FLOJET®

CATALOG N0. 30

Industrial Pumps and Accessories

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Flojet

ITT Industries
Engineered for life

FLOJET'S commitment to quality and customer support accounts for our exceptional success and growth from a two-man operation to a 300-person effort. Through years of experience in design and development, Flojet has established itself as a leader in the small pump industry. In addition to our global headquarters in Southern California, Flojet operates a large sales, assembly and distribution facility in the United Kingdom to serve the European community. A significant part of the company's sales are exports throughout Europe, Asia, Africa and Latin America. Flojet has continued to vertically integrate its manufacturing capabilities to the point where it now produces a majority of its own product components, injection molded parts, motors, and designs its own assembly equipment.

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This catalog shows only the standard models of Flojet's industrial line of pumps. Other models are available upon request.

ENGINEERING SUPPORT

FLOJET has a dedicated team of research and development engineers and designers assigned to work on application specific projects. This ensures a better understanding of the customer's application and development of the best suited pump to fit the application. The pumps represented in this catalog are the result of application-specific design and development effort.

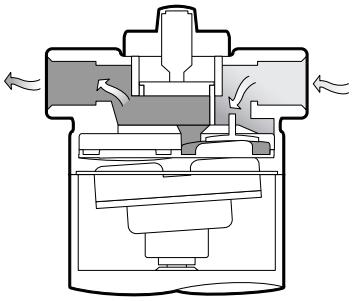
Our technical support, which includes professionals from our marketing and engineering departments, collaborates closely with you to design and apply the right pump for your application. Flojet also assists in performing qualification tests and establishing its criteria. We assure on-time delivery of quality tested products through stringent manufacturing process controls. You can count on the user friendly support literature for installation, service and trouble shooting to make the entire experience very simple and easy. Service, support and assistance from FLOJET are only a toll-free call away for all our customers.

PRODUCT VERSATILITY

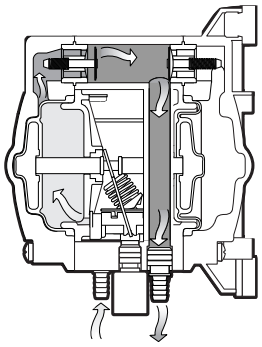
FLOJET CORPORATION makes a wide range of positive displacement diaphragm pumps that can be driven by air, electric motor or solenoid. Flojet becomes an obvious choice for pumps with flows up to 5 GPM and pressures up to 100 PSI, owing to diverse styles that suit most applications. These are available in different voltages in both AC and DC configurations. The selection of materials of construction make our pumps capable of handling a wide range of the industrial and other commonly used chemicals. The "sealless" design eliminates costly, difficult to service dynamic shaft seals.

The positive displacement diaphragm design of Flojet pumps makes them ideal for use in conditions that require self-priming and dry running capability for short periods of time. Additionally, the compact size of our pumps makes them very useful in tight spaces where you cannot ensure a flooded suction. Flojet pumps are the choice of OEMs where low power consumption is critical. That is because of our pumps' superior design and higher efficiency.

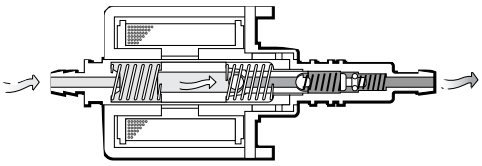
Our motor driven pumps use permanent magnet motors manufactured in-house by Flojet. We install a heavy duty ball bearing for the offset cam assembly that moves a reciprocating two, four or five-piston plate. A diaphragm, clamped between the inner and outer pistons, seals the pumping chamber and when actuated creates an alternating suction and pressure condition that opens and closes the inlet and outlet check valves. Flojet provides these pumps with no switch and no bypass for transfer or recirculating types of applications. Demand pumps are supplied with a pressure-actuated switch to provide on demand flow. Flojet provides pumps with an external bypass system for applications that are likely to see closed or partially closed discharge lines.



Our compact and lightweight air operated pumps can deliver up to 5 GPM of flow and 100 PSI pressure. Due to the self-priming capacity of these pumps, they can be located above the liquid level. Flojet designs these pumps for general, commercial and industrial markets. They have the ability for quick adaptation to a diverse array of applications. Our patented shuttle valve design virtually eliminates stalling. Finally, the availability of different port sizes eliminates the need for extra fittings and adapters.



The solenoid pumps are self-priming, double insulated and built to draw low amps for cool operation. These pumps deliver fluids from 0 to 0.4 GPM with pressures up to 230 PSI and are capable of handling a broad range of liquids. They are also available in various port sizes and elastomer options.



HOW TO SPECIFY A PUMP

The first step towards applying the right pump is to develop the specifications for the pump. It involves knowledge of the application and the chemical solution for pumping. The following tips will be helpful in collecting the required information to select the right pump for the application. Please refer to the Engineering Data and Tables at the end of this catalog to assist you in this process.

Flow
"Flow" is defined as the rate at which you want the liquid pumped. There are several factors that dictate the flow requirements in an application. Some of these are the size of the nozzle for spraying, cycle time for transferring and volume of the liquid per cycle for dispensing applications. In case you have a choice it is always advisable to choose a lower flow rate, which will increase the life and reliability of the pump.

Head/Pressure
Head or pressure in combination with the flow rate determine the size of a pump. This is a simple calculation in cases where the discharge is at a higher level than suction, and is determined by the differential height between the liquid level on the suction and discharge side. The flow required through a nozzle or an orifice determines the pressure required to deliver it. (Refer to page 17.) The same principle applies where there is a long narrow tube on the discharge. The frictional loss through the tube and the fitting dictates the pressure required at a certain flow. (Refer to page 17.) The required pressure also includes difference in the pressure of the suction and the discharge vessel when pumping into a higher-pressured vessel or from a vacuum. Here again the lower the pressure the better it will be for the life and reliability of the pump and the system. The chance of leakage also increases with the increase in pressure. Do not overlook the fact that high pressure requires pressure-rated tubing and fittings adding to the cost of your overall system.

Control
What turns the pump on and off is an important consideration since running the pump longer than required reduces pump life. For applications where there is a closed valve or a spray wand with a trigger, it is advisable to use a demand pump with a pressure switch to shut the pump off when the valve is closed. Running a positive displacement pump against a dead head could cause immediate failure. For other applications, it is useful to have a bypass system to prevent failure. More complicated pump controls may involve sensors and electronics.

Pump Driver
The decision to choose the right driving source is generally dictated by availability. If the pump is to be motor or solenoid driven, you will need to know the voltage and the frequency of the power source. AC or DC governs the kind of motor needed. The oscillating pumps that run on the cycling of the AC supply cannot work with DC voltages. If you have air available and choose an air driven pump, you need to know the pressure and means of regulating the incoming air to the pumps. In flammable atmospheres, Flojet recommends using an air driven pump properly grounded to prevent the potential of explosion.

Chemical Compatibility
It is essential to get all the details including the exact composition, temperatures and the concentration of the chemicals to be pumped. This information helps you choose the material of construction for the pumps for chemical compatibility. Corrosion causes leakage and failure. Refer to the chemical compatibility sheet in the back of the catalog as a guide. However, an actual soak test of the materials is strongly recommended before applying the pump. Flojet offers a free chemical compatibility test kit (F100-168) which will walk you through this process.

Priming
The pump needs to be primed when it is located above the level of the liquid or where a flooded suction can not be provided. Most positive displacement pumps can self prime as long as you stay within the limit of its priming capability. If that limit is exceeded, the pump will not prime and hence will not pump. This will lead to a condition where the pump runs without any liquid. This dry running will lead to early failure of the pump if it happens frequently and over extended periods of time.

Other important considerations, such as the duty cycle, plumbing and ambient temperature all have a direct bearing on the performance of a pump and need to be clearly understood and defined. The specification sheet at the back will help cover all the information needed for proper pump applications.

PUMP SELECTION

After establishing the specifications, you need to choose the right type of pump for your application. There are various styles of small pumps, i.e., pump flows under 20 GPM. These are broadly categorized as centrifugal, metering and positive displacement pumps.

Centrifugal

In small pumps, centrifugal is the predominant non-positive displacement pump. The principle used is to impart high velocity to the fluid with an impeller and convert the kinetic energy to head (or pressure). The head generated is directly proportional to the diameter of the impeller and hence the size of the pump. That means for a given pressure requirement, a centrifugal pump is more likely to be larger than a positive displacement pump. Centrifugal pumps need flooded suction as they cannot self-prime or tolerate dry running.

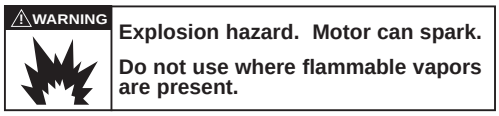
Metering pumps

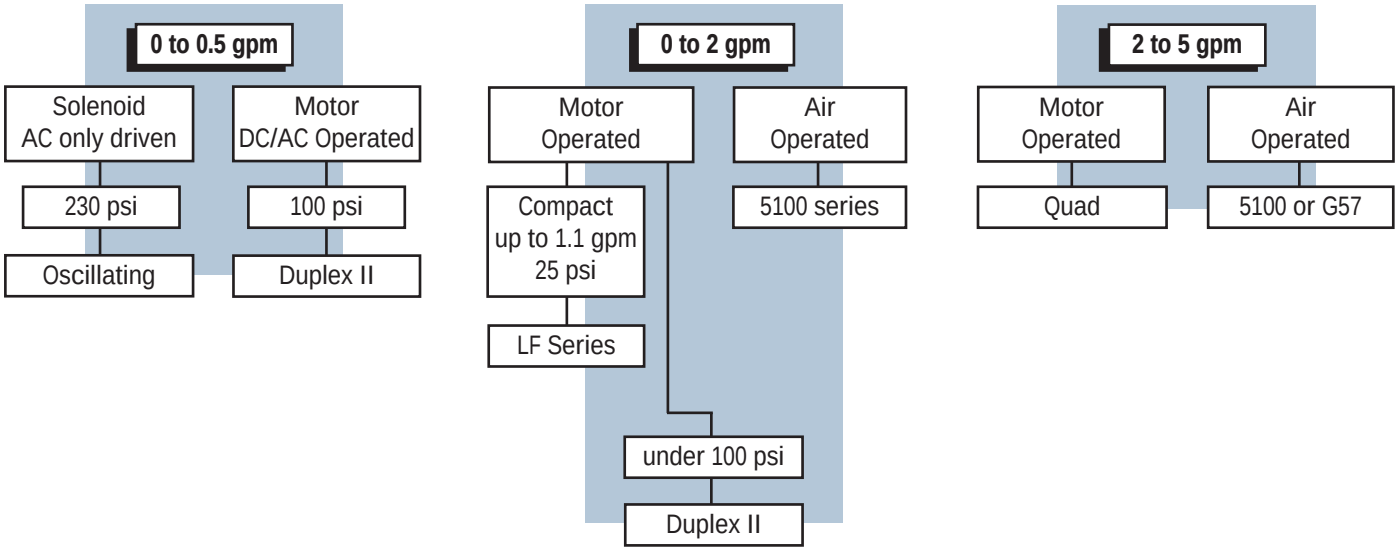
They pump precise volumes of liquid in a specified time period to give accuracy and repeatability of + or - 2% or better. These work on the principles of positive displacement and could be piston, bellows or diaphragm pumps.

Positive Displacement

In small pumps this is the most popular category, simply because of the advantages it offers with self-priming, dry run capacity, and compact size, among others. There are several styles of positive displacement pumps including air driven, bellows, diaphragm, flex vane, oscillating, and rotary vane. Diaphragm pumps are perhaps the most versatile of the positive displacement pumps as they offer more benefits than any other style. These pumps are also capable of being used in some metering applications where the repeatability is not very stringent.

Hence, after you have determined the specifications and decided that you do not need a centrifugal or metering pump, you can refer to the selection chart as follows to choose the right model of positive displacement pump.





DUPLEX II

DUPLEX II SERIES PUMPS

The Duplex II series of pumps incorporate the best technology and features developed by FLOJET. Everything from the back flow preventer, check valves, bearings and diaphragm assembly to the motor, have been designed to make this truly the most advanced and reliable diaphragm pump available. Higher efficiency of the pump is evident in the longer life of the motor pump unit. The new diaphragm design combined with the new valves makes the pump capable of pulling higher dry vacuum. Duplex II is available in various performance ranges, voltages and with a choice of elastomers, making it easily adaptable to a diverse range of applications.

SPECIAL FEATURES

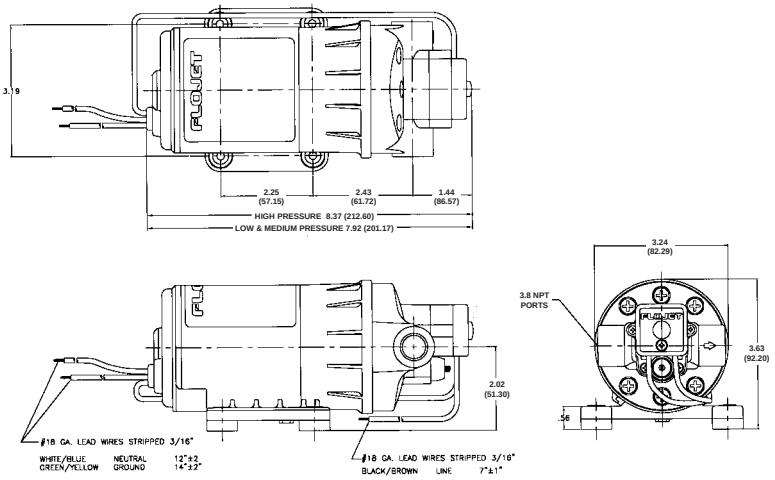
- Self priming up to 8 feet (2.4 m).
- Can run dry without damage.
- Chemical resistant material.
- Internal bypass standard.
- Built-in back flow preventer.
- Heavy duty ball bearing drive system.
- UL, CSA and CE models available.

SPECIFICATIONS

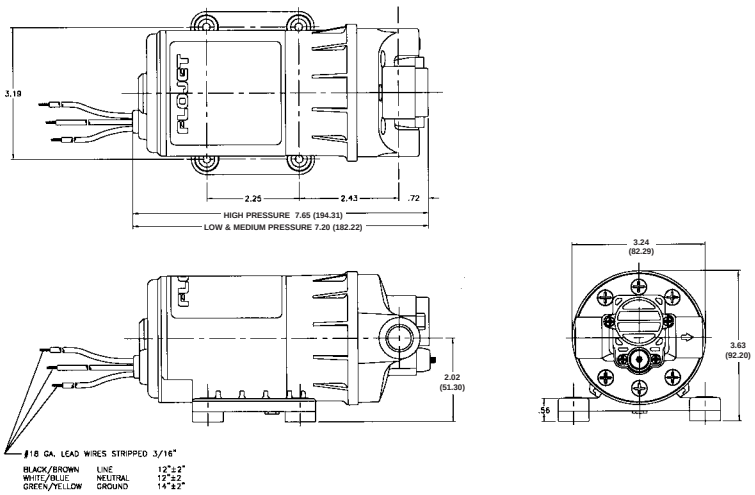
Pump: Positive Displacement two piston design
Flow Rate: 2.2 GPM (8.32 L/min) for high pressure models
1.6 GPM (6.05 L/min) for medium and low pressure models
Pressures: Up to 100 PSI (6.89 bar)
Ports: 3/8" NPT female
Motor: Permanent Magnet with solid state rectifier
Voltages: 12 & 24 V DC, 115 & 230 V AC
Cycle: 50/60 hertz for AC models
Dry Vacuum: Up to 8 feet (2.4 M)
Pressure Switch Setting: 15, 30, 45, 60, 80, and 100 PSI
Wetted Parts: Polypropylene, Viton®, Buna or EPDM
Net Weight: 4 to 5 lbs. (2.28 kgs)
Maximum Operating Pressure: 100 PSI (6.8 bar)

DIMENSIONS inches (mm)

Demand Pump



Bypass Pump



To choose a pump model number, fill in the desired voltage code for 'x' and the compatible elastomers code for 'y'. Hence, for a medium pressure demand pump where a 115 V AC motor is required and Viton is chosen, the model number becomes D3631V5011.

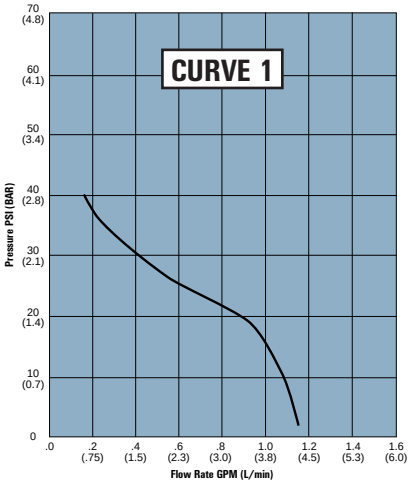
Duplex II Standard Models

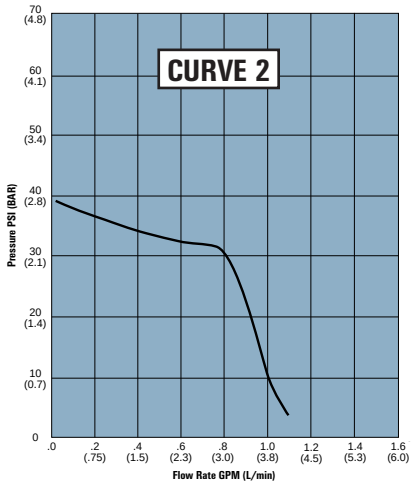
Low Pressure (Up to 40 psi)	Demand Pump	D3 _____ (x) 21* _____ (y) 3011	(Reference Curve #1)
	Bypass Pump	D3 _____ (x) 21* _____ (y) 1211	(Reference Curve #2)
Medium Pressure (Up to 60 psi)	Demand Pump	D3 _____ (x) 31* _____ (y) 5011	(Reference Curve #3)
	Bypass Pump	D3 _____ (x) 31* _____ (y) 1311	(Reference Curve #4)
High Pressure (Up to 100 psi)	Demand Pump	D3 _____ (x) 35 _____ (y) 7011	(Reference Curve #5)
	Bypass Pump	D3 _____ (x) 35 _____ (y) 1411	(Reference Curve #6)

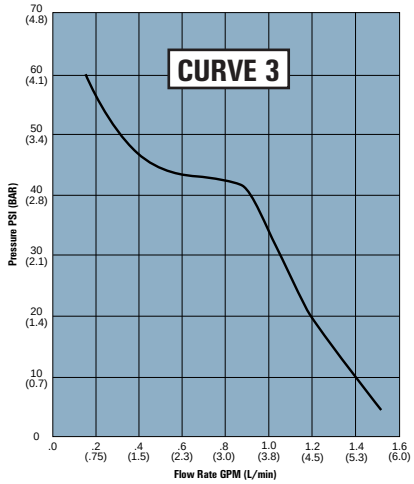
x _____ 1 for 12 VDC
6 for 115 VAC, 50/60 HZ
7 for 230 VAC, 50/60 HZ
(See 230 V Notes)

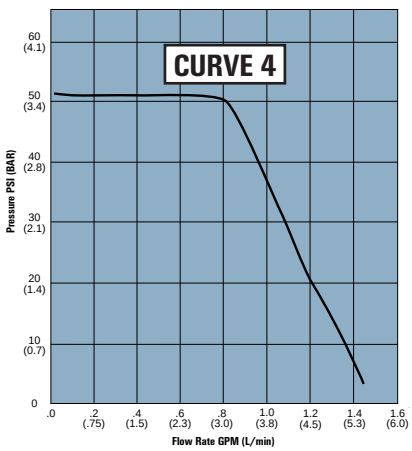
y _____ V for Viton® Check Valves and Viton® Diaphragm
(Viton not available in high pressure diaphragm pump)
B for Buna Check Valves and Buna Diaphragm
E for EPDM Check Valves and EPDM Diaphragm

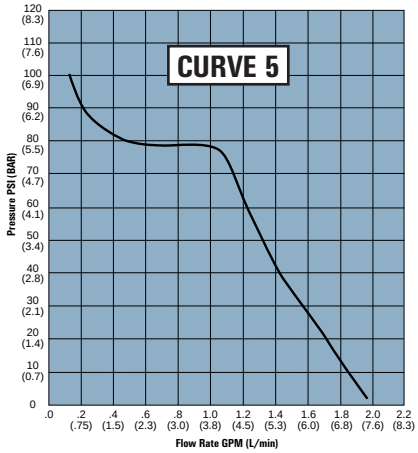
Note: All 230 V pumps have CE mark and full RFI suppression. This is denoted by the "RL" suffix in the model number.
Contact Flojet for 230 V pumps with partial and no suppression.
* Replace "1" with "2" for 230 V pumps.

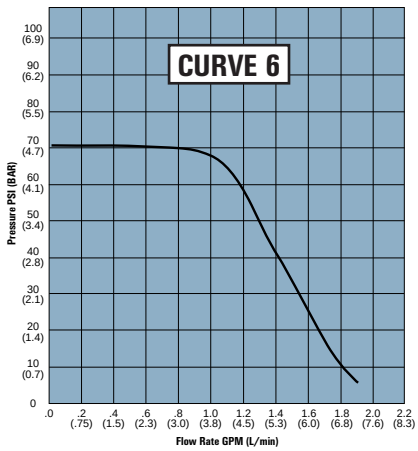












QUAD PUMPS

4000 SERIES PUMPS

Flojet developed the quad pumps to deliver higher flows up to 5 GPM using a four-piston design with excellent self-priming capability.

SPECIAL FEATURES

- Built-in pressure switch automatically starts and stops pump instantaneously when discharge valve opens and closes.
- Compact design and plug-in port fittings make installation easy.
- Can run dry without damage and handle liquids up to 130° F (54° C).
- No metal contact with liquid being pumped.
- Ball bearing drive throughout pump and motor assures longer pump life.
- Excellent self-priming capability. Pump may be located above the liquid level.
- Powerful, permanent magnet motor with low current draw and long life brushes.

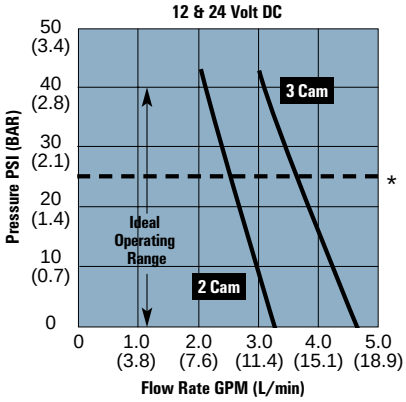
SPECIFICATIONS

Flow Rate: 3.5 to 5.0 GPM (13.2 and 18.9 L/min) Nominal	
Pump Design: Diaphragm	
Shaft Seal: None	
Motor: TEFC Permanent Magnet Motor	
Voltage: 12 & 24 Volt DC, 115 & 230 Volt AC	
Cycle: 50/60 hertz for AC Models	
Current: 1.5 amp max. (115 V)	
Pressure Switch Setting: 45 PSI (3.2 bar) cut out	
Maximum Operating Pressure: 40 PSI (2.8 bar)	
Self-Priming: Up to 8 ft. (2.4 m) Vertical Height	
Ports: Plug-In Ports 1/2" or 3/4" Hose Barb Standard (Consult Factory for other type of Port Fittings)	
Wetted Parts: Housing	Modified Polypropylene - Standard
Elastomers	Santoprene® and Buna - Standard
Net Weight: 4 lbs. (2 kg)	

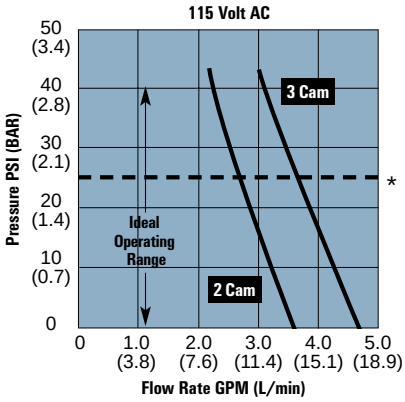
STANDARD MODELS		CAM NO.
115 VOLT 3.5 GPM 1/2" HOSE BARB		
4300-042	Santo/EPDM, Switch at 45 PSI (3.2 bar)	2
4100-500	Santo/EPDM, No Pressure Switch	2
115 VOLT 5.0 GPM 3/4" HOSE BARB		
4300-043	Santo/EPDM, Switch at 45 PSI (3.2 bar)	3
4100-512	Santo/Viton®, No Pressure Switch	3
12 VOLT 3.5 GPM 1/2" HOSE BARB		
4300-142	Santo/EPDM, Switch at 45 PSI (3.2 bar)	2
4100-505	Santo/EPDM, No Pressure Switch	2
12 VOLT 5.0 GPM 3/4" HOSE BARB		
4300-143	Santo/EPDM, Switch at 45 PSI (3.2 bar)	3
4100-143	Santo/EPDM, No Pressure Switch	3

Note: All Motors Are Fan Cooled With A Thermal Switch Used On All Non-Pressure Switch Models.

PUMP PERFORMANCE

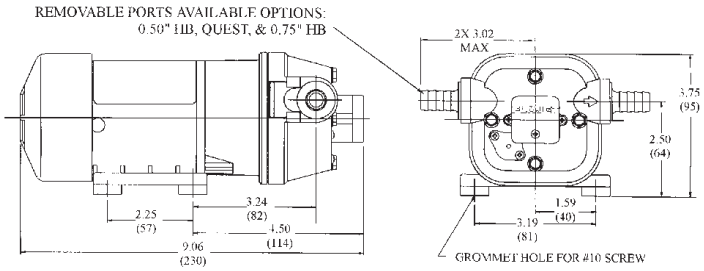


*** Continuous Duty Max Pressure For No Switch 3 Cam Models.**



*** Continuous Duty Max Pressure For No Switch 3 Cam Models.**

DIMENSIONS inches (mm)



LF SERIES

This ultra compact pump uses the duplex diaphragm design to deliver flow and pressure comparable to much larger pumps.

