



2 Hp Fixed Speed Submersible Turbine Pumps

Marketers concerned about fueling times, efficiency, serviceability, reliability and overall quality find it an easy choice to specify FE Petro™ brand submersible turbine pumps (STPs). An STP has to be reliable, it has to be safe, and it has to perform. That's why thousands of station owners around the world have trusted FE Petro™ STPs and the Franklin Electric motors that drive them to keep their business flowing for over 25 years. With best-in-class flow rates and backed by a long history of dependability FE Petro™ STPs simply do their job without fail, delivering fuel to customers day after day without a hitch.

Highlights

Faster Fueling Times

Available on FE Petro™ brand 2 Hp models, a MagShell™ expands the pump motor shell to increase the flow area around the motor by 45%. The expanded flow area creates significantly higher flow rates compared to a traditional pump motor shell. This additional flow capability is equivalent to having one more nozzle open during peak operating times.

Active Air Eliminator

FE Petro™ brand STPs come standard with active air elimination, which eliminates air through the highest point in the pump head at all times when the pump is running, assuring air does not pass into discharge piping.

Safety and Ease of Maintenance

FE Petro™ brand STPs include a contractor electrical disconnect, which requires loosening only one bolt, allowing motor wiring to be disconnected without venting the dangerous tank vapors into the sump when servicing FE Petro™ submersible products.

Simple Servicing

If ever required, the pump can be easily removed from the tank by unthreading three bolts. There is no need to disconnect the syphon system or to remove the leak detector from the system to service the STP.

Manual Pressure Relief

As a standard FE Petro™ feature a vent screw is provided to bleed line pressure to zero when necessary. By turning this screw, product is diverted back to the tank, dropping line pressure to zero. This reduces fuel discharged into the sump manhole or dispenser pan during servicing, further protecting service technicians and the environment.

Reliable Check Valve

The STP uses the proven FE Petro™ line check valve. At 70mm in diameter, this valve reduces pressure loss at high flow rates resulting in faster fueling times. FE Petro™ line check valves are offered in multiple configurations to best suit your line leak application.

Variable Length

The VL2 pump fits 94% of all known tank diameters and tank bury depth combinations. The VL1 and VL3 are available to handle installations shorter or longer than this range. The telescoping connection is a patented FE Petro feature. Pump length can be set by making one simple measurement and setting the pump length without affecting the UL listing.

Outlast, Outperform with Franklin Electric Inside

FE Petro™ STPs are powered by the legendary Franklin Electric motor and built for long term performance. Franklin Electric-powered submersible pumps provide maximum uptime and a proven track record in the fueling industry that spans more than four decades. They feature best-in-class flow rates and a long history of dependability.

Specifications

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- 2 hp fixed speed models are available in variable length and fixed length options.
- Check valve: 70 mm diameter fluorocarbon seal constructed on cast aluminium body and steel backing washer.
- Pressure relief valve: available in four pressure relief settings, integral to check valve. Standard model relieves at 2.76 bar and resets above 2.41 bar.
- Syphon: venturi-type syphon primer supplied with every submersible. Syphon check valve and secondary syphon sold separately.
- Air eliminator: every submersible includes a tank return path with one-way check valve to provide active air elimination.
- Electrical disconnect: electrical yoke for positive contractor disconnect during service.

Pump Motor

- 2 hp fixed speed, 2875 rpm, multi-stage centrifugal type pump motor with integral, automatic, thermal overload protection.
- Available with MagShell™ for 45% increased flow area around motor.

Power Requirements

- 200B models require single-phase, 200-250 VAC, 50 Hz incoming power.
- 200B models incorporate a starting and running capacitor, with internal bleed resistor, rated 440 Volt, 40 microfarad.

- STP-SCI single-phase smart controllers and STP-CBBS single-phase control boxes are available for 200B control.
- 200C models require three-phase, 380-415 VAC, 50 Hz incoming power.
- STP-CBB three-phase magnetic starter available for 200C control.

