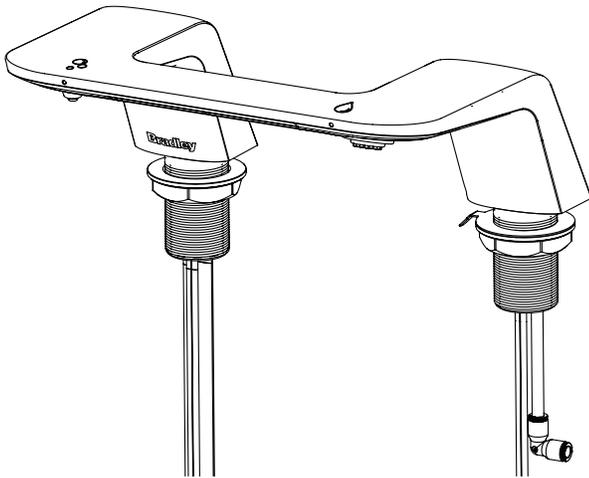


# Installation

## WBD1

### WashBar® Duo



### Table of Contents

Safety Information .....	2
Supplies Required .....	2
Components .....	3
Dimensions:	
Customer Supplied Countertop with WBD1 .....	6
Verge® LVA-Series with WBD1 .....	7
Verge LVA-Series with WBD1 .....	8
LD-3010 with WBD1 .....	9
Structural Rough-Ins:	
LVAD1 (1-Station) .....	10
LVAD2 (2-Station) .....	11
LVAD3 (3-Station) .....	12
Plumbing & Electrical Rough-Ins:	
LVAD1 (1-Station) .....	13
LVAD2 (2-Station) .....	14
LVAD3 (3-Station) .....	15
WashBar Installation .....	16
Aerator Installation .....	16
Attach Soap Motor and Soap Container Bracket .....	17
Control Box and Valve Installation:	
Customer Supplied Countertop .....	18
LVA and LD-3010 Decks .....	19
LVA 2-Station .....	20
LVA 3-Station .....	21
Soap Installation .....	22
Electrical Connections .....	23
Adjust Temperature with Water Running .....	23
Master Control Box .....	24
Software Update .....	28
Displaying Software Revision and Cycle Counts on LCD Display .....	28
Cleaning and Maintenance .....	29
Liquid Soap Recommendations and Dispenser Maintenance .....	30



[Scan or click code to view  
Installation Guide \(French\)](#)



[Scan or click code to view  
Installation Guide \(Spanish\)](#)



**Read the instructions in this manual before beginning installation. Save these instructions and refer to them for inspection, maintenance, and troubleshooting information.**

For questions regarding the operation, installation or maintenance of this product, visit [bradleycorp.com](http://bradleycorp.com) or call 800.BRADLEY (800.272.3539).

Product warranties and parts information may also be found under "Resources" on our website at [bradleycorp.com](http://bradleycorp.com).



## Safety Information

### **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.

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

### **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. Product warranties may be found under "Products" on our website at [www.bradleycorp.com](http://www.bradleycorp.com).

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.

For standard height mounting, do not exceed the recommended 33.5" distance from the fixture rim to the finished floor.

Troubleshooting and internal maintenance must be performed by qualified service personnel.

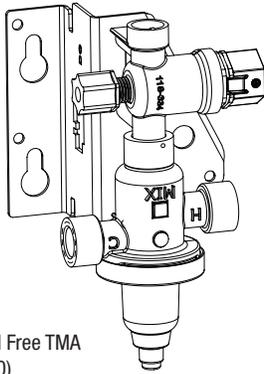
## Supplies Required

- (4) #10 fasteners and wall anchors for soap tank brackets (minimum pull-out rating of 100 lb)
- ½" hot/cold or tempered stub-out
- (1) NEMA 5-15R Receptacle, 125V GFCI
- Drill
- Basin wrench
- Tape measure
- Phillips screw driver
- Flat head screw driver
- 5/16" nut driver
- 5/16" socket (with or without extension)

# Components

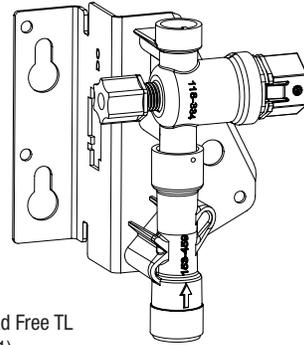
## 1-Station

DC Lead Free Valve Assembly,  
Single TMA (S08-2401TMA)



Hose/90 Stop Lead Free TMA  
(S45-2730)

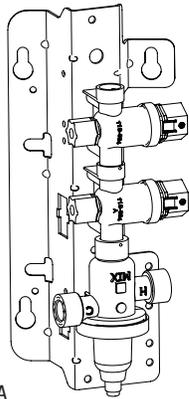
DC Lead Free Valve Assembly,  
Single TL (S08-2401TL)



Hose/90 Stop Lead Free TL  
(S45-2731)

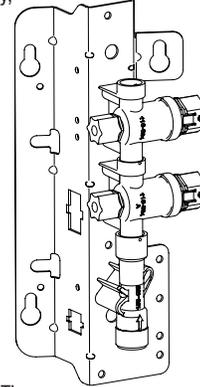
## 2-Station

DC Lead Free Valve Assembly,  
Single TMA (S08-2402TMA)



Hose/90 Stop Lead Free TMA  
(S45-2730)

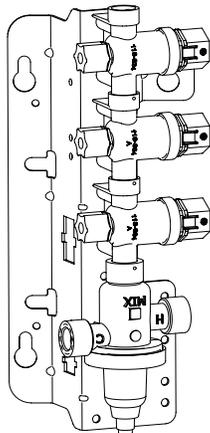
DC Lead Free Valve Assembly,  
Single TL (S08-2402TL)



Hose/90 Stop Lead Free TL  
(S45-2731)

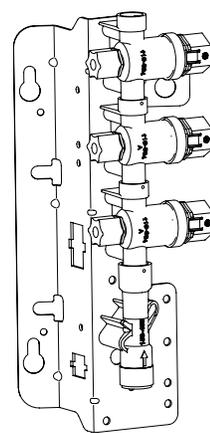
## 3-Station

DC Lead Free Valve Assembly,  
Single TMA (S08-2403TMA)



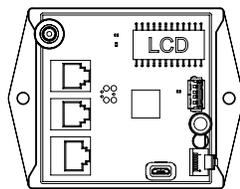
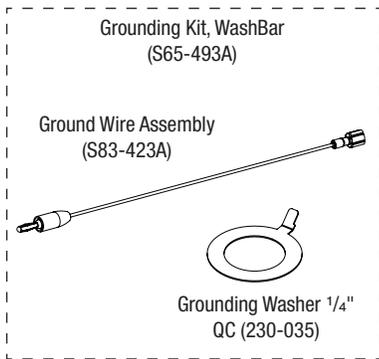
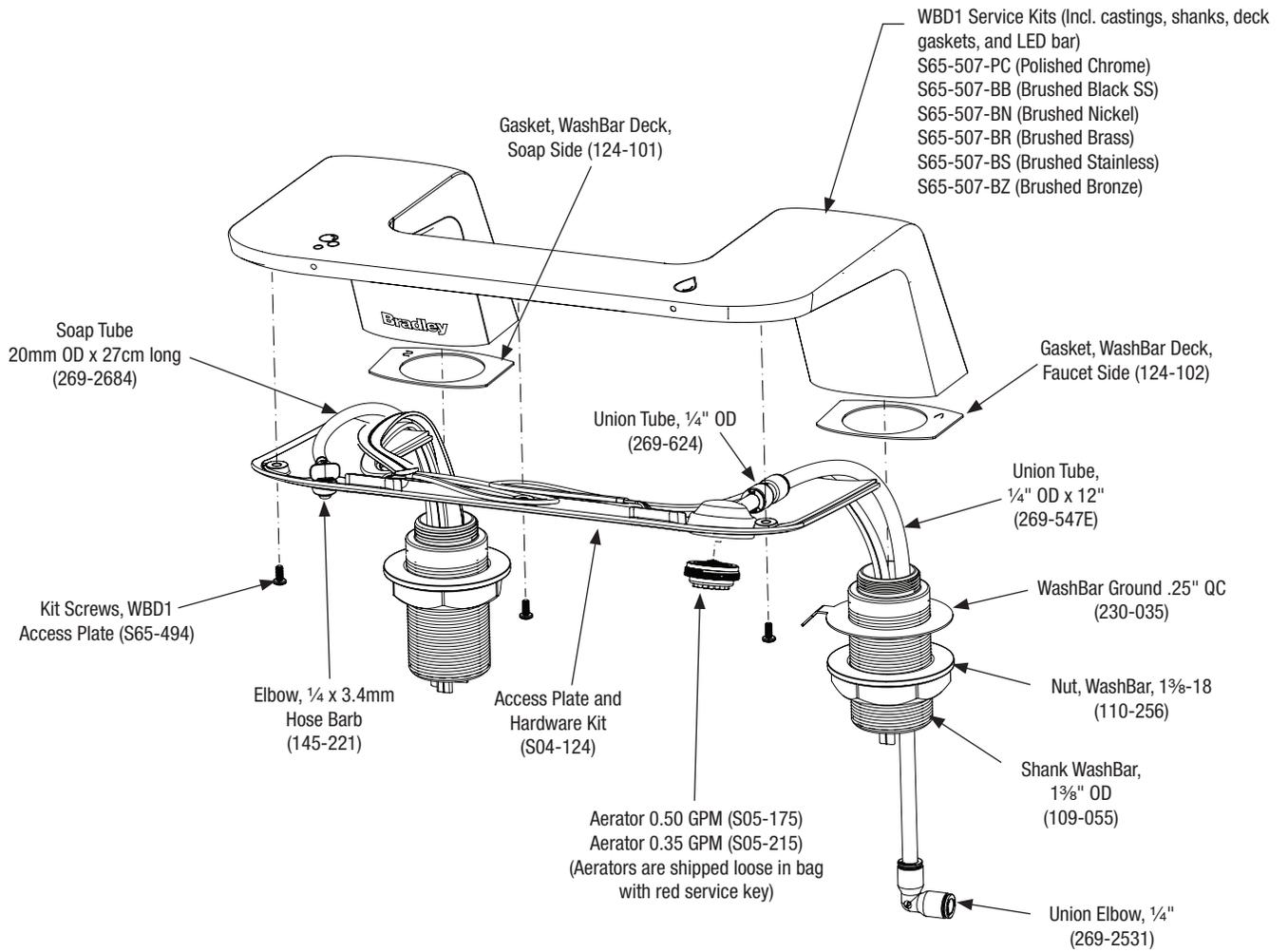
Hose/90 Stop Lead Free TMA  
(S45-2730)

DC Lead Free Valve Assembly,  
Single TL (S08-2403TL)

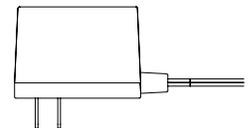
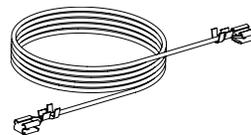


Hose/90 Stop Lead Free TL  
(S45-2731)

