

## Automatic lubricator SYSTEM 24 (LAGD 60 and LAGD 125)

### Application

The SKF SYSTEM 24 is a single point automatic lubricator, which can be used to supply grease to single lubrication points that are usually lubricated by means of a grease gun. Lubrication points which are designed to be re-lubricated by means of a grease gun, replenish the grease buffer at the lubrication point.

SKF SYSTEM 24 lubricators can be set to ensure that the correct quantity of lubricant is delivered over a set time period. This allows a more accurate control of the amount of lubricant supplied compared to traditional manual re-lubrication techniques.

The SKF SYSTEM 24 is ideal for applications which are difficult to reach with a grease gun, or where a large number of greasing points mean that manual greasing techniques would be less effective.

Typical applications include, amongst others;

- Pumps
- Fans & Blowers
- Conveyors
- Elevators and escalators
- Cranes
- Food Processing machinery
- Petrochemical industry
- Oil filled units are also available, the typical applications for these include, chains, elevator slides and escalator guidance rails

### Description

The SKF SYSTEM 24 is a single point automatic lubricator. It consists of a transparent container filled with a specified lubricant and a cartridge containing an electrochemical gas cell that produces hydrogen. Once activated, the internal batteries are electrically connected and gas production begins. The gas production rate is proportional to the electrical current, and can be varied by selecting the appropriate dispense period on the time dial on top of the lubricator. The dispense period can be between 1 and 12 months. In the event that a machine, to which the unit is fitted, is at a prolonged standstill, then the unit can be temporarily deactivated. Once activated, the gas pressure builds up, until the piston moves and then the lubricator will start to dispense lubricant. There is an initial delay in gas build up before lubricant is dispensed. This delay is relative to the selected emptying time, for instance a 12 month setting has a longer delay than a 3 month setting.

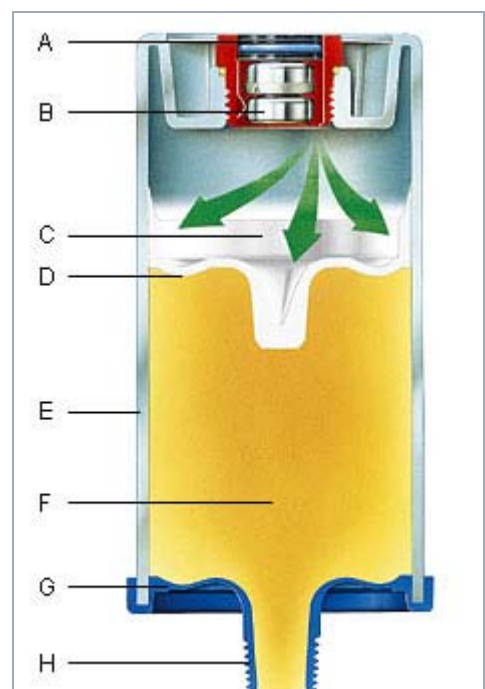
In practice this is not a problem, as the bearing is already pre lubricated and therefore has a grease buffer. The values on the time set dial are an indication of the real emptying time based on an operating ambient temperature of 20 °C (68 °F) and a back pressure of 0,5 bars (7.25 psi). The dispensing rates can vary due to changes in the operating ambient temperature. This is due to the contraction or expansion of the gas in relation to the ambient temperature and the subsequent influence of back pressure on the dispense rate. Above 40 °C (105 °F) or so, the unit runs twice as fast (eg. 12 month setting will only last 6 months) and at around -10 °C (15 °F) the unit runs half as fast (eg. 6 month setting will last 12 months).

The standard SYSTEM 24 product (LAGD 125) contains 125 ml (4.25 fl.oz US) of grease and is suitable for many applications. However certain applications have a limited space in which to fit the standard unit and in these instances a 60 ml (2 fl oz US) unit (LAGD 60) is available which is 35% shorter. The 60 ml unit can also be used when a lower grease purge is required.

Oil filled SYSTEM 24 units are also available, as are empty units (LAGD 125/U) which can be filled by the user with their own choice of oil. Oil filled and empty units are supplied with a plastic non-return valve, which stops the oil from flowing out on units that have not been activated.

For applications where there is insufficient space to install SYSTEM 24 or where there are excessive vibrations, the unit can be remotely mounted. In this instance, a female tube connection (LAPF F1/4), tubing (LAPT 1000) and a male connector to the application (LAPF M1/4) are required. For oil filled lubricators, a non return valve (LAPV 1/4 or LAPV 1/8) at the application end of the tubing is also required.

For hazardous environments, such as petrochemical installations, SYSTEM 24 is considered intrinsically safe. TÜV Product Service has certified the SKF SYSTEM 24 LAGD 125 and LAGD 60 to a rating of II 2 G EEx ib IIC T6.



