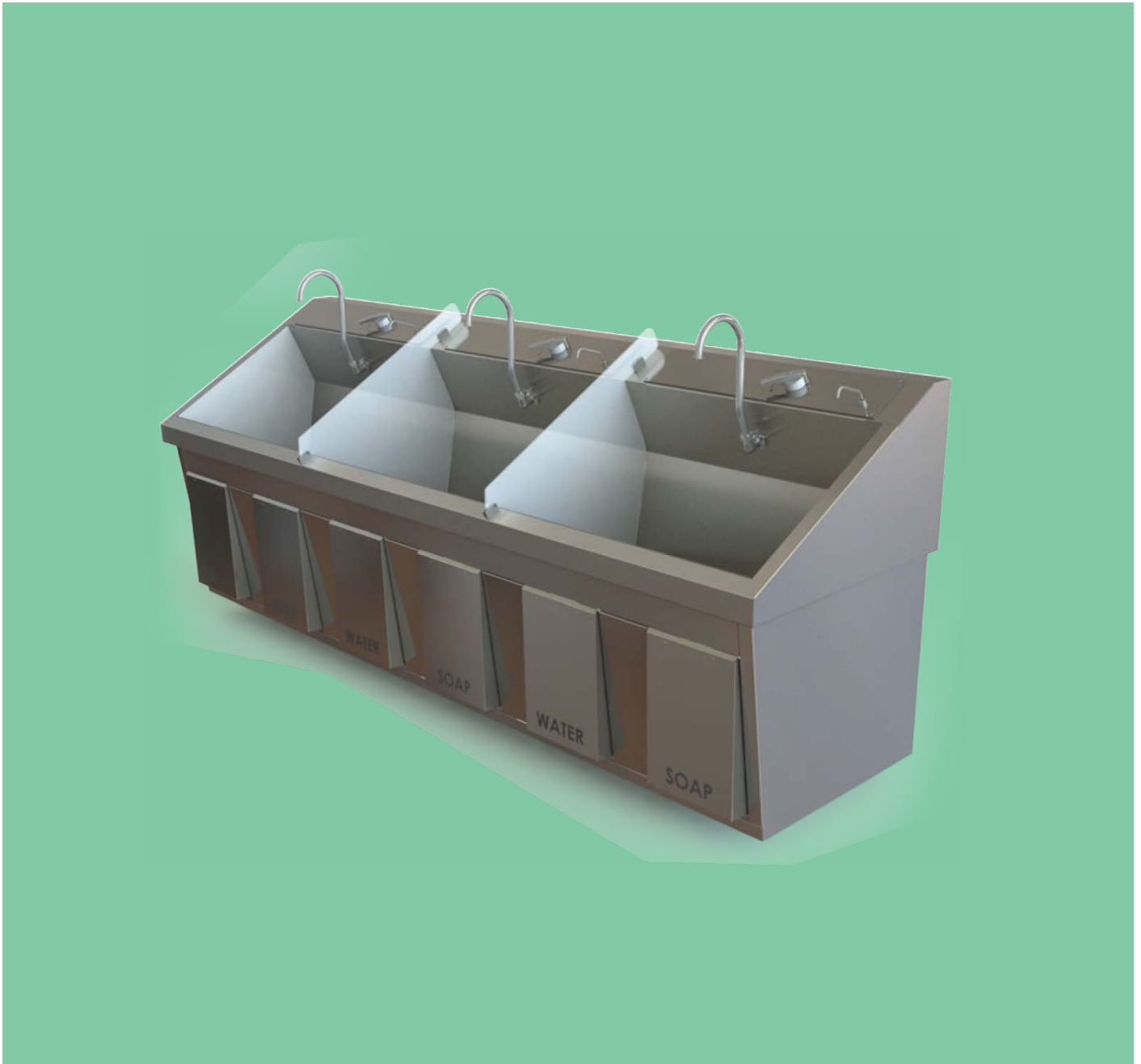


Integro Surgical Products

Instruction Guide for Scrub Sinks



Read the instructions and safety information in this manual before operating this product.

Table of Contents

Cautions	3
Specifications	4
In-Line Flow Switch Timer Control	5
Sink Dimensions	6
Assembly and Installation	
Assembly for Single Basin	7
Recommended Mounting Specifications for Single Basin	8
Assembly for Double Basin	9
Recommended Mounting Specifications for Double Basin	10
Assembly for Triple Basin	11
Recommended Mounting Specifications for Single Basin	12
Installing the Sink	13
Installing and Operating the Soap Spout	14
Connecting Drain Pipe to Drain and Plumbing to Water Lines	15
Operation	16
Maintenance and Troubleshooting	17
Care and Cleaning	18



Single Station



Double Station



Triple Station

Warnings and Cautions When Installing or Operating This Product

Prior to installation or operation, the user must read these warnings and cautions.

The following is a list of the safety precautions that must be observed when operating this equipment.

Warning: Injury Hazard

Repairs and adjustments should be attempted only by experienced service agents fully acquainted with this equipment. The use of inexperienced, unqualified persons to service the equipment or install unauthorized parts could cause serious personal injury or result in costly damage. Always unplug power cord from power source prior to attempting any repairs or servicing.

Warning: Burn Hazard

Do not change temperature settings on thermostatic mixing valve unless you are a trained mechanic. Any repair or modification of mixing valve may affect the high temperature setting. The installer must check operating temperature before sink is back in operation.

Caution: Possible Equipment Damage

Before cleaning the sink, read Care and Cleaning Instructions in this manual.

Note: This product is to be used strictly for the purpose it was designed for. If this product is used in a manner not specified by InnerSpace, the protection provided by the equipment may be impaired. InnerSpace disclaims all liability for the consequences of this product being used for purposes other than its intended design. Product modification or misuse can be dangerous. InnerSpace disclaims all liability for the consequences of product alterations or modifications as well as for the consequences which might result from the combination of this product with other products, whether supplied by InnerSpace or by or by other manufacturers, unless such a combination has been specifically endorsed by InnerSpace.

