

TIMKEN

Where You Turn

Timken Lubricants

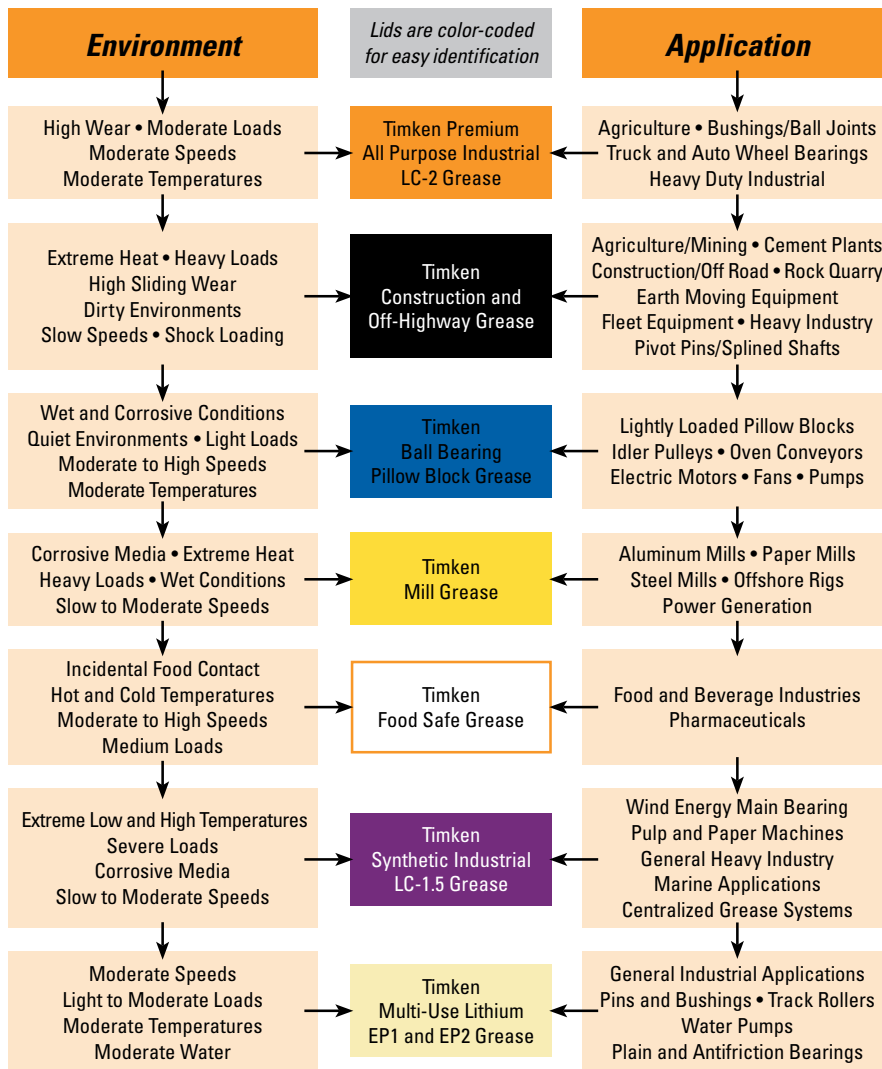


*Friction management solutionsSM
to keep systems
running smoothly*

Helping customers enhance system performance

The Timken Company, a global leader in bearing and steel technology, understands the importance of friction management. The Timken line of application- and environment-specific lubricants was developed by leveraging our knowledge of tribology and anti-friction bearings and how these two elements affect overall system performance. Timken lubricants help bearings and related components operate effectively in demanding industrial operations. High-temperature, anti-wear and water-resistant additives offer superior protection in challenging environments.

Similar to our bearings, all Timken lubrication products are backed by highly trained customer service and technical support. Industrial customers turn to Timken for comprehensive friction management solutions, which extend beyond bearings to include delivery systems, lubrication, condition monitoring systems, training and bearing repair services. We help customers analyze performance and recommend options that make sense for their unique operating conditions and maintenance intervals.



