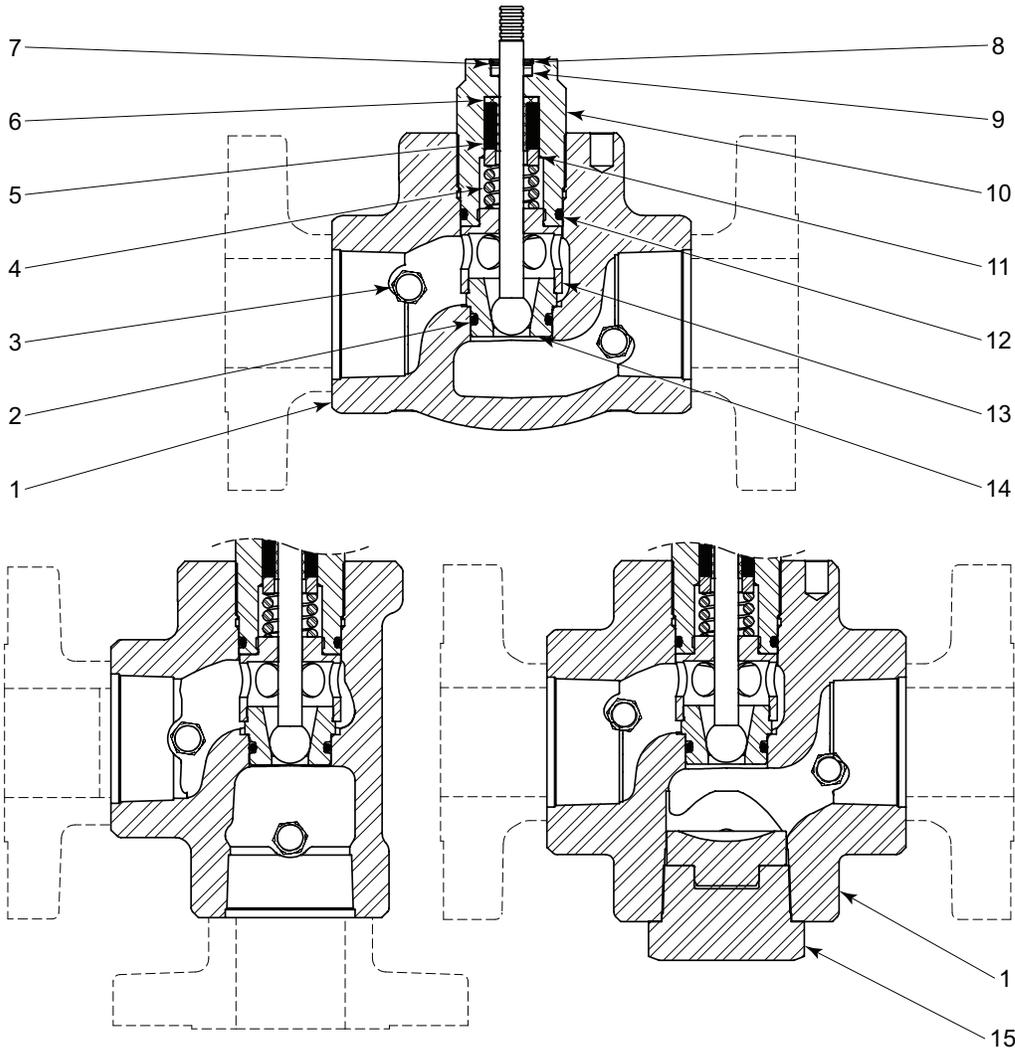


HIGH PRESSURE CONTROL VALVES



STEM GUIDED BOTTOM WORKS MODEL CVS PARTS DRAWING



ITEM	QTY.	DESCRIPTION	PART NO.							
			STANDARD		CORROSIVE		EROSIVE		MIXED DUTY	
			1 INCH	2 INCH	1 INCH	2 INCH	1 INCH	2 INCH	1 INCH	2 INCH
1	1	Body	See Table On Page 01:10.3							
2	1	O-Ring *	155	157	155	157	155	157	155	157
3	2	Plug	----	699	----	699SS6	----	699	----	699SS6
4	1	Spring	465	509	465HAC	509HAC	465	509	465HAC	509HAC
5 (QTY)	1	Packing Ring *	484 (4)	533 (6)	484 (4)	533 (6)	484 (4)	533 (6)	484 (4)	533 (6)
6	1	Packing Sleeve *	485	534	485	534	485	534	485	534
5&6	1	Optional VEE Packing 450°F max	5117	5118	5117	5118	5117	5118	5117	5118
		Optional Grafoil Packing 450°F max	----	5118GF	----	5118GF	----	5118GF	----	5118GF
7	1	Retainer	486	528	486	528	486	528	486	528
8	1	Snap Ring *	938	940	938	940	938	940	938	940
9	1	Felt Wiper *	480	527	480	527	480	527	480	527
10	1	Stuffing Box	479	526	479SS6	526SS6	479	526	479SS6	526SS6
11	1	Packing Follower	482SS6	531SS6	482SS6	531SS6	482SS6	531SS6	482SS6	531SS6
12	1	O-Ring *	156	520	156	520	156	520	156	520
13	1	Cage	2837	2889	2837SS6	2889SS6	2837	2889	2837	2889PH
14	1	Trim Set	See Table On Page 01:10.3							
15	1	2" NPT Hex Plug w/Wear Plug	----	7886ASB	----	7886ASB	----	7886ASB	----	7886ASB
2" NPT Hex Plug for Angle T-Body (not shown)			----	7665R	----	7665R	----	7665R	----	7665R
Repair Kits			RFA	RFE	RFA	RFE	RFA	RFE	RFA	RFE
Stuffing Box Assemblies		Order Code	EAW	EBY	EAWSS6	EBYSS6	EAW	EBY	EAWSS6	EBYSS6
		Max W.P. psig	6000	6170	6000	6170	6000	6170	6000	6170

* These parts are recommended spare parts and are stocked as repair kits.

All Pictures shown are for illustration purpose only. Actual product may vary due to product enhancement.

