

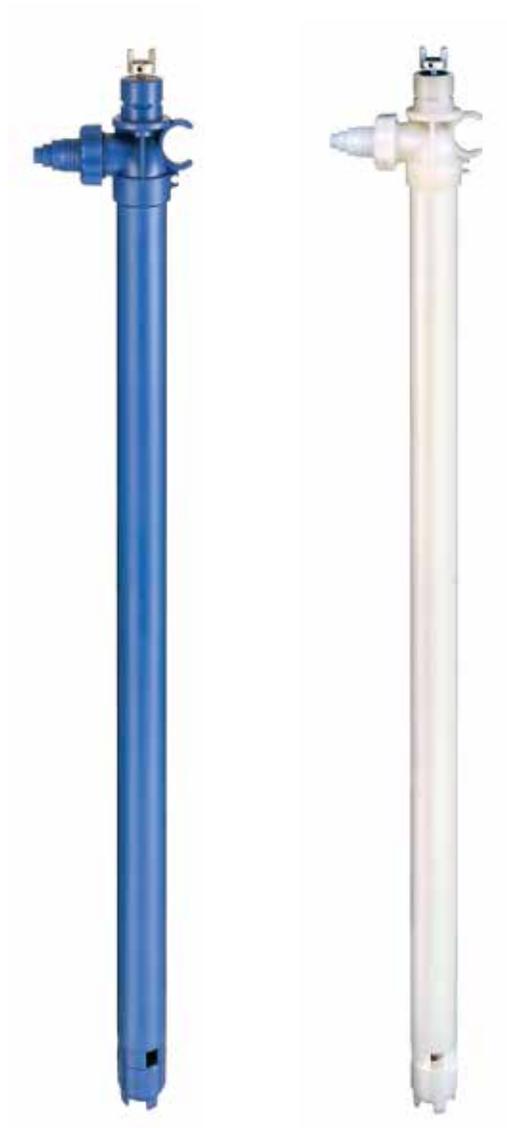


FINISH THOMPSON INC.

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800-PumpBiz (786-7249)
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PF SERIES PUMPS

PFM, PFP, PFV OPERATION, INSTALLATION & PARTS MANUAL



Safety

1. Introduction

This manual contains all the information needed for the correct installation, use and maintenance of your new Finish Thompson pump. It should be read and understood by all the personnel involved in installation, operating and servicing of the pump before it is started.

2. Operator Qualification and Training

The personnel in charge of the installation, the operation, and the maintenance of the pump must be qualified and able to perform the operations described in this manual. Finish Thompson, Inc. shall not be held responsible for the training level of personnel and for the fact that they are not fully aware of the contents of this manual.

3. Safety Instructions

FOR YOUR OWN SAFETY

BEFORE using or servicing your pump, please make sure to wear the proper clothing, eye protection and follow standard safety procedures when handling corrosive or personally harmful materials.

GENERAL DANGER

NEVER use a plastic pump or an open, splash-proof, TEFC or non-ATEX motor when pumping or mixing flammable or combustible material.

ALWAYS use and store the pump and motor in an upright position.

DANGER: POWER SUPPLY

Refer to instructions in the appropriate motor Operation & Installation Manual.

4. Noise Level

Refer to specifications in the appropriate motor Operation & Installation Manual.

5. Modifications and Spare Parts

Any changes concerning the service of the pump as originally purchased can be executed only after written approval from Finish Thompson Inc. It is recommended to use only genuine Finish Thompson Inc. spare parts and approved accessories. The use of non-original spare parts or non-approved accessories will void warranty and removes any responsibility on the manufacturer's behalf for any damage caused to people or things.

