QuickSetter™ Balancing Valve with flow meter, ANSI Flanged

© Copyright 2020 Caleffi

132 Series

Function

The balancing valve accurately controls the flow rate of heating and cooling transfer fluid supplied to air handlers, fan coils and terminal units; or where flow balancing is required in solar thermal systems. Proper hydronic system balancing ensures the system operates according to design specifications, providing satisfactory thermal comfort with low energy consumption.The flow meter is housed in a by-pass circuit on the valve body and can be shut off during normal operation. The flow meter permits fast and easy circuit balancing without added differential pressure gauges and charts.

These items are designed for use in closed hydronic systems. Do not use in plumbing applications. These items do not meet the low-lead plumbing standards of U.S. and Canada.

Product range

132 Series Balancing valve with flow meter sizes 2½", 3", and 4" with ANSI flange connections.

Technical specifications

Materials

Valve

Body:	cast iron
Ball:	brass
Ball control stem:	brass, chrome plated
Ball seal seat:	R-PTFE
Control stem guide:	PTFE
Seal:	peroxide-cured EPDM

Flow meter

Body and headwork:	brass
Bypass shutoff control stem:	brass, chrome plated
Springs:	stainless steel
Seal:	EPDM
Flow meter float and indicator cover:	PSU

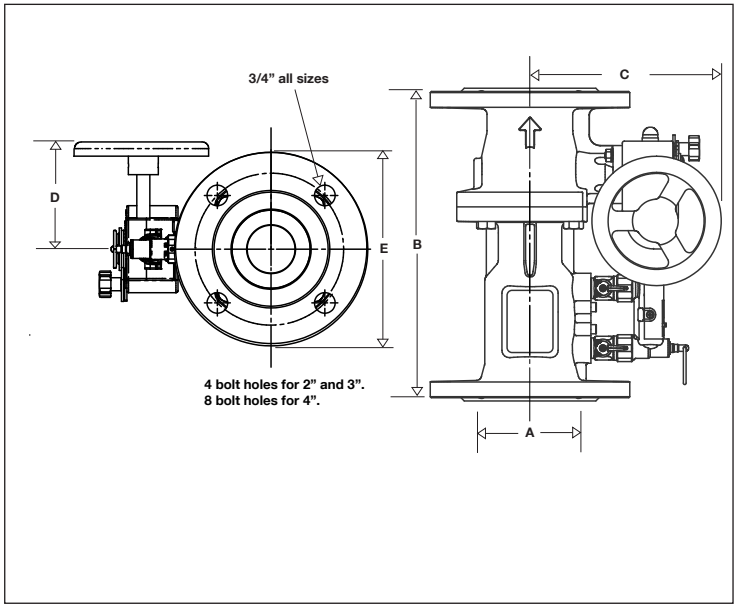
Performance

Suitable Fluids:		water, glycol solutions
Max. percentage of glycol:		50%
Max. working pressure:		150 psi (10 bar)
Working temperature range:		14 – 230°F (-10 – 110°C)
Flow rate range unit of measurement:		gpm
Flow rate scales:	size 2½"-	30 – 105 gpm
	size 3" -	38 – 148 gpm
	size 4" -	55 – 210 gpm
Accuracy:		±10%
Control stem angle of rotation:		90°
Adjustment handwheel diameter:		5½"

Flanged connections: 2½", 3", 4" ANSI B16.1 125 CLASS RF

Flow rate correction factor:	20% – 30% glycol solutions:	0.9
	40% – 50% glycol solutions:	0.8

Dimensions



Code	A	B	C	D	E	Bolt circle dia	Flow scale (gpm)	Wt. (lbs.)	Wt. (kg)
132060A	2½"	11 1/16"	6 1/32"	3⅛"	7"	5½"	30-105	32	15
132080A	3"	12 7/32"	7 9/32"	3⅛"	7½"	6"	38-148	40	18
132100A	4"	13 25/32"	7 29/32"	3⅛"	9"	7½"	55-210	57	26

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 THESE INSTRUCTIONS MAY RESULT IN A SAFETY HAZARD.**

WARNING: This product can expose you to chemicals including lead, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

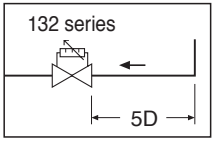
CAUTION: All work must be performed by qualified personnel trained in the proper application, installation, and maintenance of systems in accordance with all applicable codes and ordinances.

