Model 70XL LEAD-FREE*

Pressure Reducing Valve with Integral By-pass (3/4" & 1")

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

❑ Installation ❑ Testing ❑ Maintenance Instructions

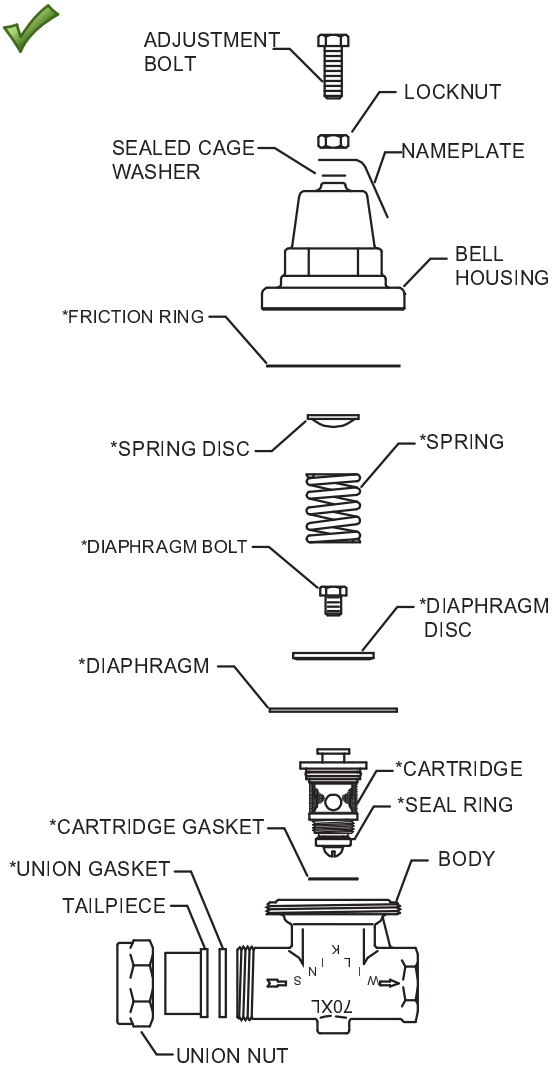
REPAIR KIT INSTRUCTIONS 70XLDUCG ✔

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 to remove spring tension.
3. Unscrew bell housing counterclockwise and remove spring, spring disc and friction ring.
4. While holding diaphragm, unscrew diaphragm bolt counter-clockwise and remove bolt, diaphragm disc and diaphragm.
5. Remove cartridge counterclockwise; Use a 1-1/8" socket for the 3/4" and a 1-3/8" socket for the 1". Make sure cartridge gasket is removed from the body.

TO REASSEMBLE:

1. While disassembled, open inlet of water service to flush out valve body and service line of debris.
2. Lubricate o-ring on replacement cartridge then thread into body clockwise.
3. Replace diaphragm, diaphragm disc and diaphragm bolt (It is necessary to hold diaphragm while tightening diaphragm bolt.).
4. Replace friction ring, spring, spring disc and bell housing. Tighten bell housing onto body by threading clockwise.
5. Turn adjustment bolt into bell housing to old setting.
6. Enter dwelling and turn on several faucets.
7. Turn on water service. Let water run for several seconds then turn off faucets in dwelling.
8. Adjust regulator to desired pressure by turning adjusment bolt clockwise (into bell housing) to raise pressure or counterclock-wise (out of bell housing) to lower pressure. **It is recommended a pressure gauge be installed down stream of the regulator to ensure pressure is reduced below 75 psi.** NOTE: When reducing pressure, open a down stream faucet to relieve pressure.
9. Tighten locknut when desired pressure is achieved.



*INDICATES PARTS SUPPLIED IN REPAIR KITS

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.

Proposition 65 Warning This product contains chemicals known to the State of California to cause cancer or birth defects or other reproductive harm.

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 then 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.

Terms and Conditions

Price and Terms of Payment
Terms are net, payable 30 days from date of invoice. All pricing in U.S. currency. The Buyer shall pay all sales, consumers, or other applicable taxes. A 1-1/2% monthly (18% annual) service charge will be added to the outstanding balance of all past due invoices.

Minimum invoice $100.00. Zurn Industries, LLC ("Zurn") reserves the right to apply a minimum order charge in order to meet the $100.00 minimum invoice requirement. All orders are subject to credit approval by the Zurn Credit Department prior to the acceptance of an order. Orders may be refused, delivery may be withheld, or shipment stopped in transit without any liability on Zurn's part at Zurn's sole discretion based upon Buyer's credit worthiness as determined by Zurn.

