



Sizes: 2-1/2", 3", 4", 5", 6", 8", 10" & 12"

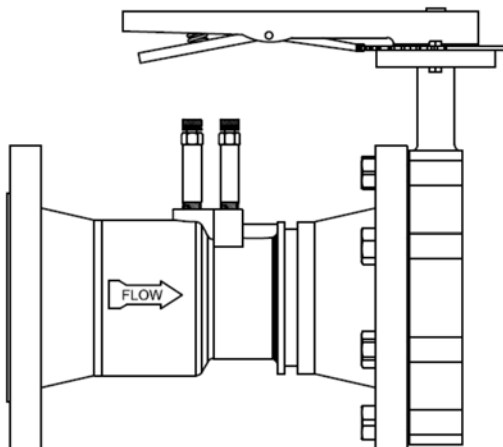
Type: Combination Butterfly/Venturi with Flange

Series: CBVF

Model CBVF is a combination butterfly valve and flanged style venturi. The carbon steel venturi connects to standard ANSI Class 150 pound flanges, and is combined with a lug type butterfly valve for throttling. The cast iron butterfly valve has a combination infinite/10 position memory stop plate, a one piece disc/shaft, a triple shaft bearing, an aluminum-bronze disc for sizes 2-1/2" - 8", a nickel plated disc for the 10" and 12" sizes, and an EPDM standard liner. It also comes with two pressure/temperature ports. Note: Sizes 2-1/2" - 6" contain the Infinite Memory stop. Sizes 8" - 12" are gear operated.

MATERIAL SPECIFICATIONS	
Venturi	Steel Casting, Carbon ASTM A216 Grade WCB
Flange	Forged Carbon Steel ASTM A105
Butterfly Valve	Nodular Cast Iron ASTM A536 60-4-18
Seat	EPDM Rubber
Disc (2-1/2"-8")	Aluminum-Bronze Sand Casting, ASTM B148 C95800
Disc (10" & 12")	Ductile Iron
Shaft	Stainless Steel AISI 410
O-Rings	EPDM Rubber
Bearing	Copper ASTM B45
Bearing Bush	PTFE
Hand Lever	Nodular Cast Iron ASTM A536 60-4-18
PT	Brass ASTM B455-05
PT Core	EPDM Dual Durometer Core

CONNECTIONS
Inlet - Raised-Face Flange / Outlet - Lug Butterfly Valve
CALCULATIONS
D.P. = (GPM*17.3/FF) ² (See Flow Factor in Chart Below) GPM = $\sqrt{DP*FF} / 17.3$
PRODUCT SPECIFICATIONS
Butterfly Valve is rated 150 PSIG and is suitable for dead-end service
Maximum pressure loss 6% of differential pressure
The carbon steel Venturi accuracy rating: ⇒ ±1% Between 10" w.c. and 70" w.c. based on Coefficient of Discharge ⇒ ±3% Between 5" w.c. and 150" w.c.
⇒ Temperature Rating: 212° F / 232 PSI (Note: the rating is limited by the butterfly valve)



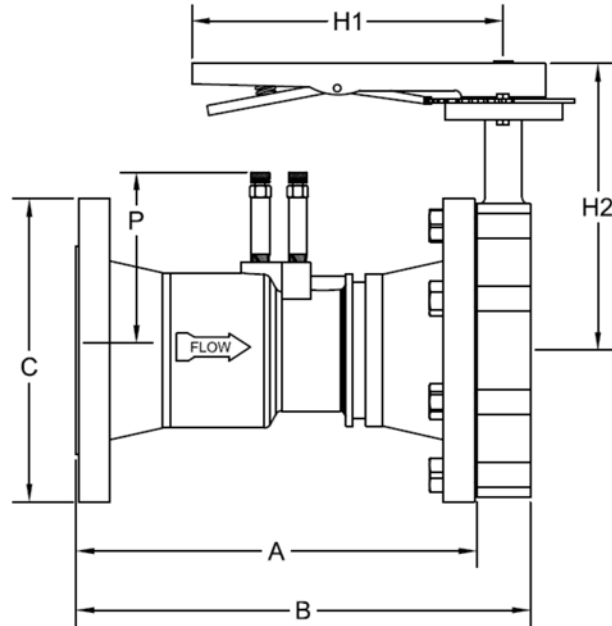
Size (In)	Model	Lower Flow Range (GPM)	Upper Flow Range (GPM)	Flow Factor	Wgt
2.5	CBVF250L	30	100	147	35
	CBVF250H	40	220	319	35
3	CBVF300L	30	160	227	43
	CBVF300H	80	400	578	41
4	CBVF400L	80	430	611	60
	CBVF400H	130	720	1029	56
5	CBVF500	160	880	1267	76
6	CBVF600	200	1100	1551	101
8	CBVF800	520	2000	2824	172
10	CBVF1000	580	2950	4164	281
12	CBVF1200	1250	6700	9670	422



