

Tankless Water Heater Service Valve Kit



290 series

01401/23 NA



Function

The 290 Series tankless water heater service valve kit connects directly to the standard $\frac{3}{4}$ " MNPT nipples on the heater to facilitate isolating, flushing and servicing the water heater. The union connections make installation simple and quick. The kit includes one blue-handled cold water inlet full-port positive-shutoff 3-way ball valve, one red-handled hot water outlet full-port 3-way positive-shutoff ball valve, and a pressure relief valve, set to 150 psi, which field-mounts to a side port on the hot water outlet ball valve. The $\frac{3}{4}$ " garden hose capped connections are for hose hookups to flush the heater.

NSF/ANSI/CAN 372



Product range

290503A Tankless water heater service valve kit

connections: $\frac{3}{4}$ " NPT female

Technical specifications

Materials

Body, tailpiece:	Low lead brass CW510L-DW
Ball:	Chrome plated brass CW511L-DW
Seat:	PTFE
Gasket:	PTFE G300
Shaft, union nut:	brass CW 617N-DW
O-ring seals:	HNBR 70 Sh
Union male x female reducing adapter:	Low lead brass CW724R-M
Union o-ring seals:	peroxide-cured EPDM 70 Sh

Performance

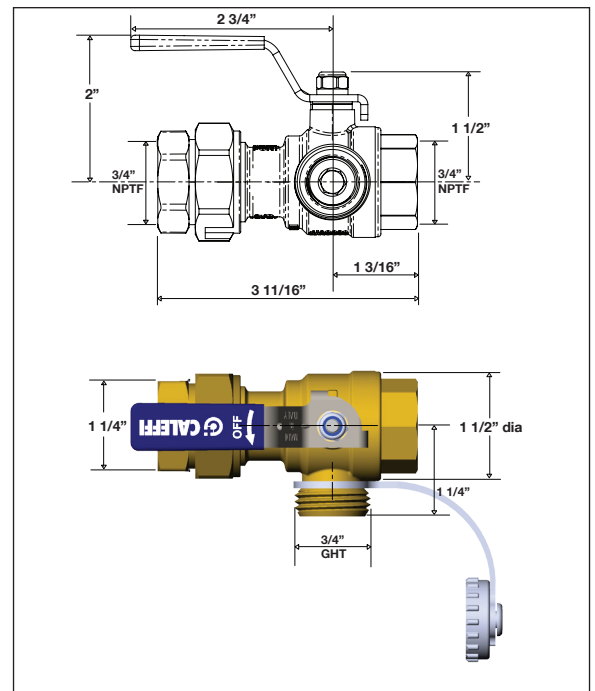
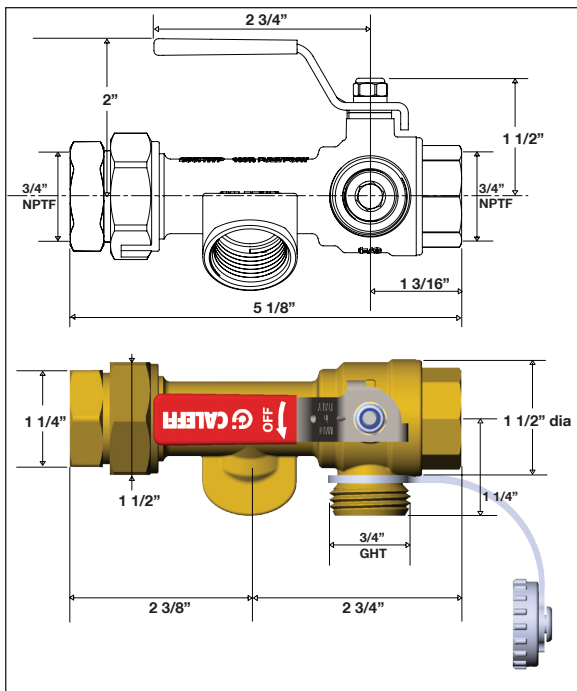
Suitable fluids:	Water
Cold working pressure (CWP):	600 psi (42 bar) up to 100°F (38°C)
Hot working pressure (HWP):	400 psi (28 bar) up to 230°F (110°C)
Working temperature range:	-4° to 230 °F (-20° - 110°C)
Seat leakage, 100% tested:	0%