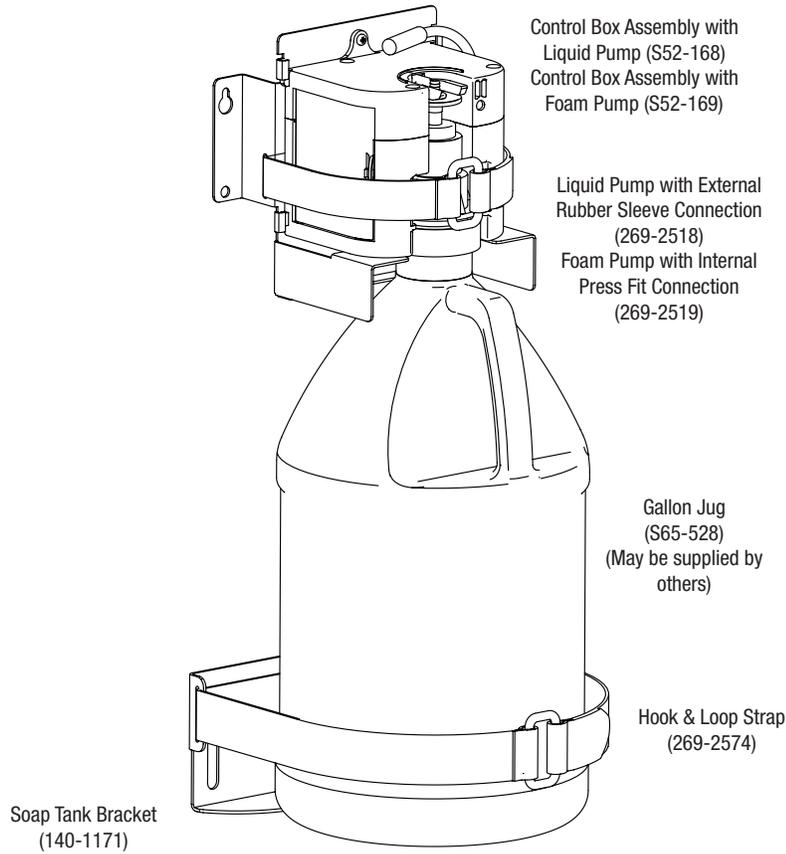
# Components



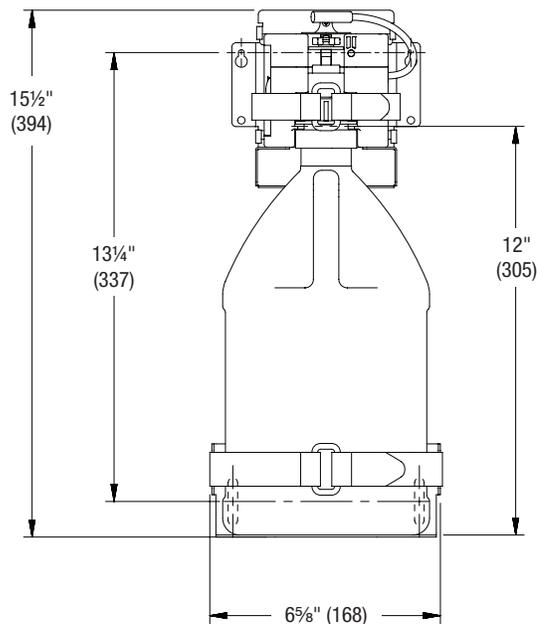
#10 x 3/8" Screw (2x)  
 (P18-054)



# Soap System Components



(mm)



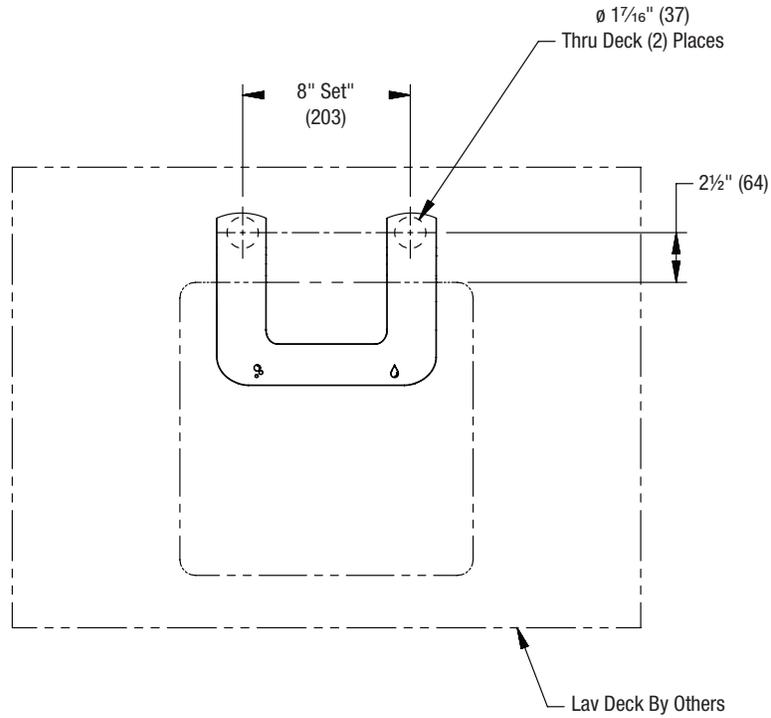
# Dimensions – Customer Supplied Countertop with WBD1

## Top View

(mm)

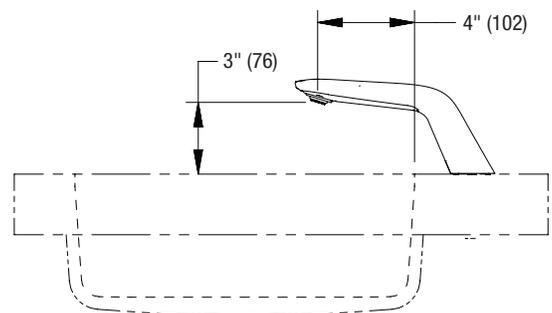
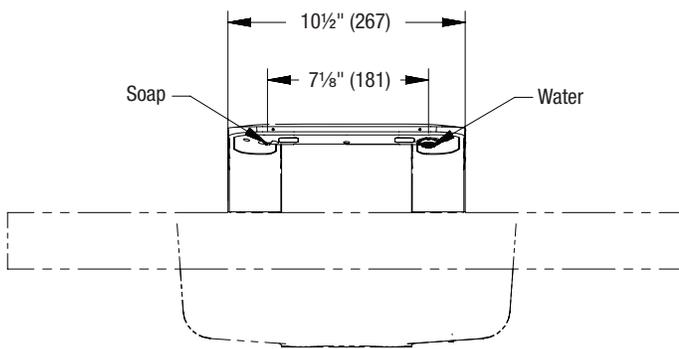


1-Station shown.  
Other configurations are similar.



## Front View

## Side View



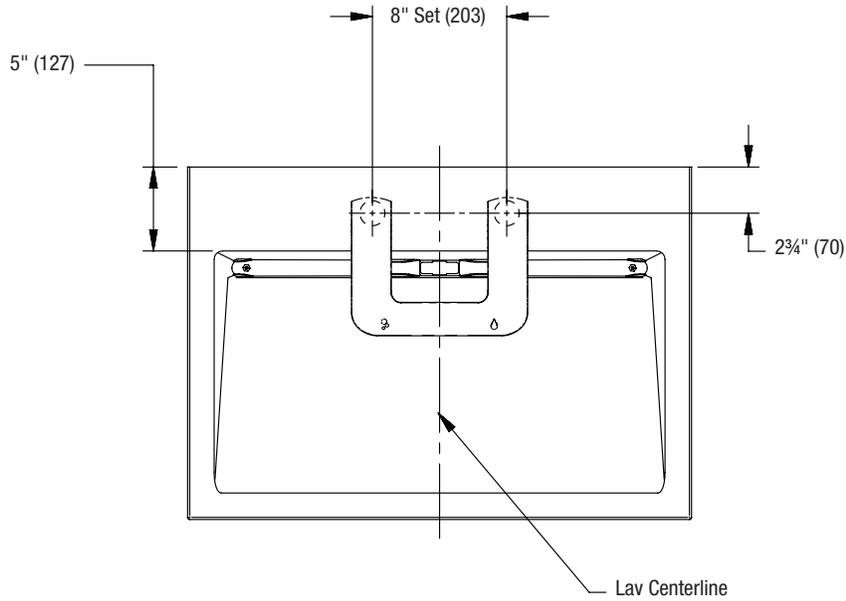
# Dimensions – Verge® LVA-Series with WBD1

## Top View

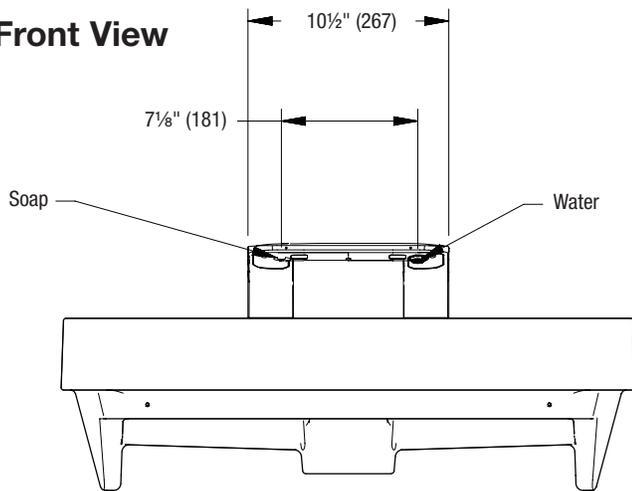
(mm)



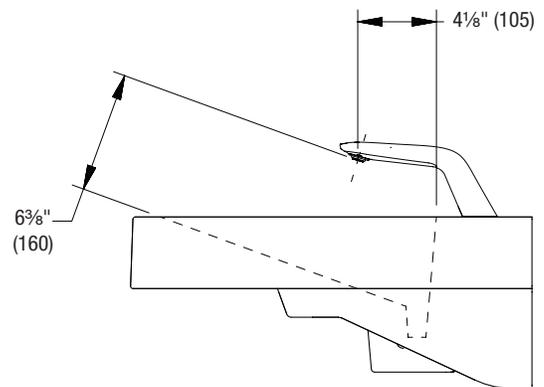
1-Station shown.  
Other configurations are similar.



## Front View



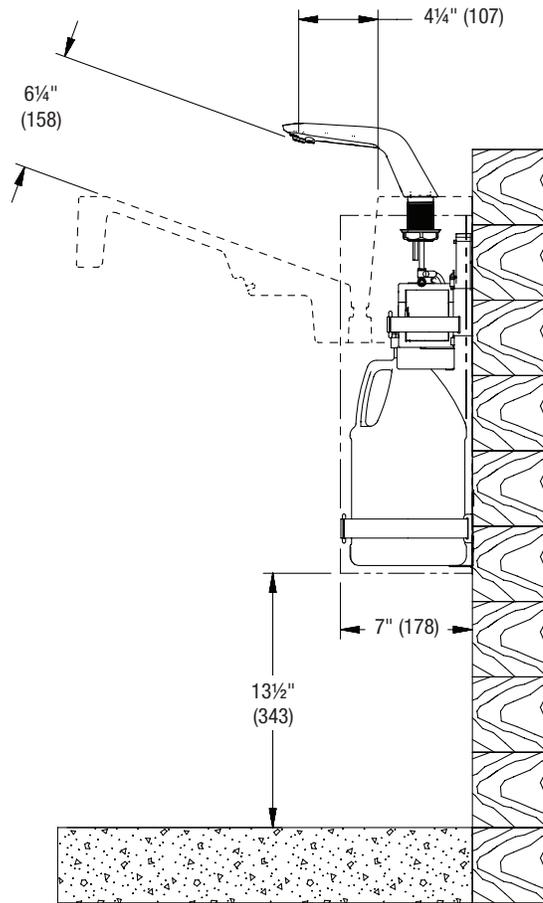
## Side View



# Dimensions – Verge LVA-Series with WBD1

Side View with Soap

(mm)



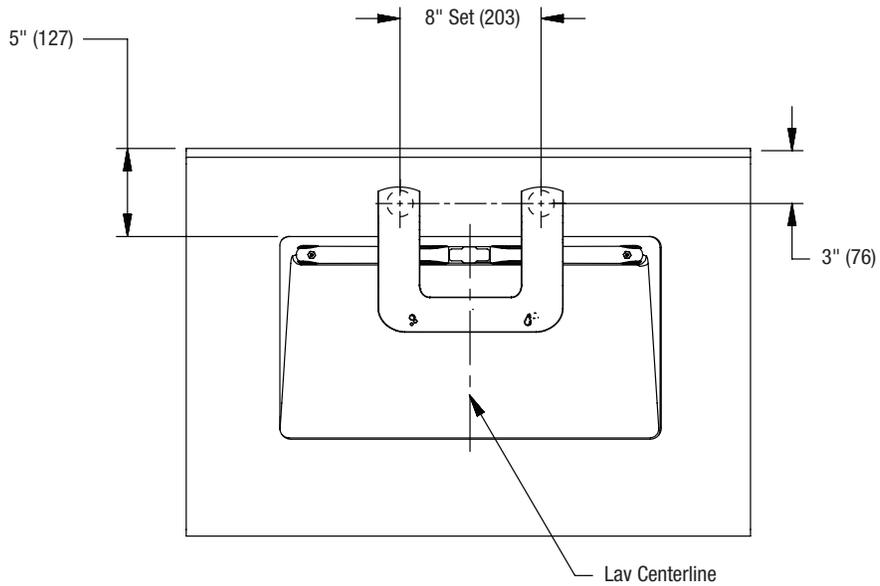
# Dimensions – LD-3010 with WBD1

## Top View

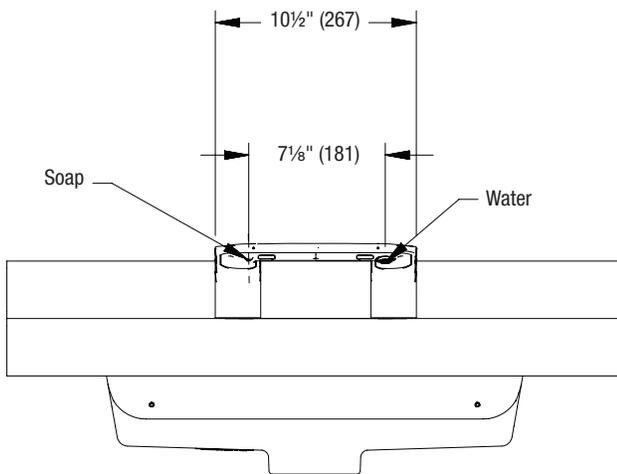
(mm)



