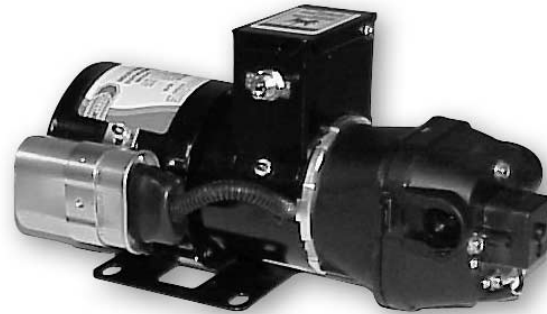


## INDUSTRIAL DIAPHRAGM PUMPS

### FEATURES

- Run Dry Ability
- Self-Priming
- Thermal Overload Protected
- Snap-in Port Adapters
- Flow to 3 GPM/12 LPM
- **CE** Conforms to Electromagnetic Compatibility 89/336/EEC and Machinery Directive 89/392/EEC, EN50081-1



115 VAC INDUSTRIAL DIAPHRAGM PUMPS

### SPECIFICATIONS

<b>Materials</b>	Pump Body	Glass-filled Polypropylene
	Diaphragm	Santoprene**
	Valves	Viton*
<b>Hardware</b>	Stainless Steel	
<b>Pump Design</b>	Four Piston Diaphragm Type	
<b>Pressure Switch</b>	OFF at 40 psi ON at 25 psi	
<b>Motor</b>	AC Induction Type Fan Cooled, Capacitor Start Sealed Ball Bearing Thermally Protected 115VAC, 60Hz, 1 $\phi$ , 1.8 Amp CSA, UL listed	
<b>Continuous Duty Rating</b>	25 psi (1.7 Bar) at 75°F (24°C) Ambient	
<b>Ports</b>	1/2" (13 mm) Hose Barb, Viton O-ring 1/2" Male Quest, EPDM O-ring	
<b>Liquid Temperature</b>	45°F (7°C) to 130°F (54°C) For use with Maximum 130°F (54°C) Water	
<b>Viscosity</b>	250 Centipoise Maximum	
<b>Shipping Weight</b>	12 lb (5.5 kg)	

### APPLICATIONS

This pump provides excellent service where 115VAC 60hz single-phase power is required for operation. The AC capacitor start induction motor dramatically extends motor service life in applications where permanent magnet DC motors would require regular maintenance to replace worn motor brushes. This pump is the clear choice for continuous duty bulk transfer and recirculation applications.

Model Number	Pressure Switch	Valves	Diaphragm
4300-529	40 PSI	Viton*	Santoprene**

\* Viton is a registered trademark of DuPont Dow Elastomers L.L.C.

\*\* Santoprene is a registered trademark of Monsanto.

#### IMPORTANT SAFETY INSTRUCTIONS SAVE THESE INSTRUCTIONS

**Read and follow all instructions in manual and on pump.**

**Do not permit children to use this product unless closely supervised at all times.**

MAINTAIN ALL SAFETY LABELS

## IMPORTANT PRE-INSTALLATION INFORMATION



**WARNING** Explosion hazard. Do not pump gasoline or other flammable liquids. Do not pump in an explosive environment. To do so can cause an explosion resulting in injury or death.



**WARNING** Fire and Shock hazard. Wiring must comply with applicable electrical standards and include a properly sized fuse or circuit breaker. Improper wiring can cause fire or electric shock resulting in injury or death.

**WARNING** To reduce risk of electric shock, connect only to a properly grounded, grounding-type receptacle. Pump must be connected to a dedicated electrical circuit protected by a properly sized circuit breaker or fuse.

**WARNING** Pump is not designed for outdoor use, open bodies of water, or where flammable gases exist. For use with chemicals compatible with materials of construction.

**CAUTION** All electrical work must be performed by a qualified technician. Always follow the National Electrical Code (NEC) or Canadian Electrical Code, as well as all local, state, and provincial codes.

## INSTALLATION

**MOUNTING** Flojet diaphragm pumps are self-priming and can be located in a dry location above or below the supply tank. Mount motor above pump, if possible, to protect motor from plumbing leaks. Secure pump with four mounting screws. Rubber grommets act as shock and noise absorbers. Do not over tighten mounting screws.

