

Fisher™ V500

Rotary Globe Control Valve



Engineered for Severe Service Excellence with Emerson's Rigorous Design Standards for Reliability and Durability

ACHIEVE TOP QUARTILE RELIABILITY - The Fisher V500 eccentric plug rotary control valves are engineered for erosive, severe service excellence and built tough to deliver precise control in the most demanding environments. Featuring rugged construction, an industry leading robust shaft and a locked plug design that minimizes deadband and enhances responsiveness. Renowned for exceptional durability, the Fisher V500 rotary globe delivers long-lasting performance, helping plants increase reliability and reduce maintenance costs.

Features

- **Emerson's Commitment to Valve Performance with Support from Design to Maintenance and Beyond** - Fisher's commitment to innovation is reflected in its extensive portfolio of patented technologies. Spanning every stage from initial design to ongoing valve maintenance, Emerson delivers comprehensive service that sets the industry standard.
- **Operational Versatility** - Self-centering seat ring and rugged plug allow forward or reverse flow with tight shutoff in either flow direction. Reverse flow direction helps move downstream turbulence away from shutoff surfaces. Full 90° rotation removes valve plug from flowstream, helping to reduce plug wear. Seat ring and retainer are available in full and restricted port constructions and can easily be changed if capacity requirements change.
- **Furnace Feed Design** - Specially selected trim materials and body coatings help to withstand oil sands, furnace feed and other highly erosive applications.
- **Rotary and Globe Face-to-Face Dimensions** - Easily upgrade existing valves without the need for piping changes. Face-to-face dimensions are available to match both rotary and globe valves. (IEC 60534-3-1, IEC 60534-3-2, ISA S75.08.01 and ISA S75.08.02)



X0189

**FISHER V500 FLANGED ROTARY CONTROL VALVE
WITH 2052 ACTUATOR AND FIELDVUE™ DVC6200
DIGITAL VALVE CONTROLLER**

- **Resists Damage from Erosive Flow** - Valve assembly is specifically designed to combat the process of erosion. Streamlined flow passages, rugged components and a wide choice of erosion-resistant trim materials all promote long, dependable service life in erosive applications.
- **Long Seat Life** - Path of eccentric plug (Figure 4) minimizes contact with seat ring when opening, reducing seat wear and friction. When the valve plug rotates into the seat ring, a self-lapping action occurs, improving the fit between shutoff surfaces. Full-port, S31600, R30006 or VTC seat ring has two shutoff surfaces and can be easily reversed, reducing downtime.
- **Restricted Trim Options to Optimize Flow** - The Fisher V500 has a variety of restricted trim options available in multiple valve sizes, which can be easily changed to optimize process flow as capacity requirements change.
- **Simple Assembly and Maintenance** - No special orientation, precision clamping or repetitive centering of valve plug and seat ring is required when tightening the retainer, promoting accurate alignment and easy assembly.

- **Improved Environmental Capabilities** - The optional ENVIRO-SEAL packing systems are designed with very smooth shaft surfaces and live loading to provide improved sealing. The seal of the ENVIRO-SEAL system can restrict emission concentrations below 100 ppmv, 50 ppmv or as low as 1 ppmv. ISO 15848-1 methane and helium testing protocols are used by Emerson to verify emissions performance.
- **Sour Service Capability** - Materials are available for applications involving sour liquids and gases. Depending on the construction, the product will comply with NACE MR0175-2002, MR0175-2003, MR0103 and/or MR0175/ISO 15156. Contact your [Emerson sales office](#) for additional information.
- **Rugged Construction** - Durable, solid metal or VTC seat ring and valve plug shutoff tightly without deforming plug arms or employing thin ball seals. Oversized shaft diameters and rugged trim parts allow high pressure drops. Tungsten carbide is also available for erosive service.
- **Reliable Performance** - Seat ring design (Figure 2) self-centers, self-laps and dynamically aligns with plug, giving excellent cycle life. Sealed metal bearings (see Figure 1) help prevent particle buildup and valve shaft seizure in erosive applications.
- **Choice of Construction Materials** - Plug, seat ring and retainer are available in four levels of hardness for selection of erosion resistance.
- **Optional Alloy 6 Seat Ledge Insert Available** - Protects seat and valve body from high-velocity erosive flows and eases repair. Available for NPS 2 to 12.

Specifications

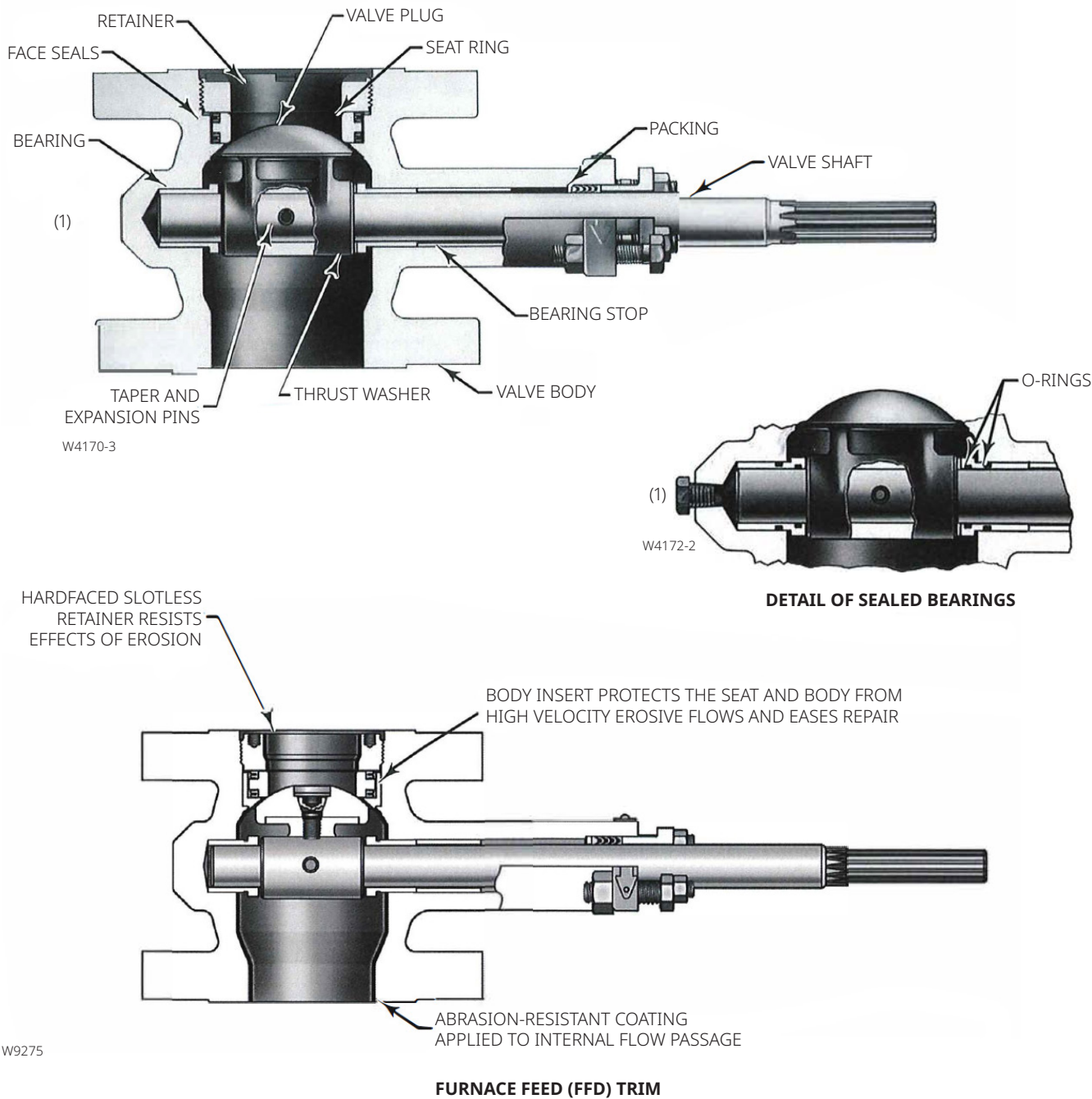
Valve Sizes	Material Temperature Capability ⁽²⁾
■ NPS 1, ■ 1-1/2, ■ 2, ■ 3, ■ 4, ■ 6, ■ 8 ■ 10 and ■ 12 DN sizes are also available (see Tables 1 and 2).	See Table 4
End Connection Style and Rating	Flow Characteristic
■ Raised-face flanges or ■ ring-type joint flanges (ASME B16.5). Valves with EN PN 10 through PN 100 flanges also available. (See Tables 1 and 2 for ASME and EN availability by valve size.)	Modified linear
Maximum Inlet Pressure ⁽²⁾	Flow Direction
Consistent with applicable ASME or EN flange ratings	Reverse flow (standard): Past valve plug and through seat ring; tends to close the valve; recommended for erosive service Forward flow: Through seat ring and past valve plug; tends to open the valve
Maximum Pressure Drops ⁽²⁾	Flow Coefficients
See Tables 5, 6, 7, 8, 9 and 10	See Fisher Catalog 12
Shutoff Classification	Flow Coefficient Ratio ⁽³⁾
Class IV per ANSI/FCI 70-2 and IEC 60534-4, (0.01% of valve capacity at full travel) for either flow direction. Leak rates for full and restricted port valves are based on full port valve capacities. Reduced port valves seat at the full port diameter.	See Fisher Catalog 12
Construction Materials	Noise Levels
See Table 4 for individual parts and Table 3 for trim combinations	See Fisher Catalog 12

