

HIGH CAPACITY SUBMERSIBLE TURBINE PUMPS

Available with either 3 or 5 hp, the FE PETRO® high capacity pump delivers efficient, reliable, and quiet performance when high volumes or high speed deliveries of gasoline or diesel fuel are required.

HIGHLIGHTS

High Performance

FE PETRO®'s two-stage centrifugal pump is coupled with a dependable Franklin Electric motor to provide higher heads, faster fuel delivery, and lower cost operation. Motors are all three-phase for smooth operation and are available in various voltages. Units come standard with a 6" diameter riser pipe to mount the pump to the tank.

Ease of Maintenance

If service is required, FE PETRO® products are designed to put the operator back in business fast. Maintenance on the pump motor assembly can be performed without having an electrician on-site. Large diameter pins and sockets provide automatic open circuits and disconnecting of the wiring when the extractable portion of the pump is removed. Properly spaced lifting eyes facilitate the removal of the unit without disturbing the discharge piping. The pump motor assembly is easily removed from the discharge head by removing four bolts and using standard pusher bolts. Replacement pump motor assemblies are available for comparably-sized competitive pumps.

SPECIFICATIONS

Pump Motor

- Fixed speed, 3450 rpm, multi-stage centrifugal type pump motor with built-in, automatic, thermal overload protection.
- High capacity pump 60 Hz models are available as two-stage versions only.

Standard Features

- Pressure relief valve: cartridge design available in two pressure relief settings, external to check valve. Standard model relieves at 40 psi and resets above 35 psi.
- Syphon: external venturi-type syphon primer supplied as submersible accessory.
- Air eliminator: every submersible includes tank return path to provide active air elimination.



Reliability

Quality engineering and simplicity of design work to ensure years of reliable performance from every high capacity unit. The continuous duty, three-phase Franklin Electric motor with carbon bearings and stainless steel journals is FE PETRO®'s standard. The impellers, made of molded acetal, and diffusers of hard coated aluminum, with a stainless steel pump shaft, assure trouble-free operation in motor fuels. Dual (180° opposed) 3" horizontal discharge ports provide easy installation, and two built-in line check valves reduce installation costs. Two line pressure relief valves protect the dispensers, meters, and piping from abnormal pressures due to thermal expansion. The mesh screen on the pump inlet prevents large particles from entering the unit and the unit is compatible with existing high capacity leak detector technology. New units are easily connected to field wiring without disassembly.

Satisfaction

Each and every high capacity pump is built to your tank and bury specifications and the complete assembly is performance tested to ensure that your needs are met. All high capacity pumps are UL listed and meet the requirements of UL 79.

Power Requirements

- High capacity pump models require three-phase, 60 Hz incoming power.
- High capacity pump models are available as 208-230 VAC, 460 VAC or 575 VAC versions.
- High capacity pump models are available in 3 hp and 5 hp versions.
- STP-SCIII three-phase Smart Controllers and STP-CB3/5 three-phase control boxes are available for high capacity pump control.

SPECIFICATIONS CONTINUED

Liquid Compatibility

- Max. liquid viscosity: 70 SSU at 60 °F (15 °C).
- Standard models are UL and cUL listed for fuel mixtures containing up to 10% ethanol with gasoline, and 20% MTBE, 20% ETBE or 17% TAME with gasoline.
- High capacity models can also be used with diesel fuels, fuel oils, kerosene, Avgas, and jet fuels in a non-gelled pourable state.
- All wetted elastomers are made of a high grade, fluorocarbon compound.

