



**MATERIALS OF CONSTRUCTION**  
*Models: XRL1.25A, XL1.25A, XL1.5A,  
 XRLF1.25B, XLF1.25B, XLF1.5B*

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**NOTE:** Temperature and viscosity ratings given below apply to individual components **Only**. For actual maximum temperatures and viscosities for the rated pump, see "**Operating Limits**" on backside.

PART NAME	STANDARD MATERIALS	AVAILABLE OPTIONS
Casing, Heads, Relief Valve Cover	Ductile Iron: ASTM 536, 18%	
Discs, Bearing Covers, Liner	Cast Iron: ASTM A48	
<b>Rotor &amp; Shaft</b>		
Rotor	Cast Iron: ASTM A48	
Shaft	High Strength Steel	
Bearings	Single Ball Bearing; Grease Lubricated, to 300°F (149°C) Max.	
Relief Valve (R/V)	Cast Iron	Nickel Plated Cast Iron
Relief Valve Spring R/V Spring Ranges	Plated Steel 20-50 psi (138-345 kPa) 51-80 psi (352-552 kPa) 81-150 psi (558-1034 kPa)	Stainless Steel 25-50 psi (172-345 kPa) 51-75 psi (352-517 kPa) 76-100 psi (524-689 kPa) 101-150 psi (696-1034 kPa)
O-Rings: Other than Mechanical Seal	Fluorocarbon (FKM) to 400°F (204°C)	Buna-N to 240°F (115°C) PTFE to 500°F (260°C)
Gaskets	Fiber to 300°F (149°C)	
<b>Vanes</b>	<b>Duravane</b> - Full Size with Stainless Steel Wear Plate to 240°F (115°C); 20,000 SSU (4,250 cP) Maximum.	<b>Bronze</b> – Full size to 180°F (82°C); 500 SSU (105 cP) Minimum. <b>Laminate</b> – Full size to 240°F (115°C); 20,000 SSU (4,250 cP) Max. <b>EC Laminate</b> - Extra-Clearance to 350°F (176°C); 40,000 SSU (8,500 cP) Max.
Push Rods	Case Hardened Steel	
<b>Mechanical Seals</b>		
Stationary O-Ring	FKM to 400°F (204°C)	Buna-N or PTFE
Stationary Seat	Hardened Steel	Silicon Carbide
Rotating O-Ring / Seal Ring	FKM to 400°F (204°C)	Buna-N O-ring or PTFE Seal Ring
Rotating Seal Face	Carbon - 20,000 SSU (4,250 cP) Max.	Bronze - 500 SSU (105 cP) Minimum
Seal Jacket	Plated Steel	
Seal Spring	Stainless Steel	
Gage Ports	1/4" NPT	

Centipoise (cP) = centistokes (cSt) at fluid specific gravity of 1.0.

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### PIPE CONNECTIONS

PUMP SIZE	STANDARD
1.25"	1 ¼" NPT Tapped Ports
1.5"	1 ½" NPT Tapped Ports

### OPERATING LIMITS

	STANDARD MATERIALS	OPTIONAL MATERIALS
Maximum Temperature	240°F (115°C)	<b>240°F (115°C):</b> w/ Buna-N O-rings <b>300°F (149°C):</b> w/ FKM or PTFE O-Rings and EC-Laminate Vanes. <b>NOTE:</b> Temperature is limited by ball bearings <b>180°F (82°C):</b> w/ Full size Bronze Vanes
Maximum Viscosity	20,000 SSU (4,250 cP)	With Bronze Vanes & Seal Faces: XRL(F)1.25: 50,000 SSU (10,500 cP) XL(F)1.25, 1.5: 30,000 SSU (6,300 cP)
Maximum Differential Pressure*	150 psi (10.3 Bar)	
Maximum Working Pressure	350 psi (24.1 Bar)	

Centipoise (cP) = centistokes (cSt) at fluid specific gravity of 1.0.

\* Maximum Relief Valve Setting