**A Lubricator time set dial**  
Allows easy and accurate adjustment of lubrication flow

**B. Gas cell**

Patented cell design ensures controlled

- production of hydrogen gas
- C. Hydrogen gas**  
Build up of gas dispenses lubricant consistently
- D. Special piston shape**  
Ensures optimum emptying of lubricator
- E. Transparent container**  
Allows visual checking of dispense rate
- F. High performance SKF grease**
- G. Profiled base**  
Matches piston profile
- H. Cartridge neck**  
Screws into lubrication point or accessories

To easily determine the correct setting for your SYSTEM 24 application, SKF can provide the easy to use DialSet program. This CD-ROM based program, in six languages, is based on the SKF general catalogue, operating conditions and the SYSTEM 24 grease dispensing rate.



DialSet program

#### Technical data LAGD 125

<b>Grease capacity</b>	125 ml, (4.25 fl.oz US)
<b>Nominal emptying time</b>	Adjustable; 1 - 12 months
<b>Lowest grease purge</b>	9 g (0.32 oz) per month
<b>Ambient temperature range</b>	-20 to 55 °C (-5 to 130 °F)*
<b>Maximum operating pressure</b>	5 bar (75 psi)**
<b>Drive mechanism</b>	Gas cell which produces hydrogen gas (H <sub>2</sub> )
<b>Body material</b>	PET
<b>Connection thread</b>	G 1/4
<b>Recommended storage temperature</b>	20 °C (70 °F)
<b>Storage life of lubricator</b>	2 years ***
<b>Weight</b>	Approx. 190 g (6.7 oz) (grease included)
<b>Designation</b>	LAGD 125/WA2 (filled with LGWA 2) LAGD 125/"lubricant"



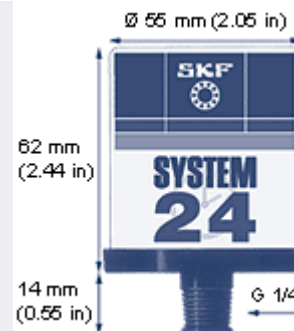
\* If the ambient temperature is constant between 40 and 55 °C (104 and 130 °F), do not select dispense rate of more than 6 months for optimum performance.

\*\* Maximum internal pressure would be achieved with a full lubricator applied to a completely blocked application. Integral safety point in at base of lubricator would break, thus relieving pressure without danger to personnel.

\*\*\* Storage life is 2 years from production date which is printed on the side of the lubricator. The lubricator may be used even at the 12 month setting if activated 2 years from production date.

#### Technical data LAGD 60

<b>Grease capacity</b>	60 ml, (2.03 fl.oz US)
<b>Nominal emptying time</b>	Adjustable; 1 - 12 months
<b>Lowest grease purge</b>	4,5 grams per month
<b>Ambient temperature range</b>	-20 to 55 °C (-5 to 130 °F)
<b>Maximum operating pressure</b>	5 bar (75 psi)*
<b>Drive mechanism</b>	Gas cell which produces hydrogen gas (H <sub>2</sub> )
<b>Body material</b>	PET
<b>Connection thread</b>	G 1/4
<b>Recommended storage temperature</b>	20 °C (70 °F)
<b>Storage life of lubricator</b>	2 years **
<b>Weight</b>	Approx. 115 g (4.1 oz) (grease included)
<b>Designation</b>	LAGD 60/WA2 (filled with LGWA 2) LAGD 60/"lubricant"



\* Maximum internal pressure would be achieved with a full lubricator applied to a completely blocked application. Integral safety point in at base of lubricator would break, thus relieving pressure without danger to personnel.

\*\* Storage life is 2 years from production date which is printed on the side of the lubricator. The lubricator may be used even at the 12 month setting if activated 2 years from production date.

The SKF SYSTEM 24 lubricator can also be ordered without lubricant. The designation for the empty SYSTEM 24 lubricator is LAGD 125/U. This product is only suitable for filling with oils. The oil can be filled through the outlet, for example, by means of a plastic squeeze bottle.

**The lubricator should be filled with oils only because of the following reasons:**

1. Due to the constant pressure in the lubricator many lubricating greases will show excessive oil bleeding. Oil bleeding means that the oil can separate from the soap and dispense, while the soap stays in the lubricator. If the user fills empty lubricators with their own lubricants, the performance will be reduced and the reliability jeopardized. All SYSTEM 24 greases have been tested to ensure no oil separation problems occur.
2. The lubricator can be refilled with a grease gun, but this is not a cost-effective solution.
3. If excessive air is trapped in the unit during the refilling process, the unit may not function correctly.

