



MG-2 Express® Lavatory System – MG-Series

- ADA and TAS compliant
- Serves one or two users at a time
- Standard lavatory spacing on 30" centers
- Continuous bowl, sprayhead, and end caps are constructed of Terreon® or Terreon®RE solid surface material
- Available in a variety of colors
- Available in infrared, air valve metering, or TouchTime® mechanical metering

Specifications

The flowing "wave" design accommodates one to two users. Units handle washroom traffic quickly and economically, while providing each user with personal space. Lavatories for the system are positioned on 30" centers. Bradley's continuous bowl features a contemporary flowing "wave" design. This unique "wave" pattern is repeated in the sprayhead, integrating the components. The pre-assembled sprayhead module is equipped with independent aerators, each served by separate infrared sensing module and solenoid valve (Model MG-2/IRP), pushbutton air metering valve (Model MG-2/AST4), TouchTime® mechanical pushbutton (Model MG-2/TTPA) or TouchTime piezo switch (MG-2/TTPB), or independent battery IR sensor and batteries (Model MG-2/BIR3). Operating range is 20–80 psi. Flow restrictor keeps flow rate constant at all pressures.

Product Compliance

Listed by IAPMO R&T to

- Uniform Plumbing Code (UPC)
- National Plumbing Code of Canada
- International Plumbing Code (IPC)
- IGC 156 and the requirements of CSA B45.5/IAPMO Z124 and ASME A112.18.1/CSA B125.1



Listed by UL Environment to

- GreenGuard Gold



- Serves the American Disabilities Act and ICC/ANSI 117.1 guidelines, citations 306, 308, 309.4, 606.4, 606.5 when installed according to these requirements. Consult local codes and standards.

- This plumbing fixture is designed for hand washing only. It is not intended to dispense water for human consumption through drinking or for preparation of food or beverages.

Verify all rough-in dimensions prior to installation.

Consult local and national codes. Conformity and compliance to local and national codes is the responsibility of the installer.

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Construction

Bowl, Sprayhead, and Pedestal End Caps

Constructed of Terreon, a densified solid surface material composed of a bio-based resin, or TerreonRE, a densified solid surface material composed of a bio-based resin and preconsumer recycled granules. Terreon and TerreonRE are resistant to chemicals, stains, burns, and impact. Surface damage can be easily repaired with everyday cleansers or fine grit abrasives. Terreon and TerreonRE are GREENGUARD® certified as low-emitting materials.

Support Frame and Access Panel

Bowl assembly and pedestal end caps are secured to a heavy gauge stainless steel support frame mounted to the wall. The contoured front access panel is constructed of 300 series stainless steel.

Vandal Resistance

The molded solid surface sprayhead is an integral part of the bowl module. A free-spinning collar protects the aerator from vandalism. The infrared sensor will automatically shut off water flow after 30–45 seconds if a vandal attempts to trigger constant operation by covering the sensor, or by placing a stationary object in the sensor's detection area. Pushbuttons are secured to the unit from inside the sprayhead. Air valves, water supplies, and waste are concealed within the pedestal/support frame assembly.

Standard Equipment

Continuous bowl with two lavatories, sprayhead, pedestal, stainless steel mounting frame (as described above), 120VAC/12VDC plug-in adapter (Model MG-2/IRP, Model MG-2/TTPA and Model MG-2/TTPB). Batteries are included (Model MG-3/BIR3). The following fittings are provided: P-trap, tailpiece, two flexible stainless steel supply connections, and Navigator® thermostatic mixing valve with stops.

Listed by NSF International to

- NSF/ANSI 372



Complies with

- ADA
- ICC/ANSI 117.1
- TAS



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Activation Types

Infrared (Model MG-2/IRP)

The sensor module uses a conical infrared transmitting beam, creating a wide detection area. Adaptive-style sensor shall learn installation environment upon power-up and react (activate) when the user's hands enter the detection area. Each of the aerators is controlled by a separate, slow-closing solenoid valve. Hands placed within the bowl are detected and will activate a flow of tempered water at a rate of 0.50 gpm (1.9 Lpm). A timing turn-off delay of 2–3 seconds results in a smooth, controlled hand-washing operation. The Bradley adaptive sensor is not affected by varying color tones or darkness. Direct sunlight or bright washroom lights (up to 10,000 foot candles) will not activate the system.

- Solenoids – 12VDC, 3/8" NPT. The electronically activated, slow-closing solenoid valve provides reliable performance since there are few moving parts, and its operation is unaffected by most chemicals and minerals often present in municipal water supplies. Neither the solenoid valve nor the infrared sensor module need adjustment for range or timing.
- Low Voltage Plug-In Adapter – A UL/CSA-listed 120VAC/12VDC plug-in adapter powers the solenoid valves. The plug-in adapter, furnished as standard equipment, plugs into a standard GFCI protected electrical outlet.

Battery Infrared (Model MG-2/BIR3)

Each battery-powered sensor uses a zone-focused infrared transmitting beam, creating a large detection area. The sensor is not affected by varying skin tones or darkness. When hands enter the detection area, the sensor starts water flow by opening the valve electronically. Tempered water flows at a rate of 0.50 gpm (1.9 Lpm). When hands leave the detection area, the sensor stops the flow of water by closing the valve. The 6VDC, electronically activated solenoid valve has few moving parts, providing reliable operation that is unaffected by most chemicals and minerals often present in municipal water supplies. Each station is powered by a single lithium battery. Battery type is Duracell® DL 223A 6V lithium or rquivalent (batteries included) with a life expectancy of 4–5 years or approximately 200,000 cycles.

Air Valve Metering (Model MG-2/AST4)

Each pushbutton pneumatically actuates a non-hold-open air metering, single-temperature valve with field adjustable timing from 0–45 seconds. Factory set at 11 seconds. Each pushbutton activates one valve which, in turn, activates one hand washing station at a rate of 0.10 gpc (0.38 Lpc). Push button requires less than five pounds of pressure.

TouchTime® Mechanical Metering (Models MG-2/TTPA & MG-2/TTPB)

Each low voltage mechanical pushbutton or piezo switch actuates a non-hold-open, slow closing anti-hammer solenoid valve that is timed from an electronic potted assembly. Each push button activates one valve, which, in turn, activates one station flowing tempered water at a rate of 0.10 gpc (0.38 Lpc). TouchTime controls water flow at each station through the use of solid-state, digital circuitry. Timing is factory set at a 15 second run time but is field adjustable to pre-set timeout periods and optional auto-flush function. The 24 hour flush function will activate water flow for a period of 60 seconds any time there has been no activation within the past 24 hours. Push button requires less than five pounds of pressure.

Optional Equipment

Soap Dispenser Type

One horizontally-mounted pump-style valve is located over the drain. Soap tank is located within the stainless steel frame. Soap tank is refillable through an easily accessible exterior filler cap. Filler cap is vandal resistant and opens with special spanner wrench included. Soap tank capacity is ¾ gallon.

For information on Terreon and TerreonRE Waste Receptacles for the Express MG-Series, visit bradleycorp.com.

Verify all rough-in dimensions prior to installation.

Consult local and national codes. Conformity and compliance to local and national codes is the responsibility of the installer.

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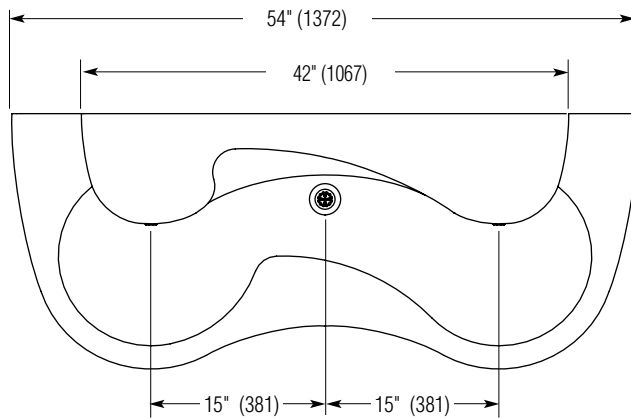


MG-2 Express® Lavatory System – MG-Series

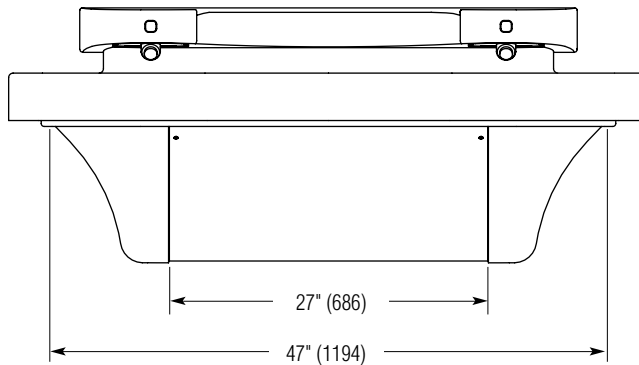
(mm)

Dimensions

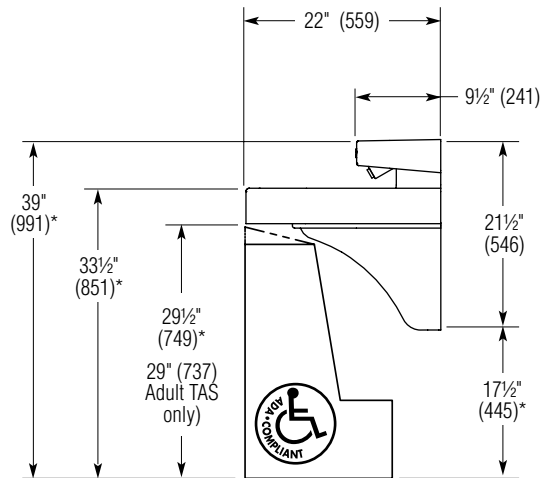
Top View



Front View



Side View



- * Subtract 4" from all vertical dimensions for Juvenile Height Mounting.
- * Subtract 3½" from all vertical dimensions for TAS Juvenile Height Mounting (grades Pre-K through 5 or 6).
- * Subtract 1½" from all vertical dimensions for TAS Juvenile Height Mounting (grades 6 through 8 or 9).

Verify all rough-in dimensions prior to installation.
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MG-2 Express® Lavatory System – MG-Series

Rough-Ins

(mm)

Mounting for Standard Height Is Shown

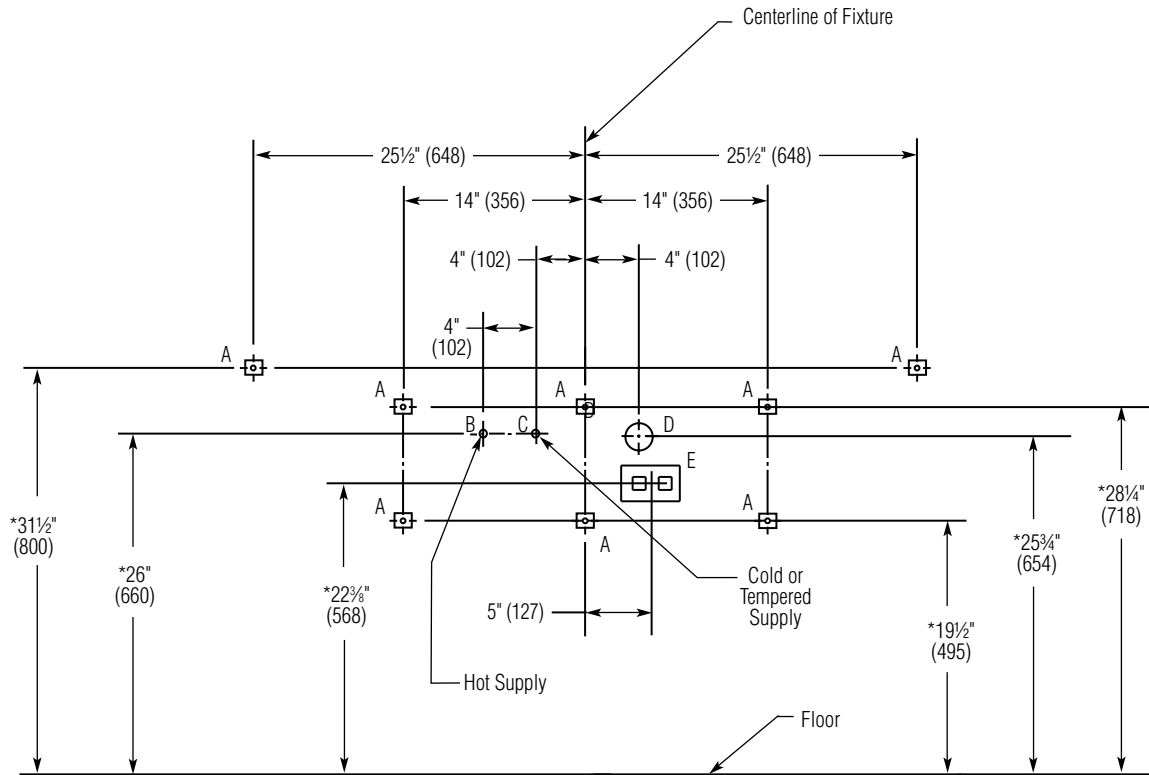


Chart 1

Std. Height	Vertical Height Adjustments Codes A, B, C, D, E, F and G	Fixture Style
*	None	Standard Height
*	Subtract 4"	Juvenile Height
*	Subtract 1 1/2"	TAS, Grades 6 through 8 or 9
*	Subtract 3 1/2"	TAS, Pre-K through Grades 5 or 6

Chart 2

Code	Description	Qty.
A	3/8" Wall Anchors with a minimum pull out force of 1,000 lb	8
B	1/2" Nominal Copper Tubing for Hot Supply, Stub-Out 2" from Wall	1
C	1/2" Nominal Copper Tubing for Cold or Tempered Supply, Stub-Out 2" from Wall	1
D	1 1/2" NPT Drain, Stub-Out 2" from Wall	1
E	110V GFCI Protected Electrical Outlet. I.R. and TouchTime Only	1

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MG-2

Express® Lavatory System – MG-Series

Standard Selections (Must select one from each category)			
Activation Type			
IRP	Infrared		
AST4	Air Pushbutton		
TTPA	TouchTime Pushbutton		
TTPB	TouchTime Piezo Switch		
BIR3	Battery Infrared		
Soap Dispenser Type (select one)			
LSD-2	One Integral Liquid Soap Dispenser (MG-2)		
NSD	No Soap Dispenser		
Water Supply Type (select one)			
TMA	Navigator Thermostatic Mixing Assembly (Hot and Cold Supplies)		
TL	Single Tempered Line		
Color of Terreon Bowl/Sprayhead Cover (select one)			
<i>Standard Colors</i>			
ALP-WHT	Alpine White	LONDON	London Gray
AVALANCHE	Avalanche †	MOONSTONE	Moonstone †
BONE	Mesa Bone	O-TAUPE	Organic Taupe
CHAR	Charcoal Gray	PEBBLE	Pebble Beach
COBBLE	Cobblestone	PEP-WHT	Peppered White
DRIFT	Driftwood †	POLAR	Polar Ice †
DS-WHT	Designer White	SAND	Sandtrap
DUNE	Sand Dune †	S-CREEK	Stone Creek
E-GRAY	Empire Gray	S-MIST	Silver Mist
GLACIER	Glacier	WHT-SAND	White Sand
GRAPH	Graphite		
LANNON	Lannonstone		
<i>Designer Colors* (available at an additional charge)</i>			
ARC-CHIP	Arctic Chip	COFFEE	Coffee Bean
RIVER	Riverstone		
<i>TerreonRE Colors* (available at an additional charge)</i>			
BIRCH-BARK	Birch Bark	MOONDUST	Moondust
DUSK	Dusk	OAT	Oat
Optional Selections			
Waste Assembly Type:			
S-CHROME	Single Chrome-Plated P-Trap		
S-POLY	Single Polypropylene P-Trap		

*Non-cancelable, non-returnable

† This color contains large, randomly distributed chips.

Verify all rough-in dimensions prior to installation.

Consult local and national codes. Conformity and compliance to local and national codes is the responsibility of the installer.



A WATTS Brand

MG-3 Express® Lavatory System – MG-Series

Key Features

- ADA and TAS compliant
- Serves one, two, or three users at a time
- Standard lavatory spacing on 30" centers
- Continuous bowl, sprayhead and end caps are constructed of Terreon® solid surface material
- Available in a variety of colors
- Available with infrared, battery infrared, air, or TouchTime® mechanical metering

Specifications

The flowing “wave” design accommodates one to three users. Units handle washroom traffic quickly and economically, while providing each user with their own personal space. Lavatories for the system are positioned on 30" centers. The pre-assembled sprayhead module is equipped with independent aerators, each served by separate infrared sensing module and solenoid valve (Model MG-3/IRP), pushbutton air metering valve (Model MG-3/AST4), TouchTime mechanical pushbutton (Model MG-3/TTPA), TouchTime piezo switch (MG-2/TTPB), or independent battery infrared sensor and batteries (Model MG-3/BIR3). Operating range is 20–80 psi. Flow restrictor keeps flow rate constant at all pressures.

Product Compliance

Listed by IAPMO R&T to

- Uniform Plumbing Code (UPC)
- National Plumbing Code of Canada
- International Plumbing Code (IPC)
- IGC 156 and the requirements of CSA B45.5/IAPMO Z124 and ASME A112.18.1/CSA B125.1



Listed by UL Environment to

- GreenGuard Gold



Sustainability

Terreon participates in the mindful MATERIALS library



Verify all rough-in dimensions prior to installation.

Consult local and national codes. Conformity and compliance to local and national codes is the responsibility of the installer.

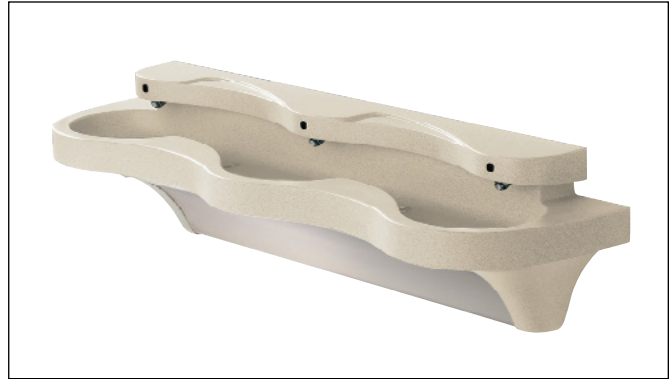
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Construction

Bowl, Sprayhead and Pedestal End Caps

Constructed of Terreon, a densified solid surface material composed of bio-based resin. Terreon is resistant to chemicals, stains, burns, and impact. Surface damage can be easily repaired with everyday cleansers or fine grit abrasives. Terreon is GREENGUARD® certified as low-emitting materials.

Support Frame and Access Panel

Bowl assembly and pedestal end caps are secured to a heavy gauge stainless steel support frame mounted to the wall. The contoured front access panel is constructed of 300 series stainless steel.

Vandal Resistance

The molded solid surface sprayhead is an integral part of the bowl module. A free-spinning collar protects the aerator from vandalism. The infrared sensor will automatically shut off water flow after 30–45 seconds if a vandal attempts to trigger constant operation by covering the sensor, or by placing a stationary object in the sensor’s detection area. Pushbuttons are secured to the unit from inside the sprayhead. Air valves, water supplies, and waste are concealed within the pedestal/support frame assembly.

Standard Equipment

Bowl with three lavatories, pedestal, stainless steel mounting frame (as described above), 120VAC/12VDC plug-in adapter (Model MG-3/IRP, Model MG-3/TTPA and Model MG-3/TTPB). Batteries are included (Model MG-3/BIR3). The following fittings are provided: P-traps, tailpiece, two flexible stainless steel supply connections, and Navigator® thermostatic mixing valve with stops.



Serves the American Disabilities Act and ICC/ANSI 117.1 guidelines, citations 306, 308, 309.4, 606.4, 606.5 when installed according to these requirements. Consult local codes and standards.



This plumbing fixture is designed for hand washing only. It is not intended to dispense water for human consumption through drinking or for preparation of food or beverages.

