



FAQ

Can other manufacturer's welders and groovers be interchanged with Zurn?

No, welders vary on power control. Groovers groove in different locations that do not allow for pipe fitting into pipe.

Do Zurn Chemical Drainage Systems comply with ASTM-D2146?

ASTM-D2146 was discontinued in 1986. It has been replaced by "Propylene Plastic Injection and Extrusion Materials" designation ASTM-D4101. The material Zurn Industries uses in manufacturing our CDS pipe and fittings is a flame retardant polypropylene copolymer, which meets table B property requirements of ASTM-D4101. The full material designation per ASTM-D4101 of this material is PP0210 B56562 FL012.

What approvals does Zurn CDS have?

Zurn Chemical Drainage System complies with ASTM-F1412 "Standard Specification for Polyolefin Pipe and Fittings for Corrosive Waste Drainage Systems" and is listed with or meets requirements of NSF, IAPMO, CSA B181.3.

What is the mechanical joint tested to?

10-foot (3.048 meters) of head for field testing.

Can polyethylene (PE) pipe be fused with the polypropylene (PP) fittings?

Fusion of polyethylene and polypropylene pipe will not work; the materials are not compatible. However, PE pipe can be joined by a mechanical joint.

Can other manufacturer's pipe and fittings be used with the Zurn system?

Other's pipe can, but not other fittings due to unique design of the Zurn fittings being able to accept either mechanical or fusion seals. The Zurn groover must also be used with our mechanical joints.

Can I use this system for pressure applications?

No, this is a drain, waste and vent (DWV) system. It is not pressure rated.

Can pipe and fittings be stored outside?

Pipe and fittings can be stored outside temporarily, if they are covered and shielded from the sun. The plastic does not contain UV stabilizers, and the sun can cause hardening of the surface of the plastic that may interfere with proper joint sealing.

What is the maximum Polypropylene system usage temperature?

The maximum continuous operating temperature is 180 degrees Fahrenheit (82.2 degrees Celsius) and is capable of 212 degrees Fahrenheit (100 degrees Celsius) for intermittent use. Fusion Lock™ seals are recommended for high temperature applications.

What is the difference between a top spud and a back spud fixture?

A top spud fixture refers to a flush valve connection that is on top surface of the urinal or toilet, generally located behind the seat. A back spud fixture has a connection for the flush valve located on the back surface of the urinal or toilet. In most cases, a back spud fixture will use a concealed-type flush valve.

What is the difference between a siphon jet and blowout style fixture?

Siphon jet bowls are attached to Zurn carriers with (4) mounting studs arranged in a rectangular pattern whereas the blowout-style bowl is mounted on three studs arranged in a triangular pattern, point down. Additionally, in a siphon jet bowl, the jet is located in the sump of the fixture. The jet in a blowout-style bowl is typically located in the trap way. Siphon jet bowls can flush at 1.28 GPF (4.85 LPF), whereas blowout-style bowls are typically 1.6GPF (6.06 LPF) or higher water usage. The majority of all bowls manufactured in the USA for commercial use are siphon jet type.

What is the difference between standard height and ADA/disabled height fixtures?

There is typically no difference in the actual fixture itself when it comes to a standard height vs. ADA/disabled height fixture, but to what height the fixture should be installed to meet the requirements of each classification.

Standard Height:

Toilets = 15" (38.1 cm) from finished floor to top of rim

Urinals = 24" (60.96 cm) from finished floor to top of rim

Lavatories = 31" (78.74 cm) from finished floor to top of rim

ADA/disabled Height:

Toilets = 17" (43.18 cm) from finished floor to top of rim

Urinals = 17" (43.18 cm) from finished floor to top of rim

Lavatories = 34" (86.36 cm) from finished floor to top of rim

What is the difference between a wall-hung and counter-top lavatory?

Wall-hung lavatories are mounted to the wall with the use of a carrier support system. The three primary types of lavatory carriers are wall bracket type, concealed arm type, and exposed arm type.

Counter-top lavatories are installed by either dropping in through the top of a counter/granite top or mounted underneath the counter-top and do not use a carrier system.

At what height should I install a Zurn lavatory to meet the ADA requirements?

In order to meet the current ADA requirements, a lavatory must be installed to measure 34" (86.36 cm) from the finished floor to the top of the lavatory rim at the front of the fixture.

When would I specify a 1.6 GPF (6.06 LPF) vs. a 1.28 GPF (4.85 LPF) toilet and valve?

1.6 GPF (6.06 LPF) water closets and flush valves have been the commercial baseline for maximum flush capacity since 1992. In more recent years, 1.28 GPF (4.85 LPF) water closets and flush valves have become more popular for LEED projects and water conservation efforts. In addition, the 1.28 GPF (4.85 LPF) water closet and flush valve combination are becoming the new baseline in several regions of the U.S.A. where water is more scarce.

What water consumption rates (gallons per flush) are available on Zurn water closets?
For commercial toilets, anything lower than 1.6 GPF (6.06 LPF) that has passed industry standards is acceptable for use. At this time, 1.6 GPF (6.06 LPF) and 1.28 GPF (4.85 LPF) along with Dual Flush systems are the most common for flush valve operated toilets.

