



**MATERIALS OF CONSTRUCTION**

Models: XLW2F, XLW3F

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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%	
Liner	Hardened Ductile Iron	
Discs	Hardened Cast Iron: ASTM A48	
Bearing Covers	Steel	
Bearings	Single Ball Bearing; Grease Lubricated, to 300°F (149°C) Max.	
Locknuts and Lockwasher	Steel	
<b>Rotor &amp; Shaft</b>		
Rotor	Extra Clearance (0.045" Reduced) Hard Ductile Iron: ASTM 536, 18%	Full Size Hard Ductile Iron: ASTM 536, 18%
Shaft	High Strength Steel with Hard Chrome Plating in Mechanical Seal and Bearing Areas	
Relief Valve (R/V)	Cast Iron: ASTM A48	
Relief Valve Cap	Ductile Iron: ASTM 536, 18%	
Relief Valve Spring	Plated Steel	
R/V Spring Ranges	XLW2 76 - 110 psi (5.2 - 7.6 bar) XLW3 51 - 75 psi (3.5 - 5.2 bar)	Optional springs range from 35 - 150 psi (2.4 - 10.3 bar) - See Parts List.
O-Rings: Other than Mechanical Seal	Fluorocarbon FKM to 400°F (204°C)	PTFE to 500°F (260°C)
Gaskets: Bearing Cover	Fiber to 300°F (149°C)	
<b>Vanes</b>	<b>EC Hardened Cast Iron</b> - Extra Clearance to 400°F (204°C); 500 SSU (105 cP) Minimum.	<b>EC Laminate</b> - Extra-Clearance to 350°F (176°C); 40,000 SSU (8,500 cP) Max. <b>Laminate</b> - Full size with SS Wear Plate to 240°F (115°C); 20,000 SSU (4,250 cP) Maximum
Push Rods	Case Hardened Steel	
<b>Mechanical Seals</b>		
Stationary O-Ring	FKM to 400°F (204°C)	PTFE to 500°F (260°C)
Stationary Seat	Silicon Carbide	
Rotating O-Ring / Seal Ring	FKM to 400°F (204°C)	PTFE seal ring to 500°F (260°C)
Rotating Seal Face	Hardened Steel	Silicon Carbide
Seal Jacket	Plated Steel	
Seal Spring	Plated Steel	
Gage Ports	1/4" NPT	

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

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### PIPE COMPANION FLANGES

PUMP SIZE	STANDARD	OPTIONAL <sup>1</sup>
XLW2	2" Ductile Iron, NPT Tapped: ASTM 536, 18%	2" Steel Weld: ASTM A216, 22% ANSI: 2", 150 lb. RF DIN: 50, PN10
XLW3	3" Ductile Iron, NPT Tapped: ASTM 536, 18%	3" Steel Weld: ASTM A216, 22% ANSI: 3", 150 lb. RF DIN: 80, PN10

### OPERATING LIMITS

	STANDARD MATERIALS	OPTIONAL MATERIALS
Maximum Temperature	300°F (149°C) <b>NOTE: Temperature is limited by ball bearings</b>	
Maximum Viscosity	75,000 SSU (15,750 cP)	20,000 SSU (4,250 cP) Maximum with Full Size Rotor & Shaft
Minimum Viscosity	500 SSU (105 cP)	30 SSU (1 cP) Minimum w/ Laminate Vanes
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

