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JACKSON COUNTY AIRPORT TERMINAL BUILDING

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22-0000 Plumbing O&M



Jackson County Airport O&M Manual

Submitted by:

Matt Davis Plumbing
1994 Old Covington Rd NE
Conyers, GA 30013

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SLOAN® Water Closet Installation Instructions

Water Connects Us®

THE RIGHT CHOICE

We thank you for your purchase. Our products are 100% tested but should you have any questions, please contact us by phone or at our web site.



⚠ WARNING: Any vitreous china can chip or break if the bolts or nuts are over-tightened or if mishandled.

BEFORE YOU START...

- Check all local plumbing and building codes.
- Check for any damage to the new water closet before installation.

WHAT YOU WILL NEED...

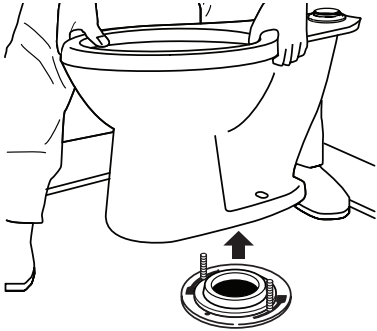
- Putty knife
- Safety glasses
- Measuring tape
- Spud wrench
- Sponge
- 10" adjustable wrench
- Large level
- Wax seal

NOTE: Plumbing System Requirements

- ✓ Minimum Flowing Pressure: 25 PSI
- ✓ Minimum Flow Rate: 25 GPM
- ✓ Maximum Static Pressure: 80 PSI

1. REMOVAL OF EXISTING WATER CLOSET

- Turn off the water supply.
- Disconnect the flush valve.
- Remove the existing water closet.



- Using putty knife, completely remove old wax seal from floor and bottom of water closet.
- Lay water closet down on padded surface to help protect the vitreous china.

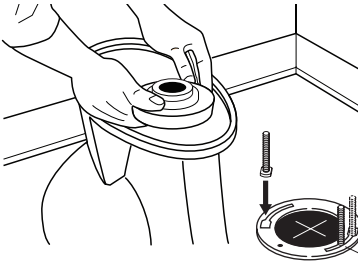


⚠ WARNING: Hazardous gases can escape through the closet flange if new water closet is not installed quickly. A temporary fix: place a large rag in the closet flange.

NOTE: All vitreous china dimensions shown in these drawings are nominal. Dimensions can vary within the tolerances established in the governing ASME A12.19.2/CSA B45.1 standard. Please take this into consideration when planning rough-in and plumbing layouts.

2. INSTALLING NEW WATER CLOSET

- Check rough-in dimensions and install or relocate flush valve and outlet as indicated.
- Record model number for reference.
- Place and press in a new wax seal around the water closet bottom outlet.
- Install new 5/16 "T-bolts.



- Take out the temporary rag (if used) from the water closet flange hole.
- Carefully align and lower the water closet over the flange and T-bolts.

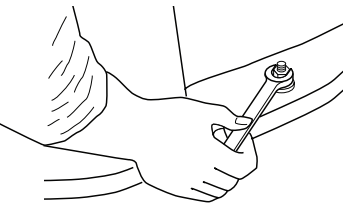
IMPORTANT! Do not lift or rock the water closet after replacement. The watertight seal will have to be replaced if breakage occurs.



- To seal, apply your full body weight around the water closet.
- Place the plastic cap base in the position indicated on cap as marked.
- The metal washers and nuts can now be placed on the bolt cap base and T-bolts.



- Tighten the nuts carefully.



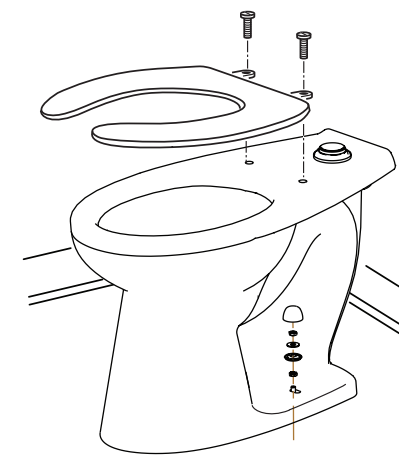
⚠ IMPORTANT! Do not overtighten the nuts, breakage and chipping of vitreous china can occur.

- Cut 1/4" or more over the top of the nut.
- Attach the bolt caps.

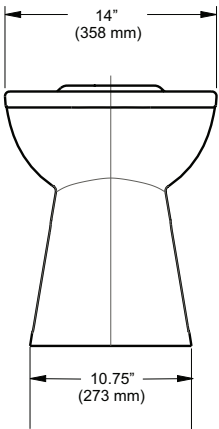
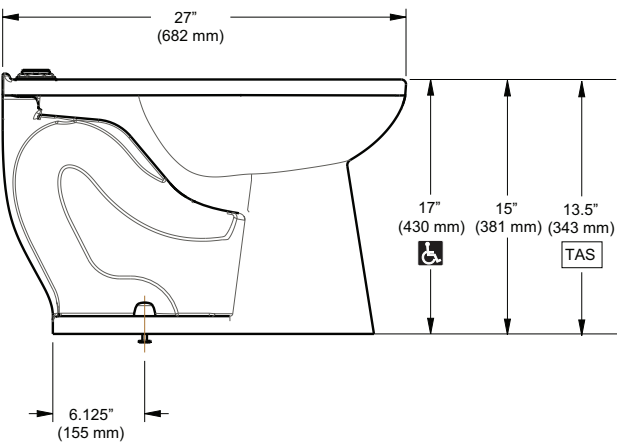
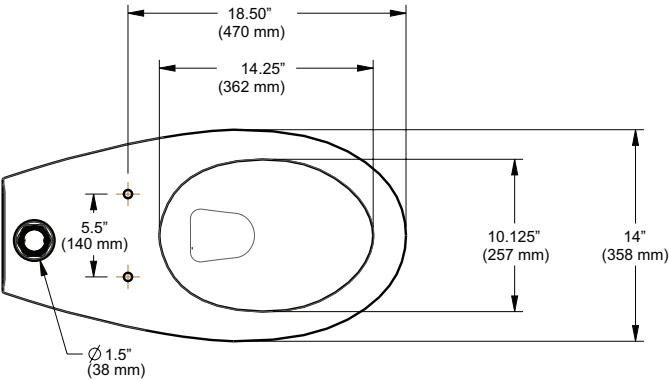
⚠ IMPORTANT! Product damage can occur if using a saw blade to cut off the excess T-bolt length. Make sure vitreous china is protected and covered.

3. COMPLETING THE INSTALLATION

- Flush valve should be installed to manufacturer's installation instructions.
- Turn on water supply valve.
- Install toilet seat (not included).



- Flush water closet a few times and check all connections for water seepage.
- Check for leaks.



TO MAXIMIZE THE PERFORMANCE OF YOUR SLOAN WATER CLOSET, USE ONLY SLOAN FLUSHOMETERS

CARE AND CLEANING OF VITREOUS CHINA

Clean water closet with a cleaner safe for vitreous china. Spray and wipe clean using soft cloth. Soft abrasive cleaners may be used to remove stains.

LIMITED WARRANTY

Sloan Valve Company warrants its products to be made of first class materials, free from defects of material or workmanship under normal use and to perform the service for which they are intended in a thoroughly reliable and efficient manner when properly installed and serviced, for a period of three years (one year for special finishes) from date of purchase. During this period, Sloan Valve Company will, at its option, repair or replace any part or parts which prove to be thus defective if returned to Sloan Valve Company, at customer's cost, and this shall be the sole remedy available under this warranty. No claims will be allowed for labor, transportation or other incidental costs. This warranty extends only to persons or organizations who purchase Sloan Valve Company's products directly from Sloan Valve Company for purpose of resale.

THERE ARE NO WARRANTIES WHICH EXTEND BEYOND THE DESCRIPTION ON THE FACE HEREOF. IN NO EVENT IS SLOAN VALVE COMPANY RESPONSIBLE FOR ANY CONSEQUENTIAL DAMAGES OF ANY MEASURE WHATSOEVER.

NOTE: IN NO EVENT SHALL THE SLOAN VALVE COMPANY BE LIABLE FOR INCIDENTAL DAMAGES, RESULTING FROM IMPROPER INSTALLATION, OR FOR DAMAGES CAUSED BY NEGLIGENCE, ABUSE OR ALTERATION.

The information contained in this document is subject to change without notice.

SLOAN®

SLOAN

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Code No. 0816195

Rev. 6 (02/15)

INSTALLATION INSTRUCTIONS FOR EXPOSED ROYAL® FLUSHOMETERS



**Closet Flushometer
for 1½" Top Spud**

MODELS 110/111,
113, 115 & 116

**Service Sink Flushometer
for 1½" Top Spud**

MODEL 117



**Urinal Flushometer
for 1¼" Top Spud**

MODEL 180

**Urinal Flushometer
for ¾" Top Spud**

MODEL 186



**Closet Flushometer
for 1½" Back Spud**

MODELS 120, 121 & 122

LIMITED WARRANTY

Unless otherwise noted, Sloan Valve Company warrants this product, manufactured and sold for commercial or industrial uses, to be free from defects in material and workmanship for a period of three (3) years (one (1) year for special finishes, SF faucets, PWT electronics and 30 days for PWT software) from date of first purchase. During this period, Sloan Valve Company will, at its option, repair, replace, or refund the purchase price of any product which fails to conform with this warranty under normal use and service. This shall be the sole and exclusive remedy under this warranty. Products must be returned to Sloan Valve Company, at customer's cost. No claims will be allowed for labor, transportation or other costs. This warranty extends only to persons or organizations who purchase Sloan Valve Company's products directly from Sloan Valve Company for purpose of resale. This warranty does not cover the life of the batteries.

THERE ARE NO WARRANTIES WHICH EXTEND BEYOND THE DESCRIPTION ON THE FACE HEREOF. IN NO EVENT IS SLOAN VALVE COMPANY RESPONSIBLE FOR ANY CONSEQUENTIAL DAMAGES OF ANY MEASURE WHATSOEVER.

PRIOR TO INSTALLATION

Before you install the flushometer, be sure the items listed below are installed. Also, refer to the rough-in diagram below.

- Closet fixture • Drain line • Water supply line

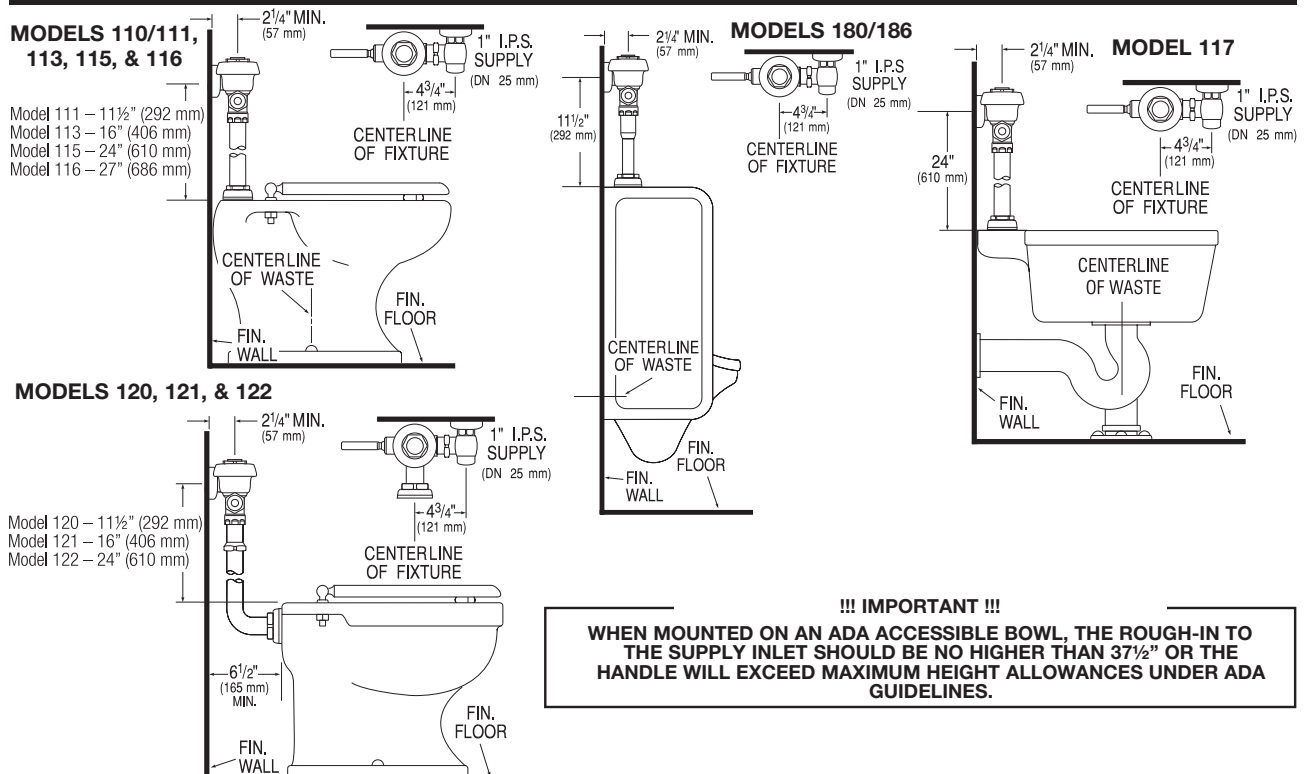
IMPORTANT:

- **ALL PLUMBING SHOULD 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.**

Sloan's flushometers are designed to operate with 15 to 80 psi (103 to 552kPa) of water pressure. **THE MINIMUM PRESSURE REQUIRED TO THE VALVE IS DETERMINED BY THE TYPE OF FIXTURE SELECTED.**

Consult fixture manufacturer for minimum pressure requirements. Most High Efficiency water closets require a minimum flowing pressure of 25 psi (172 kPa). Many building codes and the ASME A112.19.2 fixture standard list Maximum static water pressure as 80 PSI (552 kPa).

ROUGH-INS



TOOLS REQUIRED FOR INSTALLATION

- Straight blade screwdriver
- Sloan A-50 Super-Wrench™, Sloan A-109 Plier Wrench or smooth jawed spud wrench

!!! IMPORTANT !!!

PROTECT THE CHROME OR SPECIAL FINISH OF SLOAN FLUSHMETERS — DO NOT USE TOOTHED TOOLS TO INSTALL OR SERVICE THESE VALVES. USE A SLOAN A-50 SUPER-WRENCH™, SLOAN A-109 PLIER WRENCH OR SMOOTH JAWED SPUD WRENCH TO SECURE ALL COUPLINGS. SEE “CARE AND CLEANING” SECTION.

!!! IMPORTANT !!!

NEVER OPEN CONTROL STOP TO WHERE THE FLOW FROM THE VALVE EXCEEDS THE FLOW CAPABILITY OF THE FIXTURE. IN THE EVENT OF A VALVE FAILURE, THE FIXTURE MUST BE ABLE TO ACCOMMODATE A CONTINUOUS FLOW FROM THE VALVE.

!!! IMPORTANT !!!

WITH THE EXCEPTION OF CONTROL STOP INLET, DO NOT USE PIPE SEALANT OR PLUMBING GREASE ON ANY VALVE COMPONENT OR COUPLING!

!!! IMPORTANT !!!

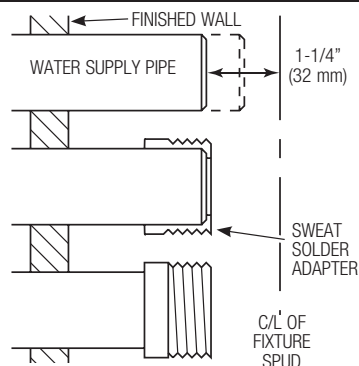
THIS PRODUCT CONTAINS MECHANICAL AND/OR ELECTRICAL COMPONENTS THAT ARE SUBJECT TO NORMAL WEAR. THESE COMPONENTS SHOULD BE CHECKED ON A REGULAR BASIS AND REPLACED AS NEEDED TO MAINTAIN THE VALVE'S PERFORMANCE.

Please take the time to read this manual to ensure proper product installation and longevity.

When further assistance is required, please contact your local Sloan Representative or Sloan Technical Support at:
1-888-SLOAN-14 (1-888-756-2614)

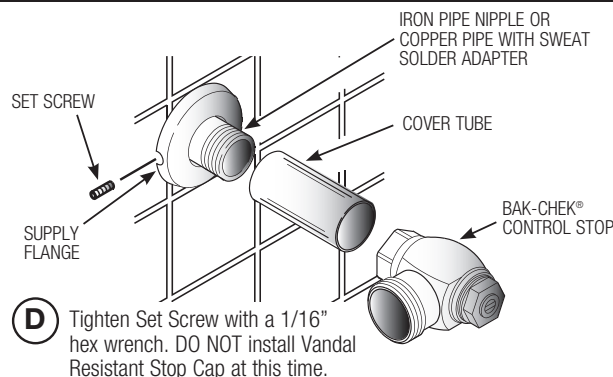
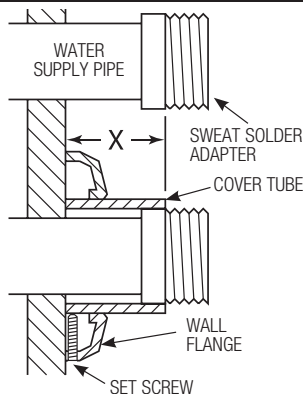
1 - INSTALL OPTIONAL SWEAT SOLDER ADAPTER (ONLY IF YOUR SUPPLY PIPE DOES NOT HAVE A MALE THREAD)

- Measure from finished wall to C/L of fixture spud. Cut pipe 1¼" (32 mm) shorter than this measurement. Chamfer O.D. and I.D. of water supply pipe.
- Slide threaded adapter fully onto pipe.
- Sweat solder the Adapter to pipe.



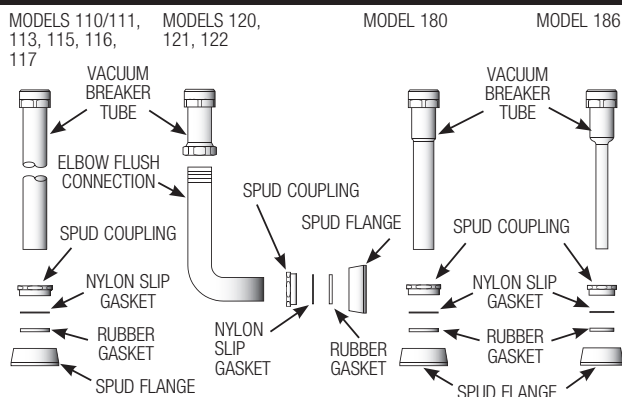
2 - INSTALL COVER TUBE, WALL FLANGE AND CONTROL STOP TO SUPPLY PIPE

- Measure from finished wall to first thread of Adapter or threaded supply pipe (dimension "X"). Cut Cover Tube to this length.
- Slide Cover Tube over pipe. Slide Wall Flange over Cover Tube until against wall.
- Thread Control Stop onto pipe. Tighten with a wrench.



3 - INSTALL VACUUM BREAKER FLUSH CONNECTION

- Slide Spud Coupling, Nylon Slip Gasket, Rubber Gasket and Spud Flange over Vacuum Breaker Tube.
- Insert Tube into Fixture Spud.
- Hand tighten Spud Coupling onto Fixture Spud.



4 - INSTALL FLUSHOMETER AND TRIPLE SEAL HANDLE ASSEMBLY

NOTE

For high efficiency urinal flushometers (0.5, 0.25 and 0.125 gpf), it is necessary to first insert the flow control component into the tailpiece assembly. See the H1015A flow control kit and separate instructions for details on how to install.

- A** Lubricate tailpiece O-ring with water. Insert Adjustable Tailpiece into Control Stop. Tighten Tailpiece Coupling by hand.
- B** Align Flushometer directly above the Vacuum Breaker Flush Connection by sliding the Flushometer Body IN or OUT as needed. Tighten Vacuum Breaker Coupling by hand.

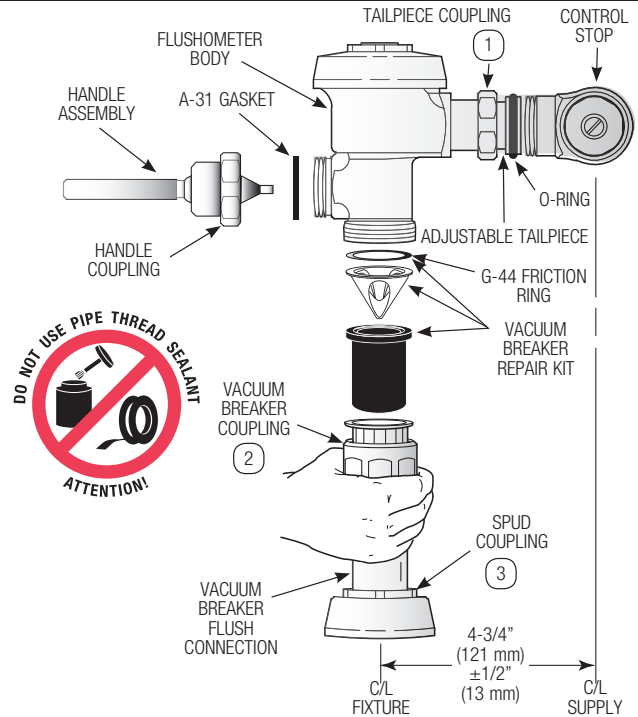
NOTE

Maximum adjustment of the Sloan Adjustable Tailpiece is 1/2" (13 mm) IN or OUT from the standard 4-3/4" (121 mm) (centerline of Flushometer to centerline of Control Stop).

If roughing-in measurement exceeds 5-1/4" (133 mm), consult factory for longer tailpiece.

- C** Align Flushometer Body and securely tighten first the Tailpiece Coupling (1), then the Vacuum Breaker Coupling (2), and finally the Spud Coupling (3). Use a wrench to tighten these couplings in the order shown.
- D** Install the red A-31 Handle Gasket on the Handle Assembly. Insert the Handle Assembly into the Handle opening in the Flushometer Body. Securely tighten the Handle coupling with a wrench.

Sloan's triple-sealed Flushometer Handle is ADA-complaint.



5 - FLUSH OUT SUPPLY LINE

- A** Make sure Control Stop is CLOSED and remove Flushometer Outer Cover.
- B** Remove Inside Cover and lift out Inside Parts Assembly.

- C** Reinstall Outside and Inside Cover wrench tight. Open Control Stop to flush supply line. Close Control Stop and remove Outside and Inside Cover.
- D** Reinstall Inside Parts Assembly, Inside Cover and Outside Cover wrench tight.

6 - ADJUST CONTROL STOP AND INSTALL VANDAL RESISTANT STOP CAP

- A** Open Control Stop COUNTERCLOCKWISE one FULL turn from closed position.
- B** Activate Flushometer.
- C** Adjust Control Stop after each flush until the rate of flow delivered properly cleanses the fixture.

!!! IMPORTANT !!!

Sloan's flushometers are engineered for quiet operation. Excessive water flow creates noise, while too little water flow may not satisfy the needs of the fixture. Proper adjustment is made when plumbing fixture is cleansed after each flush without splashing water out from the lip AND a quiet flushing cycle is achieved.

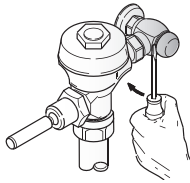
Never open Control Stop to where the flow from the valve exceeds the flow capability of the fixture. In the event of a valve failure, the fixture must be able to accommodate a continuous flow from the valve.

- D** Install Vandal Resistant Control Stop Cap onto Control Stop.
 - Thread the Plastic Sleeve onto the Stop Bonnet until it is snug (tighten only by hand; do not use pliers or a wrench).
 - Place the metal Control Stop Cap over the plastic Sleeve and use the palm of the hand to push or "pop" the Cap over the fingers of the Plastic Sleeve. The Cap should spin freely.

Important: DO NOT install Cap onto Sleeve unless the Sleeve has been threaded onto Control Stop Bonnet. If the Sleeve and Cap are assembled off of the Control Stop, the Sleeve WILL NOT come apart from the Cap.

VANDAL RESISTANT CONTROL STOP CAP REMOVAL

Use a large flat screwdriver as a lever to remove the Cap from the Control Stop. Insert the screwdriver blade between the bottom edge of the Cap and the flat surface of the Control Stop body as shown. Push the screwdriver handle straight back toward the wall to gently lift the Cap. If necessary, work the screwdriver around the diameter of the Cap until you can grasp the Cap and lift it completely off the Sleeve. The Sleeve should remain attached to the bonnet of the Control Stop.



TROUBLESHOOTING GUIDE

1. Flushometer does not function (no flush).

- A. Control stop or main valve is closed. Open control stop or main valve.
- B. Handle assembly is damaged. Replace handle or install handle repair kit.
- C. Relief Valve is damaged. Replace relief valve.

2. Volume of water is not sufficient to siphon fixture.

- A. Control stop is not open wide enough. Adjust control stop for desired delivery of water volume.
- B. Diaphragm assembly is damaged. Replace diaphragm assembly.
- C. Incorrect diaphragm assembly is installed in flushometer; for instance, urinal assembly inside a closet flushometer, or low consumption assembly inside a higher consumption fixture. Determine the flush volume required by the fixture and replace diaphragm. Use valve label and markings on fixture for reference.
- D. Water supply volume or pressure is inadequate. If no gauges are available to properly measure supply pressure or volume of water at the flushometer, then remove the relief valve from the diaphragm assembly, reassemble the flushometer and completely open the control stop.
 - If the fixture siphons, more water volume is required. Install a higher flushing volume diaphragm. **IMPORTANT – LAWS AND REGULATIONS PROHIBIT THE USE OF HIGHER FLUSHING VOLUMES THAN LISTED ON FIXTURE OR FLUSHOMETER.**
 - If the fixture DOES NOT siphon or if a low consumption flush is required, steps must be taken to increase the water supply pressure and/or volume. Contact the fixture manufacturer for minimum water supply requirements of the fixture.

3. Length of flush is too short (short flush).

- A. Diaphragm assembly is worn or damaged. Replace diaphragm assembly.
- B. Handle assembly is damaged. Replace handle or install handle repair kit.
- C. Incorrect diaphragm assembly is installed in flushometer; for instance, urinal assembly inside a closet flushometer, or low consumption assembly inside a higher consumption fixture. Determine the flush volume required by the fixture and replace diaphragm. Use valve label and markings on fixture for reference.

4. Length of flush is too long (long flush) or continuous.

- A. Metering bypass hole (upper filter ring) in diaphragm is clogged. Remove the diaphragm assembly. Remove the primary and secondary filter rings from the diaphragm, wash under running water, and reassemble. Replace as necessary.
- B. Diaphragm or relief valve is damaged. Replace diaphragm or relief valve.
- C. Incorrect diaphragm assembly is installed in flushometer; for instance, closet assembly inside a urinal flushometer, or water saver assembly inside a low consumption flushometer. Determine the flush volume required by the fixture and replace the diaphragm. Use valve label and markings on fixture for reference.
- D. Inside cover is damaged. Replace Inside cover.
- E. Supply line water pressure has dropped and is not sufficient to close the valve. Close control stop until pressure is restored.
- F. Relief valve is not seated properly. Disassemble diaphragm components (relief valve, filter rings, and diaphragm unit), wash under running water, and reassemble. Replace as necessary.

5. Chattering noise is heard during flush.

- A. Inside cover is damaged. Replace inside cover.
- B. Relief valve or diaphragm is damaged. Replace relief valve or diaphragm assembly.

6. Handle Leaks.

- A. Handle seal or assembly is damaged. Replace handle or install handle repair kit.

7. Water splashes from fixture.

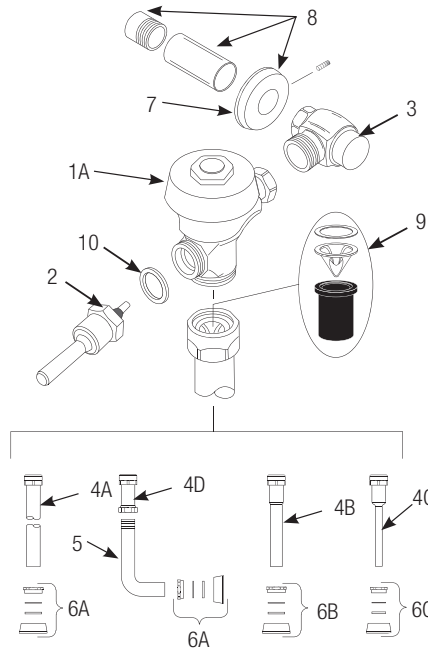
- A. Control stop is open wider than necessary. Adjust control stop for desired delivery of water volume.
- B. Water saver/conventional diaphragm assembly is installed on low consumption fixture or closet diaphragm assembly is installed on urinal fixture. Determine the required flush volume (see label on valve or markings on fixture). Replace diaphragm assembly or relief valve for appropriate flush volume of fixture.

When assistance is required, please contact your local Sloan Representative or Sloan Technical Support at:
1-888-SLOAN-14 (1-888-756-2614)

CARE AND CLEANING

DO NOT use abrasive or chemical cleaners (including chlorine bleach) to clean Flushometers that may dull the luster and attack the chrome or special decorative finishes. Use ONLY mild soap and water, then wipe dry with clean cloth or towel. While cleaning the bathroom tile, protect the Flushometer from any splattering of cleaner. Acids and cleaning fluids will discolor or remove chrome plating.

PARTS LIST

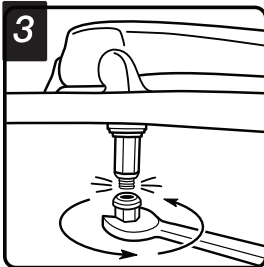
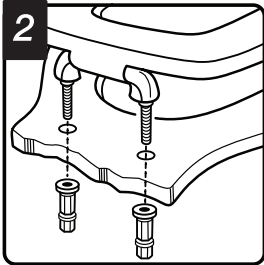
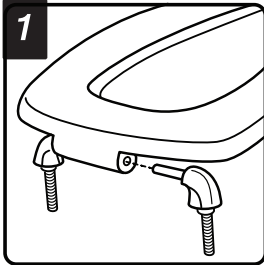


Item No.	Part No.	Description
1	†	Valve Assembly
2	B-73-A	ADA Compliant Handle Assembly
3	H-700-A	Bak-Chek® Control Stop
4A	V-600-AA	1½" (38 mm) Vacuum Breaker Assembly ‡
4B	V-600-AA	1¼" (32 mm) Vacuum Breaker Assembly
4C	V-600-AA	¾" (19 mm) Vacuum Breaker Assembly
4D	V-600-A	Vacuum Breaker Assembly
5	F-109	1½" (38 mm) Elbow Flush Connection
6A	F-56-A	1½" (38 mm) Spud Coupling Assembly
6B	F-57-A	1¼" (32 mm) Spud Coupling Assembly
6C	F-58-A	¾" (19 mm) Spud Coupling Assembly
7	F-7	Supply Flange (Supplied when Valve is not Ordered with Sweat Solder Kit)
8	H-633-AA	1" (25 mm) Sweat Solder Kit with Cast Set Screw Flange
	H-636-AA	¾" (19 mm) Sweat Solder Kit with Cast Set Screw Flange
9	V-651-A	High Back Pressure Vacuum Breaker Repair Kit
10	A-31	Handle Gasket
†		Part number varies with valve model variation; consult factory.
‡		Length varies with valve model variation; consult factory.

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

SLOAN • 10500 SEYMOUR AVENUE • FRANKLIN PARK, IL 60131

Phone: 1-800-9-VALVE-9 or 1-847-671-4300 • Fax: 1-800-447-8329 or 1-847-671-4380 • sloan.com



STATITE®

Commercial Fastening System

For use with
Bemis/Church/Olsonite
Commercial Toilet Seats.

Installation Note:

1. Assemble hinges and finger tighten nuts.
2. Hold seat centered while tightening nuts.
3. Use a wrench on the lower part of the nuts and alternately tighten with wrench until nuts shear off.



TOILET SEAT USE & CARE GUIDE

Toilet seats should be cleaned using only mild, soapy water and a soft cloth or sponge. Rinse clean with water and thoroughly dry with a clean cloth.

To avoid damaging the finish, do not allow aerosol products, abrasive chemicals or cosmetics (fingernail polish, aftershave, harsh cleansers, etc.) to come in contact with the toilet seat.

Do not use bleach, pine oils, essential oils, chlorine, acid, disinfectants, products in aerosol cans, hard brushes, abrasive scouring powders or pads. Harsh chemicals can rub away or corrode paint finishes on toilet seats, metal hinges, and dull plastic seats.

**If you need any further assistance, please
contact Customer Service at 888.722.6488.**



TOILET SEAT & BIDET LIMITED WARRANTY

Toilet seats and specified bidets guaranteed against defects in material and workmanship for a minimum of one year from date of purchase. If this product is defective, Bemis will repair, replace, or refund of the purchase price (less shipping, if applicable), at Bemis's option.

Expenses incurred during removal or installation are excluded. Plastic suitable for commercial and residential use; enameled wood and soft seats for residential use only.

Please see [BemisMfg.com/terms-and-conditions](https://www.bemis.com/terms-and-conditions) or product manual for complete warranty terms.

**If you need any further assistance, please
contact Customer Service at 888.722.6488.**

SLOAN® Water Closet Installation Instructions

Water Connects Us®

THE RIGHT CHOICE

We thank you for your purchase. Our products are 100% tested but should you have any questions, please contact us by phone or at our web site.



⚠ WARNING: Any vitreous china can chip or break if the bolts or nuts are over-tightened or if mishandled.

BEFORE YOU START...

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- Check for any damage to the new water closet before installation.

WHAT YOU WILL NEED...

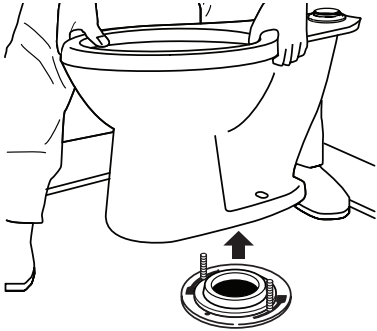
- Putty knife
- Safety glasses
- Measuring tape
- Spud wrench
- Sponge
- 10" adjustable wrench
- Large level
- Wax seal

NOTE: Plumbing System Requirements

- ✓ Minimum Flowing Pressure: 25 PSI
- ✓ Minimum Flow Rate: 25 GPM
- ✓ Maximum Static Pressure: 80 PSI

1. REMOVAL OF EXISTING WATER CLOSET

- Turn off the water supply.
- Disconnect the flush valve.
- Remove the existing water closet.



- Using putty knife, completely remove old wax seal from floor and bottom of water closet.
- Lay water closet down on padded surface to help protect the vitreous china.

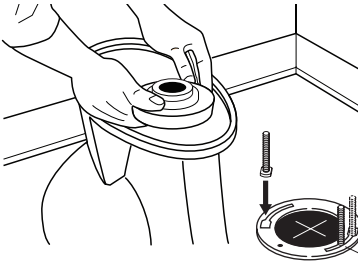


⚠ WARNING: Hazardous gases can escape through the closet flange if new water closet is not installed quickly. A temporary fix: place a large rag in the closet flange.

NOTE: All vitreous china dimensions shown in these drawings are nominal. Dimensions can vary within the tolerances established in the governing ASME A12.19.2/CSA B45.1 standard. Please take this into consideration when planning rough-in and plumbing layouts.

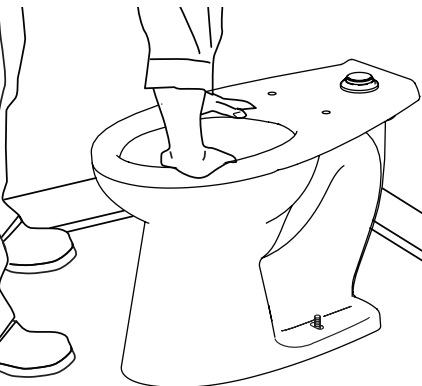
2. INSTALLING NEW WATER CLOSET

- Check rough-in dimensions and install or relocate flush valve and outlet as indicated.
- Record model number for reference.
- Place and press in a new wax seal around the water closet bottom outlet.
- Install new 5/16 "T-bolts.



- Take out the temporary rag (if used) from the water closet flange hole.
- Carefully align and lower the water closet over the flange and T-bolts.

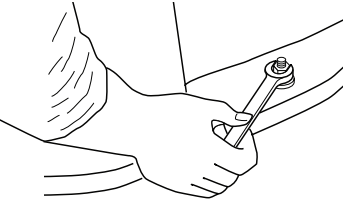
IMPORTANT! Do not lift or rock the water closet after replacement. The watertight seal will have to be replaced if breakage occurs.



- To seal, apply your full body weight around the water closet.
- Place the plastic cap base in the position indicated on cap as marked.
- The metal washers and nuts can now be placed on the bolt cap base and T-bolts.



- Tighten the nuts carefully.



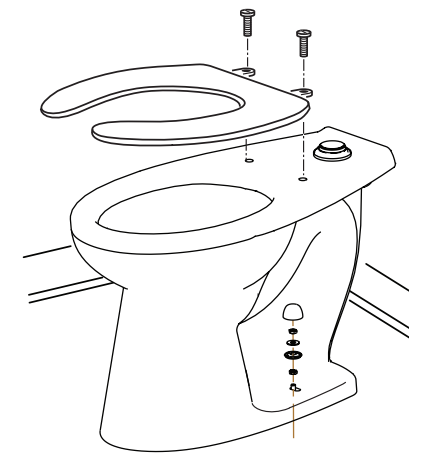
⚠ IMPORTANT! Do not overtighten the nuts, breakage and chipping of vitreous china can occur.

- Cut 1/4" or more over the top of the nut.
- Attach the bolt caps.

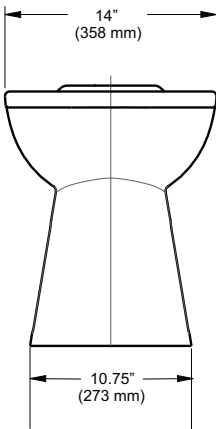
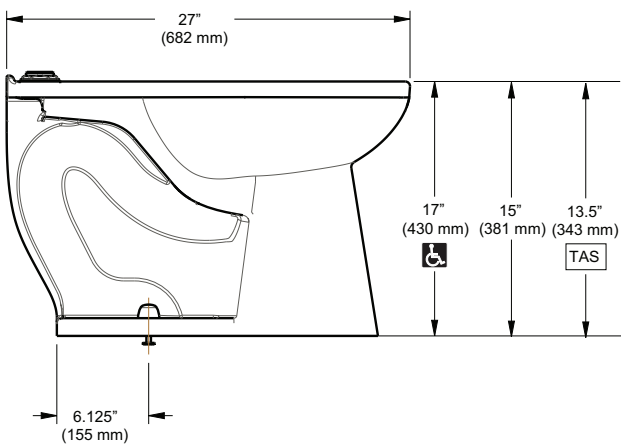
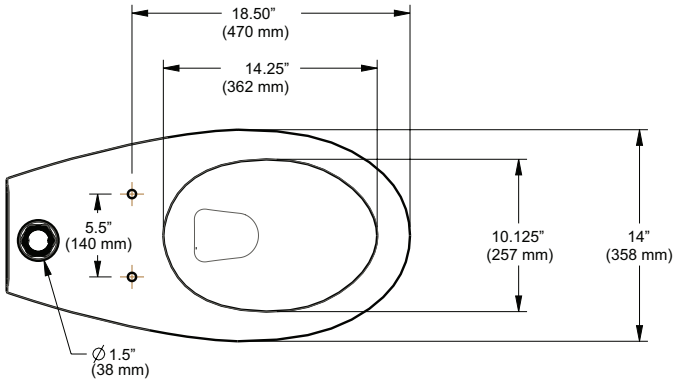
⚠ IMPORTANT! Product damage can occur if using a saw blade to cut off the excess T-bolt length. Make sure vitreous china is protected and covered.

3. COMPLETING THE INSTALLATION

- Flush valve should be installed to manufacturer's installation instructions.
- Turn on water supply valve.
- Install toilet seat (not included).



- Flush water closet a few times and check all connections for water seepage.
- Check for leaks.



TO MAXIMIZE THE PERFORMANCE OF YOUR SLOAN WATER CLOSET, USE ONLY SLOAN FLUSHOMETERS

CARE AND CLEANING OF VITREOUS CHINA

Clean water closet with a cleaner safe for vitreous china. Spray and wipe clean using soft cloth. Soft abrasive cleaners may be used to remove stains.

LIMITED WARRANTY

Sloan Valve Company warrants its products to be made of first class materials, free from defects of material or workmanship under normal use and to perform the service for which they are intended in a thoroughly reliable and efficient manner when properly installed and serviced, for a period of three years (one year for special finishes) from date of purchase. During this period, Sloan Valve Company will, at its option, repair or replace any part or parts which prove to be thus defective if returned to Sloan Valve Company, at customer's cost, and this shall be the sole remedy available under this warranty. No claims will be allowed for labor, transportation or other incidental costs. This warranty extends only to persons or organizations who purchase Sloan Valve Company's products directly from Sloan Valve Company for purpose of resale.

THERE ARE NO WARRANTIES WHICH EXTEND BEYOND THE DESCRIPTION ON THE FACE HEREOF. IN NO EVENT IS SLOAN VALVE COMPANY RESPONSIBLE FOR ANY CONSEQUENTIAL DAMAGES OF ANY MEASURE WHATSOEVER.

NOTE: IN NO EVENT SHALL THE SLOAN VALVE COMPANY BE LIABLE FOR INCIDENTAL DAMAGES, RESULTING FROM IMPROPER INSTALLATION, OR FOR DAMAGES CAUSED BY NEGLIGENCE, ABUSE OR ALTERATION.

The information contained in this document is subject to change without notice.

SLOAN®

SLOAN

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Code No. 0816195

Rev. 6 (02/15)

INSTALLATION INSTRUCTIONS FOR EXPOSED ROYAL® FLUSHOMETERS



**Closet Flushometer
for 1½" Top Spud**

MODELS 110/111,
113, 115 & 116

**Service Sink Flushometer
for 1½" Top Spud**

MODEL 117



**Urinal Flushometer
for 1¼" Top Spud**

MODEL 180

**Urinal Flushometer
for ¾" Top Spud**

MODEL 186



**Closet Flushometer
for 1½" Back Spud**

MODELS 120, 121 & 122

LIMITED WARRANTY

Unless otherwise noted, Sloan Valve Company warrants this product, manufactured and sold for commercial or industrial uses, to be free from defects in material and workmanship for a period of three (3) years (one (1) year for special finishes, SF faucets, PWT electronics and 30 days for PWT software) from date of first purchase. During this period, Sloan Valve Company will, at its option, repair, replace, or refund the purchase price of any product which fails to conform with this warranty under normal use and service. This shall be the sole and exclusive remedy under this warranty. Products must be returned to Sloan Valve Company, at customer's cost. No claims will be allowed for labor, transportation or other costs. This warranty extends only to persons or organizations who purchase Sloan Valve Company's products directly from Sloan Valve Company for purpose of resale. This warranty does not cover the life of the batteries.

THERE ARE NO WARRANTIES WHICH EXTEND BEYOND THE DESCRIPTION ON THE FACE HEREOF. IN NO EVENT IS SLOAN VALVE COMPANY RESPONSIBLE FOR ANY CONSEQUENTIAL DAMAGES OF ANY MEASURE WHATSOEVER.

PRIOR TO INSTALLATION

Before you install the flushometer, be sure the items listed below are installed. Also, refer to the rough-in diagram below.

- Closet fixture • Drain line • Water supply line

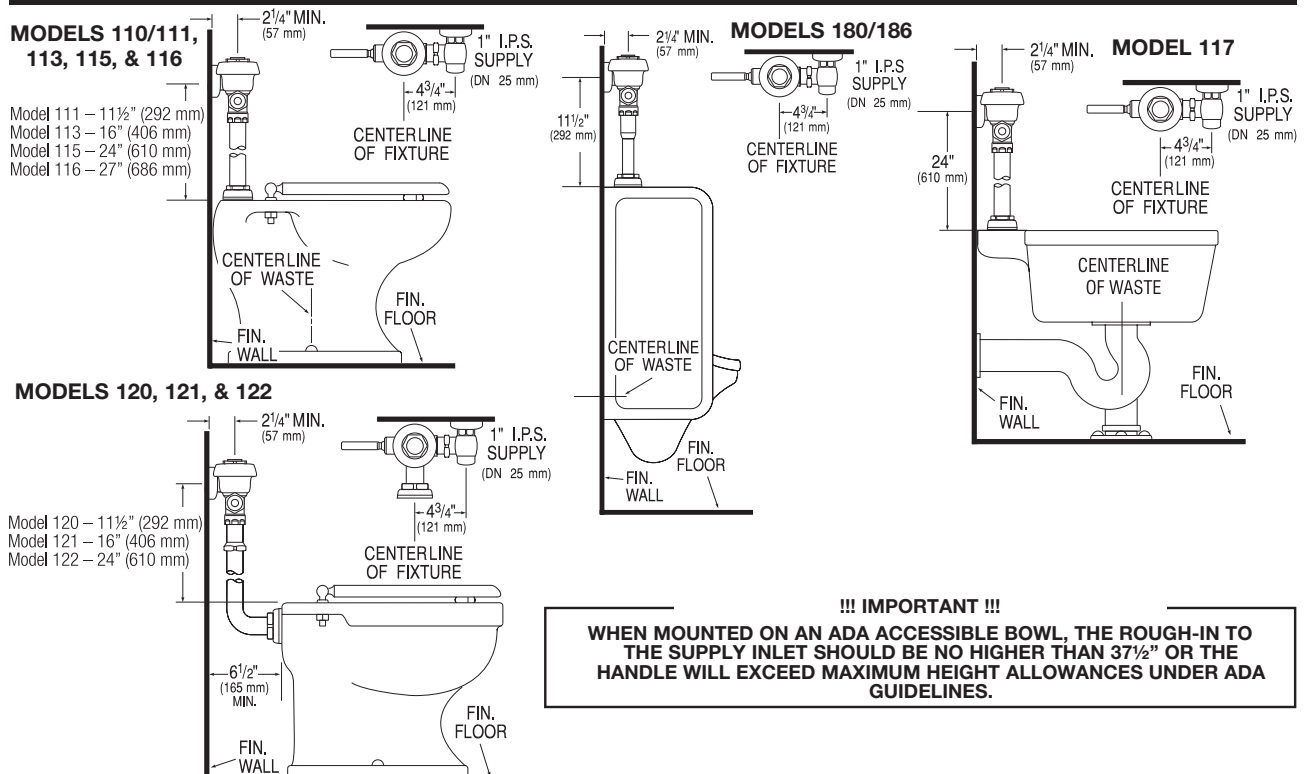
IMPORTANT:

- **ALL PLUMBING SHOULD 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.**

Sloan's flushometers are designed to operate with 15 to 80 psi (103 to 552kPa) of water pressure. **THE MINIMUM PRESSURE REQUIRED TO THE VALVE IS DETERMINED BY THE TYPE OF FIXTURE SELECTED.**

Consult fixture manufacturer for minimum pressure requirements. Most High Efficiency water closets require a minimum flowing pressure of 25 psi (172 kPa). Many building codes and the ASME A112.19.2 fixture standard list Maximum static water pressure as 80 PSI (552 kPa).

ROUGH-INS



TOOLS REQUIRED FOR INSTALLATION

- Straight blade screwdriver
- Sloan A-50 Super-Wrench™, Sloan A-109 Plier Wrench or smooth jawed spud wrench

!!! IMPORTANT !!!

PROTECT THE CHROME OR SPECIAL FINISH OF SLOAN FLUSHMETERS — DO NOT USE TOOTHED TOOLS TO INSTALL OR SERVICE THESE VALVES. USE A SLOAN A-50 SUPER-WRENCH™, SLOAN A-109 PLIER WRENCH OR SMOOTH JAWED SPUD WRENCH TO SECURE ALL COUPLINGS. SEE “CARE AND CLEANING” SECTION.

!!! IMPORTANT !!!

NEVER OPEN CONTROL STOP TO WHERE THE FLOW FROM THE VALVE EXCEEDS THE FLOW CAPABILITY OF THE FIXTURE. IN THE EVENT OF A VALVE FAILURE, THE FIXTURE MUST BE ABLE TO ACCOMMODATE A CONTINUOUS FLOW FROM THE VALVE.

!!! IMPORTANT !!!

WITH THE EXCEPTION OF CONTROL STOP INLET, DO NOT USE PIPE SEALANT OR PLUMBING GREASE ON ANY VALVE COMPONENT OR COUPLING!

!!! IMPORTANT !!!

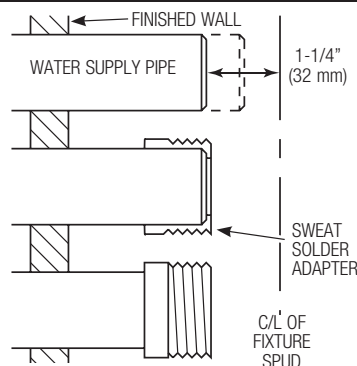
THIS PRODUCT CONTAINS MECHANICAL AND/OR ELECTRICAL COMPONENTS THAT ARE SUBJECT TO NORMAL WEAR. THESE COMPONENTS SHOULD BE CHECKED ON A REGULAR BASIS AND REPLACED AS NEEDED TO MAINTAIN THE VALVE'S PERFORMANCE.

Please take the time to read this manual to ensure proper product installation and longevity.

When further assistance is required, please contact your local Sloan Representative or Sloan Technical Support at:
1-888-SLOAN-14 (1-888-756-2614)

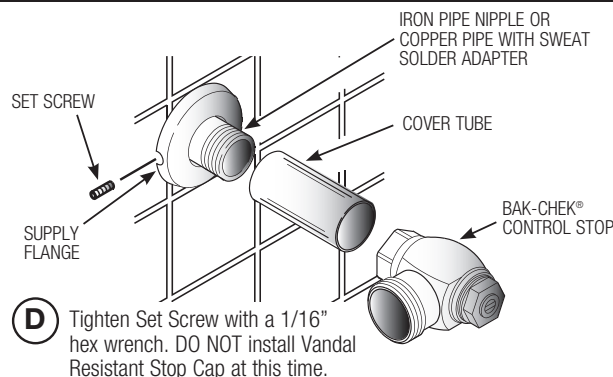
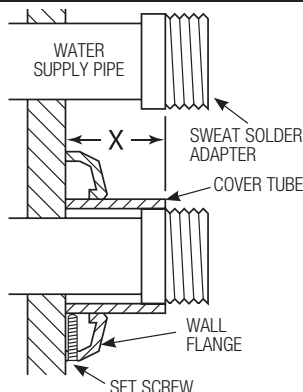
1 - INSTALL OPTIONAL SWEAT SOLDER ADAPTER (ONLY IF YOUR SUPPLY PIPE DOES NOT HAVE A MALE THREAD)

- Measure from finished wall to C/L of fixture spud. Cut pipe 1¼" (32 mm) shorter than this measurement. Chamfer O.D. and I.D. of water supply pipe.
- Slide threaded adapter fully onto pipe.
- Sweat solder the Adapter to pipe.



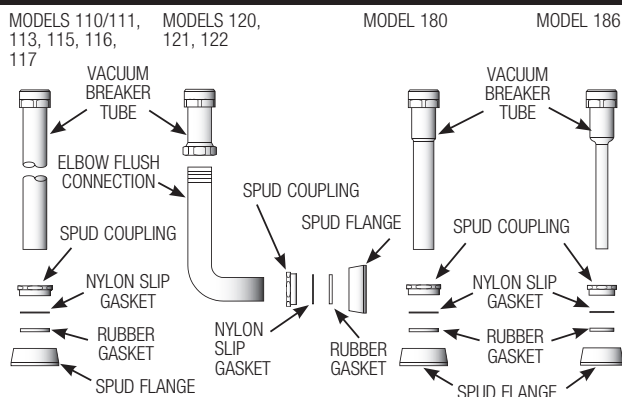
2 - INSTALL COVER TUBE, WALL FLANGE AND CONTROL STOP TO SUPPLY PIPE

- Measure from finished wall to first thread of Adapter or threaded supply pipe (dimension "X"). Cut Cover Tube to this length.
- Slide Cover Tube over pipe. Slide Wall Flange over Cover Tube until against wall.
- Thread Control Stop onto pipe. Tighten with a wrench.



3 - INSTALL VACUUM BREAKER FLUSH CONNECTION

- Slide Spud Coupling, Nylon Slip Gasket, Rubber Gasket and Spud Flange over Vacuum Breaker Tube.
- Insert Tube into Fixture Spud.
- Hand tighten Spud Coupling onto Fixture Spud.



4 - INSTALL FLUSHOMETER AND TRIPLE SEAL HANDLE ASSEMBLY

NOTE

For high efficiency urinal flushometers (0.5, 0.25 and 0.125 gpf), it is necessary to first insert the flow control component into the tailpiece assembly. See the H1015A flow control kit and separate instructions for details on how to install.

- A** Lubricate tailpiece O-ring with water. Insert Adjustable Tailpiece into Control Stop. Tighten Tailpiece Coupling by hand.
- B** Align Flushometer directly above the Vacuum Breaker Flush Connection by sliding the Flushometer Body IN or OUT as needed. Tighten Vacuum Breaker Coupling by hand.

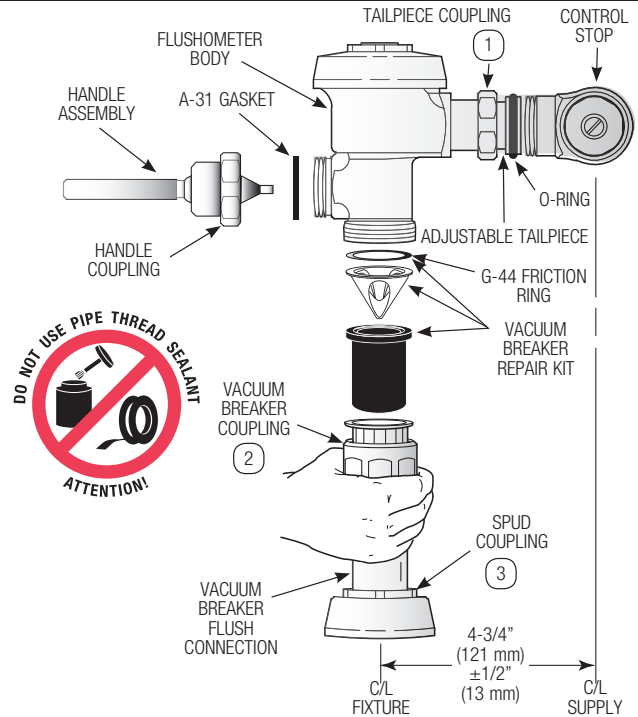
NOTE

Maximum adjustment of the Sloan Adjustable Tailpiece is 1/2" (13 mm) IN or OUT from the standard 4-3/4" (121 mm) (centerline of Flushometer to centerline of Control Stop).

If roughing-in measurement exceeds 5-1/4" (133 mm), consult factory for longer tailpiece.

- C** Align Flushometer Body and securely tighten first the Tailpiece Coupling (1), then the Vacuum Breaker Coupling (2), and finally the Spud Coupling (3). Use a wrench to tighten these couplings in the order shown.
- D** Install the red A-31 Handle Gasket on the Handle Assembly. Insert the Handle Assembly into the Handle opening in the Flushometer Body. Securely tighten the Handle coupling with a wrench.

Sloan's triple-sealed Flushometer Handle is ADA-complaint.



5 - FLUSH OUT SUPPLY LINE

- A** Make sure Control Stop is CLOSED and remove Flushometer Outer Cover.
- B** Remove Inside Cover and lift out Inside Parts Assembly.

- C** Reinstall Outside and Inside Cover wrench tight. Open Control Stop to flush supply line. Close Control Stop and remove Outside and Inside Cover.
- D** Reinstall Inside Parts Assembly, Inside Cover and Outside Cover wrench tight.

6 - ADJUST CONTROL STOP AND INSTALL VANDAL RESISTANT STOP CAP

- A** Open Control Stop COUNTERCLOCKWISE one FULL turn from closed position.
- B** Activate Flushometer.
- C** Adjust Control Stop after each flush until the rate of flow delivered properly cleanses the fixture.

!!! IMPORTANT !!!

Sloan's flushometers are engineered for quiet operation. Excessive water flow creates noise, while too little water flow may not satisfy the needs of the fixture. Proper adjustment is made when plumbing fixture is cleansed after each flush without splashing water out from the lip AND a quiet flushing cycle is achieved.

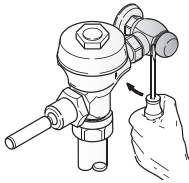
Never open Control Stop to where the flow from the valve exceeds the flow capability of the fixture. In the event of a valve failure, the fixture must be able to accommodate a continuous flow from the valve.

- D** Install Vandal Resistant Control Stop Cap onto Control Stop.
 - Thread the Plastic Sleeve onto the Stop Bonnet until it is snug (tighten only by hand; do not use pliers or a wrench).
 - Place the metal Control Stop Cap over the plastic Sleeve and use the palm of the hand to push or "pop" the Cap over the fingers of the Plastic Sleeve. The Cap should spin freely.

Important: DO NOT install Cap onto Sleeve unless the Sleeve has been threaded onto Control Stop Bonnet. If the Sleeve and Cap are assembled off of the Control Stop, the Sleeve WILL NOT come apart from the Cap.

VANDAL RESISTANT CONTROL STOP CAP REMOVAL

Use a large flat screwdriver as a lever to remove the Cap from the Control Stop. Insert the screwdriver blade between the bottom edge of the Cap and the flat surface of the Control Stop body as shown. Push the screwdriver handle straight back toward the wall to gently lift the Cap. If necessary, work the screwdriver around the diameter of the Cap until you can grasp the Cap and lift it completely off the Sleeve. The Sleeve should remain attached to the bonnet of the Control Stop.



TROUBLESHOOTING GUIDE

1. Flushometer does not function (no flush).

- A. Control stop or main valve is closed. Open control stop or main valve.
- B. Handle assembly is damaged. Replace handle or install handle repair kit.
- C. Relief Valve is damaged. Replace relief valve.

2. Volume of water is not sufficient to siphon fixture.

- A. Control stop is not open wide enough. Adjust control stop for desired delivery of water volume.
- B. Diaphragm assembly is damaged. Replace diaphragm assembly.
- C. Incorrect diaphragm assembly is installed in flushometer; for instance, urinal assembly inside a closet flushometer, or low consumption assembly inside a higher consumption fixture. Determine the flush volume required by the fixture and replace diaphragm. Use valve label and markings on fixture for reference.
- D. Water supply volume or pressure is inadequate. If no gauges are available to properly measure supply pressure or volume of water at the flushometer, then remove the relief valve from the diaphragm assembly, reassemble the flushometer and completely open the control stop.
 - If the fixture siphons, more water volume is required. Install a higher flushing volume diaphragm. **IMPORTANT – LAWS AND REGULATIONS PROHIBIT THE USE OF HIGHER FLUSHING VOLUMES THAN LISTED ON FIXTURE OR FLUSHOMETER.**
 - If the fixture DOES NOT siphon or if a low consumption flush is required, steps must be taken to increase the water supply pressure and/or volume. Contact the fixture manufacturer for minimum water supply requirements of the fixture.

3. Length of flush is too short (short flush).

- A. Diaphragm assembly is worn or damaged. Replace diaphragm assembly.
- B. Handle assembly is damaged. Replace handle or install handle repair kit.
- C. Incorrect diaphragm assembly is installed in flushometer; for instance, urinal assembly inside a closet flushometer, or low consumption assembly inside a higher consumption fixture. Determine the flush volume required by the fixture and replace diaphragm. Use valve label and markings on fixture for reference.

4. Length of flush is too long (long flush) or continuous.

- A. Metering bypass hole (upper filter ring) in diaphragm is clogged. Remove the diaphragm assembly. Remove the primary and secondary filter rings from the diaphragm, wash under running water, and reassemble. Replace as necessary.
- B. Diaphragm or relief valve is damaged. Replace diaphragm or relief valve.
- C. Incorrect diaphragm assembly is installed in flushometer; for instance, closet assembly inside a urinal flushometer, or water saver assembly inside a low consumption flushometer. Determine the flush volume required by the fixture and replace the diaphragm. Use valve label and markings on fixture for reference.
- D. Inside cover is damaged. Replace Inside cover.
- E. Supply line water pressure has dropped and is not sufficient to close the valve. Close control stop until pressure is restored.
- F. Relief valve is not seated properly. Disassemble diaphragm components (relief valve, filter rings, and diaphragm unit), wash under running water, and reassemble. Replace as necessary.

5. Chattering noise is heard during flush.

- A. Inside cover is damaged. Replace inside cover.
- B. Relief valve or diaphragm is damaged. Replace relief valve or diaphragm assembly.

6. Handle Leaks.

- A. Handle seal or assembly is damaged. Replace handle or install handle repair kit.

7. Water splashes from fixture.

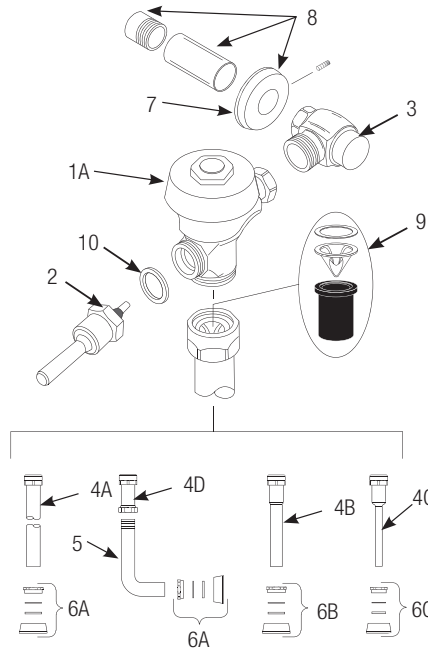
- A. Control stop is open wider than necessary. Adjust control stop for desired delivery of water volume.
- B. Water saver/conventional diaphragm assembly is installed on low consumption fixture or closet diaphragm assembly is installed on urinal fixture. Determine the required flush volume (see label on valve or markings on fixture). Replace diaphragm assembly or relief valve for appropriate flush volume of fixture.

When assistance is required, please contact your local Sloan Representative or Sloan Technical Support at:
1-888-SLOAN-14 (1-888-756-2614)

CARE AND CLEANING

DO NOT use abrasive or chemical cleaners (including chlorine bleach) to clean Flushometers that may dull the luster and attack the chrome or special decorative finishes. Use ONLY mild soap and water, then wipe dry with clean cloth or towel. While cleaning the bathroom tile, protect the Flushometer from any splattering of cleaner. Acids and cleaning fluids will discolor or remove chrome plating.

PARTS LIST

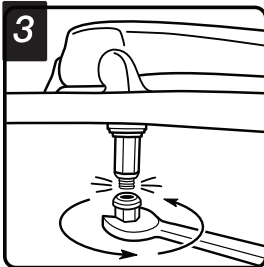
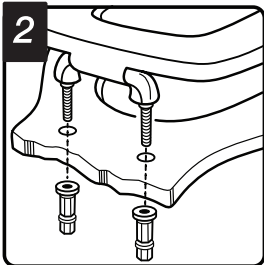
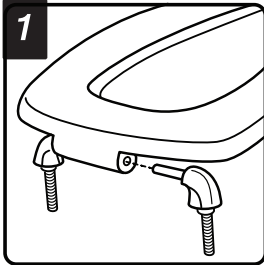


Item No.	Part No.	Description
1	†	Valve Assembly
2	B-73-A	ADA Compliant Handle Assembly
3	H-700-A	Bak-Chek® Control Stop
4A	V-600-AA	1½" (38 mm) Vacuum Breaker Assembly ‡
4B	V-600-AA	1¼" (32 mm) Vacuum Breaker Assembly
4C	V-600-AA	¾" (19 mm) Vacuum Breaker Assembly
4D	V-600-A	Vacuum Breaker Assembly
5	F-109	1½" (38 mm) Elbow Flush Connection
6A	F-56-A	1½" (38 mm) Spud Coupling Assembly
6B	F-57-A	1¼" (32 mm) Spud Coupling Assembly
6C	F-58-A	¾" (19 mm) Spud Coupling Assembly
7	F-7	Supply Flange (Supplied when Valve is not Ordered with Sweat Solder Kit)
8	H-633-AA	1" (25 mm) Sweat Solder Kit with Cast Set Screw Flange
	H-636-AA	¾" (19 mm) Sweat Solder Kit with Cast Set Screw Flange
9	V-651-A	High Back Pressure Vacuum Breaker Repair Kit
10	A-31	Handle Gasket
†		Part number varies with valve model variation; consult factory.
‡		Length varies with valve model variation; consult factory.

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

SLOAN • 10500 SEYMOUR AVENUE • FRANKLIN PARK, IL 60131

Phone: 1-800-9-VALVE-9 or 1-847-671-4300 • Fax: 1-800-447-8329 or 1-847-671-4380 • sloan.com



STATITE®

Commercial Fastening System

For use with
Bemis/Church/Olsonite
Commercial Toilet Seats.

Installation Note:

1. Assemble hinges and finger tighten nuts.
2. Hold seat centered while tightening nuts.
3. Use a wrench on the lower part of the nuts and alternately tighten with wrench until nuts shear off.



TOILET SEAT USE & CARE GUIDE

Toilet seats should be cleaned using only mild, soapy water and a soft cloth or sponge. Rinse clean with water and thoroughly dry with a clean cloth.

To avoid damaging the finish, do not allow aerosol products, abrasive chemicals or cosmetics (fingernail polish, aftershave, harsh cleansers, etc.) to come in contact with the toilet seat.

Do not use bleach, pine oils, essential oils, chlorine, acid, disinfectants, products in aerosol cans, hard brushes, abrasive scouring powders or pads. Harsh chemicals can rub away or corrode paint finishes on toilet seats, metal hinges, and dull plastic seats.

**If you need any further assistance, please
contact Customer Service at 888.722.6488.**



TOILET SEAT & BIDET LIMITED WARRANTY

Toilet seats and specified bidets guaranteed against defects in material and workmanship for a minimum of one year from date of purchase. If this product is defective, Bemis will repair, replace, or refund of the purchase price (less shipping, if applicable), at Bemis's option.

Expenses incurred during removal or installation are excluded. Plastic suitable for commercial and residential use; enameled wood and soft seats for residential use only.

Please see [BemisMfg.com/terms-and-conditions](https://www.bemis.com/terms-and-conditions) or product manual for complete warranty terms.

**If you need any further assistance, please
contact Customer Service at 888.722.6488.**

Top Spud Urinal Installation Instructions

⚠ WARNING: Any vitreous china can chip or break if the bolts or nuts are over-tightened or if mishandled. Personal injury can occur if product is mishandled.

BEFORE YOU START...

- Observe all local plumbing and building codes.
- Check for any damage to the new urinal before installation.
- Make sure the wall is strong enough to support the new urinal prior to installation. Reinforce or install a urinal carrier if necessary.
- Urinal complies to ASME Standard A112.19.2

WHAT YOU WILL NEED...

- Electric Drill (heavy duty 1/2" VSR hammer drill preferred if mounting to concrete wall)
- High Speed or carbide tipped masonry bits if mounting to concrete wall
- Putty knife or sharp scraper
- Screwdrivers (phillips and flat head)
- Safety glasses
- Measuring tape and marker
- Level (24" minimum preferred)
- Caulking gun and caulk
- Channel lock pliers, adjustable wrench, and utility knife
- Manual or electric drain cleaner
- Additional materials and tools may be required for rough-in and reinforcing.

NOTE: Plumbing System Requirements
√ Minimum **Flowing** Pressure: 25 PSI

⚠ WARNING: Hazardous gases can escape through the waste pipe if new urinal is not installed quickly. A temporary fix: place a rag in the waste pipe hole.

RETROFIT INSTALLATIONS

1. REMOVE EXISTING URINAL

- Turn off the water supply.
- Disconnect the flush valve.
- Cut caulk all around existing urinal using utility knife to release urinal from wall surface.
- Remove any attaching bolts that may be holding the urinal at the bottom.
- Remove urinal from wall.
- Remove existing hanger bracket.
- Using sharp scraper or putty knife, completely remove all remaining caulk from wall.
- Remove existing outlet flange and gasket and discard.

2. CHECK ROUGH-IN DIMENSIONS

- Check rough-in dimensions. Make any adjustments to water supply to accommodate flush valve as necessary.

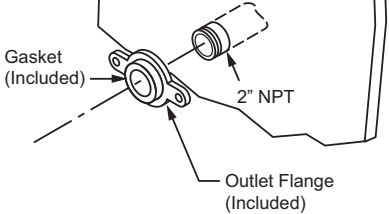
3. CLEAN DRAIN

- Clean out waste pipe using hand or power cleaner to be sure pipe is clear.
- Proceed to NEW INSTALLATIONS.

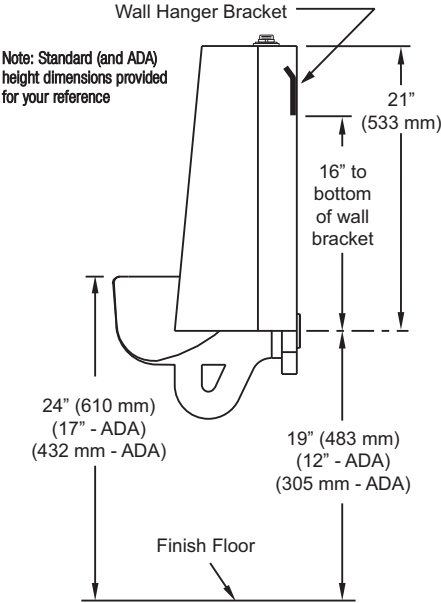
NEW INSTALLATIONS

1. INSTALL OUTLET FLANGE AND GASKET

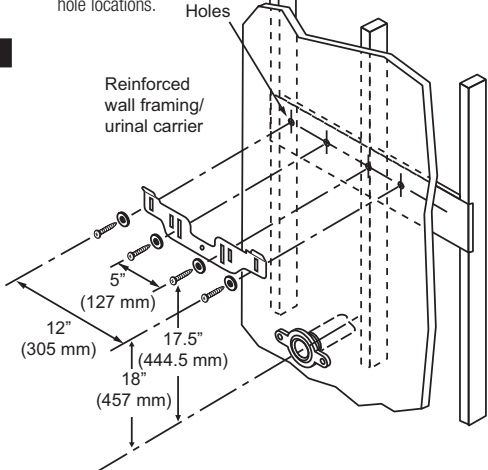
- Remove the temporary rag (if used) from the waste pipe hole.
- Apply thread sealant to waste pipe threads and install new outlet flange on pipe.



2. INSTALL NEW WALL HANGER BRACKET (INCLUDED)



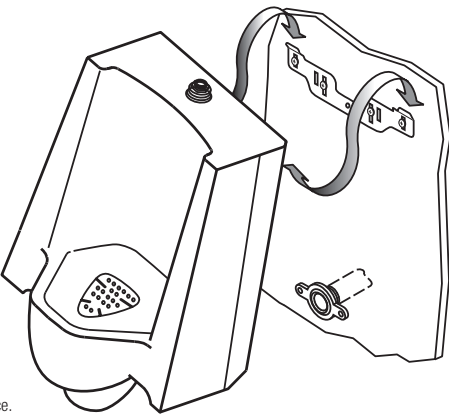
- Wall must be properly reinforced to support urinal.
- Determine position for new wall hanger bracket and mark hole locations.



- Drill holes in wall (use wall anchors if needed.)
- Mount and level wall hanger bracket using mounting screws and washers (included).

3. INSTALL NEW URINAL

- Install urinal on wall hanger bracket and secure bottom of urinal with bolts.



Note: Check if urinal is level. If not, adjust bracket.

⚠ CAUTION! Do not overtighten the bolts. Breakage and chipping of vitreous china can occur.

Hand tighten hex end into acorn nut before carefully securing and tightening bolts

4. COMPLETING THE INSTALLATION

- Install flush valve to manufacturer's installation instructions.
- Turn on water supply valve.
- Flush urinal a few times and check all connections for water seepage.
- Caulk urinal perimeter where urinal meets the wall surface to provide a suitable hygienic seal.
- Drop in Urinal Fragrance pad (included).
- Recheck for leaks for a few days.
- Record model number for reference and fill out and send in warranty card.

CARE AND CLEANING OF VITREOUS CHINA

Clean urinals with a cleaner safe for vitreous china such as Sloan's Waterfree Urinal Cleaner/Deodorizer. Spray and wipe clean using soft cloth. Soft abrasive cleaners may be used to remove stains.

LIMITED WARRANTY

Sloan Valve Company warrants its Flushometer Products to be made of first class materials, free from defects of material or workmanship under normal use and to perform the service for which they are intended in a thoroughly reliable and efficient manner when properly installed and serviced, for a period of three years from date of purchase. During this period, Sloan Valve Company will, at its option, repair or replace any part or parts which prove to be thus defective if returned to Sloan Valve Company, at customer's cost, and this shall be the sole remedy available under this warranty. No claims will be allowed for labor, transportation or other incidental costs. This warranty extends only to persons or organizations who purchase Sloan Valve Company's products directly from Sloan Valve Company for purpose of resale.

THERE ARE NO WARRANTIES WHICH EXTEND BEYOND THE DESCRIPTION ON THE FACE HEREOF. IN NO EVENT IS SLOAN VALVE COMPANY RESPONSIBLE FOR ANY CONSEQUENTIAL DAMAGES OF ANY MEASURE WHATSOEVER.

NOTE: IN NO EVENT SHALL THE SLOAN VALVE COMPANY BE LIABLE FOR INCIDENTAL DAMAGES, RESULTING FROM IMPROPER INSTALLATION, OR FOR DAMAGES CAUSED BY NEGLIGENCE, ABUSE OR ALTERATION.

SLOAN.

SLOAN VALVE COMPANY

10500 Seymour Avenue
Franklin Park, IL 60131
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or 1-847-671-4300
Fax: 1-800-447-8329 or 1-847-671-4380
www.sloanvalve.com

Instalación de Mingitorio

⚠ ADVERTENCIA: Cualquier porcelana puede astillarse o romperse si los pernos o las tuercas se aprietan de más o si se maltratan. Pueden ocurrir lesiones personales si el producto se maneja erróneamente.

ANTES DE COMENZAR...

- Observe todos los códigos locales de plomería y construcción.
- Revise si el nuevo mingitorio presenta daños antes de su instalación.
- Asegúrese que la pared sea suficientemente fuerte para soportar el nuevo mingitorio antes de instalarlo. Refuerce o instale un portador de mingitorio de ser necesario.
- Las dimensiones cumplen con el estándar ASME A112.19.2

USTED NECESITA...

- Taladro eléctrico (preferible un martillo perforador 1/2" VSR de uso pesado si se monta en pared de concreto)
- Brocas para mampostería de alta velocidad o punta de carburo si se monta en pared de concreto.
- Espátula para masilla o raspador filoso
- Destornilladores (phillips y plano)
- Lentes de seguridad
- Cinta de medir y marcador
- Nivel (mínimo preferido 24")
- Pistola para calafatear y masilla
- Pinzas regulables, llave ajustable y cuchillo multiusos.
- Limpiador de desague manual o eléctrico
- Pueden requerirse materiales y herramientas adicionales para preparación y refuerzo.

Nota: Requisitos del sistema de plomería
Presión mínima de flujo: 25 PSI

⚠ ADVERTENCIA: Pueden escapar gases peligrosos por la tubería de drenaje si no se instala rápidamente el mingitorio nuevo. Revise sus códigos locales de plomería. Arreglo temporal: coloque un trapo en el agujero de tubo de drenaje.

INSTALACIONES DE REPUESTO

1. REMUEVA EL MINGITORIO EXISTENTE

- Cierre el suministro de agua.
- Desconecte la válvula de descarga.
- Corte la masilla por todo el perímetro del mingitorio existente usando el cuchillo multiusos para soltar el mingitorio de la superficie de la pared.
- Remueva cualesquier pernos de sujeción que puedan estar soportando el mingitorio en la parte inferior.
- Remueva el mingitorio de la pared.
- Remueva el soporte de colgar existente.
- Usando el raspador filoso o la espátula para masilla, remueva por completo la masilla restante de la pared.
- Remueva la brida y el empaque de salida existentes y elimínelos.

2. REVISE LAS DIMENSIONES DE PREPARACIÓN

- Revise las dimensiones de preparación. Haga los ajustes que se requieran a la alimentación de agua para acomodar la válvula de descarga.

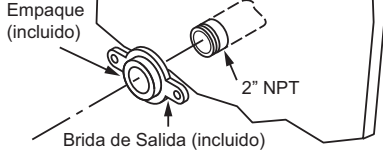
3. LIMPIE EL DESAGÜE

- Limpie el tubo de drenaje usando un limpiador manual o mecánico para asegurarse que el tubo esté despejado.
- Proceda a INSTALACIONES NUEVAS.

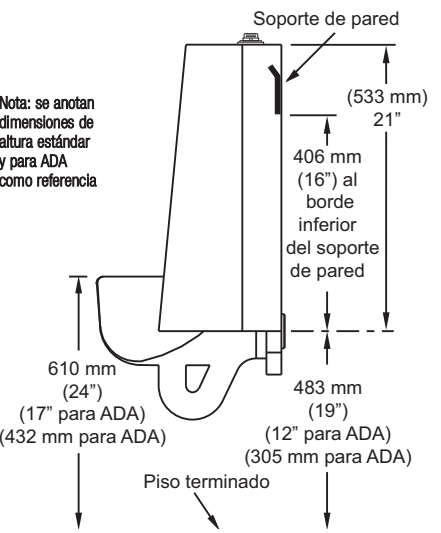
INSTALACIONES NUEVAS

1. INSTALE LA BRIDA Y EL EMPAQUE DE SALIDA

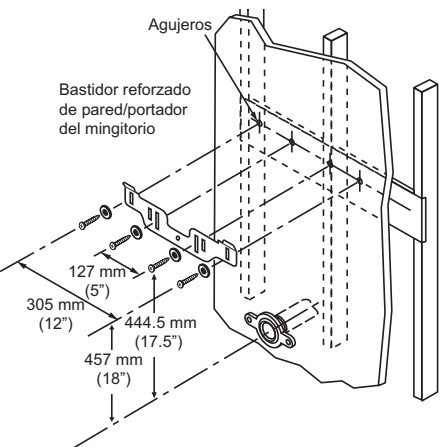
- Remueva el trapo temporal (si se utilizó) del agujero del tubo de drenaje.
- Aplique sellador de rosca a las rosas del tubo de drenaje e instale la nueva brida de salida en el tubo. Ponga el empaque en la brida de salida.



2. INSTALE EL NUEVO SOPORTE (INCLUIDO)



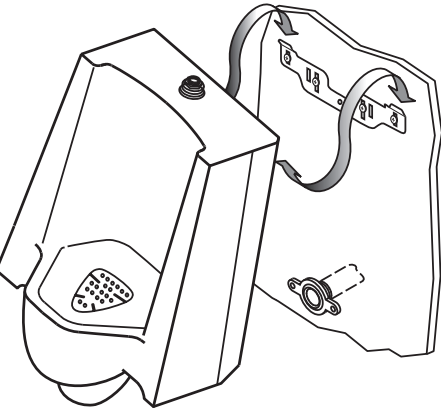
- La pared debe reforzarse adecuadamente para soportar el mingitorio.
- Determine la posición para el nuevo soporte de pared y marque las ubicaciones de los agujeros.



- Taladre agujeros en la pared (use taquetes si se requiere)
- Monte y nivele el soporte de pared usando los tornillos y arandelas de montaje (incluidos).

3. INSTALE EL NUEVO MINGITORIO

- Instale el mingitorio en el soporte de pared y asegúrelo en la parte inferior con pernos.



Nota: Revise si el mingitorio está nivelado. Si no lo está, ajuste el soporte.

⚠ PRECAUCIÓN! No apriete los pernos en exceso. La porcelana puede romperse y astillarse.

4. COMPLETE LA INSTALACIÓN

- Instale la válvula de descarga de acuerdo con las instrucciones del fabricante.
- Abra la válvula de alimentación de agua.
- Descargue el mingitorio varias veces y revise todas las conexiones para verificar si presentan fugas.
- Ponga masilla en el perímetro del mingitorio donde éste se une a la superficie de la pared para aportar un sello higiénico adecuado.
- Coloque la plantilla de fragancia (incluida).
- Siga revisando si hay fugas por varios días.
- Registre el número de modelo como referencia y llene y envíe la tarjeta de garantía.

CUIDADO Y LIMPIEZA DE LA PORCELANA

Limpie los mingitorios con un limpiador que sea seguro para porcelana, como el Desodorante/Limpiador para Mingitorios Sloan Waterfree. Rocíe y talle con un trapo suave. Se pueden utilizar limpiadores abrasivos suaves para remover manchas.

GARANTÍA LIMITADA

Sloan Valve Company garantiza que sus Productos de Fluxómetro están hechos con materiales de primera clase, libres de defectos en material o mano de obra bajo uso normal y que prestan el servicio para el que fueron fabricados en una forma totalmente eficiente y confiable siempre que se instalen adecuadamente y se les dé el servicio adecuado, por un periodo de tres años a partir de la fecha de compra. Durante este periodo Sloan, a su discreción, reparará o reemplazará cualquier parte o partes que se comprueben que estén defectuosas si se devuelven a Sloan a costo del cliente, y éste será el único recurso correctivo que se ofrece con esta garantía. No se aceptan reclamos por mano de obra, transporte u otros costos incidentales. La presente garantía se extiende únicamente a personas u organizaciones que compren los productos de Sloan Valve Company directamente de Sloan Valve Company con fines de reventa.

NO EXISTEN MÁS GARANTÍAS QUE SE EXTIENDAN MÁS ALLÁ DE LA QUE SE DESCRIBIÓ ANTERIORMENTE. EN NINGÚN CASO SLOAN VALVE COMPANY ES RESPONSABLE POR CUALQUIER DAÑO CONSECUENTE DE CUALQUIER CLASE

NOTA: EN NINGÚN CASO SLOAN VALVE COMPANY SERÁ RESPONSABLE POR DAÑOS INCIDENTALES QUE RESULTEN DE INSTALACIÓN INADECUADA O POR DAÑOS CAUSADOS POR NEGLIGENCIA, ABUSO O ALTERACIONES.

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HEU I.I. Code No. 0816421

Rear Spud Urinal Installation Instructions

⚠ WARNING: Any vitreous china can chip or break if the bolts or nuts are over-tightened or if mishandled. Personal injury can occur if product is mishandled.

BEFORE YOU START...

- Observe all local plumbing and building codes.
- Check for any damage to the new urinal before installation.
- Make sure the wall is strong enough to support the new urinal prior to installation. Reinforce or install a urinal carrier if necessary.
- Urinal complies to ASME Standard A112.19.2

WHAT YOU WILL NEED...

- Electric Drill (heavy duty 1/2" VSR hammer drill preferred if mounting to concrete wall)
- High Speed or carbide tipped masonry bits if mounting to concrete wall
- Putty knife or sharp scraper
- Screwdrivers (phillips and flat head)
- Safety glasses
- Measuring tape and marker
- Level (24" minimum preferred)
- Caulking gun and caulk
- Channel lock pliers, adjustable wrench, and utility knife
- Manual or electric drain cleaner
- Additional materials and tools may be required for rough-in and reinforcing.

NOTE: Plumbing System Requirements
√ Minimum **Flowing** Pressure: 25 PSI

⚠ WARNING: Hazardous gases can escape through the waste pipe if new urinal is not installed quickly. A temporary fix: place a rag in the waste pipe hole.

RETROFIT INSTALLATIONS

1. REMOVE EXISTING URINAL

- Turn off the water supply.
- Disconnect the flush valve.
- Cut caulk all around existing urinal using utility knife to release urinal from wall surface.
- Remove any attaching bolts that may be holding the urinal at the bottom.
- Remove urinal from wall.
- Remove existing hanger bracket.
- Using sharp scraper or putty knife, completely remove all remaining caulk from wall.
- Remove existing outlet flange and gasket and discard.

2. CHECK ROUGH-IN DIMENSIONS

- Check rough-in dimensions. Make any adjustments to water supply to accommodate flush valve as necessary.

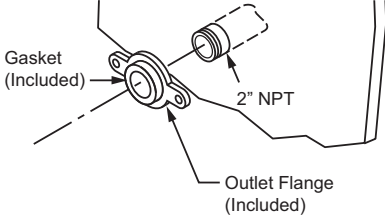
3. CLEAN DRAIN

- Clean out waste pipe using hand or power cleaner to be sure pipe is clear.
- Proceed to NEW INSTALLATIONS.

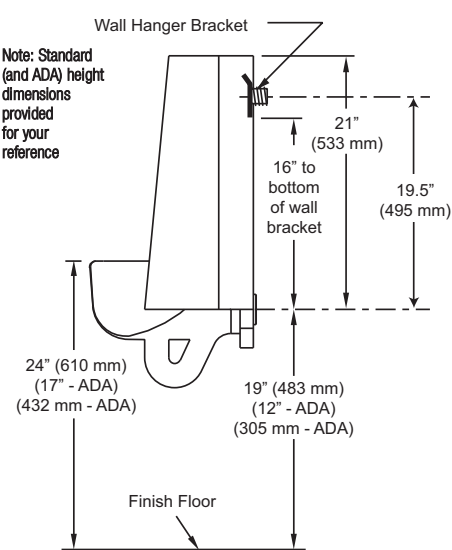
NEW INSTALLATIONS

1. INSTALL OUTLET FLANGE AND GASKET

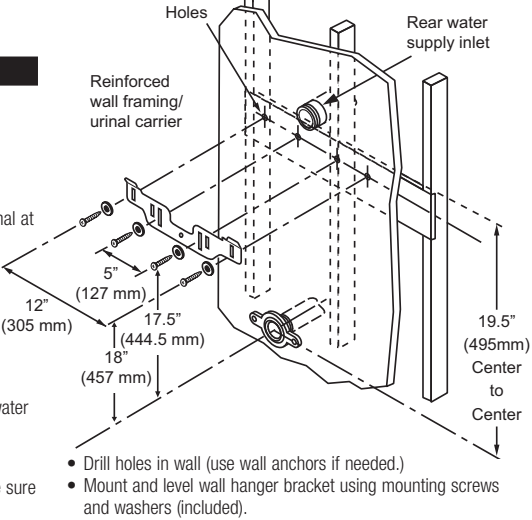
- Remove the temporary rag (if used) from the waste pipe hole.
- Apply thread sealant to waste pipe threads and install new outlet flange on pipe.



