

### PUMP INSTALLATION

#### MOUNTING

Flojet 2100 is a self-priming pump. It may be located several feet from the tank, above or below the liquid level (It is not a submersible pump.) For vertical pump mounting be sure that the motor is located on top. This will prevent water from entering the motor chamber in event of a leak. Pump head may be rotated in 90° increments to simplify plumbing.

#### PLUMBING

For best performance, flexible 3/8-inch minimum hose is recommended instead of rigid piping at the pump. *Use plastic fittings at the pump port. Brass fittings will break pump housing if over tightened.* Do not install pump such that plumbing causes excessive stress on either port.

It is essential that a 20 mesh strainer or filter be installed in the tank or in the pump inlet line to keep large foreign particles out of the system. The use of check valves in the plumbing system may interfere with the priming ability of the pump. Check valves, if used, must have a cracking (opening) pressure of no more than 2 psi.

#### ELECTRICAL

On 115 Volt AC pumps, the black wire lead is common, the white is neutral and green/yellow is ground. On 230 Volt AC pumps, the brown wire lead is common, the blue is neutral and the green/yellow is ground. Never connect the green (or green/yellow) wire to a live terminal. On 12 and 24 Volt DC pumps, match red (+) and black (-) power leads with red and black leads on motor or switch.

The bypass and standard pump (no bypass, no switch) must be started and stopped by an electrical (on-off) switch.

#### OPERATION

Allow pump to prime with discharge line (or spray valve) open, to avoid airlock. Built-in bypass will allow the pump to bypass internally when discharge is restricted or closed and will stop bypassing when the discharge valve is open.

When liquid supply to pump is depleted pump will continue to operate. Running dry will not damage the pump. Turn off manually.

When the bypass type pump is allowed to run against a closed valve the internal bypass will automatically recirculate the flow within the pump at the preset bypass pressure.

**Caution:** The standard series pump is not equipped with a bypass or pressure switch. Allowed to run against a closed valve the excessive pressure developed by the pump will cause system or pump damage.

### TROUBLESHOOTING

#### Failure to Prime-

##### Motor operates, but no pump discharge

- Restricted intake or discharge line. Open all line valves, check for "jammed" check valve poppets and clean clogged lines.
- Air leak in intake line.
- Punctured pump diaphragm.
- Defective pump check valve.
- Crack in pump housing.
- Debris in check valves.

##### Motor Fails to Turn On

- Pump or equipment not plugged in electrically. Loose wiring connection.
- Defective motor or rectifier.
- Frozen cam/bearing.

##### Low Flow and Pressure

- Air leak at pump intake.
- Accumulation of debris inside pump and plumbing.
- Worn pump bearing (excessive noise).
- Punctured pump diaphragm.
- Defective rectifier or motor
- Insufficient voltage to pump

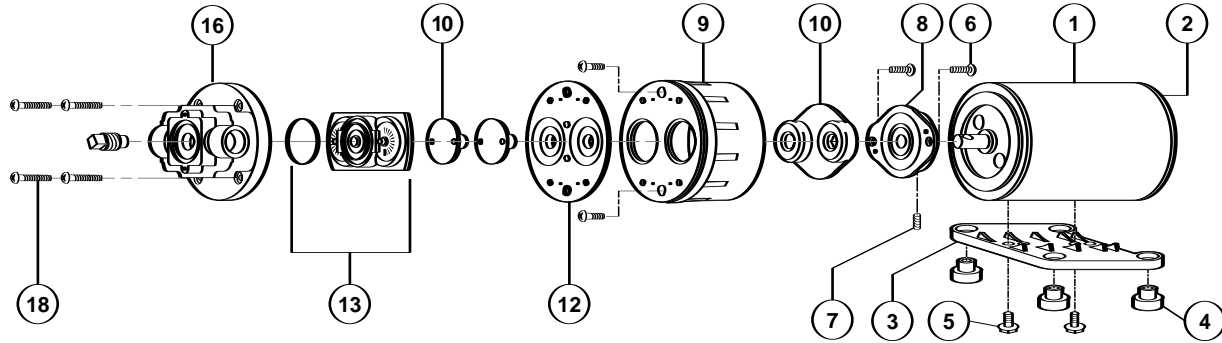
### WARRANTY

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.

