

Farval®

A BRAND OF **BIJUR DELIMON®**
INTERNATIONAL

OPERATORS MANUAL Electric Barrel Pump

36915 R8



CONTENTS

General Data & Features.....	2
Operation.....	3
Technical Data.....	3
EBP How to Order.....	4
EBP Service Parts & Repair Kits.....	5
Exploded View.....	6
Repair Kit Illustration.....	7
Example Layouts.....	8
Wiring & Hydraulic Schematics.....	9
EBP Dimensions.....	10
EBP Accessories.....	11
EBPD How to Order.....	12
EBPD Service Parts.....	12
EBPD Dimensions.....	13
EBPC - AC Control Pkg 110V.....	14-15
EBPC - AC Control Pkg 220V.....	16-17
EBPC - DC Control Package.....	18-19
Premium AC Control Package.....	20-21
Troubleshooting.....	22
Notes.....	23

© Copyright Bijur Delimon International 2024.
Bijur Delimon International reserves the right
to update or improve the technical specifica-
tions for this product without prior notice.

BIJUR DELIMON INTERNATIONAL

(919) 465-4448 **LOCAL**
(800) 631-0168 **TOLL-FREE**
(919) 465-0516 **FAX**

WWW.BIJURDELIMON.COM

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

Farval'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.

BIJUR DELIMON'S INDUSTRY LEADING FAMILY OF BRANDS



DELIMON

Farval



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

Standard Tube Lengths/Fits Drum Size ¹		120 lb. (50 kg), 400 lb. (185 kg)
Voltages ²		24 VDC 115 VAC (50/60 Hz) Single Phase
Amp Draw	24 VDC ³	15 Amp draw @ 3500 psi 20°C (68°F) with NLGI #2
	115 VAC ⁴	4 Amp draw @ 3500 psi 20°C (68°F) with NLGI #2
Duty Cycle		24 VDC & 115 VAC S3 Duty Cycle (Intermittent Duty 5min on/5min off)
Lubrication Flow ⁵		150cc/minute @ 140 bar, +20°C (9 cu.in. @ 2030 psi, +68°F)
Pump Pressure		300 bar max/240 bar recommended (4350 psi / 3480 psi)
Systems	Progressive / Dualine ⁶	Pressure Relief Valve Included
	Injector	Vent Valve & Pressure Relief Valve Included
Relief Valve Pressure		240 bar / 3500 psi
Vent Valve Voltages		24 VDC 115/230 VAC (50/60 Hz) Single Phase
Operating Temperature ⁷		-25°C to +60°C (-13°F to +140°F)
Pressure Gauge		350 bar Included (5000 psi)
Lube Outlet Port		1/2" NPSF (F)
Lubricants ⁸		NLGI #000 to #2
Rating		IP66
Noise Level ⁹		75dB

¹ Bung Bushing F360002 is included with pumps.

² Contact factory for other voltages.

³ 16 Amp draw spike. Recommend 40A fuse max.

⁴ 5 Amp draw spike. Recommend 7A fuse max.

⁵ Flow rate is for 60 Hz motors. 60 Hz motor can operate on 50 Hz but pump flow is reduced.

⁶ Suitable for Dualine system when paired with a hydraulic or electric reversing valve.

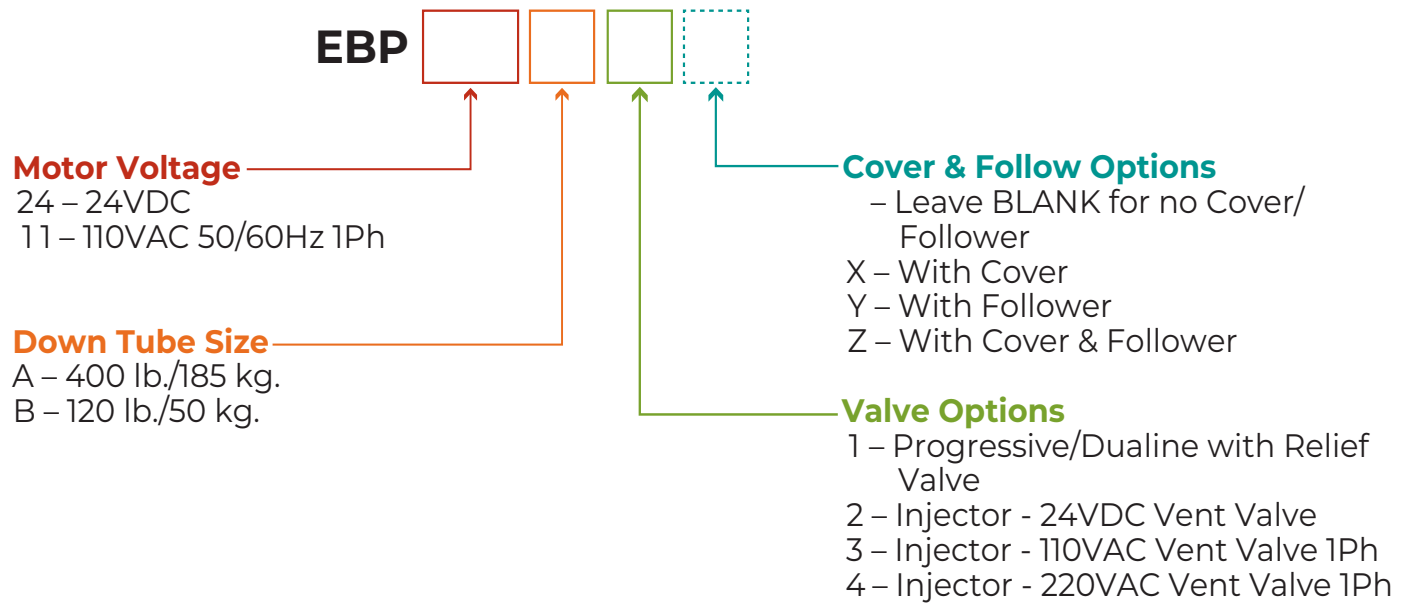
⁷ Lower temperatures may be possible with suitable grease and/or heated reservoir/piping.

⁸ EBP will also work pumping oils.

⁹ Noise level measured at 3' (1 m) from the pump.

Note: Duty Cycle
+ 24VDC & 115 VAC:
S3 Intermittent Duty
5min on/5min off

HOW TO ORDER EBP

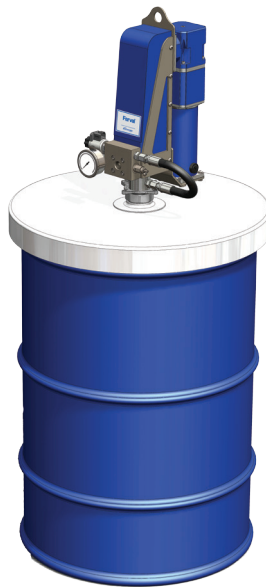


When ordering, specify by name, description and part number.