2. INSTALL NEW WALL HANGER BRACKET (INCLUDED)

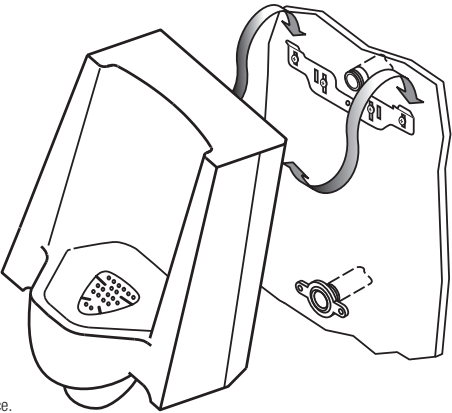


- Wall must be properly reinforced to support urinal .
- Determine position for new wall hanger bracket and mark hole locations.



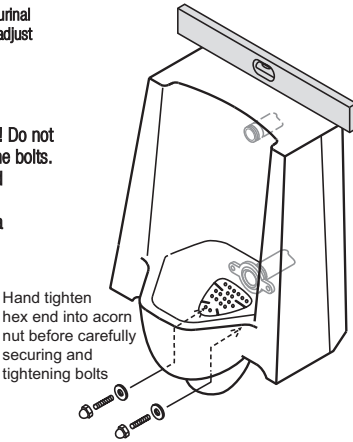
3. INSTALL NEW URINAL

- Install urinal on wall hanger bracket and secure bottom of urinal with bolts.



Note: Check if urinal is level. If not, adjust bracket.

⚠ CAUTION! Do not overtighten the bolts. Breakage and chipping of vitreous china can occur.



4. COMPLETING THE INSTALLATION

- Install flush valve to manufacturer's installation instructions.
- Turn on water supply valve.
- Flush urinal a few times and check all connections for water seepage.
- Caulk urinal perimeter where urinal meets the wall surface to provide a suitable hygienic seal.
- Drop in Urinal Fragrance pad (included).
- Recheck for leaks for a few days.
- Record model number for reference and fill out and send in warranty card.

CARE AND CLEANING OF VITREOUS CHINA

Clean urinals with a cleaner safe for vitreous china such as Sloan's Waterfree Urinal Cleaner/Deodorizer. Spray and wipe clean using soft cloth. Soft abrasive cleaners may be used to remove stains.

LIMITED WARRANTY

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or 1-847-671-4300
Fax: 1-800-447-8329 or 1-847-671-4380
www.sloanvalve.com

Instalación de Mingitorio con Spud Trasero

⚠ ADVERTENCIA: Cualquier porcelana puede astillarse o romperse si los pernos o las tuercas se aprietan de más o si se maltratan. Pueden ocurrir lesiones personales si el producto se maneja erróneamente.

ANTES DE COMENZAR...

- Observe todos los códigos locales de plomería y construcción.
- Revise si el nuevo mingitorio presenta daños antes de su instalación.
- Asegúrese que la pared sea suficientemente fuerte para soportar el nuevo mingitorio antes de instalarlo. Refuerce o instale un portador de mingitorio de ser necesario.
- Las dimensiones cumplen con el estándar ASME A112.19.2.

USTED NECESITA...

- Taladro eléctrico (preferible un martillo perforador 1/2" VSR de uso pesado si se monta en pared de concreto)
- Brocas para mampostería de alta velocidad o punta de carburo si se monta en pared de concreto.
- Espátula para masilla o raspador filoso
- Destornilladores (phillips y plano)
- Lentes de seguridad
- Cinta de medir y marcador
- Nivel (mínimo preferido 24")
- Pistola para calafatear y masilla
- Pinzas regulables, llave ajustable y cuchillo multiusos.
- Limpiador de desagüe manual o eléctrico
- Pueden requerirse materiales y herramientas adicionales para preparación y refuerzo.

Nota: Requisitos del sistema de plomería
Presión mínima de flujo: 25 PSI

⚠ ADVERTENCIA: Pueden escapar gases peligrosos por la tubería de drenaje si no se instala rápidamente el mingitorio nuevo. Revise sus códigos locales de plomería. Arreglo temporal: coloque un trapo en el agujero de tubo de drenaje.

INSTALACIONES DE REPUESTO

1. REMUEVA EL MINGITORIO EXISTENTE

- Cierre el suministro de agua.
- Desconecte la válvula de descarga.
- Corte la masilla por todo el perímetro del mingitorio existente usando el cuchillo multiusos para soltar el mingitorio de la superficie de la pared.
- Remueva cualesquier pernos de sujeción que puedan estar soportando el mingitorio en la parte inferior.
- Remueva el mingitorio de la pared.
- Remueva el soporte de colgar existente.
- Usando el raspador filoso o la espátula para masilla, remueva por completo la masilla restante de la pared.
- Remueva la brida y el empaque de salida existentes y elimínelos.

2. REVISE LAS DIMENSIONES DE PREPARACIÓN

- Revise las dimensiones de preparación. Haga los ajustes que se requieran a la alimentación de agua para acomodar la válvula de descarga.

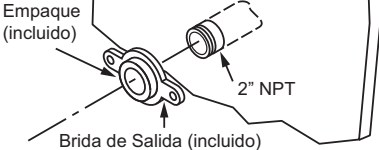
3. LIMPIE EL DESAGÜE

- Limpie el tubo de drenaje usando un limpiador manual o mecánico para asegurarse que el tubo esté despejado.
- Proceda a INSTALACIONES NUEVAS.

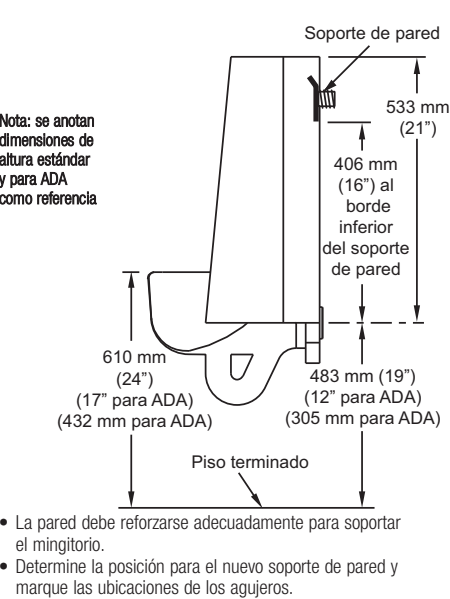
INSTALACIONES NUEVAS

1. INSTALE LA BRIDA Y EL EMPAQUE DE SALIDA

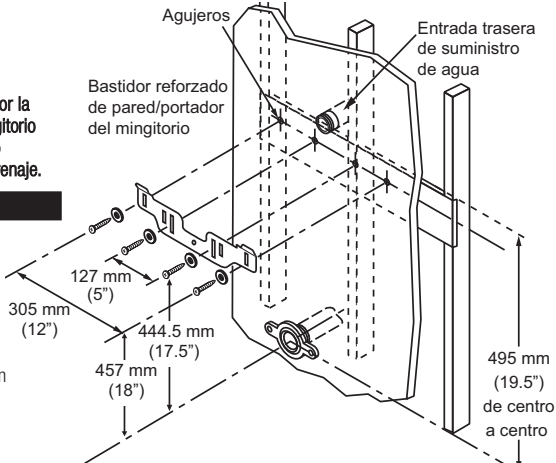
- Remueva el trapo temporal (si se utilizó) del agujero del tubo de drenaje.
- Aplique sellador de rosca a las roscas del tubo de drenaje e instale la nueva brida de salida en el tubo. Ponga el empaque en la brida de salida.



2. INSTALE EL NUEVO SOPORTE DE PARED (INCLUIDO)



- La pared debe reforzarse adecuadamente para soportar el mingitorio.
- Determine la posición para el nuevo soporte de pared y marque las ubicaciones de los agujeros.



- Taladre agujeros en la pared (use taquetes si se requiere)
- Monte y nivele el soporte de pared usando los tornillos y arandelas de montaje (incluidos)

3. INSTALE EL NUEVO MINGITORIO

- Instale el mingitorio en el soporte de pared y asegúrelo en la parte inferior con pernos.

Nota: Revise si el mingitorio está nivelado. Si no lo está, ajuste el soporte.

⚠ PRECAUCIÓN! No apriete los pernos en exceso. La porcelana puede romperse y astillarse.



4. COMPLETE LA INSTALACIÓN

- Instale la válvula de descarga de acuerdo con las instrucciones del fabricante.
- Abra la válvula de alimentación de agua.
- Descargue el mingitorio varias veces y revise todas las conexiones para verificar si presentan fugas.
- Ponga masilla en el perímetro del mingitorio donde éste se une a la superficie de la pared para aportar un sello higiénico adecuado.
- Coloque la plantilla de fragancia (incluida).
- Siga revisando si hay fugas por varios días.
- Registre el número de modelo como referencia y llene y envíe la tarjeta de garantía.

CUIDADO Y LIMPIEZA DE LA PORCELANA

Limpie los mingitorios con un limpiador que sea seguro para porcelana, como el Desodorante/Limpiador para Mingitorios Sloan Waterfree. Rocíe y talle con un trapo suave. Se pueden utilizar limpiadores abrasivos suaves para remover manchas.

GARANTÍA LIMITADA

Sloan Valve Company garantiza que sus Productos de Fluxómetro están hechos con materiales de primera clase, libres de defectos en material o mano de obra bajo uso normal y que prestan el servicio para el que fueron fabricados en una forma totalmente eficiente y confiable siempre que se instalen adecuadamente y se les dé el servicio adecuado, por un periodo de tres años a partir de la fecha de compra. Durante este periodo Sloan, a su discreción, reparará o reemplazará cualquier parte o partes que se comprueben que estén defectuosas si se devuelven a Sloan a costo del cliente, y éste será el único recurso correctivo que se ofrece con esta garantía. No se aceptan reclamos por mano de obra, transporte u otros costos incidentales. La presente garantía se extiende únicamente a personas u organizaciones que compren los productos de Sloan Valve Company directamente de Sloan Valve Company con fines de reventa.

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HEU I.I. No. Código 0816421



Code No. 0816195

Rev. 6 (02/15)

INSTALLATION INSTRUCTIONS FOR EXPOSED ROYAL® FLUSHOMETERS



**Closet Flushometer
for 1½" Top Spud**

MODELS 110/111,
113, 115 & 116

**Service Sink Flushometer
for 1½" Top Spud**

MODEL 117



**Urinal Flushometer
for 1¼" Top Spud**

MODEL 180

**Urinal Flushometer
for ¾" Top Spud**

MODEL 186



**Closet Flushometer
for 1½" Back Spud**

MODELS 120, 121 & 122

LIMITED WARRANTY

Unless otherwise noted, Sloan Valve Company warrants this product, manufactured and sold for commercial or industrial uses, to be free from defects in material and workmanship for a period of three (3) years (one (1) year for special finishes, SF faucets, PWT electronics and 30 days for PWT software) from date of first purchase. During this period, Sloan Valve Company will, at its option, repair, replace, or refund the purchase price of any product which fails to conform with this warranty under normal use and service. This shall be the sole and exclusive remedy under this warranty. Products must be returned to Sloan Valve Company, at customer's cost. No claims will be allowed for labor, transportation or other costs. This warranty extends only to persons or organizations who purchase Sloan Valve Company's products directly from Sloan Valve Company for purpose of resale. This warranty does not cover the life of the batteries.

THERE ARE NO WARRANTIES WHICH EXTEND BEYOND THE DESCRIPTION ON THE FACE HEREOF. IN NO EVENT IS SLOAN VALVE COMPANY RESPONSIBLE FOR ANY CONSEQUENTIAL DAMAGES OF ANY MEASURE WHATSOEVER.

PRIOR TO INSTALLATION

Before you install the flushometer, be sure the items listed below are installed. Also, refer to the rough-in diagram below.

- Closet fixture • Drain line • Water supply line

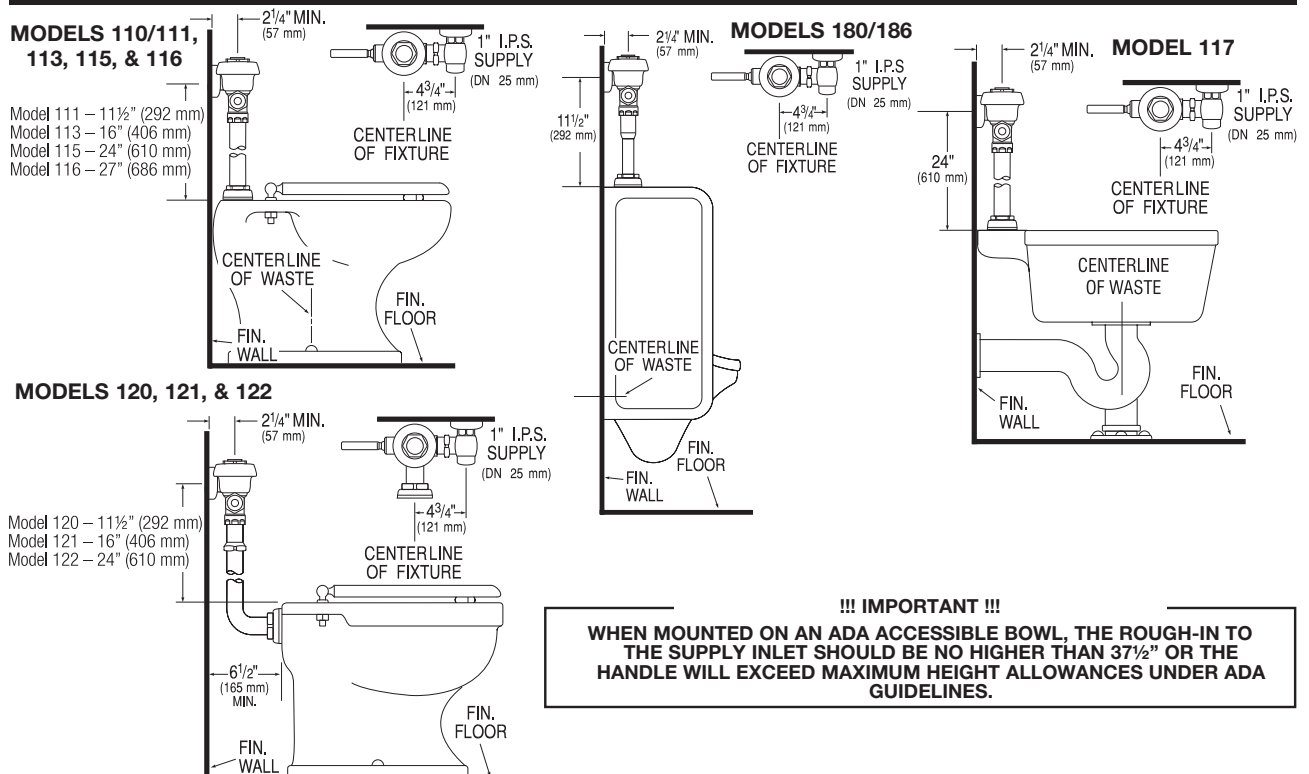
IMPORTANT:

- **ALL PLUMBING SHOULD 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.**

Sloan's flushometers are designed to operate with 15 to 80 psi (103 to 552kPa) of water pressure. **THE MINIMUM PRESSURE REQUIRED TO THE VALVE IS DETERMINED BY THE TYPE OF FIXTURE SELECTED.**

Consult fixture manufacturer for minimum pressure requirements. Most High Efficiency water closets require a minimum flowing pressure of 25 psi (172 kPa). Many building codes and the ASME A112.19.2 fixture standard list Maximum static water pressure as 80 PSI (552 kPa).

ROUGH-INS



TOOLS REQUIRED FOR INSTALLATION

- Straight blade screwdriver
- Sloan A-50 Super-Wrench™, Sloan A-109 Plier Wrench or smooth jawed spud wrench

!!! IMPORTANT !!!

PROTECT THE CHROME OR SPECIAL FINISH OF SLOAN FLUSHOMETERS — DO NOT USE TOOTHED TOOLS TO INSTALL OR SERVICE THESE VALVES. USE A SLOAN A-50 SUPER-WRENCH™, SLOAN A-109 PLIER WRENCH OR SMOOTH JAWED SPUD WRENCH TO SECURE ALL COUPLINGS. SEE “CARE AND CLEANING” SECTION.

!!! IMPORTANT !!!

NEVER OPEN CONTROL STOP TO WHERE THE FLOW FROM THE VALVE EXCEEDS THE FLOW CAPABILITY OF THE FIXTURE. IN THE EVENT OF A VALVE FAILURE, THE FIXTURE MUST BE ABLE TO ACCOMMODATE A CONTINUOUS FLOW FROM THE VALVE.

!!! IMPORTANT !!!

WITH THE EXCEPTION OF CONTROL STOP INLET, DO NOT USE PIPE SEALANT OR PLUMBING GREASE ON ANY VALVE COMPONENT OR COUPLING!

!!! IMPORTANT !!!

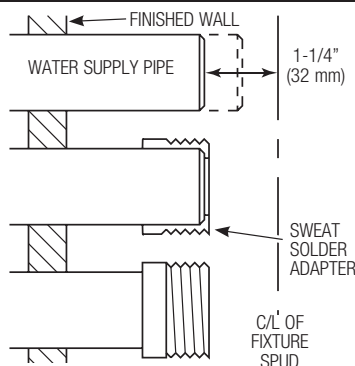
THIS PRODUCT CONTAINS MECHANICAL AND/OR ELECTRICAL COMPONENTS THAT ARE SUBJECT TO NORMAL WEAR. THESE COMPONENTS SHOULD BE CHECKED ON A REGULAR BASIS AND REPLACED AS NEEDED TO MAINTAIN THE VALVE'S PERFORMANCE.

Please take the time to read this manual to ensure proper product installation and longevity.

When further assistance is required, please contact your local Sloan Representative or Sloan Technical Support at:
1-888-SLOAN-14 (1-888-756-2614)

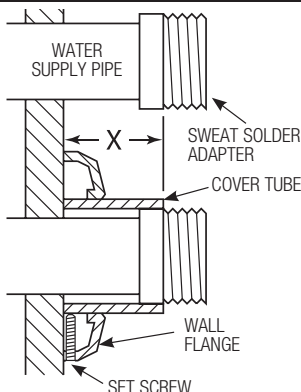
1 - INSTALL OPTIONAL SWEAT SOLDER ADAPTER (ONLY IF YOUR SUPPLY PIPE DOES NOT HAVE A MALE THREAD)

- Measure from finished wall to C/L of fixture spud. Cut pipe 1¼" (32 mm) shorter than this measurement. Chamfer O.D. and I.D. of water supply pipe.
- Slide threaded adapter fully onto pipe.
- Sweat solder the Adapter to pipe.

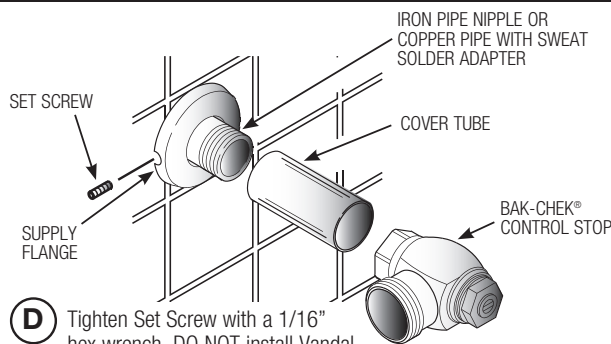


2 - INSTALL COVER TUBE, WALL FLANGE AND CONTROL STOP TO SUPPLY PIPE

- Measure from finished wall to first thread of Adapter or threaded supply pipe (dimension "X"). Cut Cover Tube to this length.
- Slide Cover Tube over pipe. Slide Wall Flange over Cover Tube until against wall.
- Thread Control Stop onto pipe. Tighten with a wrench.

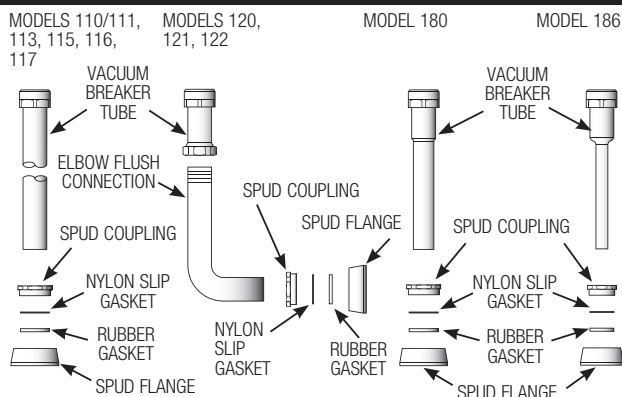


- Tighten Set Screw with a 1/16" hex wrench. DO NOT install Vandal Resistant Stop Cap at this time.



3 - INSTALL VACUUM BREAKER FLUSH CONNECTION

- Slide Spud Coupling, Nylon Slip Gasket, Rubber Gasket and Spud Flange over Vacuum Breaker Tube.
- Insert Tube into Fixture Spud.
- Hand tighten Spud Coupling onto Fixture Spud.



4 - INSTALL FLUSHOMETER AND TRIPLE SEAL HANDLE ASSEMBLY

NOTE

For high efficiency urinal flushometers (0.5, 0.25 and 0.125 gpf), it is necessary to first insert the flow control component into the tailpiece assembly. See the H1015A flow control kit and separate instructions for details on how to install.

- A** Lubricate tailpiece O-ring with water. Insert Adjustable Tailpiece into Control Stop. Tighten Tailpiece Coupling by hand.
- B** Align Flushometer directly above the Vacuum Breaker Flush Connection by sliding the Flushometer Body IN or OUT as needed. Tighten Vacuum Breaker Coupling by hand.

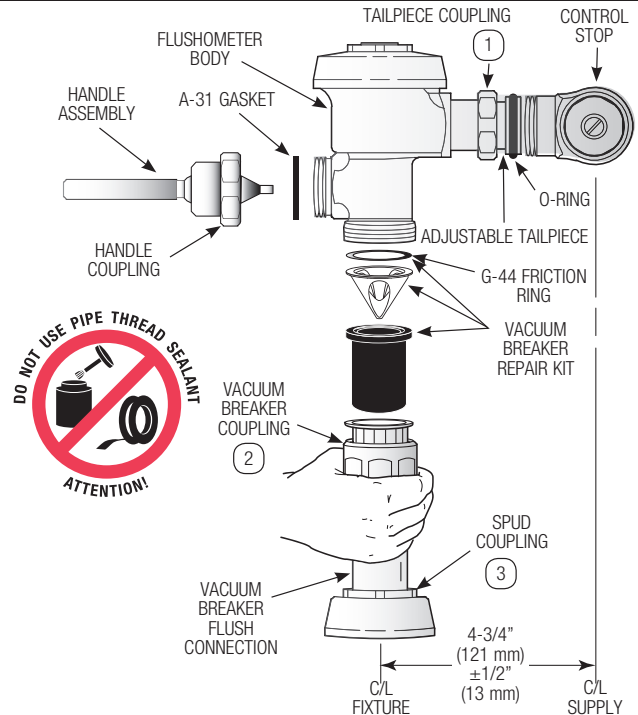
NOTE

Maximum adjustment of the Sloan Adjustable Tailpiece is 1/2" (13 mm) IN or OUT from the standard 4-3/4" (121 mm) (centerline of Flushometer to centerline of Control Stop).

If roughing-in measurement exceeds 5-1/4" (133 mm), consult factory for longer tailpiece.

- C** Align Flushometer Body and securely tighten first the Tailpiece Coupling (1), then the Vacuum Breaker Coupling (2), and finally the Spud Coupling (3). Use a wrench to tighten these couplings in the order shown.
- D** Install the red A-31 Handle Gasket on the Handle Assembly. Insert the Handle Assembly into the Handle opening in the Flushometer Body. Securely tighten the Handle coupling with a wrench.

Sloan's triple-sealed Flushometer Handle is ADA-complaint.



5 - FLUSH OUT SUPPLY LINE

- A** Make sure Control Stop is CLOSED and remove Flushometer Outer Cover.
- B** Remove Inside Cover and lift out Inside Parts Assembly.

- C** Reinstall Outside and Inside Cover wrench tight. Open Control Stop to flush supply line. Close Control Stop and remove Outside and Inside Cover.
- D** Reinstall Inside Parts Assembly, Inside Cover and Outside Cover wrench tight.

6 - ADJUST CONTROL STOP AND INSTALL VANDAL RESISTANT STOP CAP

- A** Open Control Stop COUNTERCLOCKWISE one FULL turn from closed position.
- B** Activate Flushometer.
- C** Adjust Control Stop after each flush until the rate of flow delivered properly cleanses the fixture.

!!! IMPORTANT !!!

Sloan's flushometers are engineered for quiet operation. Excessive water flow creates noise, while too little water flow may not satisfy the needs of the fixture. Proper adjustment is made when plumbing fixture is cleansed after each flush without splashing water out from the lip AND a quiet flushing cycle is achieved.

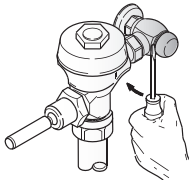
Never open Control Stop to where the flow from the valve exceeds the flow capability of the fixture. In the event of a valve failure, the fixture must be able to accommodate a continuous flow from the valve.

- D** Install Vandal Resistant Control Stop Cap onto Control Stop.
 - Thread the Plastic Sleeve onto the Stop Bonnet until it is snug (tighten only by hand; do not use pliers or a wrench).
 - Place the metal Control Stop Cap over the plastic Sleeve and use the palm of the hand to push or "pop" the Cap over the fingers of the Plastic Sleeve. The Cap should spin freely.

Important: DO NOT install Cap onto Sleeve unless the Sleeve has been threaded onto Control Stop Bonnet. If the Sleeve and Cap are assembled off of the Control Stop, the Sleeve WILL NOT come apart from the Cap.

VANDAL RESISTANT CONTROL STOP CAP REMOVAL

Use a large flat screwdriver as a lever to remove the Cap from the Control Stop. Insert the screwdriver blade between the bottom edge of the Cap and the flat surface of the Control Stop body as shown. Push the screwdriver handle straight back toward the wall to gently lift the Cap. If necessary, work the screwdriver around the diameter of the Cap until you can grasp the Cap and lift it completely off the Sleeve. The Sleeve should remain attached to the bonnet of the Control Stop.



TROUBLESHOOTING GUIDE

1. Flushometer does not function (no flush).

- A. Control stop or main valve is closed. Open control stop or main valve.
- B. Handle assembly is damaged. Replace handle or install handle repair kit.
- C. Relief Valve is damaged. Replace relief valve.

2. Volume of water is not sufficient to siphon fixture.

- A. Control stop is not open wide enough. Adjust control stop for desired delivery of water volume.
- B. Diaphragm assembly is damaged. Replace diaphragm assembly.
- C. Incorrect diaphragm assembly is installed in flushometer; for instance, urinal assembly inside a closet flushometer, or low consumption assembly inside a higher consumption fixture. Determine the flush volume required by the fixture and replace diaphragm. Use valve label and markings on fixture for reference.
- D. Water supply volume or pressure is inadequate. If no gauges are available to properly measure supply pressure or volume of water at the flushometer, then remove the relief valve from the diaphragm assembly, reassemble the flushometer and completely open the control stop.
 - If the fixture siphons, more water volume is required. Install a higher flushing volume diaphragm. **IMPORTANT – LAWS AND REGULATIONS PROHIBIT THE USE OF HIGHER FLUSHING VOLUMES THAN LISTED ON FIXTURE OR FLUSHOMETER.**
 - If the fixture DOES NOT siphon or if a low consumption flush is required, steps must be taken to increase the water supply pressure and/or volume. Contact the fixture manufacturer for minimum water supply requirements of the fixture.

3. Length of flush is too short (short flush).

- A. Diaphragm assembly is worn or damaged. Replace diaphragm assembly.
- B. Handle assembly is damaged. Replace handle or install handle repair kit.
- C. Incorrect diaphragm assembly is installed in flushometer; for instance, urinal assembly inside a closet flushometer, or low consumption assembly inside a higher consumption fixture. Determine the flush volume required by the fixture and replace diaphragm. Use valve label and markings on fixture for reference.

4. Length of flush is too long (long flush) or continuous.

- A. Metering bypass hole (upper filter ring) in diaphragm is clogged. Remove the diaphragm assembly. Remove the primary and secondary filter rings from the diaphragm, wash under running water, and reassemble. Replace as necessary.
- B. Diaphragm or relief valve is damaged. Replace diaphragm or relief valve.
- C. Incorrect diaphragm assembly is installed in flushometer; for instance, closet assembly inside a urinal flushometer, or water saver assembly inside a low consumption flushometer. Determine the flush volume required by the fixture and replace the diaphragm. Use valve label and markings on fixture for reference.
- D. Inside cover is damaged. Replace Inside cover.
- E. Supply line water pressure has dropped and is not sufficient to close the valve. Close control stop until pressure is restored.
- F. Relief valve is not seated properly. Disassemble diaphragm components (relief valve, filter rings, and diaphragm unit), wash under running water, and reassemble. Replace as necessary.

5. Chattering noise is heard during flush.

- A. Inside cover is damaged. Replace inside cover.
- B. Relief valve or diaphragm is damaged. Replace relief valve or diaphragm assembly.

6. Handle Leaks.

- A. Handle seal or assembly is damaged. Replace handle or install handle repair kit.

7. Water splashes from fixture.

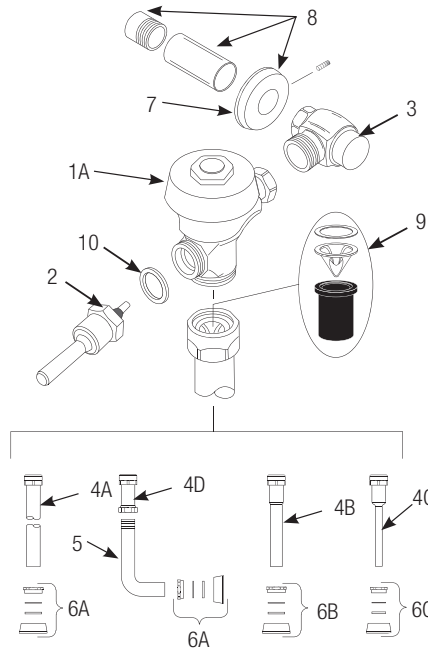
- A. Control stop is open wider than necessary. Adjust control stop for desired delivery of water volume.
- B. Water saver/conventional diaphragm assembly is installed on low consumption fixture or closet diaphragm assembly is installed on urinal fixture. Determine the required flush volume (see label on valve or markings on fixture). Replace diaphragm assembly or relief valve for appropriate flush volume of fixture.

When assistance is required, please contact your local Sloan Representative or Sloan Technical Support at:
1-888-SLOAN-14 (1-888-756-2614)

CARE AND CLEANING

DO NOT use abrasive or chemical cleaners (including chlorine bleach) to clean Flushometers that may dull the luster and attack the chrome or special decorative finishes. Use ONLY mild soap and water, then wipe dry with clean cloth or towel. While cleaning the bathroom tile, protect the Flushometer from any splattering of cleaner. Acids and cleaning fluids will discolor or remove chrome plating.

PARTS LIST



Item No.	Part No.	Description
1	†	Valve Assembly
2	B-73-A	ADA Compliant Handle Assembly
3	H-700-A	Bak-Chek® Control Stop
4A	V-600-AA	1½" (38 mm) Vacuum Breaker Assembly ‡
4B	V-600-AA	1¼" (32 mm) Vacuum Breaker Assembly
4C	V-600-AA	¾" (19 mm) Vacuum Breaker Assembly
4D	V-600-A	Vacuum Breaker Assembly
5	F-109	1½" (38 mm) Elbow Flush Connection
6A	F-56-A	1½" (38 mm) Spud Coupling Assembly
6B	F-57-A	1¼" (32 mm) Spud Coupling Assembly
6C	F-58-A	¾" (19 mm) Spud Coupling Assembly
7	F-7	Supply Flange (Supplied when Valve is not Ordered with Sweat Solder Kit)
8	H-633-AA	1" (25 mm) Sweat Solder Kit with Cast Set Screw Flange
	H-636-AA	¾" (19 mm) Sweat Solder Kit with Cast Set Screw Flange
9	V-651-A	High Back Pressure Vacuum Breaker Repair Kit
10	A-31	Handle Gasket
†		Part number varies with valve model variation; consult factory.
‡		Length varies with valve model variation; consult factory.

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

SLOAN • 10500 SEYMOUR AVENUE • FRANKLIN PARK, IL 60131

Phone: 1-800-9-VALVE-9 or 1-847-671-4300 • Fax: 1-800-447-8329 or 1-847-671-4380 • sloan.com



Wall-Hung Lavatory with Backsplash Installation

Model
SS-3003 / SS-3103 / SS-3803
Standard Wall Hung Lavatory with Backsplash

THE RIGHT CHOICE

We thank you for your purchase. Our products are 100% tested but should you have any questions, please contact us by phone or at our web site.



⚠ WARNING: Any vitreous china can chip or break if the bolts or nuts are over-tightened or if mishandled.
BEFORE YOU START...

- Check all local plumbing and building codes.
- Check for any damage to the new lavatory sink before installation.
- WHAT YOU WILL NEED...**
 - Putty knife
 - Safety glasses
 - Measuring tape
 - Basin wrench
 - Tube cutter
 - Hacksaw
 - Channel lock pliers
 - Carrier: Jay R. Smith- 0700 series lavatory; Josam- 17100-202 series lavatory; Watts TCA-411 concealed arm "track"; Watts WCA-411 carrier with concealed arms or equal
 - 10" adjustable wrench
 - Phillips screwdriver
 - Flathead screwdriver
 - Drill
 - Plumbers putty
 - Silicone sealant
 - Compatible with:

RETROFIT INSTALLATIONS

1. REMOVE EXISTING LAVATORY

- Turn off the water supply.
- Disconnect the supply lines and waste pipes.
- Remove the existing lavatory.
- Scrape any old putty or sealant from wall surface.
- Remove old wall bracket and discard.
- Adequate structural support in or behind the wall is required to withstand the weight of the lavatory when filled with water.

2. CLEAN DRAIN

- Clean out waste pipe using hand or power cleaner to be sure pipe is clear.
- Proceed to NEW INSTALLATIONS.

Wall Carrier rough-in information to be provided by wall carrier manufacturer. Carrier and hardware not included with fixture

Important: Fixture dimensions are nominal and may vary slightly from drawings.

NEW INSTALLATIONS

1. PRIOR TO NEW INSTALLATION

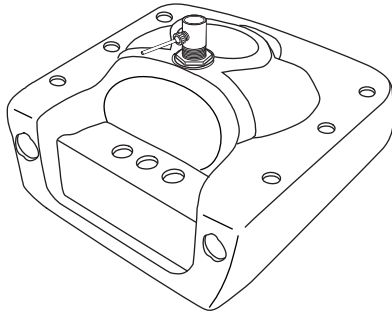
- Determine appropriate wall location for the lavatory. Consider that hot and cold water supply lines with supply stops or a tempered water supply line with supply stop and a drain line will be required. A 120V electrical source (receptacle) may also be required. Compare the physical dimensions of the lavatory to the space available for the installation.

2. UNPACK AND INSPECT LAVATORY

- Carefully remove sink from its protective carton so as not to damage porcelain finish. Check for any damage to lavatory before proceeding with the installation.
- Examine the carton for additional parts before discarding packaging.

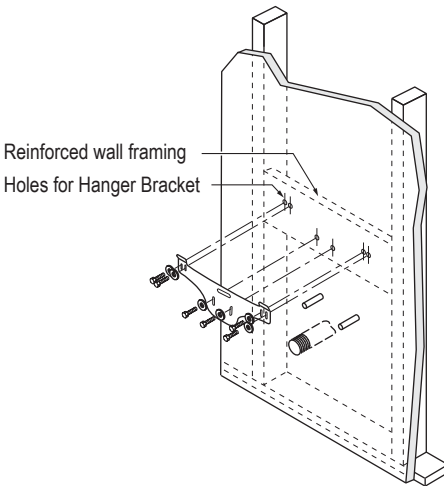
3. INSTALL DRAIN POP-UP AND FAUCET

- Install the faucet and drain assembly (not included). Follow faucet manufacturers instructions. Use plumbers putty to ensure a water seal.



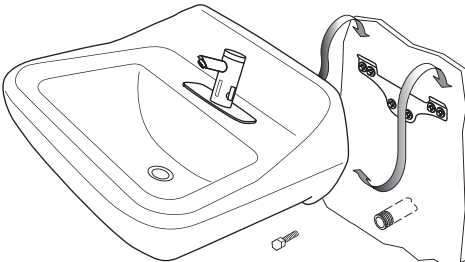
4. INSTALL NEW WALL HANGER BRACKET

- Determine the desired height to the top of lavatory sink rim. Mark level line on wall. This line is centerline of holes for wall hanger bracket mounting holes.
- Mark and drill holes in wall for mounting lavatory



⚠ Note: Adequate reinforced wall framing is required behind the wall for proper hanger bracket support. Use of wall anchors or toggle bolts is not recommended. For concrete walls a properly sized wall anchor can be used.

- Mount and level wall hanger bracket using six (6) screws and washers (not supplied)

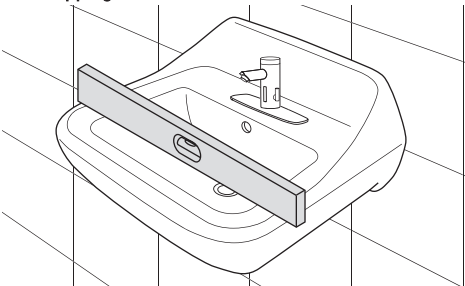


5. INSTALL LAVATORY ON WALL BRACKET

Note: Check if lavatory is level. If not level, remove lavatory and adjust wall bracket as needed.

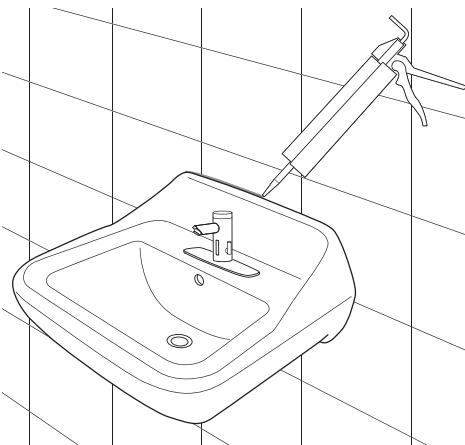
Install two (2) 5/16" anchor bolts (not supplied), through the (2) 3/8" anchor holes, in the sink and into the wall.

⚠ CAUTION! Do not overtighten the bolts. Breakage and chipping of vitreous china can occur.



COMPLETING THE INSTALLATION

- Connect all supply lines and waste pipes.
- Turn on water. Check to see that the faucet and drain are operating properly and there are no leaks.
- Caulk around lavatory perimeter where lavatory meets the wall.
- Record lavatory model number for reference.



CARE AND CLEANING OF VITREOUS CHINA

Clean lavatory with a cleaner safe for vitreous china. Spray and wipe clean using soft cloth. Soft abrasive cleaners may be used to remove stains.

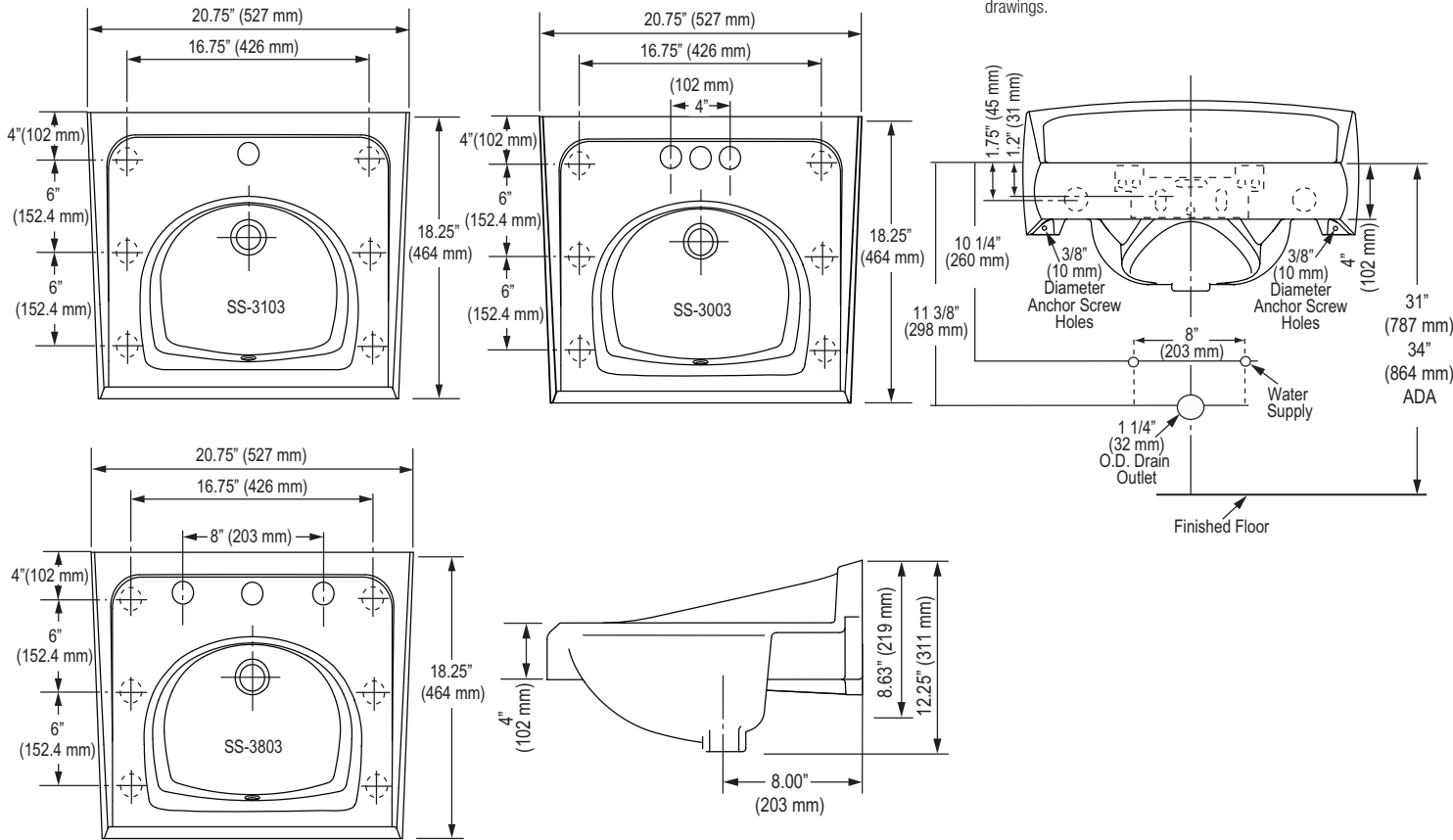
LIMITED WARRANTY

Sloan Valve Company warrants its vitreous china products to be made of first class materials, free from defects of material or workmanship under normal use and to perform the service for which they are intended in a thoroughly reliable and efficient manner when properly installed and serviced, for a period of three years from date of purchase. During this period, Sloan Valve Company will, at its option, repair or replace any part or parts which prove to be thus defective if returned to Sloan Valve Company, at customer's cost, and this shall be the sole remedy available under this warranty. No claims will be allowed for labor, transportation or other incidental costs. This warranty extends only to persons or organizations who purchase Sloan Valve Company's products directly from Sloan Valve Company for purpose of resale.

THERE ARE NO WARRANTIES WHICH EXTEND BEYOND THE DESCRIPTION ON THE FACE HEREOF. IN NO EVENT IS SLOAN VALVE COMPANY RESPONSIBLE FOR ANY CONSEQUENTIAL DAMAGES OF ANY MEASURE WHATSOEVER.

NOTE: IN NO EVENT SHALL THE SLOAN VALVE COMPANY BE LIABLE FOR INCIDENTAL DAMAGES, RESULTING FROM IMPROPER INSTALLATION, OR FOR DAMAGES CAUSED BY NEGLIGENCE, ABUSE OR ALTERATION.

The information contained in this document is subject to change without notice.



TO MAXIMIZE THE PERFORMANCE OF YOUR SLOAN LAVATORY, USE ONLY SLOAN FAUCETS



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SINGLE HANDLE LAVATORY CENTERSET FAUCETS

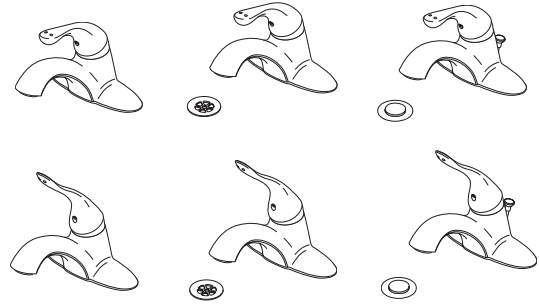
LLAVES MONOCONTROL DE MONTURA DE CENTRO PARA LAVAMANOS

ROBINETS À ENTRAXE COURT À UNE POIGNÉE

Models/Modelos/Modèles

501LF-HDF, 511LF-HDF, 515LF-HDF,
516LF-HDF, 520LF-HDF & 523LF-HDF

Series/Series/Seria

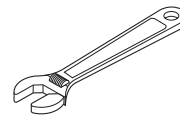
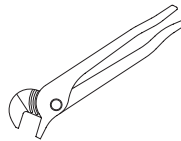
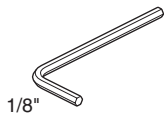


Write purchased model number here.

Escriba aquí el número del modelo comprado.

Inscrivez le numéro de modèle ici.

**You may need/Usted puede necesitar/
Articles dont vous pouvez avoir besoin:**



For easy installation of your Delta faucet you will need:

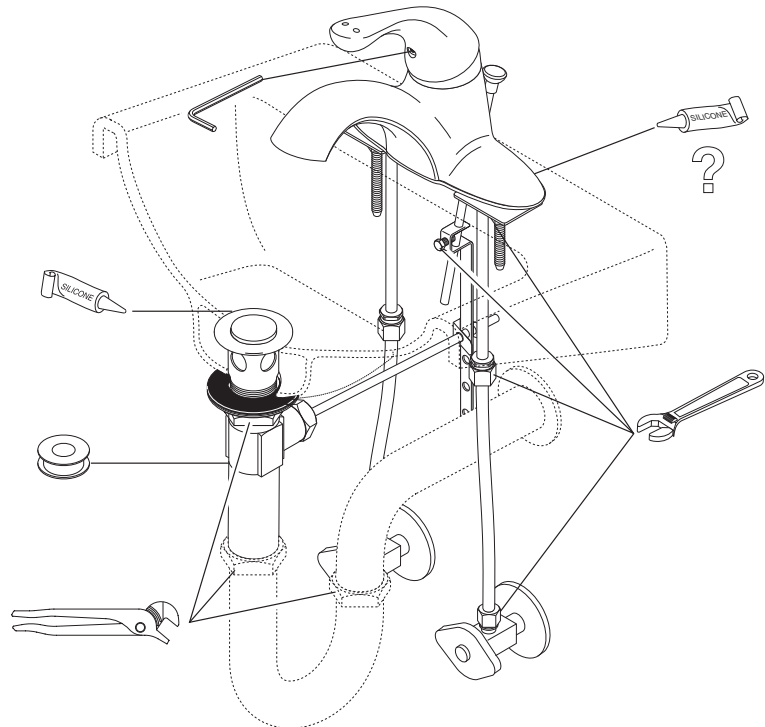
- To **READ ALL** the instructions completely before beginning.
- To **READ ALL** warnings, care, and maintenance information.
- To purchase the correct **water supply hook-up**.

Para instalación fácil de su llave Delta usted necesitará:

- **LEER TODAS** las instrucciones completamente antes de empezar.
- **LEER TODOS** los avisos, cuidados, e información de mantenimiento.
- **Comprar** las conexiones correctas para el **suministro de agua**.

Pour installer votre robinet Delta facilement, vous devez:

- **LIRE TOUTES** les instructions avant de débiter;
- **LIRE TOUS** les avertissements ainsi que toutes
- Acheter le bon nécessaire de raccordement.



Delta Commercial Faucet Limited Warranty

All parts of the Delta® HDF® and TECK® faucets are warranted to the original consumer purchaser to be free from defects in material, finish and workmanship for a period of five (5) years unless otherwise specifically stated in the catalogue and price book. This warranty is made to the original consumer purchaser and shall be effective from date of purchase as shown on purchaser's receipt.

Delta will, at its option, repair or replace, FREE OF CHARGE, during the warranty period, any part which proves defective in material or workmanship under normal installation, use and water and service conditions. If Delta Faucet concludes that the returned part was manufactured by Delta Faucet and is, in fact, defective, then Delta Faucet will honour the warranty stated herein. Replacement parts can be obtained from your local dealer or distributor listed in the telephone directory or by returning the part along with the purchaser's receipt to our factory, TRANSPORTATION CHARGES PREPAID, at the address listed. THIS WARRANTY IS THE ONLY EXPRESS WARRANTY MADE BY DELTA. ANY CLAIMS MADE UNDER THIS WARRANTY MUST BE MADE DURING THE FIVE YEAR PERIOD REFERRED TO ABOVE. ANY IMPLIED WARRANTIES, INCLUDING THE IMPLIED

WARRANTY OF MERCHANTABILITY OF FITNESS FOR A PARTICULAR PURPOSE, ARE LIMITED IN DURATION TO THE DURATION OF THIS WARRANTY. LABOUR CHARGES AND/OR DAMAGE INCURRED IN INSTALLATION, REPAIR OR REPLACEMENT AS WELL AS INCIDENTAL AND CONSEQUENTIAL, SPECIAL, INDIRECT OR PUNITIVE DAMAGES CONNECTED THEREWITH ARE EXCLUDED AND WILL NOT BE PAID BY DELTA FAUCET.

Some states do not allow limitations on how long an implied warranty lasts, or the exclusion or limitation of incidental or consequential damages, so the above limitations or exclusions may not apply to you. This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

This warranty is for commercial products only from Delta Faucet Company and Delta Faucet Canada and is void for any damage to this faucet due to misuse, abuse, neglect, accident, improper installation, any use in violation of instructions furnished by Delta Faucet or any use of replacement parts other than genuine Delta parts.

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Garantía Limitada de las Llaves de Agua Comerciales Delta

Todas las piezas de las llaves de agua (grifos) Delta®, HDF®, TECK® están garantizadas al comprador consumidor original de estar libres de defectos de material, acabado y fabricación por un período de cinco (5) años a menos que sea establecido específicamente de otra manera en el catálogo o libro de precios. Esta garantía se le hace al comprador consumidor original y será efectiva desde la fecha de compra como mostrado en el recibo del comprador.

Delta, a su opción, reparará o reemplazará, GRATISMENTE, durante el período de garantía, cualquier pieza que pruebe ser defectuosa en material o fabricación bajo instalación, uso, agua y condiciones de servicio normales. Si Delta Faucet concluye que la pieza devuelta fue fabricada por Delta Faucet y es, de hecho, defectiva, entonces Delta Faucet honrará la garantía establecida en este documento.

Las piezas de repuesto se pueden obtener de su comerciante o distribuidor local listado en el libretto telefónico o devolviendo la pieza junto con el recibo del comprador a nuestra fábrica. CARGOS DE TRANSPORTE PRE-PAGADOS, a la dirección incluida. ESTA GARANTÍA ES LA ÚNICA GARANTÍA EXPRESA HECHA POR DELTA. CUALQUIER RECLAMO HECHO BAJO ESTA GARANTÍA DEBE SER HECHO DURANTE EL PERÍODO DE CINCO AÑOS ARRIBA

MENTIONADO. CUALQUIER GARANTÍA IMPLÍCITA, INCLUYENDO LA GARANTÍA IMPLÍCITA DE COMERCIABILIDAD DE EMPLEO PARA UN PROPÓSITO PARTICULAR, TIENE UNA DURACIÓN LIMITADA A LA DURACIÓN DE ESTA GARANTÍA. LOS CARGOS DE LABOR Y/O DAÑO INCURRIDO DURANTE LA INSTALACIÓN, REPARACIÓN O REPUESTO COMO TAMBIÉN DAÑOS INCIDENTALES O RESULTANTES, ESPECIALES, INDIRECTOS O PUNITIVOS RELACIONADOS CON LO MENCIONADO SON EXCLUIDOS Y NO SERÁN PAGADOS POR DELTA FAUCET.

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Esta garantía es solo para productos comerciales de Delta Faucet Company y Delta Faucet Canada y es nula por cualquier daño hecho a esta llave de agua resultante del mal uso, abuso, descuido, accidente, instalación incorrecta, cualquier uso en violación de las instrucciones proporcionadas por Delta Faucet o cualquier uso de piezas de repuesto que no sean de piezas genuinas de Delta.

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Garantie Limitee Delta Commercial

Toutes les pièces des robinets de marque Delta® HDF® et TECK® sont garanties contre tout défaut de matière, de finition et de main d'oeuvre pour une période de cinq (5) ans, sauf indication contraire stipulée dans le catalogue et la liste des prix. Cette garantie est offerte à l'acheteur original et entre en vigueur à compter de la date d'achat indiquée sur la preuve d'achat.

Delta procédera, à son entière discrétion, à la réparation ou au remplacement, SANS FRAIS, durant la période de garantie, de toute pièce qui présente un défaut de matière ou de main d'oeuvre dans des conditions d'installation, d'usage, d'eau et de service normales. Si Delta Faucet détermine que la pièce retournée a été fabriquée par Delta Faucet et qu'en effet, cette pièce fait défaut, Delta Faucet respectera alors la garantie stipulée aux présentes. Les pièces de rechange peuvent être obtenues chez votre marchand local ou le distributeur inscrit dans votre annuaire téléphonique ou en retournant la pièce ainsi que la preuve d'achat à notre usine, FRAIS DE TRANSPORT PRÉPAYÉS, à l'adresse indiquée. CETTE GARANTIE EST LA SEULE GARANTIE EXPRESSE FAITE PAR DELTA.

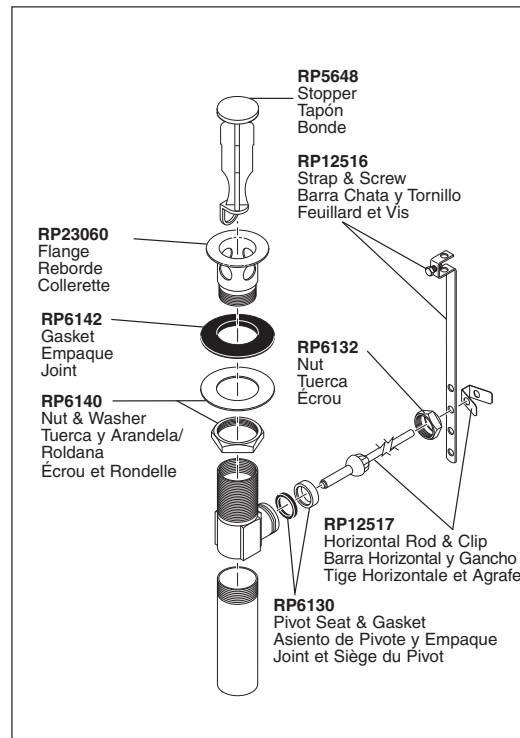
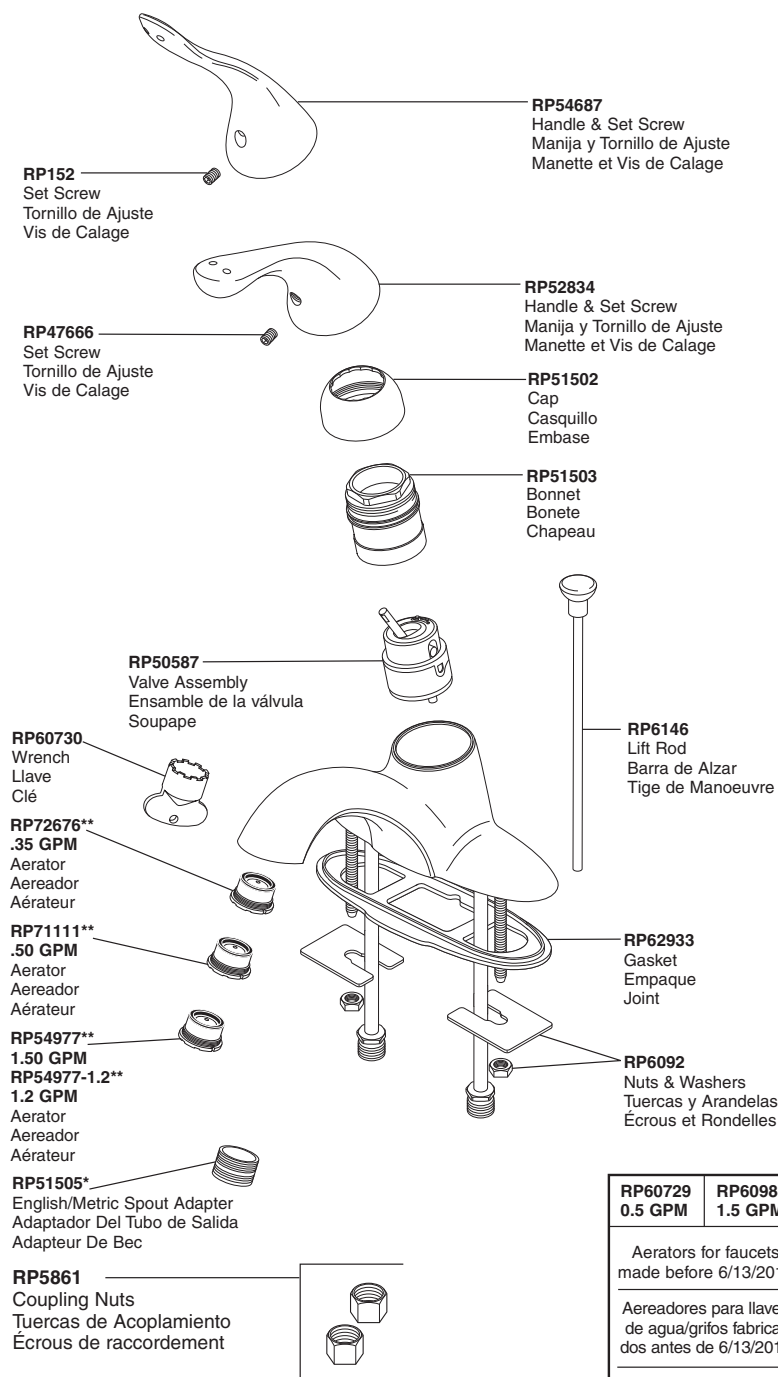
TOUTE RÉCLAMATION FAITE EN VERTU DE CETTE GARANTIE DOIT ÊTRE PRÉSENTÉE DURANT LA PÉRIODE DE CINQ ANS MENTIONNÉE CI-DESSUS. TOUTE GARANTIE IMPLICITE, Y COMPRIS LA GARANTIE IMPLICITE DE VALEUR

COMMERCIALE RELATIVEMENT À L'APTITUDE À LA FONCTION, EST LIMITÉE EN TERMES DE DURÉE POUR LA DURÉE DE CETTE GARANTIE. LES FRAIS DE MAIN D'OEUVRE ET/OU DE DOMMAGES ENCOEURS DURANT L'INSTALLATION, LA RÉPARATION OU LE REMPLACEMENT AINSI QUE LES DOMMAGES-INTÉRÊTS ACCESSOIRES OU IMMATÉRIELS, SPÉCIAUX, INDIRECTS OU PUNITIFS S'Y RAPPORTANT SONT EXCLUS ET NE SERONT PAS PAYÉES PAR DELTA FAUCET.

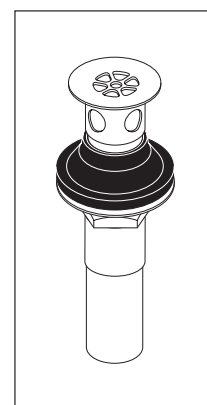
Certains états ne permettent pas la limitation de la durée de la garantie implicite, ou l'exclusion ou la limitation des dommages-intérêts accessoires ou immatériels, et par conséquent, les limitations ou les exclusions stipulées ci-dessus peuvent ne pas s'appliquer dans votre cas. Cette garantie vous accorde certains droits reconnus par la loi et vous avez peut-être aussi d'autres droits qui varient d'un état à l'autre.

Cette garantie s'applique seulement aux produits commerciaux des sociétés Delta Faucet et Delta Faucet Canada et est nulle de plein droit pour tout dommage causé à ce robinet en raison d'usage excessif, d'abus, de négligence, d'accident, de mauvaise installation, tout usage en contravention des directives fournies par Delta Faucet ou tout usage de pièces de rechange autres que des pièces originales Delta.

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RP26533
Metal Pop-Up Assembly Less Lift Rod
Ensamble de Metal del Desagüe Automático Menos
la Barra de Alzar
Renvoi Mécanique en Métal Sans la Tige de Manoeuvre



RP6346
Grid Strainer
Tamiz de la rejilla
Tamis de grille

*RP51505 adapter is only compatible with aerators produced before 6/13/2011.

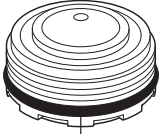
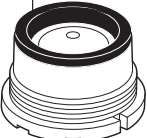
Adaptador *RP51505 solo es compatible con aireadores fabricados antes de junio 13, 2011.

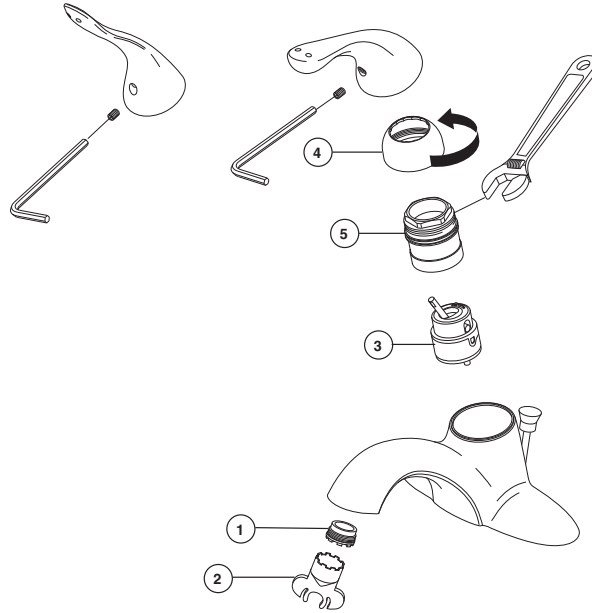
*L'adaptateur *RP51505 est compatible uniquement avec les aérateurs produits avant le 13 juin 2011.

**If you are unsure of the manufacture date, please order both aerators in the flow rate you desire.

**Si no está seguro de la fecha de fabricación, por favor, ordene ambos aireadores para el flujo deseado.

**Si vous n'êtes pas certain de la date de fabrication, veuillez commandez les aérateurs de chacun des modèles qui ont les caractéristiques de débit que vous désirez.

RP60729 0.5 GPM	RP60983 1.5 GPM	RP72676 0.35 GPM	RP71111 0.5 GPM	RP54977 1.5 GPM
Aerators for faucets made before 6/13/2011		Aerators for faucets made after 6/13/2011		
Aereadores para llaves de agua/grifos fabricados antes de 6/13/2011		Aereadores para llaves de agua/grifos fabricados después de 6/13/2011		
Aérateurs pour les robinets fabriqués avant le 13/06/2011		Aérateurs pour les robinets fabriqués après le 13/06/2011		
 O-ring Seal Anillos "O" Joints Torique		 Gasket Seal Empaque Joint		



Maintenance

If faucet exhibits very low flow:

A. Remove and clean Aerator (1) with supplied wrench (2), or

B. SHUT OFF WATER SUPPLIES. Replace valve cartridge (3). When reinstalling parts, make sure bonnet nut (5) is tightened securely with a wrench.*

If faucet leaks from under handle:

Remove handle and unthread trim cap (4). Using a wrench, ensure bonnet nut (5) is tight.

If leak persists—SHUT OFF WATER SUPPLIES.

Replace valve cartridge (3). When reinstalling parts, make sure bonnet nut (5) is tightened securely with a wrench.*

If faucet leaks from spout outlet—SHUT OFF WATER SUPPLIES. Replace valve cartridge (3).

When reinstalling parts, make sure bonnet nut (5) is tightened securely with a wrench.*

*** WARNING: Failure to securely tighten bonnet nut with a wrench could result in water damage.**

Note: Do not attempt to disassemble cartridge (3). There are no repairable parts inside.

Cleaning and Care

Care should be given to the cleaning of this product. Although its finish is extremely durable, it can be damaged by harsh abrasives or polish. To clean, simply wipe gently with a damp cloth and blot dry with a soft towel.

Mantenimiento

Si la lave de agua exhibe muy poco flujo:

A. Quite y limpie el aereador (1) con la llave de tuercas incluida (2), o

B. CIERRE LOS SUMINISTROS DE AGUA. Cambie el cartucho de la válvula (3). Sando una llave de tuercas, asegúrese que la tuerca tapa (5) esté apretada.*

Si la llave de agua tiene una filtración por debajo de la manija:

Quite la manija y casquillo (4). Usando una llave de tuercas, asegúrese que la tuerca tapa (5) esté apretada.*

Si la filtración persiste – CIERRE LOS SUMINISTROS DE AGUA. Cambie el cartucho de la válvula (3). Usando una llave de tuercas, asegúrese que la tuerca tapa (5) esté apretada.*

Si la llave de agua tiene una filtración desde la salida del surtidor – CIERRE LOS SUMINISTROS DE AGUA. Cambie el cartucho de la válvula (3). Sando una llave de tuercas, asegúrese que la tuerca tapa (5) esté apretada.*

*** AVISO: Si no aprieta fijamente la tuerca tapa con una llave de tuercas pudiera resultar en daño por agua.**

Nota: No procure desmontar el cartucho (3). No hay piezas reparables adentro.

Limpeza y Cuidado de su Llave

Tenga cuidado al ir a limpiar este producto. Aunque su acabado es sumamente durable, puede ser afectado por agentes de limpieza o para pulir abrasivos. Para limpiar su llave, simplemente frótelas con un trapo húmedo y luego séquela con una toalla suave.

Entretien

Si le débit du robinet est très faible :

A. Enlevez l'aérateur (1) à l'aide de l'outil fourni (2) et nettoyez-le ou

B. FERMEZ LES ROBINETS D'ALIMENTATION. Remplacez la cartouche de la soupape (3). Usando una llave de tuercas, asegúrese que la tuerca tapa (5) esté apretada.*

Si le robinet fuit par le dessous de la manette : Enlevez la manette et embase (4). À l'aide d'une clé, assurez-vous que l'écrou-chapeau (5) est serré.*

Si la fuite persiste, COUPEZ L'ARRIVÉE D'EAU.

Remplacez la cartouche de la soupape (3). Usando una llave de tuercas, asegúrese que la tuerca tapa (5) esté apretada.*

Si le robinet fuit par la sortie du bec, COUPEZ L'ARRIVÉE D'EAU. Remplacez la cartouche (3). Usando una llave de tuercas, asegúrese que la tuerca tapa (5) esté apretada.*

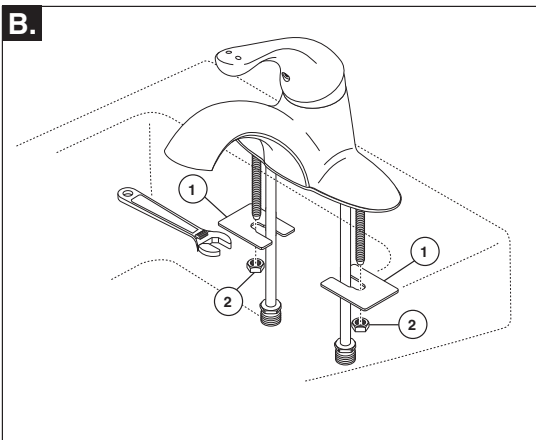
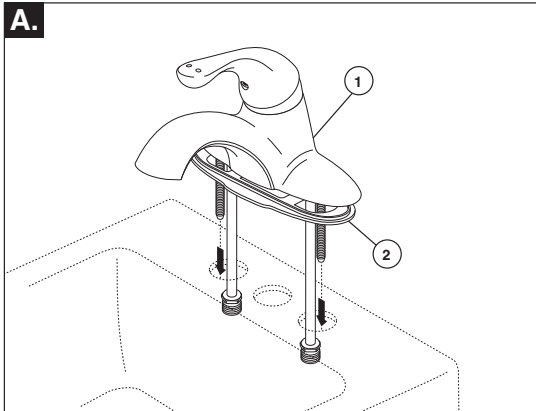
*** MISE EN GARDE : L'omission de bien serrer l'écrou-chapeau peut entraîner une fuite d'eau et des dommages.**

Note : N'essayez pas de démonter la cartouche (3). Il n'y a aucune pièce réparable à l'intérieur.

Instructions de nettoyage

Il faut le nettoyer avec soin. Même si son fini est extrêmement durable, il peut être abîmé par des produits fortement abrasifs ou des produits de polissage. Il faut simplement le frotter doucement avec un chiffon humide et le sécher à l'aide d'un chiffon doux.

1



A. Position faucet (1) and gasket (2) on sink. *Option: If sink is uneven, use silicone under the gasket.*

B. Secure with washers (1) and nuts (2).

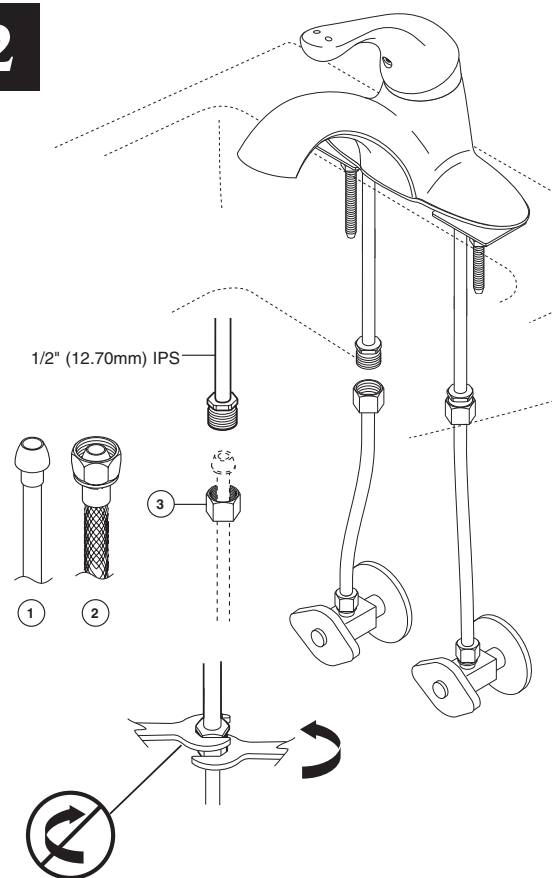
A. Coloque la llave (1) y el empaque (2) en el lavamanos. *Opción: Si el lavamanos está desnivelado, use silicona debajo del empaque.*

B. Fije con arandelas (1) y tuercas (2).

A. Placer le robinet (1) et le joint (2) sur l'évier. *Facultatif - Si la surface de l'évier est inégale, placez du composé d'étanchéité à la silicone sous le joint.*

B. Fixez le robinet à l'aide des rondelles (1) et des écrous (2).

2



Supply Line Connections

Note: Be careful when bending the copper tubing. Kinked tubes will void the warranty. Choose hook-ups for 1/2" I.P.S. connections: (1) Ball nose riser (3/8" O.D. copper tubing), or (2) 1/2" I.P.S. faucet connector. Use the enclosed coupling nuts (3) with the ball nose risers (1). **Important:** Use two wrenches when tightening. Do not overtighten.

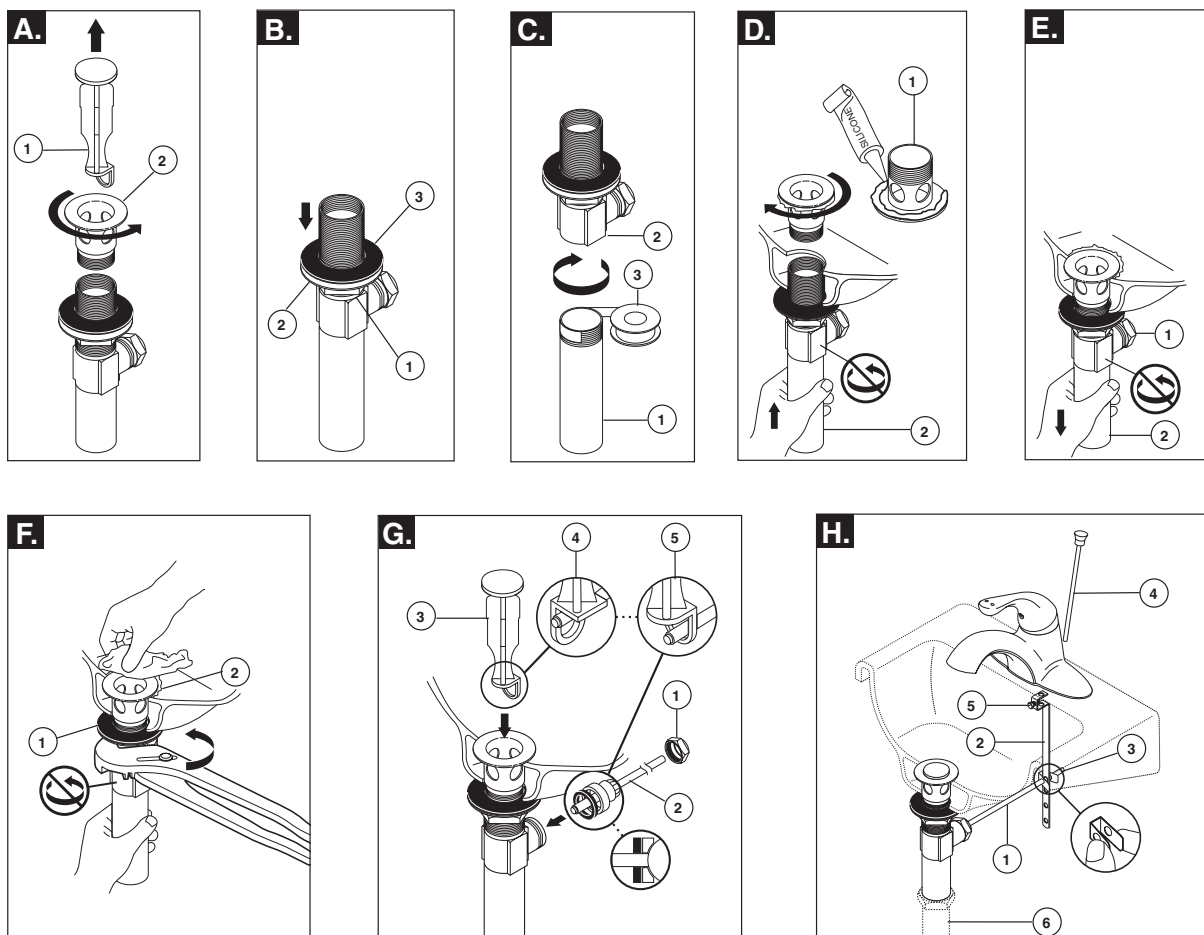
Conexiones de las líneas de Suministro

Nota: Tenga cuidado cuando doble la tubería de cobre. Tubos torcidos anularán la garantía. Escoja las conexiones IPS de 1/2": (1) Conexión Bola-nariz (Tubería cobre 3/8" D.E.), o (2) Conector de llave I.P.S. 1/2". Utilice las tuercas de acoplamiento incluidas (3) con la conexión bola-nariz (1). **Utilice dos llaves de tuercas cuando apriete. No apriete demasiado.**

Branchements à la tuyauterie d'alimentation

Note - Prenez garde de pincer les tubes en les cintrant. La garantie est nulle si les tubes ont été pincés. Choisissez des raccords compatibles 1/2 po IPS : (1) tubes-raccords à portée sphérique (tube en cuivre 3/8 po d.e.) ou (2) raccords de robinet 1/2 po IPS. Si vous utilisez des tubes-raccords à portée sphérique (1), servez-vous des écrous de raccordement fournis (3). **Utilisez deux clés pour serrer les raccords. Prenez garde de trop serrer.**

3



Metal Pop-Up Installation

- Remove stopper (1) and flange (2).
- Screw nut (1) all the way down. Push washer (2) and gasket (3) down.
- Remove tailpiece (1) from body (2), add plumber tape (3), replace tailpiece.
- Apply silicone to underside of flange (1). Insert body (2) into sink. Screw flange (1) into body (2).
- Pivot (1) must face faucet. Pull assembly (2) down firmly and hold in place. DO NOT TWIST.
- Tighten nut/washer/gasket (1), clean off excess silicone (2). DO NOT TWIST.
- Remove pivot nut (1). Install horizontal rod (2) and stopper (3) as removable (4) or non-removable (5). Hand tighten pivot nut (1).
- Attach horizontal rod (1) to strap (2) using clip (3). Install lift rod (4), tighten screw (5). Connect assembly to drain (6).

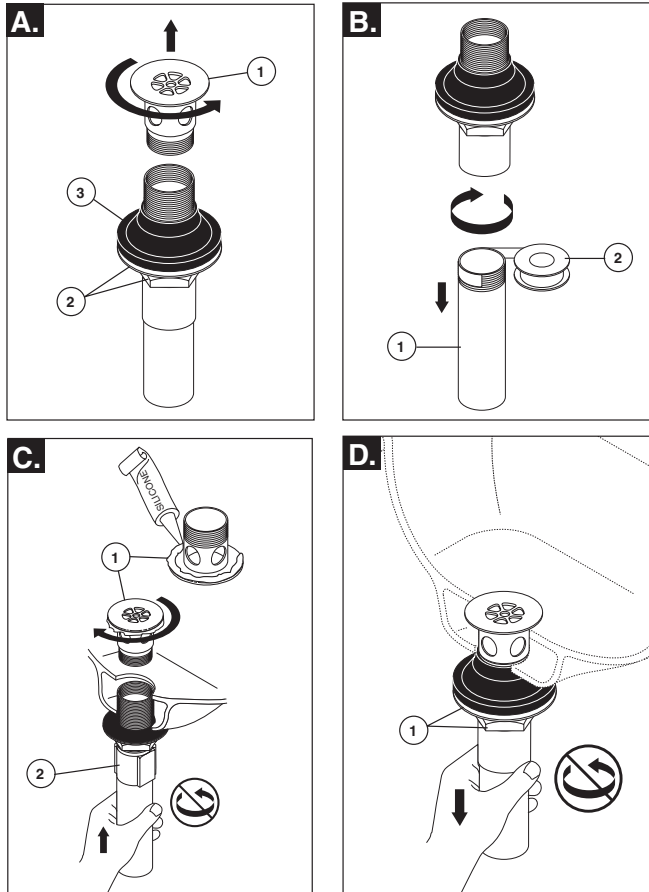
Desagüe Automático de Metal

- Quite el tapón (1) y el reborde (2).
- Atornille la tuerca (1) completamente hasta abajo. Empuje la arandela/roldana (2) y el empaque (3) hacia abajo.
- Quite el tubo de cola (1) del cuerpo (2), aplique cinta para plomero (3), coloque otra vez el tubo de cola.
- Aplique silicona a la parte interior del reborde (1). Inserte el cuerpo (2) en el lavamanos. Atornille el reborde (1) en el cuerpo (2).
- El pivote (1) debe de estar de frente a la llave. Hale el ensamble (2) hacia abajo firmemente y sujételo en sitio. NO LO GIRE.
- Apriete la tuerca/arandela/empaque (1), limpie el exceso de silicona (2). NO LO GIRE.
- Quite la tuerca del pivote (1). Instale la barra horizontal (2) y el tapón (3) como desmontable (4) o fijo (5). Apriete a mano la tuerca del pivote (1).
- Una la barra horizontal (1) a la barra chata (2) utilizando el gancho (3). Instale la barra de alzar (4), apriete el tornillo (5). Conecte el ensamble al desagüe (6).

Renvoi Mécanique en Métal

- Enlevez la bonde (1) et la collerette (2).
- Serrez l'écrou (1) pour le faire descendre complètement. Poussez la rondelle (2) et le joint (3) vers le bas.
- Enlevez le raccord droit de vidange (1) du corps (2), appliquez du ruban de plomberie (3), puis remettez le raccord droit en place.
- Appliquez du composé à la silicone sous la collerette (1). Introduisez le corps (2) dans lav-abo, puis vissez la collerette (1) dans le corps (2).
- Le pivot (1) doit faire face au robinet. Tirez l'ensemble (2) vers le bas fermement et maintenez-le en place. PRENEZ GARDE DE LE TORDRE.
- Serrez l'écrou contre la rondelle et le joint (1), puis enlevez le surplus de composé à la silicone (2). PRENEZ GARDE DE TORDRE LE PIVOT.
- Enlevez l'écrou du pivot (1). Installez la tige horizontale (2) et la bonde (3) de manière que la bonde soit amovible (4) ou non amovible (5). Serrez l'écrou (1) du pivot à la main.
- Fixez la tige horizontale (1) au feillard (2) à l'aide de l'agrafe (3). Installez la tige de manoeuvre (4) et serrez la vis (5). Fixez l'ensemble au renvoi (6).

3



Grid Strainer Installation

- Remove grid flange (1). Screw nut and washer (2) down as far as possible. Push gasket (3) down to nut and washer.
- Remove tailpiece (1) and apply plumber tape (2) to threads. Replace tailpiece.
- Apply silicone sealant to underside of grid flange (1). Insert grid strainer assembly (2) up through bottom of lavatory. Screw grid flange back on and secure.
- Pull grid strainer straight down into drain hole and secure gasket nut and washer (1). **DO NOT TURN GRID STRAINER WHILE TIGHTENING NUT OR SEALANT MAY NOT SEAL DRAIN. REMOVE EXCESS SEALANT.** Connect assembly to drain.

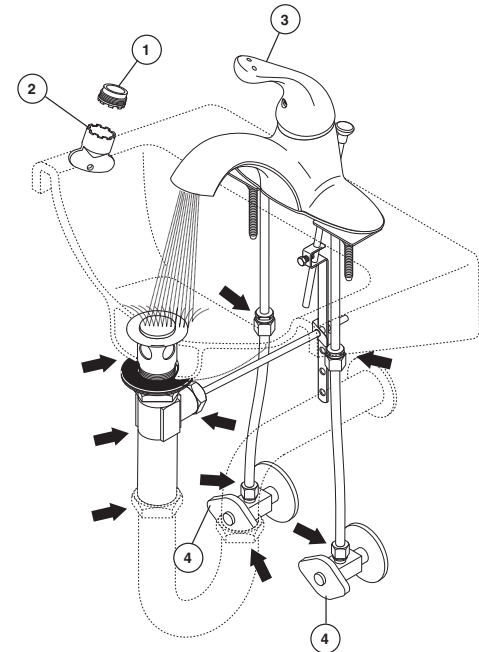
Instalación de la Rejilla Coladora

- Quite el reborde de la rejilla (1). Atornille la tuerca y la arandela (2) lo más posible. Empuje el empaque (3) hacia abajo, hacia la tuerca y la arandela.
- Quite el tubo de cola (1) y aplique cinta para plomero (2) a las roscas. Coloque otra vez el tubo de cola.
- Aplique sellador de silicona a la parte de abajo del reborde de la rejilla (1). Inserte el ensamble de la rejilla-colador (2) hacia arriba por debajo del lavamanos. Atornille, otra vez, el reborde de la rejilla y fíjelo.
- Hale la rejilla colador directamente hacia abajo, que quede dentro del hoyo del drenaje, y fije la tuerca del empaque y la arandela (1). **NO GIRE LA REJILLA O EL SELLADO PUEDA NO SELLAR EL DRENAJE. LIMPIE EL EXCESO DE SELLADOR.** Conecte el ensamble al desagüe.

Installation de la crépine

- Retirez la collerette de la crépine (1). Vissez l'écrou avec la rondelle (2) autant ue possible. Abaissez le joint (3) contre l'écrou et la rondelle.
- Enlevez le raccord droit de vidange (1) et appliquez du ruban de plomberie (2) sur les filets. Remettez le raccord en place.
- Appliquez du composé à la silicone contre le dessous de la collerette de la crépine (1). Introduisez la crépine (2) dans l'orifice par le dessous du lavabo. Remettez la collerette en place et vissez-la à fond.
- Tirez la crépine vers le bas dans l'orifice et vissez l'écrou contre la rondelle et le joint (1). **NE FAITES PAS TOURNER LA CRÉPINE EN SERRANT L'ÉCROU CAR LE COMPOSÉ D'ÉTANCHÉITÉ POURRA PERDRE SON EFFICACITÉ. ENLEVEZ LE COMPOSÉ D'ÉTANCHÉITÉ EN TROP.** Fixez l'ensemble au renvoi.

4

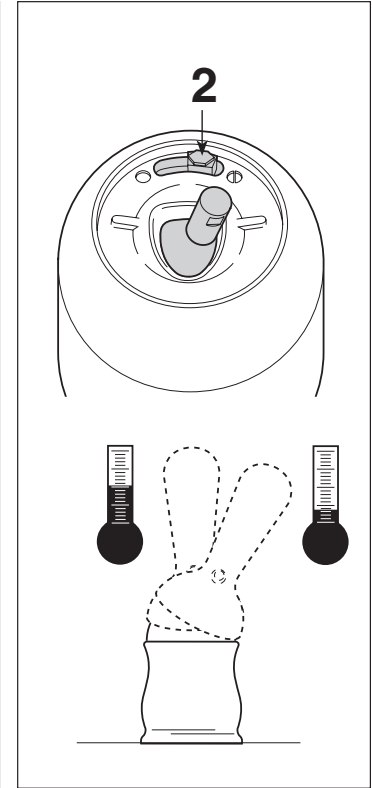
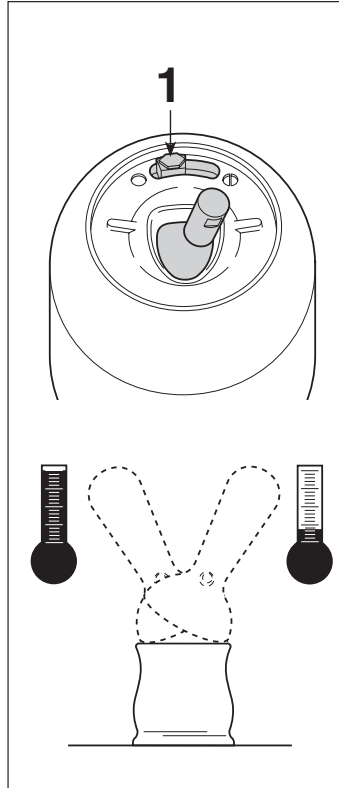
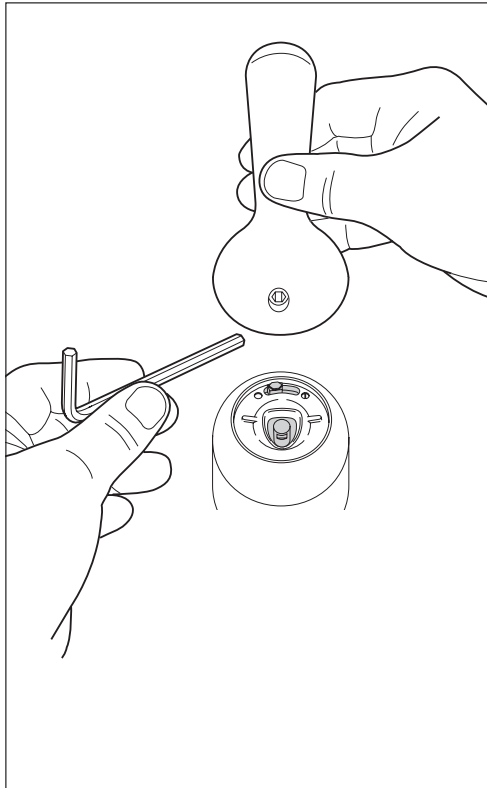


Remove aerator (1) using supplied wrench (2) and move faucet handle (3) to the full on mixed position. Turn on hot and cold water supplies (4) and flush water lines for one minute. **Important: This flushes away any debris that could cause damage to internal parts.** Reinstall aerator. Check all connections at arrows for leaks. Re-tighten if necessary, but do not overtighten.

