

SKF Automatic Lubricators

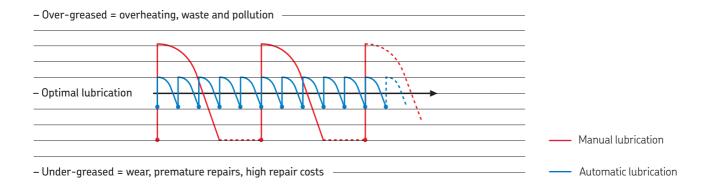
Automatic lubricators deliver safety, reliability and efficiency



Manual lubrication vs. automatic lubrication

Performing manual lubrication tasks can be challenging due to the vast number of lubrication points throughout a factory. Also, most of these points have varying lubrication requirements. Utilising automatic lubricators is one solution that can improve worker safety and increase machine reliability.

Reduce the risks of failure



Challenges associated with manual lubrication

Manual lubrication tasks can be complex and inconvenient, often requiring equipment shutdown. Manual lubrication on difficult-to-access lubrication points also can increase the possibility of worker injury and take your valuable human resources away from other tasks.

Improper manual lubrication can be a factor in creating additional challenges. Failure to lubricate every lubrication point regularly can have a negative effect on equipment reliability, production schedules and maintenance efficiency. Other results of improper manual lubrication can be lubricant waste, environmental issues, increased energy consumption and finished product spoilage due to contamination of lubricant.

Benefits of using automatic lubricators

A lubricator is designed to automatically supply a small quantity of clean grease or oil to a lubrication point on a regular basis, thus improving bearing performance. Key benefits of using an automatic lubricator are improved employee safety, increased machine reliability and optimized maintenance operations.

SKF SYSTEM 24 lubricators are suitable for a variety of applications but often are used on pumps, electric motors, fans, blowers, conveyors and chains. They can be adjusted to ensure that the correct quantity of lubricant is delivered to the lubrication point during a predetermined period of time. This provides a more accurate control of the amount of lubricant supplied, when compared to traditional manual lubrication techniques.

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Improving employee safety

Use of SKF SYSTEM 24 lubricators can have a positive impact on workplace safety because technicians can spend less time in confined spaces, with safety cages or guards removed, and on rooftop or elevated lubrication tasks.



Lubrication point behind safety guards

Safety cages and guards are utilised for a reason – to protect workers and others from injury caused by moving parts. By reducing the amount of time these implements are not in place, SKF SYSTEM 24 lubricators increase safety and eliminate the need to manually lubricate difficult–to–access lubrication points.



Elevated lubrication point

Lubrication points on rooftops or other high elevations can create a significant challenge, and the safety implications are evident. Due to apprehension, these lubrication points often are not lubricated properly and equipment reliability suffers.

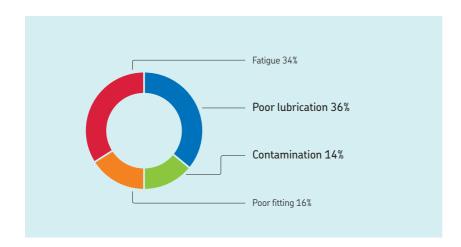


Manual handling of lubricants

Improper handling of loose lubricant can expose technicians to chemicals. By eliminating manual handling of lubricant, SKF SYSTEM 24 lubricators reduce the potential for chemical exposure of workers.

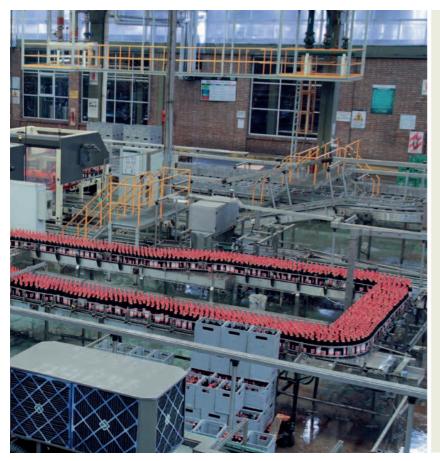
Machine reliability

The importance of lubrication often is overlooked due to its underestimated impact on equipment total cost of ownership. However, machine reliability can be enhanced substantially with proper lubrication. As the leading supplier of bearings worldwide, SKF has conducted extensive research and determined that up to 50 percent of premature bearing failures are due to either improper lubrication practices or contamination.