Example: 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

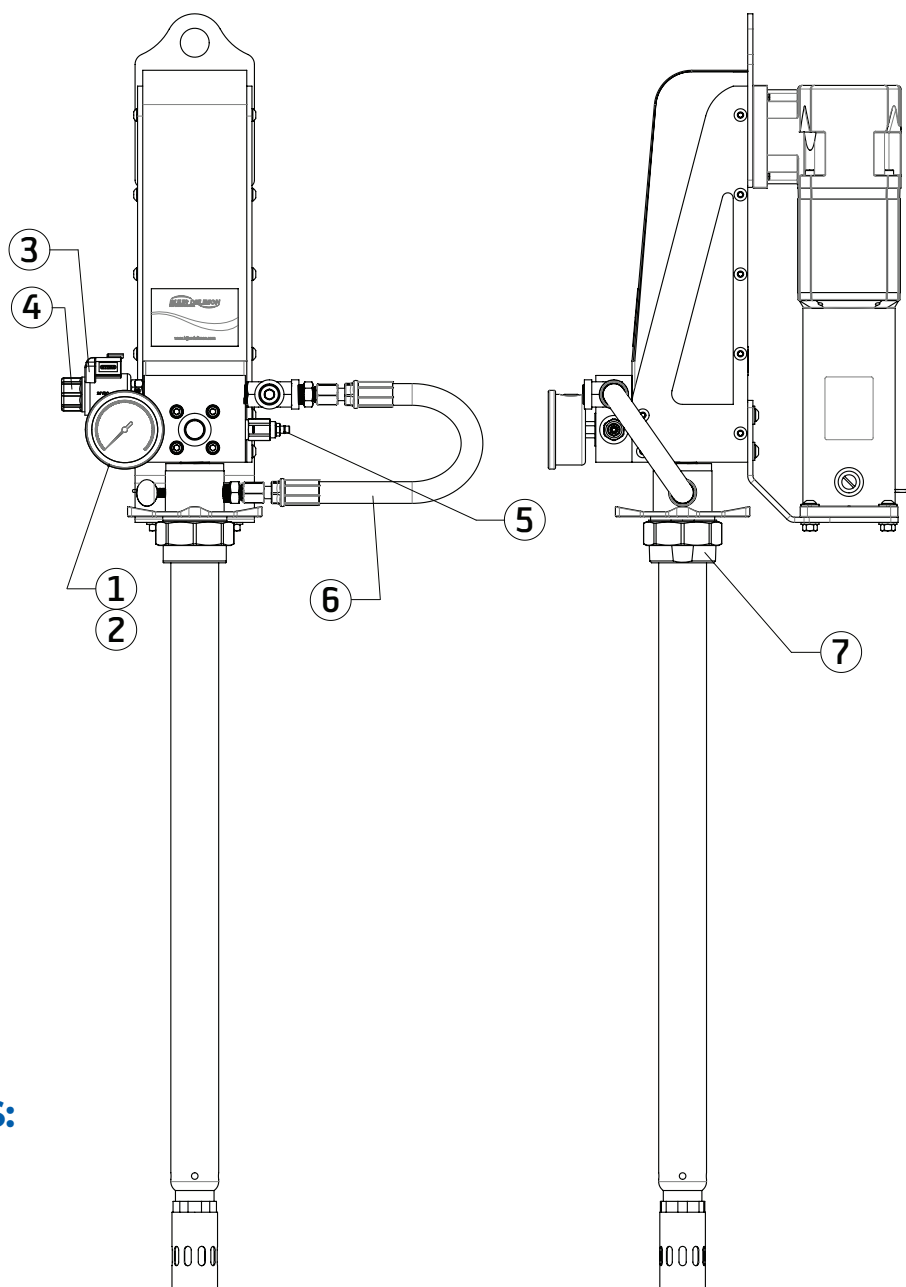
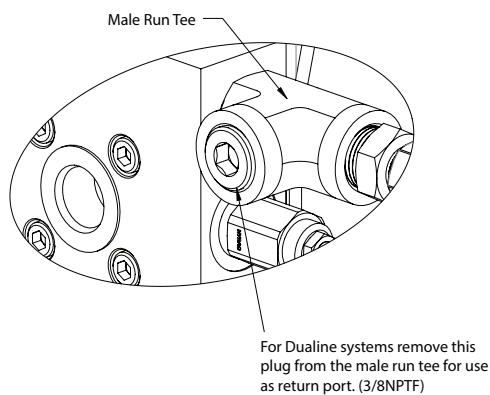
* Injector version only

REPAIR KITS EBP

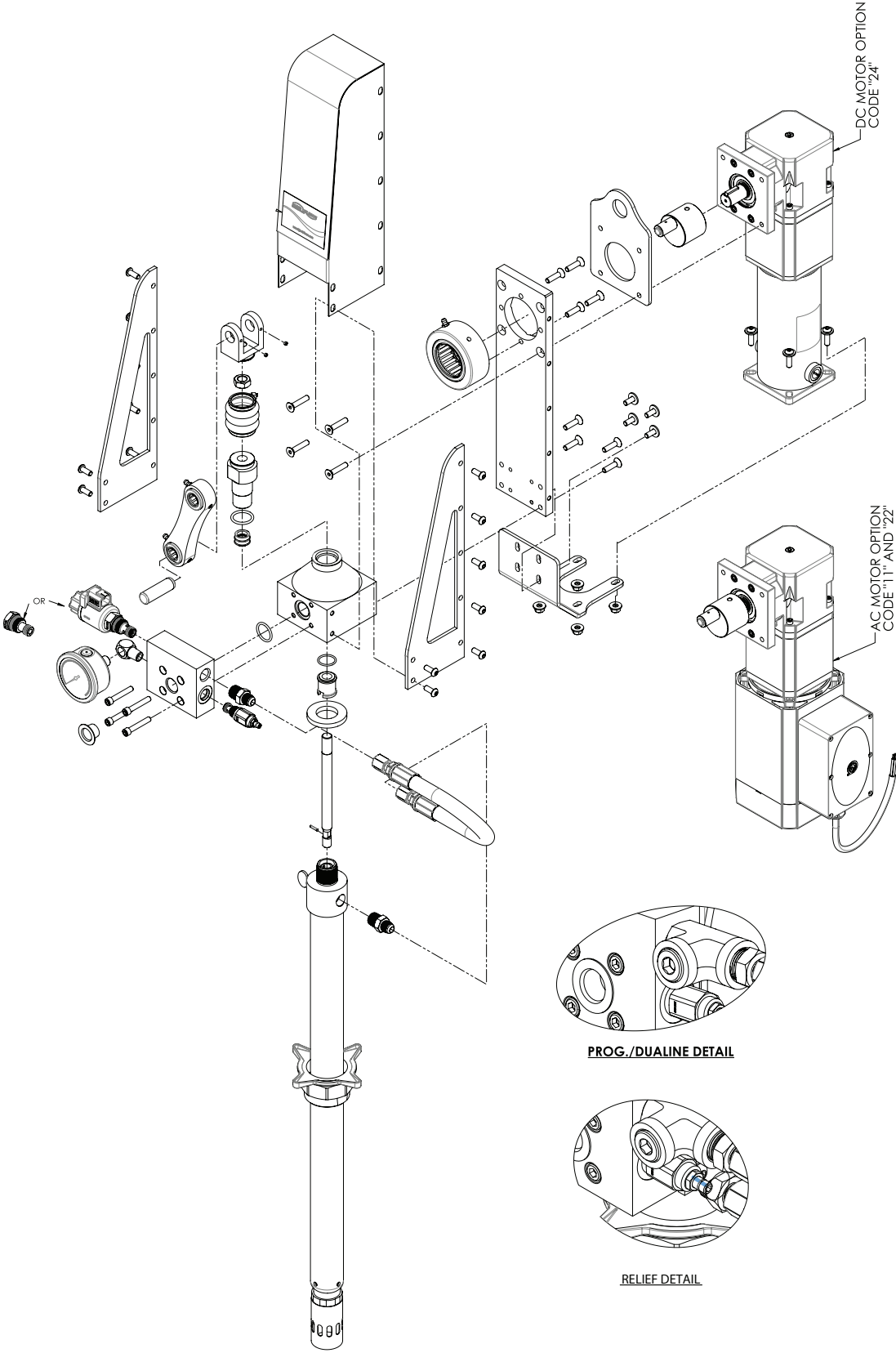
Item	Description	Part #
A	Pressure Valve Repair Kit	FGK3
B	Foot Valve Repair Kit	FGK4
C	High Pressure Piston Repair Kit	FGK5
D	Grease Intake Repair Kit	F740958