1. Material

- a. Sink basin and sink top: 14 gauge, 300 series stainless steel
- b. Sink skirt: 18 gauge, 300 series stainless steel



2. Plumbing material

- a. 1/2" copper or brass pipe
- b. Sink is furnished with in-line check valves on supply lines

3. Utility requirements

- a. Cold water - 20 to 50 psig 70°F max
- b. Hot water - 20 to 50 psig 120°F to 140°F
- c. Water lines should be flushed clean before water connections are made
- d. It shall be the customers responsibility:
 - to ensure by use of pressure regulators or other means that maximum specified pressures are not exceeded
 - to ensure that water supplies are properly protected for internal cross connection control in accordance with local building and plumbing requirements
 - to eliminate water hammer conditions should they occur in the service piping

4. Power requirements (for sinks with optional infrared sensor operations)

- a. 120 Volt, 60 Hz, single-phase, 3.0 amp GFCI-protected electrical outlet (by others)
- b. 220 VAC, 60 Hz, single-phase 1.5 amp
- c. to be installed per local building codes

5. Sink weight

- a. Single basin - 130 lb
- b. Double basin - 230 lb
- c. Triple basin - 320 lb

6. Sink certifications

- a. UL and cUL certified
- b. California OSHPD pre-approved when mounted on a structurally sound wall

7. Mixing valve specifications

- a. Connections - 1/2" NPT inlets and 1/2" NPT top outlet
- b. Capacity (without checkstops) - 5.25 gpm [19.9 L/min - at 45 psi differential (310 kPa) with hot water supply between 140° - 180°F (60° - 82°C) and 50/50 mix] - (±0.25 gpm [0.95 L/min])
- c. Maximum hot water supply temperature - 190°F (88°C)
- d. Minimum hot water supply temperature (not applicable to low temperature hot water valves - 5°F (2.8°C) above set point
- e. Temperature ranges - ASSE 1016 Type T: 65-115°F (18-46°C); ASSE 1016 Type T/P: 90-110°F (32-43°C)
- f. Maximum operating pressure - 125 psig (862 kPa)
- g. Maximum static pressure - 125 psig (862 kPa)
- h. Compliant - ASSE 1016-T-P
- i. Certified - CSA B125

In-Line Flow Switch Timer Controller Specifications, Switch Ratings, and Wiring Diagram

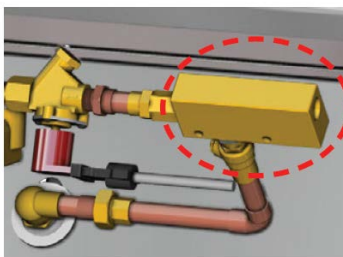
Note: This feature (Figure 1) is available only on infrared-activated scrub sinks. This is an explosion-proof brass flow switch, actuation set point 0.50 GPM (1.89 LPM), and calibrated for water at standard conditions. It is used for accurate detection of excessive or insufficient flow rates.

Service	Compatible liquids
Wetted Materials	Housing: brass; Piston: polysulfone; Spring: 316SS; O-Ring: Fluoroelastomer, Other: Epoxy
Temperature Limits	-20 to 225°F (-29 to 107°C)
Pressure Limits	1000 psig (68.9 bar)
Accuracy	±10% of set point
Repeatability	±1%
Switch Type*	SPDT, 20 VA
Electrical Rating	.17 A @ 120 VAC, .08 A @ 240 VAC, .13 A @ 120 VDC, .06 A @ 240 VDC
Electrical Connection	18 AWG, 24" (60.96 cm), Polymeric lead wires
Process Connection	1/4" female NPT
Mounting Orientation	Any position. Set points shown are based on vertical, inlet down position
Required Filtration	50 microns or better
Weight	0.66 lb (301 g)
Agency Approval	CE

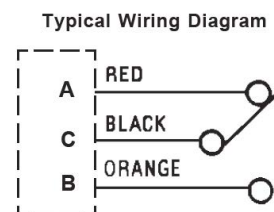
*Switch Ratings Max Resistive Load

VA	Volts	Amps AC	Amps DC
20	0-30	.4	.3
	120	.17	.13
	240	.08	.06

Figure 1: In-line Flow Timer Controller



Pin Connections for Units with MS Receptacle



This unit was calibrated in a vertical position with lead wires up. Install unit in piping system using standard pipe fitting procedures. Be sure to keep thread sealing compound out of unit. Make sure that flow is in proper direction - marked IN and OUT on housing. See wiring diagrams for electrical connections.

Caution: See Switch Ratings before connecting power.

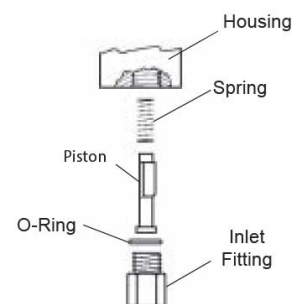
Caution: Flow settings for this switch is normally calibrated using water at +70°F on increasing flow. Water calibrated units are not recommended for air/gas applications.

Switch Timer Controller Maintenance

Accumulation of foreign debris should periodically be removed from these switches. Occasional wipe-down cleaning when excessive contamination is present is all that is normally required.

To clean: Remove unit from system and disassemble as shown at right. Clean all parts, reassemble and reinstall unit.

Note: 50 micron filtration is recommended.



