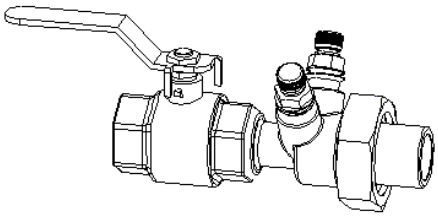
Bell & Gossett
a xylem brand

SUBMITTAL

A-606.40B

JOB:	**REPRESENTATIVE:**	
UNIT TAG:	**ORDER NO.**	**DATE:**
ENGINEER:	**SUBMITTED BY:**	**DATE:**
CONTRACTOR:	**APPROVED BY:**	**DATE:**



MODEL MV
Venturi/Ball Valve Combination

DESCRIPTION

Bell & Gossett's Model MV is a combination calibrated balance, commissioning and positive shut-off valve for use in HVAC systems. An efficient brass Venturi design provides accurate flow balancing with minimal system pressure loss. Valves are furnished with two pressure / temperature ports, standard port ball valve with memory stop, and a hanging ID tag for commissioning. A variety of end connections are available on both the fixed and union ends.

CONSTRUCTION

Body: Brass C37700
Ball: Chrome Plated
Ball Seal: Teflon
Stem: Explosion Proof
O-Rings: EPDM
Handle: Chrome Plated Steel with Vinyl Cover

MAXIMUM WORKING PRESSURE

400 psig (2,758 kPa)

TEMPERATURE RANGE

-4°F (-20°C) to 250°F (121°C)

ACCURACY

+/- 1% Between 10" W.C. & 70" W.C.
+/- 3% Between 5" W.C. & 150" W.C.
+/- 5% Less than 5" W.C. & Over 150" W.C.

See Instruction Sheet V57895

SCHEDULE

VALVE SIZE/FIXED END	TAGGING INFORMATION	QUANTITY
½"L Sweat Female		
½"L NPT Female		
½"H Sweat Female		
½"H NPT Female		
¾"UL Sweat Female		
¾"UL NPT Female		
¾"L Sweat Female		
¾"L NPT Female		
¾"H Sweat Female		
¾"H NPT Female		
1" Sweat Female		
1" NPT Female		
1¼" Sweat Female		
1¼" NPT Female		
1½" Sweat Female		
1½" NPT Female		
2" Sweat Female		
2" NPT Female		

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B&G Model MV - Manual Venturi Balance Chart (Differential Pressure Measured Across the Venturi)

1/2"L & 3/4"UL Venturi's

GPM (LPM)	ΔP (In. W.C.)	ΔP (PSID)	CV
0.3 (1.1)	8	0.3	0.55
0.4 (1.5)	15	0.5	0.55
0.5 (1.9)	23	0.8	0.55
0.6 (2.3)	33	1.2	0.55
0.7 (2.7)	45	1.6	0.55
0.8 (3.0)	59	2.1	0.55
0.9 (3.4)	75	2.7	0.55
1.0 (3.8)	92	3.3	0.55
1.1 (4.2)	112	4.0	0.55
1.2 (4.5)	133	4.8	0.55
1.3 (4.9)	156	5.6	0.55
1.4 (5.3)	181	6.5	0.55
1.5 (5.7)	208	7.5	0.55
1.6 (6.1)	236	8.5	0.55
1.7 (6.4)	267	9.6	0.55
1.8 (6.8)	299	10.8	0.55
1.9 (7.2)	333	12.0	0.55
2.0 (7.6)	369	13.3	0.55
2.2 (8.3)	447	16.1	0.55

