

# WINTERIZATION NOTES

To assist you with winterizing your home and purging the water system in your home, the following items have been installed on your water line:

1. A shut off valve (curb stop) has been installed on your property (located near your former well, on the house side of the water meter). You have been provided with a tool to remove the bolt on the valve box and a key to operate the shut off valve. Please close this valve prior to winterizing your home and draining your water line.
2. A drain line with a pipe stub and valve has been installed on a tee in the piping installed in your home. Open the valve on this line to drain, or blow out, internal piping.

Turn on the water / purge the air from your pipes in your home:

1. Open the shut off valve (curb stop) adjacent to the abandoned well on your property.
2. Open the faucet furthest away from the drain valve and let the water run for several minutes, close the faucet.
3. Open individually all other faucets and run for several minutes. If you experience low flow from a faucet, remove the aerator, clean and reinstall.

As indicated above, the shut off valve installed near your abandoned well and drain line installed in your house were provided to assist you with draining your water line when winterizing your home. Each home is unique and may require additional steps to ensure your interior water lines are completely drained. Please consult your plumber for any additional measures required to facilitate draining your water line.

# Installation, Warnings, and Operation Instructions PROFLO, Potable Water Expansion Tanks



## Operation

This thermal expansion tank is designed to maintain safe water pressures in a domestic water heating system that utilizes a backflow preventer or check valve. It features a butyl rubber diaphragm and polypropylene liner to separate the system water from the tank's inner walls and pre-charge. The system connection is stainless steel and the tank is finished with an appliance quality paint to minimize corrosion.

## What it does

Adding a backflow preventer, water meter with a check valve, or any other "no return" valve to a domestic water heating system creates a closed loop system. When water heats up, it expands which can cause unsafe operating pressures and cause nuisance operation of the water heater's safety relief valve.

Adding a thermal expansion tank to the cold water inlet of the water heater creates a reservoir for the expanded water. Water enters the tank and is released back into the system on demand. The goal is to avoid dripping relief valves and improve the safety of the system.



**THIS IS THE SAFETY ALERT SYMBOL. IT IS USED TO ALERT YOU TO POTENTIAL PERSONAL INJURY HAZARDS. OBEY ALL SAFETY MESSAGES THAT FOLLOW THIS SYMBOL TO AVOID POSSIBLE INJURY OR DEATH.**



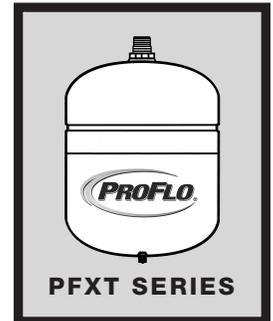
**INDICATES A POTENTIALLY HAZARDOUS SITUATION WHICH, IF NOT AVOIDED, COULD RESULT IN SERIOUS INJURY OR DEATH.**



**INDICATES A POTENTIALLY HAZARDOUS SITUATION WHICH, IF NOT AVOIDED, MAY RESULT IN MINOR OR MODERATE INJURY OR RESULT IN PROPERTY DAMAGE.**

### **WARNING**

This product must be installed by a **Qualified Professional** following all local and national plumbing and electrical codes. Read and understand fully the instructions included here and those on the Ferguson website which are updated on a regular basis. This product must be inspected annually by a qualified professional for any signs of corrosion or leakage and replaced immediately if these signs are present. Failure to follow these instructions may result in serious injury or death and or property damage and will void the product warranty.



### **WARNING**

**EXPLOSION HAZARD** This expansion tank is designed for water storage at a maximum pressure of 150 psi and a maximum temperature of 200 F. A properly sized pressure relief valve set at a maximum of 150 psi must be installed in the system. This tank is shipped with a pre-charge of 40 psi and any adjustment to the pre-charge must be done prior to installation and at ambient temperature. Do not adjust the pre-charge of this tank if the product is corroded or damaged or shows any signs of diminished integrity. The maximum allowable pre-charge in this expansion tank is 80 psi. Do not adjust the pre-charge of the expansion tank with the system under pressure. Failure to follow these instructions is **UNSAFE** and may result in serious injury or death and or property damage.

### **CAUTION**

This expansion tank and the associated piping may in time leak. This tank must be installed in a location that allows for easy access, visual inspection and where water leakage will not cause property damage. Installation must include a means for adequate drainage. This tank must not be installed in a location that is subject to freezing. This tank must be installed in the vertical position. The manufacturer of this product is not liable or responsible for any water damage associated with the installation and or failure of this product. Failure to follow these instructions will void the warranty and may result in personal injury or property damage.

### **WARNING**

This tank is intended for use on potable water systems only and any other use may be dangerous and will void the warranty. This product's performance and lifespan can be significantly and adversely impacted by aggressive water conditions. A water test should be conducted at regular, periodic intervals specifically looking for corrosive water, acids and other relevant water contaminants which if present must be treated immediately and appropriately. The system piping must be properly grounded to earth and a dielectric union is recommended in the installation. Failure to follow these instructions may result in serious injury or death and or property damage.

**Not for sale in California.**

These instructions and warnings are subject to periodic updates on the Ferguson website [www.ferguson.com](http://www.ferguson.com) and should be regularly reviewed by the consumer for important safety and instruction updates.



**Note:** PFXT Series tanks are certified to NSF Standard 61 Domestic Hot, but are suitable for temperatures up to 200° F.

# Before Installation

## Product Inspection

Visually inspect the product for any signs of damage that may have occurred during transportation. If the tank is dented, bent or scratched, return the product to the original purchase point for replacement.

## Pre-Charge Adjustment

This expansion tank is shipped from the factory with a pre-charge of 40 psi. Any adjustments to the factory pre-charge must be done prior to initial tank installation and with 0 psi pressure on the system. **DO NOT ADJUST THE PRE-CHARGE OF THE EXPANSION TANK WITH THE SYSTEM UNDER 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 expectancy of the product.**

## To Adjust Tank Pre-Charge

- Remove the protective cap from the air valve.
- Check the tank pre-charge pressure using a standard tire pressure gauge.
- If required add air to the tank using a manual bicycle tire pump until the proper pre-charge pressure is reached.
- Replace the protective cap on the air valve.

