TIMKEN

Timken® Lubricants Boost Efficiency















Choose Timken® Lubricants for Optimal Performance

The right lubrication and lubricant delivery systems can help extend bearing life, protect your equipment, reduce costs and keep your operations running efficiently.

Timken expertise in tribology and bearings gives you a reliable line of lubricants developed for specific applications and environments. High-temperature, anti-wear and water-resistant additives help provide superior protection in particularly challenging environments where dirt, corrosion and other contaminants are common.

When you choose Timken as your lubrication resource, you gain exceptional customer service and technical support. Discover the benefits of our suite of products and services that extend from lubrication delivery systems to training and bearing maintenance. We can help analyze your operational performance and recommend solutions that make sense for your unique production demands.

For more information on Timken lubricants, contact your authorized Timken distributor or sales representative, or visit www.timken.com/lubricants.

Expertly Blended Greases for Specific Applications

	Environment	Application
 Timken® Mill Grease	Corrosive Media • Extreme Heat Heavy Loads • Wet Conditions Slow to Moderate Speeds	Aluminum Mills • Paper Mills Steel Mills • Offshore Rigs Power Generation
 Timken® Premium All Purpose Industrial LC-2 Grease	High Wear • Moderate Loads Moderate Speeds Moderate Temperatures	Agriculture • Bushings/Ball Joints Truck and Auto Wheel Bearings Heavy-Duty Industrial
 Timken® Construction and Off-Highway Grease	Extreme Heat • Heavy Loads High Sliding Wear Dirty Environments Slow Speeds • Shock Loading	Agriculture/Mining • Cement Plants Construction/Off Road • Rock Quarry Earth-Moving Equipment Fleet Equipment • Heavy Industry Pivot Pins/Splined Shafts
 Timken® Ball Bearing Pillow Block Grease	Wet and Corrosive Conditions Quiet Environments • Light Loads Moderate to High Speeds Moderate Temperatures	Lightly Loaded Pillow Blocks Idler Pulleys • Oven Conveyors Electric Motors • Fans • Pumps
 Timken® Food Safe Grease	Incidental Food Contact Hot and Cold Temperatures Moderate to High Speeds Medium Loads	Food and Beverage Industries Pharmaceuticals (only for ball bearing applications)
 Timken® Synthetic Industrial LC-1.5 Grease	Extreme Low and High Temperatures Severe Loads Corrosive Media Slow to Moderate Speeds	Wind Energy Main Bearing Pulp and Paper Machines General Heavy Industry Marine Applications Centralized Grease Systems
 Timken® Multi-Use Lithium EP1 and EP2 Grease	Moderate Speeds Light to Moderate Loads Moderate Temperatures Moderate Water	General Industrial Applications Pins and Bushings • Track Rollers Water Pumps Plain and Antifriction Bearings
 Timken® High-Performance Mounted Roller Bearing Grease	Extreme Load, High Wear, Moderate Speed, High Temperatures, Shock Loading	Metals, Mining, Aggregate, Power Generation, Material Handling, and Heavy Industries.

Lids are color-coded for easy identification

This selection guide is not intended to replace specific recommendations by the equipment builder who is responsible for its performance.

Smart lubrication delivery solutions

Timken offers a wide range of lubricant delivery systems to help you maintain the optimal levels of grease for your specific operations.

For single-point applications, we offer products to help users manage release of Timken lubricant efficiently, depending on the specific environments and requirements.

Groeneveld-BEKA, part of The Timken Company, is a global leader for producing automatic lubrication systems, lubricants and fluid management systems. Groeneveld-BEKA products offer several options for reliably distributing lubricant into machine operations.

These devices may be filled with Timken lubricants or many other types of commercial lubricants. Optional mounting accessories are also available.



Select Your Grease Carefully for Reliable Performance

Identifying the optimal grease requires a good understanding of each specific application, particularly operating load, speed, temperature and ambient conditions. There is no universal anti-friction bearing grease.Each grease has limiting properties and characteristics.

Bearing grease is composed of a base-oil, a thickening agent and additives.Specific base-oils are designed to handle certain applications and environments:

Demanding applications	Recommended base-oil
High-speed	Low viscosity
High-temperature	High viscosity with extreme pressure (EP) additive/solid lubricants
Low-speed, high-load	High viscosity

Thickening agents within grease manage the "bleed-rate" by releasing or retaining the base-oil.Some grease thickeners are incompatible with certain thickeners, as well as additives, resulting in undesirable softening or hardening of the grease.This may cause poor lubrication scenarios that can shorten the lives of components.Additives used within grease are designed to provide extra protection in demanding conditions.

If you need expert advice when selecting grease, consult your Timken engineer. Interchange guides* are proved below.

