



## PUMP OPERATION & MAINTENANCE MANUAL



T025 - T200 High Purity Air Operated Double Diaphragm Pump

# TABLE OF CONTENTS

<b>1. Warnings and Cautions</b>	<b>3</b>
<b>2. Pump Model Matrix</b>	<b>4</b>
<b>3. Pump Dimensions and Specifications</b>	<b>5-6</b>
<b>4. Performance Curves and Specifications</b>	<b>7-8</b>
T025, T038, T050	7
T100, T150, T200	8
<b>5. Installation, Troubleshooting and Maintenance</b>	<b>9-12</b>
Installation	9-10
Troubleshooting	11
Operation	12
Maintenance	13
Shut Down	14
<b>6. Torque Specifications</b>	<b>15</b>
<b>7. Exploded View and Parts List</b>	<b>15-26</b>
T025	16-17
T038	18-19
T050	20-21
T100	22-23
T150	24-25
T200	26-27
<b>8. Warranty and Registration</b>	<b>29</b>

# 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<sub>2</sub>O 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.

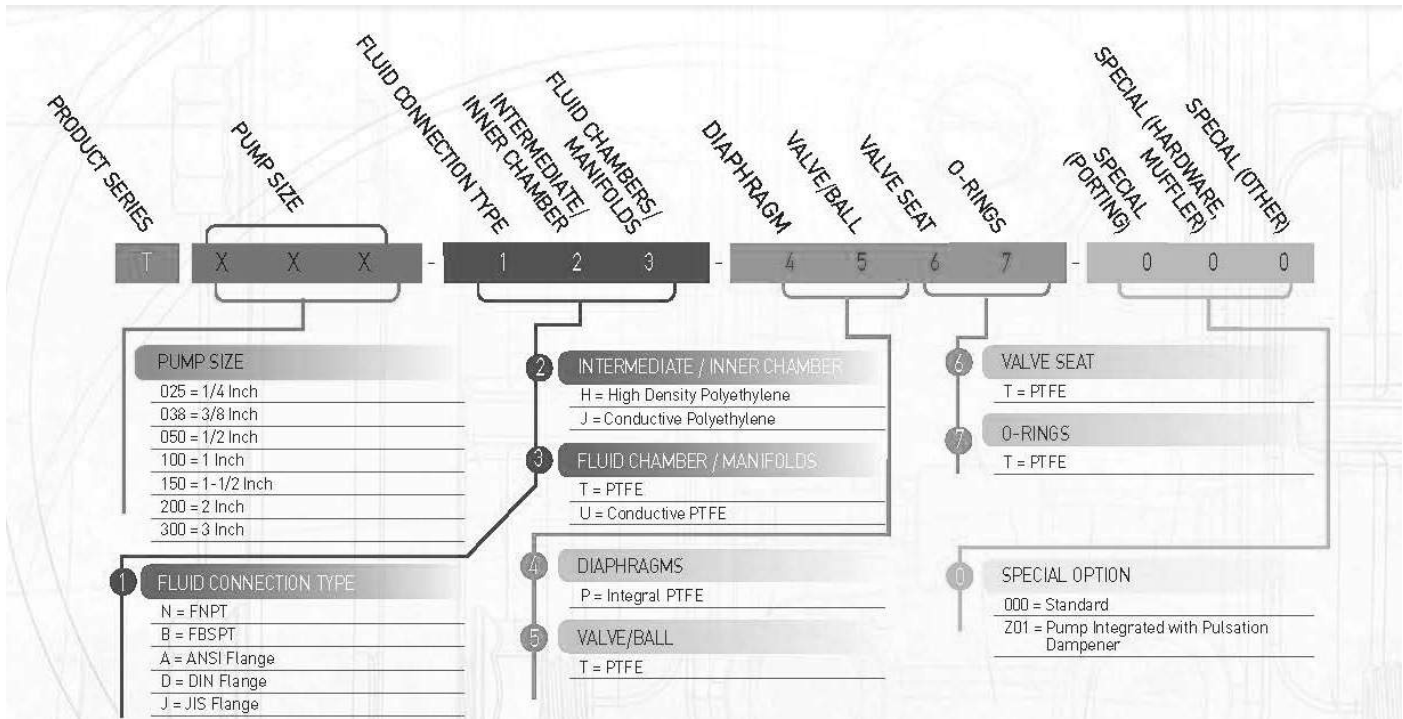
**⚠ CAUTION** Close and disconnect all compressed air and bleed all air from the pump prior to service. Remove all process fluid in a safe manner prior to service.

**⚠ 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.

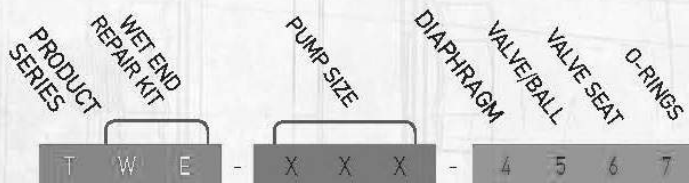
# Model Designation Matrix



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

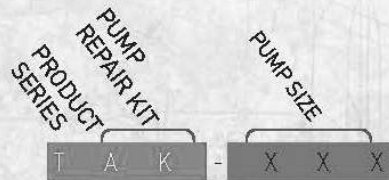
## WET END REPAIR KIT

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.



## CONNECTION TYPES

BSP & NPT

ANSI & DIN FLANGE



NON-CONDUCTIVE

CONDUCTIVE

# CONDUCTIVITY



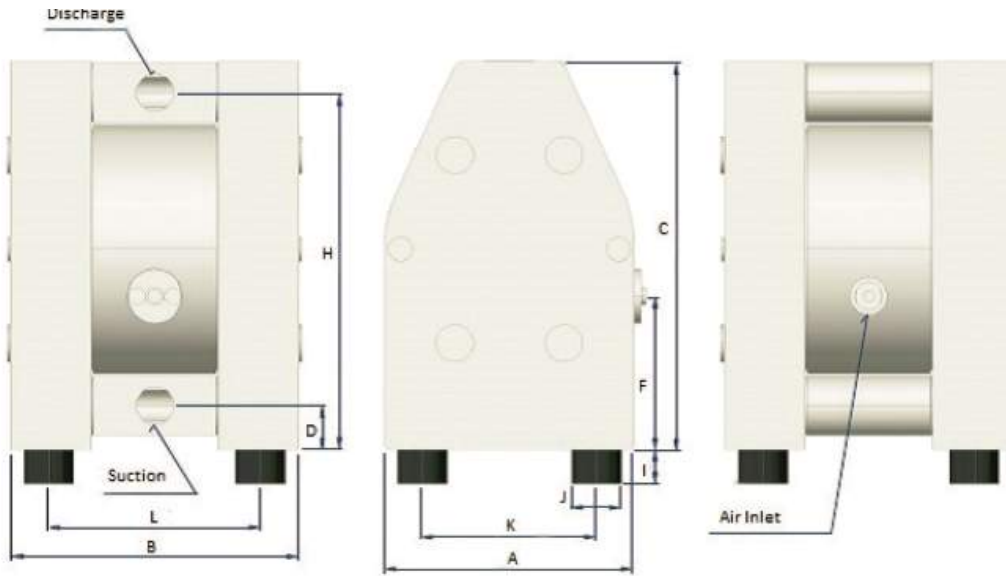
all-flo.com

## Pump Specifications

	T025	T038	T050	T100	T150	T200
<b>DIMENSION</b>						
Air Inlet	1/8"	1/8"	1/4"	1/4"	1/2"	1/2"
Liquid Inlet	1/4"	3/8"	1/2"	1"	1-1/2"	2"
Liquid Outlet	1/4"	3/8"	1/2"	1"	1-1/2"	2"
Weight	3.3 lbs (1.5 kg)	5.3 lbs (2.4 kg)	15 lbs (6.8 kg)	36.4 lbs (16.5 kg)	98.1 lbs (44.5 kg)	192 lbs (87 kg)
<b>PERFORMANCE</b>						
Max capacity	2.6 gpm (10 lpm)	6.4 gpm (25 lpm)	14.5 gpm (55 lpm)	33 gpm (125 lpm)	83 gpm (315 lpm)	150 gpm (565 lpm)
Max pressure	120 psi (8.2 bar)					
Max Solids	1/16" (2 mm)	1/8" (3 mm)	1/8" (4 mm)	1/4" (7 mm)	3/8" (10 mm)	7/16" (12 mm)
Suction lift dry	1.6 ft-H <sub>2</sub> O (0.5 m-H <sub>2</sub> O)	6.6 ft-H <sub>2</sub> O (2 m-H <sub>2</sub> O)	9.8 ft-H <sub>2</sub> O (3 m-H <sub>2</sub> O)	13.1 ft-H <sub>2</sub> O (4 m-H <sub>2</sub> O)	13.1 ft-H <sub>2</sub> O (4 m-H <sub>2</sub> O)	16.4 ft-H <sub>2</sub> O (5 m-H <sub>2</sub> O)
Suction lift wet	29.5 ft-H <sub>2</sub> O (9.0 m-H <sub>2</sub> O)					
Temperature limits	230°F (110°C)	230°F (110°C)	248°F (120°C)	248°F (120°C)	248°F (120°C)	248°F (120°C)