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MG-3

Express® Lavatory System – MG-Series

Activation Types

Infrared (Model MG-3/IRP)

The sensor module uses a conical infrared transmitting beam, creating a wide detection area. Adaptive-style sensor shall learn installation environment upon power-up and react (activate) when the user's hands enter the detection area. Each of the aerators is controlled by a separate, slow-closing solenoid valve. Hands placed within the bowl are detected and will activate a flow of tempered water at a rate of 0.50 gpm (1.9 Lpm). A timing turn-off delay of 2–3 seconds results in a smooth, controlled hand-washing operation. The Bradley adaptive sensor is not affected by varying color tones or darkness. Direct sunlight or bright washroom lights (up to 10,000 foot candles) will not activate the system.

- Solenoids – 12VDC, 3/8" NPT. The electronically activated, slow-closing solenoid valve provides reliable performance since there are few moving parts, and its operation is unaffected by most chemicals and minerals often present in municipal water supplies. Neither the solenoid valve nor the infrared sensor module need adjustment for range or timing.
- Low Voltage Plug-In Adapter – A UL/CSA-listed 120VAC/12VDC plug-in adapter powers the solenoid valves. The plug-in adapter, furnished as standard equipment, plugs into a standard GFCI protected electrical outlet.

Battery Infrared (Model MG-3/BIR3)

Each battery-powered sensor uses a zone-focused infrared transmitting beam, creating a large detection area. The sensor is not affected by varying skin tones or darkness. When hands enter the detection area, the sensor starts water flow by opening the valve electronically. Tempered water flows at a rate of 0.50 gpm (1.9 Lpm). When hands leave the detection area, the sensor stops the flow of water by closing the valve. The 6VDC, electronically activated solenoid valve has few moving parts, providing reliable operation that is unaffected by most chemicals and minerals often present in municipal water supplies. Each station is powered by a single lithium battery. Battery type is Duracell® DL 223A 6V lithium or equivalent (batteries included) with a life expectancy of 4–5 years or approximately 200,000 cycles.

Air (Model MG-3/AST4)

Each pushbutton pneumatically actuates a non-hold-open air metering, single-temperature valve with field adjustable timing from 0–45 seconds. Factory set at 11 seconds. Each pushbutton activates one valve which, in turn, activates one hand washing station at a rate of 0.10 gpc (0.38 Lpc). Push button requires less than five pounds of pressure.

TouchTime Metering (Model MG-3/TTPA and Model MG-3/TTPB)

Each low voltage mechanical pushbutton or piezo switch actuates a non-hold-open, slow closing anti-hammer solenoid valve that is timed from an electronic potted assembly. Each push button activates one valve, which, in turn, activates one station flowing tempered water at a rate of 0.10 gpc (0.38 Lpc). TouchTime controls water flow at each station through the use of solid-state, digital circuitry. Timing is factory set at a 15 second run time but is field adjustable to pre-set timeout periods and optional auto-flush function. The 24 hour flush function will activate water flow for a period of 60 seconds any time there has been no activation within the past 24 hours. Push button requires less than five pounds of pressure.

Optional Equipment

Soap Dispenser Type

Two horizontally-mounted pump-style valves are located over the drains. Soap tank is located within the stainless steel frame. Soap tank is refillable through an easily accessible exterior filler cap. Filler cap is vandal resistant and opens with special spanner wrench included. Soap tank capacity is ¾ gallon.

For information on Terreon Waste Receptacles for the Express MG-Series, visit bradleycorp.com.

Verify all rough-in dimensions prior to installation.

Consult local and national codes. Conformity and compliance to local and national codes is the responsibility of the installer.

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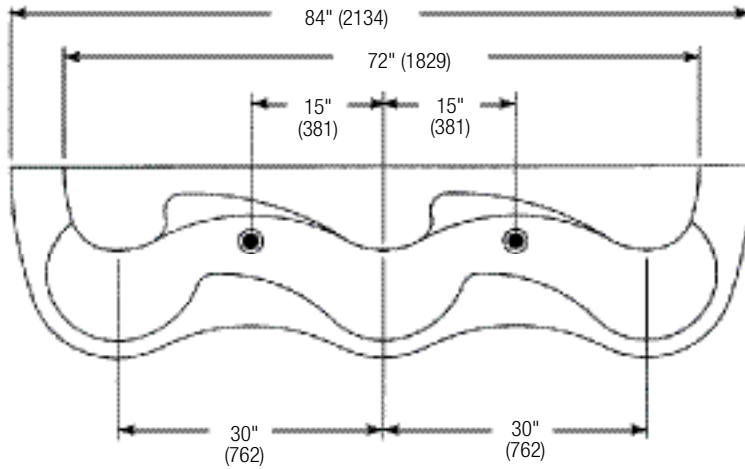


MG-3 Express® Lavatory System – MG-Series

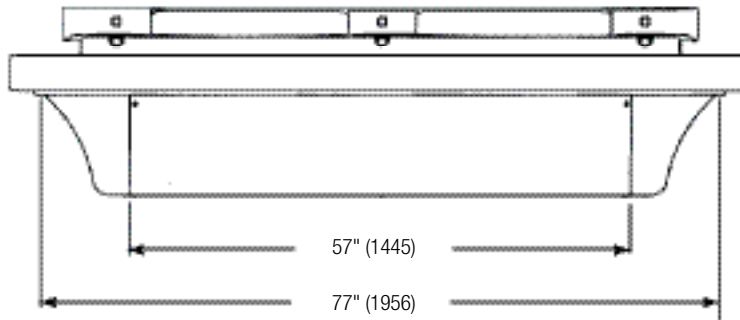
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Dimensions

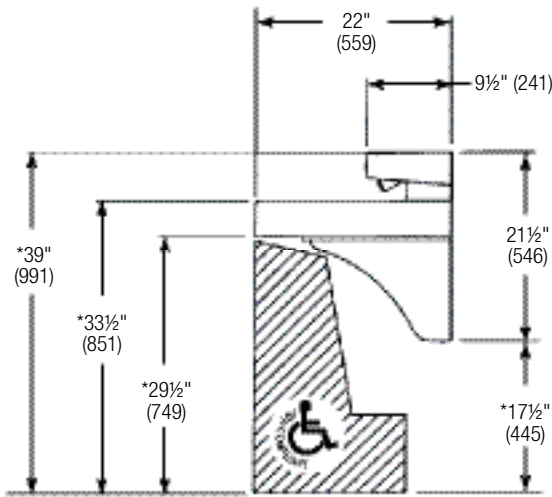
Top View



Front View



Side View



- * Subtract 4" from all vertical dimensions for Juvenile Height Mounting.
- * Subtract 3 1/2" from all vertical dimensions for TAS Juvenile Height Mounting (grades Pre-K through 5 or 6).
- * Subtract 1 1/2" from all vertical dimensions for TAS Juvenile Height Mounting (grades 6 through 8 or 9).

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(mm)

Rough-Ins

Mounting for Standard Height Is Shown

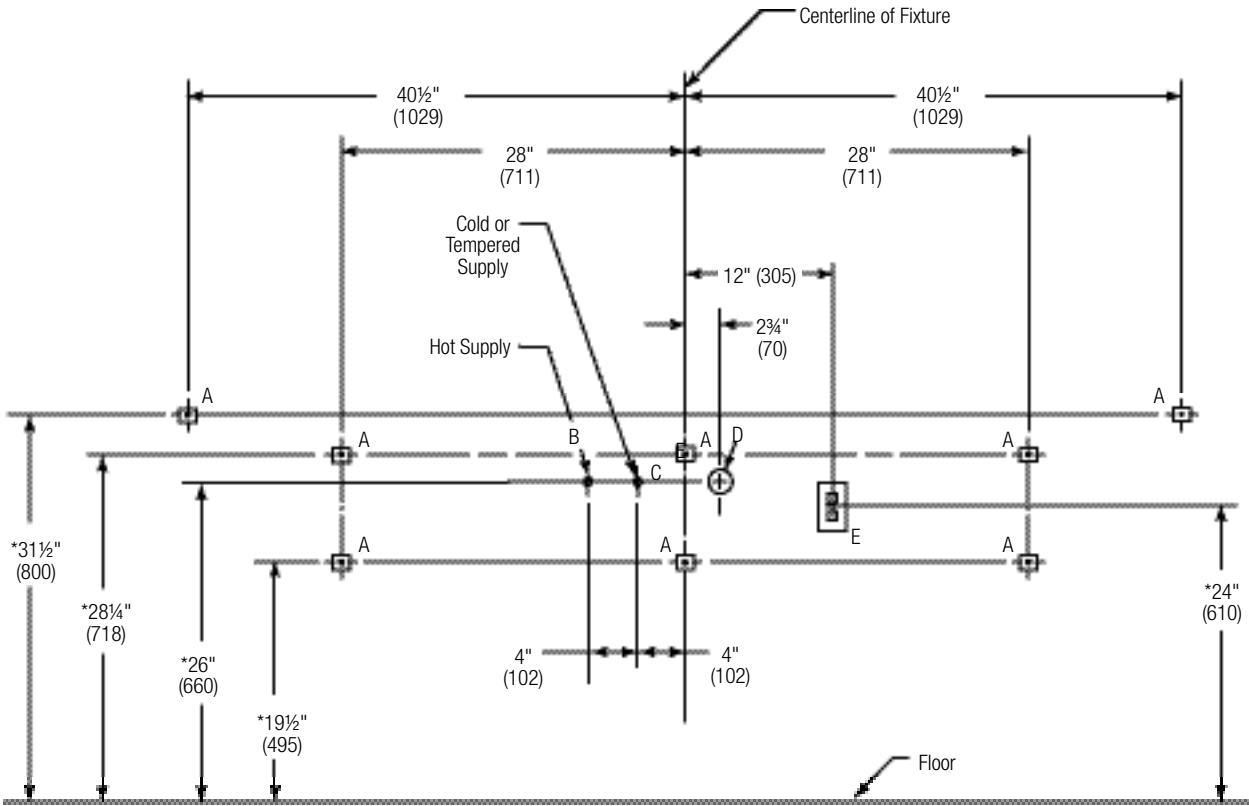


Chart 1

Std. Height	Vertical Height Adjustments Codes A, B, C, D, E, F and G	Fixture Style
*	None	Standard Height
*	Subtract 4"	Juvenile Height
*	Subtract 1 1/2"	TAS, Grades 6 through 8 or 9
*	Subtract 3 1/2"	TAS, Pre-K through Grades 5 or 6

Chart 2

Code	Description	Qty.
A	3/8" Wall Anchors with a minimum pull out force of 1,000 lb	8
B	1/2" Nominal Copper Tubing for Hot Supply, Stub-Out 2" from Wall	1
C	1/2" Nominal Copper Tubing for Cold or Tempered Supply, Stub-Out 2" from Wall	1
D	1 1/2" NPT Drain, Stub-Out 2" from Wall	1
E	110V GFCI Protected Electrical Outlet. I.R. and TouchTime Only	1

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MG-3 Express® Lavatory System – MG-Series

Standard Selections (Must select one from each category)

Activation Type

IRP	Infrared
AST4	Air Pushbutton
TTPA	TouchTime Pushbutton
TTPB	TouchTime Piezo Switch
BIR3	Battery Infrared

Soap Dispenser Type (select one)

LSD-3	Two Integral Liquid Soap Dispensers (MG-3)
NSD	No Soap Dispenser

Water Supply Type (select one)

TMA	Navigator Thermostatic Mixing Assembly (Hot and Cold Supplies)
TL	Single Tempered Line

Color of Terreon Bowl/Sprayhead Cover (select one)

NOTE: Click on any swatch to view as a larger image.

Standard Colors

ALP-WHT	<input type="checkbox"/> Alpine White	PEBBLE	<input type="checkbox"/> Pebble Beach
CHAR	<input type="checkbox"/> Charcoal Gray	PEP-WHT	<input type="checkbox"/> Peppered White
DRIFT	<input type="checkbox"/> Driftwood†	POLAR	<input type="checkbox"/> Polar Ice †
DS-WHT	<input type="checkbox"/> Designer White	RIVER	<input type="checkbox"/> Riverstone
E-GRAY	<input type="checkbox"/> Empire Gray	SAND	<input type="checkbox"/> Sandtrap
GLACIER	<input type="checkbox"/> Glacier †	S-CREEK	<input type="checkbox"/> Stone Creek
GRAPH	<input type="checkbox"/> Graphite	S-MIST	<input type="checkbox"/> Silver Mist
LANNON	<input type="checkbox"/> Lannonstone	WHT-SAND	<input type="checkbox"/> White Sand
MOONSTONE	<input type="checkbox"/> Moonstone †		

Optional Selections

Waste Assembly Type

S-CHROME	Single Chrome-Plated P-Trap
S-POLY	Single Polypropylene P-Trap

† This color contains large, randomly distributed chips.

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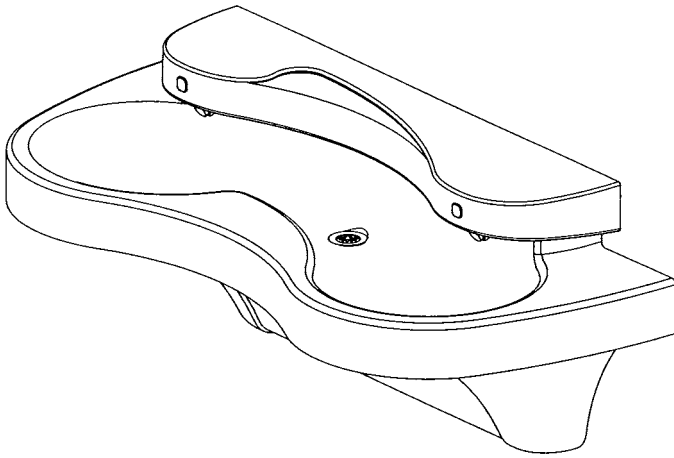
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Installation



MG-2/BIR3

**Express® Lavatory
System - MG Series with
Battery Infrared Control**



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IMPORTANT

Read this entire installation manual to ensure proper installation.

Flush all the water supply lines before making connections.

Wall anchors used must have a minimum pull-out rating of 1,000 lbs.

File these instructions with the owner or maintenance department.

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



Pre-Installation Information

Barrier-free and ADA compliant - standard height mounting

The MG-2/BIR3 Express® Lavatory System with Battery Infrared Control must have a rim height no higher than 34" above finished floor to be compliant with Americans with Disabilities Act (ADA). When mounted at 34" rim height, the MG-2/BIR3 Express® meets ADA, ANSI and UFAS requirements for barrier-free clearances, reaches and controls. Always check local codes and ordinances for compliance.

Barrier-free and ADA compliant - juvenile height mounting

The MG-2/BIR3 Express® Lavatory System with Battery Infrared Control must have a rim height no higher than 30" above finished floor to be compliant with Americans with Disabilities Act (ADA) Accessibility Guidelines for Buildings and Facilities: Building Elements Designed for Children's Use; Final Rule.

Texas Accessibility Standards compliant

The MG-2/BIR3 Express® Lavatory System with Battery Infrared Control meets Texas Accessibility standards (TAS) for barrier-free clearances, reaches and controls. Always check local codes and ordinances for compliance.

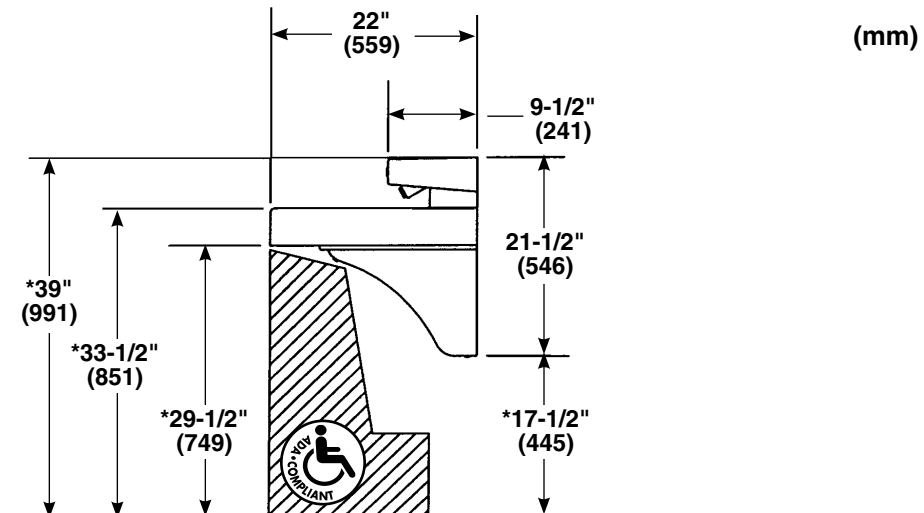
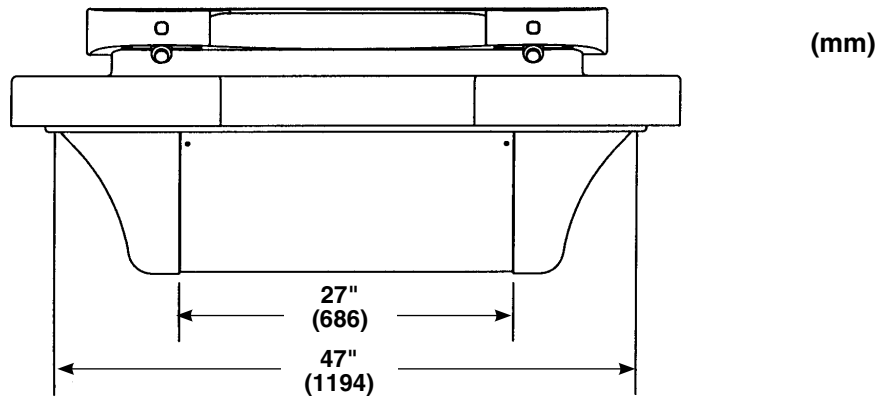
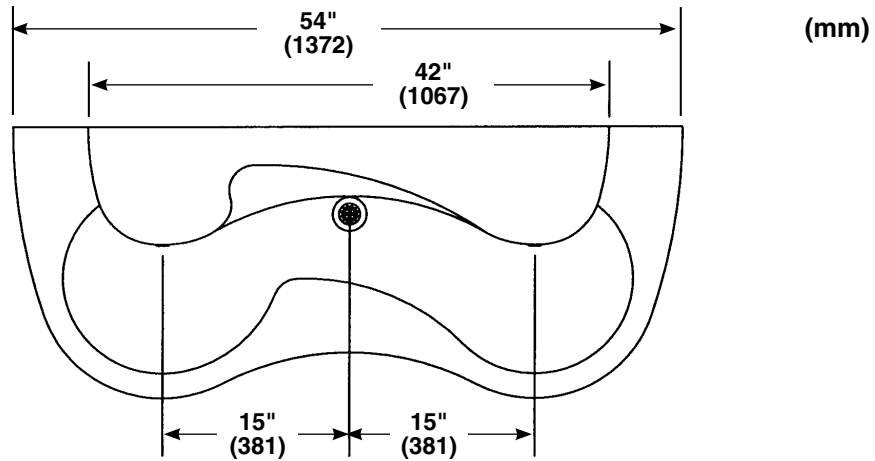
Infrared sensor and solenoid

Each sprayhead is controlled by a separate sensor and solenoid valve, enabling each user to activate a single flow of water. Each valve uses less than half the maximum of hot water allowed by the ANSI/ASHRAE/IES 90A-1980 Standard.