6. Cleaning

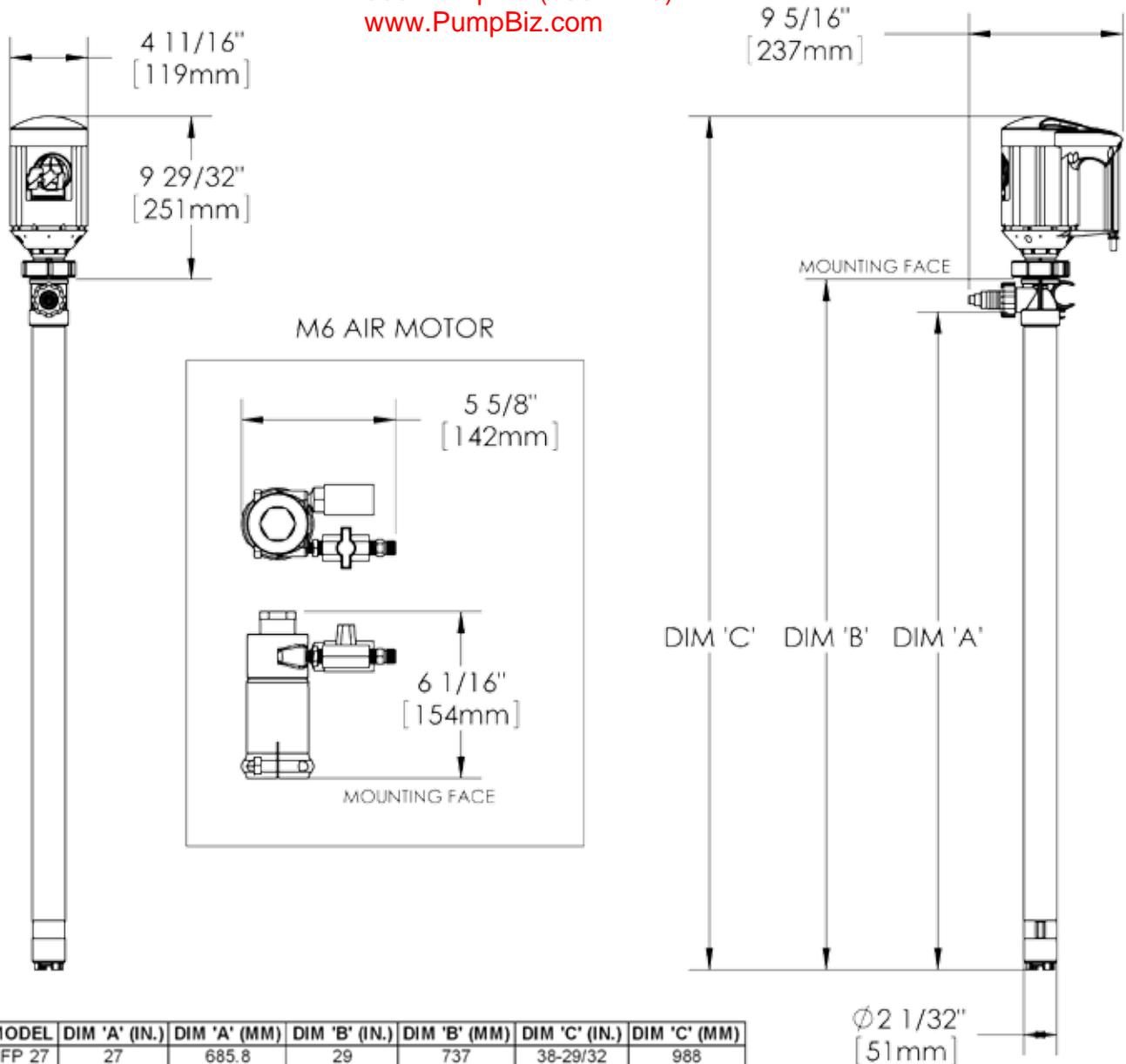
It is highly recommended to flush pumps with clean water or some other neutralizing fluid compatible with pump materials when done pumping or when switching chemicals.

PUMP SPECIFICATIONS

	MODEL PFM	MODEL PFP	MODEL PFV
Outer Tube Diameter	2" (51 mm)	2" (51 mm)	2" (51 mm)
Discharge Spout	Variable orifice barb fitting	Variable orifice barb fitting	Variable orifice barb fitting
Discharge Thread	1-1/4" NPSM	1-1/4" NPSM	1-1/4" NPSM
Max. Specific Gravity	1.83	1.83	1.83
Max. Viscosity	2000 cP	2000 cP	2000 cP
Min./ Max. Fluid Temperature	35°F Minimum to 160°F Maximum	35°F Minimum to 160°F Maximum	35°F Minimum to 120°F Maximum*
	(1.6°C Minimum to 71°C Maximum)	(1.6°C Minimum to 71°C Maximum)	(1.6°C Minimum to 49°C Maximum)
Wetted Materials	Polypro, FKM, PTFE, ETFE, 316 SS	Polypro, FKM, PTFE, ETFE, Alloy 625 (PFP)	Unfilled Polypro, PVDF, FKM, PTFE, ETFE, Alloy 625

*PFV-72: 35°F Min. to 115°F Max. (2°C Min. to 49°C Max.)