- continued -

Specifications (continued)

Actuator Mounting	Shaft Diameters
■ Right-hand or ■ left-hand as viewed from the upstream side of the valve. Mounting position depends on the desired open valve plug position and flow direction required by operating conditions. For more information, see the Installation section.	See Figure 5
Valve Plug Rotation	Dimensions and Approximate Weights
Counterclockwise to close (when viewed from actuator side of valve) through 90° of plug rotation	See Figure 5; face-to-face dimensions conform to ISA S75.08.01, ISA S75.08.02, IEC 60534-3-1 and IEC 60534-3-2.
Valve/Actuator Action	Options
With diaphragm or piston rotary actuator, field-reversible between ■ push-down-to-close (extending actuator rod closes valve) and ■ push-down-to-open (extending actuator rod opens valve)	■ Restricted trim (retainer and seat ring) to optimize process flow, ■ sealed bearing constructions, ■ purged bearings, ■ Tungsten carbide trim option ■ flushing connections, ■ Chrome carbide valve body coating, ■ Fisher enhanced ENVIRO-SEAL packing system; see Figure 3 and Bulletin 59.3:041, Fisher enhanced ENVIRO-SEAL Packing Systems for Rotary Valves (D101638X012) for more information — Rotary and Globe face-to-face dimensions.
Packing Constructions	
■ PTFE V-ring: With one carbon-filled PTFE conductive packing ring in single, double or leak-off arrangements, -46 to +232°C / -50 to +450°F ■ PTFE/Bound-Composition: With one graphited composition conductive packing ring in single, double or leak-off arrangements, -46 to +232°C / -50 to +450°F ■ Graphite Ribbon Packing Rings: In single, double or leak-off arrangements, -198 to +538°C / -325 to +1000°F ■ Fisher enhanced ENVIRO-SEAL™ PTFE: -46 to +232°C / -50 to +450°F (for 100 ppm service requirements) ■ Fisher enhanced ENVIRO-SEAL Graphite: -7 to +316°C / 20 to 600°F (for 100 ppm service requirements). This packing arrangement can be used to 371°C / 700°F for non-environmental service.	
1. The reversible seat is not available in every trim material. Consult your Emerson sales office . 2. The pressure or temperature limits in the referenced tables or figures and in any applicable code limitation, should not be exceeded. 3. Ratio of maximum flow coefficient to minimum usable flow coefficient. May also be called rangeability.	

Figure 1. Sectional of Fisher V500 Control Valve



1. End-tapped valve body and pipe plug optional (limited to less than 232°C / 450°F).

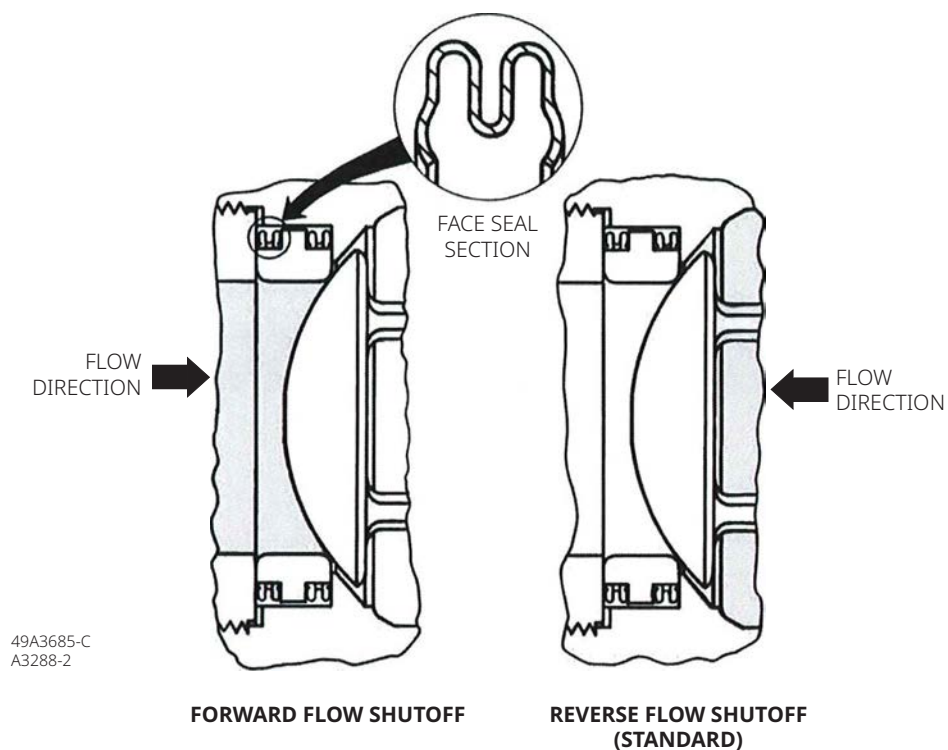
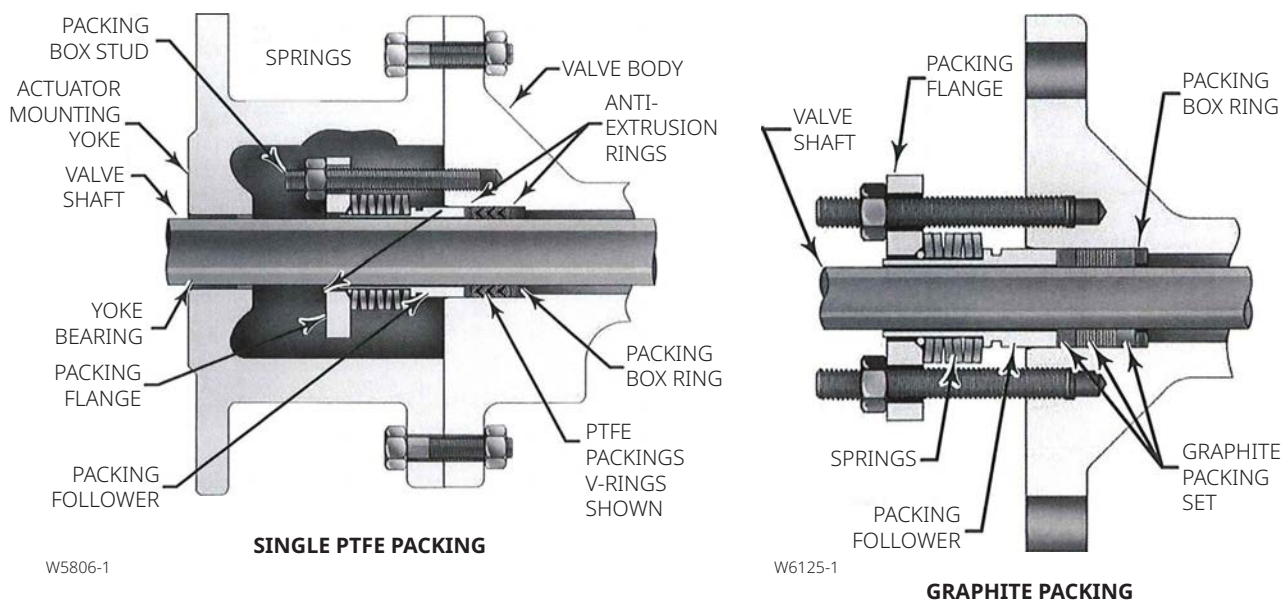
Figure 2. Detail of Seat Ring Design**Figure 3. Typical Fisher enhanced ENVIRO-SEAL Packing Arrangements for Rotary Valves**

Table 1. Valve Size, ASME Pressure Ratings and Flange Compatibility (X Indicates Availability)

