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NEWTON COUNTY CENTRALIZED STORAGE FACILITY

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davisplumbingco@yahoo.com

22-0000 Plumbing O&M



Newton County Central Storage O&M Manual

Submitted by:

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

Water Closet 3

American Standard 3517A.101.020 Cadet Pro Elongated Bowl
American Standard 4188A.105.020 Cadet Pro Right Hand Tank
Bemis 1955CT White OFLC Elongated Toilet Seat

Lavatory..... 21

Kohler K2005-0 Wall Hung Lavatory
Moen 8414 One Handle Lavatory Faucet

Mop Sink 46

Fiat MSB2424 Mop Service Basin
T&S B-0665-BSTR Service Sink Faucet

Heater 60

State EN6-30-DORS 30 Gallon 208v 4.5KW Electric Water Heater
Hydra Pro 2.1gal Expansion Tank

INSTALLATION INSTRUCTIONS CARE AND MAINTENANCE

*American
Standard*

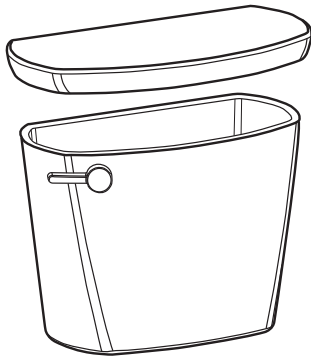
Cadet® PRO 2-piece Toilet Elongated and Round Front

Models 215AA, 215BA, 215AB, 215BB, 215FA, 215FC, 215CA, 215DA, 215CB, 215DB Series

Thank you for selecting American Standard - the benchmark of fine quality for over 100 years. 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.

⚠ CAUTION: PRODUCT IS FRAGILE. TO AVOID BREAKAGE AND POSSIBLE INJURY HANDLE WITH CARE!
NOTE: Pictures may not exactly define contour of china and components.

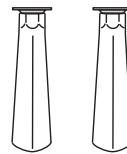
TANK 4188A and 4188B



EZ-INSTALL KIT INCLUDED WITH TANK



Tank To Bowl Gasket



Attachment Handles
with Nuts (2)

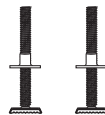


Plastic Washers (2)

BOWL 3517A, 3517C, 3517F ELONGATED BOWL 3517B, 3517D ROUND FRONT



EZ-INSTALL KIT INCLUDED WITH BOWL



T-Bolts with
Retainer (2)

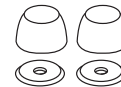


Bolt Caps (2)

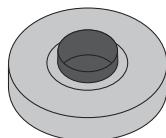


Bowl-To-Floor
Knobs (2)

Also includes Standard Bolt Caps (2)



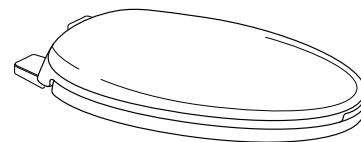
SOLD SEPARATELY



Wax Ring



Water Supply Line



Slow Close Toilet Seat

SAVE FOR FUTURE USE



7301878-100R4

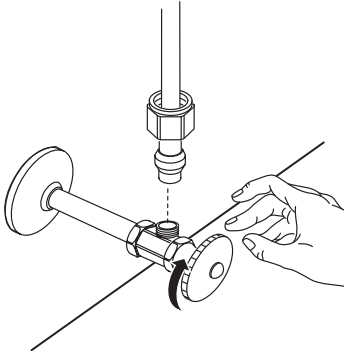
Product names listed herein are trademarks of AS America, Inc.
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7301878-100 Rev. 4 8/19

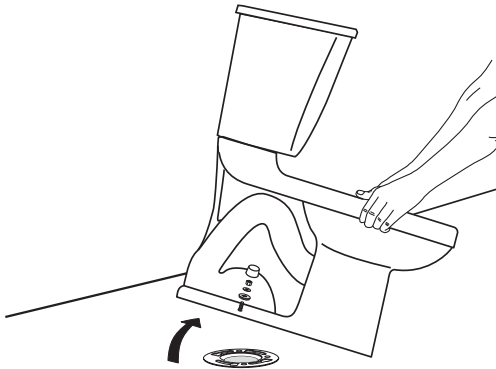
BEFORE YOU START:

If Removing An Existing Toilet

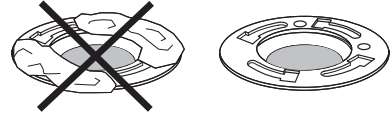
Turn Off Water Supply



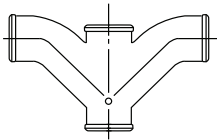
Flush to remove water from tank;
sponge remaining water from bowl
before removing toilet.



Clean Flange



⚠ Caution: If leaving floor flange open for more than 1-2 hours, cover flange to prevent escaping sewer gases.



Recommended fitting type for
back-to-back installations.

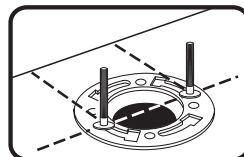
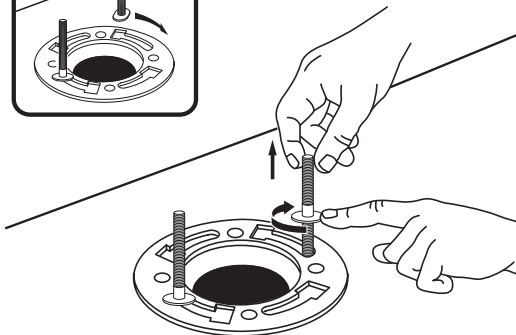
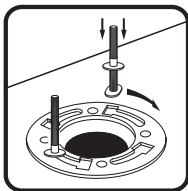


BACK-TO-BACK INSTALLATION

Depending upon your plumbing and venting conditions, the flow from the toilet in a back-to-back installation may create a vacuum on the system and draw water from the opposing bowl. The National Standards Plumbing Code prohibits the use of a cross fitting for drainage as throw over is possible. The code does approve a directional "Y" style fitting with proper venting to direct the water downward and away from the other toilet.

INSTALLATION INSTRUCTIONS:

1

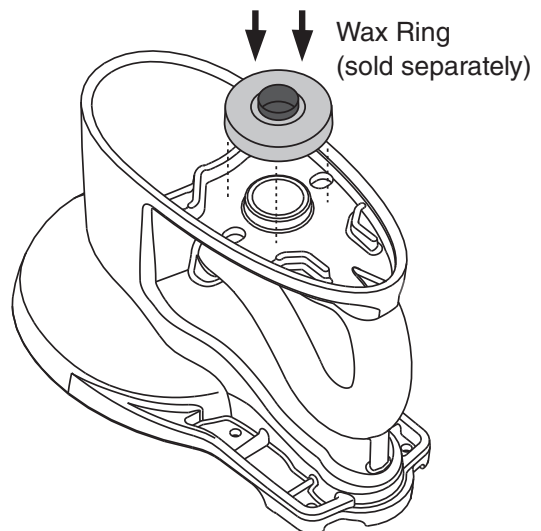


NOTE: 1/4" EZ-BOLTS INCLUDED.

IF 5/16" BOLTS ARE REQUIRED, PURCHASE SEPARATELY.

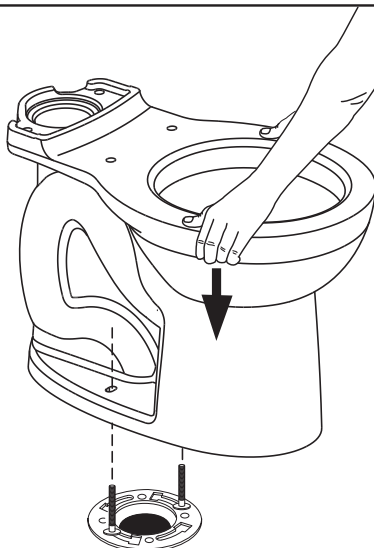
2

Press firmly.



3

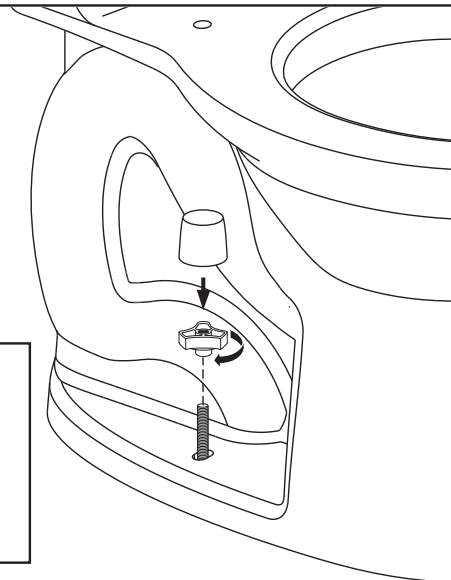
Apply weight evenly.
Do not move after
placement. Water
tight seal may break.



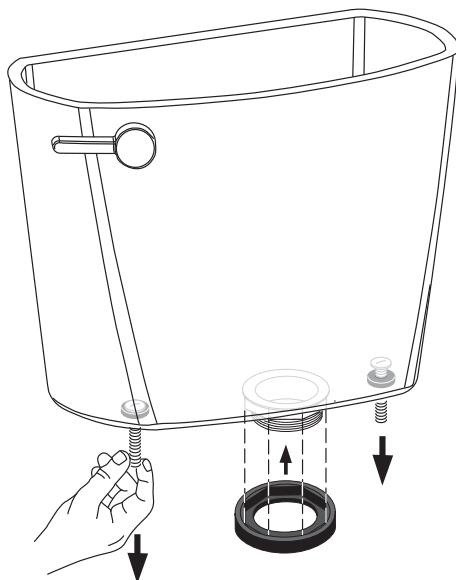
4

! Hand tighten
only. Do not
overtighten.

NOTE: 1/4" EZ-BOLT
AND CAP SHOWN.
IF 5/16" BOLT USE
STANDARD DISK AND
CAP INCLUDED.



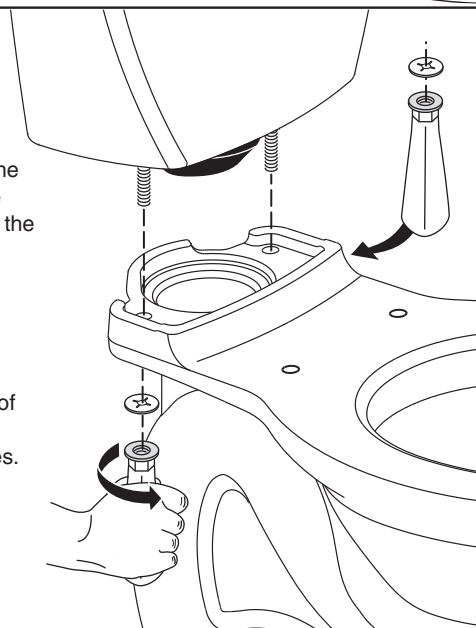
5



6

Tighten handles
alternately until the
tank contacts the
front and back of the
bowl achieving
china-to-china
contact.

NOTE: To ease
installation, push
down on the top of
the tank while
tightening handles.



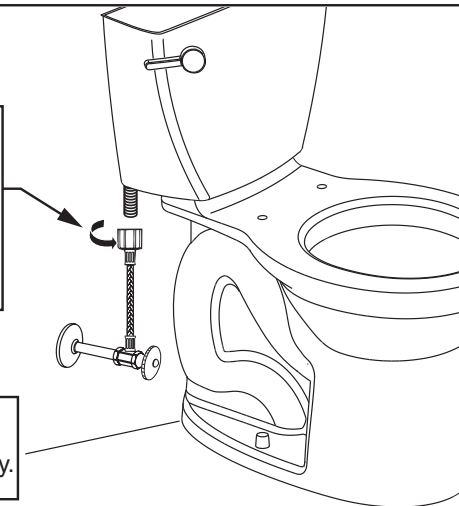
7

A

Connect water
supply line.
(Sold separately)
Hand tighten nut.

B

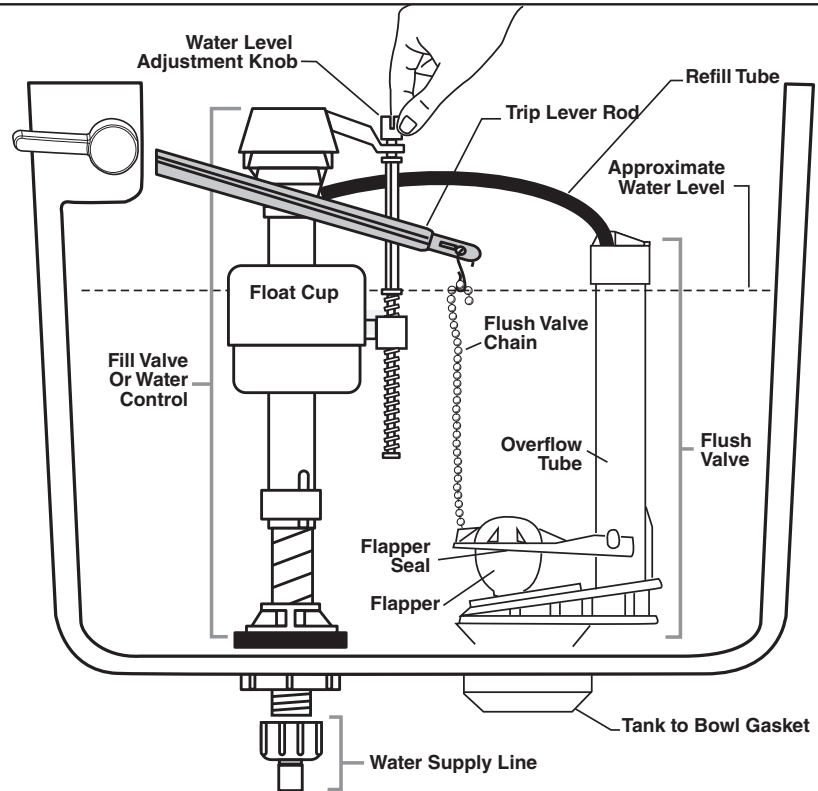
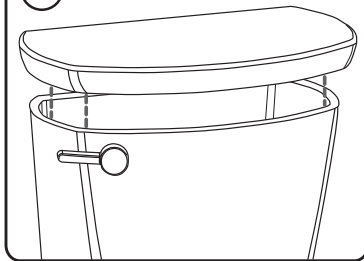
Turn on water supply.



WARNING: Overtightening of
water supply line nuts could result
in breakage and potential flooding.
If the connection leaks after hand
tightening, replace the supply line.
Do not use any type of sealant on
the water supply connection. Use
of plumber's putty, pipe dope, or
any other type of sealant will void
the warranty.

A

Adjust water level to level indicated on tank by turning water level adjustment knob to move float cup up or down.

B

CARE AND CLEANING

When cleaning your toilet, wash it with mild, soapy water, rinse thoroughly with clear water and dry with a soft cloth.

WARNING: Do not use in-tank cleaners. These products can seriously corrode fittings in the tank. This damage can cause leakage and property damage. American Standard shall not be responsible or liable for any damage caused by the use of in-tank cleaners.

TROUBLESHOOTING GUIDE - See Step 8 For Diagram

Problem	Possible Cause	Corrective Action
Does not flush	a. Water supply valve closed. b. Supply line blocked. c. Flush valve chain too loose or disconnected. d. Sand or debris lodged in water control.	a. Open valve and allow water to fill tank. b. Shut off water supply, disconnect supply line and inspect all gaskets and washers. Reassemble. c. Readjust chain length as required. d. Shut off water supply. Remove cap and clean as per Fluidmaster maintenance instructions at: www.americanstandard-us.com/enews/fluidmasterguide.pdf
Poor or sluggish flush	a. Bowl water level too low. b. Supply valve partly closed. c. Partially clogged trapway and/or drain pipe and/or vent. d. Supply pressure too low.	a. Check that refill tube is connected to water control and inserted into overflow tube without being kinked or damaged. b. Open supply valve fully. Be sure that proper supply tube size is used. c. Remove obstruction. Consult a plumber if necessary. d. Normal supply pressure must be at least 20 psi.
Toilet leaks	a. Poor supply line connection. b. Poor bowl to tank/floor connection.	a. Review Step 7 of installation procedure. b. Review Step 1 through 6 of installation procedure.
Toilet does not shut off	a. Flapper seal leaking or deformed. b. Sand or debris lodged in water control. c. Flush valve chain too tight, holding flapper open.	a. Clean debris from seal surface. Replace flapper seal as needed. See web for more info. b. Shut off water supply. Remove cap and clean as per Fluidmaster maintenance instructions at: www.americanstandard-us.com/enews/fluidmasterguide.pdf c. Readjust chain length as needed.
Toilet bowl rocks after installation	a. Wax ring not fully compressed. b. Floor not level.	a. Retighten bowl-to-floor knobs. b. Use toilet shims and /or place a bead of caulk around the base of the toilet.

In the United States:
American Standard Brands
1 Centennial Ave
Piscataway, New Jersey 08854
Attention: Director of Customer Care
For residents of the United States, warranty information may also be obtained by calling the following toll free number: (800) 442-1902
www.americanstandard.com

In Canada:
LIXIL Canada, ULC
5900 Avebury Rd.
Mississauga, Ontario
Canada L5R 3M3
Toll Free: (800) 387-0369
www.americanstandard.ca

In Mexico:
American Standard B&K Mexico
S. de R.L. de C.V.
Via Morelos #330
Col. Santa Clara
Ecatepec 55540 Edo. Mexico
Toll Free: 01-800-839-1200
www.americanstandard.com.mx

INSTRUCTIONS D'INSTALLATION ET D'ENTRETIEN

*American
Standard*

Cadet® Toilette 2 pièces PRO

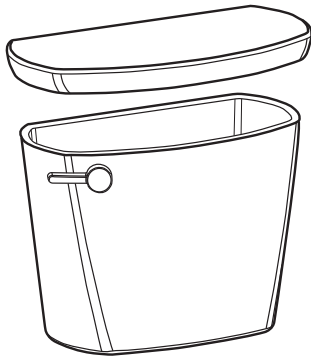
Devant allongé et rond

Modèles 215AA, 215BA, 215AB, 215BB, 215FA, 215FC, 215CA, 215DA, 215CB, 215DB Series

Merci d'avoir choisi American-Standard... la référence en matière de qualité depuis plus de 100 ans. Afin de vous assurer que le produit est installé correctement, veuillez lire attentivement les instructions avant de commencer. (Certaines installations peuvent nécessiter une aide professionnelle.) Assurez-vous également que votre installation est conforme aux codes locaux.

⚠ ATTENTION : LE PRODUIT EST FRAGILE. MANIPULEZ-LE AVEC SOINS POUR ÉVITER LES BRIS ET LES BLESSURES! REMARQUE : Les illustrations peuvent ne pas montrer exactement la forme des composants et de la porcelaine.

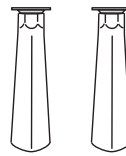
RÉSERVOIR 4188A et 4188B



NÉCESSAIRE D'INSTALLATION FACILE INCLUS AVEC LE RÉSERVOIR



Joint du réservoir
à la cuvette



Poignées de fixation
avec écrous (2)

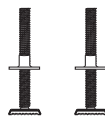


Rondelles de
plastique (2)

CUVETTE 3517A, 3517C, 3517F ALLONGÉE CUVETTE 3517B, 3517D DEVANT ROND



NÉCESSAIRE D'INSTALLATION FACILE INCLUS AVEC LA CUVETTE



Boulons à T avec
bague d'arrêt (2)

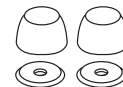


Capuchons de
boulon (2)

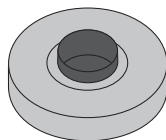


Tiges de raccord de
la cuvette au plancher (2)

Inclut également des capuchons
de boulon standard (2)



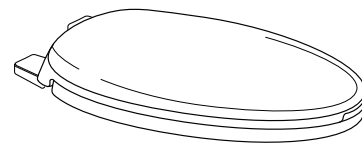
VENDUS SÉPARÉMENT



Rondelle de cire



Tuyau d'alimentation en eau



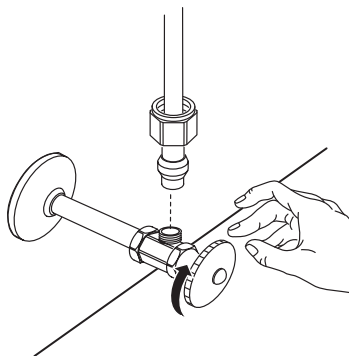
Siège de toilette à fermeture lente

CONSERVEZ POUR UN USAGE ULTÉRIEUR

AVANT DE COMMENCER :

Si Vous Enlevez Une Toilette Déjà Installée

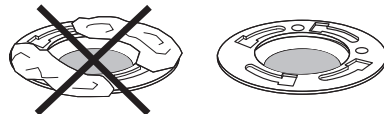
Fermez l'alimentation en eau



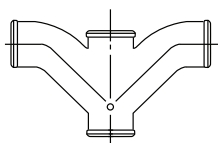
Tirez la chasse pour vider l'eau du réservoir; épongez l'eau restante de la cuvette avant de retirer la toilette.



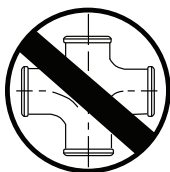
Nettoyez la bride



⚠ Avertissement: Si la bride au sol demeure ouverte plus de 1 à 2 heures, couvrez-la pour éviter l'échappement de gaz d'égout.



Type de raccord recommandé pour les installations parallèles.

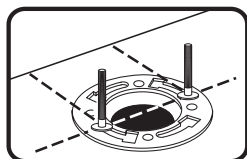
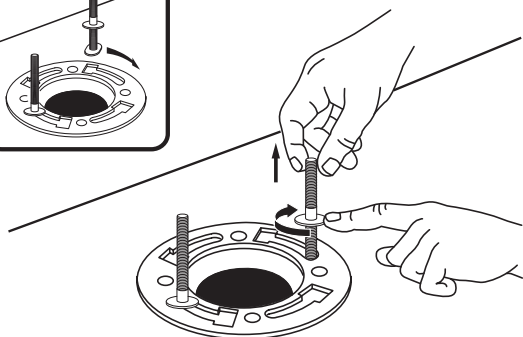
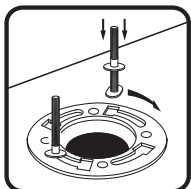


INSTALLATION EN PARALLÈLE

Selon l'état de votre plomberie et de votre ventilation, le débit de cette toilette dans une installation en parallèle pourrait créer une succion dans le système et tirer de l'eau de la cuvette opposée. Le code des normes nationales de plomberie interdit l'utilisation d'un raccord en croix pour le drainage puisqu'il y a risque de basculage. Le code approuve l'utilisation d'un raccord en Y de type directionnel avec une ventilation appropriée qui dirige l'eau vers le bas et loin de l'autre toilette.

INSTRUCTIONS D'INSTALLATION

1

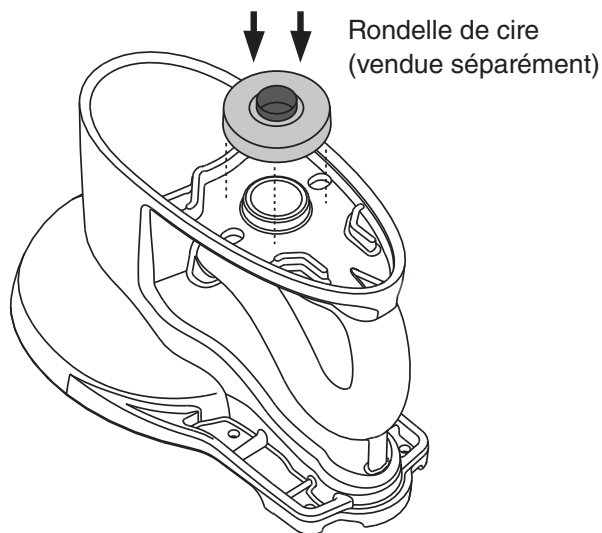


REMARQUE : BOULONS DE 1/4 PO À USAGE FACILE.

SI DES BOULONS DE 5/16 PO SONT REQUIS, LES ACHETER SÉPARÉMENT.

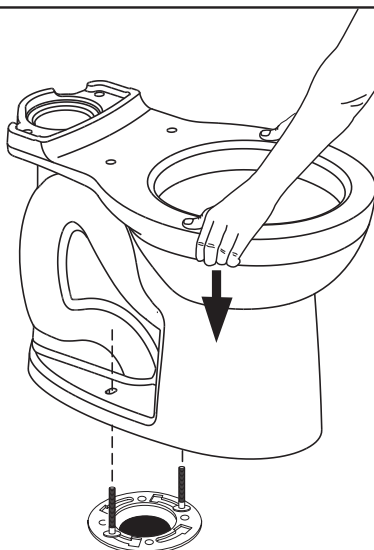
2

Appuyez fermement.



3

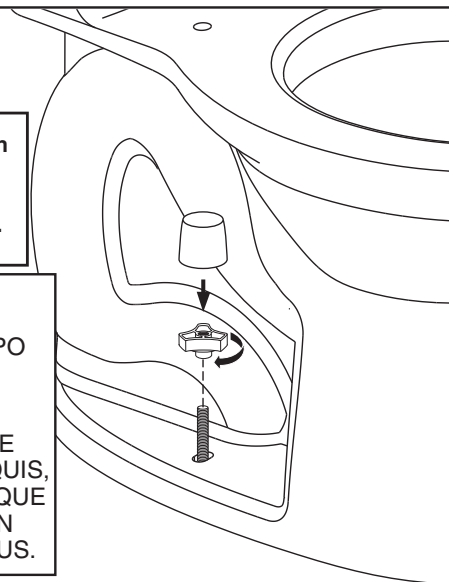
Appliquez du poids uniformément. Ne pas bouger la toilette après l'avoir placée. Le seau étanche risque de briser.



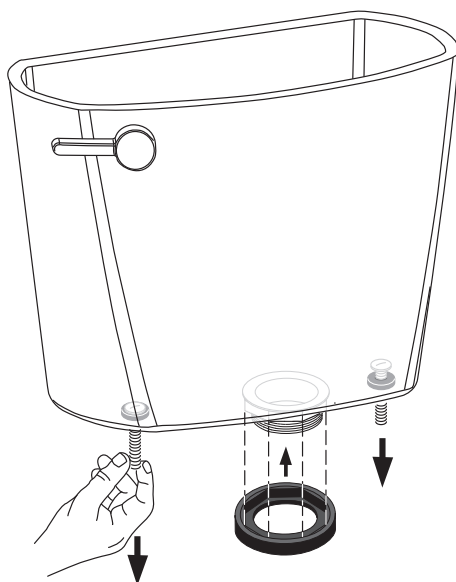
4

! Serrez à la main seulement. Ne serrez pas excessivement.

REMARQUE :
ILLUSTRATION : BOULON DE 1/4 PO À USAGE FACILE ET CAPUCHON.
SI UN BOULON DE 5/16 PO EST REQUIS, UTILISER LE DISQUE ET LE CAPUCHON STANDARD INCLUS.



