

Operating Manual

Model: 66 PA

Size:

Serial #:

Sales Order :

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Tulsa, Oklahoma
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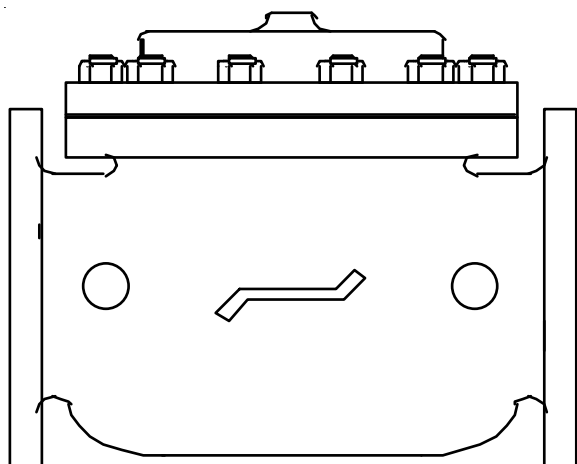
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Global performance. **Personal** touch.



installation, operating, and maintenance instructions

series 66

basic control valve

GENERAL DESCRIPTION

The OCV Series 66 Power-Actuated Valve is a hydraulically-operated, diaphragm type valve. The diaphragm is a nylon fabric bonded with an elastomer. An elastomeric seat disc forms a tight seal with the valve seat when the valve is closed. The valve contains upper and lower diaphragm chambers, separated and sealed from each other by the diaphragm itself. The lower chamber is sealed from the flow passage by means of a stem seal.

Because of the twin-chamber design, the Series 66 valve requires no line pressure differential to operate. Thus, it is particularly useful where line pressure is extremely low, pressure loss is critical or where line fluid is too dirty or otherwise unsuitable for operating the valve.

The Series 66 valve is designed to operate in a temperature range from -40 degrees F to +180 degrees F, depending upon the type of fluid being transported. It is available in either globe or angle configuration in ductile iron (150 lb. or 300 lb.) or in cast steel (150 lb. or 300 lb.) construction.

FUNCTIONAL DESCRIPTION

The Series 66 valve may be operated by line pressure or by an independent pressure source (equal to or greater than line pressure). Applying that pressure to the lower diaphragm chamber and simultaneously venting the upper diaphragm chamber causes the valve

to move to its full open position. Conversely, applying pressure to the upper diaphragm chamber and simultaneously venting the lower chamber causes the valve to go fully closed.

INSTALLATION

In order to insure safe, accurate and efficient operation of the Series 66 valve, the following list of checkpoints and procedures should be followed when installing the valve.

1. Make a careful visual inspection of the valve to insure that there has been no damage to the external piping, fittings or controls. Check that all fittings are tight.
2. It is recommended that either gate or block valves be installed on the inlet and discharge sides of the valve to facilitate isolating the valve for preventive or corrective maintenance.
3. It is recommended that pressure gauges be installed at the inlet and discharge ports to provide monitoring of the valve during initial start-up and during operation.
4. Prior to mounting the valve, all interconnecting piping should be thoroughly flushed of chips, scale and foreign matter.
5. Install the valve in the line according to the flow arrow on the inlet flange. The arrow should point downstream.

6. It is recommended that for maximum efficiency and serviceability, valves 6" and larger be installed in a horizontal position.
7. Allow sufficient room around the valve for ease of adjustment and maintenance service.
8. Because of the venting action, a quantity of fluid will be exhausted each time the valve opens or closes. Provisions should be made to drain or dispose of this vented fluid.

<u>Valve Size</u>	<u>Discharge Capacity (gallons)</u>
1.25-1.5"	.02
2"	.05
2.5"	.06
3"	.1
4"	.2
6"	.6
8"	1.3
10"	2.5
12"	4.0
14"	6.5
16"	9.6

MAINTENANCE

The OCV control valve requires no lubrication or packing and a minimum of maintenance. However, a periodic inspection should be established to determine how the fluid being handled is affecting the efficiency of the valve. In a water system, for example, the fluid velocity as well as the substances occurring in natural waters, such as dissolved minerals, colloidal and suspended particles vary in every installation. The effect of these actions or substances must be determined by inspection. It is recommended that an annual inspection, which includes examination of the valve interior, be conducted. Particular attention should be paid to the elastomeric parts, i.e., the diaphragm and seat disc. Any obviously worn parts should be replaced.

TROUBLESHOOTING

In the event of malfunction of the OCV control valve, troubleshooting should be conducted according to the procedures outlined for the specific model of valve. Then, if those steps indicate a problem with the main

valve, this section will outline the procedures necessary to correct the problem.

Problems with the main valve can be classed in three basic categories:

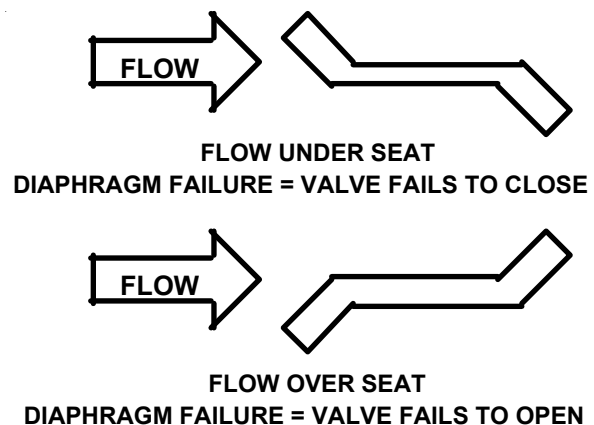
1. MAIN VALVE FAILS TO OPEN

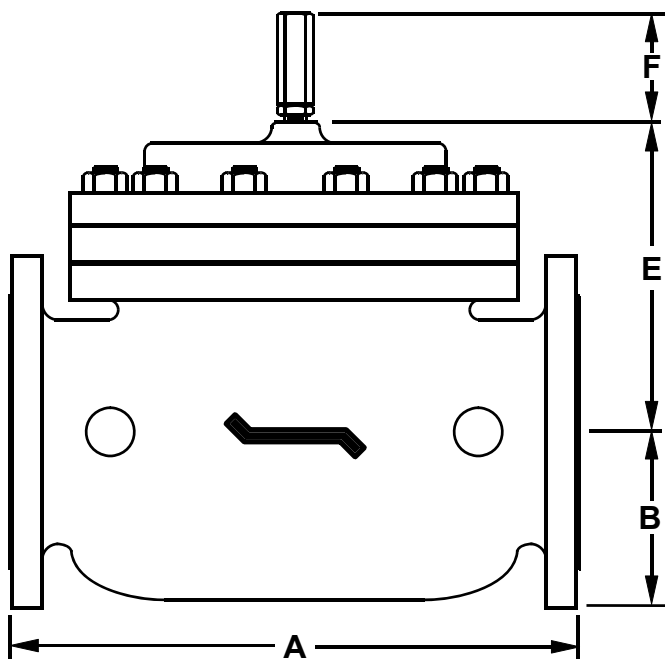
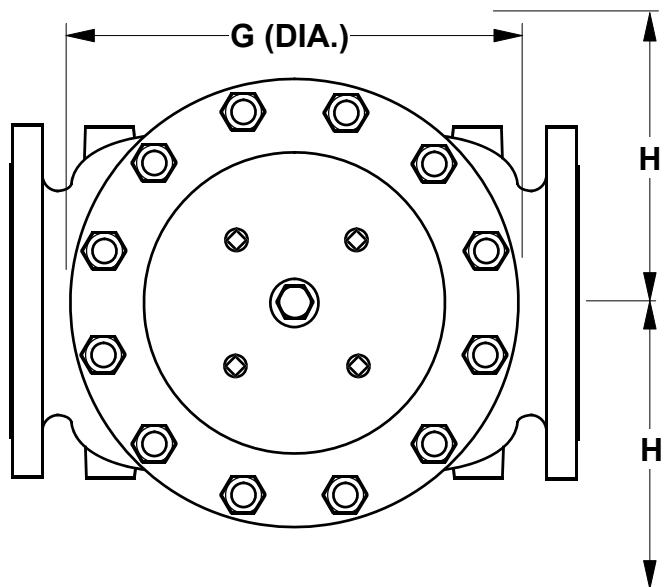
- a. Closed isolation valves or cocks in pilot system or in main line—*Open valves or cocks.*
- b. Insufficient operating pressure—*Check pressure.*

2. MAIN VALVE FAILS TO CLOSE

- a. Closed cocks in control system or in main line—*Open cocks.*
- b. Lack of cover chamber pressure—*Check upstream pressure strainer, tubing, cocks, needle valves for restriction.*
- c. Diaphragm damaged (see note)—*Replace diaphragm.*
- d. Diaphragm assembly inoperative. Corrosion or excessive scale buildup on valve stem—*Clean and polish stem. Replace any defective, damaged or badly eroded parts.*
- e. Mechanical obstruction. Object lodged in valve—*Remove obstruction.*
- f. Worn seat disc—*Replace seat disc.*
- g. Badly scored seat—*Replace seat.*

NOTE: Assuming control system is functioning properly.





