

Features

- Available in 30°, 60°, 90° V-port sizes
- Machined 316 stainless steel ball
- Full pressure capability
- Factory-installed when ordered with a Valworx 3-piece ball valve
- Converts a full port valve to V-port
- For use on 5618 EPS/ 5610 DPS Positioning units only
- For use in Valworx valves only
- R5515xxyy where xx = Valve size; yy = 30°, 60°, 90°

Applications

V-port ball valves are used in applications requiring finer flow control than standard ball valves. These valves are meant to be used for positioning (throttling) applications. For on/off applications use a regular full-port ball valve.

Valworx offers two types of positioning actuators. Specifications are summarized below.

Positioning Actuators Specifications

	5610 Series	5618 Series
Accuracy	3% F.S.	0.5% F.S.
Linearity	2% F.S.	0.5% F.S.
Deadband	3% F.S.	0.5%- 5% Adjustable
Resolution (4- 20mA)	Min 150 steps	Min 80 steps
Resolution (0- 10V)	Min 98 steps	N/A
Impedance	100 Ohm	180- 280 Ohm
Actuator Ordering Information	Factory installed accessory	Complete unit

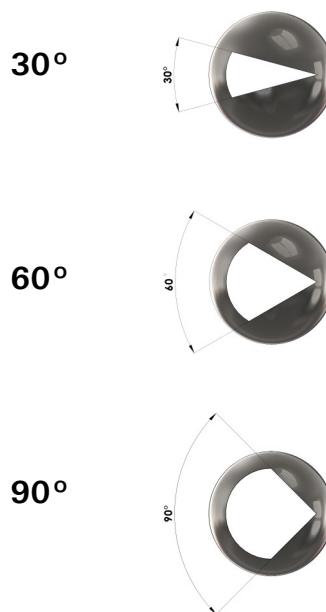


Description

Solid, machined V-port 316 stainless steel ball provides better linearity for enhanced flow control. Note that total flow is significantly reduced in comparison to full port ball valves.

316 stainless steel V-port balls are available both as a complete valve (when ordered as an accessory) or an aftermarket part.

V-Port Images



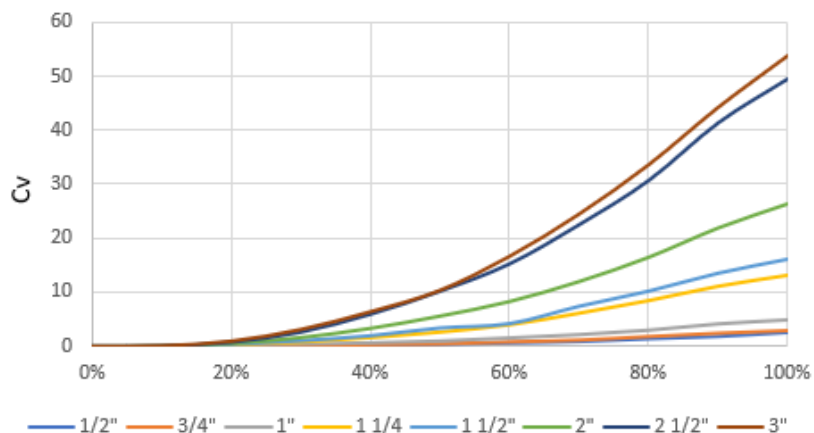
CV vs Valve Position

Size	V	0	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
1/2"	30°	0.000	0.000	0.100	0.172	0.324	0.429	0.649	0.873	1.350	1.749	2.435
	60°	0.000	0.000	0.120	0.236	0.539	0.643	1.081	1.587	2.615	3.664	5.525
	90°	0.000	0.100	0.200	0.400	0.600	0.800	1.500	2.200	3.800	5.400	6.900
3/4"	30°	0.000	0.000	0.128	0.159	0.338	0.489	0.850	1.166	1.805	2.408	2.884
	60°	0.000	0.000	0.151	0.238	0.453	0.729	1.275	1.915	3.419	4.630	6.440
	90°	0.000	0.200	0.400	0.800	1.200	2.000	3.100	4.600	8.000	11.300	14.000
1"	30°	0.000	0.030	0.312	0.436	0.659	0.986	1.539	2.129	2.921	4.045	4.761
	60°	0.000	0.030	0.445	0.607	0.790	1.417	2.308	3.318	5.270	7.568	10.108
	90°	0.000	0.200	0.600	1.800	3.400	5.100	8.100	11.400	16.000	21.000	29.000
1-1/4"	30°	0.000	0.050	0.359	0.857	1.661	2.686	4.044	6.186	8.530	11.193	13.230
	60°	0.000	0.060	0.441	1.114	1.845	3.426	5.575	8.215	13.290	18.360	24.499
	90°	0.000	0.300	0.800	2.000	5.000	8.000	14.000	19.000	28.000	39.000	55.000
1-1/2"	30°	0.000	0.050	0.410	1.099	1.995	3.430	4.230	7.432	10.230	13.540	16.126
	60°	0.000	0.060	0.570	1.556	2.849	5.488	7.077	12.908	19.665	28.068	37.099
	90°	0.000	0.400	0.900	3.500	7.000	13.000	20.000	31.000	42.000	63.000	78.000
2"	30°	0.000	0.050	0.549	1.620	3.320	5.574	8.252	11.931	16.397	21.797	26.234
	60°	0.000	0.060	0.698	2.477	4.784	9.094	15.410	21.889	31.707	46.343	60.981
	90°	0.000	0.500	2.000	6.000	12.000	22.000	35.000	45.000	70.000	105.000	135.000
2-1/2"	30°	0.000	0.060	0.750	2.610	5.907	10.153	15.210	22.440	30.620	41.270	49.400
	60°	0.000	0.090	0.955	3.699	7.100	13.199	22.222	31.972	46.028	68.120	89.400
	90°	0.000	0.500	1.700	7.000	14.000	28.000	48.000	70.000	106.000	160.000	218.000
3"	30°	0.000	0.100	0.955	3.115	6.400	10.364	16.661	24.500	33.650	44.300	53.880
	60°	0.000	0.120	1.000	4.156	9.943	18.514	28.984	48.566	66.704	93.350	123.860
	90°	0.000	0.700	3.500	8.000	18.000	35.000	60.000	90.000	135.000	205.000	310.000

