ALL-FLO
PUMP CO.

PUMP OPERATION & MAINTENANCE MANUAL

H-Series Sanitary and Hygienic Air Diaphragm Pumps

TABLE OF CONTENTS

CAUTIONS — READ FIRST!

READ THESE WARNINGS AND SAFETY PRECAUTIONS PRIOR TO INSTALLATION OR OPERATION. FAILURE TO COMPLY WITH THESE INSTRUCTIONS COULD RESULT IN PERSONAL INJURY AND OR PROPERTY DAMAGE. RETAIN THESE INSTRUCTIONS FOR FUTURE REFERENCE.

WARNING Pump, valves and all containers must be properly grounded prior to handling flammable fluids and/or whenever static electricity is a hazard.

WARNING Prior to servicing the pump, ensure that the air and fluid lines are closed and disconnected. While wearing personal protective equipment, flush, drain and process liquid from the pump in a safe manner.

WARNING The TX marking refers to the maximum surface temperature depending not on the equipment itself, but mainly on operating conditions. In this case, the maximum surface temperature depends upon the temperature of the process fluids.

CAUTION The temperature of the process fluid and air input must be no more than 36°F (20C) less of the maximum temperature allowed for the appropriate non-metallic material. See the list of temperatures below for each material's maximum recommended temperature:

Buna-N (Nitrile):	10°F to 180°F (-12C to 82C)
Geolast®:	10°F to 180°F (-12C to 82C)
EPDM:	-40°F to 280°F (-40C to 138C)
Santoprene®:	-40°F to 225°F (-40C to 107C)
Viton® (FKM):	-40°F to 350°F (-40C to 177C)
PTFE:	40°F to 220°F (4C to 104C)
Polyethylene:	32°F to 158°F (0C to 70C)
Polypropylene:	32°F to 180°F (0C to 82C)
PVDF:	0°F to 250°F (-18C to 121C)
Nylon:	0°F to 200°F (-18C to 93C)

Temperature limits are solely based upon mechanical stress and certain chemicals will reduce the maximum operating temperature. The allowable temperature range for the process fluid is determined by the materials in contact with the fluid being pumped. Consult a chemical resistance guide for chemical compatibility and a more precise safe temperature limit. Always use minimum air pressure when pumping at elevated temperatures.

CAUTION Do not lubricate air supply.

WARNING = Hazards or unsafe practices which could result in severe personal injury, death or substantial property damage

CAUTION = Hazards or unsafe practices which could result in minor personal injury, product or property damage.

CAUTION Do not connect a compressed air source to the exhaust port of the pump.

WARNING Use only with liquid process fluid.

WARNING Maintenance must not be performed when a hazardous atmosphere is present.

CAUTION Do not exceed 120 psig (8.3 bar) air-inlet pressure.

CAUTION Do not exceed 10 psig (0.7 bar) or 23 ft-H_2O suction pressure.

CAUTION Ensure all wetted components are chemically compatible with the process fluid and the cleaning fluid.

CAUTION Ensure pump is thoroughly cleaned and flushed prior to installation into a process line.

CAUTION Always wear Personal Protective Equipment (PPE) when operating pump.

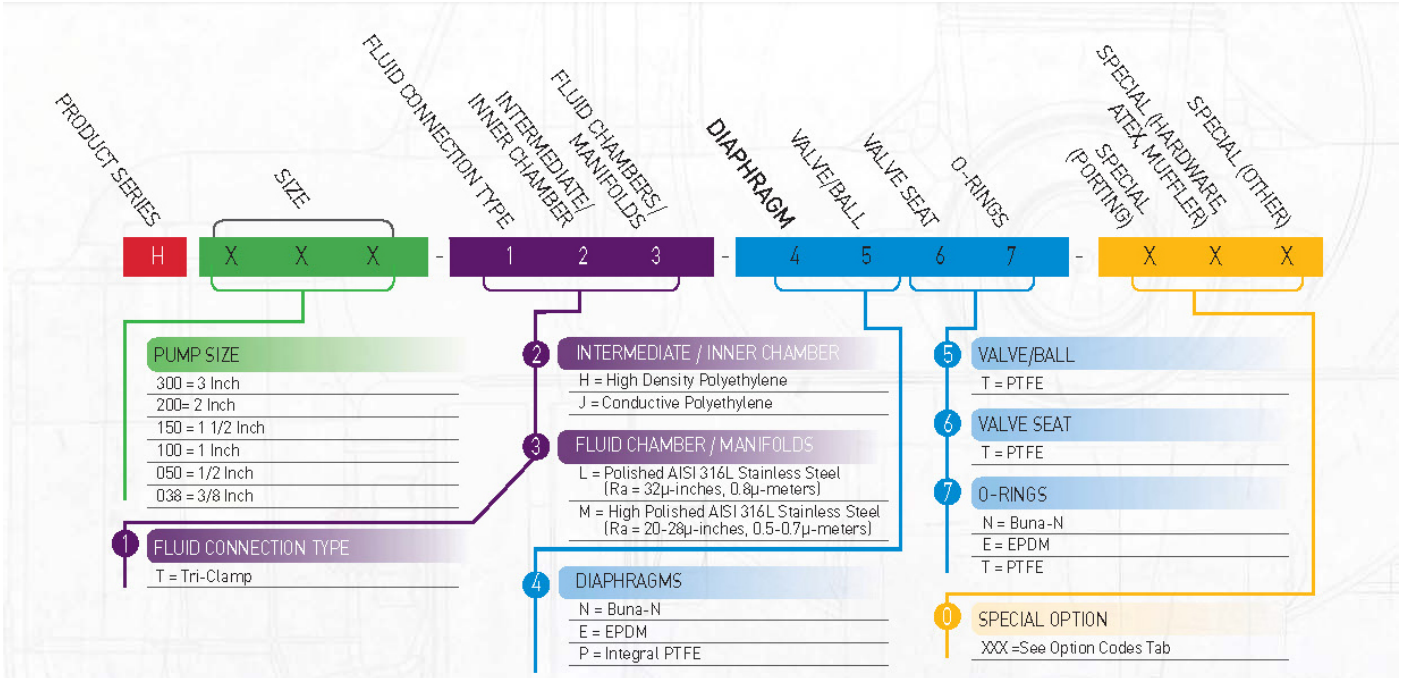
CAUTION Close and disconnect all compressed air and bleed all air from the pump prior to service. Remove all process fluid in a safe manner prior to service.

CAUTION Blow out all compressed air lines in order to remove any debris, prior to pump installation. Ensure that the muffler is properly installed prior to pump operation.

CAUTION Ensure air exhaust is piped to atmosphere prior to a submerged installation.

CAUTION Ensure all hardware is set to correct torque values prior to operation.

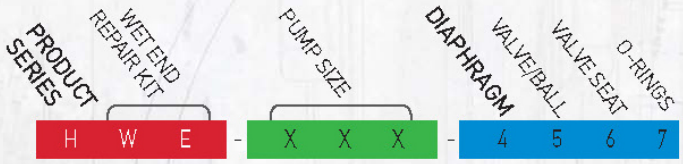
Model Designation Matrix



*Additional fluid connection types and finishes available on upon request. Contact factory for details.

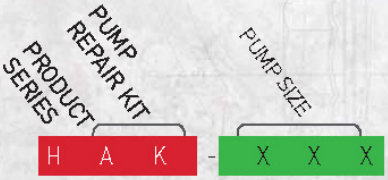
WET END REPAIR KIT

Wet end kit contains 2 diaphragms, (2 back-up diaphragms if required), 4 balls, 4 seats, and 4 seat o-rings.



AIR END REPAIR KIT

Air end repair kit contains pilot sleeve assembly and main air valve.



