

APPLICATIONS:

As oil or water valve for emulsion treaters, water knockouts and gunbarrels. Can be used for pressure, atmospheric, or vacuum operation. Ideal for discharging salt water to disposal systems.

FEATURES:

- Single soft seat for tight shut off
- Balanced against upstream pressure
- Balanced against downstream pressure or vacuum
- Standard weight and lever holds approx. 4' liquid head
- Weights may be added to increase liquid head
- Can be manually opened and closed
- Sample tap on inlet connection
- Rotary stuffing box with leakless, low friction TEFLON packing
- All interior parts can be removed without taking valve out of line
- Prevents air from entering salt water disposal system piping

CERTIFICATIONS:

- Canadian Registration Number (CRN):
- 0C15735.24567890NTY (Ductile)
- 0C15811.24567890NTY (Steel)

TEMPERATURE:

Delrin Seats should only be used up to 180°F (82°C) max

OPERATION:

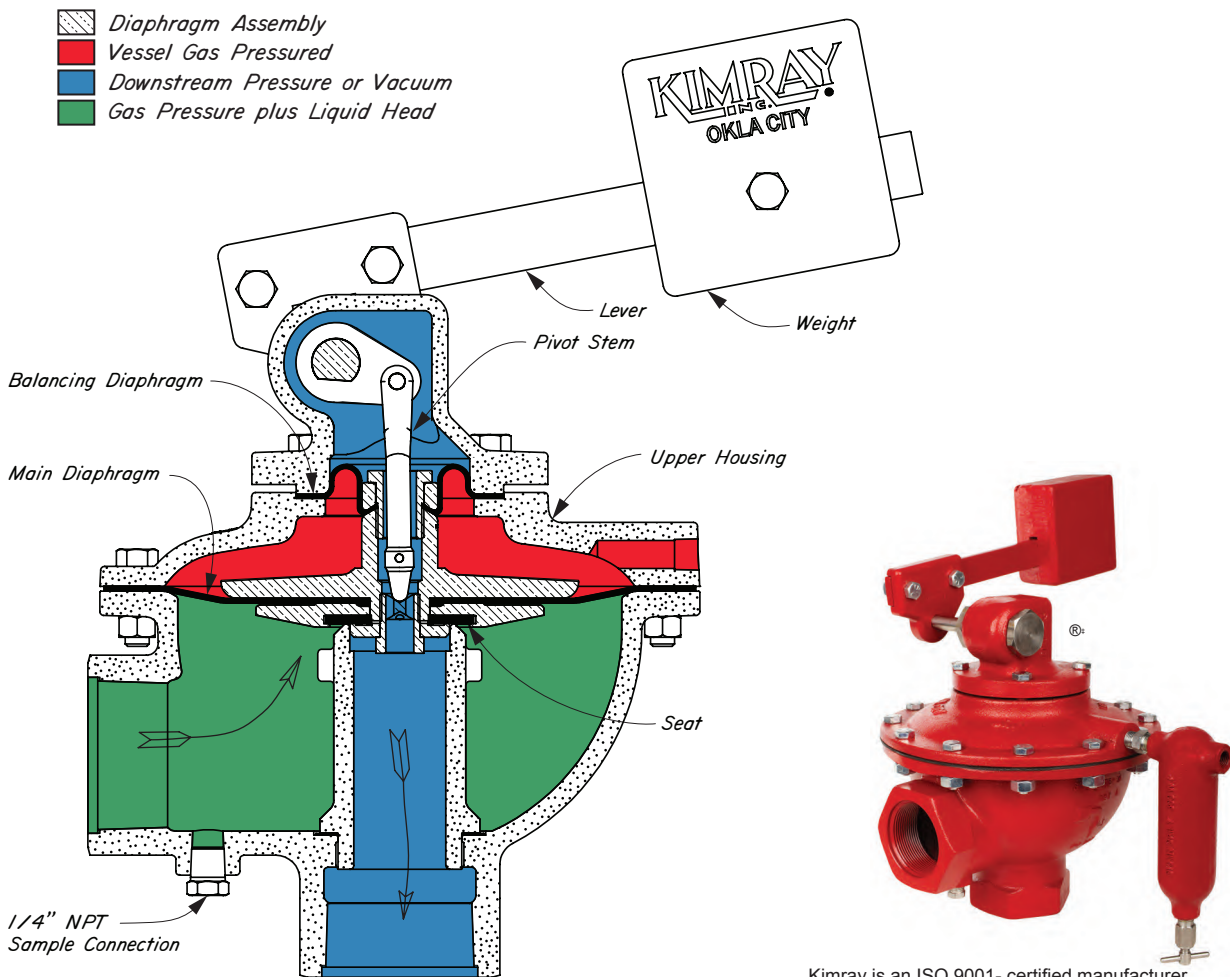
The inlet of the valve is connected to the water siphon leg or oil discharge line from an emulsion treater or water knockout. Vessel Gas Pressure (Red) is connected to the UPPER HOUSING to balance the Gas Pressure under the MAIN DIAPHRAGM.

