

TLGLF Sliding Vane Pumps

LPG TRUCK PUMPS FOR MOBILE APPLICATIONS | PRODUCT BROCHURE



Blackmer

Where Innovation Flows



Established as the industry leader in LPG truck pumps, Blackmer® TLGLF Sliding Vane Pumps are the go-to choice for all LPG bobtail and transport truck builders and propane marketers for flange mounted truck pumps. TLGLF Pumps are known for their reliability, high flow rates, quiet dependable operation and easy maintenance and repair.

FLANGE MOUNTED TRUCK PUMPS FOR BOBTAILS, HIGH CAPACITY BOBTAILS AND TRANSPORTS

Blackmer® TLGLF Pumps

Designed to be flanged mounted to tank vessels on trucks, the TLGLF Sliding Vane Pumps are UL listed for use in LPG, butane and anhydrous ammonia. The TLGLF Truck Pumps are available in three different models - two 3-inch models – the TLGLF3 and TLGLF3HD and one 4-inch model – the TLGLF4. With a max flow rate of 425 gpm (1,608 L/min) the TLGLF4 pumps are designed for transport loading and unloading. Whereas the TLGLF3, designed for bobtail truck use, features a flow rate of 140 gpm (530 L/min) ideal for smaller tank vessel sizes. With an increased flow rate that is 29% greater than the TLGLF3, the TLGLF3HD model features flow rates of 180 gpm (681 L/min), ideal for high capacity bobtail trucks that often have 7,000 gallon sized tank vessels. All TLGLF Pumps offer maximum differential pressure of 125 psi (8.62 bar), and can be driven by PTO shaft or by hydraulic motor using an adapter kit.

TLGLF Sliding Vane Pumps provide numerous benefits to truck operators, such as:

- Sliding vane pumping technology is the most well suited for handling thin liquefied gases like LPG
- All TLGLF Pumps can be easily rebuilt to like new condition with Blackmer rebuild kits
- Self-adjusting vanes maintain flow rates even as they wear
- The Blackmer cavitation suppression liner mitigates the harmful effects of cavitation within the pump
- Dry run ability, that enables line stripping, and high suction lift capabilities
- Double-ended shaft for clockwise or counterclockwise rotation
- Auxiliary intake ports for emergency loading and unloading



Blackmer® TLGLF Pumps | Features & Benefits

Drive Options

All Blackmer TLGLF Pumps can be driven by either a PTO Shaft, or by Hydraulic Motor using an adapter kit.

Cavitation Suppression Liner

Specifically designed to mitigate the negative effects of cavitation - such as excessive noise, vibration, and deterioration of the pump internals, the cavitation suppression liner allows for the transfer of multi-phase liquids with high vapor pressures and zero NPSH. The liner can be easily replaced.

Auxiliary Inlet

Allows for unloading of remote vessels directly into the truck tank vessel. Helpful in emergency loading and unloading situations.

Vanes

Vanes provide exceptional sealing which maintains performance over the operating life of the pump. These self-adjusting and easily replaceable vanes provide the best technology solution for pumping thin liquefied gases like LPG.

Relief Valve

Standard relief valve designed to protect the pump from excessive pressure.

Inlet Flange

Mounting to the tank vessel on a truck, the inlet flange provides optimal inlet conditions for handling liquefied gases.