Pulsation Dampener

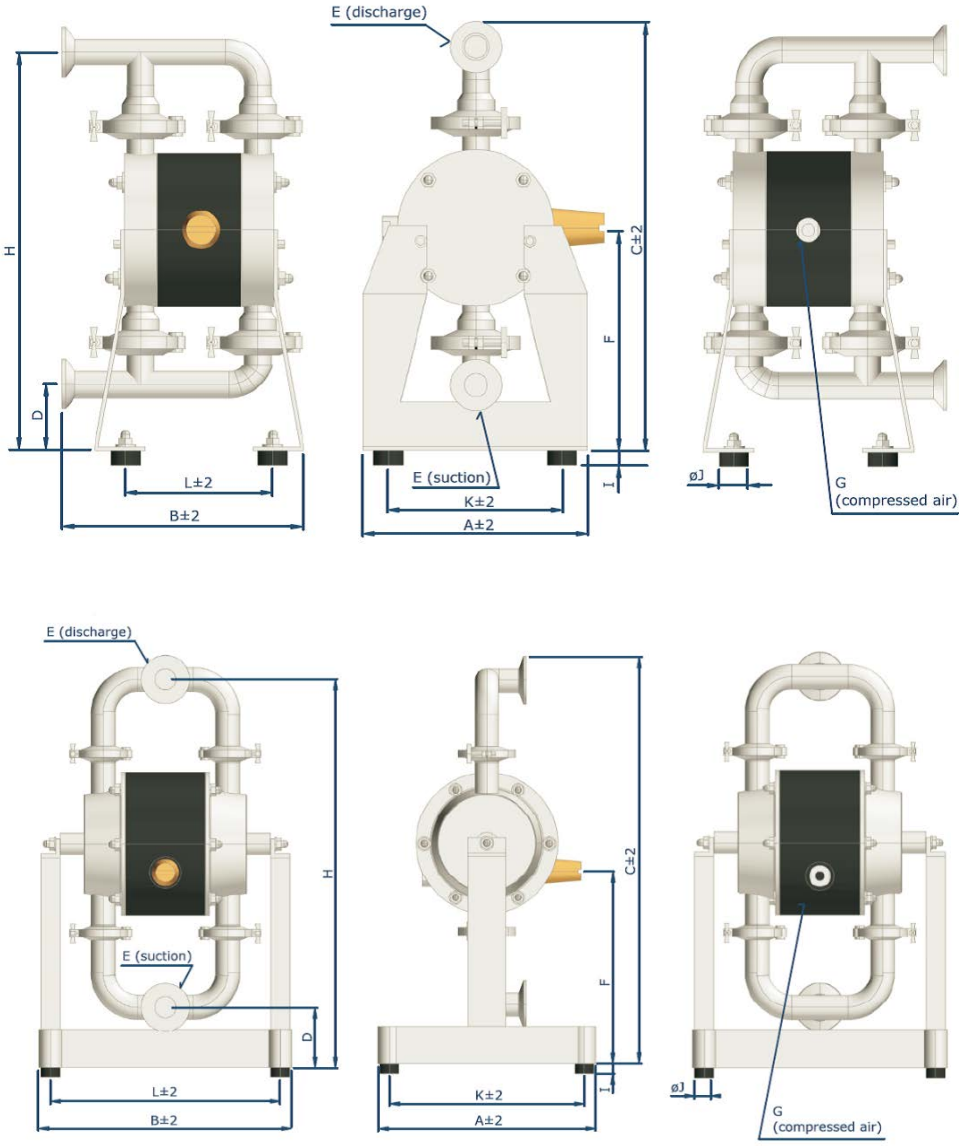
- Smooths Discharge Flow and Pressure
- Automatic Self-Charging and Self-Venting
- Sanitary AISI 316 Stainless Steel Housing Material
- Sanitary Tri-Clamp Connections
- FDA and Sanitary Grade Elastomers
- 3/8, 1/2, 3/4, 1, 1-1/2, 2, 3 Inch Sizes Available

See Pulsation Dampener Flyer for Additional Information and Product Specifications

Pump Specifications

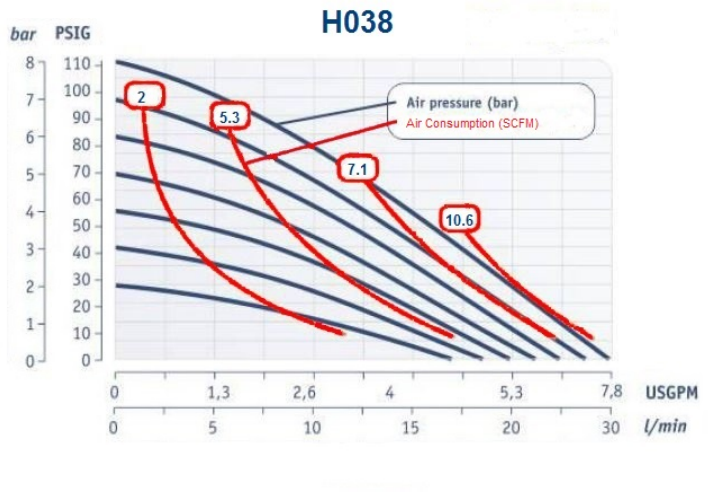
	H038	H050	H100	H150	H200	H300
Dimension						
Air Inlet	1/8"	1/4"	1/4"	1/2"	1/2"	3/4"
Liquid Inlet	.5"	1"	1.5"	2"	2.5"	3"
Liquid Outlet	.5"	1"	1.5"	2"	2.5"	3"
Weight	11 lbs	17.6 lbs	24.3 lbs	57.3 lbs	75 lbs	187.4 lbs
	(5kg)	(8kg)	(11kg)	(26kg)	(34kg)	(85kg)
Performance						
Max Capacity	7.9 gpm	19.8 gpm	33 gpm	83 gpm	150 gpm	225 gpm
	(30 lpm)	(75 lpm)	(125 lpm)	(315 lpm)	(565 lpm)	(850 lpm)
Max Pressure	120 psi (8.2 bar)					
Max Solids	1/8" (4 mm)	3/16" (5 mm)	5/16" (8 mm)	7/16" (11 mm)	7/32" (14 mm)	19/32" (15 mm)
Suction Lift Dry	4.9 ft-H2O	9.8 ft-H2O	13.1 ft-H2O	13.1 ft-H2O	16.4 ft-H2O	16.4 ft-H2O
	1.5 m-H2O	3 m-H2O	4 m-H2O	4 m-H2O	5 m-H2O	5 m-H2O
Suction Lift Wet	29.5 ft-H2O (9.0 m-H2O)					
Temperature Limits						
Rubber, EPDM	176°F (80 C)					
PTFE	248°F (120 C)					

Pump Dimensions

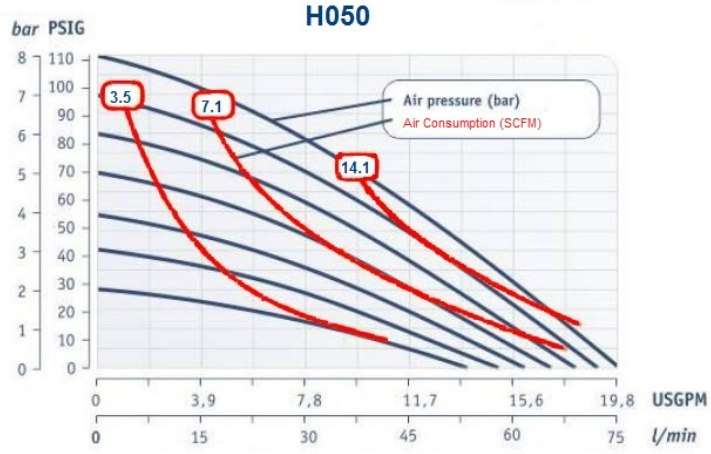


	A	B	C	D	E		F	G	H	I	J	K	L
					TC	DN							
H038	5.9"	6.5"	11.8"	1.8"	1/2"	(15mm)	6.4"	1/8"	11.1"	.70"	1.2"	4.6"	4.1"
	(150mm)	(165mm)	(299mm)	(46mm)		.6"	(162mm)		(282mm)	(18mm)	(30mm)	(116mm)	(103mm)
H050	9.1"	10.4"	16.5"	3.0"	1"	(25mm)	8.0"	1/4"	15.5"	.70"	1.2"	8.1"	9.4"
	(230mm)	(264mm)	(419mm)	(75mm)		1"	(204mm)		(394mm)	(18mm)	(30mm)	(206mm)	(238mm)
H100	10.1"	11.3"	18.3"	2.6"	1 1/2"	(40mm)	8.7"	1/4"	17.3"	.70"	1.2"	8.9"	10.1"
	(256mm)	(287mm)	(465mm)	(67mm)		1.6"	(221mm)		(440mm)	(18mm)	(30mm)	(226mm)	(257mm)
H150	13.8"	15.2"	26.7"	4.0"	2"	(50mm)	9.7"	1/2"	25.2"	.70"	1.2"	12.8"	14.1"
	(350mm)	(387mm)	(679mm)	(102mm)		2.0"	(247mm)		(640mm)	(18mm)	(30mm)	(325mm)	(357mm)
H200	13.8"	18.1"	35.0"	5.0"	2 1/2"	(65mm)	14.1"	1/2"	33.1"	.70"	1.2"	12.8"	17.1"
	(350mm)	(459mm)	(888mm)	(126mm)		2.6"	(357mm)		(842mm)	(18mm)	(30mm)	(326mm)	(435mm)
H300	23.2"	23.6"	51.6"	5.1"	3"	(80mm)	27.1"	3/4"	49.5"	.70"	1.2"	22.2"	22.6"
	(590mm)	(600mm)	(1310mm)	(129mm)		3.2"	(688mm)		(1257mm)	(18mm)	(30mm)	(565mm)	(575"

