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.

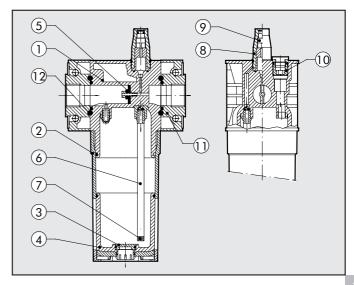
The quantity of oil controlled by the regulating needle then flows back from the bowl to the circuit.



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	cm ³	50		95			160		
Versions		Standard	- CA - CD	Standard - CA - CD		Standard - CA - CD - ML			
							CA ML - CDV - CDML		
Max. input pressure		1.5MPa - 15	ibar - 217psi	1.3٨	·		1.3٨	BMPa - 13bar - 188psi	
Flow rate at 6.3 bar (0.63 MPa-91 psi)	NI/min	11	00		2200		3500		
ΔP 0.5 bar (0.05 MPa – 7 psi)	scfm	3	9	71		125			
Flow rate at 6.3 bar (0.63 MPa-91 psi)	NI/min	15	00	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

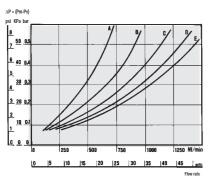
- 1) Technopolymer body
- 2 Bowl: technopolymer for LUB 100 and 200, metal for LUB 300
- 3 Technopolymer plug
- 4 Clear technopolymer glass
- (5) NBR Venturi tube diaphragm
- 6 Rilsan oil suction tube
- (7) Filter
- (8) Clear technopolymer inspection dome
- 9 OT58 brass oil flow regulating needle
- (11)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



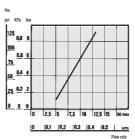


FLOW CHARTS

LUB 100 1/4 - 3/8

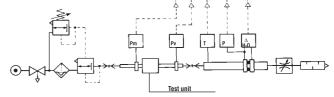


MINIMUM OPERATING FLOW CHART



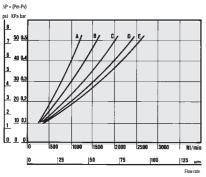




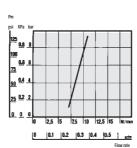


- Flow tests carried out at the Department of Mechanics, Turin Polytechnic, using the computerized test bench following CETOP RP50R recommendations (ISO DIS 6358-2-approved) with ISO 5167 diaphragm gauge.
- (A) = 2 bar 0,2 MPa 29 psi
- (D) = 8 bar 0,8 MPa 116 psi (E) = 10 bar 1 MPa 145 psi
- (B) = 4 bar 0,4 MPa 58 psi
- (C) = 6 bar 0.6 MPa 87 psi

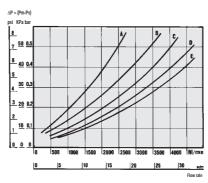
LUB 200 1/4 - 3/8 - 1/2



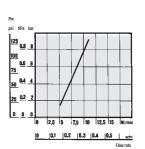
MINIMUM OPERATING FLOW CHART



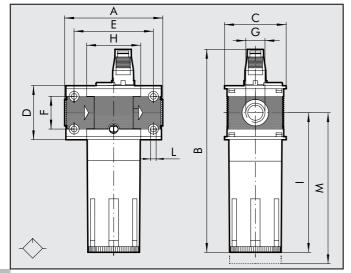
LUB 300 1/2 - 3/4 - 1



MINIMUM OPERATING FLOW CHART



DIMENSIONS



	LUB 100	LUB 100	LUB 200	LUB 200	LUB 200	LUB 300	LUB 300	LUB 300
T. Port	G 1/4	G 3/8	G1/4	G 3/8	G 1/2	G 1/2	G 3/4	G 1"
Α	7	8	93.5		110 112			
В	16	52	193			214		
С	5	0	63			72		
D	4	3	55			65		
E	6	3	78.5			92		
F	2	6		36			42	
G	G 1/4	G 3/8	G 1/4	G 3/8	G 1/2	G 1/2	G 3/4	G 1"
Н	4	3		55.5			65	
I	11	12		137.5			153	
L	M4	hole	M5 hole				M5 hole	
М	13	30	150		160			

Skillair 400 LUBRICATOR



High-performance mist lubricator in various versions.