Sink Dimensions

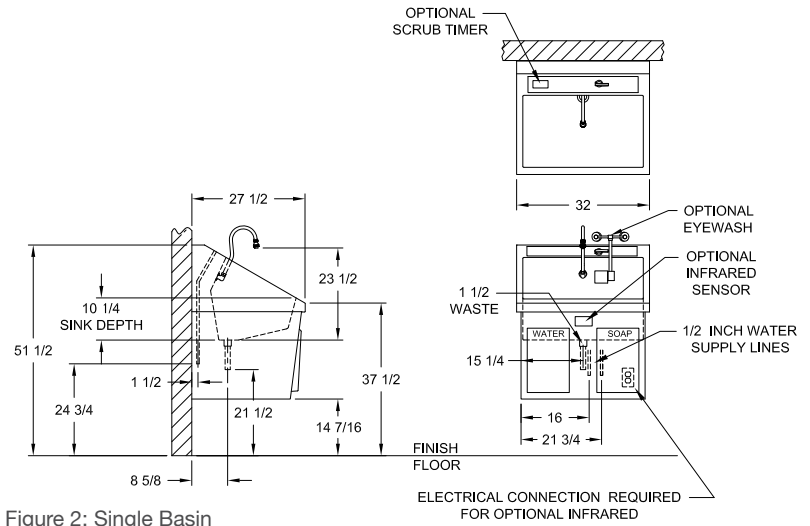


Figure 2: Single Basin

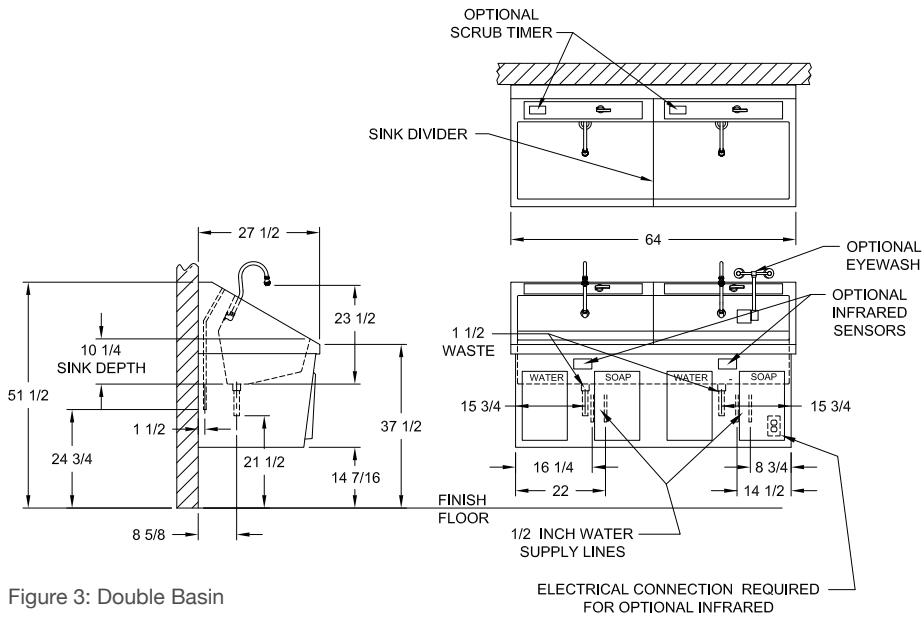


Figure 3: Double Basin

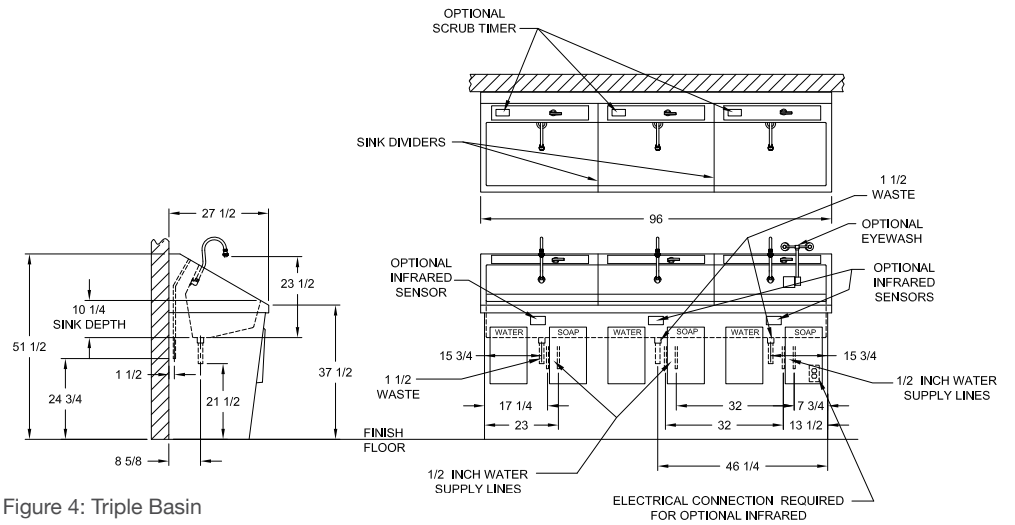
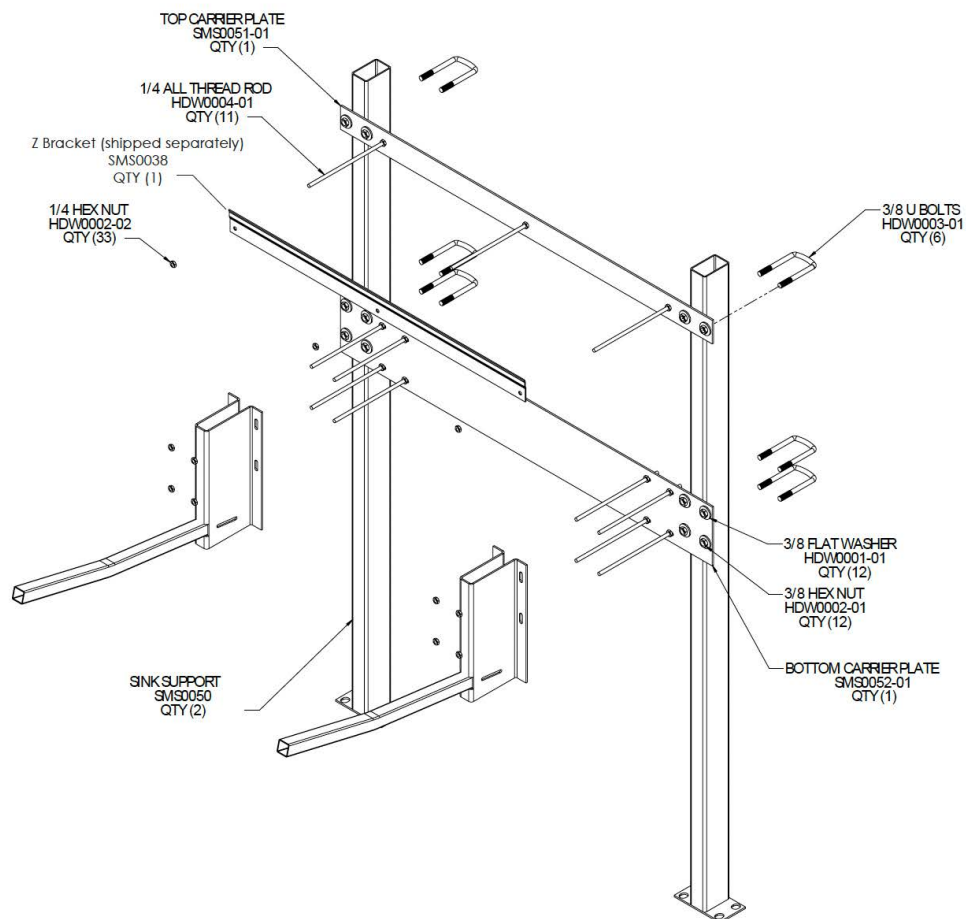


Figure 4: Triple Basin

In-Line Wall Carrier Mount Assembly for Single Basin

This drawing shows how the in-line wall carrier for single basin scrub sinks is assembled.

Note: To ensure stability, InnerSpace recommends that the in-line wall carrier mount assembly be tied into the existing wall support structure. All applicable local and state building codes should be adhered to when mounting this unit.