The effective area of the BALANCING DIAPHRAGM is the same as the effective area of the SEAT. Pressure or vacuum acting on either side of the BALANCING DIAPHRAGM will cancel the pressure or vacuum acting on the SEAT. This balancing feature prevents the slamming open and closed prevalent in unbalanced single seat construction.

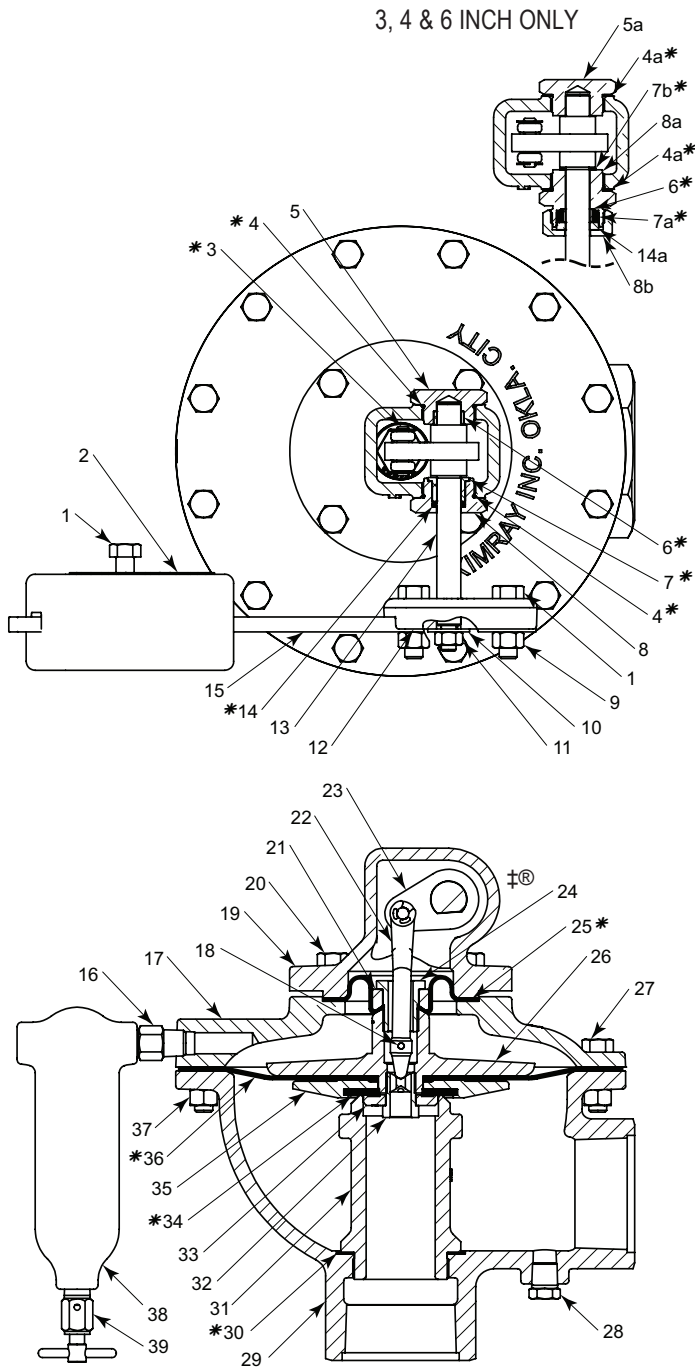
The Vessel Gas Pressure (Red) with the UPPER HOUSING acts upwardly on the BALANCING DIAPHRAGM to cancel the downward pressure on the single SEAT. Downstream Pressure Vacuum (Blue) acting on the SEAT is communicated to the top side of BALANCING DIAPHRAGM. This cancels any downstream pressure or vacuum effect on the valve operation.

