

# **TIMKEN FOOD & BEVERAGE**

Solutions For Rotating Equipment



**///iMOTION**  
*Australia*





Hygienic stainless steel

Hygienic blue polymer (thermoset)



# TIMKEN® Hygienic Ball Bearing Housed Units

## UPGRADE FOOD SAFETY WITH TIMKEN® HYGIENIC BALL BEARING HOUSED UNITS

Engineered to help you maintain the highest standards in food safety, our hygienic housed units deliver improved production uptime. Made from corrosion-resistant materials and available with food-grade Solid Lube, this premium product can withstand aggressive washdowns and a variety of wet and dry contaminants.

### Your First Line of Defense

Available in optically detectable blue thermoset or stainless steel housings, our Ball Bearing Housed Units can help reduce ownership costs. Thanks to an easy-to-clean design, food-grade lubricant and Solid Lube, Ball Bearing Housed Units provide longer operating life and fewer maintenance events.

### GAIN SOLUTIONS THAT:

#### Comply with Regulations

USDA-accepted hygienic housings feature smooth surfaces without reinforced bolt holes and comply with NSF/ANSI/3-A SSI 14159-1 – 2014. Bearings feature FDA-compliant NSF H1 food-grade lubricants.

#### Help Detect Contamination

Both optically detectable blue thermoset housing and metal-detectable ball bearing cage help detect foreign particles.

#### Simplify Cleaning

An optional QuiKlean® housing design avoids dead volume between the housing base and machinery, allowing washdown from all sides. Smooth housing surfaces with laser marking allow for effective removal of residue and reduced washdowns. Solid Lube option prevents grease purge.

#### Raise Productivity

Hygienic housings reduce downtime from mandatory cleanings and food-grade Solid Lube eliminates the need for relubrication.

#### Achieve Lower Cost of Ownership

Premium bearing units are engineered to reduce costs associated with washdown, downtime and product recalls.

### Product Advantages

- Housings available in optically detectable blue thermoset or stainless steel in all mounting styles
- Thermoset housings are cast to eliminate voids and increase strength
- Stainless steel ball bearing inserts include set screw locking and metal cage and double lip seal
- Interchange industry-standard mounted bearings from 20 mm to 50 mm (3/4 in. to 2 in.)
- USDA-accepted hygienic design
- Designed for normal operation between -20° C and 100° C (-4° F and 212° F) and may vary with Solid Lube
- Available with food-grade Solid Lube or food-grade grease relubricable option

### A Smart Solution for Food & Beverage Processing

- Conveyors
- Mixers
- Metal detectors
- Check-weighers
- Tumblers
- Slicers
- Breaders



# TIMKEN® Corrosion-Resistant Ball Bearing Housed Units

## MAXIMIZE EQUIPMENT OUTPUT WITH TIMKEN® CORROSION-RESISTANT BALL BEARING HOUSED UNITS

Designed with corrosion-resistant materials and food-grade lubricant, the product can withstand aggressive washdowns management and a variety of wet and dry contaminants. The result? Enhanced reliability that helps extend bearing life, improve production uptime and – most importantly – elevate food safety.

### Sanitary Bearings for All Stages

Our Corrosion-Resistant Ball Bearing Housed Units can help reduce ownership costs thanks to longer life and fewer maintenance events.

#### GAIN SOLUTIONS THAT:

##### Improve Food Safety

Our products meet the most stringent food safety legislation and regulations. You gain reliable operations with peak performance in critical machines.

##### Reduce Maintenance

Premium products tout longer operating lives in demanding environments and eliminate downtime from mandatory cleaning or constant re-greasing.

##### Achieve Lower Cost of Ownership

Long-lasting products and predictive maintenance help you avoid sudden, expensive shutdowns. Head off costly changeouts with products designed to handle corrosion, thermal expansion and harsh chemicals.

##### Raise Productivity

Our products are designed for efficiency. You can maintain optimum uptime despite chemical washdowns, high temperatures and fast throughput.



#### Product Advantages

- Stainless steel ball bearing inserts with set screw locking, metal cage and double lip seal for higher ingress protection
- Housings available in polymer (thermoplastic) or stainless steel and all mounting styles
- Interchangeable industry-standard mounted bearings from 20 mm to 50 mm (3/4 in. to 2 in.)
- Hygienic construction (smooth surface, laser marking, co-molded bushings) and metal cage for higher food safety
- Designed for normal operations between -20° C and 100° C (-4° F and 212° F)
- Available with food-grade Solid Lube, food-grade grease or relubricable option

#### A Smart Solution for Food & Beverage Processing

- Conveyors
- Mixers
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- Tumblers
- Slicers
- Breaders
- Peelers



# TIMKEN®

## Corrosion-Resistant Deep Groove Ball Bearings for Food & Beverage Industry

Food and beverage manufacturers and producers need premium products that deliver machinery uptime and food safety. You can meet these challenges head-on with Timken® corrosion-resistant deep groove ball bearings.