Connections:

Tankless water heater cold inlet and hot outlet NPT male nipples:	$\frac{3}{4}$ " NPT female union
Flushing and servicing connections:	$\frac{3}{4}$ " capped garden hose
Hot water ball valve relief valve access port:	$\frac{3}{4}$ " NPT female
Pressure relief valve discharge port:	$\frac{3}{4}$ " NPT female

Complies with NSF/ANSI/CAN 372 low lead laws for use in accordance with the U.S. and Canadian plumbing codes. Relief valve is certified to ANSI Z21.22//CSA 4.4 and capacity certified to ASME Boiler Code Section IV.

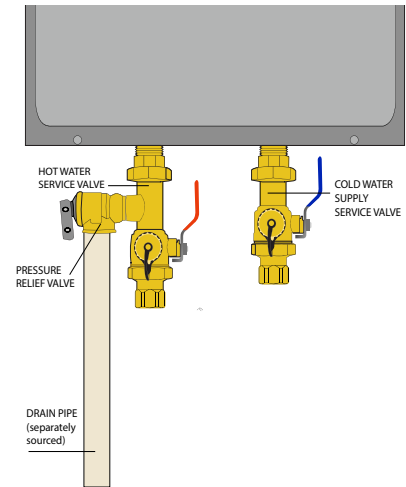
Dimensions



Installation:

The 290 Series tankless water heater service valve kit connects directly to the standard 3/4" MNPT nipples on the bottom of a typical tankless water heater.

Attach the 3/4" union tailpieces on the 290 valves to the hot (on the left) and the cold (on the right) nipples of the heater, using tape or sealant for the NPT threads. Then attach the valve bodies using the union nuts.



Service

Tankless water heaters require regular flushing and cleaning. Hard water mineral deposits on the heat exchanger surfaces and sediment buildup reduce heater efficiency and can cause premature failure.

Pressure relief valve

In the event that the tankless water heater and its piping system exceed designed pressure limits, the pressure relief valve will automatically open, discharging large amounts of very hot water. Correctly installed discharge piping and drainage are critical in avoiding a scalding danger or water damage.

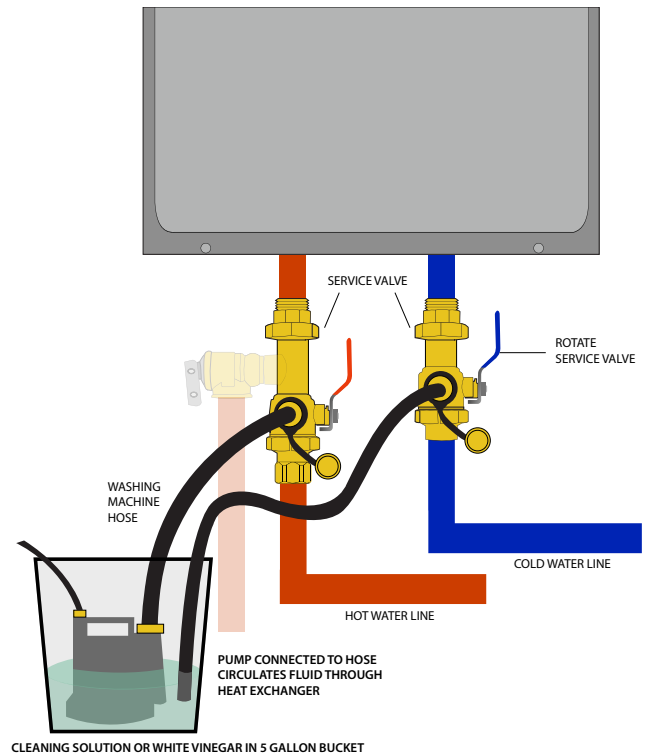
Tighten the included pressure relief with 3/4" NPT male connection into the hot water isolation ball valve 3/4" NPT female access port. The outlet connection of the pressure relief valve must face downward, requiring a vertical discharge pipe. In accordance with IPC code requirement 504.6, install a suitable-length nipple as a discharge pipe, into the female NPT outlet of the pressure relief valve:

- Do not reduce the 3/4" nominal pipe size (NPS) at any length of the piping. The end of the discharge pipe must remain open and unobstructed.
- The discharge piping must not contain low points, which could trap water. The piping must allow complete drainage.
- The discharge piping must discharge into a suitable open drain and must not be allowed to freeze.