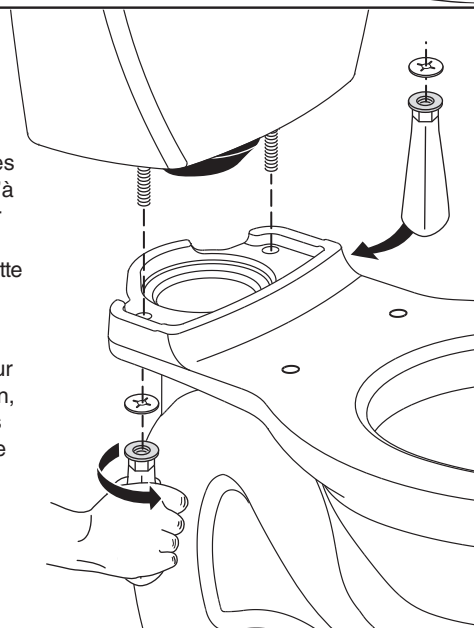
5



6

Serrez les poignées une à la fois jusqu'à ce que le réservoir touche l'avant et l'arrière de la cuvette de façon à obtenir un contact direct.

REMARQUE : Pour faciliter l'installation, poussez le dessus du réservoir vers le bas en serrant les poignées.



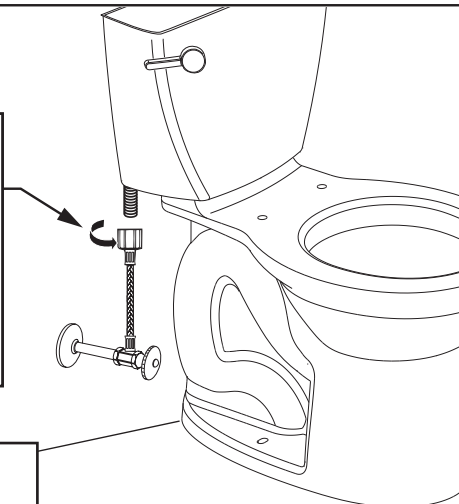
7

A

Raccordez le tuyau d'alimentation en eau. (Vendu séparément) Serrez l'écrou à la main.

B

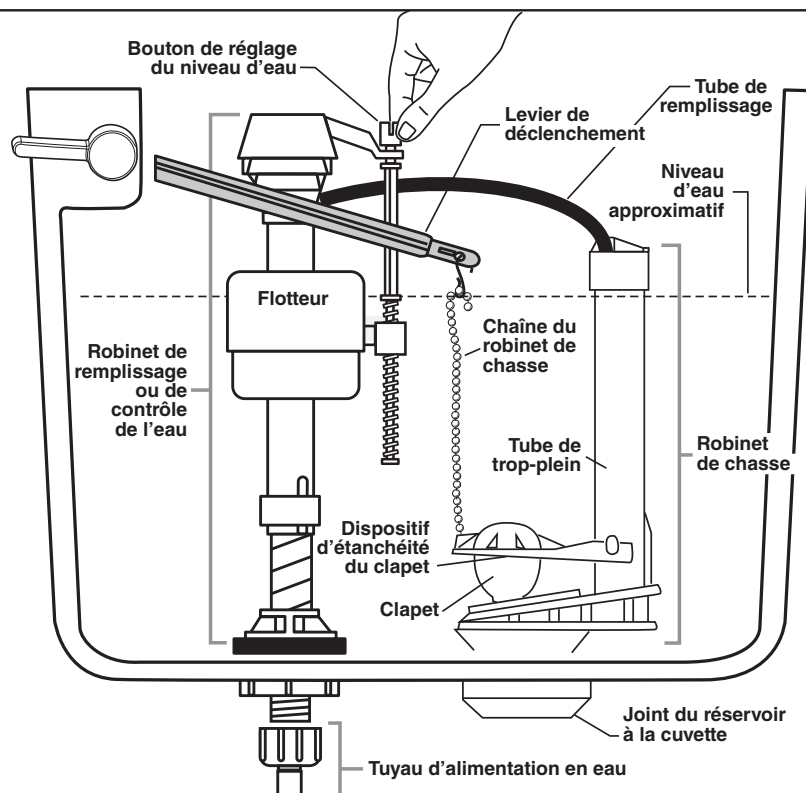
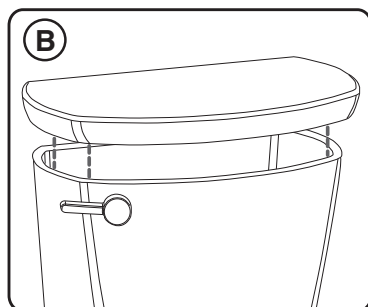
Ouvrez l'alimentation en eau.



MISE EN GARDE : Un serrement excessif des écrous du tuyau d'alimentation en eau pourrait entraîner un bris et une éventuelle inondation. Si le raccord fuit après le serrage à la main, remplacez la conduite d'alimentation. N'utilisez aucun scellant sur le raccord de l'alimentation en eau. L'utilisation de mastic de plomberie, de pâte lubrifiante ou de tout autre type de scellant annulera la garantie.

A

Ajustez le niveau d'eau au niveau indiqué sur le réservoir en tournant le bouton de réglage du niveau d'eau pour déplacer le flotteur vers le haut ou vers le bas.

B

ENTRETIEN ET NETTOYAGE

Lorsque vous nettoyez votre cuvette, lavez-la avec de l'eau légèrement savonneuse, rincez-la à fond à l'eau claire et essuyez-la avec un chiffon doux.

MISE EN GARDE : N'utilisez pas de nettoyeurs pour cuvette. Ces produits peuvent sérieusement corroder les raccords de tuyauterie du réservoir. Ces dommages peuvent entraîner des fuites et des dommages matériels. American Standard n'assume aucune responsabilité pour tout dommage causé par l'utilisation de nettoyeurs pour cuvette.

GUIDE DE DÉPANNAGE – Voir l'étape 8 pour le diagramme

Problème	Cause possible	Mesure corrective
La chasse ne se tire pas	a. Vanne d'alimentation fermée. b. Tuyau d'alimentation bloqué. c. Chaîne du robinet de chasse trop détendue ou déconnectée. d. Sable ou débris logés dans la commande d'eau.	a. Ouvrez l'obturateur et laissez le réservoir se remplir d'eau. b. Éteignez l'alimentation en eau, déconnectez la conduite d'alimentation et inspectez tous les joints et toutes les rondelles. Réassemblez. c. Rajustez la longueur de la chaîne. d. Fermez l'alimentation en eau. Enlevez le capuchon et nettoyez selon les instructions d'entretien Fluidmaster, disponibles à l'adresse : www.americanstandard-us.com/enews/fluidmasterguide.pdf
Chasse d'eau faible ou lente	a. Niveau d'eau de la cuvette trop bas. b. Robinet d'alimentation partiellement fermé. c. Jambes de siphon et/ou drain et/ou évier partiellement obstrués. d. Pression de l'alimentation trop faible.	a. Vérifiez que le tube de remplissage est raccordé à la commande d'eau et inséré dans le tube de trop-plein sans être déformé ou endommagé. b. Ouvrez entièrement le robinet d'alimentation. Assurez-vous d'utiliser un tube d'alimentation de taille appropriée. c. Enlevez tout ce qui obstrue. Consultez un plombier au besoin. d. La pression d'alimentation normale doit être d'au moins 20 psi.
La toilette fuit	a. Mauvais raccord de la conduite d'alimentation. b. Mauvais raccord de la cuvette au réservoir/plancher.	a. Revoyez l'étape 7 de la procédure d'installation. b. Revoyez les étapes 1 à 6 de la procédure d'installation.
La toilette ne s'arrête pas	a. Le dispositif d'étanchéité du clapet fuit ou est déformé. b. Sable ou débris logés dans la commande d'eau. c. Chaîne du robinet de chasse trop tendue, maintient le clapet ouvert.	a. Nettoyez les débris de la surface du dispositif d'étanchéité. Remplacez le dispositif d'étanchéité du clapet au besoin. Voir le site Web pour plus de renseignements. b. Fermez l'alimentation en eau. Enlevez le capuchon et nettoyez selon les instructions d'entretien Fluidmaster, disponibles à l'adresse : www.americanstandard-us.com/enews/fluidmasterguide.pdf c. Rajustez la longueur de la chaîne au besoin.
La cuvette de la toilette bouge après l'installation	a. La rondelle de cire n'est pas entièrement compressée. b. Le plancher n'est pas à niveau.	a. Resserrez les tiges de raccord de la cuvette au plancher. b. Utilisez des cales pour toilette et/ou placez une couche de produit d'étanchéité autour de la base de la toilette.

Aux États-Unis :

American Standard Brands
1 Centennial Ave
Piscataway, New Jersey 08854

À l'attention de : Directeur du service à la clientèle
Pour les résidents des États-Unis, les informations de garantie peuvent également être obtenues en appelant au numéro sans frais suivant : 1-800-442-1902
www.americanstandard.com

Au Canada :

LIXIL Canada, ULC
5900 Avebury Rd.
Mississauga (Ontario)
L5R 3M3 Canada
Sans frais : 1-800-387-0369
www.americanstandard.ca

Au Mexique :

American Standard B&K Mexico
S. de R.L. de C.V.
Via Morelos #330
Col. Santa Clara
Ecatepec 55540 Edo. Mexico
Sans frais : 01-800-839-1200
www.americanstandard.com.mx

INSTRUCCIONES DE INSTALACIÓN, CUIDADO Y MANTENIMIENTO

*American
Standard*

Inodoro de dos piezas Cadet® PRO

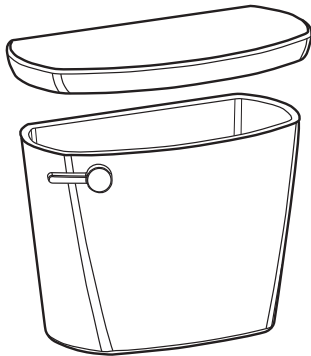
Frente alargado y redondo

Modelos de las series 215AA, 215BA, 215AB, 215BB, 215FA, 215FC, 215CA, 215DA, 215CB, 215DB

Gracias por seleccionar American Standard, el punto de referencia de la calidad por más de 100 años. Para asegurar que no haya problemas durante la instalación, lea atentamente estas instrucciones antes de comenzar (algunas instalaciones pueden requerir ayuda profesional). Asegúrese también de que su instalación cumple con los códigos locales.

⚠ PRECAUCIÓN: EL PRODUCTO ES FRÁGIL. ¡PARA EVITAR ROTURAS Y POSIBLES LESIONES MANÉJELO CON CUIDADO! NOTA: Las imágenes pueden no definir exactamente el contorno de la porcelana y los componentes.

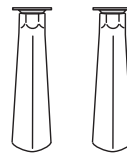
TANQUE 4188A y 4188B



KIT DE INSTALACIÓN FÁCIL INCLUIDO CON EL TANQUE



Empaque del tanque
a la taza



Manijas de fijación
con tuercas (2)

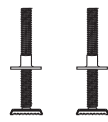


Arandelas de
plástico (2)

TAZA 3517A, 3517C, 3517F ALARGADA TAZA 3517B, 3517D FRENTE REDONDO



KIT DE INSTALACIÓN FÁCIL INCLUIDO CON LA TAZA



Pernos T con
retenedor (2)



Tapas
de pernos (2)

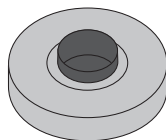


Perillas de la taza
al piso (2)

También incluye tapa estándar para pernos (2)



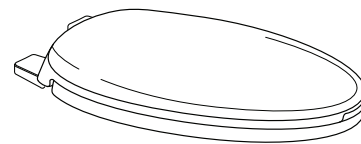
SE VENDE POR SEPARADO



Anillo de cera



Línea de suministro de agua



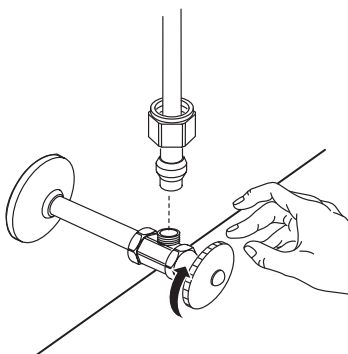
Asiento de inodoro de cierre lento

G U A R D A R P A R A U S O F U T U R O

ANTES DE COMENZAR:

Si Está Quitando Un Inodoro Existente

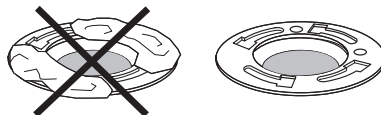
Cierre el suministro de agua



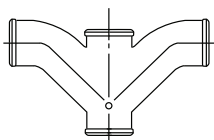
Descargue el inodoro para quitar el agua del tanque; saque con una esponja el agua restante de la taza antes de quitar el inodoro.



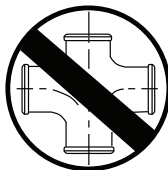
Limpie la brida



⚠ Precaución: Si deja la brida del piso abierta por más de 1-2 horas, cubra la brida para prevenir el escape de gases del drenaje.



Tipo de conexión recomendada para las instalaciones en oposición

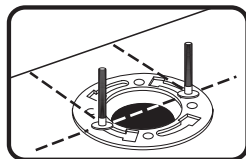
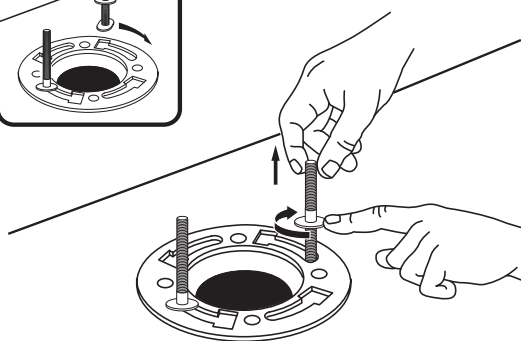
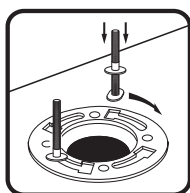


INSTALACIÓN EN OPOSICIÓN

Según las condiciones de plomería y ventilación, el flujo de este inodoro en una instalación en oposición puede crear un vacío en el sistema y atraer agua de la otra taza. El Código de Normas Nacionales de Plomería (National Standards Plumbing Code) prohíbe el uso de una conexión en cruz para el desagüe por la posibilidad de rechazo. El código aprueba el uso de una conexión direccional en "Y" con la ventilación adecuada para dirigir el agua hacia abajo y lejos del otro inodoro.

INSTRUCCIONES DE INSTALACIÓN :

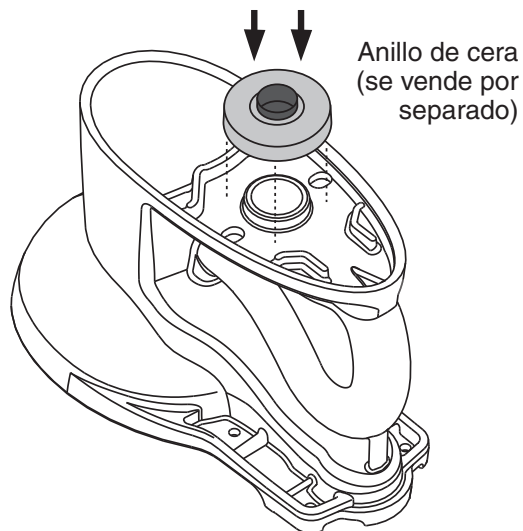
1



Nota: Pernos EZ de 1/4" incluidos, si los pernos de 5/16" se requieren, comprarlos por separado.

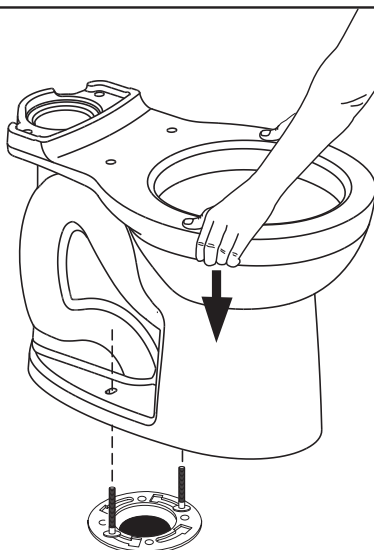
2

Presione con firmeza.



3

Aplique peso uniformemente. No lo mueva después de la colocación ya que el sello impermeable podría romperse.

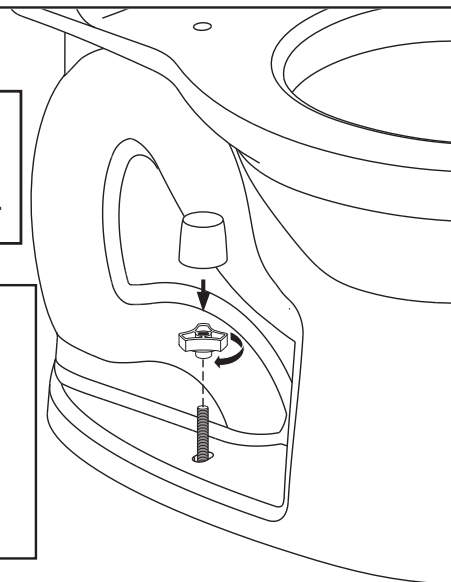


4

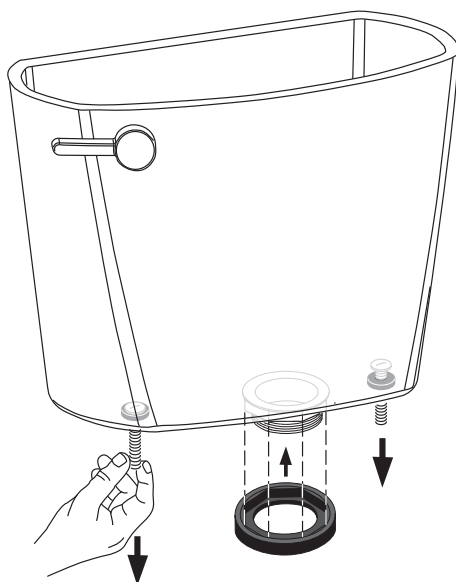
⚠ Apriete a mano solamente. No apriete excesivamente.

Nota: Se muestra el perno EZ de 1/4" y la tapa.

Si se usa el perno de 5/16" use un disco estándar y la tapa incluida.



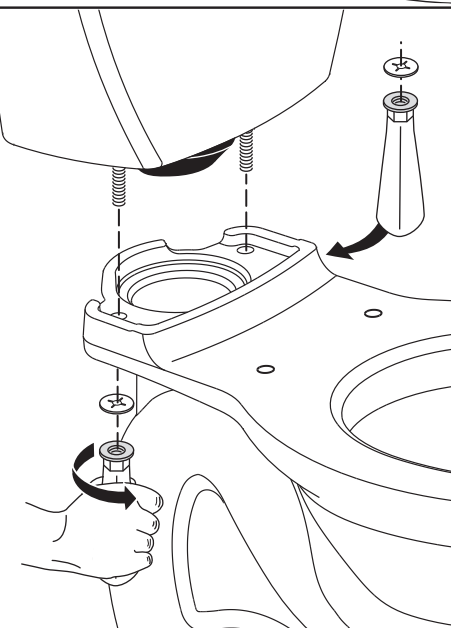
5



6

Apriete las manijas alternadamente hasta que el tanque esté en contacto con la parte frontal y trasera de la taza, logrando contacto porcelana con porcelana.

NOTA: Para facilitar la instalación, empuje la parte superior del tanque mientras aprieta las manijas.



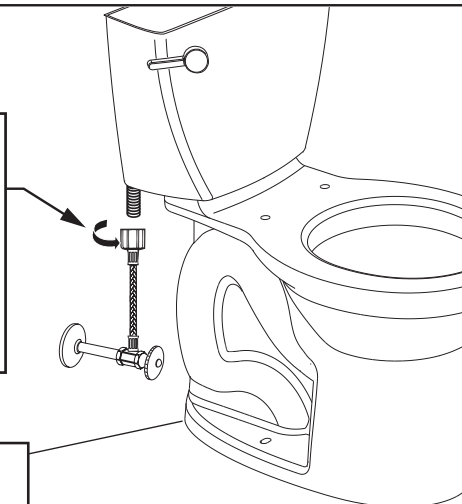
7

A

Conecte la línea de suministro de agua (se vende por separado). Apriete la tuerca manualmente.

B

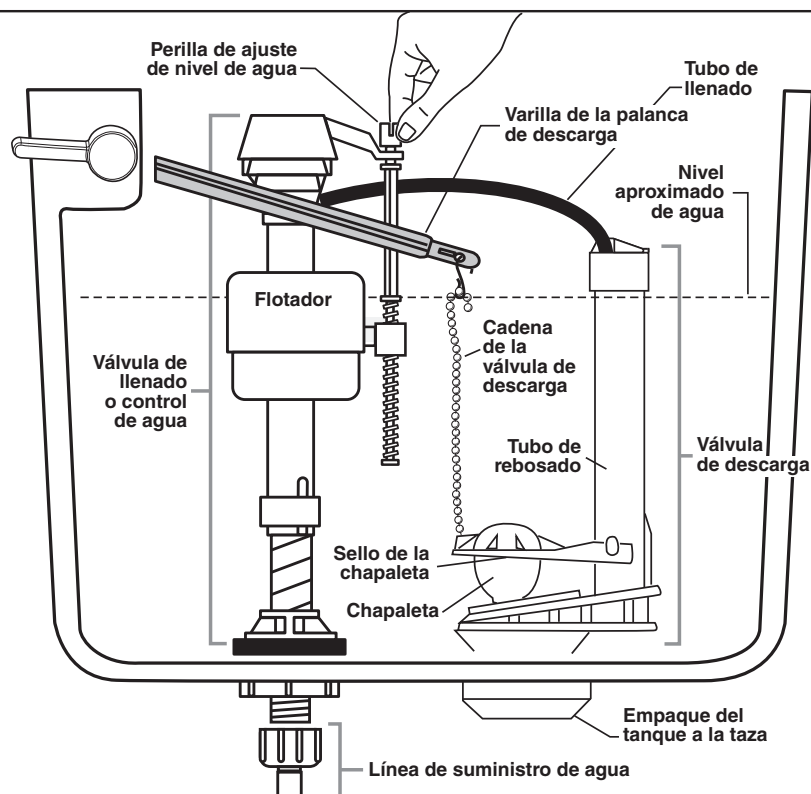
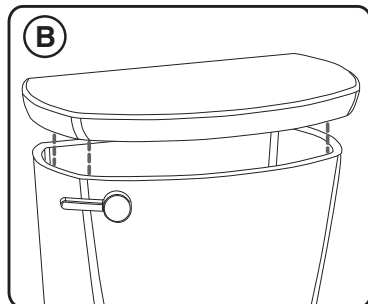
Abra el suministro de agua.



ADVERTENCIA: Apretar demasiado las tuercas de la línea de suministro de agua podría ocasionar una rotura y un escape potencial de agua. Si la conexión presenta fugas después de apretarla, reemplace la línea de suministro. No utilice ningún tipo de sellador en la conexión de suministro de agua. El uso de masilla para plomeros, grasa para rosca o cualquier otro tipo de sellador anulará la garantía.

A

Ajuste el nivel del agua al nivel indicado en el tanque haciendo girar la perilla de ajuste de nivel de agua para mover el flotador hacia arriba o hacia abajo.

B

CUIDADO Y LIMPIEZA

Al limpiar su inodoro, lávelo con agua con jabón suave, enjuague completamente con agua limpia y séquelo con un paño suave.

ADVERTENCIA: No utilice limpiadores para el interior del tanque. Estos productos pueden corroer gravemente los accesorios en el tanque. Este daño puede causar fugas y daños a su propiedad. American Standard no será responsable ni sujeto a acción legal por cualquier daño causado por el uso de limpiadores dentro del tanque.

GUÍA DE SOLUCIÓN DE PROBLEMAS - Ver diagrama en el Paso 8

Problema	Posible causa	Acción correctiva
No descarga	a. La válvula de suministro de agua está cerrada. b. La línea de suministro está bloqueada. c. La cadena de la válvula de descarga está muy floja o desconectada. d. El control de agua está obstruido por arena o desechos.	a. Abra la válvula y permita que el agua llene el tanque. b. Cierre el suministro de agua, desconecte la línea de suministro e inspeccione todos los empques y arandelas. Reensamble. c. Reajuste la longitud de la cadena según se requiera. d. Cierre el suministro de agua. Quite la tapa y límpiela siguiendo las instrucciones de mantenimiento de Fluidmaster en: www.americanstandard-us.com/enews/fluidmasterguide.pdf
Descarga pobre o lenta	a. El nivel del agua en la taza es muy bajo. b. La válvula de suministro está parcialmente cerrada. c. Hay una trampa y/o tubo de drenaje y/o tubo de ventilación parcialmente obstruidos. d. La presión de suministro es demasiado baja.	a. Verifique que el tubo de llenado esté conectado al control de agua e insertado en el tubo de rebosado sin estar doblado ni dañado. b. Abra completamente la válvula de suministro. Asegúrese de que se está usando el tamaño correcto del tubo de suministro. c. Quite la obstrucción. Consulte a un plomero si es necesario. d. La presión normal de suministro deberá ser de por lo menos 20 psi.
Fugas del inodoro	a. Mala conexión de la línea de suministro. b. Mala conexión de la taza al tanque o al piso.	a. Revise el Paso 7 del procedimiento de instalación. b. Revise los Pasos 1 al 6 del procedimiento de instalación.
El inodoro no deja de descargar	a. El sello de la chapaleta tiene fugas o está deformado. b. El control de agua está obstruido por arena o desechos. c. La cadena de la válvula de descarga está demasiado ajustada, dejando abierta la chapaleta.	a. Limpie los desechos de la superficie del sello. Reemplace el sello de la chapaleta si es necesario. Consulte la web para obtener más información. b. Cierre el suministro de agua. Quite la tapa y límpiela siguiendo las instrucciones de mantenimiento de Fluidmaster en: www.americanstandard-us.com/enews/fluidmasterguide.pdf c. Reajuste la longitud de la cadena según se requiera.
La taza del inodoro se mece después de la instalación	a. El anillo de cera no está totalmente comprimido. b. El piso no está nivelado.	a. Reapriete las perillas de la taza al piso. b. Utilice calzas para inodoro y/o coloque un poco de calafate alrededor de la base del inodoro.

En los Estados Unidos:

American Standard Brands
1 Centennial Ave
Piscataway, New Jersey 08854

Atención: Director de Atención al Cliente

Para residentes de los Estados Unidos, la información de garantía puede obtenerse también llamando al siguiente número gratuito: (800) 442-1902
www.americanstandard.com

En Canadá:

LIXIL Canada, ULC
5900 Avebury Rd.
Mississauga, Ontario
Canadá L5R 3M3
Número gratuito: (800) 387-0369
www.americanstandard.ca

En México:

American Standard B&K Mexico
S. de R.L. de C.V.
Via Morelos #330
Col. Santa Clara
Ecatepec 55540 Edo. de México
Número gratuito: 01-800-839-1200
www.americanstandard.com.mx

AS America, Inc. ("American Standard") Limited Warranty – Toilets

General Terms and Requirements

American Standard warrants each Product to be free of defects in material and workmanship during normal residential or commercial use for the relevant time periods identified here, measured from the initial date of purchase.

This warranty extends only to the **original purchaser** and is non-transferable unless purchased by a plumber, contractor or other service provider, in which case this warranty extends to the first property owner on whose behalf the product was purchased for installation.

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

Exclusions and Limitations

American Standard's obligations under this warranty are limited to the repair or replacement of the Product or any part, or exchange of the Product for the same or a similar model, in its sole discretion. American Standard reserves the right to make inspections it deems necessary.

