

## Overview of SKF mounting tools and products

SKF offers a wide assortment of mounting tools and products. For additional information, visit [www.mapro.skf.com](http://www.mapro.skf.com).

Bearing fitting tool kit



Hook spanners



Bearing lock nut spanners



Bearing handling tools



Working/heat/oil resistant gloves



Induction heaters



Portable induction heaters



Electric hot plates



Mounting fluid



Hydraulic pumps



Hydraulic nuts



## Appendices

Oil injectors



Air-driven hydraulic pumps



Feeler gauges



SENSORMOUNT indicator



Anti-fretting agent



## Overview of SKF alignment equipment

SKF offers a wide assortment of alignment equipment. For additional information, visit [www.mapro.skf.com](http://www.mapro.skf.com) and [www.skf.com/services](http://www.skf.com/services).

Shaft alignment tools



Thermal printers



Belt alignment tools



Machinery shims



SKF Vibracon SM elements



## Overview of SKF lubrication tools and products

SKF offers a wide assortment of lubrication products. For additional information, visit [www.mapro.skf.com](http://www.mapro.skf.com).

SKF also offers an assortment of centralized lubrication systems. For additional information, visit [www.skf.com/lubrication](http://www.skf.com/lubrication).

Bearing greases and chain oils



Grease packers and grease guns



Grease filling pumps



Bearing packers



Oil handling containers



Grease meters



Single point automatic lubricators



Multi point automatic lubricators



Grease resistant gloves



Grease fittings



Oil levellers



## Appendices

SKF Lubrication Planner, and grease fitting caps and tags



Grease test kits



Compact greasers



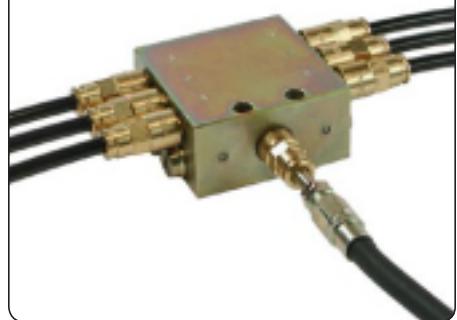
Battery driven piston pumps KFAS



Piston pump with block feeder PF-VPBM



Lubricating aids with metering distributor



## LGMT 2

### SKF general purpose industrial and automotive bearing grease

LGMT 2 is mineral oil based lithium soap thickened grease with excellent thermal stability within its operating temperature range. This premium quality, general purpose grease is suitable for a wide range of industrial and automotive applications.

#### Characteristics

- excellent oxidation stability
- good mechanical stability
- excellent water resistance and rust inhibiting properties

#### Recommended applications

- agricultural equipment
- automotive wheel bearings
- conveyors
- small electric motors
- industrial fans

## LGMT 3

### SKF general purpose industrial and automotive bearing grease

LGMT 3 is mineral oil based lithium soap thickened grease. This premium quality, general purpose grease is suitable for a wide range of industrial and automotive applications.

#### Characteristics

- excellent rust inhibiting properties
- high oxidation stability within its recommended temperature range

#### Recommended applications

- bearings with a bore diameter > 100 mm
- outer bearing ring rotation
- vertical shaft applications
- continuous high ambient temperatures >35 °C (95 °F)
- propeller shafts
- agricultural equipment
- car, truck and trailer wheel bearings
- large electric motors



### LGEP 2

#### SKF heavy load, extreme pressure bearing grease

LGEP 2 is mineral oil based lithium soap thickened grease with extreme pressure additives. This grease provides good lubrication in operating temperatures ranging from  $-20$  to  $+110$  °C ( $-5$  to  $+230$  °F)

##### Characteristics

- excellent mechanical stability
- extremely good corrosion inhibiting properties
- excellent EP performance

##### Recommended applications

- pulp and paper machines
- jaw crushers
- dam gates
- work roll bearings in steel industry
- heavy machinery, vibrating screens
- crane wheels, sheaves

### LGFP 2

#### SKF food compatible bearing grease

LGFP 2 is clean, non-toxic bearing grease, which is based on medical white oil using an aluminium complex soap. This grease is formulated using only FDA<sup>1)</sup> listed ingredients and is authorised by the NSF<sup>2)</sup> for category H1<sup>3)</sup> service.