• Activation guaranteed at low flows

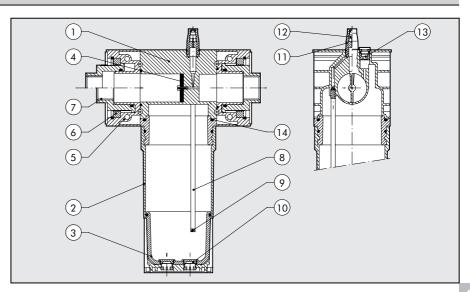
- High ratio of quantity of lubricant to air flow.
 Various oil filling configurations.



TECHNICAL DATA		LUB 400					
Threaded port		G 1"	G 1''1/4	G 1"1/2	G 2"		
Type of lubrication		Mist					
Bowl capacity	cm ³		8	300			
Versions			Standard - CA - CD - M	IL - CA ML - CDV - CDML			
Max. input pressure	MPa		1	1.3			
	Bar		1	13			
	psi		1/	88			
Flow rate at 6.3 bar (0.63 MPa-91 psi)	NI/min		18.	.000	21.000		
ΔP 0.5 bar (0.05 MPa – 7 psi)	scfm	640 750					
Fluid			Filtered cor	mpressed air			
Max temperature	°C		5	50			
at 1 MPa; 10 bar; 145 psi	°F		1:	22			
Weight	Kg		4.9		5.7		
Wall fixing screws			M6 :	x 110			
Mounting position			Ver	rtical			
Recommended oils		ISO	and UNI FD22 (Energol HPL ÷	- Spinesso ÷ Mobil DTE ÷ Tellu	s Oil)		
Notes on use		Install the lubricator as close as possible to the point of use. Fill the lubricator bowl with oil be		owl with oil before			
		pressurizing the system. Do not use cleaning oils, brake fluid oils or solvents in general.			nts in general.		
		For the best lubrication results, set the drip rate to one drop per 300-600 NI			-600 NI		

COMPONENTS

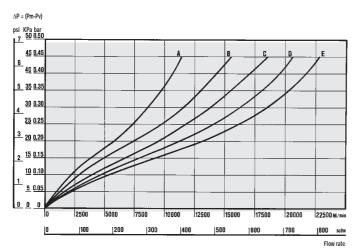
- 1 Aluminium body
- 2 Aluminium bowl
- ③ Clear technopolymer glass
- 4 NBR Venturi tube diaphragm
- (5) Aluminium end plate
- 6 OT58 brass retaining ring
- 7) OT48 brass threaded bush with axial adjustment
- 8 Rilsan oil suction pipe
- (9) Filter
- 10 Technopolymer plug
- 11) Clear technopolymer inspection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



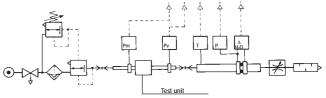


FLOW CHARTS

LUB 400 1"







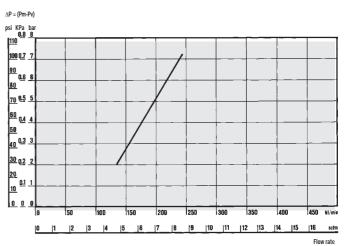
• Flow tests carried out at the Department of Mechanics, Turin Polytechnic, using the computerized test bench following CETOP RP50R recommendations (ISO DIS 6358-2-approved) with ISO 5167 diaphragm gauge.

- (A) = 2 bar 0,2 MPa 29 psi
- $\begin{array}{lll} (D) = & 8 \; bar \; \text{--} \; 0,8 \; MPa \; \text{--} \; 116 \; psi \\ (E) = & 10 \; bar \; \text{--} \; & 1 \; MPa \; \text{--} \; 145 \; psi \end{array}$
- (B) = 4 bar 0,4 MPa 58 psi
- (C) = 6 bar 0.6 MPa 87 psi

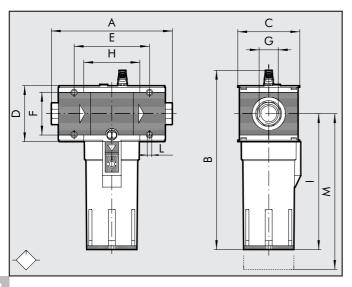
LUB 400 2"

$\Delta P = (Pm-Pv)$ psi KPa bar 50 0.50 <u>45 0.4</u> 40 0.40 5 35 0.35 30 0.30 <u>25 0.25</u> <u>3</u> 20 0.20 2 15 0.15 10 0.10 12500 15000 17500 20000 |100]400 500 |600 Flow rate