Use 1/2" (13mm) flexible inlet and outlet tubing minimum. See port adapter kit options on page 3. Quest fittings are for nut-and-ferrule connection and should not be used with NPT fittings. Secure with hose clamps. Use flexible tubing between port fitting and rigid pipe to prevent excessive mechanical stress. A 40 mesh inlet strainer is recommended. Use 01745-010 for 3/4" hose barb or 01745-012 for 1/2" hose barb. Clean periodically.

**ELECTRICAL CONNECTION** Place ON/OFF switch in OFF position before connecting to wall outlet. Pump must be connected to a properly grounded 3 prong electrical receptacle. Pump must be connected to a dedicated electrical circuit protected by a properly sized circuit breaker or fuse.

## IMPORTANT PRE-OPERATION INFORMATION

**WARNING** Do not service pump with power connected. Thermal protector may restart pump at anytime after thermal shutoff.

**WARNING** To reduce risk of electric shock, connect only to a properly grounded, grounding-type receptacle.

**WARNING** Use chemicals in strict accordance with manufacturers label, cautions and direction. Take precautions to prevent injury in case of pump leak. Always wear eye protection. Flush pump with water and/or neutralizing agent after chemical use.

**CAUTION** Do not cycle pump. Excessive cycling will damage pressure switch and void warranty. Increase flow (nozzle size) to eliminate unnecessary pump cycling.

## OPERATION

**START-UP** Check level of fluid in supply tank. Open all valves in system. Turn pump ON. Pump is primed when flow is steady. Demand type pumps will automatically turn off when discharge valve is closed and automatically turn on when discharge valve is opened.

**WARNING** Do not block pump discharge if demand switch is not present. Excessive pressure can damage pump and plumbing and may result in injury.

**SELF-PRIMING** Pump is self-priming. Vertical dry lift capacity is approximately 9 feet (2.7m). Suction line must be airtight, and discharge line must be open to prime.

**RUNNING DRY** Pump can run dry indefinitely without damage.

**CHEMICAL COMPATIBILITY** Use with fluids compatible with the materials of construction. Consult factory for Chemical Compatibility Guide. Flush with water or neutralizing solution to prolong pump life. Fluid temperature and chemical concentration may reduce material compatibility. Flojet does not warrant against chemical attack. The end user must determine the suitability of this product in the final application.

**DUTY CYCLE AND TEMPERATURE** Motor and pump are designed for continuous operation on 70° F (21° C) ambient air while producing 25 psi (2 bar) discharge pressure. If air temperature, liquid temperature, or discharge pressure are above these limits, intermittent operation is required to prevent overheating. Liquid temperature range is 130° F (54° C) to 45° F (7° C).

**CAUTION** In normal operation, motor case will get hot. Prolonged contact with motor could cause a burn on human skin.

## SERVICE INSTRUCTIONS

### PUMP DISASSEMBLY

1. Remove power from pump. Open discharge valve to relieve system pressure.
2. Push port clips back and disconnect plumbing from pump.
3. Remove the four (4) pumphead screws.
4. Rotate pumphead until cam/bearing set screw is visible through drain notch.
5. Loosen cam/bearing set screw and slide pump off motor shaft.
6. Separate upper housing, lower housing, and check valve assembly as required.

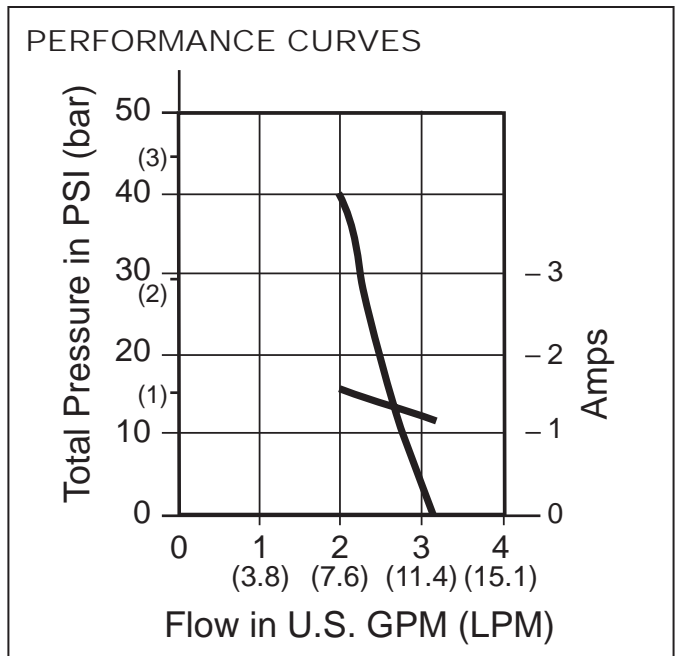
### PUMP ASSEMBLY

1. Install new outer piston in lower housing with piston tops pointing away from motor.
2. Install new diaphragm in lower housing with the molded O-ring seals facing away from motor.
3. Insert each inner piston through the diaphragm into outer piston.
4. Turn each piston until fully seated.
5. Secure cam/bearing assembly to outer pistons using 18 inch pounds (2.0 Nm) of torque.
6. Slide lower housing on motor shaft. Align set screw with motor shaft indentation.

