

# Installation

## TDB3108

Terreon® 54" Circular Deep Bowl Washfountain with TouchTime® Control

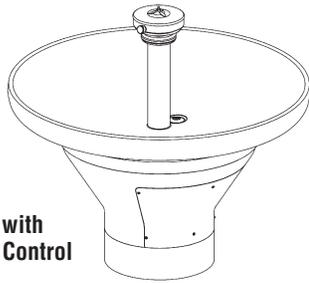


## WF3208

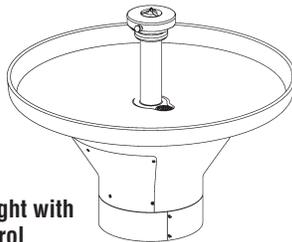
Terreon® Extra Height 54" Circular Classic Washfountain with 9" Deep Bowl and TouchTime® Control

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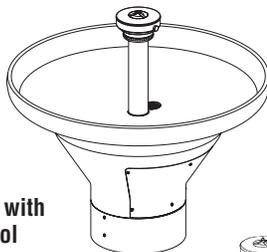
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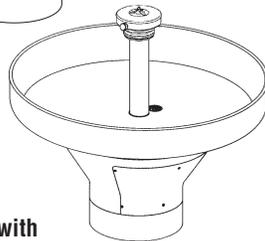
TDB3108 with TouchTime® Control



TDB3108 Juvenile Height with TouchTime® Control



TDB3108 TAS Height with TouchTime® Control



WF3208 with TouchTime® Control

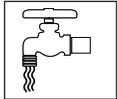
## IMPORTANT!



Read this entire installation manual to ensure proper installation. When finished with the installation, file this manual with the owner or maintenance department.



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.



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.



Product warranties may be found under "Product Information" on our web site at [www.bradleycorp.com](http://www.bradleycorp.com).

## Supplies required for installation:

- (4) lag bolts, screws or other fasteners to anchor washfountain pedestal to floor
- 1" hot and cold water supply lines and fittings (refer to rough-ins)
- Reducing fittings and 1/2" nom. copper tubing supply lines for types with supplies from above
- Standard P-trap (refer to rough-ins) (vented trap supplied by Bradley when required)
- 2" drain lines and fittings (refer to rough-ins)
- Teflon tape or pipe dope
- 1-1/2" vent or tie pipe on types vented through washfountain column (see Step 1 for lengths required)
- 110 VAC GFI power source for 110/24 VAC UL Class II transformer supplied
- OPTIONAL: Bradley recommends installing an electrical cutoff switch to the unit. This feature allows no accidental water delivery during regular maintenance and service.

## Pre-Installation Information

### Terreon® Material

The Washfountain is constructed of Terreon®, a densified solid surface material composed of polyester resin. Terreon is resistant to chemicals, stains, burns and impact. Surface damage can be easily repaired with everyday cleaners or fine-grit abrasives. Terreon is NAHB certified to meet ANSI Z124.3, Z124.6 and ANSI/ICPA SS-1-2001.

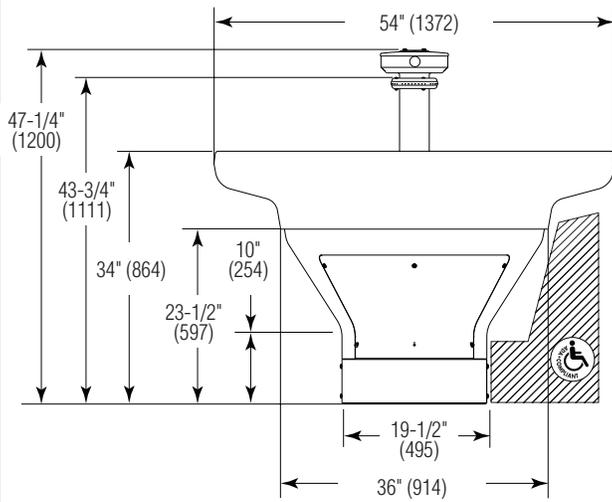
### Cylindrical air valve

The air valve pushbutton allows each user to activate an air metering valve (starting the flow of water) by pushing and releasing the pushbutton. The air metering valve is factory-preset to run for 10 seconds and can be adjusted to run from 5-60 seconds.

### Circular Washfountain Dimensions

#### Model TDB3108

##### 54" Circular - side view

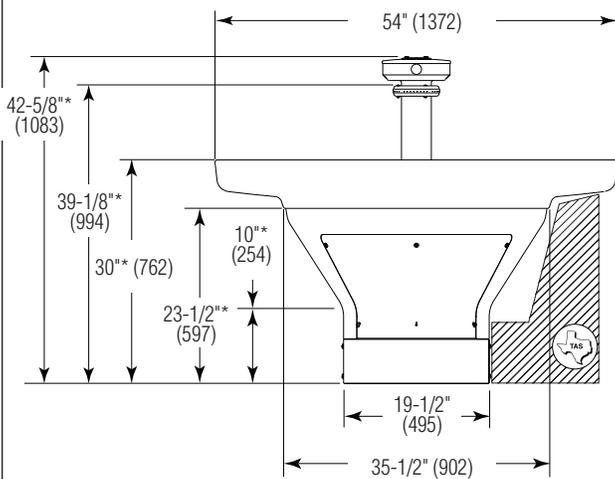


**Model TDB3108 is ADA Compliant**

**Optional equipment may not comply with all ADA dimensional guidelines**

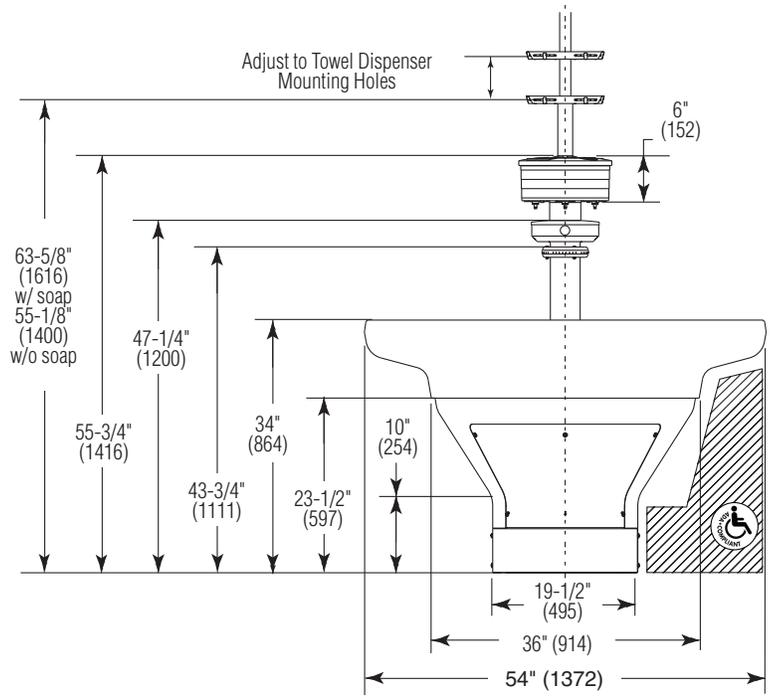
#### Model TDB3108 (Juvenile Height)