# INSTALLATION

## Location

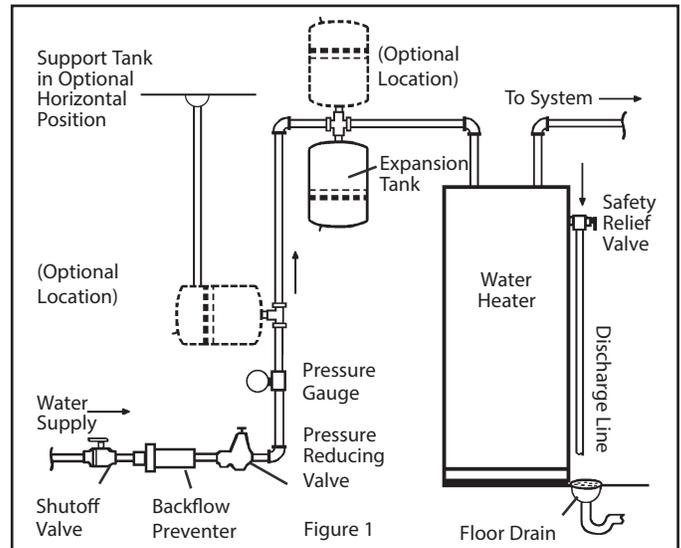
Select a location where a water leak will not cause property damage and provides adequate means for water drainage. This expansion tank and the associated piping may in time leak. The manufacturer is not responsible for any water damage that may occur in association with the expansion tank installation.

**⚠ WARNING** Disconnect or shut off the electrical power source to the water heater. Shut off the water supply to the system and remove all water pressure from the system. Failure to follow these instructions may result in serious injury or death and or property damage.

The tank is designed to be supported by the system piping. Make sure that there is adequate means of supporting the system piping and if necessary add strapping, brackets or pipe hangers. **DO NOT INSTALL THIS EXPANSION TANK IN THE HORIZONTAL POSITION UNLESS IT IS PROPERLY SUPPORTED!**

Install the expansion tank in the incoming water line to the water heater between the water heater and the backflow preventer or check valve (see Fig. 1). Adequate thread sealant must be added to ensure a leak free installation.

Before turning on the water supply to the system, open a hot water faucet to prevent any damage to the water heater and remove air from the system piping. Turn on the water supply and inspect the installation for water leaks paying close attention to the connection between the expansion tank and the piping.



**NOTE:** If vertical installation is impractical, PFXT tank may be installed in a horizontal position as long as the tank weight is fully supported independent of the piping. The support can be in the form of strapping or a support platform. **ABSENCE OF AN INDEPENDENT TANK SUPPORT WILL VOID THE WARRANTY.**

Follow the water heater manufacturer's instructions for proper start-up of the heater and the system.

# Maintenance Specs/Dimensions

This expansion tank and the entire system must be checked annually by a qualified professional.

Visually examine the tank and its connection to the system piping looking for any signs of water leakage or corrosion on the exterior of the tank or the connection.

**⚠️ WARNING** If this expansion tank shows any visible signs of leaking, corrosion or rusting, the tank must be replaced immediately to avoid personal injury or property damage. Do not 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.

## Specs/Dimensions

### Materials of Construction

- Tank: 16 gauge cold rolled steel
- Finish: Appliance quality paint for indoor or outdoor installation
- Water chamber: 100% butyl rubber, lined with polypropylene
- Connection: Stainless Steel
- Testing: High pressure, seam weld, helium, final precharge check
- Air valve: Brass valve with o-ring seal
- Warranty: One year

### Dimensions & Capacities

Model	Total Tank Volume		A Height		B Diameter		C Connection	Total Weight	
	gal	liters	in	cm	in	cm		lbs	kilos
PFXT5I	2.1	8	11.6	30.0	8.00	20.0	3/4" MNPT	5.0	2.3
PFXT12I	4.8	18	14.5	37.0	11.00	28.0	3/4" MNPT	10.0	4.6

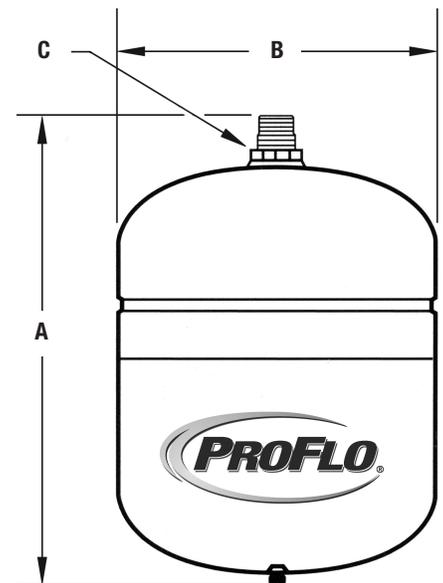
Maximum working pressure 150 psig. Maximum working temperature, internal & external 200° F. Tank pre-charge 40 psig.

NOTE: PFXT Series tanks are certified to NSF Standard 61 Domestic Hot, but are suitable for temperatures up to 200° F.

### Quick Sizing Chart

Water Heater Size/Volume	Maximum Water Temperature			
	130° F	140° F	160° F	180° F
30 GALLONS	PFXT5I	PFXT5I	PFXT5I	PFXT5I
40 GALLONS	PFXT5I	PFXT5I	PFXT5I	PFXT5I
50 GALLONS	PFXT5I	PFXT5I	PFXT5I	PFXT12I
60 GALLONS	PFXT5I	PFXT5I	PFXT5I	PFXT12I
80 GALLONS	PFXT5I	PFXT12I	PFXT12I	PFXT12I
100 GALLONS	PFXT12I	PFXT12I	PFXT12I	(2) PFXT12I
120 GALLONS	PFXT12I	PFXT12I	PFXT12I	(2) PFXT12I
150 GALLONS	PFXT12I	PFXT12I	(2) PFXT12I	(2) PFXT12I
175 GALLONS	PFXT12I	(2) PFXT12I	(2) PFXT12I	(2) PFXT12I

Sizing based on water heater recovery from 40F, water supply pressure of 60 PSIG, and relief valve set at 150 PSIG. Adjust tank precharge to equal incoming water pressure.



# One Year Limited Warranty



## Products Covered: All Thermal Tanks Manufactured and Distributed by Ferguson

All parts for PROFLO products are warranted to the original consumer purchaser to be free from defects in material and workmanship for a period of one (1) year. This warranty is made to the original consumer purchaser and shall be effective from date of purchase as shown on purchaser's receipt.