Quite el aereador (1) usando la llave de tuercas (2) proporcionada con su llave de agua y mueva la manija de la llave de agua (3) a la posición completamente abierta. Abra los suministros de agua caliente y fría (4) y deje correr en agua por la líneas por un minuto. **Importante: Esto limpia cualquier escombros que pudiera causar daño a las partes internas.** Reemplace el aereador. Examine todas las conexiones donde señalan las flechas por si hay filtraciones de agua. Apriete de nuevo si es necesario, pero no apriete demasiado.

Retirez l'aérateur (1) en utilisant la clé (2) et placez la poignée (3) du robinet en position d'écoulement maximum de l'eau chaude et de l'eau froide. Rétablissez l'alimentation en eau chaude et en eau froide (4) et laissez couler l'eau pendant une minute. **Important: Il faut laisser s'écouler l'eau pour évacuer les saletés qui pourraient abîmer les éléments internes du robinet.** Remettez l'aérateur en place.

Vérifiez l'étanchéité de tous les raccords identifiés par une flèche. Resserrez les raccords au besoin, mais prenez garde de trop les serrer.



Setting The Handle Limit Stop (Optional)

This faucet includes an integrated handle limit stop that has two positions. Position 1, to the left, allows full handle motion (the full range between "all cold" to "all hot"). The faucet is set in position 1 in the factory. Position 2, to the right, allows half of the normal handle motion ("all cold" to "mixed hot/cold").

The handle limit stop can be adjusted by the homeowner once the faucet is installed. Setting the handle limit stop in position 2 may help to prevent scalding

because it limits the amount of hot water in the mix; however, this handle limit stop will not always prevent scalding because it does not compensate for incoming pressure or sudden water temperature changes.

To change positions of the handle limit stop: remove the handle; move the valve stem to the all cold position so the water is on; change the position of the handle limit stop; turn off the water; reinstall the handle.

Fijando la parada de límite de la manija (opcional)

Esta llave de agua incluye una manija integrada, que tiene dos posiciones, para limitar la temperatura. La posición 1, a la izquierda, permite el movimiento completo de la manija (el alcance completo entre el agua "totalmente fría" hasta "totalmente caliente"). La fábrica preselecciona la llave de agua (grifo) a la posición 1. La posición 2, a la derecha, permite la mitad del alcance de movimiento normal de la manija ("totalmente fría" a la posición "mixta caliente/fría").

Una vez que la llave de agua (grifo) se ha instalado, el límite rotacional de la manija puede ajustarse por el propietario de la residencia. Ajustando la manija de ajuste del tope del límite de la temperatura a la posición 2 puede ayudar a prevenir

escaldaduras porque limita la cantidad de agua caliente en la mezcla; sin embargo, esta manija que limita la temperatura del agua no siempre prevendrá escaldaduras porque no compensa la presión del agua de entrada o cambios repentinos de la temperatura del agua.

Para cambiar las posiciones de la manija que limitan la temperatura: quite la manija; cambie la posición de la espiga de la válvula a la posición totalmente fría de manera que el agua este abierta; cambie la posición de la manija que limita la temperatura; cierre el agua; reinstale la manija.

Plaçant l'arrêt de limite de poignée (facultatif)

Ce robinet est muni d'une butée de température maximale à deux positions. La position 1, à gauche, permet le déplacement de la manette entre les deux extrémités de la plage de température (eau très froide et eau très chaude). C'est la position sélectionnée en usine. La position 2, à droite, permet le déplacement de la manette sur la moitié de la plage de température (eau très froide et eau mitigée).

Il est possible de régler la butée de température maximale de la manette au moment de l'installation du robinet. Un réglage à la position 2 peut empêcher l'ébullantage parce que cette position limite la quantité d'eau chaude dans le

mélange. Toutefois, ce réglage de la butée de température maximale de la manette ne constitue pas une garantie absolue contre l'ébullantage parce qu'il n'offre aucune protection contre les fluctuations de la pression d'alimentation ou les changements de température soudains.

Pour modifier la position de la butée de température maximale de la manette : enlevez la manette; amenez l'obturateur à l'extrémité de la plage du côté eau froide pour faire s'écouler l'eau; modifiez la position de la butée de température maximale; fermez le robinet; réinstallez la manette.



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

Bulletin G-170370

July 2020

INSTALLATION, OPERATION & MAINTENANCE MANUAL

170-LF 3/8" Compression ASSE 1070	270-LF 1/2" - M-NPT ASSE 1070/1017	370-LF 3/4" - M-NPT ASSE 1070/1017
 Eco-Mix Certified Lead Free 	 Eco-Mix Certified Lead Free 	 Eco-Mix Certified Lead Free 

170-LF WARNING:

DO NOT use thread sealant on compression connections as it will cause damage.

270-LF / 370-LF WARNING:

When using flex hoses be careful, swivel connectors may damage inlet checks and / or element on outlet on 270-LF, 370-LF models. Coupling fittings may be needed if swivel connectors have a brass protruding tube or any protrusion that may damage the valve.

WARNING!

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

- 1) Valve should be installed where it can be easily cleaned, adjusted or repaired.
- 2) 170 Inlets are furnished with 3/8" compression connections. If using copper tubing, **DO NOT extend tubing more than 1/8" beyond the compression ferrule. DO NOT use thread sealant.**
- 3) Verify tubing is straight, tighten compression nuts by hand, then tighten only 1/4 turn, overtightening will cause leaks and possibly crush checks.
- 4) 270 / 370 Inlets are furnished with NPT connections. When soldering close to this unit, **DO NOT OVERHEAT**, internal components may become damaged.
- 5) Leonard recommends that unions and shutoffs are installed on the inlets and outlet.
- 6) Use solder or pipe cement sparingly. Supply pipes should be flushed before the valve is connected. Flush outlet pipe and valve as soon as it is connected.
- 7) Open hot and cold water supply valves to mixing valve.
- 8) Open mixed water outlet.
- 9) With the fixture in the full open position, calibrate the mixed water outlet temperature by placing a thermometer in the mixed water stream. Loosen knob set screw with 5/64" Allen wrench. Adjust the setting of the valve to obtain the desired temperature (counter-clockwise to increase temperature – clockwise to decrease temperature).
- 10) Tighten knob set screw to lock temperature setting.

PRESSURE-TEMPERATURE:

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: 90-140°F (32-60°C)

Minimum Flow: 170 / 270 - .25 GPM, 370 - .5 GPM

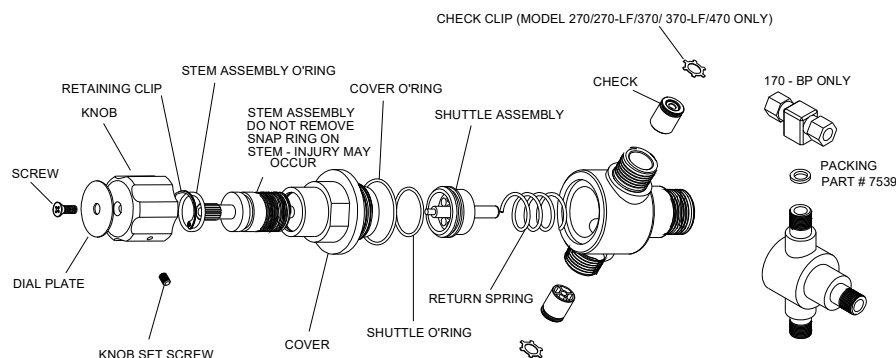
IMPORTANT:

Maximum Operating Pressure: 125 PSI (860 KPA)

These thermostatic water mixing valves 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).

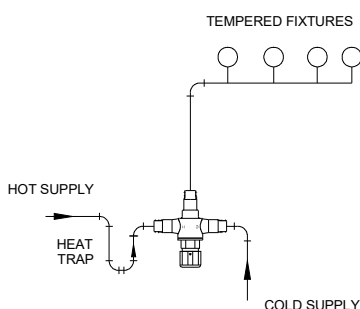
TROUBLESHOOTING INSTRUCTIONS

SYMPTOMS	REPAIR KIT	170-LF	270-LF	370-LF
Leaking water between valve cover and body. Leaking water under knob.	GASKET KIT	1/WX	1/WX	1/WX
Valve will not control temperature after cleaning.	REBUILDING KIT	R/170	R/270/370	R/270/370
Hot water by-passes into the Cold Water Supply Cold water by-passes into the Hot Water Supply	CHECKSTOP KIT	4/108	4/220	4/320

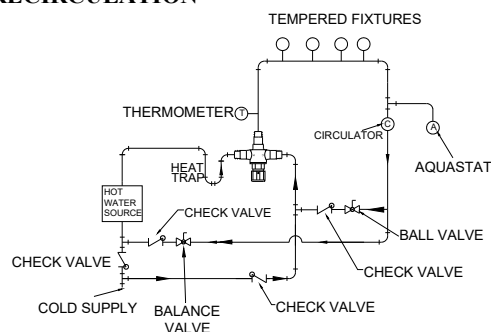


170-LF (3/8"COMP) ASSE 1070	270-LF (1/2"NPT) ASSE1017/ASSE 1070	370-LF (3/4"NPT) ASSE1017/ASSE 1070
1/ WX Gasket Kit Shuttle O-Ring Stem assembly O-Ring Cover O-Ring R/170 Rebuild Kit Return spring Shuttle assembly Shuttle O-Ring Stem assembly O-Ring Cover O-Ring 4/108 Check valve Kit 2 Check Valves	1/ WX Gasket Kit Shuttle O-Ring Stem assembly O-Ring Cover O-Ring R/270/370 Rebuild Kit Return spring Shuttle assembly Shuttle O-Ring Stem assembly O-Ring Cover O-Ring 4/220 Check valve Kit 2 Check Valves 2 Check Clips	1/ WX Gasket Kit Shuttle O-Ring Stem assembly O-Ring Cover O-Ring R/270/370 Rebuild Kit Return spring Shuttle assembly Shuttle O-Ring Stem assembly O-Ring Cover O-Ring 4/320 Check valve Kit 2 Check Valves 2 Check Clips

NO RECIRCULATION



RECIRCULATION



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.

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EZSTLDWS*1G EZSTL8WS*1G, 2G, 3G LZSTLDWS*1G LZSTL8WS*1G, 2G, 3G

ELKAY®**INSTALLATION & USE MANUAL***Manual de instalación y uso**Manuel d'installation et utilisation***EZ™ & LZ™ Series Versatile Bottle Filling Stations & Coolers***EZ™ & LZ™ Serie versatil Botella Bombas y Enfriadores**EZ™ & LZ™ Stations versatile de Remplissage de Bouteille Série et Refroidisseurs*

*Versatile Cooler Model LZSTL8WSLK
configuration as shipped



*Versatile cooler design allows units to be installed either left-hand high and right-hand low or left-low and right high.

Basin change may be required. See desired rough-in to help determine if the basin change is necessary.

Refrigerated unit must be installed on right-hand side.

*Versatile Cooler Model LZSTL8WSLK
alternate installations



Patent zurn-elkay.com/patents

⚠ **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: Danger! Electric shock hazard. Disconnect power before servicing unit.
Nota: peligro! Peligro de descarga eléctrica. Desconecte antes de reparar la unidad.
Remarque : Danger ! Risque d'électrocution. Débrancher avant de réparer l'appareil.

Pictured is unit only without bottle filler.

En la foto, la unidad sólo sin relleno botella.

Sur la photo, est une unité seulement sans remplissage de la bouteille.

Uses HFC-134A refrigerant
 Usa refrigerante HFC-134A
 Utilise du fluide frigorigène HFC-134A

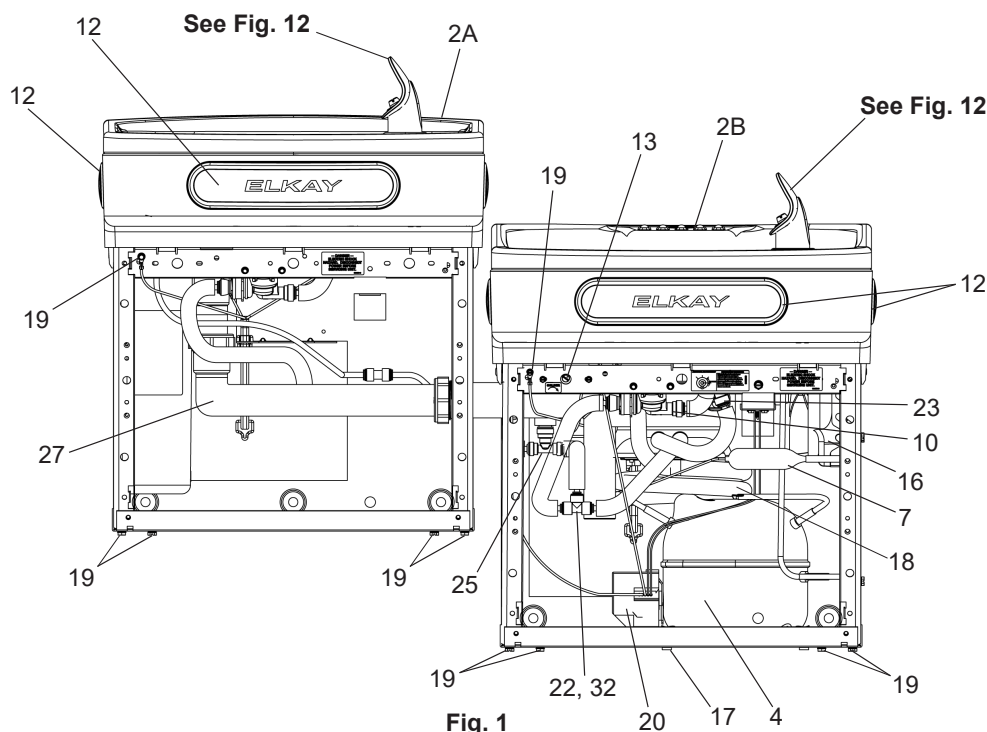
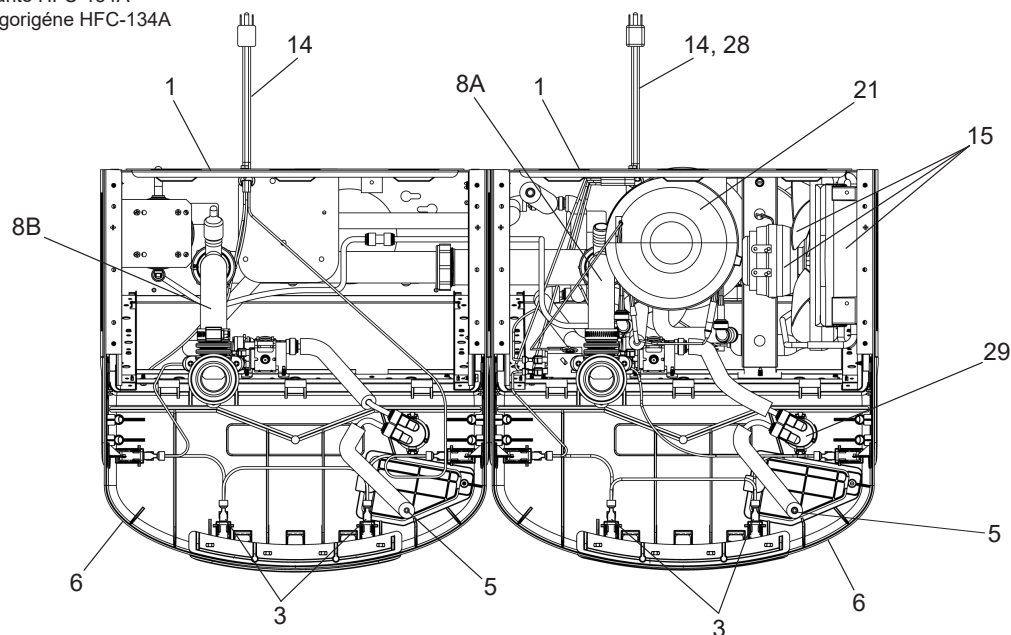


Fig. 1

STANDARD ROUGH-IN FOR LEFT-HAND HIGH, BOTTLE FILLER LOW MODELS

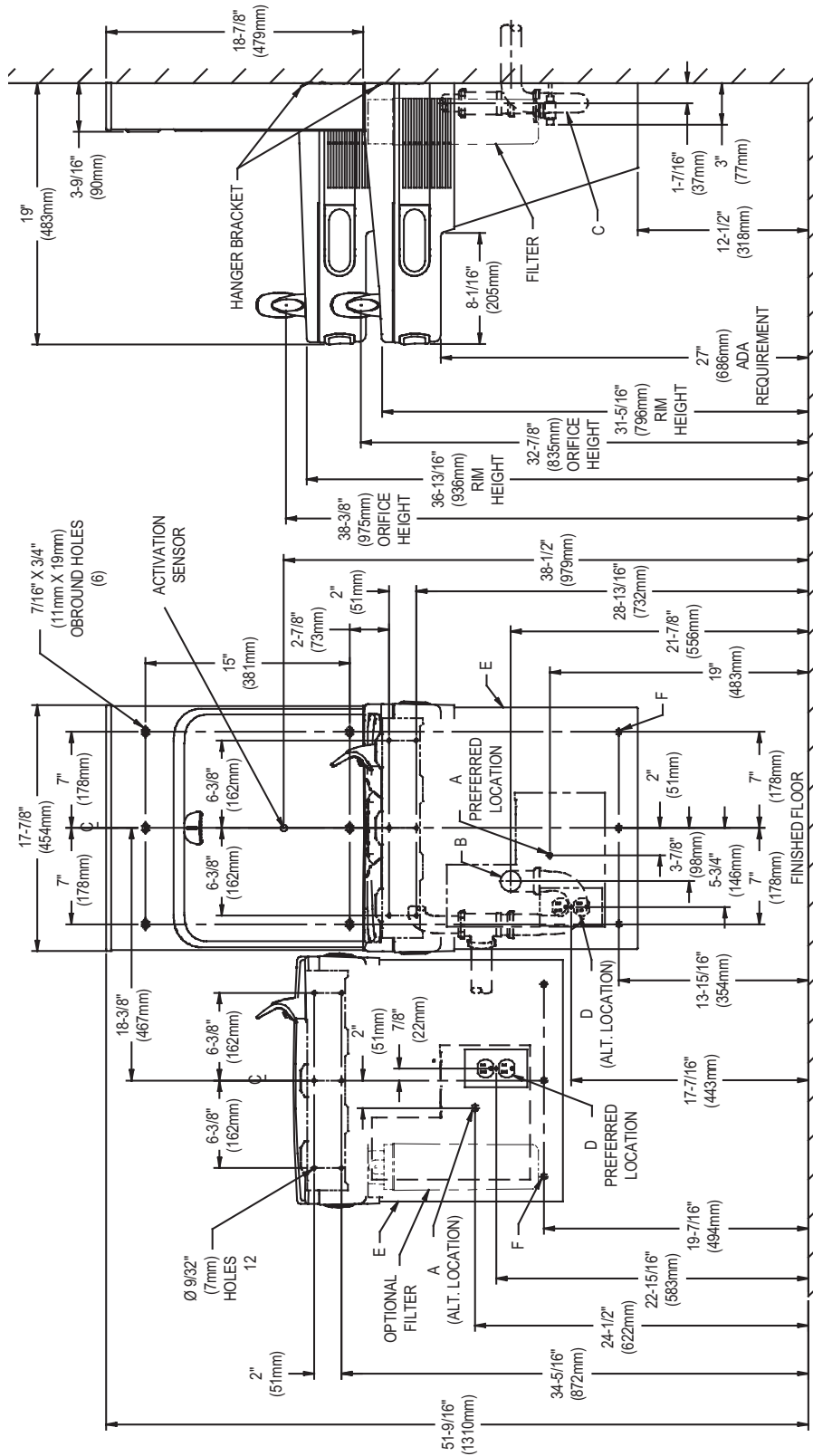


Fig. 2

REDUCE HEIGHT BY 3 INCHES FOR INSTALLATION OF CHILDREN'S ADA COOLER

LEGEND/LEYENDA/LÉGENDE

A = RECOMMENDED WATER SUPPLY LOCATION 3/8 O.D. UNPLATED COPPER TUBE CONNECT STUB WITH SHUT OFF (BY OTHERS) 3 IN. (76mm) MAXIMUM OUT FROM WALL
 La UBICACION 3/8 O RECOMENDADA DE ABASTECIMIENTO DE AGUA. D. EI TUBO DE COBRE DE UNPLATED CONECTA TALONARIO CON APAGO (POR OTROS) 3 en. (76 mm) el MAXIMO FUERA DE PARED
 L'O.D de 3/8 d'EMPLACEMENT DE PROVISION D'EAU RECOMMANDE. LE TUBE DE CUIVRE DE UNPLATED CONECTE STUB AVEC ETEINT (PAR LES AUTRES) 3 dans. (76 mm) le MAXIMUM HORS DU MUR

B = RECOMMENDED LOCATION FOR WASTE OUTLET 1-1/2" O.D. DRAIN STUB 2 IN. OUT FROM WALL
 UBICACION RECOMENDADA PARA EL DRENAJE DE SALIDA DE AGUA DE 1-1/2 DE DIAMETRO EL TALONARIO 2 FUERA DE PARED
 EMPLACEMENT RECOMMANDE POUR LE DRAIN DE D.E. 1-1/2 DE SORTIE D'EAU. STUB 2 HORS DU MUR

C = 1-1/2" TRAP NOT FURNISHED
 PURGADOR DE 1-1/2" NO PROPORCIONADO
 SIFON 1-1/2" NON FOURNI

NOTE: IT IS HIGHLY RECOMMENDED THAT THE CIRCUIT BE DEDICATED AND THE LOAD PROTECTION BE SIZED FOR 20 AMPS.

LEGEND/LEYENDA/LÉGENDE

D = ELECTRICAL SUPPLY (3) WIRE RECESSED BOX DUPLEX OUTLET**
 SUMINISTRO ELÉCTRICO (3) CAJA ENCHUFE DE ALAMBRE SALIDA DUPLEX
 ALIMENTATION ÉLECTRIQUE (3) BOÎTIER ENCASTRÉ

E = INSURE PROPER VENTILATION BY MAINTAINING 6" (152 mm) (MIN.) CLEARANCE FROM CABINET LOUVERS TO WALL.
 ASEGURE UNA VENTILACION ADECUADA MANTENIENDO UN ESPACIO E 6" (152 mm) (MIN.) DE HOLGURA ENTRE LA REJILLA DE VENTILACION DEL MUEBLE Y LA PARED
 ASSUREZ-VOUS UNE BONNE VENTILATION EN GARDANT 6" (152 mm) (MIN.) ENTRE LES ÉVÈNEMENTS DE L'ENCEINTE ET LE MUR.

F = 7/16 BOLT HOLES FOR FASTENING UNIT TO WALL
 TORNILLOS PARA FIJAR LA UNIDAD A LA PARED
 TROUS DÉCROUS 7/16 POUR FIXER L'APPAREIL AU MUR

**NEW INSTALLATIONS MUST USE GROUND FAULT CIRCUIT INTERRUPTER (GFCI)
 *Les nouvelles installations doivent employer l'interrupteur de circuit moulé de défaut (GFCI)

REFRIGERATED UNIT MUST BE INSTALLED ON RIGHT-HAND SIDE.



Fig. 3

EGEND/I EYENDA/I ÉGENDE

LEGEND/LEYENDA/LEGENDE
A = RECOMMENDED WATER SUPPLY LOC
(76mm) MAXIMUM OUT FROM WALL

(termini) MAXIMUM OUT FROM WALL
 LA UBICACION 3/8 O RECOMENDADA DE ABASTECIMIENTO DE AGUA. D. EI TUBO del COBRE de UNPLATED CONECTA TALONARIO CON APAGO
 (POR OTROS) 3 en. (76 Mm) el MAXIMO FUERA DE PARED
 L'OD de 3/8 d'EMPLACEMENT DE PROVISION D'EAU RECOMMANDEE. LE TUBE de CUIVRE DE UNPLATED CONNECTE STUB AVEC ETIANT (PAR

LES AUTRES) 3 dans, (76 mm) le MAXIMUM HORS DU MUR
3 = RECOMMENDED LOCATION FOR WASTE OUTLET 1-1/2" O.D. DRAIN STUD 2 IN. OUT FROM WALL

3" RECOMMENDED LOCATION FOR WASTE OUTLET 1-1/2" O.D. DRAIN SUB 2 IN. OUT FROM WALL
UBICACIÓN RECOMENDADA PARA EL DRENAJE DE AGUA DE 1-1/2" DE DIÁMETRO. EL TALLONARIO 2 FUERA DE PARED
EMPLACEMENT RECOMMANDÉ POUR LE DRAIN DE D.E. 1-1/2" DE SORTIE D'EAU. STUB 2 HORS DU MUR

C = 1-1/2" TRAP NOT FURNISHED

PURGADOR DE 1-1/2" NO PROPORCIONADO
SIPHON 1-1/2" NON EQUIPATO

SIPHON 1-1/2" NON FOURNI

NOTE: IT IS HIGHLY RECOMMENDED THAT THE CIRCUIT BE DEDICATED AND THE LOAD PROTECTION BE SIZED FOR 20 AMPS.

EGEND/I EYENDA/I ÉGENDE

LEGEND/LEGENDE
 ○ = ELECTRICAL SUPPLY (3) WIRE RECESSED BOX DUPLEX OUTLET**

SUMINISTRO ELÉCTRICO (3) CAJA ENCHUFE DE ALAMBRE SALIDA DÚPLEX

ALIMENTATION ÉLECTRIQUE (3) BOÎTIER ENCASTRÉ
E = INSURE PROPER VENTILATION BY MAINTAINING 6" (152 mm) (MIN.) CLEARANCE FROM CABINET LOUVERS TO WALL.
ASEGURE UNA VENTILACIÓN ADECUADA MANTENIENDO UN ESPACIO E 6" (152 mm) (MIN.) DE HOLGURA ENTRE LA REJILLA
DE VENTILACIÓN DEL MUÑO Y LA PARED

DE VENTILACION DEL MUEBLE Y LA PARED.
ASSUREZ-VOUS UNE BONNE VENTILATION EN GARDANT 6" (152 mm) (MIN.) ENTRE LES ÉVÉNENTS DE L'ENCEINTE ET LE MUR.

E = 7/16 BOLT HOLES FOR FASTENING UNIT TO WALL

AGUJEROS DE LAS TUERCAS DE 7/16 PARA SUJETAR LA UNIDAD A LA PARED

ASUEROS DE LAS TUERCAS DE 7/16 PARA SUEJIAN LA UNIDAD A LA PARED
TROUS D'ÉCROUS 7/16 POUR FIXER L'APPAREIL AU MUR

****NEW INSTALLATIONS MUST USE GROUND FAULT INTERRUPTER (GFCI)**

Las nuevas instalaciones deben utilizar el interruptor de tierra de la avería (GFCI)

Les nouvelles installations doivent employer l'interrupteur de défaut (GFCI)

REFRIGERATED UNIT MUST BE INSTALLED ON RIGHT-HAND SIDE.

ALTERNATE ROUGH-IN FOR RIGHT-HAND HIGH, BOTTLE FILLER HIGH MODELS

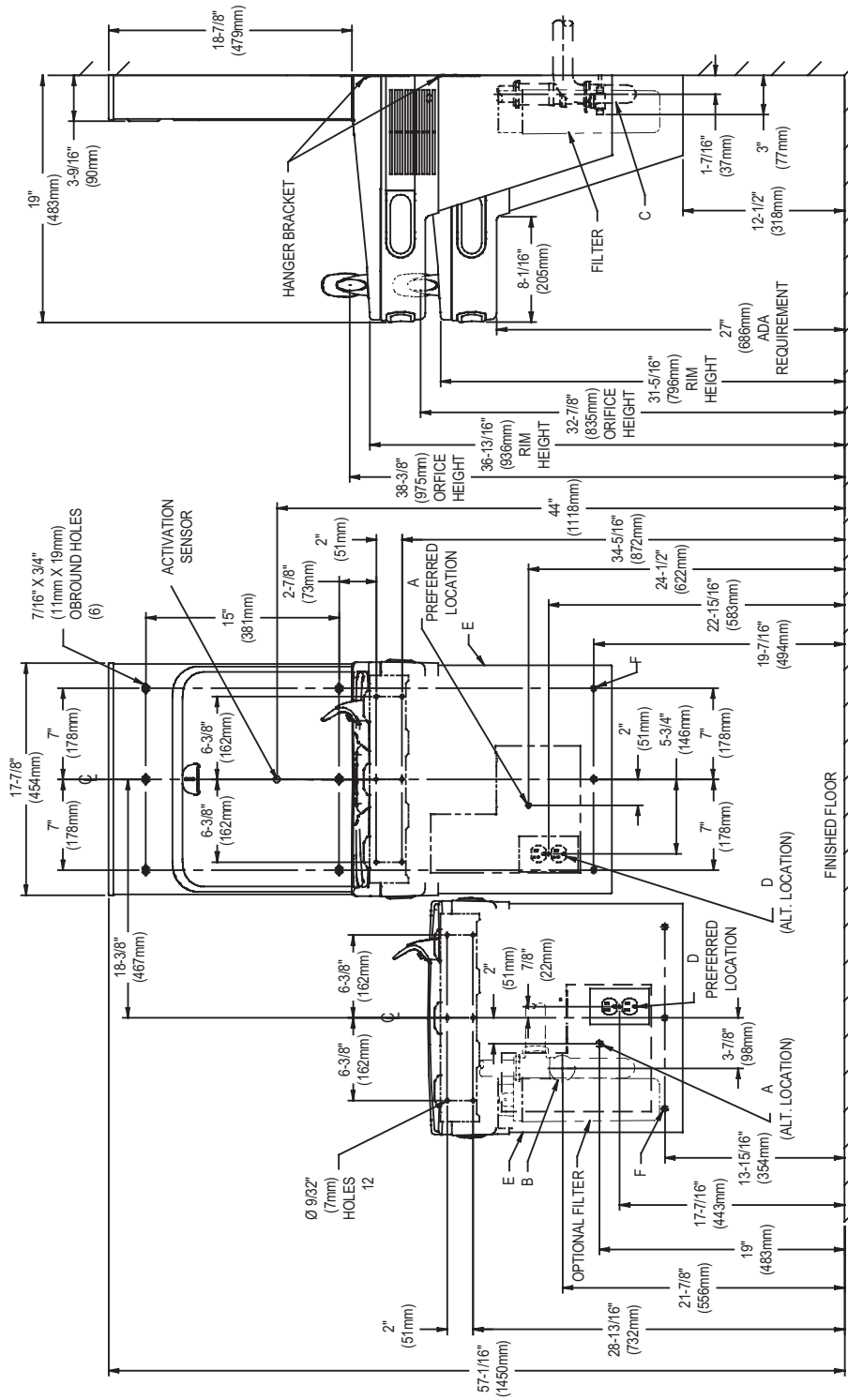


Fig. 4

REDUCE HEIGHT BY 3 INCHES FOR INSTALLATION OF CHILDREN'S ADA COOLER

LEGEND/LÉGENDE

- A = RECOMMENDED WATER SUPPLY LOCATION 3/8 O.D. UNPLATED COPPER TUBE CONNECT STUB WITH SHUT OFF (BY OTHERS) 3 IN. (76mm) MAXIMUM OUT FROM WALL**
 La UBICACION 3/8 O RECOMENDADA DE ABASTECIMIENTO DE AGUA. D. EI TUBO DE COBRE DE UNPLATED CONECTA TALONARIO CON APAGO (POR OTROS) 3 en. (76 mm) el MAXIMO FUERA DE PARED
 L'O.D. de 3/8 d'EMPLACEMENT DE PROVISION D'EAU RECOMMANDE. LE TUBE DE CUIVRE DE UNPLATED CONNECTE STUB AVEC ETEINT (PAR LES AUTRES) 3 dans. (76 mm) le MAXIMUM HORS DU MUR
- B = RECOMMENDED LOCATION FOR WASTE OUTLET 1-1/2" O.D. DRAIN STUB 2 IN. OUT FROM WALL**
 UBICACION RECOMENDADA PARA EL DRENAJE DE SALIDA DE AGUA. DE 1-1/2" DE DIAMETRO. EI TALONARIO 2 FUERA DE PARED
 EMPLACEMENT RECOMMANDE POUR LE DRAIN DE D.E. 1-1/2" DE SORTIE D'EAU. STUB 2 HORS DU MUR
- C = 1-1/2" TRAP NOT FURNISHED**
 PURGADOR DE 1-1/2 NO PROPORCIONADO
 SIPHON 1-1/2 NON FOURNI
- D = ELECTRICAL SUPPLY (3) WIRE RECESSED BOX DUPLEX OUTLET****
 ALIMENTATION ELECTRIQUE (3) CAJA ENCHUFE DE ALAMBRE SALIDA DUPLEX
- E = INSURE PROPER VENTILATION BY MAINTAINING 6" (152 mm) (MIN.) CLEARANCE FROM CABINET LOUVERS TO WALL.**
 ASSUREZ-VOUS UNE BONNE VENTILATION EN GARDANT 6" (152 mm) (MIN.) ENTRE LES ÉVÈNTS DE L'ENCAINTE ET LE MUR.
- F = 7/16 BOLT HOLES FOR FASTENING UNIT TO WALL**
 AGUJEROS DE LAS TUERCAS DE 7/16 PARA SUJETAR LA UNIDAD A LA PARED
 TROUS D'ECROUS 7/16 POUR FIXER L'APPAREIL AU MUR
- NEW INSTALLATIONS MUST USE GROUND FAULT CIRCUIT INTERRUPTER (GFCI)**
 Les nouvelles installations doivent employer l'interrupteur de circuit de défaut (GFCI)
- NOTE: IT IS HIGHLY RECOMMENDED THAT THE CIRCUIT BE DEDICATED AND THE LOAD PROTECTION BE SIZED FOR 20 AMPS.**

REFRIGERATED UNIT MUST BE INSTALLED ON RIGHT-HAND SIDE.

ALTERNATE ROUGH-IN FOR LEFT-HAND HIGH, BOTTLE FILLER HIGH MODELS REQUIRES BASIN ASSY CHANGE. SEE PAGES 11-13 FOR INSTRUCTIONS

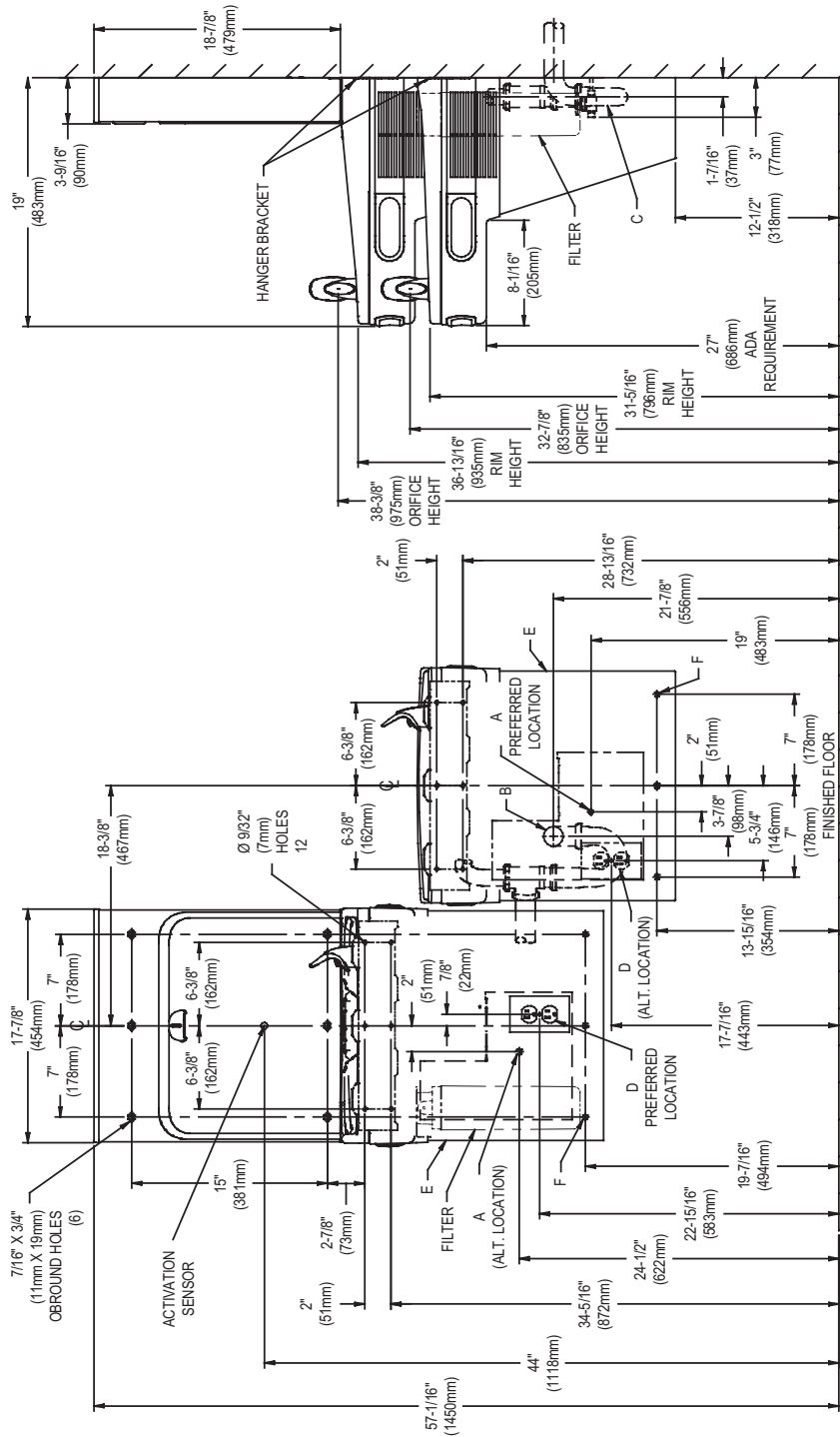


Fig. 5

REDUCE HEIGHT BY 3 INCHES FOR INSTALLATION OF CHILDREN'S ADA COOLER

LEGEND/LEYENDA/LÉGENDE

A = RECOMMENDED WATER SUPPLY LOCATION 3/8 O.D. UNPLATED COPPER TUBE CONNECT STUB WITH SHUT OFF (BY OTHERS) 3 IN. (76mm) MAXIMUM OUT FROM WALL
(POR OTROS) 3\"/>

LEGEND/LEYENDA/LÉGENDE

D = ELECTRICAL SUPPLY (3) WIRE RECESSED BOX DUPLEX OUTLET**
SUMINISTRO ELÉCTRICO (3) CAJA ENCHUFE DE ALAMBRE SALIDA DUPLEX
E = MINIMUM CLEARANCE FROM WALL (152mm) (MIN.) CLEARANCE FROM CABINET LOUVERS TO WALL
ASIGURE UN ESPACIO DE 152 mm (MIN.) DE HUECO ENTRE LA REJILLA DE VENTILACIÓN DEL MUEBLE Y LA PARED
F = 7/16 BOLT HOLES FOR FASTENING UNIT TO WALL
AGUJEROS DE LAS TUERCAS DE 7/16 PARA SUJETAR LA UNIDAD A LA PARED
TROUS D'ÉCROUS 7/16 POUR FIXER L'APPAREIL AU MUR
****NEW INSTALLATIONS MUST USE GROUND FAULT INTERRUPTER (GFCI)**
****Las nuevas instalaciones deben utilizar el interruptor de circuito de tierra de la avería (GFCI)**
****Les nouvelles installations doivent employer l'interrupteur de circuit moulé de défaut (GFCI)**
REFRIGERATED UNIT MUST BE INSTALLED ON RIGHT-HAND SIDE.

HANGER BRACKETS INSTALLATION

- 1) Remove hanger brackets fastened to back of cooler by removing one (1) screw.
- 2) Mount the hanger brackets as shown in Figures 2, 3, 4 or 5.

NOTE: Hanger Bracket **MUST** be supported securely. Add fixture support carrier if wall will not provide adequate support. Anchor hanger securely to wall using all six (6) 1/4 in. dia. mounting holes.

INSTALLATION OF COOLER

- 3) Hang the cooler on the hanger bracket. Be certain the hanger bracket is engaged properly in the slots on the cooler back as shown in Figures 2, 3, 4 or 5.
- 4) Remove the four (4) screws holding the lower front panel at the bottom of cooler. Remove the front panel by pulling straight down and set aside.
- 5) Connect water inlet line--See Note 4 of General Instructions.
- 6) Install trap. Remove the slip nut and gasket from the trap and install them on the cooler waste line making sure that the end of the waste line fits into the trap. Assemble the slip nut and gasket to the trap and tighten securely.

IMPORTANT: If it is necessary to cut the drain, loosen the screw at the black rubber boot and remove tube, check for leaks after re-assembly.

- 7) Install bottle filler per page (11).
- 8) Plug in electrical power. Unit must have electrical power to have water flow.

START UP**Also See General Instructions**

- 9) Stream height is factory set at 35 PSI. If supply pressure varies greatly from this, adjust screw located on the right knee clearance area. CW adjustment will raise stream and CCW adjustment will lower stream. For best adjustment, stream should hit basin approximately 6-1/2" (165mm) from bubbler on the downward slope of the basin.

NOTE: If continuous flow occurs at the end of the compressor cycle, turn cold control counterclockwise 1/4 turn.

- 10) Replace the front panel ensuring that the metal wrapper is secured inside of the upper shroud. Replace all four screws previously removed.

CLEANING

Warm, soapy water or mild household cleaning products can be used to clean the exterior panels of the EZ coolers. Extra caution should be used to clean the mirror finished stainless steel panels. They can be easily scratched and should only be cleaned with mild soap and water or Windex glass cleaner and a clean, soft cloth. Use of harsh chemicals or petroleum based or abrasive cleaners **will void the warranty**.

INSTALACIÓN DE SOPORTES PARA COLGAR

- 1) Retire el soporte fijador que se encuentra conectado a la parte posterior del enfriador sacando un (1) tornillo.
- 2) Monte el soporte fijador de la manera descrita en Fig. 2, 3, 4 y 5.

NOTA: Es necesario que el soporte fijador sea apoyado seguramente. Agregue un portador al soporte fijador si la pared no aporta soporte adecuado. Amarre el soporte colgante seguramente a la pared. Usando todos los seis (6) agujeros de montaje de ¼ pulg. (6.35 mm) de diám.

INSTALACIÓN DEL ENFRIADOR

- 3) Cuelgue el enfriador en el soporte colgante. Asegúrese que el soporte colgante está enganchado adecuadamente en las ranuras en la parte posterior del enfriador según descrito en Figura 2, 3, 4 y 5.
- 4) Retire los cuatro (4) tornillos que sujetan el panel frontal inferior en el pie del enfriador. Retire el panel frontal al jalarlo hacia abajo y póngalo al lado.
- 5) Conecte la tubería de entrada de agua – Consulte la Nota 4 de las Instrucciones Generales.
- 6) Instale el purgador. Retire la tuerca deslizando y el obturador del purgador e instálelos en la tubería de descarga del enfriador, asegurándose de que el extremo de la tubería de descarga encaje en el purgador. Ensamble la tuerca deslizando y el obturador en el purgador y apriete firmemente.

IMPORTANTE: Si llega a ser necesario cortar la tubería de descarga, afloje el tornillo en el fuelle negro de goma y retire la tubería, después del reensamblaje, compruebe que no haya pérdidas.

- 7) Instalación de llenado de la botella por página (11).
- 8) Enchufe la alimentación eléctrica.

INICIO**También consulte las Instrucciones Generales**

- 9) La altura del chorro viene predefinida de la fábrica en 35 psi. Si la presión de la fuente varía grandemente de esto, ajuste el tornillo situado en el lado izquierdo debajo de la barra del empuje ass'y, en la barra transversal. Un ajuste en el sentido de las manecillas del reloj alzará al chorro y un ajuste en el sentido contrario a las manecillas del reloj bajará el chorro. Para lograr el mejor ajuste, el chorro debe caer al estanque aproximadamente un 6-1/2 pulg. (165 mm) del grifo en la inclinación hacia abajo del estanque.

NOTA: Si ocurre un flujo continuo al fin del ciclo del compresor, gire el control del agua fría una cuarta vuelta en el sentido contrario a las manecillas del reloj.

- 10) Reemplace el panel frontal asegurando que la envoltura metálica está bien sujeta dentro de la cubierta superior. Reemplace todos los cuatro tornillos previamente retirados.

LIMPIEZA

Se puede usar agua tibia enjabonada o un producto no abrasivo de limpieza para limpiar los paneles exteriores de los enfriadores EZ. Debe usar mucho cuidado al limpiar los paneles de acero inoxidable de acabado espejo. Es muy fácil rayarlos y únicamente debe limpiarse con jabón no abrasivo y agua o con el limpiador de vidrios Windex y un paño limpio y suave. El uso de productos químicos o limpiadores abrasivos o aquellos basados en petróleo **anulará la garantía**.

SUPPORTS DE CROCHET DE SUSPENSION INSTALLATION

- 1) Retirez le support de suspension fixé au dos du refroidisseur en retirant une (1) vis.
- 2) Montez le support de suspension comme indiqué dans la figure 2, 3, 4 et 5.

REMARQUE: Le support de suspension doit être accroché sûrement. Renforcez le soutien du mur par l'ajout d'un élément porteur fixe si le mur ne peut pas, à lui tout seul, offrir un soutien suffisant. Fixez le support au mur en utilisant des trous de fixation de 6 pouces ¼ de diamètre.

INSTALLATION DU REFROIDISSEUR

- 3) Pendez le refroidisseur au support de suspension. Assurez-vous que le support est correctement inséré dans les emplacements au dos du refroidisseur, comme indiqué dans la figure 2, 3, 4 et 5.
- 4) Retirez les four (4) vis maintenant en place le panneau frontal au bas du refroidisseur. Retirez le capot inférieur en tirant vers le bas et mettez-le de côté.
- 5) Reliez l'alimentation en eau — Référez-vous à la remarque 4 des Instructions Générales.
- 6) Mettez en place le siphon. Retirez l'écrou coulissant et le joint statique du siphon et installez-les sur la conduite résiduaire du refroidisseur en vérifiant bien que l'extrémité de la conduite résiduaire entre dans le siphon. Installez l'écrou coulissant et le joint statique au siphon et serrez fortement.

IMPORTANT: Au cas où il serait nécessaire de couper le drain, déserez la vis située sur la gaine noire en caoutchouc et retirez le tube, puis vérifiez qu'il n'y a pas de fuites avant de remonter.

- 7) Installation de remplissage de bouteille par page (11).
- 8) Branchez l'alimentation électrique.

DEMARRAGE**Voir également le chapitre Instructions Générales**

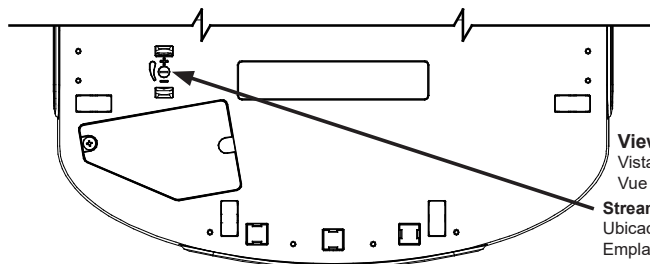
- 9) La pression de la vapeur a été réglée en usine à 35 psi. Si la pression d'alimentation change considérablement de ceci, ajustez la vis plac du côté gauche au-dessous de la barre de poussée ass'y, sur la barre transversale. Le réglage dans le sens des aiguilles d'une montre augmente le jet, et dans le sens inverse le diminue. Pour un meilleur réglage, le jet doit frapper le bassin à une distance d'environ 6 pouces et demi (165 mm) du barboteur sur la pente descendante du bassin.

REMARQUE: Si un flot continu se déclenche à la fin du cycle de compression, tournez le Contrôle de refroidissement d'un quart de tour dans le sens inverse des aiguilles d'une montre.

- 10) Remettez le panneau frontal en place en vérifiant que le couvre-joint métallique est bien installé à l'intérieur de l'enveloppe de protection supérieure. Revisez les four vis ôtées précédemment.

ENTRETIEN

Utiliser de l'eau tiède savonneuse ou des produits de nettoyage domestiques doux pour nettoyer les panneaux extérieurs des refroidisseurs EZ. Une prudence supplémentaire est requise lors du nettoyage du miroir ou des panneaux inox. Ces éléments peuvent se rayer facilement et doivent être uniquement nettoyés à l'aide de savon doux et d'eau ou de liquide nettoyant pour vitres Windex et d'un chiffon doux et propre. L'utilisation de produits chimiques corrosifs et de nettoyeurs abrasifs ou dérivés du pétrole **annulera la garantie constructeur**.

**View of Underside of Basin Shroud**

Vista de la parte inferior de la cuenca cubierta

Vue de dessous du bassin du Saint-Suaire

Stream Height Adjustment Location

Ubicación de ajuste de altura de corriente

Emplacement de réglage hauteur Stream

Service Instructions

Lower and Upper Shroud

To access the refrigeration system and plumbing connections, remove four screws from bottom of cooler to remove the lower shroud. To remove the upper shroud for access to the pushbars, regulator, solenoid valve or other components located in the top of the unit, remove lower shroud, disconnect drain, remove four screws from tabs along lower edge of upper shroud, unplug two wires and water tube.

Bubbler

To remove the bubbler, first disconnect the power supply. The underside of the bubbler can be reached through the access panel on the underside of the upper shroud. Remove the access panel by removing the retaining screw. To remove the bubbler, loosen locknut from the underside of the bubbler and remove the tubing from the quick connect fitting per the Operation Of Quick Connect Fittings section in the General Instructions. After servicing, replace the access panel and retaining screw.

Switches Behind the Push Bar

The regulator in an EZ cooler is always held fully open by the use of a single regulator nut (See Fig. 6 or 7). Water is not dispensed until the pushbar is depressed to activate a switch which then opens a solenoid valve. When installing the regulator nut, the regulator spring must be depressed while turning the nut.

To remove sidebars, from the inside compress the flared tabs and pull out carefully. To reinstall side pushbars, the front of the pushbar is inserted first. While keeping the switch depressed, snap the rear of the pushbar into position.

Atienda a Instrucciones

Las cubiertas inferiores y superiores

Para obtener acceso al sistema de refrigeración y las conexiones de plomería, retire cuatro tornillos de la parte inferior del enfriador para así poder retirar la cubierta inferior. Para retirar la cubierta superior para obtener acceso a las barras tope de empuje, regulador, la válvula del solenoide u otros componentes ubicados en la parte superior de la unidad, retire la cubierta inferior, desconecte el tubo de desagüe, retire cuatro tornillos de las lengüetas a lo largo del borde inferior de la cubierta superior, desenchufe dos cables y la tubería de agua.

Burbujeador

Para quitar el burbujeador, primero hay que desconectar la alimentación.

Se puede obtener acceso a la parte inferior del burbujeador a través del panel de acceso en la parte inferior de la cubierta superior. Quite el panel de acceso sacando el tornillo de retención. Para retirar el burbujeador, suelte la contratuercas de la parte inferior del burbujeador y saque la tubería del accesorio de conexión rápida según descrito en la sección Funcionamiento de los Accesorios de Conexión Rápida en las Instrucciones Generales. Después de realizar el servicio, reemplace el panel de acceso y el tornillo de retención.

Interruptores detrás de la barra tope de empuje

El enfriador EZ es parecido a un sensor fotoeléctrico en que el regulador siempre está completamente abierto pero no surte el agua hasta que la barra tope se empuje (Figura 6 or 7). Se escuchará un sonido de chasquidos al activar el interruptor y la válvula del solenoide. Una sola tuerca del regulador mantiene abierto el regulador en todo momento. Al instalar la tuerca, es necesario presionar el resorte del regulador mientras gira la tuerca.

Para retirar las barras laterales, desde el interior, hay que contraer las lengüetas acampanadas y retire cuidadosamente. Para reinstalar las barras tope laterales, se debe introducir la parte frontal de las barras primero. Con el interruptor presionado, encaje con un chasquido la parte posterior de la barra tope en la posición correcta.

Entretien des Instructions

Enveloppes de Protection Supérieure et Inférieure

Pour accéder au système de réfrigération et aux raccords de plomberie, retirez les six vis situées au bas du refroidisseur pour retirer l'enveloppe inférieure.

Pour retirer l'enveloppe supérieure afin d'avoir accès aux boutons-poussoir, au régulateur, à l'électro-robotin ou à tout autre composant situé au sommet de l'unité, retirez l'enveloppe inférieure, déconnectez le drain, retirez les quatre vis des pattes situées le long de l'arête inférieure de l'enveloppe supérieure, et débranchez les deux câbles ainsi que le raccordement en eau.

Barboteur

Pour déposer le barboteur, débranchez d'abord l'alimentation électrique. Le dessous du barboteur est accessible par le biais du panneau d'accès sur la face inférieure du collecteur d'air. Déposez le panneau d'accès en retirant la vis de retenue. Pour déposer le barboteur, desserrez l'écrou de blocage du dessous du barboteur et retirez la tubulure à partir du raccord rapide conformément à la section Utilisation des raccords rapides dans les instruction générales. Une fois le travail terminé, remplacez le panneau d'accès et la vis de

Interrupteurs derrière le bouton-poussoir

Le refroidisseur EZ a un fonctionnement similaire à celui d'un capteur photo-électrique, dans le sens où le régulateur est toujours complètement ouvert mais ne dispense de l'eau que lorsque l'on presse le bouton-poussoir (composant 6 or 7). Un cliquetis se produit quand l'interrupteur et l'électro-robotin se mettent en marche. Un seul écrou de régulateur maintient le régulateur en position ouverte en permanence. Lors de l'installation de l'écrou, le ressort de détente doit être en position relâchée pendant le réglage de l'écrou.

Afin de retirer les barres latérales, pressez les pattes évasées de l'intérieur et tirez doucement. Pour réinstaller les barres latérales, la partie avant est d'abord insérée. En gardant l'interrupteur relâché, encastrez l'arrière du bouton-poussoir en position.

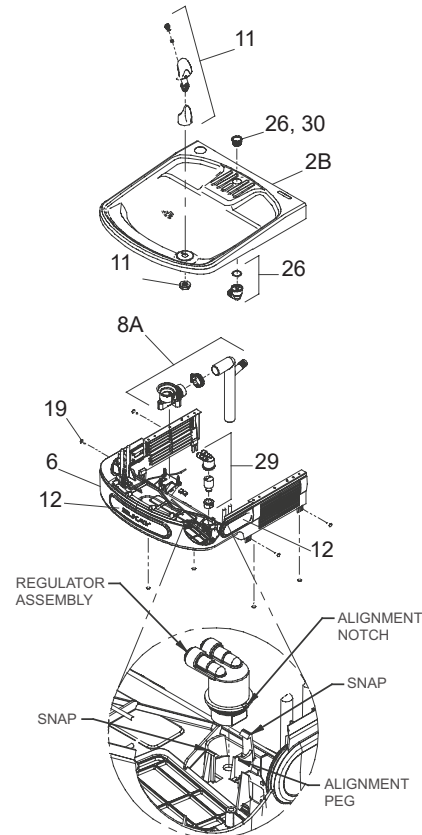


Fig. 6

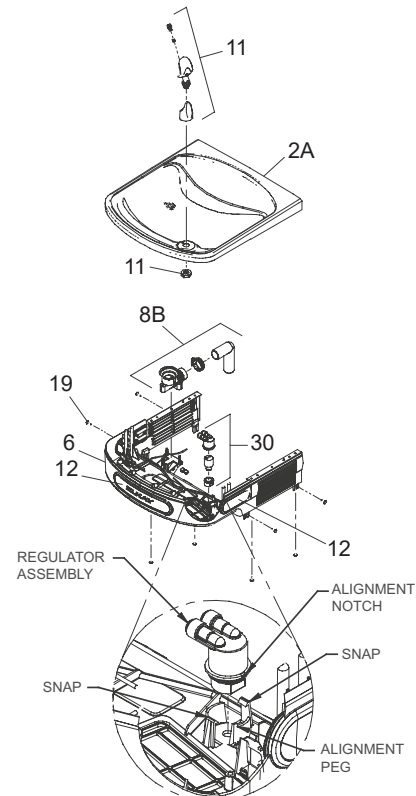


Fig. 7

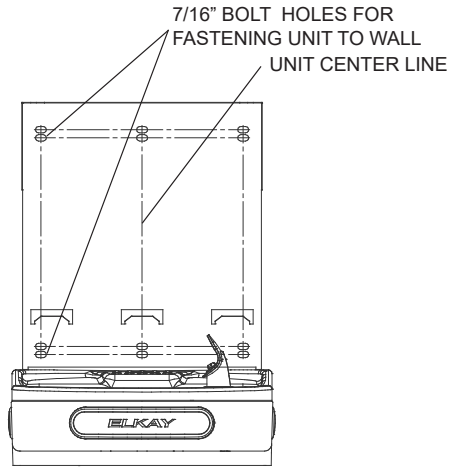


Fig. 8

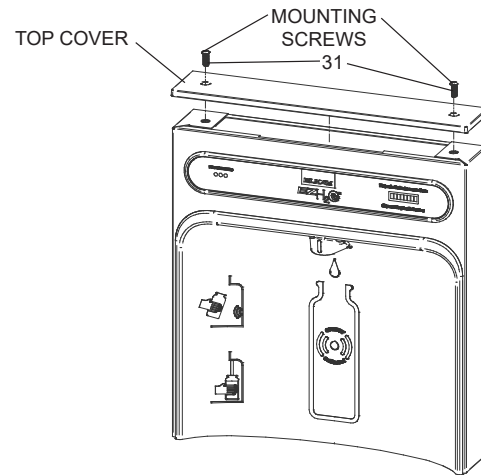


Fig. 9

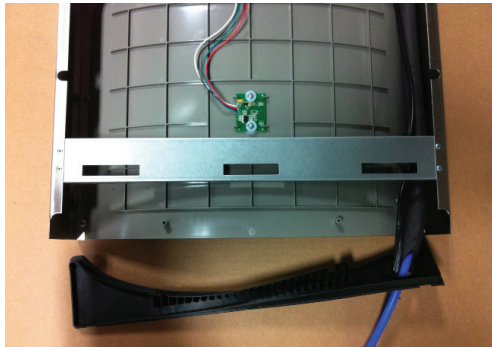
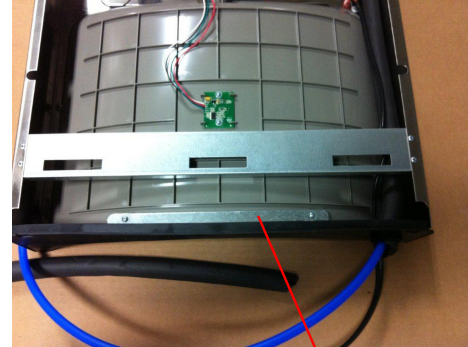


Fig. 10



BRACKET & SCREWS

Fig. 11

Bottle Filler Installation Instructions

- 1) Remove two (2) mounting screws with 5/32" Allen wrench holding top cover to Bottle Filler (See Fig. 9). Remove top cover. Note do not discard mounting screws, they will be needed to reinstall top cover.
- 2) Remove wall mounting plate from Bottle Filler. Place wall plate against wall on top of basin. Center the wall plate side to side with the basin. Mark the six (6) mounting holes with a pencil (See Fig. 2, 3, 4 or 5).
- 3) Remove wall mounting plate from wall. **NOTE:** Mounting plate **MUST** be supported securely. Add fixture support carrier if wall will not provide adequate support.
- 4) Install wall mounting plate to wall using six (6) 7/16" obround mounting holes (mounting bolts not included) (See Fig. 8). Use appropriate fasteners for your wall type.
- 5) Lay Bottle Filler on water cooler basin and cut insulation from tube even with bottom of gasket, remove this insulation from the 3/8" tube, but do not discard. Feed the power cord and waterline through the hole on top of water cooler. **NOTE:** To prevent scratching the basin place a towel or soft cloth over the entire basin when working above it.
- 6) Install gasket on bottom of bottle filler tower with gasket support bracket & (2) screws (See Fig. 11).
- 7) Feed power cord & 3/8" water line through hole in tower/basin gasket (See Fig. 10).
- 8) With the power cord, wire(s), and waterline through hole on top of water cooler place Bottle Filler on the three (3) angled tabs protruding from the wall mounting plate installed on wall. Make sure round boss in gasket fits in hole of basin.
- 9) Once Bottle Filler is installed on wall plate tabs, make sure the water line, wire(s) and power cord are installed properly. Inspect for leaks, fix all leaks before continuing. Push top of Bottle Filler toward wall and line up top cover two (2) holes.
- 10) Reinstall Top Cover on Bottle Filler (See Fig. 9) with two mounting screws from step 1 above. Caution, do not over tighten screws.
- 11) Install remaining tube insulation to the water line from bottle filler, connect Bottle Filler waterline inside of the water cooler by connecting the 3/8" water line to the tee.
- 12) Install filter cartridge, remove filter from carton, remove protective cap, attach filter to filter head by firmly inserting into head and rotating filter clockwise.
- 13) Turn water supply on and inspect for leaks. Fix all leaks before continuing.
- 14) Once unit has been inspected for leaks and any leaks found corrected, plug Bottle Filler and unit into wall. For correct Electrical Cord Routing and Connections (See Fig. 30) be sure to reinstall fuse to the circuit or switch the circuit breaker back to the "ON" position.
- 15) Once power is applied to Bottle Filler, the GREEN LED light should illuminate showing good filter status along with the LCD Bottle Counter.
- 16) Verify proper dispensing by placing cup, hand, or any opaque object in front of sensor area and verify water dispenses. **Note:** the first initial dispenses might have air in line which may cause a sputter. This will be eliminated once all air is purged from the line.
- 17) Once unit tests out, install Lower Panel back on water cooler(s). Unit is now ready for use.

BF11 - BF12 PROGRAM

SETTING THE CONTROL BOARD

VERIFY CONTROL BOARD SOFTWARE

- 1) To verify the software program of the control board the unit will need to be shut down and restarted. The chiller (if present) does not need to be shut down and restarted.
- 2) The units lower panel must be open to access the power cord and wall outlet.
- 3) Shut down the unit by unplugging the power cord from the wall outlet or switching off the circuit breaker to the unit.
- 4) Restart the unit by plugging the power cord back into the wall outlet.
- 5) Upon start up, the bottle count display will show the software designation of BF11 or BF12.

ACCESSING THE PROGRAMMING BUTTON

- 1) To access the program button, remove the top cover of the bottle-filler. Remove the two (2) screws holding top cover to bottle-filler with a 5/32" allen wrench. Remove top cover. Do not discard mounting screws, they will be needed to reinstall the top cover after programming operations are completed. The programming button is located at the top right side of the unit on the control board.
NOTE: When applicable, there is also an alternate reset button located on the lower part of the water cooler. After removing the bottom cover, the reset button will be located on the left side of the cooler, mounted on the side panel support.

RESET THE FILTER MONITOR

- 1) Instructions apply to filtered units only.
- 2) Depress the program button for approximately 2 seconds until the display changes then release. The display will change and scroll through two messages:
"RST FLTR" – Reset Filter Status LED
"SETTINGS" – System Settings Sub Menu
If the program button is not pushed again the display will scroll through the two messages above for three cycles and then default back to bottle count and be back in run mode.
- 3) When the display changes to "RST FLTR", depress the button again. The display will change to show "FLTR =". Depress the button again and the display will show "FLTR =0"
- 4) The Green LED should be illuminated indicating that the visual filter monitor has been reset.

SETTING RANGE OF THE IR SENSOR WHERE APPLICABLE

- 1) Depress the program button for approximately 2 seconds until the display changes then release. The display will change and scroll through two messages:
"RST FLTR" – Reset Filter Status LED
"SETTINGS" – System Settings Sub Menu
If the program button is not pushed again the display will scroll through the two messages above for three cycles and then default back to bottle count and be back in run mode.
- 2) When the display changes to "SETTINGS", depress the button again. The display will change to show
"RNG SET" - Range set for IR sensor.
"UNIT TYP" - Type of unit (REFRIG or NON-RFRG)
"FLT SIZE" - Select filter capacity
"RST BCNT" - Reset bottle count
- 3) When display shows "RNG SET" push program button once the display will show current value (can be 1 – 10) e.g. "RNG = 3".
- 4) Once display shows current value push the program button to scroll through value of 1 – 10. Select the desired range setting, "1" being closest to sensor and "10" being farthest away.
- 5) Once range is selected allow approximately 4 seconds to pass and then the display will go back to bottle counter and be in run mode.
- 6) Test bottle filler by placing bottle or hand in front of sensor to make sure water is dispensed.

SETTING UNIT TYPE

- 1) Depress the program button for approximately 2 seconds until the display changes then release. The display will change and scroll through two messages:
"RST FLTR" – Reset Filter Status LED
"SETTINGS" – System Settings Sub Menu
If the program button is not pushed again the display will scroll through the two messages above for three cycles and then default back to bottle count and be back in run mode.

Continued from below:

- 2) When the display changes to "SETTINGS", depress the button again. The display will change to show
"RNG SET" - Range set for IR sensor.
"UNIT TYP" - Type of unit (REFRIG or NON-RFRG)
"FLT SIZE" - Select filter capacity
"RST BCNT" - Reset bottle count
- 3) When display shows "UNIT TYPE" push program button once the display will show current value. Can be REFRIG or NON-RFRG
- 4) Push button once to change value. Once value is selected the display will show the new value. (Can be REFRIG or NON-RFRG)
"REFRIG" - stands for refrigerated product. In this setting the flow rate is estimated at 1.0 gallon per minute.
"NON-RFRG" - stands for nonrefrigerated product. In this setting the flow rate is estimated at 1.5 gallons per minute. Both "REFRIG" and "NON-RFRG" simulate 1 bottle equal to 20 oz.
- 5) Allow approximately 4 seconds to pass and the display will return to bottle counter and be in run mode.

RESETTING BOTTLE COUNT

- 1) Depress the program button for approximately 2 seconds until the display changes then release. The display will change and scroll through two messages:
"RST FLTR" – Reset Filter Status LED
"SETTINGS" – System Settings Sub Menu
If the program button is not pushed again the display will scroll through the two messages above for three cycles and then default back to bottle count and be back in run mode.
- 2) When the display changes to "SETTINGS", depress the button again. The display will change to show:
"RNG SET"- Range set for IR sensor.
"UNIT TYP" - Type of unit (REFRIG or NON-RFRG)
"FLT SIZE" - Select filter capacity
"RST BCNT" - Reset bottle count
If the button is not pushed again the display will scroll through the four messages above for three cycles and return to run mode.
- 3) When display shows "RST BCNT" push program button once the display will show current value, e.g. "0033183".
- 4) Once display shows current value push the program button once more to reset back to 0. The display will show BTLCT = 0 for approximately 2 seconds and then return to run mode showing 00000000 bottles.
NOTE: Once the bottle count is reset to zero there is no way to return to the previous bottle count.
- 5) Testing the bottle counter:
REFRIG units: Place bottle or hand in front of sensor for approximately 9 seconds to see bottle counter count 00000001,
(This is based on filling a 20 oz. bottle).
NON-RFRG units: Place bottle or hand in front of sensor for approximately 6 seconds to see bottle counter count 00000001,
(This is based on filling a 20 oz bottle).

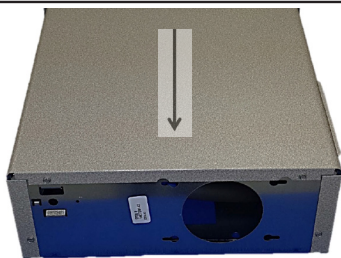
SETTING FILTER CAPACITY

- 1) Depress the program button for approximately 2 seconds until the display changes then release. The display will change and scroll through two messages:
"RST FLTR" – Reset Filter Status LED
"SETTINGS" – System Settings Sub Menu
If the program button is not pushed again the display will scroll through the two messages above for three cycles and then default back to bottle count and be back in run mode.
- 2) When the display changes to "SETTINGS", depress the button again. The display will change to show:
"RNG SET"- Range set for IR sensor.
"UNIT TYP" - Type of unit (REFRIG or NON-RFRG)
"FLT SIZE" - Select filter capacity
"RST BCNT" - Reset bottle count
If the button is not pushed again the display will scroll through the four messages above for three cycles and return to run mode.
- 3) When display shows "FLT SIZE" push program button once. The display will show current value. Can be 3000GAL or 6000GAL.
- 4) Push program button again to display the desired "FLT SIZE".
- 5) Allow approximately 4 seconds to pass and the display will return to bottle counter and be in run mode.

INSTRUCTIONS TO MOVE THE BOTTLE FILLER & BASIN TO THE LEFT SIDE (NON-REFRIGERATED) FOR ALTERNATE MOUNTING VERSATILE BI-LEVEL



Fig. 12



Using a 5/16" socket, remove the (4) screws from the bottom of each cooler to remove the wrappers.



Using a #T20 (6 point star bit), loosen the shroud screws. Both sides, both coolers.



ONLY move the filler panel and j-clip to the refrigerated (right) side if right side will be mounted 'high'.

Fig. 13

Refrigerated Cooler side:

Carefully lift and tip the shroud/basin assembly off of the cooler frame.

Only disconnect the (2) black wires coming from the shroud assembly that go to the solenoid valve and to the cold control.

Disconnect the water line at the solenoid valve. Reference (Fig. 27, Pg.17) for the operation of the quick connect fittings.

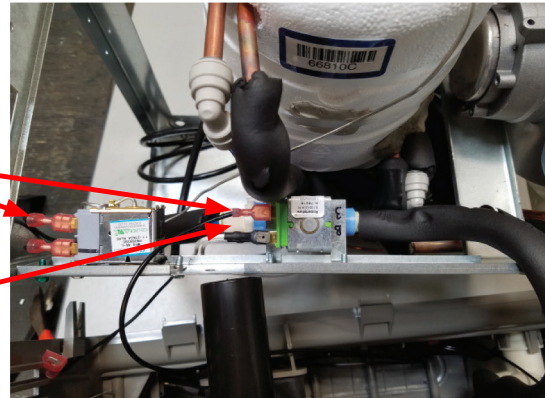


Fig. 14

Non-Refrigerated Cooler side:

Carefully lift and tip the shroud/basin assembly off of the cooler frame.

Only disconnect the (2) black wires coming from the shroud assembly going to the solenoid valve and to the power cord.

Disconnect the water line at the solenoid valve. Reference (See Fig. 27, Pg.17) for the operation of the quick connect fittings.

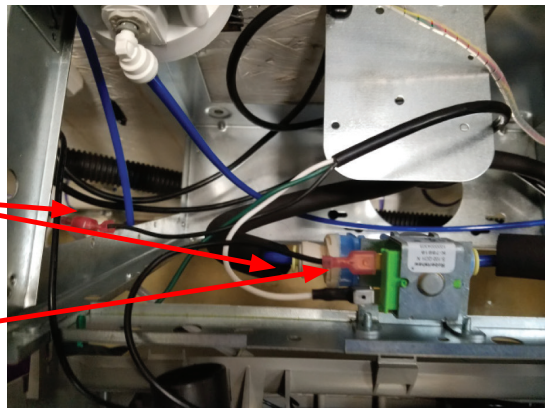


Fig. 15

INSTRUCTIONS CONTINUED.....**Swap drain parts in shroud:**

Loosen each hose clamp retaining the drain pieces.

Remove each drain piece and swap to other basin.

Tighten each hose clamp.

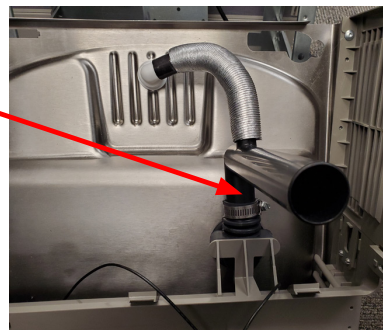


Fig. 16

Refrigerated Cooler side:

Carefully lift and tip the shroud/basin assembly off of the cooler frame.

Only disconnect the (2) black wires coming from the shroud assembly that go to the solenoid valve and to the cold control.

Disconnect the water line at the solenoid valve. Reference (Fig. 27, Pg.17) for the operation of the quick connect fittings.



Fig. 17

Non-Refrigerated Cooler side:

Carefully tip the shroud/basin assembly toward the cooler frame.

Connect one of the black wires to the solenoid valve and one to the power cord.

Re-connect the water line at the solenoid. Reference (See Fig. 27, Pg.17) for the operation of the quick connect fittings.

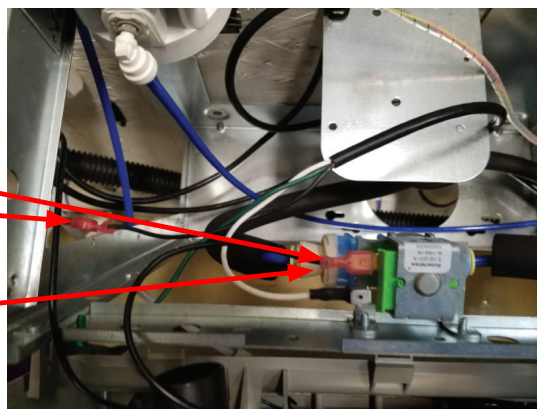


Fig. 18

Precautions need to be taken when replacing the Basin/shroud assembly:

- 1) Make sure all wires are inside frames so as not to become pinched.
- 2) Water line coming from bottle filler drain must be pulled down as not to interfere with the fan operation. The fan blade needs to spin freely.



Fig. 19

Using a #T20 (6 point star bit), tighten the shroud screws. Both sides, both coolers, being careful not to overtighten.

INSTALL WRAPPERS & TRIM STRIPS PER PAGE 13

SEE PAGE 14 FOR PLUMBING DIAGRAMS

Versatile Wrapper and Trim Kit Installation Instructions

Left Hand Wrapper

(High Side)

- 1) Remove existing wrapper by removing the (4) screws from bottom.
- 2) Screw trim piece to wrapper with (2) screws (provided)
- 3) Re-install wrapper with (4) screws.
- 4) Dispose of unused cover plate.

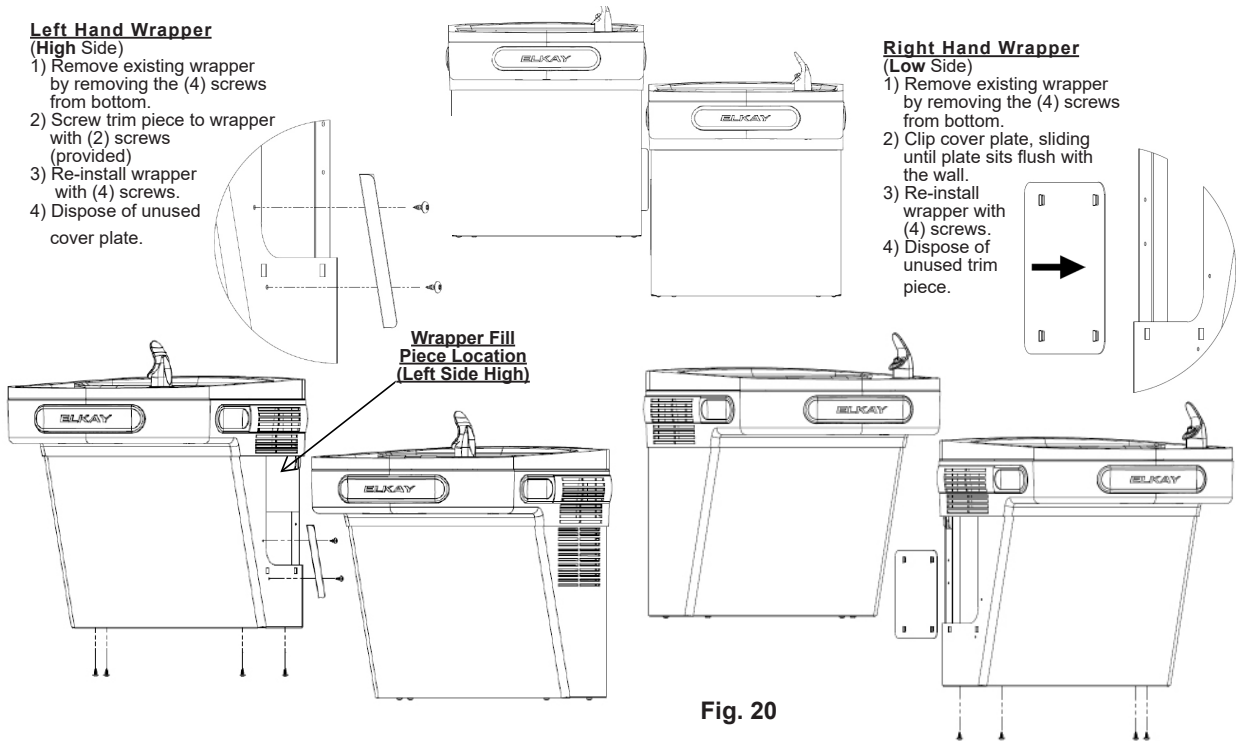


Fig. 20

Left Hand Wrapper

(Low Side)

- 1) Remove existing wrapper by removing the (4) screws from bottom.
- 2) Clip cover plate, sliding until plate sits flush with the wall.
- 3) Re-install wrapper with (4) screws.
- 4) Dispose of unused trim piece.

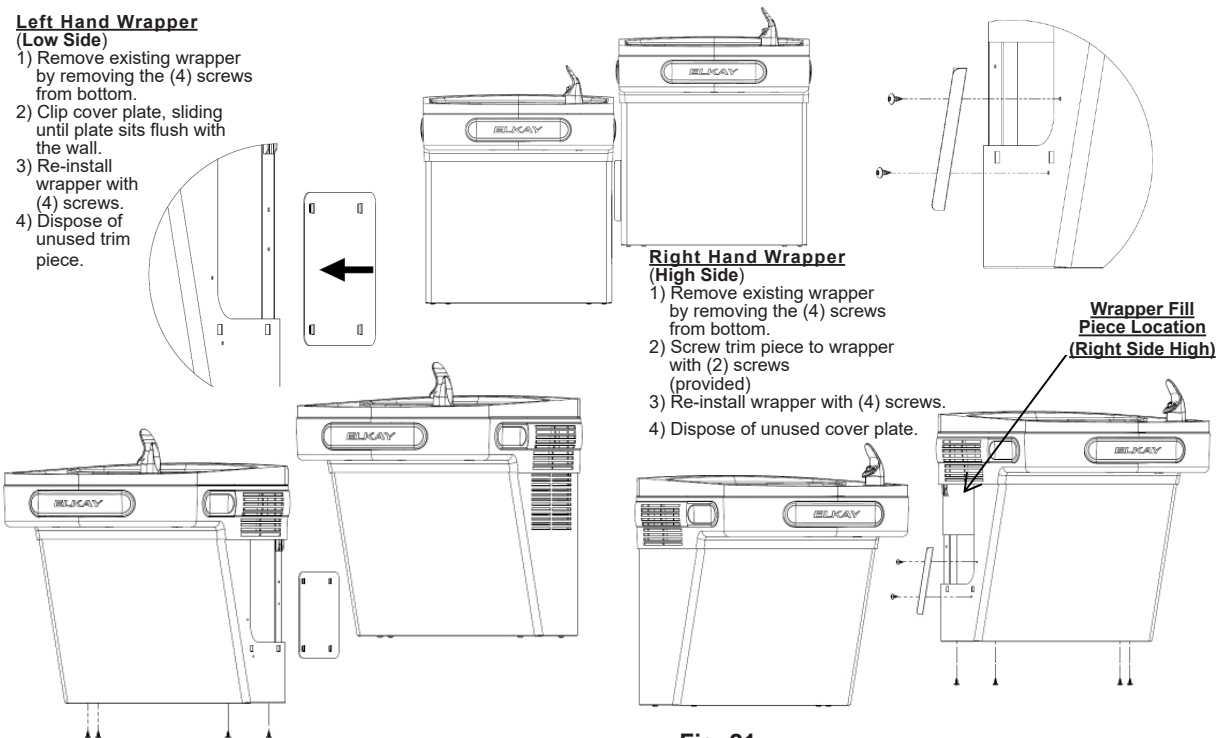


Fig. 21

PLUMBING DIAGRAMS VERSATILE BI-LEVEL

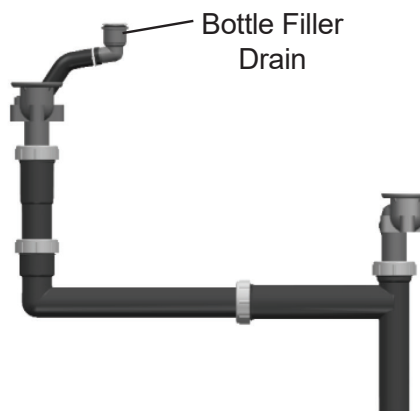
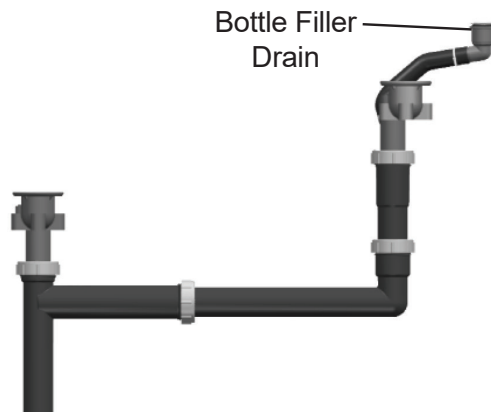
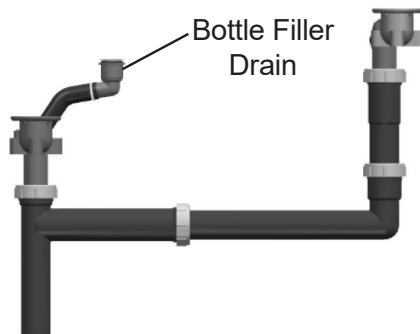
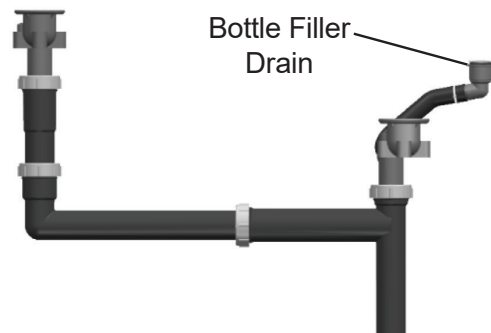
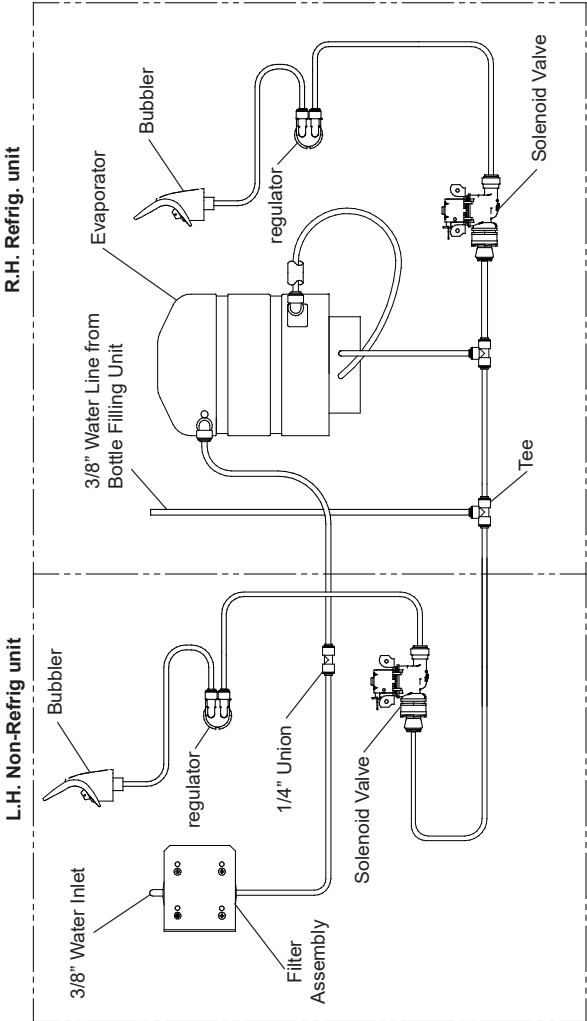
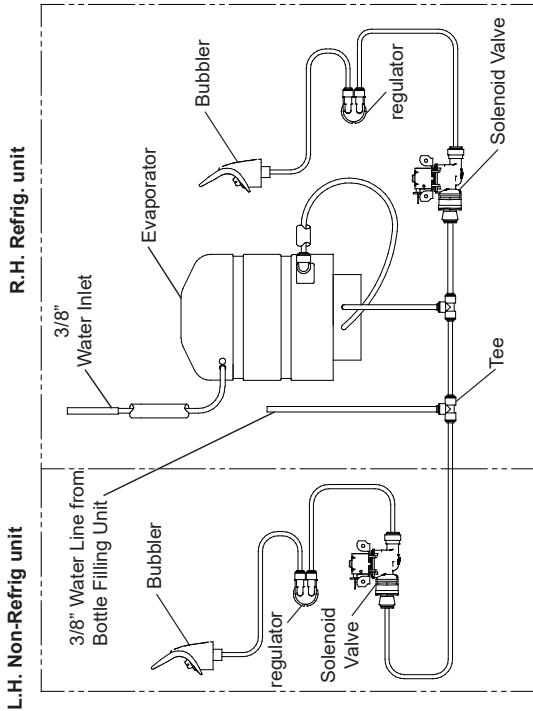


Fig. 22

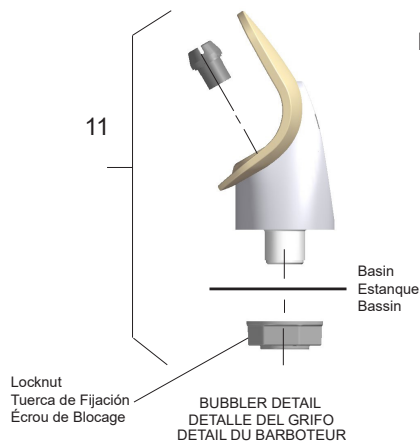
PLUMBING DIAGRAMS FOR EZ BI-LEVEL COOLERS

Standard EZ Bi-Level Pressurized
Plumbing Diagram



EZ Bi-Level Plumbing Diagram after Filter Installation
& Bottle Filler Water Line Addition

Fig. 23

**NOTE:**

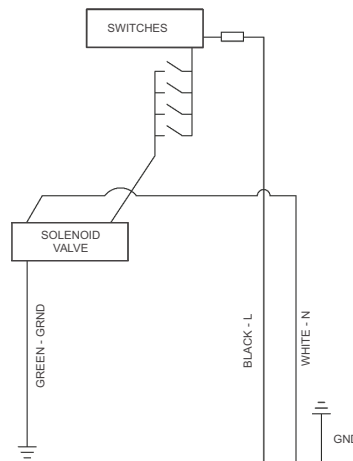
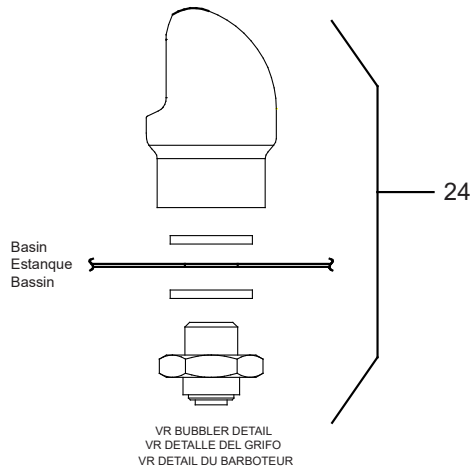
When installing replacement bubbler and pedestal, tighten nut only to hold parts snug in position. Do Not Overtighten.

