



Operators Manual  
**Electric Barrel Pump**

36915 r#4



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## Manufacturer's Statement

The manufacturer and/or distributor has provided the parts list and assembly diagram in this manual as a reference tool only. Neither the manufacturer or distributor makes any representation or warranty of any kind to the buyer that he or she is qualified to make any repairs or replace any parts to the product. In fact, the manufacturer and/or distributor expressly states that all repairs and parts replacements should be undertaken by certified and licensed technicians, and not by the buyer. The buyer assumes all risk and liability arising out of his or her repairs to the original product or replacement parts thereto, or arising out of his or her installation of replacement parts thereto.

## General

Bijur Delimon's AC or DC Electric Barrel Pumps will replace the air or hydraulic operated pumps now used for lubrication system on mobile or stationary equipment. Installation is cleaner - no air or hydraulic lines to install/leak. Simply wire into the machines power supply. Pressure rated to 300 bar (4350 psi). Will fit original refinery 120 and 400 lb drums (50 kg & 185 kg). Drum cover and follower plates also available.

## System Features

- Available for progressive, dualine, and/or injector lubrication systems.
- Rugged construction for outdoor use and rough environments.
- Eliminate expensive air consumption.
- Longer life expectancy
- Fits standard 120 lb / 50 kg and 400 lb / 185 kg grease drums.
- Extremely low noise levels - work right next to it.

## Operation

The pump end (bottom) consists of a hardened steel bushing, through which the piston runs. As the piston strokes down, grease is pushed past the check valve ball and out through the extruded discharge holes in the pump stem. As the piston strokes up, the check valve prevents drawback, and a vacuum is created inside the bushing. When the piston uncovers the suction holes in the bushing, another charge of grease is drawn in through the suction ports on the bottom of the stem and into the bushing. The cycle then repeats.



## Technical Data

<b>Standard Tube Lengths/Fits Drum Size</b> <sup>1</sup>		120 lb. (50 kg), 400 lb. (185 kg)
<b>Voltages</b> <sup>2</sup>		24 VDC 115/230 VAC (50/60 Hz) Single Phase 230/460 VAC (60 Hz) Three Phase 400 VAC (50 Hz) Three Phase
<b>Amp Draw</b>	24 VDC <sup>3</sup>	15 Amp draw @ 3500 psi 20°C (68°F) with NLGI #2
	115 VAC <sup>4</sup>	4 Amp draw @ 3500 psi 20°C (68°F) with NLGI #2
	220 VAC <sup>5</sup>	2 Amp draw @ 3500 psi 20°C (68°F) with NLGI #2
	230VAC 60Hz 3Ph <sup>6</sup>	2 Amp draw @ 3500psi 20°C (68°F) with NLGI #2
	460VAC 60Hz 3Ph <sup>7</sup>	1 Amp draw @ 3500psi 20°C (68°F) with NLGI #2
	400VAC 50Hz 3Ph <sup>8</sup>	1 Amp draw @ 3500psi 20°C (68°F) with NLGI #2
<b>Lubrication Flow</b> <sup>9</sup>		150cc/minute @ 140 bar, +20°C (9 cu.in. @ 2030 psi, +68°F)
<b>Pump Pressure</b>		300 bar max/240 bar recommended (4350 psi / 3480 psi)
<b>Systems</b>	Progressive / Dualine <sup>10</sup>	Pressure Relief Valve Included
	Injector	Vent Valve & Pressure Relief Valve Included
<b>Relief Valve Pressure</b>		240 bar / 3500 psi
<b>Vent Valve Voltages</b>		24 VDC 115/230 VAC (50/60 Hz) Single Phase
<b>Operating Temperature</b> <sup>11</sup>		-25°C to +60°C (-13°F to +140°F)
<b>Pressure Gauge</b>		350 bar Included (5000 psi)
<b>Lube Outlet Port</b>		1/2" NPSF (F)
<b>Lubricants</b> <sup>12</sup>		NLGI #000 to #2
<b>Rating</b>		IP66
<b>Noise Level</b> <sup>13</sup>		75dB

<sup>1</sup> Bung Bushing F360002 is included with pumps.

<sup>2</sup> 24 VDC S3 Duty Cycle (Intermittent Duty 5min on/5min off). 115/220 VAC S1 Duty Cycle (Continuous Duty). 230/460 VAC (60 Hz) & 400 VAC (50 Hz) Three Phase S1 Duty Cycle (Continuous Duty)

<sup>3</sup> 16 Amp draw spike. Recommend 40A fuse max.

<sup>4</sup> 5 Amp draw spike. Recommend 7A fuse max.

<sup>5</sup> 2.5 Amp draw spike. Recommend 4A fuse max.

<sup>6</sup> 4 Amp draw spike. Recommend 5A fuse max.

<sup>7</sup> 2 Amp draw spike. Recommend 2.5A fuse max.

<sup>8</sup> 1.5 Amp draw spike. Recommend 2A fuse max.

<sup>9</sup> Flow rate is for 60 Hz motors. 60 Hz motor can operate on 50 Hz but pump flow is reduced.

<sup>10</sup> Suitable for Dualine system when paired with a hydraulic or electric reversing valve.

<sup>11</sup> Lower temperatures may be possible with suitable grease and/or heated reservoir/piping.

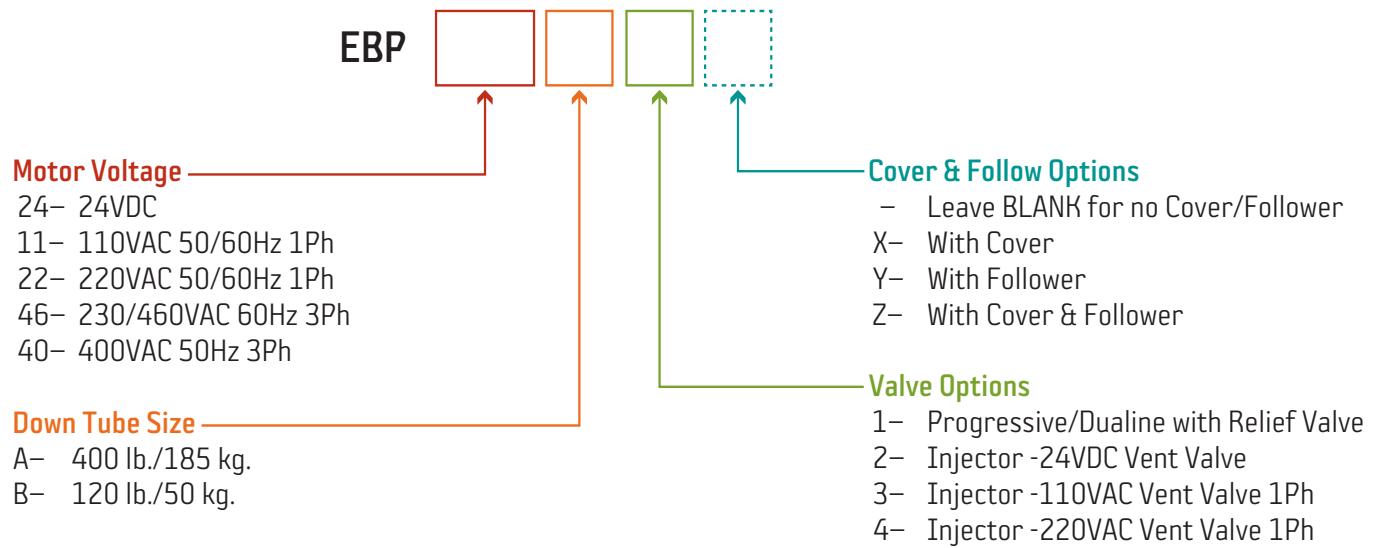
<sup>12</sup> EBP will also work pumping oils.

<sup>13</sup> Noise level measured at 3' (1 m) from the pump.

### Note: Duty Cycle

- + 24VDC: S3 Intermittent Duty 5min on/5min off
- + 115/220VAC: S1 Continuous Duty
- + 230/460VAC: S1 Continuous Duty
- + 400VAC: S1 Continuous Duty

## How to Order EBP



When ordering, specify by name, description and part number, e.g. Electric Barrel Pump, 24 VDC, 120 lb Down Tube, Progressive with Cover & Follower, Part #EBP24B1Z.



120 lb. Electric Barrel Pump



400 lb. Electric Barrel Pump

**ATTENTION**

Bung Adapter F360002 is included with pumps.