##### Characteristics

- compliance with all existing legislation on food protection
- high resistance to water washout making it suitable for applications subject to frequent wash down
- excellent grease life
- excellent corrosion resistance
- an essentially neutral pH value

##### Recommended applications

- bakery equipment
- food processing equipment
- multi-pack cassette bearings
- wrapping machines
- conveyor bearings
- bottling machines

<sup>1)</sup> Food and Drug Administration

<sup>2)</sup> National Sanitation Foundation

<sup>3)</sup> Incidental contact with food

## LGEM 2

### SKF high viscosity bearing grease with solid lubricants

LGEM 2 is a premium quality, high viscosity, mineral oil based grease using a lithium soap containing molybdenum disulphide and graphite.

#### Characteristics

- good lubrication for bearings operating under heavy loads and slow rotation
- safe lubrication due to the inclusion of molybdenum disulphide and graphite

#### Recommended applications

- rolling element bearings running at low speed and very heavy loads
- jaw crushers
- track laying machines
- lift mast wheels
- building machines such as mechanical rams, crane arms and crane hooks

## LGEV 2

### SKF extremely high viscosity bearing grease with solid lubricants

LGEV 2 is a premium quality, extremely high viscosity, mineral oil based grease using a lithium-calcium soap containing molybdenum disulphide and graphite.

#### Characteristics

- excellent lubrication properties due to the inclusion of molybdenum disulphide and graphite solid
- very suitable for lubricating large spherical roller bearings subject to heavy loads and slow rotation, a situation where microslip is likely to occur
- extremely mechanically stable providing good water resistance and corrosion protection

#### Recommended applications

- trunnion bearings on rotating drums
- support and thrust rollers on rotary kilns and dryers
- bucket wheel excavators
- slewing ring bearings
- high pressure roller mills
- crushers

### LGLT 2

#### SKF low temperature, extremely high speed bearing grease

LGLT 2 is premium quality, fully synthetic oil based grease using lithium soap. Its unique thickener technology and its low viscosity oil (PAO) provide excellent lubrication performance at low temperatures ( $-50\text{ }^{\circ}\text{C}$  ( $-60\text{ }^{\circ}\text{F}$ )) and extremely high speeds,  $n\text{ }d_m$  values of  $1,6 \times 10^6$  can be reached.

#### Characteristics

- low frictional moment
- low level of power loss
- quiet running behaviour
- extremely good oxidation stability and resistance to water

#### Recommended applications

- textile spinning spindles
- machine tool spindles
- instruments and control equipment
- small electric motors used in medical and dental equipment
- in-line skates
- printing cylinders
- robots

### LGGB 2

#### SKF green biodegradable bearing grease

LGGB 2 is biodegradable, low toxicity, synthetic ester oil based grease using a lithium-calcium thickener. It has excellent lubrication properties for a wide range of applications operating under different conditions.

#### Characteristics

- compliance with current regulations on toxicity and biodegradability
- good performance in applications with steel-on-steel spherical plain bearings, ball and roller bearings
- good low temperature start-up performance
- good corrosion inhibiting properties
- suitable for medium to heavy loads

#### Recommended applications

- agricultural and forestry equipment
- construction and earthmoving equipment
- mining and conveying equipment
- water treatment and irrigation
- locks, dams, bridges
- linkages, rod ends
- other applications where contamination of the environment is a concern

## LGWM 1

### SKF extreme pressure (EP) low temperature bearing grease

LGWM 1 is a mineral oil based grease using a lithium soap and containing extreme pressure additives. It is very suitable for the lubrication of bearings operating under both radial and axial loads, e.g. transport screws.

#### Characteristics

- good oil film formation at low temperatures down to  $-30\text{ }^{\circ}\text{C}$  ( $-20\text{ }^{\circ}\text{F}$ )
- good pumpability at low temperature
- good corrosion protection
- good water resistance

#### Recommended applications

- windmills
- screw conveyors
- centralized lubrication systems
- spherical roller thrust bearing applications

## LGWM 2

### SKF heavy load, wide temperature bearing grease

LGWM 2 has been developed for lubrication under a wide temperature range, heavy loads and wet environments. LGWM 2 is a synthetic-mineral oil based grease using the latest complex calcium sulphonate thickener technology. LGWM 2 is suitable for temperatures down to  $-40\text{ }^{\circ}\text{C}$  ( $-40\text{ }^{\circ}\text{F}$ ).

