

# MultiPort Lubricator

## Electric motor-driven, Grease and Oil



### General

The MultiPort Lubricator is a rugged, motor-driven, electric lubricator, equipped with fixed or adjustable output pumping elements to discharge grease or oil over a wide operating range. Low level switches are optional on this compact unit. Up to three independent feed lines can be used with the MultiPort Lubricator. A selection of timers and controller/monitors are available to program MultiPort Lubricators.

### Technical Data

<b>Reservoir Capacity</b>	2, 4 and 8 liter (4, 8 and 16 lb)	
<b>Lubricant</b>	Grease	NLGI grade 2 (Max)
	Oil	Up to 5000 SUS
<b>Maximum Working Pressure</b>	Grease	3600 psi (240 bar)
	Oil	2900 psi (180 bar)
<b>Operating Voltage</b>	As noted below	
<b>Operating Temperature Range</b>	0°F to 120°F (-18°C to 49°C)	
<b>Pumping Elements</b>	1 to 3	
<b>Output per 1 rpm</b>	Fixed	0.16cc (0.01 cu. in.)
	Adjustable	0.16cc - 0.01cc (0.01- 0.0006 cu.in.)
<b>Motor</b>	As noted below	
<b>Low Level Switch</b>	Grease	N.C. (Available on some models)
	Oil	N.O. (Available on some models)
<b>Discharge Element Output Port</b>	1/4" NPTF	
	1/4" BSPP (230vac single phase only)	
<b>Fill Connection</b>	Grease	Male filler fitting, quick disconnect plug
	Oil	Fill cap

### Motor

IP Enclosure Rating	HP Rating	Voltage	Amperage
IP-55	0.068	12 VDC <sup>1</sup>	4 FLA
		24 VDC <sup>1</sup>	2 FLA
	0.08	110 VAC <sup>2</sup>	1.83 FLA
		220 VAC <sup>2</sup>	0.68 FLA
		220/380/440 VAC <sup>2</sup>	0.63 FLA

<sup>1</sup> Operates at 40 rpm @ 68°F, 1000 psi back pressure

<sup>2</sup> Operates at 32 rpm (60 Hz) @ 68°F, 1000 psi back pressure



Refer to the following documents:

+ Datasheet #35744:  
Fill Pumps

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## How To Order

Name	Lubricant	Voltage	Reservoir Capacity	Reservoir Material	Low Level Switch	Part #	
MultiPort	Grease	12 VDC	2 liter (4 lb)	Plastic	No	30785-1NF	
					Yes	31099-1NF	
			4 liter (8 lb)	Plastic	No		28571-1NF
		Yes	30787-1NF				
			4 liter (8 lb)	Plastic	No		28572-1NF
			8 liter (16 lb)	Metal	Yes		41704-1NF
		110 VAC	2 liter (4 lb)	Plastic	No	28569-1NF	
	Yes				41320-1NF		
	4 liter (8 lb)		Plastic	No	28575-1NF		
				Yes	31801-1NF		
	220 VAC***	2 liter (4 lb)	Plastic	Yes	MULTI2BD		
				4 liter (8 lb)	Plastic	Yes	MULTI4BD
						8 liter (16lb)	Plastic
	220/380/440* VAC Three Phase	2 liter (4 lb)	Plastic	No	28570-1NF		
				Yes	30558-1NF		
				4 liter (8 lb)	No	28576-1NF	
					Yes	30559-1NF	
8 liter (16 lb)				Metal	Yes	28730-1NF	
Oil	12 VDC	4liter	Plastic	No	51095-4E		
						24 VDC	2 liter
	4 liter	Plastic	Yes	31037-1NFO			
			110 VAC	2 liter	Plastic	Yes	41320-1NFO
	4 liter	Plastic				Yes	31801-1NFO
			220 VAC***	2 liter (4 lb)	Plastic	Yes	MULTI2BDO
	4 liter (8 lb)	Plastic				Yes	MULTI4BDO
						8 liter (16lb)	Plastic
	220/380/440* VAC Three Phase	4 liter	Plastic	Yes	30559-1NFO		
				8 liter	Metal	Yes	28730-1NFO

### NOTES:

These Multiports have a rubber lid:  
30785-1NF, 28566-1NF, 28569-1NF &  
28570-1NF. All others are metal lid with  
tie rods.

