

Techni-flow[®] 025

332521C

Air-Operated Diaphragm Pumps

EN

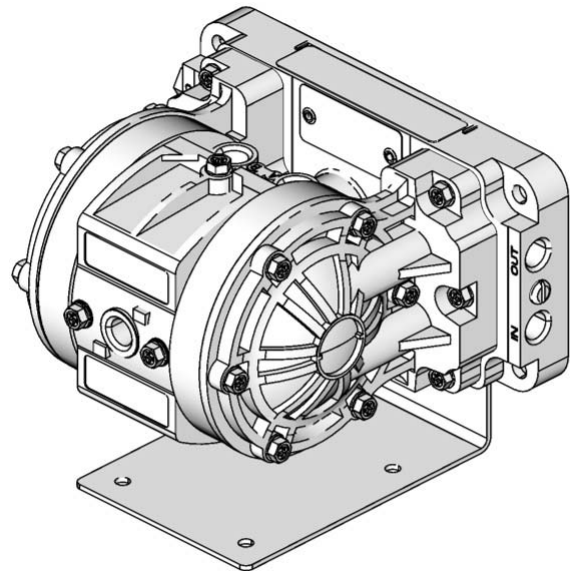
For fluid transfer applications. For professional use only.

100 psi (0.7 MPa, 7 bar) Maximum Incoming Air Pressure
100 psi (0.7 MPa, 7 bar) Maximum Fluid Working Pressure



Important Safety Instructions

Read all warnings and instructions in this manual. Save these instructions.



ti10660a

Contents

Models	2	Troubleshooting	11
Warnings	3	Repair	12
Installation	5	Service Kits	12
Tightening Threaded Fasteners		Servicing the Air Valve	12
Before First Use	5	Replacing Diaphragms	13
Grounding	5	Replacing Check Valves	14
Mounting	6	Torque Sequence	15
Typical Installation	8	Parts	16
Operation	9	Air Motor Section	17
Pressure Relief Procedure	9	Fluid Section	17
Flush the Pump Before First Use	9	Check Valves and Diaphragms	17
Start and Adjust the Pump	9	Service Kits	17
Pump Shutdown	9	Performance Charts	18
Maintenance	10	Dimensions and Mounting Hole Layout	20
Lubrication	10	Technical Data	21
Maintenance Schedule	10	Techni-flow Standard Warranty	22
Tighten Threaded Connections	10		
Flushing and Storage	10		

Models

Sample Configuration Number

TFG025	P	TF
Pump Model	Fluid Covers and Manifolds	Diaphragms

Pump Model		Fluid Section		Diaphragms	
1/4 bspt ports, 8.9 l/min.	TFG025	Polypropylene	P	PTFE	TF
		Acetal★	AC		
★: See ATEX Certifications , below.					

Your Part Number and Configuration Number are marked on the pump's serial plate. The listing of existing Techni-flow 025 pumps is below.


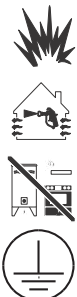

Model	Part No.	Configuration Number	Fluid Section	Checks	Diaphragms
Techni-flow 025	TF24T062	TFG025PTF	Polypropylene	Polypropylene	PTFE
	TF24T063	TFG025ACTF	Acetal★	Acetal	PTFE

★ Acetal Model is certified:



Warnings

The following warnings are for the setup, use, grounding, maintenance, and repair of this equipment. The exclamation point symbol alerts you to a general warning and the hazard symbols refer to procedure-specific risks. When these symbols appear in the body of this manual or on warning labels, refer back to these Warnings. Product-specific hazard symbols and warnings not covered in this section may appear throughout the body of this manual where applicable.

 WARNING	
	<p>FIRE AND EXPLOSION HAZARD</p> <p>Flammable fumes, such as solvent and paint fumes, in work area can ignite or explode. To help prevent fire and explosion:</p> <ul style="list-style-type: none"> • Use equipment only in well ventilated area. • Eliminate all ignition sources; such as pilot lights, cigarettes, portable electric lamps, and plastic drop cloths (potential static arc). • Keep work area free of debris, including solvent, rags and gasoline. • Do not plug or unplug power cords, or turn power or light switches on or off when flammable fumes are present. • Ground all equipment in the work area. See Grounding instructions. • Use only grounded hoses. • Hold gun firmly to side of grounded pail when triggering into pail. Do not use pail liners unless they are antistatic or conductive. • Stop operation immediately if static sparking occurs or you feel a shock. Do not use equipment until you identify and correct the problem. • Keep a working fire extinguisher in the work area. • Route exhaust away from all ignition sources. If diaphragm ruptures, fluid may be exhausted with air. <p>Static charge may build up on plastic parts during cleaning and could discharge and ignite flammable vapors. To help prevent fire and explosion:</p> <ul style="list-style-type: none"> • Clean plastic parts only in well ventilated area. • Do not clean with a dry cloth. • Do not operate electrostatic guns in equipment work area.
	<p>PRESSURIZED EQUIPMENT HAZARD</p> <p>Fluid from the equipment, leaks, or ruptured components can splash in the eyes or on skin and cause serious injury.</p> <ul style="list-style-type: none"> • Follow the Pressure Relief Procedure when you stop spraying/dispensing and before cleaning, checking, or servicing equipment. • Tighten all fluid connections before operating the equipment. • Check hoses, tubes, and couplings daily. Replace worn or damaged parts immediately.

WARNING



EQUIPMENT MISUSE HAZARD

Misuse can cause death or serious injury.

- Do not operate the unit when fatigued or under the influence of drugs or alcohol.
- Do not exceed the maximum working pressure or temperature rating of the lowest rated system component. See **Technical Data** in all equipment manuals.
- Use fluids and solvents that are compatible with equipment wetted parts. See Technical Data in all equipment manuals. Read fluid and solvent manufacturer's warnings. For complete information about your material, request MSDS from distributor or retailer.
- Do not leave the work area while equipment is energized or under pressure.
- Turn off all equipment and follow the **Pressure Relief Procedure** when equipment is not in use.
- Check equipment daily. Repair or replace worn or damaged parts immediately with genuine manufacturer's replacement parts only.
- Do not alter or modify equipment. Alterations or modifications may void agency approvals and create safety hazards.
- Make sure all equipment is rated and approved for the environment in which you are using it.
- Use equipment only for its intended purpose. Call your distributor for information.
- Route hoses and cables away from traffic areas, sharp edges, moving parts, and hot surfaces.
- Do not kink or over bend hoses or use hoses to pull equipment.
- Keep children and animals away from work area.
- Comply with all applicable safety regulations.



TOXIC FLUID OR FUMES HAZARD

Toxic fluids or fumes can cause serious injury or death if splashed in the eyes or on skin, inhaled, or swallowed.

- Read MSDSs to know the specific hazards of the fluids you are using.
- Route exhaust away from work area. If diaphragm ruptures, fluid may be exhausted into the air.
- Store hazardous fluid in approved containers, and dispose of it according to applicable guidelines.



PERSONAL PROTECTIVE EQUIPMENT

You must wear appropriate protective equipment when operating, servicing, or when in the operating area of the equipment to help protect you from serious injury, including eye injury, hearing loss, inhalation of toxic fumes, and burns. This equipment includes but is not limited to:

- Protective eyewear, and hearing protection.
- Respirators, protective clothing, and gloves as recommended by the fluid and solvent manufacturer.

Installation

Tightening Threaded Fasteners Before First Use




Before using the pump for the first time, check and retorque all external fasteners. See **Torque Sequence**, page 15. After the first day of operation, retorque the fasteners. Although pump use varies, a general guideline is to retorque fasteners every two months.

Use a compatible thread sealant on all male threads. Tighten all connections firmly to avoid air or fluid leaks.

NOTICE

To avoid pump damage, do not overtighten the fittings to the pump.