VALVE SIZE, NPS	FLANGED		
	CL150	CL300	CL600
1	X	X	X
1-1/2	X	X	X
2	X	X	X
3	X	X	X
4	X	X	X
6	X	X	X
8	X	X	X
10	X	X	X
12	X	X	X

Table 2. Valve Size, EN Pressure Ratings and Flange Capability (X Indicates Availability)

VALVE SIZE, NPS	FLANGED					
	PN 10	PN 16	PN 25	PN 40	PN 63	PN 100
25	X	X	X	X	X	X
40	X	X	X	X	X	X
50	X	X	X	X	X	X
80	X	X	X	X	X	X
100	X	X	X	X	X	X
150	X	X	X	X	X	X
200	X	X	X	X	X	X
250	---	---	X	X	---	---
300	---	---	X	X	---	---

Table 3. Material Combinations

Trim Level	Body Material	Valve Size, NPS	Valve Plug	Seat Ring	Retainer
1	WCC	1 and 1-1/2	CF8M/Chrome Plate	CF8M	CF8M
		2 through 12	CF8M/Chrome Plate	CF8M	CB7Cu-1
	CF8M	1 through 12	CF8M/Chrome Plate	CF8M	CF8M
	CF3M ⁽²⁾	1 through 12	CF3M/Chrome Plate	CF3M	CF3M
2	WCC	1 and 1-1/2	R30006	R30006	CF8M
		2 through 12	R30006	R30006	CB7Cu-1
	CF8M	1 through 12	R30006	R30006	CF8M
	CF3M ⁽²⁾	1 through 12	R30006	R30006	CF3M
3	WCC/CF8M/CF3M ^(1,3)	1 and 1-1/2	R30006	R30006	CF8M/R30006 bore or CF3M/R30006 bore ⁽³⁾
		2 through 12	R30006	R30006	R30006
3H (over 600°F)	CF8M/CF3M ⁽³⁾	2 through 12	R30006	R30006	CF8M/R30006 bore or CF3M/R30006 bore ⁽³⁾
4 ^(5,6)	WCC/CF8M/CF3M ^(1,3)	1 and 1-1/2 ⁽⁴⁾	Solid VTC	Solid VTC	CF8M/VTC bore or CF3M/VTC bore ⁽³⁾
		2 ⁽⁴⁾	Solid VTC	Solid VTC	R30006/VTC bore
		3 through 8	R30006 hub, Titanium Gr 5 cap screw and VTC surface cap	Solid VTC	R30006/VTC bore
4S ^(5,6)	WCC/CF8M/CF3M ^(1,3)	3 through 8	R30006 hub, S17400 SST treated insert, N07718 cap screw and VTC surface cap	Solid VTC	R30006/VTC bore
FFD ⁽⁶⁾	CF8M with Tungsten Carbide Coating and R30006 Drop-in Seat Ledge	2 through 8	R30006/Tungsten Carbide Seating Surface	Solid VTC	CF8M/R30006 bore

1. Trim 3 for NPS 2 through 12 stainless steel bodies is limited to 600°F.

2. European Sourcing Only

3. European sources supply CF3M in lieu of CF8M.

4. Includes an S20910 SST shaft for NPS 1, 1-1/2 and 2.

5. Use trim 45 when sour service construction is required for compliance to NACE MR0175-2002.

6. VTC trim is not compatible with water and steam above 180°C / 360°F.

Table 4. Material Temperature Capabilities^(1, 4)

PART NAME	MATERIAL		MINIMUM TO MAXIMUM TEMPERATURE	
			°C	°F
Valve body and retainer NPS 1 and 1-1/2	Steel body	CF8M retainer CF8M retainer with R30006 bore CF8M retainer with VTC bore	-29 to +427	-20 to +800
	CF8M body	CF8M retainer CF8M retainer with R30006 bore S31600 retainer with VTC bore	-198 to +538	-325 to +1000
Valve body and retainer NPS 2 through 12	WCC Steel body	CB7Cu-1 retainer	-29 to +427	-20 to +800
		Solid R30006 retainer	-29 to +427	-20 to +800
		CF8M retainer	-29 to +260	-20 to +500
		R30006 retainer with VTC bore	-29 to +427	-20 to +800
	CF8M body	CF8M retainer	-198 to +427	-325 to +800
		Solid R30006 retainer	-46 to +324	-50 to +600
		CF8M with R30006 bore	-198 to +427	-325 to +800
		R30006 retainer with VTC bore	-46 to +324	-50 to +600
Seat ledge insert	R30006		-46 to +538	-50 to +1000
Seat ring	CF8M		-198 to +538	-325 to +1000
	Solid R30006		-46 to +538	-50 to +1000
	CF8M with R30006 seat		-198 to +538	-325 to +1000
	Solid VTC (NPS 1 to 8)		-46 to +427	-50 to +800
Valve plug	Chrome-plated CF8M		-198 to +316	-325 to +600
	Solid R30006		-46 to +427	-50 to +800
	Solid VTC (NPS 1 through 2 valves only)		-46 to +427	-50 to +800
	VTC surface bolted to an R30006 hub (NPS 3 through 8 valves only)		-46 to +427	-50 to +800
	R30006 Hub, Tungsten Carbide seat (NPS 3 to 8)		-40 to +538	-40 to +1000
Valve shaft	S17400		-62 to +427	-80 to +800
	S20910		-198 to +538	-325 to +1000
Taper and expansion pins	1 through 2-in. solid VTC valve plug	N10276	-46 to +427	-50 to +800
	Other valve plugs	S20910	-198 to +538	-325 to +1000
Groove pin (NPS 12)	S31600		-198 to +538	-325 to +1000
Bearings	PTFE/Composition-lined S31600		-46 to +260	-50 to +500
	R30006 ⁽²⁾ , Silver plate R30006		-198 to +538	-325 to +1000
	S44004 ⁽²⁾		-29 to +427	-20 to +800
O-rings ⁽³⁾ (for Alloy 6 or 440C SST sealed bearings)	FKM		-18 to +204	0 to 400
	NBR		-29 to +93	-20 to +200

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Table 4. Material Temperature Capabilities^(1, 4) (continued)

PART NAME	MATERIAL	MINIMUM TO MAXIMUM TEMPERATURE	
		°C	°F
Bearing stop	S31600	-198 to +538	-325 to +1000
Thrust washer	S17700 for S17400 shaft	-198 to +427	-325 to +800
	R30016 for S20910 SST shaft	-198 to +538	-325 to +1000
Face seals	N07718 (NACE)	-198 to +538	-325 to +1000
	PTFE/N10276	-46 to +232	-50 to +450
Retainer gasket	Graphite laminate for NPS 1 and 1-1/2 valves or S31600 for NPS 2 through 12 valves	-198 to +538	-325 to +1000
Packing rings	PTFE	-46 to +260	-50 to +500
	PTFE/Bound-composition	-73 to +260	-100 to +500
	Graphite ribbon	-198 to +538	-325 to +1000
Packing follower	S31600	-198 to +538	-325 to +1000
Studs and nuts	SA-193-B7 studs and SA-194-2H nuts	-46 to +427	-50 to +800
	SA-193-B7M studs and SA-194-2HM nuts	-29 to +427	-20 to +800
	B8M studs and 8M nuts	-198 to +538	-325 to +1000
Packing box ring	S31600	-198 to +538	-325 to +1000
1. VTC trim is incompatible with water and steam above 180°C / 360°F. 2. Recommended for erosive applications. 3. For sealed bearing constructions 4. Component ratings (not indicative of assembly rating)			

