

Pulsarlube



A wide scope of Automatic lubricators

PULSARLUBE



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Company Introduction

Brief History

Aiming to be the innovative leader in SPL business...

Pulsarlube USA was established in November of 2000 in Chicago IL to provide its customers the finest quality lubrication products throughout North & South America.

After conducting years of exhaustive research and development, along with an aggressive marketing plan, Pulsarlube is recognized as an industry leader in the manufacture of the world's most innovative automatic single point lubricators.

Given our products' proven technology, we continue to make every effort to improve upon the quality of our product line and always strive to constantly go above and beyond our customer's expectations. Pulsarlubes' lubrication innovation keeps a continuous, watchful eye over your critical moving parts.



International Subsidiaries

Pulsarlube GmbH



Europe Sales HQ Pulsarlube GmbH

Ober der Röth 4
D-65824 Schwalbach T/s, Germany
www.pulsarlube.de

KLT Co., Ltd



Manufacturing Facility KLT Co.,Ltd

597-2 Kyumseung Ri, Tan Hyun-Myun
Paju City, Kyunggi-Do, 413-840, Korea
www.pulsarlube.com

Key Customers





Overview

Pulsarlube self-contained automatic lubricators have been designed to provide a constant predictable supply of fresh grease or oil to bearings or other components within your capital intensive production equipment. The lubricants used within the units are of the highest quality available for a particular application. The standard units are available in 5 different dispensing rates and 5 specialized lubricant grades to cover all common applications. When compared with the high cost of lubrication application labor, or the hazards that can be associated with lubricating modern machinery, Pulsarlube single point lubricators offer a cost effective alternative to manual grease and oil application.

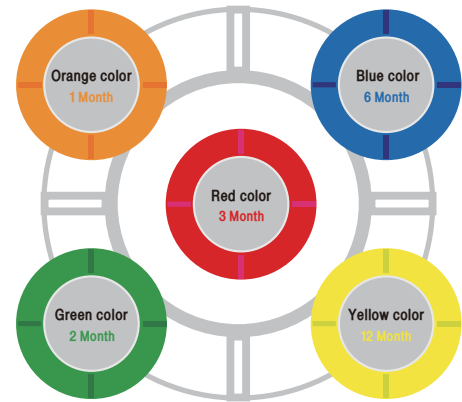
Operating principle

After installing a Pulsarlube of the desired dispensing period on the application point, turn on switch, then a small electric current is introduced to an electrochemical cell to produce an inert gas. This gas pushes the piston with steady pressure and dispenses the grease constantly for the desired period.

■ Specification

Item	Specification
Generated gas	N ₂ Non-flammable gas
Gas-generating method	Electro-chemical reaction
Housing design	Transparent plastic reservoir
Maximum distance for remote installation	1m (3ft); Tube with I.D 6mm (1/4")
Identifying feature	LED lamp
Dispensing rate	Color code fixed type
Explosion-proof / IP code	Ex ia II B T4 / IP68

■ Color coded



Benefits

- The use of a transparent reservoir makes checking the remaining grease easy.
- Generates nitrogen inert gas (N₂ gas), low explosiveness.
- Applies color code, thereby facilitating identifying how long a product can be used.
- Easy to control with the use of one-touch switch.
- Reliable constant & predictable lubricant supply.
- Enhanced equipment life, reduced failure rates.
- Constant lube supply flushes contaminants away.
- Easy determining whether it works through the LED lamp.

■ How to order



KLT100 / GR2 / PL1 (125cc)

KLT200 / GR2 / PL1 (250cc)

① ② ③

① Pulsarlube model No.

② Dispensing code

③ Grease type

Pulsarlube C

Automatic Single Point Lubricator



Overview

Unlike other products, the Pulsarlube C controls the gas generator precisely using a microprocessor so that it can dispense the exact amount of grease. In addition, it has LED lamp that helps the user see whether it is working as well as a self-diagnosis function. This lubricator is very convenient since it enables selecting from various using periods in a single unit. In particular, Pulsarlube C boasts of powerful chemical and vibration resistance.