When ordering, specify by name, lubricant, voltage, reservoir capacity and part number, e.g. MultiPort, grease, 110 VAC, 2 liter (4 lb) reservoir with low level switch, Part #41320-1NF.

\* Can be used up to 440VAC for intermittent use only.

\*\* Special: 3 fixed elements tied together, includes pressure gauge.

\*\*\*Note: All "MULTI\_BD & MULTI\_BDO part numbers are 1/4BSPP outlet, all others are 1/4NPTF.

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## Service Parts

### Grease Models

Item	Description	Part #
1	Low level switch	30544
2	Washer	22076-5
3	Nut	22188-3
4	Tie rod: 2 liter (4 lb)	43125-4
	Tie rod: 4 liter (8 lb)	43125-5
	Tie rod: 8 liter (16lb)	43125-7
5	Reservoir: 2 liter (4 lb)*	22465-1
	Reservoir: 2 liter (4 lb)	28205-1
	Reservoir: 4 liter (8 lb)	28205-2
	Reservoir: 10 liter (20 lb)	28205-5
	Reservoir: 8 liter (16 lb)	28205-4
	Reservoir: 8 liter (16 lb) Metal	28213-4
6	Bottom reservoir seal*	22100-61
	Bottom reservoir seal	45831-1
	Bottom reservoir seal - metal res.	28228
7	Copper seal	25589-7
8	Copper seal	25589-5
9	Pump element w/ relief valve**** 1/4NPT	28278-3
	1/4BSPP (MULTI2BD, MULTI4BD & MULTI8BD only)	28278-4
10	Motor & worm gear (12 VDC)	31703-2
	Motor & worm gear (24 VDC)	31703-1
	Motor & worm gear (110 VAC 1PH)	31711-2
	Motor & worm gear (220 VAC 1PH)	49064
	Motor & worm gear (220/380/440 VAC 3PH)	31711-4
11**	Plug	22454
12	Grease fill fitting***	U421BC
	Fill fitting cover	U423B
13*	Rubber reservoir lid	28677
14	Plastic Electrical Box (115VAC)	80261

\* For reservoirs with rubber lid

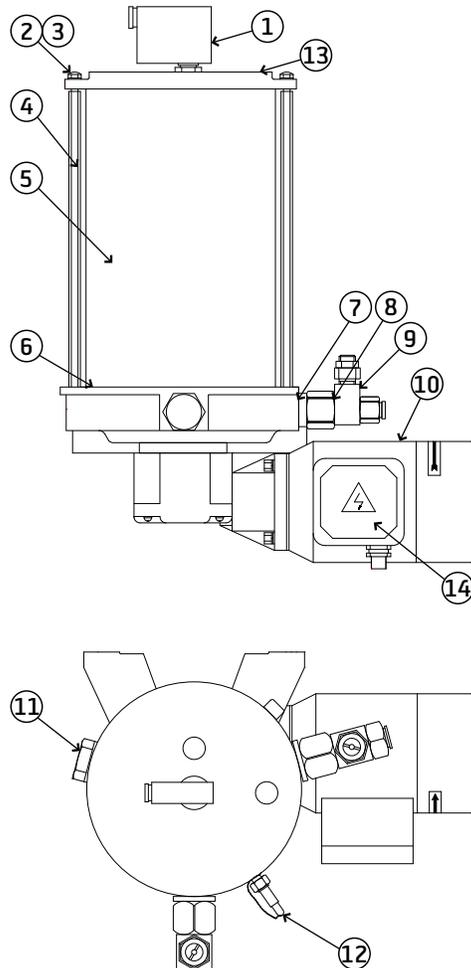
\*\* Copper seal (part #25589-7) required for installation.

\*\*\* Mating connector is Socket p.n. U422BC.

\*\*\*\*MULTI2BD, MULTI4BD & MULTI8BD use 28278-4

### ATTENTION

Low level switch is supplied as N.C.

