

# 3 AND 5 HP 50HZ 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.

## TECHNICAL ADVANTAGES

### High Performance

FE PETRO®'s multi-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.

### 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 aluminium, 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.



## SPECIFICATIONS

### Standard Features

- Pressure relief valve: cartridge design available in two pressure relief settings, external to check valve. Standard model relieves at 2.76 bar and resets above 2.41 bar.
- Syphon: external venturi-type syphon primer supplied as submersible accessory.
- Air eliminator: every submersible includes tank return path to provide active air elimination.

### Power Requirements

- 50 Hz high capacity pump models require three-phase, 380-415 VAC incoming power.
- 50 Hz high capacity pump models are available in 3 hp and 5 hp versions.
- STP-SCIIIIC three-phase smart controllers and STPCBB3C and STP-CBB5C three-phase control boxes are available for high capacity pump control.

### Pump Motor

Fixed speed, 2875 rpm, multi-stage centrifugal type pump motor with built-in, automatic, thermal overload protection.

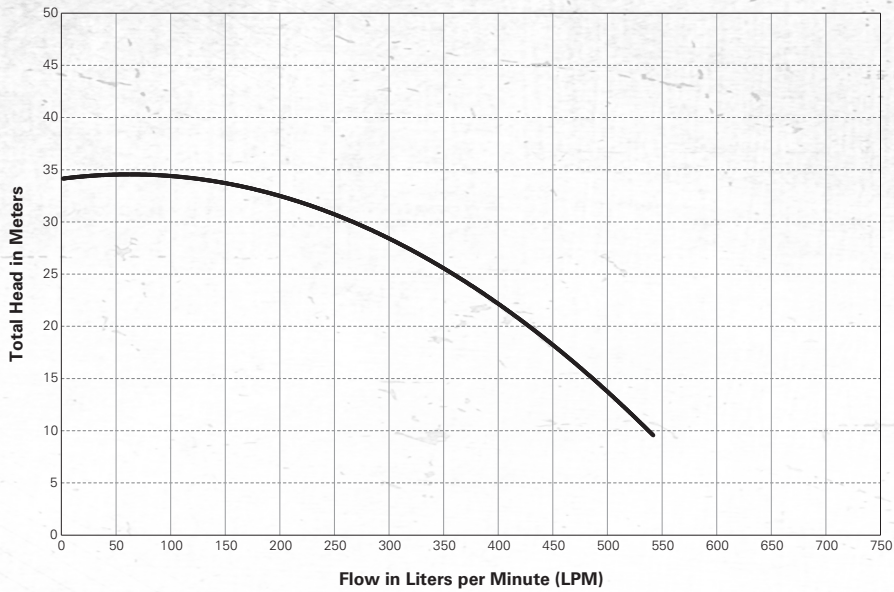
### Liquid Compatibility

Max. liquid viscosity: 70 SSU at 60°F (15°C).

- Standard models are listed for fuel mixtures containing up to 10% ethanol or methanol, and 20% MTBE, 20% ETBE or 17% TAME with gasoline.
- HCP models can also be used for fuel mixtures containing up to 5% biodiesel 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 Viton® compound.

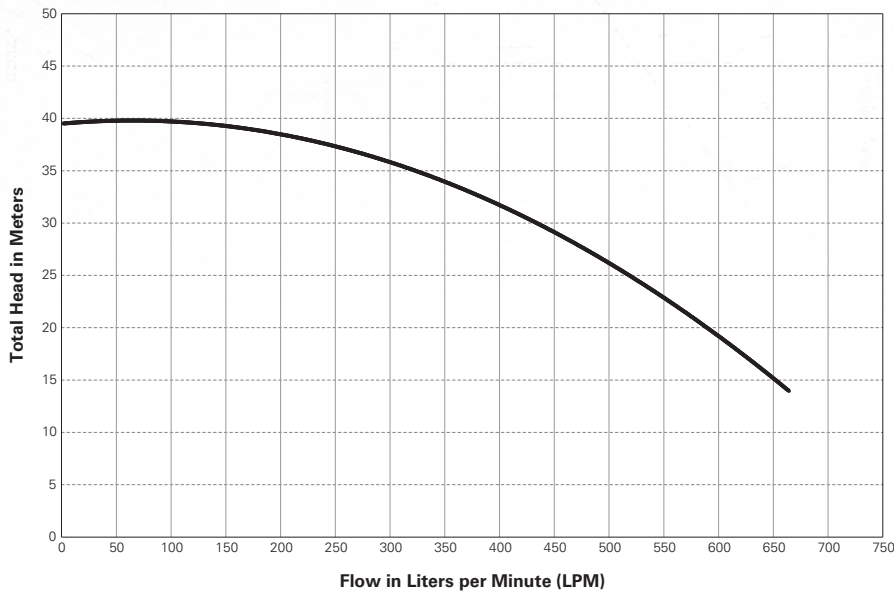
## SPECIFICATIONS CONTINUED

### 3 hp Fixed Speed High Capacity Performance Chart (STP3C)



Note: Performance based on pumping solvent (0.78 specific gravity). Pressure is taken at the manifold discharge outlet. Fixed Speed 3 HP was powered by Three-Phase, 50 Hz, 415 Volt incoming supply.

