

Pulsarlube



A wide scope of Automatic lubricators

PULSARLUBE

Pulsarlube M

Automatic Single Point Lubricator



Overview

The Pulsarlube M electromechanical lubricator has been developed to compensate the performance of the gas type lubricator, which has been used widely. This product has combined the vertical self-priming pump mechanism and microprocessor control system, and it can be used mainly in case of considerable back pressure from the bearings, when precise lubrication is needed, and when a single-use lubricator is not economical.

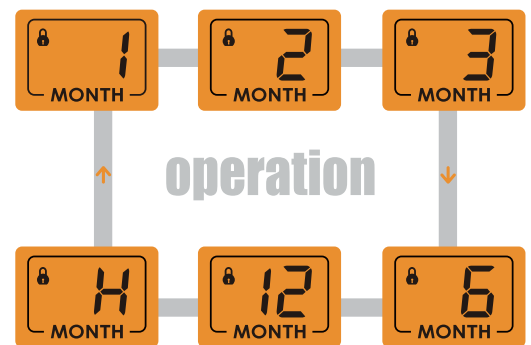
Operating principle

This product has a vertical self-priming pump with the motor/gear set controlled by the microprocessor. The dispensing rate may be set by choosing from 6 modes according to the characteristics of the equipment. The large LCD window is easy to use, helping one detect the grease and battery replacement time and high back pressure. This is a semi-permanent, mechanical automatic grease lubricator that is more economical than the single-use products since it enables replacing the grease pouch and battery pack after use. With high operating pressure of 30kgf/cm² (430psi) this product has increased dispensing reliability and installation in case gas-type products cannot be installed because of the high back pressure, allowing remote installation and multipoint lubrication up to 8 points.

■ Specification

Item	Specification
Grease volume	125, 250cc (volume select, pouch replaceable)
Pump type	Vertical self-priming pump
Battery pack	DC 4.5 voltage (replaceable)
Multi point lubrication	Can lubricate up to 8 points with distribution block
Outlet thread size	3/8" NPT
Dispensing rate (cc/stroke)	0.34cc/stroke @ 20°C
Dispensing pressure	Normal working pressure: 30kg/cm ² (430psi) Max. pressure: 60kg/cm ² (850psi)
Operating Temperature range	Standard Alkaline Battery: -15°C~60°C (5°F~140°F) Low temp Lithium Battery: -40°C~60°C (40°F~140°F)
IP code	IP54

■ LCD Displayed



Benefits

- Ease of setting by choosing from 6 various dispensing rates 1, 2, 3, 6, 12 months and 15 days with one-touch switch.
- The selected dispensing rate and number of days that passed are shown easy to check with the naked eye.
- Protect environment through product reuse by replacing the grease and battery pack.
- Shows dispensing failure because of excessive back pressure from full packed bearing or resistance of lube lines.
- Test function for various purposes such as operation checking, purging, motor overload diagnosis, etc.
- High operation pressure (30kgf/cm² (430 psi)) makes remote installation (Max 10m (30ft)) easy and ensures high reliability.
- Shows low battery to notify the exact time to replace.
- The M series lubricator comes with a unique automatic "Locking system" to prevent any possible accidental re-programming of the unit after it has been set.

■ How to order



KLT125 / PL1 (125cc) ① Pulsarlube model No.

KLT250 / PL1 (250cc) ② Grease type

①

②

Pulsarlube EX

Automatic Single Point Lubricator



Overview

The Pulsarlube EX is an eco-friendly, single-point lubricator that can be reused by changing only the grease and battery pack.

EX units circuits and parts are designed based on the energy limitation concept by adapting a non-sparking, explosion-proof structure that keeps an electrical device from sparking an explosive gas whether it is working under normal or certain abnormal condition.

