SKF lubricants

Selecting a grease can be a delicate process. SKF has developed several tools in order to facilitate the selection of the most suitable lubricant. The wide range of tools available includes those from easy-to-use application driven tables to advanced software allowing for grease selection based upon detailed working conditions.

The basic bearing grease selection chart provides you with quick suggestions on the most commonly used greases in typical applications.

SKF bearing grease selection chart

Grease	Description	Application examples	Temperature range [1] LTL	HTPL	Temp.	Speed
LGMT 2	General purpose industrial and automotive	Automotive wheel bearings Conveyors and fans Small electric motors	–30 °C (–20 °F)	120 °C (250 °F)	M	M
LGMT 3	General purpose industrial and automotive	Bearings with d>100 mm Vertical shaft or outer bearing ring rotation Car, truck and trailer wheel bearings	–30 °C (–20 °F)	120 °C (250 °F)	M	M
LGEP 2	Extreme pressure	Forming and press section of paper mills Work roll bearings in steel industry Heavy machinery, vibrating screens	–20 °C (–5 °F)	110 °C (230 °F)	M	L to M
LGWA 2	Wide temperature [4], extreme pressure	Wheel bearings in cars, trailers and trucks Washing machines Electric motors	–30 °C (–20 °F)	140 °C (285 °F)	M to H	L to M
LGFP 2	Food compatible	Food processing equipment Wrapping machines Bottling machines	–20 °C (–5 °F)	110 °C (230 °F)	M	M
LGGB 2	Biodegradable, low toxicity [3]	Agricultural and forestry equipment Construction and earthmoving equipment Water treatment and irrigation	–40 °C (–40 °F)	90 °C (195 °F)	L to M	L to M
LGBB 2	Wind turbine blade and yaw bearing grease	Wind turbine blade and yaw slewing bearings	–40 °C (–40 °F)	120 °C (250 °F)	L to M	VL
LGLT 2	Low temperature, extremely high speed	Textile and machine tool spindles Small electric motors and robots Printing cylinders	–50 °C (–60 °F)	110 °C (230 °F)	L to M	M to EH
LGWM 1	Extreme pressure, low temperature	Main shaft of wind turbines Centralised lubrication systems Spherical roller thrust bearing applications	–30 °C (–20 °F)	110 °C (230 °F)	L to M	L to M
LGWM 2	High load, wide temperature	Main shaft of wind turbines Heavy duty off road or marine applications Snow exposed applications	–40 °C (–40 °F)	110 °C (230 °F)	L to M	L to M
LGEM 2	High viscosity plus solid lubricants	Jaw crushers Construction machinery Vibrating machinery	–20 °C (–5 °F)	120 °C (250 °F)	M	VL
LGEV 2	Extremely high viscosity with solid lubricants	Trunnion bearings Support and thrust rollers on rotary kilns and dryers Slewing ring bearings	–10 °C (15 °F)	120 °C (250 °F)	M	VL
LGHB 2	EP high viscosity, high temperature [5]	Steel on steel plain bearings Dryer section of paper mills Work roll bearings and continuous casting in steel industry Sealed spherical roller bearings up to 150 °C (300 °F)	–20 °C (–5 °F)	150 °C (300 °F)	M to H	VL to M
LGHP 2	High performance polyurea grease	Electric motors Fans, even at high speed High speed ball bearings at medium and high temperatures	–40 °C (–40 °F)	150 °C (300 °F)	M to H	M to H
LGET 2	Extreme temperature	Bakery equipment (ovens) Wafer baking machines Textile dryers	–40 °C (–40 °F)	260 °C (500 °F)	VH	L to M

1) LTL = Low Temperature Limit
HTPL = High Temperature Performance Limit
2) mm^2/s at 40 °C (105 °F) = cSt.
3) LGGB 2 can withstand peak temperatures of 120 °C (250 °F)
4) LGWA 2 can withstand peak temperatures of 220 °C (430 °F)
5) LGHB 2 can withstand peak temperatures of 200 °C (390 °F)

