	079472	.157	4.00	3	15	8	yes	72
.787	20.00	1.063	27.00	079M27	.118	3.00	9	17	10	yes	82
.787	20.00	1.772	45.00	079M45	.197	5.00	9	15	10	yes	84
.866	22.00	.787	20.00	087787	.157	4.00	5	17	10	yes	78
.866	22.00	1.378	35.00	087M35	.197	5.00	7	17*	10	yes	83
.866	22.00	1.969	50.00	087M50	.197	5.00	10	17	10	yes	85
.866	22.00	.197	5.00	087196	.197	5.00	1	15	10	yes	50
.871	22.11	.200	5.08	RD088200	.100	2.54	2	15	10	yes	-
.875	22.23	.166	4.22	088166	.166	4.22	1	15	10	yes	45
.875	22.23	.200	5.08	088200	.200	5.08	1	15	10	yes	48
.945	24.00	1.181	30.00	094M30	.118	3.00	10	20*	12	yes	85
.945	24.00	1.575	40.00	094M40	.197	5.00	8	20*	12	yes	83
.945	24.00	2.165	55.00	094M55	.197	5.00	11	20	12	yes	86

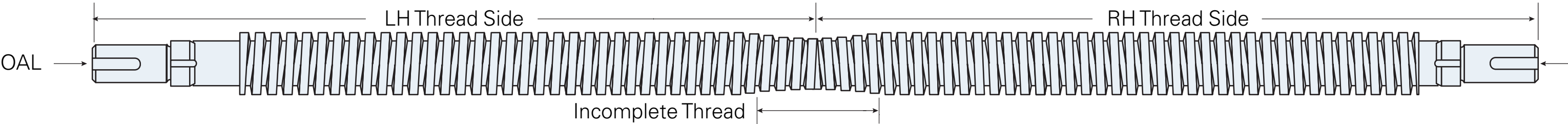
Available Screw Sizes

1.00” - 2.000” Diameter Range

Diameter		Lead		Screw Code	Pitch		Starts	End Machining		LH Available	Efficiency %
in	mm	in	mm		in	mm		Types 1,2,3	Type 4		
1.000	25.40	.100	2.54	100100	.100	2.54	1	20	12	yes	24
1.000	25.40	.167	4.23	100166	.167	4.23	1	17	10	yes	40
1.000	25.40	.200	5.08	100200	.200	5.08	1	17	10	yes	44
1.000	25.40	.250	6.35	100250	.250	6.35	1	17	10	yes	46
1.000	25.40	.500	12.70	100500	.250	6.35	2	17	10	yes	63
1.000	25.40	1.000	25.40	100M25	.100	2.54	10	20	12	**	-
1.000	25.40	1.000	25.40	100999	.100	2.54	10	20	12	**	74
1.000	25.40	2.250	57.15	100M57	.225	5.72	10	20	12	**	-
1.000	25.40	3.000	76.20	100M76	.200	5.08	15	20	12	yes	86
1.024	26.00	.236	6.00	TR26X6	.236	6.00	1	17	10	**	-
1.125	28.45	.200	5.08	112200	.200	5.08	1	20	12	yes	42
1.250	31.75	.200	5.08	125200	.200	5.08	1	25	16	yes	35
1.250	31.75	.250	6.35	125250	.250	6.35	1	20	12	yes	45
1.250	31.75	.500	12.70	125500	.250	6.35	2	20	12	yes	55
1.250	31.75	1.600	40.64	125M40	.400	10.16	4	20	12	yes	84
1.500	38.10	.100	2.54	150100	.100	2.54	1	30	19	**	25
1.500	38.10	.200	5.08	150200	.200	5.08	1	30	19	yes	35
1.500	38.10	.250	6.35	150250	.250	6.35	1	30	19	yes	40
1.500	38.10	.375	9.53	150375	.375	9.53	1	25	16	yes	43
1.500	38.10	.500	12.70	150500	.250	6.35	2	30	19	yes	56
1.500	38.10	1.000	25.40	150999	.100	2.54	10	30	19	yes	78
1.570	39.88	.276	7.00	157276	.276	7.00	1	30	19	yes	37
1.750	44.45	.250	6.35	175250	.250	6.35	1	35	22	yes	38
2.000	50.80	.200	5.08	200200	.200	5.08	1	40	24	yes	30
2.000	50.80	.250	6.35	200250	.250	6.35	1	40	24	yes	32
2.000	50.80	.500	12.70	200500	.500	12.70	1	35	22	yes	46

Twin-Lead Screw Assemblies

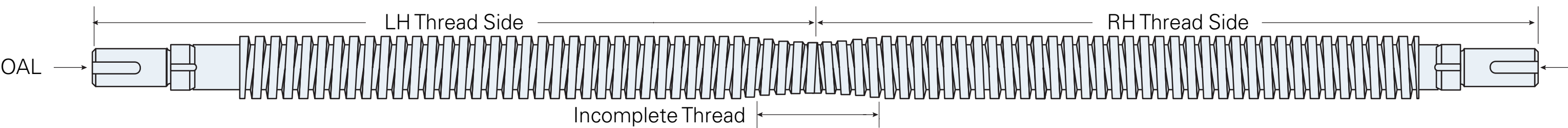
.078" - .500" Diameter Range



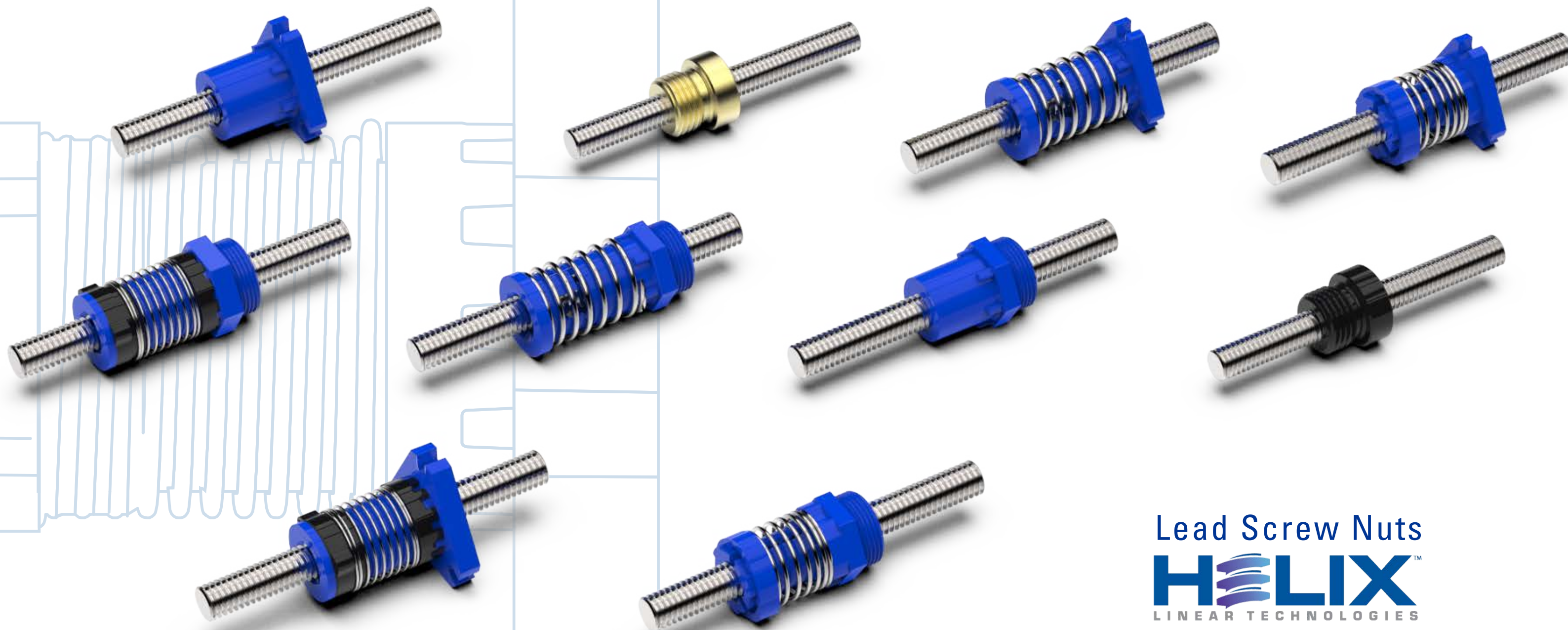
Screw Diameter		Max Overall Length		Max Usable LH/RH Thread		Incomplete Thread Length	
in	mm	in	mm	in	mm	in	mm
.078	1.98	4.000	101.60	1.750	44.45	.500	12.70
.079	2.00	3.937	100.00	1.732	44.00	.472	12.00
.125	3.18	12.000	304.80	5.500	139.70	1.000	25.40
.157	4.00	11.811	300.00	5.315	135.00	.984	25.00
.218	5.54	24.000	609.60	11.500	292.10	1.000	25.40
.236	6.00	23.622	600.00	11.339	288.00	.984	25.00
.250	6.35	24.000	609.60	11.500	292.10	1.000	25.40
.312	7.92	24.000	609.60	11.500	292.10	1.000	25.40
.315	8.00	35.433	900.00	16.929	430.00	.748	19.00
.375	9.53	36.000	914.40	17.000	431.80	.750	19.05
.394	10.00	35.433	900.00	16.929	430.00	1.000	25.40
.433	11.00	35.433	900.00	16.929	430.00	1.000	25.40
.472	12.00	35.433	900.00	16.929	430.00	1.000	25.40
.500	12.70	36.000	914.40	17.000	431.80	1.000	25.40

Twin-Lead Screw Assemblies

.551" - 2.000" Diameter Range



Screw Diameter		Max Overall Length		Max Usable LH/RH Thread		Incomplete Thread Length	
in	mm	in	mm	in	mm	in	mm
.551	14.00	35.433	900.00	16.929	430.00	1.000	25.40
.625	15.88	36.000	914.40	17.000	431.80	1.500	38.10
.630	16.00	35.433	900.00	16.929	430.00	1.496	38.00
.709	18.00	70.866	1800.00	34.449	875.00	1.969	50.00
.750	19.05	72.000	1828.80	34.500	876.30	2.000	50.80
.787	20.00	70.866	1800.00	34.449	875.00	1.969	50.00
.875	22.23	72.000	1828.80	34.500	876.30	2.000	50.80
1.000	25.40	72.000	1828.80	34.500	876.30	2.000	50.80
1.024	26.00	70.866	1800.00	34.449	875.00	1.969	50.00
1.250	31.75	144.000	3657.60	70.250	1784.35	2.000	50.80
1.500	38.10	144.000	3657.60	70.250	1784.35	2.500	63.50
1.575	40.00	141.732	3600.00	69.882	1775.00	1.969	50.00
1.750	44.45	144.000	3657.60	70.500	1790.70	3.000	76.20
2.000	50.80	144.000	3657.60	70.500	1790.70	3.000	76.20

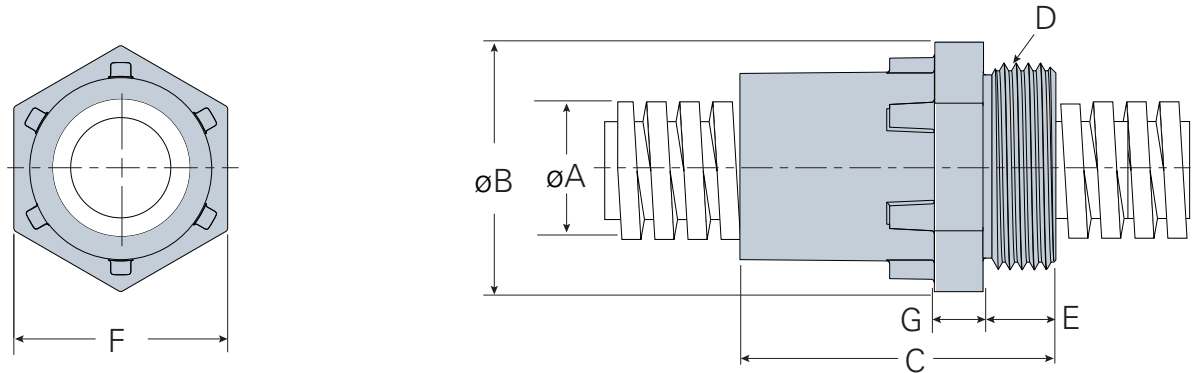


Lead Screw Nuts
HELIX[™]
LINEAR TECHNOLOGIES

Standard Freewheeling Nut (NTA)

Threaded mount

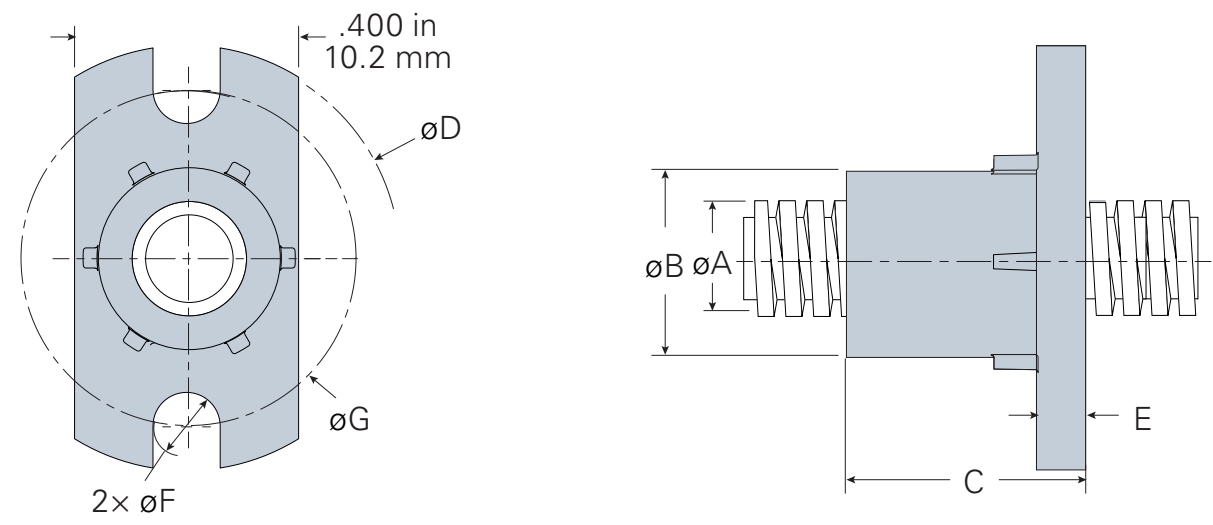
material: Acetal



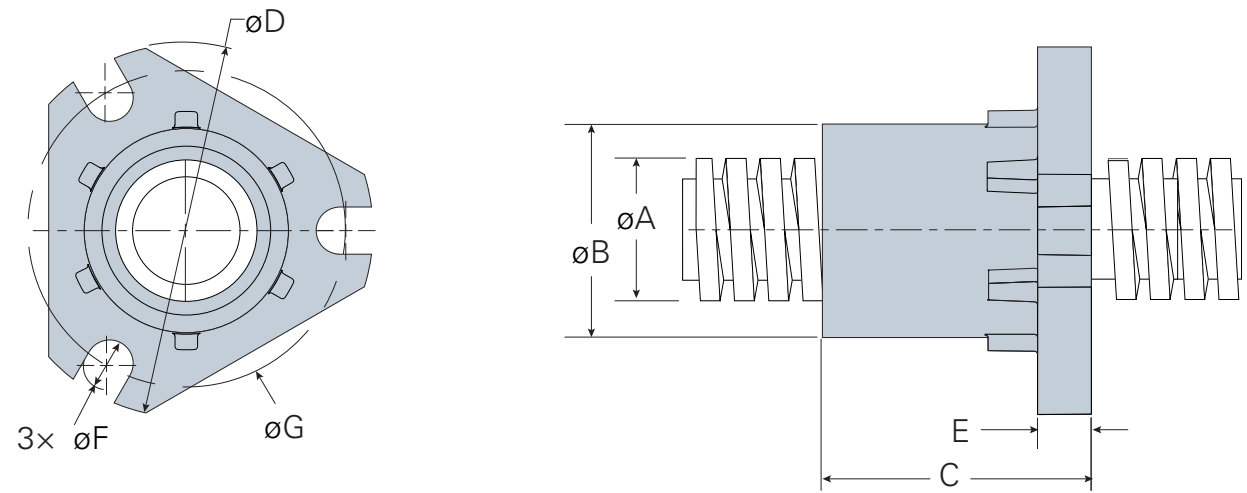
Lead Thread Diameter Range A		Hex Across Corners B		Nut Length C		Thread Size D	Thread Length E		Hex Across Flats F		Hex Thickness G		Dynamic Load	
in	mm	in	mm	in	mm	in	in	mm	in	mm	in	mm	lb	kg
.079 - .188	2.0 - 4.8	.504	12.8	.684	17.15	3⁄8"-24 UNF	.188	4.8	.437	11.0	.130	3.3	35	16
.195 - .394	5.0 - 10.0	.721	18.3	.875	22.23	9⁄16"-18 UNF	.250	6.3	.625	15.8	.180	4.8	75	34
.433 - .563	11.0 - 14.3	.793	20.1	1.000	25.40	5⁄8"-18 UNF	.250	6.3	.687	17.4	.180	4.8	150	68
.625 - .500	15.9 - 16.0	1.154	29.3	1.500	38.10	15⁄16"-16 UN	.375	9.5	1.000	25.4	.250	6.4	225	102
.550 - .750	18.0 - 19.1	1.299	33.0	1.625	41.28	11⁄16"-16 UN	.375	9.5	1.125	28.5	.250	6.4	350	159
.787 - 1.000	20.0 - 25.4	1.660	42.2	1.750	44.45	13⁄8"-16 UN	.375	9.5	1.438	36.5	.310	7.9	530	240

Standard Freewheeling Nut (NFA) Flanged mount

material: Acetal



Two-Hole Flange
Diameter Ranges:
.078 – .188 in
2.0 – 5.0 mm



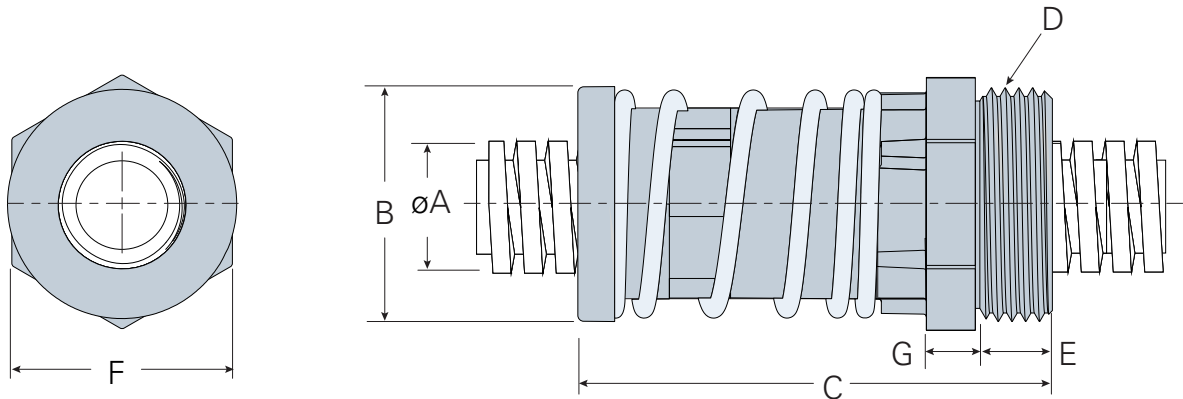
Three-Hole Flange
Diameter Ranges:
.195 – 1.000 in
5.5 – 25.4 mm

Lead Thread Diameter Range A		Nut Diameter B		Nut Length C		Flange Diameter D		Flange Thickness E		Slot Width F		Bolt Circle Diameter G		Dynamic Load	
in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	lb	kg
.078 - .188	2 - 5	.30	10.2	.50	12.7	.760	19.0	.13	3.3	.120	3.1	.600	15.3	35	16
.195 - .276	5.5 - 7	.42	12.7	.63	15.8	1.000	25.4	.19	4.8	.144	3.7	.750	19.0	75	34
.294 - .393	8 - 10	.54	15.8	.75	19.1	1.125	28.5	.19	4.8	.144	3.7	.875	22.2	150	68
.433 - .500	11 - 13	.66	19.1	1.13	28.5	1.500	38.1	.25	6.4	.203	5.2	1.125	28.5	225	102
.550 - .750	14 - 19	.96	28.5	1.25	31.7	1.750	44.4	.25	6.4	.221	5.6	1.438	36.5	350	159
.787 - 1.000	20 - 25.4	1.20	38.0	1.38	67.9	2.250	57.2	.32	8.0	.257	6.5	1.875	47.6	530	240

