



**MATERIALS of CONSTRUCTION**  
 Models: *MLX4B, MLXW4B*  
*MRLX4B<sup>1</sup>, MRLXW4B<sup>1</sup>*

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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, Hubs	Ductile Iron: ASTM 536	Jacketed Heads Ductile Iron: ASTM 536 150 psi (1034 kPa) Max. Pressure
Liner MLX4, MRXL4	Ductile Iron: ASTM 536	
MLXW4, MRLXW4	Hardened Ductile Iron: ASTM 536	
Discs MLX4, MRXL4	Cast Iron: ASTM A48	
MLXW4, MRLXW4	Hardened Cast Iron: ASTM A48	
Bearing Covers	Ductile Iron: ASTM 536	
Bearings	Spherical Roller Bearing; Grease Lubricated, to 300°F (149°C) Max.	
Locknuts and Lockwasher	Steel	
Rotor & Shaft		
Rotor	Hardened Ductile Iron: ASTM 536	
Shaft	High Strength Steel	
Optional Relief Valve (R/V)	Cast Iron	
Relief Valve Body, Cap, Cover	Ductile Iron: ASTM 536	
Blanking Plates – Standard	Ductile Iron: ASTM 536	
Relief Valve Spring	Chrome Vanadium 400°F (204°C)	
R/V Spring Ranges	76-125 psi (5.2-8.6 Bar)	Optional springs range from 45-200 psi (3.1-13.8 Bar) - See Parts List.
O-Rings: Other than Mechanical Seal	Fluorocarbon (FKM) to 400°F (204°C)	PTFE to 500°F (260°C)
Gasket: R/V Cap	Composition	
Vanes	<b>Duravane</b> - Full Size with 316 Stainless Steel Wear Plate to 240°F (115°C); 20,000 SSU (4,250 cP) Maximum.	EC Bronze - Extra-Clearance to 500°F (260°C); 500 SSU (105 cP) Minimum. (Not available on MLXW4, MRLXW4) EC Laminate - Extra-Clearance to 350°F (176°C); 40,000 SSU (8,500 cP) Max. EC Hardened Ductile Iron - Extra-Clearance to 400°F (204°C); 500 SSU (105 cP) Minimum.
Push Rods	Case Hardened Steel	

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

<sup>1</sup> MRLX4B and MRLXW4B have a Low Displacement Liner – flow rate and horsepower are about 75% of the MLX4B.

Models: MLX4B, MLXW4B, MRLX4B, MRLXW4B

PART NAME	STANDARD MATERIALS	AVAILABLE OPTIONS
Mechanical Seals		
Stationary O-Ring / Rotating O-Ring / Wedge	FKM to 400°F (204°C)	
Stationary Seat / Mating Ring	Hardened Steel	Silicon Carbide
Rotating Seal Face	Carbon - 50,000 SSU (10,550 cP) Max. with Lubricating Fluid	Bronze - 500 SSU (105 cP) Min. to 100,000 SSU (21,000cP) Max. Silicon Carbide – 100,000 SSU (21,000 cP) Max.
Seal Jacket / Spring	302 Stainless Steel 18-8	

Gage Ports	1/4" NPT
Flanges	4" 150lb Flat Face ANSI Compatible, Ductile Iron

### OPERATING LIMITS

	STANDARD MATERIALS	OPTIONAL MATERIALS
Maximum Temperature	240°F (115°C)	<b>300°F (149°C)</b> with EC Metal or Laminate Vanes <b>400°F (204°C) Intermittent Duty</b> with Metal Vanes (Limited by Bearings)
Maximum Viscosity	30,000 SSU (6,300 cP)	<b>100,000 SSU (21,000 cP) Max.</b> with Metal Vanes and Bronze or Silicon Carbide Mech. Seal Faces <b>40,000 SSU (8,500 cP) Max.</b> with EC Laminate Vanes <b>500 SSU (105 cP) Minimum</b> with Metal Vanes and Bronze Seal Faces
Maximum Differential Pressure	200 psi (13.8 Bar)	
Maximum Working Pressure	250 psi (17.2 Bar)	

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

\* Maximum Relief Valve Setting