



Precise. Performance.

NAVIGATOR Thermostatic Mixing Valves

High-Low Standard Point-of-Use

Emergency



BRADLEYCORP.COM



NAVIGATOR

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Bradley's Navigator® Thermostatic Mixing Valves provide superior, long-lasting and reliable performance.

Single valve design. Easy, fast set-up.

Less complex than a multi-valve system, Navigator's unique single valve design is easy to set up and start up – especially in a recirculated system.

Reduced installation time.

An integral port allows for the tempered water recirculation line to be attached directly to the valve body. As a result, Navigator valves need fewer connections than multi-valve manifold systems. Fewer connections and universal mounting capability reduce installation time.

Precise temperature control and anti-scald protection.

Navigator valves precisely control output temperature and provide protection from variations in input temperature and pressure. This built-in anti-scald protection is another benefit of this compact easy-to-use line of valves.

Lead-free.

Better for the environment and safer for drinking water, Navigator® valves are certified to meet the requirements of the Federal Safe Drinking Water Act. Bradley's Navigator valves are American made and were the first lead-free mixing valve on the market.



Certified to
NSF/ANSI 372

NAVIGATOR VALVE TYPES

NAVIGATOR HIGH-LOW VALVES HIGH CAPACITY SYSTEMS RECIRCULATION SYSTEMS

A high-low valve is best used when there is a fluctuation in usage, such as high and low flow requirements. These units are normally installed near the water source in the mechanical room.

Applications include:

- Locker rooms
- Nursing homes
- Schools
- Hotels & Casinos
- Convention centers
- Military barracks



NAVIGATOR EMERGENCY VALVES

An emergency valve is used exclusively on emergency eyewash and drench shower applications to provide tepid water. Safety features include anti-scald protection and fixed cold water bypass ports to ensure cold water will keep flowing at all times even if the hot water fails.

Applications include:

- Emergency eye/face wash and drench shower systems
- Hazardous chemical environments
- Scientific laboratories
- Manufacturing environments



NAVIGATOR STANDARD VALVES

A standard valve is best used when there is a constant flow of water needed/required. These units are normally installed near the water source in the mechanical room.

Applications include:

- Food Processing
- Car Washes
- Restaurants
- Recirculation Systems



POINT-OF-USE VALVES

A point-of-use valve is attached directly to a shower or lavatory to control water temperature and provide anti-scald protection. These units are normally installed at the fixture.

Applications include:

- Schools
- Hospitals
- Restaurants
- Retail and Office

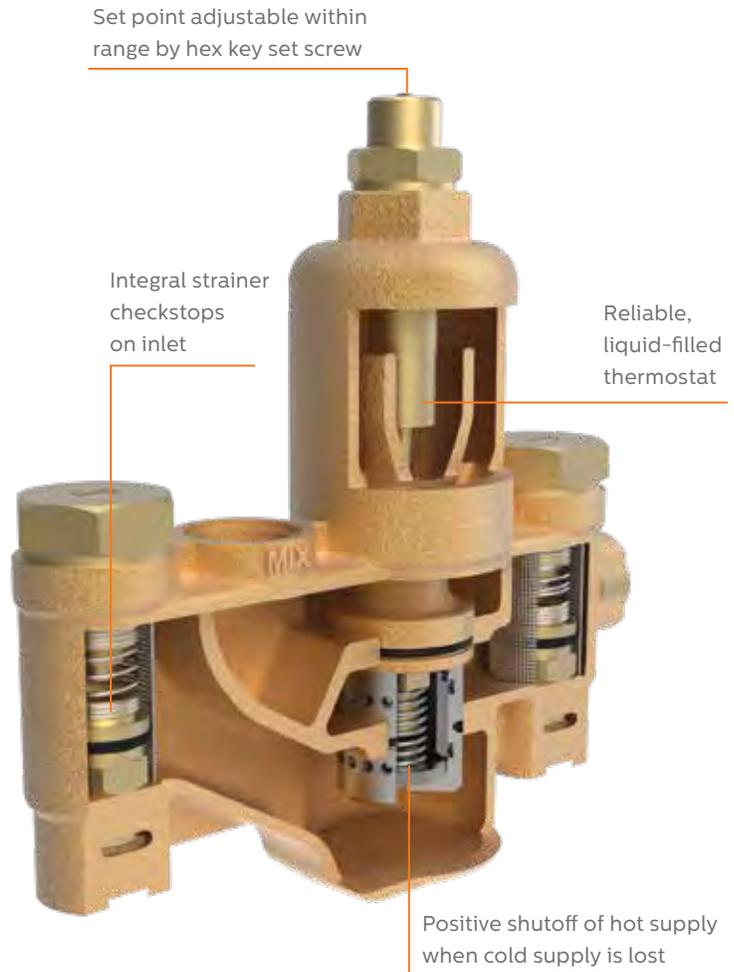


NAVIGATOR HIGH-LOW VALVES

Bradley's Navigator high-low valves are our most popular, adaptable valves and use a single valve design to control water temperatures during high demand and low demand. These can be used at the main water source or in remote locations such as a locker room. The valve maintains the temperature to within +/- 3 degrees through both high and low demands.

