

Quality People. Building Solutions.

Comfort Systems USA (Arkansas), Inc.
P.O. Box 16620
Little Rock, AR 72231
Phone 501-834-3320
Fax 501-834-5416

Date: 2/15/2022

Return Request: 2/25/2022

Project: EJ Towbin Healthcare Center

Supplier: LR Winnelson

Manufacturer: Various

Submittal: Plumbing Fixtures

Submittal Number: 22 40 00-01

Drawing # and Installation: Plumbing Drawings

ARCHITECT

Johnson Danforth & Associates
2200 N. Rodney Parham, Suite 210
Little Rock, AR 72212
501-404-4811

ENGINEER

Insight Engineering
201 S. Chester, Suite B
Little Rock, AR 72201
501-237-3077

GENERAL CONTRACTOR

CDI Contractors
3000 Cantrell Re.
Little Rock, AR 72202
501-666-4300

MECHANICAL SUBCONTRACTOR

Comfort Systems USA (Arkansas), Inc.
9924 Landers Rd.
N. Little Rock, AR 72117
501-834-3320

Notes:

CSUSA PROJECT NO.

22-873

dpierce@comfortar.com

9924 Landers Rd.
No. Little Rock, AR 72117

EJ TOWBIN HEALTHCARE CENTER
3H RENOVATION
NORTH LITTLE ROCK, ARKANSAS

SS-1 SERVICE SINK



T&S BRASS AND BRONZE WORKS, INC.

2 Saddleback Cove / P.O. Box 1088
Travelers Rest, SC 29690

Model No.

B-0665-BSTP

Item No.

Travelers Rest, SC: 800-476-4103 • Simi Valley, CA: 800-423-0150 • Fax: 864-834-3518 • www.tsbrass.com



ADA Compliant

This Space for Architect/Engineer Approval

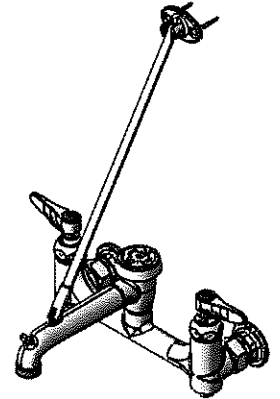
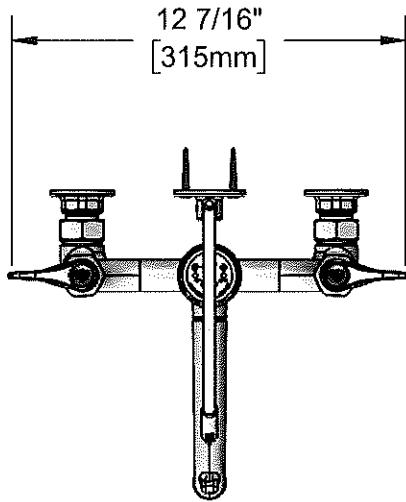
Job Name _____ Date _____

Model Specified _____ Quantity _____

Customer/Wholesaler _____

Contractor _____

Architect/Engineer _____



Support Rod w/
Wall Bracket &
Mounting Screws

Items Not Shown
for Clarity

B-0969
1/2" NPT Vacuum
Breaker

Quarter-Turn
Eterna Cartridges w/
Spring Check &
Lever Handles w/
Color Coded Indexes

Garden Hose
Male Outlet

Ø 2" [51mm]
Flanges w/
1/2" NPT
Female Inlets

Built-In Service
Stops

Mounting
Surface

14 5/16"
[364mm]

3 15/16"
[100mm]

8"
[203mm]
Adjustable From
7 3/4" to 8 1/4"
[197mm to 210mm]

2 11/16"
[68mm]

9 1/8"
[232mm]

Product Specifications:

8" Wall Mount Service Sink, Quarter-Turn Eterna Cartridges w/ Spring Checks, Lever Handles, Upper Support Rod, Built-In Stops, Garden Hose Male Outlet, Polished Chrome Finish, 1/2" NPT Vacuum Breaker & 1/2" NPT Female Inlets

Product Compliance:

ASME A112.18.1 / CSA B125.1
NSF 61 - Section 9
NSF 372 (Low Lead Content)
ANSI A117.1 (ADA)
ASSE 1001 (VB)



T&S BRASS AND BRONZE WORKS, INC.

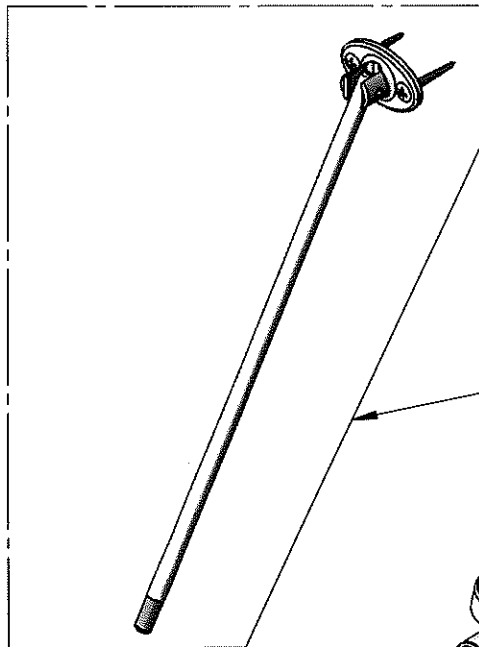
2 Saddleback Cove / P.O. Box 1088
Travelers Rest, SC 29690

Model No.

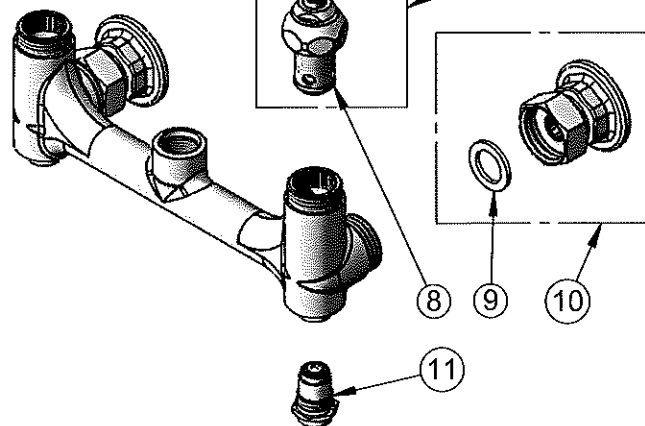
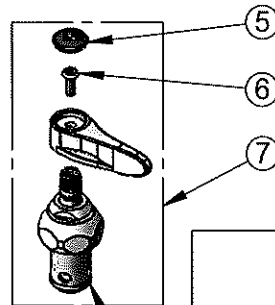
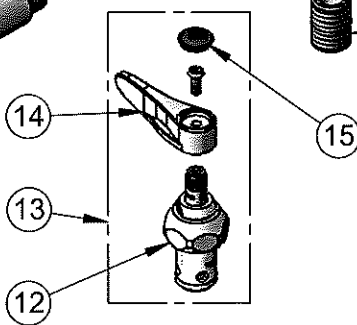
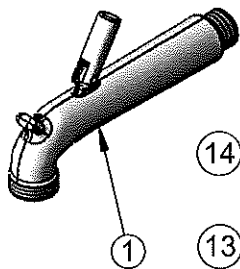
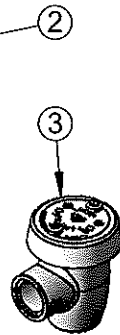
B-0665-BSTP

Item No.

Travelers Rest, SC: 800-476-4103 • Simi Valley, CA: 800-423-0150 • Fax: 864-834-3518 • www.tsbrass.com



ITEM NO.	SALES NO.	DESCRIPTION
1	009545-40	Spout w/ Male GH Outlet & Upper Clevis - Polished Chrome
2	009546-40	Upper Support Rod
3	B-0969	1/2" NPT Vacuum Breaker
4	002534-25	Close Nipple, 1/2" NPT
5	018506-19NS	Blue Button Index, Press-in
6	000925-45	Lab Handle Screw
7	002711-40NS	Quarter-Turn Eterna Cartridge w/ Spring Check, Handle, Blue Index & Screw, LTC
8	012442-40NS	Quarter-Turn Eterna Cartridge w/ Spring Check, LTC
9	001019-45	Coupling Nut Washer
10	00AA	1/2" NPT Female Eccentric Flange
11	163A	Built-in Service Stop
12	012443-40NS	Quarter-Turn Eterna Cartridge w/ Spring Check, RTC
13	002712-40NS	Quarter-Turn Eterna Cartridge w/ Spring Check, Handle, Red Index & Screw, RTC
14	001638-45NS	Lever Handle (New Style)
15	001193-19NS	Red Button Index, Press-in



Product Specifications:

8" Wall Mount Service Sink, Quarter-Turn Eterna Cartridges w/ Spring Checks, Lever Handles, Upper Support Rod, Built-In Stops, Garden Hose Male Outlet, Polished Chrome Finish, 1/2" NPT Vacuum Breaker & 1/2" NPT Female Inlets

Product Compliance:

ASME A112.18.1 / CSA B125.1
NSF 61 - Section 9
NSF 372 (Low Lead Content)
ANSI A117.1 (ADA)
ASSE 1001 (VB)



T&S BRASS AND BRONZE WORKS, INC.

2 Saddleback Cove / P.O. Box 1088
Travelers Rest, SC 29690

Model No.

B-WH6C

Item No.

Travelers Rest, SC: 800-476-4103 • Simi Valley, CA: 800-423-0150 • Fax: 864-834-3518 • www.tsbrass.com

This Space for Architect/Engineer Approval

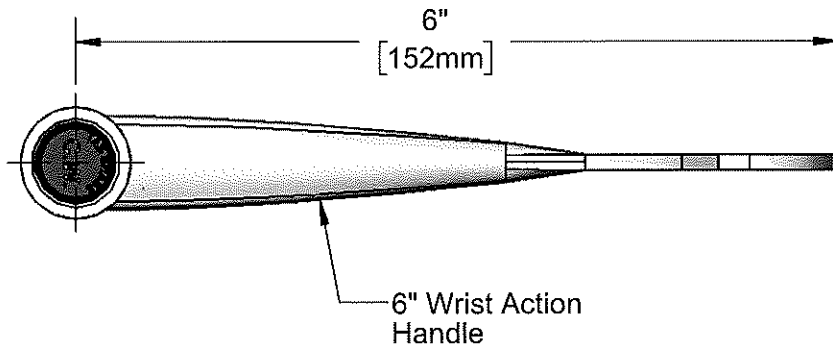
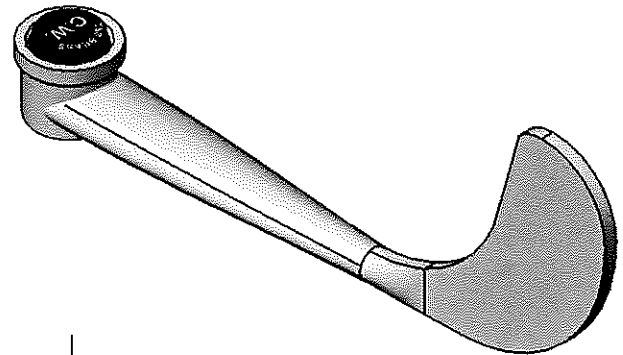
Job Name _____ Date _____

Model Specified _____ Quantity _____

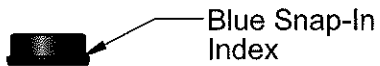
Customer/Wholesaler _____

Contractor _____

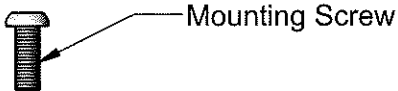
Architect/Engineer _____



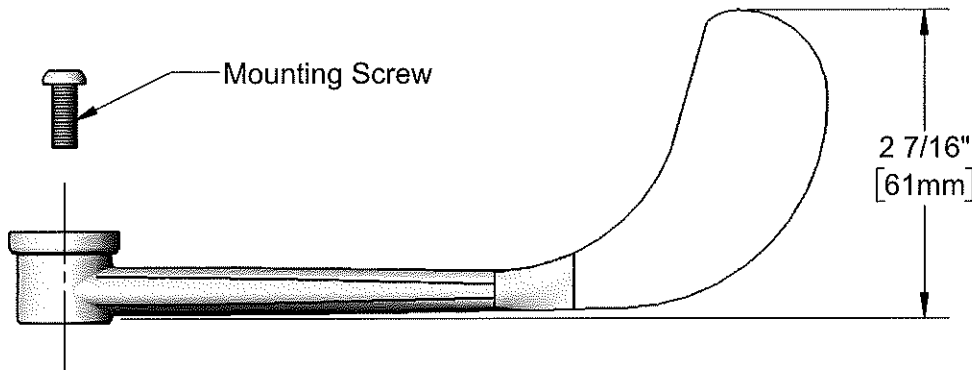
6" Wrist Action Handle



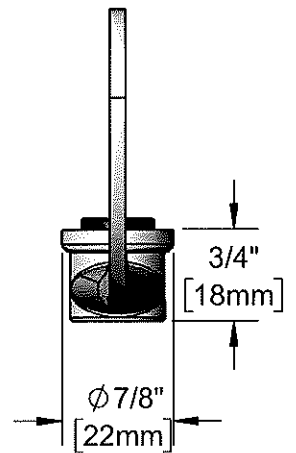
Blue Snap-In Index



Mounting Screw



2 7/16"
[61mm]



3/4"
[18mm]

Ø 7/8"
[22mm]

Product Specifications:
6" Wrist Action Handle (Polished Chrome) w/ Blue (CW) Index and Screw

Product Compliance:



T&S BRASS AND BRONZE WORKS, INC.

2 Saddleback Cove / P.O. Box 1088
Travelers Rest, SC 29690

Model No.

B-WH6H

Item No.

Travelers Rest, SC: 800-476-4103 • Simi Valley, CA: 800-423-0150 • Fax: 864-834-3518 • www.tsbrass.com

This Space for Architect/Engineer Approval

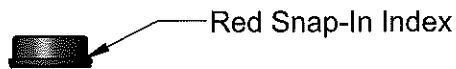
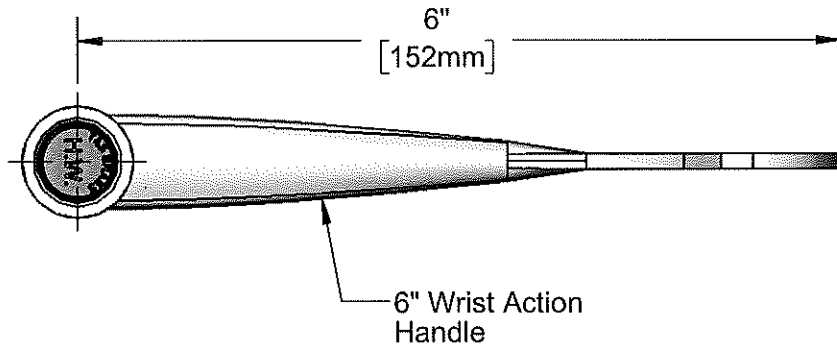
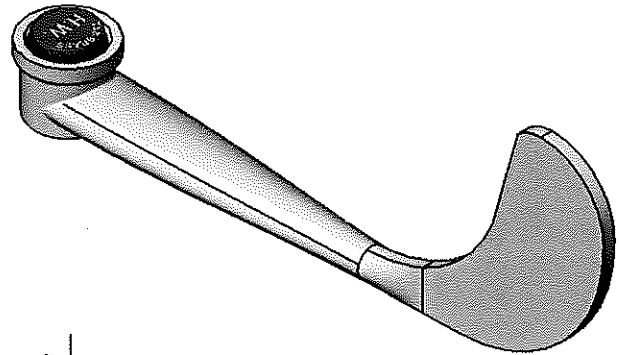
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Model Specified _____ Quantity _____

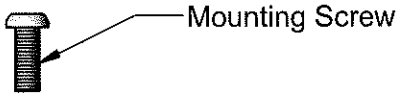
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Contractor _____

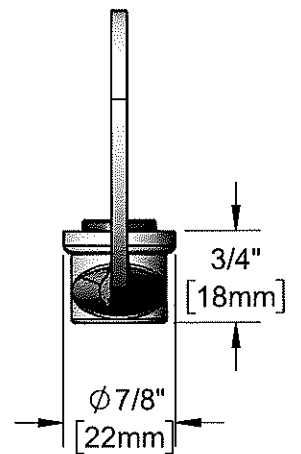
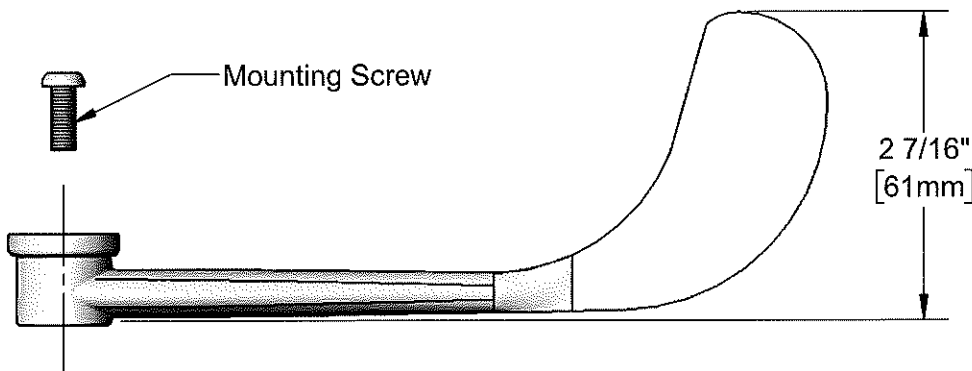
Architect/Engineer _____



Red Snap-In Index



Mounting Screw



Product Specifications:
6" Wrist Action Handle (Polished Chrome) w/ Red (HW) Index and Screw

Product Compliance:



T&S BRASS AND BRONZE WORKS, INC.

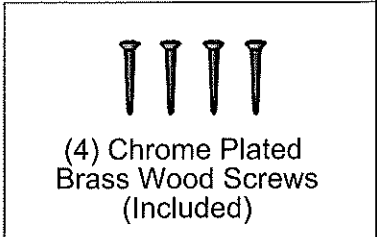
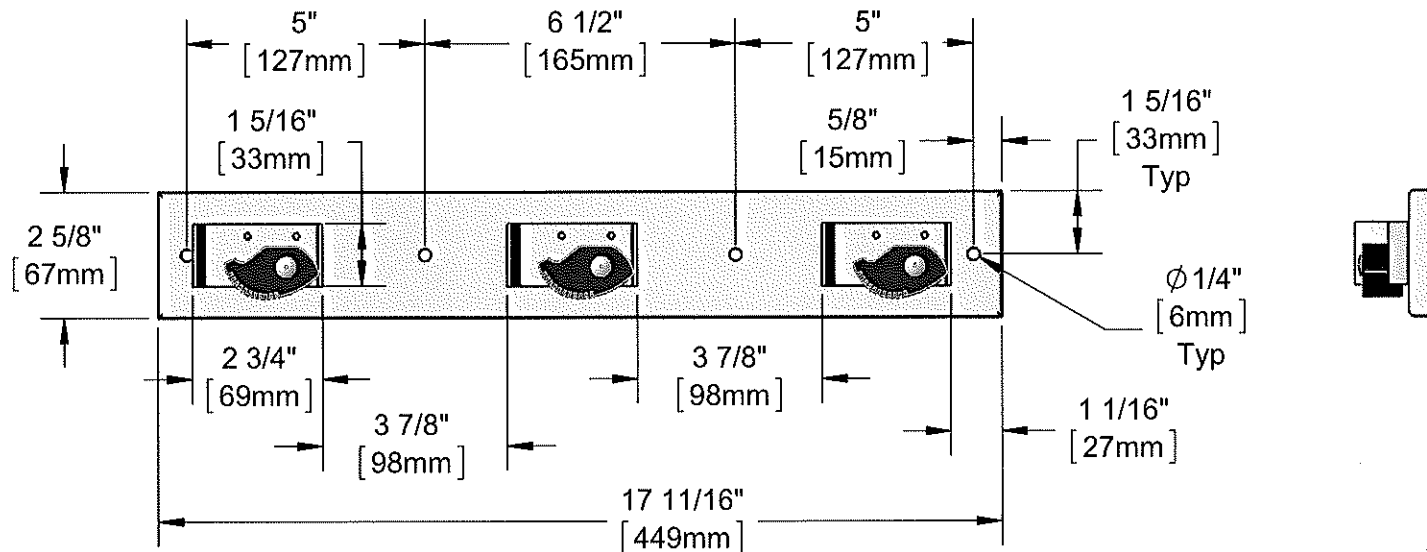
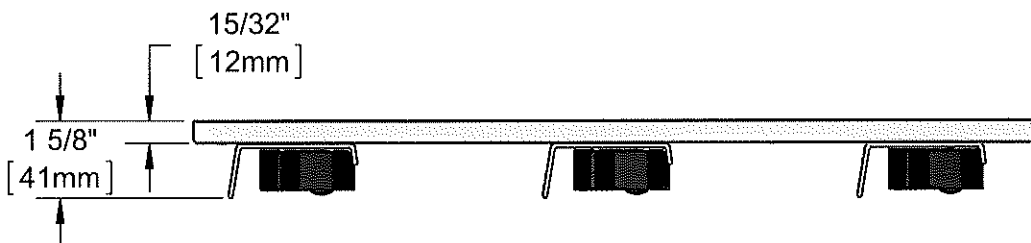
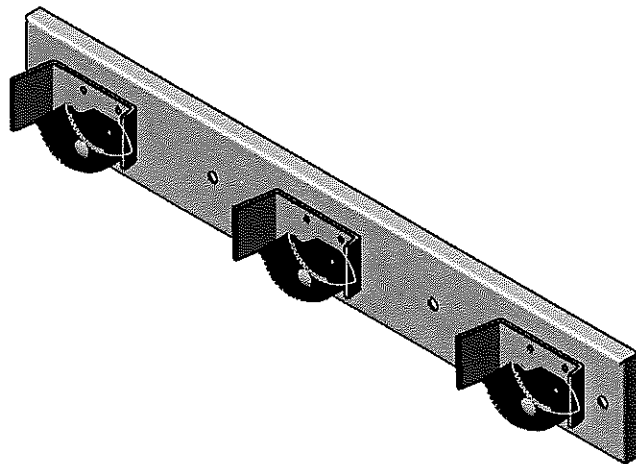
2 Saddleback Cove / P.O. Box 1088
Travelers Rest, SC 29690

Model No.

B-0653

Item No.

Travelers Rest, SC: 800-476-4103 • Simi Valley, CA: 800-423-0150 • Fax: 864-834-3518 • www.tsbrass.com



Product Specifications:
Stainless Steel Mop Hanger, (3) Spring-Loaded Rubber Grips

Drawn
KJG

Checked
JRM

Approved
JHB

Scale:
NTS

Date:
05/14/15



T&S BRASS AND BRONZE WORKS, INC.

2 Saddleback Cove / P.O. Box 1088
Travelers Rest, SC 29690

Model No.

B-0654

Item No.

Travelers Rest, SC: 800-476-4103 • Simi Valley, CA: 800-423-0150 • Fax: 864-834-3518 • www.tsbrass.com

This Space for Architect/Engineer Approval

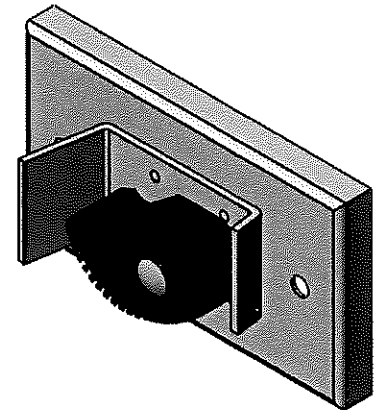
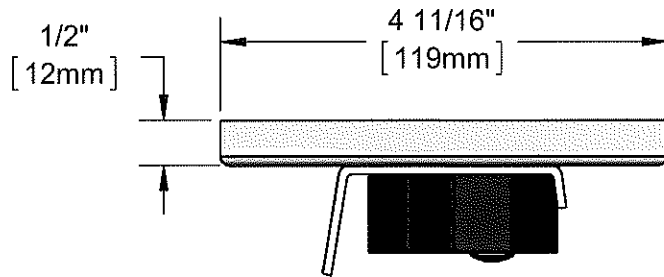
Job Name _____ Date _____

Model Specified _____ Quantity _____

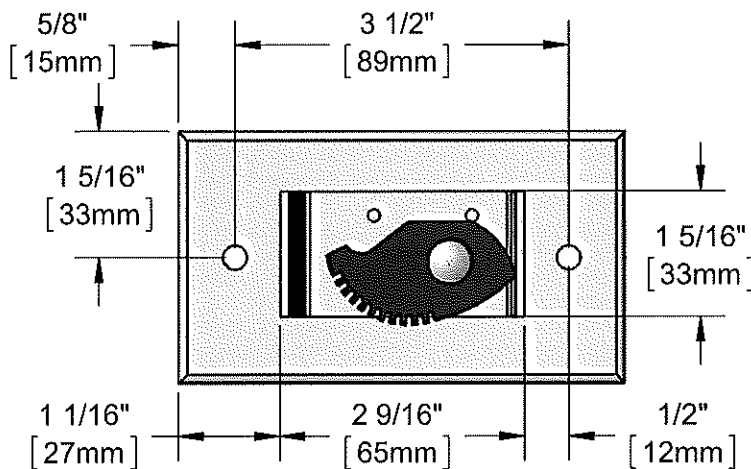
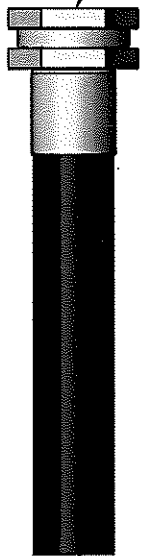
Customer/Wholesaler _____

Contractor _____

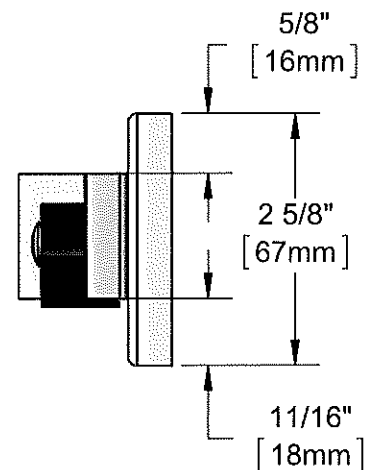
Architect/Engineer _____



Garden Hose Female Inlet
w/ Gasket



30" [762mm] Hose



(2) Chrome Plated
Brass Wood Screws
(Included)

Product Specifications:
Stainless Steel Hose Hanger w/ Spring-Loaded Rubber Grip, and 30" Hose w/
Female Garden Hose Inlet

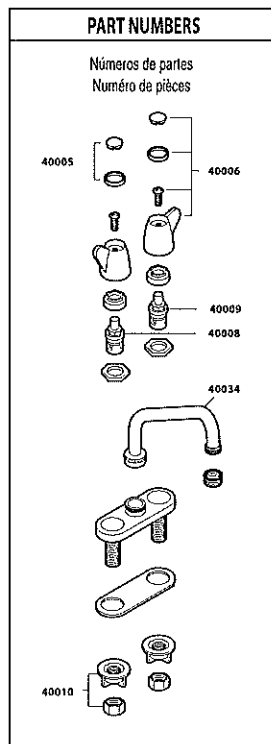
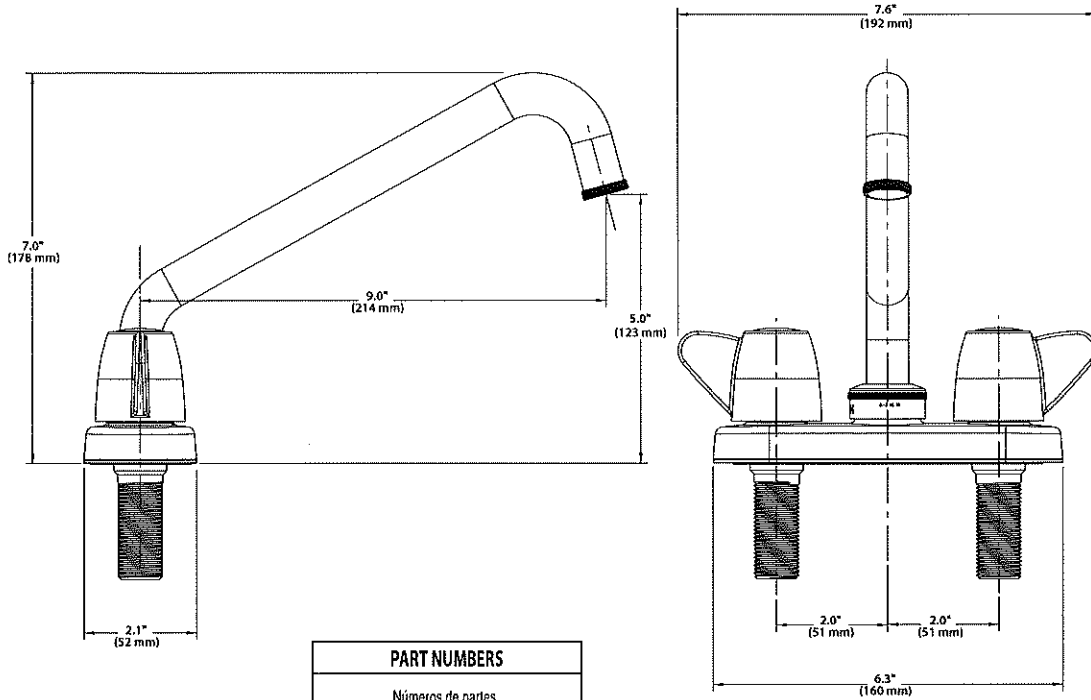
Product Compliance:

SS-2 SERVICE SINK



CRITICAL DIMENSIONS

- This faucet designed to be installed through 3 holes.
1" minimum diameter, 4" centers
- Maximum deck thickness 1.75" (44.5 mm)



L-1 LAVATORY

Single Control Lavatory Faucet Installation Instructions

Recommended for base fittings: 420 Series and 420-T Series

**CHICAGO
FAUCETS**
Geberit Group

Overview

Chicago Faucets deck mounted faucets feature cast brass bodies and precision cartridges for years of reliable operation.

Notice to the Installer

- Read this entire instruction sheet before installing to ensure proper installation.
- Installation must comply with local codes and ordinances.
- 420-T45 Series products have a maximum outlet temperature of 113°F (45°C), which may exceed the maximum temperature requirements of some plumbing codes.

Pressurized plumbing fixtures shall be installed in accordance with manufacturer's recommendations. The supply piping to these devices shall be securely anchored to the building structure to prevent installed device from unnecessary movement when operated by the user. Care shall be exercised when installing the device to prevent marring the exposed surface.

NOTE: The information in this manual is subject to change without notice.

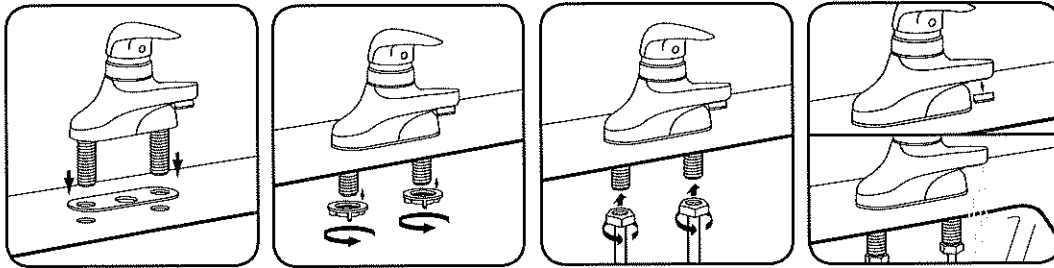
Please leave this manual with the facility manager after completing the faucet installation. This document contains information necessary for routine maintenance and servicing.

NOTE: Before installation, turn off water supplies to existing faucet and remove faucet if replacing. Clean faucet basin and clear away debris. Flush all supply lines before connecting to faucet. Failure to do so can result in debris clogging the inlets and/or cartridges.

NOTE: Before installing a new ceramic cartridge flush lines completely.

NOTE: Faucet must be serviced using only a Chicago Faucets recommended replacement outlet.

Installation Instructions

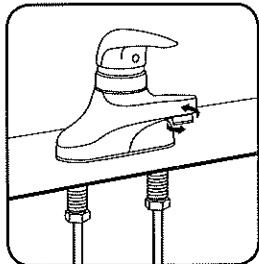


1. Position gasket and faucet.

2. Secure faucet.

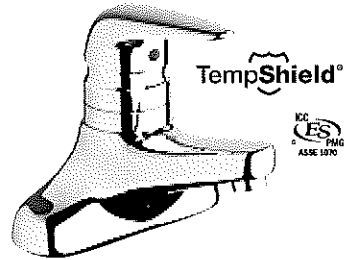
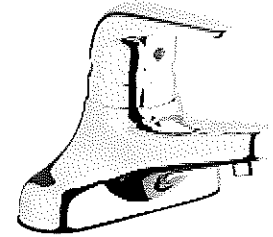
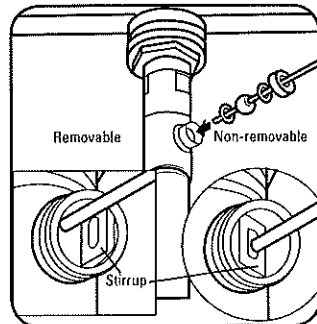
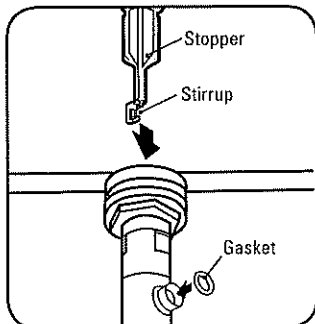
3. Attach supply lines.

4. Remove outlet and flush lines.



5. Reinstall outlet.

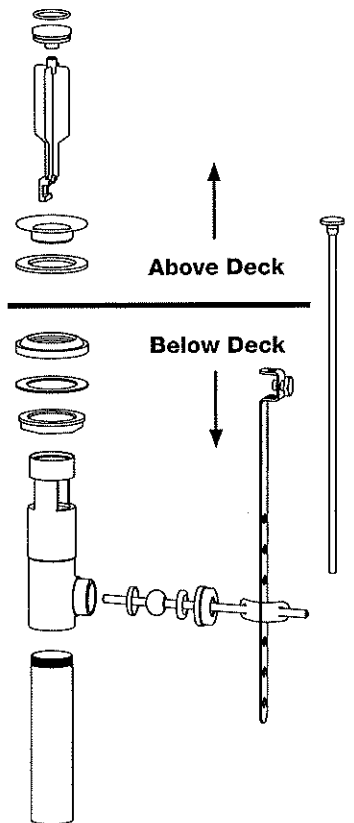
Waste Fitting



TempShield®

420-T products are ASSE 1070 certified to provide anti-scald safety measures.

Waste Fitting (420 Series Only)



Single Control Lavatory Faucet Installation Instructions

(continued)

**CHICAGO
FAUCETS**
Geberit Group

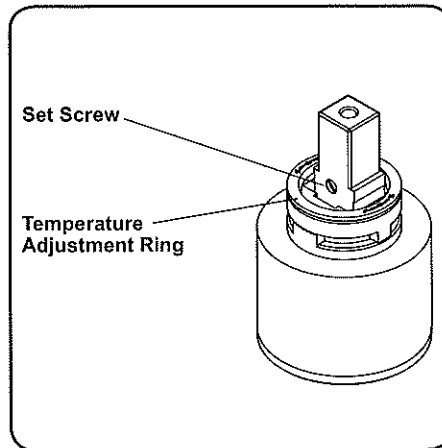
Temperature Adjustment

(420 Series Only)

Lift temperature adjustment ring off cartridge, and rotate clockwise to decrease hot water flow.

Volume Adjustment

Loosen set screw in back of cartridge stem to limit total water volume.



LIFETIME FAUCET WARRANTY — The "Faucet," defined as any metal cast, forged, stamped or formed portion of the Product, not including electronic or moving parts or other products separately covered by this Limited Warranty or water restricting components or other components, is warranted against material manufacturing defects for the life of the Product.

FIVE YEAR FAUCET WARRANTY — Certain Products and portions of the Product are warranted against material manufacturing defects for a period of five (5) years from the date of Product purchase. Products warranted against material manufacturing defects for a period of five (5) years from the date of Product purchase are referred to by the product numbers 42X, 43X, 15XX and E-Tronic™ - 4X, 5X, 6X, 7X, 8X and 9X. All zinc die cast portions of Product are warranted against material manufacturing defects for a period of five (5) years from the date of Product purchase.

THREE YEAR ELECTRONICS WARRANTY — Electronic components, including the solenoid, are warranted for three (3) years from the date of installation.

FIVE YEAR CARTRIDGE WARRANTY — The "Cartridge", defined as the metal portion of any Product typically referred to by the product numbers containing 1-099, 1-100, 1-310, 377X, 217X and 274X, excluding any rubber or plastic components, is warranted against material manufacturing defects for a period of five (5) years from the date of Product purchase. All Cartridges included in the Company's Single Control or Shower Products also are warranted against material manufacturing defects for a period of five (5) years from the date of Product purchase.

ONE YEAR FINISH WARRANTY – COMMERCIAL — For Products used in commercial applications, the finish of the Product is warranted against material manufacturing defects for a period of one (1) year from the date of Product purchase.

OTHER WARRANTIES — All other Products not covered above are warranted against material manufacturing defects for a period of one (1) year from the date of Product purchase.

Other restrictions and limitations apply. For complete warranty details, call Chicago Faucets Customer Service at 847-803-5000 or visit chicagofaucets.com.

The Chicago Faucet Company
2100 South Clearwater Drive
Des Plaines, IL 60018
Phone: 847/803-5000
Fax: 847/803-5454
Technical: 800/832-8783
www.chicagofaucets.com

Repair Parts

420-T45E2805ABCP

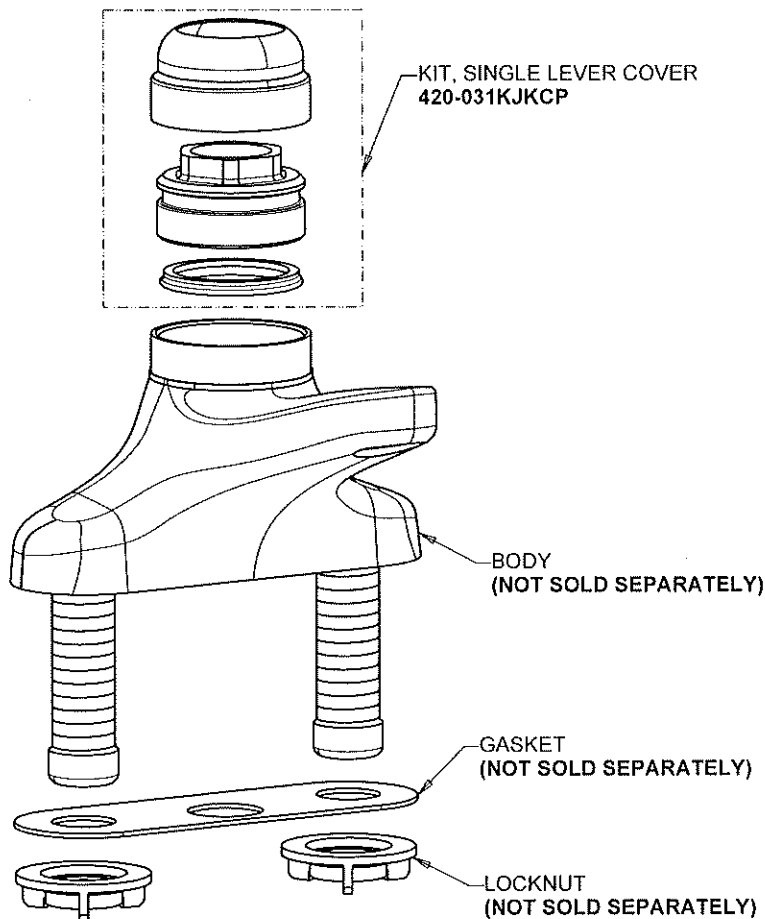
Deck-mounted manual faucet with built-in ASSE 1070 certified scald protection

CHICAGO FAUCETS

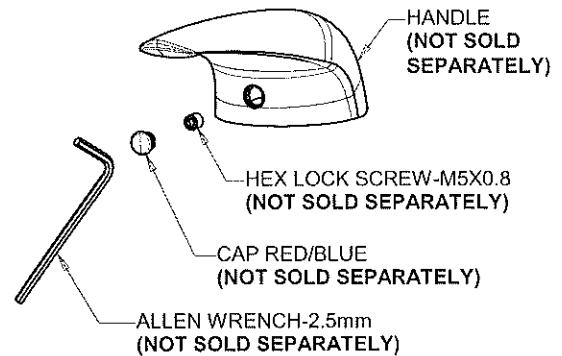
Geberit Group

Base for 420-T Series Fittings

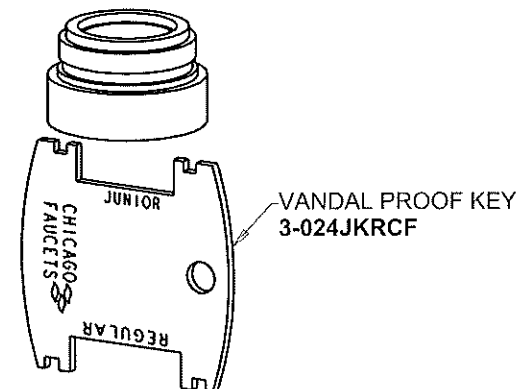
Base Parts:



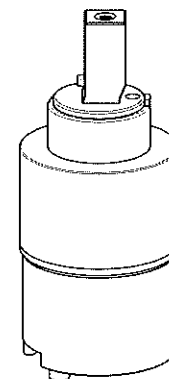
4-1/4" Lever Handle
420-030KJKCP



0.5 GPM (1.9 L/min) Vandal Proof Econo-Flo Non-Aerating Spray
E2805JKABCP



Ceramic Cartridge, Volume and Temperature Control
420-X45KJKABNF



For Technical Assistance:

Phone: 800-TEC-TRUE (832-8783)

Email: techsupport.us@chicagofaucets.com

2100 South Clearwater Drive

Des Plaines, IL 60018

Phone: 847-803-5000

chicagofaucets.com

L-2 LAVATORY

L-3 LAVATORY

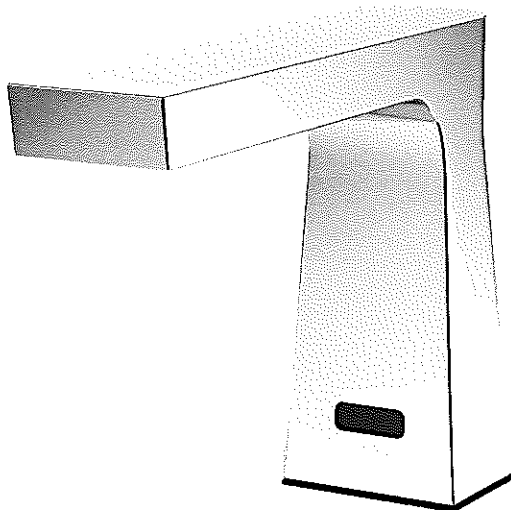


HYDRO·X
P  W E R

Camaya Series™ Faucet

Sensor-Operated Lavatory Faucets for
Battery or Plug-In Installations.

Installation, Operation, Maintenance,
and Parts Manual



Z6953-XL
Camaya Series™

**Sensor-Operated Battery-Power or Plug-in
Lavatory Faucets**

LIMITED WARRANTY

All goods sold hereunder are warranted to be free from defects in material and factory workmanship for a period of three years from the date of purchase. Decorative finishes warranted for one year. We will replace at no costs goods that prove defective provided we are notified in writing of such defect and the goods are returned to us prepaid at Sanford, NC, with evidence that they have been properly maintained and used in accordance with instructions. We shall not be responsible for any labor charges or any loss, injury or damages whatsoever, including incidental or consequential damages. The sole and exclusive remedy shall be limited to the replacement of the defective goods. Before installation and use, the purchaser shall determine the suitability of the product for his intended use and the purchaser assumes all risk and liability whatever in connection therewith. Where permitted by law, the implied warranty of merchantability is expressly excluded. If the products sold hereunder are "consumer products," the implied warranty of merchantability is limited to a period of three years and shall be limited solely to the replacement of the defective goods. All weights stated in our catalogs and lists are approximate and are not guaranteed.

NOTICE: READ ENTIRE MANUAL PRIOR TO INSTALLING PRODUCT.

⚠ WARNING: Cancer and Reproductive Harm - www.P65Warnings.ca.gov

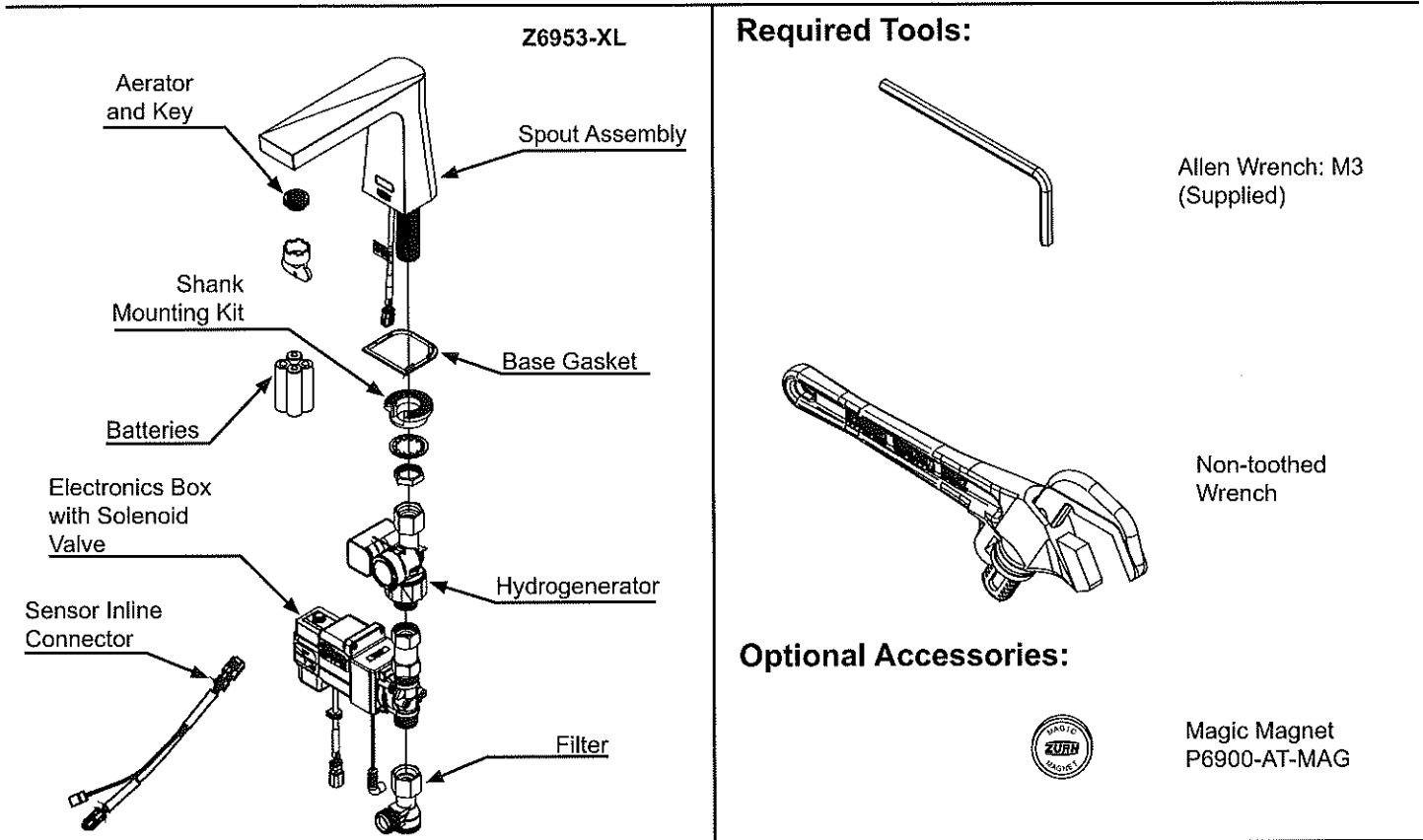
⚠ ADVERTENCIA: Cáncer y daño reproductivo - www.P65Warnings.ca.gov

⚠ AVERTISSEMENT: Cancer et effets néfastes sur la reproduction - www.P65Warnings.ca.gov

NOTE: The information in this manual is subject to change at any time without notice. Installations may be performed at different times of construction by different individuals. For this reason, these instructions should be left on-site with the facility or maintenance manager.

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Camaya Series™ Faucet Package Contents



Overview:


Zurn® Camaya Series™ Faucets features multiple spout designs in a standard polished chrome finish with one piece heavy duty cast brass spouts and advanced electronic components and feature sets. Sophisticated automatic user detection ensures the user does not need to touch the faucet and helps deliver optimum water savings.

Specifications:

Voltage:	6 VDC Series [4 "AA" (Alkaline) and/or external power option]
Sensor Range:	Fixed.
Operating Water Pressure:	10-125 psi
Operational Water Temperature:	33°F to 140°F (1°C to 60°C)
Aerator:	0.5 GPM (Standard)

Important Safety Information:

- Installer is responsible for ensuring the product is installed and conforms to all plumbing codes and ordinances.
- Do not convert or modify this Zurn product yourself. All warranties will be voided.
- Water supply lines must be sized according to building designer in order to provide adequate water supply for each fixture.
- Flush all water lines prior to making connections.

 **Warning:** Do not connect an external power supply to the hydrogenerator's barrel jack connector. Doing so could reduce product performance or pose a fire hazard

Prior to Installation:

Before installing your Zurn® Camaya Series™ Faucet: the items listed below should already be installed on site.

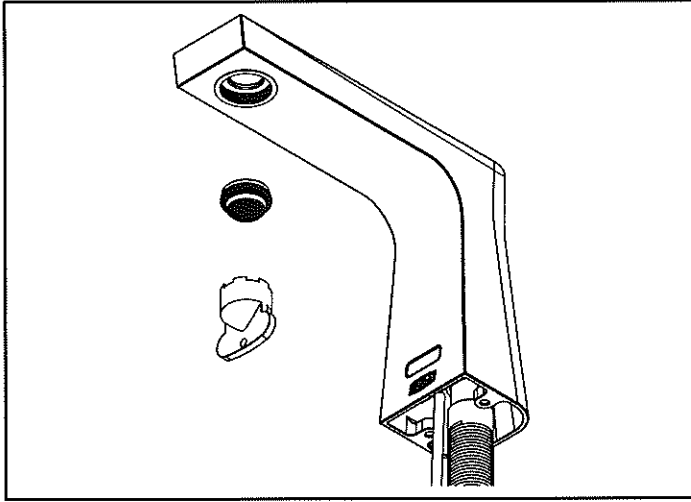
- Lavatory/sink
- Drain Line
- Hot and cold water supply line or pre-tempered water supply line.
- Installer/Service should not use pipe dope or teflon/thread sealant anywhere on this product, most notably threads and connection points.
- Care shall be taken when installing this product to prevent marring of any exposed or decorative surfaces.

NOTE: Before installation, turn off water supplies to existing faucet and remove faucet if replacing an existing device. Clean the faucet basin and clear away debris. Flush all supply lines before connecting the faucet. Failure to do so may result in debris clogging the inlets and/or internal control and mixing valve

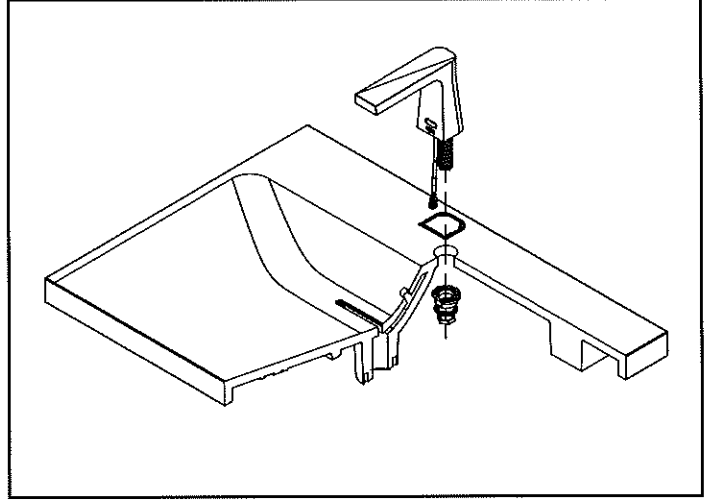
Spout Installation - Step 1

1.1. Carefully screw aerator into spout using included tool.

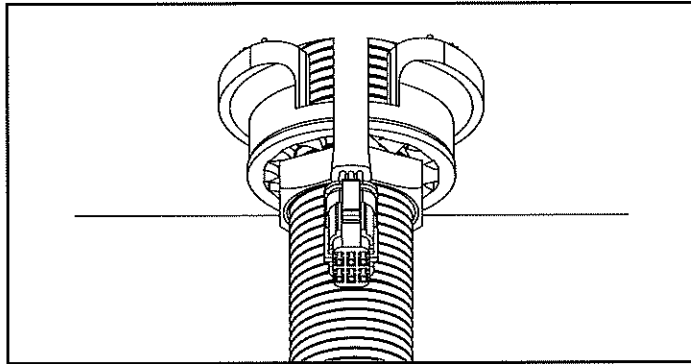
! Take care to not pinch blue o-ring



1.2. Install spout to sink using spout base gasket, plastic mounting washer, star washer and mounting nut (and cover plate for versions that are included).



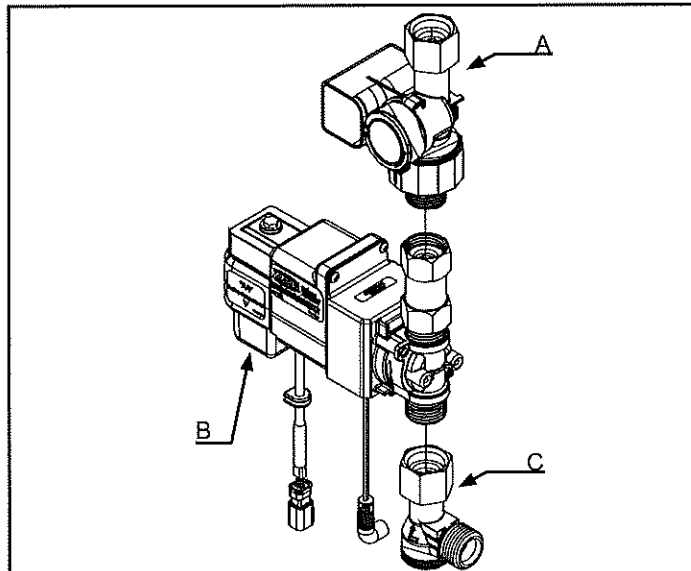
1.3. Ensure that slot in plastic washer is facing forward.



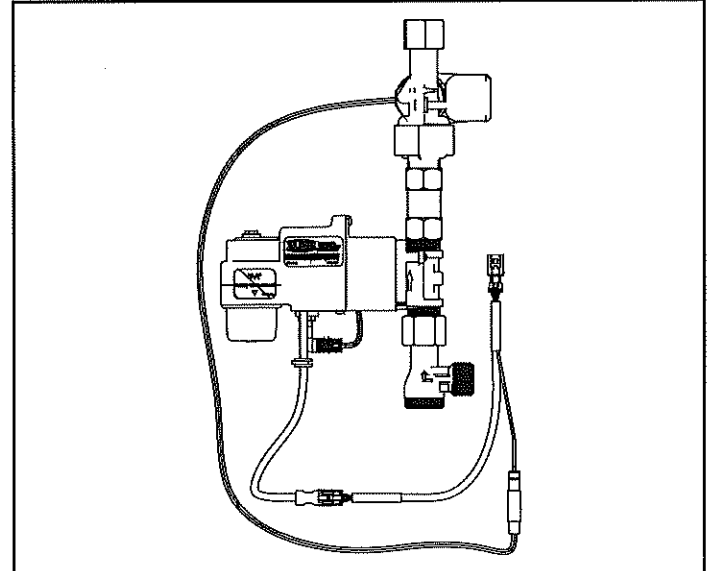
! Take care passing sensor cable through hole. Cable passes through front of plastic mounting washer

Electronics Module Installation - Step 2

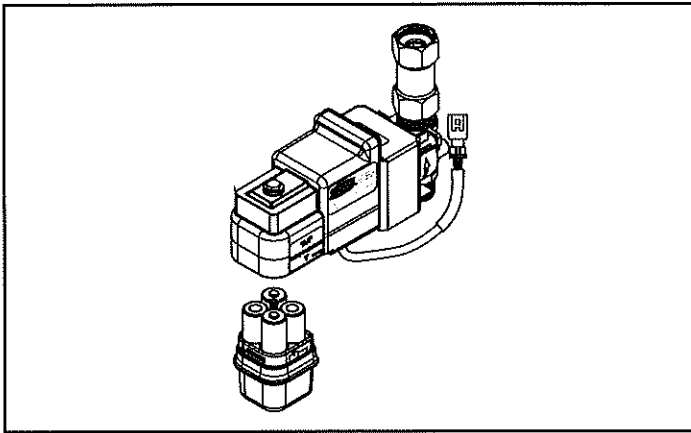
2.1. Connect the hydrogenerator(A) downstream of electronics module(B) and filter(C) to bottom of electronics module.



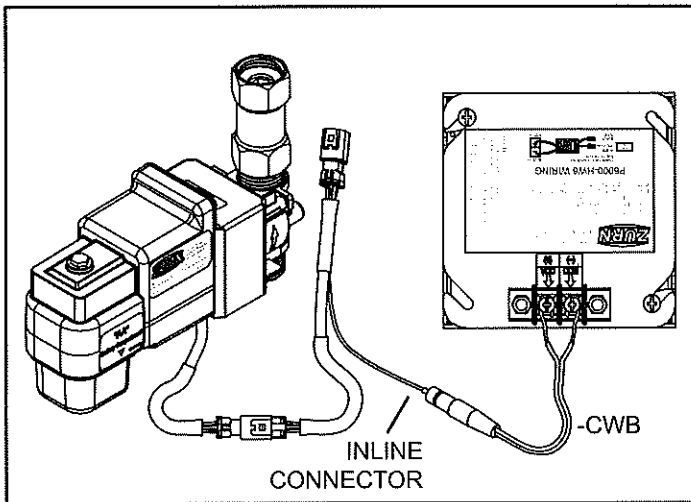
2.2. For battery-powered version, connect sensor inline connector to electronics module and hydrogenerator.



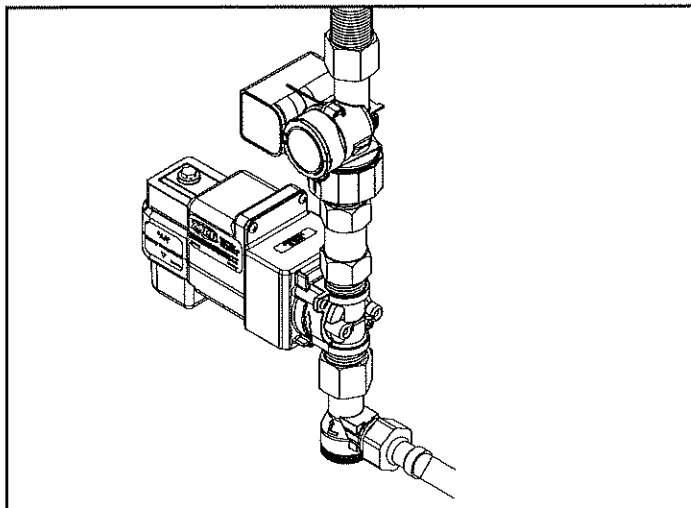
2.3. Open battery module using supplied Allen wrench and install supplied batteries in the electronics module.



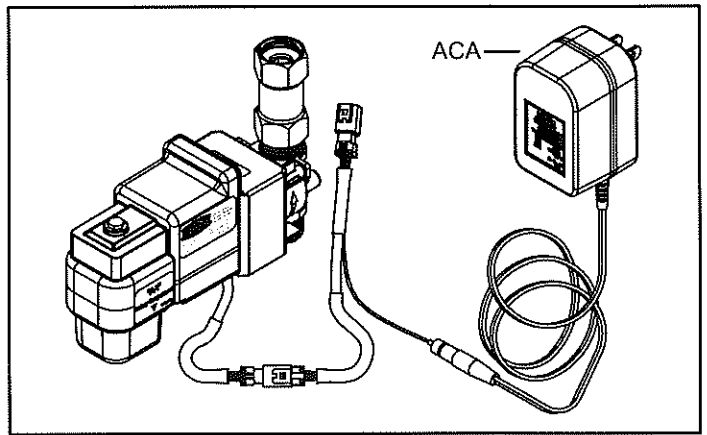
2.3b. Optional HW6 (Hardwired 6V) version: Connect supplied inline connector and hardwire adapter. When securing the CWB to the screw terminals on HW6 unit, the BLACK WITH DASHED MARKINGS should be connected to the Positive (+) terminal, and the SOLID BLACK wire should be connected to the Negative (-) terminal.



2.4. Tighten electronics module assembly with hydrogenerator to shank and connect water line(s).

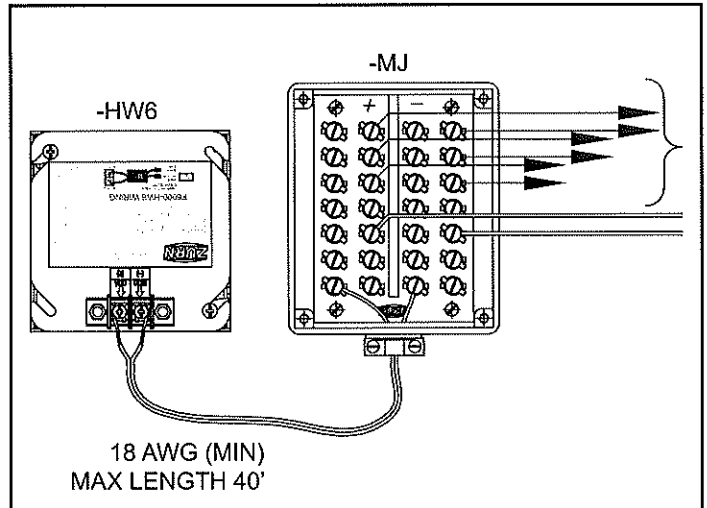


2.3a. Optional ACA installation: Connect Y-adaptor to ACA adapter as shown.



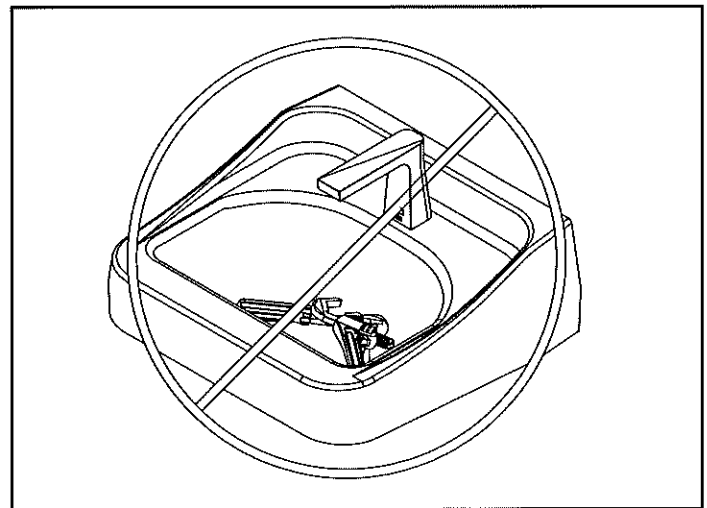
MJ unit (sold separately)

Note: Do not connect more than 8 solenoids to a single transformer

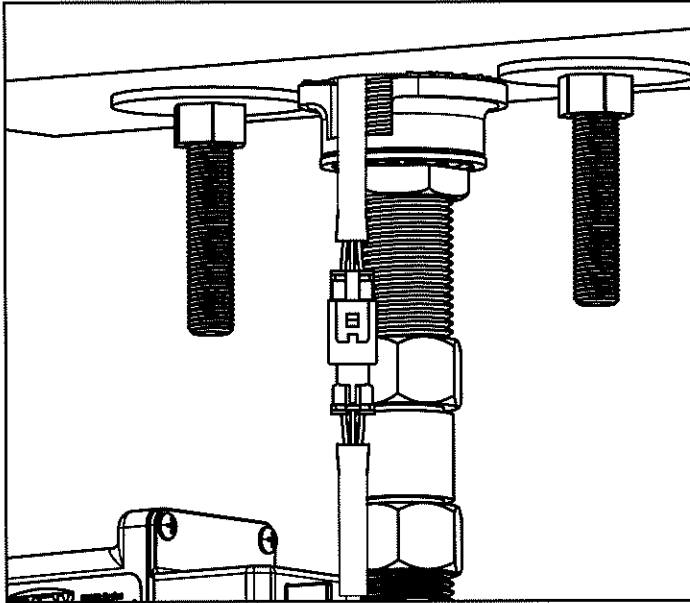


2.5. Ensure that sink is clear of tools/debris and is in normal operating condition.

2.6. Turn on water supply(ies).

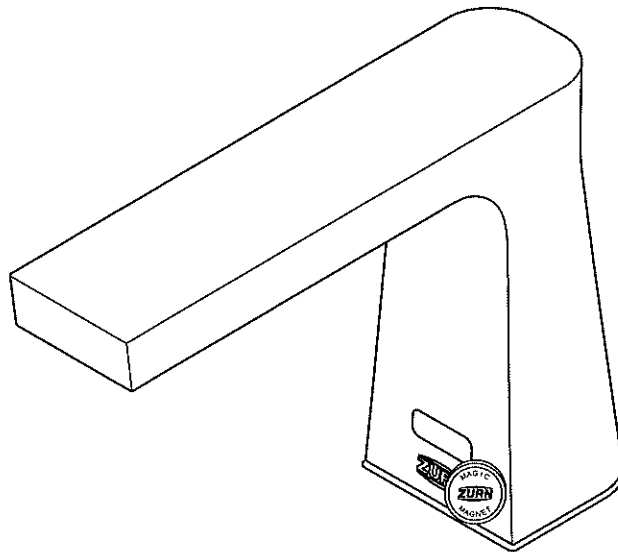


2.7. Connect sensor inline connector to sensor cable from spout.



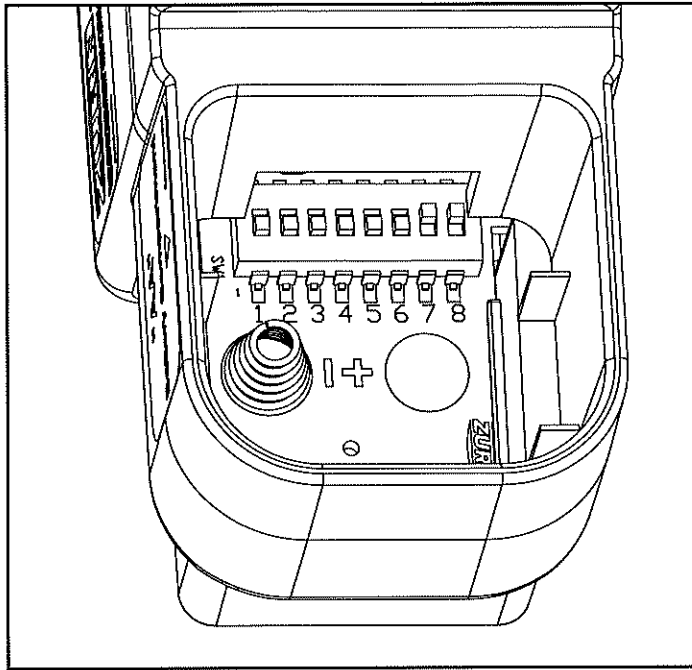
Sensor Range Adjustment (All configurations when necessary)

1. Ensure that the faucet is installed and powered has been applied.
2. Place and hold the Magic Magnet (optional accessory: P6900-AT-MAG) in the right hand corner of the sensor as shown. An indicating light will activate when the magnet is correctly positioned.
3. Wait until the light starts to blink, then remove the magnet. (Faucet has entered the calibration mode.)
4. Place a target at the desired activation range in front of the faucet sensor. (Cardboard, hand, etc.)
5. Wait approximately 10 seconds during the calibration cycle. Do not move the target during this period.
6. Calibration is complete when the light stops blinking.
7. Confirm calibration distance by moving the target back, then slowly forward until the faucet activates at the desired calibration distance.

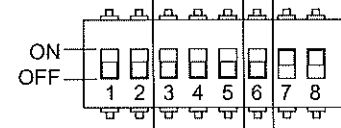


Adjustable modes and features selection:

To adjust features from default configuration, you must remove the battery tray. Once battery tray is removed you will see the switches.



All switches shown in default mode.



Switch Position:	1	2	3	4	5	6	7	8
Purge (Hours)								
Disable:	Off	Off						
12:	On	Off						
24:	Off	On						
48:	On	On						
Time (Seconds)								
30:			Off	Off	Off			
5:			On	Off	Off			
10:			Off	On	Off			
15:			On	On	Off			
60:			Off	Off	On			
Less Time-out:			On	Off	On			
Mode Select								
Sensing Mode:						Off		
Metering Mode:						On		
Sensor Sensitivity								
Low:							Off	Off
Normal:							On	Off
Mode A:							Off	On
Mode B:							On	On

Purge Features:

The purge switches can be configured for 4 modes of operation: Disabled (standard configuration), 12 hour, 24 hours, or 48 hours. Purge water flow duration is 2 minutes. Note: Purge activation occurs every switch selected time (0,12, 24, or 48 hours) after last activation.