What is a carrier and when is it required?

A carrier is a steel and/or cast iron fixture that gets installed behind the finished wall to hold the "wall-hung" fixture off of the wall. Wall-hung fixtures may include water closets, urinals, and lavatories. The carrier is designed to transfer the load placed upon the fixture directly to the floor, placing no load on the finished wall. Carriers are required any time a wall-hung fixture is specified. Carriers are also used with floor mounted back outlet water closets to secure the drain assembly to the fixture. For more information on Zurn carriers, please click the following link: [Zurn Carrier Code Book](#)

Why does a commercial water closet require a minimum water supply line of 1" (2.54 cm) in diameter?

A minimum supply line of 1" (2.54 cm) in diameter is necessary on commercial water closets to be able to supply the minimum 25 GPM (94.64 LPM) flow rate required to properly actuate the flush valve and fixture.

What does it mean when a product description for a lavatory specifies a unit with "no-overflow" design?

Commercial vitreous china and cast iron lavatories typically contain "overflow" punchings in the bowl/basin of the lavatory. These punchings lead to an internal channel within the lavatory so that if the water reaches a certain level within the fixture, the water will flow into the overflow hole, down the channel and directly into the grid drain/p-trap to avoid potential restroom flooding. To specify "no-overflow" means the lavatory will not have these holes.

What style lavatory installation is recommended, a wall-bracket installation or a concealed carrier arm installation?

In commercial applications, it is typically recommended that the concealed arm type carriers are specified for use when possible. Concealed arm type carriers support more weight/force than bracket type installations and also provide more vandal resistance.

When would I specify 1.0 GPF (3.79 LPF), 0.5 GPF (1.89 LPF), and a 0.125 GPF (.47 LPF) urinal and valve?

1.0 GPF (3.79 LPF) urinals and flush valves have been the commercial baseline for maximum flush capacity since 1992. In more recent years, the 0.5 GPF (1.89 LPF) and 0.125 GPF (.47 LPF) urinals and flush valves have become more popular for LEED projects and water conservation efforts. Today, the 0.125 GPF (.47 LPF) systems are becoming the baseline in several regions of the U.S.A. where water is more scarce.

What water consumption rates (gallons per flush) are available on Zurn Urinals?

For commercial urinals, 1.0 GPF (3.79 LPF) is the maximum allowed by code and 0.125 GPF (.47 LPF) is the lowest flow flushing urinal available. Water free urinals are manufactured by various companies and are designed not to use any water after each use. However, water free style fixtures require more daily cleaning and maintenance, monthly fixture maintenance on sealing mechanisms, and annual drain line cleaning.

What is the difference between a washdown and siphon jet urinal?

Washdown urinals direct water to the water distribution box which spreads water across the back wall of the urinal and it flows down cleansing the back wall. A siphon jet urinal also utilizes this action, but additionally directs water to a siphon jet located in the trap of the urinal. Siphon jet urinals typically flush at 1.0 GPF (3.79 LPF) whereas wash down urinals can flush with less water and can operate on as little as 0.125 GPF (.47 LPF).

Why does a commercial urinal require a minimum water supply line of 3/4" (1.91 cm) in diameter?

A minimum supply line of 3/4" (1.91 cm) in diameter is necessary on commercial urinals to be able to supply the minimum 15 GPM (56.78 LPM) flow rate required to properly actuate the flush valve and fixture.

Where would I find the model/product # on a urinal or commercial toilet?

The Zurn product number is not visible on the installed fixture. However the fixture flow volume (gpf / lpf) is visible on the top face of our Urinals or on the rim (near the spud) of our Water Closets.

What is the MaP rating?

MaP is a third party Maximum Performance scale that rates toilet efficiency and flush performance. A 1000 gram MaP rating certifies that this toilet can evacuate 2.2 pounds of waste which is the maximum achievable rating.

What is the minimum flow rate available for a faucet / lavatory combination?

The lowest flow rates available in the market today are either 0.35 GPM (1.32 LPM) or 0.50 GPM (1.89 LPM). The most commonly specified faucets are the 1.0GPM (3.79 LPM) and 1.5GPM (5.68 LPM) versions

How does one ensure a faucet conforms to ASSE 1070 which prevents scalding of hot water on users during operation?

By using a Zurn thermostatic mixing valve (TMV) in conjunction with the Zurn faucet. This unit is designed to monitor inlet conditions and hold the outlet temperature constant based on a variable set point from 96 degrees F (36 degrees C) to 120 degrees F (49 degrees C).

What is the difference between a laminar flow and aerated flow in terms of faucet outlets?

Laminar flow outlets distribute water from the faucet without absorbing air first. This gives the flow a clear, stream-like pattern, and prevents potential bacteria or germs in the air from getting pulled into the water supply as the faucet is distributing water. Laminar flow outlets are often specified in healthcare and education applications. Aerated flow outlets pull air and mix with the water as the faucet is dispensing, giving a more rigid stream of water.

