

FOR MODELS 2820-040 & 2820-041 115 VOLTS AC
FOR MODELS 2820-240 & 2820-241 230 VOLTS AC

PRODUCT DATA

Pump Design	.....Duplex Diaphragm
Motor	.....Permanent Magnet .....TENV
Wetted Parts	.....Diaphragm Material .....EPDM
	.....Check Valve Material .....EPDM
	.....Housing Material .....Nylon
Accumulator Tank	.....Diaphragm Material .....Butyl
	.....Liner Material .....Polpropylene
Ports	.....1/4" NPT
Net Weight	.....7.4 Pounds (3.4 kgs)

PERFORMANCE SPECIFICATIONS

PUMP

Motor	.....Max Amp Draw	.....0.55 @ 115 VAC
		.....0.25 @ 230 VAC
	Cycle	.....50160 Hertz
Liquid Temperature	Min	.....45° (7°C)
	Max	.....160°F (71°C)
Priming	Dry	.....5 ft. (1.5 m)
	Wet	.....15 ft. (4.6 m)
Flow Rate	Max	.....1.5 GPM @ 0 PSI (0.0 bar)
Pressure Switch	Off	.....70 PSI (4.8 bar)
	On	.....45 PSI (3.1 bar)
Timer	.....	.....3 minute, manual reset

TANK

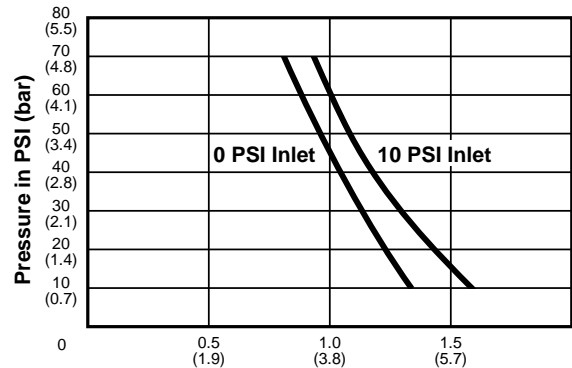
Total Volume	.....1.1 Gal. (4.1 Lt.)
Operating Volume	.....0.22 Gal. (0.8 Lt.)

STANDARD MODEL NUMBERING SYSTEM

28 X X - X X X			
Pump Service	Voltage	Switch	Options
20 = Duplex (2130)	0 = 115V AC 1 = 12V DC	0 = 40 PSI 1 = 45 PSI	0 = Std 1 = Timer
40 = Quad (4300)	2 = 230V AC 3 = 24V DC	4 = 70 PSI 6 = 95 PSI	2 = Inlet Sw.
50 = Pentaflex	4 = 36V DC		

The standard model numbering system is used for models up to -500. Numbers -500 and over are used for variations from standard assemblies such as special pump or tank specifications. Consult the factory for special models to meet specific requirements.

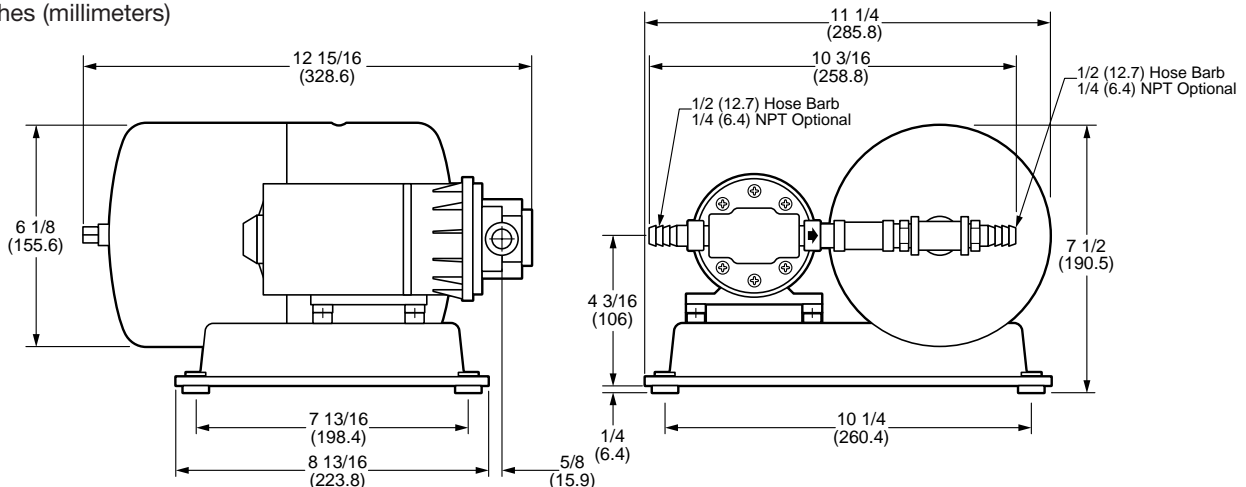
PERFORMANCE FOR AC MODELS



Note: Flow readings are nominal

DIMENSIONAL DRAWING

Inches (millimeters)