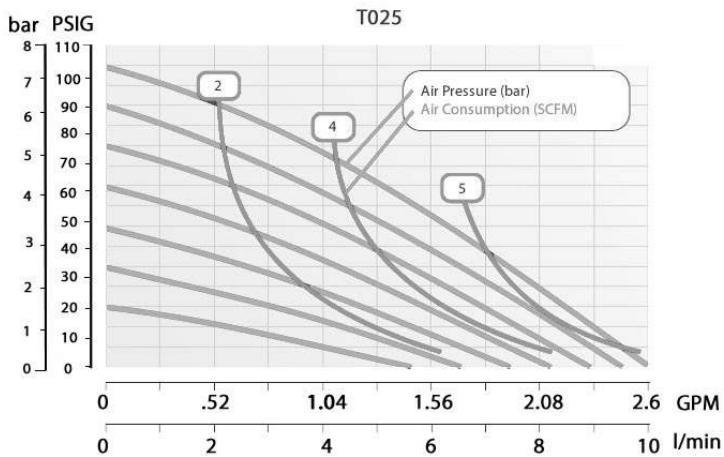


# Pump Dimensions

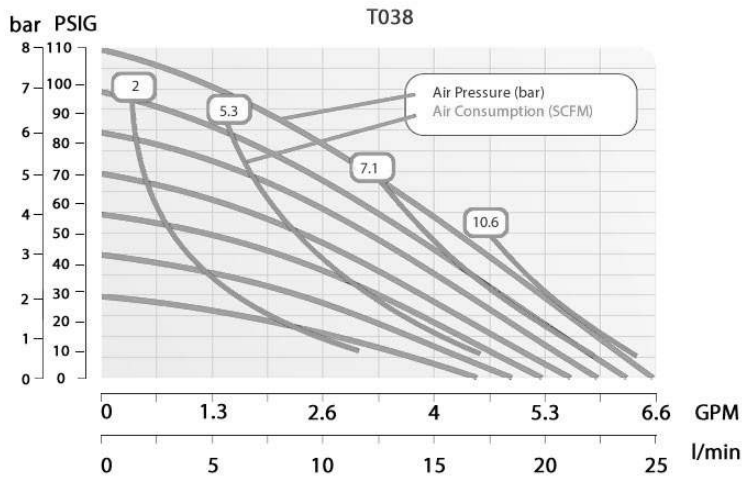


	A	B	C	D	F	H	I	J	K	L
T025	2.76" (70 mm)	4.5" (113 mm)	4.72" (120 mm)	.59" (15 mm)	2.28" (58 mm)	4.23" (107 mm)	.40" (10 mm)	.60" (15 mm)	1.97" (50 mm)	3.39" (86 mm)
T038	44.13" (105 mm)	5.04" (128 mm)	6.46" (164 mm)	.71" (18 mm)	3.31" (84 mm)	5.91" (150 mm)	.40" (10 mm)	.60" (15 mm)	2.95" (75 mm)	3.66" (93 mm)
T050	6.02" (153 mm)	6.97" (177 mm)	9.25" (235 mm)	.98" (25 mm)	3.43" (87 mm)	8.54" (217 mm)	.71" (18 mm)	1.18" (30 mm)	4.41" (112 mm)	5.35" (136 mm)
T100	7.78" (200 mm)	9.13" (232 mm)	12.28" (312 mm)	1.38" (35 mm)	4.84" (123 mm)	11.3" (287 mm)	1.10" (28 mm)	1.58" (40 mm)	5.51" (140 mm)	6.70" (170 mm)
T150	110.63" (270 mm)	12.28" (312 mm)	16.77" (426 mm)	1.65" (42 mm)	4.29" (109 mm)	15.28" (388 mm)	1.18" (30 mm)	2.36" (60 mm)	7.48" (190 mm)	8.94" (227 mm)
T200	113.78" (350 mm)	15.16" (385 mm)	21.26" (540 mm)	1.77" (45 mm)	6.22" (158 mm)	19.09" (485 mm)	1.18" (30 mm)	2.36" (60 mm)	10.63" (270 mm)	11.10" (282 mm)

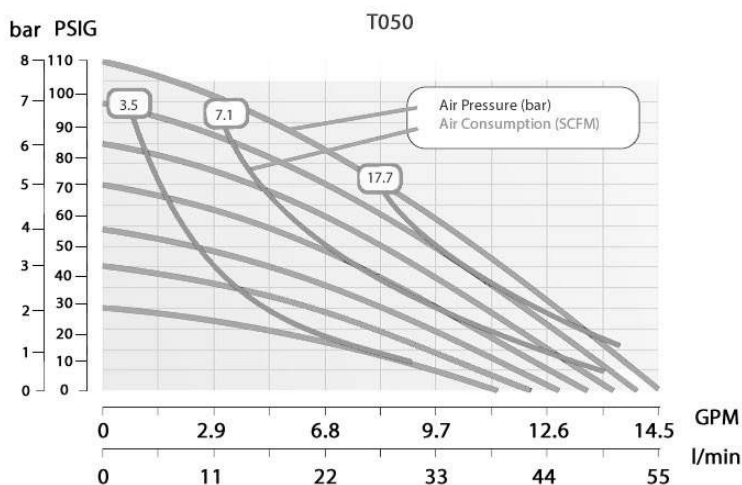
# Performance Curves



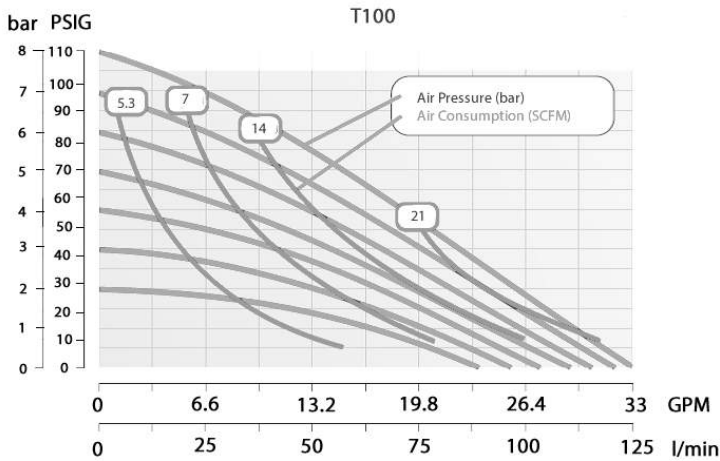
T025 Performance Specifications	
Max. Flow:	2.6 gpm (10 lpm)
Max. Air Pressure:	116 PSI (8 bar)
Max. Solids:	1/16" (2 mm)
Max. Suction Lift Dry:	1.6 ft-H <sub>2</sub> O (0.5 m-H <sub>2</sub> O)
Max. Suction Lift Wet:	29.5 ft-H <sub>2</sub> O (9 m-H <sub>2</sub> O)
Weight:	3.3 lbs (1.5 kg)
Air Inlet:	1/8"
Liquid Inlet:	1/4"
Liquid Outlet:	1/4"
Height:	5.12" (130 mm)
Width:	4.5" (114 mm)
Depth:	2.76" (70 mm)



