TIMKEN | PRECISION DRIVES

for MACHINE TOOLS

PRECISION MOTION FOR HIGH-PERFORMANCE MACHINING

From wafer handling and inspection to precision positioning and factory automation, Timken Precision Drives delivers compact, accurate motion technologies for demanding semiconductor equipment applications.

Rotary Tables | **Indexing** | **Tool Changers** | **Positioning** | **Multi-Axis** | **Automation**

Designed to Meet Critical Requirements

- ✓ High positioning accuracy and repeatability
- ✓ Low backlash
- ✓ High torsional stiffness
- ✓ High torque and load capacity
- ✓ Long service life and reliability

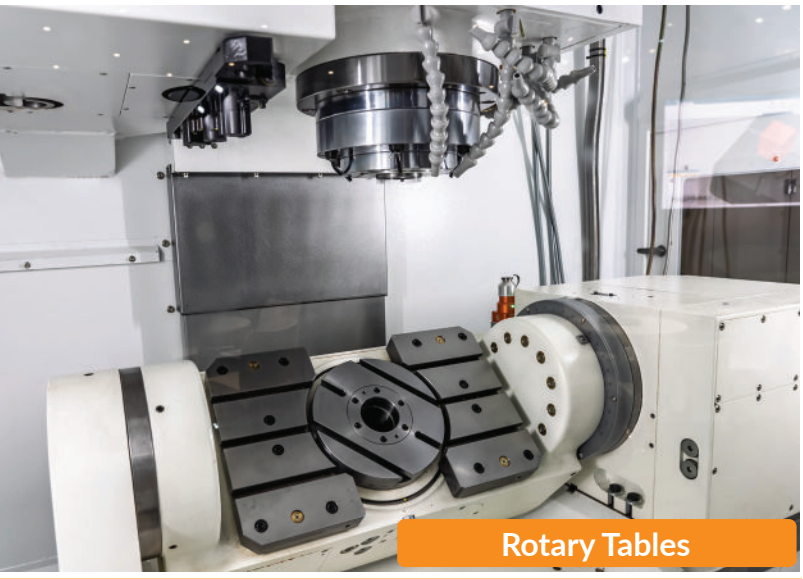
Timken Precision Drives combines **cycloidal, worm, planetary, and strain wave gearing technologies** with **precision bearings, high-resolution encoders, and engineered motion solutions** to support accurate positioning, high rigidity, and reliable operation throughout machine tool systems.



CNC Machining

Built on Timken Capabilities

- ✓ Global manufacturing and support
- ✓ Collaborative application engineering
- ✓ Advanced engineering and R&D resources
- ✓ Decades of proven quality systems
- ✓ Standard, modified, and custom solutions
- ✓ Multiple motion technologies



Rotary Tables



Machine Automation

Precision motion. Global engineering and manufacturing. Timken quality.

TIMKEN | PRECISION DRIVES

Cone Drive · CGI · SPINEA · TIMKEN ENCODERS

ONE PARTNER. **MULTIPLE MOTION TECHNOLOGIES.**

Distinct technologies engineered for different motion challenges.
Together, they create one of the industry's most comprehensive precision motion portfolios.



STRAIN WAVE GEARING

Compact, zero-backlash precision

- ✓ Zero backlash
- ✓ High reduction ratios
- ✓ Exceptional positioning accuracy



CYCLOIDAL GEARING

High torque and exceptional rigidity

- ✓ High torque capacity
- ✓ Exceptional torsional stiffness
- ✓ DriveSpin® integrated actuators



WORM GEARING

Reliable right-angle motion

- ✓ High torque capacity
- ✓ Wide range of reduction ratios
- ✓ Flexible mounting configurations



PLANETARY GEARING

Compact, efficient power transmission

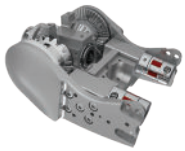
- ✓ High power density
- ✓ Low backlash options
- ✓ Efficient torque transmission



SLEW BEARINGS & DRIVES

Integrated rotary positioning

- ✓ High-capacity rotary positioning
- ✓ Smooth rotary positioning
- ✓ Bearing and drive configurations



MICRO GEARING

Miniature precision motion

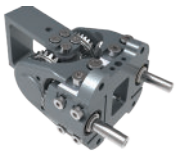
- ✓ Extremely small package sizes
- ✓ Precision gearheads
- ✓ Custom configurations available



MAGNETIC ENCODERS

High-resolution motion feedback

- ✓ High-resolution position sensing
- ✓ Accurate speed feedback
- ✓ Compact, integrated design



ENGINEERED SOLUTIONS

Integrated motion solutions

Standard, modified, and custom solutions backed by application engineering expertise.

Why Timken Precision Drives?

- ✓ Multiple Motion Technologies
- ✓ Proven Quality & Reliability
- ✓ System-Level Engineering
- ✓ Global Support
- ✓ Standard, Modified, & Custom Solutions
- ✓ **125+ Years of Innovation**

One Partner. Every Motion Challenge.