Premature bearing failure

Approximately 36 percent of premature bearing failures are due to improper lubrication, such as too much, too little or the wrong type of lubricant. Another 14 percent of bearing failures occur because of contamination via poor seals or lubricant handling practices.



Clean, fresh lubricant

A continuous supply of clean, fresh grease or oil is essential when lubricating equipment. SKF SYSTEM 24 lubricators feature high quality SKF lubricants in a water- and dust-resistant design.

Positive pressure

Positive pressure prevents contaminants from entering the bearing through the seal. SKF SYSTEM 24 lubricators can provide fresh lubricant and purge seals of smaller-sized bearings operating at lower speeds, while larger bearings may benefit from a separate lubricator for lubrication and seal purging.

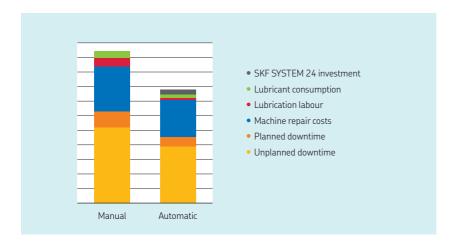
Missed lubrication points

With manual lubrication, it is difficult and time consuming to find every lubrication point. Use of SKF SYSTEM 24 lubricators helps to ensure that each point is receiving the proper amount of lubricant on a set schedule.

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Supporting effective maintenance

The use of automatic lubricators can have a large impact on effective maintenance. The most significant benefits usually are found in the reduction of unplanned downtime, machine repair costs, labor and lubricant consumption.



Cost savings of automatic lubrication

Based on numerous case studies, the illustration at left represents a comparison of manual vs. automatic lubrication. The results show improvement in all areas when using automatic lubrication with the most significant found in the reduction of downtime and repair costs.



Improved machine reliability

Using an SKF SYSTEM 24 lubricator provides increased machine reliability and, therefore, reduces unplanned downtime.

Increased productivity

Because automatic lubricators deliver lubricant while the equipment is in operation, there is less scheduled downtime and more productivity.

Better use of personnel

Automatic lubrication enables workers to focus on more value-added tasks, such as machine inspection.

Lower cost of ownership

Improved equipment reliability and performance means lower machine repair costs.

SKF SYSTEM 24



Gas driven single point automatic lubricators

SKF LAGD series

The units are supplied ready-to-use straight from the box and filled with a wide range of high performance SKF lubricants. Tool-free activation and time-setting allow easy and accurate adjustment of lubrication flow.

- Flexible dispense rate from 1 to 12 months
- Stoppable or adjustable if required
- Intrinsic safety rating: ATEX approved for zone 0
- Transparent lubricant container allows visual inspection of dispense rate
- Compact size, permits installation in restrictive areas
- Greases and chain oils available

Typical applications

- Applications in restrictive and hazardous locations
- Bearing housing lubrication
- Electric motors
- Fans and pumps
- Conveyors
- Cranes
- Chains (oil)
- Elevators and escalators (oil)

SKF DialSet helps to calculate the correct dispense rate.