GENERAL SAFETY INFORMATION

Protect yourself and others by observing all safety information. Shut off power and drain pressure from system prior to service.

DESCRIPTION

The FLOJET 2820 series Booster Pump Systems are designed to provide a constant water pressure of 45 to 70 psi (3.1 - 4.8 bar) and maximum flow of 1.5 GPM at 10 psi (0.7 bar). The pump is fully automatic with a built-in switch and check valve to maintain system pressure and will supply smooth water flow from a trickle to full flow. Typical uses are; Commercial Ice Machines, Pure Water Dispensing, Water Purifiers, Small Domestic and Commercial Appliances where the water supply pressure is very low or fluctuates widely.

Models -041 & -241 have a timer to turn the pump off after 3 minutes if the water supply fails or when used to pump from a 5 gallon bottled water source. Pump must be restarted by pressing reset button on rear cover of motor.

OPERATION

IMPORTANT - For correct operation, the tank must be properly pressurized on the air side **before** the pump is started. Follow instructions on the tank label and check air pressure after filling and before starting the pump. The air valve is a standard tire valve. Compressed air hose or hand pump may be used to pressurize. Pressure can be reduced by pressing the center pin in the valve.

Make sure pump inlet connection is securely connected to the water supply and no inlet valves are open. Open all valves or taps on outlet side to purge air from the system. Turn power on to the pump, pump will start up. Allow system to pump for a minute or until all the air has been purged from the system. Close all valves in the system, the pump will pressurize the tank, shut off and operate automatically to maintain pressure in the system.

To completely fill the pressure tank for maximum volume, shut off power to pump and open faucet (or valve) closest to tank. Trapped air will be expelled. Turn on power to pump, and close faucet when water is free of air.

WINTERIZING TIP

When units are exposed to freezing conditions.

1. Open discharge valve (Faucet nearest to the Booster System).
2. Open inlet side to pump (Remove inlet hose to the Booster System).
3. Run Pump for approximately 2 minutes, (Dry) or until system is out of fluid.
4. Leave discharge. value open and inlet hose removed until next usage.



WARNING



DO NOT USE PUMP IN A FLAMMABLE ENVIRONMENT. DO NOT USE TO PUMP FLAMMABLE OR EXPLOSIVE FLUIDS SUCH AS GASOLINE, FUEL OIL, KEROSENE, ETC.

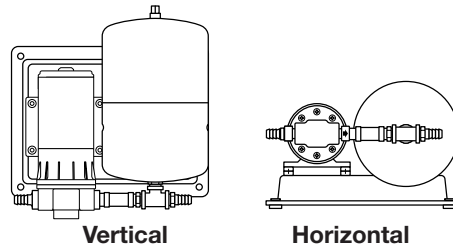
MOUNTING

The FLOJET 2820 Series Water Pressure System should be mounted in a dry and adequately ventilated area.

Select a location where the plumbing is as direct as possible and the inlet strainer is visible and accessible for cleaning.

The unit can be floor or wall mounted. If wall mounted, the Pump head should be down or lower than the motor.

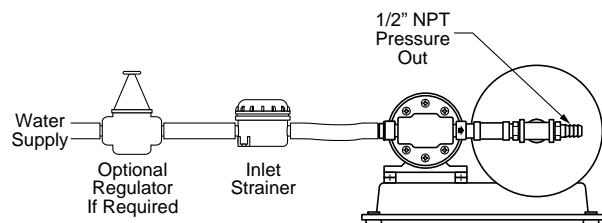
Fasten base securely with the four rubber mounting feet assembled to base as shown below.



PLUMBING

Fasten strainer in a visible and accessible location for future cleaning. Use 1/2" ID hose between pump inlet & strainer. Connect strainer inlet (1/2" hose) to water supply line and clamp all hose connections securely to avoid air leaks. **IMPORTANT** - if water supply line has pressure fluctuations that may exceed 30 psi (2.1 bar) - use a pressure regulator to limit inlet pressure to 30 psi (2.1 bar) maximum.