##### 54" Circular - side view



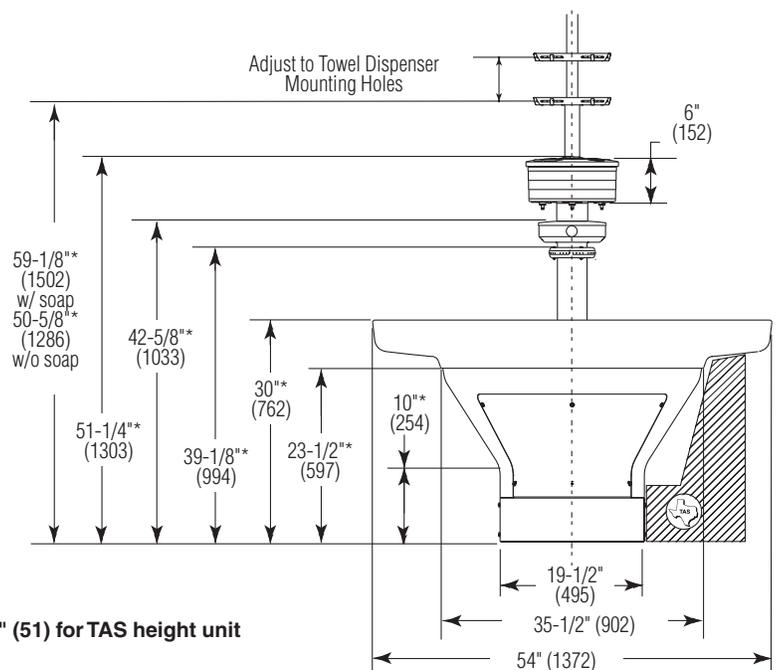
#### Model TDB3108

##### 54" Circular with optional accessories - side view



#### Model TDB3108 (Juvenile Height)

##### 54" Circular with optional accessories- side view

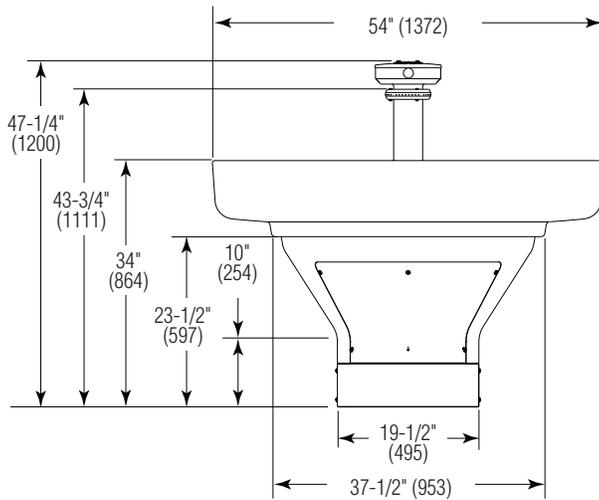


\* Add 2" (51) for TAS height unit

### Circular Washfountain Dimensions

**Model TDB3208**

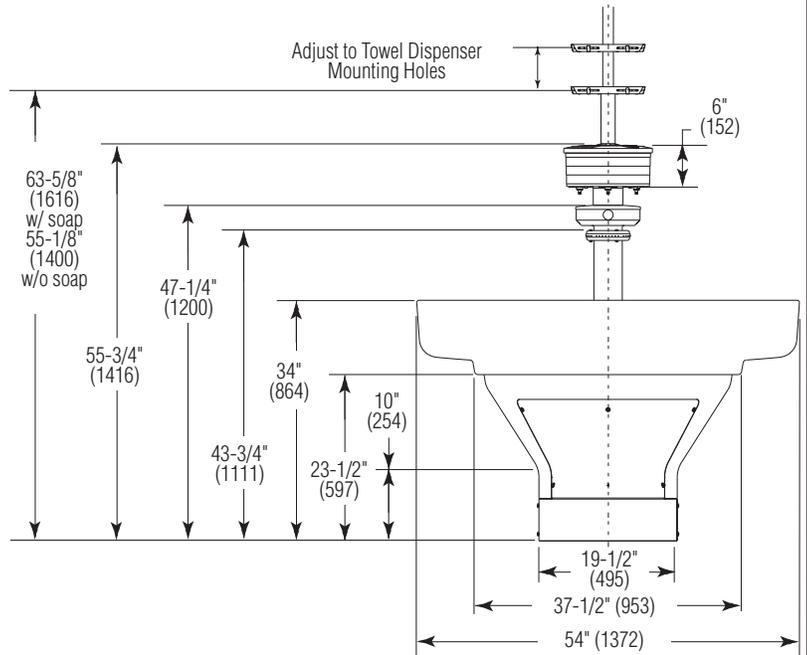
**54" Circular - side view**



**Model TDB3208 is not ADA Compliant**

**Model TDB3208**

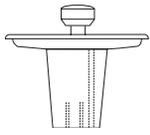
**54" Circular with optional accessories - side view**



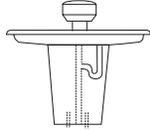
### Rough-In Dimensions for Supplies and Drain

(mm)

#### Supplies from Below or Through Wall

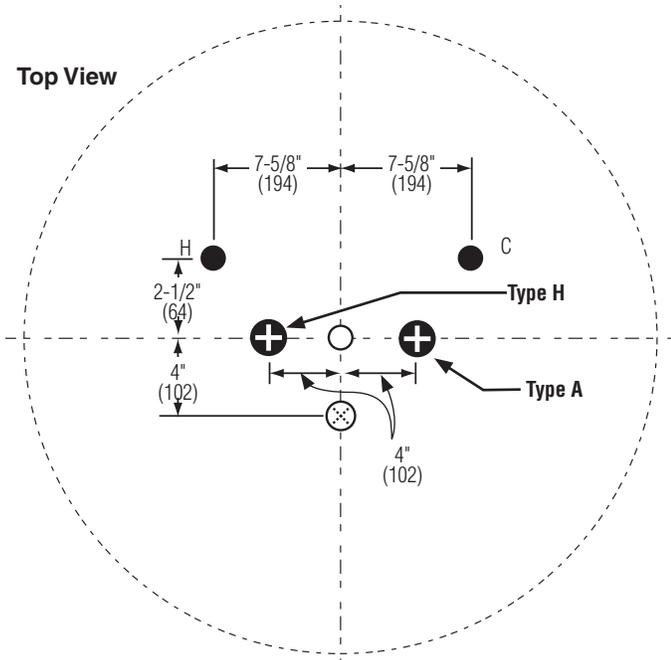


**Type A**  
Off-line vent with supplies from below  
(P-Trap supplied by Installer.)

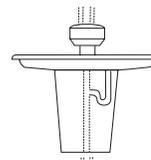


**Type H**  
Centrally rising vent with supplies from below  
(P-Trap furnished with unit.)

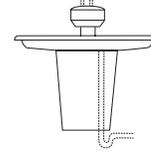
Top View



#### Supplies from Above

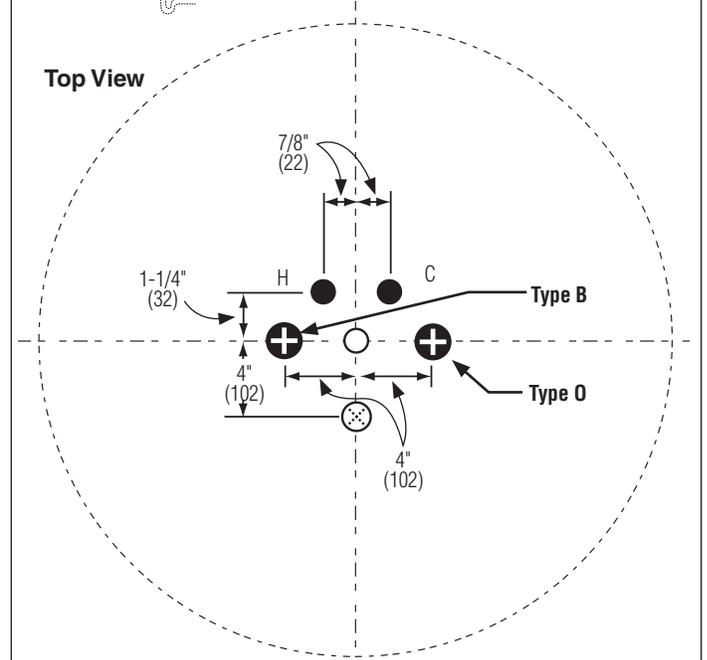


**Type B**  
Centrally rising vent with supplies from above  
(P-Trap furnished with unit.)



**Type O**  
Off-line vent with supplies from above  
(P-Trap supplied by Installer.)

Top View



**Key**

- 1-1/2" NPT Vent to Ceiling (if Required)
- 1/2" Supply: Nominal Copper Tube (Type A and H: Stub up 2-1/2" (64) above floor)
- ⊕ 2" NPT Drain Stub up 3" (76) above Floor
- ⊗ Electrical Outlet Location (Recommended)



Supply lines for one to two washfountains should be 1"; for three washfountains, 1-1/4". For more than three washfountains, pipe sizes should be increased proportionately.

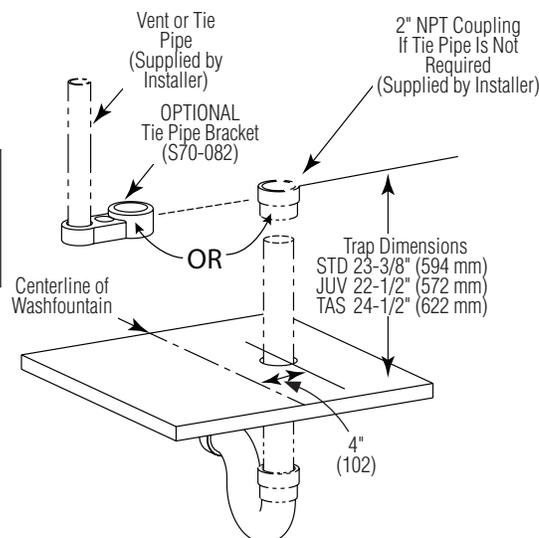


All pipes shown in dotted lines to be supplied by installer.