WARNING: This warranty **DOES NOT COVER:**

- (I) Any damages caused by use of in-tank cleaners.
- (II) Any damages that occur during shipment.
- (III) Any damages to personal or real property from use of the Product.
- (IV) Any damages from negligent or improper installation or use of non-genuine American Standard Parts.
- (V) Any damages caused by factors beyond the control of American Standard, such as installation, maintenance and normal wear and tear, and failure to follow care and cleaning instructions.
- (VI) Failure of the Product or parts thereof from external forces such as, but not limited to, vandalism, vehicular or other impact.
- (VII) Local building code compliance. Purchasers should check with a local building or plumbing contractor to ensure local code compliance before installation.
- (VIII) Labor or other costs of removal or installation, including any costs of any surrounding material (such as tile or marble).
- (IX) Any damages caused by an Act of God or natural disaster (such as earthquake, storm, hurricane, lightning strike, tornado, hail, cyclone, typhoon, blizzard, volcanic activity, landslide, tidal wave, tsunami, flood, drought); outbreaks of infectious disease or any other public health crisis; explosion, fire, prolonged break-down of transport; shortage or inability to obtain critical material or supplies to the extent not subject to the reasonable control of American Standard; or any other event or condition beyond its reasonable control.

WARNING: This warranty is **VOID** if the Product:

- (I) Has been moved from its initial place of installation.
- (II) Has been subjected to faulty or improper maintenance, abuse, misuse, improper use, accident, fault or negligence.
- (III) Was not installed in accordance with instructions.
- (IV) Has been modified or altered in a manner inconsistent with the Product as shipped by American Standard.
- (V) Was purchased from an unauthorized seller.
- (VI) Was accidentally or intentionally damaged.
- (VII) Was used in a manner for which it was not designed.
- (VIII) Was improperly shipped, stored or handled.

LIMITATIONS AND DISCLAIMERS

TO THE MAXIMUM EXTENT PERMITTED BY APPLICABLE LAW, AMERICAN STANDARD EXPRESSLY DISCLAIMS ANY WARRANTIES OTHER THAN THE ONE PROVIDED HEREIN, EXPRESS OR IMPLIED, STATUTORY OR OTHERWISE, INCLUDING, WITHOUT LIMITATION, IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR ANY PARTICULAR PURPOSE. AMERICAN STANDARD EXCLUDES SPECIAL, INCIDENTAL AND CONSEQUENTIAL DAMAGES FOR ANY BREACH OF ANY EXPRESS OR IMPLIED WARRANTY APPLICABLE TO THE PRODUCT.

Some States do not allow the exclusion or limitation of incidental or consequential damages, so this limitation or exclusion may not apply to you. Any implied warranties, including those of merchantability or fitness for an intended purpose, are limited in duration to the duration of this warranty. Some States do not allow limitations on how long an implied warranty lasts, so this limitation may not apply to you.

Obtaining Warranty Service

If you believe you have a warranty claim, contact American Standard, either through an authorized dealer or re-seller, by writing to the addresses below, or visiting the website below:

In the United States

AMERICAN STANDARD BRANDS

30 Knightsbridge Road, Suite 301, Piscataway, NJ 08854

Attn: Director of Consumer Affairs.

Toll Free: (800) 442-1902 www.americanstandard.com

AS America, Inc. (“American Standard”) Limited Warranty – Toilets

In Canada

LIXIL Canada Inc.

5900 Avebury Rd. Mississauga, Ontario Canada L5R 3M3

Toll Free: (855) 836-9615 www.americanstandard.ca

In Mexico

American Standard B&K Mexico

S. de R.L. de C.V. Via Morelos #330

Col. Santa Clara Ecatepec 55540 Edo. Mexico

Toll Free: 01-800-839-1200 www.americanstandard.com

Please be sure to provide all pertinent information regarding your claim, including a complete description of the problem, the product, model number, color, the date the product was purchased and from whom the product was purchased. Also include your proof of purchase (original sales receipt).

Product	Non-Commercial Use	Commercial Use ¹
ActiClean®, Boulevard® Dual Flush, Champion® PRO, Champion®4, Heritage® VorMax®, VorMax, VorMax Plus and LXP® Toilets	• Lifetime warranty on chinaware for as long as the original owner owns the product. • 10-year warranty on all mechanical parts.	• 1-year warranty on chinaware • 1-year warranty on all mechanical parts of the toilet
Cadet® PRO, Cadet®3, Cadet®3 Skirted Design, Edgemere®, H2Optimum®, H2Option®, Loft®, Studio® Activate® and Studio® Dual Flush Toilets	• Lifetime warranty on chinaware for as long as the original owner owns the product. • 5-year warranty on all mechanical parts.	• 1-year warranty on chinaware • 1-year warranty on all mechanical parts of the toilet
AS America, Inc. Limited Warranty for Colony® and Fairfield® Toilets	• Lifetime warranty on chinaware for as long as the original owner owns the product. • 5-year warranty on all mechanical parts.	• 1-year warranty on chinaware • 1-year warranty on all mechanical parts of the toilet
SpaLet® Limited Warranty	3-year warranty on all parts of the SpaLet	2-year warranty on all parts of the SpaLet
Toilet Seats	1-year warranty on the toilet seat if included with product	1-year warranty on the toilet seat if included with product
Electrical Components	1-year warranty on electrical components included	1-year warranty on electrical components included

¹ The term “commercial use” includes use of the Product in apartments and other rental units, non-residential facilities, hotels, commercial businesses and/or other public accommodations.



IMPORTANT
Installation Instructions

IMPORTANTE
Instrucciones de Instalación

IMPORTANT
Instructions d'installation

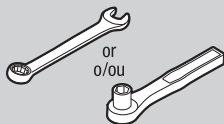
© 2018 1B5990770A

Tools Needed

Herramientas requeridas

Outils requis

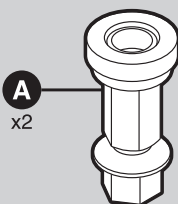
5/8" (16 mm)



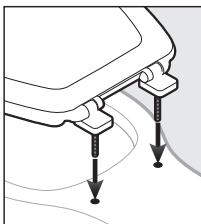
Hardware Kit Includes

El kit de instalación incluye

Le kit de matériel inclut



1

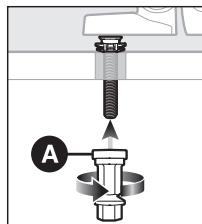


Place seat on bowl.

Colcar el asiento en el sanitario.

Placez le siège sur la cuvette.

2

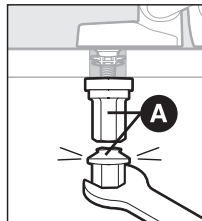
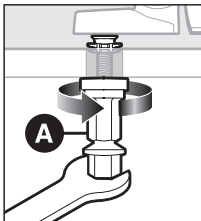


Finger tighten (A) to the under side of the bowl.

Aprieta con los dedos (A) en el lado inferior de la taza.

Serrer à la main (A) au-dessous de la cuvette.

3



Holding seat centered on bowl, tighten (A) until lower portions snap off.

Sosteniendo el asiento centrado en la taza, apriete (A) hasta que las partes inferiores se desprendan.

En maintenant le siège centré sur la cuvette, serrer (A) jusqu'à ce que les portions inférieures cassent.

Alternate installation instructions on reverse side for toilets with restricted access bolt holes.

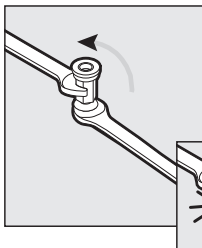
Hojas de instalación alternas en el reverso para sanitarios con orificios de acceso restringido al perno.

Des instructions d'installation sont au verso pour les toilettes aux trous de boulons à accès restraint.



Restricted Access Installation Instructions
Instrucciones de instalación de acceso restringido
Instructions d'installation aux accès restreints.

1

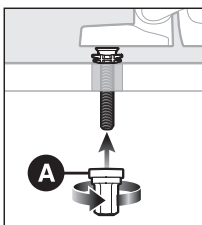
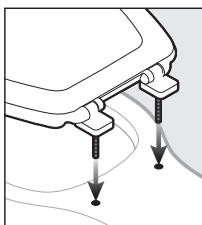


Prior to seat installation, pre-shear off bottom section of (1) nut using two 5/8" wrenches as shown. Discard lower portion of nut, keeping upper section with integrated washer for installation on restricted access side of bowl. Do NOT shear remaining nut at this time.

Utilizar dos llaves 5/8" y desprender la sección inferior de la tuerca (1) STA-TITE. Desechar la parte inferior de la tuerca, manteniendo la parte superior con arandela integrada para instalación en el lado del sanitario con accesibilidad restringida. NO desprender la parte restante en este momento.

Avant l'installation, cisailier la section inférieure de (1) écrou à l'aide de clé de 5/8" tel qu'indiqué. Jeter la portion inférieure de l'écrou, gardant la section supérieure avec la rondelle intégrée pour l'installation sur le côté de la cuvette à accès restreint. NE PAS cisailier l'écrou restant à ce moment.

2



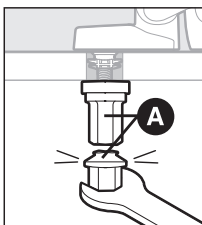
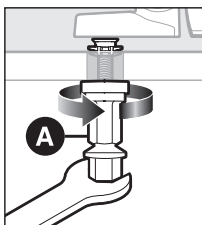
Position sheared off nut directly beneath the side with restricted access bolt hole and as bolt is coming through bolt hole, finger-tighten nut to bolt, pulling it through hole as it is being threaded. Finger-tighten remaining nut on opposite side of bowl.

Posicionar la tuerca que se desprende directamente debajo del lado con acceso restringido en el orificio del perno y como el perno este saliendo por el orificio del perno, apretar con los dedos la tuerca al perno, tirando de él a través del orificio. Apretar con los

dedos la parte restante de la tuerca en la parte opuesta del sanitario.

Positionner l'écrou cisailé directement en-dessous du côté à accès restreint au trou de boulon et serrer à la main l'écrou au boulon, alors que celui-ci passe dans le trou du boulon, le tirant dans ce dernier tout en le vissant. Serrer à la main l'écrou restant du côté opposé de la cuvette.

3



Holding seat centered on bowl, use a 5/8" wrench to tighten unsheared nut until lower portion of nut shears off. Use a 5/8" wrench and tighten pre-sheared off nut 4-5 quarter turns, this will indicate proper tightening torque.

Sostener el asiento centrado en el sanitario, utilizar una llave 5/8" para apretar la tuerca hasta que la parte inferior de la tuerca se desprenda. Use una llave de 5/8" y apriete la tuerca precortada 4-5, esto indicará un torque apropiado.

utiliser une clé de 5/8" pour serrer l'écrou non-cisailé jusqu'à ce que la partie inférieure de l'écrou casse. Utiliser une clé ouverte de 5/8" et serrer de 4-5 quarts de tour l'écrou, ceci indiquera une bonne pression de serrage.



888.722.6488
ToiletSeats.com

BEMIS

Mayfair

Church



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.**

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Warranty

Warranty Statement

All products are guaranteed against defects in material and workmanship for a period of one (1) year from date of purchase.

This guarantee does not apply to any compression molded wood, solid wood, decorator, or economy residential plastic toilet seats used in nonresidential installations, including hotels and motels. This guarantee does not apply to any toilet seats which are modified in any way or used on any type of installation or unit other than conventional water closets. We assume no liability for toilet seats modified or installed on anything other than conventional water closets.

TOILETSEATS.COM

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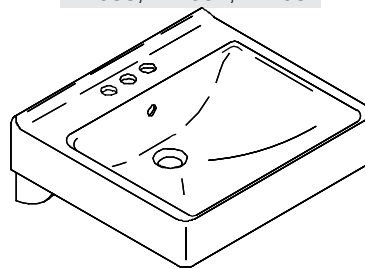
Installation Guide

Wall-Mount Lavatories

K-2005, K-2006, K-2007



K-2053, K-2054, K-2084



M product numbers are for Mexico (i.e. K-12345**M**)
Los números de productos seguidos de
M corresponden a México (Ej.
K-12345**M**)
Français, page “Français-1”
Español, página “Español-1”

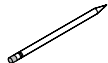
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THE BOLD LOOK
OF **KOHLER**®

Tools and Materials



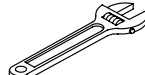
Safety
Glasses



Pencil



Tape
Measure



Adjustable
Wrench



Drill



Screwdriver

Plus:

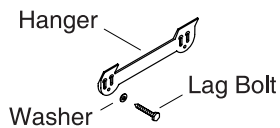
- 3/8" Lag Bolts and Washers

Thank You For Choosing Kohler Company

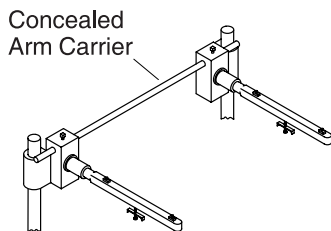
We appreciate your commitment to Kohler quality. Please take a few minutes to review this manual before you start installation. If you encounter any installation or performance problems, please don't hesitate to contact us. Our phone numbers and website are listed on the back cover. Thanks again for choosing Kohler Company.

Before You Begin

- ☐ Observe all local plumbing and building codes.
- ☐ Prior to installation, unpack the new lavatory and inspect it for damage. Return the lavatory to its protective carton until you are ready to install it.
- ☐ Inspect the drain and supply tubing. Replace if necessary.
- ☐ These instructions are for installing the lavatory to wood frame construction. For other installations, supply suitable bracing and fastening devices of sufficient size and strength.
- ☐ The walls and floor must be square, plumb, and level.



Hanger Installation



Arm Carrier Installation

1. Preparation

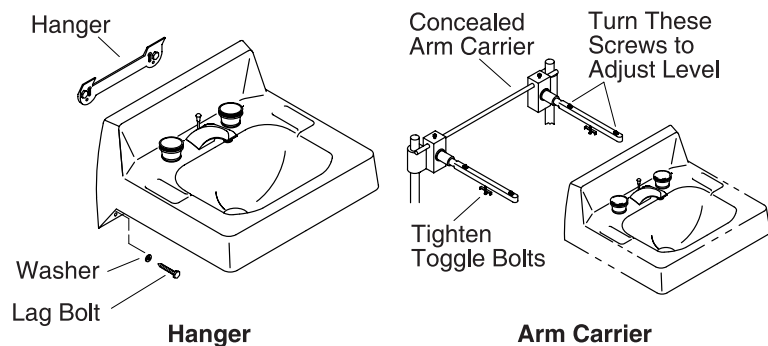
- Install the water supplies and drain piping according to the roughing-in information.
- Install sufficient backing behind the finished wall to provide a secure material for the anchoring devices.

Hanger (provided) Installation

- Install the hanger according to the roughing-in information. Use 1/4" lag bolts and washers (neither is provided) or other suitable fasteners to secure the hanger to the finished wall and backing material. Make sure the hanger is level.

Concealed Arm Carrier Installation

- Install the concealed arm carrier according to the roughing-in information. Follow the installation information included with the carrier. Make sure the carrier is level.



2. Install the Lavatory

- Install the faucet and drain to the lavatory according to the manufacturer's instructions.

Installation With Hanger

- Temporarily position the lavatory on the hanger, and level. Use a pencil to mark the anchoring hole locations on the finished wall. Remove the lavatory.
- Drill 1/4" mounting holes at the marked locations on the wall.



CAUTION: Risk of product damage. Do not overtighten the hardware. Overtightening may damage the product.

- Position the lavatory on the hanger, and level. Use 3/8" lag bolts and washers (not provided) to secure the lavatory to the finished wall and backing material.
- Connect and tighten the trap to the drain, and complete the water supply connections to the faucet according to the instructions packed with the faucet.
- Run water into the lavatory and check for leaks.
- Clean up with a non-abrasive cleaner.

Installation With Concealed Arm Carrier



CAUTION: Risk of product damage. Do not overtighten the hardware. Overtightening may damage the product.

Install the Lavatory (cont.)

- Slide the lavatory completely onto the carrier arms. Adjust the level of the lavatory by turning the front and rear carrier arm screws in or out as needed. The lavatory should not rock after it has been leveled.
- Carefully tighten the toggle screws until the lavatory is securely held in place.
- Connect and tighten the trap to the drain, and complete the water supply connections to the faucet according to the instructions packed with the faucet.
- Run water into the lavatory and check for leaks.
- Clean up with a non-abrasive cleaner.

Guide d'Installation

Lavabo sur mur

Outils et matériaux



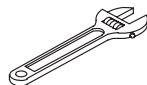
Lunettes de protection



Crayon



Ruban à mesurer



Clé à molette



Perceuse



Tournevis à pointe en croix

Et

Tire-fonds de 3/8" et rondelles

Merci d'avoir opté pour les produits de la Société Kohler

Nous apprécions votre engagement envers la qualité de Kohler. Veuillez lire attentivement ce guide avant de commencer l'installation. En cas de problèmes d'installation ou de fonctionnement, n'hésitez pas à nous contacter. Nos numéros de téléphone et site web sont contenues au plat verso. Merci encore d'avoir choisi des produits Kohler.

Avant de commencer

- ☐ Respecter tous les codes de plomberie et de bâtiment locaux.
- ☐ Avant l'installation, déballer le nouveau lavabo et l'examiner pour déceler tout dommage. Remettre le lavabo dans l'emballage de protection en attendant de commencer l'installation.
- ☐ Vérifier l'état des tubes d'évacuation et d'alimentation. Remplacer les composants au besoin.
- ☐ Ces instructions visent l'installation du lavabo contre un mur en ossature de bois. Pour les autres types d'installation, fournir les dispositifs d'entretoisement et d'attache ayant les dimensions et la résistance appropriées.

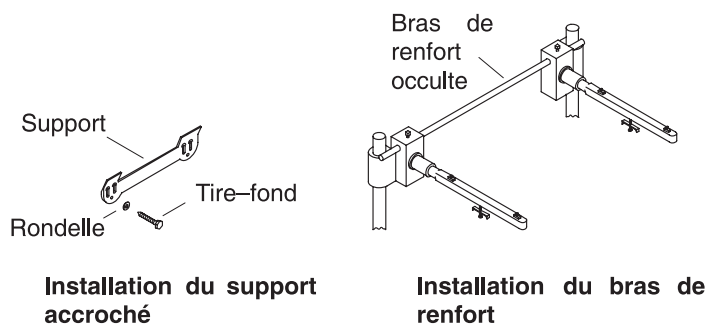
Avant de commencer (cont.)

- Les murs et le plancher doivent être d'aplomb, à l'équerre et de niveau.
- Ce lavabo peut être installé avec le support inclus ou avec un bras occulte de renfort. Suivez les étapes qui s'appliquent particulièrement à votre installation.
- S'il est possible, assembler le robinet et le tuyau d'évacuation au lavabo avant d'installer celui-ci.
- Il se peut que vous ayez à utiliser des outils et matériaux additionnels pour votre installation.



ATTENTION : Risque de blessures. Les lavabos en fonte sont très lourds. Utilisez l'équipement de sécurité nécessaire pour l'installation de ce produit.

- Si un mastic est fourni avec le lavabo, ne pas en utiliser d'autre.
- Ce lavabo offre au consommateur de multiples possibilités d'installation.
- Utiliser ces instructions pour des installations murales, à rebord intégré et sur comptoir. Suivez les étapes qui s'appliquent particulièrement à votre installation.
- Vous pouvez choisir entre un robinet sur mur ou sur comptoir, selon le style désiré. Il est conseillé installer un robinet sur mur.



1. Préparation

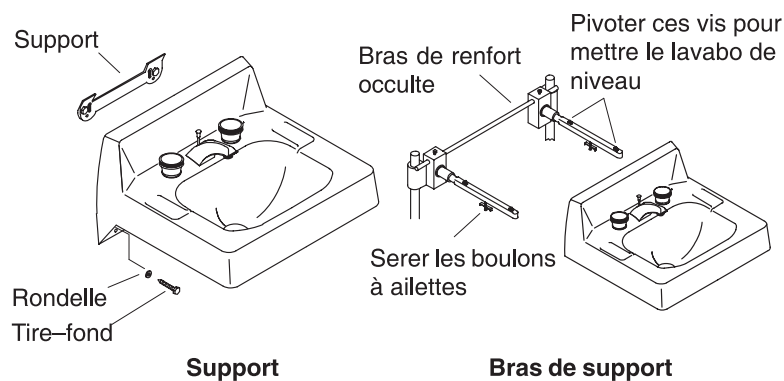
- Installer les tuyaux d'arrivée d'eau et d'évacuation, selon l'information du diagramme de raccordement.
- Installer derrière le mur fini une plaque d'appui suffisamment robuste pour recevoir les ancrages.

Installation du support (fourni)

- Installer le support selon le diagramme de raccordement. Utiliser des tire-fonds de 1/4 po et des rondelles (non-inclus) ou d'autres dispositifs d'ancrage pour fixer le support au mur fini et à la plaque d'appui. Vérifier que le support soit de niveau.

Installation du bras de renfort occulte

- Installer le bras de renfort selon le diagramme de raccordement. Suivre l'information qui accompagne le bras de renfort. Vérifier que le bras de renfort soit de niveau.



2. Installer le Lavabo

- Assembler le robinet et le tuyau d'évacuation au lavabo conformément à la notice du fabricant.

Installation avec support suspendu

- Placer temporairement le lavabo sur le support et mettre de niveau. Tracer avec un crayon les trous d'ancrage sur le mur fini. Enlever le lavabo.
- Percer des trous de 1/4" aux emplacements repérés sur le mur.



ATTENTION : Risque d'endommagement du produit. Ne pas trop serrer les boulons. Le serrage excessif peut endommager le produit.

- Placer le lavabo sur le support et mettre de niveau. Fixer le lavabo au mur fini et à la planche d'appui à l'aide de tire-fonds de 3/8" et rondelles (non inclus).
- Raccorder et fixer le siphon au drain, puis compléter les raccords d'arrivée d'eau au robinet, selon la notice qui accompagne le robinet.
- Laisser couler l'eau dans le lavabo et vérifier s'il y a des fuites.
- Utiliser de nettoyeurs non abrasifs.

Installation avec bras de renfort occulte

Installer le Lavabo (cont.)



ATTENTION : Risque d'endommagement du produit. Ne pas trop serrer les boulons. Le serrage excessif peut endommager le produit.

- ☐ Glisser le lavabo sur les bras de renfort. Mettre le lavabo de niveau, en tournant les vis du front et du dos du bras de renfort, au besoin. Le lavabo ne devrait pas avoir du jeu après la fixation.
- ☐ Serrer soigneusement les vis à ailettes jusqu'à fixer le lavabo à sa place.
- ☐ Raccorder et fixer le siphon au drain, puis compléter les raccords d'arrivée d'eau au robinet, selon la notice qui accompagne le robinet.
- ☐ Laisser couler l'eau dans le lavabo et vérifier s'il y a des fuites.
- ☐ Utiliser de nettoyeurs non abrasifs.

Guía de Instalación

Lavabo de montaje mural

Herramientas y materiales



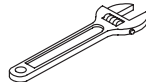
Anteojos de seguridad



Lápiz



Cinta métrica



Llave ajustable



Taladro



Destornillador de estrías

Adicionalmente

Pernos de fijación y arandelas de 3/8"

Gracias por elegir los productos de Kohler

Apreciamos su elección por la calidad de Kohler. Por favor, tome unos minutos para leer este manual, antes de comenzar la instalación. En caso de problemas de instalación o de funcionamiento, no dude en contactarnos. Nuestros números de teléfono y nuestra página web se encuentran en la solapa posterior. Gracias nuevamente por escoger a Kohler.

Antes de Comenzar

- ☐ Cumpla con todos los códigos locales de plomería y de construcción.
- ☐ Antes de la instalación, revise con cuidado todas las piezas para ver si están dañadas. Después, coloque el lavabo nuevamente en su empaque como protección, hasta el momento de la instalación.
- ☐ Inspeccione el tubo de suministro y de desagüe. Reemplace de ser necesario.
- ☐ Estas instrucciones son para la instalación del lavabo en un marco de madera. Para otras instalaciones, suministre soporte adecuado y sujetadores de suficiente tamaño y solidez.
- ☐ Las paredes y los pisos deben haber sido nivelados y plomados.

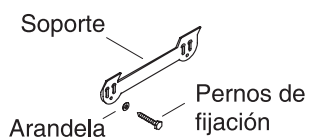
Antes de Comenzar (cont.)

- Este lavabo puede ser instalado con el soporte incluido o con un brazo de soporte oculto. Siga las instrucciones correspondientes a su instalación.
- De ser posible, monte la grifería y el desagüe antes de instalar el lavabo.
- Es posible que su instalación requiera el uso de otras herramientas y materiales.

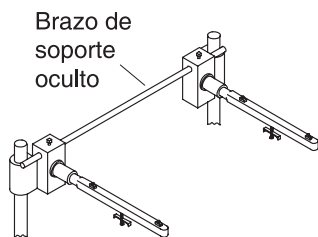


PRECAUCIÓN: Riesgo de lesiones personales. Los lavabos de hierro fundido son muy pesados. Utilice el equipo de seguridad apropiado al instalar estos productos.

- Si se incluye un sellador con el lavabo no utilice otro sellador como sustituto.
- Este lavabo le permite ser creativo y flexible con la instalación.
- Utilice estas instrucciones para instalaciones murales, con borde terminado o de sobreponer. Siga las instrucciones correspondientes a su instalación.
- El cliente puede elegir entre una instalación de grifería mural o sobre el mostrador, dependiendo del decorado y estilo deseado. Se recomienda el uso de grifería mural.



Instalación del soporte



Instalación del brazo de soporte

1. Preparación

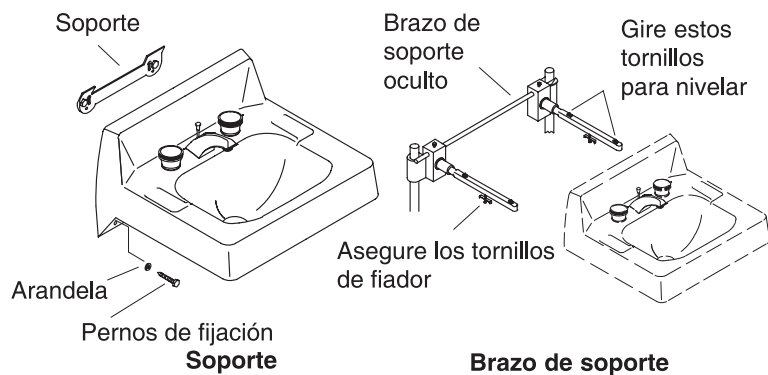
- ☐ Instale las líneas de suministro y desagüe, de acuerdo al diagrama de instalación.
- ☐ Instale suficiente soporte detrás de la pared acabada para los sujetadores.

Instalación del soporte (incluido):

- ☐ Instale el soporte de acuerdo a la información del diagrama de instalación. Utilice pernos de fijación de 1/4" y arandelas (no incluidos) u otros sujetadores para asegurar el soporte colgante a la pared acabada y al material de soporte. Verifique que el soporte esté nivelado.

Instalación del brazo de soporte oculto

- ☐ Instale el brazo de soporte oculto según el diagrama de instalación. Utilice las instrucciones de instalación que se incluyen con el brazo de soporte. Verifique que el brazo esté nivelado.