Regulator may be installed at any convenient location between water supply and inlet strainer.



ELECTRICAL



WARNING



RISK OF AN ELECTRICAL SHOCK!

When wiring an electrically driven pump, follow all electrical and safety codes, as well as the most recent National Electrical Code (NEC) and the Occupational Safety and Health Act (OSHA).

RISK OF PRODUCT DAMAGE!

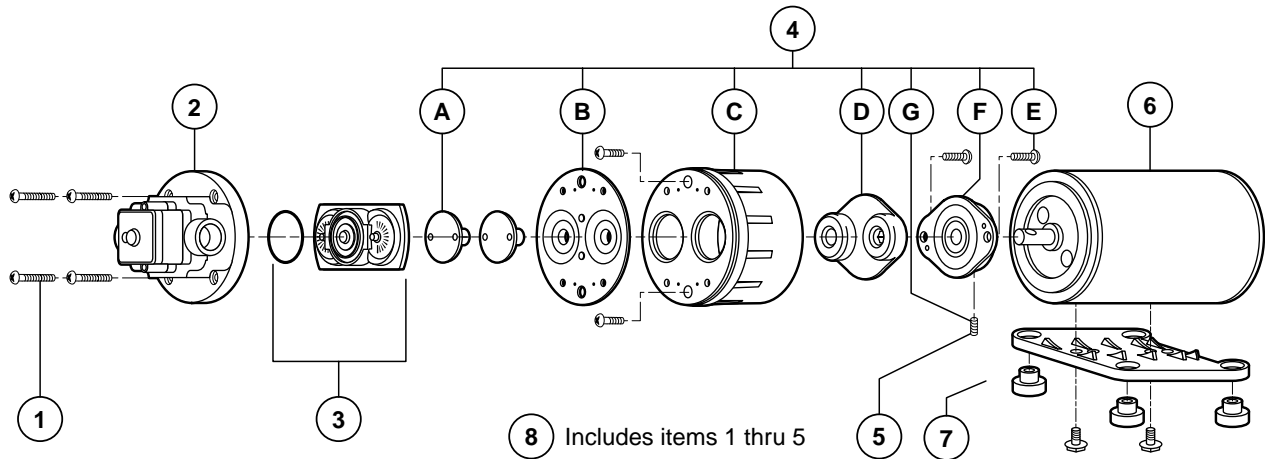
Make certain the power source conforms to the pump voltage. Be sure all power is disconnected before installation or removal.

Use the maximum recommended fuse for pump protection. Recommended fuse amp rating is located on pump label. Failure to provide correct overload device may result in motor failure.

For 115V AC plug AC cord into a conventional 115V AC outlet.



WARNING: DISCONNECT POWER TO PUMP AND OPEN VALVE TO RELIEVE WATER PRESSURE PRIOR TO SERVICING PUMP



Key	Part No.	Description	Qty
1	20131-001	Pump Screws Kit, Set of 6	1
2	20316-100	Upper Housing w/ Switch	1
3	20028-053	EPDM CVA Kit	
4	21023-132A	Lower Housing Kit	1
5	20552-000	Cam Bearing Set Screw	1
6	02029-014A 02039-007A	115V AC Motor 230V AC Motor	1
7	11028-101	Plastic Baseplate Kit w/ Grommets & Screws	1

Key	Part No.	Description	Qty
8	21054-591 21054-592	Pump Head Assy. 2820-040 Pump Head Assy. 2820-240	1
**	02130-591A 02130-592A	Complete MPU For Model 2820-040 Complete MPU For Model 2820-240	1
**	20799-000A	Accumulator Tank	
**	20796-000A	Base	
**	01740-003	Strainer	

**Not Shown in Diagram

DISASSEMBLE

Upper Housing (2)

1. Disconnect power to pump and open faucet or valve to relieve system pressure.
2. Remove the six Pump Head Screws (1) located on top of the Upper Housing (2).

Check Valve (3) Follow steps 1 and 2

3. The Check Valve (3) is located in the Upper Housing (2), or on the Diaphragm (4-B). Remove Check Valve (3).

Lower Housing (4-C) Follow steps 1 and 2

4. Rotate Lower Housing (4-C), so access notch is aligned with Cam Bearing Set Screw (5), loosen set screw with a 1/8" Allen Wrench and slide pump head off motor shaft.