Axial Anti-Backlash Nut (ATA)

material: Acetal

Threaded mount



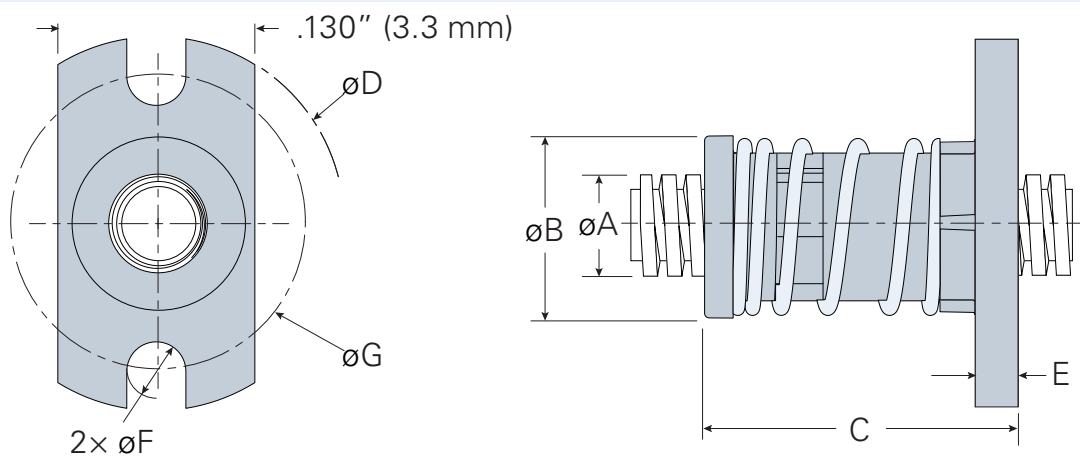
Lead Thread Diameter Range A		Hex Across Corners B		Nut Length C		Thread Size D	Thread Length E		Hex Across Flats F		Hex Thickness G		High Force Spring Load Range		Low Force Spring Load Range	
inch	mm	inch	mm	inch	mm		inch	mm	inch	mm	inch	mm	lbs	kg	lbs	kg
.078 - .197	2 - 5	.51	12.9	1.06	26.9	3⁄8-24 UNF	.19	4.8	.44	11.2	.13	3.3	1.11 - 3.38	.50 - 1.53	.51 - 1.56	.23 - 0.71
.217 - .276	5.5 - 7	.73	18.5	1.28	32.5	9⁄16-18 UNF	.25	6.4	.63	16.0	.19	4.8	1.03 - 3.31	.47 - 1.50	.55 - 1.62	.25 - 0.73
.313 - .394	8 - 10	.80	20.2	1.55	39.4	5⁄8-18 UNF	.25	6.4	.69	17.5	.19	4.8	4.07 - 6.18	1.85 - 2.80	1.88 - 2.87	.85 - 1.30
.433 - .500	11 - 13	1.15	29.3	2.25	57.2	15⁄16-16 UN	.38	9.7	1.00	25.4	.25	6.4	4.00 - 9.88	1.81 - 4.48	1.98 - 4.01	.90 - 1.82
.550 - .750	14 - 19	1.30	33.1	2.56	65.0	1 1⁄16-16 UN	.37	9.4	1.13	28.7	.25	6.4	6.69 - 13.14	3.03 - 5.96	3.31 - 6.50	1.50 - 2.95
.787 - 1.000	20 - 24	1.66	42.2	2.86	72.6	1 3⁄8-16 UN	.38	9.7	1.44	36.6	.31	7.9	10.51 - 20.29	4.77 - 9.20	5.67 - 10.51	2.57 - 4.77

Lead Thread Diameter Range		Drag Torque (max)		Dynamic Load	
inch	mm	oz-in	N-m	lb	kg
.078 - .197	2 - 5	4	0.03	35	16
.217 - .276	5.5 - 7	4	0.03	75	35
.313 - .394	8 - 10	5	0.04	150	68

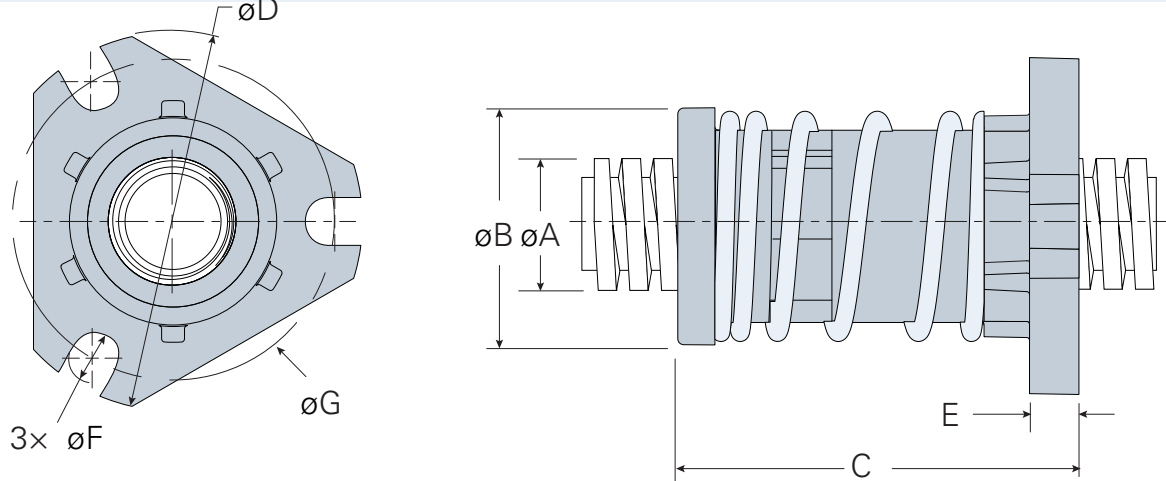
Lead Thread Diameter Range		Drag Torque (max)		Dynamic Load	
inch	mm	oz-in	N-m	lb	kg
.433 - .500	11 - 13	9	0.06	225	100
.550 - .750	14 - 19	12	0.08	350	160
.787 - 1.000	20 - 24	16	0.11	530	240

Axial Anti-Backlash Nut (AFA) Flanged mount

material: Acetal



Two-Hole Flange
Diameter Ranges: .078 – .188 in
2.0 – 5.0 mm



Three-Hole Flange
Diameter Ranges: .195 – 1.000 in
5.5 – 25.4 mm

Lead Thread Diameter Range A		Nut Diameter B		Nut Length C		Flange Diameter D		Flange Thickness E		Slot Width F		Bolt Circle Diameter G		High Force Spring Load Range		Low Force Spring Load Range	
in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	lbs	kg	lbs	kg
.078 - .197	2 - 5	.42	10.7	.87	24.0	.750	19.1	.130	3.3	.120	3.0	.600	15.24	1.11 - 3.38	.50 - 1.53	.51 - 1.56	.23 - 0.71
.217 - .276	5.5 - 7	.56	14.3	1.10	28.0	1.000	25.4	.188	4.8	.144	3.7	.750	19.0	1.03 - 3.31	.47 - 1.50	.55 - 1.62	.25 - 0.73
.313 - .394	8 - 10	.69	17.4	1.4	35.5	1.125	28.5	.188	4.8	.144	3.7	.875	22.2	4.07 - 6.18	1.85 - 2.80	1.88 - 2.87	.85 - 1.30
.433 - .500	11 - 13	.85	22.0	2.00	5.8	1.500	38.1	.250	6.35	.203	5.2	1.125	28.5	4.00 - 9.88	1.81 - 4.48	1.98 - 4.01	.90 - 1.82
.550 - .750	14 - 19	1.13	28.5	2.34	59.4	1.750	44.4	.250	6.35	.221	5.6	1.438	36.5	6.69 - 13.14	3.03 - 5.96	3.31 - 6.50	1.50 - 2.95
.787 - 1.000	20 - 24	1.50	38.0	2.68	67.9	2.250	57.2	.313	8.0	.257	6.5	1.875	47.6	10.51 - 20.29	4.77 - 9.20	5.67 - 10.51	2.57 - 4.77

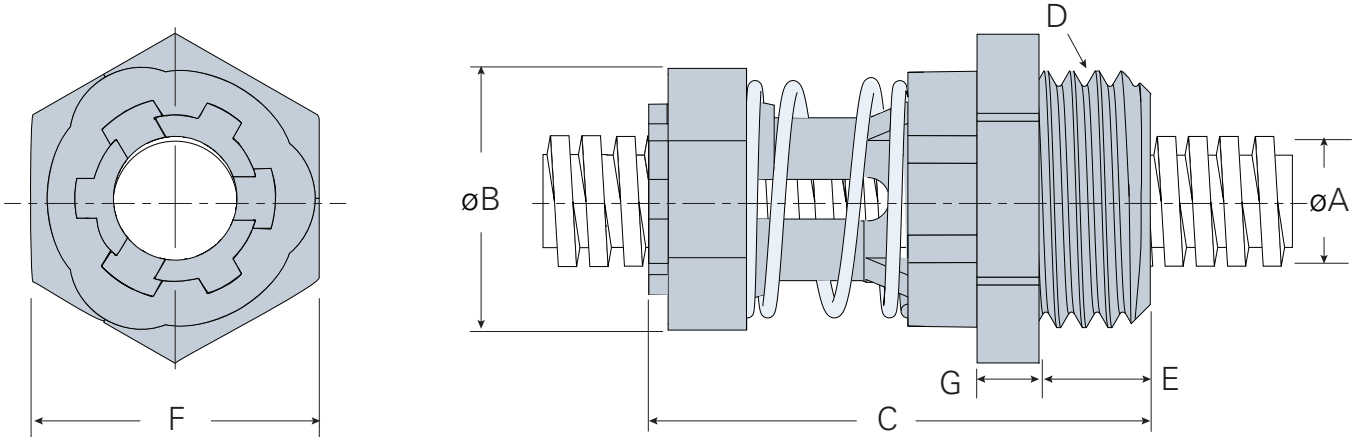
Lead Thread Diameter Range		Drag Torque (max)		Dynamic Load	
inch	mm	oz-in	N-m	lb	kg
.078 - .197	2 - 5	4	0.03	35	16
.217 - .276	5.5 - 7	4	0.03	75	35
.313 - .394	8 - 10	5	0.04	150	68

Lead Thread Diameter Range		Drag Torque (max)		Dynamic Load	
inch	mm	oz-in	N-m	lb	kg
.433 - .500	11 - 13	9	0.06	225	100
.550 - .750	14 - 19	12	0.08	350	160
.787 - 1.000	20 - 24	16	0.11	530	240

Radial Anti-Backlash Nut (RTA)

Threaded mount

material: Acetal



Drag

Torque (max)

Lead Thread Diameter Range A		Nut Diameter B		Nut Length C		Thread Size D	Thread Length E		Hex Across Flats F		Hex Thickness G		Dynamic Load		Drag Torque (max)	
in	mm	in	mm	in	mm	in	in	mm	in	mm	in	mm	lbs	kg	oz-in	N-m
.217 - .276	6 - 7	.607	15.4	1.150	29.2	9⁄16 - 18 UNF	.250	6.4	.625	15.9	.188	4.8	75	35	.25 - .3	0.002 - 0.021
.313 - .394	8 - 10	.777	19.7	1.375	34.9	5⁄8 - 18 UN	.260	6.6	.688	17.5	.188	4.8	75	35	1 - 5	0.007 - 0.03
.438 - .500	11 - 13	.930	23.6	1.765	44.8	15⁄16 - 16 UN	.375	9.5	1.000	25.4	.250	6.4	150	68	3 - 7	0.02 - 0.05
.551 - .750	14 - 19	1.274	32.4	2.125	54.0	11⁄16 - 16 UN	.374	9.5	1.125	28.6	.250	6.4	225	100	4 - 8	0.028 - 0.055

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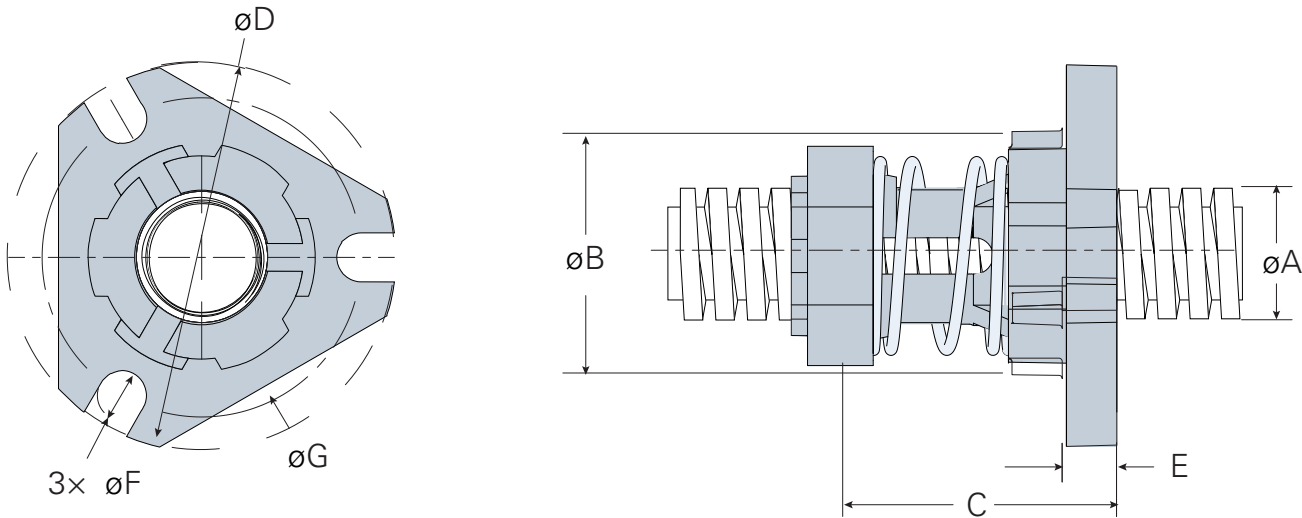
Design Considerations

Order Now

Radial Anti-Backlash Nut (RFA)

Flanged mount

material: Acetal

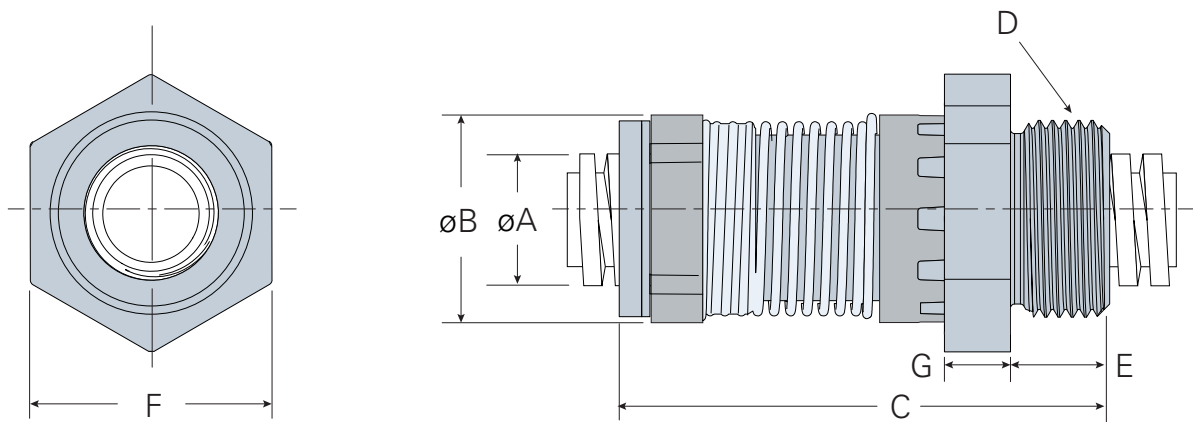


Lead Thread Diameter Range A		Nut Diameter B		Nut Length C		Thread Size D		Thread Length E		Hex Across Flats F		Hex Thickness G		Dynamic Load		Drag Torque (max)	
inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	lbs	kg	oz-in	N-m
.217–.276	6–7	.610	15.4	.94	23.8	1.00	25.4	.19	4.8	.14	3.7	.750	19.0	75	35	.25–3	.002–.021
.313–.394	8–10	.780	19.7	1.16	29.5	1.13	28.6	.19	4.8	.14	3.7	.875	22.2	75	35	1–5	.007–.030
.438–.500	11–13	.930	23.6	1.44	36.5	1.50	38.1	.25	6.4	.20	5.2	1.125	28.5	150	68	3–7	.020–.050
.551–.750	14–19	1.275	32.4	1.75	44.4	1.75	44.4	.25	6.4	.22	5.6	1.438	36.5	225	100	4–8	.028–.055

Torsional Anti-Backlash Nut (KTA)

Threaded mount

material: Acetall



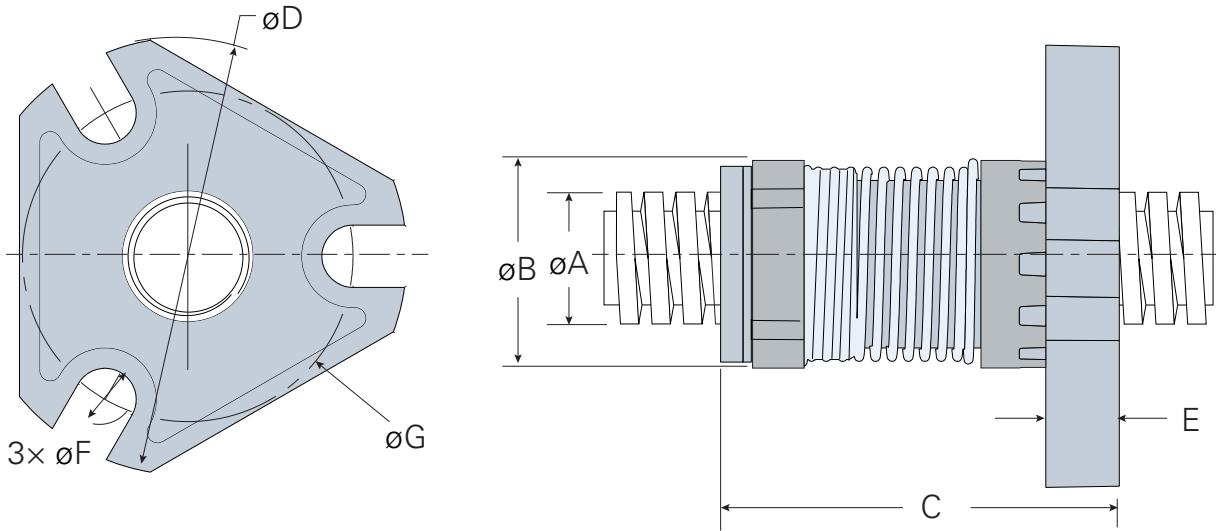
Lead Thread Diameter Range A		Nut Diameter B		Nut Length C		Thread Size D	Thread Length E		Hex Across Flats F		Hex Thickness G		Dynamic Load		Drag Torque (max)	
in	mm	in	mm	in	mm	in	in	mm	in	mm	in	mm	lbs	kg	oz-in	N-m
.236–.276	6–7	.70	17.8	1.6	40.6	9⁄16-18	.25	6.4	.69	17.5	.18	4.8	20	9	3	0.025
.313–.394	8–10	.87	22.1	1.8	45.7	3⁄4-20	.37	9.4	.88	22.35	.25	6.4	30	13	3	0.025
.433–.500	11–13	1.06	26.9	2.1	53.3	15⁄16-16	.37	9.4	1.00	25.4	.25	6.4	50	34	6	0.04
.550–.630*	14–16	1.30	33.0	2.5	63.5	1 1⁄8-16	.37	9.4	1.25	31.7	.31	8.0	90	68	6	0.04
.709–.787*	18–20	1.63	41.4	2.8	71.1	1 3⁄8-16	.37	9.4	1.56	39.6	.32	8.0	250	113	7	0.05