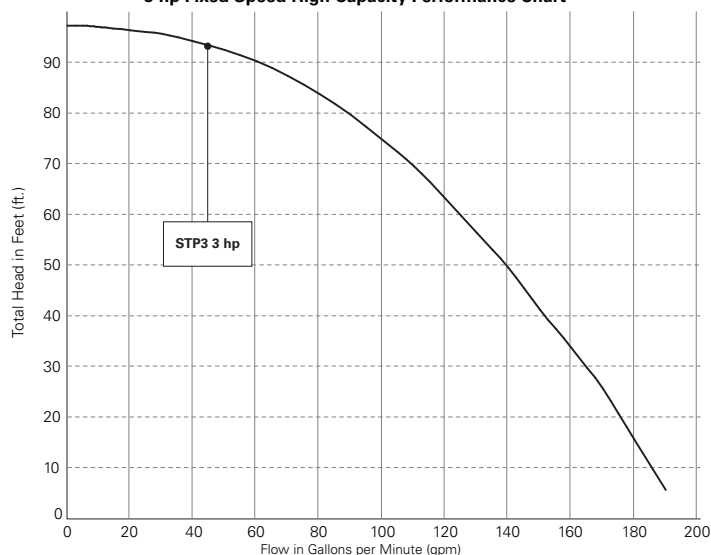
Approvals

- Consult factory for applicable approvals.

Quality Certification

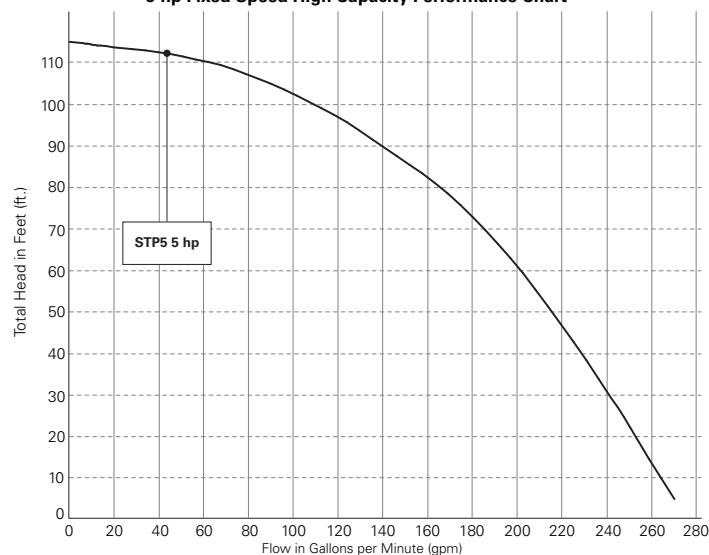
- Franklin Electric is an ISO 9001 Certified Manufacturer.

3 hp Fixed Speed High Capacity Performance Chart



Note: Performance based on pumping solvent (0.78 specific gravity). Pressure is taken at the manifold discharge outlet. STP3 models are powered by a three-phase, 60 Hz, 208/230 Volt power supply.

5 hp Fixed Speed High Capacity Performance Chart



Note: Performance based on pumping solvent (0.78 specific gravity). Pressure is taken at the manifold discharge outlet. STP5 models are powered by a three-phase, 60 Hz, 208/230 Volt power supply.

ORDERING INFORMATION

High Capacity Submersible Turbine Pump Model Designation System

A typical turbine model designation has up to five components to define the pump being supplied as follows:

STP XXXXX Y - A - B

STP = Basic Model Designation

Note: Standard models up to 10% ethanol capable.

XXXXX = Factory Installed Options

HCP model designations may include one or more of the following characters in alphabetical order:

F = Floating suction adapter (3" NPT male adapter)

*R = Model R check valve (24 psi relief/22 psi reset for PLLD)

**If not otherwise specified, all HCP models supplied with standard model check valve (40 psi relief/35 psi reset for MLD, TS-LS300, and TS-LS500).*

Y = Pump Motor Horsepower Rating

3 = 3 hp fixed speed, 208-230 VAC

5 = 5 hp fixed speed, 208-230 VAC

5H = 5 hp fixed speed, 460 VAC

5G = 5 hp fixed speed, 575 VAC

A = Model Length

Model length is expressed as three numeric characters that indicate the length of the HCP from the turbine manifold bottom to the pump motor inlet in inches, available from 60" to 200" (additional charge for models 132" and longer)

B = Riser Pipe Length

Riser pipe length is expressed as two numeric characters that indicate the total length of the riser in inches. Riser pipes are available from 6" to 60" in three inch increments (additional charge and lead time for risers 27" or longer).

