

# XL Series

LINED GENERAL INDUSTRIAL SLIDING VANE PUMPS | PRODUCT BROCHURE



*Blackmer*

Where Innovation Flows



No matter how hard you run your pump, it's reassuring to know that a simple rebuild kit can be used to get your pump back to like new condition, internally.

## DUCTILE-IRON PUMPS FOR PROCESSING, FILLING AND TRANSFER APPLICATIONS

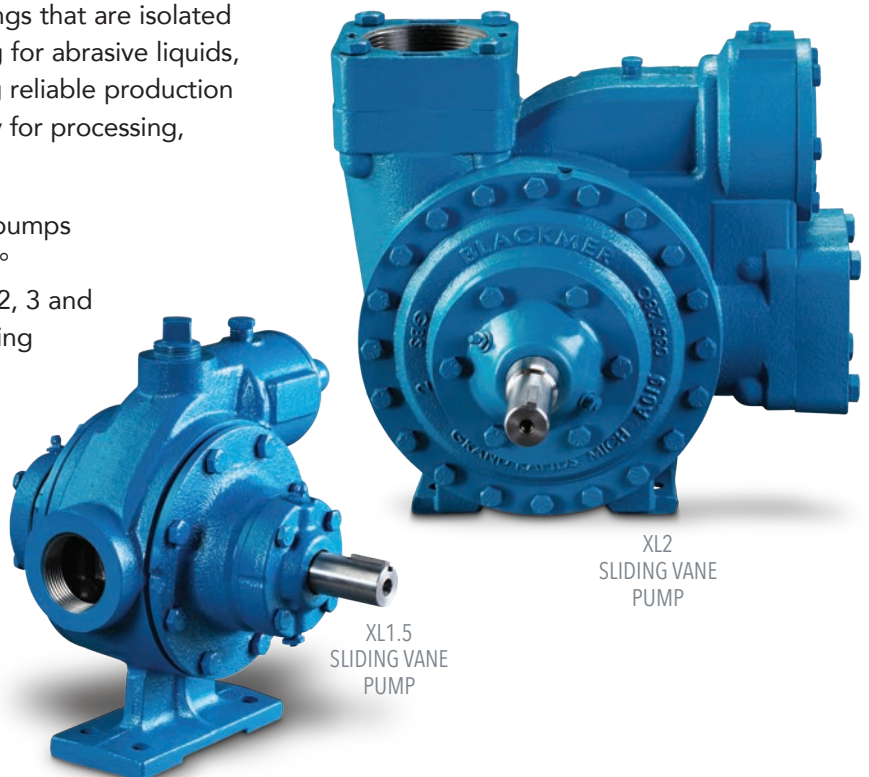
### Blackmer® XL Series | Shock-Resistant Pump with Replaceable Components

The XL Series Sliding Vane Pumps feature many internal components that can be easily replaced, such as– vanes, liner, discs, push rods, seals, O-rings, rotor and shaft. Replacing these wear parts when needed will ensure your initial XL Sliding Vane Pump investment will last for years, no matter how demanding your application is.

The shock-resistant, ductile iron XL Series Sliding Vane Pumps are available in five sizes with port sizes ranging from 1-1/4- to 4-in. With flow rates from 4 gpm to 345 gpm (15 to 1,306 L/min), temperatures to 300°F and relief valve pressures to 150 psi (10.3 bar) there is an appropriate sized pump for your application.