Grounding

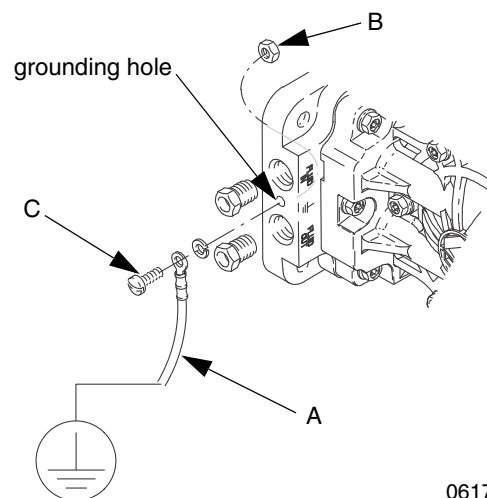
						
<p>The equipment must be grounded to reduce the risk of static sparking. Static sparking can cause fumes to ignite or explode. Grounding provides an escape wire for the electric current.</p> <ul style="list-style-type: none"> The acetal pump contains stainless steel fibers which make the wetted parts conductive. Attaching the ground wire to one of the grounding locations grounds the wetted parts. Polypropylene pumps are not conductive. Do not use with flammable fluids. Follow your local fire codes. 						

To reduce the risk of static sparking, ground the pump and all other equipment used or located in the pumping area. Check your local electrical code for detailed grounding instructions for your area and type of equipment.

Polypropylene Pump: The pump is not conductive. Ground the entire fluid system. Make sure the fluid has an electrical path to a true earth ground.

Acetal Pump: Connect a ground wire (A) and clamp, Part No. 222011. See FIG. 1. The pump grounding locations are on the manifold between the inlet and outlet ports. Use the nut (B) and bolt (C) that are provided with the pump, and install as follows:

- Place the nut in the nut catcher on the underside of the manifold.
- Insert the bolt through the loop end of the ground wire.
- Insert the bolt through the hole on the pump manifold and tighten it into the nut that you positioned in Step 1.
- Connect the clamp end of the ground wire to a true earth ground.



06179a

FIG. 1

Air and fluid hoses: Use only grounded hoses with a maximum of 500 ft (150 m) combined hose length to ensure grounding continuity.

Air compressor: Follow the manufacturer's recommendations.

All solvent pails used when flushing: Follow the local code. Use only grounded metal pails, which are conductive. Do not place the pail on a non-conductive surface, such as paper or cardboard, which interrupts the grounding continuity.

Fluid supply container: Follow the local code.

Mounting

--	--	--	--	--	--	--

To avoid serious injury or death from toxic fluid or fumes:

- Ventilate to a remote area. The pump exhaust air may contain contaminants. See **Air Exhaust Ventilation** on page 6.
- Never move or lift a pump under pressure. If dropped, the fluid section may rupture. Always follow the **Pressure Relief Procedure** on page 9 before moving or lifting the pump.

The pump is shipped with a 90 degree mounting bracket (60). Mount the pump to the bracket using the four screws (61) provided. Secure the opposite portion of the mounting bracket to a horizontal surface. The mounting bracket must be used for proper pump performance.

Be sure the mounting can support the weight of the pump, hoses, and accessories, as well as the stress caused during operation.

For all mountings, be sure the pump is secured with screws and nuts.

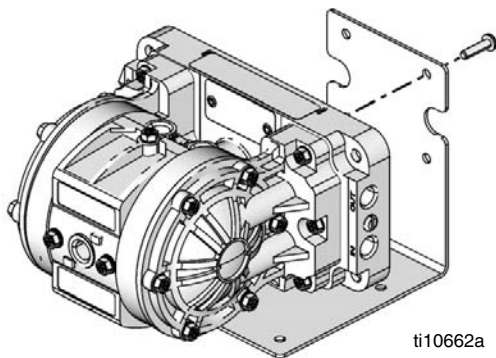


FIG. 2

Air Exhaust Ventilation

--	--	--	--	--	--	--

If pumping toxic fluids, you must vent the exhaust away from people, animals, food handling areas, and all sources of ignition. Follow all applicable codes.

NOTICE						
The air exhaust port is 1/4 npt(f) or bspt(f). Do not restrict the air exhaust port. Excessive exhaust restriction can cause erratic pump operation and poor diaphragm life.						

If the diaphragm ruptures, the fluid being pumped is exhausted with the air. Place a container at the end of the air exhaust line to catch fluid in case the diaphragm ruptures.

Air Lines

--	--	--	--	--	--	--

Trapped air can cause the pump to cycle unexpectedly, which could result in serious injury from splashing. A bleed-type master air valve is required.

Mount the air line accessories on the wall or on a bracket. Be sure the air line supplying the accessories is grounded. See FIG. 4, page 8.

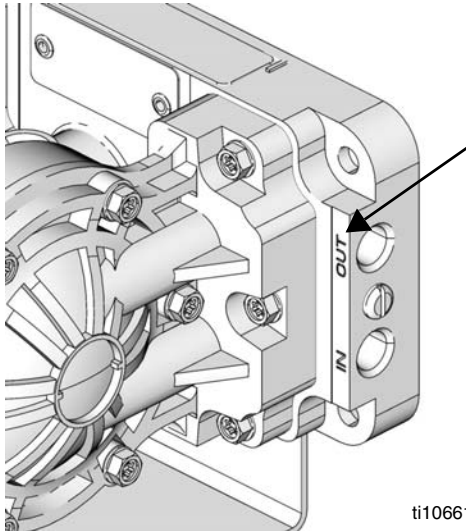
1. Install an air regulator and gauge (H) to control the fluid pressure. The fluid stall pressure will be the same as the setting of the air regulator.
2. Locate a bleed-type master air valve (B) close to the pump and use it to relieve trapped air. Be sure the valve is easily accessible from the pump and located downstream from the regulator.
3. Locate another master air valve (E) upstream from all air line accessories and use it to isolate them during cleaning and repair.
4. An air line filter (F) removes harmful dirt and moisture from the compressed air supply.
5. Install a grounded, flexible air hose (C) between the accessories and the pump air inlet.
6. Do not restrict the exhaust port. Excessive exhaust restriction can cause erratic pump operation.

Fluid Line

Use grounded, flexible fluid hoses (L, N). See **Grounding**, page 5.

For maximum suction lift (wet and dry), see **Technical Data**, page 21. For best results, always install the pump as close as possible to the material source. Minimize suction requirements to maximize pump performance.

On each end of the fluid manifold are a fluid IN port and a fluid OUT port. **NOTE: Make sure the fluid OUT port on the fluid manifold is mounted up.** This will insure proper pump priming. Fluid-in and fluid-out lines can be connected on the same end, or opposite ends of the manifold. Plug ports that are not used (plugs provided).

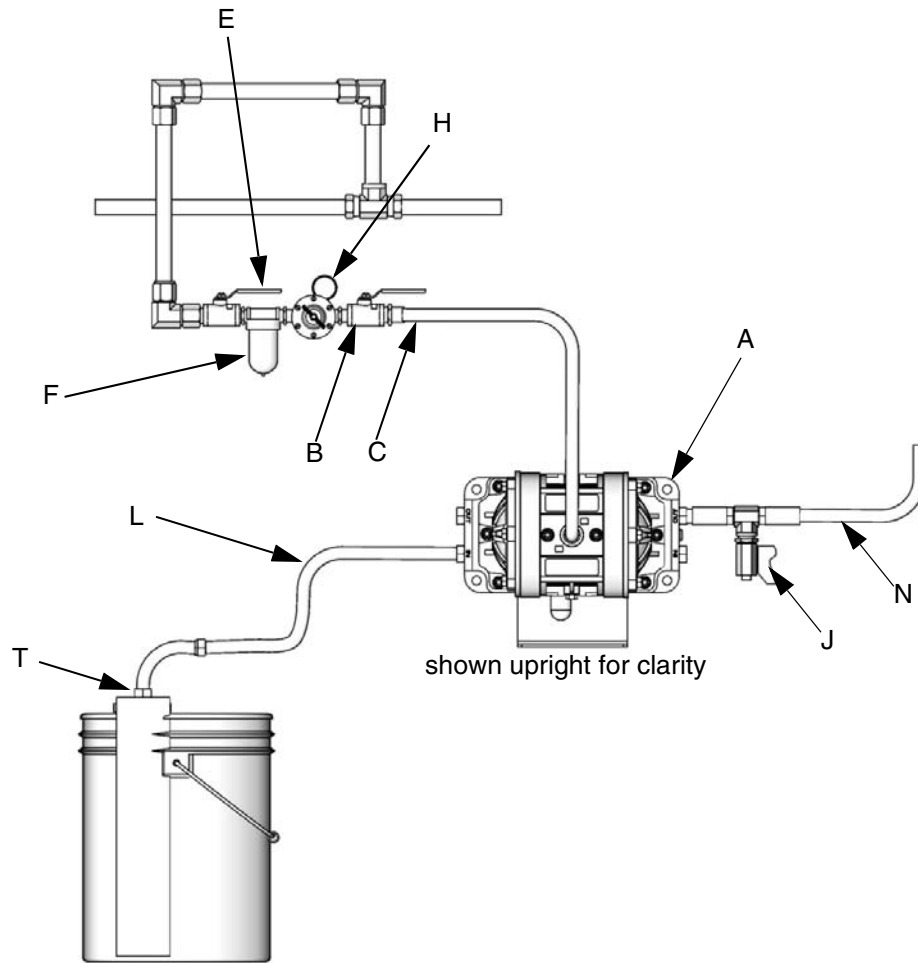


ti10661a

FIG. 3. Fluid Out Port

Typical Installation

The installation shown in FIG. 4 is only a guide for selecting and installing system components. Contact your Techni-flow representative for assistance in planning a system to suit your needs.