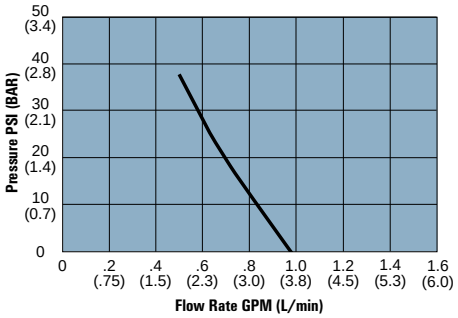
SPECIAL FEATURES

- Sealed pressure switch automatically starts and stops pump when discharge valve opens and closes.
- Self-priming so pump can be located above supply tank.
- Can run dry for extended periods of time without damage.
- Built-in thermal protector.
- Low amp draw for battery powered applications.

OPTIONAL FEATURES

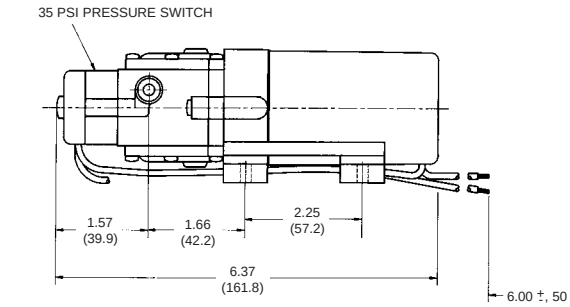
- Sealed motor with protective metal cooling finned cover.
- Integral 5 amp in-line fuse with cover.
- Manual on/off switch with protective cap to turn off pump when supply tank is empty.

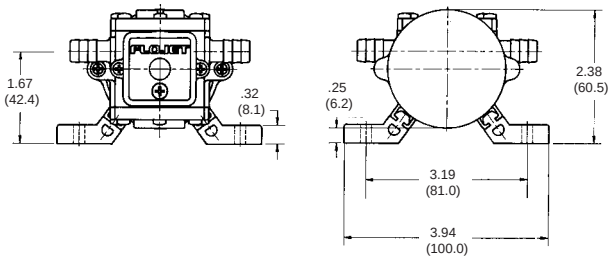
PERFORMANCE - LF12 AND LF11 SERIES



DIMENSIONS inches (mm)

LF12





Specifications - LF12 and LF11 Series

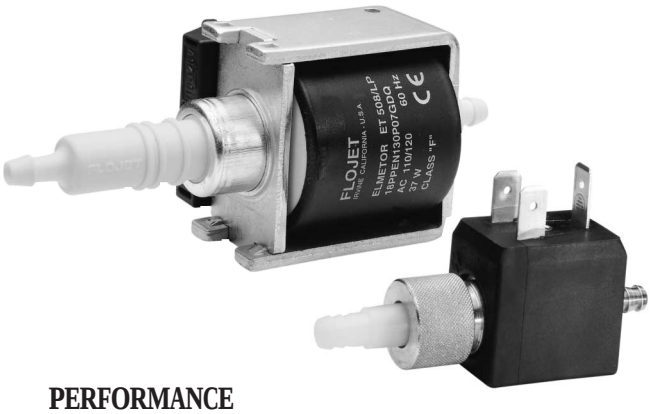
Pump Design: Reciprocating Diaphragm
Flow Rate: 1.0 GPM (3.8 L/min) Nominal @ Open Flow
Duty Cycle: Intermittent
Wetted Parts Housing: Polypropylene
Diaphragm: Santoprene®
Check Valve: Viton® or EPDM
Check Valve Spring: 316 Stainless Steel
Minimum Tip Size: #8 Tip, .072" (1.83 mm) Diameter
Port Type: 3/8" (9.5 mm) Hose Barb
Operating Pressure: 25 PSI (1.7 bar) Maximum
Pressure Switch Setting: 35 PSI (2.4 bar) Off
25 PSI (1.7 bar) On
Self-Priming: Up to 2.5 ft (.76 m) Vertically
Liquid Temperature: 110° F (43° C) Maximum
Motor Type: Permanent Magnet Motor
Motor Voltage: 12 V DC
Current: 2.5 Amp Nominal @ 25 PSI (1.7 bar)

Model No.	Diaphragm	Check Valve	Pressure Switch Setting PSI (bar)	Manual On/Off Housing	Motor	Protection
LF112201	Santoprene	Viton®	35 (2.4 bar)	Yes	Metal Finned	Fuse
LF122201	Santoprene	Viton®	35 (2.4 bar)	No	Plastic	Thermal
LF122202	Santoprene	EPDM	35 (2.4 bar)	No	Plastic	Thermal
LF122002	Santoprene	EPDM	No Switch	No	Plastic	Thermal

OSCILLATING PUMPS

OSCILLATING PUMPS

Flojet oscillating pumps are designed for general consumer, commercial and industrial applications. All models are self-priming double insulated and built to draw low amps for cool operation and can run dry for extended periods of time without damage.



SPECIFICATIONS

Technical Data

Type of Pump	ET508-LP	ET508-HP	ET500	ET200
Temperature	Max. 160° F/71° C	Max. 160° F/71° C	Max. 160° F/71° C	Max. 176° F/80° C
Open Flow Rate	.32 GPM/73 LPH	.40 GPM/90 LPH	.18 GPM/40 LPH	3.8 GPH/240 cc/min.
Maximum Pressure	38 PSI/2.6 Bar	55 PSI/3.8 Bar	230 PSI/16 Bar	20 PSI/1.4 Bar
Self-Priming (up to)	6 (inHg)	6 (inHg)	2.6 (inHg)	1.3 (inHg)
Standard Voltage	115V/60Hz and 230V/50Hz, other voltages available upon request.			
Power Consumption (nominal)	37 Watts	46 Watts	53 Watts	18.5 Watts
Insulation Class	F (155° C)	F (155° C)	F (155° C)	H (180° C)
Elastomers	EPDM, Viton and Buna			
Piston and Spring	Stainless Steel for all models			
Filtering	4/1000 Mesh			
Approvals	U.L. and CSA Recognized, CE Certified*			

* Approvals vary within the Product Line. Contact a Flojet Representative for specific model listings, recognitions and certifications.

Includes internal diode (except ET200 which requires an external diode).

Standard Model Numbering System

ET508

ET508-ABC		
A Model Type	B Voltage	C Port - Elastomer
1=LP Low Pressure	2=115/60Hz	1=Std. Port - EPDM
2=HP High Pressure	4=230/50Hz	2=Std. Port - Viton
3=HF High Flow		3=Threaded Port 1/8" F - EPDM
		4=Threaded Port 1/8" F - Viton

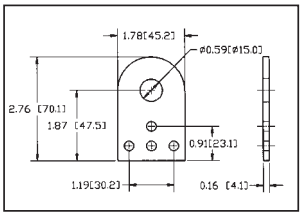
ET500

ET500-ABC		
A Model Type	B Voltage	C Port - Elastomer
2=HP High Pressure	2=115/60Hz	3=Threaded Port 1/8" F - EPDM
	4=230/50Hz	4=Threaded Port 1/8" F - Viton

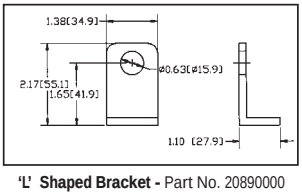
ET 200

ET200-ABC		
A Model Type	B Voltage	C Port - Elastomer
0=LF Low Flow	2=115/60Hz	1=Std. Port - EPDM
	4=230/50Hz	

Mounting Brackets

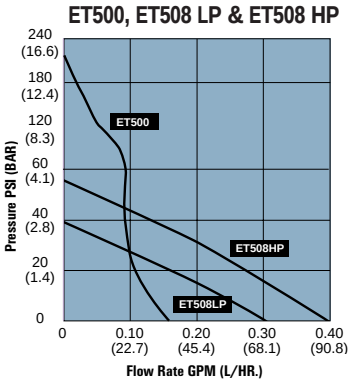


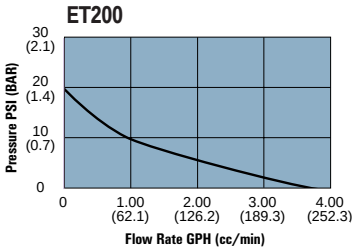
Straight Bracket - Part No. 20900000
• For ET508, ET500



'L' Shaped Bracket - Part No. 20890000
• For ET508, ET500

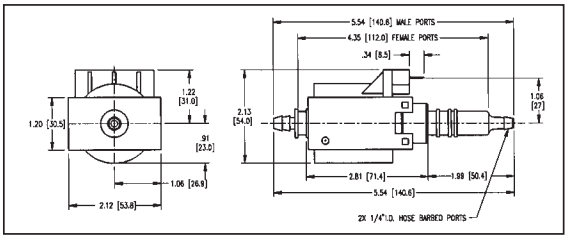
PERFORMANCE



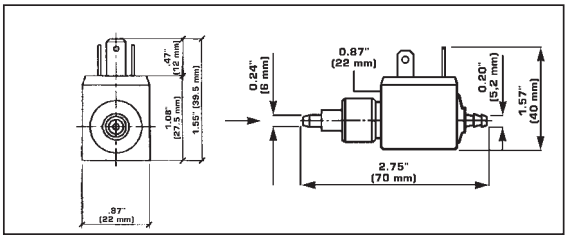


DIMENSIONS inches (mm) & MOUNTING BRACKETS

508/500 Series



200 Series



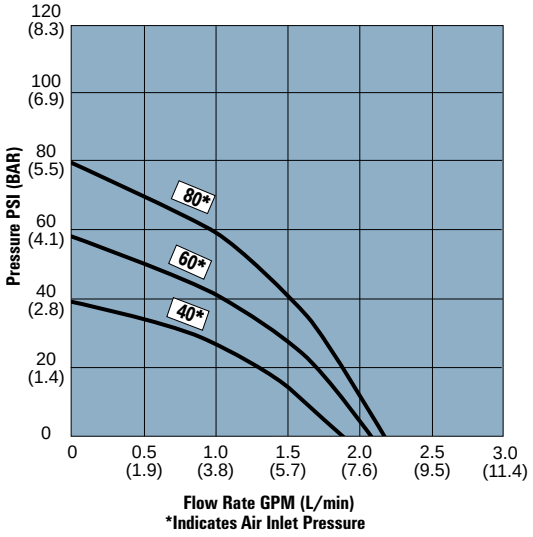
AIR OPERATED PUMPS

5100 SERIES

SPECIAL FEATURES

- Compact design with plug-in hose connections for quick installation.
- Variety of elastomers to ensure chemical compatibility.
- Variable capacity from zero to the maximum flow.
- No pressure relief or bypass plumbing required.
- Excellent self-priming. Pump may be located above the liquid level.

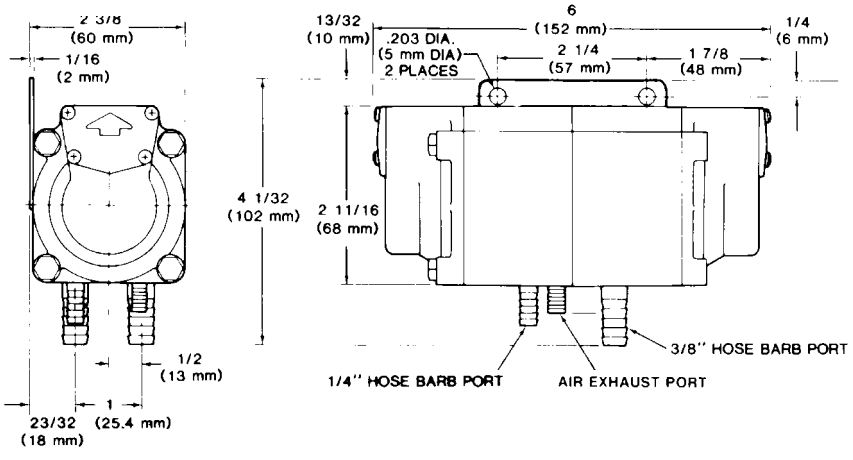
PUMP PERFORMANCE



SPECIFICATIONS

Pump: Air-operated positive displacement double diaphragm pump
Flow Rate: Up to 2.0 GPM (7.57 L/min)
Pressure: 20 to 75 PSI (1.38 to 5.51 bar)
Ports: Liquid 3/8"
Air 1/4"
Wetted Parts: Buna, Santoprene®, Geolast® or Viton® for diaphragms and valves
Acetal copolymer for housing
Self-Priming: 28 ft. (8.5 mm) Dry, 32 ft. (9.8 mm) Wet
Gas/Air Consumption: Air Supply must be oil-free and dry
40 PSI at 1 GPM - 0.45 C.F.M.
60 PSI at 1 GPM - 0.58 C.F.M.
80 PSI at 1 GPM - 0.77 C.F.M.

DIMENSIONS inches (mm)



AIR OPERATED PUMPS

G57 SERIES

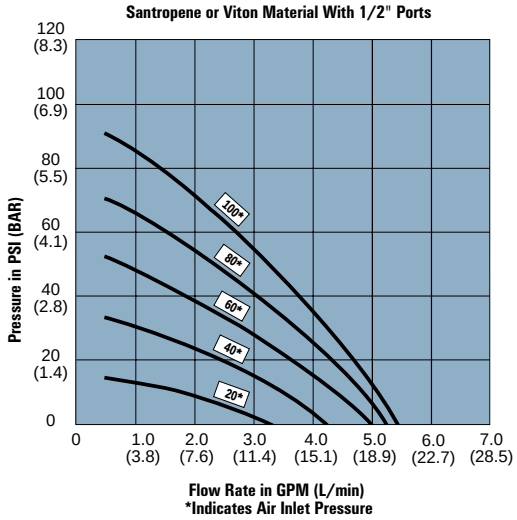
SPECIAL FEATURES

- Highest flow rate for any air pump of comparable size.
- Stall proof design with patented shuttle valve.
- Easy installation with all quick disconnect ports.
- Robust design with durable integral mounting.
- Sanitary design with inset molded diaphragm.
- Leak resistant radial seals, no critical O-ring seals.
- Quiet operation with large exhaust muffler.

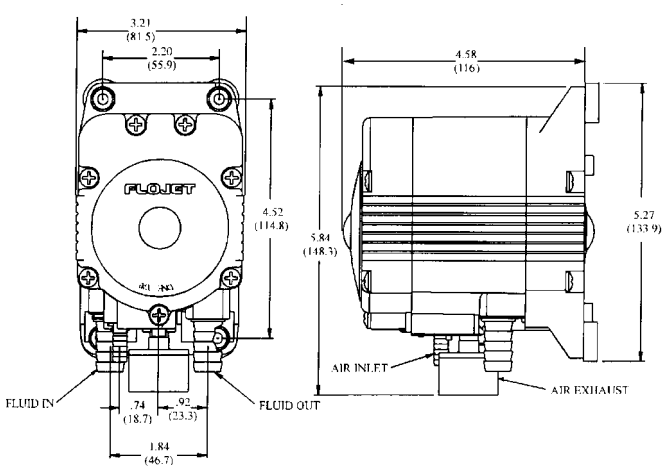
SPECIFICATIONS

Pump: Air operated positive displacement double diaphragm pump
Flow Rate: Up to 5 GPM (26.49 L/min)
Pressure: 20 to 100 PSI (1.38 to 8.27 bar) (Same as inlet air pressure)
Ports: Liquid 3/8", 1/2" and 3/4"
Air 1/4"
Barb Port Fittings of 3/8" and 1/2" NPT
Wetted Parts:
Body: Polypropylene
Diaphragm: Santoprene® or Viton®
Check Valves: Santoprene® or Viton®
Springs: Hasteloy C
Net Weight: 1.2 pounds (0.54 kg.)

PUMP PERFORMANCE



DIMENSIONS inches (mm)

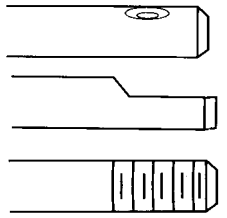


PERMANENT MAGNET MOTORS

FLOJET MOTOR SERIES

Flojet manufactures a wide range of 3" diameter permanent magnet motors. These are designed as a more cost-effective alternative to larger series wound or induction type motors. They also offer flexibility of speed in the range of 1000 to 5000 rpm. Low heat rise and high efficiency ensures long and reliable service life. The ease with which these motors can be adapted to any application is enhanced by the availability of various motor lengths and shaft configurations. The fact that the motors are bi-directional increases their versatility. Most of our motors have the appropriate agency approvals including UL, CSA and CE.

Motor Shaft Configurations

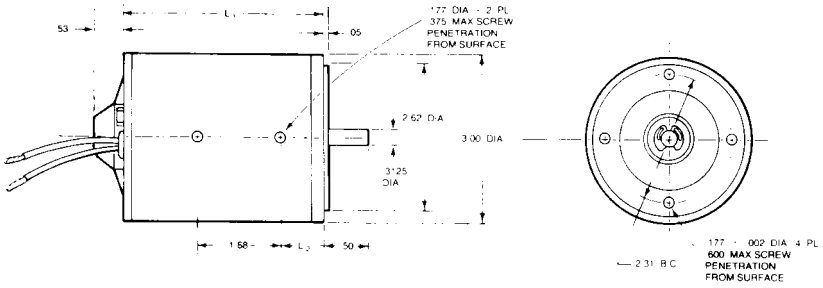


SPECIAL FEATURES

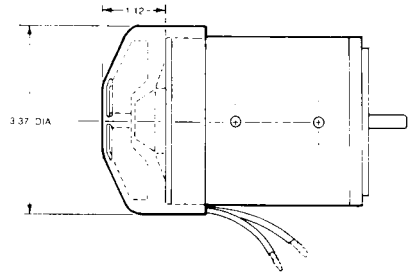
- Highly efficient permanent magnet design.
- Combines advantages of low amp draw heat rise with high torque and low speed.
- Diamond-turned commutator.
- Delivers up to 1/8 H.P. in compact 3-inch diameter.
- 6, 12, 24, 32, 36, 115, 230 and 240 volt AC or DC.
- Lightweight double insulated armatures.
- High starting torque - up to 600% of rated torque.
- Speed control capability.
- Available with internal solid state rectifier (AC models only).
- Instant reversibility (DC voltages).
- Thermo protection available.
- Dynamic braking capability.
- UL recognized (115 Volt AC models only).
- Partial or full suppression available with CE certification.

DIMENSIONS inches (mm)

Totally Enclosed (TENV)



Fan-Cooled (TEFC)



STACK Lg (Approx.)	L_1	L_2	M.H.P.
.500	2.87	.56	20
.875	3.25	.56	50
1.250	3.70	.81	75
1.875	4.40	.81	100

⚠WARNING

Explosion hazard. Motor can spark.

Do not use where flammable vapors are present.

SPECIFICATIONS

Motor Design: Permanent Magnet
Size: 3 in. (76.1 mm) Diameter
Stack Length: 1/2 in. - 2 in. (12.7 - 50.8 mm)
Horsepower: Up to 1/40 - 1/8 H.P.
Duty: Continuous or Intermittent
Speed: 1100-5000 R.P.M.
Voltage: 6-230 Volt DC or Rectified AC
Insulation: Class B Standard
Bearings: Sleeve or Ball Bearing
Enclosure: Totally Enclosed / Totally Enclosed Fan-Cooled

ACCESSORIES & FITTINGS

1720/1740 SERIES

Inlet Strainers

- Low profile design for space saving installation.
- Very strong reinforced plastic base with clear cover.
- Wide variety of port configurations from 3/4" to 3/8."

SPECIFICATIONS

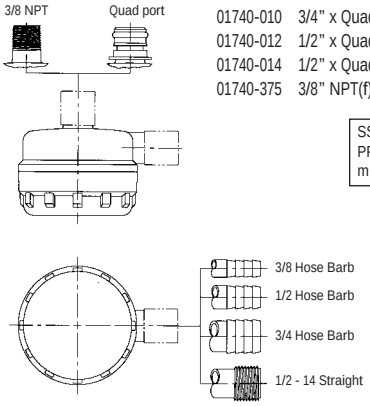
Materials	Base	Polypropylene, black
	Cover	Polysulfane, smoke tinted
	Screen	Stainless Steel, 20 and 40 mesh
		Polypropylene Screen, 20 mesh
	O-rings	Buna-N FDA Compound
Temperature: 160˚F (70˚C) max.		
Dimensions:	2.75" (70 mm) diameter x 2.25" (57 mm) high	
	4.75" (121 mm) max. port to port (3/4" hose barb)	
	Plug-in style, 3.75" (96 mm) max. length	

Styles Available

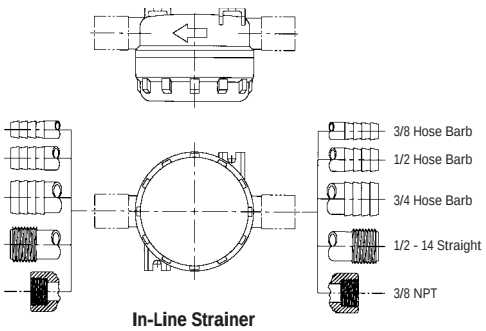
Model No.	Description
01720-000	3/4" x 3/4" hose barb SS 20m
01720-002	1/2" x 1/2" hose barb SS 20m
01720-023	3/8" hb x 3/8" NPT (m) 90˚ SS 20m
01720-102	1/2" x 1/2" hose barb PP 20m
01720-103	3/8" x 3/8" hose barb PP 20m

Model No.	Description
01720-112	1/2" x Quad port 90° PP 20m
01720-123	3/8" hb x 3/8" NPT (m) 90˚ PP 20m
01720-375	3/8" NPT(f) x 3/8" NPT(f) SS 20m
01740-000	3/4" x 3/4" hose barb SS 40m
01740-002	1/2" x 1/2" hose barb SS 40m
01740-003	3/8" x 3/8" hose barb SS 40m
01740-004	1/2"x 1/2" SS 40m
01740-010	3/4" x Quad port 90° SS 40m
01740-012	1/2" x Quad port 90° SS 40m
01740-014	1/2" x Quad port 90° SS 40m
01740-375	3/8" NPT(f) x 3/8" NPT(f) SS 40m

SS - Stainless Steel
PP - Polypropylene
m - Mesh



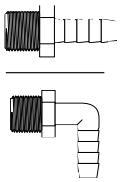
Inlet Strainer
(Plugs into Quad pump port)



In-Line Strainer

ELECTRIC PUMP FITTINGS

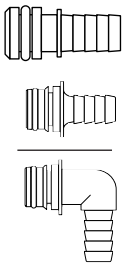
Nylon Barbed Straight/Elbow



- For use with all Duplex II Series Pumps (3/8" NPT only).

Part Number Straight	Part Number Elbow	Description
91010-032	91010-033	3/8" NPT Male x 1/4" Barb
91010-004	91010-003	1/4" NPT Male x 3/8" Barb
91010-002	91010-001	3/8" NPT Male x 3/8" Barb
91010-034	91010-025	1/4" NPT Male x 3/8" Barb
91010-006	91010-005	3/8" NPT Male x 1/2" Barb
91010-053	91010-052	1/4" NPT Male x 1/4" Barb

Plastic (Polypropylene, EPDM)* Inlets & Outlets



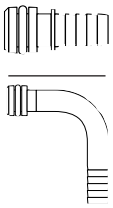
- For use with all 5100 Series Pumps

Part Number Straight	Part Number Elbow	Description
20381-000	20381-008	Quad Port x 1/2"-14 Male Straight
20381-002	20381-009	Quad Port x 1/2" Hose Barb
20381-006	20381-010	Quad Port x 3/4" Hose Barb
20381-007		Quad Port x Garden Hose Adapter

* Other Elastomers Available
* * Packaged 2 per bag.

GAS PUMP FITTINGS

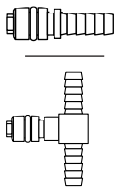
Stainless Steel Inlets & Outlets (Liquid Fittings)



- For use with all Quad Series Pumps.

Part Number Straight	Part Number Elbow	Description
20324-030	20607-100	1/4" Hose Barb
20325-030	20608-100	3/8" Hose Barb
20606-100		1/2" Hose Barb

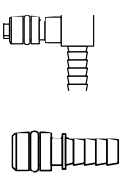
Brass CO_2/Air Inlets with Shutoff Valve (Air Fittings)



- For use with all 5100 and G Series Pumps.

Part Number	Description
1510-000	1/4" Hose Barb, Straight
1520-000	1/4" Hose Barb, Tee
1521-000	1/4" Hose Barb, Elbow

Plastic (Celcon) CO_2/Air Inlets



- For use with all 5100 and G Series Pumps.

Part Number	Description
20325-033	1/4" Hose Barb, Straight

PRODUCT SPECIFICATION FORM

CUSTOMER DATA

Company:			Date:
Address:			
City:		State:	Country:
Phone:	Fax:		E-mail:
Contact:		Title:	Annual Unit Sales:
Samples Requested:	Agency Approvals Required:		

APPLICATION DATA

Flow Rate:	Point (A)	Operating Pressure:	Point (A)
	Point (B)		Point (B)
	Point (C)		Point (C)
Fluid Being Pumped:			Concentration:
PH Rating:	Temperature Range:		Viscosity:
Specify Gravity:	Suspended Solids:		Size:
Horizontal Mounting Position:		Vertical, Pump Head Down:	
Suction Plumbing Type:		Size:	Length:
Vertical Distance:		Horizontal Distance:	
Fittings/Elbows:		Quick Disconnects:	Size:
Discharge Plumbing Type:		Size:	Length:
Vertical Distance:		Horizontal Distance:	
Fittings/Elbows:		Quick Disconnects:	Size:
Nozzle/Orifice Qty:		Size:	
Solenoid Controlled:		Manual Controlled:	
Intermittent Duty:		Continuous Duty:	
Time On:	Time Off:	Hrs./Day:	Days/Week:
Environmental Conditions:	Temperature Range:		Humidity Range:
	Noise Limitations:		Exposure To Sun:

PRODUCT DATA MOTOR INFORMATION

Voltage:	Minimum:	Maximum:
AC:	DC:	Source:
Torque Required:*	Speed Required:*	Max Amps:
Cord:	Special Leads:	Length:
Thermal Protection:	Temperature Range:	
RFI Suppression:	Full:	Partial:
Base Plate:	Sealed Housing:	
Other:		

PUMP INFORMATION

Housing Materials:		Polypropylene:	Nylon:
Diaphragm Elastomers:		Santoprene®:	EPDM:
		Buna:	Viton®:
Check Valve Elastomers:		Santoprene:	EPDM:
		Buna:	Viton:
Vented Body:		Vented Check Valve:	Anti-Drip Valve:
Screen:	S.S. Screws:	Bypass Required:	Max. PSI:
Automatic Control:		PSI On:	PSI Off:

Completed By

*To be completed when specifying/buying motor only.

