



# TIMKEN

PRECISION  
DRIVES

## for FOOD & BEVERAGE

### PRECISION MOTION FOR HIGH-PERFORMANCE AUTOMATION

From processing and packaging to robotic handling and inspection, Timken Precision Drives delivers precise, reliable motion technologies for automated food and beverage equipment.

Processing

Packaging

Filling

Conveying

Robotics

Inspection

#### Designed to Meet Critical Requirements

- ✓ Precise, repeatable motion
- ✓ High-speed operation
- ✓ Compact system designs
- ✓ High duty-cycle performance
- ✓ Long service life and reliability

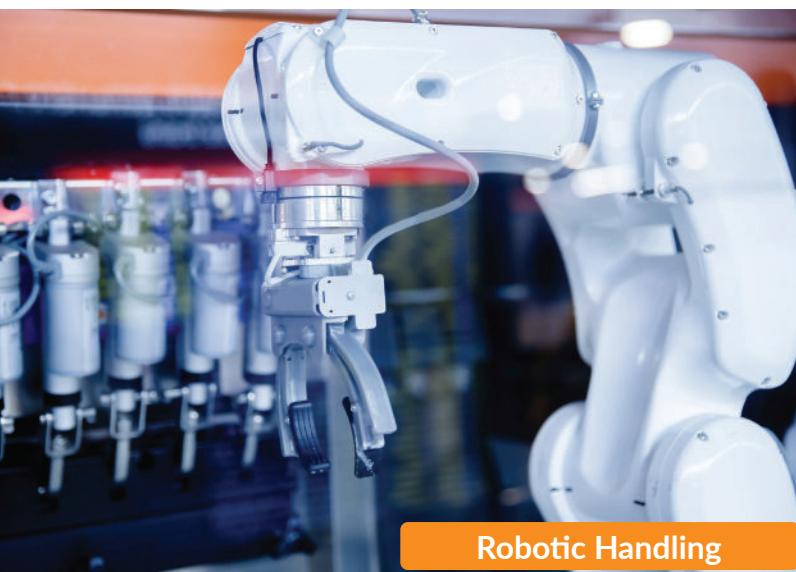
Timken Precision Drives combines **planetary, cycloidal, strain wave, worm, and micro gearing technologies** with **integrated actuators, precision bearings, high-resolution encoders, and custom motion solutions** to support high-performance automation throughout food and beverage production.



Packaging Automation

#### 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 precision motion technologies



Robotic Handling



Processing and Filling

Precision motion. Global engineering and manufacturing. Timken quality.



# TIMKEN

# PRECISION DRIVES

**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.**