7. Set screw MUST be positioned over shaft indentation and secured tightly.
8. Check that ferrules are installed in upper housing and O-ring is properly seated.
9. Install check valve assembly in upper housing and fit upper and lower housings together.
10. Align pumphead with motor and tighten four (4) screws evenly using 25 inch pounds (2.8 Nm) of torque.

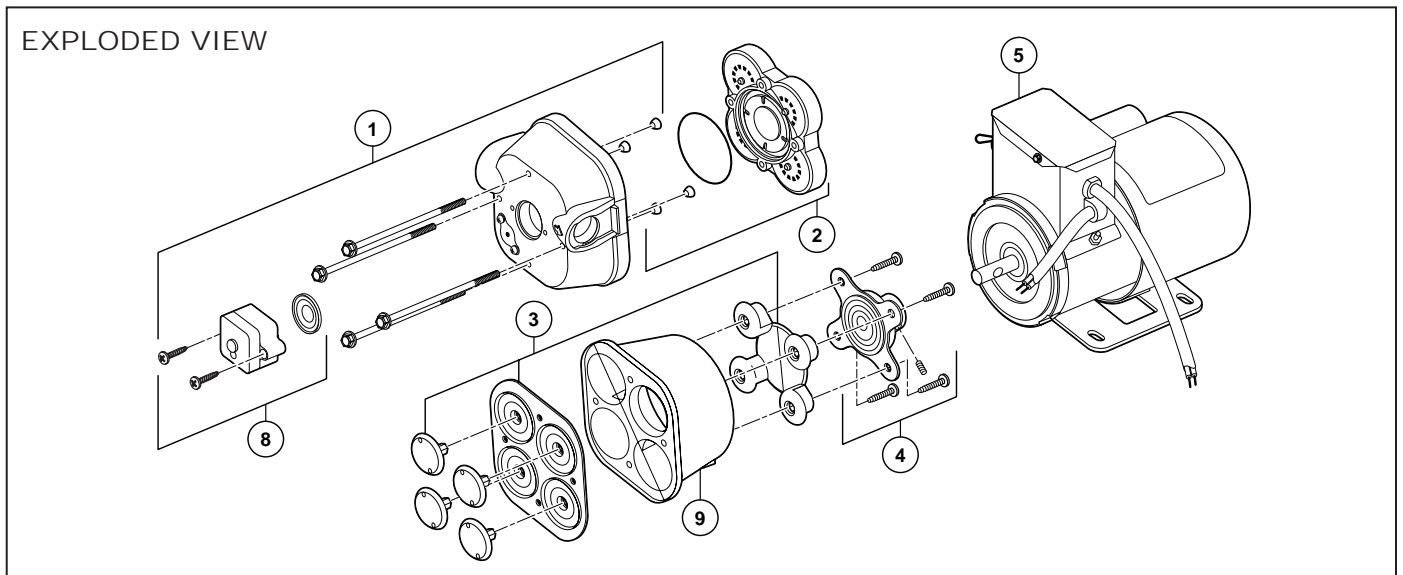
### SWITCH REPLACEMENT

1. Remove power from pump. Relieve system pressure. Disconnect inlet and outlet hoses.
2. Remove pressure switch cover and disconnect power leads from switch.
3. Remove switch and switch diaphragm from pump by removing two (2) switch mounting screws.
4. Replace switch diaphragm and switch. Reassemble in reverse order.
5. Do not over tighten switch mounting screws.