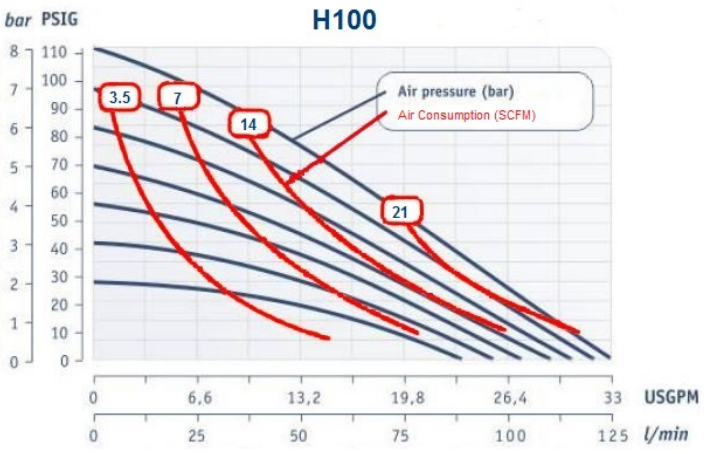
Performance Curves



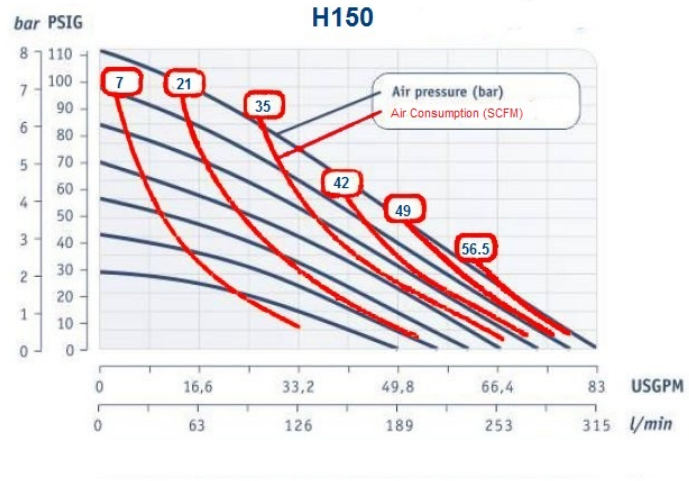
H038 Performance Specifications	
Max. Flow:	7.9 gpm (30 lpm)
Max. Air Pressure:	120 PSI (8.2 bar)
Max. Solids:	1/8" (3 mm)
Max. Suction Lift Dry:	4.9 ft-H2O (1.5 m-H2O)
Max. Suction Lift Wet:	29.5 ft-H2O (9 m-H2O)
Weight:	11 lbs (5 kg)
Air Inlet:	1/8"
Liquid Inlet:	3/8"
Liquid Outlet:	3/8"
Height	12.5" (317 mm)
Width:	6.5" (165mm)
Depth:	5.9" (150 mm)



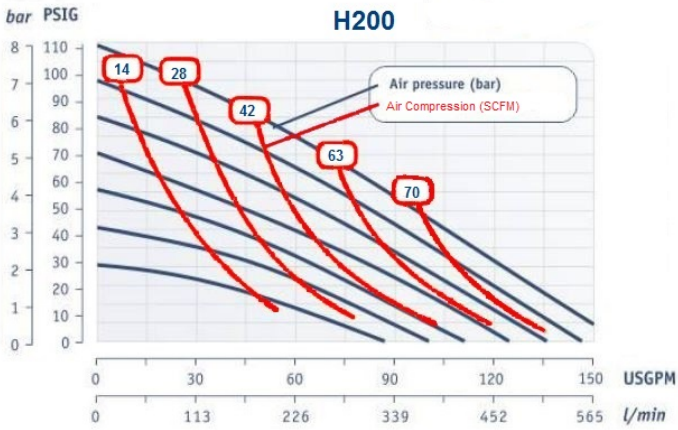
H050 Performance Specifications	
Max. Flow:	14.5 gpm (55 lpm)
Max. Air Pressure:	120 PSI (8.2 bar)
Max. Solids:	3/16" (5 mm)
Max. Suction Lift Dry:	9.8 ft-H2O (3 m-H2O)
Max. Suction Lift Wet:	29.5 ft-H2O (9 m-H2O)
Weight:	17.6 lbs (8kg)
Air Inlet:	1/4"
Liquid Inlet:	1/2"
Liquid Outlet:	1/2"
Height	17.2" (248 mm)
Width:	10.4" (264mm)
Depth:	9.1" (230mm)



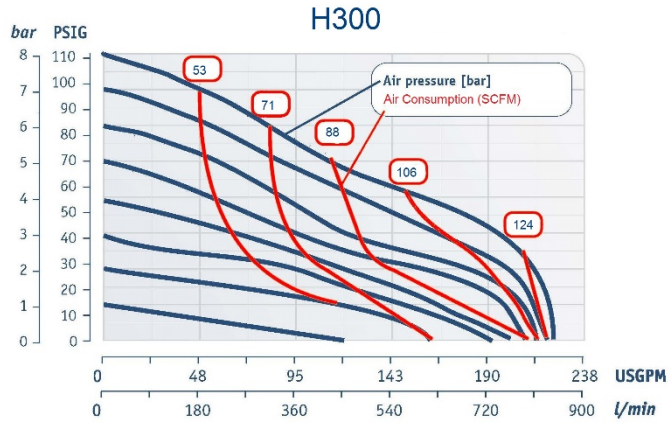
H100 Performance Specifications	
Max. Flow:	33 gpm (125 lpm)
Max. Air Pressure:	120 PSI (8.2 bar)
Max. Solids:	5/16" (8 mm)
Max. Suction Lift Dry:	13.1 ft-H2O (4 m-H2O)
Max. Suction Lift Wet:	29.5 ft-H2O (9 m-H2O)
Weight:	21 lbs (9.7 kg)
Air Inlet:	1/4"
Liquid Inlet:	1"
Liquid Outlet:	1"
Height	19" (483mm)
Width:	11.3" (287mm)
Depth:	10.1" (256mm)



H150 Performance Specifications	
Max. Flow:	83 gpm (315 lpm)
Max. Air Pressure:	120 PSI (8.2 bar)
Max. Solids:	7/16" (11 mm)
Max. Suction Lift Dry:	13.1 ft-H2O (4 m-H2O)
Max. Suction Lift Wet:	29.5 ft-H2O (9 m-H2O)
Weight:	57.3 lbs (26 kg)
Air Inlet:	1/2"
Liquid Inlet:	1 1/2"
Liquid Outlet:	1 1/2"
Height	27.4" (697 mm)
Width:	15.2" (387mm)
Depth:	13.8" (350mm)



H200 Performance Specifications	
Max. Flow:	150 gpm (565 lpm)
Max. Air Pressure:	120 PSI (8.2 bar)
Max. Solids:	7/32" (14 mm)
Max. Suction Lift Dry:	16.4 ft-H2O (5 m-H2O)
Max. Suction Lift Wet:	29.5 ft-H2O (9 m-H2O)
Weight:	75 lbs (34 kg)
Air Inlet:	1/2"
Liquid Inlet:	2"
Liquid Outlet:	2"
Height	35.7" (906mm)
Width:	18.1" (459mm)
Depth:	13.8" (350 mm)



H300 Performance Specifications	
Max. Flow:	225 gpm (850 lpm)
Max. Air Pressure:	120 PSI (8.2 bar)
Max. Solids:	19/32" (15 mm)
Max. Suction Lift Dry:	16.4 ft-H2O (5 m-H2O)
Max. Suction Lift Wet:	29.5 ft-H2O (9 m-H2O)
Weight:	187.4 lbs (85 kg)
Air Inlet:	3/4"
Liquid Inlet:	3"
Liquid Outlet:	3"
Height	52.3" (1328 mm)
Width:	23.6" (600mm)
Depth:	23.2" (590mm)

Installation, Troubleshooting and Maintenance

Installation

Piping

Whenever possible ensure the pump is installed using the shortest possible pipe lengths with the minimum
amount of pipe fittings. Ensure all piping is supported independent of the pump.

Suction and discharge piping should not be smaller than the connection size of the pump. When pumping liquids of high viscosity, larger piping may be used, in order to reduce frictional pipe loss.

Employ flexible hoses in order to eliminate the vibration caused by the pump. Mounting feet can also be used to reduce vibration effects.

All hoses should be reinforced, non-collapsible and be capable of high vacuum service. Ensure that all piping and hoses are chemically compatible with the process and cleaning fluid.

For processes where pulsation effects should be reduced, employ a pulsation dampener on the discharge side of the pump.

For self-priming applications, ensure all connections are airtight and the application is within the pumps
dry-lift capability. Refer to product specifications for further details.