Liquid Compatibility

- Max. liquid viscosity: 70 SSU at 60°F (15°C).
- Standard STP models are listed for fuel mixtures containing up to 10% ethanol with gasoline, and 20% MTBE, 20% ETBE or 17% TAME with gasoline.
- STPAG (AG compatible) models are for fuel mixtures containing diesel fuel with up to 20% biodiesel, 100% biodiesel, up to 85% ethanol with gasoline and 20% MTBE, 20% ETBE or 17% TAME with gasoline.
- 2 hp fixed speed 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/Certifications

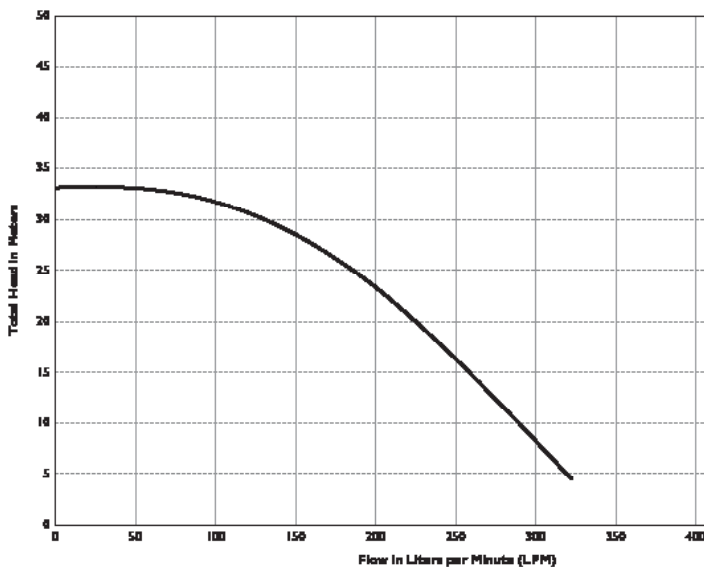
- Consult factory for applicable approvals.

Quality Certification

- Franklin Fueling Systems is an ISO 9001 Certified Manufacturer.

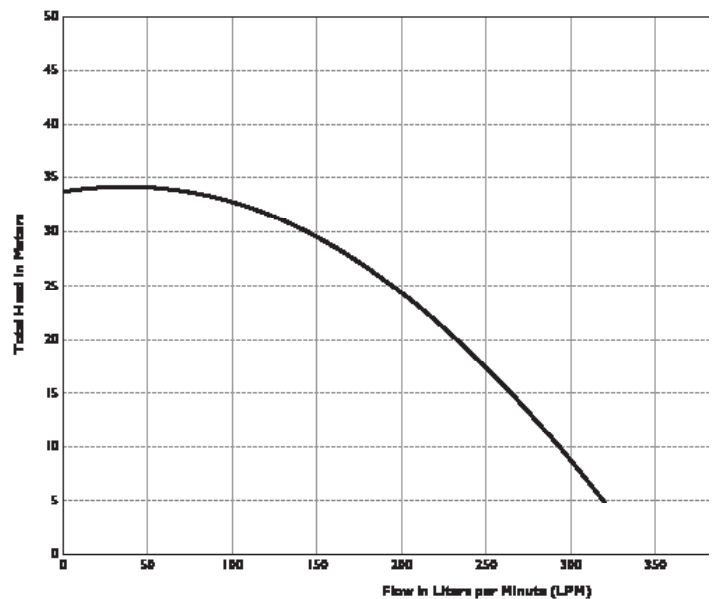
2 hp Fixed Speed Turbine Performance Chart

(STP200B)



Note: Performance based on pumping solvent (0.78 specific gravity). Pressure is taken at the manifold discharge outlet. Fixed Speed 2.00 HP was powered by Single-Phase, 50 Hz, 250 Volt incoming supply.

(STP200C)



Note: Performance based on pumping solvent (0.78 specific gravity). Pressure is taken at the manifold discharge outlet. Fixed Speed 2.00 HP was powered by Three-Phase, 50 Hz, 415 Volt incoming supply.