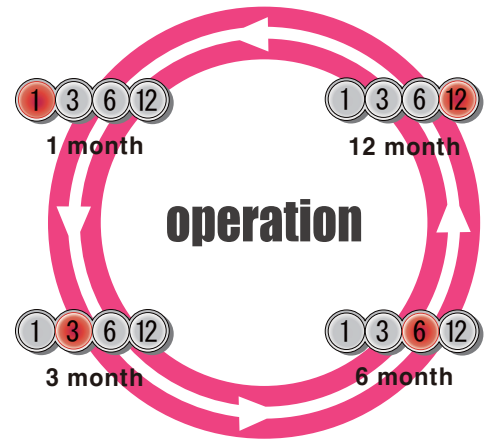
Operating principle

Nitrogen gas generated from the electrolysis reaction controlled by the microprocessor dispenses a certain amount of grease in the container constantly for the pre-set period. It has high accuracy, reliability and maintains the best lubricating condition inside of the bearing.

■ Specification

Item	Specification
Generated gas	N ₂ Non-flammable gas
Gas-generating method	Electro-chemical reaction
Housing design	Transparent plastic reservoir
Maximum distance for remote installation	1m (3ft); Tube with I.D 6mm (1/4")
Identifying feature	LED lamp
Dispensing control	1, 3, 6, and 12 months (Each single press of the button advances the mode to the next step)
Explosion-proof class/IP code	Ex ia II B T4 / IP68

■ LED Displayed



Benefits

- Easy mode change using one-touch switch.
- The LED lamp shows the mode change in order, thereby facilitating the checking of the period.
- High vibration resistance using engineering plastic with high shock resistance.
- High chemical resistance; allows using synthetic grease that is not compatible with plastic.
- Ease of checking whether it works, i.e., when the electrochemical reaction starts, LED lamp blinks every 10 seconds.
- Perfect waterproof quality.

■ How to order



KLT100C / PL1 (125cc)

KLT200C / PL1 (250cc)

①

②

① Pulsarlube model No.

② Grease type

Pulsarlube V

Automatic Single Point Lubricator



Overview

The Pulsarlube V gas-type lubricator is a mode-integrated product designed to help users set the dispensing rate much more easily by adopting the microprocessor and large LCD panel. It is also designed to ensure a precise, predictable and fresh supply of lubricant in a wide variety of Industrial applications.

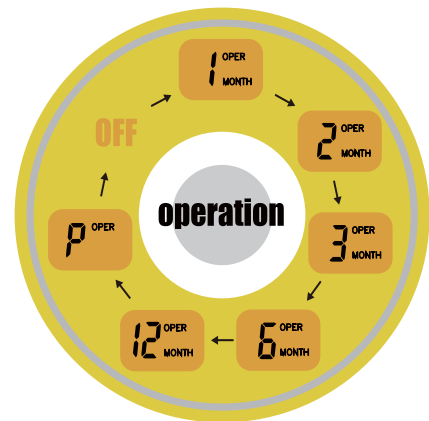
Operating principle

Pulsarlube V operates on the principle of the inert Nitrogen gas generation using an electrolyte and electrical current. Pressure is generated above a piston and lubricant is dispensed through an outlet at the base of the unit.

■ Specification

Item	Specification
Generated gas	N ₂ Non-flammable gas
Gas-generating method	Electro-chemical reaction
Housing design	Transparent plastic reservoir
Maximum distance for remote installation	1m(3ft); Tube with I.D 6mm (1/4")
Identifying feature	LCD display window and operating display
Dispensing control	1, 2, 3, 6, 12 months & Purge (Each single press of the button advances the mode to the next step)
Explosion-proof class/IP code	Ex ia II B T4 / IP54

■ LCD Displayed



Benefits

- Easy mode change using one-touch switch.
- The LCD window makes checking the months of the set mode from the outside easy.
- Power-saving mode; lower current consumption than the former LED type by flashing "OPER" when operating.
- With the pressure compensating program of the 8-bit microprocessor, exact dispensing is guaranteed.
- Easy of checking whether it works, i.e., when the electrochemical reaction starts, "OPER" blinks on the LCD window.
- The transparent container makes checking the remaining grease with the naked eye easy.

■ How to order



KLT500 / PL1 (125cc)
 KLT1000 / PL1 (250cc)
 ① ②

- ① Pulsarlube model No.
- ② Grease type

■ Caution



- When using the product outside or in a place where moisture can infiltrate it, be sure to use a waterproof cap.