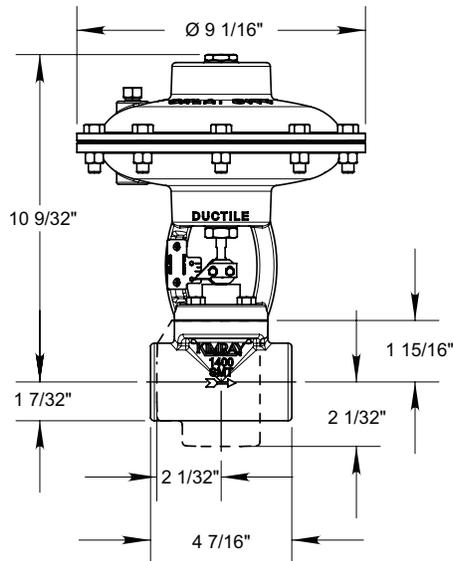
Table 1 - Flow Coefficient(Cv)														
Line Size	Trim Size in. (mm)	Trim Type	Cf	Valve Opening Percentage										
				10	20	30	40	50	60	70	80	90	100	
Stem Guided														
1"	1/8 in (3.17 mm)	Linear (Nominal)	0.58	0.10	0.40	0.50	0.70	0.90	1.00	1.00	1.00	1.10	1.10	
	3/16 in (4.74 mm)		0.59	0.20	0.50	0.77	1.00	1.30	1.40	1.50	1.50	1.50	1.50	
	1/4 in (6.35 mm)		0.78	0.28	0.72	1.11	1.50	1.80	1.95	2.08	2.13	2.15	2.17	
	3/8 in (9.52 mm)		0.91	0.40	1.10	1.60	2.20	2.70	2.90	3.10	3.20	3.20	3.20	
	1/2 in (12.7 mm)		0.94	0.70	1.90	2.90	4.00	4.80	5.20	5.50	5.60	5.70	5.70	
2"	1/4 in (6.35 mm)		0.55	0.40	1.00	1.50	2.00	2.50	2.70	2.80	2.90	2.90	3.00	
	3/8 in (9.52 mm)		0.77	0.53	1.33	2.06	2.80	3.40	3.60	3.90	4.00	4.00	4.00	
	1/2 in (12.7 mm)		0.78	0.94	2.38	3.67	4.97	5.98	6.48	6.91	7.06	7.13	7.20	
	3/4 in (19.0 mm)		0.80	1.60	4.00	6.20	8.40	10.10	11.00	12.00	12.00	12.00	12.00	
	1 in (25.4 mm)		0.77	2.80	7.00	11.00	15.00	18.00	19.00	20.00	21.00	21.00	21.00	
1"	1/8 in (3.17 mm)		Quick Opening (Carbide)	0.73	0.39	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40
	3/16 in (4.74 mm)			0.74	0.77	0.90	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
	1/4 in (6.35 mm)			0.68	0.88	1.51	1.67	1.71	1.73	1.73	1.74	1.74	1.74	1.74
	3/8 in (9.52 mm)	0.74		1.02	2.40	3.36	3.64	3.73	3.78	3.82	3.83	3.83	3.86	
	1/2 in (12.7 mm)	0.90		1.09	2.46	4.17	5.03	5.27	5.45	5.60	5.72	5.85	5.93	
2"	1/4 in (6.35 mm)	0.65		1.23	1.82	1.87	1.87	1.87	1.87	1.87	1.87	1.87	1.87	
	3/8 in (9.52 mm)	0.76		1.65	3.41	3.77	3.83	3.84	3.84	3.84	3.84	3.84	3.84	
	1/2 in (12.7 mm)	0.80		2.26	4.35	5.87	6.36	6.51	6.58	6.61	6.63	6.63	6.63	
	3/4 in (19.0 mm)	0.78		2.16	4.61	7.23	9.19	10.2	10.6	10.9	10.9	10.9	10.9	
	1 in (25.4 mm)	0.70		2.54	5.58	9.30	12.3	14.2	15.1	15.5	15.6	15.6	15.8	
1"	1/8 in (3.17 mm)	Equal Percentage		0.73	0.01	0.02	0.03	0.04	0.06	0.09	0.15	0.26	0.32	0.34
	1/4 in (6.35 mm)			0.66	0.05	0.10	0.14	0.19	0.29	0.58	0.93	1.27	1.63	1.99
	1/2 in (12.7 mm)			0.78	0.16	0.32	0.47	0.60	0.93	1.74	2.99	4.41	5.65	6.49
2"	1/4 in (6.35 mm)		0.65	0.10	0.14	0.19	0.23	0.27	0.55	0.82	1.12	1.62	1.72	
	7/16 in (11.1 mm)		0.60	0.10	0.30	0.50	0.70	1.00	1.50	2.60	3.80	4.80	5.40	
	5/8 in (15.8 mm)		0.58	0.30	0.50	0.90	1.10	1.40	2.30	3.90	6.40	8.70	10.80	
	7/8 in (22.2 mm)		0.66	0.40	0.90	1.57	2.10	3.00	4.20	6.30	9.60	13.00	17.00	
Cage Guided														
2"	1 1/2 in (38mm)		Equal Percentage	0.75	0.60	1.30	2.20	3.40	5.00	8.60	14.0	21.0	26.0	28.6
	2 in (51 mm)	0.76		2.00	4.00	6.00	8.00	11.0	20.0	33.0	45.0	51.0	57.0	
3"	2 in (51 mm)	0.75		2.90	4.90	7.40	9.50	12.0	17.4	28.9	40.8	48.1	52.6	
	3 in (76 mm)	0.76		4.00	6.00	10.0	13.0	16.0	26.0	54.0	83.0	97.0	107	
4"	3 in (76 mm)	0.75		4.00	6.00	9.00	12.0	16.0	25.0	52.0	81.0	95.0	115	
	4 in (102 mm)	0.75		9.00	13.0	18.0	26.0	36.0	64.0	104	148	197	222	
6"	4 in (102 mm)	0.75		9.00	13.0	18.0	26.0	36.0	64.0	104	148	197	222	
	6 in (152 mm)	0.75		7.00	20.0	45.0	78.0	108	140	222	318	399	431	
8"	6 in (152 mm)	0.75		47.0	60.0	90.0	106	119	139	173	243	294	453	
	8 in (203 mm)	0.75		51.0	55.0	64.0	134	162	330	452	527	571	630	
10"	6 in (152 mm)	0.75		26.0	37.0	46.0	53.0	56.0	58.0	104	146	655	655	
	8.5 in (216 mm)	0.75		21.0	22.0	27.0	103	209	429	596	663	695	884	
8"	8 in (203 mm)	Modified E.P.		0.75	51.0	53.0	235	362	485	584	665	699	745	810
10"	8.5 in (216 mm)		0.75	28.0	72.0	420	509	632	678	769	814	832	1091	
2"	2 in (51 mm)	Quick Open	0.76	0.80	1.50	6.10	13.0	20.2	27.6	35.6	42.4	48.8	53.0	
3"	3 in (76 mm)		0.76	5.10	21.3	42.4	63.8	83.0	97.7	105	111	113	115	
4"	4 in (102 mm)		0.75	8.20	43.8	80.0	119	170	211	237	247	252	253	

