



**Definition of Cv Value
(Flow Coefficient)**

The value Cv is the flow rate of Pure water at 60°F passing through the valve when the disc is fully opened and the differential pressure between the two ends of the valve is 1Lbf/in².

$$Cv = \sqrt{V \frac{G}{\Delta P}}$$

- V: Max.flow (in US gal/min)
- G: Specific gravity (1 for water)
- ΔP: Differential Pressure in valve (Lbf/in²)
- Cv = 1.17 Kv

**Definition of Kv Value
(Flow Coefficient)**

The value Kv is the flow rate of Pure water at 15°C passing through the valve when the disc is fully opened and the differential pressure between the two ends of the valve is 1 bar.

$$Kv = \sqrt{Q \frac{G}{\Delta P}}$$

- Q: Max.flow (m³/h)
- G: Medium density (g/cm³) (1 for water)
- ΔP: Differential Pressure in valve (100Kpa) i.e.(bar)
- Kv = 0.855 Cv

Cv Value of Concentric Butterfly Valve

Size	Flow in Gpm @ 1PSI P @ Various Disc Angles								
	10°	20°	30°	40°	50°	60°	70°	80°	Full 90°Open
2"	0.1	5	12	24	45	64	90	125	135
2.5"	0.2	8	20	37	65	98	144	204	220
3"	0.3	12	22	39	70	116	183	275	302
4"	0.5	17	36	78	139	230	364	546	600
5"	0.8	29	61	133	237	392	620	930	1022
6"	2	45	95	205	366	605	958	1437	1579
8"	3	89	188	408	727	1202	1903	2854	3136
10"	4	151	320	694	1237	2047	3240	4859	5340
12"	5	234	495	1072	1911	3162	5005	7505	8250
14"	6	338	715	1549	2761	4568	7230	10844	11917
16"	8	464	983	2130	3797	6282	9942	14913	16388
18"	11	615	1302	2822	5028	8320	13168	19752	21705
20"	14	791	1674	3628	6465	10698	16931	25396	27908
24"	22	1222	2587	5605	9989	16528	26157	39236	43116

Cv Value of Flanged Butterfly Valve

Size	Flow in Gpm @ 1PSI P @ Various Disc Angles								
	10°	20°	30°	40°	50°	60°	70°	80°	Full 90°Open
4"	1.74	18.3	41.1	88.5	133	284	348	569	632
6"	3.40	42.5	83.3	190	325	535	826	1232	1361
8"	4.48	79.3	163	361	632	1055	1655	2450	2696
10"	5.28	140	291	605	1081	1786	2782	4311	4652
12"	6.60	222	435	930	1671	2731	4286	6432	7122
14"	7.08	299	622	1343	2385	3925	6186	7220	7650
16"	8.88	411	865	1852	3271	5380	8518	9650	10800
18"	10.1	543	1215	2431	4321	7135	11273	12350	13600
20"	14.2	686	1482	3160	5541	9176	14510	16240	18250
24"	26.4	1058	2231	4844	8560	14157	18376	23556	26950
28"	51.7	1062	2528	5126	8921	14353	22566	30752	32150
32"	121	1232	2632	5326	9121	15125	22781	33916	39105
36"	282	1383	2816	5629	9533	15635	25783	35126	57923
40"	316	1463	2921	5726	9815	16335	26183	38133	69143
48"	474	2528	3005	5910	10212	16826	27156	39176	98256
56"	658	2716	4126	6975	19705	38916	42525	96175	122158
64"	868	3675	5985	7673	26265	39355	61625	122256	168256