NOTA:

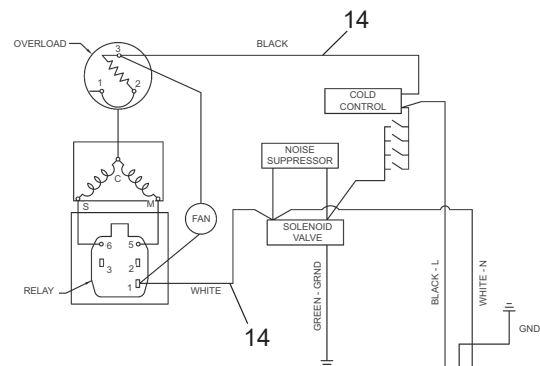
Al instalar el grifo y pedestal de reemplazo, apriete la tuerca unicamente para mantener las piezas en una posición ajustada. No debe apretarse demasiado.

REMARQUE:

Lors de l'installation du barboteur de remplacement ou du socle, serrez la vis afin de maintenir les éléments en place. Ne Pas Serrer Trop Fortement.

**Fig. 25**

115V Non-Refrigerated Wiring Diagram
Diagrama de cableado no refrigerados de 115 voltios
schéma de câblage non réfrigéré de 115 volts

**Fig. 26**

115V Refrigerated Wiring Diagram
Diagrama de cableado refrigerados de 115 voltios
Schéma frigorifique de 115 volts

220V PARTS LIST/ 220V LISTA DE PIEZAS/ 220V LISTE DES PIÈCES

ITEM NO.	PART NO.	DESCRIPTION	DESCRIPCIÓN	DESCRIPTION
10	1000004575	Kit - Solenoid Valve/Regulator Assy	Kit - Montaje del Regulador/Válvula Soleoide	Kit - Solénoide de la Vanne/Régulateur
*4	1000002147	Compressor Serv. Pak (220v/50Hz)	Compresor Paquete de servicio (220v/50Hz)	Kit d'Entretien du Compresseur (220v/50Hz)
	1000002146	Compressor Serv. Pak (220v/60Hz)	Compresor Paquete de servicio (220v/60Hz)	Kit d'Entretien du Compresseur (220v/60Hz)
15	0000000245	Kit - Fan Motor Assy/Blade/Motor/Shroud/ Screws/Nut (220v-50Hz/60Hz)	Kit - Ventilador Motor Montaje/Hoja/Motor/ Cubierta/Tornillos/Tuerca (220v-50Hz/60Hz)	Kit - Ventilateur Moteur Assemblée/Lame/Moteur/ Cache/Vis/Écrou (220v-50Hz/60Hz)
20	98751C	Kit - /Relay/Cvrr/Overload (220v/50Hz)	Kit - relé/sobrecarga/cubierta (220v/50Hz)	Kit-relais/surcharge/couverture (220v/50Hz)
	98752C	Kit - Relay/Cvrr/Overload (220v/60Hz)	Kit - relé/sobrecarga/cubierta (220v/60Hz)	Kit-relais/surcharge/couverture (220v/60Hz)
29	36066C	Internal Power Cord	Cable de alimentación interno	Cordon d'alimentation interne
	36067C	Internal Power Cord Non-Refrigerated	Cable de alimentación interno L/R	Cordon d'alimentation interne L/R
NS	36004C	Jumper Wire	Puente de alambre	Fil de raccordement
NS	28030C	Brkt - Power Inlet	Soporte - Entrada De Eléctrico	Support - Entrée d'alimentation
NS	35826C	Inlet Power	Entrada De Eléctrico	Entrée d'alimentation
NS	36357C	Split Snap Bushing	Buje rápido partido	Douille instantanée fendue
NS	36300C	Jumper Wire (Yellow)	Cable - Puente (Amarillo)	Câble - Cavalier (Jaune)

NS = NOT SHOWN

OPERATION OF QUICK CONNECT FITTINGS

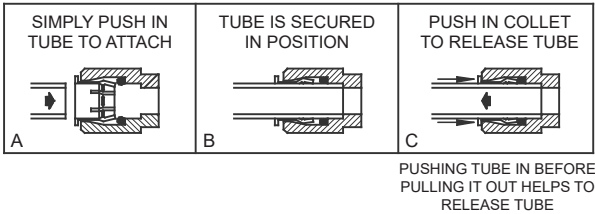


Fig. 27

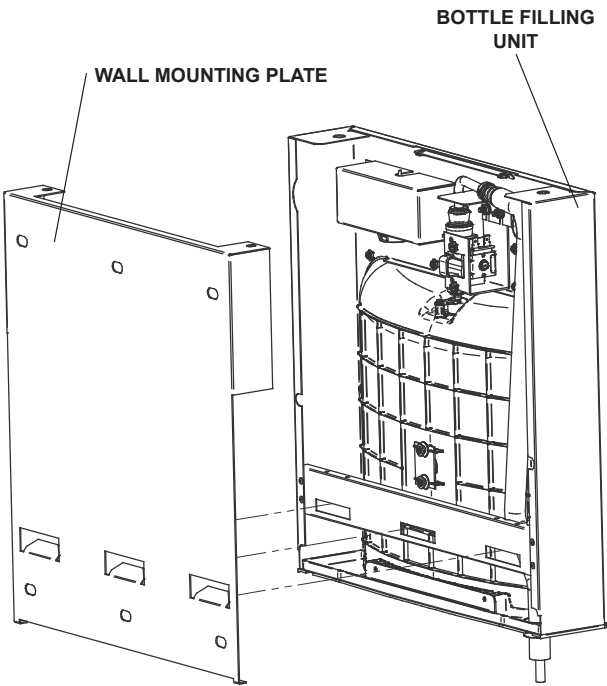
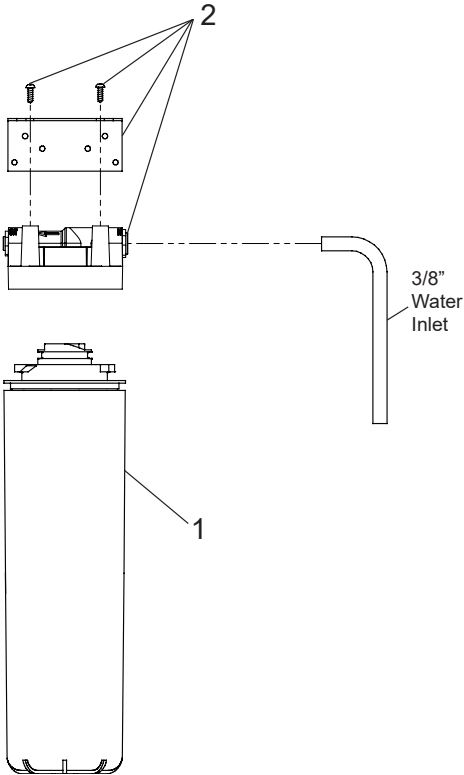


Fig. 28



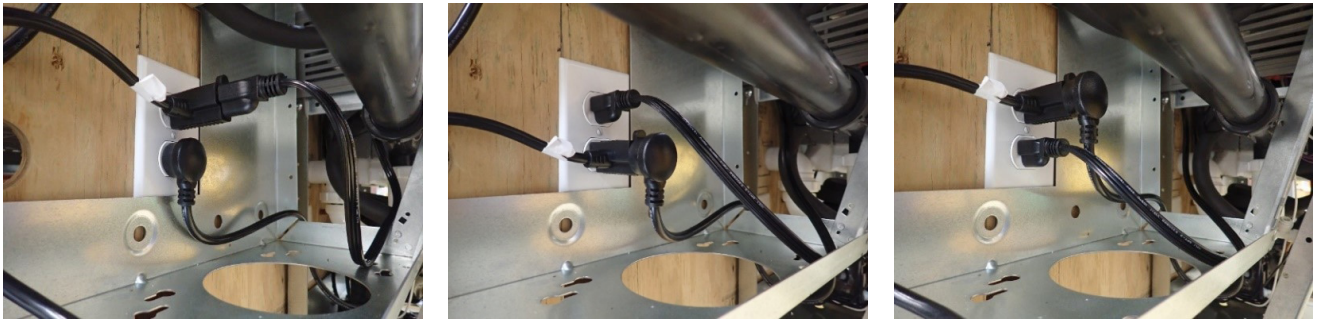
Filter Head Assembly
used after 01/01/2021

Fig. 29

WATERSENTRY® PLUS Filter Detail
Detalle WATERSENTRY® Filtro
Description WATERSENTRY® Filtrage

FILTER PARTS LIST			LISTA DE PIEZAS DEL FILTRO	LISTE DES PIÈCES DU FILTRE
ITEM NO.	PART NO.	DESCRIPTION	DESCRIPCIÓN	DESCRIPTION
1 2	51300C 0000000746	Filter Assy-3000 Gal. Assy-Filter & Bracket includes Filtr Head/Mtg Bkt/ John Guest Ftgs/Screws	Ensamblado del Filtro-3000 Galón Conjunto del Filtro y Soporte, Incluye Filtro Soporte/John Guest Guarniciones/Tornillos de Montaje de Cabeza	Ens. filtre-3000 Gallon Assemblée-Filtre et Support Inclut Filtre/Montage Support/ John Guest/Vis à Tête

Standard Rough-In Primary Outlet Location



Standard Rough-In Alternate Outlet Location



Reverse Rough-In Primary Outlet Location



Reverse Rough-In Alternate Outlet Location

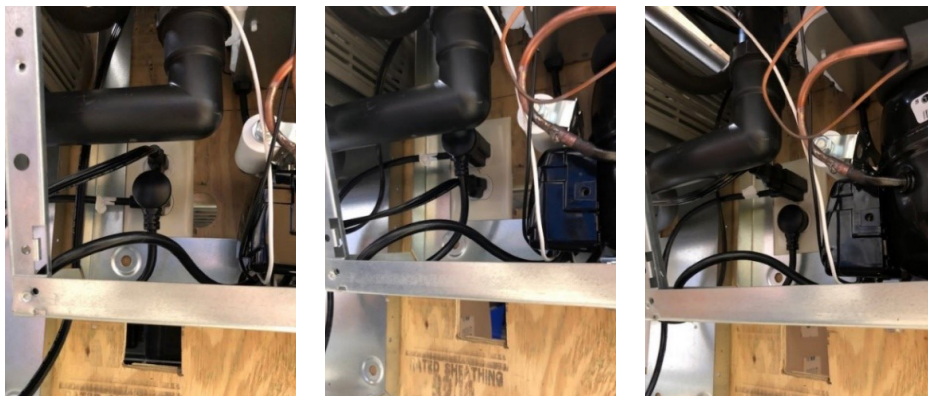


Fig. 30

ITEM NO.	PART NO.	DESCRIPTION	DESCRIPCIÓN	DESCRIPTION
1	28401C	Hanger Bracket	Soporte Colgante	Support de Suspension
2A	55001109	Basin - Stainless Steel	Estanque - Acero Inoxidable	Basin - Inox
2B	0000001337	Basin - Stainless Steel (BF)	Estanque - Acero Inoxidable (BF)	Basin - Inox (BF)
3	36216C	Wiring - Front/Side PushBar	Barra de Empuje de Cableado-Frontal/Lateral	Barre Anti-Panique Câblage Avant/Côté
*4	36322C	Compr - Service Pak 115V	Compresor Paquete de Servicio 115V	Kit d'Entretien du Compresseur
5	56092C	Tube - Poly (Cut To Length)	Tubo - Poli (Corte a la longitud)	Tube - Polyéthylène (Couper à la longueur)
6	56229C	Assy - Shroud - Upper (Front Side Push)	Cubierta - Superior (Frontal Lateral Presión)	Enveloppe de Protection - Supérieure (Face Laterel)
7	66703C	Drier	Secador	Poussoir) Déshydrateur
8A	98900C	Kit - Drain Replacement EZTL8 (Brkt, Tube, Flg, Clamp)	Kit - Reemplazo de Drenaje (EZTL8)/Soporte/Tubo/ Guarnición de Tubo/Abrazadera	Kit - Remplacement de Drain (EZTL)/Support/Tube/ Raccord de Tube/Bride Pour Tuyau
8B	97969C	Kit - Drain Replacement EZTLD (BF) (Brkt, Tube, Flg, Clamp)	Kit - Reemplazo de Drenaje (EZTLD)/Soporte/Tubo/ Guarnición de Tubo/Abrazadera	Kit - Remplacement de Drain (EZTLD)/Support/Tube/ Raccord de Tube/Bride Pour Tuyau
9	55996C	In-Line Strainer	En Line Strainer	Filtre à eau en ligne
10	1000004572	Kit - Solenoid Valve/Regulator Assy	Kit - Montaje del Regulador/Válvula Solenoide	Kit - Solénoide de la Vanne/Régulateur
11	56073C	Kit - Flexi Bubbler/O'-Ring/Nut	Kit - Flexi Borbotador/Oring/Teurca	Kit - Flexi Barboteur/Oring/Noix
12	98734C	Kit - Pushbar (Front/Side) EZSTL	Kit - Manillar (Frontal/Lateral) EZSTL	Kit - Barre de Poussée (Avant/Côté) EZSTL
	1000001600	Kit - Pushbar (Front) EZTL	Kit - Manillar (Frontal) EZSTL	Kit - Barre de Poussée (Avant) EZSTL
13	98773C	Kit - Cold Control/Screws	Kit - Control del Enfriamiento/Tornillo	Kit - Contrôle de Refroidissement/Vis
14	98774C	Kit - Internal Wiring/Pwr Cord/Black and White Jumper Wires	Kit - Cableado Interno/Cable/ Negro Y Blanco Puente	Kit - Câblage Interne/Câble d'Alimentation/Noir et Fils de Raccordement Blanc
15	98775C	Kit - Fan Motor Assy/Blade/Mtr/ Shroud/Screws/Nut	Kit - Ventilador Motor Montaje/Hoja/Motor/ Cubierta/Tornillos/Tuerca	Kit - Ventilateur Moteur Assemblée/Lame/Moteur/ Cache/Vis/Ecrou
16	98776C	Kit - Condenser/Drier	Kit - Condensador/Secador	Kit - Condenseur/Séchoir
17	98777C	Kit- Compr Mtg Hdwe/Grommets/ Clips/Studs	Kit - Matériel de Montaje Compresor/Ojal/ Pinza/Taguete	Kit - Montage du Compresseur materiel/Joint d'étanchéité/Clip/Goujon
18	98778C	Kit - Heat/Drier	Kit - Intercambiador Térmico/Secador	Kit - Echangeur Thermique/Déshydrateur
19	98898C	Kit - Hardware (EZ)	Kit - Juego de Accesorios (EZ)	Kit - De Visserie (EZ)
20	0000000238	Kit - Relay/Overload/Cover	Kit - Relé/Sobrecarga/Cubierta	Kit - Relais/Surcharge/Relais Coiffe
21	98724C	Kit - Evaporator Assembly	Montaje del Kit-Evaporador	Assemblée de L'évaporateur en Kit
22	1000002062	Kit - Tee 1/4" x 1/4" x 3/8" (3 Pack)	Kit - Tee 1/4" x 1/4" x 3/8" (Paquete de 3)	Kit - Tee 1/4" x 1/4" x 3/8" (Pack de 3)
23	1000001602	Kit - 75583C Elbow 5/16" x 1/4" (3 Pack)	Kit - 75583C Elbow 5/16" x 1/4" (Paquete de 3)	Kit - 75583C Elbow 5/16" x 1/4" (Pack de 3)
24	97446C	Kit - Vandal Resistant Bubbler (VR)	Kit - Vandal Resistente pelele (VR)	Kit - Vandal barboteur résistant (VR)
25	1000001994	Kit - 70682C 1/4" Tee (3 Pack)	Kit - 70682C 1/4" Tee (paquete de 3)	Kit - 70682C 1/4" Tee (Pack de 3)
26	1000001812	Kit - Bottle Filler Drain	Kit - de Drenaje de Llenada de la Botella	Kit - de Remplissage de Bouteille de Vidange
27	1000004447	Wasteline Drain Assy	Malgaste la Asamblea de la Linea EZTL(R)	Gaspiiller TL (R) d'Assemblée de Ligne
28	1000006146	Power Cord Non-Refrigerated	Cable eléctrico L/R	Cordon d'Alimentation L/R
	36287C	Power Cord EZTL8	Cable eléctrico EZTL8	Cordon d'Alimentation EZTL8
29	1000004564	Kit - Regulator w/Holder & Nut	Kit - regulador con soporte y la tuerca	Kit - régulateur avec support et écrou
30	0000001339	Ferrule-Drain (Bottle Filler)	Férula-Drenaje (Llenadora de botellas)	Virole-Drain (remplisseur de bouteille)
NS	1000000888	Kit - EZTL Wrapper/Serv Label - Stainless (R)	Kit - envoltura de acero inoxidable (R)	Enveloppe extérieure kit-inox (R)
	1000000944	Kit - EZTL Wrapper/Serv Label - Light Grey (R)	Kit de luz gris envoltura (R)	Kit-gris de Cape extérieure (R)
NS	1000000758	Kit - EZTLD Wrapper/Serv Label - Stainless (L)	Envoltura exterior kit-acero inoxidable sin rejillas (L)	Acier inoxydable-kit Cape extérieure sans persiennes (L)
	1000000759	Kit - EZTLD Wrapper/Serv Label - Light Grey (L)	Gris luz kit envoltura exterior sin rejillas (L)	Enveloppe extérieure kit-gris sans persiennes (L)

NS = NOT SHOWN

***INCLUDES RELAY & OVERLOAD. IF UNDER WARRANTY, REPLACE WITH SAME COMPRESSOR USED IN ORIGINAL ASSEMBLY.**

NOTE: All correspondence pertaining to any of the above water coolers or orders for repair parts MUST include Model No. and Serial No. of cooler, name and part number of replacement part.

***INCLUYE RELÉ Y SOBRECARGA. SI ESTÁ BAJO GARANTÍA, REEMPLACE CON EL MISMO COMPRESOR USADO EN EL ENSAMBLADO INICIAL.**

NOTA: Toda la correspondencia relacionada con el enfriador de agua anterior o con una orden de reparación piezas DEBERÁ incluir el número de modelo y número de serie del enfriador, el nombre y número de pieza de la pieza de repuesto.

***COMPRED RELAIS ET SURCHARGE. SI SOUS GARANTIE, REMPLACEZ AVEC LE MÊME SURPRESSEUR QUE CELUI UTILISÉ ORIGINALEMENT.**

NOTE: Toute correspondance au sujet des refroidisseurs d'eau courante ou toute commande de pièce de rechange DOIT inclure le numéro de modèle et le numéro de série du refroidisseur ainsi que le nom et le numéro de pièce à remplacer.

BOTTLE FILLER REPLACEMENT PART KITS

ITEM NO.	PART NO.	DESCRIPTION	DESCRIPCIÓN	DESCRIPTION
NS	98543C	Kit - Electrical Package 115V	Paquete Kit - Eléctrico 115V	Forfait Kit - Electrique 115V
NS	98631C	Kit - Electrical Package 220V	Paquete Kit - Eléctrico 220V	Forfait Kit - Electrique 220V
NS	98544C	Kit - IR Sensor	Sensor Kit - IR	Kit - Rcepteur IR
NS	1000004573	Kit - BF Solenoid Valve Replacement 115V	Reemplazo de la Válvula de Solenoide Kit 115V	Remplacement de la Valve Solénoide - Kit 115V
NS	1000004574	Kit - BF Solenoid Valve Replacement 220V	Reemplazo de la Válvula de Solenoide Kit 220V	Remplacement de la Valve Solénoide - Kit 220V
NS	98546C	Kit - Aerator Replacement	Reemplazo Kit - Aireador	Remplacement du Kit - Aérateur
31	98547C	Kit - Top Cover Replacement	Kit - Tapa Cubierta Reemplazo	Remplacement du Kit - Top Couvercle
32	98549C	Kit - Hardware & Waterway Parts	Piezas del Kit - De Hardware y Por Vía Navegable	Pièces Kit - Matériel et Voie Navigable
NS	98551C	Kit - Filter Mounting Cover	Cubierta del Filtro de Kit - De Montaje	Couvercle de Filtre - Kit Montage
NS	98552C	Kit - Retro Filter Mounting	Montaje de Filtro Kit - Retro	Montage de Retro - Kit Filtre
NS	1000001813	Kit - Tower/Basin Gasket	Kit - Torre/Cuenca Junta	Kit - Tour/Collecteur

NS = NOT SHOWN

FOR PARTS, CONTACT YOUR LOCAL DISTRIBUTOR OR CALL 1.800.834.4816
PARA PIEZAS, CONTACTE A SU DISTRIBUIDOR LOCAL O LLAME AL 1.800.834.4816
POUR OBTENIR DES PIÈCES, CONTACTEZ VOTRE DISTRIBUTEUR LOCAL OU COMPOSEZ LE 1.800.834.4816

REPAIR SERVICE INFORMATION TOLL FREE NUMBER 1.800.260.6640
NÚMERO GRATIS DE SERVICIO 1.800.260.6640
INFORMATIONS POUR LE SERVICE PAR NUMERO SANS FRAIS 1.800.260.6640

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ELKAY MANUFACTURING COMPANY • 1333 BUTTERFIELD ROAD • DOWNERS GROVE, IL 60515 • 630.574.8484 • www.elkay.com



Elkay Residential Stainless Sinks Limited Warranty

Elkay warrants to the original purchaser of an Elkay stainless steel sink that Elkay will, at its option, replace or repair, without charge, such product if it fails due to a manufacturing defect during normal residential use during the first year from the date of purchase. Product replacement does not include transportation cost or labor installation cost. This warranty covers only stainless steel self-rimming drop-in sinks installed in a conventional countertop surface and stainless steel undermount sinks installed in a conventional solid surface countertop and applies to residential installations only. Elkay reserves the right to examine product in question and its installation prior to replacement.

Waste fittings and accessories are warranted for 1 year from the date of purchase.

Other Warranty Conditions on Sinks

Our warranty does not cover product failure or damage caused by the use of optional accessories, abusive treatment, misuse, environmental factors, normal wear including dents and scratches, improper care and cleaning, use of aggressive and abrasive cleaners, damage due to handling or failure to follow the recommended procedures for installation, care and maintenance as detailed in the installation and care guide provided with every sink. This warranty is extended only to the original consumer purchaser of the product.

This warranty does not cover shipping costs, labor costs, or any other charges for such items as installation or replacement of the sink, diagnosis or replacement of any faucet or component part, or any other expense or loss. This warranty does not cover obsolete, discontinued nor display products, whether such items are purchased at discount outlets and/or online or sold on clearance or close out.

All incidental or consequential damages are specifically excluded. No additional warranties, express or implied are given, including but not limited to, any implied warranty of merchantability or fitness for a particular purpose.

Some states do not allow the exclusion or limitation of incidental or consequential damages or limitations on how long an implied warranty lasts, so the above limitations or exclusions may not apply to you.

This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

The above protection will continue for 1 year.

To Obtain Service Under Warranty

1. Write to: Elkay Manufacturing Company
Attention: Consumer Care
1333 Butterfield Road, Suite 200
Downers Grove, Illinois 60515
2. Include a letter containing the following information:
 - a. Date of purchase and installation.
 - b. Proof of Purchase (copy of original dated invoice)
 - c. Description of nature of defect.
 - d. Model number or description of model and/or component part if possible.

INSTALLATION INSTRUCTIONS

Molded Stone Mop Service Basin

Model: MSB2424 & MSB3624

FIATTM PRODUCTS

Thank you for selecting Fiat Products. To ensure this product is installed properly, please read these instructions carefully before you begin. (Certain installations may require professional help.) Also be sure your installation conforms to local codes.

IMPORTANT: Unpack your new mop service basin and inspect carefully for damage. Exercise care during installation. Rough handling or dropped tools may chip or crack material.

OBSERVE LOCAL PLUMBING AND BUILDING CODES

NOTE: Pictures may not exactly define contour of components

INSTALLATION PLANNING

Study all job prints, specifications, and instructions. Check the level and quality of sub floor.

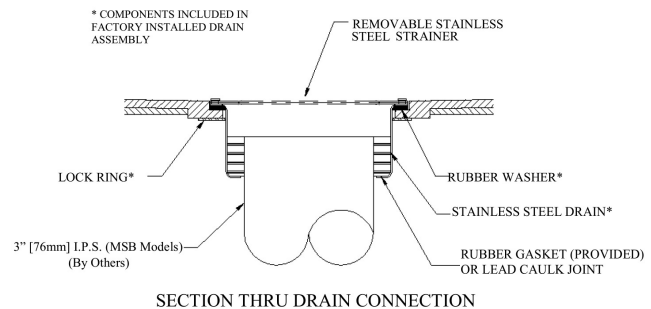
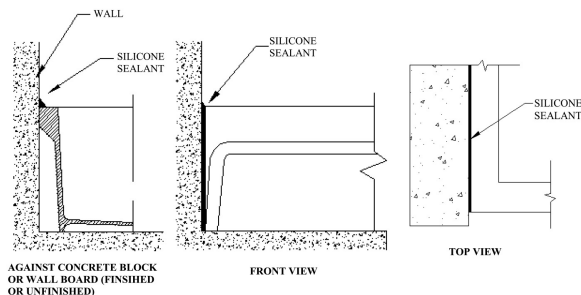
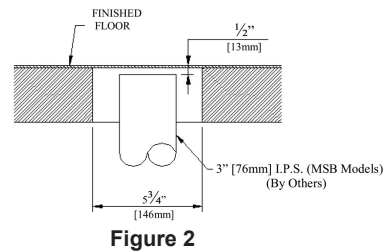
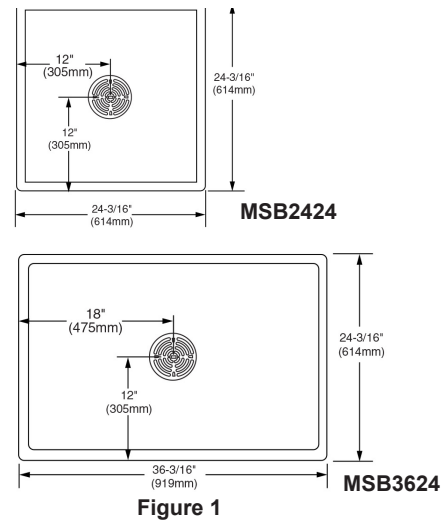
1

INSTALLATION INSTRUCTIONS

MSB MODEL CONTENTS:

- 1 - Mop Service Basin
- 1 - QDC 3XH

1. Refer to "Rough-In dimensions (See figure 1) and determine location of Mop Basin.
2. Prepare a 5-3/4" diameter opening in sub-floor with top of the 3" PVC drain pipe centered 1/2" below the floor surface (See figure 2).
3. Once the drain body is installed, set the mop basin in place and align the drain body with the drain pipe. Level basin and shim as necessary.
4. Connect the drain line to the mop basin with included QDC 3XH rubber gasket (See figure 3).
5. Once the mop basin is in place, apply silicone sealant (not included) at all points where mop basin meets the wall (See figure 4).
6. Do not install lint basket and strainer until room is ready for use.



MSB_IOM-A

MOP SERVICE BASIN CARE AND CLEANING

This mop basin has been specifically designed and engineered to exceed demanding strength and stress factors required for use. It is stain resistant, semi gloss finish. Like any fine finish, it requires reasonable care to maintain its beauty and luster.

Day-to-day cleaning: Wash with warm water, a soft cloth, and mild liquid detergent.

For stubborn stains: Use a Non-Abrasive, liquid detergent cleaner, applied using a soft cloth. More persistent stains, tar, or paint can be removed with naphtha or mineral spirits. Remove excess plaster by scraping with a sharpened soft wood stick. Avoid wire brushes, metal scrapers, or tools.

NEVER USE ABRASIVE SCOURING POWDERS, SOLVENT BASED CLEANSERS, OR SCOURING PADS AS THEY TEND TO DULL THE FINISH.

FIAT PRODUCTS, LLC. LIMITED ONE YEAR WARRANTY FOR PERSONAL RESIDENTIAL AND COMMERCIAL USE OF FIAT® PRODUCTS

WARRANTY COVERAGE

FIAT Products warrants products against defects in material and workmanship under both normal residential and commercial use for as long as it is owned by the original purchaser for a period of one (1) year from the date of first purchase.

This warranty is provided for the exclusive benefit of the initial consumer purchaser or owner. This warranty is non-transferable to subsequent purchasers or owners. The sole exception to the non-transferability of this warranty is that if this product is purchased by a plumber, contractor or other service provider, this warranty extends to the first residential or commercial property owner on whose behalf the product was purchased for installation. This warranty applies only to FIAT® Products installed in the United States of America or Canada.

If a defect arises and a valid claim is received, FIAT Products, at its option, will either (1) repair the product, (2) replace the product or any part therein with a FIAT product of equal or similar type and size, or (3) refund to the consumer the wholesale price of the product. If FIAT Products elects to refund the wholesale price to the consumer, FIAT Products shall have no further obligation to its wholesale customer, or any contractor with respect to such product. Goods proven to be defective will be replaced after proper inspection, but no claims for damages incurred or for work done thereon will be allowed. Replacements when supplied will be shipped at no cost to the consumer.

EXCLUSIONS AND LIMITATIONS

1. This warranty only applies to products purchased through an authorized FIAT® Products dealer or re-seller.
2. This warranty does not apply to defects or damage caused by non-genuine FIAT parts, installation error, product abuse, product misuse, improper maintenance, improper care or cleaning, improper repair or installation, and/or movement or transfer of the product from its original installation location (whether performed by you, a plumber, a contractor or a service company). Because improper care and cleaning can cause significant damage to the product, it is strongly recommended that you follow the Care and Cleaning Instructions (as well as the other instructions).
3. FIAT Products is not responsible for labor charges and/or damage incurred during installation, repair, or replacement.
4. FIAT Products does not warrant that this product and/or its installation complies with local code requirements. FIAT Products recommends that you consult with a plumbing contractor about local code requirements.

TO THE EXTENT PERMITTED BY LAW, THIS WARRANTY IS EXCLUSIVE AND IN LIEU OF ALL OTHER WARRANTIES, WHETHER ORAL OR WRITTEN, STATUTORY, EXPRESS, OR IMPLIED. FIAT PRODUCTS HEREBY EXCLUDES SPECIAL, INCIDENTAL AND CONSEQUENTIAL DAMAGES FOR ANY BREACH OF ANY EXPRESS OR IMPLIED WARRANTY APPLICABLE TO THIS PRODUCT.

Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitations and exclusions may not apply to you. This warranty gives you specific legal rights, and you may also have other rights which vary from state to state (or province, as applicable).

OBTAINING WARRANTY SERVICE

If you feel you have a warranty claim, contact FIAT Products, either through an authorized FIAT Products dealer or re-seller, or by writing:

In the United States and Canada:
FIAT Products, LLC
4515 E. 139th St.
Grandview, MO 64030

Please be sure to provide all pertinent information regarding your claim, including a complete description of the problem, the product, model number, color, finish, purchase date, and from whom the product was purchased.

For other information, call (833) 549-9244 (in the United States and Canada) or visit www.fiatproducts.com.



RELIABILITY BUILT IN™

Limited One Year Warranty (Commercial Applications)

T&S warrants to the original purchaser (other than for purposes of resale) that such product is free from defects in material and workmanship for a period of one (1) year from the date of purchase. During this one-year warranty period, if the product is found to be defective, T&S shall, at its options, repair and/or replace it. To obtain warranty service, products must be returned to...

*T&S Brass and Bronze Works, Inc.
Attn: Warranty Repair Department
2 Saddleback Cove
Travelers Rest, SC 29690*

Shipping, freight, insurance, and other transportation charges of the product to T&S and the return of repaired or replaced product to the purchaser are the responsibility of the purchaser. Repair and/or replacement shall be made within a reasonable time after receipt by T&S of the returned product. This warranty does not cover items which have received secondary finishing or have been altered or modified after purchase, or for defects caused by physical abuse to or misuse of the product, or shipment of the products.

Any express warranty not provided herein, and any remedy for Breach of Contract which might arise, is hereby excluded and disclaimed. Any implied warranties of merchantability or fitness for a particular purpose are limited to one year in duration. Under no circumstances shall T&S be liable for loss of use or any special consequential costs, expenses or damages.

Some states do not allow limitations on how long and implied warranty lasts or the exclusion or limitation of incidental or consequential damages, so the above limitations or exclusions may not apply to you. Specific rights under this warranty and other rights vary from state to state.

Attention California Residents:

⚠ WARNING This product can expose you to chemicals including Lead, Chromium (hexavalent compounds) and Phthalates (DEHP) which are known to the State of California to cause cancer and birth defects or other reproductive harm.

For more information go to
www.P65Warnings.ca.gov.

P/N: 098-009518-45 Rev.4

Date: 11-01-18

Drawn: TEH

Checked: JRM 12-19-18

Approved: JHB 02-14-19

Installation and Maintenance Instructions



Surgical Sink and Service Sink Faucets with Built-In Stops

ES

Español:

Instrucciones de instalación y mantenimiento

FR

Français:

Instructions pour l'installation et la maintenance

DE

Deutsch:

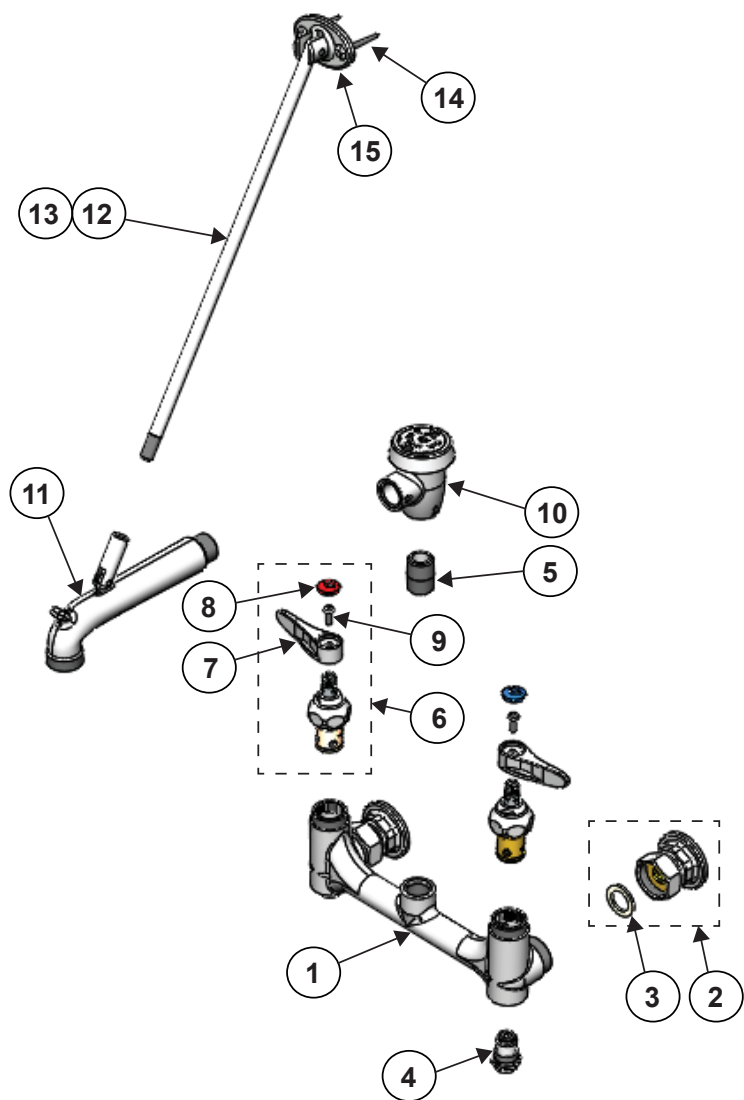
Installations- und Wartungsanleitungen

CN

中文:

安装与维护说明

Exploded View



Part Number Guide

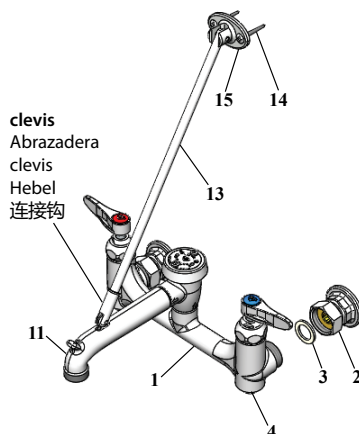
Service Sink Faucet Assemblies

1	Body, Faucet	N/A
2	Asm, Flange Coupling	00AA
3	Washer, Coupling Flange	001019-45
4	Asm, BST Spindle & Insert	163A
5	Nipple, Close 1/2 HWL	002534-25
6	Asm, Eterna w/ Spring Checks & Handle (Cold)	002711-40NS
	Asm, Eterna w/ Spring Checks & Handle (Hot)	002712-40NS
7	Handle, Lever (Blank)	001638-45NS
8	Index, Button (Red / Hot)	001193-19NS
	Index, Button (Blue / Cold)	018506-19NS
9	Screw, Handle	000925-45
10	Asm, Vacuum Breaker, 1/2"	B-0969
11	Spout (BSTR)	009545-25
	Spout (BSTP)	009545-40
12	Asm, Upper Nozzle Support	009546-40
13	Rod, Support	005060-40
14	Screw, Wall Mount (1 each)	000915-45
15	Flange	003007-40

- EN** *Note: This is a general instructional example of units using -BST. Nozzles should be installed on unit first.*
- ES** *Nota: Esto es un ejemplo general instruccional de unidades que utilizan - BST. (Interceptor Incorporado.) Primero se debe de instalar las boquillas.*
- FR** *Celui-ci être un exemple générale et instructif des élément s qui utiliser BST Les ajutages devoir être installer au début.*
- DE** *Anmerkung: Die ist ein allgemeines Installationsbeispiel für Armaturen, die BST verwenden. Düsen sollten zuerst auf die Einheit installiert werden.*
- CN** *注意：这是-BST系列的常规说明样例。首先应将水嘴安装在装置上。*

EN Faucet Installation:

1. Shut off water supply and drain lines. Drill (2) two 7/8" [2.2 cm] holes in wall or backsplash of sink, 8" [20 cm] center to center, where you are installing no.1.
2. Apply teflon tape or pipe joint compound to threads of water supply lines.
3. Remove no.2 from no.1 and attach no.2 to water supply lines flush against wall. Tighten by hand. *Trim supply lines if necessary.*
4. Attach no.1 to no.2, adjusting center to center fit by turning no.2 if needed. *Make sure no.3 remains in place.* Tighten no.2 firmly with a wrench.
5. Turn on water supply and check for leaks.



Upper Nozzle Support Installation:

6. Attach no.13 to no.11 by screwing no.13 into **clevis** on no.11.
7. Position no.15 against wall. Mark holes and secure no.15 to wall using no.14.

ES Instalación De La Canilla:

1. Cierre la fuente de agua y desagüe las tuberías. Perfore (2) dos huecos de 2 cm en la pared o el espaldar del lavatorio, con 20 cm de centro a centro donde la parte No.1 será instalada.
2. Aplique cinta de Teflon o compuesto de coyuntura a las roscas de las líneas de surtido.
3. Remuévala la parte No.2 de la parte No.1 y conecte la parte No.2 a las líneas de surtido pareja con la pared. Apreté a mano. *Si es necesario recorte las líneas de surtido.*
4. Conecte la parte No.1 a la parte No.2, ajustando la medida de centro a centro girando la parte No.2 si es necesario. *Asegúrese que la parte No.3 permanezca situada.* Con una llave aprete firmemente la parte No.2.
5. Abra el surtido de agua e inspeccione por filtraciones.

Instalación De Soporte Superior:

6. Conecte la parte No.13 a la parte No.11 atornillando la parte No.13 dentro de la abrazadera en la parte No.11.
7. Coloque la parte No.15 contra la pared. Señale los huecos y asegure la parte No.15 a la pared usando la parte No.14.

FR L'Installation du Robinet:

1. Fermer la réserve de l'eau et égoutter la tuyauterie. Percer (2) deux trous de 2.2cm dans le mur ou le garde-boue de l'évier 20cm de centre à centre où vous aller installer N°1.

2. Appliquer le ruban en Téflon ou le composé pour les tuyaux aux tuyaux qui fournir l'eau.
3. Enlever N° 2 de N°1 et attacher N°2 aux tuyaux qui fournir l'eau au même niveau du mur. Resserrer par le main. **Couper les tuyaux qui fournir l'eau si nécessaire.**
4. Attacher N°1 à N°2, en réglant l'ajustement centre à centre en tournant N°2 si nécessaire. **Soyez certain que N°3 rester à sa place.** Resserrer N°2 fermement avec une clef anglaise.
5. Recommencer l'eau et vérifier s'il y a des fuites.

L'Installation du Support de L'Ajutage en Haut:

6. Attacher N°13 à N°11 en vissant N°13 dans le clevis sur N°11.
7. Mettre N°15 contre le mur. Marquer les trous et attacher N°15 au mur en utilisant N°14.



Einbau des Wasserhahns:

1. Den Wasserzulauf schließen und die Leitungen leeren. Zwei 2 cm Löcher in die Wand oder die Rückwand der Spüle - je nachdem, wo Nr. 1 installiert werden soll - mit einem Mittenabstand von 20 cm bohren.
2. Für die Gewinde der Wasserzuleitungen Teflonband oder Rohrdichtungsmasse verwenden.
3. Nr. 2 von Nr. 1 entfernen und Nr. 2 bündig zur Wand auf die Wasserzulaufleitungen aufdrehen. Mit der Hand festziehen. **Zulaufleitungen bei Bedarf kürzen.**
4. Nr. 1 an Nr. 2 befestigen, wobei auf mittigen Sitz zu achten ist und bei Bedarf Nr. 2 gedreht werden kann. **Sicherstellen, daß Nr.3 an Ort und Stelle verbleibt!** Nr. 2 mit einem Schrauben schlüssel festdrehen.
5. Wasserzulauf andrehen und auf Dichtigkeit überprüfen.

Einbau des oberen Schwenkarms:

6. Nr. 13 an Nr. 11 befestigen, indem Nr. 13 an dem Hebel auf Nr. 11 angeschraubt wird.
7. Nr. 15 an der Wand in Position bringen. Löcher markieren und Nr. 15 mit Hilfe von Nr. 14 an der Wand sichern.



龙头的安装:

1. 关闭供水和排水管道。在墙面或者水槽的防溅挡板上面钻 (2) 两个7/8" [2.2cm]的孔, 中心距为8" [20cm], 在孔上安装1号。
2. 在供水管道的螺纹上缠上胶带或涂上管道胶合剂。
3. 将2号从1号上拆下, 把2号平对着墙装在供水管道上, 用手拧紧。根据实际情况修整供水管道。
4. 把1号装到2号上, 可根据需求旋转2号来调整中心距。请务必确保3号在准确的位置。用扳手将2号牢牢拧紧。
5. 打开供水开关, 检查是否漏水。

水嘴上方支架安装:

6. 把13号拧到11号上的连接钩上。
7. 将15号靠墙放好, 并做好记号, 用14号把15号固定在墙上。



Adjusting Built-in Stops:

Insert a screwdriver to adjust no.4 at the base of no.1 on each side. **Water should be turned on for this procedure.**

Close Stop turn clockwise

Detenedor **cerrado** gire a la derecha
Fermer l'arrêt tourner dans le sens des
aiguilles d'une montre

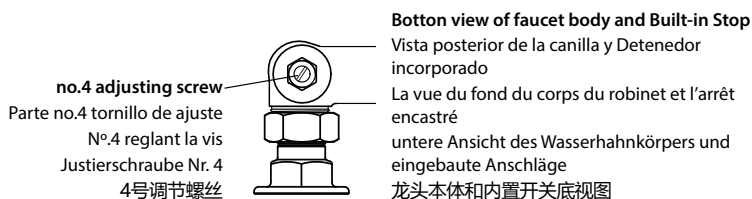
Anschlag für Geschlossen:
im Uhrzeigersinn drehen
顺时针方向关闭开关



Open Stop turn counterclockwise

Detenedor **Abierto** gire a la izquierda
Ouvrir l'arrêt tourner dans le sens
inverse des aiguilles d'une montre

Anschlag für Offen:
gegen den Uhrzeigersinn drehen
逆时针方向打开开关



ES Ajuste De Los Detenedores Incorporados:

Para ajustar la parte No.4 insarte un destornillador por debajo de la parte No.1 en ambos lados. *El agua debe estar abierta para este proceso.*

FR La Réglage des Arrêts Encastrés:

Insérer un tournevis pour régler N°4 à la base de N°1 sur chaque côté. *On devoir déjà recommencer l'eau pour ce processus.*

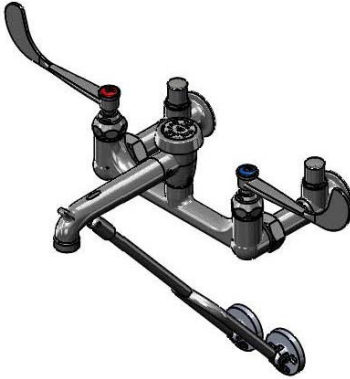
DE Eingebaute Anschläge justieren:

Mit einem Schraubenzieher die Nr. 4 an dem Fuß von der Nr. 1 auf beiden Seiten justieren. *Das Wasser sollte hierfür aufgedreht werden.*

CN 调整内置开关:

可用螺丝刀调整1号的两侧底部的4号来控制水流大小。在这一步骤中，需要打开供水。

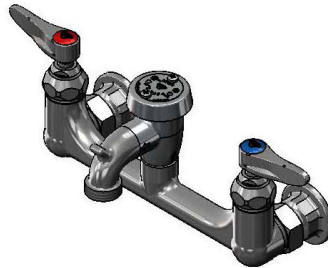
RELATED T&S BRASS PRODUCT LINE



B-0657

Service Sink /
Mop Sink Faucet

B-0674-RGH
Service Sink /
Mop Sink Faucet



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Fax: (864) 834-3518

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Model No.

B-0665-BSTR

Item No.

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ADA Compliant

This Space for Architect/Engineer Approval

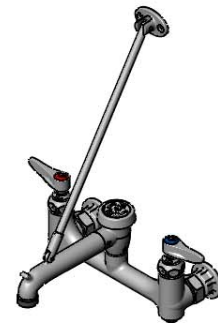
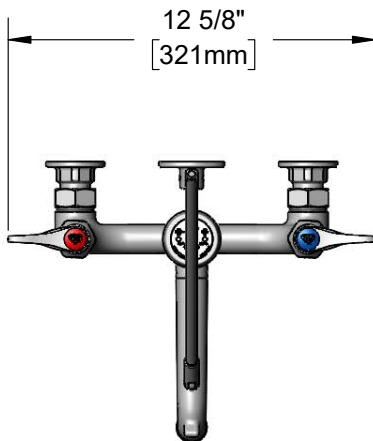
Job Name _____ Date _____

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 Checks &
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, Garden Hose Male Outlet, Built-In Service Stops, Rough 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)

Drawn: KJG Checked: JRM Approved: JHB Date: 11/19/19 Scale: 1:6 Sheet: 1 of 2



T&S BRASS AND BRONZE WORKS, INC.

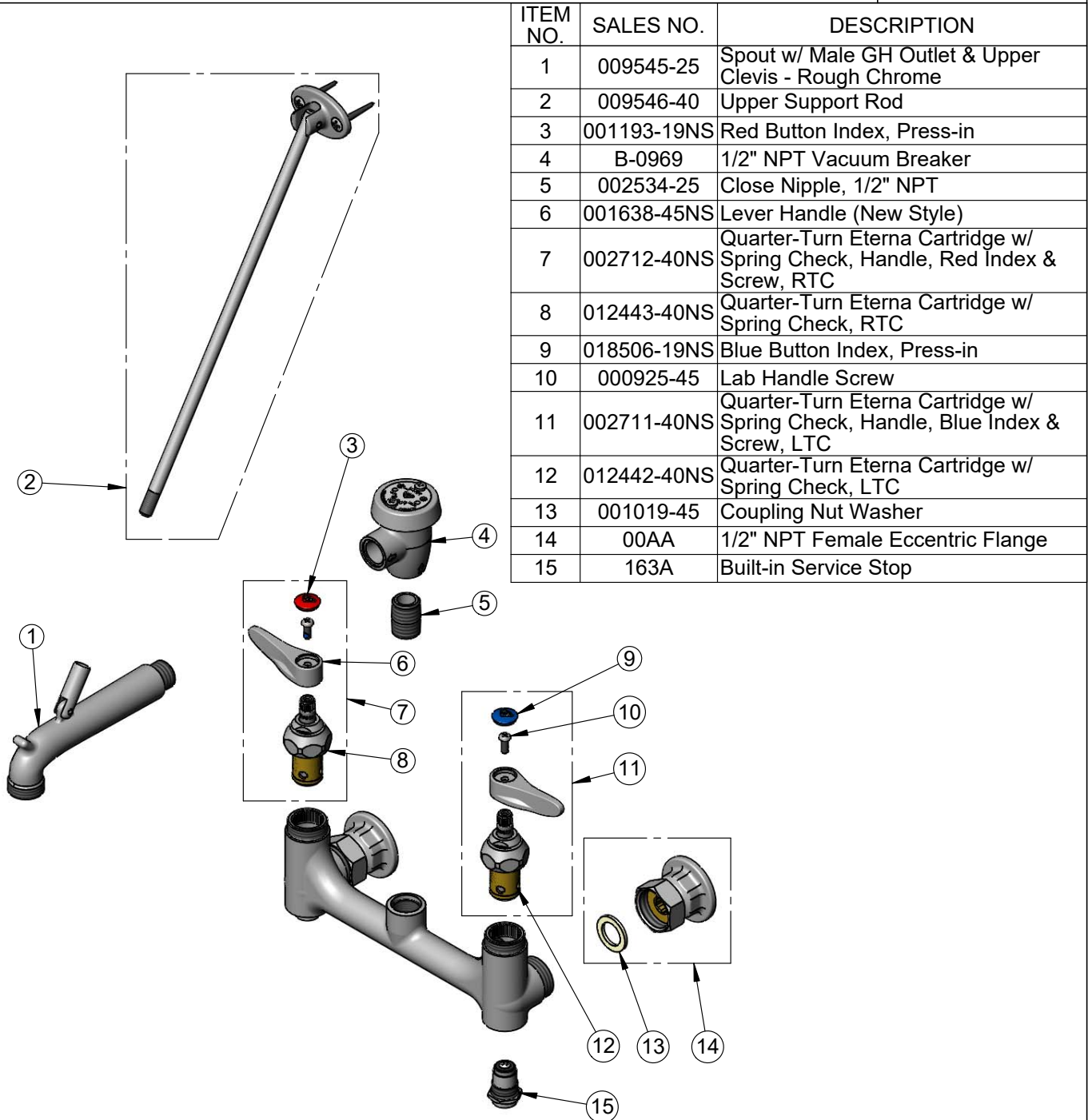
2 Saddleback Cove / P.O. Box 1088
Travelers Rest, SC 29690

Model No.

B-0665-BSTR

Item No.

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



Product Specifications:

8" Wall Mount Service Sink, Quarter-Turn Eterna Cartridges w/ Spring Checks, Lever Handles, Upper Support Rod, Garden Hose Male Outlet, Built-In Service Stops, Rough 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)

Drawn: KJG Checked: JRM Approved: JHB Date: 11/19/19 Scale: NTS Sheet: 2 of 2

Limited Warranty

READ THIS LIMITED WARRANTY BEFORE INSTALLING OR USING THIS PRODUCT. IF THESE TERMS ARE NOT ACCEPTABLE TO YOU, IMMEDIATELY RETURN THIS PRODUCT TO T&S BRASS AND BRONZE WORKS, INC. BEFORE INSTALLING AND/OR USING THIS PRODUCT.

T&S Brass and Bronze Works, Inc. (T&S) warrants to the original purchaser of this product that such product is free from defects in workmanship and materials for the period specified in the chart below beside the product description from the original date of purchase.

Product Description	Warranty Period
T&S EasyInstall pre-rinse units	3 years
T&S DuraPull pre-rinse units	7 years
T&S ChekPoint and WaveCrest sensor faucets & accessories	3 years
T&S Hose reels (except B-7161-C hose reel & B-7245 creamery hose reel)	2 years
T&S Hose reel blue hose	1 year
T&S Modular waste drain valve	Lifetime
T&S Cerama ceramic cartridges	Lifetime
T&S Single lever faucet ceramic cartridges	2 years
T&S Flexible stainless steel hose (B-0044-H, etc.)	3 years
T&S Reinforced PVC flex hoses without stainless steel covering (All B-0044-R, etc. models)	2 years
T&S Safe-T-Link gas & water hose connectors	5 years
T&S EverSteel pre-rinse units & faucets	Lifetime
Equip hose reel hose	1 year
All other products (including all equip products)	1 year

During the applicable warranty period, if this product is found to be defective, T&S shall, at its option, repair and/or replace it. To obtain warranty service, products must be returned to T&S Brass and Bronze Works, Inc., 2 Saddleback Cove, Travelers Rest, South Carolina, 29690, clearly marked to the attention of the Warranty Repair Department. Shipping, freight, insurance, and other transportation charges of the returned product to T&S and the return of the repaired or replaced product to the purchaser are the responsibility of the purchaser. Replacement and/or repair under this warranty shall be made within a reasonable time after receipt by T&S of the returned product and T&S' verification of the defect. T&S is not responsible for removal, installation, labor charges, or other incidental or consequential costs.

This warranty does not cover this product (i) if it has received secondary finishing or has been altered or modified after purchase, (ii) for defects caused by physical abuse to or misuse of the product or use with corrosive materials, (iii) for damage or harm occurring in the shipment of the product, (iv) for damage or harm occurring due to environmental conditions, including but not limited to water quality and impurities, or (v) for damages arising from wear to or the failure of replaceable components, including those made out of rubber or plastic. This warranty is provided to the original purchaser only and may not be assigned or transferred by the original purchaser of the product, other than when purchased for resale, in which case the reselling original purchaser may assign the warranty to the purchaser from the reseller who shall be deemed the original purchaser under this limited warranty, but the warranty may not be assigned thereafter.

ANY EXPRESS WARRANTY NOT PROVIDED HEREIN AND ANY REMEDY FOR BREACH OF CONTRACT WHICH BUT FOR THIS PROVISION MIGHT ARISE BY IMPLICATION OR OPERATION OF LAW, IS HEREBY EXCLUDED AND DISCLAIMED.

ANY IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE ARE LIMITED IN DURATION TO THE WARRANTY PERIOD PROVIDED ON THE PRODUCT.

UNDER NO CIRCUMSTANCES SHALL T&S BE LIABLE TO PURCHASER OR ANY OTHER PERSON FOR ANY LOSS OF USE OF THE PRODUCT OR ANY SPECIAL OR CONSEQUENTIAL COSTS, EXPENSES OR DAMAGES WHETHER ARISING OUT OF BREACH OF WARRANTY, BREACH OF CONTRACT OR OTHERWISE INCURRED BY THE PURCHASER OR ANY OTHER USER.

SOME STATES DO NOT ALLOW LIMITATIONS ON HOW LONG AN IMPLIED WARRANTY LASTS OR THE EXCLUSION OR LIMITATION OF INCIDENTAL OR CONSEQUENTIAL DAMAGES SO THE ABOVE LIMITATIONS OR EXCLUSIONS MAY NOT APPLY TO YOU.

THIS WARRANTY GIVES YOU SPECIFIC RIGHTS AND YOU MAY ALSO HAVE OTHER RIGHTS WHICH VARY FROM STATE TO STATE.

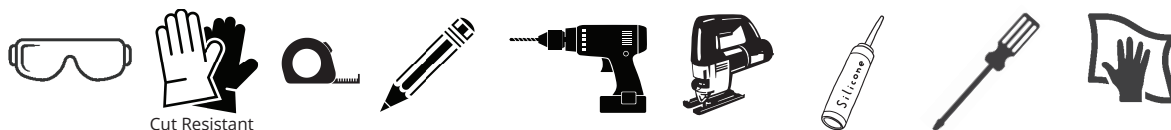


Installation Instructions: Drop-in Sinks

Attention Installer:

- Elkay recommends that drop-in sinks be installed by a professional, experienced installer.
- Elkay is not responsible for the sink or countertop if damaged during installation.
- Metal edges may be sharp. Use caution when handling.
- Follow all local plumbing and building codes.
- Inspect sink for damage prior to beginning installation.

Required Tools (not included)



Cut Resistant

Installation

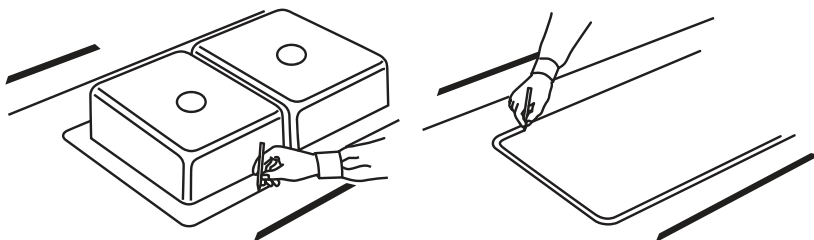


WARNING: Always wear safety goggles and gloves when using power tools or handling the sink to prevent personal injury.

- 1 Position the sink upside down on the countertop.

Trace a line around the edge of the sink.

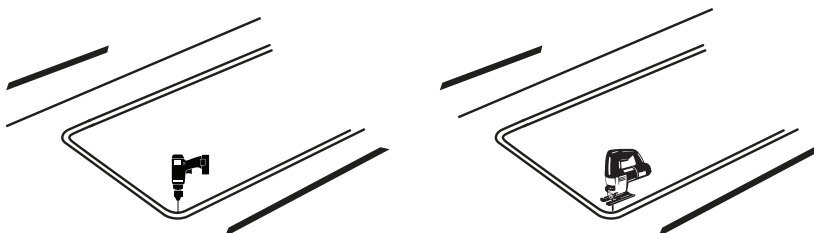
Draw a line 5/16" inside of the outline of the sink.



- 2 Drill a pilot hole in all four corners of the inside line.

Use a saber or jig saw to cut on the inside line.

Place a support underneath the cutout portion of the countertop to prevent it from falling during cutting.



- 3 Apply silicone caulk (not included) around the cutout in the countertop surface.

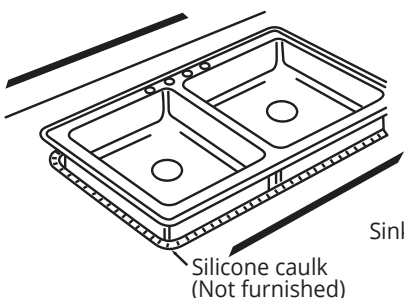
Carefully lower the sink into the cutout.

Assemble the clips and screws.

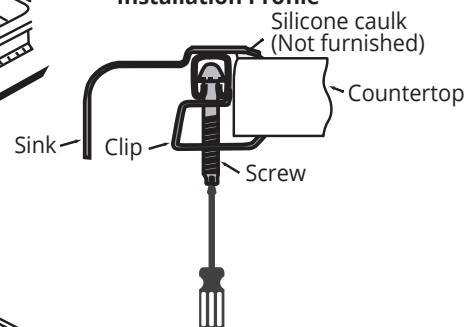
From the underside, place a clip in the center along each side and hand tighten to hold sink in place. Fasten the remaining clips along the edges and space them approximately 3" from each end, and equally along the front, back, and sides. For countertops thicker than 3/4", clips can be spaced as close as 1-1/2".

From the top, check the seal between the sink edge and countertop. Lightly tighten clips evenly with a screwdriver until the sink is tight to the countertop. Do not over tighten.

Wipe away any excess caulk with a rag.



Installation Profile





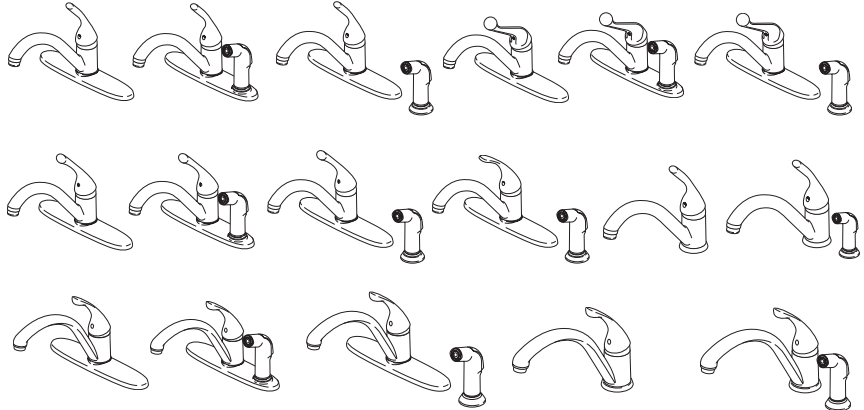
see what Delta can do™

75106

SINGLE HANDLE KITCHEN FAUCET
LLAVE DE COCINA DE PALANCA
ROBINET DE CUISINE À UNE MANETTE

Models/Modelos/Modèles
 100-DST, 101-DST, 140-DST,
 141-DST, 175-DST, 300-DST,
 340-DST, 400-DST, 440-DST &
 441-DST Series/Series/Seria

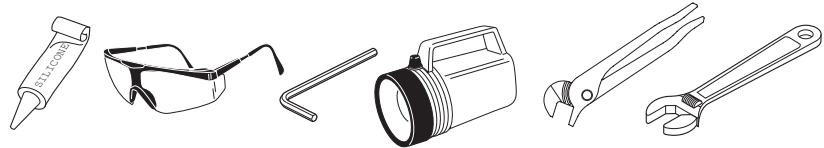
Write purchased model number here.
 Escriba aquí el número del modelo comprado.
 Inscrivez le numéro de modèle ici.



**For easy installation of your
 Delta faucet you will need:**

- To **READ ALL** the instructions completely before beginning.
- To **READ ALL** warnings, care, and maintenance information.

**You may need/Usted puede necesitar/
 Articles dont vous pouvez avoir besoin:**

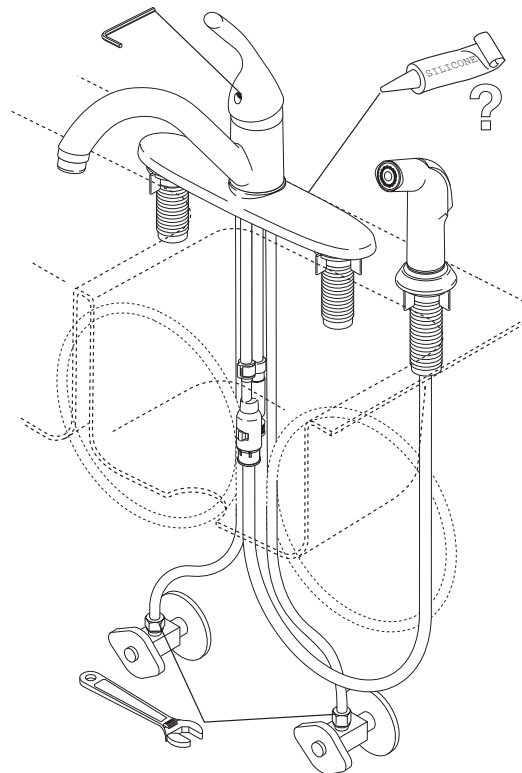


**Para instalación fácil de su llave
 Delta usted necesitará:**

- **LEER TODAS** las instrucciones completamente antes de empezar.
- **LEER TODOS** los avisos, cuidados, e información de mantenimiento.

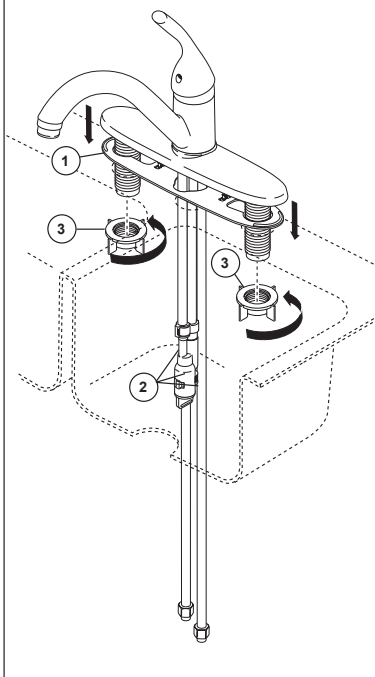
**Pour installer votre robinet
 Delta facilement, vous devez:**

- **LIRE TOUTES** les instructions avant de débiter;
- **LIRE TOUS** les avertissements ainsi que toutes les instructions de nettoyage et d'entretien;



1

100 & 140 Series / Seria



100 & 140 Series

SHUT OFF WATER SUPPLIES. Remove old faucet. Slide gasket (1) over tubes (2) and install onto bottom of faucet. **NOTE: If surface is uneven, use silicone sealant under the gasket.** Feed tubes down through center hole in sink. Secure faucet to sink with mounting nuts (3) supplied with your faucet. Continue to step 3.

100 y 140 Series

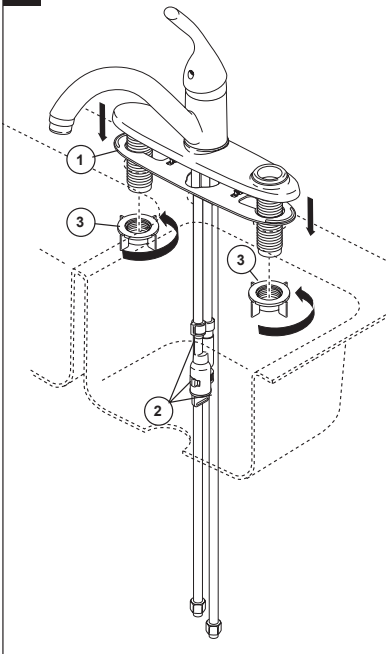
CIERRE LOS SUMINISTROS DE AGUA. Quite la llave vieja. Deslice el empaque (1) sobre los tubos (2) e instale en la parte inferior de la llave de agua. **NOTA: Si el lavamanos está desnivelado, use sellador de silicona debajo del empaque.** Deslice los tubos hacia abajo a través del agujero en el centro del fregadero. Fije la llave de agua con las tuercas de montaje (3) proporcionadas con su llave. Continúe con el paso 3.

100 et 140 Seria

INTERROMPEZ L'ALIMENTATION EN EAU. Déposez le vieux robinet. Glissez le joint (1) sur les tubes (2) et installez-le en dessous du robinet. **NOTE : Si l'évier est inégal, appliquez du composé d'étanchéité à la silicone sous le joint.** Introduisez les tubes dans le trou de montage de l'évier. Fixez le robinet à l'évier avec les écrous de montage (3) fournis. Passez à l'étape 3.

300 & 340 Series / Seria

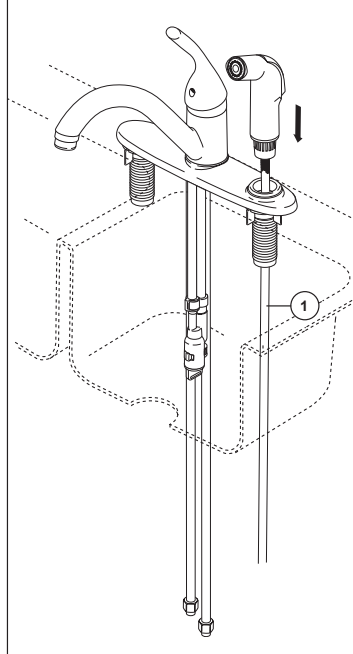
A.



300 & 340 Series

A. SHUT OFF WATER SUPPLIES. Remove old faucet. Slide gasket (1) over tubes (2) and install onto bottom of faucet. **NOTE: If surface is uneven, use silicone sealant under the gasket.** Feed tubes down through center hole in sink. Secure faucet to sink with mounting nuts (3) supplied with your faucet.

B.



B. Insert sprayer and hose (1) down through support assembly. Continue to step 2.

300 y 340 Series

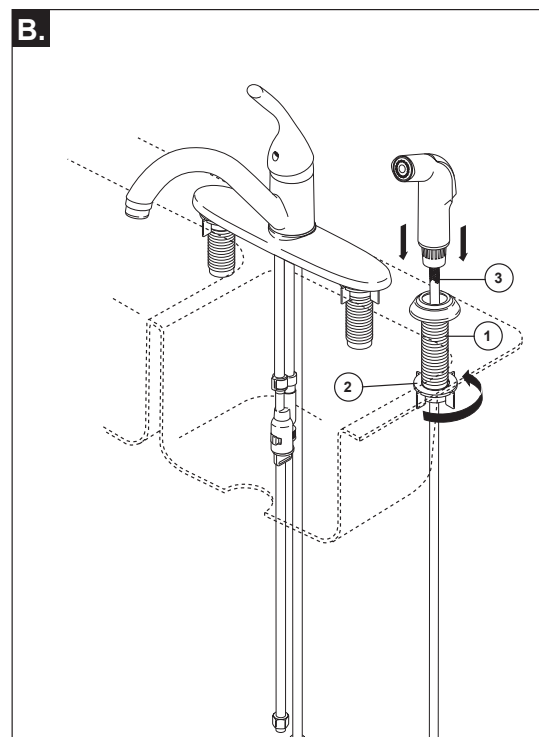
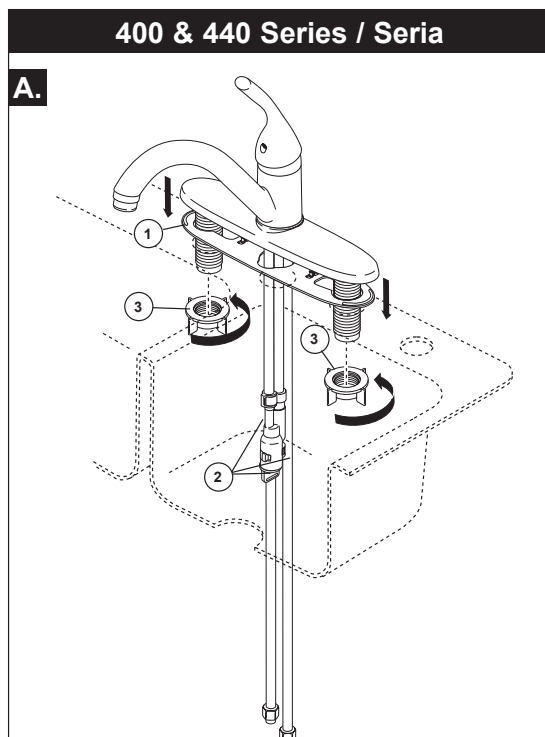
A. CIERRE LOS SUMINISTROS DE AGUA. Quite la llave vieja. Deslice el empaque (1) sobre los tubos (2) e instale en la parte inferior de la llave de agua. **NOTA: Si el lavamanos está desnivelado, use sellador de silicona debajo del empaque.** Deslice los tubos hacia abajo a través del agujero en el centro del fregadero. Fije la llave de agua con las tuercas de montaje (3) proporcionadas con su llave.

B. Introduzca la manguera del rociador (1) hacia abajo por el soporte. Continúe con el paso 2.

300 et 340 Seria

A. INTERROMPEZ L'ALIMENTATION EN EAU. Déposez le vieux robinet. Glissez le joint (1) sur les tubes (2) et installez-le en dessous du robinet. **NOTE : Si l'évier est inégal, appliquez du composé d'étanchéité à la silicone sous le joint.** Introduisez les tubes dans le trou de montage de l'évier. Fixez le robinet à l'évier avec les écrous de montage (3) fournis.

B. Par le haut, introduisez le tuyau de douche (1) dans le support. Passez à l'étape 2.



400 & 440 Series

- A.** **SHUT OFF WATER SUPPLIES.** Remove old faucet. Slide gasket (1) over tubes (2) and install onto bottom of faucet. **NOTE: If sink is uneven, use silicone sealant under the gasket.** Feed tubes down through mounting hole in sink. Secure faucet to sink with mounting nuts (3) supplied with your faucet.

- B.** **Note: If you prefer not to use side sprayer, skip this step and move to page 8.**

Mount the spray support (1) in far right hole in sink. Hand tighten nut (2). Insert sprayer and hose (3) down through support assembly. Continue to step 2.

400 y 440 Series

- A.** **CIERRE LOS SUMINISTROS DE AGUA.** Quite la llave vieja. Deslice el empaque (1) sobre los tubos (2) e instale en la parte inferior de la llave. **NOTA: Si el lavamanos está desnivelado, use sellador de silicón debajo del empaque.** Deslice los tubos hacia abajo a través del orificio de montaje en el fregadero. Fije la llave de agua con las tuercas de montaje (3) proporcionada con su llave de agua / grifo.

- B.** **Nota: Si prefiere no usar el rociador lateral, omita este paso y siga a la página 8.**

Instale el ensamble del soporte del rociador (1) en el hoyo más lejano al extremo de la derecha. Apriete a mano la tuerca (2). Introduzca la manguera del rociador (3) hacia abajo a través del ensamble del soporte. Continúe con el paso 2.

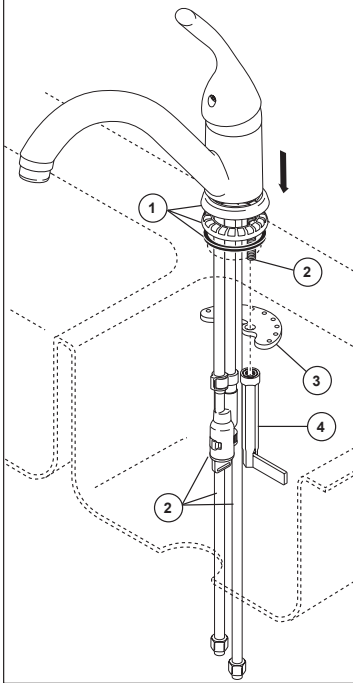
400 et 440 Seria

- A.** **INTERROMPEZ L'ALIMENTATION EN EAU.** Déposez le vieux robinet. Glissez le joint (1) sur les tubes (2) et installez-le en dessous du robinet. **NOTE : Si l'évier est inégal, appliquez du composé d'étanchéité à la silicone sous le joint.** Introduisez les tubes dans le trou de montage de l'évier. Fixez le robinet à l'évier avec les écrous de montage (3) fournis.

- B.** **Note : Si vous préférez ne pas utiliser la douchette latérale, sautez cette étape et allez à la page 8.**

Montez le support de douchette (1) dans le trou à l'extrême droite de l'évier. Serrez l'écrou (2) à la main. Par le dessus, introduisez le tuyau de douchette (3) dans le support. Passez à l'étape 2.

101 & 141 Series / Seria



101 & 141 Series

SHUT OFF WATER SUPPLIES. Remove old faucet. Make sure base, spacer and gasket (1) are properly positioned under new faucet. Feed tubes and shank (2) down through hole in sink. Secure faucet to sink with bracket (3), using nut and wrench (4) supplied with your faucet. **NOTE:** If sink is uneven, use silicone sealant under the gasket. Continue to step 3.

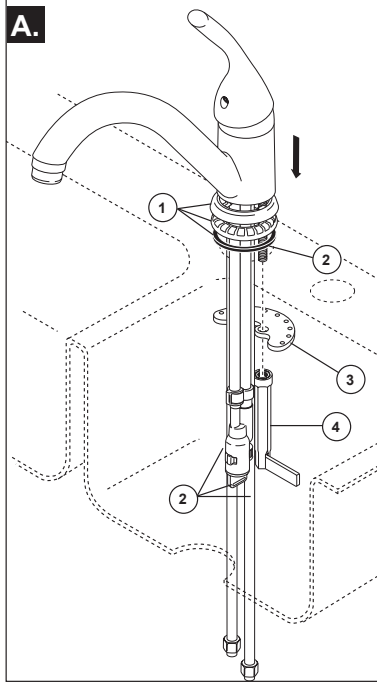
101 y 141 Series

CIERRE LOS SUMINISTROS DE AGUA. Quite la llave vieja. Asegúrese que el empaque, chapetón y separadore (1) están apropiadamente colocado debajo de la nueva llave de agua. Deslice los tubos y la espiga (2) por el agujero en el fregadero. Fije la llave de agua al fregadero con un sujetador (3) usando una tuerca y una llave de tuercas (4) incluida con su llave de agua. **NOTA:** Si el fregadero está desnivelado, use sellador de silicón por debajo del empaque. Continúe al paso 3.

101 et 141 Seria

INTERROMPEZ L'ALIMENTATION EN EAU. Déposez le vieux robinet. Assurez-vous que le joint, boîtier et pièce d'espacement (1) sont bien positionné sous le nouveau robinet. Introduisez les tuyaux et la tige (2) dans le trou de l'évier. Fixez le robinet à l'évier avec le support (3) au moyen de la clé et l'écrou (4) fournie avec le robinet. **NOTE :** si l'évier est inégal, appliquez du composé d'étanchéité à la silicone sous le joint. Passez à l'étape 3.

175 & 441 Series / Seria



175 & 441 Series

A. SHUT OFF WATER SUPPLIES. Remove old faucet. Make sure base, spacer and gasket (1) are properly positioned under new faucet. Feed tubes and shank (2) down through hole in sink. Secure faucet to sink with bracket (3), using nut and wrench (4) supplied with your faucet. **NOTE:** If sink is uneven, use silicone sealant under the gasket.

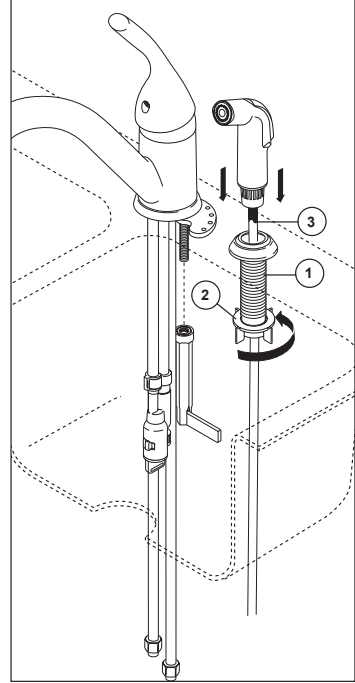
175 y 441 Series

A. CIERRE LOS SUMINISTROS DE AGUA. Quite la llave vieja. Asegúrese que el empaque, chapetón y separadore (1) está correctamente colocado. Deslice los tubos y la espiga (2) hacia abajo por el agujero en el fregadero. Fije la llave de agua al fregadero con un sujetador (3) usando una tuerca y una llave de tuercas (4) incluida con su llave de agua. **NOTA:** Si el fregadero está desnivelado, use sellador de silicón por debajo del empaque.

175 et 441 Seria

A. INTERROMPEZ L'ALIMENTATION EN EAU. Déposez le vieux robinet. Assurez-vous que le joint, boîtier et pièce d'espacement (1) est bien calé. Introduisez les tubes et la tige (2) dans le trou de l'évier. Fixez le robinet à l'évier avec le support (3) au moyen de la clé et l'écrou (4) fournie avec le robinet. **NOTE :** si l'évier est inégal, appliquez du composé d'étanchéité à la silicone sous le joint.

B.



B. Note: If you prefer not to use side sprayer, skip this step and move to page 8.

Mount the spray support (1) in far right hole in sink. Hand tighten nut (2). Insert sprayer and hose (3) down through support assembly. Continue to step 2.

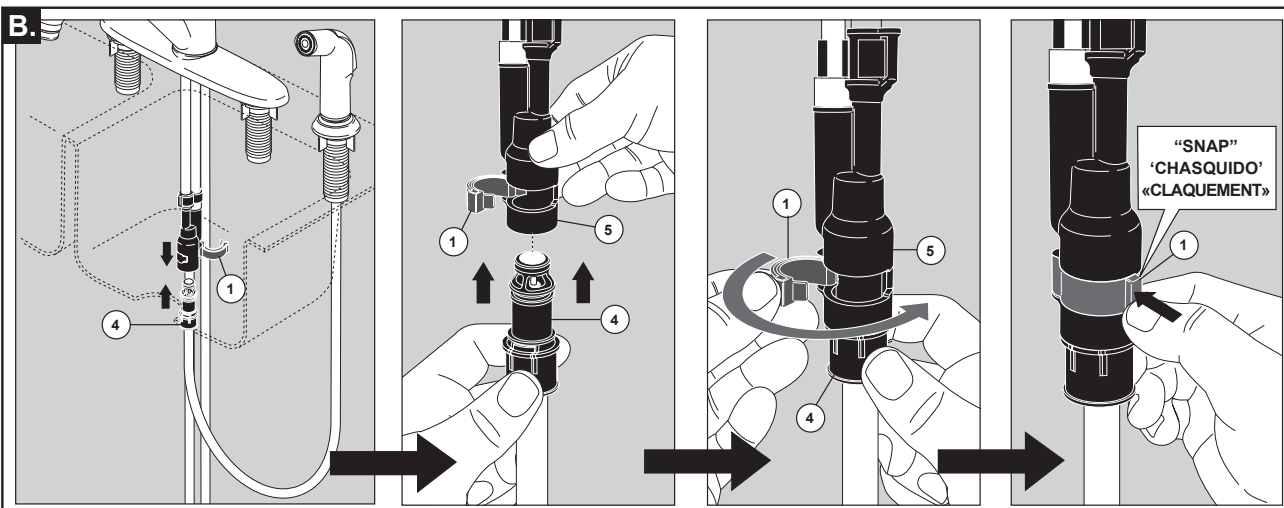
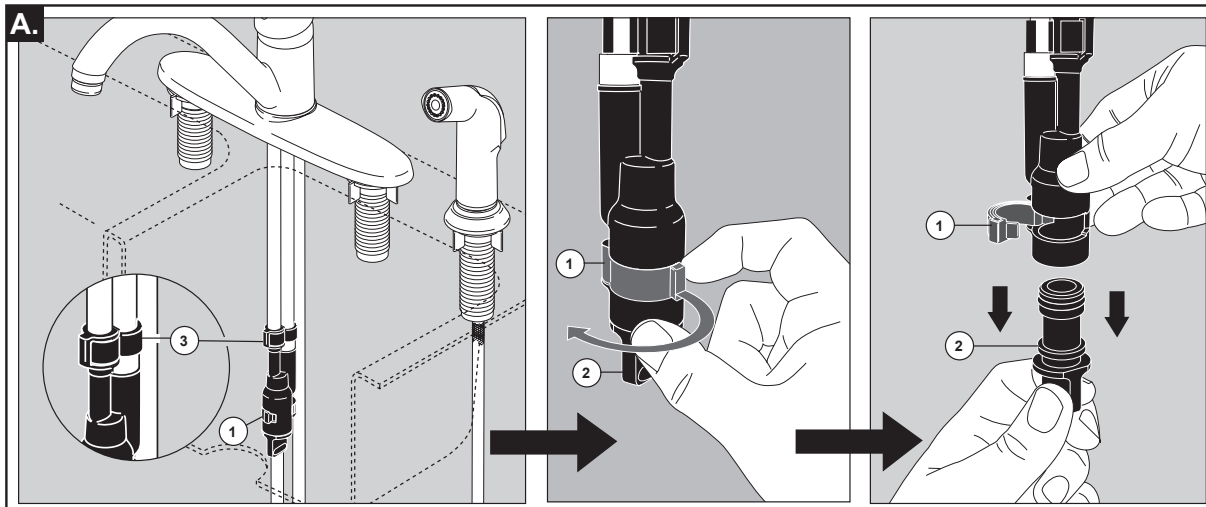
B. Nota: Si prefiere no usar el rociador lateral, omita este paso y siga a la página 8.

Instale el soporte del rociador (1) en el agujero extremo a la derecha del fregadero. Apriete la tuerca a mano (2). Introduzca la manguera del rociador (3) hacia abajo por el soporte. Continúe al paso 2.

B. Note : Si vous préférez ne pas utiliser la douchette latérale, sautez cette étape et allez à la page 8.

Montez le support de douchette (1) dans le trou à l'extrême droite de l'évier. Serrez l'écrou (2) à la ain. Par le dessus, introduisez le tuyau de douchette (3) dans le support de douchette. Passez à l'étape 2.

2



For Sprayer Models Only

- A.** Swing open lower clip (1). Pull down on diverter plug (2) to remove. Discard diverter plug. **Caution: Do not remove upper clip (3).**
- B.** Keeping lower clip (1) disengaged, insert diverter hose end (4) into diverter housing (5) until seated. To secure diverter hose, rotate lower clip (1) until an audible snap is heard. Pull down moderately to ensure connection has been made.

Notice

Incorrect clip assembly may cause water leaks and property damage.

Para el rociador modelo solamente

- A.** Abra el gancho inferior (1). Hale el tapón del desviador (2) para sacarlo. Deseche el tapón del desviador. **Precaución: No retire el gancho superior (3).**
- B.** Manteniendo el gancho inferior (1) desconectado, inserte el extremo de desvío de la manguera (4) en la cubierta o bastidor del desviador (5) hasta que quede asentado. Para fijar la manguera de desvío, gire el gancho inferior (1) hasta que se escuche un chasquido. Hale hacia abajo moderadamente para asegurar que la conexión se ha hecho.

Aviso

El ensamble incorrecto del gancho puede provocar fugas de agua y daños a la propiedad.

