



Food & Beverage
PRODUCTS + SERVICES GUIDE

SP207



TIMKEN



Breadth. Safety. Savings.

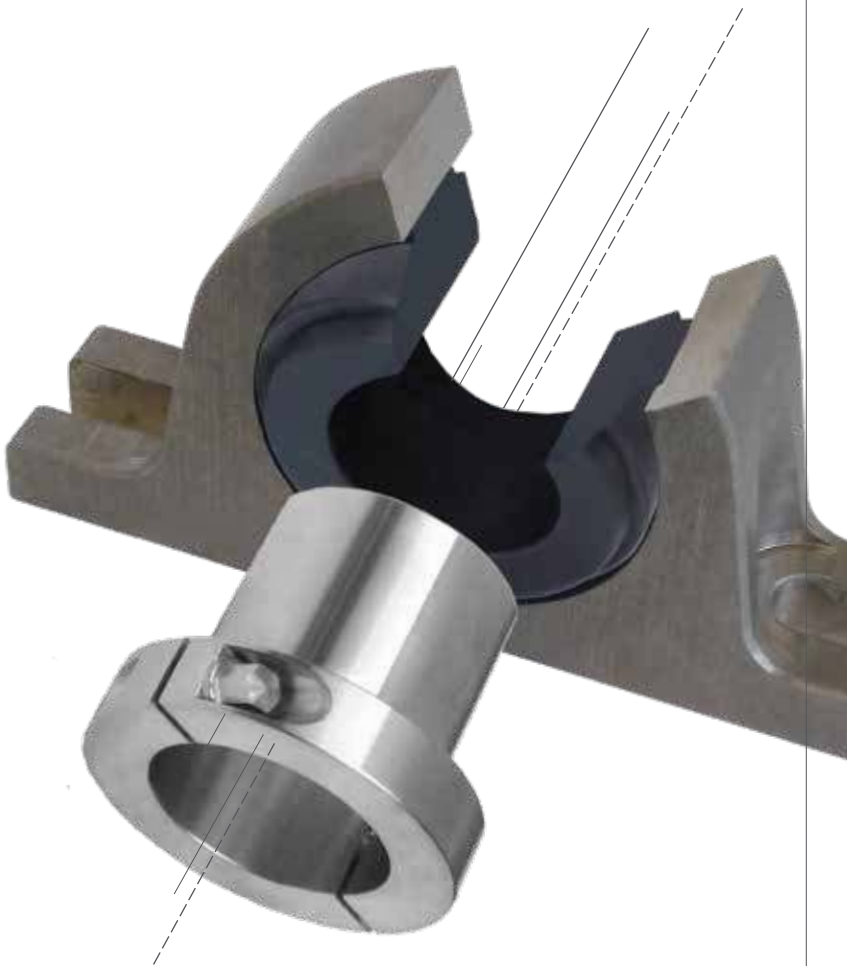
Safe, efficient manufacturing. It's vital to the health of the products you produce – and the viability of your business.

And while your operations must meet demanding safety regulations, they also need to maintain profitable uptime. You need equipment tough enough to handle chemical washdowns, high temperatures, fast throughput and other challenges they endure day in and day out.

Work with Timken to overcome your toughest challenges.

Together, we are **stronger, by design.**

For more information, visit us at www.timken.com.



Let's work together to overcome your challenges. We are committed to your success. For more information, visit us at www.timken.com.









FRICION HAS MET ITS MATCH.

We manufacture and deliver one of the broadest ranges of application-proven products and services for the food and beverage industry. After decades of serving leading equipment builders and food processors across the globe, we know more than a thing or two about food safety.

Our products thrive in severe operating conditions, and you gain a partner who understands the regulations and operating challenges you face.











ENGINEERED BEARING PRODUCTS

Timken® engineered bearings feature precision tolerances, proprietary internal geometries and quality materials. Our tapered, spherical, cylindrical, thrust, ball and housed unit bearings deliver strong consistent and reliable performance.

