

Table 1 - Flow Coefficient(Cv) for Pneumatic Dump Valves													
Line Size	Trim Size in. (mm)	Trim Type	Cf	Valve Opening Percentage									
				10	20	30	40	50	60	70	80	90	100
Diaphragm Balanced													
2"	1 1/2 in (38mm)	Linear (Nominal)	0.79	5.0	8.5	11.7	14.6	17.0	19.0	20.5	21.6	22.6	23.3
3"	2 1/4 in (57 mm)		0.79	6.7	11.1	15.6	20.3	24.8	29.2	33.4	37.2	40.7	43.8
4"	3 in (76 mm)		0.79	12.0	18.9	25.8	32.8	39.9	46.9	53.7	60.0	65.7	70.1
6"	4.88 in (124 mm)		0.79	14.2	21.0	31.6	61.2	98.3	139	179	217	250	277
Low Pressure High Volume Piston Balanced Throttling													
2" thru	1 1/2 in (38mm)	Linear (Nominal)	0.75	5.7	8.4	12.0	14.9	17.6	19.8	22.3	24.4	26.2	28.9
	2 in (51 mm)		0.75	8.3	15.3	21.5	27.2	31.6	36.0	39.3	41.6	44.0	45.8
2" angle	1 1/2 in (38mm)		0.75	3.7	7.9	12.5	15.7	18.6	21.4	24.1	27.2	30.1	33.3
	2 in (51 mm)		0.75	9.7	16.1	23.3	29.2	35.1	39.3	43.6	46.5	49.4	51.4
3" thru	2 in (51 mm)		0.75	11.6	21.5	30.5	38.6	45.7	51.3	55.6	59.1	61.6	64.0
	3 in (76 mm)		0.75	17.0	32.3	46.0	58.6	70.4	79.6	87.4	94.0	98.7	103
3" angle	2 in (51 mm)		0.75	12.5	22.9	32.2	41.8	49.4	56.2	60.8	65.3	68.4	71.7
	3 in (76 mm)		0.75	18.8	34.8	49.0	63.7	75.6	86.7	93.9	101	107	113
4" thru	3.75 in (95 mm)		0.75	17.8	32.9	48.6	61.2	73.1	84.8	94.5	102	108	114
	3 in (76 mm)		0.75	22.7	42.0	61.3	76.2	91.3	106	118	128	135	142
4" angle	3.75 in (95 mm)		0.75	18.4	35.5	52.0	67.9	84.7	96.4	110	120	130	137
	3 in (76 mm)		0.75	23.6	44.7	64.2	83.2	103	117	132	142	154	162
Piston Balanced Throttling													
2"	2 in (51 mm)	Linear (Nominal)	0.75	6.6	12.3	18.4	24.2	29.5	34.1	38.0	41.2	44.0	47.0
3"	3 in (76 mm)		0.75	12.7	18.7	29.0	41.0	52.9	63.4	71.9	78.4	83.7	89.0
4"	3 in (76 mm)		0.75	11.7	18.1	24.8	36.8	58.3	86.1	114	137	152	160

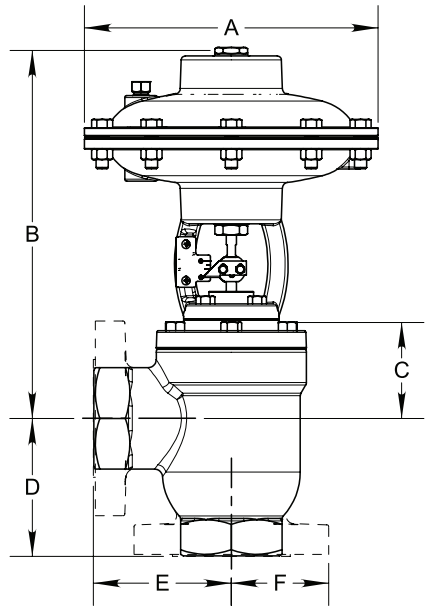
Kimray flow equations conform to ANSI/ISA - 75.01.01-2002
 Kimray inherent flow characteristics conform to ANSI/ISA 75.11.01 -1985