Cam Bearing (4-F) Follow steps 1 through 5

5. Rotate Lower Housing (4-C) to view Cam Bearing Assembly (4-F).
6. Remove both Phillips Head Screws that attach the Cam Bearing (4-F) to the Outer Pistons (4-D).

Inner and Outer Pistons (4A & 4D) Follow steps 1 through 7

7. After removing the Cam Bearing from the Outer Pistons, the Inner Pistons are visible. Remove both Flat Head Screws. The Inner Pistons pop-out.

Diaphragm (4-B) Follow steps 1 through 8

REASSEMBLE

Diaphragm (4-B)

1. Place hex stem of Inner Pistons (4-A) through Diaphragm (4-B), and openings in Lower Housing (4-C) and into Inner Pistons (4-A).
2. Center Pistons in Diaphragm and tighten Flat Head Screws (4-E).

Cam Bearing (4-D)

3. Place Cam Bearing (4-D) over Outer Pistons (4-D), align locating pins in the hole of the Cam Bearing.
4. Install round head screws and tighten securely.

Lower Housing (4-C)

Coat motor shaft with grease prior to installing Cam Bearing (4-F).

5. Attach Cam Bearing (4-F) to motor shaft indentation by Cam Bearing Set Screw (5). When installing the Lower Housing, rotate access notches down towards the Baseplate (7).

Check Valve (3)

6. Install Check Valve with new O-Ring over the, Pistons (4-A) in Diaphragm (4-B) discharge side up. (Side with center circle up.)
7. Join Upper Pump Housing (2) with Lower Housing (4-C) by six Pump Head Screws (1).

Upper Housing (2) Follow steps 6 through 7

TROUBLESHOOTING CHART

Symptom	Possible Cause(s)	Corrective Action
Pump will not prime or retain prime after operating (When pump is above tank or cistern water supply)	<ol style="list-style-type: none"> 1. Air leak in suction line 2. Defective check valve 3. Upper housing leaking 4. Suction lift too high 5. Debris in check valve(s) 	<ol style="list-style-type: none"> 1. Repair or replace 2. Replace 3. Tighten bolts 4. Lower pump 5. Clean check valve(s)
Pump runs but no fluid	<ol style="list-style-type: none"> 1. Faulty suction piping 2. Defective check valve 3. Suction lift too high 4., Clogged inlet 5. Inlet line valve closed 	<ol style="list-style-type: none"> 1. Repair or replace 2. Replace 3. Lower pump 4. Clean or replace 5. Open valve
Motor runs too hot	<ol style="list-style-type: none"> 1. Voltage incorrect 2. Insufficient ventilation for motor 	<ol style="list-style-type: none"> 1. Check voltage 2. Insure proper ventilation
Flow rate is low	<ol style="list-style-type: none"> 1. Piping or hose is damaged 2. Clogged check valve 3. Worn check valve 4. Voltage incorrect 	<ol style="list-style-type: none"> 1. Clean or replace 2. Clear obstruction 3. Replace 4. Check voltage
Pump leaks	<ol style="list-style-type: none"> 1. Upper housing loose 2. Pistons loose 3. Diaphragm Failure 4. Switch loose 	<ol style="list-style-type: none"> 1. Tighten screws 2. Tighten piston screws 3. Replace 4. Tighten switch
Pump will not run	<ol style="list-style-type: none"> 1. No electricity 2. Defective pressure switch 3. Motor has open circuit 	<ol style="list-style-type: none"> 1. Check connections, fuse, breakers 2. Replace switch 3. Replace

CONVERSION TABLE

TO CONVERT	TO	MULTIPLY BY
Gallons, U.S.	Liters	3.785
Liters	Gallons, U.S.	0.264
Pounds/Sq. Inch	Bar	0.069
Bar	Pounds/Sq. Inch	14.5
Fahrenheit	Celsius	(°F-32) .556
Celsius	Fahrenheit	(°C X 1.8) + 32

WARRANTY

FLOJET warrants this product to be free of defects in material and/or workmanship for a period of one year after purchase by the customer from FLOJET. During this one year warranty period, FLOJET will at its option, at no charge to the customer, repair or replace this product if found defective, with a new or reconditioned product, but not to include costs of removal or installation. No product will be accepted for return without a return material authorization number. All return goods must be shipped with transportation charges prepaid. This is only a summary of our Limited Warranty. For a copy of our complete warranty, please request Form No. 100-101.

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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