The force to hold the SEAT closed is applied by a WEIGHT and LEVER through a rotary TEFLON packed stuffing box to a PIVOT STEM which pushes down on the Diaphragm Assembly. When the liquid rises in the discharge piping of the vessel above the set level, it lifts the Diaphragm Assembly against the WEIGHT load to open the valve. As liquid is discharged to lower the level, the WEIGHT closes the valve.

Liquid level may be adjusted up to approximately four feet by moving the WEIGHT on the LEVER. Additional weights may be added if a higher level is desired.



**TREATER VALVE
DUCTILE IRON**



ITEM	QTY.	DESCRIPTION	PART NO.			
			2 INCH	3 INCH	4 INCH	6 INCH
1		BOLT	247 x 3	430 x 3	430 x 3	1795 x 4
2		WEIGHT	424 x 1	425 x 1	426 x 1	426 x 2
3	2	LINK PIN w/ SNAP RINGS * (kit includes Snap Rings only)	316		317	1790
4	2	O RING *	2131HSN			
4a	2	GASKET *		365	366	1789
5	1	TRUNNION PLUG	7522			
5a	1	TRUNNION PLUG		368	369	1777
6	1	PACKING *	354	355	356	1786
7	1	BUSHING *	7518			
7a		PACKING RING *		352 x 1	353 x 2	1787 X 2
7b	1	THRUST WASHER *		361	362	1788
8	1	STUFFING BOX	7520			
8a	1	STUFFING BOX		358	359	1779
8b	1	STUFFING BOX NUT		346	347	1778
9	2	NUT		241		101
10	1	NYLOCK NUT	7366	7411		7486
11	1	LEVER HUB	7600	7601	7602	7603
	1	SET SCREW (NOT SHOWN)		7608		
12	1	WASHER	4492	7544		4491
13	1	SHAFT	7404	7408	7427	7449
14		O RING *	154HSN			
14a	1	FOLLOWER		349	350	1785
15	1	LEVER BAR	419		420	
16	1	NIPPLE		648		
17	1	HOUSING	1499	411	412	1768
18	1	PIN	932	428	429SS6	1792SS6
19	1	BONNET	295	296	297	1767
20		BOLT	380 x 4	247 x 6	247 x 8	1794 x 8
21	1	DIAPHRAGM RETAINER	401SS6	402SS6	403SS6	1782
22	1	STEM	398	399	400	1774
23	1	TRUNNION HUB	7403	7407	7454	7453
24	1	DIAPHRAGM BOLT	407	408	409	1780
25	1	DIAPHRAGM *	416	417	418	1766
26	1	DIAPHRAGM PLATE	404	405	406	1769
27		BOLT	247 x 12	430 x 14	430 x 16	1795 x 24
28	1	PLUG		699		
29	1	BODY				
		SCREWED ANGLE	381			
		FLANGED ANGLE	1492	382	383	1765
30	1	GASKET *	387	388	389	1797
31	1	REMOVABLE SEAT	384DEL	385DEL	386	1771
32	1	PIVOT BOLT		396	397	1781
33	1	RATIO PLUG	413SS6	414SS6	415SS6	1773
34	1	SEAT *	7502HSN	7503HSN	392	1793P
35	1	SEAT DISC	393KC	394KC	395	1770
36	1	DIAPHRAGM *	421	422	423	1764
37		NUT	241 x 12	241 x 14	241 x 16	101 x 24
38	1	DRIP POT BODY		431		
39	1	BLEED VALVE		YBF1		