For flooded suction applications, install a gate valve on the suction piping in order to facilitate service. For unattended flooded suction operation, it is recommended to pipe the exhaust air above the liquid source. In the event of a diaphragm failure this will reduce or eliminate the possibility of liquid discharging through the exhaust onto the ground.

Location

Ensure that the pump is installed in an accessible location, in order to facilitate future service and maintenance.

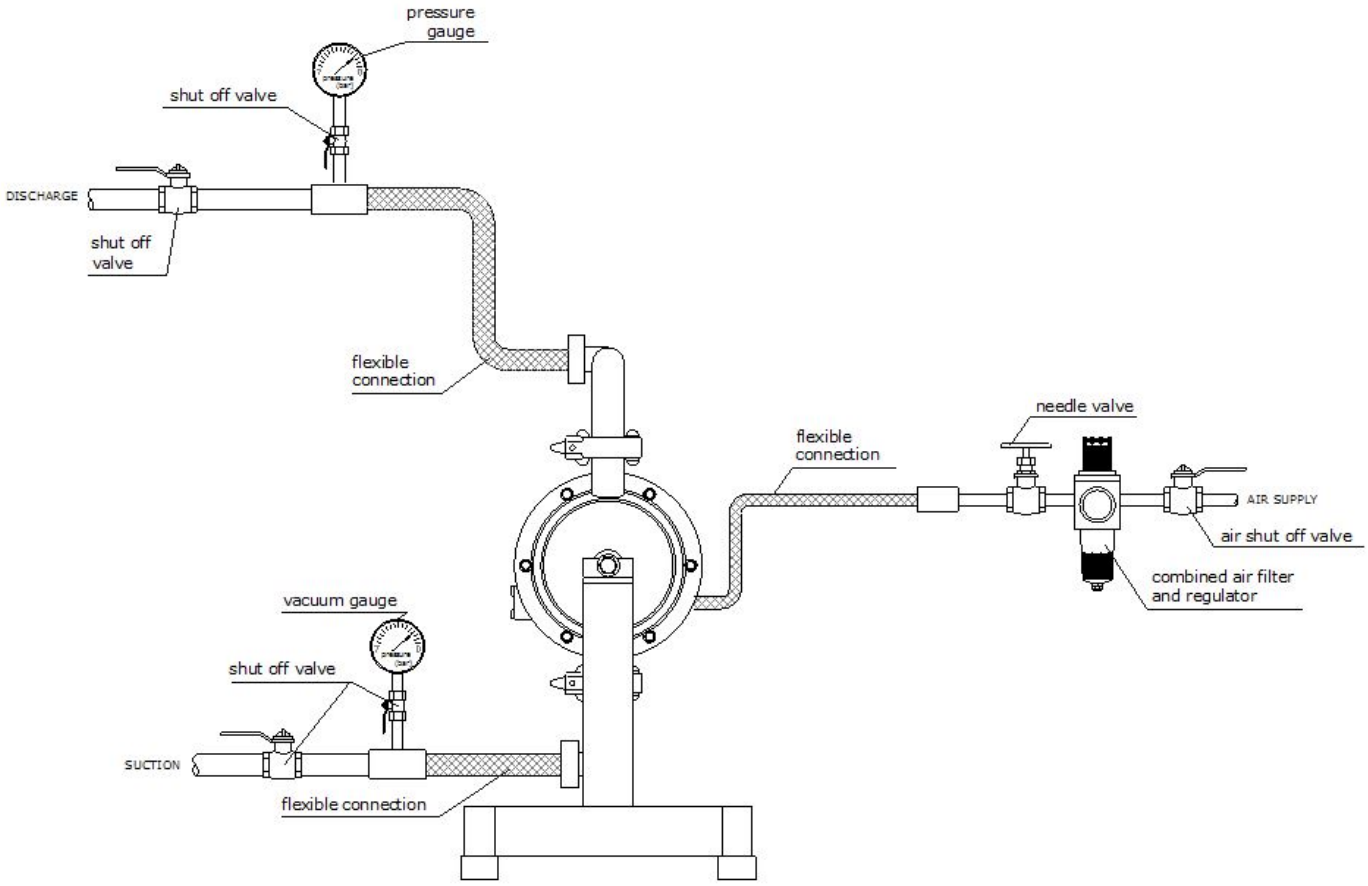
Air

Ensure that the air supply is sufficient for the volume of air required by the pump. Refer to product specifications for further details. For reliable operation, install a 5 micron air filter, air-valve and
pressure regulator. Do not exceed the pumps maximum operating pressure of 120 psig.

Remote Operation

Utilize a three way solenoid valve for remote operation. This ensures that air between the solenoid
and the pump is allowed to “bleed off,” ensuring reliable operation. Liquid transfer volume is estimated
by multiplying displacement per stroke times the number of strokes per minute

Noise

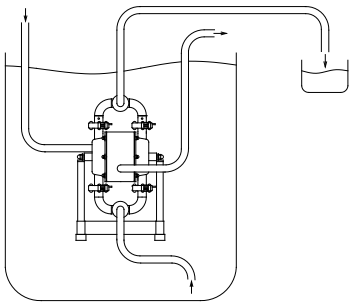


Correct installation of the muffler reduces sound levels. Refer to product specifications for further details.

Submerged Operation

For submersible operation, pipe the air exhaust to atmosphere

Suggested Installation and Connection



SELF PRIMING APPLICATION

Suction lift capability may vary depending on the construction materials and application parameters. The range is from 16.4 feet dry to 30 feet in a primed condition (values calculated for pumping water at 68 degrees Fahrenheit).

SUBMERGED OPERATION

All pumps may operate in full submersion.
Construction materials must be compatible with

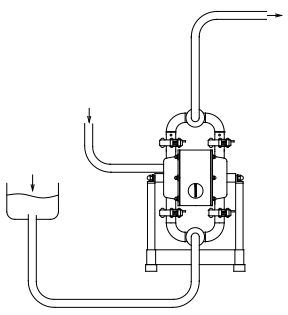
surrounding liquid and the air exhaust must be placed above the liquid level.

POSITIVE SUCTION HEAD

Common as a method of drawing off the bottoms of holding tanks and clarifiers. Optimum inlet pressure should be kept at 14.5 PSI.

Troubleshooting

PROBLEM	EFFECT/SOLUTION
Pump Will Not Cycle	
	Discharge line closed or plugged Discharge filter blocked Check valve stuck Air filter blocked Air supply valve closed Air supply hooked up to muffler side of pump Compressor not producing air or turned off Muffler iced or blinded Diaphragm ruptured Plant air supply line ruptured Air valve wear/debris Pilot sleeve wear/debris Diaphragm rod broken Diaphragm plate loose
Pumped Fluid Coming Out of Muffler	
	Diaphragm ruptured Diaphragm plate loose Inlet liquid pressure excessive (above 10 psig)
Pump Cycles but no Flow	
	Inlet strainer clogged Suction valve closed Suction line plugged No liquid in the suction tank Suction lift excessive Debris stuck in valves Excessive wear of check valves Air leak on suction side with suction lift
Pump Cycles with Closed Discharge Valve	
	Debris stuck in check valve Excessive wear of check valves
Pump Running Slowly/Not Steady	
	Air compressor undersized Leak in air supply Air-line, filter regulator or needle valve undersized Muffler partially iced or blinded Air valve gasket leak or misalignment Air valve wear/debris



	Pilot sleeve wear/debris
	Liquid fluid filter blocked
	Pump may be cavitating, reduce speed of operation
	Suction strainer clogged
Pump Will Not Prime	
	Air leak in suction pipe
	Air leak in pump manifold connections
	Suction strainer and lines clogged
	Excessive lift conditions
	Check valve wear
	Debris in check valve

If any of the above mentioned causes do not apply to your problem, contact your All-Flo authorized distributor.

Operation

CAUTION

- Before starting the pump, check that all piping is properly connected.
- Before starting the pump, check that **all the bolts are securely tightened.**
- Check that the regulator and the drain valve on the discharge side are closed and that the valve on the suction side is opened if applicable.

1) Start the air compressor.
2) Open the air valve. Using a regulator to adjust the supply air pressure within the permissible range.
3) Open the flow valve on the discharge side.
4) First, check that fluid is flowing inside the piping and is being pumped to the discharge side, and then fully open the air valve.

Flow Adjustment

Adjust the flow valve on the discharge side, or adjust the supply air pressure.

CAUTION

! The supply air pressure may initially rise during closing the flow valve. Make sure that the pressure is kept within the normal operating range.

! The permissible suction flow speed can vary depending upon the viscosity and specific gravity of the fluid, the suction stroke and other factors. However in case of a rapid growth of the pump speed (flow speed of fluid), cavitations will occur. This will reduce pump performance and may cause a malfunction. In order to prevent cavitations, adjust the supply air pressure and the flow.

! If fluid is not discharged after you start the pump, or if you hear an abnormal noise or notice any irregularity, shut down the pump immediately.