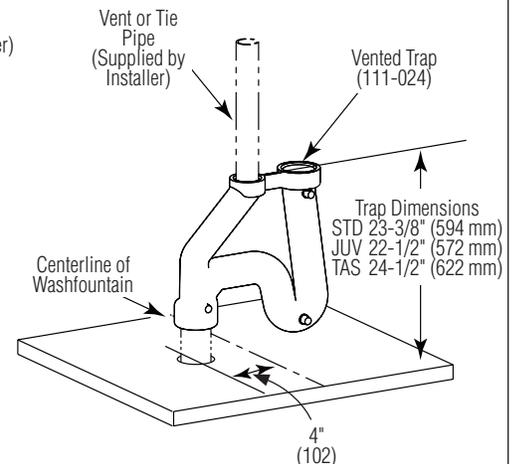
## 1 Install Drain

**A** Rough in supply and drain pipe required for your installation (see rough-ins of the installation options).

**B** Assemble the drain to the dimension for the bowl size of the washfountain you are installing.



Types A, O with Tie Pipe Bracket Option



Types B, H

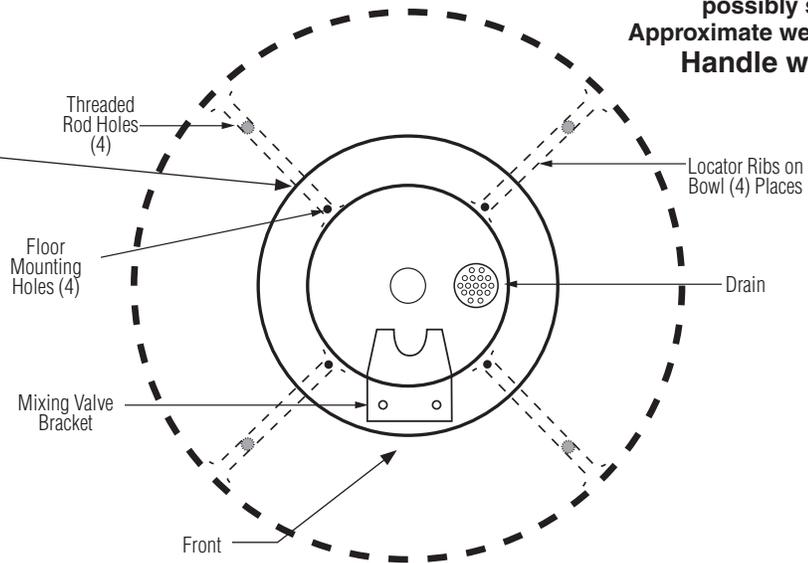
## 2 Bowl/Pedestal Mounting and Assembly

**A** Position the pedestal making sure the floor mounting holes (4 places) line up as shown. Mark the mounting hole positions on floor. Secure pedestal to floor with suitable fasteners, 1/2" anchors and bolts (supplied by installer). Do not overtighten.



**Bowl surface is smooth and possibly slippery. Approximate weight is 190 lbs. Handle with care!**

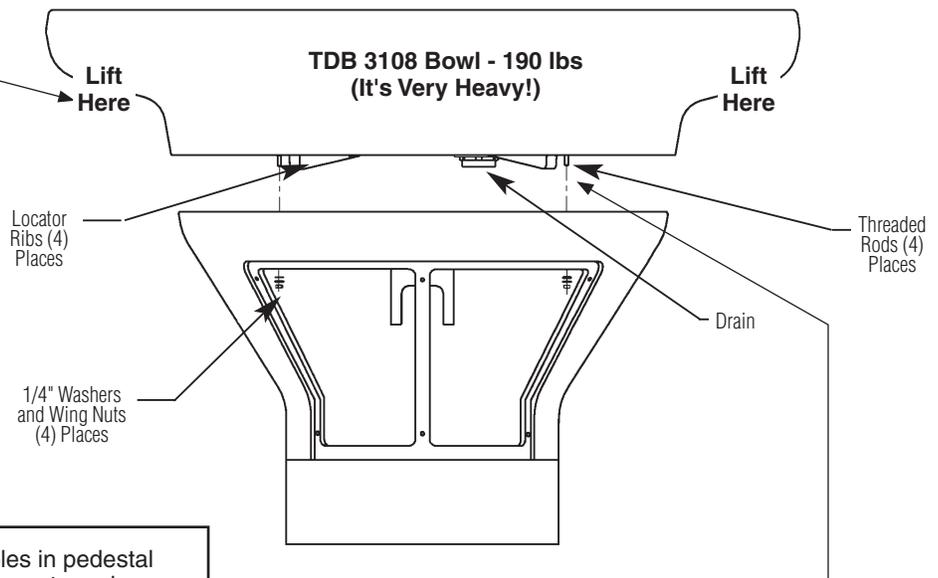
**TAS OPTION:** Place TAS spacer on floor over the mounting holes. Place pedestal on top of the spacer before anchoring to floor.



**Overhead View of Pedestal**  
(Bowl shown with dotted lines for reference)

**B** Using **three or four people**, carefully lift bowl at locations shown onto pedestal, making sure drain holes line up with floor drain.

Washfountain bowl and pedestal may be covered with a protective coating that is very slippery. Thoroughly clean and dry all lifting surfaces before assembling.



**C** Mate thread rods with slotted holes in pedestal using locator ribs. Using 1/4" wing nuts and washers, secure bowl to pedestal in four places.

### 3 Install Drain Spud in Bowl

**A** Loosely attach the drain spud to the bowl with the locknut and washer.

B TRAP OPTION: attach B trap to drain spud.

Tie Pipe OPTION: attach tie pipe bracket to drain spud.

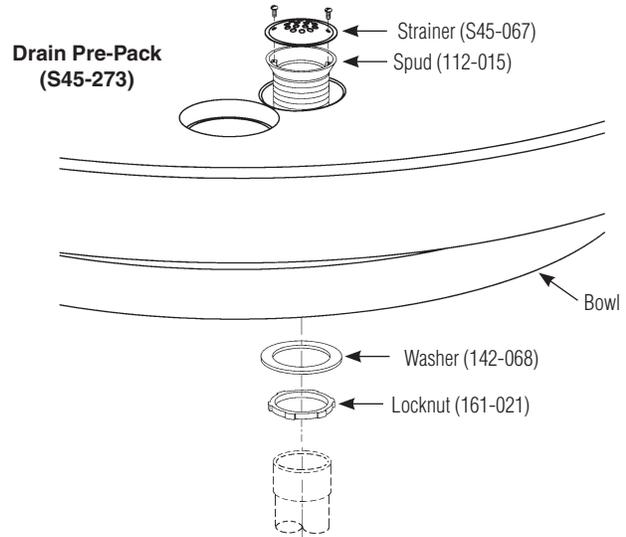
**B** Tighten the spud and lock nut against the bowl.

**C** Secure the strainer to drain spud with the screws provided.

**D** Connect spud (or B Trap or Tie Pipe Bracket) to drain.



Seal between drain spud and drain hole with plumber's putty (supplied by installer).