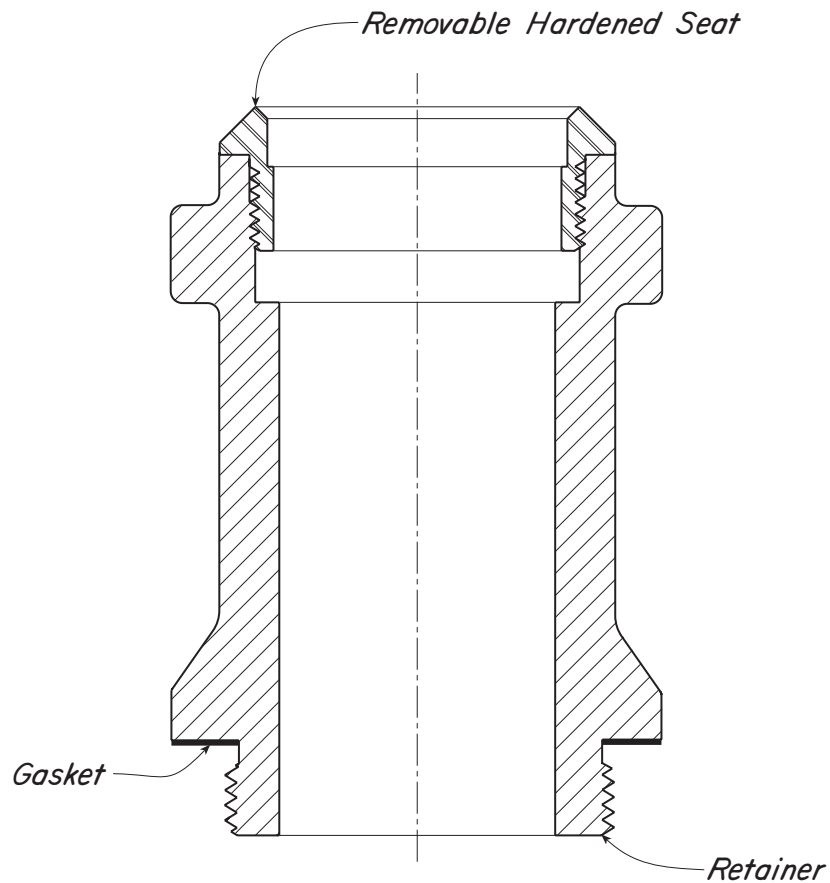
VALVES AVAILABLE:

PART NO.	BODY CONNECTION	BODY TYPE	MODEL NO.	OPER. PRES.	MAX W.P.	REP. KIT
DAA	2" NPT	ANGLE	26 SWA	0-125	125	REL
DAB	2" 150RF	ANGLE	26 FWA	0-125	125	REL
DAC	3" 150RF	ANGLE	36 FWA	0-125	125	REM
DAD	4" 150RF	ANGLE	46 FWA	0-125	125	REN
DAE	6" 150RF	ANGLE	66 FWA	0-60	60	REP

NOTES:

*These parts are recommended spare parts and are stocked as repair kits.
 For standard & optional Seals, Metals, Cv values, Material specifications & Dimensions see Technical Data on pages D:I - D:V
 † Max W.P. valves based on -20°F to 100°F. See page D:V for temps above 100°F

Kimray is an ISO 9001- certified manufacturer.



SEATS AVAILABLE:

LINE SIZE	SEAT	RETAINER	GASKET
2"	384HA	384HB	387
3"	385PH	385HB	388
3"	385ASS6	385HB	388

Table 1 - Flow Coefficient(Cv)					
2" Treater valve					
Trim Size in. (mm)	Cf	Valve Opening Percentage			
		25	50	75	100
2 in (50 mm)	0.75	2.5	13.5	26	36.5
3" Treater valve					
Trim Size in. (mm)	Cf	Valve Opening Percentage			
		25	50	75	100
3 in (76 mm)	0.75	16.5	37.9	66.2	93.3
4" Treater valve					
Trim Size in. (mm)	Cf	Valve Opening Percentage			
		25	50	75	100
4 in (100 mm)	0.75	28.4	77.1	131.4	173.5
6" Treater valve					
Trim Size in. (mm)	Cf	Valve Opening Percentage			
		25	50	75	100
6 in (152 mm)	0.75	49.3	147.6	270.2	371.9