Table 5. Maximum Allowable Shutoff Pressure Drops for Level 1 Trim, Bar

VALVE BODY MATERIAL	BEARING MATERIAL	TEMPERATURE, °C	VALVE BODY SIZE, NPS								
			1	1-1/2	2	3	4	6	8	10	12
WCC Steel	S44004	-29 to +149	68.9	55.2	41.4	41.4	41.4	41.4	24.1	26.9 ⁽¹⁾	34.5 ⁽¹⁾
										21.9 ⁽²⁾	32.5 ⁽²⁾
		149 to 204	68.9	55.2	41.4	41.4	41.4	41.4	23.8	26 ⁽¹⁾	34.5 ⁽¹⁾
										20.2 ⁽²⁾	31 ⁽²⁾
		204 to 316	68.9	55.2	41.4	41.4	41.4	41.4	23.1	25.2 ⁽¹⁾	34.5 ⁽¹⁾
										19.1 ⁽²⁾	30.1 ⁽²⁾
	R30006	-29 to +204	68.9	55.2	41.4	41.4	41.4	20.7	15.2	24.1 ⁽¹⁾	27.6
										20.2 ⁽²⁾	
		204 to 260	68.9	55.2	41.4	41.4	41.4	20.7	15.2	24.1 ⁽¹⁾	27.6
										19.5 ⁽²⁾	
		260 to 316	68.9	55.2	41.4	41.4	41.4	20.7	15.2	24.1 ⁽¹⁾	27.6
										19.1 ⁽²⁾	
	PTFE/ Composition-lined S31600	-29 to +93	68.9	55.2	41.4	41.4	41.4	41.4	24.1	28.1 ⁽¹⁾	34.5
										23.1 ⁽²⁾	
		93 to 149	68.9	55.2	41.4	41.4	41.4	41.4	24.1 ⁽¹⁾	28.1 ⁽¹⁾	34.5 ⁽¹⁾
									23.1 ⁽²⁾	23.1 ⁽²⁾	33.9 ⁽²⁾
		149 to 204	68.9	55.2	41.4	41.4	41.4	41.4	23.8 ⁽¹⁾	27.2 ⁽¹⁾	34.5 ⁽¹⁾
									22.1 ⁽²⁾	21.2 ⁽²⁾	32.2 ⁽²⁾
		204 to 232	68.9	55.2	41.4	41.4	41.4	41.4	23.4 ⁽¹⁾	26.6 ⁽¹⁾	34.5 ⁽¹⁾
									21.7 ⁽²⁾	20.5 ⁽²⁾	31.9 ⁽²⁾
CF8M SST	R30006	-46 to +204	68.9	55.2	41.4	41.4	41.4	20.7	15.2	24.1 ⁽¹⁾	27.6
										20.2 ⁽²⁾	
		204 to 260	65.8	55.2	41.4	41.4	41.4	20.7	15.2	24.1 ⁽¹⁾	27.6
										19.5 ⁽²⁾	
		260 to 316	62.0	55.2	41.4	41.4	41.4	20.7	15.2	24.1 ⁽¹⁾	27.6
										19.1 ⁽²⁾	
	R30006/Silver Plate	-46 to +204	68.9	55.2	41.4	41.4	41.4	41.4	24.1	26 ⁽¹⁾	34.5 ⁽¹⁾
										20.2 ⁽²⁾	31 ⁽²⁾
		204 to 260	65.8	55.2	41.4	41.4	41.4	41.4	21.4	25.4 ⁽¹⁾	34.5 ⁽¹⁾
										19.5 ⁽²⁾	30.7 ⁽²⁾
		260 to 316	62.0	55.2	41.4	41.4	41.4	41.4	21.0	25.2 ⁽¹⁾	34.5 ⁽¹⁾
										19.1 ⁽²⁾	30.1 ⁽²⁾
	PTFE/ Composition-lined S31600	-46 to +93	68.9	55.2	41.4	41.4	41.4	41.4	24.1	28.1 ⁽¹⁾	34.5
										23.1 ⁽²⁾	
		93 to 149	68.9	55.2	41.4	41.4	41.4	41.4	24.1 ⁽¹⁾	28.1 ⁽¹⁾	34.5 ⁽¹⁾
									23.1 ⁽²⁾	23.1 ⁽²⁾	33.9 ⁽²⁾
		149 to 204	68.9	55.2	41.4	41.4	41.4	41.4	23.8 ⁽¹⁾	27.2 ⁽¹⁾	34.5 ⁽¹⁾
									22.1 ⁽²⁾	21.2 ⁽²⁾	32.2 ⁽²⁾
		204 to 232	65.8	55.2	41.4	41.4	41.4	41.4	23.4 ⁽¹⁾	26.6 ⁽¹⁾	34.5 ⁽¹⁾
									21.7 ⁽²⁾	20.5 ⁽²⁾	31.9 ⁽²⁾

1. S17400 shaft only.

2. ASME SA-479 Grade S20910 SST shaft only.

Table 6. Maximum Allowable Shutoff Pressure Drops for Level 1 Trim, Psi

VALVE BODY MATERIAL	BEARING MATERIAL	TEMPERATURE, °F	VALVE BODY SIZE, NPS								
			1	1-1/2	2	3	4	6	8	10	12
WCC Steel	S44004	-20 to +300	1000	800	600	600	600	600	350	390 ⁽¹⁾	500 ⁽¹⁾
										318 ⁽²⁾	472 ⁽²⁾
		300 to 400	1000	800	600	600	600	600	345	377 ⁽¹⁾	500 ⁽¹⁾
										293 ⁽²⁾	449 ⁽²⁾
		400 to 600	1000	800	600	600	600	600	335	365 ⁽¹⁾	500 ⁽¹⁾
										277 ⁽²⁾	436 ⁽²⁾
	R30006	-20 to +400	1000	800	600	600	600	300	220	350 ⁽¹⁾	400
										293 ⁽²⁾	
		400 to 500	1000	800	600	600	600	300	220	350 ⁽¹⁾	400
										283 ⁽²⁾	
		500 to 600	1000	800	600	600	600	300	220	350 ⁽¹⁾	400
										277 ⁽²⁾	
	PTFE/ Composition-lined S31600	-20 to +200	1000	800	600	600	600	600	350	408 ⁽¹⁾	500
										335 ⁽²⁾	
		200 to 300	1000	800	600	600	600	600	350 ⁽¹⁾	408 ⁽¹⁾	500 ⁽¹⁾
									335 ⁽²⁾	335 ⁽²⁾	
		300 to 400	1000	800	600	600	600	600	345 ⁽¹⁾	395 ⁽¹⁾	500 ⁽¹⁾
									320 ⁽²⁾	307 ⁽²⁾	
		400 to 450	1000	800	600	600	600	600	340 ⁽¹⁾	386 ⁽¹⁾	500 ⁽¹⁾
									315 ⁽²⁾	297 ⁽²⁾	
CF8M SST	R30006	-50 to +400	1000	800	600	600	600	300	220	350 ⁽¹⁾	400
										293 ⁽²⁾	
		400 to 500	955	800	600	600	600	300	220	350 ⁽¹⁾	400
										283 ⁽²⁾	
		500 to 600	900	800	600	600	600	300	220	350 ⁽¹⁾	400
										277 ⁽²⁾	
	R30006/Silver Plate	-50 to +400	1000	800	600	600	600	600	350	377 ⁽¹⁾	500 ⁽¹⁾
										293 ⁽²⁾	449 ⁽²⁾
		400 to 500	955	800	600	600	600	600	311	369 ⁽¹⁾	500 ⁽¹⁾
										283 ⁽²⁾	445 ⁽²⁾
		500 to 600	900	800	600	600	600	600	305	365 ⁽¹⁾	500 ⁽¹⁾
										277 ⁽²⁾	436 ⁽²⁾
	PTFE/ Composition-lined S31600	-50 to +200	1000	800	600	600	600	600	350	408 ⁽¹⁾	500
										335 ⁽²⁾	
		200 to 300	1000	800	600	600	600	600	350 ⁽¹⁾	408 ⁽¹⁾	500 ⁽¹⁾
									335 ⁽²⁾	335 ⁽²⁾	
		300 to 400	1000	800	600	600	600	600	345 ⁽¹⁾	395 ⁽¹⁾	500 ⁽¹⁾
									320 ⁽²⁾	307 ⁽²⁾	
		400 to 450	955	800	600	600	600	600	340 ⁽¹⁾	386 ⁽¹⁾	500 ⁽¹⁾
									315 ⁽²⁾	297 ⁽²⁾	

