Vacu-Stop™
Vacuum relief valve

304 series

01402/23 NA

Function

Vacu-Stop™ vacuum relief valves automatically allow air to enter into the piping system to prevent vacuum conditions that could siphon the water from the system and damage water heater/tank equipment. VRVs are suitable for water and low pressure steam service and are ideal for use in water heaters and supply tanks, table top heaters, jacketed steam kettles, unit heaters, low pressure steam systems, and steam coil heaters. Complies with ANSI Z21.22 and CSA 4.4 Relief Valves for Hot Water Supply Systems.

NSF/ANSI/CAN 372
NSF/ANSI/CAN 61

Product range

304 series Vacu-Stop vacuum relief valve connections: ½" and ¾" NPT male

Technical specifications

Materials

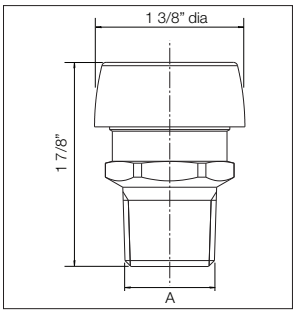
Body:	DZR low-lead brass CW724R
Top:	glass fiber reinforced nylon PA6G30
Cover plate:	acrylonitrile butadiene styrene
Cartridge, check:	polyphenylsulfone
Spring:	stainless steel ISO 6931-1 (4310-301-00)
Washer:	silicon 240/T

Performance

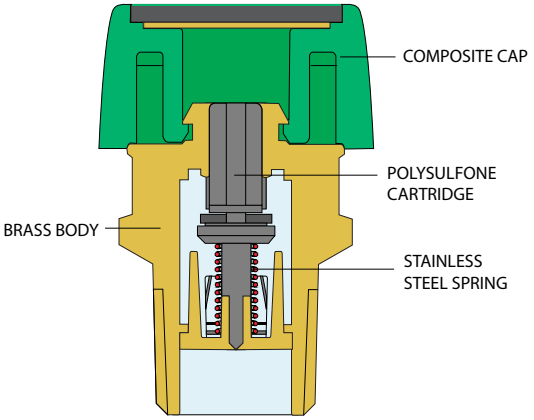
Medium:	water, low pressure steam
Maximum working pressure (water):	200 psig (14 bar)
Maximum working pressure (steam);	15 psig (1 bar)
Working temperature range:	32 to 250°F (0 to 120°C)
Vacuum relief opening pressure (opening point):	0.3" Hg (1 kPa) vacuum
Relief capacity:	4.5 cfm @ 2" Hg (130 lpm @ 7 kPa) vacuum

Complies with ANSI Z21.22/CSA 4.4 and NSF/ANSI/CAN 61 and NSF/ANSI/CAN 372, Drinking Water System Components-Lead Content Reduction of Lead in Drinking Water Act, California Health and Safety Code 116875 S.3874, Reduction in Drinking Water Act, Vermont Act 193 - The Lead in Plumbing Supplies Law and Maryland's Lead Free Law HB.372, as certified by ICC-ES.

Dimensions



Code	A	Wt. (lb/kg)
NPT male threaded		
304040A	½"	0.8/0.4
304050A	¾"	0.8/0.4



Installation:

Install the Caleffi 304 Series Vacu-Stop vacuum relief valve in the cold water supply line at or above the highest point in the tank, vertically in the upright position. The illustration below shows a typical and correct position when the valve is installed on a water heater tank. The valve opens at a vacuum of 0.3" mercury column.

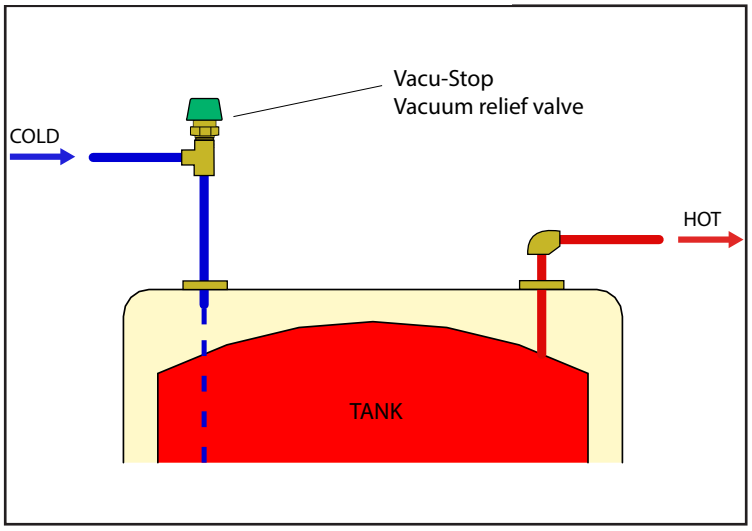
When installing the vacuum relief valve on a low pressure steam heating system, use a pigtail.