Cv = The GPM of water at 60° F that will pass through the valve with 1 PSI pressure drop

Specifications (CV)

Cv vs % Open, 30° V Port



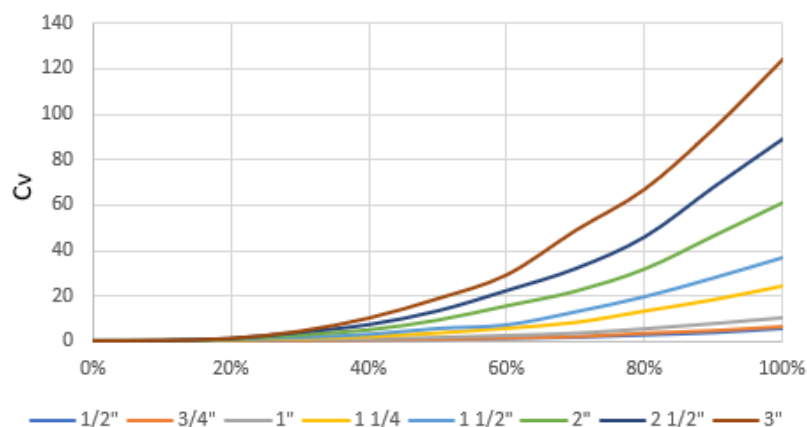
Polynomial Best Fit

$$Cv = Ax^2 + Bx + C$$

where x = % open

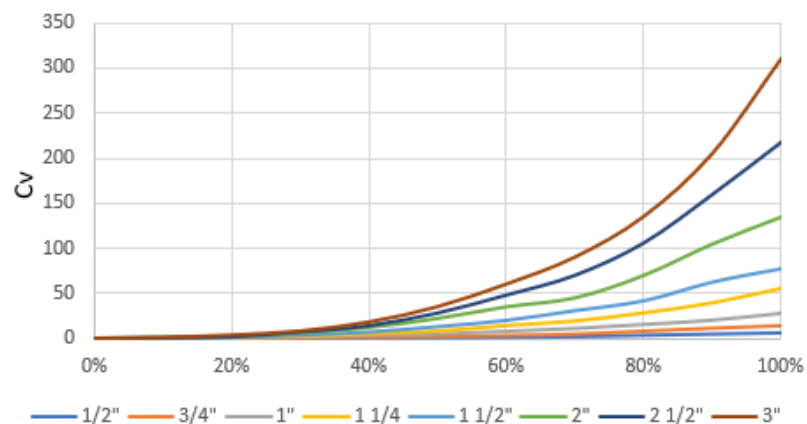
30°	A	B	C
1/2	3.0597	-0.8189	0.0732
3/4	3.7579	-0.8844	0.0566
1	5.5478	-0.8243	0.0903
1 1/4	15.9160	-2.4360	0.0835
1 1/2	19.9630	-3.6943	0.1823
2	31.0550	-4.5772	0.1215
2 1/2	60.1080	-10.0700	0.2174
3	65.6310	-11.3300	0.3235

Cv vs % Open, 60° V Port



60°	A	B	C
1/2	8.1790	-3.3599	0.2728
3/4	9.9126	-4.0308	0.2960
1	14.6730	-5.3902	0.4561
1 1/4	35.8110	-12.8860	0.8933
1 1/2	55.2470	-20.5430	1.4205
2	86.4620	-28.9610	1.8044
2 1/2	127.4300	-43.2490	2.7312
3	174.7300	-56.8050	3.1735

Cv vs % Open, 90° V Port



90°	A	B	C
1/2	10.4900	-4.0350	0.3371
3/4	20.9210	-7.5844	0.6154
1	36.3520	-5.3902	0.4561
1 1/4	76.3400	-25.9400	1.8056
1 1/2	108.1000	-32.3910	1.9378
2	190.7900	-63.7020	4.3916
2 1/2	329.2900	-129.2100	8.7343
3	478.5200	-208.7300	15.5370