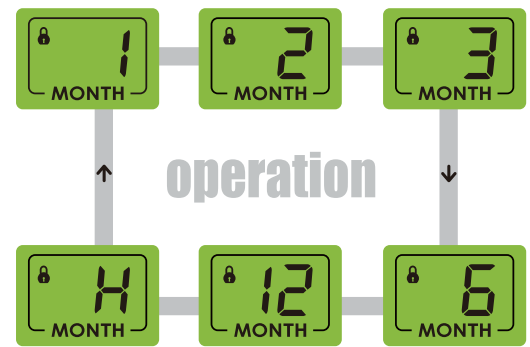
Operating principle

The EX lubricator includes a powerful positive displacement pump designed to reliably lubricate equipment. To install, simply mount the EX unit directly on the lubrication point or remote install up to 3m (10ft). The EX intermittently injects grease via a microprocessor chip to keep rotating equipment in hazardous locations precisely lubricated 24 hrs / day.

■ Specification

Item	Specification
Grease volume	125, 250cc (volume select, pouch replaceable)
Pump type	Vertical self-priming pump
Battery pack	DC 4.5 voltage (replaceable)
Applications	Single-point lubricator only
Remote installation	Within 1m (3ft)
Dispensing Pressure	Max pressure: 15kg/cm ² (200 psi)
IP code	IP54

■ LCD Displayed



■ Description of certification

	UL	ATEX	KTL
Rating	Class I Division 2 Groups – C, D	EEX nL IIB T5 IP54	EEX nC IIB T5 IP54
Gas groups	D-C1 I Div 1/2	II A	II A
	D-C1 I Div 1/2	II B	II B
Maximum Surface Temperature	T6 (85°C)	T5 (100°C)	T5 (100°C)
Enclosure protection indices		IP54	IP54
Classification of hazardous locations	D-C1 I Div 1/2 C1 I Zone 2 (gas)	Zone 2 (gas) Zone 22 (dust)	
Certification number	E304815	LCIE 07 ATEX 6100X	2007-1167-Q1

■ How to order



EX125 / PL1 (125cc)

EX250 / PL1 (250cc)

① ②

① Pulsarlube model No.

② Grease type

■ Caution



- When power is cut off in a hazardous location, or even if the installation location is not affected by flammable gas or vapors, please do not disassemble the battery.
- Use the battery produced by Pulsarlube.
- Do not use auxiliary battery.
- Do not open unit during operation.

Pulsarlube ML500

Automatic Single Point Lubricator



Overview

The Pulsarlube ML500 is primarily designed to ensure reliable lubrication large size (102mm(4in)O.D) bearings commonly found in mining, cement and steel industry. It is recognized that a common 125 or 250cc units does not have sufficient volume of lubricant required for large size bearings. Pulsarlube ML500 has a capacity of 500cc grease volume that meets the volume requirement specified by a bearing or equipment manufacturer.

■ Specification

Item	Specification
Grease volume	500cc (pouch replaceable)
Pump type	Vertical self-priming pump
Battery pack	Optional DC 4.5V standard battery or Lithium battery
Dispensing pressure	Normal working pressure: 30kg/cm ² (430 psi)
Operating temperature	Standard Alkaline Battery: -10°C~50°C (14°F~120°F) Low temp Lithium Battery: -40°C~60°C (-40°F~140°F)
IP code	IP 54

Battery selection is necessary to use Pulsarlube ML500 with large volume, long-term mode of up to 24 months, and remote multi-point installation.

■ LCD Displayed



■ Battery selection guide

	Standard Alkaline Battery	Lithium Battery
Temperature	-10°C ~ 50°C (14°F~122°F)	-40°C ~ 60°C (-40°F~140°F)
Back Pressure	30kg/cm ² (430psi) or less Constant Back Pressure	Over 30kg/cm ² (430psi)
Divider Block	N/A	Up to 8 points
Remote install Distance	10ft or less for remote installations	Handles greater than 10ft/line for remote

■ How to order



ML500 / PL1 (500cc)
① ②

- ① Pulsarlube model No.
- ② Grease type

Pulsarlube MSP

Automatic Single Point Lubricator

Overview

The Pulsarlube MSP has been designed to lubricate continuously while the machinery is operating. MSP unit is an externally powered unit. As a mechanical lubricator that uses external power so that only the grease pack is replaceable, Pulsarlube MSP dispenses a certain amount of grease during the operation of the machine; when the machine where the product is installed stops, the product also stops lubricating.