KEY FEATURES

- ASSE 1017, cUPC certified
- Single valve design handles high and low demand for tempered water
- Accurate temperature control to within +/- 3°F
- Factory assembled and tested
- Universal mounting capability
- Maximum operating pressure of 125 psi (860 kPA)
- Maximum inlet temperature of 200°F (93°C)
- Dial thermometer
- 10-year warranty on liquid-filled thermostat
- See Technical Data Sheets on bradleycorp.com for available configurations



Flow Capacities gpm (lpm)								
Model	Minimum Flow	Pressure Drop — psi (bar)						
		5 (0.5)	10 (1.0)	15 (1.5)	20 (2.0)	30 (2.5)	45 (3.0)	60 (4.0)
HL45	1.5 (5.5)	12.5 (58.0)	19.0 (89.0)	24.0 (115.0)	28.5 (137.0)	37.0 (157.0)	47.0 (175.0)	56.5 (209.0)
HL80	2.0 (7.5)	26.0 (110.0)	36.0 (157.0)	44.0 (193.0)	51.0 (223.5)	63.0 (250.5)	77.0 (275.0)	88.0 (318.0)
HL130	4.0 (15.0)	40.0 (184.5)	58.0 (265.0)	71.0 (327.0)	83.0 (380.0)	102.0 (427.0)	126.0 (470.0)	147.0 (546.0)
HL200	5.0 (19.0)	60.0 (282.5)	91.0 (405.0)	109.0 (499.5)	127.0 (580.0)	157.0 (651.0)	192.0 (715.5)	220.0 (831.0)
HL2X1	8.0 (30.0)	80.0 (369.0)	116.0 (530.0)	142.0 (654.0)	166.0 (760.0)	204.0 (854.0)	252.0 (940.0)	294.0 (1092.0)
HL2X2	10.0 (38.0)	120.0 (565.0)	182.0 (810.0)	218.0 (999.0)	254.0 (1160.0)	314.0 (1302.0)	384.0 (1432.0)	440.0 (1662.0)



HL45 MODEL S59-3045
 3/4" (19mm) inlet, 1" (25.4mm) outlet
 1.5 gpm (5.7 lpm) minimum flow capacity



HL80 MODEL S59-3080
 1" (25.4mm) inlet, 1-1/4" (32.8mm) outlet
 2 gpm (7.6 lpm) minimum flow capacity



HL130 MODEL S59-3130
 1-1/4" (32.8mm) inlet, 1-1/2" (38mm) outlet
 4 gpm (15.1 lpm) minimum flow capacity



HL200 MODEL S59-3200
 2" (50.8mm) inlet, 2" (50.8mm) outlet
 5 gpm (18.9 lpm) minimum flow capacity

HIGH CAPACITY SYSTEMS

Large capacity for large projects.



HL2X1 MODEL S59-3260
 2" (50.8mm) inlet, 2" (50.8mm) outlet
 8 gpm (30.3 lpm) minimum flow capacity



HL2X2 MODEL S59-3400
 3" (76.2mm) inlet, 3" (76.2mm) outlet
 10 gpm (37.9 lpm) minimum flow capacity



NovaCare Complex,
 Philadelphia, PA

NFL Training Facility Reduces Maintenance with Navigator® Thermostatic Mixing Valve

NovaCare needed a valve that could deliver 5 to 200 gallons (757 liters) of water per minute and accurately maintain a preset temperature during periods when no water was being drawn from the system.

Ken Rinear, a Bradley Corp. representative with Keystone Sales, recommended that the existing two-valve system be replaced with a Bradley high-low Navigator TMV (model HL-200), which could accommodate a higher capacity. The Navigator is a compact valve capable of providing tempered water for fluctuating high and low demand without the need for a second low-capacity valve. "Sizing and specifying the Navigator valve couldn't have been easier," noted Ray Murphy, the plumbing foreman. "Installing the single unit was fast and the valve hasn't required any maintenance since being installed – we're extremely impressed."