Maintenance

Cleaning the Pump

⚠ **WARNING**

! Make sure that compressed air is not supplied to the pump BEFORE you start cleaning the pump.

! Make sure that the pump is not pressurized BEFORE you start cleaning the pump.

1) Remove the hose from the suction side of the pump.
2) Close the flow valve on the discharge side and open the drain valve. Then start air pressure for a while to discharge possibly much fluid remaining inside the pump.
3) Remove the hose from the discharge side, and attach different hoses to the suction side and the discharge side for cleaning.
4) Be ready with a vessel with cleaning solution, the kind appropriate for the type of fluid pumped. Next connect the suction-side and the discharge-side hoses of the pump.
5) Start the pump air pressure slowly, and let the cleaning solution circulate for sufficient cleaning.
6) Flush with clean water.
7) Remove the hose from the suction side of the pump, run the pump for a while to purge the pump of remaining fluid as much as possible.

CAUTION

- Be extremely careful when removing piping - the fluid will run/flow out.
- After cleaning with clean water, turn the pump upside-down to let the water flow out.

Shutdown

Close the air valve of the pump and shut off the supply air.

CAUTION

- The pump can be shut down with the flow valve closed while air is being supplied. However DO NOT leave the pump in this condition for many hours without supervision - there is a risk of a leak from the pump or piping, and fluid may continue flowing out of the position of leakage.
- When the pump is shut down while pumping slurry, particulate matter contained in the slurry will be deposited and get stuck inside the out chamber. Therefore after finishing work the pump must be cleared of the remaining fluid. Otherwise when starting the pump again, the diaphragm may get damaged and the center rod may bend.

CAUTION

- Keep a vessel below the relief valve for any drain off.
- Be careful! - Fluid under pressure will gush out the moment you open the valve.
- If the pump is unused for a prolonged period, purge and clean it.

Daily check

Before starting pump operation, conduct the following check procedures every day. In case there appears any

irregularity, do NOT start running the pump until the cause of the irregularity has been determined and corrective measures have been taken.

a) Make sure that there is no leakage of fluid from any connection part or the pump.

b) Make sure that there are no cracks in the pump casing or piping.

c) Check the tightness of every bolt of the pump.

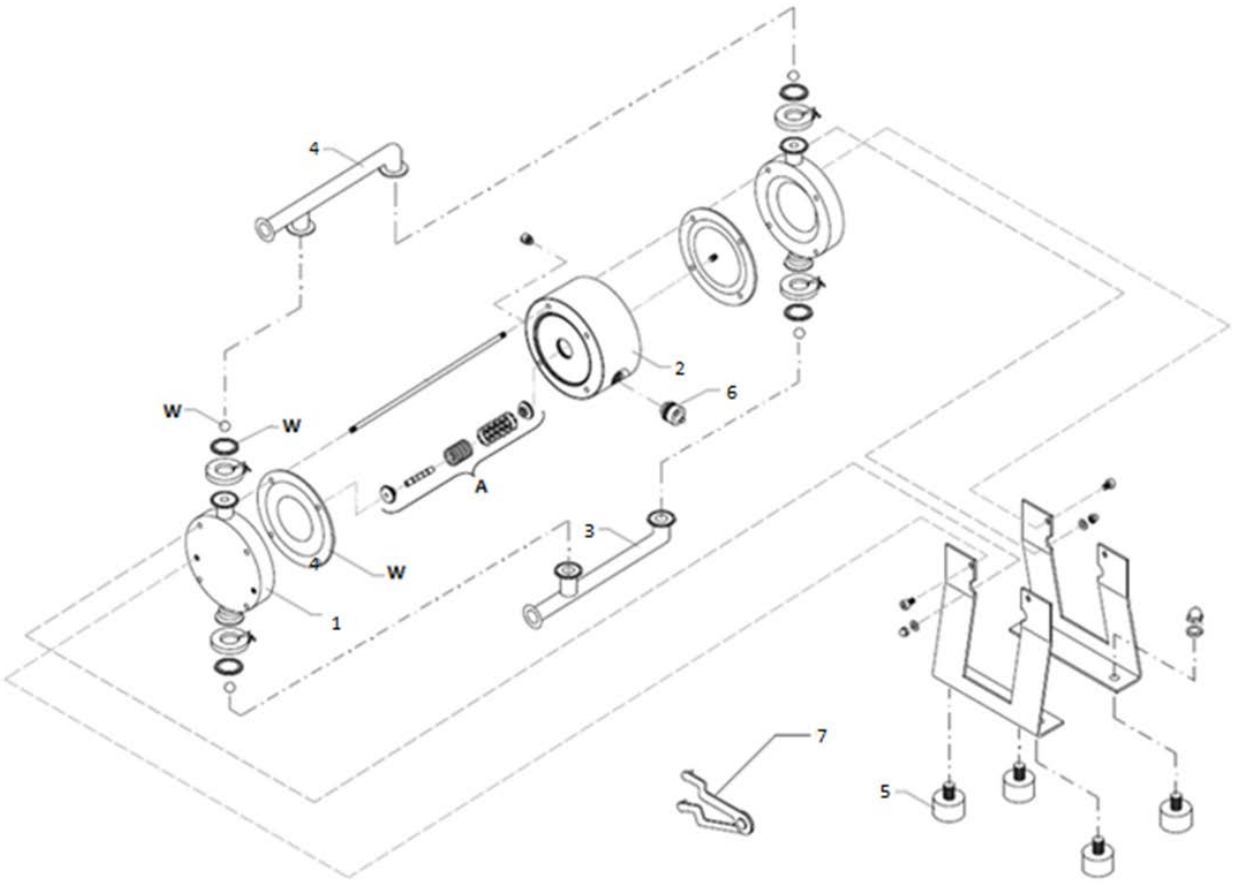
d) Make sure that the connection parts of the piping and peripheral equipment are not loose.

e) Make sure that any parts of the pump that are to be replaced at regular intervals have been changed.

Maximum Torque Specifications	
Torque values for housing bolts	
Pump Size	
H038	79 in-lbs (9 N-m)
H050	89 in-lbs (10 N-m)
H100	124 in-lbs (14 N-m)
H150	150 in-lbs (17 N-m)
H200	195 in-lbs (22 N-m)
H300	398 in-lbs (45 N-m)