Please consult IPC 504.6 for additional details.

Annually inspect the end of the discharge piping for signs of relief valve leakage. Carefully lift the spring-loaded lever and center it horizontally against the identification disc, allowing hot water to flow from the end of the discharge pipe, into the drain.

CAUTION! Discharged water is extremely hot and can scald! Avoid contact with the water. After a few seconds, flip the lever back down, closing the valve. If the pressure relief valve fails to flow water when opened or fails to reseal when closed, contact a qualified installer for valve replacement.



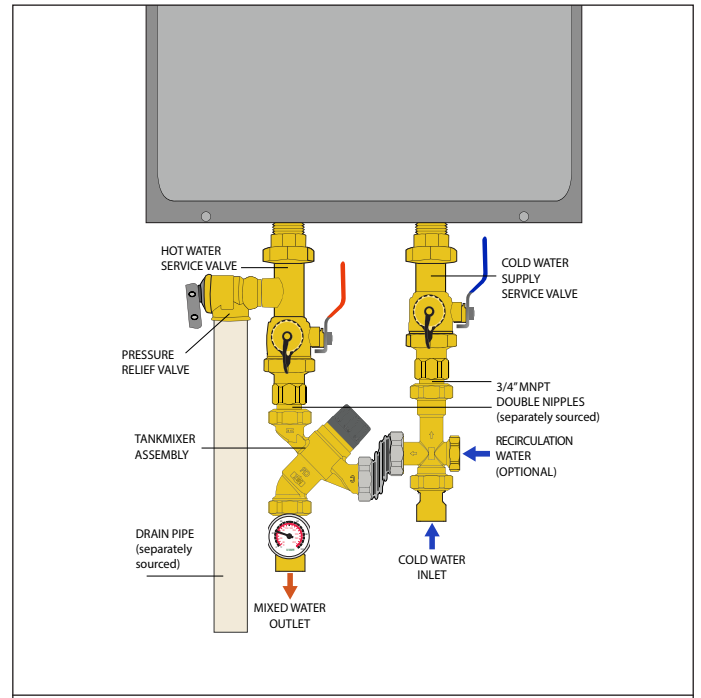
Connecting to Caleffi 520 series TankMixer™



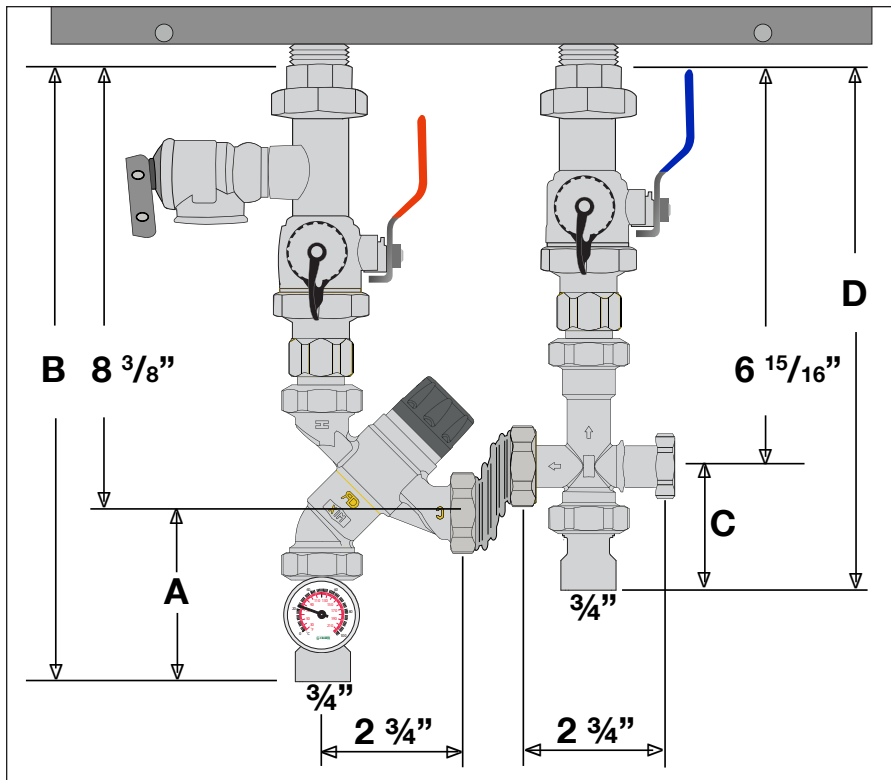
Code number	Connection
290516A	3/4" press
290519A	3/4" sweat
290510A	3/4" NPT female
290517A	3/4" PEX crimp
290518A	3/4" PEX expansion