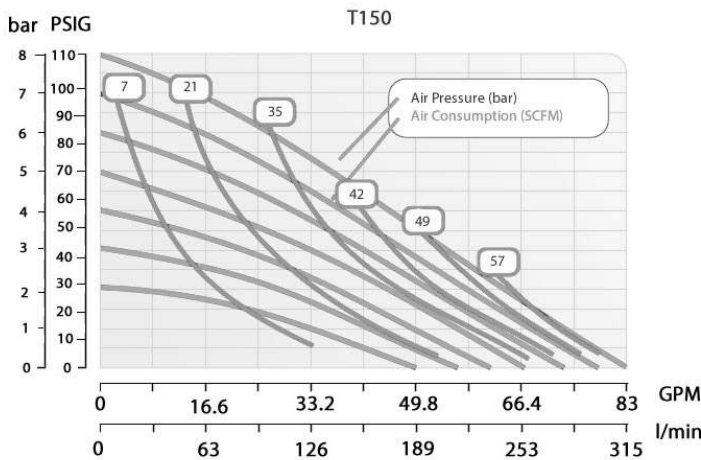
T038 Performance Specifications	
Max. Flow:	6.6 gpm (25 lpm)
Max. Air Pressure:	116 PSI (8 bar)
Max. Solids:	1/8" (3 mm)
Max. Suction Lift Dry:	6.6 ft-H <sub>2</sub> O (2 m-H <sub>2</sub> O)
Max. Suction Lift Wet:	29.5 ft-H <sub>2</sub> O (9 m-H <sub>2</sub> O)
Weight:	5.3 lbs (2.4 kg)
Air Inlet:	1/8"
Liquid Inlet:	3/8"
Liquid Outlet:	3/8"
Height:	6.86" (174 mm)
Width:	5.04" (128 mm)
Depth:	4.13" (105 mm)



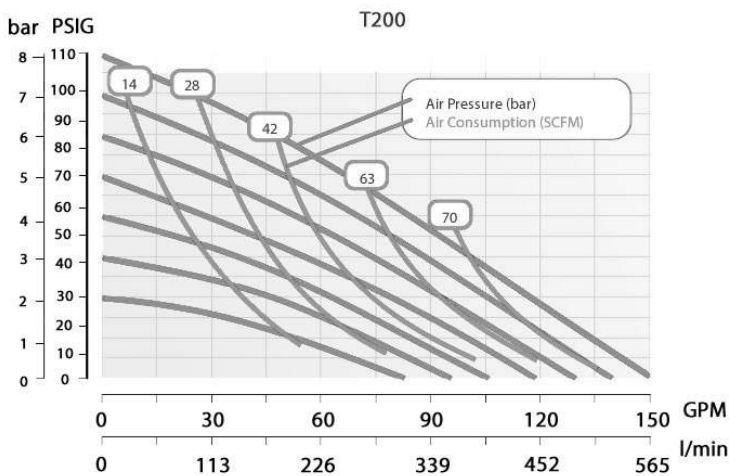
T050 Performance Specifications	
Max. Flow:	14.5 gpm (55 lpm)
Max. Air Pressure:	116 PSI (8 bar)
Max. Solids:	5/32" (4 mm)
Max. Suction Lift Dry:	9.8 ft-H <sub>2</sub> O (3 m-H <sub>2</sub> O)
Max. Suction Lift Wet:	29.5 ft-H <sub>2</sub> O (9 m-H <sub>2</sub> O)
Weight:	15 lbs (6.8 kg)
Air Inlet:	1/4"
Liquid Inlet:	1/2"
Liquid Outlet:	1/2"
Height:	9.96" (253 mm)
Width:	6.97" (177 mm)
Depth:	6.02" (153 mm)



T100 Performance Specifications	
Max. Flow:	33 gpm (125 lpm)
Max. Air Pressure:	116 PSI (8 bar)
Max. Solids:	9/32" (7 mm)
Max. Suction Lift Dry:	13.1 ft-H <sub>2</sub> O (4 m-H <sub>2</sub> O)
Max. Suction Lift Wet:	29.5 ft-H <sub>2</sub> O (9 m-H <sub>2</sub> O)
Weight:	36.4 lbs (16.5 kg)
Air Inlet:	1/4"
Liquid Inlet:	1"
Liquid Outlet:	1"
Height:	13.38" (340 mm)
Width:	19.13" (232 mm)
Depth:	7.78" (198 mm)



T150 Performance Specifications	
Max. Flow:	83 gpm (315 lpm)
Max. Air Pressure:	116 PSI (8 bar)
Max. Solids:	3/8" (10 mm)
Max. Suction Lift Dry:	13.1 ft-H <sub>2</sub> O (4 m-H <sub>2</sub> O)
Max. Suction Lift Wet:	29.5 ft-H <sub>2</sub> O (9 m-H <sub>2</sub> O)
Weight:	98.1 lbs (44.5 kg)
Air Inlet:	1/2"
Liquid Inlet:	1 1/2"
Liquid Outlet:	1 1/2"
Height:	17.95" (456 mm)
Width:	12.28" (312 mm)
Depth:	10.63" (270 mm)



T200 Performance Specifications	
Max. Flow:	150 gpm (565 lpm)
Max. Air Pressure:	116 PSI (8 bar)
Max. Solids:	15/32" (12 mm)
Max. Suction Lift Dry:	16.4 ft-H <sub>2</sub> O (5 m-H <sub>2</sub> O)
Max. Suction Lift Wet:	29.5 ft-H <sub>2</sub> O (9 m-H <sub>2</sub> O)
Weight:	192 lbs (87 kg)
Air Inlet:	1/2"
Liquid Inlet:	2"
Liquid Outlet:	2"
Height:	22.44" (570 mm)
Width:	15.16" (385 mm)
Depth:	13.78" (350 mm)