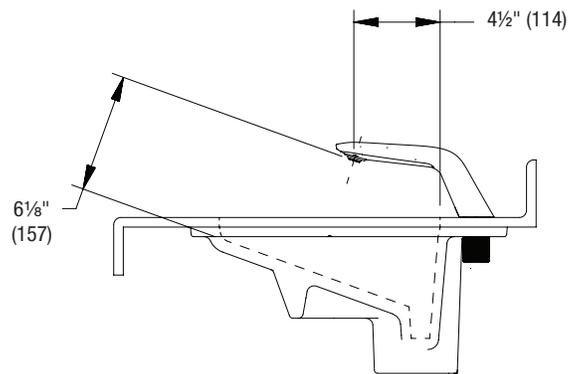
1-Station shown.  
Other configurations are similar.



## Front View



## Side View





# Structural Rough-Ins for LVAD2 (2-Station)

(mm)



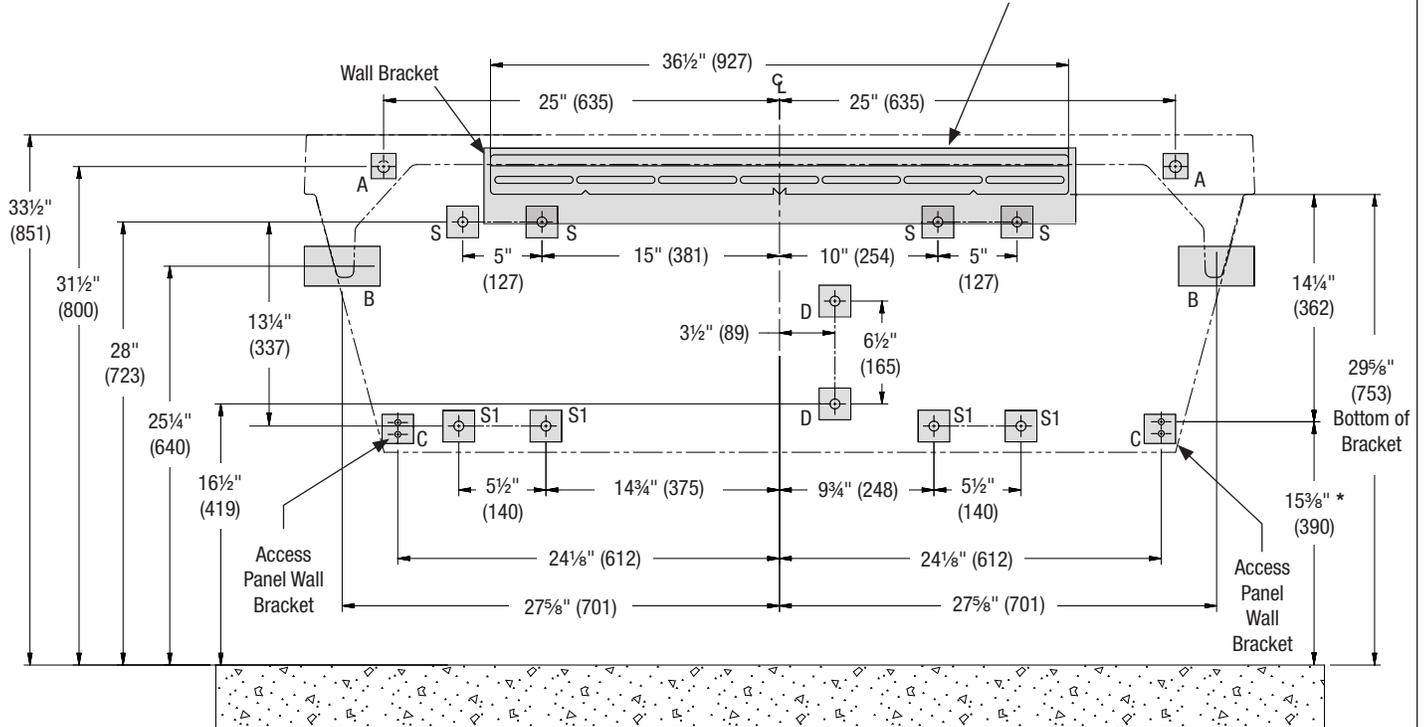
Mounting for Standard ADA and TAS height shown.



Points A, B, and C require sufficient backing compliant with local building codes.

**⚠ WARNING** Ensure bowl is completely seated in the wall bracket and securely fastened to the wall at point A.

Secure bracket to wall using min. (2) 3/8" anchor bolts to the left of C/L and min. (2) 3/8" anchor bolts to the right of C/L. The (2) anchor bolts to the right of C/L must be min. 16" apart from the anchor bolts to the left of C/L. When mounting is complete, check to ensure the bracket is level. See Step 1: Bracket Mounting for more information.



CODE	DESCRIPTION	QTY.
A	Install (1) 3/8" wall anchor with a minimum pull-out force of 1,000 lb per local codes at locations shown	2
B	Provide structural backing compliant with local building codes.	2
C	Install wall anchor with a minimum pull-out force of 100 lb per local codes at locations shown	4
D	#10 Wall Anchors for Valve Bracket	2
S	#10 Wall Anchors for Soap Control Box Bracket	4
S1	#10 Wall Anchors for Soap Tank Bracket (100 lb pull out force)	4

RIM HEIGHT	VERTICAL HEIGHT ADJUSTMENTS	FIXTURE STYLE
33 1/2"	No Adjustment	Standard Height ADA, TAS, and CSA
30 1/2"	Subtract 3"	Juvenile ADA and TAS

# Structural Rough-Ins for LVAD3 (3-Station)

(mm)



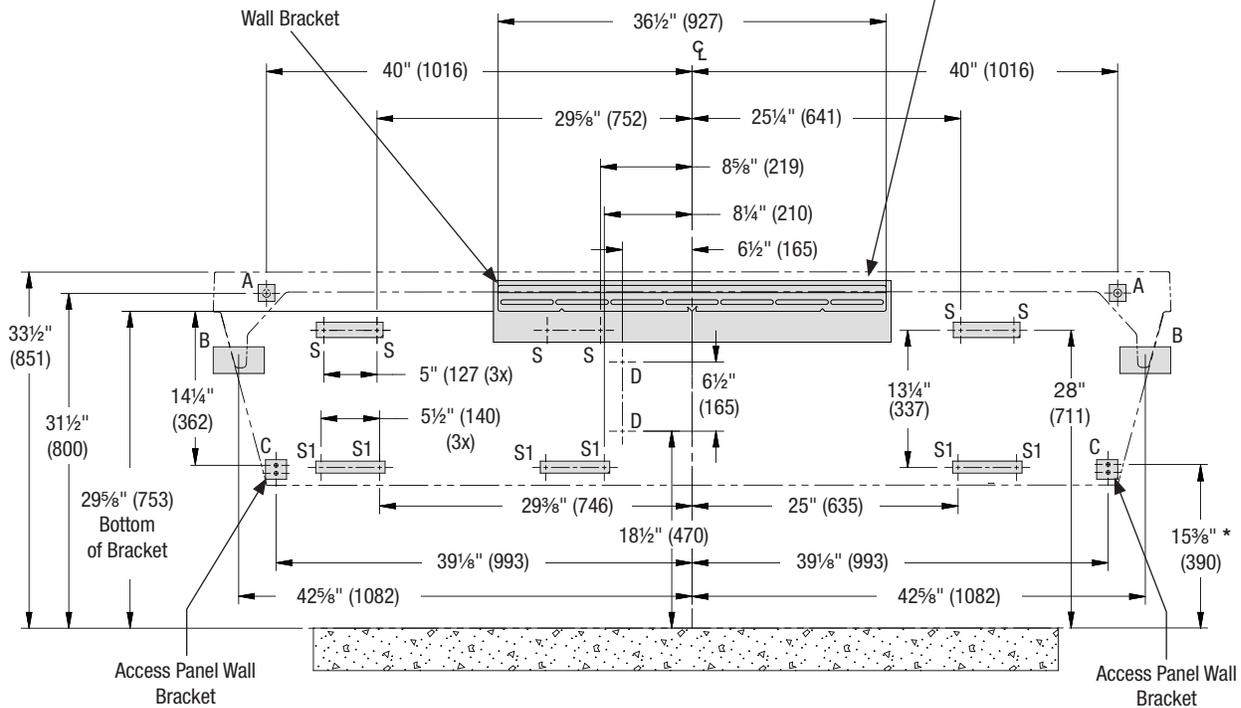
Mounting for Standard ADA and TAS height shown.



Points A, B, and C require sufficient backing compliant with local building codes.

**⚠ WARNING** Ensure bowl is completely seated in the wall bracket and securely fastened to the wall at point A.

Secure bracket to wall using min. (2) 3/8" anchor bolts to the left of C/L and min. (2) 3/8" anchor bolts to the right of C/L. The (2) anchor bolts to the right of C/L must be min. 16" apart from the anchor bolts to the left of C/L. When mounting is complete, check to ensure the bracket is level. See Step 1: Bracket Mounting for more information.



CODE	DESCRIPTION	QTY.
A	Install (1) 3/8" wall anchor with a minimum pull-out force of 1,000 lb per local codes at locations shown	2
B	Provide structural backing compliant with local building codes.	2
C	Install wall anchor with a minimum pull-out force of 100 lb per local codes at locations shown	4
D	#10 Wall Anchors for Valve Bracket	2
S	#10 Wall Anchors for Soap Control Box Bracket	6
S1	#10 Wall Anchors for Soap Tank Bracket (100 lb pull out)	6

