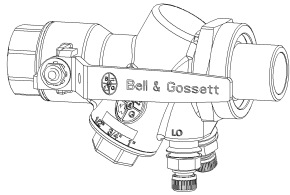




SUBMITTAL

A-606.16B

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



Circuit Sentry™

Model AC

Combination Commissioning Valve & Automatic Flow Limiting Valve

DESCRIPTION

The Bell & Gossett Circuit Sentry™ is a combination automatic flow limiting valve, commissioning valve, and shut-off valve for use in HVAC systems. Valves are furnished with a removable flow limiting diaphragm cartridge to allow easy access for inspection, cleaning or flow rate changes without disturbing the piping. Two 1" pressure / temperature ports and a hanging ID tag for commissioning are standard. A variety of end connections are available on both the fixed and union ends.

CONSTRUCTION

Body: Brass C37710
 Ball: Chrome Plated Brass C37710
 Ball Seal: PTFE
 Stem: Blow-out Proof
 O-Rings: EPDM
 Cartridge:
 "A" Body: Brass 36000
 "B" Body: Brass 36000
 "C" Body: 304 Stainless Steel
 Diaphragm: Reinforced EPDM
 Spring: Stainless Steel

MAXIMUM WORKING PRESSURE

400 psig (2,758 kPa)

TEMPERATURE RANGE

-4°F (-20°C) to 250°F (121°C)

CONTROL RANGE

2 psi (14kPa) to 60 psi (414 kPa)

Accuracy

+/- 5%

*See Instruction Sheet V50844

SCHEDULE

VALVE SIZE FIXED END	TAGGING INFORMATION	QUANTITY
½" Sweat Female		
½" NPT Female		
¾" Sweat Female		
¾" NPT Female		
1" Sweat Female		
1" NPT Female		
1L" Sweat Female		
1L" NPT Female		
1¼" Sweat Female		
1¼" NPT Female		
1½" Sweat Female		
1½" NPT Female		
2" R Sweat Female		
2" R NPT Female		
LARGE BODY		
1½" L Sweat Female		
1½" L NPT Female		
2" Sweat Female		
2" NPT Female		
2½" Sweat Female		
2½" NPT Female		

FLOW RATES

Fixed End Size In. (mm)	FLOW RATES* (GPM)																										
	0.33	0.5	1	1.5	1.75	2	2.5	3	3.5	4	4.5	5	5.5	6	6.5	7	7.5	8	9	10	11						
½" (12.7)	0.33	0.5	1	1.5	1.75	2	2.5	3	3.5	4	4.5	5	5.5	6	6.5	7	7.5	8	9	10	11						
¾" (19)	0.33	0.5	1	1.5	1.75	2	2.5	3	3.5	4	4.5	5	5.5	6	6.5	7	7.5	8	9	10	11						
1" (25.4)	0.33	0.5	1	1.5	1.75	2	2.5	3	3.5	4	4.5	5	5.5	6	6.5	7	7.5	8	9	10	11						
1"L (25.4)	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	22	24	26	28	30	32	34	36	38	40	42
1¼" (31.75)	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	22	24	26	28	30	32	34	36	38	40	42
1½" (38.1)	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	22	24	26	28	30	32	34	36	38	40	42
2"R (50.8)	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	22	24	26	28	30	32	34	36	38	40	42

*B&G recommends following ASHARAE's design criteria for hydronic system piping, flow rates, and friction loss.