Flow Time:

There are 6 optional time configurations: 30 seconds (standard), 5s, 10s, 15s, 60s, & "Less Time-out". The "Less Time-out" option actually ceases water flow (turns off) after 20 minutes to limit chance of water damage in the event a sink drain becomes blocked.

Sensing Mode (DEFAULT):

During this mode the valve will shut off after hands are removed. If hands are not removed the time out delay will turn off the faucet (ex: standard configuration is 30 seconds) (See Switch Position Diagram shown above)

Metering Mode:

When hands are detected by the sensor, water will run for ' X ' seconds (standard configuration is 30 seconds) before turning off. (See Switch Position Diagram shown above)

Sensor Sensitivity: (Default setting: Low):

The 4 sensor sensitivity options are used for varied sink and environmental conditions. The factory default setting should be ideal for most general applications. However, sensor performance can be optimized to adjust for unusual sink finish, material, shape, or unusually bright or dark lighting conditions.

Switch 7 controls the sensitivity

-On (default) is normal sensitivity for most sinks providing max range.

-Off set the sensor to a lower sensitivity level for sinks that cause false activation. The detection range maybe less for all hands.

Switch 8 controls sensor mode

-On (default) enables the mode that filters the effects of flowing in the bottom of problematic sinks. Detection maybe less for some hands.

-Off disable the filter mode, so detection is expanded deeper into the sink for max detection range for all hands. Some sinks may only be able to operate in this mode.

NOTE: After a configuration switch change has been made, disconnect sensor cable from electronics box, wait 30 seconds, then reconnect sensor cable and wait 30 seconds to allow the sensor to tune-in the sink characteristics.

TROUBLESHOOTING GUIDE:

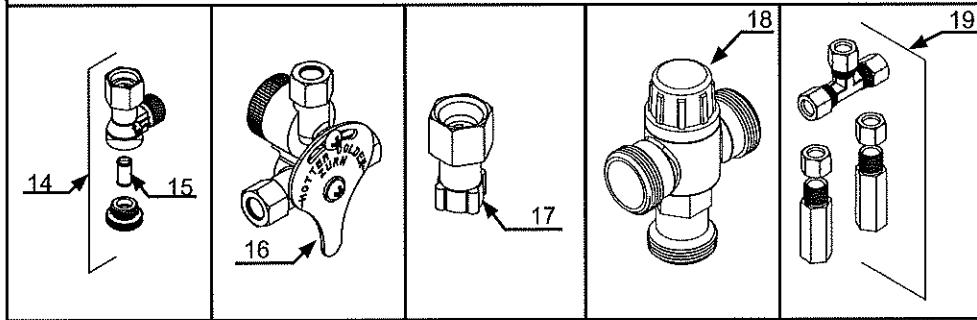
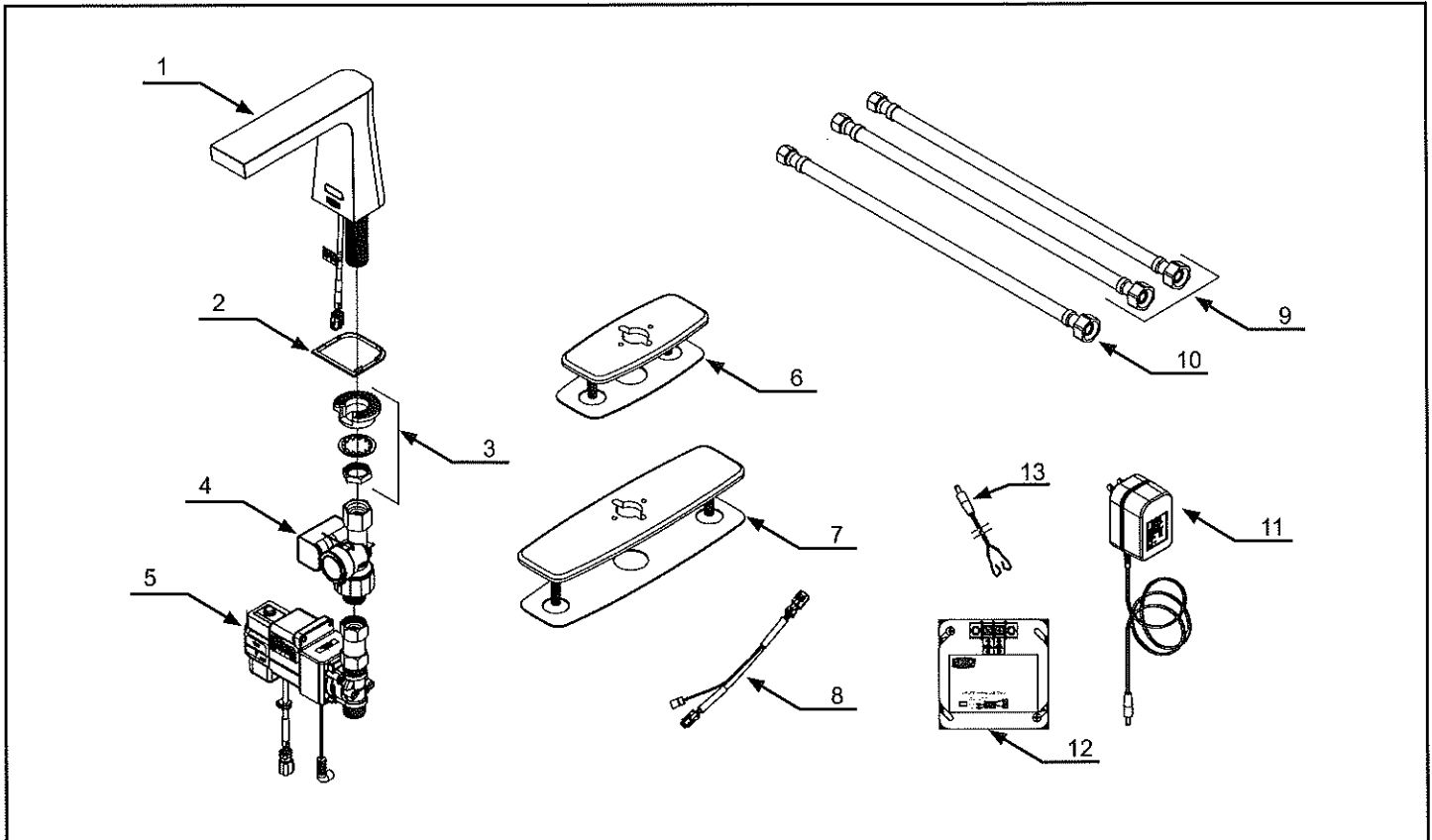
POTENTIAL SITUATIONS	POSSIBLE CAUSES	SUGGESTED SOLUTION TIPS
Faucet is non-responsive	Battery voltage low or no power.	Change out batteries or verify power provided by HW6 or ACA
	Sensor and electronic connector cable has bent or broken pins.	Check to see if pins are missing, bent, or broken. If yes, then the electronic box needs replaced
	Sensor lens could have surface damage, scratches, or deposit build ups.	"Inspect the sensor lens underneath the spout tip. May require cleaning with a damp cloth or sensor replacement"
Faucet does not activate after initial installation	Sensor may not have had enough time to calibrate prior to a user or target trying to initiate activation.	Disconnect the sensor and electronic box cables and wait for 30 seconds. Reconnect the cables, but allow for another 30 seconds before placing hands or a target within the sensor range. You should hear a click of the solenoid once calibration is complete.
	Check if protective film was removed from lens.	
Water does not stop	Electronics box cable connector has bent pins that are shorted	Check to see if pins are missing, bent, or broken. If yes, then the electronic box needs replaced.
Ghost Activation	Sensor lens could be obstructed or environmental factors such as high reflective surfaces and/or bright sunlight conditions.	Check/clean sensor lens of any debris or buildup If sunlight or IR interference is a factor.
"Sensor faucet is leaking underneath the sink or counter"	Mounting hardware is not tightened sufficiently (faucet shank, electronic box, supply hoses, etc)	Check and ensure the nuts and joints are tight and secure from the supply stop all the way to the faucet shank.
	Missing the washer located in the solenoid box nut where it assembles to the faucet shank.	Make sure the water supply stops are shut off. Check to ensure the washer is installed or damaged. If not, install washer. If a washer is damaged, replace with new.

For further assistance with troubleshooting visit <http://www.zurn.com>

Care and Cleaning Instructions:

- Do not use any abrasive or chemical cleaners to clean the faucets.
- If abrasives or chemicals are used it can lead to dulling of luster, attacking of chrome plating or decorative finishes.
- ONLY use mildly warm soapy water, and then wipe the device dry with a clean/soft towel or cloth.
- Upon cleaning other areas of the restroom be sure the sensor lenses are protected from other cleaning chemicals/solvents to prevent potential damages to the sensor and/or electronics.

Z6953-XL Parts List



Item	Description	Product No.
1	Z6953 Spout Assembly with Sensor	P6953-XL-CV-1
2	Z6953 Spout Base Gasket	P6953-XL-42
3	Mounting Kit	P6900-43
4	Hydrogenerator Assembly	P6900-HYD
5	Electronics Box with Solenoid	P6950-XL-B-L-V2
6	4" Cast Cover Plate w/Gasket	P6900-CP4
7	8" Cast Cover Plate w/Gasket	P6900-CP8
8	Sensor Inline Connector	P6950-XL-DC
9	Stainless Supply Hoses (XL)	P6900-SSH-2
10	Single Stainless Steel Hose (XL)	P6900-SSH
11	Optional Plug-in Power Converter	P6900-ACA

Item	Description	Product No.
12	-HW6 Power Supply	P6900-HW6
13	-CWB Pigtail	P6900-CWB
14	Filter Kit	P6900-120
15	Filter Screen	P6900-MV-7
16	Mixing Valve with Filter	P6900-XL-MV
17	Composite Mixing Valve Adapter	P6900-MV-ADAP
18	Thermostatic Mixing Valve	P6900-TMV
19	Mixing Tee w/Filters and Back Checks	P6900-XL-MT

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Rev. E | Date: 12/07/22 | C.N. No. 144945 | Prod./Dwg. No. FV795

Patent zurn.com/patents

US 1.855.0NE.ZURN CANADA 1.877.892.5216

ZURN.COM

by **ZURN ELKAY** Water Solutions



**INSTALLATION & SERVICE
INSTRUCTIONS MODEL 170A-LF**

170A-LF 3/8" COMPRESSION

ASSE 1070 CERTIFIED

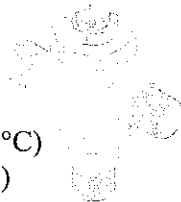


WARNING: This product can expose you to chemicals including lead, which is known to the State of California to cause cancer. For more information, go to

NOTE: DO NOT USE THREAD SEALANT ON COMPRESSION CONNECTIONS

PERFORMANCE:

- Maximum Pressure: 125 PSI (8.6 BAR)
- Maximum Hot water temperature: 180°F (82°C)
- Hot water inlet temperature range: 120-180°F (49-82°C)
- Cold water inlet temperature range: 33-80°F (1-27°C)
- Outlet temperature range: 95-120°F (35-49°C)
- Minimum flow certified to ASSE 1070: 0.25 GPM
- Maximum flow: 4 GPM



⚠ WARNING!! ⚠

WATER TEMPERATURES IN EXCESS OF 110°F (43°C) MAY CAUSE SCALDING, SEVERE INJURY, OR DEATH!! IMPORTANT!

This thermostatic water mixing valves is NOT pre-set and can be adjusted to deliver water at temperatures exceeding 110°F (43°C). After installation, the installer must check the outlet water temperature and adjust the temperature setting to ensure delivery of a safe water temperature not exceeding 110°F (43°C).

Periodic inspection and maintenance is required

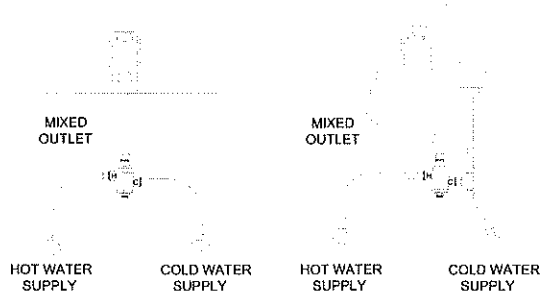
Regular inspection of the valve and the outlet temperature are required. Cleaning at a minimum of annually will help assure proper function of the mixing valve. Frequency of cleaning and inspection of the outlet temperature depends upon local water quality conditions.

1. Valve should be installed where it can be easily cleaned, adjusted or repaired. Leonard recommends that shutoffs are installed on the inlets to the mixing valve.
2. Inlets are furnished with 3/8" compression connections. If using copper tubing, do NOT extend tubing more than 3/16" beyond the compression ferrule. **DO NOT use thread sealant.**
3. Tighten compression nuts by hand, then tighten only 1/4 turn, overtightening will cause leaks and possibly crush checks.
4. Flush the hot and cold water lines before installing mixing valve.
5. "H" and "C" are clearly marked on the inlets, install hot water line to inlet marked "H" and cold water line to the inlet marked "C". Valve can be installed in any position.
6. Valve is NOT pre-set and must be set after installation. Run water for at least 1-2 minutes to allow water to stabilize.
7. Loosen locknut on stem, turn stem (screwdriver adjustment) counter-clockwise (stem coming out of valve) for hotter and clockwise (stem going into valve) for colder outlet temperature. Do not force the valve to below 90° F.
8. Tighten down the locknut to prevent unauthorized adjustment.
9. Verify the outlet temperature is set to the correct temperature.

TROUBLESHOOTING

PROBLEM	CAUSE	SOLUTION
Cannot reach desired outlet temperature	Valve is full of debris or Inlets supplies are reversed	Flush valve with water Pipe hot to hot inlet, cold to cold inlet
Flow rate reduced or fluctuating	Inlet screen filled with debris	Check inlet screens for debris
No flow from outlet	Hot or Cold water supply failure	Restore Hot and Cold water inlet supplies
No flow from outlet	Inlet supply tube extending more than 3/16" beyond ferrule	Shorten tube and replace inlet checks
Hot water flows into Cold water supply or vice versa	Check valve has debris, inlets were not properly flushed	Replace inlet check valves and screens
Outlet temperature not warm enough	Hot water supply not 10° F above required outlet temperature (5° F with equal pressures)	Increase Hot water inlet temperature

INSTALLATION



170A - BP ONLY

**PACKING
PART # 7539**

**CHECK KIT - KIT 4/108
INCLUDES CHECKS
AND SCREENS**

LIMITED WARRANTY

Leonard Valve Company warrants the original purchaser that products manufactured by them (not by others) will be free from defects in materials and workmanship under normal conditions of use, when properly installed and maintained in accordance with Leonard Valve Company's instructions, for a period of one year from date of shipment. During this period the Leonard Valve Company will at its option repair or replace any product, or part thereof, which shall be returned, freight prepaid, to the Leonard factory and determined by Leonard to be defective in materials or workmanship. There are no warranties, express or implied, which extend beyond the description contained herein. There are no implied warranties of merchantability or of fitness for a particular purpose. In no event will Leonard be liable for labor or incidental or consequential damages. Any alteration or improper installation or use of the product will void this limited warranty.

1360 Elmwood Avenue, Cranston, RI 02910 USA

Phone: 401.461.1200 Fax: 401.941.5310

Email:

Web Site: <http://www.leonardvalve.com>

S-1 SINK



T&S BRASS AND BRONZE WORKS, INC.
 2 Saddleback Cove / P.O. Box 1088
 Travelers Rest, SC 29690

Model No.

B-2866-05

Item No.

Travelers Rest, SC: 800-476-4103 • Simi Valley, CA: 800-423-0150 • Fax: 864-834-3518 • www.tsbrass.com

This Space for Architect/Engineer Approval

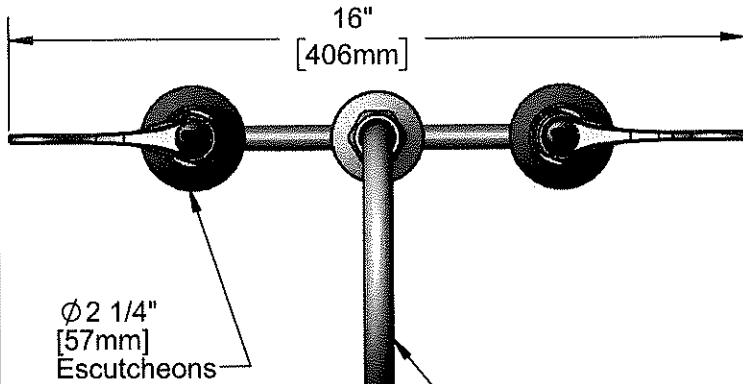
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Model Specified _____ Quantity _____

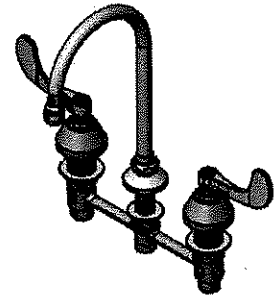
Customer/Wholesaler _____

Contractor _____

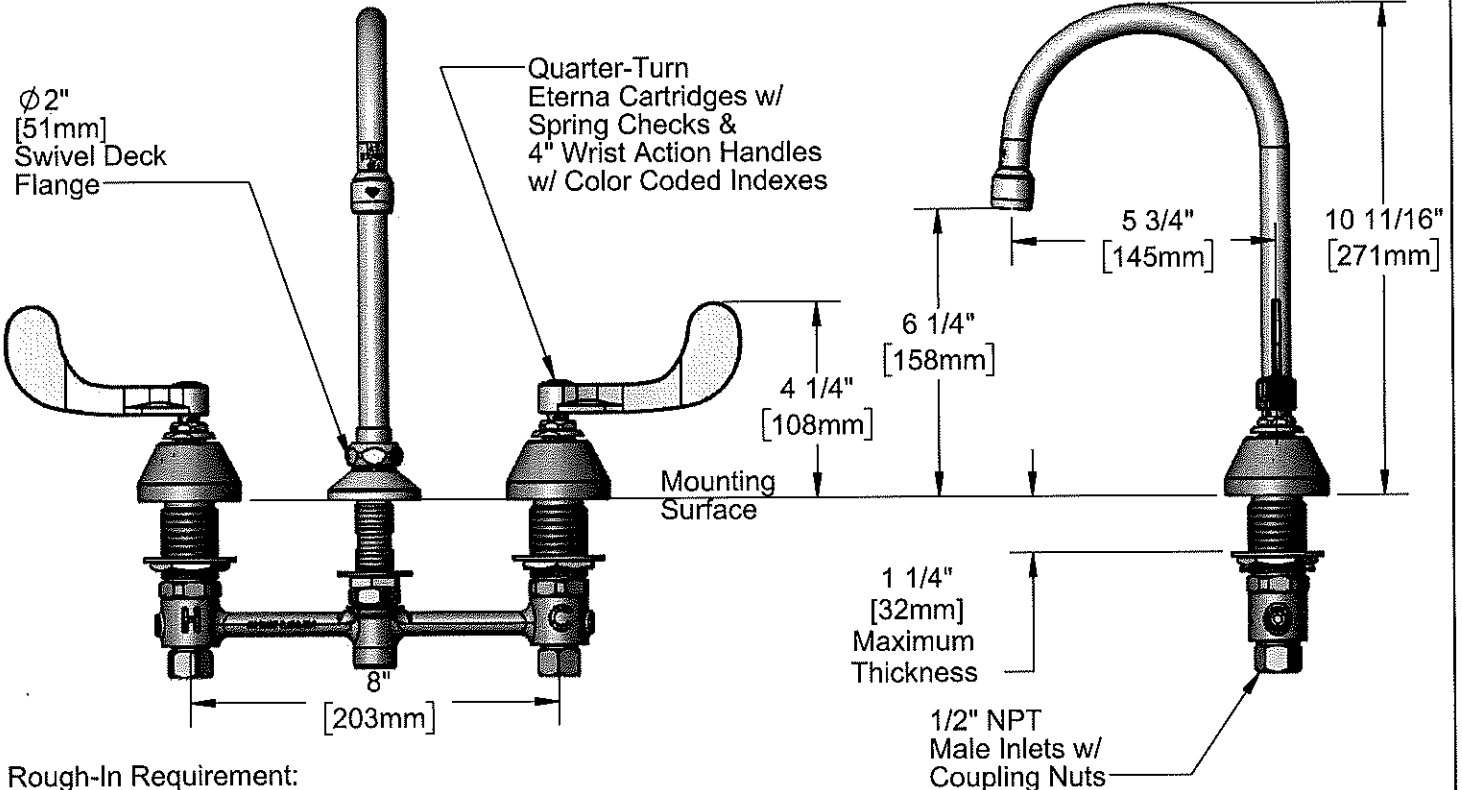
Architect/Engineer _____




ADA Compliant



133X-A22
 Swivel Gooseneck w/
 2.2 GPM Aerator.
 Rigid Conversion Requires
 014200-45 Lock Washer
 (Included)



Rough-In Requirement:
 Center Shank: ϕ 1" [25mm] Mounting Hole
 Hot/Cold Sides: ϕ 1 1/2" [38mm] Mounting Holes

Product Specifications:
 8" Concealed Widespread EasyInstall Mixing Faucet, 4" Wrist Action
 Handles, Quarter-Turn Eterna Cartridges w/ Spring Checks & 5 3/4"
 Rigid/Swivel Gooseneck w/ 2.2 GPM Aerator & 1/2" NPT Male Inlets

Product Compliance:
 ASME A112.18.1 / CSA B125.1
 NSF 61 - Section 9
 NSF 372 (Low Lead Content)
 ANSI A117.1 (ADA)



T&S BRASS AND BRONZE WORKS, INC.

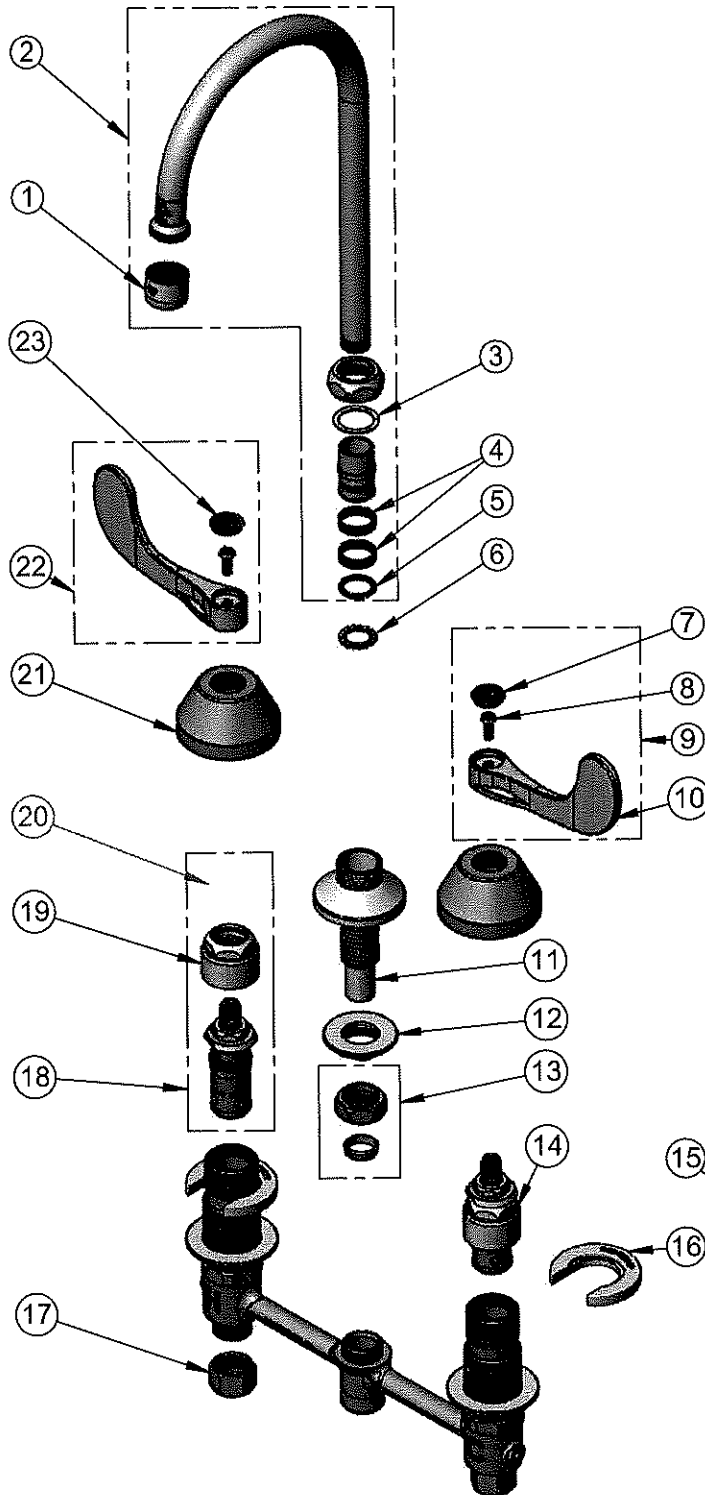
2 Saddleback Cove / P.O. Box 1088
Travelers Rest, SC 29690

Model No.

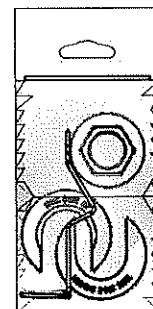
B-2866-05

Item No.

Travelers Rest, SC: 800-476-4103 • Simi Valley, CA: 800-423-0150 • Fax: 864-834-3518 • www.tsbrass.com



ITEM NO.	SALES NO.	DESCRIPTION
1	B-0199-01	2.2 GPM Aerator, 55/64-27 UN Female
2	133X-A22	5 3/4" Swivel Gooseneck w/ 2.2 GPM Aerator
3	009538-45	Swivel Washer
4	011429-45	Swivel Sleeves (2)
5	001074-45	O-Ring
6	014200-45	Star Washer, Anti-Rotation
7	018506-19NS	Blue Button Index, Press-in
8	000925-45	Lab Handle Screw
9	B-WH4C-NS	Wrist Action Handle, Screw & Cold Index
10	B-WH4-NS	Wrist Action Handle - New Style
11	016754-40NS	EasyInstall CWS Swivel Center Shank
12	016742-45	Center Flange Nut
13	016745-45	Compression Nut & Fitting
14	016752-40NS	EasyInstall, CWS Quarter-Turn Eterna Cartridge w/ Spring Check, LTC
15	016777-45	CWS Hanger
16	016749-45	Sidebody C-Washer
17	000958-20	Coupling Nut
18	016753-40NS	EasyInstall, CWS Quarter-Turn Eterna Cartridge w/ Spring Check, RTC
19	016743-25	CWS Eterna Bonnet
20	009002-40NS	Packing Assembly (New Style)
21	001257-40NS	Bell Escutcheon
22	B-WH4H-NS	Wrist Action Handle, Screw & Hot Index
23	001193-19NS	Red Button Index, Press-in



017245-40
Installation Repair Kit
Includes #12, (2)#16, & #15

Product Specifications:

8" Concealed Widespread EasyInstall Mixing Faucet, 4" Wrist Action Handles, Quarter-Turn Eterna Cartridges w/ Spring Checks & 5 3/4" Rigid/Swivel Gooseneck w/ 2.2 GPM Aerator & 1/2" NPT Male Inlets

Product Compliance:

ASME A112.18.1 / CSA B125.1
NSF 61 - Section 9
NSF 372 (Low Lead Content)
ANSI A117.1 (ADA)

S-2 SINK



T&S BRASS AND BRONZE WORKS, INC.

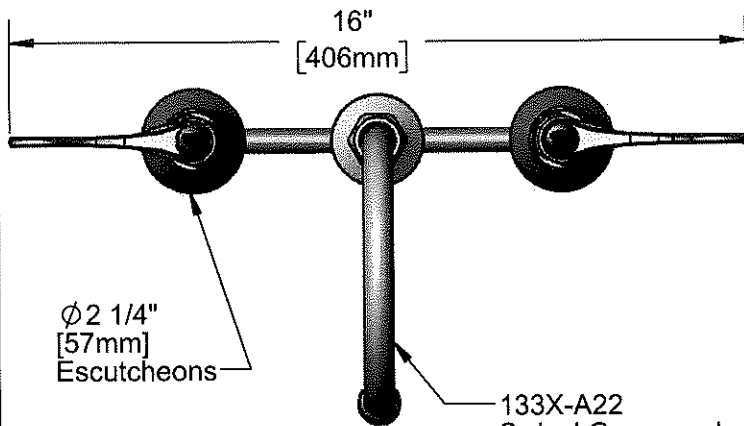
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Travelers Rest, SC 29690

Model No.

B-2866-05

Item No.

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This Space for Architect/Engineer Approval

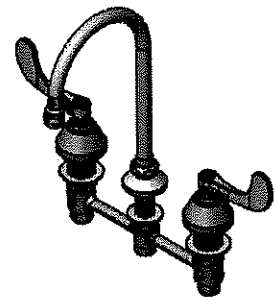
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Model Specified _____ Quantity _____

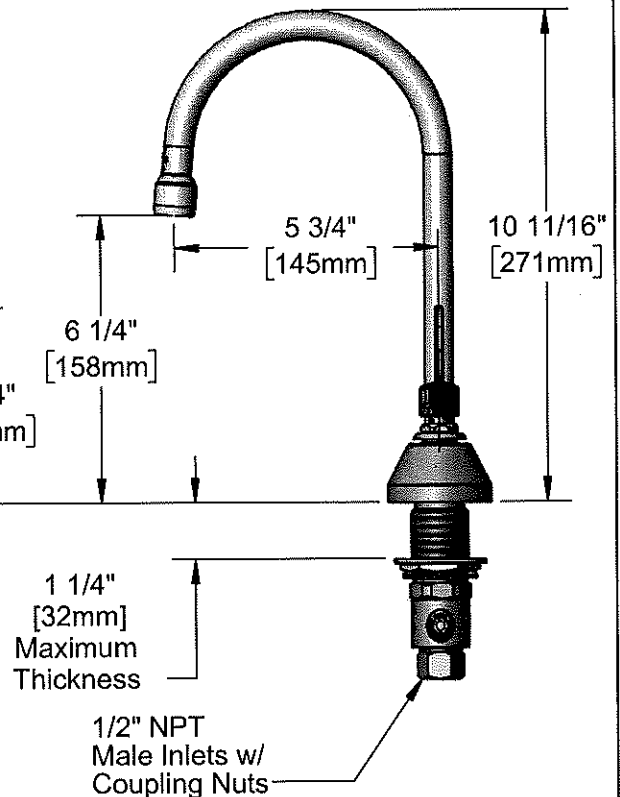
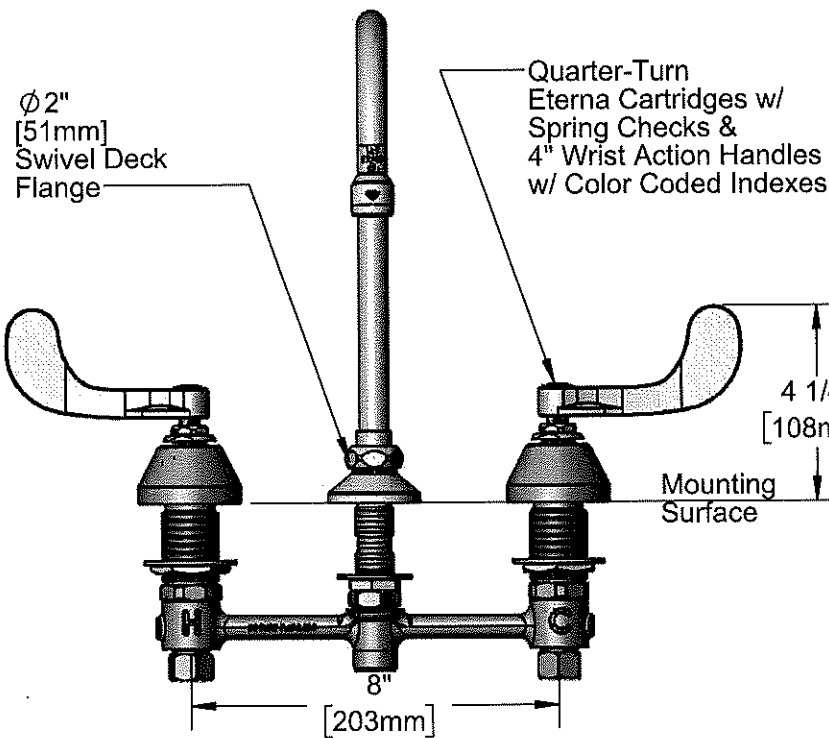
Customer/Wholesaler _____

Contractor _____

Architect/Engineer _____



133X-A22
Swivel Gooseneck w/
2.2 GPM Aerator.
Rigid Conversion Requires
014200-45 Lock Washer
(Included)



Rough-In Requirement:
Center Shank: ϕ 1" [25mm] Mounting Hole
Hot/Cold Sides: ϕ 1 1/2" [38mm] Mounting Holes

Product Specifications:
8" Concealed Widespread EasyInstall Mixing Faucet, 4" Wrist Action Handles, Quarter-Turn Eterna Cartridges w/ Spring Checks & 5 3/4" Rigid/Swivel Gooseneck w/ 2.2 GPM Aerator & 1/2" NPT Male Inlets

Product Compliance:
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NSF 61 - Section 9
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T&S BRASS AND BRONZE WORKS, INC.

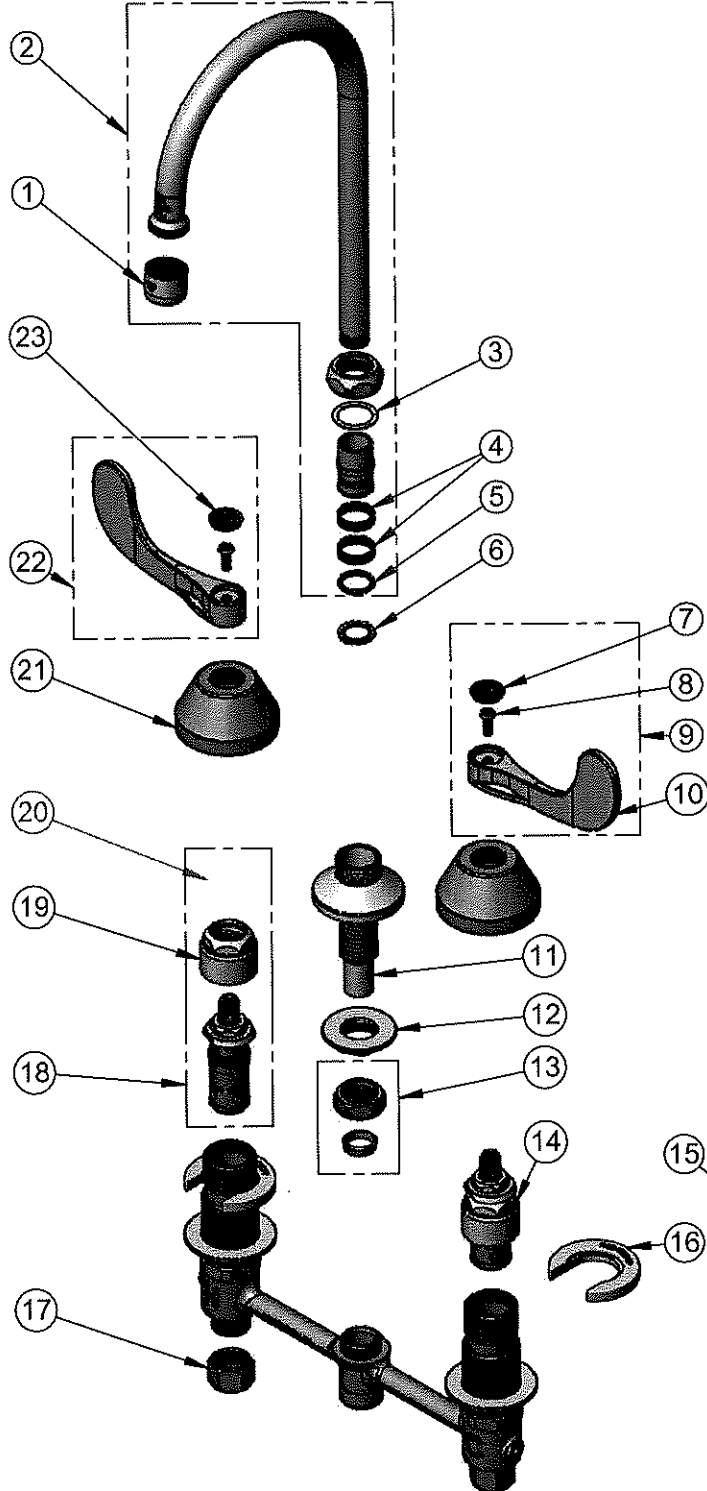
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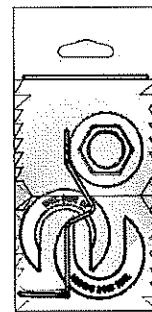
B-2866-05

Item No.

Travelers Rest, SC: 800-476-4103 • Simi Valley, CA: 800-423-0150 • Fax: 864-834-3518 • www.tsbrass.com



ITEM NO.	SALES NO.	DESCRIPTION
1	B-0199-01	2.2 GPM Aerator, 55/64-27 UN Female
2	133X-A22	5 3/4" Swivel Gooseneck w/ 2.2 GPM Aerator
3	009538-45	Swivel Washer
4	011429-45	Swivel Sleeves (2)
5	001074-45	O-Ring
6	014200-45	Star Washer, Anti-Rotation
7	018506-19NS	Blue Button Index, Press-in
8	000925-45	Lab Handle Screw
9	B-WH4C-NS	Wrist Action Handle, Screw & Cold Index
10	B-WH4-NS	Wrist Action Handle - New Style
11	016754-40NS	EasyInstall CWS Swivel Center Shank
12	016742-45	Center Flange Nut
13	016745-45	Compression Nut & Fitting
14	016752-40NS	EasyInstall, CWS Quarter-Turn Eterna Cartridge w/ Spring Check, LTC
15	016777-45	CWS Hanger
16	016749-45	Sidebody C-Washer
17	000958-20	Coupling Nut
18	016753-40NS	EasyInstall, CWS Quarter-Turn Eterna Cartridge w/ Spring Check, RTC
19	016743-25	CWS Eterna Bonnet
20	009002-40NS	Packing Assembly (New Style)
21	001257-40NS	Bell Escutcheon
22	B-WH4H-NS	Wrist Action Handle, Screw & Hot Index
23	001193-19NS	Red Button Index, Press-in



017245-40
Installation Repair Kit
Includes #12, (2)#16, & #15

Product Specifications:

8" Concealed Widespread EasyInstall Mixing Faucet, 4" Wrist Action Handles, Quarter-Turn Eterna Cartridges w/ Spring Checks & 5 3/4" Rigid/Swivel Gooseneck w/ 2.2 GPM Aerator & 1/2" NPT Male Inlets

Product Compliance:

ASME A112.18.1 / CSA B125.1
NSF 61 - Section 9
NSF 372 (Low Lead Content)
ANSI A117.1 (ADA)

WC-1 WATER CLOSET



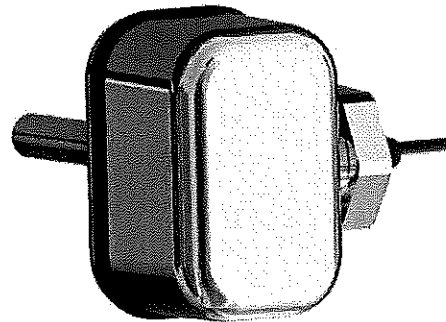
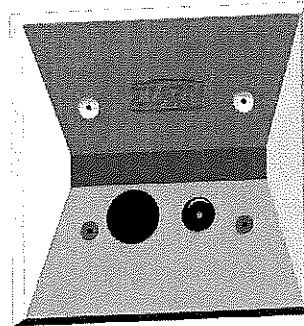
AquaSense®

ZEMS G2 Series

Automatic Systems Sensor-Operated Flushometer

Installation, Operation, Maintenance and Parts Manual

Patented and Patents Pending



Sensor-Operated Exposed Systems

ZEMS6000AV	ZEMS6200AV-3
ZEMS6200AV	ZEMS6001AV
ZEMS6000AV-2	ZEMS6201AV
ZEMS6200AV-2	ZEMS6003AV
ZEMS6000AV-3	ZEMS6203AV

Sensor-Operated Concealed Systems

ZEMS6140AV	ZEMS6190AV
ZEMS6240AV	ZEMS6290AV
ZEMS6152AV	ZEMS6195AV
ZEMS6252AV	ZEMS6295AV
ZEMS6153AV	ZEMS6197AV
ZEMS6253AV	ZEMS6297AV

⚠ **WARNING:** Cancer and Reproductive Harm - www.P65Warnings.ca.gov

⚠ **ADVERTENCIA:** Cáncer y daño reproductivo - www.P65Warnings.ca.gov

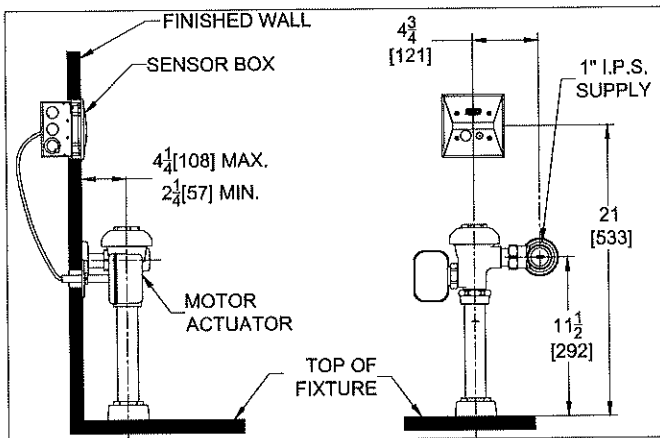
⚠ **AVERTISSEMENT:** Cancer et effets néfastes sur la reproduction - www.P65Warnings.ca.gov

LIMITED WARRANTY

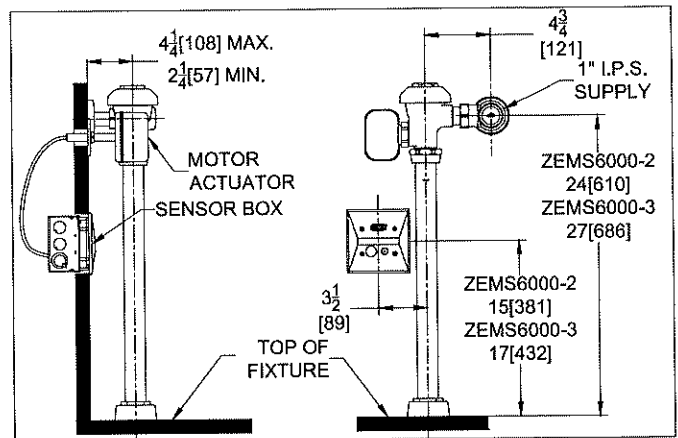
All goods sold hereunder are warranted to be free from defects in material and factory workmanship for a period of five years from the date of purchase. Decorative finishes warranted for one year. We will replace at no costs goods that prove defective provided we are notified in writing of such defect and the goods are returned to us prepaid at Sanford, NC, with evidence that they have been properly maintained and used in accordance with instructions. We shall not be responsible for any labor charges or any loss, injury or damages whatsoever, including incidental or consequential damages. The sole and exclusive remedy shall be limited to the replacement of the defective goods. Before installation and use, the purchaser shall determine the suitability of the product for his intended use and the purchaser assumes all risk and liability whatever in connection therewith. Where permitted by law, the implied warranty of merchantability is expressly excluded. If the products sold hereunder are "consumer products," the implied warranty of merchantability is limited to a period of three years and shall be limited solely to the replacement of the defective goods. All weights stated in our catalogs and lists are approximate and are not guaranteed.

Valve Rough-In

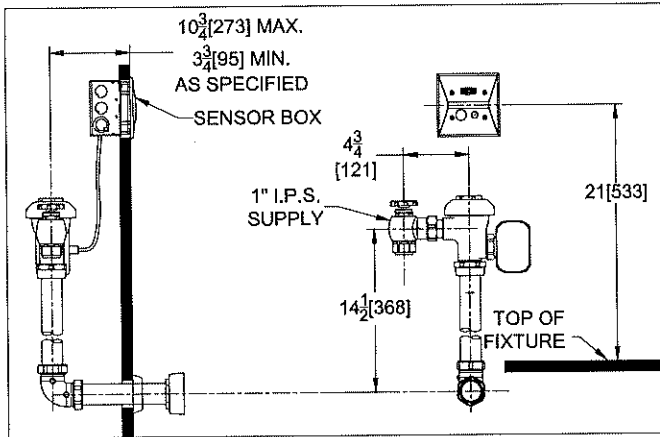
Models
ZEMS6000 and ZEMS6200



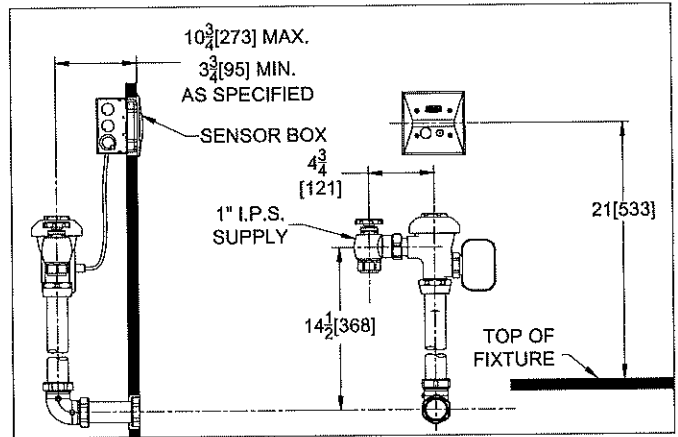
Models
ZEMS6000-2, ZEMS6000-3
ZEMS6200-2, ZEMS6200-3



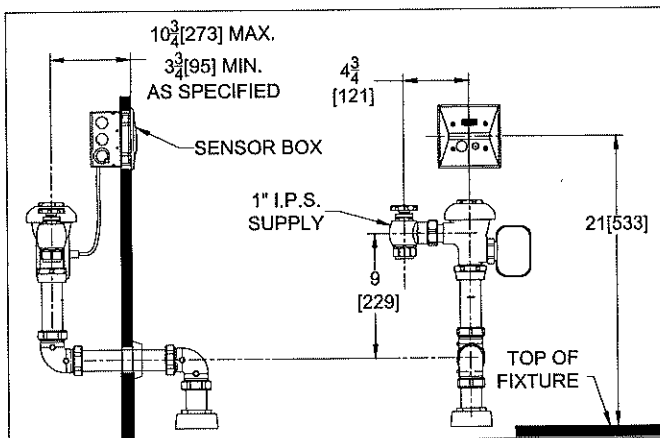
Models
ZEMS6140 and ZEMS6240



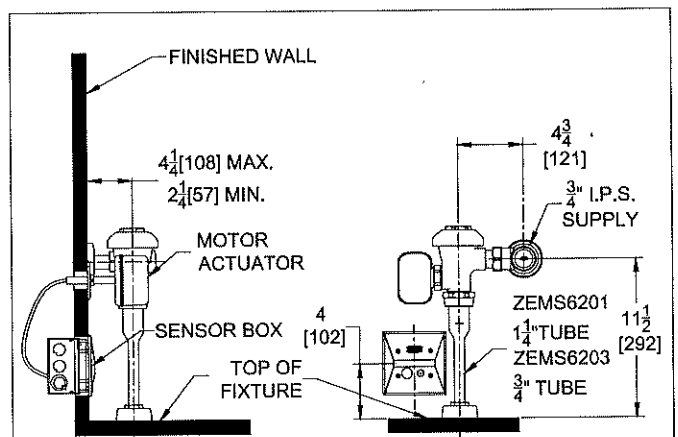
Models
ZEMS6152 and ZEMS6252



Models
ZEMS6153 and ZEMS6253



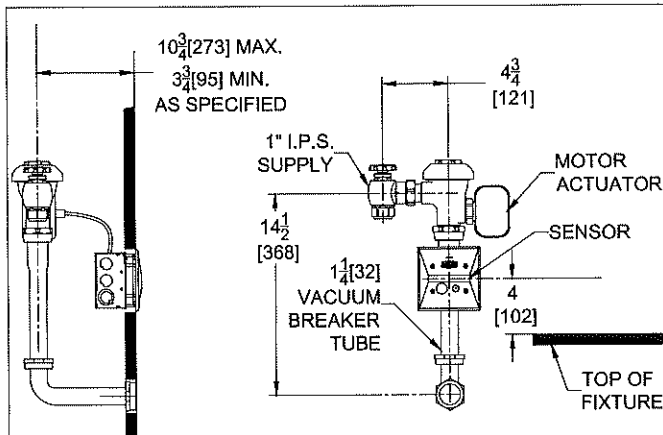
Models
ZEMS6001, ZEMS6003
ZEMS6201, ZEMS6203



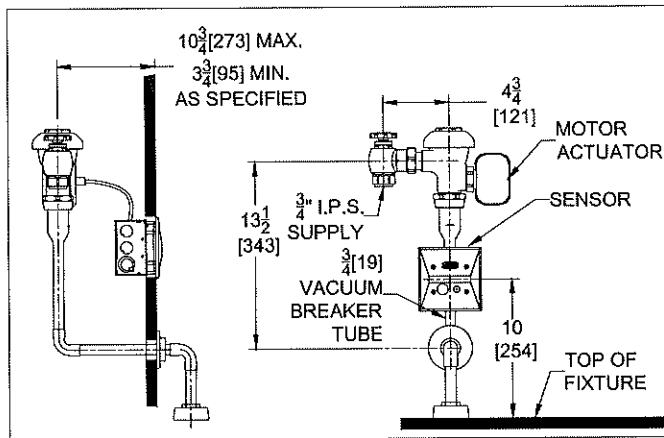
NOTES:
FOR INSTALLATIONS WITH GRAB BAR, CENTERLINE OF 4 X 4 BOX MUST BE A MINIMUM OF 4 INCHES ABOVE CENTERLINE OF GRAB BAR.

Valve Rough-In (Continued)

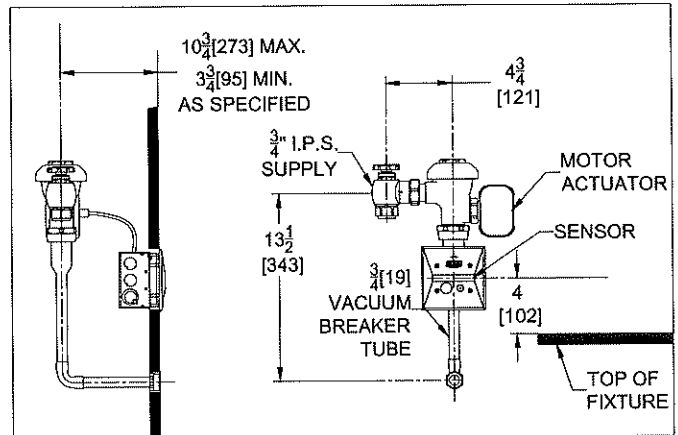
Models
ZEMS6190 and ZEMS6290



Models
ZEMS6197 and ZEMS6297



Models
ZEMS6195 and ZEMS6295



Prior to Installation

Prior to installing the Zurn Automatic Sensor-equipped Flushometer, install the items listed below as illustrated in Figures 1 through 3.

- 2-gang electrical box (4 x 4 x 2 1/8, use Steel City #52171-N box, and #52-C-18 device cover or equivalent for sensor with closet or urinal installs);
- Optional: Single-gang electrical outlet for plug-in power converter.
- Electrical wiring to the power converter outlet (120 VAC, 35 watts service required for each power converter used).
- Closet fixture.
- Zurn carrier system, Z1200 series or equal.

Important:

- ALL ELECTRICAL WIRING IS TO BE INSTALLED IN ACCORDANCE WITH NATIONAL/LOCAL CODES AND REGULATIONS.
- ALL PLUMBING IS TO BE INSTALLED IN ACCORDANCE WITH APPLICABLE CODES AND REGULATIONS.
- WATER SUPPLY LINES MUST BE SIZED TO PROVIDE AN ADEQUATE VOLUME OF WATER FOR EACH FIXTURE.
- FLUSH ALL WATER LINES PRIOR TO MAKING CONNECTIONS.
- SENSOR UNITS SHOULD NOT BE LOCATED ACROSS FROM EACH OTHER OR IN CLOSE PROXIMITY TO HIGHLY REFLECTIVE SURFACES.
- CONTROL STOP SHOULD NEVER BE OPENED TO ALLOW FLOW GREATER THAN FIXTURE IS CAPABLE OF EVACUATING. IN THE EVENT OF VALVE FAILURE, FIXTURE MUST BE ABLE TO HANDLE A CONTINUOUS FLOW.

Electrical

AC/DC Power Supply

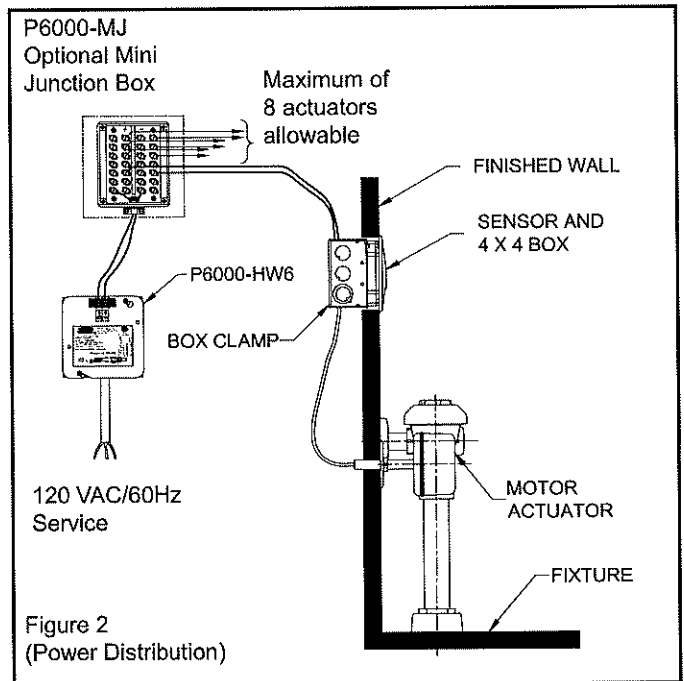
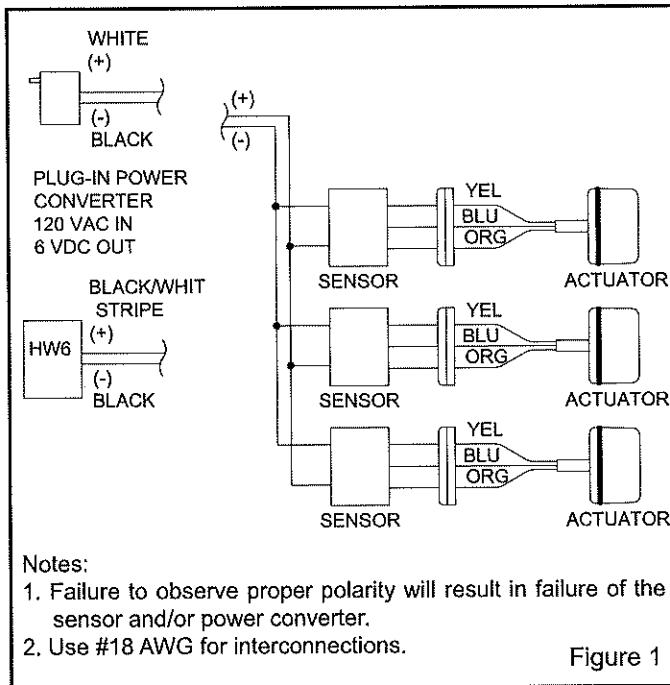
Install hardwired power supply (P6000-HW6) or receptacle for the Zurn Power Converter (P6900-ACA-BA) in a convenient location. An optional mini junction box (P6000-MJ) is recommended to distribute power to each sensor location.

NOTE: One Zurn P6000-HW6 can operate up to eight automatic sensor equipped flushometers, and the optional P6000-ACA-BA Power Converter can handle up to six flushometers and is supplied with a six-foot cord. If additional wire is needed from the Power Converter to the Flushometer(s), use #18 AWG (not provided). **Do not supply power** to the Power Converter until installation of actuator, sensor and Flushometer is completed and checked. **Proper polarity must be observed or damage to one or all components will result.**

Electrical Hook-up (Figure 1)

Be certain power is off to prevent damage to electrical components. Connect the sensor to the actuator and power converter exactly as shown in Figure 1.

Double check that power converter polarity is correct.



Sensor Installation

STEP 1 – Locate Sensor Box

Locate sensor box in the wall according to model number as shown on pages 2 and 3. Install plaster ring so screw holes are on left and right side of box (as shown in Figure 3). Trim tiles to allow screw holes in plaster ring to show.

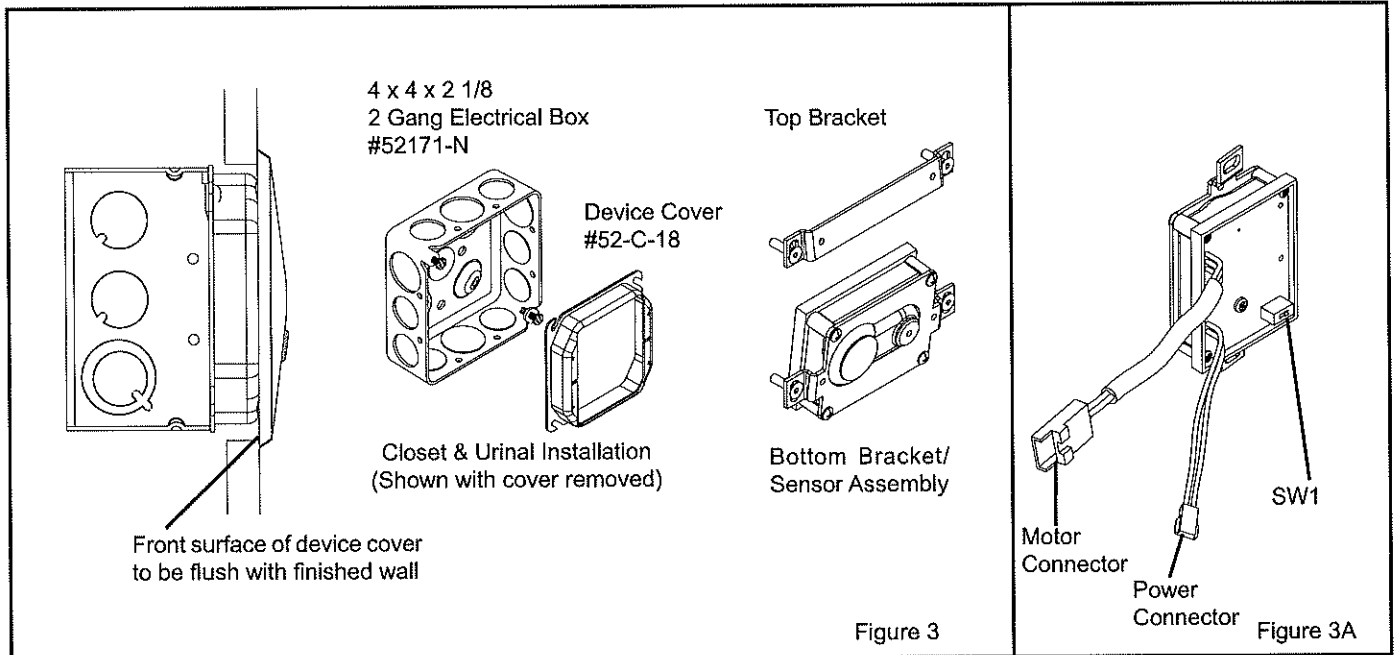
Note: Product is configured at time of shipment for a 168 hour trap seal flush (SW1 in OFF position on rear of sensor). If a 48 hour trap seal flush is desired, set SW1 to ON position. (Figure 3A)

STEP 2 – Mount Automatic Sensor (Figure 3)

Install the Zurn Automatic Sensor into the lower half of the 2-gang electrical box using two (2) screws provided. Connect the 2-wire power cable and 3-wire actuator cable to sensor. Connectors are keyed to insure correct polarity. Ensure that the sensor is mounted in the orientation shown (with lens angled downward, see Figure 4).

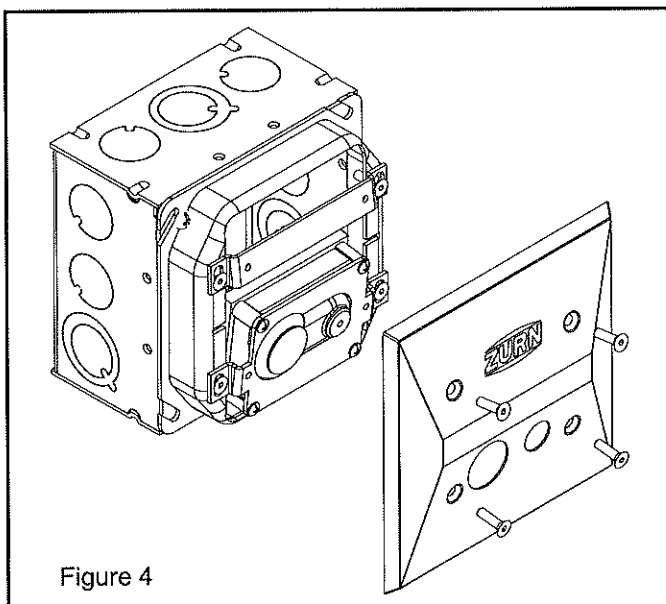
STEP 3 – Install Top Bracket (Figure 3)

Fasten the Top Bracket to the electrical box using (2) screws provided. Ensure that bracket is mounted in the orientation shown (with face angled upward, see Figure 4).



STEP 4 – Install Cover Plate (Figure 4)

Perform a trial fit of the Cover Plate and adjust positions of the sensor and top bracket as needed to ensure alignment of sensor lens, button, and cover screws. Fasten Cover Plate with (4) screws provided.



Mechanical

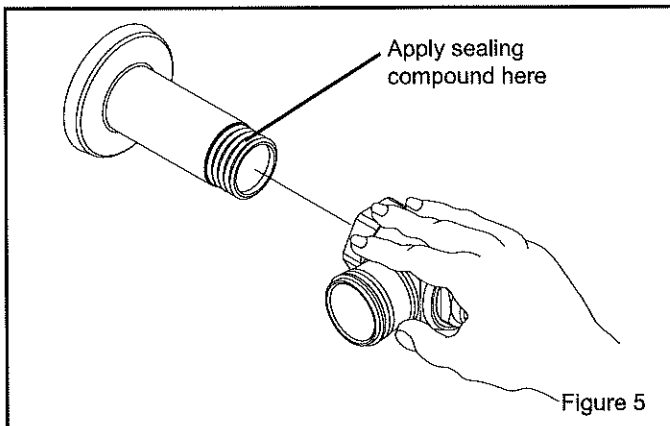
The AquaVantage® design is optimized to operate between 25 and 80 psi (172 to 552 kPa) of water pressure (running). The minimum pressure required for the valve to work properly is determined by the fixture selected. Please consult fixture manufacturer for water pressure requirements. Protect the chrome or special finish of this flushometer during installation. **Do not use toothed tools to install or service the valve as this will damage the finish.** Also, see "Care and Cleaning" section of this manual.

Control Stop Installation Instructions

STEP 1

Install control stop assembly by threading it onto water supply pipe and tightening with a smooth jawed wrench. Apply thread sealing compound or pipe tape to male NPT thread on sweat solder adapter only. See Figure 5.

Prior to turning on main water supply line ensure all stop valves are closed off tight by using a flathead screwdriver and turning the stop valve adjustment screw clockwise.

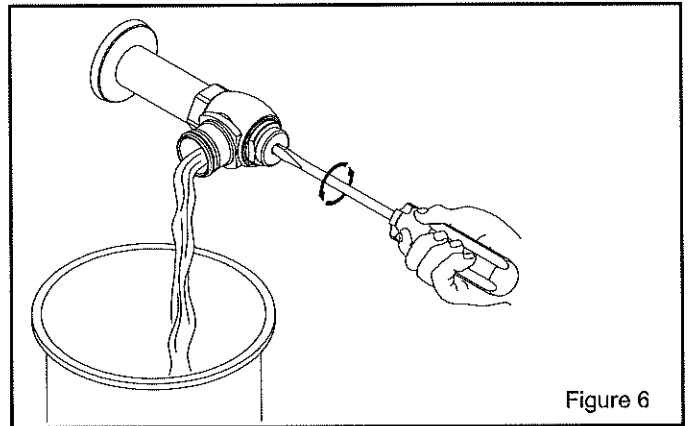


STEP 2

When all stop valves are properly connected to the water supply line and water pressure is available open the control stop using a flathead screwdriver and turning the stop valve adjustment screw counter clockwise. See Figure 6.

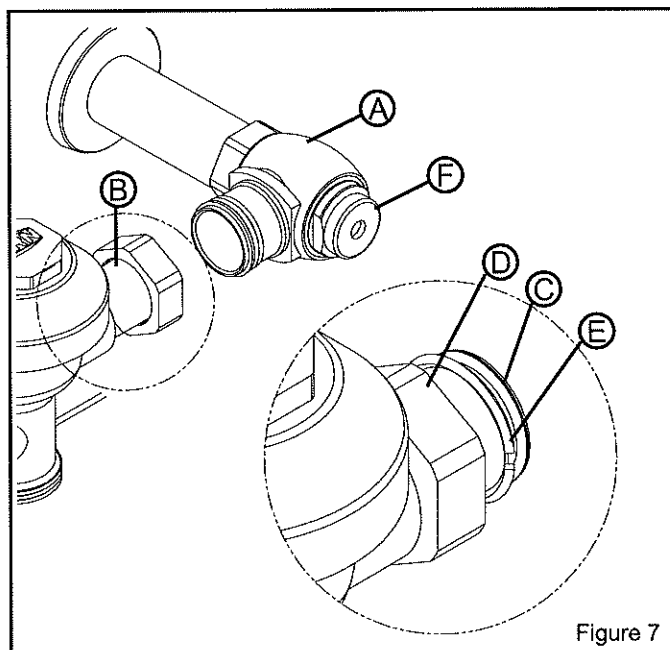
Allow the water supply line to flush any debris or sediment that may be present in the line.

Close the control stop once the lines are completely flushed.



Flush Valve Installation

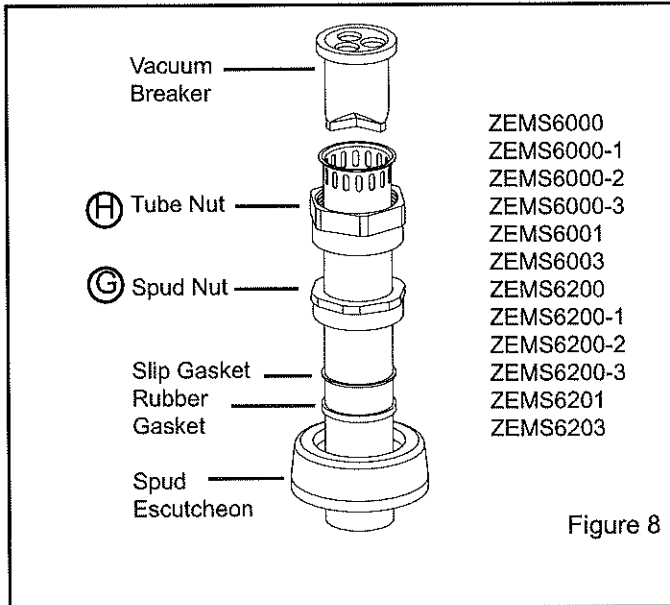
Prior to attaching flush valve to control inspect and verify that the O-ring seal is located within the O-ring groove at the tailpiece. Ensure the locking nut and locking snap ring are also present on the tailpiece. See Figure 7. Lubricate O-ring with water if necessary and insert flush valve tailpiece into the control stop valve. Tighten locking nut using a smooth jawed wrench.



Install Vacuum Breaker Flush Connection

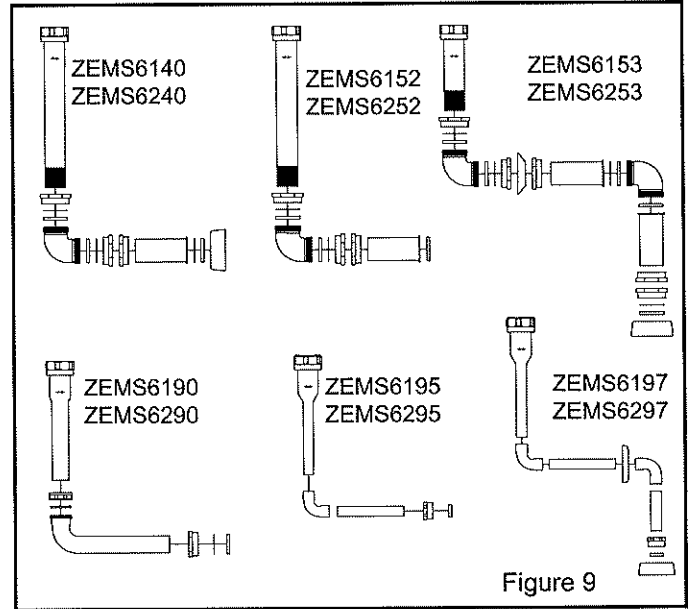
Models ZEMS6000, ZEMS6000-2, ZEMS6000-3, ZEMS6001, ZEMS6003, ZEMS6200, ZEMS6200-2, ZEMS6200-3, ZEMS6201, and ZEMS6203

Slide the tube nut (H), spud nut (G), slip gasket, rubber gasket and spud escutcheon over the vacuum breaker tube and insert tube into fixture spud. Hand tighten tube nut to valve body and hand tighten spud nut onto fixture spud. Adjust the valve assembly for plumb. Tighten fixture spud nut (G), vacuum breaker tube nut (H) and lock nut (D) (fig. 7 & 8) with a wrench.