Date

COMMON VISCOSITIES

MATERIAL	TEMPERATURE (F°)	VISCOSITY (cp)
Water	70	1
Gasoline	70	8
Sulfuric Acid	70	10
Kerosene	70	12
Phenol	70	16
Diethylene Glycol	70	30
Corn Oil	130	34
Water glass	100	60
Water Soluble Oil	70	60
Oil SAE 10	70	110
SAE 20	70	150
SAE 40	70	260
SAE 60	70	740
SAE 70	70	1050
Asphalt	300	1000
Tomato Catsup	70	3000
Butter	70	10,000
Mayonnaise	70	40,000
Molasses	70	100,000
Confectionary Glucose	70	1,000,000
Asphalt	100	3,000,000

NOMINAL DIMENSIONS OF STD SIEVES

Sieve Opening (mm)	USA std ASTM E 11-61	Sieve Opening (mm)	USA std ASTM E 11-61
0.037	400	0.250	60
0.044	325	0.297	50
0.045	-	0.300	-
0.053	270	0.354	45
0.063	230	0.355	-
0.074	200	0.420	40
0.075	-	0.500	35
0.088	170	0.595	30
0.090	-	0.600	-
0.105	140	0.707	25
0.125	120	0.710	-
0.149	100	0.841	20
0.150	-	1.00	18
0.177	80	1.19	16
0.180	-	1.20	-
0.210	70	1.41	14

TEMPERATURE LIMITATIONS

PLASTICS	MIN.	MAX.
Polypropylene	45˚F (7˚C)	160˚F (71˚C)
Nylon	45˚F (7˚C)	200˚F (93˚C)
Celcon	40˚F (5˚C)	200˚F (60˚C)
ELASTOMERS	**MIN.**	**MAX.**
Viton®	50˚F (13˚C)	200˚F (93˚C)
Buna-N	45˚F (7˚C)	200˚F (93˚C)
EPDM	40˚F (5˚C)	200˚F (93˚C)
Santoprene®	40˚F (5˚C)	180˚F (82˚C)

FLOW DATA - NOZZLES

DISCHARGE HEAD				APPROXIMATE FLOW THROUGH NOZZLES IN GPM (L/M) diameter of nozzles in inches (mm)									
				.072 (1.8)		.078 (2.0)		.094 (2.4)		.140 (3.6)		.156 (4.0)	
PSI	(BAR)	FEET	METERS										
10	(0.7)	23.1	(.7)	.40	(1.5)	.50	(1.9)	.75	(2.8)	1.5	(5.7)	2.0	(7.6)
20	(1.4)	46.2	(14)	.56	(2.1)	.71	(2.7)	1.1	(4.2)	2.1	(8.0)	2.8	(10.6)
30	(2.1)	69.3	(21)	.69	(2.6)	.86	(3.3)	1.3	(4.9)	2.6	(9.8)	3.5	(13.3)
40	(2.8)	92.4	(28)	.80	(3.0)	1.0	(3.8)	1.5	(5.7)	3.0	(11.4)	4.0	(15.1)
50	(3.5)	115.5	(35)	.90	(3.4)	1.1	(4.2)	1.7	(6.4)	3.4	(12.9)	4.5	(17.0)
60	(4.2)	138.6	(42)	.98	(3.7)	1.2	(4.5)	1.8	(6.8)	3.7	(14.3)	4.9	(18.6)
80	(5.6)	184.8	(56)	1.1	(4.2)	1.4	(5.3)	2.1	(8.0)	4.2	(15.9)	5.7	(21.6)
100	(7.0)	230.9	(70)	1.3	(4.9)	1.6	(6.1)	2.4	(9.1)	4.7	(17.8)	6.3	(23.9)

TEMPERATURE CONVERSION FOR FAHRENHEIT AND CENTIGRADE SCALES

DEGREES FAHRENHEIT	DEGREES CENTIGRADE
+212˚F	+100˚C
+203	+95
+194˚F	+90˚C
+185	+85
+176˚F	+80˚C
+167	+75
+158˚F	+70˚C
+149	+65
+140˚F	+60˚C
+95	+35
+122˚F	+50˚C
+113	+45
+104˚F	+40˚C
+95	+35
+86˚F	+30˚C
+77	+25
+68˚F	+20˚C
+59	+15
+50˚F	+10˚C
+41	+5
+32˚F	0˚C
+23	-5
+14˚F	-10˚C
+5	-15
-4˚F	-20˚C
-13	-25
-22˚F	-30˚C
-31	-35
-40˚F	-40˚C

When sizing a pump, be sure to account not only for the desired outlet pressure but also for a pressure drop due to friction losses. The table at right gives pressure drops in psi per **100 feet** of pipe and tube. Use pipe friction losses when calculating discharge pressures. Pipe sizes shown apply to standard weight, Schedule 40 pipe. Tube is based on standard copper tubing.

PIPE FRICTION LOSSES (WATER)

GPM	Nominal sizes (inside diameters)									
	1/4"OD tube (0.21)	1/8" pipe (0.27)	3/8"OD tube (0.36)	1/4" pipe (0.36)	1/2" pipe (0.43)	3/8" pipe (0.49)	1/2" pipe (0.62)	3/4" pipe (0.82)	1" pipe (1.05)	1 1/2" pipe (1.61)
0.2	4.28	1.86	0.591	0.359	0.134	0.042				
0.5	26.7	10.5	3.92	2.39	0.853	0.539	0.167	0.033		
1	107	37.2	14.8	8.28	3.38	1.85	0.602	0.155	0.050	
2		134	50.1	30.1	11.5	6.58	2.10	0.526	0.164	
3			102	64.1	23.2	13.9	4.33	1.09	0.336	0.043
4	2" pipe (2.067)		169	111	38.5	23.9	7.42	1.83	0.565	0.071
5					56.9	36.7	11.2	2.75	0.835	0.104
6		2 1/2" pipe (2.469)			78.4	51.9	15.8	3.84	1.17	0.145
8	0.073		3" pipe (3.068)		130	91.1	27.7	6.60	1.99	0.241
10	0.108						42.4	9.99	2.99	0.361
15	0.224	0.094		4" pipe (4.026)			93.2	21.6	6.36	0.755
20	0.375	0.158						37.8	10.9	1.28
25	0.561	0.234	0.083		5" pipe (5.047)			58.1	16.7	1.93
30	0.786	0.327	0.114					86.3	23.8	2.72
40	1.35	0.556	0.192	0.052					41.5	4.65
50	2.03	0.839	0.288	0.076					66.4	7.15
60	2.87	1.18	0.406	0.107	0.035				92.8	10.2
70	3.84	1.59	0.540	0.143	0.047					13.7
80	4.97	2.03	0.687	0.180	0.060					17.6
90	6.20	2.53	0.861	0.224	0.072					22.0
100	7.59	3.09	1.05	0.272	0.090					26.9

T0 CONVERT	TO	MULTIPLY BY
BAR	PSI	14.5
CENTIMETERS	Inches	0.3937
Centimeters	Feet	0.03280
Centimeters	Meters	0.01
Centimeters	Millimeters	10
CUBIC CENTIMETERS	Cubic feet	3.53×10^{-5}
Cubic Centimeters	Cubic inches	6.102×10^{-2}
Cubic Centimeters	Cubic meters	10-6
Cubic Centimeters	Cubic yards	1.308×10^{-6}
Cubic Centimeters	Gallons	2.642×10^{-4}
Cubic Centimeters	Liters	10-3
Cubic Centimeters	Pints (liq.)	2.113×10^{-3}
Cubic Centimeters	Quarts (liq.)	1.057×10^{-3}
CUBIC FEET	Cubic centimeters	2.832×10^{4}
Cubic Feet	Cubic inches	1728
Cubic Feet	Cubic meters	0.02832
Cubic Feet	Cubic yards	0.03704
Cubic Feet	Gallons U.S.	7.48052
Cubic Feet	Imperial gallons	6.23
Cubic Feet	Liters	28.32
Cubic Feet	Pints (liq.)	59.84
Cubic Feet	Quarts (liq.)	29.92
CUBIC FOOT WATER	Pounds	62.4
Cubic Foot Water	Ounces	998.8
Cubic Foot Water	Kilograms	28.315
CUBIC INCHES	Cubic centimeters	16.39
Cubic inches	Cubic feet	5.787×10^{-4}
Cubic inches	Cubic meters	1.639×10^{-5}
Cubic inches	Cubic yards	2.143×10^{-5}
Cubic inches	Gallons	4.329×10^{-3}
Cubic inches	Liters	1.639×10^{-2}
Cubic inches	Pints (liq.)	0.03463
Cubic inches	Quarts (liq.)	0.01732
FEET	Centimeters	30.48
Feet	Inches	12
Feet	Meters	0.3048
Feet	Yards	1/3
FEET OF WATER	Atmospheres	0.02950
Feet of Water	Inches of Mercury	0.8826
Feet of Water	Kgs. sq. cm.	0.03048
Feet of Water	Lbs. sq. ft.	62.43
Feet of Water	Lbs. sq. inch	0.4335
GALLONS, U.S.	Cubic centimeters	3785
Gallons, U.S.	Cubic feet	0.1337
Gallons, U.S.	Cubic inches	231
Gallons, U.S.	Cubic meters	3.785×10^{-3}
Gallons, U.S.	Cubic yards	4.951×10^{-3}
Gallons, U.S.	Fluid ounces	128
Gallons, U.S.	Liters	3.785
Gallons, U.S.	Pints (liq.)	8
Gallons, U.S.	Quarts (liq.)	4
Gallons, U.S.	Imperial gallons	0.83267
GALLONS (IMP)	U.S. gallons	1.20095
GALLONS, U.S.	Pounds of water	8.3453
Gallons, U.S.	Kilograms	3.785
GALLONS/MIN	Cubic feet/sec.	2.228×10^{-3}
Gallons/Min.	Liters/sec.	0.06308
Gallons/Min.	Liters/Min.	3.785
Gallons/Min.	Cu. ft. hr.	8.0208
GRAMS	Dynes	980.7
Grams	Grains	15.43
Grams	Kilograms	10^{-3}
Grams	Milligrams	10^{3}
Grams	Ounces	0.03527
Grams	Ounces (troy)	0.03215
Grams	Pounds	2.205×10^{-3}
HORSE-POWER	B.T. Units/min.	42.44
Horse-power	Foot-lbs./min.	33.000
Horse-power	Foot-lbs./sec.	550
Horse-power	Horse-power (metric)	1.014
Horse-power	Kg-calories min.	10.70
Horse-power	Kilowatts	0.7457
Horse-power	Watts	745.7
INCHES	Centimeters	2.540
Inches	Millimeters	25.4
Inches	Meters	0.0254
Inches	Feet	0.0833
INCHES OF MERCURY	Kgs./sq. cm.	0.03453
Inches of Mercury	Lbs./sq. ft.	70.73
Inches of Mercury	Lbs./sq. inch	0.4912
INCHES OF WATER	Atmosphere	0.002458
Inches of Water	Inches of Mercury	0.07355
Inches of Water	Kgs./sq. cm.	0.002450
Inches of Water	Ounces/sq. inch	0.5781
Inches of Water	Lbs./sq. ft.	5.202
Inches of Water	Lbs./sq. inch	0.03613
KILOGRAMS	Pounds	2.205
Kilograms	Tons (short)	1.102×10^{-3}
Kilograms	Grams	10^{3}
LITERS	Cubic centimeters	10^{3}
Liters	Cubic feet	0.03531
Liters	Cubic inches	61.02
Liters	Cubic meters	10-2
Liters	Cubic yards	1.308×10^{-3}
Liters	Gallons	0.2642
Liters/min.	Gallons/mins.	0.264
Liters	Pints (liq.)	2.113
Liters	Quarts (liq.)	1.057
METERS	Centimeters	100
Meters	Feet	3.281
Meters	Inches	39.37
Meters	Kilometers	10^{-3}
Meters	Millimeters	10^{3}
Meters	Yards	1.094
MILLIMETERS	Centimeters	0.1
Millimeters	Inches	0.03937
POUNDS (AVOIR.)	Ounces	16
Pounds (avoir.)	Drams	256
Pounds (avoir.)	Grains	7000
Pounds (avoir.)	Tons (short)	0.0005
Pounds (avoir.)	Grams	453.5924
Pounds (avoir.)	Pounds (troy)	1.21528
Pounds (avoir.)	Ounces (troy)	14.5833
Pounds (avoir.)	Kilograms	0.454
POUNDS OF WATER	Cubic feet	0.01602
Pounds of Water	Cubic inches	27.68
Pounds of Water	Gallons	0.1198
Pounds of Water	Imperial gallon	0.10
POUNDS/SQ. INCH	Atmospheres	0.06804
Pounds/Sq. Inch	Feet of Water	2.307
Pounds/Sq. Inch	Inches of Mercury	2.036
Pounds/Sq. Inch	Kgs. sq. cm.	0.07031
Pounds/Sq. Inch	Bars	0.06895

CHEMICAL RESISTANCE GUIDE

This Chemical Resistance Guide is offered to assist in selecting pump materials that are most resistant to the chemicals that may be used with a FLOJET pump.

The information is based on FLOJET laboratory tests, field testing programs and general data from industry sources. It should be used only as a guide in the selection of pump materials. Suitability for the application should be determined by actual use and is the full responsibility of the customer. No warranty, expressed or implied, can be extended by FLOJET where failure is caused by chemical attack on pump materials. Temperature, aeration, concentration and other factors may change the effect of the specific fluid on the pump materials. Data shown is based on results at ambient temperatures, unless otherwise noted. Flojet recommends the use of our Soak Test kit number F100-168, available for free upon your request.

RATING SYSTEM

The "A" rating indicates little effect on the physical properties of the material (Generally Satisfactory).

The "B" rating indicates minor to moderate effect (Generally Satisfactory But Should Be Qualified By Testing).

The "C" rating indicates a change in the physical properties in excess of acceptable tolerances could occur (Generally Not Satisfactory, Must Be Qualified By Testing).

The "D" rating indicates rapid physical deterioration, swelling of check valves, diaphragm or chemical attack on the pump housing material (Not Satisfactory).

Where no rating is shown data is not currently available, pump materials should be qualified by testing.

It is recommended that the pump be thoroughly flushed with water or other neutralizing agent after each use whenever possible.

	PLASTICS				ELASTOMERS					ALLOYS	
	POLYPROPYLENE	NYLON	POLYETHYLENE	ACETAL COPOLYMER	VITON	BUNA	SILICONE	EPDM	SANTOPRENE	316 STAINLESS STEEL	HASTELLOY
Acetaldehyde	A	A	D		C	D	A	B		A	A
Acetamide	A	A	A		B	A	B	A		A	
Acetate Solvents (crude)	D	A	A		D	D	C	V		A	
Acetate Solvents (pure)	D	A	B		D	D	C	B		A	
Acetic Acid, Glacial	A	D	A		D	C	B	B		A	A
Acetic Acid, 10%	A	C	A		C	B		B		A	
Acetic Acid, 20%	A	B	A		C	B	B	B		A	
Acetic Acid, 50%	A	D	A		C	A		B		A	
Acetic Acid, 80%	B	D	A		C	C	B	A		A	
Acetic Acid, pure	A	D	A		D	C	V	V	A	A	A
Acetic Anhydride	C	A	C		D	D	C	C		A	A
Acetone	A	A	C	A	D	D	B	A		A	
Acetophenone	C				D	C		A		B	
Acetyl Chloride	D	D	D		A	D	C	D		B	
Acetylene	A	A	A		A	B	B	A		A	
Acetylene Tetrabromide	A		A		A	D				A	
Acetylesalicylic Acid	A	A								A	
Acrylonitrile	A	A	A		D	D	D	D	A	B	
Adipic Acid						A					
Aero Lubriplate					A	A	B				
Aero Safe 2300					D	D	C				
Alcohol - Amyl	A	A	B		C	B	D	A			
Alcohol - Benzyl	A	D	D		A	D		B		A	A
Alcohol - Butyl	A	A	A		A	A	B	B		A	A
Alcohol - Diacetone	A	A	B		C	D	D	A		A	A
Alcohol - Ethyl	A	A	B		B	C	B	A		A	A
Alcohol - Hexyl		A	A		B	A	B			A	A
Alcohol - Isobutyl	A	A	A		A	B	A	A		A	A
Alcohol - Isopropyl	A	B	A		A	B	A	A		A	A
Alcohol - Methyl	A	A	A		C	A	A	A		A	A
Alcohol - Octyl	A	A	A		B	B	B	A		A	A
Alcohol - Propyl	A	B	A		A	A	A	A		A	A
Aluminum Chloride, 20%	A	C	B		A	A	B	A		C	A
Aluminum Chloride	A	D	B		A	A	B	A		C	B
Aluminum Citrate											
Aluminum Flouride	A	A	A		C	A	B	A		C	
Aluminum Formate					D	D					
Aluminum Hydroxide	A	A	A		B	A		A		A	
Aluminum Nitrate	A		A		B	A					
Aluminum Oxychloride	A				D						
Aluminum Phosphate					A	A					
Aluminum Potassium Sulfate 10%	A	D	A		A	A	A	A		B	C
Aluminum Potassium Sulfate	A	D	A		A	A	A	A		A	
Aluminum Sulfate	A	A	A		A	A	A	A		B	B
Amines	B	D			D	D	B	B			
Ammonia, 10%	A	A	C		C	D			A		
Ammonia, anhydrous	A	A	A		D	C	D	A		A	B
Ammonia, liquid	A	B			D	C		A		A	
Ammonia Nitrate	A	D			D	C		A		A	
Ammonium Acetate					A	A		A			
Ammonium Alum						B					
Ammonium Bichromate						A		A			
Ammonium Biflouride	A		A		A	B		A			
Ammonium Bisulfide	A										
Ammonium Carbonate	A	A	B		A	C	A			B	B
Ammonium Casenite										A	
Ammonium Chloride	A	C	A		A	B		A		C	B
Ammonium Dichromate						A					
Ammonium Flouride						B					
Ammonium Flouride, 10%	A				A	A					

	PLASTICS				ELASTOMERS					ALLOYS	
	POLYPROPYLENE	NYLON	POLYETHYLENE	ACETAL COPOLYMER	VITON	BUNA	SILICONE	EPDM	SANTOPRENE	316 STAINLESS STEEL	HASTELLOY
Ammonium Flouride, 25%	A										
Ammonium Hydroxide	A	A	A	C	B	C	A	A		A	B
Ammonium Metaphosphate	A		A		A	A		A			
Ammonium Nitrate	A	B	A		A	A		A		A	D
Ammonium Oxalate		B				A				A	
Ammonium Persulfate	A	C	A		B	C		B		A	D
Ammonium Phosphate, Dibasic	A	C	A		A	A	A	A		C	
Ammonium Phosphate, Monobasic	A	B	A		A	A	A	A		C	
Ammonium Phosphate, Tribasic	A	B	A		A	A	A	A		B	
Ammonium Sulfate	A	A	A		A	A	A	A		B	B
Ammonium Thiosulfate			A			A				A	
Amyl Acetate	C	A	A		D	D	D	A		A	A
Amyl Alcohol	B	A	B		B	B	D	A		A	
Amyl Chloride	D	C	D		B	D	D				A
Anniline	C	C	B	B	D	D	D	B	A	B	B
Anti-Freeze	D	D		A	A	A			A	A	
Aqua Regia	B	D	C		B	D	D			D	D
Arochlor	D	A	B		A	C	B	B		B	A
Aromatic Hydrocarbons	D		D		A	C	D	D		B	
Arsenic Acid	A		B		A	A	A	A		B	B
Asphalt	B	A	C		A	B	D	D		A	
Barium Carbonate	A	A	B		A	A		A		B	B
Barium Chloride	A	A	A		A	A	A	A		B	A
Barium Cyanide	D		B		A	C		A		B	
Barium Hydroxide	B	A	B		A	B	A	A		B	B
Barium Nitrate	A	A	B		A	A		A		B	B
Barium Sulfate	A	A	A		A	A	A	A		A	C
Barium Sulfide	B	A	A		A	A	A	A			
Beer	A	A	A	A	A	A	A	A		A	A
Beer Sugar Liquid	B	A			A	A	A	A		A	
Benzaldehyde	C	C	D		D	D	D	C		A	A
Benzalkonium Chloride											
Benzene	C	A	D	A	A	D	D	D		B	B
Benzoic Acid	B	C	C		A	D	B	C		B	B
Benzol	A	D	C		A	D		B		A	
Benzyl Benzonte					A	D		C			
Benzyl Chloride					D	D	D	D			
Black Liquor	A	A		A	A	A	B	B			
Bleach	A	C	A		A	D	B	A			
Borax	A	A	A		A	C	B	A		A	A
Boric Acid	A	B	A		A	A	A	A		B	A
Brake Fluid				A	D	C	C	A	A		
Brewery Slop					A	A				A	
Brine	A				A	A					
Brine Acid	A		A		A	A		A			
Bromic Acid	D				A			B			
Bromine Dry		D			A	D	D	D			A
Bromine Gas		D			A	D	D	D			A
Bromine Liquid	D	D	D		A	D	D	D		D	A
Bromine Water	C	D	D		A	C	D	D			A
Bromobenzene							D				
Bromotoluene	D										
Butadiene	C	A	D		A	C	D	C		A	
Butane	A	A	C		A	A	D	C		A	B
Butanediol			A		A			D			
Butter			A		A	A	B	A		A	
Buttermilk	A	B	A		A	A				A	A
Butylene		B	C		A	B	D	D		A	
Butyl Acetate	B	A	C		D	D	D	B	A	B	A

	PLASTICS				ELASTOMERS					ALLOYS	
	POLYPROPYLENE	NYLON	POLYETHYLENE	ACETAL COPOLYMER	VITON	BUNA	SILICONE	EPDM	SANTOPRENE	316 STAINLESS STEEL	HASTELLOY
Butyl Acrylate Pure	D				D			A			
Butyl Acrylate Saturated	D				D	C		D			
Butyl Amine	D				D	C	B	D			B
Butylebenzine					A	D					
Butyl Benzorte					A	D		A			
Butyric Acid	C	B	C		C	D		B		B	B
Calcium Bisulfate							A			A	
Calcium Bisulfide	A	A			A	A		C		B	
Calcium Bisulfite	B	A	A		A	A	A	D		A	B
Calcium Carbonate	A	A	B		A	A	A	A		B	B
Calcium Chlorate					A	C		A			
Calcium Chloride	A	A	B		A	A	A	A		B	B
Calcium Hydroxide	A	A	B		A	B	A	A		B	A
Calcium Hyprochloride	A	C	B		A	B	B	B		C	B
Calcium Sulfate	A	D	B		A	A		A		B	B
Calgon	A	A		B	A	A		A		A	
Cane Juice	C	A			A	A	A	A		A	
Carbolic Acid	B	D	B		A	C	D	B		B	
Carbon Bisulfide	C	A	D		A	C		D		B	
Carbon Dioxide (wet or dry)	A	A	B		A	C	B	B		A	A
Carbon Monoxide	A	A	A		A	A	A	A		A	A
Carbon Tetrachloride	D	C	D		B	C	D	D		B	B
Carbonated Water	B	A	A		A	A				A	
Carbonic Acid	A	A	A		A	B	A	A		B	A
Casein					A	A		A			
Castor Oil	A		C		A	A	A	B			
Catsup	A	A			A	A			C		A
Caustic Lime					B	A		A			
Caustic Potash	A				D	A		A			B
Caustic Soda	A				B	C		A			A
Chloral Hydrate	A	D			A	C					
Chloracetic Acid	C	D	C		D	C		B		C	A
Chloric Acid		D				D				C	
Chloric Acid, 20%	D										
Chlorinated Glue					A	C		B		A	
Chlorine Dioxide	C				D						
Chlorine Dry	C	D	B		C	D	D	B		B	B
Chlorine Gas Dry	D				B	C		D			
Chlorine Gas Wet	D				C	C		D			
Chlorine Liquid	C	D	C		A	C				D	A
Chlorine Water	C		A		A	C		B		C	B
Chlorobenzene (Mono)	C	B	C		A	D	D	D		B	B
Chloroform	C	D	C		A	D	D	D		A	A
Chlorosulfonic Acid	D	D	D		D	D	D	D		D	A
Chlorox Bleach	D	A	B		A	B		B		A	
Chocolate Syrup	A	A			A	A				A	
Chresylic Acid, 50%			D		A	D					
Chrome Alum			A		A	A	A				
Chromic Acid, 05%	C	D	B		A	D	C	A		A	A
Chromic Acid, 10%	B	D	A		B	D	C	B		B	A
Chromic Acid, 20%	C	D	A		B	C	C	B			
Chromic Acid, 30%	C	D	A		A	D	C	B		B	
Chromic Acid, 50%	C	D	C		A	D	C	B		B	D
Chromium Alum	A				A			A			
Cider	A		B		A	A				A	
Citric Acid	A	A	A	A	A	A	A	A		A	A
Citric Oils	A				A	A		B		A	
Cobalt Chloride					A	A	B	A			
Coconut Oil	A		A		A	A	A	A		A	
Coffee	A	A			A	A	A	A		A	

