



MATERIALS OF CONSTRUCTION
*Models: GX2B, GX2.5B, GX3E, GX4B
 X2B, X2.5B, X3E, X4B,
 XH2B, XH2.5B, XH3E, XH4B*

Page Number	101-095
Effective	Dec 2015
Replaces	Oct 2015
Section	101

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
Cylinder, Relief Valve Cover	X2", 2.5", 3"	Cast Iron: ASTM A48
	X4" and all XH	Ductile Iron: ASTM 536
Heads	2", 2.5", 3"	Cast Iron: ASTM A48
	GX4B (inboard)	Cast Iron: ASTM A48
	GX4B (outboard)	Ductile Iron: ASTM 536
	X4B, XH4B	Ductile Iron: ASTM 536
Bearing Covers	2", 2.5", 3"	Steel
	4"	Cast Iron: ASTM A48
Bearings	Single Ball Bearing; Grease Lubricated, to 300°F (149°C) Max.	
Locknut and Lockwasher	X2.5, XH2.5, X3, XH3 Only: Steel	
Rotor & Shaft		
Rotor	Ductile Iron: ASTM 536	
Shaft	High Strength Steel	
Relief Valve (R/V)	Cast Iron: ASTM A48	Nickel Plated Cast Iron
Relief Valve Cap	2", 2.5"	Steel
	3", 4"	Ductile Iron: ASTM 536
Relief Valve Spring	Plated Steel	
R/V Spring Ranges	2", 2.5", 3"	51-75 psi (3.5 – 5.2 Bar)
	4"	51-110 psi (3.5 – 7.6 Bar)
O-Rings: Other than Mechanical Seal	Fluorocarbon (FKM) to 400°F (204°C)	PTFE to 500°F (260°C) Buna-N to 240°F (115°C)
Gaskets	Aramid Fiber to 500°F (260°C)	
Vanes	Duravane - Full Size with Stainless Steel Wear Plate to 240°F (115°C); 20,000 SSU (4,250 cP) Maximum.	EC Laminate - Extra-Clearance with Stainless Steel Wear Plate to 350°F (176°C); 40,000 SSU (8,500 cP) Max. 'X' Models only: EC Cast Iron - Extra-Clearance to 500°F (260°C); 500 SSU (105 cP) Min.
Push Rods	Case Hardened Steel	
Mechanical Seals	IVCV	IACT
Stationary O-Ring	FKM to 400°F (204°C)	PTFE to 500°F (260°C) Buna-N to 240°F (115°C)
Stationary Seat	Cast Iron	Cast Iron
Rotating O-Ring / Seal Ring	FKM to 400°F (204°C)	PTFE to 500°F (260°C) Buna-N to 240°F (115°C)
Rotating Seal Face	Carbon - 20,000 SSU (4,250 cP) Max.	Carbon - 20,000 SSU (4,250 cP) Max.
Seal Jacket & Spring	Plated Steel	Plated Steel
Gage Ports	1/4" NPT	

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

Models: GX2B, GX2.5B, GX3E, GX4B

X2B, X2.5B, X3E, X4B, XH2B, XH2.5B, XH3E, XH4B

PIPE COMPANION FLANGES

PUMP SIZE	STANDARD	OPTIONAL
2"	2" Cast Iron, NPT Tapped	2" Steel, Weld: ASTM A216 WCB 2" 150# RF ANSI compatible
2.5"	2.5" Cast Iron, NPT Tapped	2.5" Steel, Weld: ASTM A216 WCB 3" 150# RF ANSI compatible
3"	3" Cast Iron, NPT Tapped	3" Steel, Weld: ASTM A216 WCB 3" 150# RF ANSI compatible
4"	4" Ductile Iron: ASTM 536, NPT Tapped	4" Steel, Weld: ASTM A105 4" 150# RF ANSI compatible

OPERATING LIMITS

	STANDARD MATERIALS	OPTIONAL MATERIALS						
Maximum Temperature	240°F (115°C)	300°F (149°C) With FKM or PTFE O-Rings and metal vanes Note: Temperature is limited by ball bearings						
Minimum Temperature	-25°F (-31°C)							
Maximum Viscosity	<table border="0"> <tr> <td>X/XH 2, 2.5,3</td> <td>20,000 SSU (4,250 cP)</td> </tr> <tr> <td>X4, XH4</td> <td>20,000 SSU (4,250 cP)</td> </tr> <tr> <td>GX2, GX2.5, GX3, GX4</td> <td>20,000 SSU (4,250 cP) GX Pumps are limited by the gear reducer. Consult Pump Characteristic Curves and Reducer Horsepower Capabilities</td> </tr> </table>	X/XH 2, 2.5,3	20,000 SSU (4,250 cP)	X4, XH4	20,000 SSU (4,250 cP)	GX2, GX2.5, GX3, GX4	20,000 SSU (4,250 cP) GX Pumps are limited by the gear reducer. Consult Pump Characteristic Curves and Reducer Horsepower Capabilities	
X/XH 2, 2.5,3	20,000 SSU (4,250 cP)							
X4, XH4	20,000 SSU (4,250 cP)							
GX2, GX2.5, GX3, GX4	20,000 SSU (4,250 cP) GX Pumps are limited by the gear reducer. Consult Pump Characteristic Curves and Reducer Horsepower Capabilities							
Maximum Differential Pressure*	125 psi (8.6 Bar)							
Maximum Working Pressure	175 psi (12.1 Bar)							

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

* Maximum Relief Valve Setting