2. Instale el lavabo

- ☐ Instale la grifería y el desagüe al lavabo según las instrucciones del fabricante.

Instalación con soporte

- ☐ Coloque temporalmente el lavabo sobre el soporte y nivélelo. Utilice un lápiz para marcar la ubicación de los hoyos de los sujetadores en la pared acabada. Remueva el lavabo.
- ☐ Perfore orificios de montaje de 1/4" en los lugares marcados sobre la pared.



PRECAUCIÓN: Riesgo de daños al producto. No asegure en exceso los tornillos. El asegurar en exceso puede causar daños al producto.

- ☐ Coloque el lavabo en el soporte y nivélelo. Utilice pernos de fijación de 3/8" y arandelas (no incluidos) para asegurar el lavabo a la pared acabada y al material de soporte.
- ☐ Conecte y asegure el sifón al drenaje y complete las conexiones del suministro de agua a la grifería, de acuerdo a las instrucciones que acompañan a la grifería.
- ☐ Abra los suministros de agua y verifique que no haya fugas.
- ☐ Utilice limpiadores que no sean abrasivos.

Instalación con brazo de soporte oculto

Instale el lavabo (cont.)



PRECAUCIÓN: Riesgo de daños al producto. No asegure en exceso los tornillos. El asegurar en exceso puede causar daños al producto.

- ☐ Deslice el lavabo completamente en los brazos de soporte. Ajuste el nivel del lavabo girando los tornillos del brazo de soporte oculto. No se debe mover el lavabo después de que esté nivelado.
- ☐ Con cuidado, apriete los tornillos de fijador hasta que el lavabo esté fijado.
- ☐ Conecte y asegure el sifón al drenaje y complete las conexiones del suministro de agua a la grifería, de acuerdo a las instrucciones que acompañan a la grifería.
- ☐ Abra los suministros de agua y verifique que no haya fugas.
- ☐ Utilice limpiadores que no sean abrasivos.

USA: 1-800-4-KOHLER
Canada: 1-800-964-5590
México: 001-877-680-1310

kohler.com

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KOHLER® One-Year Limited Warranty

Kohler Co. warrants its plumbing products to be free of defects in material and workmanship for one (1) year from date of purchase. (The service life of any disposable filter replacement cartridges varies with individual use, local conditions, and consumption and thus is not warranted other than to be free of defects in material and workmanship at the time of purchase.) This warranty applies only to KOHLER products purchased and installed in North America, Central America, the Caribbean and South America excluding Brazil ("Americas").

Kohler Co. will, at its election, repair, replace, or make appropriate adjustment where Kohler Co. inspection discloses any such defects occurring in normal residential usage within one (1) year from the date of purchase. Kohler Co. is not responsible for removal or installation costs. **Improper care and cleaning will void the warranty.***

If you believe that you have a warranty claim, contact Kohler Co., either through your Dealer, Plumbing Contractor, Home Center or E-tailer, or by writing Kohler Co., Attn.: Customer Care Center, 444 Highland Drive, Kohler, WI 53044, USA. Please be sure to provide all pertinent information regarding your claim, including a complete description of the problem, the product, model number, color, finish, the date the product was purchased and from whom the product was purchased. Also include your proof of purchase (original sales receipt).

For other information call 1-800-4-KOHLER (1-800-456-4537), visit www.us.kohler.com within the USA, www.ca.kohler.com within Canada, or www.la.kohler.com within Latin America. Kohler Co.'s sales organization in Mexico is Kohler Trading Mexico S. de R.L. de C.V., Autopista Monterrey-Cadereyta Km 19, Edificio 1, Interior B, Lomas del Sol, Cd. Benito Juárez, Nuevo León C.P. 67254 RFC KTM170118KW2.

KOHLER CO. AND/OR SELLER ARE PROVIDING THESE WARRANTIES IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. KOHLER CO. AND/OR SELLER DISCLAIM ALL LIABILITY FOR SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES. Some jurisdictions do not allow limitations of how long an implied warranty lasts or the exclusion or limitation of such damages, so these limitations and exclusions may not apply to you. This warranty gives the consumer specific legal rights. You may also have other rights that vary from jurisdiction to jurisdiction.

This is Kohler Co.'s exclusive written warranty.

* Never use in-tank toilet cleaners. This will void the warranty. See Care & Cleaning recommendations at kohler.com/clean.

Garantie limitée d'un an KOHLER®

Kohler Co. garantit ses produits de plomberie contre tout défaut de matériau et de fabrication sur une période d'un (1) an à partir de la date d'achat. (La durée de vie des cartouches de rechange de filtres jetables varie en fonction de l'utilisation individuelle, des conditions locales et de la consommation, et, par conséquent, elles ne sont garanties contre tout défaut de matériau et de fabrication qu'au moment de l'achat.) La présente garantie s'applique uniquement aux produits KOHLER achetés et installés en Amérique du Nord, en Amérique Centrale, aux Caraïbes et en Amérique du Sud, sauf le Brésil (« Amériques »).

Si des défauts sont découverts au cours d'une utilisation résidentielle normale, Kohler Co. choisira, à son gré, la réparation, le remplacement ou la rectification appropriée après inspection desdits défauts par Kohler Co. sur une période d'un (1) an à partir de la date d'achat. Kohler Co. n'est pas responsable des frais d'enlèvement ou d'installation. **Un entretien et un nettoyage inadéquats annulent la garantie.***

Pour toute réclamation au titre de la présente garantie, contacter Kohler Co. par l'intermédiaire du vendeur, plombier, centre de rénovation ou revendeur par Internet, ou bien par écrit à l'adresse Kohler Co., Attn.: Customer Care Center, 444 Highland Drive, Kohler, WI 53044, USA. Fournir tous les renseignements pertinents à la réclamation, dont notamment une description complète du problème et du produit, le numéro de modèle, la couleur, la finition, la date et le lieu d'achat du produit. Également inclure la preuve d'achat (ticket de caisse original).

Pour d'autres renseignements, appeler le 1-800-4-KOHLER (1-800-456-4537), visiter le site www.us.kohler.com aux É.-U., www.ca.kohler.com au Canada, ou www.la.kohler.com en Amérique Latine. L'organisme de vente de Kohler Co. au Mexique est Kohler Trading Mexico S. de R.L. de C.V., Autopista Monterrey-Cadereyta Km 19, Edificio 1, Interior B, Lomas del Sol, Cd. Benito Juárez, Nuevo León C.P. 67254 RFC KTM170118KW2.

KOHLER CO. ET/OU LE REVENDEUR FOURNISSENT CES GARANTIES AU LIEU ET PLACE DE TOUTES AUTRES GARANTIES, EXPRESSES OU TACITES, Y COMPRIS, SANS S'Y LIMITER, LES GARANTIES TACITES DE COMMERCIALITÉ ET D'ADAPTATION À UN USAGE PARTICULIER. KOHLER CO. ET/OU LE VENDEUR DÉCLINENT TOUTE RESPONSABILITÉ CONTRE LES DOMMAGES PARTICULIERS, ACCESSOIRES OU INDIRECTS. Certaines juridictions ne permettent pas de limite sur la durée d'une garantie tacite, ni l'exclusion ou la limite de tels dommages, et, par conséquent, lesdites limites et exclusions pourraient ne pas s'appliquer à votre cas. La présente garantie accorde au consommateur des droits juridiques particuliers. Vous pouvez également avoir d'autres droits qui varient d'une juridiction à l'autre.

Ceci constitue la garantie écrite exclusive de Kohler Co.

* Ne jamais utiliser de nettoyeurs de toilette pour l'intérieur du réservoir. Cela annulera la garantie. Voir les recommandations pour Entretien et Nettoyage sur le site kohler.com/clean.

Garantía limitada de un año de KOHLER®

Kohler Co. garantiza sus productos de plomería contra defectos de materiales y mano de obra durante un (1) año a partir de la fecha de adquisición. (La vida de servicio de los cartuchos de repuesto desechables varía con el uso individual, las condiciones locales y el consumo de agua y, por lo tanto, solo se garantiza contra defectos de materiales y mano de obra al momento de adquisición.) Esta garantía solo aplica a productos KOHLER adquiridos e instalados en América del Norte, América Central, el Caribe y América del Sur, pero excluye a Brasil (continente americano).

Kohler Co., a su criterio, reparará, reemplazará o realizará los ajustes pertinentes en los casos en que la inspección realizada por Kohler Co. determine que dichos defectos hayan ocurrido durante el uso residencial normal en el transcurso de un (1) año a partir de la fecha de adquisición. Kohler Co. no se hace responsable de costos de desinstalación ni de instalación. **El cuidado y la limpieza indebidos anulan la garantía.***

Si usted considera que tiene una reclamación en virtud de la garantía, comuníquese con Kohler Co. a través de su distribuidor, contratista de plomería, centro de remodelación o distribuidor por Internet, o escriba a Kohler Co., Atención: Customer Care Center, 444 Highland Drive, Kohler, WI 53044, EE.UU. Asegúrese de proporcionar toda la información pertinente a su reclamación, que debe incluir una descripción completa del problema, el producto, el número de modelo, el color, el acabado, la fecha de compra y el lugar de compra del producto. También incluya su comprobante de compra (recibo de venta original).

Para obtener más información llame al 1-800-4-KOHLER (1-800-456-4537), o visite www.us.kohler.com en los EE.UU., www.ca.kohler.com en Canadá, o www.la.kohler.com en América Latina. La organización de ventas de Kohler Co. en México es Kohler Trading México S. de R.L. de C.V., Autopista Monterrey-Cadereyta Km. 19, Edificio 1, Interior B, Lomas del Sol, Cd. Benito Juárez, Nuevo León C.P. 67254 RFC KTM170118KW2.

KOHLER CO. Y/O EL VENDEDOR OFRECEN ESTAS GARANTÍAS QUE SUSTITUYEN A TODAS LAS DEMÁS GARANTÍAS, EXPRESAS O IMPLÍCITAS, INCLUIDAS, ENTRE OTRAS, LAS GARANTÍAS IMPLÍCITAS DE COMERCIALIZACIÓN E IDONEIDAD PARA UN USO DETERMINADO. KOHLER CO. Y/O EL VENDEDOR DESCARGAN TODA RESPONSABILIDAD POR CONCEPTO DE DAÑOS PARTICULARES, INCIDENTALES O INDIRECTOS. Algunas jurisdicciones no permiten limitaciones en cuanto a la duración de una garantía implícita o a la exclusión o limitación de dichos daños, por lo que es posible que estas limitaciones y exclusiones no se apliquen a su caso. Esta garantía otorga al consumidor ciertos derechos legales específicos. Además, usted puede tener otros derechos que varían de jurisdicción a jurisdicción.

Esta es la garantía exclusiva por escrito de Kohler Co.

* Nunca utilice productos para limpiar que se colocan dentro del tanque. Esto anula la garantía. Consulte las recomendaciones de limpieza y cuidados en kohler.com/clean.



INS962B - 6/05

ONE-HANDLE LAVATORY FAUCET

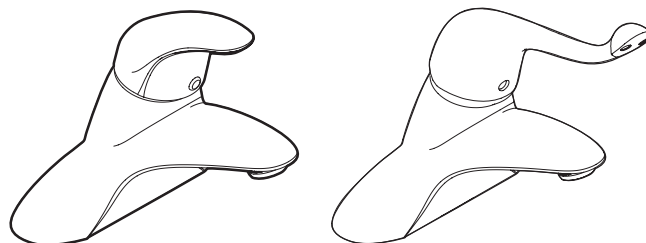
MODELS 8413, 8416 Series

MEZCLADORA MONOMANDO PARA LAVABO

MODELOS 8413, 8416 Series

ROBINET DE LAVABO À UNE POIGNÉE

MODÈLES 8413, 8416

**English****Español****Français****HELP LINE****Please do not return this product to the store.**

If you need installation assistance, replacement parts or have questions regarding our warranty, please call our Product Consultants at:
U.S.: 1-800-289-6636
 Monday - Friday 8:00 a.m. to 8:00 p.m. EST
 Saturday 8:00 a.m. to 6:30 p.m. EST
 Or e-mail us at:
moenwebmail@moen.com
 Be sure to visit our website at
www.moen.com
Canada 1-800-465-6130
 Monday - Friday 7:30 a.m. to 5:00 p.m. EST
 Or e-mail us at: **cantsd@moen.com**
 Be sure to visit our website at
www.moen.com

When ordering parts, specify finishes.



CAUTION — TIPS FOR REMOVAL OF OLD FAUCET: Always turn water supply OFF before removing existing faucet or disassembling the valve. Open faucet handle to relieve water pressure and ensure that complete water shut-off has been accomplished.

CARE INSTRUCTIONS

To preserve the finish on the metallic parts of your Moen faucet, apply non-abrasive wax, such as car wax. Any cleaners should be rinsed off immediately. Mild abrasives are acceptable on Platinum and LifeShine® finishes.

LÍNEA DE AYUDA**Por favor no devuelva este producto a la tienda.**

Si necesita ayuda para la instalación, piezas de repuesto o tiene alguna pregunta relacionada con nuestra garantía, por favor llame a nuestros asesores de producto al:
En la República Mexicana:
01-800-718-4345
 Lunes a viernes de 8:00 a.m. a 6:00 p.m. hora Central
 O envíenos un correo electrónico a:
tcoronado@moen.com.mx
 Visite nuestra página de Internet:
www.moen.com.mx

Cuando ordene piezas, por favor especifique los acabados.

**PRECAUCIÓN - CONSEJOS PARA CAMBIAR LA LLAVE MEZCLADORA.**

Siempre CIERRE la toma de agua antes de quitar la llave existente o desmontar la válvula. Abra la llave para liberar la presión, y asegúrese de que esté bien cerrada el agua.

INSTRUCCIONES DE CUIDADO

Para conservar el acabado que cubre las partes metálicas de su llave mezcladora Moen, aplique cera que no sea abrasiva, como una cera para autos. Si usa algún tipo de limpiador, deberá enjuagarlo inmediatamente. Los abrasivos suaves son aceptables en acabados Platinum y LifeShine®.

**SERVICE À LA CLIENTÈLE****Prière de ne pas retourner ce produit au magasin.**

Pour obtenir de l'aide pour l'installation, le remplacement de pièces ou pour toute question concernant notre garantie, appeler un de nos spécialistes des produits :
Toronto : (905) 829-3400
Ailleurs au Canada: 1 800 465-6130
 7 h 30 à 17 h HNE
 Ou par courriel à l'adresse :
cantsd@moen.com
 Visitez notre site web à l'adresse
www.moen.com

Spécifier le ou les finis dans la commande.

**ATTENTION — SUGGESTIONS POUR ENLEVER L'ANCIEN ROBINET:**

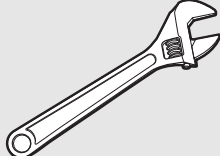
Toujours COUPER l'alimentation en eau avant d'enlever l'ancien robinet ou de démonter la soupape. Ouvrir la poignée du robinet pour libérer la pression d'eau et pour s'assurer que l'alimentation en eau a bien été coupée.

DIRECTIVES D'ENTRETIEN

Pour préserver le fini des pièces métalliques du robinet Moen, appliquer une cire non abrasive comme une cire à voiture. Rincer immédiatement le robinet après l'avoir nettoyé avec un agent nettoyant. Les finis Platinum et LifeShine® peuvent être nettoyés à l'aide de produits abrasifs doux.

HELPFUL TOOLS

For safety and ease of faucet replacement, Moen recommends the use of these helpful tools.



Plumbers putty
 Masilla de plomero
 Mastic de plombier

HERRAMIENTAS ÚTILES

Para que el cambio de la llave sea fácil y seguro, Moen le recomienda usar estas útiles herramientas.

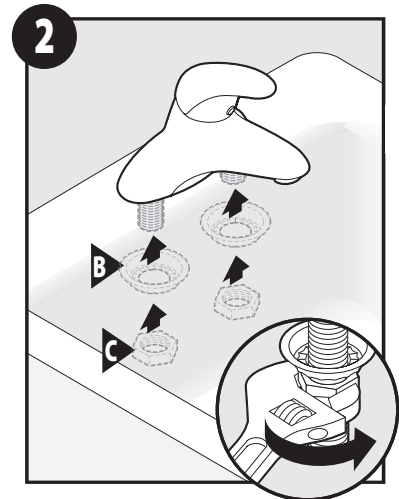
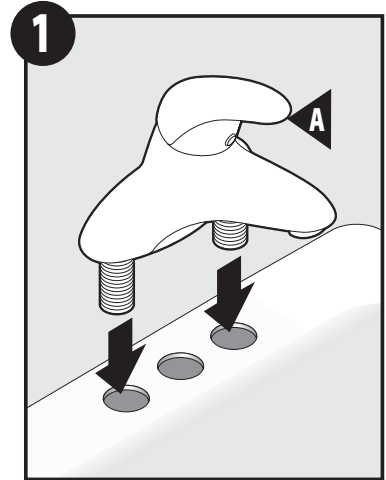
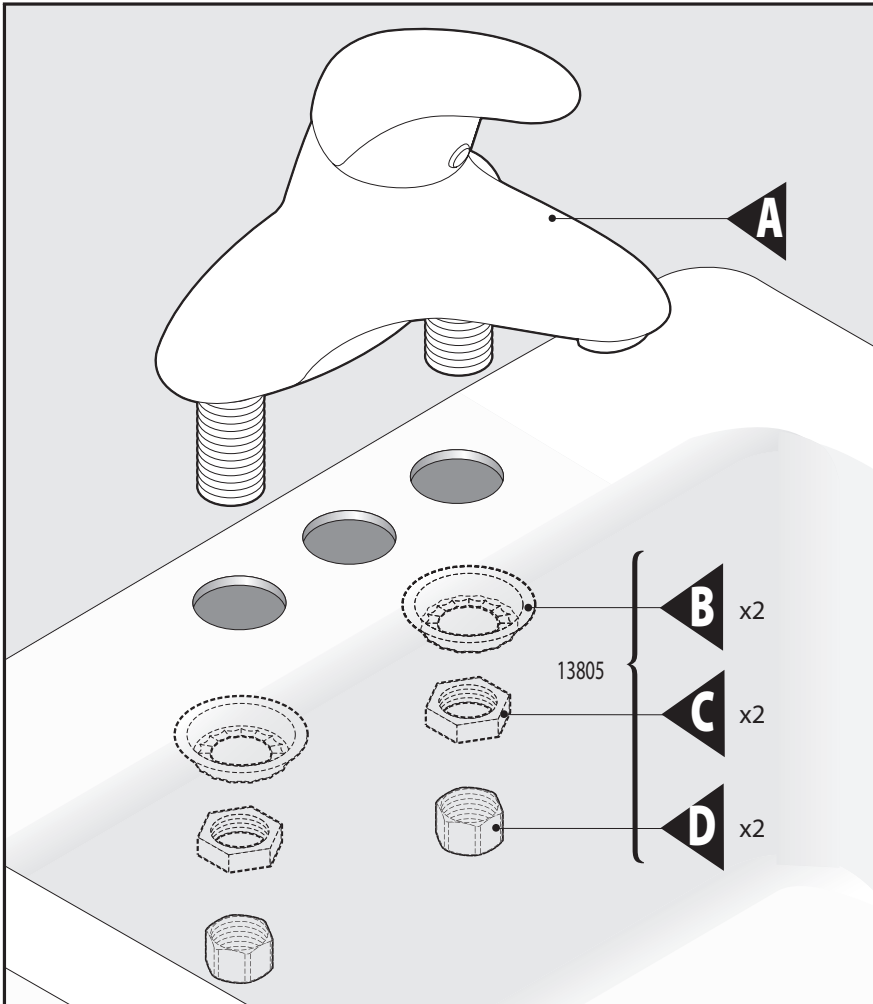
OUTILS UTILES

Par mesure de sécurité et pour faciliter l'installation, Moen suggère l'utilisation des outils suivants.

Complies with ASME A112.18.1M and CSA B125

Cumple con las normas A112.18.1M de ASME y B125 de CSA

Conforme à ASME A112.18.1M et CSA B125



Consumer Information

Faucets made of leaded brass alloys may contribute small amounts of lead to water that is allowed to stand in contact with the brass. The amount of lead contributed by any faucet is highest when the faucet is new. The following steps may reduce potential exposure to lead from faucets and other parts of the plumbing system:

- Always run the water for a few seconds prior to use for drinking or cooking.
- Use only cold water for drinking or cooking.
- If you are concerned about lead in your water, have your water tested by a certified laboratory in your area.

Información al consumidor

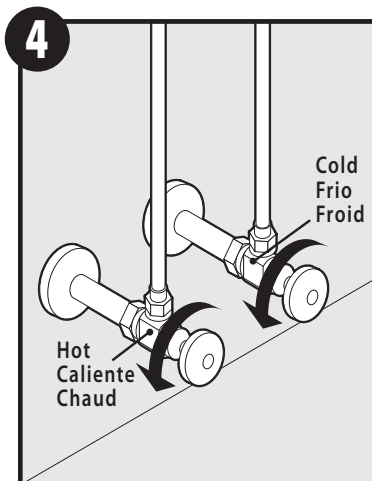
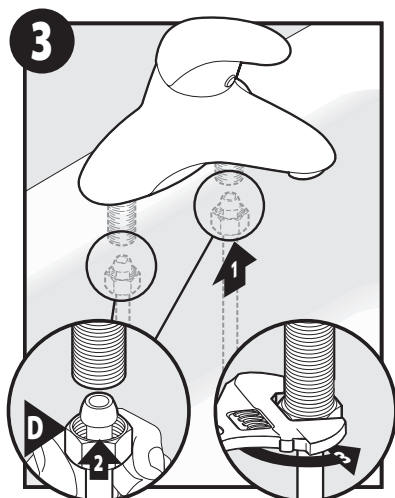
Las llaves mezcladoras fabricadas con aleaciones de cobre con plomo pueden arrojar pequeñas cantidades de plomo al agua que queda en contacto con el bronce, las cuales son mayores cuando la llave está nueva. Los siguientes pasos le ayudarán a reducir la posible exposición al plomo originada por las llaves y otras piezas del sistema de plomería.

- Deje correr el agua durante unos segundos antes de usarla para beber o cocinar.
- Utilice sólo agua fría para beber o cocinar.
- Si está preocupado por la cantidad de plomo que pudiera haber en el agua, llévela a examinar a algún laboratorio local certificado.

Renseignements pour les consommateurs

Les robinets fabriqués à partir d'alliages de laiton et de plomb pourraient ajouter de petites quantités de plomb à l'eau si celle-ci était stagnante et qu'elle touchait au laiton. La quantité de plomb ajoutée par tout robinet est plus élevée lorsque le robinet est nouveau. Les directives suivantes peuvent aider à réduire l'exposition au plomb provenant du robinet et d'autres parties de la tuyauterie :

- Toujours faire couler l'eau pendant quelques secondes avant de s'en servir pour boire ou cuire.
- Utiliser uniquement de l'eau froide pour boire ou cuire.
- Si la quantité de plomb dans votre eau vous inquiète, la faire tester par un laboratoire local certifié.



Moen Lifetime Limited Warranty

Moen products have been manufactured under the highest standards of quality and workmanship. Moen warrants to the original consumer purchaser for as long as the original consumer purchaser owns their home (the "Warranty Period" for homeowners), that this faucet will be leak- and drip-free during normal use and all parts and finishes of this faucet will be free from defects in material and manufacturing workmanship. All other purchasers (including purchasers for industrial, commercial and business use) are warranted for a period of 5 years from the original date of purchase (the "Warranty Period" for non-homeowners).

If this faucet should ever develop a leak or drip during the Warranty Period, Moen will FREE OF CHARGE provide the parts necessary to put the faucet back in good working condition and will replace FREE OF CHARGE any part or finish that proves defective in material and manufacturing workmanship, under normal installation, use and service. Replacement parts may be obtained by calling 1-800-289-6636 (Canada 1-800-465-6130), or by writing to the address shown. Proof of purchase (original sales receipt) from the original consumer purchaser must accompany all warranty claims. Defects or damage caused by the use of other than genuine Moen parts is not covered by this warranty. This warranty is applicable only to faucets purchased after December, 1995 and shall be effective from the date of purchase as shown on purchaser's receipt.

This warranty is extensive in that it covers replacement of all defective parts and finishes. However, damage due to installation error, product abuse, product misuse, or use of cleaners containing abrasives, alcohol or other organic solvents, whether performed by a contractor, service company, or yourself, are excluded from this warranty. Moen will not be responsible for labor charges and/or damage incurred in installation, repair or replacement, nor for any indirect, incidental or consequential damages, losses, injury or costs of any nature relating to this faucet. Except as provided by law, this warranty is in lieu of and excludes all other warranties, conditions and guarantees, whether expressed or implied, statutory or otherwise, including without restriction those of merchantability or of fitness for use.

Some states, provinces and nations do not allow 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, province to province, nation to nation. Moen will advise you of the procedure to follow in making warranty claims. Simply write to Moen Incorporated using the address below. Explain the defect and include proof of purchase and your name, address, area code and telephone number.

Moen Incorporated
25300 Al Moen Drive
North Olmsted, Ohio 44070-8022
U.S.A.

Moen le otorga Garantía limitada de por vida

Los productos Moen son fabricados bajo las más estrictas normas de calidad y mano de obra. Moen le garantiza al comprador original que durante el tiempo que la tenga su casa (el "periodo de garantía", para los propietarios), esta llave no tendrá ni goteras ni fugas durante el uso normal, y que todas las piezas y acabados estarán libres de defectos en material y mano de obra. Asimismo, a todos nuestros otros consumidores (industriales, comerciales y empresariales), les otorgamos 5 años de garantía a partir de la fecha original de compra (el "periodo de garantía" para usos no domésticos).

Si en esta llave mezcladora se llegara a producir alguna fuga o gotera durante el periodo de garantía, Moen le proporcionará SIN COSTO ALGUNO las piezas necesarias para que vuelva a funcionar en perfectas condiciones y reemplazará también SIN COSTO para usted, cualquier pieza o acabado que pudiera tener algún defecto en la fabricación o mano de obra, bajo condiciones normales de instalación, uso y servicio. Las piezas de repuesto se pueden obtener llamando en la República Mexicana al 01-800-718-4345 o si escribe en la dirección que aparece aquí. Para que el comprador original pueda hacer efectiva la garantía, cualquier reclamación deberá ir acompañada por el comprobante de compra (nota de venta original). La garantía no cubre los defectos o daños causados por el uso de otras partes que no sean piezas originales Moen. Esta garantía es aplicable sólo para las llaves compradas después de diciembre de 1995, y entrará en vigencia a partir de la fecha que aparece en la nota de compra.

Esta garantía es amplia en el sentido que cubre el reemplazo de todas las partes y acabados defectuosos. Sin embargo, se excluyen de esta garantía los daños causados por un error de instalación, abuso del producto, mal uso del mismo, o uso de limpiadores que contengan abrasivos, alcohol u otros solventes orgánicos, ya sea por parte del contratista, compañía de servicio o usted mismo. Moen no se hace tampoco responsable por los gastos de mano de obra ni por los daños incurridos en la instalación, reparación o sustitución, ni por ningún daño indirecto, directo o consecuente, ni por pérdidas, lesiones o costos de alguna otra índole relacionados con esta llave. A menos que lo estipule la ley, esta garantía reemplaza y excluye cualquier otra garantía y condiciones, ya sea expresas o implícitas, establecidas por la ley o de otra manera, incluyendo sin restricción aquellas en que el producto se encuentra en condiciones aptas para la venta o se adecúa al uso específico para el cual fue adquirido.