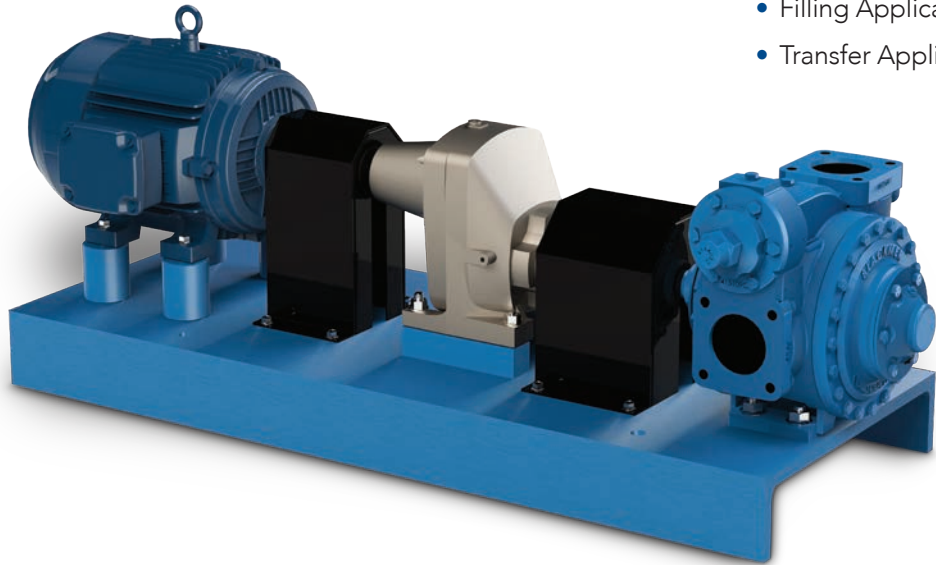
All XL Series Vane Pumps feature external bearings that are isolated from the pumpage by mechanical seals, allowing for abrasive liquids, extended dry run, and solids handling. Providing reliable production in refineries, lube oil plants, and general industry for processing, filling, and transfer applications.

The 1.25 and 1.5-inch models are motor speed pumps with a max speed of 1,750 rpm, and feature 180° porting orientation with NPT tapped ports. The 2, 3 and 4-inch models top out at 780 rpm, with 90° porting orientation with flanged ports.



## Integrated Unit Assembly

Blackmer® fully Integrated Unit Assemblies are the pre-engineered and pre-designed drop-in pumping solution. These unit assemblies, include motor, gearbox, baseplate, XL 2, 2.5, 3-inch Pump and coupling safety covers. No alignment required with these pre-configured fully Integrated Unit Assemblies as they are ready for immediate drop-in installation.



XL3 Integrated Unit Assembly

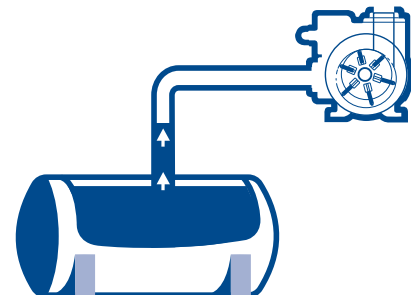
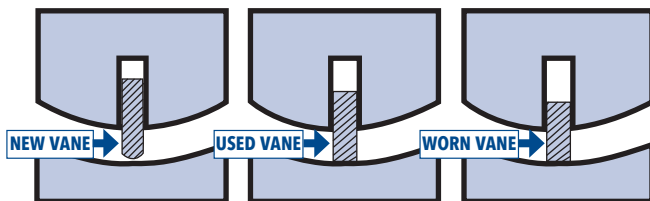
## Applications

- Refinery Applications
- Lube Oil Plants
- General Industry
- Processing Applications
- Filling Applications
- Transfer Applications