Freight
Zurn is pleased to provide an industry-leading $3,500 combined freight rate. Please see below for specific policy details.

All sales are F.O.B. seller's location. Zurn will allow full freight allowance when any of the following conditions are met: 1) any combination of Specification Drainage, Light Commercial, Commercial Brass or Wilkins orders of $3,500 or more; 2) Linear Drainage and Chemical Drainage orders of $5,000 or more; 3) any Combination of Specification Drainage, Light Commercial, Commercial Brass, Wilkins, Linear Drainage and Chemical Drainage orders of $5,000 or more; 4) Zurn One Systems orders of $7,500 or more; 5) fixture only orders totaling $10,000 or more. This full freight allowance applies when the shipment is within the continental United States and has a single destination of a buyer's standard address or job location. Routing of shipment shall be determined at the sole direction of Zurn . Shipping dates are estimates and time of delivery shall not be of the essence of this sale contract. Under no circumstances will the Seller have any responsibility on account of any delays in manufacture, transportation, or otherwise. Terms of Export Shipment on application.

NOTE: Any product dimension larger than 92" or any single item weighing more than 3,500 lbs., shall be defined as an oversized and/or overweight product and Zurn's standard FFA terms may not apply. Please contact our customer service department for guidance on potential additional shipping charges.

These charges and restrictions apply in addition to Zurn standard terms and conditions for sale unless otherwise agreed upon by the parties.

Limited Warranty
Zurn goods sold hereunder are warranted to be free from defects in material and factory workmanship for the period of time from the date of purchase: AquaVantage® Flush Valves, AquaFlush® Flush Valves, Commercial Fixtures, Faucets, Showers, and Tubular Brass three years; Chemical Drainage, Linear Drainage, Light Commercial, Specification Drainage, Zurn Wilkins, and Flush Valve and Tubular Brass decorative finishes one year. Where permitted by law, THE IMPLIED WARRANTY OF MERCHANTABILITY IS LIMITED TO THE ABOVE IDENTIFIED PERIOD OF TIME AND SHALL BE LIMITED SOLELY TO THE REPLACEMENT OF THE DEFECTIVE GOODS. A damaged/broken test cock or ball valve is not considered defective. Please contact Zurn Customer Care for assistance.

Zurn will replace goods at no cost that prove defective provided Zurn is notified in writing of such defect and the goods are returned prepaid at the specified Zurn location with evidence that they have been properly maintained and used in accordance with instructions. ZURN SHALL NOT BE RESPONSIBLE FOR ANY LABOR CHARGES OR ANY LOSS, INJURY, OR DAMAGES WHATSOEVER, INCLUDING, BUT NOT LIMITED TO, INCIDENTAL OR CONSE QUENTIAL DAMAGES. The sole and exclusive remedy shall be limited to the replacement of the defective goods. Before installation and use, the purchaser shall determine the suitability of the product for his intended use and the purchaser assumes all risk and liability whatever in the connection therewith. All weights stated in Zurn catalogs and lists are approximate and are not guaranteed.

Returned Goods
Standard cataloged material may be returned only with written permission of Zurn. Returned goods are subject to a 25% restocking charge of total saleable material returned, plus cost of reconditioning, if necessary, to make material sellable. Transportation charges are the responsibility of the Buyer. Credit allowance will be in the form of merchandise credit only – not cash credit. The value of the return must total at least $100.00 to qualify for credit allowance. No credit will be allowed for parts unless originally ordered and invoiced as parts. No credit will be allowed for discontinued or made-to-order items. Items that have been specially made are not subject to return or cancellation except by special negotiation. Material must be returned within one year of invoice date for credit to be issued for Chemical Drainage, Linear Drainage, and Light Commercial. Material must be returned within two years of invoice date for credit to be issued for Commercial Fixtures, Flush Valve Products, Specification Drainage, Tubular Brass, and Zurn Wilkins. No credit is allowed for Linear Drainage products that have been cut and Specification Drainage product with auxiliary tappings. Flush Valve material over two years old will be subject to a 50% handling charge. Flush Valve material over five years old will not be accepted. Light Commercial and Specification Drainage galvanized material will be credited at value of Dura-Coated cast iron, and chrome plated at value of bronze. Zurn Wilkins damaged/broken test cocks or ball valves are not considered defective.

Illustrations of Typical Installations
The typical installations for various products found in each product section are intended to illustrate the products and potential options for the use of these products. Under no circumstances are they to be construed as recommended installation procedures. Consult local codes and project specifications for proper installation instructions.