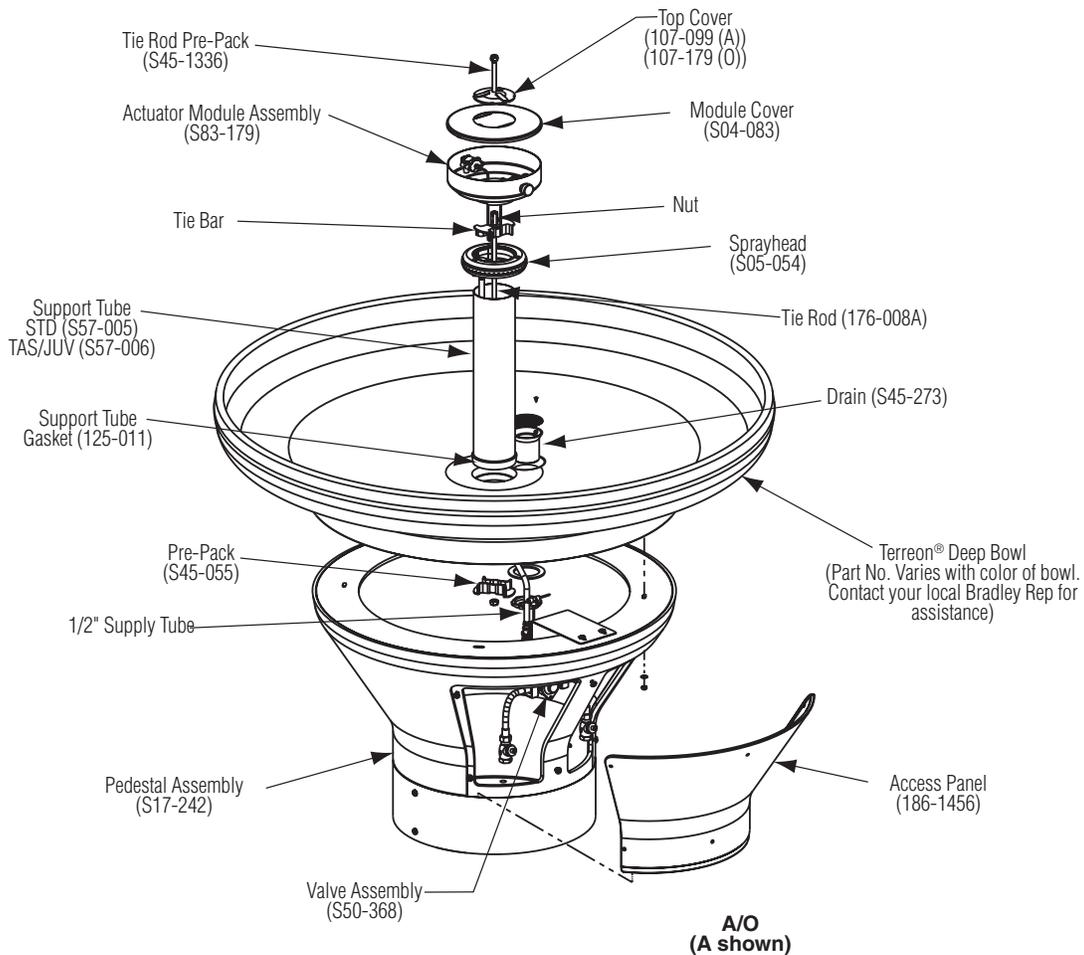
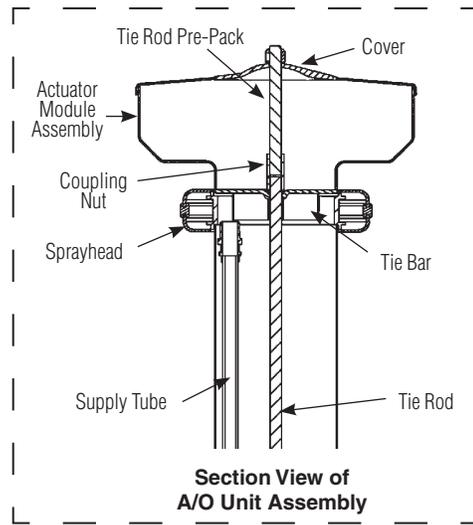
# 4a Assemble TouchTime® – A and O Units without Tie Pipe Option (A Shown)

**A** Install hemmed end (not sharp end) of support tube with gasket onto bowl.

**B** Connect 1/2" supply tubing to sprayhead with 3/8" NPT to 1/2" tube connector and place sprayhead onto support tube. Run the tubing down through the support tube and connect to valve tube connector.

**C** Place the upper tie bar (notched at both corners of each end) on top of sprayhead. Connect the longer tie rod to the 4-1/4" tie rod using the coupling nut with hex head set screws.

**D** Run the tie rod assembly down through upper tie bar and secure from underneath the bowl using lower tie bar (no notches) and hex nut with socket head set screw.



# 4a Assemble TouchTime® – A and O Units without Tie Pipe Option (A Shown)

**E** Place the TouchTime module assembly on top of sprayhead. Rotate until actuator module locks in with tie bar. Drop TouchTime module wires down to the valve assembly.

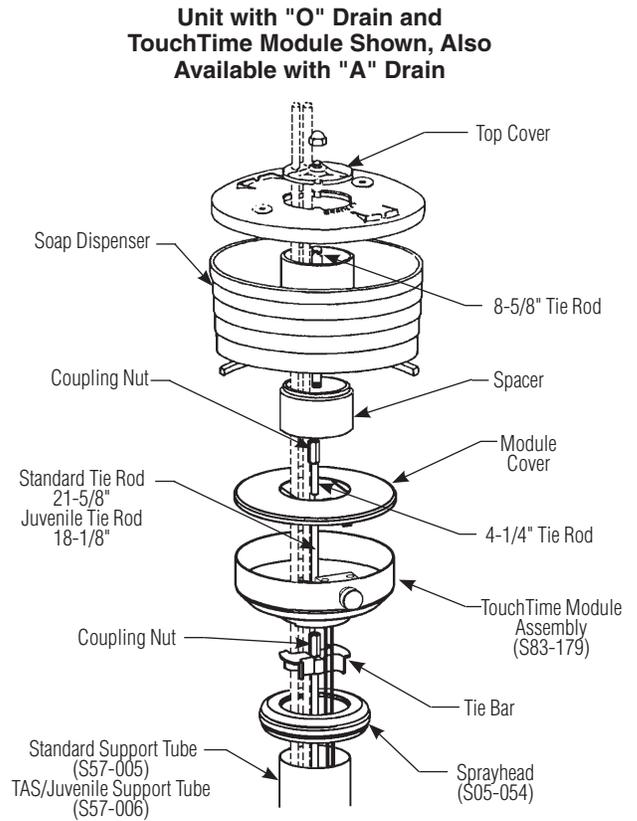


*Skip to step G for units without soap.*

**F** For units with soap option, install the spacer, soap dispenser and cover using the third tie rod (8-5/8" long) and second coupling nut as shown. Secure with acorn nut and set screw.

**G** Secure TouchTime module cover and top cover with acorn nut and set screw.

**H** **FOR O UNIT:** Install 1/2" nominal copper tubing supply lines (pass them through holes in cover down through support column) and connect to stops using suitable fittings.

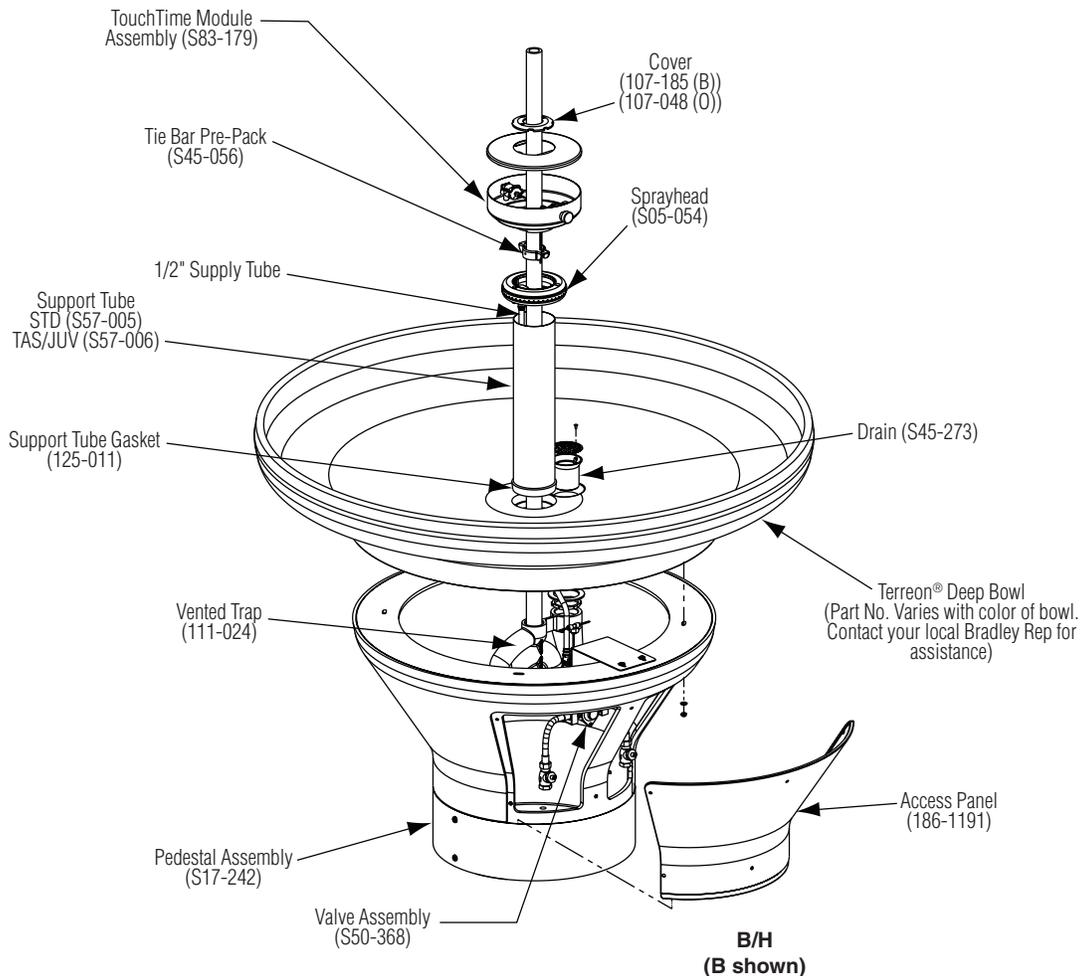
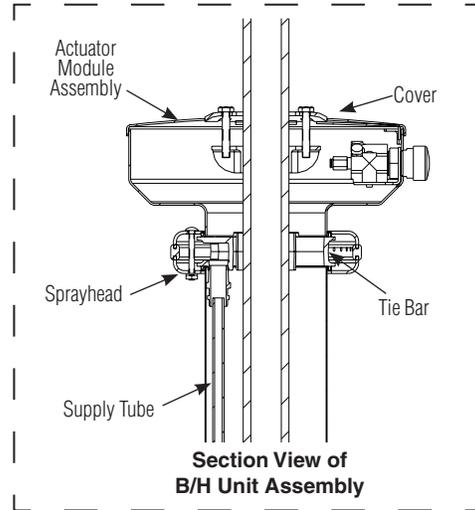