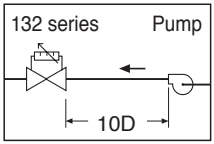
CAUTION: Over-tightening and breakage can occur with the use of Teflon® pipe joint compounds. Teflon® provides lubricity so that care must be exercised not to over-tighten joints. Failure to follow these instructions could result in property damage and /or personal injury.

WARNING: System fluids are under pressure or temperature can be hazardous. Be sure the pressure has been reduced to zero and the system temperature is below 100°F (38°C). Failure to follow these instructions could result in property damage and/or personal injury.

Caleffi shall not be liable for damages resulting from stress corrosion, misapplication or misuse of it products.

Installation





The balancing valves, with built-in flow meter, must be installed by qualified technical personnel in accordance with the instructions given in this manual and with current regulations.
Clean the pipes of any debris, rust, welding slag and any other contaminants.

As in all piping circuits it is important to pay attention to the cleanliness of the entire system.
For optimal operation, any air in the water must be removed.
In order to ensure measuring accuracy, the balancing valves with flow meter must be installed by keeping a straight section above them at least as long as five diameters, increased to at least ten diameters if the nearest device upstream is a pump.

Do not install in direct sunlight.

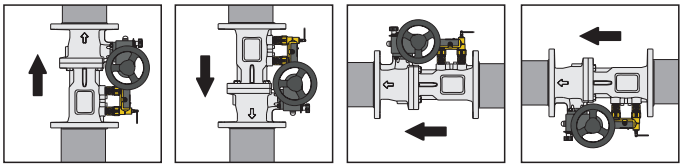
The valves must be installed so that:
- the direction of the flow agrees with that of the arrow on the valve body.
- there is easy access to the flow meter valve, control stem and dial with the calibration adjustment range.

The valves can be installed on either vertical or horizontal pipes.

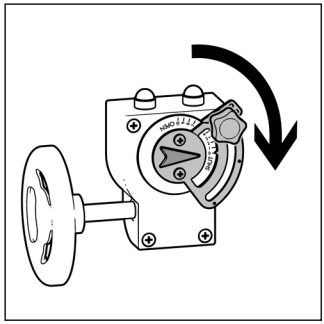
Scan to view

132 Quicksetter™ Flange

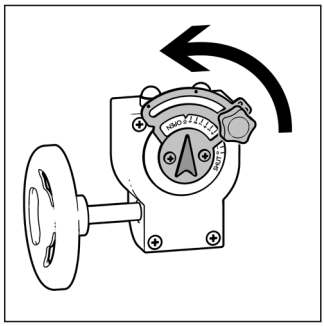
Installation Tip



Complete closing/ opening of valve



Complete closing of valve.

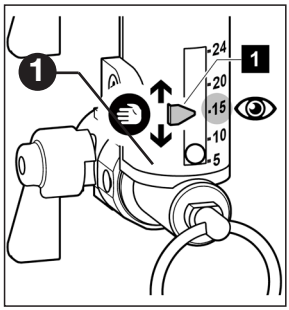


Complete opening of valve.

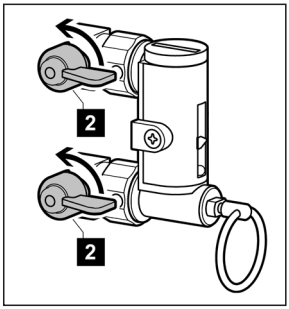
Flow rate adjustment

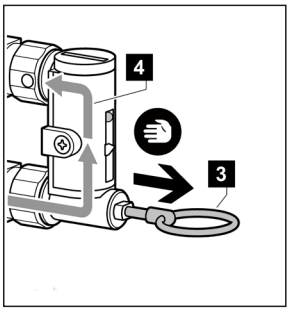
The flow rate is adjusted by following these step-by-step instructions:

A. With the aid of the indicator (1), mark the reference flow rate on which the valve is to be set.

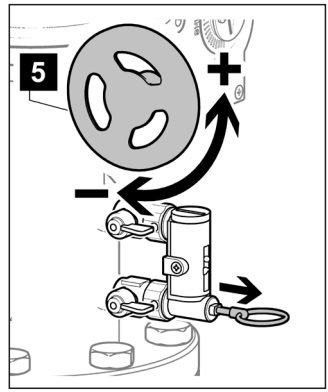


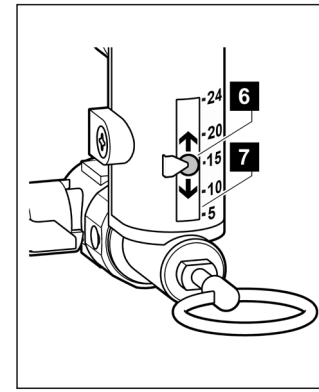
B. Open the isolating ball valves (2) turning them clockwise. Pull the operating ring (3) allowing the flow to pass through the flowmeter(4).



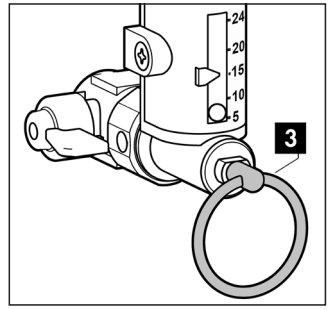


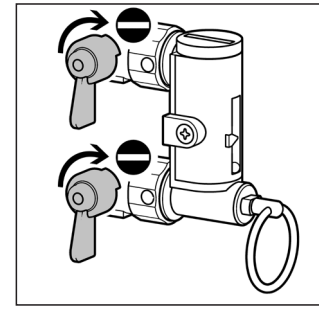
C. Keeping the flow meter bypass valve open, turn the flow rate adjusting handlwheel (5), Flow rate is indicated by the metal ball i(6) moving inside a transparent cylinder (7) alongside a graduated scale in GPM.



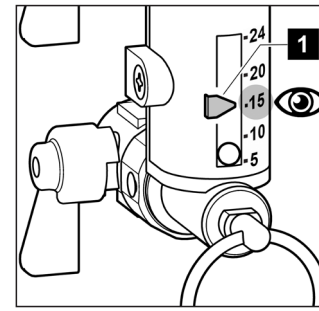


D. After completing the balancing, release the ring (3) of the flow meter bypass valve, which will automatically go back into the closed position. Close the isolating ball valves.

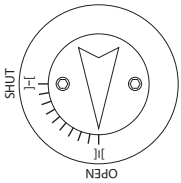




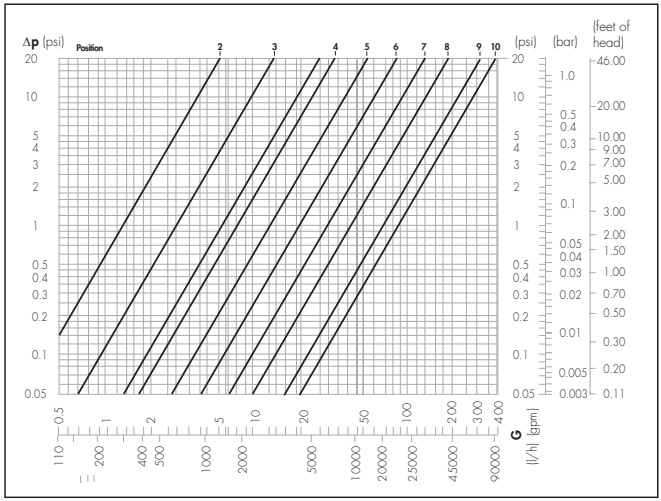
E. On completing the adjustment, the indicator (1) can be used to keep the setting in memory, in case checks need to be made over time.