See page 7 for Repair Kits Illustrations

DUALINE SYSTEM NOTES:

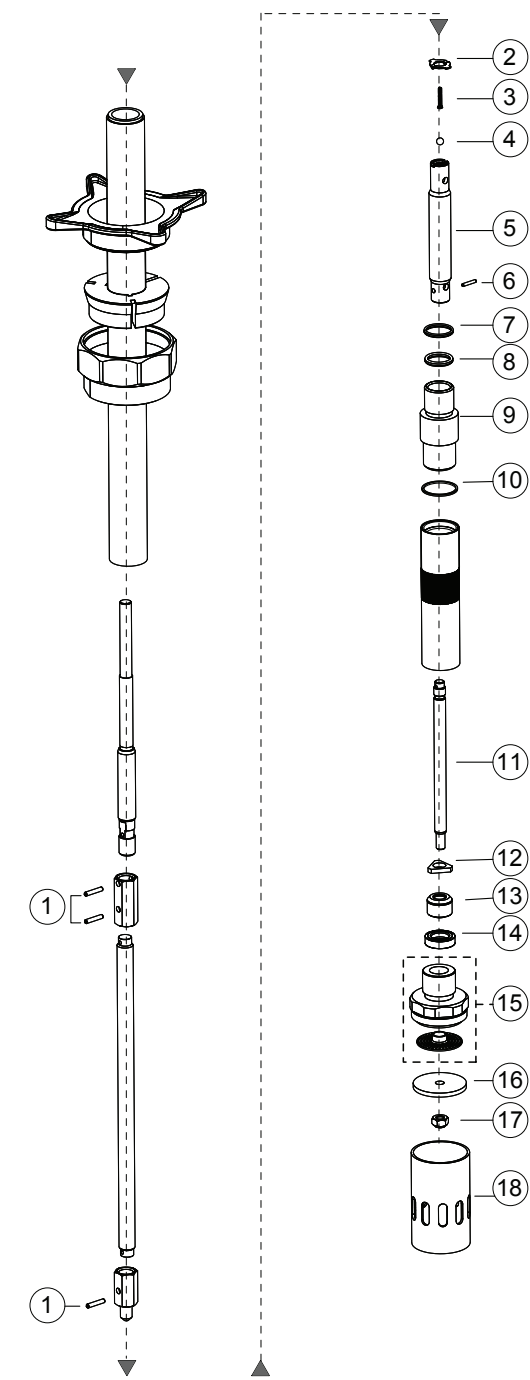


EXPLODED VIEW EBP



NOTES

REPAIR KIT PARTS ILLUSTRATION EBP



REPAIR KITS

Ref	Description	Part Number
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

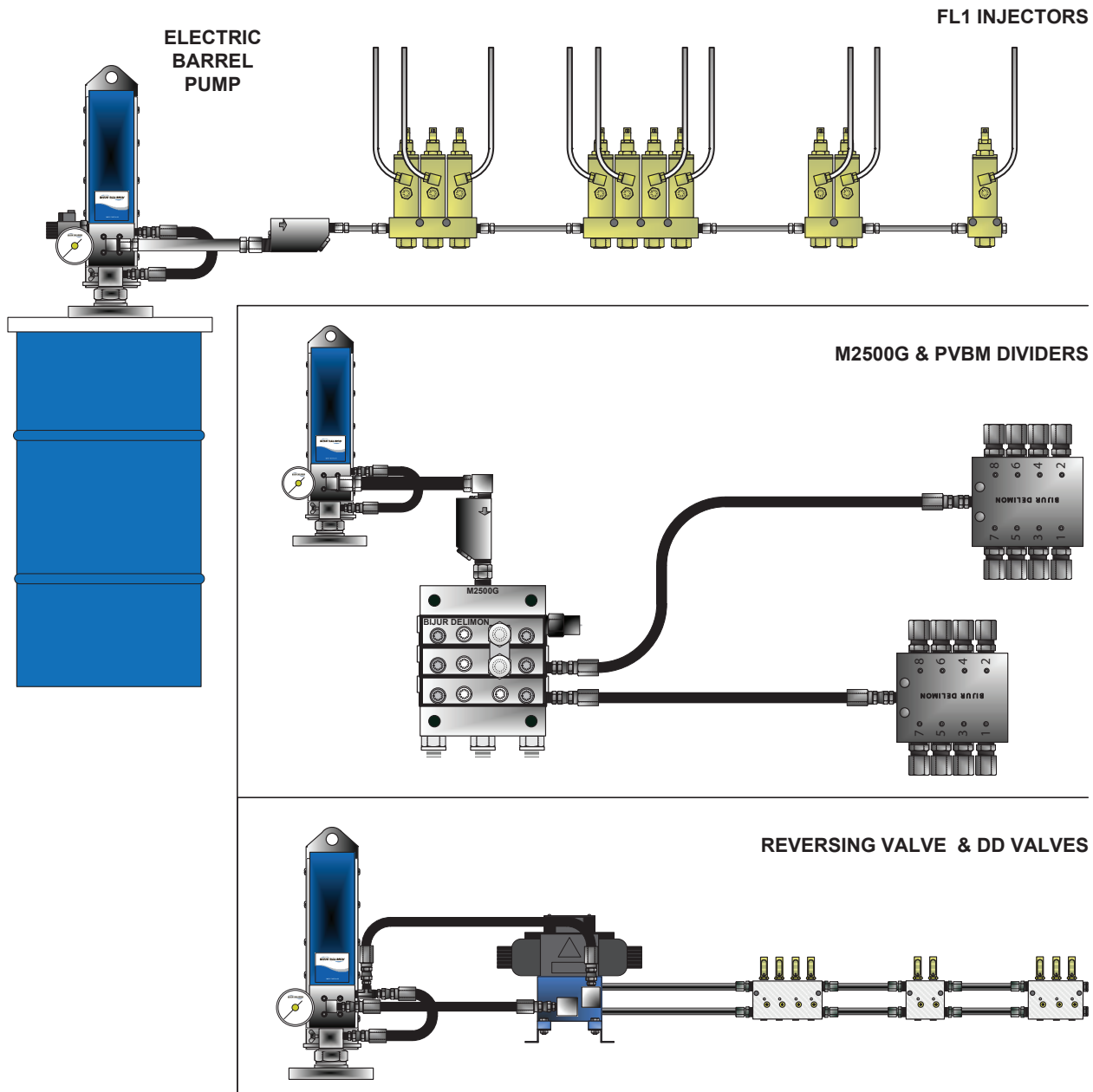
KEY

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	B		
8	Inner O-ring			
9	HP Cylinder			
10	Copper Ring			
11	Shovel Rod	B	D	
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

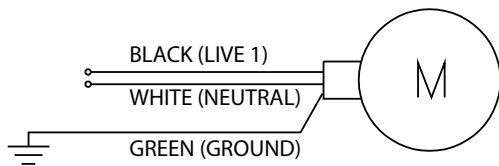
Farval's AC or DC Electric Barrel Pumps will replace the air or hydraulic operated pumps now used for lubrication system on mobile or stationary equipment. Installation is cleaner- no air or hydraulic lines to install/leak. Simply wire into the machines power supply. Pressure rated to 300 bar (4350 psi).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

Farval'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!