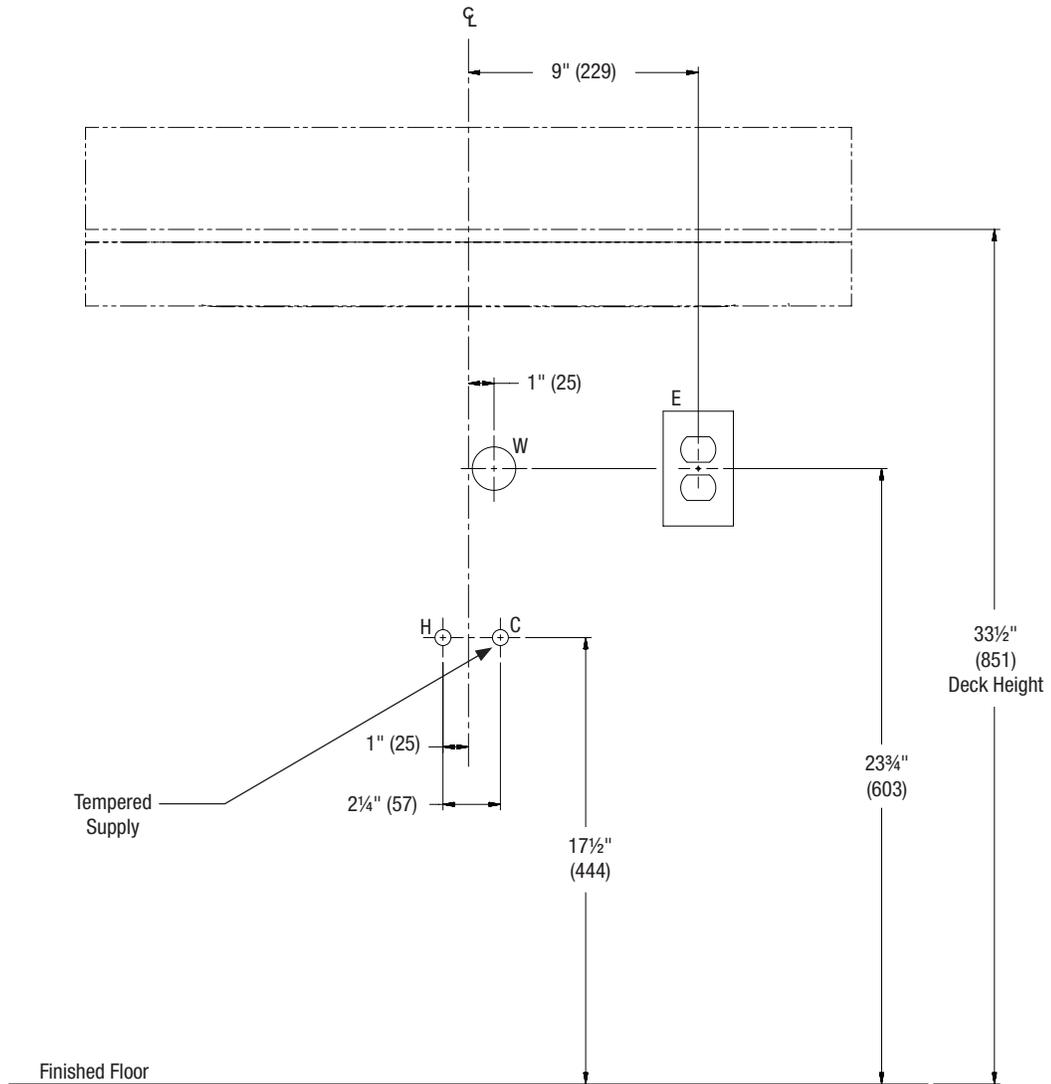
RIM HEIGHT	VERTICAL HEIGHT ADJUSTMENTS	FIXTURE STYLE
33 1/2"	No Adjustment	Standard Height ADA, TAS, and CSA
30 1/2"	Subtract 3"	Juvenile ADA and TAS

# Plumbing & Electrical Rough-Ins for LVAD1 (1-Station)

(mm)



Standard ADA height shown.  
Subtract or add for other accessibility guidelines.



CODE	DESCRIPTION	QTY.
A	1 1/2" NPT Drain, Stub-out 2" from wall	1
E	NEMA 5-15R Receptacle, 125V GFCI (protected electrical outlet not required for battery powered systems)	1
H,C	1/2" nominal (5/8" O.D. Comp.) Hot/Cold supplies, stub-out 2" from wall	1

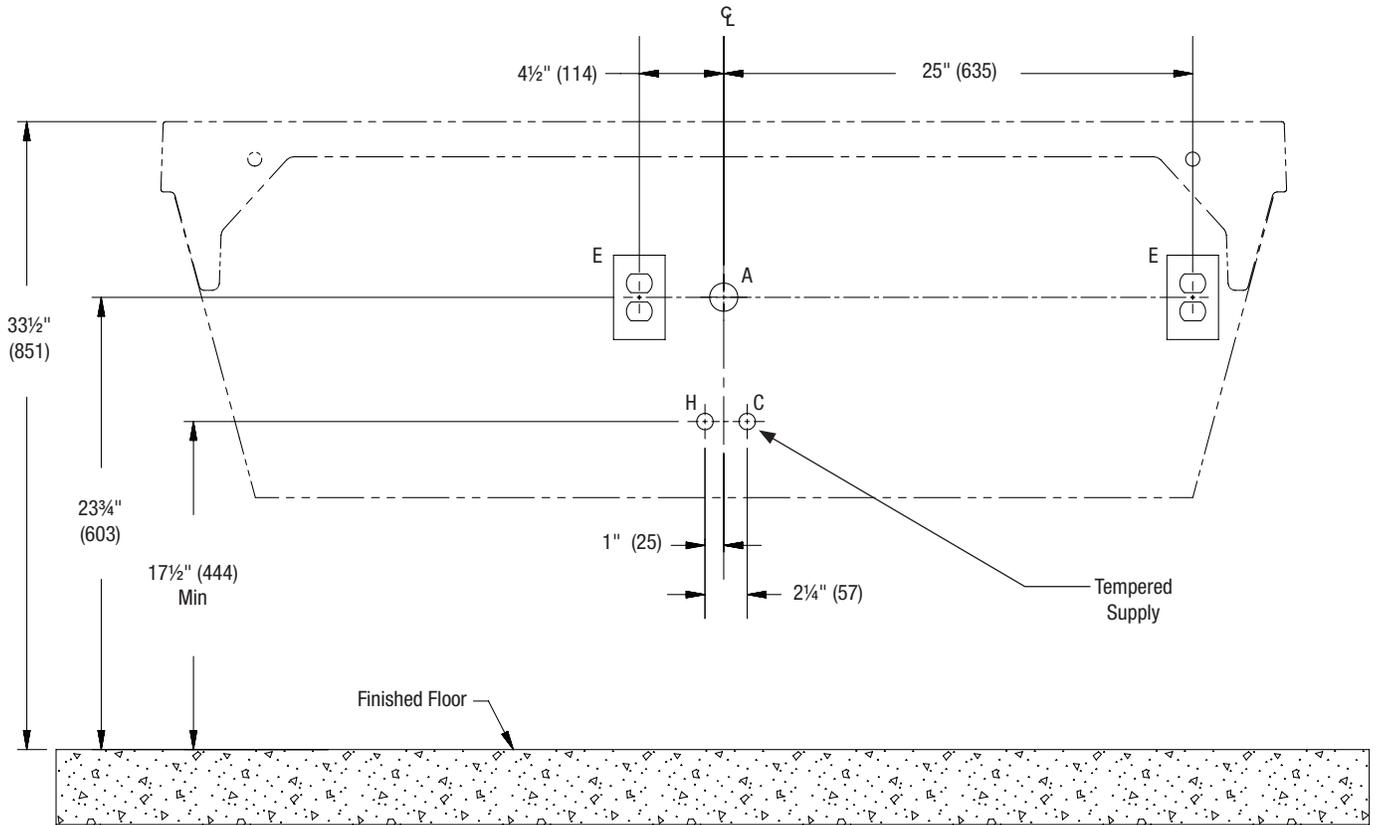
\* If no GFCI outlet is provided, contact a licensed electrician to assure proper electrical connections in accordance with local building codes.

# Plumbing & Electrical Rough-Ins for LVAD2 (2-Station)

(mm)



Mounting for Standard ADA and TAS height shown.



CODE	DESCRIPTION	QTY.
A	1 1/2" NPT Drain, Stub-out 2" from wall	1
H,C	1/2" Nominal (5/8" O.D. Comp.) Hot/Cold supplies, Stub-out 2" from wall	1
E	NEMA 5-15R Receptacle, 125V GFCI (protected electrical outlet not required for battery powered systems)	2

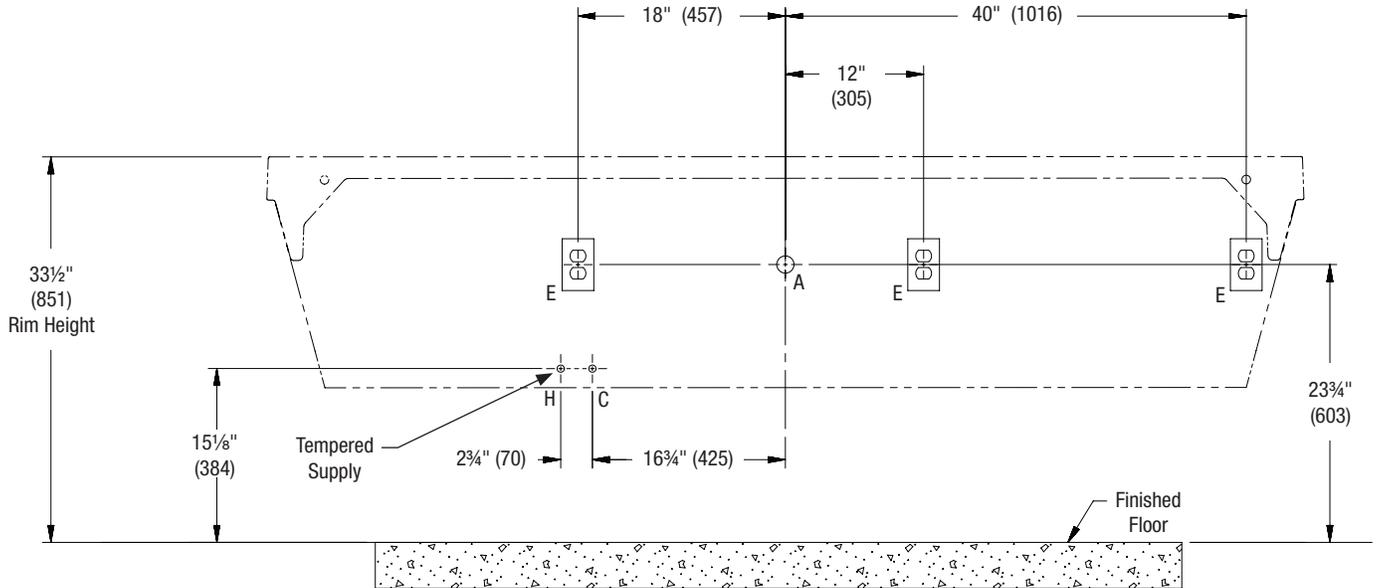
\* If no GFCI outlet is provided, contact a licensed electrician to assure proper electrical connections in accordance with local building codes. Troubleshooting and internal maintenance must be performed by qualified service personnel.

# Plumbing & Electrical Rough-Ins for LVAD3 (3-Station)

(mm)



Mounting for Standard, ADA and TAS height shown.



CODE	DESCRIPTION	QTY.
A	1 1/2" NPT Drain, Stub-out 2" from wall	1
H,C	1/2" Nominal (5/8" O.D. Comp.) Hot/Cold supplies, Stub-out 2" from wall	1
E	NEMA 5-15R Receptacle, 125V GFCI (protected electrical outlet not required for battery powered systems)	3

\*If no GFCI outlet is provided, contact a licensed electrician to ensure proper electrical connections in accordance with local building codes. Troubleshooting and internal maintenance must be performed by qualified service personnel.

# 1 WashBar Installation

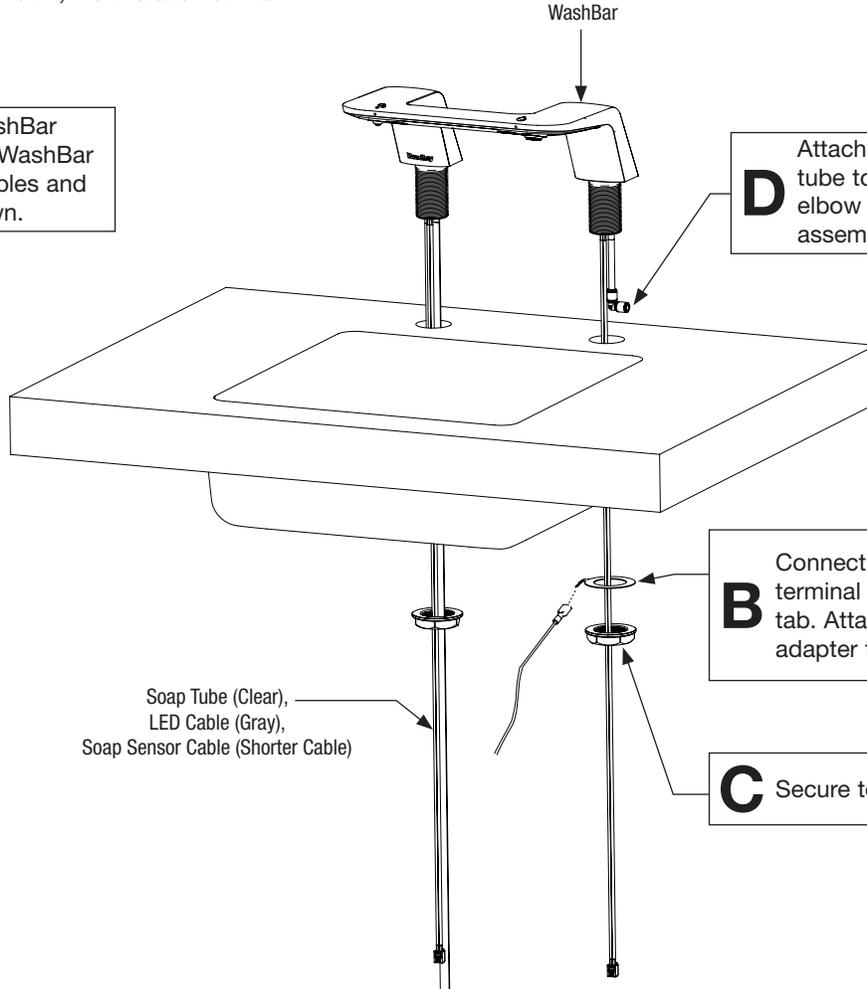


WashBar® comes pre-assembled, with the exception of the aerator.