Recommended Mounting Specifications for Single Basin

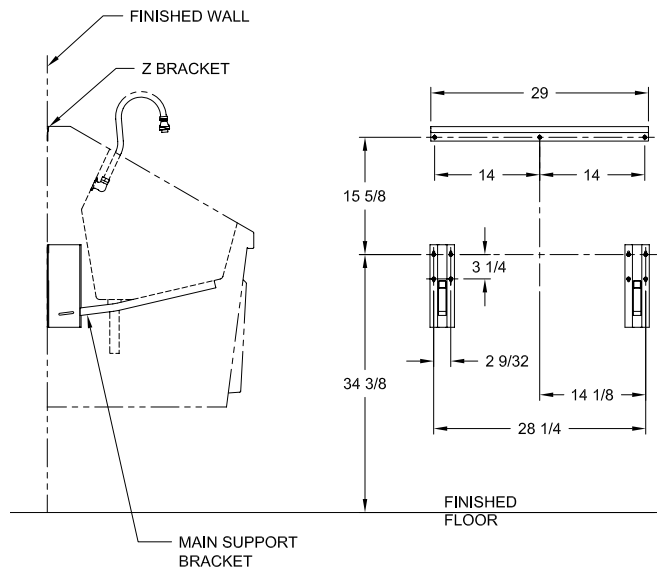


Figure 13: Z bracket mounting locations



Figure 14: In-line wall carrier mount - SMSSINKCARRIER

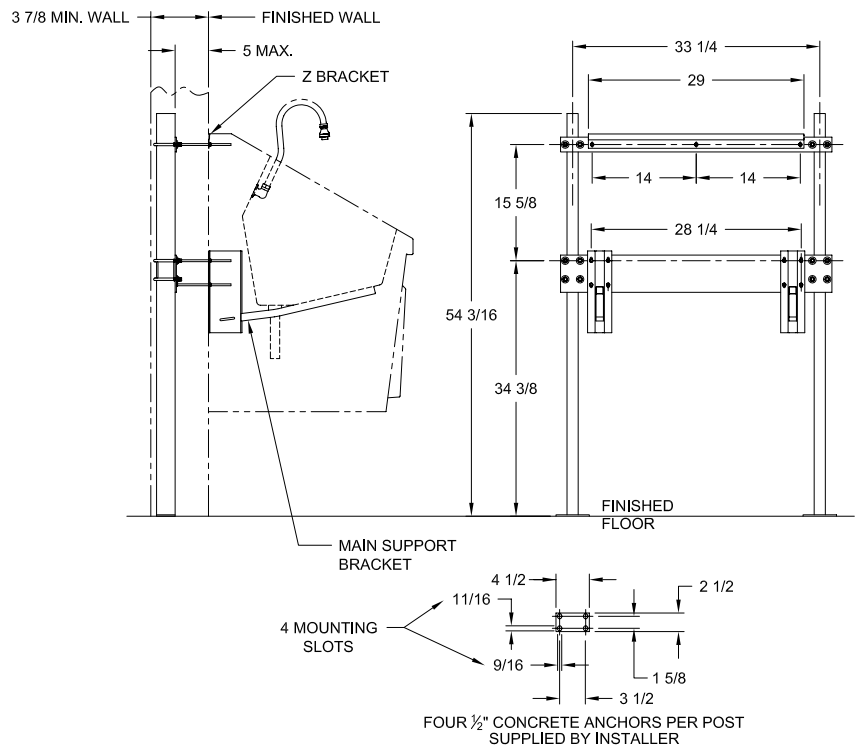


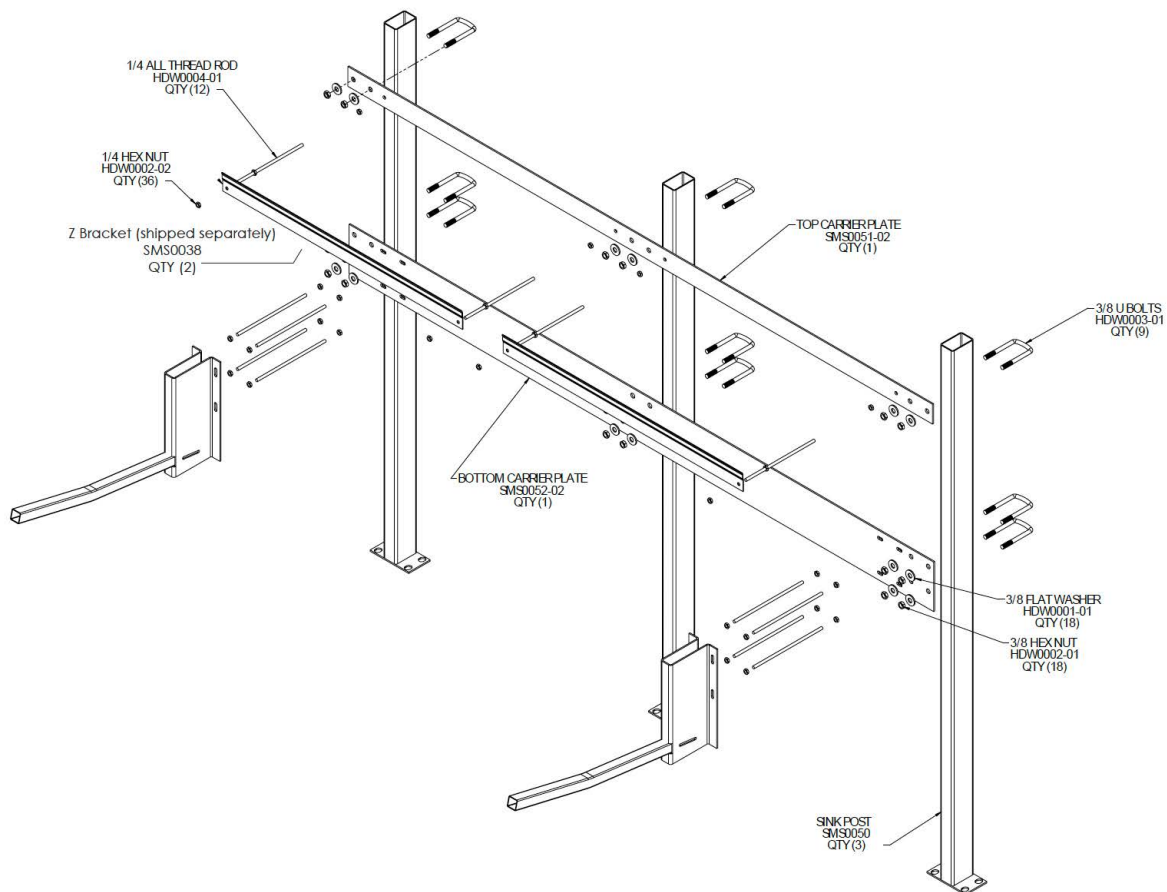
Figure 15: In-line wall carrier mounting locations

For the assembly drawing of in-line wall carrier mount (SMSSINKCARRIER), see page 7.

In-Line Wall Carrier Mount Assembly for Double Basin

This drawing shows how the in-line wall carrier for double basin scrub sinks is assembled.

Note: To ensure stability, InnerSpace recommends that the in-line wall carrier mount assembly be tied into the existing wall support structure. All applicable local and state building codes should be adhered to when mounting this unit.