Fixed End Size In. (mm)	FLOW RATES* (LPS)																										
	0.02	0.03	0.06	0.09	0.11	0.13	0.16	0.19	0.22	0.25	0.28	0.32	0.35	0.38	0.41	0.44	0.47	0.50	0.57	0.63	0.69						
½" (12.7)	0.02	0.03	0.06	0.09	0.11	0.13	0.16	0.19	0.22	0.25	0.28	0.32	0.35	0.38	0.41	0.44	0.47	0.50	0.57	0.63	0.69						
¾" (19)	0.02	0.03	0.06	0.09	0.11	0.13	0.16	0.19	0.22	0.25	0.28	0.32	0.35	0.38	0.41	0.44	0.47	0.50	0.57	0.63	0.69						
1" (25.4)	0.02	0.03	0.06	0.09	0.11	0.13	0.16	0.19	0.22	0.25	0.28	0.32	0.35	0.38	0.41	0.44	0.47	0.50	0.57	0.63	0.69						
1"L (25.4)	0.32	0.38	0.44	0.50	0.57	0.63	0.69	0.76	0.82	0.88	0.95	1.01	1.07	1.14	1.20	1.26	1.39	1.51	1.64	1.77	1.89	2.02	2.14	2.27	2.40	2.52	2.65
1¼" (31.75)	0.32	0.38	0.44	0.50	0.57	0.63	0.69	0.76	0.82	0.88	0.95	1.01	1.07	1.14	1.20	1.26	1.39	1.51	1.64	1.77	1.89	2.02	2.14	2.27	2.40	2.52	2.65
1½" (38.1)	0.32	0.38	0.44	0.50	0.57	0.63	0.69	0.76	0.82	0.88	0.95	1.01	1.07	1.14	1.20	1.26	1.39	1.51	1.64	1.77	1.89	2.02	2.14	2.27	2.40	2.52	2.65
2"R (50.8)	0.32	0.38	0.44	0.50	0.57	0.63	0.69	0.76	0.82	0.88	0.95	1.01	1.07	1.14	1.20	1.26	1.39	1.51	1.64	1.77	1.89	2.02	2.14	2.27	2.40	2.52	2.65

*B&G recommends following ASHARAE's design criteria for hydronic system piping, flow rates, and friction loss.

FLOW RATES - LARGE BODY

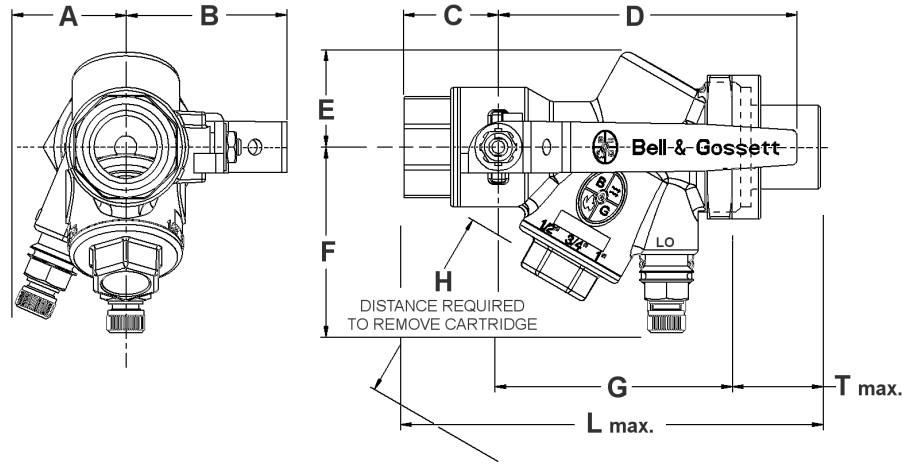
Fixed End Size In. (mm)	FLOW RATES* (GPM)																									
	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100	110	120	130	140	150			
1½"L (38.1)	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100	110	120	130	140	150			
2" (50.8)	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100	110	120	130	140	150			
2½" (63.5)	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100	110	120	130	140	150			

*B&G recommends following ASHARAE's design criteria for hydronic system piping, flow rates, and friction loss.