LIQUID DUMP VALVES PNEUMATIC OPERATED

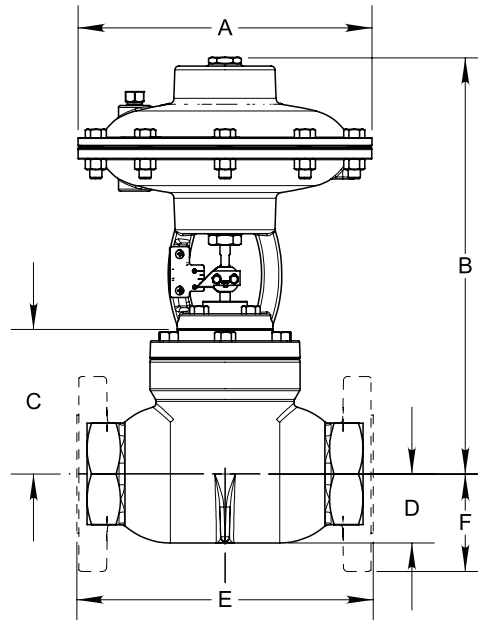


DIMENSIONS

PH ANGLE DIMENSIONS



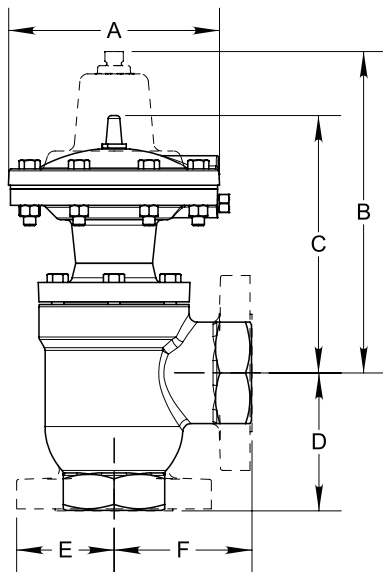
PH THRU DIMENSIONS



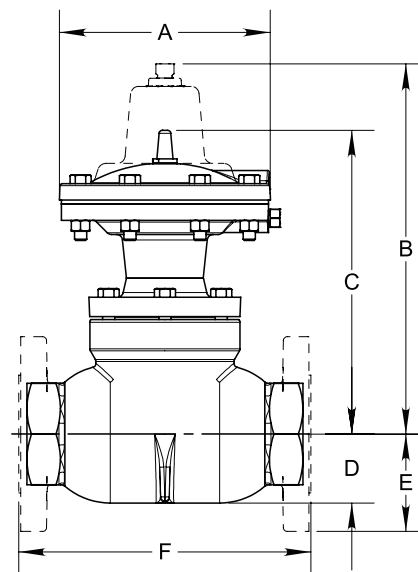
VALVE	A	B	C	D	E	F
2" SA & AR	9 1/16	11 9/32	2 29/32	4 1/4	4 1/4	3
3" SA & AR	12 7/8	15 9/32	4 1/32	5 1/2	5 1/2	3 3/4
4" AR	12 7/8	15 5/32	3 7/8	6 1/2	6 1/2	4 1/2

VALVE	A	B	C	D	E	F
2" SA	9 1/16	12 13/16	4 7/16	2 1/8	8 1/2	3
2" AR	9 1/16	12 13/16	4 7/16	2 1/8	9 1/8	3
3" SA	12 7/8	17 5/32	5 29/32	2 7/8	12	3 3/4
3" AR	12 7/8	17 5/32	5 29/32	2 7/8	12 3/16	3 3/4
4" AR	12 7/8	15 5/32	6 7/32	3 21/32	15	4 1/2

PD, PE, PP, PQ ANGLE DIMENSIONS



PD, PE, PP, PQ ANGLE DIMENSIONS



VALVE	A	B	C	D	E	F
2" SA & AR	6 1/2	9	8 1/2	4 1/4	3	4 1/4
3" SA & AR	8 1/2	11 3/4	10 1/4	5 1/2	3 3/4	5 1/2
4" SA & AR	8 1/2	12 1/2	11	6 1/2	4 1/2	6 1/2
6" SA & AR	10 3/4	—	19 3/4	10 1/4	5 1/2	7 11/16