What are the current ADA criteria to conform with when specifying manually or metering operated faucets?

In order to conform to the current ADA standards, a faucet handle or lever can not require any grabbing, twisting, or pinching in any such way, and also requires less than 5 lbs (2.27 kg) of force to turn the unit on or off.

What are some key requirements to ensure that metering style faucets perform and flow correctly?

Metering faucets must first be ordered and installed with a 1.0 GPM (3.79 LPM) or less aerator in order to ensure proper cycle time. In most cases, metering faucets will cycle for 10-15 seconds.

What is the difference between quarter turn faucets and compression style faucets?

Most quarter turn faucets use ceramic based cartridges that are designed to open and close with a quarter turn greatly reducing the amount of twist that occurs on the o-rings. A compression style cartridge faucet operates by continually turning the handle to retract the seal against the bottom of the cartridge bore.

What is the difference between a flushometer and a flush valve?

Both terms are used interchangeably to describe the flushing mechanism for commercial toilets. There is no difference between the two.

What is the difference between a hardwired and battery powered flush valve?

Both types of flush valves are sensor operated. Battery type flush sensor flush valves are hands-free activated units that are typically powered by alkaline or lithium type batteries. Most studies conducted can state battery life lasts between 3-4 years in most flush valves. For hardwired flush valves, these units are hardwired directly into the electrical supply of the facility during installation. They are powered through transformers that convert the electrical current to the proper amperage required to activate the flush valve. Hardwired flush valves are also hands-free sensor operated devices.

Can the sensor range of a ZEMS-IS be adjusted to eliminate ghost flushing?

The ZEMS-IS valves are factory set to accommodate the most ideal sensor range for most applications.

Can Zurn cleanouts be used on a pressurized drainage system?

Zurn does not test Cleanout Plugs for a specific pressure rating. We recommend our cleanouts be used in gravity fed systems. In most building applications, a standard pressure test of 10 feet (3.048 meters) of head pressure (approximately 5 p.s.i. (34.47 kPa)) is applied to the piping system to check for leaks. The Zurn Cleanout plug will safely pass this test with the use of a non-permanent thread sealant.

Does Zurn offer a sediment bucket for roof drains?

Sediment buckets are not generally used on roof drains, as they tend to be cleaned on an irregular basis. If a full bucket is not serviced, it will impede the flow of the roof drain system. We do offer the -SS (Stainless Steel Mesh Screen Over Dome) option. This screen keeps sediment from entering the drain, and can be serviced without disrupting the roof drain.

What is the maximum height for the -85 (Stainless Steel Perforated Extension) option?

The maximum height for the -85 (Stainless Steel Perforated Extension) option is 20 inches (50.8 cm). Please contact Zurn Engineering if a height greater than 20 inches (50.8 cm) is required.

Does Zurn have any product offerings for Green Roofing applications?

The Z110 series is Zurn's line of Green Roof drains. Zurn currently offers four different models within this line, each available with a number of options, which can be configured to meet the needs of

most any green roofing application.

Does Zurn offer an adjustable promenade deck drain?

Yes, both the Z150 and Z150-DT offer the -EA (Adjustable Extension Assembly) option. The -EA option provides a range of extension height for applications where the roof material thickness is determined upon installation.

In addition, Zurn offers the -DR and -EB options which feature Zurn's Patented Top-Set Deck Plate which facilitates vertical adjustment. These options are available on the Z150, Z150-DT, Z154, Z154-DT, Z158, Z158-DT.

What type of carrier should be used with a wall mounted water closet?

The vast majority of all wall hung water closets sold in the US market have a universal 4-bolt mounting pattern (9" (22.86 cm) center to center wide by 7.5" (19.05 cm) center to center tall). Therefore, most Zurn water closet carriers can be specified. The most common systems are the Z1203 and Z1204. The difference between these two systems is the orientation of the stack. The Z1203 has a Horizontal No-Hub Stack, and the Z1204 has a Vertical No-Hub Stack. Zurn offers a variety of carriers to meet the needs of special applications such as narrow chase, special loading requirements, and pre-fab installations. Please contact Zurn for additional information on these systems.

What determines whether a water closet carrier is right-handed or left-handed?

The direction of the water closet carrier is determined by the following method: When facing the fixture, if the flow direction is from left to right, it is a left-handed carrier. If flow direction is from right to left, it is a right-handed carrier. Our water closet carriers come marked with either a "LH" or a "RH" on the fitting for easy identification.

How is a ceramic cartridge assembly removed from a hydrant?

A special tool is required as follows:

- 62078-001 for up to a 12" (30.48 cm) wall thickness,
- 62078-002 for up to a 24" (60.96 cm) wall thickness, and
- 62078-003 for up to a 36" (91.44 cm) wall thickness.

For step by step directions for removing the Cartridge and Operating Tube Assemblies, please click [here](#).

What is the recommended static operating pressure range of Zurn Hydrants?