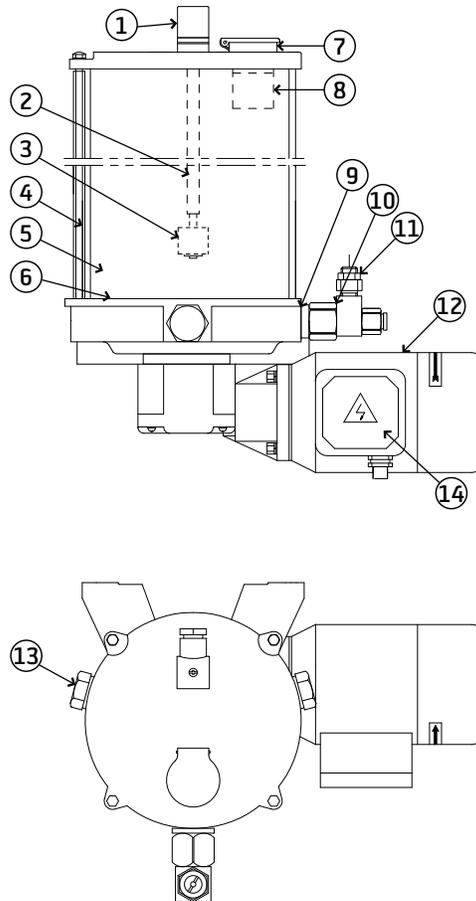


## Service Parts

### Oil Models

Item	Description	Part #
1	Din connector	41091
2	Low level tube: 2 liter (4 lb)	41066-4
	Low level tube: 4 liter (8 lb)	41066-1
	Low level tube: 8 liter (16 lb)	41066-3
3	Low level switch	B9640
4	Tie rod: 2 liter (4 lb)	43125-4
	Tie rod: 4 liter (8 lb)	43125-5
5	Reservoir: 2 liter (4 lb)	41077-1
	Reservoir: 4 liter (8 lb)	41077-2
6	Bottom reservoir seal	45831-1
7	Fill cap	32114
8	Screen	32116
9	Copper seal	25589-7
10	Copper seal	25589-5
11	Pump element w/relief	28278-3
12	Motor & worm gear (24 VDC)	31703-1
	Motor & worm gear (110 VAC)	31711-2
	Motor & worm gear (220/380/440 VAC)	31711-4
13*	Plug	22454
14	Plastic Electrical Box (115VAC)	80261

\* Copper seal (part #25589-7) required for installation.

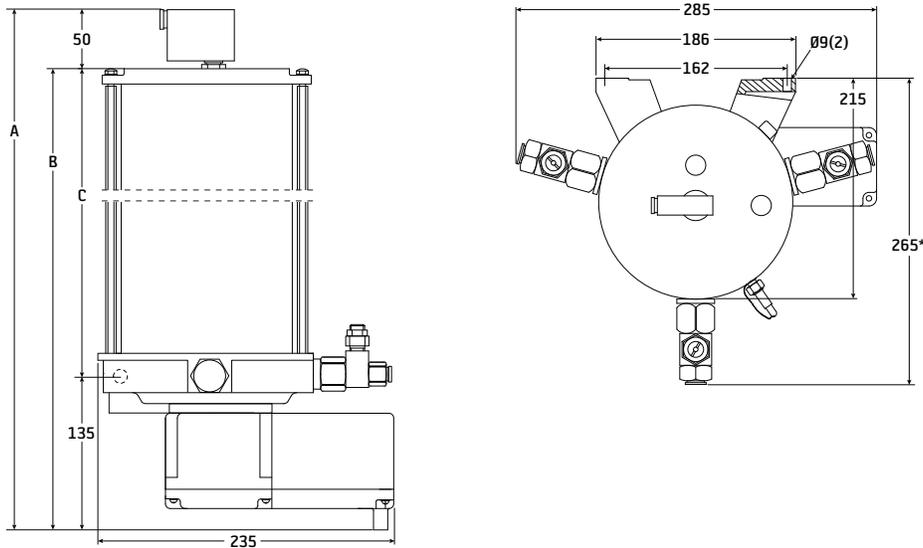


### ATTENTION

Low level switch is supplied as N.O.  
Change to N.C. by removing the pump cover and inverting item 3 (part #B9640)