Easy-grip top-cover

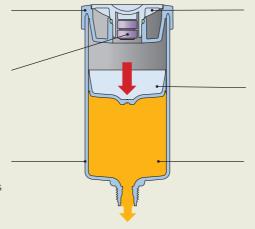
Specially designed top ring for an optimum grip

Gas cell

Detachable batteries for an environmentally friendly disposal

Lubricant container

Transparent lubricant container allows visual inspection of dispense rate



Toolless dial

Allows easy and accurate adjustment of flow rate

Piston

Special piston shape helps ensure optimum emptying of lubricator

SKF Lubricants

Filled with high quality SKF lubricants



Grease	LGWA 2	LGEM 2	LGGB 2	LGHB 2	LGHP 2	LGFP 2	LGWM 2	LGFQ 2
Description	Multi-purpose EP type grease	High loads, slow rotations	Biodegradable	High temperature and loads, plain bearings	High performance polyurea	Food processing industry	High load, wide temperature	High load and wide temperature food grade
Unit 60 ml	LAGD 60/WA2	LAGD 60/EM2	_	LAGD 60/HB2	LAGD 60/HP2	LAGD 60/FP2	_	-
Unit 125 ml	LAGD 125/WA2	LAGD 125/EM2	LAGD 125/GB2	LAGD 125/HB2	LAGD 125/HP2	LAGD 125/FP2	LAGD 125/WM2	LAGD 125/FQ2
Chain oils	LHMT 68	LHHT 2	165 L	.FFM 80	LHFP 150	LFFT 220) –	
Description	Medium tempera	ature High tempera		ood grade NSF H1) oil	Food grade (NSF H1) oil	Food grade (NSF H1) c		pty unit suitable for illing only
Unit 60 ml	LAGD 60/HMT6	8* -	-		-	-	LAG	GD 60/U*
Unit 125 ml	LAGD 125/HMT	68* LAGD 12	25/HHT26* L	AGD 125/FFM80*	LAGD 125/HFP15	5* LAGD 125	/FFT22* LAG	GD 125/U*

^{*} Includes non-return valve

Designation	LAGD 60 and LAGD 125		
Grease capacity - LAGD 60 - LAGD 125	60 ml (2 <i>US fl. oz</i>) 125 ml (4.2 <i>US fl. oz</i>)	Intrinsically safe approval	II 1 G Ex ia IICT6 Ga II 1 D Ex ia IIICT85°C Da I M1 Ex ia I Ma
Nominal emptying time	Adjustable; 1–12 months	EC Type Examination Certificate	Kema 07ATEX0132 X
Ambient temperature range		Protection class	IP 68
– LAGD 60/ and LAGD 125/	−20 to +60 °C (−5 to +140 °F)	Recommended storage temperature	20 °C (70 °F)
Maximum operating pressure	5 bar (<i>75 psi</i>) (at start-up)	Storage life of lubricator	2 years
Drive mechanism	Gas cell producing inert gas	Weight	LAGD 125 approx 200 g (7.1 oz)
Connection thread	R ¹ / ₄	3	LAGD 60 approx 130 g (4.6 oz)
Maximum feed line length with:			Lubricant included
– grease	300 mm (11.8 in.)		
– oil	1 500 mm (59.1 in.)		

Note: If ambient temperature is constant between 40 °C and 60 °C (105 °F and 140 °F), do not select a setting of more than 6 months for optimum performance. LGHP 2 should not be used with ambient temperatures over 40 °C (105 °F) or have a time setting longer than 6 months.



SKF SYSTEM 24



Electro-mechanical single point automatic lubricators

SKFTI SD series

The SKFTLSD series is the first choice when a simple and reliable automatic lubricator is required under variable temperatures, or when the application conditions (such as vibration, limited space or hazardous environments) require a remote mounting.

- Filled with SKF Lubricants especially developed for bearing applications
- Temperature independent dispense rate
- Maximum discharge pressure of 5 bar over the whole dispensing period
- Dispense rate available in various settings
- Transparent reservoir allows visual inspection
- Red-yellow-green LEDs indicate the lubricator's status
- Refill sets include battery pack
- Supplied with support flange for enhanced sturdiness
- Suitable for both direct and remote installation

Typical applications

- Critical applications where extreme reliability and additional monitoring is required
- Applications in restrictive and hazardous locations
- Applications requiring high volumes of lubricant

SKF DialSet helps to calculate the correct dispense rate.