DIM	ANSI CLASS	VALVE SIZE												
		1 1/4	1 1/2	2	2 1/2	3	4	6	8	10	12	14	16	24
A	S.E	8.75	8.75	9.88	10.50	13.00	—	—	—	—	—	—	—	—
	150	8.50	8.50	9.38	10.50	12.00	15.00	17.75	25.38	29.75	34.00	39.00	40.38	62.00
	300	8.75	8.75	9.88	11.12	12.75	15.63	18.62	26.38	31.12	35.50	40.50	42.00	63.75
B	SE	1.44	1.44	1.69	1.88	2.25	—	—	—	—	—	—	—	—
	150	2.31	2.50	3.00	3.50	3.75	4.50	5.50	6.75	8.00	9.50	10.62	11.75	16.00
	300	2.62	3.06	3.25	3.75	4.12	5.00	6.25	7.50	8.75	10.25	11.50	12.75	18.00
C	SE	4.38	4.38	4.75	6.00	6.50	—	—	—	—	—	—	—	—
	150	4.25	4.25	4.75	6.00	6.00	7.50	10.00	12.69	14.88	17.00	—	20.81	—
	300	4 3/8	4.38	5.00	6.38	6.38	7.81	10.50	13.19	15.56	17.75	—	21.62	—
D	SE	3.12	3.12	3.88	4.00	4.50	—	—	—	—	—	—	—	—
	150	3.00	3.00	3.88	4.00	4.00	5.50	6.00	8.00	11.38	11.00	—	15.69	—
	300	3.25	3.25	4.12	4.38	4.38	5.81	6.50	8.50	12.06	11.75	—	16.50	—
E	ALL	6.00	6.00	6.00	7.00	6.50	8.00	10.00	14.63	19.00	18.88	18.00	19.00	27.00
F	ALL	3.88	3.88	3.88	3.88	3.88	3.88	3.88	6.38	6.38	6.38	6.38	6.38	8.00
G	ALL	6.00	6.00	6.75	7.69	8.75	11.75	14.00	21.00	24.50	28.00	31.25	34.50	52.00
H	ALL	10.00	10.00	11.00	11.00	11.00	12.00	13.00	14.00	17.00	18.00	20.00	20.00	28.50

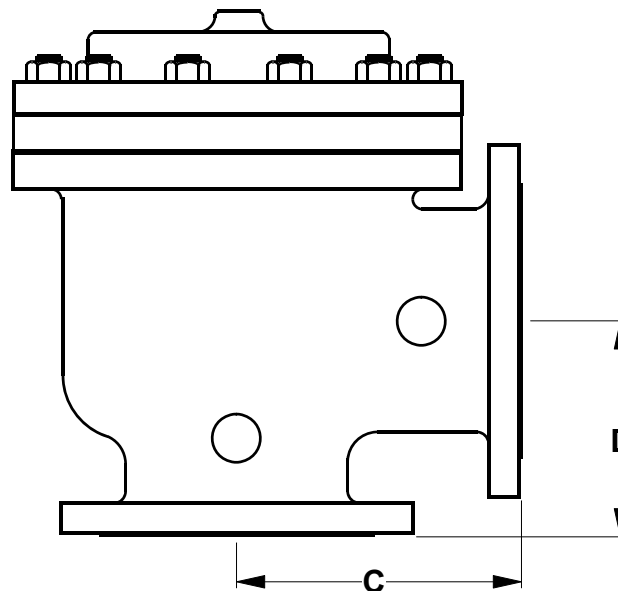
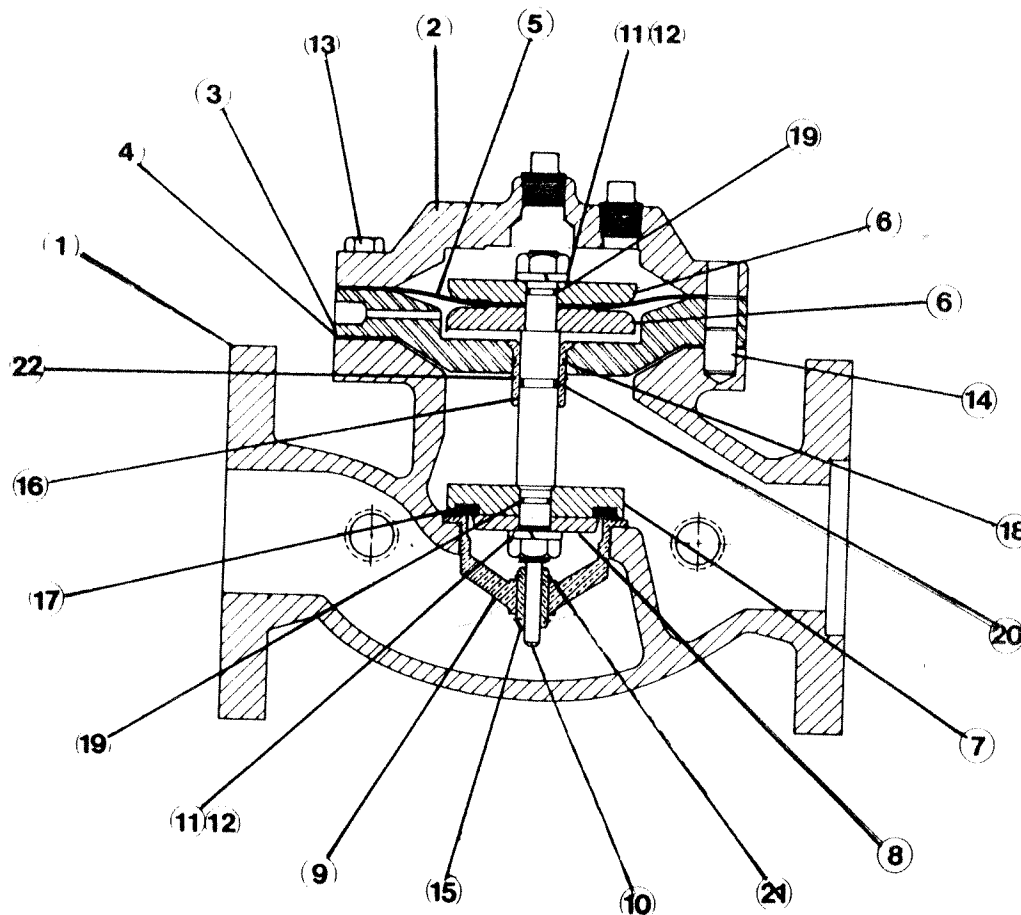


TABLE DEPICTS
3" SERIES 3100
4" SERIES 4400
8" SERIES 3200
10" SERIES 3800

TOLERANCES		OCV Control Valves TULSA, OKLAHOMA U.S.A.		
GENERAL ENVELOPE		GENERAL VALVE DIMENSIONS		
DRAWN BY	DATE	SIZE	DRAWING NUMBER	REV.
RON	5-20-04	A	66D	
CHKD. BY	DATE			