# 2100 SERIES DEMAND PUMP



KEY	PART NO.	DESCRIPTION	QTY.
1	02029-000	Motor 115 Volt AC TENV	1
	02039-001	Motor 230 Volt AC TENV	
	02009-004	Motor 12 Volt DC TENV	
	02019-001	Motor 24 Volt DC TENV	
2	20115-111	Brush Endbell/Rect. Assy. (AC) TENV	1
	20115-219	Brush Endbell/Rect. Assy. (AC) TEFC N/BRG.	
	20115-116	Brush Endbell Assy. (DC) TENV	
	20115-213	Brush Endbell/Rect. Assy. (DC) TEFC N/BRG.	
	20252-500	Internal Rectifier w/Leads**	1
3	11028-101	Motor Base Plate Assy. (Plastic)	1
4	20132-000	Grommets	Set of 4
5	20131-002	Baseplate Screws	Set of 2

## CAM BEARING / DIAPHRAGM KIT

	21004-100	#0 Cam, VITON ® Diaphragm	1
	21004-200	#0 Cam, BUNA Diaphragm	1
	21004-400	#0 Cam, SANTO Diaphragm	1
	21004-101	#1 Cam, VITON ® Diaphragm	1
Kit	21004-201	#1 Cam, BUNA Diaphragm	1
Incl.	21004-401	#1 Cam, SANTO Diaphragm	1
6	21004-102	#2 Cam, VITON ® Diaphragm	1
7	21004-202	#2 Cam, BUNA Diaphragm	1
8	21004-402	#2 Cam, SANTO Diaphragm	1
10	21004-104	#4 Cam, VITON ® Diaphragm	1
12	21004-204	#4 Cam, BUNA Diaphragm	1
	21004-404	#4 Cam, SANTO Diaphragm	1
	21004-105	#5 Cam, VITON ® Diaphragm	1
	21004-205	#5 Cam, BUNA Diaphragm	1
	21004-405	#5 Cam, SANTO Diaphragm	1

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## SERVICE TIPS

Refer to exploded view for key number. To disassemble, remove six pump head screws (18), rotate bearing cover (9) so drain notch is aligned with cam/bearing assembly set screw (7), loosen set screw (use 1/8" size Allen Wrench) and slide pump head off shaft. Pistons (10) should always be replaced when new diaphragm is installed. Replace worn parts and reassemble. Be sure raised side of diaphragm faces the motor and radiused corner of pistons face diaphragm. Hex stem of inner piston (10) must be aligned (free to enter) into Hex hole in outer piston set (10). Press pistons together by hand until pistons snap tight. Install flat head screws (6) through outer piston set and tighten screws partially, center pistons in diaphragm then tighten screws securely. Place cam bearing assembly over outer piston set, align locating pins in the holes in cam

KEY	PART NO.	DESCRIPTION	QTY.
9	20428-100	Bearing Cover Poly Pro	1
*13		Check Valve Assy. (Single Bypass)	1
	20028-002	SANTOPRENE	
	20028-012	BUNA N/FAB	
	20028-045	VITON ®	
		Check Valve Assy (Double Bypass)	
	20028-003	SANTOPRENE	
	20028-022	BUNA N/FAB	
	20028-078	VITON ®	
		Check Valve Assy (Single Bypass Vented)	
	20028-048	SANTOPRENE	
	20028-079	VITON ®	
	20028-028	BUNA N/FAB	
*14		Bypass Springs & Poppet Kit	
*15	20378-000	For 30 PSI Bypass Nominal (Yellow)	Set of 2
	20378-001	For 50 PSI Bypass Nominal (Blue)	Set of 2
		Standard Bypass Springs shown above. For correct bypass spring part number for your model, request specific parts list, giving the complete pump model number.	
	20500-507	Pump Housing Poly Pro	1
16	21050**	Pump Head Ass'y. Use Pump Dash Number for Pumphead Number	
18	20131-001	Pump Screws	Set of 6
6-18		Brush Kit	Set of 2
	20097-000	For 115 & 230 Volt AC Motor	Set of 2
	20097-001	For 12 & 24 Volt DC Motor	Set of 2
	20132-005	Fan Shroud Kit	1

\* Parts included In Pump Service Kit \*\* Not shown in diagram

bearing assembly. Install round head screws and tighten securely. (Torque to 18 inch pounds, coat motor shaft with grease prior to assembly.) Reassemble bearing and cam bearing assembly to motor and retighten the set screw securely. Set screw **MUST** be positioned in shaft indentation. Position of the screw is critical to avoid misalignment and subsequent diaphragm damage. Reassemble pump head parts, using care to properly seat "O" ring (13) in check valve assembly. With lower housing held vertically, place bypass poppet(s) (14) and spring(s) (15) on locating post(s) molded on diaphragm. Place pump head with check valve and "O" ring installed, over bypass poppet(s) making sure poppet(s) are aligned into bypass ports in check valve housing (13). Tighten pump head screws (18) evenly.



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