

**QuickSetter™ Balancing Valve with flow meter**

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**132 Series****Function**

The balancing valve accurately controls the flow rate of heating and cooling transfer fluid supplied to 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 bypass 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 gages and charts. The balancing valve comes standard with a hot pre-formed insulation shell to optimize thermal performance for both hot and chilled water. **Patent application No. MI2007A000703.**

**Product range**

132 Series Balancing valve with flow meter sizes 1/2", 3/4", 1", 1 1/4", 1 1/2" and 2"

**Technical characteristics****Valve**

Material:	Body and ball:	brass
	Ball control stem:	chrome plated brass
	Ball seal seat:	PTFE
	Control stem guide:	PSU
	Seals:	EPDM

**Flow meter**

Material:	Body:	brass
	Headwork:	brass EN 12164 CW614N
	Valve stem:	chrome plated brass
	Springs:	stainless steel
	Seals:	EPDM
	Flow meter float and indicator cover:	PSU

Performance:	Medium:	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
	Accuracy:	±10%
	Control stem angle of rotation:	90°
	Required operating wrench:	1/2"-1 1/4": 9 mm 1 1/2" and 2": 12 mm
	Threaded connections:	1/2"- 2" FNPT

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

**Insulation**

Material:	closed cell expanded PE-X
Thickness:	10 mm
Density:	- inner part: 30 kg/m <sup>3</sup> - outer part: 50 kg/m <sup>3</sup>
Thermal conductivity (DIN 52612):	- at 0°C: 0.038 W/(m·K) - at 40°C: 0.045 W/(m·K)
Coefficient of resistance to water vapor (DIN 52615):	> 1.300
Working temperature range:	32 - 212°F (0-100°C)
Reaction to fire (DIN 4102):	class B2



## 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.**



**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.



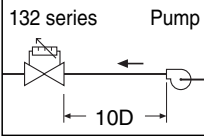
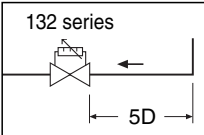
**CAUTION:** Over-tightening and breakage can occur with the use of Teflon® pipe joint compounds. Teflon® provides lubricity so that care must be exercised not to over-tighten joints. Failure to follow these instructions could result in property damage and /or personal injury.



**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 its 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 hydraulic circuits it is important to pay attention to the cleanliness of the entire system.

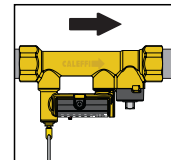
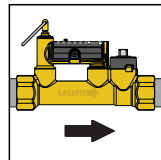
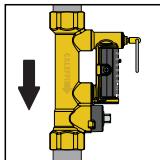
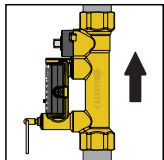
For optimal operation, any air in the medium must be removed.

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.

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.

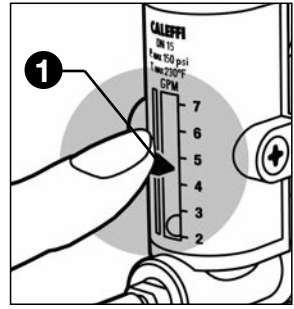
The valves can be fitted on either vertical or horizontal pipes.



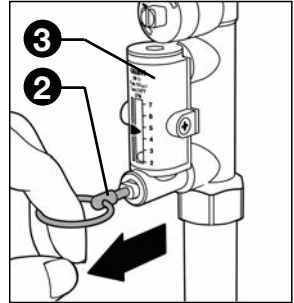
## Flow rate adjustment

The flow rate is adjusted by carrying out the following operations:

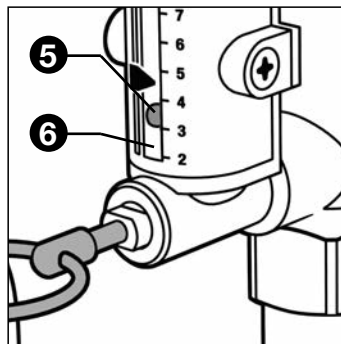
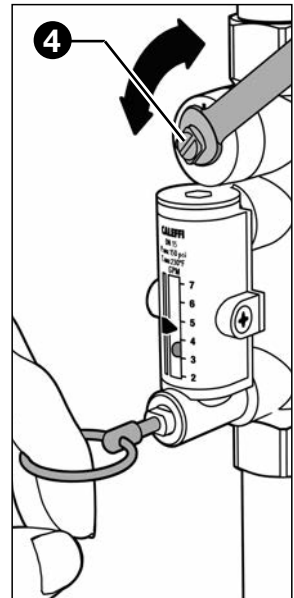
- A. With the aid of the indicator (1), mark the reference flow rate on which the valve is to be set.



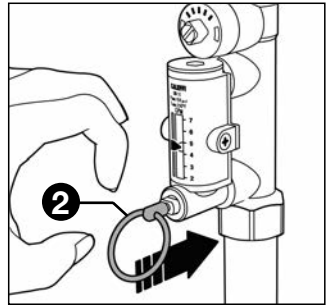
- B. Use the ring (2) to slowly open the flow meter bypass valve that shuts off the flow of medium in the flow meter (3) under normal operating conditions.



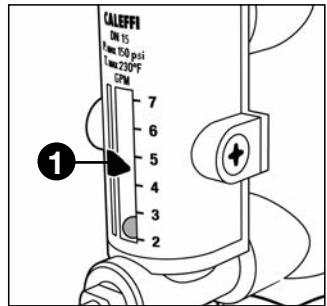
- C. Keeping the flow meter bypass valve open, apply a wrench (9 mm for 1/2" to 1 1/4" sizes; 12 mm for 1 1/2" and 2" sizes) to the balancing valve control stem (4) to slowly adjust the flow rate, which is indicated by a metal ball (5) that runs inside a transparent cylinder (6) alongside which there is a graduated scale in GPM.