Models ZEMS6140, ZEMS6152, ZEMS6153, ZEMS6190, ZEMS6195, ZEMS6197, ZEMS6240, ZEMS6252, ZEMS6253, ZEMS6290, ZEMS6295 and ZEMS6297 (Figure 9)

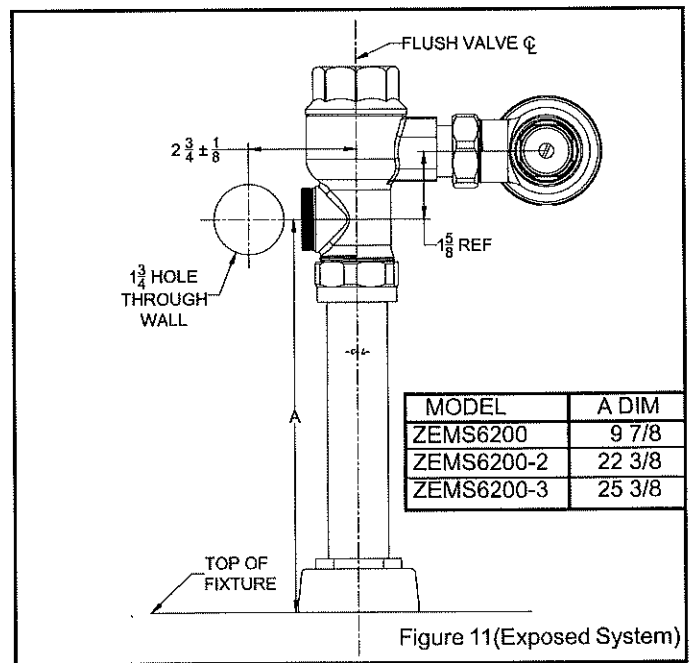
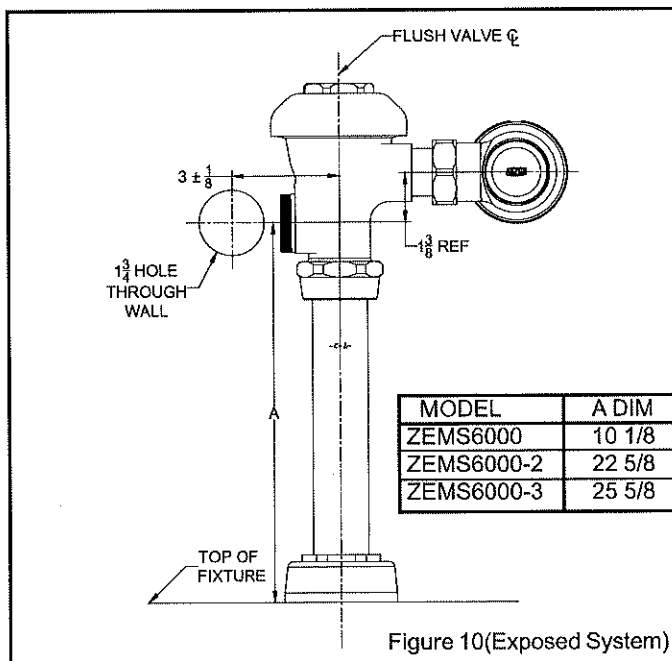
NOTE: When cutting scored pipe, leave a minimum of 1-1/4" of scoring to ensure engagement with compression coupling. Assemble pipe, elbows, couplings, slip washers, rubber gaskets and flanges as illustrated in Figure 9. Hand tighten all couplings. Once installation is completed, tighten all connections.



Motor Actuator Installation

1. Drill 1-3/4" diameter hole per Figures 10 or 11.
2. Run "fish tape" from electrical box to 1-3/4" hole.
3. Install actuator escutcheon to the actuator pipe with setscrew toward actuator. Do not tighten setscrew at this time.
4. Pull actuator cable through hole with fish tape and back to sensor box. Secure cable to box with box clamp.
5. With escutcheon loose and handle port washer installed, push cable into wall. The actuator must be angled away from the valve body at this time until the actuator push rod clears the handle port flange. The actuator can now be mounted to the flush valve and tightened.
6. Push escutcheon back to wall and tighten setscrew.

NOTE: See Figure 2 for typical installation including optional mini junction box.



Customized Sensor Range Setting

The ZEMS is factory set to accommodate most closet and urinal installations. If this factory setting does not accommodate your specific environment, follow steps below to customize your range settings for your specific ZEMS model.

CALIBRATION INSTRUCTIONS FOR ZEMS G2

1. Obtain a target. SEE FIGURE 12.
2. PRESS and HOLD button for 10 seconds or until the LED turns solid.
(*Unit will blink four times and flush once while button is being held)
3. RELEASE finger after LED turns solid.
4. PRESS and HOLD button when LED starts blinking.
5. RELEASE finger when LED turns solid.
6. Set target at desired distance, (No less than 16") from sensor face and verify NO other objects are in view of sensor face.
7. Keep target steady - Unit will blink while calibrating.
8. After 30 seconds, calibration ends with a fast double blink or a solid LED for 5 seconds.
9. IF THE LED REMAINS SOLID FOR 5 SECONDS AFTER CALIBRATION, the calibration was NOT successful. REPEAT STEPS 2-8
10. For closet installations continue to "VERIFY CALIBRATION FOR CLOSET INSTALLATIONS".

Verify Calibration for Closet Installations

1. Stand outside closet stall and close door and verify that sensor does not see stall door. If LED blink/flashes, recalibrate to a shorter range.
2. Slowly open door to closet stall while looking at ZEMS-IS sensor.
3. If led blinks while door is opening, recalibrate to a shorter range.
FAILURE TO DO SO WILL RESULT IN GHOST FLUSHING.

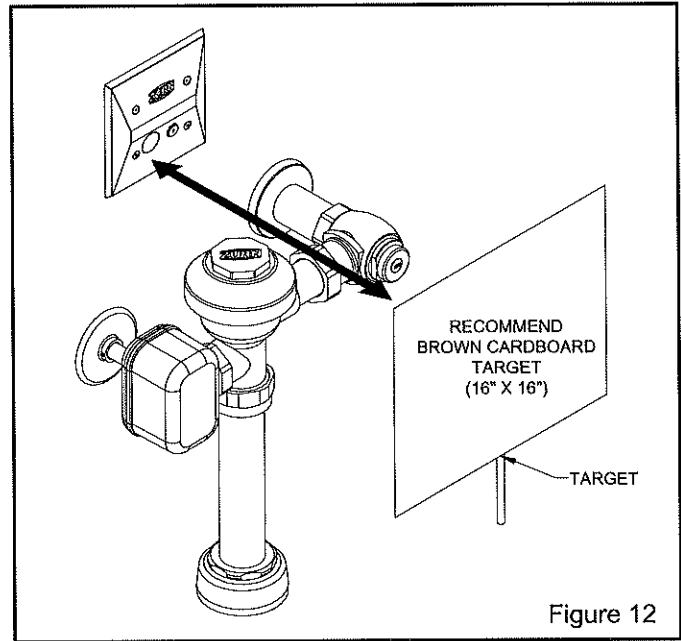


Figure 12

Activating the Motor Actuator with the Sensor

To activate the motor actuator with the sensor, simply place a target in front of the sensor. A single red light will flash indicating the sensor has recognized the target. If the target stays in view for eleven seconds, two flashing red lights will occur. This indicates that the target has been in view for the required time and upon leaving the view, a signal will be sent to the motor actuator to flush the flush valve. NOTE: If the target does not stay in view for the required eleven seconds, a flush will not occur.

IMPORTANT NOTE: Excessive water flow creates noise, while too little flow will not satisfy the needs of the fixture. Proper adjustment is made when:

1. The plumbing fixture is cleansed after each flush without splashing water out from the lip.
 2. A quiet flushing cycle is achieved.
- After adjustment: Replace the Zurn stop cap screw cover.

Care and Cleaning Instructions

Do not use abrasive or chemical cleaners to clean Flushometers, sensor, and actuators as they may degrade the sensor lens, dull the luster, and attack the chrome or special decorative finishes. Use only mild soap and water, then wipe dry with a clean cloth or towel.

While cleaning the bathroom tile, the Flushometer and actuator should be protected from splattering of cleaner. Do not use acids and cleaning fluids as they can damage the optics lens and chrome plating.

Seasonal use.

Valves that are used in installations subject to shut down because of cold and freezing conditions should be maintained in the following manner.

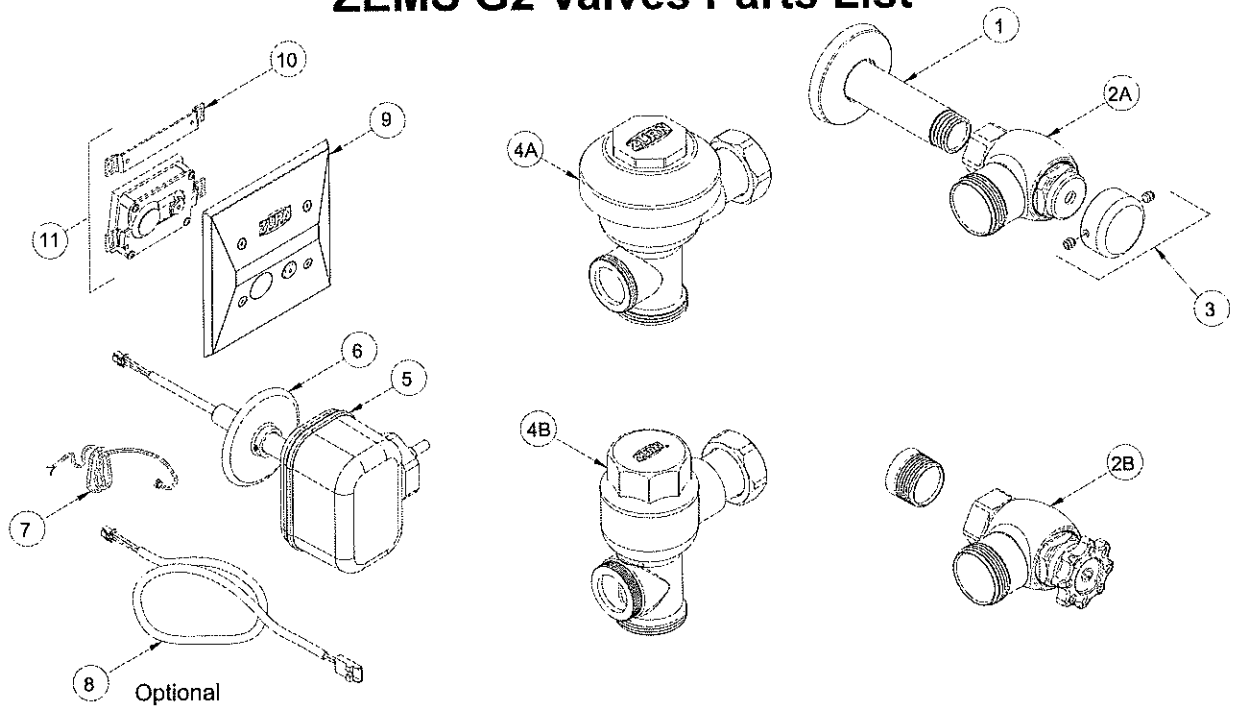
1. Shut off the main supply.
2. Drained water.
3. Remove the stop valve cap and stop internals to allow the water to drain from the flush valve and supply line.

ZEMS G2 Trouble Shooting

Problem	Possible Cause	Corrective Action
Valve will not operate.	1) Stop valve is closed	1) Open stop valve.
	2) Supply valve is closed.	2) Open supply valve.
	3) The electric wire(s) is not connected.	3) Connect the wires.
	4) Sensor lens may be dirty.	4) Clean lens.
	5) Reflective surface in front of sensor.	5) Remove the reflective surface from in front of the sensor.
	6) Detection range not adjusted properly.	6) Adjust the detection range.
	7) The infrared sensor or the actuator is out of order.	7) Contact distributor for replacement.
	8) Sensor fault	8) Replace sensor
	9) No power provided by power supply	9) Replace power supply
Flush valve does not activate after user leaves	1) Sensor does not recognize a user	1) Re-calibrate sensor per "Calibration Instructions" section.
	2) Power supply may be disrupted	2) Check available voltage where escutcheon is attached to wall with DC voltmeter. 7.4-9 VDC is required.
		3) Verify connection to actuator.
Repeated valve activation when power is provided	1) Insufficient DC power level (less than 7.4 volts DC)	1) Upgrade the -HW6 power supply to the new ZURN power supply (greater than 7.4 volts DC) or replace the ACA supply.
Insufficient volume of water to adequately siphon fixture	1) Stop valve is not open enough.	1) Open stop valve for desired volume of water.
	2) Urinal piston installed in closet valve.	2) Replace urinal piston with proper closet piston.
	3) Insufficient volume or pressure at supply.	3) Consult fixture guide for minimum gallons per minute flow and running pressure for satisfactory performance.
Valve is flushing too long or not shutting off.	1) Trip mechanism not seating properly due to foreign material between trip mechanism and seat.	1) Disassemble parts and rinse thoroughly.
	2) By-pass orifice is plugged or partially plugged.	2) Examine by-pass orifice and clean if necessary being certain not to enlarge orifice opening.
	3) Line pressure is not adequate to force trip mechanism to seal.	3) Pressure is inadequate or has dropped below minimum operating range. Steps should be taken to increase the line pressure.
Water splashes out of fixture/	1) Supply volume is more than is necessary.	1) Adjust downward on control stop.
	2) Lime accumulation on vortex or spreader holes of fixture.	2) Remove the lime build up.
Flush is not considered quiet.	1) Control stop may not be adjusted for quiet operation.	1) Adjust the control stop for quiet operation keeping in mind the fixture evacuation requirements.
	2) Fixture may be contributing to noise.	2) Check noise created by fixture by placing a cover over the bowl opening to separate valve noise from bowl noise. If it is determined the fixture is too noisy, consult with fixture manufacturer.
	3) Piping system may be source of noise.	3) High pressure in the system can sometimes be controlled by the stop valve. Other sources of noise may be the absence of air chamber and shock arrestors, loose pipes, improper size pipes, etc. In these cases the building engineer should be consulted.
Flush valve "ghost" flushes or activates randomly with no user present.	1) Sensor Lens may be dirty.	1) Clean lens.
	2) Power supply output is out of tolerance.	2) DC voltage must be between 7.4-9 volts. Check for power fault or malfunction in a unit or replace with a Zurn power converter.
	3) Sensor is viewing stall door.	3) Re-calibrate sensor per "Calibration Instructions" section.
Flush valve shuts off too quick.	Diaphragm Valves	
	1) Damaged diaphragm.	1) Install new P6000-ECA, P6000-EUA replacement kit.
	2) Enlarged by-pass orifice.	2) Install new P6000-ECA, P6000-EUA replacement kit.
	Piston Valves	
	1) Damaged piston.	1) Install new P6200-EC, P6200-EU replacement kit.
2) Enlarged by-pass orifice.	2) Install new P6200-EC, P6200-EU replacement kit.	
Valve is short flushing	Diaphragm Valves	
	1) Enlarged by-pass orifice.	1) Install new P6000-ECA, P6000-EUA replacement kit.
	2) Urinal piston installed in closet valve.	2) Replace urinal piston with proper closet piston.
	Piston Valves	
	1) Enlarged by-pass orifice.	1) Install new P6200-EC, P6200-EU replacement kit.
2) Urinal piston installed in closet valve.	2) Replace urinal piston with proper closet piston.	



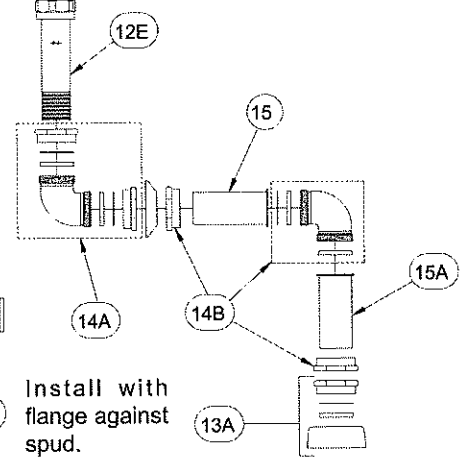
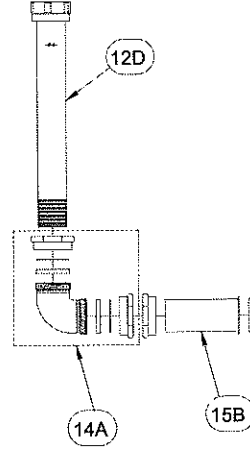
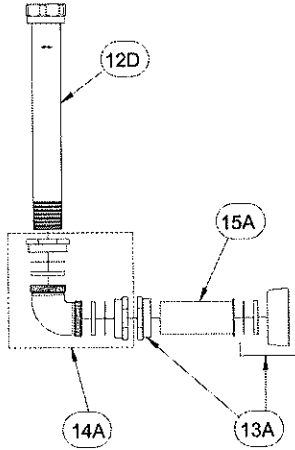
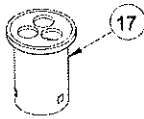
ZEMS G2 Valves Parts List



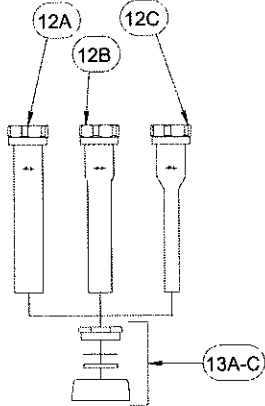
ZEMS6140
ZEMS6240

ZEMS6152
ZEMS6252

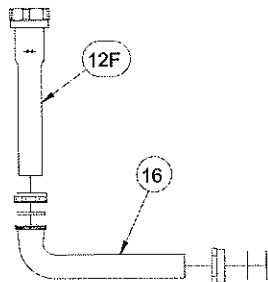
ZEMS6153
ZEMS6253



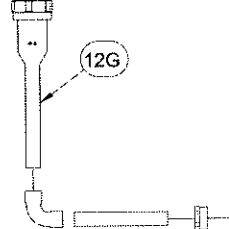
ZEMS6000 ZEMS6200
ZEMS6000-1 ZEMS6200-1
ZEMS6000-2 ZEMS6200-2
ZEMS6000-3 ZEMS6200-3
ZEMS6001 ZEMS6201
ZEMS6003 ZEMS6203



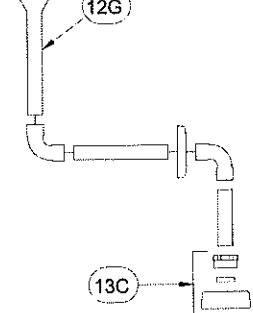
ZEMS6190
ZEMS6290



ZEMS6195
ZEMS6295



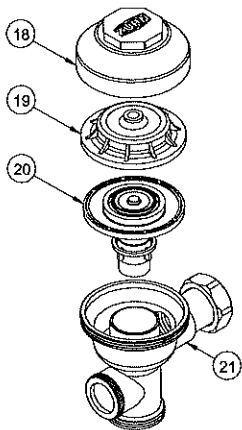
ZEMS6197
ZEMS6297



ZEMS G2 Valve Parts List (Continues)

1.	P6000-YBYC	Closet Cast Wall Escutcheon & Solder Kit	12A.	P6000-A-AA-CP	Chrome Plated 1-1/2" X 8 1/2" Vacuum Breaker Assembly
	P6003-YBYC	Urinal Cast Wall Escutcheon & Solder Kit		P6000-2-A-AA-CP	Chrome Plated 1-1/2" X 21" Vacuum Breaker Assembly
2A.	P6000-C-SD-CP	Chrome Plated Closet Stop Assembly		P6000-3-A-AA-CP	Chrome Plated 1-1/2" X 24" Vacuum Breaker Assembly
	P6003-C-SD-CP	Chrome Plated Urinal Stop Assembly			
	P6000-C-SD-RB	Rough Brass Closet Stop Assembly	12B.	P6001-A-AA-CP	Chrome Plated 1-1/4" X 8 1/2" Vacuum Breaker Assembly
	P6003-C-SD-RB	Rough Brass Urinal Stop Assembly			
2B.	P6000-C-WH-CP	Chrome Plated Closet Stop Assembly for Wheel Handle	12C.	P6003-A-AA-CP	Chrome Plated 3/4" X 8 1/2" Vacuum Breaker Assembly
	P6003-C-WH-CP	Chrome Plated Urinal Stop Assembly for Wheel Handle			
	P6000-C-WH-RB	Rough Brass Closet Stop Assembly for Wheel Handle	12D.	P6000-1-A-AA-RB	Rough Brass 1-1/2" X 12 1/2" Vacuum Breaker Assembly
	P6003-C-WH-RB	Rough Brass Urinal Stop Assembly for Wheel Handle			
3.	P6000-VC	Vandal-Resistant Control Stop Cover	12E.	P6000-A-AA-RB	Rough Brass 1-1/2" X 5" Vacuum Breaker Assembly
4A.	Varies(Z60___Z61___)	Diaphragm Valve	12F.	P6001-10-A-AA-RB	Rough Brass 1-1/4" X 10" Vacuum Breaker Assembly
4B.	Varies(Z62___)	Piston Valve	12G.	P6003-10-A-AA-RB	Rough Brass 3/4" X 10" Vacuum Breaker Assembly
5.	PEMS6000-HYM-G2	ZEMS Actuator	13A.	P6000-H	1 1/2" Spud Coupling Assembly
6.	PEMS6000-G	ZEMS Escutcheon	13B.	P6001-H	1 1/4" Spud Coupling Assembly
7.	PEMS6000-CWB-G2	Sensor Power Supply Cable	13C.	P6003-H	3/4" Spud Coupling Assembly
8.	PEMS6000-CW-G2	Motor-Sensor Connector Extension Cable, 24" (Optional) (Max 2 per installation)	14A.	P6000-QE3-RB	Rough Brass 1 1/2" Slip Elbow Assembly
			14B.	P6000-QE3-CP	Chrome Plated 1 1/2" Slip Elbow Assembly
9.	PEMS6000-22-G2	ZEMS Sensor Plate with fasteners	15A.	P6000-QT1-xx	Chrome Plated Slotless Tube
10.	PEMS6000-22-KIT-G2	ZEMS Top Bracket with fasteners	15B.	P6000-QT3-xx	Rough Brass Slotless Tube
11.	PEMS6000-26-G2	ZEMS Sensor with top bracket and fasteners	16.	Varies	Rough Brass Slip Elbow
			17.	P6000-B-HP	Vacuum Breaker

Z6000 Series



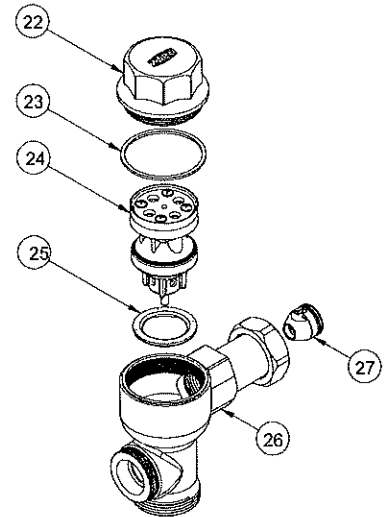
Diaphragm Valves (Z6000 Series)

18.	P6000-LL-CP	Chrome Plated Valve Body Outside Cover
	P6000-LL-RB	Rough Brass Valve Body Outside Cover
	P6000-L	Valve Body Inside Cover
19.	P6000-ECA-WS	Closet Repair Kit (3.5 gpf)
20.	P6000-ECA-WS1	Low Consumption Closet Kit (1.6 gpf)
	P6000-ECA-HET	High Efficiency Closet Kit (1.28 gpf)
	P6000-EUA-WS	Urinal Repair Kit (1.5 gpf)
	P6000-EUA-WS1	Low Consumption Urinal Kit (1.0 gpf)
	P6000-EUA-EWS	High Efficiency Urinal Kit (0.5 gpf)
	P6000-EUA-ULF	Pint Urinal Kit (0.125 gpf)
21.	P6000-19___	Valve Body

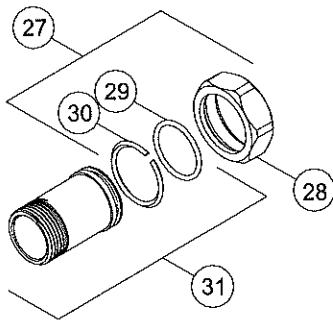
Piston Valves (Z6200 Series)

22.	P6200-LL-CP	Valve Body Cover
	P6200-LL-ULF-CP	.125 gpf Valve Body Cover
23.	P6200-LL-CG	Valve Body Cover Gasket
24.	P6200-EC-WS1	Low Consumption Closet Kit (1.6 gpf)
	P6200-EC-HET	High Efficiency Closet Kit (1.28 gpf)
	P6200-EU-WS1	Low Consumption Urinal Kit (1.0 gpf)
	P6203-EU-EWS	High Efficiency Urinal Kit (0.5 gpf)
	P6203-EU-ULF	Ultra Low Flush Kit (.125 gpf)
25.	P6000-S-30	Main Seat
	P6200-MS-ULF	.125 gpf Main Seat
26.	Varies	Valve Body
27.	PTR6203-FA-LF	Urinal 0.125/0.250 gpf Tailpiece filter

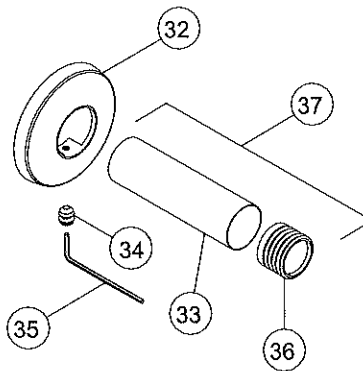
Z6200 Series



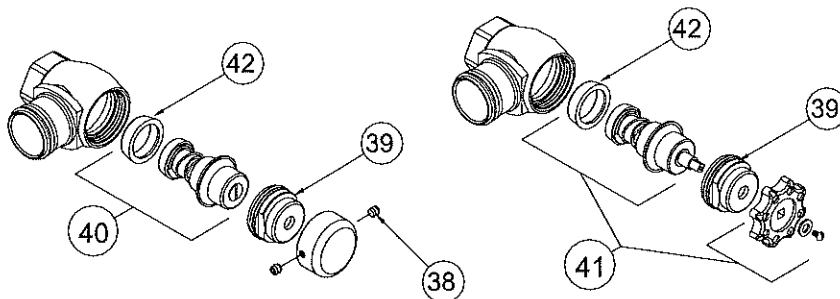
Valve Repair Parts List (Continues)



- 27. P6000-K Tailpiece Coupling Assembly
- 28. P6000-C32-CP Chrome Plated Locking Nut
- P6000-C32-RB Rough Brass Locking Nut
- 29. P6000-C31 Tailpiece O-Ring
- 30. P6000-C30 Snap Ring
- 31. P6000-J Adjustable Tailpiece Assembly
- 32. P6000-YC 1" Cast Wall Escutcheon
- P6003-YC 3/4" Cast Wall Escutcheon



- 33. P6000-YB-CVR 1" Supply Cover Tube
- P6003-YB-CVR 3/4" Supply Cover Tube
- 34. P6000-YC-SS Setscrew for Cast Wall Escutcheon
- 35. P6000-VC-W-VP 5/64 Allen Wrench
- 36. P6000-YBA 1" Sweat Solder Adapter
- P6003-YBA 3/4" Sweat Solder Adapter
- 37. P6000-YB 1" Sweat Solder Kit
- P6003-YB 3/4" Sweat Solder Kit

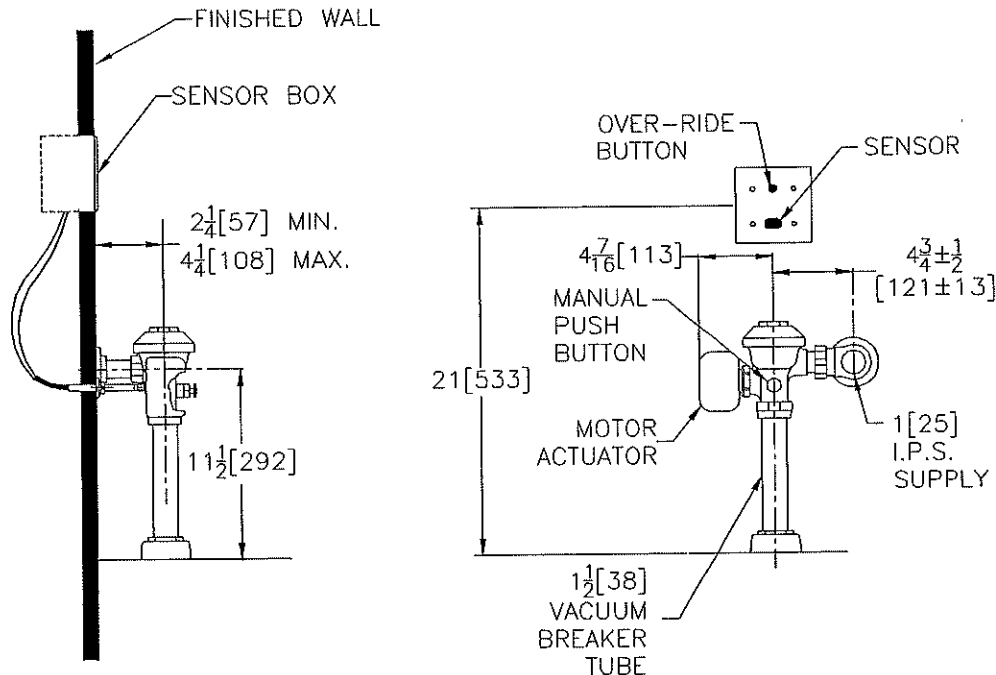


- 38. P6000-VC-SS Set Screw for Control Stop Cover
- 39. P6000-C34-CP Chrome Plated Stop Cap Bonnet
- P6000-C34-RB Rough Brass Stop Cap Bonnet
- 40. P6000-D-SD Stop Cap Internals
- 41. P6000-D-WH Stop Cap Internals with Wheel Handle
- 42. P6000-D42 Stop Seat



ZEMS6000-YB-YC-MOB

Hardwired Automatic Sensor Flush Valve
For Water Closets With Manual Override Button



Flow Options

- HET 1.28 gpf High Efficiency Flush
- WS1 1.6 gpf Low Consumption Flush
- 3.5 gpf
- FF 4.5 gpf Full Flush

Accessories

- FM12 Floor Mount 12" Rough In
- YJ Split Ring Pipe Support
- YK Solid Ring Pipe Support
- YO Bumper on Angle Stop
- _____ Other

Power Supply Choices (Sold Separately)

- ACA-BA 6VDC Plug-in Power Converter (Up to 6 valves)
- HW6 Hardwired Power Converter (Up to 8 Valves)
- MJ Mini Junction Box

NOTE: MUST USE EITHER ZURN P6000-HW6 HARDWIRE POWER CONVERTER OR ZURN P6900-ACA-BA PLUG-IN POWER CONVERTER TO ENSURE PROPER OPERATION. USING A POWER CONVERTER OTHER THAN ZURN MAY RESULT IN OPERATION MALFUNCTION OR UNIT FAILURE.

ENGINEERING SPECIFICATION: ZURN ZEMS6000-YB-YC-MOB AquaSense® Exposed Hardwired Automatic Sensor Flush Valve For Water Closets- Exposed, quiet diaphragm-type, chrome plated, flushometer valve with a polished exterior. Complete with Zurn's chloramine resistant, dual seal diaphragm with a clog resistant by-pass. The valve incorporates a motorized actuator, an automatic sensor with a manual push-button override, high back pressure vacuum breaker, one piece hex coupling nut, adjustable tailpiece, spud coupling and flange for top spud connection. Switchable sensor features include: courtesy flush, automatic 8 hour flush, and diagnostic indicator lights. Control stop has internal siphon-guard protection, vandal resistant stop cap, sweat solder kit, and a cast wall flange with set screw. Internal seals are made of chloramine resistant materials. Electrical box is not provided (see installation instructions for type and size). Note: Order power converter separate.

Architectural/Engineering Approval

The information contained in this document is subject to change without notice. Please contact Zurn for most up to date information.

ZURN INDUSTRIES, LLC. ♦ COMMERCIAL BRASS OPERATION ♦ 5900 ELWIN BUCHANAN DRIVE ♦ SANFORD NC 27330

Phone: 1-800-997-3876 ♦ Fax: 919-775-3541 ♦ World Wide Web: www.zurn.com

In Canada: ZURN INDUSTRIES LIMITED ♦ 7900 Goreway Drive Unit 10 ♦ Brampton, Ontario L6T5W6 ♦ Phone: 905-405-8272 Fax: 905-405-1292

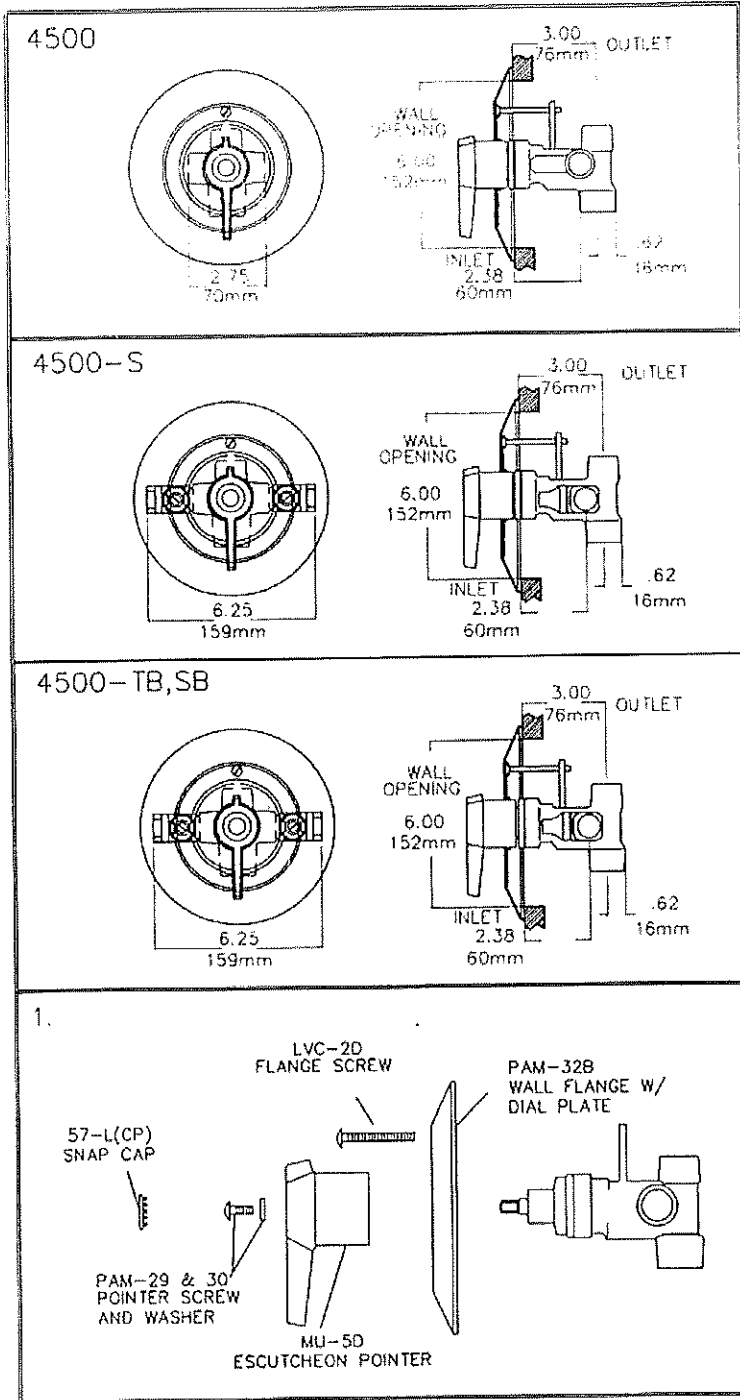
SH-1 SHOWER

AQUATROL®4500


PRESSURE ACTUATED MIXING VALVES (1/2")

INSTALLATION INSTRUCTIONS

Serial No. 4500 00001 and higher



1. Valve must NOT be sealed in wall with plaster or tile. Cover screws and inlet fittings MUST be accessible for servicing.
2. It is recommended that the valve is furnished with inlet stops or checkstops on each supply. Type F, and SB checkstops should be disassembled before soldering to prevent damage to packing.
3. Install hot to left inlet and cold to right inlet (see H and C marks on valve body).
4. Pipe cement, or solder flux must be used sparingly. After connections are made to the valve, flush pipes thoroughly (remove internal parts if necessary) to eliminate dirt and excess materials which might become lodged on the working parts of the valve.
5. Attach protective cover which serves as a guide for the finish wall line after piping connections are made.
6. **IMPORTANT!** The AQUATROL® valve is designed for top and bottom outlet. When used for showers, the top outlet only is used and the pipe plug is left in the bottom outlet. When used for shower AND tub, remove the pipe plug from the bottom outlet and pipe down to a diverter tub spout. No special elbow is required, (see installation drawings, page 4).
7. After the valve is installed as noted above, recheck and reset the adjustable high temperature limit stop (see instructions, page 3)



WARNING

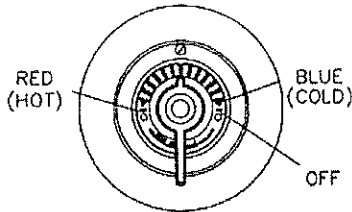
WARNING! THIS MIXING VALVE IS EQUIPPED WITH AN ADJUSTABLE HIGH TEMPERATURE LIMIT STOP FACTORY SET AT APPROXIMATELY 110°F(43°C) WITH AN INCOMING HOT WATER SUPPLY TEMPERATURE OF 135°F(57°C) IF INCOMING HOT WATER ON THE JOB IS HIGHER THAN 135°F, THE VALVE WHEN TURNED TO FULL HOT MAY DELIVER WATER IN EXCESS OF 110°F, AND THE HIGH TEMPERATURE LIMIT STOP MUST BE RESET BY THE INSTALLER (SEE PAGE 2)

8. Mount the wall flange to the valve body, using the LVC-2D wall flange screw.
9. Attach the pointer to the valve stem (using the pointer screw and washer), and insert snap cap. The top (short) end of the pointer should point to "OFF" on the dial plate.

WARNING! HOT WATER IN EXCESS OF 110°F IS DANGEROUS AND MAY CAUSE SCALDING!

OPERATION

The AQUATROL R4500 is a pressure-actuated water mixing valve which will compensate for changes in the pressure of hot and cold supplies and maintain bathing temperatures. The easy to read dial with directional indicators helps to eliminate confusion as to where the handle should be located for a particular temperature. Turn the handle counter-clockwise from the "OFF" position through the BLUE (or COLD) area on the dial plate, the shower is on and temperature is cold. As the handle enters the lighter RED area, shower temperature becomes progressively WARMER until the high temperature limit is reached in the full RED (or HOT) position. To turn OFF move handle back in clockwise direction to the "OFF" position.



SERVICING INSTRUCTIONS

1. Remove escutcheon pointer (MU-5D) and wall flange (PAM-32B)(See DWG 1).
2. Turn off hot and cold supplies.
3. Temporarily place escutcheon pointer on spline and turn LEFT to maximum "HOT" position. Unscrew cover and remove complete interior assembly (See DWG 4).
4. If valve will not shut off (ie. it drips), replace PV-8-1 upper packing, PV-2 lower packing, and inspect upper and lower valve seats in PV-3 sleeve (DWG 5).
5. If valve will not mix properly, piston in PV-CR-2 control rod group may be sticking due to some deposit of foreign matter (DWG 5). To free piston:
 - a. Tap either end of control rod against a wooden surface or hit with a plastic mallet.
 - b. Remove PV-2 packing and screw and tap piston loose with a small drift pin.
 - c. Submerge lower end of PV-CR-2 control rod group in non-corrosive cleaning solution and flush with clean water.

NOTE: Before reinserting assembly in valve (with cover gasket) make sure escutcheon pointer has been turned LEFT to the maximum RED ("HOT") position.

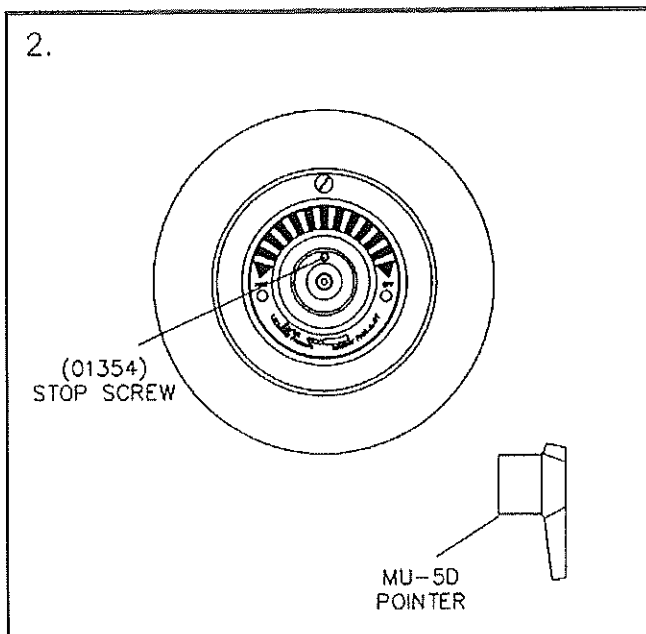


WARNING



WARNING! THIS MIXING VALVE IS EQUIPPED WITH AN ADJUSTABLE HIGH TEMPERATURE LIMIT STOP FACTORY SET AT APPROXIMATELY 110°F(43°C) WITH AN INCOMING HOT WATER SUPPLY TEMPERATURE OF 135°F(57°C). IF INCOMING HOT WATER ON THE JOB IS HIGHER THAN 135°F, THE VALVE WHEN TURNED TO THE FULL HOT MAY DELIVER WATER IN EXCESS OF 110°F, AND THE HIGH TEMPERATURE LIMIT STOP MUST BE RESET BY THE INSTALLER. (SEE BELOW)

2.

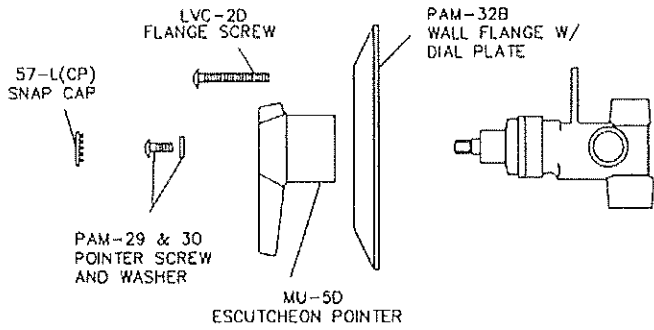


TO RESET HIGH TEMPERATURE LIMIT STOP (DWG 2.):

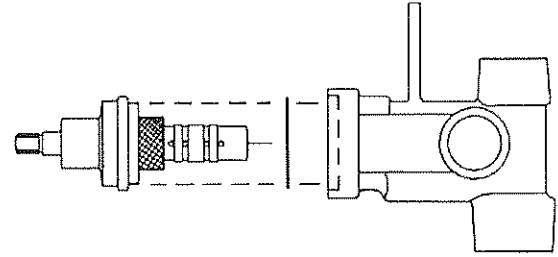
1. Remove pointer (MU-5D). Loosen 01354 stop screw but DO NOT REMOVE.
2. Replace pointer and turn to left or right until the valve is delivering the highest temperature of 110°F (43°C) or LOWER and remove pointer.
3. Tighten 01354 Stop Screw.
4. Reinstall pointer so small end is pointing to the extreme RED ("HOT") position, shut valve off.

IMPORTANT! TEST THE NEW HIGH TEMPERATURE SETTING USING A DIAL THERMOMETER TO MAKE CERTAIN IT AS DESIRED. HOT WATER IN EXCESS OF 110°F IS DANGEROUS AND MAY CAUSE SCALDING!!

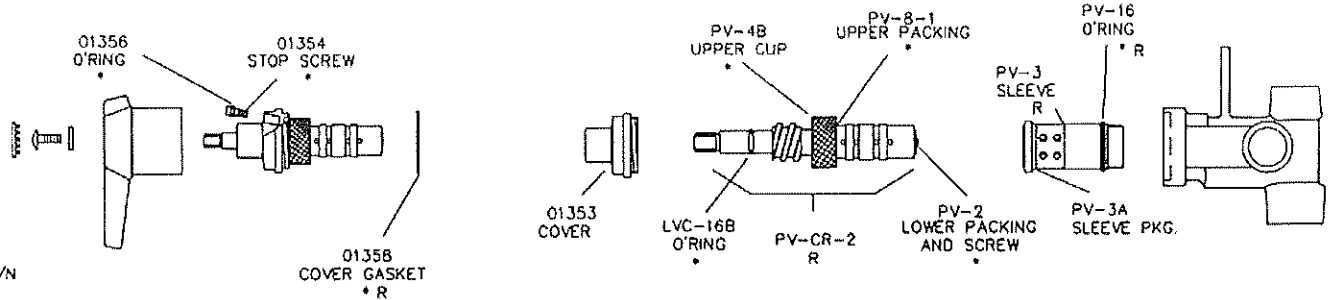
REMEMBER!! THIS IS A CONTROL DEVICE WHICH MUST BE CLEANED AND MAINTAINED ON A REGULAR BASIS (SEE MAINTENANCE GUIDE AND RECORD MGR-1000).



3.

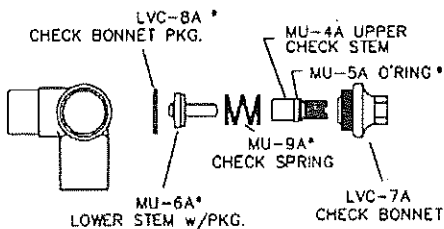


4.



* = KIT 1/ST/N
R = KIT R/67

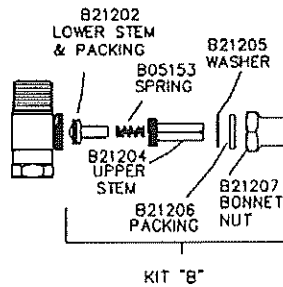
5.



* = KIT 4/LVC

F CHECKSTOPS

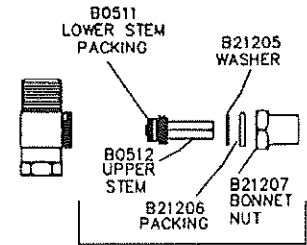
6.



KIT "B"

SB, TB CHECKSTOPS

7.



KIT "C"

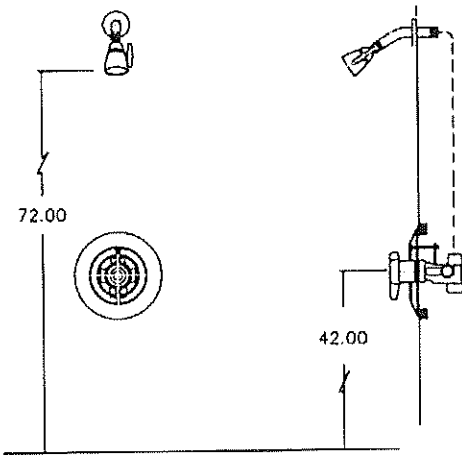
S STOPS

8.

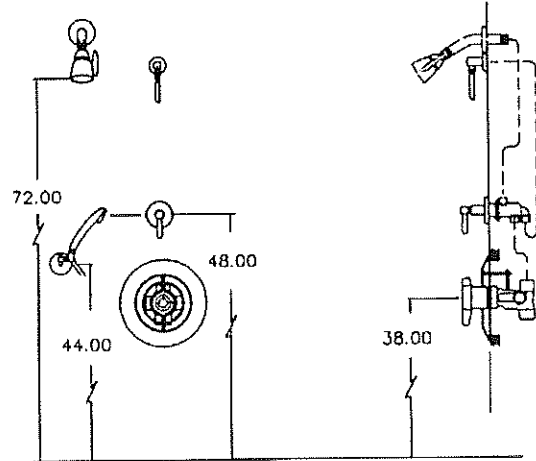
SERVICING INSTRUCTIONS

	SYMPTOM:	KIT REQUIRED:	PARTS INCLUDED:
PACKINGS & O'RINGS	<ol style="list-style-type: none"> 1. Leak at handle. 2. Valve will not shut off completely. 3. Valve is difficult to pull apart. 4. Leak at stop screw. 	Kit 1/ST/N	PV-2, PV-4B, PV-8-1, LVC-16B, O1358, O1356, PV-16
CONTROL ROD GROUP	<ol style="list-style-type: none"> 5. Valve delivers either all hot or all cold water, or will not mix consistently. 	Kit R/67	O1358, PV-CR-2, PV-3, PV-16
INSERTED SEAT	<ol style="list-style-type: none"> 6. After replacing packings and O-rings, valve will not shut off completely. 		PV-3, PV-3A, PV-16
CHECKSTOPS, STOPS	<ol style="list-style-type: none"> 7. Supplies cannot be shut off completely. 8. Leak at checkstop (or stop) bonnet or stem. 		SEE DWG #6,7, or 8 ABOVE FOR REPAIR KITS

SHOWER

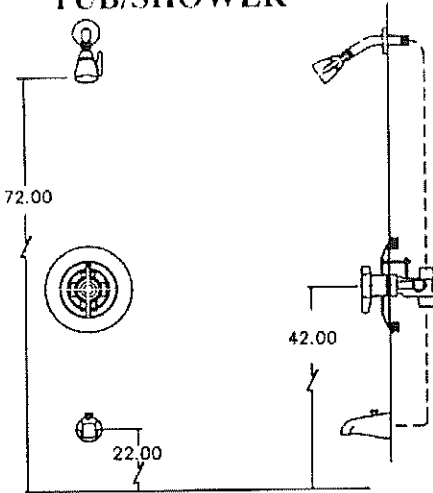


SHOWER/HAND SHOWER *

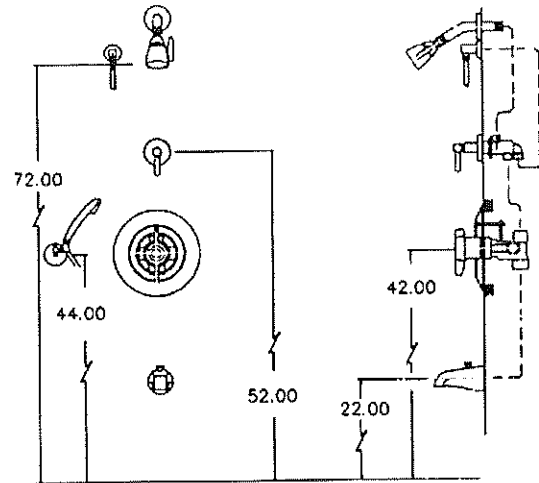


* MOUNTING HEIGHTS SHOWN MEET ADA REQUIREMENTS

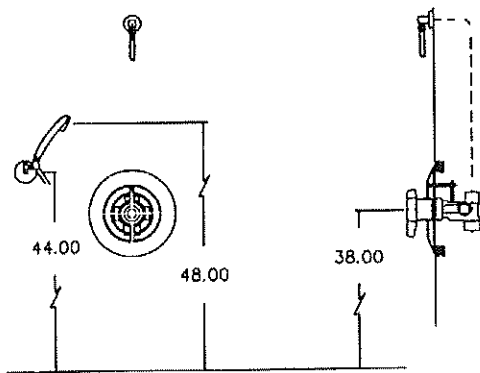
TUB/SHOWER



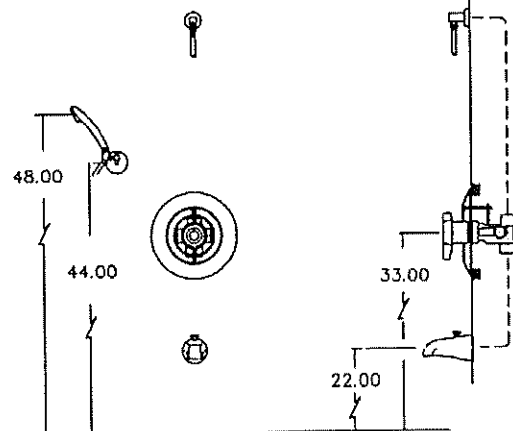
SHOWER/TUB/HAND SHOWER



HAND SHOWER *



TUB/HAND SHOWER



* MOUNTING HEIGHTS SHOWN MEET ADA REQUIREMENTS

LIMITED WARRANTY

Leonard Valve Company warrants the original purchaser that products manufactured by them (not by others) will be free from defects in materials and workmanship under normal conditions of use, when properly installed and maintained in accordance with Leonard Valve Company's instructions, for a period of one year from date of shipment. During this period the Leonard Valve Company will at its option repair or replace any product, or part thereof, which shall be returned, freight prepaid, to the Leonard factory and determined by Leonard to be defective in materials or workmanship. There are no warranties, express or implied, which extend beyond the description contained herein. There are no implied warranties of merchantability or of fitness for a particular purpose. In no event will Leonard be liable for labor or incidental or consequential damages. Any alteration or improper installation or use of the product will void this limited warranty.

WALL GRAB BARS & HAND SHOWERS SETS

62001A

24" (61 cm) ADA wall grab bar, stainless steel, 1.5" (38mm) outside diameter, concealed screw mounting system (mounting hardware included)

Slide mechanism operable by left hand, right hand, or closed first, 2.65" (67mm) lever, meets Handicapped Accessibility Standard of less than 5lb handle operating force and can swivel to ensure easy reach

Withstands 1000 lb pull (NOTE: Grab Bar must be securely attached to wall or backing to provide safety)

Wall Grab bar can be securely mounted at 90 degree angle

Hand spray with non-positive push button shut-off

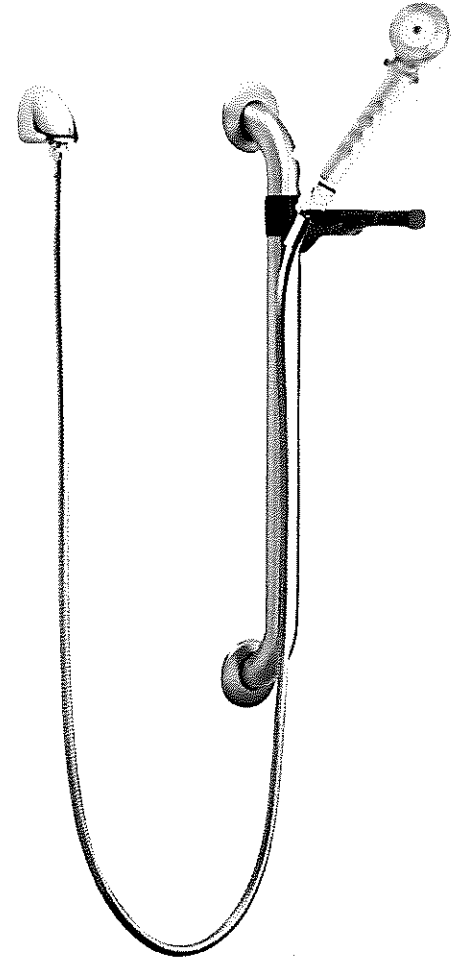
Braided stainless steel flexible hose, 60"

2 wall hooks

Double check valve backflow preventer

Supply elbow and flange

2.5 GPM (9.5 l/min.) max. flow rate



62001A-1.5

- Same as above except 1.5 GPM (5.7 l/min.)



62003A

- Same as above except 36" grab bar (91 cm)

62003A-1.5

- Same as above except 36" grab bar (91 cm) & 1.5 GPM (5.7 l/min.)



OPTIONAL (fits all models):

SUFFIX RV – White vinyl hose

SUFFIX 72 – 72" Hose in place of 60"



1360 Elmwood Avenue, Cranston, RI 02910 USA

Phone: 401.461.1200 Fax: 401.941.5310

Email:

WEB: <http://www.leonardvalve.com>

HB-1 HOSE BIBB

Care & Cleaning Instructions

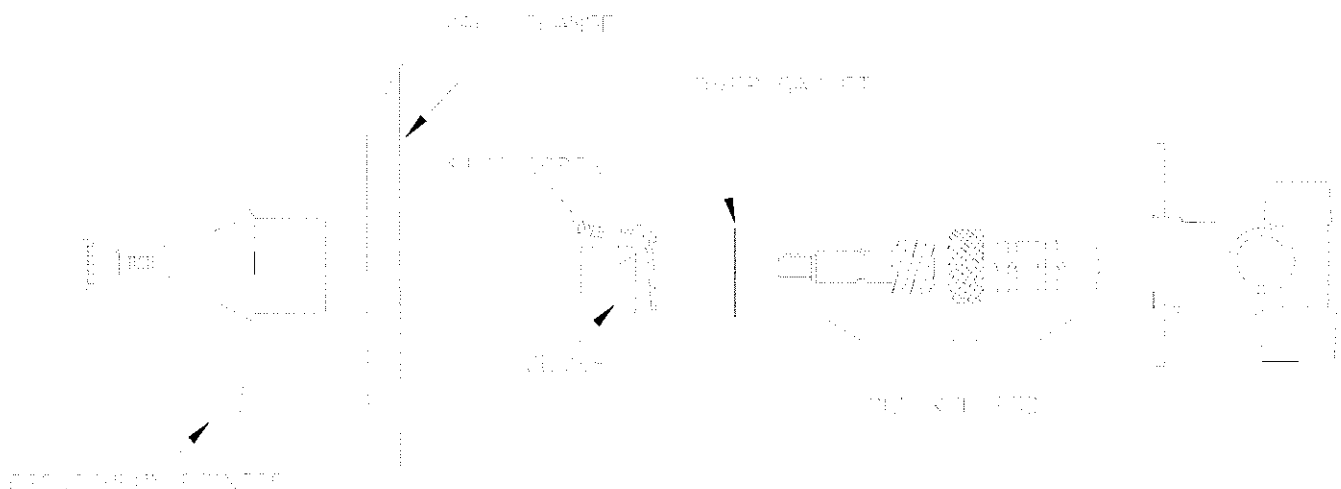
AQUATROL[®] 4500, PAM[®]-II-ST, ADVANTAGE[®] 6700

The escutcheon pointer & wall flange should never be cleaned with abrasive cleaners or polish. Wipe surfaces with a damp cloth and dry with a soft towel.

Cleaning Instructions:

1. Remove escutcheon pointer and wall flange.
2. Turn off hot and cold water supplies.
3. Temporarily place escutcheon pointer on spline and turn LEFT to maximum "HOT" position. Unscrew cover and remove complete interior assembly.
4. Remove control rod from assembly, submerge in non-corrosive cleaning solution and flush with clean water. Do not attempt to adjust or remove the stop screw, this will change the high temperature limit setting.

NOTE: Before reinserting assembly in valve (with cover gasket) make sure escutcheon pointer has been turned LEFT to the maximum RED ("HOT") position.



Cleaning and Care Instructions

BioPrism® Solid Surface

Cleaning and Care of your BioPrism® Solid Surface

There are two types of solid surface finishes: matte and satin. Lighter colors are finished with a matte finish, and darker colors receive a satin finish. All solid surface sinks have a matte finish.

Soapy water, ammonia based cleaners (not window cleaners as they can leave a waxy build up that may dull the surface) or commercially available solid surface cleaners will remove most dirt and residue from all types of finishes. Stubborn residue will require a little stronger cleaner. Follow the recommendations on the next page to properly clean your sink.

To prevent build up of a film on the surface, it is very important to wipe the surface completely dry after spills and cleaning.

- Some colors of BioPrism® Solid Surface may require more frequent cleaning to maintain a uniform finish. Darker colors tend to require more attention than lighter colors. Over time, even with proper care your countertop will acquire a patina, changing the appearance of the finish. You may restore the look of the original finish by following the renewing a finish guidelines below. To enhance the gloss level on satin finishes, use a countertop polish such as Rock Doctor Granite Polish.

A key to keeping your surfaces looking good is to thoroughly wipe completely dry after cleaning.

Surfaces - Cleaning all Finishes

Most Dirt & Residue

Use soapy water, ammonia based cleaner, (not window cleaner) rinse and wipe completely dry. Commercially available solid surface cleaners, such as Clean Encounters will also work well.

Prevent Hard Water Marks

Rinse and wipe completely dry after cleaning. On vertical surfaces a squeegee works well.

Removing Hard Water Marks

Use Cleaner formulated for removing hard water marks, such as CLR.

Disinfecting

Occasionally wipe surface with diluted household bleach - 1:10 (1.5 cups of bleach to 1 gallon of water, As recommended by the Centers For Disease Control and Prevention for disinfection and sterilization of surfaces)

Sinks & Lavs

Cleaning

Follow procedures above or use Soft Scrub and a Scotch-Brite® pad to remove residue. Rub Scotch-Brite® pad over entire sink to blend finish.

Note: Do Not Use Scotch-Brite® pad on finished surfaces as this will dull the surface!

Disinfecting

Fill your sink 1/4 full with diluted household bleach (5 Tbsp. bleach to 1 gallon water). Be sure to get some of the solution into the overflow opening to disinfect. Let the solution stay in the sink for 15 minutes; then wash sides and bottom as the solution drains. Rinse out the sink with water.

Shower Receptors/Bases

Cleaning

Spray surface until thoroughly wet with LYSOL Power & Free Bathroom Cleaner, wipe with a clean cloth or sponge. No rinsing required.

Removing Soap Scum, Limescale and Rust Stains

Spray surface until thoroughly wet with LYSOL Power & Free Bathroom Cleaner, allow product to sit for 10 minutes before wiping with a clean cloth or sponge. Repeat if necessary.

Magnetic Grate - Iron Deposit Removal

Moisten a clean soft cloth with water. Gently wipe off the surfaces containing iron deposits to remove iron from the surface of the grate or magnets. Repeat with clean sections of the rag until all iron deposits are removed.

Notes:

- Do not use abrasive cleaners or cloths to clean off iron deposits, this could damage the surfaces of the grate or magnets, or weaken the adhesive bonds.
- Do not scrape/chip off iron deposits with screw drivers, chisels, or putty knives, this could damage the surfaces of the grate or magnets, or weaken the adhesive bonds.
- Household vinegar may be used in place of water for stubborn iron deposits.

IPC.701/REV.12

ENDURANT® Washroom Systems

inpro.com • 800.222.5556 • 262.679.9010

World Headquarters S80 W18766 Apollo Drive, Muskego, WI 53150 USA

Installation Hotline: 866.394.6776

inpro®

Cleaning and Care Instructions

BioPrism® Solid Surface

Preventing Heat Damage

While Inpro® BioPrism® Solid Surface is heat resistant, as with all solid surface materials, it is important to minimize direct heat exposure to protect your surface and investment.

Do not place hot objects directly on the surface.

Always use heat trivets or hot pads when placing hot objects on any surface. Always use a trivet under portable heat generating appliances such as a griddle or crock-pot. Allow cookware to cool before placing it into a Solid Surface sink.

Preventing Other Damage

In most cases BioPrism® Solid Surface can be repaired if damaged. Be sure to follow these guidelines to help you prevent permanent damage to your surface or sink:

- Avoid getting strong chemicals, such as paint removers, oven cleaners, etc., on your BioPrism® Solid Surface. If a spill does occur, promptly flush the surface with water to fully rinse off the chemical.
- Do not cut directly on BioPrism® Solid Surface. Use a cutting board or trivet.
- Boiling water alone will not damage your sink; however, it is a recommended practice to run cool water from the faucet while pouring boiling water into the sink.

Removing Dull or Blotchy Appearance

Typically this is caused by letting hard water dry on the surface, which will leave a film of minerals.

- Pour some mild abrasive liquid cleaner, such as Soft Scrub, on a damp sponge or cloth and rub over area using small circular motions, from the front to the back, then side to side, overlapping the circles until the entire area has been cleaned.
- Thoroughly rinse the top with clean water and wipe the surface completely dry.
- Check to see if the blotchiness is gone. If not, repeat the procedure applying more pressure on the sponge or rag.
- Continue over all affected areas until film is removed.
- To enhance the gloss level on satin finishes, use a countertop polish such as Rock Doctor Granite Polish.

Note: While this procedure may remove or minimize the look of the very fine scratches, other deeper scratches may remain. They may be removed by following the procedure below or you may wish to hire a local fabricator to refinish your countertop. Contact your Inpro® BioPrism® Solid Surface Sales Rep to inquire about getting a referral for a local fabricator.

Renewing the Finish

Sanding:

Using a 5" or 6" random-orbital sander, move the sander in an orbital pattern, overlapping each pass by 50%. Sand slowly and evenly, keeping the micron paper clean from sanding dust (Check paper frequently).

Matte Finish (Class A & A1)

- Use a 100 micron sanding pad to remove marks and scratches and even out the finish.
The easily maintained matte finish is suitable for high use areas.

Satin Finish (Class B)

- Remove marks and scratches with a 100 micron sanding pad.
- Repeat the process with a 60 micron sanding pad.
- Use a Scotch-Brite® pad (#7447 Maroon, Very Fine, 320-400 Grit) under the sanding pad to even out the finish.
- Repeat the process with a Scotch-Brite® pad (#7448 Gray, Ultra Fine, 600-800 Grit).

Sources for materials mentioned above:

CLR® Registered trademark of Jelmar	Local Retail
Clean EnCounters® Registered trademark of Stone Care International	Stone Care International (800) 839-1654
Scotch Brite™ Registered trademark of 3M Company	Local Retail
Soft Scrub® Registered trademark of the Dial Corporation	Local Retail
Rock Doctor Granite Polish Rock Doctor Products, a division of Apex Products	Local Retail
LYSOL Power & Free Bathroom Cleaner Registered trademark of Reckitt Benckiser, Inc	Local Retail

When used properly, LYSOL Power & Free Bathroom Cleaner kills the following bacteria and viruses on hard non-porous surfaces: Salmonella enteric (Salmonella), Escherichia coli O148:H7, Pseudomonas aeruginosa, Staphylococcus aureus (Staph), Avian Influenza AH1N1, Herpes Symplex Virus Type 1, Rhinovirus Type 37, Rotavirus WA (Source: LYSOL website)

Quality Assurance

With proper care, your BioPrism® Solid Surface can stay looking like new. Your Inpro® BioPrism® Solid Surface carries a 10-year Limited Warranty.

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Safety Data Sheet

BOSS® 385 Tub & Tile Silicone

Section 1. Identification

Product Identifier	BOSS® 385 Tub & Tile Silicone		
Synonyms	38508; 38505; 38501; 38500		
Manufacturer Stock Numbers	01034WH48; 01034CL48; 01034AM48; 01034TW48		
Recommended use	Refer to Technical Information		
Uses advised against	Refer to Technical Information		
Manufacturer Contact Address	Soudal Accumetric 350 Ring Road Elizabethtown, KY, 42701 USA		
	Phone	Emergency Phone	Fax
	(270) 769-3385	(800) 424-9300 CHEMTREC	(270) 765-2412

Section 2. Hazards Identification

Classification	N/A
Signal Word	
Pictogram	
Hazard Statements	N/A
Precautionary Statements	
Response	N/A
Prevention	Use only outdoors or in a well-ventilated area.
Storage	N/A
Disposal	N/A

Ingredients of unknown toxicity 0%

Hazards not Otherwise Classified

GHS Classification Not a hazardous substance or mixture.
GHS Label Element Not a hazardous substance or mixture.
Other hazards None known

Section 3. Ingredients

CAS	Ingredient Name	Weight %
64742-46-7	Distillates (petroleum), hydrotreated middle	5% - 10%
7631-86-9	Amorphous silica	5% - 10%

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First-Aid Measures

Eye Contact Immediately flush the contaminated eye(s) with lukewarm, gently flowing water for 5 minutes while holding the eyelids open. Obtain medical attention.

Skin Contact No health effects expected. If irritation does occur, flush with lukewarm, gently flowing water for 5 minutes. If irritation persists, obtain medical advice.

Inhalation If symptoms are experienced remove source of contamination or move victim to fresh air. If irritation persists, obtain medical advice.

Ingestion If irritation or discomfort occur, obtain medical advice.

Comments Treat according to person's condition and specifics of exposure.

Section 5. Fire Fighting Measures

Suitable Extinguishing Media On large fires use dry chemical, foam, or water spray. On small fires use carbon dioxide, dry chemical or water spray. Water can be used to cool fire exposed containers.

Unsuitable Extinguishing Media None known

Special Fire Fighting Procedures Self-contained breathing apparatus and protective clothing should be worn when fighting large fires involving chemicals. Determine the need to evacuate or isolate the area according to your local emergency plan. Use water spray to keep fire exposed containers cool.

Unusual Fire or Explosion Hazards None known

Section 6. Accidental Release Measures

Steps to be taken in case of spill or release Observe all personal protection equipment recommendations in Sections 5 and 8. Wipe or scrape up and contain for salvage or disposal. Clean area as

appropriate since spilled materials, even in small quantities, may present a slip hazard. Final cleaning may require use of steam, solvents or detergents. Dispose of saturated absorbant or cleaning materials appropriately, since spontaneous heating may occur. Local, state and federal laws and regulations may apply to releases and disposal of this material, as well as those materials and items employed in the cleanup of releases. You will need to determine which federal, state and local laws and regulations are applicable. Sections 13 and 15 of this MSDS provide information regarding certain federal and state requirements.

Note

See Section 8 for information about personal protective equipment for spills. Contact Accumetric, LLC if additional information is required.