MINIMUM OPERATING FLOW CHART



DIMENSIONS



	LUB 400	LUB 400	LUB 400	LUB 400
Threaded port	G 1"	G 1''1/4 225÷255	G 1''1/2	G 2"
A B C		33	38 16	283÷313
D		10)5	
E F		8	1.4 0	
G H	G 1"	G 1''1/4	G 1''1/2 5.4	G 2''
l L		25 M6		
М		28		



LUBRICATORS: MINUMUM 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

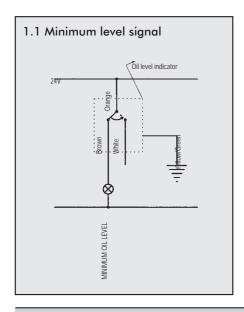
Level indicator

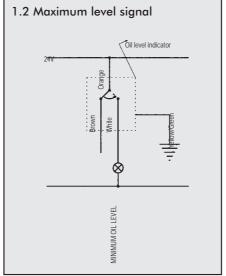
White = 1st signal (maximum oil level) Brown = 2nd signal (minimum oil level)

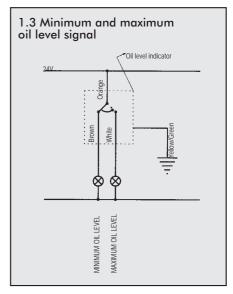
Orange = Common

Yellow/Green = Earth Voltage = 24V Contact = 0.75 A 10W

NB: The unused end plate must be suitably insulated.







LUBRICATORS: AUTOMATIC MINIMUM LEVEL FILLING (CAML)

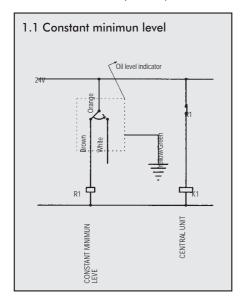
Available in size 300 and 400.

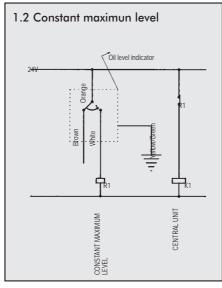
Used for filling the bowl with oil during operation of the system only if the oil inlet pressure is higher than the pressure inside the lubricator bowl.

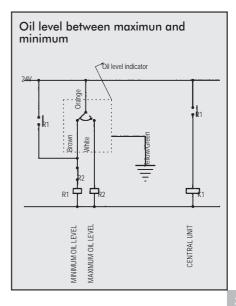
The electric indicator inside the bowl sends an electric signal that is used to activate the oil unit.

When the oil reaches the maximum level, another signal disactivates 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.







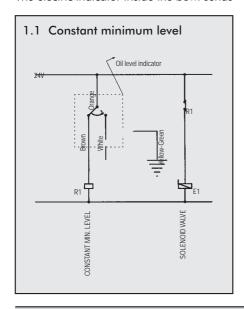


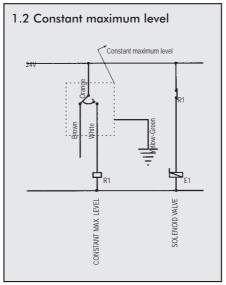
LUBRICATOR: DEPRESSION FILLING WITH MINIMUM LEVEL (CD ML)

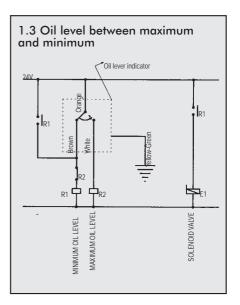
DEPRESSION FILLING WITH MINIMUM LEVEL

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.







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.



KEY TO CODES

LUB	100	1/4	STD
ELEMENT	SIZE	THREADED PORT	TYPE OF OIL FILLING
LUB	100	1/4 3/8	STD CA
	200	1/4	CD
		3/8	STD
		1/2	CA
	300	1/2	CD
		3/4	ML
		1	CA ML
	400	1	CDV
		1 1/4	CD ML
		1 1/2	
		2	

D: Standard version filled with oil by removing the bowl or through the top cap. Requires circuit relieving.