	PLASTICS				ELASTOMERS					ALLOYS	
	POLYPROPYLENE	NYLON	POLYETHYLENE	ACETAL COPOLYMER	VITON	BUNA	SILICONE	EPDM	SANTOPRENE	316 STAINLESS STEEL	HASTELLOY
Copper Chloride	A	A	B		A	A	A	A		C	B
Copper Cyanide	A	A	A		A	A	A	A		A	B
Copper Fluoborate					A	B				D	B
Copper Nitrate	A	D	B		A	A				B	C
Copper Culfate	A	C	B		A	A	A	A		B	B
Cream	A	A			A	A				A	
Cresols	D	D	C		A	D	D	D		A	B
Cresylic Acid	D	D	B		A	D	D	D		A	B
Cyanic Acid					A	C					
Cyclohexane	C	A	B		A	B	D	D	D	A	B
Detergents	B	A	A	B	A	A	A	A		A	B
Diacetone Alcohol	A				D	D	D	A			
Diazo Salts	A		A								
Dibutyl Amine					C	C	C	D			
Dibutyl Ether					C	C	D	C			
Dibutyl Phthalate	B	A			B	D	B	A			B
Dibutyl Sebacate					C		B	B			
Dichlorethane	A	C	C		C					B	
Dichloromethane					B	D		D			
Diesel Fuel	B		C	A	A	A	D	D		A	B
Diethylamine	B	A	D		C	C	B	B		B	
Diethyl Ether	B			A	C	D	D	C	A		B
Diethyl Oxide					D	B		D			
Diethylene Glycol	A	A	B		A	A	D	A		A	
Diglycolic Acid	A				A			A			
Diisobutyl Ketone					D			D			
Diisobututylene					A		D	D			
Diisooctyl Phthalate					B			B			
Diisopropyl Ketone					D		D	B			
Dimethyl Amine	A				D	B		C			
Dimethyl Benzene					A	D		D			
Dimethyl Ether					B	B		B			
Dimethyl Formamide	A	A		A	C	B	B	B	A		
Dimethyl Ketone					D	D		A			
Dimethyl Phthalate					B	C		B			
Dimethylamine	A				D			D			
Dioctyl Phthalate	D		D		A	D	C	B			
Dioxane	B	A			D	D	D	B			
Diphenyl Oxide	D		D		A	D	C	D		B	
Dyes		A			A					A	
Epsom Salts	A	A	A		A	A	A	A		B	A
Ethane	C	D	D		A	A	D	D		A	A
Ethanolamine	B	A			D	B	B	B		A	B
Ether	D	A	C		C	D	D	C		B	B
Ethyl Acetate	B	A	B	A	D	D	B	B		B	A
Ethyl Chloride	C	A	B		A	A	D	A		A	B
Ethyl Sulfate					A	A				D	
Ethylene Chloride	C	B	C		B	D	D	D		A	B
Ethylene Dichloride	B	B	C	A	A	D	D	C		A	A
Ethylene Glycol	A	B	A	B	A	A	A	A		A	B
Ethylene Oxide	C	A	C		D	D	D	C		C	
Fatty Acids	B	A	B		D	D	D	C		A	A
Ferric Chloride	B	C	A		A	B	B	A		C	C
Ferric Nitrate	B	A	B		A	A	C	A		A	B
Ferric Sulfate	B	A	A		A	A	B	A		A	B
Ferrous Chloride	A	C	A		A	A				C	D
Ferrous Sulfate	A	C	A		A	A		A		B	B
Flouboric Acid	A	D	B		A	A		A		C	A
Fluorine	C	D	C		B	C	D	A		C	B
Fluosilic Acid	A	D	B		A	A	B	A		B	

	PLASTICS				ELASTOMERS					ALLOYS	
	POLYPROPYLENE	NYLON	POLYETHYLENE	ACETAL COPOLYMER	VITON	BUNA	SILICONE	EPDM	SANTOPRENE	316 STAINLESS STEEL	HASTELLOY
Formaldehyde	C	D	B		D	C	B	A		A	B
Formaldehyde, 40%	A	C	A		A	B		A		A	B
Formic Acid	A	C	B		C	B	B	A		C	B
Freon 11	D	D	C		A	B	D	D	C	A	
Freon 12	D	D	C		B	A	D	B		A	
Freon 22	A	B	A		D	D	D	A		A	
Freon 113	D		D		B	A	D	D		A	
Freon T.F.	D	D	D		B	A	D	D		A	
Fructose	A		A		A	A		A		A	
Fruit Juice	A	A	B		A	A				A	
Fruit Pulp	A		A		A					A	
Fuel Oils	B	A	D		A	A	C	D		A	B
Furan Resin	D		D		D	D	D	C		A	A
Furfural	C	B	D		D	D	D	B		A	B
Gallic Acid	A	B	D		A	A		A		B	B
Gasoline	D	A	D	A	B	A	D	D		A	A
Gelatin	A	A	A		A	A	A	A		A	B
Glucose	A	B	A		A	A	A	A		A	
Glue		A	A		A	A	A	A		A	
Glycerin	A	A	A		A	A	A	A	A	A	A
Glycerol	A	A	A		A	A	A	A	A	A	A
Glycolic Acid	A		A	C	A	A	A	A		A	B
Gold Monocyanide					A	A				A	
Grape Juice		A	B		A	A				A	
Grease					A	D				A	
Heptane	C	A	C	A	A	A	D	D		A	B
Hexane	C	A	C		A	A	D	D		A	B
Honey	A	A	B		A	A				A	
Hydraulic Oil (Petroleum)	D	A	D		C	A	C	D		A	
Hydraulic Oils (Synthetic)	D	A	A		A	C				A	
Hydrazine	C				A	B	C	A		A	
Hydrobromic Acid 20%	A	D	B		A		D	A		D	B
Hydrobromic Acid	A	D	A		A	D	D	A		D	B
Hydrochloric Acid dry gas	B	A	A					C		D	A
Hydrochloric Acid, 20%	B	D	A	D	A	C	C	A	A	D	B
Hydrochloric Acid, 37%	B	D	C		A	B	B	A		D	A
Hydrochloric Acid, 100%	D	B			A	D	D	C		D	A
Hydrocyanic Acid	A	C	A		A	B	C	A		B	A
Hydrocyanic Acid (Gas 10%)	A				A	B		A			
Hydrofluoric Acid, 20%	A	C	A		A	C	D	A		C	B
Hydrofluoric Acid, 50%	A	D	A		A	C	D	A		D	B
Hydrofluoric Acid, 75%	C	D	C		A	D	D	C		D	B
Hydrofluosilicic Acid	A	D	B		A	B	D	A		D	B
Hydrogen Gas	A	A	A		A	A	C	A		A	A
Hydrogen Peroxide, 10%	B	C	A	A	A		B			B	D
Hydrogen Peroxide, 30%	B	D	C		A		B			B	D
Hydrogen Peroxide, 50%	B	D	C		A		B			A	C
Hydrogen Peroxide, 100%	B	D	C		A	B	B	A		A	A
Hydrogen Sulfate (aqua)	A	C	A		D	D	C	A		C	A
Hydrogen Sulfide (dry)	A	C	A		D	A	C	A		B	B
Hydroxyacetic Acid			A		A	A		A			
Hydroxyacetic Acid (70%)			A		A	A		A			
Hydroxylamine Sulfate	A							A			
Hypochlorous Acid	A		A		B	D		B		D	
Ink	A	C	D		A	A				A	
Iodine	B	D	B		A	B		B		C	B
Isotane	D	D			A	A					
Isopropyl Acetate	B	B	B		D	D	D	B		B	B
Isopropyl Ether	C	A	C		D	B	D	D		A	
Jet Fuel JP-3	A	A	C		A	A	D	D		A	A

	PLASTICS				ELASTOMERS					ALLOYS	
	POLYPROPYLENE	NYLON	POLYETHYLENE	ACETAL COPOLYMER	VITON	BUNA	SILICONE	EPDM	SANTOPRENE	316 STAINLESS STEEL	HASTELLOY
Jet Fuel JP-4	B	A	C		A	B	D	D		A	A
Jet Fuel JP-5	B	A	C		A	A	D	D		A	A
Kerosene	A	A	C	A	A	A	D	D		A	A
Ketones	B	A	C		D	D		C		A	B
Laquer	B	A	C		D	D	D	D		A	
Laquer Thinner	B	A	B		D	D	D	A		A	
Lactic Acid	A	C	B		A	A	A	B		A	B
Lard	A	A	B		A	A	B	C		A	A
Latex	A	A	A		A	A		B		A	
Lead Acetate	A	B	B		D	B	D	A		B	B
Lead Chloride	A				A			A			
Lead Nitrate	A				A	A	B	A		B	B
Lead Sulfamate	A	B	A		A	B	B	A		B	
Ligroin	B	D	C		A	A	D	C		A	
Lime	A	A	B		A	A	B	C		A	
Linoleic Acid	A				B	B	B	D		A	
Linseed Oil	A	A	D	A	A	A	A	B		A	A
Lubricants	A	A	D		A	A	D	D		A	B
Magnesium Carbonate	A		A		A	A		A		A	B
Magnesium Chloride	A	A	A		A	A	A	A		A	A
Magnesium Hydroxide	A	B	A		A	A	A	A		A	B
Magnesium Nitrate	A	A	A		A	A		A		A	B
Magnesium Oxide						A				A	
Magnesium Sulfate	A	A	A		A	A	A	A		B	A
Maleic Acid	A	B	B		A	D	B	D		B	B
Maleic Anhydride	D				A	D		D			A
Mash		A			A	A		A		A	
Mayonnaise		A	B		A	A				A	
Melamine	A	A			A	C		A		D	
Mercuric Chloride	A	D	A		A	A				C	D
Mercuric Cyanide	A	A	A		A	A				B	D
Mercury	B	A	A		A	A		A		A	B
Methyl Acetate	D	A	B		D	D	D	B		A	B
Methyl Acrylate	D		B		D	D	D	B			
Methyl Acetone		A			A	D				A	
Methyl Bromide	C	C	D		A	D			D	A	
Methyl Butyl Ketone	D	D	A		D	D	D	A		A	B
Methyl Cellosolve	B	C	B		D	C	D	B		A	
Methyl Chloride	D	C	C		A	D	D	C		A	B
Methyl Dichloride	D	C			A	D	D	D			
Methyl Ethyl Ketone	A	A	B		D	D	D	A	A	A	B
Methyl Isobutyl Ketone	C	A	A		D	D	D	C		A	
Methyl Isopropyl Ketone	D	D	D		D	D	D	B		A	
Methyl Methacrylate	D				D	D	C	D			
Methylamine	D				D	D		A		A	
Methylene Chloride	B	C	C		B	D	D	D		B	A
Milk	B	A	A		A	A	A	A		A	A
Mineral Oil	A	A	D	A	A	A	B	D		A	
Molasses	A	A	A		A	A		C		A	A
Motor Oil	C			A	A	A		D			
Mustard	A	A	A		D	C	A	A		A	A
Naptha	C	A	A		A	C	D	D		A	B
Napthalene	B	A	A		A	D	D	D	A	B	
Natural Gas	A				A	A	A	D			
Neon					A	A	A	A			
Nickle Chloride	A	C	B		A	A	A	A		C	A
Nickle Sulfate	A	A	B		A	A	A	A		B	B
Nitric Acid (5-10%)	A	C	B	D	A	D	C	D		A	D
Nitric Acid (20%)	A	D	C		A	D	D	B		A	D
Nitric Acid (50%)	D	D	C		A	D	D	D		A	D

	PLASTICS				ELASTOMERS					ALLOYS	
	POLYPROPYLENE	NYLON	POLYETHYLENE	ACETAL COPOLYMER	VITON	BUNA	SILICONE	EPDM	SANTOPRENE	316 STAINLESS STEEL	HASTELLOY
Nitric Acid (Concentrated)	D	D	C		A	D	D	D		A	
Nitrobenzene	B	B	C		B	D	D	D	A	A	C
OILS											
Aniline	A	A			C	D	D	B		A	
Anise		A								A	
Bay					A					A	
Bone	A				A	A				A	
Castor	A	A			A	A	A	B		A	
Cinnamon		A			A					A	
Citric		A			A						
Clove		A			A	A				A	
Coconut	A	A			A	A	A	C		A	
Cod Liver	A				A	A	B	A		A	
Corn	A	A	C		A	A	A	C		A	
Cotton Seed	A	A	B		A	A	A	C		A	
Creosote	C	D	C		A	B	D	D		B	
Diesel Fuel	A	A	C		A	A	D	D		A	
Fuel	C	A	C		A	B	C	D		A	
Ginger		A			A	A		A		A	
Hydraulic	D	A	C		A	A	C	D		A	
Lemon		A			A			D		A	
Linseed	A	A	C		A	A	A	C		A	
Mineral	B	A	B		A	A	C	D		A	
Olive	A	A	A		A	A	D	B		A	
Orange		A			A	A	D			A	
Palm		A			A	A				A	
Peanut	D	A			A	A	A	C		A	
Peppermint		A			A	D				A	
Pine	D	A			A	B	D	A		A	
Rape Seed	D				A	B	D	A		A	
Rosin	A	A	B		A	A				A	
Sesame Seed		A			A	A				A	
Silicone	A	A	A		A	A	C	A		A	
Soybean	A	A	A		A	D	A	C		A	
Sperm					A	A				A	
Tanning					A	A				A	
Oil, Turbine	B		C		A	B	D	D		A	
Oleic Acid	A	B	D	A	B	B	D	C		B	B
Oleum	D	D	A		D	D	D			B	
Oxalic Acid	A	B	A		A	B	B	A		B	B
Oxygen Gas	A				A	C	B	A			
Ozone	C		C		A	D	A	A			
Palmitic Acid	A		B		A	A	D	B			
Paraffin	A	A	B		B	A		D		A	A
Pentane	D	A	D		A	A	D	D		C	
Perchloroethylene	C	C	D		A	D	D	D		A	B
Petrolatum	C	D	B		A	A	C	C		A	
Phenols 10%	B	D	A	B	B	D	D	C		B	
Phenols 100%	A	D	B			D	D	D		A	
Phosgene Gas	C				D	D		A			
Phosgene Liquid	D				D	D		A			
Phosphoric Acid < 40%	A	D	B		A	C	D	B		A	A
Phosphoric Acid > 40%	A	B	A		A	C	C	B		B	B
Phosphoric Acid (crude)	B	B	C		A	C	C	B		C	A
Phosporic Acid (molter)	D										C
Phosphoric Acid Anhydride	A										
Phosphorus Trichloride	C		A		C	D		C		A	D
Photographic Developer	A		B		A	A	A	B		A	
Phthalic Acid	D	B			A			A			B
Phthalic Anhydride	D				A	C		A		B	A

	PLASTICS				ELASTOMERS					ALLOYS	
	POLYPROPYLENE	NYLON	POLYETHYLENE	ACETAL COPOLYMER	VITON	BUNA	SILICONE	EPDM	SANTOPRENE	316 STAINLESS STEEL	HASTELLOY
Plating Solutions - Antimony	A				A	A				A	
Plating Solutions - Arsenic	A	A			A	A				A	
Plating Solutions - Brass	A	A	B		A	A				A	
Plating Solutions - Bronze	A	A			A	A		A		A	
Plating Solutions - Cadrium	A	C			A	A					A
Plating Solutions - Chrome	A	D			A		D				
Plating Solutions - Copper	A	C			A	A					A
Plating Solutions - Gold	A	A			A	A				A	
Plating Solutions - Indium	A	D			A	A				A	
Plating Solutions - Iron	A	D			A	A				A	A
Plating Solutions - Lead	A	D			A	A					A
Plating Solutions - Nickel	A	C			A	A					A
Plating Solutions - Silver	A	A			A	A		A		A	
Plating Solutions - Tin	A	D			A	A					A
Plating Solutions - Zinc	A	D			A	A					A
Potash	A	A	B		A	A				A	
Potassium Bicarbonate	A	A	A		A	A				B	B
Potassium Bromide	A	A	A		A	A				B	A
Potassium Carbonate	A	A	A		A	A				B	B
Potassium Chlorate	A		A		A					B	B
Potassium Chloride	A	B	A		A	A	A	A		B	B
Potassium Chromate	A	A	A		A	A				B	A
Potassium Cyanide Solutions	A	A	A		A	A	A	A		B	B
Potassium Dichromate	A	D	A		A	A	A	A		B	B
Potassium Ferrocyanide	A	B	A		A	A				B	B
Potassium Hydroxide	A	C	A		B	B	C		A	B	B
Potassium Iodide	A				A	A		A			A
Potassium Nitrate	A	B	B		B	A	A	A		B	D
Potassium Perborate	A		A								
Potassium Perchlorate	A		A			A		A			
Potassium Permanganate	A	D	A		B	A		A		B	B
Potassium Persulfate	A		A			A		A			
Potassium Sulfate	A	A	A		A	A	A	A		B	
Potassium Sulfide	A	A	A		A	A	A	A		A	
Potassium Thiosulfate					A	A					
Propane	B	A			A	A	D	D		A	
Propanol					A	A		A	A		
Propargyl Alcohol	A		A								
Propyl Acetate					D	D	D	B			
Propylene					A	D	D	D			
Propylene Dichloride	C		C		D	D		D			
Propylene Glycol	A		B		A	A		A		A	B
Pyridine	A	A	B		D	D	D	B	A	A	A
Pyrogalic Acid	A				A					B	B
Rosins	A	A	B		A	A				A	A
Rum	A	A			A	A		A		A	
Rust Inhibitors	A				A	A				A	
Salad Dressing	A	A			A	A				A	
Sea Water	A	A	A		A	A	A	A	A	A	A
Sewage	A				A	A	B	B		A	
Shellac (Bleached)	A	A	A			A				A	
Shellac (Orange)	A	A	A			A				A	
Silicic Acid	A		A		A	A					
Silicone	A	A			A	A	C	A		A	
Silver Bromide										B	B
Silver Cyanide	A				A			A			
Silver Nitrate	A	A	B		A	B	A	A		B	B
Silver Salts	A		A		A	A				A	
Silver Sulfate	A				A	C		A			
Soap Solutions	A	A	B		A	A	A	A		B	B

	PLASTICS				ELASTOMERS					ALLOYS	
	POLYPROPYLENE	NYLON	POLYETHYLENE	ACETAL COPOLYMER	VITON	BUNA	SILICONE	EPDM	SANTOPRENE	316 STAINLESS STEEL	HASTELLOY
Sodium Acetate	A	B	B		D	B	D	A		B	
Sodium Aluminate	A	A	A		A	A		A		A	B
Sodium Bicarbonate	A	A	A		A	B	D	A		B	B
Sodium Bisulfate	A	A	A		A	B		A		B	B
Sodium Bisulfide	A	A	A		A	A	A	A		B	
Sodium Borate	A	A	A		A	A	A	A		B	
Sodium Carbonate	A	B	B	A	A	A	A	A		A	B
Sodium Chlorate	A	D	B		A			A		B	
Sodium Chloride	A	A	A	B	A	A	A	A	A	B	A
Sodium Chromate		D			A	A				B	
Sodium Cyanide	A	A	A		A	A	A	A		A	
Sodium Hydroxide 20%	A	A	A	A	B	B	B	A		A	A
Sodium Hydroxide 50%	A	A	A	B	B	B	B	A	A	B	A
Sodium Hydroxide 80%	A		B	C	B	B		A			B
Sodium Hypochlorite < 20%	B	D	A	D	A	B	B	B		C	
Sodium Hypochlorite 100%	B	D	B		A	B	B	B	D		
Sodium Hyposulfate									A	A	
Sodium Metaphosphate	A	A	A		A	A		A		A	
Sodium Metasilicate	A				A	A		A		A	A
Sodium Nitrate	A	A	A		A	B	D	A		B	B
Sodium Perborate	A	B	A		A	B	B	A		B	B
Sodium Peroxide	B	A	A		A	B	D	A		A	C
Sodium Phosphate Alkaline	A	A			A	A		A			B
Sodium Phosphate Neutral	A	A			A	A		A			B
Sodium Polyphosphate	A	A	A		A	A	D	A		B	
Sodium Silicate	A	A	A		A	A		A		A	C
Sodium Sulfate	A	A	A		A	A	A	A		B	B
Sodium Sulfide	A	A	A		A	A	A	A		B	B
Sodium Sulfite	A	D	B		A	A	A	A		B	D
Sodium Tetraborate		A	A		A	A				A	
Sodium Thiocyanate			A		A		A	D			
Sodium Thiosulfate	A	B	A	A	A	B		A		A	
Sorghum		A			A	A				A	
Soy Sauce		A			A	A				A	
Soybean Oil			A		A			A		A	
Stannic Chloride	A	B	A		A	A	B	A		D	B
Stannic Fluoborate					A	A				A	
Stannous Chloride	A	C	B		A	A	B	B		A	B
Starch	A	A	B		A	C		A		A	
Stearic Acid	A	A	B		A	B	B	C		A	C
Stoddard Solvent	C	A	C		A	A	D	D		A	
Styrene		A			C	D	D	D		A	
Sugar (liquids)	A	A			A	A	A	A		A	B
Sulfate Liquors	A	B	A		A	A		A		B	B
Sulfur	D	A	B		A	C		C			
Sulfur Chloride	C	A	C		A	D	C	D		D	A
Sulfur Dioxide Dry	A	B	A		A	D	B	A		A	B
Sulfur Dioxide Wet	A	C	B		A	D	B	A		A	D
Sulfur Trioxide	D	A	C		A	D	B	C		A	
Sulfuric Acid (to 10%)	A	C	A	C	A	D	D	B		B	C
Sulfuric Acid (10-75%)	A	D	A	D	A	D	D	B		D	C
Sulfuric Acid (75-95%)	C	D	B	D	A	D	D	A		D	C
Sulfuric Acid (95-100%)	C	D	B	D	A	D	D	D	A	D	A
Sulfurous Acid	A	D	B		A	B	D	B		C	C
Syrup	A				A	A				A	
Tallow	A	A	C		A	A				A	
Tannic Acid	A	C	B		A	A	B	A		A	B
Tanning Liquors	A	A	A		A	A		B		A	B
Tartaric Acid	A	B	A		A	A	A	B		C	B
Tetrachlorethane	C	C			A	D	D			A	

	PLASTICS				ELASTOMERS					ALLOYS	
	POLYPROPYLENE	NYLON	POLYETHYLENE	ACETAL COPOLYMER	VITON	BUNA	SILICONE	EPDM	SANTOPRENE	316 STAINLESS STEEL	HASTELLOY
Tetrahydrofuran	C	A	C		D	D	B	D		A	B
Toluene, Tuluol	C	A	C	A	A	D	D	B		A	A
Tomato Juice	A	A	A			A		D		A	A
Trichloroethane	C	C			A	D	D	D		A	
Trichloroethylene	C	C	C		A	C	D	D	D	B	B
Trichloropropane					A	A				A	A
Tricresylphosphate	A	A	B		B	D	C	A		A	
Triethylamine	D	A			A	A		A		A	
Turpentine	B	A	C		A	A	D	D	C	A	B
Urine	A	A	A		A	A		A		A	
Varnish	A	C	C		A	B	D	D		A	A
Vegetable Juice		A			A	C				C	
Vinegar	A	C	B		A	B	A	A		A	B
Vinyl Acetate					D	D		B			
Vinyl Chloride		A			A	D		C			A
Water Acid Mine	A	B	A		A	A	B	A		A	A
Water Deionized	A		A		A	A		A		A	B
Water Distilled	A	A	A	B	A	A		A		A	A
Water, Fresh	A	A	A		A	A	B	A	A	A	A
Water, Salt	A	A	A		A	A		A	A	A	A
Weed Killers		A			A	B				A	
Whey					A	A		A		A	
Whiskey & Wines	A	A				A	A	A		A	
Xylene	C	A	C		B	D	D	D	C	A	B
Xylol	D				A	C	D	D			
Yeast	A		A		A	A					
Zeolite					A	A		B			
Zinc Acetate	A				C	B		A		B	
Zinc Chloride	A	C	A		A	A	D	A	A	C	B
Zinc Hydrosulphite		A				A		A		A	
Zinc Sulfate	A	C	B		A	A	A	A		A	B
Zirlite	A		B		C	B		A			

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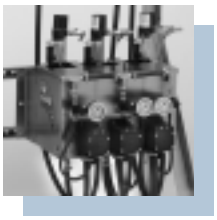
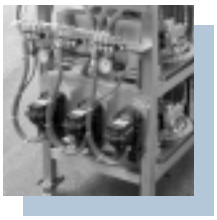

ITT - FLOJET has been an expert in special application pumps for over 20 years, emerging as a leading global supplier for the car wash industry. Emphasizing quality and design, Flojet is ISO 9001 certified. Flojet is also proud to be the first ITT company in California to achieve certification under the ISO environmental standard 14001. With a worldwide customer service network and manufacturing facilities in both the United States and the United Kingdom, Flojet is committed to providing you with the finest products for your car wash equipment needs wherever you are.

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This catalog shows only the standard model pumps in Flojet's car wash line. Other models of are available. Flojet manufactures a complete line of small pumps to fit most applications. Contact us for special requests and additional information.