# 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

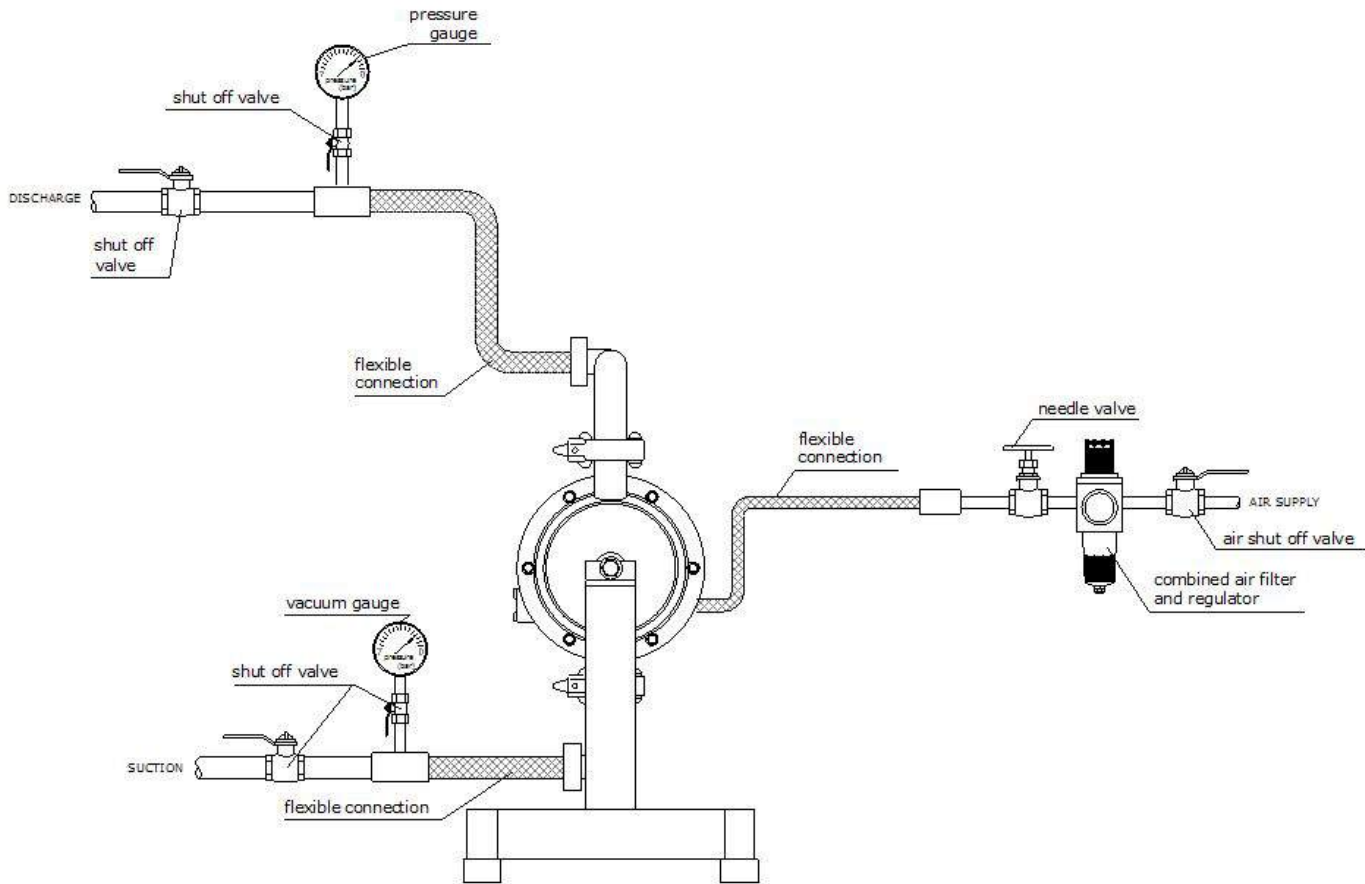
## Noise

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

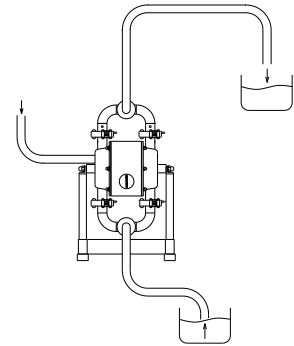
# Installation



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.

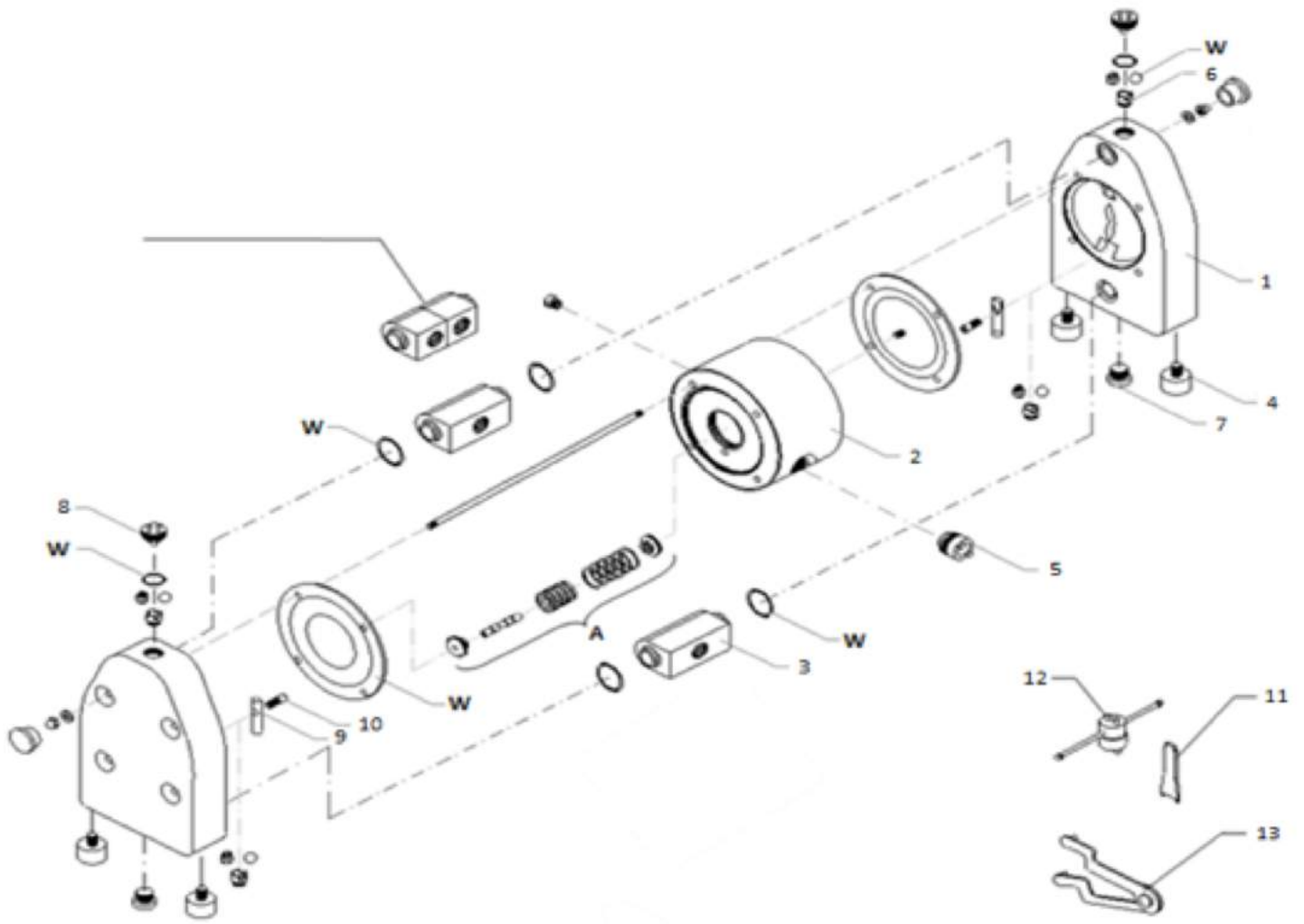
- a) Make sure that there is no leakage of fluid from any connection part or the pump.
- b) Make sure that there are no cracks in the pump casing or piping.
- c) Check the tightness of every bolt of the pump.
- d) Make sure that the connection parts of the piping and peripheral equipment are not loose.
- 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	
T025	18 in-lbs (2 N-m)
T038	44 in-lbs (5 N-m)
T050	62 in-lbs (7 N-m)
T100	97 in-lbs (11 N-m)
T150	133 in-lbs (15 N-m)
T200	168 in-lbs (19 N-m)