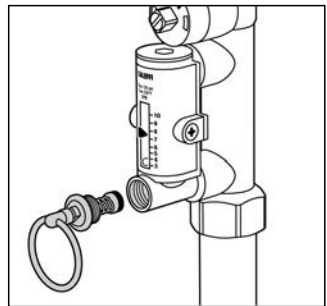
D. After completing the balancing, release the ring (2) of the flow meter bypass valve, which will automatically go back into the closed position.



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.

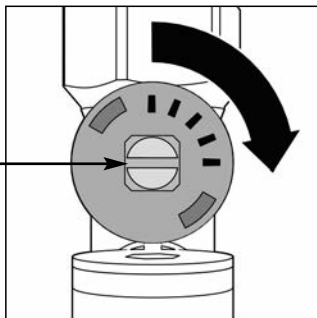


F. A replacement flow meter bypass valve stem with operating ring is available in the event it is damaged and inoperable. Order code F19346. See page 6 for replacement instructions.

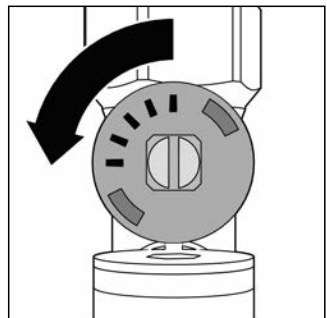


**Complete closing/opening of valve**

Balancing valve control stem

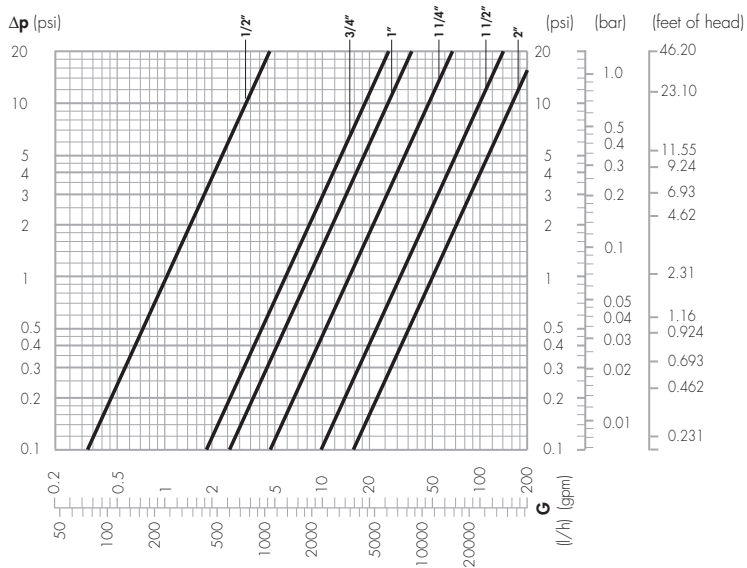


**Complete closing of valve**



**Complete opening of valve**

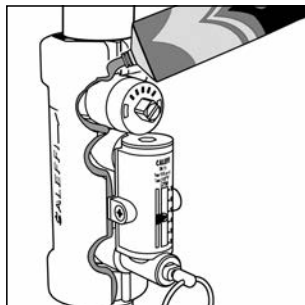
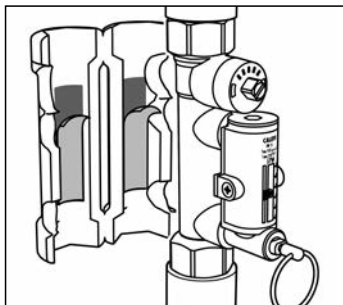
**Hydraulic characteristics at 100% open**



Code	Connection	Flow rate (GPM)	Cv
<b>132432A</b>	1/2" NPT	1/2 – 1 3/4	1.0
<b>132552A</b>	3/4" NPT	2.0 – 7.0	6.3
<b>132662A</b>	1" NPT	3.0 – 10.0	8.3
<b>132772A</b>	1 1/4" NPT	5.0 – 19.0	15.2
<b>132882A</b>	1 1/2" NPT	8.0 – 32.0	32.3
<b>132992A</b>	2" NPT	12.0 – 50.0	53.7

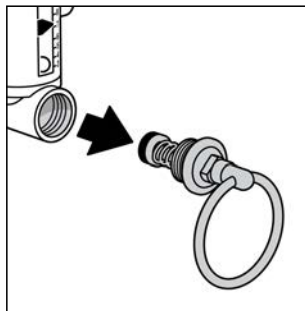
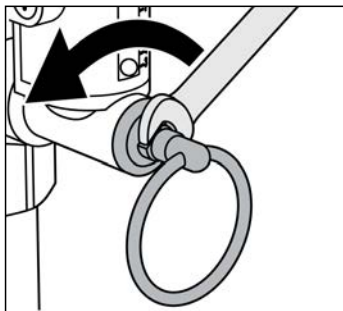
**Procedure for installation and insulation assembly**

1. Remove the protective strip from the adhesive surface. Re-close the insulation shells.
2. If the balancing valve with flow meter is used with chilled water, spread a thin layer of sealant on the edge of the insulation and wait until the solvent evaporates (10 minutes approx.) and then re-close it.



**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 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.



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