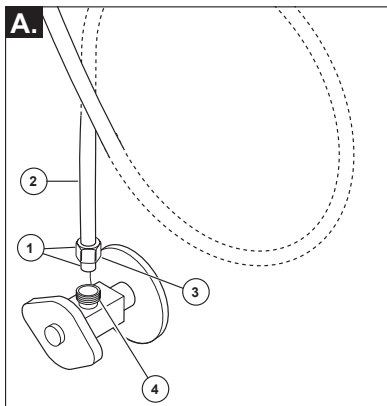
Pour le pulvérisateur modèle seulement

- A.** Ouvrez l'agrafe inférieure (1). Tirez le bouchon (2) de l'inverseur vers le bas pour l'enlever. Jetez le bouchon de l'inverseur. **Attention : N'enlevez pas l'agrafe supérieure (3).**
- B.** Tout en maintenant l'agrafe (1) ouverte, introduisez l'extrémité du tuyau souple (4) de l'inverseur dans le boîtier (5) de l'inverseur jusqu'à ce qu'il soit bien appuyé. Pour fixer le tuyau souple de l'inverseur, tournez l'agrafe inférieure (1) jusqu'à ce qu'un claquement se produise. Tirez modérément sur le tuyau pour vous assurer qu'il est bien branché.

Avis

Si l'agrafe est mal montée, une fuite d'eau peut se produire et causer des dommages matériels.

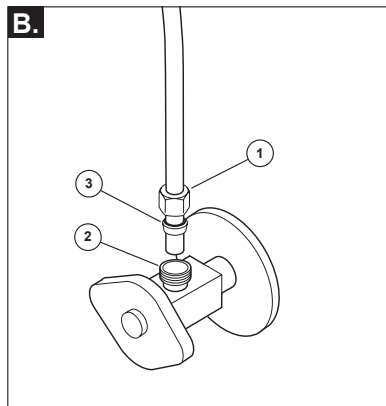
3



OR

O

OU



A. Standard Connections

NOTICE

To avoid risk of property damage, Follow instructions for proper installation. Failure to follow these instructions may result in risk of property damage caused by leaking at this connection. Do not use pipe dope or other sealants on water line connections.

Ensure all fittings and end connections are free of debris. Faucet fittings (1) are 3/8" compression. Loop tubing (2) if it is too long. **Note: Recommended tubing minimum bend diameter is 8".** Secure metal nut (3) to supply valve connection (4). Turn nut until it feels snug. Then tighten nut at least 2 more turns with a wrench. Repeat for other tube. Turn on water, examine for leaks.

B. Custom Fit Connections

NOTICE

If you determine the PEX supply tubing for this faucet is too long and must be shorter to create an acceptable installation, be sure to read the instructions and plan ahead. When cutting the supply tubing the installer accepts the responsibility to do so in a way that allows a leak-free joint to be created. Delta is not responsible for tubing that is cut too short or cut in a way that will not allow for a leak-free joint. **DO NOT use a metal sleeve (ferrule) or gasket (supplied with faucet) in place of the plastic sleeve (ferrule) supplied, it may not create a leak-free joint. Do not use pipe dope or other sealants on water line connections.**

For custom fit installations, you must use plastic sleeves (ferrules) supplied with model and nuts included on supply lines. **Tube cut must be straight.** See plastic sleeve (ferrule) installation instructions found in and included in this document for more information.

Slide nut (1) over plastic sleeve (ferrule) (3). Start nut by hand onto supply valve connection (2) to prevent cross-threading. Turn nut until it feels snug. Then tighten nut at least 2 more turns with a wrench. Repeat for other supply line. Turn on water, examine for leaks.

Potential Problems and Remedies

- **Tubing is not cut perpendicular to the axis of the tube:** carefully make an additional cut, being careful not to cut the tube too short.
- **Tubing is cut too short:** buy a coupling union and a replacement supply line that mate together from a store. The coupling union end intended to connect to the faucet must mate to the standard 3/8" connection nuts and plastic sleeves (ferrules) supplied with the faucet.
- **The plastic sleeve (ferrule) or connection nut is lost:** purchase a replacement nut and/or plastic sleeve (ferrule) that are designed to seal with PEX tubing.

A. Conexiones Estándares

AVISO

Para evitar el riesgo de daños a la propiedad, siga las instrucciones para una instalación adecuada. El incumplimiento de estas instrucciones puede resultar en arriesgar dañar la propiedad causado por fugas en esta conexión. No utilice compuestos para tuberías ni otros selladores en las conexiones de las líneas de agua.

Asegúrese de que todos los accesorios y las conexiones extremas estén libres de residuos. Los accesorios de la llave de agua (1) son de 3/8" compresión. Enlace el tubo (2) si es demasiado largo. **Nota: el diámetro mínimo recomendado de la curva del tubo es de 8".** Fije la tuerca metálica (3) a la conexión de la válvula de suministro (4). Gire la tuerca hasta que se sienta ajustada. Luego apriete la tuerca por lo menos 2 vueltas más con una llave de tuercas. Repita con el otro tubo. Abra el agua, examine para detectar fugas.

B. Conexiones Especiales

AVISO

Si determina que el tubo de suministro de PEX para esta llave de agua es demasiado largo y debe ser más corto para crear una instalación aceptable, asegúrese de leer las instrucciones y planificar con anticipación. Al cortar la tubería de suministro, el instalador acepta la responsabilidad de hacerlo de una manera que permita crear una junta libre de fugas. Delta no es responsable de que los tubos estén cortados demasiado cortos o de una manera que no permita una unión libre de fugas. **NO use un manguito o funda de metal (casquillo) o el empaque (suministrado con la llave de agua) en lugar del manguito plástica (casquillo) suministrada, porque es posible no crear una conexión sin fugas. No use compuesto de tuberías ni otros selladores en las conexiones de la línea de agua.**

Para instalaciones hechas a la medida, debe usar manguitos plásticos (casquillos) suministrados con el modelo y las tuercas incluidas en las líneas de suministro. **El corte del tubo debe ser recto.** Consulte las instrucciones de instalación del manguito plástico (casquillo) que se encuentran y se incluyen en este documento para obtener más información.

Deslice la tuerca (1) sobre el manguito plástico (casquillo) (3). Coloque la tuerca a mano en la conexión de la válvula de suministro

(2) para evitar que se entrecrucen. Gire la tuerca hasta que se sienta ajustada. Luego apriete la tuerca por lo menos 2 vueltas más con una llave de tuercas. Repita con la otra línea de suministro. Abra el agua, examine para detectar fugas.

Averías potenciales y remedios

- **Si el tubo no se corta perpendicular al eje del tubo:** con cuidado haga un corte adicional, teniendo cuidado de no cortar el tubo demasiado corto.
- **Si la tubería se corta demasiado corta:** compre en una tienda una unión de acoplamiento y una línea de suministro de repuesto que se acoplen. El extremo de la unión del acoplamiento destinado a conectarse a la llave de agua/grifo debe acoplarse con las tuercas de conexión de 3/8" estándar y los manguitos plásticos (casquillos) suministrados con la llave de agua.
- **Si el manguito plástico (casquillo) o la tuerca de conexión se pierde:** compre una tuerca de repuesto y/o manguito plástico (casquillo) que estén diseñados para sellar con tubería PEX.

A. Branchements Standard

AVIS

Pour prévenir les risques de dommages matériels, respectez les instructions d'installation. L'omission de respecter ces instructions pourrait entraîner des dommages matériels causés par une fuite de ce raccord. N'utilisez pas de pâte lubrifiante ni d'autres produits d'étanchéité sur les raccords de cette conduite d'eau.

Assurez-vous que tous les raccords et les raccords d'extrémité sont exempts de corps étrangers. Ce robinet est muni de raccords (1) à compression de 3/8 po. Cintrer le tube (2) s'il est trop long. **Note : Le diamètre de cintrage recommandé est de 8 po.** Fixez l'écrou en métal (3) au raccord du robinet d'alimentation (4). Serrez l'écrou jusqu'à ce qu'il soit appuyé, puis faites au moins 2 tours supplémentaires avec une clé. Installez l'autre tube de la même manière. Rétablissez l'alimentation en eau et vérifiez l'étanchéité.

B. Branchements Spéciaux

AVIS

Si vous constatez que le tube d'alimentation en PEX de ce robinet est trop long et vous devez le sectionner pour faire une installation acceptable, lisez les instructions et prévoyez le coup. L'installateur qui sectionne le tube d'alimentation a la responsabilité de le faire d'une manière qui permettra la réalisation d'un joint étanche. Delta se dégage de toute responsabilité dans l'éventualité où le tube sectionné serait trop court ou ne permettrait pas la réalisation d'un joint étanche. **N'UTILISEZ PAS le manchon métallique (virole) ou le joint plat (fourni avec le robinet) à la place du manchon de plastique (virole) fourni. Le raccord pourra fuir. N'utilisez pas de pâte lubrifiante ni d'autres produits d'étanchéité sur les raccords de cette conduite d'eau.**

Pour les installations sur mesure, vous devez utiliser les manchons en plastique (viroles) fournis avec le modèle et les écrous qui se trouvent sur les tubes d'alimentation. **Le tube doit être sectionné perpendiculairement à son axe.** Pour obtenir plus de renseignements, veuillez consulter la section du présent document qui traite de l'installation du manchon en plastique (virole).

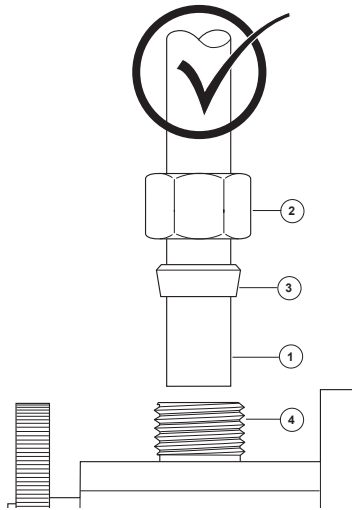
Glissez l'écrou (1) sur le manchon en plastique (virole) (3). Amorcez l'écrou à la main sur le raccord du robinet d'alimentation (2) pour ne pas risquer de foirer le filets. Tournez l'écrou jusqu'à ce qu'il soit

appuyé. Faites ensuite au moins deux tours supplémentaires à l'aide d'une clé. Branchez l'autre tube d'alimentation de la même manière. Rétablissez l'alimentation en eau et vérifiez l'étanchéité.

Problèmes et solutions possibles

- **Le tube n'est pas coupé perpendiculairement à l'axe du tube :** sectionnez le tube de nouveau minutieusement en vous assurant qu'il ne sera pas trop court.
- **Le tube a été sectionné et il est trop court :** achetez un raccord-union et un tube d'alimentation de rechange. L'extrémité du raccord-union doit être compatible avec les écrous de raccordement de 3/8 po et les manchons en plastique (viroles) fournis avec le robinet.
- **Le manchon en plastique (virole) ou l'écrou de raccordement a été perdu :** achetez un écrou et/ou un manchon en plastique (virole) conçus pour assurer l'étanchéité avec un tube en PEX.

Correct method
Método Correcto
Bonne méthode



NOTICE

Failure to use plastic sleeve (ferrule) in the correct orientation will result in disconnection and possible water damage.

1. Determine desired length of supply tube (1). Leave 1" or 2" of extra length to allow for easier installation and cut tube. Ensure cut is straight and burr free.
2. Slide nut (2) and plastic sleeve (ferrule) (3) onto cut supply tube. Ensure plastic sleeve (ferrule) is oriented as shown.
3. Insert supply tube into supply valve connection (4). Supply tube should touch bottom of hole inside supply valve.
4. Slide plastic sleeve (ferrule) down supply tube until it contacts the supply valve connection.
5. Slide nut over plastic sleeve (ferrule). Start nut by hand to prevent cross-threading. Turn nut until it feels snug. Then tighten nut at least 2 more turns with a wrench. Repeat for other supply line. Turn on water, examine for leaks.

AVISO

Si no utiliza el manguito plástico (casquillo) en la orientación correcta resultará en la desconexión y el posible daño por agua.

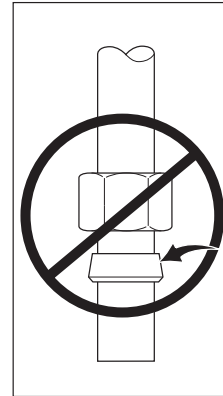
1. Determine el largo deseado del tubo de suministro (1). Agregue 1" ó 2" de más para permitir una instalación más fácil y corte el tubo. Asegúrese que el corte es recto y sin rebabas.
2. Deslice la tuerca (2) y el manguito plástico (casquillo) (3) en el tubo cortado de suministro. Asegúrese el manguito plástico (casquillo) está orientado, como se muestra.
3. Introduzca el tubo de suministro en la conexión de la válvula de suministro (4). El tubo de alimentación debe tocar el fondo del agujero dentro de la válvula de suministro.
4. Deslice el manguito plástico (casquillo) por el tubo de suministro hasta que tenga contacto con la conexión de la válvula de suministro. AVISO: Si no utiliza el manguito plástico (casquillo) en la orientación correcta resultará en la desconexión y el posible daño por agua.
5. Deslice la tuerca sobre el manguito plástico (casquillo). Coloque la tuerca a mano para evitar que se entrecruzen. Gire la tuerca hasta que se sienta ajustada. Luego apriete la tuerca por lo menos 2 vueltas más con una llave de tuercas. Repita con la otra línea de suministro. Abra el agua, examine para detectar fugas

NOTE:

Si le manchon en plastique (bague) n'est pas installé correctement, le raccord peut se défaire et occasionner un dégât d'eau.

1. Coupez le tube d'alimentation (1) à la longueur désirée. Laissez 1 à 2 pouces de jeu pour faciliter l'installation. Faites une coupe d'équerre et enlevez les bavures.
2. Glissez l'écrou (2) et le manchon en plastique (bague) (3) sur le tube d'alimentation coupé. Assurez-vous que le manchon en plastique est orienté comme le montre la figure.
3. Introduisez le tube d'alimentation dans le raccord du robinet d'alimentation (4). Le tube doit toucher le fond du trou à l'intérieur du raccord du robinet d'alimentation.
4. Faites glisser le manchon en plastique (bague) dans le tube jusqu'à ce qu'il entre en contact avec le raccord du robinet d'alimentation.
5. Glissez l'écrou sur le manchon en plastique (virole). Amorcer l'écrou à la main pour ne pas risquer de foirer les filets. Tournez l'écrou jusqu'à ce qu'il soit appuyé. Faites ensuite au moins deux tours supplémentaires avec une clé. Branchez l'autre tube d'alimentation de la même manière. Rétablissez l'alimentation en eau et vérifiez l'étanchéité.

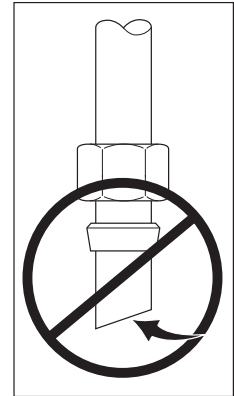
Incorrect Installation
Instalación Incorrecta
Installation Incorrecte



Do not install sleeve upside down.

No instale la manga boca abajo.

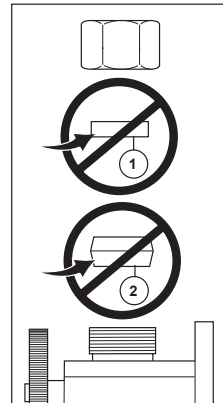
N'installez pas le manchon à l'envers.



Ensure cut is straight.

Asegúrese que el corte esté recto.

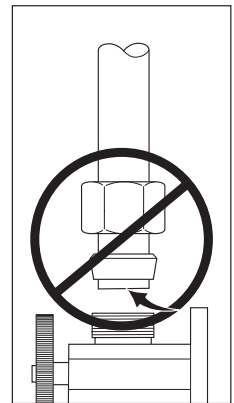
Assurez-vous que la coupe est droite.



Do not use gasket (1) supplied with PEX tubing or brass ferrule (2) supplied with valve stops.

No use empaque (1) suministrado con el tubería de PEX o el casquillo de bronce (2) suministrado con las válvulas de cierre.

N'utilisez pas le joint (1) fournie avec la tuyauterie de PEX ou la bague en cuivre (2) fournie avec les robinets d'arrêt.

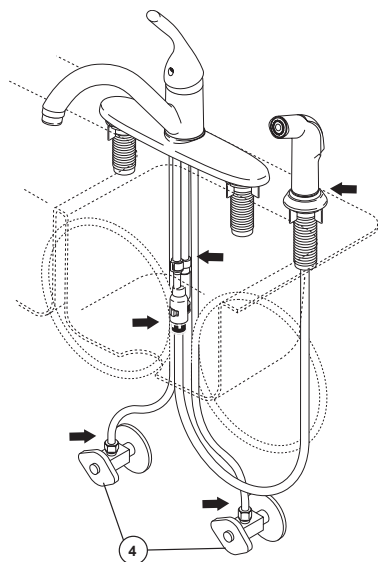
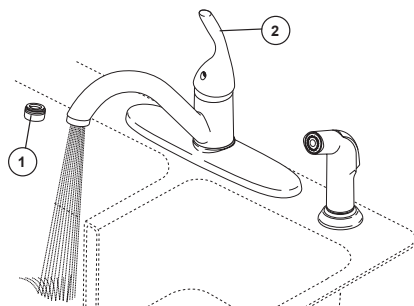
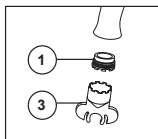


Ensure tube is fully inserted into stop before sliding sleeve down to engage top of fitting.

Asegúrese que el tubo este completamente introducido dentro del tope antes de deslizar la manga hacia abajo para encajar la parte superior del accesorio.

Assurez-vous que le tube est introduit entièrement dans le robinet d'arrêt avant de faire glisser le manchon vers le bas pour le fixer à la partie supérieure du raccord.

4



FLUSH YOUR SYSTEM:

- A.** Remove aerator (1) and turn faucet handle (2) to the full on mixed position. (Some models require wrench (3) to remove aerator.) Turn on hot and cold water supplies (4) and flush water lines for one minute. **Important: This flushes away any debris that could cause damage to internal parts.** Reinstall aerator.
- B.** Check all connections at arrows for leaks. Re-tighten if necessary, but do not overtighten.

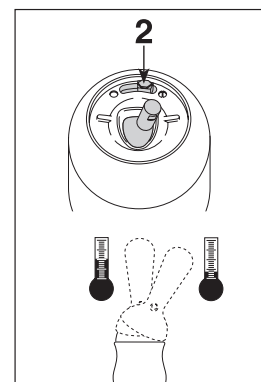
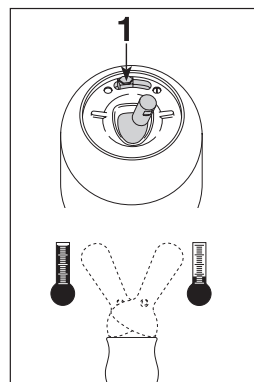
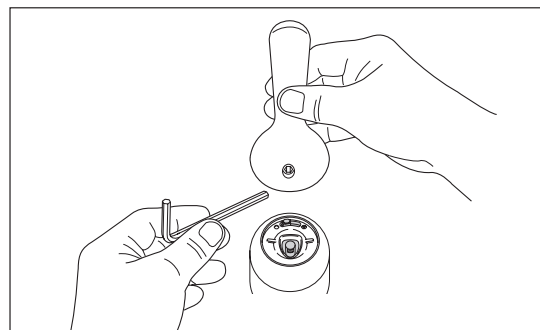
DEJE CORRER EL AGUA POR LAS TUBERÍAS:

- A.** Quite el aereador (1) y mueva la manija de la llave de agua (2) a la posición completamente abierta. Abra los suministros de agua caliente y fría (3) y deje correr en agua por las líneas por un minuto. **Importante: Esto limpia cualquier escombros que pueda causar daño a las partes internas.** Reinstale el aereador.
- B.** Examine si hay filtraciones en todas las conexiones indicadas con flechas. Apriete de nuevo si es necesario, pero no apriete demasiado.

PURGEZ L'INSTALLATION:

- A.** Retirez l'aérateur (1) et placez la poignée (2) du robinet en position d'écoulement maximum de l'eau chaude et de l'eau froide. Rétablissez l'alimentation en eau chaude et en eau froide (3) et laissez couler l'eau pendant une minute. **Important: le fait de laisser couler l'eau permet d'évacuer les corps étrangers qui pourraient abîmer les composants internes du robinet.** Réinstallez l'aérateur.
- B.** Vérifiez qu'il n'y a pas de fuites aux flèches. Resserrez les raccords au besoin, mais prenez garde de trop serrer.

5



Setting The Handle Limit Stop (Optional)

This faucet includes an integrated handle limit stop that has two positions. Position 1, to the left, allows full handle motion (the full range between "all cold" to "all hot"). The faucet is set in position 1 in the factory. Position 2, to the right, allows half of the normal handle motion ("all cold" to "mixed hot/cold").

The handle limit stop can be adjusted by the homeowner once the faucet is installed. Setting the handle limit stop in position 2 may help to prevent scalding because it limits the amount of hot water in the mix; however, this handle limit stop will not always prevent scalding because it does not compensate for incoming pressure or sudden water temperature changes.

To change positions of the handle limit stop: remove the handle; move the valve stem to the all cold position so the water is on; change the position of the handle limit stop; turn off the water; reinstall the handle.

Fijando la parada de límite de la manija (opcional)

Esta llave de agua incluye una manija integrada, que tiene dos posiciones, para limitar la temperatura. La posición 1, a la izquierda, permite el movimiento completo de la manija (el alcance completo entre el agua "totalmente fría" hasta "totalmente caliente"). La fábrica preselecciona la llave de agua (grifo) a la posición 1. La posición 2, a la derecha, permite la mitad del alcance de movimiento normal de la manija ("totalmente fría" a la posición "mixta caliente/fría").

Una vez que la llave de agua (grifo) se ha instalado, el límite rotacional de la manija puede ajustarse por el propietario de la residencia. Ajustando la manija de ajuste del tope del límite de la temperatura a la posición 2 puede ayudar a prevenir escaldaduras porque limita la cantidad de agua caliente en la mezcla; sin embargo, esta manija que limita la temperatura del agua no siempre prevendrá escaldaduras porque no compensa la presión del agua de entrada o cambios repentinos de la temperatura del agua.

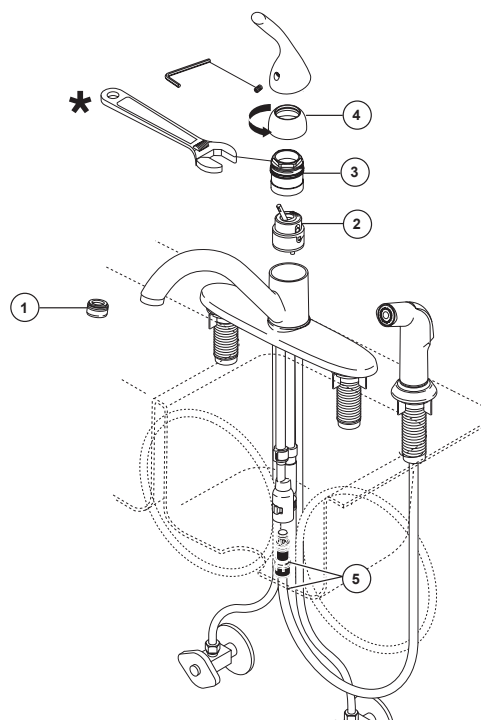
Para cambiar las posiciones de la manija que limitan la temperatura: quite la manija; cambie la posición de la espiga de la válvula a la posición totalmente fría de manera que el agua este abierta; cambie la posición de la manija que limita la temperatura; cierre el agua; reinstale la manija.

Plaçant l'arrêt de limite de poignée (facultatif)

Ce robinet est muni d'une butée de température maximale à deux positions. La position 1, à gauche, permet le déplacement de la manette entre les deux extrémités de la plage de température (eau très froide et eau très chaude). C'est la position sélectionnée en usine. La position 2, à droite, permet le déplacement de la manette sur la moitié de la plage de température (eau très froide et eau mitigée).

Il est possible de régler la butée de température maximale de la manette au moment de l'installation du robinet. Un réglage à la position 2 peut empêcher l'ébullition parce que cette position limite la quantité d'eau chaude dans le mélange. Toutefois, ce réglage de la butée de température maximale de la manette ne constitue pas une garantie absolue contre l'ébullition parce qu'il n'offre aucune protection contre les fluctuations de la pression d'alimentation ou les changements de température soudains.

Pour modifier la position de la butée de température maximale de la manette : enlevez la manette; amenez l'obturateur à l'extrémité de la plage du côté eau froide pour faire s'écouler l'eau; modifiez la position de la butée de température maximale; fermez le robinet; réinstallez la manette.



Maintenance

If faucet exhibits very low flow:

A. Remove and clean aerator (1) or

B. SHUT OFF WATER SUPPLIES. Replace valve cartridge (2). When reinstalling parts, make sure bonnet nut (3) is tightened securely **with a wrench**.*

If faucet leaks from under handle: Remove handle and unthread trim cap (4). **Using a wrench**, ensure bonnet nut (3) is tight.

If leak persists: SHUT OFF WATER SUPPLIES. Replace valve cartridge (2). When reinstalling parts, make sure bonnet nut (3) is tightened securely **with a wrench**.*

If faucet leaks from spout outlet: SHUT OFF WATER SUPPLIES. Replace valve cartridge (2). When reinstalling parts, make sure bonnet nut (3) is tightened securely **with a wrench**.*

If spray attachment does not function properly: Replace diverter and hose assembly (5).

Note: Do not attempt to disassemble cartridge (2). There are no repairable parts inside.

Notice

*Failure to securely tighten bonnet nut (3) with a wrench could result in a water leak and property damage.

Cleaning and Care

Care should be given to the cleaning of this product. Although its finish is extremely durable, it can be damaged by harsh abrasives or polish. To clean, simply wipe gently with a damp cloth and blot dry with a soft towel.

Mantenimiento

Si la llave de agua exhibe muy poco flujo:

A. Quite y limpie el aerador (1) o

B. CIERRE LOS SUMINISTROS DE AGUA. Cambie el cartucho de la válvula (2). Sando una llave de tuercas, asegúrese que la tuerca tapa (3) esté apretada.*

Si la llave de agua tiene una filtración por debajo de la manija:

Quite la manija y casquillo (4). Usando una llave de tuercas, asegúrese que la tuerca tapa (3) esté apretada.*

Si la filtración persiste: CIERRE LOS SUMINISTROS DE AGUA. Cambie el cartucho de la válvula (2). Usando una llave de tuercas, asegúrese que la tuerca tapa (3) esté apretada.*

Si la llave de agua tiene una filtración desde la salida del surtidor: CIERRE LOS SUMINISTROS DE AGUA. Cambie el cartucho de la válvula (2). Sando una llave de tuercas, asegúrese que la tuerca tapa (3) esté apretada.*

Si no funciona el accesorio del aerosol correctamente: Substituya el montaje del desviador y de manguera (5).

Nota: No procure desmontar el cartucho (2). No hay piezas reparables adentro.

Aviso

*Si no aprieta fijamente la tuerca tapa con una llave de tuercas pudiera resultar en daño por agua.

Limpeza y Cuidado de su Llave

Tenga cuidado al ir a limpiar este producto. Aunque su acabado es sumamente durable, puede ser afectado por agentes de limpieza o para pulir abrasivos. Para limpiar su llave, simplemente frótela con un trapo húmedo y luego séquela con una toalla suave.

Entretien

Si le débit du robinet est très faible :

A. Enlevez l'aérateur (1) et nettoyez-le ou

B. FERMEZ LES ROBINETS D'ALIMENTATION. Remplacez la cartouche de la soupape (2). À l'aide d'une clé, assurez-vous que l'écrou-chapeau (3) est serré.*

Si le robinet fuit par le dessous de la manette :

Enlevez la manette et embase (4). À l'aide d'une clé, assurez-vous que l'écrou-chapeau (3) est serré.*

Si la fuite persiste, COUPEZ L'ARRIVÉE D'EAU : Remplacez la cartouche de la soupape (2). À l'aide d'une clé, assurez-vous que l'écrou-chapeau (3) est serré.*

Si le robinet fuit par la sortie du bec : COUPEZ L'ARRIVÉE D'EAU. Remplacez la cartouche (2). À l'aide d'une clé, assurez-vous que l'écrou-chapeau (3) est serré.*

Si l'attachement de jet ne fonctionne pas correctement : Remplacez l'ensemble d'aiguillage et de tuyau (5).

Note : N'essayez pas de démonter la cartouche (2). Il n'y a aucune pièce réparable à l'intérieur.

Avis

*L'omission de bien serrer l'écrou-chapeau peut entraîner une fuite d'eau et des dommages.

Instructions de nettoyage

Il faut le nettoyer avec soin. Même si son fini est extrêmement durable, il peut être abîmé par des produits fortement abrasifs ou des produits de polissage. Il faut simplement le frotter doucement avec un chiffon humide et le sécher à l'aide d'un chiffon doux.

Limited Warranty on Delta® Faucets

Parts and Finish. All parts (other than electronic parts and batteries) and finishes of Delta® faucets purchased from authorized Delta sellers are warranted to the original consumer purchaser to be free from defects in material and workmanship for as long as the original consumer purchaser owns the home in which the faucet was first installed. For commercial purchasers, (a) the warranty period is ten (10) years for multi-family residential applications and (b) five (5) years for all other commercial applications, in each case from the date of original purchase. For purposes of this warranty, the term "multi-family residential application" refers to the purchase of the faucet from an authorized Delta seller by a purchaser who owns but does not live in the residential dwelling in which the faucet is initially installed, such as in a rented or leased single unit or multi-unit detached home (duplex or townhome), or a condominium, apartment building or community living center. The following installations are not considered multi-family residential applications, are excluded from the 10-year warranty and are subject to the 5-year warranty: industrial, institutional or other business premises, such as a dormitory, hospitality premises (hotel, motel or extended stay location), airport, educational facility, long- or short-term healthcare facility (hospital, rehabilitation center, nursing, assisted or staged-care living unit), public space or common area.

Parts and Finish for Delta® Recertified Faucets. Delta Faucet Company offers for sale on deltafaucet.com Delta® Recertified faucets. All parts (other than electronic parts and batteries) and finishes of these Delta® Recertified faucets are warranted to the original consumer purchaser to be free from defects in material and workmanship for ten (10) years from the date of original purchase. For commercial purchasers, the warranty period is one (1) year from the date of original purchase.

Electronic Parts. Electronic parts (other than batteries), if any, of Delta® faucets purchased from deltafaucet.com or authorized Delta sellers are warranted to the original consumer purchaser to be free from defects in material and workmanship for five (5) years from the date of original purchase or, for commercial purchasers, for one (1) year from the date of original purchase. No warranty is provided on batteries.

What We Will Do. Delta Faucet Company will repair or replace, free of charge, during the applicable warranty period (as described above), any part or finish that proves defective in material and/or workmanship under normal installation, use and service. If repair or replacement is not practical, Delta Faucet Company may elect to refund the purchase price in exchange for the return of the product. **These are your exclusive remedies.**

What is Not Covered. Because Delta Faucet Company is unable to control the quality of Delta products sold by unauthorized sellers, unless otherwise prohibited by law, this warranty does not cover Delta products purchased from unauthorized sellers.

Any labor charges incurred by the purchaser to repair, replace, install or remove this product are not covered by this warranty. Delta Faucet Company shall not be liable for any damage to the faucet resulting from reasonable wear and tear, outdoor use, misuse (including use of the product for an unintended application), freezing water, abuse, neglect or improper or incorrectly performed installation, maintenance or repair, including failure to follow the applicable care and cleaning instructions. Delta Faucet Company recommends using a professional plumber for all installation and repair of faucets. We also recommend that you use only genuine Delta® replacement parts.

What You Must Do To Obtain Warranty Service or Replacement Parts. A warranty claim may be made and replacement parts may be obtained by calling 1 800 345 DELTA (3358) or by contacting us by mail or online as follows (please include your model number and date of original purchase):

In the United States and Mexico:

Delta Faucet Company
Product Service
55 E. 111th Street
Indianapolis, IN 46280
Attention: Customer Solutions
www.deltafaucet.com/service-parts/contact-us

In Canada:

Masco Canada Limited, Plumbing Group
Technical Service Centre
350 South Edgeware Road
St. Thomas, Ontario, Canada N5P 4L1
Attention: Customer Service
<http://www.deltafaucet.ca/customersupport/assistance.html>

Proof of purchase (original sales receipt) from the original purchaser must be made available to Delta Faucet Company for all warranty claims unless the purchaser has registered the product with Delta Faucet Company or the product is a Delta® Recertified product purchased from deltafaucet.com. This warranty applies only to Delta® faucets manufactured after January 1, 2019 and installed in the United States of America, Canada and Mexico.

Limitation on Duration of Implied Warranties. Please note that some states/provinces (including Quebec) do not allow limitations on how long an implied warranty lasts, so the below limitations may not apply to you. TO THE MAXIMUM EXTENT PERMITTED BY APPLICABLE LAW, ANY IMPLIED WARRANTY, INCLUDING THE IMPLIED WARRANTIES OF MERCHANTABILITY AND OF FITNESS FOR A PARTICULAR PURPOSE, IS LIMITED TO THE STATUTORY PERIOD OR THE DURATION OF THIS WARRANTY, WHICHEVER IS SHORTER.

Limitation of Special, Incidental or Consequential Damages. Please note that some states/provinces (including Quebec) do not allow the exclusion or limitation of special, incidental or consequential damages, so the below limitations and exclusions may not apply to you. TO THE MAXIMUM EXTENT PERMITTED BY APPLICABLE LAW, THIS WARRANTY DOES NOT COVER, AND DELTA FAUCET COMPANY SHALL NOT BE LIABLE FOR, ANY SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES (INCLUDING LABOR CHARGES TO REPAIR, REPLACE, INSTALL OR REMOVE THIS PRODUCT), WHETHER ARISING OUT OF BREACH OF ANY EXPRESS OR IMPLIED WARRANTY, BREACH OF CONTRACT, TORT, OR OTHERWISE. DELTA FAUCET COMPANY SHALL NOT BE LIABLE FOR ANY DAMAGE TO THE FAUCET RESULTING FROM REASONABLE WEAR AND TEAR, OUTDOOR USE, MISUSE (INCLUDING USE OF THE PRODUCT FOR AN UNINTENDED APPLICATION), FREEZING WATER, ABUSE, NEGLECT OR IMPROPER OR INCORRECTLY PERFORMED INSTALLATION, MAINTENANCE OR REPAIR, INCLUDING FAILURE TO FOLLOW THE APPLICABLE INSTALLATION, CARE AND CLEANING INSTRUCTIONS. Notice to residents of the State of New Jersey: The provisions of this warranty, including its limitations, are intended to apply to the fullest extent permitted by the laws of the State of New Jersey.

Additional Rights. This warranty gives you specific legal rights, and you may also have other rights which vary from state/province to state/province.

This is Delta Faucet Company's exclusive written warranty and the warranty is not transferable.

If you have any questions or concerns regarding our warranty, please contact us as provided above or view our Warranty FAQs at www.deltafaucet.com.

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Garantía Limitada en las Llaves de Agua de Delta®

Piezas y Acabado. Todas las piezas (excepto los componentes electrónicos y las pilas) y los acabados de los grifos Delta Faucet® comprados de vendedores autorizados por Delta están garantizados al consumidor comprador original de estar libres de defectos en material y fabricación durante el tiempo que el comprador original sea propietario de la vivienda en la que el grifo/la llave de agua fue originalmente instalada. En el caso de los consumidores comerciales, (a) el período de garantía es de diez (10) años para aplicaciones multifamiliares (apartamentos y condominios) y (b) cinco (5) años para todas las otras aplicaciones comerciales, en cada caso a partir de la fecha de compra. Para los propósitos de esta garantía, el término "aplicación multifamiliar residencial" se refiere a la compra del grifo de un vendedor autorizado por Delta por el comprador propietario que no vive en la vivienda residencial donde se instaló inicialmente la llave de agua, como en una unidad alquilada o arrendada, o unidad o vivienda unifamiliar separada (duplex o casas adosadas), o un condominio, edificio de apartamentos o centro de vivienda comunitaria. Las siguientes instalaciones no se consideran aplicaciones multifamiliares residenciales, están excluidas de la garantía de 10 años y están sujetas a la garantía de cinco años: instalaciones industriales, institucionales u otras instalaciones comerciales, como dormitorios, instalaciones de hotelaría (hotel, motel o una alberga para estancias prolongadas), aeropuerto, centro educativo, centro de atención de salud a corto o largo plazo (hospital, centro de rehabilitación, asilo de ancianos, unidad de vivienda asistida o una unidad residencial de cuidado), espacio público o área común.

Piezas y acabados para grifos recertificados Delta®. Delta Faucet Company ofrece para la venta en deltafaucet.com llaves de agua/grifos recertificados Delta®. Todas las piezas electrónicas (excepto las partes electrónicas y las pilas) y los acabados de estos grifos recertificados Delta® están garantizados al consumidor comprador original de estar libres de defectos en material y fabricación durante diez (10) años a partir de la fecha de compra. Para los consumidores comerciales, el período de garantía es por un (1) año a partir de la fecha de compra.

Piezas electrónicas. Las piezas electrónicas (excepto las pilas), si las hay, de las llaves de agua Delta® compradas de deltafaucet.com o vendedores autorizados por Delta están garantizadas al consumidor comprador original de estar libres de defectos en material y fabricación durante cinco (5) años a partir de la fecha de compra o para los consumidores comerciales, por un (1) año a partir de la fecha de compra. No se garantizan las pilas.

Lo que hacemos. La compañía Delta Faucet Company reparará o reemplazará, sin costo alguno, durante el período de garantía aplicable (como descrito arriba) cualquier pieza o acabado que demuestre ser defectuosa en material y/o fabricación bajo la instalación, el uso y el servicio normal. Si la reparación o el reemplazo no es práctico, Delta Faucet Company puede optar por reembolsarle el precio de compra o cambio de la devolución del producto. **Estos son sus remedios exclusivos.**

Lo que no cubre. Debido a que Delta Faucet Company no puede controlar la calidad de los productos Delta vendidos por vendedores no autorizados, a menos que la ley lo prohíba, esta garantía no cubre los productos Delta comprados a vendedores no autorizados.

No cubre cualquier gasto de labor incurrido por el comprador para reparar, reemplazar, instalar o desmontar este producto. Delta Faucet Company no es responsable por cualquier daño al grifo que resulte del desgaste razonable, uso en el exterior, uso indebido, (incluyendo el uso del producto para una aplicación indebida), agua helada, abuso, negligencia o la instalación, el mantenimiento o la reparación incorrecta, incluido el incumplimiento de las instrucciones de cuidado y limpieza correspondientes. Delta Faucet Company recomienda el uso de los servicios de un plomero profesional para toda instalación y reparación de los grifos. También recomendamos que use solo piezas de repuesto genuinas Delta®.

Lo que usted debe hacer para obtener servicio de garantía o piezas de repuesto. Se puede hacer un reclamo de la garantía y se pueden obtener piezas de repuesto llamando al 1-877-345-DELTA (3358) o contactándonos por correo postal o electrónico como indicado (favor incluir el número del modelo y la fecha de compra):

En los Estados Unidos y México:

Delta Faucet Company
Product Service
55 E. 111th Street
Indianapolis, IN 46280
Attention: Customer Solutions
www.deltafaucet.com/service-parts/contact-us

En Canadá:

Masco Canada Limited, Plumbing Group
Technical Service Centre
350 South Edgeware Road
St. Thomas, Ontario, Canada N5P 4L1
Attention: Customer Service
<http://www.deltafaucet.ca/customersupport/assistance.html>

El comprobante de compra (recibo de venta original) del comprador original debe ser disponible a Delta Faucet Company para todos los reclamos de garantía a menos que el comprador haya registrado el producto en Delta Faucet Company o es un producto recertificado de Delta® comprado de deltafaucet.com. Esta garantía aplica solo a las llaves de agua/grifos Delta® fabricados después de enero 1, 2019 e instalados en los Estados Unidos de América, Canadá y México.

La limitación de la duración de las garantías implícitas. Favor tomar nota que algunos estados/provincias (incluyendo Quebec) no permiten las limitaciones de la duración de una garantía implícita por lo que las limitaciones a continuación puedan no aplicarle. HASTA EL ALCANCE MÁXIMO EN QUE LA LEY LO PERMITA, CUALQUIER GARANTÍA IMPLÍCITA, INCLUIDAS LAS GARANTÍAS IMPLÍCITAS DE COMERCIABILIDAD Y DE IDONEIDAD PARA UN PROPÓSITO PARTICULAR, ESTÁ LIMITADA AL PERÍODO LEGAL O A LA DURACIÓN DE ESTA GARANTÍA, LO QUE SEA MÁS CORTO.

Limitación de daños especiales, incidentales o consiguientes. Favor de tomar nota que algunos estados/provincias (incluyendo Quebec) no permiten la exclusión o limitación de daños especiales, incidentales o consiguientes, por lo que estas limitaciones y exclusiones puedan no aplicarle. HASTA EL ALCANCE EN QUE LA LEY LO PERMITA, ESTA GARANTÍA NO CUBRE Y DELTA FAUCET COMPANY NO SE HACE RESPONSABLE, POR NINGÚN DAÑO ESPECIAL, INCIDENTAL O CONSIGUIENTE (INCLUYENDO LOS GASTOS DE LABOR PARA REPARAR, REEMPLAZAR, INSTALAR O DESMONTAR ESTE PRODUCTO), YA SEA EL RESULTADO DEL INCUMPLIMIENTO DE CUALQUIER GARANTÍA EXPRESA O IMPLÍCITA, INCUMPLIMIENTO DE CONTRATO, AGRAVIO O DE OTRA MANERA. DELTA FAUCET COMPANY NO SE RESPONSABILIZARÁ POR CUALQUIER DAÑO AL GRIFO QUE RESULTE DEL DESGASTE RAZONABLE, USO EN EL EXTERIOR DE LA PROPIEDAD, USO INDEBIDO (INCLUYENDO EL USO DEL PRODUCTO PARA UNA APLICACIÓN INDEBIDA), AGUA HELADA, ABUSO, NEGLIGENCIA O INSTALACIÓN O MANTENIMIENTO INADECUADO O INCORRECTO, INCLUYENDO EL NO SEGUIR LAS INSTRUCCIONES CORRESPONDIENTES PARA EL CUIDADO, LA LIMPIEZA Y EL MANTENIMIENTO. Aviso para los residentes del estado de New Jersey: Las disposiciones de este documento tienen la intención de aplicarse en la máxima medida permitida por las leyes del estado de New Jersey.

Derechos adicionales. Esta garantía le otorga derechos legales específicos y también puede tener otros derechos que varían de estado/provincia a estado/provincia.

Esta es la garantía escrita exclusiva de Delta Faucet Company y la garantía no es transferible.

Si tiene preguntas o dudas con respecto a nuestra garantía, por favor comuníquese con nosotros como se indica anteriormente o consulte nuestras Preguntas Frecuentes Warranty FAQs en www.deltafaucet.com.

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Garantie limitée des robinets Delta®

Pièces et finis. Tous les pièces (autres que les composants électroniques et les piles) et les finis de ce robinet Delta® achetés chez des vendeurs Delta autorisés sont protégés contre les défauts du matériel et les vices de fabrication par une garantie qui est consentie au premier acheteur au détail et qui demeure valide tant que celui-ci demeure propriétaire de la maison dans laquelle le robinet a été installé. En ce qui concerne les acheteurs commerciaux, la période de garantie est a) de dix (10) ans pour les applications résidentielles multifamiliales et b) de cinq (5) ans pour toutes les autres applications commerciales, à compter de la date d'achat dans chaque cas. Dans le libellé de la présente garantie, on entend par « application résidentielle multifamiliale », un robinet acheté chez un vendeur Delta autorisé par un acheteur qui est propriétaire d'un logement résidentiel sans l'habiter et installé la première fois dans cet immeuble. Il peut s'agir d'un immeuble individuel comportant un ou plus d'un logement (ou duplex ou groupe de maisons en rangée), d'un condominium, d'un immeuble d'habitation ou d'un centre d'intégration communautaire. Les applications décrites ci-dessus ne sont pas considérées comme des applications multifamiliales et elles sont couvertes par la garantie de cinq (5) ans plutôt que par la garantie de dix (10) ans. Ce sont les suivantes : robinets installés dans un bâtiment industriel, un bâtiment institutionnel et un autre immeuble commercial, notamment une résidence d'étudiants, un lieu d'hébergement (hôtel, motel ou lieu de séjour prolongé), un aéroport, un établissement d'enseignement, un établissement de soins de santé de courte ou de longue durée (hôpital, centre de réadaptation, maison de soins infirmiers), un endroit public ou un lieu commun.

Pièces et finis pour les robinets recertifiés Delta®. Delta Faucet Company offre en vente sur deltafaucet.com des robinets recertifiés Delta®. Tous les pièces (autres que les composants électroniques et les piles) et les finis de ces robinets recertifiés Delta® sont protégés contre les défauts du matériel et les vices de fabrication par une garantie d'une durée de dix (10) ans qui est consentie au premier acheteur au détail à compter de la date d'achat par ledit acheteur. En ce qui concerne les acheteurs commerciaux, la durée de la garantie est d'un (1) an à compter de la date d'achat par le premier acheteur.

Composants électroniques. Les composants électroniques (autres que les piles) de ce robinet Delta® qui ont été achetés chez des vendeurs Delta autorisés sont protégés contre les défauts du matériel et les vices de fabrication par une garantie consentie au premier acheteur au détail qui est de cinq (5) ans à compter de la date d'achat. En ce qui concerne les acheteurs commerciaux, la période de garantie est d'un (1) an à compter de la date d'achat. Les piles ne sont pas couvertes par la garantie.

Ce que nous ferons. Delta Faucet Company réparera ou remplacera gratuitement, pendant la période de garantie applicable (décrite ci-dessus), toute pièce ou tout fini qui présentera une défectuosité de matériel et/ou un vice de fabrication pour autant que le produit ait été installé, utilisé et entretenu normalement. S'il n'est pas utile de réparer ou de remplacer le produit, Delta Faucet Company pourra rembourser le prix d'achat en échange du produit retourné. **Il s'agit de vos seuls recours.**

Ce qui n'est pas couvert. Étant donné que Delta Faucet Company n'est pas en mesure de contrôler la qualité des produits vendus par des vendeurs non autorisés, la présente garantie ne s'applique pas aux produits Delta vendus par des vendeurs non autorisés, à moins que cette restriction ne soit interdite par la loi.

La présente garantie ne couvre pas les frais de main-d'œuvre encourus par l'acheteur pour la réparation, le remplacement, l'installation ou la dépose du robinet. Delta Faucet Company se dégage de toute responsabilité à l'égard de toute détérioration du robinet résultant d'une usure raisonnable et des dommages causés par une utilisation à l'extérieur, un mauvais usage (y compris l'utilisation du produit à des fins autres que celles auxquelles il est destiné), le gel de l'eau, un usage abusif, la négligence ou l'utilisation d'une méthode d'installation, de maintenance ou de réparation incorrecte ou inadéquate, y compris les dommages résultant du non-respect des instructions de nettoyage et d'entretien applicables. Delta Faucet Company vous recommande de confier tous les travaux d'installation et de réparation à un plombier professionnel. Nous vous recommandons également d'utiliser uniquement des pièces de rechange Delta® authentiques.

Ce que vous pouvez faire pour vous prévaloir de la garantie ou obtenir des pièces de rechange. Vous pouvez présenter une réclamation en vertu de la garantie et obtenir des pièces de rechange en appelant au 1-800-345-DELTA (3358) ou en communiquant avec nous à l'une des adresses postales ou des adresses de courriel indiquées ci-dessous (n'oubliez pas d'indiquer le numéro de modèle et la date d'achat).

Aux États-Unis et au Mexique

Delta Faucet Company
Product Service
55 E. 111th Street
Indianapolis, IN 46280
Attention: Customer Solutions
www.deltafaucet.com/service-parts/contact-us

Au Canada:

Masco Canada Limited, Groupe plomberie
Centre de services techniques
350, chemin South Edgeware
St. Thomas (Ontario) Canada N5P 4L1
À l'attention du Service à la clientèle
<http://www.deltafaucet.ca/customersupport/assistance.html>

La preuve d'achat (original du reçu) du premier acheteur doit être présentée à Delta Faucet Company pour toutes les réclamations en vertu de la garantie, sauf si le produit a été enregistré auprès de Delta Faucet Company ou s'il s'agit d'un produit recertifié Delta® qui a été acheté de deltafaucet.com. La présente garantie s'applique uniquement aux robinets Delta® fabriqués après le 1er janvier 2019 et installés aux États-Unis d'Amérique, au Canada et au Mexique.

Limitation de la durée des garanties implicites. Veuillez noter que dans les États ou les provinces (y compris le Québec) où il est interdit de limiter la durée d'une garantie implicite, les limites mentionnées ci-dessous peuvent ne pas s'appliquer. DANS LA MESURE DE CE QUI EST PERMIS PAR LA LOI APPLICABLE, TOUTES LES GARANTIES IMPLÍCITES, Y COMPRIS LES GARANTIES IMPLÍCITES DE QUALITÉ MARCHANDE ET D'ADEQUATION À UN USAGE PARTICULIER, SE LIMITENT À LA PÉRIODE FIXÉE PAR LA LOI OU À LA DURÉE DE LA PRÉSENTE GARANTIE, LA PLUS COURTE DES DEUX PÉRIODES S'APPLIQUANT.

Limitation des dommages particuliers, consécutifs ou indirects. Veuillez noter que dans les États ou les provinces (y compris le Québec) où il est interdit d'exclure ou de limiter les dommages particuliers, consécutifs ou indirects, les exclusions et les limites mentionnées ci-dessous peuvent ne pas s'appliquer. DANS LA MESURE DE CE QUI EST PERMIS PAR LA LOI APPLICABLE, DELTA FAUCET COMPANY SE DÉGAGE DE TOUTE RESPONSABILITÉ À L'ÉGARD DES DOMMAGES PARTICULIERS, CONSÉCUTIFS OU INDIRECTS (Y COMPRIS LES FRAIS DE MAIN-D'ŒUVRE POUR LA RÉPARATION, LE REMPLACEMENT, L'INSTALLATION OU LA DÉPOSE DU PRODUIT), PEU IMPORTÉ QU'ILS DÉCOULENT D'UNE RUPTURE D'UNE GARANTIE IMPLÍCITE OU EXPLÍCITE, D'UNE RUPTURE DE CONTRAT, D'UN DÉLIT CIVIL OU D'UNE AUTRE CAUSE. DELTA FAUCET COMPANY SE DÉGAGE DE TOUTE RESPONSABILITÉ À L'ÉGARD DE TOUTE DÉTÉRIORATION DU ROBINET RÉSULTANT D'UNE USURE RAISONNABLE ET DES DOMMAGES CAUSÉS PAR UNE UTILISATION À L'EXTÉRIEUR, UN MAUVAIS USAGE (Y COMPRIS L'UTILISATION DU PRODUIT À DES FINS AUTRES QUE CELLES AUXQUELLES IL EST DESTINÉ), LE GEL DE L'EAU, UN USAGE ABUSIF, LA NÉGLIGENCE OU L'UTILISATION D'UNE MÉTHODE D'INSTALLATION, DE MAINTENANCE OU DE RÉPARATION INCORRECTE OU INADÉQUATE, Y COMPRIS LES DOMMAGES RÉSULTANT DU NON-RESPECT DES INSTRUCTIONS D'INSTALLATION, D'ENTRETIEN ET DE NETTOYAGE APPLICABLES, ET CES DOMMAGES NE SONT PAS COUVERTS PAR LA GARANTIE. Avis à l'intention des résidents de l'État de New Jersey : Les dispositions de la présente garantie, y compris ses limitations, s'appliquent dans toute la mesure permise par les lois de l'État de New Jersey.

Droits supplémentaires. La présente garantie vous procure des droits précis reconnus par la loi. Vous pouvez avoir d'autres droits qui varient selon l'État ou la province.

La présente garantie écrite est la seule garantie offerte par Delta Faucet Company et elle n'est pas transférable.

Si vous avez des questions ou des préoccupations concernant notre garantie, veuillez communiquer avec nous de la manière indiquée ci-dessous ou consulter notre FAQ sur la garantie à www.deltafaucet.com.

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50353

**MULTICHOICE® ROUGH-IN BODY****PIEZAS PARA LA INSTALACIÓN
INTERNA MULTICHOICE®****CORPS DE ROBINET MULTICHOICE®**

Models/Modelos/Modèles

R10000

Series/Series/Seria

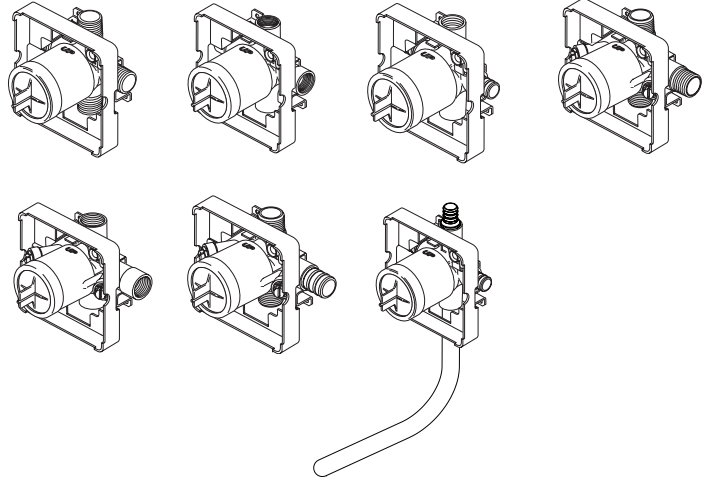
Write purchased model number here.
Escriba aquí el número del modelo comprado.
Inscrivez le numéro de modèle ici.

Register Online
Regístrese en línea
S'enregistrer en ligne
www.deltafaucet.com/registerme

To reference replacement parts and access additional
technical documents and product info,
visit www.deltafaucet.com

Para referencia sobre las piezas de repuesto y acceder a
documentos técnicos adicionales e información del producto,
visite www.deltafaucet.com

Pour obtenir la référence des pièces de rechange ainsi
que pour avoir accès à d'autres documents techniques et
renseignements sur le produit, allez à www.deltafaucet.com



1-800-345-DELTA (3358)
www.deltafaucet.com/service-parts

⚠ CAUTION

Failure to read these instructions prior to installation may result in personal injury, property damage, or product failure. Manufacturer assumes no responsibility for product failure due to improper installation.

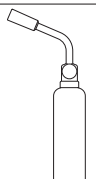
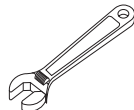
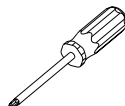
⚠ ADVERTENCIA

El no leer estas instrucciones de instalación puede resultar en lesiones personales, daños a la propiedad, o falla en el funcionamiento del producto. El fabricante no asume ninguna responsabilidad por la falla del producto debido a una instalación incorrecta.

⚠ AVERTISSEMENT

L'omission de lire les présentes instructions avant l'installation peut entraîner des blessures, des dommages matériels ou le bris du produit. Le fabricant se dégage de toute responsabilité à l'égard d'un bris du produit causé par une mauvaise installation.

You may need:
Usted puede necesitar:
Articles dont vous pouvez avoir besoin :



IMPORTANT

This product must be installed by a professional plumber in accordance with all applicable building and plumbing codes and regulations.

Read all instructions before installation. Failure to read and follow the instructions and warnings below or elsewhere in this document may result in product failure, personal injury, or property damage. Manufacturer assumes no responsibility for product failure or other damage caused by failure to follow these instructions and warnings.

This product includes a disposable plastic test cap, which is designed for temporary use while leak testing and flushing the valve body and associated piping. To reduce the risk of water leaks and damage:

1. The disposable test cap should not be left on the valve body any longer than it takes to leak test and flush the assembly. If the disposable test cap is left in place after leak testing and flushing, which should be avoided, the water supply must be shut off and drained, especially in cold conditions and months when freeze events are more likely. Do not re-use the disposable test cap.
2. The disposable test cap's material, though strong, may be damaged or weakened by chemicals or abrasives. If the disposable test cap is exposed to cleaners, acids, or chemicals including but not limited to cleaners containing muriatic or hydrochloric acid, lime, or lye, it should be immediately replaced.

The failure to follow these instructions may result in water damage or other significant property damage and will void the warranty.

Care should be given to the cleaning of this product, including all parts other than the disposable test cap. Although the other parts are made of extremely durable materials, the finish can be damaged by abrasives, polish, and cleaners. To clean, wipe gently with a damp cloth and blot dry with a soft towel.

IMPORTANTE

Este producto debe ser instalado por un plomero profesional conforme a todos los códigos y normativas de construcción y plomería aplicables.

Lea todas las instrucciones antes de la instalación. No leer ni seguir las instrucciones y advertencias que se indican a continuación o en otra parte de este documento puede causar fallas del producto, lesiones personales o daños a la propiedad. El fabricante no asume responsabilidad alguna por fallas del producto u otros daños causados por no seguir estas instrucciones y advertencias.

Este producto incluye una tapa de plástico de prueba desechable, diseñada para uso temporal durante la prueba de fugas y la descarga del cuerpo de la válvula y de las tuberías asociadas. Para reducir el riesgo de fugas de agua y daños:

1. La tapa de prueba desechable no debe permanecer en el cuerpo de la válvula más tiempo del necesario para realizar la prueba de fugas y la descarga del ensamble. Si se deja puesta la tapa de prueba desechable después de la prueba de fugas y la descarga, lo cual debe evitarse, se deberá cerrar y drenar el suministro de agua, especialmente en condiciones frías o durante los meses con mayor probabilidad de heladas. No reutilice la tapa de prueba desechable.
2. Si bien el material de la tapa de prueba desechable es resistente, puede dañarse o debilitarse con productos químicos o abrasivos. Si la tapa de prueba desechable entra en contacto con limpiadores, ácidos o productos químicos, incluidos, entre otros, limpiadores que contengan ácido muriático o clorhídrico, cal o lejía, se debe reemplazar de inmediato.

No seguir estas instrucciones puede ocasionar daños por agua u otros daños importantes a la propiedad, además de anular la garantía.

Debe prestarse especial atención a la limpieza de este producto, incluidas todas las piezas además de la tapa de prueba desechable. Si bien las demás piezas están fabricadas con materiales extremadamente duraderos, el acabado puede dañarse con productos abrasivos, pulidores o limpiadores. Para limpiar, frote suavemente con un paño húmedo y seque con una toalla suave.

IMPORTANT

Ce produit doit être installé par un plombier professionnel conformément à tous les codes et règlements du bâtiment et de la plomberie applicables.

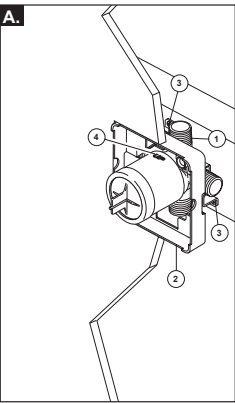
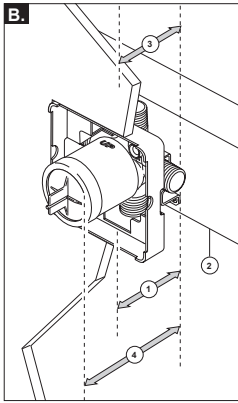
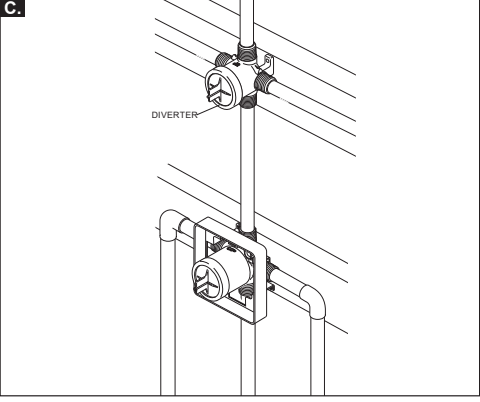
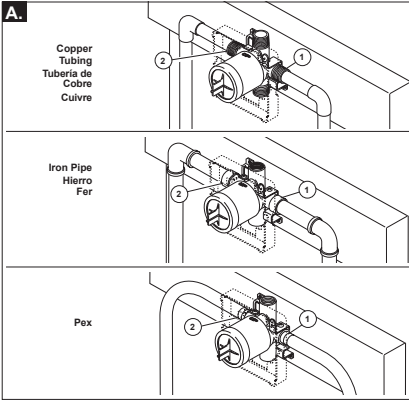
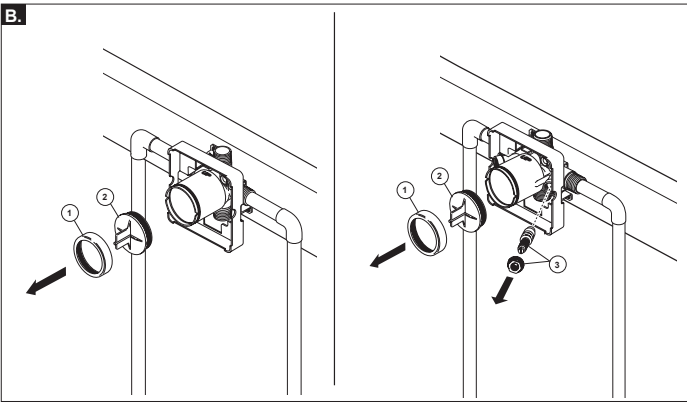
Lisez toutes les instructions avant de procéder à l'installation. Le fait de ne pas lire ou de ne pas respecter les instructions et les avertissements ci-dessous ou ailleurs dans ce document peut entraîner un dysfonctionnement du produit, des blessures ou des dommages matériels. Le fabricant décline toute responsabilité en cas de défaillance du produit ou d'autres dommages résultant du non-respect de ces instructions et avertissements.

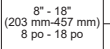
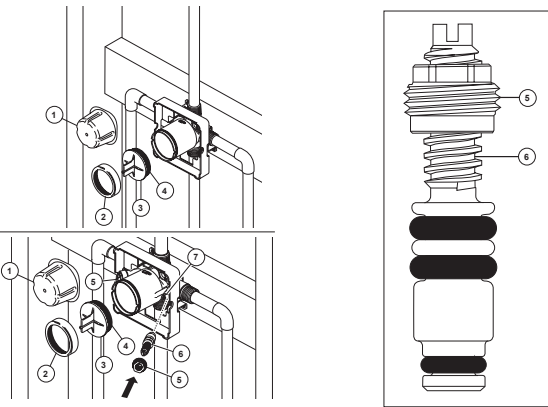
Ce produit comprend un bouchon d'essai en plastique jetable, conçu pour un usage temporaire lors des tests d'étanchéité et du rinçage du corps de la vanne et de la tuyauterie associée. Pour réduire le risque de fuites d'eau et de dommages :

1. Ne laissez pas le bouchon d'essai jetable en place plus longtemps qu'il ne faut pour tester l'étanchéité et rincer l'ensemble. Si, par inadvertance, il demeure en place après ces opérations, coupez et videz l'alimentation en eau, notamment en période froide ou lorsque le gel est possible. Ne réutilisez jamais ce bouchon d'essai jetable.
2. Le matériau du bouchon d'essai jetable, bien que résistant, peut être fragilisé par des produits chimiques ou abrasifs. S'il est en contact avec des nettoyants, des acides ou d'autres produits chimiques, tels que des nettoyants contenant de l'acide chlorhydrique, de la chaux ou de la soude, remplacez-le immédiatement.

Le non-respect de ces instructions peut provoquer des dégâts d'eau ou d'autres dommages importants et annulera la garantie.

Portez une attention particulière au nettoyage de ce produit, à l'exception du bouchon d'essai jetable. Bien que les autres pièces soient conçues dans des matériaux très durables, leur finition peut être altérée par des abrasifs, des agents de polissage ou certains nettoyants. Pour les nettoyer, passez délicatement un chiffon humide, puis séchez-les en tapotant avec une serviette douce.

1 A.  B.  C. 	2 A.  B. 
A. SHUT OFF WATER SUPPLIES. Consider the type and thickness of your finished wall before placing your stringer back plate. Install the body (1) so the surface of the finished wall is flush with the front of the plasterguard (2) $\pm 1/4"$. Note: For with stops models, plasterguard must be flush or subflush $1/4"$ to finished wall. Mount body using the two stringer mounting holes (3) on the bracket. Make sure the word "UP" (4) is on top of the valve body when installing. B. Distance (1) from the stringer (2) to the front of the plasterguard is $2\ 3/4" \pm 1/4"$ (70 mm ± 6 mm). Note: This is the same distance to the finished wall (3). Distance (4) from the stringer (2) to the front of the bonnet is $3\ 7/8"$ (99 mm). (For reference only) If a thin wall is used, be sure to have the plasterguard behind the wall, otherwise the wall should always be flush with the front of the plasterguard. See instruction on the bag for thin wall mounting. Note: For thin wall installation, RP47202 might be needed. C. The figure illustrates the diverter and MultiChoice installed in the same finished wall. Note: Refer to the diverter rough installation instructions for more information.	A. Connect valve body to water supplies using the proper fittings for your valve body type (copper tubing, iron pipe or Pex). Note: For Pex, be sure to use the right fitting for crimping and the right tool for cold expansion. If either of the two outlet ports is to be unused, seal the port with a pipe plug. Note: (1) is the cold inlet port and (2) is the hot inlet port. If you are making a back to back or reverse installation (hot on right and cold on left) install the valve body as described, but the water supply lines will be reversed. Note: (1) is the hot inlet port and (2) is the cold inlet port. B. Remove bonnet (1) and test cap (2) before soldering. Warning: Avoid soldering at high temperature. Exposure to high temperatures may damage screen. Be sure stops (3) are removed from the w/stops version before soldering. (To avoid damage to the test cap, do not install before soldering).
A. CIERRE LOS SUMINISTROS DE AGUA. Considere el tipo y el grosor de su pared terminada antes de colocar su placa trasera de acoplamiento de las tuberías. Instale el cuerpo (1) de manera que la superficie de la pared terminada esté al ras con la parte delantera del protector de yeso (2) $\pm 1/4"$. Nota: Para modelos con topes, el yeso debe estar al mismo nivel o por debajo de $1/4"$ de la pared terminada. Instale la pieza usando los dos agujeros de instalación del acoplamiento (3) en el soporte. Cuando esté haciendo la instalación, asegúrese que la palabra "UP" (4) quede arriba de la válvula. B. La distancia (1) desde el larguero (2) al frente del protector de yeso es $2\ 3/4" \pm 1/4"$ (70 mm ± 6 mm). Nota: Esta es la misma distancia a la pared acabada (3). La distancia (4) desde el larguero (2) en la parte delantera del capuchón o tuerca tapa de $3\ 7/8"$ (99 mm). (Sólo como referencia) Si está haciendo la instalación en una pared delgada, asegúrese tener el protector de yeso detrás de la pared, de lo contrario la pared debe siempre estar al ras con la parte delantera del protector de yeso. Lea las instrucciones en la bolsa para instalación en paredes delgadas. Nota: Para una instalación en pared delgada, puede requerir RP47202. C. La figura muestra el desviador y MultiChoice instalado en la misma pared terminada. Nota: Para más información, consulte con las instrucciones de instalación preliminar del desviador.	A. Conecte el cuerpo de la válvula a los suministros de agua usando los accesorios apropiados para el tipo de su válvula (tubería de cobre, hierro o Pex). Nota: Para Pex, asegúrese de usar el accesorio correcto para plegar y la herramienta adecuada para la expansión en frío. Si no va a usar alguna de las dos entradas de agua, séllela con un tapón de tubería. Nota: (1) es la entrada del agua fría y el (2) es la entrada del agua caliente. Si está haciendo una instalación dorso con dorso o a la inversa (caliente en la derecha y fría en la izquierda) instale el cuerpo de la válvula como se describe arriba, pero coloque al inverso las líneas de suministro de agua. Nota: (1) es la entrada de agua caliente (2) es la entrada del agua fría. B. Quite la tuerca tapa (1) y la tapa de prueba (2) antes de soldar. AVISO: Evite soldar a temperaturas altas. Si se deja expuesto a temperaturas altas pudiera dañar la rejilla. Sea seguro que las válvulas apagadas (3) están quitadas de la versión con las paradas antes de soldar. (Para evitar daños a la tapa de prueba, no la instale antes de soldar).

3 	4 
Connect top outlet (1) to shower pipe with proper fittings. Connect bottom outlet (2) to tub spout pipe with proper fittings. Pipe (3) between valve body and tub spout must be a minimum of 1/2" (13 mm) copper pipe or 1/2" (13 mm) iron pipe in a straight drop no less than 8" (203 mm) but no more than 18" (457 mm) long with only one iron pipe or copper 90 degree elbow to the tub spout nipple. Do not use PEX tubing for tub spout drop. Note: There is no tub outlet in high flow models.	PRESSURE TESTING & FLUSHING THE INSTALLATION Prior to testing, remove cover (1), bonnet (2) and cap (3). Ensure O-ring (4) is properly installed. Reinstall cap and bonnet and tighten securely. Plug both outlets with proper fittings. Check for leaks. After testing remove shower and/or tub spout plug and flush system. After flushing and reinstall cap, bonnet and cover. Install stops (5 & 6) in the w/stops version and set to full open. Note: Install stops in the w/stops version as follows: Thread nut (5) on stem (6) as shown. Then press stem and nut assembly into body (7) and tighten using a 3/8", 6 point, deep well socket. With a flat head screwdriver, adjust stem clockwise to close and counterclockwise to open. When the pressure testing and flushing is complete, dispose of the test cap - do NOT re-use it.
Conecte la salida de arriba (1) a la tubería de la regadera con los accesorios apropiados. Conecte la salida de abajo (2) a la tubería del surtidor de la bañera con los accesorios apropiados. La tubería (3) entre el cuerpo de la válvula y el de la bañera debe ser de un mínimo de 1/2" (13 mm) de tubería de cobre ó 1/2" (13 mm) de tubería de hierro en caída recta no menos de 8" (203 mm) pero no más de 18" (457 mm) de largo a la enterroscas del surtidor de la bañera y con sólo un codo de 90 grados, de tubería de hierro o cobre. No use la tubería PEX como tubería entre la válvula y el surtidor de la bañera.	PRUEBA DE PRESIÓN Y LIMPIEZA DE LA INSTALACIÓN Antes de probar, quite la cubierta (1), el capuchón (2) y la tapa (3). Asegúrese que el aro O (4) están correctamente instalados. Si lo ha quitado, instale otra vez la tapa y el capuchón, y apriete bien. Tape ambas salidas con los accesorios apropiados. Examine si hay filtraciones o fugas. Después de hacer la prueba quite el tapón de la regadera y/o bañera y deje que el agua corra para limpiar el sistema de tuberías. Después de dejar el agua correr y reinstale la tapa, el capuchón y la cubierta. Instale las válvulas apagadas (5 y 6) en con las paradas versión y sistema para abrirse por completo. Nota: Instale las paradas en con la versión de las válvulas apagadas como sigue: Rosque la tuerca (5) en el vástago (6) según lo demostrado. Después presione el montaje del vástago y de tuerca en cuerpo (7) y apriete con un 3/8", 6 puntos, zócalo bien profundo. Con un destornillador principal plano, ajuste el vástago a la derecha al cierre y a la izquierda abrirse. Cuando se completan las pruebas de presión y el lavado, deseché la tapa de prueba, NO la vuelva a utilizar.
À l'aide des raccords appropriés, raccordez l'orifice supérieur (1) au tuyau de la douche et l'orifice inférieur (2) au tuyau du bec de baignoire. Le corps de robinet doit être relié au bec de baignoire par un tuyau de cuivre d'au moins 1/2 po (13 mm) ou un tuyau de fer d'au moins 1/2 po (13 mm). Ce tuyau (3) doit être droit et il doit avoir une longueur d'au moins 8 po (203 mm) et d'au plus 18 po (457 mm); il doit être relié au tuyau du bec de baignoire par un seul coude à 90 degrés en cuivre ou en fer. N'utilisez pas de tube PEX pour raccorder le bec.	ESSAI SOUS PRESSION ET RINÇAGE DE L'INSTALLATION Avant d'effectuer l'essai, enlevez le couvercle (1), le chapeau (2) et le capuchon (3). Assurez-vous que le joint torique (4) sont bien installés. Reposez le capuchon et le chapeau si vous les avez enlevés et serrez-les solidement. Obturez les deux sorties à l'aide des bouchons appropriés. Vérifiez l'étanchéité. Après avoir réalisé l'essai, enlevez le bouchon de la sortie de la douche et/ou le bouchon de la sortie du bec de baignoire et rincez l'installation. Une fois l'installation rincée et reposez le capuchon, le chapeau ainsi que le couvercle. Installez les valves coupées (5 et 6) dans avec des arrêts version et ensemble sur grand ouvert. Note : Installez les arrêts dans avec la version de valves coupées comme suit : Filetez l'écrou (5) sur la tige (6) comme montré. Alors serrez l'ensemble de tige et d'écrou dans le corps (7) et serrez en utilisant un 3/8", 6 points, douille bonne profonde. Avec un tournevis principal plat, ajustez la tige dans le sens des aiguilles d'une montre sur la fin et s'ouvrir dans le sens contraire des aiguilles d'une montre. Une fois le test de pression et le rinçage terminés, jetez le capuchon de test - ne le réutilisez pas.

Limited Warranty on Delta® Faucets

Parts and Finish: All parts (other than electronic parts and batteries) and finishes of Delta® faucets purchased from authorized Delta sellers are warranted to the original consumer purchaser to be free from defects in material and workmanship for as long as the original consumer purchaser owns the home in which the faucet was first installed. For commercial purchasers, (a) the warranty period is ten (10) years for multi-family residential applications and (b) five (5) years for all other commercial applications, in each case from the date that the product is received by the original purchaser or their authorized representative (installation contractor, etc.). For purposes of this warranty, the term "multi-family residential application" refers to the purchase of the faucet from an authorized Delta seller by a purchaser who owns but does not live in the residential dwelling in which the faucet is initially installed, such as in a rented or leased single unit or multi-unit detached home (duplex or townhome), or a condominium, apartment building or community living center. The following installations are not considered multi-family residential applications, are excluded from the 10-year warranty and are subject to the 5-year warranty: industrial, institutional or other business premises, such as a dormitory, hospitality premises (hotel, motel or extended stay location), airport, educational facility, long- or short-term healthcare facility (hospital, rehabilitation center, nursing, assisted or staged-care living unit), public space or common area.

Parts and Finish for Delta® Recertified Faucets: Delta Faucet Company offers for sale online Delta® Recertified faucets. Delta® Recertified faucets only include faucets that have been certified as such by Delta Faucet Company. All parts (other than electronic parts and batteries) and finishes of these Delta® Recertified faucets are warranted to the original consumer purchaser to be free from defects in material and workmanship for ten (10) years from the date that the product is received by the original purchaser or their authorized representative (installation contractor, etc.). For commercial purchasers, the warranty period is one (1) year from the date that the product is received by the original purchaser or their authorized representative (installation contractor, etc.).

Electronic Parts: Electronic parts (other than batteries), if any, of Delta® faucets purchased from deltafaucet.com or authorized Delta sellers are warranted to the original consumer purchaser to be free from defects in material and workmanship for five (5) years from the date that the product is received by the original purchaser or their authorized representative (installation contractor, etc.) or, for commercial purchasers, for one (1) year from the date that the product is received by the original purchaser or their authorized representative (installation contractor, etc.). No warranty is provided on batteries.

What We Will Do: Delta Faucet Company will repair or replace, free of charge, during the applicable warranty period (as described above), any part or finish that proves defective in material and/or workmanship under normal installation, use and service. Delta Faucet Company may, in its sole discretion, use new, refurbished or recertified parts or products for such repair or replacement. If repair or replacement is not practical, Delta Faucet Company may elect to refund the purchase price in exchange for the return of the product. **These are your exclusive remedies.**

What Is Not Covered: Because Delta Faucet Company is unable to control the quality of Delta products sold by unauthorized sellers, unless otherwise prohibited by law, this warranty does not cover Delta products purchased from unauthorized sellers.

Any labor charges incurred by the purchaser to repair, replace, install or remove this product are not covered by this warranty. Delta Faucet Company shall not be liable for any damage to the faucet resulting from reasonable wear and tear, outdoor use, misuse (including use of the product for an unintended application), freezing water, abuse, neglect or improper or incorrectly performed installation, maintenance or repair, including failure to follow the applicable care and cleaning instructions. Delta Faucet Company recommends using a professional plumber for all installation and repair of faucets. We also recommend that you use only genuine Delta® replacement parts.

What You Must Do To Obtain Warranty Service or Replacement Parts: A warranty claim may be made and replacement parts may be obtained by calling 1 800 345 DELTA (3358) or by contacting us by mail or online as follows (please include your model number, date of original purchase and documentation of the date of receipt of the product by the original purchaser or their authorized representative (installation contractor, etc.)):

In the United States and Mexico:

Delta Faucet Company
55 E. 111th Street
Carmel, IN 46280
Attention: Warranty Service
www.deltafaucet.com/service-parts/contact-us

In Canada:

Masco Canada Limited, Plumbing Group
Technical Service Centre
350 South Edgeware Road
St. Thomas, Ontario, Canada N5P 4L1
Attention: Customer Service
<http://www.deltafaucet.ca/customersupport/assistance.html>

Proof of purchase (original sales receipt showing purchase date) and documentation of the date of receipt of the product by the original purchaser or their authorized representative (installation contractor, etc.) from the original purchaser must be made available to Delta Faucet Company for all warranty claims unless the purchaser has registered the product with Delta Faucet Company or the product is a Delta® Recertified product purchased from deltafaucet.com. This warranty applies only to Delta® faucets manufactured after January 1, 2019 and installed in the United States of America, Canada and Mexico.

Limitation on Duration of Implied Warranties: Please note that some states/provinces (including Quebec) do not allow limitations on how long an implied warranty lasts, so the below limitations may not apply to you. TO THE MAXIMUM EXTENT PERMITTED BY APPLICABLE LAW, ANY IMPLIED WARRANTY, INCLUDING THE IMPLIED WARRANTIES OF MERCHANTABILITY AND OF FITNESS FOR A PARTICULAR PURPOSE, IS LIMITED TO THE STATUTORY PERIOD OR THE DURATION OF THIS WARRANTY, WHICHEVER IS SHORTER.

Limitation of Special, Incidental or Consequential Damages: Please note that some states/provinces (including Quebec) do not allow the exclusion or limitation of special, incidental or consequential damages, so the below limitations and exclusions may not apply to you. TO THE MAXIMUM EXTENT PERMITTED BY APPLICABLE LAW, THIS WARRANTY DOES NOT COVER, AND DELTA FAUCET COMPANY SHALL NOT BE LIABLE FOR, ANY SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES (INCLUDING LABOR CHARGES TO REPAIR, REPLACE, INSTALL OR REMOVE THIS PRODUCT), WHETHER ARISING OUT OF BREACH OF ANY EXPRESS OR IMPLIED WARRANTY, BREACH OF CONTRACT, TORT, OR OTHERWISE. DELTA FAUCET COMPANY SHALL NOT BE LIABLE FOR ANY DAMAGE TO THE FAUCET RESULTING FROM REASONABLE WEAR AND TEAR, OUTDOOR USE, MISUSE (INCLUDING USE OF THE PRODUCT FOR AN UNINTENDED APPLICATION), FREEZING WATER, ABUSE, NEGLIGENCE OR IMPROPER OR INCORRECTLY PERFORMED INSTALLATION, MAINTENANCE OR REPAIR, INCLUDING FAILURE TO FOLLOW THE APPLICABLE INSTALLATION, CARE AND CLEANING INSTRUCTIONS. Notice to residents of the State of New Jersey: The provisions of this warranty, including its limitations, are intended to apply to the fullest extent permitted by the laws of the State of New Jersey.

Additional Rights: This warranty gives you specific legal rights, and you may also have other rights which vary from state/province to state/province. This is Delta Faucet Company's exclusive written warranty and the warranty is not transferable.

If you have any questions or concerns regarding our warranty, please contact us as provided above or view our Warranty FAQs at www.deltafaucet.com.

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NOTICE TO INSTALLER: Place this label on the water heater next to the temperature adjustment knob.

WARNING:

These series of tub/shower valves do not adjust automatically for changes in temperature at the hot water heater or inlet. If the temperature setting of the hot water heater or inlet is changed, the setting on these valves must be adjusted manually! Failure to re-adjust the valve may result in hot water burns or extreme cold resulting from variations in line pressure (such as when a dishwasher or washing machine is in use while you are taking a shower). After installation, verify that the rotational limit stop or temperature knob on the valve is set so that changes in line pressure or temperature do not result in uncomfortable water temperature changes. If the temperature setting of the hot water heater or inlet is changed after installation of the valve, the setting of the rotational limit stop or temperature knob also must be changed! Consult the installation instruction sheet for instructions on how to make this setting, or call us at 1-800-345-DELTA.

AVISO AL INSTALADOR: Coloque esta etiqueta en el calentador de agua al lado de la perilla para el ajuste de temperatura.

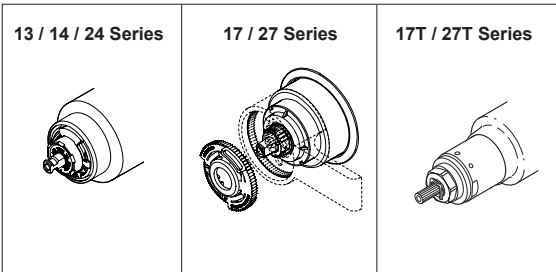
AVISO:

Esta serie de válvulas para bañeras/regaderas no se ajustan automáticamente a los cambios de temperatura en el calentador de agua o en el agua de entrada. Si el ajuste de la temperatura del calentador de agua o la temperatura del agua que entra cambia ¡El ajuste de estas válvulas se debe hacer manualmente! El no reajustar la válvula puede resultar en quemaduras por agua caliente o temperaturas de agua extremadamente frías resultando en variaciones de presión y temperatura (como cuando el fregador de platos o la lavadora están funcionando mientras que se baña). Después de la instalación, verifique que el control o tope del límite rotacional o la perilla del control de temperatura en la válvula está ajustada para que los cambios de presión y de temperatura en la línea no resulten en cambios incómodos de temperatura del agua. Si el ajuste de la temperatura del calentador de agua o de la entrada de agua se cambia después de la instalación de la válvula, el ajuste del tope del límite rotacional o la perilla de ajuste también se debe cambiar! Consulte con su hoja de instrucciones de instalación para saber como se ajusta o cambia el ajuste, o llámenos al 1-800-345-DELTA.

AVIS À L'INSTALLATEUR: Fixez cette étiquette sur le chauffe-eau près du bouton de réglage de température.

ATTENTION :

La soupape de robinet de baignoire ou de douche de cette série ne se règle pas automatiquement en fonction des changements de température de l'eau chaude au chauffe-eau ou de l'eau d'alimentation. En cas de modification du réglage de température du chauffe-eau ou de la température de l'eau d'alimentation, le réglage de cette soupape doit être modifié manuellement! Si le réglage de la soupape n'est pas modifié, le robinet pourra permettre l'écoulement d'eau très chaude susceptible de causer l'ébouillantage ou d'eau très froide, sous l'effet des variations de pression et de température dans la tuyauterie d'alimentation (lorsque la douche est utilisée en même temps que le lave-vaisselle ou la machine à laver, par exemple). Après l'installation, assurez-vous que la butée de température maximale ou le bouton de température sur la soupape est réglé de manière que les fluctuations de pression et de température dans la tuyauterie d'alimentation n'entraînent pas de changements de température de l'eau inconfortables. En cas de modification du réglage de température du chauffe-eau ou de la température de l'eau d'alimentation après l'installation de la soupape, le réglage de la butée de température maximale ou du bouton de température doit être modifié! Pour régler le bouton de température, consultez la feuille d'instructions d'installation ou appelez-nous au 1-800-345-DELTA.



NOTICE TO INSTALLER: Place this label close to the valve where the owner will see it, such as inside the door of a cabinet or vanity.

WARNING:

Water temperature changes due to seasonal or other inlet variations, such as changing the setting on the hot water heater may require adjustment of the rotational limit stop or temperature knob on your tub/shower valve to ensure a safe maximum temperature. These valve series do not automatically adjust for inlet temperature changes. If changes occur and you are not sure how to make the necessary rotational limit stop or temperature knob adjustments, please consult the installation instruction sheet provided with this valve or call 1-800-345-DELTA. These valve series are designed to minimize the effects of outlet water temperature changes due to inlet pressure changes, commonly caused by dishwashers, washing machines, toilets and the like. They may not provide protection from hot water burns when there is a failure of other temperature controlling devices elsewhere in the plumbing system. After making the necessary adjustments please fill in the information below. This valve/system has been set by the person listed below to ensure a safe maximum temperature. Any change in the setting may raise the discharge temperature above the limit considered safe and could lead to hot water burns. If this label has not been completed, you should verify that the rotational limit stop or temperature knob has been properly adjusted to suit your individual installation. The installation instruction sheet supplied with the valve provides information on how to make this setting.

AVISO AL INSTALADOR: Coloque esta etiqueta cerca de la válvula donde el propietario la pueda ver, tal como dentro de la puerta del gabinete o el tocador.

AVISO:

Los cambios de temperatura del agua por variaciones estacionales u otras variaciones en el agua de entrada, como el cambio por el ajuste en el calentador de agua, puede requerir el ajuste del tope del límite rotacional o ajuste de la perilla para el control de la temperatura de la válvula de su unidad bañera/regadera para asegurar una temperatura máxima segura. Esta serie de válvulas no se ajusta automáticamente para los cambios de temperatura del agua de entrada. Si cambios ocurren y usted no está seguro como hacer los ajustes necesarios con la perilla para controlar la temperatura, por favor consulte la hoja de instrucciones de instalación proporcionada con esta válvula o llámenos al 1-800-345-DELTA. Las válvulas de esta serie están diseñadas para minimizar los efectos por cambios de temperatura en el agua de entrada por cambios en la presión del agua, comúnmente causados por el uso simultáneo de fregadoras de platos, lavadoras, inodoros y aparatos similares. Estas pueden no proporcionar protección de quemaduras por el agua caliente cuando hay una falla de otros mecanismos que controlan la temperatura del agua en otro sitio del sistema de plomería. Después de hacer los ajustes necesarios, por favor escriba la información suministrada a continuación. Esta válvula/sistema han sido ajustada por la persona indicada a continuación para ayudar a asegurar una temperatura máxima segura. Cualquier cambio al ajuste puede aumentar la temperatura del agua de descarga sobre el límite considerado seguro y puede resultar en quemaduras por agua caliente. Si esta etiqueta no se ha llenado, debe verificar si el control o tope del límite rotacional o la perilla que controla la temperatura han sido correctamente ajustadas al gusto de su instalación individual. La hoja de instrucciones de instalación proporcionada con las válvulas le suministra información sobre como hacer este ajuste.

