

# Skillair® LUBRICATOR

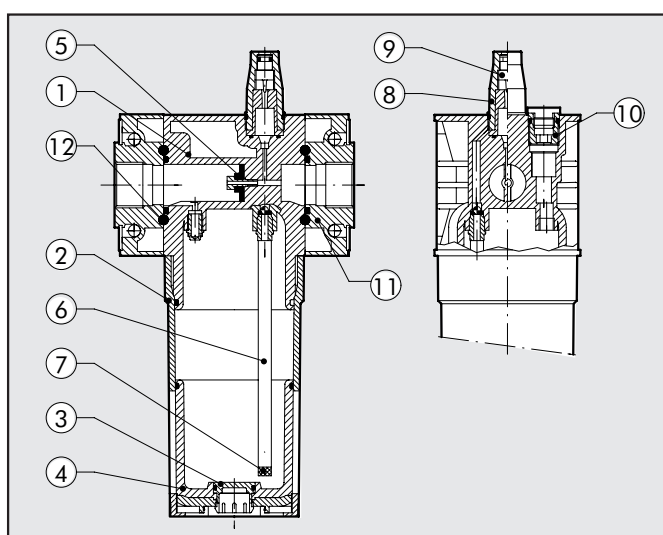
The pneumatic lubricator is the simplest way of properly lubricating actuators connected to a circuit. As air flows from the mains through the lubricator, it encounters the diaphragm which obstruct the flow and the air is forced through the Venturi tube. The inside of the Venturi tube is connected to the inspection dome, which connects with the bowl via a tube with a regulating needle in between. The drop in pressure caused by the Venturi tube sucks up air through the dome, the tube and lastly into the bowl containing oil. The quantity of oil controlled by the regulating needle then flows back from the bowl to the circuit.



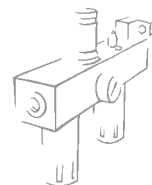
TECHNICAL DATA	LUB 100	LUB 100	LUB 200	LUB 200	LUB 200	LUB 300	LUB 300	LUB 300
Threaded port	1/4"	3/8"	1/4"	3/8"	1/2"	1/2"	3/4"	1"
Type of lubrication	Mist		Mist		Mist			
Bowl capacity	cm³	50	95		160			
Versions	Standard - CA - CD		Standard - CA - CD		Standard - CA - CD - ML CA ML - CDV - CDML			
Max. input pressure	1.5MPa - 15bar - 217psi		1.3MPa - 13bar - 188psi		1.3MPa - 13bar - 188psi			
Flow rate at 6.3 bar (0.63 MPa-91 psi)	NI/min	1100	2200		3500			
ΔP 0.5 bar (0.05 MPa – 7 psi)	scfm	39	71		125			
Flow rate at 6.3 bar (0.63 MPa-91 psi)	NI/min	1500	3700		5500			
ΔP 1 bar (0.1 MPa – 14 psi)	scfm	53	131		196			
Fluid	Filtered compressed air							
Max temperature	°C	50	50		50			
at 1 MPa; 10 bar; 145 psi	°F	122	122		122			
Weight	Kg	0.4	0.7		1.4			
Wall fixing screws	M4x50		M5x60		M5x70			
Mounting position	Vertical							
Recommended oils	ISO and UNI FD22 (Energol HPL ÷ Spinesso ÷ Mobil DTE ÷ Tellus Oil)							
Notes on use	Install the lubricator as close as possible to the point of use. Fill the lubricator bowl with oil before pressurizing the system. Do not use cleaning oils, brake fluid oils or solvents in general.							
	For the best lubrication results, set the drip rate to one drop per 300-600 NI							

## COMPONENTS

- ① Technopolymer body
- ② Bowl: technopolymer for LUB 100 and 200, metal for LUB 300
- ③ Technopolymer plug
- ④ Clear technopolymer glass
- ⑤ NBR Venturi tube diaphragm
- ⑥ Rilsan oil suction tube
- ⑦ Filter
- ⑧ Clear technopolymer inspection dome
- ⑨ OT58 brass oil flow regulating needle
- ⑩ OT58 brass oil filling plug
- ⑪ Zamak end plate
- ⑫ NBR gaskets







# Skillair® 400 LUBRICATOR

High-performance mist lubricator in various versions.

- Activation guaranteed at low flows
- High ratio of quantity of lubricant to air flow.
- Various oil filling configurations.