How to install

- 1) Install the product on the bearing vertically or remotely as in Pulsarlube M.
- 2) Connect the female end on the MSP power supply to the electric control panel or switch that is synchronized with the equipment. Before connecting the MSP power supply, check whether the equipment power output is AC or DC. For the VDC converter, the rated input power should be checked; when connecting, check the (+)/(-) polarity. (VDC cable connection: (+) light blue, (-) brown)

For safety and reliability, do not use the MSP power supply in the following places:

- Places with poor ventilation
- High temperature
- With volatile and flammable materials

- 3) Connect the MSP main body with power supply (VAC, VDC) connected to the electric control panel. (The red LED on the power supply will be turned on when external power is applied)

- 4) Press the power button to turn MSP on and select the desired dispensing rate.

■ Specification

Item	Specification
Available Model	KLT125, KLT250, ML500 and OL500
Multi-point lubrication	Can lubricate up to 8 points with distribution block
Outlet thread size	3/8" NPT
Backup battery	DC 4.5 Voltage (Service life: 5 years)
Dispensing Pressure	Normal working pressure: 30kg/cm ² (430 psi) Max pressure: 60kg/cm ² (850 psi)
Operating Temperature range	-15°C ~ 60°C (5°F ~ 140°F)
Other specification	Same as Pulsarlube M

■ LCD Displayed



■ Specification for MSP power supply

Item		MSP VAC AC-DC Adapter	MSP VDC DC-DC Converter
Rated Input Power		AC 100 ~ 220V, 0.5A 50 ~ 60 Hz	DC 12V ~ 24V
Rated Output Power		5.0V, 2A	
LED Lamp to indicate power ON		RED LED	
Case Size (mm)		85(D) x 49(W) x 32(H)	
Wire Length	Power Supply Side	Input	1M
		Output	4.5M
MSP side		90mm	

■ How to order



MSP125 / VDC / PL1

MSP250 / VAC / PL1

① ② ③

① Pulsarlube model No.

② Power supply code

③ Grease type

Pulsarlube OL500

Automatic Single Point Lubricator



Overview

The Pulsarlube OL500 oil lubricator consists of the main body with a vertical self-priming pump structure controlled by the microprocessor, a 500cc oil cartridge, and a battery pack. OL500 can be used semi-permanently by refilling oil and replacing the battery at the same time. When the switch of oil lubricator is turned "ON", the pump connected to the electric circuit automatically works, and the product displays the daily dispensing rate according to each mode. The automatic locking mode starts within 30 seconds of selecting from among 8 different dispensing rates, and the days that passed from the set date is displayed continuously.

Matters to be noted

Installing lubricating lines: Use Teflon tape to prevent oil leakages.

■ Specification

Item	Specification
Oil volume	500cc
Available oil viscosity	150 ~ 10,000 cSt@40°C(104°F)
Battery pack	DC 4.5V standard battery
Operating Temperature	-15°C ~ 60°C (5°F~140°F)
Max dispensing pressure	30kgf/cm ² (430psi) depends on oil viscosity
Multi point lubrication	Up to 4 points using remote installation kit (1250 RO series)

■ LCD Displayed



■ Necessary assembly kit for remote multi-point installation

No.	KIT No.	Description
1	1250RO-1	1-point remote installation kit for Pulsarlube OL500
2	1250RO-2	2-point remote installation kit for Pulsarlube OL500
3	1250RO-3	3-point remote installation kit for Pulsarlube OL500
4	1250RO-4	4-point remote installation kit for Pulsarlube OL500
5	C030	Oil Brush & Bracket Kit

· Remark: Oil brush not included in the 1250RO series

■ How to order



· Empty lubricator cartridge with battery

■ Caution



- When the product is operating, turn the black knob at the top counterclockwise for 2~3 times to open the air hole for the smooth lubrication (Air venting hole).
- When refilling oil, remove all foreign material in the mesh filter inside of the oil container regularly.
- At the first operation or after a long operation, the pump may idle because oil is drained. Thus, the product should be installed after removing the air using test function.