ORDERING INFORMATION CONTINUED

High Capacity Turbine Pumps (Fixed Length Only)**

Model	Description
STP3	3 hp 6" STP, three-phase 208-230 VAC
STP5	5 hp 6" STP, three-phase 208-230 VAC
STP5H*	5 hp 6" STP, three-phase 460 VAC
STP5G*	5 hp 6" STP, three-phase 575 VAC

*Please call customer service for lead time on this item.

Notes:

- 1. STP models are listed for compatibility with fuel mixtures containing up to 10% ethanol with gasoline and up to 5% Biodiesel with diesel fuels.
- 2. All models are supplied with a standard check valve unless factory option "R" is specified.
- 3. All above models require three-phase, 60 Hz incoming power.
- 4. 6" riser pipe, if supplied locally, must be 6 5/8" OD by 1/4" WT tubing.
- 5. For riser pipe lengths 27" to 60" long, additional charges apply (consult factory for lead times).

** Model length (A) defined as the dimension from the turbine manifold bottom to pump motor inlet. Model length can be minimum of 60" to a maximum of 200". Adder (P/N 401190911) applies if model length is 132" to 170" or adder (P/N 401190914) applies if model length is 171" to 200" (charge is for additional packaging). Please call Customer Service for lead times.

Factory Installed Options

Model	Description
F	Floating suction adapter, 3" male NPT (must be ordered with STP)
R	Model R relief valve factory installed, for Veeder-Root® PLLD

Field Installed Options

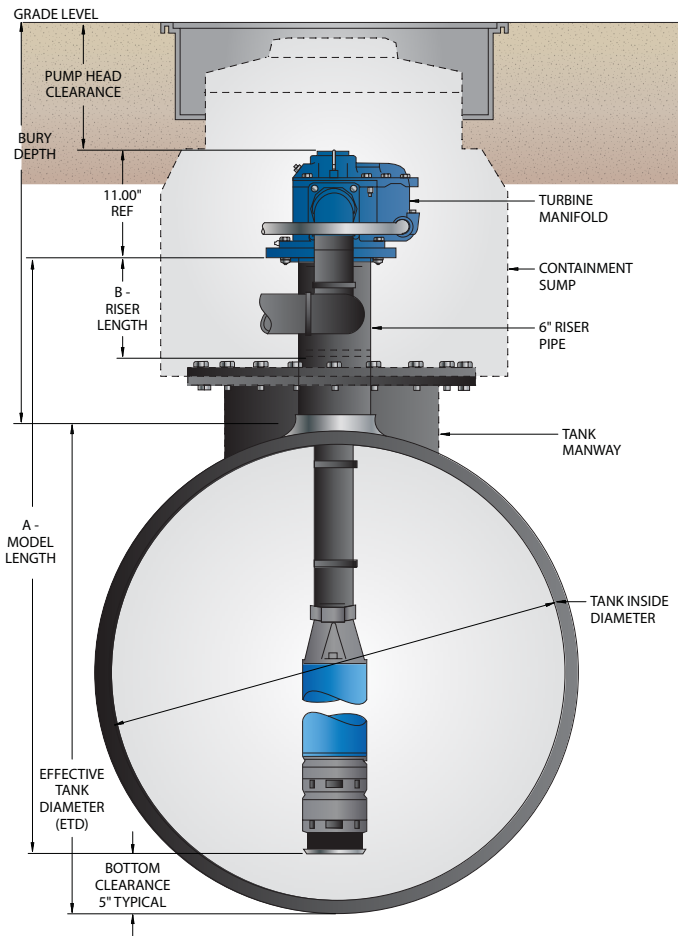
Model	Description
401165905	Syphon system (when purchased with STP)
STP-CB3	3 hp, 208-230 VAC, 60 Hz, three-phase motor starter, 120 VAC coil
STP-CB5	5 hp, 208-230 VAC, 60 Hz, three-phase motor starter, 120 VAC coil
STP-CB5G	5 hp, 575 VAC, 60 Hz, three-phase motor starter, 120 VAC coil
STP-CBB5H	5 hp, 460 VAC, 60 Hz, three-phase motor starter, 220 VAC coil
TPGC-220	Three-phase Guardian Controller, 120 VAC coil

Note: Three-phase Guardian Controller is compatible with FE PETRO® 208/230 Volt 3 and 5 hp high capacity STPs and like competitive makes. Not available for 460 or 575 Volt models.