The maximum static operating pressure is 125 psi (827.37 kPa), while the minimum running pressure is 8 psi (55.16 psi).

Does Zurn offer a seat removal tool?

Yes, the seat removal tool is offered in 3 lengths. Part number 841130014 is used for hydrant lengths up to 12 inches (30.48 cm). Part number 841130024 is used for hydrant lengths up to 24 inches (60.96 cm). Part number 841130034 is used for hydrant lengths up to 36 inches (91.44 cm).

What is the minimum and maximum operating temperature of Zurn Hydrants?

The minimum and maximum allowable operating temperatures are 33 degrees Fahrenheit (0.56 degrees Celsius) and 130 degrees Fahrenheit (54.44 degrees Celsius), respectively.

Can a wall hydrant be installed in the ground?

It is not recommended to install a wall hydrant in the ground because the hydrant cannot properly drain after use. This could potentially damage the hydrant under freeze conditions.

Can a Zurn grease interceptor be built with a sediment bucket?

Zurn does not recommend the use of sediment buckets inside the grease interceptor because grease tends to stick to the solids, which does not allow the grease to float to the top and be separated. Instead, Zurn suggests the use of a solids interceptor upstream of the grease interceptor to separate any solids from the waste line before they can enter the grease interceptor.

How are grease interceptors sized for use with commercial dishwashers?

The PDI standard recommends using a separate grease interceptor for each commercial dishwasher. The size of the interceptor is determined by the GPM discharge rate of the dishwasher as specified by the manufacturer. The interceptor should be sized to have a GPM rating equal to or greater than the discharge rate of the dishwasher.

Is the Flow Control Fitting required when installing a grease interceptor?

Yes, the flow control fitting is necessary, as it regulates the velocity of the water entering the inlet of the interceptor to the specified GPM. Without it, water may enter the unit too quickly causing the operating water level inside the unit to rise over the top of the separation baffle allowing grease to pass through the unit which can lead to clogged/damaged drain lines over time.

Why is the interceptor cover leaking when I try to pressure test the plumbing lines?

The interceptor is not designed to be pressurized and should have the inlet and outlet plugged off when pressurizing the plumbing lines for testing.

Can the flow control valve be buried in the ground?

Yes, the flow control valve can be buried in the ground. However, Zurn recommends that the valve be accessible for maintenance purposes, so it should be partially encased in a vault or within an access box. Please consult your local code to ensure the installation complies within your code.

Is the water/grease capacity listed on the spec sheet table an overall capacity or a working capacity?

The water capacity listed on the spec sheet table represents the maximum amount of water the interceptor can hold with no other substance within the unit. On the other hand, the grease capacity is a working capacity, which represents the total amount of grease that can be intercepted before the turbulence of the water forces grease through the unit.

How do I properly size a grease interceptor?

Use Zurn's online Grease Interceptor sizing program to find the appropriate sized interceptor.

Which interceptors can be used for plaster?

The following interceptors can be used for plaster: Z1180, Z1181, and Z1184.

Does Zurn offer a 12" (30.48 cm) drain with heel proof grates?

Yes. Please contact Zurn Engineering for more information specific to your application.

Are Zurn's Trench Drain Systems waterproof?

Zurn offers several solutions in order to make the systems water tight such as -KC clamp collars among other solutions. Please contact Zurn Engineering for additional details on these products.

What are the different types of crimp rings or clamps offered by Zurn that are compatible with Zurn's XL brass and CR polymer insert fittings?

Zurn PEX sells 3 types of crimp rings or clamps for use with our XL brass insert fittings and our CR polymer insert fittings.

- Zurn PEX copper crimp rings (QCR2X, 3X, 4X, 5X, 6X, 7X, 8X) are made to the specifications in ASTM F1807. These copper crimp rings are suitable for use with Zurn PEX XL brass insert fittings and Zurn PEX CR polymer insert fittings. Copper rings require a separate tool for each size of ring. Some tools are made with interchangeable inserts.
- Zurn PEX Stainless Steel Clamps (QSOET2X, 3X, 4X, 5X) are made to the specifications in ASTM F2098 stainless steel clamps for PEX tubing. These stainless steel clamps are suitable for use with Zurn PEX XL brass insert fittings and Zurn PEX CR polymer insert fittings. The Stainless Steel Clamp (QSOET_X) requires the QSECRET tool.
- Zurn PEX Qickclamp stainless steel clamps (QCLP2X, 3X, 4X, 5X) are a patented, proprietary clamp. This Qickclamp is suitable for use with Zurn PEX XL brass insert fittings and Zurn PEX CR polymer insert fittings. Qickclamp (QCLP_X) requires either the QCRTQCM or the QCRTQCRM tool.

Note:

The tools for the 2 different types of stainless steel clamps that Zurn PEX sells are not interchangeable and will not work on both clamp systems. Use of the wrong tool will give improper clamping and result in possible leaks, flooding and property damage. The Zurn PEX warranty does not cover problems caused by use of the wrong tool.

Can Zurn's CR insert and crimp fittings be used in residential plumbing circulating hot water plumbing loops?

