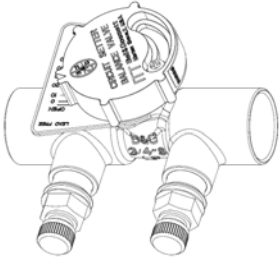


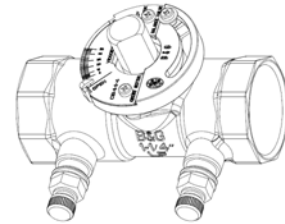
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<b>UNIT TAG:</b>	<b>ORDER NO.</b>	<b>DATE:</b>
<b>ENGINEER:</b>	<b>SUBMITTED BY:</b>	<b>DATE:</b>
<b>CONTRACTOR:</b>	<b>APPROVED BY:</b>	<b>DATE:</b>



# Circuit Setter® Plus

Calibrated Balance Valves  
with NPT and Solder Connections

LEAD FREE\*



**DESCRIPTION**

The Bell & Gossett CIRCUIT SETTER PLUS and CIRCUIT SETTER PLUS "RF" calibrated balance valves are a precision machined ball type triple purpose balancing instrument. They are 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 a 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 and 1/4" NPT tapped and plugged drain port.

**CONSTRUCTION**

Body: Brass ASTM B283-C69300\*  
Ball: 304 Stainless Steel  
Seat Rings: Glass and Carbon filled TFE  
Readout Valves: Brass with EPT check valves  
Stem "O" Ring: EPDM

**MAXIMUM WORKING PRESSURE**

NPT Models: 400 psig (2758 kPa)  
Sweat Models: See table below

**MAXIMUM OPERATING TEMPERATURE**

-4°F(-20°C) to 250°F(121°C)

\* Contains less than 0.25% lead content by weight on wetted surfaces.

CSA CERTIFIED: AB1953; Vermont S152.

Maryland House Bill 372 [statute 12-605].

ANSI/NSF-61 Annex G Compliant.

Type Solder	Maximum Pressure Limitations for 1/2"-1" With Solder Connections	
	Pressure PSI (KPa)	Temp °F (°C)
95-5 Tin-Antimony	300 (2068)	200 (93)
	250 (1724)	225 (107)
	200 (1379)	250(121)

**LEAD-FREE CIRCUIT SETTER PLUS Calibrated Balance Valves**
**A-549LFP(C)**
**SCHEDULE**

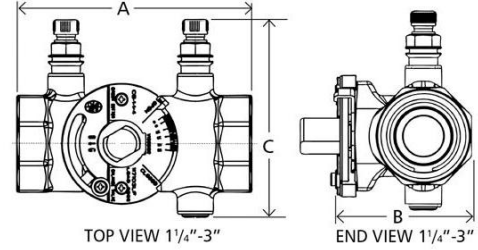
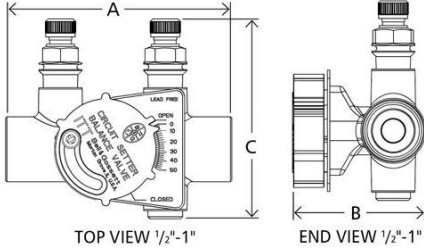
MODEL NO.	PART NUMBER	TAGGING INFORMATION	QUANTITY
RF-1/2S LF	117410LF		
RF-3/4S LF	117411LF		
CB-1/2S LF	117412LF		
CB-3/4S LF	117413LF		
CB-1S LF	117401LF		
CB-1-1/4S LF	117402LF		
CB-1-1/2S LF	117403LF		
CB-2S LF	117404LF		
CB-1/2 LF	117414LF		
CB-3/4 LF	117415LF		
CB-1 LF	117416LF		
CB-1-1/4 LF	117103LF		
CB-1-1/2 LF	117104LF		
CB-2 LF	117105LF		
CB-2-1/2 LF	117106LF		
CB-3 LF	117107LF		