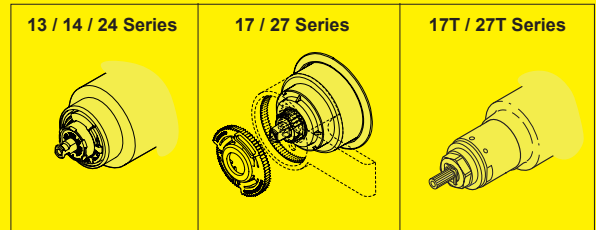
AVIS À L'INSTALLATEUR: Placez cette étiquette près de la soupape à un endroit où le propriétaire pourra la voir, du côté intérieur de la porte de l'armoire ou du meuble par exemple.

AVERTISSEMENT:

La température de l'eau peut varier en raison des changements de saison, d'une modification du réglage du chauffe-eau ou d'autres changements. Par conséquent, un réglage du bouton de température de votre soupape de douche ou de baignoire peut s'imposer pour que la température maximale de l'eau demeure sécuritaire. Les soupapes de cette série ne s'ajustent pas automatiquement aux changements de température de l'eau d'alimentation. Si des changements vous obligent à régler le bouton de température et vous n'êtes pas certain de la marche à suivre, veuillez consulter le feuillet d'instructions fourni avec la soupape ou appeler au 1-800-345-DELTA. Cette soupape est conçue pour réduire les risques de blessures causées par des changements de la température ou de la pression de l'eau d'alimentation habituellement causés par le lave-vaisselle, la machine à laver, une toilette ou un autre appareil qui consomme de l'eau. Elle peut ne pas assurer de protection contre l'ébouillantage en cas de défectuosité d'un autre dispositif de régulation de la température dans la tuyauterie. Après avoir effectué le réglage nécessaire, veuillez inscrire l'information requise ci-dessous. La personne dont le nom figure ci-dessous a réglé cette soupape pour qu'elle puisse maintenir une température maximale sécuritaire. Toute modification du réglage peut entraîner une élévation de la température de l'eau s'écoulant par la douche ou dans la baignoire au delà de la limite considérée sécuritaire, ce qui pourrait causer un ébouillantage. Si cette étiquette n'a pas été remplie, vous devriez vous assurer que le bouton de température a été réglé en fonction des caractéristiques de votre installation. Le feuillet d'instruction fourni avec la soupape indique la marche à suivre pour effectuer le réglage.

TO BE FILLED OUT BY THE INSTALLER / PARA SER LLENADO POR EL INSTALADOR / A REMPLIR PAR L'INSTALLATEUR:

BY/POR/PAR _____ COMPANY/COMPANIA/COMPAGNIE _____
DATE/FECHA/LE _____ PHONE/TELÉFONO/TELÉPHONE _____





see what Delta can do™

107528

MultiChoice® Valve Trim Installation Instructions

Owners Manual

13/14 Series

Write purchased model number here.



You May Need

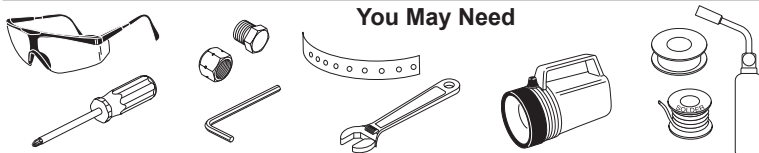


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Cartridge Summary Reference Sheet	Page 13

**For additional replacement parts,
visit www.deltafaucet.com/service-parts**

CAUTION: This system/device must be set by the installer to ensure safe, maximum temperature. Any change in the setting may raise the discharge temperature above the limit considered safe and may lead to hot water burns.

NOTICE TO INSTALLER: CAUTION! – As the installer of this valve, it is your responsibility to properly **INSTALL** and **ADJUST** this valve per the instructions given. This valve does not automatically adjust for inlet temperature changes, therefore, someone must make the necessary Rotational Limit Stop adjustments at the time of installation and further adjustments may be necessary due to seasonal water temperature change. **YOU MUST** inform the owner/user of this requirement by following the instructions. If you or the owner/user are unsure how to properly make these adjustments **please refer to page 6** and if still uncertain, call us at 1-800-345-DELTA.

After installation and adjustment, you must affix your name, company name and the date you adjusted the Rotational Limit Stop to the caution

label provided and apply or attach the label to the back side of the closest cabinet door and the warning label to the water heater. **Leave this Instruction Sheet for the owner's/user's reference.**

WARNING: This pressure balanced or thermostatic bath valve is designed to minimize the effects of outlet water temperature changes due to inlet pressure changes, commonly caused by dishwashers, washing machines, toilets and the like. It may not provide protection from hot water burns when there is a failure of other temperature controlling devices elsewhere in the plumbing system, if the rotational limit stop is not properly set or if the hot water temperature is changed after the settings are made or if the water inlet changes due to seasonal changes.

WARNING: Do not install a shut-off device on either outlet of this valve. When this type of device shuts off the water flow, it can defeat the ability of the valve to balance the hot and cold water pressures.

Limited Warranty on Delta® Faucets

Parts and Finish: All parts (other than electronic parts and batteries) and finishes of Delta® faucets purchased from authorized Delta sellers are warranted to the original consumer purchaser to be free from defects in material and workmanship for as long as the original consumer purchaser owns the home in which the faucet was first installed. For commercial purchasers, (a) the warranty period is ten (10) years for multi-family residential applications and (b) five (5) years for all other commercial applications, in each case from the date that the product is received by the original purchaser or their authorized representative (installation contractor, etc.). For purposes of this warranty, the term "multi-family residential application" refers to the purchase of the faucet from an authorized Delta seller by a purchaser who owns but does not live in the residential dwelling in which the faucet is initially installed, such as in a rented or leased single unit or multi-unit detached home (duplex or townhome), or a condominium, apartment building or community living center. The following installations are not considered multi-family residential applications, are excluded from the 10-year warranty and are subject to the 5-year warranty: industrial, institutional or other business premises, such as a dormitory, hospitality premises (hotel, motel or extended stay location), airport, educational facility, long- or short-term healthcare facility (hospital, rehabilitation center, nursing, assisted or staged-care living unit), public space or common area.

Parts and Finish for Delta® Recertified Faucets: Delta Faucet Company offers for sale online Delta® Recertified faucets. Delta® Recertified faucets only include faucets that have been certified as such by Delta Faucet Company. All parts (other than electronic parts and batteries) and finishes of these Delta® Recertified faucets are warranted to the original consumer purchaser to be free from defects in material and workmanship for ten (10) years from the date that the product is received by the original purchaser or their authorized representative (installation contractor, etc.). For commercial purchasers, the warranty period is one (1) year from the date that the product is received by the original purchaser or their authorized representative (installation contractor, etc.).

Electronic Parts: Electronic parts (other than batteries), if any, of Delta® faucets purchased from deltafaucet.com or authorized Delta sellers are warranted to the original consumer purchaser to be free from defects in material and workmanship for five (5) years from the date that the product is received by the original purchaser or their authorized representative (installation contractor, etc.) or, for commercial purchasers, for one (1) year from the date that the product is received by the original purchaser or their authorized representative (installation contractor, etc.). No warranty is provided on batteries.

What We Will Do: Because Delta Faucet Company will repair or replace, free of charge, during the applicable warranty period (as described above), any part or finish that proves defective in material and/or workmanship under normal installation, use and service. Delta Faucet Company may, in its sole discretion, use new, refurbished or recertified parts or products for such repair or replacement. If repair or replacement is not practical, Delta Faucet Company may elect to refund the purchase price in exchange for the return of the product.

These are your exclusive remedies.

What Is Not Covered: Because Delta Faucet Company is unable to control the quality of Delta products sold by unauthorized sellers, unless otherwise prohibited by law, this warranty does not cover Delta products purchased from unauthorized sellers.

Any labor charges incurred by the purchaser to repair, replace, install or remove this product are not covered by this warranty. Delta Faucet Company shall not be liable for any damage to the faucet resulting from reasonable wear and tear, outdoor use, misuse (including use of the product for an unintended application), freezing water, abuse, neglect or improper or incorrectly performed installation, maintenance or repair, including failure to follow the applicable care and cleaning instructions. Delta Faucet Company recommends using a professional plumber for all installation and repair of faucets. We also recommend that you use only genuine Delta® replacement parts.

What You Must Do To Obtain Warranty Service or Replacement Parts: A warranty claim may be made and replacement parts may be obtained by calling 1 800 345 DELTA (3358) or by contacting us by mail or online as follows (please include your model number, date of original purchase and documentation of the date of receipt of the product by the original purchaser or their authorized representative (installation contractor, etc.)):

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Attention: Customer Service
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Proof of purchase (original sales receipt showing purchase date) and documentation of the date of receipt of the product by the original purchaser or their authorized representative (installation contractor, etc.) from the original purchaser must be made available to Delta Faucet Company for all warranty claims unless the purchaser has registered the product with Delta Faucet Company or the product is a Delta® Recertified product purchased from deltafaucet.com. This warranty applies only to Delta® faucets manufactured after January 1, 2019 and installed in the United States of America, Canada and Mexico.

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Limitation of Special, Incidental or Consequential Damages: Please note that some states/provinces (including Quebec) do not allow the exclusion or limitation of special, incidental or consequential damages, so the below limitations and exclusions may not apply to you. TO THE MAXIMUM EXTENT PERMITTED BY APPLICABLE LAW, THIS WARRANTY DOES NOT COVER, AND DELTA FAUCET COMPANY SHALL NOT BE LIABLE FOR, ANY SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES (INCLUDING LABOR CHARGES TO REPAIR, REPLACE, INSTALL OR REMOVE THIS PRODUCT), WHETHER ARISING OUT OF BREACH OF ANY EXPRESS OR IMPLIED WARRANTY, BREACH OF CONTRACT, TORT, OR OTHERWISE. DELTA FAUCET COMPANY SHALL NOT BE LIABLE FOR ANY DAMAGE TO THE FAUCET RESULTING FROM REASONABLE WEAR AND TEAR, OUTDOOR USE, MISUSE (INCLUDING USE OF THE PRODUCT FOR AN UNINTENDED APPLICATION), FREEZING WATER, ABUSE, NEGLIGENCE OR IMPROPER OR INCORRECTLY PERFORMED INSTALLATION, MAINTENANCE OR REPAIR, INCLUDING FAILURE TO FOLLOW THE APPLICABLE INSTALLATION, CARE AND CLEANING INSTRUCTIONS. Notice to residents of the State of New Jersey: The provisions of this warranty, including its limitations, are intended to apply to the fullest extent permitted by the laws of the State of New Jersey.

Additional Rights: This warranty gives you specific legal rights, and you may also have other rights which vary from state/province to state/province.

This is Delta Faucet Company's exclusive written warranty and the warranty is not transferable.

If you have any questions or concerns regarding our warranty, please contact us as provided above or view our Warranty FAQs at www.deltafaucet.com.

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Delta HDF Limited Warranty

All parts of the Delta HDF faucet are warranted to the original consumer purchaser to be free from defects in material and workmanship for a period of five (5) years. This warranty is made to the original consumer purchaser and shall be effective from date of purchase as shown on purchaser's receipt.

Delta will replace, FREE OF CHARGE, during the warranty period, any part which proves defective in material and/or workmanship under normal installation, use and service. Replacement parts can be obtained from your local dealer or distributor listed in the telephone directory or by returning the part along with the purchaser's receipt to our factory, TRANSPORTATION CHARGES PREPAID, at the address listed. THIS WARRANTY IS THE ONLY EXPRESS WARRANTY MADE BY DELTA. ANY CLAIMS MADE UNDER THIS WARRANTY MUST BE MADE DURING THE FIVE YEAR PERIOD REFERRED TO ABOVE. ANY IMPLIED WARRANTIES, INCLUDING THE IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR

PURPOSE, ARE LIMITED IN DURATION TO THE DURATION OF THIS WARRANTY. LABOR CHARGES AND/OR DAMAGE INCURRED IN INSTALLATION, REPAIR OR REPLACEMENT AS WELL AS INCIDENTAL AND CONSEQUENTIAL DAMAGES CONNECTED THEREWITH ARE EXCLUDED AND WILL NOT BE PAID BY DELTA.

Some states do not allow limitations on how long an implied warranty lasts, or the exclusion or limitation of incidental or consequential damages, so the above limitations or exclusions may not apply to you.

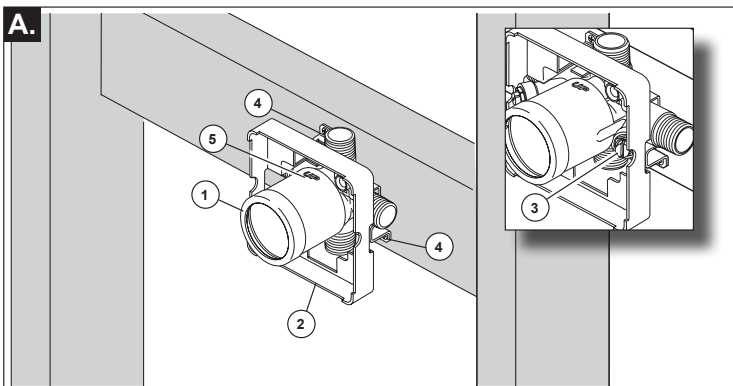
This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

This warranty is void for any damage to this faucet due to misuse, abuse, neglect, accident, improper installation, any use violative of instructions furnished by us or any use of replacement parts other than genuine Delta parts.

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1

MultiChoice® Rough-In Installation (When your product requires)



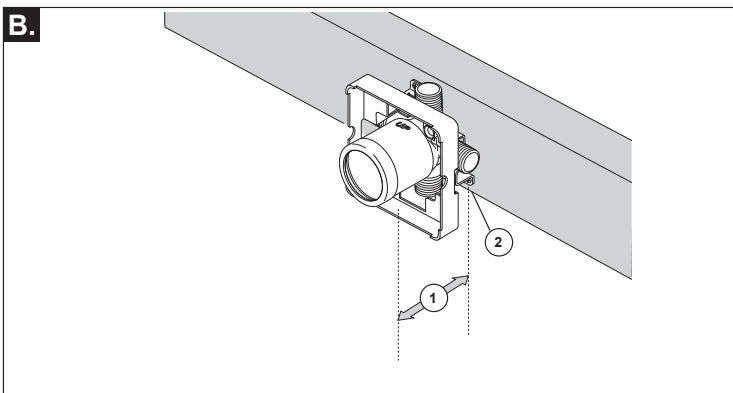
SHUT OFF WATER SUPPLIES.

Consider the type and thickness of your finished wall before placing your stringer back plate.

- Install the body (1) so the surface of the finished wall is flush with the front of the plasterguard (2) $\pm 3/8"$. **Note: For models with stops (3), plasterguard must be flush or subflush $3/8"$ to**

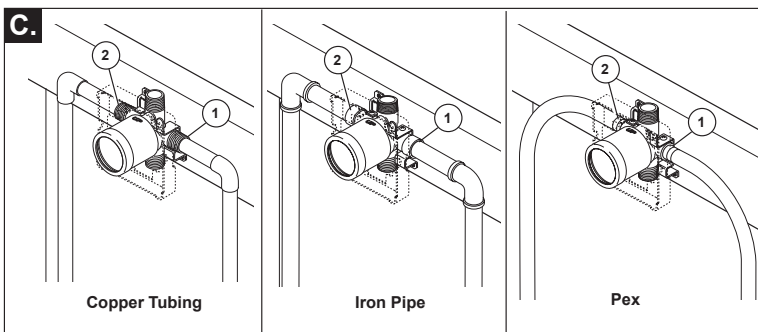
finished wall.

- Mount body using the two stringer mounting holes (4) on the bracket.
- Make sure the word "UP" (5) is on top of the valve body when installing.



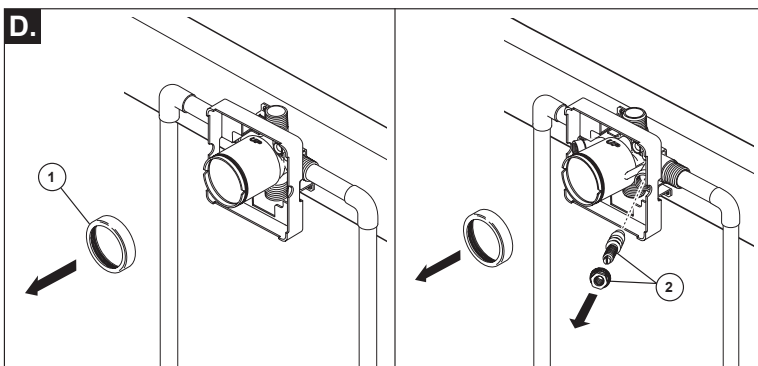
Distance (1) from the stringer (2) to the front of the plasterguard is 2.8" (71 mm).

If a thin wall is used, be sure to have the plasterguard behind the wall, otherwise the wall should always be flush with the front of the plasterguard. See instruction on the bag for thin wall mounting.



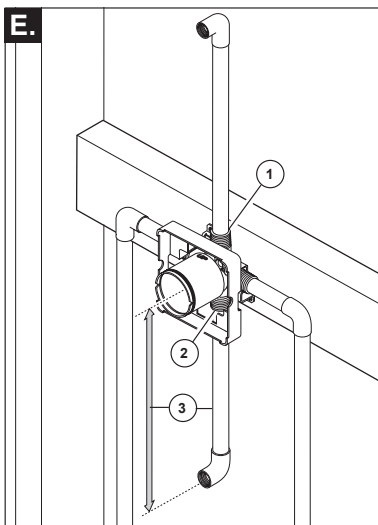
- Connect valve body to water supplies using the proper fittings for your valve body type (copper tubing, iron pipe or Pex). **Note: (1) is the cold inlet port and (2) is the hot inlet port.**
- If either of the two outlet ports is to be unused, seal the port with a pipe plug.

If you are making a BACK TO BACK OR REVERSE INSTALLATION (hot on right and cold on left) install the valve body as described, but the water supply lines will be reversed. **Note: (1) is the hot inlet port and (2) is the cold inlet port.**

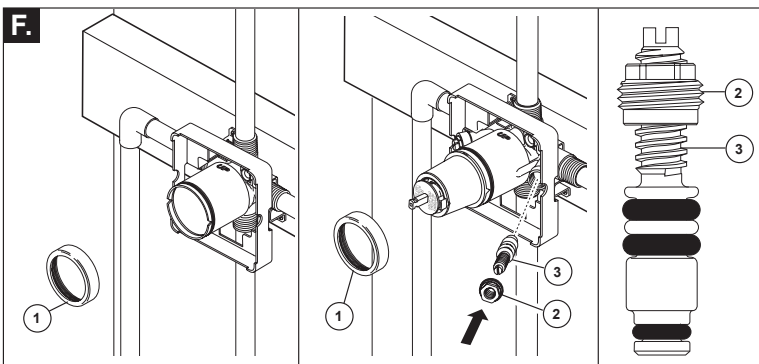


- Remove bonnet (1). **NOTICE:** Avoid soldering at high temperatures. Components of the rough could become damaged.

- Be sure stops (2) are removed from the w/stops version before soldering. Do not install stops before soldering.



- Connect top outlet (1) to shower pipe with proper fittings.
- Connect bottom outlet (2) to tub spout pipe with proper fittings.
- Pipe (3) between valve body and tub spout must be a minimum of 1/2" (13 mm) copper pipe or 1/2" (13 mm) iron pipe in a **straight** drop no less than 8" (203 mm) but no more than 18" (457 mm) long with only **one** iron pipe or copper 90 degree elbow to the tub spout nipple. **Do not use PEX tubing for tub spout drop.**



PRESSURE TESTING & FLUSHING THE INSTALLATION

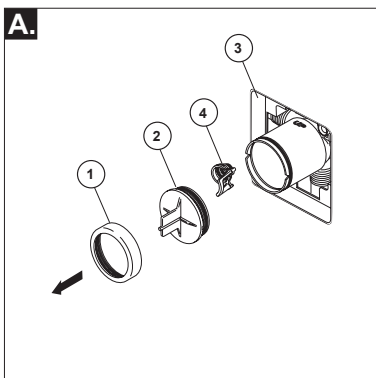
- To flush the system of debris, remove bonnet nut (1).
- Prepare the area for water spray.
- Slowly turn on the water supplies to purge the system for 30 seconds.
- After flushing, install the cartridge and bonnet nut.
- Turn cartridge stem counter clockwise until it stops.

FOR MODELS WITH STOPS, install the stops but leave them full open. Install stops as follows:

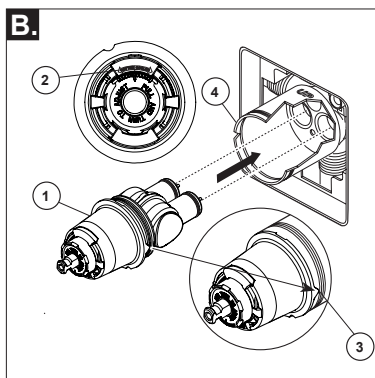
- Thread nut (2) onto stem (3) as shown. Then press stem and nut assembly into body and tighten using a 3/8", 6 point, deep well socket. With a flat head screwdriver, adjust stem clockwise to close and counterclockwise to open.
- Plug the tub spout and/ or shower outlet(s) with the appropriate fitting for your piping.
- Test for leaks.
- After testing, turn off the valve by rotating the cartridge stem fully clockwise.

2

Cartridge Installation



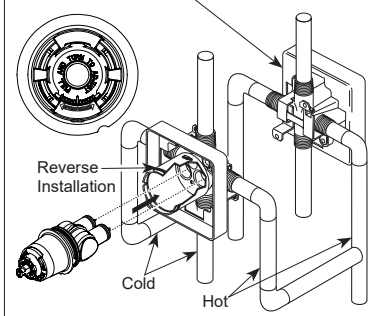
Turn off water supplies. Remove bonnet nut (1) and test cap (2) from the body. If this is not a thin wall mounting, the entire plasterguard (3) may be removed. If screen (4) is in place, remove before installing cartridge.



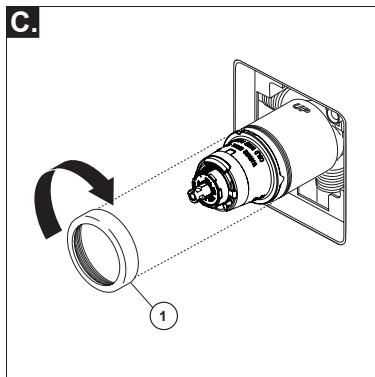
Rotate valve cartridge (1) so the words "HOTTER COLDER" (2) appear on the top. Insert cartridge assembly into rough-in body. A light coating of plumbers grease applied to o-rings may aid in assembly. Make sure the key (3) on the cartridge is fully engaged with the slot in the brass body (4).

Back to back Installation

Normal Installation (changes not required)

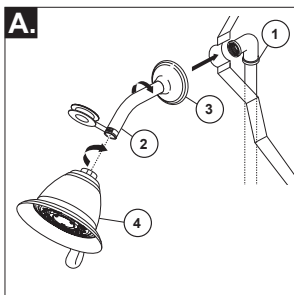


For back to back or reverse installations (hot on right and cold on left) insert the cartridge with the "hot side" on the right. If you are not making a reverse or back to back installation skip this step and continue with step 2C.

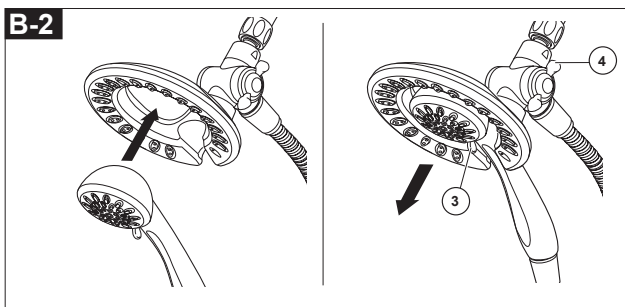
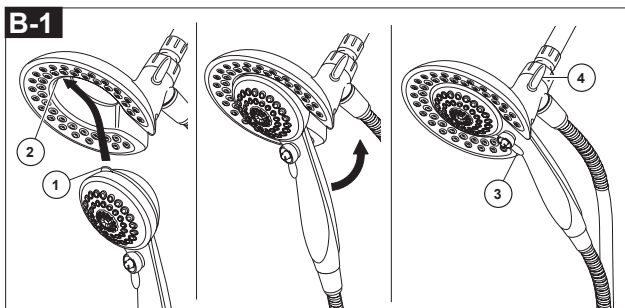


Slide bonnet nut (1) over the cartridge and thread onto the body. Hand tighten securely.

3 Shower Head and Tub Spout Installation



FOR SHOWER HEAD INSTALLATION: Connect top outlet (1) to shower arm (2) with proper fittings. To prevent damage to finish on shower arm, insert wall end of shower arm into shower flange (3) before screwing arm into riser connection. Thread shower head (4) onto shower arm. Apply plumber tape to pipe threads on both ends. Do not overtighten shower head.



B-1: To combine the two showers, insert the top tab (1) on the hand shower into the slot (2) of the shower head. Push the hand shower into the shower head until the two parts snap together.

B-2: To combine the two showers, push the hand shower into the shower head, then pull down on the hand shower until locked with the shower head.
If the shower head moves when removing the hand shower, hand tighten the connection between the shower head and the shower arm.

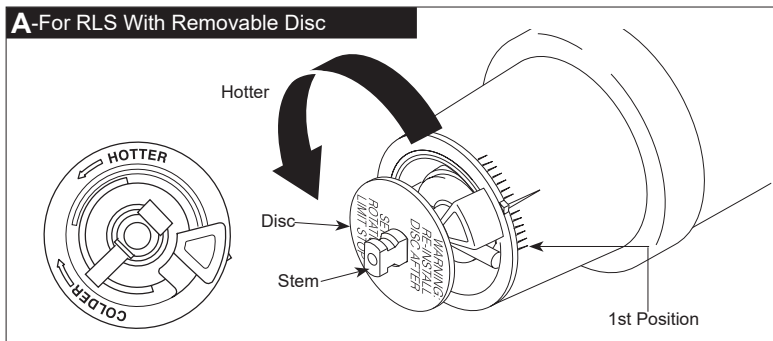
To change spray modes, turn the lever (3) left or right to the desired setting. Turn knob (4) to change between shower head only, shower head and hand shower or hand shower only.

FOR TUB SPOUT INSTALLATION:

Refer to the installation instructions supplied with your spout. Do not connect deck mount spouts to in-wall valves. Do not use hand showers connected in lieu of a tub spout to a tub/shower valve. Do not use PEX tubing for tub spout drop.

4 Adjusting the Rotational Limit Stop

A-For RLS With Removable Disc



IMPORTANT:

The Rotational Limit Stop is used to limit the amount of hot water available such that, if set properly, the user will not be scalded if the handle accidentally is rotated all the way to "hot" when a person is showering or filling a tub. The first position allows the **LEAST** amount of hot water to mix with the cold water in the system. In the first position the water will be the coldest possible when the handle is turned all the way to hot. As you move the Rotational Limit Stop counterclockwise, you progressively add more and more hot water in the mix. The last position to the left will result in the greatest amount of hot water to the mix, and the greatest risk of scald injury if someone accidentally turns the valve handle all the way to the hot side while showering or filling a tub.

WARNING: In some instances, setting the Rotational Limit Stop in the hottest position (full counterclockwise) could result in scald injury. It is necessary to adjust the Rotational Limit Stop so that the water coming out of the valve will not scald the user when the handle of the valve is rotated to the hot side.

- According to the majority of industry standards, the maximum allowable temperature of the water exiting the valve is 120°F (Your local plumbing codes may require a water temperature less than 120°F).

- The Rotational Limit Stop may need to be re-adjusted seasonally if the inlet water temperature changes. For example, during the winter, the cold water temperature is colder than it is during the summer which could result in varying outlet temperatures. A water temperature for

a comfortable bath or shower is typically between 90°F - 110°F.

- Run the water so that the cold water is as cold as it will get and hot water is as hot as it will get. Place the handle on the stem (see page 8, step 4C) and rotate the handle counterclockwise until the handle stops.

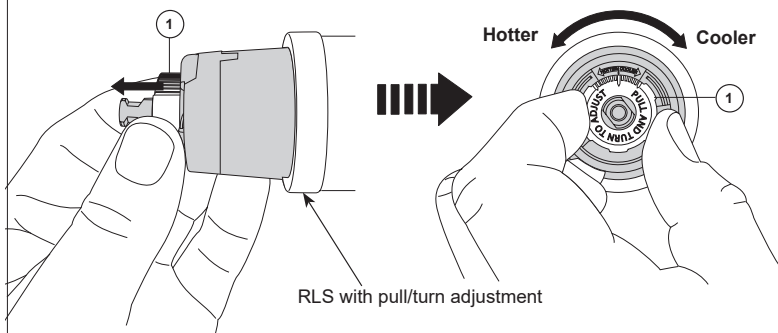
- Place a thermometer in a plastic tumbler and hold in the water stream. If the water temperature is above 120°F, the Rotational Limit Stop must be repositioned clockwise to decrease valve outlet water temperature to be less than 120°F or to meet the requirements of your local plumbing codes.

- To adjust the temperature of the water coming out of the valve, pull the disc back to a position where it is possible to remove the Rotational Limit Stop and readjust the teeth engagement position to the desired temperature. Clockwise will decrease the outlet temperature, counterclockwise will increase the outlet temperature. Temperature change per tooth (notch) could be 4° - 16°F based on inlet water conditions. Repeat as necessary. Push disc until fully seated.

WARNING: Failure to re-install Disc after setting Rotational Limit Stop could result in scald injury.

- MAKE SURE COLD WATER FLOWS FROM THE VALVE FIRST. MAKE SURE WATER FLOWING FROM THE VALVE AT THE HOTTEST FLOW POSSIBLE DOES NOT EXCEED 120°F OR THE MAXIMUM ALLOWED BY YOUR LOCAL PLUMBING CODE.**

B-For RLS With Pull/Turn Adjustment



IMPORTANT:

The Rotational Limit Stop is used to limit the amount of hot water available such that, if set properly, a scald injury is less likely to occur if the handle accidentally is rotated all the way to "hot" when a person is showering or filling a tub. The first position allows the **LEAST** amount of hot water to mix with the cold water in the system. In the first position the water will be the coldest possible when the handle is turned all the way to hot. As you move the Rotational Limit Stop counterclockwise, you progressively add more and more hot water in the mix. The last position to the left will result in the greatest amount of hot water to the mix, and the greatest risk of scald injury if someone accidentally turns the valve handle all the way to the hot side while showering or filling a tub.

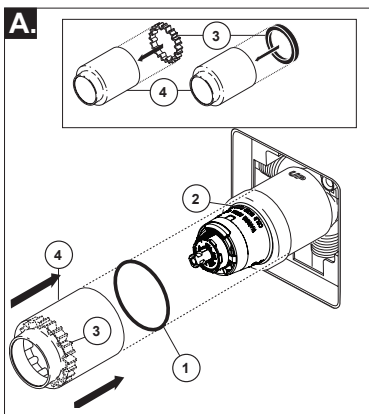
WARNING: In some instances, setting the Rotational Limit Stop in the hottest position (full counterclockwise) could result in scald injury. It is necessary to adjust the Rotational Limit Stop so that the water coming out of the valve will not scald the user when the handle of the valve is rotated to the hot side.

- According to the majority of industry standards, the maximum allowable temperature of the water exiting the valve is 120°F (Your local plumbing codes may require a water temperature less than 120°F).
- The Rotational Limit Stop may need to be re-adjusted seasonally if the inlet water temperature changes. For example, during the winter, the cold water temperature is colder than it is during the summer which could result in varying outlet temperatures. A water temperature for

a comfortable bath or shower is typically between 90°F - 110°F.

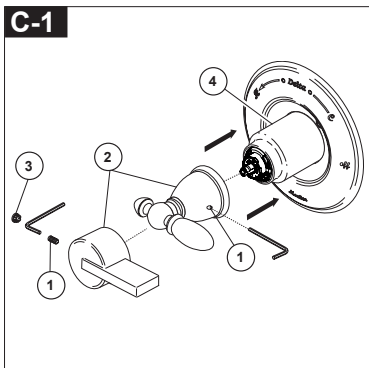
- Run the water so that the cold water is as cold as it will get and hot water is as hot as it will get. Place the handle on the stem (see page 8, step 4C) and rotate the handle counterclockwise until the handle stops.
- Place a thermometer in a plastic tumbler and hold in the water stream. If the water temperature is above 120°F, the Rotational Limit Stop must be repositioned clockwise to decrease valve outlet water temperature to be less than 120°F or to meet the requirements of your local plumbing codes.
- To adjust the temperature of the water coming out of the valve, pull the white Rotational Limit Stop (1) outward and rotate. Clockwise rotation will decrease the outlet temperature, counterclockwise rotation will increase the outlet temperature. Temperature change per tooth (notch) could be 4° - 16°F based on inlet water conditions. Repeat as necessary. When finished, make sure that the Rotational Limit Stop is fully retracted into the seated position. **WARNING: Do not take the Rotational Limit Stop apart.**
- **MAKE SURE COLD WATER FLOWS FROM THE VALVE FIRST. MAKE SURE WATER FLOWING FROM THE VALVE AT THE HOTTEST FLOW POSSIBLE DOES NOT EXCEED 120°F OR THE MAXIMUM ALLOWED BY YOUR LOCAL PLUMBING CODE.**

5 Trim Installation

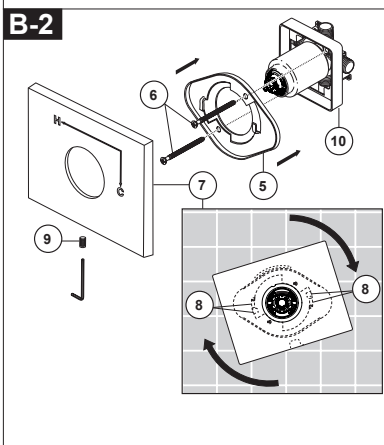
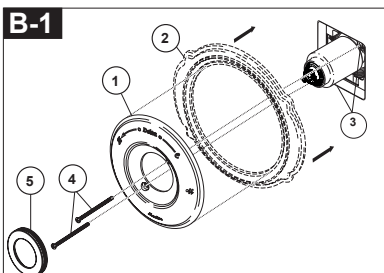


Slide O-ring (1) over cartridge and the bonnet nut (2). The O-ring, which acts as a spacer to steady the sleeve, should rest behind the bonnet nut.

If your model requires a spacer (3), insert it into the sleeve (4) and push it to the front. Slide the sleeve over the cartridge, body and O-ring.



Using an Allen wrench to secure the set screw (1), install the handle (2) onto the stem and tighten set screw. Insert plug button (3) (if your model has one) into set screw hole. Adjust the sleeve (4) to minimize the gap between the sleeve & handle.

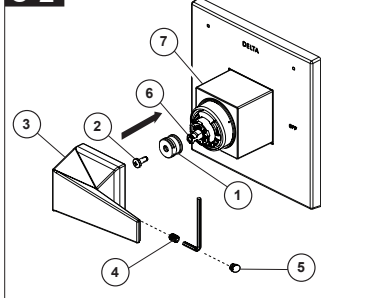


Note: Adjust for up to 1" thick wall. For thick wall installation, visit [delta faucet website](http://deltafaucet.com), check "view technical specification" of the models you bought, order the appropriate thick wall installation kit RP to get additional 1 3/4" wall thickness.

B-1: Secure the escutcheon (1) and backplate (2) (if your model has one) to the bracket (3) using the 2 screws (4) provided. Do not overtighten escutcheon screws. Press the cover (5) onto the escutcheon (1) when your product includes the cover.

B-2: Remove plaster guard (10). Install bracket (5) over the cartridge body using the 2 screws (6) provided. Install escutcheon (7) by placing it over the bracket as shown and rotating it to lock the tabs (8). Secure the escutcheon to the bracket using set screw (9).

C-2



Install adapter (1) on cartridge stem (6) with screw (2).

Thread set screw (4) into handle (3) slightly, put handle (3) on adapter (1), hold and adjust the handle (3) at OFF position to ensure it well aligned with sleeve (7). Then tighten set screw (4).

Apply pressure, insert button (5) until properly seated. Adjust the sleeve (7) to minimize the gap between the sleeve & handle.

Clean and Care

Care should be given to the cleaning of this product. Although its finish is extremely durable, it can be damaged by harsh abrasives or polish. To clean, simply wipe gently with a damp cloth and blot dry with a soft towel.

Warning: Scrubbing Bubbles® Bathroom Cleaner and Lyso® Basin Tub and Tile Cleaner

must not be used on the clear knob handles and levers. Use of these cleaners can result in cracked or severely damaged handles. If overspray gets onto the handles, immediately wipe them dry with a soft cotton cloth.

Maintenance

Faucet leaks from tub spout/shower head: SHUT OFF WATER SUPPLIES.

Replace seats and springs—Repair Kit RP4993. Check condition of lower O-rings and replace if necessary RP14414. See Helpful Hints 1, 2, & 3.

If leak persists:

SHUT OFF WATER SUPPLIES.
Replace valve cartridge RP46074.
See Helpful Hints 1, 2, 3, 4 & 5

Unable to maintain constant water temperature:

Replace housing assembly with RP46074 or follow instructions in Helpful Hints 1, 2, 3, 4 & 5.

Helpful Hints:

1. Before removing valve cartridge assembly for any maintenance, be sure to note the position of the rotational limit stop on the cap. The valve cartridge assembly must always be put back in the same position. BE SAFE! After you have finished the installation, turn on valve to make sure COLD WATER FLOWS FIRST.
2. To remove valve cartridge from body, shut off

water supplies and remove handle and bonnet nut. Do not pry the valve cartridge out of the body with a screwdriver. Place handle on stem and rotate counterclockwise approximately 1/4 turn after the stop has been contacted. Lift valve cartridge out of body.

3. To remove seats and springs.

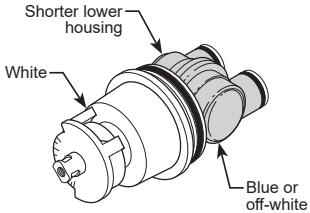
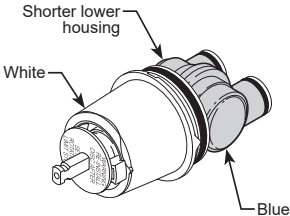
Remove valve cartridge. Separate cap assembly from the housing assembly by rotating the cap assembly counterclockwise 90° (degrees). Separate cap and housing assemblies.

4. If the water in your area has lime, rust, sand or other contaminants in it, your pressure balance valve will require periodic inspection. The frequency of the inspection will depend on the amount of contaminants in the water. To inspect valve cartridge remove it and follow the steps in note 1 above. Turn the valve to the full mix position and shake the cartridge vigorously. If there is a rattling sound, the unit is functional and can be reinstalled following instructions given in note 1 above. If there is no rattle, replace the housing assembly with the proper RP.

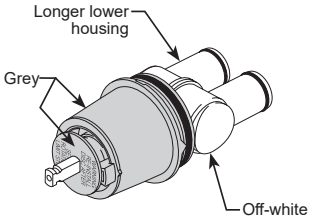
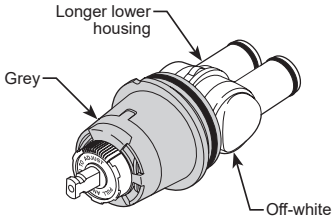
5. Push disc until fully seated. See page 9 for more details

Cartridge Summary Reference Sheet

Monitor® Series 1300/1400

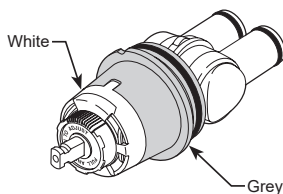
Cartridge shipped before March 2006.	Cartridge shipped in July 2006 and after (prior to MultiChoice® transition).
 Shorter lower housing White Blue or off-white	 Shorter lower housing White Blue
Order RP19804 to replace cartridge.	Order RP19804 to replace cartridge.

MultiChoice® 13/14

Cartridge shipped from March 2006 to August 2014.	Cartridge shipped in August 2014 and after.
 Longer lower housing Grey Off-white	 Longer lower housing Grey Off-white
Order RP46074 to replace cartridge.	Order RP46074 to replace cartridge.
NOTE: A running change for MultiChoice® 13/14 valves began August 2014, and features a new Rotational Limit Stop.	

MultiChoice® 13/14 (Ceramic)

Cartridge shipping in select models (-CER).



Order RP74236 to replace cartridge.



MultiChoice® Valve Trim with
Diverter
Installation Instructions

Owners Manual

T24859, T24867, T24897,
T24959, T24967, T24997
Series

84892

Write purchased model number here.

You May Need

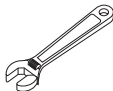
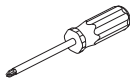


Table of Contents:

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Classic Series Replacement Parts	Page 12

For additional replacement parts, visit www.deltafaucet.com

CAUTION: This system/device must be set by the installer to ensure safe, maximum temperature. Any change in the setting may raise the discharge temperature above the limit considered safe and may lead to hot water burns.

NOTICE TO INSTALLER; CAUTION! – As the installer of this valve, it is your responsibility to properly **INSTALL** and **ADJUST** this valve per the instructions given. This valve does not automatically adjust for inlet temperature changes, therefore, someone must make the necessary Rotational Limit Stop adjustments at the time of installation and further adjustments may be necessary due to seasonal water temperature change. **YOU MUST** inform the owner/user of this requirement by following the instructions. If you or the owner/user are unsure how to properly make these adjustments **please refer to page 6** and if still uncertain, call us at 1-800-345-DELTA.

After installation and adjustment, you must affix your name, company name and the date you adjusted the Rotational Limit Stop to the caution

label provided and apply or attach the label to the back side of the closest cabinet door and the warning label to the water heater. **Leave this instruction sheet for the owner's/user's reference.**

WARNING: This pressure balanced or thermostatic bath valve is designed to minimize the effects of outlet water temperature changes due to inlet pressure changes, commonly caused by dishwashers, washing machines, toilets and the like. It may not provide protection from hot water burns when there is a failure of other temperature controlling devices elsewhere in the plumbing system, if the rotational limit stop is not properly set or if the hot water temperature is changed after the settings are made or if the water inlet changes due to seasonal changes.

WARNING: Do not install a shut-off device on either outlet of this valve. When this type of device shuts off the water flow, it can defeat the ability of the valve to balance the hot and cold water pressures.

Lifetime Faucet and Finish Limited Warranty

Parts and Finish

All parts (other than electronic parts and batteries) and finishes of this Delta® faucet are warranted to the original consumer purchaser to be free from defects in material and workmanship for as long as the original consumer purchaser owns the home in which the faucet was first installed or, for commercial users, **for 5 years from the date of purchase.**

Electronic Parts and Batteries (if applicable)

Electronic parts (other than batteries), if any, of this Delta® faucet are warranted to the original consumer purchaser to be free from defects in material and workmanship for 5 years from the date of purchase or, for commercial users, for one year from the date of purchase. No warranty is provided on batteries.

Delta Faucet Company will replace, FREE OF CHARGE, during the applicable warranty period, any part or finish that proves defective in material and/or workmanship under normal installation, use and service. If repair or replacement is not practical, Delta Faucet Company may elect to refund the purchase price in exchange for the return of the product. **These are your exclusive remedies.**

Delta Faucet Company recommends using a professional plumber for all installation and repair. We also recommend that you use only genuine Delta® replacement parts.

Delta Faucet Company shall not be liable for any damage to the faucet resulting from misuse, abuse, neglect or improper or incorrectly performed installation, maintenance or repair, including failure to follow the applicable care and cleaning instructions.

Replacement parts may be obtained by calling the applicable number below or by writing to:

In the United States and Mexico:

Delta Faucet Company
Product Service
55 E. 111th Street
Indianapolis, IN 46280
1-800-345-DELTA (3358)
customerservice@deltafaucet.com

In Canada:

Masco Canada Limited, Plumbing Group
Technical Service Centre
350 South Edgeware Road
St. Thomas, Ontario, Canada N5P 4L1
1-800-345-DELTA (3358)
customerservice@mascocanada.com

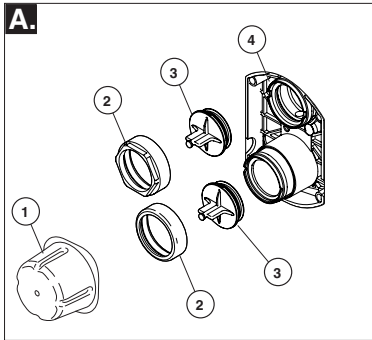
Proof of purchase (original sales receipt) from the original purchaser must be made available to Delta Faucet Company for all warranty claims unless the purchaser has registered the product with Delta Faucet Company. This warranty applies only to Delta® faucets manufactured after January 1, 1995 and installed in the United States of America, Canada and Mexico.

DELTA FAUCET COMPANY SHALL NOT BE LIABLE FOR ANY SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES (INCLUDING LABOR CHARGES) FOR BREACH OF ANY EXPRESS OR IMPLIED WARRANTY ON THE FAUCET. Some states/provinces do not allow the exclusion or limitation of special, incidental or consequential damages, so these limitations and exclusions may not apply to you. This warranty gives you special legal rights. You may also have other rights which vary from state/province to state/province.

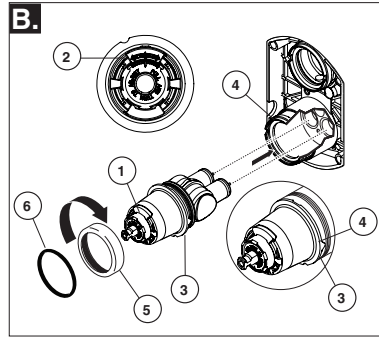
This is Delta Faucet Company's exclusive written warranty and the warranty is not transferable.

If you have any questions or concerns regarding our warranty, please view our Warranty FAQs at www.deltafaucet.com, email us at customerservice@deltafaucet.com or call us at the applicable number above.

1 Cartridge Installation

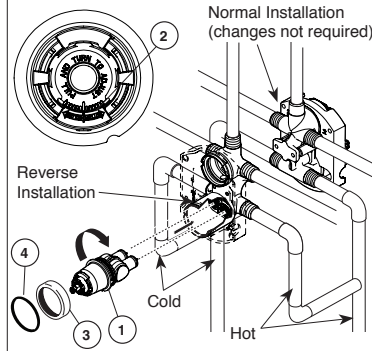


Turn off water supplies. Remove cover (1), bonnet nuts (2) and test caps (3) from the rough-in body (4). Place a bucket or small container over the front of the valve body and slowly open the water supplies to flush any debris from the supply lines before installing the cartridge. Turn the water supplies back off.



Rotate valve cartridge (1) so the words "HOT COLD" (2) appear on the top. Insert cartridge assembly into rough-in body. Make sure the key (3) on the cartridge is fully engaged with the slot in the brass body (4). Insert bonnet nut (5) on the cartridge and thread onto the body. Hand tighten securely. Slide o-ring (6) over cartridge and bonnet. A light coating of plumbers grease applied to o-rings may aid in assembly.

Back to back Installation



For the exceptions of back to back or reverse installations (hot on right and cold on left) only: Rotate valve cartridge (1) so "HOT COLD" (2) appears on the bottom.

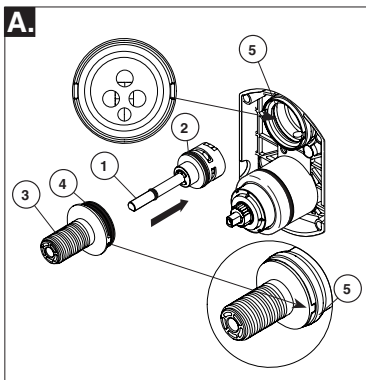
Apply silicone lube to the three o-rings shown above to make the cartridge easier to install and remove from the rough-in body.

Install the cartridge making sure that the keys are fully engaged with the slot in the rough-in body (see step B).

Slide o-ring (4) and bonnet nut (3) over the cartridge and thread onto the rough-in body. Hand tighten securely.

Installation

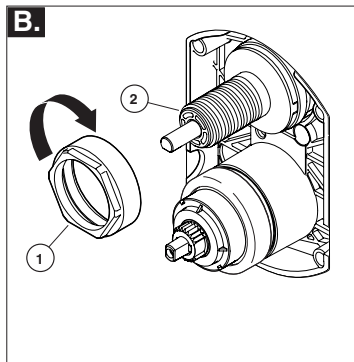
2 Diverter Cartridge Installation



FOR DIVERTER CARTRIDGE INSTALLATION:

Apply silicone lube to the o-ring (2) to make the diverter sleeve (3) easier to install diverter cartridge. A light coating of plumbers grease applied to o-rings (4) may aid in assembly.

Install diverter cartridge (1) assuring that the locating pin on the bottom of the cartridge aligns with mating hole in rough-in body. Slide diverter sleeve (3) over cartridge stem aligning tabs on the diverter sleeve with slots in rough-in body (5).

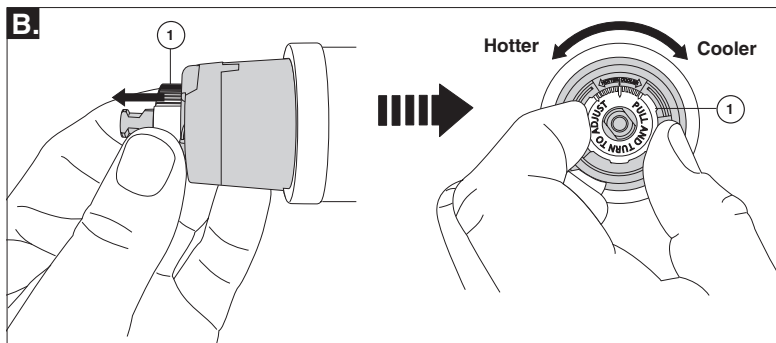


For Bonnet Installation

Slide bonnet nut (1) over diverter sleeve (2) and thread into rough-in body. Hand tighten securely.

Installation

3 Adjusting the Rotational Limit Stop



IMPORTANT:

The Rotational Limit Stop is used to limit the amount of hot water available such that, if set properly, a scald injury is less likely to occur if the handle accidentally is rotated all the way to "hot" when a person is showering. The first position allows the **LEAST** amount of hot water to mix with the cold water in the system. In the first position the water will be the coldest possible when the handle is turned all the way to hot. As you move the Rotational Limit Stop counterclockwise, you progressively add more and more hot water in the mix. The last position to the left will result in the greatest amount of hot water to the mix, and the greatest risk of scald injury if someone accidentally turns the valve handle all the way to the hot side while showering.

WARNING: In some instances, setting the Rotational Limit Stop in the hottest position (full counterclockwise) could result in scald injury. It is necessary to adjust the Rotational Limit Stop so that the water coming out of the valve will not scald the user when the handle of the valve is rotated to the hot side.

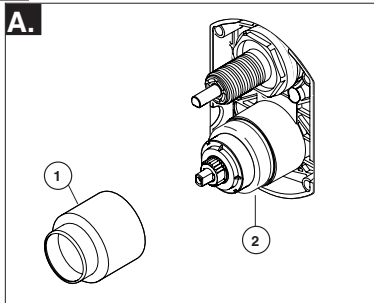
- According to the majority of industry standards, the maximum allowable temperature of the water exiting the valve is 120°F (Your local plumbing codes may require a water temperature less than 120°F).
- The Rotational Limit Stop may need to be re-adjusted seasonally if the inlet water temperature changes. For example, during the winter, the cold water temperature is colder than it is during the summer which could result in varying outlet temperatures. A water temperature for a comfortable bath or shower is typically between

90°F - 110°F.

- Run the water so that the cold water is as cold as it will get and hot water is as hot as it will get. Place the handle on the stem (see page 8, step 4C) and rotate the handle counterclockwise until the handle stops.
- Place a thermometer in a plastic tumbler and hold in the water stream. If the water temperature is above 120°F, the Rotational Limit Stop must be repositioned clockwise to decrease valve outlet water temperature to be less than 120°F or to meet the requirements of your local plumbing codes.
- To adjust the temperature of the water coming out of the valve, pull the white Rotational Limit Stop (1) outward and rotate. Clockwise rotation will decrease the outlet temperature, counterclockwise rotation will increase the outlet temperature. Temperature change per tooth (notch) could be 4° - 16°F based on inlet water conditions. Repeat as necessary. When finished, make sure that the Rotational Limit Stop is fully retracted into the seated position. **WARNING: Do not take the Rotational Limit Stop apart.**
- **MAKE SURE COLD WATER FLOWS FROM THE VALVE FIRST. MAKE SURE WATER FLOWING FROM THE VALVE AT THE HOTTEST FLOW POSSIBLE DOES NOT EXCEED 120°F OR THE MAXIMUM ALLOWED BY YOUR LOCAL PLUMBING CODE.**

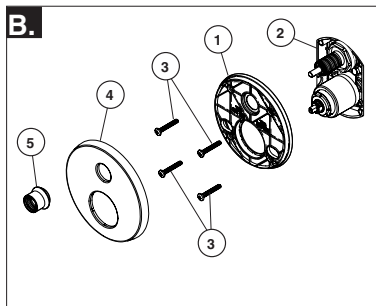
Installation

4 Trim Installation



Trim Sleeve Installation

Slide trim sleeve (1) over the bonnet (2), valve cartridge and rough-in body. Ensure sleeve is properly positioned over the front of cartridge.



Escutcheon Installation

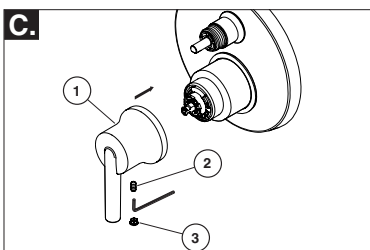
For finished wall thickness up to 1 1/8". Secure the backplate (1) to the rough-in body (2) using 4 screws (3) provided.

Note: Be sure backplate is oriented front side forward and markings are visible.

Slide escutcheon (4) over valve and diverter cartridges, thread trim nut (5) provided onto diverter sleeve.

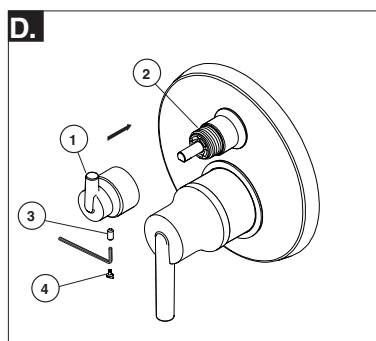
Note: For thick wall installations, order installation kit RP90542 to support finished wall thickness up to 2 1/8".

On rough or uneven surfaces it is necessary to apply caulk around the backplate (1) to supplement the seal. Do not caulk the drip notch in the bottom of the backplate (1). Do not caulk the escutcheon (4).



Valve Handle Installation

Using an allen wrench, install valve handle (1) with screw (2). Applying pressure, insert button (3) until properly seated.

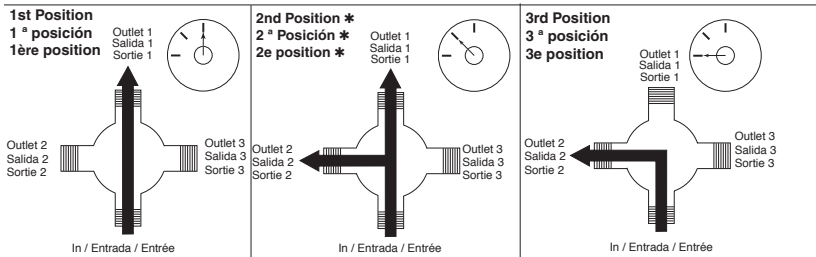


Diverter Handle Installation

Slide diverter handle (1) onto trim sleeve (2). Using an allen wrench, insert set screw (3) into handle (1). Applying pressure, insert set screw cover (4) until properly seated.

Diverter Handle Reference Sheet

Water Flow For 3 Function Diverter / Flujo de agua para Desviadores de 3 posiciones / Écoulement de l'eau pour les inverseurs à 3 positions

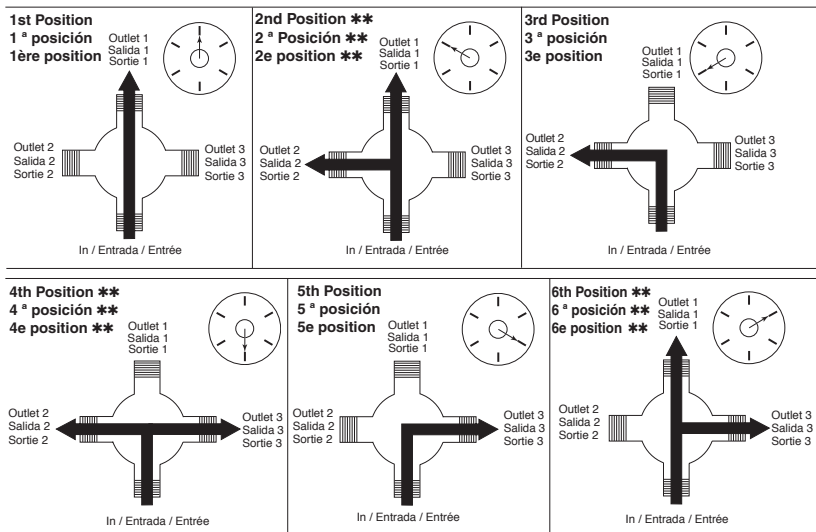


* Shared positions do not exist in non-shared cartridges.

* Los ajustes o posiciones compartidas no existen en los cartuchos no-compartidos.

* Comme leur nom l'indique, les cartouches sans position partagée ne comportent aucune position partagée.

Water Flow For 6 Function Diverter / Flujo de agua para Desviadores de 6 posiciones / Écoulement de l'eau pour les inverseurs à 6 positions



** Shared positions do not exist in non-shared cartridges.

** Los ajustes o posiciones compartidas no existen en los cartuchos no-compartidos.

** Comme leur nom l'indique, les cartouches sans position partagée ne comportent aucune position partagée.

Clean and Care

Care should be given to the cleaning of this product. Although its finish is extremely durable, it can be damaged by harsh abrasives or polish. To clean, simply wipe gently with a damp cloth and blot dry with a soft towel.

Maintenance

Faucet leaks from showerhead:

SHUT OFF WATER SUPPLIES.

Replace seats and springs—Repair

Kit RP4993. Check condition of lower O-rings and replace if necessary RP14414. See Helpful Hints 1, 2, & 3.

If leak persists:

SHUT OFF WATER SUPPLIES.

Replace valve cartridge RP46074.

See Helpful Hints 1, 2, 3, 4 & 5

Unable to maintain constant water temperature:

Replace housing assembly with RP46074 or follow instructions in Helpful Hints 1, 2, 3, 4 & 5.

Helpful Hints:

1. Before removing valve cartridge assembly for any maintenance, be sure to note the position of the rotational limit stop on the cap. The valve cartridge assembly must always be put back in the same position. BE SAFE! After you have finished the installation, turn on valve to make sure COLD WATER FLOWS FIRST.

2. To remove valve cartridge from body, shut off

water supplies and remove handle and bonnet nut. Do not pry the valve cartridge out of the body with a screwdriver. Place handle on stem and rotate counterclockwise approximately 1/4 turn after the stop has been contacted. Lift valve cartridge out of body.

3. To remove seats and springs.

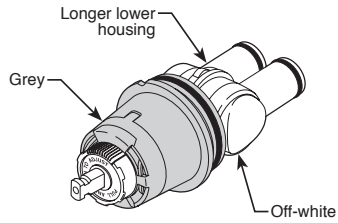
Remove valve cartridge. Separate cap assembly from the housing assembly by rotating the cap assembly counterclockwise 90° (degrees). Separate cap and housing assemblies.

4. If the water in your area has lime, rust, sand or other contaminants in it, your pressure balance valve will require periodic inspection. The frequency of the inspection will depend on the amount of contaminants in the water. To inspect valve cartridge remove it and follow the steps in note 1 above. Turn the valve to the full mix position and shake the cartridge vigorously. If there is a rattling sound, the unit is functional and can be reinstalled following instructions given in note 1 above. If there is no rattle, replace the housing assembly with the proper RP.

5. Push disc until fully seated. See page 6 for more details

Cartridge Summary Reference Sheet

T24



Order RP46074 to
Replace Cartridge.

RP90542

Thick Wall Installation Kit

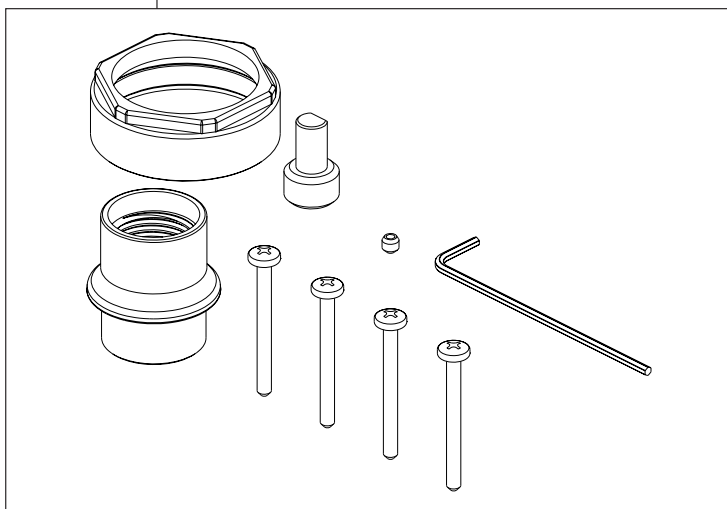
Juego de piezas para la instalación en paredes gruesas

Trousse d'installation pour mur épais

For finished wall thickness over 1 1/8" up to 2 1/8"
(Order Separately)

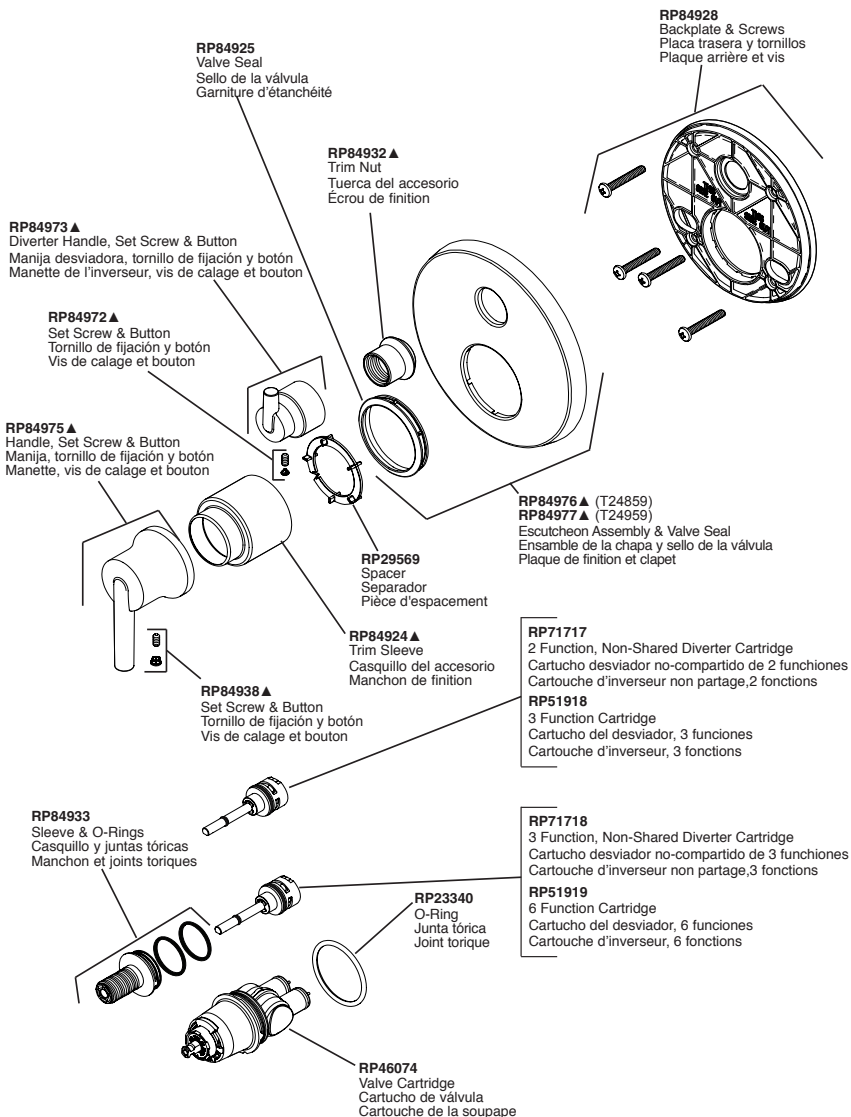
Para paredes acabadas de un grosor mayor de 1 1/8"
hasta 2 1/8" (ordene por separado)

Installation dans un mur fini d'une épaisseur de 1 1/8"
po à 2 1/8 po (commandez séparément)



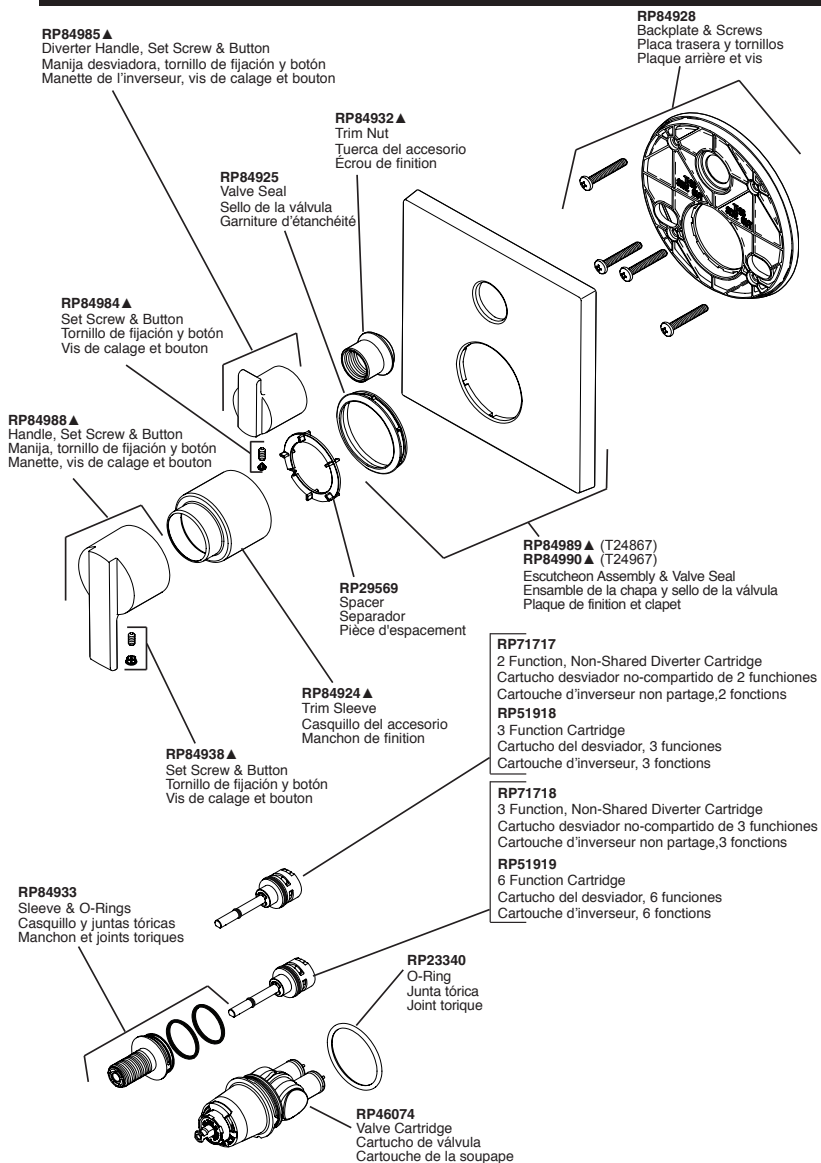
▲ Specify Finish/Especifique el Acabado/ Précisez le fini

T24859 & T24959 Models / Modelos / Modèles



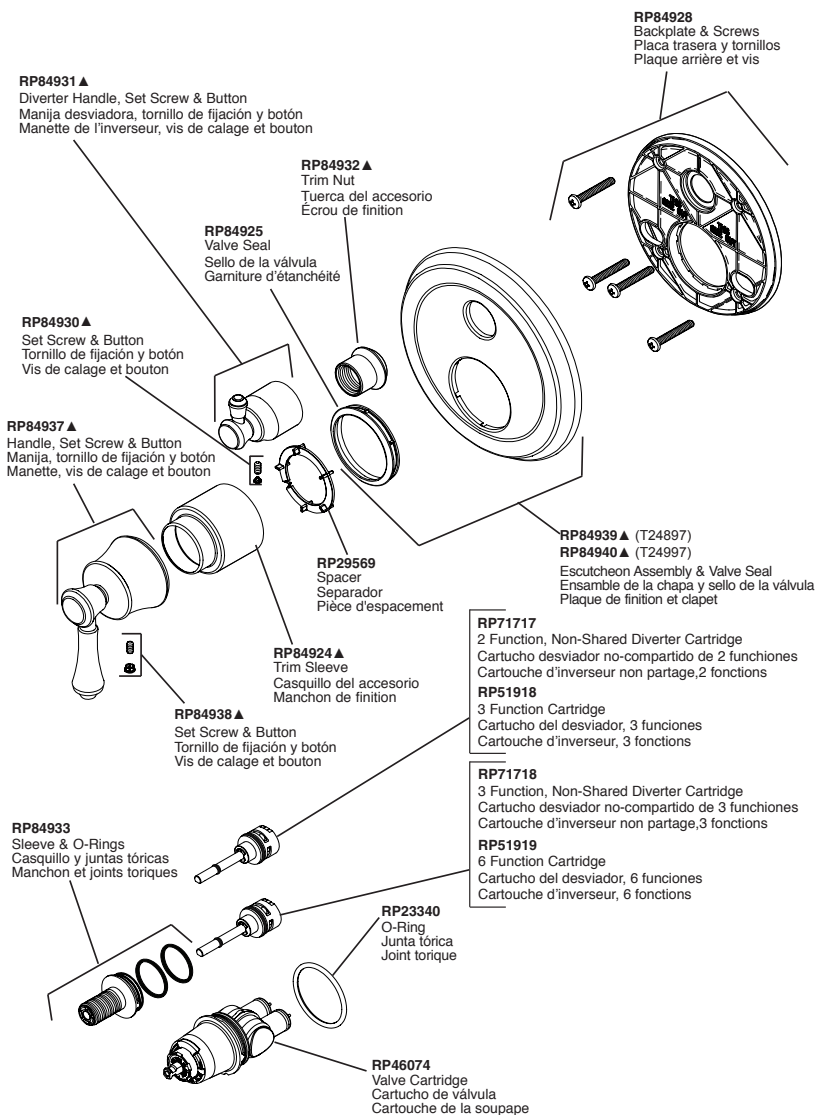
▲ Specify Finish/Especifique el Acabado/ Précisez le fini

T24867 & T24967 Models / Modelos / Modèles



▲ Specify Finish/Especifique el Acabado/ Précisez le fini

T24897 & T24997 Models / Modelos / Modèles



▲ Specify Finish/Especifique el Acabado/ Précisez le fini

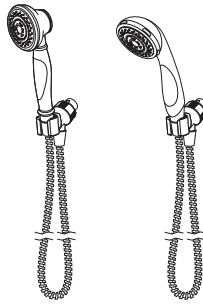


see what Delta can do™

86512



X00086512



54613 & 56613 SERIES SHOWER MOUNT HAND SHOWER INSTALLATION INSTRUCTIONS

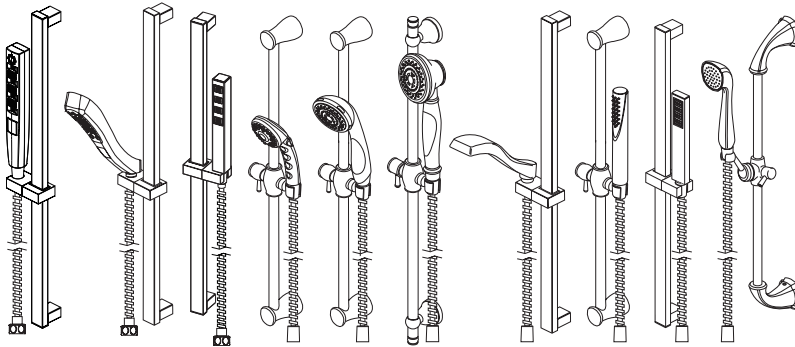
SERIES 54613 Y 56613
INSTRUCCIONES PARA LA
INSTALACIÓN DE LA REGADERA
MANUAL EN LA REGADERA

SÉRIES 54613 ET 56613
INSTRUCTIONS D'INSTALLATION
DU PORTE-DOUCHE

Write purchased model number here.

Escriba aquí el número del modelo comprado.

Inscrivez le numéro de modèle ici.



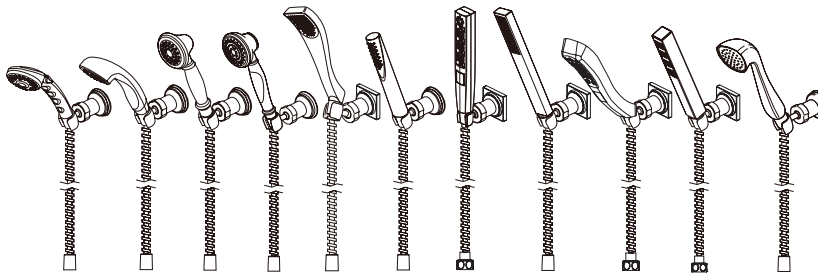
51140, 51552, 51567, 57011, 57014, 57021, 57051, 57085, 57530, & 59210 SERIES WALL BAR HAND SHOWER UNIT INSTALLATION INSTRUCTIONS

SERIES 51140, 51552, 51567, 57011, 57014,
57021, 57051, 57085, 57530 Y 59210

INSTRUCCIONES PARA LA INSTALACIÓN
DE LA BARRA EN LA PARED PARA
SOSTENER LA REGADERA MANUAL

SÉRIES 51140, 51552, 51567, 57011, 57014,
57021, 57051, 57085, 57530 ET 59210

INSTRUCTIONS D'INSTALLATION DE LA
COULISSE DE DOUCHE À MAIN



55011, 55013, 55020, 55021, 55051, 55085, 55140, 55530, 55552, 55567 & 57923 SERIES WALL MOUNT HAND SHOWER INSTALLATION INSTRUCTIONS

SERIES 55011, 55013, 55020, 55021, 55051,
55085, 55140, 55530, 55552, 55567 Y 57923

INSTRUCCIONES PARA LA INSTALACIÓN
DE LA REGADERA MANUAL EN LA PARED

SÉRIES 55011, 55013, 55020, 55021, 55051,
55085, 55140, 55530, 55552, 55567 ET 57923

INSTRUCTIONS D'INSTALLATION DES
SUPPORTS MURAUX

Read all instructions prior to installation.

Lea todas las instrucciones antes de hacer la instalación.

Veuillez lire toutes les instructions avant l'installation.

Backflow Protection System

Your Delta® faucet handshower incorporates a backflow protection system that has been tested to be in compliance with ASME A112.18.3 and ASME A112.18.1 / CSA B125.1. It incorporates two certified check valves in series, which operate independently and are integral, non-serviceable parts of the wand assembly.

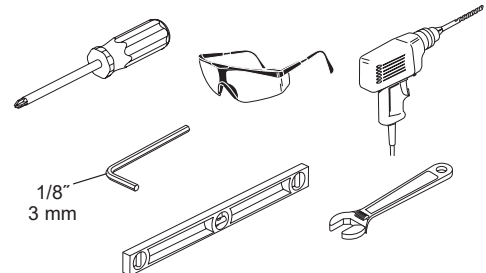
Sistema de protección contra el contraflujo

Su regadera de mano de Delta® incorpora un sistema de protección de contra-flujo que ha sido probado y cumple con ASMEA112.18.3 y ASMEA112.18.1/CSAB125.1. Este incorpora en la pieza de mano dos válvulas de retención o checkadoras certificadas en una serie, las cuales operan independientemente y son piezas integrantes que no requieren servicio.

Dispositif anti-siphonnage

Votre douche à main Delta® est munie d'un dispositif anti-siphonnement qui est conforme aux normes ASMEA112.18.3 et ASMEA112.18.1/CSAB125.1. Ce dispositif se compose de deux clapets indépendants homologués, montés en série dans le tube rigide, qui sont non réparables.

You may need / Usted puede necesitar / Articles dont vous pouvez avoir besoin:



To access additional technical documents & product info, visit www.deltafaucet.com/p/Your-Model-Number-Here (example: www.deltafaucet.com/p/9159T-DST)

Para acceder a documentos técnicos adicionales e información sobre el producto, visítenos en www.deltafaucet.com/p/Your-Model-Number-Here (ejemplo: www.deltafaucet.com/p/9159T-DST)

Pour avoir accès à des documents techniques supplémentaires et à de l'information sur le produit, visitez www.deltafaucet.com/p/Votre-numéro-de-modèle-ci (exemple : www.deltafaucet.com/p/9159T-DST)



www.deltafaucet.com
1-800-345-DELTA (3358)
customerservice@deltafaucet.com

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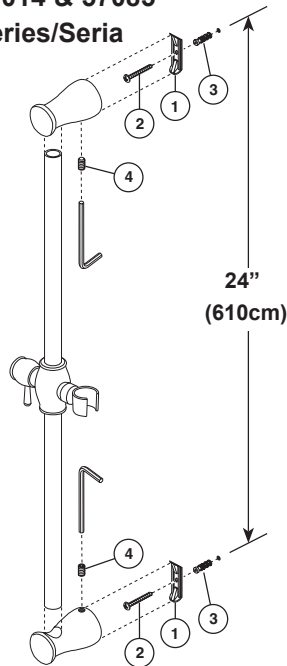
Slide Bar Barra deslizable Coulisse

Select wall position for wall bar or wall mount bracket based on family's needs. **NOTE: Locate so there will be slack in the hose when hand shower is in extreme up or down position.** Follow the mounting instructions for your specific model.

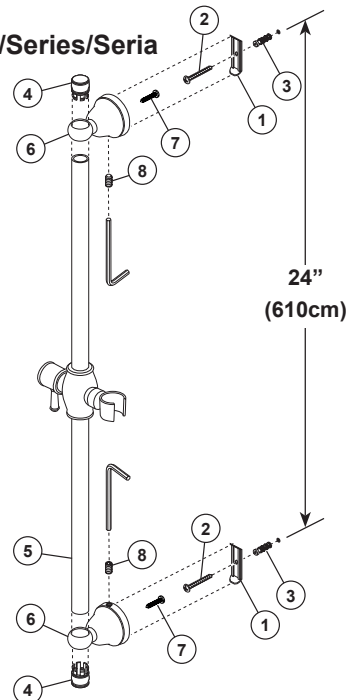
Elija la posición en la pared para la barra de pared basada en las necesidades de su familia. **NOTA: Ubíquela de manera que tenga la manguera algo floja cuando use la regadera manual, en la posición extrema hacia arriba o hacia abajo.**

Choisissez un endroit sur le mur qui convient aux besoins de votre famille. **NOTE : Laissez suffisamment de jeu au tuyau de sorte que la douche à main puisse atteindre les points inférieur et supérieur extrêmes librement.**

57011, 57014 & 57085 Series/Series/Seria



57021 Series/Series/Seria



SLIDE BAR INSTALLATION

Models 57011, 57014 & 57085: Locate stud for secure mounting. Mark mounting locations at 24 inches on center. Secure brackets (1) on wall with screws (2). Use anchors (3) only if required. **Note: For ceramic tile installation drill holes in grout (if possible) and insert anchors.** For fiberglass/acrylic surfaces use toggle bolts (not included). Place wall bar assembly onto brackets and tighten set screws (4).

Model 57021: Locate stud for secure mounting. Mark mounting locations at 24 inches on center. Secure brackets (1) on wall with screws (2). Use anchors (3) only if required. **Note: For ceramic tile installation drill holes in grout (if possible) and insert anchors.** For fiberglass/acrylic surfaces use toggle bolts (not included). Remove caps (4) from both ends of the bar (5). Slide bar (5) into mount (6) and align the hole located in the side of the bar with the hole in the back of the mount. Install screw (7) through the hole in back of mount (6) and into the hole in the side of the bar (5). Repeat on the other end of the bar. Place wall bar assembly onto brackets and tighten set screws (8).

INSTALACIÓN DE LA BARRA DESLIZABLE

Los modelos 57011, 57014 y 57085: Encuentre el entramado para obtener un montaje seguro. Marque la ubicación a 24 pulgadas en el centro. Fije los soportes (1) en la pared con tornillos (2). Use las anclas (3) sólo si es necesario. **Nota: Para los agujeros en losa/cerámica, perforo los agujeros en la lechada de cemento (si es posible) e inserte los anclajes.** Para la fibra de vidrio o superficies de acrílico use los pernos de palanca (no incluidos). Coloque el ensamble de la barra de pared en los soportes y apriete los tornillos de fijación (4).

Los modelo 57021: Encuentre el entramado para obtener un montaje seguro. Marque la ubicación a 24 pulgadas en el centro. Fije los soportes (1) en la pared con tornillos (2). Use las anclas (3) sólo si es necesario. **Nota: Para los agujeros en losa/cerámica, perforo los agujeros en la lechada de cemento (si es posible) e inserte los anclajes.** Para la fibra de vidrio o superficies de acrílico use los pernos de palanca (no incluidos). Retire las tapas (4) de ambos extremos de la barra (5). Deslice la barra (5) en el soporte (6) y alinee el orificio ubicado en el costado de la barra con el orificio en la parte posterior del soporte. Instale el tornillo (7) a través del orificio en la parte posterior del soporte (6) y en el orificio en el lado de la barra (5). Repita en el otro extremo de la barra. Coloque el conjunto de la barra de pared sobre los soportes y apriete los tornillos de fijación (8).

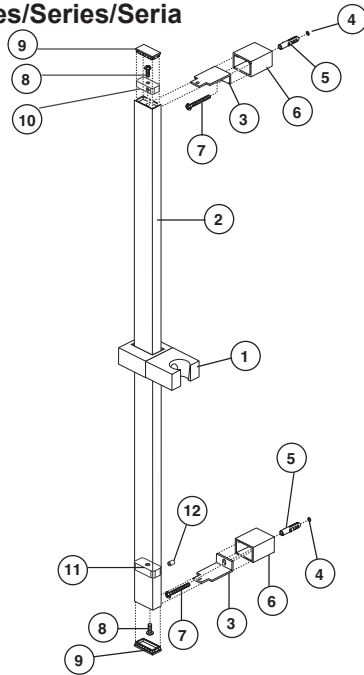
INSTALLATION DE LA COULISSE

Modèles 57011, 57014 et 57085: Localisez un montant où la barre murale pourra être fixée solidement. Marquez les points de fixation espacés de 24 pouces centre à centre. Fixez les fixations (1) au mur à l'aide des vis (2). Utilisez des ancrages (3) au besoin seulement. **Note: Si vous installez la barre sur des carreaux de céramique, percez les trous dans le coulis (dans la mesure du possible) et insérez des ancrages.** Dans les surfaces en acrylique ou en fibre de verre, utilisez des boulons à ailettes (non inclus). Placez la barre murale sur les fixations et serrez les vis de calage (4).

Modèle 57021: Localisez un montant où la barre murale pourra être fixée solidement. Marquez les points de fixation espacés de 24 pouces centre à centre. Fixez les fixations (1) au mur à l'aide des vis (2). Utilisez des ancrages (3) au besoin seulement. **Note: Si vous installez la barre sur des carreaux de céramique, percez les trous dans le coulis (dans la mesure du possible) et insérez des ancrages.** Dans les surfaces en acrylique ou en fibre de verre, utilisez des boulons à ailettes (non inclus). Retirez les capuchons (4) des deux extrémités de la barre (5). Glissez la barre (5) dans la monture (6) et alignez le trou situé sur le côté de la barre avec le trou à l'arrière de la monture. Installez la vis (7) à travers le trou à l'arrière du support (6) et dans le trou sur le côté de la barre (5). Répétez à l'autre bout de la barre. Placer l'assemblage de la barre murale sur les supports et serrer les vis de réglage (8).

Slide Bar Barra deslizable Coulisse

51140, 51552, 51567, 57051 & 57530 Series/Series/Seria



SLIDE BAR INSTALLATION

Model 51140, 51552, 51567, 57051 & 57530: Slide the slide mechanism (1) and elbow (10) onto the wall bar (2). The slide mechanism must be on the bar before mounting it to the brackets. Temporarily insert brackets (3) into slots in wall bar. Using a level, position the bar in a level vertical position and mark the drill holes (4). Move the bar out of the way and drill 1/4" holes. **Note: For ceramic tile installation, drill holes in grout (if possible) and insert anchors. For fiberglass/acrylic surfaces, use toggle bolts (not included).** For most secure mounting, attach to wall stud. Insert anchors (5) into drilled holes. Remove brackets (3) from wall bar. Slide covers (6) over brackets, and insert screws (7) into bracket/cover assembly. Secure assembly to wall with screws. Slide wall bar over bracket tabs and secure the wall bar unit with screws (8) provided. Install caps (9) into ends of wall bar. Lower elbow (11) & screw (12) was pre-installed prior to shipping, tighten screw if you find it is sliding inside bar.

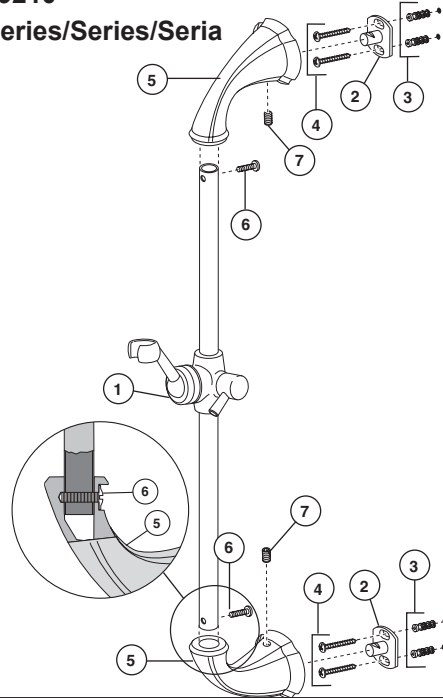
INSTALACIÓN DE LA BARRA DESLIZABLE

Modelos 51140, 51552, 51567, 57051 y 57530 - deslice el mecanismo de deslizamiento (1) y codo (10) en la barra de la pared (2). El mecanismo de deslizamiento debe estar en la barra antes de montarlos en los soportes. Temporalmente inserte los soportes (3) en las ranuras en la barra de la pared. Con un nivel, coloque la barra en posición nivelada, vertical, y marque los agujeros de perforación (4). Mueva la barra a un lado y perforo los agujeros de 1/4". **Nota: Para la instalación en baldosas de cerámica, perforo los agujeros en la lechada (si es posible) e inserte las anclas.** Para obtener una instalación segura, fije al entramado de la pared. En superficies de fibra de vidrio / acrílicas, use pernos fijadores (no incluidos). Inserte las anclas (5) en los agujeros perforados. Quite los soportes (3) de la barra de la pared. Deslice las tapas de cubierta (6) sobre los soportes e inserte los tornillos (7) en el ensamble del soporte/tapa. Fije el ensamble a la pared con tornillos. Deslice la barra de la pared sobre las lengüetas del soporte y fije la unidad de la barra de la pared con los tornillos (8) incluidos. Instale las tapas (9) en los extremos de la barra de la pared. Antes del envío, por debajo del codo (11) y los tornillos (12) han sido conectadas en el producto, si se encuentra baja la suelta, apriete los tornillos por favor.