### OPTIONAL VITON PORT KITS

Port Kits contain two ports with O-rings



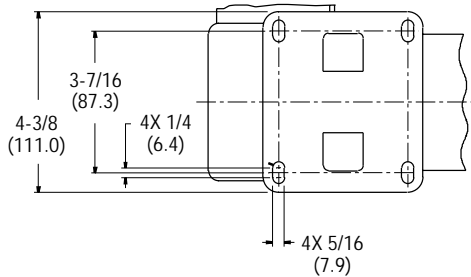
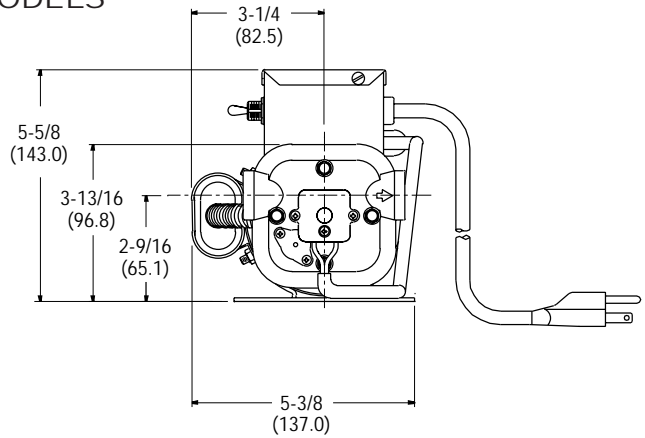
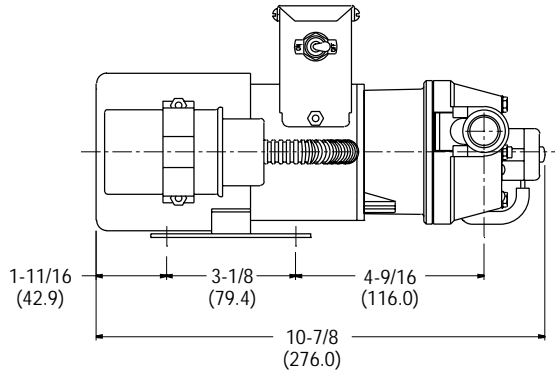
### PARTS LIST

Model	① Upper Housing Kit	② Check Valve Kit	③ Diaphragm Kit	④ Cam/Bearing Kit	⑤ Motor Kit	⑧ Pressure Switch Kit
4300-0529	20404-007	20407-020	20403-040	20400-003	R2029-125A	02090-118

Bearing cover ⑨ not included in diaphragm Kit ③

DIMENSIONS Inches (mm)

4300 MODELS



TROUBLESHOOTING

**PULSATING FLOW**

Pump cycles on and off

- Restricted on outlet remove restriction or increase nozzle size

**FAILURE TO PRIME**

Motor operates, but no pump discharge

- Restricted intake or discharge line
- Air leak in intake line
- Punctured pump diaphragm
- Debris under check valves

**MOTOR FAILS TO TURN ON**

- Loose wiring connection
- Pump circuit has no power
- Blown fuse
- Thermal Protector Tripped
- Pressure switch failure
- Defective motor

**PUMP FAILS TO TURN OFF**

After discharge valve is closed

- Empty water tank
- Punctured pump diaphragm

- Discharge line leak
- Defective pressure switch
- Low voltage to pump
- Debris under check valves

**LOW FLOW AND PRESSURE**

- Air leak at pump intake
- Debris inside pump in check valves
- Worn bearing (excessive noise)
- Punctured pump diaphragm
- Defective motor

Flojet



THE PRODUCTS DESCRIBED HEREIN ARE SUBJECT TO THE STANDARD FLOJET ONE YEAR LIMITED WARRANTY, WHICH IS AVAILABLE FOR YOUR INSPECTION UPON REQUEST.

U.S.A.  
Flojet\*  
20 Icon  
Foothill Ranch, CA 92610-3000  
Tel: 949.859.4945  
Fax: 949.859.1153

UNITED KINGDOM  
Jabsco  
Bingley Road, Hoddesdon  
Hertfordshire EN11 OBU  
Tel: +44 (0) 1992 450145  
Fax: +44 (0) 1992 467132

CANADA  
Fluid Products Canada  
55 Royal Road  
Guelph, Ontario N1H 1T1  
Tel: (519) 821.1900  
Fax: (519) 821.2569

JAPAN  
NHK Jabsco Company Ltd.  
3-21-10, Shin-Yokohama  
Kohoku-Ku, Yokohama, 222  
Tel: 045.475.8906  
Fax: 045.475.8908

GERMANY  
Jabsco GmbH  
Oststrasse 28  
22840 Norderstedt  
Tel: +49-40-53 53 73 -0  
Fax: +49-40-53 53 73 -11