Fixed End Size In. (mm)	FLOW RATES* (LPS)																									
	0.95	1.26	1.58	1.89	2.21	2.52	2.84	3.15	3.47	3.79	4.10	4.42	4.73	5.05	5.36	5.68	5.99	6.31	6.94	7.57	8.20	8.83	9.46			
1½"L (38.1)	0.95	1.26	1.58	1.89	2.21	2.52	2.84	3.15	3.47	3.79	4.10	4.42	4.73	5.05	5.36	5.68	5.99	6.31	6.94	7.57	8.20	8.83	9.46			
2" (50.8)	0.95	1.26	1.58	1.89	2.21	2.52	2.84	3.15	3.47	3.79	4.10	4.42	4.73	5.05	5.36	5.68	5.99	6.31	6.94	7.57	8.20	8.83	9.46			
2½" (63.5)	0.95	1.26	1.58	1.89	2.21	2.52	2.84	3.15	3.47	3.79	4.10	4.42	4.73	5.05	5.36	5.68	5.99	6.31	6.94	7.57	8.20	8.83	9.46			

*B&G recommends following ASHARAE's design criteria for hydronic system piping, flow rates, and friction loss.

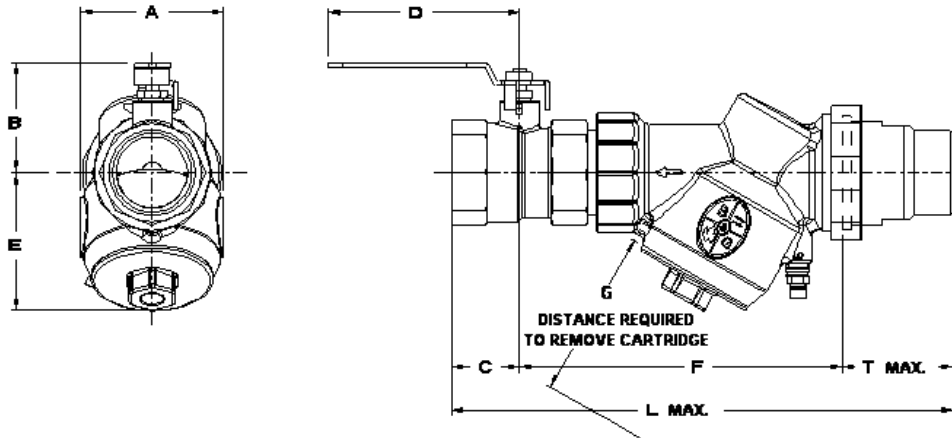




Valve Size Fixed End	Connection Fixed End	DIMENSIONS* INCH (mm)										Approx. Weight Lbs. (kg)
		A	B	C	D	E	F	G	H	T (Max)	L (Max)	
½" (12.7)	Sweat Female	1.42 (36)	1.93 (49)	1.26 (32)	3.74 (95)	1.18 (30)	2.36 (60)	3.03 (77)	1.77 (45)	0.98 (25)	5.27 (134)	2.4 (1.1)
½" (12.7)	NPT Female	1.42 (36)	1.93 (49)	1.18 (30)	3.74 (95)	1.18 (30)	2.36 (60)	3.03 (77)	1.77 (45)	0.98 (25)	5.19 (132)	2.4 (1.1)
¾" (19)	Sweat Female	1.42 (36)	1.93 (49)	1.38 (35)	3.74 (95)	1.18 (30)	2.36 (60)	3.03 (77)	1.77 (45)	0.98 (25)	5.39 (137)	2.4 (1.1)
¾" (19)	NPT Female	1.42 (36)	1.93 (49)	1.18 (30)	3.74 (95)	1.18 (30)	2.36 (60)	3.03 (77)	1.77 (45)	0.98 (25)	5.19 (132)	2.5 (1.1)
1" (25.4)	Sweat Female	1.42 (36)	1.93 (49)	1.46 (37)	3.74 (95)	1.18 (30)	2.36 (60)	3.03 (77)	1.77 (45)	1.69 (43)	6.18 (157)	2.6 (1.2)
1" (25.4)	NPT Female	1.42 (36)	1.93 (49)	1.38 (35)	3.74 (95)	1.18 (30)	2.36 (60)	3.03 (77)	1.77 (45)	1.69 (43)	6.10 (155)	2.6 (1.2)
1L" (25.4)	Sweat Female	1.65 (42)	2.87 (73)	1.85 (47)	5.2 (132)	1.89 (48)	2.95 (75)	4.67 (118.5)	2.46 (62.5)	1.93 (49)	8.45 (214.5)	7.1 (3.2)
1L" (25.4)	NPT Female	1.65 (42)	2.87 (73)	1.67 (42.5)	5.2 (132)	1.89 (48)	2.95 (75)	4.67 (118.5)	2.46 (62.5)	1.93 (49)	8.27 (210)	7.1 (3.2)
1¼" (31.75)	Sweat Female	1.65 (42)	2.87 (73)	1.89 (48)	5.2 (132)	1.89 (48)	2.95 (75)	4.67 (118.5)	2.46 (62.5)	2.09 (53)	8.65 (219.5)	7.1 (3.2)