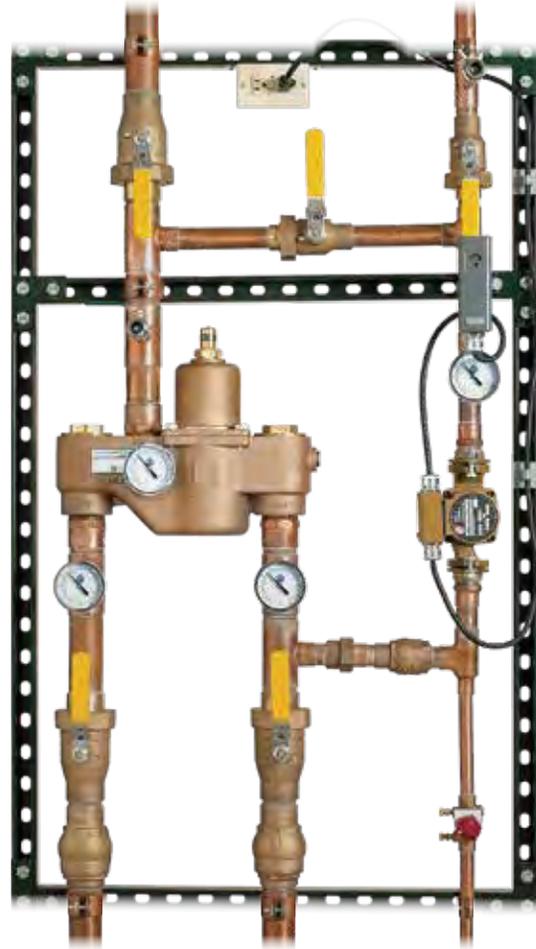
NAVIGATOR RECIRCULATION STATIONS

Save Time and Money

Bradley's Navigator Recirculation Station is designed to take the guesswork out of installing a thermostatic mixing valve in a recirculation system. This pre-assembled, pre-tested recirculation station consists of a Navigator High-Low Valve combined with the components typically used in this type of system: piping assembly, inlet/outlet shut-off valves, pressure/temperature gauges, circulation pump, balancing valve, and a GFCI outlet mounted to an enamel-coated strut. The Navigator NRS simplifies the specification and installation to such a degree that no factory technicians are required for installation. It's that easy.