Kimray flow equations conform to ANSI/ISA - 75.01.01-2002

Kimray inherent flow characteristics conform to ANSI/ISA 75.11.01 -1985

* Use "2 inch Removable Full Port" values for regulators with operating pressure ranges of 10-250psig, 10-285psig & 10-300psig

TREATER VALVE
DIMENSIONS

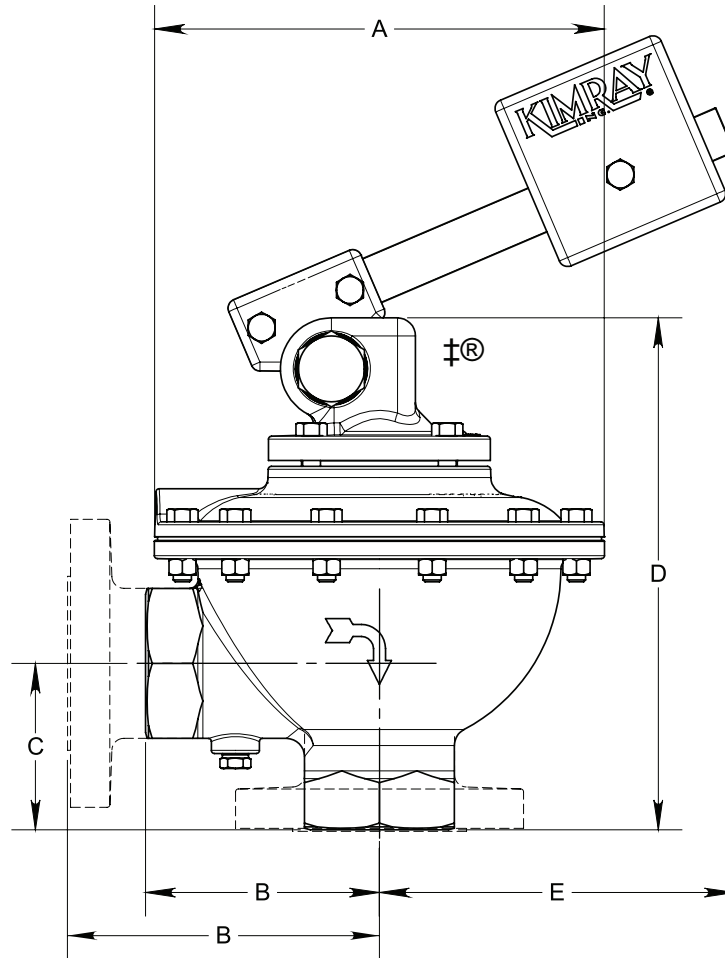


Table 2 - Treater Valves

	End Connection	A	B	C	D	E	Approx. Weight
2"	NPT	9 3/8 in. (238 mm)	4 7/8 in. (123 mm)	3 1/2 in. (88 mm)	10 5/8 in. (269 mm)	8 1/2 in. (215 mm)	46 lbs (20.8 kg)
	150FF	9 3/8 in. (238 mm)	6 1/2 in. (165 mm)	3 1/2 in. (88 mm)	10 5/8 in. (269 mm)	8 1/2 in. (215 mm)	
3"	125FF	11 3/4 in. (298 mm)	8.00 in. (203 mm)	4 1/4 in. (107 mm)	13 1/2 in. (342 mm)	13.00 in. (330 mm)	90 lbs (40.8 kg)
	150FF	11 3/4 in. (298 mm)	8.00 in. (203 mm)	4 1/4 in. (107 mm)	13 1/2 in. (342 mm)	13.00 in. (330 mm)	
4"	125FF	13.00 in. (330 mm)	9.00 in. (228 mm)	4 3/4 in. (120 mm)	14 5/8 in. (371 mm)	13.00 in. (330 mm)	132 lbs (59.8 kg)
	150FF	13.00 in. (330 mm)	9.00 in. (228 mm)	4 3/4 in. (120 mm)	14 5/8 in. (371 mm)	13.00 in. (330 mm)	
6"	125FF	18 5/8 in. (473 mm)	12 1/4 in. (311 mm)	6 3/4 in. (95 mm)	21 1/2 in. (317 mm)	12 1/2 in. (317 mm)	375 lbs (170 kg)
	150FF	18 5/8 in. (473 mm)	12 1/4 in. (311 mm)	6 3/4 in. (95 mm)	21 1/2 in. (317 mm)	12 1/2 in. (317 mm)	