Sizes: 2-1/2", 3", 4", 5", 6", 8", 10" & 12"

Type: Combination Butterfly/Venturi with Flange

Series: CBVF



Size (In)	Model	A	B	C	H1	H2	P
2.5	CBVF250L CBVF250H	10.8	12.6	7.0	10.5	8.1	5.3
3	CBVF300L CBVF300H	11.1	12.9	7.5	10.5	8.2	5.5
4	CBVF400L CBVF400H	12.4	14.4	9.0	10.5	9.0	6.0
5	CBVF500	13.4	15.5	10.0	10.5	9.4	6.6
6	CBVF600	14.9	17.1	11.0	10.5	10.2	7.2
8 ¹	CBVF800	16.8	19.2	13.5	¹	¹	8.4
10 ¹	CBVF1000	20.5	23.1	16.0	¹	¹	8.5
12 ¹	CBVF1200	26.2	29.2	19.0	¹	¹	12.4

¹Denotes a gear operated valve.

* Note: All dimensions and materials are subject to minor variations. Consult with factory for confirmation of dimensions and material specifications at the time of order.



Series: CBVF - Differential Pressure: Inches W.C.

GPM	2-1/2" L	2-1/2" H	3" L	3" H	4" L	4" H
30	12.5	2.6	5.2			
40	22.2	4.7	9.3			
50	34.6	7.4	14.5	2.2		
60	49.9	10.6	20.9	3.2	2.9	
70	67.9	14.4	28.5	4.4	3.9	
80	88.6	18.8	37.2	5.7	5.1	
90	112	23.8	47	7.3	6.5	2.3
100	139	29.4	58.1	9.0	8.0	2.8
110	168	35.6	70.3	10.8	9.7	3.4
120	199	42.4	83.6	12.9	11.5	4.1
130	234	49.7	98.2	15.1	13.5	4.8
140	271	57.6	114	17.6	15.7	5.5
150		66.2	131	20.2	18.0	6.4
160		75.3	149	22.9	20.5	7.2
170		85.0	168	25.9	23.2	8.2
180		95.3	188	29.0	26.0	9.2
190		106	210	32.3	28.9	10.2
200		118	232	35.8	32.1	11.3
210		130	256	39.5	35.4	12.5
220		142	281	43.4	38.8	13.7
230		156		47.4	42.4	15.0
240		169		51.6	46.2	16.3
250		184		56.0	50.1	17.7
260		199		60.6	54.2	19.1
270		214		65.3	58.4	20.6
280		231		70.2	62.9	22.2
290		247		75.3	67.4	23.8
300		265		80.6	72.2	25.4
310		283		86.1	77.0	27.2
320		301		91.7	82.1	28.9

GPM	3" H	4" L	4" H
330	97.6	87.3	30.8
340	104	92.7	32.7
350	110	98	34.6
360	116	104	36.6
370	123	110	38.7
380	129	116	40.8
390	136	122	43.0
400	143	128	45.2
410	151	135	47.5
420	158	141	49.9
430	166	148	52.3
440	173	155	54.7
450	181	162	57.2
460	190	170	59.8
470	198	177	62.4
480	206	185	65.1
490	215	192	67.9
500	224	200	70.7
510	233	209	73.5
520	242	217	76.4
540	261	234	82.4
560	281	251	88.6
580	301	270	95.1
600		299	101

Flow Factors for Calculating Delta Pressure D.P. = (GPM * 17.3/FF) ²					Flow Factors for Calculating Gallons Per Minute GPM = √DP*FF / 17.3					
2-1/2" L	2-1/2" H	3" L	3" H	4" L	4" H	5"	6"	8"	10"	12"
147	319	227	578	611	1029	1267	1551	2824	4164	9670



Series: CBVF - Differential Pressure: Inches W.C.

GPM	4"H
620	109
640	116
660	123
680	131
700	139
720	147
740	155
760	163
780	172
800	181
820	190
840	199
860	209
880	219
900	229
950	255
1000	283

GPM	5"	6"
110	2.3	
120	2.7	
130	3.2	2.1
140	3.7	2.4
150	4.2	2.8
160	4.8	3.2
170	5.4	3.6
180	6.0	4.0
190	6.7	4.5
200	7.5	5.0
210	8.2	5.5
220	9.0	6.0
230	9.9	6.6
240	10.7	7.2
250	11.7	7.8
260	12.6	8.4
270	13.6	9.1
280	14.6	9.8
290	15.7	10.5
300	16.8	11.2
310	17.9	12.0
320	19.1	12.7
330	20.3	13.5
340	21.6	14.4
350	22.8	15.2
360	24.2	16.1
370	25.5	17.0
380	26.9	18.0
390	28.4	18.9
400	29.8	19.9
410	31.3	20.9
420	32.9	21.9
430	166	148
440	173	155