HIGH PRESSURE CONTROL VALVES

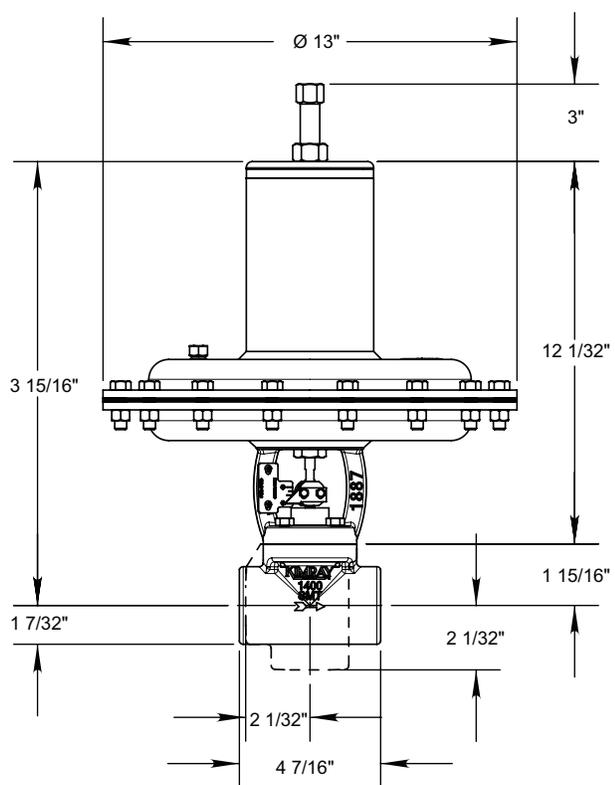


DIMENSIONS 1" MODEL CVS

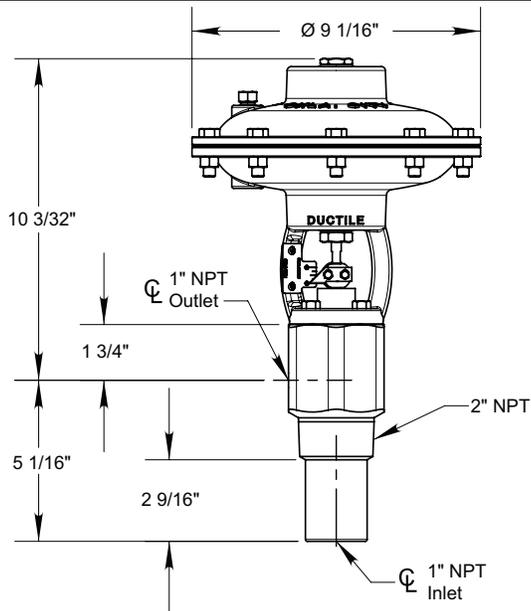
1" HPCV



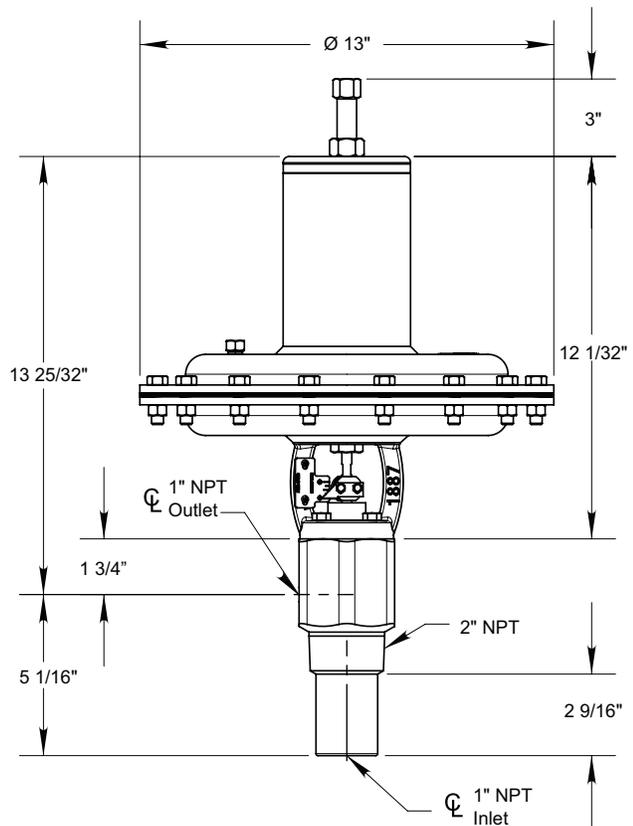
1" HPCV -65 TOPWORKS



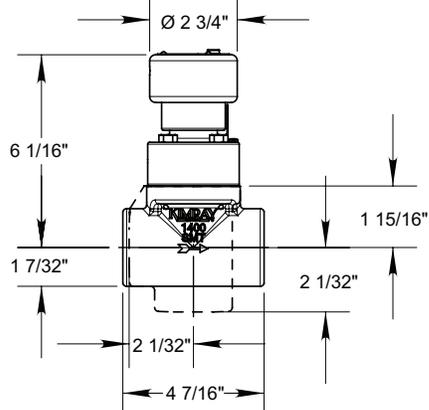
1" SMS



1" SMS -65 TOPWORKS

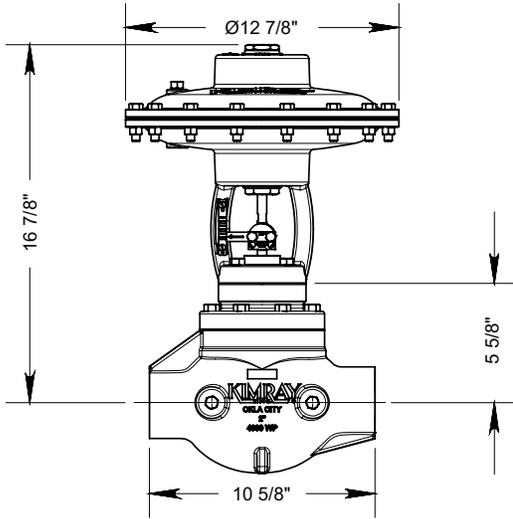


1" SMVA/T

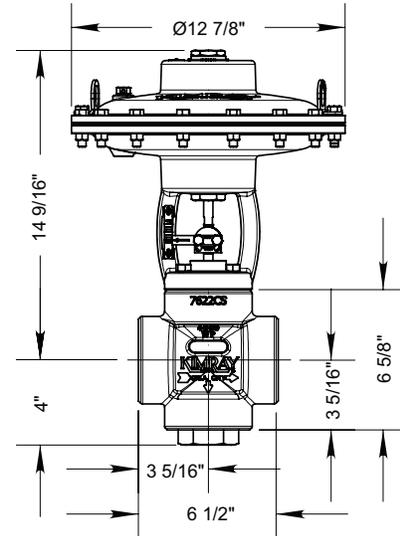


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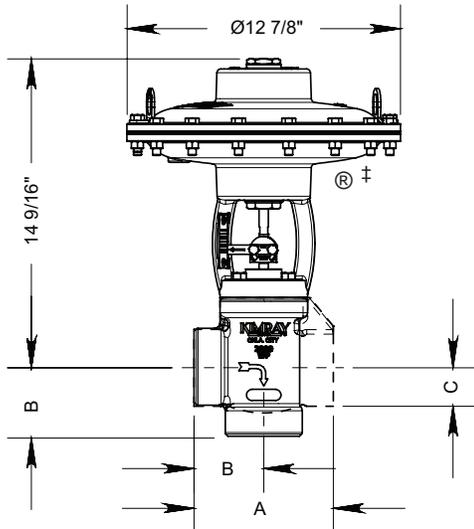
2" HPCV PB



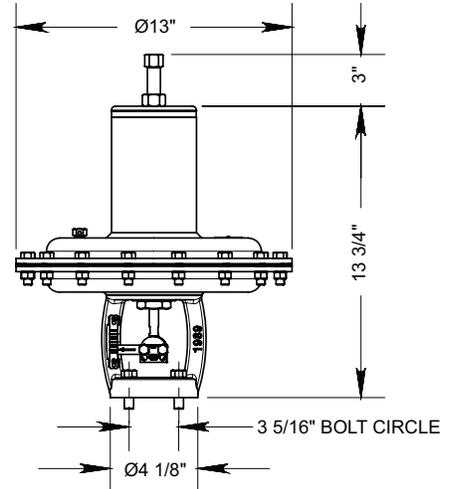
2" SMD



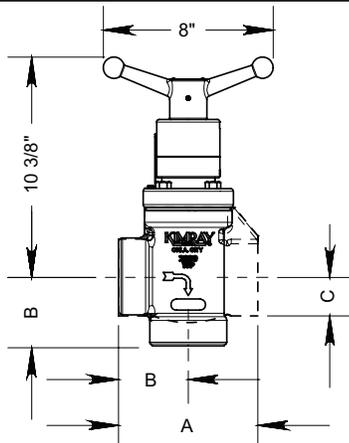
2" HPCV



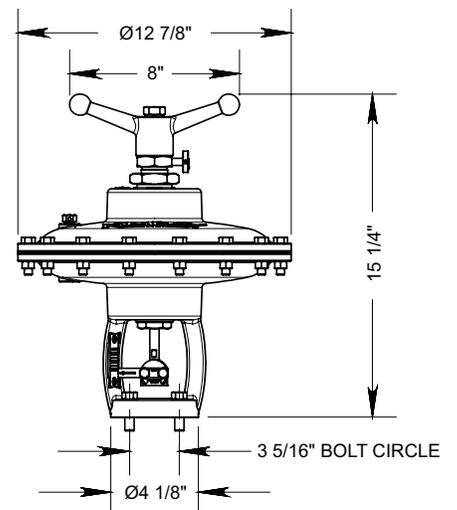
2" -65 TOPWORKS



2" SMVA/T TOPWORKS



2" MVP TOPWORKS



MODEL NO.	A	B	C
2200	6 9/16"	3 9/32"	1 13/16"
2400	6 9/16"	3 9/32"	2 1/16"

All dimensions are in inches
Flanged body dimensions available on request.

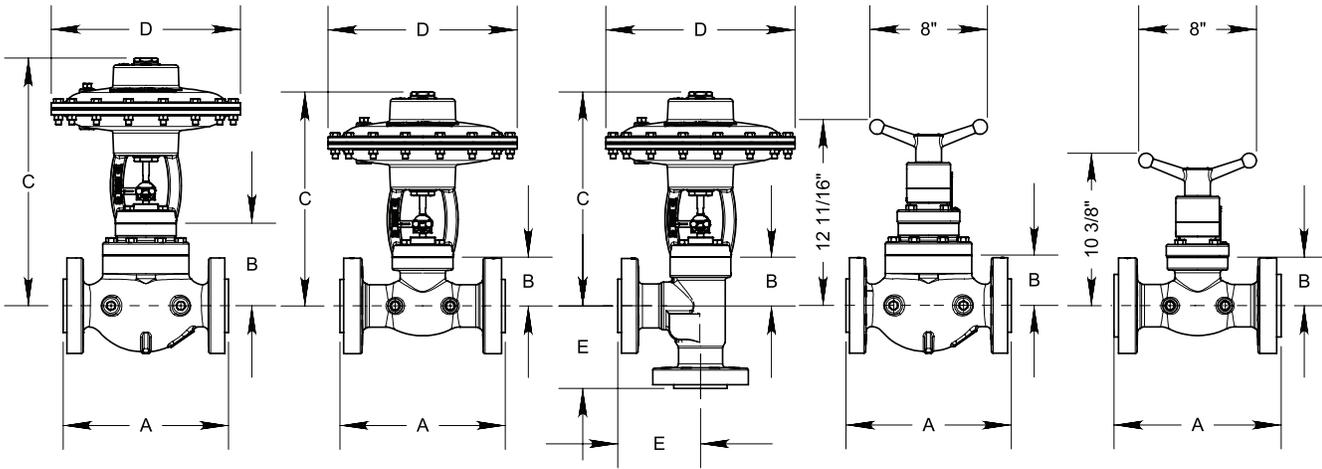
All Pictures shown are for illustration purpose only. Actual product may vary due to product enhancement.
‡ Configuration of High Pressure Control Valve is a trademark of Kimray, Inc.
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HIGH PRESSURE CONTROL VALVES



