

Installation

Freeze and Scald Protection Valve Kits for Drench Shower, Eyewash and Combination Units

Freeze Protection Valve Kits

S45-1986 (Eyewash and Combination Units)

S45-1987 (Drench Shower and Combination Units)

Scald Protection Valve Kits

S45-1989 (Eyewash and Combination Units)

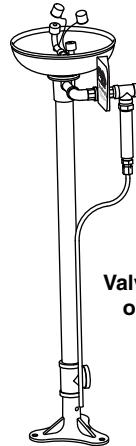
S45-1990 (Drench Shower and Combination Units)

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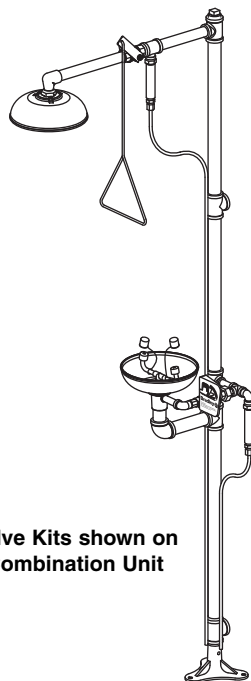
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Valve Kit shown
on Drench Shower



Valve Kit shown
on Eyewash

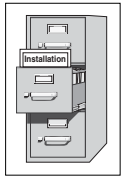


Valve Kits shown on
Combination Unit

Pre-Installation Information

Bradley Freeze and Scald Protection Valves may serve as primary protection on untraced systems or a fail-safe back-up for traced water systems. The freeze protection valve activates at 45° F (7° C) and will fully open at 35° F (2° C). The scald protection valve activates at 85° F (30° C) and fully opens at 100° F (38° C). The freeze valve closes at 45° F (7° C) and the scald valve closes at 85° F (30° C). These valves allow water to circulate inside the unit without getting too hot or freezing. Water drains from the valve outlet to the outside of the unit through a hose or piping. Max. pressure rating is 200 psi.

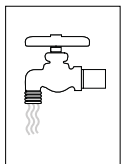
WARNING



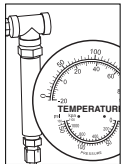
Read this installation manual completely to ensure proper installation, then file it with the owner or maintenance department. Installations shown throughout this manual are typical. Never undersize installations. Compliance and conformity to drain requirements and other local codes and ordinances is the responsibility of the installer.



Separate parts from packaging and make sure all parts are accounted for before discarding any packaging material. If any parts are missing, do not begin installation until you obtain the missing parts.



Flush the water supply lines before beginning installation. Main water supply to Bradley drench showers, eyewashes and combination units should be "ON" at all times and provisions shall be made to prevent unauthorized shutoff. Flushing fluid should be tepid per ANSI Z358.1. This equipment should be inspected annually to ensure compliance with ANSI Z358.1.



Never insulate or heat-trace the valve body. Never place the scald valve in the shade or in a cool place by comparison with the shower head, etc. The valve must heat to sense over-temperature line flow and then open. Temperature control point is factory set and sealed. Do not adjust; tampering with valve set point or cap will void warranty.



Workers who may come in contact with potentially hazardous materials should be trained regarding the placement and proper operation of emergency equipment per ANSI Z358.1.



For questions regarding the operation or installation of this product, visit www.bradleycorp.com or call 1-800-BRADLEY.

Product warranties may also be found under "Product Information" on our web site at www.bradleycorp.com.

Installing Valves on Drench Showers



IMPORTANT

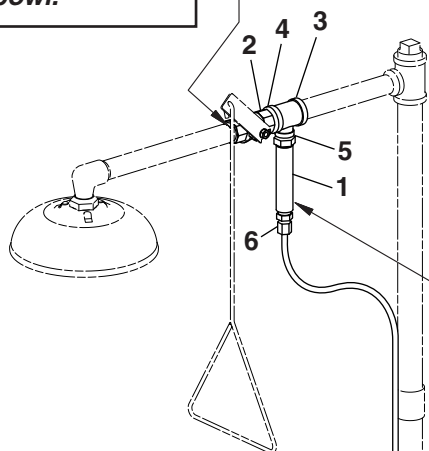
To prevent an ice patch hazard, Bradley recommends that discharge from the valve be directed through a hose or piping to the waste.