Zurn PEX CR insert and crimp fittings may be used in residential plumbing circulating hot water plumbing loops when the water temperature is 140° F (60° C) or less and the free chlorine level in the water is less than 4 ppm.

Zurn PEX CR insert and crimp fittings are not recommended for use in hydronic heating applications.

Can rodents chew through or damage PEX plumbing systems?

On very rare occasions, we get a report that rodents have damaged a piping system. While it is possible that some gnawing rodents may be able to chew through a PEX tube, there is usually very little incentive for them to do so.

Moles, for example will frequently prefer to tunnel along a freshly buried tube if it is going the direction they want to go because the soil is easier to dig. If the tube gets in their way, they will gnaw at it as they would a root. Usually it is easier for them to dig around it than go through it and that is what they do.

Rats or other gnawing rodents that live above ground may chew on tube if it is in their way but there is nothing in the tube that is attractive or nutritionally satisfying to them. Again, it is usually easier for a rodent to go around a tube than chew through it.

What do the colors of Zurn PEX tube mean?

Zurn PEX tube is available in red, white and blue colors. Red is commonly used on the hot water side of a plumbing system and Blue is commonly used on the cold water side of a plumbing system. White is frequently used on both the hot and cold side when color differentiation is not needed or desired.

The plumbing codes require that all hot and cold water distribution tube in a home be capable of hot water service even if the tube is only conveying cold water.

All colors of Zurn PEX potable water tubing meet all the same pressure-temperature performance requirements of the ASTM standards.

[Can Zurn PEX Tube go through holes in wood framing?](#)

We have long recommended that holes in wood studs, floors or engineered wood structural products be a minimum of 1/8" (0.32 cm) larger in diameter than the outside diameter of the tube. This recommendation is published in our Installation Guides. This allows ample clearance for expansion and contraction of the tube.

We do not require that the tubing be centered in the drilled hole. It may touch one side or the other. Contact with the wood material will not abrade the surface of the Zurn PEX tube.

If sealants are being used to minimize drafts or for other purposes such as fire stopping, it is important to size the hole and position the tube in the hole as recommended by the sealant manufacturer.

[What are the standards for Non Fire-rated and Fire-rated wall penetrations with Zurn PEX tube?](#)

Fire-rated wall penetrations with Zurn PEX tube must be done in a way that doesn't compromise the integrity of the fire-rated wall. The type of sealant or seal used depends on the rating of the wall. There are several manufacturers of fire stops/sealants and most of them have UL listed procedures for using their products to seal around plastic pipe (including PEX) penetrations of fire-rated walls. The fire stop/sealant manufacturer's recommended installation procedures must be followed in order to maintain the integrity of the fire-rated wall.

We are aware of at least the following companies that manufacture fire stop/sealants.

- Rectorseal
- Passive Fire Protection Partners
- 3M
- Hilti

The fire stop/sealant manufacturer must be contacted to determine the proper product for a given application.

When penetrating a Non Fire-rated wall, common practice is the same with Zurn PEX as for other piping materials. A hole is cut in the wall and the pipe is run through the hole. The hole is usually covered with a decorative escutcheon.

[To protect against freeze damage, does Zurn PEX tubing need to be insulated when installed in attics, walls, or other locations?](#)

Plumbing codes require piping that is run in attics or other spaces such as exterior walls to be protected from freezing.

Zurn PEX tube is resistant to freeze damage but the Zurn PEX warranty does not cover damage caused by freezing because installation specific variables can affect the performance of the system if it is allowed to freeze up. Zurn PEX tube should be insulated according to the requirements of the code when it is run in attics or other spaces such as exterior walls where it may be exposed to freezing temperatures. The amount of insulation required depends on the geographic location, type of construction and many other variables. The same insulation and installation practices that would

typically be required for copper or CPVC in a given location will provide equivalent protection to the Zurn PEX tube.

Does Zurn PEX comply with no lead laws?

We get many questions about our potable water plumbing products and compliance with the imminent Federal regulations regarding lead in potable water plumbing products.

- Zurn PEX tube does not contain lead.
- CR plastic insert fittings do not contain lead.
- Qickport Manifolds and plastic valves do not contain lead.
- Copper sweat adapter fittings and stub out elbows do not contain lead.

XL brass insert fittings and valves are in full compliance with the Federal regulations that require that the lead content of the metal be less than 0.25%. They have been in compliance since they were introduced in early 2010. Our XL fittings and valves are identified with "ZPEX". The XL fittings will also have a letter "G" typically at the end of the mark of NSF, our 3rd party listing agency such as "cNSFus-pw G".

What are Water Hammer Arrestors and does Zurn PEX have them?

Water hammer arrestors are used in plumbing systems to dampen the pressure surges that occur when flowing water is quickly stopped. These quick stops can occur when someone quickly closes a faucet (particularly a single handle faucet) or a washing machine or dishwasher solenoid valve closes.