Dispensing Recommendations

In the chart below are some guidelines for bearing lubrication requirements. Requirements may vary with individual bearing types or operating conditions.

Bearing Shaft Dia	125cc		250cc		500cc	
	month	cc/Day	month	cc/Day	month	cc/Day
230~330mm (9" ~13")	N/A	-	N/A	-	½ month	33.3
116~229mm (6½" ~9")	N/A	-	½ month	16.6	1 month	16.6
102~165mm (4" ~6½")	½month	8.3	1 month	8.3	2 month	8.3
90~101mm (3½" ~4")	1 month	4.2	2 month	4.2	3 month	4.2
77~89mm (3" ~3½")	2 month	2.8	3 month	2.8	6 month	2.8
65~76mm (2½" ~3")	3 month	1.4	6 month	1.4	12 month	1.4
					18 month	0.9
51~64mm (2" ~2½")	6 month	0.7	12 month	0.7	24 month	0.7
25~50mm (1" ~2")	12 month	0.3	N/A	-	N/A	-

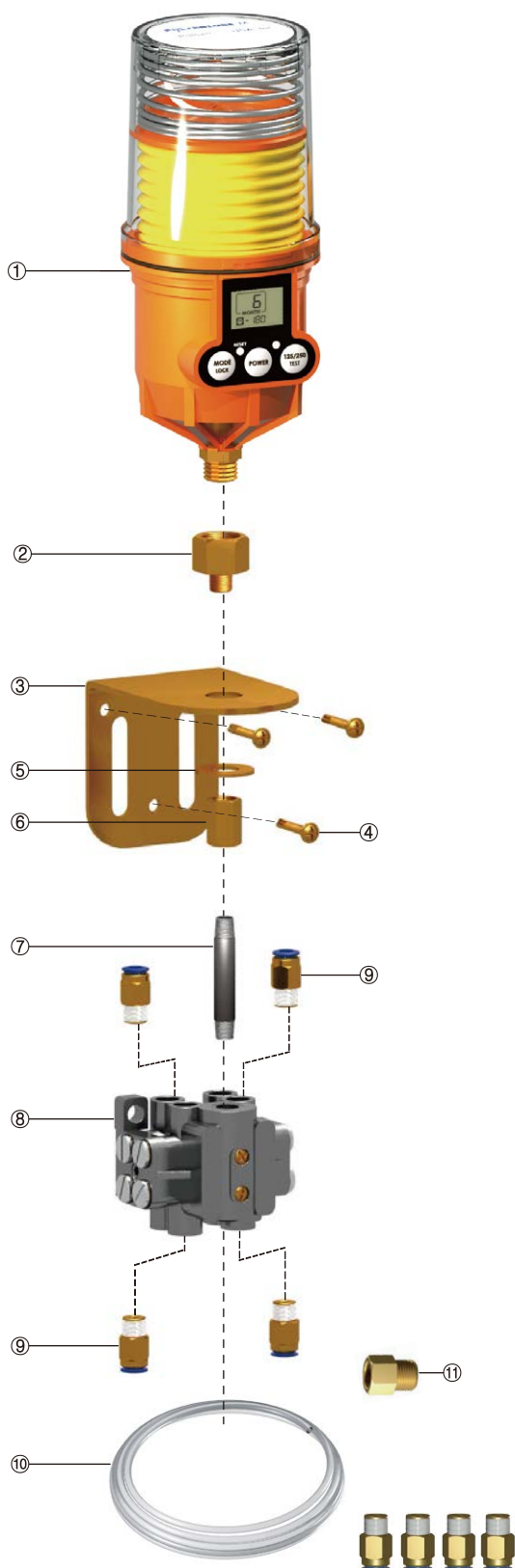
Pump dispensing cycle for M units

MODE (Month)	CC	125cc		250cc		500cc	
		Cycle/Time intervals	Cycles/Day	Cycle/Time intervals	Cycle/Day	Cycle/Time intervals	Cycle/Day
½		1 Hour	24	30 Minute	48	15 Minute	96
1		2 Hour	12	1 Hour	24	30 Minute	48
2		4 Hour	6	2 Hour	12	1 Hour	24
3		6 Hour	4	3 Hour	8	N/A	-
4		N/A	-	N/A	-	2 Hour	12
6		12 Hour	2	6 Hour	4	3 Hour	8
12		24 Hour	1	12 Hour	2	6 Hour	4
18		N/A	-	N/A	-	9 Hour	2.66
24		N/A	-	N/A	-	12 Hour	2

Accessory Parts

No.	Part Number	Parts Name	Detail	Q'ty	Image
1	A001	Reducer	PT 3/8"F × PT 1/4"M Adapter	1	
2	A002		PT 3/8"F × PT 1/8"M Adapter	1	
3	A011	Socket	1/4"F × 1/4"F Adapter	1	
4	A012		1/8"F × 1/8"F Adapter	1	
5	A106	Steel Pipe	1/8"M×1/8"M×50 Pipe Connector (50mm)	1	