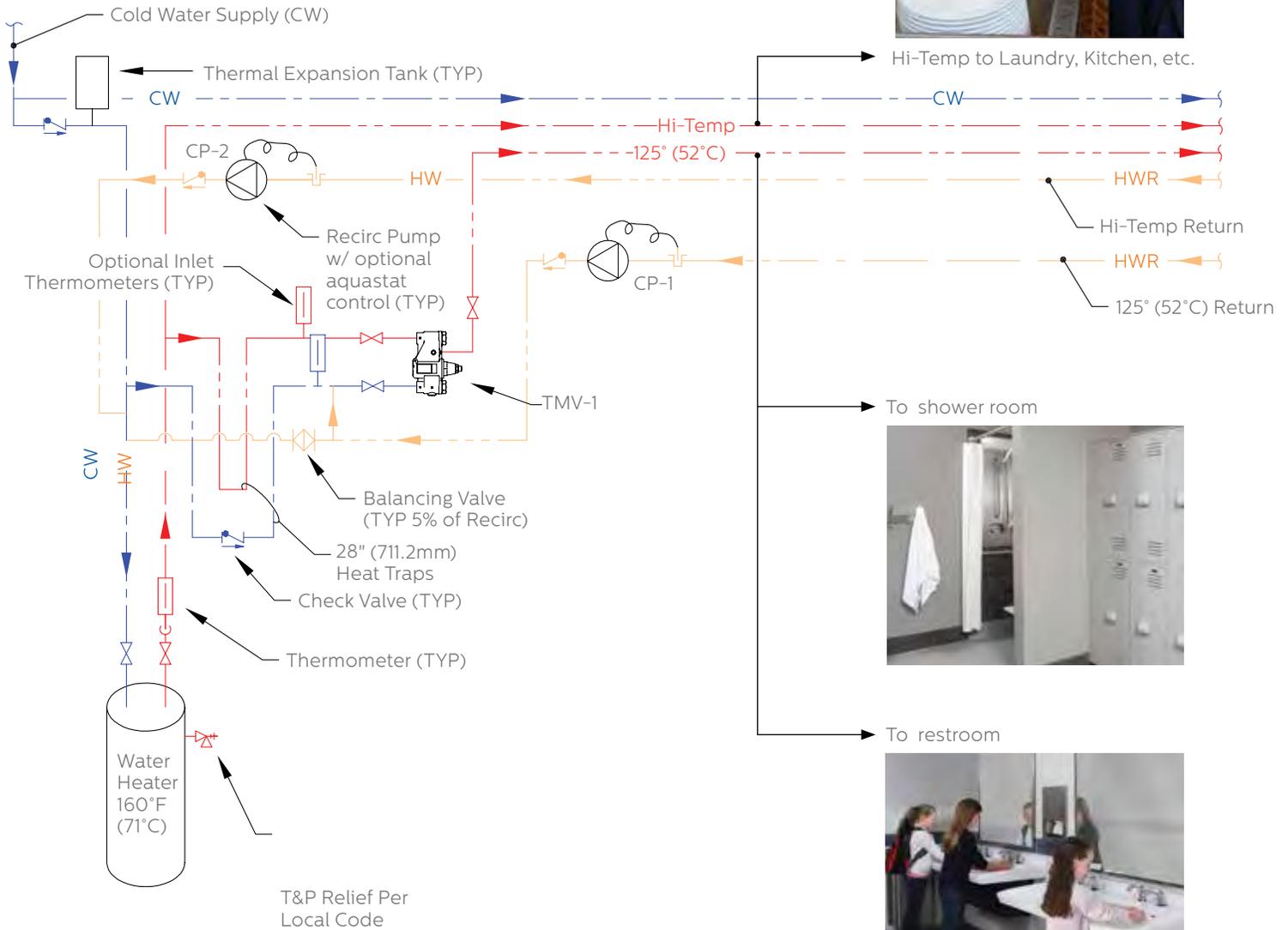
KEY FEATURES

- ASSE 1017, cUPC certified valves
- Pre-assembled and tested recirculation station
- Navigator High-Low thermostatic valve
- Shutoff valves on inlets and outlets
- Outlet setup connection
- Return line with circulatory pump, balancing valve and check valves
- GFCI outlet
- Mounted to enamel-coated strut
- See Technical Data Sheets on bradleycorp.com for available configurations



Flow Capacities gpm (lpm)								
Model	Minimum Flow	Pressure Drop — psi (bar)						
		5 (0.5)	10 (1.0)	15 (1.5)	20 (2.0)	30 (2.5)	45 (3.0)	60 (4.0)
NRS-4	1.5 (5.5)	12.5 (47.3)	19.0 (89.0)	24.0 (115.0)	28.5 (137.0)	37.0 (140.1)	47.0 (175.0)	56.5 (209.0)
NRS-8	2.0 (7.5)	26.0 (98.4)	36.0 (157.0)	44.0 (193.0)	51.0 (223.5)	63.0 (238.5)	77.0 (275.0)	88.0 (318.0)
NRS-13	4.0 (15.0)	40.0 (151.4)	58.0 (265.0)	71.0 (327.0)	83.0 (380.0)	102.0 (386.1)	126.0 (470.0)	147.0 (546.0)
NRS-20	5.0 (19.0)	60.0 (227.1)	91.0 (405.0)	109.0 (499.5)	127.0 (580.0)	157.0 (594.3)	192.0 (715.5)	220.0 (831.0)

RECIRCULATION DIAGRAM



NAVIGATOR RECIRCULATION MODELS

NRS-4

3/4" (19mm) inlet,
1" (25.4mm) outlet

NRS-8

1" (25.4mm) inlet,
1-1/4" (32.8mm) outlet

NRS-13

1-1/4" (32.8mm) inlet,
1-1/2" (38.1mm) outlet

NRS-20

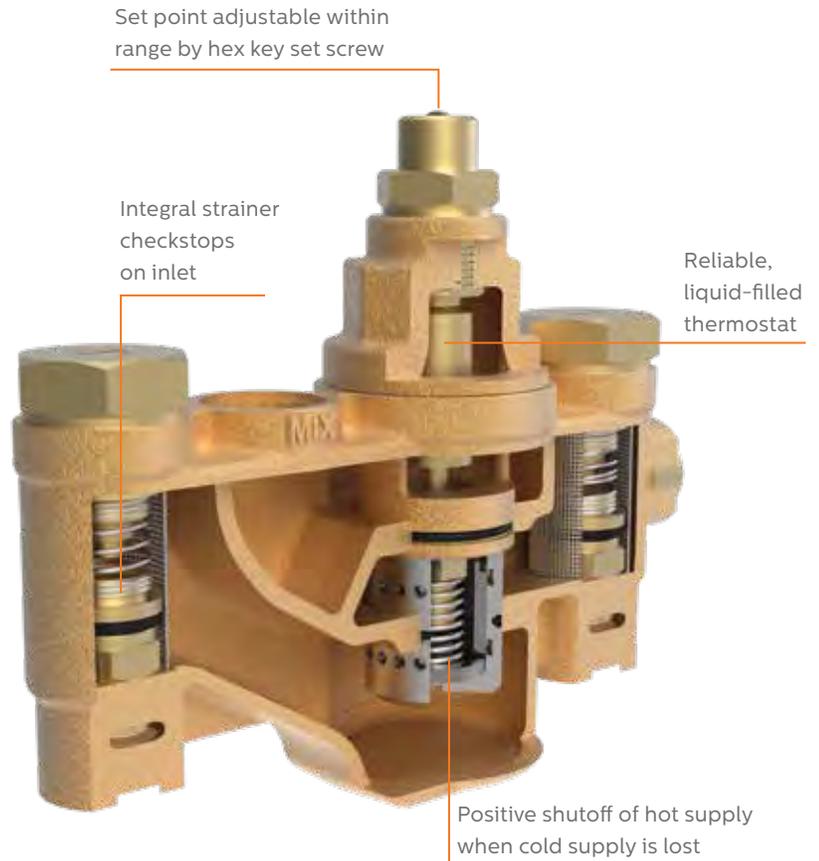
2" (50.8mm) inlet,
2" (50.8mm) outlet

NAVIGATOR STANDARD VALVES

Bradley's Navigator standard valves provide reliable temperature control of water in a recirculation system or when the application does not call for a low demand of water. Bradley's Navigator standard valves are ASSE 1017 and cUPC certified, providing long-lasting reliable service.