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.

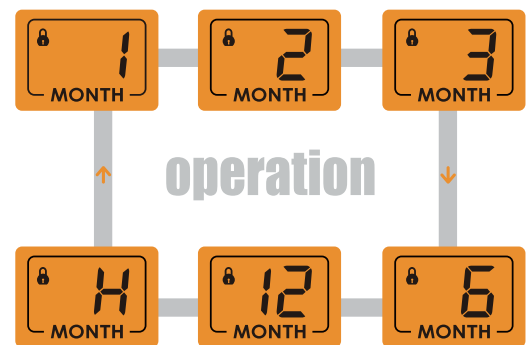
Operating principle

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.

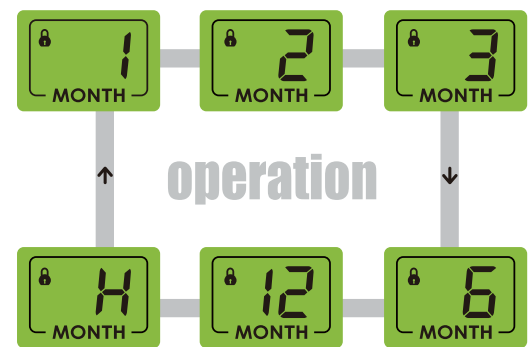
Operating principle

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 MS

Automatic Single Point Lubricator



Overview

The Pulsarlube MS is intended to avoid loss and waste of machinery and ensure the effective maintenance of the equipment.

Operating principle

The MS unit turns "On" or "Off" in synchronization with the equipment on which it is installed. It will dispense the preset amount of grease as long as the machine is operating. If the equipment is not operating, then the Pulsarlube MS unit goes into "stand-by mode" and does not dispense lubrication until the machine operates again. The MS unit turns ON/OFF through a Relay Box in accordance with the relate equipment power signal.

■ Specification

Item	Specification
Available Model	KLT125, KLT250, ML500 and OL500
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)	0.34 cc/stroke@20°C
Dispensing Pressure	Normal working pressure: 30kg/cm ² (430 psi) Max pressure: 60kg/cm ² (850 psi)
Operating Temperature range	Standard Alkaline battery: -15°C~60°C (5°F~140°F)
Other specification	Same as Pulsarlube M

■ LCD Displayed



■ MS relay box specification



Item		Specification
Rated input		AC 100 ~ 440V, 0.5W/50 ~ 60Hz
Rated output		Signal (Open collector type)
Power on signal		Red LED
Case size (mm)		85(D) x 49(W) x 32(H)
Wire length	Power Supply Side	Input: 1M Output: 4.5M
	MS product side	90mm

■ How to order



MS125 / PL1 (125cc)
MS250 / PL1 (250cc)
① ②

- ① Pulsarlube model No.
- ② Grease type

■ Caution



- MS unit is not external powered unit.
- Battery has to be replaced along with grease pouch.

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 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 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.

Pulsarlube S

Automatic Single Point Lubricator



Overview

Pulsarlube S operates unique and it designed very scientific, Spring pushes lubricant upward and maintains it within the lubricator, thereby preventing any oil from dripping out due to gravity. In this reason, grease will be not hardened and all lubricant is able to dispense completely at that end of lubrication cycle.

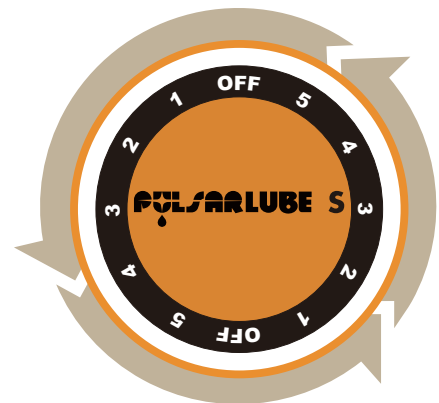
Moreover, Pulsarlube S has a Piston Locking Device, It will hold piston when unit is stocking or transportation period. Spring force will not effect to grease properties. It is good to prevent oil seperation and it allows them to supply grease filled unit in the market. It is one of good advantage to customer because there is no need to fill grease by them also install immediately, no need any other equipment to mount unit on the bearing.