PRODUCT	SUMMARY	ADVANTAGES
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	<ul style="list-style-type: none"> » Resist corrosion and improve metal detectability » Improve food safety with NSF H1-registered water-resistant 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
SOLID LUBE 	Timken Solid Lube provides a lubricating alternative to grease in harsh environments. Solid Lube is a micro-porous polymer structure combined with high-performance oils and additives	<ul style="list-style-type: none"> » Hygienic. Its unique makeup helps prevent lube from contaminating food products. Some Solid Lube grades have NSF H1 registration » Protected. Full-fill and large-oil reservoirs help guard against washdown and ingress of contaminants for safe and reliable operation » Cost-effective. Timken Solid Lube can help reduce your operating costs and increase operational productivity » Versatile. With a wide range of Solid Lube solutions, we can match application requirements, including extreme temperatures or washdown environments
BALL BEARINGS 	Engineered to perform in a wide range of applications, from motors to gearboxes to all food processing equipment	<ul style="list-style-type: none"> » Radial bearings tolerate relatively high-speed operation under various load conditions » Angular contact designs can support both radial and axial loads » The Timken® series ball bearings are fully interchangeable to competitor product
CYLINDRICAL ROLLER BEARINGS 	Comprehensive line of single-, double- and multi-row versions helps extend equipment life and lower maintenance costs	<ul style="list-style-type: none"> » EMA high-performance series offers premium brass land-riding cages that reduce operating temperatures
THRUST BEARINGS 	Ideal for when axial loads meet high speeds, heavy loads or other challenging conditions	<ul style="list-style-type: none"> » Get optimum performance with either standard or custom designs
SPHERICAL ROLLER BEARINGS 	Manage high radial loads with innovations that help extend bearing life and boost reliability	<ul style="list-style-type: none"> » Run at consistently lower temperatures than same-size competitive bearings
TAPERED ROLLER BEARINGS 	Timken® tapered roller bearing components are precisely designed to manage both axial and radial loads	<ul style="list-style-type: none"> » Increase power density with a smaller, lighter bearing
COATINGS AND ENGINEERED SURFACES 	Hard coatings and topographical modifications help boost the performance of precision components in difficult applications	<ul style="list-style-type: none"> » Enhance performance and reliability in equipment with marginal lubrication or in high-debris environments » AquaSpexx® and Thin-Dense Chrome electrodeposited coatings provide outstanding corrosion resistance and wear protection










HOUSED UNITS (MOUNTED BEARINGS)

Stronger outside, smarter inside. Timken® housed units or mounted bearings deliver a single brand solution for consistency, control and confidence.