1. S17400 shaft only.

2. ASME SA-479 Grade S20910 SST shaft only.

Table 7. Maximum Allowable Shutoff Pressure Drops for Level 2 and 3 Trims, Bar

VALVE BODY MATERIAL	BEARING MATERIAL	TEMPERATURE, °C	VALVE BODY SIZE, NPS								
			1	1-1/2	2	3	4	6	8	10	
WCC Steel	S44004	-29 to +93	103.4	103.4	103.4	103.4	82.7	51.7	24.1	26.9 ⁽¹⁾	34.5
										22.1 ⁽²⁾	
		93 to 149	100.3	100.3	99.0	100.3	82.7	51.7	24.1	26.9 ⁽¹⁾	34.5 ⁽¹⁾
										22.1 ⁽²⁾	32.5 ⁽²⁾
		149 to 204	97.2	97.2	93.8	97.2	82.7	51.0	23.8	26 ⁽¹⁾	34.5 ⁽¹⁾
										20.2 ⁽²⁾	31 ⁽²⁾
		204 to 260	91.7	91.7	91.4	91.7	82.7	50.0	23.1	25.4 ⁽¹⁾	34.5 ⁽¹⁾
										19.5 ⁽²⁾	30.7 ⁽²⁾
		260 to 316	83.4	83.4	83.4	83.4	82.7	49.3	23.1	25.4 ⁽¹⁾	34.5 ⁽¹⁾
										19.5 ⁽²⁾	30.1 ⁽²⁾
		316 to 343	81.0	81.0	81.0	81.0	81.0	48.3	22.4	24.5 ⁽¹⁾	34.5 ⁽¹⁾
										18.8 ⁽²⁾	29.6 ⁽²⁾
		343 to 371	78.3	78.3	78.3	78.3	78.3	48.3	22.4	24.5 ⁽¹⁾	34.5 ⁽¹⁾
										18.8 ⁽²⁾	29.6 ⁽²⁾
		371 to 399	69.6	69.6	69.6	69.6	69.6	46.9	21.7	23.9 ⁽¹⁾	34.5 ⁽¹⁾
										18.4 ⁽²⁾	29 ⁽²⁾
		399 to 427	56.9	56.9	56.9	56.9	56.9	46.9	21.7	23.9 ⁽¹⁾	34.5 ⁽¹⁾
										18.4 ⁽²⁾	29 ⁽²⁾
	R30006	-29 to +204	68.9	55.2	41.4	41.4	41.4	20.7	15.2	24.1 ⁽¹⁾	27.6
										20.2 ⁽²⁾	
		204 to 260	68.9	55.2	41.4	41.4	41.4	20.7	15.2	24.1 ⁽¹⁾	27.6
										19.5 ⁽²⁾	
		260 to 316	68.9	55.2	41.4	41.4	41.4	20.7	15.2	24.1 ⁽¹⁾	27.6
										19.1 ⁽²⁾	
		316 to 343	68.9	55.2	41.4	41.4	41.4	20.7	15.2	24.1 ⁽¹⁾	27.6
										18.8 ⁽²⁾	
		343 to 371	68.9	55.2	41.4	41.4	41.4	20.7	15.2	24.1 ⁽¹⁾	27.6
										18.8 ⁽²⁾	
		371 to 399	68.9	55.2	41.4	41.4	41.4	20.7	15.2	23.9 ⁽¹⁾	27.6
										18.4 ⁽²⁾	
		399 to 427	56.9	55.2	41.4	41.4	41.4	20.7	15.2	23.9 ⁽¹⁾	27.6
										18.4 ⁽²⁾	
	PTFE/ Composition-lined S31600	-29 to +38	103.4	103.4	103.4	103.4	89.6	55.2	24.1	28.1 ⁽¹⁾	34.5
										23.2 ⁽²⁾	
		38 to 93	103.4	103.4	103.4	103.4	89.6	55.2	24.1	28.1 ⁽¹⁾	34.5
										23.1 ⁽²⁾	
		93 to 149	100.3	100.3	100.3	100.3	89.6	55.2	24.1 ⁽¹⁾	28.1 ⁽¹⁾	34.5 ⁽¹⁾
									23.1 ⁽²⁾	23.1 ⁽²⁾	33.9 ⁽²⁾
		149 to 204	97.2	97.2	97.2	97.2	89.6	54.8 ⁽¹⁾	23.8 ⁽¹⁾	27.2 ⁽¹⁾	34.5 ⁽¹⁾
								51.0 ⁽²⁾	22.1 ⁽²⁾	21.2 ⁽²⁾	32.2 ⁽²⁾
		204 to 232	91.7	91.7	91.7	91.7	89.6	53.8 ⁽¹⁾	23.4 ⁽¹⁾	26.6 ⁽¹⁾	34.5 ⁽¹⁾
								50.0 ⁽²⁾	21.7 ⁽²⁾	20.5 ⁽²⁾	31.9 ⁽²⁾

- continued -

Table 7. Maximum Allowable Shutoff Pressure Drops for Level 2 and 3 Trims, Bar (continued)

VALVE BODY MATERIAL	BEARING MATERIAL	TEMPERATURE, °C	VALVE BODY SIZE, NPS								
			1	1-1/2	2	3	4	6	8	10	12
CF8M SST ⁽³⁾	R30006	-46 to +204	68.9	55.2	41.4	41.4	41.4	20.7	15.2	24.1 ⁽¹⁾ 20.2 ⁽²⁾	27.6
		204 to 260	65.8	55.2	41.4	41.4	41.4	20.7	15.2	24.1 ⁽¹⁾ 19.5 ⁽²⁾	27.6
		260 to 316	62.1 68.9	55.2	41.4	41.4	41.4	20.7	15.2	24.1 ⁽¹⁾ 19.1 ⁽²⁾	27.6
		316 to 343	61.0 68.9	55.2	41.4	41.4	41.4	20.7	15.2	24.1 ⁽¹⁾ 18.8 ⁽²⁾	27.6
		343 to 371	59.6	55.2	41.4	41.4	41.4	20.7	15.2	24.1 ⁽¹⁾ 18.8 ⁽²⁾	27.6
		371 to 399	58.3	55.2	41.4	41.4	41.4	20.7	15.2	23.9 ⁽¹⁾ 18.4 ⁽²⁾	27.6
		399 to 427	57.2	55.2	41.4	41.4	41.4	20.7	15.2	23.9 ⁽¹⁾ 18.4 ⁽²⁾	27.6
	R30006/Silver Plate	-46 to +38	99.3	99.3	99.3	96.5	78.6	48.3	24.1	26.9 ⁽¹⁾ 22.2 ⁽²⁾	34.5
		38 to 93	85.5	85.5	85.5	85.5	78.6	48.3	24.1	26.9 ⁽¹⁾ 22.1 ⁽²⁾	34.5
		93 to 204	70.7	70.7	70.7	70.7	70.7	48.3	21.6	25.4 ⁽¹⁾ 19.5 ⁽²⁾	34.5 ⁽¹⁾ 30.7 ⁽²⁾
		204 to 260	65.8	65.8	65.8	65.8	65.8	48.3	21.4	25.4 ⁽¹⁾ 19.5 ⁽²⁾	34.5 ⁽¹⁾ 30.7 ⁽²⁾
		260 to 316	62.0	62.0	62.0	62.0	62.0	48.3	21.0	25.2 ⁽¹⁾ 19.1 ⁽²⁾	34.5 ⁽¹⁾ 30.1 ⁽²⁾
		316 to 371	59.6	59.8	59.8	59.8	59.8	48.3	20.7	24.5 ⁽¹⁾ 18.8 ⁽²⁾	34.5 ⁽¹⁾ 29.6 ⁽²⁾
		371 to 427	57.2	58.3	58.3	58.3	58.3	46.9	20.3	23.9 ⁽¹⁾ 18.4 ⁽²⁾	34.5 ⁽¹⁾ 29 ⁽²⁾
	PTFE/ Composition-lined S31600	-46 to +38	99.3	99.3	99.3	99.3	89.6	55.2	24.1	28.1 ⁽¹⁾ 23.2 ⁽²⁾	34.5
		38 to 93	85.5	85.5	85.5	85.5	85.5	55.2	24.1	28.1 ⁽¹⁾ 23.1 ⁽²⁾	34.5
		93 to 149	77.3	77.3	77.3	77.3	77.2	53.1	24.1 ⁽¹⁾ 23.1 ⁽²⁾	28.1 ⁽¹⁾ 23.1 ⁽²⁾	34.5 ⁽¹⁾ 33.9 ⁽²⁾
		149 to 204	71.0	71.0	71.0	71.0	71.0	54.8 ⁽¹⁾ 51.0 ⁽²⁾	23.8 ⁽¹⁾ 22.1 ⁽²⁾	27.2 ⁽¹⁾ 21.2 ⁽²⁾	34.5 ⁽¹⁾ 32.2 ⁽²⁾
		204 to 232	65.8	65.8	65.8	65.8	65.8	53.8 ⁽¹⁾ 50.0 ⁽²⁾	23.4 ⁽¹⁾ 21.7 ⁽²⁾	26.6 ⁽¹⁾ 20.5 ⁽²⁾	34.5 ⁽¹⁾ 31.9 ⁽²⁾

