

## JV-Control Ball Valve Flow Coefficient Cv Charts

Valve Size	V-Port Angle	Percent and Angle of Ball Rotation										
		0% 0°	10% 9°	20% 18°	30% 27°	40% 36°	50% 45°	60% 54°	70% 63°	80% 72°	90% 81°	100% 90°
1/2"	15°	0	0.04	0.17	0.43	0.68	0.98	1.62	2.09	2.84	3.61	4.18
1/2"	30°	0	0.04	0.23	0.47	0.77	1.19	1.83	2.47	3.43	4.65	5.55
1/2"	60°	0	0.04	0.28	0.73	1.11	1.83	2.92	4.29	7.00	9.43	12.78
1/2"	90°	0	0.06	0.47	0.85	1.28	2.05	3.24	4.74	8.26	11.61	14.72
3/4"	15°	0	0.05	0.20	0.51	0.88	1.30	2.13	2.75	3.74	4.75	5.51
3/4"	30°	0	0.07	0.30	0.61	0.99	1.57	2.42	3.25	4.52	6.12	7.30
3/4"	60°	0	0.07	0.35	0.93	1.46	2.42	3.85	5.64	9.21	12.41	16.25
3/4"	90°	0	0.08	0.59	1.11	1.69	2.69	4.27	6.24	10.85	15.28	19.37
1"	15°	0	0.06	0.30	0.93	1.49	2.31	3.75	4.67	6.47	8.46	9.84
1"	30°	0	0.08	0.45	1.25	2.06	3.54	5.30	7.70	10.49	12.84	15.48
1"	60°	0	0.09	0.68	1.74	2.78	5.13	8.00	11.88	18.71	23.22	32.81
1"	90°	0	0.11	0.93	2.78	5.09	7.74	12.20	17.33	24.48	26.79	43.89
1-1/4"	15°	0	0.03	0.27	0.83	1.64	2.78	4.07	5.88	7.99	10.81	12.82
1-1/4"	30°	0	0.05	0.48	1.37	2.47	4.12	6.08	8.82	11.76	14.87	17.37
1-1/4"	60°	0	0.07	0.67	2.04	3.41	6.47	10.80	15.39	22.35	33.37	43.45
1-1/4"	90°	0	0.08	0.78	2.92	5.41	10.23	17.28	19.48	34.93	51.76	65.81
1-1/2"	15°	0	0.05	0.37	1.15	2.26	3.82	5.59	8.08	10.99	14.86	17.62
1-1/2"	30°	0	0.07	0.65	1.88	3.39	5.66	8.36	12.12	16.17	20.44	23.88
1-1/2"	60°	0	0.09	0.92	2.81	4.69	8.89	14.85	21.16	30.73	45.88	59.74
1-1/2"	90°	0	0.10	1.07	4.01	7.44	14.06	23.76	26.78	48.03	71.17	90.49
2"	15°	0	0.06	0.69	2.23	4.45	7.24	10.68	15.38	21.39	28.75	34.69
2"	30°	0	0.09	1.18	3.79	7.53	12.26	17.83	26.44	36.45	48.09	55.85
2"	60°	0	0.11	1.51	5.80	10.39	20.60	33.98	48.75	69.04	104.23	135.75
2"	90°	0	0.16	1.89	7.28	13.58	25.38	42.30	55.56	87.04	129.75	167.34
2-1/2"	15°	0	0.07	0.77	2.40	5.23	8.06	11.73	16.42	22.31	27.24	31.30
2-1/2"	30°	0	0.09	1.15	4.42	7.91	13.39	20.05	30.43	41.92	69.75	76.95
2-1/2"	60°	0	0.13	1.46	5.91	11.90	23.24	37.92	59.31	83.29	113.65	162.50
2-1/2"	90°	0	0.17	1.83	7.29	16.45	31.16	53.53	77.89	118.29	177.32	239.45
3"	15°	0	0.08	0.89	2.96	6.65	9.58	13.42	19.47	26.67	31.79	38.31
3"	30°	0	0.12	1.20	4.15	9.49	15.96	26.78	38.91	53.31	69.77	85.91
3"	60°	0	0.15	2.89	6.70	15.82	29.36	46.32	73.60	106.74	149.88	193.20
3"	90°	0	0.20	4.12	8.65	21.09	41.09	69.27	105.91	161.04	237.23	359.21
4"	15°	0	0.11	1.40	3.73	8.86	16.76	27.91	41.85	59.24	75.49	96.37
4"	30°	0	0.16	1.75	7.84	18.59	35.21	58.60	87.89	124.41	158.53	196.35
4"	60°	0	0.26	2.20	12.44	33.67	62.98	106.26	160.49	233.96	329.50	437.29
4"	90°	0	0.35	4.37	19.68	50.29	91.83	157.43	240.51	365.15	546.62	830.86
6"	15°	0	0.20	2.50	6.64	15.77	29.85	49.70	74.54	105.51	134.44	171.62
6"	30°	0	0.29	3.12	13.97	33.11	62.70	104.37	156.53	221.56	282.33	349.69
6"	60°	0	0.46	5.41	22.15	59.97	112.16	189.24	285.82	416.68	586.83	800.80
6"	90°	0	0.66	7.79	35.05	89.56	163.55	280.37	428.34	650.32	973.50	1479.70
8"	15°	0	0.34	4.23	11.32	26.84	50.80	84.58	126.84	395.03	503.35	292.07
8"	30°	0	0.49	5.32	23.77	56.35	106.70	177.62	266.39	377.06	480.47	595.11
8"	60°	0	0.79	6.66	23.81	102.06	190.87	322.06	486.41	709.11	998.69	1325.38
8"	90°	0	1.05	13.26	59.64	152.42	278.33	477.14	728.96	1106.69	1656.77	2518.18
10"	15°	0	0.53	6.62	17.69	41.94	79.38	132.15	198.20	617.24	786.48	456.36
10"	30°	0	0.77	8.31	37.14	88.05	166.73	277.53	416.24	589.16	750.74	929.87
10"	60°	0	1.23	10.41	37.20	159.47	298.23	503.22	760.02	1107.99	1560.45	2070.90
10"	90°	0	1.64	20.72	93.20	238.16	434.90	745.53	1139.00	1729.20	2588.70	3934.65
12"	15°	0	0.74	9.26	24.76	58.72	111.13	185.01	277.47	864.13	1101.07	638.90
12"	30°	0	1.07	11.63	52.00	123.27	233.42	388.54	582.73	824.82	1051.03	1301.81
12"	60°	0	1.72	14.57	52.08	223.25	417.52	704.51	1064.03	1551.19	2184.63	2899.26
12"	90°	0	2.29	29.00	130.47	333.42	608.85	1043.74	1594.59	2420.88	3624.18	5508.51

Note: Max CV used should be limited to 90% of valve opening for best results. Limit velocity to 40,000 FPM on steam service and 15 FPS for water service at max flow thru valve per size.