Hydraulic characteristics

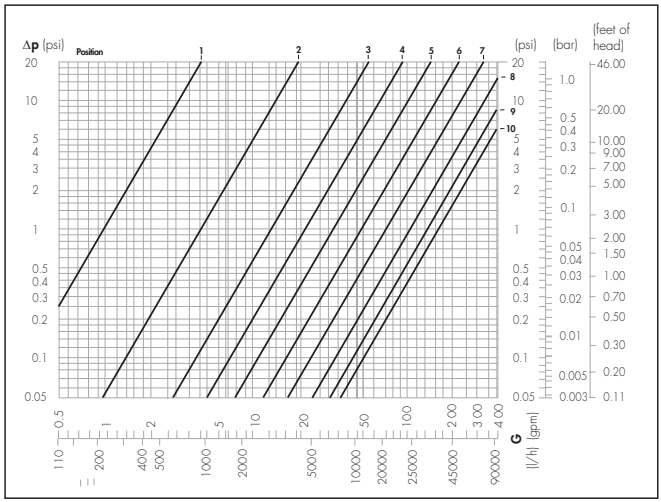


132060A 2 ½ inch



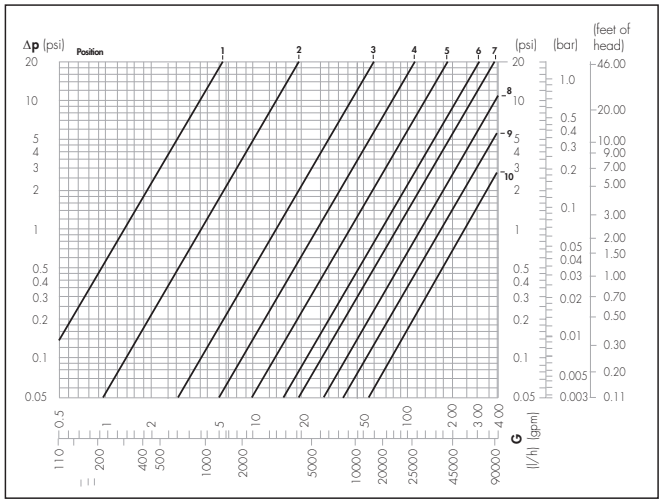
	Handwheel Position									
2½ inch	1	2	3	4	5	6	7	8	9	10
Cv	0	1.1	3.0	7.6	12	19	31	43	70	87

132080A 3 inch



	Handwheel Position									
3 inch	1	2	3	4	5	6	7	8	9	10
Cv	0.9	4.2	12	21	35	52	75	106	137	163

1320100A 4 inch



	Handwheel Position									
4 inch	1	2	3	4	5	6	7	8	9	10
Cv	1.1	4.4	13	26	43	67	89	125	175	241

Correction for liquids with different densities

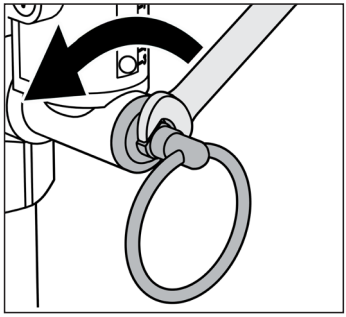
For fluids (typically glycol mixtures) with a specific gravity different from water at 70°F (20°C) (S.G.=1.0), correct the value of the pressure drop Δp read from the hydraulic charts, for sizing the pump, by using the following:

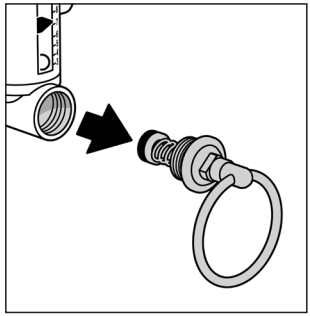
- $\Delta p_{actual} = \Delta p_{chart} \times (S.G.')_{glycol\ mix}$;
- variation in flow rate measurement remains within the specified accuracy range (±10%) for glycol percentages up to 50%.

Example: 50% propylene glycol has a specific gravity of 1.0366 at 70° F (20° C). The flow rate for the 4 inch 132100A, handwheel position 10, in the above chart of 100 gpm yields a Δp_{chart} of 0.16 psi. Correcting for glycol in this example calculates as $\Delta p_{actual} = 0.16 \times (1.0366) = 0.1659$ psi.

Procedure for replacing bypass valve stem with operating ring

1. Remove bypass valve assembly with an 8 mm wrench.
2. Install replacement bypass valve assembly, code F19346, using locktight to seal the threads.





CAUTION: If the balancing valve is not installed, commissioned and maintained properly, according to the instructions contained in this manual, it may not operate correctly and may endanger the user.

CAUTION: Make sure that all the connecting pipework is water tight.

CALEFFI
Hydronic Solutions

Caleffi North America, Inc.
3883 West Milwaukee Road
Milwaukee, WI 53208
T: 414.238.2360 F: 414.238.2366

11-8-19