Order Information

2 hp Fixed Speed 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

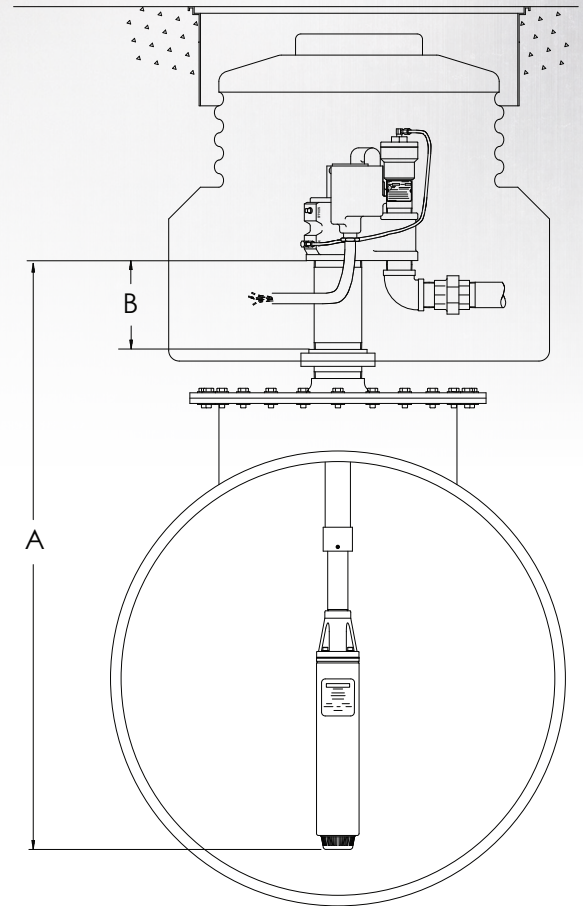
- STP = Basic Model Designation
- XXXXX = Factory Installed Options
 - STP model designations may include one or more of the following characters in alphabetical order:
 - AG = Alcohol-gasoline compatible (up to 85% ethanol, up to 20% biodiesel, or 100% biodiesel). Note: Standard models up to 10% ethanol capable.
 - F = Floating suction adapter (1½" NPT female adapter) H = High pressure (3.1 bar deadhead (no flow) output)
 - K = Intake filter screen (IFS, factory installed to PMA)
 - M = MagShell™ (flow enhancing, expanded PMA shell)
 - *R = Model R check valve (1.65 bar relief/1.52 bar reset for PLLD)
 - *W = Model W check valve (1.10 bar relief/ 0.89 bar reset for PPM4000)

**Note: If not otherwise specified, all STP models supplied with standard model check valve (2.76 bar relief/2.41 bar reset for MLD, TS-LS300 & TS-LS500).*

- Y = Pump Motor Horsepower Rating
 - 200B = 2 hp fixed speed, 50 hz, 1-phase
 - 200C = 2 hp fixed speed, 50 hz, 3-phase
- A = Model Length
 - VL1 = Variable length range #1.
 - VL2 = Variable length range #2.
 - VL3 = Variable length range #3.

Note VL2 models fit 94% of all known installations.

- 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 178mm to 1753mm in 25.4mm increments (additional charge for risers 787mm or l



Model Length (A)

| STP Horsepower | Model Length Range | Model Length Designation |
|----------------|--------------------|--------------------------|
| 200B | 1632mm-2374mm | VL1 |
| | 2420mm-3981mm | VL2 |
| | 3233mm-5575mm | VL3 |
| 200C | 1575mm-2317mm | VL1 |
| | 2363mm-3924mm | VL2 |
| | 3175mm-5518mm | VL3 |

Ordering Information continued

Standard 2 Hp Fixed Speed Submersible Turbine Pumps

| Model | Description | Model Length Range Number | Model Length Range* |
|-------------|--------------------------------|---------------------------|---------------------|
| STP200B-VL1 | 2 hp fixed speed, single-phase | VL1 | 1632mm-2374mm |
| STP200B-VL2 | 2 hp fixed speed, single-phase | VL2 | 2420mm-3981mm |
| STP200B-VL3 | 2 hp fixed speed, single-phase | VL3 | 3233mm-5575mm |
| STP200C-VL1 | 2 hp fixed speed, three-phase | VL1 | 1575mm-2317mm |
| STP200C-VL2 | 2 hp fixed speed, three-phase | VL2 | 2363mm-3924mm |
| STP200C-VL3 | 2 hp fixed speed, three-phase | VL3 | 3175mm-5518mm |