* limited availability

Torsional Anti-Backlash Nut (KFA)

Flanged mount

material: Acetal

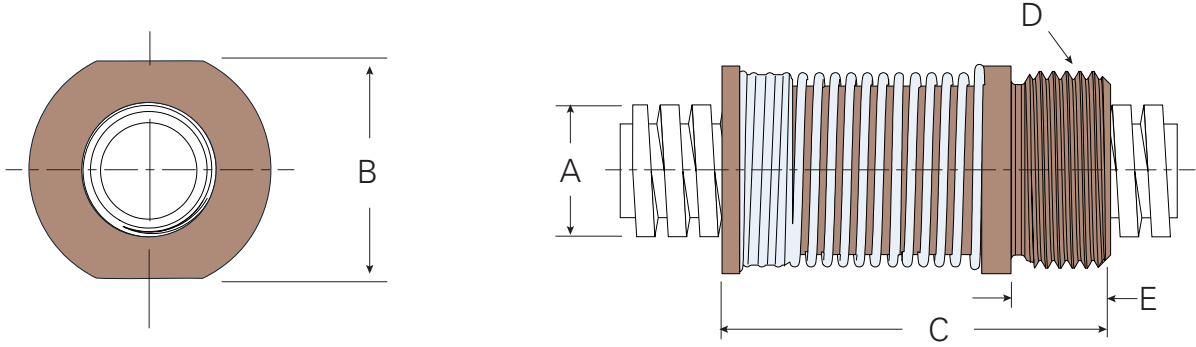


Lead Thread Diameter Range A		Nut Diameter B		Nut Length C		Thread Size D		Thread Length E		Hex Across Flats F		Hex Thickness G		Dynamic Load		Drag Torque (max)	
inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	lbs	kg	oz-in	N-m
.236–.276	6–7	.70	17.8	1.6	40.6	1.12	28.6	.18	4.8	.144	3.7	.875	22.2	20	9	3	0.025
.313–.394	8–10	.87	22.1	1.8	45.7	1.50	38.1	.25	6.4	.203	5.2	1.125	28.6	30	13	3	0.025
.433–.500	11–13	1.06	26.9	2.1	53.3	1.75	44.5	.25	6.4	.220	5.6	1.406	35.7	50	34	6	0.04
.550–.630	14–16	1.30	33.0	2.5	63.5	1.75	44.5	.31	8.0	.220	5.6	1.750	44.5	90	68	6	0.04
.709–.787	18–20	1.63	41.4	2.8	71.1	2.38	60.5	.31	8.0	.220	5.6	2.000	50.8	250	113	7	0.05

Compact Torsional Anti-Backlash Nut (GTD)

Threaded mount

material: Delrin

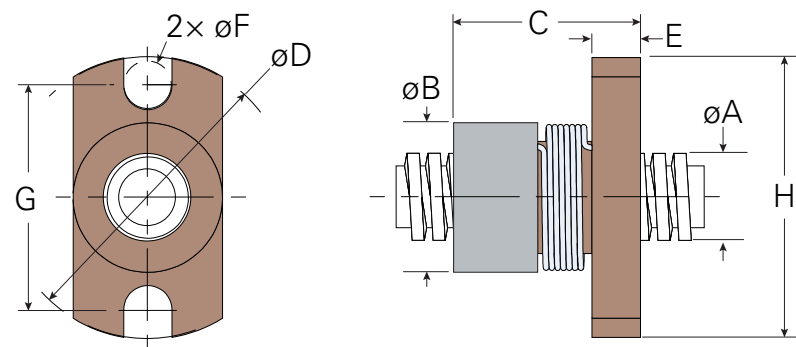


Lead Thread Diameter Range A		Nut Diameter B		Nut Length C		Thread Code D	Thread Length E		Dynamic Load		Drag Torque (max)	
in	mm	in	mm	in	mm		in	mm	lb	kg	oz-in	N-m
.125 – .217	3 – 5.5	.50	10.2	.50	12.7	3⁄8-24	.19	4.8	5	2.3	.5	0.004
.236 – .300	6.0 – 7.6	.52	13.2	1.09	27.7	7⁄16-20	.25	6.4	10	4.5	.5–2	0.004–0.14
.312 – .400	7.9 – 10.2	.80	20.3	1.73	44.0	3⁄8-20	.38	9.7	20	9.1	1–3	0.007–0.02
.433 – .465	11.0 – 11.8	.90	22.9	1.80	46.0	13⁄16-16	.38	9.7	30	13.6	1–3	0.007–0.02
.472 – .550	12.0 – 14.0	1.06	26.9	2.09	53.1	15⁄16-16	.38	9.7	100	45.4	.5–2	0.014–0.04
.562 – .628	14.3 – 16.0	1.38	35.1	2.29	58.2	1 1⁄8-16	.38	9.7	125	56.8	1–3	0.014–0.04
.630 – .788	16.0 – 20.0	1.56	39.6	2.69	68.4	1 3⁄8-16	.50	12.7	150	68.2	1–3	0.02–0.05

Compact Torsional Anti-Backlash Nut (GFD)

Flanged mount

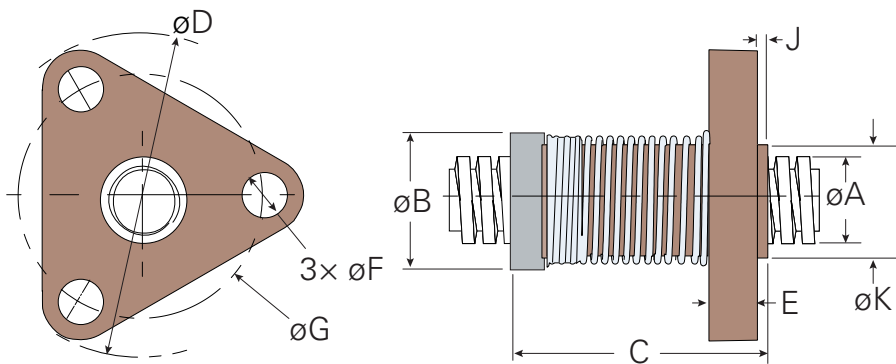
material: Delrin



Rectangular Flange

Diameter Ranges:

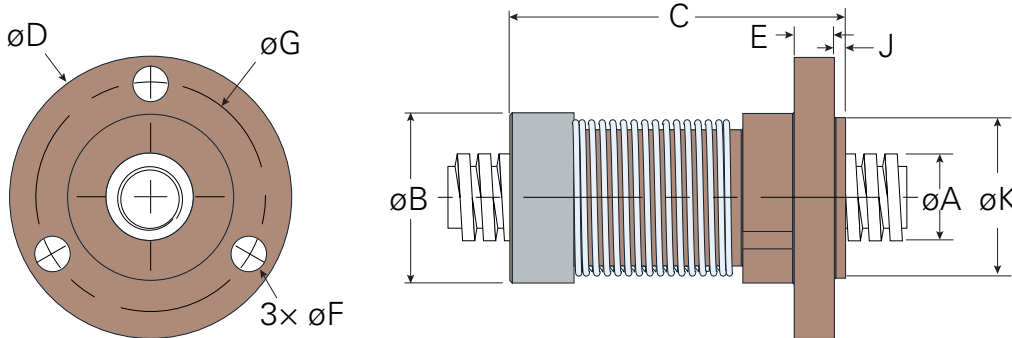
.078 – .188 in (2.0 – 5.0 mm)



Triangular Flange

Diameter Ranges:

.195 – .465 in (5.5 – 11.5 mm)



Round Flange

Diameter Ranges:

.472 – 1.000 in (12 – 25.4 mm)

Lead Thread Diameter Range A		Nut Diameter B		Nut Length C		Flange Diameter D		Flange Thickness E		Mount Hole F		Bolt Circle Diameter G		Flange Height H		Boss Length J		Boss Diameter K		Dynamic Load		Drag Torque (max)	
in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	lb	kg	oz-in	N-m
.125 – .217	3 – 5.5	.40	10.2	.50	12.7	.76	19.3	.130	3.3	.13	3.3	.600	15.2	.75	19.1	-	-	-	-	5	2.3	.5	0.004
.236 – .300	6.0 – 7.6	.52	13.2	1.09	27.7	1.00	25.4	.016	3.9	.147	3.7	.750	19.1	-	-	.08	2.0	.50	12.7	10	4.5	.5–2	0.004–0.14
.312 – .400	7.9 – 10.2	.80	20.3	1.73	44.0	1.50	38.1	.200	5.1	.200	5.1	1.125	28.6	-	-	.06	1.5	.75	19.1	20	9.1	1–3	0.007–0.02
.433 – .465	11.0 – 11.8	.90	22.9	1.80	46.0	1.62	41.2	.230	5.8	.230	5.1	1.250	31.8	-	-	.06	1.5	.875	22.2	30	13.6	1–3	0.007–0.02
.472 – .550	12.0 – 14.0	1.06	26.9	2.09	53.1	1.75	44.5	.250	6.4	.22	5.6	1.410	35.7	-	-	.07	1.8	1.0	25.4	100	45.4	.5–2	0.014–0.04
.562 – .628	14.3 – 16.0	1.38	35.1	2.29	58.2	2.13	54.0	.280	7.1	.22	5.6	1.750	44.5	-	-	.08	2.0	1.25	31.8	125	56.8	1–3	0.014–0.04
.630 – .788	16.0 – 20.0	1.56	39.6	2.69	68.4	2.38	60.3	.310	7.9	.22	5.6	2.000	50.8	-	-	.09	2.3	1.5	38.1	150	68.2	1–3	0.02–0.05

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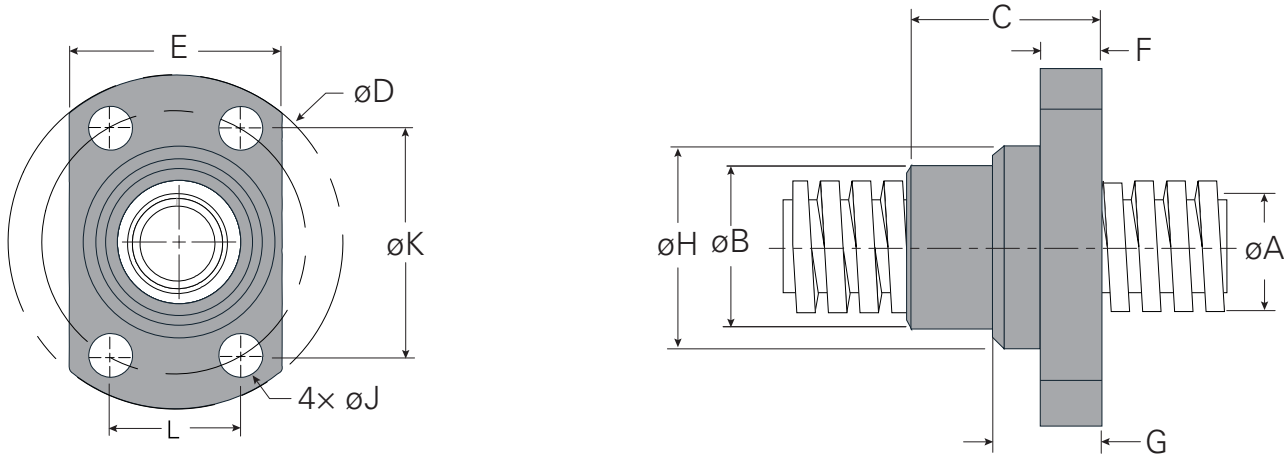
Design
Considerations

Order
Now

Ball Nut Replacer (BNR)

Flanged mount

material: Heavy Load Resin

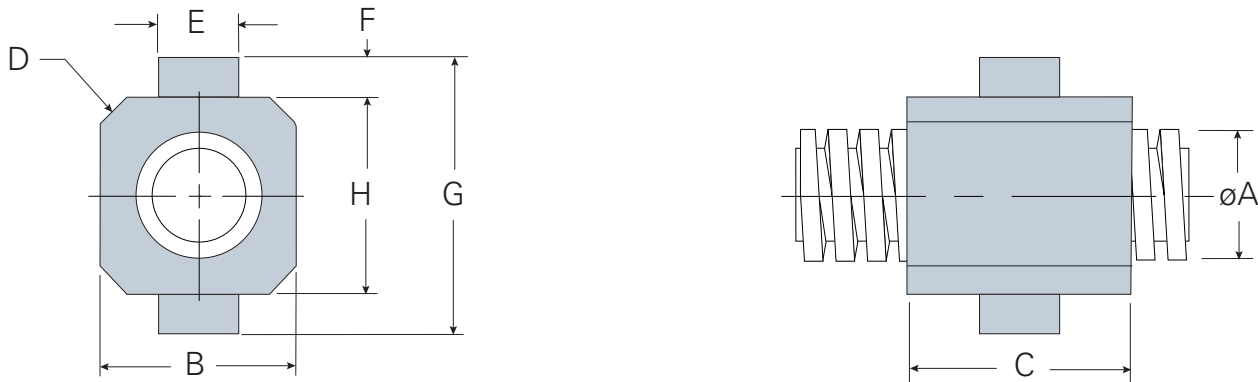


Lead Thread Diameter Range A		Nut Diameter B		Nut Length C		Flange Diameter D		Flange Height E		Flange Thickness F		Shoulder Height G		Shoulder Diameter H		Mounting Hole Diameter J		Mounting Holes		Dynamic Load			
																		Height K	Width L				
in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	lb	kg		
.197–.276	5–7	.61	13.0	.63	15.9	.940	23.9	.63	15.9	.24	6.0	.42	10.7	.472 ⁰ _{-.005}	11.99 ⁰ _{-.13}	.13	3.3	.61	15.6	.35	9	115	52
.313–.394	8–10	.51	13.0	.63	15.9	1.097	27.9	.74	18.9	.24	6.0	.42	10.7	.630 ⁰ _{-.004}	16.00 ⁰ _{-.10}	.13	3.5	.75	19.1	.43	11	125	57
.433–.500	11–13	.64	16.2	.75	20.0	1.412	36.0	.91	23.0	.24	6.0	.42	10.7	.748 ⁰ _{-.004}	19.00 ⁰ _{-.10}	.18	4.6	.96	24.3	.55	14	125	57
.551–.630	14–16	.79	20.0	1.13	29.0	1.570	40.0	1.02	26.0	.31	8.0	.55	14.0	.945 ⁰ _{-.004}	24.00 ⁰ _{-.10}	.18	4.6	1.09	27.7	.63	16	201	91

Trunnion Mounting Nut (TMA)

Trunnion mount

material: Acetal

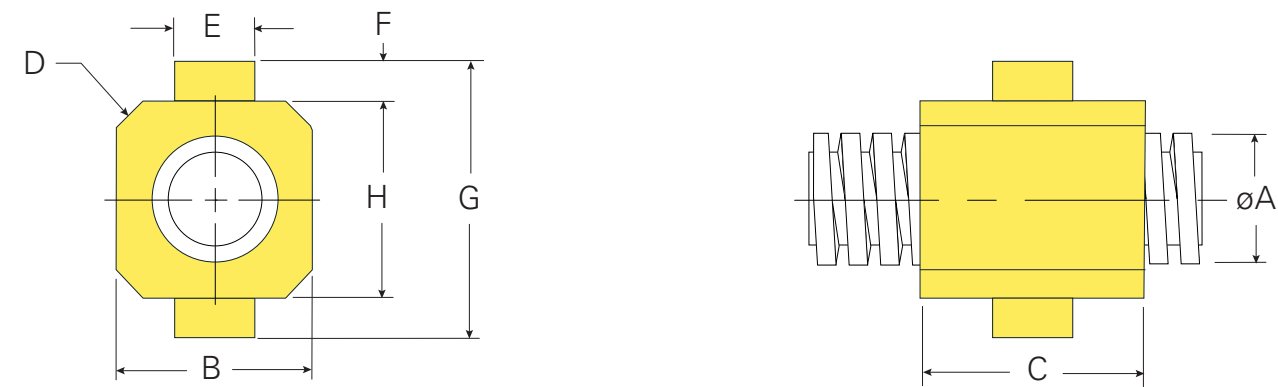


Lead Thread Diameter Range A		Nut Height B		Nut Length C		Chamfer Width D		Trunnion Diameter E		Trunnion Height F		Width Over Pins G		Nut Body Width H		Dynamic Load	
in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	lb	kg
.125–.158	3–4	.220	5.59	.250	6.35	.030	0.76	.125	3.18	.050	1.27	.320	8.13	.220	5.59	35	16
.188–.197	4.75–5	.300	7.62	.350	8.89	.040	1.02	.157	3.99	.075	1.91	.450	11.43	.300	7.62	55	25
.217–.315	5.5–9	.438	11.13	.500	12.70	.060	1.52	.188	4.78	.100	2.54	.638	16.21	.438	11.13	115	52
.375–.433	9.5–11	.563	14.30	.625	15.88	.080	2.03	.225	5.72	.150	3.81	.863	21.92	.563	14.30	125	57
.438–.500	11.1–13	.688	17.48	.750	19.05	.100	2.54	.275	6.99	.188	4.78	1.063	27.00	.688	17.48	200	90

Trunnion Mounting Nut (TMB)

Trunnion mount

material: Bronze

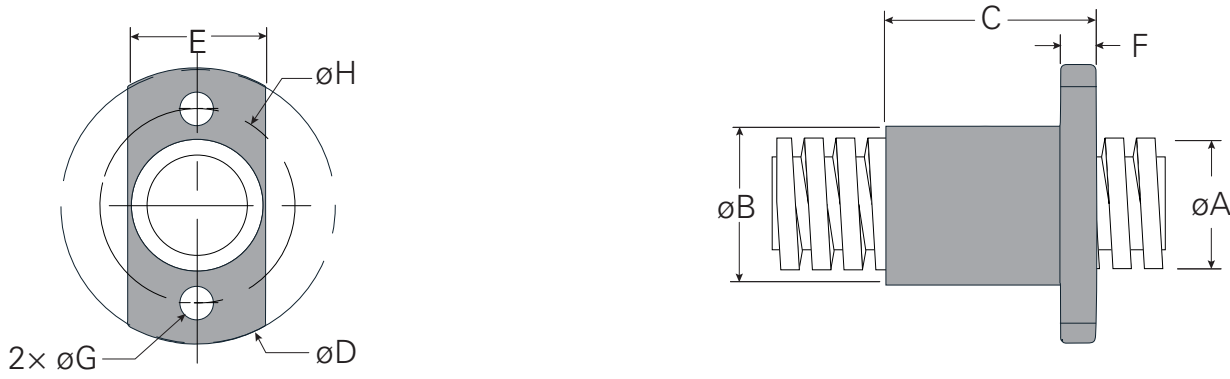


Lead Thread Diameter Range A		Nut Height B		Nut Length C		Chamfer Width D		Trunnion Diameter E		Trunnion Height F		Width Over Pins G		Nut Body Width H		Dynamic Load	
in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	lb	kg
.125–.158	3–4	.220	5.59	.250	6.35	.030	0.76	.125	3.18	.050	1.27	.320	8.13	.220	5.59	150	68
.188–.197	4.75–5	.300	7.62	.350	8.89	.040	1.02	.157	3.99	.075	1.91	.450	11.43	.300	7.62	250	113
.217–.315	5.5–9	.438	11.13	.500	12.70	.060	1.52	.188	4.78	.100	2.54	.638	16.21	.438	11.13	550	249
.375–.433	9.5–11	.563	14.30	.625	15.88	.080	2.03	.225	5.72	.150	3.81	.863	21.92	.563	14.30	773	351
.438–.500	11.1–13	.688	17.48	.750	19.05	.100	2.54	.275	6.99	.188	4.78	1.063	27.00	.688	17.48	1,115	506

Heavy Load Nut (HLC)