#### Characteristics

- excellent corrosion protection
- excellent mechanical stability
- excellent heavy load lubricating capacity
- good false brinelling protection
- good pumpability down to low temperatures

#### Recommended applications

- wind turbines
- heavy-duty off road applications
- snow exposed applications
- marine applications
- spherical roller thrust bearing applications

### LGWA 2

#### **SKF heavy load, extreme pressure (EP), wide temperature range bearing grease**

LGWA 2 is premium quality mineral oil based lithium complex grease with extreme pressure (EP) performance. LGWA 2 has such properties that it can be recommended for a wide range of industrial and automotive applications.

##### **Characteristics**

- excellent lubrication at peak temperatures up to 220 °C (430 °F) for short periods
- protection of wheel bearings operating under severe conditions
- effective lubrication in wet conditions
- good water and corrosion resistance
- excellent lubrication under heavy loads and low speeds

##### **Recommended applications**

- wheel bearings in cars, trailers and trucks
- washing machines
- electric motors

### LGHB 2

#### **SKF heavy load, high temperature, high viscosity bearing grease**

LGHB 2 is a premium quality, high viscosity, mineral oil based grease using the latest complex calcium, sulphonate soap technology. This grease contains no additives and the extreme pressure characteristics are created within the soap structure.

##### **Characteristics**

- excellent anti-oxidation and anti-corrosion properties
- good EP performance in applications running at heavy loads

##### **Recommended applications**

- steel on steel plain bearings
- pulp and paper machines
- asphalt vibrating screens
- continuous casting machines
- sealed spherical roller bearings operating up to 150 °C (300 °F)
- withstands peak temperatures of 200 °C (390 °F)
- work roll bearings in steel industry
- mast rollers of fork lift trucks

## LGHP 2

### SKF high performance, high temperature bearing grease

LGHP 2 is premium quality mineral oil based grease, using a modern polyurea (di-urea) thickener. It is suitable for ball (and roller) bearings required to run extremely quiet, operating at a wide temperature range from  $-40$  to  $+150$  °C ( $-40$  to  $+300$  °F), at medium to high speeds.

#### Characteristics

- extremely long life at high temperature
- wide temperature range
- excellent corrosion protection
- high thermal stability
- good low temperature start-up performance
- compatibility with common polyurea greases
- compatibility with lithium complex thickened greases
- low noise level characteristics
- very good mechanical stability

#### Recommended applications

- electric motors: small, medium and large
- industrial fans, including high-speed fans
- water pumps
- rolling bearings in textile, paper processing and drying machines
- applications with high-speed ball bearings operating at medium and high temperatures
- clutch release bearings
- kiln trucks and rollers
- vertical shaft applications

## LGET 2

### SKF high temperature, extreme condition bearing grease

LGET 2 is premium quality, synthetic fluorinated oil based grease using a PTFE thickener. It has excellent lubrication properties at extremely high temperatures exceeding  $200$  to  $260$  °C ( $300$  to  $500$  °F).

#### Characteristics

- long life in aggressive environments such as very reactive environments or areas with a presence of high purity gaseous oxygen or hexane
- excellent oxidation resistance
- good corrosion resistance
- excellent water and steam resistance

#### Recommended applications

- bakery equipment (ovens)
- kiln truck wheels
- load rollers in copying machines
- wafer baking machines
- textile dryers
- film stretching tenders
- electric motors running at extreme temperatures
- emergency/hot fans
- vacuum pumps

