



The Red Jacket Product Portfolio



The Red Jacket 4" STP Portfolio

The Red Jacket 4" STP Platform

The Red Jacket Submersible Turbine Pump (STP) platform delivers faster, more reliable fuel flow for the lowest cost of ownership. With a motor that delivers higher flow rates than any other motor in the industry, The Red Jacket STPs optimize fuel flow to your dispensers. It features Red Jacket's advanced packer manifold design, making it the fueling industry's easiest and safest submersible pump to install and service.



The Red Jacket STP

The Red Jacket STP solution optimizes fuel flow and dispensing. The Red Jacket's motor performance delivers higher flow rates than comparable submersible fuel motors. The STP also features Red Jacket's advanced packer manifold design, making it the industry's easiest and safest STP to install and service.



The Red Jacket Alcohol Gas (AG) STP

All the advantages of The Red Jacket STP, designed for alternative fuels – such as alcohol and ethanol. Red Jacket Submersible Turbine Pump AG is a fixed-speed alcohol gas fuel pump with a motor that delivers a higher flow rate than comparable submersible fuel motors, to optimize fuel flow and dispensing.



The Red Armor® STP

All the advantages of The Red Jacket STP, and now designed to withstand corrosive environments. Whether your site is struggling with Ethanol-induced in-sump corrosion or ULSD-induced in-tank corrosion, with its specialty coating* and stainless-steel construction, the Red Armor solution is designed to survive.



As Biofuels, Vehicle Technology and Biofuel Infrastructures Expand, so do the Needs of Your Fueling Systems.

If your fueling system is used with incompatible fuel types, infrastructure degradation and corrosion could result. Therefore, as fuels containing higher amounts of ethanol (such as E15 and E85) and biodiesels are added to fueling sites, it is important in the design phase of new sites and during upgrades to existing sites to consider STPs that are compatible with renewable fuels, as well as fuels focused on improved emissions and fuel economy. The Red Jacket® STP portfolio offers solutions tailored for both traditional and renewable fuels and provides protection against corrosive environments.



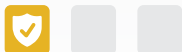
The Red Jacket STP

The cornerstone of your fueling infrastructure, The Red Jacket STP solution optimizes fuel flow and dispensing. It is the foundation model that sets the standard for high throughput, high reliability fueling applications.

Compatible with:

- 100% Diesel or Gasoline
- Ethanol, Methanol, MTBE, ETBE, or TAME concentrations up to 20%

Protection Level:



The Red Jacket Alcohol Gas (AG) STP

The Red Jacket AG STP has an additional 30% increase in stainless steel hardware from The Red Jacket STP. It has all the advantages of The Red Jacket STP design, but was constructed with stainless steel on all parts exposed to the fuel path.

In addition to fuel types supported by The Red Jacket STP, The Red Jacket AG STP is also compatible with:

- Methanol concentrations up to 100%
- Ethanol concentrations up to 90%
- Biodiesel concentrations up to 100%
- Jet Fuel and AVGAS
- Kerosene and Fuel Oil

Protection Level:



The Red Armor® STP

The Red Armor STP has an additional 30% increase in stainless steel hardware from The Red Jacket AG STP. It has all the advantages of The Red Jacket STP design, but was constructed specifically to withstand corrosive environments.

The Red Armor STP is compatible with the same fuel types as The Red Jacket STP and AG STP, but also protects against:

- Microbial Growth in Tank (Ultra-Low Sulfur Diesel)
- Constant Moisture Presence or Water Ingress into Sump
- Known Corrosive Environment

Protection Level:



The Red Jacket STP



Advanced STP Design

The Red Jacket STP solution optimizes fuel flow and dispensing. Its motor performance delivers higher flow rates than comparable submersible fuel motors. The STP also features Red Jacket's advanced packer manifold design, making it the industry's easiest and safest STP to install and service. This STP solution is available in ¾ HP to 2 HP motor configurations and fixed or Quick Set® adjustable lengths.