- A The unit can be programmed to dispense lubricant in 1, 2, 3, 4, 6, 8, 9, 10 and 12 month settings.
- B The same drive unit can be used with both cartridge versions by simply adjusting the 125/250 ml switch.
- Traffic light LEDs are visual from all sides because of the presence of dual LEDs on the sides of the lubricator. The meaning of the lights is as follows:
 - Green light: The lubricator is properly functioning.
 - Yellow light: The lubricator is still functioning, but soon some action will be required. Yellow light serves as a pre-warning light.
 - Red light: The lubricator stopped operating.



Ordering details	1)						
Grease	LGWA 2	LGEM 2	LGHB 2	LGHP 2	LGFP 2	LGWM 2	LGFQ 2
Description	High load, extreme pressure, wide temperature range	High viscosity bearing grease with solid lubricants	High load, high temperature, high viscosity	High performance, high temperature	Food compatible NSF H1 certified	High loads, wide temperature	High load and wide temperature food grade
Complete unit 125	TLSD 125/WA2	TLSD 125/EM2	TLSD 125/HB2	TLSD 125/HP2	TLSD 125/FP2	-	-
Complete unit 250	TLSD 250/WA2	TLSD 250/EM2	TLSD 250/HB2	TLSD 250/HP2	TLSD 250/FP2	-	-
Refill set 125	LGWA 2/SD125	LGEM 2/SD125	LGHB 2/SD125	LGHP 2/SD125	LGFP 2/SD125	LGWM 2/SD125	LGFQ 2/SD125
Refill set 250	LGWA 2/SD250	LGEM 2/SD250	LGHB 2/SD250	LGHP 2/SD250	LGFP 2/SD250	LGWM 2/SD250	LGFQ 2/SD250

Chain oils	LHMT 68	LHHT 265	LHFP 150
Description	Medium temperature oil	High temperature oil	Food compatible, NSF H1 approved oil
Complete unit 125	TLSD 125/HMT68	-	-
Complete unit 250	TLSD 250/HMT68	-	-
Refill set 125	LHMT 68/SD125	LHHT 265/SD125	LHFP 150/SD125
Refill set 250	LHMT 68/SD250	LHHT 265/SD250	LHFP 150/SD250

Designation	TLSD 125 and TLSD 250		
Grease capacity -TLSD 125 -TLSD 250	125 ml (4.2 <i>US fl. oz</i>) 250 ml (8.5 <i>US fl. oz</i>)	LED status indicators – Green led (each 30 sec) – Yellow led (each 30 sec)	OK Pre warning, low battery power
Emptying time	User adjustable: 1, 2, 3, 4, 6, 8, 9, 10 and 12 months	– Yellow led (each 5 sec) – Red led (each 5 sec) – Red led (each 2 sec)	Pre warning, high back pressure Warning, stopped on error Warning, empty cartridge
owest grease purge TLSD 125 TLSD 250	0,3 ml (0.01 US fl. oz) per day 0,7 ml (0.02 US fl. oz) per day	Protection class assembled lubricator	IP 65
Highest grease purge -TLSD 125	4,1 ml (0.13 <i>US fl. oz</i>) per day	Battery pack -TLSD 1-BAT	4,5 V 2,7 Ah/Alkaline manganese
-TLSD 250 Ambient temperature range	8,3 ml (0.28 US fl. oz) per day	Recommended storage temperature	20 °C (70 °F)
-TLSD 1-BAT	0 to 50 °C (30 to 120 °F)	Storage life of lubricator	3 years ³⁾ (2 years for LGFP 2 and Oils)
Maximum operating pressure	5 bar (<i>75 psi</i>)	Total weight (incl. packaging)	,
Orive mechanism	Electro mechanical	-TLSD 125 -TLSD 250	635 g (22.5 oz) 800 g (28.2 oz)
connection thread	G ¹ / ₄	- 1230 230	000 g (20.2 <i>02)</i>
Maximum feed line length vith: - grease - oil	Up to 3 meters (10 ft) ²⁾ Up to 5 meters (16 ft)		

- 1) TLSD lubricator and SD refill sets are not for offer/sale/use in Germany, France or United States until December 2017.
- 2) The maximum feed line length is dependent on ambient temperature, grease type and back pressure created by the application.
- 3) Maximum storage life is 3 years from production date, which is printed on the side of the canister. The canister and battery pack may be used at 12 month setting even if activated 3 years from production date.