KEY FEATURES

- ASSE 1017, cUPC certified
- Accurate temperature control to within +/- 3°F
- Factory assembled and tested
- Universal mounting capability
- Maximum operating pressure of 125 psi (860 kPa)
- Maximum inlet temperature of 200°F (93°C)
- 10-year warranty on liquid-filled thermostat
- See Technical Data Sheets on bradleycorp.com for available configurations



Flow Capacities gpm (lpm)								
Model	Minimum Flow	Pressure Drop – psi (bar)						
		5 (0.5)	10 (1.0)	15 (1.5)	20 (2.0)	30 (2.5)	45 (3.0)	60 (4.0)
TMV25	2.0 (8.0)	5.5 (30.0)	9.0 (47.0)	13.0 (60.0)	16.0 (73.0)	20.0 (84.0)	25.0 (94.0)	29.0 (112.0)
TMV45	5.0 (18.9)	12.0 (60.0)	17.0 (91.0)	21.0 (115.0)	25.0 (135.0)	31.0 (153.0)	37.0 (170.0)	42.0 (200.0)
TMV80	8.0 (30.3)	24.0 (116.0)	34.0 (166.0)	44.0 (206.0)	48.0 (234.0)	60.0 (267.0)	74.0 (296.0)	85.0 (343.0)
TMV130	13.0 (50.0)	40.0 (185.0)	58.0 (265.0)	71.0 (327.0)	83.0 (380.0)	102.0 (428.0)	126.0 (470.0)	147.0 (546.0)
TMV200	20.0 (75.7)	60.0 (280.0)	91.0 (403.0)	109.0 (500.0)	127.0 (580.0)	157.0 (653.0)	192.0 (720.0)	220.0 (836.0)



TMV25 MODEL S59-2025
 3/4" (19mm) inlet, 3/4" (19mm) outlet
 2 gpm (7.6 lpm) minimum flow capacity



TMV45 MODEL S59-2045
 3/4" (19mm) inlet, 1" (25.4mm) outlet
 5 gpm (18.9 lpm) minimum flow capacity



TMV80 MODEL S59-2080
 1" (25.4mm) inlet, 1-1/4" (32.8mm) outlet
 8 gpm (30.3 lpm) minimum flow capacity



TMV130 MODEL S59-2130
 1-1/4" (32.8mm) inlet, 1-1/2" (38.1mm) outlet
 13 gpm (49.2 lpm) minimum flow capacity



HL200 MODEL S59-2200
 2" (50.8mm) inlet, 2" (50.8mm) outlet
 20 gpm (75.7 lpm) minimum flow capacity



**University of Hartford
 West Hartford, Conn.**

**Campus Improves Safety, Reduces
 Maintenance with TMVs**

Literally thousands of showers are taken each day in dorms and locker rooms on the University of Hartford campus. Since scald protection is a key issue, the school needed to replace single hot water tanks with tempering valves in its Village Apartment complex.

In total, about 12 Bradley Navigator TMVs have been installed at the University. For efficiency, these master TMVs are each installed near the hot water source. This eliminates the need for installing individual valves for each shower. The Navigator line of valves uses single-valve technology to blend hot and cold water to preset temperatures with pinpoint accuracy, providing better user protection. Preset temperatures are maintained within three degrees, and in the event that cold water supply is lost, the valves will shutoff hot water to prevent scalding.

“The new Bradley TMVs are working marvelously,” Lou Perleoni, the University’s head of plumbing services said. “I’m amazed by the lack of maintenance on these valves.” Perleoni also mentioned that he appreciates the compact Navigator design and that cleaning the cartridge is not an issue.

POINT-OF-USE VALVES

The point-of-use valves work at the fixture for showers and sinks. They reliably control water temperature at flow as low as 0.35 gpm (1.32 lpm). Protect your users with these anti-scald valves.