Supplies required for installation

- (8) 3/8" wall anchors, bolts and washers to mount frame and bowl to wall (minimum pull-out rating of 1,000 lbs.)
- 1/2" Nominal copper tubing for hot and cold supplies and 1 1/2" NPT drain piping

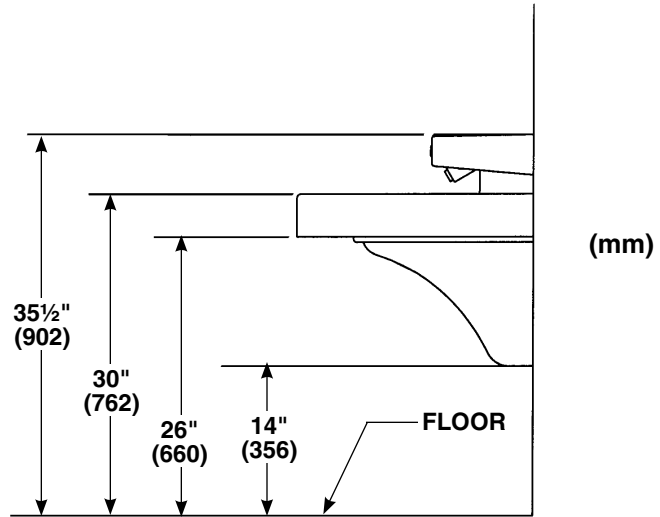
MG-2/BIR3 Express® Lavatory System Dimensions



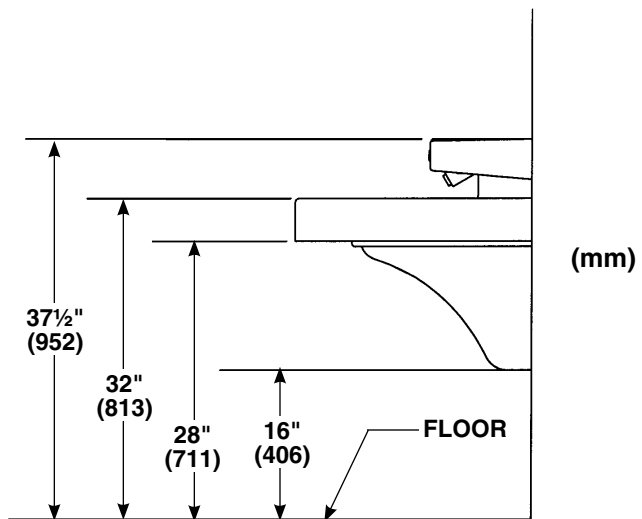
*Subtract 4" from vertical dimensions for compliance with ADA guidelines for children's use.

Dimensions *continued* . . .

TAS Juvenile Height
Grades Pre-K thru 5 or 6



TAS Juvenile Height
Grades 6 thru 8 or 9



Installation Instructions

Step 1: Rough in supplies and optional hot water heater

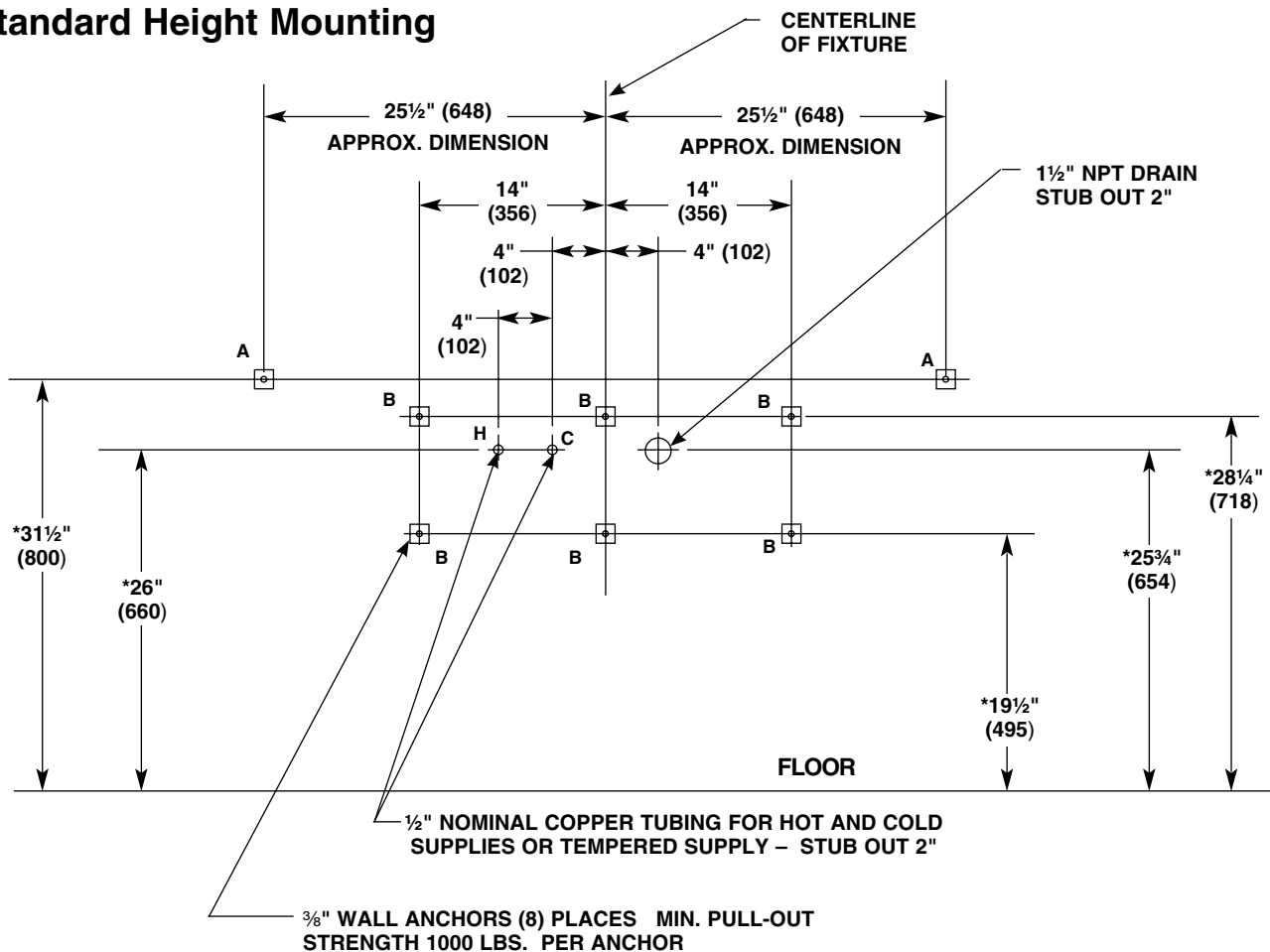
NOTE: See Figure 1 (below), 1a, 1b (for TAS on page 6) and Figure 2 (on page 7) when roughing in the MG-2/BIR3 Express®.

IMPORTANT: Flush the supply lines before making connections. Debris in supply lines will cause the valves to malfunction.

IMPORTANT: Dimensions shown in Figure 1 are for Standard Height Mounted MG-2/BIR3 Express®.

1. Rough in ½" nominal copper tubing for hot and cold supply lines through wall at dimensions shown.
2. Rough in 1½" NPT drain waste connection through wall at dimensions shown.

Standard Height Mounting



* Juvenile Height Mounting:

Subtract 4" from vertical dimensions for compliance with ADA guidelines for children's use.

Figure 1

TAS - Texas Accessibility Standards:
 Juvenile Height (grades Pre-K thru 5 or 6)

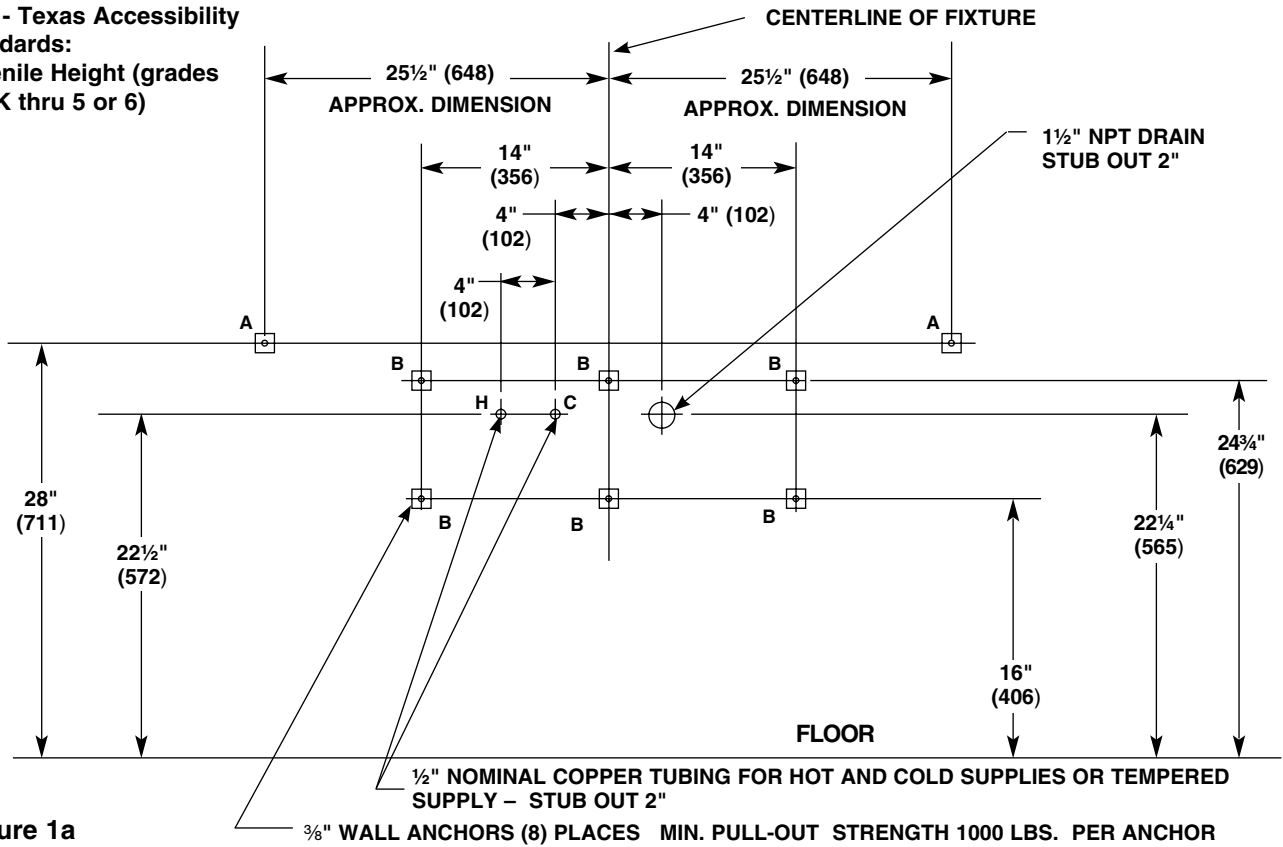


Figure 1a

TAS - Texas Accessibility Standards:
 Juvenile Height (grades 6 thru 8 or 9)

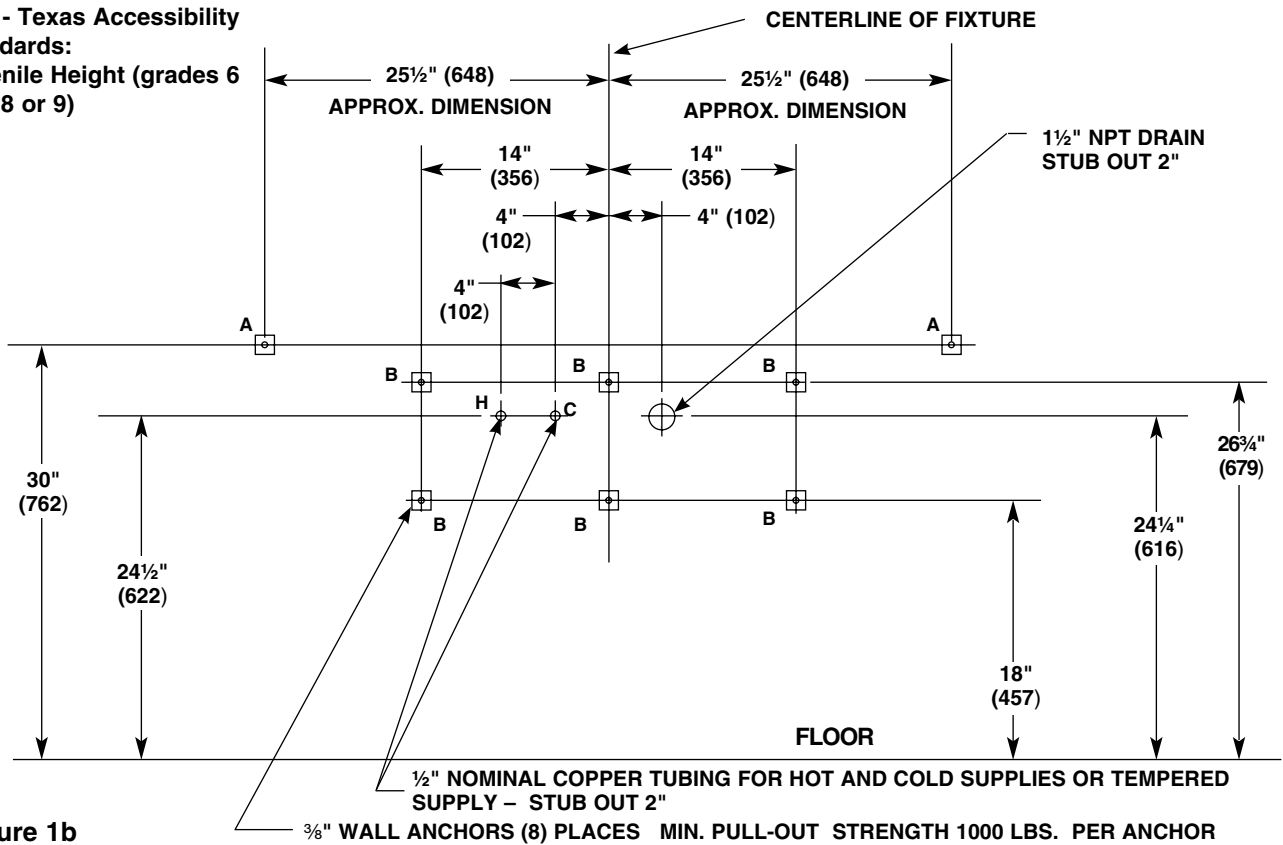


Figure 1b

Installation Instructions *continued* . . .

Step 2: Rough in wall anchors

1. Install six $\frac{3}{8}$ " wall anchors with a minimum pull-out rating of 1,000 lbs. (supplied by installer) at the locations marked (ref. location "B" shown in Figure 1, 1a or 1b on pages 5-6).

NOTE: The dimensions for the wall anchors at location "A" are for reference only.

2. On the back of the bowl, measure the distance between the $\frac{3}{4}$ " bowl mounting holes. Divide this measurement in half. Measure and mark this dimension on the wall to the left of the centerline and to the right of the centerline. Install two $\frac{3}{8}$ " wall anchors with a minimum pull-out rating of 1,000 lbs. (supplied by installer) at the locations marked (ref. location "A" shown in Figure 1, 1a or 1b on pages 5-6).

NOTE: The anchors will be used to mount the Express® MG-2/BIR3 bowl and frame to the wall.

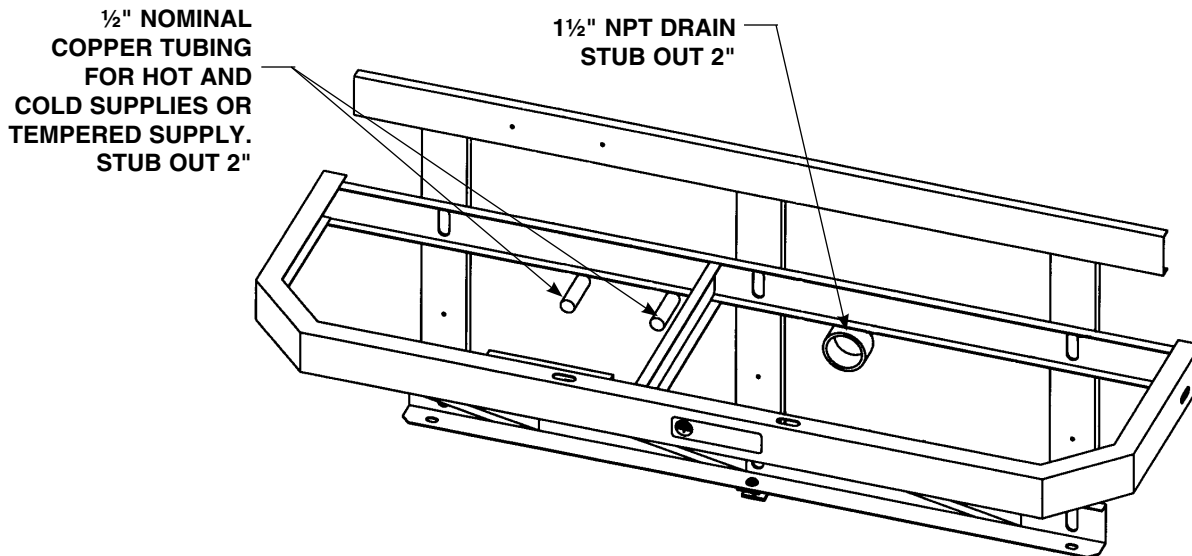


Figure 2

Installation Instructions *continued* . . .

Step 3: Mount frame to wall

1. Loosen, but do not remove the bottom three access panel screws.
2. Remove the two top access panel screws and washers securing the access panel to the frame and remove the access panel (see Figure 3).
3. Position the frame with Terreon® End Caps attached, against the wall, ensuring that it is level.



IMPORTANT: Anchoring the frame to a wall that is not flat may cause the frame to bend. If necessary, install shims to compensate for wall distortion.

4. Ensure that the back of the frame is flat against the wall. If wall is not flat, insert shims behind the frame to ensure that it will not bend when anchored.
5. Once you have positioned the frame such that it is level and flat against the wall or shimmed, use the 3/8" bolts and washers to mount the frame to the wall.

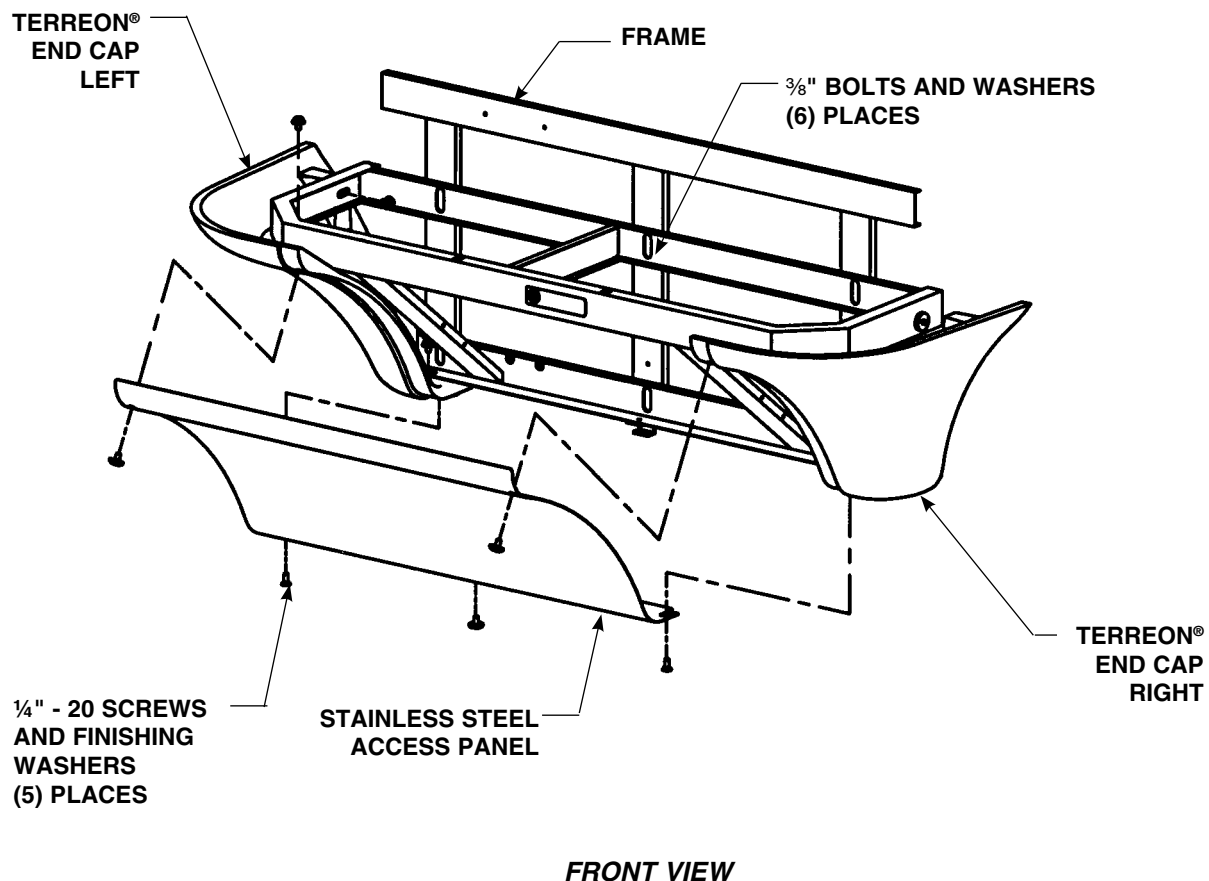


Figure 3

Installation Instructions *continued* . . .

