

**JOB:**
**REPRESENTATIVE:**

 UNIT TAG:  
 ENGINEER:  
 CONTRACTOR:

 ORDER NUMBER:  
 SUBMITTED BY:  
 APPROVED BY:

 DATE:  
 DATE:  
 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 valve 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

**Stem:** Stainless Steel

**Packing:** Teflon-Graphite (Asbestos-Free)

**Gasket:** Synthetic Fiber - Nitrile Binder (Asbestos-Free)

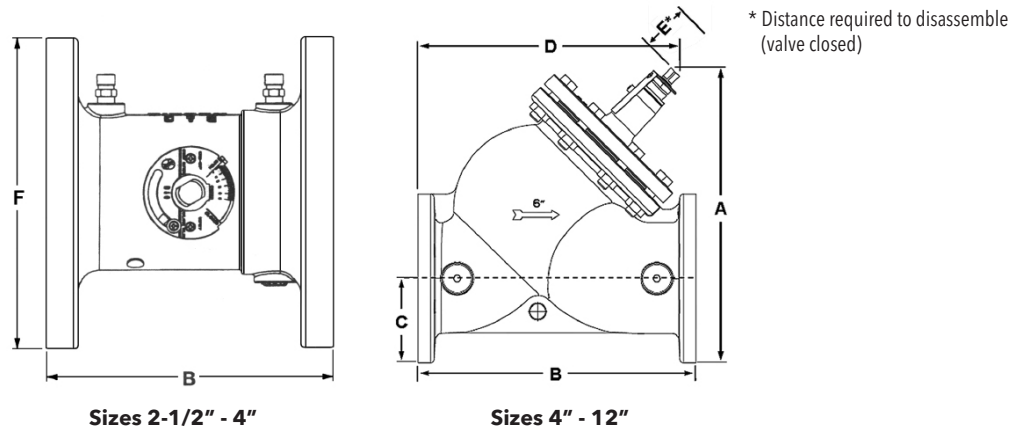
**Seal Ring:** EPDM

**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.

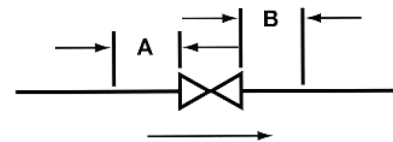
IMPORTANT

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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