Compact flange mount

material: Heavy Load Resin

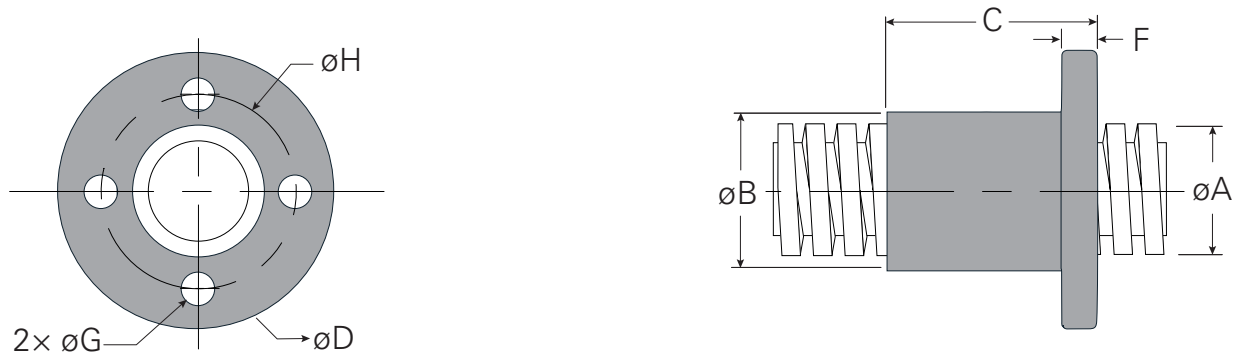


Lead Thread Diameter Range A		Nut Diameter B		Nut Length C		Flange Diameter D		Flange Height E		Flange Thickness F		Mounting Hole Diameter G		Bolt Circle Diameter H		Dynamic Load	
in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	lb	kg
.313 - .315	7.9 - 8.0	.591	15	.787	20	1.181	30	.591	15	.197	5	.169	4.3	.866	22	210	95.2
.375 - .394	9.5 - 10.0	.787	20	.945	24	1.417	36	.787	20	.197	5	.169	4.3	1.024	26	278	126.1
.433 - .551	11.0 - 14.0	.866	22	1.181	30	1.732	44	.866	22	.197	5	.213	5.4	1.220	31	428	194.1
.563 - .630	14.3 - 16.0	1.102	28	1.378	35	2.001	51	1.102	28	.236	6	.260	6.6	1.496	38	686	311.1
.709 - .787	18.0 - 20.0	1.260	32	1.575	40	2.205	56	1.260	32	.236	6	.260	6.6	1.654	42	954	432.7

Heavy Load Nut (HLR)

material: Heavy Load Resin

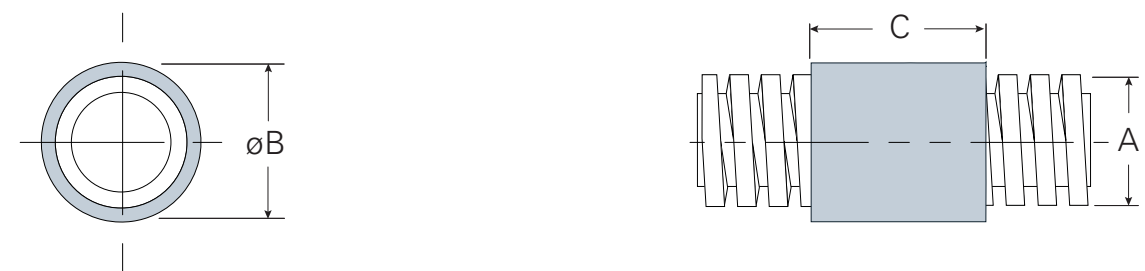
Flange mount



Lead Thread Diameter Range A		Nut Diameter B		Nut Length C		Flange Diameter D		Flange Thickness F		Mounting Hole Diameter G		Bolt Circle Diameter H		Dynamic Load	
in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	lb	kg
.313 - .315	7.9 - 8.0	.591	15	.787	20	1.181	30	.197	5	.169	4.3	.866	22	210	95.2
.375 - .394	9.5 - 10.0	.787	20	.945	24	1.417	36	.197	5	.169	4.3	1.024	26	278	126.1
.433 - .551	11.0 - 14.0	.866	22	1.181	30	1.732	44	.197	5	.213	5.4	1.220	31	428	194.1
.563 - .630	14.3 - 16.0	1.102	28	1.378	35	2.001	51	.236	6	.260	6.6	1.496	38	686	311.1
.709 - .787	18.0 - 20.0	1.260	32	1.575	40	2.205	56	.236	6	.260	6.6	1.654	42	954	432.7

Sleeve Nut (SNA)

material: Acetal



Lead Thread Diameter Range A		Screw Diameter B		Nut Length C		Dynamic Load		Static Load	
in	mm	in	mm	in	mm	lb	kg	lb	kg
.125–.250	3.5–6.4	.500	12.7	.500	12.7	38	17	125	57
.313–.433	6.5–11.0	.750	19.1	.750	19.1	350	159	560	254
.438–.560	11.2–14.0	.875	22.2	1.000	25.4	625	283	1,000	454
.563–.630	15.0–16.0	1.125	28.6	1.250	31.8	955	433	1,570	712
.750–.787	17.0–20.0	1.250	31.8	1.500	38.1	1,450	658	2,260	1,025
.800–.900	21.0–23.0	1.500	38.1	1.750	44.5	1,950	885	3,100	1,406
9.40–1.100	24.0–26.0	1.750	44.5	2.000	50.8	2,600	1,179	4,100	1,860
1.125–1.200	26.5–30.0	1.875	47.6	2.250	57.2	3,200	1,451	5,050	2,291
1.250–1.350	31.8–34.3	2.000	50.8	2.500	63.5	3,950	1,792	6,300	2,858
1.375–1.490	34.9–37.8	2.250	57.2	2.750	69.9	4,660	2,114	7,600	3,447
1.500–1.700	38.1–43.2	2.500	63.5	3.000	76.2	5,660	2,567	9,100	4,128
1.750–1.850	44.5–47.0	2.750	69.9	3.500	88.9	7,660	3,475	12,600	5,715
1.900–2.000	48.3–50.8	3.250	82.6	4.000	101.6	10,100	4,581	16,300	7,394

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Contents

Design
Considerations

Order
Now

Sleeve Nut (SNB)

material: Bronze

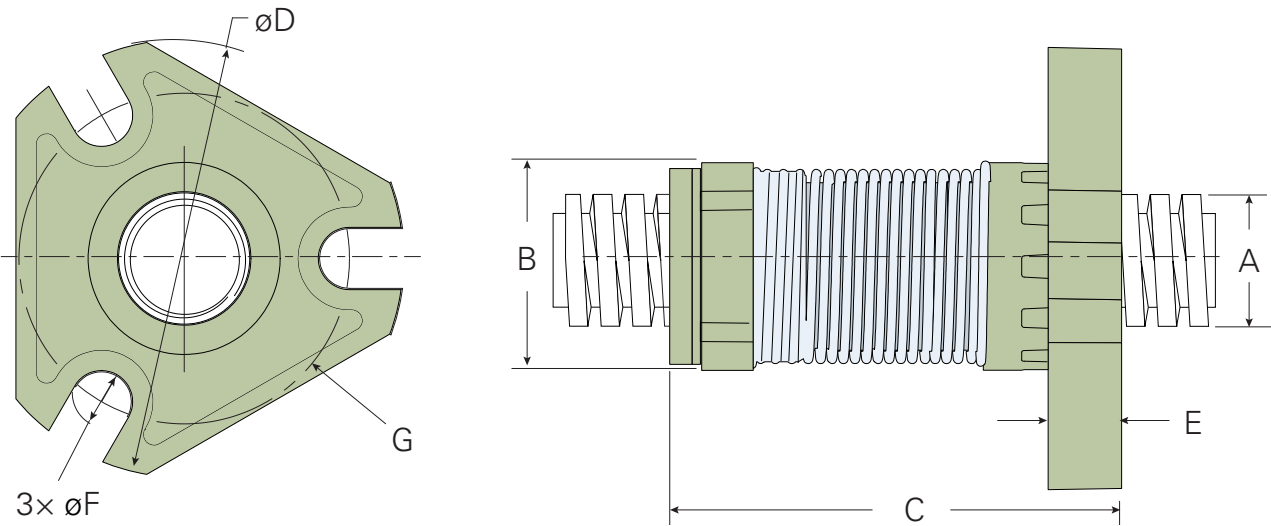


Lead Thread Diameter Range A		Nut Diameter B		Nut Length C		Dynamic Load		Static Load	
in	mm	in	mm	in	mm	lb	kg	lb	kg
.125–.250	3.5–6.4	.500	12.7	.500	12.7	75	34	500	227
.313–.433	6.5–11.0	.750	19.1	.750	19.1	700	318	2,250	1,021
.438–.560	11.2–14.0	.875	22.2	1.000	25.4	1,250	567	4,000	1,814
.563–.630	15.0–16.0	1.125	28.6	1.250	31.8	1,900	862	6,250	2,835
.750–.787	17.0–20.0	1.250	31.8	1.500	38.1	2,800	1,270	9,000	4,082
.800–.900	21.0–23.0	1.500	38.1	1.750	44.5	3,800	1,724	12,250	5,557
9.400–1.100	24.0–26.0	1.750	44.5	2.000	50.8	5,000	2,268	16,000	7,257
1.125–1.200	26.5–30.0	1.875	47.6	2.250	57.2	6,200	2,812	20,000	9,072
1.250–1.350	31.8–34.3	2.000	50.8	2.500	63.5	7,800	3,538	25,000	11,340
1.375–1.490	34.9–37.8	2.250	57.2	2.750	69.9	9,300	4,218	30,000	13,608
1.500–1.700	38.1–43.2	2.500	63.5	3.000	76.2	11,300	5,126	36,000	16,329
1.750–1.850	44.5–47.0	2.750	69.9	3.500	88.9	15,300	6,940	50,000	22,680
1.900–2.000	48.3–50.8	3.250	82.6	4.000	101.6	20,000	9,072	65,000	29,483

Anti-Backlash Hurricane Nut (HAFA)

3-Hole flange mount

material: Acetal

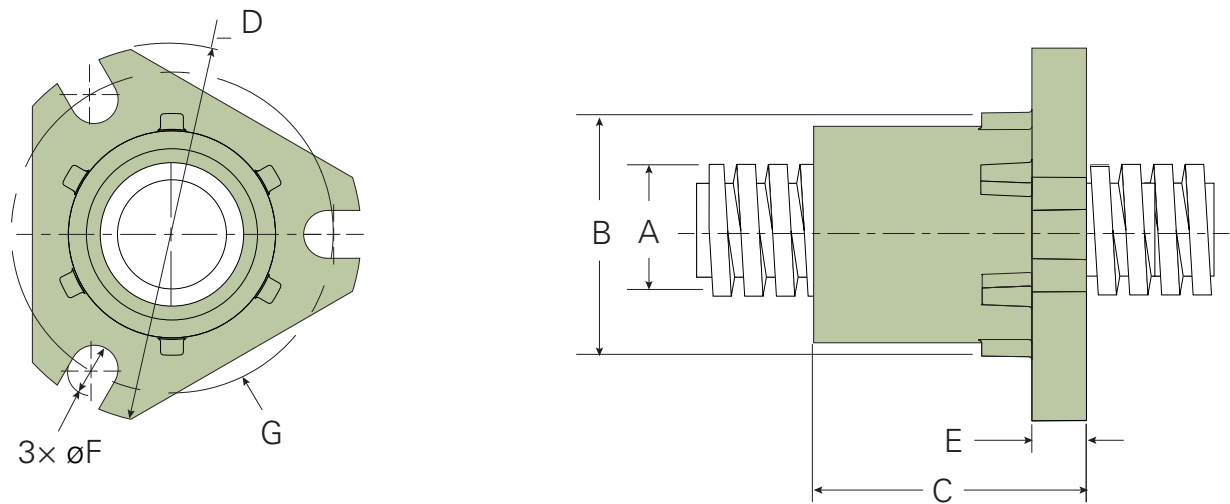


Lead Thread Diameter Range A			Nut Diameter B		Nut Length C		Flange Diameter D		Flange Thickness E		Slot Width F		Bolt Circle Diameter. G		Drag Torque (max)		High Force Spring Load Range		Low Force Spring Load Range	
in	mm		in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	lb	kg	lbs	kg	lbs	kg
.216 - .276	5.5–7.0		0.563	14.3	1.100	28	1.00	25.4	.188	4.8	.144	3.7	0.750	19.0	4	0.03	1.03 - 3.31	.47 - 1.50	.55 - 1.62	.25 - 0.73
.294 - .393	8.0–10.0		0.688	17.4	1.398	35.5	1.125	28.5	.188	4.8	.144	3.7	0.875	22.2	5	0.04	4.07 - 6.18	1.85 - 2.80	1.88 - 2.87	.85 - 1.30
.433 - .500	11.0–13.0		0.875	22.0	2.000	50.8	1.50	38.1	.250	6.4	.203	5.2	1.125	28.5	9	0.06	4.00 - 9.88	1.81 - 4.48	1.98 - 4.01	.90 - 1.82
.550 - .750	14.0–19.0		1.500	38.0	2.675	67.9	2.25	57.2	.313	8.0	.257	6.5	1.875	47.6	16	0.11	6.69 - 13.14	3.03 - 5.96	3.31 - 6.50	1.50 - 2.95

Standard Freewheeling Hurricane Nut (HNFA)

3-Hole flange mount

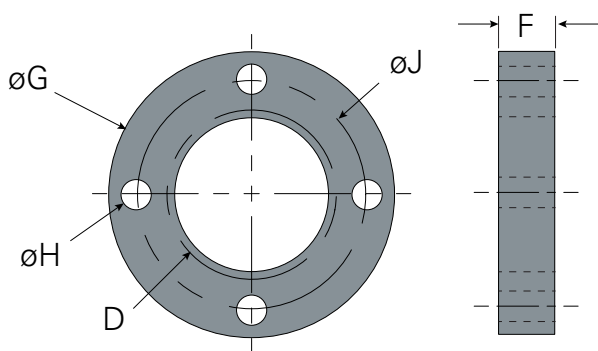
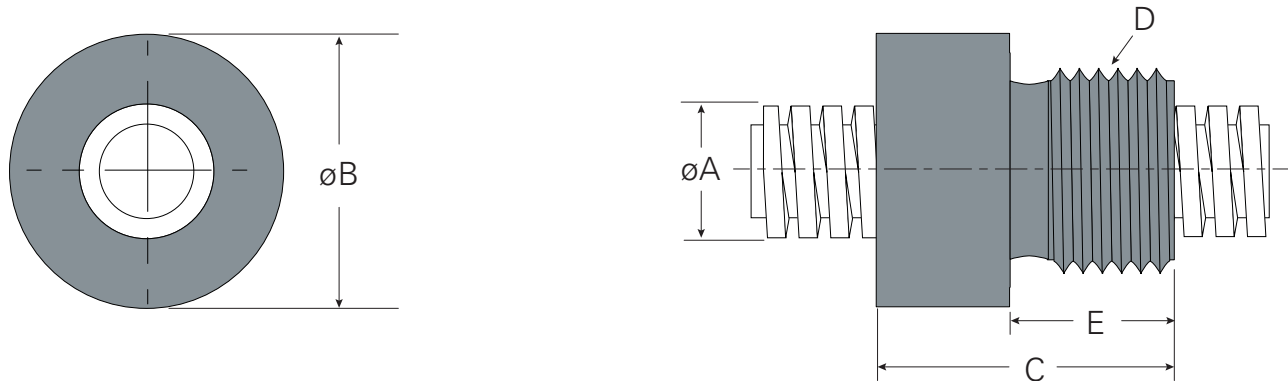
material: Acetal



Lead Thread Diameter Range A		Nut Diameter B		Nut Length C		Flange Diameter D		Flange Thickness E		Slot Width F		Bolt Circle Diameter. G		Dynamic Load	
in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	lb	kg
.216 - .276	5.5–7	.500	12.70	.625	15.80	1.000	25.40	.188	4.80	.144	3.70	.750	19.00	75	34
.294 - .393	8–10	.625	15.80	.750	19.10	1.125	28.50	.188	4.80	.144	3.70	.875	22.20	150	68
.433 - .500	11–13	.750	19.10	1.125	28.50	1.500	38.10	.250	6.35	.203	5.20	1.125	28.50	225	102
.550 - .750	14–19	1.125	28.50	1.250	31.70	1.750	44.40	.250	6.35	.221	5.60	1.438	36.50	350	159

Power·Ac™ Acme Nut (NPA) threaded mount (with optional flange)

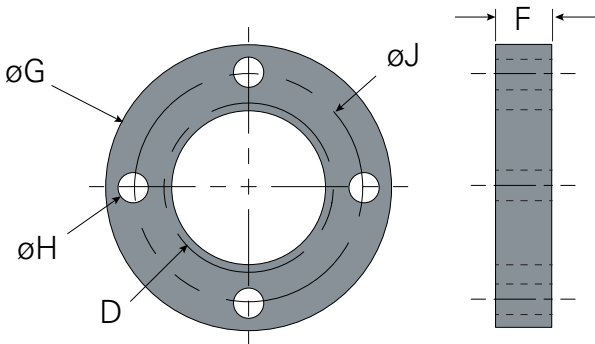
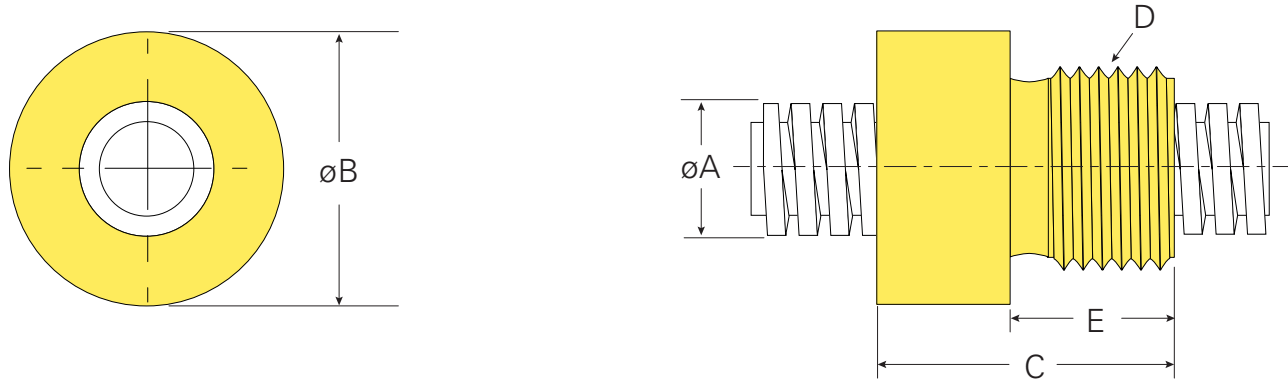
material: Acetal