Constructed with stainless steel rings, balls and cages, these corrosion-resistant materials and food-grade lubricant can help elevate food safety and production uptime with improved reliability. Standard, thin-section, narrow and miniature constructions are offered in the following series and configurations:

- 6000, 6200, 6300 and 600 series
- Open design, double contact seals and double shields
- Food-grade grease, food-grade Solid Lube; and general industrial grease.

### GAIN SOLUTIONS THAT:

#### Improve Food Safety

Our products meet stringent food safety legislation and regulations including compliance with FDA 21.CFR 178.3570. As a result, you can see gains in operational performance.

#### Reduce Maintenance

Premium products are designed to operate longer in demanding applications and environments.

#### Decrease Unplanned Downtime

Long-lasting products help you avoid sudden, expensive shutdowns. Head off costly changeouts with products designed to handle corrosive conditions and harsh chemicals.

#### Increase Overall Productivity

Our products are designed for efficiency. You can maintain optimum operating efficiency despite chemical washdowns and wet environments.



### Product Advantages

- Resist corrosion and improve metal detectability with stainless steel rings, balls and cages
- Improve food safety with NSF H1 registered waterresistant grease for shielded and sealed bearings
- Versatile Timken® Solid Lube is a grease alternative for harsh environments
- Handle a wide range of operating temperatures with high-performance lubricants

### A Smart Fit

Our corrosion-resistant deep groove ball bearings are an ideal fit for a variety of applications:

- Poultry deboning machines
- Conveyor rolls
- Form fill seal machines
- Filling and seaming equipment
- Combination weigher
- Labeling equipment





# Move Forward With Diamond® Chain By TIMKEN

## YOUR POWERFUL LINK TO HIGHER PRODUCTIVITY

Achieve superior performance with Timken's Diamond Chain range – designed to handle multiple applications and offer long-lasting protection.

## Protect With Corrosion Resistant Chain

### STAINLESS STEEL CHAIN

Diamond produces a wide range of single-pitch and double-pitch stainless steel conveyor chains. Four stainless steel series have been formulated to meet the needs of your applications:

- **300 Series** – Assembled using only 300 series components. Excellent corrosion resistance and very low magnetic permeability. A “non-sparking” chain.
- **Options Made to Order:**
  - **AP Series** – Assembled using a combination of 300 series link plates, bushings, and rollers along with a precipitation-hardened stainless steel pin to increase the wear life of the chain.
  - **400 Series** – Assembled using a combination of 300 series link plates and 400 series pins, bushings, and rollers to significantly increase wear resistance.
  - **600 Series** – Assembled using 300 series link plates with pins, bushings, and rollers made from 600 series precipitation-hardened stainless steel.

## Diamond Ace® Chain

The Diamond ACE (anti-corrosion exterior) chain incorporates an electrochemically bonded, protective exterior coating that is applied before assembly. Diamond ACE features a zinc-nickel and non-hexavalent chromate coating with a protective lubricant to provide corrosion protection and extended wear resistance.

## Nickel-Plated Chain

Diamond nickel-plated chain provides superior protection from the elements, greatly extending the life of the base chain when operating in wet conditions. Each individual component of Diamond nickel-plated chain is plated before assembly to ensure full coverage and plate depth.