6" STP Extractable (Less Manifold, Riser, and PMA)

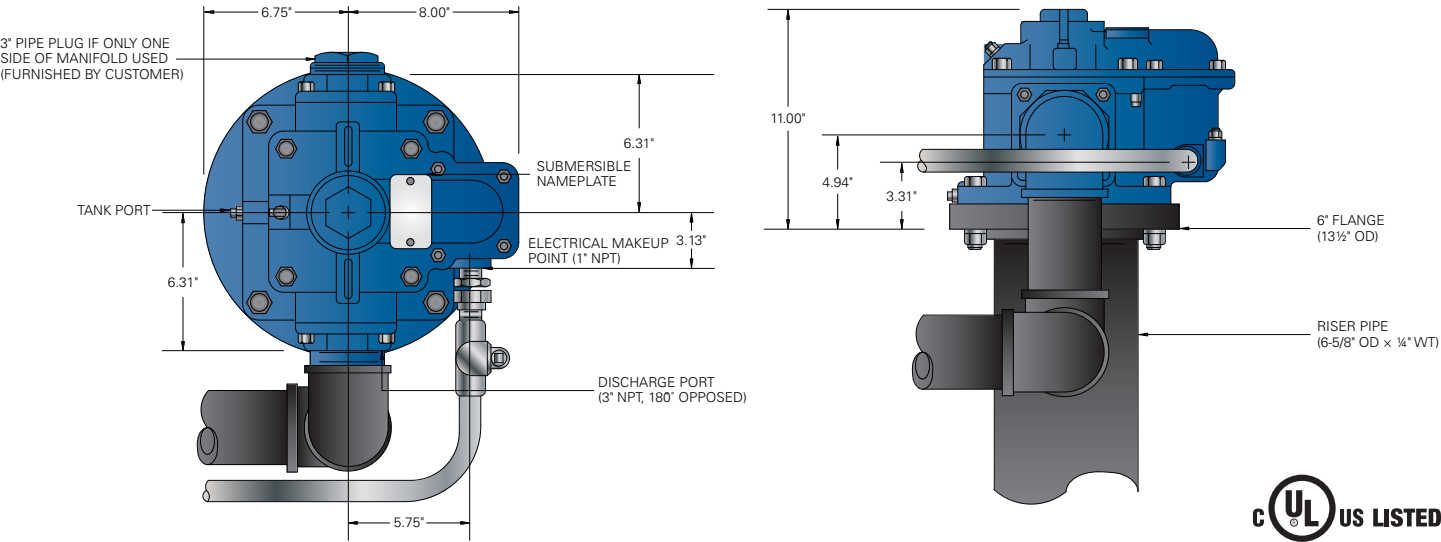
Model	Description
STPHC-EXT-XXX	6" fixed length extractable (p/n 401230901, where XXX indicates model length)*

* Model length can be minimum of 60" and a maximum of 200" (length adder charges apply for model lengths 132" to 200"). Please call Customer Service for lead times.



- Note: 1. Effective tank diameter (ETD) = Inside tank diameter (to top of 6" bung), including tank manway and/or sump adapter.
2. Model length (A) = ETD plus riser length minus bottom clearance minus 2" thread engagement.
3. Riser length (B) = Bury depth (to top of tank) minus pump head clearance minus tank manway and/or minus sump adapter.