Section 7. Handling and Storage

Storage

Use reasonable care and store away from oxidizing materials. Keep container closed and store away from water or moisture. This material in its finely divided form presents an explosion hazard. Follow NFPA 654 (for chemical dusts) or 484 (for metal dusts) as appropriate for managing dust hazards to minimize secondary explosion potential.

Handling

Use adequate ventilation. Product evolves acetic acid when exposed to water or humid air. Provide ventilation during use to control acetic acid within exposure guidelines or use respiratory protection. Avoid eye contact. Avoid skin contact.

Section 8. Exposure Controls/Personal Protection

Occupational Exposure Limits	Ingredient Name	ACGIH TLV OSHA PEL STEL		
	Distillates (petroleum), hydrotreated middle	5 mg/m ³	5 mg/m ³	10 mg/m ³
	Amorphous silica	10 mg/m ³	6 mg/m ³	Not Est.
Personal Protective Equipment	Goggles, Gloves			
Engineering Controls	Local Ventilation: None should be needed General Ventilation: Recommended			
Respiratory Protection	No respiratory protection should be needed.			
Eye Protection	Suitable Respirator: None should be needed.			
Skin Protection	Use proper protection - safety glasses as a minimum. Wash at mealtimes and end of shift. Contaminated clothing and shoes should be removed as soon as practical and thoroughly cleaned before reuse. Chemical protective gloves are recommended.			
Precautionary Measures	Suitable Gloves: Handle in accordance with good industrial hygiene and safety practices.			
Comment	Avoid eye contact. Avoid skin contact. Use reasonable care. Product evolves acetic acid when exposed to water or humid air. Provide ventilation during use to control acetic acid within exposure guidelines or use respiratory protection.			

When heated to temperatures above 150C (300F) in the presence of air, product can form formaldehyde vapors. Physical and health hazard information is readily available on the Material Safety Data Sheet. When heated to temperatures above 150C in the presence of air, product can form formaldehyde vapors. Formaldehyde is a potential cancer hazard, a known skin and respiratory sensitizer, and an irritant to the eyes, nose throat, skin and digestive system. Safe handling conditions may be maintained by keeping vapor concentrations within the OSHA Permissible Exposure Limit for formaldehyde.

Note These precautions are for room temperature handling. Use at elevated temperatures or aerosol/spray applications may require added precautions.

Section 9. Physical and Chemical Properties

Physical State	Paste
Color	Refer to product label
Odor	Acetic Acid
Odor Threshold	No data available
Solubility	No data available
Partition coefficient Water/n-octanol	No data available
VOC%	23 g/L
Viscosity	Not applicable
Specific Gravity	1.007
Density lbs/Gal	N/A
Pounds per Cubic Foot	N/A
Flash Point	>212F >100C
FP Method	Closed Cup
Ph	Not applicable
Melting Point	No data available
Boiling Point	Not applicable
Boiling Range	Not applicable
LEL	N/A
UEL	N/A
Evaporation Rate	Not applicable
Flammability	Not classified as a flammability hazard

should be done only after a careful evaluation and in compliance with all federal, local and state laws.

RCRA Hazard Class (40 CFR 261) When a decision is made to discard this material, as received, is it classified as a hazardous waste? NO

State or local laws may impose additional regulatory requirements regarding disposal.

Section 14. Transport Information

UN Number	N/A
UN Proper Shipping Name	Not regulated
DOT Classification	Not regulated
Packing Group	Not regulated
Ocean Shipment (IMDG)	Not subject to IMDG code.
Air Shipment (IATA)	Not subject to IATA regulations.

Section 15. Regulatory Information

TSCA Status	All chemical substances in this material are included on or exempted from listing on the TSCA Inventory of Chemical Substances.
SARA Title III Section 302 Extremely Hazardous Substances	None
SARA Title III Section 304 CERCLA Substances dangereuses	None
SARA Title III Section 311/312 Hazard Class	Acute: No Chronic: No Fire: No Pressure: No Reactive: No
SARA Title III Section 313 Toxic Chemicals	None present or none present in regulated quantities.
Note	Chemicals are listed under the 313 Toxic Chemicals section only if they meet or exceed a reporting threshold.
California Proposition 65	This product contains the following chemical(s) listed by the State of California under the Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65) as being known to cause cancer, birth defects or other reproductive harm: None known
New Jersey	Dimethyl siloxane, hydroxy-terminated (70131-67-8) Ethyltriacetoxysilane (17689-77-9) Methyltriacetoxysilane (4253-34-3) Silica, amorphous (7631-86-9) Hydrotreated middle petroleum distillates (64742-46-7)
Pennsylvania	Dimethyl siloxane, hydroxy-terminated (70131-67-8) Silica, amorphous (7631-86-9) Hydrotreated middle petroleum distillates (64742-46-7)

Section 16. Other Information

Revision Date

11/9/2015

Disclaimer

The data contained herein is based upon information that Soudal Accumetric believes to be reliable. Users of this product have the responsibility to determine that suitability of use and to adopt all necessary precautions to ensure the safety and protection of property and persons involved in said use. All statements or suggestions are made without warranty, expressed or implied, regarding the accuracy of the information, the hazards connected with the use of the material or the results to be obtained from the use thereof.

BOSS[®] 385 Tub & Tile Plumbers 100% RTV Silicone

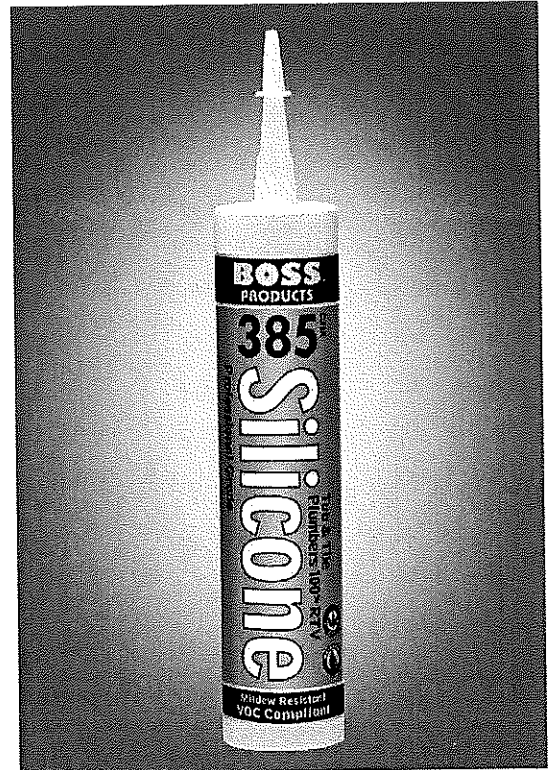
TYPICAL PROPERTIES

Type.....One part, ready-to-use silicone rubber
Special Properties.....Mildew and moisture resistant
Benefits.....Long-life reliability,
permanently flexible, good appearance
Primary Use.....Sealing nonporous surfaces around
ceramic tile, showers, tubs, sinks and plumbing fixtures

As supplied

Color.....Clear, white, translucent white, almond
Flow, sag or slump.....NIL
Tack-Free Time.....15-20 minutes
Cure Time (1/8" thickness).....24 hours
Service Temperature.....-40°F to 400°F
Application Temperature.....-35°F to 140°F

*Information on this data sheet is subject to change without notice
and should not be used for writing specifications.
For additional information on specific applications, contact Soudal Accumetric.



DESCRIPTION

BOSS[®] 385 Tub & Tile Plumbers 100% RTV Silicone is a one-part, fungicidal, silicone rubber sealant designed to seal nonporous surfaces around ceramic tile, showers, tubs, sinks and plumbing fixtures where conditions of high humidity and temperature extremes exist.

BOSS[®] 385 Tub & Tile Plumbers 100% RTV Silicone:

- Resists mildew even in prolonged hot and humid environments
- Resists staining, spotting and color change
- Remains flexible – will not shrink, crack, crumble or dry out
- Stays bright and clean
- Is ready-to-use as supplied
- Resists moisture, hot cooking oils and free steam
- Adheres to many nonporous surfaces such as porcelain, painted areas and glass without the use of a primer

USES

BOSS[®] 385 Tub & Tile Plumbers 100% RTV Silicone is mildew resistant. It is used for such nonporous surface applications as:

- Sealing around shower-tub enclosures, tubs, sinks and around urinals
- Sealing around bathroom fixtures
- Waterproofing rimless sinks
- Ceramic tile grouting

HOW TO USE

BOSS® 385 Tub & Tile Plumbers 100% RTV Silicone must always be applied to sound, clean, dry, frost-free surfaces.

Tooling is recommended and if possible, should be completed in one continuous stroke. Tool joints within 10 minutes of application. Remove masking tape before a surface skin has formed.

Cleaning the joint surface on both new and old jobs

Bonding surfaces on both new and remedial jobs must be clean, dry and free of dirt, dust and soap film.

Use masking tape where bead lines of exact shapes are required

Use masking tape before applying sealant and remove immediately after a bead is completed and before a skin forms (7 to 15 minutes).

Applying the sealant

BOSS® 385 Tub & Tile Plumbers 100% RTV Silicone can be applied directly from the caulking cartridge with either an air operated or hand operated cartridge gun. Do not break the cartridge seal until just before using.

After applying the sealant and after a skin has formed, do not disturb the joint for 48 hours. A previously opened cartridge may be reused by removing the cured plug of sealant from the tip.

SPECIFICATIONS

BOSS® 385 meets Federal Specifications TT-S-001543A, TT-S-00230C and ASTM C920-86.

CLEAN UP

Uncured sealant can be easily removed using a solvent such as alcohol or acetone. For an environmental and health friendlier choice use **BOSS®** Biggie Wipes. If the sealant is cured it must be removed mechanically by cutting and scraping.

COLORS

BOSS® 385 Tub & Tile Plumbers 100% RTV Silicone is available in clear, white, translucent white and almond.

PACKAGING

BOSS® 385 Tub & Tile Plumbers 100% RTV Silicone is available in standard caulking cartridges and 4.5 gallon pails. Other sizes available upon request.

SHIPPING LIMITATIONS

None.

Reactive VOC 23 g/l (<3% wt)

LIMITATIONS

BOSS® 385 Tub & Tile Plumbers 100% RTV Silicone is not recommended for continuous water immersion, nor for floor joints where abrasion and physical abuse are encountered. It should not be applied to:

- Porous surfaces such as masonry
- Building materials that bleed oils or solvents, such as impregnated wood and certain partially vulcanized rubber gaskets, tapes or adhesives
- Totally confined spaces, because the sealant needs atmospheric moisture to cure

STORAGE AND SHELF LIFE

When stored in the original unopened containers at or below 90°F (32°C), **BOSS® 385** Tub & Tile Plumbers 100% RTV Silicone has a shelf life of 12 months from date of shipment. In countries where high heat and humidity are a factor, special precautions must be taken. Store product in a covered, well-ventilated warehouse and avoid excessive heat conditions. Storage in high heat, high humidity conditions may reduce shelf life by up to 30%. Rotation of stock is an absolute necessity. Cartons should always be stacked upright with the nozzle tip pointed upwards. **DO NOT** stack cartons on their side. **NEVER** stack cartons more than 8 high. **DO NOT** store within 1 meter (4 feet) of roofline of the warehouse or storage building.

CAUTION

DIRECT CONTACT OF UNCURED SEALANT IRRITATES EYES AND MAY IRRITATE SKIN. OVEREXPOSURE TO VAPOR MAY IRRITATE EYES, NOSE, AND THROAT. Avoid eye and skin contact. Use only outdoors or in a well ventilated area. Do not handle contact lenses with sealant on hands. **IN CASE OF EYE CONTACT,** flush eyes with water for 15 minutes. Obtain medical attention. **IN CASE OF SKIN CONTACT,** remove from skin and flush with water. Sealant releases acetic acid (vinegar-like odor) during cure. **KEEP OUT OF THE REACH OF CHILDREN.** For safe handling information on this product, consult the Safety Data Sheet (SDS).

USERS PLEASE READ

The information and data contained herein is believed to be accurate and reliable; however, it is the user's responsibility to determine suitability of use. Since the supplier cannot know all the uses, or the conditions of use to which these products may be exposed, no warranties concerning the fitness or suitability for a particular use or purpose are made.

It is the user's responsibility to thoroughly test any proposed use of our products and independently conclude satisfactory performance in the application.

Likewise, if the application, product specifications or manner in which our products are used requires government approval or clearance, it is the sole responsibility of the user to obtain sure authorization.

Non-warranty: Because the storage, handling and application of the material is beyond Soudal Accumetric's control, we can accept no liability for the results obtained. Soudal Accumetric's sole limited warranty is the product meets the manufacturing specifications in effect at time of shipment. There is no warranty of merchantability or fitness for use, nor any other express or implied warranty. Soudal Accumetric will not be liable for incidental or consequential damages of any kind. The exclusive remedy for breach of such limited warranty is a refund of purchase price or replacement of any product shown to be other than as warranted.

Suggestions of uses should not be taken as inducements to infringe any patents.

MADE IN U.S.A.

BOSS® PRODUCTS

Soudal Accumetric
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Outside U.S.
TEL +1(270)769-3385 / FAX +1(270)765-2412
www.bossproducts.com

Performance Properties of BioPrism®

PROPERTY	TEST	RESULT
Tensile Strength	ASTM D 638	4,978 psi
Tensile Modulus	ASTM D 638	1.8 x 10 ⁶ psi
Elongation	ASTM D 638	.45% min.
Flexural Strength	ASTM D 790	7,106 psi
Flexural Modulus	ASTM D 790	1.4 x 10 ⁶ psi
Specific Gravity	ASTM D 792	1.75
Weight per Square Foot		¼" – 2.2 lbs. ½" – 4.4 lbs.
Hardness, Rockwell M	ASTM D 785	86
Hardness, Barcol Impressor	ASTM D 2583	54
Thermal Expansion	ASTM D 696	3.6 x 10 ⁻⁵ in./in./deg. F
Izod Impact, Notched	ASTM D 256A	.33 ft.lb./in.
Impact Resistance, Sheets	NEMA LD-3-3.3 1/2lb. ball	¼" – 42" drop, No fracture ½" – 132" drop, No fracture
Water Absorption, 24hrs.	ASTM D 570	¼" – .038% ½" – .028%
Boiling Water Resistance	NEMA LD-3-3.5	No change
High Temperature Resistance	NEMA LD-3-3.6	No change
Fungus and Bacteria Resistance	ASTM G 21 and G 22	No support of growth
Color Stability	NEMA LD-3-3.10	No change
Gloss Level, 60° Gardner	ANSI Z124	3-30 (matte to semi-gloss)
Wear and Cleanability	ANSI Z124	Pass
Stain Resistance, Sheets	ANSI Z124	Pass
Sanitation	NSF 51	Pass
Flammability – Surface Burning Characteristics	ASTM E 84, UL723, NFPA 255 Flame Spread(FS) Smoke Developed(SD)	¼" - FS = 5 & SD =130, Class A ½" - FS = 0 & SD = 50, Class A

Note: BioPrism® Solid Surface products meet or exceed ANSI Z124/CSA B45.5-11 (Plastic Plumbing Fixtures), as well as, ANSI/ICPA SS-1 (Performance Standard for Solid Surface Materials).

IPC.1260/REV.6

BioPrism® Solid Surface Warranty

Limited Warranty

Inpro® Corporation (Inpro®) warrants to the purchasers that all BioPrism® Solid Surface sold by it will be free of manufacturing and material defects. Failure to use qualified fabricators, proper fasteners, adhesives, other finishing or maintenance accessories and/or other installation methods consistent with Inpro® installation instructions shall relieve Inpro® of any liability. Physical abuse, misuse, neglect, abnormal usage, movement from original location, structural movement, excessive temperature damage or breakage not due to a defect in the material is not covered by the warranty. The warranty does not apply to damage to the product caused while in transit nor does it cover slight imperfections, warping or shade variations in products. The warranty excludes color variation from sample to final product. The warranty does not cover exterior usage of this product or exposure to exterior elements. Any defective product will be replaced free of charge if a claim, proof of purchase, photo of area and original location is presented in writing to Inpro® within TEN (10) YEARS following the date of sale. Inpro® will not be responsible for any removal or installation costs involved in such replacement. Replacement will include shipment costs within the United States. The obligation to the warranty allows Inpro® the right to use colors, shapes and sizes that are available at the time of the replacement as the replacement. This warranty is IN LIEU OF any other warranty, express or implied, including, but not limited to, any implied warranty of MERCHANTABILITY or fitness for a particular purpose. Our liability under this warranty is limited to replacement of product and does not include any responsibility for incidental, consequential, indirect, special, punitive or exemplary damages of any nature, whether or not based in warranty, contract, indemnity, tort (including negligence) or any other theory or law or equity. This warranty gives you specific rights and you may have other rights which vary from state to state. Some states do not allow limitations of implied warranties or consequential damages, so these limitations may not apply to you. This warranty is non-transferable.

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FOR CUSTOMER SERVICE CALL TOLL FREE: 800.222.5556 FAX: 888.715.8407

IMPORTANT: Our products, like others in this industry, are subject to damage during shipping. As soon as the recipient has accepted the products in good condition, Inpro® Corporation responsibility ceases. Freight carriers will not honor a claim for concealed damage if the waybill is authorized clear. It is important to inspect the contents of each carton immediately as it comes off the carrier. If this is not possible, then inspect the carton carefully for dents, abrasions, signs of impact or markings. If the carton appears damaged, sign the waybill with the following notation: **Cartons have exterior markings, possible concealed damage.**

Inspect contents soon. You must file a claim with the carrier within 15 days of your receipt of product if damage within the carton is found.

The composition of BioPrism® Solid Surface produces slight color variation between production cycles due to the innate and complex blending of natural minerals and man-made resin.

IPC.703/REV.10

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ENDURANT® •
WASHROOM SYSTEMS
A DIVISION OF INPRO®

HB-1 HOSE BIBB



Anti-Siphon Wall Faucets

Model 24/B24/Y24

The Model 24 and B24 are anti-siphon, vacuum breaker protected wall faucets designed for irrigation purposes in mild climate areas. The Model B24 is enclosed in a flush mounted wall box. Both models are designed to blend with modern architecture for installation on or in homes, service stations, churches, motels, drive-in restaurants, etc. The Model Y24 is designed to be used on a stand pipe in the lawn and garden, etc.

SPECIFICATIONS:

VACUUM BREAKER - ANTI-SIPHON:

- NIDEL® Model 34HF with 3/4 inch male hose thread
- ASSE Standard 1011 approved
- IAPMO® listed
- Canadian Standards Association

EPDM PACKING: Prevents leaking.

PACKING NUT: Adjustable brass nut with deep stem guard.

VALVE SEAT: Standard "O" size washer.

HANDLES: Furnished with polycarbonate wheel handle and loose tee key.

Optional: Metal wheel handle.

INLETS: Model 24 as shown below.
 Model B24: 24P- 1/2" or 24P 3/4" only.
 Model Y24: 3/4" FPT.

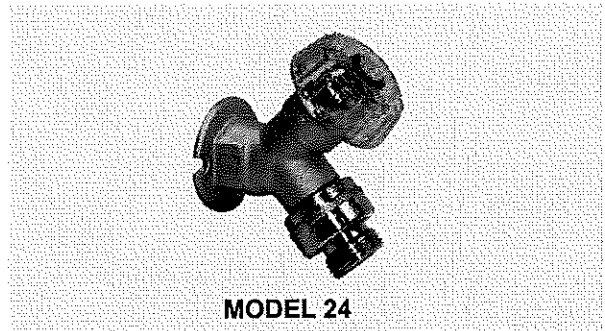
MAX PRESSURE: 125 p.s.i.

MAX TEMPERATURE: 120° F

SHIPPING WEIGHT: (per unit)

MODEL 24 & Y24: 1 lb

MODEL B24: 13 lbs (brass or chrome box)
 6 lbs (aluminum box)

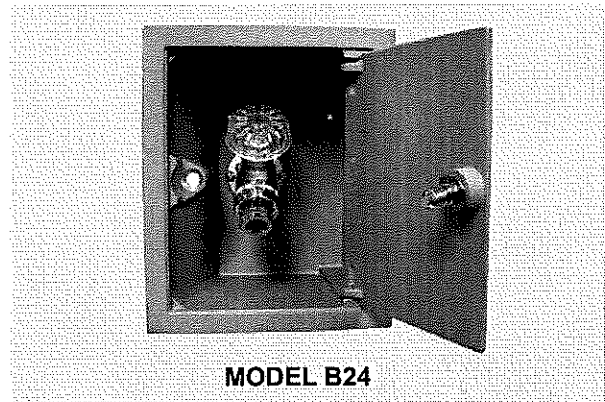


MODEL 24

Exterior Finish:

Standard - Chrome (CH)

Optional- Rough Brass (BR) or Polished Chrome (PC)



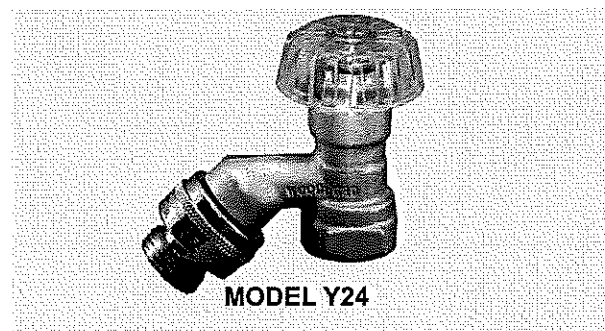
MODEL B24

Exterior Finish:

Standard - Chrome (CH)

Optional- Rough Brass (BR) or Polished Brass (PB)

Other Options: Anodized Aluminum Box (AL)



MODEL Y24

Exterior Finish:

Standard - Chrome (CH)

Optional- Rough Brass (BR) or Polished Chrome (PC)

Inlet Descriptions

MODEL 24/B24

P-1/2" Inlet

1/2" FPT

P-3/4" Inlet

3/4" FPT



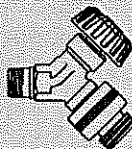
MODEL 24 ONLY

CP Inlet

COMBINATION

1/2" COPPER TUBE

1/2" MPT



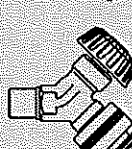
MODEL 24 ONLY

C Inlet

COMBINATION

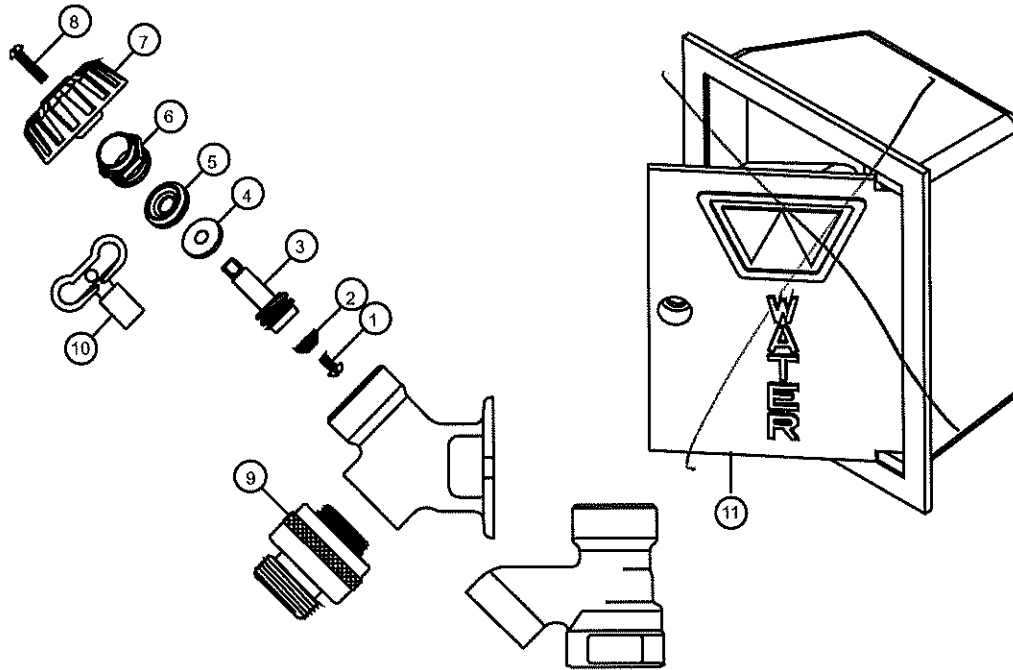
1/2" COPPER TUBE

3/4" COPPER TUBE



**For Installation / Troubleshooting Instructions go to
www.woodfordmfg.com or call 1-800-621-6032**

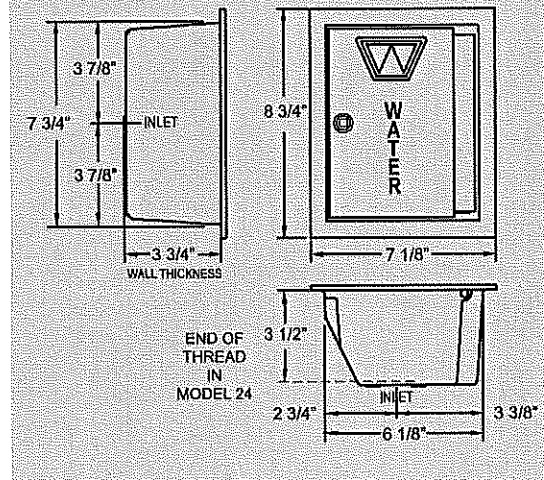
WOODFORD



MODEL 24/B24/Y24 PARTS LIST

ITEM	PART#	DESCRIPTION
1	30009	Washer Screw
2	30008	Washer
3	30104	Operating Stem
4	30105	Packing Support Washer
5	30247	EPDM Packing
6	30109	Packing Nut - Chrome
	30107	Packing Nut - Brass
7	30120	Wheel Handle - Clear
	30233	Wheel Handle - Tan
8	30121	Handle Screw - Nickel
	30002	Handle Screw - Brass
9	34HF-CH	34HF Vacuum Breaker - Chrome
	34HF-BR	34HF Vacuum Breaker - Brass
10	50009	Tee Key
11	B24BX	Box/Door Assembly - Chrome
	B24BX-BR	Box/Door Assembly - Brass
	B24BX-PB	Box/Door Assembly - Polished Brass
	B24BX-AL	Box/Door Assembly - Anodized Aluminum
	RK-24	Chrome Repair Kit (Includes Items 1-8)
	RK-H34	Brass Repair Kit (Includes items 1-8)

**MODEL B24
Rough-In Dimensions**



Manufactured under one or more of the following patents: U.S. Patents: 3,414,001; 3,543,786; 4,178,956; 4,316,481; D216,790; D216,791; D277,365; D277,366; Canada Patents: 822,458; 852,529; 865,995

For more information contact...

WOODFORD MANUFACTURING COMPANY

2121 Waynoka Road, Colorado Springs, Colorado 80915 • Phone: (800) 621-6032 • Fax: (800) 765-4115

To view our complete product line visit: www.woodfordmfg.com or email: sales@woodfordmfg.com

A Division Of WCM Industries, Inc.



201 S Chester
Little Rock, AR 72201
501.237.3077

Submittal Comment Sheet

Project Name: Renovate 3H Bed Stations

Submittal: 19-029 001 Plumbing Fixtures

Date Received: 03-01-2022

Date Returned: 03-05-2022

Reviewed By: Kim Koch

Comments:

1. SS-1
 - a. Approved
2. SS-2
 - a. Approved
3. LAV-1
 - a. Approved
4. LAV-2
 - a. Approved
5. LAV-3
 - a. Approved
6. WC-1
 - a. Approved
7. S-1
 - a. Approved
8. S-2
 - a. Approved
9. SH-1
 - a. Approved
10. WB-1
 - a. Approved
11. WCO
 - a. Approved
12. FD-1
 - a. Approved
13. HB-1
 - a. Approved



- 14. Water Hammer Arrestors
 - a. Approved

End of Comments

THE CONSULTANTS OF RECORD FOR THIS PROJECT HAVE REVIEWED THESE SHOP DRAWINGS. THE CONSULTANTS' COMMENTS AND REVIEW STAMP ARE APPLICABLE FOR THEIR PORTION OF THE WORK. THE REVIEW AND CHECKING OF THE REFERENCED SUBMITTED DOCUMENTS IS FOR GENERAL CONFORMANCE WITH THE DESIGN INTENT OF THE PROJECT AND GENERAL COMPLIANCE WITH THE INFORMATION GIVEN IN THE CONTRACT DOCUMENTS. ANY ACTION SHOWN IS SUBJECT TO THE REQUIREMENTS OF THE PLANS AND SPECIFICATIONS. REVIEW IS NOT CONDUCTED FOR THE PURPOSE OF DETERMINING THE ACCURACY AND COMPLETENESS OF OTHER DETAILS, SUCH AS DIMENSIONS AND QUANTITIES, FOR SUBSTANTIATING INSTRUCTIONS FOR INSTALLATION OR PERFORMANCE OF EQUIPMENT OR SYSTEMS, OR FOR COORDINATION OF THE WORK OF ALL TRADES, ALL OF WHICH REMAIN THE RESPONSIBILITY OF THE CONTRACTOR AS REQUIRED BY THE CONTRACT DOCUMENTS. CONTRACTOR IS RESPONSIBLE FOR ALL QUANTITIES.



EJ TOWBIN HEALTHCARE CENTER
3H RENOVATION
NORTH LITTLE ROCK, ARKANSAS

SS-1 SERVICE SINK
ELKAY FLR-1X SERVICE SINK
T&S B-0665-BSTP-BWH6 FAUCET
T&S B-0653 MOP HANGER
T&S B-0654 HOOK AND HOSE

PRODUCT SPECIFICATIONS

Elkay Stainless Steel 24" x 20" x 11-1/4" 16 Gauge Mop Sink. Sink is manufactured from 16 gauge 304 Stainless Steel with a #4 Finish, Center drain placement.

Material:	304 Stainless Steel
Finish:	#4 Finish
Gauge:	16
Weight Without Packaging:	28
Number of Bowls:	1
Sink Dimensions:	24" x 20" x 11-1/4"
Bowl 1 Dimensions:	20" x 16" x 6"
Drain Size:	3-1/2" (89mm)
Drain Location:	Center

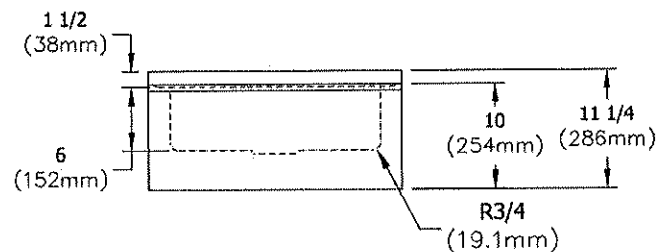
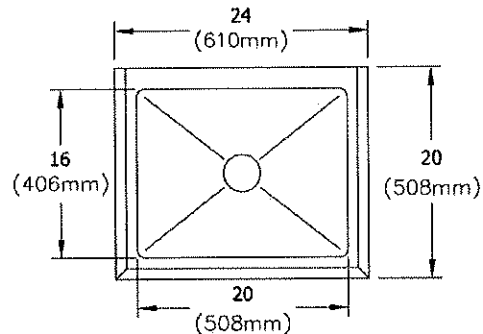


Included with Product: Stainless Steel Skirt,
2" Brass No-Caulk Drain

AMERICAN PRIDE. A LIFETIME TRADITION.
Like your family, the Elkay family has values and traditions that endure. For almost a century, Elkay has been a family-owned and operated company, providing thousands of jobs that support our families and communities.

Product Compliance: ASME A112.19.3/CSA B45.4
NSF 2

Accessory: ASME A112.18.2/CSA B125.2



PART: _____ QTY: _____
 PROJECT: _____
 CONTACT: _____
 DATE: _____
 NOTES: _____
 APPROVAL: _____

In keeping with our policy of continuing product improvement, Elkay reserves the right to change product specifications without notice. Please visit elkay.com for the most current version of Elkay product specification sheets. This specification describes an Elkay product with design, quality, and functional benefits to the user. When making a comparison of other producers' offerings, be certain these features are not overlooked.



T&S BRASS AND BRONZE WORKS, INC.

2 Saddleback Cove / P.O. Box 1088
Travelers Rest, SC 29690

Model No.

B-0665-BSTP

Item No.

Travelers Rest, SC: 800-476-4103 • Simi Valley, CA: 800-423-0150 • Fax: 864-834-3518 • www.tsbrass.com



ADA Compliant

This Space for Architect/Engineer Approval

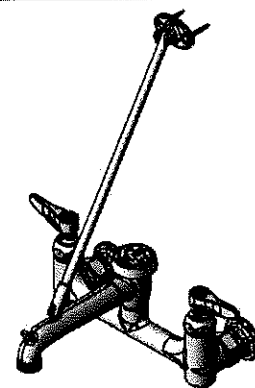
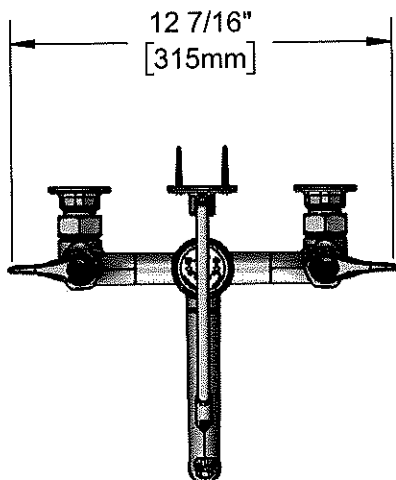
Job Name _____ Date _____

Model Specified _____ Quantity _____

Customer/Wholesaler _____

Contractor _____

Architect/Engineer _____



Support Rod w/
Wall Bracket &
Mounting Screws

Items Not Shown
for Clarity

B-0969
1/2" NPT Vacuum
Breaker

Quarter-Turn
Eterna Cartridges w/
Spring Check &
Lever Handles w/
Color Coded Indexes

Garden Hose
Male Outlet

Ø 2" [51mm]
Flanges w/
1/2" NPT
Female Inlets

Built-In Service
Stops

Mounting
Surface

14 5/16"
[364mm]

3 15/16"
[100mm]

8"
[203mm]
Adjustable From
7 3/4" to 8 1/4"
[197mm to 210mm]

2 11/16"
[68mm]

9 1/8"
[232mm]

Product Specifications:

8" Wall Mount Service Sink, Quarter-Turn Eterna Cartridges w/ Spring Checks, Lever Handles, Upper Support Rod, Built-In Stops, Garden Hose Male Outlet, Polished Chrome Finish, 1/2" NPT Vacuum Breaker & 1/2" NPT Female Inlets

Product Compliance:

ASME A112.18.1 / CSA B125.1
NSF 61 - Section 9
NSF 372 (Low Lead Content)
ANSI A117.1 (ADA)
ASSE 1001 (VB)



T&S BRASS AND BRONZE WORKS, INC.

2 Saddleback Cove / P.O. Box 1088
Travelers Rest, SC 29690

Model No.

B-WH6

Item No.

Travelers Rest, SC: 800-476-4103 • Simi Valley, CA: 800-423-0150 • Fax: 864-834-3518 • www.tsbrass.com

This Space for Architect/Engineer Approval

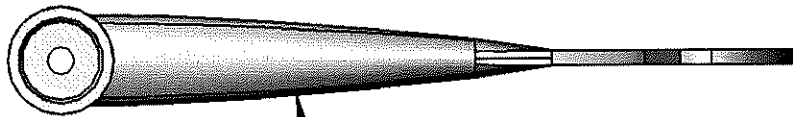
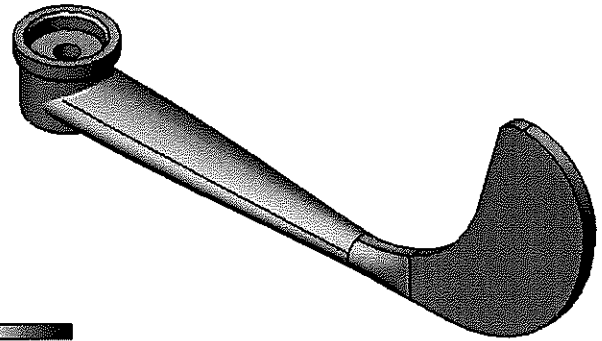
Job Name _____ Date _____

Model Specified _____ Quantity _____

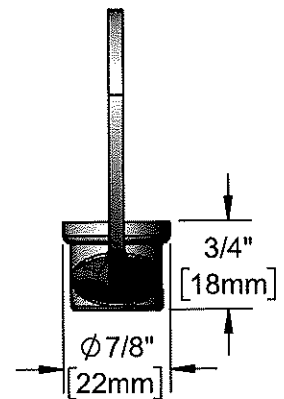
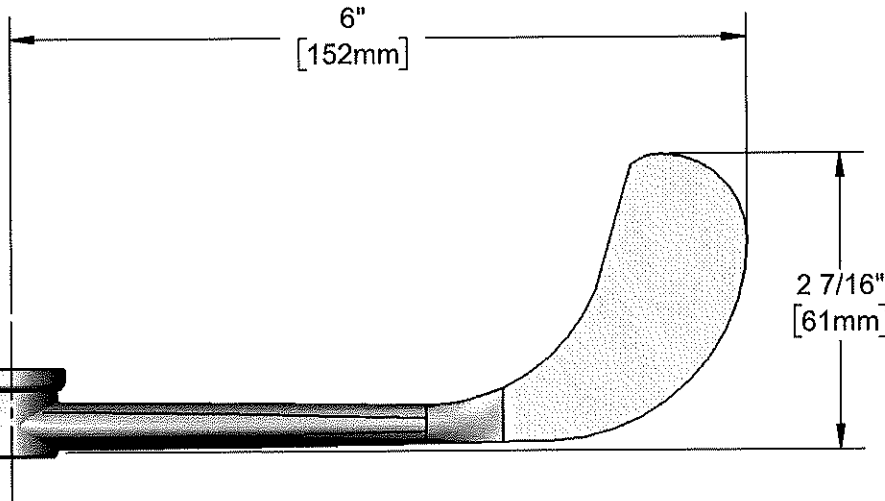
Customer/Wholesaler _____

Contractor _____

Architect/Engineer _____



6" Wrist Action Handle



Product Specifications:
6" Wrist Action Handle (Polished Chrome)

Product Compliance:



T&S BRASS AND BRONZE WORKS, INC.

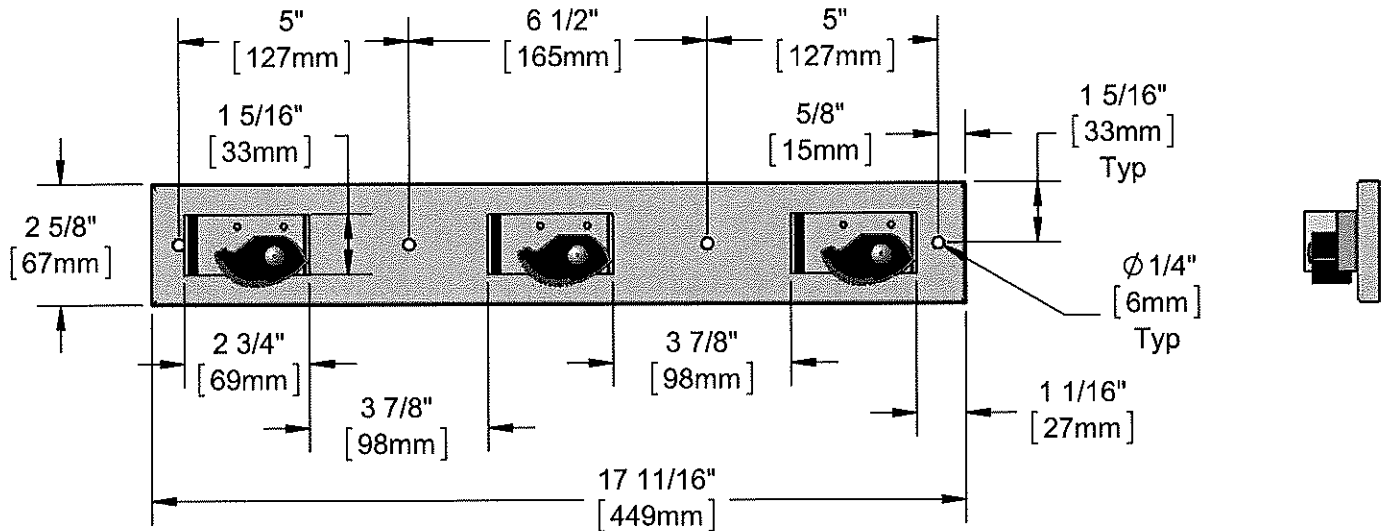
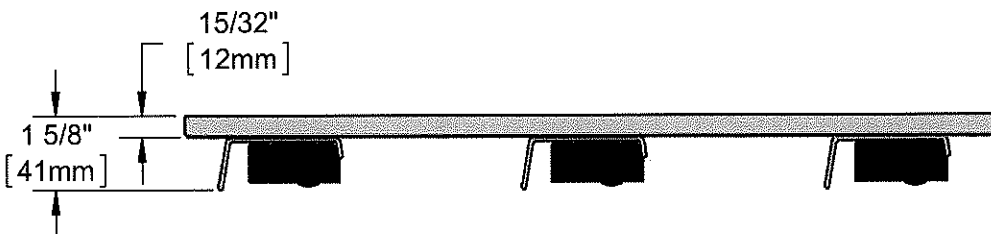
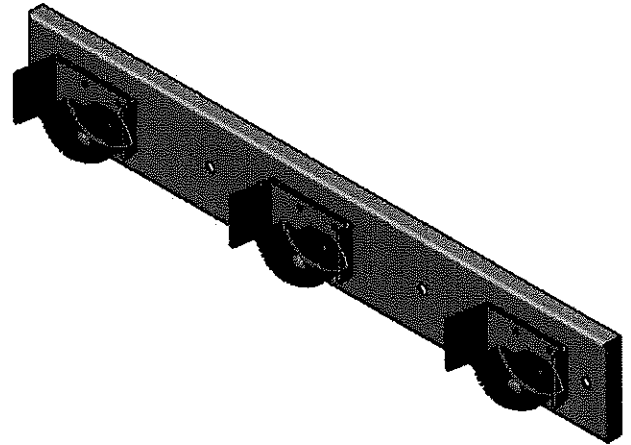
2 Saddleback Cove / P.O. Box 1088
Travelers Rest, SC 29690

Model No.

B-0653

Item No.

Travelers Rest, SC: 800-476-4103 • Simi Valley, CA: 800-423-0150 • Fax: 864-834-3518 • www.tsbrass.com



(4) Chrome Plated
Brass Wood Screws
(Included)

Product Specifications:
Stainless Steel Mop Hanger, (3) Spring-Loaded Rubber Grips

Drawn KJG	Checked JRM	Approved JHB
Scale: NTS		Date: 05/14/15



T&S BRASS AND BRONZE WORKS, INC.

2 Saddleback Cove / P.O. Box 1088
Travelers Rest, SC 29690

Model No.

B-0654

Item No.

Travelers Rest, SC: 800-476-4103 • Simi Valley, CA: 800-423-0150 • Fax: 864-834-3518 • www.tsbrass.com

This Space for Architect/Engineer Approval

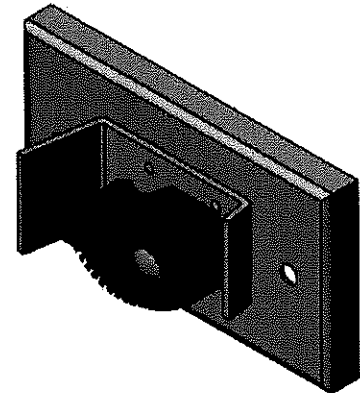
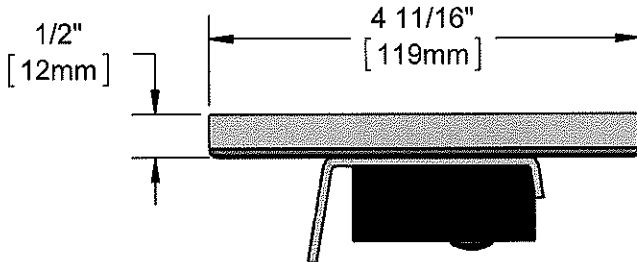
Job Name _____ Date _____

Model Specified _____ Quantity _____

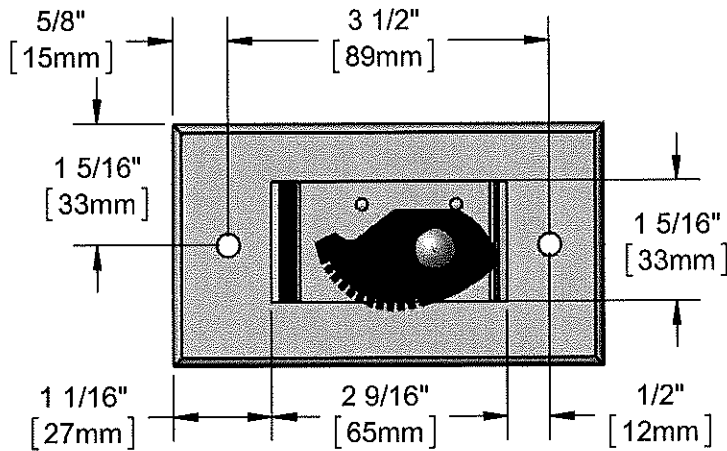
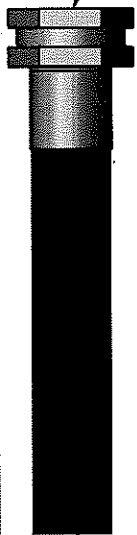
Customer/Wholesaler _____

Contractor _____

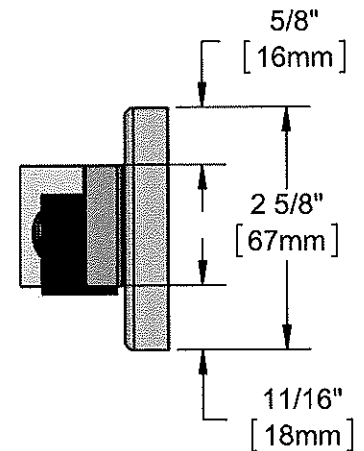
Architect/Engineer _____



Garden Hose Female Inlet
w/ Gasket



30" [762mm] Hose



(2) Chrome Plated
Brass Wood Screws
(Included)

Product Specifications:
Stainless Steel Hose Hanger w/ Spring-Loaded Rubber Grip, and 30" Hose w/
Female Garden Hose Inlet

Product Compliance:



T&S BRASS AND BRONZE WORKS, INC.

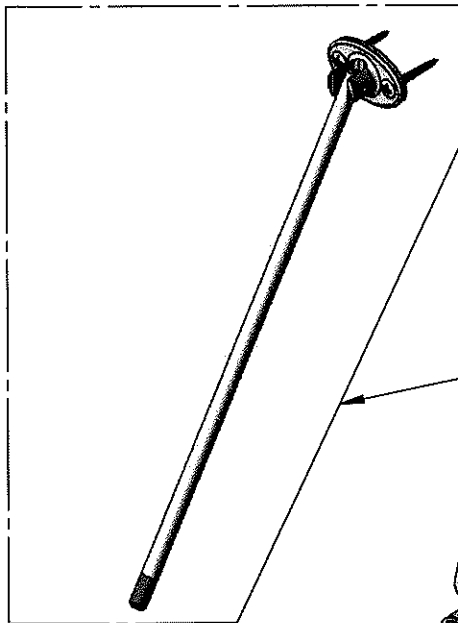
2 Saddleback Cove / P.O. Box 1088
Travelers Rest, SC 29690

Model No.

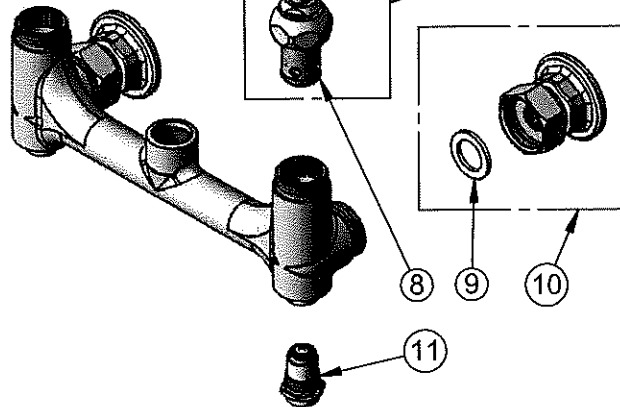
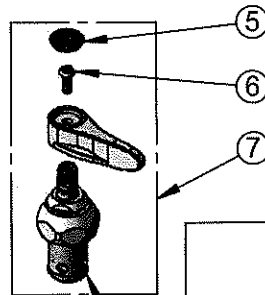
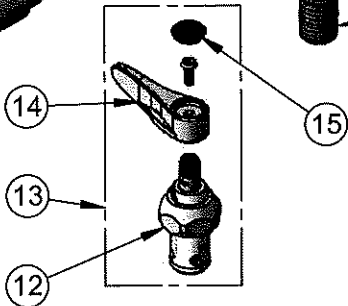
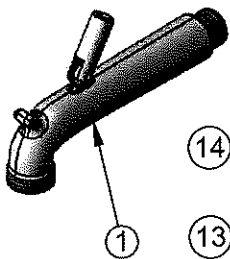
B-0665-BSTP

Item No.

Travelers Rest, SC: 800-476-4103 • Simi Valley, CA: 800-423-0150 • Fax: 864-834-3518 • www.tsbrass.com



ITEM NO.	SALES NO.	DESCRIPTION
1	009545-40	Spout w/ Male GH Outlet & Upper Clevis - Polished Chrome
2	009546-40	Upper Support Rod
3	B-0969	1/2" NPT Vacuum Breaker
4	002534-25	Close Nipple, 1/2" NPT
5	018506-19NS	Blue Button Index, Press-in
6	000925-45	Lab Handle Screw </td
7	002711-40NS	Quarter-Turn Eterna Cartridge w/ Spring Check, Handle, Blue Index & Screw, LTC
8	012442-40NS	Quarter-Turn Eterna Cartridge w/ Spring Check, LTC
9	001019-45	Coupling Nut Washer
10	00AA	1/2" NPT Female Eccentric Flange
11	163A	Built-in Service Stop
12	012443-40NS	Quarter-Turn Eterna Cartridge w/ Spring Check, RTC
13	002712-40NS	Quarter-Turn Eterna Cartridge w/ Spring Check, Handle, Red Index & Screw, RTC
14	001638-45NS	Lever Handle (New Style)
15	001193-19NS	Red Button Index, Press-in



Product Specifications:

8" Wall Mount Service Sink, Quarter-Turn Eterna Cartridges w/ Spring Checks, Lever Handles, Upper Support Rod, Built-In Stops, Garden Hose Male Outlet, Polished Chrome Finish, 1/2" NPT Vacuum Breaker & 1/2" NPT Female Inlets

Product Compliance:

ASME A112.18.1 / CSA B125.1
NSF 61 - Section 9
NSF 372 (Low Lead Content)
ANSI A117.1 (ADA)
ASSE 1001 (VB)

SS-2 SERVICE SINK
ZURN MS2620-F SERVICE SINK
WITH FAUCET AND DRAIN
Z8802XL-LRLK-PC SUPPLY AND STOP
Z8702PC-BX 1-1/2" CAST BRASS P-TRAP



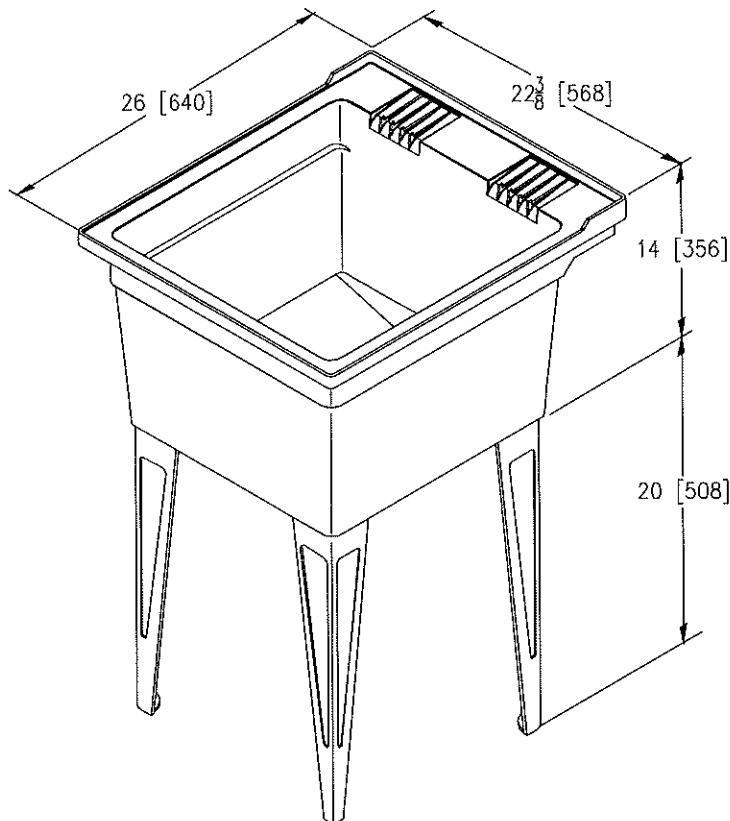
MS2620

Multi-Purpose Sink

SPECIFICATION SHEET

TAG _____

Dimensional Data (inches and [mm]) are Subject to Manufacturing Tolerances and Change Without Notice



Model Number	Description
MS2620-F	Floor Mounted Multi-Purpose Sink
MS2620-W	Wall Mounted Multi-Purpose Sink*

Engineering Specification: MS2620

Single compartment, multi-purpose sink manufactured from an innovative foam process. The polypropylene structural composite sink utilizes this unique molding process, producing seamless corners and edges while providing unrivaled strength. Floor mounted units are equipped with coated steel, self-leveling legs.

*Wall-mounting brackets with hardware and filler panels included.

OPTIONS (Check/specify appropriate options)

SUFFIXES

- -AP Accessory Package
- ➔ -DF1 Dual Handle Deck Faucet
- -FA Top Supplied Adapter Faucet
- -FP Filler Panel
- -PF Pull-out Lead Free Faucet (JP2620-PF-XL)
- -PL Polyethylene Legs
- -TS Top Supplied Faucet



OPTIONAL COLORS (Gray-Standard)

- -AW Appliance White

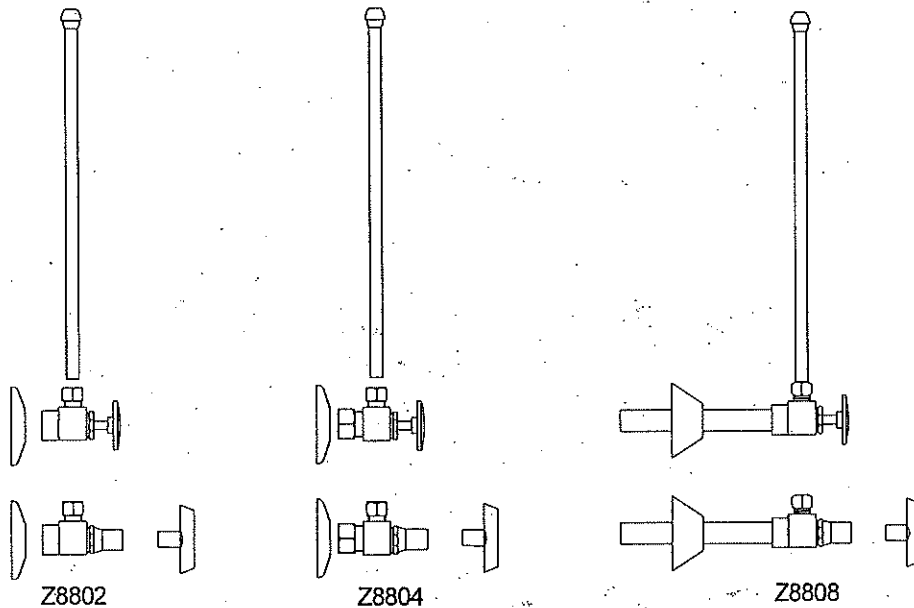


STANDARD STOP WITH FLEXIBLE LAVATORY SUPPLY

Z8802-XL-LR-PC TO Z8808-XL-LRLK-PC TAG

Engineering Specification: Zurn Z8802-XL-LR-PC TO Z8808-XL-LRLK-PC Two Zurn chrome plated, solid brass angle stops with round wheel handles or loose key as specified, two 12"[305mm] flexible chrome plated copper lavatory risers complete with two chrome plated steel flanges. Z8808-XL-LR-PC and Z8808-XL-LRLK-PC include 5"[127mm] chrome plated copper extension tubes and deep bell steel flanges.

Zurn Lead Compliant* "XL" products are a line of durable, high quality brass faucets and fixtures that are designed and manufactured to comply with state laws and local codes that mandate lead content levels. Zurn "XL" products are manufactured with *not more than 0.25% lead content when used with respect to wetted surfaces of pipes and pipe fittings, plumbing fitting and fixtures: California Health & Safety Code § 116875; Vermont 9 VCA § 2470h.



PRODUCT NUMBER	CONNECTIONS	EXT.	MASTER CARTON	WEIGHT CARTON	
				LR	LRLK
Z8802-XL-LR-PC	1/2 [13] IPS x 3/8 [10] OD	-	25	24	
Z8802-XL-LRLK-PC	1/2 [13] IPS x 3/8 [10] OD	-	25		25
Z8804-XL-LR-PC	1/2 [13] NOM x 3/8 [10] OD	-	25	24	
Z8804-XL-LRLK-PC	1/2 [13] NOM x 3/8 [10] OD	-	25		25
Z8808-XL-LR-PC	1/2 [13] SWT x 3/8 [10] OD	5	25	28	
Z8808-XL-LRLK-PC	1/2 [13] SWT x 3/8 [10] OD	5	25		33

SUFFIXES

- - A Single supply option
- - C1 Standard Line Lock Shield Cap
- - CE Chrome Plated, Cast Brass, Flange with setscrew
- - D Chrome Plated Steel, Deep Bell Flange (Bell Type)
- - WD Wrought Brass, Deep Flange, (Bell Type)
- - XP Cross Handle
- - 15 15[381] Supply Tube
- - 20 20[508] Supply Tube
- - 30 30[762] Supply Tube
- - 36 36[914] Supply Tube

*REGULARLY FURNISHED UNLESS OTHERWISE SPECIFIED

ZURN INDUSTRIES, LLC ♦ COMMERCIAL BRASS OPERATION ♦ 2640 SOUTH WORK STREET ♦ FALCONER NY 14733

Phone: 1-800-997-3876 ♦ Fax: 1-919-775-3541 ♦ www.zurn.com

In Canada: ZURN INDUSTRIES LIMITED ♦ 3544 Nashua Drive ♦ Mississauga, Ontario L4V1L2 ♦ Phone: 905/405-8272 Fax: 905/405-1292



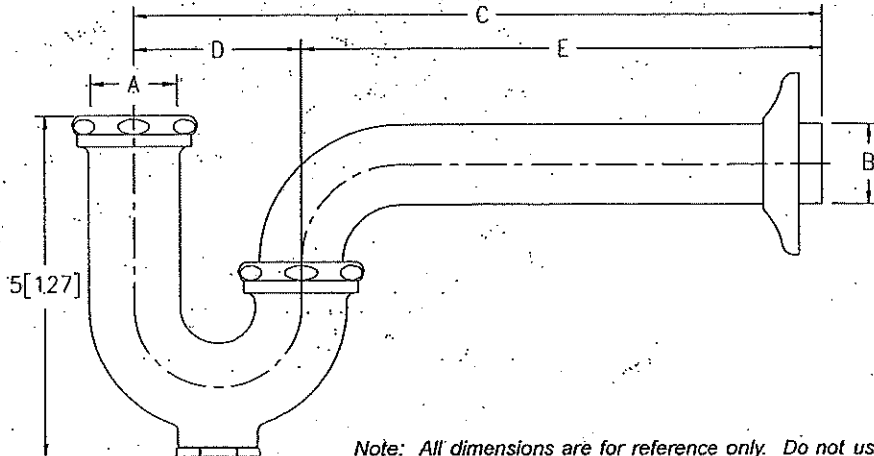
SEMI-CAST P-TRAPS WITH WALL BEND

Z8700-PC TO Z8708-PC

TAG



Engineering Specification: Zurn Z8700-PC to Z8708-PC. -Chrome-plated cast brass (copper alloy) body P-trap with cleanout, tubular brass wall bend as specified, die-cast nuts, and shallow escutcheon with compression inlet.



Note: All dimensions are for reference only. Do not use for pre-plumbing.

PRODUCT NUMBER	A INLET in[mm]	B OUTLET in[mm]	GAUGE	DIMENSIONS			MASTER CARTON	WEIGHT CARTON [lbs]
				C in[mm]	D in[mm]	E in[mm]		
Z8700-PC	1 1/4[32]	1 1/4[32]	17	10[254]	2 1/2[64]	7 1/2[191]	12	24
Z8700-8-PC	1 1/4[32]	1 1/4[32]	17	11[279]	2 1/2[64]	8 1/2[216]	12	24
Z8700-15-PC	1 1/4[32]	1 1/4[32]	17	15[381]	2 1/2[64]	12 1/2[318]	18	40
Z8701-PC	1 1/4[32]	1 1/2[38]	17	10 1/2[267]	3[76]	7 1/2[191]	12	24
Z8701-9-PC	1 1/4[32]	1 1/2[38]	17	12[305]	3[76]	9[229]	12	24
Z8701-15-PC	1 1/4[32]	1 1/2[38]	17	15[381]	3[76]	12[305]	18	42
Z8702-PC*	1 1/2[38]	1 1/2[38]	17	10 1/2[267]	3[76]	7 1/2[191]	12	24
Z8702-9-PC*	1 1/2[38]	1 1/2[38]	17	12[305]	3[76]	9[229]	12	24
Z8702-15-PC*	1 1/2[38]	1 1/2[38]	17	15[381]	3[76]	12[305]	18	42
Z8703B-PC**	1 1/2[38]	2[51]	17	12 1/2[318]	3 1/2[89]	9[229]	6	18
Z8704B-PC**	2[51]	2[51]	17	12 1/2[318]	3 1/2[89]	9[229]	6	18
Z8706-PC	1 1/4[32]	1 1/4[32]	20	10[254]	2 1/2[64]	7 1/2[191]	12	24
Z8707-PC	1 1/4[32]	1 1/2[38]	20	10 1/2[267]	3[76]	7 1/2[191]	12	24
Z8708-PC*	1 1/2[38]	1 1/2[38]	20	10 1/2[267]	3[76]	7 1/2[191]	12	24

OPTIONAL ACCESSORIES

Suffix	Description
-B	Brass Nuts
-BX	Box Escutcheon
-CE	Cast Brass Escutcheon with Setscrew
-D	Deep Escutcheon (Note = not available for Z8703B-PC and Z8704B-PC)
-J	Metal to Metal Ground Joint Connection
-WC	Waste Connections - Compression
-15	15[381] C Dim. 1 1/4[32] and 1 1/2[38] Only
-18	18[457] C Dim. 1 1/4[32] and 1 1/2[38] Only

* COMES WITH OPTIONAL 1-1/2" x 1-1/4" REDUCTION POLY-WASHER FOR INLET

** SHIPPED WITH BRASS NUTS UNLESS OTHERWISE SPECIFIED

ZURN INDUSTRIES, LLC ♦ COMMERCIAL BRASS OPERATION ♦ 2640 SOUTH WORK STREET ♦ FALCONER NY 14733

Phone: 1-800-997-3876 ♦ Fax: 1-919-775-3541 ♦ www.zurn.com

In Canada: ZURN INDUSTRIES LIMITED ♦ 3544 Nashua Drive ♦ Mississauga, Ontario L4V1L2 ♦ Phone: 905/405-8272 Fax: 905/405-1292

LAV-1 LAVATORY
CHICAGO 420-T45E2805ABCP FAUCET
Z8743PC GRID STRAINER
Z8802XL-LRLK-PC SUPPLY AND STOP
Z8700PC-BX 1-1/4" CAST BRASS P-TRAP

Manual Sink Faucets

420-T45E2805ABCP

Product Type

Deck-mounted manual sink faucet with 4" centers

Features & Specifications

- 4" fixed centers
- Vandal Proof Pressure compensating Econo-Flo™ non-aerating laminar spray 0.5 GPM
- Vandal Proof 4-1/4" lever handle
- Thermostatic ceramic cartridge with built-in check valve and scald protection
- ECAST® design provides durable cast brass construction with total lead content equal to or less than 0.25% by weighted average

Performance Specification

- Rated Operating Pressure: 20-125 PSI
- Rated Operating Temperature: Hot inlet temperature: 100°F-180°F (38°C-82°C) ;Maximum Temperature Out: 113°F (45°C) ;minimum approved flow rate for temp limiting: 0.35 GPM

Warranty

- 1-Year Limited Cartridge Warranty
- 5-Year Limited Faucet Warranty
- 1-Year Limited Finish Warranty

Codes & Standards

- ASME A112.18.1/CSA B125.1
- ADA ANSI/ICC A117.1
- Certified per ASSE 1070 / ASME A112.1070 / CSA B125.70
- NSF/ANSI 372 Low Lead Content
- NSF/ANSI 61, Section 9
- Certified to WaterSense by ICC-ES

Job Name _____

Item Number _____

Section/Tag _____

Model Specified _____

Architect _____

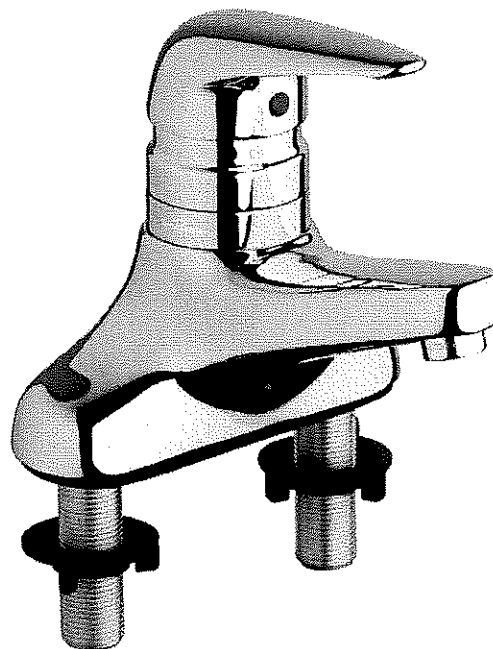
Engineer _____

Contractor _____

Submitted as Shown

Submitted with Variations

Date _____

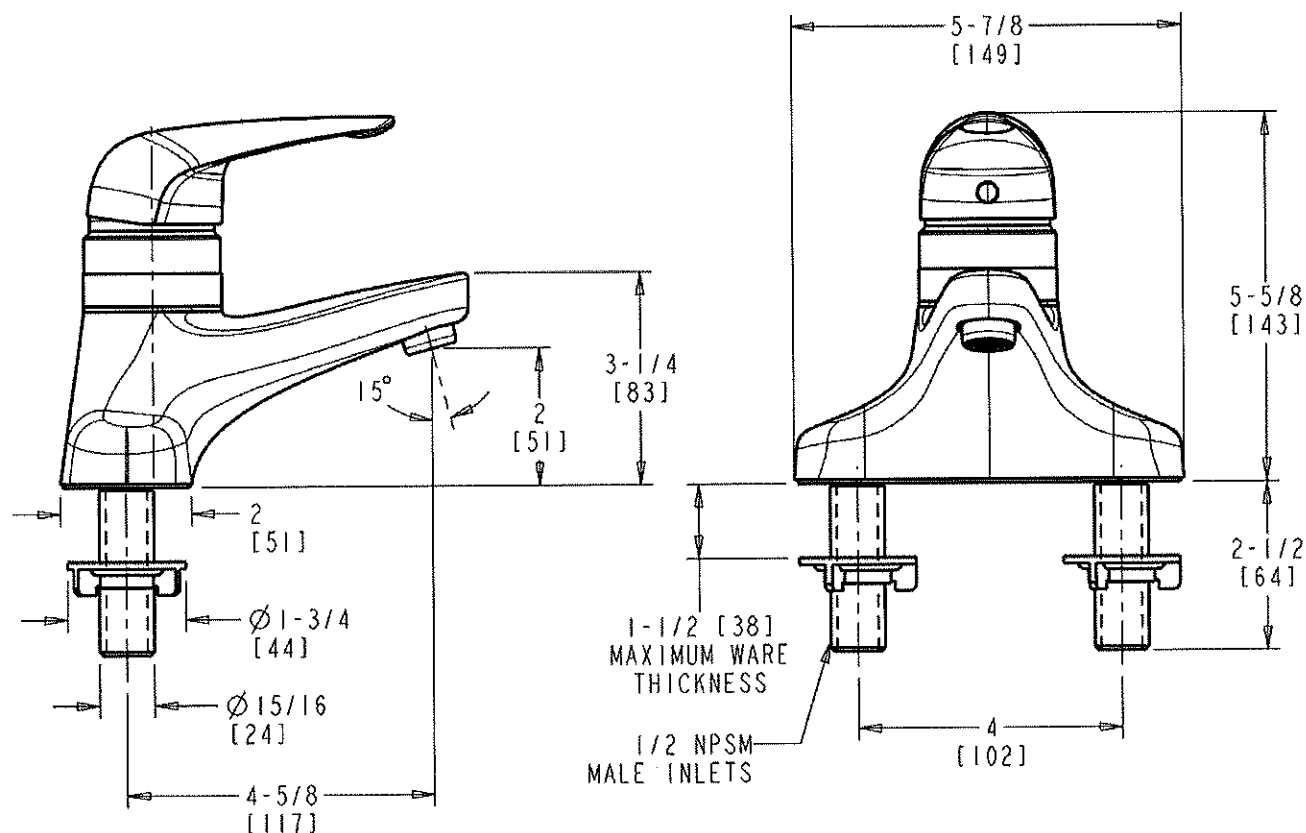


ECAST

ECAST products are intended for installation where state laws and local codes mandate lead content levels or in any location where lead content is a concern.