ti10663a

FIG. 4: Typical Installation

Key:

- A Techni-flow 025 pump
- B Bleed-type master air valve (required)
- C Air line(s)
- E Master air valve (for accessories)
- F Air line filter
- H Pump air regulator
- J Fluid drain valve (required on fluid outlet side of pump)
- L Fluid suction line
- N Fluid supply hose
- T Bung adapter

Operation

Pressure Relief Procedure



Follow the Pressure Relief Procedure whenever you see this symbol.



This equipment stays pressurized until pressure is manually relieved. To help prevent serious injury from pressurized fluid, such as splashing in the eyes or on skin, follow the Pressure Relief Procedure whenever you stop pumping and before you clean, check, or service the equipment.

1. Shut off air and reserve air to the pump.
2. Open the dispensing valve if the system has one.
3. Open the fluid drain valve to relieve all system pressure, and have a container ready to catch the drainage.

Flush the Pump Before First Use

The pump was tested in water. If water could contaminate the fluid you are pumping, flush it thoroughly with a compatible solvent. Follow the procedure in **Start and Adjust the Pump**.

Start and Adjust the Pump

1. Be sure the pump is properly grounded. Read and follow the instructions in **Grounding** on page 5.
2. Check all fittings to be sure they are tight. Be sure to use a compatible liquid thread sealant on all male threads. Tighten the fluid inlet and outlet fittings and plugs securely. Retorque all fasteners before start-up. See **Torque Sequence**, page 15.
3. Place the suction tube (if used) in the fluid to be pumped.
4. Place the end of the outlet hose into an appropriate container.
5. Close the fluid drain valve.

6. With the air regulator closed, open all bleed-type master air valves.
7. If the outlet hose has a dispensing device, hold it open while continuing with step 8.
8. Slowly open the air regulator until the pump starts to cycle. Allow the pump to cycle until all air is pushed out of the lines and the pump is primed.

Pump Shutdown



At the end of the work shift and before you check, adjust, clean or repair the system, follow the **Pressure Relief Procedure**, page 9.

Maintenance

Lubrication

The air valve is lubricated at the factory. It is designed to require no further lubrication for the life of the packings. There is no need to add an inline lubricator under normal operating conditions.

If added lubrication is desired, every 500 hours of operation (or monthly), remove the hose from the pump air inlet and add two drops of machine oil to the air inlet.

NOTICE

Do not over-lubricate the pump. Excess oil is exhausted through the muffler, which could contaminate your fluid supply or other equipment.

Maintenance Schedule

Establish a preventative maintenance schedule based on the pump's service history. Scheduled maintenance is especially important to prevent spills or leakage due to diaphragm failure.

Tighten Threaded Connections

Before each use, check all hoses for wear or damage, and replace as necessary. Be sure all threaded connections are tight and leak-free. Check mounting bolts.

Check fasteners. Tighten or retorque as necessary. Although pump use varies, a general guideline is to retorque fasteners every two months. See **Torque Sequence**, page 15.

Flushing and Storage



- Flush before fluid can dry in the equipment, at the end of the day, before storing, and before repairing equipment.
- Flush at the lowest pressure possible. Check connectors for leaks and tighten as necessary.
- Flush with a fluid that is compatible with the fluid being dispensed and the equipment wetted parts.
- Always flush the pump and follow the **Pressure Relief Procedure**, page 9, before storing it for any length of time.

NOTICE

Flush the pump often enough to prevent the fluid you are pumping from drying or freezing in the pump and damaging it. Use a compatible solvent.

If you are flushing, run the pump long enough to thoroughly clean the pump and hoses, close the air regulator, and remove the suction hose from the solvent and place it in the fluid to be pumped.

If you are shutting down the pump, remove the suction hose from the fluid container, run the pump until the fluid is forced out of the system, and shut off the air supply immediately.

Troubleshooting



1. Follow **Pressure Relief Procedure**, page 9, before checking or repairing the equipment.
2. Check all possible problems and causes before you disassemble the pump.

Problem	Cause	Solution
The pump cycles at stall, or it fails to hold pressure at stall.	The check valves (20) or o-rings (21) are leaking.	Replace the check valves and/or o-rings. See page 14.
	The check valves (20) are worn.	Replace the check valves. See page 14.
	Debris is stuck between the check valve (20) and the seat.	Clean the check valve/seat area. See page 14.
The pump operates erratically.	The suction line is clogged.	Inspect and clear the line.
	The check valves (20) are sticking or leaking.	Replace the check valves, or clean and check the valve/seat area. See page 14.
	A diaphragm (30) is ruptured.	Replace the ruptured diaphragm. See page 13.
The fluid contains air bubbles.	The suction line is loose.	Tighten the suction line.
	A diaphragm (30) is ruptured.	Replace the ruptured diaphragm. See page 13.
	The manifold (52) is loose, or the o-rings (21) are damaged.	Tighten the manifold screws (58). Replace the o-rings (21). See page 14.
	The fluid covers (51) are loose.	Tighten the fluid cover screws (58). See page 14.
The exhaust air contains fluid.	A diaphragm (30) is ruptured.	Replace the ruptured diaphragm. See page 13.
	A diaphragm plate (50) is loose.	Tighten the diaphragm plate. See page 13.
The pump exhausts air near the fluid covers.	The fluid covers (51) are loose, or the o-rings (57) are damaged.	Tighten the fluid cover screws (58), or replace the o-rings. See page 13.
The pump exhausts air near the air valve.	The air valve cover screws (14) are loose.	Tighten the screws. See page 12.
	The top (5) and/or side (6) air valve o-rings are damaged.	Replace these o-rings. See the Parts Drawing on page 16.
The pump leaks fluid from the check valves.	The o-rings (21) are leaking, or the screws (58) are loose.	Replace these o-rings, and tighten the screws. See page 14.
The pump will not cycle, or it cycles once and stops.	The air valve is stuck or dirty.	Disassemble and clean or repair the air valve. Use filtered air.
	Not enough pressure supplied.	Increase air pressure supply. Do not exceed maximum input pressure.

Repair



Service Kits

Service Kits may be ordered separately.

To repair the air valve, order Part No. 238853. Parts included in the Air Valve Service Kit are marked with an asterisk in **Parts** on page 16, for example (3*).

For fluid section repair section parts, see **Fluid Section Service Kits** on page 17. Parts included in the Fluid Section Service Kit are marked with a dagger in **Parts** on page 16, for example (21†).

Servicing the Air Valve

Service the air valve as follows. See FIG. 5.

1. Follow the **Pressure Relief Procedure**, page 9. Disconnect air line from the pump.

2. Remove the four screws (14) that hold the valve cover (7) on the center housing (1).
3. Remove the valve block (4) and valve carriage (2), and replace the u-cups (3). Inspect o-rings (5, 6), gasket (16) and valve plate (17). Replace if damaged.
4. Clean any parts that are dirty.
5. Replace the valve carriage and valve block. When you replace the valve carriage, position it all the way to one side or the other.
6. To reinstall the valve cover (7), spread cover apart enough not to damage the square ring packings (5) and slide cover (7) into the center section.
7. Install the screws (14), and torque to 45-47 in-lb (5.0-5.3 N•m). See **Torque Sequence** on page 15.
8. Reconnect the pump.