ORDERING INFORMATION CONTINUED



Replacement Pump Motor Assemblies*

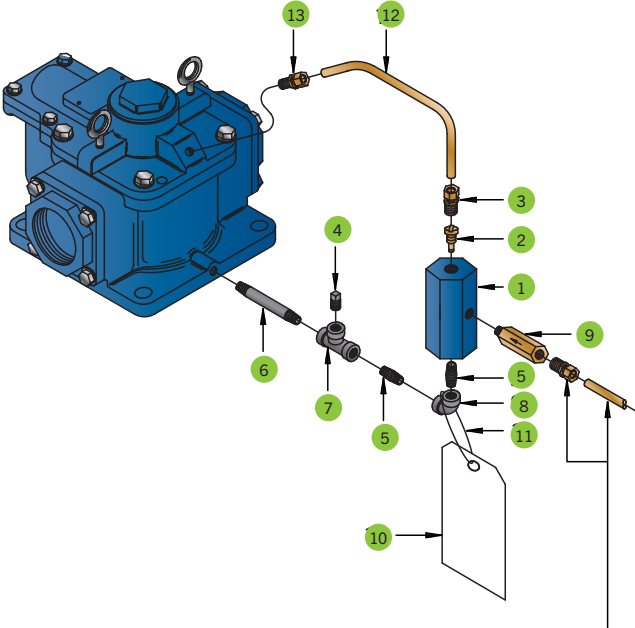
Model	Description
PMA3	3 hp 208-230 Volt 6" pump motor assembly
PMA3RJ	3 hp 208-230 Volt 6" pump motor assembly, replaces competitive model UMP300J4-2HB
PMA5	5 hp 208-230 Volt 6" pump motor assembly
PMA5RJ	5 hp 208-230 Volt 6" pump motor assembly, replaces competitive model UMP500J4-2K
PMA5H"	5 hp 460 Volt 6" pump motor assembly
PMA5G"	5 hp 575 Volt 6" pump motor assembly

*For pump motor assemblies with floating suction adapters (3" male NPT connections), specify "F" in the model number and adder charge applies (must be ordered with PMA).

"Please call customer service for lead time on these items.