## Appendices

SKF bearing grease selection chart

Designation	Temp	Speed	Load	Description	Temperature range <sup>1)</sup>		Thickener/ base oil	Base oil viscosity <sup>2)</sup>
					LTL	HTPL		
					°C (°F)		mm <sup>2</sup> /s	
<b>LGMT 2</b>	M	M	L to M	General purpose industrial and automotive	-30 (-20)	+120 (+250)	Lithium soap / mineral oil	110
<b>LGMT 3</b>	M	M	L to M	General purpose industrial and automotive	-30 (-20)	+120 (+250)	Lithium soap / mineral oil	120
<b>LGEP 2</b>	M	L to M	H	Extreme pressure	-20 (-5)	+110 (+230)	Lithium soap / mineral oil	200
<b>LGFP 2</b>	M	M	L to M	Food compatible	-20 (-5)	+110 (+230)	Aluminium complex / medical white oil	130
<b>LGEM 2</b>	M	VL	H to VH	High viscosity with solid lubricants	-20 (-5)	+120 (+250)	Lithium soap / mineral oil	500
<b>LGVE 2</b>	M	VL	H to VH	Extremely high viscosity with solid lubricants	-10 (+15)	+120 (+250)	Lithium-calcium soap / 1 020 mineral oil	
<b>LGLT 2</b>	L to M	M to EH	L	Low temperature, extremely high speed	-50 (-60)	+110 (+230)	Lithium soap / PAO oil	18
<b>LGGB 2</b>	L to M	L to M	M to H	Green biodegradable, low toxicity <sup>3)</sup>	-40 (-40)	+90 (+195)	Lithium-calcium soap / synthetic ester oil	110
<b>LGWM 1</b>	L to M	L to M	H	Extreme pressure, low temperature	-30 (-20)	+110 (+230)	Lithium soap / mineral oil	200
<b>LGWM 2</b>	L to M	L to M	M to H	Heavy load, wide temperature	-40 (-40)	+110 (+230)	Calcium complex sulphonate / synthetic (PAO)/mineral oil	80
<b>LGWA 2</b>	M to H	L to M	L to H	Wide temperature <sup>4)</sup> , extreme pressure	-30 (-20)	+140 (+285)	Lithium complex soap / mineral oil	185
<b>LGHB 2</b>	M to H	VL to M	H to VH	EP high viscosity, high temperature <sup>5)</sup>	-20 (-5)	+150 (+300)	Calcium complex sulphonate / mineral oil	400
<b>LGHP 2</b>	M to H	M to H	L to M	High performance polyurea grease	-40 (-40)	+150 (+300)	Di-urea / mineral oil	96
<b>LGET 2</b>	VH	L to M	H to VH	Extreme temperature	-40 (-40)	+260 (+500)	PTFE/synthetic (fluorinated polyether)	400

VL = very low, L = low, M = moderate, H = high, VH = very high, EH = extremely high

<sup>1)</sup> LTL = low temperature limit, HTPL = high temperature performance limit

<sup>2)</sup> mm<sup>2</sup>/s at 40 °C (105 °F) = cSt

<sup>3)</sup> LGGB 2 can withstand peak temperatures of 120 °C (250 °F)

<sup>4)</sup> LGWA 2 can withstand peak temperatures of 220 °C (430 °F)

<sup>5)</sup> LGHB 2 can withstand peak temperatures of 200 °C (400 °F)

Vertical shaft	Fast outer ring rotation	Oscillating movements	Severe vibration	Shock loads or frequent start-up	Low noise level	Low friction	Rust inhibiting properties
-	-	-	-	-	-	-	-
0	-	-	+	-	-	0	+
+	0	-	+	-	-	0	0
0	-	0	+	+	-	-	+
0	-	-	-	-	-	0	+
0	-	+	+	+	-	-	+
0	-	+	+	+	-	0	0
0	-	-	-	0	+	+	0
0	-	+	+	+	-	0	0
-	-	+	-	+	-	-	+
0	0	+	+	+	-	-	+
0	0	0	0	+	-	0	+
0	+	+	+	+	-	-	+
+	-	-	0	0	+	0	+
0	+	+	0	0	-	-	0

Symbols: + Recommended  
 0 Suitable  
 - Not suitable



## Overview of SKF basic condition monitoring instruments

SKF offers a wide assortment of basic condition monitoring instruments. For additional information, visit [www.mapro.skf.com](http://www.mapro.skf.com) or [www.skf.com/cm](http://www.skf.com/cm).

For information about advanced condition monitoring instruments and on-line monitoring systems, visit [www.skf.com/cm](http://www.skf.com/cm).

Thermometers



Electronic stethoscopes



Endoscopes



Thermal imagers



Stroboscopes



Tachometers



Oil condition monitors



Viscometers



Sound pressure meters



Ultrasonic leak detectors



SKF Machine Condition Advisor



## Appendices

Ultrasonic probe kits



Condition monitoring kits (basic)



Specialized condition monitoring kits



SKF MicroVibe P



Machine condition detectors



## Overview of SKF dismounting tools and products

SKF offers a wide assortment of dismounting tools. For additional information, visit [www.mapro.skf.com](http://www.mapro.skf.com).