Algunos estados, provincias y naciones no permiten la exclusión o limitación de los daños incidentales o consecuentes, de modo que las limitaciones o exclusiones mencionadas pueden no ser aplicables a usted. Esta garantía le otorga derechos legales específicos y usted puede también tener otros derechos que cambian de un estado a otro o de una provincia o nación a otra. Moen lo asesorará en el procedimiento a seguir para hacer válida esta garantía. Sencillamente escriba a Moen Incorporated utilizando la dirección que aparece a continuación. Explique el tipo de defecto e incluya comprobantes de compra, su nombre, dirección, código de área y número de teléfono.

Moen de Mexico, S.A. de C.V.
Carretera Saltillo-Monterrey KM 14.7
Ramos Arizpe, Coahuila
Mexico 25900

Garantie à vie limitée de Moen

Les produits Moen sont fabriqués selon les normes les plus élevées de qualité et de main-d'oeuvre. Moen garantit à l'acheteur original, tant qu'il sera propriétaire de la maison (la «période de garantie» des propriétaires), que ce robinet sera libre de toute fuite pendant son usage normal et qu'aucune pièce et qu'aucun fini de ce robinet ne présenteront de défaut de matériel et de main-d'oeuvre en usine. Tous les autres achats (y compris les achats à des fins industrielles, commerciales et d'affaires) sont garantis pendant cinq (5) ans à compter de la date d'achat originale (période de garantie commerciale).

Si ce robinet fuit ou dégorge pendant la période de garantie, Moen s'engage à fournir GRATUITEMENT les pièces de rechange requises pour remettre le robinet en état de fonctionnement ainsi qu'à remplacer GRATUITEMENT toute pièce ou tout fini dont le matériel, la fabrication ou la main-d'oeuvre, lors de l'installation, de l'usage et du service habituels, s'avèrent défectueux. On peut obtenir les pièces de rechange en composant le 1 800 465-6130 ou en écrivant à l'adresse indiquée ci-dessous. Le reçu de vente original de l'acheteur initial du robinet doit accompagner toute réclamation. Les défauts ou les dommages causés par l'utilisation de pièces non fournies par Moen ne sont pas couverts par cette garantie. Cette garantie s'applique uniquement aux robinets achetés après décembre 1995 et entre en vigueur à compter de la date d'achat indiquée sur le reçu de caisse du client.

Cette garantie s'étend aussi au remplacement de toute pièce ou de tout fini défectueux. Cependant, sont exclus de cette garantie, les dommages causés par une erreur d'installation, un abus du produit, une mauvaise utilisation du produit, l'utilisation de produits de nettoyage contenant des agents abrasifs, de l'alcool ou des solvants organiques, qu'ils soient utilisés par un entrepreneur, une entreprise de service ou le consommateur. Moen décline toute responsabilité quant aux frais de main-d'oeuvre et aux dommages causés durant l'installation, la réparation ou le remplacement, et aux dommages, pertes, blessures ou coûts, indirects ou consécutifs, connexes à ce robinet. Sauf lorsque la loi le stipule, cette garantie remplace et exclut toutes les autres garanties et conditions, qu'elles soient indiquées expressément ou non, obligatoires ou autres, y compris, sans restriction, celles qui visent la commercialisation ou l'aptitude d'utilisation.

Certains pays, états ou provinces ne permettent aucune exclusion, ni limitation suite aux dommages indirects ou consécutifs. Les limitations ou les exclusions précitées ne s'appliqueraient pas dans ces cas. Cette garantie accorde des droits juridiques et il est possible que d'autres droits soient applicables selon l'état, la province ou le pays. Moen avisera le consommateur de la procédure à suivre pour soumettre une réclamation. Il suffit d'écrire à Moen inc. à l'adresse indiquée ci-dessous, pour expliquer le défaut, d'inclure une preuve d'achat, d'inscrire son nom, son adresse ainsi que son indicatif régional et son numéro de téléphone.

Moen Inc.
2816 Bristol Circle
Oakville, Ontario L6H 5S7

INS962B - 6/05

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Installation Instructions
Manuel d'installation
Directives d'installation

INS1293 - 4/06

English

HELP LINE

STOP Please do not return this product to the store.

If you need installation assistance, replacement parts or have questions regarding our warranty, please call our Product Consultants at:

U.S.: 1-800-289-6636

Monday - Friday 8:00 a.m. to 8:00 p.m. EST

Saturday 8:00 a.m. to 6:30 p.m. EST

Or e-mail us at:

moenwebmail@moen.com

Be sure to visit our website at

www.moen.com

Canada 1-800-465-6130

Monday - Friday 7:30 a.m. to

5:00 p.m. EST

Or e-mail us at: cantds@moen.com

Be sure to visit our website at

www.moen.com

Español

LÍNEA DE AYUDA

STOP Por favor no devuelva este producto a la tienda.

Si necesita ayuda para la instalación, piezas de repuesto o tiene alguna pregunta relacionada con nuestra garantía, por favor llame a nuestros asesores de producto al:

En la República Mexicana:

01-800-718-4345

Lunes a viernes de 8:00 a.m.

a 6:00 p.m. hora Central

O envíenos un correo electrónico a:

tcoronado@moen.com.mx

Visite nuestra página de Internet:

www.moen.com.mx

Français

SERVICE À LA CLIENTÈLE

STOP Prière de ne pas retourner ce produit au magasin.

Pour obtenir de l'aide pour l'installation, le remplacement de pièces ou pour toute question concernant notre garantie, appeler un de nos spécialistes des produits:

Toronto: (905) 829-3400

Ailleurs au Canada: 1-800-465-6130

7 h 30 à 17 h HNE

Ou par courriel à l'adresse:

cantds@moen.com

Visitez notre site web à l'adresse

www.moen.com

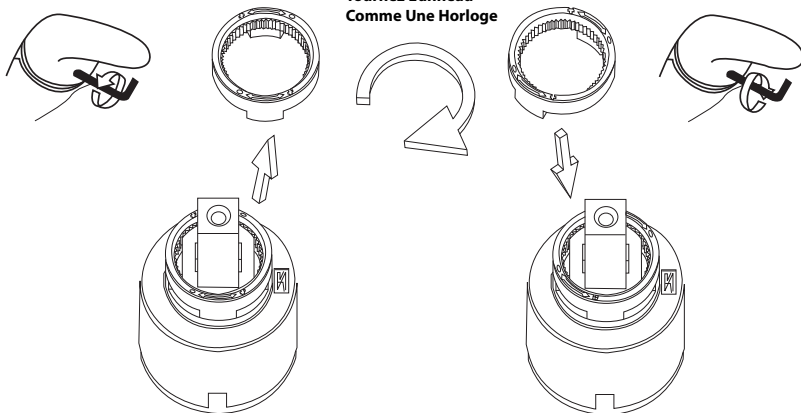
1. Remove Handle
Quite Manija
Enlevez Poignée

2. Remove Ring
Quite Anillo
Enlevez L'Anneau

3. Rotate Ring
Clockwise
Rote El Anillo
A La Derecha
Tournez L'anneau
Comme Une Horloge

4. Replace Ring
Substituya El Anillo
Remplacez L'Anneau

5. Replace Handle
Substituya Manija
Remplacez Poignée



CAUTION —TIPS FOR REMOVAL OF OLD CARTRIDGE:

Always turn water supply OFF before removing existing faucet or disassembling the valve. Open faucet handle to relieve water pressure and ensure that complete water shut-off has been accomplished.

PRECAUCIÓN- CONSEJOS PARA RETIRAR EL CARTUCHO USADO:

Siempre CIERRE la toma de agua antes de quitar la llave existente o desmontar la válvula. Abra la llave para liberar la presión, y asegúrese de que esté bien cerrada el agua.

ATTENTION —SUGGESTIONS ENLEVER L'ANCIENNE

Toujours couper l'alimentation eau avant d'enlever ou démonter le robinet. robinet pour libérer la d'eau et pour s'assurer l'alimentation en eau a bien été coupée.

One Year Limited Warranty

Moen products have been manufactured under the highest standards of quality and workmanship. Moen warrants to the original consumer purchaser and parts of this product to be free from defects in material and workmanship during normal use, for (1) year from date of purchase. A replacement for any defective part will be supplied free of charge for installation by you. Defects or damage caused by the use of other than genuine Moen parts are not covered by this warranty. This warranty shall be effective from the date of purchase as shown on the purchaser's receipt. Some states do not allow limitations on how long an implied warranty lasts, so the above limitation may not apply to you.

This warranty is valid for the original purchaser only and excludes product damage due to installation error, product abuse, or product misuse, whether performed by a contractor, service company, or yourself. Moen will not be responsible for labor charges, and/or damage incurred in installation, repair or replacement, nor for incidental or consequential damages.

Some states, provinces and nations do not allow 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 may vary from state to state, province to province, and nation to nation.

Moen Incorporated will advise you of the procedure to follow in making warranty claims. Simply write to Moen explaining the defect and include proof of purchase and your name, address and telephone number. The address is: Moen Incorporated, 25300 Al Moen Drive, North Olmsted, OH 44070-8022, or call our toll-free consumer Helpline: 1-800-289-6636.

In Canada, write to Moen, 2816 Bristol Circle, Oakville, Ontario L6H5S7 or call: Toronto: 905-829-3400; Rest of Canada: 1-800-465-6130, and ask for Product Service.

Moen Incorporated

25300 Al Moen Drive

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.

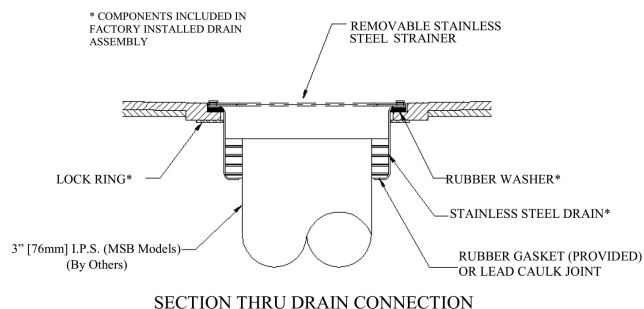
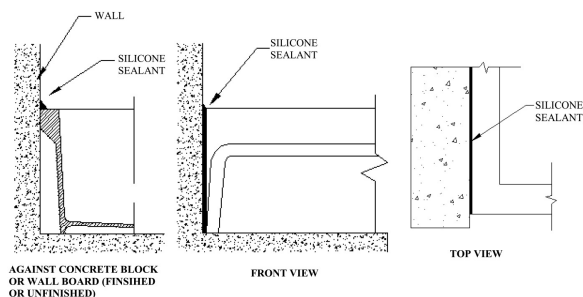
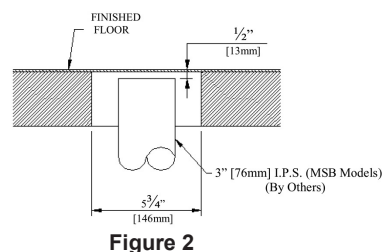
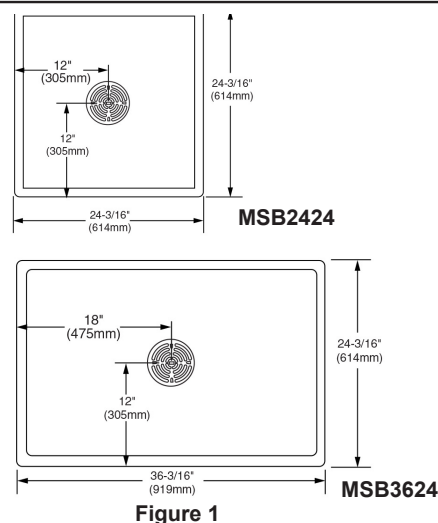
1

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.



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.



1) Sealers – New Installations:

Immediately following installation of a new floor or thorough cleaning of an older floor, the floor can be sealed with a penetrating sealer. Such sealers are available at paint or tile stores and must state that they are approved for use on Terrazzo products. Sealers are not permanent and can be reapplied (after a thorough cleaning) approximately once a year, or as recommended by the manufacturer of the sealer.

2) Regular Cleaning:

To maintain the original terrazzo surface appearance, clean regularly with a liquid detergent such as Joy, Liquid Ajax, or Spic n Span (for the latter, prepare a solution containing ½ cup of Spic n Span in a gallon of water). Scrub with a stiff bristled, nonmetallic scrub brush and then rinse thoroughly.

NOTE: Do not use any acid, e.g., muriatic or cleaning agents that contain acid.

3) Special or Unusual Conditions:

a. Scum on Surface caused by soap, makeup, etc.:

Use a cleaning powder, such as Ajax, plus lots of elbow grease.

b. Surface cleaning:

Heel marks, plaster, etc. may require abrasive removal. This can be done with a wet emery cloth. If emery cloth is ineffective, use an 80 to 100 grit aluminum oxide coated paper. Abrasive cloth or paper will result in a very faint grinding away of the floor surface.

c. Penetrated stains:

Stains such as caused by oil, putty, etc., may be removed by scouring with a cleanser and then soaking floor overnight- if need be- with a commercial bleach such as Linco, etc.



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3. FIAT Products is not responsible for labor charges and/or damage incurred during installation, repair, or replacement.
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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).

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In the United States and Canada:

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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:

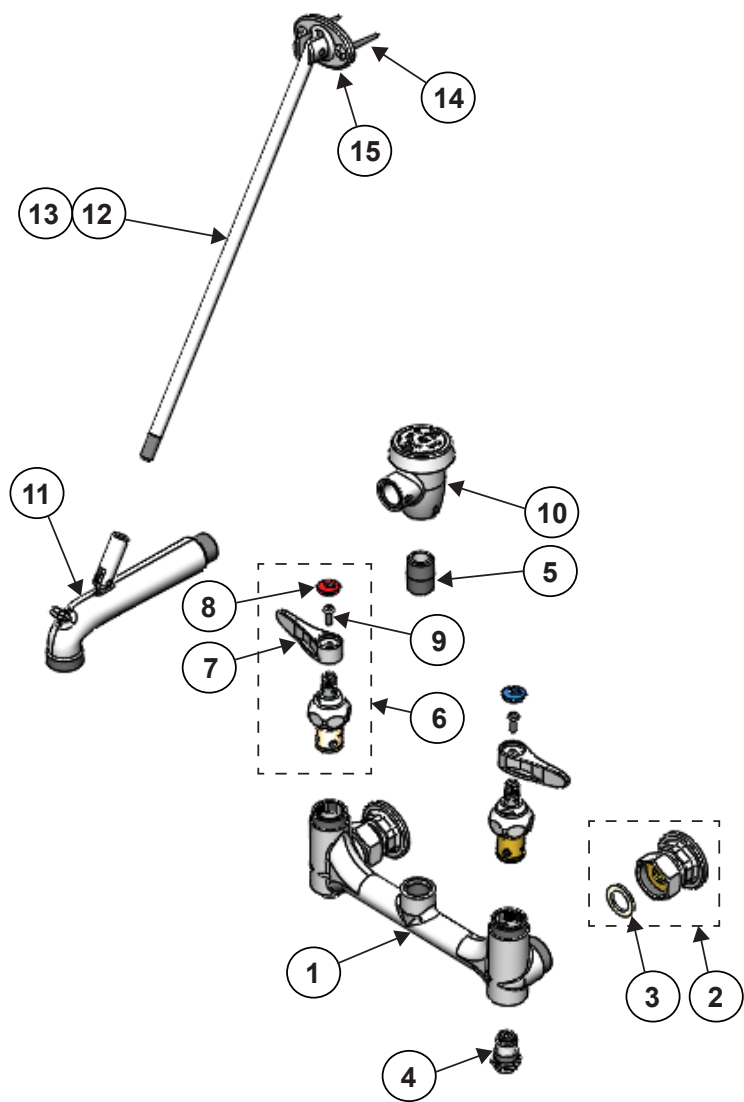
Installations- und Wartungsanleitungen

CN

中文:

安装与维护说明

Exploded View



Part Number Guide

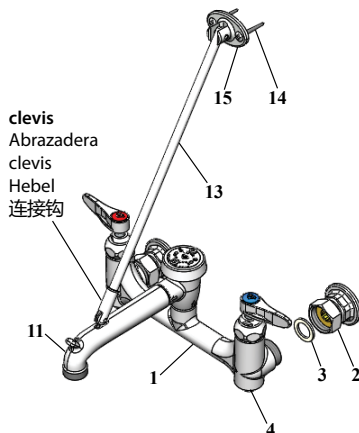
Service Sink Faucet Assemblies

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 backplash 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. Remuéva 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 Teflon 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

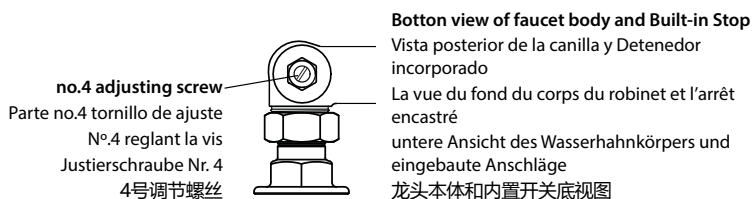
Anschlag für Geschlossen:
im Uhrzeigersinn drehen
顺时针方向关闭开关



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.*

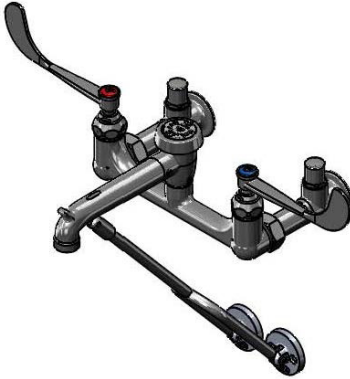
DE Eingebaute Anschläge justieren:

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。

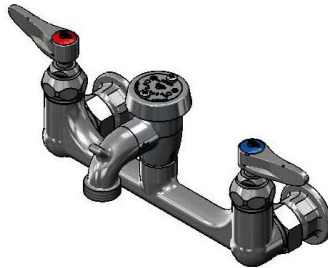
RELATED T&S BRASS PRODUCT LINE



B-0657

Service Sink /
Mop Sink Faucet

B-0674-RGH
Service Sink /
Mop Sink Faucet



T&S BRASS AND BRONZE WORKS, INC.

A firm commitment to application-engineered plumbing products

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

Phone: (864) 834-4102

Fax: (864) 834-3518

E-mail: tsbrass@tsbrass.com

T & S Brass-Europe
'De Veenhoeve'

Oude Nieuwveenseweg 84

2441 CW Nieuwveen

The Netherlands



RELIABILITY BUILT IN™

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 and Use & Care Guide

Residential Electric Water Heater



Read this manual and the labels on the water heater before you install, operate, or service it. If you have difficulty following the directions, or aren't sure you can safely and properly do any of this work yourself:

- Call your local plumbing supplies store to have this water heater installed. Professional Installation is available for this product and the work is guaranteed.
- Schedule an appointment with a qualified person to install your water heater. Call our Technical Assistance Hotline which is listed on the water heater's warranty sheet. We can help you with installation, operations, troubleshooting, or maintenance. Before you call, write down the model and serial number from the water heater's data plate.

Incorrect installation, operation, or service can damage the water heater, your house and other property, and present risks including fire, scalding, electric shock, and explosion, causing serious injury or death.

AHRI Certification® applies to residential electric water heaters with rated capacities of 20 to 120 gallon and input ratings of 12 kw or less.

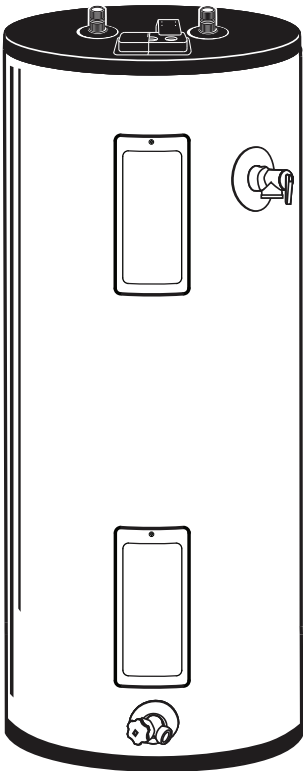


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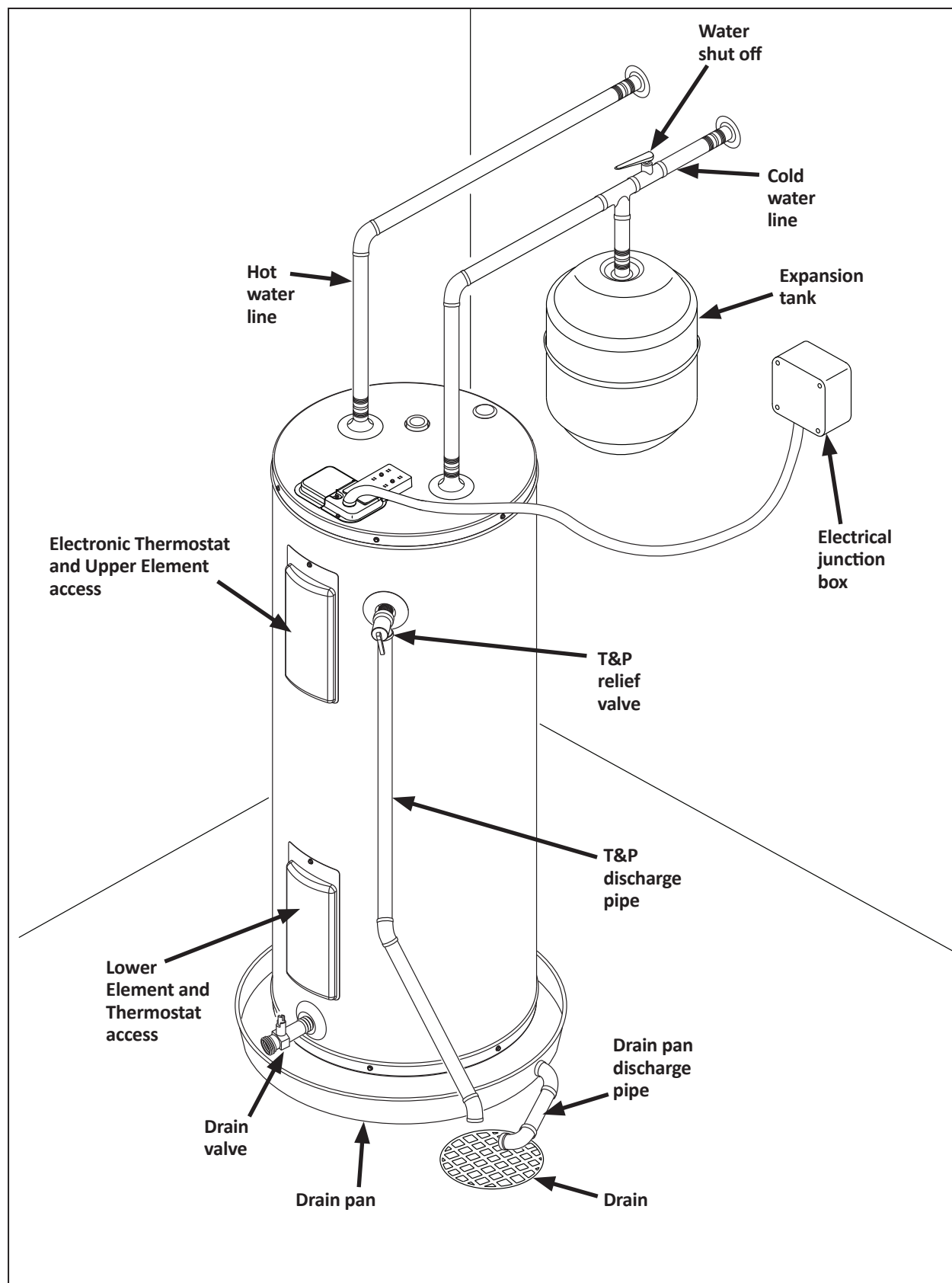
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Keep this manual in the pocket on heater for future reference whenever maintenance, adjustment or service is required.
Retain your original receipt as proof of purchase.

100309904_2000561989_(Rev. A)
July 2018

COMPLETED INSTALLATION (TYPICAL)



IMPORTANT SAFETY INFORMATION

Read and follow all safety messages and instructions in this manual.



This is the safety alert symbol. It is used to alert you to potential physical injury hazards. Obey all safety messages that follow this symbol to avoid possible property damage, serious injury or death. Do not remove any permanent instructions, labels, or the data plate from either the outside of the water heater or on the inside of the access panels. Keep this manual near the water heater.

 DANGER	DANGER indicates hazardous situation that, if not avoided, will result in death or serious injury.
 WARNING	WARNING indicates a hazardous situation that, if not avoided, could result in death or serious injury.
 CAUTION	CAUTION indicates a hazardous situation that, if not avoided, could result in minor or moderate injury.
NOTICE	NOTICE indicates practices not related to physical injury.

This product is certified to comply with a maximum weighted average of 0.25% lead content as required in some areas.

Important information to keep

Fill out this section and keep this manual in the pocket of the water heater for reference.

Date Purchased:

Model number:

Serial number:

Maintenance performed:* Date:

_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

*Drain and flush tank and remove and inspect anode rod after first six months of operation and at least annually thereafter. Operate the Temperature and Pressure Relief Valve (T&P) annually and inspect T&P valve every 2-4 years (see the label on the T&P valve for maintenance schedule). If no label is attached to the T&P Relief Valve, follow the instructions in the T&P Relief Valve Maintenance section of this manual. See the Maintenance section for more information about maintaining this water heater.

IMPORTANT SAFETY INFORMATION

To reduce the risk of property damage, serious injury or death, read and follow the precautions below, all labels on the water heater, and the safety messages and instructions throughout this manual.

RISKS DURING INSTALLATION AND MAINTENANCE



Electric Shock Risk

Contact with the electrical parts in the junction box and behind the access doors can result in severe injury or death from electrical shock:

- Disconnect power by opening the circuit breaker or removing the fuses before installing or servicing.
- Use a non-contact circuit tester to confirm that power is off before working on or near any electrical parts.
- Replace the junction box cover and access doors after servicing.

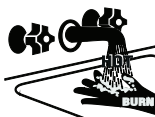
Lifting Risk



⚠ WARNING! The water heater is heavy. Follow these precautions to reduce the risk of property damage, injuries from lifting or impact injuries from dropping the water heater.

- Use at least two people to lift the water heater.
- Be sure you both have a good grip before lifting.
- Use an appliance dolly or hand truck to move the water heater.

RISKS DURING OPERATION



Scalding Risk

This water heater can make water hot enough to cause

severe burns instantly, resulting in severe injury or death.

Feel water before bathing or showering. To reduce the risk of scalding, install Thermostatic Mixing Valves (temperature limiting valves) at each point-of-use. These valves automatically mix hot and cold water to limit the temperature at the tap. Mixing valves are available from local hardware stores. Follow manufacturer's instructions for installation and adjustment of the valves.

The thermostat(s) on this water heater have been factory set to approximately 120°F to reduce the risk of scalding. Higher temperatures increase the risk of scalding, but even at 120°F, hot water can scald. If you choose a higher temperature, Thermostatic Mixing Valves located at each point-of-use are particularly important to help avoid scalding.