Red Jacket's unsurpassed expertise helps your customers optimize fuel flow. Part of the industry's leading Veeder-Root suite of products, Red Jacket's family of Submersible Turbine Pumps (STPs) and Pump Controllers ensure that your customers can pump fuel quickly, efficiently and safely – whether it's motor fuel, diesel, aviation gasoline, ethanol/methanol or kerosene – in aboveground or underground storage tanks.

► KEY FEATURES

Superior Motor Design:

- **Up to 5% Increased Flow** – Improved stator and receptacle housing design provides larger fuel paths.
- **8% Less Power Consumption** – More efficient motor design results in 8% reduction in wattage.
- **Better Quality** – Red Jacket's motor manufacturing yields improved quality, which means more station uptime than other STPs on the market.
- **Universal Compatibility** – Fewer parts to stock.
- **Improved Reliability** – Improved bearing design and upgraded insulation yield longer motor life.
- **Increased Safety** – Enhanced connectors separation meets latest flameproof standards.

Advanced Packer Manifold Design:

- **Built-in Isolated Contractor's Box** – Electrical connection housing is built into the manifold and is completely isolated from the fuel path.
- **Easy to Install and Service** – No adjustment required to fit yoke, assembly is quick.
- **Increased Electrical Safety** – Automatic electrical yoke disconnects upon removal of extractable bolts.
- **Environmentally Friendly** – Automatic breaking of extractable seal upon bolt removal ensures automatic fuel drain back into tank, protecting the environment from contamination and site owners from related liability.
- **Innovative Check Valve Design** – "Open" setting makes for easier line tests and servicing.

Protection Level





The Red Jacket STP

Product Specifications

Fuel Compatibility:

- 100% Diesel or Gasoline
- Ethanol, Methanol, MTBE, ETBE or TAME concentrations up to 20%

Motor Sizes Available:

- ¾ HP, 60 Hz, 1-phase
- 1 ½ HP, 60 Hz, 1-phase
- X3 1 ½ HP, 60 Hz, 1-phase, high pressure
- LP 2 HP, 60 Hz, 1-phase, low pressure
- 2 HP, 60 Hz, 1-phase

Protective Coatings: N/A

Operation Environment:

- Class 1, Group D atmospheres
- Low corrosion environment
- Dry sump space (no water ingress)

Installation Depth Range:

- Fixed Length: 3.5' to 19'
- Quick Set® (Adjustable Length):
 - RJ 1 = 74.5" - 105"*
 - RJ 2 = 104.4" - 165"
 - RJ 3 = 164" - 225"

*Assumes 1.5 HP

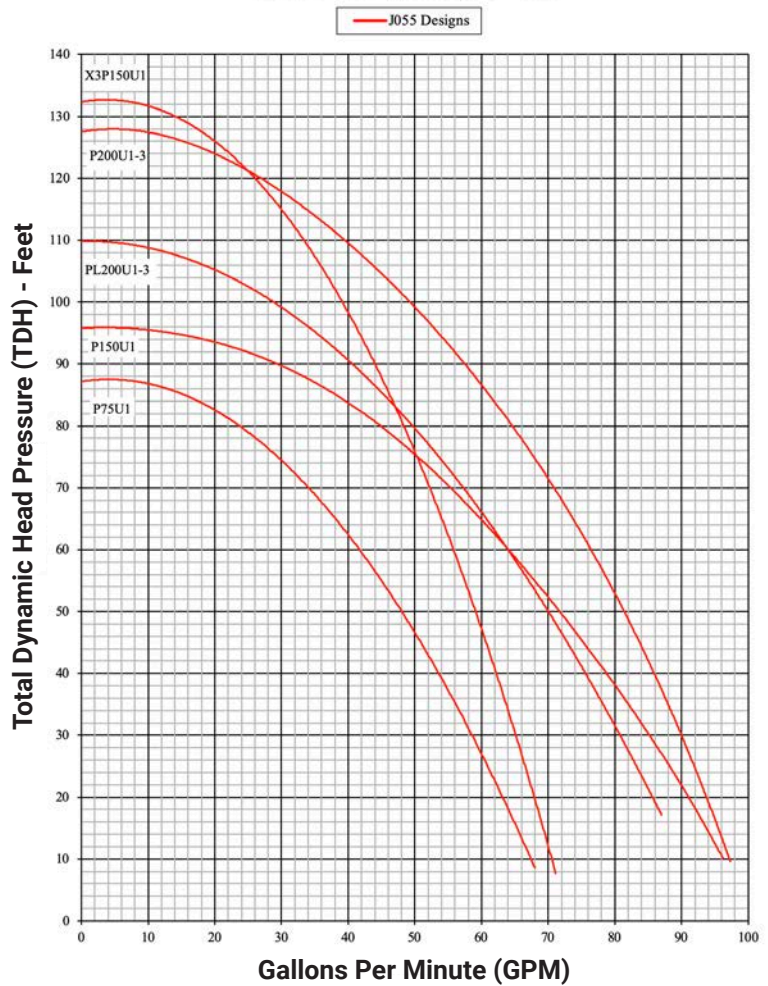
Packer Manifold Access Ports:

- Siphon Ports:
 - 2 available, ¼" NPT
 - Vacuums generated up to 25 in Hg
- Line Pressure Port: 1 Available, ¼" NPT
- Vent Port: 1 Available, ¼" NPT

Check Valve Compatibility:

- Standard VR ready check valve for PLLD (410152-001)
- High pressure check valve for high pressure applications (410152-002)

Performance @ 230V; SG = 0.78



UL Listings:

- 100% Diesel
- 100% Gasoline
- Gasoline and up to: 10% Ethanol, 15% Methanol, 20% MTBE, 20% ETBE, 20% TAME

Other Agency Listings: cUL



The Red Jacket Alcohol Gas STP



Created for Alternate Fuels

All the advantages of The Red Jacket STP, designed for alternative fuels – such as alcohol and ethanol. The Red Jacket AG STP is a fixed-speed alcohol gas fuel pump with a motor that delivers a higher flow rate than comparable submersible fuel motors, to optimize fuel flow and dispensing. The STP also features Red Jacket’s advanced packer manifold design, making it the industry’s easiest and safest STP to install and service. This STP solution is available in ¼ HP to 2 HP motor configurations and fixed or Quick Set® adjustable lengths.

▶ KEY FEATURES

Alternative Fuel ready with AG Compatible Hardware:

- **Specialized Design** – Compatible with Alternate Fuels. Ethanol concentrations up to 90%, Methanol concentrations up to 100%, and MTBE, ETBE or TAME concentrations up to 20%.
- **Certified** – UL79A and UL79B for use with renewable biofuels.

Plus, all the Advantages of The Red Jacket STP Features



The Red Jacket AG STP is compatible with Ethanol concentrations up to 90%, Methanol concentrations up to 100%, and MTBE, ETBE or TAME concentrations up to 20%, and is UL79A and UL79B certified for use with renewable biofuels.

Protection Level





Product Specifications

Fuel Compatibility:

- 100% Diesel or Gasoline
- Biodiesel concentrations up to 100%
- Jet Fuel and AVGAS
- Kerosene and Fuel Oil
- Ethanol concentrations up to 90%
- Methanol concentrations up to 100%
- MTBE, ETBE or TAME concentrations up to 20%

Motor Sizes Available:

- ¾ HP, 60 Hz, 1-phase
- 1 ½ HP, 60 Hz, 1-phase
- X3 1 ½ HP, 60 Hz, 1-phase, high pressure
- LP 2 HP, 60 HZ, 1-phase, low pressure
- 2 HP, 60 Hz, 1-phase

Protective Coatings: N/A

Operation Environment:

- Class 1, Group D atmospheres
- Low corrosion environment
- Dry sump space (no water ingress)

Installation Depth Range:

- Fixed Length: 3.5' to 19'
- Quick Set® (Adjustable Length):
 - RJ 1 = 74.5" - 105"*
 - RJ 2 = 104.4" - 165"
 - RJ 3 = 164" - 225"

