

INDUSTRIAL DIAPHRAGM PUMPS

FEATURES

- Run Dry Ability
- Self-Priming
- Thermal Overload Protected
- Snap-in Port Adapters
- Flow to 3 GPM/12 LPM

SPECIFICATIONS

Materials:	Pump Body	Glass-filled Polypropylene
	Diaphragm	Santoprene™
	Valves	Viton or EPDM
Hardware:		Stainless Steel
Pump Design:		Four Piston Diaphragm Type
Pressure Switch:		Off at 40 psi On at 25 psi
Motor:		AC Induction Type Fan Cooled, Capacitor Start Sealed Ball Bearing Thermally Protected 115VAC, 60Hz 10, 1.8 Amp CSA
Continuous Duty Rating:		25 psi (1.7 bar) at 75° F (24° C) Ambient
Ports:		1/2" (13 mm) Hose Barb, Viton o-ring 1/2" Male QUEST, EPDM o-ring
Liquid:		45° F (7°C) to 130° F (54°C)
Temp:		For use with Maximum 130°F (54°C) water
Viscosity:		250 Centipolse Maximum
Shipping Weight:		12 lb (5.5 Kg)



APPLICATIONS

This pump provides excellent service where 115VAC 60 Hz 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
4300529	40 PSI	Viton	Santoprene
4300531	40 PSI	EPDM	Santoprene




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

⚠ 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.



Hazardous voltage can shock, burn or cause death.

IMPORTANT PRE-INSTALLATION INFORMATION

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 Cod, 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" (13 mm) 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 manufactures 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 Checked 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 (2.7 m). Suction lime must be airtight, and discharge line must be open to prime.

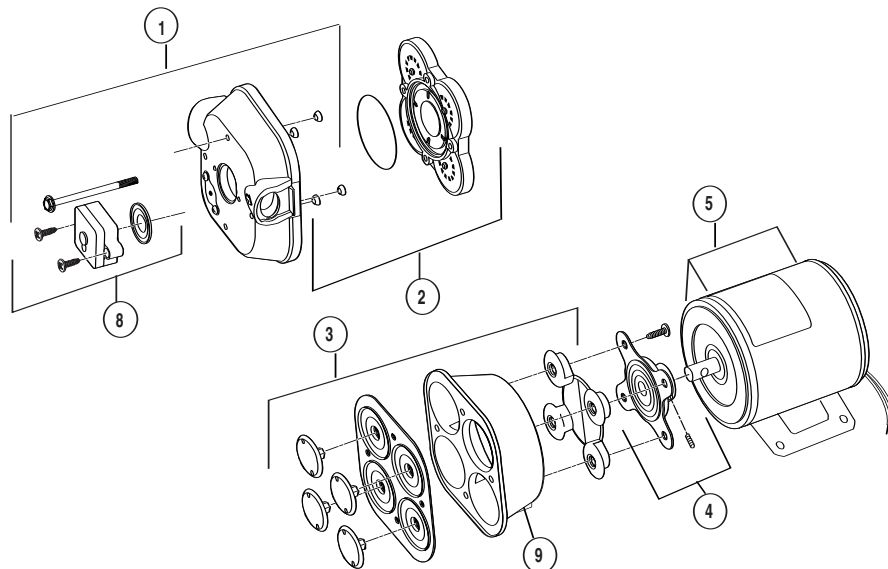
RUNNING DRY Pump can run dry indefinitely without damage

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.

EXPLODED VIEW



Model	1 Upper Housing Kit	2 Check Valve Kit	3 Diaphragm Kit	4 Cam/Bearing Kit	5 Motor Kit	8 Pressure Switch Kit
4300-529	20404-007	20407-020	20403-040	20400-003	R2029-125A	02090-118
4300-531	20404-007	20407-030 EPDM	20403-040	20400-003	R2029-125A	02090-118

Bearing cover (9) not included in diaphragm kit (3)

SERVICE INSTRUCTIONS

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.

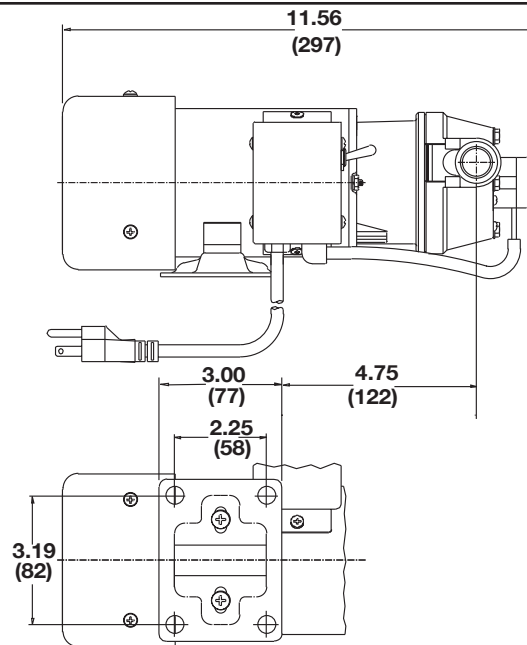
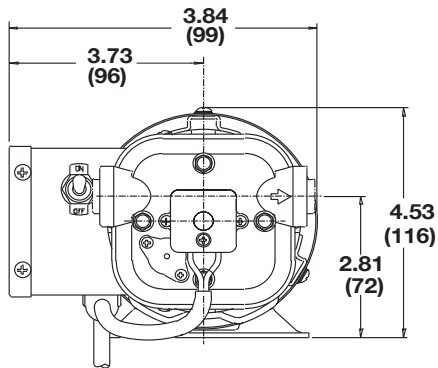
PUMP DISASSEMBLY

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, tower housing, and check valve assembly as required.

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.

DIMENSIONAL DRAWING Inches (mm)



TROUBLE SHOOTING

PULSATION FLOW

Pump cycles on and off

- Restricted outlet; remove restriction

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

WARRANTY

FLOJET warrants this product to be free of defects in material and/or workmanship for a period of two years after purchase by the customer from **FLOJET**. During this two year warranty period, **FLOJET** will at its option, at no charge to the customer, repair or replace this product if found defective in material or workmanship, with a new or reconditioned product, but not to include costs of removal or installation.

This is only an overview of our limited warranty. If you would like a copy of our warranty, please call or write **FLOJET**.

RETURN PROCEDURE

Prior to returning any product to **FLOJET**, call customer service for an authorization number. This number must be written on the outside of the shipping package. Place a note inside the package with an explanation regarding the reason for return as well as the authorization number. Include your name, address and phone number.

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