Caleffi offers Service Valve Kits complete with the 520 TankMixer. This installation and instruction sheet is included, along with the TankMixer instruction sheet, in the kits listed below.

The standard 520 TankMixer assemblies can also be field retrofitted to an already installed Caleffi code 290503A Tankless water heater service valve kit. A 3/4" NPT male double nipple is required to connect the TankMixer water heater 3/4" NPT female connections to the lower 3/4" NPT female connections on the hot and cold isolation ball valves in the code 290503A.

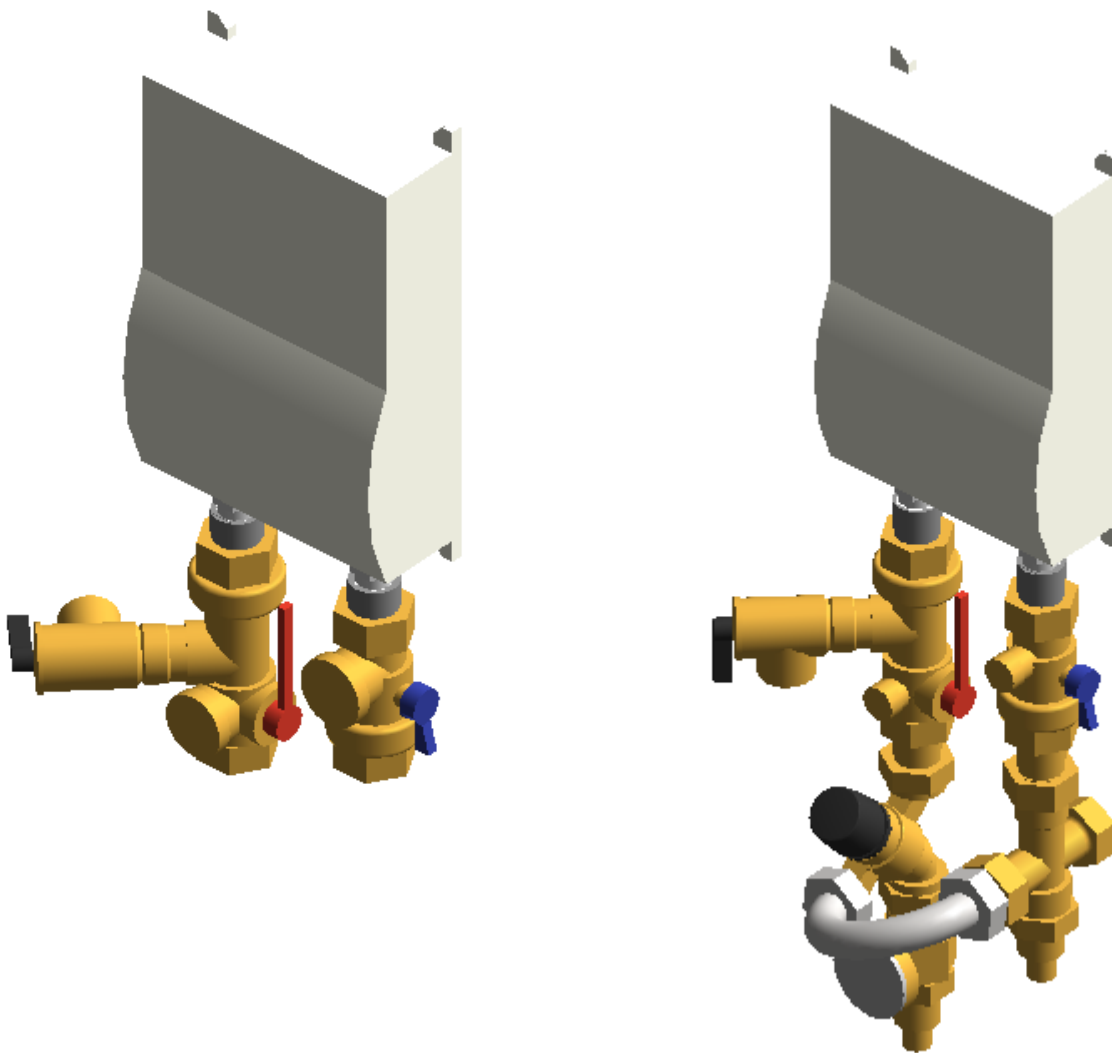


Dimensions



Code	System Connection	A	B	C	D
290516A	press	4 ⁹ / ₁₆ "	12 ¹⁵ / ₁₆ "	2 ⁹ / ₁₆ "	9 ¹ / ₂ "
290519A	sweat	4 ³ / ₁₆ "	12 ⁹ / ₁₆ "	2 ³ / ₁₆ "	9 ¹ / ₈ "
290510A	FNPT	4 ⁹ / ₁₆ "	12 ¹⁵ / ₁₆ "	2 ¹ / ₄ "	9 ¹ / ₁₆ "
290517A	PEX crimp	5 ¹ / ₃₂ "	13 ¹⁹ / ₃₂ "	3 ¹ / ₃₂ "	9 ³¹ / ₃₂ "
290518A	PEX expansion	5 ¹³ / ₃₂ "	13 ²⁵ / ₃₂ "	3 ¹³ / ₃₂ "	10 ¹⁹ / ₃₂ "

All codes weigh 5 lbs (2.25 kg)



Find us in
MasterSpec[®]
 a product of The American Institute of Architects



<https://get.caleffi.info/specpoint>

find BIM Revit files and system templates at
<https://bim.caleffi.com/en-us>

SPECIFICATION SUMMARY

290 series

