

Job	Representative	
Unit tag	Order number	Date
Engineer	Submitted by	Date
Contractor	Approved by	Date



Circuit Setter®

Calibrated balance valves
with flanged connections

Description

The Bell & Gossett Circuit Setter calibrated balance valve is a precision machined triple purpose balancing instrument. It is precisely calibrated for use as a presettable balance valve, variable orifice flow meter and positive shut-off service valve.

Valves are furnished with a calibrated nameplate and memory stop indicator which permits the value to be preset to a fixed open position and then closed for service without disturbing valve setting.

Valves are equipped with capped readout valves fitted with internal check valves. Sizes 2-1/2"-4" (brass ball) include a 1/4" NPT tapped and plugged drain port as standard.

Maximum operating temperature:
250°F (121°C)

Maximum working pressure:
175 PSIG (1207 kPa)

Construction:
Sizes: 2-1/2"-4"

Body: cast iron

Ball: brass

Seat rings: glass and carbon filled TFE

Readout valves: brass with EPT check valve

Stem "O" ring: EPDM

Sizes: 4"-12"

Body & bonnet - flanged: cast iron
Disc: 4" - 8" Brass with EPDM insert
10" - 12" stainless steel with EPDM insert

Stern: stainless steel

Packing: teflon-graphite (asbestos-free)

Gasket: synthetic fiber - nitrile binder (asbestos-free)

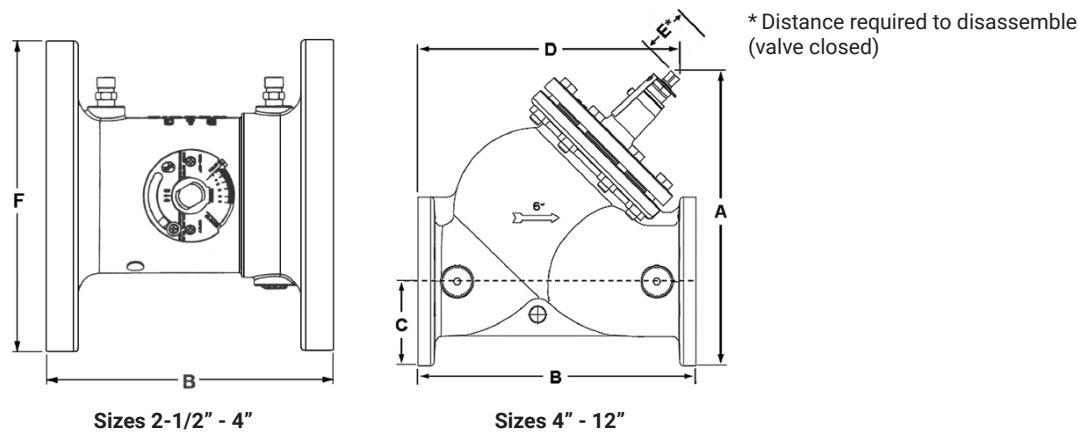
Seal ring: EPDM

Bushing: nickel plated steel

Schedule

Model no.	Part no.	Tagging information	Quantity
CB-2-1/2F	117116		
CB-3F	117117		
CB-4	117035		
CB-4F	117470		
CB-5F	117471		
CB-6F	117472		
CB-8F	117473		
CB-10F	117639		
CB-12F	117640		

Flanged models



Dimensions and weights* Dimensions in inches (mm)

Model no.	Pipe size	Conns.	A		B	C	D		E	F	Max. Width of valve	Weight in lbs. (Kg)
			Open	Closed			Open	Closed				
CB-2-1/2F	2-1/2 (63.5)	FLGD.	-	-	6-9/16 (166.7)	-	-	-	-	7 (177.8)	-	23 (10.4)
CB-3F	3 (76.2)	FLGD.	-	-	6-13/16 (173.0)	-	-	-	-	7-1/2 (190.5)	-	29 (13.2)
CB-4	4 (101.6)	FLGD.	-	-	8 (203.2)	-	-	-	-	9 (228.6)	-	41 (18.5)
CB-4F	4 (101.6)	FLGD.	16-7/8 (428.6)	15-7/8 (403.2)	14-1/2 (368.3)	4-1/2 (114.3)	15-11/16 (398.5)	13-15/16 (354.0)	6-1/4 (158.8)	-	9 (228.6)	94 (43)
CB-5F	5 (127)	FLGD.	18-1/2 (470.0)	17-1/4 (438.2)	16 (406.4)	5 (127.0)	16-27/32 (427.8)	15-1/16 (382.6)	6-7/8 (174.6)	-	10 (254.0)	114 (52)
CB-6F	6 (152.4)	FLGD.	20-3/4 (527.1)	19-1/4 (489.0)	18 (457.2)	5-1/2 (139.7)	19-1/8 (485.8)	17 (431.8)	8-1/4 (209.6)	-	11 (279.4)	186 (85)
CB-8F	8 (203.2)	FLGD.	24-3/4 (628.7)	23-1/4 (590.6)	21-1/2 (546.1)	6-3/4 (171.5)	22-3/8 (568.3)	20-5/16 (516.0)	10-3/8 (263.5)	-	14-1/4 (362.0)	316 (144)
CB-10F	10 (254)	FLGD.	28-7/8 (733.4)	26-1/2 (673.1)	25-1/2 (647.7)	8 (203.2)	26 (660.4)	23-3/16 (589.0)	12-1/4 (311.2)	-	17 (431.8)	458 (208)
CB-12F	12 (304.8)	FLGD.	33-1/2 (851.0)	31-1/8 (790.6)	30 (762.0)	9-1/2 (241.3)	29-11/16 (754.1)	26-9/16 (674.7)	14-1/2 (368.3)	-	20 (508)	662 (301)

All Dimensions +/- 0.125" (3.2 mm) tolerance. Dimensions are subjected to change. Not to be used in construction purposes unless certified.

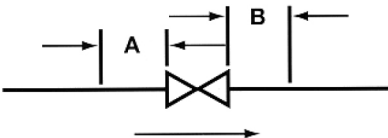
Important

When monitoring system flow care must be exercised to avoid direct skin or eye contact with liquids that may escape. Liquids with temperatures in excess of 120°F (49°C) may cause burns.

Bell & Gossett Circuit Setter Balance Valves are not recommended for use with meter connections pointing downward.

To retain calibrated accuracy, a minimum length of unrestricted straight pipe adjacent to the valve should be maintained as follows:

Size inches (mm)	Upstream "A" (In pipe diameters)	Downstream "B" (In pipe diameters)
2-1/2"-4" (63.5-101.6)	3	1
4"-12" (63.5-304.8)	5	2



Best use results maximize straight pipe length entering and leaving valve. Obstructions or changes in planar flow profiles entering valve may affect accuracy if too close to valve.

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