Timken® Mill Grease • Part #GR180, GR181, GR182, GR183



- Calcium sulfonate-thickened grease
- Excellent resistance to water washout
- Superior protection against rust and corrosion, including salt spray
- Excellent high-temperature properties
- Timken Mill Grease is formulated with high VI parafinic mineral oil, resulting in very good oxidation stability
- Operating temperatures from -40° C to 204° C (-40° F to 400° F)
- Applications: Steel mills, paper mills, aluminum mills, foundries, cement plants, power generation, off-road applications, mineral processing, offshore rigs and marine applications
- This grease is available in three NLGI grades:
  - -Part #GR180-NLGI No. 1
  - -Part #GR181-NLGI No. 1.5
  - -Part #GR182-NLGI No. 2
  - -Part #GR183-NLGI No. 2-with tackifiers

-16 kg (35.3 lb.) pail	– Part #GR180P	– Part #GR182P
-55 kg (121.3 lb.) keg		– Part #GR182K
-180 kg (396.8 lb.) drum	– Part #GR180D	– Part #GR182D
	– Part #GR181D	– Part #GR183D

Interchange Guide

Castrol Molub-Alloy 777-2ES™
Chem & Lube Black Magic™
Chevron Ulti-Plex EP 2™
Ronex Extra Duty 2™
FAG Arcanol Load 400™
Kyodo Yushi Palmax RBG™
Loctite ViperLube™
LUBRIPLATE® 1444
SKF LGHB2™

Timken® Premium All Purpose Industrial LC-2 Grease • Part #GR217



- NLGI No. 2 extreme pressure, lithium-complex thickened grease
- Solid protection against rust and corrosion
- Excellent protection against wear
- Operating temperature range of -40° C to 149° C (-40° F to 300° F)
- Applications: Ideal for industrial bearings operating at higher-than-average temperatures and/or subjected to shock loading, as well as heavy-duty on- and off-road applications, wheel bearings, axles, ball joints, U joints, power takeoffs, king pins, bushings, trucks, buses and automobiles
- Available in:

-400 g (14.1 oz.) cartridges, 10/case –	Part #GR217C
-454 g (1 lb.) tubs, 6/case –	Part #GR217T
-16 kg (35.3 lb.) pail –	Part #GR217P
-55 kg (121.3 lb.) keg –	Part #GR217K
-180 kg (396.8 lb.) drum –	Part #GR217D

Interchange Guide

Castrol 4020/220-2™
Chevron Delo® EP 2
Citgo Lithoplex MP2™
Citgo Premium Lithium EP 2™
Ronex MP™
Unirex EP 2™
FAG LOAD220™
Fuchs (Century) Uniwrl 2™
Lubrication Engineers Almagard® 3752
LUBRIPLATE® 1552
Mobilgrease® XHP 222
Pennzoil® Premium Lithium Complex 2
Petro-Canada Multipurpose EP 2™
Royal Purple® Ultra-Performance® 2
SKF LGWA2™
SKF LGEP2™
Texaco Starplex® 2
76 Multiplex Red

*Every reasonable effort has been made to ensure the accuracy of the information contained in this writing, but no liability is accepted for errors, omissions or for any other reason.

Timken® Construction and Off-Highway Grease • Part #GR219



- NLGI No. 2 calcium sulfonate grease with 5 percent moly
- Provides resistance to extreme pressures caused by shock loading
- Timken OK Load – 65 lbs.
- Protects against rust and corrosion
- Offers excellent high-temperature properties
- Operating temperatures of -40° C to 204° C (-40° F to 400° F)
- Applications: High-load, low-speed applications such as mining, draglines, construction equipment, agriculture machinery, bulldozers, scrapers, earthmovers, cranes, backhoes, shovels, rollers, tractors, combines and cotton pickers
- Available in: -400 g (14.1 oz.) cartridges, 10/case – Part #GR219C
  -16 kg (35.3 lb.) pail – Part #GR219P
  -55 kg (121.3 lb.) keg – Part #GR219K
  -180 kg (396.8 lb.) drum – Part #GR219D

Interchange Guide

Mobil Centaur Moly Series™
Ronex Extra Duty Moly™
Fuchs Moreplex 2™
LUBRIPLATE® 3000
Mobilgrease® Moly 52
Petro-Canada Precision Moly EP 2™
Schaeffer Moly Ultra Supreme 238™
Texaco Starplex® Moly MPGM2
Unocal 76 Megaplex™