Single-station shown; multi-station similar.

**A** Assemble WashBar through deck WashBar holes. Run cables and tubes as shown.



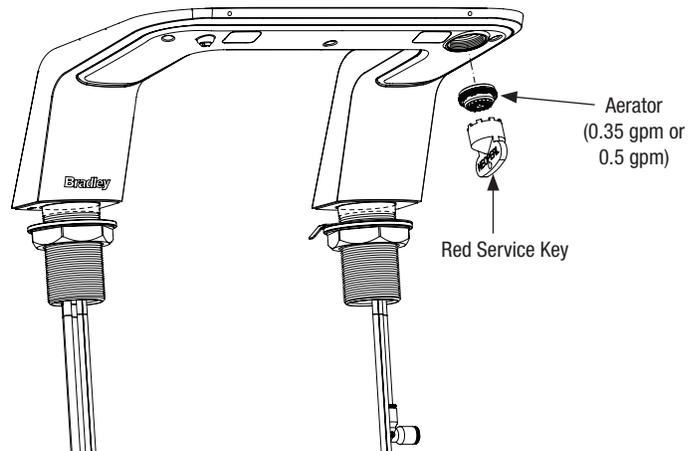
**D** Attach the 1/4" supply tube to the 1/4" union elbow after WashBar is assembled to deck.

**B** Connect grounding wire spade terminal end to grounding washer tab. Attach grounding wire plug adapter to wall outlet.

**C** Secure to the underside with nuts.

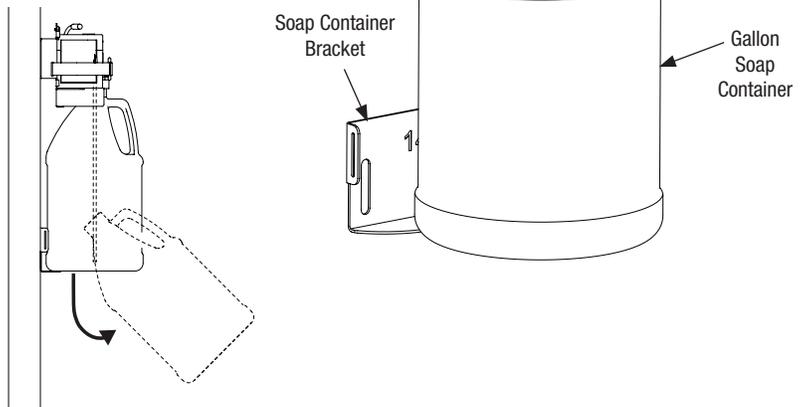
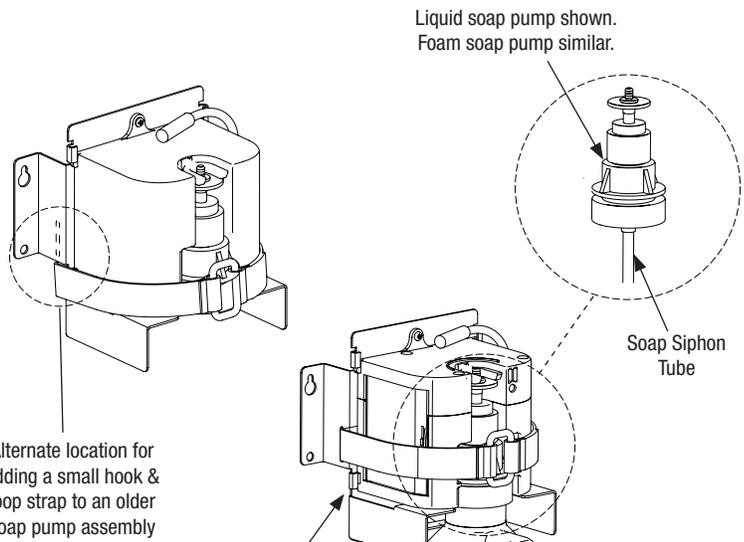
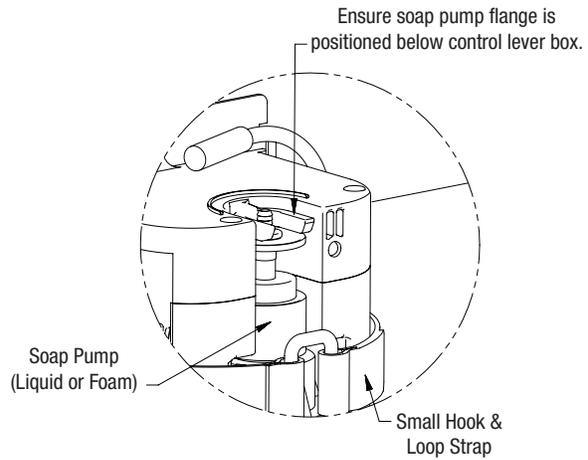
# 2 Aerator Installation

**A** Carefully thread the aerator into the WashBar casting using the red service key provided. Ensure no leaks after installation.



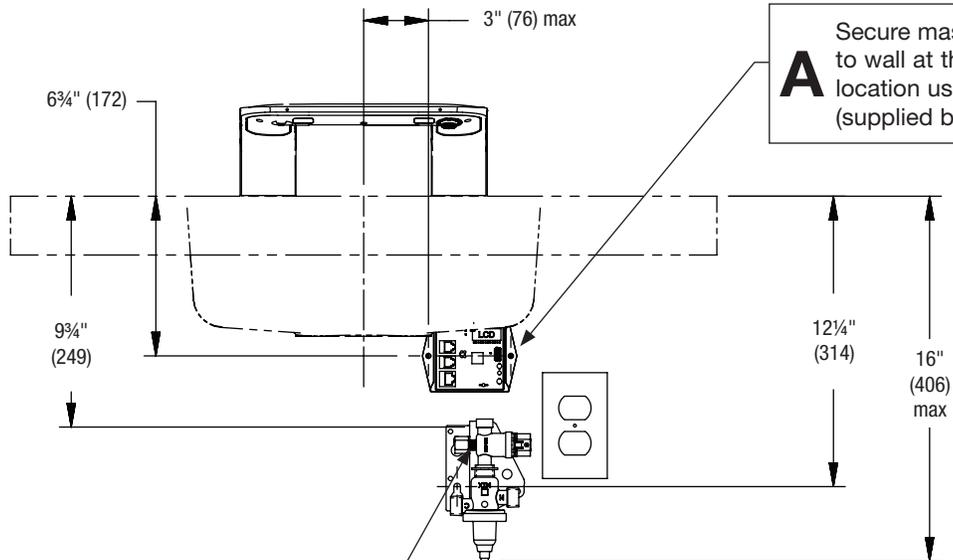
### 3 Attach Soap Motor and Soap Container Bracket

- A** Attach soap motor control box and soap container bracket to wall using #10 screws at the locations shown in the Structural Rough-Ins.
- B** Attach soap siphon tube to the bottom of the soap pump.
- C** Install soap pump into the soap control box.
- D** Secure soap pump to the soap control box using the small hook and loop strap.
  
- E** Slide the gallon soap container over the soap siphon tube, and push the soap container up into the soap pump approximately 1/4" (6 mm).
- F** Clear soap bracket and hold in place against the wall.
- The liquid soap pump has a rubber sleeve that fits over the soap container opening. The foam soap pump has an interior white cylinder that fits into the soap container. The fit may be tight. Move the gallon soap container laterally while applying pressure to seat them together approximately 1/4" (6 mm) into soap container opening.*
- G** Slide soap container bracket up until it touches the bottom of gallon soap container. Tighten the #10 screws to secure the soap container bracket to the wall.
- H** Remove the gallon soap container by swinging it away from the wall and lowering it from the soap syphon tube. Store soap container for later installation.
- Reference LVA Series and LD-3010 Series installation manuals for instructions on bracket assembly, drain assembly, P-trap assembly, and access panel assembly.*



## 4a Control Box and Valve Installation – Customer Supplied Countertop

(mm)



# 4b Control Box and Valve Installation – LVA and LD-3010 Decks

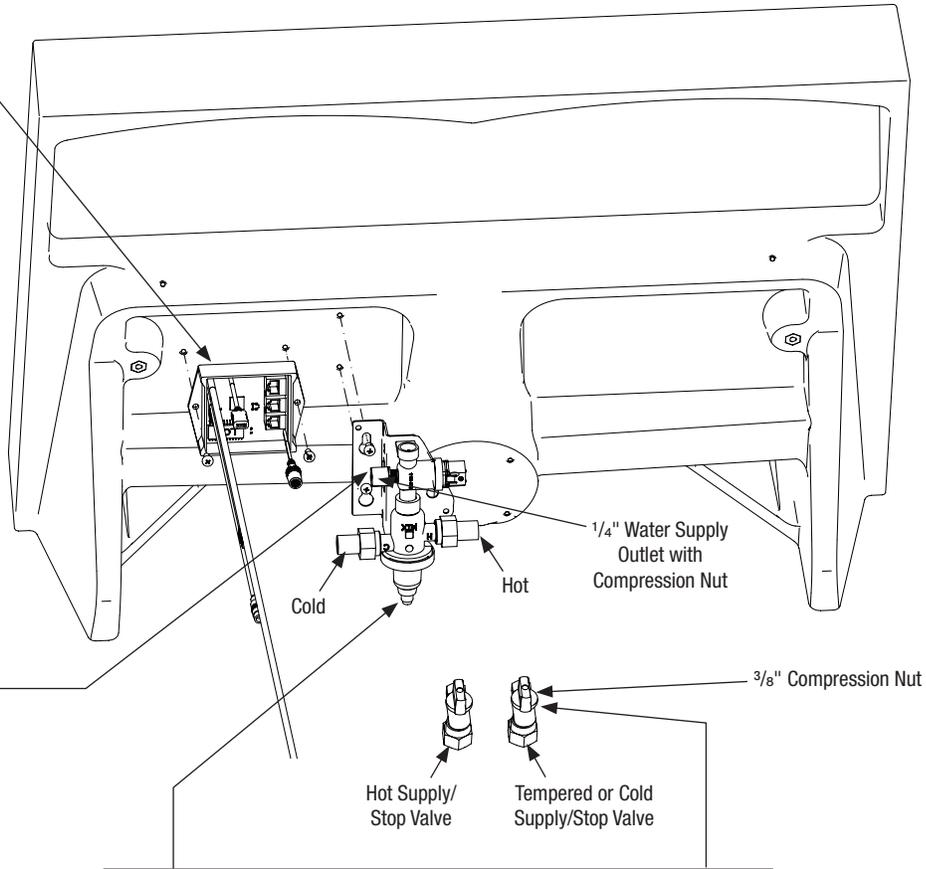


LVA is shown; LD-3010 is similar.

**A** Secure control box to underside of bowl using (2) #10 x 3/8" long screws provided.

**B** Secure valve to bowl using (2) #10 x 3/8" long screws and washers (install washer between the bowl and valve bracket).

**C** Attach 1/4" supply tube from the WashBar to the 1/4" supply valve outlet. Loosen the compression nut on the valve body. Push the 1/4" supply tube firmly into the tube connector until it is fully seated. Hand tighten the compression nut.