*Assumes 1.5 HP

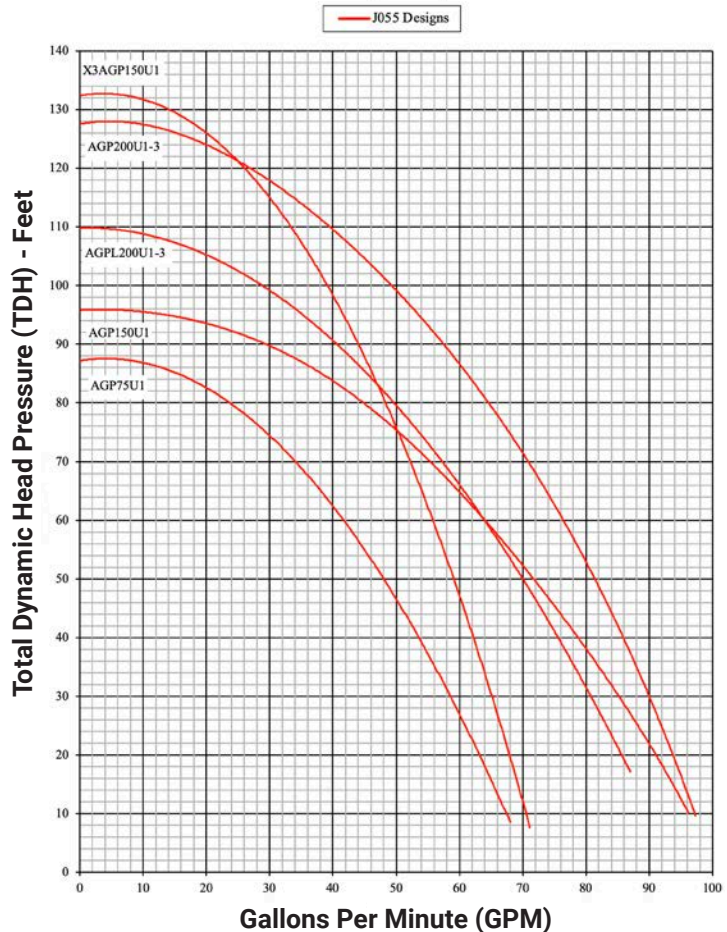
Packer Manifold Access Ports:

- Siphon Ports:
 - 2 available, ¼" NPT
 - Vacuums generated up to 25 in Hg
 - Equipped with stainless siphon cartridge for survivability in corrosive fuels (410151-002)
- Line Pressure Port: 1 Available, ¼" NPT
- Vent Port: 1 Available, ¼" NPT

Check Valve Compatibility:

- Standard VR ready check valve for PLLD (410152-001)
- High pressure check valve for high pressure applications (410152-002)

Performance @ 230V; SG = 0.78



UL Listings:

- 100% Diesel
- 100% Gasoline
- 100% Biodiesel (B100)
- Kerosene and Fuel Oil
- 85% Ethanol (E85)
- 0-20% Biodiesel blends
- Gasoline and up to: 15% Methanol, 20% MTBE,
- 20% ETBE, 20% TAME

Other Agency Listings: cUL



Red Armor® STP



In-Sump and In-Tank Protection from Corrosion

The ultimate survivor in your fueling infrastructure, the Red Armor series of STPs is built to last in the harshest corrosive environments created by ULSD and ethanol blends. Red Armor is a robust fixed-speed fuel pump with a motor that delivers higher flow rates than comparable submersible fuel motors for corrosive environments, promoting optimal fuel flow and dispensing. The Red Armor STPs also features Red Jacket's advanced packer manifold design, making it the industry's easiest and safest STP to install and service. This STP solution is available in ¾ HP to 2 HP motor configurations and fixed or Quick Set® adjustable lengths.

The Red Armor family of STPs and Pump Controllers ensure that your customers can pump fuel quickly, efficiently and safely – whether it's motor fuel, diesel, aviation gasoline, ethanol/methanol or kerosene – in even the harshest aboveground or underground fueling environments.

► KEY FEATURES

Added Protection on all Exposed Surfaces:

- **Specialty coating** on all cast surfaces withstands acetic acid exposure to prevent pitting and deterioration over time.
- **Stainless Steel construction** on all exposed surfaces ensures easy maintenance for the life of the pump, including: riser, nuts, springs, screws, check valve seat, eye bolt, and check valve guide.
- **Constructed with upgraded materials** including powder-coated discharge head, stainless column pipe and Quick Set connector.