Exploded View & Parts List

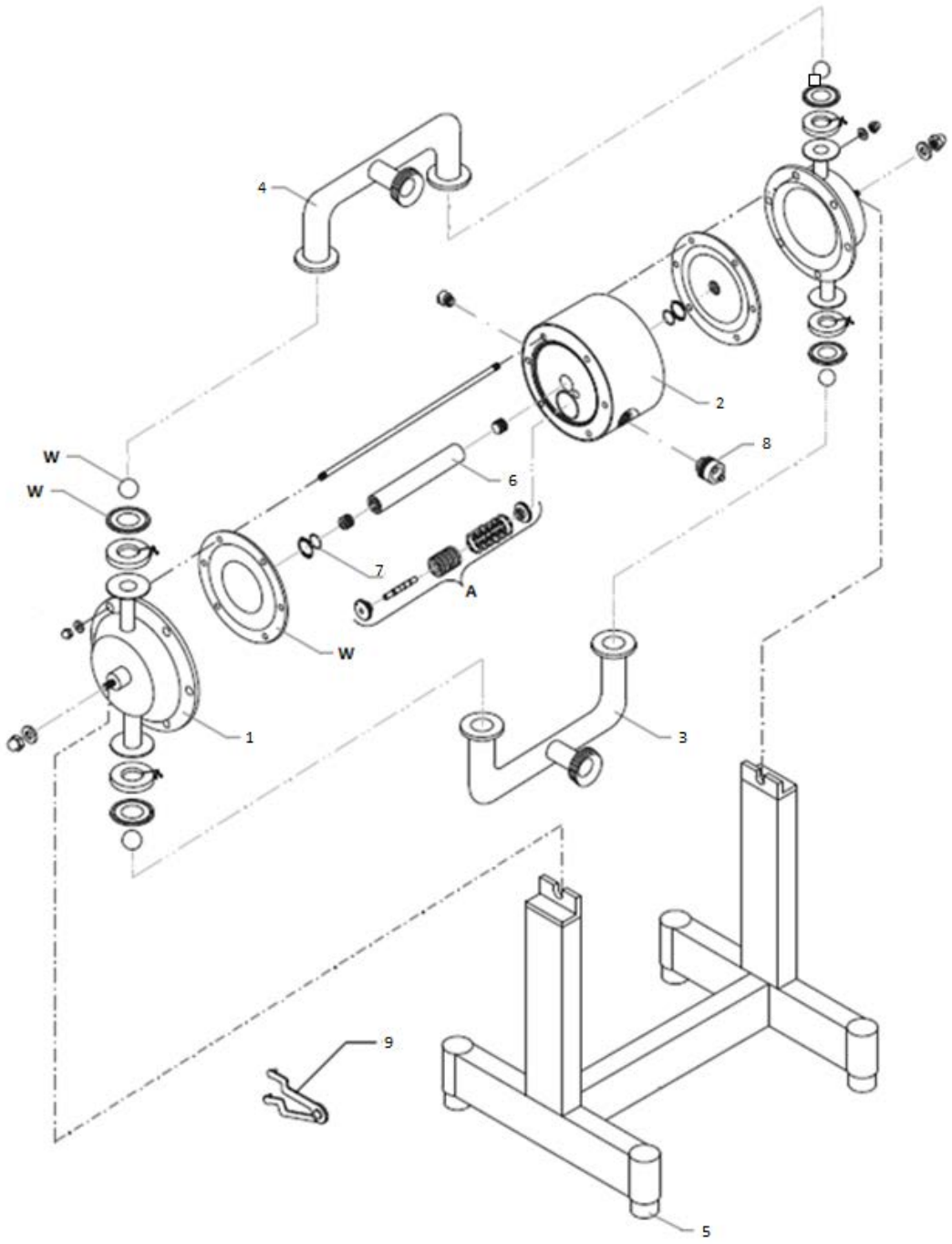
H038



Parts List for H038

H038				
ITEM	**PART NUMBER**	**QTY**	**DESCRIPTON**	**MATERIAL**
1	HP-4 15 01 53	2	Pump housing	AISI 316 L
2	HP-1 10 10 20	1	Center housing	PE
	HP-1 10 10 21			PE cond.
3	HP-4 15 30 53	1	Manifold inlet DIN	AISI 316 L
	HP-4 15 32 53		Manifold inlet TC	AISI 316 L
4	HP-4 15 33 53	1	Manifold outlet DIN	AISI 316 L
	HP-4 15 35 53		Manifold outlet TC	AISI 316 L
5	HP-1 15 69 52	4	Shock absorber	NR/SS
6	HP-1 08 99 35	1	Muffler	PE porous
7	HP-1 08 58 00	1	Air valve key (SK4)	Various
REPAIR KITS				
A	HAK-038	KIT	Air valve	PET/NBR
W	HWE-038-NTTN	KIT	BUNA-N WET KIT	
	HWE-038-ETTE	KIT	EPDM WET KIT	
	HWE-038-PTTT	KIT	PTFE WET KIT	

H050, H100



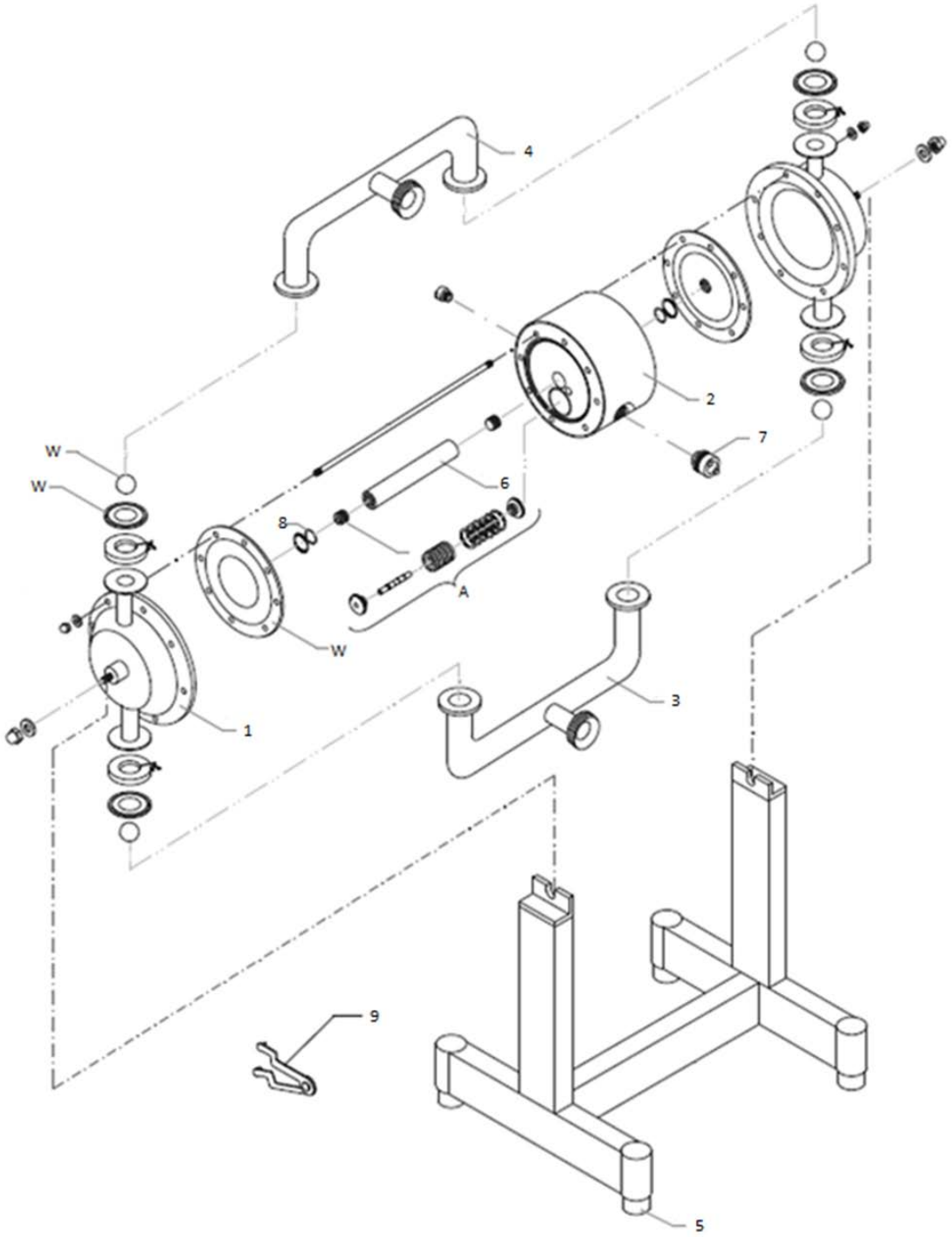
Parts List for H050 Pumps

H050				
ITEM	**PART NUMBER**	**QTY**	**DESCRIPTON**	**MATERIAL**
1	HP-4 25 01 53	2	Pump housing	AISI 316 L
2	HP-1 15 10 20	1	Center housing	PE
	HP-1 15 10 21			PE conductive
3	HP-4 25 30 53	1	Manifold inlet DIN	AISI 316 L
	HP-4 25 31 53		Manifold inlet SMS	AISI 316 L
	HP-4 25 32 53		Manifold inlet TC	AISI 316 L
4	HP-4 25 33 53	1	Manifold outlet DIN	AISI 316 L
	HP-4 25 34 53		Manifold outlet SMS	AISI 316 L
	HP-4 25 35 53		Manifold outlet TC	AISI 316 L
5	HP-1 15 69 52	4	Shock absorber	NR/SS
6	HP-1 15 40 50	1	Shaft	AISI 304
7	HP-1 15 85 22	2	Center housing seal	PE
8	HP-1 15 99 35	1	Muffler	PE porous
9	HP-1 08 58 00	1	Air valve key (SK4)	diverse
REPAIR KITS				
A	HAK-050	1	Air valve	PET/NBR
W	HWE-050-NTTN	KIT	BUNA-N WET KIT	
	HWE-050-ETTE	KIT	EPDM WET KIT	
	HWE-050-PTTT	KIT	PTFE WET KIT	

Parts List for H100 Pumps

H100				
ITEM	**PART NUMBER**	**QTY**	**DESCRIPTON**	**MATERIAL**
1	HP-4 40 01 53	2	Pump housing	AISI 316 L
2	HP-1 25 10 20	1	Center housing	PE
	HP-1 25 10 21			PE conductive
3	HP-4 40 30 53	2	Manifold inlet DIN	AISI 316 L
	HP-4 40 31 53		Manifold inlet SMS	AISI 316 L
	HP-4 40 32 53		Manifold inlet TC	AISI 316 L
4	HP-4 40 33 53	2	Manifold outlet DIN	AISI 316 L
	HP-4 40 34 53		Manifold outlet SMS	AISI 316 L
	HP-4 40 35 53		Manifold outlet TC	AISI 316 L
5	HP-1 15 69 52	4	Shock absorber	NR/SS
6	HP-1 25 40 50	1	Shaft	AISI 304
7	HP-1 15 99 35	1	Muffler	PE porous
8	HP-1 25 85 22	2	Center housing seal	PE
9	HP-1 08 58 00	1	Air valve key (SK4)	diverse
REPAIR KITS				
A	HAK-100	1	Air valve	PET/NBR
W	HWE-100-NTTN	KIT	BUNA-N WET KIT	
	HWE-100-ETTE	KIT	EPDM WET KIT	
	HWE-100-PTTT	KIT	PTFE WET KIT	