■ Specification

Item	Specification
Grease capacity	100cc (90 gram; 3.2 Oz)
Operating temperature	-23°C ~ 121°C(-9.4°F~250°F)
Normal operating pressure	1.3 kg/cm ² (15psi)
Max distance for remote installation	30cm(1ft); Tube with I.D 6mm(1/4")
Outlet thread size	Function on both 1/4" NPT & BSP lube points
Water proof	Can be installed under water
IP code	IP68

Since manual lubrication using grease gun is based on presumption, error is inevitable regardless of the amount of grease in bearing. When Pulsarlube S is used, however, the vacuum pressure inside of the housing caused by the spinning of the bearing takes in the needed grease and stops lubricating when the machine stops. This way, only proper amount of grease is injected.

■ Dial Displayed



■ Matter to be noted



Pulsarlube S spring type lubricator is a demand-feed system, not a "time" programmable. Bearings get only as much lubricant as they need. The natural vacuum created in a bearing (Venturi Action) gently draw the grease into the bearing. When equipment isn't operating, there is no grease demand. This means that the grease will be rapidly discharged into the bearing housing if there will be no back pressure on the unit. In addition, if the bearing you are lubricating with the Pulsarlube S spring type lubricator is an open bearing located within an open housing (no mechanical seals installed), then the lubricator will be discharged very quick. You should look at the engineering drawings for the item you are attempting to lubricate and from those drawings identify and decide if there is sufficient resistance to allow the Pulsarlube S units to operate correctly, as they were originally designed to do so, if doubt remains then install a more positive Pulsarlube product, Pulsarlube V and M.

■ How to order



KLT1500 / PL1
① ②

- ① Pulsarlube model No.
- ② Grease type

■ Caution



- Overfilling of grease may cause damage to the product. Thus, the piston should not be allowed to go down to below the line marked with "Do not fill below this line"
- When refilling the product, a manual grease gun should be used.

Dispensing Recommendations

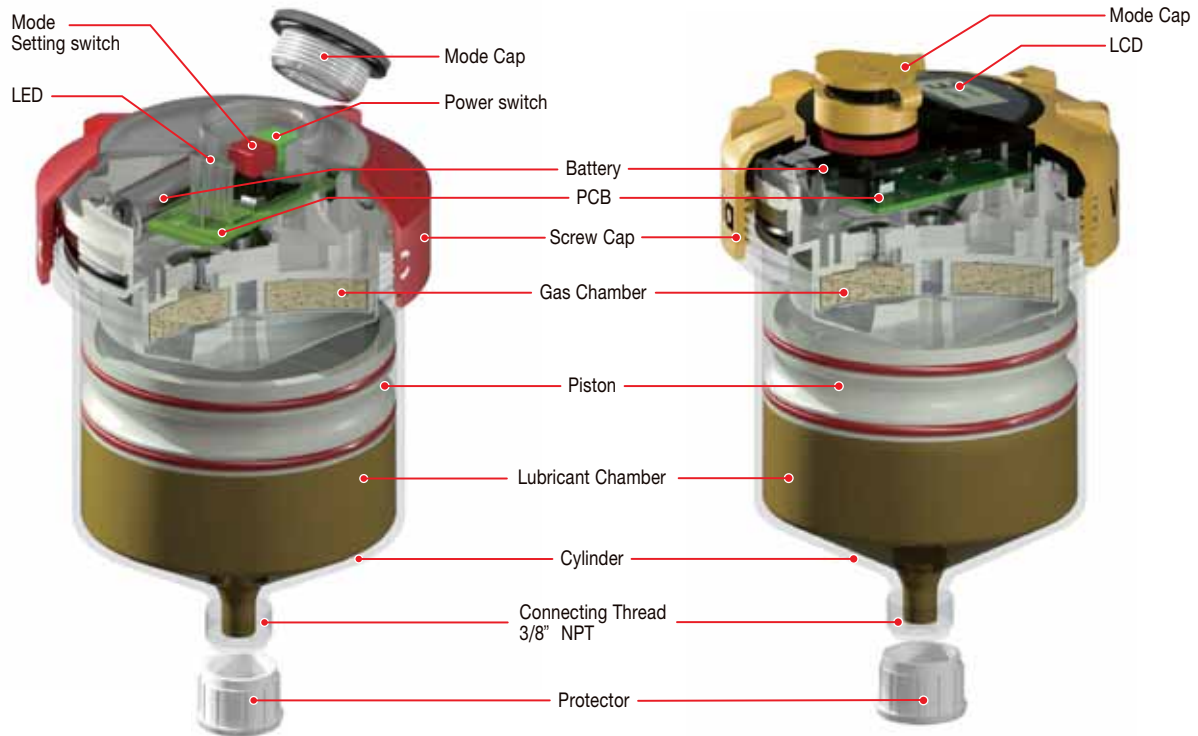
In the chart below are some guidelines for bearing lubrication requirements. Requirements may vary with individual bearing types or operating conditions.