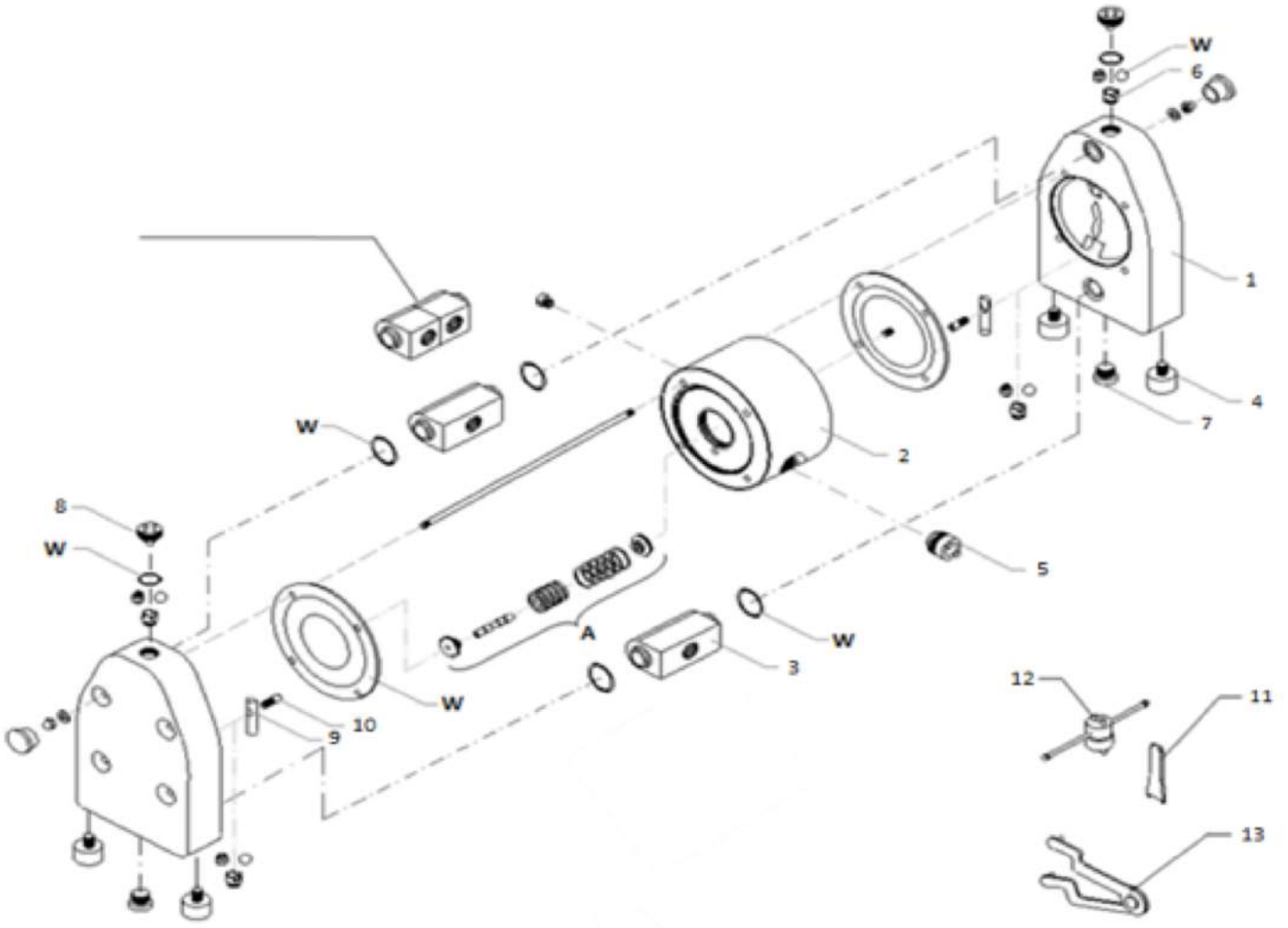
# T025 - EXPLODED VIEW



## T025 - PARTS LIST

ITEM	PART NUMBER	QTY	DESCRIPTION	MATERIAL	
1	HP-2 08 01 23	2	Pump housing	PTFE	
	HP-2 08 01 24			Conductive PTFE	
2	HP-1 08 10 20	1	Center housing	PE	
	HP-1 08 10 21			Conductive PE	
3	HP-2 08 30 23	2	Suction/Discharge ports BSP	PTFE	
	HP-2 08 30 23		Suction/Discharge ports NPT	PTFE	
	n/a		Suction/Discharge ports-twin (split connection) NPT	PTFE	
	n/a		Suction/Discharge ports-twin (split connection) BSP	PTFE	
	HP-2 08 33 23	1	Suction port-drum	PTFE	
4	HP-1 08 69 06	4	Shock absorber	NR/St37	
5	HP-1 08 99 35	1	Muffler	PE porous	
6	HP-2 08 54 23	4	Valve seat	PTFE	
7	HP-2 08 59 23	2	Plug lower	PTFE	
8	HP-2 08 055 23	2	Plug upper	PTFE	
9	HP-2 08 39 23	2	Valve stopper	PTFE	
10	HP-2 08 38 23	2	Bolt	PTFE	
11	HP-1 08 254 50	1	Valve seat key	AISI 304	
12	HP-1 08 158 00	1	Upper/lower plug key (SK1,*- SK2)	diverse	
13	HP-1 08 58 00	1	Air valve key (SK4)	diverse	
<b>REPAIR KITS</b>					
A	TAK-025	KIT	Air valve	PET/NBR	
W	TWE-025-PTTT	KIT	PTFE WET KIT		
			2	Diaphragm	TFM /PTFE
			4	Valve balls	PTFE
			4	Sealing inlet/outlet	FEP/FPM
			2	Plug upper sealing	FEP/FPM
			1	Muffler	PE porous

# T038 - EXPLODED VIEW

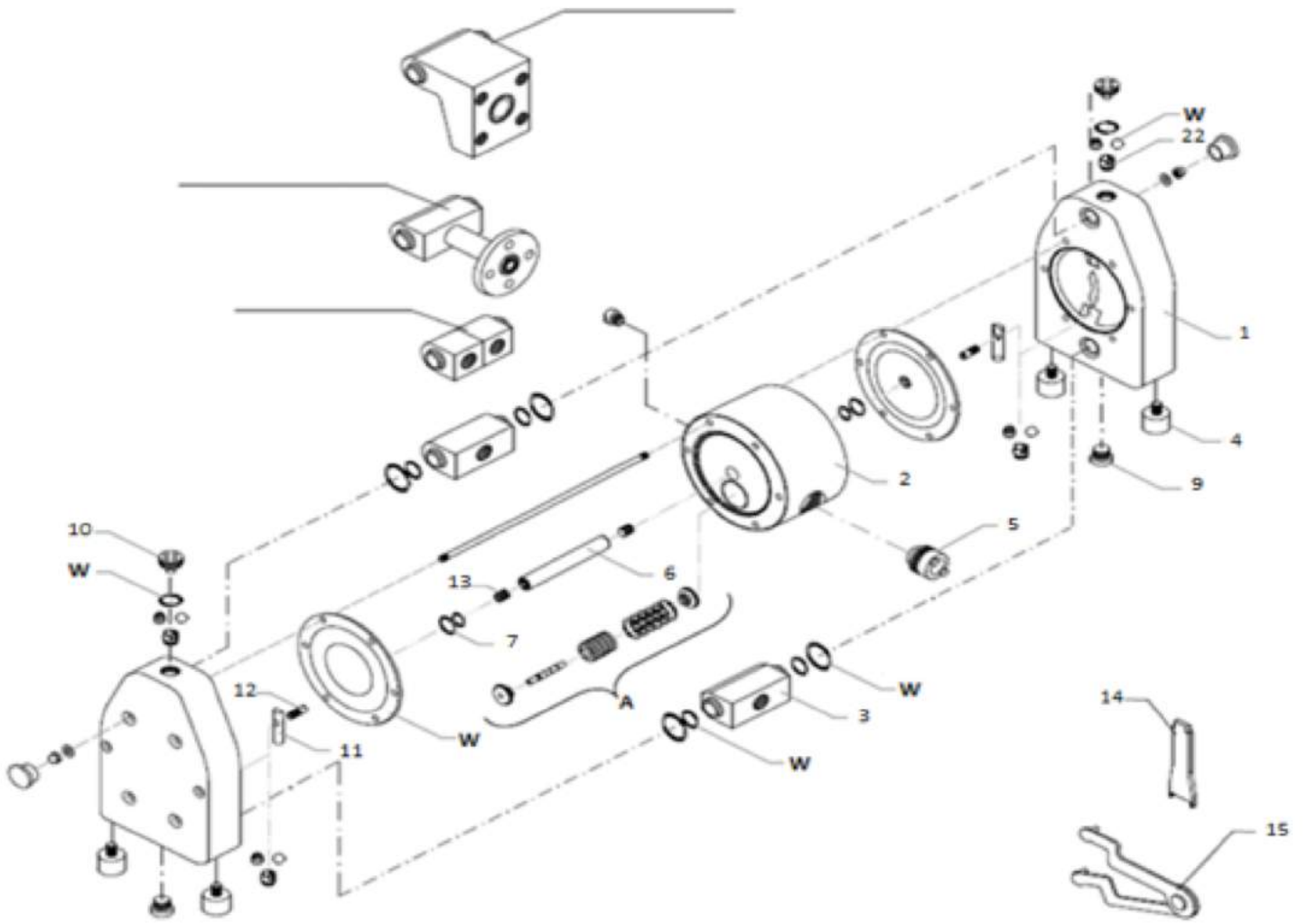




## T038 - PARTS LIST

ITEM	PART NUMBER	QTY	DESCRIPTION	MATERIAL
1	HP-2 10 01 23	2	Pump housing	PTFE
	HP-2 10 01 24			Conductive PTFE
2	HP-1 10 10 20	1	Center housing	PE
	HP-1 10 10 21			Conductive PE
3	HP-2 10 30 23	2	Suction/Discharge ports BSP	PTFE
	HP-2 10 30 23		Suction/Discharge ports NPT	PTFE
	HP-2 10 31 23NPT		Suction/Discharge ports-twin (split connection) NPT	PTFE
	HP-2 10 31 23BSP		Suction/Discharge ports-twin (split connection) BSP	PTFE
	HP-2 10 33 23	1	Suction port-drum	PTFE
4	HP-1 08 69 06	4	Shock absorber	NR/St37
5	HP-1 08 99 35	1	Muffler	PE porous
6	HP-2 10 54 23	4	Valve seat	PTFE
7	HP-2 10 59 23	2	Plug lower	PTFE
8	HP-2 10 055 23	2	Plug upper	PTFE
9	HP-2 10 39 23	2	Valve stopper	PTFE
10	HP-2 10 38 23	2	Bolt	PTFE
11	HP-1 10 254 50	1	Valve seat key	AISI 304
12	HP-1 10 158 00*	1	Upper/lower plug key (SK1,*- SK2)	diverse
13	HP-1 08 58 00	1	Air valve key (SK4)	diverse
<b>REPAIR KITS</b>				
A	TAK-038	KIT	Air valve	PET/NBR
W	TWE-038-PTTT	KIT	PTFE WET KIT	
		2	Diaphragm	TFM /PTFE
		4	Valve balls	PTFE
		4	Sealing inlet/outlet	FEP/FPM
		2	Plug upper sealing	FEP/FPM
		1	Muffler	PE porous