KEY FEATURES

- Model S59-2007: ASSE 1017
- Models S59-4000, S59-4000A, S59-4000BY, S59-4007: ASSE 1070, cUPC certified
- Model S59-4016 Series: ASSE 1017, 1069 & 1070, cUPC certified
- Reliable wax-filled thermostat
- Adjustable set point within temperature limit
- Easy installation and serviceability
- Universal mounting capability
- Factory assembled and tested
- Maximum operating pressure of 125 psi (860 kPa)
- See Technical Data Sheets on bradleycorp.com for available configurations

Set point adjustable within range by valve cover

Internal check valves

Glass-filled polysulfone valve body with internal ribbing for extra strength



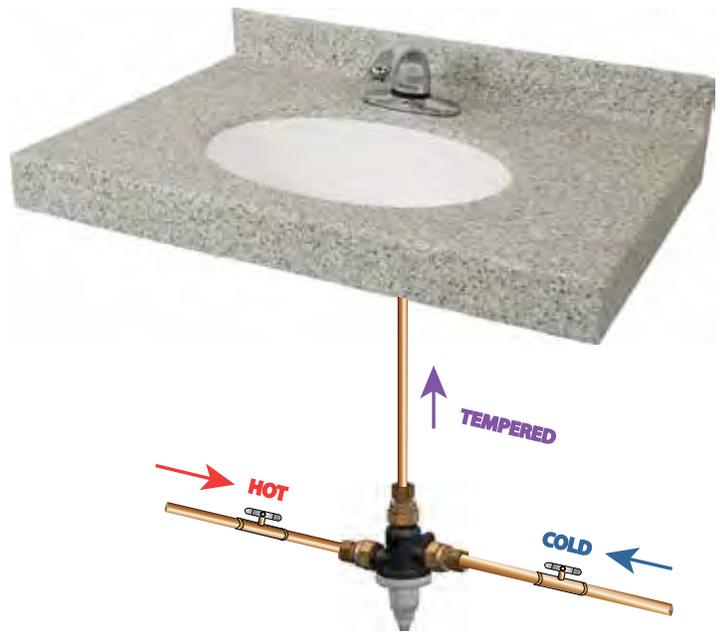
Model S59-2007 is ASSE 1070 and cUPC certified.

Flow Capacities gpm (lpm)								
Model	Minimum Flow	Pressure Drop — psi (bar)						
		5 (0.5)	10 (1.0)	15 (1.5)	20 (2.0)	30 (2.5)	45 (3.0)	60 (4.0)
S59-2007	0.5 (2.0)	2.0 (10.0)	3.5 (16.0)	4.5 (20.5)	5.0 (24.5)	6.5 (27.5)	8.0 (30.0)	9.5 (35.5)
S59-4000(A)	0.35 (1.5)	2.0 (7.5)	2.5 (9.0)	3.0 (11.0)	3.5 (13.0)	4.5 (17.0)	5.5 (19.0)	6.5 (24.5)
S59-4007	0.5 (2.0)	2.5 (11.5)	3.5 (16.0)	4.5 (20.0)	5.0 (23.0)	6.0 (25.5)	7.5 (28.0)	8.5 (32.0)
S59-4016	0.5 (2.0)	5.0 (22.4)	7.0 (31.6)	8.5 (39.6)	10.0 (46.4)	12.5 (52.0)	15.0 (56.5)	16.5 (61.9)



SINK/FAUCET VALVE MODEL S59-2007

1/2" (12.7mm) inlet, 1/2" (12.7mm) outlet
 0.5 gpm (1.9 lpm) minimum flow capacity



S59-4000



S59-4000A



S59-4000BY

NAVIGATOR MODELS S59-4000, S59-4000A, S59-4000BY

3/8" (9.5mm) compression inlet, 3/8" (9.5mm) compression outlet, 1/2" (12.7mm) inlet, 1/2" (12.7mm) outlet
 0.35 gpm (1.3 lpm) minimum flow capacity



S59-4016D



S59-4016N



S59-4016S



S59-4016X



S59-4016Y

NAVIGATOR MODELS S59-4016D, S59-4016N, S59-4016S, S59-4016X, S59-4016Y

1/2" (12.7mm) inlet, 1/2" (12.7mm) outlet, 3/4" (19mm) inlet, 3/4" (19mm) outlet
 0.5 gpm (1.9 lpm) minimum flow capacity