Electro-mechanical single point automatic lubricators

SKFTLMR series

The SKF Automatic Lubricant Dispenser – TLMR – is a single point automatic lubricator designed to supply grease to a single lubrication point. With a relatively high pressure of 30 bars, this lubricator can operate at long distances providing optimum results with difficult-to-reach and unsafe lubrication locations. With a wide temperature range and robust design, the TLMR lubricator is suitable for operating conditions with various levels of temperature and vibration.

- Filled with high quality SKF greases
- Temperature independent dispense rate
- Extended time setting up to 24 months
- Maximum discharge pressure of 30 bar over the whole dispensing period
- Available in two versions: TLMR 101 powered by batteries (standard Lithium AA type) and TLMR 201 powered by 12–24 V DC
- Available with non-refillable cartridges in two sizes: 120 and 380 ml

Typical applications

- Applications requiring high lubricant consumption
- Applications experiencing high vibration in operation
- Excellent water and dust protection makes TLMR suitable for general machinery applications and food processing machinery
- Excellent high temperature performance makes TLMR suitable for engine rooms and hot fan applications
- Excellent low temperature performance makes TLMR suitable for wind turbine applications

SKF DialSet helps to calculate the correct dispense rate.



Each TLMR is supplied with a strong mounting bracket as standard. The bracket enables the TLMR to be easly mounted on a flat surface.



For ease of use, cartridges are easely exchanged by simply screwing them into the lubricator.

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Ordering do	etails				
Grease	Description		s (cartridge and battery)	TLMR 201 cartridg	
		120 ml	380 ml	120 ml	380 ml
LGWA 2	High load, extreme pressure, wide temperature range bearing grease	LGWA 2/MR120B	LGWA 2/MR380B	LGWA 2/MR120	LGWA 2/MR380
LGEV 2	Extremely high viscosity bearing grease with solid lubricants	-	LGEV 2/MR380B	-	LGEV 2/MR380
LGHB 2	High load, high temperature, high viscosity bearing grease	-	LGHB 2/MR380B	-	LGHB 2/MR380
LGHP 2	High performance, high temperature bearing grease	-	LGHP 2/MR380B	-	LGHP 2/MR380
LGFP 2	Food grade bearing grease NSF H1 certified	LGFP 2/MR120B	LGFP 2/MR380B	LGFP 2/MR120	LGFP 2/MR380
LGWM 1	Extreme pressure, low temperature bearing grease	-	LGWM 1/MR380B	-	LGWM 1/MR380
LGWM 2	High load, wide temperature range bearing grease	-	LGWM 2/MR380B	-	LGWM 2/MR380
LGEP 2	Extreme pressure bearing grease	_	LGEP 2/MR380B	_	LGEP 2/MR380
LGMT 3	All purpose industrial and automotive bearinggrease	-	LGMT 3/MR380B	-	LGMT 3/MR380
LGFQ 2	High load and wide temperature food grade bearing grease	-	LGFQ 2/MR380B	-	LGFQ 2/MR380
Complete se	et Design	ation	TLMR pump	Docio	ınation
	<u> </u>		<u></u>		<u></u>
TLMR 101		.01/38WA2	Lubricator powered by batt		
TLMR 201	380 ml TLMR 2	01/38WA2	Lubricator powered by 12-	24 V DC TLMR	201