DIMENSIONS

FLANGED BODY MODEL CVS & CVC



	SIZE	BODY STYLE	A	B	C	D	E
STEM GUIDED	1"	150RF	7 1/4"	1 15/16"	10 1/2"	9 1/8"	
		150RTJ	7 5/8"	1 15/16"	10 1/2"	9 1/8"	
		300RF	7 3/4"	1 15/16"	10 1/2"	9 1/8"	
		300RTJ	8 1/8"	1 15/16"	10 1/2"	9 1/8"	
		600RF	8 1/4"	1 15/16"	10 1/2"	9 1/8"	
		600RTJ	8 1/4"	1 15/16"	10 1/2"	9 1/8"	
		1500RF	10 3/4"	1 15/16"	10 1/2"	9 1/8"	
	1500RTJ	10 3/4"	1 15/16"	10 1/2"	9 1/8"		
	2"	150RF	10"	3 3/16"	14 1/2"	12 7/8"	5"
		150RTJ	10 3/8"	3 3/16"	14 1/2"	12 7/8"	5"
		300RF	10 1/2"	3 3/16"	14 1/2"	12 7/8"	5 1/2"
		300RTJ	11"	3 3/16"	14 1/2"	12 7/8"	5 1/4"
		600RF	11 1/4"	3 3/16"	14 1/2"	12 7/8"	5 5/8"
		600RTJ	11 3/8"	3 3/16"	14 1/2"	12 7/8"	5 5/8"
		1500RF	13 3/8"	3 3/16"	14 1/2"	12 7/8"	7 1/4"
	1500RTJ	13 1/2"	3 3/16"	14 1/2"	12 7/8"	7 13/32"	
	2500RTJ	16 3/8"	3 3/16"	14 1/2"	12 7/8"		
2-1/16 API 5000	14 3/4"	4 1/4"	14 1/2"	12 7/8"	7 3/8"		
CAGE GUIDED	2"	150RF	10"	5 5/8"	17"	12 7/8"	
		300RF	10 1/2"	5 5/8"	17"	12 7/8"	
		600RF	11 1/4"	5 5/8"	17"	12 7/8"	
		1500RF	13 3/8"	5 5/8"	17"	12 7/8"	
		1500RTJ	13 1/2"	5 5/8"	17"	12 7/8"	
	3"	150RF	11 3/4"	7 1/4"	27"	15 3/4"	
		300RF	12 1/2"	7 1/4"	27"	15 3/4"	
		600RF	13 1/4"	7 1/4"	27"	15 3/4"	
		600RTJ	13 3/8"	7 1/4"	27"	15 3/4"	
	4"	150RF	13 7/8"	11"	30"	15 3/4"	
		300RF	14 1/2"	11"	30"	15 3/4"	
		600RF	15 1/2"	11"	30"	15 3/4"	
	6"	150RF	17 3/4"	11 3/16"	34 1/2"	20 7/16"	
		300RF	18 5/8"	11 3/16"	34 1/2"	20 7/16"	
		600RF	20 1/16"	11 3/16"	34 1/2"	20 7/16"	
	8"	150RF	21 3/8"	11 5/16"	34 1/2"	20 1/2"	
		300RF	22 3/8"	11 5/16"	34 1/2"	20 1/2"	
600RF		24"	11 5/16"	34 1/2"	20 1/2"		
10"	150RF	26 1/2"	11 5/16"	34 1/2"	20 1/2"		
	300RF	27 7/8"	11 5/16"	34 1/2"	20 1/2"		
	600RF	29 9/16"	11 5/16"	34 1/2"	20 1/2"		

All Pictures shown are for illustration purpose only. Actual product may vary due to product enhancement.

Part	Standard Material	Optional Material
Diaphragm	Nitrile	FKM
Packing Rings	Nitrile	FKM, Aflas, HSN, Graphite
Packing Sleeve	Teflon	
O-rings	Nitrile	FKM, Aflas, HSN
Seal Ring	Polyurethane	Aflas

		NITRILE	HIGHLY SATURATED NITRILE	FKM	AFLAS®	TEFLON	GRAPHITE PACKING
Resistance	Kimray Suffix	-	HSN	V	AF	T	G
	Abrasion	G	G-E	G	G	E	PF
	Acid	F	G-E	G-E	E	E	G
	Chemical	F	F	E	E	E	E
	Cold	G	G	P	P	E	E
	Flame	P	P	E	E	P	E
	Heat	G	E	E	E	E	E
	Oil	G-E	E	E	E	E	E
	Ozone	P	G	G-E	E	E	F
	Set	G	G	G-E	P	P	G
	Tear	F	F	F	P	E	P
	Water/Steam	F	E	P	G	E	E
	Weather	F	G	E	E	E	E
	CO2	F-G	G	G	G	E	E
	H2S	P	F	P	E	E	E
Methanol	F	E	P	P	E	E	
Properties	Dynamic	G	G	G	G	P	E
	Electrical	F	F	F	G-E	E	Conductive
	Impermeability	G	G	G	G	E	G
	Tensile Strength	G	G-E	G	F	E	P
Temp. Range		-20° to +250°F	-20° to +300°F	-15° to +400°F	+15° to +450°F	-450° to +500°F	-328° to +850°F
		-29° to +121°C	-29° to +149°C	-26° to +204°C	-9° to +232°C	-268° to +260°C	-200° to +455°C
RATINGS: P-POOR, F-FAIR, G-GOOD, E-EXCELLENT							

Table 4 - Material Options Stem Guided			
Part Description	Standard Material	Erosive Material	Corrosive Material
Body	WCB (ASTM A216)		WCB (ASTM A216) ‡
Actuator	Ductile (ASTM A395)		
Stuffing Box	Carbon Steel (ASTM A105)		316SS (ASTM A479)
Cage	Alloy Steel (ASTM A108)		316SS (ASTM A479)
Stem	303SS (ASTM A582)		316SS (ASTM A479)
Plug*	Chrome Alloy	Tungsten Carbide	316SS (ASTM A479)
Seat	D-2 (ASTM A681)	Zirconia	316SS (ASTM A479)
Cover Bonnet (Metering Valve)	WCB (ASTM A216)		

*Material can vary by trim size. See Page 01:200.2

‡ Coated Parts available with "K" service type

Table 5 - Material Options Cage Guided			
Part Description	Standard Material	Erosive Material	Corrosive Material
Body	WCB (ASTM A216)		WCB (ASTM A216) ‡
Actuator	Ductile (ASTM A395)		
Stuffing Box	2" - 4"	Carbon Steel (ASTM A105)	316SS (ASTM A479)
	6" - 10"	316SS (ASTM A479)	
Cover Bonnet (Upper Housing)	WCB (ASTM A216)		WCB (ASTM A216) ‡
Cage	2 & 3 inch 316SS (ASTM A479)	4-10 inch 316SS (ASTM A351 CF8M)	
Stem	316SS (ASTM A479)	303SS (ASTM A582)	316SS (ASTM A479)
Piston	316SS (ASTM A479)	D-2 (ASTM A597)	316SS (ASTM A479)
Seat Disc	D2 (ASTM A681)	Zirconia	316SS (ASTM A479)
Ratio Plug	D-2 (ASTM A597)		316SS (ASTM A351 CF8M)
Seat	D-2 (ASTM A681)		316SS (ASTM A479)
Bonnet (Metering Valve)	WCB (ASTM A216)		