Recommended Mounting Specifications for Double Basin

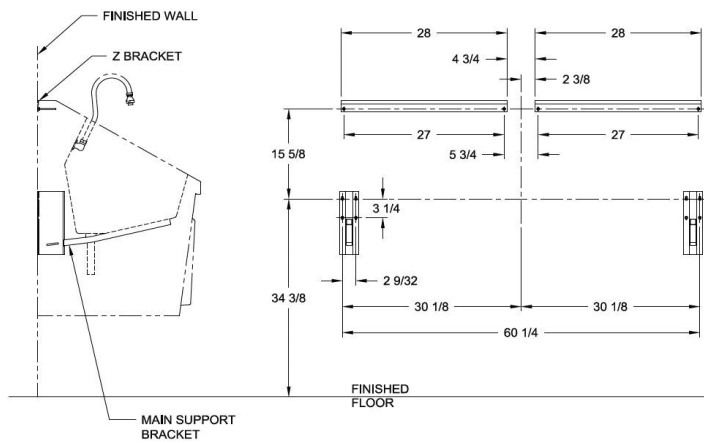


Figure 16: Z bracket mounting locations



Figure 17: In-line wall carrier mount SMDSINKCARRIER

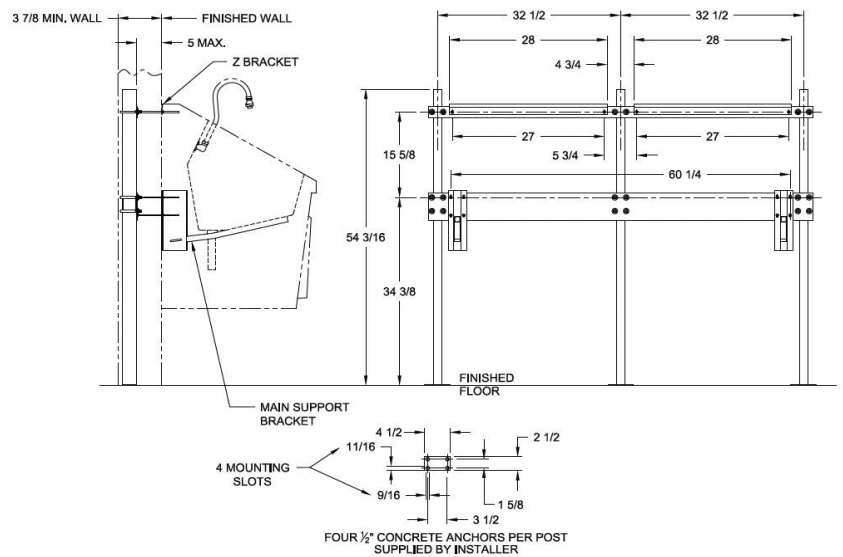


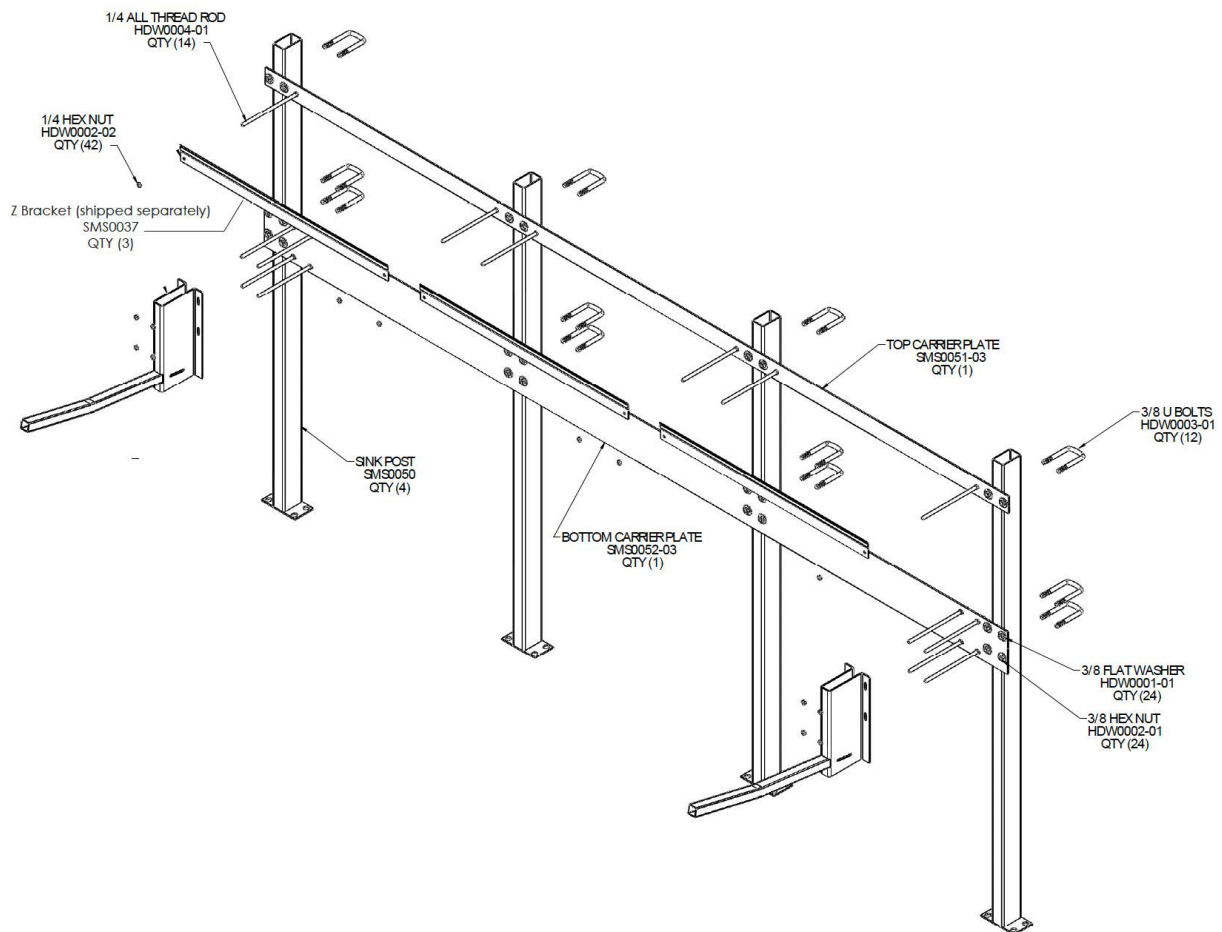
Figure 18: In-line wall carrier mounting locations

For the assembly drawing for the in-line wall carrier mount (SMDSINKCARRIER), see page 9.

In-Line Wall Carrier Mount Assembly for Triple Basin

This drawing shows how the in-line wall carrier for triple basin scrub sinks is assembled.

Note: To ensure stability, InnerSpace recommends that the in-line wall carrier mount assembly be tied into the existing wall support structure. All applicable local and state building codes should be adhered to when mounting this unit.