INSTALLATION DE LA COULISSE

Modèles 51140, 51552, 51567, 57051 et 57530 - Glissez le coulisseau (1) en coude (10) sur la barre murale (2). Vous devez placer le coulisseau sur la barre avant de monter celle-ci sur les fixations. Insérez temporairement les fixations (3) dans les rainures de la barre murale. À l'aide d'un niveau, placez la barre murale parfaitement à la verticale et marquez l'emplacement des trous à percer (4). Enlevez la barre et percez les trous de 1/4 po. **Note: Si vous installez la barre sur des carreaux de céramique, percez les trous dans les joints de coulis dans la mesure du possible et insérez des ancrages.** Pour installer la barre aussi solidement que possible, fixez-la dans un montant. Si la surface est en fibre de verre ou en acrylique, utilisez des boulons à ailettes (non fournis). Insérez les ancrages (5) dans les trous. Retirez les fixations (3) de la barre murale. Glissez les couvercles (6) sur les fixations et introduisez les vis (7) dans les fixations avec leur couvercle. Fixez les fixations avec leur couvercle au mur en serrant les vis. Glissez la barre murale sur les pattes des fixations et fixez-la avec les vis (8) fournies. Installez les capuchons (9) dans les extrémités de la barre murale. Le coude inférieur (11) et la vis ont (12) été préinstallés avant l'expédition, serrez la vis si vous constatez qu'il glisse à l'intérieur de la barre.

59210 Series/Series/Seria



SLIDE BAR INSTALLATION

Model 59210 - Slide the slide mechanism (1) onto the bar. The slide mechanism must be on the bar before mounting it to the brackets. Secure mounting posts (2) to wall with anchors (3) and screws (4). **Note: For ceramic tile installation, drill holes in grout (if possible) and insert anchors. For fiberglass/acrylic surfaces, use toggle bolts (not included).** Install end brackets (5) onto slide bar with screws (6). End brackets must be attached before the next step. Place slide bar assembly over mounting posts (2) and secure with set screws (7).

INSTALACIÓN DE LA BARRA DESLIZABLE

Modelo 59210 - Deslice el mecanismo de la diapositiva (1) sobre la barra. El mecanismo de la diapositiva debe ser en la barra antes del montaje él a los soportes. Asegure los postes del montaje (2) a la pared con las anclas (3) y los tornillos (4). **Nota: Para la instalación de la baldosa cerámica, los agujeros de taladro en lechada (si es posible) y las anclas del parte movable. Para la fibra de vidrio/las superficies de acrílico, utilice los pernos de palanca (no incluidos).** Instale los soportes del extremo (5) sobre barra de diapositiva con los tornillos (6). Los soportes del extremo se deben atar antes del paso siguiente. Ponga el montaje de la barra de diapositiva sobre los postes del montaje (2) y asegúrelo con los tornillos de presión (7).

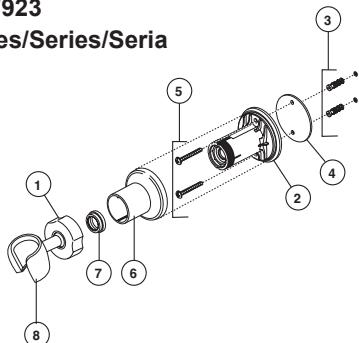
INSTALLATION DE LA COULISSE

Modèle 59210 - Glissez le mécanisme de glissière (1) sur la barre. Le mécanisme de glissière doit être sur la barre avant le support lui aux parenthèses. Fixez les poteaux de support (2) au mur avec des ancrages (3) et des vis (4). **Note: Pour l'installation de carreau de céramique, les trous de foret en coulis (si possible) et les ancrages d'insertion. Pour la fibre de verre/surfaces acryliques, utilisez les boulons à bascule (non inclus).** Installez les parenthèses d'extrémité (5) sur la barre coulissante avec des vis (6). Des parenthèses d'extrémité doivent être attachées avant la prochaine étape. Placez le montage de barre coulissante au-dessus des poteaux de support (2) et le fixez avec des vis de réglage (7).

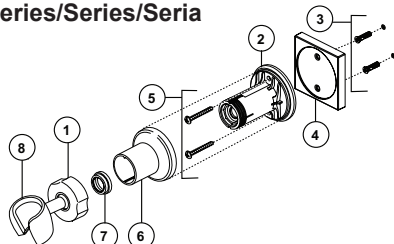
Wall Mount Montaje en la pared Supports Muraux

**55011, 55013, 55020, 55021, 55085
& 57923**

Series/Series/Seria



55552, 55567, 55051, 55140 & 55530
Series/Series/Seria



WALL MOUNT BRACKET INSTALLATION

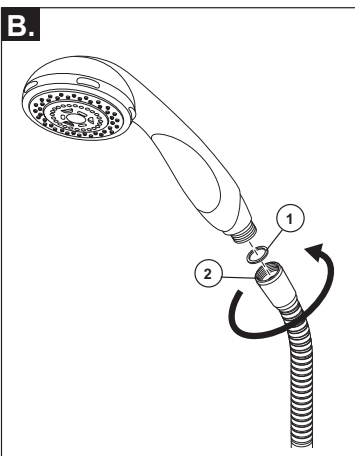
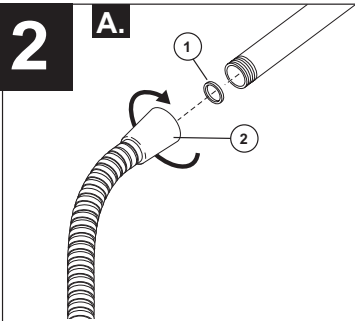
Models 55011, 55013, 55020, 55021, 55051, 55085, 55140, 55530, 55552, 55567 & 57923 - Select wall position for hand shower wall mount based on family's needs. Remove the locknut (1) from the bracket (2). Using the bracket (2), mark the 2 holes in the desired location. Remove the bracket and drill 1/4" holes. Insert anchors (3). **Note: For ceramic tile installation, drill holes in grout (if possible) and insert anchors. For fiberglass/acrylic surfaces, use toggle bolts (not included).** Secure the wall bracket (2) and gasket (4) with the screws (5) provided. Slide the bracket cover (6) over the bracket. Install glide ring (7). Install hand shower mount (8) onto bracket (2). Secure locknut (1).

INSTALACIÓN DEL MONTAJE EN LA PARED

Modelos 55011, 55013, 55020, 55021, 55051, 55085, 55140, 55530, 55552, 55567 y 57923 - Posición selecta de la pared para el montaje de la pared de la ducha de la mano basado en las necesidades de la familia. Para la mayoría de montaje seguro, se adhiere al poste de la pared. Quite la tuerca de fijación (1) del soporte (2). Usando el soporte (2), marque los 2 agujeros en la localización deseada. Quite el soporte y el taladro 1/4" agujeros. Inserte las anclas (3). **Nota: Para la instalación de la baldosa cerámica, los agujeros de taladro en lechada (si es posible) y las anclas del parte movable. Para la fibra de vidrio/las superficies de acrílico, utilice los pernos de palanca (no incluidos).** Asegure el soporte de pared (2) y la junta (4) o brida (4) (Sólo para los modelo 55567) con los tornillos (5) proporcionados. Deslice la cubierta del soporte (6) sobre el soporte. Instale el anillo del deslizamiento (7). Instale el montaje de la ducha de la mano (8) sobre el soporte (2). Asegure la tuerca de fijación (1).

INSTALLATION DES SUPPORTS MURAUX

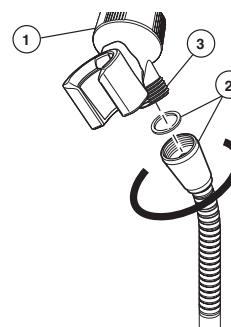
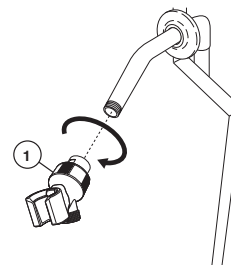
Modèles 55011, 55013, 55020, 55021, 55051, 55085, 55140, 55530, 55552, 55567 et 57923 - Position choisie de mur pour le bâti de mur de douche de main basé sur les besoins de famille. Pour la plupart de montage sécurisé, se fixer au poteau de mur. Enlevez le contre-écrou (1) de la parenthèse (2). Utilisant la parenthèse (2), marquez les 2 trous dans l'endroit désiré. Enlevez la enthèse et le foret 1/4" trous. Insérez les ancrs (3). **Note: Pour l'installation de carreau de céramique, les trous de foret en coulis (si possible) et les ancrs d'insertion. Pour la fibre de verre/surfaces acryliques, utilisez les boulons à bascule (non inclus).** Fixez la parenthèse de mur (2) et la garniture (4) ou collerette (4) (modèle 55567 seulement) avec les vis (5) fournies. Glissez la couverture de parenthèse(6) audessus de la parenthèse. Installez l'anneau de glissement (7). Installez le bâti de douche de main (8) sur la parenthèse (2). Fixez le contre-écrou (1).



- Ensure gasket (1) is inserted into the hose (2). Connect the hose to your designated water supply.
- Connect tapered end of hose to hand shower:** Seat the gasket (1) firmly into the hose nut (2). Carefully align the thread of the tapered end of the hose (2) directly to the hand shower. **Hand Tighten – do not use a wrench or pliers.** Then place the hand shower into the wall mount holder.

Shower Mount Regadera en la pared Porte-douche

54613 & 56613
Series/Series/Seria



SHOWER MOUNT INSTALLATION

Models 54510, 54513 - Remove present shower head. Screw the hand shower bracket (1) to the shower arm. Attach the shower hose and gasket (2) to the threaded connection (3) on the bottom of the bracket.

INSTALACIÓN DE LA REGADERA EN LA PARED

Modelos 54510 y 54513 - Quite la cabeza de la regadera existente. Atornille el sujetador de la regadera manual (1) al brazo de la regadera. Conecte la manguera de la regadera y el empaque (2) a la conexión enroscada (3) en la parte inferior del sujetador.

- Asegúrese que el empaque o junta (1) esté introducido dentro de la manguera (2). Conecte la manguera al suministro de agua designado.
- Conecte el extremo estrecho de la manguera a la regadera manual:** Asiente la arandela (1) firmemente en la tuerca de la manguera (2). Cuidadosamente, alinee el enrosque del extremo estrecho de la manguera (2) directamente a la regadera manual. **Apriete a mano – no use llave de tuercas o alicates.** Luego coloque la regadera manual en el sujetador en la barra de la pared.

- Assurez-vous que le joint (1) est inséré dans le tuyau souple (2). Raccordez le tuyau souple au tuyau d'alimentation en eau.
- Raccordez l'embout conique du tuyau souple à la douche à main:** Mettez solidement en place la rondelle (1) dans l'écrou (2) du tuyau souple. Alignez soigneusement le filetage de l'embout conique du tuyau souple (2) directement avec la douche à main. **Serrez à la main – n'utilisez pas de clé ni de pince.** Placez ensuite la douche à main dans le porte-douche.

INSTALLATION DU PORTE-DOUCHE

Modèles 54510 et 54513 - Enlevez la pomme de douche existante. Vissez la de la fixation douche à main (1) au manchon de la douche. Fixez le tuyau souple de la douche et le joint (2) au raccord fileté (3) au bas de la fixation.

Limited Warranty on Delta® Faucets

Parts and Finish: All parts (other than electronic parts and batteries) and finishes of Delta® faucets purchased from authorized Delta sellers are warranted to the original consumer purchaser to be free from defects in material and workmanship for as long as the original consumer purchaser owns the home in which the faucet was first installed. For commercial purchasers, (a) the warranty period is ten (10) years for multi-family residential applications and (b) five (5) years for all other commercial applications, in each case from the date that the product is received by the original purchaser or their authorized representative (installation contractor, etc.). For purposes of this warranty, the term "multi-family residential application" refers to the purchase of the faucet from an authorized Delta seller by a purchaser who owns but does not live in the residential dwelling in which the faucet is initially installed, such as in a rented or leased single unit or multi-unit detached home (duplex or townhome), or a condominium, apartment building or community living center. The following installations are not considered multi-family residential applications, are excluded from the 10-year warranty and are subject to the 5-year warranty: industrial, institutional or other business premises, such as a dormitory, hospitality premises (hotel, motel or extended stay location), airport, educational facility, long- or short-term healthcare facility (hospital, rehabilitation center, nursing, assisted or staged-care living unit), public space or common area.

Parts and Finish for Delta® Recertified Faucets: Delta Faucet Company offers for sale online Delta® Recertified faucets. Delta® Recertified faucets only include faucets that have been certified as such by Delta Faucet Company. All parts (other than electronic parts and batteries) and finishes of these Delta® Recertified faucets are warranted to the original consumer purchaser to be free from defects in material and workmanship for ten (10) years from the date that the product is received by the original purchaser or their authorized representative (installation contractor, etc.). For commercial purchasers, the warranty period is one (1) year from the date that the product is received by the original purchaser or their authorized representative (installation contractor, etc.).

Electronic Parts: Electronic parts (other than batteries), if any, of Delta® faucets purchased from deltafaucet.com or authorized Delta sellers are warranted to the original consumer purchaser to be free from defects in material and workmanship for five (5) years from the date that the product is received by the original purchaser or their authorized representative (installation contractor, etc.) or, for commercial purchasers, for one (1) year from the date that the product is received by the original purchaser or their authorized representative (installation contractor, etc.). No warranty is provided on batteries.

What We Will Do: Delta Faucet Company will repair or replace, free of charge, during the applicable warranty period (as described above), any part or finish that proves defective in material and/or workmanship under normal installation, use and service. Delta Faucet Company may, in its sole discretion, use new, refurbished or recertified parts or products for such repair or replacement. If repair or replacement is not practical, Delta Faucet Company may elect to refund the purchase price in exchange for the return of the product. **These are your exclusive remedies.**

What Is Not Covered: Because Delta Faucet Company is unable to control the quality of Delta products sold by unauthorized sellers, unless otherwise prohibited by law, this warranty does not cover Delta products purchased from unauthorized sellers.

Any labor charges incurred by the purchaser to repair, replace, install or remove this product are not covered by this warranty. Delta Faucet Company shall not be liable for any damage to the faucet resulting from reasonable wear and tear, outdoor use, misuse (including use of the product for an unintended application), freezing water, abuse, neglect or improper or incorrectly performed installation, maintenance or repair, including failure to follow the applicable care and cleaning instructions. Delta Faucet Company recommends using a professional plumber for all installation and repair of faucets. We also recommend that you use only genuine Delta® replacement parts.

What You Must Do To Obtain Warranty Service or Replacement Parts: A warranty claim may be made and replacement parts may be obtained by calling 1 800 345 DELTA (3358) or by contacting us by mail or online as follows (please include your model number, date of original purchase and documentation of the date of receipt of the product by the original purchaser or their authorized representative (installation contractor, etc.)):

In the United States and Mexico:

Delta Faucet Company
55 E. 111th Street
Indianapolis, IN 46280
Attention: Warranty Service
www.deltafaucet.com/service-parts/contact-us

In Canada:

Masco Canada Limited, Plumbing Group
Technical Service Centre
350 South Edgeware Road
St. Thomas, Ontario, Canada N5P 4L1
Attention: Customer Service
<http://www.deltafaucet.ca/customersupport/assistance.html>

Proof of purchase (original sales receipt showing purchase date) and documentation of the date of receipt of the product by the original purchaser or their authorized representative (installation contractor, etc.) from the original purchaser must be made available to Delta Faucet Company for all warranty claims unless the purchaser has registered the product with Delta Faucet Company or the product is a Delta® Recertified product purchased from deltafaucet.com. This warranty applies only to Delta® faucets manufactured after January 1, 2019 and installed in the United States of America, Canada and Mexico.

Limitation on Duration of Implied Warranties: Please note that some states/provinces (including Quebec) do not allow limitations on how long an implied warranty lasts, so the below limitations may not apply to you. TO THE MAXIMUM EXTENT PERMITTED BY APPLICABLE LAW, ANY IMPLIED WARRANTY, INCLUDING THE IMPLIED WARRANTIES OF MERCHANTABILITY AND OF FITNESS FOR A PARTICULAR PURPOSE, IS LIMITED TO THE STATUTORY PERIOD OR THE DURATION OF THIS WARRANTY, WHICHEVER IS SHORTER.

Limitation of Special, Incidental or Consequential Damages: Please note that some states/provinces (including Quebec) do not allow the exclusion or limitation of special, incidental or consequential damages, so the below limitations and exclusions may not apply to you. TO THE MAXIMUM EXTENT PERMITTED BY APPLICABLE LAW, THIS WARRANTY DOES NOT COVER, AND DELTA FAUCET COMPANY SHALL NOT BE LIABLE FOR, ANY SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES (INCLUDING LABOR CHARGES TO REPAIR, REPLACE, INSTALL OR REMOVE THIS PRODUCT), WHETHER ARISING OUT OF BREACH OF ANY EXPRESS OR IMPLIED WARRANTY, BREACH OF CONTRACT, TORT, OR OTHERWISE. DELTA FAUCET COMPANY SHALL NOT BE LIABLE FOR ANY DAMAGE TO THE FAUCET RESULTING FROM REASONABLE WEAR AND TEAR, OUTDOOR USE, MISUSE (INCLUDING USE OF THE PRODUCT FOR AN UNINTENDED APPLICATION), FREEZING WATER, ABUSE, NEGLIGENCE OR IMPROPER OR INCORRECTLY PERFORMED INSTALLATION, MAINTENANCE OR REPAIR, INCLUDING FAILURE TO FOLLOW THE APPLICABLE INSTALLATION, CARE AND CLEANING INSTRUCTIONS. Notice to residents of the State of New Jersey: The provisions of this warranty, including its limitations, are intended to apply to the fullest extent permitted by the laws of the State of New Jersey.

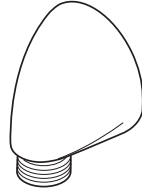
Additional Rights: This warranty gives you specific legal rights, and you may also have other rights which vary from state/province to state/province. This is Delta Faucet Company's exclusive written warranty and the warranty is not transferable.

If you have any questions or concerns regarding our warranty, please contact us as provided above or view our Warranty FAQs at www.deltafaucet.com.

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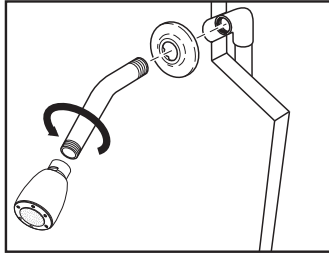
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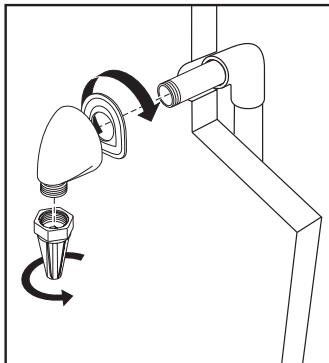
50560 SERIES—SUPPLY ELBOW INSTALLATION INSTRUCTIONS

INSTRUCCIONES PARA EL CODO ABASTECEDOR—SERIES 50560

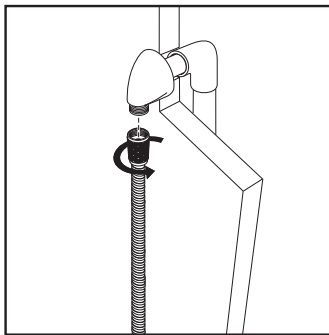
SÉRIES 50560—INSTRUCTIONS D'INSTALLATION DU COUDE D'ALIMENTATION



1. Remove present shower head and shower arm with flange.
1. Quite la cabeza y el brazo de la regadera con la brida.
1. Retirez la pomme de douche, le tuyau de la pomme de douche et la collerette.



2. Apply plumber tape to threaded ends of 1/2" (13 mm) iron pipe nipple (not supplied) and thread into shower riser elbow so that nipple extends past the finished wall no more than 1/2" (13 mm) and no less than 1/4" (6 mm). Place the supplied installation gasket behind the elbow. Thread the supplied installation tool onto the base of the elbow; then, using it for additional leverage (fits a 1/4 inch Allen wrench) screw the supply elbow onto the nipple making sure that the supply elbow outlet is in a downward facing position. Unthread install tool when finished. Minimum diameter for hole is 1" (25 mm) with a maximum of 1 1/2" (38 mm).
2. Applique cinta plomero a las puntas roscadas de la enterrosca de tubo de hierro de 1/2" (13 mm) (no proporcionado) y enrósquelo en el codo del tubo vertical de suministro de manera que la enterrosca no atraviese la pared acabada más de 1/2" (13 mm) y no menos de 1/4" (6 mm). Coloque el empaque, para la instalación, que se incluye detrás del codo. Enrosque la herramienta para la instalación que se incluye en la base del codo; luego, usándola para obtener apalancamiento adicional (puede usar una llave Allen de 1/4 pulgada) atornille el codo de suministro en la enterrosca asegurándose que la salida del codo esté colocada de frente hacia abajo. Cuando termine, destornille la herramienta de instalación. El diámetro mínimo para el agujero es 1" (25 mm) y un máximo de 1 1/2" (38 mm).
2. Appliquez du ruban de plomberie sur les filetages du manchon fileté en fer de 1/2 po (13 mm) (non fourni) et vissez le manchon dans le coude du tuyau vertical d'alimentation de la douche de sorte qu'il présente une saillie d'au plus 1/2 po (13 mm) et d'au moins 1/4 po (6 mm) par rapport à la paroi finie. Placez le joint fourni pour l'installation derrière le coude. Vissez l'outil d'installation fourni sur la base du coude; puis, en l'utilisant pour accroître l'effet de levier (il s'adapte à une vis Allen 1/4 po), vissez le coude d'alimentation sur le mamelon. La sortie du coude doit être orientée vers le bas. Dévissez l'outil d'installation après avoir terminé. L'orifice doit avoir un diamètre d'un moins 1 po (25 mm) et d'au plus 1 1/2 po (38 mm).



3. Attach the shower hose to the threaded supply outlet and proceed with the installation of the hand shower, following the manufacturers instructions.

CAUTION: To avoid damage to the supply elbow or hose finish during installation, wrap with a cloth or tape and use only a smooth-jawed wrench. **DO NOT OVERTIGHTEN CONNECTIONS.**

3. Fije la manguera de la regadera a la toma de agua enroscada y continúe con la instalación de la regadera de mano, siguiendo las instrucciones del fabricante.

ADVERTENCIA: Para prevenir daño al codo de abastecimiento o al acabado de la manguera durante la instalación, envuelva con un trapo o cinta y use solamente una llave de tuercas de mordaza lisa. **NO APIRIETE DEMASIADO LAS CONEXIONES.**

3. Fixez le tuyau souple de la douche au raccord d'alimentation fileté et installez la douche à main conformément aux instructions du fabricant.

ATTENTION – Pour éviter d'abîmer le fini du coude d'alimentation ou du tuyau souple pendant l'installation, enrobez-les d'un chiffon ou de ruban adhésif ou utilisez une clé aux mors lisses. **PRENEZ GARDE DE TROP SERRER LES RACCORDS.**

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Limited Warranty on Delta® Faucets

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Parts and Finish for Delta® Recertified Faucets. Delta Faucet Company offers for sale on deltafaucet.com Delta® Recertified faucets. All parts (other than electronic parts and batteries) and finishes of these Delta® Recertified faucets are warranted to the original consumer purchaser to be free from defects in material and workmanship for ten (10) years from the date of original purchase. For commercial purchasers, the warranty period is one (1) year from the date of original purchase.

Electronic Parts. Electronic parts (other than batteries), if any, of Delta® faucets purchased from deltafaucet.com or authorized Delta sellers are warranted to the original consumer purchaser to be free from defects in material and workmanship for five (5) years from the date of original purchase or, for commercial purchasers, for one (1) year from the date of original purchase. No warranty is provided on batteries.

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What You Must Do To Obtain Warranty Service or Replacement Parts. A warranty claim may be made and replacement parts may be obtained by calling 1 800 345 DELTA (3358) or by contacting us by mail or online as follows (please include your model number and date of original purchase):

In the United States and Mexico:

Delta Faucet Company
Product Service
55 E. 111th Street
Indianapolis, IN 46280
Attention: Customer Solutions
<http://www.deltafaucet.com/service-parts/contact-us>

In Canada:

Masco Canada Limited, Plumbing Group
Technical Service Centre
350 South Edgeware Road
St. Thomas, Ontario, Canada N5P 4L1
Attention: Customer Service
<http://www.deltafaucet.ca/customersupport/assistance.html>

Proof of purchase (original sales receipt) from the original purchaser must be made available to Delta Faucet Company for all warranty claims unless the purchaser has registered the product with Delta Faucet Company or the product is a Delta® Recertified product purchased from deltafaucet.com. This warranty applies only to Delta® faucets manufactured after January 1, 2019 and installed in the United States of America, Canada and Mexico.

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Additional Rights. This warranty gives you specific legal rights, and you may also have other rights which vary from state/province to state/province.

This is Delta Faucet Company's exclusive written warranty and the warranty is not transferable.

If you have any questions or concerns regarding our warranty, please contact us as provided above or view our Warranty FAQs at www.deltafaucet.com.

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Garantía Limitada en las Llaves de Agua de Delta®

Piezas y Acabado. Todas las piezas (excepto los componentes electrónicos y las pilas) y los acabados de los grifos Delta Faucet® comprados de vendedores autorizados por Delta están garantizados al consumidor comprador original de estar libres de defectos en material y fabricación durante el tiempo que el comprador original sea propietario de la vivienda en la que el grifo/la llave de agua fue originalmente instalada. En el caso de los consumidores comerciales, (a) el período de garantía es de diez (10) años para aplicaciones multifamiliares (apartamentos y condominios) y (b) cinco (5) años para todos las otras aplicaciones comerciales, en cada caso a partir de la fecha de compra. Para los propósitos de esta garantía, el término "aplicación multifamiliar residencial" se refiere a la compra del grifo de un vendedor autorizado por Delta por el comprador propietario que no vive en la vivienda residencial donde se instaló inicialmente la llave de agua, como en una unidad alquilada o arrendada, o unidad o vivienda unifamiliar separada (dúplex o casas adosadas), o un condominio, edificio de apartamentos o centro de vivienda comunitaria. Las siguientes instalaciones no se consideran aplicaciones multifamiliares residenciales, están excluidas de la garantía de 10 años y están sujetas a la garantía de cinco años: instalaciones industriales, institucionales u otras instalaciones comerciales, como dormitorios, instalaciones de hotelería (hotel, motel o una alberga para estadías prolongadas), aeropuerto, centro educativo, centro de atención de salud a corto o largo plazo (hospital, centro de rehabilitación, asilo de ancianos, unidad de vivienda asistida o una unidad residencial de cuidado), espacio público o área común.

Piezas y acabados para grifos recertificados Delta®. Delta Faucet Company ofrece para la venta en deltafaucet.com llaves de agua/grifos recertificados Delta®. Todas las piezas electrónicas (excepto las partes electrónicas y las pilas) y los acabados de estos grifos recertificados Delta® están garantizados al consumidor comprador original de estar libres de defectos en material y fabricación durante diez (10) años a partir de la fecha de compra. Para los consumidores comerciales, el período de garantía es por un (1) año a partir de la fecha de compra.

Piezas electrónicas. Las piezas electrónicas (excepto las pilas), si las hay, de las llaves de agua Delta® compradas de deltafaucet.com o vendedores autorizados por Delta están garantizadas al consumidor comprador original de estar libres de defectos en material y fabricación durante cinco (5) años a partir de la fecha de compra o para los consumidores comerciales, por un (1) año a partir de la fecha de compra. No se garantizan las pilas.

Lo que hacemos. La compañía Delta Faucet Company reparará o reemplazará, sin costo alguno, durante el período de garantía aplicable (como descrito arriba) cualquier pieza o acabado que demuestre ser defectuosa en material y/o fabricación bajo la instalación, el uso y el servicio normal. Si la reparación o el reemplazo no es práctico, Delta Faucet Company puede optar por reembolsarle el precio de compra a cambio de la devolución del producto. **Estos son sus remedios exclusivos.**

Lo que no cubre. Debido a que Delta Faucet Company no puede controlar la calidad de los productos Delta vendidos por vendedores no autorizados, a menos que la ley lo prohíba, esta garantía no cubre los productos Delta comprados a vendedores no autorizados.

No cubre cualquier gasto de labor incurrido por el comprador para reparar, reemplazar, instalar o desmontar este producto. Delta Faucet Company no es responsable por cualquier daño al grifo que resulte del desgaste razonable, uso en el exterior, uso indebido, (incluyendo el uso del producto para una aplicación indebida), agua helada, abuso, negligencia o la instalación, el mantenimiento o la reparación incorrecta, incluido el incumplimiento de las instrucciones de cuidado y limpieza correspondientes. Delta Faucet Company recomienda el uso de los servicios de un plomero profesional para toda instalación y reparación de los grifos. También recomendamos que use solo piezas de repuesto genuinas Delta®.

Lo que usted debe hacer para obtener servicio de garantía o piezas de repuesto. Se puede hacer un reclamo de la garantía y se pueden obtener piezas de repuesto llamando al 1-877-345-DELTA (3358) o contactándonos por correo postal o electrónico como indicado (favor incluir el número del modelo y la fecha de compra):

En los Estados Unidos y México:

Delta Faucet Company
Product Service
55 E. 111th Street
Indianapolis, IN 46280
Attention: Customer Solutions
<http://www.deltafaucet.com/service-parts/contact-us>

En Canadá:

Masco Canada Limited, Plumbing Group
Technical Service Centre
350 South Edgeware Road
St. Thomas, Ontario, Canada N5P 4L1
Attention: Customer Service
<http://www.deltafaucet.ca/customersupport/assistance.html>

El comprobante de compra (recibo de venta original) del comprador original debe ser disponible a Delta Faucet Company para todos los reclamos de garantía a menos que el comprador haya registrado el producto en Delta Faucet Company o es un producto recertificado de Delta® comprado de deltafaucet.com. Esta garantía aplica solo a las llaves de agua/grifos Delta® fabricados después de enero 1, 2019 e instalados en los Estados Unidos de América, Canadá y México.

La limitación de la duración de las garantías implícitas. Favor tomar nota que algunos estados/provincias (incluyendo Quebec) no permiten las limitaciones de la duración de una garantía implícita por lo que las limitaciones a continuación puedan no aplicarle. HASTA EL ALCANCE MÁXIMO EN QUE LA LEY LO PERMITA, CUALQUIER GARANTÍA IMPLÍCITA, INCLUIDAS LAS GARANTÍAS IMPLÍCITAS DE COMERCIABILIDAD Y DE IDONEIDAD PARA UN PROPOSITO PARTICULAR, ESTÁ LIMITADA AL PERÍODO LEGAL O A LA DURACIÓN DE ESTA GARANTÍA, LO QUE SEA MÁS CORTO.

Limitación de daños especiales, incidentales o consiguientes. Favor de tomar nota que algunos estados/provincias (incluyendo Quebec) no permiten la exclusión o limitación de daños especiales, incidentales o consiguientes, por lo que estas limitaciones y exclusiones puedan no aplicarle. HASTA EL ALCANCE EN QUE LA LEY LO PERMITA, ESTA GARANTÍA NO CUBRE Y DELTA FAUCET COMPANY NO SE HACE RESPONSABLE, POR NINGUN DAÑO ESPECIAL, INCIDENTAL O CONSIGUIENTE (INCLUYENDO LOS GASTOS DE LABOR PARA REPARAR, REEMPLAZAR, INSTALAR O DESMONTAR ESTE PRODUCTO), YA SEA EL RESULTADO DEL INCUMPLIMIENTO DE CUALQUIER GARANTÍA EXPRESA O IMPLÍCITA, INCUMPLIMIENTO DE CONTRATO, AGRAVIO O DE OTRA MANERA. DELTA FAUCET COMPANY NO SE RESPONSABILIZARÁ POR CUALQUIER DAÑO AL GRIFO QUE RESULTE DEL DESGASTE RAZONABLE, USO EN EL EXTERIOR DE LA PROPIEDAD, USO INDEBIDO (INCLUYENDO EL USO DEL PRODUCTO PARA UNA APLICACIÓN INDEBIDA), AGUA HELADA, ABUSO, NEGLIGENCIA O INSTALACIÓN O MANTENIMIENTO INADECUADO O INCORRECTO, INCLUYENDO EL NO SEGUIR LAS INSTRUCCIONES CORRESPONDIENTES PARA EL CUIDADO, LA LIMPIEZA Y EL MANTENIMIENTO. Aviso para los residentes del estado de New Jersey: Las disposiciones de este documento tienen la intención de aplicarse en la máxima medida permitida por las leyes del estado de New Jersey.

Derechos adicionales. Esta garantía le otorga derechos legales específicos y también puede tener otros derechos que varían de estado/provincia a estado/provincia.

Esta es la garantía escrita exclusiva de Delta Faucet Company y la garantía no es transferible.

Si tiene preguntas o dudas con respecto a nuestra garantía, por favor comuníquese con nosotros como se indica anteriormente o consulte nuestras Preguntas Frecuentes Warranty FAQs en www.deltafaucet.com.

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Garantie limitée des robinets Delta®

Pièces et finis. Tous les pièces (autres que les composants électroniques et les piles) et les finis de ce robinet Delta® achetés chez des vendeurs Delta autorisés sont protégés contre les défauts du matériel et les vices de fabrication par une garantie qui est consentie au premier acheteur au détail et qui demeure valide tant que celui-ci demeure propriétaire de la maison dans laquelle le robinet a été installé. En ce qui concerne les acheteurs commerciaux, la période de garantie est a) de dix (10) ans pour les applications résidentielles multifamiliales et b) de cinq (5) ans pour toutes les autres applications commerciales, à compter de la date d'achat dans chaque cas. Dans le libellé de la présente garantie, on entend par « application résidentielle multifamiliale », un robinet acheté chez un vendeur Delta autorisé par un acheteur qui est propriétaire d'un logement résidentiel sans l'habiter et installé la première fois dans cet immeuble. Il peut s'agir d'un immeuble individuel comportant un ou plus d'un logement loué (duplex ou groupe de maisons en rangée), d'un condominium, d'un immeuble d'habitation ou d'un centre d'intégration communautaire. Les applications décrites ci-après ne sont pas considérées comme des applications multifamiliales et elles sont couvertes par la garantie de cinq (5) ans plutôt que par la garantie de dix (10) ans. Ce sont les suivantes : robinets installés dans un bâtiment industriel, un bâtiment institutionnel et un autre immeuble commercial, notamment une résidence d'étudiants, un lieu d'hébergement (hôtel, motel ou lieu de séjour prolongé), un aéroport, un établissement d'enseignement, un établissement de soins de santé de courte ou de longue durée (hôpital, centre de réadaptation, maison de soins infirmiers), un endroit public ou un lieu commun.

Pièces et finis pour les robinets recertifiés Delta®. Delta Faucet Company offre en vente sur deltafaucet.com des robinets recertifiés Delta®. Tous les pièces (autres que les composants électroniques et les piles) et les finis de ces robinets recertifiés Delta® sont protégés contre les défauts du matériel et les vices de fabrication par une garantie d'une durée de dix (10) ans qui est consentie au premier acheteur au détail à compter de la date d'achat par ledit acheteur. En ce qui concerne les acheteurs commerciaux, la durée de la garantie est d'un (1) an à compter de la date d'achat par le premier acheteur.

Composants électroniques. Les composants électroniques (autres que les piles) de ce robinet Delta® qui ont été achetés chez des vendeurs Delta autorisés sont protégés contre les défauts du matériel et les vices de fabrication par une garantie consentie au premier acheteur au détail qui est de cinq (5) ans à compter de la date d'achat. En ce qui concerne les acheteurs commerciaux, la période de garantie est d'un (1) an à compter de la date d'achat. Les piles ne sont pas couvertes par la garantie.

Ce que nous ferons. Delta Faucet Company réparera ou remplacera gratuitement, pendant la période de garantie applicable (décrite ci-dessus), toute pièce ou tout fini qui présentera une défectuosité de matériel et/ou un vice de fabrication pour autant que le produit ait été installé, utilisé et entretenu normalement. S'il n'est pas utile de réparer ou de remplacer le produit, Delta Faucet Company pourra rembourser le prix d'achat en échange du produit retourné. **Il s'agit de vos seuls recours.**

Ce qui n'est pas couvert. Étant donné que Delta Faucet Company n'est pas en mesure de contrôler la qualité des produits vendus par des vendeurs non autorisés, la présente garantie ne s'applique pas aux produits Delta vendus par des vendeurs non autorisés, à moins que cette restriction ne soit interdite par la loi.

La présente garantie ne couvre pas les frais de main-d'œuvre encourus par l'acheteur pour la réparation, le remplacement, l'installation ou la dépose du robinet. Delta Faucet Company se dégage de toute responsabilité à l'égard de toute détérioration du robinet résultant d'une usure raisonnable et des dommages causés par une utilisation à l'extérieur, un mauvais usage (y compris l'utilisation du produit à des fins autres que celles auxquelles il est destiné), le gel de l'eau, un usage abusif, la négligence ou l'utilisation d'une méthode d'installation, de maintenance ou de réparation incorrecte ou inadéquate, y compris les dommages résultant du non-respect des instructions de nettoyage et d'entretien applicables. Delta Faucet Company vous recommande de confier tous les travaux d'installation et de réparation à un plombier professionnel. Nous vous recommandons également d'utiliser uniquement des pièces de rechange Delta® authentiques.

Ce que vous pouvez faire pour vous prévaloir de la garantie ou obtenir des pièces de rechange.

Vous pouvez présenter une réclamation en vertu de la garantie et obtenir des pièces de rechange en appelant au 1-800-345-DELTA (3358) ou en communiquant avec nous à l'une des adresses postales ou des adresses de courriel indiquées ci-dessous (n'oubliez pas d'indiquer le numéro de modèle et la date d'achat).

Aux États-Unis et au Mexique

Delta Faucet Company
Product Service
55 E. 111th Street
Indianapolis, IN 46280
Attention: Customer Solutions
<http://www.deltafaucet.com/service-parts/contact-us>

Au Canada:

Masco Canada Limited, Groupe plomberie
Centre de services techniques
350, chemin South Edgeware
St. Thomas (Ontario) Canada N5P 4L1
À l'attention du Service à la clientèle
<http://www.deltafaucet.ca/customersupport/assistance.html>

La preuve d'achat (original du reçu) du premier acheteur doit être présentée à Delta Faucet Company pour toutes les réclamations en vertu de la garantie, sauf si le produit a été enregistré auprès de Delta Faucet Company ou s'il s'agit d'un produit recertifié Delta® qui a été acheté de deltafaucet.com. La présente garantie s'applique uniquement aux robinets Delta® fabriqués après le 1^{er} janvier 2019 et installés aux États-Unis d'Amérique, au Canada et au Mexique.

Limitation de la durée des garanties implicites. Veuillez noter que dans les États ou les provinces (y compris le Québec) où il est interdit de limiter la durée d'une garantie implicite, les limites mentionnées ci-dessous peuvent ne pas s'appliquer. DANS LA MESURE DE CE QUI EST PERMIS PAR LA LOI APPLICABLE, TOUTES LES GARANTIES IMPLICITES, Y COMPRIS LES GARANTIES IMPLICITES DE QUALITÉ MARCHANDE ET D'ADEQUATION À UN USAGE PARTICULIER, SE LIMITENT À LA PÉRIODE FIXÉE PAR LA LOI OU À LA DURÉE DE LA PRÉSENTE GARANTIE, LA PLUS COURTE DES DEUX PÉRIODES S'APPLIQUANT.

Limitation des dommages particuliers, consécutifs ou indirects. Veuillez noter que dans les États ou les provinces (y compris le Québec) où il est interdit d'exclure ou de limiter les dommages particuliers, consécutifs ou indirects, les exclusions et les limites mentionnées ci-dessous peuvent ne pas s'appliquer. DANS LA MESURE DE CE QUI EST PERMIS PAR LA LOI APPLICABLE, DELTA FAUCET COMPANY SE DÉGAGE DE TOUTE RESPONSABILITÉ À L'ÉGARD DES DOMMAGES PARTICULIERS, CONSÉCUTIFS OU INDIRECTS (Y COMPRIS LES FRAIS DE MAIN-D'ŒUVRE POUR LA RÉPARATION, LE REMPLACEMENT, L'INSTALLATION OU LA DÉPOSE DU PRODUIT), PEU IMPORTÉ QU'ILS DÉCOULENT D'UNE RUPTURE D'UNE GARANTIE IMPLICITE OU EXPLICITE, D'UNE RUPTURE DE CONTRAT, D'UN DÉLIT CIVIL OU D'UNE AUTRE CAUSE. DELTA FAUCET COMPANY SE DÉGAGE DE TOUTE RESPONSABILITÉ À L'ÉGARD DE TOUTE DÉTÉRIORATION DU ROBINET RÉSULTANT D'UNE USURE RAISONNABLE ET DES DOMMAGES CAUSÉS PAR UNE UTILISATION À L'EXTÉRIEUR, UN MAUVAIS USAGE (Y COMPRIS L'UTILISATION DU PRODUIT À DES FINS AUTRES QUE CELLES AUXQUELLES IL EST DESTINÉ), LE GEL DE L'EAU, UN USAGE ABUSIF, LA NÉGLIGENCE OU L'UTILISATION D'UNE MÉTHODE D'INSTALLATION, DE MAINTENANCE OU DE RÉPARATION INCORRECTE OU INADÉQUATE, Y COMPRIS LES DOMMAGES RÉSULTANT DU NON-RESPECT DES INSTRUCTIONS D'INSTALLATION, D'ENTRETIEN ET DE NETTOYAGE APPLICABLES, ET CES DOMMAGES NE SONT PAS COUVERTS PAR LA GARANTIE. Avis à l'intention des résidents de l'État du New Jersey : Les dispositions de la présente garantie, y compris ses limitations, s'appliquent dans toute la mesure permise par les lois de l'État du New Jersey.

Droits supplémentaires. La présente garantie vous procure des droits précis reconnus par la loi. Vous pouvez avoir d'autres droits qui varient selon l'État ou la province.

La présente garantie écrite est la seule garantie offerte par Delta Faucet Company et elle n'est pas transférable.

Si vous avez des questions ou des préoccupations concernant notre garantie, veuillez communiquer avec nous de la manière indiquée ci-dessus ou consulter notre FAQ sur la garantie à www.deltafaucet.com.

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MODELS PCE 6-120 GALLONS

COMMERCIAL ELECTRIC WATER HEATERS

- Installation
- Electrical
- Wiring Diagrams
- Replacement Parts
- Operation
- Maintenance
- Leakage Checkpoints
- Limited Warranty



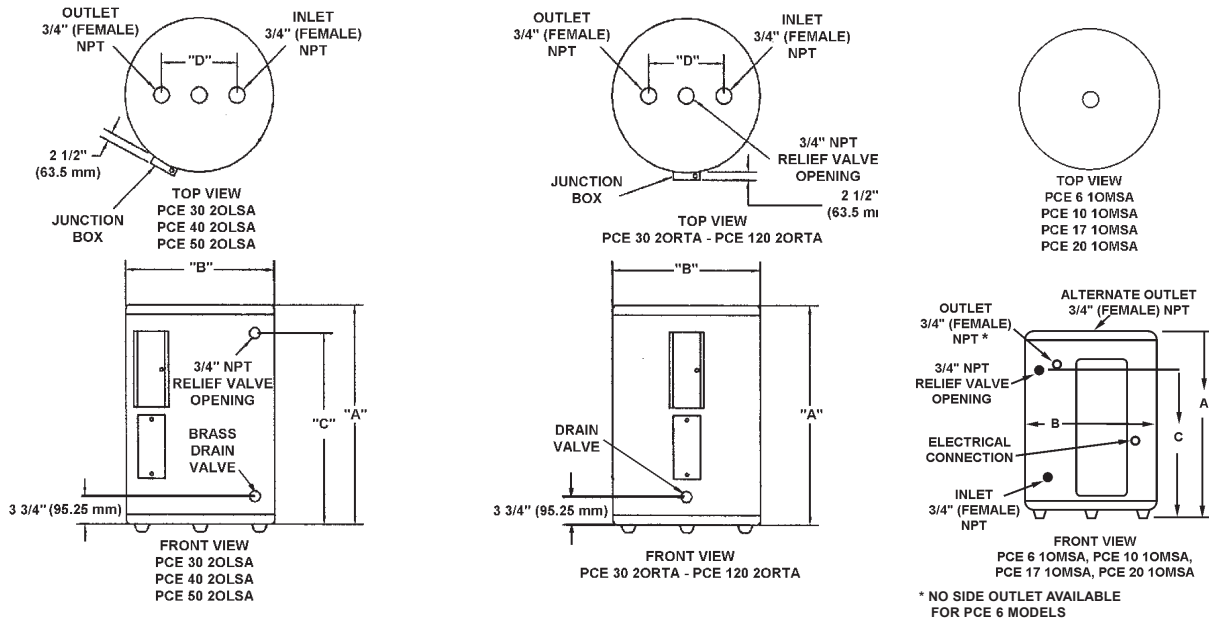
500 Tennessee Waltz Parkway, Ashland City, TN 37015
www.statewaterheaters.com



TEXT PRINTED OR OUTLINED IN RED CONTAINS INFORMATION RELATIVE TO YOUR SAFETY.
PLEASE READ THOROUGHLY BEFORE INSTALLING AND USING THIS APPLIANCE.

PLACE THESE INSTRUCTIONS ADJACENT TO HEATER AND NOTIFY OWNER TO KEEP FOR FUTURE REFERENCE.

ROUGH-IN DIMENSIONS



ROUGH-IN DIMENSIONS

Models Dimensions	No. of Elements	Tank Capacity		A		B		C		D		Approx. Shipping Weight.	
		US Gals.	Litres	inches	mm	inches	mm	inches	mm	inches	mm	Lbs.	Kg.
PCE 6 1OMSA	1	6	23	15 1/2	394	14 1/4	362	11	279	-	-	35	15.9
PCE 10 1OMSA	1	10	38	18 1/4	464	18	457	12 1/2	318	-	-	54	24.5
PCE 17 1OMSA	1	15	57	26	660	18	457	20 1/2	521	-	-	58	26.3
PCE 20 1OMSA	1	20	76	22 1/4	565	21 3/4	552	15 3/8	391	-	-	73	33.1
PCE 30 2OLSA	2	30	114	30 7/8	784	21 3/4	552	24 1/8	613	8	203	100	45.4
PCE 40 2OLSA	2	40	151	32 1/4	819	24	610	25 9/16	649	8	203	125	56.7
PCE 50 2OLSA	2	50	189	32 1/4	819	26 1/2	673	25 1/8	638	8	203	166	75.3
PCE 30 2ORTA	2	30	114	34 1/2	876	20 1/2	521	-	-	8	203	98	44.5
PCE 40 2ORTA	2	40	151	45 1/8	1146	20 1/2	521	-	-	8	203	113	51.3
PCE 52 2ORTA	2	50	189	54 7/8	1394	20 1/2	521	-	-	8	203	131	59.4
PCE 66 2ORTA	2	66	250	60 3/4	1543	21 3/4	552	-	-	8	203	176	79.8
PCE 82 2ORTA	2	80	303	59 3/8	1508	24	610	-	-	8	203	211	95.7
PCE 120 2ORTA	2	119	450	62 7/16	1586	29 3/8	746	-	-	8	203	326	147.9

RECOVERY CAPACITIES

Element Wattage (Upper/Lower)	INPUT KW	U.S. Gallons/Hr and Litres/Hr at TEMPERATURE RISE INDICATED											
		F°	36F°	40F°	54F°	60F°	72F°	80F°	90F°	100F°	108F°	120F°	126F°
		C°	20C°	22.2C°	30C°	33.3C°	40C°	44.4C°	50C°	55.5C°	60C°	66.6C°	70C°
NON-SIMULTANEOUS OPERATION													
/1500	1.5	GPH	17	15	11	10	8	8	7	6	6	5	5
		LPH	64	58	43	38	32	29	26	23	21	19	18
/2000	2.0	GPH	23	20	15	14	11	10	9	8	8	7	6
		LPH	85	77	57	51	43	38	34	31	28	26	24
/2500	2.5	GPH	28	25	19	17	14	13	11	10	9	8	8
		LPH	107	96	71	64	53	48	43	38	36	32	30
3000/3000	3.0	GPH	34	30	23	20	17	15	14	12	11	10	10
		LPH	128	115	85	77	64	58	51	46	43	38	37
4000/4000	4.0	GPH	45	41	30	27	23	20	18	16	15	14	13
		LPH	170	153	114	102	85	77	68	61	57	51	49
4500/4500	4.5	GPH	51	46	34	30	25	23	20	18	17	15	14
		LPH	192	173	128	115	96	86	77	69	64	58	55
5000/5000	5.0	GPH	56	51	38	34	28	25	23	20	19	17	16
		LPH	213	192	142	128	107	96	85	77	71	64	61
6000/6000	6.0	GPH	68	61	45	41	34	30	27	24	23	20	19
		LPH	256	230	170	153	128	115	102	92	85	77	73
SIMULTANEOUS OPERATION													
3000/3000	6	GPH	68	61	45	41	34	30	27	24	23	20	19
		LPH	256	230	170	153	128	115	102	92	85	77	73
4000/4000	8	GPH	90	81	60	54	45	41	36	32	30	27	26
		LPH	341	307	227	205	170	153	136	123	114	102	97
4500/4500	9	GPH	101	91	68	61	51	46	41	36	34	30	29
		LPH	384	345	256	230	192	173	153	138	128	115	110
5000/5000	10	GPH	113	101	75	68	56	51	45	41	38	34	32
		LPH	426	384	284	256	213	192	170	153	142	128	122
6000/6000	12	GPH	135	122	90	81	68	61	54	49	45	41	39
		LPH	511	460	341	307	256	230	205	184	170	153	146

Recovery capacities at 100° F rise equal: for non-simultaneous element operation = 4.1 gal. x KW of one element; for simultaneous element operation = 4.1 gal. x 2/3 KW of both elements. For other rises multiply element KW as previously explained by 410 and divide by temperature rise. Full load current for single phase = total watts : voltage.

FOREWORD

Thank you for buying this energy efficient water heater from State. We appreciate your confidence in our products. Detailed installation diagrams are in this manual. These diagrams will serve to provide the installer with a reference for the materials and method of piping suggested. IT IS NECESSARY THAT ALL WATER PIPING AND THE ELECTRICAL WIRING BE INSTALLED AND CONNECTED AS SHOWN IN THE DIAGRAMS.

In addition to these instructions, the water heater must be installed in accordance with local codes and the authority having jurisdiction.

GENERAL SAFETY INSTRUCTIONS

BE SURE TO TURN OFF POWER WHEN WORKING ON OR NEAR THE ELECTRICAL SYSTEM OF THE HEATER. NEVER TOUCH ELECTRICAL COMPONENTS WITH WET HANDS OR WHEN STANDING IN WATER. WHEN REPLACING FUSES ALWAYS USE THE CORRECT SIZE FOR THE CIRCUIT.

The principal components of the heater are identified on page 6. The model and rating plate on page 5 interprets certain markings into useful information. Both of these references should be used to identify the heater, its components and optional equipment.

WARNING

FOR CALIFORNIA INSTALLATION THIS WATER HEATER MUST BE BRACED, ANCHORED, OR STRAPPED TO AVOID FALLING OR MOVING DURING AN EARTHQUAKE. SEE INSTRUCTIONS FOR CORRECT INSTALLATION AND PROCEDURES. INSTRUCTIONS MAY BE OBTAINED FROM YOUR LOCAL DEALER, WHOLESALE, PUBLIC UTILITIES OR CALIFORNIA'S OFFICE OF STATE ARCHITECT, 400 P STREET, SACRAMENTO, CALIFORNIA 95814.

INSULATION BLANKETS

Insulation blankets available to the general public for external use on electric water heaters are not approved for use on your State water heater. The purpose of an insulation blanket is to reduce the standby heat loss encountered with storage tank water heaters. Your State water heater meets or exceeds the National Appliance Energy Act standards with respect to insulation and standby loss requirements, making an insulation blanket unnecessary.

WARNING

Should you choose to apply an insulation blanket to this heater, you should follow these instructions (See page 5 for identification of components mentioned below). Failure to follow these instructions can result in fire, serious personal injury or death.

- Do not cover the temperature & pressure relief valve.
- Do not cover the instruction manual. Keep it on the side of the water heater or nearby for future reference.
- Do obtain new labels from State Water Heaters for placement on the blanket directly over the existing labels.

EXTENDED NON-USE PERIODS

CAUTION

HYDROGEN GAS CAN BE PRODUCED IN A HOT WATER SYSTEM SERVED BY THIS HEATER THAT HAS NOT BEEN USED FOR A LONG PERIOD OF TIME (GENERALLY TWO WEEKS OR MORE). HYDROGEN GAS IS EXTREMELY FLAMMABLE. To

reduce the risk of injury under these conditions, it is recommended that the hot water faucet be opened for several minutes at a nearby kitchen sink before using any electrical appliance connected to the hot water system. If hydrogen is present, there will probably be an unusual sound such as air escaping through the pipe as the water begins to flow. **THERE SHOULD BE NO SMOKING OR OPEN FLAME NEAR THE FAUCET AT THE TIME IT IS OPENED.**

CAUTION

AN ELECTRICAL GROUND IS REQUIRED TO REDUCE RISK OF ELECTRIC SHOCK OR POSSIBLE ELECTROCUTION. THE GROUND SCREW AT THE JUNCTION BOX IS FOR BONDING THE HEATER TO A GROUNDED SERVICE ENTRANCE CONDUCTOR, A GROUNDED SERVICE ENTRANCE RACEWAY, OR AN EARTH GROUNDING ELECTRODE CONDUCTOR.

WARNING

FAILURE TO FOLLOW THESE INSTRUCTIONS CAN RESULT IN SERIOUS PERSONAL INJURY OR DEATH.

REQUIRED ABILITY

INSTALLATION OR SERVICE OF THIS WATER HEATER REQUIRES ABILITY EQUIVALENT TO THAT OF A LICENSED TRADESMAN IN THE FIELD INVOLVED. PLUMBING AND ELECTRICAL WORK ARE REQUIRED.

GENERAL

The installation must conform to these instructions, the local code authority having jurisdiction, and the requirements of the power company. In the absence of code requirements follow the current edition of NFPA-70, The National Electrical Code which may be ordered from: National Fire Protection Association, 1 Batterymarch Park, Quincy, MA 02269.

LOCATION

The water heater should be located as close as possible to or centralized to the water piping system. The water heater should be located in an area not subject to freezing temperatures.

The heater should be located in an area where leakage of the tank or connections will not result in damage to the area adjacent to the heater or to lower floors of the structure.

When such locations cannot be avoided, a suitable drain pan should be installed under the heater.

Such pans should be at least two inches deep, have a minimum length and width of at least two inches greater than the diameter of the heater and should be piped to an adequate drain.

Drain pans suitable for these heaters are available from your distributor or State Water Heaters, 500 Tennessee Waltz Parkway, Ashland City, TN 37015.

Water heater life depends upon water quality, water pressure and the environment in which the water heater is installed. Water heaters are sometimes installed in locations where leakage may result in property damage, even with the use of a drain pan piped to a drain. However, unanticipated damage can be reduced or prevented by a leak detector or water shut-off device used in conjunction with a piped drain pan. These devices are available from some plumbing supply wholesalers and retailers, and detect and react to leakage in various ways:

- Sensors mounted in the drain pan that trigger an alarm or turn off the incoming water to the water heater when leakage is detected.

- Sensors mounted in the drain pan that turn off the water supply to the entire home when water is detected in the drain pan.
- Water supply shut-off devices that activate based on the water pressure differential between the cold water and how water pipes connected to the water heater.
- Devices that will turn off the gas supply to a gas water heater while at the same time shutting off its water supply.

CLEARANCES

A minimum clearance of 4" must be allowed for access to replaceable parts such as thermostats, drain valve and relief valve.

Adequate clearance for servicing this appliance should be considered before installation, such as changing the anodes, etc.

FLOOD WARNING

IF THE HEATER BECOMES IMMERSSED IN WATER UP TO OR ABOVE THE LEVEL OF THE BOTTOM OF THE ELEMENT DOORS, THE HEATER SHOULD BE EXAMINED BY A COMPETENT SERVICE PERSON BEFORE IT IS PLACED IN OPERATION.

CHEMICAL VAPOR CORROSION

Water heater corrosion and component failure can be caused by the heating and breakdown of airborne chemical vapors. Spray can propellants, cleaning solvents, refrigerator and air conditioning refrigerants, swimming pool chemicals, calcium and sodium chloride, waxes, and process chemicals are typical compounds which are potentially corrosive. These materials are corrosive at very low concentration levels with little or no odor to reveal their presence. Products of this sort should not be stored near the heater.

ELECTRICAL (GENERAL)

Check the heater model and rating plate information against the characteristics of the branch circuit electrical supply. **DO NOT CONNECT THE HEATER TO AN IMPROPER SOURCE OF ELECTRICITY.** Contact the heater supplier for conversion information if necessary.

Voltage applied to the heater should not vary more than +5% to -10% of the model and rating plate marking for satisfactory operation.

DO NOT ENERGIZE THE BRANCH CIRCUIT FOR ANY REASON BEFORE THE HEATER TANK IS FILLED WITH WATER. DOING SO WILL CAUSE THE HEATING ELEMENTS TO BURN OUT.

The factory wiring is attached to a terminal block within the external junction box unit. The branch circuit is connected to the terminal block within this junction box. The water heater should be connected to a separate, grounded, branch circuit with overcurrent protection and disconnect switch. The water heater should be grounded in accordance with national and local codes.

BRANCH CIRCUIT

The branch circuit wire size should be established through reference to the current edition of NFPA-70, the National Electrical Code or other locally approved source in conjunction with the heater amperage rating. For convenience, portions of the wire size tables from the Code are reproduced here. The branch circuit should be sized at 125 percent of the heater rating and further increase wire size as necessary to compensate for voltage drop in long runs.

CALCULATING AMPERAGE/OVERCURRENT PROTECTION

The heaters come from the factory in two configurations:

1. Two wire C-2 circuit for single element heater equipped with a high limit control, single phase power input.
2. Four wire A-8 circuit for dual element heater equipped with two high limit controls, single phase or three phase power input.

The heater with dual elements is factory wired for connection to a three wire, three-phase delta branch circuit, non-simultaneous operation. In addition a ground conductor is required.

Element connection is for non-simultaneous operation. This means only one element at a time operates. The wiring diagram, on page 5, shows the heater may be field converted to simultaneous element operation by moving the red wire on "J" terminal to L1. It is then possible for both elements to operate at once as determined by the thermostats. Regardless of element connection the heater operates in an "unbalanced" fashion.

The heater may be field converted to single-phase operation by moving the wire on L3 of the terminal block to L2. L3 is not used, see page 5.

The heater, now in single-phase non-simultaneous operation, may be field-converted to single phase simultaneous operation by moving the red wire on terminal "J" to L1, see page 5.

This is an example of calculating heater amperage for both types of element operation. From this, the branch circuit conductor and overcurrent protection sizing can be established.

The example is of a three-phase 240 volt unit with two, 6 kw elements. The notations are for units field converted to single-phase. Check the heater model and rating plate for actual specifications and substitute those values in the following.

Non-simultaneous: (as factory wired)	Simultaneous: (Field conversion)
$3000 \div 240 = 12.5 \text{ amps}^*$	$3000 \div 240 = 12.5 \text{ amps}^*$ $12.5 \times 1.73 = 21.6 \text{ amps}$
*NOTE: as a single-phase non-simultaneous unit.	*NOTE: as a single-phase simultaneous unit the total is: $12.5 \times 2 = 25 \text{ amps}$

The rating of the overcurrent protection should be computed on the basis of 125 percent of the total connected load amperage. Where the standard ratings and settings do not correspond with this computation, the next higher standard rating or setting should be selected.

Portion of Table 310-16 (NFPA-70) follows:

Allowable Ampacities of Insulated Copper Conductors. Not more than three conductors in Raceway or Cable or Direct Burial (Based on Ambient Temperature of 30° C, 86° F).

These ampacities relate only to conductors described in Table 310-13 in Code.

For ambient temperatures over 30° C (86° F), see Correction Factors, Note 13 in Code.

Size	Temperature Rating of Conductor See Table 310-13 in Code	
AMG MCM	60° C (140° F)	75° C (167° F)
	TYPES: RUW (14-2), T, TW, UF	TYPES: RH, RHW, RUH, (14-2), THW THWN, XHHW, USE
18	---	---
16	---	---
14	15	15
12	20	20
10	30	30
8	40	45
6	55	65
4	70	85
3	80	100

Size	Temperature Rating of Conductor See Table 310-13 in Code	
AMG MCM	60° C (140° F)	75° C (167° F)
	TYPES: RUW (12-2), T, TW, UF	TYPES: RH, RHW, RUH, (12-2), THW THWN, XHHW, USE
12	15	15
10	25	25
8	30	40
6	40	50
4	55	65
3	65	75
2	75	90
1	85	100

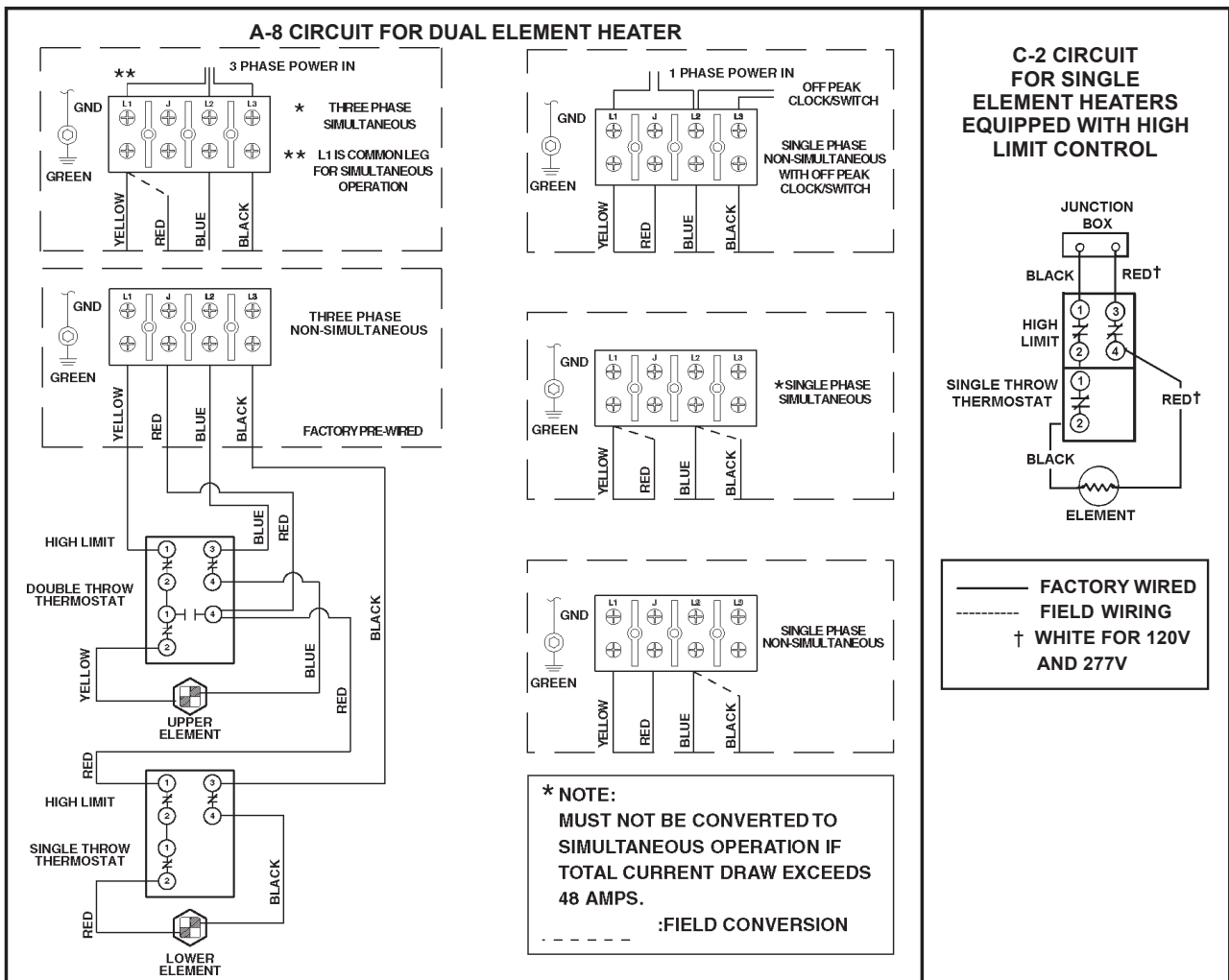
Portion of Table 310-18 follows:

Allowable Ampacities of Insulated Aluminum and Copper -Clad Aluminum Conductors.

Not more than three conductors in Raceway or Cable or Direct Burial (Based on Ambient Temperature of 30° C, 86° F. These ampacities relate only to conductors described in Table 310-13 in Code.

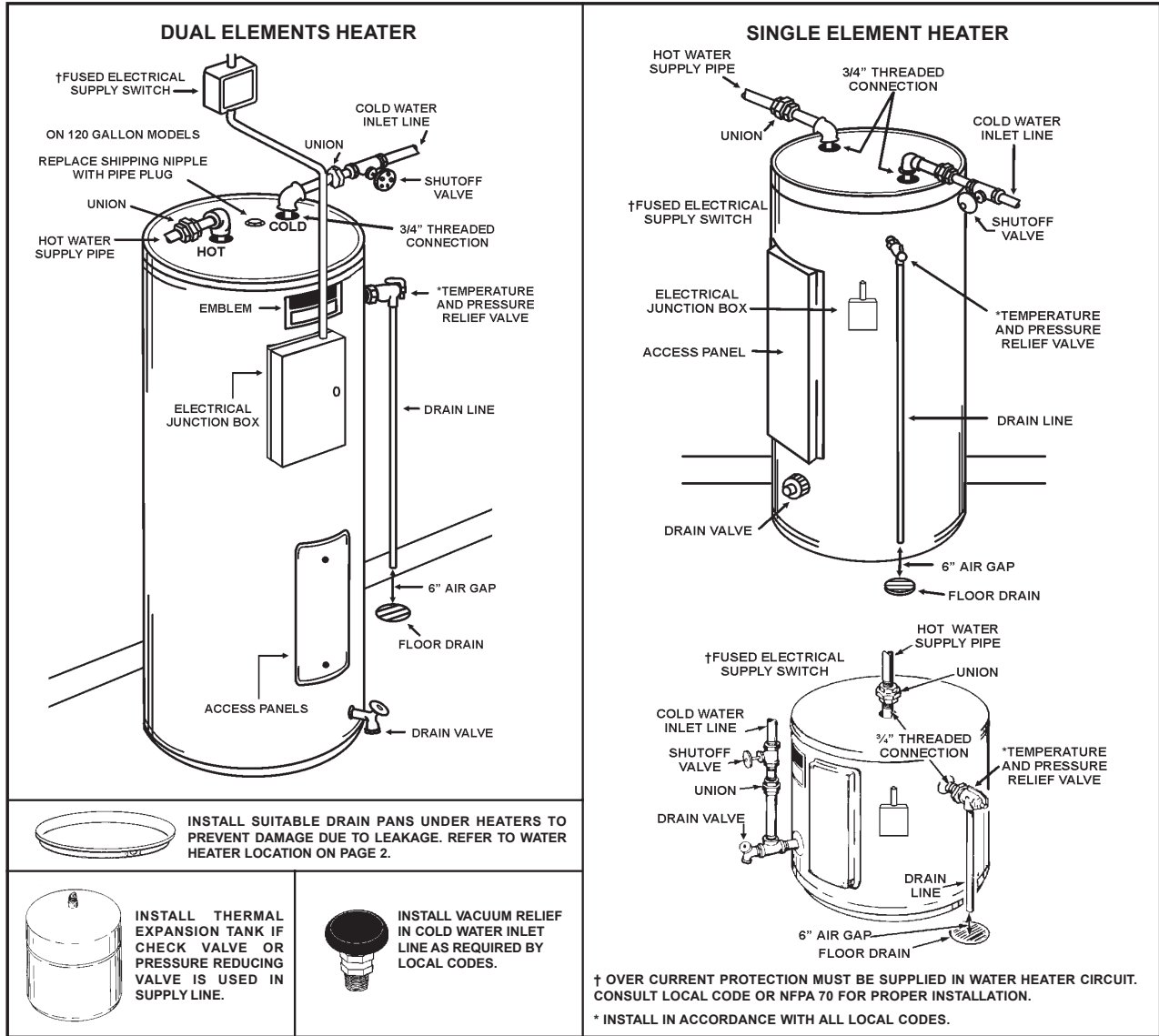
For ambient temperatures over 30° C (86° F), see Correction Factors, Note 13 in Code.

WIRING DIAGRAMS



TYPICAL PIPING CONNECTIONS

This page shows typical water heater installations by model designations.



TEMPERATURE AND PRESSURE RELIEF VALVE



TO REDUCE THE RISK OF EXCESSIVE PRESSURES AND TEMPERATURES IN THIS WATER HEATER, INSTALL TEMPERATURE AND PRESSURE PROTECTIVE EQUIPMENT REQUIRED BY LOCAL CODES BUT NOT LESS THAN A COMBINATION TEMPERATURE AND PRESSURE RELIEF VALVE CERTIFIED BY A NATIONALLY RECOGNIZED TESTING LABORATORY THAT MAINTAINS PERIODIC INSPECTION OF PRODUCTION OF LISTED EQUIPMENT OR MATERIALS, AS MEETING THE REQUIREMENTS FOR RELIEF VALVE DEVICES FOR HOT WATER SUPPLY SYSTEMS. (ANSI Z21.22.)

This valve must be marked with a maximum set pressure not to exceed the marked maximum working pressure of the water heater. Install the valve into an opening provided and marked for this purpose in the water heater, and orient it or provide tubing so

that any discharge from the valve will exit only within 6 inches above, or at any distance below, the structural floor and cannot contact any live electrical part. THE DISCHARGE OPENING MUST NOT BE BLOCKED OR REDUCED IN SIZE UNDER ANY CIRCUMSTANCES.

DUAL ELEMENT RATING PLATE

COMMERCIAL STORAGE TANK WATER HEATER					
UL LISTED 22UL					
MODEL NUMBER	SERIAL NUMBER	ITEM ID / PART NUMBER			
VOLTS-AC	PHASE	WATTS UPPER	WATTS LOWER	CAPACITY US GALS	MAX. WORKING PRESSURE
TOTAL WATTS CONNECTED		CITY OF NEW YORK DEPT. OF BUILDING MEA.			
INTERLOCK, SIMULTANEOUS					

SINGLE ELEMENT RATING PLATE

ELECTRIC STORAGE TANK WATER HEATER					
UL LISTED 22UL					
MODEL NUMBER	SERIAL NUMBER	ITEM ID / PART NUMBER			
VOLTS-AC	PHASE	WATTS UPPER	WATTS LOWER	TOTAL WATTS CONNECTED	CAPACITY US GALS
TOTAL WATTS CONNECTED		CITY OF NEW YORK DEPT. OF BUILDING MEA.			
INTERLOCK, SIMULTANEOUS					

OPERATION

⚠ CAUTION

DO NOT OPERATE THE HEATER WITHOUT INSTALLING AN APPROVED TEMPERATURE AND PRESSURE RELIEF VALVE IN THE OPENING PROVIDED IN THE TANK. GROUND THE HEATER TO GUARD AGAINST ELECTRIC SHOCK FROM THE HEATER OR WATER SYSTEM. NEVER OPERATE THE HEATER WITHOUT FILLING WITH WATER PER THE FILLING INSTRUCTIONS. FAILURE TO DO SO WILL DAMAGE INTERNAL PARTS.

FILLING

1. Close the water heater drain valve by turning hand-wheel to right (clockwise).
2. Open a nearby hot water faucet to permit the air in the system to escape.
3. Fully open the cold water inlet valve allowing the heater and piping to be filled.
4. Close the hot water faucet as water starts to flow.
5. Turn on the electrical switch to the water heater.

⚠ WARNING

DO NOT ATTEMPT TO OPERATE HEATER WITH COLD WATER INLET VALVE CLOSED.

TEMPERATURE REGULATION



⚠ DANGER

THE WATER HEATER IS EQUIPPED WITH AN ADJUSTABLE THERMOSTAT TO CONTROL WATER TEMPERATURE. HOT WATER AT TEMPERATURES DESIRED FOR AUTOMATIC DISHWASHER AND LAUNDRY USE CAN CAUSE SCALDS RESULTING IN SERIOUS PERSONAL INJURY AND/OR DEATH. THE TEMPERATURE AT WHICH INJURY OCCURS VARIES WITH THE PERSON'S AGE AND TIME OF EXPOSURE. THE SLOWER RESPONSE TIME OF CHILDREN, AGED OR DISABLED PERSONS INCREASES THE HAZARD TO THEM. NEVER ALLOW SMALL CHILDREN TO USE A HOT WATER TAP, OR TO DRAW THEIR OWN BATH WATER. NEVER LEAVE A CHILD OR DISABLED PERSON UNATTENDED IN A BATHTUB OR SHOWER.

It is recommended that lower water temperatures be used to avoid the risk of scalding. It is further recommended, in all cases, that the water heater thermostats be set for the lowest temperature which satisfies your hot water needs, see Figure 3. This will also provide the most energy efficient operation of the water heater.

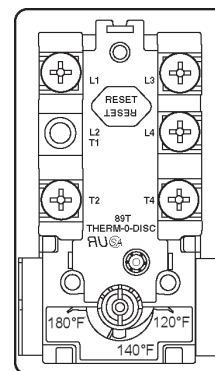
Figure 3 shows the approximate time-to-burn relationship for normal adult skin. The thermostats on your water heater have a linear relationship between degrees of angular rotation and the corresponding change in temperature. Thus rotating the temperature adjustment indicator 30 angular degrees will result in a 10 degree Fahrenheit change in water temperature.

Temperature Setting	Time to Produce 2nd & 3rd Degree Burns on Adult Skin
180° F (82° C)	Nearly instantaneous
160° F (71° C)	About 1/2 second
150° F (66° C)	About 1-1/2 seconds
140° F (60° C)	Less than 5 seconds
130° F (54° C)	About 30 seconds
125° F (52° C)	About 2 minutes
120° F (49° C)	More than 5 minutes

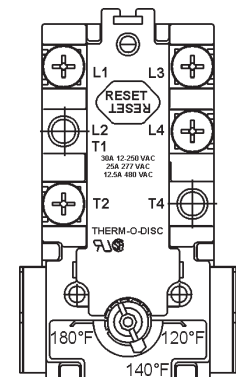
FIGURE 3.

TEMPERATURE ADJUSTMENT

The water temperature is controlled by surface mounted thermostats with hi-limit. There is one mounted firmly against the tank directly above each element. The thermostats of A-8 circuit are adjustable from approximately 120°F (49°C) (lowest setting) to 180°F (82°C) (highest setting). The thermostat of C-2 circuit is adjustable from approximately 110°F (43°C) to 170°F (77°C) with a factory set point 120°F (49°C). The over temperature device (hi-limit) attached to each thermostat has a manual reset.



ADJUSTABLE UPPER THERMOSTAT BEHIND JUNCTION BOX DOOR



ADJUSTABLE LOWER (SINGLE) THERMOSTAT

FIGURE 4.

NOTE: It is not necessary to adjust the upper thermostat for a dual element unit. However, if it is adjusted above the factory set point 140°F (60°C) it is recommended that it not be set higher than the lower thermostat setting.

To change the temperature setting:

⚠ DANGER

1. Turn off the heater electrical supply. Do not attempt to adjust thermostat with power on.
2. Open the junction box door (for upper thermostat of dual element water heater only) and/or remove the (lower) thermostat access panel. Do not remove the plastic personnel protectors covering the thermostats. The thermostat is factory pre-set at 140°F (60°C) for dual element units or at 120°F (49°C) for single element units.

3. Using a flat tip screwdriver, rotate the adjusting knob to the desired temperature setting.
4. Replace the covers and access panels, and turn on heater electrical supply.

Valves for reducing point-of-use temperature by mixing cold and hot water are available, see Figure 5 . Also available are inexpensive devices that attach to faucets to limit hot water temperatures. Contact a licensed plumber or the local plumbing authority.

A non-adjustable high temperature limit control operates before steam temperatures are reached. The high limit is in the same area as the upper thermostat and must be reset manually when it operates. **BECAUSE THE HIGH LIMIT OPERATES ONLY WHEN ABNORMALLY HIGH WATER TEMPERATURES ARE PRESENT, IT IS IMPORTANT THAT A QUALIFIED SERVICE AGENT BE CONTACTED TO DETERMINE THE REASON FOR OPERATION BEFORE RESETTING.**

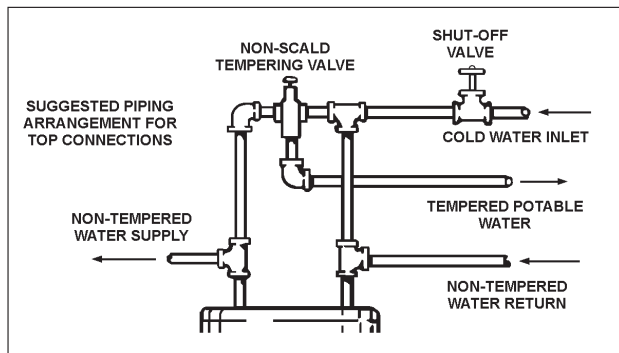


FIGURE 5.

DRAINING

If the heater is to be shut down and exposed to freezing temperatures, it must be drained. Water, if left in the tank and allowed to freeze, will expand and damage the heater.

1. Turn off the electrical switch and cold water inlet valve.
 - If desired, a hose may be connected to the drain valve to carry the water away.
2. Open a nearby hot water faucet and the heater drain valve.
 - Be careful to grasp the drain valve handle in such a way that the hand will not be exposed to hot water.
3. The drain valve must be left open during the shutdown period.
 - To restart heater, refer to the foregoing FILLING instructions.

MAINTENANCE

Electric water heater maintenance consists of cleaning the tank and removing lime (or scale) from the heating elements in hard water areas. Tank flushing should be performed monthly. Tank sediment removal and element lime scale removal must be performed when needed as determined by periodic inspections. Your dealer should be contacted for element cleaning. In some instances a hissing sound may be heard as the scale builds up. This noise is normal.

Once a month the temperature and pressure relief valve should be checked to ensure that it is in operating condition. Lift the lever on the valve several times until the valve seats properly and operates freely.



CAUTION

THE WATER PASSING OUT OF THE VALVE DURING THIS CHECKING OPERATION MAY BE EXTREMELY HOT.

It is recommended that the drain valve on this unit be opened once a month and 1 to 2 gallons of water be allowed to drain out. This will help to prevent sediment buildup in the tank bottom.

ANODE INSPECTION AND REPLACEMENT

This water heater is equipped with a sacrificial anode. Anodes protect the glass-lined tank from corrosion by sacrificing themselves through electrolysis. When the anode material is consumed, there is no more protection and corrosion of the tank accelerates.

Inspection of the anode every 6 to 12 months allows you to identify a spent anode and replace it. Replace the anode when its diameter is 3/8" (1 cm) of an inch, or annually whichever ever is first. Aggressive, very hot and softened water causes rapid consumption of the anode requiring frequent inspections. Anodes are available from your distributor or A.O. Smith.

TROUBLESHOOTING

CHECKLIST

Before contacting your dealer, check the water heater to see if the apparent malfunction is caused by some external fault. Consulting this checklist may eliminate the need for a repair call and restore hot water service.

NOT ENOUGH OR NO HOT WATER

1. Be certain that the water heater electrical switch is turned to the ON position.
 - In some areas an additional special meter, controlled by a timer, is used to govern the periods electricity is available. If the heater operates on a timed electrical circuit, recovery will be limited to certain hours.
2. Check for loose or blown fuses in the water heater circuit.
3. If the water has been excessively hot and is now cold, the high temperature limit control may have operated. To restore service, contact your dealer or utility company. Refer to TEMPERATURE REGULATION section.
4. The storage capacity of the heater may have been exceeded by large demands of hot water.
5. If the heater was installed when incoming water temperatures were warm, colder incoming temperatures will create the effect of less hot water.
6. Look for leaking or open hot water faucets.

WATER IS TOO HOT

1. Refer to TEMPERATURE REGULATION section.

WATER HEATER MAKES SOUNDS

1. See MAINTENANCE

WATER LEAKAGE IS SUSPECTED

1. Check to see if the heater drain valve is tightly closed.
2. The apparent leakage may be condensation which forms on cool surfaces of the heater and piping.
3. If the outlet of the relief valve is leaking it may represent:
 - Excessive water pressure.
 - Excessive water temperature.
 - Faulty relief valve.

Excessive water pressure is the most common cause of relief valve leakage. It is often caused by a "closed system". A check valve in the inlet system will not permit the expanded hot water volume to equalize pressure with the main. A relief valve must release this water or the water heater or plumbing system will be damaged.

Damage to the water heater caused by a closed system is not covered by the limited warranty. The only solution is to install a thermal expansion tank between the check valve and the cold water inlet to the heater.

IF YOU CANNOT IDENTIFY OR CORRECT THE SOURCE OF THE MALFUNCTION

1. Place the water heater electrical switch in the OFF position.
2. Close the cold water inlet valve to the heater.
3. Contact your dealer.

NOTES

LEAKAGE CHECKPOINTS

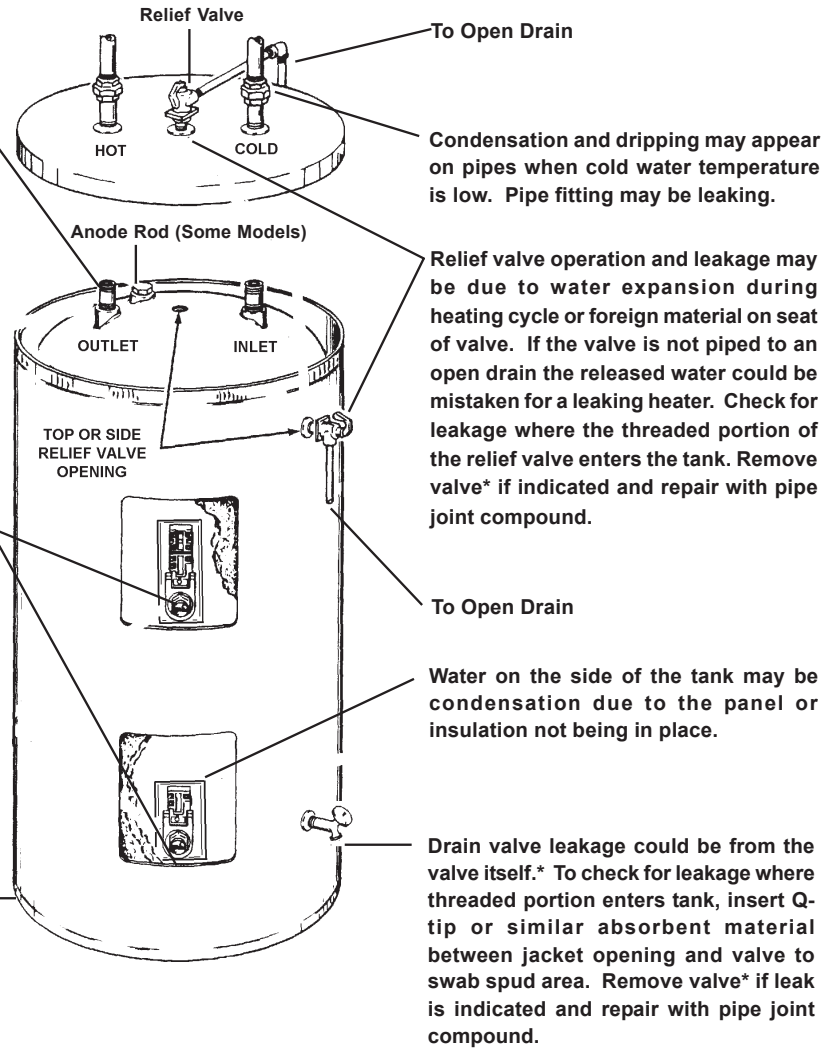
Instructions: Use this illustration as a guide when checking for sources of water leakage. You or your dealer may be able to correct what appears to be a problem. **NOTE:** Cover and Insulation shown removed to reveal tank top

Where possible remove or lift top cover to examine threads of fittings installed into tank for evidence of leakage. Correct fitting leaks as necessary.

Water leaks at the elements may be due to:

1. Defective element which leaks at terminals or thru flange. Replace element*.
2. Loose element/gasket leak:
 - (a) Screw-in type: tighten with 1-1/2" socket wrench or Part Number 23985 wrench. If leak continues, remove element*, discard gasket and clean thread areas. Apply nonhardening Permatex Number 2 to thread areas, install new gasket and screw element into fitting until it seats. Tighten 1/2 to 3/4 turn with wrench.
 - (b) Flange type: tighten screw with wrench. If leak continues remove element* and discard gasket. Clean gasket seating areas and re-install element with new gasket. NOTE: Part Number 40000-1 scale cleaning replacement screws available where threads have become rusted or damaged, preventing tightening.

All water which appears at the heater bottom or on the surrounding floor may be caused by condensation, loose connections or relief valve operation and leakage. Do not replace the heater until full inspection of all potential leak points is made and corrective steps taken to stop the leak. Leakage from other appliances, water lines or ground seepage should also be suspected until proven otherwise.



*Contact your dealer as it is necessary to shut off electricity and drain tank to perform procedure.

REPAIR PARTS LIST

Now that you have purchased this water heater, should a need ever exist for repair parts or service, simply contact the company it was purchased from or direct from the manufacturer listed on the rating plate on the water heater.

Selling prices will be furnished on request or parts will be shipped at prevailing prices and you will be billed accordingly.