Step 4: Install bowl assembly

⚠ IMPORTANT: See Figure 4 below when installing the bowl assembly. If the fixture has soap option, refer to the soap system installation manual 215-1585 before installing the bowl assembly.

1. With someone to assist you, place the bowl assembly squarely onto the frame being careful not to pinch tubing between bowl and frame.
2. Attach the front of the bowl assembly to the frame using the two ¼-20 x ½" pan-head screws and washers provided. **Do not tighten screws at this time.**

⚠ IMPORTANT: When bolting the bowl assembly to the wall, do not overtighten the bolts. Overtightening bolts can damage the Terreon® material.

3. After the bowl assembly is attached to the frame, install the two ¾" bolts and washers (supplied by the installer) to bolt the bowl to the wall anchors. **Do not overtighten bolts.**
4. Tighten the screws installed in procedure #2 above to secure the bowl assembly to the frame. **Do not overtighten.**
5. If necessary, adjust sprayhead body to fit closely to wall by adjusting sprayhead mounting bolts. See Figure 8 on page 13 for sprayhead mounting bolt locations.

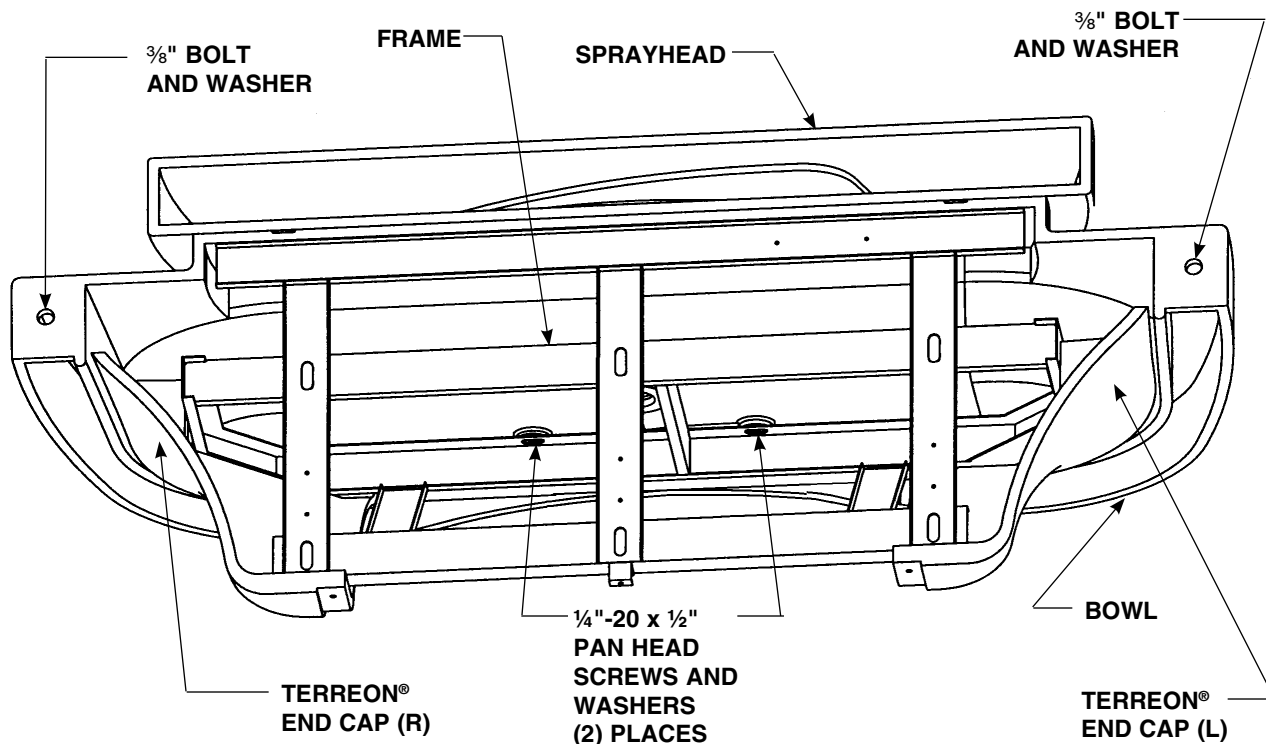


Figure 4

BACK VIEW

Installation Instructions *continued* . . .

Step 5: Connecting supply

1. Loosen but do not remove the two mounting screws holding the valve bracket to the frame. Slide the valve bracket up until the larger cutout in the frame's slot aligns with the screw head (see Figure 5b). Then lift up to remove the valve bracket from the frame.
2. FOR HOT AND COLD SUPPLY: Attach the stops to the hot and cold water supply piping from the wall. Connect the flexible hoses to the Navigator Mixing Valve and to the stops (see Figure 5a).
NOTE: The "H" on Navigator Mixing Valve indicates hot water supply inlet.
FOR SINGLE TEMPERED SUPPLY: Attach the stop to the ½" tempered supply line. Connect the stop to the tempered line adapter with the flexible supply hose (Figure 5c).
3. Assemble the P-trap by connecting the 1½" tubular pipe to the tailpiece and to the 1½" drain pipe stubbed out of the wall.
4. Install the strainer on the drain plug opening inside the bowl, and push the strainer firmly into place. Secure the strainer with the screw provided.

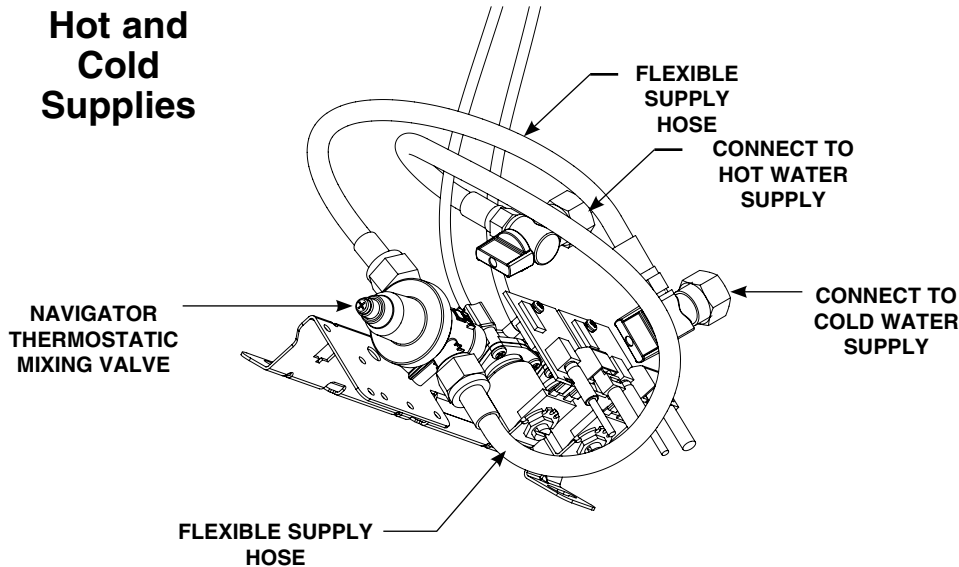


Figure 5a

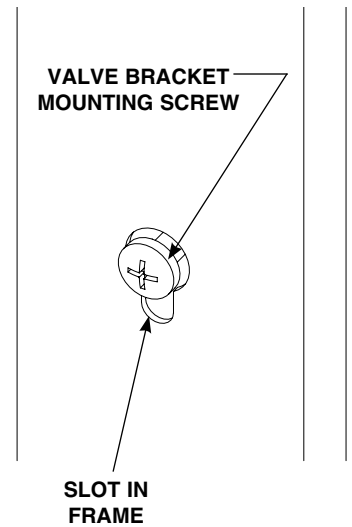


Figure 5b

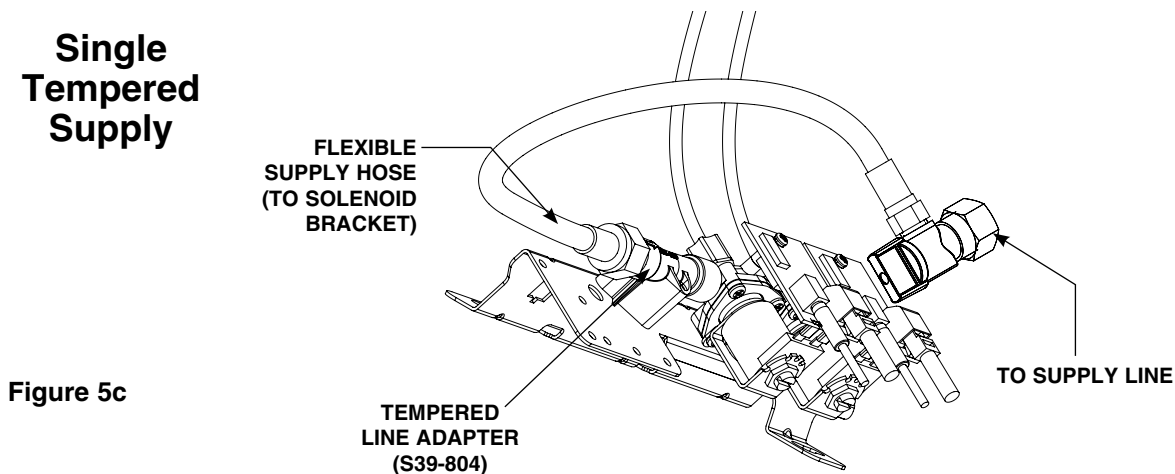


Figure 5c

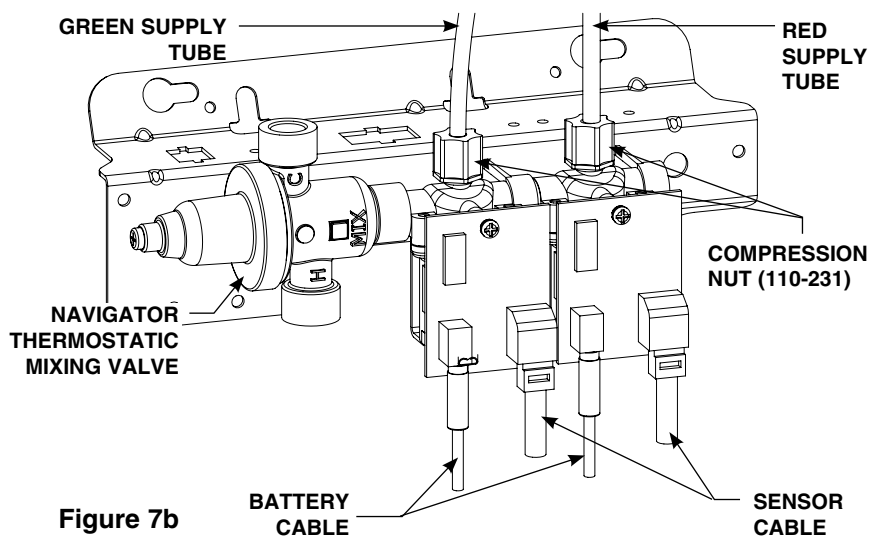
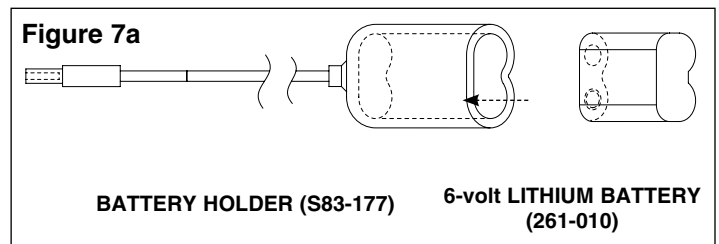
Installation Instructions *continued* . . .

Step 7: Connecting electrical and supply tubing

WARNING: The MG-2/BIR3 must be connected to the 6 VDC battery. Connection to 110 VAC may cause personal injury and/or damage to electronics. Connection of leads other than shown may cause permanent sensor damage.

CAUTION: To avoid activating the sprayhead valve, make sure to connect the sensor cable plugs to the circuit board before inserting the batteries into the battery holder. If the cable is connected or disconnected while the batteries are installed, the station will activate and continue running for 75 seconds.

1. Snap the sensor plugs from the sprayhead into the proper valve's circuit board.
2. Insert the batteries into the battery holders (see Figure 7a). Mount the battery holders (with batteries) in a convenient location on the frame using the hook-and-loop fastener provided.
3. Snap the battery holder plugs into the female circuit board plugs.
4. Insert the two sprayhead supply tubes into the two solenoid tube connectors by loosening the compression nut and firmly pushing the tubing into the tube connector until the tubes are fully seated, then re-tighten the compression nut by hand (see Figure 7b).
5. Align the valve bracket mounting screws with slots on the frame. Let the valve bracket slide down to lock into place.
6. Turn on the water supply to the MG-2/BIR3 and check for leaks. Pass your hand in front of each station's sensor until all the air is purged from the lines and water is flowing smoothly.



Installation Instructions continued . . .

Step 8: Adjust the temperature



This valve is NOT factory preset. Upon installation, the temperature of this valve must be checked and adjusted to ensure delivery of a safe water temperature. Water in excess of 110°F (43°C) may cause scalding.

1. Check the temperature when approximately 1.0 GPM water flow is reached and adjust if necessary (the range of the valve is 95°F–125°F (35°C–52°C)).
2. Loosen Cap Screw about ¼" (4-6 turns) and lift up cover (do not remove).
3. Using cover, turn cartridge gently until desired water temperature is reached. Do not turn past stops as this may damage unit. Push cover down and tighten screw.
4. After testing is complete, reinstall access panel to frame. Fasten access panel with the five panel screws and washers provided (see Figure 3 on page 8).

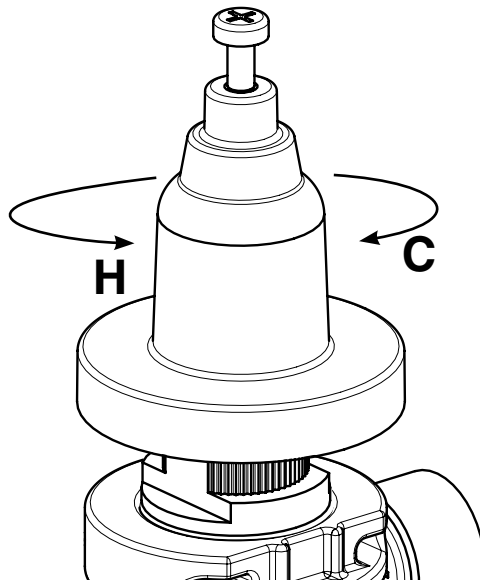


Figure 8

Cleaning and Maintenance Instructions



IMPORTANT: Strong alkaline or acid-based chemicals and cleansers should not be used to clean the MG-2/BIR3 Express®. If these chemicals come in contact with the Terreon® surface, wipe off the surface immediately and flush with soapy water. Avoid unnecessary or prolonged contact with hot pans and objects.

Terreon® and panel maintenance

The bowl, sprayhead and pedestal end caps are made of Terreon®, a solid cast polyester resin material. Terreon® resists chemicals, stains, burns and impact, and is repairable with everyday cleaners or fine-grit abrasives. The panel is made of stainless steel. With regular cleaning, your MG-2/BIR3 Express® will provide years of dependable service.

Stainless Steel Access Panel cleaning

Stainless steel is extremely durable, and maintenance is simple and inexpensive. Proper care, particularly under corrosive conditions, is essential. Ordinary deposits of dirt and grease are quickly removed with soap and water. Whenever possible, the metal should be thoroughly rinsed and dried after washing. To remove tightly adhering deposits, use stainless steel polishing powder. In all cases, rub in the direction of the stainless steel grain.



IMPORTANT: Never use ordinary steel wool or steel brushes on stainless steel. Always use stainless steel wool or stainless steel brushes.

Avoid prolonged contact with chlorides, bromides, thiocyanates, and iodides on stainless steel equipment, especially if acid conditions exist. Do not permit salty solutions to evaporate and dry on stainless steel. The appearance of rust streaks on stainless steel leads to the belief that the stainless steel is rusting. Look for the source of the rust in some iron or steel particles which may be touching, but not actually a part of the stainless steel structure. *NOTE: Strongly acidic or caustic cleaners may attack the steel causing a reddish film to appear. The use of these cleaners should be avoided.*

Terreon® Bowl, Sprayhead and Pedestal End Cap cleaning



IMPORTANT: To sustain original finish, additional care is recommended for dark colored solid surfaces to maintain highest quality color. The original luster can be maintained by periodically applying furniture polish, mineral oil or a solid surface cleaner or polish. For more information on restoring dark colors, see Bradley document #1505. Length of time between applications varies with usage.

- For regular cleaning, use standard commercial or household products such as Formula 409® or Windex®.
- Remove tough stains with Ajax®, Comet® or Soft-Scrub® and a green Scotch-Brite® pad or lightly sand in a circular motion with 240 grit wet/dry sandpaper. The finish can be renewed with a maroon Scotch-Brite® pad.
- Remove scratches with a green Scotch-Brite® pad. The finish can be renewed with a maroon Scotch-Brite® pad. Remove hard water build-up with a mild solution of vinegar and water.
- * Use of brand names is intended to indicate a type of cleaner and does not constitute an endorsement.
- ** It is emphasized that all products should be used in strict accordance with package instructions.
- **Repair kit:** A repair kit is available from Bradley to repair/patch the Terreon® bowl and shelf. Contact your Bradley representative to order a repair kit and be sure to specify color.