Recommended Mounting Specifications for Triple Basin

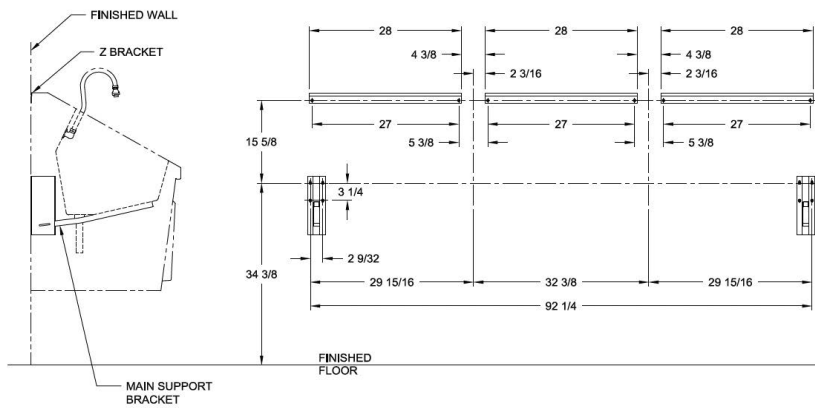


Figure 19: Z bracket mount locations

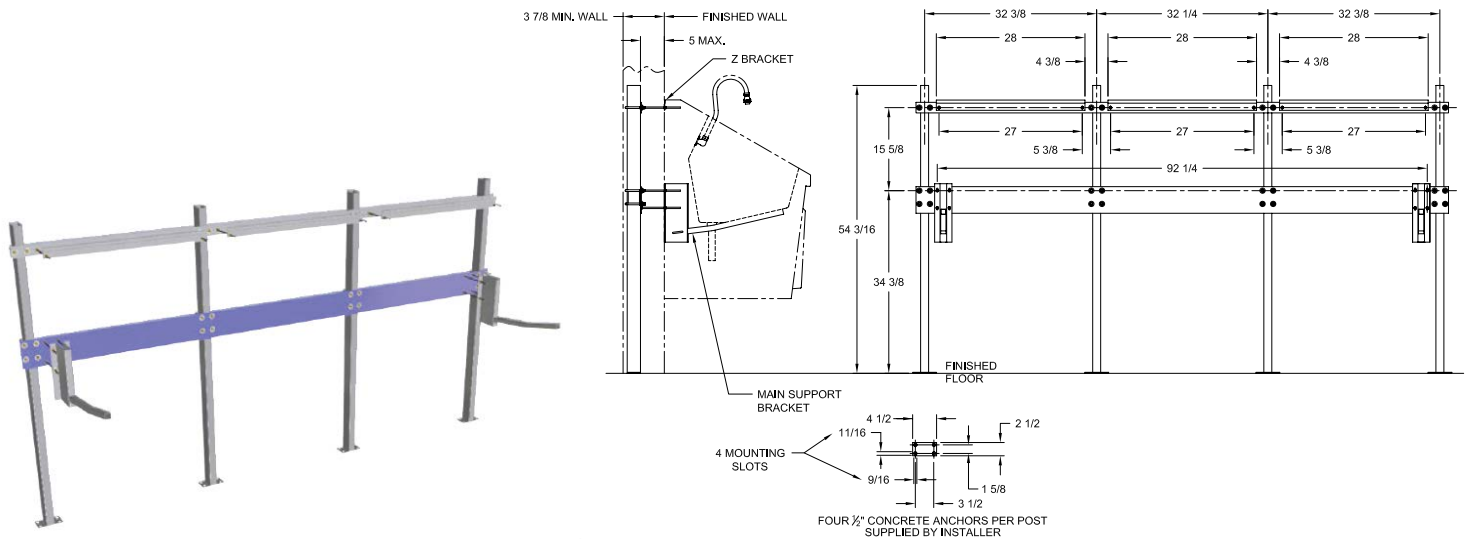


Figure 20: In-line wall carrier mount - SMTSINKCARRIER

Figure 21: In-line wall carrier mounting locations

For the assembly drawing for the in-line wall carrier mount (SMTSINKCARRIER), see page 11.

Installing the Sink

1. Carefully uncrate the scrub sink. The mounting hardware is under the sink, secured to the shipping materials. Be sure to remove all hardware before discarding packaging.
2. Check water supply and waste terminal locations.
 - a. Be sure all connections are safely accessible to the sink and in proper working condition.
Note: For proper sink operation, the hot water temperature must be 120°F.
 - b. Install sink near a hot water source.
3. Locate Infrared sensor activated sinks near a 110/120V outlet power source.
4. Attach wall mount sink support brackets to the wall.
 - a. Z brackets for mounting the sink to the wall come with the sink (Figure 5). Recommended mounting specifications for Z brackets are shown in Figure 13 (single bay), Figure 16 (double bay), and Figure 19 (triple bay) on pages 8, 10 and 12.
 - b. **Important:** For wall mounted units, the wall structure must be capable of supporting the load.
 - c. Optional wall mounting systems (in-wall chair carrier and pedestal style) and their mounting specifications are shown in Figure 15 (part # SMSSINKCARRIER for single bay), Figure 18 (part # SMDSINKCARRIER for double bay), and Figure 21 (part # SMTSINKCARRIER for triple bay) on pages 9, 11 and 13.
5. Install the soap spout on the sink (see page 14).
6. Mount the sink body onto the Z brackets that were attached to the wall.
 - a. With the help of an assistant, slide the sink over the Z brackets until it locks securely into place (Figure 6 - Figure 7, Z brackets shown in green).
7. Connect the drain pipe to the drain.
8. Connect the water supply to the plumbing (page 15).