Timken® Ball Bearing Pillow Block Grease • Part #GR220



- NLGI No. 2 polyurea-thickened grease
- Outstanding long-life, moderately high-temperature lubrication of ball bearings
- Maintains mechanical shear stability
- Provides corrosion resistance, even in the presence of salt water
- Features low-noise characteristics and excellent pumpability
- Does not contain extreme-pressure additives but is inhibited against rust and oxidation
- Operating temperatures from -40° C to 163° C (-40° F to 325° F)
- Applications: Lightly loaded ball bearings in pillow blocks and conveyors that operate in high-temperature environments, including kiln and glasswork applications, electric motors, chemical manufacturing and noise-sensitive environments, ball bearings operating at mid- to high-speeds (10,000 RPM maximum), pumps, fans, electric motors and idler pulleys
- Available in: -400 g (14.1 oz.) cartridges, 10/case – Part #GR220C
  -16 kg (35.3 lb.) pail – Part #GR220P
  -55 kg (121.3 lb.) keg – Part #GR220K
  -180 kg (396.8 lb.) drum – Part #GR220D
- NOTE: GR218 has been superceded to GR220.

Interchange Guide

Conoco Phillips Polyurea 2™
Chevron SRI™
Citgo Polyurea 2™
Mobil Polyrex® EM
Mobil Unirex N™
LUBRIPLATE® EM
Petro-Canada EMB™
Shell Dolium® BRB
SKF LGHP2™
Mobil SHC Polyrex 462™

Timken® Food Safe Grease • Part #GR231



- NLGI No. 2 aluminum-complex thickened lubricating grease
- Provides for improved low- and high-temperature performance
- Contains extra-pressure, anti-wear additives and corrosion and oxidation inhibitors
- Operating temperatures from -40° C to 149° C (-40° F to 300° F)
- Applications: Food processing operations with ball bearing pillow blocks
- Available in: -400 g (14.1 oz.) cartridges, 10/case – Part #GR231C
  -16 kg (35.3 lb.) pail – Part #GR231P
  -55 kg (121.3 lb.) keg – Part #GR231K

Interchange Guide

SKF LGFP2™
FAG Arcanol FOOD2™
Keystone Nevastane HT/AW2™
LE 4025 H1 Quinplex™
LPS ThermaPlex Foodlube™
LUBRIPLATE® FGL-2
Mobilgrease® FM 102
Petro-Canada Purity FG™
Royal Purple® Ultra-Performance® Clear FDA Grease

Timken® Synthetic Industrial LC-1.5 Grease • Part #GR232



- NLGI No. 1.5 multi-purpose, lithium-complex lubricating grease
- Contains extreme-pressure and anti-wear additives
- Inhibits corrosion
- Operating temperatures from -46° C to 180° C (-50° F to 356° F)
- Applications: Used in a variety of industrial, construction, agriculture and automotive applications
- Available in: -400 g (14.1 oz.) cartridges, 10/case – Part #GR232C
  -16 kg (35.3 lb.) pail – Part #GR232P
  -55 kg (121.3 lb.) keg – Part #GR232K

Interchange Guide

Mobilith SHC™ 460
Chevron Ulti-Plex Synthetic Grease EP™
Exxon Mobil SHC® PM
Texaco Starfak® PM



Trust Timken to keep you rolling forward

Around the world, customers use Timken lubricants for rail bearings, rolling mills, power generation equipment, construction and transportation vehicles, and multiple demanding industrial applications. With more than a century of leadership in developing friction management solutions, Timken is a trusted source for a broad range of bearings – and mechanical power transmission products that help keep your operations performing efficiently and reliably, even in the toughest environments. We use our knowledge to make the world's industries work better.

Timken® Multi-Use Lithium EP1 and EP2 Grease • Part # GR236, GR237



- Fortified with rust and oxidation inhibitors
- Lithium soap thickened grease
- Operating temperatures from -34.4° C to 121.1° C (-30° F to 250° F)
- Used in a variety of applications where extreme pressure is required
- This grease is available in two NLGI grades:
  -Part #GR236-NLGI No. 1, EP1 -Part #GR237-NLGI No. 2, EP2

-400 g (14.1 oz.) cartridges, 10/case	– Part #GR236C	– Part #GR237C
-16 kg (35.3 lb.) pail	– Part #GR236P	– Part #GR237P
-55 kg (121.3 lb.) keg		– Part #GR237K
-180 kg (396.8 lb.) drum	– Part #GR236D	– Part #GR237D

Interchange Guide

Castrol Longtime™ PD
Castrol Spheerol EPL
Conoco Phillips
Conolit EP
Dow Molykote® BR2
Exxon Mobil Beacon EP
76® Unoba EP
CITGO Premium
Lithium EP-2
Chevron Multifak® EP
Fina Lithium EP
Chevron Dura-Lith® EP
FAG® Arcanol-MULTI2™
LUBRIPLATE® 1200-2
LUBRIPLATE® 1241, 1242
LUBRIPLATE® 630-AA
SKF® LGMT2
SKF® LGEP2
Shell® Alvania EP
Mobilux® EP

