



# AngleMix™ Angle-style three-way thermostatic mixing valve

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## Application

The Caleffi AngleMix™ 520 series thermostatic mixing valve is used in systems producing domestic hot water and easily mounts to the top of water heaters. The mixed temperature outlet is inline with the hot water inlet, facilitating trouble-free connection and reducing space required for installation. The AngleMix 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 mixing valve also features a thermal shut-off function that operates in the event of a cold water supply failure at the inlet. Also available as body only, for a wide variety of separately-ordered end connections, the angle style body design offers improved fluid dynamics for better performance and reduces installation labor and materials, eliminating a piping elbow in typical installations. The valve has been specifically certified to ASSE 1017 and Low Lead Plumbing Law by ICC-ES.

## Typical Specification

Furnish and install on the plans described herein, an AngleMix™ angle-style three-way thermostatic mixing valve as manufactured by Caleffi. Each mixing valve must be designed with a DZR low-lead brass body, stainless steel springs, seals in peroxide-cured EPDM, and shutter, seats and sliding guides in anti-scale plastic, PSU. 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, and mixed outlet temperature gauge. Provide with inlet port check valves, AC models. The valve shall be ASSE 1017 approved for point of distribution installation. DZR low-lead brass body ( $<0.25\%$  Lead content) shall be certified by ICC-ES, file 1360. Meets requirements of ANSI/NSF 372-2011. Each valve shall be Caleffi model 520 or approved equal. (See product instructions for specific installation information.)



## Technical specifications

### Materials

- Valve body:	DZR low-lead brass
- Shutter, seats and slide guides:	PSU
- Springs:	stainless steel
- Seals:	peroxide-cured EPDM
- Adjustment knob	ABS

### Performance

Suitable fluids:	water
Setting range:	95–150° F (35–65° C)
Tolerance:	$\pm 3^{\circ}\text{F}$ ( $\pm 2^{\circ}\text{C}$ )
Max. working pressure (static):	150 psi (10 bar)
Max. working pressure (dynamic):	75 psi (5 bar)
Max. hot water inlet temperature:	195° F (90° C)
Max. inlet pressure ratio (H/C or C/H) for optimal performance:	2:1

Minimum temperature difference between hot water inlet and mixed water outlet for optimal performance:	18° F (10° C)
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Min. flow to ensure optimal performance:	sizes $\frac{1}{2}$ & $\frac{3}{4}$ inch: 0.5 gpm (2 L/min)
	size 1 inch: 1.0 gpm (3.8 L/min)

Max. flow for temperature stability:	sizes $\frac{1}{2}$ & $\frac{3}{4}$ inch: 9 gpm (34 L/min)
	size 1 inch: 16 gpm (60 L/min)

Mixed outlet temperature gauge:	2" diameter
	Dual scale from 30° F to 210° F (0° C to 100° C)

