



MATERIALS of CONSTRUCTION
 TX1.5, TXD2A, TXD2.5A, TXD3E, TX4A
 TXSD2A, TXSD2.5A, TXSD3E

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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	Ductile Iron: ASTM A536, 18%		
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.		
Rotor & Shaft	1.5	Single End Keyed Shaft		
	2, 2.5, 3	Double End Keyed Shaft		
	4	Single End Keyed Shaft		
	Rotor	1.5, 2, 2.5, 3		Ductile Iron: ASTM A536
	Shaft	4		Cast Iron: ASTM A48
Relief Valve	TX Models	Cast Iron: ASTM A48		
	TXS Models	Nickel Plated Cast Iron: ASTM A48		
Relief Valve Cap	1.5, 2, 2.5	Brass: ASTM B16		
	3, 4	Ductile Iron: ASTM A536, 18%		
Relief Valve Spring		Plated Steel	Stainless Steel (TXS Models ONLY)	
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)	TX Models	Buna-N to 240°F (115°C)	----	
	TXS Models	Fluorocarbon (FKM) to 400°F (204°C)	PTFE to 500°F (260°C)	
Gaskets		Composition to 500°F (260°C)		
Vanes		Duravane - Full Size with 316 Stainless Steel Wear Plate to 240°F (115°C); 20,000 SSU (4,250 cP) Maximum.	Laminate – with SS Wear Plate to 350°F (176°C); 40,000 SSU (8,500 cP) Max. Note: TX1.5 Laminate vanes to 240°F (115°C); 20,000 SSU (4,250 cP) Max. Bronze - to 500°F (260°C); 500 SSU (105 cP) Minimum.	
Push Rods		Case Hardened Steel		
Gage Ports		1/4" NPT		

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

MATERIALS OF CONSTRUCTION

Models: TX1.5, TXD2A, TXD2.5A, TXD3E, TX4A
TXSD2A, TXSD2.5A, TXSD3E

PART NAME	STANDARD MATERIALS		AVAILABLE OPTIONS			
	TX Models	TXS Models	TXS Models ONLY			
Seal Codes	INCN	IVCT	IVCV	INCT	IACT	WACT
Stationary Seat	Cast Iron	Cast Iron	Cast Iron	Cast Iron	Cast Iron	Stainless Steel
Stationary O-Ring	Buna-N to 240°F (115°C)	FKM to 400°F (204°C)	FKM to 400°F (204°C)	Buna-N to 240°F (115°C)	PTFE to 400°F (204°C)	PTFE 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	Carbon - 20,000 SSU (4,250 cP) Maximum	Carbon - 20,000 SSU (4,250 cP) Maximum
Rotating O-Ring/Seal Ring	Buna-N O-Ring to 240°F (115°C)	PTFE Seal Ring to 400°F (204°C)	FKM O-Ring to 400°F (204°C)	PTFE Seal Ring to 400°F (204°C)	PTFE Seal Ring to 400°F (204°C)	PTFE Seal Ring to 400°F (204°C)
Seal Jacket	Plated Steel					
Seal Spring	Plated Steel					

PIPE COMPANION FLANGES

PUMP SIZE	STANDARD	OPTIONAL
TX1.5	1.5" NPT Tapped Cylinder Ports	---
TXD2A, TXSD2A	Two 2" NPT Tapped Flanges, Cast Iron: ASTM A48	2" Weld Flanges, Steel: ASTM A216 WCB
TXD2.5A, TXSD2.5A	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, Cast Iron: ASTM A48
TXD3E, TXSD3E	Two 3" NPT Tapped Flanges, Cast Iron: ASTM A48	3" Weld Flanges, Steel: ASTM A216 WCB 3" Untapped Flanges, Cast Iron: ASTM A48
TX4A	Two 4" NPT Tapped Flanges, Ductile Iron: ASTM A536, 18%	4" Weld Flanges, Steel:

OPERATING LIMITS

	STANDARD MATERIALS	OPTIONAL MATERIALS
Maximum Temperature	240°F (115°C)	300°F (149°C) With FKM or PTFE O-Rings and Bronze or Laminate Vanes Note: Temperature is limited by ball bearings
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.