Temperature	Time to Produce a Serious Burn
120°F (49°C)	More than 5 minutes
125°F (52°C)	1½ to 2 minutes
130°F (54°C)	About 30 seconds
135°F (57°C)	About 10 seconds
140°F (60°C)	Less than 5 seconds
145°F (63°C)	Less than 3 seconds
150°F (66°C)	About 1½ seconds
155°F (68°C)	About 1 second

For information about changing the factory thermostat setting(s), refer to the "Adjusting Temperature" section in this manual ("Step 10" on page 15).

Even if you set the water heater thermostat(s) to a low setting, higher temperatures may occur in certain circumstances:

In some cases, repeated small draws of water can cause the hot and cold water in the tank to "stack" in layers. If this happens, the water can be as much as thirty degrees hotter than the thermostat setting. This temperature variation is the result of your usage pattern and is not a malfunction.

Water temperature will be hotter if someone adjusted the thermostat(s) to a higher setting.

Problems with the thermostat(s), or other malfunctions may result in higher than expected water temperatures.

If the water heater is in a hot environment, the water in the tank can become as hot as the surrounding air, regardless of the thermostat setting.

If the water supplied to the water heater is pre-heated (for example, by a solar system) the temperature in the tank may be higher than the water heater's thermostat setting.

To reduce the risk of unusually hot water reaching the fixtures in the house, install Thermostatic Mixing Valves at each point-of-use.

If anyone in your home is at particular risk of scalding (for example, the elderly, children, or people with disabilities) or if there is a local code or state law requiring a certain water temperature

at the hot water tap, then these precautions are particularly important.

According to a national standard American Society of Sanitary Engineering (ASSE 1070) and most local plumbing codes, the water heater's thermostat should not be used as the sole means to regulate water temperature and avoid scalds.

Properly adjusted Thermostatic Mixing Valves installed at each point-of-use allow you to set the tank temperature to a higher setting without increasing risk of scalds. A higher temperature setting allows the tank to provide much more hot water and can help provide proper water temperatures for appliances such as dishwashers and washing machines. Higher tank temperatures (140°F) also kill bacteria that cause a condition known as "smelly water" and can reduce the levels of bacteria that cause water-borne diseases.

Water Contamination Risk

Do not use chemicals that could contaminate the potable water supply. Do not use piping that has been treated with chromates, boiler seal, or other chemicals.



Fire Risk

To reduce the risk of a fire that could destroy your home and seriously

injure or kill people:

- Do not store things that can burn easily such as paper or clothes next to the water heater.
- Be sure the junction box cover and the access door covers are in place. These covers keep debris from entering and potentially being ignited, and help keep any internal fires from spreading.
- Keep the water heater from becoming

wet. Immediately shut the water heater off and have it inspected by a qualified person if you find that the wiring, thermostat(s) or surrounding insulation have been exposed to water in any way (e.g., leaks from plumbing, leaks from the water heater itself can damage property and could cause a fire risk). If the water heater is subjected to flood conditions or the thermostat(s) have been submerged in water, the entire water heater must be replaced.

- Make electrical connections properly, according to the instructions on page 14. Use 10 gauge solid copper wire. Use a UL listed or CSA approved strain relief. Connect ground wire to green ground screw.



Explosion Risk

High temperatures and pressures in the water heater tank can cause an explosion resulting in property damage, serious injury or death. A new Temperature and Pressure (T&P) Relief Valve is included with your water heater to reduce risk of explosion by discharging hot water. Additional temperature and pressure protective equipment may be required by local codes.

A nationally recognized testing laboratory maintains periodic inspection of the valve production process and certifies that it meets the requirements for Relief Valves for Hot Water Supply Systems, ANSI Z21.22. The T&P Relief Valve's relief pressure must not exceed the working pressure rating of the water heater as stated on the rating plate.

Maintain the T&P Relief Valve properly. Follow the maintenance instructions provided by the manufacturer of the T&P Relief Valve (label attached to T&P Relief Valve). If no label is attached to the T&P Relief Valve, follow the instructions in the T&P Relief Valve Maintenance section of this manual.

An explosion could occur if the T&P Relief Valve or discharge pipe is blocked. Do not cap or plug the T&P Relief Valve or discharge pipe.

Fire and Explosion Risk if Hot Water is Not Used for Two Weeks or More

⚠ CAUTION! Hydrogen gas builds up in a hot water system when it is not used for a long period (two weeks or more). Hydrogen gas is extremely flammable. If the hot water system has not been used for two weeks or more, open a hot water faucet for several minutes at the kitchen sink before using any electrical appliances connected to the hot water system. Do not smoke or have an open flame or other ignition source near the faucet while it is open.

GETTING STARTED

GETTING STARTED

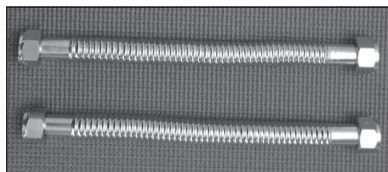


Figure 1 - Flexible connectors use compression fittings and do not require soldering.



Figure 2 - Use a non-contact circuit tester to insure that the power is off before you work on a circuit.

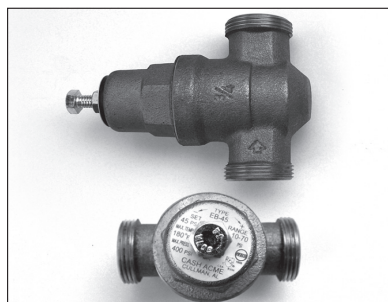


Figure 3 - Install a Pressure Reducing Valve set to 50 to 60 PSI.

- 1 Review all of the instructions before you begin work.

If you aren't sure that you can safely and properly do this work yourself, call your local hardware store to arrange for Professional Installation (you may also call a qualified person of your choice, such as a licensed plumber or electrician, to have the work done). Improper installation can damage the water heater, your home and other property, and can present risks of serious injury or death.

- 2 Check with your local and state authorities for any local or state codes that apply to your area. In the absence of local and state codes, follow National Fire Protection Association (NFPA-70) and the current editions of the National Electric Code (NEC) and the International Plumbing Code (IPC). The instructions in this manual comply with national codes, but the installer is responsible for complying with local codes.

Massachusetts code requires this water heater to be installed in accordance with Massachusetts 248-CMR 2.00 and 248-CMR 5.00: State Plumbing Code. Other local and state authorities may have similar requirements or other codes applicable to the installation of this water heater.

- 3 Before you start, be sure you have, and know how to use, the following tools and supplies:

- Plumbing tools and supplies appropriate for the type of water pipes in your home
- Threaded connectors (figure 1) for the cold and hot water pipes
 - For homes plumbed with plastic pipe, use threaded connectors

suitable for the specific type of plastic pipe used: CPVC and PEX (cross-linked polyethylene). Do not use PVC pipe.

- For homes with copper pipes, you may purchase connector kits with compression fittings that don't require soldering (figure 1). Compression fittings are easier to install than soldering copper pipes.
 - Thread sealant tape or pipe joint compound approved for potable water
 - Tools to make the electrical connections (for example, screwdrivers, wire strippers)
 - Non-Contact circuit tester to check for power (figure 2)
 - Water Pressure Gauge (see next page, figure 4)
- Recommended Accessories:**
- Suitable drain pan (see page 8, figure 6)
 - Automatic leak detection and shut-off device
 - Pressure Reducing Valve (figure 3)
 - Thermal Expansion Tank (see next page, figure 5)
 - Point-of-use Thermostatic Mixing Valves (see page 8, figure 7) ■

INSTALLATION

Follow these steps for proper installation:

Step 1:

✓ Verify that your home is equipped and up-to-date for proper operation

Installing a new water heater is the perfect time to examine your home's plumbing system and make sure the system is up to current code standards. There have likely been plumbing code changes since the old water heater was installed. We recommend installing the following accessories and any other needed changes to bring your home up to the latest code requirements.

Use the checklist below and inspect your home. Install any devices you need to comply with codes and assure that your new water heater performs at its best. Check with your local plumbing official for more information.

✓ Water pressure

We recommend checking your home's water pressure with a pressure gauge (figure 4). Most codes allow a maximum incoming water pressure of 80 psi. We recommend a working pressure no higher than 50-60 psi.

HOW: Purchase an inexpensive water pressure gauge available at your local hardware store. Connect the Water Pressure Gauge to an outside faucet and measure the maximum water pressure experienced throughout the day (highest water pressures often occur at night).

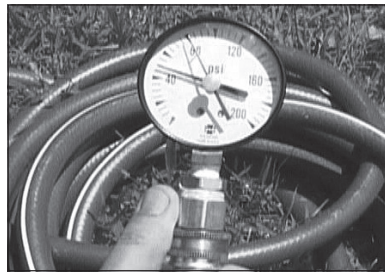


Figure 4 - Use a Water Pressure Gauge to make sure your home's water pressure is not too high.

To limit your home's water pressure: Locate your home's Pressure Reducing Valve (PRV) on the main incoming (cold) water supply line and adjust the water pressure control to between 50 and 60 psi. If your home does not have a Pressure Reducing Valve, install a PRV on the home's main water supply line and set it to between 50 and 60 psi. Pressure Reducing Valves are available at local hardware store.

BACKGROUND: Over the years, many utilities have increased water supply pressures so they can serve more homes. In some homes today, pressures exceed 100 psi. High water pressures can damage water heaters, causing premature leaks. If you have replaced toilet valves, had a water heater leak, or had to repair appliances connected to the plumbing system, pay particular attention to your home's water pressure. When purchasing a PRV, make sure the PRV has a built-in bypass.

✓ Water pressure increase caused by thermal expansion

Verify that you have a properly sized Thermal Expansion Tank (figure 5). We recommend installing an expansion tank if your home does not have one. Codes require a properly pressurized, properly sized Thermal Expansion Tank in almost all homes. (See photo on inside front cover.)



Figure 5 - A Thermal Expansion Tank helps protect the home's plumbing system from pressure spikes.

HOW: Connect the Thermal Expansion Tank (available at your local hardware store) to the cold water supply line near the water heater. The expansion tank contains a bladder and an air charge. To work properly, the Thermal Expansion Tank must be sized according to the water heater's tank capacity and pressurized to match the home's incoming water pressure. Refer to the installation instructions provided with the Thermal Expansion Tank for installation details.

INSTALLATION

INSTALLATION

BACKGROUND: Water expands when heated, and the increased volume of water must have a place to go, or thermal expansion will cause large increases in water pressure (despite the use of a Pressure Reducing Valve on the home's main water supply line). The Safe Drinking Water Act of 1974 requires the use of backflow preventers and check valves to restrict water from your home reentering the public water system. Backflow preventers are often installed in water meters and may not be readily visible. As a result, most all plumbing systems today are now "closed," and almost all homes now need a Thermal Expansion Tank.

A Thermal Expansion Tank is a practical and inexpensive way to help avoid damage to the water heater, washing machine, dishwasher, ice maker and even toilet valves. If your toilet occasionally runs for no apparent reason (usually briefly at night), that may be due to thermal expansion increasing the water pressure temporarily.

Water pipe and tank leaks

Leaks from plumbing pipes or from the water heater itself can damage property and could cause a fire risk.

- Install an automatic leak detection and shutoff device (available in hardware stores). These devices can detect water leaks and can shut off the water heater's water supply if a leak occurs.
- Install a suitable drain pan (available in stores) under the water heater (figure 6) to catch condensation or



Figure 6 - A suitable drain pan piped to an adequate drain can help protect flooring from leaks and drips.

leaks in the piping connections or tank. Most codes require and we recommend installing the water heater in a drain pan that is piped to an adequate drain. The drain pan must be at least two inches wider than the diameter of the water heater. Install the drain pan so the water level would be limited to a maximum depth of 1-3/4".



Water temperature regulation

Install Thermostatic Mixing Valves (figure 7) to regulate the temperature of the water supplied to each point-of-use (for example, kitchen sink, bath-



Figure 7 - Thermostatic Mixing Valves installed at each point-of-use can help prevent scalding.

room sink, bath, shower). Consult the valve manufacturer's instructions or a qualified person.

▲ WARNING! Even if the water heater thermostat is set to a relatively low temperature, hot water can scald. Install Thermostatic Mixing Valves at each point-of-use to reduce the risk of scalding (see page 4).

BACKGROUND: A Thermostatic Mixing Valve, installed at each point-of-use, mixes hot water from the water heater with cold water to more precisely regulate the temperature of hot water supplied to fixtures. If you aren't sure if your plumbing system is equipped with properly installed and adjusted Thermostatic Mixing Valves at each point where hot water is used, contact a qualified person for more information. ■

Step 2:

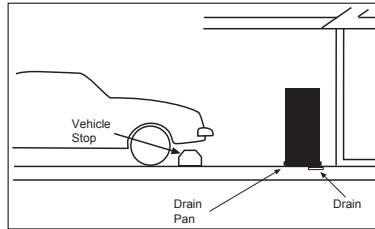
Verify that the location is appropriate

Before installing your water heater, ensure that:

- 1 The water heater will be:
 - Installed indoors close to the center of the plumbing system.
 - In a suitable drain pan piped to an adequate floor drain or external to the building (See page 8, figure 6).
 - In an area that will not freeze
 - In an area that is suitable for installing the water heater vertically
- 2 The location has adequate space (clearances) for periodic servicing.
- 3 The floor can support the weight of a full water heater.
- 4 Your area is not prone to earthquakes. If it is, use special straps as required by local building codes.

NOTICE: The state of California requires bracing, anchoring, or strapping the water heater to avoid its moving during an earthquake. Contact local utilities for code requirements in your area, visit <http://www.dsa.dgs.ca.gov>, or call 1-916-445-8100 and request instructions. Other locations may have similar requirements. Check with your local and state authorities.

- 5 The location is not prone to physical damage by vehicles, flooding, or other risks.



In a garage, install a vehicle stop to avoid water heater damage.

- 6 Avoid locations such as attics, upper floors, or where a leak might damage the structure or furnishings. Due to the normal corrosive action of water, the tank will eventually leak. To minimize property damage from leaks, inspect and maintain your water heater in accordance with this manual's instructions. Install a suitable drain pan under the water heater piped to an adequate drain. Inspect the drain pan, pipes, and surrounding area regularly and fix any leaks found. Drain pans are available in local hardware stores. Leaks are frequently in the plumbing system itself and not the water heater.

Step 3:

Removing the old water heater

- 1 Read each installation step and decide if you have the necessary skills to install the water heater. Only proceed if you can safely perform the work. If you are not comfortable, have a qualified person perform the installation.

- 2 Locate the water heater's circuit breaker and turn it OFF (or remove the circuit's fuses).

- 3 On the old water heater, remove the electrical junction box access panel. Using a non-contact circuit tester, check the wiring to make certain the power is OFF.

▲ WARNING! Working on an energized circuit can result in severe injury or death from electrical shock.

- 4 Disconnect the electrical wires.

- 5 Open a hot water faucet and let the hot water run until it is cool (This may take 10 minutes or longer).



Let the hot water run until it is cool.

▲ WARNING! Be sure the water runs cool before draining the tank to reduce the risk of scalding.

- 6 Connect a garden hose to the drain valve and place the other end of the hose in a drain, outside, or a bucket. (Note that sediment in the bottom of the tank may clog the valve and prevent it from draining. If you can't get the

INSTALLATION

tank to drain, contact a qualified person.)

- 7 Turn the cold water supply valve OFF.

- 8 Open the drain valve on the water heater.



Draining the old water heater.

- 9 Also open a hot water faucet to help the water in the tank drain faster.

- 10 When the tank is empty, disconnect the Temperature & Pressure (T&P) Relief Valve discharge pipe. You may be able to reuse the discharge pipe, but do not



Removing the T&P Relief Valve discharge pipe.

reuse the old T&P Relief Valve. A new T&P Relief Valve comes installed on your water heater (or on some models, is in the carton with the water heater).

- 11 Disconnect the water pipes. Many water pipes are connected by a threaded union which can be disconnected with wrenches. If you must cut the water pipes, cut the pipes close to the water heater's inlet and outlet connections, leaving the water pipes as long as possible. If necessary, you can make them shorter later when you install the new water heater.

- 12 Remove the old water heater.

▲ WARNING! Use two or more people to remove or install water heater. Failure to do so can result in back or other injury.

Step 4:

Installing the new water heater

- 1 Completely read all instructions before beginning. If you are not sure you can complete the installation, DO NOT RETURN THIS UNIT TO THE STORE. Seek assistance from any of the following sources:

- Professional Installation is available for this product and the work is guaranteed. Call your local hardware store to have this water heater installed.
- Schedule an appointment with a qualified person to install your water heater.
- Call our Technical Assistance Hotline which is listed on the water heater's warranty sheet.

- 2 Install a suitable drain pan that is piped to an adequate drain.

- 3 Set the water heater in place taking care not to damage the drain pan.

NOTICE: Most codes require setting the water heater in a suitable drain pan piped to an adequate drain. The drain pan helps avoid property damage which may occur from condensation or leaks in the piping connections or tank. The drain pan must be at least two inches wider than the diameter of the water heater. Install the drain pan so the water level is limited to a maximum depth of 1-3/4".

- 4 Verify that the water heater is set in place properly. Check that:

- The T&P Relief Valve will not be in contact with any electrical parts.
- There is adequate space to install the T&P Relief Valve discharge pipe and that it can be piped to a separate drain (and not into the drain pan).
- There is adequate access and space around the water heater for future maintenance.

DO NOT CONNECT ELECTRICAL WIRING UNTIL YOU ARE INSTRUCTED TO DO SO.

NOTICE: Connecting electrical power to the tank before it is completely full of water (water must run FULL STREAM from a hot water tap for a full three minutes) will cause the upper heating element to burn out.

Step 5:

Connect the Temperature and Pressure (T&P) Relief Valve/Pipe

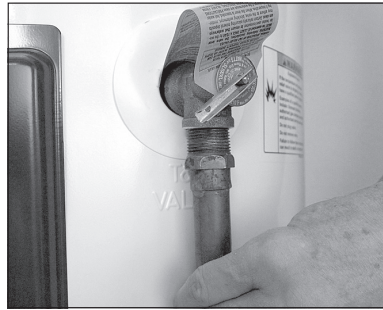
Most T&P Relief Valves are pre-installed at the factory. In some cases, they are shipped in the carton and must be installed in the opening marked and provided for this purpose and according to local codes.

▲ WARNING! To avoid serious injury or death from explosion, install a T&P Relief Valve according to the following instructions:

1 If your water heater does not have a factory installed T&P Relief Valve, install the new T&P Relief Valve that came with your water heater. Do not reuse an old T&P Relief Valve. Install a T&P Relief Valve discharge pipe according to local codes and the following guidelines:

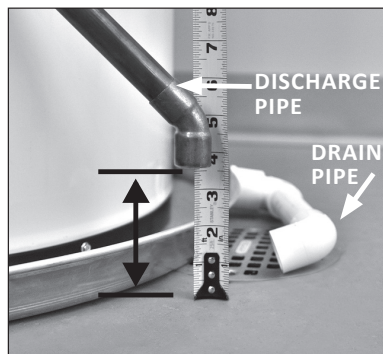
- The discharge pipe should be at least 3/4" inside diameter and sloped for proper drainage. Install it to allow complete drainage of both the T&P Relief Valve and the discharge pipe.

- The discharge pipe must withstand 250°F (121°C) without distortion. Use only copper or CPVC pipe. Do not use any other type of pipe, such as PVC, iron, flexible plastic pipe, or any type of hose.



The T&P Relief Valve discharge pipe must be installed properly and piped to an adequate drain.

- Terminate the discharge pipe a maximum of six inches above a floor drain or outside the building. Do not drain the discharge pipe into the drain pan; instead pipe it separately to an adequate drain. In cold climates, terminate the discharge pipe inside the building to an adequate drain. Outside drains could freeze and obstruct the drain line. Protect the drain from freezing.



The end of the T&P Relief Valve discharge pipe must stop no more than six inches above a floor drain or outside.

INSTALLATION

Step 6:

Install shutoff and tempering valves

1 If one is not already installed, install a manual shutoff valve in the cold water line that supplies the water heater. Install the shutoff valve near the water heater so that it is readily accessible. Only use valves that are compatible with potable water. Use only full-flow ball or gate valves. Other types of valves may cause excessive restriction to the water flow.

2 Install a Thermostatic Mixing Valve at each point-of-use (for example, kitchen sink, bathroom sink, bath, shower). Consult the valve manufacturer's instructions or a qualified person.



Install Thermostatic Mixing Valves at each point where hot water will be used.

▲ WARNING! Even if the water heater's thermostat(s) are set to a relatively low temperature, hot water can scald. Install Thermostatic Mixing Valves at each point-of-use to reduce the risk of scalding. (See page 4.)

3 For water heaters that are fed

by a solar water heating system (or any other pre-heating system), always install a Thermostatic Mixing Valve or other temperature limiting device in the inlet water supply line to limit water supply inlet temperature to 120°F. Solar water heating systems can supply water with temperatures exceeding 170°F and may result in water heater malfunction.

▲ WARNING! Hot water provided by solar heating systems can cause severe burns instantly, resulting in severe injury or death (see page 4).

Step 7:

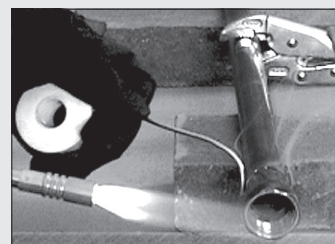
1 Connect the water supply

Determine the type of water pipes in your home. Most homes use copper water pipes, but some use CPVC or cross-linked polyethylene (PEX). Use fittings appropriate for the type of pipe in your home. Do not use iron or PVC pipe – they are not suitable for potable water.

2 Connect the cold water supply using 3/4 inch National Pipe Thread "NPT" to the fitting marked "C" (COLD). For ease of removing the water heater for service or replacement, connect the water pipes with a coupling called a union. We recommend using a dielectric-type union (available at local hardware stores). Dielectric unions can help prevent corrosion caused by tiny electric currents common in copper water pipes and can help extend the life of the water heater.

IF YOU HAVE COPPER PIPES:

If your home has copper water pipes, you can solder the water pipe connections or use compression fittings which don't require soldering. Compression fittings are easier to install than soldering pipe. Check with local plumbing officials to determine what types of pipe materials are suitable for your location. Do not use lead-based solder.



NOTICE: Do not solder pipes while they are attached to the water heater. The water heater's inlet and outlet connections contain non-metallic parts which could be damaged. The proper way to connect the water heater to copper water pipes is as follows:

- Solder a short length of pipe (about a foot or so) to a threaded adapter using only 95/5 tin-antimony or equivalent solder. Attach the threaded adapters to the water heater's connections (using thread sealant tape or pipe joint compound). Connect the home's water pipes by soldering, keeping the connections at the water heater cool with wet rags.

NOTICE: Most water heater models contain energy saving heat traps in the inlet and outlet connections to avoid the circulation of hot water within the pipes. Do not remove the heat traps.

3 Connect the hot water supply using 3/4 inch NPT to the fitting marked "H" (HOT). Follow the same connection guidelines as for the cold water supply.

4 Install insulation (or heat tape) on the water pipes especially if the indoor installation area is subject to freezing temperatures. Insulating the hot water pipes can increase energy efficiency.

5 Double check to make sure the hot and cold water pipes are connected to the correct hot and cold water fittings on the water heater.

6 If needed, install (or adjust) the home's Pressure Reducing Valve to 50-60 psi and install a Thermal Expansion Tank.



A Pressure Reducing Valve is required if your home's water pressure is above 80 psi.



The Thermal Expansion Tank should be pressurized with air, to match the home's incoming water pressure.

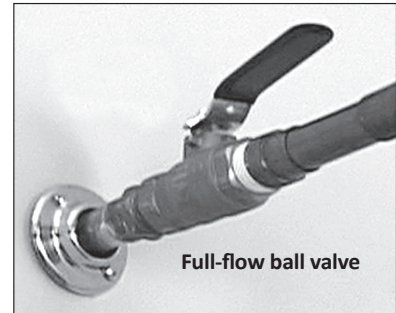
Step 8:

Verify connections and completely fill tank

To remove air from the tank and allow the tank to fill completely with water, follow these steps:

1 Remove the aerator at the nearest hot water faucet. This allows any debris in the tank or plumbing system to be washed out.

2 Turn the cold water supply back on.



Fully open the cold water supply valve.

3 Open a hot water faucet and allow the water to run until it flows with a full stream.

4 Let the water run full stream for three full minutes.

5 Close the hot water faucet and replace the aerator.

6 Check inlet and outlet connections and water pipes for leaks. Dry all pipes so that any drips or leaks will be apparent. Repair any leaks. Almost all leaks occur at connections and are not a tank leak.

INSTALLATION

INSTALLATION



NOTICE: The tank must be completely empty of air and full of water before connecting electrical power to avoid “Dry Firing.” Dry Firing may result in the upper element burning out. This is a common installation mistake. After you make the water connections, but before you connect the electrical power, open a hot water faucet and let the water run full until all the air is removed. Let the “hot” water run full for three minutes or longer before connecting any electrical wires. A Dry Fired upper heating element is an installation error and is not covered under warranty.

If Dry Firing occurs, replace the upper heating element according to the instructions on page 26.

Step 9:

Make electrical connections

⚠ WARNING! Working on an energized circuit can result in severe injury or death from electrical shock.

NOTICE: Do not turn electrical power on unless you are sure all of the air is out of the tank and the tank is completely full of water. If power is applied before the tank is completely full of water, the upper element will burn out (Dry Fire).

1 Be sure the electrical power to the water heater is turned OFF at the circuit breaker panel (or remove the circuit’s fuses).

2 Using a non-contact circuit tester, check the wiring to make certain the power is OFF.

3 Check the water heater’s data plate and ensure that the home’s voltage, wiring size (ampacity) and circuit breaker rating and type are correct for this water heater. Refer to the wiring diagram located on the water heater for the correct electrical connections. Ensure that wire sizes, type, and connections comply with all applicable local codes. In the absence of local codes, follow NFPA-70 and the current edition of the National Electric Code (NEC).

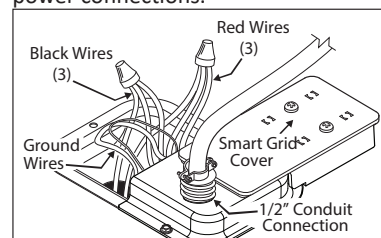
4 Remove the cover on the electrical junction box on the top of the water heater.



The water heater’s electrical requirements can be determined from the data plate.

5 Install wiring in an approved conduit (if required by local codes). Use a UL listed or CSA approved strain relief to secure the electrical wiring to the water heater.

6 Connect the ground wire to the green ground screw. Connect the home’s two power wires to the water heater’s four power wires (black to black, red to red). Use suitable wire nuts or other approved means to make the power connections.



Connecting the electrical wires.

7

Replace the junction box cover and secure with the screws provided.

▲ WARNING! Be sure cover is secured to reduce the risk of fire and electric shock.

Step 10:

Adjusting the Temperature

With the installation steps completed, you may adjust the water heater's temperature setting if desired.

1

Set the thermostat(s) to desired temperature. The thermostat(s) on this water heater have been factory set to approximately 120°F to reduce the risk of scald injury. You may wish to set a higher temperature to provide hot water for automatic dishwashers or laundry machines, to provide more hot water capacity, and to reduce bacterial growth. Higher tank temperatures (140° F) kill bacteria that cause a condition known as "smelly water" and can reduce the levels of bacteria that cause water-borne diseases.