1. S17400 shaft only.

2. ASME SA-479 Grade S20910 SST shaft only.

3. Level 3 trim is limited to a maximum temperature of 316°C / 600°F. For temperatures above 316°C / 600°F, use trim 3H.

Table 8. Maximum Allowable Shutoff Pressure Drops for Level 2 and 3 Trims, Psi

VALVE BODY MATERIAL	BEARING MATERIAL	TEMPERATURE, °F	VALVE BODY SIZE, NPS								
			1	1-1/2	2	3	4	6	8	10	12
WCC Steel	S44004	-20 to +200	1500	1500	1500	1500	1200	750	350	390 ⁽¹⁾	500
				1500	1500	1500	1200	750		320 ⁽²⁾	
		200 to 300	1455	1455	1435	1455	1200	750	350	390 ⁽¹⁾	500 ⁽¹⁾
			1455	1455	1435	1455	1200	750		320 ⁽²⁾	472 ⁽²⁾
		300 to 400	1410	1410	1360	1410	1200	740	345	377 ⁽¹⁾	500 ⁽¹⁾
				1410	1360	1410	1200	740		293 ⁽²⁾	449 ⁽²⁾
		400 to 500	1330	1330	1325	1330	1200	725	335	369 ⁽¹⁾	500 ⁽¹⁾
			1330	1330	1325	1330	1200	725		283 ⁽²⁾	445 ⁽²⁾
		500 to 600	1210	1210	1210	1210	1200	715	335	369 ⁽¹⁾	500 ⁽¹⁾
										283 ⁽²⁾	436 ⁽²⁾
		600 to 650	1175	1175	1175	1175	1175	700	325	356 ⁽¹⁾	500 ⁽¹⁾
				1175	1175	1175		700		273 ⁽²⁾	430 ⁽²⁾
		650 to 700	1135	1135	1135	1135	1135	700	325	356 ⁽¹⁾	500 ⁽¹⁾
								700		273 ⁽²⁾	430 ⁽²⁾
		700 to 750	1010	1010	1010	1010	1010	680	315	347 ⁽¹⁾	500 ⁽¹⁾
					1010	1010		680	315	267 ⁽²⁾	421 ⁽²⁾
		750 to 800	825	825	825	825	825	680	315	347 ⁽¹⁾	500 ⁽¹⁾
				825				680	315	267 ⁽²⁾	421 ⁽²⁾
	R30006	-20 to +400	1000	800	600	600	600	300	220	350 ⁽¹⁾	400
				800	600	600	600	300	220	293 ⁽²⁾	
		400 to 500	1000	800	600	600	600	300	220	350 ⁽¹⁾	400
			1000	800			600	300	220	283 ⁽²⁾	
		500 to 600	1000	800	600	600	600	300	220	350 ⁽¹⁾	400
			1000	800	600	600	600	300	220	277 ⁽²⁾	
		600 to 650	1000	800	600	600	600	300	220	350 ⁽¹⁾	400
			1000	800	600	600	600	300	220	273 ⁽²⁾	
		650 to 700	1000	800	600	600	600	300	220	350 ⁽¹⁾	400
			1000	800	600	600	600	300	220	273 ⁽²⁾	
		700 to 750	1000	800	600	600	600	300	220	347 ⁽¹⁾	400
			1000	800	600	600	600	300		267 ⁽²⁾	
		750 to 800	825	800	600	600	600	300	220	347 ⁽¹⁾	400
			825	800	600	600	600	300		267 ⁽²⁾	
	PTFE/ composition-lined S31600	-20 to +400	1000	800	600	600	600	600	350	408 ⁽¹⁾	500
										337 ⁽²⁾	
		400 to 500	1000	800	600	600	600	600	350	408 ⁽¹⁾	500
										335 ⁽²⁾	
		500 to 600	1000	800	600	600	600	600	350 ⁽¹⁾	408 ⁽¹⁾	500 ⁽¹⁾
									335 ⁽²⁾	335 ⁽²⁾	491 ⁽²⁾
		600 to 650	1000	800	600	600	600	600	345 ⁽¹⁾	395 ⁽¹⁾	500 ⁽¹⁾
									320 ⁽²⁾	307 ⁽²⁾	467 ⁽²⁾
		650 to 700	1000	800	600	600	600	600	340 ⁽¹⁾	386 ⁽¹⁾	500 ⁽¹⁾
									315 ⁽²⁾	297 ⁽²⁾	463 ⁽²⁾

- continued -

Table 8. Maximum Allowable Shutoff Pressure Drops for Level 2 and 3 Trims, Psi (continued)

Valve Body Material	Bearing Material	Temperature, °F	Valve Body Size, NPS								
			1	1-1/2	2	3	4	6	8	10	12
CF8M SST	R30006	-20 to +400	1000	800	600	600	600	300	220	350 ⁽¹⁾	400
			1000			600	600	300	220	293 ⁽²⁾	
		400 to 500	955	800	600	600	600	300	220	350 ⁽¹⁾	400
			1000	800	600	600	600	300	220	283 ⁽²⁾	
		500 to 600	900	800	600	600	600	300	220	350 ⁽¹⁾	400
			1000	800	600	600	600	300		277 ⁽²⁾	
		600 to 650	885	800	600	600	600	300	220	350 ⁽¹⁾	400
			1000	800	600	600	600	300	220	273 ⁽²⁾	
		650 to 700	865	800	600	600	600	300	220	350 ⁽¹⁾	400
			1000	800	600	600	600	300		273 ⁽²⁾	
		700 to 750	845	800	600	600	600	300	220	347 ⁽¹⁾	400
			1000	800	600	600	600	300	220	267 ⁽²⁾	
		750 to 800	830	800	600	600	600	300	220	347 ⁽¹⁾	400
			825	800	600	600	600	300		267 ⁽²⁾	
	R30006/Silver Plate	-50 to +100	1440	1440	1440	1400	1140	700	350	390 ⁽¹⁾	500
										322 ⁽²⁾	
		100 to 200	1240	1240	1240	1240	1140	700	350	390 ⁽¹⁾	500
										320 ⁽²⁾	
		200 to 400	1025	1025	1025	1025	1025	700	314	369 ⁽¹⁾	500 ⁽¹⁾
										283 ⁽²⁾	445 ⁽²⁾
		400 to 500	955	955	955	955	955	700	311	369 ⁽¹⁾	500 ⁽¹⁾
										283 ⁽²⁾	445 ⁽²⁾
		500 to 600	900	900	900	900	900	700	305	365 ⁽¹⁾	500 ⁽¹⁾
										277 ⁽²⁾	436 ⁽²⁾
		600 to 700	865	870	870	870	870	700	301	356 ⁽¹⁾	500 ⁽¹⁾
										273 ⁽²⁾	430 ⁽²⁾
		700 to 800	830	845	845	845	845	680	295	347 ⁽¹⁾	500 ⁽¹⁾
										267 ⁽²⁾	421 ⁽²⁾
	PTFE/ composition-lined S31600	-50 to +100	1440	1440	1440	1440	1300	800	350	408 ⁽¹⁾	500
										337 ⁽²⁾	
		100 to 200	1240	1240	1240	1240	1240	800	350	408 ⁽¹⁾	500
										335 ⁽²⁾	
		200 to 300	1120	1120	1120	1120	1120	770	350 ⁽¹⁾	408 ⁽¹⁾	500 ⁽¹⁾
									335 ⁽²⁾	335 ⁽²⁾	491 ⁽²⁾
		300 to 400	1030	1030	1030	1030	1030	795 ⁽¹⁾	345 ⁽¹⁾	395 ⁽¹⁾	500 ⁽¹⁾
								740 ⁽²⁾	320 ⁽²⁾	307 ⁽²⁾	467 ⁽²⁾
		400 to 450	955	955	955	955	955	780 ⁽¹⁾	340 ⁽¹⁾	386 ⁽¹⁾	500 ⁽¹⁾
								725 ⁽²⁾	315 ⁽²⁾	297 ⁽²⁾	463 ⁽²⁾