Technical data			
Designation	TLMR 101 and TLMR 201		
Grease capacity	120 ml (4.1 US fl. oz)	Drive mechanism	Electro mechanical
	380 ml (12.8 US fl. oz)	Connection thread	G¹/₄ female
Emptying time	User adjustable: 1,2,3,6,9,12, 18,	Maximum feed line length*	Up to 5 meters (16 ft)
Lowest setting – 120 ml cartridge – 380 ml cartridge	24 months or purge 0,16 ml (0.005 US fl. oz) per day 0,5 ml (0.016 US fl. oz) per day	LED status indicators – Green LED (every 8 sec) – Green and red LED (every 8 sec) – Red LED (every 8 sec)	OK Almost empty Error
Highest setting – 120 ml cartridge – 380 ml cartridge	3,9 ml (0.13 <i>US fl. oz</i>) per day 12,5 ml (0.42 <i>US fl. oz</i>) per day	Protection class – DIN EN 60529 – DIN 40 050 Teil 9	IP 67 IP 6k9k
Purge	31 ml (1 US fl. oz) per hour	Power	
Ambient temperature range	−25 to +70 °C (−13 to +158 °F)	-TLMR 101	4 AA Lithium batteries
Maximum operating pressure	30 bar (435 <i>psi</i>)	-TLMR 201	12–24 Volt DC

 $^{{}^{\}star}\text{The maximum feed line length is dependent on ambient temperature, grease type and back pressure created by the application.}$

Ready-to-use centralised lubrication system

SKFTLMP series

The SKF MultiPoint Automatic Lubricator TLMP series is intended for reliable relubrication of multiple lubrication points. This sturdy automatic lubrication system is packaged as a complete kit, including the lubricator, required tubing and connectors. Designed to supply from one to eighteen lubrication points, the TLMP series features pluggable outlets and is easy to install and program via its keypad with LED display.



Featuring a reservoir capacity of nearly one litre, this versatile lubricator has a stirring paddle to prevent grease separation, making it suitable for more lubricants. With its high IP protection rating, the durable TLMP series is vibration resistant, withstands equipment washdowns and prevents contamination ingress. Also, the unit enables machine steering to temporarily disable lubrication by removing power.

TLMP series advantages

- Easy to install and program
- Complete kit
- Suitable for one to eighteen lubrication points
- Low-level and malfunction alarms; remote notification possible
- · Machine steering by removing power
- Available in versions with different voltages
- Developed for industrial applications, as well as agricultural and off-road vehicles



The TLMP series are supplied complete with the following items

TLMP 1008	TLMP 1018	
1 ×	1 ×	Pump
1×	1×	Fitting material for the pump unit
2 ×	2 ×	Electrical connectors
20 m (65 ft)	50 m (164 ft)	plastic pipe Nylon, 6 x 1,5 mm
8 ×	18×	Straight tube connectors for application G1/8
8 ×	18×	Tube connectors plugs
7 ×	17 ×	Outlet closure plugs

Filler nipple

Replaces standard grease nipple for quicker lubricant replenishment using filler pump. (LAGF 1-H)

Flexible hose with filler nipple

Replaces standard grease nipple for quicker lubricant replenishment using filler pump. (LAGF 1-F)



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empty or when outlet is blocked

Filter to avoid grease contamination from airborne particles

Stirring paddle to prevent grease separation

Pump element features maximum operating pressure of 120 bar (1 740 psi)

Divider block provides flexibility of using one to eight outlets

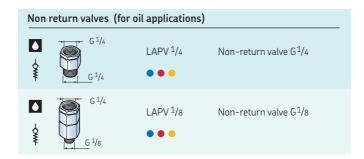
Cycle control sensor ensures lubricant is delivered to outlets