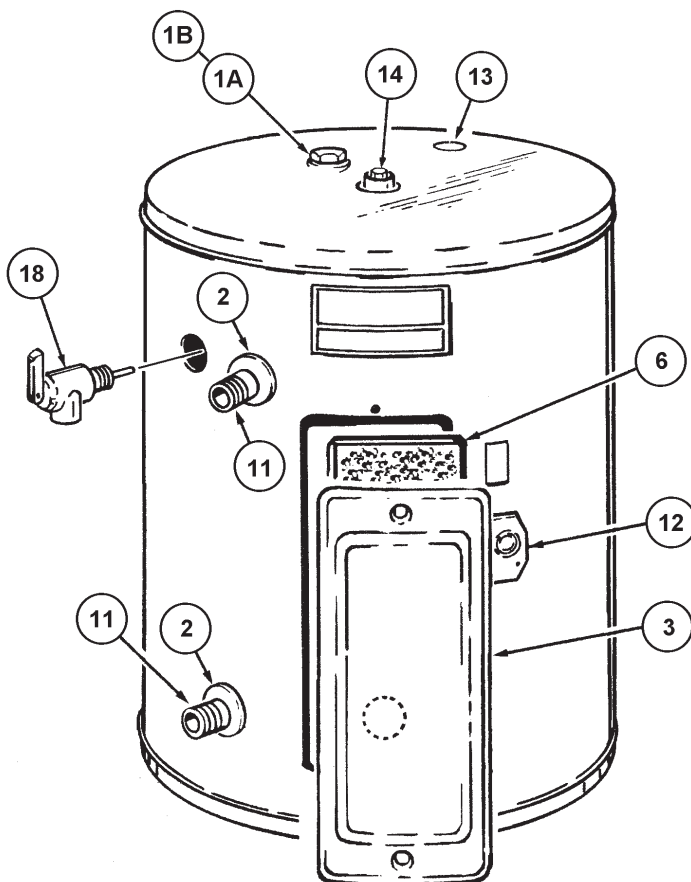
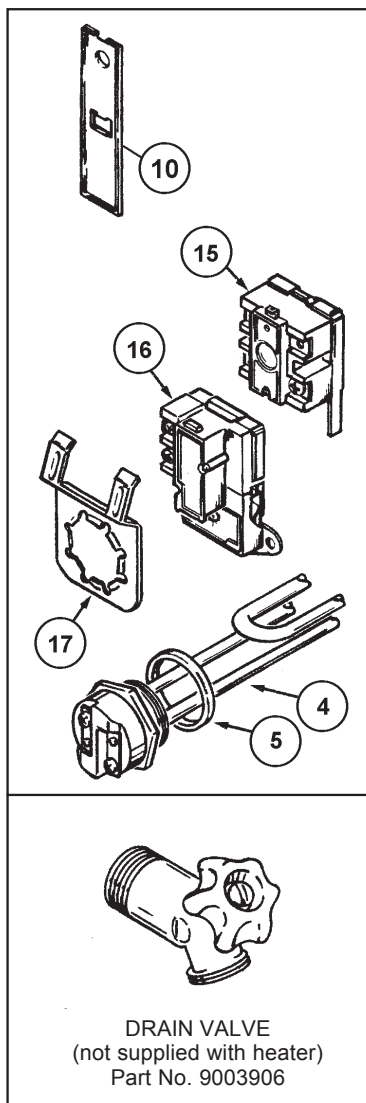
The model number of your Water Heater will be found on the rating plated located above the lower access panel.

Be sure to provide all pertinent facts when you call or visit.

WHEN ORDERING REPAIR PARTS, ALWAYS GIVE THE FOLLOWING INFORMATION:

- MODEL NUMBER
- VOLTAGE AND ELEMENT WATTAGE
- SERIAL NUMBER
- PART DESCRIPTION

PCE 6 thru PCE 20 - refer to Repair Parts Table on page 12 for Single Element Electric Units.

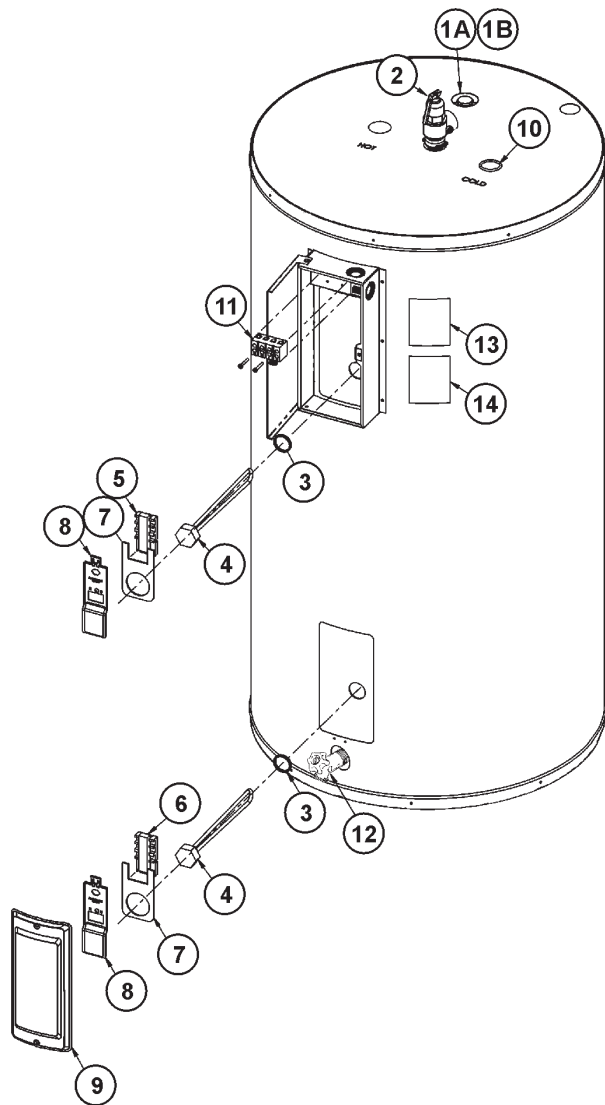


Item	Description	PCE-610MSA Series 102	PCE-1010MSA Series 102	PCE-1710MSA Series 102	PCE-2010MSA Series 102
1A	Anode, Alum.....	9003942	9003942	9003943	9003944
1B	Anode, Mag.	9002110	9002110	9004302	9003721
2	Collar, Pipe	9004610	9004610	9004610	9004610
3	Cover, Front	9003900	9003900	9003900	9003900
4	ELEMENT, HEATING	SEE ELEMENT CHART ON PAGE 14			
5	Gasket, Element.....	9000308	9000308	9000308	9000308
6	Opening Insulation	43307	43307	43307	43307
7	*Instruction Manual	195202-002	195202-002	195202-002	195202-002
	LABEL				
8	*Scald Warning.....	181138	181138	181138.....	181138
9	*Temperature Warning	182734	182734	182734	182734
10	Personnel Protector.....	9003899	9003899	9003899	9003899
11	Pipe Nipple	194130	194130-3	194130-3	194130-3
12	Plate, Knockout	43293-1	43293-1	43293-1	43293-1
	PLUG				
13	Cap.....	42306-1	42306-1	42306-1	42306-1
14	Pipe	9001437	9001437	9001437	9001437
15/16	Thermostat with High Limit Switch	9003945	9003945	9003945	9003945
17	Bracket, Thermostat	9003898	9003898	9003898	9003898
18	Valve, Relief	9003484	9003741	9003741	9003741

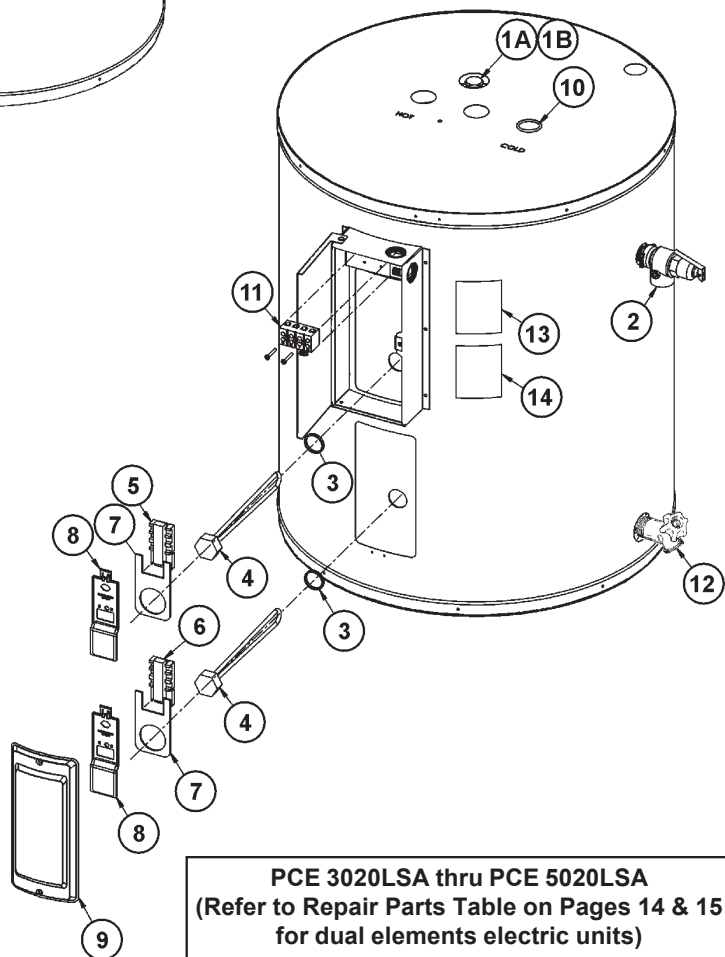
*Not Illustrated.

Standard Hardware Items May Be Purchased Locally.

Underlined Parts Are Recommended For Emergency Replacement.



PCE 3020RTA thru PCE 12020 RTA
 (Refer to Repair Parts Table on Pages 14 & 15
 for dual elements electric units)



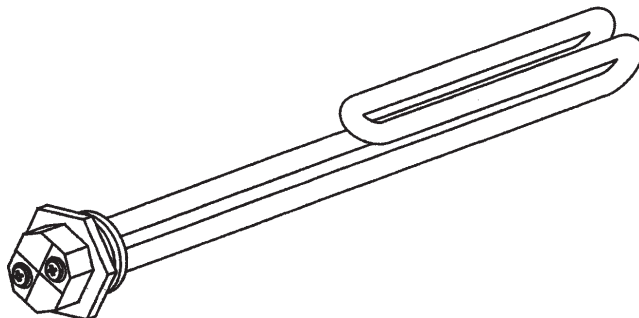
PCE 3020LSA thru PCE 5020LSA
 (Refer to Repair Parts Table on Pages 14 & 15
 for dual elements electric units)

Item	Description	PCE 30 20LSA Series 110	PCE 40 20LSA Series 110	PCE 50 20LSA Series 110	PCE 3020RTA Series 110
1A	Anode, Alum.....	9003888	9003889	9003889	9003944
1B	Anode, Mag.	9003721	9003922	9001834	9003721
2	T&P Relief Valve	9003741	9003741	9003741	9000071
3	Gasket, Element.....	90000308	90000308	90000308	90000308
4	ELEMENT, each	(SEE ELEMENT & WATTAGE CHART BELOW)			
5	Upper Thermostat w/Hi Limit	9003896	9003896	9003896	9003896
6	Lower Thermostat w/Hi Limit	9003897	9003897	9003897	9003897
7	Thermostat Bracket, each	9003898	9003898	9003898	9003898
8	Terminal Cover, each	9003899	9003899	9003899	9003899
9	Lower Access Panel	9003900	9003900	9003900	9003900
10	Dip Tube	9003901	9003901	9003901	9003902
11	Power Terminal	9005719	9005719	9005719	9005719
12	Drain Valve	9003906	9003906	9003906	9003906
13	Wiring Diagram Label	195203	195203	195203	195203
14	Scald Warning Label	181138	181138	181138	181138
15*	Junction Box Assembly	195171	195171	195171	195171
16*	Manual	195202-002	195202-002	195202-002	195202-002

*Not Illustrated.

Standard Hardware Items May Be Purchased Locally.

Underlined Parts Are Recommended For Emergency Replacement.



COPPER SHEATH ELEMENT AND WATTAGE CHART

K.W.	ELEMENT WATTAGE	120V	208V	240V	277V	480V
		PART NO.	PART NO.	PART NO.	PART NO.	PART NO.
1.0	1000W	---	9002863	9000143	---	---
1.5	1500W	9002963	9000145	9002864	9001225	---
2.0	2000W	9003947	9002858	9000145	9004709	---
2.5	2500W	9002859	9004712	9002860	9002890	9002861
3.0	3000W	9002862	9002868	9003959	9003958	9003961
3.5	3500W	---	9005708	9004712	---	---
MAX 3.5KW INPUT FOR 6 GALLON UNITS, ELEMENTS BELOW DOTTED LINE CANNOT BE USED ON 6 GALLON UNITS						
4.0	4000W	---	9002867	9002868	9001229	9002869
4.5	4500W	---	9003952	9005708	9003960	9001225
5.0	5000W	---	9001224	9003957	9001231	9001236
5.5	5500W	---	9002871	9002867	---	9002872
6.0	6000W	---	9003953	9003952	9002874	9002875

PCE 40 20RTA Series 110	PCE 52 20RTA Series 110	PCE 66 20RTA Series 110	PCE 82 20RTA Series 110	PCE 120 20RTA Series 110
... 9003889	9003889	9000029	9003892	9003893
... 9003483	9003487	9003465	9003650	9000734
... 9000071	9000071	9000071	9000071	9000071
... 9000308	9000308	9000308	9000308	9000308
..... (SEE ELEMENT & WATTAGE CHART ON PAGE 14)				
... 9003896	9003896	9003896	9003896	9003896
... 9003897	9003897	9003897	9003897	9003897
... 9003898	9003898	9003898	9003898	9003898
... 9003899	9003899	9003899	9003899	9003899
... 9003900	9003900	9003900	9003900	9003900
... 9003903	9003904	9003905	9003905	9005709
... 9005719	9005719	9005719	9005719	9005719
... 9003906	9003906	9003906	9003906	9003907
... 195203	195203	195203	195203	195203
... 181138	181138	181138	181138	181138
... 195171	195171	195171	195171	195171
.. 195202-002	195202-002	195202-002	195202-002	195202-002

*Not Illustrated.

Standard Hardware Items May Be Purchased Locally.

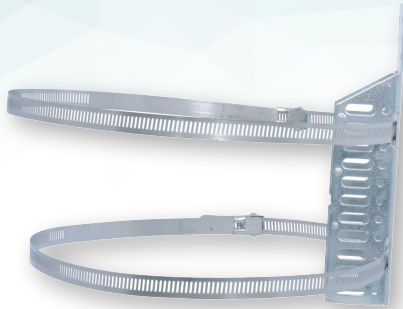
Underlined Parts Are Recommended For Emergency Replacement.

**INCOLOY SHEATH ELEMENT AND WATTAGE CHART
(FOR SPECIAL MAG. ANODE/INCOLOY ELEMENT UNITS)**

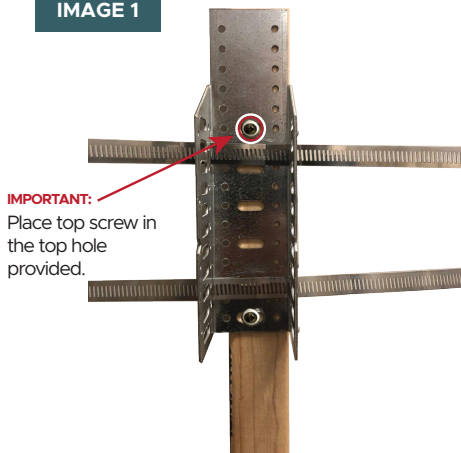
K.W.	ELEMENT WATTAGE	120V	208V	240V	277V	480V
		PART NO.	PART NO.	PART NO.	PART NO.	PART NO.
1.5	1500W	9004279	9004283	9004290	---	---
2.0	2000W	9004280	9004284	9004283	9004290	9004298
2.5	2500W	9004281	9004285	9004291	9004295	9004299
----- Incoloy Elements Below dotted line cannot be used on 6 gallon units because of element length -----						
3.0	3000W	9004282	9004751	9000664	9004296	9004300
3.5	3500W	---	9003210	9004292	---	---
4.0	4000W	---	9004294	---	9004543	---
4.5	4500W	---	9004287	9003210	9004297	9004301
5.0	5000W	---	---	9004293	---	---
5.5	5500W	---	9004288	9004294	---	---
6.0	6000W	---	9004289	9004287	---	---



500 Tennessee Waltz Parkway, Ashland City, TN 37015
Phone: 800-821-2017 Fax: 800-644-9306
www.statewaterheaters.com

INSTALL SHEET: **ETB.0820** EFFECTIVE: **08.25.20****INSTALLATION INSTRUCTIONS****EXPANSION TANK BRACKET**

- Secures Expansion Tank to Wall or Stud
- Stainless Steel and Galvanized Construction
- Includes mounting bracket, (2) support straps and stainless steel mounting screws

IMAGE 1**STEP 1:**

Place the mounting bracket vertically. Mark two mounting holes at least 4" apart. Place one hole at the upper slot on the bracket and the second hole below lower strap slots at the bottom of the bracket.

STEP 2:

Drill pilot holes approximately 1/16" - 3/32" for included #14 x 1-1/2" stainless steel pan head screws. For hollow wall or concrete, install appropriate anchors at locations marked in Step 1 (**IMAGE 1**). Install screws or anchors.

STEP 3:

Slide the metal straps through the side slots in bracket (**IMAGE 1**), and pull about half way through.

STEP 4:

Center expansion tank on bracket aligning notch in bracket with rib on tank (if applicable). Tighten straps around tank with 5/16" socket/nut driver. To avoid damaging tank, do not over-tighten (**IMAGE 2**).

IMAGE 2

EXPANSION TANK

www.hydrapro.biz | (800) 849-4844 | Fax (877) 249-8435

Atlanta (GA) • Dallas (TX) • Houston (TX) • Pompano Beach (FL) • Jackson (MI)

HYDRAPRO LIMITED 1 YEAR PRODUCT WARRANTY

Products covered: Thermal Expansion Tanks manufactured by HYDRAPRO.

This warranty cannot be transferred - it is extended only to the original Purchaser or First User of the Product. By accepting and keeping this Product you agree to all of the warranty terms and limitations of liability described below.

IMPORTANT WARNING - READ CAREFULLY THE INSTALLATION, OPERATING AND MAINTENANCE INSTRUCTIONS MANUAL to avoid serious personal injury and/or property damage and to ensure safe use and proper care of this product

Who Receives HYDRAPRO Product Warranty:

All purchasers or first users of the HYDRAPRO Thermal Expansion Tanks. The Warranty is non-transferable.

What is Covered by This Warranty:

HYDRAPRO warrants to the purchaser or first user of the new Product that at the time of manufacture, the Product is free from defects in material and workmanship. Any warranty claim must be made within one (1) year unless another time period is set forth in the Manual, measured from the time the Product was purchased.

What HYDRAPRO Will Do If You Have a Covered Warranty Claim:

In the event of a breach of the foregoing warranty, HYDRAPRO will at its option replace or make repairs to correct any defect in material or workmanship or supply and ship either new or used replacement parts or products. HYDRAPRO will not accept any claims for labor or other costs.

What This Warranty Does Not Cover - Exclusions and Limitations:

This Warranty does not cover any failure or problem unless it was caused by a defect in material or workmanship. In addition this Warranty shall not apply:

- if the Product is not correctly installed, operated, repaired or maintained as described in the Manual provided with the Product; "to any failure or malfunction resulting from abuse (including freezing); improper or negligent: handling, shipping (by anyone other than HYDRAPRO). Storage, use, operation, accident or alteration, lightning, flood or any other environmental condition;
- to any failure or problem resulting from the use of the Product for any purpose other than those specified in the accompanying Manual or alteration of any part of the product;
- if the Product is used anywhere except the United States, its territories or possessions, or Canada;
- this Warranty does not cover labor costs, shipping charges, service charges, delivery expenses. Administrative fees or any costs incurred in removing or reinstalling the Product;
- this Warranty does not cover any claims submitted to HYDRAPRO or an HYDRAPRO-authorized distributor or retailer more than 30 days after expiration of the applicable warranty time period described in this Warranty
- this Warranty also does not cover repair or replacement costs not authorized in advance by HYDRAPRO.

Additional Warranty Limitations

ALL IMPLIED WARRANTIES, INCLUDING THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE SPECIFICALLY DISCLAIMED.

Limitations of Remedies

THE REMEDIES CONTAINED IN THIS WARRANTY ARE THE PURCHASER'S OR FIRST USER'S EXCLUSIVE REMEDIES. IN NO CIRCUMSTANCES WILL HYDRAPRO BE LIABLE FOR MORE THAN, AND PURCHASER-FIRST USER'S REMEDIES SHALL NOT EXCEED, THE PRICE PAID FOR THE PRODUCT. IN NO CASE SHALL HYDRAPRO BE LIABLE FOR ANY SPECIAL, INDIRECT, INCIDENTAL OR CONSEQUENTIAL DAMAGES, WHETHER RESULTING FROM NON-DELIVERY OR FROM THE USE, MISUSE, OR INABILITY TO USE THE PRODUCT OR FROM DEFECTS IN THE PRODUCT OR FROM HYDRAPRO'S OWN NEGLIGENCE OR OTHER TORT. This exclusion applies regardless of whether such damages are sought for breach of warranty, breach of contract, negligence, strict liability, in tort or under any other legal theory. Such damages include, but are not limited to inconvenience, loss or damage to property, mold, loss of profits, loss of savings or revenue, loss of use of the Products or any associated equipment facilities, buildings or services, downtime, and the claims of third parties including customers.

What To Do If You Have a Problem Covered By This Warranty

Any covered Warranty service must be authorized by HYDRAPRO. Contact the person from whom you purchased the Product who must receive authorization from a HYDRAPRO distributor or HYDRAPRO. If you do not receive a prompt response, call HYDRAPRO directly at (877) 813-2333. Notice of a Warranty claim should be submitted by the authorized distributor to HYDRAPRO at the following address:

**HYDRAPRO Warranty Claim Department
7400 Sunbelt Drive SE
Austell, GA 30168**

Before HYDRAPRO determines to provide any replacement part or Product, it may as a pre-condition to making such a determination require that the warranty claimant ship the Product postage prepaid to an authorized HYDRAPRO distributor, or to HYDRAPRO and provide proof of purchase evidenced by the original sales receipt.

ADDITIONAL PRE-CAUTIONS



WARNING
HYDRAPRO Expansion Tanks must be installed by a qualified professional follow all local and national plumbing and electrical codes. Read and understand fully the instructions included here and those on the manufacturer's website which are updated on a regular basis. Failure to follow these instructions may result in serious injury or death and or property damage and will void the product warranty.



WARNING
This tank is intended for use on potable water systems only and any other use may be dangerous and will void the warranty.



WARNING
This product's performance and life span can be significantly and adversely impacted by aggressive water conditions. A water test should be done at regular intervals looking for corrosive water, acids, and other contaminants which must be treated immediately if present.



WARNING
This system piping must be properly grounded to earth and a dielectric union is recommended in the installation.



Instruction Sheet

102-054

“00” Cartridge Circulators

SUPERSEDES: 102-054 dated April 15, 2004

EFFECTIVE: May 1, 2010

Plant I.D. 001-934

APPLICATION:

1. Maximum operating pressure is 125 psi (862 kPa).
2. Maximum water temperature not to exceed nameplate rating.
3. Cast iron circulators are to be used for closed loop systems. Bronze or stainless steel circulators are to be used for open loop, fresh water, or potable water systems.
4. Taco Cartridge circulator pumps are for indoor use only – employer uniquement à l'intérieur.

INSTALLATION:

1. Mounting position – Circulator must be mounted with the motor in a horizontal position. It may be mounted vertically with the motor up, provided that the system pressure is at least 20 psi (138 kPa).
2. Rotating body – Body has an arrow on the front that indicates direction of flow. To rotate body, remove the four body bolts, rotate body and replace bolts. Make sure that the junction box is NOT located underneath the circulator. (The junction box must NOT be located in the 6 o'clock position, as viewed from the motor end.)
3. Electrical connections – Observe all applicable codes when connecting to power supply. The motor is impedance protected, and does not require overload protection. Either colored wire from the capacitor box can be attached to either colored wire from the power supply. There is no “hot” or “common” wire leading from the capacitor box. Typical installation would be to attach the white wire to the white (common) power supply wire and either the yellow or blue wire to the black (hot) power supply wire. The pump cannot run backwards.

WARNING: Do not use in swimming pool or spa areas; pump has not been investigated for this application.

WARNING: In the event the retaining screws have been pulled out of the housing, DO NOT replace them. Use of any other screw may short out the stator windings, creating a risk of electrical shock.

CAUTION: When installing electrical connections, do not apply mechanical loads to the capacitor box; otherwise, retaining screws may be pulled out of the housing, making circulator unusable.

CAUTION: Installations at higher elevations over 5000 feet must have higher fill pressure of 20 psi minimum to prevent pump cavitation and flashing. Premature failure may result. Adjust expansion tank pressure to equal fill pressure. A larger size expansion tank may be required.

4. Fill system with tap water – The system must be filled before operating the circulator. The bearings are water lubricated and should not be allowed to operate dry. Filling the system will result in immediate lubrication of the bearings. It is always good practice to flush a new system of foreign matter before starting the circulator.
5. Circulator operation – Operate the circulator for 5 minutes immediately after filling system to purge remaining air from the bearing chamber. This is especially important when installing the circulator during the off-season.

**CAUTION: 1. The addition of petroleum based fluids or certain chemical additives to systems utilizing TACO equipment voids the warranty.
2. Use supply wires suitable for 90°C – ATTENTION: Employer des fils d'alimentation adéquats pour 90°C.**

WARNING: To avoid electrical shock, disconnect the power supply to the circulator and the main electrical unit.

REPLACING MOTOR ASSEMBLY:

1. Disconnect the electrical supply.
2. Reduce system pressure to 0 psi and allow system to return to room temperature. Isolate the circulator by closing the service valves or draining the system.
3. Remove the body bolts and swing motor assembly away from the body.
4. Install new motor, and reassemble circulator using the new gasket and bolts supplied.
5. Follow the "installation" procedure to start up the circulator.

REPLACING CARTRIDGE ASSEMBLY:

1. Disconnect the electrical supply.
2. Reduce system pressure to 0 psi and allow system to return to room temperature. Isolate the circulator by closing the service valves or draining the system.
3. Remove the body bolts and swing motor assembly away from the body.
4. Pull cartridge out of the motor housing.
5. Install replacement cartridge, making sure that the cover plate is between the cartridge flange and motor.
6. Make sure the replacement cartridge corresponds to the full circulator product number. A complete parts list is available from your local plumbing supply wholesaler.
7. Reassemble the circulator using the new gasket and bolts supplied.
8. Follow the "Installation" procedure to start up the circulator.

REPLACING CAPACITOR:

1. Replacement capacitor must have same rating as originally furnished.

LIMITED WARRANTY STATEMENT

Taco, Inc. will repair or replace without charge (at the company's option) any Taco 00 Series circulator or circulator part which is proven defective under normal use within three (3) years from the date of manufacture.

In order to obtain service under this warranty, it is the responsibility of the purchaser to promptly notify the local Taco stocking distributor or Taco in writing and promptly deliver the subject product or part, delivery prepaid, to the stocking distributor. For assistance on warranty returns, the purchaser may either contact the local Taco stocking distributor or Taco. If the subject product or part contains no defect as covered in this warranty, the purchaser will be billed for parts and labor charges in effect at time of factory examination and repair.

Any Taco product or part not installed or operated in conformity with Taco instructions or which has been subject to misuse, misapplication, the

addition of petroleum-based fluids or certain chemical additives to the systems, or other abuse, will not be covered by this warranty.

If in doubt as to whether a particular substance is suitable for use with a Taco product or part, or for any application restrictions, consult the applicable Taco instruction sheets or contact Taco at (401-942-8000).

Taco reserves the right to provide replacement products and parts which are substantially similar in design and functionally equivalent to the defective product or part. Taco reserves the right to make changes in details of design, construction, or arrangement of materials of its products without notification.

TACO OFFERS THIS WARRANTY IN LIEU OF ALL OTHER EXPRESS WARRANTIES. ANY WARRANTY IMPLIED BY LAW INCLUDING WARRANTIES OF MERCHANTABILITY OR FITNESS IS IN EFFECT ONLY FOR THE DURA-

TION OF THE EXPRESS WARRANTY SET FORTH IN THE FIRST PARAGRAPH ABOVE.

THE ABOVE WARRANTIES ARE IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR STATUTORY, OR ANY OTHER WARRANTY OBLIGATION ON THE PART OF TACO.

TACO WILL NOT BE LIABLE FOR ANY SPECIAL, INCIDENTAL, INDIRECT OR CONSEQUENTIAL DAMAGES RESULTING FROM THE USE OF ITS PRODUCTS OR ANY INCIDENTAL COSTS OF REMOVING OR REPLACING DEFECTIVE PRODUCTS.

This warranty gives the purchaser specific rights, and the purchaser may have other rights which vary from state to state. Some states do not allow limitations on how long an implied warranty lasts or on the exclusion of incidental or consequential damages, so these limitations or exclusions may not apply to you.

COMFORT MADE EASY®

TACO, INC., 1160 Cranston Street, Cranston, RI 02920 Telephone: (401) 942-8000 FAX: (401) 942-2360.

TACO (Canada), Ltd., 8450 Lawson Road, Unit #3, Milton, Ontario L9T 0J8. Telephone: 905/564-9422. FAX: 905/564-9436.

Visit our web site at: <http://www.taco-hvac.com>

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BULLETIN G-26-R34
August, 2018

INSTALLATION ADJUSTMENT SERVICE

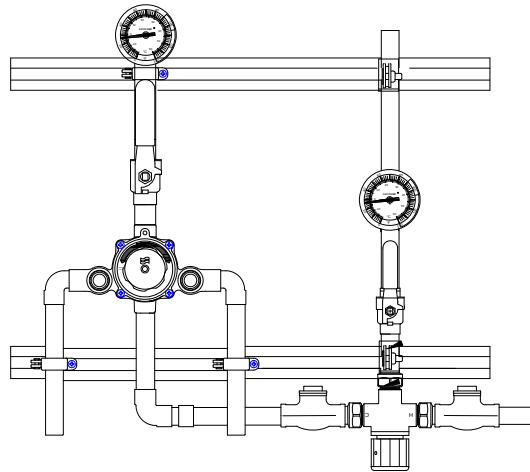
TYPE TM-26-RF-DT-R34, TM-26-LF-RF-DT-R34

IMPORTANT! Provide valve serial number (stamped on cover of valve) when ordering parts!!

Valve manufactured after July 2007 starting with serial # TM26272



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



INSTALLATION

1. Valve should be installed at a location where it can easily be cleaned, adjusted or repaired.
2. Connect the hot water and cold water as shown above.
3. Valve has integral checkstops, for ease of servicing.
4. A shutoff valve must be installed on the outlet pipe. Type TM valves do not have a built-in shutoff.
5. Use solder or pipe cement sparingly. Supply pipes should be flushed before the valve is connected. Flush outlet pipe and valve as soon as it is connected.

Maximum Operating Pressure 125PSI (860 KPA) for Hot and Cold Water.

CAUTION

All thermostatic water mixing valves have limitations. They will not provide the desired accuracy outside of their flow capacity range. Consult the capacity chart on page 6. Minimum flow must be no less than as shown.

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

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>

ADJUSTMENT AND SERVICE

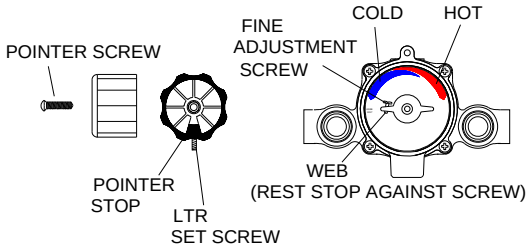
Leonard Type TM Thermostatic Water Mixing Valves are simple in design and may be easily cleaned, adjusted and repaired. If the installation is accessible, servicing may be completed without disconnecting the valve.

NOTE: Thermostatic Water Mixing Valves are REGULATING mechanisms, which must be regularly maintained to provide best performance. Frequency of cleaning depends on quality of local water conditions and usage. (See Maintenance Guide and Record MGR-1000).

WARNING

This mixing valve is equipped with an adjustable high temperature limit stop factory set at approximately 120°F (49°C) with an incoming hot water supply temperature of 150°F (65.5°C). If the hot water supply temperature of the job is greater than 150°F (65.5°C), the valves when turned to full HOT will deliver water in excess of 120°F (49°C) and the limit stops **MUST BE RESET BY THE INSTALLER!**

TO RESET ADJUSTABLE HIGH TEMPERATURE LIMIT STOP:

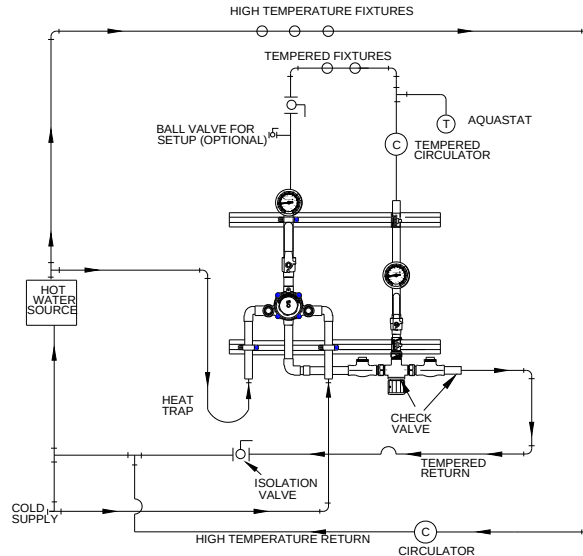
 1. Loosen LTR Set Screw, remove POINTER SCREW. 2. Adjust POINTER to maximum desired temperature. 3. Remove POINTER, replace POINTER on spline rod with STOP (which is cast into the underside on the pointer), resting against the BOTTOM side of the WEB on the FINE ADJUSTMENT SCREW. 4. If fine adjustment is needed, adjust FINE ADJUSTMENT SCREW on the cover, loosen for hotter or tighten for cooler temperature. 5. Replace POINTER and check temperature, if set to desired temperature replace POINTER SCREW, and tighten LTR SET SCREW. 6. The new maximum temperature has now been set. Test this temperature by holding a thermometer under the flow of water to be certain it is as desired. * LIMIT STOP MUST BE RESET AND RECHECKED EACH TIME HANDLE IS REMOVED.	WARNING WARNING! This Thermostatic Mixing Valve has an adjustable high temperature limit stop which, must be checked. If temperature is too high, the installer MUST RESET this stop immediately. Always check the temperature of the mixed water when the lever handle is turned to full HOT. Excessively hot water is DANGEROUS AND MAY CAUSE SCALDING! The high temperature limit stop is factory set at approximately 120°F (49°C) with an incoming hot water supply temperature of 150°F (65°C). If the incoming hot water on the job is higher than 150°F (65°C), the valve when turned to full hot will deliver water in excess of 120°F (49°C) and the high temperature limit stop MUST BE RESET BY THE INSTALLER.
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Check for significant variations in outlet flow. Thermostatic valves will NOT provide the desired accuracy outside of their flow capacity range. Minimum flows must be no less than shown (see Flow Capacities, page 6).

If installed on a recirculated hot water system, make certain the valve is piped according to Leonard Required Piping Method #2 (see page 4).

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

REQUIRED METHODS OF PIPING TM VALVES (RECIRCULATED HOT WATER SYSTEMS)



METHOD #2

Required when **TEMPERED** water is to be circulated through the entire building, to maintain tempered water at each fixture. The function of the 1/2" by-pass is to allow the recirculated water to pass through the mixing valve during periods of no draw without entering the hot water source to avoid being reheated. The 320ARV valve allows the system to be properly balanced. The by-pass loop helps reduce the buildup of undesirable hot water in the primary system, and **MUST NOT** be omitted. See set-up instructions below.

METHOD #2 SET-UP INSTRUCTIONS

1. Before any attempt is made to adjust this system, be sure the temperature of the hot water at the source is properly set and maintained.
2. Be sure system is piped to correct method.
3. Open enough fixtures to exceed the minimum requirements of the mixing valve installed (see Flow Capacities, page 7). Note: The minimum flow requirements apply only to the mixing valve and not to the flow of the circulator.
4. Turn circulator off, set mixing valve to the desired temperature, (note Warning Tag attached to the pointer of the valve).
5. Shut off all fixtures. Note: At this point, be sure NO water is being drawn through any fixture until the temperature in the recirculated line has been set.
6. Open the ball valve fully and start the circulator.
7. Observe the temperature until it stabilizes.
8. Adjust 320 ARV counter clockwise slightly if warmer temperature is desired or clockwise if cooler water is desired. Allow to stabilize. Repeat until the desired recirculated temperature is set.

WARNING: THIS PIPING METHOD WILL NOT PERFORM EFFECTIVELY IF THE VALVE IS OVERSIZED. MINIMUM FLOWS ARE SHOWN ON FLOW CAPACITIES CHART, PAGE 9. FOR ESTIMATING MAXIMUM HOT WATER DEMAND, CONSULT LEONARD CASPAK SIZING PROGRAM.

DO NOT CONFUSE THE MINIMUM FLOW REQUIREMENTS OF THE MIXING VALVE WITH PROPER SIZING OF THE CIRCULATOR.

INSTRUCTIONS FOR DISMANTLING VALVE (DWG. 1)

1. Shut off hot and cold supplies to valve.
2. Remove four Cover Screws M20-2C to release entire thermostatic control assembly.

WHEN RE-ASSEMBLING VALVE, insert Cover Gasket M20-3C in base. Lubricate TM28-6B O'Rings before re-inserting assembly.

After installing new parts, it may be necessary to reset high temperature limit. See instructions "TO RESET ADJUSTABLE HIGH TEMPERATURE LIMIT STOP" (page 2).

TO REMOVE BRIDGE ASSEMBLY (DWG. 2)

Remove MU-10B Pointer Rod Nut, remove TM28-1-8B Bridge Assembly from pointer rod.

Failure to properly blend the water may be caused by a sticking condition in the TGM-1/28 Port Sleeve Assembly. The Thimble should slide freely on the Port Sleeve.

Clean with a NON-CORROSIVE CLEANING AGENT AND SOFT CLOTH. DO NOT USE ABRASIVES, then wash parts thoroughly.

To reassemble, replace Bridge Assembly on pointer rod. Driving ball on Thimble **MUST** engage hole in coil bracket. Replace pointer rod nut.

DO NOT apply grease or lubricants to the TGM-1/28 Port Sleeve Assembly.

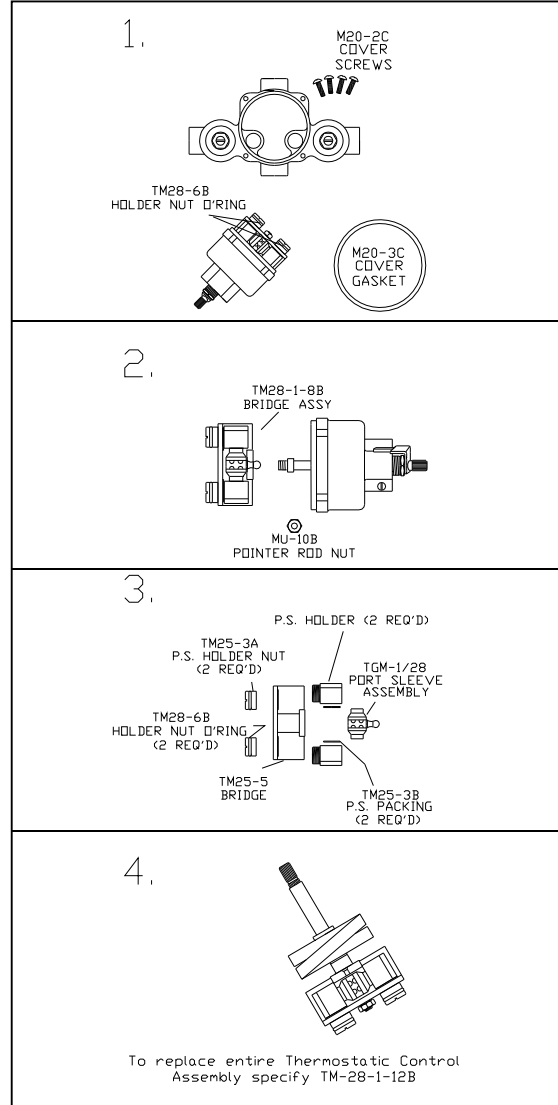
TO DISASSEMBLE BRIDGE ASSEMBLY (DWG. 3)

Remove TM25-3A Holder Nuts using a screwdriver in the slots provided. Clean or replace TGM-1/28 Port Sleeve Assembly following instructions above. When reassembling, check TM-25-3B port sleeve packings and replace if necessary.

TO CLEAN OR REPLACE THERMOSTAT GROUP

Loosen gland nut. Push rod through cover. BE CAREFUL NOT TO PULL THERMOSTAT COIL OUT OF SHAPE.

To clean, if a deposit has collected on the thermostat group, brush in a non-corrosive cleaning solution. Rinse in clean water and replace in cover with parts as shown.



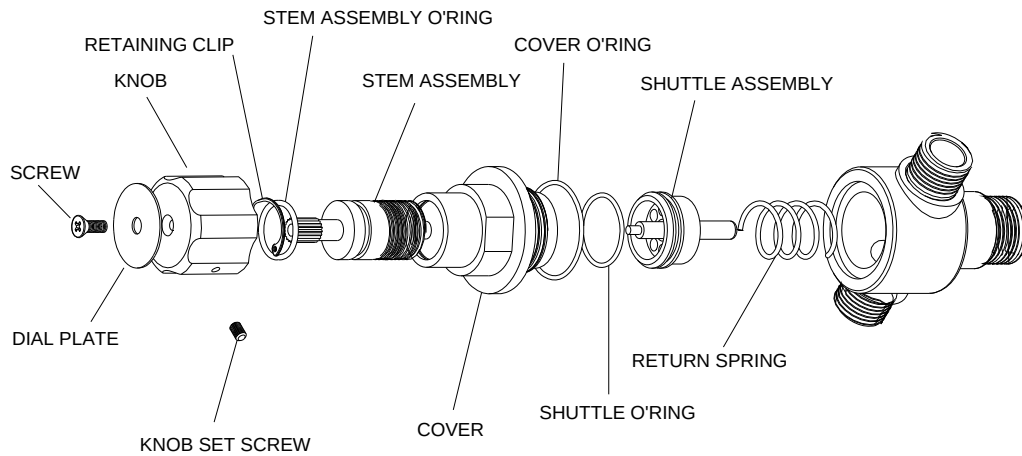
TROUBLESHOOTING INSTRUCTIONS

PACKINGS & GASKETS	1. Leak at pointer rod. 2. Leak between valve cover and base.	PARTS REQUIRED: KIT#1/26 (PACKINGS & GASKETS)
PORT SLEEVE ASSEMBLY	3. Valve delivers either all hot or all cold water, or will not mix consistently.	KIT#R/28 (REBUILDING KIT) OR TM-28-1-8B BRIDGE ASSEMBLY
THERMOSTAT GROUP	4. After cleaning or replacing port sleeve assembly, valve will not hold temperature.	KIT#R/28 (REBUILDING KIT) OR TM28-G2 THERMOSTAT GROUP
CHECKSTOPS	5. Hot water bypass into cold line. 6. Supplies cannot be shut off completely. 7. Leak at checkstop bonnet.	KIT#4/M20 (CHECKSTOP KIT)

See page 6 for Parts Breakdowns

MODEL 320/370ARV

Check dial plate on knob for model #



DISMANTLING & CLEANING

1. Shut off hot and cold water to the valve as well as the valve outlet port.
2. Loosen lock screw on side of knob with 5/64" allen wrench.
3. Remove the knob screw on top of knob.
4. Remove temperature adjustment knob.
5. Remove valve cover, which includes the stem assembly.
6. The shuttle assembly can now be removed, cleaned and inspected. Be sure to check the condition of the shuttle o-ring and replace if necessary.
7. Lubricate the shuttle o-ring before installing the shuttle assembly.
8. Install the cover assembly including o-ring back onto valve and tighten.
9. Replace knob and knob screw.
10. **Valve temperature must be reset after any repairs or cleaning!!**

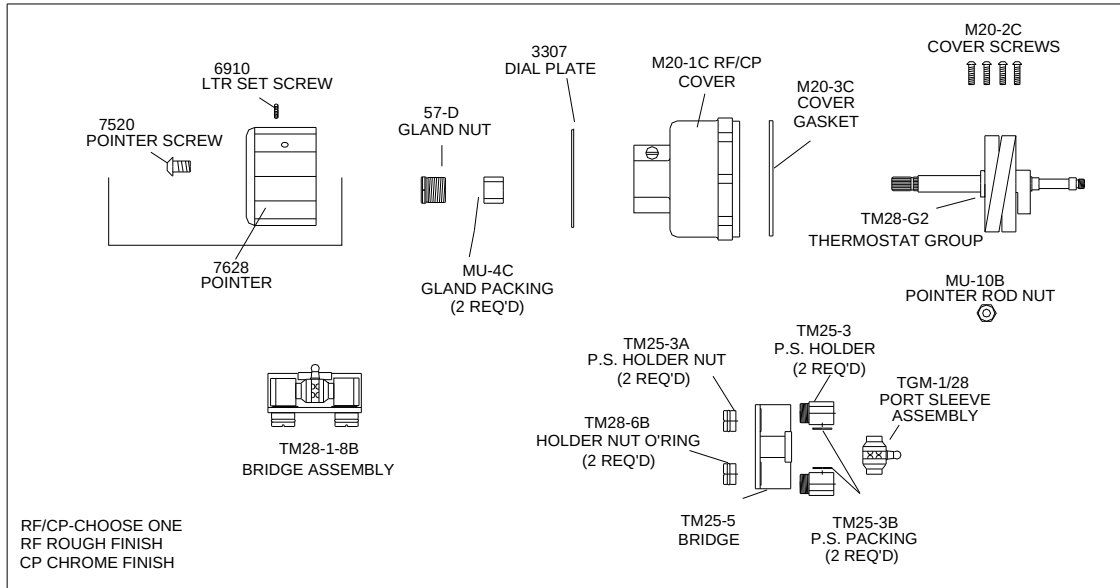
TROUBLESHOOTING

1. Leaking water under knob, order gasket kit, replace stem assembly o-ring. Remove knob screw and knob, remove retaining clip, thread out the stem assembly and replace o-ring. Lubricate o-ring, thread stem into cover, replace retaining ring, knob and screw. **Valve temperature must be reset after any repairs or cleaning!!**
2. Leaking water between cover and body, order gasket kit, replace cover o-ring. Remove knob screw and knob and remove valve cover and replace o-ring. Replace valve cover, knob and knob screw. **Valve temperature must be reset after any repairs or cleaning!!**
3. Valve not controlling temperature even after cleaning, order complete rebuild kit. Remove knob screw and knob and remove valve cover. Replace shuttle assembly and return spring being sure to lubricate shuttle o-ring. Replace valve cover, knob and knob screw. **Valve temperature must be reset after any repairs or cleaning!!**

REPAIR KITS

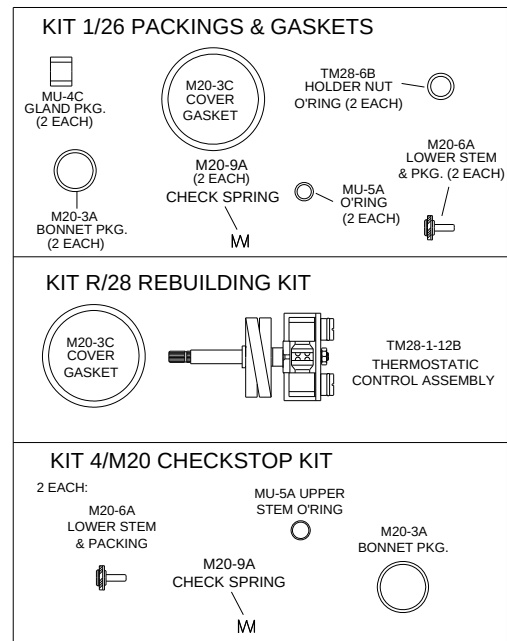
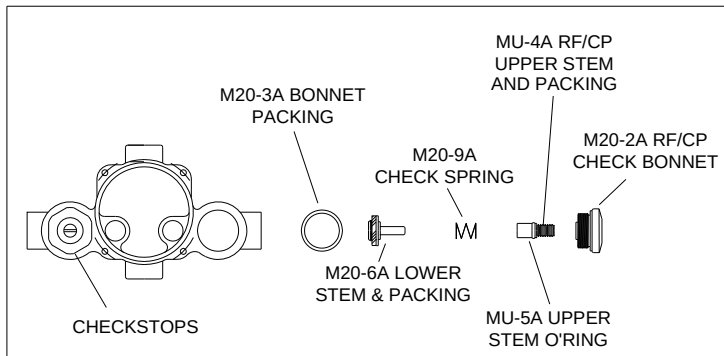
	MODEL 320 ARV	MODEL 370 ARV
Leaking water under knob.	1/ WX Gasket Kit	1/ WX Gasket Kit
Leaking water between valve cover and body.	Shuttle o'ring	Shuttle o'ring
	Stem assembly o'ring	Stem assembly o'ring
	Cover o'ring	Cover o'ring
Valve will not control temperature after cleaning.	R/ WX Complete Rebuild Kit	R/ 270/370 Complete Rebuild
	Return spring	Return spring
	Shuttle assembly	Shuttle assembly
	Shuttle o'ring	Shuttle o'ring
	Stem assembly o'ring	Stem assembly o'ring
	Cover o'ring	Cover o'ring

TM-26 VALVE PARTS



REPAIR KITS

CHECKSTOP PARTS

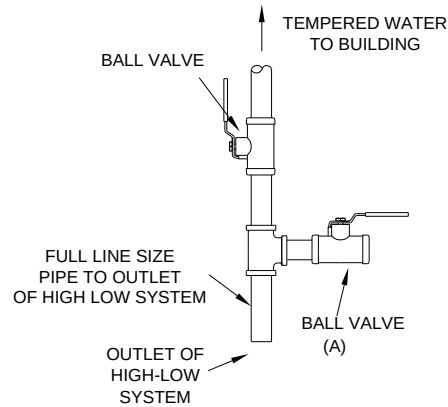


REMEMBER! THIS IS A CONTROL DEVICE WHICH MUST BE CLEANED AND MAINTAINED ON A REGULAR BASIS (SEE MAINTENANCE GUIDE AND RECORD).

NOTE: AFTER INSTALLING NEW PARTS IT WILL BE NECESSARY TO RESET THE ADJUSTABLE HIGH TEMPERATURE LIMIT STOP ON EACH VALVE (SEE PAGE 2).

**OPTIONAL OUTLET SETUP PIPING
(BY OTHERS)**

The addition of this piping arrangement (extra tee and ball valve) eliminates the need to turn showers on and off throughout the building at setup. The flows required in the setup instructions (page 3) are set by using Ball Valve A. (make sure main outlet ball valve is closed).



CAUTION! ALL THERMOSTATIC WATER MIXING VALVES AND SYSTEMS HAVE LIMITATIONS! THEY WILL NOT PROVIDE THE DESIRED PERFORMANCE OUTSIDE OF THEIR FLOW CAPACITY RANGE! CONSULT THE CAPACITY CHART BELOW AND OBSERVE MINIMUM FLOWS SHOWN.

FLOW CAPACITIES

MODEL	IN	OUT	MINIMUM FLOW (GPM)	SYSTEM PRESSURE DROP										PSI
				5	10	15	20	25	30	35	40	45	50	
			L/MIN	.3	.7	1.0	1.4	1.7	2.1	2.4	2.8	3.1	3.4	BAR
TM-26	3/4"	3/4"	1.0	7	10	13	15	17	19	21	23	25	26	GPM
			3.7	26	38	49	57	64	72	80	87	95	98	L/MIN
MAXIMUM FLOW CAPACITY														

LIMITED WARRANTY

Leonard Valve Company (hereinafter, "Leonard") warrants the original purchaser that products manufactured by Leonard will be free from defects in material or workmanship under normal conditions of use, when properly installed and maintained in accordance with Leonard's instructions, for a period of one year from the date of shipment. During this period, Leonard 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. Leonard provides no warranty, express or implied, which extends beyond the description contained herein. LEONARD SPECIFICALLY DISCLAIMS ANY AND ALL IMPLIED WARRANTIES OF MERCHANTABILITY OR OF FITNESS FOR A PARTICULAR PURPOSE. Nonetheless, some jurisdictions may not allow the disclaimer of certain implied warranties, in which case Leonard hereby limits such implied warranties to the duration of the limited warranty period contained herein. Some jurisdictions may not allow limitations on how long an implied warranty lasts, so the foregoing durational limitation may not apply to you. In no event will Leonard be liable for labor or incidental or consequential damages. Any alteration or improper installation or use of this product will void this limited warranty. If any provision of this limited warranty is prohibited by law in the applicable jurisdiction, such provision shall be null and void, but the remainder of this limited warranty shall continue in full force and effect.

TROUBLESHOOTING & MAINTENANCE



For more information contact...

WOODFORD MANUFACTURING COMPANY, LLC.

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

04/15 Rev 1

Model 21, 24 or 26 Mild Climate Non-Freeze Area Wall Faucets

Fig 1



Fig 2



Fig 3

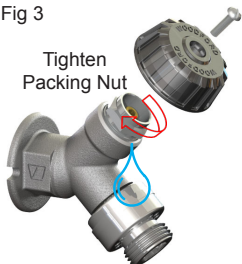


Fig 4



- **Water leaks from the nozzle when faucet is off. Fig 1**
Valve seat (30008) Washer (Fig 2) is worn out or damaged and needs to be replaced or the Washer Screw is loose. Follow instructions below on how to remove the Operating Stem. If this does not fix the leak, the faucet may have a damaged seat and the faucet will need to be replaced.
- **Operating Stem removal. Fig 2**
To remove the Operating Stem from the faucet, shut off the water supply and remove the Wheel Handle and Packing Nut. Use the handle to turn the stem counterclockwise until the stem becomes disengaged from the threads. Use a small screwdriver to pry the packing loose. Pull the stem out of the faucet. Remove Washer Screw and old Washer and install new Washer.
- **Packing leak. Faucet leaks from around the operating stem when the faucet is on. Fig 3**
The packing nut will occasionally need to be tightened to stop a packing leak. Tighten the packing nut behind the handle until snug and the leak stops. Persistent leaks will require a new 30247 EPDM Packing. (Removal of Wheel Handle may be required to access Packing Nut.)
- **Faucet will not flow water when the faucet is on. Fig 4**
The Vacuum Breaker may be obstructed or damaged. Remove the vacuum breaker and check to see if the faucet flows water with the vacuum breaker removed. Inspect the vacuum breaker for obstruction or damage.
- **Available RK-24 Repair Kit includes all 8 parts listed in Fig 2.**

TERMS AND CONDITIONS OF SALE

Selling Policy - Possession of our price list or jobber discounts is not an offer to sell. All orders are subject to acceptance by the home office in Colorado Springs, Colorado.

Minimum Invoice - No invoice will be rendered for less than \$25.00 list.

Cash Discount - 3% 15 days from date of invoice or 2% 10th Prox., Net EOM

Freight Allowance - All goods sold F.O.B shipping point. For shipments in the continental United States and Canada, **full freight will be allowed on orders of \$2,000.00 or more list**. No freight allowance on smaller shipments. We reserve the right to ship the most economical way.

Foreign Shipments - (including Alaska and Hawaii) will be allowed full freight, according to the conditions listed above, to the embarkation point in the continental United States only.

Claims, Shortages and Damage - All claims for shortages or goods damaged in transit must be made within **10 days after receipt of merchandise**. (All claims should be made to Woodford Manufacturing Co. by the consignee.)

Prices, Designs and Quotation - Prices, designs and dimensions of products are subject to change without notice. Quotations, unless otherwise stated, are for immediate acceptance and prices quoted are based on the sellers standard tolerances of materials. We reserve the right to invoice all merchandise at prices in effect at the time of shipment.

Cancellations - Orders covering special merchandise are not subject to cancellation without our written permission. Purchaser subject to expense incurred by cancellation of special orders.

Limited Warranty - All goods are sold with a limited warranty for one year against defects in material and workmanship. We will replace or issue credit (at our option) for defective goods that are returned for inspection and found to be defective within one year of purchase from Woodford.

Implied warranties - Implied warranties are limited to one year from date of purchase from Woodford.

Taxes and Government Regulations - Sales or manufactures tax imposed under any existing or future statutes shall be added to the price of merchandise effective at the time shipment is made.

Ordering Procedure - Purchase order must include the following: Model number, inlet size & type, handle type, wall thickness or depth of bury and type of finish required where applicable.

Returned Goods - Standard catalog material may be returned. All returns of resalable new and unused product is subject to a 25% restocking charge, plus the cost of reconditioning, not to exceed an additional 25% (50% total). Credit for used or freight damaged material to be determined by factory upon receipt of material.

We will not accept returns for:

1. Any non-defective return under \$25.00 net or product over 18 months old.
2. Special lengths on any product.
3. Obsolete merchandise and product not listed in current price guide.
4. Competitor's product or product abused by installation.
5. Items not reviewed and RGA form signed by local Woodford representative before being sent back for factory approval.

All items claimed defective must be returned prepaid to address shown on back cover:

Model 19 Limited 5 Year Warranty



All Model 19 Wall faucets are sold with a limited warranty for five (5) years against defects in material and workmanship. We will replace or issue credit (at our option) for defective goods that are returned for inspection and found to be defective within five (5) years of purchase from Woodford. In addition, Woodford will pay up to \$5,000.00 toward the cost to repair damages incurred as a result of a defective Model 19 Wall Faucet that was properly installed. This limited warranty does not cover defects caused by: modification, alteration or repair of the product by anyone other than Woodford; physical abuse to, or misuse of, the product or operation thereof in a manner contrary to accompanying instructions.

Commercial Limited 5 Year Warranty



All Commercial Wall hydrants and Roof hydrants shown in this brochure are sold with a limited warranty for five years against defects in material and workmanship. We will replace or issue credit (at our option) for defective goods that are returned for inspection and found to be defective within five years of purchase from Woodford.

Patented and Patents Pending: See woodfordmfg.com for details
For Individual Spec Sheets, Installation and Troubleshooting Instructions
Go to **woodfordmfg.com** or Call Customer Service 1-800-621-6032

TROUBLESHOOTING & MAINTENANCE



For more information contact...

WOODFORD MANUFACTURING COMPANY, LLC.

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

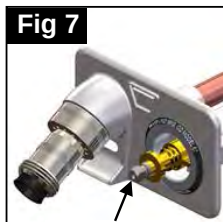
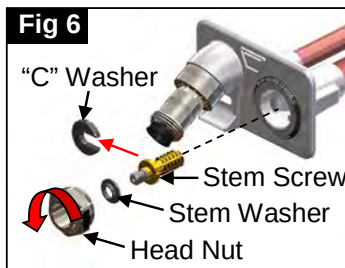
To view our complete product line visit: www.woodfordmfg.com or email: sales@woodfordmfg.com

Model 65 & 67 Freezeless Wall Hydrant

Rev 06/15 Form No. TM65.103

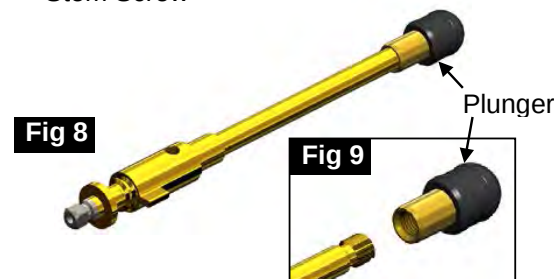


Drain Hole Air Vent



Stem Screw

For replacement
parts order
Repair Kit
RK-65



- **Water leaks from drain hole (Fig 1) and/or air vent in Stem Screw when the hydrant is on.**
Plunger (50250) is damaged and needs to be replaced. See **Operating Rod Removal**
 - **Hydrant will not shut off. Water leaks out nozzle (Fig 2) and/or drain hole when hydrant is off.**
If a new installation debris or other obstruction may be prohibiting the plunger from seating properly. Remove rod assembly, inspect plunger for damage and flush the casing before reassembling. See **Operating Rod Removal**
 - **Hydrant does not drain when it is shut off.**
Drain hole cavity in casting and/or air vent hole in Stem Screw (Fig 3) may be blocked with insect nest or other debris. Use a stiff wire to clear any obstructions.
 - **Hydrant does not flow water when it is on.**
The Vacuum Breaker may be obstructed or damaged. Remove the Vacuum Breaker (Fig 4) and check to see if the hydrant flows water with the Vacuum Breaker removed. Inspect the Vacuum Breaker for obstruction or damage. If the hydrant still does not flow water with the Vacuum Breaker removed, remove the Operating Rod Assembly and turn on the water supply to flush the casing. See **Operating Rod Removal**
- Operating Rod Removal:**
1. Shut off water supply.
 2. Turn the Stem Screw counterclockwise to the full open position. (Fig 5)
 3. Remove the Head Nut and Stem Screw. (Fig 6)
 4. Remove the "C" Washer from the stem screw. (Fig 6)
 5. Thread the stem screw back in the operating rod one or two turns. (Fig 7) Use a screwdriver or small pry bar to pry under the ledge of the stem screw, against the face of the hydrant, to pull the rod out of the hydrant. A damaged plunger may require a significant force to pull the rod free. (Fig 8)
 6. Once the rod is out of the hydrant, inspect and/or replace the plunger, which is threaded on the rod. (Fig 8 & 9) If the plunger rubber has come off the insert and is stuck inside the hydrant, a special plunger removal tool is available on loan from Woodford.

TERMS AND CONDITIONS OF SALE

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Commercial Limited 5 Year Warranty



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Patented and Patents Pending: See woodfordmfg.com for details
For Individual Spec Sheets, Installation and Troubleshooting Instructions
Go to **woodfordmfg.com** or Call Customer Service 1-800-621-6032



The Green Solution

2" SureSeal®

MODEL #SS2009V

INLINE FLOOR DRAIN TRAP SEALER

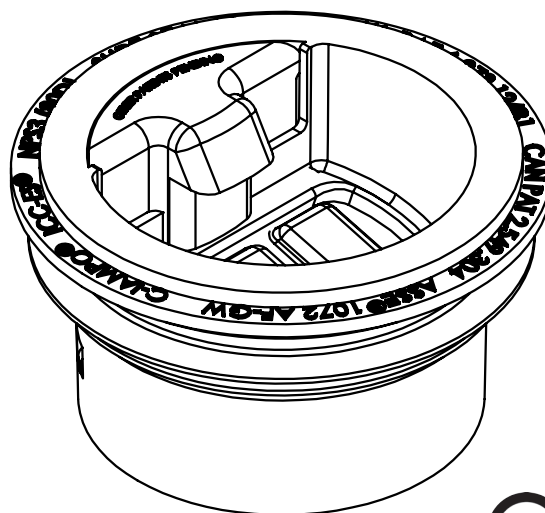
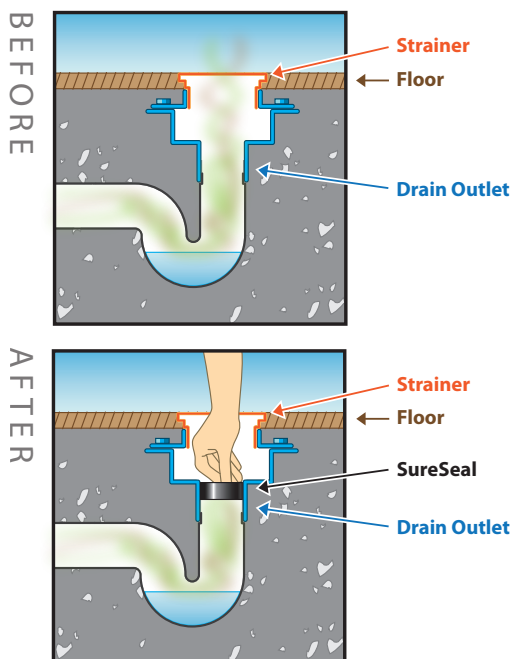


Specification: SureSeal model SS2009V Waterless Inline 2" Drain Trap Seal. HDPE (High Density Poly Ethylene) housing with heavy duty proprietary silicone diaphragm and soft EPDM rubber sealing gasket. Floor rating ASSE 1072 AF GW.

Function: Installs into the outlet of drain bodies, or drain hubs to protect the trap seal from evaporation. Creates a physical barrier that blocks sewer gases and their odors from escaping. Provides waterless trap seal protection equivalent to water based trap primers.

- **New Construction:** Used as a trap primer replacement or in conjunction with a trap primer to provide protection against escaping sewer gases. Eliminates the need to repair/replace trap primers when they fail.
- **Retrofit:** Used in situations where trap primers have failed or where trap primers were never installed.

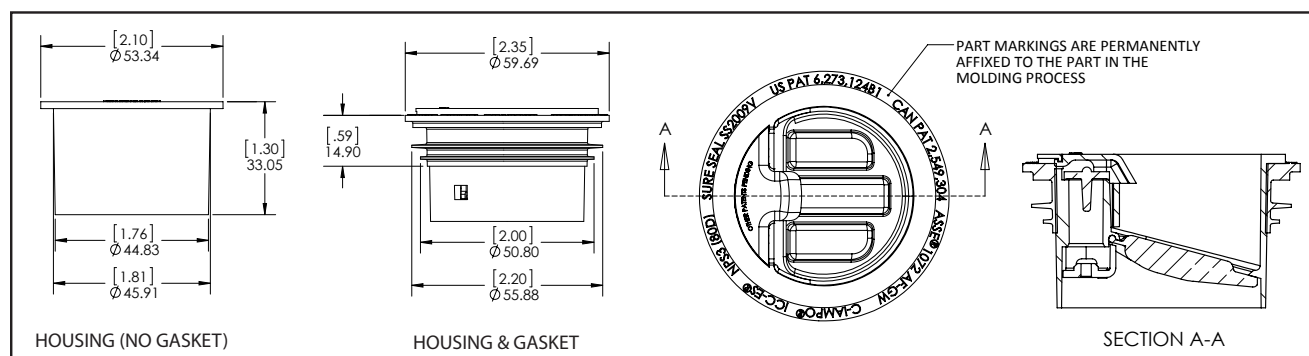
Benefits: Simple to install, eliminates the need for complex, time consuming, and expensive repairs. ECO friendly providing 100% water savings efficiency over traditional methods.



ICC-ES Listed: PMG-1070 IAPMO Listed: C-4165

U.S. Patent 9,010363

Other Patent Pending



Contact: RectorSeal® 2601 Spenwick Drive, Houston, TX 77055 P 713-263-8001 | 800-231-3345 F 713-263-7577 | 800-441-0051 W rectorseal.com



The Green Solution

3" SureSeal®

MODEL #SS3009V

INLINE FLOOR DRAIN TRAP SEALER

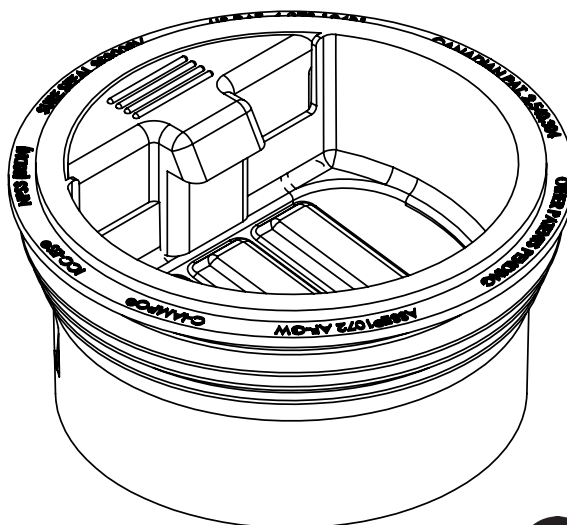
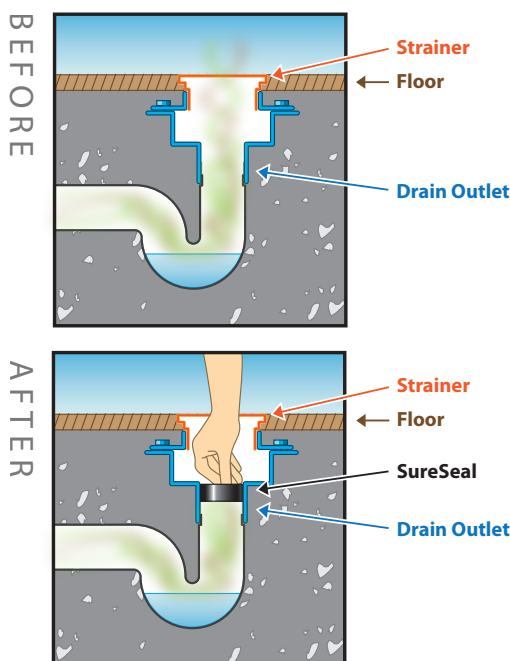


Specification: SureSeal model SS3009V Waterless Inline 3" Drain Trap Seal. HDPE (High Density Poly Ethylene) housing with proprietary heavy duty silicone diaphragm and soft EPDM rubber sealing gasket. Floor rating ASSE 1072 AF GW.

Function: Installs into the outlet of drain bodies, or drain hubs to protect the trap seal from evaporation. Creates a physical barrier that blocks sewer gases and their odors from escaping. Provides waterless trap seal protection equivalent to water based trap primers.

- **New Construction:** Used as a trap primer replacement or in conjunction with a trap primer to provide protection against escaping sewer gases. Eliminates the need to repair/replace trap primers when they fail.
- **Retrofit:** Used in situations where trap primers have failed or where trap primers were never installed.

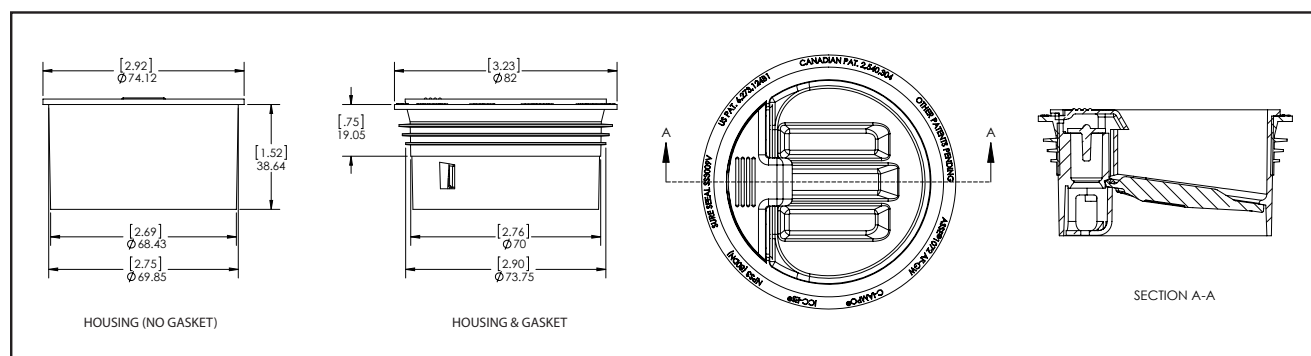
Benefits: Simple to install, eliminates the need for complex, time consuming, and expensive repairs. ECO friendly providing 100% water savings efficiency over traditional methods.



ICC-ES Listed: PMG-1070 IAPMO Listed: C-4165

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Other Patent Pending



Contact: RectorSeal® 2601 Spenwick Drive, Houston, TX 77055 P 713-263-8001 | 800-231-3345 F 713-263-7577 | 800-441-0051 W rectorseal.com

P-J-15



A CSW Industrials Company

LIMITED WARRANTY:

RectorSeal® makes the Limited Express Warranty that when the instructions for storage and handling of our products are followed we warrant our products to be free from defects. THIS LIMITED EXPRESS WARRANTY IS EXPRESSLY IN LIEU OF ANY OTHER EXPRESS OR IMPLIED WARRANTIES, INCLUDING ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, AND OF ANY OTHER OBLIGATION ON THE PART OF RECTORSEAL®. The sole remedy for breach of the Limited Express Warranty shall be the refund of the purchase price. All other liability is negated and disclaimed, and RectorSeal® shall not be liable for incidental or consequential damages.

MANUFACTURED BY

RectorSeal®

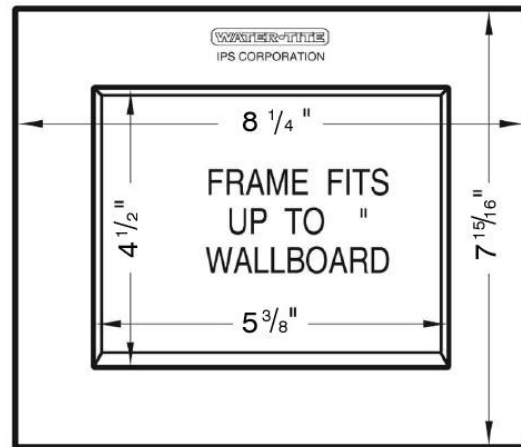
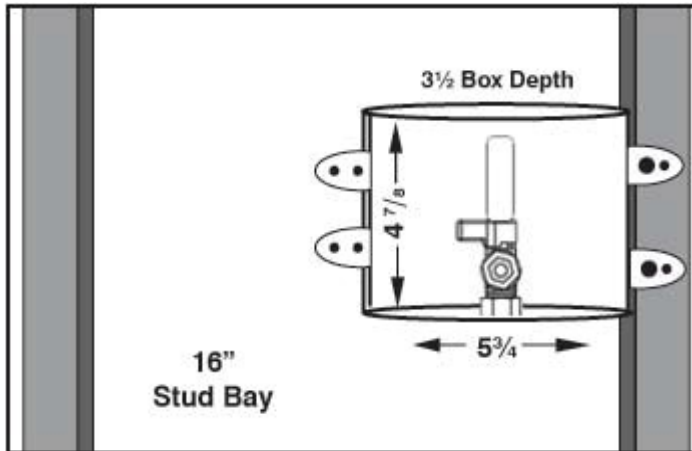
2601 Spenwick Drive • Houston, TX 77055 USA

713-263-8001 • Fax 713-263-7577

Toll-free 800-231-3345 • Fax 800-441-0051

OPERATIONS & MAINTENANCE MANUAL

WATER-TITE
 IPS CORPORATION

PLASTIC ICE MAKER OUTLET BOXES
 with Lead Free Quarter Turn Arrester Valve


Ice Maker Box Installation Instructions

- 1) Remove the faceplate that is attached to the ice maker box and save for future installation.
- 2) Using either nails or screws, mount the box to the stud via the flanges on the side of the box.
- 3) Box can be mounted:
 - a) On either side of the stud bay.
 - b) At a height determined by builder/installer.
 - c) In any direction - top mount, etc.
- 4) Connect the PEX water supply piping to the ice maker box valve via the ASTM F1807 connection.
- 5) Check all local codes for appropriate approvals and requirements.
- 6) To the 1/4" outlet of valve attach either:
 - a) Copper supply tubing via compression connection.
 - b) Poly supply tubing via compression connection - brass insert into poly tube is required
 - c) Braided hose via threaded connection.
- 7) Connect to the inlet connection of the refrigerator.

✓	Product Code #	Product Description	Model #	Units/Case	Packaging
	87980	Brass Lead Free Qtr Turn Valve w/Arrester Installed - 1/2" F1807 PEX	AB9702HA	10	Standard Pack
	87981	Brass Lead Free Qtr Turn Valve w/Arrester Installed - 1/2" F1807 PEX	AB9702HACP	20	Contractor Pack

Item #	Replacement Component Description
89440	Plastic Locknut for Solder Valves
88367	Lead Free Lead Pex Ice Valve w/Hammer Arrester
89266	Faceplate

IPS
 CORPORATION

www.ipscorp.com | plumbing@ipscorp.com

500 Distribution Parkway, Collierville, TN 38017 ■ 800-888-8312 ■ Fax: 901-853-5008

WATER HAMMER ARRESTERS

650 SERIES

HydraRester™

SPECIFICATION

Sioux Chief 650 Series piston-type water hammer arresters shall be required in piping systems. Water hammer arresters shall have sufficient volume of air to dissipate the calculated kinetic energy generated in the piping system. Arresters shall be effective when installed at any angle. Arresters shall be approved for installation with no access panel required. Water hammer arresters shall be ANSI/ASSE 1010 2004 certified. Arresters shall be sized and placed per manufacturer's instructions.

INSTALLATION

May be installed at any angle. No access panels required. Compatible with Press Fittings or Push Fittings. Refer to instructions on product package, catalog or website.

MATERIALS

Arrester body: type L copper tube

Piston: poly piston with two EPDM o-rings

Male thread fitting: copper MIP thread

Piston lubrication: Dow-Corning, 111 FDA approved silicone compound

PEX F1960 fitting: No Lead EcoBrass 69300

CERTIFICATIONS/APPROVALS

Certified by ASSE to the ANSI/ASSE 1010-2004 standard

WORKING LIMITS*

Max working temperature: 250°

Max working pressure: 350 PSIG

Burst tested: to 2,900 PSIG

*PEX and CPVC connection specifications are limited to those called out in their respective ASTM Standards for Fittings (CPVC D2846, PEX F1807, PEX 1960).

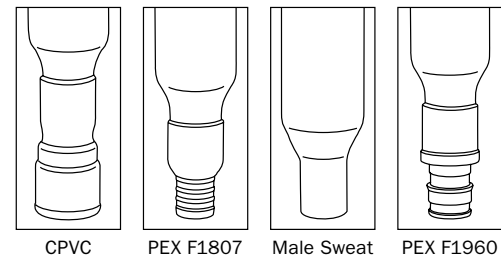
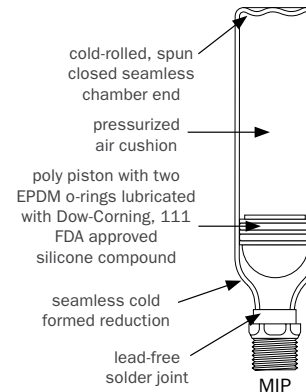
DIMENSIONS

Arrester size	A	B	C	D	E	F
Overall height						
Male thread	6½"	8¾"	11"	10⅞"	12⅝"	15½"
Male sweat	8¼"	10"	12½"	11"	13½"	16"
CPVC	7½"	9½"	12"	—	—	—
PEX F1807	6½"	8¾"	11"	—	—	—
PEX F1960	6½"	8¾"	11"	—	—	—
Chamber width	1⅜"	1⅜"	1⅜"	2⅜"	2⅜"	2⅜"
Connection size	½"	¾"	1"	1"	1"	1"
Volume (cu. in.)	5	7	11	20	29	36
Fixture units	1-11	12-32	33-60	61-113	114-154	155-330

ITEM # SUBMITTED _____
JOB NAME _____
LOCATION _____
ENGINEER _____
CONTRACTOR _____
PO# _____ TAG _____



652-A



Choose Item Number

652-A = A size, MIP

653-B = B size, MIP

654-C = C size, MIP

655-D = D size, MIP

656-E = E size, MIP

657-F = F size, MIP

652-AS = Sweat/Press-Fit

653-BS = Sweat/Press-Fit

654-CS = Sweat/Press-Fit

655-DS = Sweat/Press-Fit

656-ES = Sweat/Press-Fit

657-FS = Sweat/Press-Fit

652-AX = A size, PEX 1807

653-BX = B size, PEX 1807

654-CX = C size, PEX 1807

652-AWG = A size, PEX 1960

653-BWG = B size, PEX 1960

654-CWG = C size, PEX 1960

652-AC = A size, CPVC socket

653-BC = B size, CPVC socket

654-CC = C size, CPVC socket

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Warranty

Limited Lifetime Warranty

Sioux Chief Mfg. Co., Inc. ("Seller" or "the Seller") warrants its products to be free from defects in material and workmanship under normal usage for the lifetime of the plumbing system in which they were originally incorporated. In the event of such defects within the warranty period, the Company will, at its option, replace or recondition the product without charge. This remedy shall be effective only if the product was installed in accordance with supplied instructions, common installation or use practices and existing building and plumbing codes and legal requirements; has not been subjected to misuse or abuse; was at all times used in a manner consistent with its intended use; was at all times used in installations and environments acceptable to its material and design specifications; or any express conditions or requirements laid out in company installation instructions, manuals, tech bulletins, special labeling, precautions, as well as other instructional documents and product limitations of use; was never modified, altered or repaired by anyone other than the Seller; was properly subjected to and passed common testing methods (including pressure testing for potable water and drainage systems) immediately after the product's installation and before the product is put into service, was not damaged by freezing temperatures or excessive heats outside normal working or any express working range of the product; was not subjected to or exposed to direct or indirect chemical exposures; was not subjected to corrosion from atmospheric or environmental degradation (including UV exposure, brackish water, acidic water (pH <6.5), alkaline water (pH >8), contaminated soils, etc.), and was protected from natural causes; was never subjected to improper protection during installation and was handled with all precautions expressly written within company limitation documents or known to the industry; was not subjected to water pressures and flow conditions outside the working limits of the product; was not subject to adverse or aggressive water conditions (during testing, through stagnation or within service life (where service-life is defined by this warranty)) and where any express water condition included within company documents is avoided; and all handling was performed in a manner consistent and known to the industry or taught through company documents, labels, websites, manuals, etc. In addition, Seller shall not be responsible for any incidental, special or consequential damages, including without limitation, lost profits or the cost of repairing or replacing other property which is damaged, other costs resulting from labor charges, delays, vandalism, negligence, fouling caused by foreign material, chemical or any other circumstances over which the Seller has no control. This warranty excludes all costs arising from routine maintenance, including the replacement of any parts required by such maintenance and the replacement of parts required by normal wear and tear. The Seller also reserves the right to modify, alter or improve its product, or parts thereof, at any time without incurring an obligation to notify or modify, alter, improve or replace any product, or parts thereof, previously sold. If, on any occasion, Seller waives any term or condition, this waiver is not to be construed as a continuing waiver. For the purposes of this warranty, the lifetime of the original plumbing system is defined as the lesser of 25 years or the time before the plumbing system was replaced or materially changed; all products with automatically or manually moving parts are excluded from the limited lifetime warranty and carry a 3-year limited warranty, subject to the remaining terms, conditions and limitations of the warranty. Some States do not allow or have other parameters governing limitations on how long an implied warranty lasts, and some States do not allow the exclusion or limitation of incidental or consequential damages. This Limited Warranty gives you specific legal rights, and you may have other rights that vary from State to

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[Accept](#)

OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

Terms & Conditions

All sales are subject to the Standard Terms and Conditions set forth on Sioux Chief's website at www.siouxchief.com. These terms include the following:

Return Merchandise

No merchandise can be returned without Seller's prior written authorization. All returns must comply with the guidelines established in sections 10 and 11 below.

Return Merchandise & Warranty Service

In order to return product/merchandise or receive warranty service, Buyer must first obtain a Return Merchandise Authorization ("RMA") by contacting Seller using the following information:

MAIL:

Customer Service Manager
Sioux Chief Manufacturing Company, Inc.
14940 Thunderbird Road
Kansas City, Missouri 64147

PHONE:

816-425-9900
1-800-821-3944

FAX:

816-348-7502
1-800-758-5950

EMAIL:

info@siouxchief.com

Returned Merchandise Procedure

All product returns and warranty claims are subject to the following general terms and conditions

1. RMA requests must reference Seller's order number, invoice number or the customer's P.O. number.
2. Minimum return amount is \$250 net – purchase orders may be combined.
3. Product returns can only be made within twelve months of the original invoice date of the product to Buyer.
4. Seller reserves the right, in its sole and absolute discretion, to reject an RMA request for any reason at any time.
5. In order to be received and accepted by Seller, all returned product must be in whole multiples of the Minimum Quantity listed in the current Price Index and material must be in its original packaging with manufacturer's seal intact.
6. Products which are being phased-out, are obsolete, or were special-order (custom) are not considered normal stock. These items are non-returnable and non-refundable, except in the case of a manufacturer's defect.
7. Buyer will be charged 25% of the applicable return price for product restocking. For Drainage items having one or more listed option, Buyer will be charged 33% of the applicable return price for product restocking; and will apply to canceled orders that have been entered but not shipped.

This site uses cookies and other tracking technologies to improve your experience, including Google Analytics and Salesforce. By continuing to use this site, you accept our use of cookies and tracking technologies.

10. All product returns are subject to inspection and acceptance by Seller at its discretion.
11. Seller reserves the right to deny, nullify or cancel an RMA at its discretion.
12. Product returned without a Return Merchandise Authorization number will be destroyed without credit.
13. Seller shall not be responsible for shipping errors and shortages reported 5 days after receipt of material.
14. Seller shall not be responsible for shipment shortages that are signed for as clear. Any shipment that appears to be damaged in shipping must be noted when signing for receipt of delivery.

Warranty Procedure - Product & Property

All claims for property or other damage are subject to the following additional terms and procedure:

- If there is a warranty claim on a part that involves property or other damage, Seller should be contacted by phone or in writing directly following the loss, and in no case later than 15 days of the date of alleged claim or failure and before any remediation or alteration of the loss site has been started; any notice beyond this time frame or after work has taken place to repair or change the loss site will materially affect the Seller's ability to adjudicate the claim and will void the warranty.
- The product in claim and/or its installation should not be modified before review by Seller; alteration of the alleged product or installation materially affects the Seller's ability to establish fault and voids the warranty.
- Request a claim form. Submit the completed form to the Seller. Claimant will receive an INC (incident) number from Seller.
- With the INC number, claimant should submit the claim form, including the date of the installation, description of problem, damage, pictures of the product, and repair invoices. This information should be sent to the above address at claimant's expense. Seller will not receive or process a claim without an INC number.
- Seller will contact claimant with next steps, which may include a visit from a site investigator or other representatives of Seller, as Seller reserves the right to investigate all alleged loss sites.

Full Freight Allowance

Sioux Chief will pay freight on all orders to single destinations totaling at least \$4,000 Net to locations within the 48 contiguous states (United States of America), at least \$7,500 Net to locations within Hawaii, Alaska, and Puerto Rico, and at least \$3,500 CAD Net to locations within Canada. Sioux Chief will pay freight on HydroTec™ and HydroBlock™ trench drain orders of at least \$5,000 Net to locations with the 48 contiguous states.

Processing of Orders

All orders are processed immediately upon receipt and acceptance by Seller. Seller reserves the right to charge back to Buyer costs incurred from order cancellations or changes, and to consider additions as separate orders. Unless provided in writing by Seller, any dates and/or times quoted by Seller for the delivery of any goods or the performance of any services are estimates and Seller will not be held responsible for any delay. Buyer's receipt of goods or acceptance of services shall constitute a waiver of any claim for delay.

If Buyer requires expedited shipment of "in stock" goods prior to stated lead times on said order, Buyer will be charged \$100.00 (USD) for any 'expedited' shipping on items up to \$1,000.00 (USD) net, or \$100.00 (USD) + 2% of net for any 'expedited' shipping on items over \$1,000.00 (USD) net.

Price Changes

All prices quoted from time to time by Seller are subject to change without notice up to time of shipment. Invoice totals and discounts will be calculated out to the sixth decimal digit. If Buyer fails to give written notice of objection to Sioux Chief's order confirmation within ten (10) days after Buyer's receipt of Sioux Chief's confirmation of the purchase order, the order confirmation pricing becomes binding.

Minimum Order Quantities

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