



# TankMixer™ Combi

## thermostatic mixing valve kit

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### Application

The Caleffi TankMixer™ Combi combines the AngleMix™ three-way point-of-distribution thermostatic mixing valve with a cold water supply cross and flexible pipe for easy installation directly on typical wall-hung gas-fired water heater or electric-fired water heater or combi boiler. In addition, hot and cold water isolation and service 3-way ball valves are included offering convenient servicing and flushing ports, and integral pressure relief valve. 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, that can be plugged if not used. The TankMixer 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. Service valves in the kit are certified to section 1417(d) of the Safe Drinking Water Act, The lead content requirements of Section 116875 of the California Health & Safety Code and NSF/ANSI/CAN 372. Listed by IAPMO R&T.

### Typical Specification

Furnish and install on the plans described herein, a TankMixer™ Combi thermostatic mixing valve kit 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. Provided with hot water and cold water isolation and service 3-way ball valves and integral pressure relief valve. 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 52051xAX 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
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)

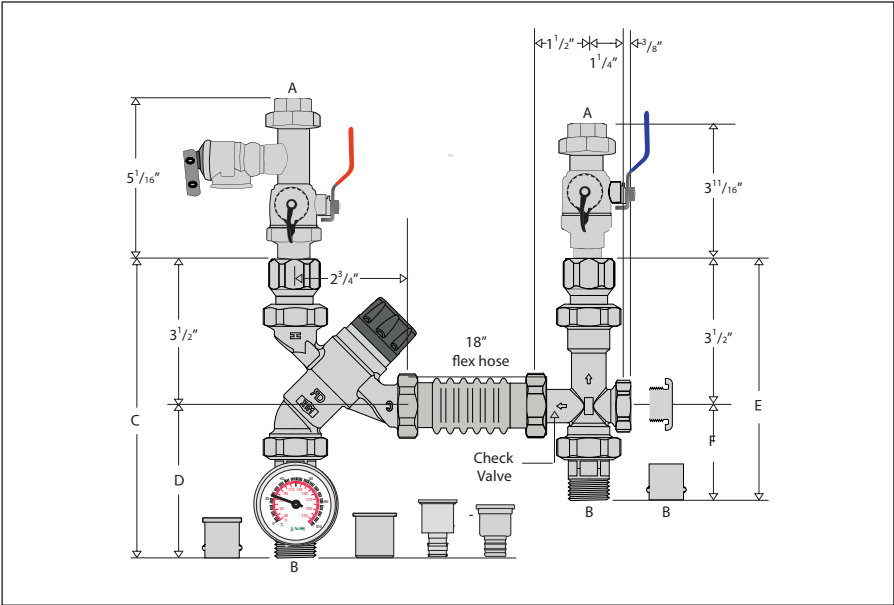
Minimum flow to ensure optimal performance: 0.5 gpm (2 L/min)  
Outlet temperature gauge: 2" diameter  
Dual-scale 32 °F - 210 °F (0 °C - 100 °C)  
Accuracy: 1% full-scale

#### Certifications

- 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.
- 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.
- Service valves listed and certified by IAPMO R&T, File number K-14799.

#### 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"



Code	A	B	C	D	E	F	Wt. (lb.)
KIT520510AX	3/4" NPTF	3/4" NPTM	7 7/8"	4 1/4"	5 5/8"	2 1/4"	5.0
KIT520516AX	3/4" NPTF	3/4" PRESS	8"	4 9/16"	5 7/8"	2 9/16"	5.0
KIT520519AX	3/4" NPTF	3/4" SWT	7 3/4"	4 3/16"	5 1/2"	2 3/16"	5.0
KIT520517AX	3/4" NPTF	3/4" PEX Crimp	8 1/4"	4 7/8"	6 1/4"	5 7/8"	5.0
KIT520518AX	3/4" NPTF	3/4" PEX Expansion	8 7/16"	4 13/16"	6 3/16"	2 13/16"	5.0

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 \_\_\_\_\_