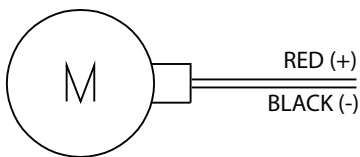


WIRING EBP

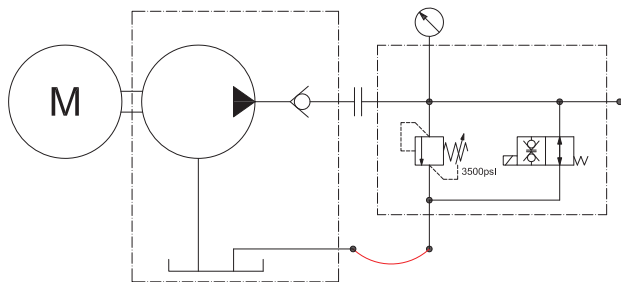
110 VAC & 220 VAC 50/60 HZ SINGLE PHASE



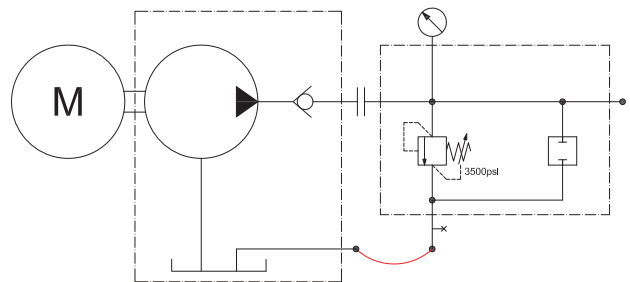
24 VDC



HYDRAULIC SCHEMATICS



EBP Injector Schematic

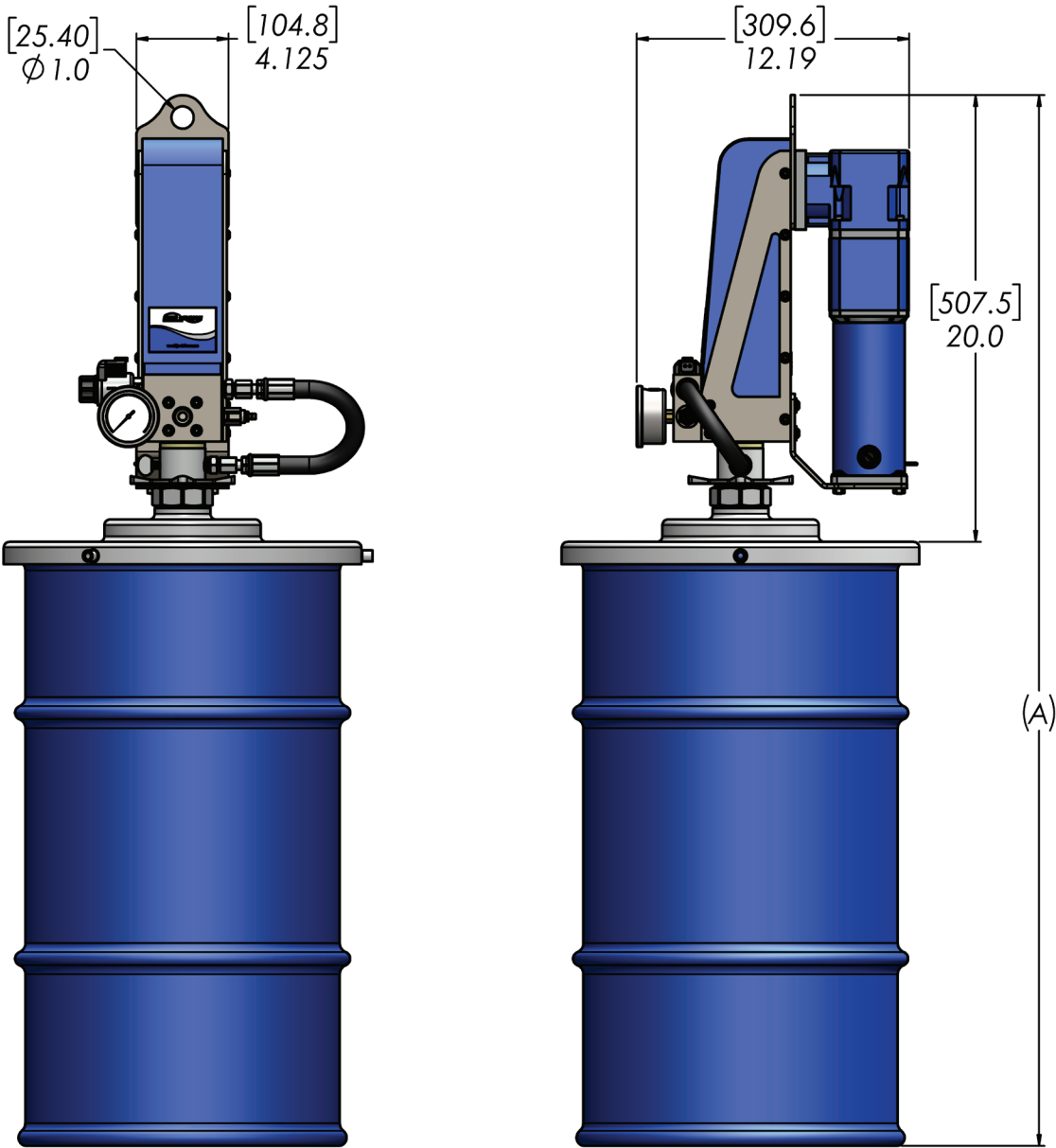


EBP Progressive/Dualine Schematic

EBP DIMENSIONAL SCHEMATICS

ATTENTION

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










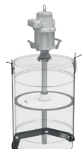



SIZE ¹	A
120 lb Drum (50 kg)	47.0" (1194mm)
400 lb Drum (185 kg)	55.0" (1397mm)

Measurements shown in inches.
[mm in brackets]

¹ 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 NUMBER
	Hose Assemblies 345 bar/5000 psi WP 1/2" I.D. Hose X 3/4-16 SAE female ends	72"-IN LG	200549
		144"-IN LG	HOS13907B
	STR Male Adapters for hoses (Additional sizes in Catalog 151)	3/4-16 x 1/2NPT 3/4-16 x 3/8NPT 3/4-16 x 1/4NPT	U43188 U43168 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
	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 -

Motor Voltage

24 – 24VDC
11 – 110VAC 50/60Hz 1Ph

Container Size

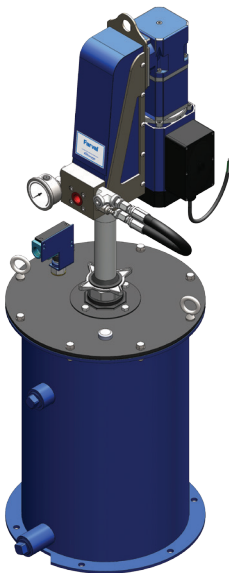
A – 90 lb. / 41kg. without Reservoir
B – 60 lb. / 27kg. without Reservoir
C – 90 lb. / 41kg. with Reservoir
D – 60 lb. / 27kg. with Reservoir

Level Switch Options

– Leave BLANK for no Level Switch
L – With Level Switch NEMA 4

Valve Options

1 – Progressive/Dualine with Relief Valve
2 – Injector -24VDC Vent Valve
3 – Injector -110VAC Vent Valve 1Ph
4 – Injector -220VAC Vent Valve 1Ph



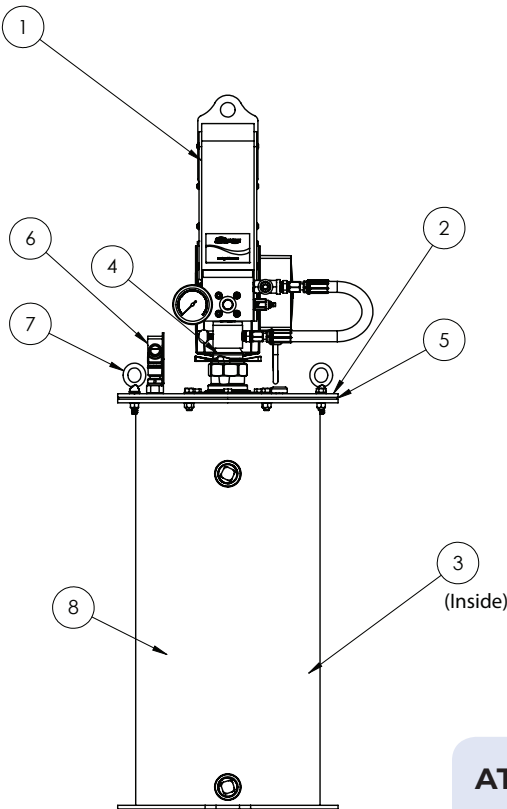
EBPD 60 LB.