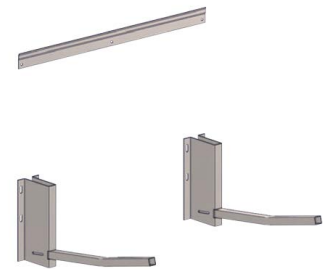


Figure 5: Z brackets

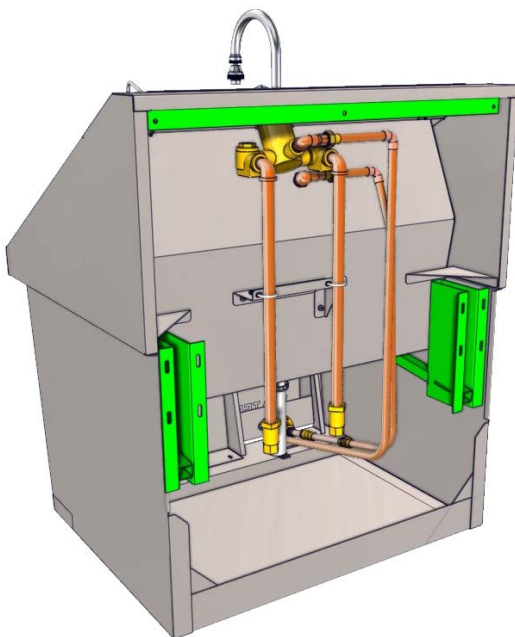


Figure 6: Z brackets on sink

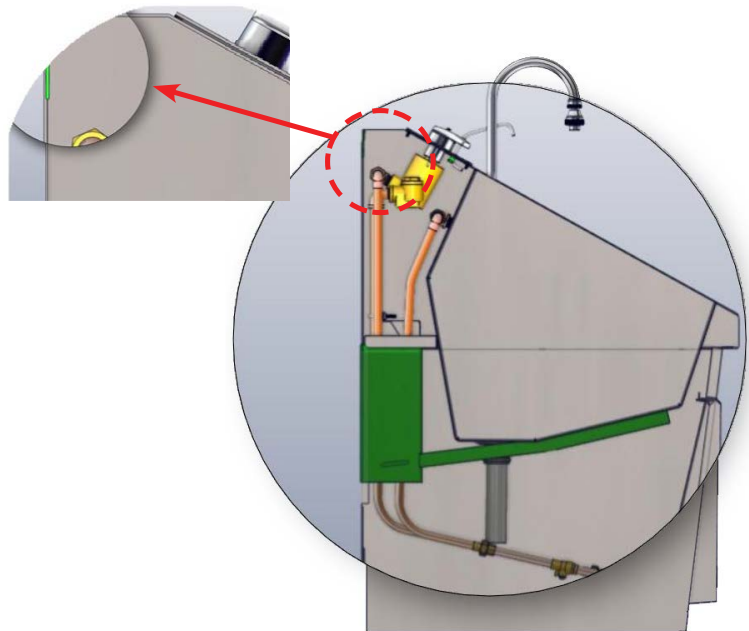


Figure 7: Cross section showing Z bracket on sink

Installing and Operating the Soap Spout

To prevent damage during shipment, the soap dispenser is stored inside the sink basin. Soap dispenser tubing is also included. The dispenser spout should be installed before hanging the sink.

1. To install, remove the bushing (Figure 8 - Item 3 shown in green).
2. Feed the spout (Item 1) through the small hole at the top of the sink (Figure 9).
The nut (Item 2) should rest on top of the sink.
3. Reinstall the bushing onto the spout from inside the cabinet (Figure 10).
4. Attach the soap tubing to the spout and soap pump (circled in red) as shown in Figure 11 and Figure 12.

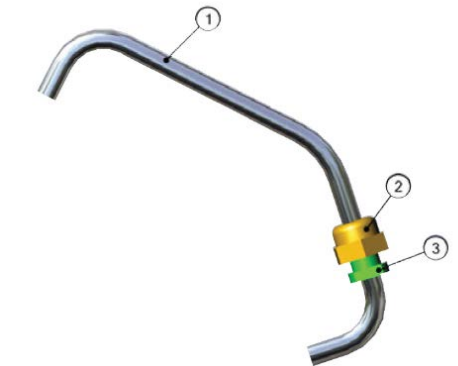


Figure 8: Soap spout with nut and bushing

To operate the soap pump, press the soap spout down repeatedly to start the flow of the soap.



Figure 9: Install soap spout

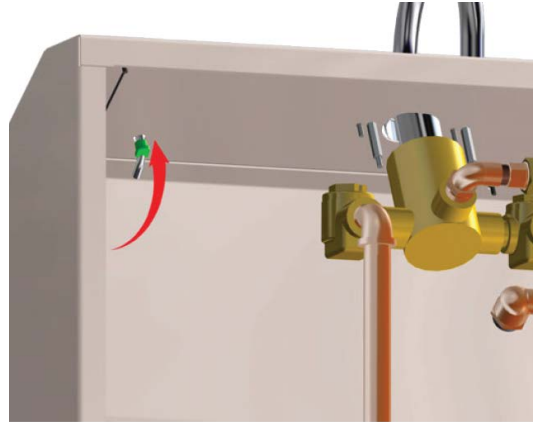


Figure 10: Secure spout with bushing



Figure 11: Install soap dispenser tubing

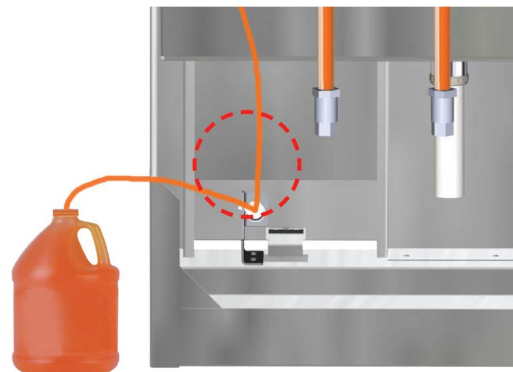


Figure 12: Close-up of soap pump with tubing attached

Connecting Drain Pipe to Drain and Plumbing to Water Lines

Note: Local building or plumbing codes may require modifications to the information provided. You are required to consult the local building and plumbing codes prior to installation. If the information provided here is not consistent with local building or plumbing codes, the local codes should be followed. This product must be installed by a licensed contractor in accordance with local codes and ordinances.

Caution: Failure to comply with proper installation and maintenance instructions could contribute to valve failure.

This hot water master tempering valve cannot be used for tempering water temperature at fixtures. Severe bodily injury (i.e., scalding or chilling) and/or death may result depending upon system water pressure changes and/or supply water temperature changes. ASSE standard 1016, 1069 or 1070 listed devices should be used at fixtures to prevent possible injury.

This hot water tempering valve is designed to be installed at or near the boiler or water heater. They are not designed to compensate for system pressure fluctuations and should not be used where ASSE standard 1016, 1069 or 1070 devices are required. These valves should never be used to provide "anti-scald " or "anti-chill " service.

The components of the system must be of materials with a construction capable of withstanding the high limit output temperatures of the water heating source.

Need for Periodic Inspection and Yearly Maintenance: Periodic inspection and yearly maintenance by a licensed contractor is required. Corrosive water conditions, temperatures over 200°F, and unauthorized adjustments or repair could render the valve ineffective for service intended. Regular checking and cleaning of the valve's internal components and check stops help ensure maximum life and proper product function. Frequency of cleaning and inspection depends upon local water conditions.

Plumbing Install Instructions

Plumbing installation should be in accordance with accepted plumbing practices. Installation and field adjustment are the responsibility of the installer.

1. Flush all pipes thoroughly before installation.
2. Connect sink drain pipe to drain connection.
3. Close both hot and cold water shutoff valves upstream of the tempering valve.
4. Bleed pressure from the system.
5. Route copper tubing or piping to fit valve dimensions.
6. Remove tailpieces from the valve and make sure union nuts are over the tubing/piping before connecting to the tailpiece.

Note: If soldering, remove unions and gaskets from valve body prior to soldering to prevent damage to valve from excessive heat.

7. Flush piping again, install valve using filter gasket on hot and cold water inlets and fiber gasket on mixed water outlet.
8. Turn on the cold and hot water. If any leaks are observed, tighten connections as necessary to stop leaks before proceeding.
9. After the plumbing installation is complete, the water pressure can be adjusted to avoid excess splash. The pressure can be controlled by adjusting the flow with the flow control valve. See item #4 of the plumbing diagram for the manual knee-operated plumbing on page 16.