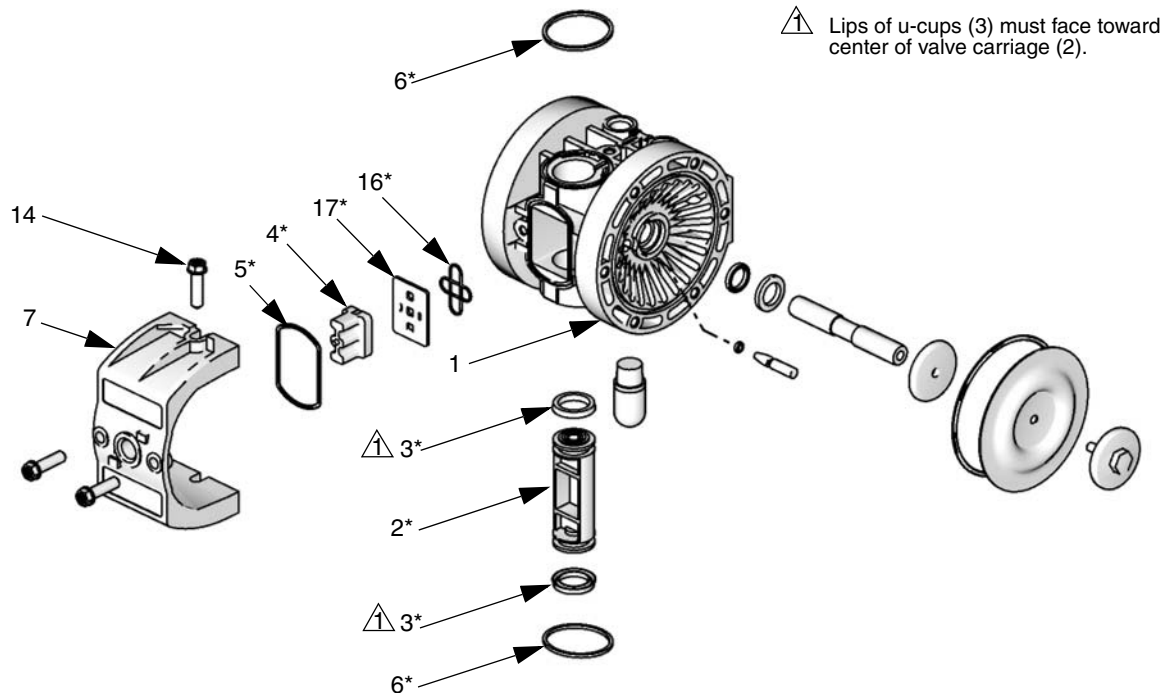


FIG. 5

Replacing Diaphragms

Replace the diaphragms as follows. See FIG. 6 and FIG. 7.

1. Follow the **Pressure Relief Procedure**, page 9, and disconnect the air line from the pump.
2. Remove the eight screws (58) that fasten the two fluid covers (51) to manifold (52). Remove the fluid cover/center housing assembly from the manifold.
3. Remove the six screws (58) that fasten each fluid cover (51) to the center housing (1). Pull the fluid covers off of the center housing.
4. Remove the diaphragm plates (50) from the shaft (10), and remove the diaphragms (30), and air-side diaphragm plates (11).
5. Remove the diaphragm pins (8). Remove and replace the o-rings (9). Reinstall the diaphragm pins in the center housing (1).
6. Reinstall the diaphragm shaft (10).
7. Install the new diaphragms (30) with the concave side toward the center housing (1).
8. Screw the diaphragm plates (50) onto the shaft (10), and torque to 28-33 in-lb (3.2-3.7 N•m)
9. Reinstall the fluid covers (51) on the center housing (1). Install the screws (58) that fasten the fluid covers to the center housing. Torque to 42-47 in-lb (4.7-5.3 N•m). See **Torque Sequence** on page 15.
10. Reinstall the fluid covers/center housing assembly on the manifold (52). Install the screws (58) that fasten the fluid covers/center housing assembly to the manifold. Torque to 42-47 in-lb (4.7-5.3 N•m). See **Torque Sequence**, page 15.
11. Reconnect the pump.