1/2"H & 3/4"L Venturi's

GPM	ΔP (In. W.C.)	ΔP (PSID)	CV
1.0 (3.8)	12	0.4	1.6
1.1 (4.2)	14	0.5	1.6
1.2 (4.5)	17	0.6	1.6
1.3 (4.9)	20	0.7	1.6
1.4 (5.3)	23	0.8	1.6
1.5 (5.7)	27	1.0	1.6
1.6 (6.1)	31	1.1	1.6
1.7 (6.4)	35	1.3	1.6
1.8 (6.4)	39	1.4	1.6
1.9 (7.2)	43	1.6	1.6
2.0 (7.6)	48	1.7	1.6
2.2 (8.3)	58	2.1	1.6
2.4 (9.1)	69	2.5	1.6
2.6 (9.8)	81	2.9	1.6
2.8 (10.6)	94	3.4	1.6
3.0 (11.4)	108	3.9	1.6
3.2 (12.1)	123	4.4	1.6
3.4 (12.9)	138	5.0	1.6
3.6 (13.6)	155	5.6	1.6
3.8 (14.4)	173	6.3	1.6
4.0 (15.1)	192	6.9	1.6
4.2 (15.9)	211	7.6	1.6
4.4 (16.7)	232	8.4	1.6
4.5 (17.0)	242	8.7	1.6
4.6 (17.4)	253	9.1	1.6
4.8 (18.2)	276	10.0	1.6
5.0 (18.9)	299	10.8	1.6
5.2 (19.7)	324	11.7	1.6
5.4 (20.4)	349	12.6	1.6
5.5 (20.8)	362	13.1	1.6
5.6 (21.2)	375	13.5	1.6
5.8 (22.0)	403	14.6	1.6
6.0 (22.7)	431	15.6	1.6
6.2 (23.5)	460	16.6	1.6
6.4 (24.2)	490	17.7	1.6

3/4"H Venturi's

GPM (LPM)	ΔP (In. W.C.)	ΔP (PSID)	CV
3.0 (11.4)	26	0.9	3.1
3.2 (12.1)	29	1.0	3.1
3.4 (12.9)	33	1.2	3.1
3.6 (13.6)	37	1.3	3.1
3.8 (14.4)	42	1.5	3.1
4.0 (15.1)	46	1.7	3.1
4.2 (15.9)	51	1.8	3.1
4.4 (16.7)	56	2.0	3.1
4.5 (17.0)	58	2.1	3.1
4.6 (17.4)	61	2.2	3.1
4.8 (18.2)	66	2.4	3.1
5.0 (18.9)	72	2.6	3.1
5.2 (19.7)	78	2.8	3.1
5.4 (20.4)	84	3.0	3.1
5.5 (20.8)	87	3.1	3.1
5.6 (21.2)	90	3.3	3.1
5.8 (22.0)	97	3.5	3.1
6.0 (22.7)	104	3.8	3.1
6.2 (23.5)	111	4.0	3.1
6.4 (24.2)	118	4.3	3.1
6.5 (24.6)	122	4.4	3.1
6.6 (25.0)	125	4.5	3.1
6.8 (25.7)	133	4.8	3.1
7.0 (26.5)	141	5.1	3.1
7.5 (28.4)	162	5.9	3.1
8.0 (30.3)	184	6.6	3.1
8.5 (32.2)	208	7.5	3.1
9.0 (34.1)	233	8.4	3.1
9.5 (36.0)	260	9.4	3.1
10 (37.9)	288	10.4	3.1
11 (41.6)	348	12.6	3.1
12 (45.4)	414	15.0	3.1
13 (49.2)	486	17.6	3.1