PRODUCT	SUMMARY	ADVANTAGES
HYGIENIC POLY-ROUND® PLAIN BEARING HOUSED UNITS 	USDA-accepted hygienic bearings made from high-performance polymers – greaseless, no rolling elements, corrosion-resistant designs are engineered to meet high food safety standards and improve reliability	<ul style="list-style-type: none"> » Eliminate lubrication time and expenses, reducing maintenance and downtime costs » Hygienic-design housings feature maximum cleanability and are reusable » Optically detectable blue polymer housings and metal detectable bearings are designed to help eliminate food contamination » Greaseless, hygienic designs promote food safety » One-year life guarantee » Interchangeable industry-standard mounted bearings from 12 mm to 50 mm or ½ in. to 2 in.
HYGIENIC BALL BEARING HOUSED UNITS 	Corrosion-resistant materials and food-grade lubricant help elevate food safety and improved production reliability. Protection against corrosion and a variety of wet and dry contaminants dramatically improves bearing life	<ul style="list-style-type: none"> » Interchangeable industry-standard mounted bearings from 12 mm to 50 mm or ½ in. to 2 in. » Solid lubrication option » Stainless steel ball bearing inserts with set screw » Housings available in polymer or stainless steel and all mounting styles » USDA-accepted housed units feature smooth surfaces and no bolt holes
HYGIENIC DESIGN HOUSINGS 	Smooth surface and blue polymer or machined stainless steel surface meet high hygienic design standard	<ul style="list-style-type: none"> » Blue optically detectable or stainless metal detectable housings » Easier and more efficient cleaning » Integral stand-off option for improved cleanability and easier implementation
POLYMER SOLID LUBRICANT 	An effective alternative to grease. This bearing eliminates over-greasing, wrong grease application or lack of grease	<ul style="list-style-type: none"> » Never requires relubrication » Consistently delivers the right amount of lubrication » Resists contamination » Stands up to harsh applications and washdowns » Dramatically improves cleanliness
FAFNIR® BALL BEARING HOUSED UNITS 	Multiple sealing and locking solutions support a wide range of demanding applications and conditions	<ul style="list-style-type: none"> » Provide advanced protection against contaminants, reducing costly wear and tear » Fafnir® robust block outperforms standard housed units in the most challenging applications and environments » Set screw solution (Shaft Guard Technology) eliminates shaft damage from set screws
U SERIES BALL BEARING HOUSED UNITS 	Five different housing designs plus replacement inserts come in extensive size ranges interchangeable in a variety of machines	<ul style="list-style-type: none"> » Two-piece sealing with contact lip seal and flinger for additional protection » Three effective locking styles
TYPE E TAPERED ROLLER BEARING HOUSED UNITS 	Manage high axial and radial loads and avoid contamination; unrivaled multi-point sealing solution design	<ul style="list-style-type: none"> » Triple-barrier seal for industry-leading protection against contamination » Secondary sealing system with open and closed end covers are available to improve grease retention and protect the bearing » Available with FDA-compliant coating for corrosion resistance and food safety
SPHERICAL ROLLER BEARING SOLID-BLOCK HOUSED UNITS 	Engineered for the harshest conditions, multiple housing and locking options, multi-point sealing solutions and interchangeable with large range of products	<ul style="list-style-type: none"> » Easy to mount and align in 15 minutes » Keeps contamination out with a full range of end covers » Bearings accept a total of 1.5 degrees misalignment » Available with FDA-compliant coating for corrosion resistance and food safety » Sealing and locking options help optimize uptime
SNT/SAF PLUMMER (PILLOW) BLOCK HOUSED UNITS 	Fast installation with reliability in rugged environments; keep lubrication in and contamination out; cast steel, cast iron or ductile iron housing	<ul style="list-style-type: none"> » Easily convert from fixed to float configurations in the field » Split housing allows for removal of cap for easy assembly and bearing inspection
SPLIT CYLINDRICAL ROLLER BEARING HOUSED UNITS 	Reduce downtime in trapped applications; innovative split-to-the-shaft bearing; fast and simple replacement of bearing components	<ul style="list-style-type: none"> » Reduce inspection and replacement time dramatically » Increase operational life and reduce maintenance expense » Easily interchangeable with conventional or split units

MECHANICAL POWER TRANSMISSION

Our growing mechanical power transmission product portfolio can improve the reliability and efficiency of industrial equipment and machinery. Carlisle® belts, Drives® chain, Lovejoy®, EDT® bearings and Groeneveld lubrication systems and provide customers a variety of solutions to keep industry in motion.