In copper systems, the pressure surge (without a water hammer arrestor) can exceed 300 psi (2068.43 kPa). A PEX system operating at the same conditions will have a pressure surge of less than 200 psi (1378.95 kPa). The pressure surge in copper is certainly less than the pressure that will cause the tube to rupture but it is greater than the pressure rating of some other components in the plumbing system and could cause them to malfunction. The pressure surge in a PEX system is less than 50% of the minimum Quick Burst requirement for PEX tube.

One of the problems with water hammer in a copper system is noise. As the pressure surge occurs, it can cause movement in the piping system and since copper is a metal, it produces the banging noise that is characteristic of water hammer in most installations. PEX is a flexible material and even if it moves, it does not strike surrounding materials with the same force as copper and it is not as noisy because it is flexible.

Water hammer in some large systems has been known to cause fatigue failures of the pipe and fittings. Zurn PEX has performed water hammer tests on PEX tube/fitting assemblies to evaluate this possibility. Assemblies consisting of a brass insert fitting for PEX tube with very short pieces of PEX tube connected to it were installed at the end of a long copper line with a solenoid valve. The short pieces of PEX tube give minimal damping of the pressure surge that occurs in the long copper run when the solenoid valve closes. The magnitude of the pressure surge in the sample is greater than what would be experienced in a PEX plumbing system. In this test, PEX tube fitting assemblies have lasted more than 250,000 cycles without failure. This is equivalent to more than 25 water hammer pressure surges a day for 25 years.

For these reasons, we believe that water hammer arrestors are not needed in typical PEX plumbing systems.

Can Zurn PEX tubing and fittings be used on a connection to a temperature-pressure relief valve for a typical water heater?

Zurn PEX tube, any color, may be used on the discharge side of a typical water heater temperature-pressure relief valves. One of the requirements of the ASTM standard for PEX systems, ASTM F877, is an Excessive Temperature-Pressure requirement to demonstrate that the system will withstand the conditions of 210° F (98.89° C)-150 psi (1034.21) for 720 hours (30 days).

In general, there should be no fittings in the discharge line except for the fitting used to connect the Zurn PEX tube to the relief valve. When required by the installation, a fitting may be used at the discharge end of the tube. Always be sure the installation is in compliance with the local plumbing code.

Can you use Heat Tapes with Zurn PEX Tube?

Low wattage electrical heating tape may be used with Zurn PEX tube to prevent the water inside from freezing. The heat tape must be thermostatically controlled and its surface temperature must not exceed 180° F (82.22° C).

We recommend that you consult with the heat tape manufacturer to confirm that the maximum surface temperature of the heat tape will not exceed 180° F (82.22° C).

When is it recommended to use nailing plates when installing Zurn PEX tubing?

In our design and installation manual, we recommend the use of nailing plates when Zurn PEX tube is passing through a stud within 2" (5.08 cm) of a nailing surface.

The use of nailing plates is a matter of good plumbing practice regardless of the tubing material and it minimizes the possibility of damage to the tube from nails or drywall screws. If the local code differs from our recommendation, it is permissible to follow the requirements of the local code with respect to nailing plates.

The installer has the responsibility to provide protection against mechanical damage from screws and nails. The Zurn PEX warranty does not apply to tube that has been damaged or punctured by screws or nails.

Do Zurn PEX products contain recycled materials?

Zurn PEX tube, both potable water tube and radiant barrier tube, do not contain recycled material. Zurn PEX CR Fittings do not contain recycled material.

Zurn PEX XL Brass Fittings are made from a specific brass alloy. The brass mills that manufacture the alloy frequently use recycled copper alloy material as an ingredient although the composition of the brass material is always adjusted to the required specification by the brass mill.

After installing Zurn PEX tubing I noticed that it sags between the pipe straps. Is that normal?

Zurn PEX tubing is flexible and sagging between pipe straps is normal, especially with the smaller diameter tubing. Coiled tubing, when straightened, will retain the memory of the coil and will have some curvature between pipe straps. The straight length tubing that's available won't have the memory of the coil but will still have some curvature between pipe straps due to the weight of the tube and the water inside the tube. We recommend that Zurn PEX tubing be installed with some slack (about 1/8" (0.32 cm) per foot (30.48 cm) of length) to allow for contraction of the tubing when it gets cold. The sag between pipe straps will help give you the slack that you need. The flexibility of the tubing will enable you to change direction and curve around obstacles without the use of

fittings.

Are Zurn PEX products made in the USA?

The following Zurn PEX products are made in the USA. (Zurn PEX non-barrier PEX tubing, Zurn PEX Performa barrier tubing, Zurn PEX hy-PE-RTube barrier tubing, Zurn PEX CR plastic fittings and valves, Zurn PEX Qicktite fittings that do not contain brass, Zurn PEX QickPort manifolds and Zurn PEX QickClamp stainless steel clamps.)

Can you embed Zurn PEX tubing in a concrete slab?

Zurn PEX tubing may be embedded within a concrete slab for either plumbing or heating applications. This is true for either the non-barrier tube primarily used for plumbing or the barrier tube primarily used for heating. The model mechanical code for hydronic heating requires that the embedded tube be a continuous length (without fittings) in the slab.