PROFLO will replace, free of charge, during the warranty period, any part which proves defective in material and/or workmanship under normal installation, use and service. PROFLO's obligation under this warranty shall be limited to the replacement of any part or parts which prove defective upon PROFLO's local dealer inspection. Transportation charges should be prepaid, please ship with a copy of the purchase receipt. For the PROFLO Dealer nearest you, call 757-874-7795. THIS WARRANTY IS THE ONLY EXPRESS WARRANTY MADE BY PROFLO AND IS LIMITED TO THE DURATION OF THIS WARRANTY AND ALL OTHER EXPRESS OR IMPLIED WARRANTIES, WHETHER IMPLIED BY OPERATION OF LAW OR OTHERWISE, INCLUDING, WITHOUT LIMITATION, ALL IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS OR FITNESS FOR A PARTICULAR PURPOSE, ARE FOR PERSONAL INJURY OR PROPERTY DAMAGE OR ANY OTHER LOSS, DAMAGE, COST OF REPAIRS OR INCIDENTAL, PUNITIVE, SPECIAL OR CONSEQUENTIAL DAMAGES OF ANY KIND, WHETHER BASED UPON WARRANTY, CONTRACT, STRICT LIABILITY, DESIGN, MANUFACTURE, SALE, TRANSPORTATION, INSTALLATION, USE OR REPAIR OF THE PRODUCTS SOLD BY PROFLO. BUYER HEREBY ACKNOWLEDGES AND AGREES THAT UNDER NO CIRCUMSTANCE, AND IN NO EVENT, SHALL PROFLO'S LIABILITY, IF ANY, EXCEED THE REPLACEMENT OF THE DEFECTIVE PRODUCT(S); NO ADDITIONAL ALLOWANCE SHALL BE MADE FOR THE LABOR OR EXPENSE OF REPAIRING OR REPLACING DEFECTIVE PRODUCTS OR WORKMANSHIP OR DAMAGE RESULTING FROM THE SAME. EXCEPT AS EXPRESSLY SET FORTH IN THIS PARAGRAPH, ALL PRODUCTS AND/OR SERVICES PROVIDED BY PROFLO AND ITS EMPLOYEES AND AGENTS ARE PROVIDED "AS IS," "WHERE IS," "AND "WITH ALL FAULTS."

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.

This warranty is void for any damage to the PROFLO product due to misuse, abuse, neglect, accident, improper installation, any use in violation of instructions furnished by us, or any use of replacement parts other than genuine PROFLO parts.

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Owners Record Keep for later use

Serial number (see tank data label at bottom of tank): \_\_\_\_\_

Model (see tank data label at bottom of tank): \_\_\_\_\_

Date Installed: \_\_\_\_\_

Installer Name: \_\_\_\_\_

Telephone number: \_\_\_\_\_

Retain copy of cancelled check and installation receipt

Manufactured for/Fabriqué pour/Fabricado para: PL Sourcing, Inc. PO. Box 2778 Newport News, VA 23609 Made in/Fabriqué en/Hecho en: Taiwan

# Model XT

# LEAD-FREE\*

## Water Thermal Expansion Tanks

\*This product contains a weighted average lead content less than 0.25% for wetted surfaces.



### □ Installation □ Maintenance Instructions

#### SPECIFICATION

Fill pressure (and air charge pressure)..... 40 PSI  
 Max. Operating Pressure.....150 PSI

For potable water applications

To obtain maximum effectiveness and to prolong XT series tank life, ADJUST TANK PRE-CHARGE TO EQUAL LINE PRESSURE, NOT TO EXCEED 80 PSI.

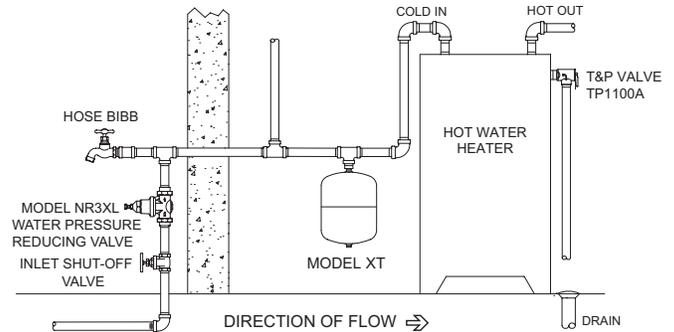
Example:

If normal city water pressure at tank location is 55 psig, increase air pre-charge in XT tank to 55 psig. This can be done with a bicycle pump or air compressor. Pressure can be checked with a standard tire gauge.



#### INSTALLATION

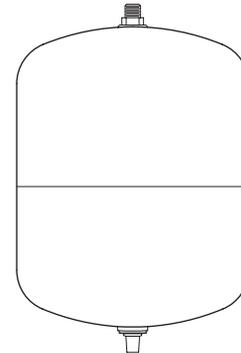
1. Shut off power or gas to water heater.
2. Shut off cold water supply to water heater.
3. Drain water from heater (MAKE SURE THAT A FAUCET OR OTHER FIXTURE IS OPEN TO PREVENT VACUUM BUILD-UP)
4. With water completely drained from water heater, install XT Series Thermal Expansion Tank by teeing into a cold water supply as shown. XT tank must be installed on the cold water supply and between water heater and check valve, backflow preventer, etc.
5. Strapping or bracing must be used when tank is installed in the horizontal position. This will allow support of the tank when filled with water.



MODEL XT INSTALLATION

#### MAINTENANCE

1. The tank pre-charge should be checked annually. The water pressure must be removed from the tank to prevent a false reading. Shutoff water supply
2. Open a faucet to remove pressure from the system
3. Check tank pressure with a tire gauge. Add air to tank if it doesn't match the incoming water pressure. If the tank pressure is zero or if water discharges from the air valve, then it should be replaced.
4. Turn water supply back on.



**NOTE:** Model XT tanks are certified to NSF/ANSI 61 domestic hot, but are suitable for temperatures up to 200° F.

#### TANK DIMENSIONS AND CAPACITIES

MODEL NUMBER	MAXIMUM WORKING PRESSURE psi	TANK VOLUME (gallons)	MAXIMUM ACCEPTANCE VOLUME (gallons)	FACTORY PRE-CHARGE psi	DIMENSIONS			WEIGHT lbs.
					DIAMETER	HEIGHT	SYSTEM CONNECTION	
XT-8	150	2.1	1.0	40	8	10 1/2	3/4NPT	5.5
XT-18	150	4.8	2.4	40	11	13 1/2	3/4 NPT	10
XT-35	150	9.0	4.25	40	12 1/2	17 1/4	3/4 NPT	15.5

**WARRANTY:** ZURN WILKINS Valves are guaranteed against defects of material or workmanship when used for the services recommended. If in any recommended service, a defect develops due to material or workmanship, and the device is returned, freight prepaid, to ZURN WILKINS within 5 years from date of purchase, it will be repaired or replaced free of charge. ZURN WILKINS' liability shall be limited to our agreement to repair or replace the valve only.

⚠ **WARNING:** Cancer and Reproductive Harm - [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov)  
 ⚠ **ADVERTENCIA:** Cáncer y daño reproductivo - [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov)  
 ⚠ **AVERTISSEMENT:** Cancer et néfastes sur la reproduction - [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov)



1747 Commerce Way, Paso Robles, CA 93446 Phone:855-663-9876 Fax:805-238-5766

ZURN WILKINS



**⚠ ADVERTENCIA**

Lea este manual ANTES de utilizar este equipo. El no leer y seguir todas las medidas de seguridad y usar la información puede causar la muerte, lesiones personales graves, daños materiales o daños en el equipo. Guarde este manual para referencia futura.

