

MixCal™ Adjustable three-way thermostatic mixing valve, Sweat



Submittal Data 02902.1 NA — Issue Date 11/2020

Application

The Caleffi MixCal™ 521 series three-way thermostatic mixing valve is used in systems producing domestic hot water or in hydronic and radiant heating systems. It maintains the desired output temperature of the mixed water supplied at a constant set value compensating for both temperature and pressure fluctuations of the incoming hot and cold water. The MixCal thermostatic mixing valve is ICC-ES certified to ASSE 1017 and CSA B125.3. It complies with codes IPC, IRC, NPC and UPC for use in accordance with the US and Canadian plumbing codes, and standard NSF/ANSI 372, low lead.

Typical Specification

Furnish and install on the plans described herein, a MixCal three-way thermostatic mixing valve as manufactured by Caleffi. Each mixing valve must be designed with a low-lead brass body, a replaceable brass cartridge chemical nickel plated, stainless steel springs, seals in EPDM, and shutter, regulating seats and sliding surfaces in anti-scale plastic, PPO. Each valve must also be designed for $\pm 3^{\circ}\text{F}$ ($\pm 2^{\circ}\text{C}$) temperature stability with a tamper proof control knob to lock the temperature at the set value. The valve shall be ASSE 1017 approved for point of distribution installation. Low-lead brass body (<0.25% Lead content) certified by ICC-ES, file 1360. Complies with requirements of NSF/ANSI 372-2016. Each valve shall be Caleffi model 521 or approved equal. (See product instructions for specific installation information.)

Technical Data

Materials

Body: low-lead brass
 Shutter, seats and slide guides: PPO
 Springs: stainless steel
 Seals: EPDM

Performance

Suitable Fluids: water, glycol solution
 Max. percentage of glycol: 30%
 Setting range: 85–150°F (30–65°C)
 Tolerance: $\pm 3^{\circ}\text{F}$ ($\pm 2^{\circ}\text{C}$)
 Max. working pressure: 200 psi (14 bar)
 Max. operating differential pressure: 75 psi (5 bar)
 Max. hot water inlet temperature: 200°F (93°C)
 Max. inlet pressure ratio (H/C or C/H) for optimum performance: 2:1
 Min. temperature differential between hot water inlet and mixed water outlet for optimal performance: 27°F (15°C)
 Min. flow to ensure optimal performance: 1.3 gpm (5 L/min)

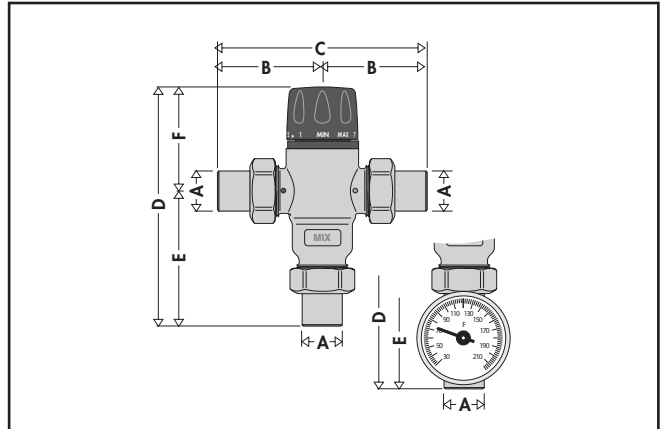
Certifications:

1. ASSE 1017/CSA B125.3, certified by ICC-ES, file PMG-1357.
2. Complies with NSF/ANSI 372, Drinking Water System Components-Lead Content Reduction of Lead in Drinking Water Act, California Health and Safety Code 116875 S.3874, Reduction of Lead in Drinking Water Act, as certified by ICC-ES, file PMG-1360.

Connections:

Sweat union: 1/2" - 1"

Dimensions



Code	A	B	C	D	E	F	Wt. (lb.)
521409A	1/2"	2 1/4"	4 1/2"	5 5/8"	3 3/8"	2 9/16"	2.4
521419A*	1/2"	2 1/4"	4 1/2"	7"	4 1/2"	2 9/16"	2.9
521409AC	1/2"	2 7/8"	5 3/4"	5 5/8"	3 3/8"	2 9/16"	2.4
521419AC*	1/2"	2 7/8"	5 7/8"	7"	4 1/2"	2 9/16"	2.9
521509A	3/4"	2 1/2"	5"	5 13/16"	3 1/4"	2 9/16"	2.4
521519A*	3/4"	2 1/2"	5"	7 1/16"	5 1/4"	2 9/16"	2.9
521509AC	3/4"	3 1/16"	6 1/8"	5 13/16"	3 1/4"	2 9/16"	2.4
521519AC*	3/4"	3 1/16"	6 1/8"	7 13/16"	5 1/4"	2 9/16"	2.9
521609A	1"	3 1/16"	6 1/8"	6 7/16"	3 7/8"	2 9/16"	2.4
521619A*	1"	3 1/16"	6 1/8"	7 13/16"	5 1/4"	2 9/16"	2.9
521609AC	1"	3 1/4"	6 1/2"	6 7/16"	3 7/8"	2 9/16"	2.4
521619AC*	1"	3 1/4"	6 1/2"	7 13/16"	5 1/4"	2 9/16"	2.9

*Model with integral outlet temperature gauge.

C designates models with integral inlet port check valves.

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

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