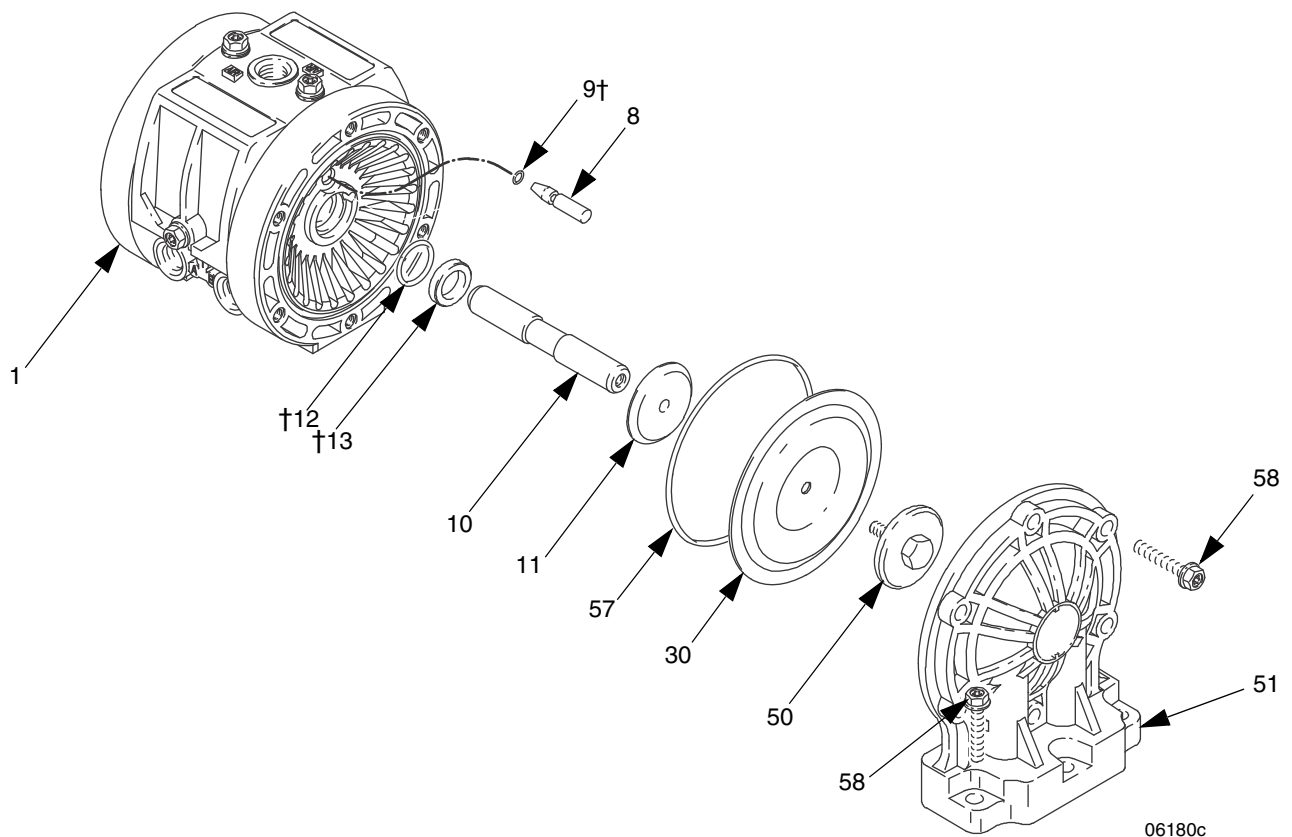


FIG. 6

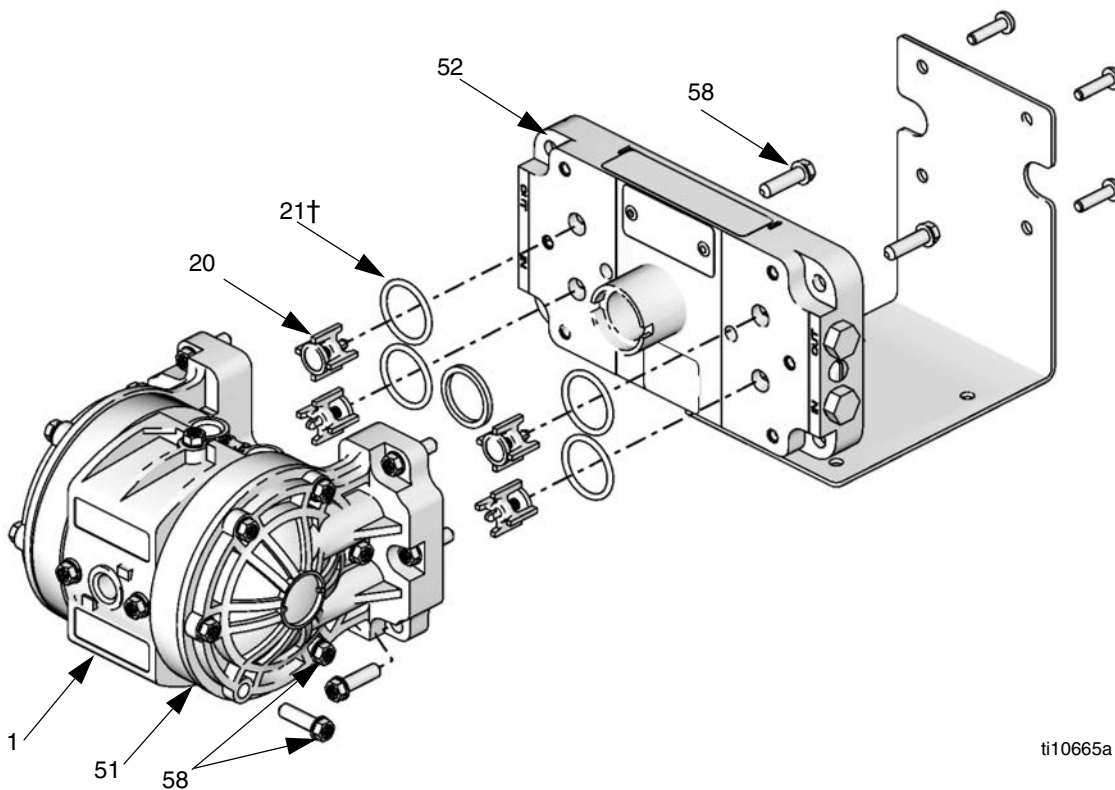
Replacing Check Valves

Replace each pair of check valves as follows.

1. Follow the **Pressure Relief Procedure**, page 9. Disconnect air line from the pump.
2. Remove the eight screws (58) that hold the fluid cover/center housing assembly on the manifold (52). Lift the manifold covers/center housing assembly off of the manifold (52).
3. Remove and replace the check valves (20). Be careful to orient each check valve exactly like the one it

is replacing. Make sure the check valve/seat area is clean.

4. Remove and replace the sealing o-rings (21). Once compressed, o-rings may not be reused. Make sure the check valve/seat area is clean.
5. Reinstall the fluid covers/center housing assembly on the manifold (52). Install the screws (58) that fasten the fluid covers/center housing assembly to the manifold. Torque to 42-47 in-lb (4.7-5.3 N•m). See **Torque Sequence**, page 15.
6. Reconnect the pump.

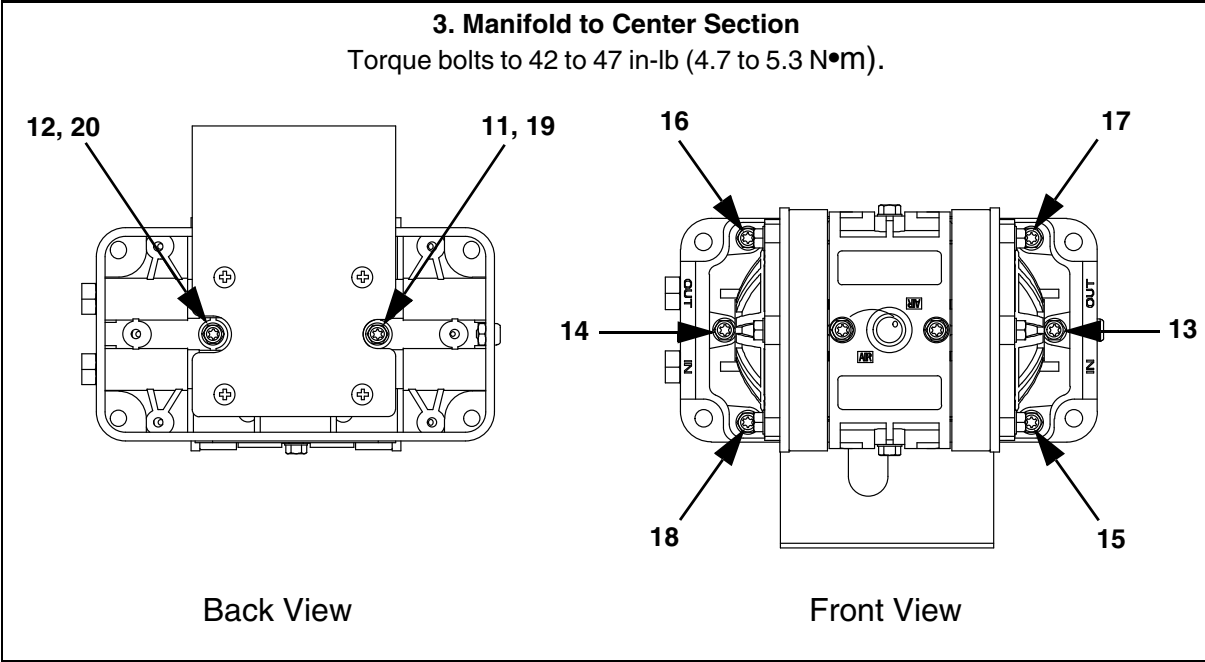
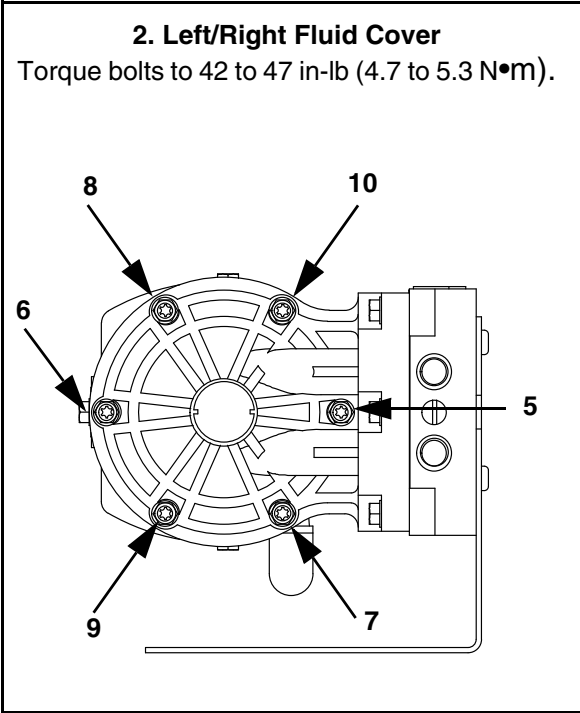
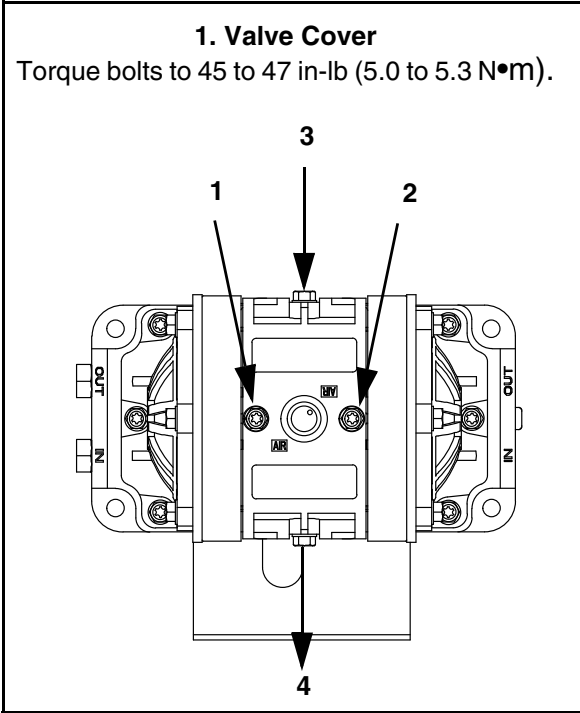