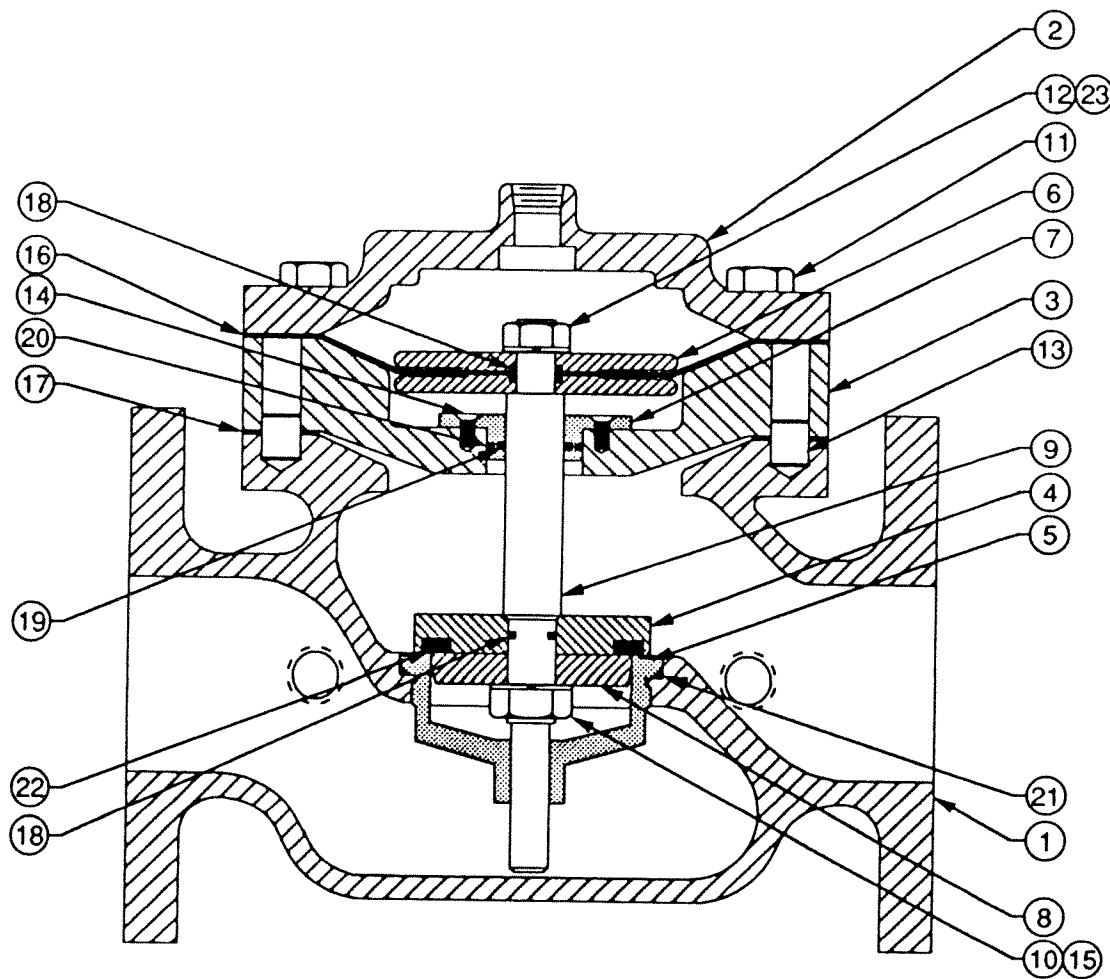
* Recommended Spare Parts
 ** Provided with Stn. Steel Seat Ring Only



ITEM	OCV NO.	QTY	DESCRIPTION	MATERIAL
1	301000 301300	1	BODY ANSI 150# BODY ANSI 150#	DUCTILE IRON CAST STEEL
2	303030 303330	1	BONNET	DUCTILE IRON CAST STEEL
3	306430	1	INTERMEDIATE PLATE	STEEL
4*	693008 693108	1	GASKET	BUNA-N VITON
5*	690011 690111	1	DIAPHRAGM	BUNA-N VITON
6	307430	2	DIAPHRAGM PLATE	STEEL
7	306440	1	SEAT PLATE	STEEL
8	309000	1	SEAT RETAINER	STN. STEEL
9	311100 311700	1	SEAT RING	BRONZE STN. STEEL
10	313719	1	STEM	STN. STEEL
11	590709	2	STEM NUT	STN. STEEL
12	685703	2	LOCKWASHER	STN. STEEL
13	531012	8	CAPSCREW	ZINC PL. STEEL
14	620701	2	DOWEL PIN	STN. STEEL
15**	300037 300035	1	S.S. SEAT RING BUSHING BZ. SEAT RING BUSHING	DELIN DELIN
16	300165 300065	1	GUIDE BUSHING	BRASS DELIN
17*	690500 691500	1	SEAT DISC	BUNA-N VITON
18*	610018	1	O-RING	BUNA-N
19*	611012	2	O-RING	VITON
20*	611111	1	O-RING	VITON
21**	630705 630700	2	SNAP RING (S.S. SEAT RING) SNAP RING (BZ SEAT RING)	STN. STEEL STN. STEEL
22	630711	1	SNAP RING	STN. STEEL

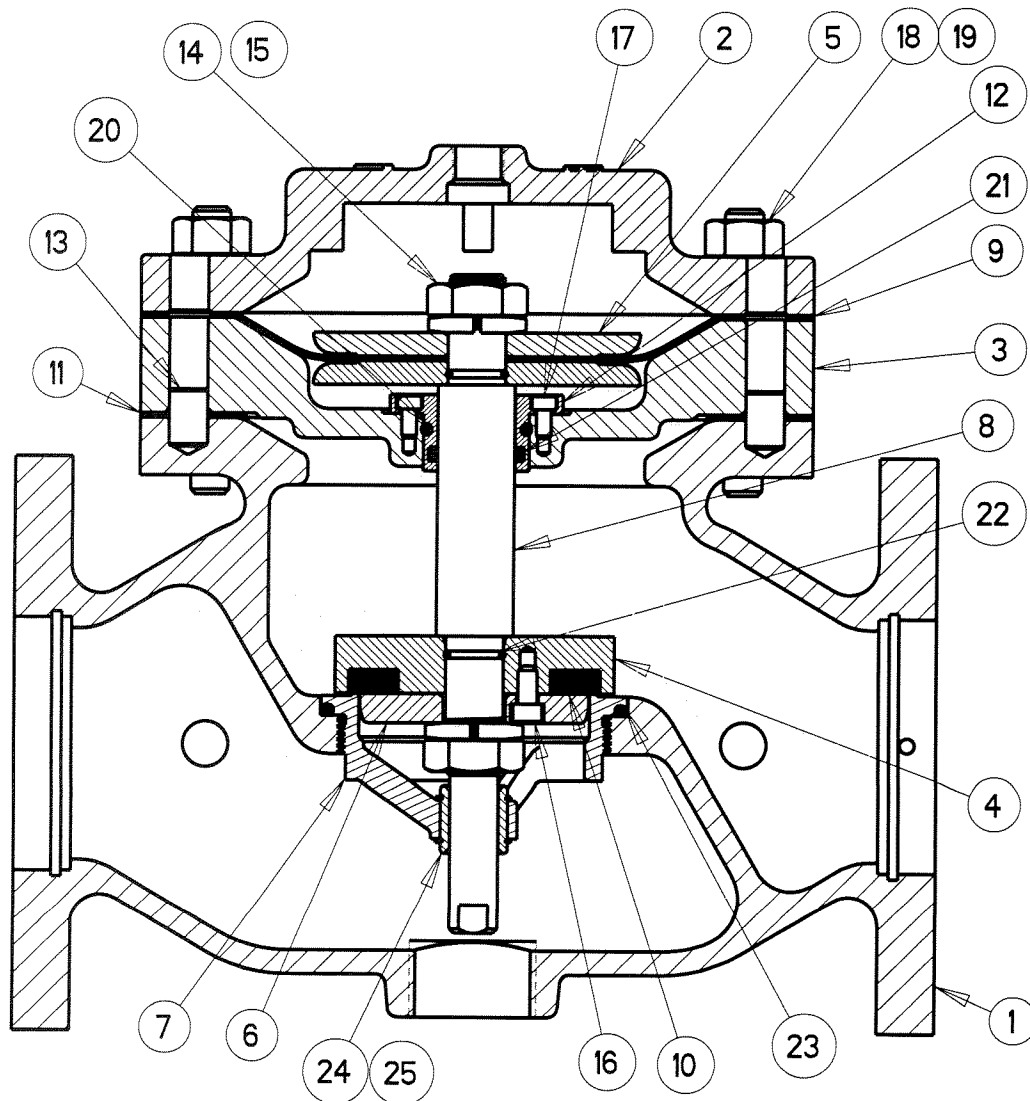
				MATERIAL		TOLERANCES		 Control Valves Your <u>Best</u> Control Valve Source				
						UNLESS NOTED FRACTIONAL $\pm 1/64$ DECIMAL $\pm .005$ MACH. FINISH 125 ANGULAR $\pm 1/2^\circ$						
				NO. REQ'D		DRAWN BY SCOTT A.		DATE 10-1-97		SIZE	DRAWING NUMBER	REV.
CHG				E.C. NO.		DATE		BY		A		A
REVISIONS				REF DWG NO'S		SCALE 20%		CHKD. BY				