**D** Remove 3/8" compression nut/sleeve from the hot and cold supply stop valves. Connect 3/8" end of flexible supply hose to 3/8" compression on supply stop valve. Ensure hot and cold supply hoses are connected to hot and cold supply stop valve.  
**For the TL option, only connect tempered supply.**

# 4c Control Box and Valve Installation – LVA 2-Station

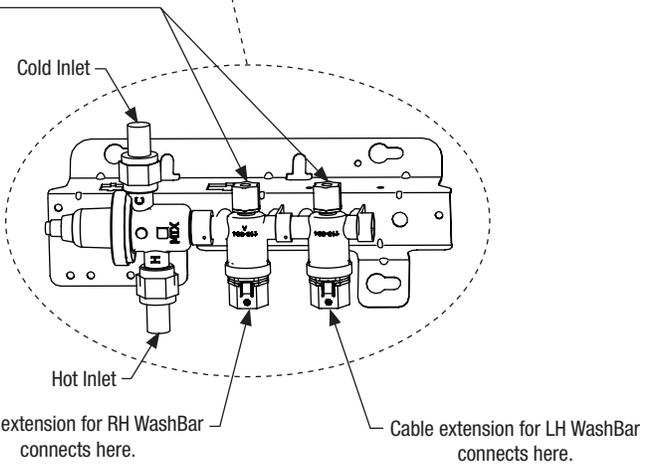
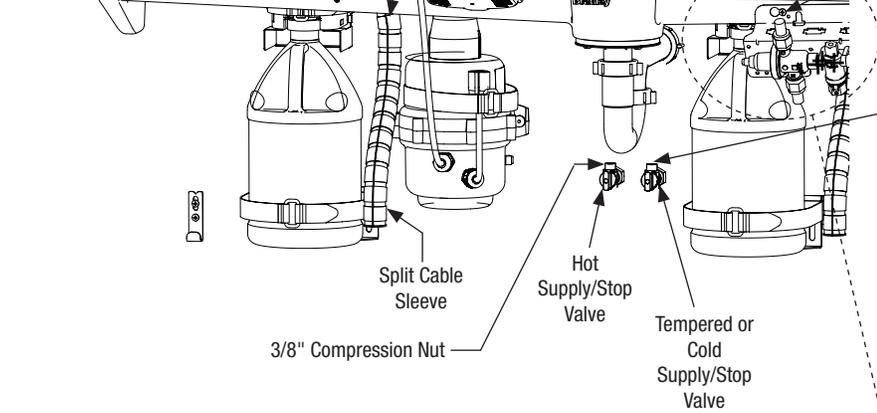
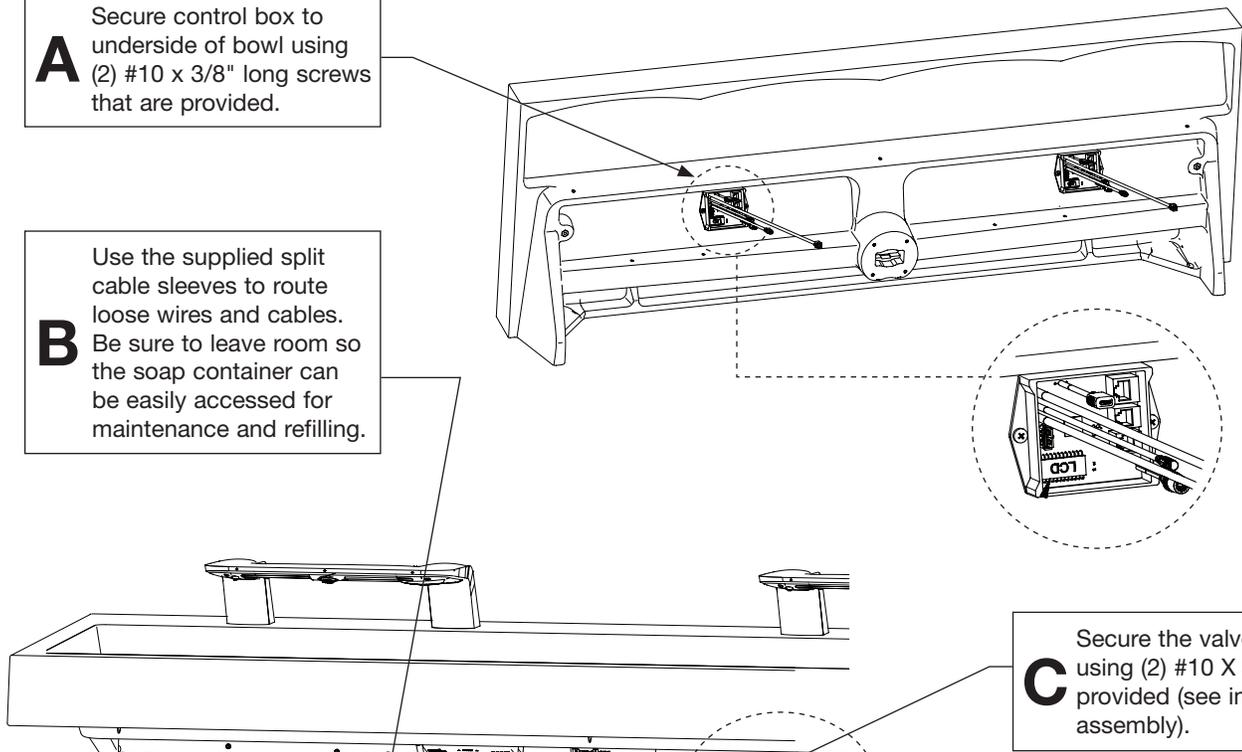
**A** Secure control box to underside of bowl using (2) #10 x 3/8" long screws that are provided.

**B** Use the supplied split cable sleeves to route loose wires and cables. Be sure to leave room so the soap container can be easily accessed for maintenance and refilling.

**C** Secure the valve in place using (2) #10 X 3/8" screws provided (see image for assembly).

**E** Remove 3/8" compression nut/sleeve from the hot and cold supply stop valves. Connect 3/8" end of flexible supply hose to 3/8" compression on supply stop valve. Ensure hot and cold supply hoses are connected to hot and cold supply stop valve.  
**For TL option, only connect the tempered supply.**

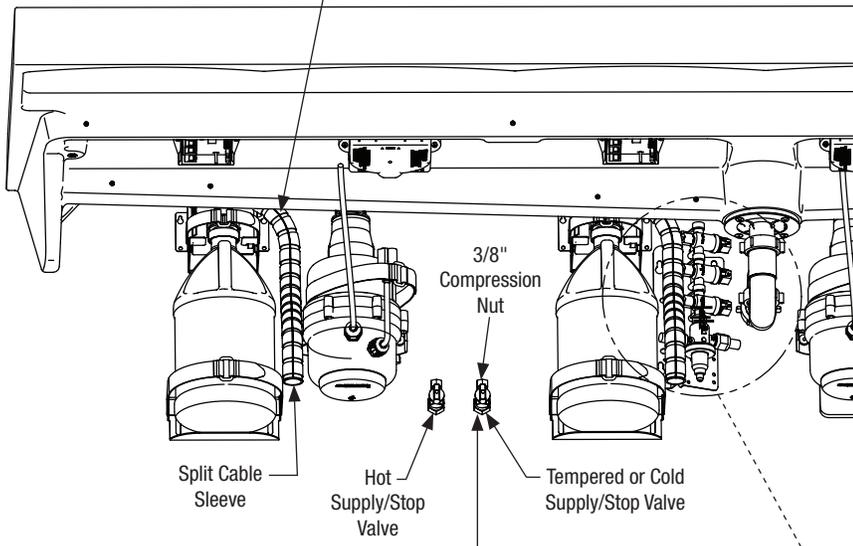
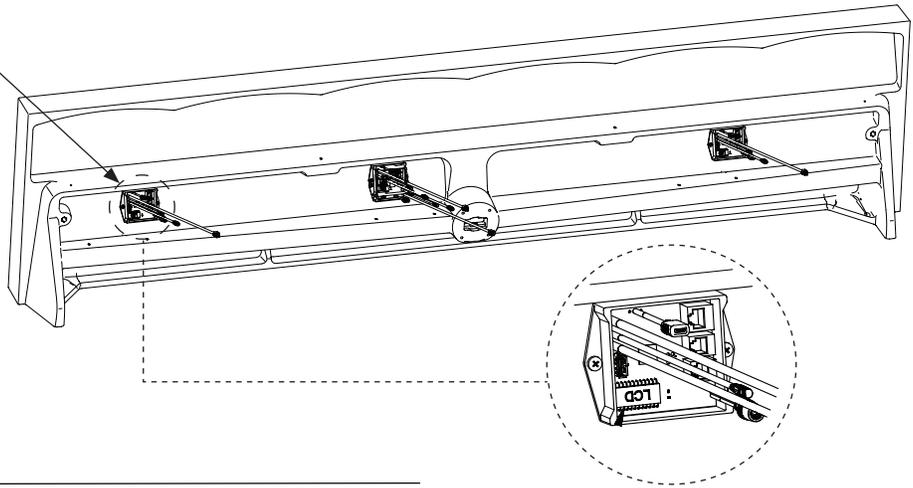
**D** Attach 1/4" supply tube from the LH WashBar to the 1/4" supply valve outlet. Loosen the compression nut on the valve body. Push the 1/4" supply tube firmly into the tube connector until it is fully seated. Hand tighten the compression nut. Repeat this step for RH WashBar supply tube.



# 4d Control Box and Valve Installation – LVA 3-Station

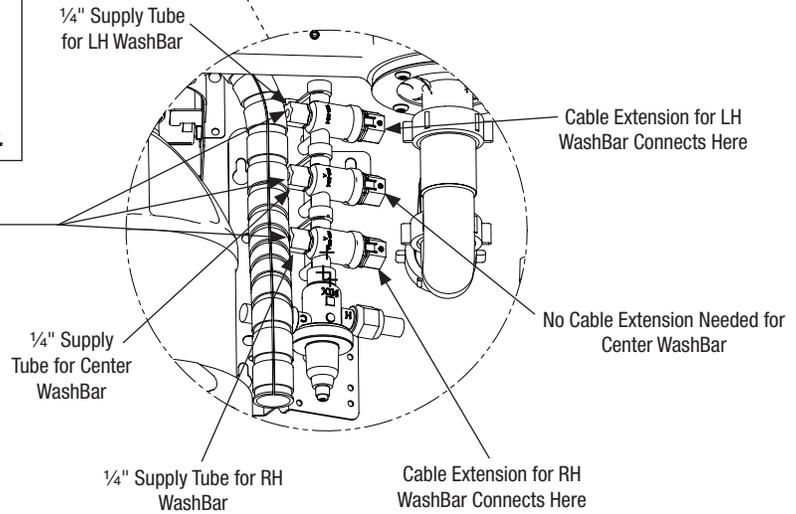
**A** Secure control box to underside of bowl using (2) #10 x 3/8" long screws that are provided.

**B** Use the supplied split cable sleeves to route loose wires and cables. Be sure to leave room so the soap container can be easily accessed for maintenance and refilling.



**D** Remove 3/8" compression nut/sleeve from the hot and cold supply stop valves. Connect 3/8" end of flexible supply hose to 3/8" compression on supply stop valve. Ensure hot and cold supply hoses are connected to hot and cold supply stop valve.  
*For TL option, only connect tempered supply.*

**C** Attach 1/4" supply tube from the LH WashBar to the 1/4" supply valve outlet. Loosen the compression nut on the valve body. Push the 1/4" supply tube firmly into the tube connector until it is fully seated. Hand tighten the compression nut. Repeat this step for Center and RH WashBar supply tubes.



# 5 Soap Installation

- The soap system is designed to be used with a standard U.S. gallon soap container. For accurate low soap indication, user needs to set soap type (see Configuration Mode on page 26 to set soap type).
- Soap cycle count defaults to liquid soap configuration. If you have the foam soap option, please see Setting the Soap Type under Configuration Mode on page 26.

**A** Slide gallon soap container over soap siphon tube and into the soap pump as shown.

- The liquid soap pump has a rubber sleeve that fits over the soap container opening. The foam soap pump has an interior white cylinder that fits into the soap container. The fit may be tight. Move the soap pump laterally while applying pressure to seat into soap container opening.

**B** Set gallon soap container onto lower soap tank bracket and hold in place.

**C** Use the provided hook and loop strap to secure container to the soap bracket. Feed the end of the strap (smooth side facing you) through the left side slot of the bracket flange at top. Feed through right side flange slot and wrap around jug. Secure with the hook and loop end.