Double-Ended Shaft

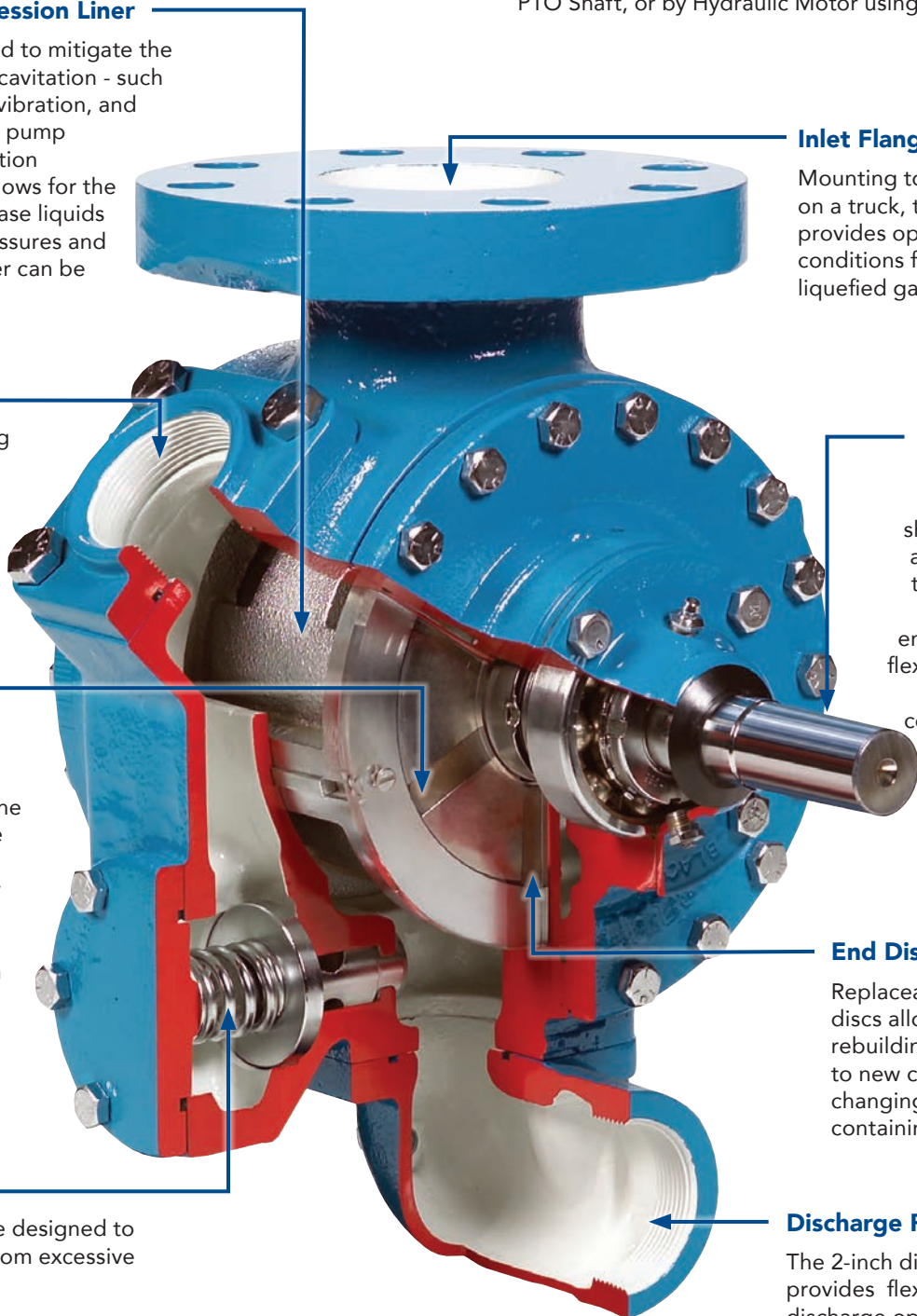
Double-ended shaft construction allows the pumps to be mounted in multiple ways to enhance mounting flexibility, and allow for clockwise or counter-clockwise rotation.

End Discs

Replaceable end discs allow for easy rebuilding of the pump to new condition without changing the pressure containing components.

Discharge Port

The 2-inch discharge port provides flexibility of discharge options due to the four different options for the TLGLF3 model. TLGLF4 and TLGLF3HD models have two different port options. See table on page 6 for details.



Maintenance Kits & Rebuild Kits

Model	Maintenance Kit	Rebuild Kit
TLGLF3	898980	899080
TLGLF3 - Relief Valve	899225	899125
TLGLF4	898922	899022
TLGLF3HD	898971	899071

BLACKMER® TLGLF PUMPS

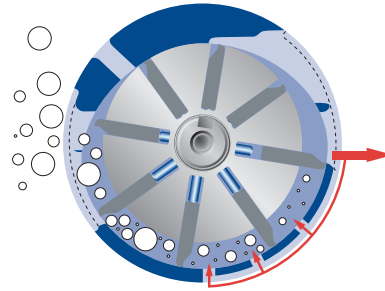
Cavitation Suppression Liners Reduce Noise

Blackmer TLGLF pumps feature noise suppression liners. This technology reduces noise at its source by reducing the amount of cavitation in the pump. Reducing the cavitation level also reduces vibration and wear.