Discharge hoses or piping should be short so that there is no standing water that may freeze.

To prevent restriction in the tube, make sure the pipe tie straps are snug around the tube and piping but not overtightened.

FREEZE VALVE ONLY:
Remove the old ball valve and install the new ball valve.

A *NOTE: When the valve is in the closed position, make sure the ball weep hole points toward the eyewash bowl.*



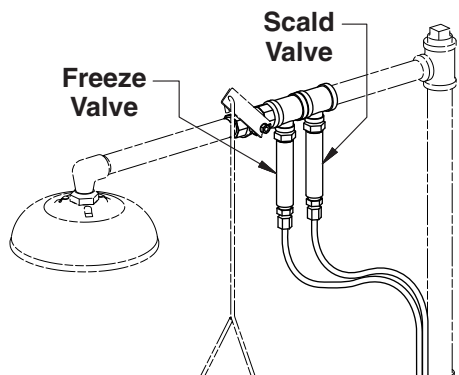
Install the freeze or scald protection valve at a low point or where the water will tend to be static or "dead leg."

B

DUAL VALVE INSTALLATION: Make sure the freeze valve is connected closest to the ball valve.

NOTE: Point the valve(s) downward to allow for drainage (the flow should be in the direction shown on the valve's nameplate).

Dual Valve Installation



Item	Part No.	Qty	Description
1	119-228	1	Freeze Protection Valve
	119-229	1	Scald Protection Valve
2	S27-301	1	Ball Valve, 1" Drilled
3	169-840	1	Tee, 1" NPT x 1" NPT x 1/2" NPT
4	113-006LN	1	1" NPT CClose Nipple
5	113-006LG	1	1/2" NPT CClose Nipple
6	145-204	1	Compression Fitting
7	269-783M	1	Tube, 3/8" Supply (96")
8	269-147	1	Cable Tie (not shown)

Installing Valves on Eyewashes



IMPORTANT

To prevent an ice patch hazard, Bradley recommends that discharge from the valve be directed through a hose or piping to the waste.

Discharge hoses or piping should be short so that there is no standing water that may freeze.

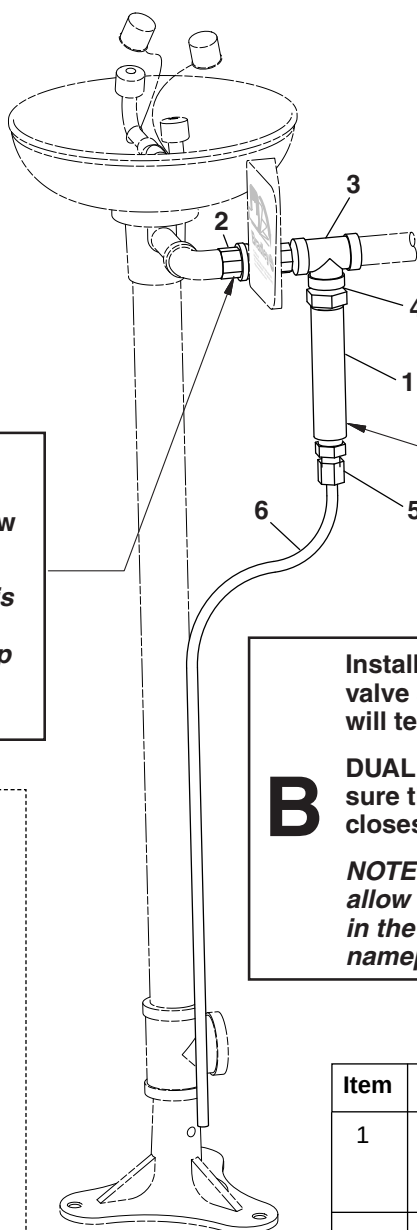
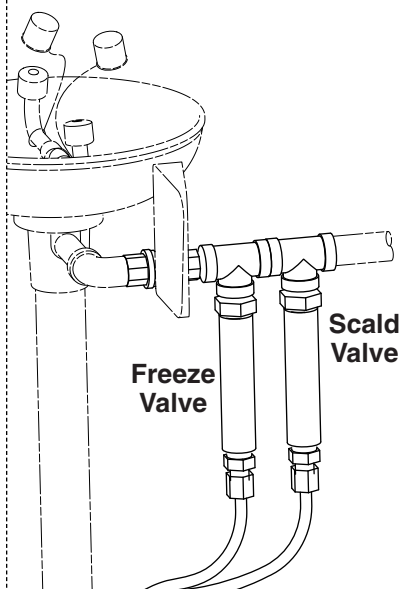
To prevent restriction in the tube, make sure the pipe tie straps are snug around the tube and piping but not overtightened.