Discover Flojet at www.flojet.com

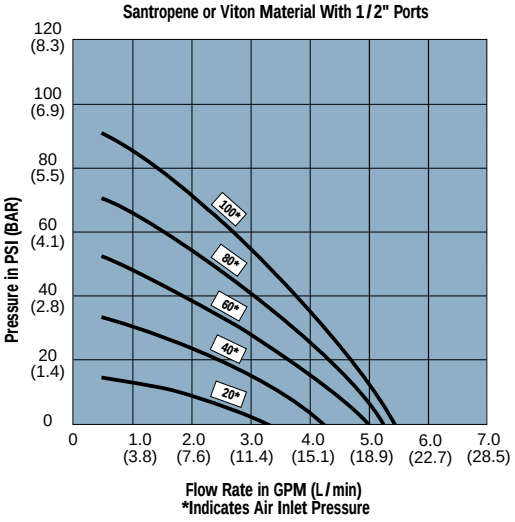
FOAM ARCH AND BRUSH SYSTEM PUMPS

G57 SERIES AIR OPERATED DIAPHRAGM PUMPS

Automatic Demand Control

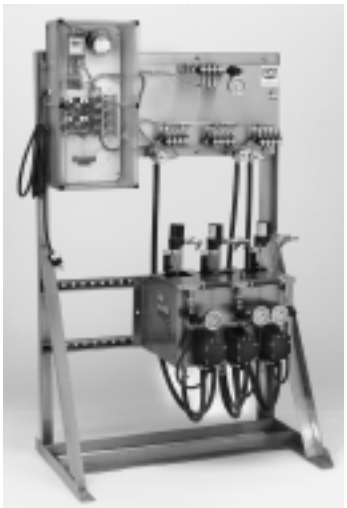
FEATURES

- Chemical resistant Polypropylene housing with Viton® and Santoprene® elastomers
- Quiet operation with large exhaust muffler
- Easy installation with quick disconnect ports
- Duplex diaphragm design
- Patented shuttle valve, eliminates stalling
- Compact size



Standard Model Numbers, Santoprene® fitted	
Model No.	**Fittings Description**
G575205	3/8" barb port, 1/4" brass air inlet port
G575215	1/2" barb port, 1/4" brass air inlet port
G575225	3/4" barb port, 1/4" brass air inlet port
G575208	3/8" barb port, 1/4" plastic air inlet port
G575218	1/2" barb port, 1/4" plastic air inlet port
G575228	3/4" barb port, 1/4" plastic air inlet port

Standard Model Numbers, Viton® fitted	
Model No.	**Fittings Description**
G573205	3/8" barb port, 1/4" brass air inlet port
G573215	1/2" barb port, 1/4" brass air inlet port
G573225	3/4" barb port, 1/4" brass air inlet port
G573208	3/8" barb port, 1/4" plastic air inlet port
G573218	1/2" barb port, 1/4" plastic air inlet port
G573228	3/4" barb port, 1/4" plastic air inlet port



Specifications
Pump Design: Positive Displacement Double Diaphragm
Flow Rate: 5.0 GPM (11.9 L/min) Open Flow
Operating Pressure: 20 to 100 PSI (1.4 to 6.0 bar)
Liquid Inlet Pressure: 30 PSI (2.1 bar) Max.
Liquid Temperature: Min. 40˚ F (4.4˚ C) Max. 140˚ F (60.0˚ C)
Priming: Dry 15ft. (4.5 m) Wet 20ft. (6.1 m)
Air Supply Pressure: 20 to 100 PSI (1.4 to 6.9 bar)
Noise: Max 90 dB

G57 SERIES DUAL AND QUATRO HIGH FLOW DIAPHRAGM PUMPS

Air Operated Diaphragm Pumps

FEATURES

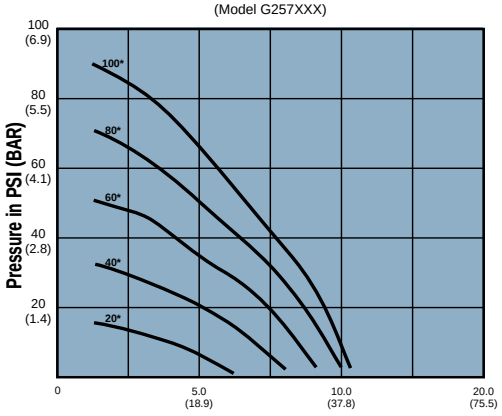
- Flows to 10 GPM (3.8 L/min) or 20 GPM (7.6 L/min)
- Chemical resistant Polypropylene housings with Viton® and Santoprene® elastomers
- Easy installation with 1/2" (12.7 mm) Dual and 3/4" (19.1 mm) Quatro pump manifolds
- Duplex diaphragm design
- Patented shuttle valves, eliminates stalling
- Compact size

Standard Model No.	Fittings Description
G257301A	Dual 10 GPM AOD Pump Viton® Elastomers, 1/2" NPTF Manifold Liquid, 1/4" Barb Air
G257302A	Dual 10 GPM AOD Pump Viton® Elastomers, 1/2" NPTF Manifold Liquid, 1/4" Quick Disconnect Elbow Air
G257501A	Dual 10 GPM AOD Pump Santoprene® Elastomers, 1/2" NPTF Manifold Liquid, 1/4" Barb Air
G257502A	Dual 10 GPM AOD Pump Santoprene® Elastomers, 1/2" NPTF Manifold Liquid, 1/4" Quick Disconnect Elbow Air
G457311A	Quatro 20 GPM AOD Pump Viton® Elastomers, 3/4" NPTF Manifold Liquid, 1/4" Barb Air
G457312A	Quatro 20 GPM AOD Pump Viton® Elastomers, 3/4" NPTF Manifold Liquid, 1/4" Quick Disconnect Elbow Air
G457511A	Quatro 20 GPM AOD Pump Santoprene® Elastomers, 3/4" NPTF Manifold Liquid, 1/4" Barb Air
G457512A	Quatro 20 GPM AOD Pump Santoprene® Elastomers, 3/4" NPTF Manifold Liquid, 1/4" Quick Disconnect Elbow Air

Specifications

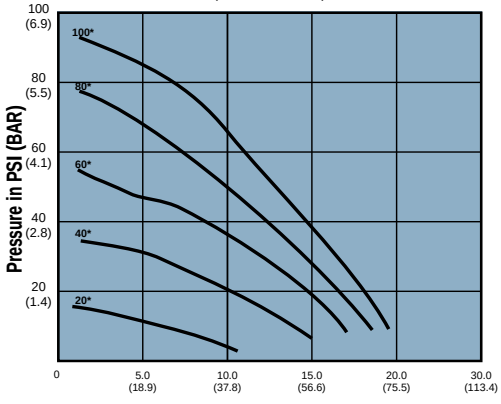
Pump Design: Positive Displacement Double Diaphragm
Flow Rate (Dual): Up to 10.0 GPM (37.8 L/min)
Flow Rate (Quatro): Up to 20.0 GPM (75.6 L/min)
Operating Pressure: 20 to 100 PSI (1.4 to 6.0 bar)
Liquid Inlet Pressure: 30 PSI (2.1 bar) Max.
Liquid Temperature: Min. 40˚ F (4.4˚ C) Max. 140˚ F (60.0˚ C)
Priming: Dry 15ft. (4.5 m) Wet 20ft. (6.1 m)
Air Supply Pressure: 20 to 100 PSI (1.4 to 6.9 bar)
Noise: Max 90 dB

Dual (10 GPM)
(Model G257XXX)



*Indicates Air Inlet Pressure in PSI

Quatro (20 GPM)
(Model G457XXX)



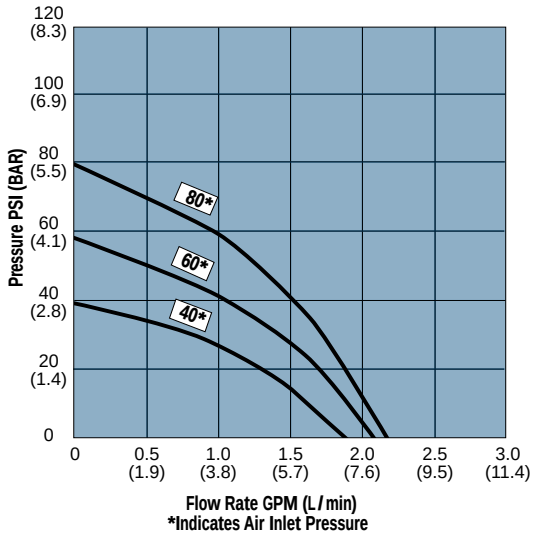
*Indicates Air Inlet Pressure in PSI

5100 SERIES AIR OPERATED DIAPHRAGM PUMPS

Automatic Demand Control

FEATURES

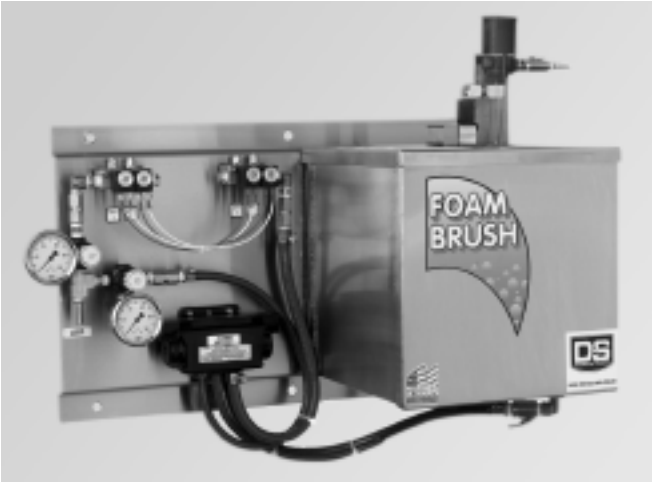
- Oil resistant Acetyl copolymer housing with Santoprene®, Viton®, Geolast® and Buna elastomers
- Flow rates to 1.9 GPM (7.2 L/min)
- Operating pressures to 75 PSI (5.2 bar)
- Duplex diaphragm design
- Compact size



Standard Model No.	Description
5100-010	Buna Elastomers, 3/8" barb port fittings, 1/4" straight plastic air inlet port fittings
5100-020	Viton® Elastomers, 3/8" barb port fittings, 1/4" straight plastic air inlet port fittings
5100-040	Santoprene® Elastomers, 3/8" barb port fittings, 1/4" straight plastic air inlet port fittings
5100-050	Geolast® Elastomers, 3/8" barb port fittings, 1/4" straight plastic air inlet port fittings

Specifications

Pump Design: Positive Displacement Double Diaphragm
Flow Rate: 1.9 GPM (7.2 L/min) Open Flow
Operating Pressure: 20 to 75 PSI (1.4 to 5.2 bar) Max.
Liquid Inlet Pressure: 15 PSI (1.03 bar) Max.
Liquid Temperature: Min. 40˚ F (4.4˚ C) Max. 140˚ F (60.0˚ C)
Priming: Dry 15 ft. (4.5 m)
Air Supply Pressure: 20 to 100 PSI (1.4 to 6.9 bar)



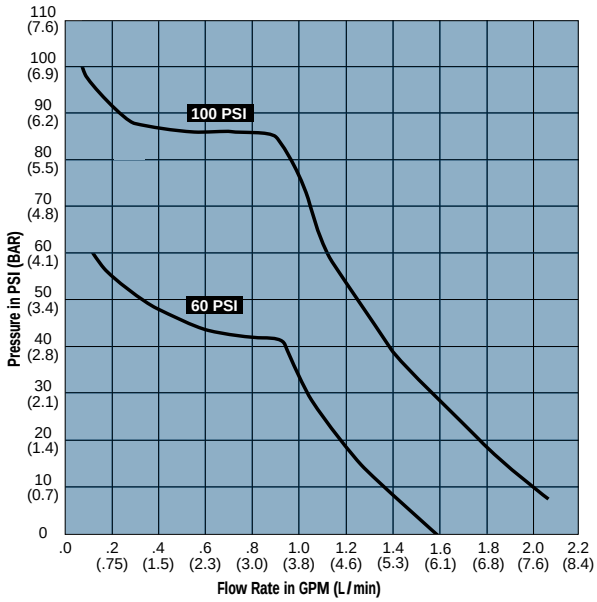
DUPLEX II SERIES DIAPHRAGM PUMPS

Automatic Demand 115 Volt AC

FEATURES

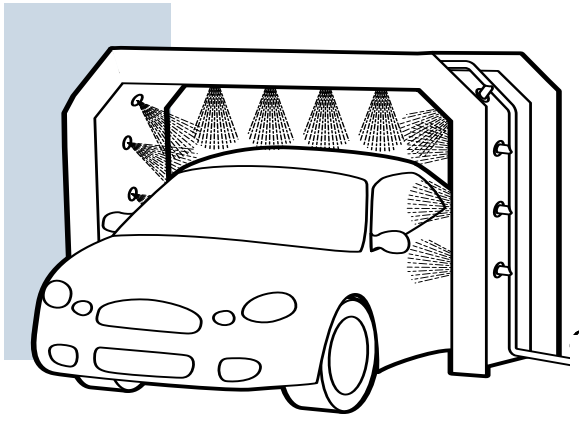
- Self priming up to 8 feet (2.4 m)
- Can run dry without damage
- Chemical resistant materials
- External bypass system standard
- Built-in back flow valve
- Heavy duty ball bearing drive system
- Optional sealed motor

Standard Model No.	Description
D1631H5011	Low Pressure Pump, EPDM CVA, Santoprene® Diaphragm 60 PSI (4.1 bar), Demand Switch, External Bypass
D1631F5011	Low Pressure Pump, Viton® CVA, Santoprene® Diaphragm 60 PSI (4.1 bar), Demand Switch, External Bypass
D1635E7011	High Pressure Pump, EPDM CVA, EPDM Diaphragm 100 PSI (6.9 bar), Demand Switch, External Bypass
D1635J7011	High Pressure Pump, Viton® CVA, EPDM Diaphragm 100 PSI (6.9 bar), Demand Switch, External Bypass



Specifications

Pump Design: Positive Displacement, Two-Chamber Diaphragm
Flow Rate: Low Pressure 1.6 GPM (6.0 L/min) High Pressure 2.2 GPM (8.3 L/min)
Ports: 3/8" NPT Female
Motor: Permanent Magnet with Solid State Rectifier
Cycles: 50/60 Hz
Amps: Low Pressure 0.8 Amps (Max.) High Pressure 1.0 Amps (Max.)
Liquid Temperature: Min. 40° F (4.4° C) Max: 140° F (60.0°C)
UL, CUL Recognized

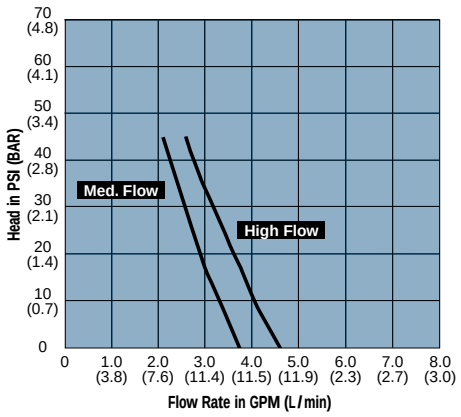


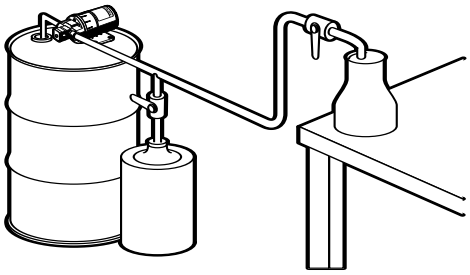
4000 SERIES DIAPHRAGM PUMPS

Automatic Demand 115 Volt AC

FEATURES

- Self priming up to 8 feet (2.4 m)
- Can run dry without damage
- Chemical resistant materials
- Built-in back flow valve
- Heavy duty ball bearing drive system
- Fan cooled motor standard





Standard Model No.	Description
4300-042	Medium Flow Pump, EPDM Valves, Santoprene® Diaphragm, 45 PSI (3.1 bar), Demand Switch
4300-501	Medium Flow Pump, Viton® Valves, Santoprene® Diaphragm, 45 PSI (3.1 bar), Demand Switch
4300-513	Medium Flow Pump, Viton® Valves, Santoprene® Diaphragm, 45 PSI (3.1 bar), Demand Switch, 6' Cord
4300-043	High Flow Pump, EPDM Valves, Santoprene® Diaphragm, 45 PSI (3.1 bar), Demand Switch
4300-515	High Flow Pump, Viton® Valves, Santoprene® Diaphragm, 45 PSI (3.1 bar), Demand Switch
4300-525	High Flow Pump, Viton® Valves, Santoprene® Diaphragm, 45 PSI (3.1 bar), Demand Switch, 6' Cord

Specifications

Pump Design: Positive Displacement, Two Chamber Design
Flow Rate: Low Flow Models 3.5 GPM (13.3 L/min) Open Flow High Flow Models 5.0 GPM (18.9 L/min) Open Flow
Ports: 1/2" and 3/4"Hose Barb
Motor: Fan Cooled Permanent Magnet with Solid State Rectifier
Cycles: 50/60 Hz
Amps: Low Flow 0.9 Amps (Max.) High Flow 1.2 Amps (Max.)
Liquid Temperature: Min. 40° F (4.4° C) Max: 140° F (60.0°C)

DISPENSING PUMPS

LF SERIES DIAPHRAGM PUMPS

Automatic Demand 115 Volt AC

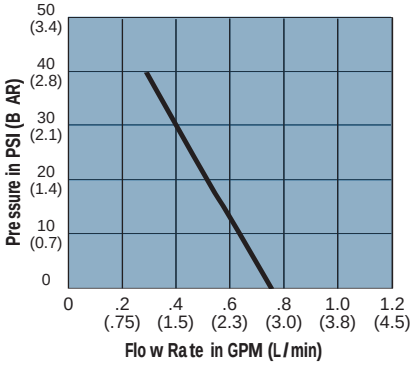
FEATURES

- Self priming up to 2.5 feet (0.76 m)
- Can run dry without damage
- Chemical resistant materials
- Compact design measuring 6.4” (164 mm) in length
- Sealed pressure switch and motor standard

Standard Model No.	Description
LF521401	Low Pressure Pump, Viton® CVA, Santoprene® Diaphragm, 40 PSI (2.8 bar), Demand Switch
LF521402	Low Pressure Pump, EPDM CVA, Santoprene® Diaphragm, 40 PSI (2.8 bar), Demand Switch

Specifications

Pump Design: Positive Displacement, Two Piston Design
Flow Rate: 0.8 GPM (xx L/min)
Ports: 3/8” Male Hose Barb
Motor: Rectified DC Motor
Cycles: 50/60 Hz
Amps: 0.30 Amps (Max.)
Liquid Temperature: Min. 40° F (4.4° C)
Max: 140° F (60.0°C)
CSA/CUS Recognized



ET SERIES SOLENOID PUMPS

Automatic Bypass 115 Volt AC

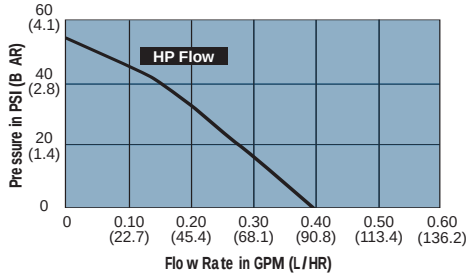
FEATURES

- Self priming
- Includes internal diode
- UL and CSA recognized

Standard Model No.	Description
ET508221	EPDM Elastomer, 1/4” Hose Barb Ports
ET508223	EPDM Elastomer, 1/8” NPTF Ports
ET508224	Viton® Elastomer, 1/8” NPTF Ports

Specifications

Pump Design: Oscillating, Solenoid Coil with Diode
Flow Rate: 0.40 GPM (90.8 L/H), Open Flow
Ports: 1/4” Hose Barb or 1/8” NPT Female
Cycles: 50/60 Hz
Power Consumption: Nominal 46 Watts
UL Recognized



COMPRESSED AIR FILTER/DRYER

Extractor/Dryer® Series FJ520B

FEATURES

- Easy to install and maintain without removal
- Lightweight aluminum housing
- Immediate cost savings from decreased downtime
- Standard inlet and outlet NPT sizes
- Improved equipment performance and life
- Standard five micron rating
- Standard weep drain

Standard Model No.	Description
FJ520B	Extractor/Dryer
FJ0155K	Service Kit

Specifications

Material: Aluminum Housing
Port Size: 1/4" NPT Female
SCFM: 15 CFM
Maximum Pressure: 250 psi (17.2 bar)
DP: 6 psi (0.4 bar)
Size: 7 1/8" x 3" x 1 1/4"
Weight: 2.0 lb (0.91 kg)

The patented Extractor/Dryer® is a two-stage filter with a lightweight anodized aluminum housing. Designed primarily for the final usage of air, it will remove water, oil, and other contaminants from compressed air lines.

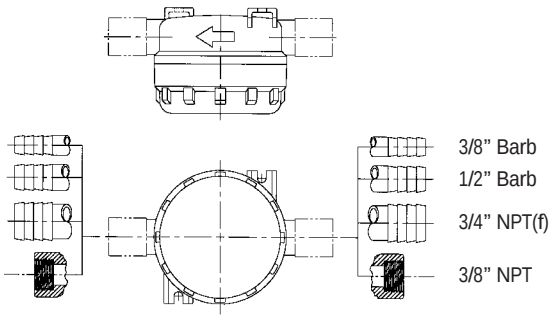
ACCESSORIES

Strainers

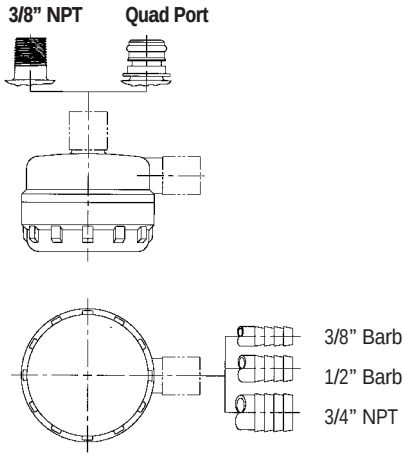
- Keep debris and particles from entering your FLOJET pump.
- Low profile design, for space saving installation.
- Threaded bowl makes cleaning quick and easy.

Part Number	Inlet	Outlet	Screen
01720-000	3/4" Barb	3/4" Barb	20 Mesh SS
01720-002	1/2" Barb	1/2" Barb	20 Mesh SS
01720-023	3/8" Barb 90°	3/8" Barb 90°	20 Mesh SS
01720-102	1/2" Barb	1/2" Barb	20 Mesh PP
01720-103	3/8" Barb	3/8" Barb	20 Mesh SS
01720-112	1/2" Barb	Quad Port 90°	20 Mesh PP
01720-123	3/8" Barb	3/8" NPT 90°	20 Mesh PP
01720-375	3/8" NPT(f)	3/8" NPT(f)	20 Mesh SS
01740-000	3/4" Barb	3/4" Barb	40 Mesh SS
01740-002	1/2" Barb	1/2" Barb	40 Mesh SS
01740-003	3/8" Barb	3/8" Barb	40 Mesh SS
01740-010	3/4" Barb	Quad Port 90°	40 Mesh SS
01740-012	1/2" Barb	Quad Port 90°	40 Mesh SS
01740-375	3/8" NPT(f)	3/8" NPT(f)	40 Mesh SS

SS=Stainless Steel PP=Polypropylene



In-Line Strainer



Inlet Strainer

(Plugs into Quad pump port)

Universal Mounting Bracket

- Single brackets snap together easily for multiple pump installations.
- No additional hardware needed to mount pumps on bracket.

Applications

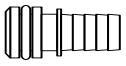
- For use with G Series, 5100 Series and Shurflo® air driven pumps.
- Ideal for mounting on rack or wall.

Part Number	Description
20982-100A	Single Pump Mounting Bracket

AIR PUMP - LIQUID FITTINGS

Plastic (Celcon) Inlets & Outlets - Liquid

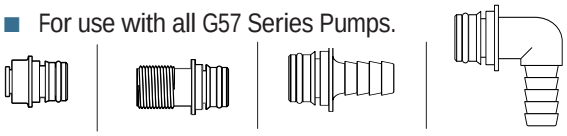
- For use with all 5100 Series Pumps.



Part Number	Description
20325-031	3/8" Hose Barb, Straight
Packaged 1 per bag.	

Plastic (Polypropylene) Inlets & Outlets

- For use with all G57 Series Pumps.

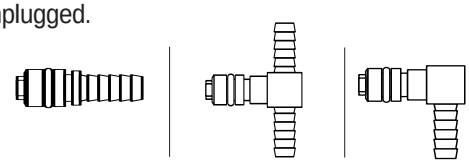


Part Number	Description	O-ring Mtl.
20381-026	10-13 mm (3/8"-1/2") Hose Barb, Straight	EPDM
20381-002	1/2" Hose Barb, Straight	EPDM
20381-006	3/4" Hose Barb, Straight	EPDM
20381-024	10-13 mm (3/8"-1/2") Hose Barb, 90° Elbow	EPDM
20381-009	1/2" Hose Barb, 90° Elbow	EPDM
20381-010	3/4" Hose Barb, 90° Elbow	EPDM
20381-070	10-13 mm (3/8"-1/2") Hose Barb, Straight	Viton®
20381-015	1/2" Hose Barb, Straight	Viton®
20381-014	3/4" Hose Barb, Straight	Viton®
20381-017	1/2" Hose Barb, Elbow	Viton®
20381-018	3/4" Hose Barb, Elbow	Viton®
20381-058	3/8" O.D. Tube, Straight, Push In Fitting	EPDM
20381-060	3/8" O.D. Tube, Straight, Push In Fitting	Viton®
20381-061	1/2" O.D. Tube, Straight, Push In Fitting	EPDM
20381-063	1/2" O.D. Tube, Straight, Push In Fitting	Viton®
20381-042	3/8" NPT Straight	EPDM
20381-043	3/8" NPT Straight	Viton®
20381-050	3/8" NPT Elbow	EPDM
20381-052	3/8" NPT Elbow	Viton®
20381-039	1/2" NPT Straight	EPDM
20381-040	1/2" NPT Straight	Viton®
20381-047	1/2" NPT Elbow	EPDM
20381-049	1/2" NPT Elbow	Viton®
	Packaged 2 per bag.	