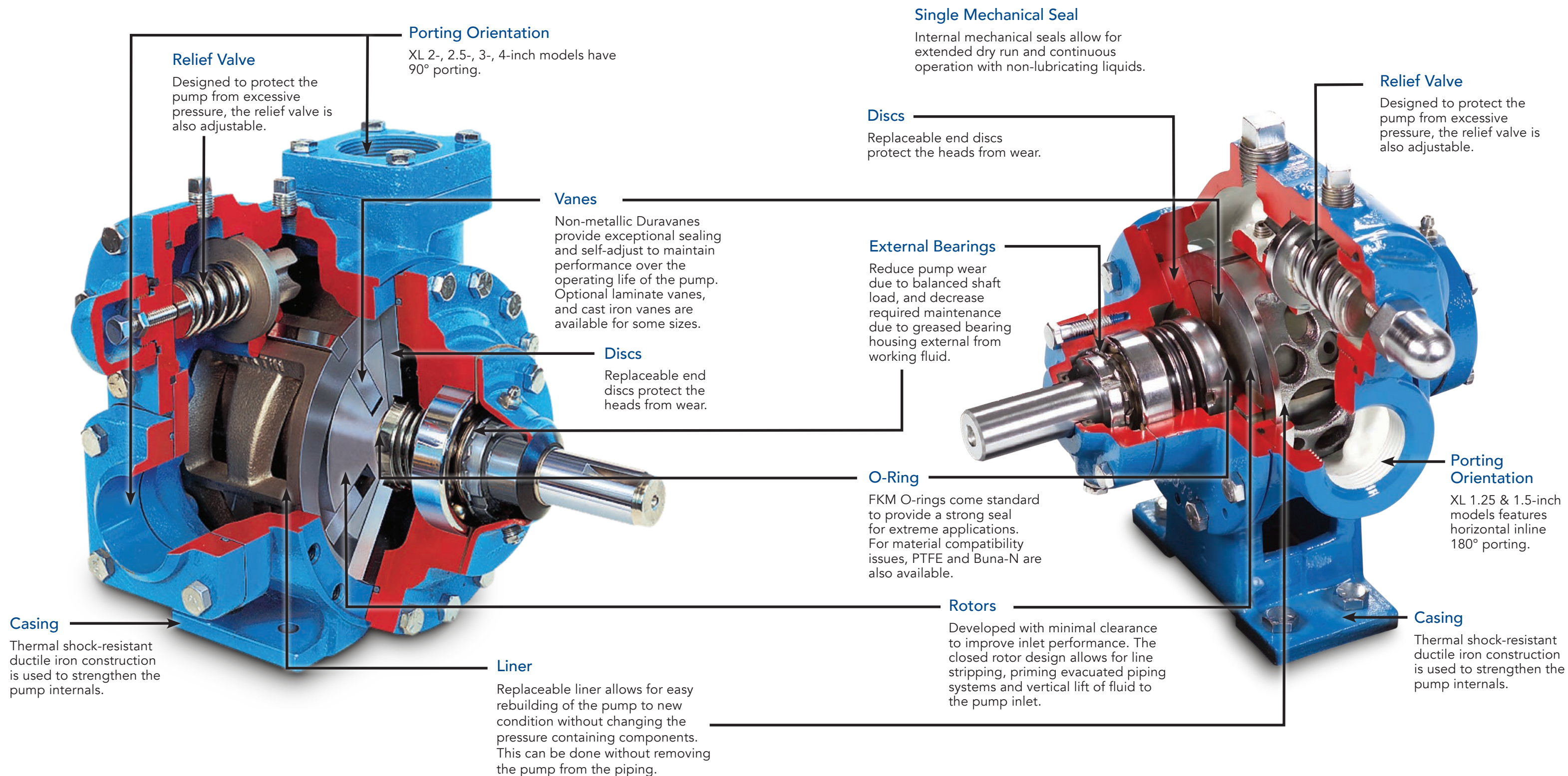
## Self-Priming, Dry Run & Other Benefits of Blackmer Vane Pumps

Blackmer positive displacement pumps have revolutionized the pumping industry with their unique sliding vane pump 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.

- Maintain consistent flow rates throughout the life of the pump due to unique sliding vane pump design that self-adjusts for wear
- Sliding vane design provides sustained performance and trouble-free operation
- Easy maintenance: vanes can be easily replaced without removing the pump from the piping system
- Low maintenance and low life-cycle costs, pumps are renewable and repairable
- 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
- Excellent at self-priming, eliminates expensive priming systems
- Extended dry-run capability, eliminates nuisance current monitoring systems
- High suction lift abilities that exceed 25 feet (7.6 meters)



# BLACKMER® XL SERIES SLIDING VANE PUMPS



## Relief Valve

Designed to protect the pump from excessive pressure, the relief valve is also adjustable.