‡ Coated Parts available with "K" service type

Table 6 - 1" Stem Guided HPCV

Valve Description	ΔP	0 psig (0 bar)		100 psig (6.8 bar)		500 psig (34.4 bar)		1000 psig (68.9 bar)		1500 psig (103.4 bar)	
		Spring	Crack	Full	Crack	Full	Crack	Full	Crack	Full	Crack
1400 SMT PO 1/8" IV	621 (10 lbs)	3 psig (0.21 bar)	9.5 psig (0.66 bar)	3 psig (0.21 bar)	9 psig (0.62 bar)	3 psig (0.21 bar)	8.5 psig (0.59 bar)	2 psig (0.13 bar)	7 psig (0.48 bar)	2 psig (0.13 bar)	6 psig (0.41 bar)
	463 (20 lbs)	6.5 psig (0.44 bar)	20.5 psig (1.41 bar)	6 psig (0.41 bar)	20 psig (1.37 bar)	6 psig (0.41 bar)	19.5 psig (1.34 bar)	5.5 psig (0.37 bar)	18 psig (1.24 bar)	5.5 psig (0.37 bar)	17.5 psig (1.20 bar)
	464 (30 lbs)	9.5 psig (0.65 bar)	34 psig (2.34 bar)	9.5 psig (0.65 bar)	34 psig (2.34 bar)	9 psig (0.62 bar)	33 psig (2.27 bar)	9 psig (0.62 bar)	32 psig (2.20 bar)	8.5 psig (0.58 bar)	31 psig (2.13 bar)
1400 SMT PO 1/8" IV EP	621 (10 lbs)	3.5 psig (0.23 bar)	10 psig (0.68 bar)	3.5 psig (0.23 bar)	10 psig (0.68 bar)	3 psig (0.21 bar)	8.5 psig (0.58 bar)	2.5 psig (0.17 bar)	7.5 psig (0.51 bar)	2 psig (0.13 bar)	6 psig (0.41 bar)
	463 (20 lbs)	7 psig (0.48 bar)	21.5 psig (1.48 bar)	7 psig (0.48 bar)	21 psig (0.44 bar)	6.5 psig (0.44 bar)	19.5 psig (1.34 bar)	6 psig (0.41 bar)	18.5 psig (1.27 bar)	6 psig (0.41 bar)	17.5 psig (1.20 bar)
	464 (30 lbs)	12.5 psig (0.86 bar)	38 psig (2.61 bar)	12.5 psig (0.86 bar)	38 psig (2.61 bar)	11 psig (0.75 bar)	35.5 psig (2.44 bar)	10.5 psig (0.72 bar)	34.5 psig (2.37 bar)	10 psig (0.68 bar)	33 psig (2.27 bar)
1400 SMT PO 3/16" IV	621 (10 lbs)	3.5 psig (0.23 bar)	10.5 psig (0.72 bar)	3.5 psig (0.23 bar)	10 psig (0.68 bar)	3.5 psig (0.23 bar)	9 psig (0.62 bar)	3.5 psig (0.23 bar)	7.5 psig (0.51 bar)	3 psig (0.21 bar)	6.5 psig (0.44 bar)
	463 (20 lbs)	6.5 psig (0.44 bar)	21.5 psig (1.48 bar)	6.5 psig (0.44 bar)	21 psig (1.44 bar)	7.5 psig (0.51 bar)	21 psig (1.44 bar)	7 psig (0.48 bar)	19.5 psig (1.34 bar)	7 psig (0.48 bar)	18.5 psig (1.27 bar)
	464 (30 lbs)	11 psig (0.75 bar)	36 psig (2.48 bar)	10.5 psig (0.72 bar)	36 psig (2.48 bar)	11 psig (0.75 bar)	35 psig (2.41 bar)	11 psig (0.75 bar)	34 psig (2.34 bar)	10.5 psig (0.72 bar)	32.5 psig (2.23 bar)
1400 SMT PO 1/4" IV	621 (10 lbs)	3 psig (0.21 bar)	9.5 psig (0.65 bar)	3 psig (0.21 bar)	9 psig (0.62 bar)	3 psig (0.21 bar)	8.5 psig (0.58 bar)	2.5 psig (0.17 bar)	7.5 psig (0.51 bar)	2.5 psig (0.17 bar)	6.5 psig (0.44 bar)
	463 (20 lbs)	6 psig (0.41 bar)	20.5 psig (1.41 bar)	6 psig (0.41 bar)	20 psig (1.37 bar)	6 psig (0.41 bar)	19.5 psig (1.34 bar)	5.5 psig (0.37 bar)	18 psig (1.24 bar)	5.5 psig (0.37 bar)	17 psig (1.20 bar)
	464 (30 lbs)	10 psig (0.68 bar)	35 psig (2.41 bar)	10 psig (0.68 bar)	35 psig (2.42 bar)	10 psig (0.68 bar)	34 psig (2.34 bar)	9.5 psig (0.65 bar)	33 psig (2.27 bar)	9 psig (0.62 bar)	32 psig (2.20 bar)
1400 SMT PO 1/4" IV EP	621 (10 lbs)	3 psig (0.20 bar)	10 psig (0.68 bar)	3 psig (0.20 bar)	9.5 psig (0.65 bar)	2.5 psig (0.17 bar)	8 psig (0.55 bar)	2.5 psig (0.17 bar)	7 psig (0.48 bar)	2 psig (0.13 bar)	6 psig (0.41 bar)
	463 (20 lbs)	6.5 psig (0.44 bar)	21.5 psig (1.48 bar)	6.5 psig (0.44 bar)	20 psig (1.37 bar)	6 psig (0.41 bar)	20 psig (1.37 bar)	6 psig (0.41 bar)	18.5 psig (1.27 bar)	6 psig (0.41 bar)	17.5 psig (1.20 bar)
	464 (30 lbs)	12 psig (0.83 bar)	40 psig (2.75 bar)	11.5 psig (0.79 bar)	39 psig (2.68 bar)	9.5 psig (0.66 bar)	35 psig (2.42 bar)	9 psig (0.62 bar)	33 psig (2.27 bar)	9 psig (0.62 bar)	32 psig (2.20 bar)
1400 SMT PO 3/8" IV SNAP	621 (10 lbs)	4.5 psig (0.31 bar)	10.5 psig (0.72 bar)	4.5 psig (0.31 bar)	10.5 psig (0.72 bar)	5.5 psig (0.38 bar)	9.5 psig (0.66 bar)	6.5 psig (0.44 bar)	8 psig (0.55 bar)	7.5 psig (0.51 bar)	7 psig (0.48 bar)
	463 (20 lbs)	7 psig (0.48 bar)	21.5 psig (1.48 bar)	7 psig (0.48 bar)	21 psig (1.44 bar)	9.5 psig (0.65 bar)	21 psig (0.44 bar)	10.5 psig (0.72 bar)	20 psig (1.37 bar)	11 psig (0.75 bar)	19 psig (1.31 bar)
	464 (30 lbs)	11 psig (0.75 bar)	35 psig (2.41 bar)	11 psig (0.75 bar)	35 psig (2.41 bar)	13 psig (0.89 bar)	35 psig (2.42 bar)	14 psig (0.97 bar)	33 psig (2.27 bar)	15.5 psig (1.06 bar)	32 psig (2.20 bar)
1400 SMT PO 3/8" IV	621 (10 lbs)	3 psig (0.20 bar)	9 psig (0.62 bar)	3 psig (0.20 bar)	9 psig (0.62 bar)	5 psig (0.34 bar)	9 psig (0.62 bar)	6.5 psig (0.44 bar)	7.5 psig (0.51 bar)	7.5 psig (0.51 bar)	6.5 psig (0.44 bar)
	463 (20 lbs)	6 psig (0.41 bar)	20.5 psig (1.41 bar)	6 psig (0.41 bar)	20 psig (1.37 bar)	8.5 psig (0.58 bar)	21 psig (0.44 bar)	9.5 psig (0.65 bar)	20 psig (1.37 bar)	10.5 psig (0.72 bar)	18.5 psig (1.27 bar)
	464 (30 lbs)	9.5 psig (0.66 bar)	34 psig (2.34 bar)	9.5 psig (0.66 bar)	34 psig (2.34 bar)	11.5 psig (0.79 bar)	33 psig (2.27 bar)	12.5 psig (0.85 bar)	32 psig (2.20 bar)	13.5 psig (0.93 bar)	31 psig (2.14 bar)
1400 SMT PO 1/2" IV	621 (10 lbs)	3 psig (0.20 bar)	10.5 psig (0.72 bar)	3 psig (0.20 bar)	10 psig (0.68 bar)	5.5 psig (0.38 bar)	8.5 psig (0.58 bar)	7 psig (0.48 bar)	7.5 psig (0.51 bar)	9 psig (0.62 bar)	6.5 psig (0.44 bar)
	463 (20 lbs)	6.5 psig (0.44 bar)	21 psig (0.44 bar)	6 psig (0.41 bar)	20.5 psig (1.41 bar)	8.5 psig (0.58 bar)	19.5 psig (1.34 bar)	10 psig (0.68 bar)	18.5 psig (1.27 bar)	12 psig (0.83 bar)	17.5 psig (1.20 bar)
	464 (30 lbs)	11.5 psig (0.79 bar)	37 psig (2.54 bar)	11 psig (0.75 bar)	36 psig (2.48 bar)	13.5 psig (0.93 bar)	35 psig (2.41 bar)	15 psig (1.03 bar)	34 psig (2.34 bar)	17 psig (1.27 bar)	33 psig (2.27 bar)
1400 SMT PO 1/2" IV EP	621 (10 lbs)	3.5 psig (0.24 bar)	10 psig (0.68 bar)	3.5 psig (0.24 bar)	9.5 psig (0.66 bar)	7 psig (0.48 bar)	10 psig (0.68 bar)	7.5 psig (0.52 bar)	7.5 psig (0.51 bar)	9.5 psig (0.65 bar)	6 psig (0.41 bar)
	463 (20 lbs)	7 psig (0.48 bar)	21.5 psig (1.48 bar)	7.5 psig (0.51 bar)	21.5 psig (1.48 bar)	10.5 psig (0.72 bar)	21 psig (0.44 bar)	12.5 psig (0.86 bar)	20.5 psig (1.41 bar)	14 psig (0.97 bar)	19 psig (1.31 bar)
	464 (30 lbs)	11 psig (0.75 bar)	37 psig (2.54 bar)	11 psig (0.75 bar)	37 psig (2.54 bar)	14 psig (0.97 bar)	35 psig (2.41 bar)	16 psig (1.10 bar)	34 psig (2.34 bar)	18 psig (1.24 bar)	33 psig (2.27 bar)