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 Let's Solve Water

**LEAD-FREE CIRCUIT SETTER PLUS Calibrated Balance Valves**

**A-549LFP(C)**



**DIMENSIONS AND WEIGHTS \***

MODEL NUMBER	SIZE	CONNECTION TYPE	DIMENSIONS IN INCHES (MM)			WEIGHT IN LBS. (KG)
			A	B	C	
RF-1/2S LF	1/2"	SWEAT	2.91 (73.9)	1.82 (46.2)	2.85 (72.4)	0.6 (0.27)
RF-3/4S LF	3/4"	SWEAT	3.51 (89.2)	2.05 (52.1)	3.10 (78.7)	0.75 (0.34)
CB-1/2S LF	1/2"	SWEAT	2.91 (73.9)	1.82 (46.2)	2.85 (72.4)	1 (0.45)
CB-3/4S LF	3/4"	SWEAT	3.51 (89.1)	2.05 (52.1)	3.10 (78.7)	1.25 (0.6)
CB-1S LF	1"	SWEAT	4.29 (109)	2.33 (59.2)	3.33 (84.6)	2 (0.9)
CB-1-1/4S LF	1-1/4"	SWEAT	4.91 (124.7)	3.08 (78.2)	3.69 (93.7)	3.5 (1.6)
CB-1-1/2S LF	1-1/2"	SWEAT	5.21 (132.3)	3.27 (83)	3.95 (100.2)	3.8 (1.7)
CB-2S LF	2"	SWEAT	6.31 (160.3)	3.83 (97.4)	4.44 (112.8)	6.2 (2.8)
CB-1/2 LF	1/2"	NPT	2.94 (74.7)	1.98 (50.3)	3.02 (76.7)	1.25 (0.6)
CB-3/4 LF	3/4"	NPT	3.06 (77.7)	2.17 (55.1)	3.12 (79.2)	1.5 (0.7)
CB-1 LF	1"	NPT	3.81 (96.8)	2.47 (62.7)	3.42 (86.9)	2 (0.9)
CB-1-1/4 LF	1-1/4"	NPT	4.41 (112)	3.19 (81)	3.69 (93.7)	3.5 (1.6)
CB-1-1/2 LF	1-1/2"	NPT	4.42 (112.3)	3.37 (85.6)	3.95 (100.2)	3.8 (1.7)
CB-2 LF	2"	NPT	5.13 (130.3)	3.98 (101.1)	4.44 (112.8)	6.2 (2.8)
CB-2-1/2 LF	2-1/2"	NPT	6.00 (152.4)	4.51 (114.6)	4.83 (122.6)	9 (4.1)
CB-3 LF	3"	NPT	6.50 (165.1)	5.12 (130.0)	5.44 (138.2)	12 (5.4)

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

**TYPICAL SPECIFICATION**

Furnish and install as shown on plans with manufacturer recommendations Model CB or "RF" calibrated balance valves.

**PRE-SET BALANCE FEATURE**

Valves to be designed to allow installing contractor to pre-set balance points for proportional system balance prior to system start-up in accordance with pre-set balance schedule.

**VALVE DESIGN AND CONSTRUCTION**

All valves 1/2" to 3" pipe size to consist of Lead Free Brass\*\* body/SS ball construction with glass and carbon filled TFE seat rings. Valves to have differential pressure read-out ports across valve seat area. Read-out ports to be fitted with internal EPT inserts/check valves. Valve bodies to have 1/4" NPT tapped drain/purge port. Valves to have memory stop feature to allow valve to be closed for service and then reopened to set point without disturbing balance position. All valves to have calibrated nameplates to assure specific valve settings. Valves shall be designed for positive shut-off.

\*\*Contains less than 0.25% lead content by weight on wetted surfaces.

CSA CERTIFIED: AB1953; Vermont S152; Maryland House Bill 372 [statute 12-605]. ANSI/NSF-61 Annex G Compliant.

**DESIGN PRESSURE/TEMPERATURE**

A. 1/2" - 3" NPT connections 400 psig (2069 kPa) at 250°F (121°C)

B. 1/2" - 2" Sweat connections (see table page1)

All balance valves to be ITT Bell & Gossett Model No. CB-\_\_\_\_\_LF or Model No. RF-\_\_\_\_\_LF (note sizes).

**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.

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