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

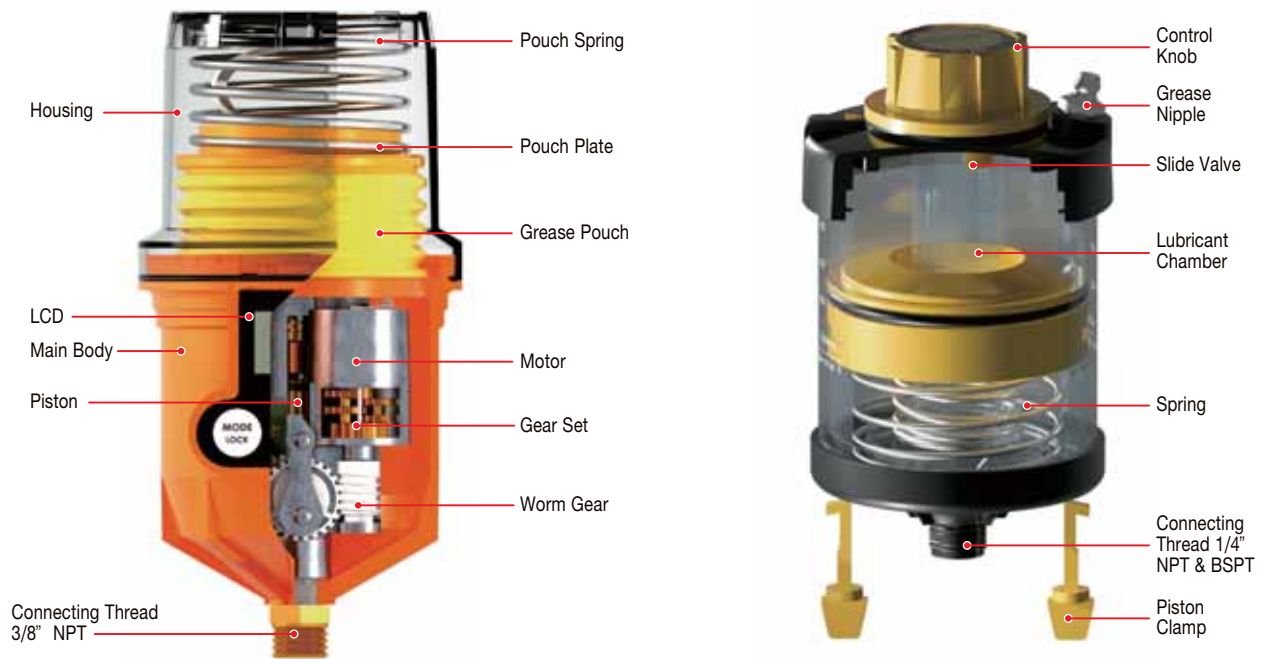
MODE (Month)	CC	125cc		250cc		500cc	
		Cycle/Time intervals	Cycles/Day	Cycle/Time intervals	Cycle/Day	Cycle/Time intervals	Cycle/Day
½		1 Hour	24	30 Minute	48	15 Minute	96
1		2 Hour	12	1 Hour	24	30 Minute	48
2		4 Hour	6	2 Hour	12	1 Hour	24
3		6 Hour	4	3 Hour	8	N/A	-
4		N/A	-	N/A	-	2 Hour	12
6		12 Hour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

Pulsarlube Lubrication Sectional view



Pulsarlube C

Pulsarlube V



Pulsarlube M

Pulsarlube S

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	