Timken® High-Performance Mounted Roller Bearing Grease • Part # GR255



- NLGI No. 2, fully synthetic lithium-complex thickened grease
- Contains solid lubricant moly and EP/AW additives
- Excellent EP performance as well as wear-resistance
- Compatible with most industrial materials
- Wide operating temperature range
- Meets NLGI Certification GC-LB
- Applications: Metals, Mining, Power Generation, Lumber, Construction and Off-Highway, Cement, and Heavy Industries.

-400 g (14.1 oz.) cartridges, 10/case	– Part #GR255C
-16 kg (35.3 lb.) pail	– Part #GR255P
-180 kg (396.8 lb.) drum	– Part #GR255D

Interchange Guide

Molycote® G4700
Mobilith SHC series
Mobilgrease XHP series
Shell Gadus S3 V460D
Shell Gadus S3 V220C
Chevron Ulti-Plex Synthetic Grease EP™

How do Timken lubricants measure up?

The American Society for the Testing of Materials (ASTM) established standards for the testing of lubricating greases. This table displays the typical range of test results reported by the lubricant companies for each test and ranks them as good, better or best, compared with the corresponding Timken grease characteristics.

Grease	Test	Good	Better	Best	Timken
Timken Mill Grease	Mobility, US Steel, 0° F, gms/sec	0.04	0.08	>0.12	0.12
	Rust Prevention, ASTM D6138, 10% Seawater, Rating	1	0.5	0	0
	Salt Fog, ASTM B117, hrs.	1,000	1,500	>2000	2,500
	Water Sprayoff, ASTM D4049, % loss	20	15	<10	9
	Water Washout, ASTM D1264, 175° F, % loss	10	5	2	2.75
	Timken OK Load, ASTM D2509, lbs.	40, 45	50, 55	>60	60
Timken Premium All Purpose Industrial LC-2 Grease	Four Ball Wear, ASTM D2266, 40 kg, 167° F, scar mm	0.8	0.6, 0.7	0.4, 0.5	0.6
	Four Ball Weld, ASTM D2596, kg	250	285	>315	285
	Timken OK Load, ASTM D2509, lbs.	40, 45	50, 55	>60	55
Timken Construction and Off-Highway Grease	Wheel Bearing Leakage, ASTM D1263, 300° F, g	8	5	<1.0	0.4
	Rust Prevention, ASTM D6138, 10% Seawater, Rating	1	0.5	0	0.1
	Four Ball Weld, ASTM D2596, kg	250	285	>315	620
	Four Ball Wear, ASTM D2266, 40 kg, 167° F, scar mm	0.8	0.6	0.45	0.45
	Timken OK Load ASTM D2509, lbs.	40, 45	50, 55	>60	65
	Operating Temperature Limit, ° F	300	350	400	400
Timken Ball Bearing Pillow Block Grease	Wheel Bearing Life, ASTM D3336, hrs@350° F	250	500	>750	750
	Water Washout, ASTM D1264, 175° F, % loss	10	5	2	2
	Rust Prevention, ASTM D6138, 10% Seawater, Rating	1	0.5	0	0
Timken Food Safe Grease	Four Ball Wear, ASTM D2266, 40 kg, 167° F, scar mm	0.8	0.6, 0.7	0.4, 0.5	0.6
	Four Ball Weld, ASTM D2596, kg	250	285	>315	315
	Water Washout, ASTM D1264, 175° F, % loss	10	5	2	5
Timken Synthetic Industrial LC-1.5 Grease	Four Ball Wear, ASTM D2266, 40 kg, 167° F, scar mm	0.8	0.6, 0.7	0.4, 0.5	0.6
	Four Ball Weld, ASTM D2596, kg	250	285	>315	285
	Timken OK Load, ASTM D2509, lbs.	40, 45	50, 55	>60	55
Timken Multi-Use Lithium EP1 and EP2 Grease	Four Ball Wear, ASTM D2266, 40 kg, 167° F, scar mm	0.8	0.6, 0.7	0.4, 0.5	0.45
	Water Washout, ASTM D1264, 175° F, % loss	10	5	2	5
Timken High-Performance Roller Housed Unit Grease	Four Ball Weld, ASTM D2266, 40 kg, 167° F, scar mm	0.8	0.65	0.45	0.4
	Four Ball Weld, ASTM D2596, kg	250	285	>300	500

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TIMKEN

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 industrial motion rebuild and repair services.

Stronger. By Design.

www.timken.com