

# Thermostatic mixing valves, low-lead, high-flow



## 5231 series

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### Application

The thermostatic mixing valve is used in systems producing domestic hot water or in radiant heating systems. Its function is to maintain the temperature of the mixed water supplied to the user at a constant set value when there are variations in the supply pressure and temperature of the incoming hot and cold water or in the flow rate. The 5231 series thermostatic mixing valves are ASSE 1017 approved for point of distribution and are designed specifically for systems requiring high flow rates and precise, stable temperature control.

### Typical Specification

Furnish and install on the plans and described herein, a Caleffi 5231 series thermostatic mixing valve as manufactured by Caleffi. Each mixing valve must be designed with 1", 1-1/4", 1-1/2", or 2" union sweat, press or NPT male threaded end connections. The design must include a DZR low-lead brass body and connections (<0.25% Lead content) certified by IAPMO R&T, PPSG40 shutter, stainless steel springs, and peroxide-cured EPDM seals. Each valve must be designed for 200 psi (14 bar) maximum working pressure, 75 psi (5 bar) maximum operating differential pressure, 95 to 150°F (35 to 66°C) mixed temperature setting range,  $\pm 3^\circ\text{F}$  ( $\pm 2^\circ\text{C}$ ) temperature stability, 10 grains maximum water hardness and provided with tamper-proof temperature locking and optional mixed outlet temperature gauge for 1-1/4" union sweat model, 30 to 210°F scale, 2" diameter. For other sizes and connections, temperature gauge adapter and fittings available separately for field installation. Each mixing valve shall be a Caleffi model 5231 or approved equal.

(See product instructions for specific installation information.)

### Technical specification

Materials: - Body: DZR low-lead brass  
- Shutter: PPSG40  
- Springs: Stainless steel  
- Seals: peroxide-cured EPDM

Suitable fluids: Water, glycol solutions  
Maximum percentage of glycol: 30% glycol solution  
Temperature stability:  $\pm 3^\circ\text{F}$  ( $\pm 2^\circ\text{C}$ )  
Max working pressure (static): 200 psi (14 bar)  
Max operating differential pressure: 75 psi (5 bar)  
Hot water inlet temperature range: 120 – 195°F (49 – 91°C)  
Cold water inlet temperature range: 39 – 80°F (3.9 – 26.6°C)  
Mixed temperature adjustment setting range: 95 – 150°F (35 – 66°C)  
Maximum inlet pressure ratio (H/C or C/H): 2:1  
Minimum temperature difference between hot water inlet and mixed water outlet for optimum performance: 20°F (11°C)  
Maximum water hardness: 10 grains

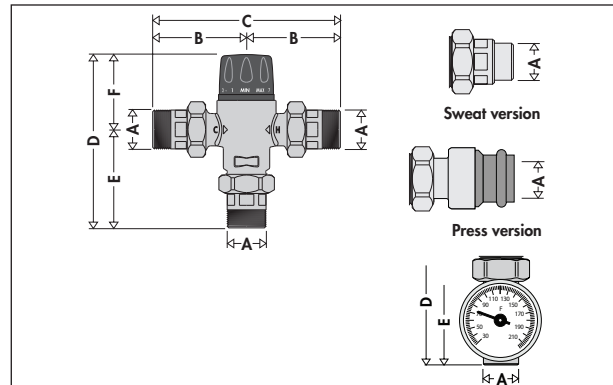
#### Certifications:

1. ASSE 1017/CSA B125.3, UPC, IRC, NPC and IPC, Low Lead Laws and listed by ICC-ES for use in accordance with the U.S. and Canadian plumbing codes. certified by ICC-ES, file PMG-1357.
2. Complies with NSF/ANSI 372 –2016, Drinking Water System Components—Lead Content Reduction of Lead in Drinking Water Act, California Health and Safety Code 116875S.3874, Reduction of Lead in Drinking Water Act, Vermont Act 193, The Lead in plumbing Supplies Law, Maryland's Lead Free Law HB. 372 Law, as certified by ICC-ES, file PMG-1360.



We reserve the right to change our products and their relevant technical data, contained in this publication, at any time and without prior notice. Contractors should request production drawings if prefabricating the system

### Dimensions



Code	A	B	C	D
523160A	1" NPT	4"	8"	7 5/8"
523166A	1" press	4 3/8"	8 3/4"	8"
523168A	1" SWT	3 5/16"	6 5/8"	7"
523170A	1 1/4" NPT	4 1/8"	8 1/4"	7 3/4"
523176A	1 1/4" press	5 3/8"	8 3/4"	9"
523177A	1 1/4" SWT	3 3/8"	6 3/4"	7 5/8"
523178A	1 1/4" SWT	3 3/8"	6 3/4"	7"
523180A	1 1/2" NPT	5 1/8"	10 1/4"	9 3/16"
523186A	1 1/2" press	5 5/8"	11 1/4"	9 11/16"
523188A	1 1/2" SWT	4 1/16"	8 1/8"	8 1/8"
523190A	2" NPT	5 1/8"	10 1/4"	9 1/2"
523196A	2" press	7 1/4"	14 1/2"	11 5/8"
523198A	2" SWT	4 5/16"	8 5/8"	8 5/8"

Code	E	F	Wt (lb)
523160A	4 3/16"	3 3/8"	7.0
523166A	4 9/16"	3 3/8"	7.0
523168A	3 1/2"	3 3/8"	7.0
523170A	4 5/16"	3 3/8"	7.0
523176A	5 9/16"	3 3/8"	7.0
523177A	4 1/8"	3 3/8"	9.0
523178A	3 1/2"	3 3/8"	7.0
523180A	5 7/16"	3 3/4"	17
523186A	6"	3 3/4"	17
523188A	4 3/8"	3 3/4"	17
523190A	5 3/4"	3 3/4"	18
523196A	7 7/8"	3 3/4"	18
523198A	4 7/8"	3 3/4"	18

Job name _____	Size _____
Job location _____	Quantity _____
Engineer _____	Approval _____
Mechanical contractor _____	Service _____
Contractor's P.O. No. _____	Tag No. _____
Representative _____	Notes _____