VALVE	A	B	C	D	E	F
2" SA	6 1/2	10 3/8	9 7/8	2 1/8	—	8 1/2
2" AR	6 1/2	10 3/8	9 7/8	—	3	9
3" SA	8 1/2	13 5/16	11 9/16	2 7/8	—	12
3" AR	8 1/2	13 5/16	11 9/16	—	3 3/4	12 3/16
4" SA	8 1/2	14 7/8	13 3/8	—	4 1/2	15 1/8
6" SA	10 3/4	—	19 3/4	—	5 1/2	22

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

Table 2 - Seal Options		
Part	Standard Material	Optional Material
O-rings	HSN	FKM
Diaphragm	HSN	FKM
Seat	HSN	FKM

Table 3 - Seal Specifications			
		HIGHLY SATURATED NITRILE	FKM
Kimray Suffix		HSN	V
Resistance	Abrasion	G-E	G
	Acid	G-E	G-E
	Chemical	F	E
	Cold	G	P
	Flame	P	E
	Heat	E	E
	Oil	E	E
	Ozone	G	G-E
	Set	G	G-E
	Tear	F	F
	Water/Steam	E	P
	Weather	G	E
	CO2	G	G
	H2S	F	P
	Methanol	E	P
Properties	Dynamic	G	G
	Electrical	F	F
	Impermeability	G	G
	Tensile Strength	G-E	G
	Temp. Range		-20° to +300°F
		-29° to +149°C	-26° to +204°C
RATINGS: P-POOR, F-FAIR, G-GOOD, E-EXCELLENT			

Table 4 - Material Options - Diaphragm Balanced & Piston Balanced Throttle

Part Description	Standard Material	Corrosive Material
Body	Ductile (ASTM A395)	Ductile (ASTM A395) + Kimcoat
Ratio Plug	2 & 3 inch Delrin (ASTM D4181), 4 & 6 inch (ASTM A395)	17-4PH (ASTM A564)
Cage	2 & 3 inch Delrin (ASTM D4181), 4 & 6 inch (ASTM A395)	Ductile (ASTM A395) + Kimcoat
Stem	303SS (ASTM A582)	316SS (ASTM A479)
Bonnet	Ductile (ASTM A395)	Ductile (ASTM A395) + Kimcoat
Piston	303SS (ASTM A582)	316SS (ASTM A479)
Cylinder	303SS (ASTM A582)	316SS (ASTM A479)

Table 5 - Material Options - Piston Balance High Volume

Part Description	Standard Material	Erosive Material	Corrosive Material
Body	Ductile (ASTM A395)		
Bonnet	Ductile (ASTM A395)		
Cylinder	303SS (ASTM A582)		316SS (ASTM A479)
Piston	303SS (ASTM A582)		316SS (ASTM A479)
Ratio Plug	303SS (ASTM A582)	D-2 (ASTM A681)	316SS (ASTM A479)
Removable Seat	303SS (ASTM A582)	D-2 (ASTM A681)	316SS (ASTM A479)
Stuffing Box	Ductile (ASTM A395)		
Stuffing Box Stem	17-4PH (ASTM A564)		316SS (ASTM A479)
Piston Stem	303SS (ASTM A582)		316SS (ASTM A479)
Seat Disc	316SS (ASTM A479)		

LIQUID DUMP VALVES PNEUMATIC OPERATED



CODE BUILDER D SERIES

Series:

D = Dump Valve

Model:

PD = Pneumatic Operated Diaphragm Balanced Fail Close
 PE = Pneumatic Operated Diaphragm Balanced Fail Open
 PP = Pneumatic Operated Piston Balanced Throttle Fail Close 4" only
 PQ = Pneumatic Operated Piston Balanced Throttle Fail Open 4" only

Line Size:

2 = 2 NPS
 3 = 3 NPS
 4 = 4 NPS
 6 = 6 NPS (PD ONLY)

End Connection:

SA = FNPT (2 & 3 NPS only)
 AR = 150RF

Body Type:

A = Angle
 T = Thru

Shell Material:

D = Ductile Iron
E = Ductile Iron w/Coating

Inner Valve Size:

F = Full Port
 R = Reduced Port (PP only)

Actuator:

P = Pneumatic

Service Type:

S = Standard
 C = Corrosive

D PD 2 SA A D F 1 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)
 H = HSN Elastomers
 V = FKM Elastomers
 X = Export (Hydrostatic test, MTR & 3.1)

Not all selections available on all products listed.
 See product pages 04:10.1 - 04:10.7 & 04:30.1 - 04:40.7
 for available options