**⚠ ADVERTENCIA**

Es obligatorio consultar los códigos locales de construcción y fontanería antes de comenzar la instalación. Si la información de este manual no se corresponde con los códigos locales de construcción y fontanería, deberán seguirse estos últimos. Pregunte a las autoridades gubernamentales sobre otros requisitos locales.

**Guía de instalación**

- Un contratista licenciado debe instalar la válvula conforme a los códigos y ordenanzas locales.
- Esta válvula debe instalarse en un lugar accesible con suficiente espacio para la limpieza, el servicio o el ajuste.
- Antes de instalar la válvula, asegúrese de que los extremos de la tubería estén escariados y las roscas estén cortadas al tamaño adecuado. Para las válvulas con alcachofas de aspiración de conexión rápida consulte las instrucciones para la "Instalación de conexión rápida".
- Enjuague las líneas para eliminar todo el sarro, la tierra y otros materiales extraños sueltos que puedan dañar u obstruir la válvula.
- Instale el regulador con la flecha del cuerpo apuntando hacia la dirección del flujo.
- El regulador puede instalarse vertical u horizontalmente (derecho o invertido).
- Comienzo — abra el suministro de agua fría, luego el de agua caliente. Verifique que no haya fugas.

**AVISO**

Para apretar el cordal, primera priete a mano follwed por cuarto a 1 vuelta con

una llave de tuercas.

**AVISO**

la válvula debe inspeccionarse anualmente para asegurar una vida útil y rendimiento máximos.

**AVISO**

las válvulas LFU5-M1 son adecuadas para instalaciones accesibles en exteriores o de pileta.

**Instrucciones de mantenimiento**

- Para limpiar el filtro retire el tapón inferior y tire del filtro para sacarlo.

**Ajuste**

El regulador está configurado a 344,7 kPa (50 psi) en una condición estática. Para ajustar la configuración de presión, afloje la tuerca de seguridad y gire el perno de ajuste en el sentido de las agujas del reloj para aumentar la presión o en el sentido contrario para reducirla.

**⚠ PRECAUCIÓN**

siempre que ajuste una válvula reductora se recomienda el uso de un medidor de presión para verificar la configuración correcta de la presión. No apriete el tornillo de ajuste hasta el fondo del compartimiento del resorte.

**Mecanismo de derivación**

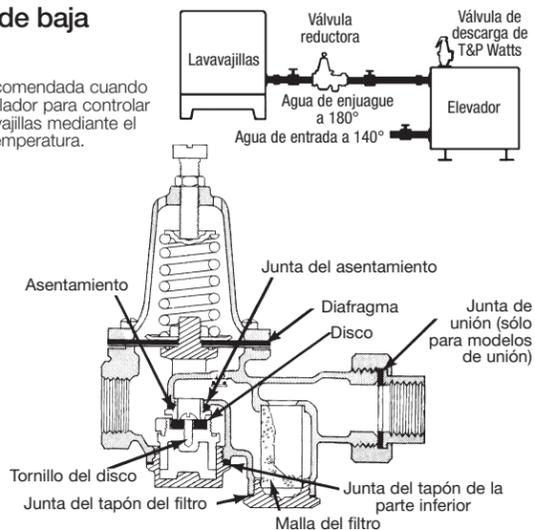
Este regulador tiene un mecanismo de derivación de expansión térmica rado. Este mecanismo evita que aumente la presión de la tubería descendente a más de 68,9 kPa (10 psi) de la presión del suministro.

**AVISO**

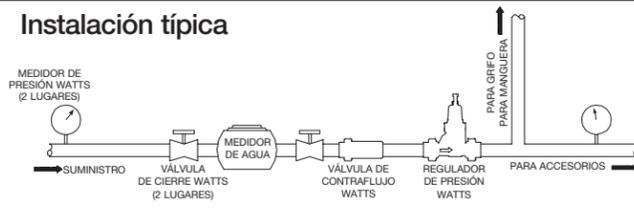
el mecanismo de derivación no evitará que la válvula de liberación de la presión se abra en el sistema de suministro de agua caliente con presiones por encima de los 10,3 bar (150 psi).

**Servicio de baja presión**

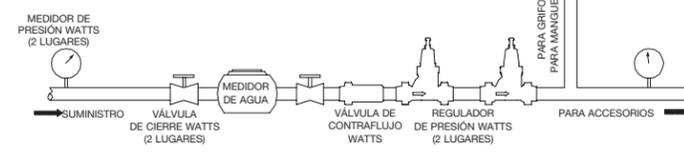
Instalación recomendada cuando se usa el regulador para controlar el flujo al lavavajillas mediante el elevador de temperatura.



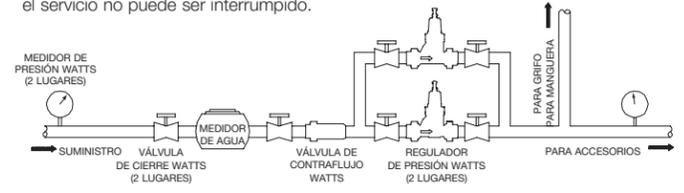
Para kits de reparación y piezas, consulte nuestra lista de precios PL-RP-GP que se encuentra en [www.watts.com](http://www.watts.com).

**Instalación típica****Instalación en serie**

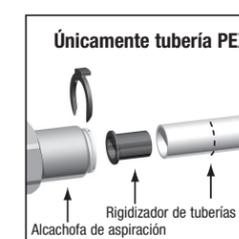
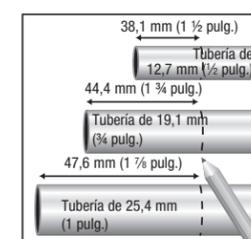
Se recomiendan las instalaciones en serie cuando una presión de suministro muy alta deba reducirse a una presión muy baja de tubería descendente. La reducción de la presión en etapas elimina silbidos y ruidos.

**Instalación paralela**

Se recomiendan las instalaciones paralelas cuando la demanda de flujo alto o bajo es intermitente/ocasional. También se usan para instalaciones en que el servicio no puede ser interrumpido.

**⚠ ADVERTENCIA**

Para válvulas que tengan conexiones finales de policloruro de vinilo clorado (CPVC) o de polietileno ligado cruzado (PEX), no exceda los valores nominales de presión y temperatura que especifica el fabricante para la tubería. Para obtener esa información, consulte las especificaciones del producto que indica el fabricante para la tubería.

**Instalación de conexión rápida****Para conectar:**

- Marque la tubería como se muestra. Esta es la profundidad de colocación de la tubería.
- Limpie el extremo de la tubería.
- Si usa tubería PEX, introduzca el rigidizador de tuberías (incluido) en el extremo de la tubería.
- Coloque la tubería en la alcachofa de aspiración hasta la marca.
- Introduzca el sujetador de boquilla.

