Data Specs

Anti-Backlash T-Nut for Lead Screw

Axial Anti-backlash (AAB) T-nuts consist of a main nut body and a secondary ring that share the same thread form. There is a spring between the two components that force each part against opposing flanks of the screw thread. Nuts are mainly used for high transmission precision equipment, with elimination backlash gap, silencer function, anti-vibration functions. Products are widely used in 3D printing and DIY projects.

SKU: MCH1179

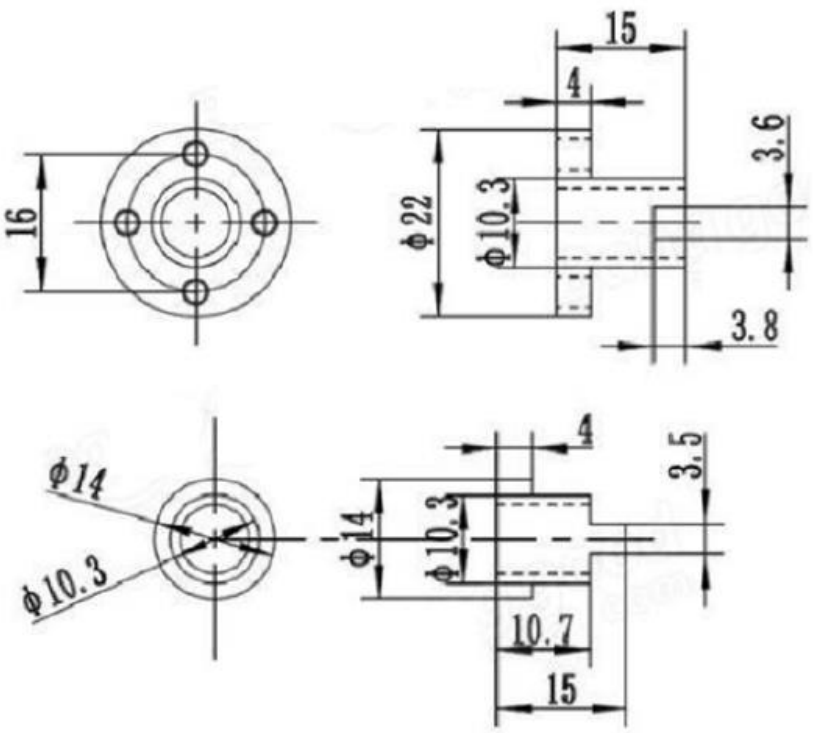
Brief Data:

- Tread: Tr8*8-2p (4 starts)
- Lead Pitch: 2mm.
- Number of Start: 4.
- Inner Diameter: Ø8mm.
- Structure: Trapezoidal Spindle Screw.
- Mounting Screw: M3.
- Material: Brass

Application:

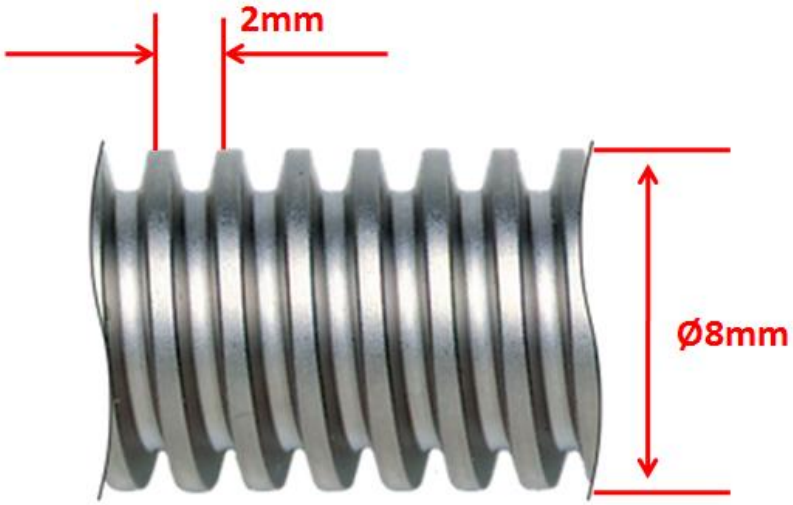
- 3D Printer
- CNC Machine
- Robotics
- Linear Motion

Mechanical Dimension:



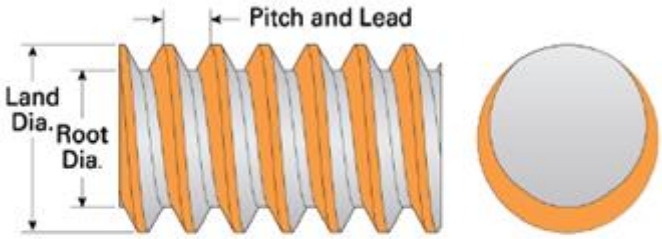
Application Example:

Lead Screw Specification:

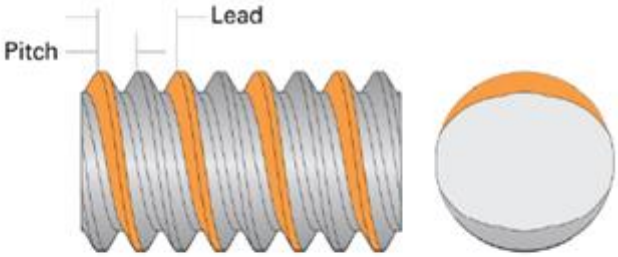


What is Number of Starts, Pitch and Lead of Lead/Ball Screw?

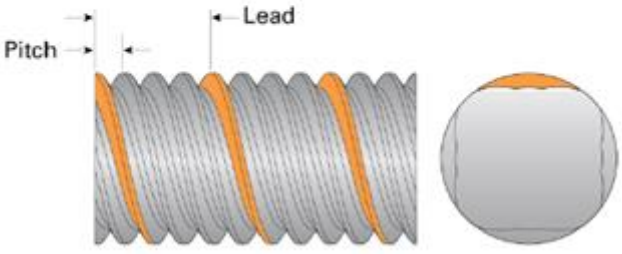
Single Start (Lead = Pitch)



Double Start (Lead = 2 × Pitch)



Four Start (Lead = 4 × Pitch)



Screw Starts

Is the number of independent threads/grooves on the screw shaft; example one, two or four in the figure above.

Pitch

Pitch is the distance between screw grooves and is commonly used with inch sized products and specified as threads per inch.

Lead

Lead is the linear travel the nut makes per one screw revolution and is how lead & ball screws are typically specified. The pitch and lead are equal with single start screws. For multiple start screws the lead is the pitch multiplied by the number of starts.

Stepper Motor Drive Step Calculation:

The motor is a standard 1.8°/step Stepper Motor, with an integral four start 8mm pitch lead-screw with a metric trapezoidal thread. 4-Start means that there are four individual threads along the length of the lead-screw. 8mm Lead Distance means that the center to center distance of the thread is 8mm (or that a nut mounted on the lead-screw will be driven 8mm for one full rotation of the lead-screw).

Using A4988 Stepper Motor Driver with 16-microstepping setting:

For 1.8°/step stepper motor, one full revolution require (360°/1.8°) = 200 Steps.

With stepper motor driver set to 16-microstepping required:

200x16 = 3,200 microsteps = 8mm.

So in order to move the nut mounted on the lead-screw 1mm distance, the Stepper Motor Driver required 3200/8 = 400 Steps. In other word, the controller board need to output 400 pulses in order to move 1mm linear distance.

Linear Motion Products Selection Guide:

Flexible Motor Shaft Coupler

Miniature Metal Bearings

Anti-Backlash T-Nut for Lead Screw

Jaw Type Motor Shaft Coupler

Delrin V-Wheels

Flange Double Shielded Bearings

Flange Trapezoidal T-8 Lead Screw Nut

GT2 Pulley

GT2 Idler Pulley

Harden Chrome Smooth Linear Shaft

Self Aligning Flange Shaft Holder – Horizontal

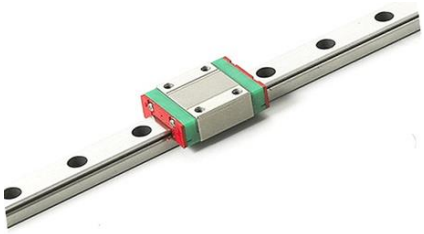
Self Aligning Flange Shaft Holder – Vertical

LM10UU Linear Bushing

LMK10LUU Flange Linear Bearings-Long

LMK10UU Flange Bearings Bushing

LMKM10UU Middle Pilot Flange Linear Bushing



MGN12 Series Linear Guideway

SBR12UU Open Type Linear Ball Bearing Bushing

SBS12UU Shaft Support Rails with Steel Shafts

SC10LUU Linear Ball Bearing Bushing – Long Type

SFU1204 Ball Screw Kit. Length 300mm.

SFU1204-3 Ball Screw Nut – Flanged

Shaft Collar Ø8mm

SHF10 Horizontal Linear Shaft Holder

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