1¼" (31.75)	NPT Female	1.65 (42)	2.87 (73)	1.65 (42)	5.2 (132)	1.89 (48)	2.95 (75)	4.67 (118.5)	2.46 (62.5)	2.09 (53)	8.41 (213.5)	7.2 (3.3)
1½" (38.1)	Sweat Female	1.65 (42)	2.87 (73)	2.01 (51)	5.2 (132)	1.89 (48)	2.95 (75)	4.67 (118.5)	2.46 (62.5)	2.09 (53)	8.77 (222.5)	7.1 (3.2)
1½" (38.1)	NPT Female	1.65 (42)	2.87 (73)	1.73 (44)	5.2 (132)	1.89 (48)	2.95 (75)	4.67 (118.5)	2.46 (62.5)	2.09 (53)	8.49 (215.5)	7.1 (3.2)
2" R ** (50.8)	Sweat Female	1.65 (42)	2.87 (73)	5.04 (128)	5.2 (132)	1.89 (48)	2.95 (75)	4.67 (118.5)	2.46 (62.5)	2.09 (53)	11.8 (299.5)	9.8 (4.4)
2" R ** (50.8)	NPT Female	1.65 (42)	2.87 (73)	3.36 (85)	5.2 (132)	1.89 (48)	2.95 (75)	4.67 (118.5)	2.46 (62.5)	2.09 (53)	10.12 (256.5)	9.0 (4.1)

*All dimensions +/- 0.125" (3.2 mm) tolerance. Dimensions are subject to change. Not to be used for construction purposes unless certified.

** 2" Reduced Port



LARGE BODY

Valve Size Fixed End	Connection Fixed End	DIMENSIONS* INCH (mm)									Approx. Weight Lbs.(kg)
		A	B	C	D	E	F	G	T (Max)	L (Max)	
1½" L (38.1)	Sweat Female	4.0 (102)	3.07 (78)	3.15 (80)	5.35 (136)	3.85 (98)	9.0 (228)	4.33 (110)	3.12 (79)	15.27 (387)	16.62 (7.5)
1½" L (38.1)	NPT Female	4.0 (102)	3.07 (78)	4.92 (125)	5.35 (136)	3.85 (98)	9.0 (228)	4.33 (110)	3.12 (79)	17.04 (432)	16.65 (7.6)
2" (50.8)	Sweat Female	4.0 (102)	3.07 (78)	3.35 (86)	5.35 (136)	3.85 (98)	9.0 (228)	4.33 (110)	3.12 (79)	15.47 (392)	16.87 (7.7)
2" (50.8)	NPT Female	4.0 (102)	3.07 (78)	1.96 (50)	5.35 (136)	3.85 (98)	9.0 (228)	4.33 (110)	3.12 (79)	14.08 (357)	17.39 (7.9)
2½" (63.5)	Sweat Female	4.0 (102)	3.07 (78)	2.55 (65)	5.35 (136)	3.85 (98)	10.78 (274)	4.33 (110)	3.12 (79)	16.45 (418)	18.83 (8.5)
2½" (63.5)	NPT Female	4.0 (102)	3.07 (78)	4.33 (110)	5.35 (136)	3.85 (98)	10.78 (274)	4.33 (110)	3.12 (79)	18.23 (463)	19.36 (8.8)

*All dimensions +/- 0.125 (3.2 mm) tolerance. Dimensions are subject to change. Not to be used for construction purposes unless certified.