Caution: DO NOT install an isolation valve in between the water supply and the vacuum relief valve.

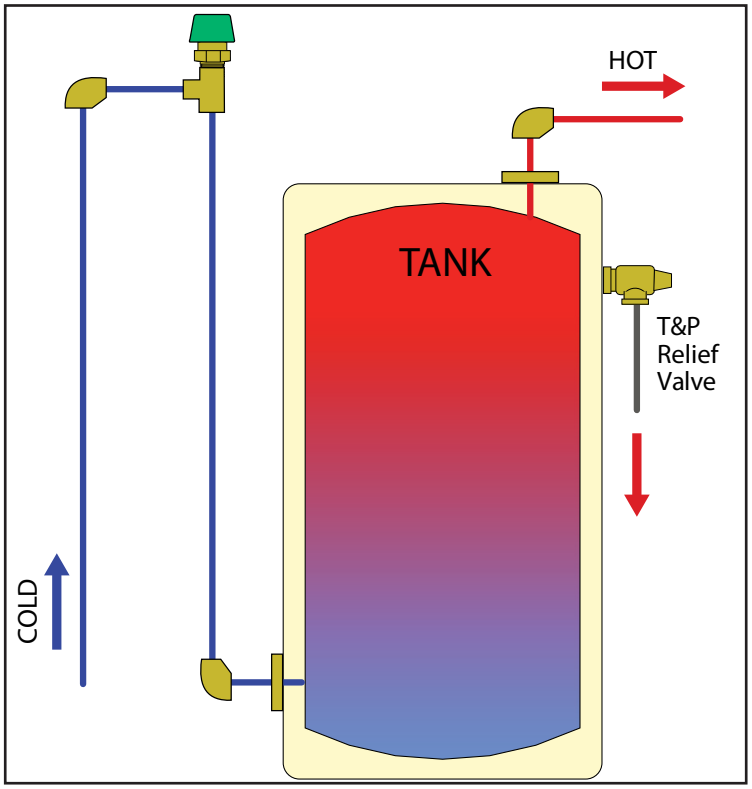
When installing the vacuum relief valve, make sure not to over-tighten the connection. Over time, a failure can occur with subsequent water leakage causing damage.

Application diagrams

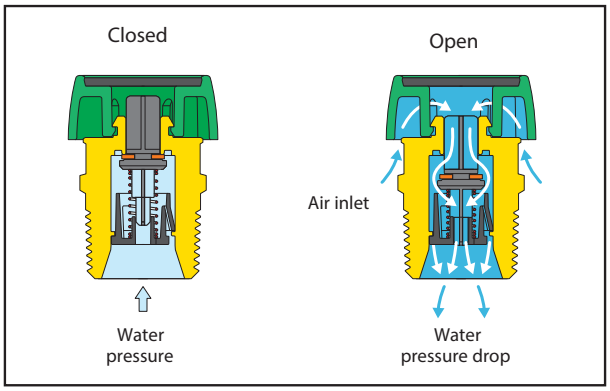
Top connection water heater tank



Bottom connection water heater tank



Principle of Operation:



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304 series

Vacuum relief valve. Threaded connections NPT male, connection sizes 1/2 and 3/4 inch. Dezincification resistant low-lead brass CW724R body (< 0.25% lead content) certified and listed by ICC-ES to NSF/ANSI/CAN 372, file PMG-1360. Complies with ANSI Z21.22/CSA 4.4. PPSU cartridge, check. Stainless steel spring. Silicom 240/T Washer. PA6G30 Top. ABS Cover plate. Water and low pressure steam. Maximum working pressure (water) 200 psig (14 bar). Maximum working pressure (steam)15 psig (1 bar). Working temperature range 32 to 250°F (0 to 120 °C). Vacuum relief opening pressure 0.3" Hg (1 kPa) vacuum. Relief capacity 4.5 CFM @ 2" Hg (130 lpm @ 7 kPa) vacuum.

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