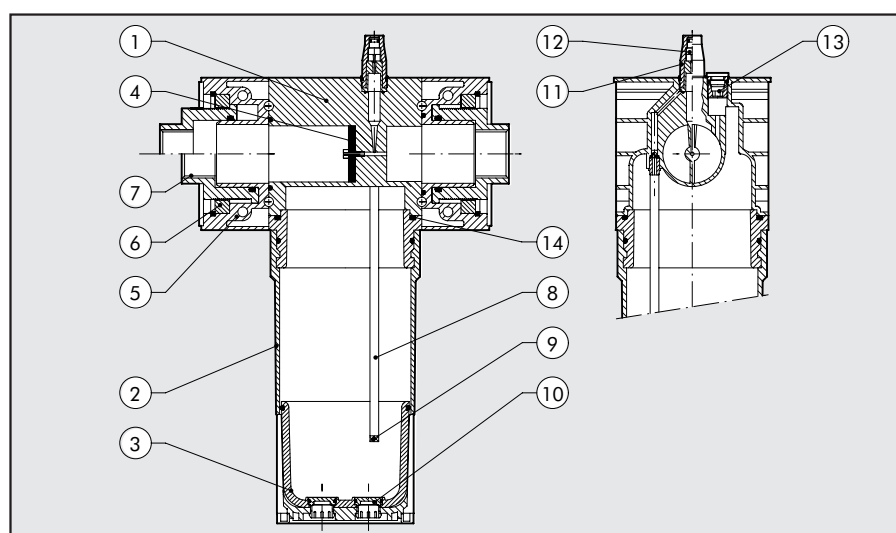


TECHNICAL DATA		LUB 400			
Threaded port		G 1"	G 1"1/4	G 1"1/2	G 2"
Type of lubrication		Mist			
Bowl capacity		800			
Versions		Standard - CA - CD - ML - CA ML - CDV - CDML			
Max. input pressure		1.3			
		13			
		188			
Flow rate at 6.3 bar (0.63 MPa-91 psi)		18.000			21.000
ΔP 0.5 bar (0.05 MPa – 7 psi)		640			750
Fluid		Filtered compressed air			
Max temperature		50			
at 1 MPa; 10 bar; 145 psi		122			
Weight		4.9			5.7
Wall fixing screws		M6 x 110			
Mounting position		Vertical			
Recommended oils		ISO and UNI FD22 (Energol HPL ÷ Spinesso ÷ Mobil DTE ÷ Tellus Oil)			
Notes on use		Install the lubricator as close as possible to the point of use. Fill the lubricator bowl with oil before pressurizing the system. Do not use cleaning oils, brake fluid oils or solvents in general.			
		For the best lubrication results, set the drip rate to one drop per 300-600 NI			

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## COMPONENTS

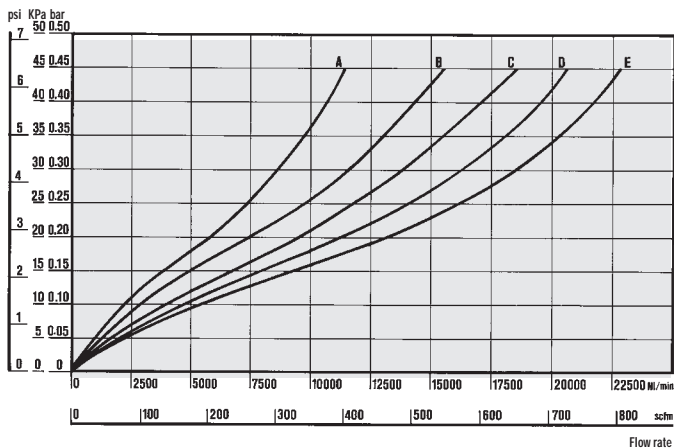
- ① Aluminium body
- ② Aluminium bowl
- ③ Clear technopolymer glass
- ④ NBR Venturi tube diaphragm
- ⑤ Aluminium end plate
- ⑥ OT58 brass retaining ring
- ⑦ OT48 brass threaded bush with axial adjustment
- ⑧ Rilsan oil suction pipe
- ⑨ Filter
- ⑩ Technopolymer plug
- ⑪ Clear technopolymer inspection dome
- ⑫ OT58 brass oil flow regulating needle
- ⑬ OT58 brass oil filling plug
- ⑭ NBR gaskets