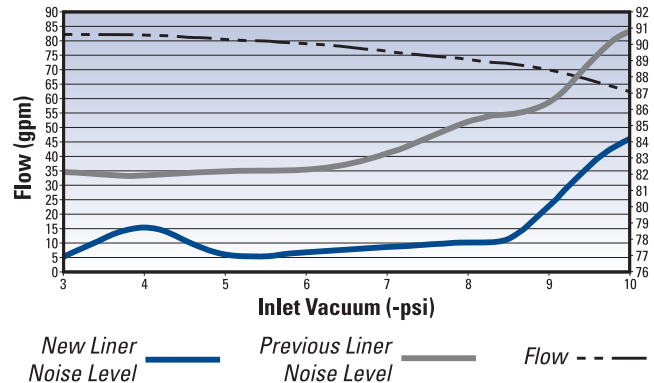
The sudden collapse of vapor bubbles inside the pump is known as cavitation. By allowing a controlled amount of fluid at discharge pressure to bleed back toward the suction of the pump, the vapor bubbles are collapsed over a longer period time. The net result is less noise, less vibration and less wear.

Cavitation can be devastating for pump components and can even lead to system failure. To learn how Blackmer TLGLF Sliding Vane Pumps incorporate a revolutionary Cavitation Suppression Liner that mitigates and even eliminates the harmful effects of pump cavitation visit blackmer.com/cavitation.

As shown in the chart, the reduction in noise level can be quite dramatic. Similar noise reductions have been measured in the TLGLF4 pumps.

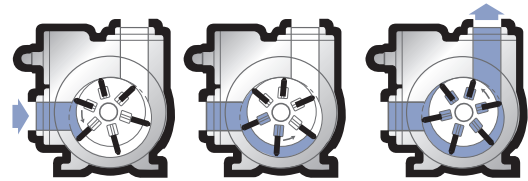


Flow and Noise vs. Inlet Vacuum
TLGLF3, 125 psi, 640 rpm



Sliding Vane Benefits

Blackmer positive displacement pumps have revolutionized the pumping industry with their unique sliding vane technology. This revolutionary rotary vane design allows the pumps to self-adjust for wear to help maintain flow rates. This sliding vane pump design creates excellent self-priming and dry-run capabilities, while also providing sustained performance and trouble-free operation.