* Recommended Spare Parts
 ** Provided with Stainless Seat Ring Only



ITEM	OCV NO.	QTY	DESCRIPTION	MATERIAL
1	301011 301611	1	BODY, 150# BODY, 300#	DUCTILE IRON DUCTILE IRON
2	303040	1	BONNET	DUCTILE IRON
3	306432	1	INTERMEDIATE PLATE	STEEL
4	306449	1	SEAT PLATE	STEEL
5	311111 311711	1	SEAT RING	BRONZE STN. STEEL
6	307439	2	DIAPHRAGM PLATE	STEEL
7	300179 300046	1	GUIDE BUSHING	BRONZE DELRIN
8	309039	1	SEAT RETAINER	STN. STEEL
9	313748	1	STEM	STN. STEEL
10	590709	1	HEX NUT, JAM	STN. STEEL
11	531011	8	CAPSCREW	ZINC PL. STEEL
12	590710	1	HEX NUT, JAM	STN. STEEL
13	620701	2	DOWEL PIN	STN. STEEL
14	532707	4	SCREW	STN. STEEL
15	685727	4	LOCKWASHER	STN. STEEL
16*	690056	1	DIAPHRAGM	STN. STEEL
17*	693027	1	GASKET	BUNA-N
18*	611014	3	O-RING	VITON
19*	611116	1	O-RING	VITON
20*	610024	1	O-RING	BUNA-N
21*	610152	1	O-RING	BUNA-N
22*	690510	1	SEAT DISC	BUNA-N
23	685709	1	LOCKWASHER	STN. STEEL
24**	300024	1	BUSHING (not shown)	TEFLON
25**	630705	2	RETAINER RING (not shown)	STN. STEEL

				MATERIAL		TOLERANCES		 2-1/2" POWER-ACTUATED VALVE ASSY.		
						UNLESS NOTED FRACTIONAL $\pm 1/64$ DECIMAL $\pm .005$ MACH. FINISH 125/ ANGULAR $\pm 1/2^\circ$				
CHG	E.C. NO.	DATE	BY	NO. REQ'D		DRAWN BY	DATE	SIZE	DRAWING NUMBER	REV.
REVISIONS				SCALE 40%		CHKD. BY	DATE	A	2850	
REF DWG NO'S										



ITEM	PART NO	QTY	DESCRIPTION	MAT'L
1	301091	1	BODY	DUCT. IRON
2	303092	1	BONNET	DUCT. IRON
3	306091	1	INTERMEDIATE PLATE	DUCT. IRON
4	306491	1	SEAT PLATE	STN. STL.
5	307092	2	DIAPHRAGM PLATE	STN. STL.
6	309092	1	SEAT RETAINER	STN. STL.
7	311191	1	SEAT RING	BRONZE
	311791			STN. STL.
8	313792	1	STEM	STN. STL.
9	690092*	1	DIAPHRAGM	NYL/BUNA-N
10	690591*	1	SEAT DISC	BUNA-N
11	693091*	1	GASKET	BUNA-N
12	320115	1	GUIDE BUSHING	BRONZE
	320076#			DELRIN
13	620701	2	DOWEL PIN	STN. STL.
14	590714	2	HEX NUT	STN. STL.
15	685712	2	LOCK WASHER	STN. STL.
16	530700	3	SKT. HD. CAPSCREW	STN. STL.
17	530702	2	SKT. HD. CAPSCREW	STN. STL.
18	300681	8	STUD	ZN PL STL
19	590011	8	HEX NUT	ZN PL STL
20	610123*	1	O-RING	BUNA-N
21	610214*	1	O-RING	BUNA-N
22	610016*	2	O-RING	BUNA-N
23	610154*	1	O-RING	BUNA-N
24	300071#	1	LOWER BUSHING	TEFLON
25	630711#	2	SNAP RING	STN. STL.

* : RECOMMENDED SPARE PARTS

: PARTS USED WITH STAINLESS STEEL SEAT RING

OCV Control Valves

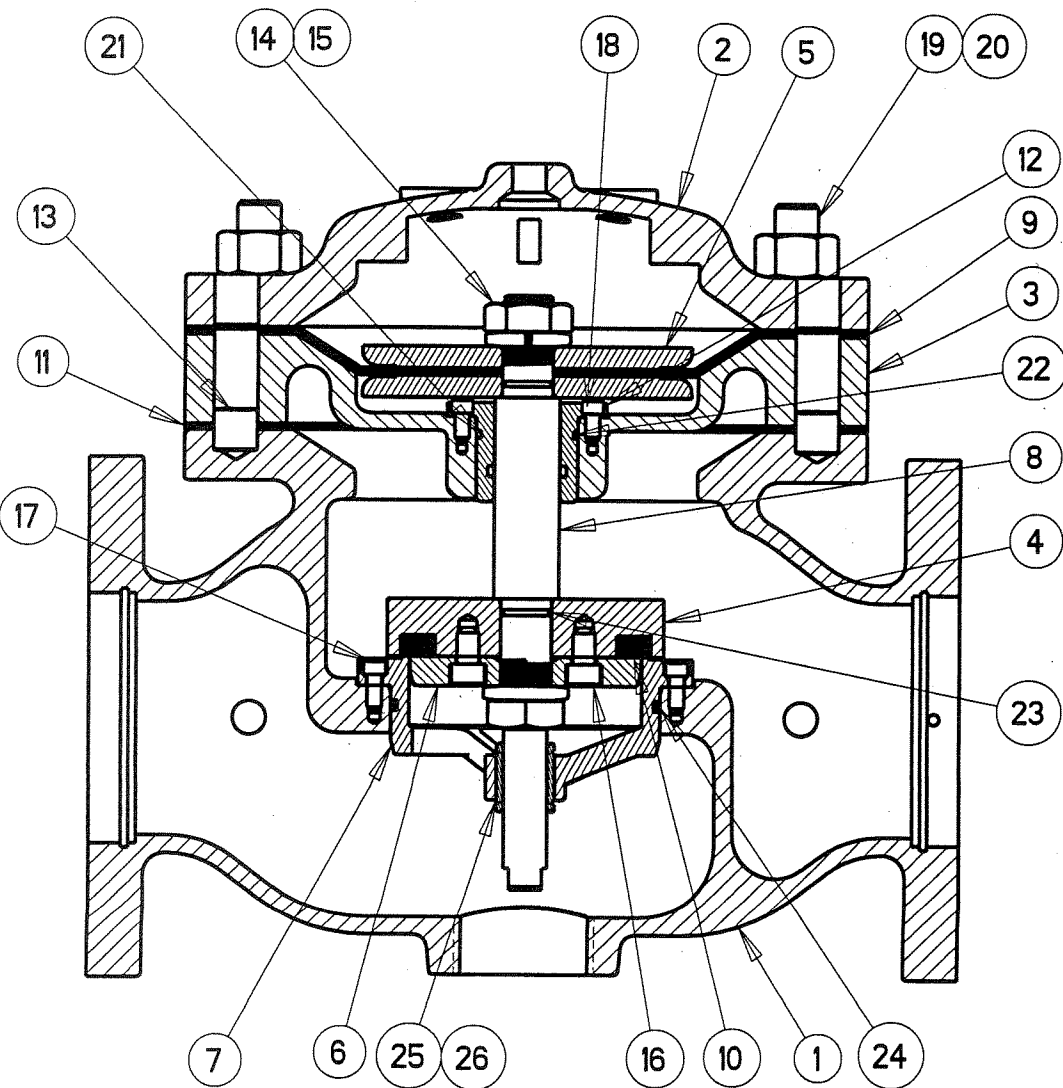
TULSA OKLAHOMA USA

3" 3100 POWER-ACTUATED VALVE

E	D	C	B	A	CHG	ECN	DATE	BY	REVISIONS	REF DWG NO'S	MATERIAL	TOLERANCES	SIZE	DRAWING NUMBER	REV
											150# DIBT OR 150# DIST	UNLESS NOTED XX $\pm .015$ XXX $\pm .005$ ANGULAR $\pm 0.5^\circ$ MACH. FINISH 125			
											NO. REQ'D	DRAWN BY	DATE		
												SDJ	8-2-02		
											SCALE	CHKD BY	DATE		
											40%				