When ordering, specify by name, description and part number.
Example: Electric Barrel Pump Dedicated 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 Assem- bly 90 LB	85269-A
	Level Switch Assem- bly 60 LB	85269-B
7	Lifting Bolts & Fasteners	85277**
8	Reservoir 90LB/41kg	85474-A
	Reservoir 60LB/27kg	85474-B

* EBP part number note: Use EBPxxBy
xx = motor voltage code
y = valve code
** 85277 also includes items 2, 4 & 5.

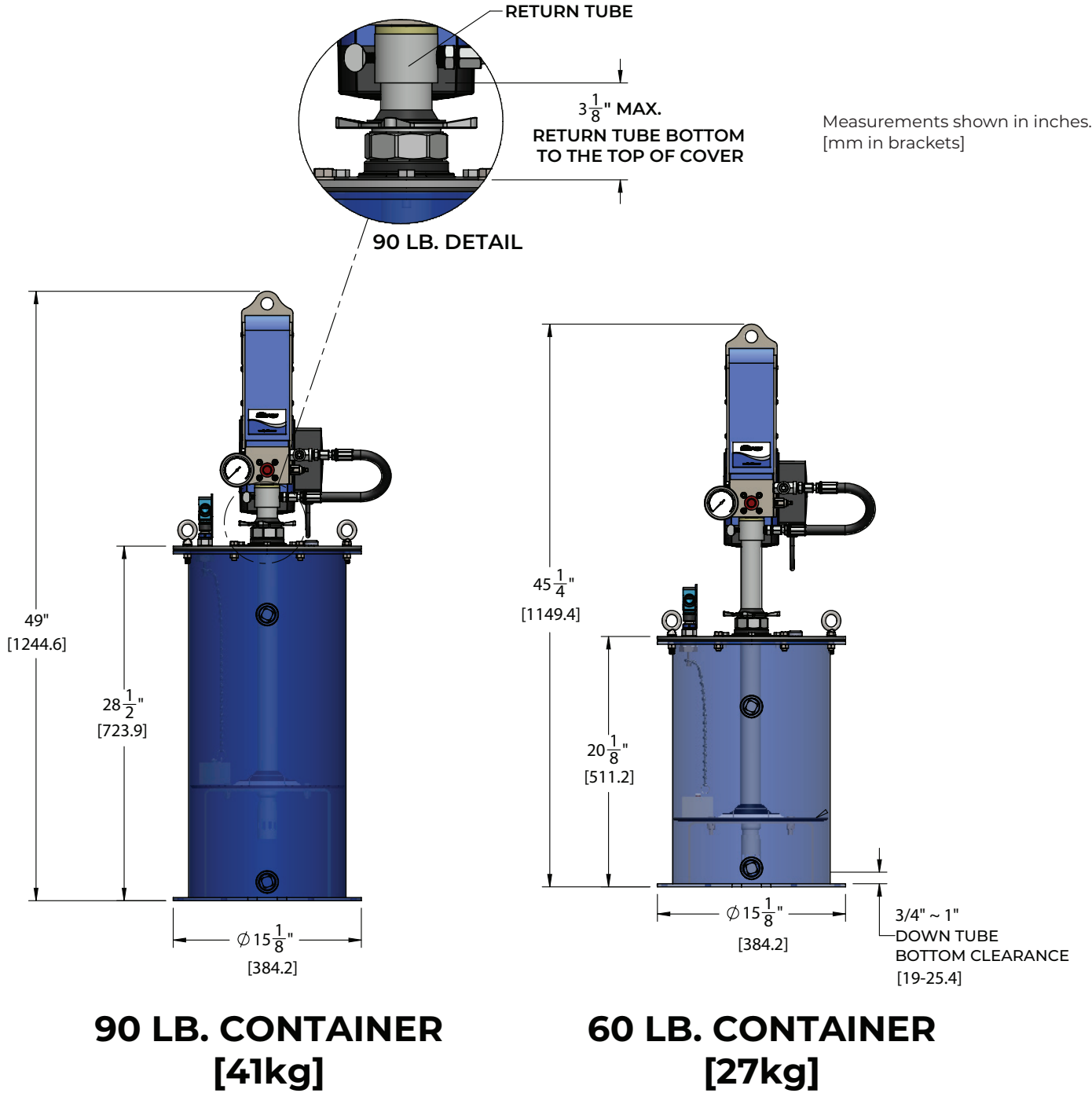


EBPD 90 LB.

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

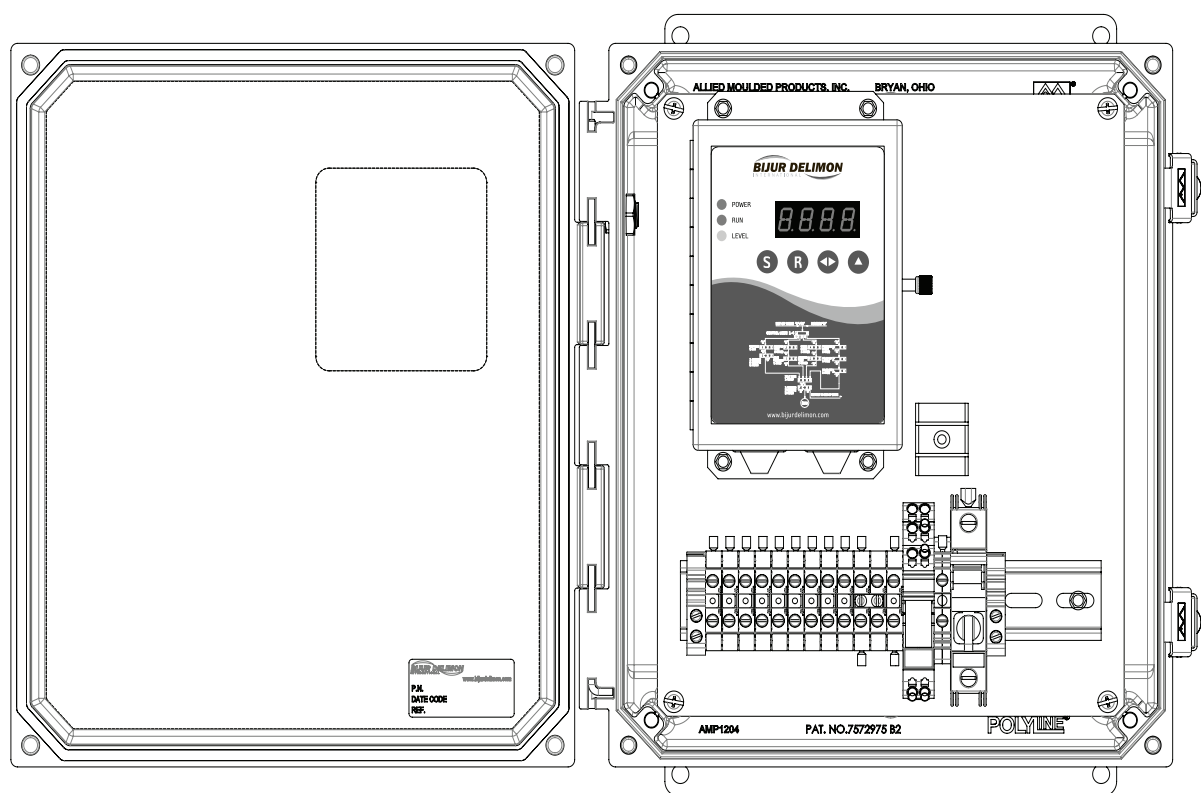
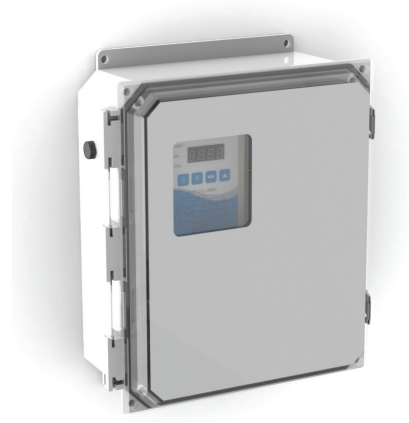