Alcohol-Gas (AG) 2 Hp Fixed Speed Submersible Turbine Pumps

| Model | Description | Model Length Range Number | Model Length Range* |
|---------------|-----------------------------------|---------------------------|---------------------|
| STPAG200B-VL1 | 2 hp AG fixed speed, single-phase | VL1 | 1632mm-2374mm |
| STPAG200B-VL2 | 2 hp AG fixed speed, single-phase | VL2 | 2420mm-3981mm |
| STPAG200B-VL3 | 2 hp AG fixed speed, single-phase | VL3 | 3233mm-5575mm |
| STPAG200C-VL1 | 2 hp AG fixed speed, three-phase | VL1 | 1575mm-2317mm |
| STPAG200C-VL2 | 2 hp AG fixed speed, three-phase | VL2 | 2363mm-3924mm |
| STPAG200C-VL3 | 2 hp AG fixed speed, three-phase | VL3 | 3175mm-5518mm |

Notes:

1. STP models are compatible with fuel mixtures containing up to 10% ethanol with gasoline, diesel fuels, and 20% MTBE, 20% ETBE or 17% TAME with gasoline. STPAG models are compatible with fuel mixtures containing diesel fuel with up to 20% biodiesel, 100% biodiesel, up to 85% ethanol with gasoline, and 20% MTBE, 20% ETBE or 17% TAME with gasoline.
2. All models are supplied with a standard check valve unless factory option "R" or "W" is specified.
3. All 200B models require single-phase, 200-250 VAC, 50 Hz incoming power. All 200C models require three-phase, 380-415 VAC, 50 Hz incoming power
4. 4" riser pipe, if supplied locally, must be 4½" OD by 3/16" WT tubing.
5. For riser pipe lengths 787mm to 1753mm, additional charge applies.

*Model length (A) defined as the dimension from turbine manifold bottom to pump motor inlet.

Factory Installed Approvals

May specify one in model number at time of STP order.

| Model | Description |
|--------|--|
| (ATXF) | Submersible Turbine Pumps with ATEX Flameproof approval for EN markets |
| (RT) | Submersible Turbine Pumps with ROSTEST approval for Eastern European markets |

Notes:

1. Note: If not otherwise specified, all models are supplied to UL approval as standard.
2. Consult Factory for other local approvals.

Factory Installed Options

Specified in model number at time of STP order.

| Model | Description |
|-------|---|
| F | Floating suction adapter, 1½" NPT female, must be factory installed |
| H | High Pressure 3.1 bar deadhead output |
| K | IFS (intake filter screen) factory assembled to pump motor assembly |
| M | Magshell™ (flow enhancing, expanded PMA shell) |
| R | Model R check valve, factory installed, for Veeder Root™ PLLD Line Leak |
| W | Model W check valve, factory installed, for Red Jacket™ PPM4000 Line Leak |

Ordering Information continued

Field Installed Options

2 Hp fixed speed specific accessories.

| Model | Description |
|------------|---|
| 400137937 | Syphon check valve, alcohol-gasoline compatible |
| 5800100215 | STP-SCI, single-phase smart controller |
| 400818922 | STP-CBBS, single-phase control box with lockout switch, 240 Volt coil |
| 402312922 | STP-DHIB-SCI, combo DHIB with factory wired to STP-SCI |
| 402313922 | STP-DHIB-CBBS, combo DHIB with factory wired STP-CBBS |
| 402459931 | Model 65 PSI (4.5 bar) relief check valve (for slave of manifolded STPs with Veeder Root™ PLLD) |
| 402507930 | Secondary syphon kit (when two syphon primes are required for one STP) |
| 401220965 | STP-CBB3C, three phase 380-415 VAC magnetic starter |
| 5800300200 | STP-DHIB, dispenser hook isolation for 240 Volt dispenser handle switches, up to eight each |

FE PETRO®

A Franklin Fueling Systems Brand

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