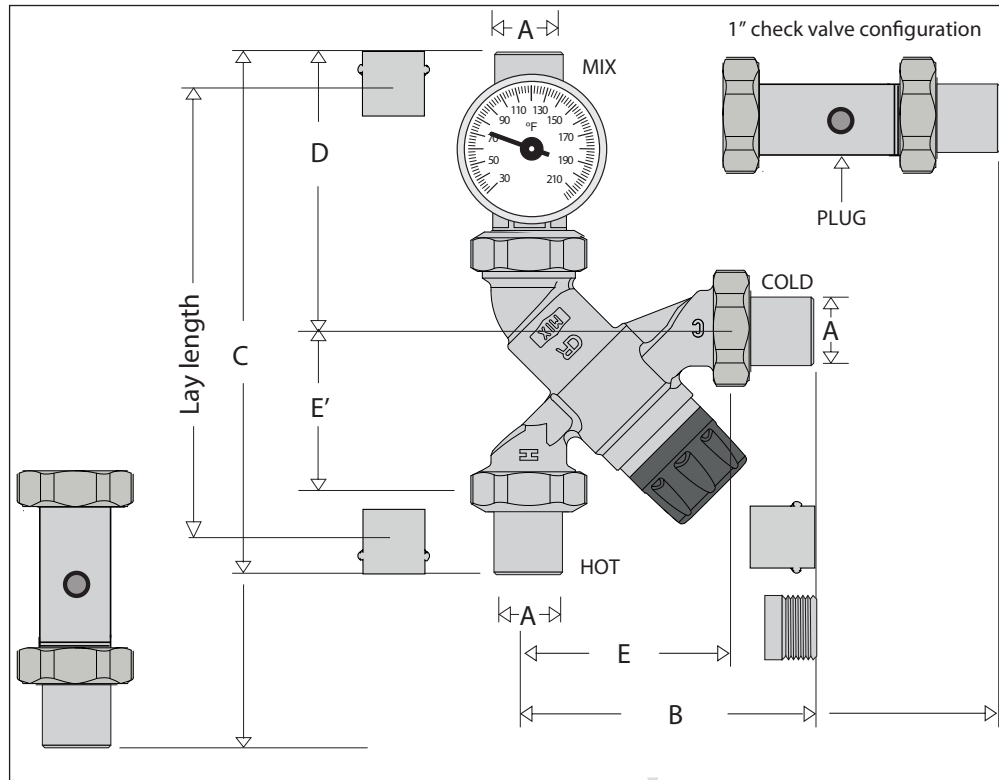
## Certifications

- ASSE 1017/CSA B125.3, certified by ICC-ES, file PMG-1357.
- In compliance to NSF/ANSI 372-2011, 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:	$\frac{1}{2}$ ", $\frac{3}{4}$ ", 1"
- press union:	$\frac{1}{2}$ ", $\frac{3}{4}$ ", 1"
- NPT male union:	$\frac{1}{2}$ ", $\frac{3}{4}$ ", 1"

## Dimensions



Code	A	B	C	D	E	E'	LL*	Wt. (lb.)
520410A	1/2" NPT male	4 1/4"	8 1/2"	4 3/4"	73 mm	53 mm		1.7
520410AC**	1/2" NPT male	4 1/4"	8 1/2"	4 3/4"				1.8
520416A	1/2" press	3 3/4"	7 9/16"	4 1/4"			6 13/16"	1.8
520419A	1/2" sweat	3 9/16"	6 1/8"	3 1/4"				1.7
520419AC**	1/2" sweat	4 3/16"	6 3/4"	3 3/16"				1.8
520510A	3/4" NPT male	3 13/16"	7 5/8"	4 1/4"				2.8
520510AC**	3/4" NPT male	4 3/16"	8 3/8"	4 5/8"				2.8
520516A	3/4" press	4"	8"	4 1/2"			5 9/16"	2.8
520516AC**	3/4" press	5 1/2"	9 1/2"	4 1/2"			7"	2.8
520519A	3/4" sweat	3 3/4"	6 1/2"	3 3/8"				2.8
520519AC**	3/4" sweat	4 1/4"	7 1/8"	3 3/8"				2.8
520610A	1" NPT male	5 7/8"	11"	6"	93 mm	73 mm		2.8
520610AC**	1" NPT male	8 5/16"	13 5/8"	5 13/16"				2.8
520616A	1" press	5 1/8"	9 3/4"	5 3/8"			7"	2.0
520616AC**	1" press	7 1/2"	12 1/4"	5 3/8"			9 1/2"	2.1
520619A	1" sweat	4 3/4"	8 7/8"	4 7/8"				2.8
520619AC**	1" sweat	7 3/8"	11 1/2"	4 7/8"				2.8

\*Lay length for press tailpieces (hot inlet to mix outlet).

\*\*Inlet port check valves included.

\*\*\*The inlet check valve tailpieces are not integral for 1 inch assemblies, as in the other sizes. Two separate gauge/check valve adapters are provided for field installation.

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 \_\_\_\_\_  
 Job location \_\_\_\_\_  
 Engineer \_\_\_\_\_  
 Mechanical contractor \_\_\_\_\_  
 Contractor's P.O. No. \_\_\_\_\_  
 Representative \_\_\_\_\_

Size \_\_\_\_\_  
 Quantity \_\_\_\_\_  
 Approval \_\_\_\_\_  
 Service \_\_\_\_\_  
 Tag No. \_\_\_\_\_  
 Notes \_\_\_\_\_