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

A single source, many lubrication options

The seven primary lines of Timken lubricants compliment our G-Power and M-Power single-point lubricators, C-Power centralized multi-point lubricators and our global offering of lubrication products. G-Power, M-Power and C-Power units consistently distribute grease into machine operations. These canisters can be filled with Timken lubricants or many other types of commercial lubricants and mounted into place with a full line of Timken accessories.

Around the world, customers use Timken lubricants for rail bearings, rolling mills, power generation equipment, construction and transportation vehicles, and other 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 products that help keep all bearings and related components running smoothly.



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

Timken Premium All Purpose Industrial LC-2 Grease



- 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
 - 1 kg (2.2 lb.) tubs – Part #GR217F
 - 5 kg (11 lb.) pail – Part #GR217G
 - 16 kg (35.3 lb.) pail – Part #GR217P
 - 55 kg (121.3 lb.) keg – Part #GR217K
 - 180 kg (396.8 lb.) drum – Part #GR217D

Timken Food Safe Grease



- 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
- Available in:
 - 400 g (14.1 oz.) cartridges, 10/case – Part #GR231C
 - 1 kg (2.2 lb.) tubs – Part #GR231F
 - 16 kg (35.3 lb.) pail – Part #GR231P
 - 55 kg (121.3 lb.) keg – Part #GR231K
 - 180 kg (396.8 lb.) drum – Part #GR231D

Timken Ball Bearing Pillow Block Grease



- 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
 - 1 kg (2.2 lb.) tubs – Part #GR220F
 - 5 kg (11 lb.) pail – Part #GR220G
 - 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 superseded to GR220.

Timken Synthetic Industrial LC-1.5 Grease



- 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
 - 180 kg (396.8 lb.) drum – Part #GR232D

Timken Construction and Off-Highway Grease



- NLGI No. 2 calcium sulfonate grease with 5 percent moly
- Provides resistance to extreme pressures caused by shock loading
- Timken OK Load – 65 lb.
- 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
-1 kg (2.2 lb.) tubs – Part #GR219F
-16 kg (35.3 lb.) pail – Part #GR219P
-55 kg (121.3 lb.) keg – Part #GR219K
-180 kg (396.8 lb.) drum – Part #GR219D
-Bulk quantities available. Contact your Timken representative

Timken Mill Grease



- NOTE: GR181 (part #GR181D) available in drum only.

- Calcium sulfonate-thickened grease
- Unsurpassed 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 paraffinic mineral oil, resulting in better oxidation stability than Black Magic™ formulated with low VI naphthenic base oil
- Operating temperatures from -40° C to 204° C (-40° F to 400° F)
- Applications: Steel mills, paper mills, aluminum mills, foundaries, 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

- | | | |
|--------------------------|----------------|----------------|
| -5 kg (11 lb.) pail | – Part #GR180G | – Part #GR182G |
| -16 kg (35.3 lb.) pail | – Part #GR180P | – Part #GR182P |
| -55 kg (121.3 lb.) keg | – Part #GR180K | – Part #GR182K |
| -180 kg (396.8 lb.) drum | – Part #GR180D | – Part #GR182D |

Timken Multi-Use Lithium EP1 and EP2 Grease



- 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 |
| -454 g (1 lb.) tubs, 6/case | – Part #GR236T | – Part #GR237T |
| -1 kg (2.2 lb.) tubs | – Part #GR236F | – Part #GR237F |
| -5 kg (11 lb.) pail | – Part #GR236G | – Part #GR237G |
| -16 kg (35.3 lb.) pail | – Part #GR236P | – Part #GR237P |
| -55 kg (121.3 lb.) keg | – Part #GR236K | – Part #GR237K |
| -180 kg (396.8 lb.) drum | – Part #GR236D | – Part #GR237D |

NOTE

*Timken Electric Motor Grease is no longer available.
We recommend interchanging with Timken Ball Bearing Pillow Block Grease*

Timken Ultra-High Speed Spindle Grease is no longer available.

Timken Synthetic Industrial LC-1.5 Grease has changed from Red grease to Purple grease. Same great performance with a new color.