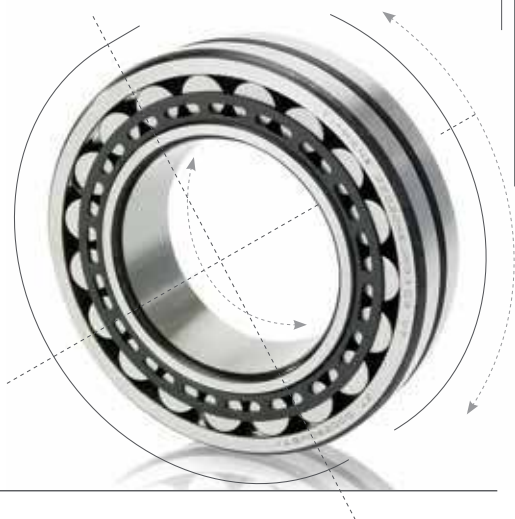
PRODUCT	SUMMARY	ADVANTAGES
PRECISION ROLLER CHAIN 	<p>Manufactured to meet or exceed both ANSI and ISO/British Standards and excel in tough, high-performance applications. Lubrication-free chain, precision roller attachment chain, engineered class chain and stainless steel, nickel plated and Silver Shield chains are available</p>	<ul style="list-style-type: none"> » Excel in tough, high-performance, demanding applications » Custom and standard MTO attachments available » Available in both ANSI and ISO/British Standard specifications » Reduced maintenance chain, precision roller attachment chain, engineered class chain and corrosion resistant options available
STAINLESS STEEL RUNRIGHT® TENSIONERS 	<p>Commonly used for self-adjusting tensioning of roller chain or belt applications. Will automatically adjust to correct for slacking or sagging</p>	<ul style="list-style-type: none"> » Cost effective, low-maintenance solution » Constant torque results in higher belt or chain life » Constant pressure results in damped vibrations » Standard range of sizes, plus many custom options and accessories
STAINLESS STEEL RUNRIGHT OSCILLATING SUSPENSION SYSTEMS 	<p>For use on oscillatory equipment and machinery from free oscillating systems to crank driven systems and gyratory sifter applications. Ideal for shaker screens in the food industry</p>	<ul style="list-style-type: none"> » Overload-proof vibration-absorbing solutions » Provides high degree of isolation on both linear and circular motion screens » Long-lasting and quiet » Maintenance-free
BELTS 	<p>Purpose-built and designed for optimal performance in a multitude of demanding applications</p>	<ul style="list-style-type: none"> » Comprehensive line of premium-quality heavy-duty v-belts and synchronous belts » Engineered and built to rigid specifications to provide superior performance and reliability
QUICK FLEX® COUPLINGS 	<p>Easy to install and requiring no lubrication, their lifespan matches the rotating equipment to help lower overall cost of ownership</p>	<ul style="list-style-type: none"> » Transmit the same or higher torque than a gear, grid, chain or other elastomeric coupling with similar dimensions » Insert is easy to replace without moving hubs – maintenance takes minutes » Sized to fit virtually all needs, with multiple hub and shaft combinations for easy mounting
S-FLEX ENDURANCE COUPLINGS™ 	<p>S-Flex Endurance couplings are excellent at protecting equipment in a wide variety of uniform-load applications</p>	<ul style="list-style-type: none"> » Ideal for pump and fan applications » Easy to install and maintenance free » Accommodates all types of shaft misalignment » Dampens vibration and shock loads
STAINLESS STEEL JAW COUPLINGS 	<p>Jaw couplings provide highly reliable service for light-, medium-, and heavy-duty applications</p>	<ul style="list-style-type: none"> » Hubs and inserts are available in many materials to cater to the needs of your environment no matter how harsh » No lubrication » Rust resistant » Convertible to in-shear coupling type when you need to accommodate misalignment or want to reduce downtime when performing maintenance
DISC COUPLINGS 	<p>The revolutionary disc pack profile design can accommodate ½ to 1.5 degrees of angular misalignment</p>	<ul style="list-style-type: none"> » Eliminates the need for lubrication and coupling maintenance » Can be inspected without disassembly » No wearing parts » Special styles available - spacer, closed coupled, drop-in and adjustable
UNIVERSAL JOINTS 	<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"> » Available in stainless steel, hubs can be modified to fit customer specifications » Built-in system provides sustained lubrication and no special tooling is needed to assemble or disassemble