## Porting Orientation

XL 2-, 2.5-, 3-, 4-inch models have 90° porting.

## Vanes

Non-metallic Duravanes provide exceptional sealing and self-adjust to maintain performance over the operating life of the pump. Optional laminate vanes, and cast iron vanes are available for some sizes.

## Discs

Replaceable end discs protect the heads from wear.

## Single Mechanical Seal

Internal mechanical seals allow for extended dry run and continuous operation with non-lubricating liquids.

## Discs

Replaceable end discs protect the heads from wear.

## External Bearings

Reduce pump wear due to balanced shaft load, and decrease required maintenance due to greased bearing housing external from working fluid.

## O-Ring

FKM O-rings come standard to provide a strong seal for extreme applications. For material compatibility issues, PTFE and Buna-N are also available.

## Rotors

Developed with minimal clearance to improve inlet performance. The closed rotor design allows for line stripping, priming evacuated piping systems and vertical lift of fluid to the pump inlet.

## Relief Valve

Designed to protect the pump from excessive pressure, the relief valve is also adjustable.

## Porting Orientation

XL 1.25 & 1.5-inch models features horizontal inline 180° porting.

## Casing

Thermal shock-resistant ductile iron construction is used to strengthen the pump internals.

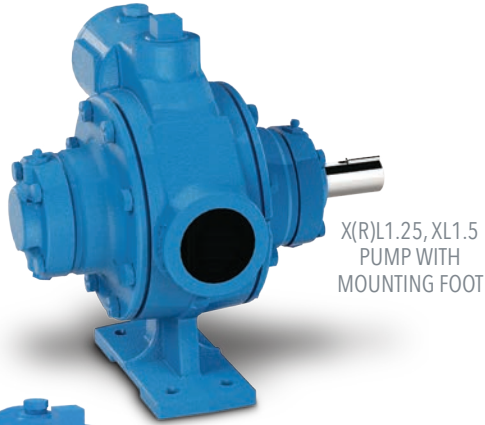
## Liner

Replaceable liner allows for easy rebuilding of the pump to new condition without changing the pressure containing components. This can be done without removing the pump from the piping.

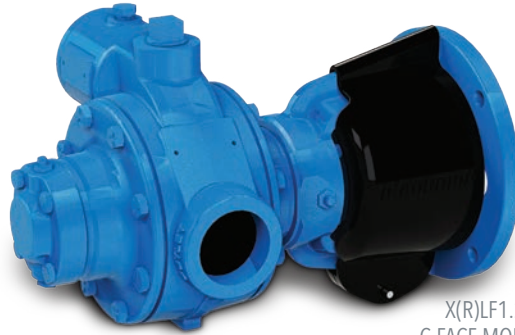
## Casing

Thermal shock-resistant ductile iron construction is used to strengthen the pump internals.

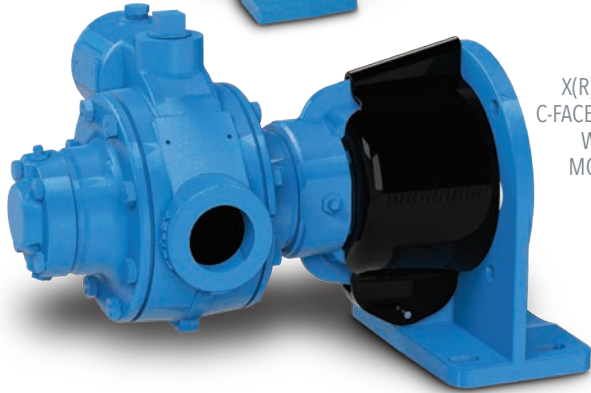
# Blackmer® XL Series | Sliding Vane Pumps