Table 7 - 2" Stem Guided HPCV

Valve Description	ΔP	0 psig (0 bar)		100 psig (6.8 bar)		500 psig (34.4 bar)		1000 psig (68.9 bar)		1500 psig (103.4 bar)	
	Spring	Crack	Full	Crack	Full	Crack	Full	Crack	Full	Crack	Full
2400 SMT PO 1/4" EP IV	1245 (15 lbs)	3.5 psig (0.24 bar)	15.5 psig (1.06 bar)	3 psig (0.20 bar)	15 psig (1.03 bar)	2.5 psig (0.17 bar)	15 psig (1.03 bar)	2 psig (0.13 bar)	14.5 psig (1.00 bar)	1.5 psig (0.10 bar)	13 psig (0.89 bar)
	538 (20 lbs)	3.5 psig (0.24 bar)	18 psig (1.24 bar)	3.5 psig (0.24 bar)	17.5 psig (1.20 bar)	3.5 psig (0.24 bar)	17.5 psig (1.20 bar)	2.5 psig (0.17 bar)	16.5 psig (1.13 bar)	1.5 psig (0.10 bar)	15 psig (1.03 bar)
	508 (30 lbs)	7.5 psig (0.52 bar)	32 psig (2.20 bar)	7 psig (0.48 bar)	32 psig (2.20 bar)	6.5 psig (0.44 bar)	31 psig (2.14 bar)	6 psig (0.41 bar)	30 psig (2.07 bar)	5.5 psig (0.38 br)	29 psig (2.00 bar)
2400 SMT PO 1/4" IV	1245 (15 lbs)	3.5 psig (0.24 bar)	16 psig (1.10 bar)	3.5 psig (0.24 bar)	16 psig (1.10 bar)	3 psig (0.20 bar)	14.5 psig (1.00 bar)	3 psig (0.20 bar)	13 psig (0.89 bar)	3 psig (0.20 bar)	12.5 psig (0.85 bar)
	538 (20 lbs)	4 psig (0.27 bar)	18.5 psig (1.27 bar)	3.5 psig (0.24 bar)	18.5 psig (1.27 bar)	3.5 psig (0.24 bar)	18 psig (1.24 bar)	3 psig (0.20 bar)	17.5 psig (1.20 bar)	3 psig (0.20 bar)	16.5 psig (1.13 bar)
	508 (30 lbs)	6.5 psig (0.44 bar)	32 psig (2.20 bar)	6.5 psig (0.44 bar)	33 psig (2.27 bar)	7 psig (0.48 bar)	31 psig (2.14 bar)	6.5 psig (0.44 bar)	30 psig (2.07 bar)	6.5 psig (0.44 bar)	29 psig (2.00 bar)
2400 SMT PO 1/4" IV SNAP	1245 (15 lbs)	3.5 psig (0.23 bar)	15.5 psig (1.06 bar)	4 psig (0.27 bar)	15.5 psig (1.06 bar)	3 psig (0.20 bar)	15 psig (1.03 bar)	2.5 psig (0.17 bar)	14.5 psig (1.00 bar)	2 psig (0.13 bar)	14 psig (0.97 bar)
	538 (20 lbs)	4 psig (0.27 bar)	18 psig (1.24 bar)	4 psig (0.27 bar)	18 psig (1.24 bar)	3 psig (0.20 bar)	17 psig (1.22 bar)	2.5 psig (0.17 bar)	17 psig (1.22 bar)	2 psig (0.13 bar)	16.5 psig (1.13 bar)
	508 (30 lbs)	6.5 psig (0.44 bar)	32 psig (2.20 bar)	7 psig (0.48 bar)	32 psig (2.20 bar)	6 psig (0.41 bar)	31 psig (2.14 bar)	5 psig (0.34 bar)	30 psig (2.07 bar)	4 psig (0.27 bar)	29 psig (2.00 bar)
2400 SMT PO 3/8" IV	1245 (15 lbs)	4 psig (0.27 bar)	16.5 psig (1.13 bar)	4 psig (0.27 bar)	16 psig (1.10 bar)	3.5 psig (0.23 bar)	16 psig (1.10 bar)	3.5 psig (0.23 bar)	15.5 psig (1.06 bar)	3.5 psig (0.23 bar)	15 psig (1.03 bar)
	538 (20 lbs)	4.5 psig (0.31 bar)	18 psig (1.24 bar)	4 psig (0.27 bar)	18 psig (1.24 bar)	4 psig (0.27 bar)	17 psig (1.22 bar)	4 psig (0.27 bar)	16.5 psig (1.13 bar)	4 psig (0.27 bar)	16.5 psig (1.13 bar)
	508 (30 lbs)	8 psig (0.55 bar)	32 psig (2.20 bar)	8 psig (0.55 bar)	32 psig (2.20 bar)	7.5 psig (0.51 bar)	32 psig (2.20 bar)	7.5 psig (0.51 bar)	31 psig (2.13 bar)	7.5 psig (0.51 bar)	30 psig (2.07 bar)
2400 SMT PO 3/8" IV SNAP	1245 (15 lbs)	4 psig (0.27 bar)	14.5 psig (1.00 bar)	3.5 psig (0.23 bar)	14.5 psig (1.00 bar)	4.5 psig (0.31 bar)	14 psig (0.97 bar)	4.5 psig (0.31 bar)	14 psig (0.97 bar)	4.5 psig (0.31 bar)	13.5 psig (0.93 bar)
	538 (20 lbs)	4 psig (0.27 bar)	17.5 psig (1.20 bar)	4 psig (0.27 bar)	17 psig (1.22 bar)	5 psig (0.34 bar)	17 psig (1.22 bar)	5 psig (0.34 bar)	16.5 psig (1.13 bar)	5 psig (0.34 bar)	16 psig (1.10 bar)
	508 (30 lbs)	7.5 psig (0.51 bar)	32 psig (2.20 bar)	7 psig (0.48 bar)	32 psig (2.20 bar)	8 psig (0.55 bar)	31 psig (2.13 bar)	8.5 psig (0.58 bar)	30 psig (2.07 bar)	8.5 psig (0.58 bar)	29 psig (2.00 bar)
2400 SMT PO 7/16" EP IV	1245 (15 lbs)	4 psig (0.27 bar)	15.5 psig (1.06 bar)	4 psig (0.27 bar)	15.5 psig (1.06 bar)	3.5 psig (0.23 bar)	15 psig (1.03 bar)	3.5 psig (0.23 bar)	14.5 psig (1.00 bar)	3.5 psig (0.23 bar)	14 psig (0.97 bar)
	538 (20 lbs)	4.5 psig (0.31 bar)	18.5 psig (1.31 bar)	4.5 psig (0.31 bar)	18.5 psig (1.27 bar)	4.5 psig (0.31 bar)	17.5 psig (1.20 bar)	4 psig (0.27 bar)	16 psig (1.10 bar)	4 psig (0.27 bar)	15 psig (1.03 bar)
	508 (30 lbs)	8 psig (0.55 bar)	32 psig (2.20 bar)	8 psig (0.55 bar)	31 psig (2.13 bar)	7.5 psig (0.51 bar)	30 psig (2.07 bar)	7.5 psig (0.51 bar)	29 psig (2.00 bar)	7.5 psig (0.51 bar)	28 psig (1.93 bar)
2400 SMT PO 1/2" IV	1245 (15 lbs)	4 psig (0.27 bar)	15 psig (1.03 bar)	4 psig (0.27 bar)	15 psig (1.03 bar)	4.5 psig (0.31 bar)	14.5 psig (1.00 bar)	5 psig (0.34 bar)	13.5 psig (0.93 bar)	5 psig (0.34 bar)	12 psig (0.83 bar)
	538 (20 lbs)	4 psig (0.27 bar)	17 psig (1.22 bar)	3.5 psig (0.23 bar)	16.5 psig (1.13 bar)	4.5 psig (0.31 bar)	16.5 psig (1.13 bar)	4.5 psig (0.31 bar)	15.5 psig (1.06 bar)	5 psig (0.34 bar)	14 psig (0.97 bar)
	508 (30 lbs)	7 psig (0.48 bar)	30 psig (2.07 bar)	7 psig (0.48 bar)	30 psig (2.07 bar)	8 psig (0.58 bar)	30 psig (2.07 bar)	8 psig (0.55 bar)	28 psig (1.93 bar)	8.5 psig (0.58 bar)	27 psig (1.86 bar)
2400 SMT 1/2" IV SNAP	1245 (15 lbs)	3 psig (0.20 bar)	16 psig (1.10 bar)	3 psig (0.20 bar)	15 psig (1.03 bar)	4.5 psig (0.31 bar)	14.5 psig (1.00 bar)	5 psig (0.34 bar)	14 psig (0.97 bar)	5 psig (0.34 bar)	13.5 psig (0.93 bar)
	538 (20 lbs)	3.5 psig (0.23 bar)	17 psig (1.22 bar)	3 psig (0.20 bar)	16.5 psig (1.13 bar)	4.5 psig (0.31 bar)	16 psig (1.10 bar)	5 psig (0.34 bar)	15 psig (1.03 bar)	5 psig (0.34 bar)	14.5 psig (1.00 bar)
	508 (30 lbs)	7 psig (0.48 bar)	32 psig (2.20 bar)	7.5 psig (0.51 bar)	32 psig (2.20 bar)	7.5 psig (0.51 bar)	31 psig (2.14 bar)	7.5 psig (0.51 bar)	30 psig (2.07 bar)	8 psig (0.55 bar)	29 psig (2.00 bar)
2400 SMT PO 5/8" EP IV	1245 (15 lbs)	4 psig (0.27 bar)	16 psig (1.10 bar)	4 psig (0.27 bar)	16 psig (1.10 bar)	6 psig (0.41 bar)	16.5 psig (1.13 bar)	7.5 psig (0.51 bar)	16 psig (1.10 bar)	8.5 psig (0.58 bar)	15.5 psig (1.06 bar)
	538 (20 lbs)	4 psig (0.27 bar)	19 psig (1.31 bar)	4 psig (0.27 bar)	19 psig (1.31 bar)	6.5 psig (0.44 bar)	18.5 psig (1.27 bar)	7.5 psig (0.51 bar)	17.5 psig (1.20 bar)	9 psig (0.62 bar)	17 psig (1.22 bar)
	508 (30 lbs)	8 psig (0.55 bar)	32 psig (2.20 bar)	8.5 psig (0.58 bar)	32 psig (2.20 bar)	10 psig (0.68 bar)	31 psig (2.14 bar)	11.5 psig (0.79 bar)	30 psig (2.06 bar)	12.5 psig (1.48 bar)	29 psig (2.00 bar)