Architect/Engineer Specification

Chicago Faucets No. 420-T45E2805ABCP, Sink Faucet for hot and cold water, single lever, deck-mounted with 4" fixed centers, chrome plated. Rigid, cast brass spout, 4-5/8" center-to-center. 0.5 GPM (1.9 L/min) vandal-proof, pressure compensating, non-aerating, laminar spray outlet. Ceramic mixing cartridge, includes thermostatic scald protection. Cartridge includes Integral inlet check valves to protect against cross-flow, 1/2" NPSM supply inlets for 3/8" or 1/2" flexible riser. ECAST® construction with less than 0.25% lead content by weighted average. This product meets ADA ANSI/ICC A117.1 requirements and is tested and certified to industry standards: ASME A112.18.1/CSA B125.1, ASSE 1070/ASME A112.1070/CSA B125.70, Certified to NSF/ANSI 61, Section 9, California Health and Safety Code 116875 (AB1953-2006), Vermont Bill S.152, and NSF/ANSI 372 Low Lead Content.



Operation and Maintenance

Installation should be in accordance with local plumbing codes. Flush all pipes thoroughly before installation. After installation, remove spout outlet or flow control and flush faucet thoroughly to clear any debris. Care should be taken when cleaning the product. Do not use abrasive cleaners, chemicals or solvents as they can result in surface damage. Use mild soap and warm water for cleaning and protecting the life of Chicago Faucet products. For specific operation and maintenance refer to the installation instructions and repair parts documents that are located at www.chicagofaucets.com.

Chicago Faucets, member of the Geberit Group, is the leading brand of commercial faucets and fittings in the United States, offering a complete range of products for schools, laboratories, hospitals, office buildings, food service, airports and sport facilities. Call 1.800.TECTRUE or 1.847.803.5000 Option 1 for installation or other technical assistance.



2100 South Clearwater Drive
Des Plaines, IL
P: 847/803-5000
F: 847/803-5454
Technical: 800/TEC-TRUE
www.chicagofaucets.com

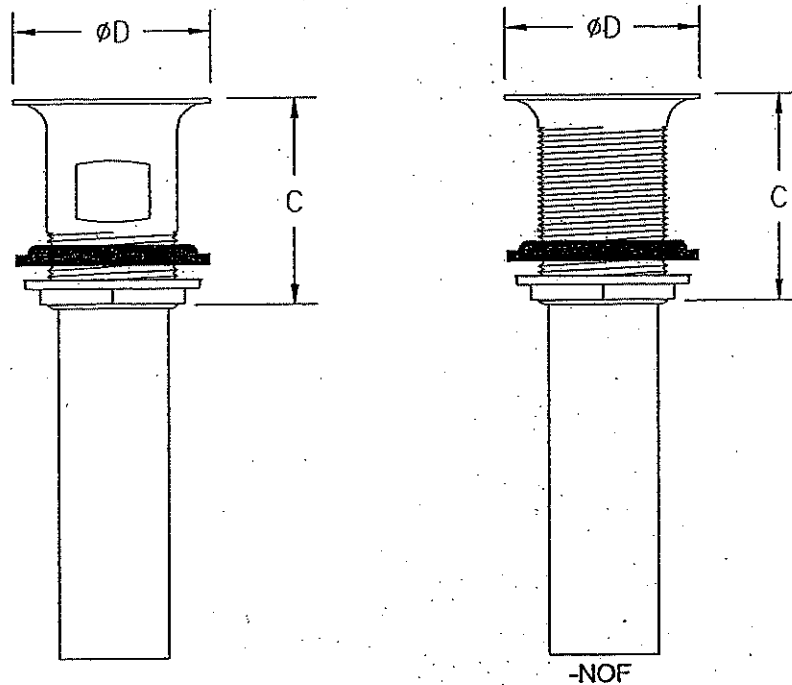


SOLID TOP, OPEN-GRID P.O. PLUGS

Z8743-PC

TAG _____

Engineering Specification: Zurn Z8743-PC – Chrome plated cast brass solid top, open grid, P.O. plug. Furnished with 5" [127mm] long, chrome plated brass 17 gauge tailpiece and chrome plated cast brass locknut for sink depth up to 2 1/4" [57mm]. 6", 8", and 12"- tailpieces available.



Note: All dimensions are for reference only. Do not use for pre-plumbing

PRODUCT NUMBER	TAILPIECE in [mm]	DIMENSIONS		MASTER CARTON	WEIGHT CARTON
		Cin [mm]	ϕD in [mm]		
Z8743-PC	1 1/4 [32]	2 9/16 [65]	2 1/4 [57]	50	50
Z8743-1-PC	1 1/2 [38]	2 9/16 [65]	2 1/4 [57]	30	30

OPTIONAL ACCESSORIES

Suffix	Description
-NOF	No Overflow
-6	w/6" [152mm] Tailpiece
-8	w/8" [203mm] Tailpiece
-12	w/12" [305mm] Tailpiece

ZURN INDUSTRIES, LLC ♦ COMMERCIAL BRASS OPERATION ♦ 2640 SOUTH WORK STREET ♦ FALCONER NY 14733
 Phone: 1-716-665-1132 ♦ Fax: 1-716-665-1135 ♦ World Wide Web: www.zurn.com
 In Canada: ZURN INDUSTRIES LIMITED ♦ 3544 Nashua Drive ♦ Mississauga, Ontario L4V1L2 ♦ Phone: 905/405-8272 Fax: 905/405-1292

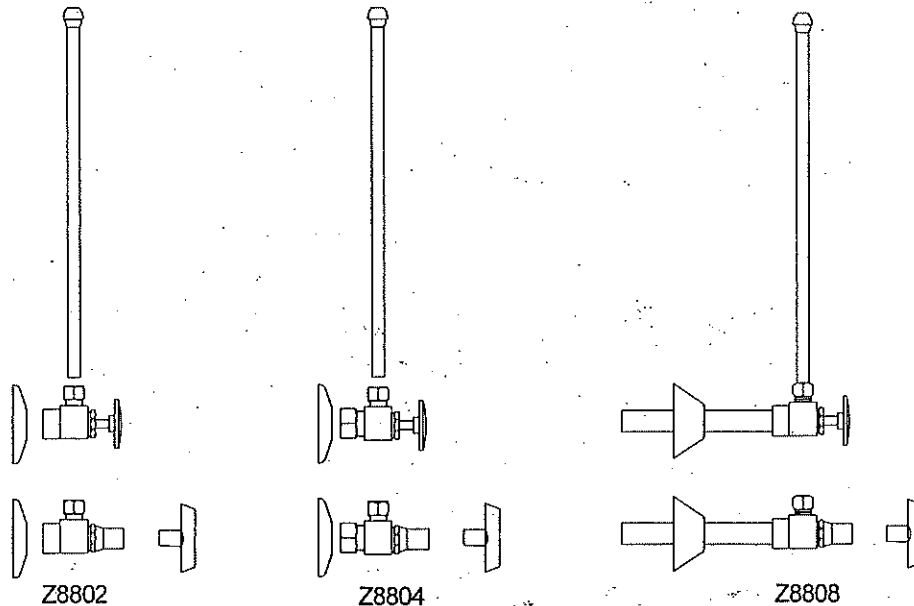


STANDARD STOP WITH FLEXIBLE LAVATORY SUPPLY

Z8802-XL-LR-PC TO Z8808-XL-LRLK-PC TAG

Engineering Specification: Zurn Z8802-XL-LR-PC TO Z8808-XL-LRLK-PC Two Zurn chrome plated, solid brass angle stops with round wheel handles or loose key as specified, two 12"[305mm] flexible chrome plated copper lavatory risers complete with two chrome plated steel flanges. Z8808-XL-LR-PC and Z8808-XL-LRLK-PC include 5"[127mm] chrome plated copper extension tubes and deep bell steel flanges.

Zurn Lead Compliant* "XL" products are a line of durable, high quality brass faucets and fixtures that are designed and manufactured to comply with state laws and local codes that mandate lead content levels: Zurn "XL" products are manufactured with *not more than 0.25% lead content when used with respect to wetted surfaces of pipes and pipe fittings, plumbing fitting and fixtures: California Health & Safety Code § 116875; Vermont 9 VCA § 2470h.



PRODUCT NUMBER	CONNECTIONS	EXT.	MASTER CARTON	WEIGHT CARTON	
				LR	LRLK
Z8802-XL-LR-PC	1/2 [13] IPS x 3/8 [10] OD	-	25	24	
Z8802-XL-LRLK-PC	1/2 [13] IPS x 3/8 [10] OD	-	25		25
Z8804-XL-LR-PC	1/2 [13] NOM x 3/8 [10] OD	-	25	24	
Z8804-XL-LRLK-PC	1/2 [13] NOM x 3/8 [10] OD	-	25		25
Z8808-XL-LR-PC	1/2 [13] SWT x 3/8 [10] OD	5	25	28	
Z8808-XL-LRLK-PC	1/2 [13] SWT x 3/8 [10] OD	5	25		33

SUFFIXES

- ___ - A Single supply option
- ___ - C1 Standard Line Lock Shield Cap
- ___ - CE Chrome Plated, Cast Brass, Flange with setscrew
- ___ - D Chrome Plated Steel, Deep Bell Flange (Bell Type)
- ___ - WD Wrought Brass, Deep Flange, (Bell Type)
- ___ - XP Cross Handle
- ___ - 15 15[381] Supply Tube
- ___ - 20 20[508] Supply Tube
- ___ - 30 30[762] Supply Tube
- ___ - 36 36[914] Supply Tube

*REGULARLY FURNISHED UNLESS OTHERWISE SPECIFIED

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Phone: 1-800-997-3876 ♦ Fax: 1-919-775-3541 ♦ www.zurn.com

In Canada: ZURN INDUSTRIES LIMITED ♦ 3544 Nashua Drive ♦ Mississauga, Ontario L4V1L2 ♦ Phone: 905/405-8272 Fax: 905/405-1292

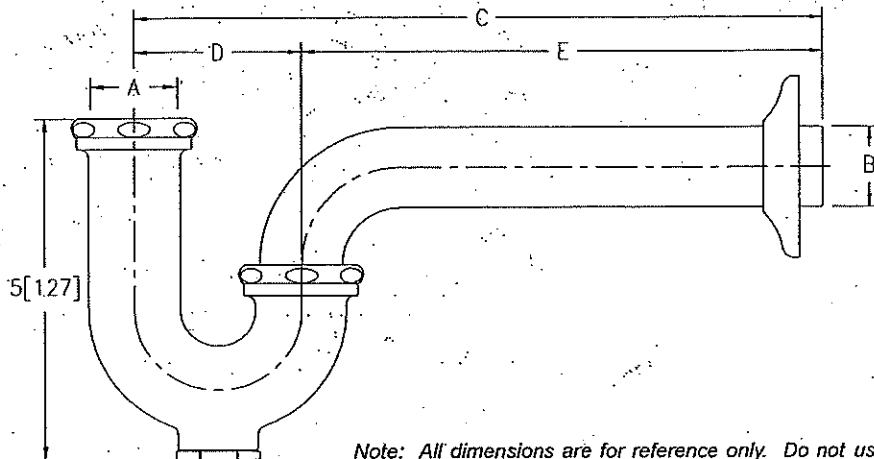


SEMI-CAST P-TRAPS WITH WALL BEND

Z8700-PC TO Z8708-PC

TAG

Engineering Specification: Zurn Z8700-PC to Z8708-PC. – Chrome-plated cast brass (copper alloy) body P-trap with cleanout, tubular brass wall bend as specified, die-cast nuts, and shallow escutcheon with compression inlet.



Note: All dimensions are for reference only. Do not use for pre-plumbing.

PRODUCT NUMBER	A INLET in[mm]	B OUTLET in[mm]	GAUGE	DIMENSIONS			MASTER CARTON	WEIGHT CARTON [lbs]
				C in[mm]	D in[mm]	E in[mm]		
Z8700-PC	1 1/4[32]	1 1/4[32]	17	10[254]	2 1/2[64]	7 1/2[191]	12	24
Z8700-8-PC	1 1/4[32]	1 1/4[32]	17	11[279]	2 1/2[64]	8 1/2[216]	12	24
Z8700-15-PC	1 1/4[32]	1 1/4[32]	17	15[381]	2 1/2[64]	12 1/2[318]	18	40
Z8701-PC	1 1/4[32]	1 1/2[38]	17	10 1/2[267]	3[76]	7 1/2[191]	12	24
Z8701-9-PC	1 1/4[32]	1 1/2[38]	17	12[305]	3[76]	9[229]	12	24
Z8701-15-PC	1 1/4[32]	1 1/2[38]	17	15[381]	3[76]	12[305]	18	42
Z8702-PC*	1 1/2[38]	1 1/2[38]	17	10 1/2[267]	3[76]	7 1/2[191]	12	24
Z8702-9-PC*	1 1/2[38]	1 1/2[38]	17	12[305]	3[76]	9[229]	12	24
Z8702-15-PC*	1 1/2[38]	1 1/2[38]	17	15[381]	3[76]	12[305]	18	42
Z8703B-PC**	1 1/2[38]	2[51]	17	12 1/2[318]	3 1/2[89]	9[229]	6	18
Z8704B-PC**	2[51]	2[51]	17	12 1/2[318]	3 1/2[89]	9[229]	6	18
Z8706-PC	1 1/4[32]	1 1/4[32]	20	10[254]	2 1/2[64]	7 1/2[191]	12	24
Z8707-PC	1 1/4[32]	1 1/2[38]	20	10 1/2[267]	3[76]	7 1/2[191]	12	24
Z8708-PC*	1 1/2[38]	1 1/2[38]	20	10 1/2[267]	3[76]	7 1/2[191]	12	24

OPTIONAL ACCESSORIES

Suffix	Description
-B	Brass Nuts
BX	Box Escutcheon
-CE	Cast Brass Escutcheon with Setscrew
-D	Deep Escutcheon (Note = not available for Z8703B-PC and Z8704B-PC)
-J	Metal to Metal Ground Joint Connection
-WC	Waste Connections - Compression
-15	15[381] C Dim. 1 1/4[32] and 1 1/2[38] Only
-18	18[457] C Dim. 1 1/4[32] and 1 1/2[38] Only

* COMES WITH OPTIONAL 1-1/2" x 1-1/4" REDUCTION POLY-WASHER FOR INLET

** SHIPPED WITH BRASS NUTS UNLESS OTHERWISE SPECIFIED

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LAV-2 LAVATORY
AM. STANDARD 0475.047 OVAL LAVATORY
ZURN Z6953-XL-CV-CWB-HW6 HARDWIRED SENSOR FAUCET
LEONARD 170A-LF THERMOSTATIC MIXING VALVE
Z8743PC GRID STRAINER
Z8802XL-LRLK-PC SUPPLY AND STOP
Z8700PC-BX 1-1/4" CAST BRASS P-TRAP

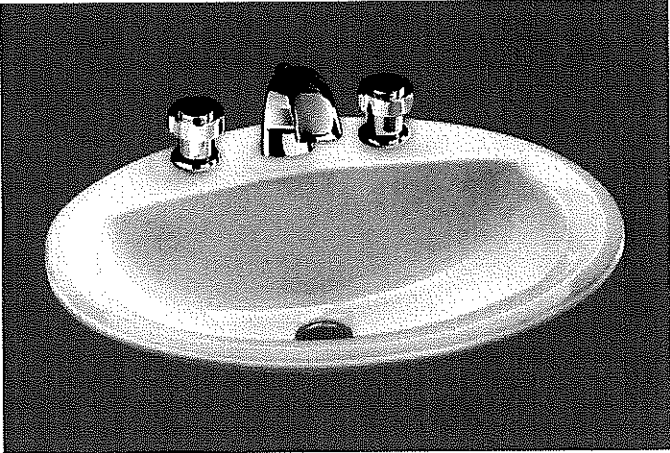


AQUALYN® DROP IN SINK

- Made from vitreous china
- Self-rimming with cutout template supplied
- Front overflow
- Faucet ledge

- 0475.020** Faucet holes on 8" (203mm) centers (illustrated)
- 0475.920** Same as 0475.020 less overflow
- 0476.028** Faucet holes on 4" (102mm) centers
- 0476.928** Same as 0476.028 less overflow
- 0476.037** Same as 0476.028 with extra right-hand hole for soap dispenser
- 0475.035** Same as 0476.028 with extra left-hand hole for soap dispenser

0475.047 Center hole only



SEE FOLLOWING PAGES FOR ROUGHING-IN DIMENSIONS

Nominal Dimensions:
20-3/8" x 17-3/8"
(518 x 441mm)

Bowl sizes:
16" (406mm) wide
10" (254mm) front to back
5-5/8" (143mm) deep

Compliance Certifications - Meets or Exceeds the Following Specifications:

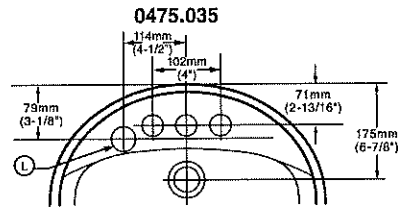
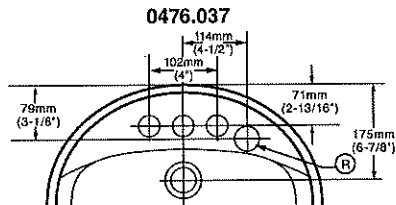
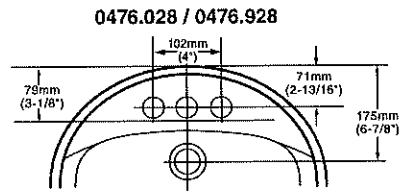
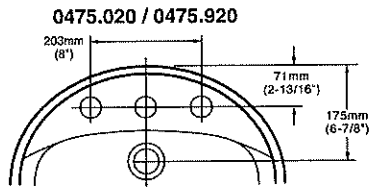
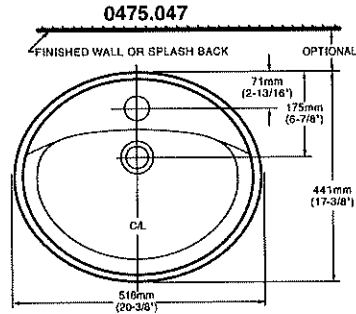
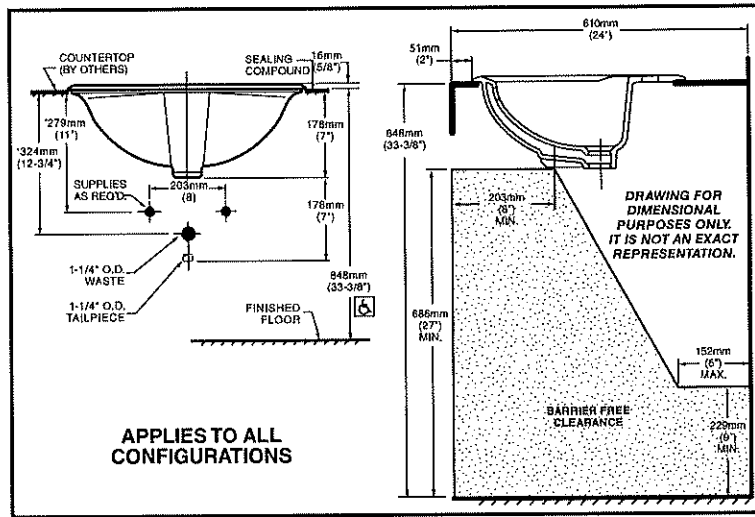
- ASME A112.19.2M for Vitreous China Fixtures

To Be Specified:

- Color:** White Bone Linen
- Faucet*:**
- Faucet Finish:**
- Supplies:**
- 1-1/4" Trap:

* See faucet section for additional models available

MEETS THE AMERICANS WITH DISABILITIES ACT GUIDELINES AND ANSI A117.1 ACCESSIBLE AND USABLE BUILDINGS AND FACILITIES - CHECK LOCAL CODES.
Install lavatory 864mm (34") from finished floor.
Lavatory installed 51mm (2") minimum from front edge of countertop provides 686mm (27") knee clearance area.



	0475.020 0475.920	0476.028 0476.928	0475.047	0476.037 0475.035
HOLES				
SPOUT	1-3/8" (35mm) DIA.	1-1/4" (32mm) DIA.	1-3/8" (35mm) DIA.	1-1/4" (32mm) DIA.
FAUCET	1-3/8" (35mm) DIA.	1-1/4" (32mm) DIA.		1-1/4" (32mm) DIA.
SOAP DISPENSER				1-3/8" (35mm) DIA.

NOTES:
* DIMENSIONS SHOWN FOR LOCATION OF SUPPLIES AND "P" TRAP ARE SUGGESTED.
FOR COUNTERTOP CUTOUT AND INSTALLATION INSTRUCTIONS USE TEMPLATE SUPPLIED WITH SINK.
FITTINGS NOT INCLUDED WITH FIXTURE AND MUST BE ORDERED SEPARATELY.
SEALING COMPOUND SUPPLIED BY OTHERS.

IMPORTANT: Dimensions of fixtures are nominal and may vary within the range of tolerances established by ANSI Standard A112.19.2. These measurements are subject to change or cancellation. No responsibility is assumed for use of superseded or voided pages.



Z6953-XL-CV

Deck-Mounted Motor Gear-Driven Ceramic Operation TAG _____

Architectural/Engineering Specification:

Designed for modern commercial restrooms, the Camaya Series™ faucet delivers a superior user experience in both form and function. Crafted by world-class industrial designers, this faucet maintains a sleek and simple design that can be paired with a matching soap dispenser for an automatic, easy to install and user-friendly handwashing solution.

Zurn Lead Free products (-XL) is the line of durable, high quality brass faucets and fixtures that are designed and manufactured to comply with Section 1417 of the Safe Drinking Water Act (SDWA) which mandates the weighted average lead content of no more than 0.25% of the wetted surface.

Product Features:

- Infrared convergence-type proximity sensor
- 30 second time out feature
- Standard Chrome-plated Cast Brass Body
- Also available in brushed nickel
- Motor gear-driven ceramic operation
- ACA (7.5 VDC) Plug-In Power Converter included

Suffix Options:

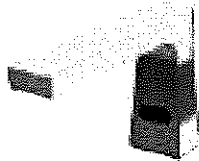
- CP4 Chrome Plated 4" Cover Plate
- MV Temperature Mixing Valve
- SH Supply Hoses for Mixing Valve
- TMV-1 Thermostatic Mixing Valve for Single Faucets

Alternate Finishes:

- BN Brushed Nickel

Compatibility

Soap Dispenser:



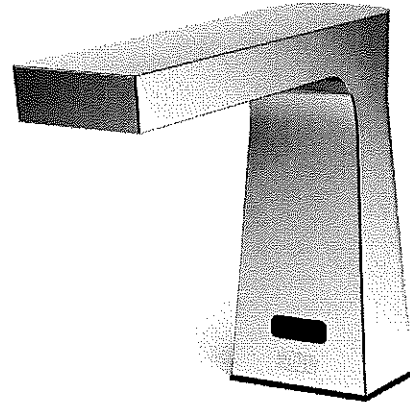
Z6953-SD

Compliance and Certification:

- ADA Compliant
- ASME A112.18.1/CSA B125.1
- cUPC
- Lead Free Compliant
- Texas Accessibility Standard (TAS)



Meets the American Disabilities Guidelines and ANSI A117.1 requirements when installed according to these requirements. In Canada - Consult local codes and standards.



Aerator Options:

	Flowrate GPM [LpM]	Vandal Resistant	WaterSense* Labeled	Outlet Type
E	1.5[5.7]	✓	✓	Aerator
-F	0.5[1.9]	✓		Spray
-J	1.5[5.7]	✓	✓	Laminar
-K	1.0[3.8]	✓	✓	Laminar
-L	1.0[3.8]	✓	✓	Aerator
-M	0.35[1.3]	✓		Spray
-N	0.5[1.9]	✓		Laminar

Power Supply Choices (Sold Separately):

- HW6** Hardwired Power Converter

Optional Power Supply Accessories:

- CWB** Connector Wire for Hardwire Install (7 ft)
- CWB-1 Connector Wire for Hardwire Install (20 ft)
- MJ Mini Junction Box

NOTE: For Hardwire applications furnish P6000-HW6 power converter. Order P6000-HW6 power converter separately.

The P6000-HW6 and P6000-MJ will power up to 8 sensor faucets.

Architectural/Engineering Approval

The information contained in this document is subject to change without notice. Please contact Zurn for most up to date information.

*This device is WaterSense labeled when used with the appropriate flow rate and certified for residential and private restrooms.



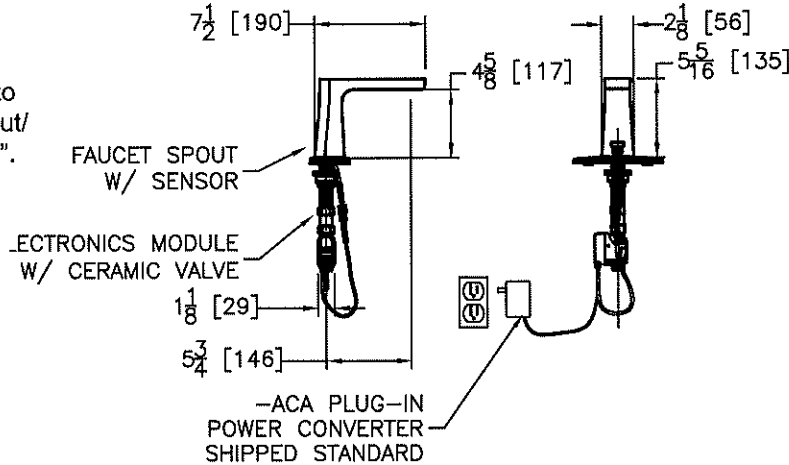
Z6953-XL-CV

Deck-Mounted Motor Gear-Driven Ceramic Operation TAG _____

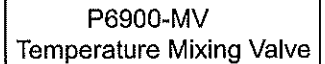
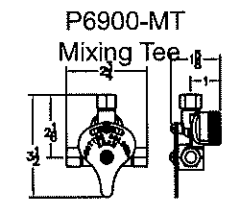
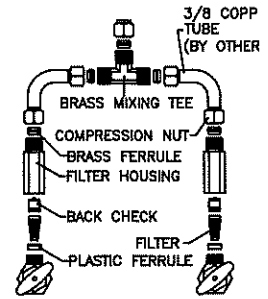
TYPICAL Z6953-XL-CV

AquaSense Hardwire Powered Faucet

NOTE: Recommended through hole diameter to properly mount the spout/shank is 1-1/8" to 1-1/4".



Optional Mixing Valves



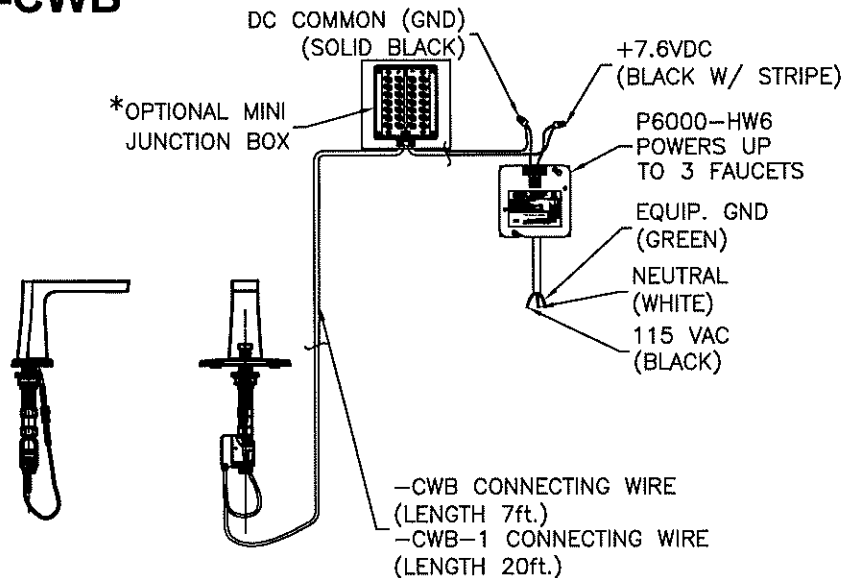
TYPICAL Z6953-XL-CV-CWB

AquaSense Hardwire Powered Faucet

Optional:

* Optional -MJ mini junction box for connecting up to 8 faucets

NOTE: MUST USE EITHER ZURN P6000-HW6 HARDWIRE POWER CONVERTER OR ZURN P6000-ACA PLUG-IN POWER CONVERTER TO ENSURE PROPER OPERATION. USING A POWER CONVERTER OTHER THAN ZURN MAY RESULT IN OPERATION MALFUNCTION OR UNIT FAILURE.



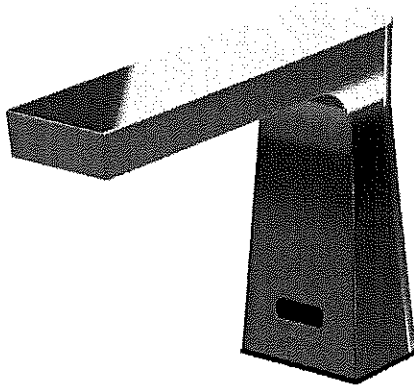


Camaya and Cumberland Series™ Faucet

Sensor-Operated Lavatory Faucets for Plug-In Installations.

Installation, Operation, Maintenance, and Parts Manual

Patented and Patents Pending



Z6953-XL-CV
Camaya Series






Z6956-XL-CV
Cumberland Series

Sensor-Operated Plug-in Lavatory Faucets with Ceramic Valve

LIMITED WARRANTY

All goods sold hereunder are warranted to be free from defects in material and factory workmanship for a period of three years from the date of purchase. Decorative finishes warranted for one year. We will replace at no costs goods that prove defective provided we are notified in writing of such defect and the goods are returned to us prepaid at Sanford, NC, with evidence that they have been properly maintained and used in accordance with instructions. We shall not be responsible for any labor charges or any loss, injury or damages whatsoever, including incidental or consequential damages. The sole and exclusive remedy shall be limited to the replacement of the defective goods. Before installation and use, the purchaser shall determine the suitability of the product for his intended use and the purchaser assumes all risk and liability whatever in connection therewith. Where permitted by law, the implied warranty of merchantability is expressly excluded. If the products sold hereunder are "consumer products," the implied warranty of merchantability is limited to a period of three years and shall be limited solely to the replacement of the defective goods. All weights stated in our catalogs and lists are approximate and are not guaranteed.

NOTICE: READ ENTIRE MANUAL PRIOR TO INSTALLING PRODUCT.

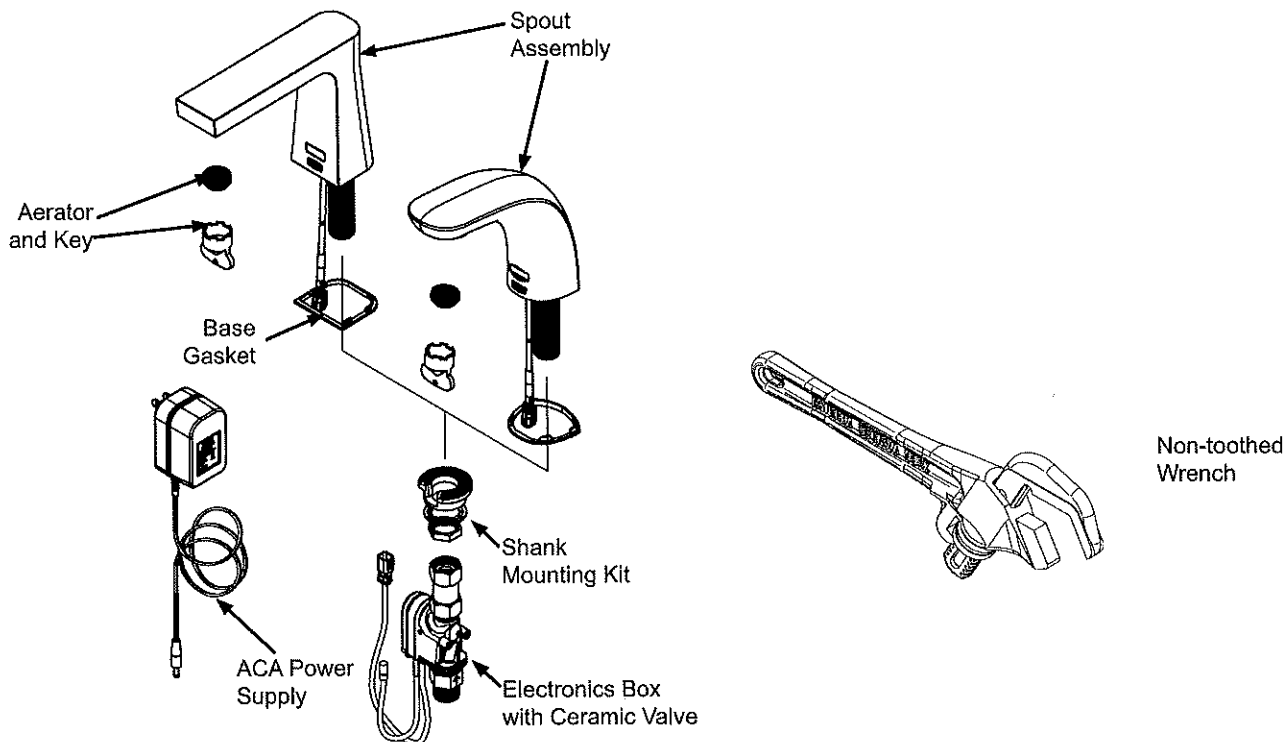
-  **WARNING:** Cancer and Reproductive Harm - www.P65Warnings.ca.gov
-  **ADVERTENCIA:** Cáncer y daño reproductivo - www.P65Warnings.ca.gov
-  **AVERTISSEMENT:** Cancer et effets néfastes sur la reproduction - www.P65Warnings.ca.gov

NOTE: The information in this manual is subject to change at any time without notice. Installations may be performed at different times of construction by different individuals. For this reason, these instructions should be left on-site with the facility or maintenance manager.

Faucet Package Contents

Z6953-XL-CV & Z6956-XL-CV

Required Tools:



Specifications:

Voltage:	7.5 VDC external power supply
Sensor Range:	Fixed
Operating Water Pressure:	10-125 psi
Operational Water Temperature:	33°F to 140°F (1°C to 60°C)
Aerator:	0.5 GPM Spray (Standard)

Important Safety Information:

- Installer is responsible for ensuring the product is installed and conforms to all plumbing codes and ordinances.
- Do not convert or modify this Zurn product yourself. All warranties will be voided.
- Water supply lines must be sized according to building designer in order to provide adequate water supply for each fixture.
- Flush all water lines prior to making connections.

Prior to Installation:

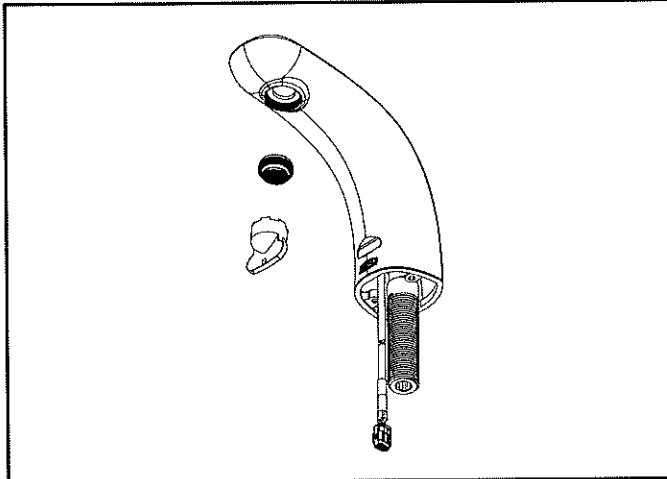
Before installing your Zurn® Faucet: the items listed below should already be installed on site.

- Lavatory/sink
- Drain Line
- Hot and cold water supply line or pre-tempered water supply line.
- Installer/Serviceur should not use pipe dope or teflon/thread sealant anywhere on this product, most notably threads and connection points.
- Care shall be taken when installing this product to prevent marring of any exposed or decorative surfaces.

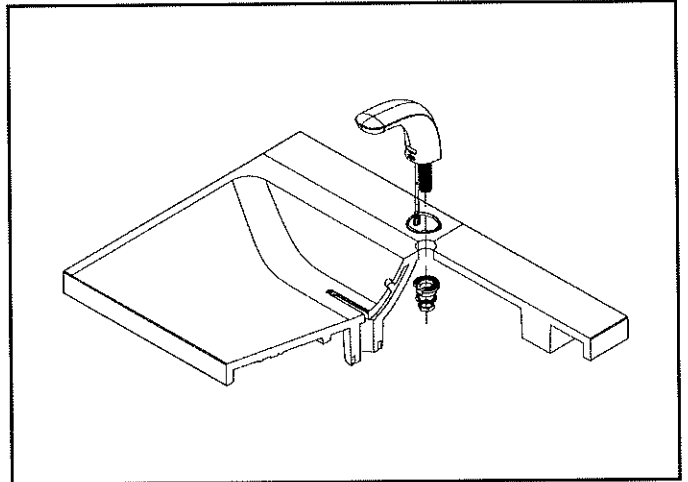
NOTE: Before installation, turn off water supplies to existing faucet and remove faucet if replacing an existing device. Clean the faucet basin and clear away debris. Flush all supply lines before connecting the faucet. Failure to do so may result in debris clogging the inlets and/or internal control and mixing valve

Spout Installation - Step 1

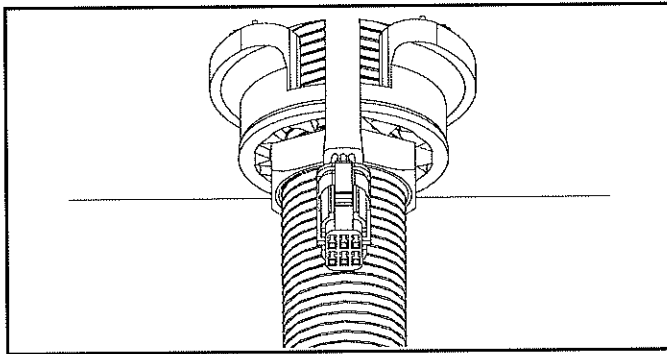
1.1. Carefully screw aerator into spout using included tool.



1.2. Install spout to sink using spout base gasket, plastic mounting washer, star washer and mounting nut (and cover plate for versions that are included).



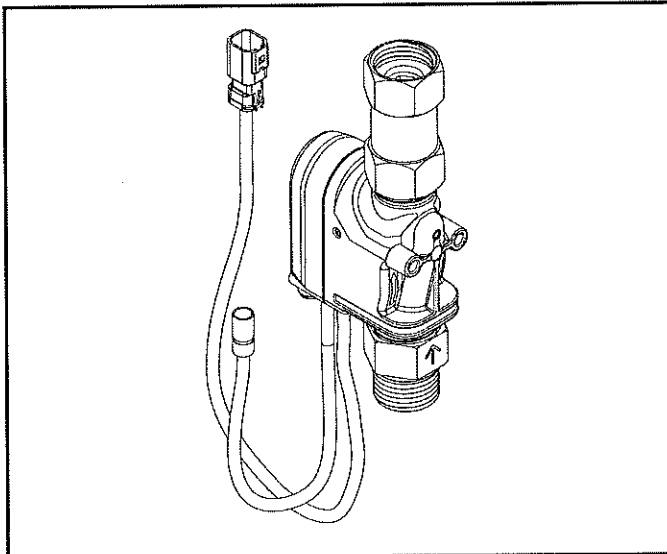
1.3. Ensure that slot in plastic washer is facing forward.



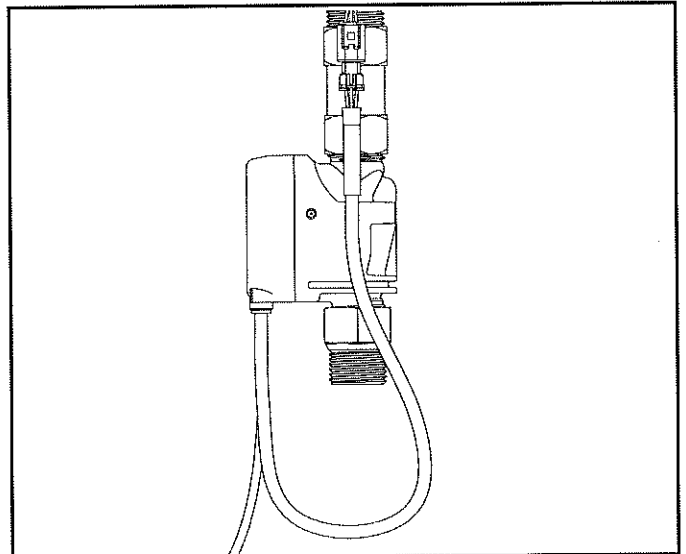
⚠ Take care passing sensor cable through hole. Cable passes through front of plastic mounting washer

Electronics Module Installation - Step 2

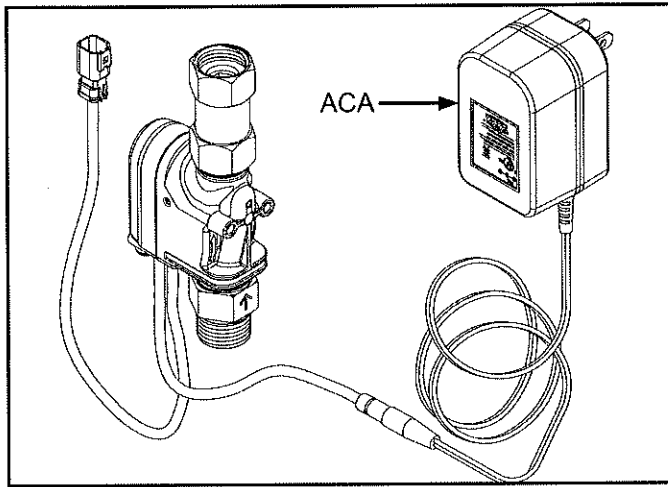
2.1. Remove the electronics module from box



2.2. Tighten electronics module assembly to shank and connect water line(s).



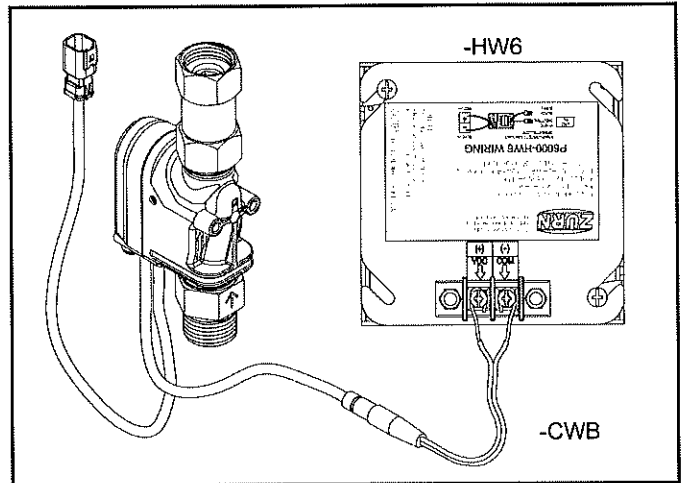
2.3a. Optional ACA version: Connect supplied inline connector and AC adapter.



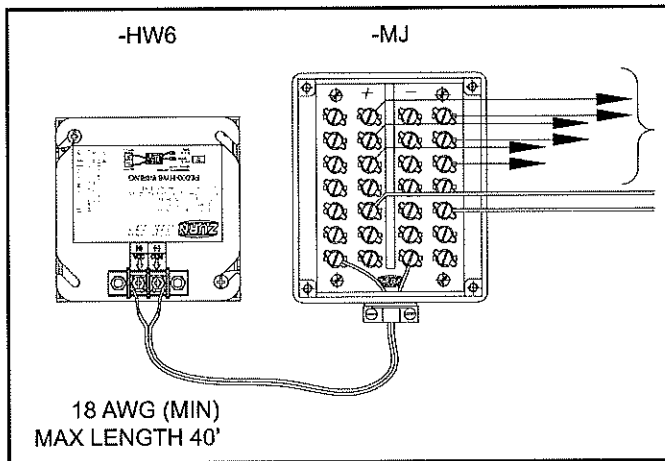
MJ unit (sold separately)

Note: Do not connect more than 3 boxes to a single transformer

2.3b. Optional HW6 (Hardwired 6V) version: Connect supplied inline connector and hardwire adapter. When securing the CWB wires to the screw terminals on HW6 unit, the BLACK WITH DASHED MARKINGS should be connected to the Positive (+) terminal, and the SOLID BLACK wire should be connected to the Negative (-) terminal.



2.5. Turn on water supply(ies).



TROUBLESHOOTING GUIDE:

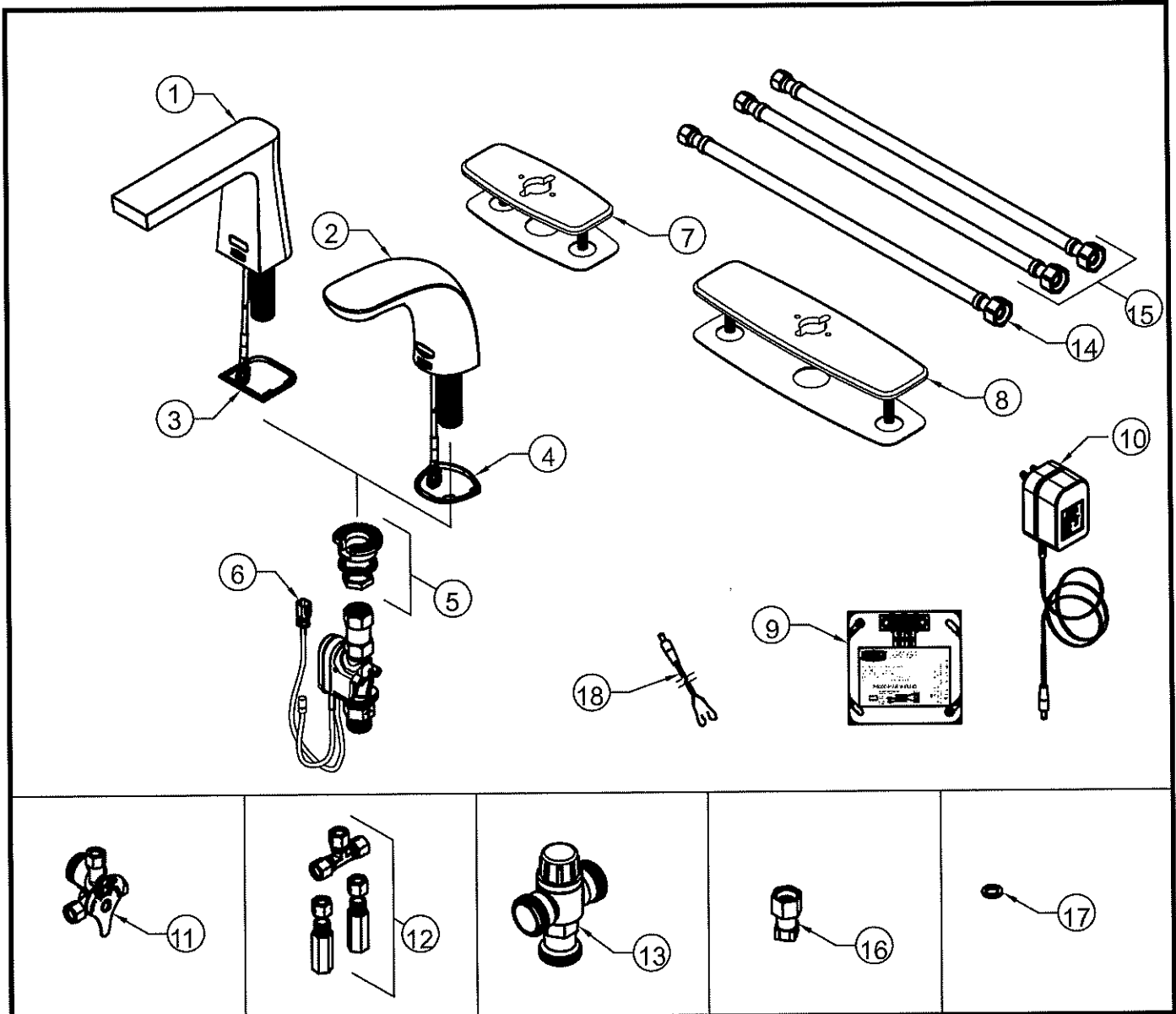
POTENTIAL SITUATIONS	POSSIBLE CAUSES	SUGGESTED SOLUTION TIPS
Faucet is non-responsive	No power.	Verify power provided by HW6 or ACA
	Sensor and electronic connector cable has bent or broken pins.	Check to see if pins are missing, bent, or broken. If yes, then the electronic box needs replaced
	Sensor lens could have surface damage, scratches, or deposit build ups.	"Inspect the sensor lens. May require cleaning with a damp cloth or sensor replacement"
	Micro-processor has locked up	Disconnect power. Wait 10 seconds. Reconnect power.
Water does not stop	Electronics box cable connector has bent pins that are shorted	Check to see if pins are missing, bent, or broken. If yes, then the electronic box needs replaced.
	Micro-processor has locked up	Disconnect power. Wait 10 seconds. Reconnect power.
Ghost Activation	Sensor lens could be obstructed or environmental factors such as high reflective surfaces and/or bright sunlight conditions.	Check/clean sensor lens of any debris or buildup If sunlight or IR interference is a factor.
"Sensor faucet is leaking underneath the sink or counter"	Mounting hardware is not tightened sufficiently (faucet shank, electronic box, supply hoses, etc)	Check and ensure the nuts and joints are tight and secure from the supply stop all the way to the faucet shank.
	Missing the washer located in the valve box nut where it assembles to the faucet shank.	Make sure the water supply stops are shut off. Check to ensure the washer is installed or damaged. If not, install washer. If a washer is damaged, replace with new.

For further assistance with troubleshooting visit <http://www.zurn.com>

Care and Cleaning Instructions:

- Do not use any abrasive or chemical cleaners to clean the faucets.
- If abrasives or chemicals are used it can lead to dulling of luster, attacking of chrome plating or decorative finishes.
- ONLY use mildly warm soapy water, and then wipe the device dry with a clean/soft towel or cloth.
- Upon cleaning other areas of the restroom be sure the sensor lenses are protected from other cleaning chemicals/solvents to prevent potential damages to the sensor and/or electronics.

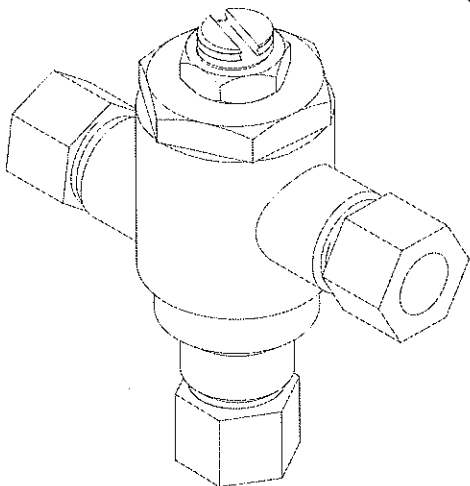
Z6953/Z6956-XL-CV Parts List



Description	Product No.
1 Z6953 Spout Assembly with Sensor	P6953-XL-CV-1
2 Z6956 Spout Assembly with Sensor	P6956-XL-CV-1
3 Z6953 Spout base gasket	P6953-XL-42
4 Z6956 Spout base gasket	P6956-XL-42
5 Mounting Kit	P6900-43
6 Ceramic Valve	P6950-XL-CV-B-L
7 4" Cast Cover Plate w/Gasket	P6900-CP4
8 8" Cast Cover Plate w/Gasket	P6900-CP8
9 -HW6 Power Supply	P6900-HW6

Description	Product No.
10 Plug-in Power Converter	P6900-ACA
11 Mixing Valve w/Filter	P6900-XL-MV
12 Mixing Tee w/Filters and Back Checks	P6900-XL-MT
13 Thermostatic Mixing Valve	P6900-TMV-1
14 Single Stainless Supply Hose (XL)	P6900-SSH
15 Stainless Supply Hoses (XL)	P6900-SSH-2
16 Composite Mixing Valve Adaptor	P6900-MV-ADAP
17 Shank Connection Gasket	P6900-SG
18 -CWB Pigtail	P6900-CWB

170A-LF



Application:

The Model 170A-LF is a high performance thermostatic temperature limiting device used to supply single outlets. Can be used to supply one sensor faucet or one two handle manual faucet.

Features:

- Certified to ASSE 1070 to control down to 0.25 GPM
- Eco-Mix Certified Lead-Free* construction
- Integral inlet checks and stainless steel screens
- Includes locknut to prevent accidental adjustment
- Easy 3/8" tubing or flex hose installation

Specifications:

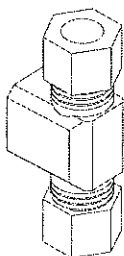
- Minimum flow: 0.25 GPM (0.95 l/Min) Certified to ASSE
- Maximum flow: 4 GPM
- Maximum pressure: 125 PSI (8.6 BAR)
- Maximum hot water temperature: 180°F (82°C)
- Hot water inlet temperature range: 120-180°F (49-82°C)
- Cold water inlet temperature range: 33-80°F (1-27°C)
- Temperature adjustment range: 95-120°F (35-49°C)

Certifications:

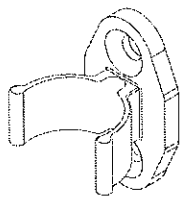
ASSE 1070-2015  CSA B125.70-15 

Options:

- ___ STSTL REC- Stainless steel cabinet, #4 finish, recessed
- ___ STSTL EXP- Stainless steel cabinet, #4 finish, exposed
- ___ BP- Cold water By-Pass (shipped loose)
- ___ BRKT- mounting bracket (shipped loose)
- ___ CP- Chrome plated finish



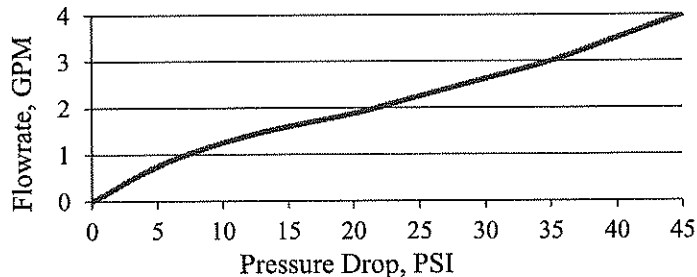
BP option



BRKT option

* This product is certified to meet Low Lead requirements of wetted surface area containing less than 0.25% lead by weight

PRESSURE DROP						
5	10	15	20	30	45	PSI
.35	.70	1.05	1.4	2.1	3.1	BAR
0.75	1.25	1.6	1.88	2.63	4	GPM
2.84	4.73	6.06	7.1	10	15	L/MIN

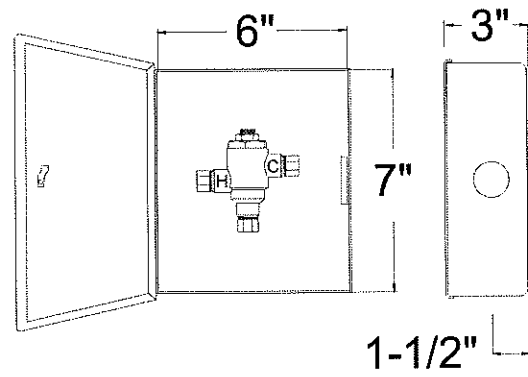
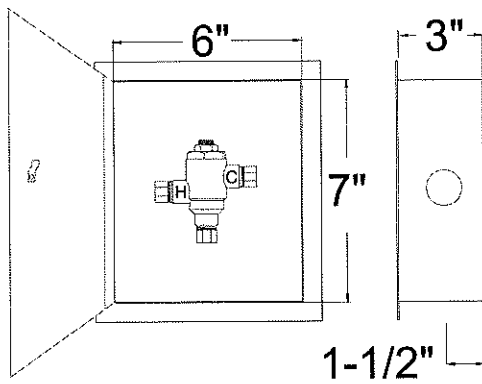
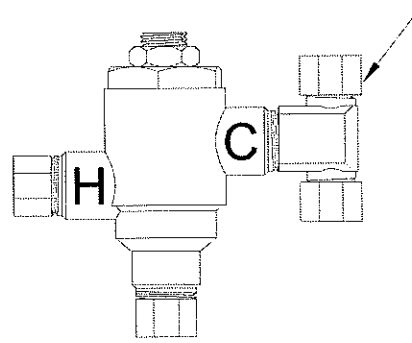
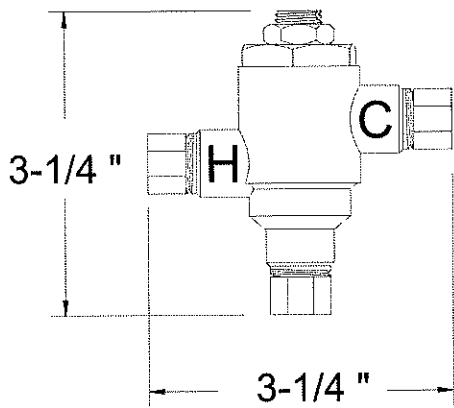


Engineer's Approval	Job # _____
	Arch/Eng. _____
	Contractor _____



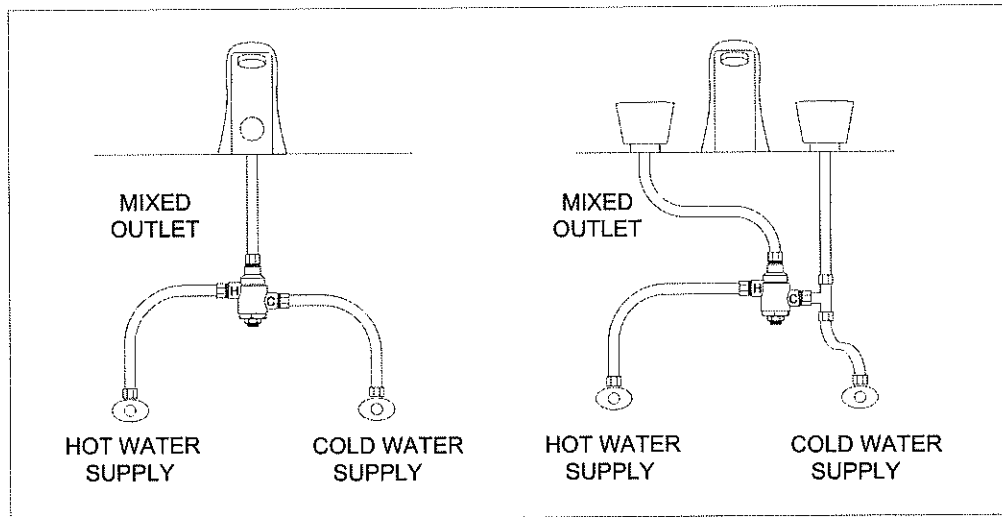
1360 Elmwood Avenue, Cranston, RI 02910 USA
 Phone: 401.461.1200 Fax: 401.941.5310
 Email: info@leonardvalve.com
 Web Site: <http://www.leonardvalve.com>

BP-OPTION



170A-LF-STSTL-REC

170A-LF-STSTL-EXP



170A-LF

170A-LF-BP



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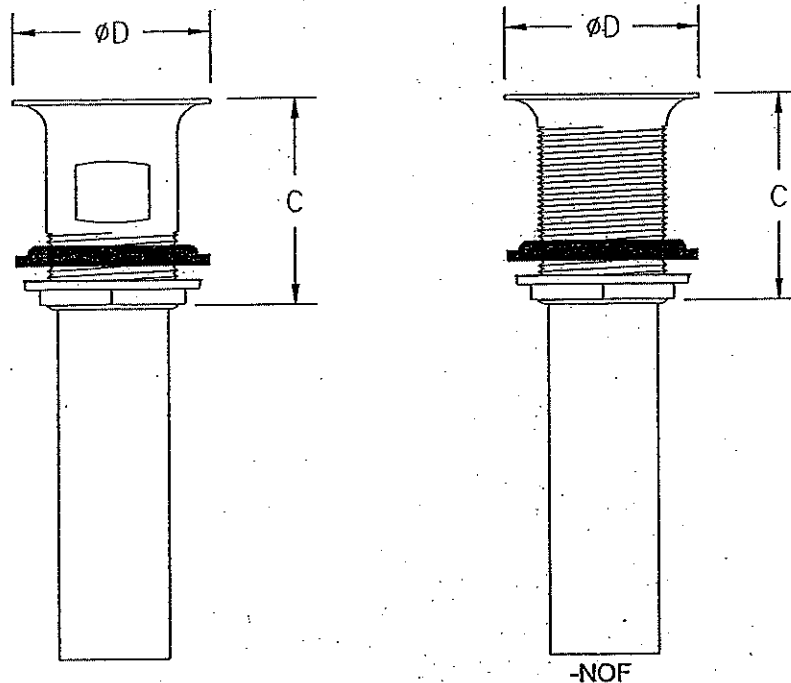


SOLID TOP, OPEN-GRID P.O. PLUGS

Z8743-PC

TAG _____

Engineering Specification: Zum Z8743-PC – Chrome plated cast brass solid top, open grid, P.O. plug. Furnished with 5" [127mm] long, chrome plated brass 17 gauge tailpiece and chrome plated cast brass locknut for sink depth up to 2 1/4" [57mm]. 6", 8", and 12"- tailpieces available.



Note: All dimensions are for reference only. Do not use for pre-plumbing

PRODUCT NUMBER	TAILPIECE in[mm]	DIMENSIONS		MASTER CARTON	WEIGHT CARTON
		Cin[mm]	øDin[mm]		
Z8743-PC	1 1/4[32]	2 9/16[65]	2 1/4[57]	50	50
Z8743-1-PC	1-1/2[38]	2 9/16[65]	2 1/4[57]	30	30

OPTIONAL ACCESSORIES

Suffix	Description
-NOF	No Overflow
-6	w/6" [152mm] Tailpiece
-8	w/8" [203mm] Tailpiece
-12	w/12" [305mm] Tailpiece

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 In Canada: ZURN INDUSTRIES LIMITED ♦ 3544 Nashua Drive ♦ Mississauga, Ontario L4V1L2 ♦ Phone: 905/405-8272 Fax: 905/405-1292

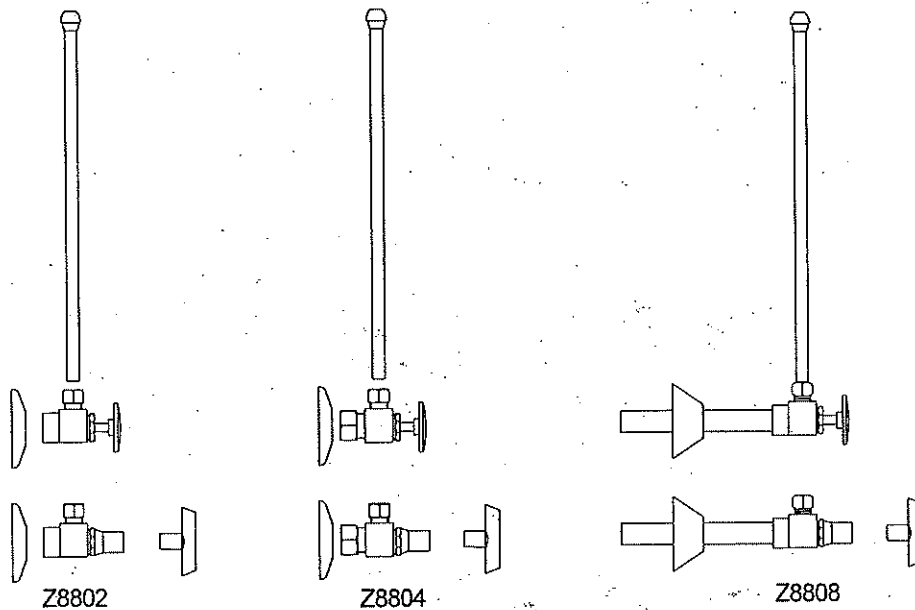


STANDARD STOP WITH FLEXIBLE LAVATORY SUPPLY

Z8802-XL-LR-PC TO Z8808-XL-LRLK-PC TAG

Engineering Specification: Zum Z8802-XL-LR-PC TO Z8808-XL-LRLK-PC Two Zurn chrome plated, solid brass angle stops with round wheel handles or loose key as specified, two 12"[305mm] flexible chrome plated copper lavatory risers complete with two chrome plated steel flanges. Z8808-XL-LR-PC and Z8808-XL-LRLK-PC include 5"[127mm] chrome plated copper extension tubes and deep bell steel flanges.

Zurn Lead Compliant* "XL" products are a line of durable, high quality brass faucets and fixtures that are designed and manufactured to comply with state laws and local codes that mandate lead content levels. Zurn "XL" products are manufactured with *not more than 0.25% lead content when used with respect to wetted surfaces of pipes and pipe fittings, plumbing fitting and fixtures: California Health & Safety Code § 116875; Vermont 9 VCA § 2470h.



PRODUCT NUMBER	CONNECTIONS	EXT.	MASTER CARTON	WEIGHT CARTON	
				LR	LRLK
Z8802-XL-LR-PC	1/2 [13] IPS x 3/8 [10] OD	-	25	24	
Z8802-XL-LRLK-PC	1/2 [13] IPS x 3/8 [10] OD	-	25		25
Z8804-XL-LR-PC	1/2 [13] NOM x 3/8 [10] OD	-	25	24	
Z8804-XL-LRLK-PC	1/2 [13] NOM x 3/8 [10] OD	-	25		25
Z8808-XL-LR-PC	1/2 [13] SWT x 3/8 [10] OD	5	25	28	
Z8808-XL-LRLK-PC	1/2 [13] SWT x 3/8 [10] OD	5	25		33

SUFFIXES

- - A Single supply option
- - C1 Standard Line Lock Shield Cap
- - CE Chrome Plated, Cast Brass, Flange with setscrew
- - D Chrome Plated Steel, Deep Bell Flange (Bell Type)
- - WD Wrought Brass, Deep Flange, (Bell Type)
- - XP Cross Handle
- - 15 15[381] Supply Tube
- - 20 20[508] Supply Tube
- - 30 30[762] Supply Tube
- - 36 36[914] Supply Tube

*REGULARLY FURNISHED UNLESS OTHERWISE SPECIFIED

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Phone: 1-800-997-3876 ♦ Fax: 1-919-775-3541 ♦ www.zurn.com

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Rev. A

Date: 5/4/11

C.N. No. 127628

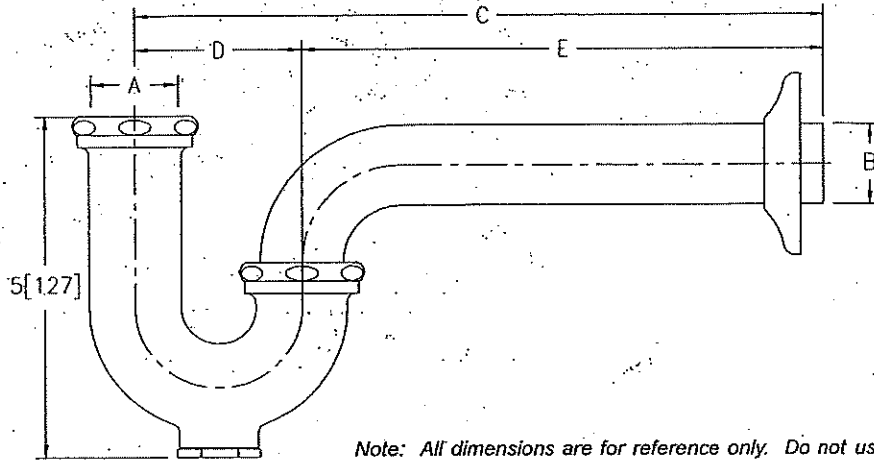


SEMI-CAST P-TRAPS WITH WALL BEND

Z8700-PC TO Z8708-PC

TAG

Engineering Specification: Zurn Z8700-PC to Z8708-PC. - Chrome-plated cast brass (copper alloy) body P-trap with cleanout, tubular brass wall bend as specified, die-cast nuts, and shallow escutcheon with compression inlet.



Note: All dimensions are for reference only. Do not use for pre-plumbing.