## Service Parts EBP

Item	Description	Part #
1	Pressure Gauge	U902FB
2	Elbow Adapter	U1104B
3*	Coil 24VDC	37636
	Coil 110VAC	37743
	Coil 220VAC	55601
4*	Cartridge Valve	37637
5	Pressure Relief Valve	55660-E
6	Hose Assembly	35869-400
7	Bung Adapter	F360002

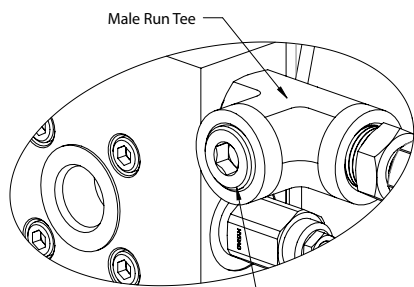
\* Injector version only

## Repair Kits EBP

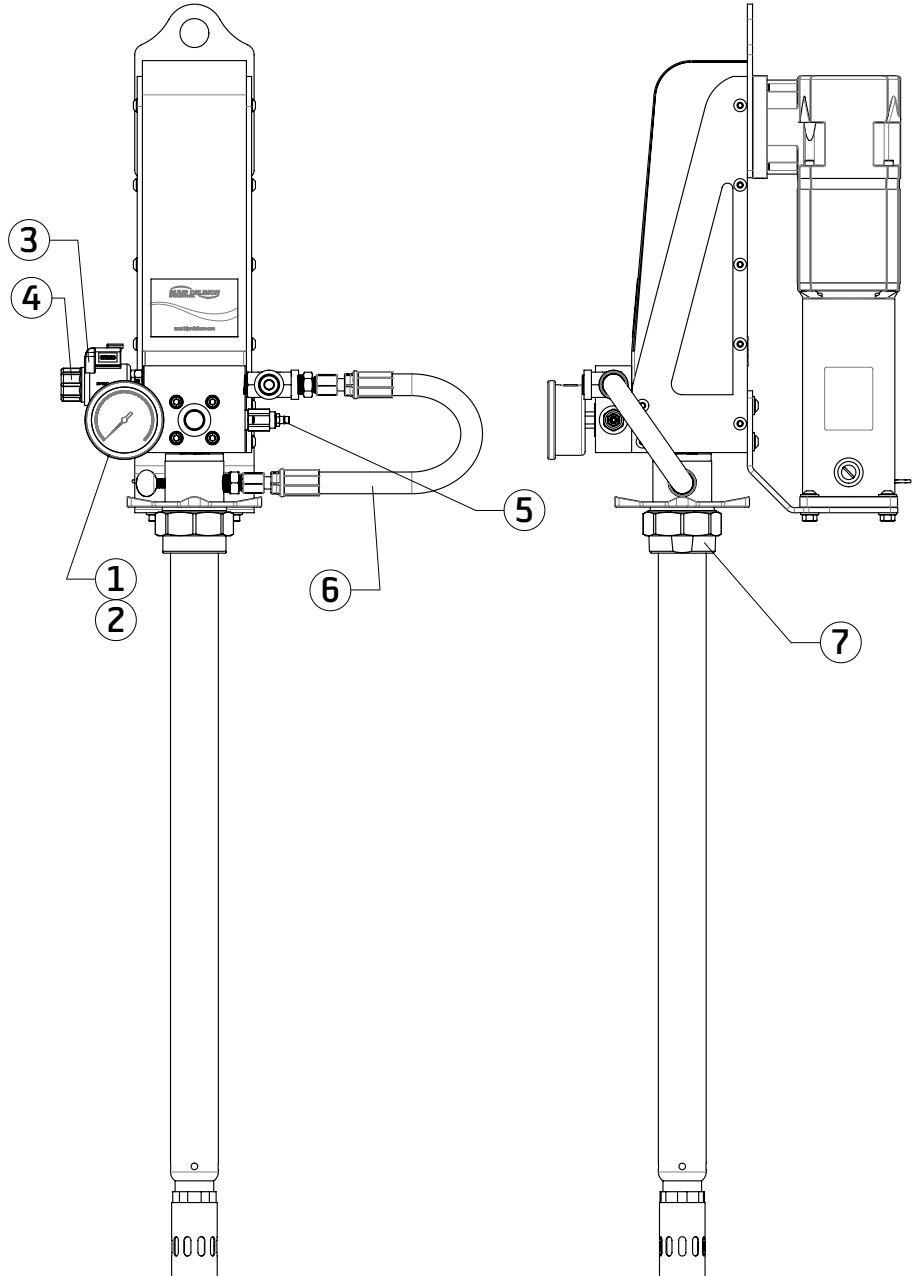
Item	Description	Part #
A	Pressure Valve Repair Kit	FGK3
B	Foot Valve Repair Kit	FGK4
C	High Pressure Piston Repair Kit	FGK5
D	Grease Intake Repair Kit	F740958

*See page 7 for Repair Kits Illustrations*

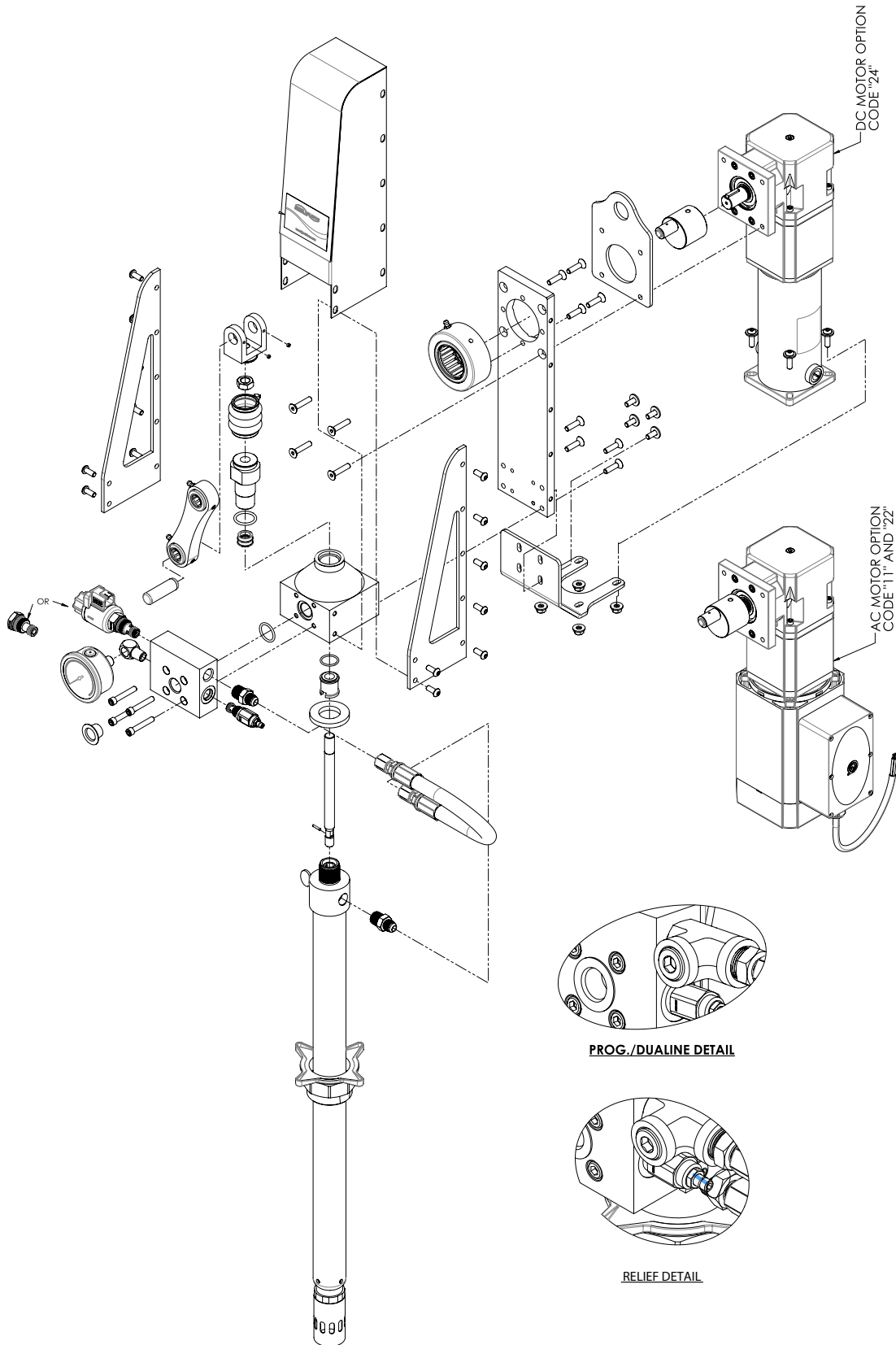
## Dualine System Notes:



For Dualine systems remove this plug from the male run tee for use as return port. (3/8NPTF)