# Industry Solutions

## Poultry Processing

- Washers
- Pluckers
- Deboning
- Sizers

## Abattoirs

- Washers
- Screw Conveyors
- Mixers
- Boning
- Conveyors
- Packaging

## Dairy

- Pasteurizers
- Packaging
- Fillers
- Shredders

## Fresh Produce

- Conveyors
- Freezers/Dryers
- Sizers
- Peelers

## Process Floors

- Conveyors
- Ovens
- Packaging Machines
- Proofers
- Fryers
- Metal Detectors

## Snack Food Processing

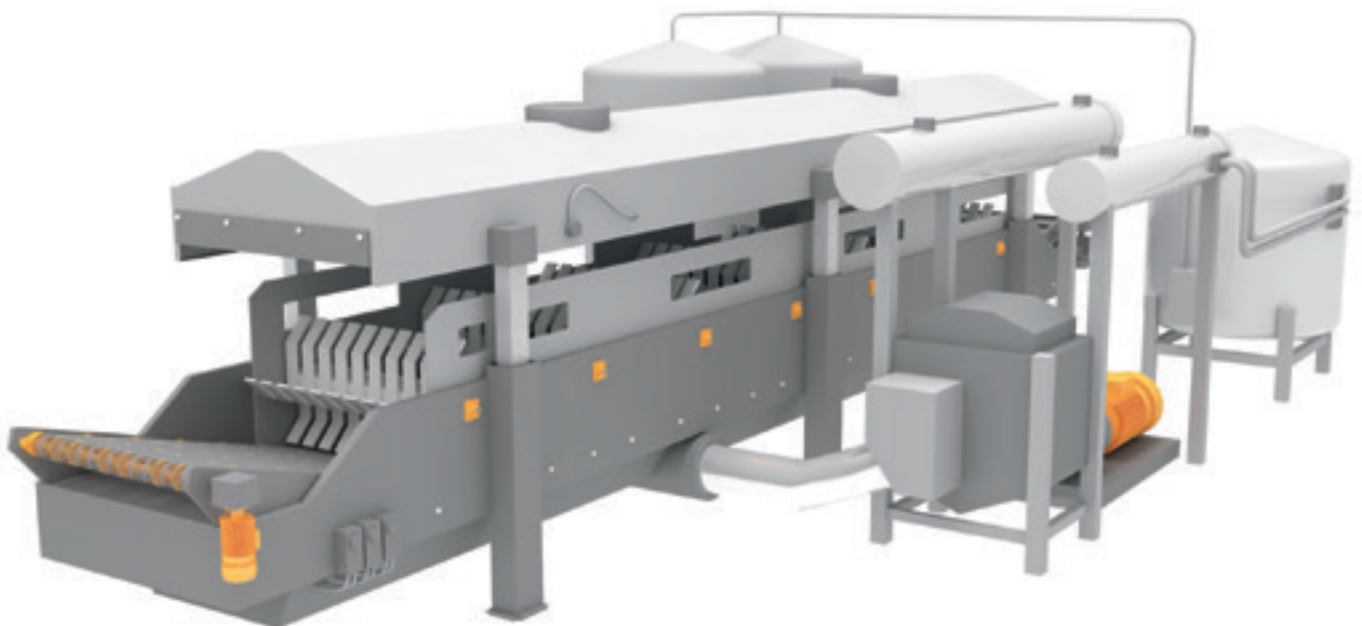
- Mixers
- Fryers
- Ovens

## Bakery


- Ovens
- Proofers
- Packaging
- Cooling Lines

## Beverage

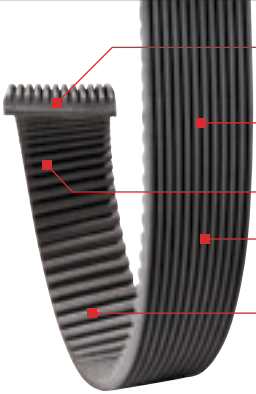
- Coolers
- Fillers
- Mixing
- Conveyor



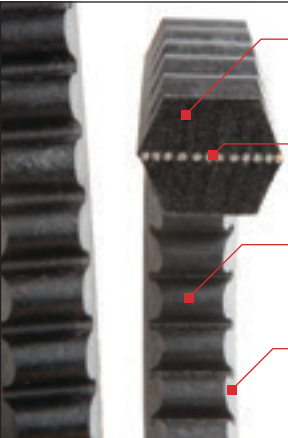
# Belts & Coupling



<b>Belts</b> 	<p>Purpose-built and designed for optimal performance in a multitude of demanding applications.</p>	<ul style="list-style-type: none"> <li>• Comprehensive line of premium-quality heavy-duty v-belts and synchronous belts</li> <li>• Engineered and built to rigid specifications to provide superior performance and reliability</li> </ul>
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## Flour Power Roller Mill Belts

 <ol style="list-style-type: none"> <li><b>1</b> Optimised tensile cord for strength and high torque loading</li> <li><b>2</b> Advanced polymer for long belt life</li> <li><b>3</b> Jump and shear resistant teeth</li> <li><b>4</b> Flexible, smooth, vibration-free performance</li> <li><b>5</b> Graphite impregnated fabric facing for wear resistance</li> </ol>	<ul style="list-style-type: none"> <li>• High performance advanced polymer compound for long belt life</li> <li>• Optimised tensile cord for strength and high torque loading</li> <li>• Graphite impregnated fabric facing for improved wear resistance</li> <li>• Jump and shear resistant belt teeth</li> <li>• Efficient and consistent power transfer</li> <li>• Heat, abrasion and wear resistant</li> <li>• Flexible, vibration-free performance</li> <li>• Durable and dependable</li> <li>• Available in matched sets</li> <li>• Manufactured in ISO 9001:2015 facilities</li> <li>• Made in USA</li> </ul>
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## Feather Picker V-Belts