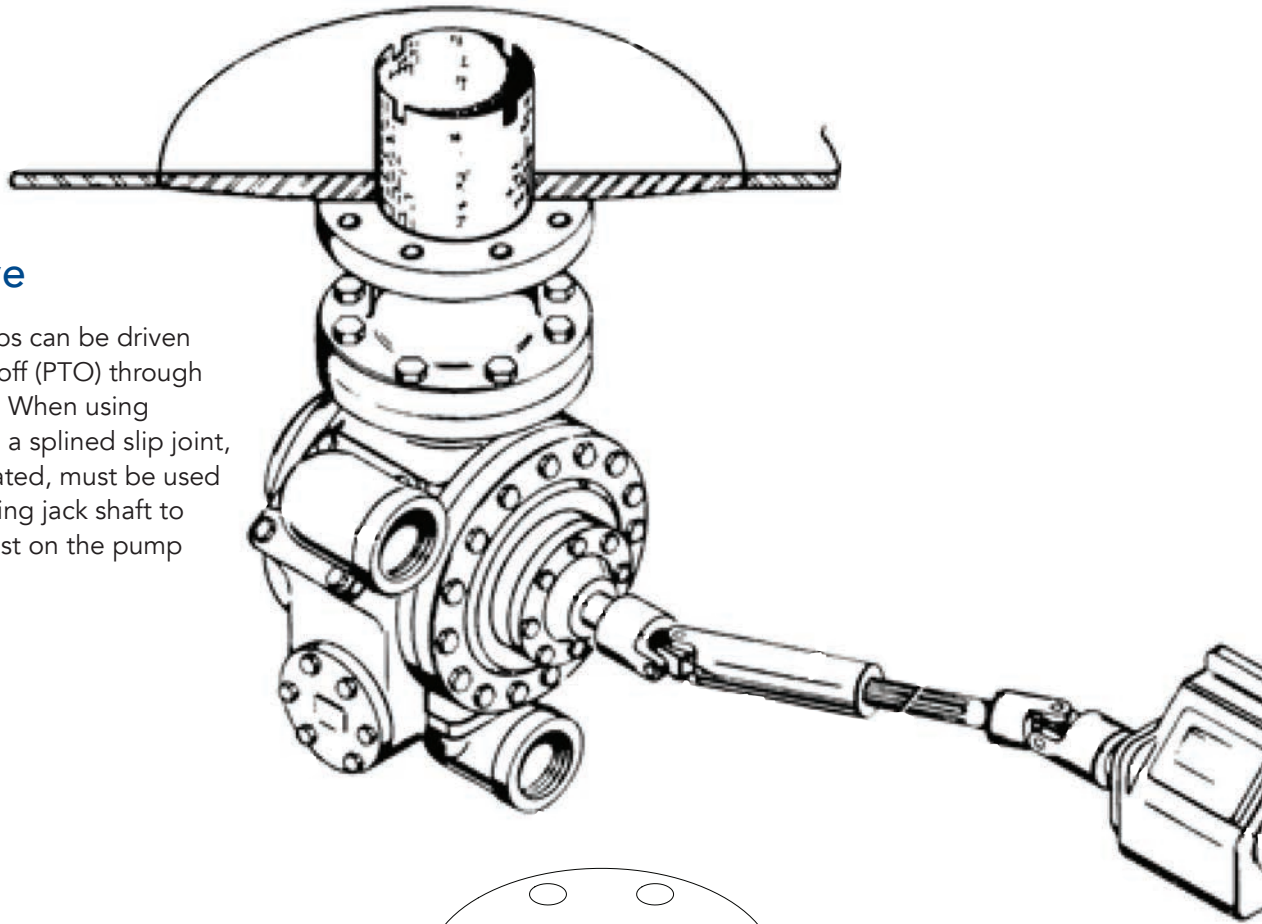


- Unique sliding vane pump design self-adjusts for wear to maintain flow rates
- Excellent at self-priming, eliminates expensive priming systems
- Extended dry-run capability, eliminates nuisance current monitoring systems
- Sliding vane design provides sustained performance and trouble-free operation
- Easy maintenance: vanes, liners, and discs can be easily replaced without removing the pump from the piping system
- High suction lift abilities that exceed 25 feet (7.6 meters) and line-stripping capabilities to completely empty tanks, and piping of fluid
- Low maintenance and low life-cycle costs, pumps are renewable and repairable
- Solids handling, provided by large displacement and slow internal velocities
- Thin to thick fluid viscosity flexibility, eliminates expensive heating systems
- Highly efficient, sliding vane pumps require less horsepower than other pumps, meaning spending less on motors initially and less on electricity to power the pump



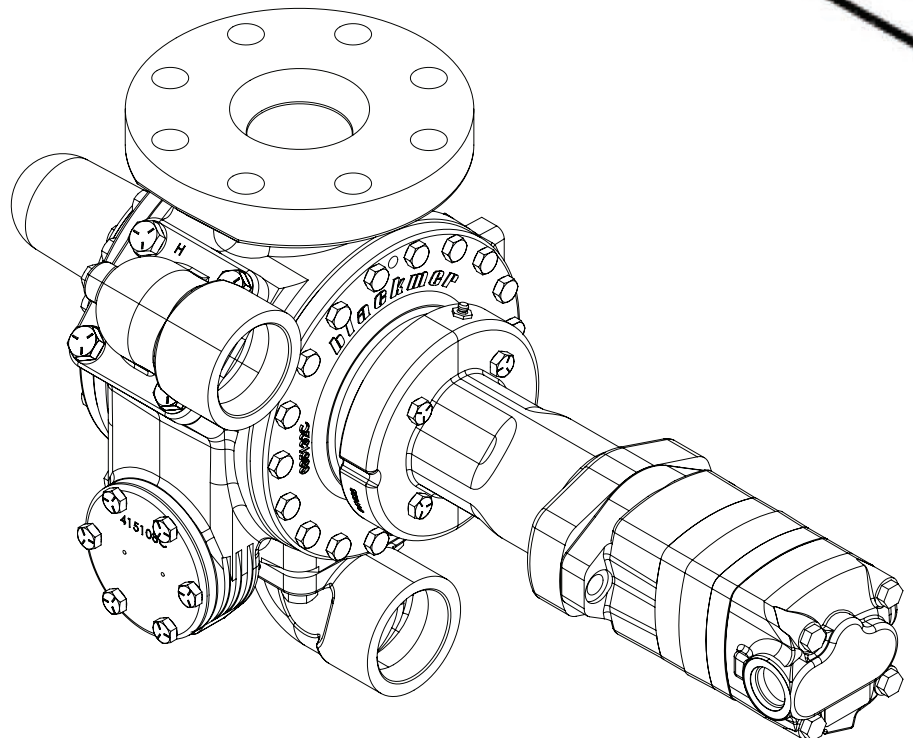
PTO Drive

All TLGLF Pumps can be driven by power take-off (PTO) through universal joints. When using universal joints, a splined slip joint, properly lubricated, must be used on the connecting jack shaft to prevent thrust on the pump shaft.