The American Society for the Testing of Materials (ASTM) has established standards for the testing of lubricating greases. This table has taken the typical range of test results reported by the lubricant companies for each test and ranked them into a good, better, best order.

Grease	Test	Good	Better	Best	Timken
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, %	10	5	2	2
	Rust Prevention, ASTM D6138, 10% Seawater, Rating	1	0.5	0	0
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 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, %	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	Economical Multi-Use Grease				

Timken Grease Interchange Guide

Timken Premium All Purpose Industrial LC-2 Grease	Timken Construction and Off-Highway Grease	Timken Ball Bearing Pillow Block Grease	Timken Mill Grease	Timken Multi-Use Lithium EP1 and EP2 Grease
<p>Castrol 4020/220-2™ Castrol 8060/220-2™ Chevron Delo® EP 2 Chevron RPM Automotive LC Grease EP-2™ Citgo Lithoplex MP2™ Citgo Premium Lithium EP 2™ Conoco Phillips Super-STA® 2 Exxon Mobil Ronex MP™ Exxon Mobil Unirex EP 2™ FAG LOAD220™ Fuchs (Century) Uniwrl 2™ Lubrication Engineers Almagard® 3752 LUBRIPLATE® 1552 Mobilgrease® XHP 222 Pennzoil® Pennlith® EP 712 Pennzoil® Premium Lithium Complex 2 Petro-Canada Multipurpose EP 2™ Royal Purple® Ultra-Performance® 2 Shell Albida® LC 2 Shell Retinax® LC 2 SKF LGWA2™ SKF LGEP2™ Texaco Starplex® 2 Unocal 76 Multiplex Red™</p>	<p>Castrol Moly 860-2ES™ Castrol Contractor Grease 2™ Conoco Phillips Super Lube M EP™ D.A. Stuart Molyplex EP 2™ Exxon Mobil Centaur Moly Exxon Mobil Ronex Extra Duty Moly™ Fuchs Moreplex 2™ LUBRIPLATE® 3000 Mobilgrease® Moly 52 Mystik® Tetrimoly® Extreme Pennzoil® Multipurpose EP 302 Pennzoil® Premium Lithium Complex 2 with Moly Petro-Canada Precision Moly EP 2™ Schaeffer Moly Ultra Supreme 238™ Shell Retinax CMX 2™ Texaco Starplex® Moly MPGM2 Unocal 76 Megaplex™</p>	<p>Conoco Phillips Polyurea 2™ Chevron SRI™ Citgo Polyurea 2™ Citgo Polyurea MP2™ Conoco Phillips Polyurea 2™ Exxon Mobil Polyrex® EM Exxon Mobil Unirex N™ LUBRIPLATE® EM Mobilgrease® AW2 Petro-Canada EMB™ Shell Alvania RL3™ Shell Dolium® BRB SKF LGHP2™ Unocal 76 Unolife Grease™</p> <p>Timken Synthetic Industrial LC-1.5 Grease</p> <p>Mobilith SHC™ 460 Chevron Ulti-Plex Synthetic Grease EP™ Conoco Phillips SynCon Extra Long Life™ Exxon Mobil SHC® PM Shell Albida® 460 Texaco Starfak® PM</p>	<p>Castrol Molub-Alloy 777-2ES™ Chem & Lube Black Magic™ Chevron Ulti-Plex EP 2™ Conoco Phillips HD Calcium™ Conoco Phillips Milube™ Exxon Mobil Ronex Extra Duty 2™ FAG Arcanol Load 400™ Kyodo Yushi Palmax RBG™ Loctite ViperLube™ LUBRIPLATE® 1444 Shell Retinax® Grease HD SKF LGHB2™</p> <p>Timken Food Safe Grease</p> <p>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</p>	<p>Castrol Longtime™ PD Castrol Spherol 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</p>



WARNING

Failure to observe the following warnings could create a risk of serious injury.

Proper maintenance and handling practices are critical. Failure to follow installation instructions and to maintain proper lubrication can result in equipment failure, creating a risk of serious bodily harm.



TIMKEN

Where You Turn

Bearings • Steel •
Precision Components • Lubrication •
Seals • Remanufacture and Repair •
Industrial Services
www.timken.com

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