



Precision lead screws in lab automation equipment

- Test tube fillers
- Chemical transfer applications
- Assembly and preparation systems
- Auto sampling
- Fluid handling
- Multi-channel pipetting

Lead Screw Assemblies



End Machining

- Standard End Configurations
- Custom Turned Ends
- Custom Milled Ends

Nut Styles

- Standard Nuts
 - Flanged Mount
 - Thread Mount
- Custom Nuts
- Custom Materials

Screw Materials

- Stainless Steel
- Aluminum
- Titanium
- Alloy Steel
- Low Carbon Steel

Coatings

- PTFE
- Chrome
- Nickel
- Melonite
- Armalloy

Testing & Validation

Lead Accuracy

- PØ8 (± 0.0003 "/Inch)
- Laser Lead Accuracy Test Machine – ± 0.000001 " Accuracy

Torque Measurement

- Application Specific Testing
- Torque Comparisons of Lubricants

Thread Form Validation

- CNC Thread Profile Measurement – ± 0.00001 "

Efficiency Measurement

- Measure Screw Assembly Efficiency

Tensile Testing

- Dynamic Loads
- Static Loads
- Stress vs. Displacement
- Capacity up to 10,000 lbs.

Functional Testing

- Life Testing
- Backlash

Dimensional Inspection

- Laser Profile Inspecting



End Machining

Standard end types



Single Bearing Drive End
with Keyway



Single Bearing
Drive End



Single Bearing
Support End



Double Bearing
Drive End



Double Flat



Threaded
Counter-bore



Single Journal



Hexagonal Drive End



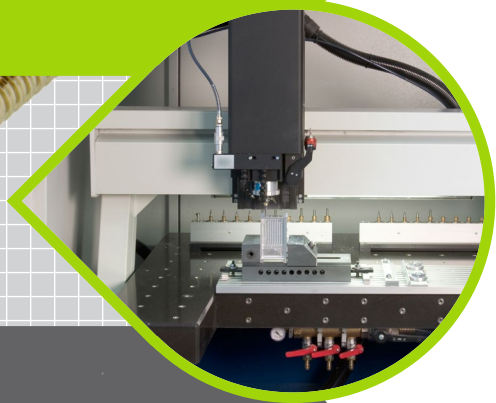
O.D. V-Thread

Applications

**Multi-channel
Pipetting** ▶



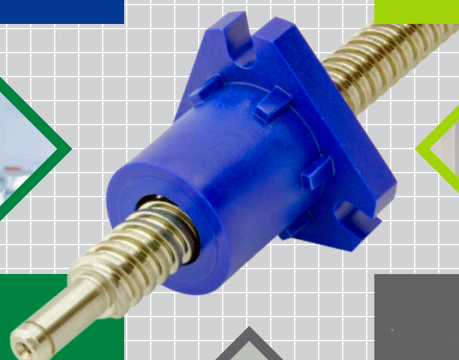
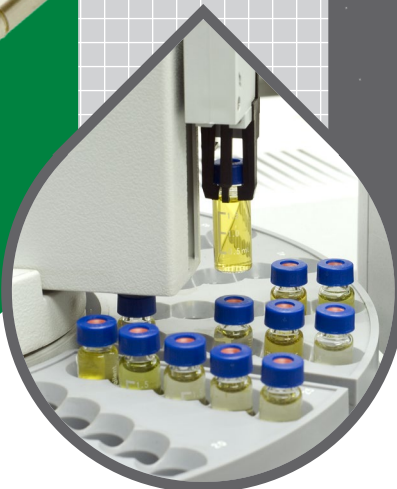
**Lab Automation
Modules** ▼



▲ **Fluid
Handling**



◀ **Auto
Sampling**



Standard Nut Materials



Helix Bronze

- Tensile Yield: 50,000 PSI
- Tensile Ultimate: 65,000 psi
- Hardness HB 75
- Dynamic Coefficient of Friction 0.125 with Helix Lubricant



Helix Blue®

- Material: Helix™ Acetal/PTFE Blend
- Tensile Strength @ 70°F: 16,000 PSI
- PV Limit: 2,700 Lubricated
- Coefficient of Friction: 0.10 Lubricated



Helix Black®

- Material: Helix™ Acetal/PTFE Blend
- Tensile Strength @ 70°F: 16,000 PSI
- PV Limit: 2,700 Lubricated
- Coefficient of Friction: 0.10 Lubricated
- Anti-Static Properties



Helix White®

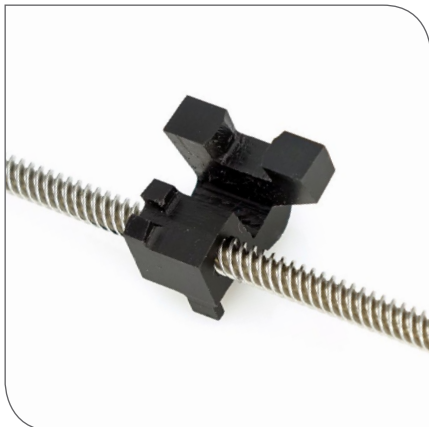
- Material: Helix™ Acetal/PTFE Blend
- Tensile Strength @ 70°F: 16,000 PSI
- PV Limit: 2,700 Lubricated
- Coefficient of Friction: 0.10 Lubricated
- Medical Grade Plastic
- Certified Ingredients (UL, FDA)

Custom Nuts



Custom Molded Nuts

- High Volume Molded Nuts
- Standard Helix Polymers
- Customer Specific Polymers
- Insert Molding



Custom Machined Nuts

- Complex Designs that can not be Molded
- Quick Turnaround
- Standard Custom Materials



Custom Anti-Backlash Nut Designs

- Anti-Backlash Feature Incorporated into your Part
- Several Anti-Backlash Designs Available to Use in your Part

NOTE: We will 3D print your custom nut design for free.

If you have a drawing or 3D model that you would like
to have us quote, simply email it to:

sales@helixlinear.com



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