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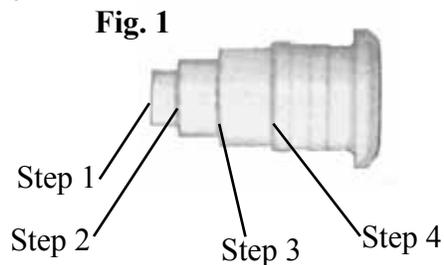
MODEL	DIM 'A' (IN.)	DIM 'A' (MM)	DIM 'B' (IN.)	DIM 'B' (MM)	DIM 'C' (IN.)	DIM 'C' (MM)
PFP 27	27	685.8	29	737	38-29/32	988
PFP 40	40	1016	42	1067	51-29/32	1318
PFP 48	48	1219.2	50	1270	59-29/32	1522
PFP 60	60	1524	62	1575	71-29/32	1826
PFP 72	72	1828.8	74	1880	83-29/32	2131

INSTALLATION & MAINTENANCE INSTRUCTIONS

Installation

1. Remove the drum pump from its packaging and inspect for shipping damage.
2. Turn the pump coupling to verify there is no binding.
3. Verify the housing cover (item 16) is on tight (it has a left hand thread).
4. Adjust the coupling so that the empty slots in the insert are at 3 and 9 o'clock with the pump discharge at 12 o'clock.
5. Install the motor onto the drum pump per the installation instructions from the Operation & Installation Manual of the specific motor model.

Note: Pumps with the standard 1" barb spout include a variable orifice fitting, which initially limits the flow of the pump to 10 gpm. As it is cut away, flow will increase from 10 gpm up to maximum flow (to increase flow, simply trim back orifice). Orifice steps control flow as follows: Step 1 = 10 gpm, Step 2 = 20 gpm, Step 3 = 30 gpm, Step 4 (maximum opening) = maximum flow (see Fig. 1).



Note: ALWAYS use a 1" I.D. hose properly secured to the barb spout using a hose clamp.

Maintenance

Disassembly

1. Remove the housing cover (item 16) by turning it clockwise (left hand thread) while gripping the impeller housing (item 14).
2. Turn the impeller until a hole in the shaft can be seen through the square slot in the impeller housing (item 14), and insert 3/32 pin into the hole. Holding the pin, turn the impeller (item 15) counterclockwise (right-hand thread) and remove it.
3. Remove the impeller housing (item 14) by gripping the intake tube and spinning the housing clockwise (left hand thread). Re-insert the 3/32 pin and while gripping the pump coupling unthread (counterclockwise) and remove the shaft (item 4) from the bearing assembly (item 3).
4. Place the pump head (item 6) in a vise (do not crush) and remove the intake tube (item 7) by unthreading clockwise (left hand thread). Remove the inner upper (item 10) and shaft sleeve (item 8) from the head. Remove the bearing assembly (item 3) and the FKM lip seal (item 5) from the head.
5. Remove the center support (item 11) from the inner tube (item 10).