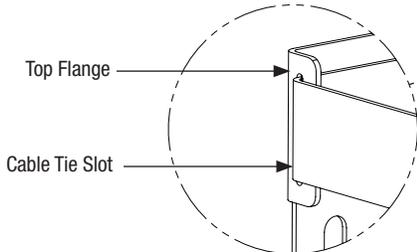
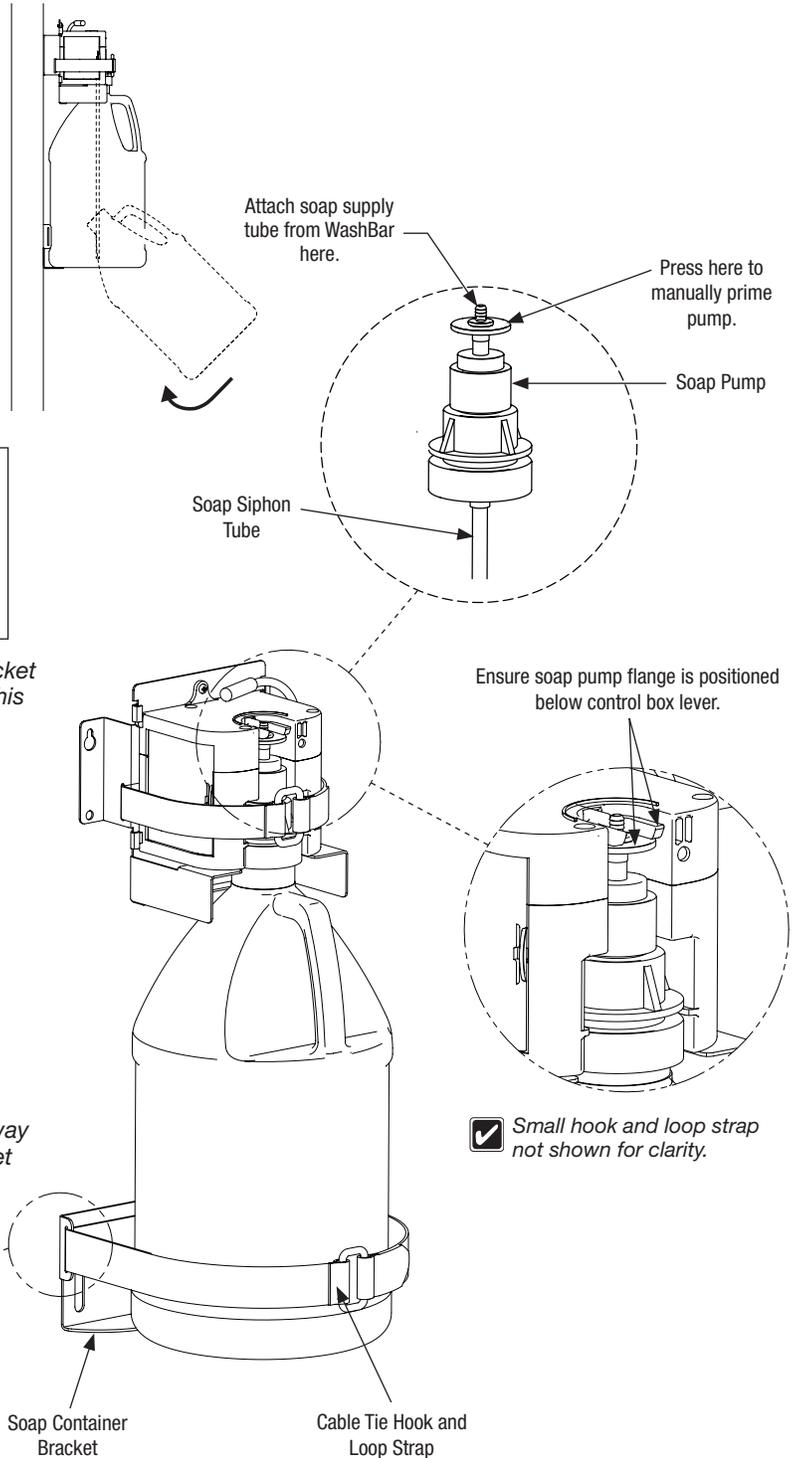
- The hook and loop strap can be slid within bracket so buckle is closer to the left side of bracket. This makes the strap easier to use on smaller tanks.

**D** Attach soap supply tube from the WashBar to the top of the soap pump.

**E** Ensure that the soap tube is not kinked. Position hand above soap motor control box and adjust tube if needed.

**F** To manually prime the soap, press the soap pump flange 6 to 8 times.

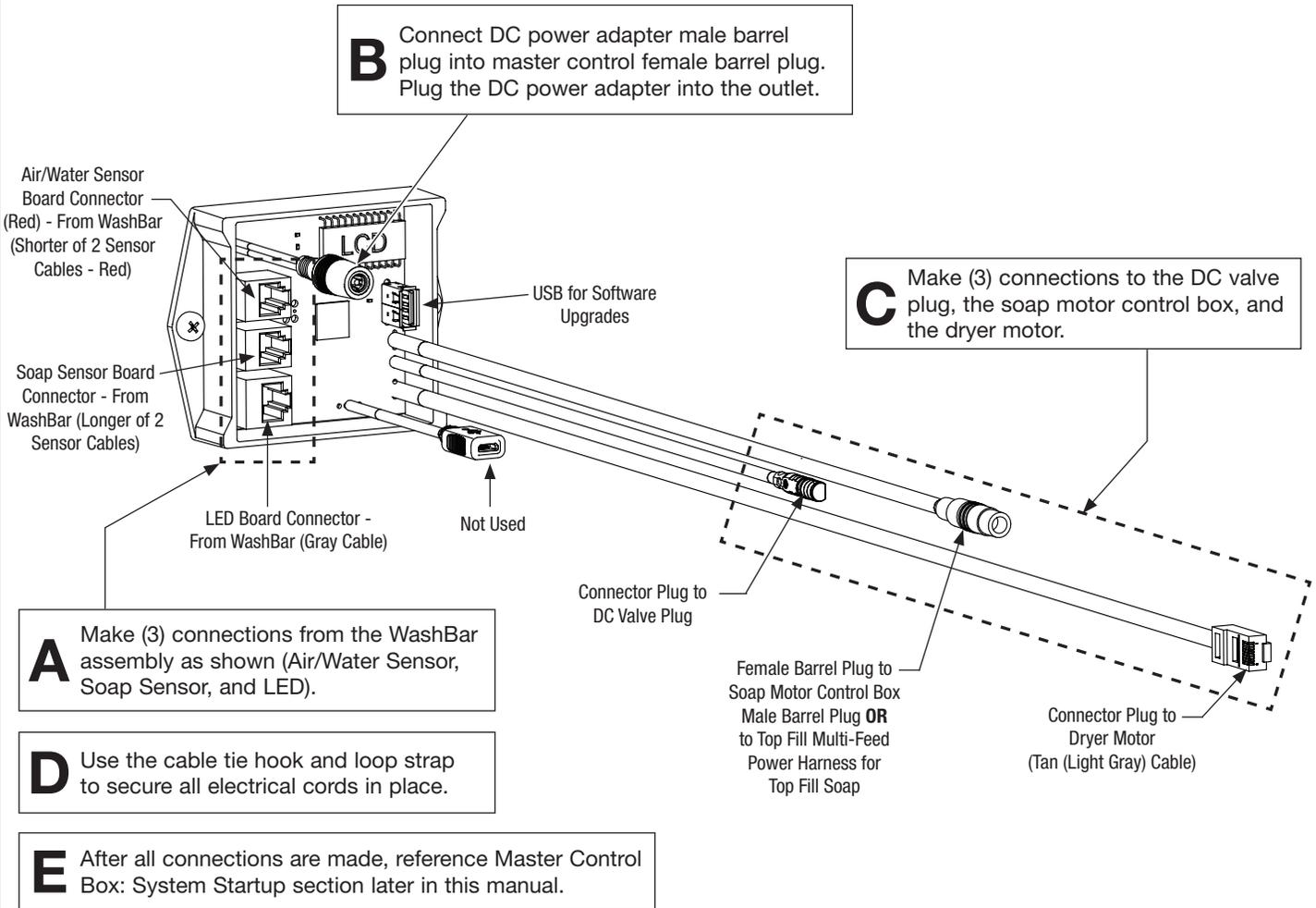
- For ease of soap container removal, swing it away from the wall to clear the soap container bracket and lower it to clear the soap siphon tube.



## 6 Electrical Connections



Each WashBar requires the same connections.

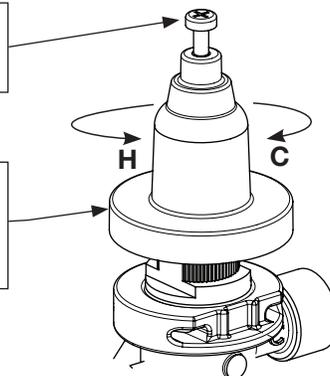


## 7 Adjust Temperature with Water Running

**⚠ WARNING** 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 6 mm (¼") (4–6 turns) and lift up cover (do not remove).

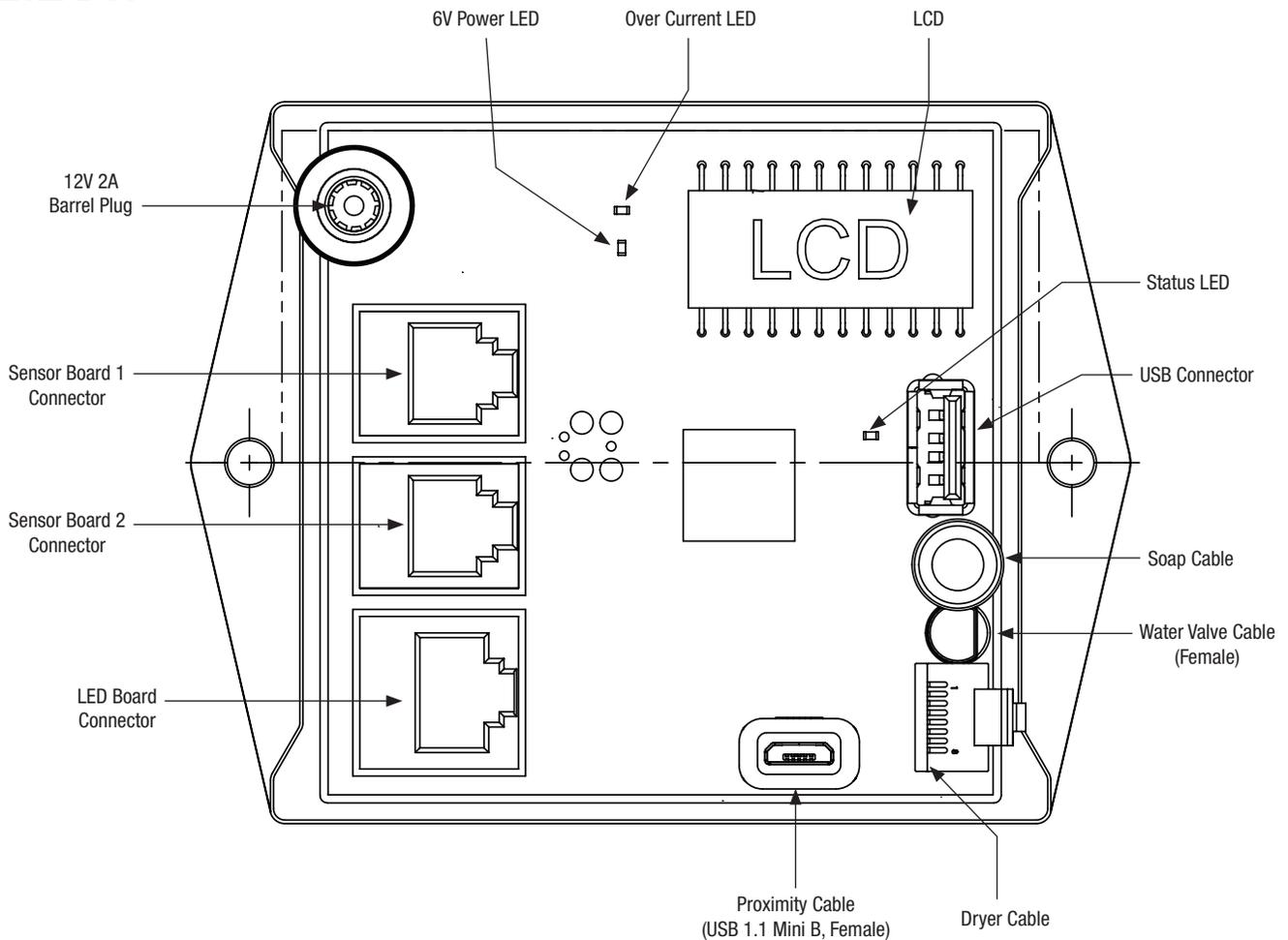
**B** Using cover, turn cartridge gently until desired water temperature is reached. Do not turn past stops as this may damage unit. Push cover down and tighten screw.