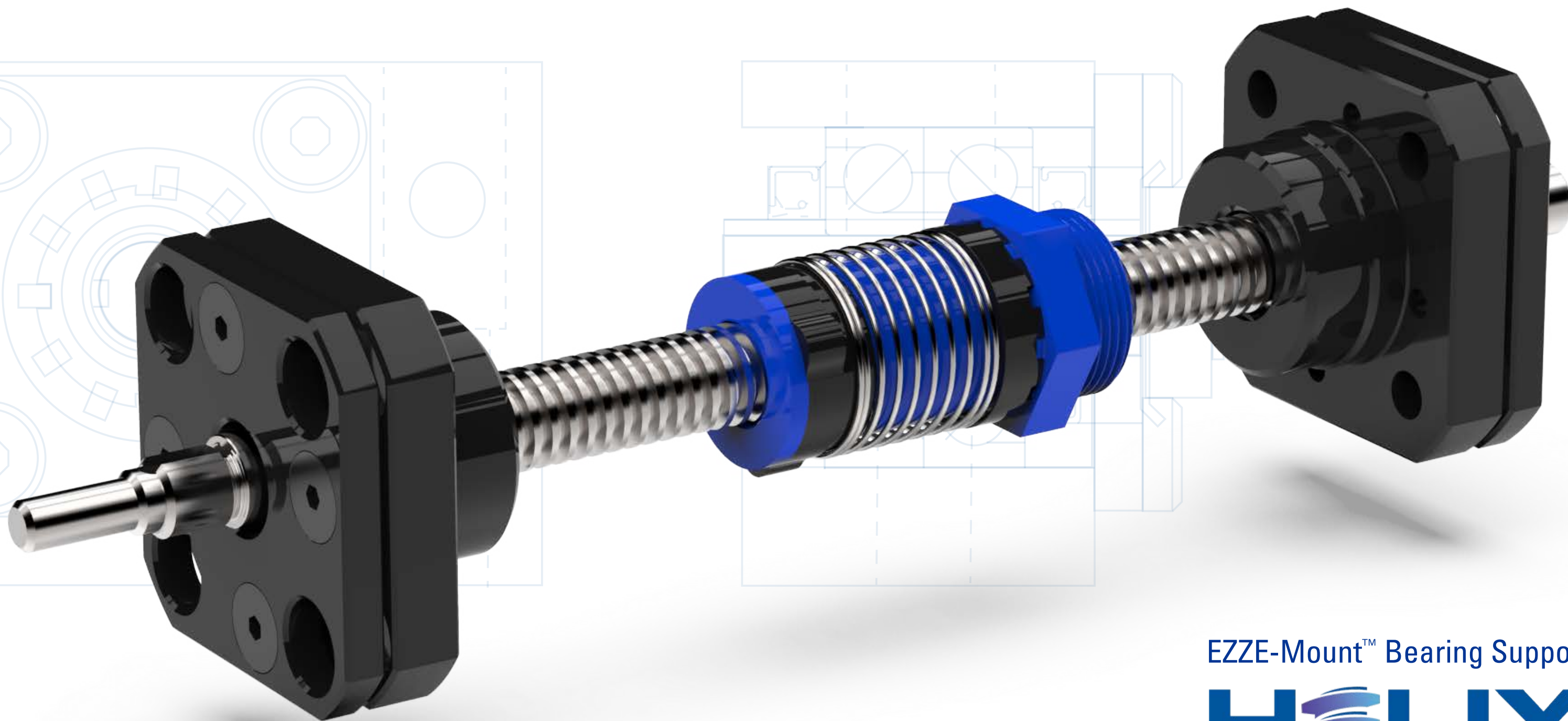
Nut												Optional Flange									
Lead Thread Diameter Range A		Nut Diameter B		Nut Length C		Thread Size D	Thread Length E		Dynamic Load		Drag Torque (max)		Flange Part Number	Flange Width F		Outside Diamater G		Hole Diameter H		Bolt Circle Diameter J	
in	mm	in	mm	in	mm		in	mm	lb	kg	oz-in	N-m		in	mm	in	mm	in	mm	in	mm
.236-.394	6.0-10.0	.680	17.3	.620	15.7	.562-18	.380	9.7	351	159	1.58	0.011	70160	.400	10.2	1.600	40.6	.266	6.8	1.125	28.6
.433-.551	11.0-14.0	1.120	28.4	.750	19.1	.937-16	.500	12.7	625	283	3.13	0.022	FLG7570	.530	13.5	2.600	66.0	.266	6.8	2.090	53.1
.563-.630	14.3-16.0	1.120	28.4	1.000	25.4	.937-16	.500	12.7	976	443	1.45	0.010	FLG7570	.530	13.5	2.600	66.0	.266	6.8	2.090	53.1
.709-.875	18.0-22.2	1.120	28.4	1.125	28.6	1.00-18	.500	12.7	1,406	638	1.89	0.013	70262	.530	13.5	2.625	66.7	.266	6.8	2.090	53.1
.945-1.024	24.0-26.0	1.500	38.1	1.500	38.1	1.375-16	.500	12.7	2,500	1,134	2.00	0.014	FLG8281	.520	13.2	2.760	70.1	.266	6.8	2.260	57.4
1.125-1.125	28.6-28.6	2.120	53.8	1.500	38.1	1.967-18	.500	12.7	3,100	1,406	1.17	0.008	FLG7572	.932	23.7	4.200	106.7	.397	10.1	3.442	87.4
1.177-1.375	29.9-34.9	2.120	53.8	1.750	44.5	1.967-18	.812	20.6	3,900	1,769	1.47	0.010	FLG7572	.932	23.7	4.200	106.7	.397	10.1	3.442	87.4
1.500-1.500	38.1-38.1	2.120	53.8	2.300	58.4	1.967-18	.812	20.6	5,650	2,562	2.99	0.021	FLG7572	.932	23.7	4.200	106.7	.397	10.1	3.442	87.4
1.575-1.750	40.0-44.5	2.750	69.9	2.500	63.5	2.548-18	.880	22.4	7,650	3,469	2.62	0.019	FLG7573	.985	25.0	4.940	125.5	.531	13.5	4.062	103.2
2.000-2.000	50.8-50.8	2.750	69.9	2.750	69.9	2.548-18	.880	22.4	10,000	4,535	2.60	0.018	FLG7573	.985	25.0	4.940	125.5	.531	13.5	4.062	103.2

Power·Ac™ Acme Nut (NPB) threaded mount (with optional flange)

material: Bronze



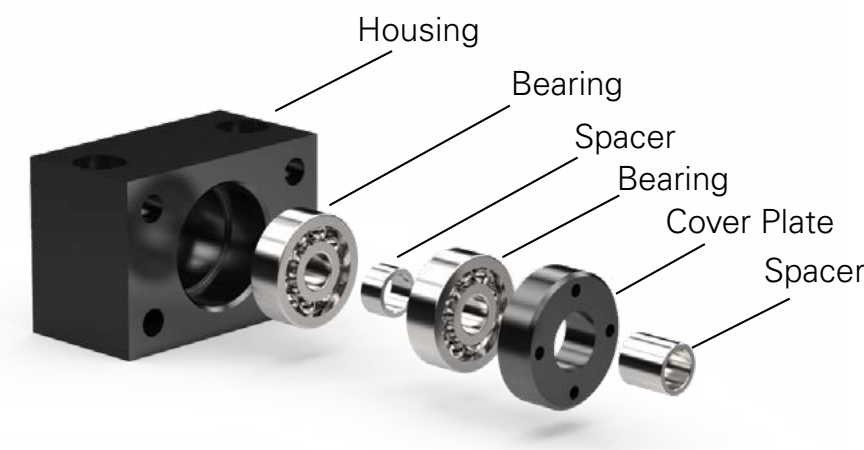
Nut												Optional Flange									
Lead Thread Diameter Range A		Nut Diameter B		Nut Length C		Thread Size D	Thread Length E		Dynamic Load		Drag Torque (max)		Flange Part Number	Flange Width F		Outside Diameter G		Hole Diameter H		Bolt Circle Diameter J	
in	mm	in	mm	in	mm		in	mm	lb	kg	oz-in	N-m		in	mm	in	mm	in	mm	in	mm
.236-.394	6.0-10.0	.680	17.3	.620	15.7	.562-18	.380	9.7	312	141.5	1.17	0.008	70160	1.600	40.6	.266	6.8	.400	10.2	1.125	28.6
.433-.551	11.0-14.0	1.120	28.4	.750	19.1	.937-16	.500	12.7	1,250	566.9	1.83	0.013	FLG7570	2.600	66.0	.266	6.8	.530	13.5	2.090	53.1
.563-.630	14.3-16.0	1.120	28.4	1.000	25.4	.937-16	.500	12.7	1,953	885.7	2.06	0.015	FLG7570	2.600	66.0	.266	6.8	.530	13.5	2.090	53.1
.709-.875	18.0-22.2	1.120	28.4	1.125	28.6	1.00-18	.500	12.7	3,828	1,736.1	1.32	0.009	70262	2.625	66.7	.266	6.8	.530	13.5	2.090	53.1
.945-1.024	24.0-26.0	1.500	38.1	1.500	38.1	1.375-16	.500	12.7	5,000	2,267.6	1.50	0.011	FLG8281	2.760	70.1	.266	6.8	.520	13.2	2.260	57.4
1.125-1.125	28.6-28.6	2.120	53.8	1.500	38.1	1.967-18	.500	12.7	6,330	2,870.7	1.59	0.011	FLG7572	4.200	106.7	.397	10.1	.932	23.7	3.442	87.4
1.177-1.375	29.9-34.9	2.120	53.8	1.750	44.5	1.967-18	.812	20.6	7,812	3,542.9	1.47	0.010	FLG7572	4.200	106.7	.397	10.1	.932	23.7	3.442	87.4
1.500-1.500	38.1-38.1	2.120	53.8	2.300	58.4	1.967-18	.812	20.6	11,250	5,102.0	2.39	0.017	FLG7572	4.200	106.7	.397	10.1	.932	23.7	3.442	87.4
1.575-1.750	40.0-44.5	2.750	69.9	2.500	63.5	2.548-18	.880	22.4	15,312	6,944.2	2.45	0.017	FLG7573	4.940	125.5	.531	13.5	.985	25.0	4.062	103.2
2.000-2.000	50.8-50.8	2.750	69.9	2.750	69.9	2.548-18	.880	22.4	20,000	9,070.3	2.60	0.018	FLG7573	4.940	125.5	.531	13.5	.985	25.0	4.062	103.2



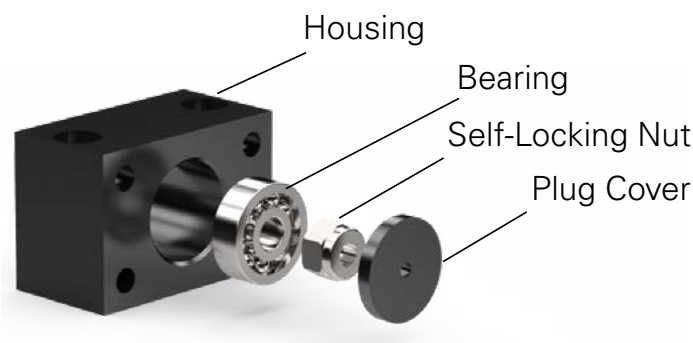
EZZE-Mount™ Bearing Supports



EZM Double Bearing



EZM Single Bearing



Part Number		Bearing	Locknut	Locknuts Max Axial Load	
Universal	Flanged			lb	kg
EZM-1007*	EZF-1007*	627-2RS1	1/4"-20	1,800	816.5
EZM-1008*	EZF-1008*	608-2RS1	5/16"-24	2,300	1,043.3
EZM-1009*	EZF-1009*	609-2RS1	5/16"-24	2,300	1,043.3
EZM-3010*	EZF-3010*	6000-2RS1	N-00	4,100	1,859.7
EZM-3012	EZF-3012	7301	N-01	6,900	3,129.8
EZM-3015	EZF-3015	7302	N-02	8,100	3,674.1
EZM-3017	EZF-3017	7303	N-03	9,900	4,490.6
EZM-2020	EZF-2020	7204	N-04	13,200	5,987.4
EZM-3025	EZF-3025	7305	N-05	16,200	7,348.2
EZM-2030	EZF-2030	7206	N-06	23,700	10,750.1
EZM-3045	EZF-3045	7309	N-09	26,500	12,020.2
EZM-3060	EZF-3060	7312	N-12	37,000	16,782.9
EZM-3080	EZF-3080	7316	AN-16	53,700	24,357.9

Bearings marked with an asterisk (*) use two deep groove ball bearings.
All others use two angular contact (40°) universal ground ball bearings in back-to back configuration.

EZZE-Mount™ Screw Supports

.250” - 472” Diameter Range

Screw Code	End Type		Universal Mounts		Flange Mounts	
	1,2,3	4	Double	Single	Double	Single
025050	4	3*	EZM-1004	EZM-4004	EZF-1004	EZF-4004
025250	4	3*	EZM-1004	EZM-4004	EZF-1004	EZF-4004
025333	4	3*	EZM-1004	EZM-4004	EZF-1004	EZF-4004
031059	6	4	EZM-1006	EZM-4006	EZF-1006	EZF-4006
031157	6	4	EZM-1006	EZM-4006	EZF-1006	EZF-4006
031250	5	3	EZM-1005	EZM-4005	EZF-1005	EZF-4005
031314	6	4	EZM-1006	EZM-4006	EZF-1006	EZF-4006
031500	5	3	EZM-1005	EZM-4005	EZF-1005	EZF-4005
037063	6	4*	EZM-1006	EZM-4006	EZF-1006	EZF-4006
037083	7	4	EZM-1007	EZM-4007	EZF-1007	EZF-4007
037100	7*	4	EZM-1007	EZM-4007	EZF-1007	EZF-4007
037125	7	4	EZM-1007	EZM-4007	EZF-1007	EZF-4007
037167	7	4	EZM-1007	EZM-4007	EZF-1007	EZF-4007
037200	6	4*	EZM-1006	EZM-4006	EZF-1006	EZF-4006
037250	7	4	EZM-1007	EZM-4007	EZF-1007	EZF-4007
037500	6	4*	EZM-1006	EZM-4006	EZF-1006	EZF-4006
037999	7*	4	EZM-1007	EZM-4007	EZF-1007	EZF-4007
039078	7	4	EZM-1007	E ZM-4007	EZF-1007	EZF-4007
039118	7	4	EZM-1007	EZM-4007	EZF-1007	EZF-4007
039354	7	4	EZM-1007	EZM-4007	EZF-1007	EZF-4007
043236	7	4	EZM-1007	EZM-4007	EZF-1007	EZF-4007
047118	7	4	EZM-1007	EZM-4007	EZF-1007	EZF-4007
047236	7	4	EZM-1007	EZM-4007	EZF-1007	EZF-4007
047393	7	4	EZM-1007	EZM-4007	EZF-1007	EZF-4007

EZZE-Mount™ Screw Supports

.500" - .875" Diameter Range

Screw Code	End Type		Universal Mounts		Flange Mounts	
	1,2,3	4	Double	Single	Double	Single
050100	9	6	EZM-1009	EZM-4009	EZF-1009	EZF-4009
050200	10	6	EZM-3010	EZM-4010	EZF-3010	EZF-4010
050250	8	4	EZM-1008	EZM-4008	EZF-1008	EZF-4008
050500	9	6	EZM-1009	EZM-4009	EZF-1009	EZF-4009
050999	9	6*	EZM-1009	EZM-4009	EZF-1009	EZF-4009
055118	7	6	EZM-1007	EZM-4007	EZF-1007	EZF-4007
055157	7	6	EZM-1007	EZM-4007	EZF-1007	EZF-4007
062078	10	6	EZM-3010	EZM-4010	EZF-3010	EZF-4010
062100	15	8	EZM-3015	EZM-4015	EZF-3015	EZF-4015
062125	12	6	EZM-3012	EZM-4012	EZF-3012	EZF-4012
062157	10	6	EZM-3010	EZM-4010	EZF-3010	EZF-4010
062200	10	6	EZM-3010	EZM-4010	EZF-3010	EZF-4010
062236	10	6	EZM-3010	EZM-4010	EZF-3010	EZF-4010
062314	10	6	EZM-3010	EZM-4010	EZF-3010	EZF-4010
062600	12	8	EZM-3012	EZM-4012	EZF-3012	EZF-4012
070157	10	6	EZM-3010	EZM-4010	EZF-3010	EZF-4010
075100	17	10	EZM-3017	EZM-4017	EZF-3017	EZF-4017
075167	20	12	EZM-2020	EZM-4020	EZF-2020	EZF-4020
075200	12	8	EZM-3012	EZM-4012	EZF-3012	EZF-4012
075333	12	8	EZM-3012	EZM-4012	EZF-3012	EZF-4012
075500	12	8	EZM-3012	EZM-4012	EZF-3012	EZF-4012
078157	12	8	EZM-3012	EZM-4012	EZF-3012	EZF-4012
078314	12	8	EZM-3012	EZM-4012	EZF-3012	EZF-4012
087167	17	10	EZM-3017	EZM-4017	EZF-3017	EZF-4017

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Building an Assembly

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The specifications and data in this publication are believed to be accurate and reliable. However, it is the responsibility of the product user to determine the suitability of Helix products for a specific application. While defective products will be replaced without charge if promptly returned, no liability is assumed beyond such replacement.

EZZE-Mount™ Screw Supports

1.000” - 2.000” Diameter Range

Screw Code	End Type		Universal Mounts		Flange Mounts	
	1,2,3	4	Double	Single	Double	Single
100100	30	19	EZM-2030	EZM-4030	EZF-2030	EZF-4030
100167	20	12	EZM-2020	EZM-4020	EZF-2020	EZF-4020
100200	25	16	EZM-3025	EZM-4025	EZF-3025	EZF-4025
100250	20	12	EZM-2020	EZM-4020	EZF-2020	EZF-4020
100500	20	12	EZM-2020	EZM-4020	EZF-2020	EZF-4020
100999	17	10	EZM-3017	EZM-4017	EZF-3017	EZF-4017
102236	17	10	EZM-3017	EZM-4017	EZF-3017	EZF-4017
112200	30	19	EZM-2030	EZM-4030	EZF-2030	EZF-4030
125200	30	19	EZM-2030	EZM-4030	EZF-2030	EZF-4030
125250	30	19	EZM-2030	EZM-4030	EZF-2030	EZF-4030
150100	30	19	EZM-2030	EZM-4030	EZF-2030	EZF-4030
150200	35	22	EZM-2030	EZM-4030	EZF-2030	EZF-4030
150250	40	24	EZM-2030	EZM-4030	EZF-2030	EZF-4030
150500	35	22	EZM-2030	EZM-4030	EZF-2030	EZF-4030
150600	40	24	EZM-2030	EZM-4030	EZF-2030	EZF-4030
157275	30	19	EZM-2030	EZM-4030	EZF-2030	EZF-4030
175250	35	19	EZM-2030	EZM-4030	EZF-2030	EZF-4030
200200	40	28	EZM-2030	EZM-4030	EZF-2030	EZF-4030
200250	40	22	EZM-2030	EZM-4030	EZF-2030	EZF-4030
200500	35	19	EZM-2030	EZM-4030	EZF-2030	EZF-4030

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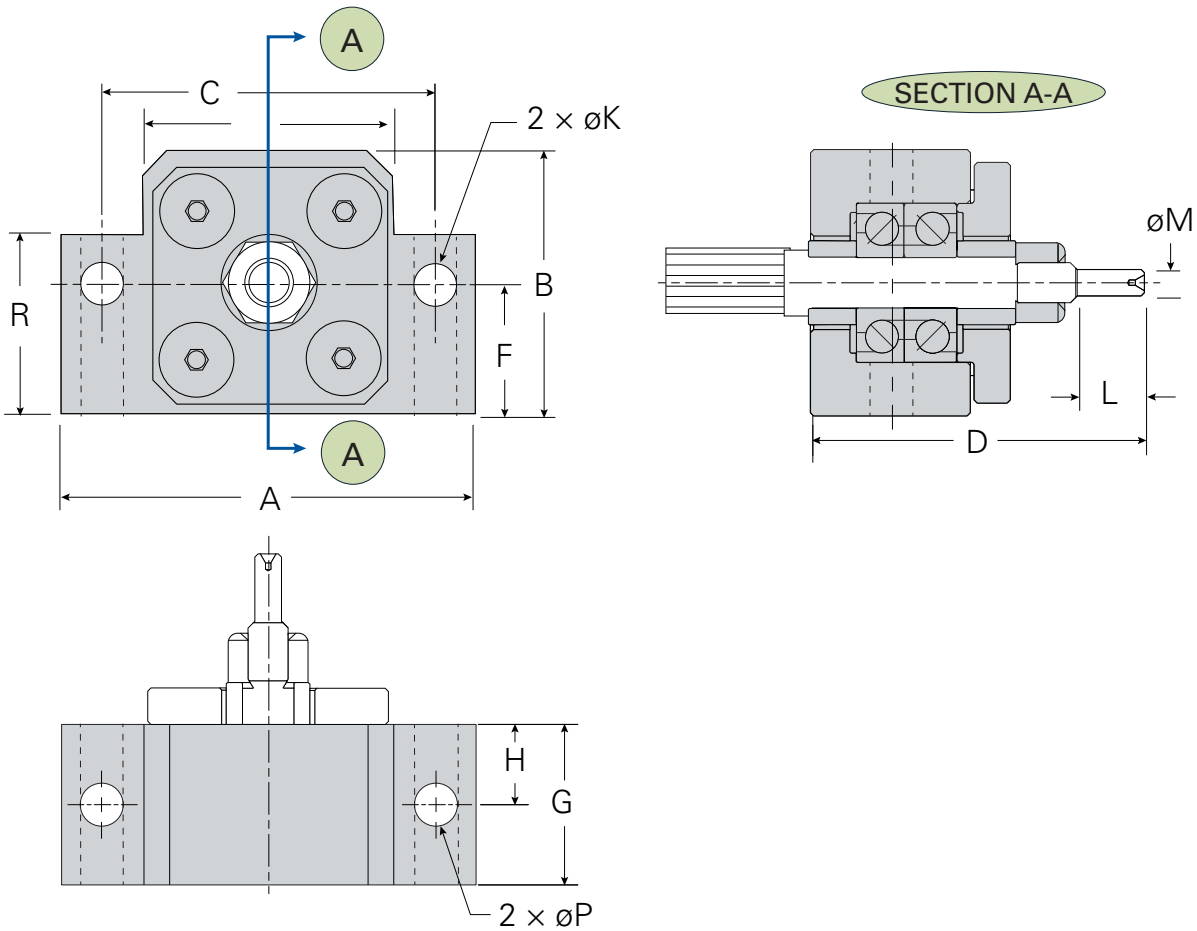
Building an
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EZZE-Mount™ Specifications

