

Franklin Fueling Systems

SUBMERSIBLE PUMP SYSTEM



FE PETRO
Franklin Fueling Systems
PETROLEUM
PUMP MOTOR
ASSEMBLY
MODEL PMAAGMVS4
190 V @ 60 HZ
4 HP
VARIABLE SPEED

MagShell™

ALCOHOL GASOLINE
UL APPROVED FOR
0-85% ETHANOL

COMPATIBLE

As the demand for biofuels continues to grow, FE Petro™ brand Alcohol-Gas (AG) optioned submersible turbine pumps are at the forefront of motor fuel compatibility. Service station customers demand it, make sure you can provide it.

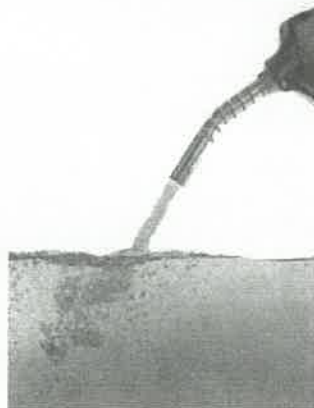
BIOFUEL SOLUTIONS

Make sure you have the appropriate equipment to meet the biofuel needs of your customers. Check out these benefits available from FE Petro™.



THE PROPER APPROVALS

FE Petro™ brand STPAG and IST models of submersible turbine pumps (STPs) are currently **the only STPs UL listed** for use with gasoline up to **85% ethanol (E85)** and diesel fuel with **up to 20% biodiesel (B20) or 100% biodiesel** according to UL79A and UL79B respectively.



BUILT ON OUR STANDARD PUMPS

FE Petro™ brand Alcohol-Gas optioned submersible turbine pumps feature fuel compatibility **built on the framework of our standard models**. Replacement items like check valves and pump motor assemblies are directly interchangeable, **eliminating the need to stock duplicate items** for standard and Alcohol-Gas optioned STPs.



STOP BIOFUEL DEBRIS

As biofuel use continues to grow, so does the potential for increased debris inside the storage tank. To **stop this debris from entering the pumping system**, use an FE Petro™ brand Intake Filter Screen (IFS). The IFS can be factory installed on STPs and Pump Motor Assemblies (PMAs) or they can be field-retrofitted onto existing FE Petro™ or competitive 4" PMAs.



FILTRATION FOR THE ENTIRE SYSTEM

When installed, an IFS adds only about 1" to the length of the PMA and **provides filtration down to about the size of a grain of sand** (0.009" openings). Through the IFS design, the output performance of the STP/PMA is maintained to that of a standard end bell construction while providing the **added filtration for the entire pumping system**.

FE PETRO®

A Franklin Fueling Systems Brand

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SUBMERSIBLE TURBINE PUMPS

- Variable speed pumps are available in variable lengths only.
- Check valve: 2 $\frac{1}{2}$ " diameter fluorocarbon seal constructed with cast aluminum body and steel backing washer.
- Pressure relief valve: available in four pressure relief settings, integral to check valve. Standard model relieves at 40 psi and resets above 35 psi.
- 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 or 4 Hp, variable speed, two-stage centrifugal type pump motor with integral, automatic, thermal overload protection.
- Max. flow: VS2 = 110 gpm, VS4 = 140 gpm.
- Max. pressure: selectable operating pressure on MagVFC™ between 24 psi and 42 psi deadhead.
- Available with MagShell™ which results in 45% increased flow area around motor.

Approvals

- cULus listed.
- Consult factory for applicable approvals.

Power Requirements

- Variable speed pumps can only be controlled by a MagVFC™ variable frequency controller:
 - VS2 models can operate with single- or three-phase incoming power supply to the MagVFC™.
 - VS4 models require three-phase incoming power supply to the MagVFC™ for proper operation.
 - Incoming power supply to the MagVFC™ can be 200-250 VAC, 50 or 60 Hz.
 - MagVFC™ outputs a three-phase, variable frequency signal, valid for FE Petro™ variable speed pumps only.
- VS2 max. motor draw: 9 Amps.
- MagVFC™ max. line draw: 20 Amps.

Liquid Compatibility

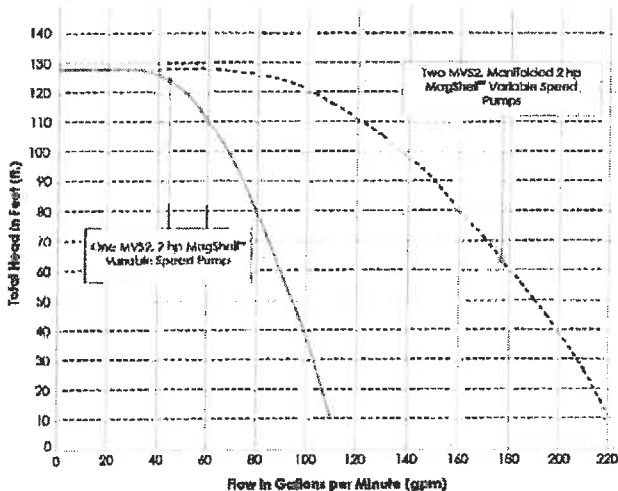
- Max. liquid viscosity: 70 SSU at 60 °F (15 °C).
- STP variable speed models are UL and cUL listed for fuel mixtures containing up to 10% ethanol, and 20% MTBE, 20% ETBE or 17% TAME with gasoline.
- IST variable speed models are UL and cUL listed for fuel mixtures containing diesel fuel with up to 20% biodiesel, 100% biodiesel, up to 85% ethanol with gasoline, and 20% MTBE, 20% ETBE or 17% TAME with gasoline.
- All variable speed (non-AG) 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.

Quality Certification

- Franklin Fueling Systems is an ISO 9001 Certified Manufacturer.

STP-ISTR

2 hp Variable Speed Turbine Performance Chart



4 hp Variable Speed Turbine Performance Chart