Embedded Zurn PEX tube should be sleeved (approximately 4-6 inches (10.16-15.24 cm) into the slab) where it enters and leaves the slab but continuous sleeving is not required.

Local jurisdictions sometimes modify the national model codes when they adopt them for local use. You should confirm acceptance of this type of installation by the local officials prior to installation.

Will there be corrosion between Qickclamp and Zurn PEX XL brass fittings?

There have been questions about the potential for corrosion caused by contact between stainless steel clamps such as Zurn PEX Qickclamp and Surecap and brass insert fittings.

Stainless steel and brass have been used together in plumbing applications for many years without problems. Many faucets use stainless steel screws or other components in contact with brass. Stainless steel retaining rings are frequently used in brass water service fittings.

The type of corrosion that could occur is described as galvanic corrosion. It is recommended that in "harsh" environments, metals that are being used together should have a difference in anodic index of less than 0.15. Brass has an index value of 0.40-0.45 and stainless steel has an index value of 0.50. The difference is 0.05, well under the recommended maximum difference. Our application is not a harsh environment. Based on this and years of plumbing experience with these materials in contact with each other, there should be no corrosion problems between the stainless steel Qickclamp and the Zurn PEX brass insert fittings.

Will Zurn PEX tubing break when the water inside it freezes?

When Zurn PEX tube is free to uniformly expand, it is resistant to freeze damage in an accidental freeze. However, there are many installation variables that may limit this uniform expansion and in these instances, some section of the tube may be forced to have more than its fair share of the expansion and this could cause the tube to rupture. For this reason, our warranty does not cover freeze related damage.

Does condensation form on Zurn Pex tubing as it does on copper pipe?

Zurn PEX tube transfers heat at a much slower rate than copper tube. This means that it is much less likely for condensation to form on the Zurn PEX tube than it is for copper in the same conditions. This does not mean that condensation cannot form under certain conditions. The site variables of relative humidity, ambient temperature and water temperature are all factors in the formation of condensation on any piping. Installing appropriate pipe insulation over the tubing will stop the formation of condensation.

Can you pressure test Zurn PEX tubing with air pressure?

Yes, but the installer must recognize that there are significant safety hazards associated with air tests. The installer must determine what safety precautions are appropriate to protect their employees and others working around the system being tested.

The maximum test pressure with air should not exceed 100 psi (689.48 kPa).

One of the problems with air tests is detecting a leak, should there be one. Zurn PEX recommends the use of ultrasonic leak detection instruments with air tests because they do not require the use of chemical solutions and they are quicker.

If you choose to use a liquid leak detector, the following is the ONLY one to be used on Zurn PEX plumbing or heating systems.

“Dilute no more than two ounces of green Ultra Palmolive® Original Scent Concentrated dishwashing liquid in one gallon (3.79 L) of potable water.”

This recommendation applies only to Zurn PEX systems using Zurn PEX brass insert fittings or Zurn PEX Qicksert CR plastic insert fittings.

DO NOT use this solution on other manufacturer’s plumbing system components unless approved by the component manufacturer.

Can Zurn PEX tubing be painted over?

Water based latex or acrylic paints will not affect Zurn PEX tube. Do not allow oil based paints or lacquers to contact or be applied to PEX tubing. Paints usually do not adhere well to Zurn PEX tube and should never be used as a method of providing UV protection to PEX tube.

Can an electric heat trace system be installed on a PEX water distribution system or will this damage the tubing?

Low wattage electrical heating tape/trace may be used with Zurn PEX tube to prevent the water inside from freezing. The heat tape/trace must be thermostatically controlled and its surface temperature must not exceed 180° F (82.22° C).

We recommend that you consult with the heat tape/trace manufacturer to confirm that the maximum surface temperature of the heat tape/trace will not exceed 180° F (82.22° C).

Is zurn pex tubing OK for use for air compressor lines.

Air compressor lines is not an application that's covered under our warranty so we can't recommend it. We have heard of people using Pex for this application but we have no data regarding longevity or potential problems.

What is Proposition 65?

In 1986, California voters approved an initiative to address their growing concerns about exposure to toxic chemicals. That initiative became the Safe Drinking Water and Toxic Enforcement Act of 1986, better known by its original name of Proposition 65. Proposition 65 requires the State to publish a list of chemicals known to cause cancer or birth defects or other reproductive harm. This list, which must be updated at least once a year, has grown to include approximately 1000+ chemicals since it was first published in 1987.

How do I control water hammer or surging that is caused by my Automatic Control Valve?

Water Hammer and Surging can be created by an Automatic Control Valve. Water Hammer is caused by a rapidly closing valve, and Surging can be caused by a rapidly opening valve. Both of these conditions can be resolved by the use of the model SC1 speed control. To eliminate Water Hammer, use a model SC1 closing speed control. To eliminate Surging, use a model SC1 opening speed control. In both cases, the speed controls are adjusted to slow the closing and opening speed of the Automatic Control Valve. Zurn Wilkins Pressure Reducing Control Valves, in sizes 1-1/4" to 3" (3.18-7.62 cm), are furnished with speed controls as standard equipment. On 4" (10.16 cm) and larger valves, speed controls are optional.

