TankMixer™ Compact thermostatic mixing valve kit

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Application

The Caleffi TankMixer™ Compact combines the AngleMix™ three-way point-of-distribution thermostatic mixing valve with a cold water cross and pivoting brass connectors for easy installation directly on typical electric water heaters and heat pump water heaters. It has unique ¾" pivot connectors that adapt to heater nipples spaced from 3" to 8" on-center. The cross for the cold water supply contains an integral check valve for the flow to the mixing valve and ½" NPT female threaded recirculation tap. The TankMixer Compact 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. The angle style body design offers improved fluid dynamics for better performance and reduces installation labor and materials. The mixing valve has been certified to ASSE 1017, CSA B125.3 and US and Canadian plumbing codes. The products also meet NSF/ANSI/CAN 372 for low lead and lead free materials requirements for products in drinking water systems. Certified and listed by ICC-ES.

Typical Specification

Furnish and install on the plans described herein, an TankMixer™ Compact water heater tank and heat pump mxing 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 ±3 °F (±2 °C) temperature stability with a tamper proof control knob to lock the temperature at the set value, and mixed outlet temperature gauge. The valve shall be certified to ASSE 1017, CSA B125.3 and US and Canadian plumbing codes. DZR low-lead brass body (<0.25% Lead content) shall meet NSF/ANSI/CAN 372 for low lead and lead free materials requirements for products in drinking water systems. Certified and listed by ICC-ES. Each valve shall be Caleffi model 52051xAP or approved equal. (See product instructions for specific installation information.)

ASSE 1017
NSF/ANSI/CAN 372

Technical specifications

Materials

Valve body:	DZR low-lead* brass
Cold water cross body:	DZR low-lead* brass
Pivot connectors:	DZR low-lead* brass
Shutter, seats and slide guides:	PSU
Springs:	stainless steel
Seals:	peroxide-cured EPDM
Adjustment knob	ABS
Recirculation port plug:	low-lead* brass

* Meets the "lead free" requirement of Section 1417 of the Safe Drinking Water Act (SDWA). This product has a weighted average lead content of less than 0.25% for its wetted surfaces contacted with consumable water.

Performance

Suitable fluids:	water
Setting range:	95–150 °F (35–65 °C)
Tolerance:	±3 °F (±2 °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 stable operation with balanced supply pressure conditions: 9 °F (5 °C)

Recommended minimum temperature difference between hot water inlet and mixed water outlet for optimal performance: 18 °F (10 °C)

Required minimum temperature difference between hot water inlet and mixed water outlet for thermal shut-off function: 18 °F (10 °C)

Minimum flow to ensure optimal performance:	0.5 gpm (2 L/min)
Outlet temperature gauge:	2" diameter
	Dual-scale 32 °F - 210 °F (0 °C –100 °C)
	Accuracy: 1% full-scale

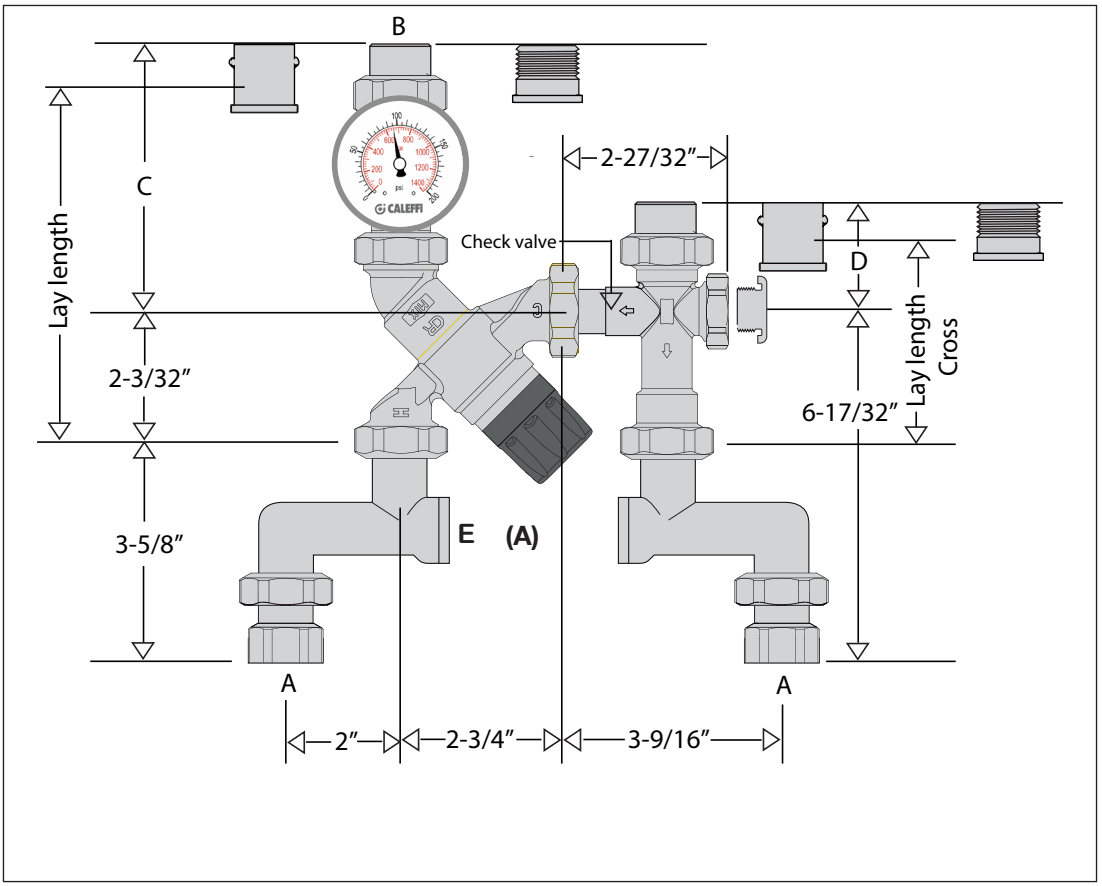
Certifications

1. ASSE 1017, CSA B125.3, UPC, IPC, IRC and NPC for use in accordance with U.S. and Canadian plumbing codes. Certified and listed by ICC-ES, File PMG 1357.
2. NSF/ANSI/CAN 372, US and Canadian Low-Lead and Lead-Free materials contents laws for drinking water system components. Certified by ICC-ES, PMG File 1360.

Connections

To water heater:	
- NPT female union:	¾"
To mix temperature outlet and cold water inlet	
- sweat union:	¾"
- press union:	¾"
- NPT male union:	¾"
Recirculation inlet port in cross:	
- NPT female (plug included)	½"

Dimensions



(A) This kit provides one pivot connector with a ¾" FNPT port (E), which can be used for applications where there is no pressure relief valve on the tank. Install that pivot connector on the hot side to add a pressure relief valve. For applications where a pressure relief valve is present on the tank, install the pivot connector with the FNPT port on the cold side for incorporating an expansion tank.

Code	A	B	C	D	E	Wt. (lb.)
520510AP	¾" NPTF	¾" NPTM	4 3/16"	2"	¾" NPTF	4.5
520516AP		¾" PRESS	4 17/32"	2 13/32"		4.4
520519AP		¾" SWT	3 5/16"	1 15/16"		4.1

Lay length (hot inlet to mix oulet) for press: 5 11/16"; for sweat: 4 11/16".
Lay length (Cross) for press: 3 9/32"; for sweat: 3 17/32".

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

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