## Master Control Box



Scan to watch maintenance and troubleshooting videos for the WashBar!



## System Startup



Before providing power to WashBar, make sure the area under the WashBar is clear of any obstructions and that sensors are clear.

The first time the WashBar is powered up, there is a sequence of LEDs that will light up.

- Within 5-10 seconds of receiving power, the WashBar will cycle its LED lights RED, GREEN, and then BLUE. When the LEDs turn blue, the WashBar is in Standby/Idle Mode.



If any of the WashBar LEDs flash RED, check for sensor obstruction. After obstruction is removed or cleaned, the WashBar LEDs will return to blue indicating that the WashBar is in Standby/Idle Mode.

- The power LED on the master control box will be GREEN indicating the unit has power.

The first time the WashBar is powered up, there is a sequence of LEDs that will light up.

- Control software revisions (ex. "000").
- Control software type ("2-1" is for a system with no dryer, "3-1" is for a system with a dryer).



The control box can be configured for either system. See website for instructions on how to change system "FLAG" or contact Bradley customer service.

## Master Control Box: Operation Modes

### Standby/Idle Mode

Standby/Idle Mode is automatically activated when the WashBar is not in use. All of the sensors (soap, water) are active in this mode. When any sensor is activated (soap, water or approach), the WashBar will exit Standby/Idle Mode.

LED Indicators	Meaning
All blue dimmed	Default/normal
All blue	User option, See Configuration Mode
All Off	User option, See Configuration Mode
Only Soap LED solid red	Low soap (Reset: Hold hand under soap sensor until red LED turns off, approximately 13 seconds.)
Only Water LED solid red	Sensor board error
Soap and water LED solid red	Low soap and sensor board error
Any Flashing Red LED	Water or soap has timed-out. This is caused by a obstructed sensor. Remove obstruction or wipe sensors with microfiber cloth to prevent from scratching sensor. System will return operational automatically once cleared.

### Operation Mode

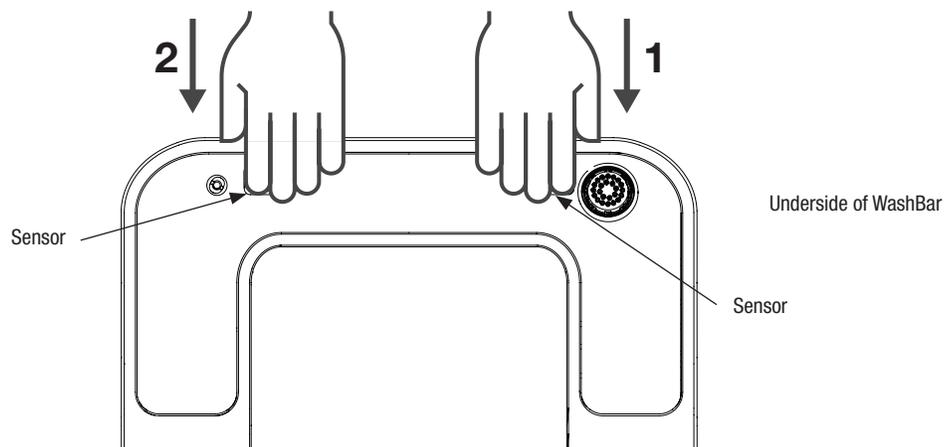
Operation Mode is the normal dispensing/washing mode automatically activated when the WashBar is in use. All of the sensors (soap, water) are active in this mode.

While in Operation Mode:

- The soap and water can activate at the same time.
- When a water sensor is still detecting an object after 30 seconds, the water will shut off and wait for a no-detect before becoming ready again.
- To reset low soap, hold hand under soap for 13 seconds (see table below for low soap indicator LED).
- When a soap sensor is still detecting an object after 15 seconds, the soap will prime for 30 seconds or until a no-detect occurs before becoming ready again. If an object continues to block the soap sensor after the prime cycle the LED will flash red until obstruction is removed. An obstruction can be a dirty sensor window.

LED Indicators	Meaning
All blue bright	Ready Mode
Green bright	Dispensing soap or water
Only Soap LED solid red	Low soap (Reset: Hold hand under soap sensor until red LED turns off, approximately 13 seconds)
Only Water LED solid red	Sensor board error
Soap and water LED solid red	Low soap and sensor board error
Any Flashing Red LED	Water or soap has timed-out. This is caused by a obstructed sensor. Remove obstruction or wipe sensors with microfiber cloth to prevent from scratching sensor. System will return operational automatically once cleared.

## WashBar Sensor Location



## Cleaning Mode

Cleaning Mode temporarily locks out the WashBar for approximately 30 seconds. All of the sensors (soap, water) are inactive in this mode. After 30 seconds, the WashBar will exit Cleaning Mode and return to Standby/Idle Mode. Use a soft cloth and ethyl alcohol or water to clean WashBar access plates/sensor windows.

To activate Cleaning Mode:

1. Place a hand under the water sensor and then immediately (within 1 second) under the soap sensor and hold hands under both water and soap sensors for approximately 5 seconds until all LED lights turn solid white. Some water and soap will dispense during the initial 5 seconds needed to enter Cleaning Mode. To avoid soap or water on hands, block sensors located just to the left of the water nozzle and right of the soap nozzle.
2. Remove hands only when all LED lights turn solid white.



*LED lights may flash and cycle different colors. To activate this mode, only remove hands once all LED lights are solid white.*

## Configuration Mode

Configuration Mode is when the user can configure the WashBar or obtain cycle counts for soap and water. All of the sensors (soap, water) are active in this mode. After 10 seconds of no use, the WashBar will slow flash all LEDs green and then return to Standby/Idle Mode.

To activate Configuration Mode:

1. Place a hand under the water sensor and then immediately (within 1 second) under the soap sensor and hold hands under both water and soap sensors for approximately 10 seconds until all LED lights turn solid red. Some water and soap will dispense during the initial 5 seconds needed to enter Configuration Mode. To avoid soap or water on hands, block the sensors located just to the left of the water nozzle and right of the soap nozzle.
2. Remove hands only when all LED lights turn solid red.



*LED lights may flash and cycle different colors. To activate this mode, only remove hands once all LED lights are solid red.*



*While in Configuration Mode, LED lights will be solid red unless changing configurations.*

## Setting the Soap Type

If the WashBar is set to the correct soap type, the low soap indicator will display low soap at 80% empty as intended. If not set correctly, a liquid soap system will be empty before indicator lights up if set to foam and a foam soap system will be 60% empty if set to liquid.

To set soap type, while in Configuration Mode:

1. Hold hand under soap sensor for 5 seconds to start selection process. Selection options will cycle until hand is removed.
2. Continue to hold hand under soap until desired setting color is shown then remove hand while color is being displayed.
  - Red LED: Liquid Soap (3200 dispensing cycles occur before low soap counter needs to be reset. This is the Default setting when WashBar is reset.)
  - Blue LED: Foam Soap (4000 dispensing cycles occur before low soap counter needs to be reset.)

**Setting the LED Lights ON (Bright) / ON (Low) / OFF for Standby/Idle Mode**

To set the LED lights to ON (Bright) / ON (Low) / OFF for Standby/Idle Mode, while in Configuration Mode:

1. Hold hand under water sensor for 5 seconds to start the selection process. Selection options will cycle until hand is removed.
2. Continue to hold hand under water until desired setting color is shown then remove hand while color is being displayed.
  - Blue LED (Bright): standby LEDs ON (default when WashBar is reset)
  - Blue LED (Low): Standby LEDs slightly dimmer
  - LED Off: standby LEDs OFF

**Reset Mode**

Reset Mode is when the user can reset all WashBar settings back to their default settings. This removes all custom configuration options but does not reset counters. Counters cannot be reset. All of the sensors (soap, water) are active in this mode. Once the WashBar has been reset, it will automatically return to Standby/Idle Mode.

To reset the WashBar:

1. Place a hand under the water and then immediately (within 1 second) under the soap sensor and hold hands under both water and soap sensors for approximately 20 seconds until all LED lights turn solid green.
2. Remove hands once all LED lights turn solid green. WashBar has now been reset and will return to Standby/Idle Mode. If foam soap is being used, the soap type will need to be set to foam. If this step is not done, the low soap indicator will not be accurate. See Configuration section "Setting the Soap Type."



*LED lights may flash and cycle different colors. To reset the WashBar, only remove hands once all LED lights are solid green.*

**24 Hour Water Purge**

If water has not been used within 24 hours, the WashBar will automatically run water for 5 seconds. This is not configurable by the user.

## Software Update



Software revisions can be found at [www.bradleycorp.com/software-updates/washbar](http://www.bradleycorp.com/software-updates/washbar).

The master control board software can be updated using a USB flash drive.

To update the software:

1. Download the desired software revision into the ROOT directory of a USB flash drive (do not copy file in any folder).
2. Place the USB flash drive containing the desired software into the master control board. Disconnect the barrel plug to power off. Then reconnect the barrel plug. Wait a few seconds for the control box to restart.
3. **DO NOT REMOVE FLASH DRIVE** until status LED on master control board turns off and LED lights on WashBar turn all BLUE to indicate update is complete.

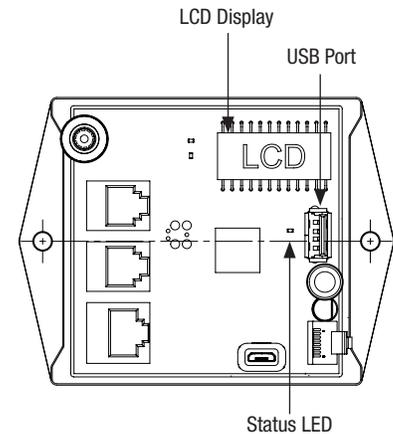


LEDs may turn off after ALL have flashed BLUE if standby LED setting is set to "OFF". RED LEDs may be solid if low soap or board error has occurred or Flashing RED if sensor is blocked.

4. Remove USB flash drive if desired. Leaving USB flash drive in master control board will not affect WashBar performance.



Software version will display on the LCD screen. Software can be reversed to a previous version by having only an earlier version of the software on the USB flash drive.



## Displaying Software Revision and Cycle Counts on LCD Display

The master control board has an LCD screen that continuously displays information about the software version and cycle counts for the soap and water. To view the LCD display:

1. Open the access panel.
2. Locate the LCD screen on the master control board. The display will cycle through the software revision and counts. Cycle counts are displayed x1000 (ex. 65 = 65,000)
  - REV followed by the software revision
  - SOP followed by the soap cycle count
  - H2O followed by the water cycle count

## 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](http://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.

## Cleaning and Maintenance for WashBar

Wipe top and underside of WashBar with a mild neutral based cleaner. Dry with a soft cloth to avoid micro scratches in the WashBar finish and sensor plates.

## Cleaning and Maintenance for Trench Drain

Depending on application and usage, it is recommended that the drain cap and strainer be removed for regular trench drain cleaning 2-3 times a month.

## Liquid Soap Recommendations and Dispenser Maintenance

### Overview

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. 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. With proper maintenance and soap, Bradley dispensers will provide long term, trouble free operation.

### Viscosity

Soap thickness is determined by a measurement called viscosity. Soap viscosity should be between 100 cps (centipoise) and 2500 cps for all Bradley soap dispensers. Thick soaps flow slower and inhibit the “flushing” action of the valves, which allows the soap to congeal in the valve and cause clogs.

### pH Level

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.

**⚠ CAUTION Base soaps (pH levels higher than 8.5) will cause skin irritation and swelling or degradation of rubber and plastic parts.**

### Soap Valves

Valves must also be maintained (cleaned) to function properly. At the very minimum, hot water should be pumped through valves periodically to clear out soap residue. Ideally, valves should occasionally be soaked for 30 minutes in hot water or a soap valve cleaning solution. The valve should be pumped at least 20 times while it is soaking to clear any clogs. The soap reservoir should also be flushed with hot water. 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. 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.