HBVV-AV V-Port Control Ball Valves

Size:
1/2" - 4" Full Port
2000 WOG

End Conections:
NPT
Butt Weld
Socket Weld

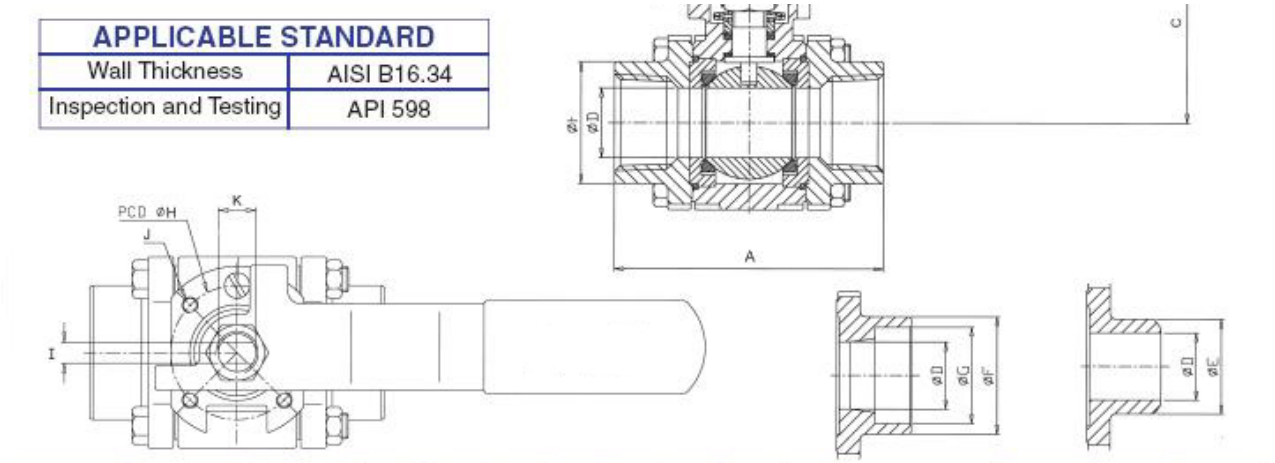
Valve Materials
316 Stainless Steel
Carbon Steel

Ball and Stem Materials:
316 Stainless Steel

Service Applications:
Hydraulic
Steam
Oxygen
Vacuum
Thermal Fluids
Chemical
Oil/Gas
Food Processing
Dry/Liquid Chlorine

Seat Materials:
Teflon
Reinforced Teflon
TFE-25% Carbon/Graphite
PEEK
UHMWPE
Metal

APPLICABLE STANDARD	
Wall Thickness	AISI B16.34
Inspection and Testing	API 598



NPS	A	B	C	C1	C2	D	E	F	G	H	I	J	K	ISO 5211	lbs.	Cv
1/4-3/8-1/2"	2.95	4.50	2.19	0.48	.335	0.50	0.87	1.10	0.87	1.42	0.22	M5	3/8"-24UNF	F03	2	5
3/4"	3.15	4.50	2.28	0.55	.385	0.75	1.10	1.38	1.08	1.42	0.22	M5	3/8"-24UNF	F03	2.5	21
1"	3.66	5.75	2.63	0.60	.555	1.00	1.34	1.77	1.36	1.65	0.30	M5	7/16"-24UNF	F04	4	44
1 1/4"	4.33	5.75	2.80	0.61	.555	1.25	1.61	2.13	1.69	1.65	0.30	M5	7/16"-24UNF	F04	6	64
1 1/2"	4.72	7.00	3.23	1.07	.725	1.50	1.93	2.44	1.93	1.97	0.34	M6	9/16"-24UNF	F05	8	87
2"	5.51	7.00	3.58	1.10	.777	2.00	2.40	2.99	2.41	1.97	0.34	M6	9/16"-24UNF	F05	14	210

Percent Open	Cv (15 degree V-Port)								
	NPS 1/2 DN15	NPS 3/4 DN20	NPS 1 DN25	NPS 1-1/4 DN32	NPS 1-1/2 DN40	NPS 2 DN50	NPS 2-1/2 DN65	NPS 3 DN80	NPS 4 DN100
100	1.9	2.17	4.32	6.19	10.45	15.74	23.39	23.61	43.06
90	1.71	1.95	3.89	5.57	9.4	14.16	21.05	21.25	38.76
80	1.52	1.74	3.46	4.95	8.36	12.59	18.71	18.89	34.46
70	1.33	1.52	3.02	4.33	7.31	11.02	16.37	16.53	30.15
60	1.14	1.3	2.6	3.71	6.27	9.44	14.03	14.16	25.84
50	0.95	1.09	2.16	3.09	5.22	7.69	11.69	11.8	21.53
40	0.76	0.87	1.73	2.47	4.18	6.3	9.35	9.44	17.23
30	0.6	0.65	1.3	1.85	3.13	4.72	7.02	6.75	12.92
20	0.38	0.43	0.75	1.24	2.09	3.15	4.68	4.72	8.61
10	0.19	0.22	0.43	0.62	1.04	1.57	2.34	2.36	4.31
Approx Flow Char.	EP	EP	EP	EP	EP	EP	EP	EP	EP
Shut-off Angle	23.9°	12.6°	17.3°	16.3°	14.4°	10.3°	8.5°	12.6°	8.5°