1" Venturi's

GPM (LPM)	ΔP (In. W.C.)	ΔP (PSID)	CV
2.8 (10.6)	9.0	0.3	5.0
3.0 (11.4)	10.0	0.4	5.0
3.2 (12.1)	12.0	0.4	5.0
3.4 (12.9)	13.0	0.5	5.0
3.6 (13.6)	15.0	0.5	5.0
3.8 (14.4)	16.0	0.6	5.0
4.0 (15.1)	18.0	0.7	5.0
4.2 (15.9)	20.0	0.7	5.0
4.4 (16.7)	22.0	0.8	5.0
4.5 (17.0)	23.0	0.8	5.0
4.6 (17.4)	24.0	0.9	5.0
4.8 (18.2)	26.0	0.9	5.0
5.0 (18.9)	28.0	1.0	5.0
5.2 (19.7)	30.0	1.1	5.0
5.4 (20.4)	33.0	1.2	5.0
5.5 (20.8)	34.0	1.2	5.0
5.6 (21.2)	35.0	1.3	5.0
5.8 (22.0)	38.0	1.4	5.0
6.0 (22.7)	41.0	1.5	5.0
6.2 (23.5)	43.0	1.6	5.0
6.4 (24.2)	46.0	1.7	5.0
6.5 (24.6)	48.0	1.7	5.0
6.6 (25.0)	49.0	1.8	5.0
6.8 (25.7)	52.0	1.9	5.0
7.0 (26.5)	55.0	2.0	5.0
7.5 (28.4)	63.0	2.3	5.0
8.0 (30.3)	72.0	2.6	5.0
8.5 (32.2)	81.0	2.9	5.0
9.0 (34.1)	91.0	3.3	5.0
9.5 (36)	102.0	3.7	5.0
10.0 (37.9)	113.0	4.1	5.0
11.0 (41.6)	136.0	4.9	5.0
12.0 (45.4)	162.0	5.9	5.0
13.0 (49.2)	190.0	6.9	5.0
14.0 (53.0)	221.0	8.0	5.0
15.0 (56.8)	253.0	9.1	5.0
16.0 (60.6)	288.0	10.4	5.0
17.0 (64.4)	326.0	11.8	5.0
18.0 (68.1)	365.0	13.2	5.0
19.0 (71.9)	407.0	14.7	5.0
20.0 (75.7)	451.0	16.3	5.0

1-1/2" Venturi's

GPM (LPM)	ΔP (In. W.C.)	ΔP (PSID)	CV
9.0 (34.1)	13.	0.5	13.0
9.5 (36)	15.0	0.5	13.0
10 (37.9)	16.0	0.6	13.0
11 (41.6)	20.0	0.7	13.0
12 (45.4)	23.0	0.8	13.0
13 (49.2)	27.0	1.0	13.0
14 (53.0)	32.0	1.2	13.0
15 (56.8)	36.0	1.3	13.0
16 (60.6)	41.0	1.5	13.0
17 (64.4)	47.0	1.7	13.0
18 (68.1)	52.0	1.9	13.0
19 (71.9)	58.0	2.1	13.0
20 (75.7)	65.0	2.3	13.0
22 (83.3)	78.0	2.8	13.0
24 (90.8)	93.0	3.4	13.0
26 (98.4)	109.0	3.9	13.0
28 (106.0)	127.0	4.6	13.0
30 (113.6)	146.0	5.3	13.0
32 (121.1)	166.0	6.0	13.0
34 (128.7)	187.0	6.8	13.0
36 (136.3)	210.0	7.6	13.0
38 (143.8)	234.0	8.5	13.0
40 (151.4)	259.0	9.4	13.0
42 (159.0)	286.0	10.3	13.0
44 (166.6)	313.0	11.3	13.0
46 (174.1)	343.0	12.4	13.0
48 (181.7)	373.0	13.5	13.0
50 (189.3)	405.0	14.6	13.0
52 (196.8)	438.0	15.8	13.0
54 (204.4)	472.0	17.1	13.0

2" Venturi's

GPM (LPM)	ΔP (In. W.C.)	ΔP (PSID)	CV
16.0 (60.6)	12.0	0.4	24.0
17.0 (64.4)	14.0	0.5	24.0
18 (68.1)	16.0	0.6	24.0
19 (71.9)	17.0	0.7	24.0
20 (75.7)	19.0	0.8	24.0
22 (83.3)	23.0	1.0	24.0
24 (90.8)	28.0	1.2	24.0
26 (98.4)	32.0	1.4	24.0
28 (106.0)	38.0	1.6	24.0
30 (113.6)	43.0	1.8	24.0
32 (121.1)	49.0	2.0	24.0
34 (128.7)	55.0	2.2	24.0
36 (136.3)	62.0	2.5	24.0
38 (143.8)	69.0	2.8	24.0
40 (151.4)	77.0	3.1	24.0
42 (159.0)	85.0	3.1	24.0
44 (166.6)	93.0	3.4	24.0
46 (174.1)	101.0	3.6	24.0
48 (181.7)	110.0	4.0	24.0
50 (189.3)	120.0	4.3	24.0
52 (196.8)	130.0	4.7	24.0
54 (204.4)	140.0	5.1	24.0
56 (212.0)	150.0	5.4	24.0
58 (219.6)	161.0	5.8	24.0
60 (227.1)	173.0	6.3	24.0
62 (234.7)	184.0	6.6	24.0
64 (242.3)	196.0	7.1	24.0
66 (249.8)	209.0	7.6	24.0
68 (257.4)	222.0	8.0	24.0