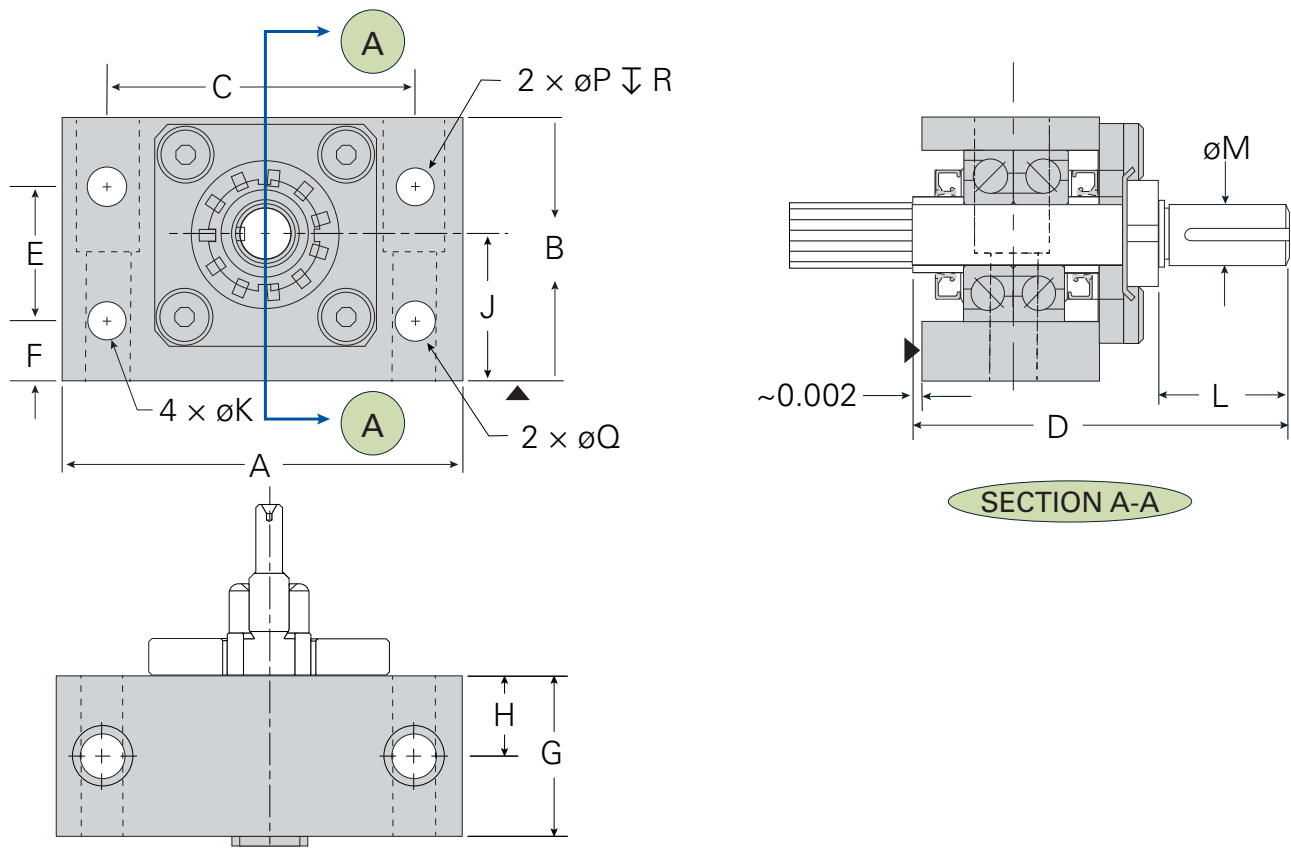
Universal Double-Bearing *for miniature screws*



Part #	A		B		C		D		F		G		H		J		øK		L		øM		øP		End Code
	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in ⁺⁰ _{-.001}	mm ⁺⁰ _{-.03}	in	mm	
EZM-1002	1.31	33.3	.78	19.8	1.06	26.9	.92	23.4	.39	9.9	.40	10.2	.20	5.1	.21	5.3	.150	3.8	.210	3.81	.058	1.47	.150	3.81	2
EZM-1003	1.31	33.3	.78	19.8	1.06	26.9	.92	23.4	.39	9.9	.40	10.2	.20	5.1	.21	5.3	.150	3.81	.210	3.81	.078	1.98	.150	3.81	3
EZM-1004	1.69	42.9	1.06	26.9	1.38	35.1	1.33	33.8	.53	13.5	.66	16.8	.33	8.4	.26	6.6	.180	3.81	.260	3.81	.097	2.46	.180	4.57	4
EZM-1005	1.94	49.3	1.25	31.8	1.56	39.6	1.55	39.4	.63	16.0	.75	19.1	.38	9.7	.35	8.9	.200	3.81	.350	3.81	.124	3.15	.200	5.08	5
EZM-1006	1.94	49.3	1.25	31.8	1.56	39.6	1.55	39.4	.63	16.0	.75	19.1	.38	9.7	.35	8.9	.200	3.81	.350	3.81	.124	3.15	.200	5.08	6

EZZE-Mount™ Specifications

Universal Double-Bearing



Counterbore Detail

Part #	Bolt Size	øP		øQ		R	
		in	mm	in	mm	in	mm
EZM-1007 EZM-1008	¼ × 1⅜	.41	10.4	.28	7.1	.41	10.4
EZM-1009 EZM-3010	⅝ × 2	.50	12.7	.34	8.6	.56	14.2
EZM-3012	⅜ × 1¾	.62	15.7	.41	10.4	1.00	25.4
EZM-3015	⅜ × 2⅛	.62	15.7	.41	10.4	1.00	25.4
EZM-3017	½ × 2¼	.88	22.4	.53	13.5	1.25	31.8
EZM-2020	⅝ × 2½	1.00	25.4	.66	16.8	1.50	38.1
EZM-3025 EZM-2030	⅞ × 3¼	1.38	35.1	.91	23.1	1.75	44.5

Part #	A		B		C		D		E		F		G		H		J		øK		L		øM		End Code
	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in ⁺⁰ _{-.001}	mm ⁺⁰ _{-.03}	
EZM-1007	2.00	50.8	1.38	35.1	1.50	38.1	1.94	49.3	.88	22.4	.25	6.4	1.06	26.9	.50	12.7	.46	11.7	.22	5.6	.69	17.5	.187	4.75	7
EZM-1008	2.00	50.8	1.38	35.1	1.50	38.1	2.00	50.8	.88	22.4	.25	6.4	1.06	26.9	.50	12.7	.56	14.2	.22	5.6	.69	17.5	.250	6.35	8
EZM-1009	2.75	69.9	2.00	50.8	2.00	50.8	2.38	60.5	1.38	35.1	.31	7.9	1.19	30.2	.56	14.2	.56	14.2	.28	7.1	1.00	25.4	.250	6.35	9
EZM-3010	2.75	69.9	2.00	50.8	2.00	50.8	2.50	63.5	1.38	35.1	.31	7.9	1.19	30.2	.56	14.2	.69	17.5	.28	7.1	1.00	25.4	.312	7.92	10
EZM-3012	3.50	88.9	2.22	56.4	2.75	69.9	3.29	83.6	1.25	31.8	.50	12.7	1.38	35.1	.69	17.5	1.30	33.0	.28	7.1	1.19	30.2	.406	10.31	12
EZM-3015	3.50	88.9	2.52	64.0	2.75	69.9	3.50	88.9	1.25	31.8	.80	20.3	1.38	35.1	.69	17.5	1.30	33.0	.28	7.1	1.44	36.5	.500	12.70	15
EZM-3017	4.50	114.3	2.69	68.3	3.38	85.9	3.65	92.7	1.38	35.1	.62	15.8	1.69	42.9	.84	21.3	1.30	33.0	.41	10.4	1.50	38.1	.500	12.70	17
EZM-2020	5.00	127.0	3.03	77.0	3.75	95.3	4.03	102.4	1.50	38.1	.75	19.1	1.72	43.7	.86	21.8	1.30	33.0	.47	11.9	1.63	41.3	.625	15.88	20
EZM-3025	6.50	165.1	3.69	93.7	4.75	120.7	4.45	113.0	2.00	50.8	.88	22.4	1.94	49.3	.97	24.6	1.61	40.9	.66	16.8	1.88	47.6	.750	19.05	25
EZM-2030	6.50	165.1	3.69	93.7	4.75	120.7	4.86	123.4	2.00	50.8	.88	22.4	1.94	49.3	.97	24.6	1.81	46.0	.66	16.8	1.88	47.6	1.000	25.40	30

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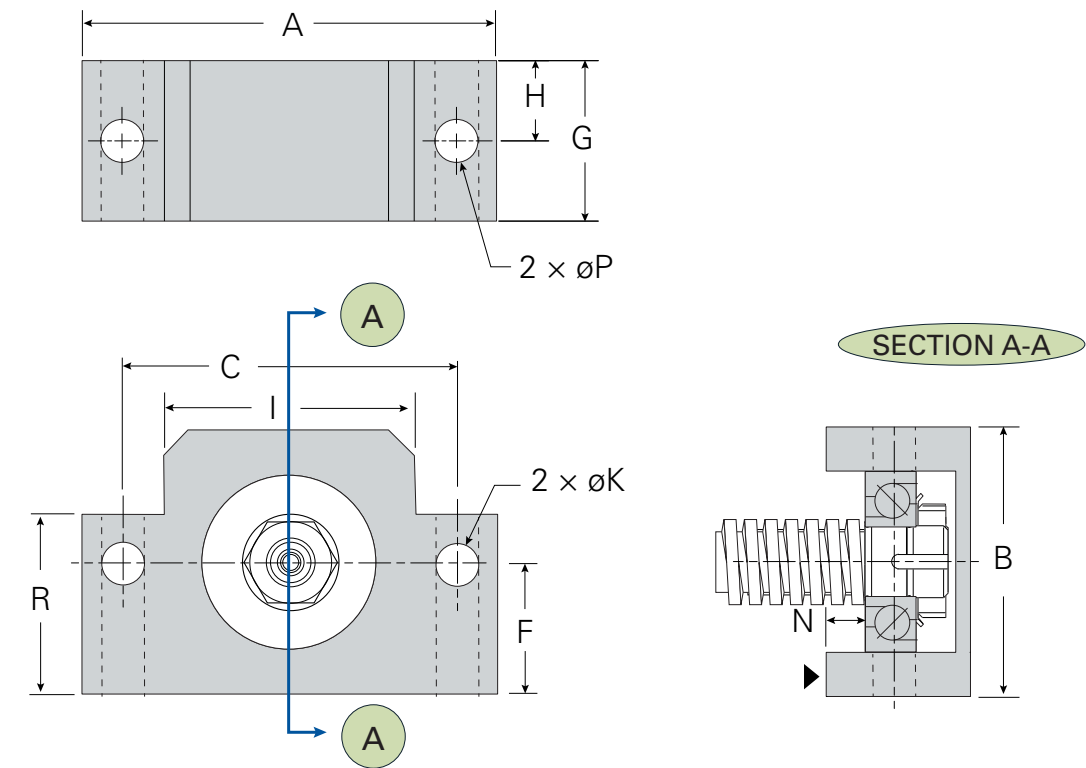
Building an Assembly

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EZZE-Mount™ Specifications

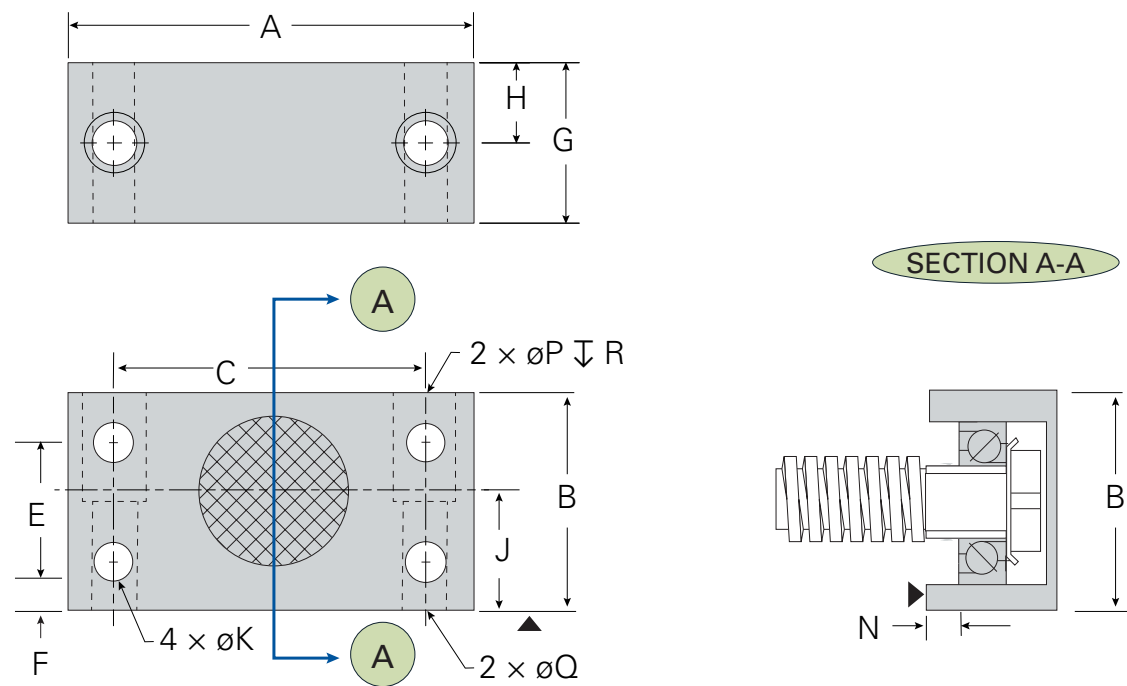
Universal Single-Bearing *for miniature screws*



Part #	A		B		C		F		G		H		øK		L		øP		End Code
	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	
EZM-4002	1.31	33.3	.78	19.8	1.06	26.9	.39	9.9	.40	10.2	.20	5.1	.150	3.8	.210	3.81	.150	3.81	2
EZM-4003	1.31	33.3	.78	19.8	1.06	26.9	.39	9.9	.40	10.2	.20	5.1	.150	3.81	.210	3.81	.150	3.81	3
EZM-4004	1.69	42.9	1.06	26.9	1.38	35.1	.53	13.5	.66	16.8	.33	8.4	.180	3.81	.260	3.81	.180	4.57	4
EZM-4005	1.94	49.3	1.25	31.8	1.56	39.6	.63	16.0	.75	19.1	.38	9.7	.200	3.81	.350	3.81	.200	5.08	5
EZM-4006	1.94	49.3	1.25	31.8	1.56	39.6	.63	16.0	.75	19.1	.38	9.7	.200	3.81	.350	3.81	.200	5.08	6

EZZE-Mount™ Specifications

Universal Single-Bearing



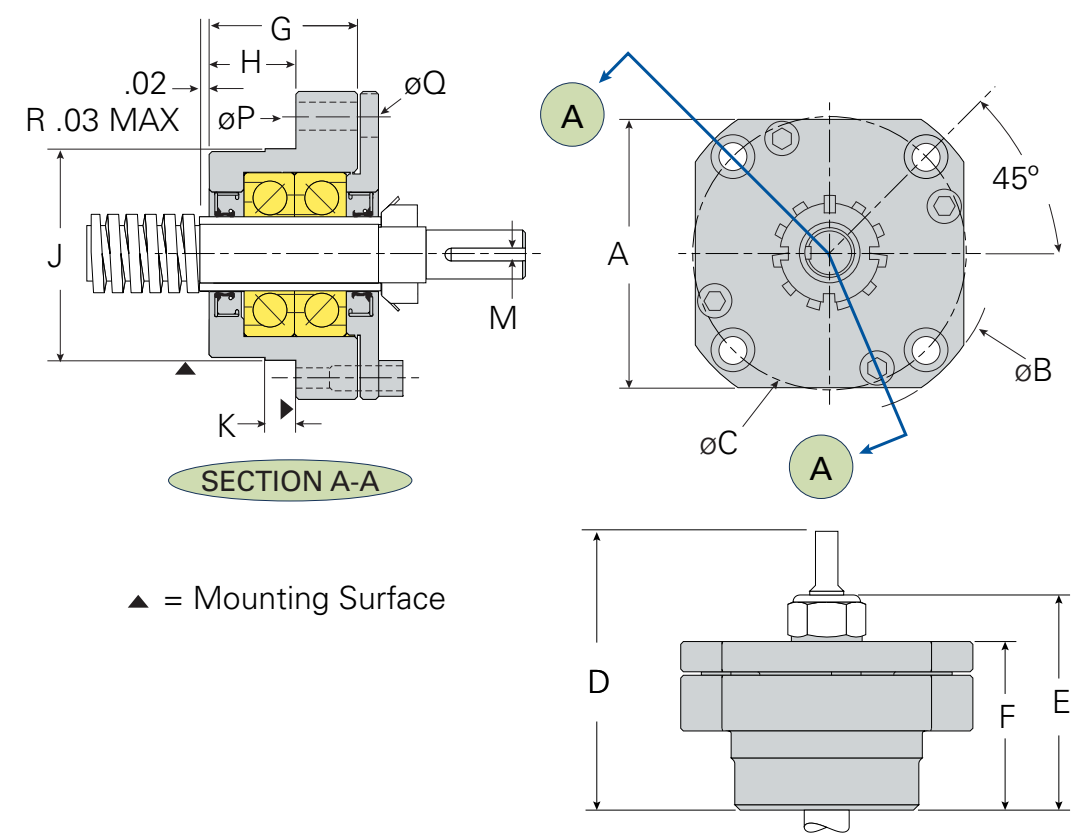
Counterbore Detail

Part #	Bolt Size	øQ		øP		øR	
		in	mm	in	mm	in	mm
EZM-4007 EZM-4008	1/4 x 13/8	.28	7.11	.41	10.41	.41	10.41
EZM-4009 EZM-4010	5/16 x 2	.34	8.64	.50	12.70	.56	14.22
EZM-4012	3/8 x 13/4	.41	10.41	.62	15.75	1.00	25.40
EZM-4015	3/8 x 2 1/8	.41	10.41	.62	15.75	1.00	25.40
EZM-4017	1/2 x 2 1/4	.53	13.46	.88	22.35	1.25	31.75
EZM-4020	5/8 x 2 1/2	.66	16.76	1.00	25.40	1.50	38.10
EZM-4025 EZM-4030	7/8 x 3 1/4	.91	23.11	1.38	35.05	1.75	44.45

Part #	A		B		C		D		E		F		G		H		L		M		End Code
	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	
EZM-4007	2.00	50.80	1.38	35.05	1.50	38.10	.19	4.83	.88	22.35	.25	6.35	1.06	26.92	.50	12.70	.22	5.59	.69	17.45	7
EZM-4008	2.00	50.80	1.38	35.05	1.50	38.10	.19	4.83	.88	22.35	.25	6.35	1.06	26.92	.50	12.70	.22	5.59	.69	17.45	8
EZM-4009	2.75	69.85	2.00	50.80	2.00	50.80	.38	9.65	1.38	35.05	.31	7.87	1.19	30.23	.56	14.22	.28	7.11	1.00	25.40	9
EZM-4010	2.75	69.85	2.00	50.80	2.00	50.80	.38	9.65	1.38	35.05	.31	7.87	1.19	30.23	.56	14.22	.28	7.11	1.00	25.40	10
EZM-4012	3.50	88.90	2.22	56.39	2.75	69.85	.33	8.38	1.25	31.75	.50	12.70	1.38	35.05	.69	17.53	.28	7.11	1.19	30.15	12
EZM-4015	3.50	88.90	2.52	64.01	2.75	69.85	.33	8.38	1.25	31.75	.80	20.32	1.38	35.05	.69	17.53	.28	7.11	1.44	36.53	15
EZM-4017	4.50	114.30	2.69	68.33	3.38	85.85	.38	9.65	1.38	35.05	.62	15.75	1.69	42.93	.84	21.34	.41	10.41	1.50	38.10	17
EZM-4020	5.00	127.00	3.03	76.96	3.75	95.25	.50	12.70	1.50	38.10	.75	19.05	1.72	43.69	.86	21.84	.47	11.94	1.63	41.28	20
EZM-4025	6.50	165.10	3.69	93.73	4.75	120.65	.52	13.21	2.00	50.80	.88	22.35	1.94	49.28	.97	24.64	.66	16.76	1.88	47.63	25
EZM-4030	6.50	165.10	3.69	93.73	4.75	120.65	.52	13.21	2.00	50.80	.88	22.35	1.94	49.28	.97	24.64	.66	16.76	1.88	47.63	30

