



**MATERIALS of CONSTRUCTION**  
*TX1.5, TXD2A, TXD2.5A, TXD3E, TX4A,*  
*TXDI2A, TXDI2.5A, TXDI3A, TXI4A*

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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
Cylinder, Heads, Relief Valve Cover	1.5, 2, 2.5, 3	Cast Iron: ASTM A48	
	4 & TXDI2-4"	Ductile Iron: ASTM A536	
Bearing Covers	1.5, 2, 2.5, 3	Steel	Bearing Cover/Spacer with Hydraulic Motor Adapter (Cast Aluminum) and Coupling (Steel).
	4	Cast Iron: ASTM A48	----
Bearings		Ball (Single Row), Grease Lubricated, to 300°F (149°C) Max.	
<b>Rotor &amp; Shaft</b>	1.5, 4	Single End Keyed Shaft	Single End Keyed Shaft
	2, 2.5, 3	Double End Keyed Shaft	
Rotor		Ductile Iron: ASTM A536	
Shaft		High Strength Steel	2.5 only: 17-4 SS
Relief Valve		Cast Iron ASTM A48	Nickel Plated Cast Iron: ASTM A48
	2	Ductile Iron ASTM 536	---
Relief Valve Cap	1.5, 2, 2.5	Steel	
	3, 4	Ductile Iron: ASTM A536	
Relief Valve Spring		Plated Steel	
Relief Valve Spring Ranges	1.5	76-100 psi (5.24-6.90 bar)	Optional springs range from 35-125 psi (2.41-8.62 bar). See Parts List.
	2, 2.5, 3	76-110 psi (5.24-7.58 bar)	
	4	76-125 psi (5.24-8.62 bar)	
O-Rings (other than seal)		Fluorocarbon (FKM) to 400°F (204°C)	Buna-N to 240°F (115°C)
			PTFE to 500°F (260°C)
Gaskets		Cellulose Fiber to 250°F (121°C)	
<b>Vanes</b>		<b>Duravane</b> - Full Size with 316 Stainless Steel Wear Plate to 240°F (115°C); 20,000 SSU (4,250 cP) Maximum.	
Push Rods		Case Hardened Steel	
Gage Ports		1/4" NPT	

**Mechanical Seals**

Seal Codes	IVCV	INCN	IACT	IVCN
Stationary Seat	Cast Iron	Cast Iron	Cast Iron	Cast Iron
Stationary O-Ring	FKM to 400°F (204°C)	Buna-N to 240°F (115°C)	PTFE to 400°F (204°C)	FKM to 400°F (204°C)
Rotating Face	Carbon - 20,000 SSU (4,250 cP) Maximum	Carbon - 20,000 SSU (4,250 cP) Maximum	Carbon - 20,000 SSU (4,250 cP) Maximum	Carbon - 20,000 SSU (4,250 cP) Maximum
Rotating O-Ring/Seal Ring	FKM O-Ring to 400°F (204°C)	Buna-N O-Ring to 240°F (115°C)	PTFE Seal Ring to 400°F (204°C)	Buna-N O-Ring to 240°F (115°C)
Seal Jacket	Plated Steel			
Seal Spring	Plated Steel			

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

# MATERIALS OF CONSTRUCTION

Models: TX1.5, TXD2A, TXD2.5A, TXD3E, TX4A

## PIPE COMPANION FLANGES

PUMP SIZE	STANDARD	OPTIONAL
TX1.5	1.5" NPT Tapped Cylinder Ports	---
TXD2A	Two 2" NPT Tapped Flanges, Cast Iron: ASTM A48	2" Weld Flanges, Steel: ASTM A216 WCB 2" Victaulic type grooved flanges, Ductile Iron: ASTM A536
TXD2.5A	Two 2½" NPT Tapped Flanges, Cast Iron: ASTM A48	2½" Weld Flanges, Steel: ASTM A216 WCB 2" NPT Tapped Flanges, Cast Iron: ASTM A48 2", 2½" or 3" Victaulic type grooved flanges, Ductile Iron: ASTM A536
TXD3E	Two 3" NPT Tapped Flanges, Cast Iron: ASTM A48	3" Weld Flanges, Steel: ASTM A216 WCB 3" Untapped Flanges, Cast Iron: ASTM A48 3" Victaulic type grooved flanges, Ductile Iron: ASTM A536
TX4A	Two 4" NPT Tapped Flanges, Ductile Iron: ASTM A536	4" Weld Flanges, Steel: ASTM A105

## OPERATING LIMITS

	STANDARD MATERIALS	OPTIONAL MATERIALS
Maximum Temperature	240°F (115°C)	
Minimum Temperature	-25°F (-31°C)	
Maximum Viscosity	20,000 SSU (4,250 cP) (For higher viscosities and temperatures, refer to the TXV Series pump.)	
Maximum Differential Pressure*	125 psi (8.62 Bar)	
Maximum Working Pressure	175 psi (12.07 Bar)	

\* Maximum Relief Valve Setting

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