Flow Factor (FF):

1"	16.3
1-1/4"	29.0
1-1/2"	43.0
2"	79.0
1/2"L & 3/4" UL	1.8
1/2"H & 3/4" L	5.0
3/4"H	10.2

Accuracy:

+/- 1% Between 10" W.C. & 70" W.C.

+/- 3% Between 5" W.C. & 150" W.C.

+/- 5% Less than 5" W.C.

+/- 5% Greater than 150" W.C.

$$\Delta P\,(\text{IN. W.C.}) = \left(\frac{\text{GPM} \times 17.3}{FF}\right)^2$$

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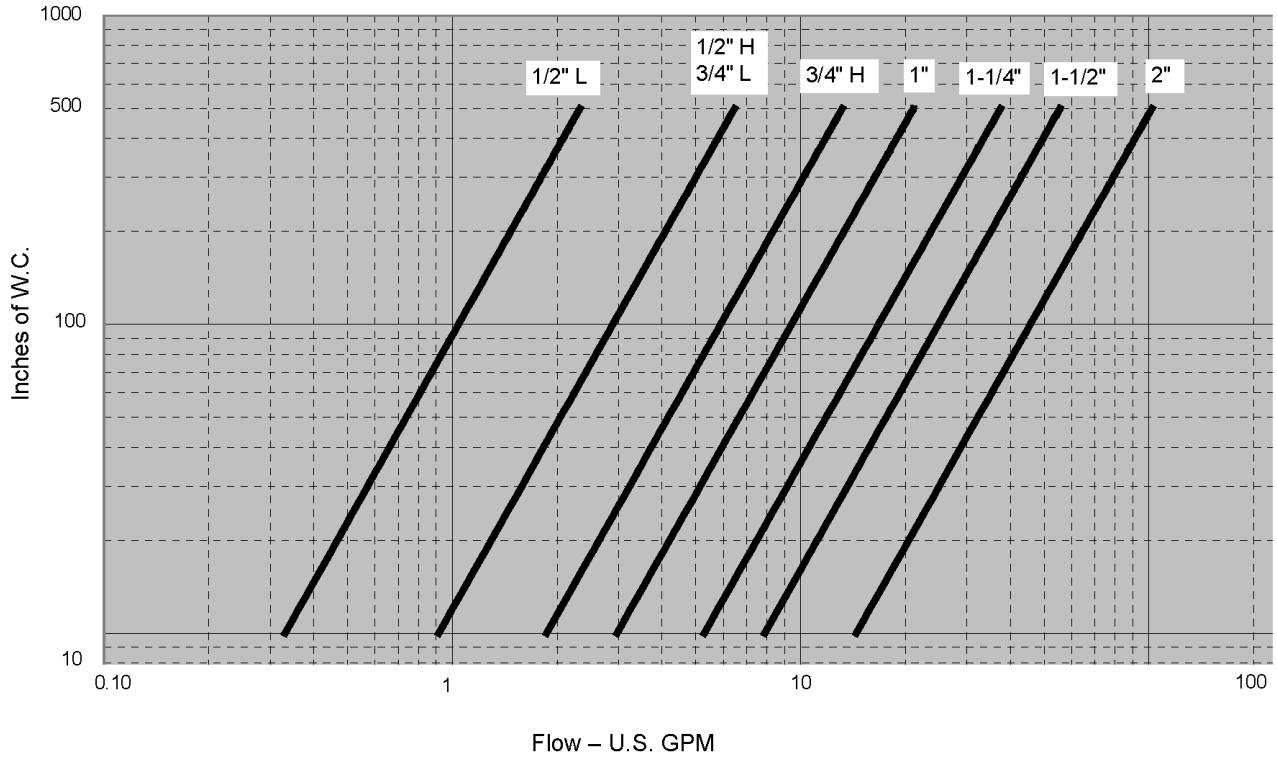
Model MV - Venturi/Ball Valve Combination

Differential Pressure: Inches W.C.