Terms and Conditions

Shortage/Damage Claims

Notification of material shortages or incorrect filling of orders must be made to Zurn within 10 days of receipt. No claims over three months old will be honored. Buyer agrees to make all complaints for damage in transit or "short count" directly to the carrier; before the contents are unloaded have the carrier agent's acknowledgement of such damage noted on the bill of lading and to present to the carrier its agent's acknowledgement of such damaged material with formal claim covering said damage.

General

Zurn reserves the right to make changes in design or equipment of any item or product without incurring any obligation on previously sold items, and to discontinue items at any time, without notice. Possession of this Catalog or other sales literature is not to be construed as an offer to sell. All orders are subject to acceptance by Zurn . Catalog printed in U.S.A.

Zurn flush valves are designed to comply with Army Corp of Engineers and Naval guide specifications, Military Specification MIL.V.29193 and Federal Specification WWP541.

Zurn flush valves comply with the following standards: ASME A112.18.1/CSA B125.1, A112.19.5, A112.19.2, A112.19.6, ASSE 1037 and 101 are listed by the following agencies: Canadian Standards, IAPMO/UPC/CUPC, and CSA 125.3. Zurn flush valves are manufactured from dezincification resistant alloys. For additional compliances, contact Zurn Industries, LLC, Commercial Brass Operation, or 1-800-997-3876.

Zurn is not responsible for typographical errors. The contents of this guide are subject to revision without notice.

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ZURN INDUSTRIES, LLC

1801 PITTSBURGH AVENUE, ERIE, PA, U.S.A. 16502 PHONE: 855-ONE-ZURN (855-663-9876) FAX: 814/454-7929 www.zurn.com

PEX Plumbing and Radiant Heating Systems Terms and Conditions

Price and Terms of Payment

Terms are net, payable 30 days from date of invoice. All pricing in U.S. currency. The Buyer shall pay all sales, consumers, or other applicable taxes. A 1-1/2% per month service charge will be added to all past due invoices. Annual rate 18% of the outstanding balance due.

Minimum invoice $150.00. Zurn reserves the right to apply a minimum order charge to equal $150.00. All orders are subject to credit approval by the Zurn Credit Department prior to the acceptance of an order. Orders may be refused, delivery may be withheld, or shipment stopped in transit without any liability on Zurn's part if in its sole opinion, the Buyer's ability to pay for the merchandise or the terms and conditions herein are in doubt. The Credit Department of Zurn must be notified of potential pricing errors within 30 days of invoice date.

Freight

All sales are F.O.B. Zurn's plant. Zurn will allow full freight allowance only on Zurn PEX® and Radiant Heating orders of $3,000 or more. This full freight allowance is when the shipment is within the continental United States and has a destiny of a Buyer's standard address of job location. Routing of shipment shall be determined at the sole discretion of Zurn. Multi product line orders totaling $7,500 can be combined to meet FFA guidelines. Shipping dates are estimates and time of delivery is not the essence of this sale of the contract therefore. Under no circumstances will Zurn have any responsibility on account of any delays in manufacture, transportation, or otherwise.

Limited Warranty

Please refer to document ZPM10232 – Zurn PEX®, Inc. warranty.

Proposition 65 Compliance

Zurn provides certain products in compliance with the requirements of California's Proposition 65 (California Health and Safety Code 25249.5 et seq.). Any required warning materials under this statute are enclosed with these products and must be kept in their entirety with the product. Any directions included in these warning materials must be strictly followed. Customer expressly acknowledges its responsibility and obligation to ensure that any such warning materials provided by Zurn are provided to the ultimate purchaser and Zurn disclaims any express or implied liability for customer's failure to meet the requirements.

Returned Goods

Standard cataloged material may be returned only with written permission of Zurn. Returned goods are subject to a 25% restocking charge of total saleable material returned, plus cost of reconditioning, if necessary, to make material sellable. Transportation charges are the responsibility of the Buyer. Credit allowance will be in the form of merchandise credit only – not cash credit. The value of a return must total at least $100.00 to qualify for credit allowance.

Shortage/Damage Claims

Notification of material shortages or incorrect filling of orders must be made to Zurn within 5 working days of receipt. No claims over three months old will be honored. Buyer agrees to make all complaints for damage in transit or "short count" directly to the carrier; before the contents are unloaded have the carrier agent's acknowledgement of such damage noted on the bill of lading and to present to the carrier its agent's acknowledgement of such damaged material with formal claim covering said damage.

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