PRODUCT NUMBER	A INLET in [mm]	B OUTLET in [mm]	GAUGE	DIMENSIONS			MASTER CARTON	WEIGHT CARTON [lbs]
				C in [mm]	D in [mm]	E in [mm]		
Z8700-PC	1 1/4 [32]	1 1/4 [32]	17	10 [254]	2 1/2 [64]	7 1/2 [191]	12	24
Z8700-8-PC	1 1/4 [32]	1 1/4 [32]	17	11 [279]	2 1/2 [64]	8 1/2 [216]	12	24
Z8700-15-PC	1 1/4 [32]	1 1/4 [32]	17	15 [381]	2 1/2 [64]	12 1/2 [318]	18	40
Z8701-PC	1 1/4 [32]	1 1/2 [38]	17	10 1/2 [267]	3 [76]	7 1/2 [191]	12	24
Z8701-9-PC	1 1/4 [32]	1 1/2 [38]	17	12 [305]	3 [76]	9 [229]	12	24
Z8701-15-PC	1 1/4 [32]	1 1/2 [38]	17	15 [381]	3 [76]	12 [305]	18	42
Z8702-PC*	1 1/2 [38]	1 1/2 [38]	17	10 1/2 [267]	3 [76]	7 1/2 [191]	12	24
Z8702-9-PC*	1 1/2 [38]	1 1/2 [38]	17	12 [305]	3 [76]	9 [229]	12	24
Z8702-15-PC*	1 1/2 [38]	1 1/2 [38]	17	15 [381]	3 [76]	12 [305]	18	42
Z8703B-PC**	1 1/2 [38]	2 [51]	17	12 1/2 [318]	3 1/2 [89]	9 [229]	6	18
Z8704B-PC**	2 [51]	2 [51]	17	12 1/2 [318]	3 1/2 [89]	9 [229]	6	18
Z8706-PC	1 1/4 [32]	1 1/4 [32]	20	10 [254]	2 1/2 [64]	7 1/2 [191]	12	24
Z8707-PC	1 1/4 [32]	1 1/2 [38]	20	10 1/2 [267]	3 [76]	7 1/2 [191]	12	24
Z8708-PC*	1 1/2 [38]	1 1/2 [38]	20	10 1/2 [267]	3 [76]	7 1/2 [191]	12	24

OPTIONAL ACCESSORIES

Suffix	Description
-B	Brass Nuts
BX	Box Escutcheon
-CE	Cast Brass Escutcheon with Setscrew
-D	Deep Escutcheon (Note = not available for Z8703B-PC and Z8704B-PC)
-J	Metal to Metal Ground Joint Connection
-WC	Waste Connections - Compression
-15	15 [381] C Dim. 1 1/4 [32] and 1 1/2 [38] Only
-18	18 [457] C Dim. 1 1/4 [32] and 1 1/2 [38] Only

* COMES WITH OPTIONAL 1-1/2" x 1-1/4" REDUCTION POLY-WASHER FOR INLET

** SHIPPED WITH BRASS NUTS UNLESS OTHERWISE SPECIFIED

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Rev. K

Date: 5/10/11

C.M. No. 107011

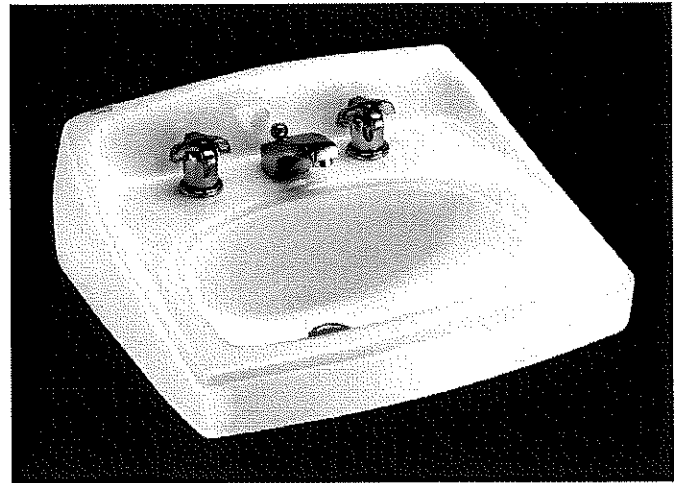
LAV-3 LAVATORY
AM. STANDARD 0356.421 WALL HUNG LAVATORY
ZURN Z6953-XL-CV-CWB-HW6 HARDWIRED SENSOR FAUCET
LEONARD 170A-LF THERMOSTATIC MIXING VALVE
Z8743PC GRID STRAINER
Z8802XL-LRLK-PC SUPPLY AND STOP
Z8700PC-BX 1-1/4" CAST BRASS P-TRAP
ZURN Z1231 LAVATORY CARRIER

LUCERNE™ WALL-HUNG LAVATORY

- Wall-hung sink
- Vitreous china
- Front overflow
- D-shaped bowl
- Self-draining deck area with contoured back and side splash shields
- Faucet ledge
- Compliant with Texas accessibility standard (TAS) for children age group 13 and up

Faucet holes on 203mm (8") centers (illus.):

- 0356.028** For exposed bracket support
Shown with 4801.862 Amarilis Heritage faucet with Triune Cross handles (not included)
- 0356.015** For wall hanger (included) or concealed arms support
- 0356.915** For wall hanger (included) or concealed arms support
 - Less overflow



0356.028

Faucet holes on 102mm (4") centers:

- 0355.027** For exposed bracket support
- 0355.012** For wall hanger (included) or concealed arms support
- 0355.912** For wall hanger (included) or concealed arms support
 - Less overflow



0356.041

Single center faucet hole (illus.):

- 0356.041** For exposed bracket support
Shown with 1340.000 metering faucet (not included)
- 0356.421** For wall hanger (included) or concealed arms support
- 0356.921** For wall hanger (included) or concealed arms support
 - Less overflow
- 0356.439** For wall hanger (included) or concealed arms support
 - Single faucet hole on right
- 0356.066** For exposed bracket support
 - Single faucet hole on right

Nominal Dimensions:

521 x 464mm
(20-1/2" x 18-1/4")

Bowl sizes:

381mm (15") wide
254mm (10") front to back
165mm (6-1/2") deep

Compliance Certifications -

Meets or Exceeds the Following Specifications:

- ASME A112.19.2 / CSA B45.1 for Vitreous China Fixtures

SEE FOLLOWING PAGES FOR ROUGHING-IN DIMENSIONS

To Be Specified:

- Color:** White
- Faucet*:**
- Faucet Finish:**
- Supplies:**
- 1-1/4" Trap:**
- Nipple:**
- Bracket Support (by others):**
- Concealed Arms Support (by others):**

* See faucet section for additional models available



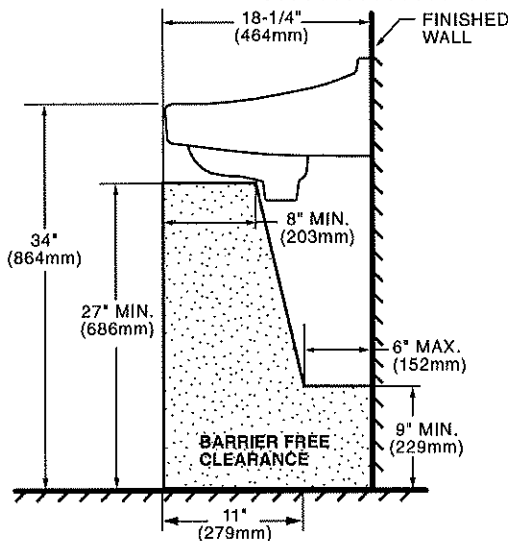
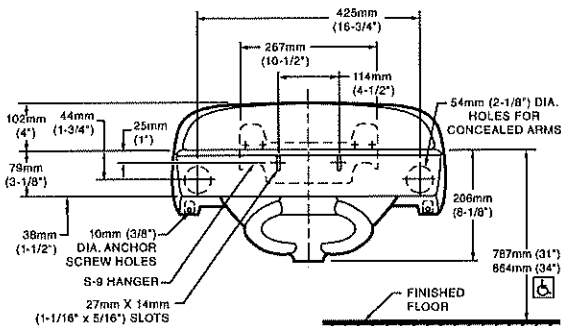
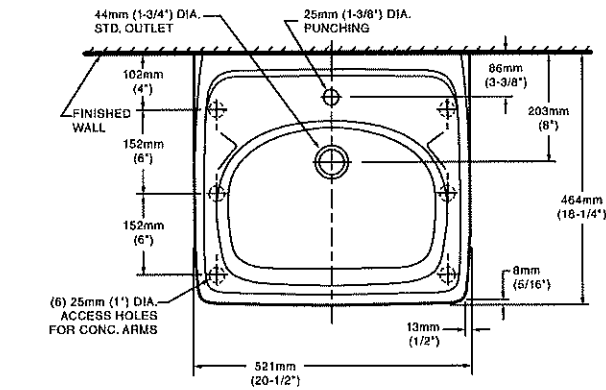
MEETS THE AMERICANS WITH DISABILITIES ACT GUIDELINES AND ANSI A117.1 ACCESSIBLE AND USABLE BUILDINGS AND FACILITIES - CHECK LOCAL CODES.
Top of front rim mounted 864mm (34") from finished floor.



0356.041 SINGLE CENTER HOLE FOR EXPOSED BRACKET SUPPORT

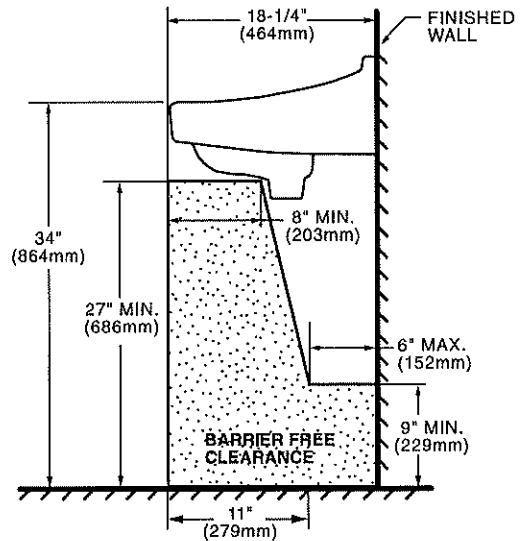
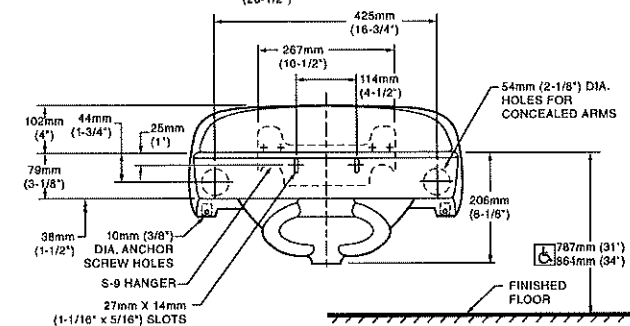
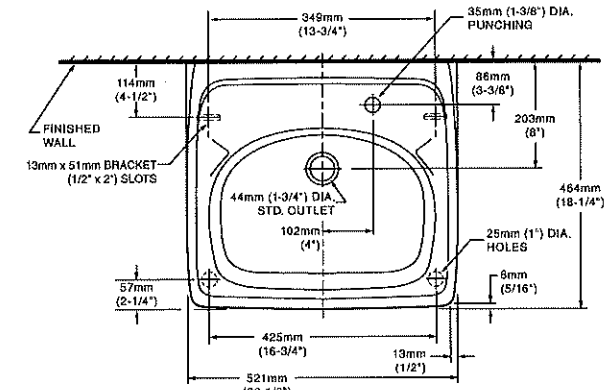
0356.421 SINGLE CENTER HOLE FOR WALL HANGER OR CONCEALED ARMS

0356.921 LESS OVERFLOW



0356.439 SINGLE CENTER HOLE ON RIGHT FOR WALL HANGER OR CONCEALED ARMS

0356.066 SINGLE CENTER HOLE ON RIGHT FOR EXPOSED BRACKET SUPPORT



NOTES:
* DIMENSIONS SHOWN FOR LOCATION OF SUPPLIES AND "P" TRAP ARE SUGGESTED.
PROVIDE SUITABLE REINFORCEMENT FOR ALL WALL SUPPORTS.
FITTINGS NOT INCLUDED AND MUST BE ORDERED SEPARATELY.
CONCEALED ARM SUPPORT AS REQUIRED TO BE FURNISHED BY OTHERS.

IMPORTANT: Dimensions of fixtures are nominal and may vary within the range of tolerances established by ANSI Standard A112.19.2. These measurements are subject to change or cancellation. No responsibility is assumed for use of superseded or voided pages.

LAVATORY DESIGNED TO MEET ADA HANDICAPPED GUIDELINES WITH MOUNTING HEIGHT SET AT 864MM (34") ABOVE FINISHED FLOOR.



Z6953-XL-CV

Deck-Mounted Motor Gear-Driven Ceramic Operation TAG _____

Architectural/Engineering Specification:

Designed for modern commercial restrooms, the Camaya Series™ faucet delivers a superior user experience in both form and function. Crafted by world-class industrial designers, this faucet maintains a sleek and simple design that can be paired with a matching soap dispenser for an automatic, easy to install and user-friendly handwashing solution.

Zurn Lead Free products (-XL) is the line of durable, high quality brass faucets and fixtures that are designed and manufactured to comply with Section 1417 of the Safe Drinking Water Act (SDWA) which mandates the weighted average lead content of no more than 0.25% of the wetted surface.

Product Features:

- Infrared convergence-type proximity sensor
- 30 second time out feature
- Standard Chrome-plated Cast Brass Body
- Also available in brushed nickel
- Motor gear-driven ceramic operation
- ACA (7.5 VDC) Plug-In Power Converter included

Suffix Options:

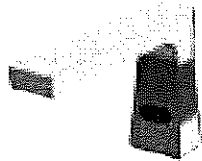
- CP4 Chrome Plated 4" Cover Plate
- MV Temperature Mixing Valve
- SH Supply Hoses for Mixing Valve
- TMV-1 Thermostatic Mixing Valve for Single Faucets

Alternate Finishes:

- BN Brushed Nickel

Compatibility

Soap Dispenser:



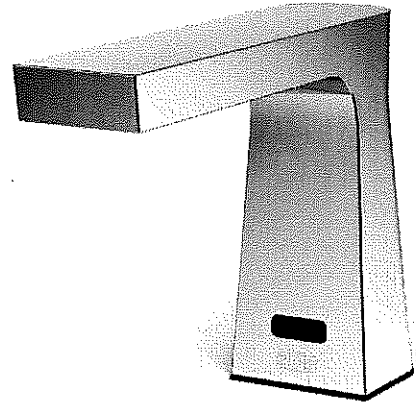
Z6953-SD

Compliance and Certification:

- ADA Compliant
- ASME A112.18.1/CSA B125.1
- cUPC
- Lead Free Compliant
- Texas Accessibility Standard (TAS)



Meets the American Disabilities Guidelines and ANSI A117.1 requirements when installed according to these requirements. In Canada - Consult local codes and standards.



Aerator Options:

	Flowrate GPM [LpM]	Vandal Resistant	WaterSense* Labeled	Outlet Type
-E	1.5[5.7]	✓	✓	Aerator
-F	0.5[1.9]	✓		Spray
-J	1.5[5.7]	✓	✓	Laminar
-K	1.0[3.8]	✓	✓	Laminar
-L	1.0[3.8]	✓	✓	Aerator
-M	0.35[1.3]	✓		Spray
-N	0.5[1.9]	✓		Laminar

Power Supply Choices (Sold Separately):

- HW6** Hardwired Power Converter

Optional Power Supply Accessories:

- CWB** Connector Wire for Hardwire Install (7 ft)
- CWB-1 Connector Wire for Hardwire Install (20 ft)
- MJ Mini Junction Box

NOTE: For Hardwire applications furnish P6000-HW6 power converter. Order P6000-HW6 power converter separately. The P6000-HW6 and P6000-MJ will power up to 8 sensor faucets.

Architectural/Engineering Approval

The information contained in this document is subject to change without notice. Please contact Zurn for most up to date information.

*This device is WaterSense labeled when used with the appropriate flow rate and certified for residential and private restrooms.





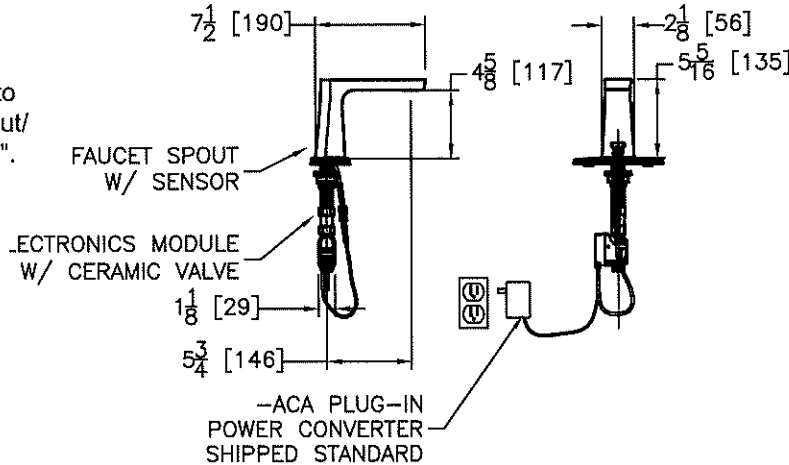
Z6953-XL-CV

Deck-Mounted Motor Gear-Driven Ceramic Operation TAG _____

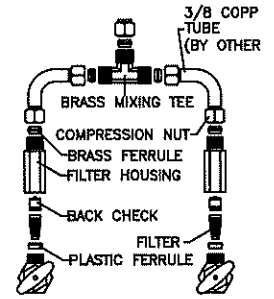
TYPICAL Z6953-XL-CV

AquaSense Hardwire Powered Faucet

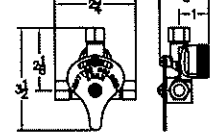
NOTE: Recommended through hole diameter to properly mount the spout/shank is 1-1/8" to 1-1/4".



Optional Mixing Valves



P6900-MT Mixing Tee



P6900-MV Temperature Mixing Valve

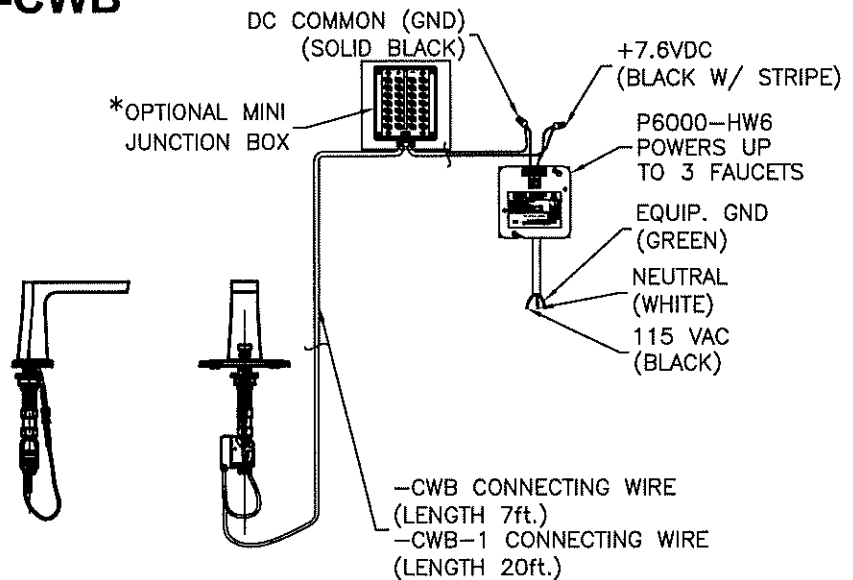
TYPICAL Z6953-XL-CV-CWB

AquaSense Hardwire Powered Faucet

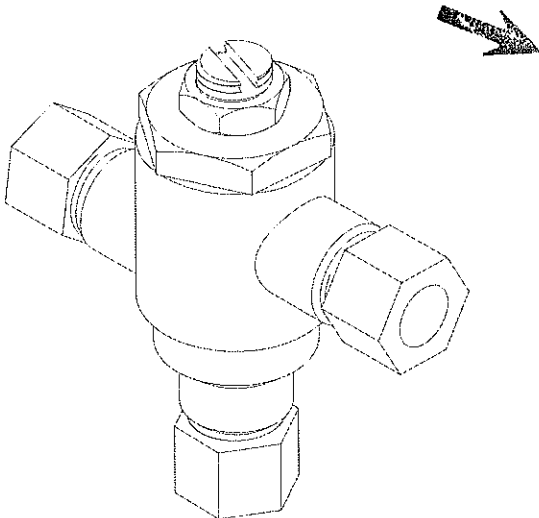
Optional:

* Optional -MJ mini junction box for connecting up to 8 faucets

NOTE: MUST USE EITHER ZURN P6000-HW6 HARDWIRE POWER CONVERTER OR ZURN P6000-ACA PLUG-IN POWER CONVERTER TO ENSURE PROPER OPERATION. USING A POWER CONVERTER OTHER THAN ZURN MAY RESULT IN OPERATION MALFUNCTION OR UNIT FAILURE.



170A-LF



Application:

The Model 170A-LF is a high performance thermostatic temperature limiting device used to supply single outlets. Can be used to supply one sensor faucet or one two handle manual faucet.

Features:

- Certified to ASSE 1070 to control down to 0.25 GPM
- Eco-Mix Certified Lead-Free* construction
- Integral inlet checks and stainless steel screens
- Includes locknut to prevent accidental adjustment
- Easy 3/8" tubing or flex hose installation

Specifications:

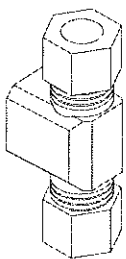
- Minimum flow: 0.25 GPM (0.95 l/Min) Certified to ASSE
- Maximum flow: 4 GPM
- Maximum pressure: 125 PSI (8.6 BAR)
- Maximum hot water temperature: 180°F (82°C)
- Hot water inlet temperature range: 120-180°F (49-82°C)
- Cold water inlet temperature range: 33-80°F (1-27°C)
- Temperature adjustment range: 95-120°F (35-49°C)

Certifications:

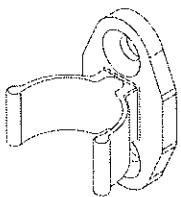
ASSE 1070-2015  CSA B125.70-15 

Options:

- STSTL REC- Stainless steel cabinet, #4 finish, recessed
- STSTL EXP- Stainless steel cabinet, #4 finish, exposed
- BP- Cold water By-Pass (shipped loose)
- BRKT- mounting bracket (shipped loose)
- CP- Chrome plated finish



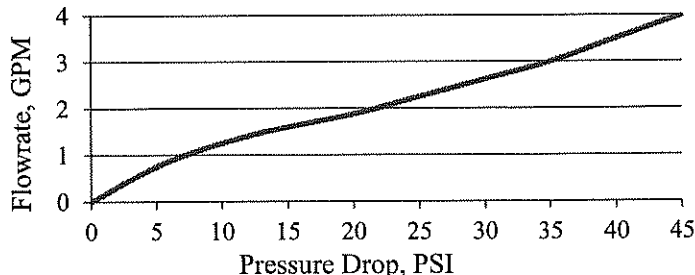
BP option



BRKT option

* This product is certified to meet Low Lead requirements of wetted surface area containing less than 0.25% lead by weight

PRESSURE DROP							
5	10	15	20	30	45	PSI	
.35	.70	1.05	1.4	2.1	3.1	BAR	
0.75	1.25	1.6	1.88	2.63	4	GPM	
2.84	4.73	6.06	7.1	10	15	L/MIN	

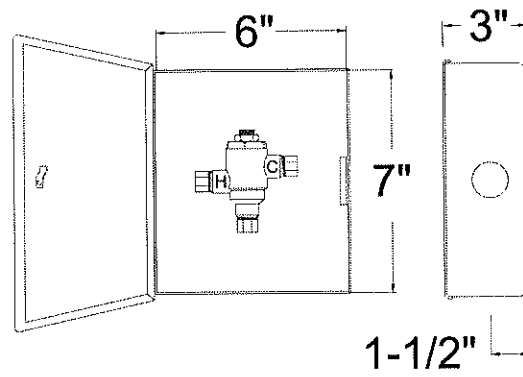
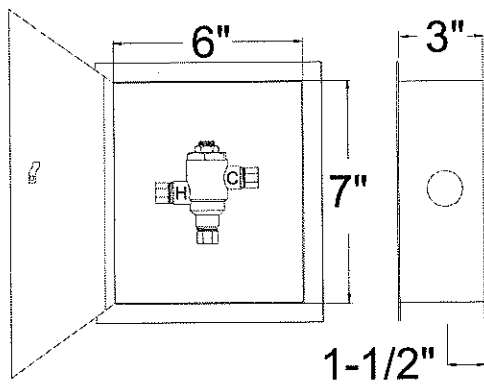
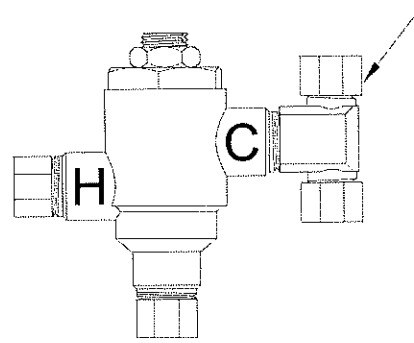
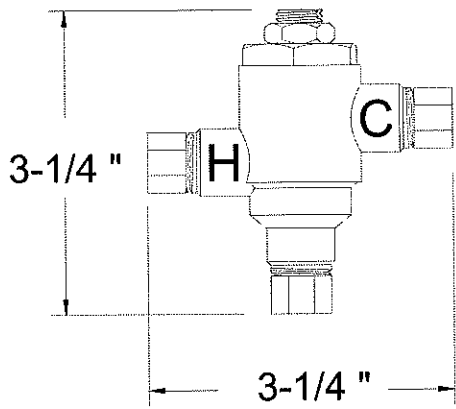


Engineer's Approval	Job # _____
	Arch/Eng. _____
	Contractor _____



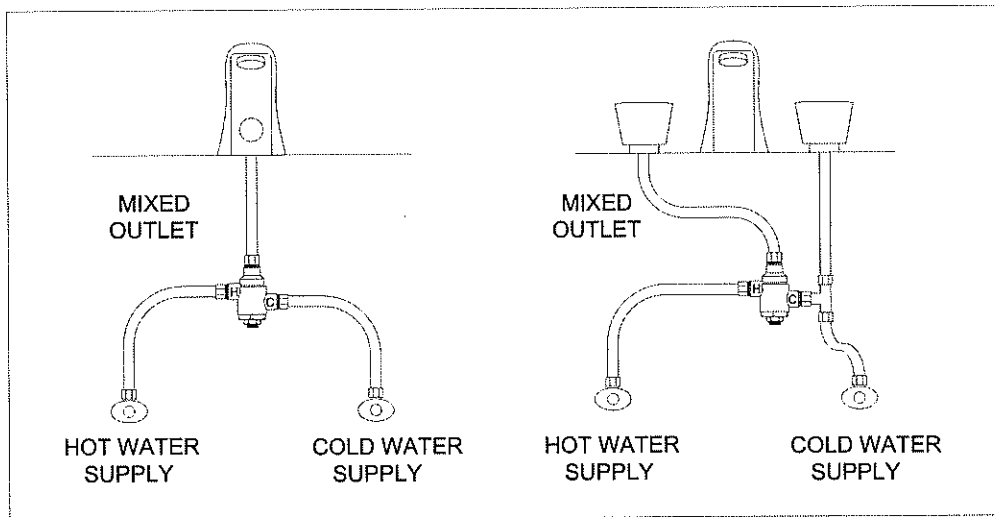
1360 Elmwood Avenue, Cranston, RI 02910 USA
 Phone: 401.461.1200 Fax: 401.941.5310
 Email: info@leonardvalve.com
 Web Site: <http://www.leonardvalve.com>

BP-OPTION



170A-LF-STSTL-REC

170A-LF-STSTL-EXP



170A-LF

170A-LF-BP



1360 Elmwood Avenue, Cranston, RI 02910 USA

Phone: 401.461.1200 Fax: 401.941.5310

Email: info@leonardvalve.com

Web Site: <http://www.leonardvalve.com>

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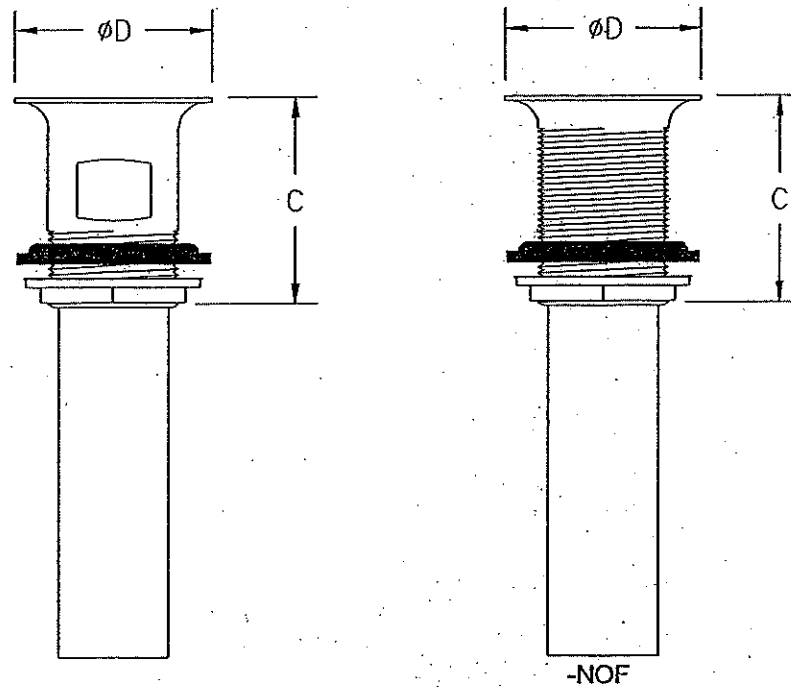


SOLID TOP, OPEN-GRID P.O. PLUGS

Z8743-PC

TAG _____

Engineering Specification: Zum Z8743-PC – Chrome plated cast brass solid top, open grid, P.O. plug. Furnished with 5" [127mm] long, chrome plated brass 17 gauge tailpiece and chrome plated cast brass locknut for sink depth up to 2 1/4" [57mm]. 6", 8", and 12"- tailpieces available.



Note: All dimensions are for reference only. Do not use for pre-plumbing

PRODUCT NUMBER	TAILPIECE in[mm]	DIMENSIONS		MASTER CARTON	WEIGHT CARTON
		Cin[mm]	ØDin[mm]		
Z8743-PC	1 1/4[32]	2 9/16[65]	2 1/4[57]	50	50
Z8743-1-PC	1 1/2[38]	2 9/16[65]	2 1/4[57]	30	30

OPTIONAL ACCESSORIES

Suffix	Description
-NOF	No Overflow
-6	w/6" [152mm] Tailpiece
-8	w/8" [203mm] Tailpiece
-12	w/12" [305mm] Tailpiece

ZURN INDUSTRIES, LLC ♦ COMMERCIAL BRASS OPERATION ♦ 2640 SOUTH WORK STREET ♦ FALCONER NY 14733

Phone: 1-716-665-1132 ♦ Fax: 1-716-665-1135 ♦ World Wide Web: www.zurn.com

In Canada: ZURN INDUSTRIES LIMITED ♦ 3544 Nashua Drive ♦ Mississauga, Ontario L4V1L2 ♦ Phone: 905/405-8272 Fax: 905/405-1292

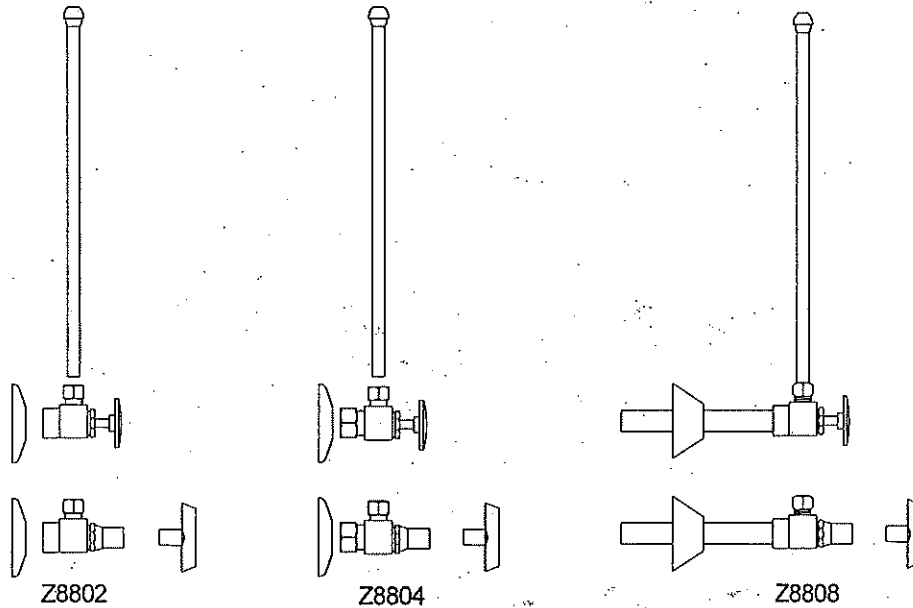


STANDARD STOP WITH FLEXIBLE LAVATORY SUPPLY

Z8802-XL-LR-PC TO Z8808-XL-LRLK-PC TAG

Engineering Specification: Zurn Z8802-XL-LR-PC TO Z8808-XL-LRLK-PC Two Zurn chrome plated, solid brass angle stops with round wheel handles or loose key as specified, two 12"[305mm] flexible chrome plated copper lavatory risers complete with two chrome plated steel flanges. Z8808-XL-LR-PC and Z8808-XL-LRLK-PC include 5"[127mm] chrome plated copper extension tubes and deep bell steel flanges.

Zurn Lead Compliant* "XL" products are a line of durable, high quality brass faucets and fixtures that are designed and manufactured to comply with state laws and local codes that mandate lead content levels: Zurn "XL" products are manufactured with *not more than 0.25% lead content when used with respect to wetted surfaces of pipes and pipe fittings, plumbing fitting and fixtures: California Health & Safety Code § 116875; Vermont 9 VCA § 2470h.



PRODUCT NUMBER	CONNECTIONS	EXT.	MASTER CARTON	WEIGHT CARTON	
				LR	LRLK
Z8802-XL-LR-PC	1/2 [13] IPS x 3/8 [10] OD	-	25	24	
Z8802-XL-LRLK-PC	1/2 [13] IPS x 3/8 [10] OD	-	25		25
Z8804-XL-LR-PC	1/2 [13] NOM x 3/8 [10] OD	-	25	24	
Z8804-XL-LRLK-PC	1/2 [13] NOM x 3/8 [10] OD	-	25		25
Z8808-XL-LR-PC	1/2 [13] SWT x 3/8 [10] OD	5	25	28	
Z8808-XL-LRLK-PC	1/2 [13] SWT x 3/8 [10] OD	5	25		33

SUFFIXES

- ___ - A Single supply option
- ___ - C1 Standard Line Lock Shield Cap
- ___ - CE Chrome Plated, Cast Brass, Flange with setscrew
- ___ - D Chrome Plated Steel, Deep Bell Flange (Bell Type)
- ___ - WD Wrought Brass, Deep Flange, (Bell Type)
- ___ - XP Cross Handle
- ___ - 15 15[381] Supply Tube
- ___ - 20 20[508] Supply Tube
- ___ - 30 30[762] Supply Tube
- ___ - 36 36[914] Supply Tube

*REGULARLY FURNISHED UNLESS OTHERWISE SPECIFIED

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Phone: 1-800-997-3876 ♦ Fax: 1-919-775-3541 ♦ www.zurn.com

In Canada: ZURN INDUSTRIES LIMITED ♦ 3544 Nashua Drive ♦ Mississauga, Ontario L4V1L2 ♦ Phone: 905/405-8272 Fax: 905/405-1292

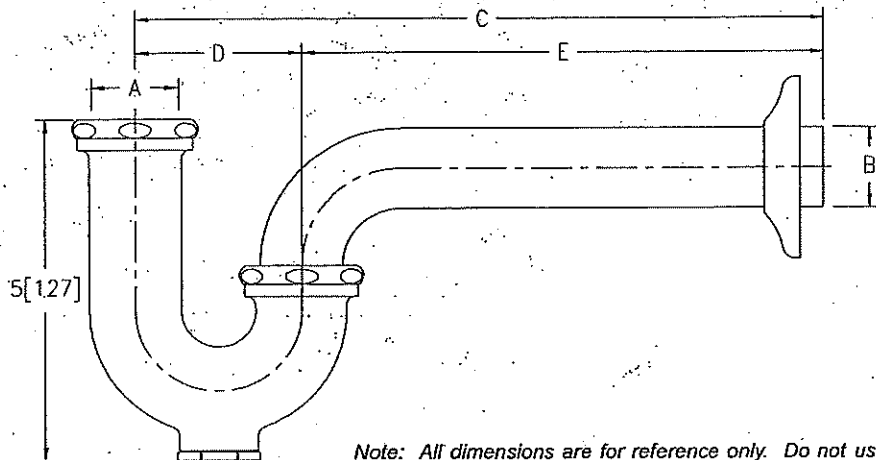


SEMI-CAST P-TRAPS WITH WALL BEND

Z8700-PC TO Z8708-PC

TAG

Engineering Specification: Zurn Z8700-PC to Z8708-PC. – Chrome-plated cast brass (copper alloy) body P-trap with cleanout, tubular brass wall bend as specified, die-cast nuts, and shallow escutcheon with compression inlet.



Note: All dimensions are for reference only. Do not use for pre-plumbing.

PRODUCT NUMBER	A INLET in[mm]	B OUTLET in[mm]	GAUGE	DIMENSIONS			MASTER CARTON	WEIGHT CARTON [lbs]
				C in[mm]	D in[mm]	E in[mm]		
Z8700-PC	1 1/4[32]	1 1/4[32]	17	10[254]	2 1/2[64]	7 1/2[191]	12	24
Z8700-8-PC	1 1/4[32]	1 1/4[32]	17	11[279]	2 1/2[64]	8 1/2[216]	12	24
Z8700-15-PC	1 1/4[32]	1 1/4[32]	17	15[381]	2 1/2[64]	12 1/2[318]	18	40
Z8701-PC	1 1/4[32]	1 1/2[38]	17	10 1/2[267]	3[76]	7 1/2[191]	12	24
Z8701-9-PC	1 1/4[32]	1 1/2[38]	17	12[305]	3[76]	9[229]	12	24
Z8701-15-PC	1 1/4[32]	1 1/2[38]	17	15[381]	3[76]	12[305]	18	42
Z8702-PC*	1 1/2[38]	1 1/2[38]	17	10 1/2[267]	3[76]	7 1/2[191]	12	24
Z8702-9-PC*	1 1/2[38]	1 1/2[38]	17	12[305]	3[76]	9[229]	12	24
Z8702-15-PC*	1 1/2[38]	1 1/2[38]	17	15[381]	3[76]	12[305]	18	42
Z8703B-PC**	1 1/2[38]	2[51]	17	12 1/2[318]	3 1/2[89]	9[229]	6	18
Z8704B-PC**	2[51]	2[51]	17	12 1/2[318]	3 1/2[89]	9[229]	6	18
Z8706-PC	1 1/4[32]	1 1/4[32]	20	10[254]	2 1/2[64]	7 1/2[191]	12	24
Z8707-PC	1 1/4[32]	1 1/2[38]	20	10 1/2[267]	3[76]	7 1/2[191]	12	24
Z8708-PC*	1 1/2[38]	1 1/2[38]	20	10 1/2[267]	3[76]	7 1/2[191]	12	24

OPTIONAL ACCESSORIES

Suffix	Description
-B	Brass Nuts
BX	Box Escutcheon
-CE	Cast Brass Escutcheon with Setscrew
-D	Deep Escutcheon (Note = not available for Z8703B-PC and Z8704B-PC)
-J	Metal to Metal Ground Joint Connection
-WC	Waste Connections - Compression
-15	15[381] C Dim. 1 1/4[32] and 1 1/2[38] Only
-18	18[457] C Dim. 1 1/4[32] and 1 1/2[38] Only

* COMES WITH OPTIONAL 1-1/2" x 1-1/4" REDUCTION POLY-WASHER FOR INLET

** SHIPPED WITH BRASS NUTS UNLESS OTHERWISE SPECIFIED

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Rev. K

Date: 6/19/11

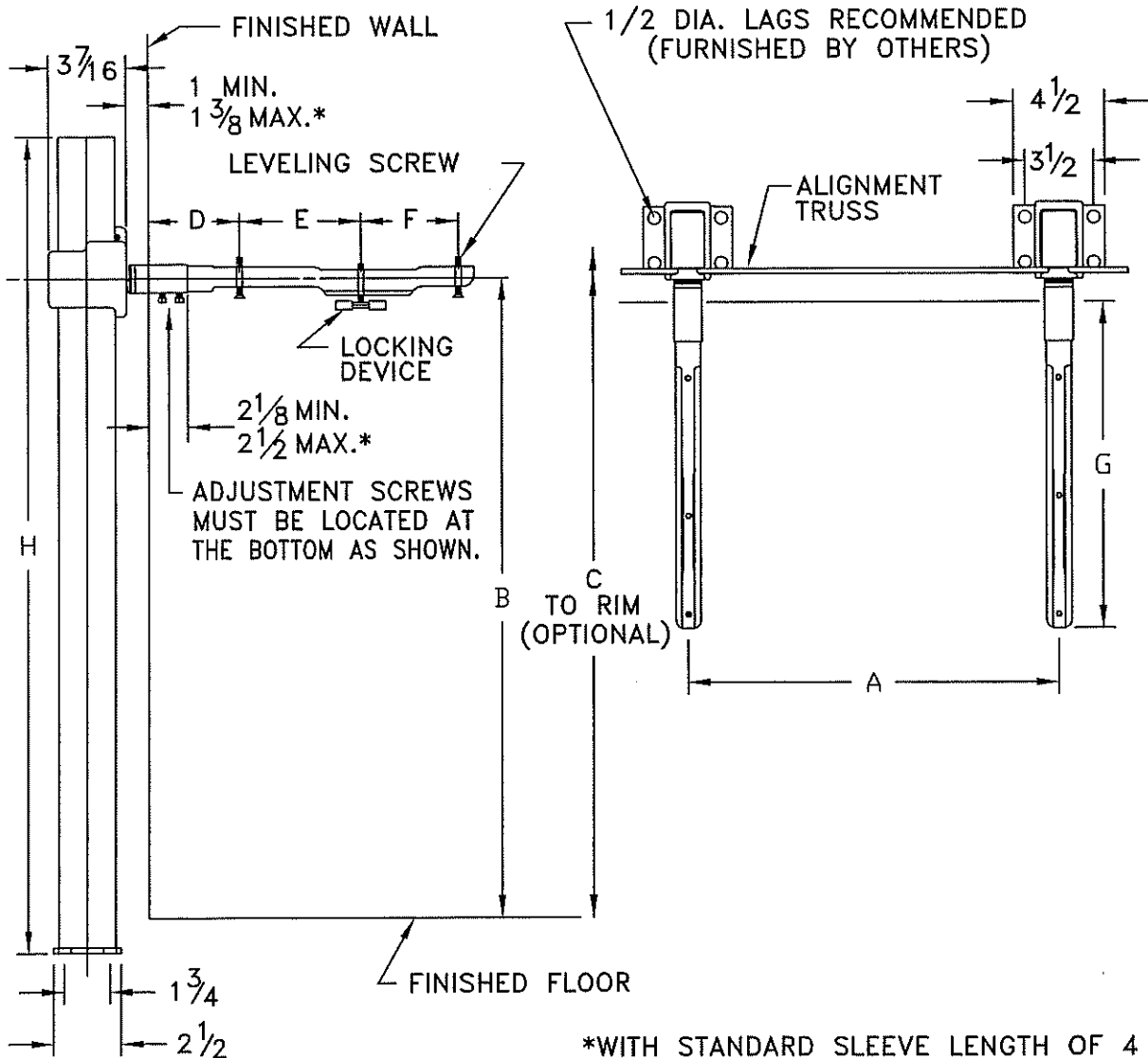
C.N. No. 107011



Z1231 RIGID SYSTEM FOR AMERICAN STANDARD CO. LAVATORIES

DIMENSIONS SUBJECT TO MANUFACTURING TOLERANCES

AMERICAN STANDARD CO. REF.			ZURN REFERENCE							
NAME	CATALOG NO.	SIZE	A	B	C	D	E	F	G	H
LUCERNE	0355.012, .034	20 1/2 X 18 1/4	16 3/4	29 3/4	31	4	6	6	16 1/2	36
LUCERNE	0356.015, .421, .439	20 1/2 X 18 1/4	16 3/4	29 3/4	31	4	6	6	16 1/2	36



*WITH STANDARD SLEEVE LENGTH OF 4

ENGINEERING SPECIFICATION:
 AS SHOWN; "DURA-COATED" STEEL STANCHIONS WITH WELDED FEET, STEEL SLEEVES, CAST IRON HEADERS AND ARMS, ALIGNMENT TRUSS, AND MOUNTING BOLTS AND TRIM.

DATE: 2/10/05
 REV. F
 C.N. NO. 92944

PRODUCT NUMBER
Z1231
 DRAWING NUMBER PAGE 3 OF 3
54511

WC-1 WATER CLOSET
AM. STANDARD 3695.001 CLOSET BOWL
ZURN ZEMS6000-HET-MOB HARDWIRED SENSOR
FLUSH VALVE W/ OVERRIDE BUTTON
CENTOCO AM500STSCCSS CLOSET SEAT



Priolo® FloWise® 16-1/2" Height Elongated Flushometer Toilet

VITREOUS CHINA with EVERCLEAN®

BARRIER FREE

Priolo® FloWise® 16-1/2" Height Elongated Flushometer Toilet with EverClean®

- Floor mount elongated rear outlet flushometer valve toilet
- Vitreous china
- High Efficiency, Low Consumption. Operates in the range of 1.1 gpf to 1.6 gpf (4.2 Lpf to 6.0 Lpf)
- Meets definition of HET (High Efficiency Toilet) when used with a high efficiency flush valve (1.28 gpf or 1.6 / 1.1 gpf dual flush)
- Permanent EverClean® surface inhibits the growth of stain- and odor-causing bacteria, mold, and mildew on the surface
- 16-1/2" rim height for accessible application
- Condensation channel
- Powerful direct-fed siphon jet action
- Fully glazed 2-1/8" trapway
- 1-1/2" inlet spud
- 4 bolt caps



SEE REVERSE FOR ROUGHING-IN DIMENSIONS

- 3695.001** Elongated bowl only, top spud
- 3696.001** Elongated bowl only, top spud with slotted rim for bedpan holding
- 3697.001** Elongated bowl only, back spud

System MaP* Score:

- 1,000 grams of miso @ 1.6 gpf or 1.28 gpf when used with an American Standard flush valve

* Maximum Performance (MaP) testing performed by IAPMO R&T Lab. MaP Report conducted by Veritec Consulting, Inc. and Koeller and Company.

Component Parts:

- 047007-0070A** Inlet spud (furnished with bowl)
- 481310.0200A** Bolt caps with retainers (furnished with bowl)

Nominal Dimensions:

752 x 356 x 419mm
(29-5/8" x 14" x 16-1/2")

Recommended working pressure—between 25 psi at valve when flushing and 80 psi static

Fixture only, less seat and flushometer valve

Compliance Certifications -

Meets or Exceeds the Following Specifications:

- ASME A112.19.2 /CSA B45.1 for Vitreous China Fixtures

To Be Specified:

- Color:** White
- Seat:**
 - American Standard #5901.110 Heavy duty open front less cover with EverClean® surface
 - American Standard #5905.110 Extra heavy duty open front less cover with EverClean® surface
- Alternative Seat:**
- Flushometer Valve:**
 - 1.6 gpf:
 - Sensor-Operated: American Standard Selectronic® DC Power #6065.161.002 (Top Spud)
 - Sensor-Operated: American Standard Selectronic® AC Power #6067.262.002 (Back Spud)
 - Manual: American Standard #6047.161.002 (Top Spud)
 - 1.28 gpf:
 - Sensor-Operated: American Standard Selectronic® DC Power #6065.121.002 (Top Spud)
 - Sensor-Operated: American Standard Selectronic® AC Power #6067.222.002 (Back Spud)
 - Manual: American Standard #6047.121.002 (Top Spud)
 - 1.6 / 1.1 gpf Dual Flush:
 - Sensor-Operated: American Standard Selectronic® DC Power #6065.761.002 (Top Spud)



MEETS THE AMERICANS WITH DISABILITIES ACT GUIDELINES AND ANSI A117.1 REQUIREMENTS FOR ACCESSIBLE AND USABLE BUILDING FACILITIES - CHECK LOCAL CODES.

CEC



When used with 1.28 gpf toilet flush valves



ADA COMPLIANT

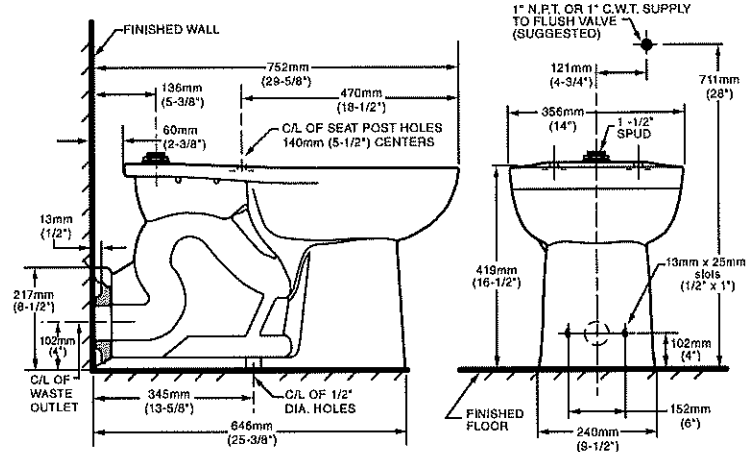


EVERCLEAN



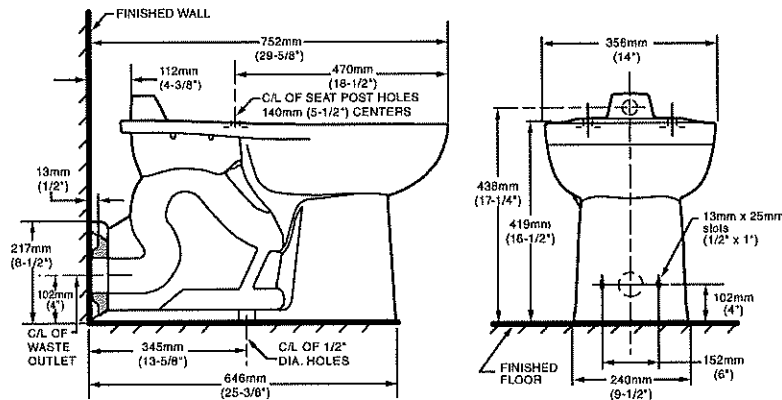
WATER EFFICIENT

3695.001/3696.001



DIMENSIONS (Nominal) NOTE: Distance from floor to closet flange centerline (rough-in) must be 4" (102 mm) with flange surface flush to 1/16" (1.6mm) max. beyond finished wall.

3697.001



DIMENSIONS (Nominal) NOTE: Distance from floor to closet flange centerline (rough-in) must be 4" (102 mm) with flange surface flush to 1/16" (1.6mm) max. beyond finished wall.

NOTES:

PRODUCTS 3695 SHOWN, 3696 SAME AS EXCEPT WITH SLOTTED RIM FOR BED PAN HOLDING.
TO COMPLY WITH AREA CODE GOVERNING THE HEIGHT OF VACUUM BREAKER ON THE FLUSHOMETER VALVE, THE PLUMBER MUST VERIFY DIMENSIONS SHOWN FOR SUPPLY ROUGHING.
FLUSHOMETER VALVE NOT INCLUDED WITH FIXTURE AND MUST BE ORDERED SEPARATELY. FLUSHOMETER VALVE REQUIREMENTS FOR 12" (305MM) ROUGH-IN: SWEAT EXTENSION NIPPLE IS REQUIRED. REFER TO VALVE MANUFACTURER AND LOCAL CODES.

IMPORTANT: Dimensions of fixtures are nominal and may vary within the range of tolerances established by ANSI Standard A112.19.2. These measurements are subject to change or cancellation. No responsibility is assumed for use of superseded or voided pages.

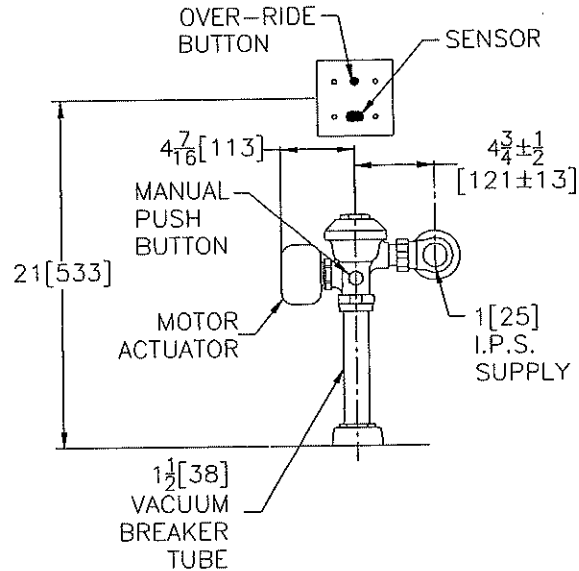
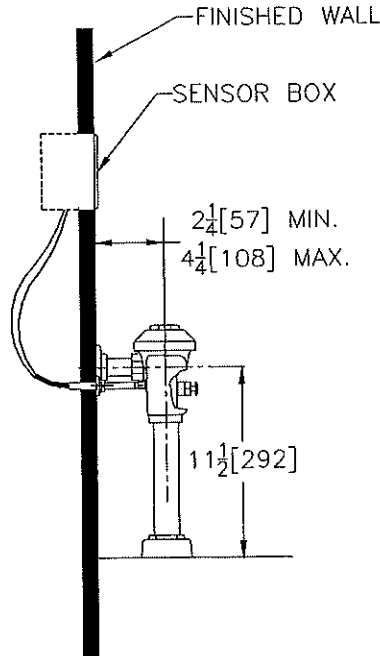


AquaSense® Model

TAG _____

ZEMS6000-YB-YC-MOB

Hardwired Automatic Sensor Flush Valve
For Water Closets With Manual Override Button



Flow Options

- HET 1.28 gpf High Efficiency Flush
- WS1 1.6 gpf Low Consumption Flush
- 3.5 gpf
- FF 4.5 gpf Full Flush

Accessories

- FM12 Floor Mount 12" Rough In
- YJ Split Ring Pipe Support
- YK Solid Ring Pipe Support
- YO Bumper on Angle Stop
- _____ Other

Power Supply Choices (Sold Separately)

- ACA-BA 6VDC Plug-in Power Converter (Up to 6 valves)
- HW6 Hardwired Power Converter (Up to 8 Valves)
- MJ Mini Junction Box

NOTE: MUST USE EITHER ZURN P6000-HW6 HARDWIRE POWER CONVERTER OR ZURN P6900-ACA-BA PLUG-IN POWER CONVERTER TO ENSURE PROPER OPERATION. USING A POWER CONVERTER OTHER THAN ZURN MAY RESULT IN OPERATION MALFUNCTION OR UNIT FAILURE.

ENGINEERING SPECIFICATION: ZURN ZEMS6000-YB-YC-MOB AquaSense® Exposed Hardwired Automatic Sensor Flush Valve For Water Closets- Exposed, quiet diaphragm-type, chrome plated, flushometer valve with a polished exterior. Complete with Zurn's chloramine resistant, dual seal diaphragm with a clog resistant by-pass. The valve incorporates a motorized actuator, an automatic sensor with a manual push-button override, high back pressure vacuum breaker, one piece hex coupling nut, adjustable tailpiece, spud coupling and flange for top spud connection. Switchable sensor features include: courtesy flush, automatic 8 hour flush, and diagnostic indicator lights. Control stop has internal siphon-guard protection, vandal resistant stop cap, sweat solder kit, and a cast wall flange with set screw. Internal seals are made of chloramine resistant materials. Electrical box is not provided (see installation instructions for type and size). Note: Order power converter separate.

Architectural/Engineering Approval

The information contained in this document is subject to change without notice. Please contact Zurn for most up to date information.

ZURN INDUSTRIES, LLC. ♦ COMMERCIAL BRASS OPERATION ♦ 5900 ELWIN BUCHANAN DRIVE ♦ SANFORD NC 27330

Phone: 1-800-997-3876 ♦ Fax: 919-775-3541 ♦ World Wide Web: www.zurn.com

In Canada: ZURN INDUSTRIES LIMITED ♦ 7900 Goreway Drive Unit 10 ♦ Brampton, Ontario L6T5W6 ♦ Phone: 905-405-8272 Fax: 905-405-1292



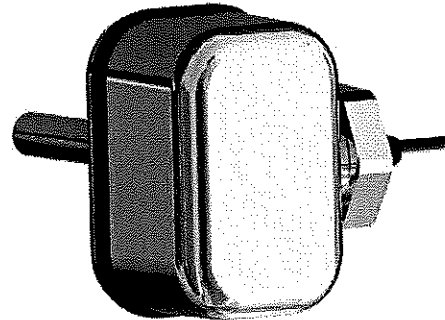
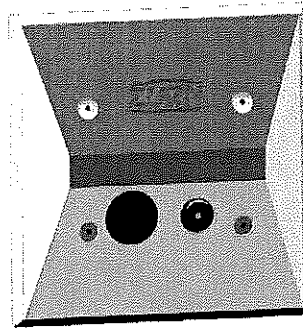
AquaSense®

ZEMS G2 Series

Automatic Systems Sensor-Operated
Flushometer

Installation, Operation, Maintenance
and Parts Manual

Patented and Patents Pending



Sensor-Operated Exposed Systems

ZEMS6000AV	ZEMS6200AV-3
ZEMS6200AV	ZEMS6001AV
ZEMS6000AV-2	ZEMS6201AV
ZEMS6200AV-2	ZEMS6003AV
ZEMS6000AV-3	ZEMS6203AV

Sensor-Operated Concealed Systems

ZEMS6140AV	ZEMS6190AV
ZEMS6240AV	ZEMS6290AV
ZEMS6152AV	ZEMS6195AV
ZEMS6252AV	ZEMS6295AV
ZEMS6153AV	ZEMS6197AV
ZEMS6253AV	ZEMS6297AV

⚠ **WARNING:** Cancer and Reproductive Harm - www.P65Warnings.ca.gov

⚠ **ADVERTENCIA:** Cáncer y daño reproductivo - www.P65Warnings.ca.gov

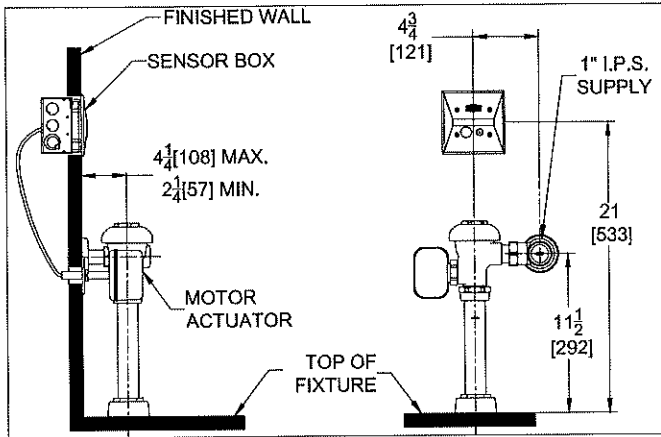
⚠ **AVERTISSEMENT:** Cancer et effets néfastes sur la reproduction - www.P65Warnings.ca.gov

LIMITED WARRANTY

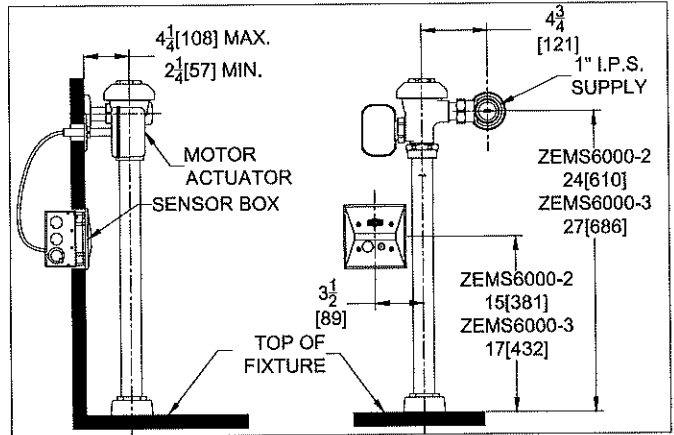
All goods sold hereunder are warranted to be free from defects in material and factory workmanship for a period of five years from the date of purchase. Decorative finishes warranted for one year. We will replace at no costs goods that prove defective provided we are notified in writing of such defect and the goods are returned to us prepaid at Sanford, NC, with evidence that they have been properly maintained and used in accordance with instructions. We shall not be responsible for any labor charges or any loss, injury or damages whatsoever, including incidental or consequential damages. The sole and exclusive remedy shall be limited to the replacement of the defective goods. Before installation and use, the purchaser shall determine the suitability of the product for his intended use and the purchaser assumes all risk and liability whatever in connection therewith. Where permitted by law, the implied warranty of merchantability is expressly excluded. If the products sold hereunder are "consumer products," the implied warranty of merchantability is limited to a period of three years and shall be limited solely to the replacement of the defective goods. All weights stated in our catalogs and lists are approximate and are not guaranteed.

Valve Rough-In

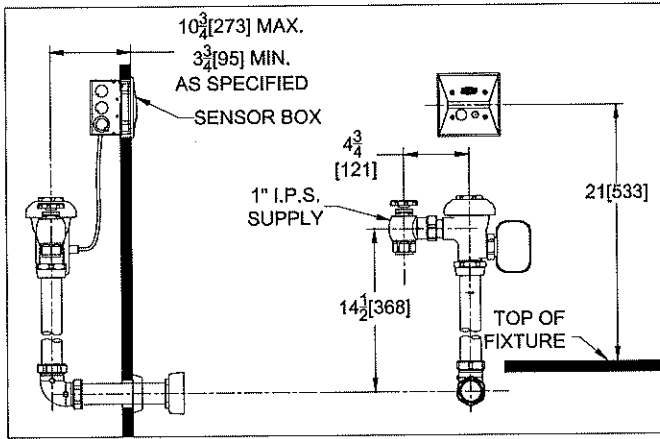
Models
ZEMS6000 and ZEMS6200



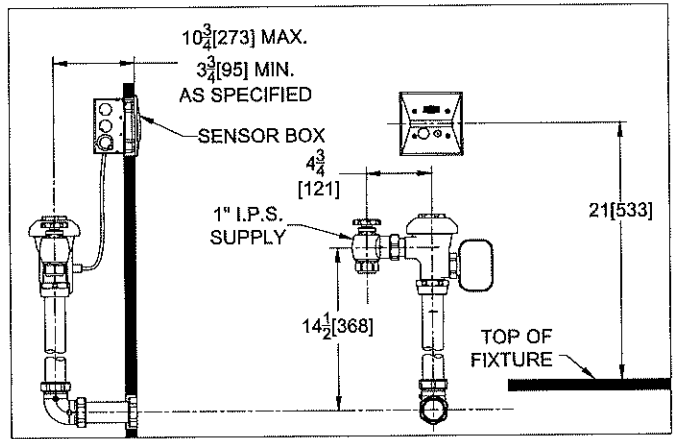
Models
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ZEMS6200-2, ZEMS6200-3



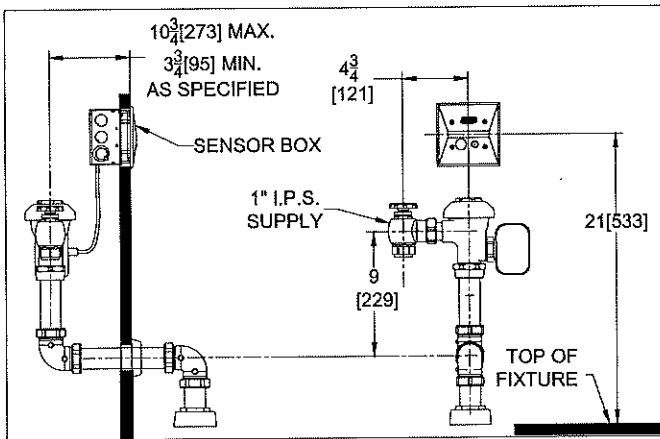
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ZEMS6140 and ZEMS6240



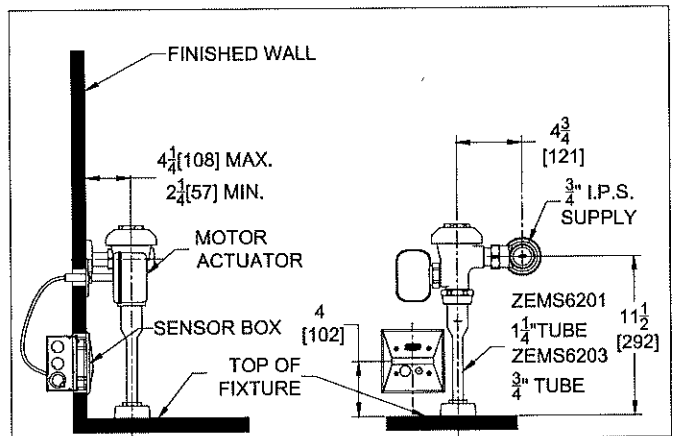
Models
ZEMS6152 and ZEMS6252



Models
ZEMS6153 and ZEMS6253



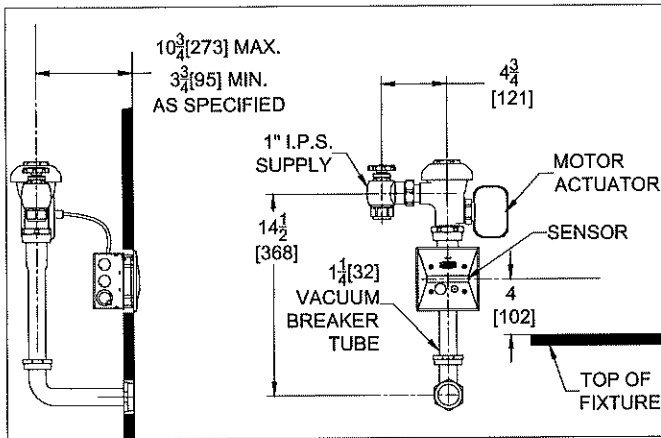
Models
ZEMS6001, ZEMS6003
ZEMS6201, ZEMS6203



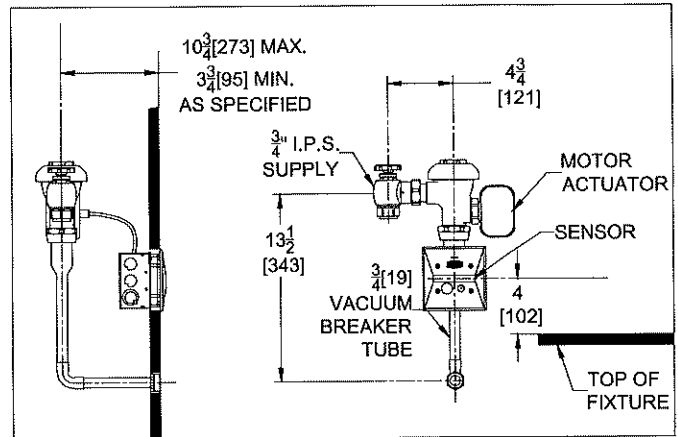
NOTES:
FOR INSTALLATIONS WITH GRAB BAR, CENTERLINE OF 4 X 4 BOX MUST BE A MINIMUM OF 4 INCHES ABOVE CENTERLINE OF GRAB BAR.

Valve Rough-In (Continued)

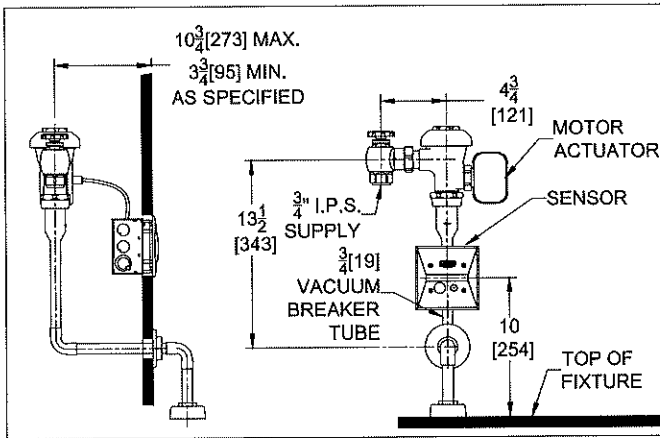
Models
ZEMS6190 and ZEMS6290



Models
ZEMS6195 and ZEMS6295



Models
ZEMS6197 and ZEMS6297



Prior to Installation

Prior to installing the Zurn Automatic Sensor-equipped Flushometer, install the items listed below as illustrated in Figures 1 through 3.

- 2-gang electrical box (4 x 4 x 2 1/8, use Steel City #52171-N box, and #52-C-18 device cover or equivalent for sensor with closet or urinal installs);
- Optional: Single-gang electrical outlet for plug-in power converter.
- Electrical wiring to the power converter outlet (120 VAC, 35 watts service required for each power converter used).
- Closet fixture.
- Zurn carrier system, Z1200 series or equal.