Kv = 0.865 Cv Av = 24.0 X 10⁻⁶Cv EP = Equal Precentage

HBVV-AV V-Port Control Ball Valves

2000WOG NPT Ends
Butt Weld Ends
Socket Weld Ends
Flange Ends

Percent Open	Cv (30 degree V-Port)								
	NPS 1/2 DN15	NPS 3/4 DN20	NPS 1 DN25	NPS 1-1/4 DN32	NPS 1-1/2 DN40	NPS 2 DN50	NPS 2-1/2 DN65	NPS 3 DN80	NPS 4 DN100
100	2.53	3.1	7.24	11.05	15.55	26.61	39.95	52.19	85.96
90	2.28	2.79	6.52	9.95	14	23.95	35.96	46.97	77.36
80	2.03	2.48	5.79	9.07	12.44	21.29	31.96	41.75	68.77
70	1.77	2.17	5.07	7.74	10.89	18.62	27.97	36.53	60.17
60	1.52	1.86	4.35	6.63	9.33	15.96	23.97	31.31	51.58
50	1.27	1.55	3.62	5.52	7.78	13.3	19.98	26.09	42.98
40	1.01	1.24	2.9	4.42	6.22	10.64	15.98	20.88	34.38
30	0.76	0.93	2.17	3.32	4.67	7.98	11.98	14.93	25.79
20	0.51	0.62	1.26	2.21	3.11	5.32	7.99	10.44	17.19
10	0.25	0.31	0.72	1.11	1.56	2.66	3.99	5.22	8.6
Approx Flow Char.	EP	EP	EP	EP	EP	EP	EP	EP	EP
Shut-off Angle	23.9°	12.6°	17.3°	16.3°	14.4°	10.3°	8.5°	12.6°	8.5°

Kv = 0.865 Cv Av = 24.0 X 10⁴Cv EP = Equal Precentage

Percent Open	Cv (45 degree V-Port)								
	NPS 1/2 DN15	NPS 3/4 DN20	NPS 1 DN25	NPS 1-1/4 DN32	NPS 1-1/2 DN40	NPS 2 DN50	NPS 2-1/2 DN65	NPS 3 DN80	NPS 4 DN100
100	4.42	4.51	11.13	17.67	25.96	44.18	63.76	75.67	131.75
90	3.98	4.06	10.01	15.91	23.36	39.76	57.39	68.1	118.57
80	3.53	3.61	8.9	14.14	20.76	35.34	51.02	60.54	105.4
70	3.09	3.16	7.79	12.37	18.17	30.93	44.64	52.97	92.22
60	2.65	2.71	6.7	10.6	15.57	26.51	38.26	45.4	79.05
50	2.21	2.26	5.56	8.83	12.98	22.09	31.88	37.83	65.87
40	1.77	1.8	4.45	7.07	10.38	17.67	25.51	30.27	52.7
30	1.33	1.35	3.34	5.3	7.79	13.25	19.13	21.65	39.52
20	0.88	0.9	1.93	3.53	5.19	8.84	9.72	15.13	26.35
10	0.44	0.45	1.11	1.77	2.6	4.42	6.38	7.57	13.17
Approx Flow Char.	EP	EP	EP	EP	EP	EP	EP	EP	EP
Shut-off Angle	23.9°	12.6°	17.3°	16.3°	14.4°	10.3°	8.5°	12.6°	8.5°

Kv = 0.865 Cv Av = 24.0 X 10⁴Cv EP = Equal Precentage

Percent Open	Cv (60 degree V-Port)								
	NPS 1/2 DN15	NPS 3/4 DN20	NPS 1 DN25	NPS 1-1/4 DN32	NPS 1-1/2 DN40	NPS 2 DN50	NPS 2-1/2 DN65	NPS 3 DN80	NPS 4 DN100
100	6.07	6.8	15.11	24.53	37.4	61.51	92.16	117.22	191.72
90	5.47	6.12	13.59	22.08	33.66	55.36	82.94	105.5	172.55
80	4.86	5.44	12.08	19.62	29.92	49.21	73.73	93.78	153.38
70	4.25	4.76	10.57	17.17	26.18	43.05	64.51	82.06	134.21
60	3.65	4.08	9.06	14.71	22.44	36.9	55.29	70.33	115.03
50	3.04	3.4	7.55	12.26	18.7	30.75	46.08	58.61	95.86
40	2.43	2.72	6.04	9.81	14.96	24.6	36.86	46.89	76.69
30	1.82	2.04	4.53	7.36	11.22	18.45	27.65	33.54	57.52
20	1.22	1.36	2.62	4.91	7.48	12.3	18.43	23.44	38.34
10	0.61	0.68	1.51	2.45	3.74	6.15	9.22	11.72	19.17
Approx Flow Char.	EP	EP	EP	EP	EP	EP	EP	EP	EP
Shut-off Angle	23.9°	12.6°	17.3°	16.3°	14.4°	10.3°	8.5°	12.6°	8.5°

Kv = 0.865 Cv Av = 24.0 X 10⁴Cv EP = Equal Precentage