# 4b Assemble TouchTime® – B and H Units without Tie Pipe Option (B Shown)

**A** Install hemmed end (not sharp end) of support tube with gasket onto bowl.

**B** Connect 1/2" supply tubing to sprayhead with 3/8" NPT to 1/2" tube connector and place sprayhead onto support tube. Run the tubing down through the support tube and connect to valve tube connector.

**C** Insert the 1-1/2" vent pipe (supplied by installer) down through the support tube and thread into vented trap.



## 4b Assemble TouchTime® – B and H Units without Tie Pipe Option (B Shown)

**D** Place the TouchTime module assembly on top of the sprayhead. Drop TouchTime module wires down to the valve assembly.



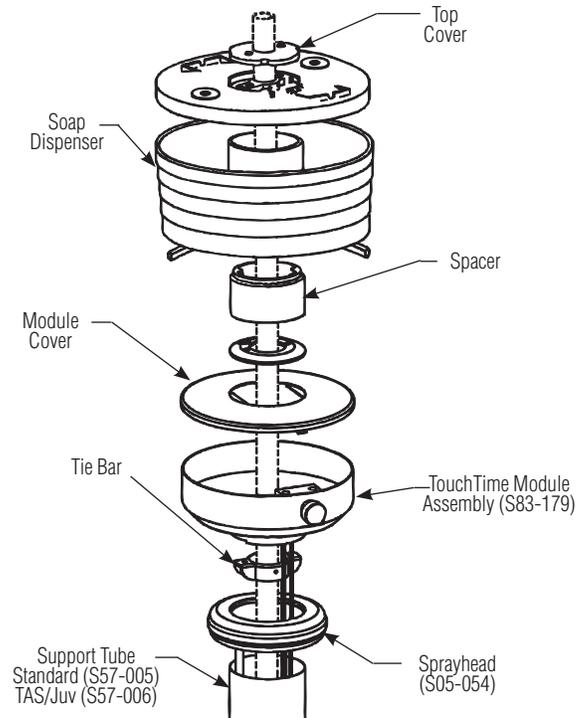
*Skip to step F for units without soap.*

**E** For units with soap option, slide the spacer and soap dispenser over the 1-1/2" pipe.

**F** Position the upper tie bar slightly below the module or soap dispenser and fasten securely to vent pipe with set screws provided. Secure top cover to tie bar with two cap screws provided.

**G** **FOR B UNIT:** Install 1/2" nominal copper supply lines (pass through holes in cover and through support column) and connect supply lines to stops using suitable fittings.

Unit with "H" Drain and TouchTime Module Shown, Also Available with "B" Drain

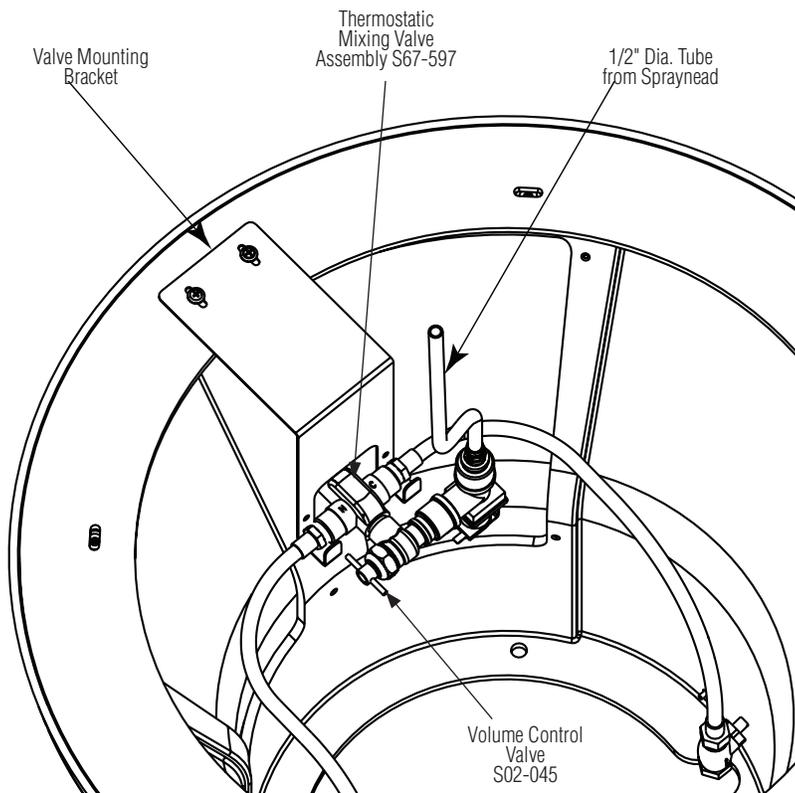
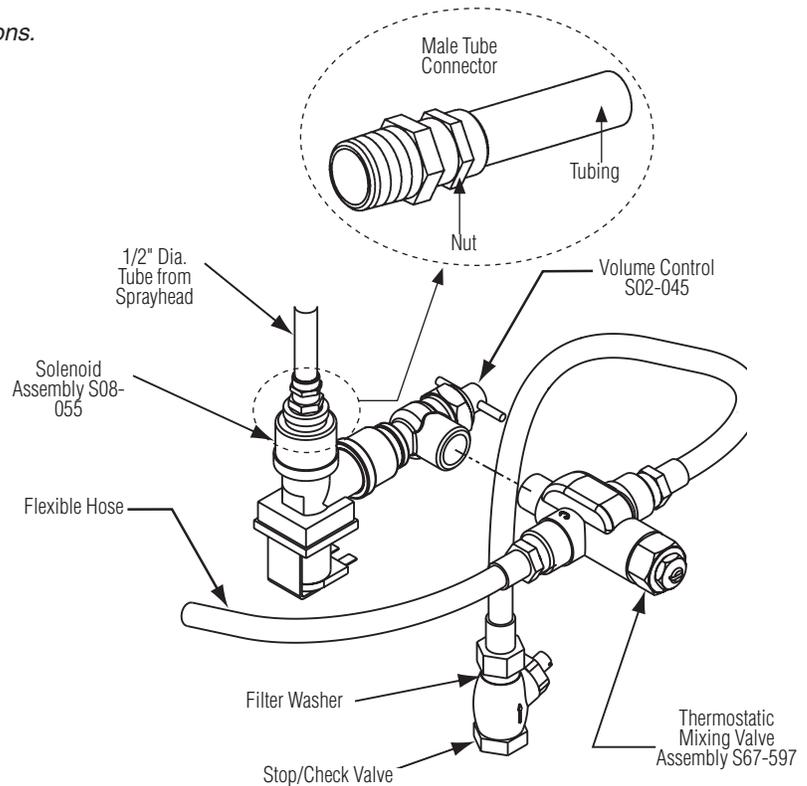


## 5 Connect Valve and Tubing for TouchTime Control

 Flush supply lines before making connections.

**A** Connect 1/2" dia. tubing from the sprayhead to the solenoid assembly. The male connector for the valve assembly will remain tight and leakproof when tubing is cut and installed properly. Follow the procedures below when installing tubing to ensure that you achieve a leakproof seal.

- Using a sharp razor, cut tubing squarely and remove any burrs. DO NOT pinch or crush end of tubing.
- Loosen nut on fitting. Moisten end of tube and push into fitting until it is firmly seated. Tighten nut to secure tube to fitting (make sure nut is securely tightened).
- If connector leaks, reseal tubing according to above procedure. If leaking persists, replace male connector, or call your Bradley representative for assistance.



**B** Hang valve assembly on pedestal bracket. Use wire tie to secure valves.

 For "O" and "B" units (overhead supplies) skip steps C through E.