**Para desconectarlos:**

- Retire el sujetador de boquilla.
- Presione el sujetador.
- Tire de la tubería de la alcachofa de aspiración.

**Resolución de problemas****Alta presión en el sistema**

Si la presión descendente del sistema es más alta que la presión establecida en condiciones sin flujo, la causa podría ser la expansión térmica, un aumento lento de la presión o tierra/residuos en el asentamiento.

La expansión térmica tiene lugar cuando el agua se calienta en un sistema cerrado. El sistema está cerrado cuando la presión de suministro excede los 10,3 bar (150 psi) o si se instala una válvula de retención o válvula de contraflujo en la tubería de suministro. Debe hacer previsiones para la protección de la liberación de la presión de su sistema de tubería y componentes. Puede ser necesario el uso de una válvula de liberación como Watts 530C, BRV, Governor 80, o 3L o un tanque de expansión de agua potable como Watts DET, PLT o DETA.

Para determinar si esto es resultado de la expansión térmica, pruebe abrir brevemente el grifo de agua fría. Si el aumento de presión es causado por la expansión térmica, la presión se liberará inmediatamente y el sistema volverá a la presión configurada.

Watts ofrece un medidor de presión de prueba, modelo LF276H300 para asistirlo para determinar su tiene presión de agua alta. Cuando se conecta el LF276H300 a un grifo para manguera, registra la lectura de presión más alta en el período de tiempo que queda conectada a sistema.

**⚠ AVERTISSEMENT**

Lisez attentivement ce manuel avant d'utiliser cet équipement. Négliger de lire et de suivre toutes les consignes de sécurité et d'utilisation de l'information peut entraîner la mort, des blessures graves ou des dégâts matériels, ou endommager l'équipement. Veuillez conserver ce manuel pour toute référence ultérieure.

**⚠ AVERTISSEMENT**

Vous êtes tenus de consulter les codes de la construction locale et de la plomberie avant l'installation. Dans la mesure où cette information n'est pas cohérente avec les codes locaux, les codes locaux doivent être suivis. Renseignez-vous auprès des autorités gouvernementales pour des exigences locales supplémentaires.

**Consignes d'installation**

- Ce régulateur doit être installé par un entrepreneur agréé, en conformité avec les codes et règlements locaux.
- Il doit être installé dans un endroit aisément accessible, avec un dégagement suffisant pour le nettoyage, l'entretien et les réglages.
- Avant l'installation, les extrémités des tuyaux doivent être alésées, les filetages coupés à dimension. Pour les régulateurs dotés d'aboutis à raccord rapide, se reporter à la rubrique Pose du raccord rapide.
- Purger les conduites pour éliminer les saletés, le tartre et autres corps étrangers qui risqueraient d'endommager ou d'obstruer le régulateur.
- Poser le régulateur avec la flèche sur le corps de celui-ci pointant dans la direction du débit.
- Le régulateur s'installe indifféremment à la verticale ou à l'horizontale (droit ou inversé).
- Mise en action – ouvrir l'arrivée d'eau froide, puis d'eau chaude. Vérifier qu'il n'y a pas de fuite.

**AVIS**

Pour serrer cordier, serrez a la main un

1/4 -1 tour avec une clé.

**AVIS**

Un contrôle annuel du régulateur garantit une durée de service et une performance optimales.

**AVIS**

Les régulateurs LFU5-M1 peuvent être installés dans une fosse ou à l'extérieur, en un lieu aisément accessible.

**Instructions d'entretien**

- Pour nettoyer la crépine, enlevez le bouchon à la base et retirez-la.

**Réglage**

Le régulateur est réglé en usine à 344,7 kPa (50 psi) dans des conditions statiques. Pour ajuster la pression, desserrer le contre-écrou et tourner le vis de réglage dans le sens horaire pour augmenter la pression, ou dans le sens antihoraire pour la baisser.

**⚠ ATTENTION**

À chaque réglage, il est recommandé d'utiliser un manomètre pour vérifier la pression correcte. Ne pas serrer à bloc la vis de réglage au fond de la cage à ressort.

**Dispositif de dérivation**

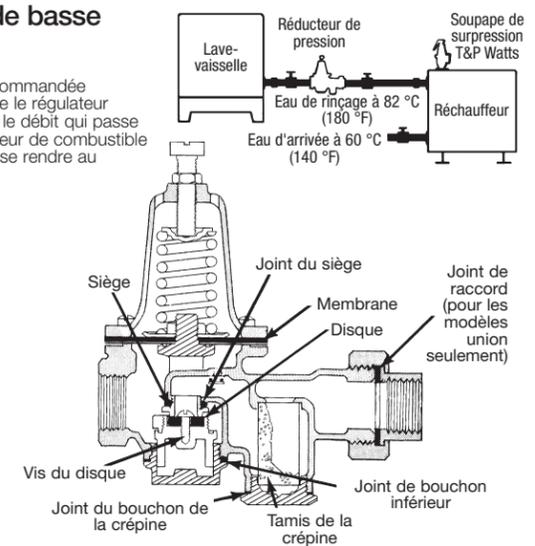
Ce régulateur comprend un dispositif intégré de dérivation de la dilatation thermique. Ce dispositif empêche la pression aval de s'élever de plus de 68,9 kPa (10 psi) au-delà de la pression d'alimentation.

**AVIS**

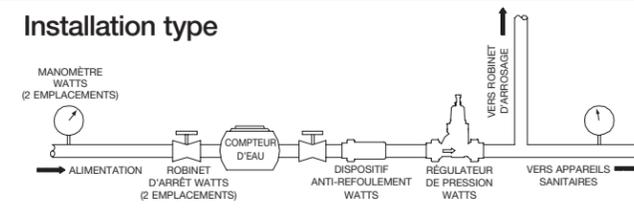
Dans un circuit d'alimentation en eau chaude, le dispositif de dérivation n'empêchera pas le régulateur de s'ouvrir à des pressions supérieures à 10,3 bars (150 psi).

**Servicio de basse presión**

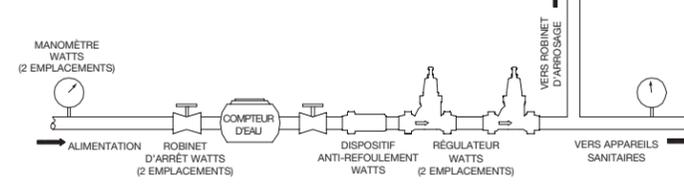
Installation recommandée lorsqu'on utilise le régulateur pour contrôler le débit qui passe par le réchauffeur de combustible auxiliaire pour se rendre au lave-vaisselle.