 <ol style="list-style-type: none"> <li><b>1</b> <b>EPDM</b> - Durable and resistant to heat, hardening, glazing, steam and moisture</li> <li><b>2</b> <b>Cord</b> - Optimised tensile cord for load carrying capacity and wear resistance</li> <li><b>3</b> <b>Double Cog</b> - Double sided molded cogs are engineered for superior flexibility</li> <li><b>4</b> <b>Raw Edge Sidewalls</b> - Enhanced gripping power and long belt life</li> </ol>	<ul style="list-style-type: none"> <li>• Double angle cogged belt</li> <li>• Gripping power of raw edge sidewalls</li> <li>• Superior flexing of precision molded cogs</li> <li>• Durability of highly engineered polymer</li> <li>• High strength tensile cord</li> <li>• Resistant to heat, steam and moisture</li> <li>• Resistant to wear, hardening and glazing</li> <li>• Broad operating temperature range <ul style="list-style-type: none"> <li>- 50°F to +250°F</li> </ul> </li> <li>• Proudly made in the USA</li> <li>• Belts are sold in matched sets of 2 <ul style="list-style-type: none"> <li>- Never mix new and used belts on a drive</li> <li>- Never mix belts from different manufacturers</li> </ul> </li> </ul>
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<b>Stainless Steel Jaw Couplings</b> 	<p>Jaw couplings provide highly reliable service for light-, medium-, and heavy-duty applications.</p>	<ul style="list-style-type: none"> <li>• Hubs and inserts are available in many materials to cater to the needs of your environment no matter how harsh</li> <li>• No lubrication</li> <li>• Rust resistant</li> <li>• Convertible to in-shear coupling type when you need to accommodate misalignment or want to reduce downtime when performing maintenance</li> </ul>
<b>Universal Joints</b> 	<p>Strong, durable and flexible joints are designed to be disassembled and reassembled without damage to the component and can be readily taken apart without special tools.</p>	<ul style="list-style-type: none"> <li>• Available in stainless steel, hubs can be modified to fit customer specifications</li> <li>• Built-in system provides sustained lubrication and no special tooling is needed to assemble or disassemble</li> </ul>





# **TIMKEN®**

## **Poly-Round® Plain Bearing Housed Units**

Timken® Poly-Round® Plain Bearing Housed Units are made of high performance bearing-grade polymer materials, incorporating lubricity into the composition. This allows Poly-Round bearings to operate without the need for grease, eliminating the need for seals or shields. Engineered to excel in the harsh conditions of food and beverage processing – including aggressive washdowns and chemicals, extreme temperature ranges, abrasives, incomplete rotation – they meet stringent food safety requirements.

Corrosion resistant and lubrication free, Timken Poly-Round Plain Bearing Housed Units are ideal for applications where sanitation and contamination are critical concerns. You can trust our housed units to:

**ELEVATE FOOD SAFETY**

**IMPROVE PRODUCTION UPTIME**

**PERFORM WITH EXTENDED BEARING LIFE**

### **Solutions for:**

- Fryers and Cookers
- Freezers
- Process Conveyors
- Oven Roller Application
- Potato Peelers
- Chicken Processing
- Water Treatment

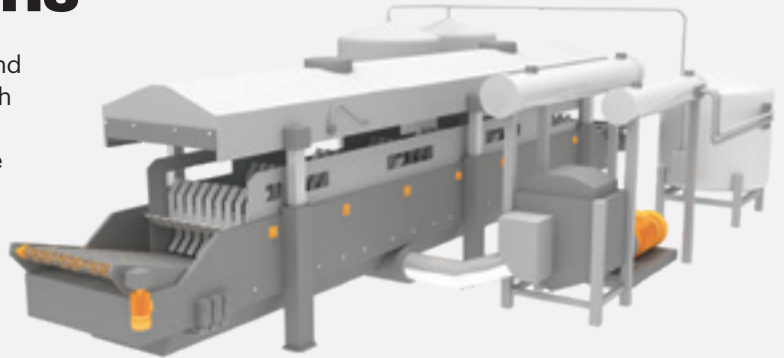




# TIMKEN® Solutions for Fryer Applications

Tunnel or paddle fryers, commonly used for snack food and protein products, face specific application challenges with bearings submerged in high temperature oils. Direct food contact, presence of debris and frequent wash-downs are additional challenges. Timken products are engineered to excel in these tough conditions.