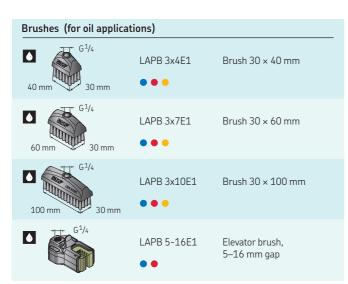
Technical data			
Designation	TLMP 1008 and TLMP 1018		
Number of lubrication outlets		External steering	By disconnecting power supply
TLMP 1008 TLMP 1018	1–8 1–18	Ambient temperature	−25 to +70 °C (−13 to +160 °F)
Suitable grease consistency	NLGI 2, 3	IP rating	IP 67
Maximum pressure	120 bar (1 740 psi)	Lubrication tubes TLMP 1008	20 m (6 <i>5 ft</i>), 6 x 1,5 mm, Nylon
aximum distance length to 5 m (16 ft) TLMP 1018	50 m (164 ft), 6 x 1,5 mm, Nylon		
lubrication point		Weight	Approx. 6 kg (13 lb)
Dispense rate	0,1 - 40 cm ³ /day (<i>0.003 -1.35 US fl.oz/day</i>) per outlet	Ordering details 8 oulets TLMP 1008/24DC	24 V DC (-20/+30%)
Output pump element	Approx. 0,2 cm ³ (per cycle), approx. 1,7 cm ³ (per minute)	TLMP 1008/120V TLMP 1008/230V	120 V AC 60 Hz (±10%) 230 V AC 50 Hz (±10%)
Reservoir size	1 litre	Ordering details 18 oulets	
Useable reservoir volume	Approx. 0,5–0,9 litres (17–30 US fl.oz)	TLMP 1018/24DC TLMP 1018/120V	24 V DC (–20/+30%) 120 V AC 60 Hz (±10%)
Filling	Via hydraulic lubrication fitting R¹/4	TLMP 1018/230V	230 V AC 50 Hz (±10%)
Installation position	Vertical (max deviation ±5°)		
Power Supply Connector	EN 175301-803 DIN 43650/A		
Alarms	blocked feed lines, empty reservoir internal and external		

Accessories

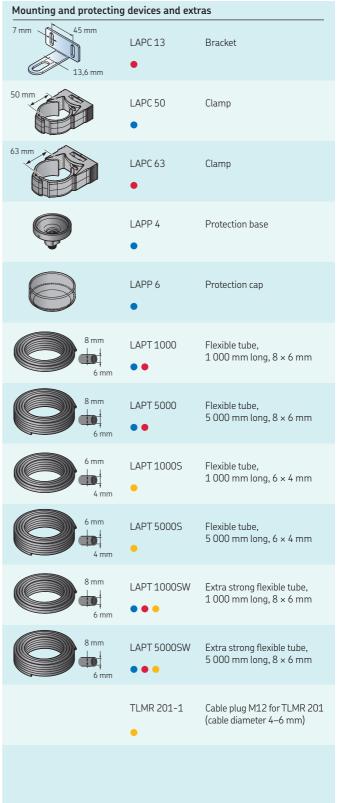
A full range for enhanced versatility of SKF automatic lubricators













Stand-alone program



Online program

DialSet for smartphones



Quick tool for relubrication calculation

SKF DialSet

SKF DialSet has been designed to help you to set up your SKF automatic lubricators. After selecting the criteria and grease appropriate for your application, the program provides you with the correct settings for your SKF automatic lubricators. It also provides a quick and simple tool for relubrication intervals and quantity calculations.

- Allows quick calculation of the relubrication intervals based on the operating conditions of your application
- Calculations are based on SKF lubrication theories
- Calculated lubrication intervals depend on the properties of the selected grease, thereby minimising the risk of under- or overlubrication and optimising grease consumption
- Calculations take into account SKF automatic lubrication systems, grease dispense rates, thus facilitating the selection of the correct lubricator setting
- Recommended grease quantity depends on the grease replenishment position; side or W33 for optimum grease consumption
- Includes a complete list of the SKF SYSTEM 24 accessories

DialSet stand-alone

The stand-alone version of DialSet is available in 11 languages: English, French, German, Italian, Spanish, Swedish, Portuguese, Russian, Chinese, Japanese and Thai. The program is suitable for PC's working with MS Windows XP and later. Download it from skf.com/lubrication

DialSet online

DialSet is also available online in English language. The program is accessible free-of-charge from mapro.skf.com/dialset

DialSet for smartphones

For smartphones, apps are available in English for iPhone and Android.







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