EZZE-Mount™ Specifications

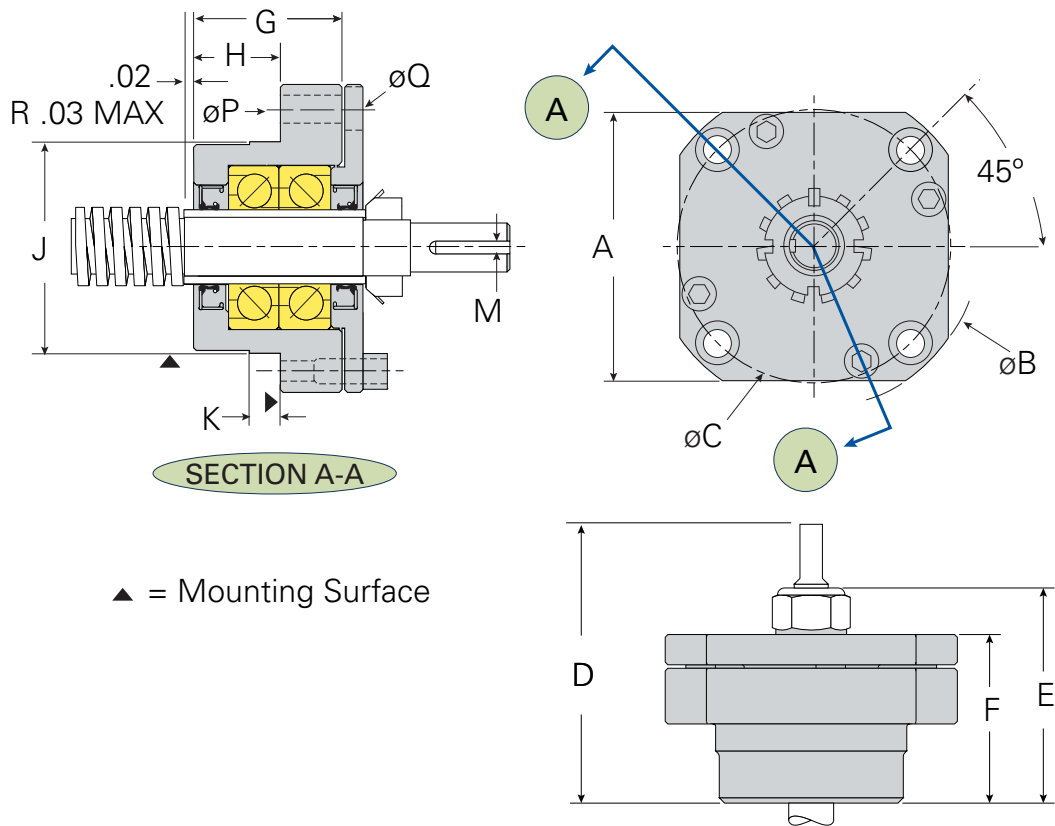
Flanged Double-Bearing for *miniature screws*



Part #	A		B		C		D		E		F		G		H		J		K		P (thru)		End Code
	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	
EZF-1002	1.060	26.9	1.310	33.3	.880	22.4	.980	24.9	.740	18.8	.560	14.2	.450	11.4	.190	4.8	1.06	15.00	.070	1.8	.15	3.8	2
EZF-1003	1.060	26.9	1.310	33.3	.880	22.4	.980	24.9	.740	18.8	.560	14.2	.450	11.4	.190	4.8	1.06	15.00	.070	1.8	.15	3.8	3
EZF-1004	1.380	35.1	1.690	42.9	1.250	31.8	1.330	33.8	1.010	25.7	.710	18.0	.540	13.7	.350	8.9	.8661	22.00	.130	3.3	.18	4.6	4
EZF-1005	1.630	41.4	2.000	50.8	1.500	38.1	1.550	39.4	1.130	28.7	.940	23.9	.750	19.1	.440	11.2	1.063	27.00	.150	3.8	.20	5.1	5
EZF-1006	1.630	41.4	2.000	50.8	1.500	38.1	1.550	39.4	1.130	28.7	.940	23.9	.750	19.1	.440	11.2	1.063	27.00	.150	3.8	.20	5.1	6

EZZE-Mount™ Specifications

Flanged Double-Bearing



Counterbore Detail

Part #	øP		øQ	
	in	mm	in	mm
EZF-1007				
EZF-1008				
EZF-1009	.266	6.8	.44	11.2
EZF-3010				
EZF-3012				
EZF-3015	.281	7.1	.44	11.2
EZF-3017				
EZF-2020	.344	8.7	.53	13.5
EZF-3025				
EZF-2030	.531	13.5	.81	20.6
EZF-3045	.781	19.8	1.25	31.8

Part #	A		B		C		D		E		F		G		H		J		K		øL		M		End Code
	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in ⁺⁰ _{-.001}	mm ⁺⁰ _{-.03}	in	mm	in ⁺⁰ _{-.001}	mm ⁺⁰ _{-.03}	in	mm	
EZF-1007	1.88	47.8	2.44	62.0	1.88	47.6	1.94	49.3	1.44	36.6	1.06	26.9	.82	20.8	.50	12.7	1.378	34.99	.188	4.8	.187	4.75	.063	1.6	7
EZF-1008	1.88	47.8	2.44	62.0	1.88	47.6	2.00	50.8	1.44	36.6	1.06	26.9	.82	20.8	.50	12.7	1.378	34.99	.188	4.8	.250	6.35	.094	2.4	8
EZF-1009	2.00	50.8	2.60	66.0	2.00	50.8	2.38	60.5	1.81	46.0	1.33	33.8	1.09	27.7	.71	18.0	1.496	37.99	.188	4.8	.250	6.35	.094	2.4	9
EZF-3010	2.00	50.8	2.60	66.0	2.00	50.8	2.50	63.5	1.81	46.0	1.33	33.8	1.09	27.7	.71	18.0	1.496	37.99	.190	4.8	.312	7.92	.125	3.2	10
EZF-3012	2.50	63.5	3.17	80.5	2.50	63.5	3.29	83.6	1.99	50.5	1.57	39.9	1.38	35.1	.75	19.1	1.889	47.99	.312	7.9	.406	10.31	.125	3.2	12
EZF-3015	2.70	68.6	3.27	83.1	2.75	69.9	3.50	88.9	2.10	53.3	1.71	43.4	1.50	38.1	.88	22.4	2.126	53.99	.312	7.9	.500	12.70	.125	3.2	15
EZF-3017	3.38	85.9	4.03	102.4	3.25	82.6	3.65	92.7	2.33	59.2	1.93	49.0	1.63	41.4	.94	23.9	2.519	63.99	.312	7.9	.500	12.70	.125	3.2	17
EZF-2020	3.38	85.9	4.03	102.4	3.25	82.6	4.03	102.4	2.71	68.8	1.98	50.3	1.72	43.7	1.03	26.2	2.519	63.99	.312	7.9	.625	15.88	.188	4.8	20
EZF-3025	4.38	111.3	5.31	134.9	4.25	108.0	4.45	113.0	2.89	73.4	2.36	59.9	1.94	49.3	1.19	30.2	3.149	79.99	.375	9.5	.750	19.05	.188	4.8	25
EZF-2030	4.38	111.3	5.31	134.9	4.25	108.0	4.86	123.4	3.05	77.5	2.36	59.9	1.94	49.3	1.19	30.2	3.149	79.99	.375	9.5	.999	25.37	.250	6.4	30
EZF-3045	6.50	165.1	7.88	200.2	6.31	160.4	6.68	169.7	4.47	113.5	4.01	101.9	3.22	81.8	1.97	50.0	4.803	121.98	.500	12.7	1.375	34.93	.313	8.0	45

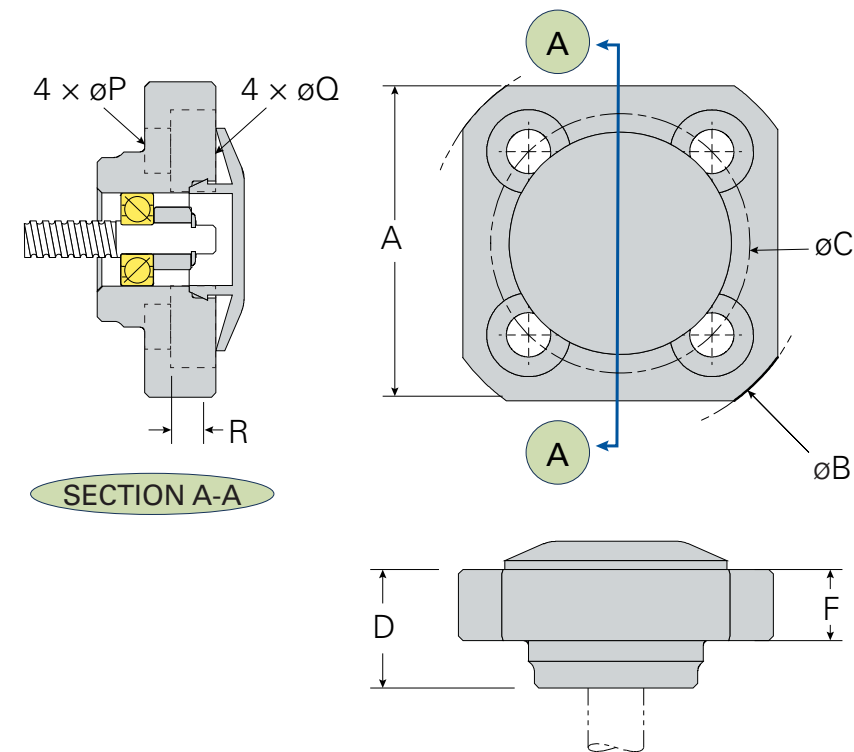
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Building an Assembly

Order Now

EZZE-Mount™ Specifications

Flanged Single-Bearing *for miniature screws*



Part #	A		øB		C		D		F		øP		øQ		R		End Code
	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	
EZF-4002	1.060	26.924	1.310	33.3	.877	22.3	.400	10.2	.240	6.1	.150	3.8	.281	7.1	.153	3.9	2
EZF-4003	1.050	26.7	1.310	33.3	.877	22.3	.400	10.2	.240	6.1	.150	3.8	.281	7.1	.153	3.9	3
EZF-4004	1.360	34.5	1.690	42.9	1.246	31.6	.660	16.8	.290	7.4	.177	4.5	.313	8.0	.179	4.5	4
EZF-4005	1.610	40.9	2.000	50.8	1.499	38.1	.750	19.1	.330	8.4	.201	5.1	.375	9.5	.205	5.2	5
EZF-4006	1.610	40.9	2.000	50.8	1.499	38.1	.750	19.1	.330	8.4	.201	5.1	.375	9.5	.205	5.2	6

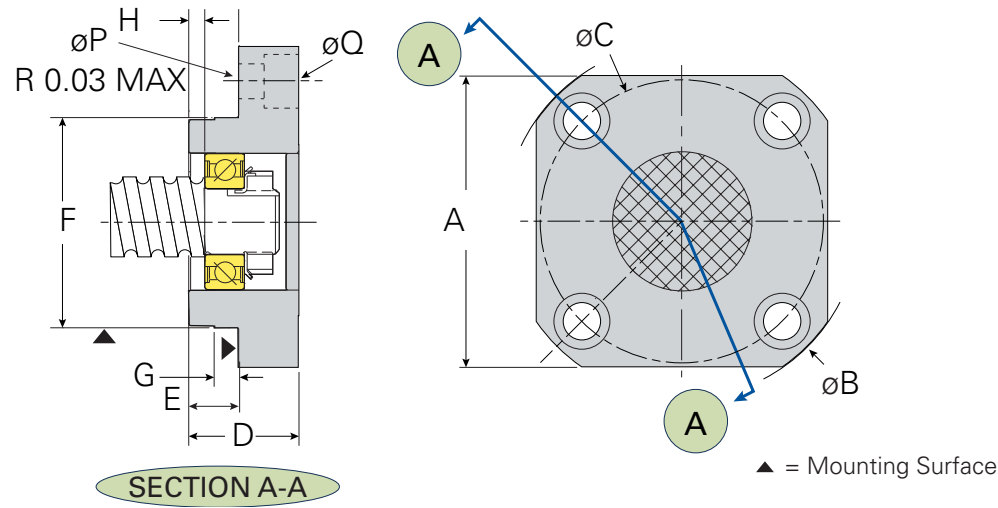
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Building an Assembly

Order Now

EZZE-Mount™ Specifications

Flanged Single-Bearing



Counterbore Detail

Part No.	øP		øQ	
	in	mm	in	mm
EZF-4007 EZF-4008 EZF-4009 EZF-4010 EZF-4012	.266	6.8	.44	11.2
EZF-4015	.281	7.1	.44	11.2
EZF-4017 EZF-4020	.344	8.7	.53	13.5
EZF-4025 EZF-4030	.531	13.5	.81	20.6
EZF-4045	.781	19.8	1.25	31.8

Mounting Block Specifications

Part No.	A		øB		øC		D		E		F		G		H		End Code
	in	mm	in	mm	in	mm	in	mm	in	mm	in ⁰ _{-.0005}	mm ⁺⁰ _{-.0127}	in	mm	in	mm	
EZF-4007	1.88	47.8	2.44	62.0	1.875	47.6	1.00	25.4	.40	10.2	1.378	34.98	.188	4.8	.13	3.3	7
EZF-4008	1.88	47.8	2.44	62.0	1.875	47.6	1.00	25.4	.40	10.2	1.378	34.98	.188	4.8	.13	3.3	8
EZF-4009	2.00	50.8	2.60	66.0	2.000	50.8	1.00	25.4	.44	11.2	1.496	37.98	.188	4.8	.13	3.3	9
EZF-4010	2.00	50.8	2.60	66.0	2.000	50.8	1.00	25.4	.44	11.2	1.496	37.98	.190	4.8	.13	3.3	10
EZF-4012	2.50	63.5	3.17	80.5	2.500	63.5	1.15	29.2	.55	14.0	1.889	47.98	.312	7.9	.13	3.3	12
EZF-4015	2.70	68.6	3.27	83.1	2.750	69.9	1.25	31.8	.63	16.0	2.126	53.98	.312	7.9	.20	5.1	15
EZF-4017	3.38	85.9	4.03	102.4	3.250	82.6	1.32	33.5	.63	16.0	2.519	63.97	.312	7.9	.20	5.1	17
EZF-4020	3.38	85.9	4.03	102.4	3.250	82.6	1.47	37.3	.72	18.3	2.519	63.97	.312	7.9	.20	5.1	20
EZF-4025	4.38	111.3	5.31	134.9	4.250	108.0	1.67	42.4	.76	19.3	3.148	53.98	.375	9.5	.25	6.4	25
EZF-4030	4.38	111.3	5.31	134.9	4.250	108.0	1.67	42.4	.76	19.3	3.148	53.98	.375	9.5	.25	6.4	30
EZF-4045	6.50	165.1	7.88	200.2	6.313	160.4	2.50	63.5	1.25	31.8	4.802	121.96	.500	12.7	.50	12.7	45

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Building an Assembly

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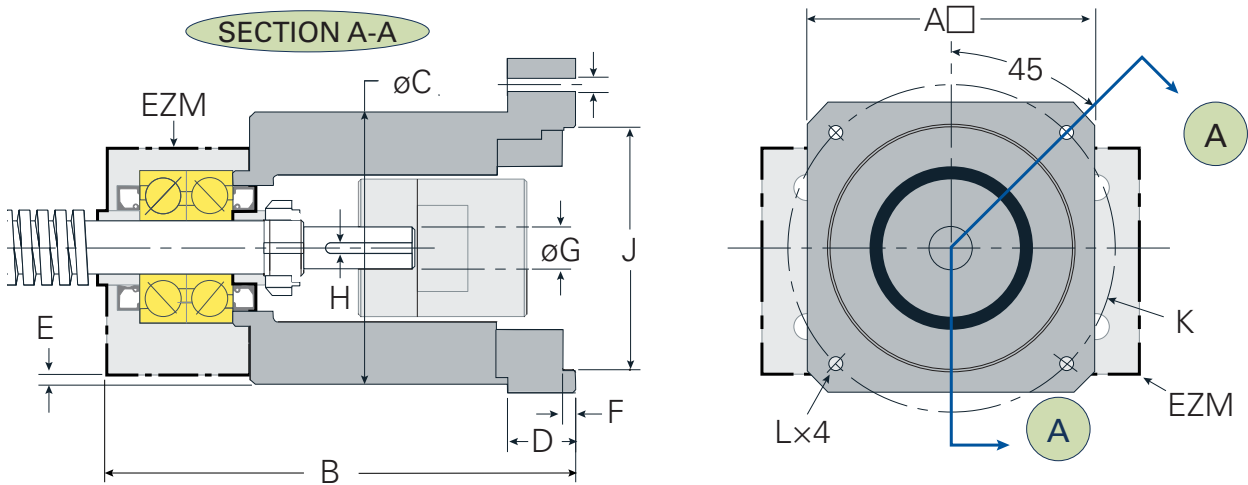
The specifications and data in this publication are believed to be accurate and reliable. However, it is the responsibility of the product user to determine the suitability of Helix products for a specific application. While defective products will be replaced without charge if promptly returned, no liability is assumed beyond such replacement.

EZZE-Mount™

Universal Bearing Support with Motor Mount

Our Universal Bearing Support with Motor Mount includes an EZZE-Mount block with a motor mount for easy, accurate installation of lead screw assemblies. Contact sales to configure your lead screw assembly application with a motor mount.

Note: When selecting the bearing support for an application with high axial loads, the capacities of the bearings and locknuts must be considered.