EBPC CONTROL PACKAGES

AC Applications – 110VAC

Farval’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 Number
EBPC Controller	Controller Enclosure with SMAC (110 VAC)	EBPC-11AC

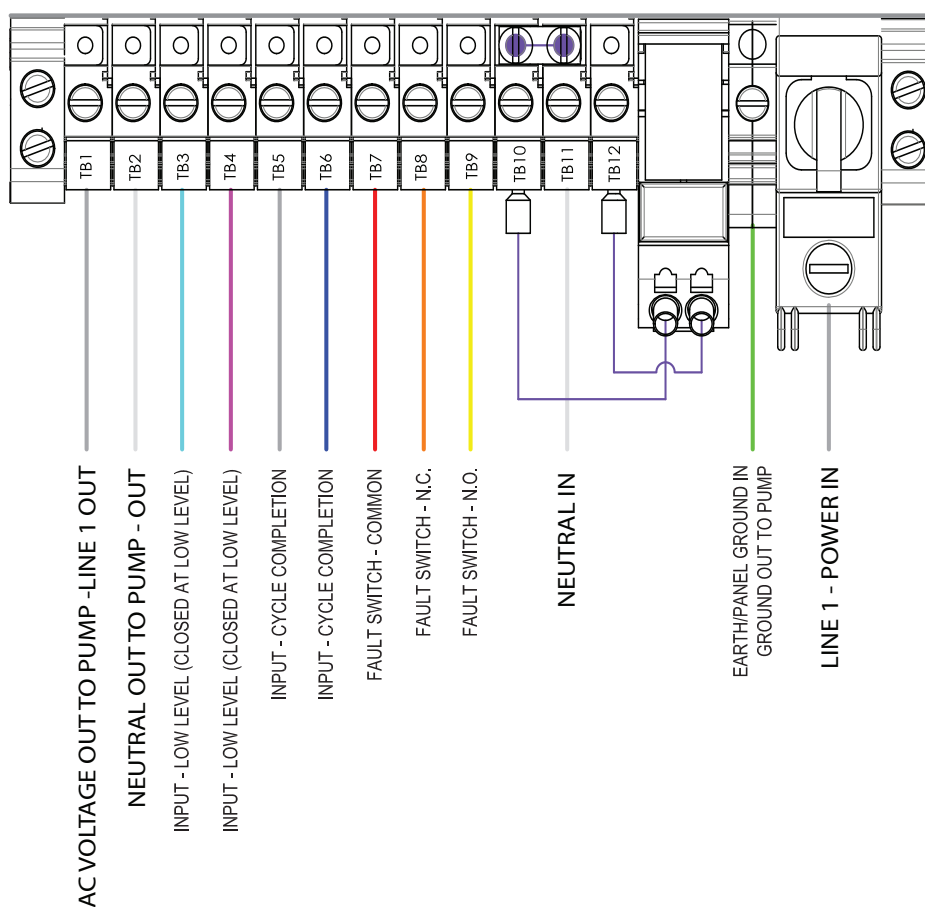
When ordering, specify by name, description and part number.
Example: EBPC Control Package 110 VAC, Part # EBPC-11AC.

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).

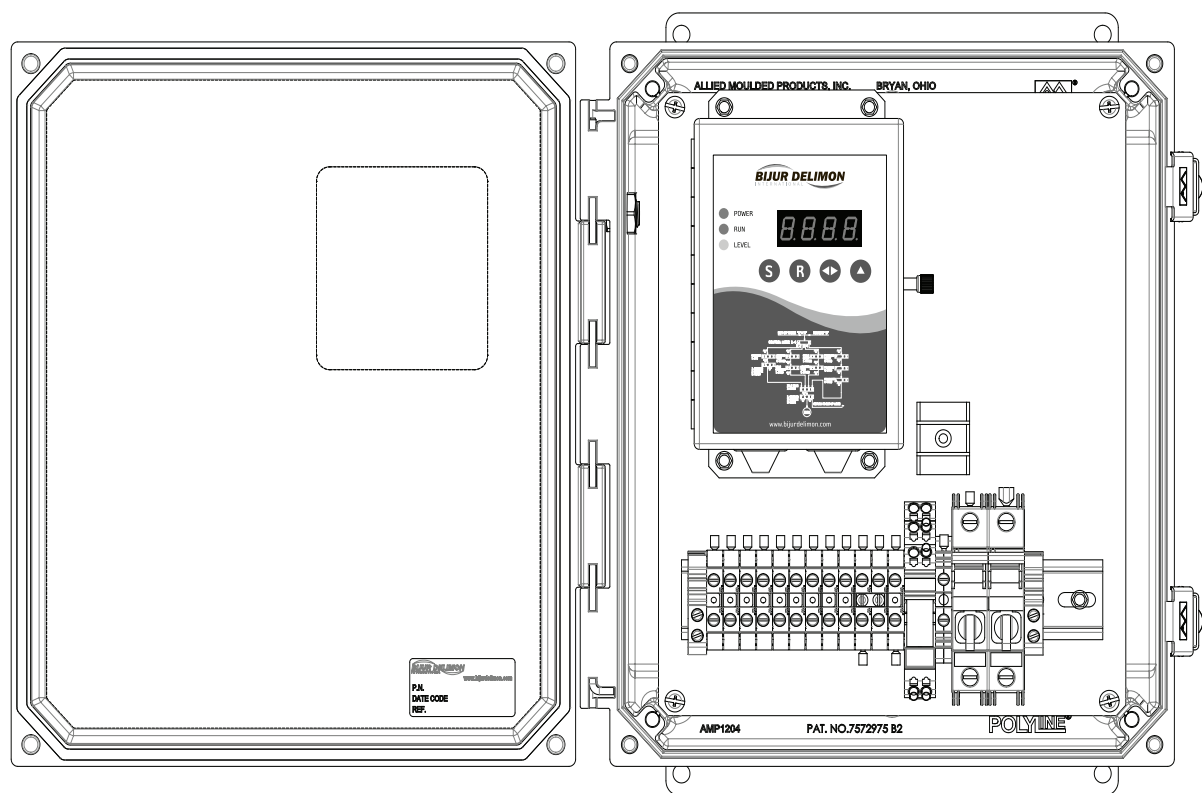
EBPC-11AC uses a 4A delay fuse
P.N. FUS14033E

EBPC CONTROL PACKAGES

AC Applications – 220VAC

Farval’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 Number
EBPC Controller	Controller Enclosure with SMAC (220 VAC)	EBPC-22AC