H150, H200



Parts List for H150 Pumps

H150				
ITEM	**PART NUMBER**	**QTY**	**DESCRIPTON**	**MATERIAL**
1	HP-4 50 01 53	2	Pump housing	AISI 316 L
2	HP-1 40 10 20	1	Center housing	PE
	HP-1 40 10 21			PE conductive
3	HP-4 50 30 53	2	Manifold inlet DIN	AISI 316 L
	HP-4 50 31 53		Manifold inlet SMS	AISI 316 L
	HP-4 50 32 53		Manifold inlet TC	AISI 316 L
4	HP-4 50 33 53	2	Manifold outlet DIN	AISI 316 L
	HP-4 50 34 53		Manifold outlet SMS	AISI 316 L
	HP-4 50 35 53		Manifold outlet TC	AISI 316 L
5	HP-1 15 69 52	4	Shock absorber	NR/SS
6	HP-1 40 40 50	1	Shaft	AISI 304
7	HP-1 40 99 35	1	Muffler	PE porous
8	HP-1 40 85 22	2	Center housing seal	PE
9	HP-1 08 58 00	1	Air valve key (SK4)	diverse
REPAIR KITS				
A	HAK-150	1	Air valve	PET/NBR
W	HWE-150-NTTN	KIT	BUNA-N WET KIT	
	HWE-150-ETTE	KIT	EPDM WET KIT	
	HWE-150-PTTT	KIT	PTFE WET KIT	

Parts List for H200 Pumps

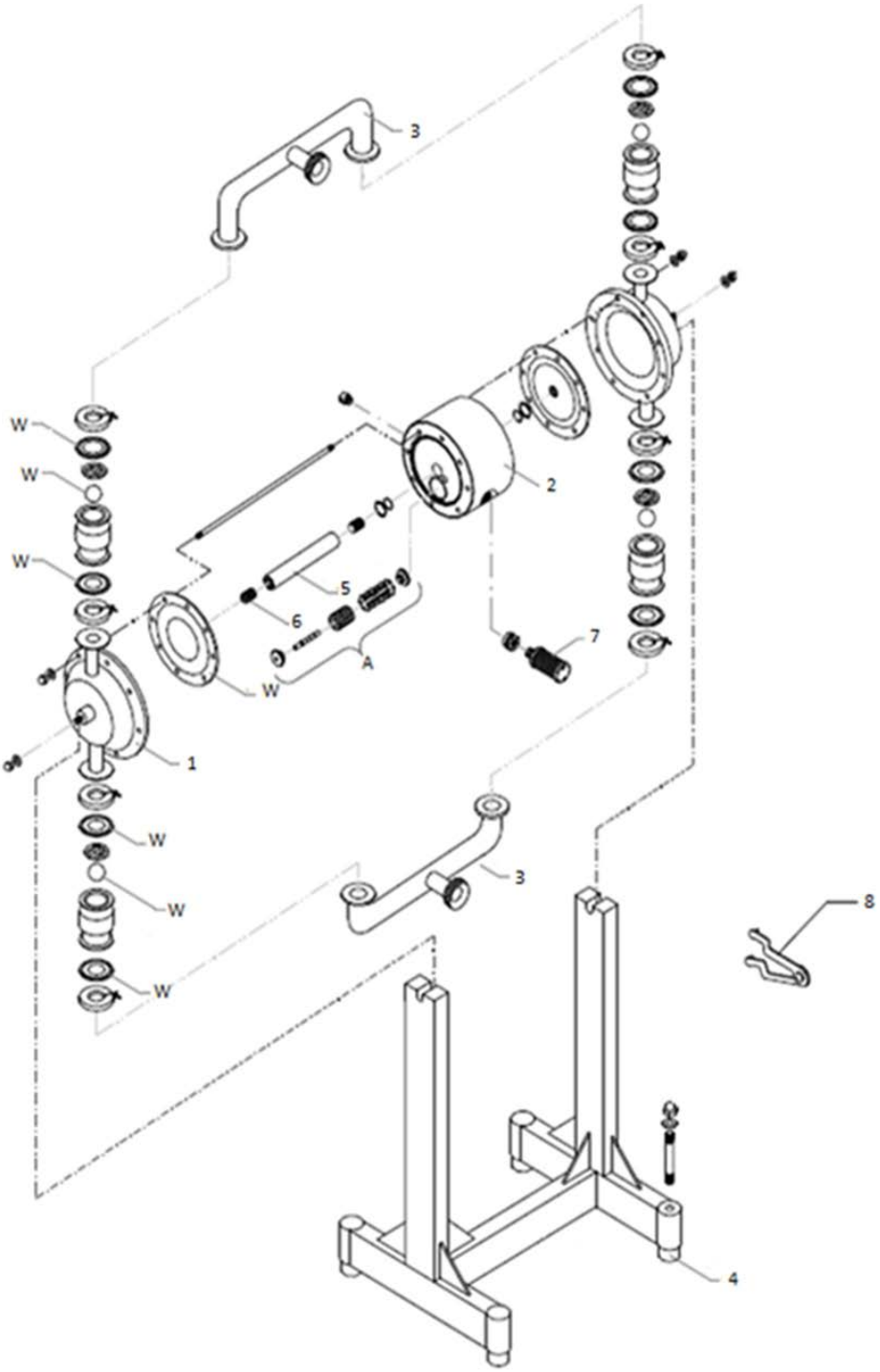
				A150	**A200**
1	2	Pump housing	PE	HP-2 40 01 20	HP-2 50 01 20
			PTFE	HP-2 40 01 23	HP-2 50 01 23
			PE conductive	HP-2 40 01 21	HP-2 50 01 21
			PTFE conductive	HP-2 40 01 24	HP-2 50 01 24
2	1	Center housing	PE	HP-1 40 10 20	HP-1 50 10 20
			PE conductive	HP-1 40 10 21	HP-1 50 10 21
3	2	Suction/Discharge ports	PE	HP-2 40 30 20	HP-2 50 30 20
			PTFE	HP-2 40 30 23	HP-2 50 30 23
			PE conductive	HP-2 40 30 21	HP-2 50 30 21
			PTFE conductive	HP-2 40 30 24	HP-2 50 30 24
			AISI 316L	HP-2 40 35 53	HP-2 50 35 53
		Suction/discharge ports-twin	PE	HP-2 40 31 20	HP-2 50 31 20
			PTFE	HP-2 40 31 23	HP-2 50 31 23
			PE conductive	HP-2 40 31 21	HP-2 50 31 21
			PTFE conductive	HP-2 40 31 24	HP-2 50 31 24
4	2	Diaphragm	TFM/PTFE	HP-1 40 50 05	HP-1 50 50 05
			EPDM	HP-1 40 50 08	HP-1 50 50 08
			NBR	HP-1 40 50 10	HP-1 50 50 10
5	4	Cylinder valves	PE	HP-2 40 56 20	HP-2 50 56 20
			PTFE	HP-2 40 56 23	HP-2 50 56 23
	4	Valve balls	PTFE	HP-1 40 60 23	HP-1 50 60 23
			EPDM	HP-1 40 60 08	HP-1 50 60 08