X(R)L1.25, XL1.5  
PUMP WITH  
MOUNTING FOOT



X(R)LF1.25, XLF1.5  
C-FACE MOUNTED PUMP  
WITH FOOTLESS  
MOTOR ADAPTER



X(R)LF1.25, XLF1.5  
C-FACE MOUNTED PUMP  
WITH FOOTED  
MOTOR ADAPTER

## Fluid Connections

PUMP MODEL	STANDARD	OPTIONAL
<b>XRL1.25</b> <b>XL1.25</b> <b>XRLF1.25</b> <b>XLF1.25</b>	1 1/4" NPT Tapped Ports	-
<b>XL1.5</b> <b>XLF1.5</b>	1 1/2" NPT Tapped Ports	-
<b>XL2</b>	2" NPT Flange	2" Steel Weld 2" ANSI CL 150 RF
<b>XL3</b>	3" NPT Flange	3" Steel Weld 3" ANSI CL 150 RF
<b>XL4</b>	4" Steel Weld	3" NPT Flange 3" Steel Weld

## Maintenance Kits

MODEL(S)	DESCRIPTION	PART NUMBER
<b>XRL1.25, XRLF1.25</b>	Kit - Maintenance	898966
<b>XRL1.25, XRLF1.25</b>	Kit - Rebuild	899066
<b>XL1.25, XLF1.25</b>	Kit - Maintenance	898968
<b>XL1.25, XLF1.25</b>	Kit - Rebuild	899068
<b>XL1.5, XLF1.5</b>	Kit - Maintenance	898970
<b>XL1.5, XLF1.5</b>	Kit - Rebuild	899070
<b>XL2</b>	Kit - Maintenance	898963
<b>XL2</b>	Kit - Rebuild	899063
<b>XL3</b>	Kit - Maintenance	898964
<b>XL3</b>	Kit - Rebuild	899064
<b>XL4</b>	Kit - Maintenance	898965
<b>XL4</b>	Kit - Rebuild	899065