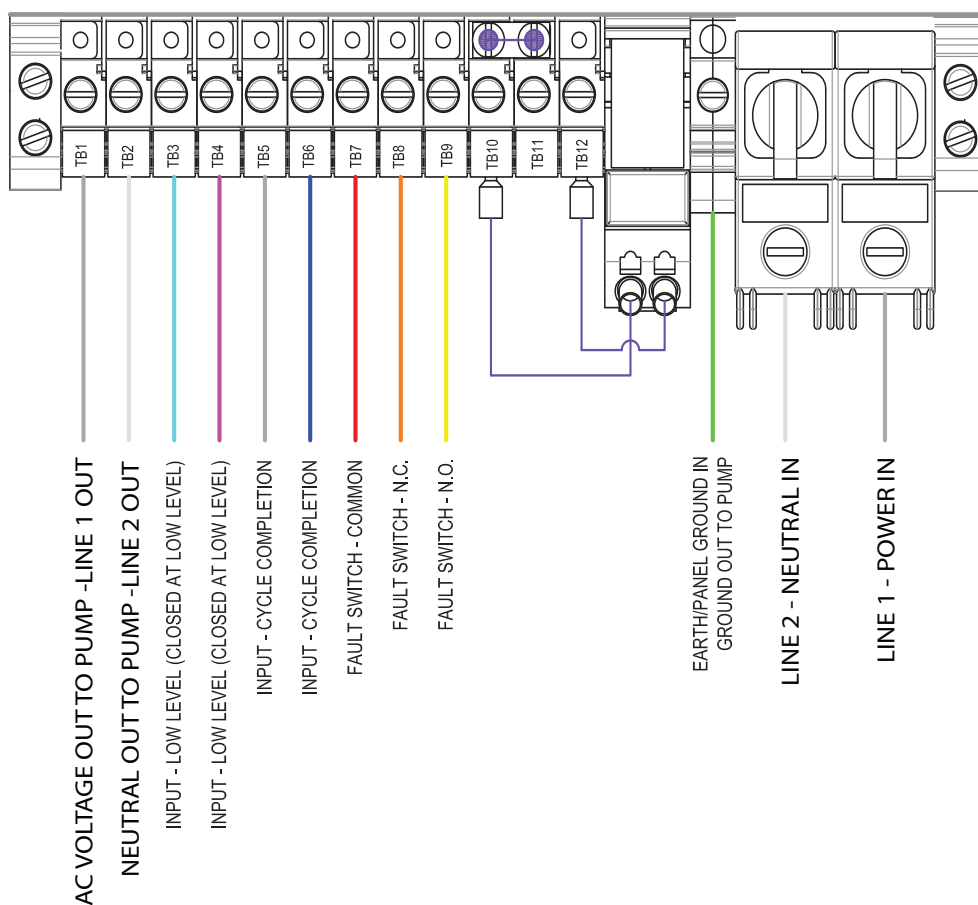
When ordering, specify by name, description and part number.
Example: EBPC Control Package 220 VAC, Part # EBPC-22AC.

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).

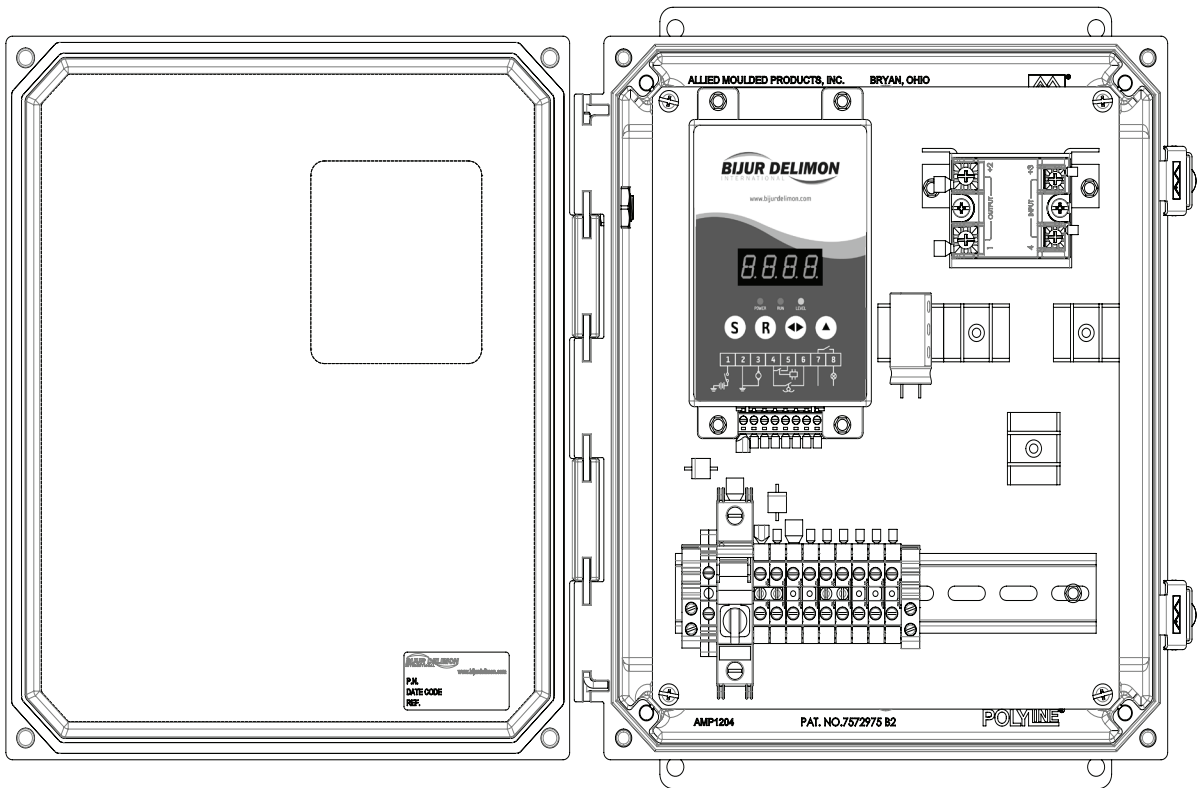
EBPC-22AC uses a 2A delay fuse
P.N. FUS14033D

EBPC CONTROL PACKAGES

DC Applications

Farval'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 Number
EBPC Controller	Controller Enclosure with SMDC (24 VDC)	EBPC-24DC

When ordering, specify by name, description and part number.

Example: EBPC Control Package 24 VDC, Part # EBPC-24DC.

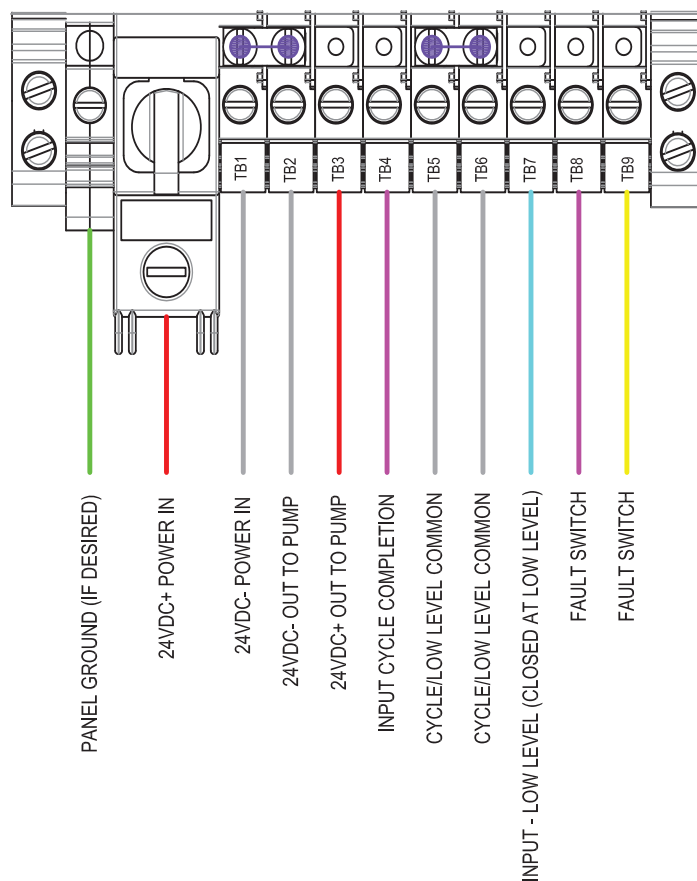
Refer to the following for programming SMDC:

+ 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

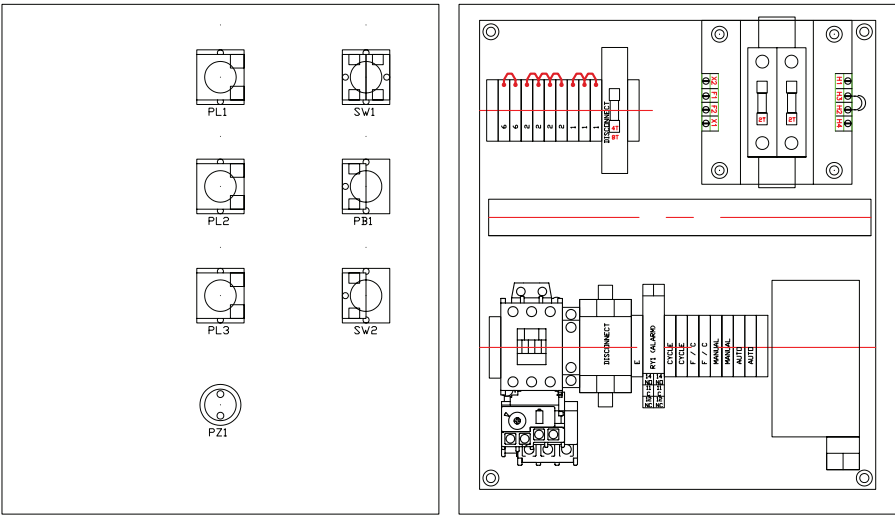
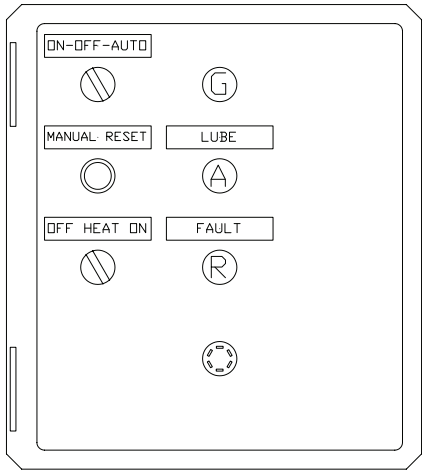
PREMIUM ELECTRIC ENCLOSURE PACKAGES

AC Applications

Farval'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 SC400 controllers. (Sold separately.)



HOW TO ORDER

55084-

Operating Voltage — ↑

1 – 110VAC 50/60Hz 1Ph
4 – 440/480VAC 50/60Hz 3Ph

Motor Current — ↑

1 – 0.8A - 1.2A
2 – 1.4A - 2.2A
3 – 2.8A - 4.2A
4 – 5.0A - 8.0A

Buzzer Option — ↑

N – No Buzzer
B – Buzzer

Heater Options — ↑

N – No Heater
H – Heater

Refer to the following:

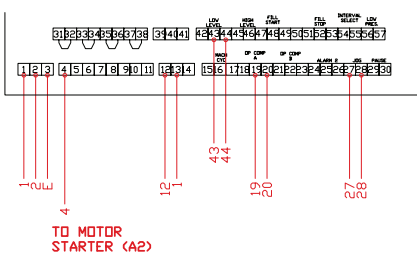
- + Datasheet #35980
SC400 Controller
- + Operator Manual # 35979
SC400

ELECTRIC ENCLOSURE PACKAGES

AC Applications

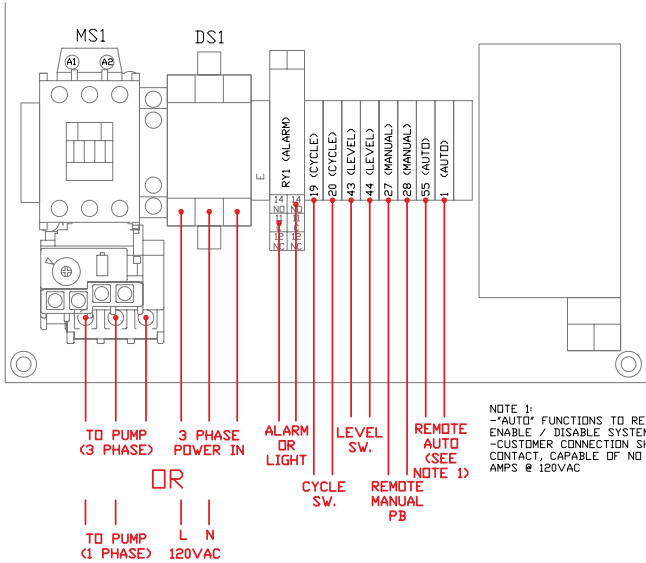
WIRING

TYPICAL WIRING: SC400



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

TYPICAL WIRING: CUSTOMER



TROUBLESHOOTING

	ISSUE	POSSIBLE CAUSE	REMEDY
GENERAL	The lube pump is powered up and no lubricant is pumped out the outlet port.	No power to pump motor	Connect proper voltage to pump motor
	No pressure been built up in the main outlet line.	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).
	The pump continues to run - on	<ol style="list-style-type: none"> 1. Grease missing around the suction filter. 2. There is a grease leak at some point of the circuit. 3. Pressure valve or foot valve closes incorrectly due to dirt or wearing. 	<ol style="list-style-type: none"> 1. Remove cover and take out pump and follower plate. Compact grease and fill the drum or substitute it for a full one. 2. Check and tighten union. Repair the leak. 3. Disassembly and clean valves. In case of damage, replace them.
	Reduction of the grease delivery.	<ol style="list-style-type: none"> 1. Air pockets in the grease drum. 2. Dirt in the pressure valve or in the foot valve. 	<ol style="list-style-type: none"> 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. 2. Disassemble and clean. If damaged, replace.
	Reduced pressure in the grease delivery.	Scratched high pressure cylinder or high pressure piston.	Replace with FGK5 Repair Kit

This image shows a full page of blank, lined paper. It features approximately 20 evenly spaced horizontal grey lines across its entire width, providing a template for writing or drawing. The margins are consistent on all sides.

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.



**CORPORATE
HEADQUARTERS (USA)**

Bijur Delimon International
5909 Falls of Neuse Road
Suite 201
Raleigh, NC 27609

(800) 631 0168 TEL

GERMANY

Delimon GmbH
Hammer Straße 19
40219 Düsseldorf

(+49) 211 / 77 74-0 TEL

CHINA

Nanjing Bijur Machinery
Products, Ltd.
#9 Hengtong Road
Nanjing Xingang Economic &
Technical Development Zone
Nanjing 210038

(+86) 25-85801188 TEL

UNITED KINGDOM

Denco Lubrication Limited
Ramsden Court
Ramsden Road Rotherwas
Industrial Estate
Hereford, HR2 6LR

(+44) (0) 1432365000 TEL

IRELAND

Bijur Lubricating Ireland
Limited
Gort Road
Ennis, County Clare

(+353) 6568-21543 TEL

FRANCE

Bijur Products, Inc.
PB 50 - ZI de
Courtabœuf
9, Avenue de Quebec
F-91942 Courtaboeuf
Cedex

(+33) (0)169298585 TEL

SPAIN

Lubricacion Centralizada de
Limon S.A.
Avenida Txori Erri 3
48150 Sondica Vicaya

(+34) 94-453-2000 TEL

INDIA

Bijur Delimon India Private
Limited
H-Block, A 56/1
M.I.D.C., Pimpri
Pune- 411018, Maharashtra

(+91) 2032319149 TEL