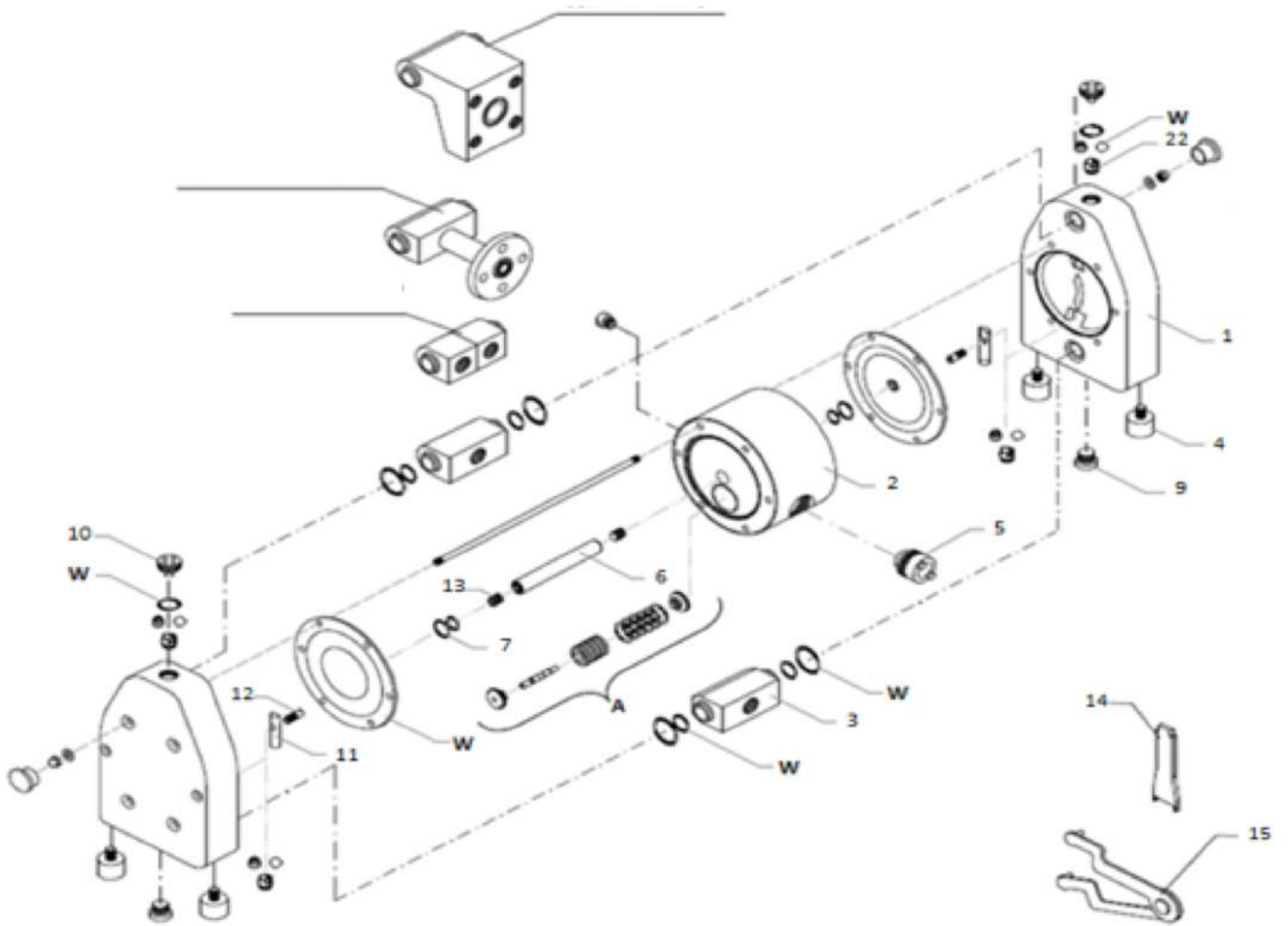
# T050 – EXPLODED VIEW



## T050 – PARTS LIST

ITEM	PART NUMBER	QTY	DESCRIPTION	MATERIAL
1	HP-2 15 01 23	2	Pump housing	PTFE
2	HP-1 15 10 20	1	Center housing	PE
3	HP-2 15 30 23	2	Suction/Discharge ports BSP	PTFE
	HP-2 15 30 23		Suction/Discharge ports NPT	PTFE
	HP-2 15 125 33		Suction/Discharge ports ANSI Flange	PTFE
	HP-2 15 25 33		Suction/Discharge ports DIN Flange	PTFE
	HP-2 15 525 23		Suction/Discharge ports JIS Flange	PTFE
	HP-2 15 31 23	1	Suction/Discharge ports-twin	PTFE
HP-2 15 33 23	1	Suction port-drum	PTFE	
4	HP-1 15 69 06	4	Shock absorber	NR/St37
5	HP-1 15 99 35	1	Muffler	PE porous
6	HP-1 15 40 50	1	Shaft	AISI 304
7	HP-1 15 85 22	2	Center housing seal	PE
8	HP-2 15 54 23	4	Valve seat	PTFE
9	HP-2 15 59 23	2	Plug lower	PTFE
10	HP-2 15 055 23	2	Plug upper	PTFE
11	HP-2 15 39 23	2	Valve stopper	PTFE
12	HP-2 15 38 23	2	Bolt	PTFE
13	HP-1 15 540 50	2	Shaft allen pin screw	AISI 304
14	HP-1 15 254 50	1	Valve seat key	AISI 304
15	HP-1 08 58 00	1	Upper/lower plugs and air valve key (SK3, SK4)	diverse
<b>REPAIR KITS</b>				
A	TAK-050	KIT	Air valve	PET/NBR
W	TWE-050-PTTT	KIT	PTFE WET KIT	
		2	Diaphragm	TFM/PTFE
		4	Valve balls	PTFE
		4	Sealing inlet/outlet	FEP/FPM
		2	Plug upper sealing	FEP/FPM
		1	Muffler	PE porous