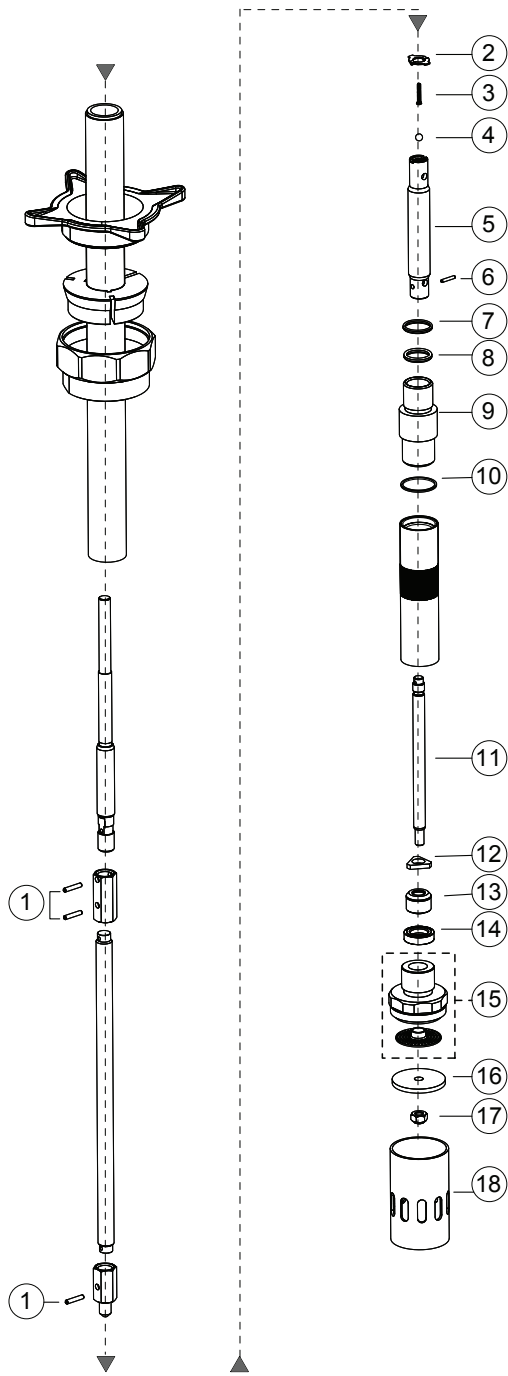


# Exploded View EBP



## NOTES

### Repair Kit Parts Illustration EBP



### Repair Kits

Ref	Description	Part #
A	Pressure Valve Repair Kit	FGK3
B	Foot Valve Repair Kit	FGK4
C	High Pressure Piston Repair Kit	FGK5
D	Grease Intake Repair Kit	F740958

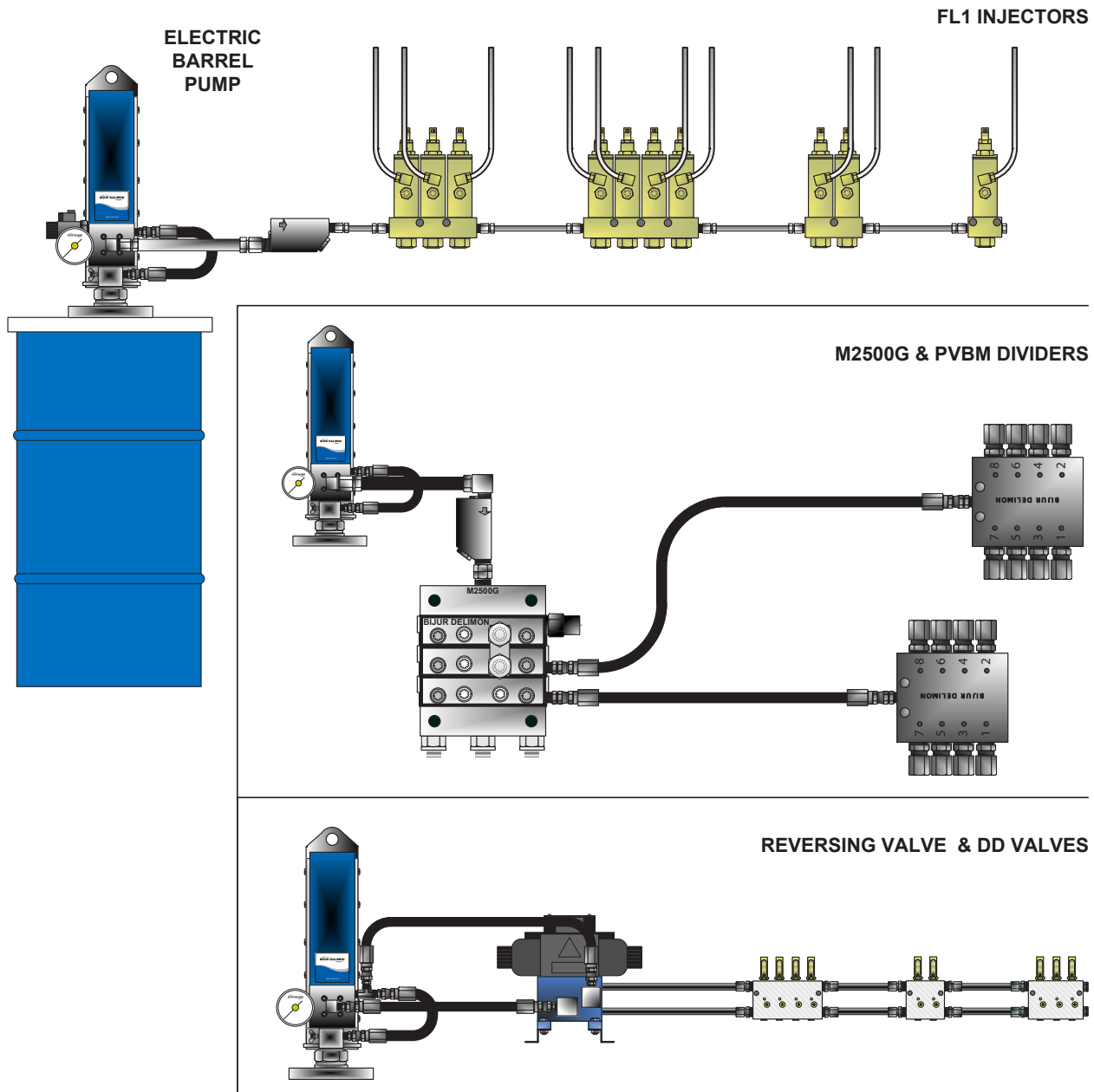
### Key

Item	Description	Ref	
1	Large Roll Pin	A	C
2	Tabbed Lock Washer		
3	Check Spring		
4	Check Ball		
5	HP Piston	B	
6	Small Roll Pin		
7	HP Cylinder Outer O-ring	D	
8	Inner O-ring		
9	HP Cylinder		
10	Copper Ring		
11	Shovel Rod	B	
12	Triangular Washer		
13	Foot Valve		
14	Foot Valve Seat		
15	Priming Filter/Priming Shovel Washer	D	
16	Priming Shovel Washer		
17	10mm Nylock Nut		
18	Priming Cylinder		

## Example Layouts EBP

Bijur Delimon's AC or DC Electric Barrel Pumps will replace the air or hydraulic operated pumps now used for lubrication system on mobile or stationary equipment. Installation is cleaner- no air or hydraulic lines to install/leak. Simply wire into the machines power supply. Pressure rated to 300 bar (4350 psi). Will fit original refinery 120 and 400 lb drums (50 kg & 185 kg). Drum cover and follower plates also available.

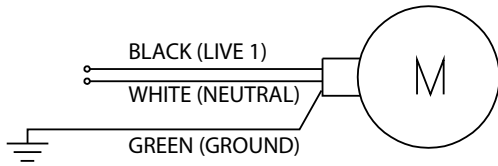
Bijur Delimon's new state of the art Electric Barrel Pump's versatility is unmatched in the market today. As seen below the new EBP can operate all styles of lubrication systems and metering from progressive, injector, direct, and even dualine. Versions are also available for all standard drum sizes. Now you can standardize on one pump design throughout your plant!



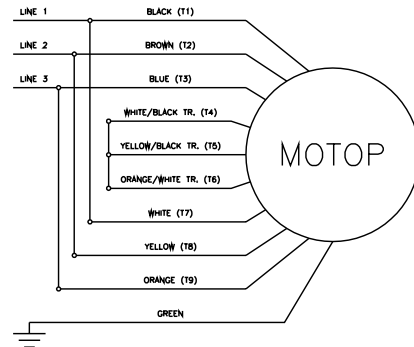


## Wiring EBP

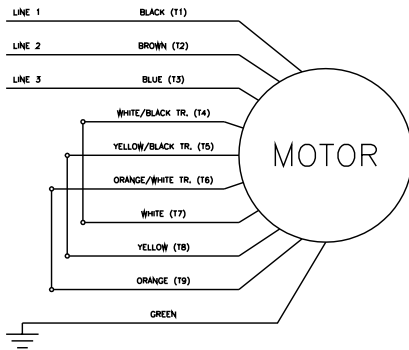
### 110 VAC & 220 VAC 50/60 Hz Single Phase