			NBR	HP-1 40 60 10	HP-1 50 60 10
			AISI 316	HP-1 40 60 52	HP-1 50 60 52
			Polyurethane	HP-1 40 60 07	HP-1 50 60 07
7	4	Sealing inlet/outlet - SET	EPDM/EPDM	HP-2 40 70 08	HP-2 50 70 08
			PTFE/FPM	HP-2 40 73 14	HP-2 50 73 14
			PTFE/EPDM	HP-2 40 73 15	HP-2 50 73 15
			PTFE-c./FPM	HP-2 40 73 16	HP-2 50 73 16
			PTFE-c./EPDM	HP-2 40 73 17	HP-2 50 73 17
9	8	Housing bolt	AISI 304	HP-2 40 042 50	HP-2 50 042 50
11	4	Shock absorber	NR/St37	HP-1 40 69 06	HP-1 40 69 06
12	16	Nut with washer	AISI 304	HP-2 40 045 50	HP-2 50 045 50
13	1	Air valve	PET/NBR	HP-1 40 020 31	HP-1 40 020 31
			PET/FPM	HP-1 40 020 32	HP-1 40 020 32
14	1	Shaft	AISI 304	HP-1 40 40 50	HP-1 50 40 50
15	6	O-ring	NBR	HP-1 40 87 10	HP-1 40 87 10
			FPM	HP-1 40 87 09	HP-1 40 87 09
16	2	Center housing seal	PE	HP-1 40 85 22	HP-1 50 85 22
17	1	Muffler	PE porous	HP-1 40 99 35	HP-1 50 99 35
18	1	Air adapter	PP	HP-1 40 46 28	HP-1 40 46 28
22	4	Valve seat	PE	HP-2 40 54 20	HP-2 50 54 20
			PTFE	HP-2 40 54 23	HP-2 50 54 23
			PE conductive	HP-2 40 54 21	HP-2 50 54 21
			PTFE conductive	HP-2 40 54 24	HP-2 50 54 24
24	2	Plug lower	PE	HP-2 40 59 20	HP-2 50 59 20
			PTFE	HP-2 40 59 23	HP-2 50 59 23
			PE conductive	HP-2 40 59 21	HP-2 50 59 21
			PTFE conductive	HP-2 40 59 24	HP-2 50 59 24
25	2	Plug upper	PE	HP-2 40 055 20	HP-2 50 055 20
			PTFE	HP-2 40 055 23	HP-2 50 055 23
			PE conductive	HP-2 40 055 21	HP-2 50 055 21
			PTFE conductive	HP-2 40 055 24	HP-2 50 055 24
26	2	Valve stopper	PE	HP-2 40 39 20	HP-2 50 39 20
			PTFE	HP-2 40 39 23	HP-2 50 39 23
			PE conductive	HP-2 40 39 21	HP-2 50 39 21
			PTFE conductive	HP-2 40 39 24	HP-2 50 39 24
27	2	Bolt	PE	HP-2 40 38 20	HP-2 50 38 20
			PTFE	HP-2 40 38 23	HP-2 50 38 23
			PE conductive	HP-2 40 38 21	HP-2 50 38 21
			PTFE conductive	HP-2 40 38 24	HP-2 50 38 24
28	2	Plug upper sealing	FEP/FPM	HP-2 40 78 04	HP-2 50 78 04
			EPDM	HP-2 40 78 08	HP-2 50 78 08
30	2	O-ring for center housing seal	NBR	HP-1 40 85 10	HP-1 50 85 10
35	1	Center housing complete	PE	HP-1 40 11 20	HP-1 50 11 20
			PE conductive	HP-1 40 11 21	HP-1 50 11 21

70	16	Pump housing plug	PE	HP-2 40 058 20	HP-2 50 058 20
82	2	Shaft allen pin screw	AISI 304	HP-1 40 540 50	HP-1 50 540 50
97	1	Valve seat key	AISI 304	HP-1 40 254 50	HP-1 50 254 50
99	1	Upper/lower plugs and air valve key (SK3, SK4)	diverse	HP-1 08 58 00	HP-1 08 58 00

H200				
ITEM	**PART NUMBER**	**QTY**	**DESCRIPTON**	**MATERIAL**
1	HP-4 65 01 53	2	Pump housing	AISI 316 L
2	HP-1 50 10 20	1	Center housing	PE
	HP-1 50 10 21			PE conductive
3	HP-4 65 30 53	2	Manifold inlet DIN	AISI 316 L
	HP-4 65 31 53		Manifold inlet SMS	AISI 316 L
	HP-4 65 32 53		Manifold inlet TC	AISI 316 L
4	HP-4 65 33 53	2	Manifold outlet DIN	AISI 316 L
	HP-4 65 34 53		Manifold outlet SMS	AISI 316 L
	HP-4 65 35 53		Manifold outlet TC	AISI 316 L
5	HP-1 15 69 52	4	Shock absorber	NR/SS
6	HP-1 50 40 50	1	Shaft	AISI 304
7	HP-1 50 99 35	1	Muffler	PE porous
8	HP-1 50 85 22	2	Center housing seal	PE
9	HP-1 08 58 00	1	Air valve key (SK4)	diverse
REPAIR KITS				
A	HAK-200	1	Air valve	PET/NBR
W	HWE-200-NTTN	KIT	BUNA-N WET KIT	
	HWE-200-ETTE	KIT	EPDM WET KIT	
	HWE-200-PTTT	KIT	PTFE WET KIT	

H300



Parts List for H300

				A300
1	2	Pump housing	PE	HP-2 80 01 20
			PE conductive	HP-2 80 01 21
2	1	Center housing	PE	HP-1 80 10 20
			PE conductive	HP-1 80 10 21
3	1	Suction port	PE	HP-2 80 25 20
			PE conductive	HP-2 80 25 21
	1	Discharge port	PE	HP-2 80 025 20
			PE conductive	HP-2 80 025 21
4	2	Diaphragm	TFM/PTFE	HP-1 80 50 05
			EPDM	HP-1 80 50 08
			NBR	HP-1 80 50 10
5	4	Valve balls	PTFE	HP-1 80 60 23
			EPDM	HP-1 80 60 08
			NBR	HP-1 80 60 10
7	4	Sealing inlet/outlet - SET	EPDM/EPDM	HP-2 80 70 08
			PTFE/FPM	HP-2 80 73 14
			PTFE/EPDM	HP-2 80 73 15
			PTFE-c./FPM	HP-2 80 73 16
			PTFE-c./EPDM	HP-2 80 73 17
9	8	Housing bolt	AISI 304	HP-2 80 042 50
11	4	Shock absorber	NR/St37	HP-1 80 69 06
12	16	Nut with washer, cpl.	AISI 304	HP-2 80 045 50
13	1	Air valve	PET/NBR	HP-1 80 020 31
			PET/FPM	HP-1 80 020 32
14	1	Shaft	AISI 304	HP-1 80 40 50
15	6	O-ring	NBR	HP-1 40 87 10
			FPM	HP-1 40 87 09
16	2	Center housing seal	PE	HP-1 80 85 22
17	1	Muffler	Diverse	HP-1 80 99 00
18	1	Air adapter	PP	HP-1 80 46 28
22	4	Valve seat	PE	HP-2 80 54 20
			PE-conductive	HP-2 80 54 21
24	2	Plug lower	PE	HP-2 80 59 20
			PE-conductive	HP-2 80 59 21
25	2	Plug upper	PE	HP-2 80 55 20
			PE conductive	HP-2 80 55 21
26	2	Valve stopper	PE	HP-2 80 39 20
			PE conductive	HP-2 80 39 21
27	4	Bolt	PE	HP-2 80 38 20
			PE conductive	HP-2 80 38 21
28	2	Plug upper sealing	FEP/FPM	HP-2 80 78 04
			EPDM	HP-2 80 78 08
			NBR	HP-2 80 78 10
30	2	O-ring for center housing seal	NBR	HP-1 80 85 10
35	1		PE	HP-1 80 11 20

		Center housing complete	PE conductive	HP-1 80 11 21
70	16	Pump housing plug	PE	HP-2 80 058 20
82	2	Shaft allen pin screw	AISI 304	HP-1 80 540 50
83	1	Muffler adapter	PE	HP-1 80 299 20
97	1	Valve seat key	AISI 304	HP-1 80 254 50
98	1	Upper/lower plugs key (SK5)	diverse	HP-1 80 158 00
99	1	Air valve (SK4)	diverse	HP-1 08 58 00

H300				
ITEM	**PART NUMBER**	**QTY**	**DESCRIPTON**	**MATERIAL**
1	HP-4 80 01 53	2	Pump housing	AISI 316 L
2	HP-1 80 10 20	1	Center housing	PE
	HP-1 80 10 21			PE conductive
3	HP-4 80 30 53	2	Manifold inlet/outlet DIN	AISI 316 L
	HP-4 80 31 53		Manifold inlet/outlet SMS	AISI 316 L
	HP-4 80 32 53		Manifold inlet/outlet TC	AISI 316 L
4	HP-1 80 69 53*	4	Shock absorber	AISI 316L
5	HP-1 80 40 50	1	Shaft	AISI 304
6	HP-1 80 85 22	2	Center housing seal	PE
7	HP-1 80 99 00	1	Muffler	diverse
8	HP-1 80 58 00	1	Air valve key (SK4)	diverse
REPAIR KITS				
A	HAK-300	1	Air valve	PET/NBR
W	HWE-300-NTTN	KIT	BUNA-N WET KIT	
	HWE-300-ETTE	KIT	EPDM WET KIT	
	HWE-300-PTTT	KIT	PTFE WET KIT	

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WARRANTY. All All-Flo products shall be covered by the standard All-Flo Limited Warranty in effect at the time of shipment. This warranty (which may be modified by All-Flo at any time) provides:

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REGISTRATION FORM

Pump Model _____ Pump Serial Number _____

Company Name _____

Name _____ Email _____

Phone # _____ City _____ State _____ Zip _____

Qty of Pumps _____ Fluid Pumping _____

How did you hear about us? Existing All-Flo user,
Web, Distributor, Magazine...

_____

MAIL TO: All-Flo Pump Co. | Attn: Product Registration
PO BOX 1870 | Mentor, OH 44061

Scan QR code and
complete form
on mobile phone
or visit
www.all-flo.com/registration-form.html

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