# T100 – EXPLODED VIEW

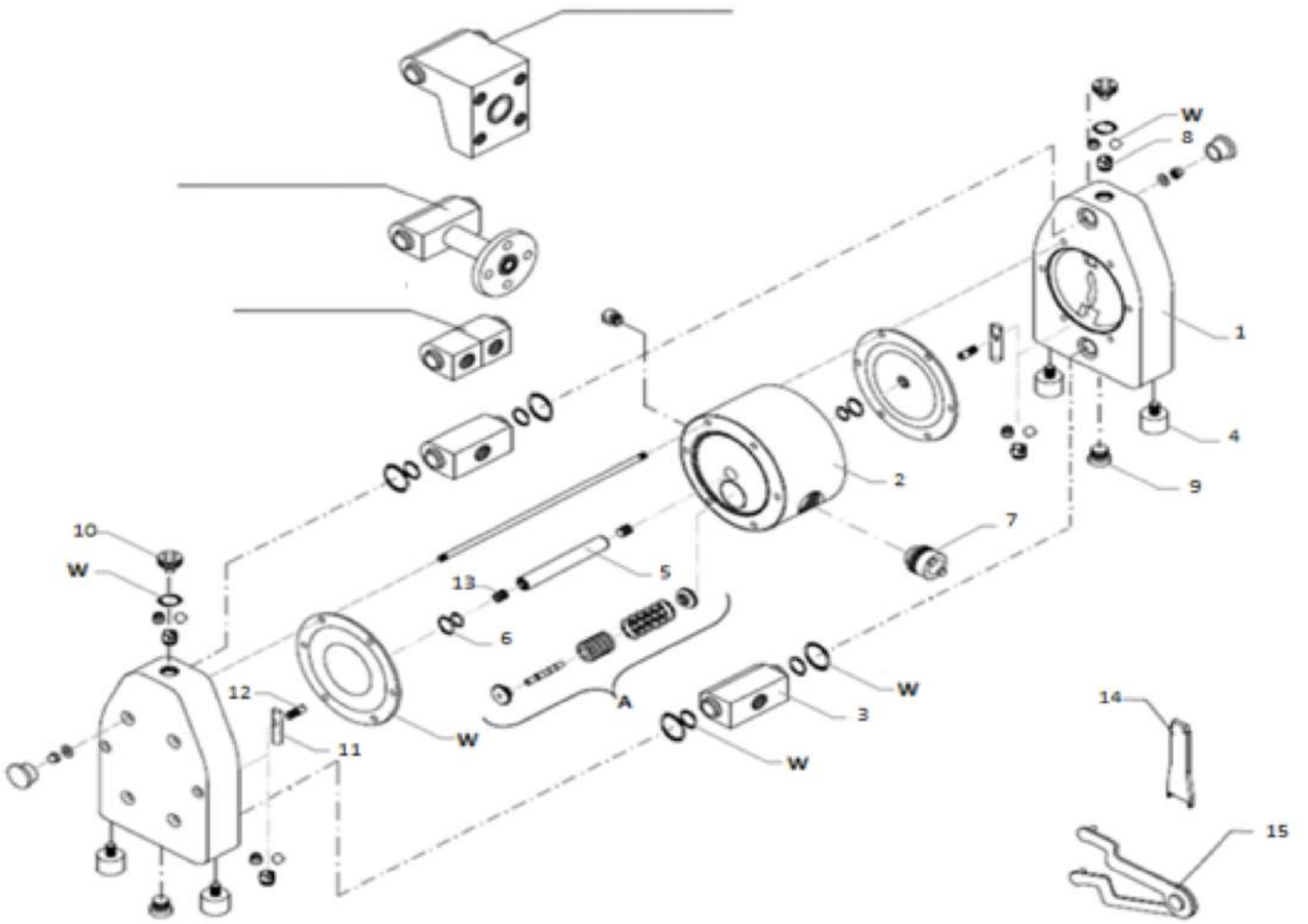


## T100 – PARTS LIST

ITEM	PART NUMBER	QTY	DESCRIPTION	MATERIAL	
1	HP-2 25 01 23	2	Pump housing	PTFE	
2	HP-1 25 10 20	1	Center housing	PE	
3	HP-2 25 30 23	2	Suction/Discharge ports BSP	PTFE	
	HP-2 25 30 23		Suction/Discharge ports NPT	PTFE	
	HP-2 25 125 33		Suction/Discharge ports ANSI Flange	PTFE	
	HP-2 25 25 33		Suction/Discharge ports DIN Flange	PTFE	
	HP-2 25 525 23		Suction/Discharge ports JIS Flange	PTFE	
	HP-2 25 31 23	1	Suction/Discharge ports-twin	PTFE	
HP-2 25 33 23	1	Suction port-drum	PTFE		
4	HP-1 25 69 06	4	Shock absorber	NR/St37	
5	HP-1 15 99 35	1	Muffler	PE porous	
6	HP-1 25 40 50	1	Shaft	AISI 304	
7	HP-1 25 85 22	2	Center housing seal	PE	
8	HP-2 25 54 23	4	Valve seat	PTFE	
9	HP-2 25 59 23	2	Plug lower	PTFE	
10	HP-2 25 055 23	2	Plug upper	PTFE	
11	HP-2 25 39 23	2	Valve stopper	PTFE	
12	HP-2 25 38 23	2	Bolt	PTFE	
13	HP-1 25 540 50	2	Shaft allen pin screw	AISI 304	
14	HP-1 25 254 50	1	Valve seat key	AISI 304	
15	HP-1 08 58 00	1	Upper/lower plugs and air valve key (SK3, SK4)	diverse	
<b>REPAIR KITS</b>					
A	TAK-100	KIT	Air valve	PET/NBR	
W	TWE-100-PTTT	KIT	PTFE WET KIT		
			2	Diaphragm	TFM/PTFE
			4	Valve balls	PTFE
			4	Sealing inlet/outlet	PTFE/FPM
			2	Plug upper sealing	FEP/FPM
			1	Muffler	PE porous