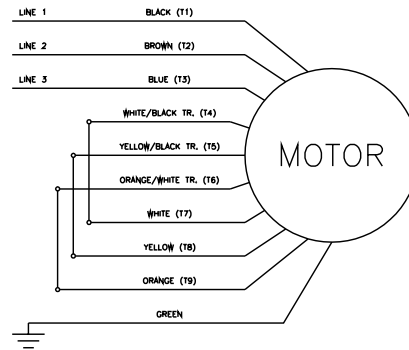
### 230 VAC 60 Hz Three Phase



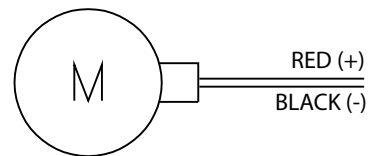
### 400VAC 50 Hz Three Phase



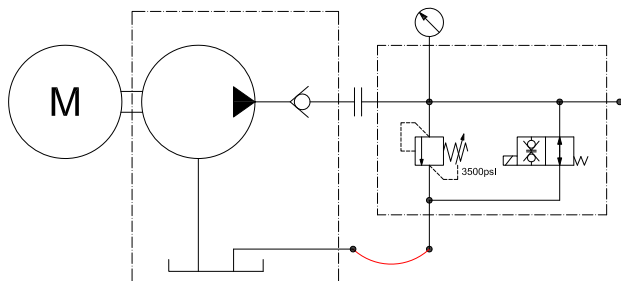
### 460VAC 60 Hz Three Phase



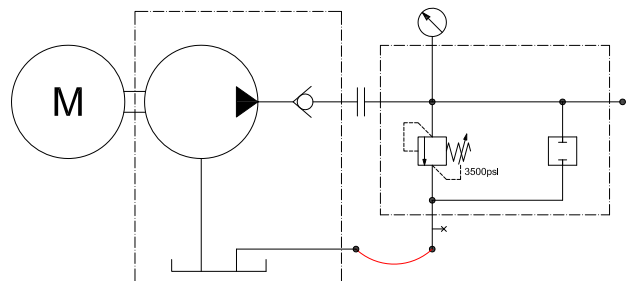
### 24 VDC



## HYDRAULIC SCHEMATICS



EBP Injector Schematic

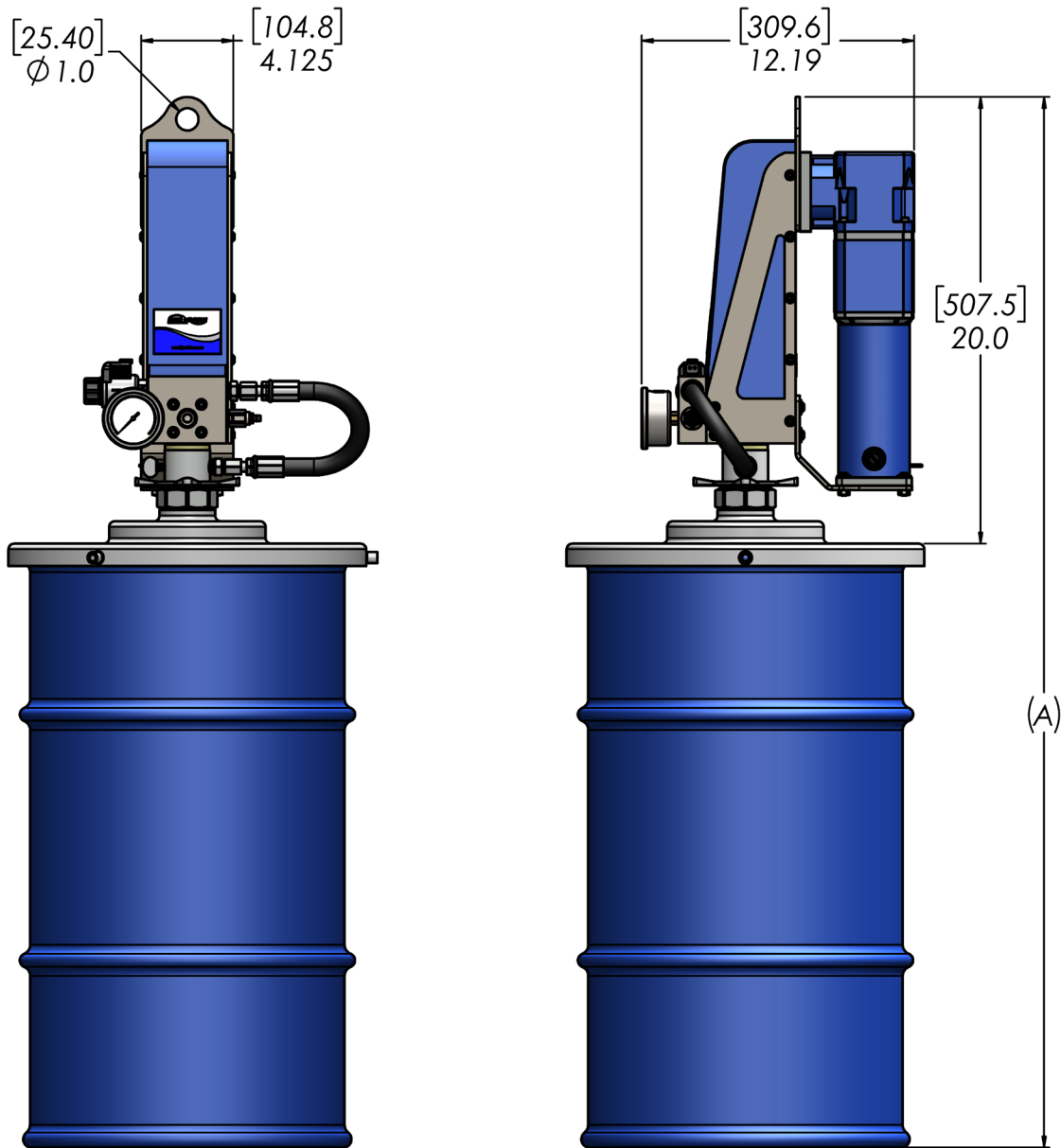


EBP Progressive/Dualine Schematic

## EBP Dimensional Schematics

**ATTENTION**

Pump does not include drum. See page 12 for accessories.










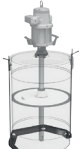



Measurements shown in inches.  
[mm in brackets]

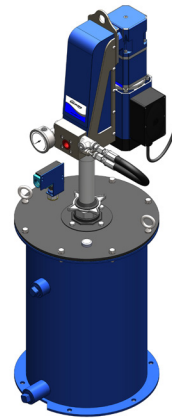
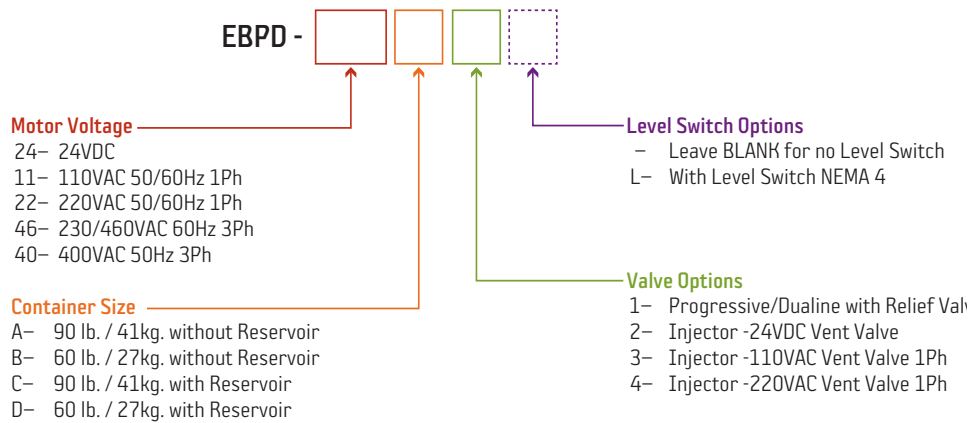
SIZE <sup>1</sup>	A
120 lb Drum (50 kg)	47.0" (1194mm)
400 lb Drum (185 kg)	55.0" (1397mm)

<sup>1</sup> Drum sizes that can be serviced:  
 -120 lb./50 kg drum is ~685 mm tall x ~355 mm dia.  
 -400 lb./185 kg drum is ~860 mm tall x ~560 mm dia..