▲ WARNING! Higher temperatures increase the risk of scalding, but even at 120°F, hot water can scald (see page 4).

If you increase the water heater's temperature setting, install Thermostatic Mixing Valve(s) at each point-of-use to reduce the risk of scalding.



Adjust Thermostatic Mixing Valves at each point-of-use to 120°F or lower.

To adjust the water heater's thermostat:

- Be sure the electrical power to the water heater is turned OFF at the circuit breaker panel (or remove the circuit's fuses).

▲ WARNING! Working near an energized circuit can result in severe injury or death from electrical shock. Check wires with a circuit tester to make sure power is off.

- Remove the upper and lower access panels and fold away the insulation.
- Turn the water temperature dial clockwise (>>) to increase the temperature, or counter clockwise (<<) to decrease the temperature. Adjust thermostat to the desired temperature set-point.

NOTE: Your water heater has only one thermostat, it is located behind the upper access panel.

- Fold the insulation back in place and replace the access panels.

▲ WARNING! Be sure panels are secured to reduce the risk of fire and electric shock.

2

Turn the electric power back on.

3

Wait for the water to heat up. It may take several hours for a tank of cold water to heat up.

If you have no hot water after two hours, refer to the Troubleshooting Section (see page 21).

▲ WARNING! If you have increased the temperature setting and the Thermostatic Mixing Valves are not set properly (or not installed) you could scald yourself while checking the temperature.

4

Check water temperature at several points of use in your home (for example, bathtub faucet, shower, or lavatory sink) and adjust the Thermostatic Mixing Valves as needed. If you aren't sure how to adjust the Thermostatic Mixing Valve settings, or aren't sure if you have Thermostatic Mixing Valves, contact a qualified person.

⚠ CAUTION! Hydrogen gas builds up in a hot water system when it is not used for a long period (two weeks or more). Hydrogen gas is extremely flammable. If the hot water system has not been used for two weeks or more, open a hot water faucet for several minutes at the kitchen sink before using any electrical appliances connected to the hot water system. Do not smoke or have an open flame or other ignition source near the faucet while it is open.

This image shows a single sheet of white paper with horizontal blue or grey ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.

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INSTALLATION

The Electronic Thermostat

IMPORTANT: The Grid Communication Adaptor must be removed before attempting to access the thermostat.

NOTE: for the Electronic Thermostat (ET) changes to remain in effect the Grid Communication Adaptor must not be reconnected, also read the “Risks During Operation” under the “Important Safety Information” section. If the instructions are not clear, contact a qualified service technician.

Water Temperature Adjustment

The Grid Communication Adaptor is intended to serve as the primary interface for operating the water heater; however, the Electronic Thermostat (ET) may control the water heater in the absence of the Grid Communication Adaptor.

The Electronic Thermostat consists of an electronics box that contains a low voltage power supply, the thermostat set point knob, relays to switch between the upper and lower heating elements, one control thermistor, a connector for the lower element control thermistor, microelectronics to convert the thermistor signals and perform switching and other logic functions, and a connector to tie the Electronic Thermostat (ET) to the Grid Communication Adaptor located on the top of the water heater. The majority of the self-diagnostics are located in the Electronic Thermostat (ET), including the dry-fire protection intelligence. The thermostat circuit is designed so that when the upper heating element calls for heat, the power is directed to that element even if the lower element is also calling for heat.

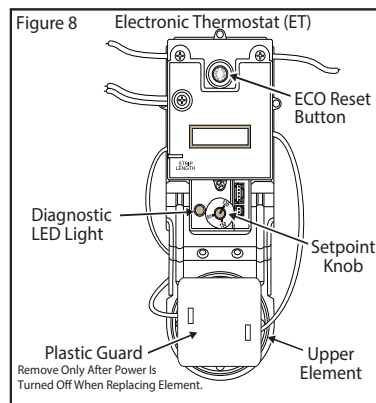
Diagnostic LED Light

The Green/Red LED light indicates the status of the electronic thermostat (See Figure 8).

▲ WARNING! Electrical Shock Hazard
Do not remove the plastic guard from over wiring.

Do not touch electrical wiring.

Failure to do so can result in death or electrical shock.



- Green LED will signal normal operation. The green LED will blink 2 times per second to indicate that power is applied to the upper heating element and at a faster rate (4 times per second) to indicate that the lower heating element is powered.

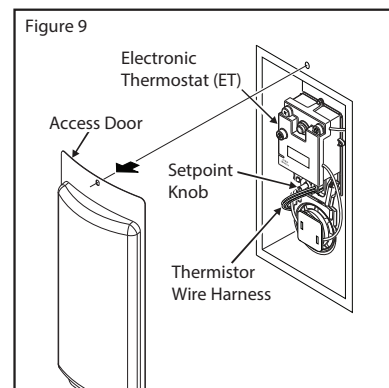
- Red LED will flash error codes. If a fault is detected by the electronic thermostat, the LED light indicator will use the red LED to indicate the fault detected. The flash code sequence is to consist of 1/2 second flashes of the red LED each separated by a 1/2 second off period.

The number of flashes indicates the fault code number.
(See diagnostic code chart section in this manual).

After the last 1/2 second “on” period, the LED will remain off until a total of 5 seconds has elapsed for the fault indication cycle (there is a 5 seconds delay before the fault flash pattern repeats).

After the 5 seconds are completed, the fault indication cycle is repeated starting with the first 1/2 second-flash. The flash sequence will be repeated as long as the fault remains. Only one fault can be declared at a time. **NOTE:** the green LED is turned off when a fault code is being displayed, even though the heater may be operating in limp mode with an element on. See diagnostic code chart section in this manual.

Adjust the thermostat to the desired temperature setting using the “Setpoint Knob”. **NOTE:** If the system diagnostic yields any codes, reference the Diagnostic Code section in this manual.



▲ WARNING! Electrical Shock Hazard
Do not remove the plastic guard from over wiring.

Do not touch electrical wiring.

Failure to do so can result in death or electrical shock.

Smart Grid Technology

The electric Smart Grid will enable significant improvements in electric power reliability and quality through reduction of peak power demand, while providing consumers the knowledge and ability to manage their energy consumption and utility costs.

According to the Department of Energy (DOE), since 1982 the growth in peak electricity demand has exceeded power transmission growth. This has caused more frequent blackouts and service interruptions, as well as an increase in the costly reserve capacity the power grid requires to meet higher peak demands. The increased demand for electrical power across the nation has also led to higher peak utility costs.

Smart appliances are one way to help mitigate this problem. By using advanced digital communication technologies, smart appliances will be able to communicate with local power company or home energy management systems, and react accordingly to save energy and money. For example, during peak demand periods the water heater may pause or delay its power consumption and thus reduce the load on the smart utility grid. Additionally, smart appliances will also communicate with consumers to let them know how much energy they are consuming. This will eventually allow consumers to control their appliances, manage energy usage, and to ultimately save money.

Smart Grid Control (Where Available)

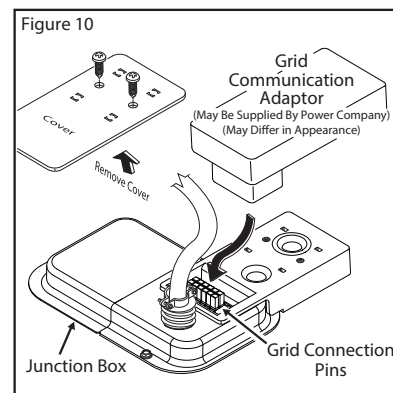
Where available, Grid Communication Adaptors may be supplied by the local power company or purchased from leading retailers. Please contact your local power company for more information.

To activate Smart Grid Control, remove the cover over the grid connection pins and plug in the grid communication adaptor. See Figure 10. NOTE: use only approved grid communication adaptors. This will enable the power company to communicate the peak demand periods for the water heater's power usage.

After this connection has been made, this will enable and allow acceptance of the power company communication of grid management requests. Unplugging will disable this feature and will allow the water heater to ignore grid management requests.

NOTE: Smart Grid will be disabled when the Grid Communication Adaptor is disconnected from the junction box wiring harness.

⚠ WARNING! Electrical Shock Hazard
Disconnect power before servicing.
Replace all parts and panels before operating.
Failure to do so can result in death or electrical shock.



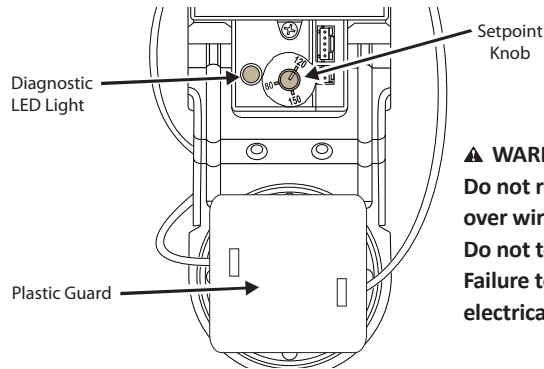
Smart Grid Connection

DIAGNOSTIC CODE CHART Electronic Thermostat (ET)

IMPORTANT: Before attempting to adjust the thermostat, read the "Adjusting The Temperature" section page 15.

The Electronic Thermostat (ET) is designed so that it may control the water heater without the Grid Communication Adaptor being operated, see page 17.

If the instructions are not clear, contact a qualified service technician.



⚠ WARNING! Electrical Shock Hazard
Do not remove the plastic guard from over wiring.
Do not touch electrical wiring.
Failure to do so can result in death or electrical shock.

(ET) DIAGNOSTIC LED	INDICATES	CORRECTIVE ACTION*
LIGHT ON (Green Flash)	Normal operation.	None
NO LIGHT	No electrical power to control board or diagnostic LED light burned out.	1. Check for blown fuses or tripped breaker. 2. If diagnostic LED light is burned out, replace Electronic Thermostat (ET).
1 FLASH (Red)	Dry-fire, electrical power on with the tank not completely full of water.	1. Turn off electrical power at breaker, add water. 2. Turn on electrical power at breaker. 3. See "Routine Maintenance" on page 25.
2 FLASHES (Red)	Water temperature exceeded high limit.	1. Turn off electrical power at the breaker. 2. Press the reset button (see Figure 8). 3. Turn on electrical power at breaker. 4. If error returns call a service technician for assistance.
3 FLASHES (Red)	Upper thermistor sensor failure. (Note: Upper thermistor sensor is part of the ET)	1. Turn off electrical power at the breaker. 2. Replace Electronic Thermostat (ET). 3. Turn on electrical power at breaker.
4 FLASHES (Red)	Upper element circuit failure. (Note: Lower element is still operable)	1. Turn off electrical power at the breaker. 2. Check element circuits for resistance of 5-25 ohms (replace if required). 3. Check wires at elements and Electronic Thermostat (ET) for damage. If this 4 flashes condition continues, replace Electronic Thermostat (ET). 4. Turn on electrical power at breaker.
5 FLASHES (Red)	Lower element circuit failure. (Note: Upper element is still operable)	1. Turn off electrical power at the breaker. 2. Check element circuits for resistance of 5-25 ohms (replace if required). 3. Check wires at elements and Electronic Thermostat (ET) for damage. If this 5 flashes condition continues, replace Electronic Thermostat (ET). 4. Turn on electrical power at breaker.
6 FLASHES (Red)	Electronic Thermostat (ET) failure (Internal processor).	1. Turn off electrical power at the breaker. Now turn on electrical power to see if error clears. If error has not cleared, replace Electronic Thermostat (ET). 2. Turn on electrical power at breaker.
7 FLASHES (Red)	Lower thermistor sensor failure.	1. Turn off electrical power at the breaker. 2. Check electrical connections at Electronic Thermostat (ET). 3. Replace Lower Thermistor Sensor. 4. Turn on electrical power at breaker.
8 FLASHES (Red)	Electronic Thermostat (ET) error	1. Turn off electrical power. 2. Check wiring at Electronic Thermostat (ET) for damage. 3. Turn on electrical power at breaker. 4. If this code flashes condition continues, replace the Electronic Thermostat (ET).

(ET) DIAGNOSTIC LED	INDICATES	CORRECTIVE ACTION*
9, 10, 11 or 12 FLASHES (Red)	Electronic Thermostat (ET) error	1. Turn off electrical power. 2. Check wiring at Electronic Thermostat (ET) for damage. 3. Turn on electrical power at breaker. 4. If this code flashes condition continues, replace the Electronic Thermostat (ET).

*These instructions are brief and intended as guidance for a qualified person. If you lack the necessary skills to perform these procedures call our Technical Assistance Hotline which is listed on the water heater's warranty sheet.

TROUBLESHOOTING

▲ **WARNING!** Working near an energized circuit can result in severe injury or death from electrical shock.

▲ **WARNING!** When you are finished, be sure all covers are secured to reduce the risk of fire and electric shock.

No Hot Water

The most likely reasons for an electric water heater to produce NO hot water are:

- No electric power—a common problem with new installations
- Burned out upper element (Dry Fired) — a common problem with new installations
- Tripped Energy Cut Off (red button on upper thermostat)
- The water heater's inlet and outlet connections are reversed (usually only in new installations)
- Broken upper thermostat (or wiring)
- A leak in the hot water side of the plumbing system that exceeds the water heater's heating capacity and makes it appear that the water heater is producing little to no hot water

Follow these steps to diagnose and correct common electrical problems:

1 Check the electric power to the water heater. No hot water is often caused by a problem with the home's electrical wiring or circuit breakers. You'll need a non-contact circuit tester. Follow these guidelines:

- Locate the water heater's circuit breaker and turn it off (or remove the circuit's fuses).

- Locate the electrical junction box on top of the water heater and remove the cover.
- Identify the two power wires. The power wires are usually black/black or black/red—the green or copper wire is the ground wire.



Use a non-contact circuit tester to check for electrical power.

- Turn the circuit breaker back on (or install the fuses) and check the power on both incoming power wires using a non-contact circuit tester.
- Turn the power off and replace the cover on the electrical junction box.

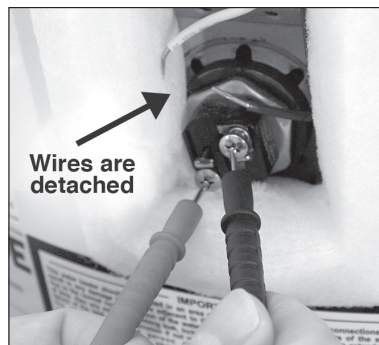
If the water heater is not getting power, contact a qualified person to have your home's wiring or circuit breakers checked.

2 Check the upper heating element. If the water heater is getting electrical power, check to see if the upper heating element has burned out. If the upper element is burned out, you'll have no hot water. To check the upper element, you'll need a multimeter capable of reading resistance.

- Turn the power OFF at the circuit breaker or remove fuses.
- Remove the upper access panel.
- Remove the insulation to access the upper thermostat and heating element.

3 Check the top two screws of the upper thermostat using a non-contact circuit tester and confirm that power is off (screw terminals 1 and 3 in photo on next page).

- With the electrical power off, remove the two power wires from the upper heating element.



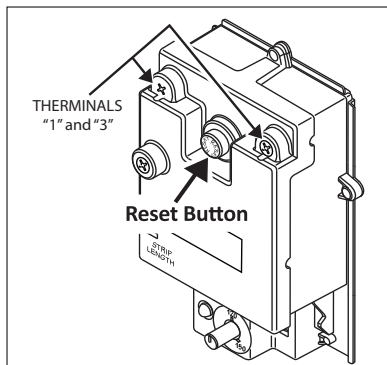
Use a multimeter to check the resistance of the upper heating element.

4 Check the resistance of the upper heating element using a multimeter. Measure the resistance between the two screw terminals on the upper heating element. A good element will have a resistance ranging between 5 and 25 Ohms. If the resistance is:

Outside this range. Replace the element (see the Routine Maintenance section on page 26). On a new water heater, a burned out upper heating element is almost always caused by turning the power on before the tank was completely full of water (Dry Fire). (See Step 8 in the Installation section.)

Within this range. Reattach the power wires, making sure the wires are in good condition and the connections are clean and tight. Next, check the following:

5

Check/Reset Energy Cut Off (ECO) Button.

Energy Cut Off (ECO) button

The Energy Cut Off (ECO) shuts off power to the water heater's elements if the temperature of the water in the tank gets too hot. If the ECO has tripped, you'll have no hot water. A tripped ECO can usually be reset, but you should have a qualified person investigate the cause of the overheating and repair the problem. Do not turn the power back on until the cause of the overheating has been identified and repaired.

To check the Energy Cut Off (ECO)

- Turn off the power to the water heater.
- ▲ **WARNING! Working near an energized circuit can result in severe injury or death from electrical shock. Check power wires in the electrical junction box with a non-contact circuit tester to make sure power is off.**
- Press the red ECO reset button (see photo above).
- The ECO was tripped if you hear a click when it is reset. In most cases, a tripped ECO indicates that the tank overheated due to a problem with one of the elements or thermostats—have a qualified person check the upper and lower elements and thermostats and replace if necessary.
- The ECO was not tripped if you didn't

hear a click. In that case, the upper thermostat should be checked by a qualified person.

- Replace the insulation and the upper access panel.

WARNING! Be sure all covers are secured to reduce the risk of fire and electric shock.

Insufficient Hot Water or Slow Hot Water Recovery

▲ **WARNING! Because of the increased risk from scalding, if you set the water heater's thermostat(s) higher than 120°F, Thermostatic Mixing Valves at each point-of-use are particularly important (see page 4).**

If the hot water is simply not warm enough, there are several possible causes:

- Faulty Thermostatic Mixing Valve in a faucet or shower control (check other faucets in the house for hot water)
- One (or both) of the thermostats set too low
- Water heater's capacity too small (or usage too high)
- Reversed plumbing connections or melted dip tube (usually found soon after new installation)
- Plumbing leak
- Bad lower heating element (or lower thermostat)
- Low supply voltage

Thermostatic Mixing Valves. If the hot water is simply not warm enough, make sure the faucet you are checking doesn't have a defective Thermostatic Mixing Valve. Many shower controls now have built-in mixing valves. If these devices fail, they can reduce the amount of hot water the shower or faucet delivers even though there is plenty of hot water in the tank. Always

check the water temperature at several faucets to make sure the problem is not in a faucet or shower control.

Thermostats set too low. If the water temperature at several faucets is too cool, adjust the thermostat(s) according to the instructions in Step 10 of the Installation section of this manual.

Undersized water heater. If your water heater runs out of hot water too quickly, it may be too small for your needs. If the water heater is old, consider replacing it with a larger model. If the water heater is in good condition, you may be able to meet your family's hot water needs with the existing water heater by installing Thermostatic Mixing Valves at each point-of-use and then turning the thermostat(s) to a higher setting. See page 15, step 10.

You can also reduce your home's hot water needs by washing clothes in cold water, installing flow restrictors on shower heads, repairing leaky faucets, and taking other conservation steps.

Reversed connections or melted dip tube. Check the hot and cold connections and make sure your home's hot water pipe is connected to the hot water outlet on the water heater. Usually, reversed connections are found soon after the installation of a new unit. If copper pipes were soldered while they were attached to the water heater, the dip tube may have melted. The dip tube is a long plastic tube inside the tank attached to the cold water inlet. If the dip tube has melted, it can be replaced by removing the cold water inlet connection, removing the old dip tube and installing a new one.

Plumbing leak. Even a small leak in the hot water side of the home's plumbing system can make it appear that the water heater is producing little to no hot water. Locate and repair the leak.

Lower heating element not working. If the lower heating element (or, more

TROUBLESHOOTING

rarely, the lower thermostat) is not working, you will have some hot water but not as much as before. Because the lower element does most of the work, the lower element usually wears out before the upper element. Replace the lower element and/or thermostat if necessary (see page 26-27).

Temperature Too High

If the water temperature is too hot:

- Install or adjust the Thermostatic Mixing Valves for each point-of-use (see manufacturer's instructions), or
- Adjust the thermostat(s) on the water heater (see Step 10 in the installation section of this manual).

A nonfunctioning thermostat or a shorted heating element can cause extremely hot water. If the Temperature and Pressure Relief Valve (T&P Valve) releases large amounts of very hot water, it is likely due to a shorted heating element, or more rarely a nonfunctioning thermostat, or the thermostat does not fit snugly against the tank. Very high water temperatures can also cause the Energy Cut Off (ECO) to trip (see page 27). Turn power off until this problem is fixed.

Low Water Pressure

Check both the cold and hot water at a sink to determine if the lower pressure is only on the hot water side. If both hot and cold faucets have low pressure, call your local water utility. If the low pressure is only on the hot water side, the primary causes of this are:

- Melted heat traps or dip tube. Soldering copper pipes while they are connected to the water heater can melt the heat traps inside the hot and cold water connections or the dip tube (cold water side). Melted heat traps or a melted dip tube can restrict the flow of hot water. If that's the case, replace

the heat traps or dip tube.

- Partially closed supply valve. Open the water heater's supply valve fully.

Drips from T&P Relief Valve Discharge Pipe

A small amount of water dripping from the Temperature and Pressure (T&P) Relief Valve usually means the home's water pressure is too high or you need a properly sized and pressurized Thermal Expansion Tank. Refer to Step 1 in the Installation section of this manual for more information. A large amount of hot water coming from the T&P discharge pipe may be due to the tank overheating.

▲ WARNING! Do not cap or plug the T&P relief valve or discharge pipe, and do not operate the water heater without a functioning T&P Relief Valve - this could cause an explosion.

Water pressure too high. High water pressure can cause the T&P Relief Valve to drip. Install a Pressure Reducing Valve (PRV) on the main cold water supply line. Adjust the PRV to between 50 and 60 psi.

Thermal Expansion Tank. Install a Thermal Expansion Tank. If a Thermal Expansion Tank is already installed and the T&P Relief Valve discharge pipe drips, the Thermal Expansion Tank may be pressurized to the wrong pressure or the internal bladder may be defective. Refer to the instructions that came with the Thermal Expansion Tank for more information.

Debris. In rare cases, debris can stick inside the T&P Relief Valve preventing the valve from seating fully. In that case, the T&P Relief Valve discharge pipe will drip. You may be able to clear debris from the T&P Relief Valve by manually operating the valve, allow-

ing small quantities of water to flush out the debris. Refer to the T&P Relief Maintenance section of this manual.

▲ WARNING! When manually operating the temperature-pressure relief valve, make sure that no one is in front of or around the discharge outlet. The water may be extremely hot and could cause severe burns. Also ensure that the water discharge will not cause property damage.

If the water pressure is between 50 and 60 psi, a Thermal Expansion Tank is installed and properly pressurized, and the valve has been cleared of any debris, and it still drips, the valve may be broken—have a qualified person replace the T&P relief valve.

Water Odor

Harmless bacteria normally present in tap water can multiply in water heaters and give off a "rotten egg" smell. Although eliminating the bacteria that causes "smelly water" with a Chlorination system is the only sure treatment, in some cases, the standard anode rod that came with your water heater can be replaced with a special zinc anode rod which may help reduce or eliminate the odor. Contact a qualified person.

NOTE: To protect the tank, an anode rod must be installed in the water heater at all times or the warranty is void.

In cases where the "rotten egg" smell is pronounced, you can raise the tank temperature to 140°F in order to reduce bacteria growth in the tank.

▲ WARNING! Because higher temperatures increase the risk of scalding, if you set the thermostat(s) higher than 120°F, Thermostatic Mixing Valves at each point-of-use are particularly important (see page 4). ■

MAINTENANCE

Routine Maintenance

Routine maintenance will help your water heater last longer and work more efficiently. If you can't perform these routine maintenance tasks yourself, contact a qualified person.

Water Heater Maintenance

After the first six months, drain and flush the water heater and inspect the anode rod. Depending on the hardness of your water, repeat this process at least annually, or more frequently if needed. From time to time you may need to replace a heating element or a thermostat. All three maintenance tasks are described below.

Draining and Flushing the Water Heater

Tap water contains minerals that can form lime deposits on heating elements or sediment in the bottom of the tank. The amount of lime deposits or sediment depends on the hardness of your tap water. The rate at which sediment builds up depends on water quality and hardness in your area, the temperature settings, and other variables. We recommend draining and flushing the water heater after the first six months of operation to determine the amount of sediment build up. Draining sediment extends the life of the tank, heating elements, and drain valves.

- In areas with very hard water, remove and check the heating elements whenever you drain the tank. If you have heavy lime deposits on heating elements, you will need to replace them more often.
- Sediment may form large masses that can prevent the tank from draining. Have a qualified person use a de-liming agent suitable for potable water to remove the sediment buildup.

- In most cases, it is easier and cheaper to replace lime-encrusted elements than trying to remove heavy lime deposits.

To drain and flush the tank:

- 1 Locate the water heater's circuit breaker and turn it OFF (or remove the circuit's fuses).



- 2 Open a hot water faucet and let the hot water run until it is cool.



▲ WARNING! Be sure the water runs cool before draining the tank to reduce the risk of scalding.

- 3 Connect a garden hose to the drain valve and place the other end of the hose in a drain, outside, or in buckets.
- 4 Turn the cold water supply valve OFF.
- 5 Open the drain valve on the water heater.

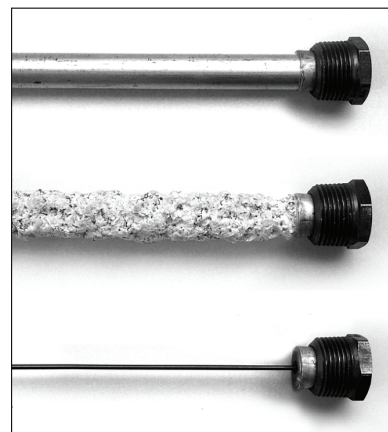


- 6 Open a hot water faucet to help the water in the tank drain faster.

NOTICE: DO NOT turn electrical power

back on unless the tank is completely full of water.

- 7 Remove and inspect the anode rod (see Repair Parts Illustration on back cover for location of the anode rod). Replace the anode rod if it is depleted. Turn power off. Run hot water until it's cool. Turn cold water supply valve off. Open a hot water faucet to depressurize tank. Locate and remove the black plastic cover marked "Anode Rod". Use a "key hole" saw or similar tool to remove the foam insulation covering the anode rod. Once the anode rod is exposed, use a 11/16" socket wrench with an extension to remove it. Inspect the anode rod and replace if depleted. Apply Thread sealant tape or pipe joint compound and reinstall the anode rod tightly. It is not necessary to replace the foam removed to access the anode. Turn cold water supply valve on. When hot water runs full, close hot water faucet. Check for leaks and repair if necessary. Turn power on.



Anode Rods from new (top) to partially depleted (middle) to fully depleted stage (bottom)

Anode Rod. The anode rod is a sacrificial metal rod that helps reduce corrosion and premature failure (leaks) in the tank. The anode rod is a consumable item. Inspect the anode rod after the first six months of operation when you drain and

MAINTENANCE

flush the tank. Replace the anode rod if it is substantially worn out or depleted. Thereafter, inspect the anode rod annually or more frequently if needed. If you use a water softener, your anode rod will deplete faster than normal. Inspect the anode rod more frequently, replacing the anode rod as needed. Obtain new anode rods from your local hardware stores or have a qualified person replace it. (Anode rods are a consumable item and are not covered under warranty).

8 If the sediment was present when the tank was drained, flush the tank by opening the cold water supply valve and letting the water run until no more sediment drains from the tank. Close the drain valve when you are done.