Table 3 - Seal Options		
Part	Standard Material	Optional Material
Diaphragm	Nitrile	FKM, HSN
Soft Seat	HSN	FKM, HSN
Packing	PTFE	FKM, HSN
O Ring	HSN	FKM
Bushing	PTFE	N/A

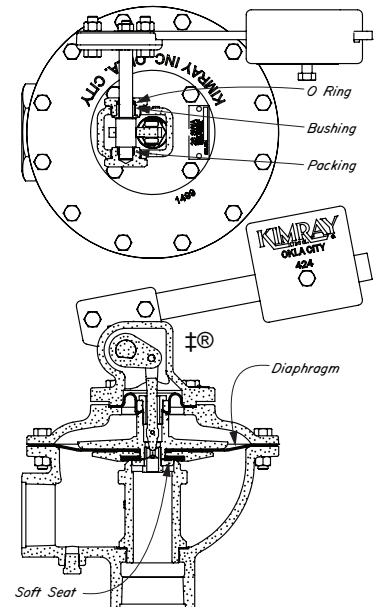


Table 4 - Seal Specifications				
		NITRILE	HIGHLY SATURATED NITRILE	FKM
Kimray Suffix		-	HSN	V
Resistance	Abrasion	G	G	G
	Acid	F	E	E
	Chemical	FG	FG	E
	Cold	G	G	PF
	Flame	P	P	E
	Heat	G	E	E
	Oil	E	E	E
	Ozone	P	G	E
	Set	GE	GE	E
	Tear	FG	FG	F
	Water/Steam	FG	E	P
	Weather	F	G	E
	CO2	FG	GE	PG
	H2S	P	FG	P
Properties	Dynamic	GE	GE	GE
	Electrical	F	F	F
	Impermeability	G	G	G
	Tensile Strength	GE	E	GE
	Temp. Range (°F)	-40 to +220°F	-15° to +300°F	-10° to +350°F
	Temp. Range (°C)	-40 to +105°C	-26° to +149°C	-23° to +177°C
	Form	O,S,D	O,S,D	O,S,D
RATINGS: P-POOR, F-FAIR, G-GOOD, E-EXCELLENT				

Table 5 - Materials of Construction

Part Description	Standard Material	Optional Material(s)
Body	Ductile Iron, ASTM A-395	ASTM A-216 WCB, ASTM A-479 316SS
Removable Seat	Delrin	Ductile Iron, ASTM A-395, ASTM-A276, ASTM-A564
Packing Box	ASTM A-582 303SS	ASTM A-479 316SS
Soft Seat	HSN	FKM