Plus, all the Advantages of The Red Jacket STP Features

Protection Level





Product Specifications

Fuel Compatibility:

- 100% Diesel or Gasoline
- Biodiesel concentrations up to 100%
- Jet Fuel and AVGAS
- Kerosene and Fuel Oil
- Ethanol concentrations up to 90%
- Methanol concentrations up to 100%
- MTBE, ETBE or TAME concentrations up to 20%

Motor Sizes Available:

- ¾ HP, 60 Hz, 1-phase
- 1 ½ HP, 60 Hz, 1-phase
- X3 1 ½ HP, 60 Hz, 1-phase, high pressure
- LP 2 HP, 60 Hz, 1-phase, low pressure
- 2 HP, 60 Hz, 1-phase

Protective Coatings: Exposed Cast Iron covered with specialized dual powder/e-coating

Operation Environment:

- Class 1, Group D atmospheres
- High corrosion environment
- Wet or dry sump space (water ingress)

Installation Depth Range:

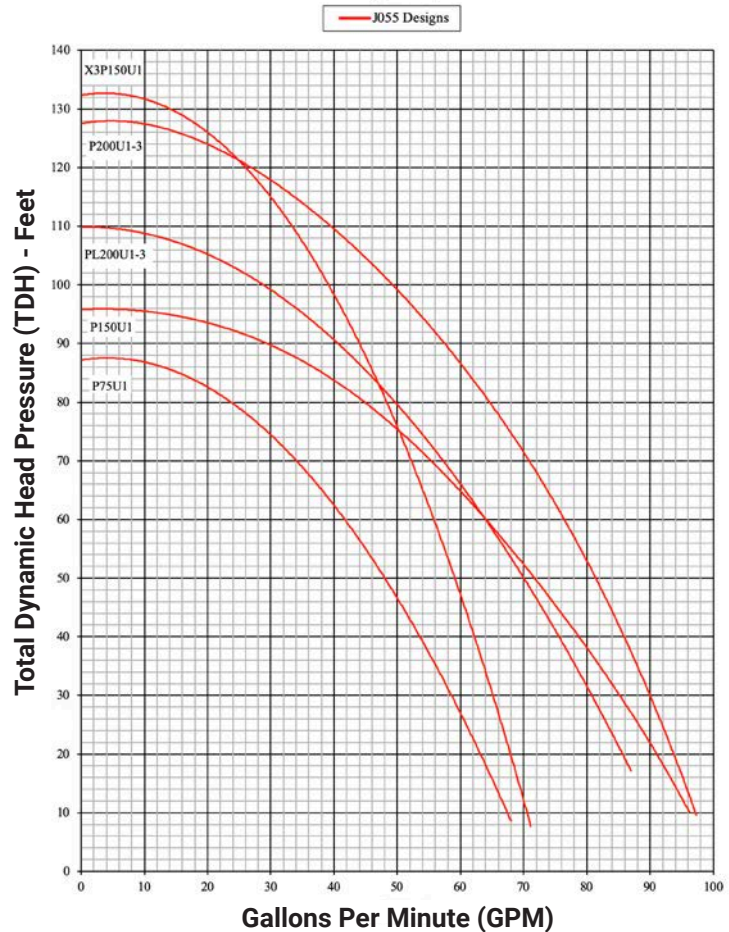
- Fixed Length: 3.5' to 19'
- Quick Set® (Adjustable Length):
 - RJ 1 = 74.5" - 105"*
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 - RJ 3 = 164" - 225"

*Assumes 1.5 HP

Packer Manifold Access Ports:

- Siphon Ports:
 - 2 available, ¼" NPT
 - Vacuums generated up to 25 in Hg
- Line Pressure Port: 1 Available, ¼" NPT
- Vent Port: 1 Available, ¼" NPT

Performance @ 230V; SG = 0.78



Check Valve Compatibility:

- Standard VR ready check valve for PLLD (410152-001)
- High pressure check valve for high pressure applications (410152-005)

UL Listings:

- 100% Diesel or Gasoline
- Gasoline and up to: 10% Ethanol, 15% Methanol, 20% MTBE, 20% ETBE, 20% TAME

Other Agency Listings: cUL



Automated Fuel Management

The TLS-450PLUS Automatic Tank Gauge (ATG) Virtual Siphon feature provides site operators the ability to control tanks' inventory levels based on operational needs.

