

High performance

Flexible solution

LPG Submersible Pump

The growing popularity of LPG fuel is placing greater demands than ever on the fuel delivery system. Now, at the heart of the system, there is a pump that's up to the job.

LPG (Liquid Petroleum Gas) Submersible Pump

Recognized as the industry leading brand for high quality fuel management solutions, Gilbarco Veeder-Root successfully introduced the LPG Premier pump range in 2003 and continues to offer the best and most reliable LPG pump solution in the market today, suitable for both automotive use as well as industrial applications. The Veeder-Root Red Jacket LPG Premier range of submersible turbine pumps has been designed to help service station owners meet these demands in every way – be it better flow performance, durability or adaptability – whilst maximising profitability.

Submersible Technology - the flexible solutions to customer needs

A key attribute of the Veeder-Root Red Jacket LPG Premier and Premier HiFlow pumps is their flexibility, enabling customers' total cost of ownership to be reduced as requirements change.

A prime challenge for service station owners is optimal site layout. The Veeder-Root Red Jacket LPG Premier pumps make it viable for the tank to be stored on site or at a remote location, underground or above ground, without degrading performance.

Whatever the layout, the pumps aren't protected from the forces of nature making them safe and unobtrusive. Furthermore, one pump can supply a number of dispensers with guaranteed flow rates, so as demand for LPG increases, the Veeder-Root Red Jacket LPG Premier pumps can be easily adapted to maximise customer benefits:

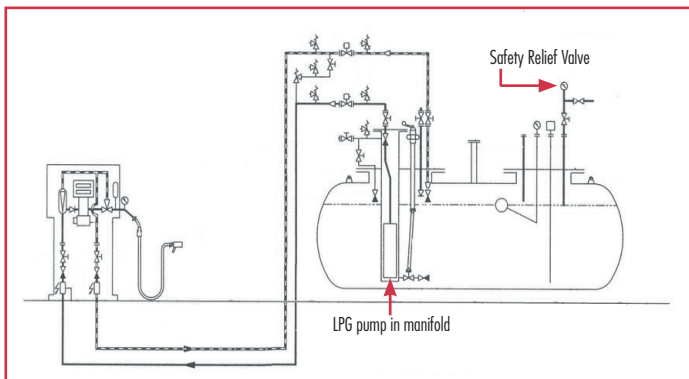
- > Fewer pumps mean lower maintenance and less energy consumption
- > Fewer lines mean lower installation costs

Benefits of submersible technology vs suction

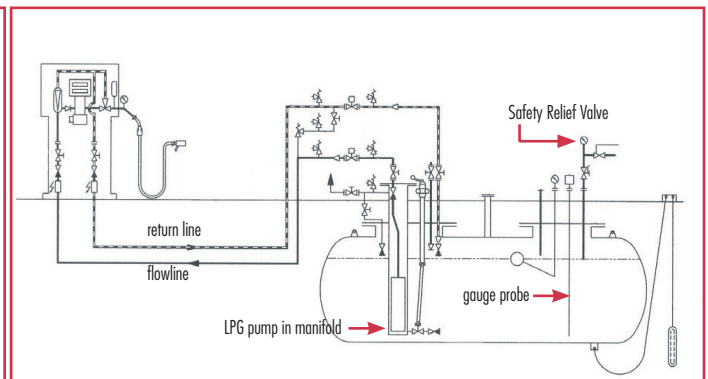
Submersible technology provides the most flexible solution - more reliable, more efficient, more cost-effective and more convenient to operate.

Quality	<ul style="list-style-type: none"> > Greater customer satisfaction through high performance <ul style="list-style-type: none"> > No vapour lock under any circumstances > Low noise > Greater reliability <ul style="list-style-type: none"> > Longer life > Less maintenance
Delivery	<ul style="list-style-type: none"> > Greater flexibility to meet customer requirement and/or local regulations <ul style="list-style-type: none"> > Can be installed above or below ground > Suitable for large or small tank sizes > Can be installed remotely or on-site > Safer, cleaner installation <ul style="list-style-type: none"> > No additional bypass components > Less obtrusive
Cost	<ul style="list-style-type: none"> > Reduced operating costs <ul style="list-style-type: none"> > Less power consumption for equivalent flow performance > Less maintenance > Larger underground tank sizes mean fewer fillings required

Schematic above ground storage tank installation



Schematic underground storage tank installation



LPG (Liquid Petroleum Gas) Submersible Pump

The high performance pump for a cleaner environment

The Veeder-Root Red Jacket LPG Premier pumps are explosion proof submersible units comprising a pump and motor section sheathed in a stainless steel shell, and electrical components encapsulated in a high performance epoxy compound mounted within the column pipe of the motor. Able to pump butane, propane or any mixture of the two, these multi-stage centrifugal pumps are designed to pump liquefied petroleum gas in its liquid state. They are capable of supplying 5 litres/hour at 9.5 bar for industrial applications and up to 150 litres/minute at 7.8bar offering an equivalent flow rate of 35 litres/minute for up to 4 fuelling points.