## EBP Accessories

	DESCRIPTION		PART #
	Hose Assemblies	72"-IN LG	200549
	345 bar/5000 psi WP 1/2" I.D. Hose X 3/4-16 SAE female ends	144"-IN LG	HOS13907B
	STR Male Adapters for hoses (Additional sizes in Catalog 151)	3/4-16 x 1/2NPT	U43188
		3/4-16 x 3/8NPT	U43168
		3/4-16 x 1/4NPT	U43148
	Drum Covers	120 LB	F418017*
	* Order with Adapter F360133	400 LB	F418026*
	Follower Plates	120 LB	F964
		400 LB	F966
	Level Switch Kits (Requires Follower Plate)	120 LB NEMA 1	LC10243
		400 LB NEMA 1	LC11036
		120 LB NEMA 4X	LC13689C
		400 LB NEMA 4X	LC13689C-1
	Empty Drum Containers	120 LB	37153
		400 LB	36490
	Drum Blanket Heaters	120 LB	37506
		400 LB	55286
	Pump Hoist		F391022
	Grease Handles with Meter 1/4"NPTF		F1177
	Pump Tie Down Kits	120 LB	F2440
		400 LB	F2450
	Bung Seal Kit		F244901

## How to Order EBPD



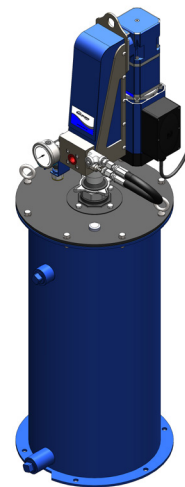
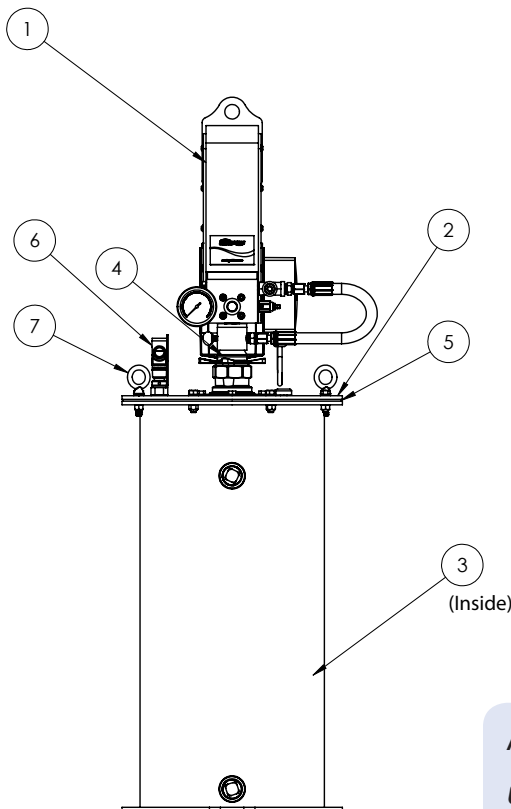
EBPD 60 LB.

When ordering, specify by name, description and part number, e.g. Electric Barrel Pump Dedicate Container, 24 VDC, 60 lb Container Size, Progressive with Low Level Switch, Part #EBPD-24B1L.

## Service Parts

Item	Description	Part #
1	EBP Pump	*
2	Cover Assembly	85272
3	Follower Assembly 90 LB	85266-A
	Follower Assembly 60 LB	85266-B
4	Bung Seal	F244901
5	Gasket	85268
6	Level Switch Assembly 90 LB	85269-A
	Level Switch Assembly 60 LB	85269-B
7	Lifting Bolts & Fasteners	85277

\*EBP part number note: Use EBPxxBy  
 xx = motor voltage code  
 y = valve code



EBPD 90 LB.

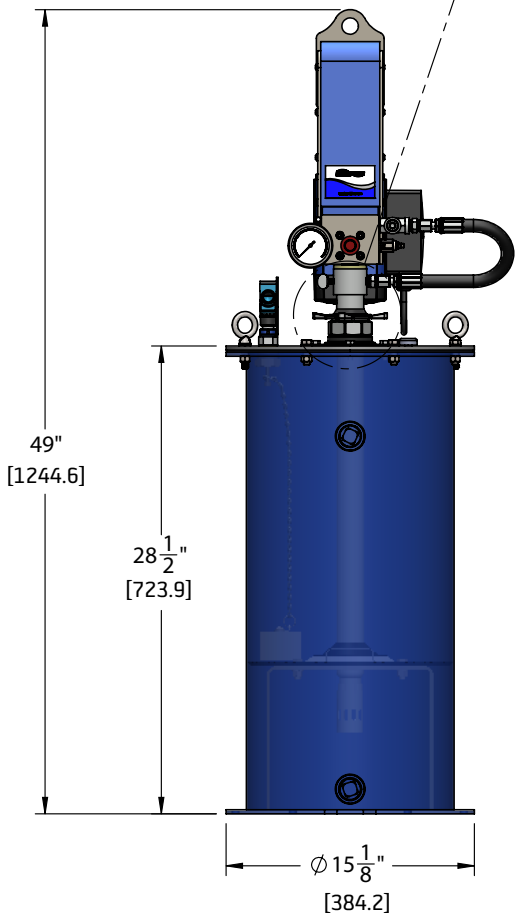
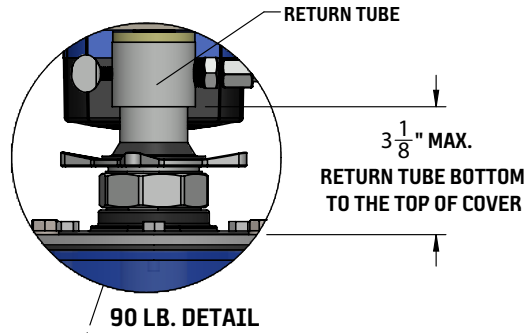
### Attention:

Container Sizes A & B directly fit competitors 60 lb.(27kg) & 90 lb. (41kg)reservoir containers\*.

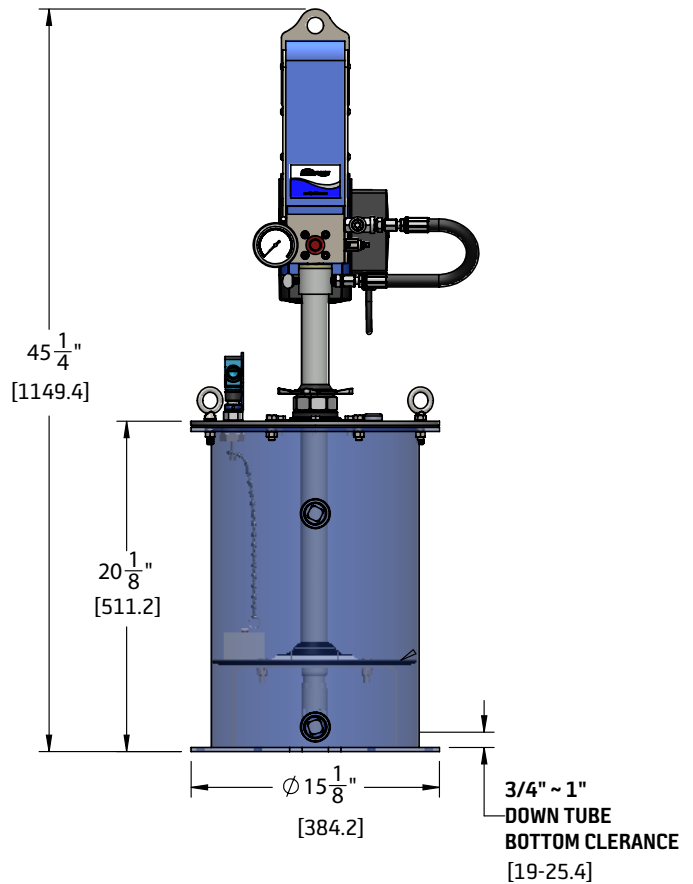
\*Fits containers conforming to dimensions shown on page 13.

# EBPD Dimensional Schematics 60 & 90 LB

Measurements shown in inches.  
[mm in brackets]



**90 LB. CONTAINER**  
**[41kg]**



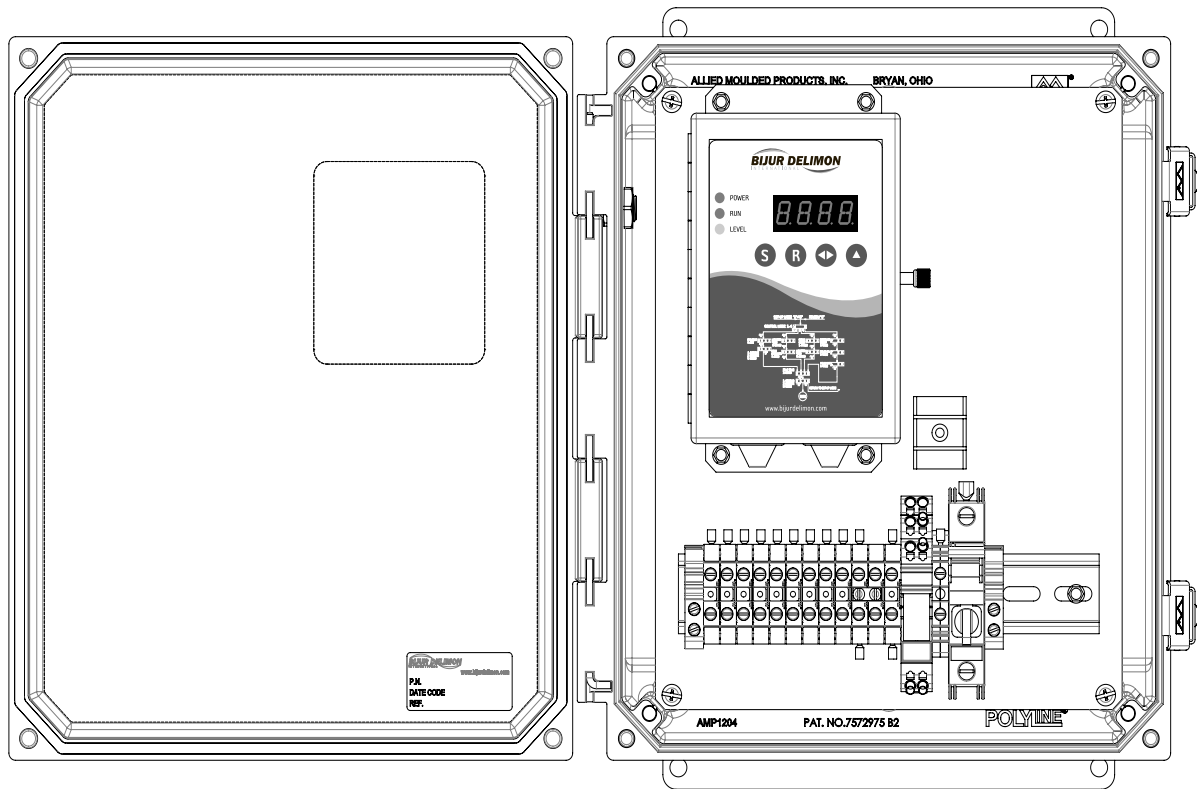
**60 LB. CONTAINER**  
**[27kg]**

## EBPC Control Packages

### AC Applications - 110VAC

Bijur Delimon's EBPC AC Control Packages are available for the Electric Barrel Pumps.