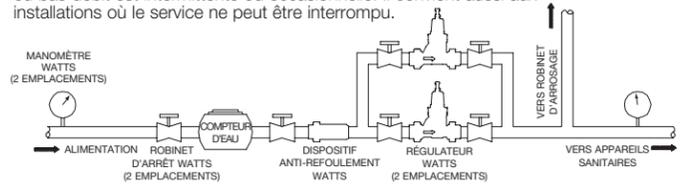
Pour les kits de réparation et des pièces détachées, consultez notre liste de tarifs PL-RP-GP disponible sur le site [www.watts.com](http://www.watts.com).

**Installation type****Installation en série**

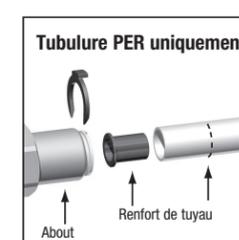
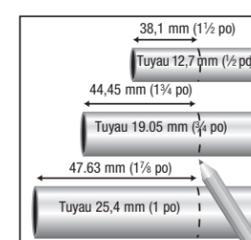
Le montage en série est recommandé lorsqu'une pression d'alimentation très élevée doit être réduite à une pression très basse en aval. La baisse de pression par étapes favorise l'élimination du sifflement et des bruits de tuyauterie.

**Installation en parallèle**

Le montage en parallèle est recommandé lorsqu'une demande à haut ou bas débit est intermittente ou occasionnelle. Il convient aussi aux installations où le service ne peut être interrompu.

**⚠ AVERTISSEMENT**

Pour les robinets munis de raccords d'extrémité CPVC ou PEX, ne pas excéder les tolérances de pression et de température du fabricant de tubulure. Consulter les fiches de spécification de produit du fabricant de tubulure pour ces données.

**Pose du raccord rapide****Raccordement :**

- Marquer un repère sur le tuyau comme illustré. Ceci correspond à la profondeur d'insertion du tuyau.
- Nettoyer l'extrémité du tuyau.

**Déconnexion :**

- Déclipser la pince de serrage.
- Retirer la pince.
- Sortir le tuyau de l'about.

**Dépannage****Surpression dans le circuit**

Dans une condition de débit nul, si la pression du circuit en aval est supérieure à la pression de consigne, la cause peut être une dilatation thermique, une déformation due à la pression, des saletés ou des débris sur le siège.

Une dilatation thermique se produit chaque fois que de l'eau est chauffée dans un circuit fermé. Le circuit est fermé lorsque la pression d'alimentation excède 10,3 bars (150 psi), ou lorsqu'un clapet anti-retour ou un dispositif anti-refoulement est monté dans la tuyauterie d'alimentation.

Il est impératif de protéger la tuyauterie et ses composants contre la surpression. La pose d'une soupape de décharge, telle une 530C, BRV, Governor 80, ou 3L de Watts, ou d'un réservoir de dilatation d'eau potable, tel DET, PLT ou DETA de Watts, peut s'avérer nécessaire.

Pour cerner le problème, soit une dilatation thermique ou non, ouvrir brièvement le robinet d'eau froide. Si la surpression a pour cause une dilatation thermique, la pression dans le circuit baissera immédiatement à la pression de consigne.

Watts propose un manomètre, modèle LF276H300 pour aider à déterminer la présence ou non d'une surpression dans le circuit. Le LF276H300 se connecte à un robinet d'arrosage ; il consigne la pression la plus élevée, atteinte pendant la période où il est resté branché.

# Model 600XL

# LEAD-FREE\*

Pressure Reducing Valve with Integral By-pass

(1/2", 3/4", 1", 1 1/4", 1 1/2" & 2")

\*This product contains a weighted average lead content less than 0.25% for wetted surfaces.



## □ Installation □ Testing □ Maintenance Instructions

### REPAIR KIT INSTRUCTIONS

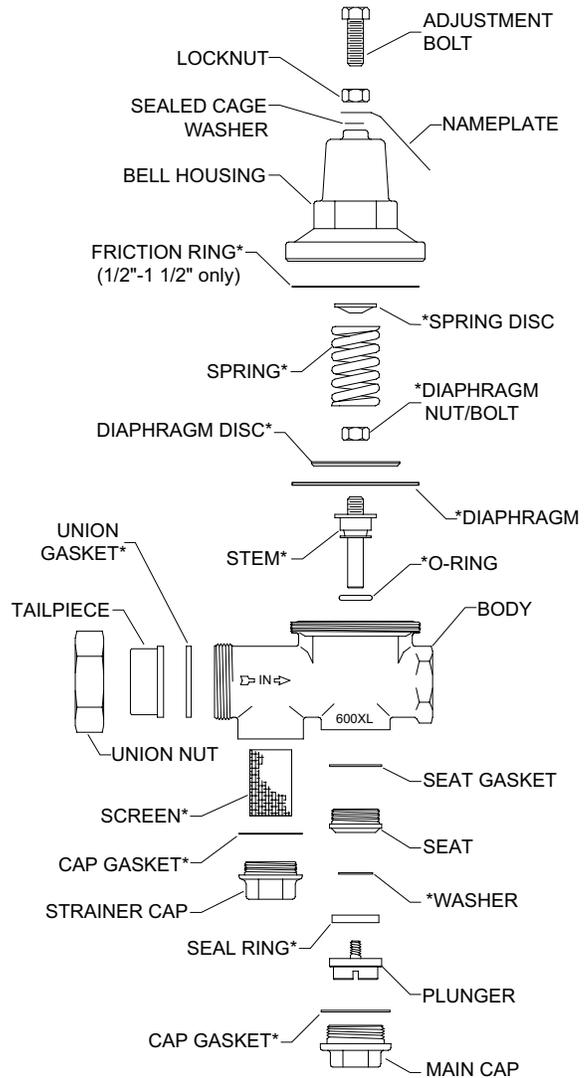
#### HOW TO MAKE REPAIRS:

(Shut off service before starting disassembly)

1. Open faucet on dwelling to remove line pressure.
2. Note distance that adjustment bolt protrudes from bell housing. Loosen locknut on adjustment bolt, then turn adjustment bolt out of bell housing until free of spring tension.
3. Loosen main cap and remove counterclockwise.
4. Loosen plunger and remove counterclockwise. Remove old seal ring then insert new seal ring.
5. Loosen strainer cap counterclockwise and remove screen.
6. Unscrew bell housing counterclockwise and remove spring, spring disc and friction ring.
7. Remove stem assembly from regulator. Inspect area in body where stem o-ring guides for pitting or scratches. Smooth bore with emery cloth if needed. This area must be smooth for the valve to function correctly.