A

3150



ITEM	PART NO	QTY	DESCRIPTION	MAT'L
1	301044	1	BODY	DUCT. IRON
2	303045	1	BONNET	DUCT. IRON
3	303044	1	INTERMEDIATE PLATE	DUCT. IRON
4	306404	1	SEAT PLATE	STN. STL.
5	307746	2	DIAPHRAGM PLATE	STN. STL.
6	309045	1	SEAT RETAINER	STN. STL.
7	311744	1	SEAT RING	STN. STL.
8	313742	1	STEM	STN. STL.
9	690387	1	DIAPHRAGM	NYLON/BUNA-N
10	690544	1	SEAT DISC	BUNA-N
11	693044	1	GASKET	BUNA-N
12	320046	1	GUIDE BUSHING	DELRI
13	300708	2	DOWEL PIN	STN. STL.
14	590733	2	HEX NUT	STN. STL.
15	685708	2	LOCK WASHER	STN. STL.
16	530719	4	SKT. HD. CAPSCREW	STN. STL.
17	530701	6	SKT. HD. CAPSCREW	STN. STL.
18	530707	4	SKT. HD. CAPSCREW	STN. STL.
19	300094	8	STUD	ZN PL STL
20	590005	8	HEX NUT	ZN PL STL
21	610129	1	O-RING	BUNA-N
22	610216	1	O-RING	BUNA-N
23	610018	2	O-RING	BUNA-N
24	610245	1	O-RING	BUNA-N
25	300645	1	LOWER BUSHING	TEFLON
26	630707	2	SNAP RING	STN. STL.

* : RECOMMENDED SPARE PARTS
SPARE PARTS KIT P/N 906044

E					MATERIAL	TOLERANCES		OCV Control Valves		
D					150# DIST	UNLESS NOTED .XX ±.015 .XXX ±.005 ANGULAR ±0.5° MACH. FINISH 125		TULSA OKLAHOMA USA		
C				4" 4400 POWER-ACTUATED VALVE						
B										
A										
CHG	ECN	DATE	BY		NO. REQ'D	DRAWN BY	DATE	SIZE	DRAWING NUMBER	REV
						SDJ	10-04-04	A	4450	
					SCALE	CHKD BY	DATE			
REVISIONS					REF DWG NO'S	30%				



2. PARTS USED WHEN STAINLESS STEEL SEAT RING IS REQUIRED

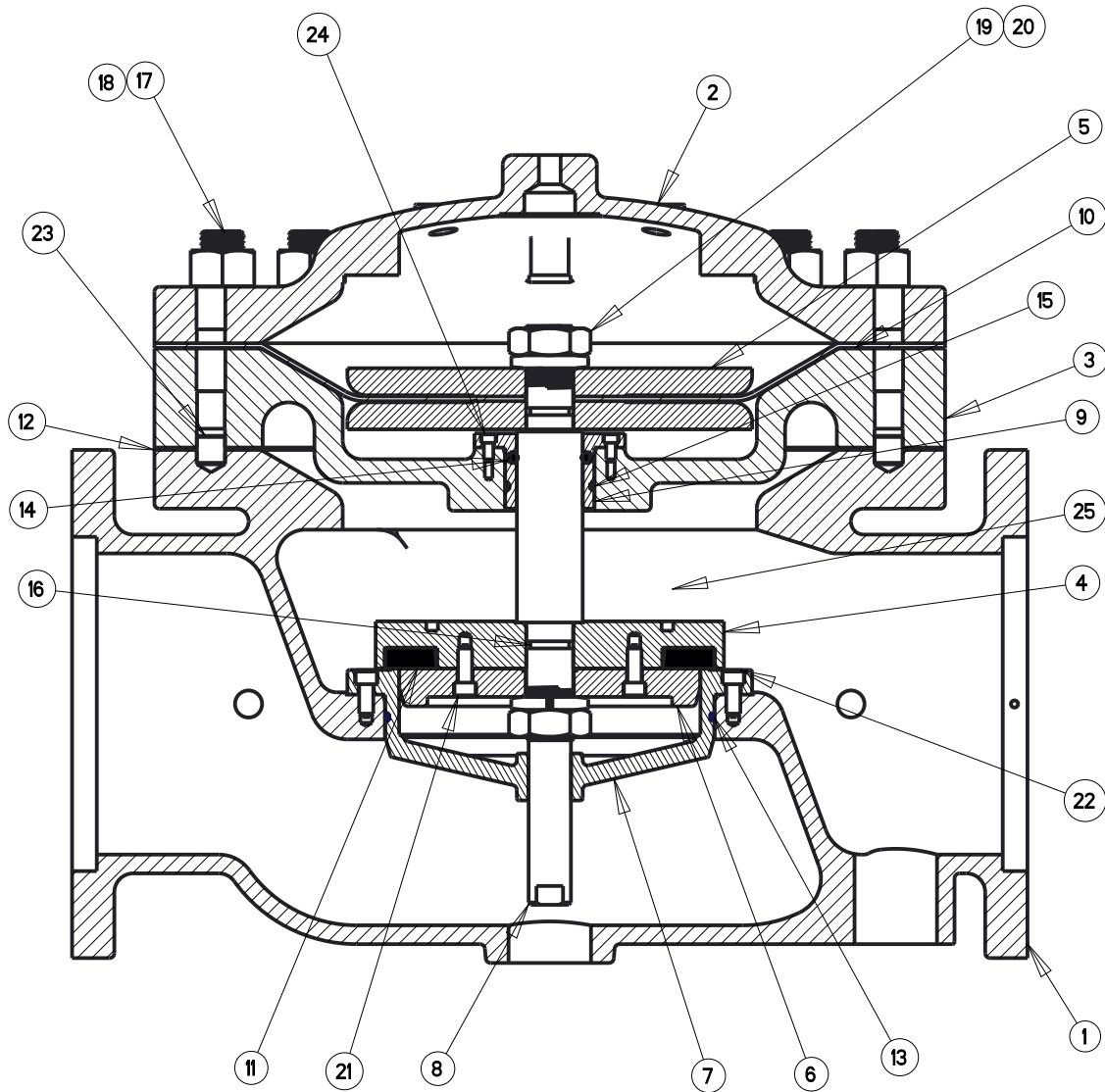
a. SERIES NUMBER

b. PART NUMBER

c. MATERIAL

ITEM		O.C.V. NO.	QTY	DESCRIPTION				MATERIAL	
				MATERIAL	TOLERANCES		 OCV Control Valves THEIR DELAMAR, U.S.A.	6" POWER ACTUATED VALVE	
					UNLESS NOTED				
					FRACTIONAL 2 1/164				
					ORIGINAL 2.00				
					MACH FINISH 128				
					ANGULAR 1/2°				
				NO REQ'D	DRAWN BY	DATE	REV	DRAWING NUMBER	
					RON	10-63			
				SCALE	CHRD BY	DATE	C	6195	
REVISIONS		REF DWG NO'S							A

ITEM		C.D.V. NO. QTY		DESCRIPTION				MATERIAL		
E				MATERIAL	TOLERANCES UNLESS NOTED FRACTIONAL $\frac{1}{16}$ DECIMAL $\pm .005$ MACH FINISH 125 ANGULAR $\pm 1/2^\circ$	 HOCV Control Valves INDUSTRIAL VALVE CO. U.S.A.	6" POWER ACTUATED VALVE			
D										
C										
B										
A										
CHG		E.C. NO.	DATE	BY	NO REQ'D	DRAWN BY RON	DATE 10-83	SIZE	DRAWING NUMBER	REV.
REVISIONS		REF DWG NO'S			SCALE	CHKD BY	DATE	C	6195	A