ti10665a

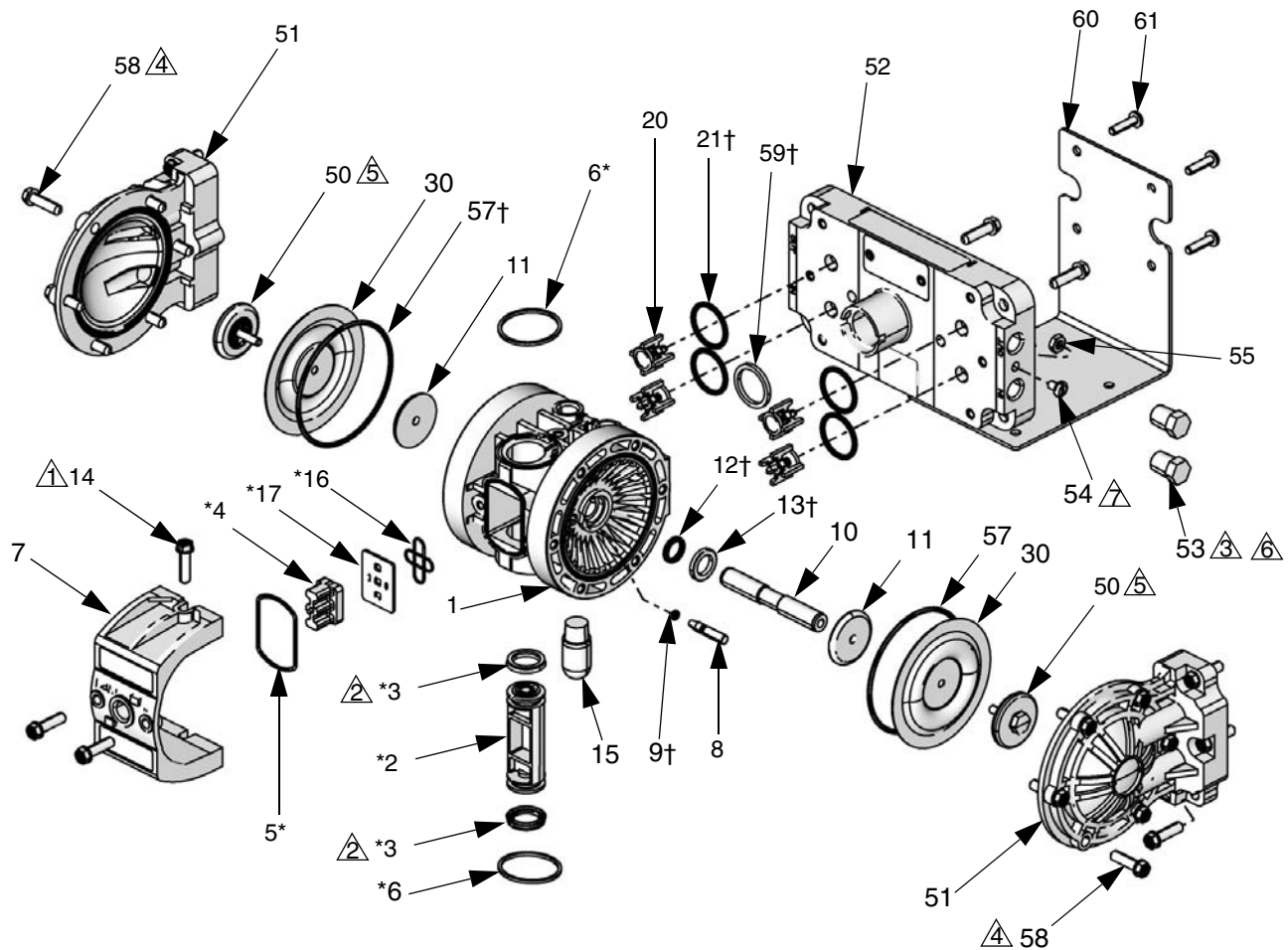
FIG. 7

Torque Sequence

For proper installation, always follow torque sequence whenever you are instructed to torque screws.



Parts



△1 Torque to 45 to 47 in-lb (5.0 to 5.3 N•m). See **Torque Sequence**, page 15.

△2 Lips of u-cups (3) must face toward the center of the valve carriage (2).

△3 Torque to 20 in-lb (2.2 N•m).

△4 Torque to 42 to 47 in-lb (4.7 to 5.3 N•m). See **Torque Sequence**, page 15.

△5 Torque to 28 to 33 in-lb (3.2 to 3.7 N•m). See **Torque Sequence**, page 15.

△6 Not assembled. These plugs are supplied to plug the two ports in the manifold that are not used.

△ Used on acetal models only.

* These parts are included in Air Valve Service Kit 238853, which may be purchased separately.

† These parts are included in Fluid Section Service Kit. See page 12 to find the correct kit for your pump.

Air Motor Section

Ref.	Part	Description	Qty.
1	240898	HOUSING, center, assembly (includes 12, 13, and 57)	1
2*	-----	CARRIAGE, valve	1
3*	-----	SEAL, u-cup	2
4*	194533	VALVE BLOCK	1
5	191160	GASKET, molded	1
6*	115056	O-RING, packing	2
8	191021	PIN, actuator	2
9†	113565	O-RING, packing	2
10	193778	SHAFT, diaphragm	1
11	193775	PLATE, diaphragm, air side	2
12†	114710	O-RING, diaphragm shaft	2
13†	15J176	BEARING, retaining	2
14	113341	SCREW, torx	4
15	114174	MUFFLER, porous plastic	1
16*	194386	SEAL, valve plate	1
17*	194384	PLATE, valve	1

Fluid Section

Ref.	Part	Description	Qty.
7	191140	COVER, valve	1
49▲	290229	LABEL, warning	1
50		PLATE, diaphragm	2
	191141	Polypropylene	
	191553	Acetal	
51		COVER, fluid;	2
	276473	Polypropylene	
	276474	Acetal	

52		MANIFOLD	1
	276470	Polypropylene	
	276471	Acetal	
53		PLUG, port;	2
	113577	Polypropylene	
	113576	Acetal	
57†	113570	O-RING, packing	2
58	113341	SCREW, torx	20
59†	111137	O-RING, exhaust	1
60	194986	BRACKET, mounting	1
61	111630	SCREW, machine, pn hd	4

Check Valves and Diaphragms

Ref.	Part	Description	Qty.
20		VALVE, check	4
	240896	Polypropylene	
	241134	Acetal	
21†	113566	O-RING, packing	4
30	191402	DIAPHRAGM; PTFE	2

▲ Replacement Danger and Warning labels, tags, and cards are available at no cost.

----- Not sold separately. See Air Valve Service Kit 238853.

* Parts included in Kit 238853 (purchase separately).

† These parts are included in Fluid Section Service Kit. See **Fluid Section Service Kits** to find the correct kit for your pump.