#### TO REASSEMBLE:

1. Open shut-off valve slowly and flush body and line of any debris.
2. Assemble new stem unit using new stem, o-ring, diaphragm, diaphragm disc and diaphragm bolt/nut. Tighten bolt/nut securely (CAUTION: Be sure the rounded edge of the diaphragm disc is next to the diaphragm).
3. Lubricate o-ring with grease supplied in repair kit and install stem unit in body.
4. Center washer on stem. Screw plunger into stem unit. CAUTION: Do not over tighten plunger; it is possible to break the threaded end of the plunger.
5. Install new spring, spring disc and friction ring then replace bell housing by tightening clockwise. Turn adjustment bolt clockwise until adjustment bolt touches spring disc.
6. Install new screen, cap gaskets and replace caps by tightening clockwise.
7. Turn adjustment bolt into bell housing to old setting then enter dwelling and turn on several faucets.
8. Turn on water service. Let water run for several seconds then turn off faucets in dwelling.
9. Adjust the regulator to desired pressure by turning adjustment bolt clockwise (into bell housing) to raise pressure or counterclockwise (out of bell housing) to lower pressure. **It is recommended a pressure gauge be installed downstream of the regulator to ensure pressure is reduced below 75 psi.** NOTE: When reducing pressure, open a downstream faucet to relieve pressure.
10. Tighten locknut when desired pressure is achieved.



\* INDICATES PARTS SUPPLIED IN REPAIR KITS  
(spring disc not included in sizes 1 1/2"-2")

### INSTALLATION INSTRUCTIONS

Install valve in line with arrow on valve body pointing in direction of flow. Before installing reducing valve, flush out line to remove loose dirt and scale which might damage seal ring and seat. All valves will be furnished with stock settings to reduce to 50 psi. To readjust reduced pressure, loosen outer locknut and turn adjustment bolt clockwise (into bell housing) to raise reduced pressure, or counterclockwise (out of bell housing) to lower reduced pressure.

**NOTICE: Annual inspection and maintenance is required of all plumbing system components. To ensure proper performance and maximum life, this product must be subject to regular inspection, testing and cleaning.**

**Regulators in series: Where the desired pressure reduction is more than a 4 to 1 ratio (i.e. 200psi to 50psi), multiple regulators in series should be installed.**

**SEALED CAGE WARNING: Loosen lock washer at adjustment bolt slowly. Look for any trapped water pressure under the sealed cage washer. Relieve pressure before removing bell.**

**CAUTION: Anytime a reducing valve is adjusted, a pressure gauge must be used downstream to verify correct pressure setting. Do not bottom out adjustment bolt on bell housing. Valve may be installed in any position.**

**WARRANTY:** ZURN WILKINS Valves are guaranteed against defects of material or workmanship when used for the services recommended. If in any recommended service, a defect develops due to material or workmanship, and the device is returned, freight prepaid, to ZURN WILKINS within 12 months from date of purchase, it will be repaired or replaced free of charge. ZURN WILKINS' liability shall be limited to our agreement to repair or replace the valve only.

⚠ **WARNING:** Cancer and Reproductive Harm - [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov)

⚠ **ADVERTENCIA:** Cáncer y daño reproductivo - [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov)

⚠ **AVERTISSEMENT:** Cancer et néfastes sur la reproduction - [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov)

# Troubleshooting

Pipe lines in a water supply system must be of sufficient carrying capacity to maintain adequate pressure at the most remote or highest fixture. Under the maximum probable fixture use, minimum adequate pressure is generally 8 to 15 lbs. but may be more, depending on the equipment being supplied. Relatively high service pressures which can create high water velocities in pipe lines would allow use of smaller pipes to satisfy fixture use. However, high velocity tends to cause whistling and humming. Reduction of pressure by the use of a pressure reducing valve,

in an attempt to eliminate such a condition, may reduce pipe line capacities below that which is adequate for maximum probable use. When high service pressures are in effect, either continuously or periodically, the application of a pressure reducing valve will be successful only when the installed pipe line is of adequate size to satisfy the system demand at the lower pressure. When actual water demands are unknown, the valve size should be no less than the existing pipe size.

## PROBLEM

### 1. Pressure creeps or builds up in system above the setting of pressure reducing valve.

## POSSIBLE CAUSE OR CAUSES

- A. Thermal expansion of water as it is being heated.
- B. Foreign matter on seating face of seal ring.
- C. Cut, worn or chipped seal ring.
- D. Cut or worn stem o-ring or worn o-ring groove.

## SOLUTION

- a. This is a natural consequence. It may happen each time that the heater runs. A pressure relief valve or expansion tank must be installed. This will not prevent pressure rise but should limit it to a safe level.
- b. Flush the reducing valve by opening one or two fixture outlets wide. If this does not correct the problem, remove seal ring for cleaning.
- c. Replace with new seal ring. Temporary repairs may be made by turning the seal ring over.
- d. Replace with new stem o-ring and/or cartridge.

### 2. Pressure and fixture flow is unsteady.

- A. Low water supply pressure in mains caused possibly by high area demand during certain periods of the day.
- B. Heavy periodic demands by appliances in the house.

## SOLUTION

- a. This is a water department problem. It is due to the mains being inadequate for the demands made on them.
- b. House service lines may at times be inadequate for the load. Size of some pipelines may need to be increased. Pressure setting of reducing valve may be too low.
- c. Try increasing pressure before changing pipelines.

### 3. Small, inadequate flow from fixtures.

- A. Pipelines to fixtures may be too small or house main supply may be inadequate for normal fixture demand.
- B. Heavy periodic demands by appliances in the house.
- C. Screen clogged with debris.

## SOLUTION

- a. It may be necessary to increase pipe sizes only in some sections of the system leading to the offending appliances or fixtures. Increasing the house service mains might be necessary if small supply is general at all fixtures.
- b. Raise pressure gradually by readjusting valve until this point is determined.
- c. Clean screen.

### 4. Valve appears to be noisy; hums, whistles or chatters.

- A. Hum or whistle is usually caused by a high velocity of flow in pipelines causing vibration.
- B. Chatter usually originates with worn seat washer or loosely installed seal ring.

## SOLUTION

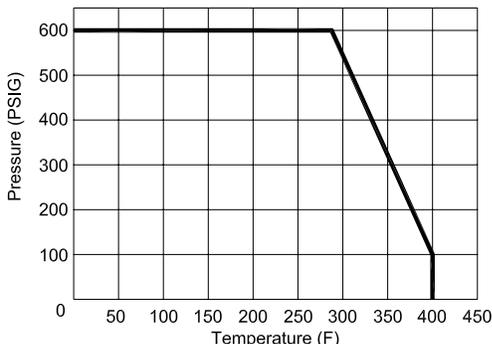
- a. Pipelines could be small or too light. Reducing valves could be too small. Pipes and valves being small would accentuate this condition.
- b. Inspect seal ring. If a deep channel appears on seal ring face, replace or use the opposite side.
- c. Frequently noise appears in a faucet or appliance and seems to originate from the reducing valve. There is a general tendency to use streamline piping of a relatively small size. Velocity is naturally high and noise of fast moving water is not unusual.