## Dimensional Schematics

### MultiPort 12 VDC & 24 VDC



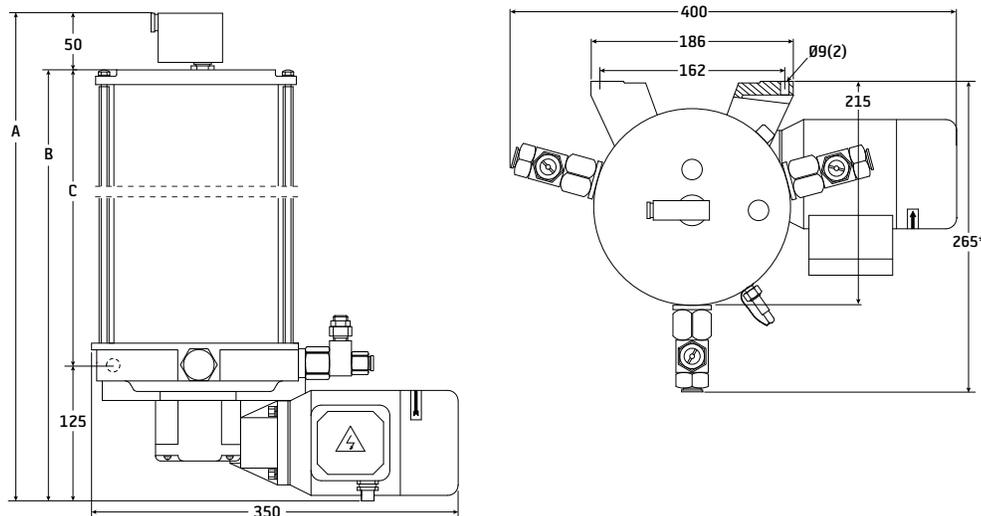
Measurements shown in millimeters.

**NOTES:**

\* Multiports 51092E & 51095-4E have a 285mm dimension.

Reservoir	A	B	C
2 liter (4 lb)	430	380	230
4 liter (8 lb)	530	480	330
2 liter (4 lb) Rubber Lid	N/A	325	190

### MultiPort 110 VAC/220 VAC Single Phase, 220/380/440 VAC Three Phase



Reservoir	A	B	C
2 liter (4 lb)	420	370	245
4 liter (8 lb)	520	470	345
8 liter (16 lb)	720	670	545
2 liter (4 lb) Rubber Lid	N/A	330	205

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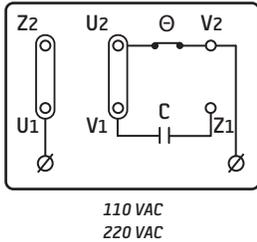
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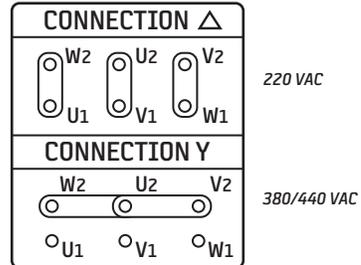
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## Wiring

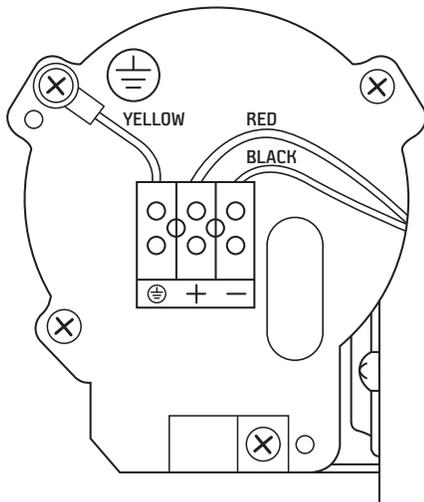
### 110 VAC / 220 VAC Single Phase



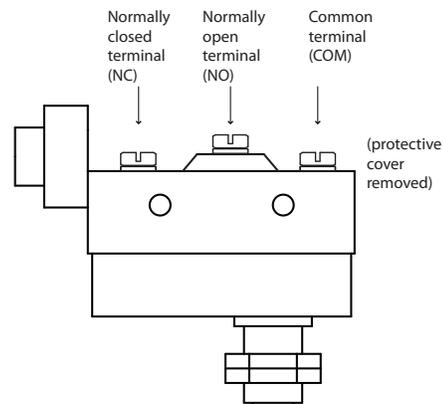
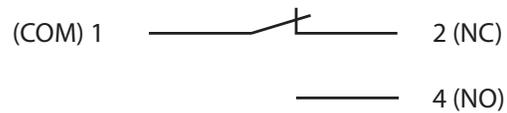
### 220 VAC & 380/440 VAC Three Phase