Syphon System

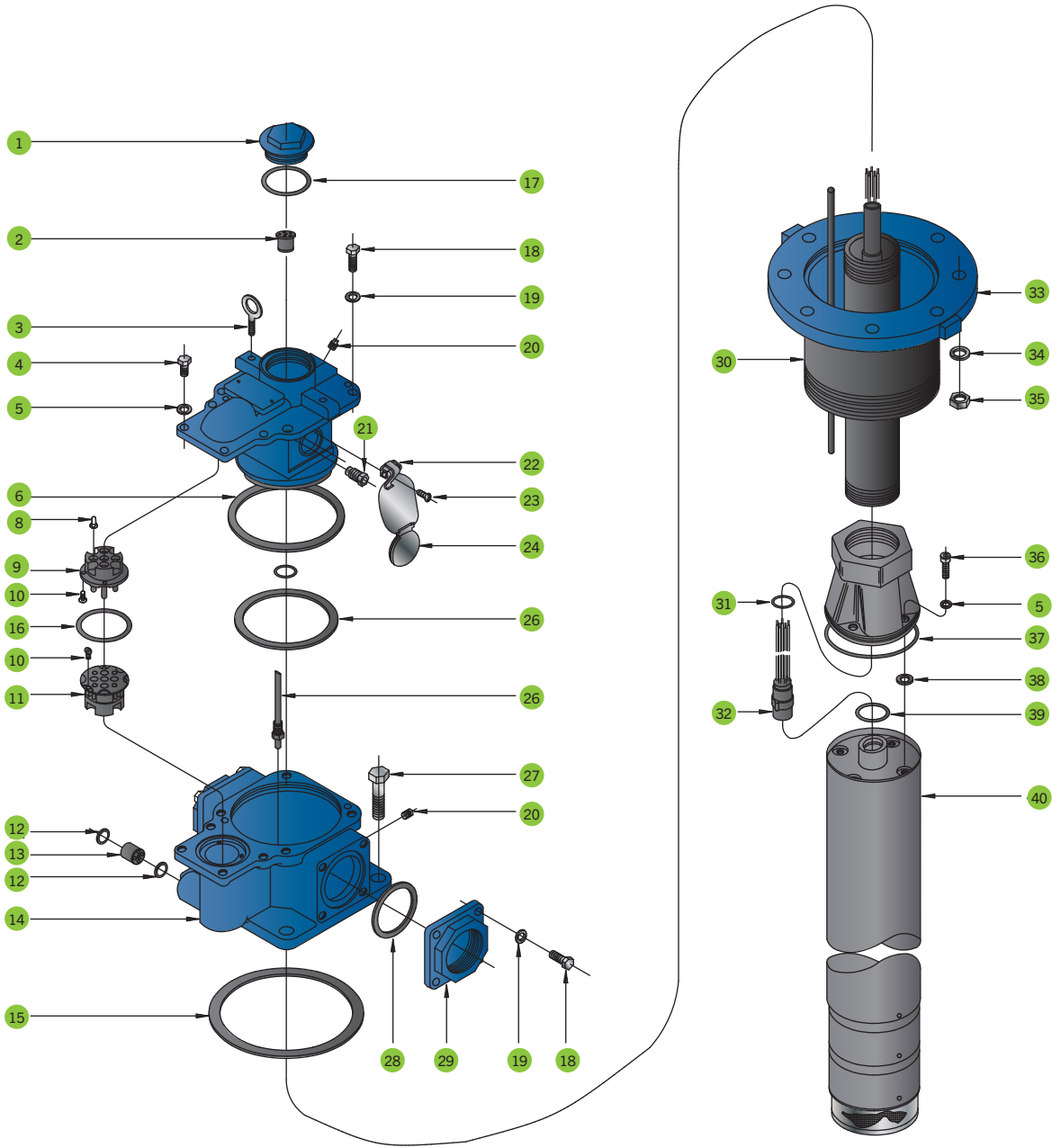
Item	Model	Description
1	402505001	Syphon block
2	400562901	Syphon jet assembly
3	400430004	3/8" P × 3/8" T compression fitting
4	400259001	1/4" pipe plug
5	400114001	1/4" close nipple, two required per system
6	400114003	1/4" nipple × 3" long
7	402510001	1/4" threaded tee
8	402511001	1/4" threaded elbow, 90°
9	400137937	Syphon check valve
10	402544001	Caution tag
11	400982001	Security seal
12	402553902	Copper tube (HC pump)
13	400430003	1/4" P × 3/8" T compression fitting
--	401165930	Syphon unit complete, includes all items above



CONNECT 1/4" NPT × 3/8" TUBE FITTING TO CHECK VALVE AND 3/8" OD COPPER TUBING TO HIGHEST POINT IN SYPHON LINE (FURNISHED BY CUSTOMER)