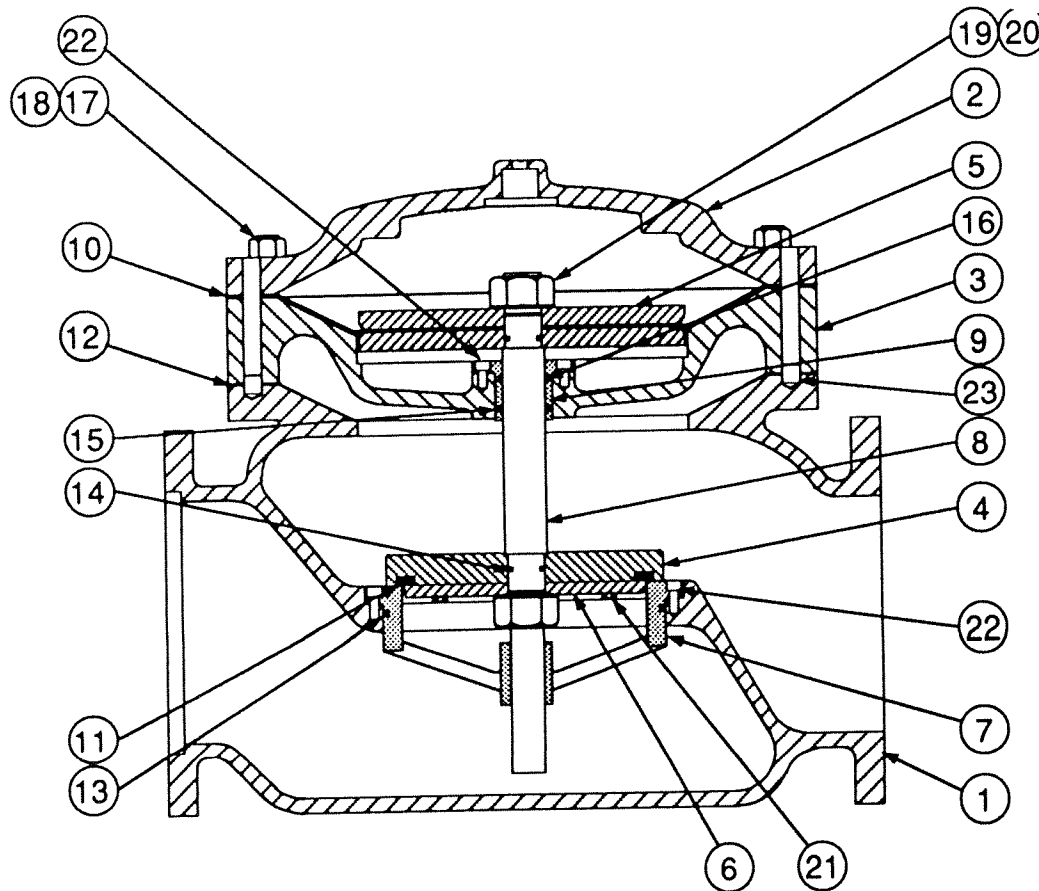
ITEM	PART NO	QTY	DESCRIPTION	MATERIAL
1	301084	1	BODY, 150#	DUCT. IRON
2	303085	1	BONNET	DUCT. IRON
3	306084	1	INTER. PLATE	DUCT. IRON
4	306484	1	SEAT PLATE	STEEL
5	307384	2	DIAPHRAGM PLATE	STEEL
6	309785	1	SEAT RETAINER	STN. STEEL
7	31184S	1	SEAT RING	BRONZE
8	313785	1	STEM	STN. STEEL
9	300287	1	GUIDE BUSHING	BRONZE
10	690411	1	DIAPHRAGM	NYL/BUNA-N
11	690584	1	SEAT DISC	BUNA-N
12	693085	1	GASKET	BUNA-N
13	610268	1	O-RING	BUNA-N
14	611214	2	O-RING	VITON
15	610227	1	O-RING	BUNA-N
16	610327	1	O-RING	BUNA-N
17	320041	12	STUD	ZN PL STL
18	590028	12	HEX NUT	ZN PL STL
19	590724	2	HEX NUT	STN. STEEL
20	685717	2	LOCK WASHER	STN. STEEL
21	530718	8	SKT HD CAPSCREW	STN. STEEL
22	530711	8	SKT HD CAPSCREW	STN. STEEL
23	300708	2	DOWEL PIN	STN. STEEL
24	530700	4	SKT HD CAPSCREW	STN. STEEL

Ⓢ = RECOMMENDED SPARE PARTS

					MATERIAL	TOLERANCES		OCV Control Valves				
					150# DIBT	UNLESS NOTED .XX ±.015 .XXX ±.005 ANGULAR ±1/2° MACH. FINISH 125		TULSA, OKLAHOMA U.S.A.				
								8" POWER-ACTUATED VALVE ASSY				
						NO. REQ'D	DRAWN BY	DATE	SIZE	DRAWING NUMBER	REV	
CHG	ECN	DATE	BY				JRK	11-18-15	A	3295		
				SCALE	CHKD BY	DATE						
REVISIONS				REF DWG NO'S	20%							

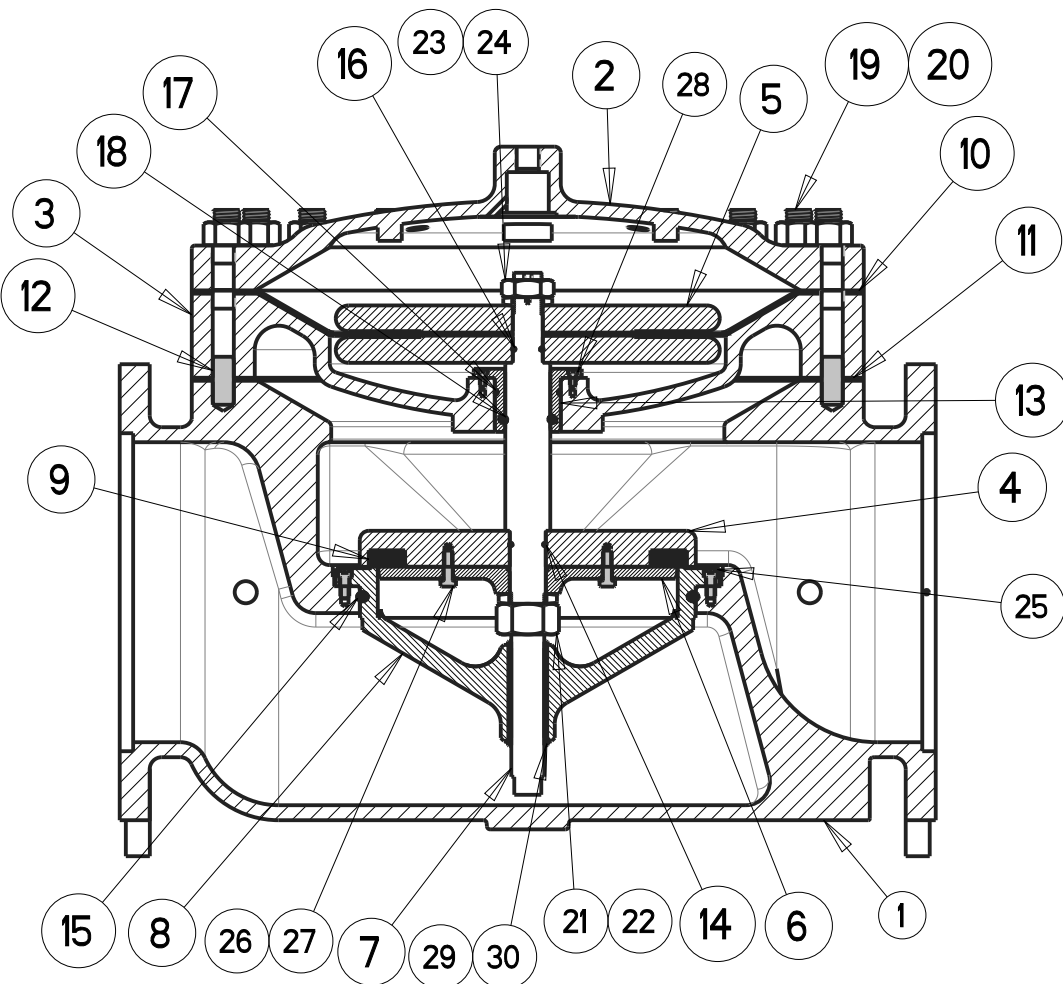
* Recommended Spare Parts

** Provided with Stn. Steel Seat Ring Only



ITEM	OCV NO.	QTY	DESCRIPTION	MATERIAL
1	301025	1	BODY, 150#	DUCTILE IRON
	301625		BODY, 300#	DUCTILE IRON
2	303041	1	BONNET	DUCTILE IRON
3	306025	1	INTERMEDIATE PLATE	DUCTILE IRON
4	306470	1	SEAT PLATE	STEEL
5	307440	2	DIAPHRAGM PLATE	STEEL
6	309035	1	SEAT RETAINER	DUCTILE IRON
7	311105	1	SEAT RING	BRONZE
	311705			STN. STEEL
8	313754	1	STEM	STN. STEEL
9	300232	1	GUIDE BUSHING	BRONZE
**	300236			DELTRIN
10*	690073	1	DIAPHRAGM	BUNA-N
11*	690505	1	SEAT DISC	BUNA-N
12*	693036	1	GASKET	BUNA-N
13*	610277	1	O-RING	BUNA-N
14*	610218	2	O-RING	BUNA-N
15*	610227	1	O-RING	BUNA-N
16*	610327	1	O-RING	BUNA-N
17	300479	16	STUD	ZINC PL. STEEL
18	590010	16	HEX NUT	ZINC PL. STEEL
19	590738	2	HEX NUT	STN. STEEL
20	685713	2	LOCK WASHER	STN. STEEL
21	531725	8	HEX HEAD CAPSCREW	STN. STEEL
22	530711	16	SKT HEAD CAPSCREW	STN. STEEL
23	300708	2	DOWEL PIN	STN. STEEL
24**	300007	1	LOWER BUSHING (not shown)	TEFLON
25**	630714	2	SNAP RING (not shown)	STN. STEEL