ORDERING CODES

Code	Description	Code	Description	Code	Description		
LUBRICATOR 100		LUBRICATOR	LUBRICATOR 300		LUBRICATOR 400		
3281001A	LUB 100 WITHOUT END PLATES	4481001A	LUB 300 WITHOUT END PLATES	6181001A	LUB 400 WITHOUT END PLATES		
3281002A	LUB 100 CA WITHOUT END PLATES	4481002A	LUB 300 CA WITHOUT END PLATES	6181002A	LUB 400 CA WITHOUT END PLATES		
3281005A	LUB 100 CD MANUAL W/END PLATES	4481003A	LUB 300 ML MANUAL W/END PLATES	6181003A	LUB 400 ML WITHOUT END PLATES		
3281001	LUB 100 1/4	4481005A	LUB 300 CD MANUAL W/END PLATES	6181004A	LUB 400 CD MANUAL W/END PLATES		
3281002	LUB 100 1/4 CA	4481006A	LUB 300 ML-CD AUTOMATIC W/END PLATES	6181006A	LUB 400 ML-CD AUTOMATIC W/END PLATI		
3281005	LUB 100 1/4 CD MANUAL	4481007A	LUB 300 ML-CA WITHOUT END PLATES	6181007A	LUB 400 ML-CA WITHOUT END PLATES		
3381001	LUB 100 3/8	4481008A	LUB 300 CD AUTOMATIC W/END PLATES	6181008A	LUB 400 CD AUTOMATIC W/END PLATE		
3381002	LUB 100 3/8 CA	4481001	LUB 300 1/2	6181001	LUB 400 1		
3381005	LUB 100 3/8 CD MANUAL	4481002	LUB 300 1/2 CA	6181002	LUB 400 1 CA		
		4481003	LUB 300 1/2 ML	6181003	LUB 400 1 ML		
LUBRICATOR	200	4481005	LUB 300 1/2 CD MANUAL	6181004	LUB 400 1 CD MANUAL		
3481001A	LUB 200 WITHOUT END PLATES	4481006	LUB 300 1/2 ML-CD AUTOMATIC	6181006	LUB 400 1 ML-CD AUTOMATIC		
3481002A	LUB 200 CA WITHOUT END PLATES	4481007	LUB 300 1/2 ML-CA	6181007	LUB 400 1 ML-CA		
3481005A	LUB 200 CD MANUAL W/END PLATES	4481008	LUB 300 1/2 CD AUTOMATIC	6181008	LUB 400 1 CD AUTOMATIC		
3481001	LUB 200 1/4	4581001	LUB 300 3/4	6281001	LUB 400 1 1/4		
3481002	LUB 200 1/4 CA	4581002	LUB 300 3/4 CA	6281002	LUB 400 1 1/4 CA		
3481005	LUB 200 1/4 CD MANUAL	4581003	LUB 300 3/4 ML	6281003	LUB 400 1 1/4 ML		
3581001	LUB 200 3/8	4581005	LUB 300 3/4 CD MANUAL	6281004	LUB 400 1 1/4 CD MANUAL		
3581002	LUB 200 3/8 CA	4581006	LUB 300 3/4 ML-CD AUTOMATIC	6281006	LUB 400 1 1/4 ML-CD AUTOMATIC		
3581005	LUB 200 3/8 CD MANUAL	4581007	LUB 300 3/4 ML-CA	6281007	LUB 400 1 1/4 ML-CA		
3681001	LUB 200 1/2	4581008	LUB 300 3/4 CD AUTOMATIC	6281008	LUB 400 1 1/4 CD AUTOMATIC		
3681002	LUB 200 1/2 CA	4681001	LUB 300 1	6381001	LUB 400 1 1/2		
3681005	LUB 200 1/2 CD MANUAL	4681002	LUB 300 1 CA	6381002	LUB 400 1 1/2 CA		
0001003	EGD 200 1/2 GD WWW TO/LE	4681003	LUB 300 1 ML	6381003	LUB 400 1 1/2 ML		
		4681005	LUB 300 1 CD MANUAL	6381004	LUB 400 1 1/2 ME		
		4681006	LUB 300 1 ML-CD AUTOMATIC	6381004	LUB 400 1 1/2 ML-CD AUTOMATIC		
		4681007	LUB 300 1 ML-CA	6381007	LUB 400 1 1/2 ML-CA		
		4681008	LUB 300 1 CD AUTOMATIC	6381007	LUB 400 1 1/2 CD AUTOMATIC		
		4001000	EOD 300 T CD ACTOMATIC	6481001	LUB 400 2		
				6481002	LUB 400 2 CA		
				6481003	LUB 400 2 CA		
				6481003	LUB 400 2 ME LUB 400 2 CD MANUAL		
				6481004	LUB 400 2 ML-CD AUTOMATIC		
				6481007	LUB 400 2 ML-CD AUTOMATIC		
				6481008	LUB 400 2 CD AUTOMATIC		