Assembly of Components

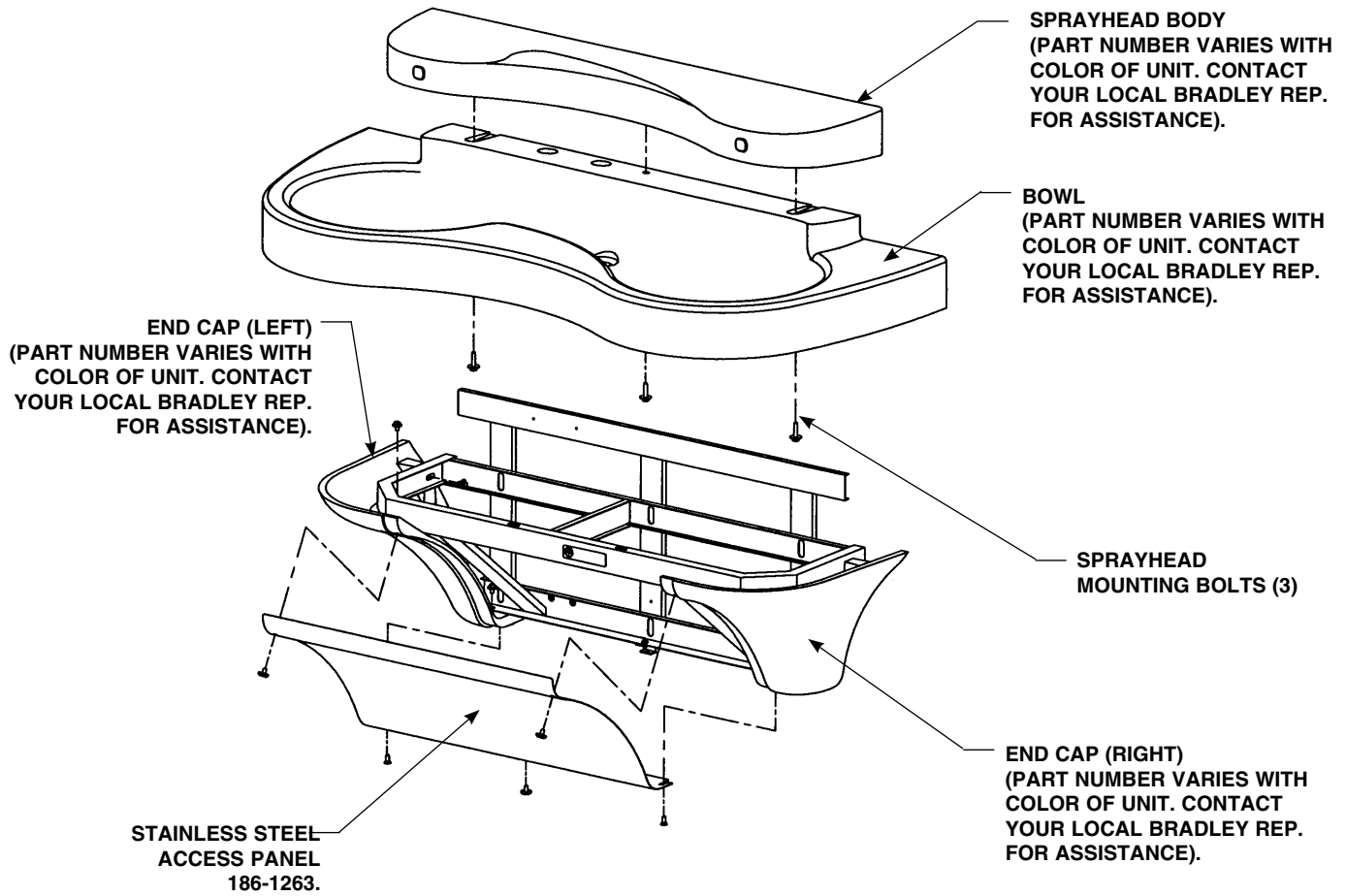


Figure 8

Other replacement parts

BOWL MOUNTING HARDWARE

- (4) 1/4"-20 x 1/2" PAN HEAD SCREW 160-389
- (4) 1/4"-20 WASHER 142-002DB

- P-TRAP 269-1697 (polypropylene)
- S29-094 (chrome-plated brass)

DRAIN ASSEMBLY

- #8-32 SCREW 160-319
- STRAINER P16-075
- DRAIN PLUG P16-072
- 1/8" RUBBER WASHER 125-001DP
- TAILPIECE 129-056

Assembly of Components *continued* . . .

Sensor assembly and solenoid valve access

- **To access solenoids:**

Using a 5/32" Allen socket wrench, loosen, but do not remove the bottom three access panel screws. Remove the two top access panel screws and washers securing the panel to the frame and remove the access panel (see Figure 3 on page 8). Solenoids are located on left side of frame (see Figure 9).

- **To remove sprayhead:**

Remove (3) bolts located underside of bowl neck (see Figures 8 and 10). Carefully remove sprayhead from bowl.

- **To access sprayhead/aerator/lens and sensor assembly:**

Remove (2) screws and washers from the access plate assembly using a 1/8" Allen socket wrench. The access plate assembly is located underneath the sprayhead (2) places (see Figure 11a on page 15), the assembly will drop down to access the lens, sensor, and sensor eyes, housing flow control and tube connector.

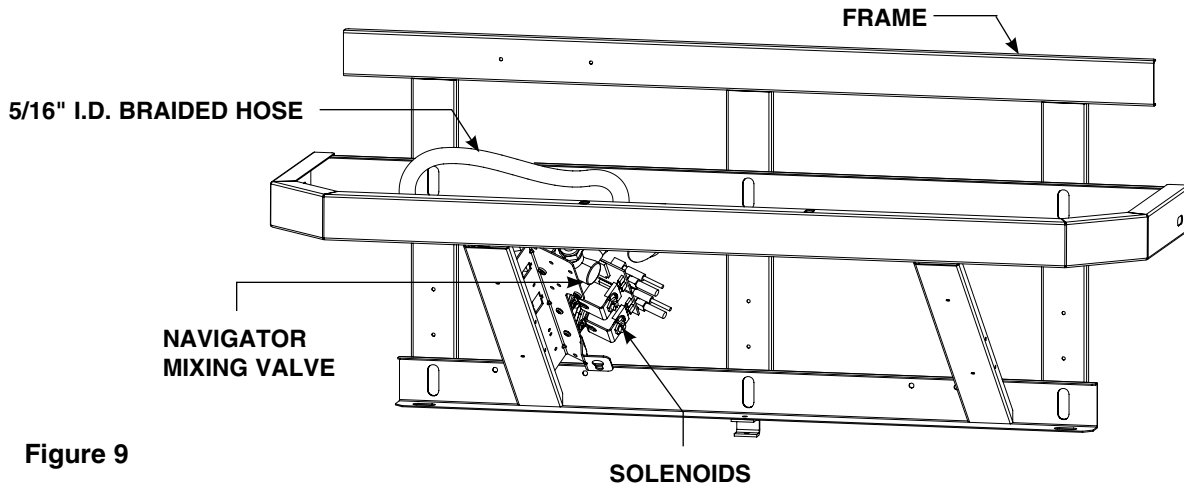


Figure 9

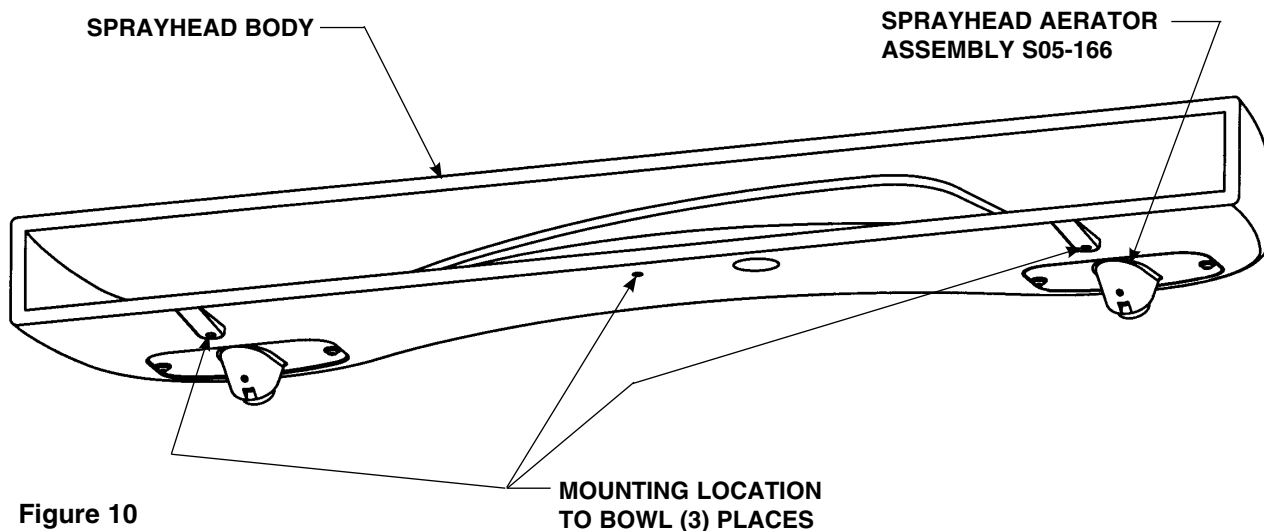


Figure 10

Assembly of Components *continued* . . .

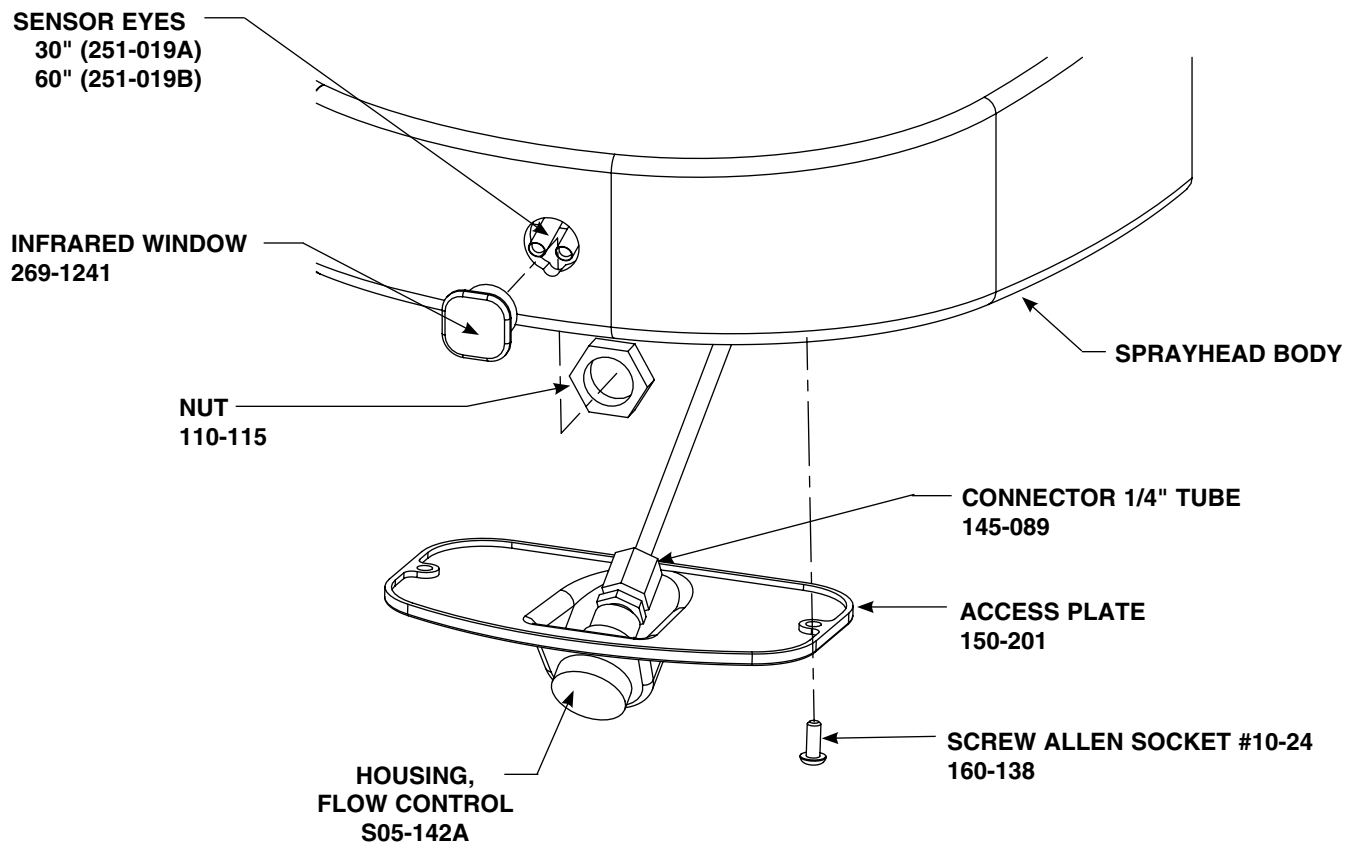


Figure 11a

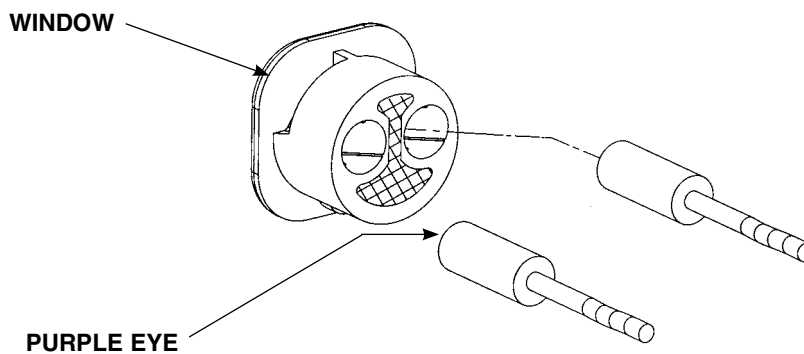


Figure 11b

Troubleshooting BIR3 Components



CAUTION: Turn off water supplies to unit before troubleshooting.

Problem: An individual operating station drips and fails to shut off.

Cause: There is debris trapped between the diaphragm and the valve seat.

Solution: Remove debris between diaphragm and the valve seat.

Disconnect the plug from the battery to the circuit board of the problem valve. Remove the three #8 Phillips-head screws that hold the solenoid valve assembly together. Be careful not to lose the armature or spring (see Figure 13 on page 17). Remove the diaphragm. Remove any particles that are trapped between the diaphragm and the valve seat. Rinse off the diaphragm and inspect for damage. Make sure the center orifice and both small side orifices are open. Reassemble in reverse order, being careful not to overtighten the Phillips-head screws or you may crack the plastic valve body. Tighten until the armature plate makes contact with the plastic body. Reconnect the battery plug per diagram on page 11. Turn on water supplies to the unit.

Problem: An individual operating station fails to turn on or off.

Cause: A dead or faulty battery.

Solution: Test the station to determine cause and replace battery if required.

Disconnect the plug from the battery to the circuit board of the problem valve. Disconnect the plug from the battery to the circuit board of an adjacent valve. Connect the battery plug from the adjacent working valve to the problem valve. Wait for ten seconds. Activate the problem station's sensor ten times. The station should turn on. If the station turns on, and cycles normally, replace the battery.

Cause: Faulty sensor eyes.

Solution: Test station to determine cause; replace sensor eyes if required.

Disconnect the sensor cable from the circuit board of the problem valve. Disconnect the sensor cable from the circuit board of an adjacent working valve. Connect the sensor cable from the adjacent working valve to the problem valve. Activate the problem station's sensor. The station should turn on. If the station turns on and cycles normally, replace the sensor eyes.

Cause: Faulty solenoid valve.

Solution: Test station to determine cause; replace solenoid valve if required.

Remove the screw, circuit board and standoff from the problem valve. Remove the battery holder. With a good working battery, briefly contact the solenoid valve directly with the battery as shown in Figure 12a. The contact should cause the valve to open. With the battery holder removed, briefly contact the solenoid valve with the battery in the position shown in Figure 12b. This should cause the valve to close. If the valve does not operate when directly contacted with a good battery, and the solenoid valve has already been cleaned as outlined at the beginning of this troubleshooting section, replace the solenoid valve.

If problems persist:

Pass your hand in front of the problem station, while at the same time looking to see if the indicator light on the circuit board flashes (the indicator light is located near the hole in the circuit board where the standoff is mounted). If it does not flash, and the battery and sensor eyes have already been tested as outlined above, the problem may be with the circuit board. Make a note of the numbers printed on the circuit board, then contact your Bradley representative for assistance.

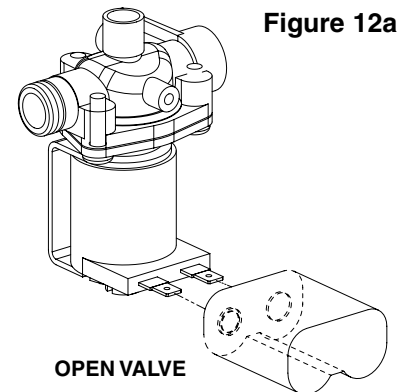


Figure 12a

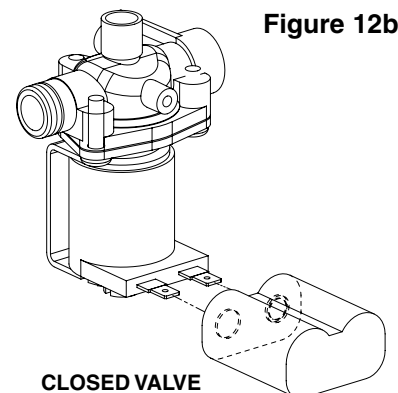
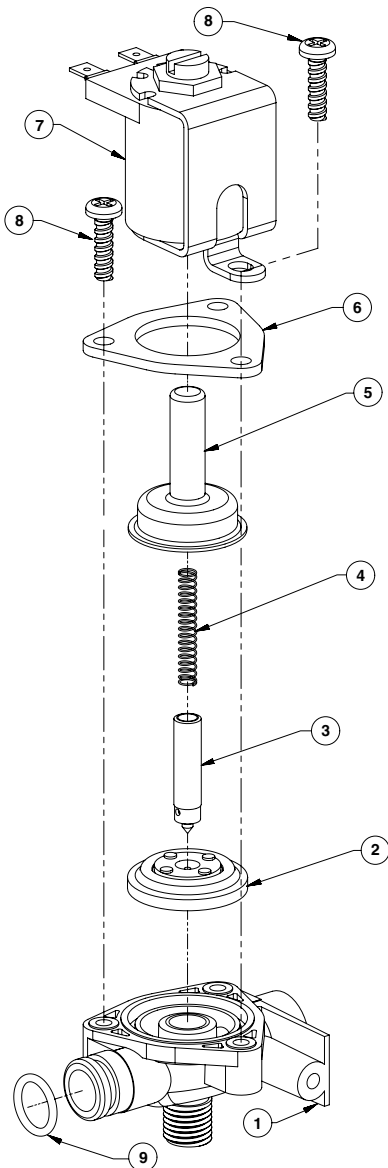


Figure 12b

Troubleshooting – Stop Valve

Problem	Cause	Solution
Water just dribbles or does not flow from sprayhead	Water supply malfunctioning	<ol style="list-style-type: none"> 1. Close the stops and check the valves that supply water to the lavatory system. 2. Inspect the stop valves for proper installation.
Water sprayhead delivers all hot or cold water	Water supply or mixing valve malfunctioning	<ol style="list-style-type: none"> 1. Close the stops and check the valves that supply water to the lavatory system. 2. Inspect the stop valves for proper installation. 3. Inspect mixing valve for proper hot and cold installation. A red marking indicates the hot inlet.

Solenoid Valve S07-072 (closed body) and S07-072A (thru body)



REF.	QTY.	PART NO.	DESCRIPTION
1	1	118-307	VALVE BODY, 1/4" CLOSED
1	1	118-307A	VALVE BODY, 1/4" THRU
2	1	269-983	DIAPHRAGM
3	1	192-017	ARMATURE
4	1	135-093	SPRING
5	1	269-1729	ARMATURE HOUSING
6	1	269-1730	CLAMP, ARMATURE HOUSING
7	1	269-1731	COIL, SOLENOID VALVE
8	3	160-447	SCREW, #8 X 5/8
9	1	125-165	O-RING, #2-013

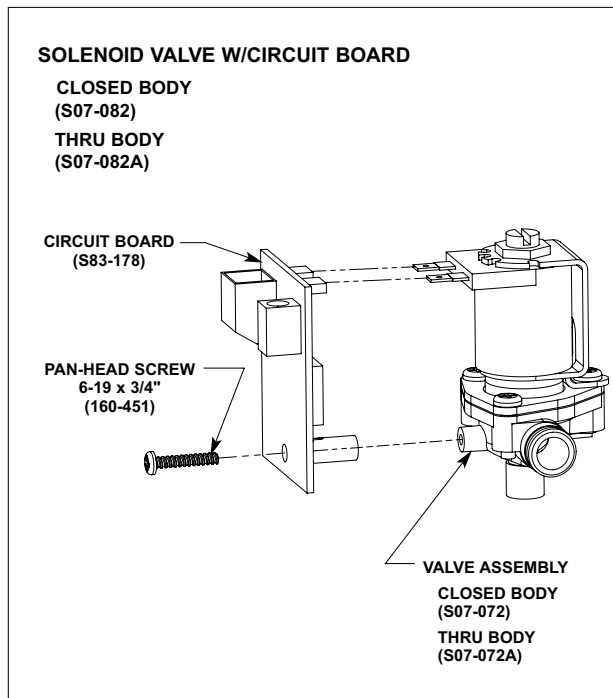


Figure 13

Thermostatic Mixing Valve Troubleshooting

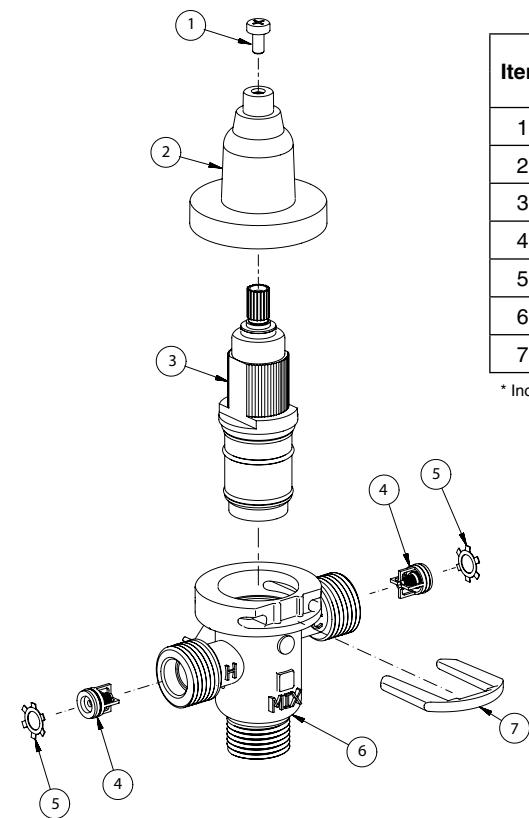
- ⚠** Before attempting to troubleshoot the valve or disassemble the components, check for the following conditions:
- If stop valves are used, make sure that they are fully open.
 - Make sure that the hot and cold inlet pipes are connected properly, and that there are no cross-connections or leaking stop valves.
 - Check the hot water heater output to make sure that it is at least 10° F above the set temperature.
- ☑** Be sure to close the appropriate shut-off valves prior to disassembly of the valve and reopen the valves after inspection and repair is complete.