The packages are assembled into a Polycarbonate Nema 4X enclosure, 12" X 10" X 4" with window. They include a relay, terminal blocks and SMAC controller.



### How to Order 110VAC

Name	Description	Part #
EBPC Controller	Controller Enclosure with SMAC (110 VAC)	EBPC-11AC

When ordering, specify by name, description and part number, e.g. EBPC Control Package 110 VAC, Part # EBPC-11AC.

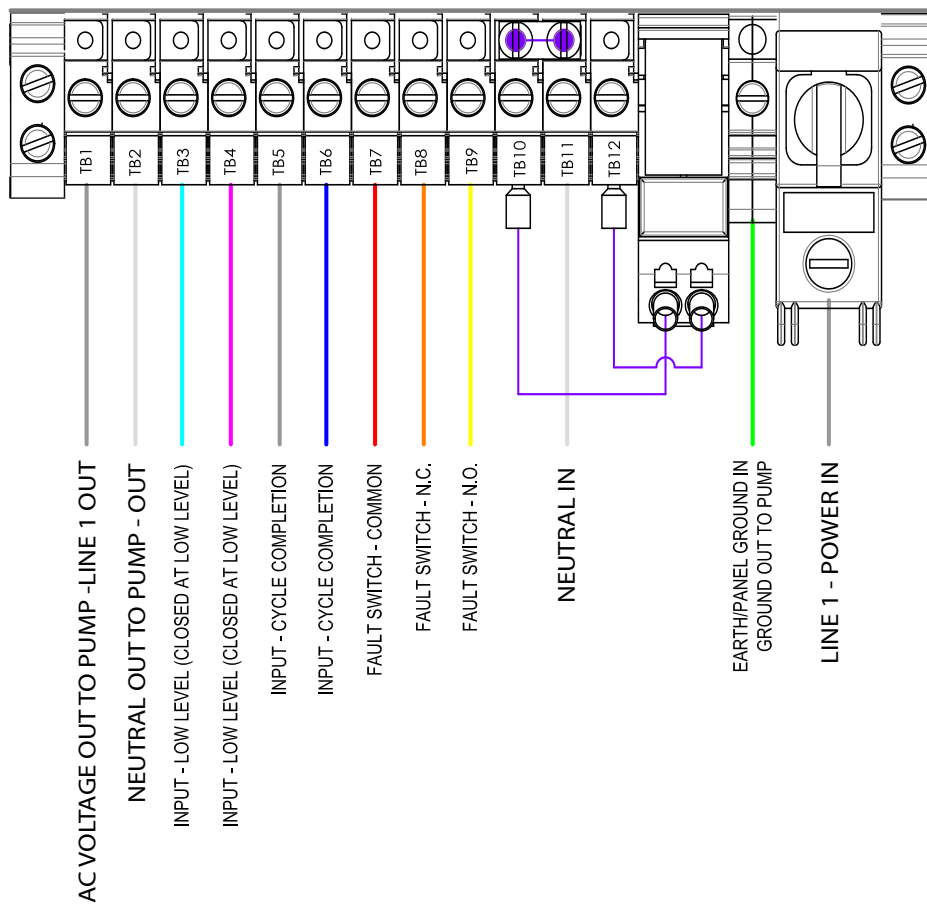
Refer to the following for programming SMAC:

+ DataSheet #46912:  
SMAC Controller

## EBPC Control Packages

AC Applications - 110VAC

### Electrical Terminal Connections EBPC-11AC



#### FUSE REPLACEMENT

The EBPC uses Type CC Fuses  
(slow blow recommended).

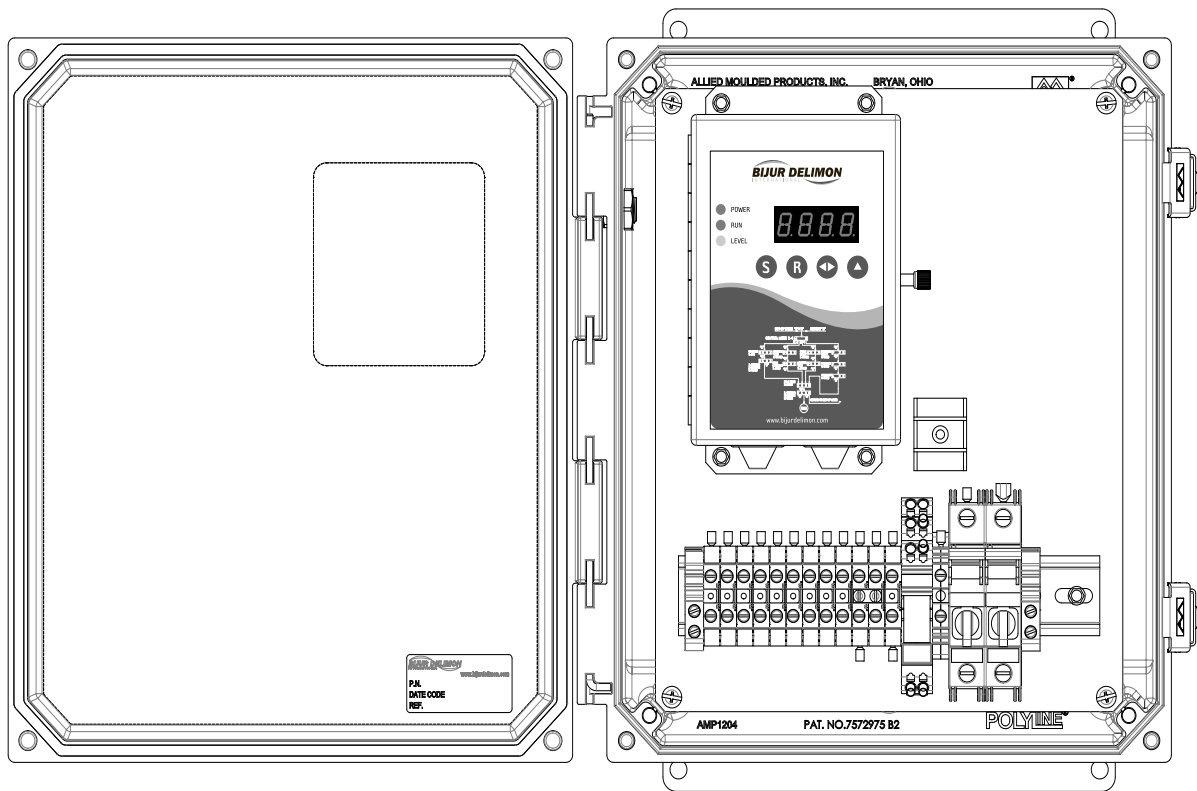
*EBPC-11AC uses a 4A delay fuse  
P.N. FUS14033E*

## EBPC Control Packages

### AC Applications - 220VAC

Bijur Delimon's EBPC AC Control Packages are available for the Electric Barrel Pumps.

The packages are assembled into a Polycarbonate Nema 4X enclosure, 12" X 10" X 4" with window. They include a relay, terminal blocks and SMAC controller.



### How to Order 220VAC

Name	Description	Part #
EBPC Controller	Controller Enclosure with SMAC (220 VAC)	EBPC-22AC

When ordering, specify by name, description and part number, e.g. EBPC Control Package 220 VAC, Part # EBPC-22AC.