Key Design Features

- > Certified Ex ed IIB T3 design explosion-proof submersible electric motor
- > Bearing Cooling and Lubrication system for maximum cooling during dispensing, leading to longer life and lower maintenance
- > Internal Bypass for continual cooling of system prior to dispensing
- > Multi-stage centrifugal pumping system for reduced power consumption
- > Split pump/motor design for easy installation and maintenance
- > High differential pressure capability for guaranteed flow performance with various LPG mixtures
- > Robust heavy-duty construction for high durability
- > Pressure-based protection system for pump and motor
- > Quiet operation

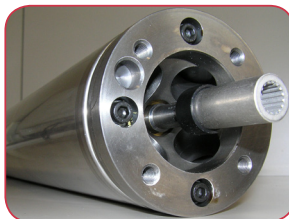
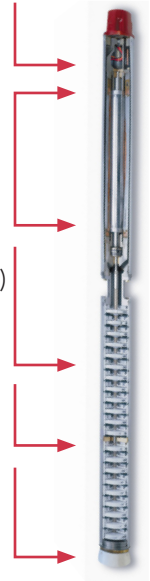
Improved liquid flow through motor for cooling and lubrication.

Specially hardened motor bearing journals constructed of stainless steel with carbon graphite alloy bearings.

Impellers and interlocked diffusers moulded of Celcon (Acetel copolymer) hydraulically balanced for quiet operation and long life.

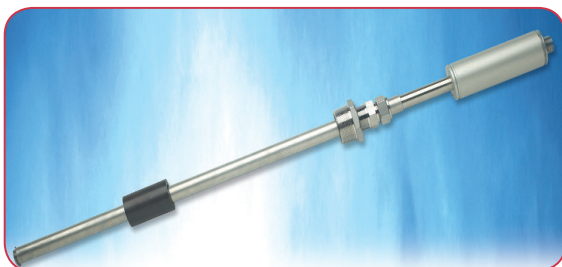
Smoothed bronze bearing holder to improve flow and dampen vibration.

Hydrodynamically designed inlet with vapour escape holes to optimise flow path.



ISO 9000

Every LPG unit has been designed and manufactured in Gilbarco Veeder-Root's ISO 9001 certified facility in Pennsylvania, USA. The Veeder-Root Red Jacket LPG Premier products are ATEX approved and have been certified by LCIE, France as having complied with the quality standards set by the International Organisation for Standardisation (ISO) in accordance with its ISO 9001 quality standard.



Complete solution

Gilbarco Veeder-Root continues to make strides in the industry with a complete LPG solution including probe installation, tank monitoring gauge and LPG dispenser.

LPG (Liquid Petroleum Gas) Submersible Pump

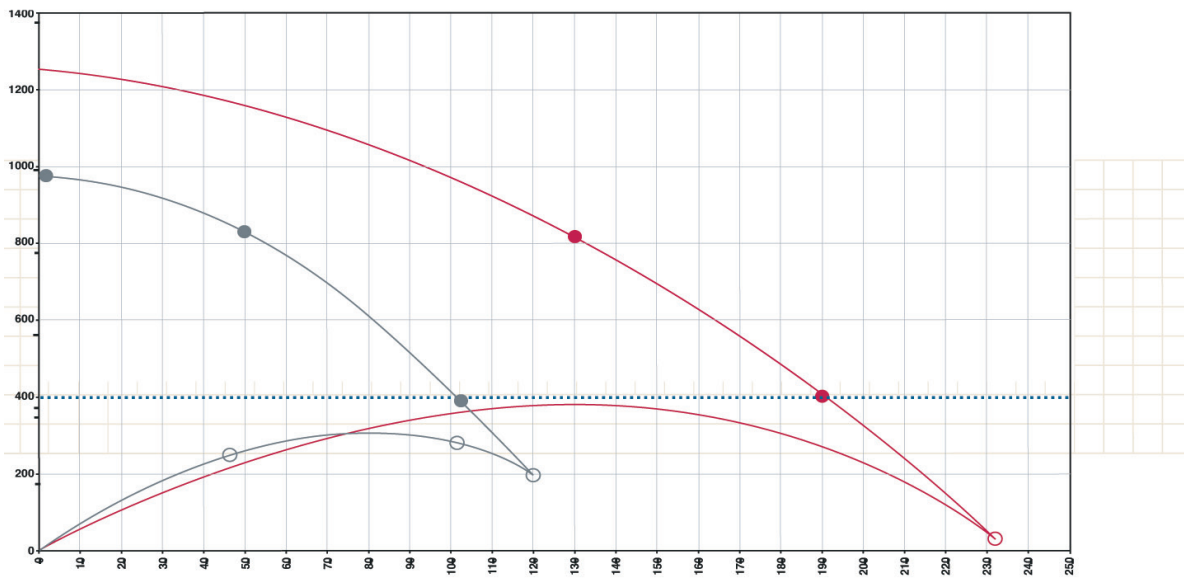
Specifications

Motor:	Submersible polyphase motor 380-415 V ac,
	3 phase 50Hz
	3HP, IN 5.4Amps, no minimum flow required
Pump:	4" diameter multi-stage centrifugal pump with 21 or 24 impeller stages
Total Unit:	LPG Premier 1420mm:
	> 3HP motor 625mm
	> + 21 stage pump 795mm
	LPG Premier HiFlow 1810mm:
> 5HP motor 780mm	
> + 24 stage pump 1030mm	
	Weight: c.40Kg

LPG Performance Curves

Differential Pressure at 15°
50% Propane / 50% Butane

bar@SG=0.5 15C; 50% P/50% B



Key

- LPG Premier
- LPG Premier Efficiency Curve
- LPG Premier HiFlow
- LPG Premier HiFlow Efficiency Curve
- Low Pressure Cut Out Setting (4 bar)
- LPG Premier Designed for 70litres/min @ Δ P 6.8 bar suitable to feed 2 nozzles @ 35litres/min simultaneously
- LPG Premier HiFlow Designed for 130litres/min @ Δ P 8.1 bar suitable to feed 4 nozzles @ 35litres/min simultaneously, or 150litres/min @ 7.8 bar for 1 nozzle

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