### 12 VDC & 24 VDC



### Level Switch 30544 Wiring



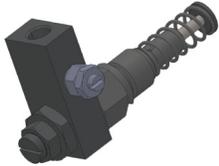
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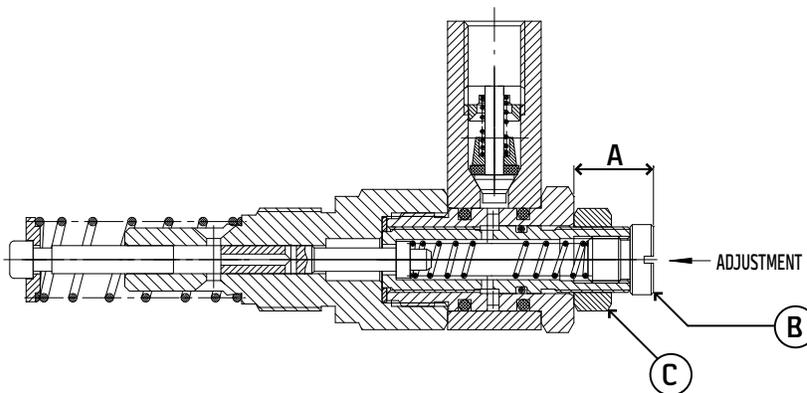
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## Pump Outlet Elements

	Part Number	Type	Outlet Thread
	28278-3 <sup>1</sup>	Fixed	1/4 NPTF
	28278-4	Fixed	1/4 BSPP
	28234-2	Adjustable	1/4 NPTF
	AK442	Adjustable	1/4 BSPP

<sup>1</sup>All Multiports are supplied with one fixed element. Up to two additional elements can be added.

## Flow Adjustment Procedure - Adjustable Elements



A / mm	cc's per cycle	Approx % Output
24	0.16	100 %
22.5	0.12	75 %
21	0.08	50 %
19.5	0.04	25 %
18.5	0.01	10 %

- Disconnect the pump outlet from the primary line tubing and start up the pump.
- Unscrew the locking nut (Item C)
- To reduce the flow, adjust the screw clockwise (inwards, Item B) to the A dimension as per the chart below.
- To increase the flow, adjust the screw slowly Counter-clockwise (Outwards Item B) to obtain the dimension + 3mm.  
(For example, to obtain .08cc, adjust counter-clockwise to "A" dimension of 24mm.)
- Wait a few seconds and screw clockwise to the "A" dimension once more to obtain the required flow.
- Retighten locking nut, item C.\*
- Allow the pump to run until a solid line of grease is obtained.
- Turn off the pump.\*
- Re-connect the outlet of the pump to the primary line tubing and start up the pump again.

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## Start Up Instructions

1. The motor must be securely and adequately grounded.
2. The power voltage must be correct. The motor rotating direction must be same as the arrow on motor end housing.
3. The grease/oil must be clean.
4. Fill the reservoir through fill cap and screen (oil).  
Fill the reservoir through the grease fill fitting (grease).

## Troubleshooting

Symptom	Possible Cause	Remedy
<b>Pump does not deliver lubricant.</b>	Reservoir is empty.	Fill up lubricant and run to charge elements.
	Electric connection of geared motor has been polarized in the wrong way.	Check pin connections.
<b>Pump does not run.</b>	Voltage is incorrect.	Check voltage.
	Voltage supply is interrupted.	Check voltage and the source.
	Lubrication point is blocked or air pocket is present.	To find out which lubrication points and/or which lubrication point group is blocked, loosen pipe connections at pump elements one after the other. When the blocked bundle has been loosened, the pump must start running again. Localize the lubrication points concerned by loosening the connection lines.  The failure may have been caused by dirt accumulation in the lubrication point, blocked up lubrication points or squeezed lines. To release air pocket, loosen pipe connections at pump elements and run pump until you have uninterrupted lubricant flow out of the elements.
<b>Pump element does not deliver lubricant.</b>	Pump element is inoperative.	By loosening the pipe connections at the pump you will find the pump element which does not deliver lubricant after the pump has been switched on. Dirt accumulation within the piston element is a possible reason for the failure.  If removal and purification of the pump element do not result in an improvement, the pump element must be replaced by a new one.

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