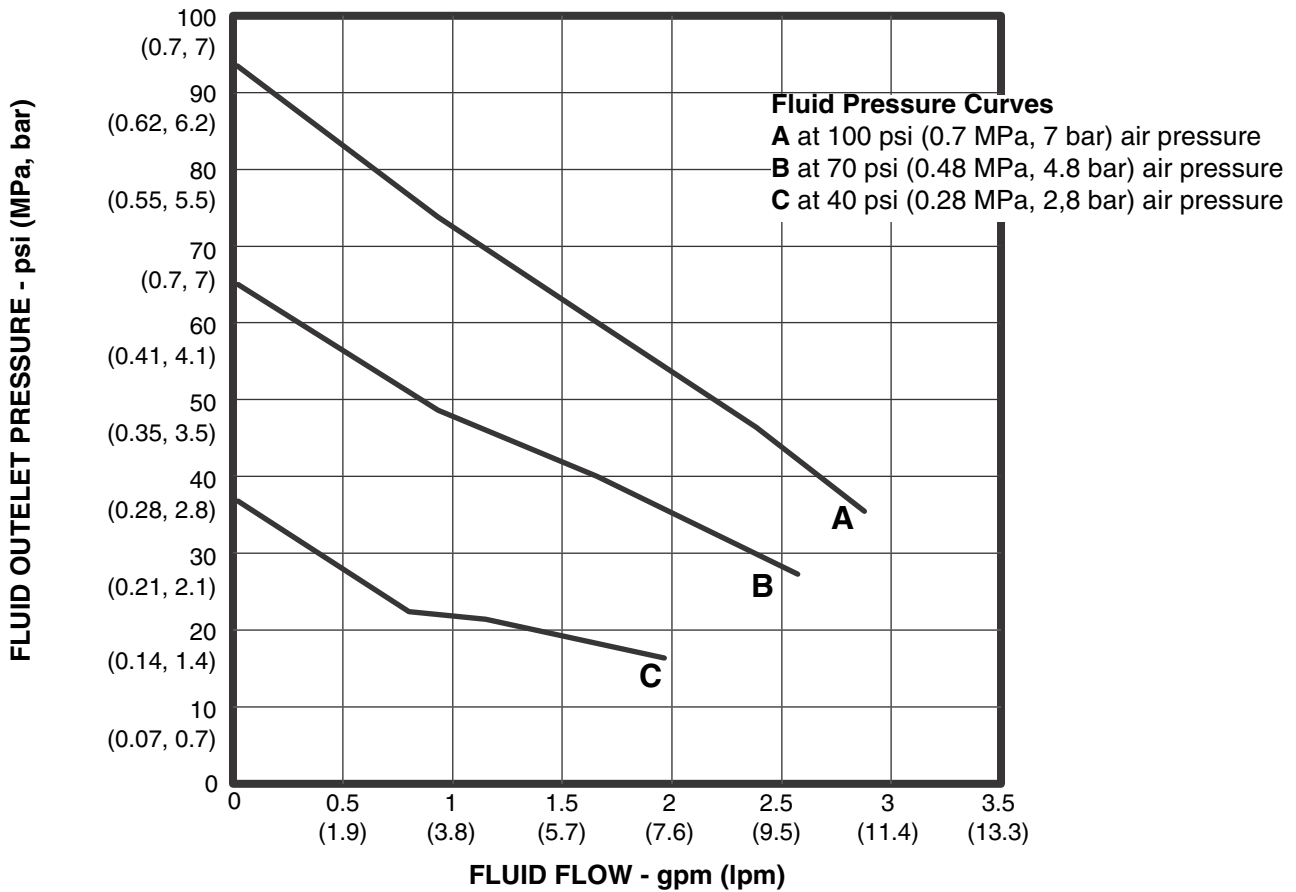
Fluid Section Service Kits

Part Number	Configuration Number	Service Kit
TF24T062	TFG025PTF	D01091
TF24T063	TFG025ACTF	D01021

Performance Charts

Fluid Outlet Pressure

Test Conditions: Pump tested in water with inlet submerged.

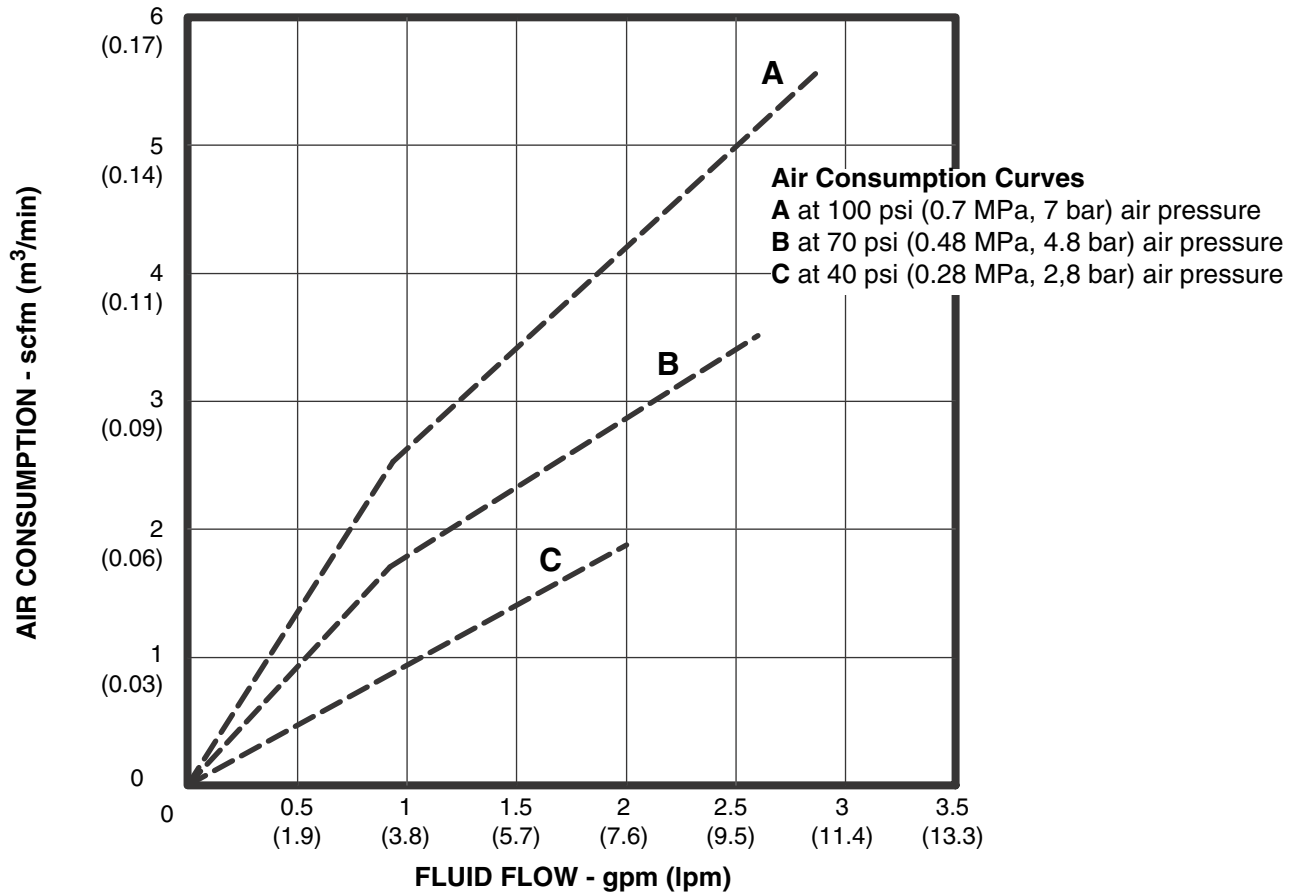


To find Fluid Outlet Pressure (psi/MPa/bar) at a specific fluid flow (gmp/lpm) and operating air pressure (psi/MPa/bar):

1. Locate fluid flow rate along bottom of chart.
2. Follow vertical line up to intersection with selected fluid outlet pressure curve.
3. Follow left to scale to read fluid outlet pressure.