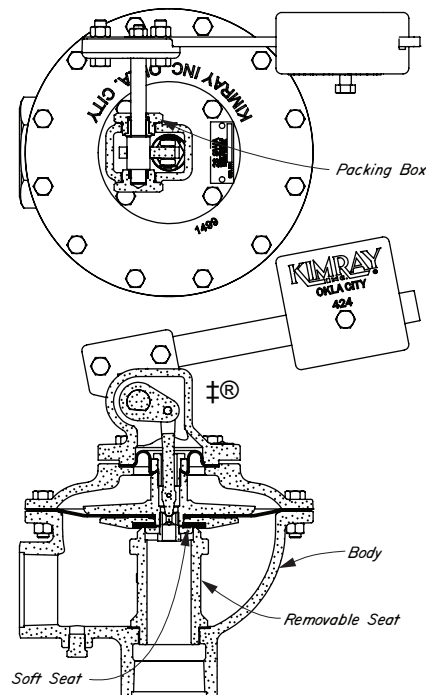
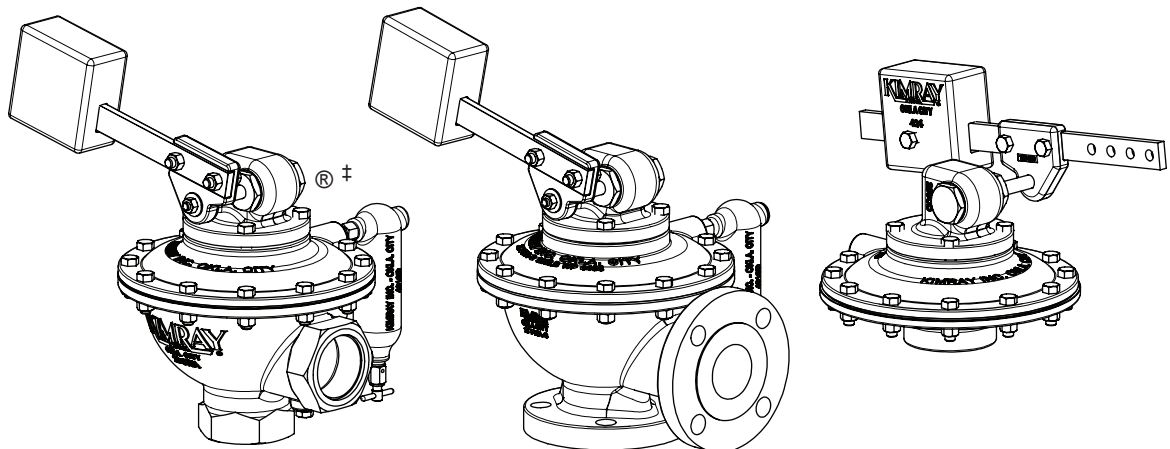


Table 6 - Material Specifications

	Body			Inner Parts		
	DUCTILE IRON	CAST STEEL	316 STAINLESS STEEL	316 STAINLESS STEEL	17-4 PH STAINLESS STEEL	DELTRIN
Kimray SUFFIX	CD	CS	C6	S6	PH	DEL
ASTM GROUP	ASTM-A395	ASTM-A216	ASTM-A351	ASTM-A276	ASTM-A564	ASTM D-4181
GRADE		WCB	CF8M	316	630	ACETAL
UNS		J03002	J92900	S31600	S17400	
NACE Compliant	Yes	Yes	Yes	Yes	Yes	Yes

Table 7 - Temperature vs. Pressure Rating	
ASTM Class Temperature °F (°C)	Flange Class
	150 RF
	Static Test Pressure (psig)
	450 (31 bar)
Maximum Allowable Non-Shock Pressure (psig)	
CAST DUCTILE ASTM A-395	
	Flange Class
	150 RF
-20 to 100 (-28 to 37)	250 (17.2 bar)
200 (93)	235 (16.2 bar)
300 (148)	215 (14.8 bar)
400 (204)	200 (13.7 bar)
500 (260)	170 (11.7 bar)
600 (315)	140 (9.6 bar)
650 (343)	125 (8.6 bar)
700 (371)	
CAST STEEL ASTM A-216 - WCB	
	Flange Class
	150 RF
-20 to 100 (-28 to 37)	285 (20.0 bar)
200 (93)	260 (17.9 bar)
300 (148)	230 (15.9 bar)
400 (204)	200 (13.8 bar)
500 (260)	170 (11.7 bar)
600 (315)	140 (9.7 bar)
650 (343)	125 (8.6 bar)
700 (371)	110 (7.6 bar)



SCREWED (NPT)

FLANGED (150RF)

DIAPHRAGM
MOTOR VALVE

Kimray valves conform to ASME B16.34-2009 for working pressure vs working temperature & ASME B16.5-1996 for flanges and flanged fittings.