				MATERIAL		TOLERANCES		 Control Valves Your <u>Best</u> Control Valve Source			
						UNLESS NOTED FRACTIONAL $\pm 1/64$ DECIMAL $\pm .005$ MACH. FINISH 125 ANGULAR $\pm 1/2^\circ$					
CHG	E.C. NO.	DATE	BY			NO. REQ'D	DRAWN BY	DATE	SIZE	DRAWING NUMBER	REV.
						SCALE 20%	CHKD. BY	DATE	A		A
REVISIONS				REF DWG NO'S							



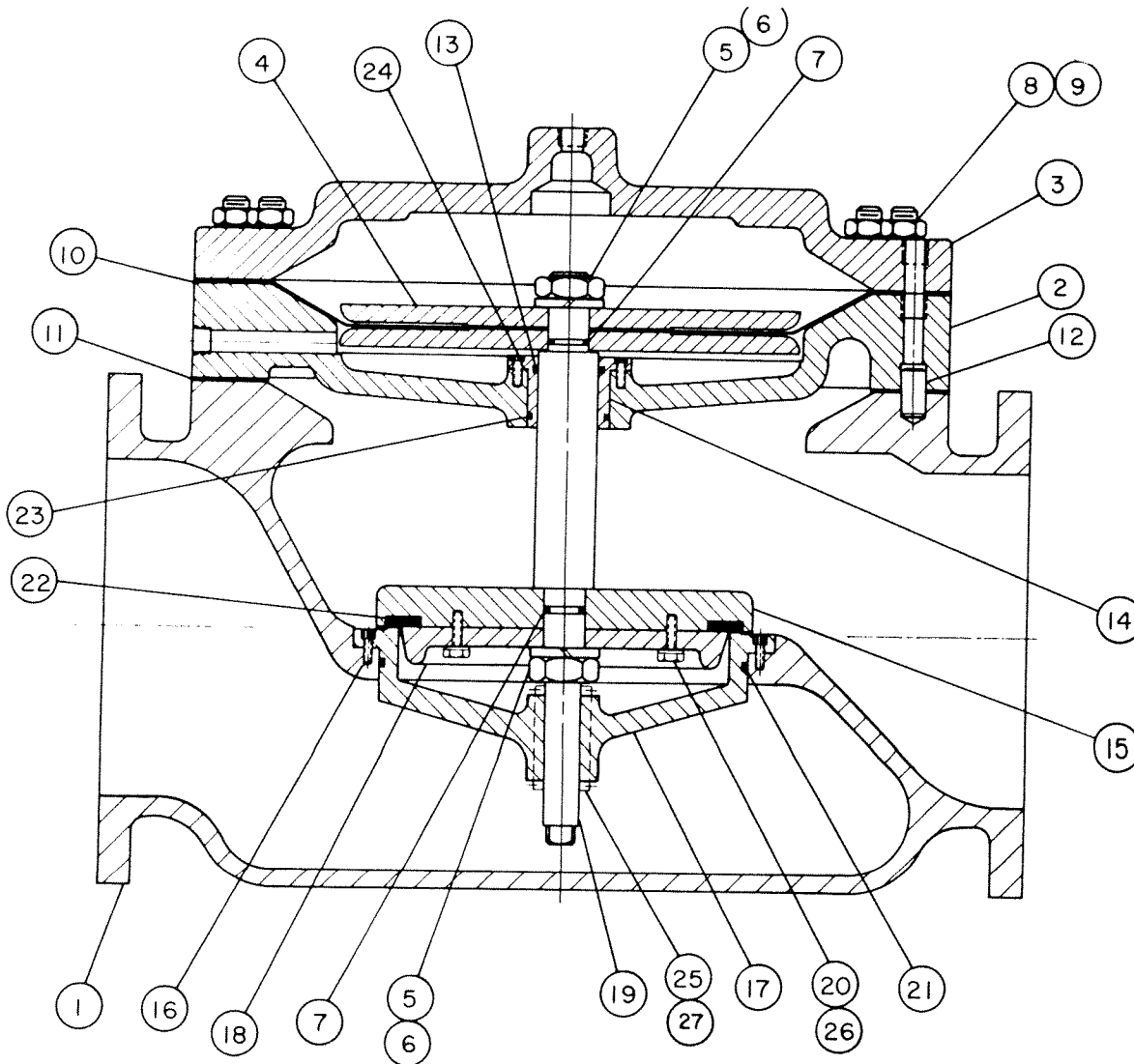
ITEM	PART NO	QTY	DESCRIPTION	MATERIAL
1	301006	1	BODY	DUCTILE IRON
2	303049	1	BONNET	DUCTILE IRON
3	306041	1	INTERMEDIATE PLATE	DUCTILE IRON
4	306456	1	SEAT PLATE	STEEL
5	307446	2	DIAPHRAGM PLATE	STEEL
6	309036	1	SEAT RETAINER	DUCTILE IRON
7	313766	1	STEM	STN. STEEL
8	311128 311728(b)	1	SEAT RING	BRONZE STN. STEEL
9	690539(a)	1	SEAT DISC	BUNA-N
10	690017(a)	1	DIAPHRAGM	NYLON/BUNA-N
11	693007(a)	1	GASKET	BUNA-N
12	620012	2	DOWEL PIN	STN. STEEL
13	320118 320018(b)	1	GUIDE BUSHING	BRONZE DELFIN
14	610125(a)	1	O-RING	BUNA-N
15	610456(a)	1	O-RING	BUNA-N
16	610121(a)	1	O-RING	BUNA-N
17	610230(a)	1	O-RING	BUNA-N
18	610328(a)	1	O-RING	BUNA-N
19	320011	20	STUD	ZN PL. STEEL
20	590028	20	NUT	ZN PL. STEEL
21	590723	1	NUT	STN. STEEL
22	685713	1	LOCK WASHER	STN. STEEL
23	590724	1	NUT	STN. STEEL
24	685717	1	LOCK WASHER	STN. STEEL
25	530711	16	SKT. HD. CAPSCREW	STN. STEEL
26	531702	16	HEX HD. CAPSCREW	STN. STEEL
27	685701	16	LOCK WASHER	STN. STEEL
28	530700	4	SKT. HD. CAPSCREW	STN. STEEL
29	300097(b)	1	LOWER BUSHING	TEFLON
30	630714(b)	2	SNAP RING	STN. STEEL

(a) : RECOMMENDED SPARE PARTS.

(b) : PARTS FURNISHED WITH "STAINLESS STEEL TRIM."