EZZE Mount™	NEMA Frame	Reference number	A		B		C		D		E	
			in	mm	in	mm	in	mm	in	mm	in	mm
EZM-1008	17	U1	1.75	44.5	3.35	85.1	1.75	44.5	0.52	13.208	.19	4.826
EZM-1009	23	U2	2.50	63.5	4.10	104.1	2.50	63.5	0.38	9.652	.26	6.604
EZM-3010	23	U2	2.50	63.5	4.10	104.1	2.50	63.5	0.38	9.652	.26	6.604
EZM-3012	23	U2	2.50	63.5	4.48	113.8	2.50	63.5	0.38	9.652	.10	2.54
EZM-3012	34	U3	3.25	82.6	4.92	125.0	2.50	63.5	0.81	20.574	.10	2.54
EZM-3015	23	U2	2.50	63.5	4.90	124.5	2.50	63.5	0.54	13.716	–	–
EZM-3015	34	U3	3.25	82.6	5.13	130.3	2.50	63.5	0.81	20.574	.19	4.826
EZM-3017	34	U3	3.25	82.6	5.56	141.2	3.12	79.25	0.81	20.574	.13	3.302
EZM-2020	34	U3	3.44	87.4	5.96	151.4	3.44	87.38	0.81	20.574	.10	2.54
EZM-3025	34	U3	4.00	101.6	6.44	163.6	4.38	111.25	0.81	20.574	.31	7.874
EZM-2030	34	U3	4.00	101.6	6.97	177.0	4.38	111.25	0.81	20.574	.31	7.874

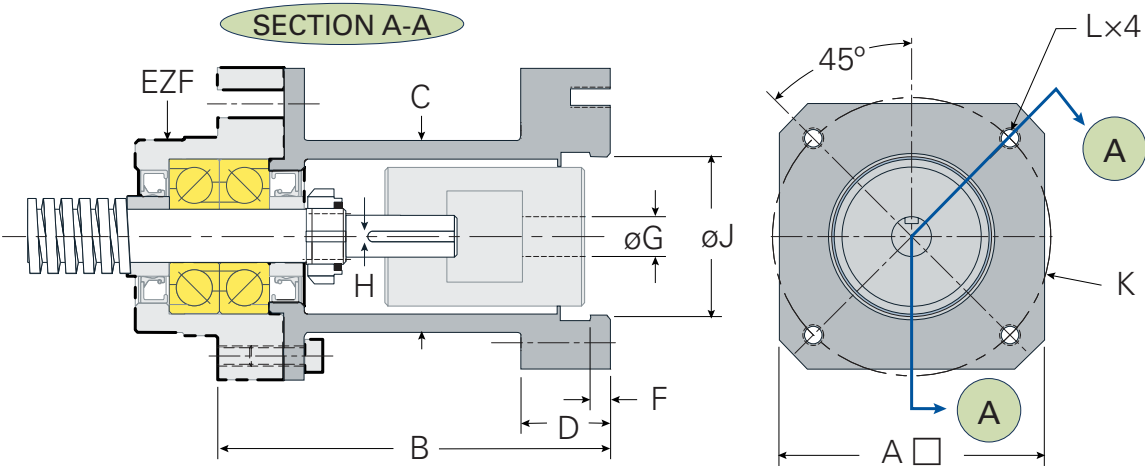
NEMA Frame	F		G		H		J		K		L
	in	mm	in	mm	in	mm	in	mm	in	mm	
17	.25	6.35	.25	6.35	.094	2.39	.871 ⁺⁰ _{-.003}	22.12 ⁺⁰ _{-.08}	1.725	43.82	#8–32
23	.19	4.826	.38	9.65	.125	3.18	1.506 ⁺⁰ _{-.003}	38.25 ⁺⁰ _{-.08}	2.625	66.68	#10–32
34	.16	4.064	.50	12.70	.125	3.18	2.882 ⁺⁰ _{-.004}	73.20 ⁺⁰ _{-.10}	3.875	98.43	#10–32

EZZE-Mount™

Flanged Bearing Support with Motor Mount

Our Universal Double-Bearing with Flange Motor Mount includes an EZZE-Mount block with a motor mount for easy, accurate installation of lead screw assemblies. Contact sales to configure your lead screw assembly application with a motor mount.

Note: When selecting the bearing support for an application with high axial loads, the capacities of the bearings and locknuts must be considered.

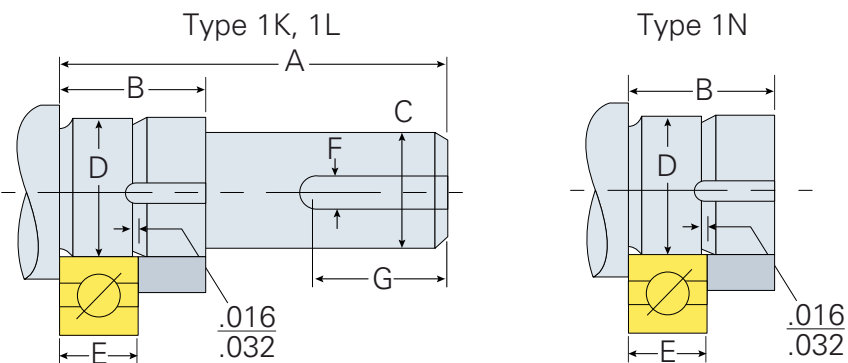


EZZE Mount™	NEMA Frame	Reference number	A		B		C		D	
			in	mm	in	mm	in	mm	in	mm
EZF-1008	17	Y1	1.750	44.45	2.840	72.14	2.200	55.88	.520	13.21
EZF-1009	23	Y2	2.500	63.50	3.410	86.61	2.100	53.34	.880	22.35
EZF-3010	23	Y2	3.440	87.38	4.920	124.97	2.370	60.20	1.670	42.42
EZF-3012	23	Y2	4.500	114.30	5.670	144.02	2.370	60.20	2.410	61.21
EZF-3012	34	Y3	4.000	101.60	5.780	146.81	3.000	76.20	1.670	42.42
EZF-3015	23	Y2	4.500	114.30	6.530	165.86	3.000	76.20	2.410	61.21
EZF-3015	34	Y3	2.500	63.50	3.410	86.61	2.100	53.34	.880	22.35
EZF-3017	34	Y3	2.500	63.50	3.700	93.98	1.810	45.97	.880	22.35
EZF-2020	34	Y3	2.500	63.50	3.840	97.54	1.980	50.29	.880	22.35
EZF-3025	34	Y3	3.250	82.55	4.620	117.35	2.250	57.15	1.670	42.42
EZF-2030	34	Y3	4.000	101.60	5.240	133.10	3.000	76.20	1.670	42.42

NEMA Frame	F		G		H		J		K		L
	in	mm	in	mm	in	mm	in	mm	in	mm	
17	.250	6.35	.250	6.35	.094	2.39	.871 ⁺⁰ _{-.003}	22.12 ⁺⁰ _{-.08}	1.725	43.82	#8-32
23	.190	4.83	.380	9.65	.125	3.18	1.506 ⁺⁰ _{-.003}	38.25 ⁺⁰ _{-.08}	2.625	66.68	#10-32
34	.160	4.06	.500	12.70	.125	3.18	2.882 ⁺⁰ _{-.004}	73.20 ⁺⁰ _{-.10}	3.875	98.43	#10-32

End Machining

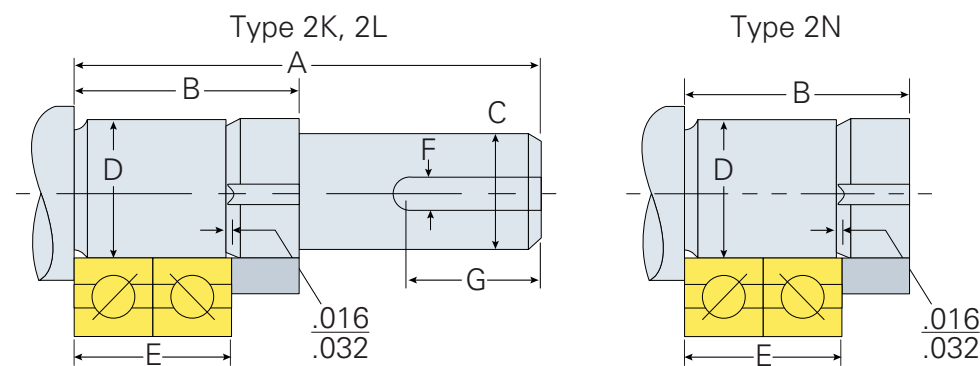
Type 1



Code	A		B		C		D		E		F		G		Lock nut	Lock washer
	in	mm	in	mm	in ⁺⁰ _{-.001}	mm ⁺⁰ _{-.02}	in ⁺⁰ _{-.001}	mm ⁺⁰ _{-.001}	in	mm	in	mm	in	mm		
2	.52	13.21	.32	8.13	.059	1.50	.059	2.50	.095	2.41	-	-	-	-	M2.5	-
3	.56	14.22	.33	8.38	.092	2.34	.920	3.01	.095	2.41	-	-	-	-	M3	-
4	.69	17.53	.43	10.92	.098	2.49	.098	4.01	.177	4.50	-	-	-	-	#6-32	-
5	.88	22.35	.55	13.97	.125	3.18	.125	5.00	.236	5.99	-	-	-	-	#10-32	-
6	.88	22.35	.55	13.97	.125	3.18	.125	6.00	.236	5.99	-	-	-	-	#10-32	-
7	1.12	28.45	.65	16.51	.187	4.75	.187	7.00	.276	7.01	.063	1.6002	.34	8.636	¼-20	-
8	1.31	33.27	.68	17.27	.250	6.35	.250	8.00	.276	7.01	.094	2.3876	.46	11.684	⅝ ₁₆ -24	-
9	1.38	35.05	.72	18.29	.250	6.35	.250	9.00	.315	8.00	.094	2.3876	.46	11.684	⅝ ₁₆ -24	-
10	1.37	34.80	.69	17.53	.312	7.93	.312	10.01	.315	8.00	.125	3.175	.50	12.7	N-00	W-00
12	2.11	53.59	.81	20.57	.406	10.31	.406	12.00	.394	10.01	.125	3.175	1.00	25.4	N-01	W-01
15	2.15	54.61	.84	21.34	.500	12.70	.500	15.01	.433	11.00	.125	3.175	1.00	25.4	N-02	W-02
17	2.23	56.64	.92	23.37	.500	12.70	.500	17.01	.472	11.99	.125	3.175	1.00	25.4	N-03	W-03
20	2.37	60.20	1.06	26.92	.625	15.88	.625	20.01	.551	14.00	.188	4.7752	1.00	25.4	N-04	W-04
25	2.68	68.07	1.12	28.45	.750	19.05	.750	25.01	.591	15.01	.188	4.7752	1.00	25.4	N-05	W-05
30	2.97	75.44	1.16	29.46	1.000	25.40	1.000	30.01	.630	16.00	.25	6.35	1.25	31.75	N-06	W-06
35	3.33	84.58	1.23	31.24	1.250	31.75	1.250	35.01	.669	16.99	.25	6.35	1.63	41.402	N-07	W-07
40	3.65	92.71	1.46	37.08	1.375	34.93	1.375	40.01	.906	23.01	.313	7.9502	1.50	38.1	N-08	W-08
45	3.73	94.74	1.54	39.12	1.375	34.93	1.375	45.01	.984	24.99	.313	7.9502	1.50	38.1	N-09	W-09
50	4.56	115.82	1.68	42.67	1.750	44.45	1.750	50.01	1.063	27.00	.375	9.525	2.30	58.42	N-10	W-10

End Machining

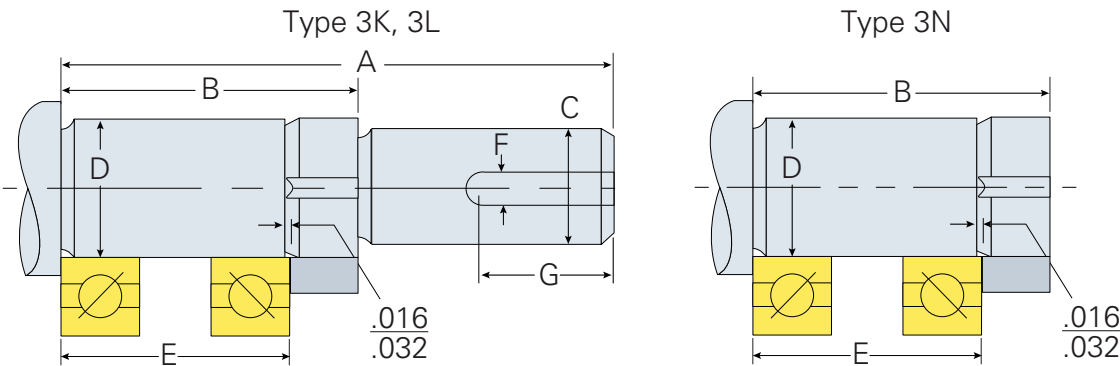
Type 2



Code	A		B		C		D		E		F		G		Lock nut	Lock washer
	in	mm	in	mm	in ⁺⁰ _{-.001}	mm ⁺⁰ _{-.03}	in ⁺⁰ _{-.001}	mm ⁺⁰ _{-.01}	in	mm	in	mm	in	mm		
2	.52	13.21	.32	8.13	.059	1.50	.059	2.50	.095	2.41	-	-	-	-	M2.5	-
3	.56	14.22	.33	8.38	.092	2.34	.920	3.01	.095	2.41	-	-	-	-	M3	-
4	.69	17.53	.43	10.92	.098	2.49	.098	4.01	.177	4.50	-	-	-	-	#6-32	-
5	.88	22.35	.55	13.97	.125	3.18	.125	5.00	.236	5.99	-	-	-	-	#10-32	-
6	.88	22.35	.55	13.97	.125	3.18	.125	6.00	.236	5.99	-	-	-	-	#10-32	-
7	1.12	28.45	.65	16.51	.187	4.75	.187	7.00	.276	7.01	.063	1.6002	.34	8.636	¼-20	-
8	1.31	33.27	.68	17.27	.250	6.35	.250	8.00	.276	7.01	.094	2.3876	.46	11.684	⅝ ₁₆ -24	-
9	1.38	35.05	.72	18.29	.250	6.35	.250	9.00	.315	8.00	.094	2.3876	.46	11.684	⅝ ₁₆ -24	-
10	1.37	34.80	.69	17.53	.312	7.93	.312	10.01	.315	8.00	.125	3.175	.50	12.7	N-00	W-00
12	2.11	53.59	.81	20.57	.406	10.31	.406	12.00	.394	10.01	.125	3.175	1.00	25.4	N-01	W-01
15	2.15	54.61	.84	21.34	.500	12.70	.500	15.01	.433	11.00	.125	3.175	1.00	25.4	N-02	W-02
17	2.23	56.64	.92	23.37	.500	12.70	.500	17.01	.472	11.99	.125	3.175	1.00	25.4	N-03	W-03
20	2.37	60.20	1.06	26.92	.625	15.88	.625	20.01	.551	14.00	.188	4.7752	1.00	25.4	N-04	W-04
25	2.68	68.07	1.12	28.45	.750	19.05	.750	25.01	.591	15.01	.188	4.7752	1.00	25.4	N-05	W-05
30	2.97	75.44	1.16	29.46	1.000	25.40	1.000	30.01	.630	16.00	.25	6.35	1.25	31.75	N-06	W-06
35	3.33	84.58	1.23	31.24	1.250	31.75	1.250	35.01	.669	16.99	.25	6.35	1.63	41.402	N-07	W-07
40	3.65	92.71	1.46	37.08	1.375	34.93	1.375	40.01	.906	23.01	.313	7.9502	1.50	38.1	N-08	W-08
45	3.73	94.74	1.54	39.12	1.375	34.93	1.375	45.01	.984	24.99	.313	7.9502	1.50	38.1	N-09	W-09
50	4.56	115.82	1.68	42.67	1.750	44.45	1.750	50.01	1.063	27.00	.375	9.525	2.30	58.42	N-10	W-10

End Machining

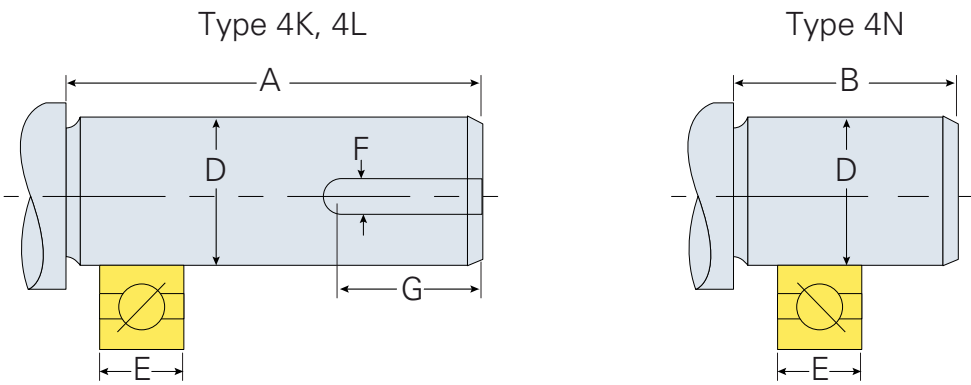
Type 3



Code	A		B		C		D		E		F		G		Lock nut	Lock washer
	in	mm	in	mm	in ⁺⁰ _{-.001}	mm ⁺⁰ _{-.03}	in ⁺⁰ _{-.001}	mm ⁺⁰ _{-.03}	in	mm	in	mm	in	mm		
2	.99	25.15	.79	20.07	.059	1.50	.059	2.50	.560	14.22	-	-	-	-	M2.5	-
3	1.03	26.16	.80	20.32	.092	2.34	.920	3.01	.560	14.22	-	-	-	-	M3	-
4	1.38	35.05	1.12	28.45	.098	2.49	.098	4.01	.860	21.84	-	-	-	-	#6-32	-
5	1.56	39.62	1.26	32.00	.125	3.18	.125	5.00	.944	23.98	-	-	-	-	#10-32	-
6	1.56	39.62	1.26	32.00	.125	3.18	.125	6.00	.944	23.98	-	-	-	-	#10-32	-
7	1.94	49.28	1.48	37.59	.187	4.75	.187	7.00	1.104	28.04	.063	1.6002	.34	8.636	¼-20	-
8	2.00	50.80	1.44	36.58	.250	6.35	.250	8.00	1.060	26.92	.094	2.3876	.46	11.684	⅝ ₁₆ -24	-
9	2.38	60.45	1.81	45.97	.250	6.35	.250	9.00	1.438	36.53	.094	2.3876	.46	11.684	⅝ ₁₆ -24	-
10	2.50	63.50	1.81	45.97	.312	7.93	.312	10.01	1.438	36.53	.125	3.175	.50	12.7	N-00	W-00
12	3.29	83.57	1.99	50.55	.406	10.31	.406	12.00	1.576	40.03	.125	3.175	1.00	25.4	N-01	W-01
15	3.50	88.90	2.18	55.37	.500	12.70	.500	15.01	1.732	43.99	.125	3.175	1.00	25.4	N-02	W-02
17	3.65	92.71	2.33	59.18	.500	12.70	.500	17.01	1.888	47.96	.125	3.175	1.00	25.4	N-03	W-03
20	4.03	102.36	2.71	68.83	.625	15.88	.625	20.01	2.204	55.98	.188	4.7752	1.00	25.4	N-04	W-04
25	4.45	113.03	2.89	73.41	.750	19.05	.750	25.01	2.364	60.05	.188	4.7752	1.00	25.4	N-05	W-05
30	4.86	123.44	3.05	77.47	1.000	25.40	1.000	30.01	2.520	64.01	.25	6.35	1.25	31.75	N-06	W-06
35	5.34	135.64	3.24	82.30	1.250	31.75	1.250	35.01	2.676	67.97	.25	6.35	1.63	41.402	N-07	W-07
40	6.37	161.80	4.18	106.17	1.375	34.93	1.375	40.01	3.624	92.05	.313	7.9502	1.50	38.1	N-08	W-08
45	6.68	169.67	4.49	114.05	1.375	34.93	1.375	45.01	3.936	99.97	.313	7.9502	1.50	38.1	N-09	W-09
50	7.75	196.85	4.87	123.70	1.750	44.45	1.750	50.01	4.252	108.00	.375	9.525	2.30	58.42	N-10	W-10

End Machining

Type 4



Code	A		B		D		F		G	
	in	mm	in	mm	in ⁺⁰ _{-.0003}	mm ⁺⁰ _{-0.007}	in	mm	in	mm
1	.50	12.70	.20	5.08	.0986	2.504	-	-	-	-
2	.75	19.05	.25	6.35	.1251	3.178	-	-	-	-
3	1.13	28.70	.38	9.65	.1877	4.768	-	-	-	-
4	1.38	35.05	.50	12.70	.2501	6.353	.063	1.6002	0.63	16.0
6	1.50	38.10	.75	19.05	.3751	9.528	.125	3.175	0.75	19.1
8	2.63	66.80	1.00	25.40	.5000	12.700	.125	3.175	1.50	38.1
10	2.63	66.80	1.25	31.75	.6250	15.875	.188	4.7752	1.50	38.1
12	2.72	69.09	1.50	38.10	.7500	19.050	.188	4.7752	1.50	38.1
16	2.84	72.14	1.50	38.10	1.0000	25.400	.25	6.35	1.50	38.1
19	3.25	82.55	1.78	45.21	1.1875	30.163	.25	6.35	1.75	44.5
22	4.44	112.78	2.06	52.32	1.3750	34.925	.313	7.9502	1.87	47.5
24	4.56	115.82	2.25	57.15	1.5000	38.100	.313	7.9502	3.00	76.2
28	4.94	125.48	2.63	66.80	1.7500	44.450	.375	9.525	3.00	76.2
32	5.19	131.83	3.50	88.90	2.0000	50.800	.500	12.700	3.00	76.2

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