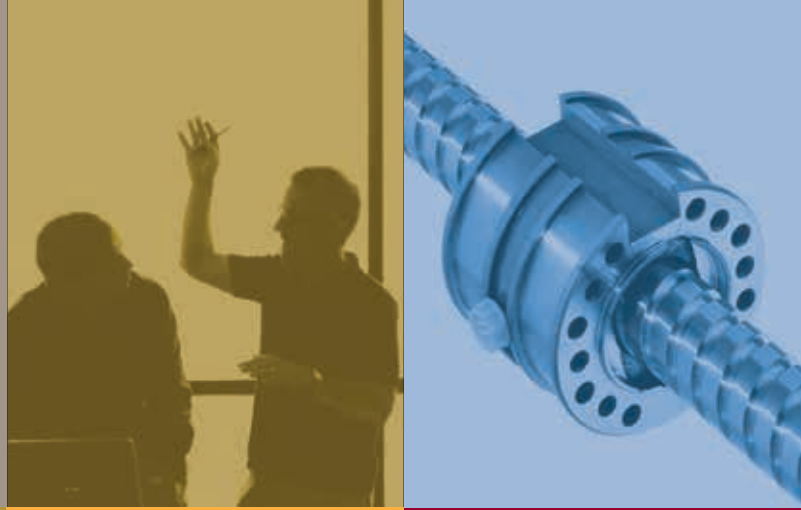


BALL SCREWS AND PLANETARY ROLLER SCREWS

Offer high acceleration, smoothness
and maximum flexibility



Moog has over 30 years experience in producing and designing customized high precision ball and planetary roller screws that are suitable for a variety of markets and challenging motion control applications.

Developed to meet the needs of leading-edge machine manufacturers across a wide range of industries, Moog ball screws and planetary roller screws are flexible and designed to provide a unique and competitive advantage.

Our extensive range enables customers to find the best solution to their specific performance requirements that meets the accuracy demands of ISO 3408-3 for classes 1-3-5-7.

The range covers a wide selection of static and dynamic loads, an extended range of accelerations up to extremely fast duty cycles plus the availability of alternative designs and re-circulating systems that meet noise and vibration requirements, even in very quiet applications.

In addition to our vast range of ball screws and planetary roller screws, Moog offers best in class electro-mechanical products and systems, with products such as servodrives, servomotors and motion controllers. These, together with global support and design expertise, help OEMs and end users develop the best solutions for leading-edge electro-mechanical applications.

ADVANTAGES

- Fully customizable (even for small quantities) to meet all performance requirements within market standard lead times
- Maximum flexibility in terms of design and performance range
- Extremely quiet and low vibration functionalities due to the excellent smoothness in the design
- High accelerations for faster machines
- Extensive array of best-in-class electro-mechanical products and systems such as servodrives, servomotors and motion controllers are at the heart of our customized and leading-edge electro-mechanical solutions
- Moog expertise and close collaboration with customers ensure solutions that meet today's toughest challenges
- Very competitive lead time for fully customised screws:
 - Starting from 5 weeks for ball screws
 - Starting from 8 weeks for roller screws

APPLICATIONS

- Industrial machines especially where requirements include high demanding performance and a fully customized ball screws or roller screws design
- Special applications where increased smoothness or high load density are needed
- Heavy industry
- Harsh industrial environments
- Electro-mechanical actuators
- Motor sport
- Aerospace applications



KEY FEATURES

- Ground ball screws and roller screws ISO 3408-3 classes 1-3-5-7
- Various screw diameter-pitch combinations available (screw load capacity and dynamic performance)
- Wide selection of screw end shafts (bearing housings, metric threads, socket heads, wrenches, bored heads, etc.)
- Nut customization (shape, flange, coupling, number of circuits, special machining processes)
- Various lubrication options (selection of the right lubricant for the application, positioning of the lubrication holes)
- Selection of materials and special processing (standard and special materials, surface treatments appropriate for the type of application)
- Extremely quiet operation for low disturbance and low noise applications
- Compact design thanks to the Moog recirculating system design that allows a better balance of the nut
- Robust design suited for heavy duty applications, vibrations and harsh environment.

Ball screws

- ISO 3408-3 classes 1-3-5-7¹
- Diameter from 12 to 125 mm (0.47 to 4.92 in)²
- Pitch from 1.5 to 50 mm (0.06 to 1.97 in)
- Length up to 6,200 mm (244 in)³
- Load capacity:
 - Dynamic load up to 1,300 kN
 - Static load up to 2,500 kN
- Acceleration 10 to 15/sec²
- Single or multi-start



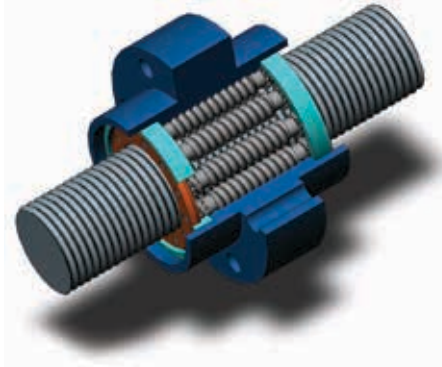
¹ISO 3408-3 defines key geometric features and tolerances of ball screws

²Smaller diameters (less than 12 mm) can be available upon request

³In special condition reachable length 7,000 mm (275 in)

Planetary roller screws

- ISO 3408-3 classes 1-3¹
- Diameter from 15 to 87 mm (0.6 to 3.42 in)²
- Pitch from 2 to 40 mm (0.08 to 1.57 in)
- Length up to 4,000 mm (157.5 in)
- Load capacity:
 - Dynamic load up to 1,000 kN
 - Static Load up to 2,000 kN
- Acceleration up to 40 m/sec²
- Number of starts: 5 to 6



¹ISO 3408-3 defines key geometric features and tolerances of ball screws

²Special combination of diameter and lead can be developed upon request

Moog has offices around the world.
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Ball screws and planetary roller screws
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This technical data is based on current available information and is subject to change at any time by Moog. Specifications for specific systems or applications may vary.

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