Problem	Cause	Solution
External leaks.	Damaged cartridge or O-rings.	Replace cartridge with part number 269-1927
Improper water temperature or temperature fluctuation.	Hot water supply is not 10° above desired set point.	Increase hot water supply temperature
	Valve temperature is not properly set.	Adjust the temperature as shown on page 12, step 8.
Limited water flow.	Dirt and debris have built up in the valve or strainer.	<p>1. Check to make sure both hot and cold supplies are connected to the Navigator mixing valve and that they have water flow.</p> <p>2. Remove cover and U-clip. Remove the cartridge and clean the strainer. It is not required to grease cartridge, however if desired, use silicone grease only. Do not use grease on check valves.</p>

Parts List

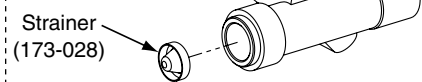
Item	Part No.	Description	Quantity		
			S59-4000	S59-4000A	S59-4000BY
1	160-463	Cap Screw	1	1	1
2	107-582	Cover	1	1	1
3	269-1927	Thermostatic Cartridge	1	1	1
4	198-014	Check Valve*	2	2	2
5	132-051	Retaining Ring*	2	2	2
6	118-319	Valve Body	1	1	1
7	146-079	U-Clip	1	1	1

* Included with Prepack S65-326



Tempered Line Adapter Option Part no. S39-804

(replaces S59-4000 if tempered line is used)



Installation

MG-3/AST4

Express® Lavatory System - MG Series with Pushbutton Air Valve

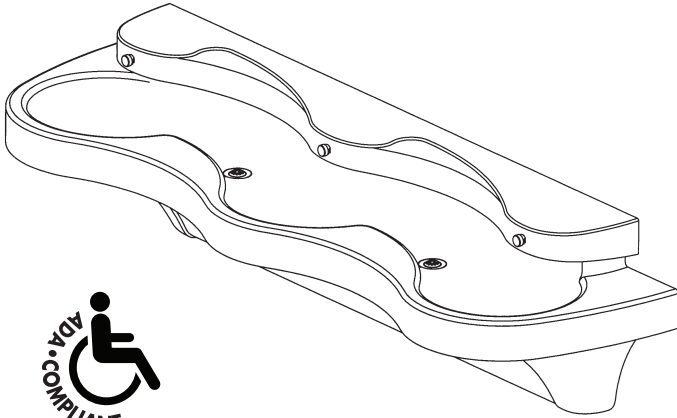


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WARNING

Make sure that all water supply lines have been flushed and then completely turned off before beginning installation. Debris in supply lines can cause valves to malfunction.

Turn OFF electrical power to the electrical outlets, then unplug all electrical units prior to installation. Electrical power **MUST** remain off until installation is complete. After installation is complete, turn on the water supply first, then turn on the electrical power.

Installer's hardware must be appropriate for wall construction. Wall anchors must have a minimum pull-out rating of 1,000 pounds.

NOTICE

Overtightening fasteners can damage the Terreon material. Use caution when tightening bowl and sprayhead fasteners.

IMPORTANT

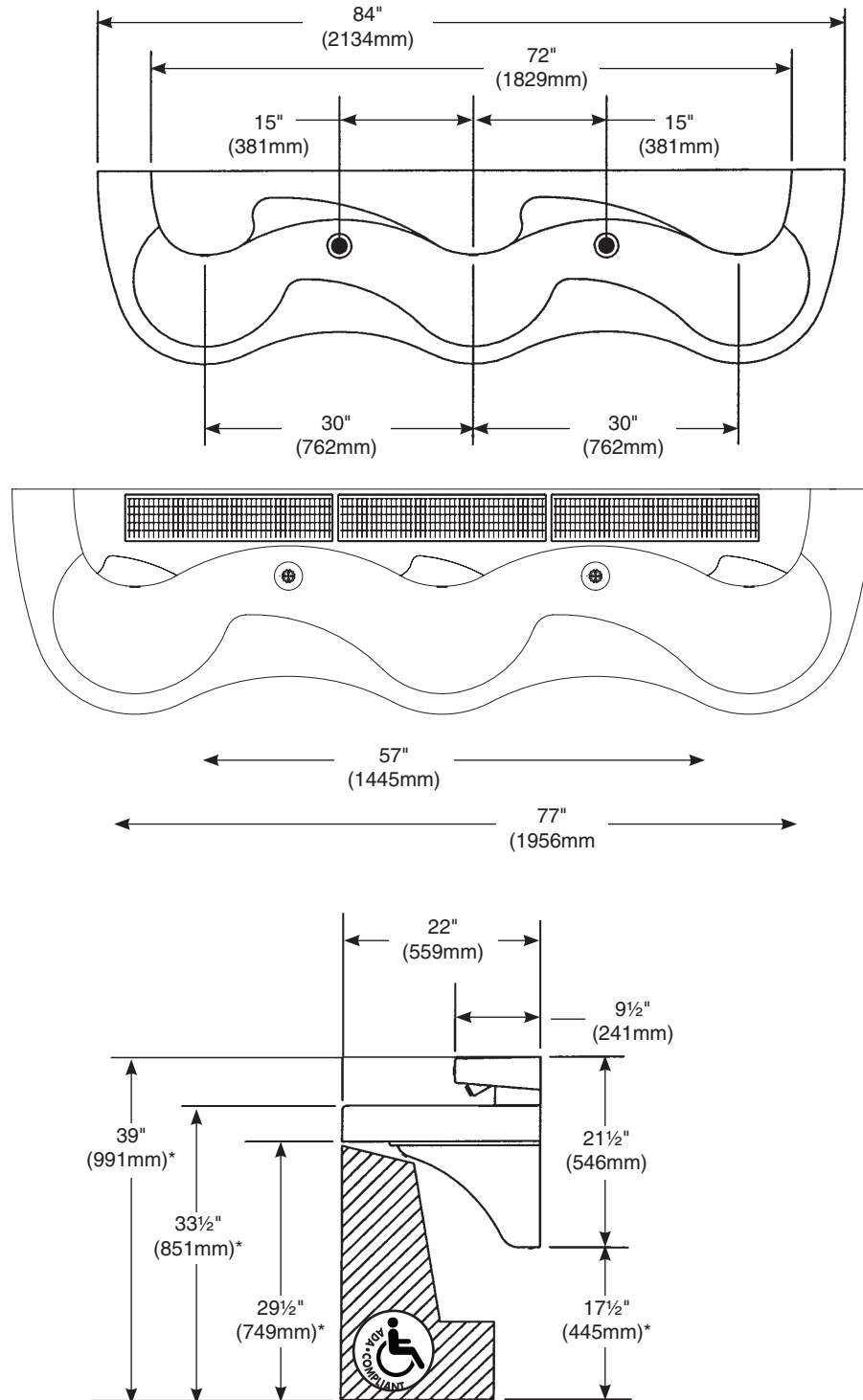
Read this entire installation manual to ensure proper installation. When finished with the installation, file this manual with the owner or maintenance department. Compliance and conformity to local codes and ordinances is the responsibility of the installer.

For optional soap dispenser, refer to Installation Instructions for Express® Lavatory System MG-Series document 215-1585.

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.

Product warranties may be found under "Products" on our website at www.bradleycorp.com.

Dimensions



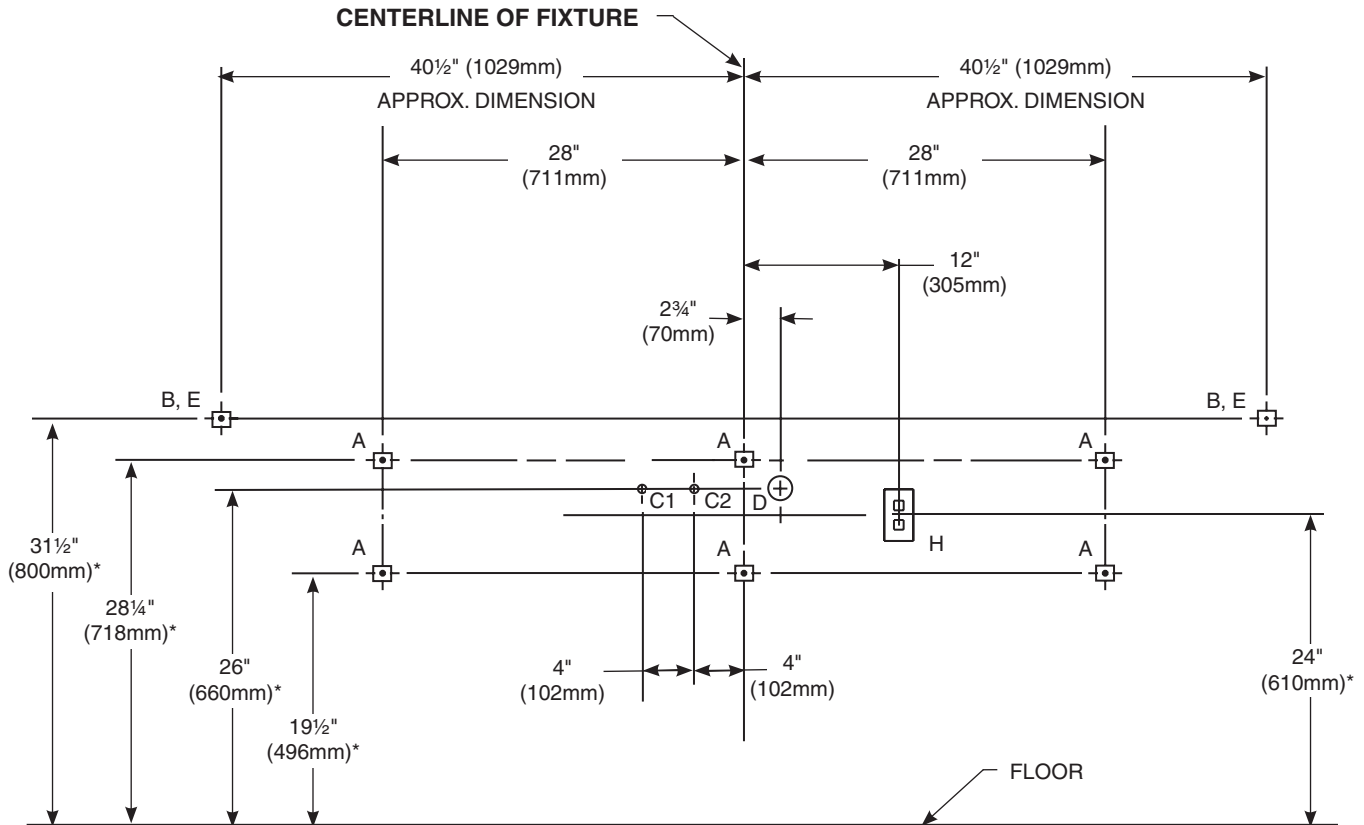
* Subtract 4" from all vertical dimensions for Juvenile Height Mounting.
 Subtract 3.5" from all vertical dimensions for TAS Juvenile Height Mounting (grades Pre-K through 5 or 6).
 Subtract 1.5" from all vertical dimensions for TAS Juvenile Height Mounting (grades 6 through 8 or 9).



Supplies Required

- (8) 3/8" wall anchors, bolts and 1" min. O.D. washers to mount main frame and bowl to wall (minimum pull-out rating of 1,000 lbs.)
- 1/2" Nominal copper tubing for hot and cold supplies and 1 1/2" NPT drain piping
- Optional: 240/208 volt or 277 volt electrical box for optional electrical tankless water heater

1 Rough-Ins



Code	Description	QTY.
A	3/8" Wall Anchors with a minimum pull-out force of 1,000 lbs. for Frame	6
B	3/8" Wall Anchors with a minimum pull-out force of 1,000 lbs. for Bowl	2
C1	1/2" Nominal Copper Tubing for Hot Supply, stub out 2" from wall	1
C2	1/2" Nominal Copper Tubing for Cold or Tempered Supply, stub out 2" from wall	1
D	1-1/2" NPT Drain, stub out 2" from wall	1
E	On the bowl back, measure the distance between the 3/4" bowl mounting holes. Divide this measurement in half. Measure and mark this dimension on the wall to the left and the right of the centerline. Install two 3/8" wall anchors with a minimum pull-out rating of 1,000 lbs. (supplied by installer) at locations marked.	2
H	110V GFCI Protected Electrical Outlet, I.R. and touch time only	1
Rim Height	* Vertical Height Adjustments	Fixture Style
33-1/2"	None	Standard Height
29-1/2"	Subtract 4"	Juvenile Height
32"	Subtract 1-1/2"	TAS, Grades 6 through 8 or 9
30"	Subtract 3-1/2"	TAS, Pre-K through 5 or 6

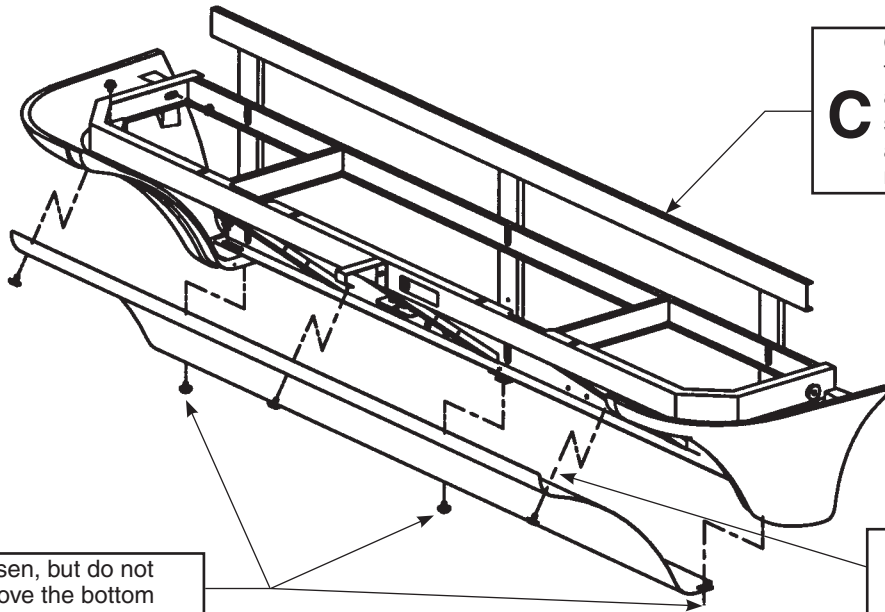


The Express® Lavatory System with Pushbutton Air Valve (model MG-3/AST4) must have a rim height no higher than 34" above finished floor to be compliant with Americans with Disabilities Act (ADA). When mounted at 33 1/2" rim height, the MG-3/AST4 Express® meets ADA, ANSI and UFAS requirements for barrier-free clearances, reaches and controls. Always check local codes and ordinances for compliance.

2 Mount the Frame



Anchoring the frame to a wall that is not flat may cause the frame to bend, making it difficult to reinstall the access panels. If necessary, use shims to compensate for wall distortion.



A Loosen, but do not remove the bottom access panel screws.

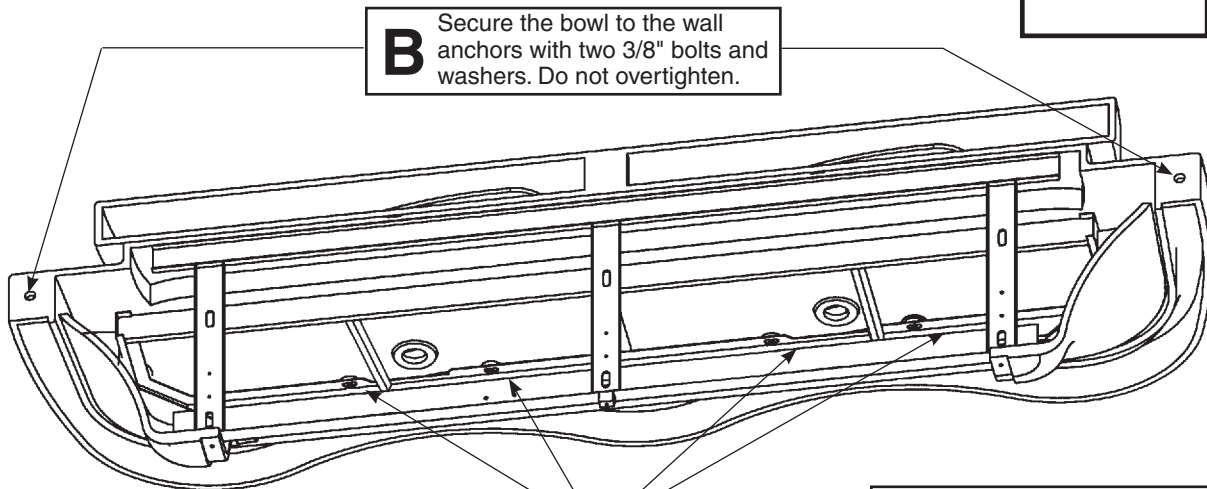
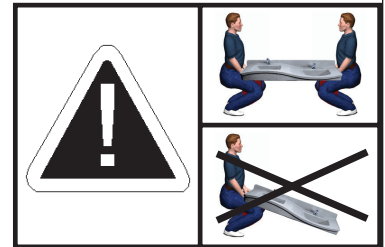
C Once you have positioned the frame such that it is level and flat against the wall or shimmed, use the 3/8" bolts and washers (6 places) to mount the frame to the wall.

B Remove the top access panel screws and washers and remove the access panel.

3 Install the Bowl



If the fixture has a soap option, refer to the soap system installation manual (215-1585) before installing the bowl assembly.



B Secure the bowl to the wall anchors with two 3/8" bolts and washers. Do not overtighten.

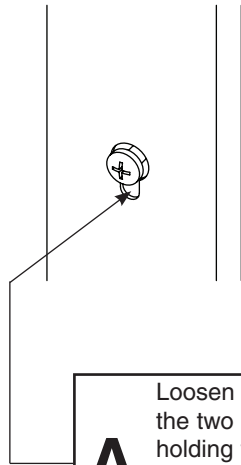
A Attach the bowl to the frame using the four 1/4-20 x 1/2" pan-head screws and washers. Do not tighten screws.

Tighten the pan-head screws. Do not overtighten.
C If necessary, adjust the sprayhead body to fit closely to the wall by adjusting the sprayhead mounting bolts. Refer to the components illustration for bolt locations.