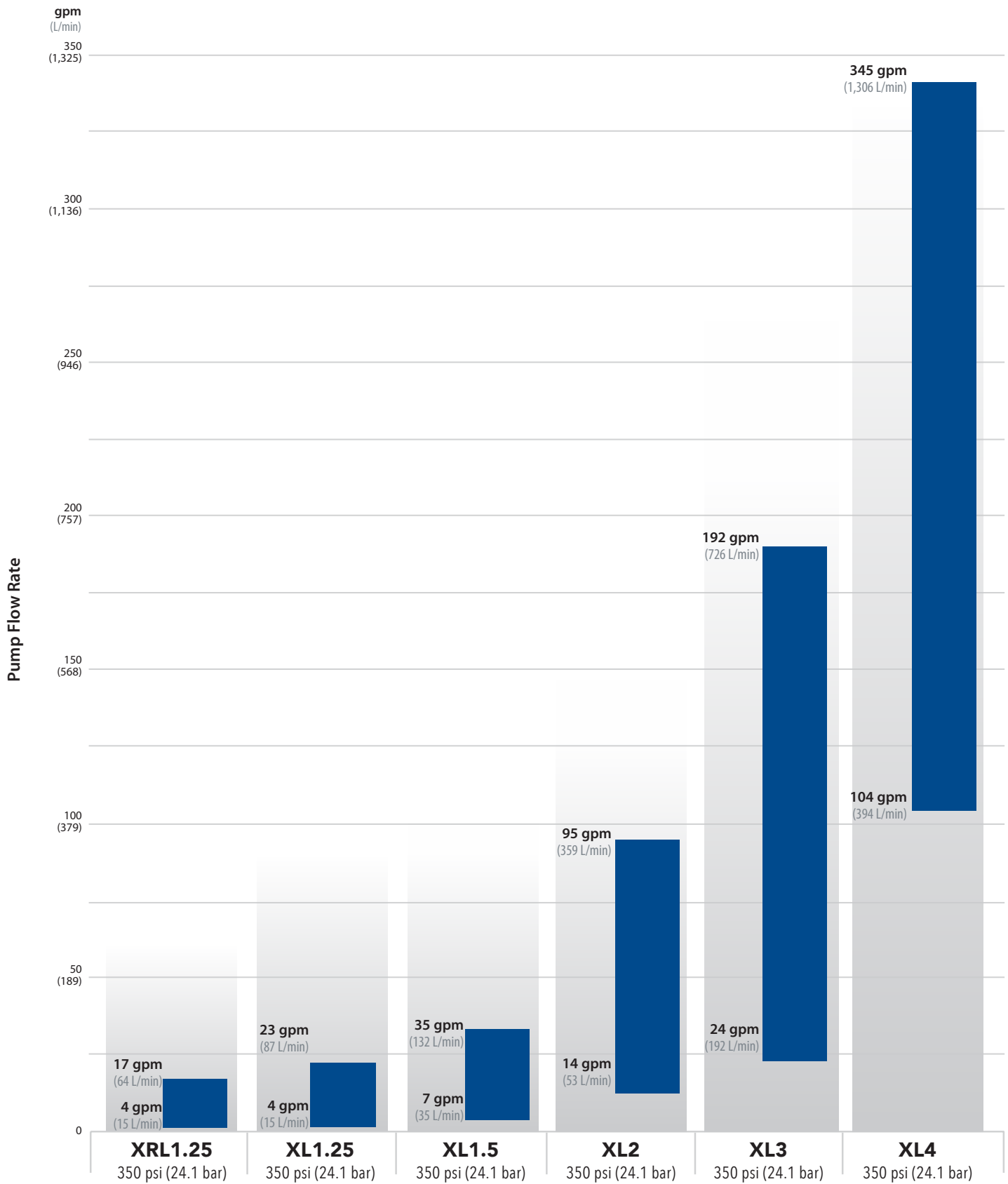
## MAXIMUM OPERATING LIMITS

Pump Model	Nominal Flow Rate Range	Maximum Viscosity	Minimum Operating Temperature	Maximum Operating Temperature	Min./Max. Speed	Maximum Differential Pressure	Maximum Working Pressure
	gpm (L/min)	SSU (cSt)	°F (°C)	°F (°C)	RPM	psi (bar)	psi (bar)
<b>XRL(F)1.25</b>	4 - 17 (15 - 64)	20,000 (4,250)	-25 (-32)	300 (148)	100 / 1800	150 (10.3)	350 (24.1)
<b>XL(F)1.25</b>	4 - 23 (15 - 87)	20,000 (4,250)	-25 (-32)	300 (148)	100 / 1800	150 (10.3)	350 (24.1)
<b>XL(F)1.5</b>	7 - 35 (35 - 132)	20,000 (4,250)	-25 (-32)	300 (148)	100 / 1800	150 (10.3)	350 (24.1)
<b>XL2</b>	14 - 95 (53 - 359)	20,000 (4,250)	-25 (-32)	300 (148)	125 / 780	150 (10.3)	350 (24.1)
<b>XL3</b>	24 - 192 (192 - 726)	20,000 (4,250)	-25 (-32)	300 (148)	125 / 780	150 (10.3)	350 (24.1)
<b>XL4</b>	104 - 345 (394 - 1,306)	20,000 (4,250)	-25 (-32)	300 (148)	125 / 780	150 (10.3)	350 (24.1)

**Note:** Optional materials of construction may be required to meet specific application requirements – refer to Blackmer Material Specification Sheets. For operating conditions that exceed those listed, consult factory.

# Blackmer® XL Series Sliding Vane Pumps | Performance

## Nominal Flow Rate Range



Maximum Differential Pressure 150 psi (10.3 bar)  
(Internal relief valve setting)



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