Refer to the following for programming SMAC:

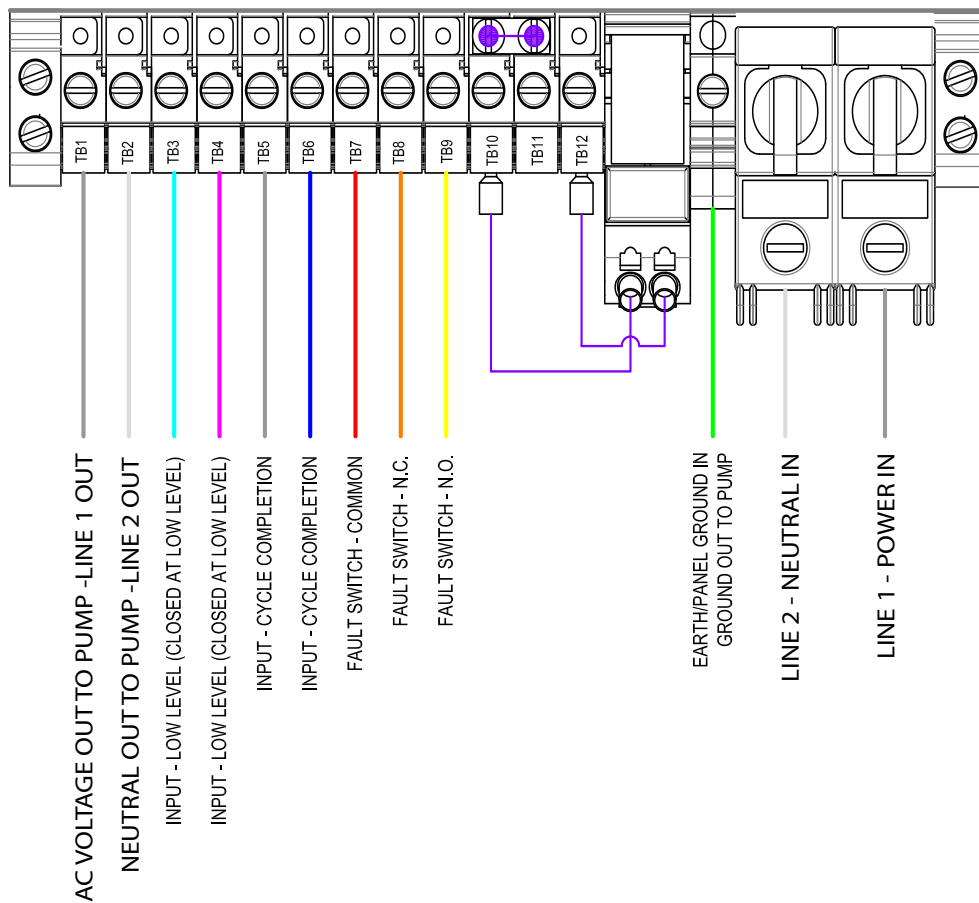
+ DataSheet #46912:  
SMAC Controller



## EBPC Control Packages

AC Applications - 220VAC

### Electrical Terminal Connections EBPC-22AC



#### FUSE REPLACEMENT

The EBPC uses Type CC Fuses  
(slow blow recommended).

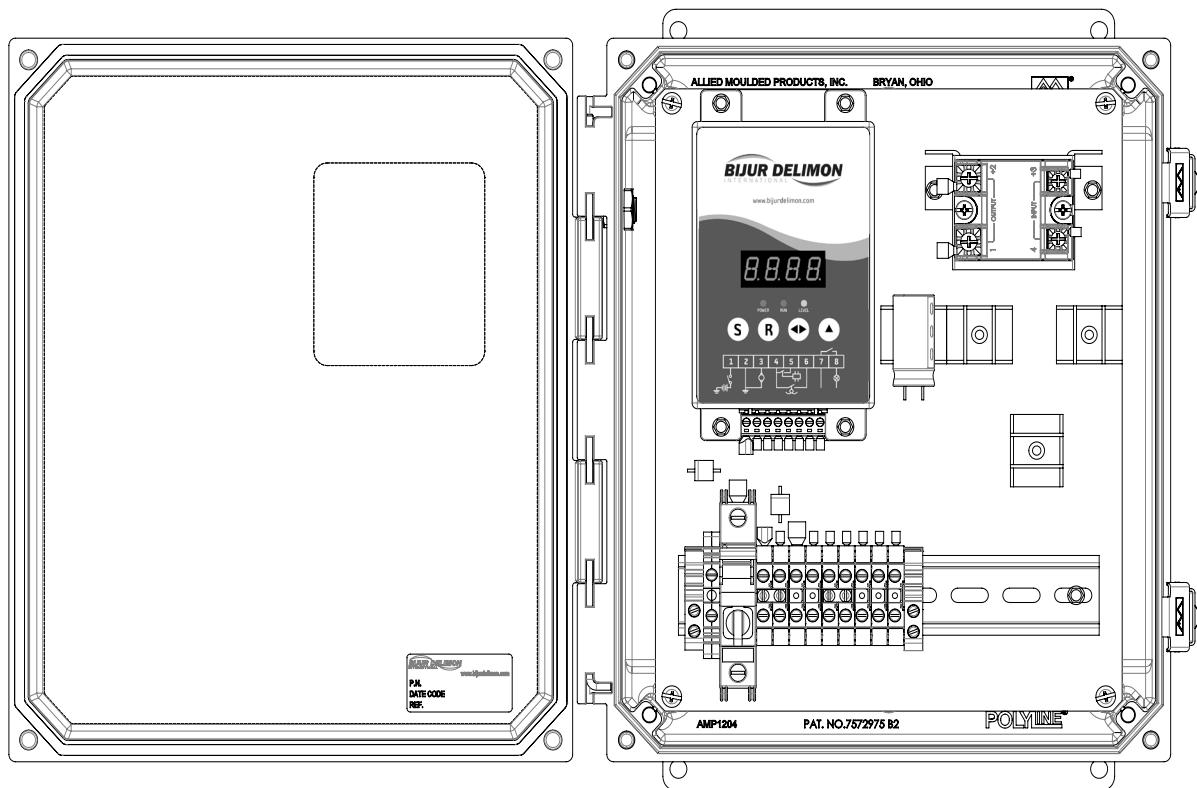
*EBPC-22AC uses a 2A delay fuse  
P.N. FUS14033D*

## EBPC Control Packages

### DC Applications

Bijur Delimon's EBPC DC Control Packages are available for the Electric Barrel Pumps.

The packages are assembled into a Polycarbonate Nema 4X enclosure, 12" X 10" X 4" with window. They include a Solid State Relay, terminal blocks and SMDC controller.



### How to Order

Name	Description	Part #
EBPC Controller	Controller Enclosure with SMDC (24 VDC)	EBPC-24DC

When ordering, specify by name, description and part number, e.g. EBPC Control Package 24 VDC, Part # EBPC-24DC.

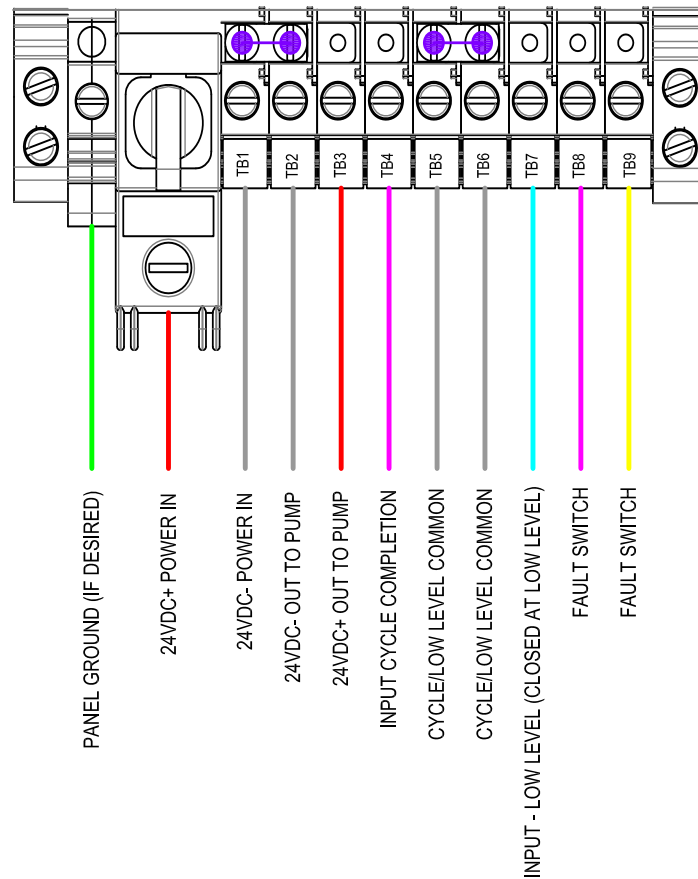
Refer to the following for programming SMDC:

+ DataSheet #46911:  
SMDC Controller

## EBPC Control Packages

### DC Applications

## Electrical Terminal Connections EBPC-24DC



### FUSE REPLACEMENT

The EBPC uses Type CC Fuses  
(slow blow recommended).