2400 SMT PO 3/4" IV	1245 (15 lbs)	5 psig (0.34 bar)	17 psig (1.72 bar)	5 psig (0.34 bar)	17 psig (1.72 bar)	7.5 psig (0.51 bar)	14.5 psig (1.00 bar)	8.5 psig (0.58 bar)	13 psig (0.89 bar)	10 psig (0.68 bar)	12 psig (0.83 bar)
	538 (20 lbs)	5.5 psig (0.37 bar)	19 psig (1.31 bar)	5.5 psig (0.37 bar)	19 psig (1.31 bar)	7 psig (0.48 bar)	17 psig (1.72 bar)	9 psig (0.62 bar)	16 psig (1.10 bar)	11 psig (0.75 bar)	14 psig (0.97 bar)
	508 (30 lbs)	9 psig (0.62 bar)	34 psig (2.34 bar)	9 psig (0.62 bar)	34 psig (2.34 bar)	11 psig (0.75 bar)	33 psig (2.27 bar)	13 psig (0.89 bar)	32 psig (2.20 bar)	15 psig (1.03 bar)	30 psig (2.07 bar)
2400 SMT PO 3/4" IV SNAP	1245 (15 lbs)	4 psig (0.27 bar)	15 psig (1.03 bar)	4 psig (0.27 bar)	15 psig (1.03 bar)	6.5 psig (0.44 bar)	14.5 psig (0.96 bar)	8 psig (0.55 bar)	13.5 psig (0.93 bar)	9 psig (0.62 bar)	12 psig (0.83 bar)
	538 (20 lbs)	5 psig (0.34 bar)	18.5 psig (1.27 bar)	5 psig (0.34 bar)	18.5 psig (1.27 bar)	6.5 psig (0.44 bar)	16.5 psig (1.13 bar)	8 psig (0.55 bar)	15.5 psig (1.06 bar)	9.5 psig (0.66 bar)	14 psig (0.97 bar)
	508 (30 lbs)	9 psig (0.62 bar)	32 psig (2.20 bar)	9 psig (0.62 bar)	32 psig (2.20 bar)	10 psig (0.68 bar)	31 psig (2.14 bar)	11 psig (0.75 bar)	30 psig (2.07 bar)	12.5 psig (0.86 bar)	29 psig (2.00 bar)
2400 SMT PO 7/8" EP IV	1245 (15 lbs)	3.5 psig (0.23 bar)	15 psig (1.03 bar)	4 psig (0.27 bar)	15 psig (1.03 bar)	7 psig (0.48 bar)	14.5 psig (1.00 bar)	11 psig (0.75 bar)	14 psig (0.97 bar)	13.5 psig (0.93 bar)	13.5 psig (0.93 bar)
	538 (20 lbs)	3.5 psig (0.23 bar)	17.5 psig (1.20 bar)	4 psig (0.27 bar)	17.5 psig (1.20 bar)	7.5 psig (0.51 bar)	17 psig (1.72 bar)	10.5 psig (0.72 bar)	16.5 psig (1.13 bar)	13.5 psig (0.93 bar)	16 psig (1.10 bar)
	508 (30 lbs)	7 psig (0.48 bar)	30 psig (2.07 bar)	7.5 psig (0.51 bar)	30 psig (2.07 bar)	10.5 psig (0.72 bar)	29 psig (2.00 bar)	14 psig (0.97 bar)	28 psig (1.93 bar)	17 psig (1.72 bar)	27 psig (1.86 bar)
2400 SMT PO 1" IV	1245 (15 lbs)	4.5 psig (0.31 bar)	14.5 psig (1.00 bar)	5 psig (0.34 bar)	14 psig (0.97 bar)	8.5 psig (0.58 bar)	13 psig (0.89 bar)	12.5 psig (0.86 bar)	11.5 psig (0.79 bar)	16 psig (1.10 bar)	11 psig (0.75 bar)
	538 (20 lbs)	4.5 psig (0.31 bar)	17 psig (1.72 bar)	5 psig (0.34 bar)	17 psig (1.72 bar)	8.5 psig (0.58 bar)	16 psig (1.10 bar)	12.5 psig (0.86 bar)	15 psig (1.03 bar)	17 psig (1.72 bar)	14 psig (0.97 bar)
	508 (30 lbs)	7 psig (0.48 bar)	31 psig (2.14 bar)	7.5 psig (0.51 bar)	31 psig (2.14 bar)	12 psig (0.83 bar)	30 psig (2.07 bar)	16 psig (1.10 bar)	29 psig (2.00 bar)	19.5 psig (1.34 bar)	28 psig (1.93 bar)
2400 SMT PO 1" IV SNAP	1245 (15 lbs)	4.5 psig (0.31 bar)	16.5 psig (1.13 bar)	4.5 psig (0.31 bar)	16.5 psig (1.13 bar)	8.5 psig (0.58 bar)	15.5 psig (1.06 bar)	11.5 psig (0.79 bar)	15 psig (1.03 bar)	15 psig (1.03 bar)	15 psig (1.03 bar)
	538 (20 lbs)	4.5 psig (0.31 bar)	19 psig (1.31 bar)	4.5 psig (0.31 bar)	19 psig (1.31 bar)	8.5 psig (0.58 bar)	16 psig (1.10 bar)	11.5 psig (0.79 bar)	15.5 psig (1.06 bar)	15 psig (1.03 bar)	15 psig (1.03 bar)
	508 (30 lbs)	8 psig (0.55 bar)	32 psig (2.20 bar)	8 psig (0.55 bar)	32 psig (2.20 bar)	12 psig (0.83 bar)	31 psig (2.14 bar)	16 psig (1.10 bar)	30 psig (2.07 bar)	19.5 psig (1.34 bar)	29 psig (2.00 bar)