Important:

- **ALL ELECTRICAL WIRING IS TO BE INSTALLED IN ACCORDANCE WITH NATIONAL/LOCAL CODES AND REGULATIONS.**
- **ALL PLUMBING IS TO BE INSTALLED IN ACCORDANCE WITH APPLICABLE CODES AND REGULATIONS.**
- **WATER SUPPLY LINES MUST BE SIZED TO PROVIDE AN ADEQUATE VOLUME OF WATER FOR EACH FIXTURE.**
- **FLUSH ALL WATER LINES PRIOR TO MAKING CONNECTIONS.**
- **SENSOR UNITS SHOULD NOT BE LOCATED ACROSS FROM EACH OTHER OR IN CLOSE PROXIMITY TO HIGHLY REFLECTIVE SURFACES.**
- **CONTROL STOP SHOULD NEVER BE OPENED TO ALLOW FLOW GREATER THAN FIXTURE IS CAPABLE OF EVACUATING. IN THE EVENT OF VALVE FAILURE, FIXTURE MUST BE ABLE TO HANDLE A CONTINUOUS FLOW.**

Electrical

AC/DC Power Supply

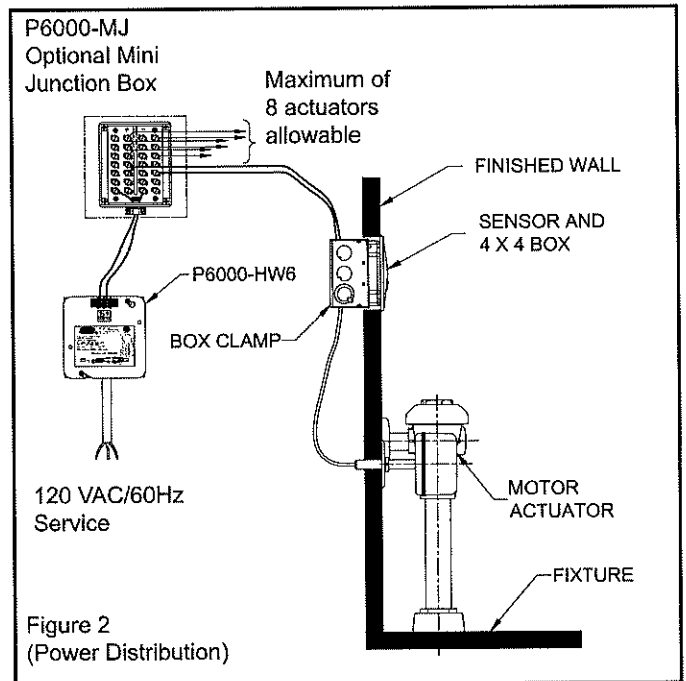
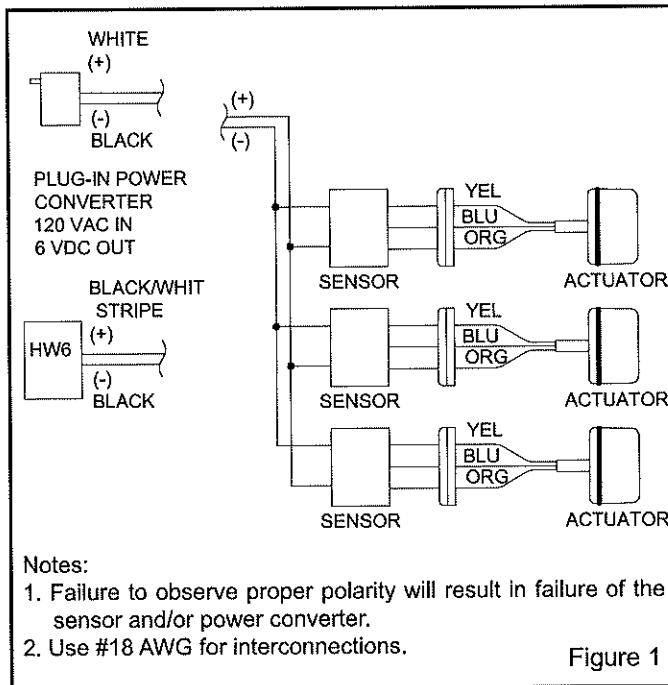
Install hardwired power supply (P6000-HW6) or receptacle for the Zurn Power Converter (P6900-ACA-BA) in a convenient location. An optional mini junction box (P6000-MJ) is recommended to distribute power to each sensor location.

NOTE: One Zurn P6000-HW6 can operate up to eight automatic sensor equipped flushometers, and the optional P6000-ACA-BA Power Converter can handle up to six flushometers and is supplied with a six-foot cord. If additional wire is needed from the Power Converter to the Flushometer(s), use #18 AWG (not provided). **Do not supply power** to the Power Converter until installation of actuator, sensor and Flushometer is completed and checked. **Proper polarity must be observed or damage to one or all components will result.**

Electrical Hook-up (Figure 1)

Be certain power is off to prevent damage to electrical components. Connect the sensor to the actuator and power converter exactly as shown in Figure 1.

Double check that power converter polarity is correct.



Sensor Installation

STEP 1 – Locate Sensor Box

Locate sensor box in the wall according to model number as shown on pages 2 and 3. Install plaster ring so screw holes are on left and right side of box (as shown in Figure 3). Trim tiles to allow screw holes in plaster ring to show.

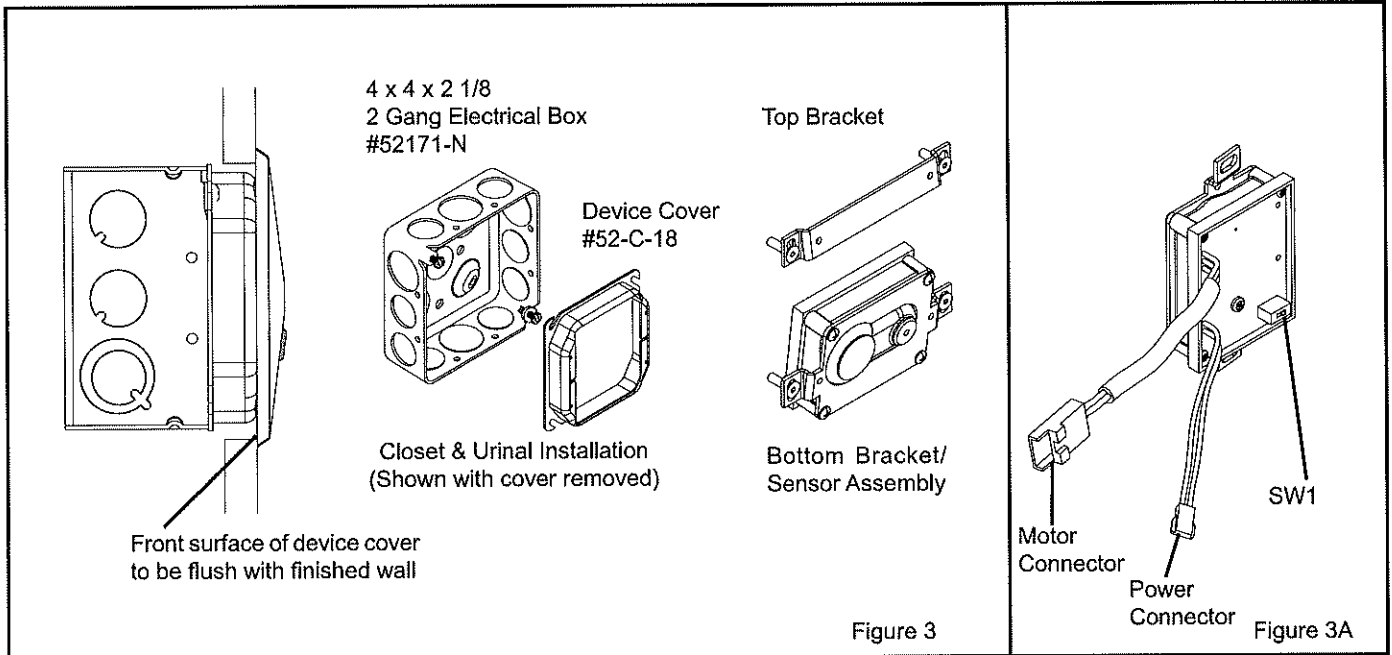
Note: Product is configured at time of shipment for a 168 hour trap seal flush (SW1 in OFF position on rear of sensor). If a 48 hour trap seal flush is desired, set SW1 to ON position. (Figure 3A)

STEP 2 – Mount Automatic Sensor (Figure 3)

Install the Zurn Automatic Sensor into the lower half of the 2-gang electrical box using two (2) screws provided. Connect the 2-wire power cable and 3-wire actuator cable to sensor. Connectors are keyed to insure correct polarity. Ensure that the sensor is mounted in the orientation shown (with lens angled downward, see Figure 4).

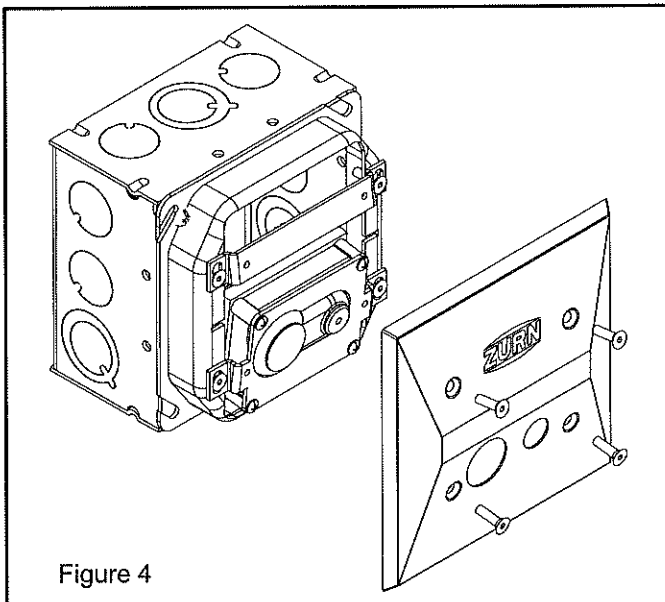
STEP 3 – Install Top Bracket (Figure 3)

Fasten the Top Bracket to the electrical box using (2) screws provided. Ensure that bracket is mounted in the orientation shown (with face angled upward, see Figure 4).



STEP 4 – Install Cover Plate (Figure 4)

Perform a trial fit of the Cover Plate and adjust positions of the sensor and top bracket as needed to ensure alignment of sensor lens, button, and cover screws. Fasten Cover Plate with (4) screws provided.



Mechanical

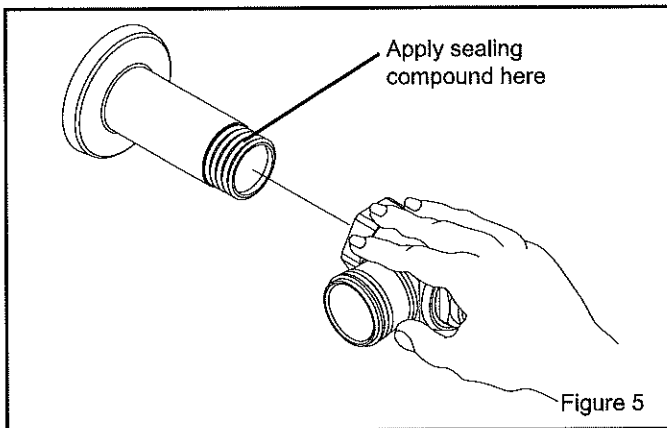
The AquaVantage® design is optimized to operate between 25 and 80 psi (172 to 552 kPa) of water pressure (running). The minimum pressure required for the valve to work properly is determined by the fixture selected. Please consult fixture manufacturer for water pressure requirements. Protect the chrome or special finish of this flushometer during installation. **Do not use toothed tools to install or service the valve as this will damage the finish.** Also, see "Care and Cleaning" section of this manual.

Control Stop Installation Instructions

STEP 1

Install control stop assembly by threading it onto water supply pipe and tightening with a smooth jawed wrench. Apply thread sealing compound or pipe tape to male NPT thread on sweat solder adapter only. See Figure 5.

Prior to turning on main water supply line ensure all stop valves are closed off tight by using a flathead screwdriver and turning the stop valve adjustment screw clockwise.

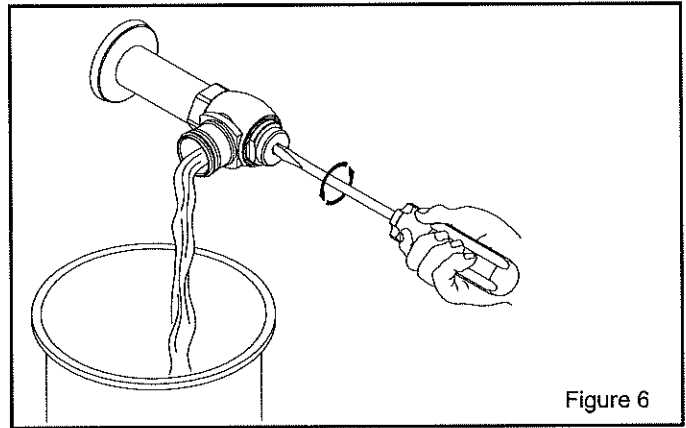


STEP 2

When all stop valves are properly connected to the water supply line and water pressure is available open the control stop using a flathead screwdriver and turning the stop valve adjustment screw counter clockwise. See Figure 6.

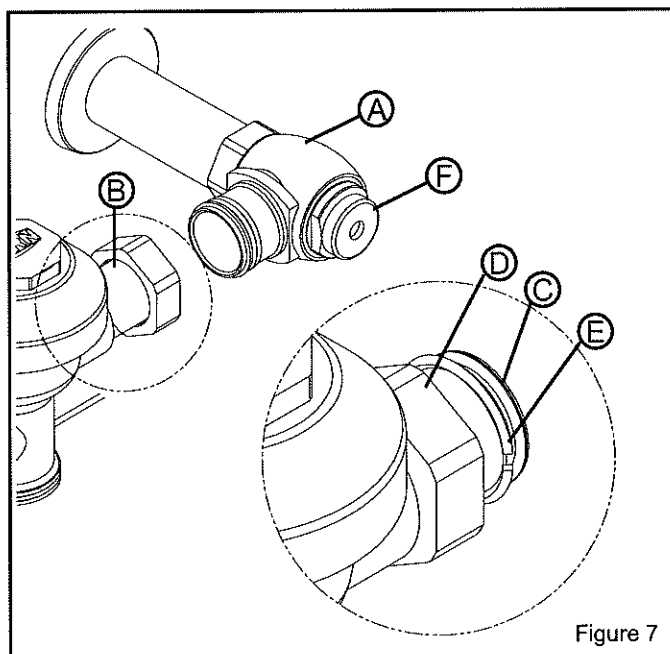
Allow the water supply line to flush any debris or sediment that may be present in the line.

Close the control stop once the lines are completely flushed.



Flush Valve Installation

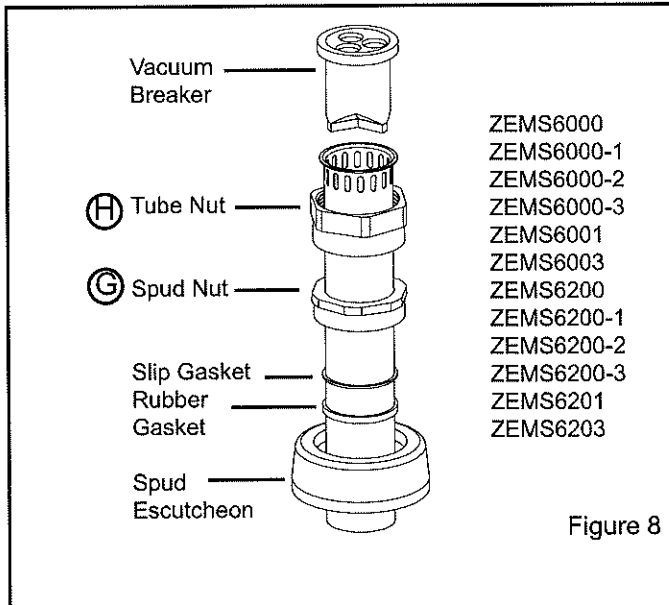
Prior to attaching flush valve to control inspect and verify that the O-ring seal is located within the O-ring groove at the tailpiece. Ensure the locking nut and locking snap ring are also present on the tailpiece. See Figure 7. Lubricate O-ring with water if necessary and insert flush valve tailpiece into the control stop valve. Tighten locking nut using a smooth jawed wrench.



Install Vacuum Breaker Flush Connection

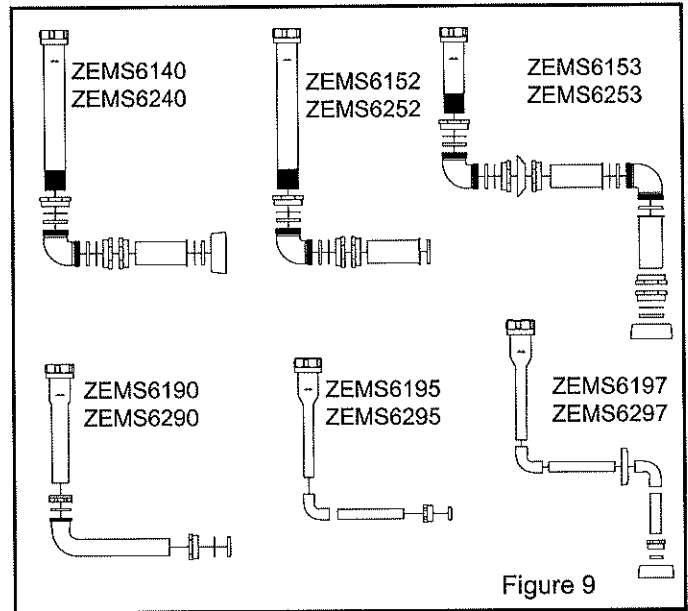
Models ZEMS6000, ZEMS6000-2, ZEMS6000-3, ZEMS6001, ZEMS6003, ZEMS6200, ZEMS6200-2, ZEMS6200-3, ZEMS6201, and ZEMS6203

Slide the tube nut (H), spud nut (G), slip gasket, rubber gasket and spud escutcheon over the vacuum breaker tube and insert tube into fixture spud. Hand tighten tube nut to valve body and hand tighten spud nut onto fixture spud. Adjust the valve assembly for plumb. Tighten fixture spud nut (G), vacuum breaker tube nut (H) and lock nut (D) (fig. 7 & 8) with a wrench.



Models ZEMS6140, ZEMS6152, ZEMS6153, ZEMS6190, ZEMS6195, ZEMS6197, ZEMS6240, ZEMS6252, ZEMS6253, ZEMS6290, ZEMS6295 and ZEMS6297 (Figure 9)

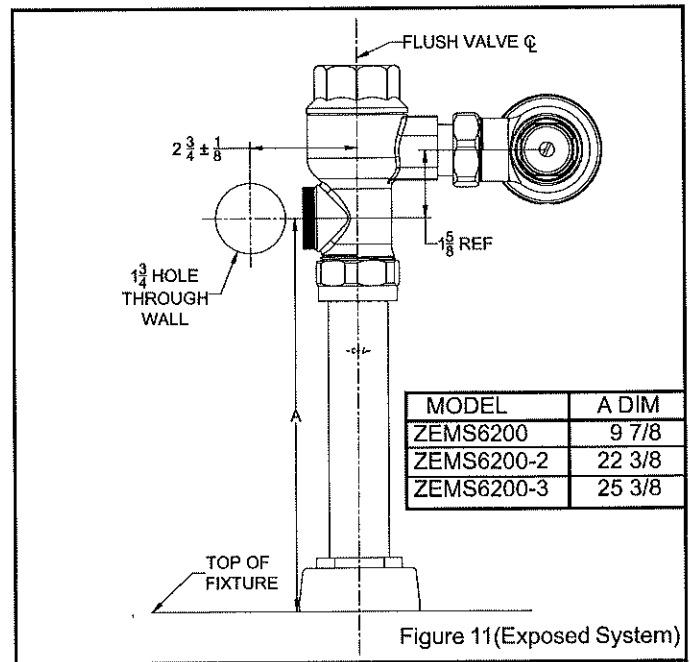
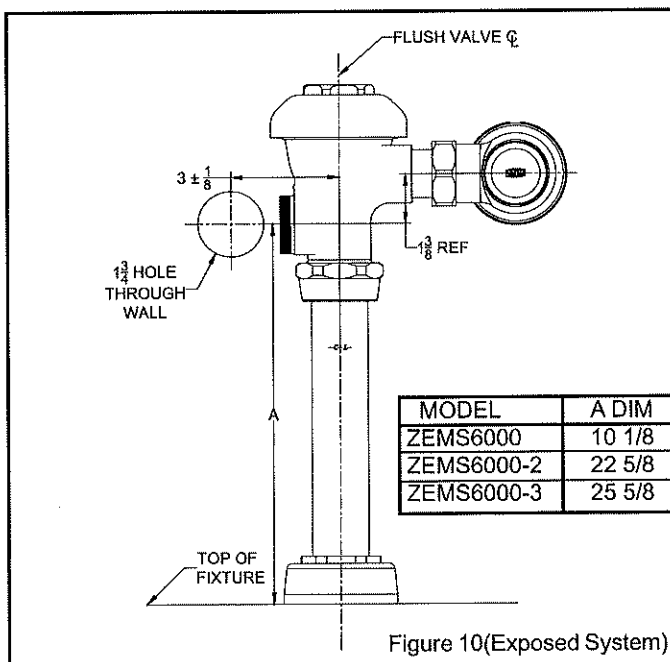
NOTE: When cutting scored pipe, leave a minimum of 1-1/4" of scoring to ensure engagement with compression coupling. Assemble pipe, elbows, couplings, slip washers, rubber gaskets and flanges as illustrated in Figure 9. Hand tighten all couplings. Once installation is completed, tighten all connections.



Motor Actuator Installation

1. Drill 1-3/4" diameter hole per Figures 10 or 11.
2. Run "fish tape" from electrical box to 1-3/4" hole.
3. Install actuator escutcheon to the actuator pipe with setscrew toward actuator. Do not tighten setscrew at this time.
4. Pull actuator cable through hole with fish tape and back to sensor box. Secure cable to box with box clamp.
5. With escutcheon loose and handle port washer installed, push cable into wall. The actuator must be angled away from the valve body at this time until the actuator push rod clears the handle port flange. The actuator can now be mounted to the flush valve and tightened.
6. Push escutcheon back to wall and tighten setscrew.

NOTE: See Figure 2 for typical installation including optional mini junction box.



Customized Sensor Range Setting

The ZEMS is factory set to accommodate most closet and urinal installations. If this factory setting does not accommodate your specific environment, follow steps below to customize your range settings for your specific ZEMS model.

CALIBRATION INSTRUCTIONS FOR ZEMS G2

1. Obtain a target. SEE FIGURE 12.
2. PRESS and HOLD button for 10 seconds or until the LED turns solid.
(*Unit will blink four times and flush once while button is being held)
3. RELEASE finger after LED turns solid.
4. PRESS and HOLD button when LED starts blinking.
5. RELEASE finger when LED turns solid.
6. Set target at desired distance, (No less than 16") from sensor face and verify NO other objects are in view of sensor face.
7. Keep target steady - Unit will blink while calibrating.
8. After 30 seconds, calibration ends with a fast double blink or a solid LED for 5 seconds.
9. IF THE LED REMAINS SOLID FOR 5 SECONDS AFTER CALIBRATION, the calibration was NOT successful. REPEAT STEPS 2-8
10. For closet installations continue to "VERIFY CALIBRATION FOR CLOSET INSTALLATIONS".

Verify Calibration for Closet Installations

1. Stand outside closet stall and close door and verify that sensor does not see stall door. If LED blink/flashes, recalibrate to a shorter range.
2. Slowly open door to closet stall while looking at ZEMS-IS sensor.
3. If led blinks while door is opening, recalibrate to a shorter range.
FAILURE TO DO SO WILL RESULT IN GHOST FLUSHING.

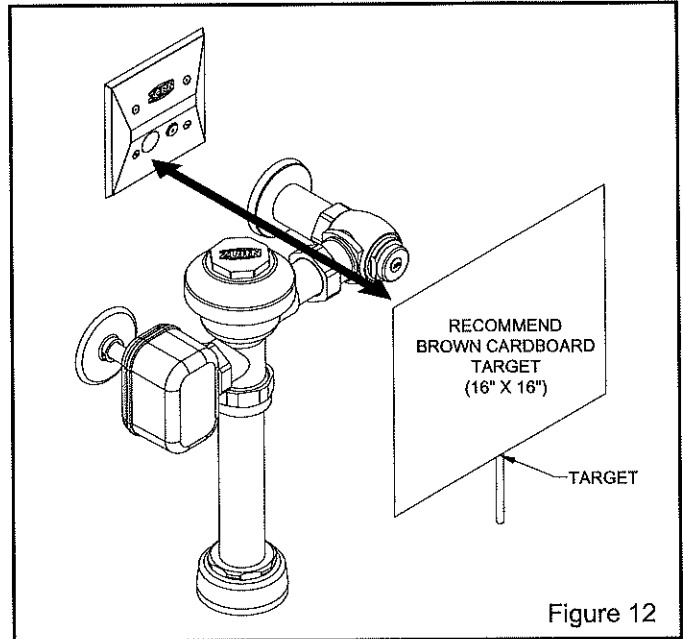


Figure 12

Activating the Motor Actuator with the Sensor

To activate the motor actuator with the sensor, simply place a target in front of the sensor. A single red light will flash indicating the sensor has recognized the target. If the target stays in view for eleven seconds, two flashing red lights will occur. This indicates that the target has been in view for the required time and upon leaving the view, a signal will be sent to the motor actuator to flush the flush valve. NOTE: If the target does not stay in view for the required eleven seconds, a flush will not occur.

IMPORTANT NOTE: Excessive water flow creates noise, while too little flow will not satisfy the needs of the fixture. Proper adjustment is made when:

1. The plumbing fixture is cleansed after each flush without splashing water out from the lip.
2. A quiet flushing cycle is achieved.

After adjustment: Replace the Zurn stop cap screw cover.

Care and Cleaning Instructions

Do not use abrasive or chemical cleaners to clean Flushometers, sensor, and actuators as they may degrade the sensor lens, dull the luster, and attack the chrome or special decorative finishes. Use only mild soap and water, then wipe dry with a clean cloth or towel.

While cleaning the bathroom tile, the Flushometer and actuator should be protected from splattering of cleaner. Do not use acids and cleaning fluids as they can damage the optics lens and chrome plating.

Seasonal use.

Valves that are used in installations subject to shut down because of cold and freezing conditions should be maintained in the following manner.

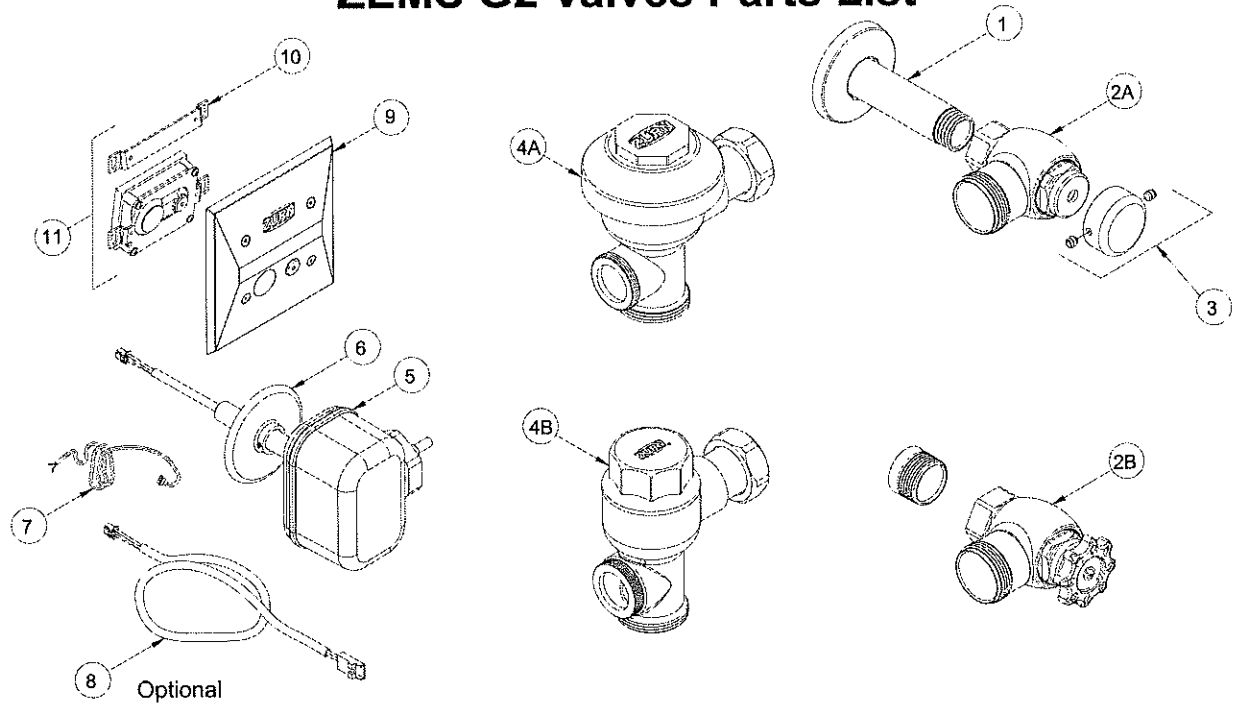
1. Shut off the main supply.
2. Drained water.
3. Remove the stop valve cap and stop internals to allow the water to drain from the flush valve and supply line.

ZEMS G2 Trouble Shooting

Problem	Possible Cause	Corrective Action
Valve will not operate.	1) Stop valve is closed	1) Open stop valve.
	2) Supply valve is closed.	2) Open supply valve.
	3) The electric wire(s) is not connected.	3) Connect the wires.
	4) Sensor lens may be dirty.	4) Clean lens.
	5) Reflective surface in front of sensor.	5) Remove the reflective surface from in front of the sensor.
	6) Detection range not adjusted properly.	6) Adjust the detection range.
	7) The infrared sensor or the actuator is out of order.	7) Contact distributor for replacement.
	8) Sensor fault	8) Replace sensor
	9) No power provided by power supply	9) Replace power supply
Flush valve does not activate after user leaves	1) Sensor does not recognize a user	1) Re-calibrate sensor per "Calibration Instructions" section.
	2) Power supply may be disrupted	2) Check available voltage where escutcheon is attached to wall with DC voltmeter. 7.4-9 VDC is required.
		3) Verify connection to actuator.
Repeated valve activation when power is provided	1) Insufficient DC power level (less than 7.4 volts DC)	1) Upgrade the -HW6 power supply to the new ZURN power supply (greater than 7.4 volts DC) or replace the ACA supply.
Insufficient volume of water to adequately siphon fixture	1) Stop valve is not open enough.	1) Open stop valve for desired volume of water.
	2) Urinal piston installed in closet valve.	2) Replace urinal piston with proper closet piston.
	3) Insufficient volume or pressure at supply.	3) Consult fixture guide for minimum gallons per minute flow and running pressure for satisfactory performance.
Valve is flushing too long or not shutting off.	1) Trip mechanism not seating properly due to foreign material between trip mechanism and seat.	1) Disassemble parts and rinse thoroughly.
	2) By-pass orifice is plugged or partially plugged.	2) Examine by-pass orifice and clean if necessary being certain not to enlarge orifice opening.
	3) Line pressure is not adequate to force trip mechanism to seal.	3) Pressure is inadequate or has dropped below minimum operating range. Steps should be taken to increase the line pressure.
Water splashes out of fixture/	1) Supply volume is more than is necessary.	1) Adjust downward on control stop.
	2) Lime accumulation on vortex or spreader holes of fixture.	2) Remove the lime build up.
Flush is not considered quiet.	1) Control stop may not be adjusted for quiet operation.	1) Adjust the control stop for quiet operation keeping in mind the fixture evacuation requirements.
	2) Fixture may be contributing to noise.	2) Check noise created by fixture by placing a cover over the bowl opening to separate valve noise from bowl noise. If it is determined the fixture is too noisy, consult with fixture manufacturer.
	3) Piping system may be source of noise.	3) High pressure in the system can sometimes be controlled by the stop valve. Other sources of noise may be the absence of air chamber and shock arrestors, loose pipes, improper size pipes, etc. In these cases the building engineer should be consulted.
Flush valve "ghost" flushes or activates randomly with no user present.	1) Sensor Lens may be dirty.	1) Clean lens.
	2) Power supply output is out of tolerance.	2) DC voltage must be between 7.4-9 volts. Check for power fault or malfunction in a unit or replace with a Zurn power converter.
	3) Sensor is viewing stall door.	3) Re-calibrate sensor per "Calibration Instructions" section.
Flush valve shuts off too quick.	Diaphragm Valves	
	1) Damaged diaphragm.	1) Install new P6000-ECA, P6000-EUA replacement kit.
	2) Enlarged by-pass orifice.	2) Install new P6000-ECA, P6000-EUA replacement kit.
	Piston Valves	
	1) Damaged piston.	1) Install new P6200-EC, P6200-EU replacement kit.
	2) Enlarged by-pass orifice.	2) Install new P6200-EC, P6200-EU replacement kit.
Valve is short flushing	Diaphragm Valves	
	1) Enlarged by-pass orifice.	1) Install new P6000-ECA, P6000-EUA replacement kit.
	2) Urinal piston installed in closet valve.	2) Replace urinal piston with proper closet piston.
	Piston Valves	
	1) Enlarged by-pass orifice.	1) Install new P6200-EC, P6200-EU replacement kit.
	2) Urinal piston installed in closet valve.	2) Replace urinal piston with proper closet piston.



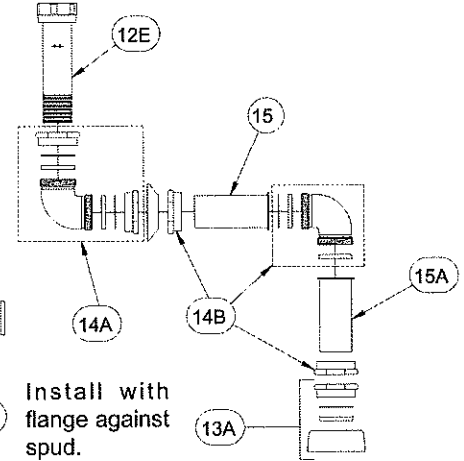
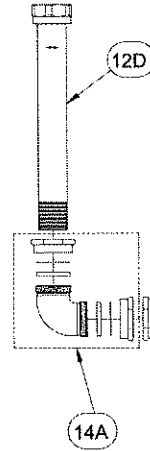
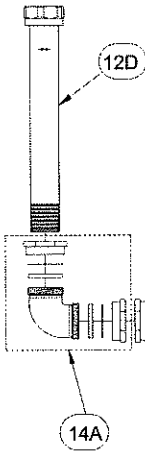
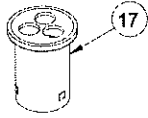
ZEMS G2 Valves Parts List



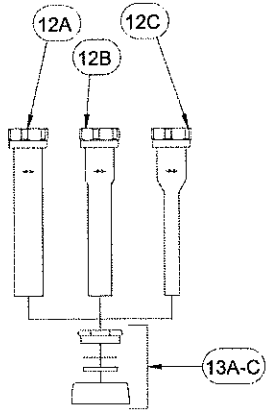
ZEMS6140
ZEMS6240

ZEMS6152
ZEMS6252

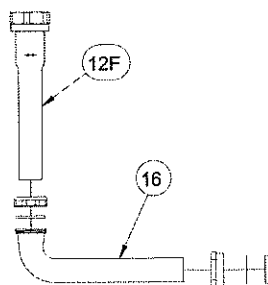
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ZEMS6253



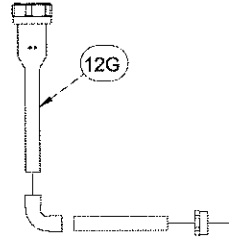
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- ZEMS6000-1 ZEMS6200-1
- ZEMS6000-2 ZEMS6200-2
- ZEMS6000-3 ZEMS6200-3
- ZEMS6001 ZEMS6201
- ZEMS6003 ZEMS6203



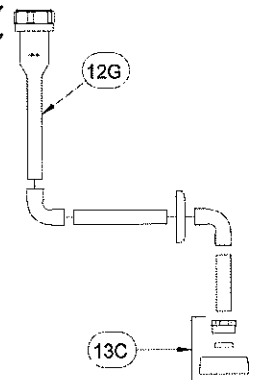
ZEMS6190
ZEMS6290



ZEMS6195
ZEMS6295



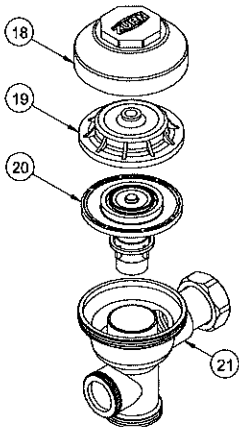
ZEMS6197
ZEMS6297



ZEMS G2 Valve Parts List (Continues)

1.	P6000-YBYC	Closet Cast Wall Escutcheon & Solder Kit	12A.	P6000-A-AA-CP	Chrome Plated 1-1/2" X 8 1/2" Vacuum Breaker Assembly	
	P6003-YBYC	Urinal Cast Wall Escutcheon & Solder Kit		P6000-2-A-AA-CP	Chrome Plated 1-1/2" X 21" Vacuum Breaker Assembly	
2A.	P6000-C-SD-CP	Chrome Plated Closet Stop Assembly		P6000-3-A-AA-CP	Chrome Plated 1-1/2" X 24" Vacuum Breaker Assembly	
	P6003-C-SD-CP	Chrome Plated Urinal Stop Assembly		12B.	P6001-A-AA-CP	Chrome Plated 1-1/4" X 8 1/2" Vacuum Breaker Assembly
	P6000-C-SD-RB	Rough Brass Closet Stop Assembly		12C.	P6003-A-AA-CP	Chrome Plated 3/4" X 8 1/2" Vacuum Breaker Assembly
	P6003-C-SD-RB	Rough Brass Urinal Stop Assembly		12D.	P6000-1-A-AA-RB	Rough Brass 1-1/2" X 12 1/2" Vacuum Breaker Assembly
2B.	P6000-C-WH-CP	Chrome Plated Closet Stop Assembly for Wheel Handle		12E.	P6000-A-AA-RB	Rough Brass 1-1/2" X 5" Vacuum Breaker Assembly
	P6003-C-WH-CP	Chrome Plated Urinal Stop Assembly for Wheel Handle		12F.	P6001-10-A-AA-RB	Rough Brass 1-1/4" X 10" Vacuum Breaker Assembly
	P6000-C-WH-RB	Rough Brass Closet Stop Assembly for Wheel Handle		12G.	P6003-10-A-AA-RB	Rough Brass 3/4" X 10" Vacuum Breaker Assembly
	P6003-C-WH-RB	Rough Brass Urinal Stop Assembly for Wheel Handle	13A.	P6000-H	1 1/2" Spud Coupling Assembly	
3.	P6000-VC	Vandal-Resistant Control Stop Cover	13B.	P6001-H	1 1/4" Spud Coupling Assembly	
4A.	Varies(Z60__,Z61__)	Diaphragm Valve	13C.	P6003-H	3/4" Spud Coupling Assembly	
4B.	Varies(Z62__)	Piston Valve	14A.	P6000-QE3-RB	Rough Brass 1 1/2" Slip Elbow Assembly	
5.	PEMS6000-HYM-G2	ZEMS Actuator	14B.	P6000-QE3-CP	Chrome Plated 1 1/2" Slip Elbow Assembly	
6.	PEMS6000-G	ZEMS Escutcheon	15A.	P6000-QT1-xx	Chrome Plated Slotless Tube	
7.	PEMS6000-CWB-G2	Sensor Power Supply Cable	15B.	P6000-QT3-xx	Rough Brass Slotless Tube	
8.	PEMS6000-CW-G2	Motor-Sensor Connector Extension Cable, 24" (Optional) (Max 2 per Installation)	16.	Varies	Rough Brass Slip Elbow	
			17.	P6000-B-HP	Vacuum Breaker	
9.	PEMS6000-22-G2	ZEMS Sensor Plate with fasteners				
10.	PEMS6000-22-KIT-G2	ZEMS Top Bracket with fasteners				
11.	PEMS6000-26-G2	ZEMS Sensor with top bracket and fasteners				

Z6000 Series



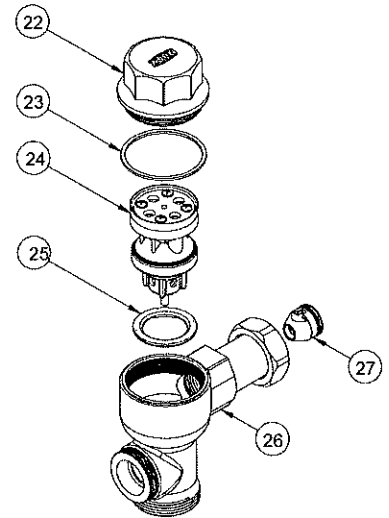
Diaphragm Valves (Z6000 Series)

18.	P6000-LL-CP	Chrome Plated Valve Body Outside Cover
	P6000-LL-RB	Rough Brass Valve Body Outside Cover
19.	P6000-L	Valve Body Inside Cover
20.	P6000-ECA-WS	Closet Repair Kit (3.5 gpf)
	P6000-ECA-WS1	Low Consumption Closet Kit (1.6 gpf)
	P6000-ECA-HET	High Efficiency Closet Kit (1.28 gpf)
	P6000-EUA-WS	Urinal Repair Kit (1.5 gpf)
	P6000-EUA-WS1	Low Consumption Urinal Kit (1.0 gpf)
	P6000-EUA-EWS	High Efficiency Urinal Kit (0.5 gpf)
	P6000-EUA-ULF	Pint Urinal Kit (0.125 gpf)
21.	P6000-19__	Valve Body

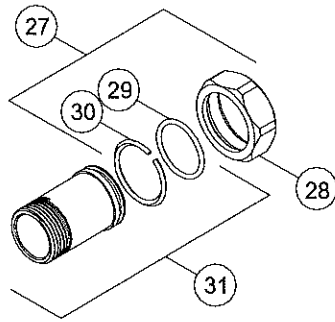
Piston Valves (Z6200 Series)

22.	P6200-LL-CP	Valve Body Cover
	P6200-LL-ULF-CP	.125 gpf Valve Body Cover
23.	P6200-LL-CG	Valve Body Cover Gasket
24.	P6200-EC-WS1	Low Consumption Closet Kit (1.6 gpf)
	P6200-EC-HET	High Efficiency Closet Kit (1.28 gpf)
	P6200-EU-WS1	Low Consumption Urinal Kit (1.0 gpf)
	P6203-EU-EWS	High Efficiency Urinal Kit (0.5 gpf)
	P6203-EU-ULF	Ultra Low Flush Kit (.125 gpf)
25.	P6000-S-30	Main Seat
	P6200-MS-ULF	.125 gpf Main Seat
26.	Varies	Valve Body
27.	PTR6203-FA-LF	Urinal 0.125/0.250 gpf Tailpiece filter

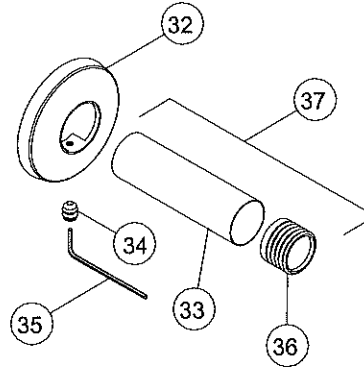
Z6200 Series



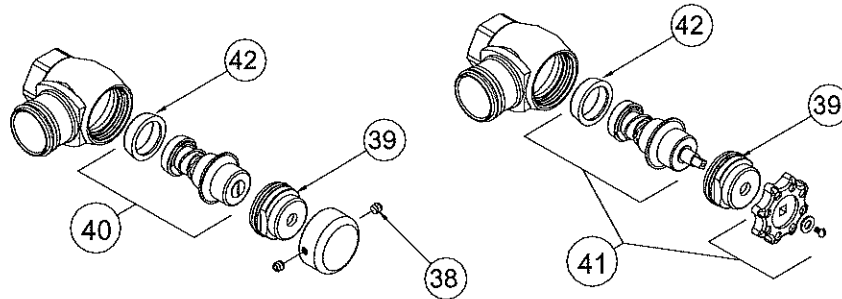
Valve Repair Parts List (Continues)



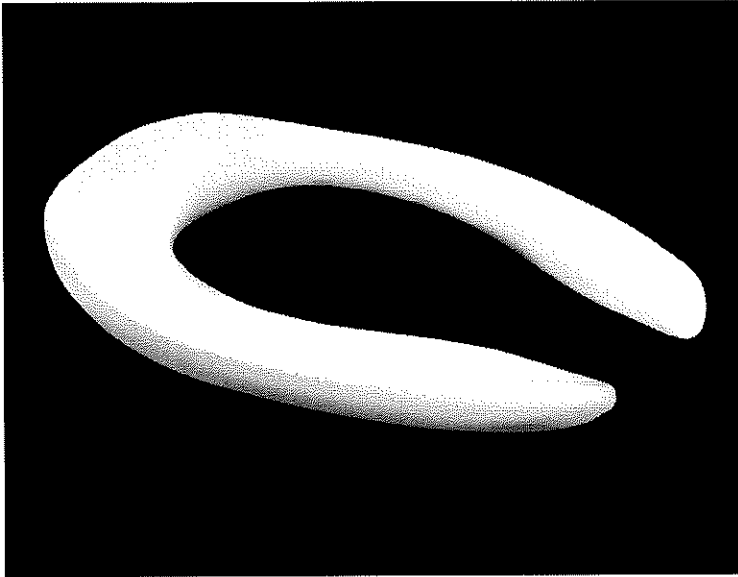
- 27. P6000-K Tailpiece Coupling Assembly
- 28. P6000-C32-CP Chrome Plated Locking Nut
- P6000-C32-RB Rough Brass Locking Nut
- 29. P6000-C31 Tailpiece O-Ring
- 30. P6000-C30 Snap Ring
- 31. P6000-J Adjustable Tailpiece Assembly
- 32. P6000-YC 1" Cast Wall Escutcheon
- P6003-YC 3/4" Cast Wall Escutcheon



- 33. P6000-YB-CVR 1" Supply Cover Tube
- P6003-YB-CVR 3/4" Supply Cover Tube
- 34. P6000-YC-SS Setscrew for Cast Wall Escutcheon
- 35. P6000-VC-W-VP 5/64 Allen Wrench
- 36. P6000-YBA 1" Sweat Solder Adapter
- P6003-YBA 3/4" Sweat Solder Adapter
- 37. P6000-YB 1" Sweat Solder Kit
- P6003-YB 3/4" Sweat Solder Kit



- 38. P6000-VC-SS Set Screw for Control Stop Cover
- 39. P6000-C34-CP Chrome Plated Stop Cap Bonnet
- P6000-C34-RB Rough Brass Stop Cap Bonnet
- 40. P6000-D-SD Stop Cap Internals
- 41. P6000-D-WH Stop Cap Internals with Wheel Handle
- 42. P6000-D42 Stop Seat

COMMERCIAL HEAVY DUTY

Product Specifications

Shape	Elongated
Seat Material	Polypropylene
Seat Form	Open front
Commercial Hinge	Yes
Bolt Material	Stainless steel
Hardware Material	Stainless Steel
Check Hinge	Yes
Cover	No
Custom Gasket	Yes
Color	White

Warranty	1 year limited warranty
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Available Colors	White,
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Features
Antimicrobial

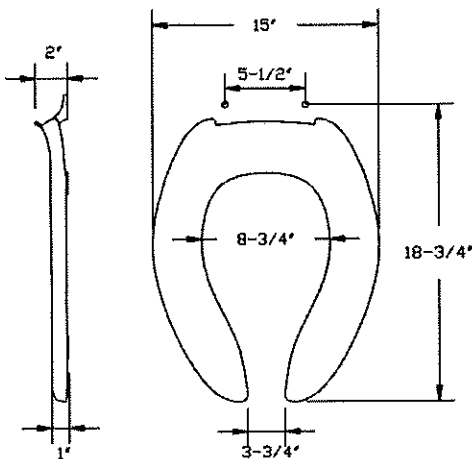
US: Antimicrobial additive inhibits the growth of stain and odor causing bacteria on this article.
 CDN: Contains CESA-MB8233 as a preservative for the protection of this article.

Fire Retardant

Includes fire retardant additive.

Commercial Hinge

Includes commercial grade hinges. One piece solid metal hinge pin and bolt over molded with plastic.



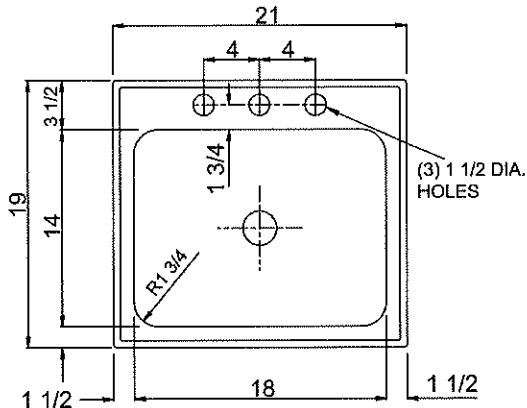
Dimensions shown are nominal and may vary within a range of tolerance. Product specifications are subject to change without notice.

S-1 SINK
JUST SLN-ADA-1921-A-GR STAINLESS STEEL SINK
T&S B-2866-05 FAUCET
Z8802XL-LRLK-PC SUPPLY AND STOP
Z8700PC-BX 1-1/2" CAST BRASS P-TRAP



SLN-ADA-1921-A-GR

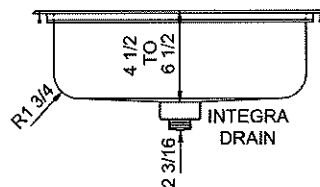
INTEGRA GROUP ADA COMPLIANT INTEGRA DRAIN - SINGLE BOWL LEDGE TYPE - 18 GA.



6.85
Gallon
Capacity

***CAPACITY MATTERS**
Max I.D. sizing with straight sided, non-tapered bowl configuration. Tight corner radius design. Capacity based on 6-1/2" bowl depth.

Seamless die-drawn construction of 18 gauge type 304 stainless steel. Interior and top surfaces satin blended No. 4 finish. Fully coated under-side insulates for sound and reduces condensation. Straight sided compartment with 1-3/4" radius corners provides greater capacity. Self-rimming top mount with Grip-Rim Plus with stainless steel mounting channels. DIntegra Drain integral drain system.



Integra Drain - seamlessly die drawn; eliminating seam in sink bottom, resulting in a hygienic surface. No additional parts or rings. Reduces installation issues and leak potential. Includes basket strainer and tailpiece. Flat grid available in place of basket, specify I-SSF option.

To Be Specified:				
■ Faucet Hole Punching:				
(1) Hole Centered				
(2) Holes on 4" centers				
(3) Holes on 4" centers (Illustrated)				
Alternate Punching: Faucet Model:		Punching required		
DEPTH - MUST BE SPECIFIED:				
4-1/2" DEEP	5" DEEP	5-1/2" DEEP	6" DEEP	6-1/2" DEEP

CUTOUT DIMENSIONS		
Model Number	Front-to-Back	Left-to-Right
SLN-1921-A-GR	18-1/4	20-1/4

* Cutout dimensions shown (Front-to-Back) x (Left-to-Right) - corners may be square or up to 1/2" radius.

Product Options	
I-SSF	Integra St. Stl. Flat Grid
-GB	Garbage disposal outlet ¹

APPROVED FOR MANUFACTURING

MODEL NO. **SLN-ADA-1921-A-GR** QTY: _____

JOB NAME: _____

TAG/ITEM: _____

CUSTOMER: _____

SIGNATURE: _____

¹DISPOSER SINKS DISCLAIMER NOTE:
Just Integra Drain sinks are designed for compatible disposers manufactured by InSinkErator® which utilizes the Quick Lock® mounting system. Use of other disposers may void the Just warranty.
InSinkErator® and Quick Lock® are trademarks of Emerson Electric Co.



JUST MFG. COMPANY CONTINUES TO MAKE QUALITY AND FUNCTIONALITY A MARK OF THE JUST PRODUCT LINE. WE RESERVE THE RIGHT TO CHANGE PRODUCT INFORMATION WITHOUT NOTICE. DIMENSIONS MAY CHANGE AND MAY BE SUBJECT TO CHANGE WITHOUT NOTICE. NO RESPONSIBILITY IS ASSUMED FOR USE OF SUPERCEDED OR VOIDED DATA. JUST MFG. CO. SINKS ARE MADE IN THE U.S.A. ALONG WITH FEATURES AND DIMENSIONS.

JUST MANUFACTURING COMPANY 9233 KING STREET . FRANKLIN PARK . ILLINOIS . 60131-2111
PH: 847-678-5150 . FAX: 847-678-6817 . E-MAIL: custserv@justmfg.com . www.justmfg.com

SUBMITTAL DATA



T&S BRASS AND BRONZE WORKS, INC.

2 Saddleback Cove / P.O. Box 1088
Travelers Rest, SC 29690

Model No.

B-2866-05

Item No.

Travelers Rest, SC: 800-476-4103 • Simi Valley, CA: 800-423-0150 • Fax: 864-834-3518 • www.tsbrass.com

This Space for Architect/Engineer Approval

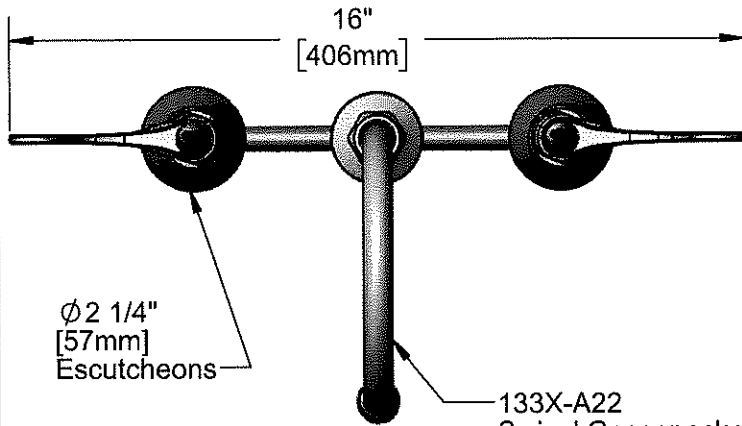
Job Name _____ Date _____

Model Specified _____ Quantity _____

Customer/Wholesaler _____

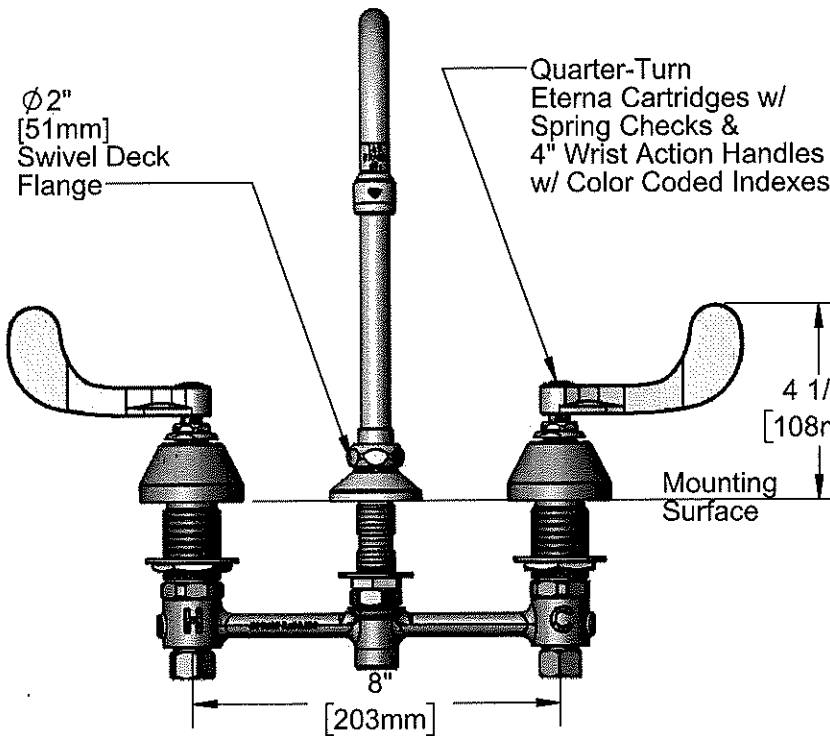
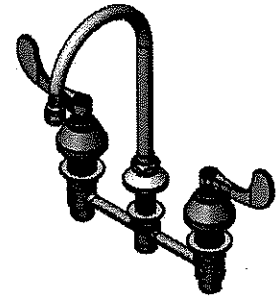
Contractor _____

Architect/Engineer _____



Ø 2 1/4"
[57mm]
Escutcheons

133X-A22
Swivel Gooseneck w/
2.2 GPM Aerator.
Rigid Conversion Requires
014200-45 Lock Washer
(Included)



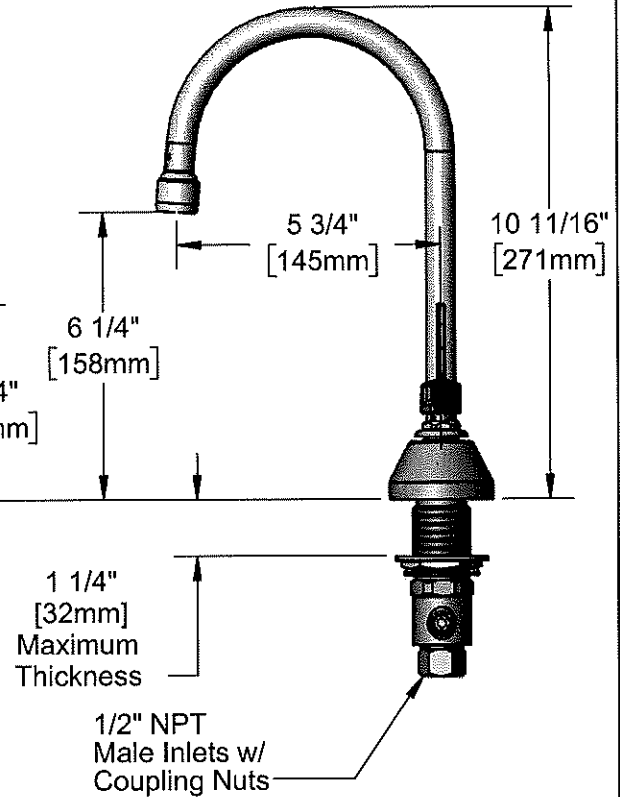
Ø 2"
[51mm]
Swivel Deck
Flange

Quarter-Turn
Eterna Cartridges w/
Spring Checks &
4" Wrist Action Handles
w/ Color Coded Indexes

4 1/4"
[108mm]

Mounting
Surface

8"
[203mm]



5 3/4"
[145mm]

10 11/16"
[271mm]

6 1/4"
[158mm]

1 1/4"
[32mm]
Maximum
Thickness

1/2" NPT
Male Inlets w/
Coupling Nuts

Rough-In Requirement:
Center Shank: Ø 1" [25mm] Mounting Hole
Hot/Cold Sides: Ø 1 1/2" [38mm] Mounting Holes

Product Specifications:
8" Concealed Widespread EasyInstall Mixing Faucet, 4" Wrist Action
Handles, Quarter-Turn Eterna Cartridges w/ Spring Checks & 5 3/4"
Rigid/Swivel Gooseneck w/ 2.2 GPM Aerator & 1/2" NPT Male Inlets

Product Compliance:
ASME A112.18.1 / CSA B125.1
NSF 61 - Section 9
NSF 372 (Low Lead Content)
ANSI A117.1 (ADA)



T&S BRASS AND BRONZE WORKS, INC.

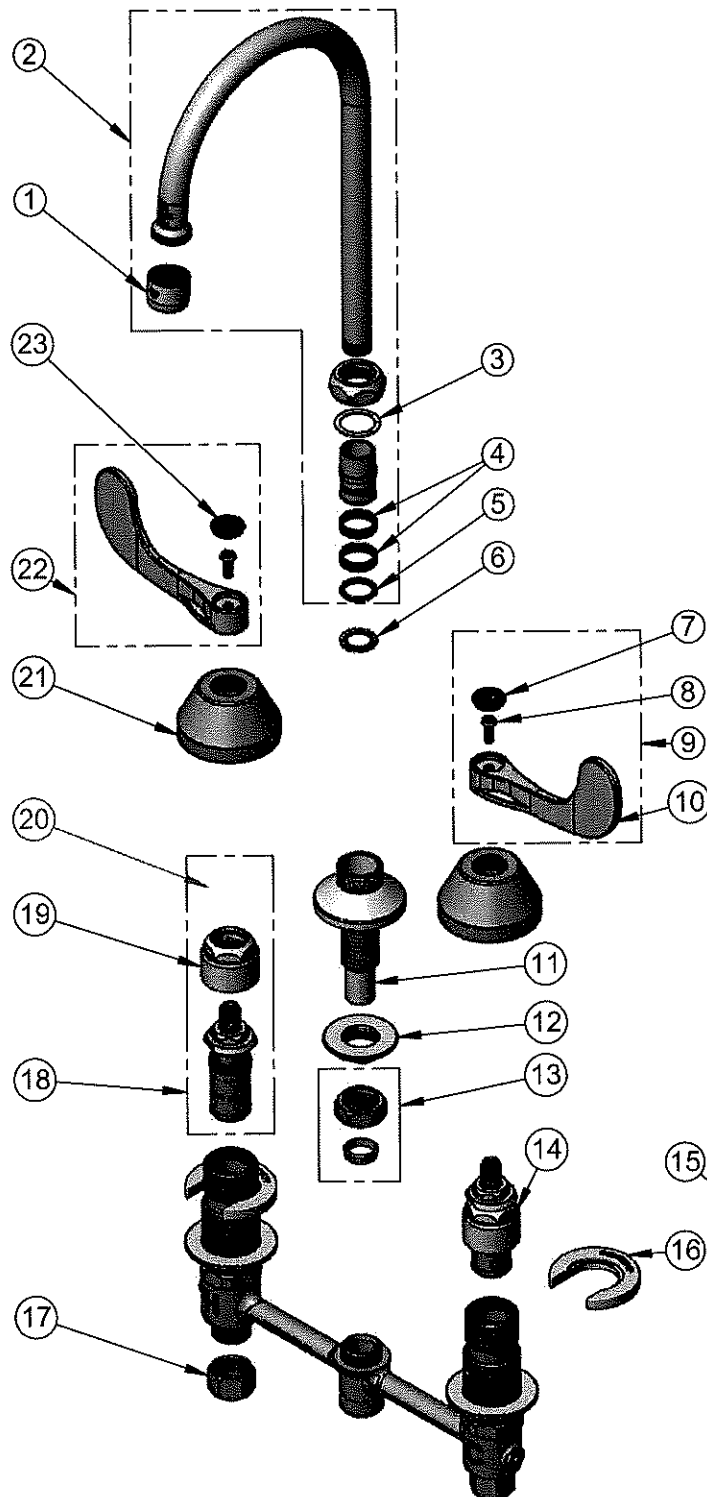
2 Saddleback Cove / P.O. Box 1088
Travelers Rest, SC 29690

Model No.

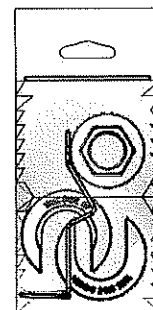
B-2866-05

Item No.

Travelers Rest, SC: 800-476-4103 • Simi Valley, CA: 800-423-0150 • Fax: 864-834-3518 • www.tsbrass.com



ITEM NO.	SALES NO.	DESCRIPTION
1	B-0199-01	2.2 GPM Aerator, 55/64-27 UN Female
2	133X-A22	5 3/4" Swivel Gooseneck w/ 2.2 GPM Aerator
3	009538-45	Swivel Washer
4	011429-45	Swivel Sleeves (2)
5	001074-45	O-Ring
6	014200-45	Star Washer, Anti-Rotation
7	018506-19NS	Blue Button Index, Press-in
8	000925-45	Lab Handle Screw
9	B-WH4C-NS	Wrist Action Handle, Screw & Cold Index
10	B-WH4-NS	Wrist Action Handle - New Style
11	016754-40NS	EasyInstall CWS Swivel Center Shank
12	016742-45	Center Flange Nut
13	016745-45	Compression Nut & Fitting
14	016752-40NS	EasyInstall, CWS Quarter-Turn Eterna Cartridge w/ Spring Check, LTC
15	016777-45	CWS Hanger
16	016749-45	Sidebody C-Washer
17	000958-20	Coupling Nut
18	016753-40NS	EasyInstall, CWS Quarter-Turn Eterna Cartridge w/ Spring Check, RTC
19	016743-25	CWS Eterna Bonnet
20	009002-40NS	Packing Assembly (New Style)
21	001257-40NS	Bell Escutcheon
22	B-WH4H-NS	Wrist Action Handle, Screw & Hot Index
23	001193-19NS	Red Button Index, Press-in



017245-40
Installation Repair Kit
Includes #12, (2)#16, & #15

Product Specifications:

8" Concealed Widespread EasyInstall Mixing Faucet, 4" Wrist Action Handles, Quarter-Turn Eterna Cartridges w/ Spring Checks & 5 3/4" Rigid/Swivel Gooseneck w/ 2.2 GPM Aerator & 1/2" NPT Male Inlets

Product Compliance:

ASME A112.18.1 / CSA B125.1
NSF 61 - Section 9
NSF 372 (Low Lead Content)
ANSI A117.1 (ADA)

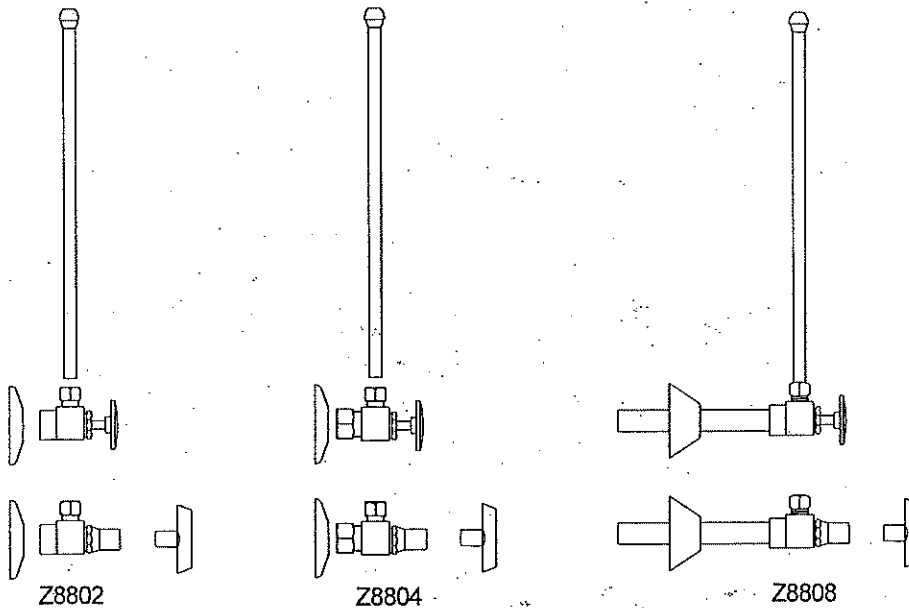


STANDARD STOP WITH FLEXIBLE LAVATORY SUPPLY

Z8802-XL-LR-PC TO Z8808-XL-LRLK-PC TAG

Engineering Specification: Zurn Z8802-XL-LR-PC TO Z8808-XL-LRLK-PC Two Zurn chrome plated, solid brass angle stops with round wheel handles or loose key as specified, two 12"[305mm] flexible chrome plated copper lavatory risers complete with two chrome plated steel flanges. Z8808-XL-LR-PC and Z8808-XL-LRLK-PC include 5"[127mm] chrome plated copper extension tubes and deep bell steel flanges.

Zurn Lead Compliant* "XL" products are a line of durable, high quality brass faucets and fixtures that are designed and manufactured to comply with state laws and local codes that mandate lead content levels. Zurn "XL" products are manufactured with *not more than 0.25% lead content when used with respect to wetted surfaces of pipes and pipe fittings, plumbing fitting and fixtures: California Health & Safety Code § 116875; Vermont 9 VCA § 2470h.



PRODUCT NUMBER	CONNECTIONS	EXT.	MASTER CARTON	WEIGHT CARTON	
				LR	LRLK
Z8802-XL-LR-PC	1/2 [13] IPS x 3/8 [10] OD	-	25	24	
Z8802-XL-LRLK-PC	1/2 [13] IPS x 3/8 [10] OD	-	25		25
Z8804-XL-LR-PC	1/2 [13] NOM x 3/8 [10] OD	-	25	24	
Z8804-XL-LRLK-PC	1/2 [13] NOM x 3/8 [10] OD	-	25		25
Z8808-XL-LR-PC	1/2 [13] SWT x 3/8 [10] OD	5	25	28	
Z8808-XL-LRLK-PC	1/2 [13] SWT x 3/8 [10] OD	5	25		33

SUFFIXES

- ___ - A Single supply option
- ___ - C1 Standard Line Lock Shield Cap
- ___ - CE Chrome Plated, Cast Brass, Flange with setscrew
- ___ - D Chrome Plated Steel, Deep Bell Flange (Bell Type)
- ___ - WD Wrought Brass, Deep Flange, (Bell Type)
- ___ - XP Cross Handle
- ___ - 15 15[381] Supply Tube
- ___ - 20 20[508] Supply Tube
- ___ - 30 30[762] Supply Tube
- ___ - 36 36[914] Supply Tube

*REGULARLY FURNISHED UNLESS OTHERWISE SPECIFIED

ZURN INDUSTRIES, LLC ♦ COMMERCIAL BRASS OPERATION ♦ 2640 SOUTH WORK STREET ♦ FALCONER NY 14733

Phone: 1-800-997-3876 ♦ Fax: 1-919-775-3541 ♦ www.zurn.com

In Canada: ZURN INDUSTRIES LIMITED ♦ 3544 Nashua Drive ♦ Mississauga, Ontario L4V1L2 ♦ Phone: 905/405-8272 Fax: 905/405-1292

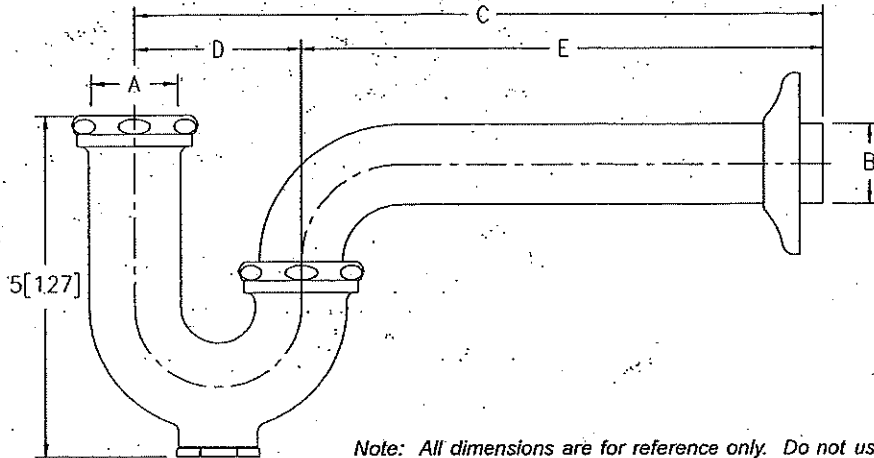


SEMI-CAST P-TRAPS WITH WALL BEND

Z8700-PC TO Z8708-PC

TAG

Engineering Specification: Zurn Z8700-PC to Z8708-PC. - Chrome-plated cast brass (copper alloy) body P-trap with cleanout, tubular brass wall bend as specified, die-cast nuts, and shallow escutcheon with compression inlet.