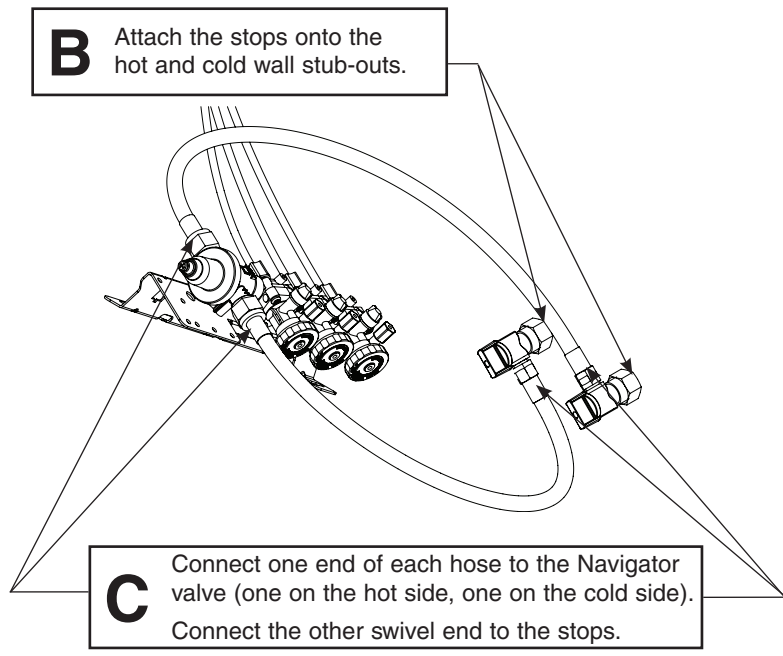
4a Connect the Supply - Hot and Cold Supply



The letter "H" on the Navigator Mixing Valve indicates hot water supply inlet.



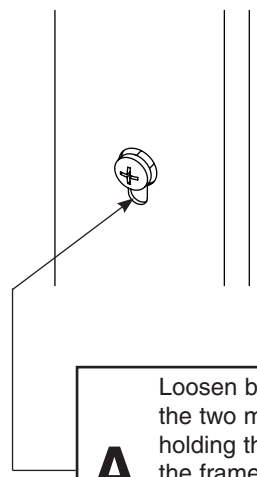
A Loosen but do not remove the two mounting screws holding the valve bracket to the frame. Slide the valve bracket up and lift it from the frame.



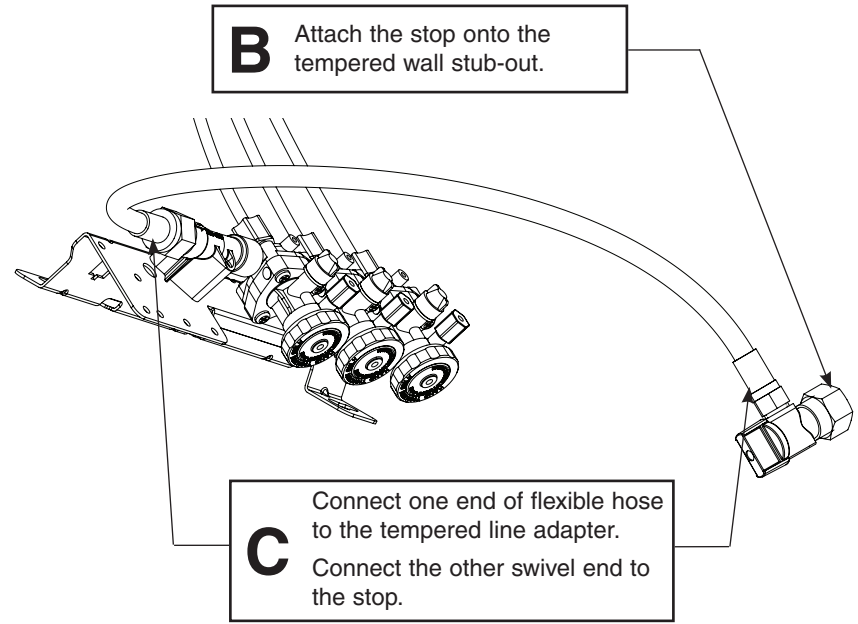
B Attach the stops onto the hot and cold wall stub-outs.

C Connect one end of each hose to the Navigator valve (one on the hot side, one on the cold side). Connect the other swivel end to the stops.

4b Connect the Supply - Single Tempered Supply



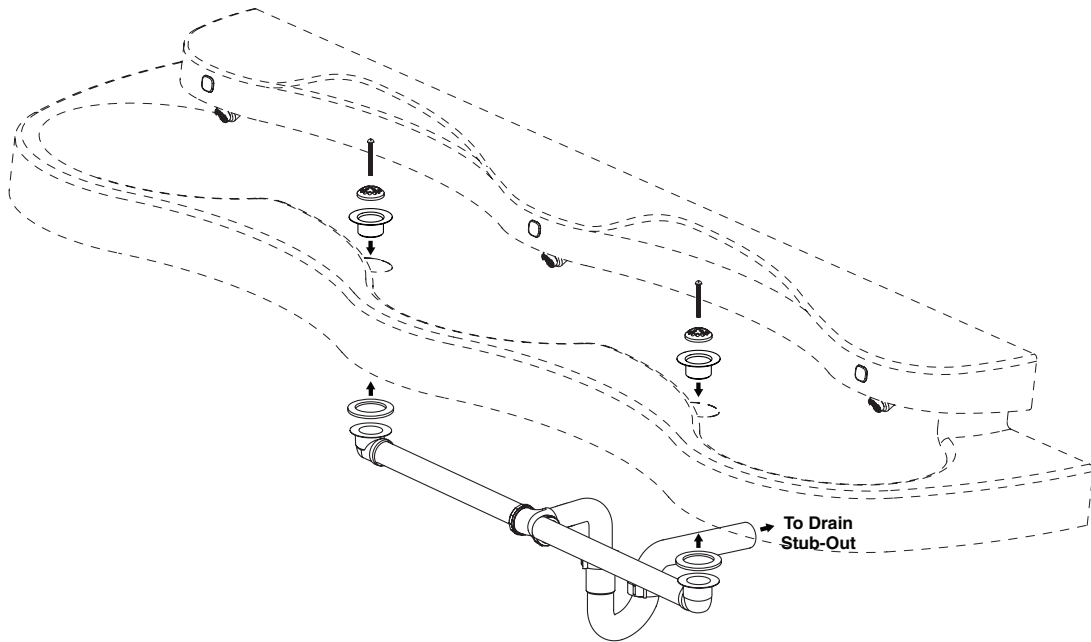
A Loosen but do not remove the two mounting screws holding the valve bracket to the frame. Slide the valve bracket up and lift it from the frame.



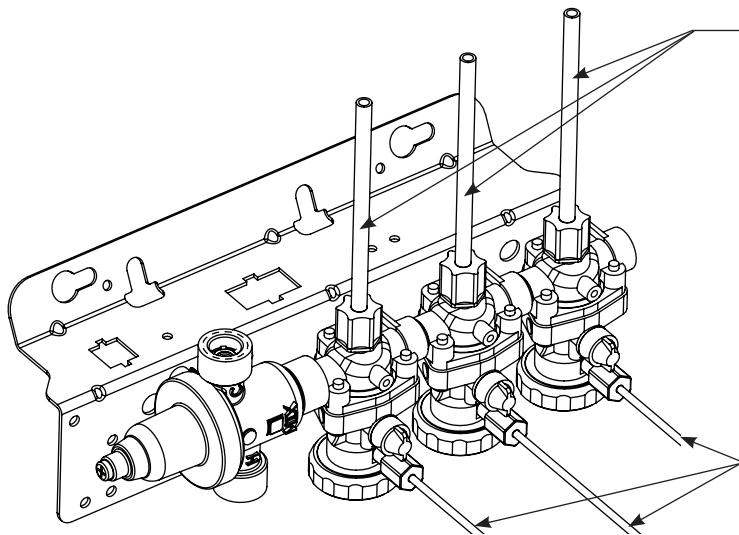
B Attach the stop onto the tempered wall stub-out.

C Connect one end of flexible hose to the tempered line adapter. Connect the other swivel end to the stop.

5 Install the Drains



6 Connect Supply Tubing



A Loosen the compression nuts.
 Push the sprayhead supply tubes firmly into the tube connectors until they are fully seated.
 Tighten the compression nuts by hand.

B Loosen the compression nuts.
 Push the matching color 1/8" tubes firmly into the tube connectors until they are fully seated.
 Tighten the compression nuts by hand.

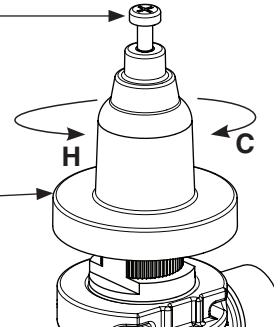
7 Adjust Temperature with Water Running



This valve is NOT factory preset. Upon installation, the temperature of this valve must be checked and adjusted to ensure delivery of a safe water temperature. Water in excess of 110°F (43°C) may cause scalding.

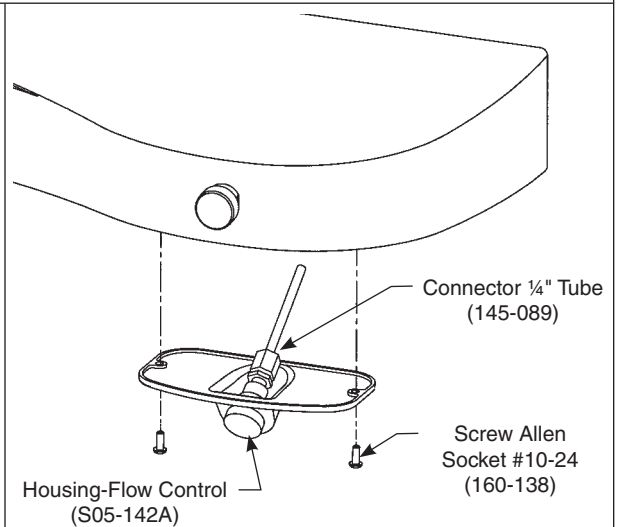
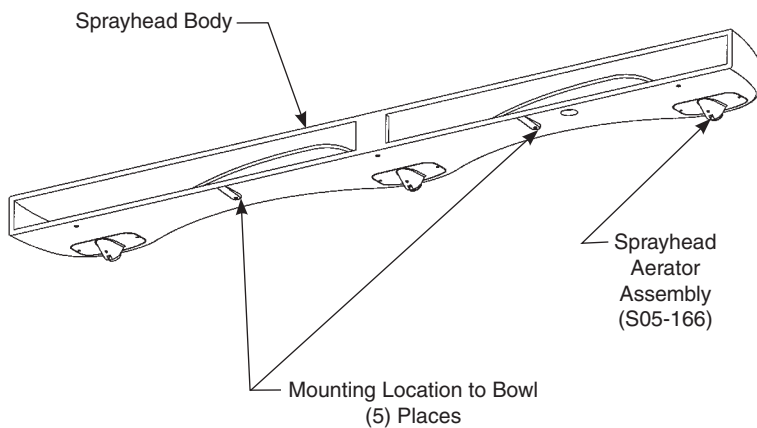
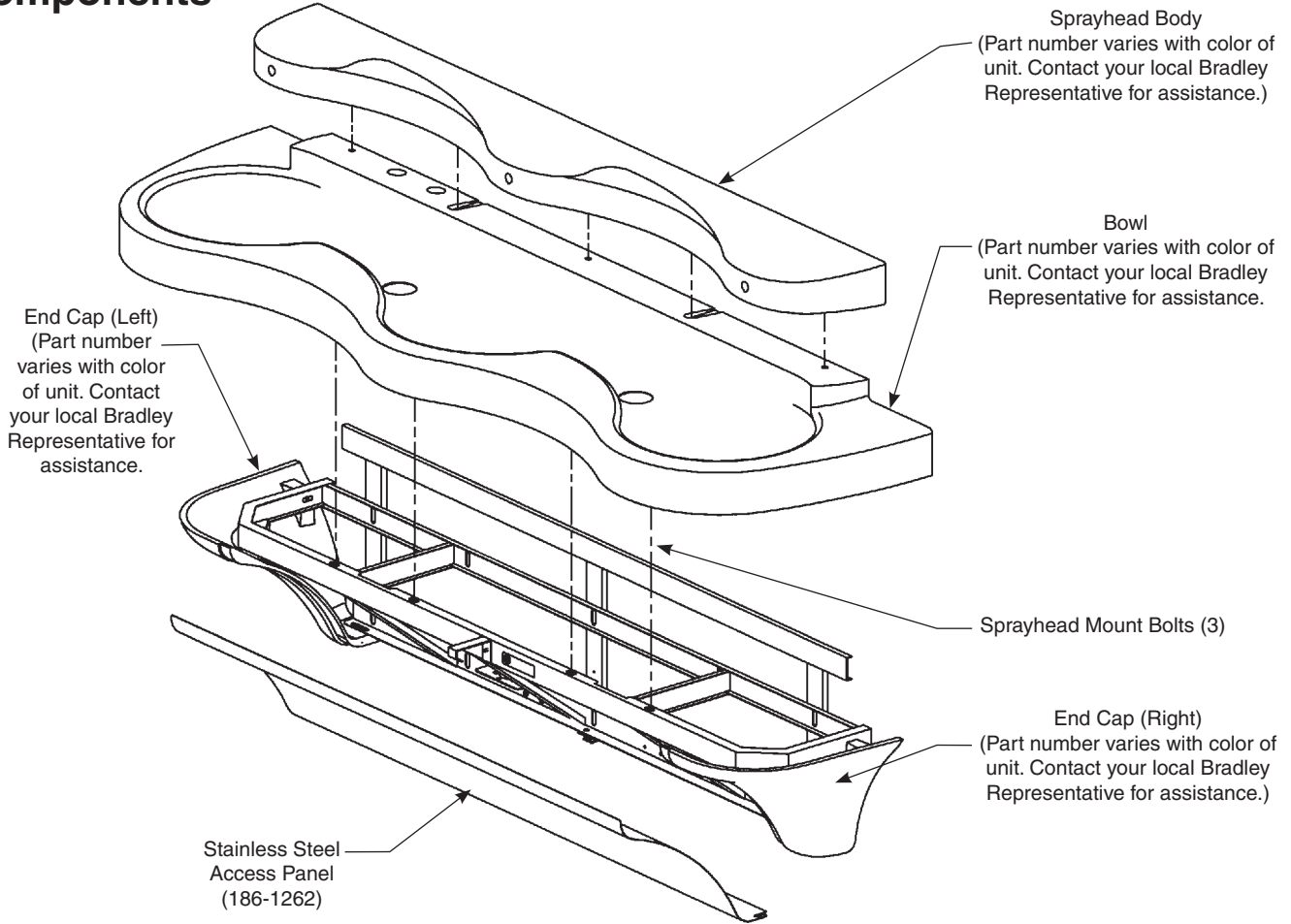
A Loosen Cap Screw about 1/4" (4-6 turns) and lift up cover (do not remove).

B Using cover, turn cartridge gently until desired water temperature is reached. Do not turn past stops as this may damage unit. Push cover down and tighten screw.



C Reinstall the bracket. Turn on the water supply to the Express® and check for leaks. Push the operating buttons of each station until all the air is purged from the lines and water is flowing smoothly. Reinstall the access panel.

Components



Components Assembly

To access air valve:

Remove access panel by removing (5) screws and finishing washers using a 5/32" Allen socket wrench.

To remove sprayhead:


Remove (5) bolts located underside of bowl neck. Carefully remove sprayhead from bowl.

To access aerator and pushbutton assembly:

Remove (2) screws and washers from the access plate assembly using a 1/8" Allen socket wrench. The access plate assembly is located underneath the sprayhead at (2) places. The assembly will drop down to access the lens, housing flow control, tube connector and pushbutton assembly.

To remove/reassemble pushbutton assembly:

Remove one screw (P/N 160-165) from the pushbutton bracket. Hold the housing with the piston and spring together while removing the remaining screw (P/N 160-165).

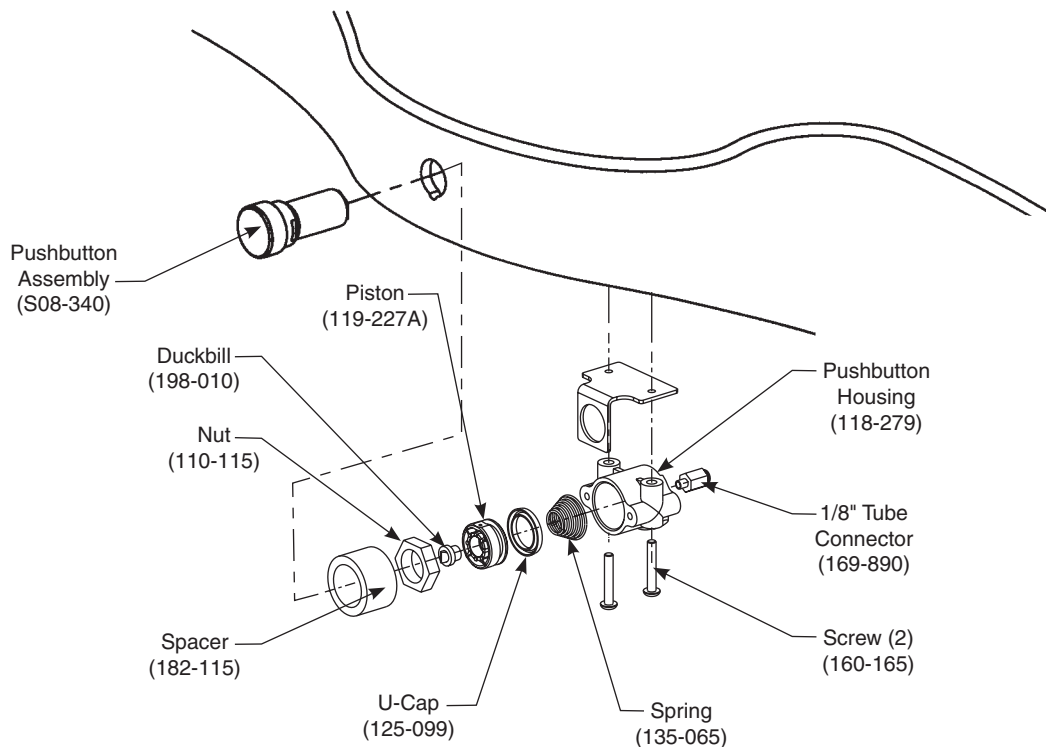
 *When removing screws, the housing assembly will drop down. If the housing, piston and spring are not held together, the piston will pop out of the housing.*

After the pushbutton housing is removed, remove the nut (P/N 110-115) and then the bracket (P/N 140-743) from the pushbutton assembly. Remove the spacer (P/N 182-115) and pushbutton assembly (P/N S08-340) from the sprayhead.

To reassemble the pushbutton assembly, first insert the pushbutton into the hole in the sprayhead housing as shown below. Slide the spacer onto the back of the pushbutton (inside the sprayhead housing) as shown. Attach the bracket (P/N 140-743) to the pushbutton and secure into place with the nut (P/N 110-115). Insert the spring and piston into the housing. While holding the assembly together, insert one screw (P/N 160-165) into the housing.

 *For ease of insertion, hold the pushbutton housing so the piston is facing the rear of the unit.*

Insert the screw with housing into the bracket on the pushbutton assembly. After the first screw is inserted, rotate the housing so that the piston is facing the front of the unit. Insert the second screw (P/N 160-165) into the bracket and secure the housing in place.



Cleaning and Maintenance for Terreon®

Material Description: Terreon is a densified solid surface material composed of bio based resin and is resistant to chemicals, stains, burns and impact. Surface can be easily repaired with everyday cleansers or fine grit abrasives. Because Terreon is a unique cast material, its aggregate flow and distribution, and shades of color can vary from product to product creating natural characteristics.

Routine Cleaning: For regular cleaning, use mild neutral base cleaners.

Stubborn Stains: Remove tough stains with Soft-Scrub® and a green Scotch-Brite® pad or lightly sand in a circular motion with 240 grit wet/dry sandpaper. The finish can then be renewed with a maroon Scotch-Brite pad.

Scratches: Remove scratches with a green Scotch-Brite pad. The finish can then be renewed with a maroon Scotch-Brite pad.