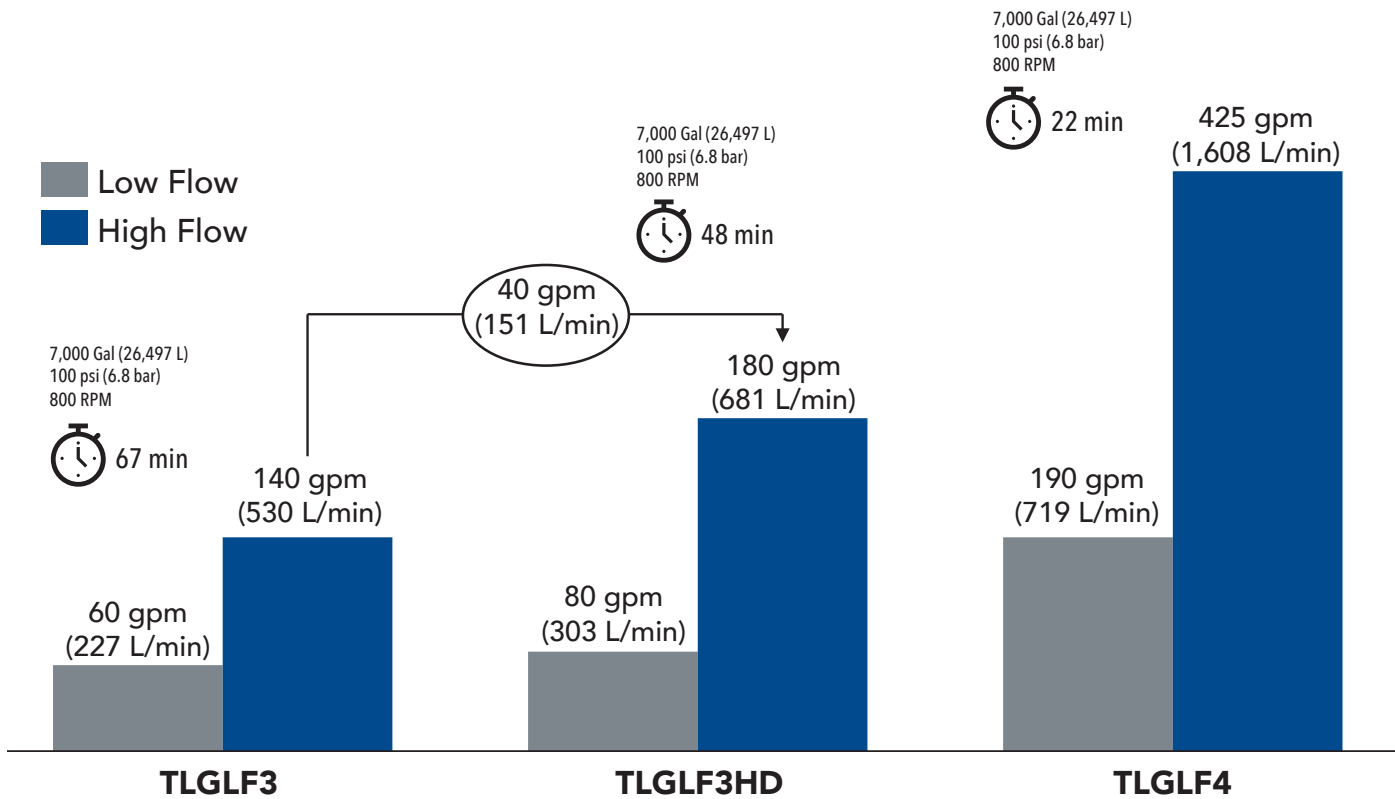


Hydraulic Drive

With use of a Blackmer hydraulic motor adapter, all TLGLF Pumps can also be driven hydraulically. The close-coupled hydraulic motor adapter provides for alignment of an SAE, 2 bolt flanged hydraulic motor with a straight keyed shaft.