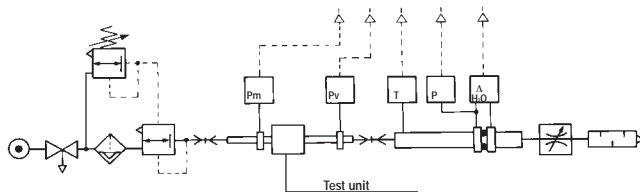
## FLOW CHARTS

### LUB 400 1''

$\Delta P = (P_m - P_v)$



Department  
of Mechanics  
Turin Polytechnic

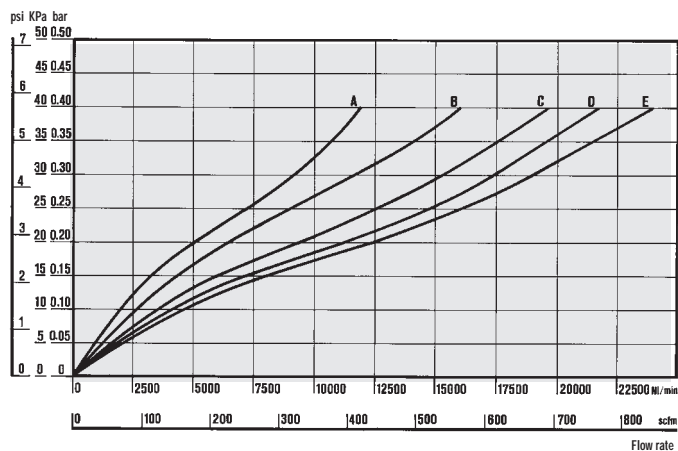


• Flow tests carried out at the Department of Mechanics, Turin Polytechnic, using the computerized test bench following CETOP RP50R recommendations (ISO DIS 6358-2-approved) with ISO 5167 diaphragm gauge.

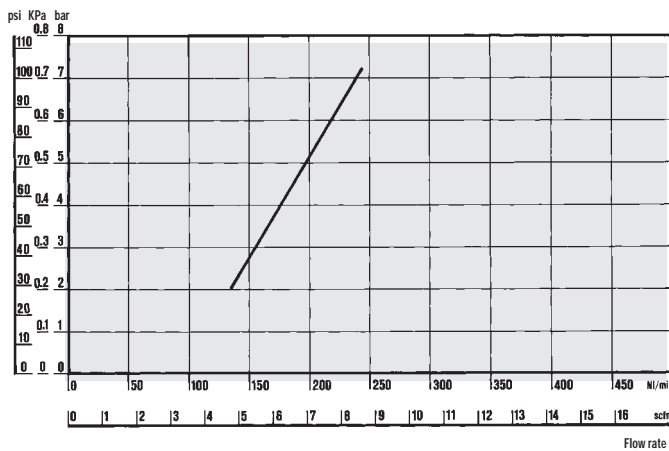
- (A) = 2 bar - 0,2 MPa - 29 psi
- (B) = 4 bar - 0,4 MPa - 58 psi
- (C) = 6 bar - 0,6 MPa - 87 psi
- (D) = 8 bar - 0,8 MPa - 116 psi
- (E) = 10 bar - 1 MPa - 145 psi

### LUB 400 2''

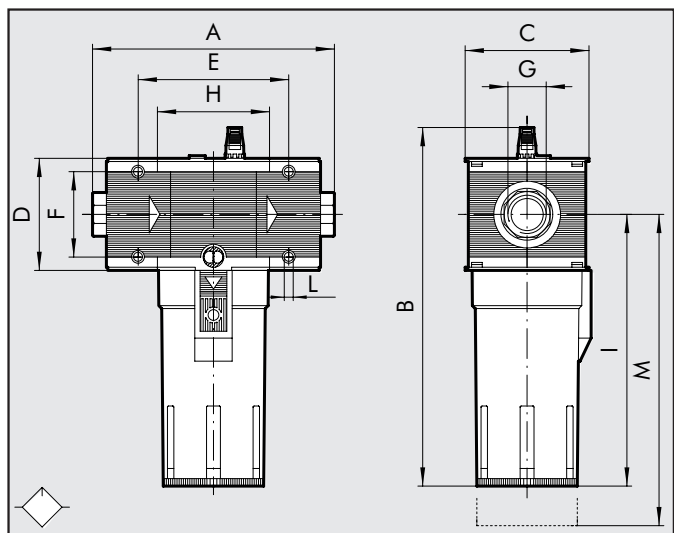
$\Delta P = (P_m - P_v)$



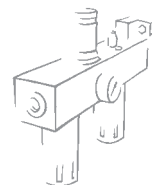
$\Delta P = (P_m - P_v)$



## DIMENSIONS



	LUB 400	LUB 400	LUB 400	LUB 400
Threaded port	G 1"	G 1"1/4	G 1"1/2	G 2"
A	225÷255			283÷313
B	338			
C	116			
D	105			
E	141.4			
F	80			
G	G 1"	G 1"1/4	G 1"1/2	G 2"
H	105.4			
I	256			
L	M6 hole			
M	285			



## LUBRICATORS : MINIMUM LEVEL (ML)

Available in sizes 300 and 400.