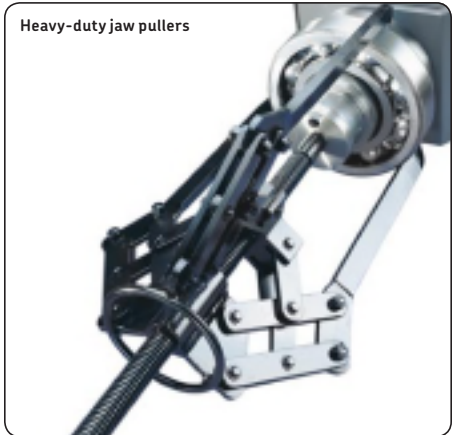
Mechanical pullers



Hydraulic pullers



Heavy-duty jaw pullers



Pulling plates



Internal bearing puller kits

## Appendices

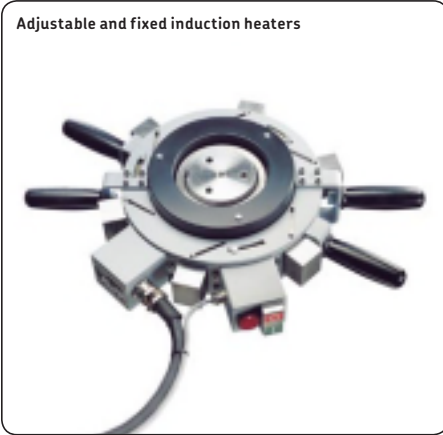
Blind housing puller kits



Aluminium heating rings



Adjustable and fixed induction heaters



Hydraulic nuts



Dismounting fluid



## Unit conversion table

Quantity	Unit	Conversion			
<b>Length</b>	inch	1 mm	0,03937 in	1 in	25,40 mm
	foot	1 m	3,281 ft	1 ft	0,3048 m
	yard	1 m	1,094 yd	1 yd	0,9144 m
	mile	1 km	0,6214 mile	1 mile	1,609 km
<b>Area</b>	square inch	1 mm <sup>2</sup>	0,00155 sq.in	1 sq.in	645,16 mm <sup>2</sup>
	square foot	1 m <sup>2</sup>	10,76 sq.ft	1 sq.ft	0,0929 m <sup>2</sup>
<b>Volume</b>	cubic inch	1 cm <sup>3</sup>	0,061 cub.in	1 cub.in	16,387 cm <sup>3</sup>
	cubic foot	1 m <sup>3</sup>	35 cub.ft	1 cub.ft	0,02832 m <sup>3</sup>
	imperial gallon	1 l	0,22 gallon	1 gallon	4,5461 l
	U.S. gallon	1 l	0,2642 U.S. gallon	1 U.S. gallon	3,7854 l
<b>Velocity, speed</b>	foot per second	1 m/s	3,28 ft/s	1 ft/s	0,30480 m/s
	mile per hour	1 km/h	0,6214 mile/h (mph)	1 mile/h (mph)	1,609 km/h
<b>Mass</b>	ounce	1 g	0,03527 oz	1 oz	28,350 g
	pound	1 kg	2,205 lb	1 lb	0,45359 kg
	short ton	1 tonne	1,1023 short ton	1 short ton	0,90719 tonne
	long ton	1 tonne	0,9842 long ton	1 long ton	1,0161 tonne
<b>Density</b>	pound per cubic inch	1 g/cm <sup>3</sup>	0,0361 lb/cub.in	1 lb/cub.in	27,680 g/cm <sup>3</sup>
<b>Force</b>	pound-force	1 N	0,225 lbf	1 lbf	4,4482 N
<b>Pressure, stress</b>	pounds per square inch	1 MPa	145 psi	1 psi	6,8948 × 10 <sup>3</sup> Pa
<b>Moment</b>	inch pound-force	1 Nm	8,85 in.lbf	1 in.lbf	0,113 Nm
<b>Power</b>	foot-pound per second	1 W	0,7376 ft lbf/s	1 ft lbf/s	1,3558 W
	horsepower	1 kW	1,36 HP	1 HP	0,736 kW
<b>Temperature</b>	degree	Celsius	t <sub>C</sub> = 0,555 (t <sub>F</sub> - 32)	Fahrenheit	t <sub>F</sub> = 1,8 t <sub>C</sub> + 32

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