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Inspection

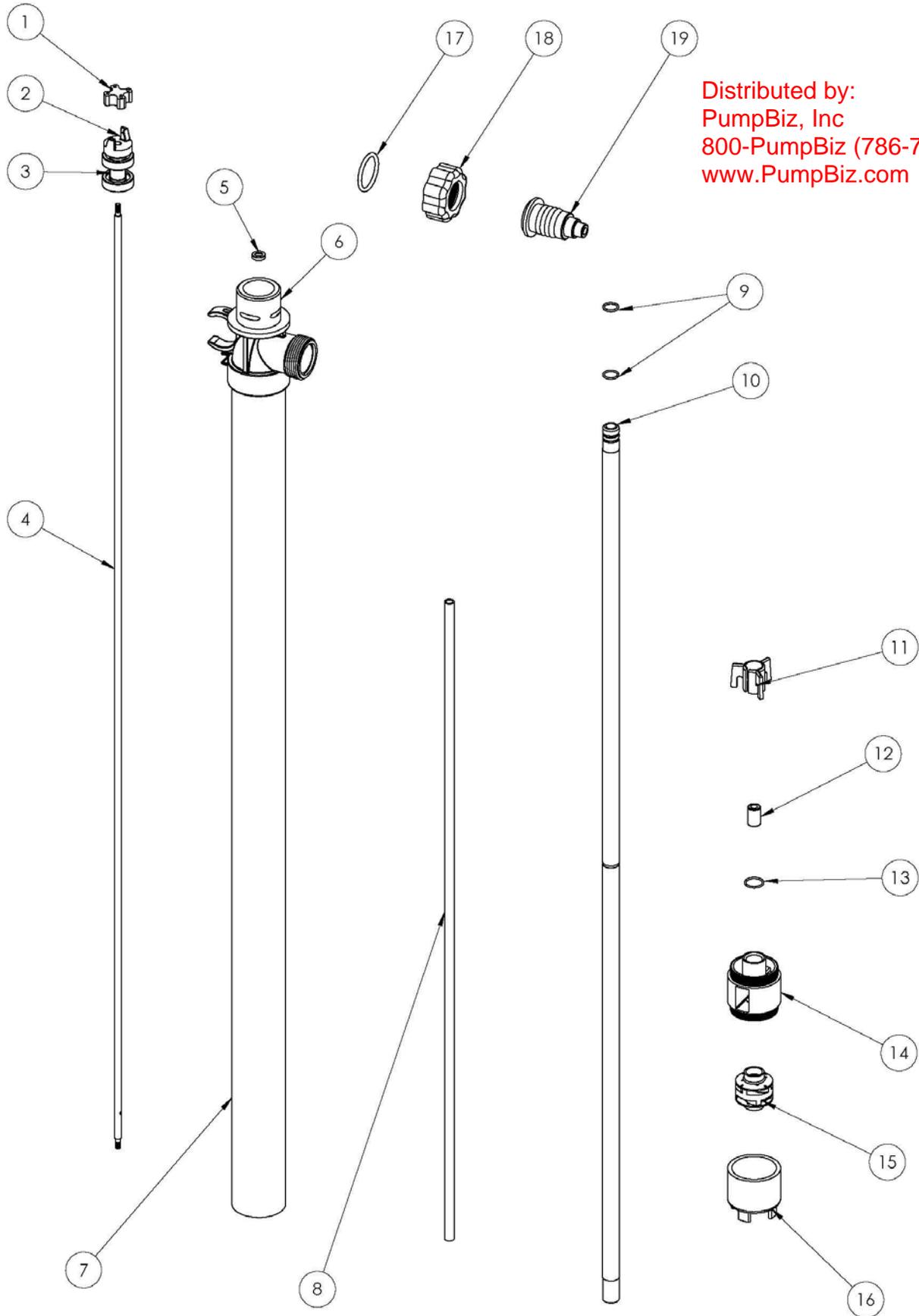
1. Check the housing cover (item 16), the impeller (item 15), and the impeller housing (item 14) for wear, rubbing, or damage from foreign objects. Replace if damaged.
Note: The double impeller design of this pump is dependant on the impeller working correctly. Any damage to the impeller can cause pump failure.
2. Inspect the pump shaft (item 4) for wear in the bottom (item 12), and the FKM lip seal (item 5) areas. Replace the shaft if needed.
3. Inspect the bottom bearing (item 12) and the shaft sleeve (item 8) for internal wear. Inspect all o-rings (items 9, 13, & 17) for nicks or chemical attack. Replace as needed.
4. Inspect the bearing assembly (item 3) for rust or corrosion. Never reuse the lip seal (item 5).

Reassembly

1. Install new lip seal (item 5) into the pump head (item 6) with the grooved side facing the bottom of the pump.
2. Thread the shaft (item 4) into the bearing assembly (item 3) with the 3/32 hole in the shaft on the other end. Carefully insert the shaft straight through the vapor seal (to avoid seal damage) from the top and seat the bearing assembly (item 3) into the pump head (item 6).
3. If o-rings are replaced: Install 2 upper inner tube o-rings (items 9), and install the impeller housing o-ring (item 13) inside the top of the housing (item 14). Apply a small amount of Vaseline to the o-rings to aid in assembly. Install the center support (item 11) onto the inner tube (item 10).
4. Slide the inner tube (item 10) up the shaft and into the counter bore in the bottom of the head. Slide the shaft sleeve (item 8) up inside the inner tube. Slide the intake tube up from the bottom, centering the center support, and thread it (left hand thread) into the head (item 6).
5. Gripping the coupling (item 7) at the top of the pump, thread the impeller on (right hand thread). Install the housing cover (left hand thread). Turn the coupling to verify there is no binding inside the pump.