Bearing locations: Produce belts, hold down belts, crumb belts, paddle wheel.



## FA AND FE POLY-ROUND® HOUSED UNITS

Improve food safety, and increase uptime with Timken FA and FE Poly-Round bearings, our premium solution for fryer applications. The maintenance free and lubrication free engineered polymer plain bearing are the right choice for fryer applications. In applications with high loads, high speeds or high tension, our ball bearing solution may be more appropriate.\*

- Ideal for high temperature fryer oils
- Good for temperatures up to 260° C (500° F)
- Eliminates failure due to water ingress and corrosion
- No lubrication needed; maintenance free
- Long and predictable operations equals increased uptime
- Excellent performance in chemical and high pressure washdown
- USDA equipment acceptance for hygienic design
- FDA compliant for direct contact
- Complies with EU 10/2011 for direct contact (FE only)
- FA Size range shaft size 12.7 mm – 101.6 mm (½ in. – 4 in.)
- FE Size range shaft size 12.7 mm – 50.8 mm (½ in. – 2 in.)



## CORROSION-RESISTANT BALL BEARING HOUSED UNITS WITH FVSL525 SOLID LUBE

Timken FVSL525 Solid Lube is a graphite based, high-temperature, solid lubrication that replaces the typical grease in a Corrosion-Resistant Ball Housed Unit. The solid lubricant helps keep out contaminants and is maintenance free.

- Ideal for use with high temperature fryer oils
- Ball bearings equipped with high temperature graphite solid lube
- Improved ingress protection
- Solid Lube helps exclude contamination from abrasive breadding materials
- Appropriate for applications with high loads, high speeds or high tension
- Maintenance-free (lubed-for-life)
- Solid Lube does not leak; improving food safety
- Good performance in high pressure and chemical washdown
- NSF H1-registered lubricant – approved for incidental contact
- Size range shaft size 20 mm – 50 mm (¾ in. – 2 in.)



\*Contact your Timken Sales Engineer for details on these limitations and the appropriate bearing solution for your application.



# Improve Food Safety on the Process Floor

**TIMKEN® QUIKLEAN® HOUSED UNITS AVAILABLE IN CAST STAINLESS OR POLYMER FOR A CLEANER ALTERNATIVE TO STANDARD HOUSED UNITS**

Timken® QuikClean® Housed Units are now available in both stainless and polymer for more production options. Designed to replace standard 2-bolt, 3-bolt and 4-bolt flange housings, with an integrated stand-off base that simplifies the cleaning process, improves sanitation and limits contact area where bacteria can hide. Accepts open or closed caps.

Timken QuikClean housings' 1/2 in. stand-off base for cast stainless and blue optically detectable thermoset allows for wash-down on all sides-ideal for food processing environments where cleanliness is paramount.



## Timken Quiklean Housed Units

- 1-piece, cast stainless or polymer construction
- Eliminates the need for spacers
- Smoother surfaces, fewer crevices, easy to clean
- Integrated stand-off allows access for cleaning on all sides
- Reduces downtime from sanitary violations
- No small components to handle or misplace



# Molykote® G-4500 FM & G-4501 FM Multi-Purpose Synthetic Greases

## WHITE, FOOD GRADE SYNTHETIC GREASE

### Key Properties

Aluminum complex thickened, PAO Synthetic base oil fortified with PTFE H1 certified through NSF for incidental food contact.

### Applications

Multi-purpose light-consistency white synthetic greases can be used in rolling element and plain bearings, pivot pins, cams, guides, ways, drive screws, gears, splines, and other machine elements.

### HIGH PERFORMANCE BENEFITS OF MOLYKOTE G-4500 FM & G-4501 FM

- Compatible with many plastics and elastomers
- Meets FDA Regulation 21 CFR 178.3570 and USDA H1 classifications for incidental food contact
- Fully synthetic PAO base oil
- Formulated to provide higher load carrying capacity, greater wear resistance and longer service life compared to conventional petroleum-based lubricants
- Provide good compatibility with most industrial and engineering substrates, including many plastic and rubber materials
- Excellent low temperature torque
- White in colour
- Good plastic & rubber compatibility
- High load carrying capability
- High wear resistance
- Low temperature performance
- Wide temperature range
- G-4501 NLGI 1
- G-4500 NLGI 2

Available in 400gm cartridges  
and 25Kg pails.



# Anytime. Anywhere.

## **Always Here.™**

C10-017 11/22



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