AIR PUMP - AIR FITTINGS

Brass CO2/Air Inlets with Shutoff Valve

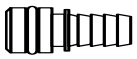
- For use with all 5100 Series and G57 Series Pumps.
- Automatically shuts off CO2 supply to pump, when unplugged.



Part Number	Description
01510-000	1/4" Hose Barb, Straight
01520-000	1/4" Hose Barb, Tee
01521-000	1/4" Hose Barb, Elbow

Plastic (Celcon) CO_2/Air Inlets

- For use with all 5100 Series and G57 Series Pumps.

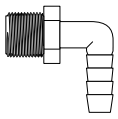


Part Number	Description
20325-033	1/4" Hose Barb, Straight
Packaged 1 per bag.	

ELECTRIC PUMP FITTINGS

Nylon Barbed Elbow

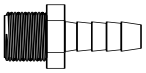
- For use with all Duplex II Series (3/8" NPT only).



Part Number	Description
91010-001	3/8" NPT Male x 3/8" Barb
91010-005	3/8" NPT Male x 1/2" Barb
91010-033	3/8" NPT Male x 1/4" Barb

Nylon Barbed Straight

- For use with all Duplex II Series (3/8" NPT only).



Part Number	Description
91010-002	3/8" NPT Male x 3/8" Barb
91010-006	3/8" NPT Male x 1/2" Barb
91010-032	3/8" NPT Male x 1/4" Barb

Viton® is a registered trademark of I.E. DuPont Co.

FLOJET®

Agriculture Pumps and Accessories

ITT

Engineered for life

To access our 24 Hour Technical Data Assistance Via Fax, Call (800) 337-4083
For DFAX #1000 series and (800) 297-3904 for DFAX #2000 series
Simply enter the Docufax number (under the DFAX# column) shown opposite the product model number and instantly receive by fax the technical data sheet you requested - Day or Night!
Use 9-digit numbers on all purchase orders and communication.

Series	Page No.	DFAX #	Description	Data Sheet No.
11810 Series	16	1001	Bronze Utility Pump	43000-0068
16400	21	1014	Series Pump Tube Poly	43000-0572
16410	21	1015	Series Pump Tube SS	43000-0573
16450	21	1019	Drum Pump Motor	43000-0707
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16520	21	1021	Series Pump Tube Kynar	43000-0586
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17830-1012	14	1031	DC Water Puppy Reversible	43000-0708
18590	18	1043	Extended Run Dry DC Macerator	43000-0745
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18690	18	1058	Macerator AC	43000-0186
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5100	13	2050	Air Operated Diaphragm Pump	81000-131
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JSP03, JSP07	19	1276	Sump Pump SS AC	43000-0765
LF & RLF Series	2	2073	LF Series Diaphragm Pumps	81000-312
R4400 Series	9	2039	Quad Variable Speed Drive	81000-352

Explosion hazard. Do not pump gasoline or other flammable liquids with any of the pumps shown in this catalog. Explosion and death can occur.

PRODUCT RATING: The data given in this catalog are approximate values based on the latest information available when this catalog was printed. English and metric performance data and dimensions are rounded to the approximate decimal point accuracy. Jabsco flexible impeller pumps, except motor pump units, are flow rated at 1750 RPM at 10 ft. (3m) of head. Unless otherwise noted, Jabsco flexible impeller motor pump units are rated at motor speed with 10 ft. (3m) of head. Centrifugal motor pump units are rated at 5 ft. (1.5m) of head. Manual pumps are rated in strokes/gallon with normal pumping action. Diaphragm motor pump units are flow rated at open flow. Blowers are rated at open flow. Searchlight bulb characteristics are taken from the latest bulb manufacturer's literature available.

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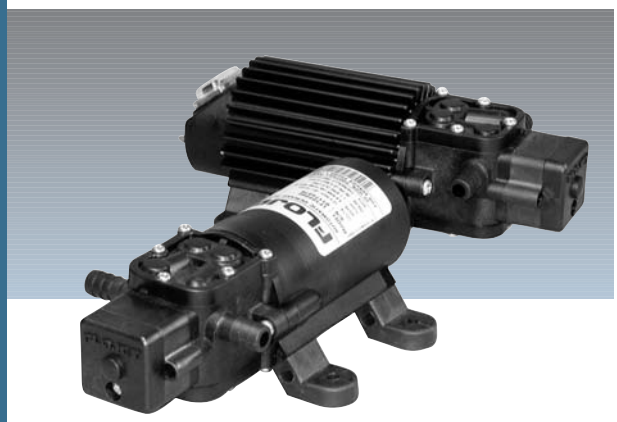
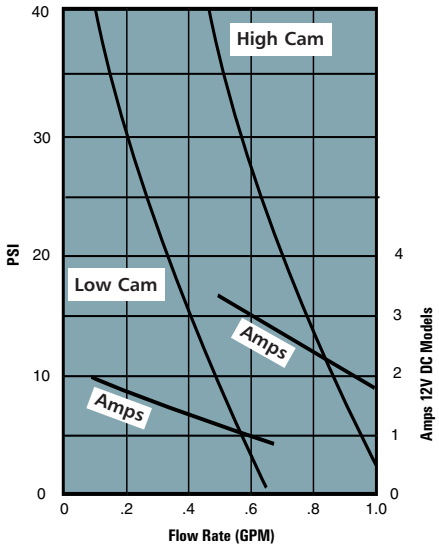
LF Series Pumps (2 Piston)



Far and away the best selling small pump in the industry. Choose from standard models or configure to meet the special needs of your OEM application. Long-life (2000 hours typical) motors have either a chemically resistant plastic housing or a metal finned housing for maximum motor cooling. Flojet's new demand switch plus bypass configuration provides optimum operation and extended cycle-life under any field condition.

OEM's appreciate features that save time and reduce cost. Features like built-in hose barb ports, flexible mounting feet, inline fuse, power connector, and manual on-off power switch.

Need a reliable demand switch? Then it has to be completely sealed! Flojet's one-piece welded body design with epoxy potted spade terminals keep reliability in and the elements out. No other switch in the industry meets these stringent design criteria.



SPECIFICATIONS

Pump Design	2 Chamber Diaphragm	
Open Flow	1.0 gpm (3.8 lpm) high cam 0.7 gpm (2.7 lpm) low cam	
Voltage	12V or 24 V DC	
Body Material	Polypropylene	
Diaphragm Material	Santoprene or Geolast	
Check Valve Material	Viton or EPDM	
Spring Material	316 Stainless Steel	
Port Size	3/8" (9.5mm)Hose Barb	
Motor	PMDC Ball Bearing type with internal fan	
Recommended Fuse	5 amps for 12V models 3 amps for 24V models	
Approvals	CE on RLF models	
Maximum Pressure	35 psi (2.4 bar)	
Duty Cycle at 70°F	Intermittent 30 psi (2.0 bar)	
Liquid Temp	110°F (43°C) Maximum	
Size	LF11	2.6" H x 3.5"w x 6.8"L (66 x 89 x 173 mm)
	LF12	2.3" H x 3.5"w x 6.2"L (58 x 89 x 157 mm)
Ship Wt.	LF11	1.9 lb (.9 kg)
	LF12	1.3 lb (.6 kg)

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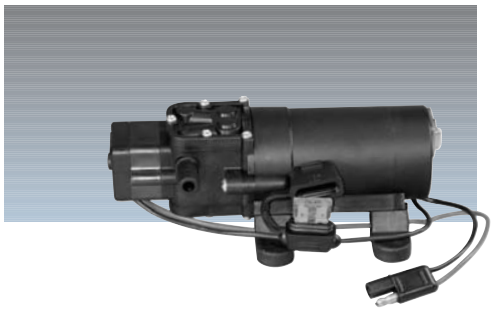
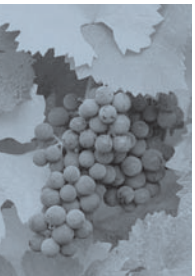


PUMP SPECIFICATIONS							PUMP FEATURES					
Mode	Supply Voltage	Diaphragm Material	Check Valve	Cam	Demand Switch	Bypass Pressure	Motor Housing	Manual on/off	Inline Fuse	Power Connector	Thermal Protection	Approvals
LF111421	12	Santo	Viton	LO	40	55	metal fins	Y	Y	Y	--	
LF121421	12	Santo	Viton	LO	40	55	plastic	--	--	--	Y	
LF112421	12	Santo	Viton	HI	40	55	metal fins	Y	Y	Y	--	
LF122421	12	Santo	Viton	HI	40	55	plastic	--	--	--	Y	
RLF111421	12	Santo	Viton	LO	40	55	metal fins	--	Y	Y	Y	CE
RLF121421	12	Santo	Viton	LO	40	55	plastic	--	--	--	Y	CE
RLF112421	12	Santo	Viton	HI	40	55	metal fins	--	Y	Y	Y	CE
RLF122421	12	Santo	Viton	HI	40	55	plastic	--	--	--	Y	CE
RLF112422	12	Santo	EPDM	LO	40	55	metal fins		Y	Y	Y	CE
LF111425	12	Geolast	Viton	LO	40	55	metal fins	Y	Y	Y	--	
LF122025	12	Geolast	Viton	HI	--	55	plastic	--	--	--	Y	
LF152421	12	Santo	Viton	HI	40	55	plastic	Y	Y	Y	--	
RLF222422	24	Santo	EPDM	HI	40	55	plastic	--	--	--	Y	CE
RLF222421	24	Santo	Viton	HI	40	55	plastic	--	--	--	Y	CE

	Extended Life Motor	Smallest Tip Size	Best Dry Suction Lift	Best Open Flow gpm	Best Heat Dissipation	Best for Gentle Spray	Best For Stream Spray	Best For Chemicals	Best For Soap & Water	Best For Petroleum
LF111421	Y	02			x	x		x		
LF121421	Y	02				x		x		
LF112421	Y	06	x	x	x		x	x		
LF122421	Y	06	x	x			x	x		
RLF111421	Y	02			x	x		x		
RLF121421	Y	02				x		x		
RLF112421	Y	06	x	x	x		x	x		
RLF122421	Y	06	x	x			x	x		
RLF112422	Y	06	x	x	x		x		x	
LF111425	Y	02			x	x				x
LF122025	Y	06	x	x			x			x
LF152421	Y	06	x	x			x	x		
RLF222422	Y	06	x	x			x		x	
RLF222421	Y	06	x	x			x	x		



Duplex II Series Pumps (2 Piston)

The Duplex II pump incorporates many new design innovations: half-spherical check valves for improved priming and efficiency, an external bypass system that is located outside of the pumping chamber, and the demand models feature a sealed pressure switch and back flow preventer to reduce pulsations.

Unique bypass system provides near-constant pressure to drive a wide range of nozzles for all your lawn, garden and agricultural spraying needs.

SPECIFICATIONS

Pump Design	2 Chamber Diaphragm
Open Flow	2.0 gpm (7.6 lpm) max.
Voltage	12V DC and 115V AC
Body Material	Polypropylene
Diaphragm Material	Santoprene, EPDM, Viton
Check Valve Material	Viton
Port Size	3/8" NPT(F)
Motor	permanent magnet, totally enclosed non-vented
Maximum Pressure	90 psi (6 bar)
Duty Cycle	Intermittent
Suction Lift	Up to 8ft. (2.4m) vertical height
Liquid Temp	130ºF (54ºC) maximum
Size	100 & 80 psi demand pump 7.6" x 3.24" x 3.63" (193 x 82 x 92 mm) 70 psi bypass pump 7.6" x 3.24" x 3.63" (193 x 82 x 92 mm) 60 psi demand pump 8.0" x 3.31" x 3.26" (203 x 84 x 83 mm)
Ship Wt.	4.5 lb. (2.0 kg) typical

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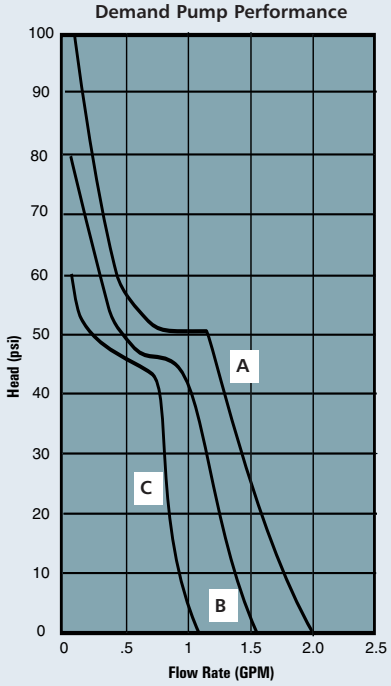
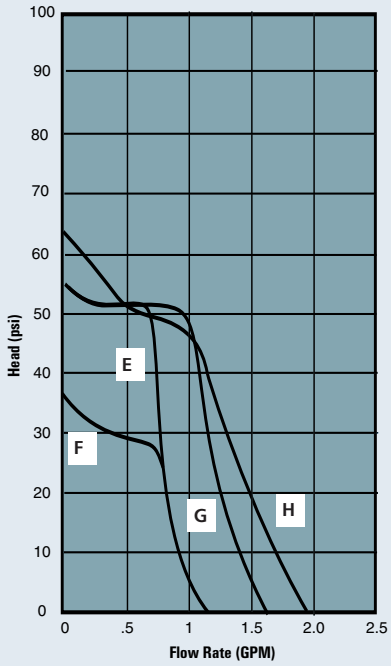
Demand Pump Performance



Bypass Pump Performance



PUMP SPECIFICATIONS

Model	Supply Voltage	Diaphragm Material	Check Valve	Cam Angle	Demand Switch	Bypass Pressure	Motor Speed	Motor Length
D2135J7011	12V DC	EPDM	Viton	high	100 psi	--	high	med
D2125F6011	12V DC	Santo	Viton	med	80 psi	--	high	med
D2125F5011	12V DC	Santo	Viton	med	60 psi	--	high	med
D2135F5011	12V DC	Santo	Viton	high	60 psi	--	high	med
D2124F5011	12V DC	Santo	Viton	med	60 psi	--	high	short
D2121F5011	12V DC	Santo	Viton	med	60 psi	--	low	short
D2132F1311	12V DC	Santo	Viton	high	--	50 psi	low	med
D2135F1311	12V DC	Santo	Viton	high	--	50 psi	high	med
D2121F1311	12V DC	Santo	Viton	med	--	50 psi	low	short
D2121F1211	12V DC	Santo	Viton	med	--	30 psi	low	med
D3835V5011	115V AC	Viton	Viton	high	60 psi	--	high	med
D3835V1311	115V AC	Viton	Viton	high	--	50 psi	high	med
D21X005	12V DC	Santo	Viton	high	60 psi	--	high	short
D21X007	12V DC	Santo	Viton	high	--	50 psi	high	short

PUMP FEATURES

Model	Open Flow gpm	Flow Curve	Manual On/Off	Inline Fuse	Power Connection
D2135J7011	2.0	A	--	--	wires
D2125F6011	1.4	B	--	--	wires
D2125F5011	1.4	B	--	--	wires
D2135F5011	2.0	A	--	--	wires
D2124F5011	1.5	B	--	--	wires
D2121F5011	1.1	C	--	--	wires
D2132F1311	1.5	G	--	--	wires
D2135F1311	2.0	H	--	--	wires
D2121F1311	1.2	E	--	--	wires
D2121F1211	1.2	F	--	--	wires
D3835V5011	2.0	A	--	--	6' cord
D3835V1311	2.0	H	--	--	6' cord
D21X005	1.5	B	yes	--	2 pin plug
D21X007	2.0	H	--	--	2 pin plug

Triplex Series Pumps (3 Piston)

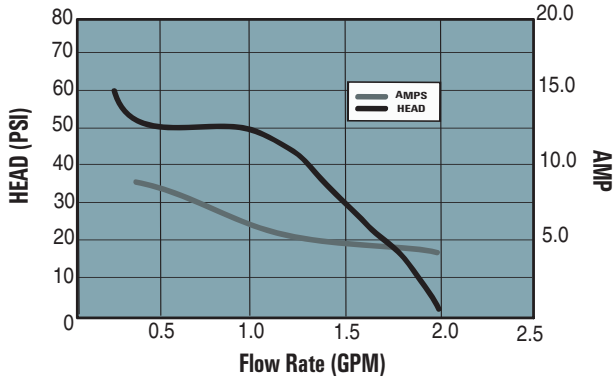
The Triplex Series pump was designed specifically for the Ag market. Flojet's new three chamber design and versatile fetures make it ideal for sprayers and many other transfer and dispensing applications.

This automatic demand pump comes with a sealed pressure switch and motor, is self-priming, can run dry, and can be installed in compact spaces.

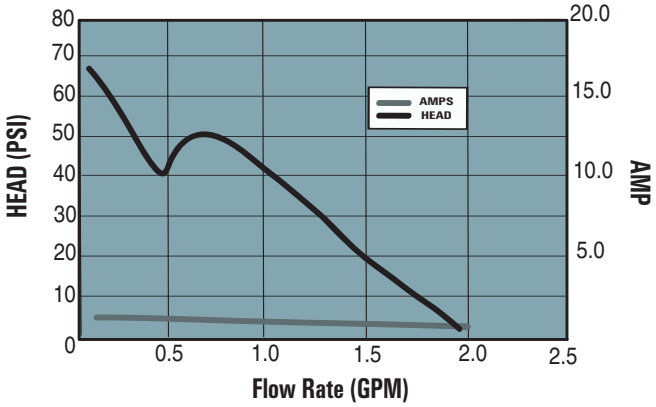
SPECIFICATIONS

Pump Design		Motor Operated 3 Chamber diaphragm
Motor Design		Permanent Magnet TENV (non-ventillated)
Voltage		12 VDC, 115 VAC, 230 VAC
Cycles:		50/60 Hz
Amp Draw:		8 amp max for 12 VDC 0.65 amp max for 115 VAC
Pump Head:		Reinforced Polypropylene
Elastomers	**Diaphragm**	Santoprene™
	Check Valve	EPDM or Viton
Max. Flow Rate:		2.0 GPM (7.6 LPM)
Maximum Pressure		50 psi (3.4bar)
Duty Cycle:		Intermittent
Weight		3.4 lb (1.5 Kg)
Certifications:		CE, NSF components
Port Size Inlet/outlet		3/8" NPTF

FLOW CURVE 12 VDC



FLOW CURVE 115 VAC



FEATURES

- Compact automatic demand pump
- Sealed pressure switch and motor
- Self-priming; pump can be located above supply tank
- Can run dry for extended periods of time without damage
- Flow rates to 2.0 GPM (7.6 l/min) and operating pressure to 50 psi (3.4 bar)

APPLICATIONS

- Small Boom and Spot Spraying
- Foam Marking
- Silage Treatment
- Estate Spraying
- Livestock and Poultry Cooling
- Dispensing
- Transfer of liquids

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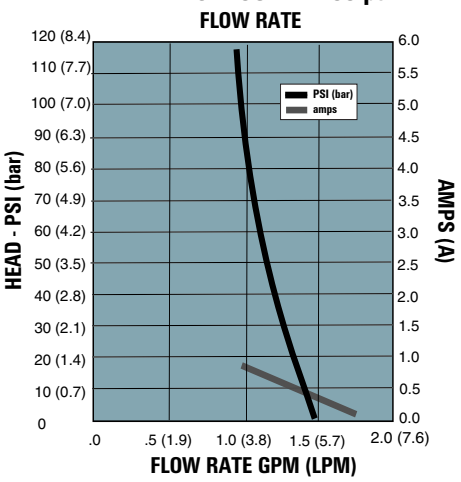
High Pressure Triplex Pumps (3 Piston)

Flojet Triplex High Pressure diaphragm pumps are self-priming and can run continuously for short periods of time. The higher the duty cycle, the shorter the expected life of the pump. Typical uses include transfer, delivery, spraying, cooling, filtration, dispensing, and pressure boosting.

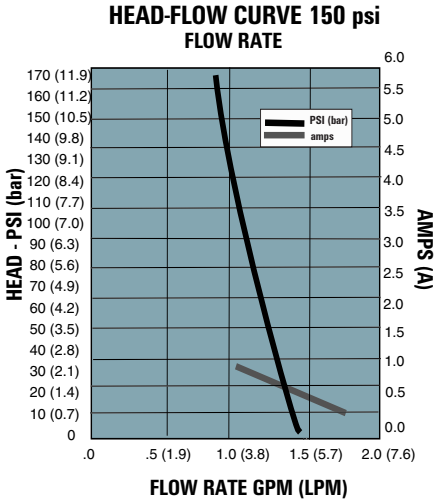
SPECIFICATIONS

Pump Design		Motor Operated 3 Chamber diaphragm
Motor Design		Permanent Magnet DC and rectified (PMDC) AC
Voltage		12, 24 VDC 115, 230 VAC
Cycles:		50/60 Hz
Amp Draw:		9 amp max for 12 VDC 0.95 amp max for 115 VAC
Pump Head:		Glass filled Nylon
Elastomers	**Diaphragm**	Santoprene™
	Check Valve	EPDM or Viton
Max. Flow Rate:		2.0 GPM (7.6 LPM)
Maximum Pressure		150 psi (10.3 bar) switch cutoff 140 psi (9.7 bar) max running pressure
Max. Liquid Temp:		40° F (4° C) Min 140° F (60° C) Max
Duty Cycle:		Intermittent
Weight		7.6 lb (3.5 Kg)
Certifications:		CE, NSF components
Port Size Inlet/outlet		3/8" NPTF

HEAD-FLOW CURVE 100 psi



HEAD-FLOW CURVE 150 psi



FEATURES

- Constructed from a selection of materials suitable for handling a broad range of chemicals.
- Sealed pressure switch and motor
- Self-priming; pump can be located above supply tank
- Can run dry for extended periods of time without damage
- Flow rates to 2.0 GPM (7.6 l/min) and operating pressure to 150 psi (10.3 bar)

APPLICATIONS

- Designed for wide range of applications
- Small Boom and Spot Spraying
- Silage Treatment
- Estate Spraying
- Livestock and Poultry Cooling
- Dispensing
- Transfer of liquids

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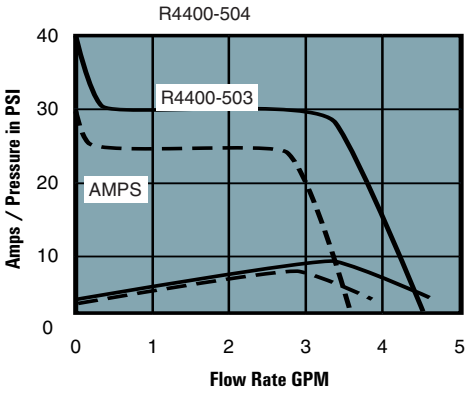
Quad Sensor VSD Pumps

Solid State microcontroller and firmware allow VSD pumps to provide constant pressure within their pumping range regardless of the number or size of nozzles operating at any time. Simulates a constant city-water-pressure type supply. Soft-start feature prevents splash. Unlike conventional pumps, the VSD is very quiet and draws very little current at low flow rates. Handles variable tip nozzles from full flow to shut off as well as multi-nozzle spray bars. VSD automatically shuts off if supply voltage falls below 8 volts to protect the vehicle battery.