**Re-use**

In theory the SYSTEM 24 lubricator can be re-filled and re-used. Because of the reasons mentioned in the chapter "Empty lubricators" and the cost to replace the gas cell, the SYSTEM 24 lubricator is recommended to be used once and the parts subsequently disassembled for recycling.

**Recycling advise**

1. Remove gas generating battery cell with a 21 mm spanner and dispose of as battery waste. Note: A small amount of hydrogen gas will escape while the cell is being removed, do not detach it in the presence of a naked flame.
2. The container and piston are made of PET and can be recycled with other plastic waste.
3. If after use the lubricator still contains lubricant please dispose of in accordance with local regulations.

**SKF SYSTEM 24 approved and available lubricants**

**SKF Greases**

Complete designation	Grease	Description
LAGD 125/WA2	LGWA 2	Multi-purpose EP type grease
LAGD 60/WA 2 (60 ml version)	LGWA 2	Multi-purpose EP type grease
LAGD 125/EM2	LGEM 2	High loads, slow rotations
LAGD 125/HB2	LGHB 2	High temperature, loads, plain bearing
LAGD 125/FP2	LGFP 2	Food processing industry
LAGD 125/HP2	LGHP 2	High performance polyurea
LAGD 125/GB2	LGGB 2	Biodegradable low toxicity

**SKF Oils**

Complete designation	Oil	Description
LAGD 125/HMT68	HMT68	EP type chain oil
LAGD 60/HMT68	HMT68	EP type chain oil
LAGD 125/HHT26	HHT265	High temperature chain oil
LAGD 125/HFP12	HFP120	Food grade oil

**Tecnical data SKF Oils**

Designation	LHMT 68	LHHT 265	LHFP 120
Description	Medium temperature oil	High temperature oil	Food compatible, USDA H1 approved oil
Specific gravity	0,875	0,951	0,857
Colour	Yellow-brown	Green-brown	Pale yellow
Base oil type	Mineral	Synthetic	Medical white oil
Thickener	Not applicable	Not applicable	Not applicable
Operating temperature range,	-10 to 90 °C (14 to 194 °F)	-20 to 250 °C (-4 to 482 °F)	-20 to 150 °C (-4 to 302 °F)
Base oil viscosity:			
20 °C, mm <sup>2</sup> /s	-	-	-
40 °C, mm <sup>2</sup> /s	68	265	120
100 °C, mm <sup>2</sup> /s	-	-	-
Flash point	222 °C (432 °F)	230 °C (446 °F)	212 °C (414 °F)
Pour point	-27 °C (-17 °F)	-46 °C (-51 °F)	-27 °C (-17 °F)
Available pack sizes	60 and 125 ml automatic lubricator SYSTEM 24	125 ml automatic lubricator SYSTEM 24	125 ml automatic lubricator SYSTEM 24
Designation	<b>LAGD 125/HMT68</b> <b>LAGD 60/HMT 68</b>	<b>LAGD 125/HHT26</b>	<b>LAGD 125/HFP12</b>

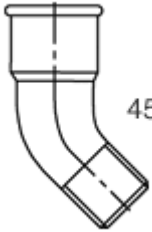
**Specials**

Complete designation	Grease	Description	Supplier
LAGD 125/LG201	Optipit	Windmill slewing ring	Optimol
LAGD 125/LG202	Obeen UF 2	Food processing grease	Optimol
LAGD 125/LG301	Mobiltemp 1		Mobil
LAGD 125/LG302	Mobiltemp SHC 100		Mobil
LAGD 125/LG337	Kalith EP2		Condat
LAGD 125/LG602	Biotop 9488, SKF	Biodegradable grease	Tribol
LAGD 125/LG603	Tribol 823 FM	Food grease, white colour	Tribol
LAGD 125/LG701	Tivela Compound	Low temperatures, soft grease NLGI 0	Shell
LAGD 125/LG801	Pluton EM 2	Polyurea grease	Fina

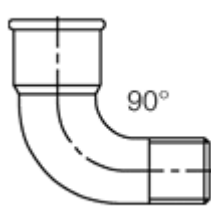
**Accessories**

Designation	Description	Designation	Description
LAGA 45	Angle connection 45°	LAGM 4	Manifold (4 to 1)