ORDERING INFORMATION CONTINUED

High Capacity General Assembly



STP3 and STP5 High Capacity General Assembly

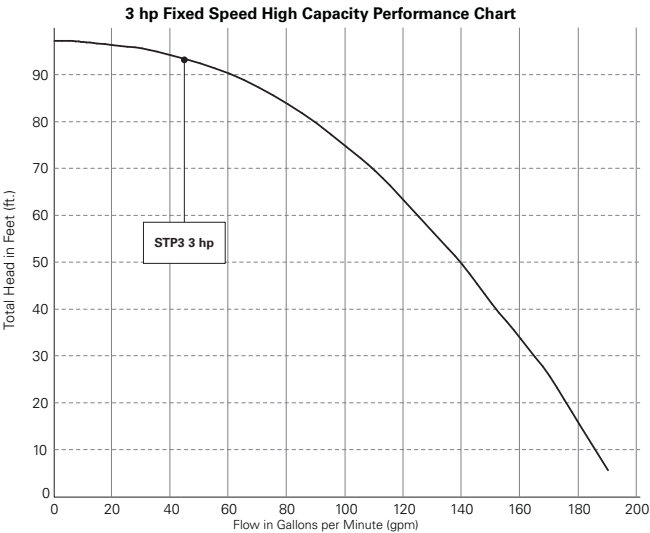
Item	Model	Description	Qty
1	401148101	Connection box cover	1
2	400236909	Seal off plug assembly, 5-wire	1
3	401149001	Eye bolt	2
4	400258001	3/8-16 × 1" large Hex head cap screw	4
5	400285002	3/8" lock washer	8
6	401236002	Upper manifold seal	1
8	400273004 400273006	12 gauge wire terminal 14 gauge wire terminal	6 4
9	401142901	Plug assembly	1
10	401091001	6-32 × 3/8" large round head machine screw, three required per connector	6
11	401137901	Receptacle assembly	1
12	401238001	Bushing ring, electrical entry	2
13	401239001	Seal plug, electrical entry	1
14	401112101	Discharge manifold	1
15	401163001	6" flange gasket	1
16	400333235	O-ring, connectors	1
17	400333234	O-ring, connection box cover (400210234)	1
18	400258005	1/2-13 × 1 1/4" large Hex head cap screw	12
19	400285005	1/2" lock washer	12
20	400259001	1/4" pipe plug	2
21	401032901 401330901 401330902	Model 550 relief (old standard pressure, tire valve) Standard relief (units built since S/N 0302XXXX) Model "R" relief (units built since S/N 0302XXXX)	2 1 1
22*	401154001	Valve spring and bracket	2
23	400523001	10-24 × 3/8" long Sems fastener, two required per bracket	4
24*	401150101	Inset valve assembly (check valve)	2
25	401236001	Lower manifold seal	1
26	401158904	Air eliminator assembly (includes return check valve, order 401158914 for check valve only)	1
27	400258006	3/4-10 × 3" large Hex head cap screw	4
28	401162001	3" flange gasket	2
29	401113101	3" companion flange	2
30	4011910XX 6 5/8" OD × 1/4" WT (XX = length)	6" riser pipe 9" riser pipe 12" riser pipe 15" riser pipe 18" riser pipe 21" riser pipe 24" riser pipe	1
31	400333218	O-ring, lead assembly	1
32	151593936	192" lead assembly	1
33	401161101	6" flange	1
34	993517	3/4" lock washer (400285006)	4
35	400274004	3/4-10 Hex nut	4
36	400264011	3/8-16 × 1 1/4" large SHCS	4
37	400333255	O-ring, motor discharge (large, shell)	1
38	402406001	Rubber washer	4
39	400333225	O-ring, motor discharge (small, electrical hub)	1
40	PMA XXX	Pump motor assembly, includes #37, #39, and four #5, #36, and #38 (XXX indicates options and horsepower)	1

*401154001 and 401150101 must be replaced together.

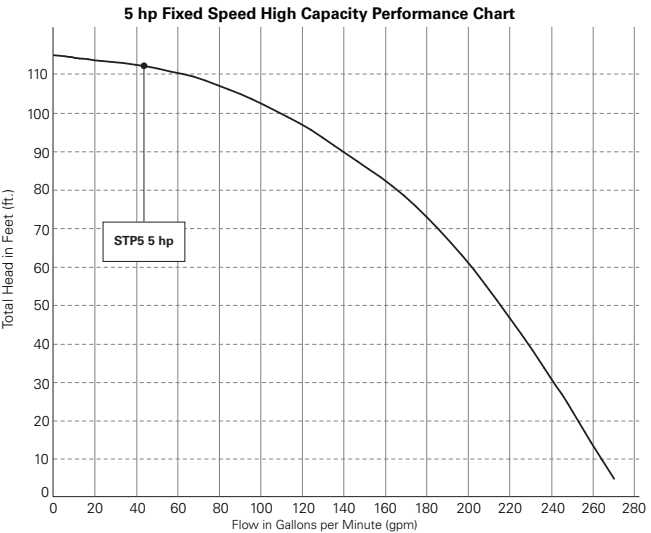
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