SPECIFICATIONS

Pump Design	Four piston diaphragm type
Open Flow	R4400-503 0-3.7 gpm (14 lpm) R4400-504 0-4.5 gpm (17 lpm)
Voltage	12-24V DC
Body Material	Polypropylene
Diaphragm Material	Santoprene
Check Valve Material	Viton
Port Size	R4400-503 1/2" hose barb straight and elbow R4400-504 3/4" hose barb straight and elbow
Motor	Permanent magnet DC totally enclosed non-vented double ball bearing thermal protection EMI filter
Regulated Pressure	R4400-503 25 psi (1.7 bar) R4400-504 30 psi (2.1 bar)
Duty Cycle	intermittent
Suction Lift Dry	8' vertical lift nominal
Liquid Temp.	130° F (54° C)
Approvals	CSA, CE
Size	R4400-503 3.75" x 6.3" x 9.0" (95 x 160 x 228 mm) R4400-504 3.75" x 6.3" x 10.3" (95 x 160 x 261 mm)
Ship Wt.	R4400-503 4.3 lbs (2 kg) R4400-504 6.3 lbs (3 kg)

FLOJET®

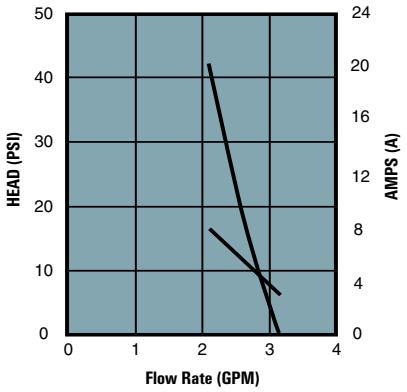
Quad Commercial Duty Pumps

Models	**4300-530**	**12VDC**	**S/V**	**3C**	**SW40**
	4100-521	**12VDC**	**S/V**	**3C**	**No Switch**

Quad DC Commercial Duty

SPECIFICATIONS

Pump Design	Four piston diaphragm type
Open Flow	3.3 gpm (12.5 lpm)
Voltage	12V DC
Body Material	Polypropylene
Diaphragm Material	Santoprene
Check Valve Material	Viton
Port Size	1/2" hose barb port and Quest, see accessories
Motor	PMDC, totally enclosed non-vented, weather coating, thermal protection, metal baseplate
Pressure	30 psi maximum
Duty Cycle	Continuous
Suction Lift Dry	6' (1.8m) vertical lift
Liquid Temp.	130° F (54° C) maximum
Approvals	CE
Size	10.3" x 4.0" x 3" (261mm x 101mm x 76mm)
Ship Wt.	7 lbs (3.2 kg)

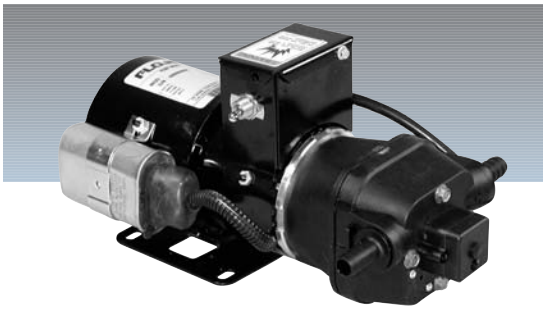


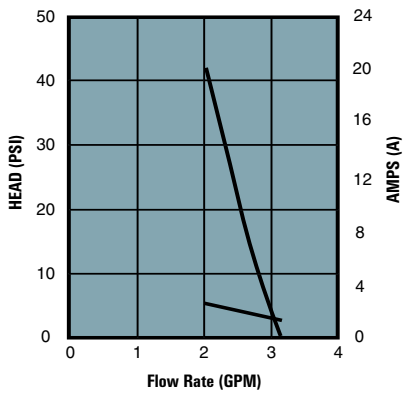
Quad AC Commercial Duty

Models	**4300-529**	**115V AC**	**S/V**	**3C**	**SW40**

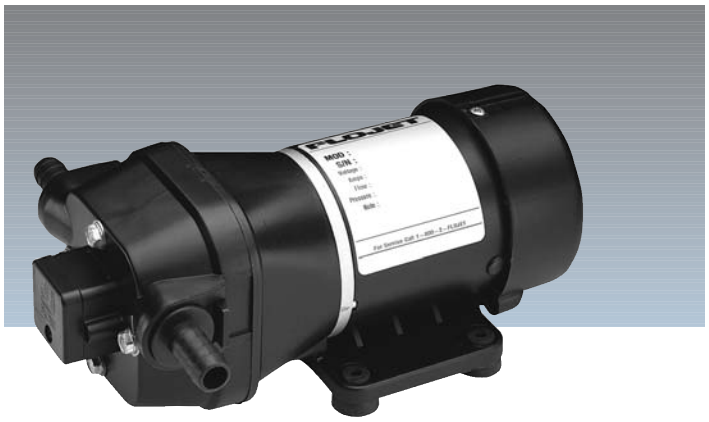
SPECIFICATIONS

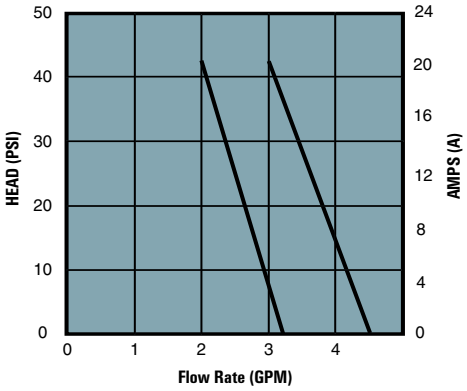
Pump Design	Four piston diaphragm type
Open Flow	3.3 gpm (12.5 lpm)
Voltage	115V AC
Body Material	Polypropylene
Diaphragm Material	Santoprene
Check Valve Material	Viton
Port Size	1/2" hose barb ports see accessories
Motor	Permanent split capacitor AC type totally enclosed fan cooled thermal protection 6' power cord with 3 prong plug
Pressure	30 psi maximum
Duty Cycle	Continuous 25 psi (1.7 bar) at 70° F (21° C)
Suction Lift Dry	8' (2.4m) vertical lift
Liquid Temp.	130° F (54° C) maximum
Approvals	CE
Size	10.9" x 5.4" x 5.7" (276mm x 137mm x 145mm)
Ship Wt.	12 lbs (5.5 kg)





Quad Standard Duty Pumps





SPECIFICATIONS

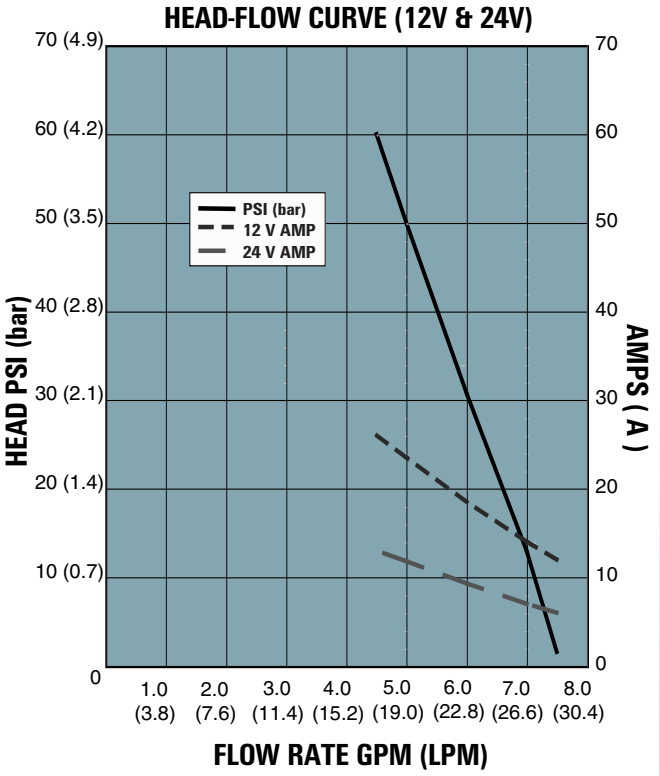
Pump Design	Four piston diaphragm type
Open Flow	4.8 gpm (18.2 lpm)
	3.3 gpm (12.5 lpm)
Voltage	12 or 24V DC 115V AC
Body Material	Polypropylene
Diaphragm Material	Santoprene or Geolast
Check Valve Material	Viton or EPDM
Port Size	1/2" or 3/4" hose barb
	see accessories
Motor	PMDC
	totally enclosed fan cooled
Pressure	30 psi maximum
Duty Cycle	Intermittent
	30 psi (2.1 bar) at 70° F (21° C) continuous
	15 psi (1.0 bar) at 70° F (21° C)
Suction Lift Dry	3 cam 8' (2.4m) vertical lift
	2 cam 6' (1.8m) vertical lift
Liquid Temp.	130° F (54° C) maximum
Size	9.0" x 3.2" x 3.8"
	(228 x 81 x 96 mm)
Ship Wt.	4 lbs (1.8 kg)

PUMP SPECIFICATIONS

Model	Supply Voltage	Diaphragm Material	Check Valve	Open Flow	Cam Size	Off Pressure	Motor Type	Port Fittings	Thermal Protection
4100-143	12V DC	Santo	EPDM	4.5	3	--	TEFC	3/4" Hose Barb	Yes
4100-502	12V DC	Santo	Viton	4.5	3	--	TEFC	3/4" Hose Barb	Yes
4100-142	12V DC	Santo	EPDM	3.2	2	--	TEFC	1/2" Hose Barb	No
4100-505	12V DC	Santo	Viton	3.2	2	--	TEFC	1/2" Hose Barb	No
4300-143	12V DC	Santo	EPDM	4.5	3	45	TEFC	3/4" Hose Barb	No
4300-504	12V DC	Santo	Viton	4.5	3	45	TEFC	3/4" Hose Barb	No
4300-142	12V DC	Santo	EPDM	3.2	2	45	TEFC	1/2" Hose Barb	No
4300-500	12V DC	Santo	Viton	3.2	2	45	TEFC	1/2" Hose Barb	No
4300-342	24V DC	Santo	EPDM	3.2	2	45	TEFC	1/2" Hose Barb	No
4300-343	24V DC	Santo	Viton	4.5	3	45	TEFC	3/4" Hose Barb	No
4100-343	24V DC	Santo	EPDM	4.5	3	--	TEFC	3/4" Hose Barb	No
4300-513	115V AC	Geolast	Buna	3.2	2	45	TEFC	1/2" Hose Barb	No

6000 Series Pumps

6000 Series pumps are designed for a wide range of applications and are constructed from a selection of materials suitable for handling a broad range of chemicals. The 5 chamber high flow pumps are self-priming and can run dry without harm. They are intended for duty cycles but can be run continuously for short periods of time. The higher the duty cycle, the shorter the expected life of the pump. typical uses include transfer, delivery, spraying, cooling, filtration,



SPECIFICATIONS

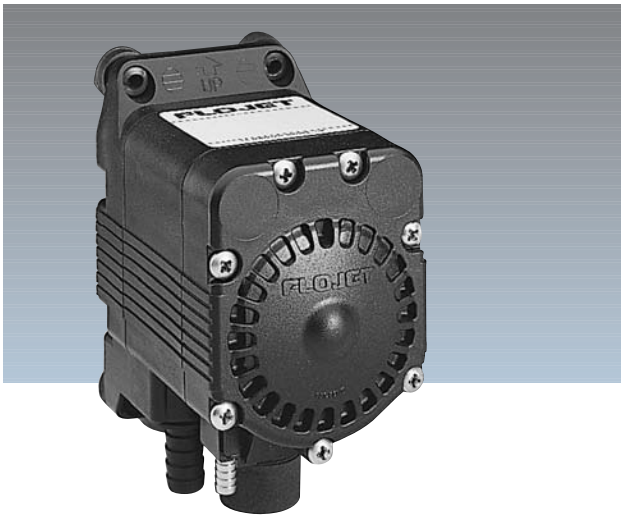
Pump Design		5 chamber diaphragm
Motor Design		Permanent Magnet DC
Voltage		12, 24 VDC
Motor rating:		IP 54 (splash proof)
Amp Draw:		13.5 amp @ 10 psi for 12 VDC
		6.8 amp @ 10 psi for 115 VAC
Fuse Size (A):		30 amp for 12 VDC
		15 amp for 24 VDC
Pump Body:		Glass filled Nylon
Elastomers	**Diaphragm**	Santoprene™
	Check Valve	EPDM
Max. Flow Rate:		7.5 GPM (28 LPM)
Maximum Pressure:		60 psi (4.2 bar)
Liquid Temp:		40° F (5°C) max
		140° F (60° C) max
Duty Cycle:		Intermittent
Weight		9.5 lb (4.3 Kg) max
Certifications:		CE
Port Size Inlet/outlet		3/4" HB

FEATURES

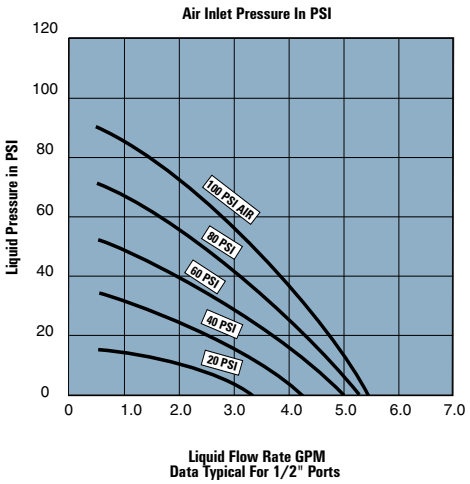
- Breakthrough performance for high flow and pressure applications
- 7.5 GPM flow
- AC and DC motor options
- Self priming, runs dry
- Low amps at low flow

FLOJET®

G57 Air-Operated Diaphragm Pumps



Innovative compact design features a patented shuttle valve that eliminates stalling. Chemically resistant Polypropylene body with a choice of Santoprene or Viton elastomers. Over-size exhaust muffler provides quiet operation. Quick disconnect liquid and gas port fittings for easy installation. Do not pump gasoline or other flammable liquids.



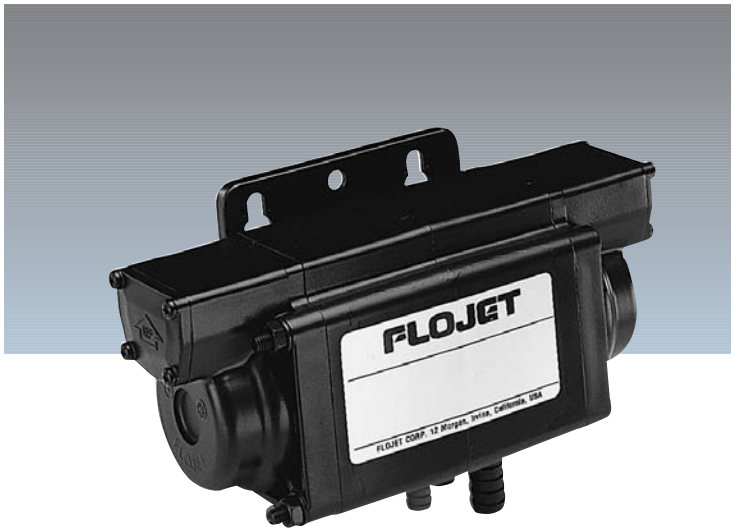
SPECIFICATIONS

Rated Flow	3.5 gpm (13.3 lpm)
Max Open Flow	5.0 gpm (19.0 lpm)
Gas/Air Pressure	20 to 100 psi (1.4 to 7 bar)
Gas/Air Supply	clean, dry, oil free
Body Material	Polypropylene
Diaphragm Material	Santoprene or Viton
Check Valve Material	Santoprene or Viton
Spring Material	Hastelloy
Liquid Port Size	3/8" or 1/2" or 3/4" barb
Gas Port Size	1/4" poly or brass barb
Dry Prime	15 ft (4.5m)
Wet Prime	20 ft (6.1m)
Liquid Temp Range	40-120° F (4-49° C)
Liquid Inlet Pressure	30 psi (2.1 bar) Max
Maximum Air Pressure	100 psi (6.9 bar)
Ship Wt.	1.2 lbs (.6 kg)

Model	Liquid Elastomer	Gas Ports	Muffler Ports	Size
G575205	Santo	3/8" plastic	1/4" brass barb	Large
G575215	Santo	1/2" plastic	1/4" brass barb	Large
G575225	Santo	3/4" plastic	1/4" brass barb	Large
G575208	Santo	3/8" plastic	1/4" plastic barb	Large
G575218	Santo	1/2" plastic	1/4" plastic barb	Large
G575228	Santo	3/4" plastic	1/4" plastic barb	Large
G573205	Viton	3/8" plastic	1/4" brass barb	Large
G573215	Viton	1/2" plastic	1/4" brass barb	Large
G573225	Viton	3/4" plastic	1/4" brass barb	Large
G573208	Viton	3/8" plastic	1/4" plastic barb	Large
G573218	Viton	1/2" plastic	1/4" plastic barb	Large
G573228	Viton	3/4" plastic	1/4" plastic barb	Large

FLOJET®

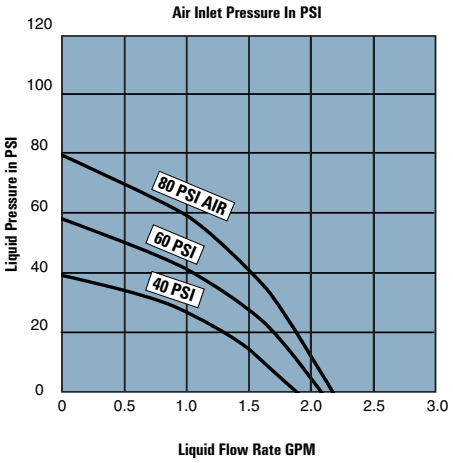
5100 Air-Operated Diaphragm Pumps



Flojet air operated diaphragm pumps offer excellent self-priming capability. Pumps can be located above the supply tank. Suction-side foot valve is recommended for best operation. Liquid pressure is regulated by supply air pressure. No bypass or pressure relief plumbing is necessary. Choice of Santoprene, Buna, or Viton elastomers provide a wide range of chemicalcompatibility. Quick disconnect liquid and gas port fittings provided for easy installation. Do not pump gasoline or other flammable liquids.

SPECIFICATIONS

Rated Flow	1 gpm (3.8 lpm)
Max Open Flow	1.9 gpm (7.2 lpm)
Gas/Air Pressure	20 to 75 psi (1.4 to 5.3 bar)
Gas/Air Consumption	.45 CFM at 40 psi at 1 gpm .58 CFM at 60 psi at 1 gpm
Gas/Air Supply	clean, dry, oil free
Liquid Inlet Pressure	15 psi (1 bar) max
Body Material	Acetal Copolymer
Diaphragm Material	Santoprene, Buna or Viton
Check Valve Material	Santoprene, Buna or Viton
Port Size	liquid ports 3/8" barb gas ports 1/4" barb
Dry Prime	28 ft (8.5m)
Wet Prime	32 ft (9.8m)
Max Liquid Temp	120° F (49° C)
Size	4 1/32" x 2 3/8" x 6" (102 x 60 x 152 mm)
Ship Wt.	.6 lbs (.3 kg)



Model	Elastomer	Liquid Ports	Gas Ports
5100-010	Buna	3/8" plastic barb	1/4" plastic barb
5100-020	Viton	3/8" plastic barb	1/4" plastic barb
5100-040	Santo	3/8" plastic barb	1/4" plastic barb

FLOJET®

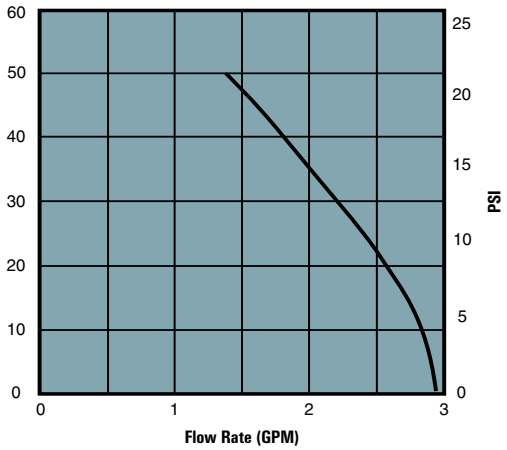
JABSCO®

17830 Reversible DC Water Puppy

Models 17830-1012

17830-1012

Especially suited for viscous fluids and engine oil transfer where self-priming and 3 gpm flow is required. Pump oil from crankcase to storage container, and from storage container to waste container automatically using the manual flow reverse switch. No need to remove or re-attach hoses to reverse oil flow direction. Oil temperature should be 100-140˚F. Use 12V DC from vehicle battery. Do not pump gasoline or other flammable liquids. DO NOT RUN DRY.



SPECIFICATIONS

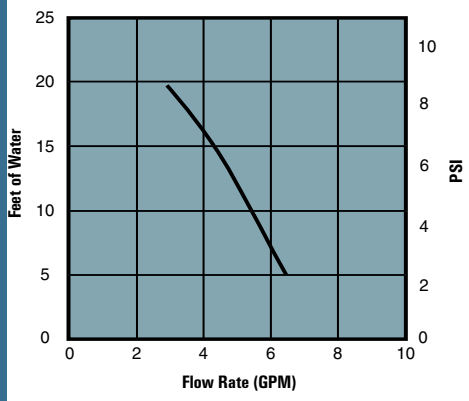
Open Flow	3 gpm (11.4 lpm)
Voltage	12V DC
Body Material	bronze
Impeller Material	Nitrile
Shaft Material	stainless steel
Shaft Seal	Buna lip type
Port Size	3/8" NPT(F)
Motor	PMDC, TENV with manual reverse switch 10 amps nominal 15 amps fuse
Approvals	CE
Maximum Pressure	8.7 psi or 20 ft of lift
Prime Dry, Wet	3-4 ft (.9-1.2 m), 15-20 ft (4.6-6.1 m)
Liquid Temp.	45-180˚F (7-82˚C) Nitrile
Size	4 7/16" x 3 1/4" x 7 7/8" (113 x 83 x 200 mm)
Ship Wt.	9 lbs (4.1 kg)

18660 DC Water Puppy

Models 18660-0121 Neoprene impeller
18660-0123 Nitrile impeller

18660-0121

For general transfer pumping where self-priming, 6 gpm flow and debris tolerance are required. Use optional oil-resistant nitrile impeller 6303-0003 if oil or diesel fuel are present. Do not pump gasoline or other flammable liquids. DO NOT RUN DRY.



SPECIFICATIONS

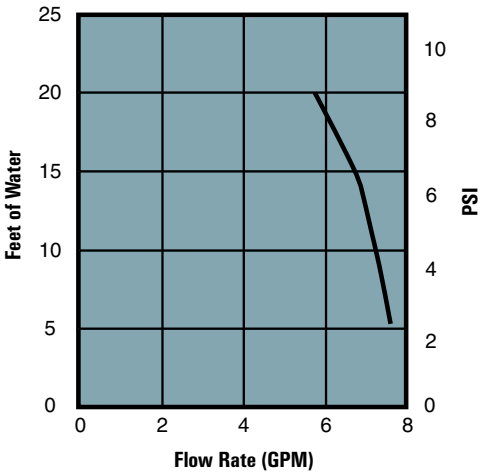
Open Flow	6.3 gpm (24 lpm)
Voltage	12V DC
Body Material	bronze
Impeller Material	Neoprene or Nitrile
Shaft Material	stainless steel
Shaft Seal	lip type
Shaft Seal Material	Nitrile
Port Size	1/2" NPT(F) 3/4" male garden hose adapter
Motor	PMDC, TENV 8.0 amps nominal 15 amps fuse
Maximum Pressure	8.7 psi or 20 ft of lift
Prime Dry, Wet	2-4 ft (.6-1.2 m), 15-20 ft (4.6-6.1 m)
Liquid Temp.	45-180˚F (7-82˚C) Neoprene
Size	3 3/8" x 4 3/4" x 6 1/2" (86 x 121 x 165 mm)
Ship Wt.	4.5 lbs (2. kg)

18670 Commercial Duty DC Water Puppy

Model			
	18670-0123	12V	Nitrile Seal
	18670-0923	12V CE	Nitrile Seal
	18670-0943	24V CE	Nitrile Seal

18670-0123

Commercial Duty Water Puppy has 25% more flow than the standard model and a heavy duty PMDC motor. For general transfer pumping where self-priming, 8 gpm flow and debris tolerance are required. Oil-resistant nitrile impeller is standard. Do not pump gasoline or other flammable liquids. DO NOT RUN DRY.



SPECIFICATIONS

Open Flow	8 gpm (30.4 lpm)
Voltage	12 or 24V DC
Body Material	bronze
Impeller Material	Nitrile
Shaft Material	316 stainless steel
Shaft Seal	lip type
Port Size	1/2" NPT(F) and 1" hose barb 3/4" male garden hose adapter
Motor	PMDC, TENV Amp Draw 11.5 amp at 12V, 5 amp at 24V Fuse Size 20 amp for 12V, 10 amp for 24V
Maximum Pressure	8.7 psi or 20 ft of lift
Prime Dry, Wet	4-6 ft (1.2-1.8 m), 15-20 ft (4.6-6.1 m)
Liquid Temp.	50-180˚F (10-82˚C) Nitrile
Maximum Pressure	8.7 psi or 20 ft of Head
Size	3" x 4 3/4" x 6 7/8" (76 x 120 x 175 mm)
Ship Wt.	6.0 lbs (2.7 kg)

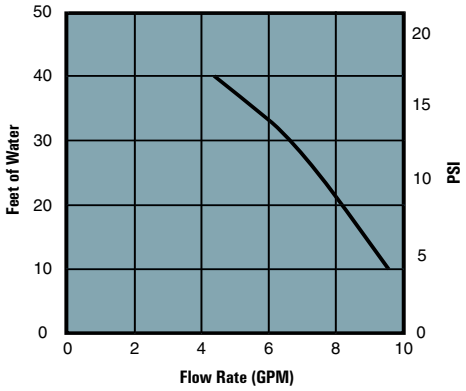
JABSCO®

11810 Bronze AC Utility Pump

Models	**11810-0003**	**Nitrile impeller**	**ODP motor**	**Nitrile seal**
	11810-0011	**Neoprene impeller**	**TEFC motor**	**Nitrile seal**
	11810-0013	**Nitrile impeller**	**TEFC motor**	**Nitrile seal**

For general transfer pumping where self-priming, 10 gpm flow, debris tolerance and portable 115V AC operation is desired. Nitrile for oil based products. Neoprene for water and general purpose pumping. Do not pump gasoline or other flammable liquids. Do not run dry. Motor is not explosion proof.

11810-0003



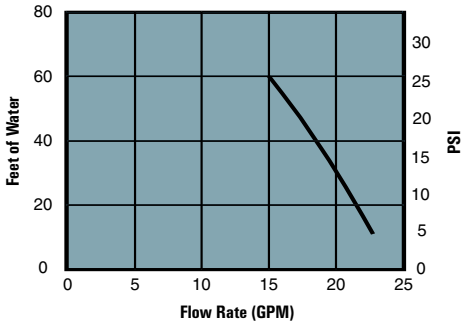
SPECIFICATIONS	
Open Flow	10 gpm (38 lpm)
Voltage	115V AC 60Hz single phase
Body Material	bronze
Impeller Material	Nitrile
Shaft Material	316 stainless steel
Shaft Seal	lip type
Shaft Seal Material	Nitrile
Port Size	1/2" NPT(F) and 3/4" male garden hose thread
Motor	1/3 hp, TEFC or ODP AC induction type 8 ft power cord with 3 prong grounded plug thermal overload protected 7 amps nominal 10 amp fuse
Maximum Pressure	17 psi, 39 ft of Head
Prime Dry, Wet	8 - 10 ft, 16 - 20 ft
Liquid Temp.	45-180˚F (7-82˚C) Neoprene 50-180˚F (10-82˚C) Nitrile
Size	7 3/4" x 7 1/4" x 10 1/2" (197 x 184 x 267 mm)
Ship Wt.	20 lbs (9.1kg) ODP, 25 lbs (11.3kg) TEFC

6050 Bronze AC Utility Pump

Models	**6050-0003**	**ODP Motor**
	6050-0013	**TEFC Motor**

For general transfer pumping using 115V AC power where self-priming, 23 gpm flow and debris tolerance are required. Oil-resistant nitrile impeller is standard. Do not pump gasoline or other flammable liquids. DO NOT RUN DRY.