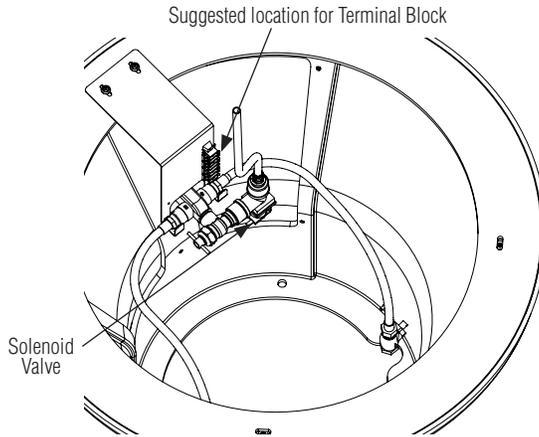
**C** Connect the 1/2" NPT female end of the stop/check valves to the rough-ins.

**D** Attach flexible hose to thermostatic mixing valve, two places.

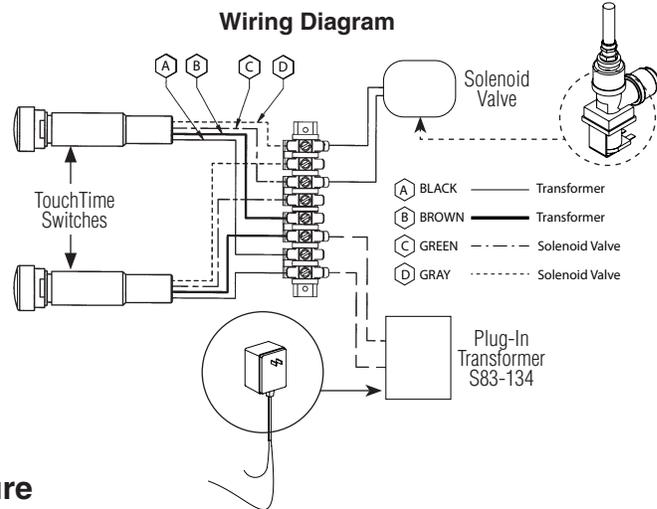
**E** Insert the filter washers (provided) into the swivel nut at the end of the supply hoses and connect to the stop/check valves.

## 6 Make Electrical Connections for TouchTime Control

**A** Mount the terminal block in a convenient location using the hook and loop fastener supplied. Make sure all wires will reach.



**B** Connect the two transformer wires, the two wires from each solenoid valve and the four wires from each TouchTime switch to the terminal block as shown. Plug the 24 VAC Class II transformer (S83-134) into a 110 VAC GFI outlet.



## 7 Activate Water Supply & Adjust Temperature

**A** Turn supplies on. Open check/stop valves and volume control valve completely. Push the TouchTime switch to purge air from the lines and activate water. Water will turn on when the button is released. If the switch does not activate water, recheck electrical connections to the terminal block.



**The Vernatherm Thermostatic Mixing 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.**

**B** Check the temperature when approximately 1.0 GPM water flow is reached and adjust if necessary (the range of the valve is 95°F–115°F (35°C–43°C)). To adjust the temperature follow steps C through G. Be sure to tighten locking nut afterward.

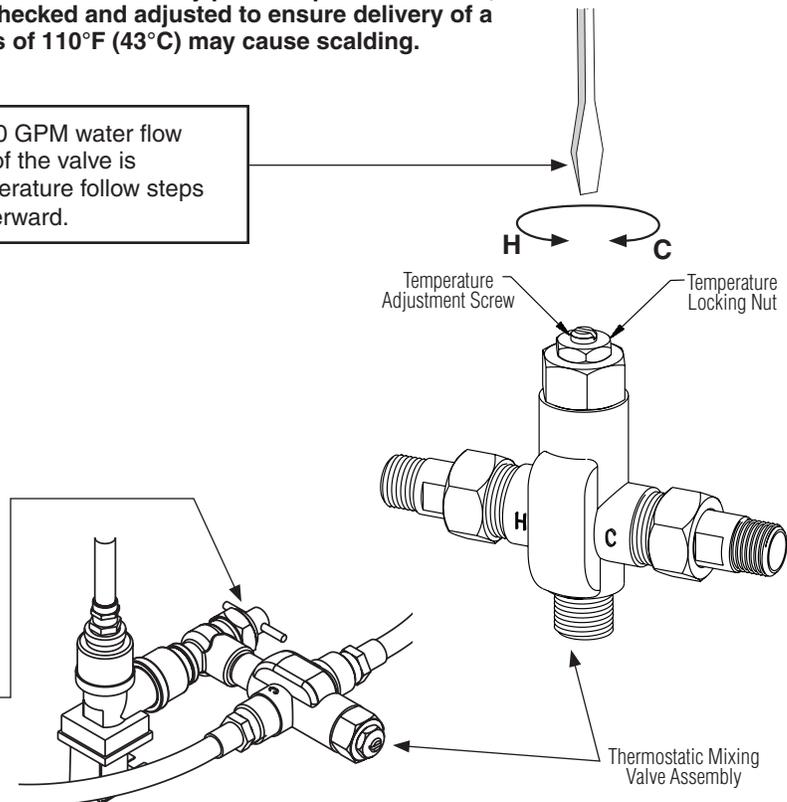
**C** Loosen temperature locking nut with wrench.

**D** Using a blade screwdriver, turn the adjustment stem counterclockwise to increase the temperature or clockwise to decrease the temperature.

**E** Once desired temperature is reached, tighten nut to prevent temperature change.

**F** Clean sprayhead if necessary. Adjust the volume control to control the flow of water.

**G** Attach pedestal access panel and kick plate with hardware provided.



## Soap Maintenance Tips

### Soap Recommendations

Quality soap dispensers require good quality soap and periodic maintenance to properly operate. Bradley soap dispensers will provide dependable, consistent operation over the long term when soap with reasonable viscosity and pH levels are used and when a minimal amount of periodic maintenance is performed on the valves.

Soap thickness is determined by a measurement called viscosity. Soap viscosity should be between 100 cps (centerpoise) and 2500 cps for all Bradley soap dispensers. Thinner soaps are perceived by the users as being “watered down” so users tend to take more than they need, resulting in waste. Thick soaps flow slower and inhibit the “flushing” action of the valves, which allows the soap to congeal in the valve and cause clogs.

The pH (acid) level of the soap should be in the range of 6.5 to 8.5. More acidic soaps (pH levels lower than 6.5) will corrode metal parts (even stainless steel!!) and degrade rubber and plastic components. They will also cause skin irritation. Most inexpensive soaps (typically the pink lotion type) fall into this acidic category and will eventually cause valve failure and metal corrosion. Base soaps (pH levels higher than 8.5) will cause swelling or degradation of rubber and plastic parts and skin irritation.

Generally, any quality soap meeting the viscosity and pH guidelines above will work well with Bradley soap dispensers. PCMX or Isopropanol based antibacterial soaps (within viscosity and pH limits) will also work with Bradley dispensers. Soaps satisfying these basic guidelines will provide consistent flow and reduce clogs.

Most soap dispenser problems are caused by soap that is too thick or corrosive, or by a lack of maintenance. Many soaps come in concentrate form which must be diluted with water. Often, the soap is improperly diluted or used straight out of the bottle, which causes clogging and valve failure. If proper soap is being used, valves that have never been cleaned are usually the source of dispensing problems. Bradley has entered into an agreement with Champion Brand Products to provide additional customer service for purchasers of our dispensers regarding soap issues. They are very helpful and can get to the bottom of almost any soap dispenser related problem. They also sell an excellent “Bradley approved” soap. Please see Soap Instruction Sheet 215-1286 for details about soap valve cleaning or how to contact Champion. With proper maintenance and soap, Bradley dispensers will provide long term, trouble free operation.

### Soap Dispenser Maintenance Instructions

Bradley soap dispensers will provide dependable, consistent operation over the long term when the proper soap is used and when a minimal amount of periodic maintenance is performed on the valves. Valves must be maintained (cleaned) to function properly.

To ensure proper operation of your soap dispenser, follow these instructions:

- Once per month, unscrew valve from reservoir and soak it for 30 minutes in hot water.
- Push valve at least 20 times while it is soaking.
- Flush soap reservoir with hot water while valve is soaking.

In cases of extreme clogging, the valve should be disassembled and the parts should be soaked in hot water or cleaning solution to restore proper functioning. Soap dispensers that will not be used for extended periods of time (schools during summer break, etc.) should be drained, cleaned and left empty until put back into service. Soap left on the outside of dispensers can cause discoloration and corrosion of the reservoir (even on stainless steel units). All soap should be wiped or scrubbed off daily, then the outside of the dispenser should be rinsed with clear water and dried with a soft cloth.

## Cleaning/Maintenance Instructions for Gel-coated Fiberglass

**Material Description:** The Terreon® Washfountains referenced in this installation manual use a gel-coated fiberglass pedestal.