GPM	5"	6"	8"	10"	12"
450	37.8	25.2			
460	39.5	26.3			
470	41.2	27.5			
480	43.0	28.7			
490	44.8	29.9			
500	46.6	31.1			
510	48.5	32.4			
520	50.4	33.6	10.1	4.7	
540	54.4	36.3	10.9	5.0	
560	58.5	39.0	11.8	5.4	
580	62.7	41.9	12.6	5.8	
600	67.1	44.8	13.5	6.2	
620	72	47.8	14.4	6.6	
640	76	51.0	15.4	7.1	
660	81	54.2	16.3	7.5	
680	86	57.5	17.4	8.0	
700	91	61.0	18.4	8.5	
720	97	64.5	19.5	8.9	
740	102	68.1	20.6	9.5	
760	108	71.9	21.7	10.0	
780	113	75.7	22.8	10.5	
800	119	79.6	24.0	11.0	
820	125	83.7	25.2	11.6	
840	132	87.8	26.5	12.2	
860	138	92.0	27.8	12.8	
880	144	96.3	29.1	13.4	
900	151	101	30.4	14.0	
950	168	112	33.9	15.6	2.9
1000	186	124	37.5	17.3	3.2
1050	206	137	41.4	19.0	3.5
1100	226	151	45.4	20.9	3.9
1150	247	165	49.6	22.8	4.2
1200	268	179	54.0	24.9	4.6
1250	291	194	58.6	27.0	5.0
1300		210	63.4	29.2	5.4



Series: CBVF - Differential Pressure: Inches W.C.

GPM	6"	8"	10"	12"
1350	227	68.4	31.5	5.8
1400	244	73.6	33.8	6.3
1450		78.9	36.3	6.7
1500	280	84.4	38.8	7.2
1550		90.2	41.5	7.7
1600		96.1	44.2	8.2
1650		102.2	47.0	8.7
1700		108.5	49.9	9.2
1750		114.9	52.9	9.8
1800		121.6	55.9	10.4
1850		128.4	59.1	11.0
1900		135.5	62.3	11.6
1950		142.7	65.6	12.2
2000		150.1	69.0	12.8
2050		157.7	72.5	13.5
2100		165.5	76.1	14.1
2150		173.5	79.8	14.8
2200		181.6	83.5	15.5
2250		190.0	87.4	16.2
2300		198.5	91.3	16.9
2350		207.3	95.3	17.7
2400		216.2	99.4	18.4
2450		225.2	103.6	19.2
2500		234.6	107.9	20.2
2550		244.0	112.2	20.8
2600		253.7	116.7	21.6
2650		263.5	121.2	22.5
2700		273.6	125.8	23.3
2750		283.8	130.5	24.2
2800		294.2	135.3	25.1
2850		304.8	140.2	26.0
2900		315.6	145.2	26.9
2950		326.6	150.2	27.9

GPM	10"	12"
3000	155.4	28.8
3050	160.6	29.8
3100	165.9	30.8
3150	171.3	31.8
3200	176.8	32.5
3250	182.3	33.8
3300	188.0	34.9
3350	193.7	35.9
3400	199.5	37.0
3450	205.5	38.1
3500	211.4	39.2
3550	217.5	40.3
3600	223.7	41.5
3650	230.0	42.6
3700	236.3	43.8
3750	242.7	45.0
3800	249.3	46.2
3850	255.6	47.4
3900	262.5	48.7
3950	269.3	49.9
4000	276.2	51.2
4050	283.1	52.5
4100	290.2	53.8
4150	297.3	55.1
4200		56.5
4250		57.8
4300		59.2
4350		60.6
4400		62.0
4450		63.4
4500		64.8
4550		66.3
4600		67.7

GPM	12"
4650	69.2
4700	70.7
4750	72.2
4800	73.7
4850	75.3
4900	76.8
4950	78.4
5000	80.0
5050	81.6
5100	83.2
5150	84.9
5200	86.5
5250	88.2
5300	89.9
5350	91.6
5400	93.3
5500	96.8
5700	104.0
5900	111.4
6100	119.1
6300	127.0
6500	135.2
6700	143.7
6900	152.4
7100	161.3
7300	170.6
7500	180.0
7700	189.8
7900	199.8
8100	210.2
8300	220.5
8500	231.2
8700	242.3

GPM	12"
8900	256.5
9100	265.0
9300	276.8
9500	288.9
9700	301.1
9900	313.7
10100	326.5
10300	339.6
10500	352.9
10700	366.4
10900	380.3
11100	394.4
11300	408.7
11500	423.3
11700	438.1
11900	453.2
12100	468.6
12300	484.2