	A107	Steel Pipe	1/8"M×1/8"M×100 Pipe Connector (100mm)	1	
6	A239	Tube Fitting	PC8-PT1/8M one touch fitting connector	1	
7	A240		PC6-PT1/8M one touch fitting connector	1	
8	A241	Bushing	PT 1/8"F × PT 1/4"M	1	
9	A242		PT 1/8"F × PT 3/8"M	1	
10	A212	Tube	8mm O.D Urethane tube	1m (3ft)	
11	A214-1		6mm O.D Nylon tube (Black)	3m (10ft)	
12	C021		Ø4 - I.D Ø2.5 Nylon tube	3m (10ft)	
13	B002	Mounting Bracket	Bracket	1	
14	B014	Cross Bridge	Horizontal Type	1	
15	B011	Divider Block	4 point U-4R type	1	
	B012		6 point U-6R type	1	
	B013		8 point U-8R type	1	
16	C001	Oil Brush	2 inch flat nylon brush(1/8"NPT)	1	
17	C003	Distributor	6(4P) M8 x 1P(N-F), M8x1P(2-F) (40088)	1	
18	C004	Resistance Valve	#1 Distributor Spraying (46011)	1	
19	C005	Plug	Oil distributor plug (M8x1P) [51164]	1	
20	C006	Reducer	Oil distributor reducer (PT1/8FxM8x1P)	1	
21	C007	Tube Fitting	Ø4 - PT1/8"	1	
22	C008	Bushing	Oil distributor bushing (Ø4xM8x1P)	1	
23	C009	Sleeve Ring	Oil tube sleeve ring (Ø4)	1	

DETAILED KIT PARTS AND ASSEMBLY PROCEDURE



No.	Part No.	DESCRIPTION	Q'TY
①	KLT-1250	Grease Dispenser	N/A
②	A002	PT3/8"F x PT1/8"M Adapter	1
③	B002	Mounting Bracket	1
④	B051	Self Drilling Screws	3
⑤	B057	Steel Washer	1
⑥	A012	PT1/8"F x PT1/8"F Adapter	1
⑦	A106	PT1/8"M Pipe Connector x 50mm	1
⑧	B011	Grease Type Divider Block U-4R	1
⑨	A240	PC6 - PT1/8"M Fitting Connector	8
⑩	A214-1	1/4" (6mm) O.D Nylon Tubing (10ft)	2
⑪	A243	Metric to inch thread converter for bearing zerk (USA only)	4

