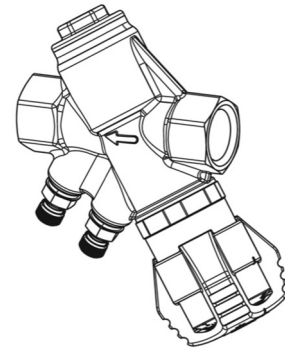




Circuit Sentry™ Flo-Setter Balance & Commissioning Valves with NPT Connections



Installation, Operation and Service Instructions

INSTALLER: PLEASE LEAVE THIS MANUAL FOR THE OWNER'S USE.

NOTE: Bell & Gossett does not recommend Circuit Sentry Flo-Setter Balance & Commissioning Valves be used for potable water.

WARNING: This product may contain a chemical known to the State of California to cause cancer, or birth defects or other reproductive harm.



SAFETY INSTRUCTION

This safety alert symbol will be used in this manual to draw attention to safety related instructions. When used, the safety alert symbol means **ATTENTION! BECOME ALERT! YOUR SAFETY IS INVOLVED! FAILURE TO FOLLOW THE INSTRUCTIONS MAY RESULT IN A SAFETY HAZARD.**

OPERATIONAL LIMITS

Circuit Setter ULTRASET Style	Maximum Limitations	
	Pressure (PSI)	Temperature °F
NPT	300	250

DESCRIPTION

Bell & Gossett Circuit Sentry Flo-Setter Balance & Commissioning Valves are precision engineered valves used in closed heating and cooling systems for the distribution of flow in various sections of the system. The dynamic balancing and commissioning valve ensures easy and reliable balancing of the system, regardless of any fluctuations in the

differential pressure of the system. The Bell & Gossett Circuit Sentry Flo-Setter limits the maximum flow in the system and can be used in both variable and constant flow systems. The clear scale on the lockable handle ensures that flow setting is simple and user friendly while the integral P/T ports allow verification of pressure.



NOTICE: This product is not intended for use in open systems. An open system is one that is exposed to atmospheric pressure at any point, such as a cooling tower system.

INSTALLATION INSTRUCTIONS

Circuit Sentry Flo-Setter Balance & Commissioning Valves are uni-directional valves and can be installed in most altitudes; however, they should be installed in a position to facilitate the ease of balancing the system. Be sure to install the Circuit Sentry Flo-Setter with the arrow pointing in the direction of flow.

CIRCUIT SENTRY FLO-SETTER BALANCE VALVES WITH NPT CONNECTIONS

Apply pipe compound conservatively to male connecting fittings only.



CAUTION: The use of PTFE impregnated pipe compound and PTFE tape on threads provides lubricity. Care should be taken to prevent over tightening of the valves which may damage the Circuit Sentry Flo-Setter.

Check connections for leaks.

OPERATION INSTRUCTIONS

HOW TO USE BELL & GOSSETT CIRCUIT SENTRY FLO-SETTER BALANCE & COMMISSIONING VALVES FOR PRE-SET FLOW BALANCING

The Circuit Sentry Flo-Setter Balance & Commissioning Valve is easily set, and the pre-setting is read on the scale. The flow rate of the valve can be determined from the flow rate graphs for the valve dimension in question. See the flow rate graphs of the valve in the FLOW CURVE BOOK (G1 0092) or Submittal (A-609.22 or A-611) for further information about the adjustment setting.

Select the appropriate size Circuit Sentry Flo-Setter Balance & Commissioning Valve (normally line size) for the required GPM.

Please note: The scale is for the adjustment of flow. If you want to close the branch line, use an isolation ball valve in conjunction with the Circuit Sentry Flo-Setter.

The handle can be locked after adjustment. Remove the B&G logo cap and tighten with 5mm hexagonal key.

HOW TO USE BELL & GOSSETT CIRCUIT SENTRY FLO-SETTER TO PROPORTIONAL BALANCE A SYSTEM

The system is easily balanced by adjusting the pump according to the required differential pressure across the critical valve.

When the differential pressure is available the system will automatically be balanced.

xylem
Let's Solve Water

Xylem Inc.
8200 N. Austin Avenue
Morton Grove, Illinois 60053
Phone: (847) 966-3700
Fax: (847) 965-8379
www.bellgossett.com

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HOW TO USE BELL & GOSSETT CIRCUIT SENTRY FLO-SETTER BALANCE & COMMISSIONING VALVES AS FLOW METERS

The flow through the valve can be identified by measuring the differential pressure (Δp) across the valve.

If the measured differential pressure is above the minimum Δp , the flow is the one stated on the graph for the valve.

If the measured differential pressure is below the minimum Δp , the flow can be found by using the formula below.

$Q = C_v \times \sqrt{\Delta p}$		
Q	Flow Rate	GPM
C_v	Flow Coefficient	GPM/PSI
Δp	Differential Pressure	PSI



WARNING: Hot water leakage can occur from readout valves (P/T ports) during probe insertion and during hookup of readout kit. Follow the instruction manuals supplied with readout probes and readout kits for safe use. Failure to follow these instructions could result in serious personal injury or death and property damage.

SERVICE INSTRUCTIONS

Periodically inspect the Circuit Sentry Flo-Setter for signs of leakage or corrosion.



WARNING: Corrosion or leakage are indications that the Circuit Sentry Flo-Setter must be replaced. Failure to follow these instructions could result in serious personal injury or death and property damage.

INSULATION

Bell & Gossett recommends that insulation be attached to the Circuit Sentry Flo-Setter after the system has been balanced.

NOTE: Tape or other acceptable means should be used to secure the insulation to the Circuit Sentry Flo-Setter Balance & Commissioning Valve.