This version gives two electric signals controlling maximum and minimum level. They can be used to control acoustic alarms, lights, etc. There is no signal between minimum and maximum level.

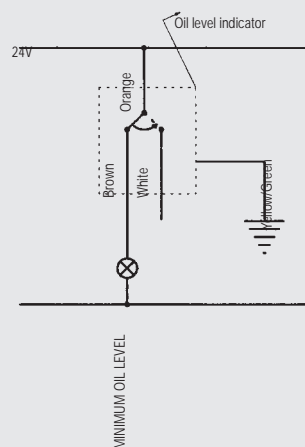
### WIRING

#### Level indicator

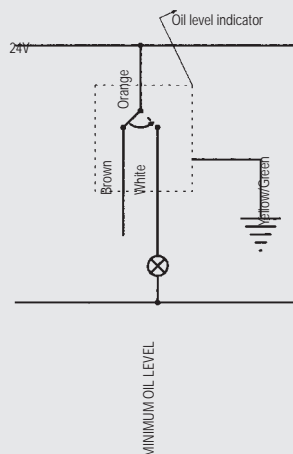
White = 1st signal (maximum oil level)  
Brown = 2nd signal (minimum oil level)  
Orange = Common  
Yellow/Green = Earth  
Voltage = 24V  
Contact = 0.75 A 10W

NB: The unused end plate must be suitably insulated.

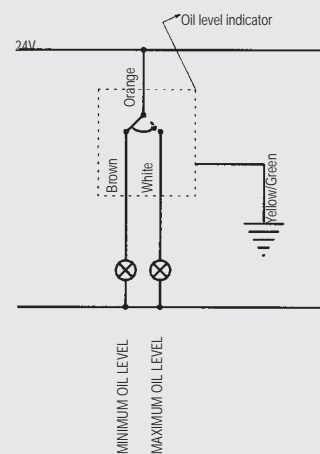
#### 1.1 Minimum level signal



#### 1.2 Maximum level signal



#### 1.3 Minimum and maximum oil level signal



## LUBRICATORS: AUTOMATIC MINIMUM LEVEL FILLING (CAML)

Available in size 300 and 400.

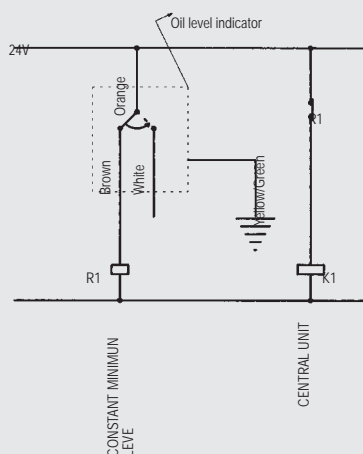
Used for filling the bowl with oil during operation of the system only if the oil inlet pressure is higher than the pressure inside the lubricator bowl.

The electric indicator inside the bowl sends an electric signal that is used to activate the oil unit.

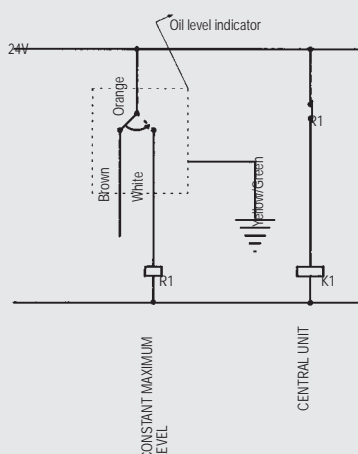
When the oil reaches the maximum level, another signal deactivates the unit. In this case the lubrication system operates with

the oil level between the maximum and minimum values. If it is necessary to keep the oil level in the bowl constant, only one of the two signals can be used. Pressure range 3-10 bar. Connect the pipe from the central unit to the G1/4 fitting on the bowl. The wiring features are the same as for model ML.