KIT 1250MD-4 Remote install Kit for 4 ports (No.2-No.11)

ASSEMBLY PROCEDURE

1. Install Mounting Bracket (③) at proper location with using of Screws (④) or Bolts. Mounting location should be very closed.
2. Screw Pipe connector (⑦) into Divider Block (⑧) inlet and tighten.
3. Insert Fitting Connector (⑨) into Divider Block (⑧) assembly and tighten.
4. Install Lubricator (①) using (②), (⑤), (⑥) Adaptors and washer on the Mounting Bracket (③).
5. If bearing zerk is Inch thread, then use (⑪) converter.
6. Tighten and position Lubricator and Divider block assemblies facing forward.
7. Measure and cut Tube (⑩) to appropriated length. Use push-in, self-seal tube fitting connector (⑨) for fast leak-tight connections. Be sure Tube (⑩) ends are cut perpendicular and no damage occurs to outside surface.
8. Setting Mode and make sure to use Dust Cover.

COMMENTS

1. All Parts should be assembled tightly with Teflon sealing tape.
2. NLGI#1 grease works best with the remote installation kit.

Note : All parts above are Metric thread.

DETAILED OIL KIT PARTS AND ASSEMBLY PROCEDURE

No.	Part No.	DESCRIPTION	Q'TY
①	KLT-OL500	Oil Dispenser	N/A
②	A002	PT3/8"F x PT1/8"M Adapter	1
③	B002	Mounting Bracket	1
④	B057	Steel Washer	1
⑤	B051	Self Drilling Screws	9
⑥	C006	PT1/8"F x M8 x 1P Reducer	1
⑦	C003	6(4P)M8 x 1P Distributor	1
⑧	C004	#1 Resistance Valve	4
⑨	C005	M8 x 1P Plug	1
⑩	C021	Ø4-ID 2.5 Nylon Tubing (40ft)	1
⑪	C010	Ø4 x 1R Tube Clamp	8
⑫	C007	Ø4-PT1/8 Fitting Connector	4
⑬	C011	Ø4 x Ø2.5 Insert	8
⑭	C009	Sleeve Ring Ø4	8