Hard Water Deposits: Remove hard water deposits with a mild solution of vinegar and water. Always rinse the unit thoroughly after cleaning.

Restoring the surface: Use Hope's® Perfect Countertop to refresh and protect the Terreon Solid Surface material. Dark Terreon colors may require additional care and maintenance. For complete instructions on this additional maintenance, visit bradleycorp.com.

Repair Kits: Terreon repair kits are available. Contact your Bradley representative or distributor for part numbers and pricing. Repair kits are made to order and have a shelf life of 30 days.

NOTICE! Do not use strong acid or alkaline chemicals and cleaners to clean Terreon. If these chemicals come in contact with the surface, wipe them off immediately and rinse with soapy water. Avoid contact with harsh chemicals such as paint remover, bleach, acetone, etc. Avoid contact with hot pans and objects.

Cleaning and Maintenance for Stainless Steel

Material Description: Stainless steel is extremely durable, and maintenance is simple and inexpensive. Proper care, particularly under corrosive conditions, is essential. Always start with the simplest solution and work your way toward the more complicated.

Routine cleaning: Daily or as often as needed use a solution of warm water and soap, detergent, or ammonia. Apply the cleaning solution per the manufacturer's instructions and always use a soft cloth or sponge to avoid damaging the finish.

Stubborn Stains: To remove stains from stainless steel use a stainless steel cleaner and polish such as Ball® stainless steel cleaner or a soft abrasive. Always follow the manufacturer's instructions and apply in the same direction as the polish lines.

NOTICE! Never use ordinary steel wool or steel brushes on stainless steel. Always use stainless steel wool or stainless steel brushes.

Fingerprints and Smears: To remove fingerprints or smears use a high quality stainless steel cleaner and polish in accordance with the manufacturer's instructions. Many of these products leave a protective coating that helps prevent future smears and fingerprints.

Grease and Oil: To remove grease and oil use a quality commercial detergent or caustic cleaner. Apply in accordance to the manufacturer's instructions and in the direction of the polish lines.

Precautions: Avoid prolonged contact with chlorides (bleaches, salts), bromides (sanitizing agents), thiocyanates (pesticides, photography chemicals, and some foods), and iodides on stainless steel equipment, especially if acid conditions exist.

NOTICE! Do not permit salty solutions to evaporate and dry on stainless steel.

The appearance of rust streaks on stainless steel leads to the belief that the stainless steel is rusting. Look for the actual source of the rust in some iron or steel particles which may be touching, but not actually a part of the stainless steel structure.

NOTICE! Strongly acidic or caustic cleaners may attack the steel causing a reddish film to appear. The use of these cleaners should be avoided.

Brand Names

Use of brand names is intended only to indicate a type of cleaner. This does not constitute an endorsement, nor does the omission of any brand name cleaner imply inadequacy. Many products named are regional in distribution, and can be found in local supermarkets, department and hardware stores, or through your cleaning service. It is emphasized that all products should be used in strict accordance with package instructions.

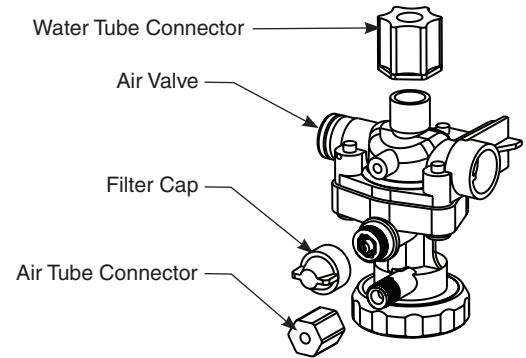
Metering Air Valve Maintenance

Adjust Air Valve Meter Time



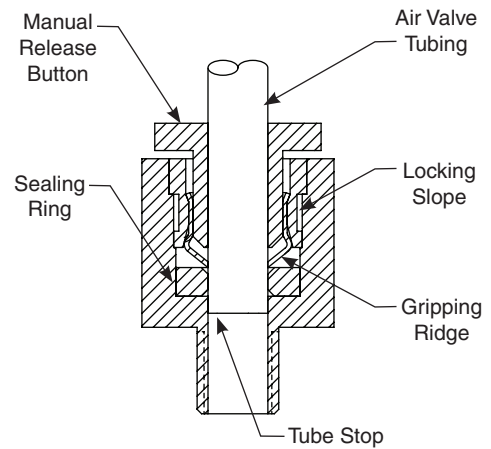
The air valve timer is located next to the tube connector on the air valve body. The timer is capped with a filter to prevent dirt build-up on the timer. The air valve timing can be adjusted from 5–60 seconds.

1. Remove filter cap and use a screwdriver to tighten or loosen the timer (see illustration at right). Turning the timer clockwise increases the time; turning the timer counterclockwise decreases the time.
2. Continue to adjust until the timer is set at desired length.
3. Replace filter cap over the timer.



Tube Connection Leaks

1. Push in the white manual release button while pulling the tube out (see illustration at right) to disconnect the tube at the connector. No tools are needed.
2. To correct a leak, press tubing firmly into the connector and make sure it is seated.
3. If leak persists, remove tubing from the fitting, and trim the tubing end square with a razor-sharp knife. If leak continues, replace the fitting or contact your Bradley representative for assistance.



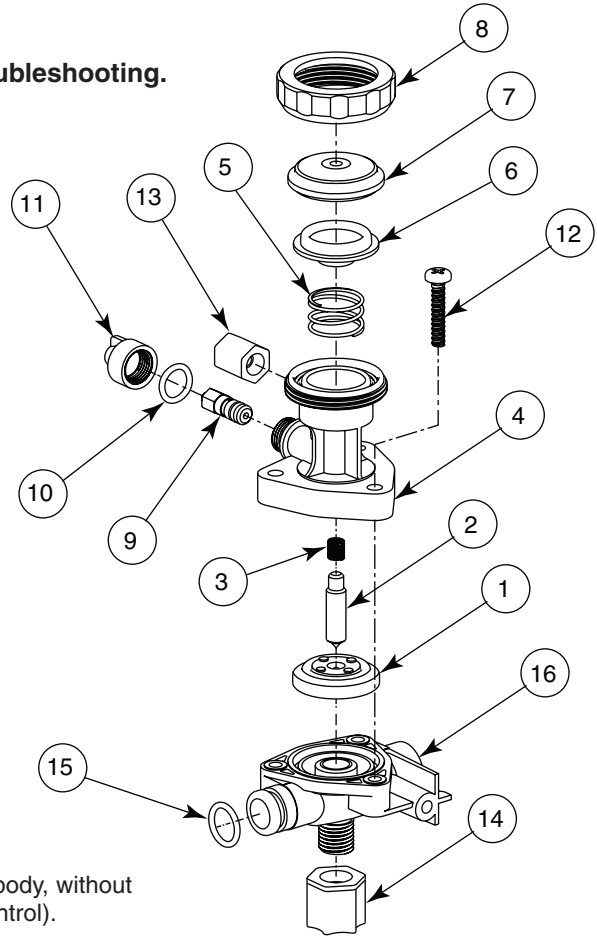
Troubleshooting – Stop Valve

Problem	Cause	Solution
Water just dribbles or does not flow from sprayhead	Water supply malfunctioning	<ol style="list-style-type: none"> 1. Close the stops and check the valves that supply water to the lavatory system. 2. Inspect the stop valves for proper installation.
Water sprayhead delivers all hot or cold water	Water supply or mixing valve malfunctioning	<ol style="list-style-type: none"> 1. Close the stops and check the valves that supply water to the lavatory system. 2. Inspect the stop valves for proper installation. 3. Inspect mixing valve for proper hot and cold installation. A red marking indicates the hot inlet.

Troubleshooting – Metering Air Valve

⚠ WARNING Turn off water supplies to the unit before troubleshooting.

Item	Qty.	Description
1	1	Diaphragm
2	1	Armature
3	1	Spring
4	1	AST 4 Valve Upper Body
5	1	Spring
6	1	Magnet/Diaphragm Assembly
7	1	AST 4 Valve Cover
8	1	AST 4 Valve Clamp Nut
9	1	AST 4 Valve Timer Assembly
10	1	O-Ring
11	1	AST 4 Valve Timer Cover
12	3	Screw, #8 x 7/8"
13	1	Compression Nut, 1/8" Tube
14	1	Compression Nut, 1/4" Tube
15	1	O-Ring
16	1	Valve Body



For complete valve, order service part S07-077S (AST4 valve, closed body, without flow control) or S07-077AS (AST4 valve, through body, without flow control).

Problem	Cause	Solution
Valve will not shut off.	Timing mechanism is clogged.	Clean and inspect timing mechanism: 1. If compressed air is available, blow water and debris from timer cover of timing mechanism. 2. Turn adjusting screw out all the way. Clean and inspect screw and valve body. 3. Turn adjusting screw in to desired cycle time.
Valve will not turn on.	Water is not being supplied to unit.	Open all stops on mixing valve.
	Water pressure is over 80 PSI.	Install a pressure reducing valve.
	Failed diaphragm/magnet assembly.	Unscrew the valve clamp nut on valve. Remove valve cover. Gently press the diaphragm. The valve should activate. If not, replace the diaphragm/magnet assembly.
Timing can not be adjusted for more than 5 seconds.	There is an air leak.	Check the valve assembly: 1. Check all tubing and fittings for proper assembly. 2. Tighten cap and nut on 1/8" tubing.
Pushbutton does not work properly.	Air volume may not be sufficient to operate valve.	Check for leaks and lubricate U-cup: 1. Check all fittings for air leaks. 2. Disassemble pushbutton and lubricate U-cup seal (see pushbutton assembly diagram on page 9).
Water is dripping from the streamformers.	Debris has accumulated on valve seat or orifices.	Clean and inspect valve seat: 1. Remove screws and disassemble metering valve. 2. Clean valve seat and inspect for deep gouges or scratches. Replace valve body if necessary. 3. Remove any debris clogging off-center hole in rubber diaphragm.

Thermostatic Mixing Valve Troubleshooting

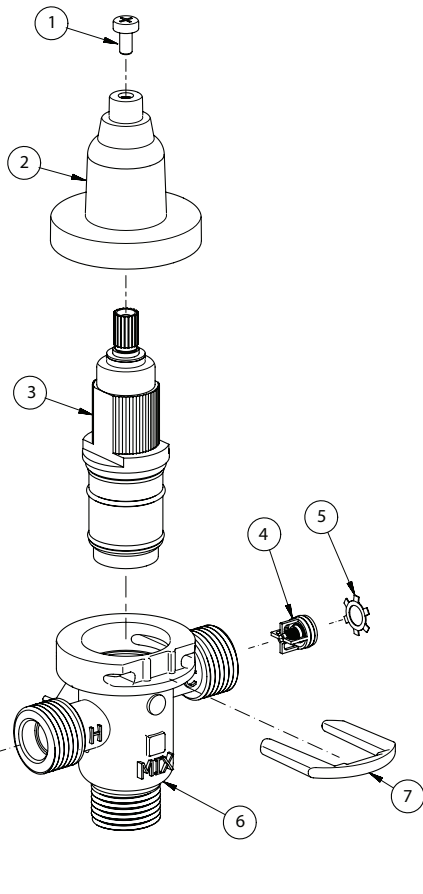
Before attempting to troubleshoot the valve or disassemble the components, check for the following conditions:

- If stop valves are used, make sure that they are fully open.
- Make sure that the hot and cold inlet pipes are connected properly, and that there are no cross-connections or leaking stop valves.
- Check the hot water heater output to make sure that it is at least 10° F above the set temperature.



Be sure to close the appropriate shut-off valves prior to disassembly of the valve and reopen the valves after inspection and repair is complete.

Problem	Cause	Solution
External leaks.	Damaged cartridge or O-rings.	Replace cartridge with part number 269-1927
Improper water temperature or temperature fluctuation.	Hot water supply is not 10° above desired set point.	Increase hot water supply temperature
	Valve temperature is not properly set.	Adjust the temperature as shown on page 19, step 10.
Limited water flow.	Dirt and debris have built up in the valve or strainer.	<ol style="list-style-type: none"> 1. Check to make sure both hot and cold supplies are connected to the Navigator mixing valve and that they have water flow. 2. Remove cover and U-clip. Remove the cartridge and clean the strainer. It is not required to grease cartridge, however if desired, use silicone grease only. Do not use grease on check valves.



Parts List

Item	Part No.	Description	Quantity
			S59-4000
1	160-463	Cap Screw	1
2	107-582	Cover	1
3	269-1927	Thermostatic Cartridge	1
4	198-014	Check Valve*	2
5	132-051	Retaining Ring*	2
6	118-319	Valve Body	1
7	146-079	U-Clip	1

* Included with Prepack S65-326

Tempered Line Adapter Option
Part no. S39-804
 (replaces S59-4000 if tempered line is used)

Strainer (173-028)

Terreon®

CAST-FORMED SOLID SURFACE MATERIAL

MATERIAL

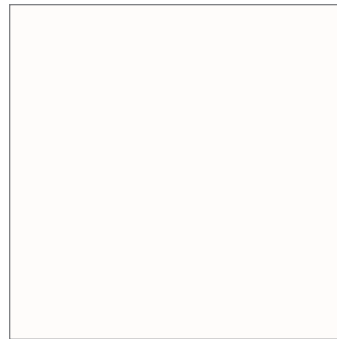
Terreon® solid surface lasts a lifetime and can easily be repaired and renewed, thus minimizing the need for replacement or disposal. Most Terreon products are completely cast-formed including bowls, overflows, backsplashes and aprons, eliminating fabrication waste and the use of sealants and adhesives. Terreon is a densified solid surface material composed of bio-based resin and complies with the requirements of CSA B45.5/IAPMO Z124.

Surface damage is easily repaired with everyday cleaners or fine grit abrasives. Standard material thickness is 1/2" (13 mm).

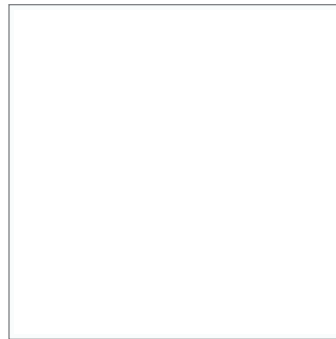
Terreon has achieved GREENGUARD GOLD Certification and participate in mindful MATERIALS Library.



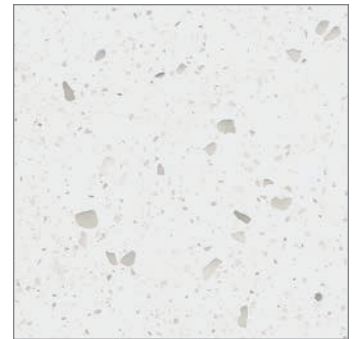
TERREON® STANDARD COLORS



Designer White



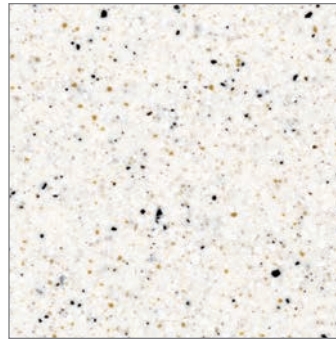
Alpine White



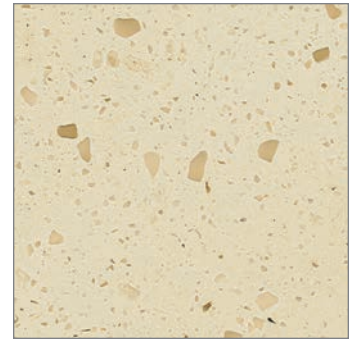
Polar Ice



Glacier



White Sand



Driftwood



Pebble Beach



Silver Mist



Lannonstone



Sandtrap

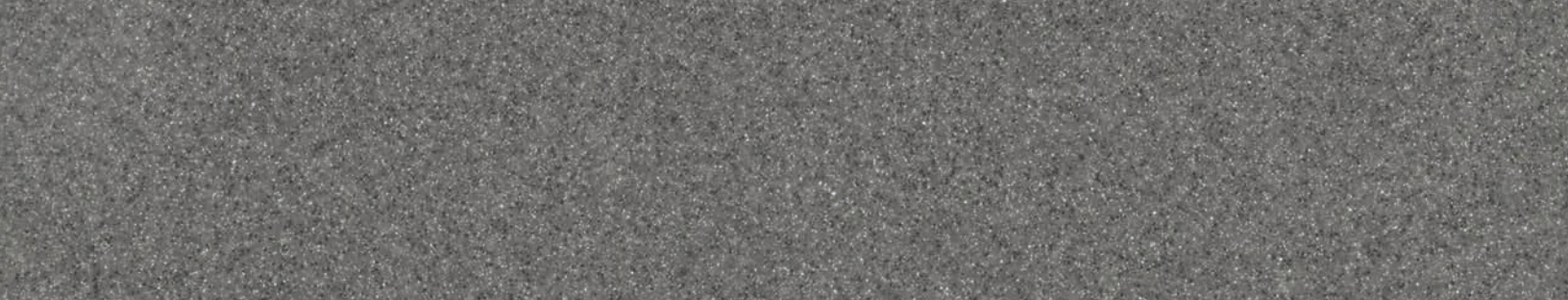


Stone Creek



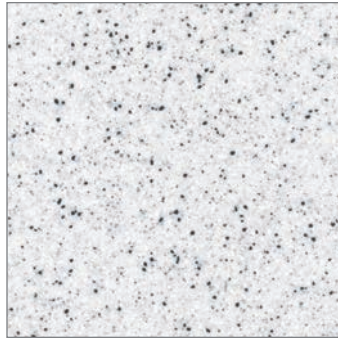
Riverstone

Note: Due to printing variances, actual color and sheen of the material may differ. Contact your Bradley representative for material samples.

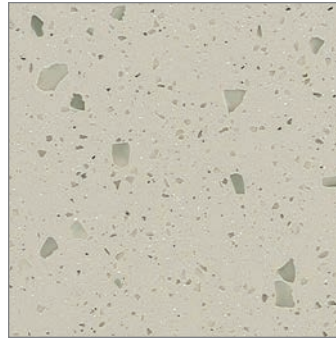


TERREON® STANDARD COLORS

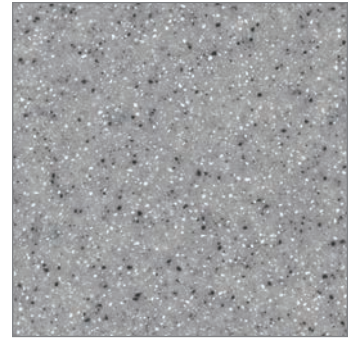
Note: Due to printing variances, actual color and sheen of the material may differ. Contact your Bradley representative for material samples.



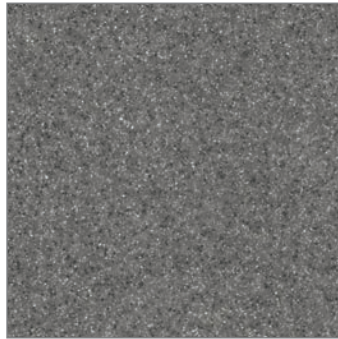
Peppered White



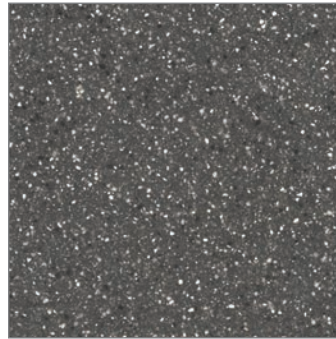
Moonstone



Empire Gray

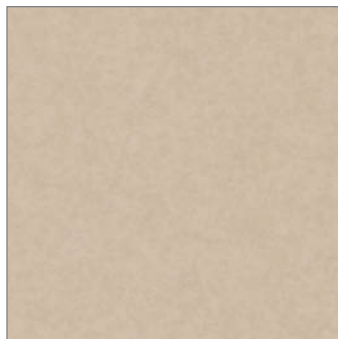


Graphite



Charcoal Gray

TERREON ELEMENT COLORS (AVAILABLE IN CERTAIN MODELS)



Canyon Tan



Soapstone Gray



Commercial Washrooms. Brought to Life.

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