PRODUCT	SUMMARY	ADVANTAGES
AUGERS 	<p>Helicoid and sectional augers available for industrial applications like conveyors, diggers and combines</p>	<ul style="list-style-type: none"> » Helicoid augers reduce friction, wear and power requirements in screw conveyors moving bulk materials » Sectional augers fit heavy-duty requirements in applications needing a thicker outside diameter flight edge – providing extended wear life
GREASE/LUBRICATION 	<p>Application- and environment-specific selection of industrial, automotive and rail lubricants developed for optimum bearing performance</p>	<ul style="list-style-type: none"> » Help extend bearing life, relubrication intervals and protect equipment » Keep operations running efficiently and reduce maintenance costs
LUBRICATORS 	<p>Dispense precise amounts of lubricants in a wide range of applications and operating conditions, from simple, single-point needs to multi-point or progressive systems</p>	<ul style="list-style-type: none"> » Single-point lubricators tailored to specific environments and requirements
AUTOMATIC LUBRICATION SYSTEMS 	<p>For a wide range of automatic lubrication solutions, Groeneveld products deliver safety and efficiency at every work site</p>	<ul style="list-style-type: none"> » Improved vehicle/machine uptime leads to higher productivity » Extended service life of critical components means lower repair and maintenance costs., resulting in higher residual value » Improved safety for workers; decreased environmental burden
SEALS 	<p>A variety of types and material options provide resistance to extreme temperatures, pressure, debris and most chemicals</p>	<ul style="list-style-type: none"> » Contact and non-contact designs suit any application » Durable materials offer long seal life and minimize maintenance » Secondary seals, covers and end caps provide extra protection
CONE DRIVE B SERIES 	<p>Suitable for applications without direct food contact and designed with conveyors in mind</p>	<ul style="list-style-type: none"> » Complete motor mounting accessories » Easy motor removal with patented fret free motor bushing » Dimensionally interchangeable with other manufacturers » Lightweight aluminum construction » Conex double enveloping gearing
CONE DRIVE F SERIES 	<p>Designed to be in the middle of direct food contact such as cutting, slicing, mixing, blending, etc.</p>	<ul style="list-style-type: none"> » Custom-engineered solutions available with standard quill and non-fretting blue bushing » True double enveloping gearing for superior rigidity and torque density » IP69K and NSF rated, tested, and approved hygienic design » Best-in-class lead times » Five-year warranty
X-RAIL 	<p>Linear bearings with C-profile. Available in zinc-plated steel, stainless steel or hardened with Rollon NOX treatment</p>	<ul style="list-style-type: none"> » Cost-effective bent steel profiles » Available with Rollon NOX hardening process » Simple mounting » Anti-corrosion – stainless steel version » Optimal reliability in dirty environments » Self-aligning system
HEGRA RAIL 	<p>Capable of handling high loads up to 20 kN per pair, overextensions up to 200 percent of length of the guide in closed position</p>	<ul style="list-style-type: none"> » Handling of heavy loads combined with minimal deflection » Profiles with 1, 2 or 3 moving elements for extensions up to 200 percent » Available in stainless steel AISI 304 and AISI 316 » High rigidity and moment of inertia with thin sections » Fluid noiseless operation » Long working life » Extremely reliable
PLUS SYSTEM 	<p>High-performance linear actuators with steel re-enforced driving belt transmission. They have a high level of protection</p>	<ul style="list-style-type: none"> » High working cycles » High protection for dirty environments » Available with fixed carriage and movable profile for Z axis solutions » High dynamics: V=5 m/s, A= 50 m/s² » Anti-corrosion version available with stainless steel components » High repeatability accuracy: ±0.05 mm

INDUSTRIAL SERVICES

Timken offers bearing and power system rebuild and repair services that can return components or entire systems to like-new. We overhaul drive train products, including switchgears, control panels, electric motors, generators, gear drives, bearings and couplings.

PRODUCT	SUMMARY	ADVANTAGES
TECHNICAL CAPABILITIES 	Benefit from cleaner, stronger materials and an ever-growing selection of high-performance product from an expert with more than a century of experience in friction management and materials science	<ul style="list-style-type: none"> » Application engineers identify and overcome unique challenges, using the most advanced analytics in the industry
ADVANCED BEARING ANALYSIS SYSTEM 	Syber analyzes bearing systems, helps optimize design and development, and predicts potential damage	<ul style="list-style-type: none"> » Speed system concept-to-design stage with fewer test requirements » Customer-specific software versions offer base design analytic capabilities
ONLINE SERVICES 	Enjoy the ease and convenience of online services with a variety of options	<ul style="list-style-type: none"> » Find product selection tools, CAD drawings, dimensional tolerances and more at cad.timken.com » Check product availability, place orders and track order status – 24/7 at our online stores
TRAINING AND CERTIFICATION 	On-site training, end-user maintenance seminars and bearing certification programs help your team select bearings and optimize system performance	<ul style="list-style-type: none"> » Tailored training programs range from bearing basics to advanced best practices » Certification programs help maintenance shops improve efficiency and performance
SERVICE ENGINEERING 	On-site engineers help solve challenges and prevent future problems using data, testing and technical resources	<ul style="list-style-type: none"> » Get on-site problem solving, life cycle calculations, interface design options, bearing inspections and evaluations » Find new ways to improve efficiency and productivity





TIMKEN

- » ENGINEERED BEARING PRODUCTS
 - BEARINGS
 - HOUSED UNITS
- » MECHANICAL POWER TRANSMISSION
- » INDUSTRIAL SERVICES

WWW.TIMKEN.COM/Food&Beverage

The Timken team applies their know-how to improve the reliability and performance of machinery in diverse markets worldwide. The company designs, makes and markets bearings, gear drives, automated lubrication systems, belts, brakes, clutches, chain, couplings, linear motion products and related power transmission rebuild and repair services.

Stronger. By Design.

1M 12-19: 29 Order No. 11122
Timken® is a registered trademark of The Timken Company.
© 2019 The Timken Company | Printed in U.S.A.