Table 8 - 2", 3", 4", 6", 8" & 10" Cage Guided HPCV											
Valve Description	ΔP	0 psig (0 bar)		100 psig (6.8 bar)		500 psig (34.4 bar)		1000 psig (68.9 bar)		1500 psig (103.4 bar)	
	Spring	Crack	Full	Crack	Full	Crack	Full	Crack	Full	Crack	Full
2150 SMT PB 2 IN IV	15 lbs	3 psig (0.21bar)	16 psig (1.1bar)	3.5 psig (0.24bar)	16 psig (1.1bar)	5.5 psig (0.38bar)	15 psig (1.03bar)	7.5 psig (0.52bar)	14 psig (0.97bar)	9.5 psig (0.66bar)	12 psig (0.83bar)
	20 lbs	3 psig (0.21bar)	19 psig (1.31bar)	3 psig (0.21bar)	18 psig (1.24bar)	5.5 psig (0.38bar)	17 psig (1.17bar)	8 psig (0.55bar)	16 psig (1.1bar)	8.5 psig (0.59bar)	15 psig (1.03bar)
	30 lbs	6 psig (0.41bar)	32 psig (2.21bar)	7 psig (0.48bar)	31 psig (2.14bar)	8 psig (0.55bar)	30 psig (2.07bar)	10.5 psig (0.72bar)	29 psig (2bar)	12.5 psig (0.86bar)	28 psig (1.93bar)
3150 FMT PB 3" IV	30 lbs	6 psig (0.41bar)	30 psig (2.07bar)	6.5 psig (0.45bar)	27.5 psig (1.9bar)	10.5 psig (0.72bar)	27 psig (1.86bar)	13.5 psig (0.93bar)	25 psig (1.72bar)	17 psig (1.17bar)	22 psig (1.52bar)
3150 FMT PB 3" IV- PC	30 lbs	Shut	27 psig (1.86bar)	Shut	28 psig (1.93bar)	Shut	30.5 psig (2.1bar)	Shut	33 psig (2.28bar)	Shut	36.5 psig (2.52bar)
4150 FMT PB	30 lbs	8.5 psig (0.59bar)	32 psig (2.21bar)	8.5 psig (0.59bar)	32 psig (2.21bar)	8 psig (0.55bar)	29.5 psig (2.03bar)	7.5 psig (0.52bar)	27 psig (1.86bar)	6 psig (0.41bar)	24.5 psig (1.69bar)
4150 FMT PB 4 IN IV PC	30 lbs	Shut	31 psig (2.14bar)	Shut	32.5 psig (2.24bar)	Shut	34.5 psig (2.38bar)	Shut	37 psig (2.55bar)	Shut	39.5 psig (2.72bar)
6150 FMT PB 6 IN IV	30 lbs	8 psig (0.55bar)	29 psig (2bar)	9.5 psig (0.66bar)	28 psig (1.93bar)	10.5 psig (0.72bar)	27 psig (1.86bar)	11 psig (0.76bar)	25 psig (1.72bar)	11.5 psig (0.79bar)	22 psig (1.52bar)
8150 FMT PB 8 IN IV	30 lbs	8 psig (0.55bar)	29 psig (2bar)	8.5 psig (0.59bar)	27.5 psig (1.9bar)	10 psig (0.69bar)	26.5 psig (1.83bar)	10.5 psig (0.72bar)	24 psig (1.65bar)	10.5 psig (0.72bar)	21.5 psig (1.48bar)
10150 FMT PB 8 IN IV	30 lbs	7.5 psig (0.52bar)	28.5 psig (1.97bar)	8.5 psig (0.59bar)	27.5 psig (1.9bar)	9.5 psig (0.66bar)	26 psig (1.79bar)	10 psig (0.69bar)	24 psig (1.65bar)	10.5 psig (0.72bar)	21.5 psig (1.48bar)

HIGH PRESSURE CONTROL VALVES



CODE BUILDER MODEL CVS (STEM GUIDED)

Series:

CV = Control Valves

Model:

S = Stem Guided

Line Size:

1 = 1 NPS
2 = 2 NPS

End Connection:

Body Type:

A = Angle
T = Thru
D = Dual

Shell Material:

W = Steel (WCB)
X = Steel (WCB) w/Coating

Inner Valve Size:

Actuator:

0 = No Actuator	7 = - 65 Fail Close
1 = 3 - 15 psi Spring Fail Close	8 = Metering Valve (EP trim only)
2 = 6 - 30 psi Spring Fail Close	J = 2 - 10 psi Spring Fail Close (1" only)
3 = 9 - 45 psi Spring Fail Close	K = 4 - 20 psi Spring Fail Close
4 = 3 - 15 psi Spring Fail Open	L = 2 - 10 psi Spring Fail Open (1" only)
5 = 6 - 30 psi Spring Fail Open	M = 4 - 20 psi Spring Fail Open
6 = 9 - 45 psi Spring Fail Open	

0 = No Actuator
1 = 3 - 15 psi Spring Fail Close
2 = 6 - 30 psi Spring Fail Close
3 = 9 - 45 psi Spring Fail Close
4 = 3 - 15 psi Spring Fail Open
5 = 6 - 30 psi Spring Fail Open
6 = 9 - 45 psi Spring Fail Open

	1" Line Size			2" Line Size		
	Linear	Quick Open	E.P.	Linear	Quick Open	E.P.
1/8"	02L	02Q	02E			
3/16"	03L	03Q				
1/4"	04L	04Q	04E	04L	04Q	04E
3/8"	06L	06Q		06L	06Q	
7/16"						07E
1/2"	08L	08Q	08E	08L	08Q	
5/8"						10E
3/4"				12L	12Q	
7/8"						14E
1"		16Q		16L	16Q	
1 1/2"					24Q	

Shell Material:

W = Steel (WCB)
X = Steel (WCB) w/Coating

Inner Valve Size:

Actuator:

0 = No Actuator	7 = - 65 Fail Close
1 = 3 - 15 psi Spring Fail Close	8 = Metering Valve (EP trim only)
2 = 6 - 30 psi Spring Fail Close	J = 2 - 10 psi Spring Fail Close (1" only)
3 = 9 - 45 psi Spring Fail Close	K = 4 - 20 psi Spring Fail Close
4 = 3 - 15 psi Spring Fail Open	L = 2 - 10 psi Spring Fail Open (1" only)
5 = 6 - 30 psi Spring Fail Open	M = 4 - 20 psi Spring Fail Open
6 = 9 - 45 psi Spring Fail Open	

0 = No Actuator
1 = 3 - 15 psi Spring Fail Close
2 = 6 - 30 psi Spring Fail Close
3 = 9 - 45 psi Spring Fail Close
4 = 3 - 15 psi Spring Fail Open
5 = 6 - 30 psi Spring Fail Open
6 = 9 - 45 psi Spring Fail Open

Service Type:	Trim Materials (Stem - Plug - Seat)		
	Linear	Quick Open	E.P.
S = Standard	S3-CR-D2	S3-CB-CB	S3-CR-D2
C = Corrosive	S6-S6-S6	N/A	S6-S6-S6
E = Erosive	S3-CB-ZR	S3-CB-ZR	S3-CB-ZR
M = Mixed Duty	S7-S7-S7	N/A	S7-S7-S7

Service Type:

Service Type:	Trim Materials (Stem - Plug - Seat)		
	Linear	Quick Open	E.P.
S = Standard	S3-CR-D2	S3-CB-CB	S3-CR-D2
C = Corrosive	S6-S6-S6	N/A	S6-S6-S6
E = Erosive	S3-CB-ZR	S3-CB-ZR	S3-CB-ZR
M = Mixed Duty	S7-S7-S7	N/A	S7-S7-S7

CV S 2 S2 T W 16L 2 S

Options: Additional cost and lead times will apply
If multiple options required input in sequential order
Leave blank if no options required

1 = NACE Certification (Corrosive Option Only)
2 = Hydrostatic Test Certification
3 = MTR (Shell Components)
A = AFLAS Elastomers (Green)
E = VEE Packing
G = Graphite Vee Packing
H = HSN Elastomers
V = FKM Elastomers (Yellow)
X = Export (Hydrostatic test, MTR & 3.1)

Not all selections available on all products listed.
See product pages 01:10.1 - 01:10.4 for available options