

Precision Bearings for Robotics & Advanced Motion Systems

Low Torque Motion • Compact Precision Design • Engineered for Robotics

- Precision bearings engineered for robotic motion systems
- Compact designs for actuators, encoders, and robotic joints
- High stiffness and low torque for accurate positioning
- Scalable production from prototype to volume manufacturing

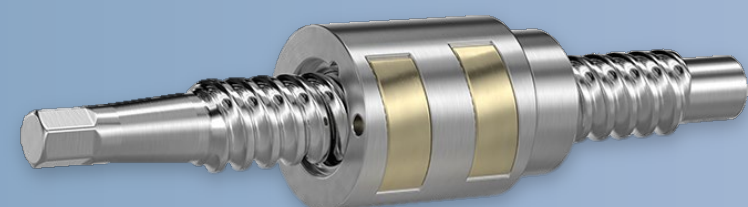
Shoulder & Hip Joints Cross Roller Bearings

Robot shoulder, elbow, and hip joints experience large moment loads from arm movement and payload weight. Cross Roller bearings provide high rigidity and support radial, axial and moment loads simultaneously.

Elbow, Wrist & End-of-Arm Tooling Miniature Deep Groove Bearings & Thin Section Bearings

Elbow, wrist and end of arm tooling assemblies require compact bearings capable of high-speed operation and precise motion control. Miniature deep groove and thin section bearings enable smooth movement and accurate articulation.

Ball screw support bearings enable high-load, precision linear actuation in robotic systems.



Head / Encoder Systems Miniature Deep Groove Bearings & Thin Section Bearings

Precision Encoders provide critical position feedback for robotic motion control.

Miniature deep groove ball bearings support encoder shafts with extremely smooth rotation, and consistent torque characteristics, ensuring accurate position sensing and repeatable motion.

Waist / Torso Rotation Cross Roller or Four-Point Contact Bearings

Robot waist supports the upper body and arm assemblies while allowing rotational movement. Bearings in this location must support large radial, axial, and moment loads with high stiffness.

Knee & Ankle Joints Cross Roller Bearings

These joints support significant loads during walking and dynamic motion. Cross Roller bearings provide high rigidity and precise motion control.

Precision Bearings for Advanced Robotics

- Miniature and Instrument Bearings
- Angular Contact Bearings
- Cross-Roller Bearings
- Custom Engineered Bearing Solutions
- Thin Section Bearings
- Four-Point Contact Bearings
- Ball Screw Support Bearings

B E A R I N G
CW



Precision in Motion

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