How do I adjust a Pressure Reducing Automatic Control Valve?

All Automatic Control Valves are relatively easy to set up. Nevertheless, there are distinct procedures that must be followed in order to ensure proper performance and function.

What is the difference between a Direct Acting Pressure Reducing Valve and a Pilot Operated Pressure Reducing Automatic Control Valve?

Aside from the difference in physical size, a Pressure Reducing Automatic Control Valve has the ability to hold its downstream pressure at a fairly constant value, regardless of changes in inlet pressure or changes in downstream demand. Direct Acting Pressure Reducing Valves exhibit a condition called Fall-off. With Direct Acting Pressure Reducing Valves, the downstream pressure decreases as the flow rate increases. Additionally, Pressure Reducing Automatic Control Valves have the ability to achieve flow rates far in excess of what a comparably sized Direct Acting Pressure Reducing Valve could provide.

What is the difference between the model 350 and the model 375?

The model 350 is a Double Check Valve Assembly. Double Check Valve assemblies are used to protect against either a Backsiphonage or Backpressure backflow condition, that is not construed as a health hazard. The 375 is a Reduced Pressure Principle Assembly that also protects against Backpressure and Backsiphonage. The 375 will protect against the backflow of substances that are considered a health hazard.

Why do I need a Pressure Reducing Valve?

Most Nation Plumbing Codes require the water pressure to be reduced before entering any building or domicile if the local street pressure is greater than 80 pounds per square inch (551.58 kPa). Further, the installation of a Pressure Reducing Valve will help conserve water and increase the longevity of all plumbing system components.

Why doesn't my new Pressure Reducing Valve regulate the pressure?

If the downstream pressure rises immediately after flow ceases, the Pressure Reducing Valve is most likely fouled with debris. Correcting this problem requires disassembly of the valve and cleaning the internal seal ring. If the pressure rise is noted to only be periodic, the rise in pressure is most likely caused by Thermal Expansion from the water heater.

What is Fall-off?

Fall-off is the difference between the Pressure Reducing Valve's static set pressure and the flowing pressure. As flow rate increases, the downstream pressure will decrease. This is an inherent characteristic of all Direct Acting Pressure Reducing valves.

How do I size a pressure Reducing Valve?

Pressure Reducing Valves are sized based upon the needs of the downstream system. Flow rate, desired downstream pressure, and allowable fall-off must be determined before the valve can be properly sized. Once these characteristics are known, they are simply applied to the flow curve of the Pressure Reducing Valve that was chosen for its features and benefits, and the appropriate size valve can be specified. If you need help in sizing a Pressure Reducing Valve, please do not hesitate to contact your Zurn Wilkins representative for assistance.

What is a Battery or a Parallel Pressure Reducing Valve station?

A Battery or Parallel station is two or more Pressure Reducing Valves plumbed in parallel. Battery installations are used when there is a wide variation between flow rates, or when a single Pressure Reducing Valve is unable to handle the maximum flow rate needed by the system. In a Battery installation, the smallest valve is set to the highest pressure, with successively larger valves set approximately 5 pounds per square inch (34.47 kPa) lower than the preceding smaller valve. This setting procedure ensures that the smallest valve will open first, with the next larger valve opening when the flow rate increases. As flow decreases, the large valve closes first, and the smallest valve closes last. For help with sizing a Battery or Parallel system, please contact your Zurn Wilkins Representative for help.

Can I repair my Pressure Reducing Valve?

Virtually all Zurn Wilkins Pressure Reducing Valves are repairable in-line. Zurn Wilkins provides repair kits that embody all of the internal components of the valve. Anyone that has skills with small hand tools should be able to repair a Pressure Reducing valve. To find a wholesaler near you that stocks repair kits for Zurn Wilkins Pressure Reducing Valves, please contact your Zurn Wilkins Representative.

How do I test my Pressure Reducing Valve?

Testing a Pressure Reducing Valve only requires a gauge to be installed downstream of the valve. With no water flowing, the downstream pressure should be below 80 psi (551.58 kPa), or should be at the level the PRV was set to. If the gauge shows a pressure above where the valve was set or above 80 psi (551.58 kPa), open a downstream faucet to relieve the pressure. Upon shutting the downstream faucet, recheck the pressure gauge. If the pressure is above 80 psi (551.58 kPa) or where the valve was set, the Pressure Reducing Valve has failed. Review the trouble shooting on the instruction sheet for the model of Pressure Reducing Valve that you have. This will guide you in correcting the problem.

Will the threads of the Zurn Wilkins tail piece nuts mate with the threads of other manufacturer's valve?

Generally, No. The threads used by various manufacturers for union connections are proprietary, and will not mate with other manufacturers components. Applicable products: Pressure Reducing Valves, Thermostatic Mixing Valve, Backflow Prevention Assemblies.