### 5 hp Fixed Speed High Capacity Performance Chart (STP5C)



Note: Performance based on pumping solvent (0.78 specific gravity). Pressure is taken at the manifold discharge outlet. Fixed Speed 5 HP was powered by Three-Phase, 50 Hz, 415 Volt incoming supply.

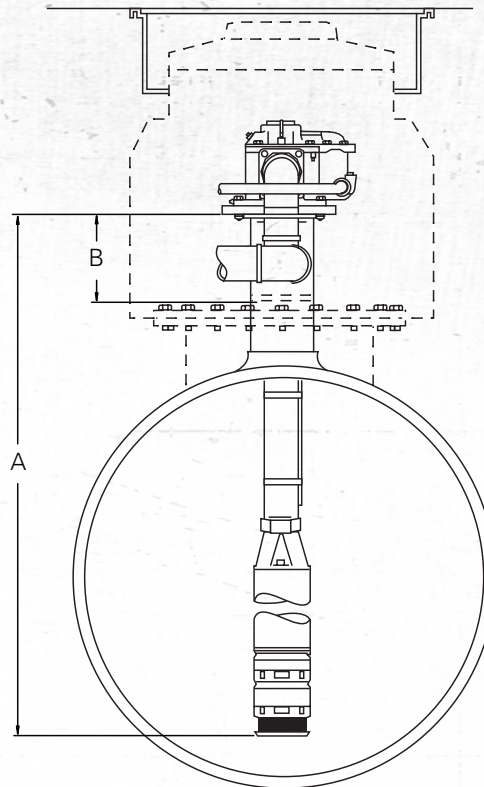
## ORDERING INFORMATION

### 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: AG = Alcohol-gasoline compatible (85% ethanol capable).  
Note: Standard models 0% to 10% ethanol capable
- F = Floating suction adapter (3" NPT male adapter)
- \*R = Model R check valve (1.65 bar relief/1.51 bar reset for PLLD)
- \*Note: If not otherwise specified, all HCP models supplied with standard model check valve (2.76 bar relief/2.41 bar reset for MLD, TS-LS300 and TS-LS500).
- Y = Pump Motor Horsepower/Electrical Rating
  - 3C = 3 Hp, 380-415 VAC, 50Hz three phase
  - 5C = 5 Hp, 380-415 VAC, 50Hz three phase
- 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 1524 mm to 5080 mm (additional charge for models 3353 mm 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 152mm to 1524 mm in 76mm increments (additional charge and lead time for risers 686 mm or longer).



For full diagram see previous page.

## ORDERING INFORMATION

### High Capacity Turbine Pumps (available as fixed length models only)\*\*

Model	Description
STP3C*	6"STP three phase, 380-415 VAC, 50Hz
STP5C*	6"STP three phase, 380-415 VAC, 50Hz

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

1. STP models are listed for compatibility with fuel mixtures containing up to 10% ethanol with gasoline, up to 5% biodiesel with diesel fuels, 20% MTBE, 20% ETBE or 17% TAME with gasoline.
2. All models are supplied with a standard check valve unless factory option "R" is specified.
3. All above models require 380-415 VAC, three-phase, 50 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 686mm to 1524mm, additional charge applies. Call Customer Services for lead times.

\*\* Model length (A) defined as the dimension from turbine manifold bottom to pump motor inlet. Model length (A) can be a minimum of 1524mm to a maximum of 5080mm. Adder (p/n 401190911) applies if model length (A) is 3353mm to 4318mm or adder (p/n 401190914) applies if model length (A) is 4319mm to 5080mm (charges are for additional packaging STP). Call Customer Services for lead times.

### Factory Installed Options

Model	Description
401227001	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
401165930	Syphon System
STP-CBB3C	3 hp, 380-415 VAC, 50 Hz, three-phase motor starter, 240 VAC coil
STP-CBB5C	5 hp, 380-415 VAC, 50 Hz, three-phase motor starter, 240 VAC coil
STP-SCIIC	Three-phase 380-415 VAC smart controller

\* STP-SCIIC is compatible with FE PETRO® 3 and 5 Hp submersibles and competitive makes, input voltage rated 380-415 VAC three phase

### 6" STP Extractable

Less manifold, riser and PMA.

Model	Description
HCPEXT-XXX	6" fixed length extractable (XXX indicates Model Length, minimum 1524mm and maximum 5080mm)*

\* Fixed Length adders apply for extractable model lengths 3353mm to 5080mm. Call Customer Services for lead times.