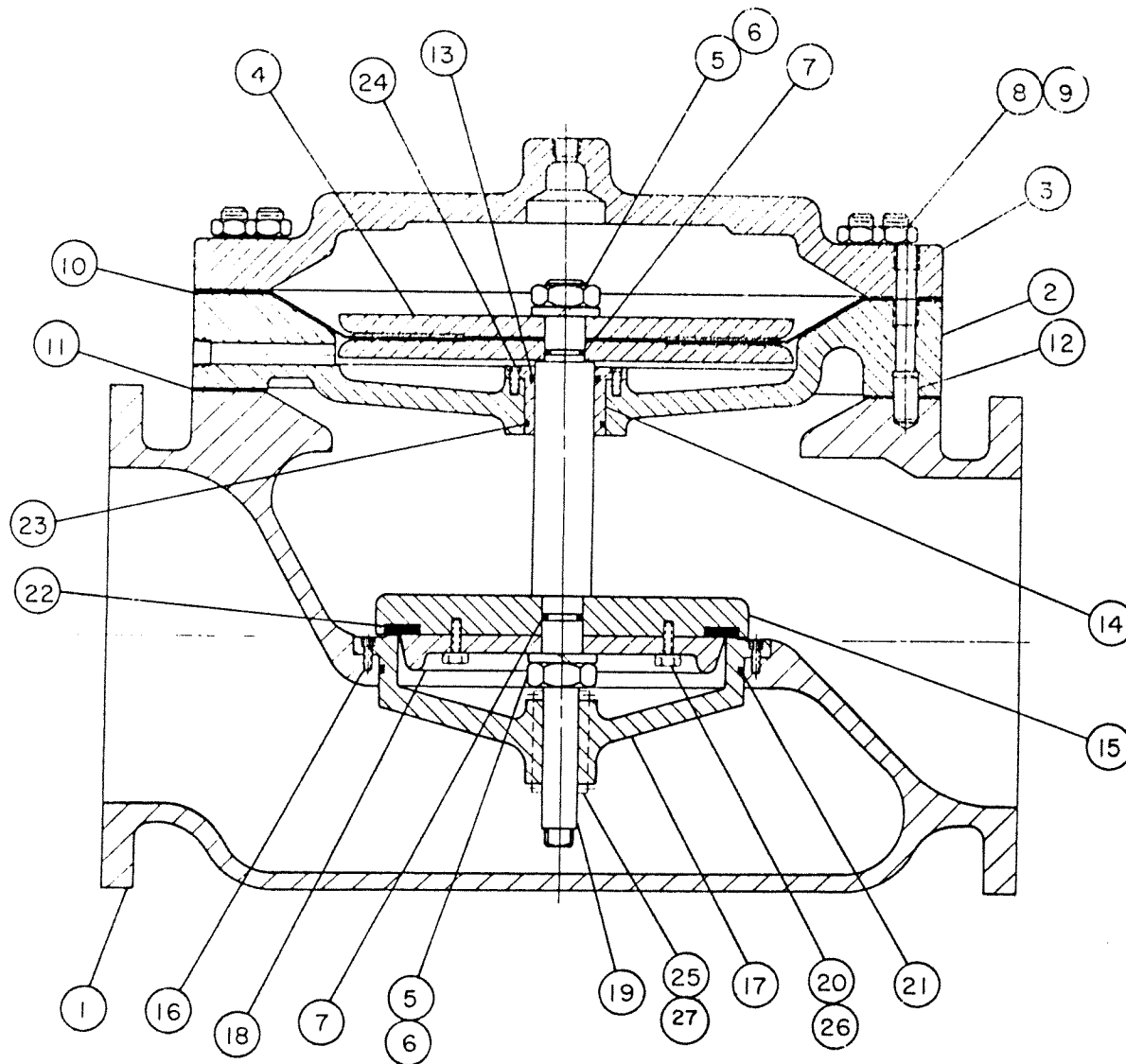
				MATERIAL	TOLERANCES	OCV Control Valves		
E						TULSA OKLAHOMA USA		
D						12" POWER-ACTUATED VALVE ASSEMBLY		
C								
B								
A		4-7-2015	JRK			SIZE	DRAWING NUMBER	REV
CHG	ECN	DATE	BY			A	1575	
REVISIONS				REF DWG NO'S	12.5%			

* Recommended Spare Parts
 ** Provided with Stn. Steel Seat Ring Only



ITEM	OCV NO.	QTY	DESCRIPTION	MATERIAL
1	301007	1	BODY, 150#	DUCTILE IRON
	301607		BODY, 300#	DUCTILE IRON
	301307		BODY, 150#	STEEL
	301707		BODY, 300#	STEEL
2	306037	1	INTERMEDIATE PLATE	DUCTILE IRON
3	303037	1	BONNET	DUCTILE IRON
4	307437	2	DIAPHRAGM PLATE	STEEL
5	590736	2	HEX NUT	STN. STEEL
6	685762	2	LOCKWASHER	STN. STEEL
7*	610222	2	O-RING	BUNA-N
8	300019	20	STUD	ZINC PL. STEEL
9	590028	20	HEX NUT	ZINC PL. STEEL
10*	690055	1	DIAPHRAGM	BUNA-N
11*	693025	1	GASKET	BUNA-N
12	620011	2	DOWEL PIN	STN. STEEL
13*	610335	1	O-RING	BUNA-N
14	300178	1	GUIDE BUSHING	BRONZE
15	306447	1	SEAT PLATE	STEEL
16	530711	16	SOCKET HEAD CAPSCREW	STN. STEEL
17	311107	1	SEAT RING	BRONZE
	311707			STN. STEEL
18	309037	1	SEAT RETAINER	DUCTILE IRON
19	313749	1	STEM	STN. STEEL
20	531722	16	HEX HEAD CAPSCREW	STN. STEEL
21*	610459	1	O-RING	BUNA-N
22*	690507	1	SEAT DISC	BUNA-N
23*	610338	1	O-RING	BUNA-N
24	530718	4	SOCKET HEAD CAPSCREW	STN. STEEL
25**	300078	1	LOWER BUSHING	TEFLON
26	685701	16	LOCKWASHER	STN. STEEL
27**	630718	2	RETAINING RING	STN. STEEL

				MATERIAL		TOLERANCES		 Control Valves Your <u>Best</u> Control Valve Source		
						UNLESS NOTED FRACTIONAL $\pm 1/64$ DECIMAL $\pm .005$ MACH. FINISH 125 ANGULAR $\pm 1/2^\circ$				
CHG	E.C. NO.	DATE	BY	NO. REQ'D		DRAWN BY	DATE	SIZE	DRAWING NUMBER	REV.
REVISIONS				REF DWG NO'S		SCALE	20%	CHKD. BY	DATE	A



* Recommended Spare Parts
 ** Provided with Stn. Steel Seat Ring Only

ITEM	OCV NO.	QTY	DESCRIPTION	MATERIAL
1	301008	1	BODY, 150#	DUCTILE IRON
	301608		BODY, 300#	DUCTILE IRON
	301308		BODY, 150#	STEEL
	301708		BODY, 300#	STEEL
2	306038	1	INTERMEDIATE PLATE	DUCTILE IRON
3	303038	1	BONNET	DUCTILE IRON
4	307438	2	DIAPHRAGM PLATE	STEEL
5	590736	2	HEX NUT	STN. STEEL
6	685762	2	LOCKWASHER	STN. STEEL
7*	610222	2	O-RING	BUNA-N
8	300098	20	STUD	ZINC. PL. STEEL
9	590029	20	HEX NUT	ZINC. PL. STEEL
10*	690042	1	DIAPHRAGM	BUNA-N
11*	693028	1	GASKET	BUNA-N
12	620011	2	DOWEL PIN	STN. STEEL
13*	610335	1	O-RING	BUNA-N
14	300178	1	GUIDE BUSHING	BRONZE
15	306448	1	SEAT PLATE	STEEL
16	530712	16	SOCKET HEAD CAPSCREW	STN. STEEL
17	311108	1	SEAT RING	BRONZE
	311708			STN. STEEL
18	309038	1	SEAT RETAINER	DUCTILE IRON
19	313720	1	STEM	STN. STEEL
20	531704	16	HEX HEAD CAPSCREW	STN. STEEL
21*	610463	1	O-RING	BUNA-N
22*	690508	1	SEAT DISC	BUNA-N
23*	610338	1	O-RING	BUNA-N
24	530718	4	SOCKET HEAD CAPSCREW	STN. STEEL
25**	300078	1	LOWER BUSHING	TEFLON
26	685703	16	LOCKWASHER	STN. STEEL
27**	630718	2	RETAINING RING	STN. STEEL

				MATERIAL		TOLERANCES		 Control Valves Your <u>Best</u> Control Valve Source				
						UNLESS NOTED FRACTIONAL $\pm 1/64$ DECIMAL $\pm .005$ MACH. FINISH 125 ANGULAR $\pm 1/2^\circ$						
CHG	E.C. NO.	DATE	BY	NO. REQ'D		DRAWN BY SCOTT A.		DATE 10-1-97		SIZE	DRAWING NUMBER	REV.
REVISIONS				SCALE 20%		CHKD. BY		DATE		A		A
REF DWG NO'S												



Global performance. **Personal** touch.