6050-0003



SPECIFICATIONS	
Open Flow	23 gpm (87 lpm)
Voltage	115V AC 60Hz single phase
Body Material	bronze
Impeller Material	Nitrile
Shaft Material	316 stainless steel
Shaft Seal	lip type
Shaft Seal Material	Nitrile
Port Size	1" NPT(F)
Motor	3/4 Hp TEFC or ODP AC induction type 8 ft. power cord with 3 prong grounded plug thermal overload protected
Maximum Pressure	26 psi or 60 ft lift
Prime Dry, Wet	8-10 ft (2.4-3 m), 20-22 ft (6.1-6.7 m)
Liquid Temp.	50-180˚F (10-82˚C)
Ship Wt.	35.5 lbs (16.1 kg)
Size	8 19/32" x 7 3/4" x 13 1/32" (218 x 197 x 331 mm)

NEW 23920 Extended Run Dry DC Flexible Impeller Pump

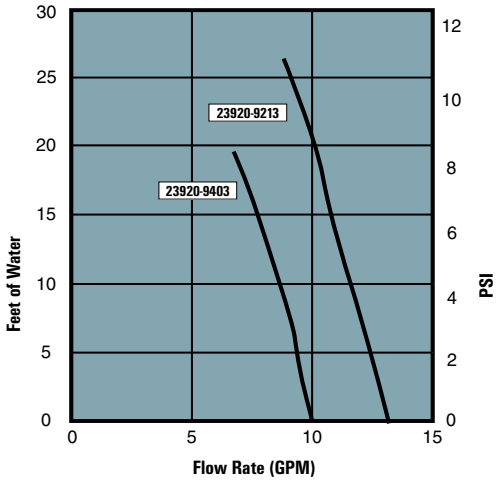
Models			
	23920-9403	12VDC	8 gpm
	23920-9213	12VDC	11 gpm

For general purpose pumping where self-priming and extended run dry capability are required. Liquid stored in the specially designed pumphead provides 10 minutes or more of run dry operation after liquid supply tank is empty. Heavy duty 12V DC motor. Upgraded carbon-ceramic mechanical shaft seal standard. Do not pump gasoline or other flammable liquids.

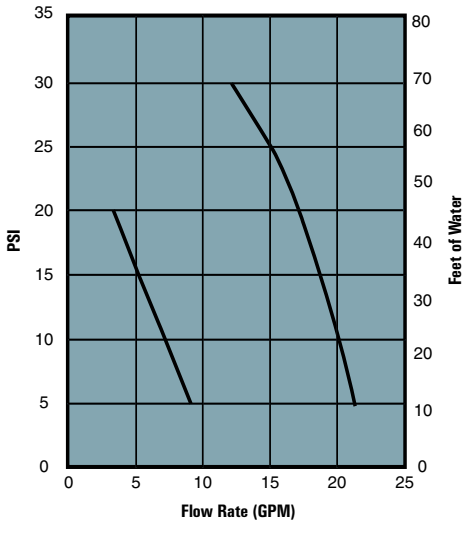
23920-9403

SPECIFICATIONS

Open Flow	8 or 11 gpm (30 or 42 lpm)
Voltage	12V DC
Body Material	bronze
Impeller Material	Nitrile
Shaft Material	stainless steel
Shaft Seal	mechanical, Carbon Ceramic/Nitrile
Port Size	3/4" NPT(F)
Motor	PMDC, TENV
	23920-9403 15 amp fuse
	23920-9213 25 amp fuse
Liquid Temp.	45-180˚F (7-82˚C)
Maximum Pressure	8 psi, 19 ft of lift
Dry Prime	23920-9403 3-4 ft, 23920-9213 6-8 ft
Size	23920-9403 7 1/2" x 4 3/4" x 3 1/2" (190 x 121 x 89 mm)
	23920-9213 8 1/2" x 4 3/4" x 3 1/2" (216 x 121 x 89 mm)
Ship Wt.	23920-9403 8.2 lbs (4 kg)
	23920-9213 9.7 lbs (3.4 kg)



30140-0003



30140 & 30180 Run Dry AC Flexible Impeller Pump

Models		
	30140-0003	9 gpm
	30180-0003	23 gpm

For general transfer pumping where self-priming, debris tolerance and extended run dry capability are required. Liquid stored in the specially designed pumphead provides 10 or more minutes of operation after supply tank is empty. Oil-resistant nitrile impeller is standard. Do not pump gasoline or other flammable liquids. EXTENDED RUN DRY CAPABILITY.

SPECIFICATIONS

Open Flow	30140 9 gpm (34 lpm) 30180 23 gpm (87 lpm)
Voltage	115V AC 60Hz single phase
Body Material	bronze
Impeller Material	Nitrile
Shaft Material	316 stainless steel
Shaft Seal	Nitrile, lip type
Port Size	1" NPT(F) 30140 1 1/2" NPT(F) 30180
Motor	1/3 Hp capacitor start type, ODP, 8 ft. power cord
	3 prong grounded plug, thermal overload protected
	7 amps 30140, 11 amps 30180, fuse
	10 amps 30140, 15 amps 30180, fuse
Maximum Pressure	30140 20 psi or 46 ft lift 30180 30 psi or 69 ft lift
Prime Dry, Wet	30140 8-10 ft (2.4-3 m) 30180 15-22 ft (4.6-6.7 m)
Liquid Temp.	50-180˚ F (10-82˚ C)
Size	30140 7 9/16" x 7 3/8" x 10 1/8" (192 x 187 x 257 mm)
	30180 8 1/2" x 8 1/8" x 11 11/16" (216 x 206 x 297 mm)
Ship Wt.	30140 23.0 lbs (10.4 kg)
	30180 31.0 lbs (14.1 kg)

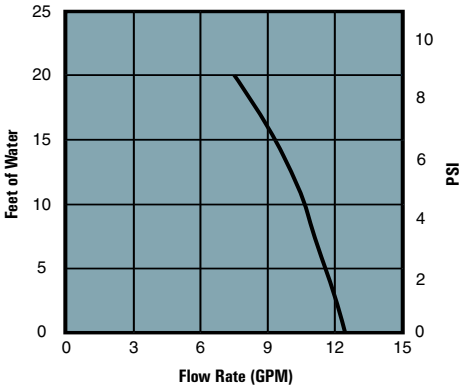
JABSCO®

18590 Macerator Run Dry DC Flexible Impeller Pump

Model **18590-1000** **12V**
18590-1090 **12V CE**

18590-1000

Run-dry protected macerator pump combines a self-priming flexible impeller pump with a high speed macerator blade to grind soft waste and debris down to 1/8" diameter for pumping. Ideal for animal waste and plant material slurry. Not for pumping stringy objects such as rags or solid objects like large fruit pits. Can empty a 30-gallon waste tank in approximately 3 minutes. Designed for intermittent operation. Run-dry protection circuit turns pump off after approximately 20 seconds of dry-run operation. Reactivation after run-dry shutdown occurs automatically the next time the pump is turned on. Reliance on the run-dry protection circuit to turn the pump off will significantly shorten impeller life. Do not pump gasoline or other flammable liquids. DO NOT RUN DRY.



SPECIFICATIONS

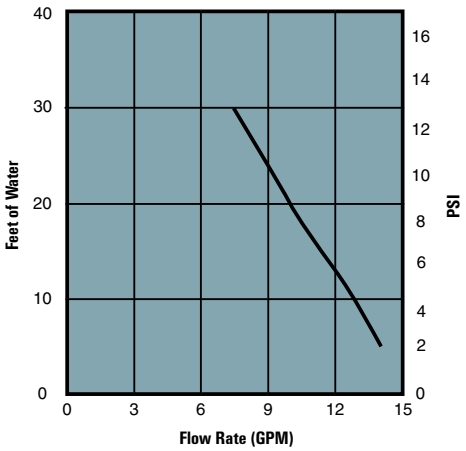
Open Flow	12 gpm (46 lpm)
Voltage	12V DC
Body Material	Polypropylene
Impeller Material	Nitrile
Shaft Material	stainless steel
Macerator Blade	stainless steel
Shaft Seal	Nitrile lip type
Inlet Port Size	1 1/2" NPT(M) or 1 1/2" hose barb
Outlet Port Size	1" Hose Barb
Motor	PMDC, TENV run dry protected 14 amps nominal 20 amps Fuse
Maximum Pressure	8.7 psi or 20 ft of lift
Prime Dry	4 ft (1.2 m)
Liquid Temp.	45-120° F (7-49° C)
Size	3 5/8" x 4 3/4" x 11 3/8" (92x 121 x 289 mm)
Ship Wt.	5.0 lbs (2.3 kg)

18690 Macerator AC

Model **18690-0000** **115V**

18690-0000

Pump combines a self-priming flexible impeller pump with a high speed macerator blade to grind soft waste and debris down to 1/8" diameter for pumping. Ideal for animal waste and plant material slurry. Not for pumping stringy objects such as rags or solid objects like large fruit pits. Can empty a 30-gallon waste tank in approximately 3 minutes. Designed for intermittent operation. Do not pump gasoline or other flammable liquids. DO NOT RUN DRY.



SPECIFICATIONS

Open Flow	14 gpm (53 lpm)
Voltage	115V AC
Body Material	Polypropylene
Impeller Material	Nitrile
Shaft Material	stainless steel
Macerator Blade	cast bronze
Shaft Seal	Nitrile lip type
Inlet Port Size	1 1/2" NPT(M) or 1 1/2" hose barb
Outlet Port Size	1" Hose Barb
Motor	TENV, AC induction type, thermal overload protected nominal amp draw 7.2 amps
Maximum Pressure	13 psi or 30 ft of lift
Prime Dry	4 ft (1.2 m)
Liquid Temp.	45-120° F (7-49° C)
Size	14 7/8" x 7 1/4" x 8 " (378 x 184 x 203 mm)
Ship Wt.	19 lbs (8.6 kg)

JABSCO®

JSP03 & JSP07 Pumps

Models **JSP0311ATF** **35 gpm**
JSP0711ATF **55 gpm**

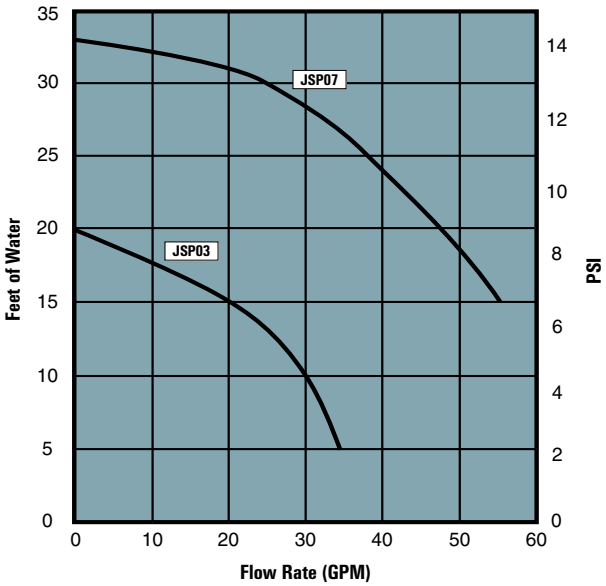
Submersible sump pumps with float switch for automatic operation. Pumps are lightweight, portable and easy to service. Will handle up to 3/8" diameter solids. Motor is permanently lubricated for extended service and rated for continuous operation. Stainless steel housing and pump shaft.

JSP03

Consult factory for 220vac models.

SPECIFICATIONS

Open Flow	35 gpm (133 lpm) & 55 gpm (209 lpm)
Voltage	115V AC 60Hz single phase
Body Material	glass-filled thermoplastic
Impeller Material	glass-filled thermoplastic
Shaft Material	416 stainless steel
Discharge Port Size	1 1/2" NPT(F)
Maximum Head	JSP03 - 20 feet (6.1 m) JSP07 - 34 feet (10.4 m)
Max. Liquid Temp	104˚F (40˚C)
Min. ON Level	JSP03 11" (277 mm), JSP07 12 1/2" (318 mm)
Min. OFF Level	JSP03 5" (126 mm), JSP07 6 1/2" (165 mm)
Minimum Basin Level	5" (127 mm)
Minimum Basin Diam.	12" (305 mm)
Float Style	piggyback wide angle
Motor	1/3 Hp permanent split capacitor type, JSP03 3/4 Hp permanent split capacitor type, JFP07 overload protected with automatic reset class F insulation, continuous duty heavy duty ball bearing construction
Cord Length	20 feet (6 m)
Maximum Amp	JSP03, 1/3 HP, 115V 2.8 amps JSP07, 3/4 HP, 115V 6.6 amps
Approvals	cCSAus, UL
Liquid Temp.	50-104º F (10-40º C)
Maximum Pressure	30 psi or 70 ft lift
Size	JSP03 9 3/4" x 6 1/8" x 6 1/8" (248 x 156 x 156 mm) JSP07 11 1/4" x 6 1/8" x 6 1/8" (286 x 156 x 156 mm)
Ship Wt.	JSP07, 11.5 lbs (5.2 kg) JSP07, 15.5 lbs (7.0 kg)



JABSCO®

59500 Mag Drive Centrifugal Pump

Model	59500-0012	12V DC
	59500-0024	24V DC

Compact, robust, high flow, long life circulating pump for use with hot water systems, heating systems, windshield washing and applications where re-circulation is required. Direct replacement for Johnson CO10P5-2 and CM10P7-1 Pumps.

59500-0012

SPECIFICATIONS

Open Flow	3.9 gpm (14.8 lpm) at 4 feet of lift
Pump Type	centrifugal
Voltage	12V DC or 24V DC
Body Material	plastic
Coupling	magnetic drive
Port Size	3/4" (19 mm) hose barb
Motor	PMDC, 2500 hour nominal life IP53 enclosure rating 3 amps Fuse for 12V model 1.5 amps Fuse for 24V model
Liquid Temp.	212° F (100° C)
Maximum Pressure	2.8 psi, 6.5 ft of lift
Size	5 1/4" x 3 3/8" x 2 1/2" (133 x 86 x 63 mm)
Ship Wt.	1.5 lbs (.7 kg)

JABSCO®

Drum Pump Motor

The new and improved 16450 Series drum pump motor is compatible with all Jabsco 16000 Series drum pump tubes. Jabsco drum pumps quickly and easily transfer and dispense liquids from drums and tanks. Drum pump tubes are available in polypropylene, stainless steel, hygienic stainless steel, and Kynar to be compatible with most liquid chemicals.

16450-0115

SPECIFICATIONS

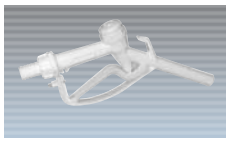
Motor Type	115V AC 60Hz, 600 Watts Fan Cooled, Thermal Protection
Motor Brushes	Replaceable
Nominal Amp Draw	5.8 amps
Duty Cycle	Intermittent
Enclosure	Weather Protected
Ambient Temperature	40-120° F (4-53° C)
Size	9" x 5" x 10 1/4" (228 x 127 x 260 mm)
Wt.	7.5 lbs (3.4 kg)

Motors	Voltage	Features
16450-0115	115VAC 60 Hz	Circuit Breaker
16450-2115	115VAC 60 Hz	Circuit Breaker, Low Voltage Safety Protection, CE approved

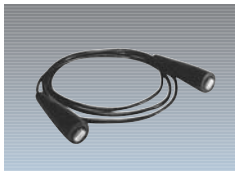
Drum Pump Tubes

35 1/2" tubes are designed for standard US 55 gallon drums. They handle a wide range of chemicals from strong acids and caustics to severe solvents and oils. Kynar is our most chemically resistant drum pump material. Hygienic models can handle food and beverage grade liquids and are built with USDA approved materials. Not recommended for viscosities over 3500 SSU. Sealless design provides up to 30 minutes of run-dry operation. Designed for gloved operation, self-aligning motor coupling makes pump easy to use.

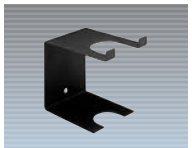
Pump Tubes	Tube Material	Length	Shaft	Impeller	Weight
16400-3350	Polypropylene	35.5"	Carpenter 20	Tefzel	2.25 lbs
16410-3350	Stainless Steel	35.5"	316 SS	Tefzel	7.5 lbs
16510-3350	Hygienic SS	35.5"	316 SS	Tefzel	7.5 lbs
16520-3350	Kynar	35.5"	Hastelloy C	Tefzel	2.75 lbs



18753-0077
Adjustable Nozzle
Chemically Resistant
Plastic material

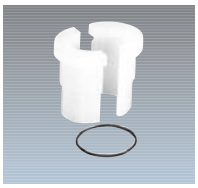


16471-0000
Safety Ground Strap



16470-0000
Wall Mount Drum Pump Storage Bracket
For easy storage when pump is not in use.

16490-1000
Polypro Strainer - Gray
16490-1001
Tefzel Strainer - Black
Blocks debris entry and protects pump impeller.



18753-0080
Drum Pump Bung Adapter 2"
allows pump tube to fit snugly in 2" bung hole.

Oil Change System

Flat Tank Oil & Fluid Changing System

The Oil & Fluid changing System reduces time for and simplifies the fluid changing process. It is ideal for Automotive and heavy duty diesel service, construction, agricultural and industrial vehicles, boats and RV's

- 3 1/2 gallon (13 liter) self-contained unit
- Convenient Dipstick suction tube
- Powerful 12 VDC motor makes oil changing quick & simple
- 7-foot (2.1 m) electrical wire for easy usage
- Battery clamp leads and an on-off switch to make the pumping process simpler and easier

178601012

SPECIFICATIONS	
Model	178601012
Pump Body:	Polypropylene
Diaphragm:	Geolast®, oil resistant
Valves:	Viton®, oil resistant
Motor:	12 VDC with integral power switch
Receiver:	Plastic with 14 quart max. capacity tank
Weight:	3.5 lb (1.6 Kg)

Accessories and Fittings

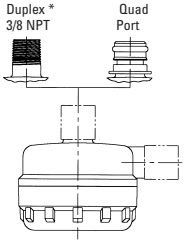
Inlet Strainers
1745 Series PETG Viton

- New PETG cover for improved chemical resistance.
- Viton o-ring is standard.
- Low profile design for space saving installation.
- Very strong reinforced plastic base with clear cover.
- Wide variety of port configurations from 3/8" to 3/4."

SPECIFICATIONS

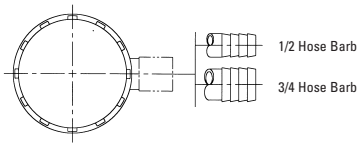
Materials	Base	Polypropylene, black
	Cover	PETG, Glycol-modified polyester terephthalate
	Screen	Stainless Steel 40 mesh
	O-rings	Viton
Temperature		160˚F (70˚C) max.

Styles Available

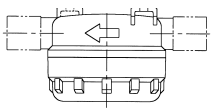


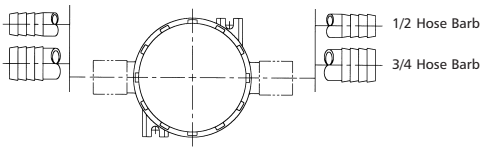
Model No.	Description
01745-010	Quad x 3/4" hose barb, Viton o-ring, PETG cover
01745-012	Quad x 1/2" hose barb, Viton o-ring, PETG cover
01745-023	3/8" NPT (M) x 3/8" hose barb, Viton o-ring, PETG cover

*3/8" NPT (M) fits all Duplex II models



Inlet Strainer
(Plugs into Quad pump port)



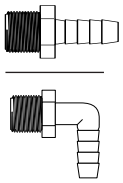


In-Line Strainer

Model No.	Description
01745-000	Inline strainer, 3/4" hose barb x 3/4" hose barb, Viton o-ring, PETG cover
01745-002	Inline strainer, 1/2" hose barb x 1/2" hose barb, Viton o-ring, PETG cover

Electric Pump Fittings
Nylon Barbed Straight/Elbow

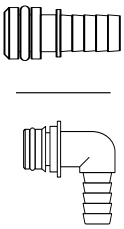
For use with all Pentaflex Series (3/8" NPT only) and Duplex II Series Pumps (3/8" NPT only).



Part No. Straight	Part Number Elbow	Description
91010-032	91010-033	3/8" NPT Male x 1/4" Barb
91010-004	91010-003	1/4" NPT Male x 3/8" Barb
91010-002	91010-001	3/8" NPT Male x 3/8" Barb
91010-034	91010-025	1/4" NPT Male x 3/8" Barb
91010-006	91010-005	3/8" NPT Male x 1/2" Barb
91010-053	91010-052	1/4" NPT Male x 1/4" Barb

Plastic (Polyproylene Body, Viton O-ring) Inlets & Outlets

For use with all Quad Series Pumps.

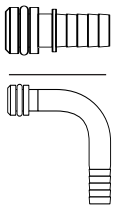


Part No. Straight	Description
20381-015	Quad x 1/2" hose barb straight, Viton o-ring
20381-033	Quad x 5/8" hose barb straight, Viton o-ring
20381-014	Quad x 3/4" hose barb straight, Viton o-ring
20381-017	Quad x 1/2" hose barb elbow, Viton o-ring
20381-018	Quad x 3/4" hose barb elbow, Viton o-ring
20381-032	Quad x 3/4" garden hose adapter, Viton o-ring

Other Elastomers Available
Packaged 2 per bag.
ALSO AVAILABLE IN 3/8" & 1/2" NPT (M).

Gas Pump Liquid Fittings
Stainless Steel Inlets & Outlets

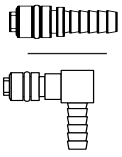
For use with all 5100 Series Pumps.



Part No. Straight	Part Number Elbow	Description
20324-030	20607-100	1/4" Hose Barb
20325-030	20608-100	3/8" Hose Barb
20606-100		1/2" Hose Barb

Gas Pump Air Fittings
Brass CO2/Air Inlets with Shutoff Valve

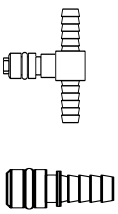
For use with all 5100 and G57 Series Pumps.



Part No.	Description
01510-000	1/4" Hose Barb, Straight
01520-000	1/4" Hose Barb, Tee
01521-000	1/4" Hose Barb, Elbow

Plastic (Celcon) CO_2/Air Inlets

For use with all 5100 and G57 Series Pumps.



Part No.	Description
20325-033	1/4" Hose Barb, Straight

CHEMICAL RESISTANCE TEST DATA

AG CHEMICAL	ELASTOMER					
	EPDM (Com)	EPDM (FDA)	EPDM (Fab)	SANTO	VITON	BUNA
Diazinon	C	C	C	B	A	C
Chickweed Killer	A	A	A	A	A	A
Triox Veg Killer	C	C	C	C	B	C
Round-Up Conc	A	A	A	A	A	A
Sevin	A	A	A	A	A	B
Malathion	A	C	B	A	B	C
Spectracide	A	A	A	A	A	A
Ortho Weed-B-Gon	A	A	A	A	A	A
Ortho Weed & Grass Killer	A	A	A	A	A	A
Home Orchard Spray	A	A	A	A	A	B
Lasso MT	A	A	A	A	A	A
Round-Up Super Conc. Grass & Weed Killer	A	A	A	A	A	A
Wipe-Out Weed Killer	A	A	A	A	A	A
Lasso EC	A	B	A	A	B	C
Ortho Malathion 50 P	A	C	B	A	B	C
Super K-Gro (Dursban)	C	C	C	C	A	C
Ortho Liquid Sevin	A	A	A	A	A	A
2,4-D Amine 4	A	A	A	A	A	A
Dursban 4E	C	C	B	B	A	C
Dursban 2E	C	C	B	C	A	C
Dow Elanco 2,4,D Bee	C	B	A	B	A	C
Lorsban 4E	B	C	B	B	A	C
Dursban 50W	A	A	A	A	A	A
CARRIER						
Acetone	A	A	A	A	C	C
Xylene	C	C	C	C	B	C
Kerosene	C	C	C	C	A	B

A - No Significant Effect
B - Moderate Effect, Generally Satisfactory
C - Major Effect, Not Satisfactory

PRODUCT SPECIFICATION FORM

CUSTOMER DATA

Company:		Date:
Address:		
City:	State:	Country:
Phone:	Fax:	E-mail:
Contact:	Title:	Annual Unit Sales:
Samples Requested:	Agency Approvals Required:	

APPLICATION DATA

Flow Rate:	Point (A)		Operating Pressure: Point (A)	
	Point (B)			Point (B)
	Point (C)			Point (C)
Fluid Being Pumped:				
Horizontal Mounting Position:		Vertical, Pump Head Down:		
Suction Plumbing Type:		Size:		Length:
Vertical Distance:		Horizontal Distance:		
Fittings/Elbows:		Quick Disconnects:		Size:
Discharge Plumbing Type:		Size:		Length:
Vertical Distance:		Horizontal Distance:		
Fittings/Elbows:		Quick Disconnects:		Size:
Nozzle/Orifice Qty:		Size:		
Solenoid Controlled:		Manual Controlled:		
Intermittent Duty:		Continuous Duty:		
Time On:	Time Off:	Hrs./Day:	Days/Week:	
Environmental Conditions:	Temperature Range:		Humidity Range:	
	Noise Limitations:		Exposure To Sun:	

PRODUCT DATA MOTOR INFORMATION

Voltage:	Minimum:	Maximum:	
AC:	DC:	Source:	
Torque Required:	Speed Required:	Max Amps:	
Cord:	Special Leads:	Length:	
Thermal Protection:	Temperature Range:		
RFI Suppression:	Full:	Partial:	
Base Plate:	Sealed Housing:		
Other:			

PUMP INFORMATION

Vented Body:		Vented Check Valve:		Anti-Drip Valve:
Screen:	S.S. Screws:	Bypass Required:	Max. PSI:	
Automatic Control:		PSI On:	PSI Off:	

Completed By