## LOW LEAD COMPLIANT 2 PC 600 WOG BALL VALVE

**Features:**

- 600 WOG
- Full Port
- NSF 61 Annex G Certified (Truesdail) (Annex G references NSF 372)
- Meets MSS SP-110 Standards
- Blow-out Proof Stem
- Adjustable Packing
- Sweat Ends Per ANSI B16.18
- Optional Lock Lever Kit
- Optional Stem Extension Kit
- Optional Tee Handle Kit
- Optional Oval Handle Kit
- Optional Memory Stop Kit

**NOT FOR USE AT OR BELOW GROUND LEVEL**



Low Lead Compliant: Referring to laws defining "Lead Free" as wetted surface of pipe, fittings and fixtures in potable water systems that have a weighted average lead content  $\leq 0.25\%$  per the Safe Drinking Water Act (Sec. 1417) amended 1-4-2011 as well as other state regulations.



**Figure Number Matrix**

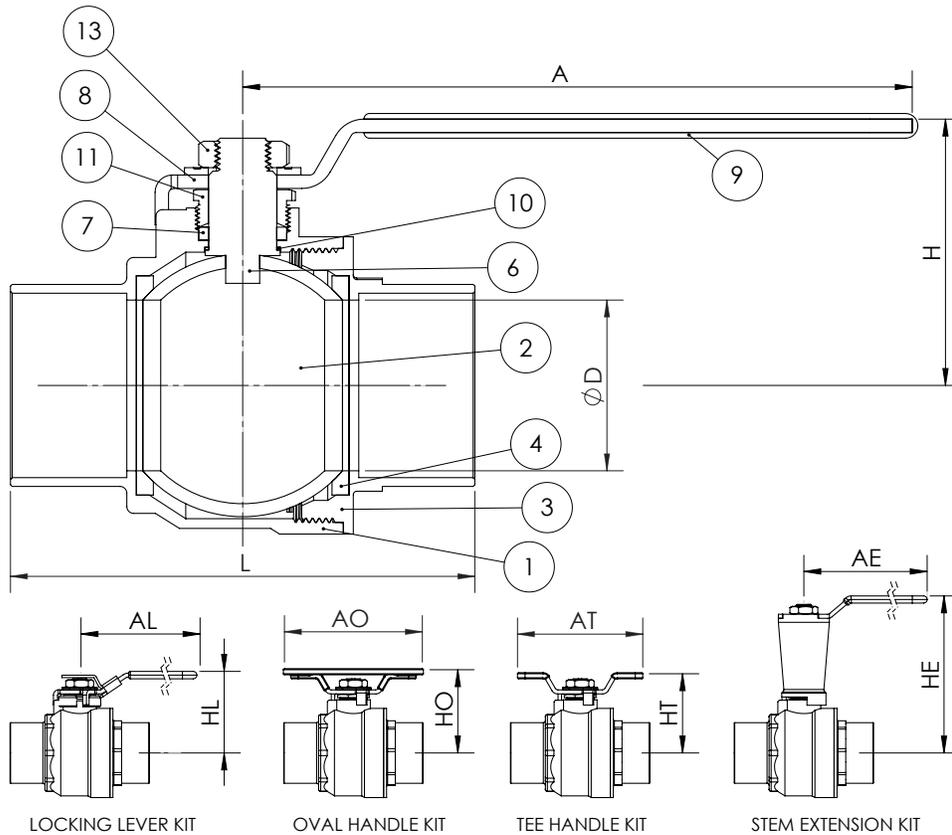
FNW X411C Size	
SIZE CODE	SIZE
3/8 = C	
1/2 = D	
3/4 = F	
1 = G	
1-1/4 = H	
1-1/2 = J	
2 = K	
2-1/2 = L	
3 = M	

**Kit Codes (Order Separately)**

FNW 410A Kit Size	
KIT TYPE	SIZE CODE
Replacement Handle = BRYLWH	1/2" = BD
Locking Lever = LHK	3/4" ~ 1" = FG
Stem Extension = SE	1-1/4" ~ 1-1/2" = HJ
Tee Handle* = THK	* 2" = KP
Oval Handle* = OHK	
Memory Stop = MSK	

\* NOTE: Due to the higher torque requirements of larger valves, use of Tee and Oval handles on valves larger than 1-1/2" can be difficult to operate.

### LOW LEAD COMPLIANT 2 PC 600 WOG BALL VALVE



#### Dimensions (inches) & Weights

SIZE	ØD	A	L	H	Wt. (Lbs)
1/2	0.50	3.10	1.91	1.43	0.31
3/4	0.75	4.32	2.69	1.79	0.64
1	0.98	4.32	3.30	2.00	0.90
1-1/4	1.26	5.11	3.77	2.35	1.40
1-1/2	1.50	5.11	4.30	2.48	1.92
2	1.97	7.80	5.39	3.16	3.74
2-1/2	2.48	7.80	6.18	3.57	8.03
3	2.95	7.80	7.14	3.88	8.60

SIZE	AL	HL	AO	HO	AT	HT	AE	HE
1/2	3.06	1.64	2.80	1.44	2.70	1.30	2.95	4.28
3/4	4.32	2.17	3.60	1.71	3.40	1.82	3.95	4.75
1	4.32	2.35	3.60	2.05	3.40	1.94	3.95	4.90
1-1/4	5.09	2.78	4.39	2.34	4.03	2.24	4.92	5.24
1-1/2	5.09	2.96	4.39	2.44	4.03	2.34	4.92	5.40
2	7.75	3.70	5.38	3.17	4.85	3.03	8.00	6.03
2-1/2	7.75	4.13	5.38	3.62	4.85	3.50	8.00	6.44
3	7.75	4.46	5.38	3.95	4.85	3.76	8.00	6.79

#### Standard Materials

Ref. No.	Description	Material	Qty	Remarks
1	Body	C46400 Lead Free Brass	1	1/2"~1-1/2"
		Modified C46400 LF Brass		2"
2	Ball	C46400 Lead Free Brass (Chrome Plated)	1	1/2"~3/4" Solid 1"~ 2" Shell
3	End Cap	C46400 Lead Free Brass	1	
4	Seat	PTFE	2	
6	Stem	ASTM B16-C36000	1	
7	Stem Packing	PTFE	1	
8	Handle	ASTM A283-D Steel	1	Zinc Plated
9	Handle Sleeve	Vinyl	1	
10	Thrust Washer	PTFE	1	2" only
11	Packing Gland	ASTM B16-C36000	1	
13	Handle Nut	AISI-1010 Steel	1	Zinc Plated

DOC: FNWX410C Ver. 7/2014

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