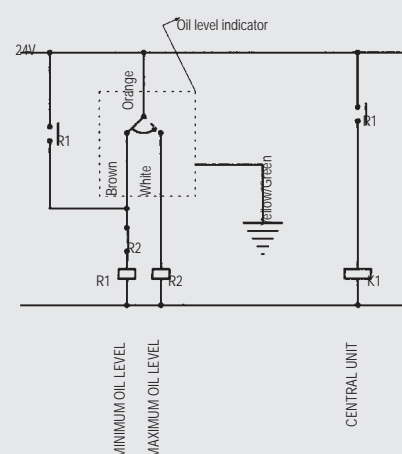
#### 1.1 Constant minimum level



#### 1.2 Constant maximum level



#### Oil level between maximum and minimum



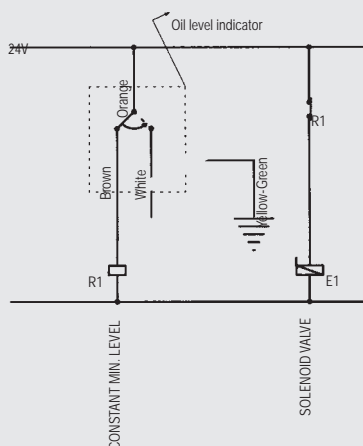
## LUBRICATOR: DEPRESSION FILLING WITH MINIMUM LEVEL (CD ML)

### DEPRESSION FILLING WITH MINIMUM LEVEL

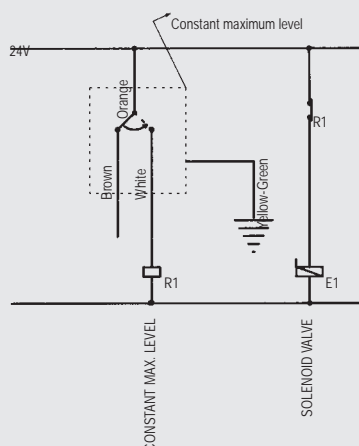
Available in sizes 300 and 400, this lubricator is controlled by a solenoid valve (2/2 NC minimum bore 3) situated on the lubricator body. It reduces pressure inside the bowl allow it to be filled with oil taken from a tank at ambient pressure, which can be located in a lower position than the lubricator (max. difference in height 2 m). The electric indicator inside the bowl sends

an electric signal used to activate the valve. When the oil reaches the maximum level, another signal disactivates the valve. In this case, the lubricator system operates with the oil level between minimum and maximum. If it is necessary to keep the oil level in the bowl constant, only one of the two signals can be used. Pressure range 3-10 bar. Connect the oil tank to the G1/4 fitting on the bowl.

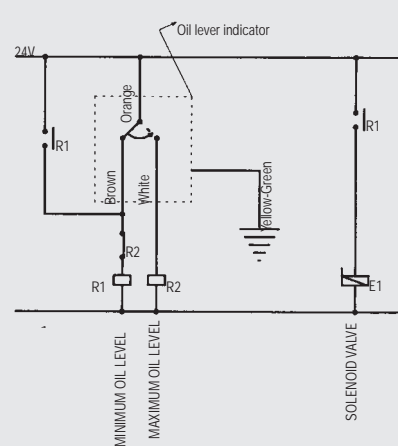
#### 1.1 Constant minimum level



#### 1.2 Constant maximum level



#### 1.3 Oil level between maximum and minimum



## OTHER VERSIONS SHOWN IN THE CATALOGUE

### AUTOMATIC FILLING (CA)

Available in all sizes. The bowl is only filled with oil during operation of the system if the oil inlet pressure is about 3 bar higher than the pressure inside the bowl. In any case, it must not exceed 15 bar. The float opens and closes the oil intake valve. Lubrication continues during oil filling. The timer can be used to control the central unit so that cycles are performed between zero and the filling pressure. These timed cycles allow the oil level in the lubricator to be topped up. Connect the tube from the central unit to the G1/8 fitting below the bowl.

### FILLING BY DEPRESSION (CD)

Available in all sizes. It is operated by means of a button on the lubricator body. The pressure inside the bowl drops to allow it to be filled with oil taken from a tank at ambient pressure, which can be located in a lower position than the lubricator (max. difference in height 2 m). Oil filling stops when the level of oil raises the float and shuts off a specific valve. Important – The SK4 lubricator is filled with oil by hand. Filling must stop when the oil level is visible through the spy-hole in the bowl release lever. Pressure range 3-10 bar. Lubrication is discontinued during filling. Connect the oil tank to the G1/4 fitting below the bowl.

### FILLING BY DEPRESSION (CVD) WITH VALVE

Available in sizes 300 and 400. It is operated by means of a solenoid valve (2/2 NC minimum bore 3) situated on the lubricator body. The pressure inside the bowl drops to allow it to be filled with oil taken from a tank at ambient pressure, which can be located in a lower position than the lubricator (max. difference in height 2 m). Oil filling stops when the level of oil raises the float and shuts off a specific valve. Important – The SK4 lubricator is filled with oil by hand. Filling must stop when the oil level is visible through the spy-hole in the bowl release lever. Pressure range 3-10 bar. Lubrication is discontinued during filling. Connect the oil tank to the G1/4 fitting below the bowl.