NAVIGATOR VALVE MODEL S59-4007

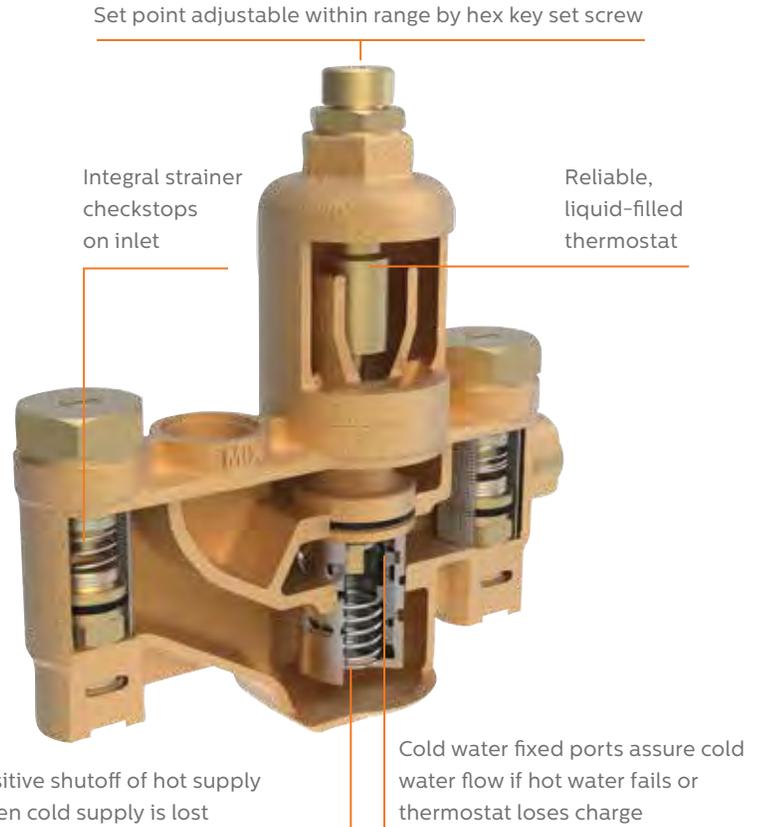
1/2" (12.7mm) inlet, 1/2" (12.7mm) outlet
 0.5 gpm (2.0 lpm) minimum flow capacity

NAVIGATOR EMERGENCY VALVES

The 15-minute rule: The current ANSI standard calls for emergency eyewash and drench showers to deliver tepid water for 15 minutes. This assures that a user won't be subjected to very cold water and possibly hypothermia or very hot scalding water and possibly skin burns. Therefore, a thermostatic mixing valve is needed to mix incoming hot and cold water to a tepid temperature. Navigator EFX valves are designed for this very purpose.

KEY FEATURES

- ASSE 1071 certified
- Meet ANSI Z358.1 requirements
- Accurate temperature control to within +/- 3°F
- Adjustable set point temperature range 65°F to 95°F (18°C to 35°C). Factory set point is 85°F (29°C)
- Cold water fixed ports assure cold water flow
- Universal mounting capability
- Maximum operating pressure of 125 psi (860 kPa)
- Maximum inlet temperature of 180°F (82°C) with recommended inlet temperature of 120°F to 140°F (49°C to 60°C)
- 10-year warranty on liquid-filled thermostat
- See Technical Data Sheets on bradleycorp.com for available configurations



Flow Capacities gpm (lpm)								
Model	Minimum Flow	Pressure Drop – psi (bar)						
		5 (0.5)	10 (1.0)	15 (1.5)	20 (2.0)	30 (2.5)	45 (3.0)	60 (4.0)
EFX125	3.0 (11.5)	33.5 (153.0)	47.5 (216.3)	58.0 (265.0)	67.0 (306.0)	82.0 (342.0)	100.5 (374.5)	116.0 (432.5)
cold bypass only		25.5 (117.3)	36.5 (166.0)	44.5 (203.0)	51.5 (234.5)	63.0 (262.0)	77.0 (287.0)	89.0 (331.5)
EFX120	3.0 (11.4)	28.4 (108.0)	47.7 (181.0)	61.8 (234.0)	73.5 (278.0)	79.0 (299.0)	112.4 (426.0)	129.8 (491.0)
cold bypass only		minimum of 23.2 gpm (87.8 lpm) at 30 psi (2.1 bar)						
EFX60	2.0 (7.5)	22.0 (99.5)	31.0 (141.0)	38.0 (172.5)	43.5 (199.0)	53.5 (222.5)	65.5 (244.0)	75.5 (281.5)
cold bypass only		16.5 (76.3)	23.5 (108.0)	29.0 (132.0)	33.5 (152.5)	41.0 (170.5)	50.0 (187.0)	58.0 (216.0)
EFX50	3.0 (11.5)	19.3 (74.8)	32.0 (124.0)	40.5 (157.0)	47.5 (184.1)	61.6 (233.2)	72.8 (282.1)	84.0 (325.5)
cold bypass only		minimum of 44.2 gpm (167.3 lpm) at 30 psi (2.1 bar)						
EFX25	2.0 (5.5)	10.5 (48.5)	15.0 (68.5)	18.5 (84.0)	21.3 (97.0)	26.0 (108.5)	32.0 (119.0)	37.0 (137.0)
cold bypass only		8.0 (37.0)	11.5 (52.0)	14.0 (64.5)	16.5 (74.0)	20.0 (83.0)	24.5 (91.0)	28.0 (105.0)
EFX20	3.0 (11.4)	6.8 (25.7)	15.2 (57.5)	20.1 (76.1)	23.8 (90.1)	30.3 (114.7)	36.8 (139.3)	42.5 (160.9)
cold bypass only		minimum of 16.9 gpm (64.0 lpm) at 30 psi (2.1 bar)						
EFX8	1.5 (5.5)	3.0 (13.5)	4.0 (19.0)	5.0 (23.5)	6.0 (27.0)	7.3 (30.5)	9.0 (33.5)	10.5 (38.5)
cold bypass only		2.3 (10.5)	3.2 (14.5)	4.0 (18.0)	4.6 (21.0)	5.6 (23.5)	6.8 (25.5)	7.7 (29.5)