**Routine Cleaning:** The gel-coated pedestal should be cleaned daily or as often as needed with a mild solution of detergent and water. Always use a soft cloth to avoid damage to the finish.

**Repair Kits:** There are no repair kits available for fiberglass materials. However, replacement parts are available, contact your Bradley representative for pricing and part numbers.



**Do not expose gel-coated fiberglass to solvents as they will damage the material and may create harmful fumes.**

**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 its 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.

## Cleaning/Maintenance Instructions for Terreon®

**Material Description:** Terreon® is a NAHB Certified densified solid surface material composed of polyester resin and is resistant to chemicals, stains, burns and impact. Surface damage can be easily repaired with everyday cleansers or fine grit abrasives.

**Routine Cleaning:** Clean daily or as often as conditions require using a standard commercial or household cleaner such as Formula 409® or Windex®.

**Stubborn Stains:** 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.

### Special Situations for Material

**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. Rinse thoroughly after cleaning.

**Restoring the Surface:** Use Hope's® Solid Surface cleaner and polish to refresh and protect the Terreon Solid Surface material. Bradley recommends additional care and maintenance for the darker colored Terreon, for complete instructions on this additional maintenance see Bradley document #1505.



**Do not use strong acid or alkaline chemicals and cleansers to clean Terreon. If these chemicals come in contact with the Terreon 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.**

**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.*

## Cleaning and Maintenance Instructions 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 manufactures 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 manufactures instructions and apply in the same direction as the polish lines.



**Never use ordinary steel wool or steel brushes on stainless steel. Always use stainless steel wool or stainless steel brushes.**

### Special Situations for Material

**Finger Prints and Smears:** To remove fingerprints or smears use a high quality stainless steel cleaner and polish in accordance with the manufactures instructions. Many of these products leave a protective coating the 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 manufactures 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.



**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.



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

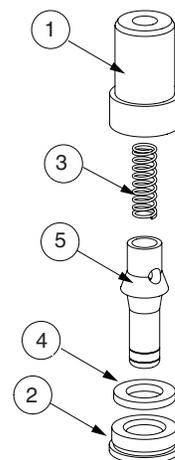
### Parts List - Soap Valves (S09-007S, S09-057S, S09-010A)

#### Soap Valve - Liquid Parts List

Item	Part No.	Description	Attaching Parts S09-007S
			Qty
1	118-025	Valve Body	1
2	110-007	Packing Nut	1
3	135-001L	Spring	1
4	125-001BU	Washer	1
5	119-028	Plunger	1
*	161-014	Nut	1
*	124-001BV	Washer	2
*	142-002AH	Washer - Stainless Steel	1

\* Not Illustrated

This valve delivers a measured amount of soap with each upward stroke. The soap dispenser has been standard on washfountains since 1983 and is not well-suited for very thick lotion soaps.



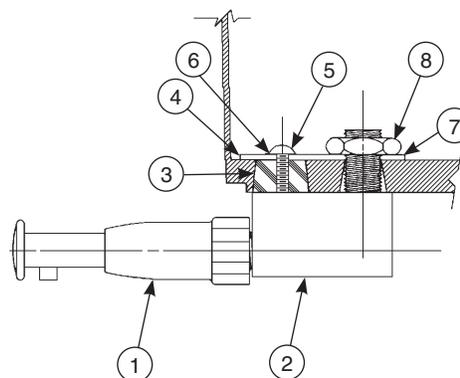
Soap Valve - Liquid S09-007S

#### Soap Valve - Lotion Parts List

Item	Part No.	Description	Valve Assembly S09-057	Attaching Parts S09-057S
			Qty	
1	S09-040	Valve	1	1
2	S53-045	Adaptor	1	1
3	125-001AN	Stopper	—	1
4	159-114	Reinforcing Plate	—	1
5	160-176	Screw	—	1
6	124-001AT	Washer	—	1
7	124-001BV	Washer	—	1
8	110-057	Nut	—	1



Lotion soap will clog liquid soap valves. Use only lotion soap valves with lotion soap.



Soap Valve - Lotion S09-057S

#### Soap Valve - Powdered Parts List

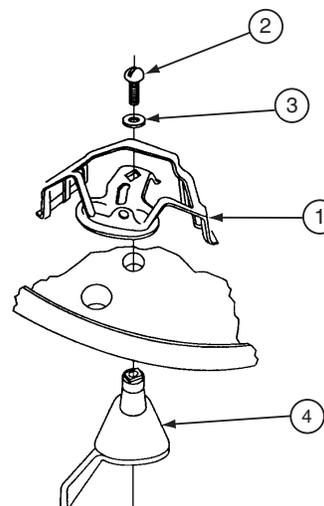
Item	Part No.	Description	S09-010A
			Qty
1	S62-002	Agitator / Slide Assembly	1
2	160-069	Screw, 1/4-20 RD	1
3	142-002X	Washer, 1/4 Split-Lock	1
4	192-004	Lever - Powdered Soap	1



Reducer plugs are available for use with fine granulated soap to reduce the flow.



Valves can be changed from powdered to liquid by plugging the innermost, or "bearing" hole with rubber plug, part number 125-001AK. To change from liquid to powdered, the plug must be removed. If none is present, it will be necessary to drill out the bearing hole with a 1/2" or 5/8" drill. The plastic container configuration forms a natural template for locating the bearing hole.

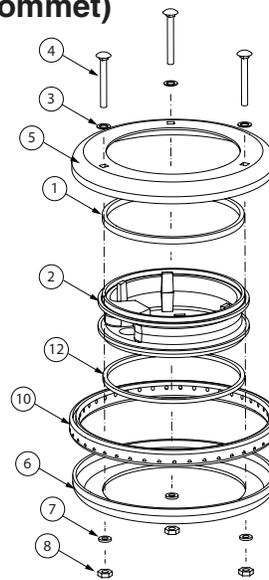


Soap Valve - Powdered S09-010A

### Troubleshooting Sprayheads (Standard with Neoprene Spray Ring Grommet)



Repair kit does not include sprayhead grommet. Order as a separate item.



**Sprayheads Parts List**

Item	Part No.	Description	Sprayhead Assembly S05-054A	Repair Kit S45-051
			Qty	
1	125-001DE	Neoprene Washer-Top	1	1
2	139-031	Sprayhead Manifold	1	—
3	124-001AL	Washer	3	4
4	160-211	Carriage Bolt	3	4
5	115-061	Sprayhead Top	1	—
6	116-008	Sprayhead Bottom	1	—
7	124-001AT	Washer	3	4
8	161-025	Nut	3	4
10	124-020D	Sprayhead Grommet - Circle	1	—
12	125-001DF	Neoprene Washer-Bottom	1	1

Problem	Cause	Solution
Water splashes over the rim of the bowl.	Foreign matter has reduced the size of the sprayhead slots, causing greater pressure at the open slots.	Clean the sprayhead: 1. Disassemble the sprayhead and dislodge any dirt, lime build-up and foreign debris with a wire brush. 2. Sprayheads with rubber grommet spray rings may be cleaned by rubbing a coin over the grommet. 3. Throttle down the volume control (water spray should strike the bowl without splashing outside of the bowl).
Water flow diminishes from the sprayhead.	Strainer portion of the stop-strainer-check valve is plugged.	Remove and clean the strainer screen from the stop-strainer-check valve. <i>The sprayhead shown above includes a perforated neoprene spray ring grommet that is self-cleaning. The water pressure flexes the spray holes which slows accumulation of foreign matter and tends to "break loose" any such deposits that may have accumulated.</i>

### Troubleshooting TouchTime®



**Make sure there is electrical power going to the transformer and there are 24 volts coming from the transformer.**



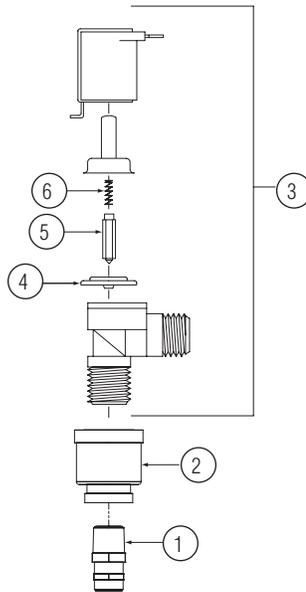
**Be sure to turn off electrical and water supplies as instructed during troubleshooting.**