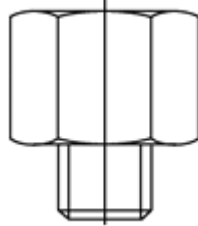
<b>LAPA 90</b> <b>LAPN 1/2</b> <b>LAPN 1/4</b>	Angle connection 90° Nipple G 1/4 - G 1/2 Nipple G 1/4 - G 1/4	<b>LAPF F1/4</b> <b>LAPF M1/8</b> <b>LAPF M1/4</b>	Tube connection female G 1/4 Tube connection male G 1/8 Tube connection male G 1/4
<b>LAPN 1/8</b> <b>LAPN 3/8</b> <b>LAPN 6</b> <b>LAPN 8</b>	Nipple G 1/4 - G 1/8 Nipple G 1/4 - G 3/8 Nipple G 1/4 - M6 Nipple G 1/4 - M8x1,25	<b>LAPF M3/8</b> <b>LAPC 50</b> <b>LAPV 1/4</b> <b>LAPV 1/8</b>	Tube connection male G 3/8 Clamp Non return valve G 1/4 Non return valve G 1/8
<b>LAPN 8x1</b> <b>LAPN 10</b> <b>LAPN 10x1</b> <b>LAPN 12</b>	Nipple G 1/4 - M8x1 Nipple G 1/4 - M10x1,5 Nipple G 1/4 - M10x1 Nipple G 1/4 - M12	<b>LAPB D2</b> <b>LAPB 3x4E</b> <b>LAPB 3x7E</b> <b>LAPB 3x10E</b>	Brush round Ø 20 mm Brush 30 x 40 mm Brush 30 x 70 mm Brush 30 x 100 mm
<b>LAPN 12x1.5</b> <b>LAPE 50</b> <b>LAPE 35</b> <b>LAPM 2</b>	Nipple G 1/4 - M12x1,5 Extension 50 mm Extension 35 mm Y-connection	<b>LAPB 5-16</b> <b>LAPG 1/4</b> <b>LAPT 1000</b>	Elevator brush, 5-16 mm gap Grease nipple G 1/4 Flexible tube, 1000 mm long, 8x6 mm
<b>LAPM 1x1</b> <b>LAPM 1x3</b> <b>LAPM 1x5</b>	Mounting bracket, single Mounting bracket, triple Mounting bracket, fivefold	<b>LAPP 1</b> <b>LAPP 2</b> <b>LAPP 3</b>	Dust protection cap Protection base Protection cover



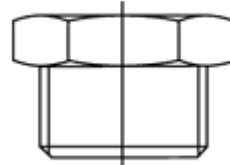
LAPA 45



LAPA 90



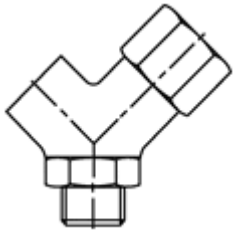
LAPN range



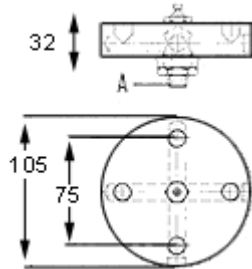
LAPN range



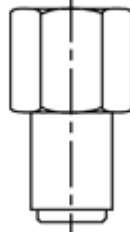
LAPE range



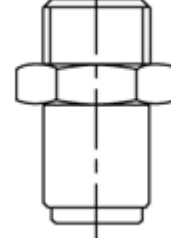
LAPM 2



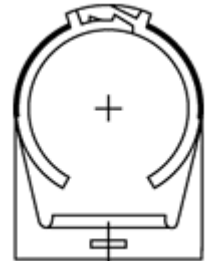
LAPM 4



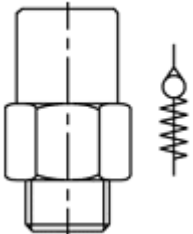
LAPF F1/4



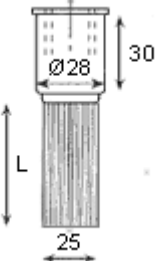
LAPF M range



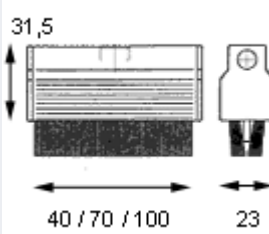
LAPC 50



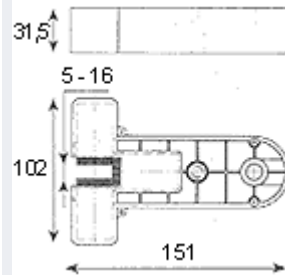
LAPV range



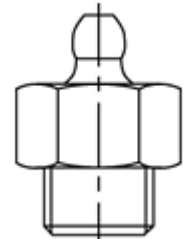
LAPB D2



LAPB 3x.. range



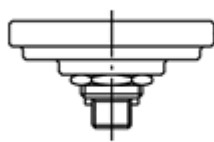
LAPB 5-16



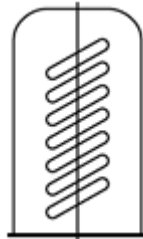
LAPG 1/4



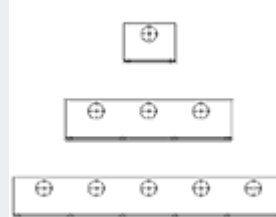
LAPT 1000



LAPP 2



LAPP 3



LAPM 1x ... range