Target Flow Ranges & Unloading Times



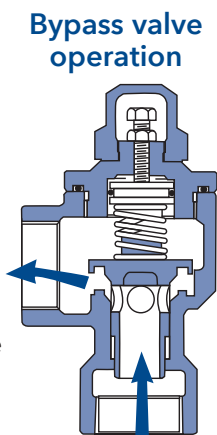
TLGLF Materials of Construction

Part Name	Material
Casing	Ductile Iron
Heads	Ductile Iron
Relief Valve Cover	Ductile Iron
O-Rings	Buna-N
Vanes	Duravanes
Liners	Cast Iron
Discs	Cast Iron
Mechanical Seal	Steel/Buna-N/Carbon

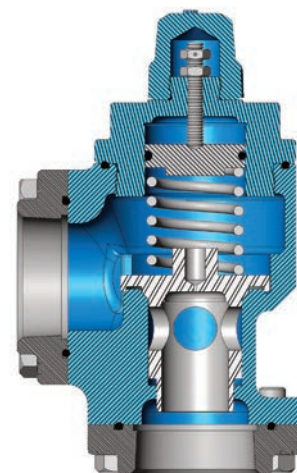
Available Companion Flanges and Flanged Elbows

Standard Pump	Discharge	Auxiliary Intake	Intake
TLGLF3	2" NPT Flanged	2" NPT Flanged	3" 300 lb. ANSI Mounting Flange
	2" NPT Flanged Elbow	2" NPT Flanged Elbow	
	2" Weld Flanged	2" Weld Flanged	
	2" Weld Flanged Elbow	2" Weld Flanged Elbow	
		Blanking Flange	
TLGLF3HD	Twin 2" NPT Flanges	2" NPT Flanged	3" 300 lb. ANSI Mounting Flange
	Twin 2" Weld Flanges	2" NPT Flanged Elbow	
		2" Weld Flanged	
		2" Weld Flanged Elbow	
		Blanking Flange	
TLGLF4	Twin 2" NPT Flanges	3" NPT Flanged	4" 300 lb. ANSI Mounting Flange
	Twin 2" Weld Flanges	3" Weld Flanged	
		Blanking Flange	
		4" Weld Flanged	

Blackmer differential bypass valves provide primary pressure control and are designed to maximize the dispensed flow rate of the overall system. When downstream connections restrict the flow of product less than what is displaced by the pump, the remaining liquid flow is safely returned to the supply tank through the bypass valve connection which avoids damage to the pump. The valve design also maximizes dispensed flow rate by having a narrow pressure band between initial opening and full pump flow when the delivery line is closed.



BV2



BV2 Cutaway

Model BV2

Ports have 2-inch NPT companion flanges, 1-1/4-inch and 1-1/2-inch NPT and WELD bolt-on flanges are available.

The Blackmer BV2 Bypass Valve is widely used for bobtails, transports and other larger bulk plant systems. The BV2 is recommended for use with the 3- and 4-inch Blackmer Pumps such as the TLGLF3, TLGLF3HD, and the TLGLF4 models. The BV2 is factory set at 125 psi (8.62 bar), and provides full-flow pressure control to 250 gpm (946 L/min).

Maximum Flow-Through Valve

Model	Maximum Rated Flow* - gpm (L/min) @			
	20 psi (1.38 bar)	50 psi (3.45 bar)	80 psi (5.52 bar)	120 psi (8.27 bar)
BV2	150 (568)	180 (681)	220 (833)	250 (946)

*Normal maximum bypass flow rates without significantly exceeding the set pressure limit.

TLGLF Pump & BV Bypass Valve Warranty & Guarantee

Blackmer stands behind the quality of our TLGLF Sliding Vane Pumps and BV Bypass Valves, with an unmatched extended five-year Product Warranty and two-year Performance Assurance Guarantee.

Product Warranty

When working with propane, butane and propane/butane mixtures, Blackmer TLGLF Pumps and BV Bypass Valves will be free from defects in materials and workmanship under normal use and service for five years.

Performance Assurance Guarantee

Should a Blackmer TLGLF Pump or BV Bypass Valve fail in the performance of its duties when handling propane, butane, and propane butane mixtures, with in two years, free replacement components will be provided to return the pump or valve to like-new condition.



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