Plumbing Access to Manual Knee-Operated Sinks

1. Open the knee panel door by depressing the latch at the bottom of the panel door (Figure 24).
2. Swing the door fully open to access the hinges (Figure 25).
3. Push the hinge pins inward to release the door from the hinges (Figure 26).

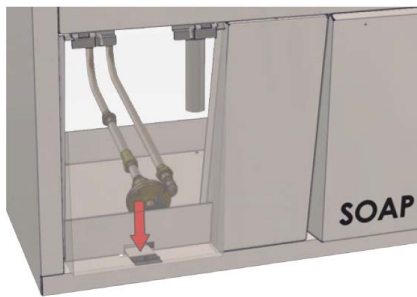


Figure 24: Push down knee panel door latch

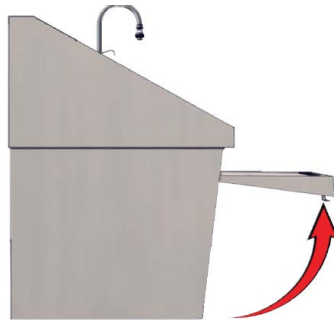


Figure 25: Door in fully opened position

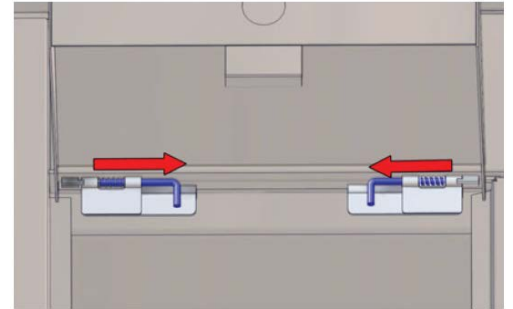


Figure 26: Push hinges inward

4. To reattach the door, push in the hinge pins and fit the top corners of the knee panel door onto the left and right hinge leaves (Figure 27 - circled in red). When the door is refitted, release the hinge pins to secure the door to the sink.
5. The knee panel door should rotate freely on its hinges. Rotate the door back down on its bottom latch to close it (Figure 28).

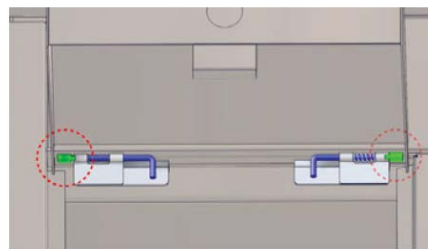


Figure 27: Left - right hinge leaves

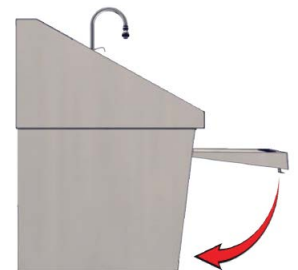


Figure 28: Door should rotate freely on hinges

Infrared Controls for Infrared Self-Activated Sinks

Installation

The sinks are supplied with a 24V power transformer(s) that connects to a standard duplex outlet (110/120V outlet required). Single basin sinks have one sensor, double basin sinks have two sensors (one for each basin), and triple basin sinks have three sensors (one for each basin).

1. Plug the transformer(s) into the outlet.
2. A red LED will flash in the sensor window (Figure 29).

Important: Do not interrupt the sensor beam until the light turns off.

Operation

The sensors are pre-set and equipped with a logic board. The sensors determine the range during initialization period. (The time after initial power until the light turns off is approximately 5 minutes.) The range is approximately 12"-14" in front of the sensor and is 25 degrees at peak. During the initialization period, the sensors allow for fixed objects that may be within the sensors' range. The sensors are equipped with a 2-second on/off delay and no-time-out feature. This prevents the sink from turning on when walking past at a normal pace, and no-timeout allows for an uninterrupted scrub.



Figure 29: Location of infrared sensor

Every 6 months

1. Check and adjust the temperature setting.

Every 12 months

1. Shut off water supply.
2. Open up checkstops.
3. Clean strainers and check for free movement of checkstop poppet.
4. Replace seals if cracked, cut, or worn.
5. Reassemble.
6. Adjust stem to desired temperature.

Troubleshooting

1. If the flow of water is less than desired
 - a. Valves upstream from supply not fully open
 - b. Low supply pressures
 - c. Accumulation of lime deposits in hot water pipes, restricting the flow of water
 - d. Checkstops not fully open
 - e. Clogged strainer screens in the checkstops
 - f. Clogged cartridge
2. Flow of water is completely cut off
 - a. Valves upstream from supply completely closed
 - b. Failure of cold water supply pressure (mixing valve is designed to shut off on a cold water supply failure)
 - c. Checkstops completely closed
3. Flow is untempered hot or cold water
 - a. Accumulation of lime deposits in hot water pipes, restricting the flow of hot water
 - b. Thermostatic actuator failure; replace with new thermostatic actuator
 - c. Hot and cold water supplies are connected to the wrong ports
4. Maximum temperature specified for the mixing valve cannot be obtained
 - a. Accumulation of lime deposits in hot water pipes restricting the flow of hot water
 - b. Hot water supply temperature is too low
5. Variable discharge temperature occurs
 - a. Extreme pressure variations in supply lines
 - b. Valve operating below minimum capacity requirements

Cleaning Stainless Steel Surgical Scrub Sinks

Stainless steel sinks must be cleaned on a regular basis to prevent any unnecessary damage to the stainless steel surfaces. When cleaning stainless steel sinks, make sure to use the proper approved cleaning agents and cleaning materials.

Do not use these cleaning materials:

- Abrasive pads
- Scrapers
- Steel wool
- Wire brushes

Do not use the following agents:

- Hard water (water with a pH reading above 7.0)
- Hydrochloric acid
- Steam or high-pressure water
- Bleach or any compounds containing chlorine, sodium hypochlorate, or ammonium chloride salts

Approved cleaning materials and agents

- Soft, clean lint-free cloth
- Non-abrasive cleaning pads
- Soft bristle brush
- Mild detergents
- Sodium bicarbonate (baking soda)
- Distilled water (pH rating 7) alone or with a mild detergent
- White vinegar (in a spray bottle)
- Isopropyl alcohol
- Hospital-grade non-bleach disinfectants
- Cleaners approved for use on stainless steel

Cleaning Stainless Steel Surfaces

- Using a damp, lint-free cloth and approved cleaner, wipe down the entire exterior surface of the stainless steel sinks. Using a damp, lint-free cloth with distilled water and a mild detergent, wipe down the entire exterior surface of the stainless steel sinks.
- Let cleaned sinks air dry.

Cleaning Decals or Printed Labels

- Use only distilled water and a mild detergent applied with a clean, dry lint-free cloth to clean decals or printed labels.
- Cleaning agents can remove or smear any printing from decals and print labels.
- Cleaning agents can damage plastic materials used in manufacturing covers for electronic items such as infrared sensor face.