1. S17400 shaft only.

2. ASME SA-479 Grade S20910 SST shaft only.

3. Level 3 trim is limited to a maximum temperature of 316°C / 600°F. For temperatures above 316°C / 600°F, use trim 3H.

Table 9. Maximum Allowable Shutoff Pressure Drops for Level 4 Trim⁽¹⁾

VALVE BODY MATERIAL	BEARING MATERIAL	TEMPERATURE, °C	BAR						
			Valve Size, NPS						
			1	1-1/2	2	3	4	6	8
WCC Steel	S44004	-29 to +93	103.4	103.4	70.3	103.4	78.6	52.4	24.1
		93 to 149	100.3	100.3	70.3	100.3	78.6	52.4	24.1
		149 to 204	97.2	97.2	70.3	97.2	78.6	51	23.8
		204 to 260	91.7	91.7	70.3	91.7	78.6	50	23.1
		260 to 316	83.4	83.4	70.3	83.4	78.6	49.3	23.1
		316 to 371	78.3	78.3	70.3	78.3	78.3	48.3	22.4
		371 to 427	56.9	56.9	56.9	56.9	56.9	46.9	21.7
	R30006	-46 to +204	68.9	55.2	41.4	41.4	41.4	20.7	15.2
		204 to 260	68.9	55.2	41.4	41.4	41.4	20.7	15.2
		260 to 316	68.9	55.2	41.4	41.4	41.4	20.7	15.2
		316 to 371	68.9	55.2	41.4	41.4	41.4	20.7	15.2
		371 to 427	56.9	55.2	41.4	41.4	41.4	20.7	15.2
CF8M SST	R30006	-46 to +204	68.9	55.2	41.4	41.4	41.4	20.7	15.2
		204 to 260	65.8	55.2	41.4	41.4	41.4	20.7	15.2
		260 to 316	62.0	55.2	41.4	41.4	41.4	20.7	15.2
	R30006/Silver Plate	-46 to +38	99.3	99.3	99.3	96.5	78.6	48.3	24.1
		38 to 93	85.5	85.5	85.5	85.5	78.6	48.3	24.1
		93 to 204	70.7	70.7	70.7	70.7	70.7	48.3	21.6
		204 to 260	65.8	65.8	65.8	65.8	65.8	48.3	21.4
		260 to 316	62.0	62.0	62.0	62.0	62.0	48.3	21.0
VALVE BODY MATERIAL	BEARING MATERIAL	TEMPERATURE, °F	PSI						
			Valve Size, NPS						
			1	1-1/2	2	3	4	6	8
WCC Steel	S44004	-20 to +200	1500	1500	1020	1500	1140	750	350
		200 to 300	1455	1455	1020	1455	1140	750	350
		300 to 400	1410	1410	1020	1410	1140	740	345
		400 to 500	1330	1330	1020	1330	1140	725	335
		500 to 600	1210	1210	1020	1210	1140	715	335
		600 to 700	1135	1135	1020	1135	1135	700	325
		700 to 800	825	825	825	825	825	680	315
	R30006	-20 to +400	1000	800	600	600	600	300	220
		400 to 500	1000	800	600	600	600	300	220
		500 to 600	1000	800	600	600	600	300	220
		600 to 700	1000	800	600	600	600	300	220
		700 to 800	825	800	600	600	600	300	220
CF8M SST	R30006	-20 to +400	1000	800	600	600	600	300	220
		400 to 500	925	800	600	600	600	300	220
		500 to 600	900	800	600	600	600	300	220
	R30006/Silver Plate	-20 to +100	1440	1440	1440	1400	1140	700	350
		100 to 200	1240	1240	1240	1240	1140	700	350
		200 to 400	1025	1025	1025	1025	1025	700	314
		400 to 500	955	955	955	955	955	700	311
		500 to 600	900	900	900	900	900	700	305

Table 10. Maximum Allowable Shutoff Pressure Drops for FFD Trim⁽¹⁾

VALVE BODY MATERIAL	BEARING MATERIAL	TEMPERATURE, °C	BAR				
			Valve Size, NPS				
			2	3	4	6	8
CF8M SST	R30006	-46 to +204	41.4	41.4	41.4	20.7	15.2
		204 to 260	41.4	41.4	41.4	20.7	15.2
		260 to 316	41.4	41.4	41.4	20.7	15.2
		316 to 371	41.4	41.4	41.4	20.7	15.2
		371 to 427	41.4	41.4	41.4	20.7	15.2
	R30006/Silver Plate	-46 to +38	99.3	96.5	78.6	48.3	24.1
		38 to 93	85.5	85.5	78.6	48.3	24.1
		93 to 204	70.7	70.7	70.7	48.3	21.6
		204 to 260	65.8	65.8	65.8	48.3	21.4
		260 to 316	62.0	62.0	62.0	48.3	21.0
		316 to 371	59.8	59.8	59.8	48.3	20.7
		371 to 427	58.3	58.3	58.3	46.9	20.3
VALVE BODY MATERIAL	BEARING MATERIAL	TEMPERATURE, °F	PSI				
			Valve Size, NPS				
			2	3	4	6	8
CF8M SST	R30006	-50 to +400	600	600	600	300	220
		400 to 500	600	600	600	300	220
		500 to 600	600	600	600	300	220
		600 to 700	600	600	600	300	220
		700 to 800	600	600	600	300	220
	R30006/Silver Plate	-50 to +100	1440	1400	1140	700	350
		100 to 200	1240	1240	1140	700	350
		200 to 400	1025	1025	1025	700	314
		400 to 500	955	955	955	700	311
		500 to 600	900	900	900	700	305
		600 to 700	870	870	870	700	301
		700 to 800	845	845	845	680	295

Table 11. Actuator Mounting Selections with Action and Open Plug Position Options

MOUNTING	ACTION ⁽¹⁾	OPEN PLUG POSITION	
		Forward Flow	Reverse Flow
Left-hand	PDTC	Below shaft ⁽²⁾	Above shaft
	PDTO	Below shaft ⁽²⁾	Above shaft
Right-hand	PDTC	Above shaft	Below shaft ⁽²⁾
	PDTO	Above shaft	Below shaft ⁽²⁾

1. PDTC – Push-down-to-close (extending actuator rod closes valve)
PDTO – Push-down-to-open (extending actuator rod opens valve)

2. Consult your [Emerson sales office](#) for compatibility with process fluid. Particulate can cause the valve to stick if the plug is rotated below the shaft.

Installation

The V500 control valve may be installed in any position. However, for best shutoff performance, a position with the shaft horizontal is recommended.

The control valve may be installed in forward or reverse flow direction. Forward flow (through the seat ring and past the plug) tends to open the valve; reverse flow (past the plug and through the seat ring) tends to close the valve. The reverse flow direction is recommended for erosive applications.

Specific operating conditions may require a specific combination of push-down-to-close or -open actuator motion and open valve plug position above or below the shaft. To satisfy specific operating requirements, the complete control valve package (valve and actuator) can be assembled and installed in different ways, providing eight options for actuator motion and open plug position.

Table 11 and the appropriate actuator bulletin describe possible assembly and installation options. For assistance in selecting the appropriate combination of actuator action and open valve position, consult your [Emerson sales office](#). Dimensions are shown in Figure 5.

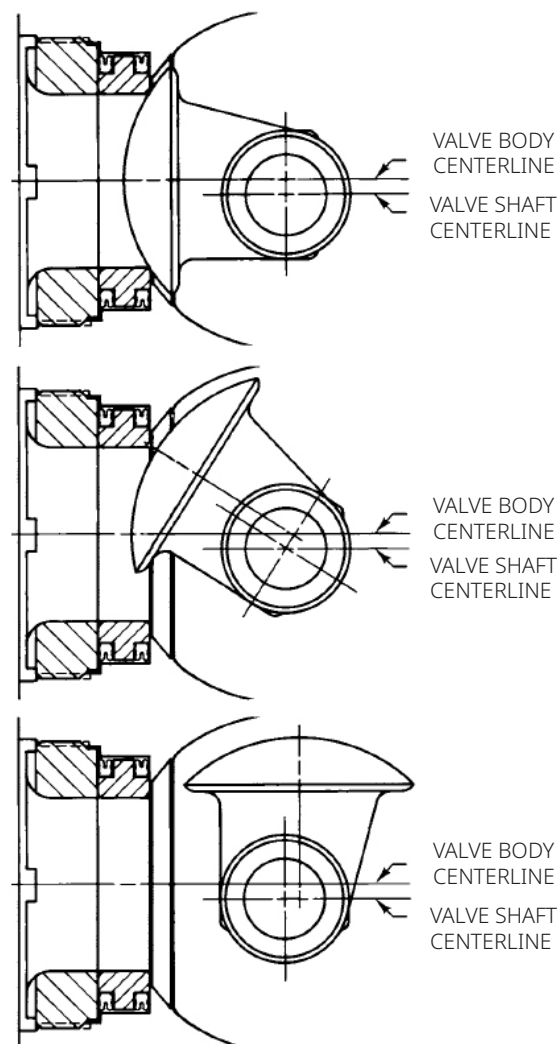
Valve Information

To determine the required valve ordering information, refer to the Specifications table. Review the information under each specification and in the referenced tables.

Actuator and Accessory Information

Refer to the specific actuator and accessory bulletins for required ordering information.