NOTICE: Do not turn power back on until the tank is completely full of water. For complete instructions on filling the tank, follow Step 8 in the Installation section.

9 Refill the tank by opening the cold water supply valve. Make sure a hot water faucet is open and the drain valve is closed. Allow the hot water to run full for at least three minutes to make sure the tank has all the air removed and is completely full of water. Failure to perform this step can cause the upper heating element to burn out. Once you are certain the tank is completely full of water, close the hot water faucet.

10 Restore power to the water heater. It may take two hours for the tank to heat up.

Replacing the Heating Element

▲ WARNING! Working on an energized circuit can result in severe injury or death from electrical shock. Turn

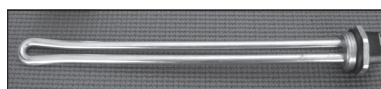
power off. Check wires with a non-contact circuit tester to make sure power is off. When you are finished, be sure all covers are secured to reduce the risk of fire and electric shock.

If you are not comfortable replacing a heating element or thermostat yourself, have this work done by a qualified person. To replace the heating element, you'll need the following tools and supplies:



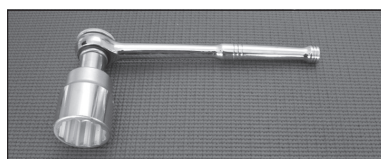
Non-Contact Circuit Tester

- Always turn power OFF and check the power wires with a non-contact circuit tester before working on the water heater.



Heating Element (with gasket)

- Check your water heater's data plate for the correct wattage and voltage. Heating elements are available at most hardware stores.



Element Wrench

- Some regular sockets (1 1/2 inch) may work, but regular sockets are often beveled and may slip. Inexpensive element wrenches are available at local hardware stores.
- Garden hose to drain the tank

- Hand dishwashing soap to lubricate the gasket
- A clean cloth to clean the threaded opening
- A flat blade and a Phillips screwdriver

Steps for Replacing the Heating Element:

1 Turn the power OFF at the circuit breaker or remove fuses.



2 Open the electrical junction box on top of the water heater. Using a non-contact circuit tester, check the power wires to make certain the power is OFF.



3 Open a hot water faucet and let the hot water run until it is cool.



▲ WARNING! Be sure the water runs cool before draining the tank to reduce the risk of scalding.

4 Connect a garden hose to the drain valve and place the other end of the hose in a drain or outside (or use buckets). Turn OFF the cold water valve that supplies the water heater. Open the drain valve on the water heater. Opening a hot water faucet will help the tank drain faster.

5 Remove the upper or lower access panel on the water heater, and then fold back the insulation and remove the plastic element/thermostat cover.



6 With the tank drained and power off, remove the power wires from the element you intend to replace.

7 Remove the bad element using an element wrench.

8 Make sure the new element is the correct replacement by referring to the water heater's data plate for voltage and wattage information.

9 Clean the threads in the tank opening with a rag. Insert the new element equipped with a rubber gasket. **NOTE:** Use a drop of hand dishwashing liquid to lubricate the gasket to help avoid damaging the gasket as it is being tightened. Tighten with an element wrench.

NOTICE: Do not turn power back on until the tank is completely full of water. For

complete instructions on filling the tank, follow Step 8 in the Installation section.

10 Refill the tank by opening the cold water supply valve. Make sure a hot water faucet is open and the drain valve is closed. Allow the hot water to run full for at least three minutes to make sure the tank has all the air removed and is completely full of water. Failure to perform this step can cause the upper heating element to burn out. Once you are certain the tank is completely full of water, close the hot water faucet.



11 Check the newly installed element for leaks. If a leak is present, tighten the element until the leak stops. If you cannot stop the leak, drain the tank and remove the element. Inspect the gasket for damage. If the gasket is damaged, replace the gasket and re-install the element.

12 Once the element is successfully installed and there are no leaks, replace the power wires, thermostat cover, insulation, and access panel. Make sure all wire connections are tight. Replace the cover on the electrical junction box.

13 Restore power to the water heater. It may take two hours for the tank to heat up.

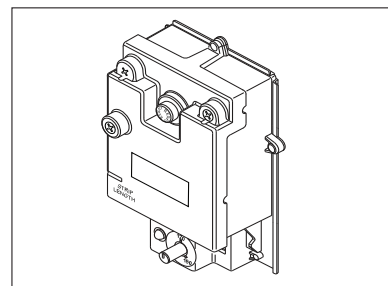
Replacing the Thermostat

⚠ WARNING! Working on an energized circuit can result in severe injury or death from electrical shock. Turn power off. Check wires with a non-contact circuit tester to make sure

power is off. When you are finished, be sure all covers are secured to reduce the risk of fire and electric shock.

To replace the thermostat, you'll need the following tools and supplies:

- A non-contact circuit tester. Always turn power OFF and check with a non-contact circuit tester before working on the water heater.



- A replacement thermostat (available at hardware stores). Take the old thermostat to the store to ensure the replacement thermostat is correct.
- A business card to check the gap between the thermostat and the tank
- Tape and a permanent marker to mark the wires
- A flat blade and a Phillips screwdriver

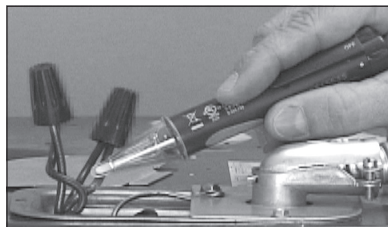
Steps for Replacing the Thermostat:

1 Turn the power OFF at the circuit breaker or remove fuses.

NOTICE: It is not necessary to drain the tank to replace a thermostat.

2 Open the electrical junction box on top of the water heater. Using a non-contact circuit tester, check the power wires to make certain the power is OFF.

MAINTENANCE



3 Remove the upper or lower access panel on the water heater and carefully fold back the insulation and plastic element/thermostat cover.

4 Make sure the replacement thermostat matches the original thermostat.

5 Mark the wires with tape so you'll know how to put them back on.

6 Disconnect the wires from the bad thermostat and remove the thermostat from the metal mounting clip.

7 Install the new thermostat in the metal mounting clip.

8 Make sure the new thermostat fits snugly against the tank. You should NOT be able to slip a business card between the thermostat and the tank. If you can, bend the thermostat mounting clip until the thermostat fits tightly against the tank.

9 Attach the wires following the wiring diagram on the water heater's label. Make sure all wire connections are tight.

10 Replace the plastic element/thermostat cover, insulation, and access panel.

11 Replace the cover on the electrical junction box.

12 Restore power to the water heater. It may take two hours for the tank to heat up.

T&P Relief Valve Maintenance

Read and follow the operating and annual maintenance instructions provided by the manufacturer of the T&P Relief Valve (yellow label attached to T&P Relief Valve). If no label is attached to the T&P Relief Valve, follow the instructions in this section. Minerals in the water can form deposits that cause the valve to stick or create blocked passages, making the T&P Relief Valve inoperative. Follow these guidelines:

- At least annually, operate the T&P Relief Valve manually to ensure the waterways are clear and the valve mechanism moves freely (above). Before operating the valve manually, check that it will discharge in a place for secure disposal. If water does not flow freely from the end of the discharge pipe, turn OFF the power to the water heater. Call a qualified person to determine the cause.



▲ WARNING! Hot water will be released. Before operating the T&P relief valve manually, check that it will discharge in a safe place. If water does

not flow freely from the end of the discharge pipe, turn the power to the water heater OFF. Call a qualified person to determine the cause.

- At least every five years, have a qualified person inspect the T&P Relief Valve and discharge pipe. Damage caused by corrosive water conditions, mineral deposits, or other problems can only be determined when a qualified person removes and inspects the valve and its components.
- Note that a dripping T&P Relief Valve is usually caused by the home's water pressure being too high or the lack of a Thermal Expansion Tank. If your T&P Relief Valve drips, see page 24.



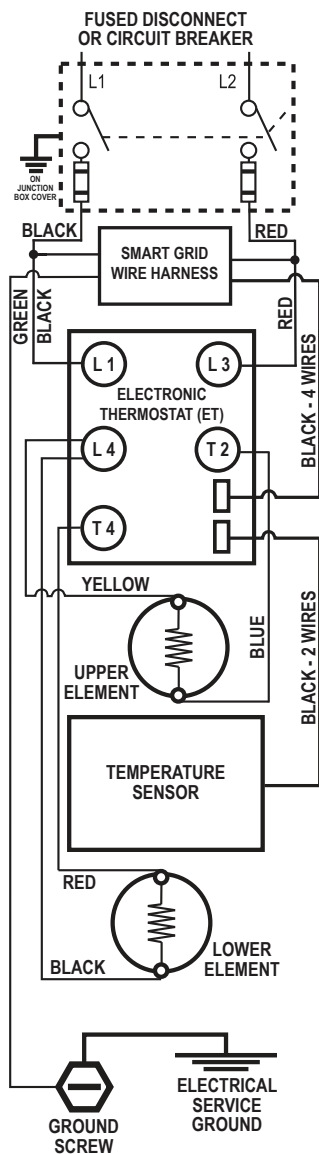
NOTES

This image shows a single sheet of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.

NOTES

DIAGRAMS

Thermostat Wiring Diagram



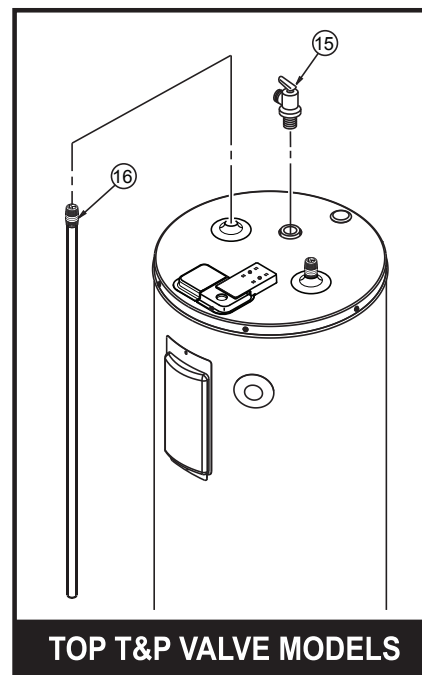
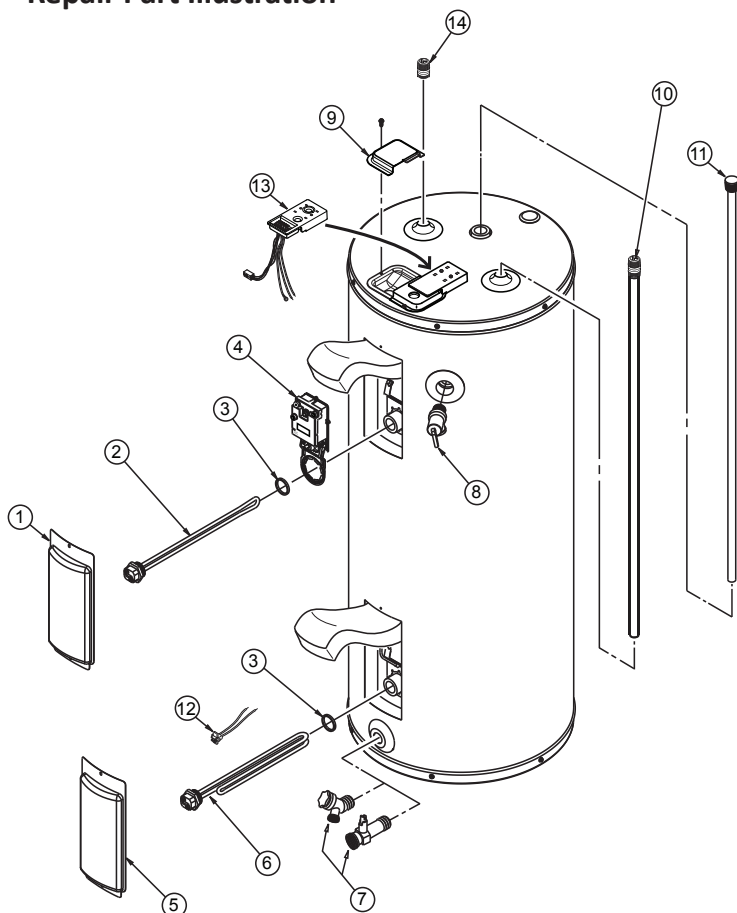
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BRANCH CIRCUIT SIZING GUIDE						
Based on N.E.C. NFPA NO. 70 - 1999						
WATT LOAD	Recommend Over Current Protection Rating			Copper Wire Size AWG Based on N.E.C. Table 310-16 (60°C)		
				120 V	208 V	240 V
1500*	15	15	15	12	14	14
2000	20	15	15	10	14	14
2500	30	15	15	10	14	14
3000	30	20	15	8	12	12
3500	-	20	20	-	10	12
4000	-	25	20	-	10	10
4500	-	30	25	-	10	10
5000	-	30	30	-	10	10
5500	-	-	30	-	-	10

* Wattages less than 1500 may be wired 14 gage with a maximum 15 amp protection.

REPAIR PARTS

Repair Part Illustration



Repair Parts

Repair parts may be ordered through your plumber, local distributor, home improvement center, or by calling Technical Assistance Hotline which is listed on the water heater's warranty sheet. When ordering repair parts, always give the following information:

1. Model, serial and product number
2. Item number
3. Parts description

Repair Parts List

Legend

- Special anode rod (See page 25)
- Temperature and Pressure Relief Valve is required, but may not be factory installed.

ITEM No.	PARTS DESCRIPTION
1	ACCESS DOOR
2	UPPER ELEMENT ▲
3	ELEMENT GASKET
4	ELECTRONIC THERMOSTAT (ET)
5	ACCESS DOOR
6	LOWER ELEMENT ▲
7	DRAIN VALVE
8	TEMPERATURE AND PRESSURE RELIEF VALVE ■
9	JUNCTION BOX COVER
10	DIP TUBE (INCLUDES NIPPLE AND HEAT TRAP)
11	ANODE ROD ◆
12	THERMISTOR SENSOR
13	SMART GRID WIRE HARNESS ASSEMBLY
14	HEAT TRAP
15	TOP TEMPERATURE AND PRESSURE RELIEF VALVE
16	HEAT TRAP/ANODE ROD COMBINATION ◆

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Limited Warranty provided by Manufacturer.

LIMITED WARRANTY

RESIDENTIAL TYPE WATER HEATER FOR INSTALLATION IN A SINGLE FAMILY DWELLING

When referencing the water heater for service or warranty, please refer to the model number printed on the data plate. Use the table below to determine the warranty term.

MODEL NUMBER EXAMPLE: EN6-40-DORS

↖ Warranty Code

MODEL NUMBER EXAMPLE: GSX 50 RCT

↖ Warranty Code

Warranty Code:	G6, S6 or N6	EE8, W8, or N8	GX, NX, or SX
Tank Warranty Term:	6 Years	8 Years	10 Years
Parts Warranty Term:	6 Years	8 Years	10 Years

A. WHO IS COVERED

STATE INDUSTRIES, INC. AND ITS SUPPLIERS, (herein collectively referred to as "Manufacturer") warrants only to the original consumer purchaser (hereinafter "Owner") of the water heater so long as he or she continuously occupies the single family dwelling in which this water heater is initially installed for the period specified below. This warranty is not transferable. The warranty is restricted to the water heater used in a single-family residence in the United States of America. This warranty is reduced to one year if the water heater is used in a commercial, or industrial application, or if the water heater is used to supply more than one dwelling unit.

B. WHEN IT IS COVERED

The water heater is warranted only when it is installed, operated and maintained in accordance with the printed instructions accompanying the water heater. A water heater should be installed in such a manner that, if the tank or any connection thereto should leak, the resulting flow of water will not cause damage to the area in which it is installed. A water heater's temperature and pressure relief valve must be piped to the nearest drain to avoid damage in the event the valve is actuated. For detailed instructions read the manual accompanying the water heater and review drawings in the manual. Any replacement product will carry the remainder of the original warranty.

C. WHAT THE MANUFACTURER WILL DO AND THE PERIOD OF COVERAGE

1. The Inner Tank – If the inner tank leaks within the warranty period listed on the data plate label after the original installation, Manufacturer will furnish a new water heater of Manufacturer's then prevailing comparable model. If industry standards, product improvements or product obsolescence prohibit Manufacturer from furnishing an identical model replacement water heater under this warranty, the Owner will be furnished with a new water heater of comparable capacity and functionality; however, the Owner will be charged for the additional value of the item(s) which Manufacturer has incorporated in the replacement water heater.
2. Component Part – If any component part other than the inner tank proves to Manufacturer's satisfaction to be defective in material or workmanship within the warranty period listed above, the Manufacturer will furnish the Owner with a replacement for the defective part(s). Anode rods are consumable maintenance parts and are excluded from warranty coverage.
3. Return of Defective Water Heater and Component Parts – Manufacturer reserves the right to examine the alleged defect in the water heater or component part(s), and it will be the Owners obligation (See paragraph D.5) to return the water heater and/or component part(s) to the Manufacturer.
 - a. When returning a water heater it must include all component parts and the data plate label.
 - b. When returning component part(s), they must be individually tagged and identified with the water heater's product number, model number, serial number, date of purchase and date of installation.

D. WHAT THIS WARRANTY DOES NOT COVER

1. THE LIMITED WARRANTY STATED HEREIN IS IN LIEU OF ANY AND ALL WARRANTIES, EXPRESS OR IMPLIED (WHETHER WRITTEN OR ORAL), INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.
2. MANUFACTURER SHALL NOT BE LIABLE FOR ANY INCIDENTAL, CONSEQUENTIAL, SPECIAL OR CONTINGENT DAMAGES OR EXPENSES, ARISING, DIRECTLY OR INDIRECTLY, FROM ANY DEFECT IN THE WATER HEATER OR THE USE OF THE WATER HEATER.
3. Manufacturer shall not be liable for any water damage arising, directly or indirectly, from any defect in the water heater or component part(s) or from its use.
4. Manufacturer shall not be liable under this warranty and the unit and/or parts will not be covered, and have no effect if the following events occur:
 - a. The water heater or any of its component parts have been subject to misuse, alteration, neglect or accident; or
 - b. The water heater has not been installed in accordance with the applicable local plumbing and/or building code(s) and/or regulations or in their absence, with the latest issue of the National Fuel Gas Code Z223.1, and/or National Electric Code; or
 - c. The water heater is not installed, operated and maintained in accordance with the printed Manufacturer's instructions, including if the water heater has any additional aftermarket equipment introduced into the sealed system not approved by the manufacturer; or
 - d. The water heater or any of its component parts are damaged or fails from operation with an empty or partially empty tank (such as, but not limited to elements burned out in a dry tank); or
 - e. The water heater or any part has been under water; or
 - f. The water heater is exposed to highly corrosive atmospheric conditions; or
 - g. The water heater is not continuously supplied with potable water; or
 - h. The water heater replacement is requested for reasons of noise, taste, odor, discoloration and/or rust; or
 - i. The water heater is not operated within the factory calibrated temperature limits; or
 - j. The water heater is supplied or operated with desalinated (deionized) water; or
 - k. The water heater is relocated from its original installation location; or
 - l. The water heater is installed outdoors (this water heater is intended only for indoor installation); or
 - m. The water heater is converted, or is attempted to be converted, from one voltage or wattage to another, if an electric water heater, or from one type gas to another, if a gas water heater; or

(Continued on back)

- n. The water heater has not been fired at the factory rated input and fuel for which it was factory built; or
 - o. The water heater or any of its component parts fail due to sediment build-up; or
 - p. The water heater does not have installed a temperature and pressure relief valve, certified to ANSI Z21.22 and approved by the American Society of Mechanical Engineers; or
 - q. The water heater or any of its component parts are exposed to fire, floods, lightning, or any other act of Nature; or
 - r. The water heater is installed in a closed system without adequate provision for thermal expansion.
5. Except when specifically prohibited by the applicable state law, the Owner, and not the Manufacturer, shall be liable for and shall pay for all charges for labor or other expenses incurred in the removal, repair or replacement of the water heater or any component part(s) claimed to be defective or any expense incurred to remedy any defect in the product. Such charges may include, but are not necessarily limited to:
- a. All freight, shipping, handling and delivery costs of forwarding a new water heater or replacement part(s) to the owner.
 - b. All costs necessary or incidental in removing the defective water heater or component part(s) and installing a new water heater or component part(s).
 - c. Any material required to complete, and/or permits required for, installation of a new water heater or replacement part(s), and
 - d. All costs necessary or incidental in returning the defective water heater or component part(s) to a location designated by the manufacturer.
6. The terms of this Limited Warranty cannot be modified by any person, whether or not he/she claims to represent or act on behalf of the Manufacturer.

E. HOW STATE LAW MAY RELATE TO THIS WARRANTY

Some States do not allow limitations on how long an implied warranty lasts so the above limitation may not apply to you. Similarly, some States do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you. Further, this warranty gives you specific legal rights and you may also have other rights, which may vary from State to State.

- F.** If a failure of this water heater causes damage to property or injury to a person, it is the obligation of the person, insurance carrier or other entity intending to make a claim against the Company to retain the water heater in its condition at the time of the incident. Failure to do so may result in denial of a claim and will be deemed material and prejudicial spoliation of evidence. Damage or injury caused by improper installation, inadequate maintenance or other damage caused after the point of sale will not be the responsibility of the Company. For faster response times, home and building owners are encouraged to work with their homeowner or property insurance carrier before submitting a claim.

G. HOW THE ORIGINAL OWNER CAN MAKE A WARRANTY CLAIM

Use the contact information below whenever any inquiry or request is made, be sure to include the water heater's product number, model number, serial number, date of purchase, date of installation, and location of installation.

FOR TECHNICAL ASSISTANCE, SERVICE OR WARRANTY INFORMATION

PHONE TOLL FREE: 1-800-365-0024

WEBSITE: WWW.STATEWATERHEATERS.COM

OR

**Write to: State Industries, Inc.,
500 Tennessee Waltz Parkway,
Ashland City, Tennessee 37015.**

HPTET.INSTALL.0820

HYDRAPRO

HYDRAPRO tanks are engineered to safely maintain optimal water pressure levels in domestic water heating systems. Thermal expansion tanks work in conjunction with a backflow preventer or check valve. HYDRAPRO Thermal Expansion Tanks are equipped with a stainless steel system connection and have a corrosion-resistant, appliance grade finish. Inside each tank is a heavy-duty, butyl rubber diaphragm encased with a polypropylene liner where the water is separated from the pre-charged air chamber.

SPECIFICATIONS

Tank - 16 gauge rolled steel
 Finish - Appliance grade paint for indoor installation
 Water Chamber - 100% butyl rubber, lined with polypropylene
 Connection - 304 Stainless steel
 Air Valve - Brass with o-ring seal
 Warranty - One year
 Maximum working pressure - 150 psig
 Maximum working temperature - 200°F (internal and external)
 Tank Pre-charge - 50 psig
 Maximum Pre-charge - 80 psi

HOW HYDRAPRO WORKS

A HYDRAPRO Thermal Expansion Tank is a safety device that prevents dripping valves and extends the overall life of the heating system. Once attached to the cold water inlet of the water heater, a reservoir for the expanded water is maintained inside the tank. A closed loop domestic water system may also include a backflow preventer, water meter with a check valve, or any other "no return" valve. Once when water is heated, it expands causing unsafe operating pressures and continual operation of the water heater safety relief valve. HYDRAPRO tanks prevent this from occurring by allowing water to enter the tank and safely releasing it back into the system on demand.

PRODUCT INSPECTION

Prior to installation, inspect the tank for damage that may have occurred during shipping. If any portion of the tank is dented, bent, or scratched, return the product to the original point of purchase for a replacement.

PRE-CHARGE ADJUSTMENT



Do not attempt to adjust the tank pre-charge once installed on the system and under the system pressure. The expansion tank should be pre-charged to the incoming system water pressure but must not exceed 80 psi. Failure to properly adjust the pre-charge will shorten the life of the product.

HYDRAPRO Thermal Expansion Tanks ship with a factory pre-charge of 40 psi. Any adjustment to the factory pre-charge must be done prior to initial tank installation or with 0 psi pressure in the system.

Step 1

Remove the protective cap from the air valve located on the bottom of the tank.

Step 2

Check the tank pre-charge using a standard tire pressure gauge.

Step 3

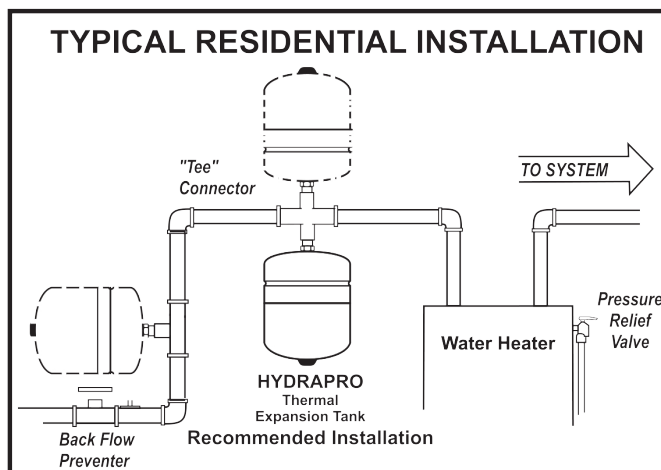
If required add air to the tank using a manual bicycle tire pump until the proper pre-charge pressure is reached.

Step 4

Replace the protective cap on the air valve.

This sheet supersedes previous versions effective 8.15.2020

INSTALLATION WARNINGS & OPERATING INSTRUCTIONS



TANK INSTALLATION

Before installing, disconnect or turn off the electrical power source to the water heater, turn off the water supply to the system, and remove all water pressure from the system. Failure to turn off the electrical and water supply and releasing the water pressure could result in serious injury or death and or property damage.

Be sure to choose an installation location where a water leak will not cause property damage and that is not subject to freezing. Over an extended period of time, it is possible that the expansion tank or the pipes could leak. Selecting a location where there is proper water drainage is ideal. HYDRAPRO is not responsible for water damage that may occur in association with the expansion tank installation. Please see reverse for further warranty information.

The 2018 International Plumbing Code states "Thermal expansion tanks shall not be supported by the piping that connects to such tanks." Please install tank according to your local codes and their interpretations. Although the tank is designed to be supported by the system pipe work, make sure there is adequate support before installing. While we recommend to install the tank vertically, the tank may be installed horizontally or in any orientation. CAUTION: If the tank is not installed vertically, the tank will need additional support via brackets or hangers.

Install the expansion tank in the incoming water line to the water heater between the water heater and the backflow preventer or check valve. Proper thread sealant must be used to ensure a leak free installation.

Open a hot water faucet prior to turning on the water supply to system to remove air from the system piping. Failure to do so might cause damage to the water heater. Once the water supply is turned on, inspect the installation for water leaks paying close attention to the connection between the expansion tank and the piping. Follow the water heater manufacturer's instructions for proper start-up of the heater and the system.

MAINTENANCE

HYDRAPRO recommends annual inspections of the expansion tank and system by a qualified professional. Visually examine the tank and the system connection for signs of water leaks or corrosion on the tank exterior and connection.

Should the tank show visible signs of leaking, corrosion or rusting, replace it immediately to avoid personal injury or property damage. Do not attempt to adjust the tank air pressure if there are any signs of corrosion on the tank. Failure to follow these instructions may result in serious injury or death and or property damage.

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.