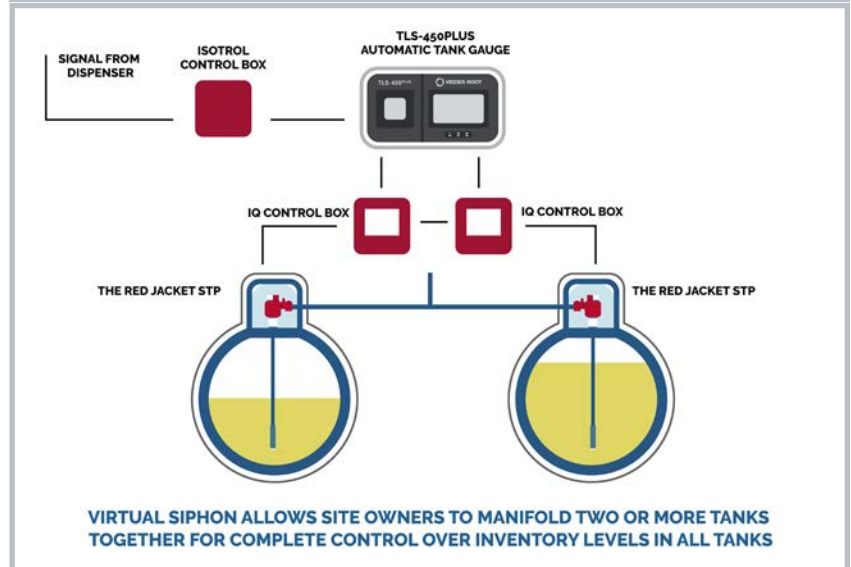
Using a line manifold system with two or more tanks, allows the site operators to use the TLS-450PLUS ATG system to decide when to activate a specific tank based on the tanks fuel height, volume, or other setting specific to the pump configuration. In addition to this capability, the TLS-450PLUS will activate the unused tank while the other tank is still active to ensure no disruption of dispensing occurs during the tank switch over event.

With the Veeder-Root TLS-450PLUS ATG, Virtual Siphon is easy to program, monitor and maintain, and provides the site with STP redundancy and backup operation.

There are several modes for managing the fuel inventory in each tank:

- 1. Manifolded: Alternate-Volume or Alternate-Height** - The TLS-450PLUS alternates the pumps to maintain a volume or height differential.
- 2. Manifolded: Alternate Pump** - Pumps alternate until one tank is empty.
- 3. Manifolded: Sequential** - Pumps empty each tank one at a time.
- 4. Manifolded: All Pumps** - All pumps on until respective tanks are empty.

Virtual Siphon connects your TLS-450PLUS ATG to your Red Jacket STPs using the IQ and Isotrol Control Boxes.



▶ KEY FEATURES

- Inventory and delivery reporting.
- Consolidated delivery information for easy fuel ordering.
- Maintain constant at the nozzle flow when switching from tank to tank.
- Programmable switch levels to reduce STP cycling.
- Continuous inventory monitoring with built in pump control logic.
- Alarm and warning notifications when fuel tanks require fuel delivery intervention.

Required Equipment: To take advantage of the Virtual Siphon feature customers must have the TLS-450PLUS ATG, Veeder-Root Electronic Line Leak Detection System and/or our pump control Universal Input-Output interface Module (UIOM).





750A Chai Chee Road #07-02 ESR BizPark @ Chai Chee Singapore 469001 • ©2020 Veeder-Root All information contained in this document is subject to change without notice.

Phone: +65 6448 7626 | Fax: +65 6448 7176 | www.gilbarco.com/kr