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PFM/PFP/PFV SPARE PARTS EXPLODED VIEW



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PUMP SPARE PARTS LIST

ITEM	QTY	DESCRIPTION	PART NUMBER		
			MODEL PFM	MODEL PFP	MODEL PFV
1	1	COUPLING INSERT			
		NITRILE	J100014	J100014	J100014
2	1	COUPLING HALF			
		CAST ALUMINUM	J100012	J100012	J100012
3*	1	BEARING ASSEMBLY			
		STEEL	A101110	A101110	A101110
4	1	MAIN SHAFT (PFM=316SS, PFP/PFV=ALLOY 625)			
		27" MODELS	M100004-5	M100004-1	M100004-1
		40" MODELS	M100004-7	M100004-3	M100004-3
		48" MODELS	M100004-8	M100004-4	M100004-4
		60" MODELS	M100004-12	M100004-9	M100004-9
		72" MODELS	M100004-13	M100004-11	M100004-11
5*	1	LIP SEAL			
		1/4" FKM	107592	107592	107592
6	1	HEAD			
		POLYPROPYLENE	107755-1	107755-1	N/A
		PVDF	N/A	N/A	107755-2
7	1	INTAKE TUBE (PFM/PFP = POLYPROPYLENE, PFV = PVDF)			
		27" MODELS	107475-2	107475-2	107475-7
		40" MODELS	107475-3	107475-3	107475-8
		48" MODELS	107475-4	107475-4	107475-9
		60" MODELS	107475-5	107475-5	107475-10
		72" MODELS	107475-6	107475-6	107475-11
8*	1	SHAFT SLEEVE (ALL MODELS = PTFE)			
		27" MODELS	108375-2	108375-2	108375-2
		40" MODELS	108375-3	108375-3	108375-3
		48" MODELS	108375-4	108375-4	108375-4
		60" MODELS	108375-5	108375-5	108375-5
		72" MODELS	108375-6	108375-6	108375-6
9*	2	INNER TUBE O-RING			
		FKM	J100249	J100249	J100249
		EPDM	106519	106519	106519
		PERLAST	105621	105621	105621
10	1	INNER TUBE (PFM/PFP = POLYPROPYLENE, PFV = PVDF)			
		27" MODELS	108373-2	108373-2	108373-7
		40" MODELS	108373-3	108373-3	108373-8
		48" MODELS	108373-4	108373-4	108373-9
		60" MODELS	108373-5	108373-5	108373-10
		72" MODELS	108373-6	108373-6	108373-11
11*	1 (27-48") 2 (60") 3 (72")	CENTER SUPPORT			
		ETFE	108277	108277	108277
12*	1	BOTTOM BEARING			
		PTFE	M100007	M100007	M100007
13*	1	IMPELLER HOUSING O-RING			
		FKM	J100019	J100019	J100019
		EPDM	106799	106799	106799
		PERLAST	105622	105622	105622
14*	1	IMPELLER HOUSING			
		POLYPROPYLENE	107316-1	107316-1	N/A
		PVDF	N/A	N/A	107316-2
15*	1	IMPELLER ASSEMBLY			
		PVDF	A100002-2	A100002-2	A100002-2
16*	1	HOUSING COVER			
		POLYPROPYLENE	M101612-1	M101612-1	N/A
		PVDF	N/A	N/A	M101612-2

ITEM	QTY	DESCRIPTION	PART NUMBER		
			MODEL PFM	MODEL PFP	MODEL PFV
17	1	DISCHARGE O-RING			
		FKM	J100991	J100991	J100991
		EPDM	J102378	J102378	J102378
		PERLAST	107017	107017	107017
18	1	DISCHARGE NUT			
		FOR USE WITH 1" OR 3/4" BARB SPOUT	M101610-1	M101610-1	M101610-2
		FOR USE WITH 1" MNPT SPOUT ONLY	106622	106622	106622-1
19	1	SPOUT			
		1" BARB (STANDARD)	M100028-1	M100028-1	M100028-2
		3/4" BARB (OPTIONAL)	105439-1	105439-1	105439
		1" MNPT (OPTIONAL)	106599	106599	106599-1

*Recommended Spare Parts

N/A = Not Applicable

Note: Bearing assembly and lip seal can be purchased as a kit using part number 108110.



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