Tankless water heater service valve kit. Tankless water heater cold inlet and hot outlet, threaded connections NPT female, size 3/4 inch. Low-lead brass CW510L-DW body and talipiece (< 0.25% lead content) certified and listed by ICC-ES to NSF/ANSI/CAN 372, file PMG-1360. Chrome plated brass CW511L-DW ball, PTFE seat, PTFE G300 gasket. Brass CW 716N-DW shaft and union nut. HNBR 70 sh o-ring seals. Low-lead brass CS724R-M union male x female reducing adapter. Peroxide-cured EPDM 780 sh union o-ring seals. Suitable fluid: Water. Maximum cold working pressure 600 psig (42 bar) up to 100°F (38°C). Maximum hot working pressure 400 psig (28 bar) up to 230°F (110°C). Working temperature range -4 – 230°F (-20 – 110 °C). Seat leakage, 100% tested: 0%. Flushing and servicing connections: 3/4 inch capped garden hose. Hot water ball valve relief valve access port: 3/4" NPT female. Pressure relief valve discharge port: 3/4" NPT female. Provide with Caleffi TankMixer™ water heater tank mixing valve with size 3/4 inch system connections: press, sweat, NPT female, PEX crimp or PEX expansion fittings.

We reserve the right to change our products and their relevant technical data, contained in this publication, at any time and without prior notice.



Caleffi North America, Inc.
 3883 W. Milwaukee Road, Milwaukee, WI 53208
 Tel: 414-238-2360 · Fax: 414-238-2366
 Technical Support: 414-338-6338 / techsupport.us@caleffi.com
 sales@caleffi.com · www.caleffi.com
 © Copyright 2023 Caleffi North America, Inc.