FREEZE VALVE ONLY:
Remove the old ball valve and install the new ball valve.

A

NOTE: When the valve is in the closed position, make sure the ball weep hole points toward the eyewash bowl.

Dual Valve Installation



Install the freeze or scald protection valve at a low point or where the water will tend to be static or "dead leg."

B

DUAL VALVE INSTALLATION: Make sure the freeze valve is connected closest to the ball valve.

NOTE: Point the valve(s) downward to allow for drainage (the flow should be in the direction shown on the valve's nameplate).

Item	Part No.	Qty	Description
1	119-228	1	Freeze Protection Valve
	119-229	1	Scald Protection Valve
2	S27-302	1	Ball Valve, 1/2" Drilled
3	169-838	1	Tee, 1/2" NPT
4	113-006LG	1	1/2" NPT Close Nipple
5	145-204	1	Compression Fitting
6	269-783C	1	Tube, 3/8" Supply (36")
7	269-147	1	Cable Tie (not shown)

Installing Valves on Combination Units

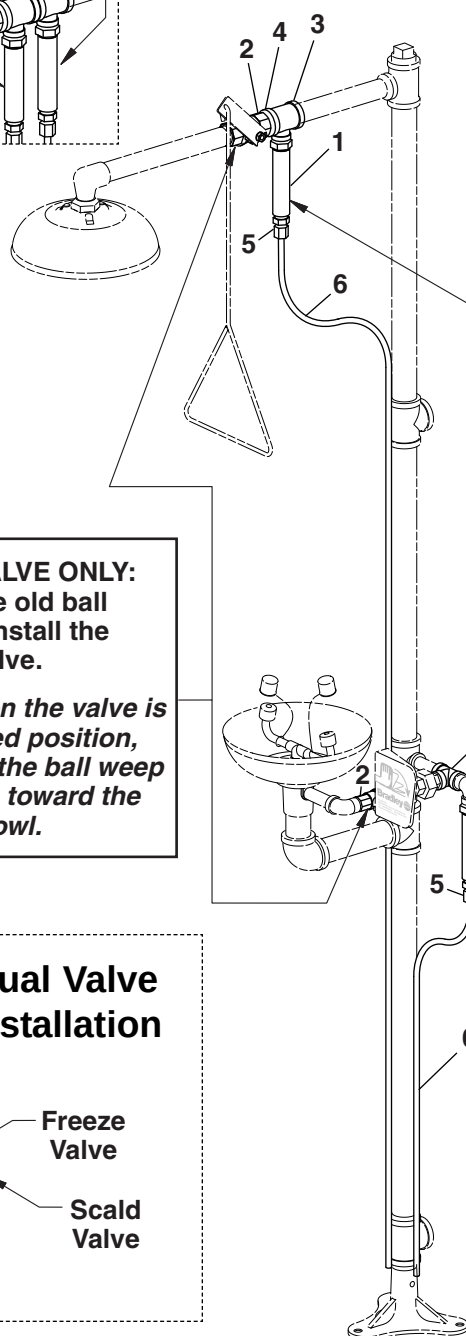
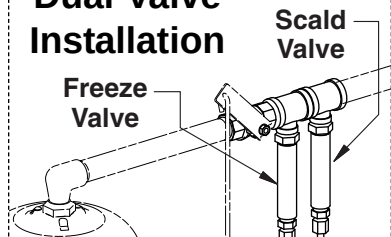