Problem	Cause	Solution
The TouchTime® push button unit does not function properly.	Power out	Make sure the water supply and the 24 VAC power are both turned on.
	Loose wiring connection	1. Turn the electrical power off. 2. Check the wiring for loose connections or corrosion and correct if necessary. 3. Turn the electrical power back on and retest the push button.
	Defective Transformer	1. Turn the water supply off (the electrical power should remain on). 2. Set the volt meter scale to be able to read "24 VAC". Connect the volt meter leads from the transformer. 3. The voltage reading should indicate 24 VAC ± 10%. If you are unable to obtain a proper voltage reading, the transformer is not working properly and needs to be replaced. Contact your Bradley representative to order a replacement transformer.
	Defective Solenoid Valve	1. Disconnect the Green/Gray wires from the solenoid and the brown transformer leads from the terminal block. 2. Connect the brown transformer leads directly to the solenoid. The solenoid coil should activate and you should hear a single click and a humming noise. 3. If the solenoid still does not function, turn off the electrical power. Then remove the four screws that secure the clamping plate to the valve body. Be careful not to lose the armature or spring. 4. Remove the diaphragm and clean it gently but thoroughly. Hold the diaphragm up to a light and find the small hole which is located about halfway between the inner diameter and the outer diameter. Make sure the hole in the diaphragm is not plugged. 5. Reassemble the valve in reverse order and test again with power from the transformer. If the solenoid coil does not activate, the solenoid valve is not working properly and needs to be replaced. Contact your Bradley representative to order a replacement solenoid valve assembly.
Defective Switch	The TouchTime® switch assembly is not working properly and needs to be replaced. Contact your Bradley representative to order a replacement switch assembly.	

### Parts List - Solenoid Valve (S27-250)

Item	Part No.	Description
1	269-626	Male Connector
2	269-1246	Reducing Coupling
3	S27-250	Solenoid Valve Assembly
4	269-1346	Diaphragm*
5	269-577	Armature*
6	269-578	Spring*

\* Repair Kit S65-155

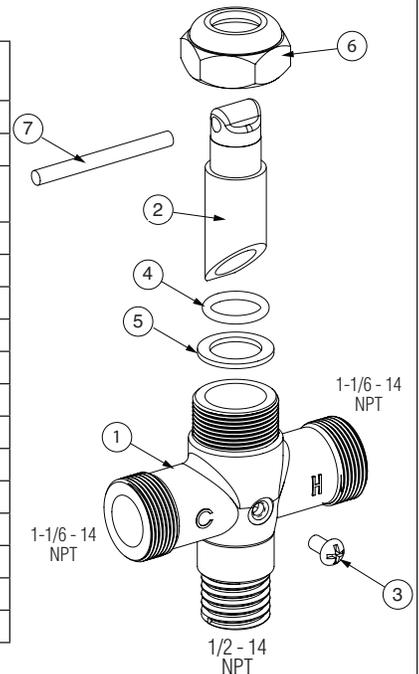


### Parts List - Mixing Valve — Manual (S01-038)

#### Mixing Valve Parts List

Item	Part No.	Description	Valve Assy	Valve Assy	Valve Assy	Valve Assy	Repair Kit
			S01-038	S01-038S	S01-038A	S01-038AS	S45-197
			Qty				
1	118-034	Mixing Valve Body - Brass	1	1	—	—	—
1	118-034A	Mixing Valve Body - Chrome	—	—	1	1	—
2	119-059	Mixing Valve Core	1	1	1	1	1
3	160-197	Screw - Brass	1	1	—	—	—
3	160-189	Screw - Stainless Steel	—	—	1	1	—
4	125-001BC	O-Ring	1	1	1	1	1
5	124-001BD	Fiber Washer	1	1	1	1	1
6	121-016	Bonnet - Brass	1	1	—	—	1
6	121-016A	Bonnet - Chrome	—	—	1	1	—
7	152-038	Roll Pin	1	1	1	1	1
*	129-007	Tailpiece - Brass	—	2	—	—	—
*	110-005	Tailpiece Nut - Brass	—	2	—	—	—
*	129-007A	Tailpiece - Chrome	—	—	—	2	—
*	110-005A	Tailpiece Nut - Chrome	—	—	—	2	—
*	124-001AF	Tailpiece Washer	—	2	—	2	2

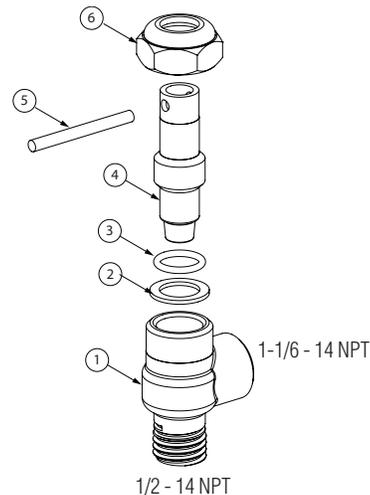
\* Parts not shown.



### Parts List - Volume Control Valve (S02-045)

#### Volume Control Valve Parts List

Item	Part No.	Description	Brass Valve	Chrome Valve	Repair Kit
			S02-045	S02-045A	S45-198
			Qty		
1	118-033B	Valve Body	—	1	—
1	118-033	Valve Body	1	—	—
2	124-001BD	Fiber Washer	1	1	1
3	125-001BC	O-Ring	1	1	1
4	119-060	Valve Core	1	1	1
5	152-038	Roll Pin	1	1	1
6	121-016	Bonnet	1	—	1
6	121-016A	Bonnet	—	1	—



## Troubleshooting Vernatherm Thermostatic Mixing Valve (S01-525) — Repair Kit S65-259



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

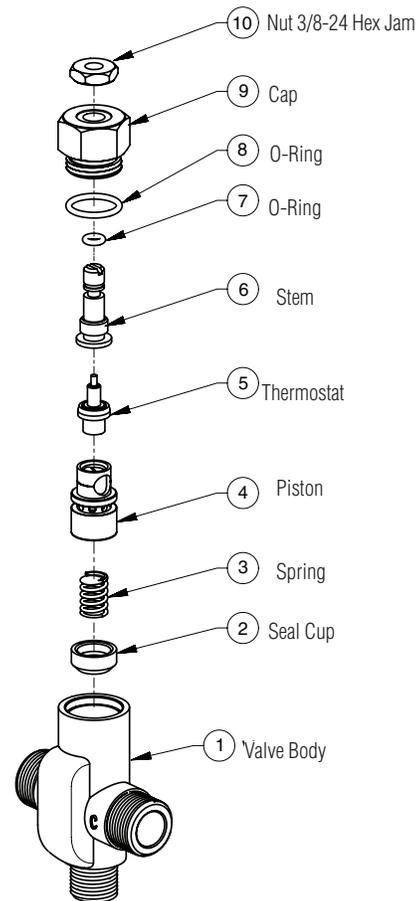
- If stop/check valves are used, make sure that they are fully open.
- Make sure that the hot and cold inlet pipes are connected properly, and that there are no cross-connections or leaking stop/check valves.
- Check the hot water heater output to make sure that it is at least 20° F above the set temperature.



*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.*

### Valve Repair Kit S65-259

Item	Part No.	Qty.	Description
5	S39-413	1	Thermostat
7	125-001BX	1	O-Ring
8	125-157	1	O-Ring



Problem	Cause	Solution
Limited water flow	Dirt and debris have built up in the valve or strainer.	Remove and clean strainer. If strainer needs to be replaced, order Bradley part no. 173-028. Check the piston for smooth movement. 1. Remove the valve's cap and thermostat. 2. Push down on the piston with your finger (the piston should move freely). If the movement is not as it should be, the piston needs to be cleaned. Follow the method outlined below for cleaning the piston and valve body: <ul style="list-style-type: none"> <li>• Remove the thermostat.</li> <li>• Lift the piston out with a needle-nose pliers and remove the spring.</li> <li>• Any cleaner suitable for brass and stainless steel may be used (if cleaning with suitable cleaner is not sufficient to remove debris, a 400-grit sandpaper may be used to polish and hone the piston and valve body).</li> <li>• Snap spring into piston (will detent) and reassemble into the valve body. Retest the piston.</li> </ul> 3. If, after a thorough cleaning, the piston does not move freely, the piston must be replaced. Contact your Bradley representative and ask for Repair Kit (part number S65-259).
External leaks in the system	O-rings have been damaged	Replace o-rings where necessary. For replacement of the O-rings, contact your Bradley representative and ask for Repair Kit (part number S65-259)
Improper water temperature or temperature fluctuation.	Thermostat is slowly failing or not working at all.	Check the thermostat for proper operation. 1. At room temperature (80° F or less) remove the cap and thermostat. 2. Place thermostat into a container with 115° F water. The pushrod should pop out of the thermostat approximately 1/10". 3. If thermostat pushrod does not pop out, replace thermostat (part no. S65-259).
	Valve temperature is not properly set.	Adjust the temperature. Using a blade screwdriver, turn the adjustment stem counterclockwise to increase the temperature or clockwise to decrease the temperature.