Air Consumption

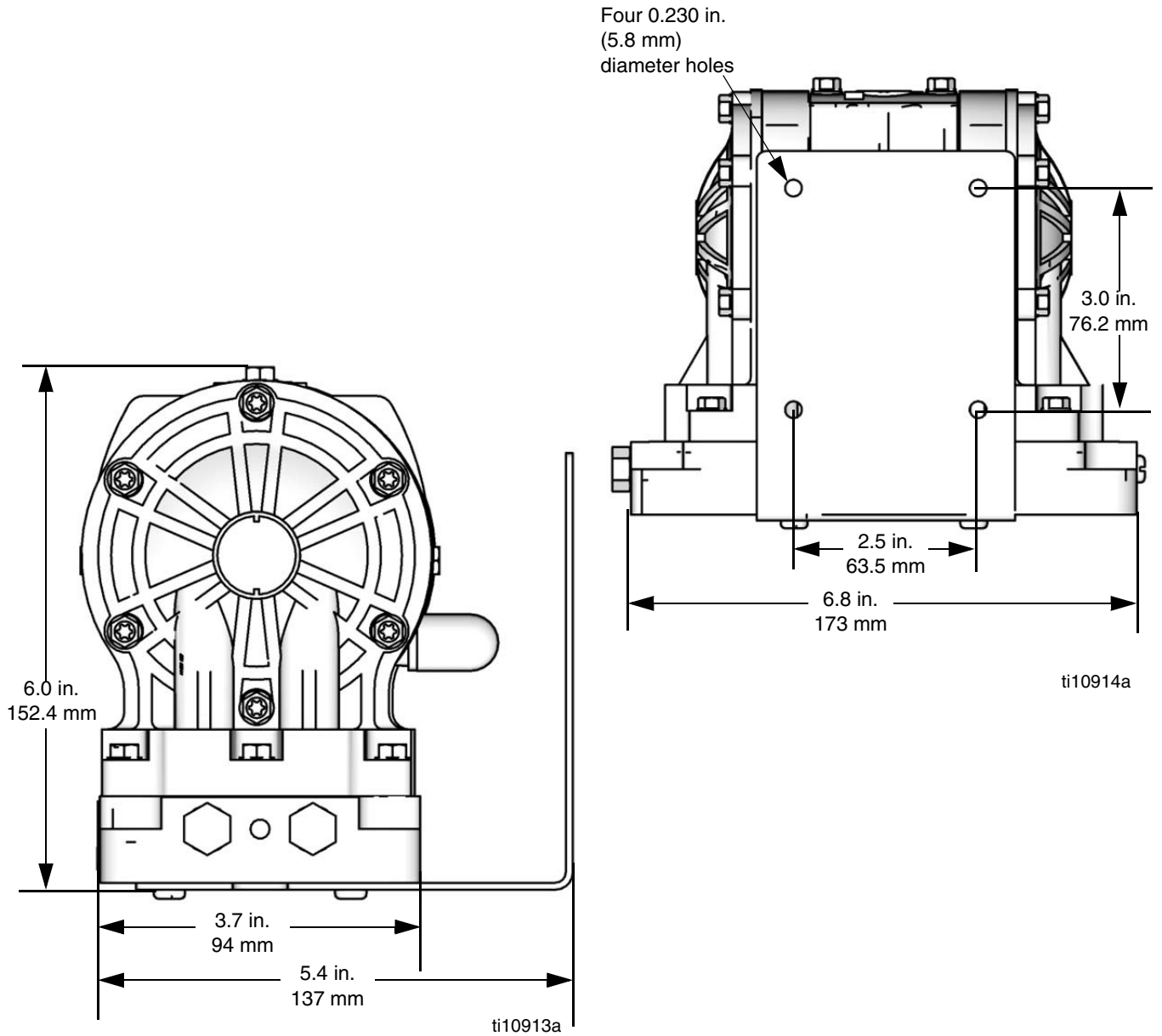
Test Conditions: Pump tested in water with inlet submerged.



To find Pump Air Consumption (scfm or m^3/min) at a specific fluid flow (gmp/lpm) and air pressure (psi/MPa/bar):

1. Locate fluid flow rate along bottom of chart.
2. Follow vertical line up to intersection with selected air consumption curve.
3. Follow left to scale to read fluid outlet pressure.

Dimensions and Mounting Hole Layout



Technical Data

	US	Metric
Maximum fluid working pressure	100 psi	0.7 MPa, 7 bar
Air pressure operating range	20 to 100 psi	0.14 to 0.7 MPa, 1.4 to 7 bar
Maximum fluid flow	5 gpm	18.9 lpm
Maximum pump speed	320 (dry) cycles per minute 250 (wet) cycles per minute	
Volume per stroke*	0.006 gal	23 cc
Volume per cycle*	0.012 gal	46 cc
Maximum suction lift dry	8 to 10 ft	2.5 to 3 m
Maximum size pumpable solids	0.06 in	1.5 mm
Maximum operating temperature	180°F	82°C
Maximum air consumption	9.0 scfm	0.252 m ³ /min
Air inlet size**	1/4 npt(f)	1/4 bspt(f)
Fluid inlet size**	1/4 npt(f)	1/4 bspt(f)
Fluid outlet size**	1/4 npt(f)	1/4 bspt(f)
Air exhaust port size**	1/4 npt(f)	1/4 bspt(f)
Weight		
Polypropylene pump	2.0 lb	0.9 kg
Acetal pump	2.5 lb	1.1 kg
Wetted Parts		
Polypropylene pump	Glass-filled polypropylene, PTFE, polypropylene, hastelloy	
Acetal pump	Acetal with SST fibers, PTFE, acetal, hastelloy	
Sound power level (pressure, per ANSI STD S12.1)		
at 100 psi (0.7 MPa, 7 bar)	75.5 dBa	
at 70 psi (0.49 MPa, 4.9 bar)	72.0 dBa	
at 40 psi (0.28 MPa, 2.8 bar)	68.2 dBa	
Sound power level (intensity, per ANSI STD S12.1)		
at 100 psi (0.7 MPa, 7 bar)	84.5 dBa	
at 70 psi (0.49 MPa, 4.9 bar)	81.1 dBa	
at 40 psi (0.28 MPa, 2.8 bar)	76.6 dBa	
Notes		
* Volume per stroke/cycle may vary based on suction condition, discharge head, air pressure, and fluid.		
** Hybrid thread allows for either 1/4 npt or 1/4 bspt fitting.		

Techni-flow Standard Warranty

Techni-flow warrants all equipment referenced in this document which is manufactured by Techni-flow and bearing its name to be free from defects in material and workmanship on the date of sale to the original purchaser for use. With the exception of any special, extended, or limited warranty published by Techni-flow, Techni-flow will, for a period of twelve months from the date of sale, repair or replace any part of the equipment determined by Techni-flow to be defective. This warranty applies only when the equipment is installed, operated and maintained in accordance with Techni-flow's written recommendations.

This warranty does not cover, and Techni-flow shall not be liable for general wear and tear, or any malfunction, damage or wear caused by faulty installation, misapplication, abrasion, corrosion, inadequate or improper maintenance, negligence, accident, tampering, or substitution of non-Techni-flow component parts. Nor shall Techni-flow be liable for malfunction, damage or wear caused by the incompatibility of Techni-flow equipment with structures, accessories, equipment or materials not supplied by Techni-flow, or the improper design, manufacture, installation, operation or maintenance of structures, accessories, equipment or materials not supplied by Techni-flow.

This warranty is conditioned upon the prepaid return of the equipment claimed to be defective to an authorized Techni-flow distributor for verification of the claimed defect. If the claimed defect is verified, Techni-flow will repair or replace free of charge any defective parts. The equipment will be returned to the original purchaser transportation prepaid. If inspection of the equipment does not disclose any defect in material or workmanship, repairs will be made at a reasonable charge, which charges may include the costs of parts, labor, and transportation.

THIS WARRANTY IS EXCLUSIVE, AND IS IN LIEU OF ANY OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO WARRANTY OF MERCHANTABILITY OR WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE.

Techni-flow's sole obligation and buyer's sole remedy for any breach of warranty shall be as set forth above. The buyer agrees that no other remedy (including, but not limited to, incidental or consequential damages for lost profits, lost sales, injury to person or property, or any other incidental or consequential loss) shall be available. Any action for breach of warranty must be brought within two (2) years of the date of sale.

TECHNI-FLOW MAKES NO WARRANTY, AND DISCLAIMS ALL IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, IN CONNECTION WITH ACCESSORIES, EQUIPMENT, MATERIALS OR COMPONENTS SOLD BUT NOT MANUFACTURED BY TECHNI-FLOW. These items sold, but not manufactured by Techni-flow (such as electric motors, switches, hose, etc.), are subject to the warranty, if any, of their manufacturer. Techni-flow will provide purchaser with reasonable assistance in making any claim for breach of these warranties.

In no event will Techni-flow be liable for indirect, incidental, special or consequential damages resulting from Techni-flow supplying equipment hereunder, or the furnishing, performance, or use of any products or other goods sold hereto, whether due to a breach of contract, breach of warranty, the negligence of Techni-flow, or otherwise.

*All written and visual data contained in this document reflects the latest product information available at the time of publication.
Techni-flow reserves the right to make changes at any time without notice.*

Original instructions. This manual contains English. MM 332521

Techni-flow • 82270 Montpezat de Quercy • FRANCE
<http://pompe-techni-flow.com>
Revision C, July 2013