IMPORTANT

To prevent an ice patch hazard, Bradley recommends that discharge from the valve be directed through a hose or piping to the waste. Discharge hoses or piping should be short so that there is no standing water that may freeze.

To prevent restriction in the tube, make sure the pipe tie straps are snug around the tube and piping but not overtightened.

Dual Valve Installation



Item	Part No.	Qty	Description
1	119-228	1	Freeze Protection Valve
	119-229	1	Scald Protection Valve
2	S27-301	1	Ball Valve, 1" Drilled
3	169-840	1	Tee, 1" x 1" x 1/2" NPT
4	113-006LN	1	1" NPT CClose Nipple
5	113-006LG	1	1/2" NPT CClose Nipple
6	145-204	1	Compression Fitting
7	269-783M	1	Tube, 3/8" Supply (96")
8	269-147	1	Cable Tie (not shown)

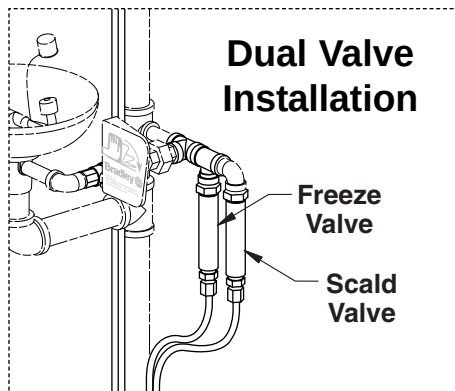
A **FREEZE VALVE ONLY:** Remove the old ball valve and install the new ball valve.

NOTE: When the valve is in the closed position, make sure the ball weep hole points toward the eyewash bowl.

B Install the freeze or scald protection valve at a low point or where the water will tend to be static or "dead leg."

DUAL VALVE INSTALLATION: Make sure the freeze valve is connected closest to the ball valve, then connect the scald valve to the freeze valve.

NOTE: Point the valve(s) downward to allow for drainage (the flow should be in the direction shown on the valve's nameplate).



Item	Part No.	Qty	Description
1	119-228	1	Freeze Protection Valve
	119-229	1	Scald Protection Valve
2	S27-302	1	Ball Valve, 1/2" Drilled
3	169-838	1	Tee, 1/2" NPT
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Maintenance

The Freeze protection and scald protection valves should be inspected each year. The following field test should be performed once a year to ensure proper opening and closing of valve:

To Test the Freeze Protection Valve

Cool the valve with CO₂ or ice and water slurry. The valve will start to drip until warm water reaches the actuator.

To Test the Scald Protection Valve

Heat the inlet line and valve with an electric heat gun or torch (if explosion hazard permits). Heat until the valve flows to purge hot water.

Troubleshooting

PROBLEM	CAUSE	SOLUTION
Freeze protection valve is flowing water	Water supply is too cold	Make sure the unit is supplied with tempered water
	Defective freeze valve [if the water temperature from the valve is above 45°F (7°C)]	Replace the freeze valve <i>NOTE: A water supply that is at least 45°F (7°C) or colder will hold the freeze bleed valve open. To close the valve, increase the surface temperature of the valve to above 45°F (7°C) by immersing the valve in hot water.</i>
Scald protection valve is flowing water	Defective scald valve [if the water temperature from the valve is below 80°F (27°C)]	Replace the scald valve
	Direct sunlight or high ambient temperature	Cool the unit