EFX8 MODEL S19-2000
 1/2" (12.7mm) inlet, 1/2" (12.7mm) outlet
 1.5 gpm (5.7 lpm) minimum flow capacity



COLD WATER BYPASS

Navigator's cold water bypass feature provides added safety. If the cold water stops, Navigator prevents scalding by shutting down the hot water. If the hot water stops or the thermostat loses its charge, the valve's fixed cold-water ports keep the cold water flowing.



EFX20 MODEL S19-2150
 3/4" (19mm) inlet, 1" (25.4mm) outlet
 3 gpm (11.4 lpm) minimum flow capacity



EFX25 MODEL S19-2100
 3/4" (19mm) inlet, 1" (25.4mm) outlet
 2 gpm (7.6 lpm) minimum flow capacity



EFX50 MODEL S19-2250
 1" (25.4mm) inlet, 1-1/4" (32.8mm) outlet
 3 gpm (11.4 lpm) minimum flow capacity



EFX60 MODEL S19-2200
 1" (25.4mm) inlet, 1-1/4" (32.8mm) outlet
 2 gpm (7.6 lpm) minimum flow capacity

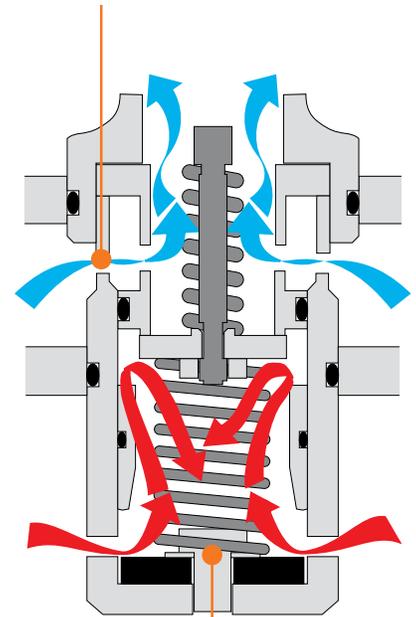


EFX120 MODEL S19-2350
 1-1/4" (32.8mm) inlet, 1-1/2" (38.1mm) outlet
 3 gpm (11.4 lpm) minimum flow capacity



EFX125 MODEL S19-2300
 1-1/4" (32.8mm) inlet, 1-1/2" (38.1mm) outlet
 3 gpm (11.4 lpm) minimum flow capacity

If hot water stops, fixed open ports ensure cold water keeps flowing.



If cold water stops, Navigator shuts down hot water.

NAVIGATOR

STANDARD FEATURES

- Manufactured from lead-free brass castings and bar stock
- Integral check stops with strainers
- Check valves can be removed as one assembly
- Positive hot water shut-off when cold supply is lost
- A simple turn of a hex screw adjusts the set point within the temperature range
- Temperature control to all fixtures to +/- 3°F
- Universal mounting
- Pre-assembled at the factory
- 100% tested for guaranteed performance
- 10-year warranty on the liquid-filled thermostats in High-Low, Standard and Emergency valves



STANDARD OPTIONS

Finishes

Navigator Valves can be specified as Rough Bronze or with a Chrome finish.



Cabinet styles

Stainless Steel or Baked White Enamel finish is available in Surface Mount or Recessed style.



Pre-piped assemblies

Valves are available as pre-piped assemblies, including inlet and outlet shut-offs, in both Rough Bronze and Chrome finish.



Application

Recommended Valve

S19224 Halo
Wall-Mounted Eyewash



S19-2000 Emergency
Thermostatic Mixing Valve



S19214DCFW Halo Eye/
Face Wash with Stainless
Steel Bowl & Dust Cover



S19-2000 Emergency
Thermostatic Mixing Valve



S19120 Drench Shower



S19-2150 Emergency
Thermostatic Mixing Valve



S19314 Halo Drench Shower
with Eye/Face Wash



S19-2250 Emergency
Thermostatic Mixing Valve



WF2808 Washfountain



S59-4007 Point-of-Use
Thermostatic Mixing Valve



Aerada 1200 Faucet



S59-4000A Point-of-Use
Thermostatic Mixing Valve



WS-3W-TT Group Shower



S59-4016 Point-of-Use
Thermostatic Mixing Valve



COL-5C Column Shower



S59-2025 Standard
Thermostatic Mixing Valve



WS-1WCA-HD Wall Showers



S59-3045 High-Low
Thermostatic Mixing Valve



Building System



NRS-20 Recirculation System





NAVIGATOR Thermostatic Mixing Valves



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