Oil Brush and Bracket available separately. To order kit: Part # is C030

ASSEMBLY PROCEDURE

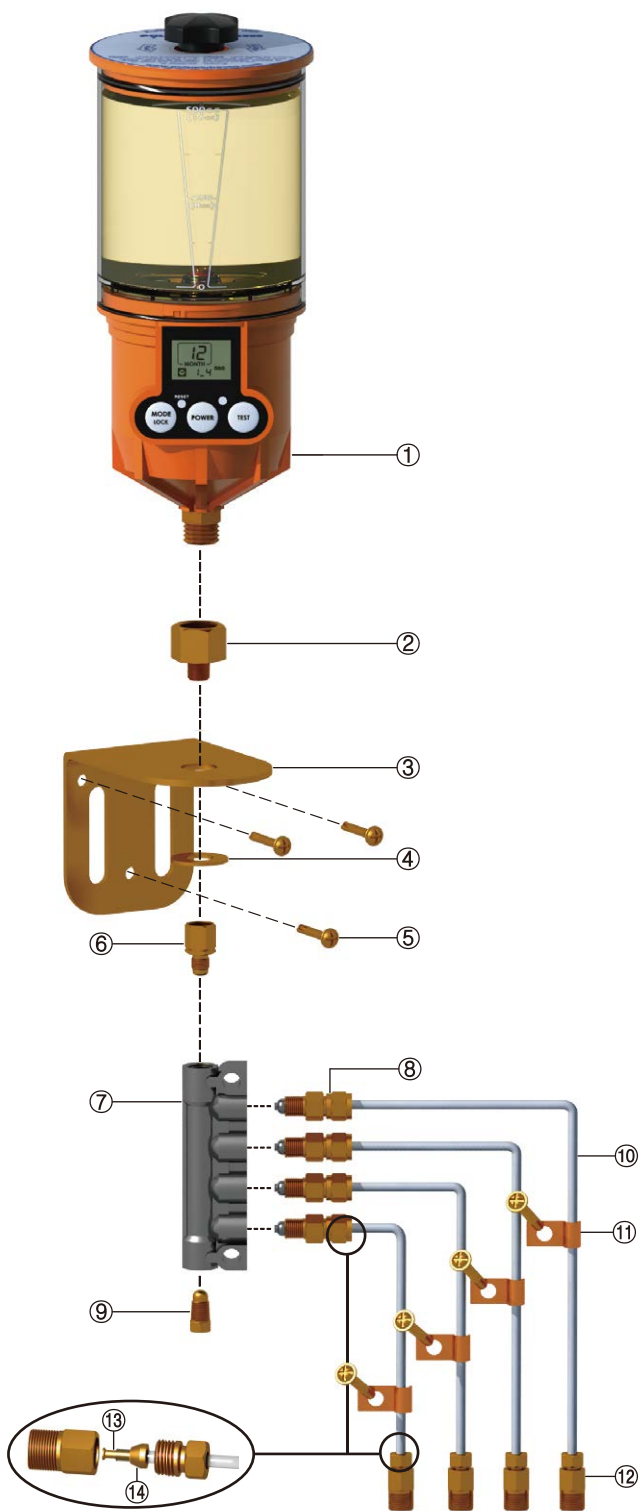
1. Select a proper location to allow for easy installation and easy oil filling.
2. Wrap Teflon around threading on part # A002 as well as part # C007. Distributor must be installed near lubricator. Plug 2 line of C003 distributor with C005 plug. Do not use Teflon tape on part # C004, C005, or C006. Simply tighten snugly to prevent oil leakage.
3. Install lubricator after sealing the 3/8" Male end with Teflon tape.
4. Unscrew top orange cartridge cap. Fill cartridge with oil to the 500cc level on the label. Press the "TEST" button to confirm that oil is dispensing properly. The unit will test for 20 seconds.

COMMENTS

1. Please check for compatibility between oil being used and plastic that lubricator is made of.
 Synthetic Hydrocarbons, PAO:O.K
 Silicones (All Types):O.K
 Fluorinated Esters:O. K
 Esters & Polyglycols:May Cause a Problem

- For more information, please contact your distributor

2. Dispensing rate may vary slightly according to oil viscosity, lube line length and ambient temperatures.



Note : All parts above are Metric thread.

SETTORE:	PRODUZIONE CARTA DA IMBALLAGGIO
AREA/ SETTORE :	MACCHINA ONDULATRICE
APPLICAZIONE:	LUBRIFICAZIONE SUPPORTI CUSCINETTI E RULLI ONDULATORE



Gent.mo,

Per avere una manutenzione affidabile sui supporti dei cuscinetti dei rulli in grado di garantire una corretta lubrificazione sia nel periodo Invernale che in quello Estivo, abbiamo proposto al Responsabile di Manutenzione dello Stabilimento l'installazione del *Sistema Automatico PULSARLUBE MSP* da 500 ml con Relè di controllo .

Le caratteristiche tecniche del Lubrificatore PULSARLUBE MSP consentono di avere benefici quali :

- lubrificazione continua e costante
- Sicurezza di manutenzione senza intervento dell'operatore
- Erogazione costante e regolare sia a Basse che Alte temperature (range - 20° + 55°).
- Funzionamento collegato al quadro di comando

I risultati raggiunti ci hanno permesso di standardizzare l'applicazione in tutto l'impianto e di informare anche altri futuri utilizzatori su questa soluzione estremamente affidabile.

GRTP srl