Load	Thickener / Base Oil	NLGI	Base oil viscosity [2]	Vertical shaft	Fast outer ring rotation	Oscillating movements	Severe Vibrations	Shock load or frequent start up	Rust inhibiting properties
L to M	Lithium soap / mineral oil	2	110	●			+		+
L to M	Lithium soap / mineral oil	3	120	+	●		+		●
H	Lithium soap / mineral oil	2	200	●		●	+	+	+
L to H	Lithium complex soap / mineral oil	2	185	●	●	●	●	+	+
L to M	Aluminium complex / medical white oil	2	130	●					+
M to H	Lithium-calcium soap / synthetic ester oil	2	110	●		+	+	+	●
M to H	Lithium complex soap / synthetic PAO oil	2	68			+	+	+	+
L	Lithium soap / synthetic PAO oil	2	18	●				●	●
H	Lithium soap / mineral oil	1	200			+		+	+
L to H	Complex calcium sulphonate / synthetic PAO oil / mineral oil	2	80	●	●	+	+	+	+
H to VH	Lithium soap / mineral oil	2	500	●		+	+	+	+
H to VH	Lithium-calcium soap / mineral oil	2	1020	●		+	+	+	+
L to VH	Complex calcium sulphonate / mineral oil	2	400	●	+	+	+	+	+
L to M	Di-urea / mineral oil	2 to 3	96	+			●	●	+
H to VH	PTFE / synthetic fluorinated polyether oil	2	400	●	+	+	●	●	●

Wide applications greases

Special requirements

Low temperatures

High loads

High temperatures

● = Suitable + = Recommended

Basic bearing grease selection

Generally use if:

Speed = M, Temperature = M and Load = M	LGMT 2	General purpose

Unless:

Expected bearing temperature continuously >100 °C *(210 °F)*	LGHP 2	High temperature
Expected bearing temperature continuously >150 °C *(300 °F)*, demands for radiation resistance	LGET 2	Extremely high temperature
Low ambient –50 °C *(–60 °F)*, expected bearing temperature <50 °C *(120 °F)*	LGLT 2	Low temperature
Shock loads, heavy loads, frequent start-up / shut-down	LGEP 2	High load
Food processing industry	LGFP 2	Food processing
Biodegradable, demands for low toxicity	LGGB 2	Biodegradable

Note: – For areas with relatively high ambient temperatures, use LGMT 3 instead of LGMT 2
– For special operating conditions, refer to the SKF bearing grease selection chart

With additional information like speed, temperature, and load conditions, LubeSelect for SKF greases is the easiest way to select the right grease.

For additional information, visit www.aptitudeexchange.com.

Additionally, the SKF bearing grease selection chart provides you with a complete overview of SKF greases. The chart includes the main selection parameters, such as temperature, speed and load, as well as basic additional performance information.

Bearing operating parameters

Temperature

L	= Low	<50 °C	*(120 °F)*
M	= Medium	50 to 100 °C	*(120 to 230 °F)*
H	= High	>100 °C	*(210 °F)*
EH	= Extremely high	>150 °C	*(300 °F)*

Load

VH	= Very high	C/P <2
H	= High	C/P ~4
M	= Medium	C/P ~8
L	= Low	C/P ≥15

C/P = Load ratio **C** = basic dynamic load rating, kN
P = equivalent dynamic bearing load, kN

Speed		**for ball bearings**
EH	= Extremely high	n d_m over 700 000
VH	= Very high	n d_m up to 700 000
H	= High	n d_m up to 500 000
M	= Medium	n d_m up to 300 000
L	= Low	n d_m below 100 000

Speed		**for roller bearings SRB/TRB/CARB**	**CRB**
H	= High	n d_m over 210 000	n d_m over 270 000
M	= Medium	n d_m up to 210 000	n d_m up to 270 000
L	= Low	n d_m up to 75 000	n d_m up to 75 000
VL	= Very low	n d_m below 30 000	n d_m below 30 000

n d_m = rotational speed, r/min x 0,5 (D+d), mm

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