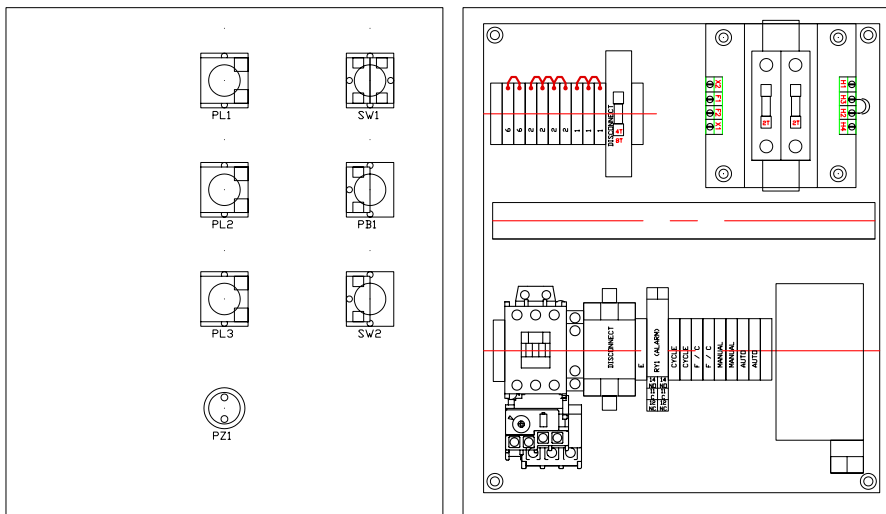
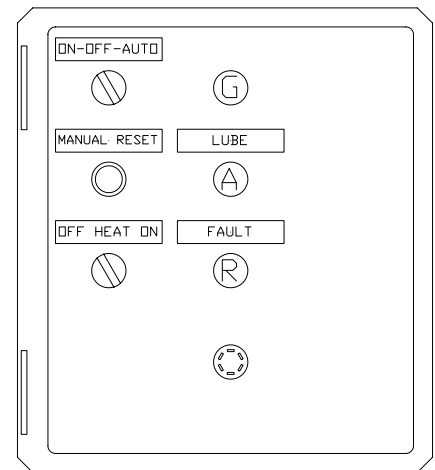
*EBPC-24DC uses a 15A delay fuse  
P.N. FUS14033G*

## Premium Electric Enclosure Packages

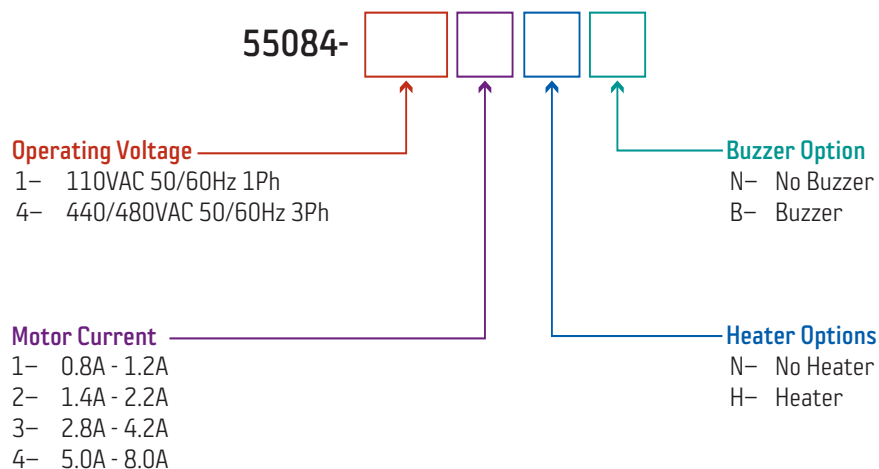
### AC Applications

Bijur Delimon's Premium AC Control Packages are available for the Electric Barrel Pumps. The 55084 Packages are assembled into a Fiberglass Nema 4X enclosure, 14" X 12" X 8". They include a Motor starter and options for heater or buzzer. They operate on 110VAC single phase or 440/480VAC three phase.

These would be used in conjunction with our SS2200 or SC400 controllers.(sold separate)



### How to Order



#### Refer to the following:

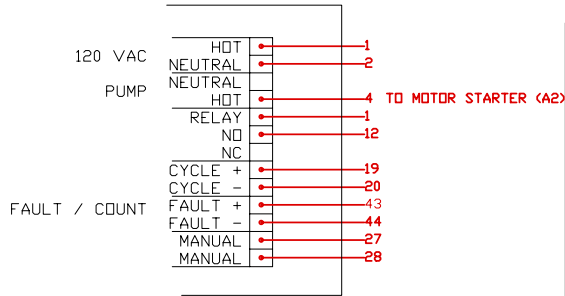
- + DataSheet #24735:  
SS2200 Controller
- + Datasheet #35980  
SC400 Controller
- + Operator Manual # 35979  
SC400

# Electric Enclosure Packages

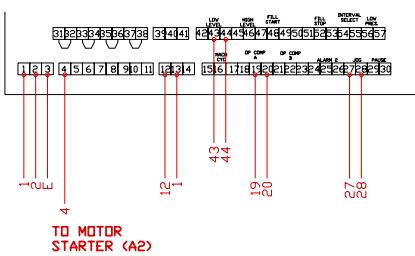
## AC Applications

### Wiring

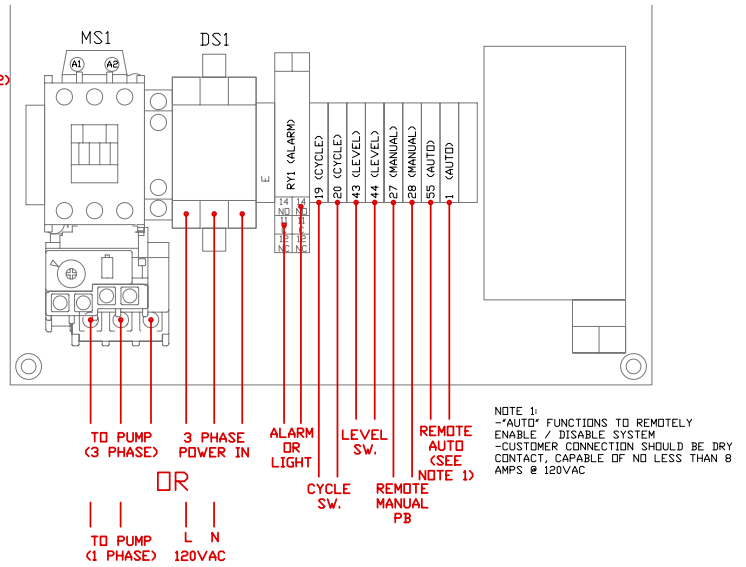
TYPICAL WIRING:  
SS2200



TYPICAL WIRING: SC400



TYPICAL WIRING: CUSTOMER



NOTE 1:  
-AUTO FUNCTIONS TO REMOTELY ENABLE / DISABLE SYSTEM  
-CUSTOMER CONNECTION SHOULD BE DRY CONTACT, CAPABLE OF NO LESS THAN 8 AMPS @ 120VAC

NOTE (GENERAL):  
-CONTROL WIRE SHALL BE U609181901 OR EQUIV (18GA MTW MINIMUM)  
-ALL WIRE SHALL BE RATED FOR 600V MIN.  
-WIRE COLOR MUST NOT BE GREEN OR GRN/YLW  
-CUSTOMER WIRING SHALL CONFORM TO FEDERAL AND LOCAL CODES

## Troubleshooting

	Issue	Possible Cause	Remedy
<b>GENERAL</b>	<b>The lube pump is powered up and no lubricant is pumped out the outlet port.</b>	No power to pump motor	Connect proper voltage to pump motor
	<b>No pressure been built up in the main outlet line.</b>	Pressure relief valve does not closed, leak in the main line.	Check that there is no lubricant coming out the relief valve, check that the lubrication circuit does not have a leak, (fit a plug to the pump outlet, turn on the pump and check if it will build up pressure, if it does the internal relief valve is ok and the fault is in the lube lines).
	<b>The pump continues to run - on</b>	<ol style="list-style-type: none"> <li>1. Grease missing around the suction filter.</li> <li>2. There is a grease leak at some point of the circuit.</li> <li>3. Pressure valve or foot valve closes incorrectly due to dirt or wearing.</li> </ol>	<ol style="list-style-type: none"> <li>1. Remove cover and take out pump and follower plate. Compact grease and fill the drum or substitute it for a full one.</li> <li>2. Check and tighten union. Repair the leak.</li> <li>3. Disassembly and clean valves. In case of damage, replace them.</li> </ol>
	<b>Reduction of the grease delivery.</b>	<ol style="list-style-type: none"> <li>1. Air pockets in the grease drum.</li> <li>2. Dirt in the pressure valve or in the foot valve.</li> </ol>	<ol style="list-style-type: none"> <li>1. Remove the cover and take out the pump and the follower plate. Compact the grease and fill the drum or substitute it for a full one.</li> <li>2. Disassemble and clean. If damaged, replace.</li> </ol>
<b>Reduced pressure in the grease delivery.</b>	Scratched high pressure cylinder or high pressure piston.	Replace with FGK5 Repair Kit	



# Innovators of engineered lubrication technology since 1872

Bijur Delimon International has ISO 9001:2015 and ISO 14001:2015 quality certified manufacturing facilities around the world, so your centralized lubrication system meets the highest industry quality standards. It's all part of our commitment to quality and customer service.



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