Note: All dimensions are for reference only. Do not use for pre-plumbing.

PRODUCT NUMBER	A INLET in[mm]	B OUTLET in[mm]	GAUGE	DIMENSIONS			MASTER CARTON	WEIGHT CARTON [lbs]
				C in[mm]	D in[mm]	E in[mm]		
Z8700-PC	1 1/4[32]	1 1/4[32]	17	10[254]	2 1/2[64]	7 1/2[191]	12	24
Z8700-8-PC	1 1/4[32]	1 1/4[32]	17	11[279]	2 1/2[64]	8 1/2[216]	12	24
Z8700-15-PC	1 1/4[32]	1 1/4[32]	17	15[381]	2 1/2[64]	12 1/2[318]	18	40
Z8701-PC	1 1/4[32]	1 1/2[38]	17	10 1/2[267]	3[76]	7 1/2[191]	12	24
Z8701-9-PC	1 1/4[32]	1 1/2[38]	17	12[305]	3[76]	9[229]	12	24
Z8701-15-PC	1 1/4[32]	1 1/2[38]	17	15[381]	3[76]	12[305]	18	42
Z8702-PC*	1 1/2[38]	1 1/2[38]	17	10 1/2[267]	3[76]	7 1/2[191]	12	24
Z8702-9-PC*	1 1/2[38]	1 1/2[38]	17	12[305]	3[76]	9[229]	12	24
Z8702-15-PC*	1 1/2[38]	1 1/2[38]	17	15[381]	3[76]	12[305]	18	42
Z8703B-PC**	1 1/2[38]	2[51]	17	12 1/2[318]	3 1/2[89]	9[229]	6	18
Z8704B-PC**	2[51]	2[51]	17	12 1/2[318]	3 1/2[89]	9[229]	6	18
Z8706-PC	1 1/4[32]	1 1/4[32]	20	10[254]	2 1/2[64]	7 1/2[191]	12	24
Z8707-PC	1 1/4[32]	1 1/2[38]	20	10 1/2[267]	3[76]	7 1/2[191]	12	24
Z8708-PC*	1 1/2[38]	1 1/2[38]	20	10 1/2[267]	3[76]	7 1/2[191]	12	24

OPTIONAL ACCESSORIES

Suffix	Description
-B	Brass Nuts
-BX	Box Escutcheon
-CE	Cast Brass Escutcheon with Setscrew
-D	Deep Escutcheon (Note = not available for Z8703B-PC and Z8704B-PC)
-J	Metal to Metal Ground Joint Connection
-WC	Waste Connections - Compression
-15	15[381] C Dim. 1 1/4[32] and 1 1/2[38] Only
-18	18[457] C Dim. 1 1/4[32] and 1 1/2[38] Only

* COMES WITH OPTIONAL 1-1/2" x 1-1/4" REDUCTION POLY-WASHER FOR INLET

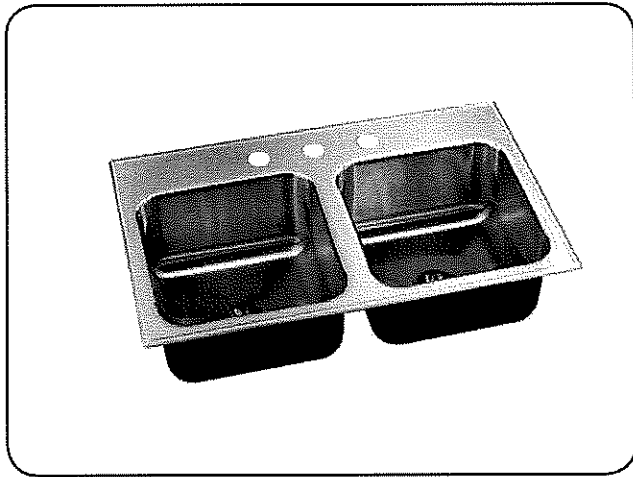
** SHIPPED WITH BRASS NUTS UNLESS OTHERWISE SPECIFIED

ZURN INDUSTRIES, LLC ♦ COMMERCIAL BRASS OPERATION ♦ 2640 SOUTH WORK STREET ♦ FALCONER NY 14733

Phone: 1-800-997-3876 ♦ Fax: 1-919-775-3541 ♦ www.zurn.com

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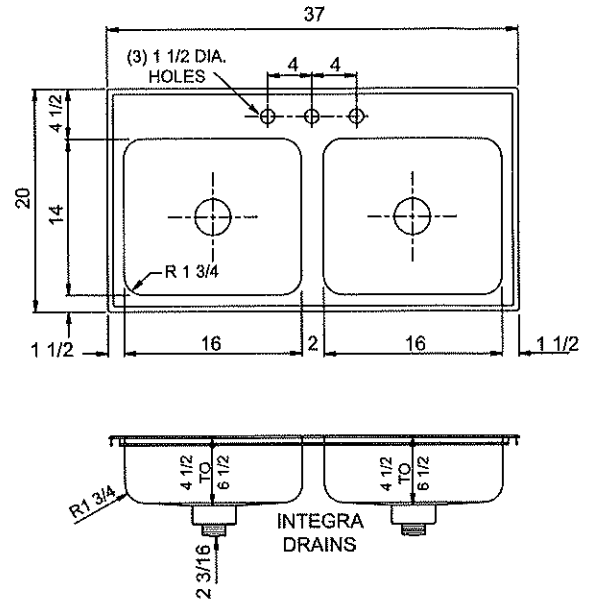
S-2 SINK
JUST DLN-ADA-2037-A-GR STAINLESS STEEL SINK
T&S B-2866-05 FAUCET
Z8802XL-LRLK-PC SUPPLY AND STOP
Z8700PC-BX 1-1/2" CAST BRASS P-TRAPS



12.14 *CAPACITY MATTERS
 Gallon Capacity: Max I.D. sizing with straight sided, non-tapered bowl configuration. Tight corner radius design. Capacity based on 6-1/2" bowl depth.

DLN-ADA-2037-A-GR

**INTEGRA GROUP
 ADA COMPLIANT
 INTEGRA DRAIN - DOUBLE BOWL
 LEDGE TYPE - 18 GA.**



SPECIFICATION

Seamless die-drawn construction of 18 gauge type 304, 18-8 stainless steel. Interior and top surfaces polished to a non-porous satin blended No. 4 finish. Smooth, fully coated underside insulates for sound, and reduces condensation. Straight-sided compartment with 1 3/4" radius corners provides greater capacity. Self-rimming top mount Grip-Rim Plus with stainless steel mounting channels. Integra-Drain integral drain system.



Integra Drain - seamlessly die drawn; eliminating seam in sink bottom, resulting in a hygienic surface. No additional parts or rings. Reduces installation issues and leak potential. Includes basket strainer and tailpiece. Flat grid available in place of basket, specify I-SSF option.

FAUCET PUNCHING MUST BE SPECIFIED	
(1) Hole - Centered	Over each bowl
(2) Holes - 4" centers	Over each partition (illustrated)
(3) holes - 4" centers (illustrated)	
Alternate Punching:	
Faucet Model:	
Punching Required:	

DEPTH - MUST BE SPECIFIED:				
4-1/2" DEEP	5" DEEP	5-1/2" DEEP	6" DEEP	6-1/2" DEEP

CUTOUT DIMENSIONS		
Model Number	Front-to-Back	Left-to-Right
DLN-ADA-2037-A-GR	19-1/4	36-1/4

* Cutout dimensions shown (Front-to-Back) x (Left-to-Right) - corners may be square or up to 1/2" radius.

APPROVED FOR MANUFACTURING

MODEL NO.: **DLN-ADA-2037-A-GR** QTY: _____

JOB NAME: _____

TAG/ITEM: _____

CUSTOMER: _____

SIGNATURE: _____

Product Options			
I-SSF	Integra St. Stl. Flat Grid		
-GB	Garbage disposal outlet ¹	Left Bowl	Right Bowl

¹ DISPOSER SINKS DISCLAIMER NOTE:
 Just Integra Drain sinks are designed for compatible disposers manufactured by InSinkErator® which utilizes the Quick Lock® mounting system. Use of other disposers may void the Just warranty.
 InSinkErator® and Quick Lock® are trademarks of Emerson Electric Co.



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JUST MANUFACTURING COMPANY 9233 KING STREET • FRANKLIN PARK • ILLINOIS • 60131-2111
 PH: 847-678-5150 • FAX: 847-678-6817 • E-MAIL: custserv@justmfg.com • www.justmfg.com

SUBMITTAL DATA



T&S BRASS AND BRONZE WORKS, INC.

2 Saddleback Cove / P.O. Box 1088
Travelers Rest, SC 29690

Model No.

B-2866-05

Item No.

Travelers Rest, SC: 800-476-4103 • Simi Valley, CA: 800-423-0150 • Fax: 864-834-3518 • www.tsbrass.com

This Space for Architect/Engineer Approval

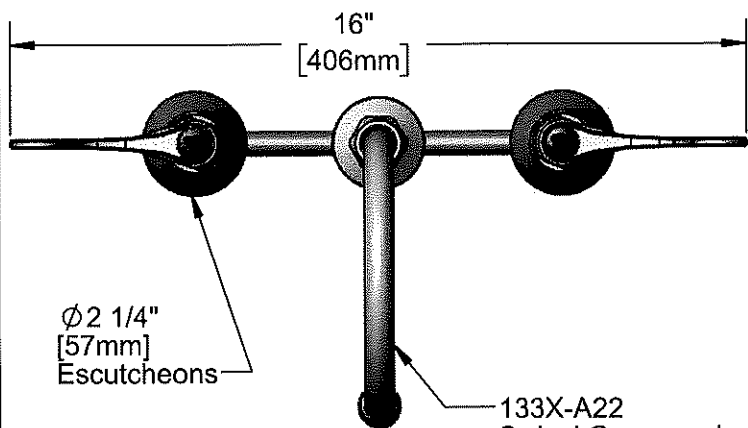
Job Name _____ Date _____

Model Specified _____ Quantity _____

Customer/Wholesaler _____

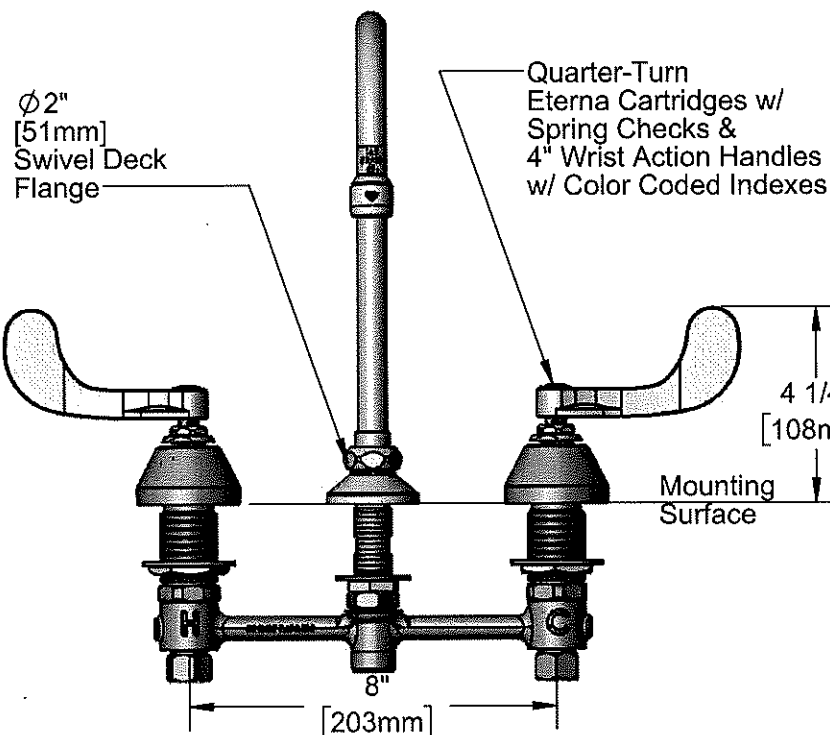
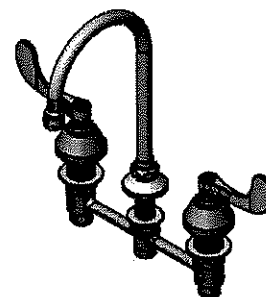
Contractor _____

Architect/Engineer _____



Ø 2 1/4"
[57mm]
Escutcheons

133X-A22
Swivel Gooseneck w/
2.2 GPM Aerator.
Rigid Conversion Requires
014200-45 Lock Washer
(Included)



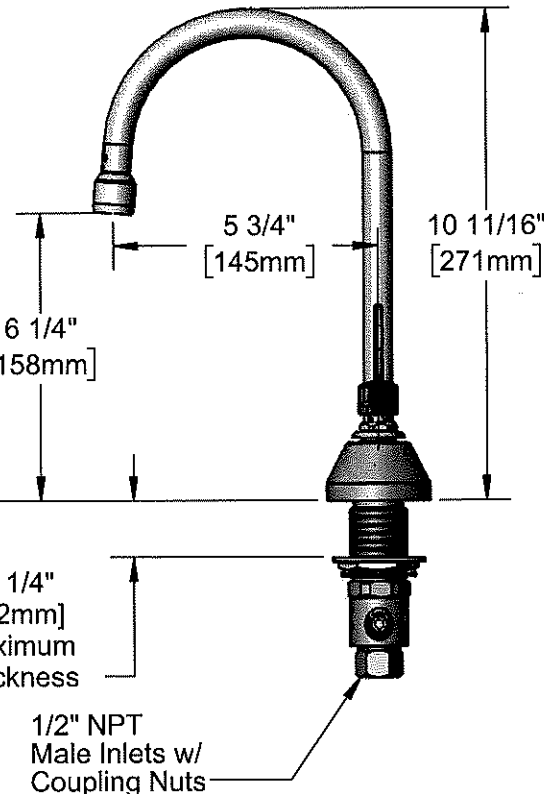
Ø 2"
[51mm]
Swivel Deck
Flange

Quarter-Turn
Eterna Cartridges w/
Spring Checks &
4" Wrist Action Handles
w/ Color Coded Indexes

Mounting
Surface

4 1/4"
[108mm]

8"
[203mm]



5 3/4"
[145mm]

10 11/16"
[271mm]

6 1/4"
[158mm]

1 1/4"
[32mm]
Maximum
Thickness

1/2" NPT
Male Inlets w/
Coupling Nuts

Rough-In Requirement:
Center Shank: Ø 1" [25mm] Mounting Hole
Hot/Cold Sides: Ø 1 1/2" [38mm] Mounting Holes

Product Specifications:
8" Concealed Widespread EasyInstall Mixing Faucet, 4" Wrist Action
Handles, Quarter-Turn Eterna Cartridges w/ Spring Checks & 5 3/4"
Rigid/Swivel Gooseneck w/ 2.2 GPM Aerator & 1/2" NPT Male Inlets

Product Compliance:
ASME A112.18.1 / CSA B125.1
NSF 61 - Section 9
NSF 372 (Low Lead Content)
ANSI A117.1 (ADA)



T&S BRASS AND BRONZE WORKS, INC.

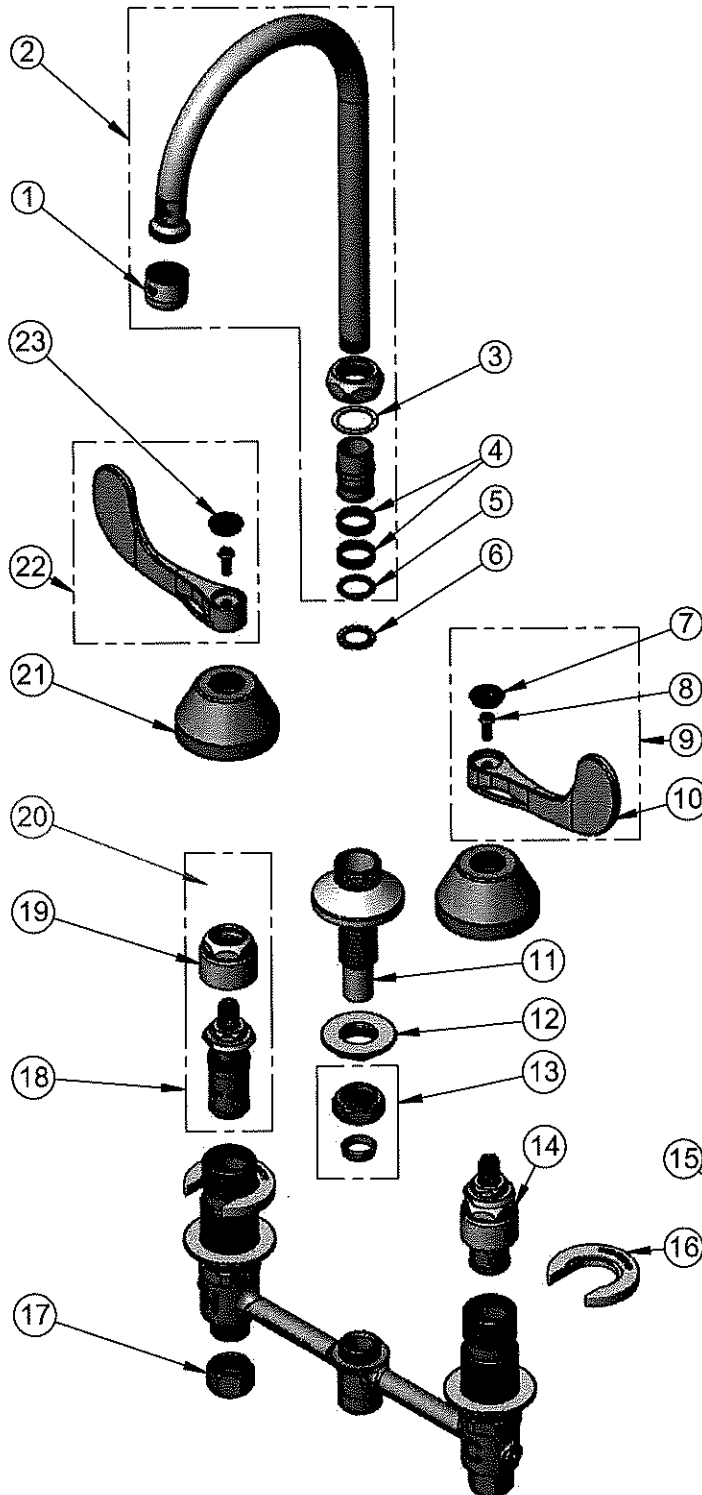
2 Saddleback Cove / P.O. Box 1088
Travelers Rest, SC 29690

Model No.

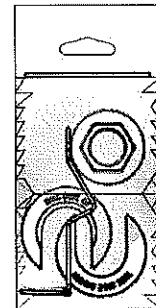
B-2866-05

Item No.

Travelers Rest, SC: 800-476-4103 • Simi Valley, CA: 800-423-0150 • Fax: 864-834-3518 • www.tsbrass.com



ITEM NO.	SALES NO.	DESCRIPTION
1	B-0199-01	2.2 GPM Aerator, 55/64-27 UN Female
2	133X-A22	5 3/4" Swivel Gooseneck w/ 2.2 GPM Aerator
3	009538-45	Swivel Washer
4	011429-45	Swivel Sleeves (2)
5	001074-45	O-Ring
6	014200-45	Star Washer, Anti-Rotation
7	018506-19NS	Blue Button Index, Press-in
8	000925-45	Lab Handle Screw
9	B-WH4C-NS	Wrist Action Handle, Screw & Cold Index
10	B-WH4-NS	Wrist Action Handle - New Style
11	016754-40NS	EasyInstall CWS Swivel Center Shank
12	016742-45	Center Flange Nut
13	016745-45	Compression Nut & Fitting
14	016752-40NS	EasyInstall, CWS Quarter-Turn Eterna Cartridge w/ Spring Check, LTC
15	016777-45	CWS Hanger
16	016749-45	Sidebody C-Washer
17	000958-20	Coupling Nut
18	016753-40NS	EasyInstall, CWS Quarter-Turn Eterna Cartridge w/ Spring Check, RTC
19	016743-25	CWS Eterna Bonnet
20	009002-40NS	Packing Assembly (New Style)
21	001257-40NS	Bell Escutcheon
22	B-WH4H-NS	Wrist Action Handle, Screw & Hot Index
23	001193-19NS	Red Button Index, Press-in



017245-40
Installation Repair Kit
Includes #12, (2)#16, & #15

Product Specifications:

8" Concealed Widespread EasyInstall Mixing Faucet, 4" Wrist Action Handles, Quarter-Turn Eterna Cartridges w/ Spring Checks & 5 3/4" Rigid/Swivel Gooseneck w/ 2.2 GPM Aerator & 1/2" NPT Male Inlets

Product Compliance:

ASME A112.18.1 / CSA B125.1
NSF 61 - Section 9
NSF 372 (Low Lead Content)
ANSI A117.1 (ADA)

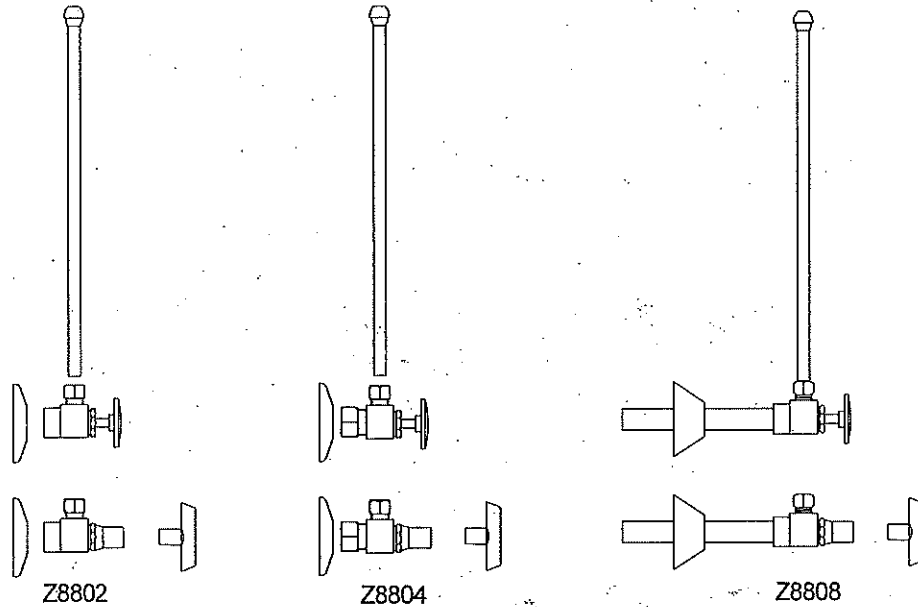


STANDARD STOP WITH FLEXIBLE LAVATORY SUPPLY

Z8802-XL-LR-PC TO Z8808-XL-LRLK-PC TAG

Engineering Specification: Zurn Z8802-XL-LR-PC TO Z8808-XL-LRLK-PC Two Zurn chrome plated, solid brass angle stops with round wheel handles or loose key as specified, two 12"[305mm] flexible chrome plated copper lavatory risers complete with two chrome plated steel flanges. Z8808-XL-LR-PC and Z8808-XL-LRLK-PC include 5"[127mm] chrome plated copper extension tubes and deep bell steel flanges.

Zurn Lead Compliant* "XL" products are a line of durable, high quality brass faucets and fixtures that are designed and manufactured to comply with state laws and local codes that mandate lead content levels. Zurn "XL" products are manufactured with *not more than 0.25% lead content when used with respect to wetted surfaces of pipes and pipe fittings, plumbing fitting and fixtures: California Health & Safety Code § 116875; Vermont 9 VCA § 2470h.



PRODUCT NUMBER	CONNECTIONS	EXT.	MASTER CARTON	WEIGHT CARTON	
				LR	LRLK
Z8802-XL-LR-PC	1/2 [13] IPS x 3/8 [10] OD	-	25	24	
Z8802-XL-LRLK-PC	1/2 [13] IPS x 3/8 [10] OD	-	25		25
Z8804-XL-LR-PC	1/2 [13] NOM x 3/8 [10] OD	-	25	24	
Z8804-XL-LRLK-PC	1/2 [13] NOM x 3/8 [10] OD	-	25		25
Z8808-XL-LR-PC	1/2 [13] SWT x 3/8 [10] OD	5	25	28	
Z8808-XL-LRLK-PC	1/2 [13] SWT x 3/8 [10] OD	5	25		33

SUFFIXES

- ___ - A Single supply option
- ___ - C1 Standard Line Lock Shield Cap
- ___ - CE Chrome Plated, Cast Brass, Flange with setscrew
- ___ - D Chrome Plated Steel, Deep Bell Flange (Bell Type)
- ___ - WD Wrought Brass, Deep Flange, (Bell Type)
- ___ - XP Cross Handle
- ___ - 15 15[381] Supply Tube
- ___ - 20 20[508] Supply Tube
- ___ - 30 30[762] Supply Tube
- ___ - 36 36[914] Supply Tube

*REGULARLY FURNISHED UNLESS OTHERWISE SPECIFIED

ZURN INDUSTRIES, LLC ♦ COMMERCIAL BRASS OPERATION ♦ 2640 SOUTH WORK STREET ♦ FALCONER NY 14733

Phone: 1-800-997-3876 ♦ Fax: 1-919-775-3541 ♦ www.zurn.com

In Canada: ZURN INDUSTRIES LIMITED ♦ 3544 Nashua Drive ♦ Mississauga, Ontario L4V1L2 ♦ Phone: 905/405-8272 Fax: 905/405-1292



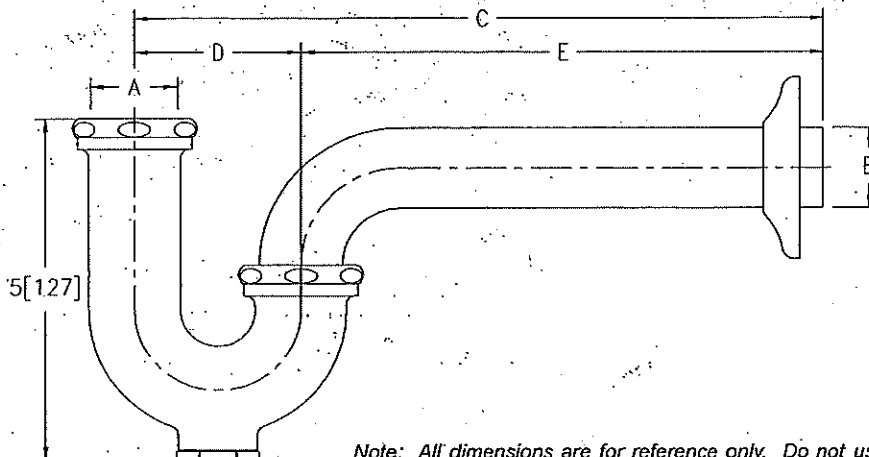
SEMI-CAST P-TRAPS WITH WALL BEND

Z8700-PC TO Z8708-PC

TAG



Engineering Specification: Zurn Z8700-PC to Z8708-PC. – Chrome-plated cast brass (copper alloy) body P-trap with cleanout, tubular brass wall bend as specified, die-cast nuts, and shallow escutcheon with compression inlet.



Note: All dimensions are for reference only. Do not use for pre-plumbing.

PRODUCT NUMBER	A INLET in[mm]	B OUTLET in[mm]	GAUGE	DIMENSIONS			MASTER CARTON	WEIGHT CARTON [lbs]
				C in[mm]	D in[mm]	E in[mm]		
Z8700-PC	1 1/4[32]	1 1/4[32]	17	10[254]	2 1/2[64]	7 1/2[191]	12	24
Z8700-8-PC	1 1/4[32]	1 1/4[32]	17	11[279]	2 1/2[64]	8 1/2[216]	12	24
Z8700-15-PC	1 1/4[32]	1 1/4[32]	17	15[381]	2 1/2[64]	12 1/2[318]	18	40
Z8701-PC	1 1/4[32]	1 1/2[38]	17	10 1/2[267]	3[76]	7 1/2[191]	12	24
Z8701-9-PC	1 1/4[32]	1 1/2[38]	17	12[305]	3[76]	9[229]	12	24
Z8701-15-PC	1 1/4[32]	1 1/2[38]	17	15[381]	3[76]	12[305]	18	42
Z8702-PC*	1 1/2[38]	1 1/2[38]	17	10 1/2[267]	3[76]	7 1/2[191]	12	24
Z8702-9-PC*	1 1/2[38]	1 1/2[38]	17	12[305]	3[76]	9[229]	12	24
Z8702-15-PC*	1 1/2[38]	1 1/2[38]	17	15[381]	3[76]	12[305]	18	42
Z8703B-PC**	1 1/2[38]	2[51]	17	12 1/2[318]	3 1/2[89]	9[229]	6	18
Z8704B-PC**	2[51]	2[51]	17	12 1/2[318]	3 1/2[89]	9[229]	6	18
Z8706-PC	1 1/4[32]	1 1/4[32]	20	10[254]	2 1/2[64]	7 1/2[191]	12	24
Z8707-PC	1 1/4[32]	1 1/2[38]	20	10 1/2[267]	3[76]	7 1/2[191]	12	24
Z8708-PC*	1 1/2[38]	1 1/2[38]	20	10 1/2[267]	3[76]	7 1/2[191]	12	24

OPTIONAL ACCESSORIES

Suffix	Description
-B	Brass Nuts
-BX	Box Escutcheon
-CE	Cast Brass Escutcheon with Setscrew
-D	Deep Escutcheon (Note = not available for Z8703B-PC and Z8704B-PC)
-J	Metal to Metal Ground Joint Connection
-WC	Waste Connections - Compression
-15	15[381] C Dim. 1 1/4[32] and 1 1/2[38] Only
-18	18[457] C Dim. 1 1/4[32] and 1 1/2[38] Only

* COMES WITH OPTIONAL 1-1/2" x 1-1/4" REDUCTION POLY-WASHER FOR INLET

** SHIPPED WITH BRASS NUTS UNLESS OTHERWISE SPECIFIED

ZURN INDUSTRIES, LLC • COMMERCIAL BRASS OPERATION • 2640 SOUTH WORK STREET • FALCONER NY 14733

Phone: 1-800-997-3876 • Fax: 1-919-775-3541 • www.zurn.com

In Canada: ZURN INDUSTRIES LIMITED • 3544 Nashua Drive • Mississauga, Ontario L4V1L2 • Phone: 905/405-8272 Fax: 905/405-1292

SH-1 SHOWER VALVE ONLY
LEONARD 4500-63002-1.5 PRESSURE BALANCED
SHOWER VALVE WITH HAND SHOWER ASSEMBLY

PRESSURE ACTUATED SHOWER VALVES

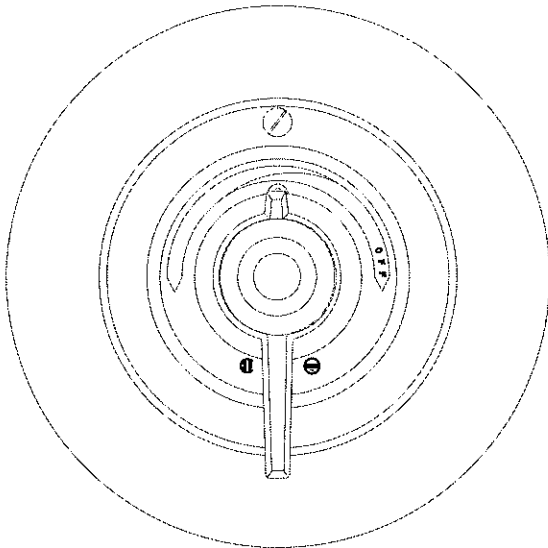
Submittal Data Sheet S-1051
August, 2018

AQUATROL® 4500



1/2" Inlets and Outlet

SHOWER OR TUB/SHOWER



4500 AQUATROL® Pressure Actuated mixer

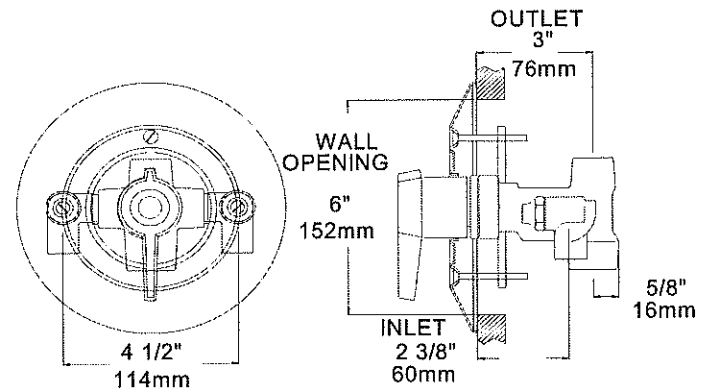
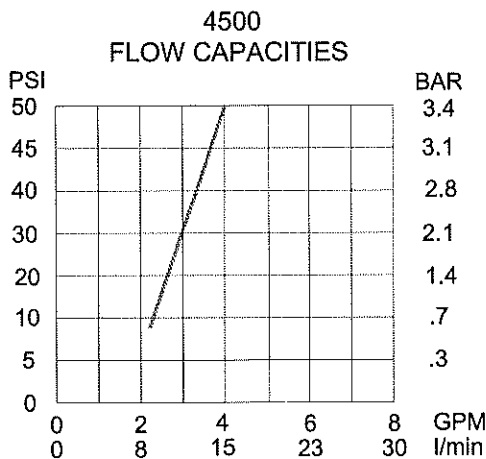
- Durable stainless steel balancing piston to equalize hot and cold supply pressures.
- Built-in shutoff for single handle operation
- Removable one piece upper and lower valve seat
- Internal parts of bronze and stainless steel
- Cast wall flange and lever handle, polished chrome plated
- Maximum operating pressure: 125 PSIG (860KPA)
- Adjustable high temperature limit stop set for 110°F* (43°C)
- Color coded dial, Off through Hot, with directional indicators
- Angle checkstops, copper tube connection
- Plasterguard/thin wall mounting bracket included.
- Minimum flow 1.5 GPM (5.7 l/min)

Valve is ASSE 1016 – Type P Certified
Valve is CSA B.125-16 – Type P Certified



Options:

— VP vandal proof screws



WARNING: This product can expose you to chemicals including lead, which is known to the State of California to cause cancer. For more information, go to www.P65Warnings.Ca.gov

Note: Leonard Valve Company reserves the right of product, or design modifications without notice or obligation. modifications without notice or obligation.

*NOTE: A limit stop, set for 110°F (43°C), is simply a mechanical setting to prevent excessive handle rotation. If incoming water is hotter than 135°F (57°C), the temperature of the factory test, the valve when turned to full HOT may deliver water in excess of 110°F and the limit stop **MUST BE RESET BY THE INSTALLER**


Job # _____
Arch/Eng. _____
Contractor _____

Engineer's Approval



1360 Elmwood Avenue, Cranston, RI 02910 USA
Phone: 401.461.1200 Fax: 401.941.5310
Email: info@leonardvalve.com
WEB SITE: <http://www.leonardvalve.com>

WALL GRAB BARS & HAND SHOWERS SETS

62001 

24" (61 cm) ADA wall grab bar, stainless steel, 1.5" (38mm) outside diameter, concealed screw mounting system (mounting hardware included)

Slide mechanism operable by left hand, right hand, or closed first, 2.65" (67mm) lever, meets Handicapped Accessibility Standard of less than 5lb handle operating force and can swivel to ensure easy reach

Withstands 1000 lb pull (NOTE: Grab Bar must be securely attached to wall or backing to provide safety)

Wall Grab bar can be securely mounted at 90 degree angle

Hand spray with non-positive push button shut-off

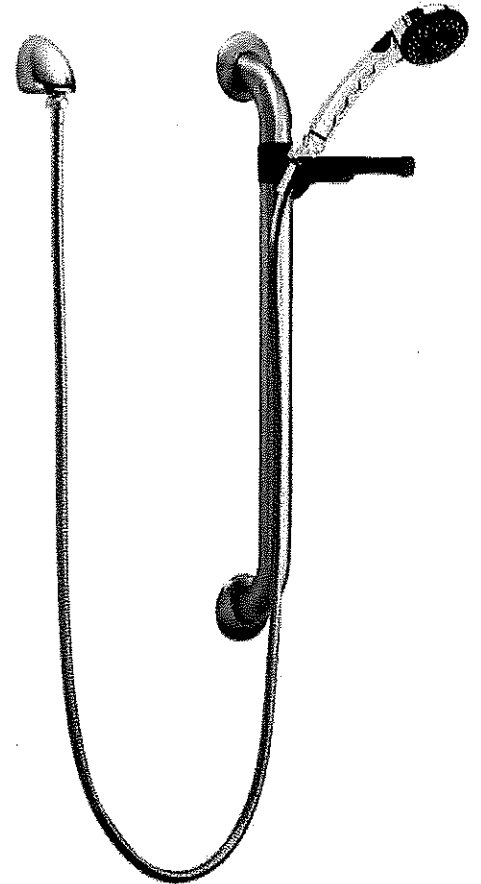
Braided stainless steel flexible and extended out from 60" to 84"


2 wall hooks

Double check valve backflow preventer

Supply elbow and flange

2.5 GPM (9.5 l/min.) max. flow rate




62001-1.5 

- Same as above except 1.5 GPM (5.7 l/min.)



62003 

- Same as above except 36" grab bar (91 cm)

62003-1.5 

- Same as above except 36" grab bar (91 cm) & 1.5 GPM (5.7 l/min.)



OPTIONAL (fits all models):

SUFFIX QD - Quick connector set

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Leonard Valve Company

**LEONARD**
WATER TEMPERATURE CONTROLS

1360 Elmwood Avenue, Cranston, RI 02910 USA

Phone: 401.461.1200 Fax: 401.941.5310

Email: info@leonardvalve.com

WEB: <http://www.leonardvalve.com>

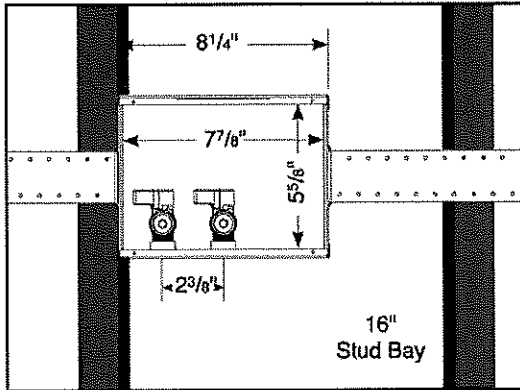
WB-1 WASHER BOX
GUY GRAY MWB-16 WASHER BOX
WITH VALVES

SPECIFICATION SUBMITTAL SHEET

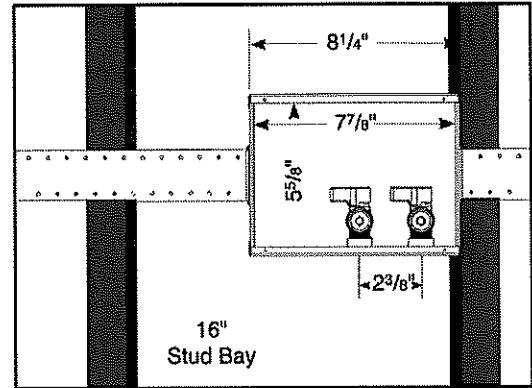


REVERSIBLE DRAIN WHITE POWDER COATED WMOB with Quarter Turn Valves

Left hand Drain Option



Right hand Drain Option



Specifications:

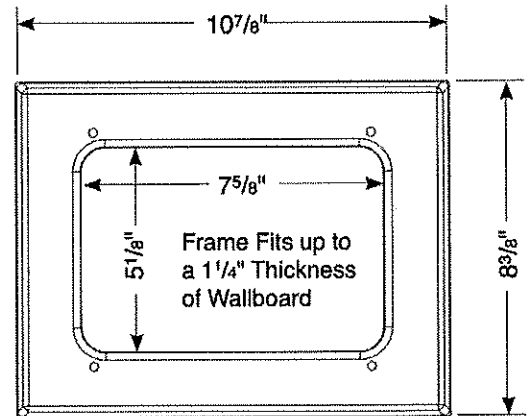
Furnish and install reversible drain white powder coated econo metal washing machine outlet box with quarter turn valves. Unit shall be Guy Gray product code checked below as manufactured by IPS Corporation.

Box Material:

White Powder Coat on Cold Rolled Steel Finish
20 gauge box with 20 gauge faceplate

Valve & Drain Options:

Qtr. Turn Valve with MIP/Sweat, CPVC, PEX or Wirsbo connection. 2" Slipnut, PVC or ABS drain. Valves comply with ASME A112.18.1.



Item #	Product Description	Model #	Quantity
82112	Reversible Qtr Turn Valves* - 1/2" Sweat Conx., Unassembled	MWB-3	5
82113	Reversible Qtr Turn Valves* - 1/2" Sweat Conx. - Cont. Pack, Unassembled	MWB-4	5
82114	Reversible Qtr Turn Valves* - 1/2" CPVC Conx., Unassembled	MWB-5	5
82115	Reversible Qtr Turn Valves* - 1/2" CPVC Conx. - Cont. Pack, Unassembled	MWB-6	5
82148	Reversible Qtr Turn Hammer Arrester Valves - 1/2" Sweat Conx., Unassembled	MWB-16	5
82152	Reversible Qtr Turn Valves - 1/2" Sweat Conx./PVC Drain Conx., Unassembled	MWB-17	5
82153	Reversible Qtr Turn Valves - 1/2" Sweat Conx./ABS Drain Conx., Unassembled	MWB-18	5
82165	1/2" Qtr Turn PEX Valve - 2" ABS Drain Conx., Unassembled	MWB25	5
82184	1/2" Qtr Turn Wirsbo® Valves - 2" Slipnut Drain Kit, Unassembled	MWB23	5
82314	Box w/o valves, Unassembled	MWBRLV	5



WCO WALL CLEANOUT COVER
ZURN Z1469 STAINLESS STEEL COVER
WITH SCREW

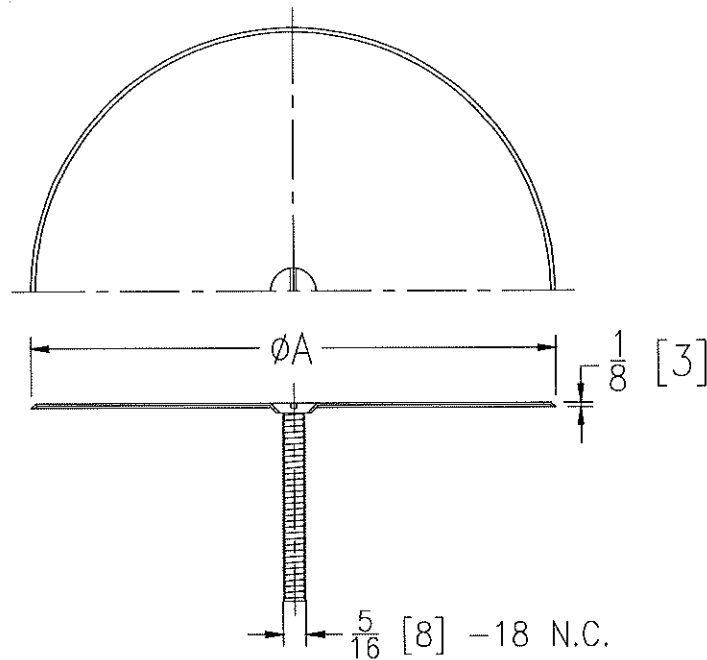
**Z1469**

ROUND ACCESS COVER

SPECIFICATION SHEET

TAG _____

Dimensional Data (inches and [mm]) are Subject to Manufacturing Tolerances and Change Without Notice



Product Designation	A Cover Dia. IN [mm]	Nominal Pipe Size	Approx. Wt. Lbs. [kg]
-4	4 [102]	2, 3, 3-1/2 [51, 76, 89]	1 [.5]
-5	5 [127]	2, 3, 3-1/2 [51, 76, 89]	1 [.5]
-7	7 [178]	4, 5 [102, 127]	2 [1]
-9	9 [229]	6 [152]	3 [1.5]
-11	11 [279]	8 [203]	4 [2]

ENGINEERING SPECIFICATION: ZURN ZS1469
Round stainless steel access cover complete with securing screw.

OPTIONS (Check/specify appropriate options)

PREFIXES

- ZAB Bronze Polished Cover
- ZS Stainless Steel Polished Cover*

SUFFIXES

- ____ -SL Screw Longer Than 3-1/2 [89]
- ____ -VP Vandal-Proof Screw

* Regularly furnished unless otherwise specified.

Zurn Industries, LLC | Specification Drainage Operation
1801 Pittsburgh Avenue, Erie, PA U.S.A. 16502 · Ph. 855-663-9876, Fax 814-454-7929
In Canada | Zurn Industries Limited
3544 Nashua Drive, Mississauga, Ontario L4V 1L2 · Ph. 905-405-8272, Fax 905-405-1292
www.zurn.com

Rev. F
Date: 07/26/16
C.N. No. 134852
Prod. | Dwg. No. Z1469

FD-1 FLOOR DRAIN
ZURN ZN415-B5" CAST IRON FLOOR DRAIN
WITH 5" N.B. STRAINER



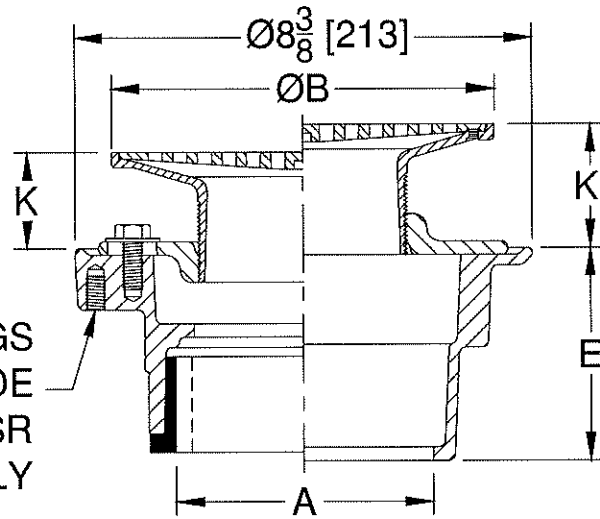
Z415B

BODY ASSEMBY W/ "TYPE B" STRAINER

SPECIFICATION SHEET

TAG _____

Dimensional Data (inches and [mm]) are Subject to Manufacturing Tolerances and Change Without Notice



FOUR 3/8-16NC TAPPINGS PROVIDED ON UNDERSIDE FOR -SA, -SQ, AND -SR SUFFIX OPTIONS ONLY

Dimensions in In [mm]						Approx. Wt. Lbs. [kg]	Strainer Open Area Sq. In. [cm ²]
A Pipe Size	B Strainer Dia.	K		K'			
		Min.	Max.	Min.	Max.		
2,3 [51,76]	5 [127]	1 [25]	1-1/2 [38]	1-3/32 [28]	2-1/4 [57]	11 [5]	6-1/4 [40]
2,3,4 [51,76,102]	6 [152]	1 [25]	1-25/32 [45]	1-13/32 [36]	2-17/32 [64]	13 [6]	9 [58]
2,3,4 [51,76,102]	7 [178]	1 [25]	2-1/8 [54]	1-23/32 [44]	2-7/8 [73]	14 [6]	12 [77]
3,4 [76,102]	8 [203]	1-5/32 [30]	2-1/8 [54]	1-3/4 [44]	2-7/8 [73]	16 [7]	19 [123]
6 [152]	8 [203]	1-5/32 [30]	2-1/8 [54]	1-3/4 [44]	2-7/8 [73]	18 [8]	19 [123]
6 [152]	10 [254]	1-7/16 [37]	2-1/2 [64]	2 [51]	3-1/4 [83]	22 [10]	23 [148]

ENGINEERING SPECIFICATION: ZURNZN415B

Floor and shower drain, Dura-Coated cast iron body with bottom outlet, combination invertible membrane clamp and adjustable collar with seepage slots and "TYPE B" polished nickel bronze, light-duty heel proof strainer.

OPTIONS (Check/specify appropriate options)

PIPE SIZE

- 2,3,4 [51,76,102]
- 2 [51]
- 3 [76]
- 4 [102]
- 6 [152]
- 2,3,4 [51,76,102]
- 2,3,4 [51,76,102]

(Specify size/type) **OUTLET**

- _____ IC Inside Caulk
- _____ IP Threaded
- _____ IP Threaded
- _____ IP Threaded
- _____ IP Threaded
- _____ NH No-Hub
- _____ NL Neo-Loc

'E' BODY HT. DIM.

- 4-3/16 [106]
- 2-7/16 [62]
- 2-3/4 [70]
- 2-13/16 [71]
- 2-7/8 [73]
- 3-13/16 [97]
- 3-7/8 [98]

PREFIXES

- ZB D.C.C.I. Body Assembly w/ Polished Bronze Top
- ZN D.C.C.I. Body Assembly w/ Polished Nickel Bronze Top*

SUFFIXES

- AR Acid Resisting Epoxy Coated Cast Iron
- CP Chrome-Plated Bronze Top
- G Galvanized Cast Iron
- HD Heavy-Duty Slotted Grate (ZN 5,6 [127,152] Sizes Only)
- OF Oval Funnel (Z329-7) (7, 8, 10 [178, 203, 254] Strainers Only)
- P Trap Primer Connection (Specify 1/2 [13] or 3/4 [19])
- PC Protective Cover
- SA Stabilizer Assembly (See Z1035)
- SQ Stabilizer Q-Deck (See Z1035-Q)

- SR Stabilizer Ring
- TC Neo-Loc Test Cap Gasket (2,3,4 [51,76,102] NL Outlet Only)
- U 1-3 [25-76] High Extension Adapter
- V Backwater Valve
- VP Vandal-Proof Secured Top
- Y Sediment Bucket
- 4 4 [102] Diameter Funnel (Z328)
- 90 90° Threaded Side Outlet Body Assembly (2,3 [51,76] Only)

* Regularly furnished unless otherwise specified.

HB-1 HOSE BIBB
WOODFORD 24P 3/4" CHROME HOSE BIBB
WITH VACUUM BREAKER



Anti-Siphon Wall Faucets

Model 24/B24/Y24

The Model 24 and B24 are anti-siphon, vacuum breaker protected wall faucets designed for irrigation purposes in mild climate areas. The Model B24 is enclosed in a flush mounted wall box. Both models are designed to blend with modern architecture for installation on or in homes, service stations, churches, motels, drive-in restaurants, etc. The Model Y24 is designed to be used on a stand pipe in the lawn and garden, etc.

SPECIFICATIONS:

VACUUM BREAKER - ANTI-SIPHON:

- NIDEL® Model 34HF with 3/4 inch male hose thread
- ASSE Standard 1011 approved
- IAPMO® listed
- Canadian Standards Association

EPDM PACKING: Prevents leaking.

PACKING NUT: Adjustable brass nut with deep stem guard.

VALVE SEAT: Standard "O" size washer.

HANDLES: Furnished with polycarbonate wheel handle and loose tee key.

Optional: Metal wheel handle.

INLETS: Model 24 as shown below.
Model B24: 24P- 1/2" or 24P 3/4" only.
Model Y24: 3/4" FPT.

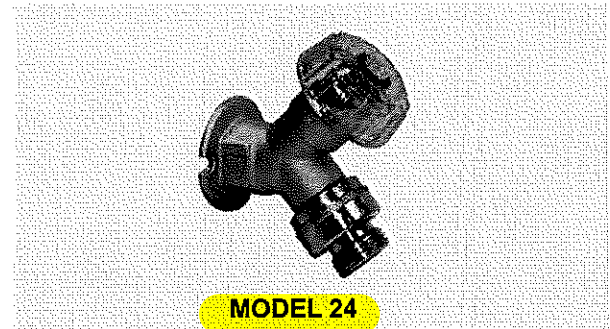
MAX PRESSURE: 125 p.s.i.

MAX TEMPERATURE: 120° F

SHIPPING WEIGHT: (per unit)

MODEL 24 & Y24: 1 lb

MODEL B24: 13 lbs (brass or chrome box)
6 lbs (aluminum box)

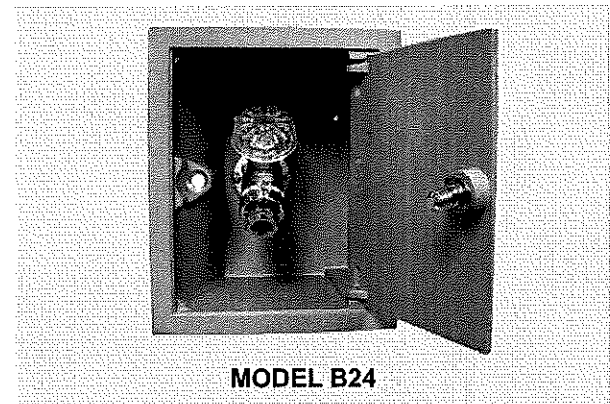


MODEL 24

Exterior Finish:

Standard - Chrome (CH) ←

Optional- Rough Brass (BR) or Polished Chrome (PC)



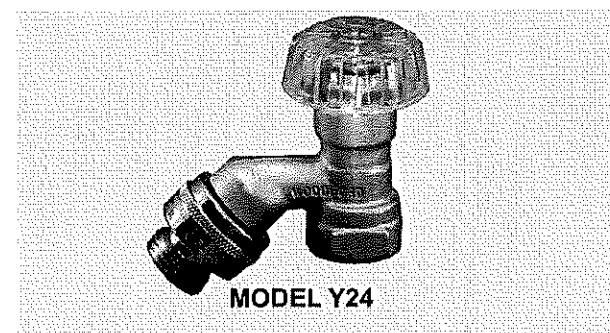
MODEL B24

Exterior Finish:

Standard - Chrome (CH)

Optional- Rough Brass (BR) or Polished Brass (PB)

Other Options: Anodized Aluminum Box (AL)



MODEL Y24

Exterior Finish:

Standard - Chrome (CH)

Optional- Rough Brass (BR) or Polished Chrome (PC)

Inlet Descriptions

MODEL 24/B24

P-1/2" Inlet

1/2" FPT

P-3/4" Inlet

3/4" FPT



MODEL 24 ONLY

CP Inlet

COMBINATION

1/2" COPPER TUBE

1/2" MPT



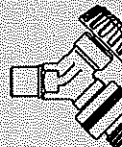
MODEL 24 ONLY

C Inlet

COMBINATION

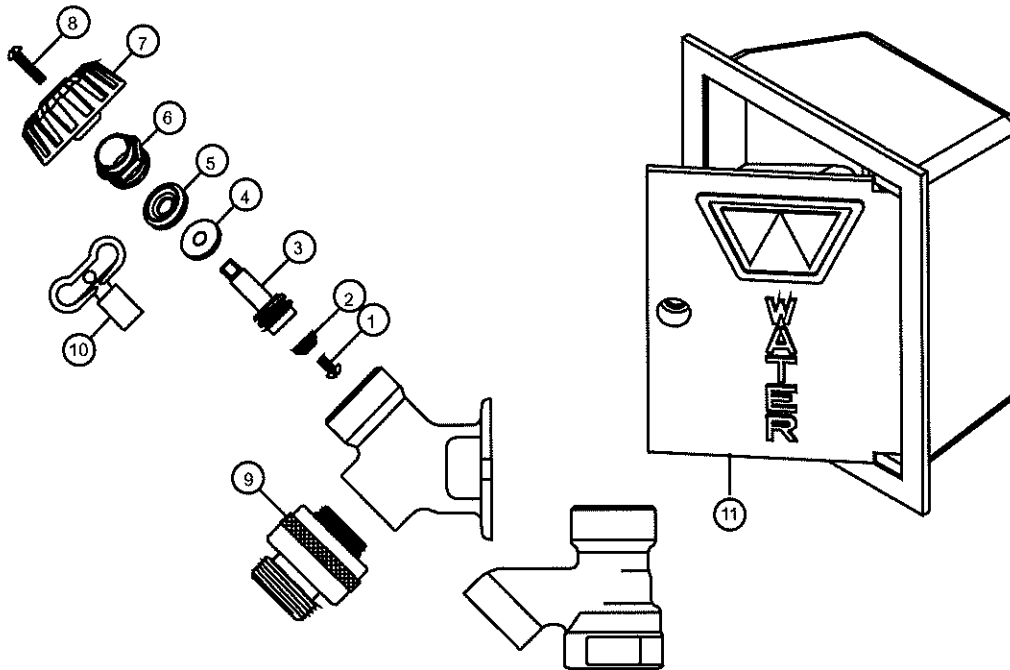
1/2" COPPER TUBE

3/4" COPPER TUBE



**For Installation / Troubleshooting Instructions go to
www.woodfordmfg.com or call 1-800-621-6032**

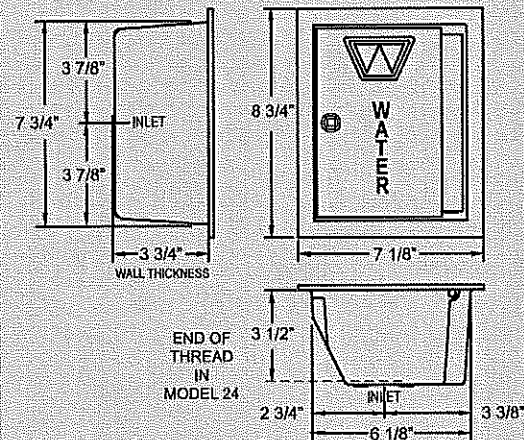
WOODFORD



MODEL 24/B24/Y24 PARTS LIST

ITEM	PART#	DESCRIPTION
1	30009	Washer Screw
2	30008	Washer
3	30104	Operating Stem
4	30105	Packing Support Washer
5	30247	EPDM Packing
6	30109	Packing Nut - Chrome
7	30107	Packing Nut - Brass
7	30120	Wheel Handle - Clear
	30233	Wheel Handle - Tan
8	30121	Handle Screw - Nickel
	30002	Handle Screw - Brass
9	34HF-CH	34HF Vacuum Breaker - Chrome
	34HF-BR	34HF Vacuum Breaker - Brass
10	50009	Tee Key
11	B24BX	Box/Door Assembly - Chrome
	B24BX-BR	Box/Door Assembly - Brass
	B24BX-PB	Box/Door Assembly - Polished Brass
	B24BX-AL	Box/Door Assembly - Anodized Aluminum
	RK-24	Chrome Repair Kit (Includes items 1-8)
	RK-H34	Brass Repair Kit (Includes items 1-8)

**MODEL B24
Rough-In Dimensions**



Manufactured under one or more of the following patents: U.S. Patents: 3,414,001; 3,543,786; 4,178,956; 4,316,481; D216,790; D216,791; D277,365; D277,366; Canada Patents: 822,458; 852,529; 865,995

For more information contact...

WOODFORD MANUFACTURING COMPANY

2121 Waynoka Road, Colorado Springs, Colorado 80915 • Phone: (800) 621-6032 • Fax: (800) 765-4115

To view our complete product line visit: www.woodfordmfg.com or email: sales@woodfordmfg.com

A Division Of WCM Industries, Inc.

**WATER HAMMER ARRESTORS
ZURN Z1700 STAINLESS STEEL WATER
HAMMER ARRESTOR**

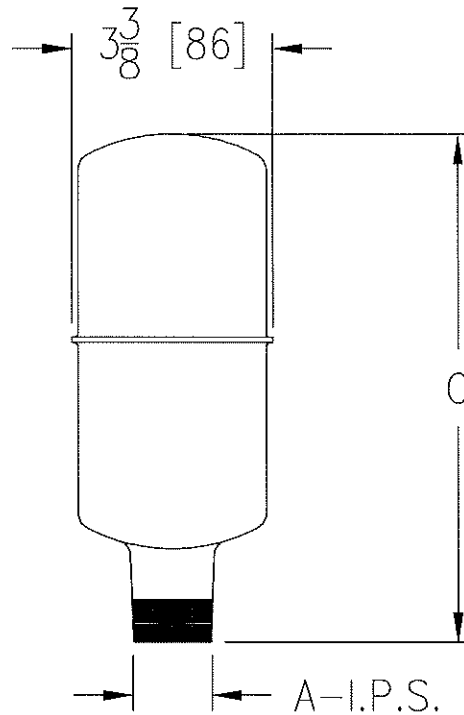
**Z1700**

SHOKTROL WATER HAMMER ARRESTORS

SPECIFICATION SHEET

TAG _____

Dimensional Data (Inches and [mm]) are Subject to Manufacturing Tolerances and Change Without Notice



Size	A Inches [mm]	C Inches [mm]	Approx. Wt. Lbs. [kg]	Fixture Unit Capacity
100	3/4 [19]	3-1/2 [90]	1 [.5]	1-11
200	3/4 [19]	3-1/2 [90]	1-1/2 [.7]	12-32
300	1 [25]	4-1/2 [114]	1-3/4 [.8]	33-60
400	1 [25]	6-5/8 [168]	2-3/4 [1.2]	61-113
500	1 [25]	7-1/2 [191]	3-1/4 [1.5]	114-154
600	1 [25]	8-1/2 [216]	3-3/4 [1.7]	155-330

Pressure and Temperature Requirements:
 Maximum Working Pressure: 125 psi [862 Kpa]
 Maximum Static Pressure: 250 psi [1724 Kpa]
 Operating Temperature Range: 33 °F to 300 °F [1 °C to 149 °C]

ENGINEERING SPECIFICATION: ZURN Z1700

Shoktrol Water Hammer Arrestors are regularly furnished in all stainless steel construction. Pipe threads are accurately machined to assure tight connection. 3/4" [19mm] male I.P.S. inlet is standard for the 100 and 200 size units, while 1" [25mm] male I.P.S. inlet is standard for sizes 300 thru 600.

All sizes of Zurn Z1700 Shoktrol Water Hammer Arrestors comply with the following specifications:

PDI WH-201
 ANSI A112.26.1M
 ASSE 1010

Where required in piping systems, properly sized water hammer arrestors shall be ZURN Z1700 (specify size) with nesting type bellows contained within a casing having sufficient displacement volume to dissipate the calculated kinetic energy generated, in the piping system. Both casing and bellows constructed of Type 304 stainless steel.

* Regularly furnished unless otherwise specified.

Zurn Industries, LLC | Specification Drainage Operation
 1801 Pittsburgh Avenue, Erie, PA U.S.A. 16502 · Ph. 855-663-9876, Fax 814-454-7929
 In Canada | Zurn Industries Limited
 3544 Nashua Drive, Mississauga, Ontario L4V 1L2 · Ph. 905-405-8272, Fax 905-405-1292
www.zurn.com

Rev. D
 Date: 11/10/2016
 C.N. No. 135481
 Prod. | Dwg. No. Z1700

Quality People. Building Solutions.

Comfort Systems USA (Arkansas), Inc.
P.O. Box 16620
Little Rock, AR 72231
Phone 501-834-3320
Fax 501-834-5416

Date: 5/5/2022

Return Request: 5/15/2022

Project: EJ Towbin Healthcare Center

Supplier: LR Winnelson

Manufacturer: Various

Submittal: Plumbing Fixtures (Showers) Re-Submittal #1

Submittal Number: 22 40 00-02

Drawing # and Installation: Plumbing Drawings

ARCHITECT

Johnson Danforth & Associates
2200 N. Rodney Parham, Suite 210
Little Rock, AR 72212
501-404-4811

ENGINEER

Insight Engineering
201 S. Chester, Suite B
Little Rock, AR 72201
501-237-3077

GENERAL CONTRACTOR

CDI Contractors
3000 Cantrell Re.
Little Rock, AR 72202
501-666-4300

MECHANICAL SUBCONTRACTOR

Comfort Systems USA (Arkansas), Inc.
9924 Landers Rd.
N. Little Rock, AR 72117
501-834-3320

Notes:

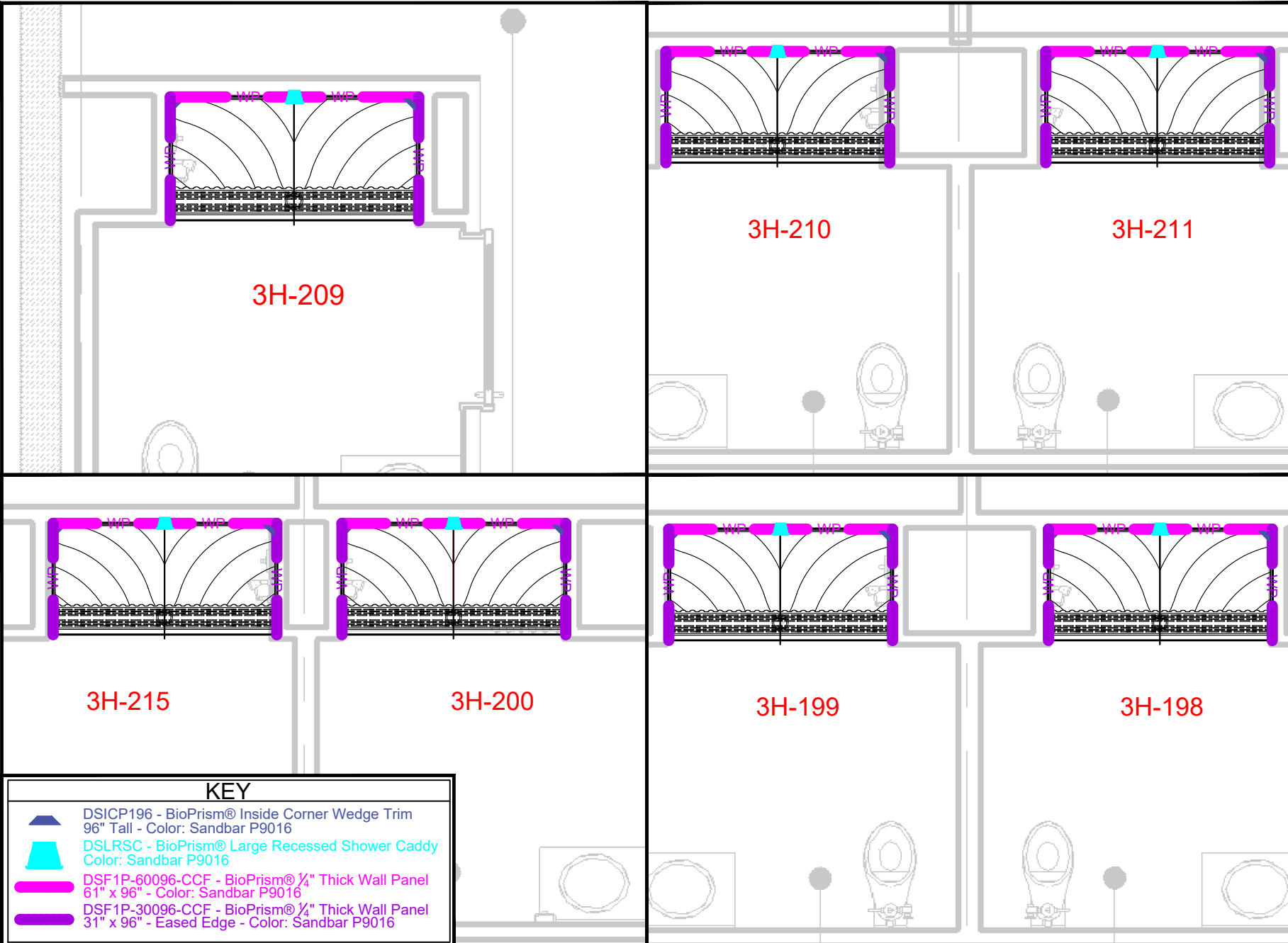
CSUSA PROJECT NO.

22-873





dpierce@comfortar.com

9924 Landers Rd.
No. Little Rock, AR 72117

EJ TOWBIN HEALTHCARE CENTER
3H RENOVATION
NORTH LITTLE ROCK, ARKANSAS



KEY

-  DSJCP196 - BioPrism® Inside Corner Wedge Trim
96" Tall - Color: Sandbar P9016
-  DSLRSC - BioPrism® Large Recessed Shower Caddy
Color: Sandbar P9016
-  DSF1P-60096-CCF - BioPrism® ¼" Thick Wall Panel
61" x 96" - Color: Sandbar P9016
-  DSF1P-30096-CCF - BioPrism® ¼" Thick Wall Panel
31" x 96" - Eased Edge - Color: Sandbar P9016

inpro.
 S80 W18766 Apollo Drive
 Muskego, WI 53150 USA
 Phone: 800.222.5556
 Fax: 262.679.9127
 www.inprocorp.com



PROJECT: Eugene J Towbin Healthcare Center
 Design Private/Semi-Private Bed Spaces for 3H
 Little Rock, Arkansas

ARCHITECT: Johnson Danforth & Associates
 Little Rock, Arkansas

SHEET TITLE: Shop Drawings

REVISION	DATE

INSTALLATION QUESTIONS?
 CALL 866-EZINPRO

This sheet identifies products provided
 by the following Inpro division:
ENDURANT®
 WASHROOM SYSTEMS

SPEC. SECTION:	102116
DRAWN BY:	JTF
INPRO No.:	1261894
SCALE:	N.T.S.
DATE:	05.04.22

SHEET No.
 2 of 7