Figure 4. Eccentric Rotation

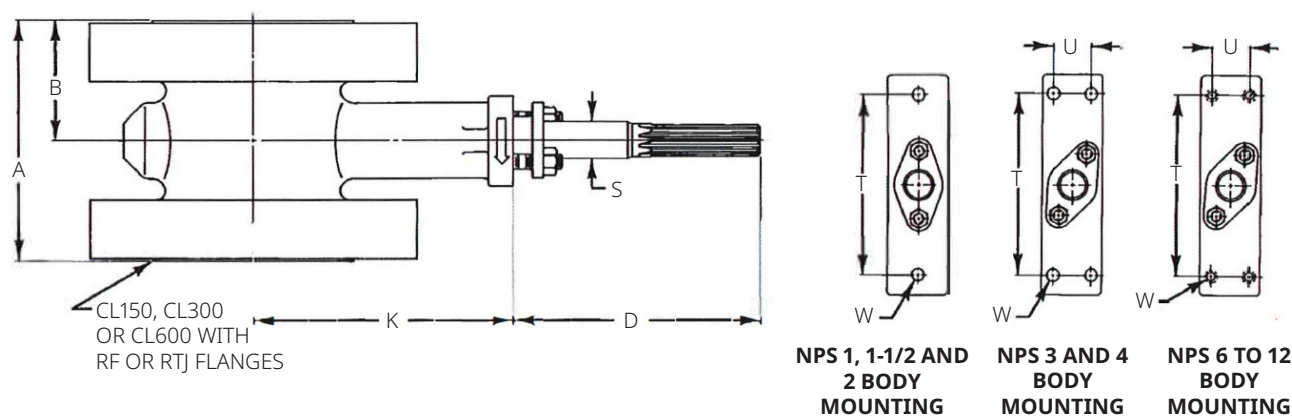


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Table 12. Fisher V500 Standard Rotary Control Flanged Valve Dimensions

VALVE SIZE, NPS	DIMENSIONS										APPROXIMATE WEIGHT		
	A		B		D	K	S SHAFT DIA ⁽¹⁾	T	U	W	Flanged		
	RF	RTJ	RF	RTJ							Pressure Class		
											CL150	CL300	CL600
mm										kg			
1	102	108	51	57	187	126	12.7	118	---	11	5.4	5.9	5.9
1-1/2	114	122	57	63	187	135	15.9	118	---	14	8.6	9.5	10
2	124	124	62	62	187	151	15.9	118	---	14	9.5	11	13
3	165	165	83	83	213	200	25.4 25.4 x 19.1	152	32	14	19	24	26
4	194	194	97	97	208	216	31.8	235	46	18	36	42	50
6	229	229	114	114	208	270	38.1 38.1 x 31.8	235	46	5/8-in. 11 UNC	54	69	93
8	243	243	121	121	208	318	38.1	235	46	5/8-in. 11 UNC	79	98	135
10	297	312	148	156	356	353	44.5	273	51	3/4-in. 10 UNC	181	208	312
12	338	354	169	177	356	408	53.8 53.8 x 50.8	273	51	3/4-in. 10 UNC	221	259	367
VALVE SIZE, NPS	in.										lbs		
1	4.00	4.25	2.00	2.25	7.38	4.97	1/2	4.62	---	0.45	12	13	13
1-1/2	4.50	4.75	2.25	2.50	7.38	5.31	5/8	4.62	---	0.56	19	21	23
2	4.88	4.88	2.44	2.44	7.38	5.94	5/8	4.62	---	0.56	21	25	28
3	6.50	6.50	3.25	3.25	8.44	7.88	1 1 x 3/4	6.00	1.25	0.56	42	52	57
4	7.62	7.62	3.81	3.81	8.19	8.50	1-1/4	9.25	1.81	0.69	79	93	111
6	9.00	9.00	4.50	4.50	8.19	10.6	1-1/2 1-1/2 x 1-1/4	9.25	1.81	5/8-in. 11 UNC	120	152	204
8	9.56	9.56	4.78	4.78	8.19	12.5	1-1/2	9.25	1.81	5/8-in. 11 UNC	175	217	298
10	11.68	12.30	5.84	6.15	14.00	13.91	1.75	10.75	2.00	3/4-in. 10 UNC	398	458	687
12	13.31	13.93	6.66	6.97	14.00	16.07	2.12 2.12 x 2.00	10.75	2.00	3/4-in. 10 UNC	487	572	810
1. Shaft diameter versus spline diameter.													

1. Shaft diameter versus spline diameter.

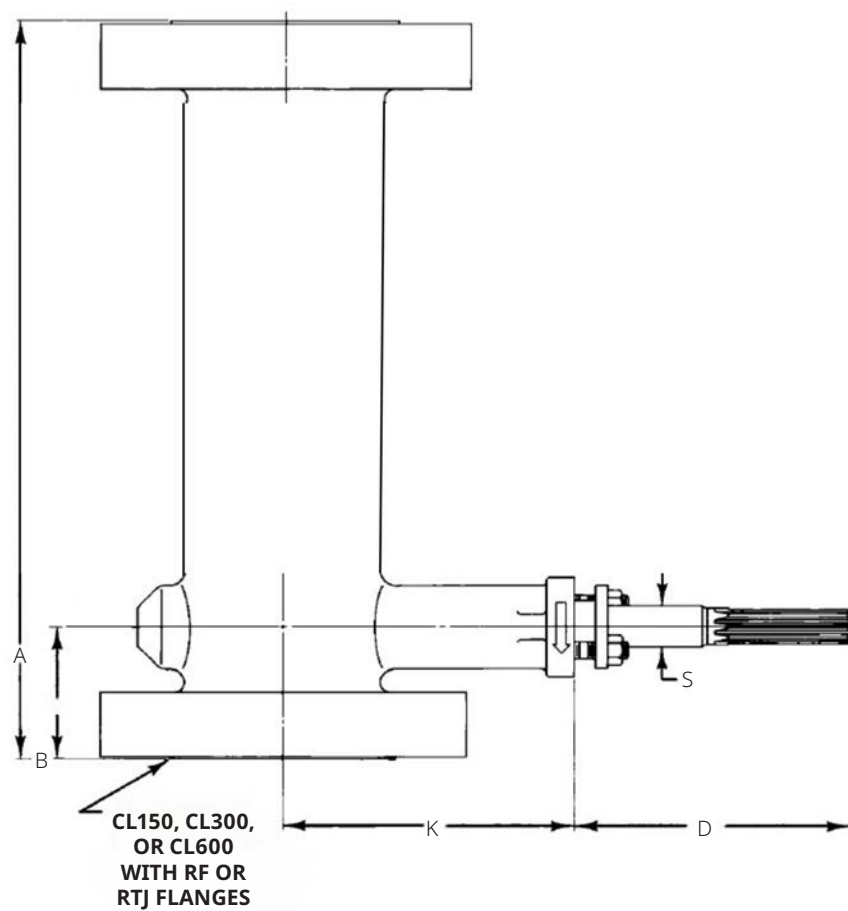
Figure 5. Fisher V500 Rotary Control Valve Flanged Dimensions (Refer to Table 12)

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NOTE:For dimensions of valves with DN (or other) end connections, consult your [Emerson sales office](#).**Table 13. Fisher V500 Rotary Control Flanged Valve Globe Face-to-Face Dimensions**

VALVE SIZE, NPS	DIMENSIONS												APPROXIMATE WEIGHT		
	A			B			D	K	S SHAFT DIA ⁽¹⁾	T	U	W	Flanged		
	RF			RF									Pressure Class		
	CL150	CL300	CL600	CL150	CL300	CL600							CL150	CL300	CL600
	mm												kg		
2	254	267	286	62	62	62	187	151	15.9	118	---	14	---	---	---
3	298	318	337	83	83	83	213	200	25.4 25.4 x 19.1	152	32	14	---	---	28
4	352	368	394	97	97	97	208	216	31.8	235	46	18	---	---	50
6	451	473	508	114	114	114	208	270	38.1 38.1 x 31.8	235	46	5/8-in. 11 UNC	48	70	104
8	543	568	610	121	121	121	208	318	38.1	235	46	5/8-in. 11 UNC	77	112	167
VALVE SIZE, NPS	in.												lbs		
2	10	10.5	11.25	2.44	2.44	2.44	7.38	5.94	5/8, 1	4.62	---	0.56	---	---	---
3	11.75	12.5	13.25	3.25	3.25	3.25	8.44	7.88	1 1 x 3/4	6.00	1.25	0.56	---	---	62
4	13.88	14.5	15.5	3.81	3.81	3.81	8.19	8.50	1-1/4	9.25	1.81	0.69	---	---	111
6	17.75	18.62	20.00	4.50	4.50	4.50	8.19	10.60	1-1/2 1-1/2 x 1-1/4	9.25	1.81	5/8-in. 11 UNC	105	155	230
8	21.38	22.38	24.00	4.78	4.78	4.78	8.19	12.50	1-1/2	9.25	1.81	5/8-in. 11 UNC	170	248	368

Figure 6. Fisher V500 Rotary Control Valve Globe Dimensions in Reverse Flow (Refer to Table 13)



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