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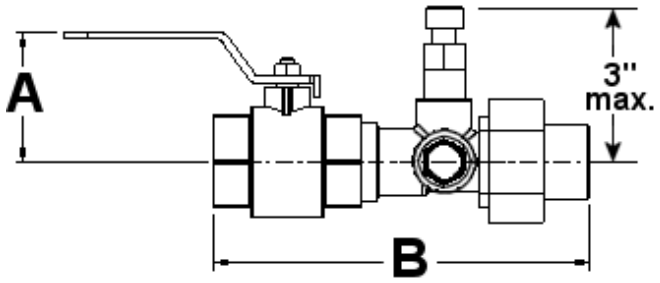

VALVE SIZE/FIXED END	Recommended Flow Rate GPM (l/m)	DIMENSIONS* INCH (mm)		APPROX. WT. LBS. (kg)
		A	B	
½"L Sweat Female	0.3 - 0.9 (1.14 - 3.41)	1.30" (33)	4.98" (127)	1.23 (0.6)
½"L NPT Female	0.3 - 0.9 (1.14 - 3.41)	1.30" (33)	4.98" (127)	1.23 (0.6)
½"H Sweat Female	1.0 - 4.8 (3.8 - 18.18)	1.30" (33)	4.98" (127)	1.23 (0.6)
½"H NPT Female	1.0 - 4.8 (3.8 - 18.18)	1.30" (33)	4.98" (127)	1.23 (0.6)
¾"UL Sweat Female	0.3 - 0.9 (1.14 - 3.41)	1.50" (38)	5.40" (137)	1.50 (0.7)
¾"UL NPT Female	0.3 - 0.9 (1.14 - 3.41)	1.50" (38)	5.40" (137)	1.50 (0.7)
¾"L Sweat Female	1.0 - 2.8 (3.8 - 10.6)	1.50" (38)	5.40" (137)	1.50 (0.7)
¾"L NPT Female	1.0 - 2.8 (3.8 - 10.6)	1.50" (38)	5.40" (137)	1.50 (0.7)
¾"H Sweat Female	3.0 - 9.0 (11.4 - 34.09)	1.50" (38)	5.40" (137)	1.50 (0.7)
¾"H NPT Female	3.0 - 9.0 (11.4 - 34.09)	1.50" (38)	5.40" (137)	1.50 (0.7)
1" Sweat Female	2.8 - 15.0 (10.61 - 56.82)	1.80" (46)	5.80" (147)	2.45 (1.11)
1" NPT Female	2.8 - 15.0 (10.61 - 56.82)	1.80" (46)	5.80" (147)	2.45 (1.11)
1¼" Sweat Female	5.4 - 26.0 (20.46 - 98.49)	2.05" (52)	6.60" (168)	3.50 (1.59)
1¼" NPT Female	5.4 - 26.0 (20.46 - 98.49)	2.05" (52)	6.60" (168)	3.50 (1.59)
1½" Sweat Female	12.0 - 40 (45.46 - 151.52)	2.48" (63)	7.60" (193)	4.81 (2.18)
1½" NPT Female	12.0 - 40 (45.46 - 151.52)	2.48" (63)	7.60" (193)	4.81 (2.18)
2" Sweat Female	22.0 - 75 (83.33 - 284.09)	2.64" (67)	9.90" (251)	7.25 (3.29)
2" NPT Female	22.0 - 75 (83.33 - 284.09)	2.64" (67)	9.90" (251)	7.25 (3.29)

*All dimensions +/- 0.125" tolerance. Dimensions are subject to change. Not to be used for construction purposes unless certified.

Please see Data Chart #EP-600

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