

## Flow Coefficient Information

### Scope

- The values given below are applicable to Floating Ball Valve/Trunnion Mounted Ball Valve, when the ball valve is in full open condition.

### Flow Coefficient C<sub>v</sub>

- It is the full capacity flow rate through the valve in US gallons/min. of water at 60 °F with a pressure drop of 1 PSI.

### Flow Coefficient K<sub>v</sub>

- Volumetric flow rate of water at a temperature between 5 °C (40 °F) and 40 °C (104 °F) passing through a valve and resulting in a pressure loss of 0.1 MPa (1 bar; 14.5 PSI).

K<sub>v</sub> is expressed in SI units of cubic meters per hour.

$$K_v = C_v / 1.156$$

## C<sub>v</sub> (in USGPM\*) for Full Bore Ball Valves

Size/Class		#150	#300	#600	#900	#1500	#2500
Mm	Inch						
15	½"	20	18	17	15	15	14
20	¾"	49	44	40	37	37	34
25	1"	94	84	75	69	69	64
40	1 ½"	239	224	201	181	181	164
50	2"	449	411	358	323	323	191
80	3"	1222	1054	947	918	835	457
100	4"	2374	2095	1788	1743	1606	1003
150	6"	5247	5196	4493	4320	3586	2464
200	8"	10192	9788	8686	8262	6887	5172
250	10"	16546	16106	13985	13602	11042	8181
300	12"	24735	24116	21606	20318	16513	12048
350	14"	30003	28710	26881	23011	19908	---
400	16"	40855	39267	36597	31944	26701	---
450	18"	52808	51588	47845	42305	34492	---
500	20"	67883	65650	60699	53471	---	---
600	24"	101990	99164	91198	80055	---	---
650	26"	118518	114449	107461	---	---	---
700	28"	138680	134349	126710	---	---	---
750	30"	163044	158125	147549	---	---	---
900	36"	234261	222624	205959	---	---	---

\* USGPM stands for US gallons per minute.

## C<sub>v</sub> (in USGPM\*) for Reduced Bore Ball Valves

Size/Class		#150	#300	#600	#900	#1500	#2500
Mm	Inch						
20 x 15	¾" x ½"	12	11	11	11	11	---
25 x 20	1" x ¾"	31	28	26	24	24	---
40 x 25	1 ½" x 1"	38	37	38	37	37	---
50 x 40	2" x 1 ½"	126	119	122	113	113	---
80 x 50	3" x 2"	126	145	143	138	136	86
100 x 80	4" x 3"	333	366	405	405	404	218
150 x 100	6" x 4"	604	601	593	568	613	379
200 x 150	8" x 6"	1641	1587	1691	1554	1503	1007
250 x 200	10" x 8"	3643	3484	3447	3439	2974	2246
300 x 250	12" x 10"	6288	6255	6171	5959	5279	4277
350 x 250	14" x 10"	4643	4600	4717	4844	4104	----
350 x 300	14" x 12"	12263	12155	11799	13369	10282	---
400 x 300	16" x 12"	7501	7447	7019	8021	6661	---
400 x 350	16" x 14"	12733	12685	12605	11550	10446	---
450 x 350	18" x 14"	8438	8305	8444	7629	7403	---
450 x 400	18" x 16"	18129	17811	17358	15640	14682	---
500 x 400	20" x 16"	12481	12203	11821	11225	10463	---
500 x 450	20" x 18"	24962	24422	24289	22015	19445	---
600 x 500	24" x 20"	23139	22980	21872	21133	19580	---
650 x 600	26" x 24"	58897	58371	55941	---	---	---
700 x 600	28" x 24"	47661	47345	45043	---	---	---
750 x 600	30" x 24"	40265	38251	41903	---	---	---
750 x 650	30" x 26"	55004	54335	51884	---	---	---

\* USGPM stands for US gallons per minute.

**Emerson Process Management  
Virgo Valves**  
10225 Mula Road, Suite 130  
Stafford, TX 77477, USA  
Phone: +1 281 933 3100  
Fax: +1 281 933 3110  
www.Virgo-Valves.com

**Emerson Process Management  
Virgo Valves**  
277, Hinjewadi Phase II, Maan (Mulshi)  
Pune - 411 057, India  
Phone: +91 20 6674 4000  
Fax: +91 20 6674 4021  
www.Virgo-Valves.com

**Emerson Process Management  
Virgo Valves**  
Via Sicilia, 96-20020 Magnago  
Milan, Italy  
Phone: +39 0331 308 211  
Fax: +39 0331 306 299  
www.Virgo-Valves.com

**Emerson Process Management  
Virgo Valves**  
PO Box 18748  
Bldg B Jebel Ali Free Zone,  
South Zone 2, Dubai, UAE  
Phone: +971 4 8118100  
Fax: +971 4 8865465  
www.Virgo-Valves.com

**Emerson Process Management  
Virgo Valves**  
No. 15,  
Taman Perindustrian Alfa Impian,  
Jalan Alfa Impian 1,  
Balakong 43300,  
Selangor, Malaysia  
Phone: +60 3 8964 1381  
Fax: +60 3 8964 1382  
www.Virgo-Valves.com

**Emerson Process Management  
Virgo Valves**  
1803, YongSeong Biztel, 314-1  
Hangganro 2ga, Yongsan-gu  
Seoul, South Korea, 140-750  
Phone: +82 70 8884 0630  
www.Virgo-Valves.com

**Emerson Process Management  
Virgo Valves**  
Room No. C 38, 11th Floor,  
Shanghai Mart, 2299 Yan An Rd (W),  
Shanghai, China  
Phone: +86 21 6207 6626  
www.Virgo-Valves.com

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