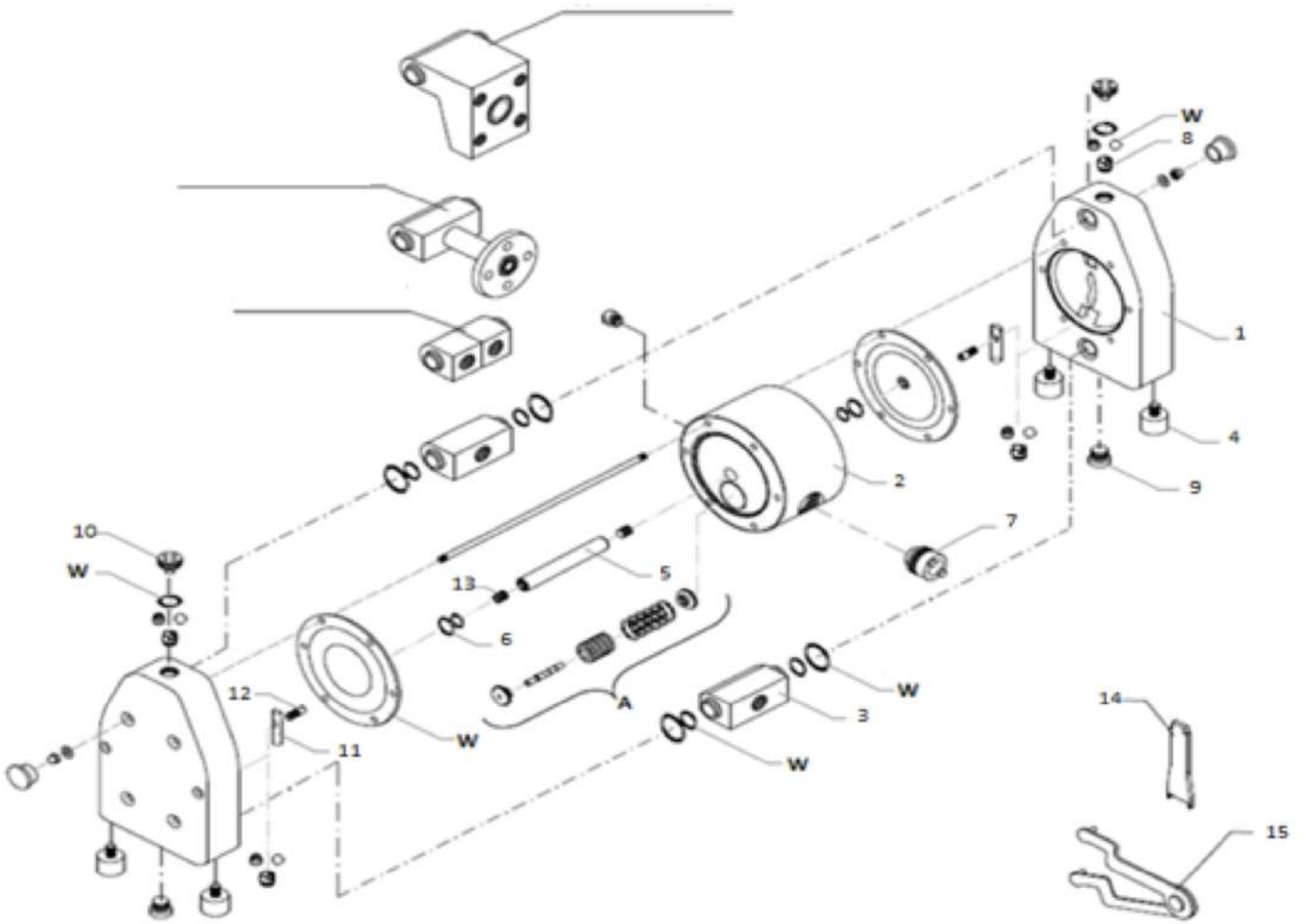
# T150 – EXPLODED VIEW



## T150 – PARTS LIST

ITEM	PART NUMBER	QTY	DESCRIPTION	MATERIAL	
1	HP-2 40 01 23	2	Pump housing	PTFE	
2	HP-1 40 10 20	1	Center housing	PE	
3	HP-2 40 30 23	2	Suction/Discharge ports BSP	PTFE	
	HP-2 40 30 23		Suction/Discharge ports NPT	PTFE	
	HP-2 40 125 33		Suction/Discharge ports ANSI Flange	PTFE	
	HP-2 40 25 33		Suction/Discharge ports DIN Flange	PTFE	
	HP-2 40 525 23		Suction/Discharge ports JIS Flange	PTFE	
	HP-2 40 31 23	Suction/Discharge ports-twin	PTFE		
	HP-2 40 33 23	1	Suction port-drum	PTFE	
4	HP-1 40 69 06	4	Shock absorber	NR/St37	
5	HP-1 40 40 50	1	Shaft	AISI 304	
6	HP-1 40 85 22	2	Center housing seal	PE	
7	HP-1 40 99 35	1	Muffler	PE porous	
8	HP-2 40 54 23	4	Valve seat	PTFE	
9	HP-2 40 59 23	2	Plug lower	PTFE	
10	HP-2 40 055 23	2	Plug upper	PTFE	
11	HP-2 40 39 23	2	Valve stopper	PTFE	
12	HP-2 40 38 23	2	Bolt	PTFE	
13	HP-1 40 540 50	2	Shaft allen pin screw	AISI 304	
14	HP-1 40 254 50	1	Valve seat key	AISI 304	
15	HP-1 08 58 00	1	Upper/lower plugs and air valve key (SK3, SK4)	diverse	
<b>REPAIR KITS</b>					
A	TAK-150	KIT	Air valve	PET/NBR	
W	TWE-150-PTTT	KIT	PTFE WET KIT		
			2	Diaphragm	TFM/PTFE
			4	Valve balls	PTFE
			4	Sealing inlet/outlet - SET	PTFE/FPM
			2	Plug upper sealing	FEP/FPM
			1	Muffler	PE porous

# T200 – EXPLODED VIEW



## T200 – PARTS LIST

ITEM	PART NUMBER	QTY	DESCRIPTION	MATERIAL
1	HP-2 50 01 23	2	Pump housing	PTFE
2	HP-1 50 10 20	1	Center housing	PE
3	HP-2 50 30 23	2	Suction/Discharge ports BSP	PTFE
	HP-2 50 30 23		Suction/Discharge ports NPT	PTFE
	HP-2 50 125 33		Suction/Discharge ports ANSI Flange	PTFE
	HP-2 50 25 33		Suction/Discharge ports DIN Flange	PTFE
	HP-2 50 525 23		Suction/Discharge ports JIS Flange	PTFE
	HP-2 50 31 23	1	Suction/Discharge ports-twin	PTFE
HP-2 50 33 23	1	Suction port-drum	PTFE	
4	HP-1 40 69 06	4	Shock absorber	NR/St37
5	HP-1 50 40 50	1	Shaft	AISI 304
6	HP-1 50 85 22	2	Center housing seal	PE
7	HP-1 50 99 35	1	Muffler	PE porous
8	HP-2 50 54 23	4	Valve seat	PTFE
9	HP-2 50 59 23	2	Plug lower	PTFE
10	HP-2 50 055 23	2	Plug upper	PTFE
11	HP-2 50 39 23	2	Valve stopper	PTFE
12	HP-2 50 38 23	2	Bolt	PTFE
13	HP-1 50 540 50	2	Shaft allen pin screw	AISI 304
14	HP-1 50 254 50	1	Valve seat key	AISI 304
15	HP-1 08 58 00	1	Upper/lower plugs and air valve key (SK3, SK4)	diverse
<b>REPAIR KITS</b>				
A	TAK-200	KIT	Air valve	PET/NBR
W	TWE-200-PTTT	KIT	PTFE WET KIT	
		2	Diaphragm	TFM/PTFE
		4	Valve balls	PTFE
		4	Sealing inlet/outlet - SET	PTFE/FPM
		2	Plug upper sealing	FEP/FPM
		1	Muffler	PE porous

**THIS PAGE LEFT INTENTIONALLY BLANK**

# Warranty

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:

MATERIALS SOLD ARE WARRANTED TO THE ORIGINAL USER AGAINST DEFECTS IN WORKMANSHIP OR MATERIALS UNDER NORMAL USE (RENTAL USE EXCLUDED) FOR FIVE YEARS AFTER PURCHASE DATE. ANY PUMP WHICH IS DETERMINED TO BE DEFECTIVE IN MATERIAL AND WORKMANSHIP AND RETURNED TO ALL-FLO, SHIPPING COSTS PREPAID, WILL BE REPAIRED OR REPLACED AT ALL-FLO'S OPTION. CUSTOMER SHALL NOTIFY ALL-FLO IN WRITING WITHIN 30 DAYS OF ANY CLAIMED DEFECTS. NO MATERIALS CAN BE RETURNED WITHOUT THE PRIOR CONSENT OF ALL-FLO, AND IF APPROVED SHALL BE RETURNED TO ALL-FLO FREIGHT PREPAID. ALL-FLO'S LIABILITY FOR ANY BREACH OF THIS WARRANTY SHALL BE LIMITED TO EITHER REPLACEMENT OF THE MATERIALS OR, AT ALL-FLO'S SOLE OPTION, THE REFUND OF THE PURCHASE PRICE. ALL-FLO SHALL NOT BE HELD LIABLE FOR ANY INCIDENTAL OR CONSEQUENTIAL DAMAGES CAUSED BY BREACH OF THIS WARRANTY. THIS EXCLUSION APPLIES WHETHER SUCH DAMAGES WERE SOUGHT BASED ON BREACH OF WARRANTY, BREACH OF CONTRACT, NEGLIGENCE, STRICT LIABILITY IN TORT, OR ANY OTHER LEGAL THEORY. FURTHER, ALL-FLO SHALL NOT BE LIABLE FOR LOSSES, DELAYS, LABOR COSTS, OR ANY OTHER COST OR EXPENSE DIRECTLY OR INDIRECTLY ARISING FROM THE USE OF MATERIALS. ALL-FLO'S LIABILITY IS EXPRESSLY LIMITED TO THE REPLACEMENT OR REPAIR OF DEFECTIVE GOODS, OR THE TOTAL VALUE OF SUCH GOODS. THIS WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES, WHETHER EXPRESS, IMPLIED, OR ORAL INCLUDING THE IMPLIED WARRANTY OF MERCHANTABILITY, ANY IMPLIED WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE, AND ANY IMPLIED WARRANTIES OTHERWISE ARISING FROM A COURSE OF DEALING OR TRADE. All-Flo will not, in ANY event, be liable for any loss of profit, interruption of business or any other special, consequential or incidental damages suffered or sustained by Customer. All-Flo's total maximum liability to the customer in respect of sale of materials or services rendered by All-Flo is limited to the total monies received by All-Flo from the customer for the particular. Materials described in Customer's order.

All-Flo does not warrant any part or component that it does not manufacture, but will assign to the original end-user purchaser of any warranty received by it from the manufacturer, to extent such pass through is permitted by the manufacturer.

---



## 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](http://www.all-flo.com/registration-form.html)

**All-Flo Pump Co.**

7750 Tyler Blvd.

Mentor, Ohio 44060

USA

Phone +440.354.1700

Fax: +440.354.9466

[sales@all-flo.com](mailto:sales@all-flo.com)

[www.all-flo.com](http://www.all-flo.com)

13966-Txxx\_Rev\_C

30 13966-Txxx\_Rev\_D\_21NOV2016

