



WELL-X-TROL®

RESIDENTIAL PRE-PRESSURIZED WELL TANKS INSTALLATION & OPERATION INSTRUCTIONS

Models WX-101 through WX-350



NOTE: Inspect for shipping damage and notify freight carrier or store where purchased immediately if damage is present. To avoid risk of personal injury and property damage, if the product appears to be malfunctioning or shows signs of corrosion, call a qualified professional immediately. Current copies of the Product manual can be viewed at www.amtrol.com. Use proper safety equipment when installing.



THIS IS THE SAFETY ALERT SYMBOL. IT IS USED TO ALERT YOU TO POTENTIAL PERSONAL INJURY AND OTHER HAZARDS. OBEY ALL SAFETY MESSAGES THAT FOLLOW THIS SYMBOL TO REDUCE THE RISK OF PERSONAL INJURY AS WELL AS PROPERTY DAMAGE.

WARNING READ CAREFULLY THE PRODUCT INSTALLATION & OPERATION INSTRUCTIONS. FAILURE TO FOLLOW THE INSTRUCTIONS AND WARNINGS IN THE MANUAL MAY RESULT IN SERIOUS OR FATAL INJURY AND/OR PROPERTY DAMAGE, AND WILL VOID THE PRODUCT WARRANTY. THIS PRODUCT MUST BE INSTALLED BY A QUALIFIED PROFESSIONAL. FOLLOW ALL APPLICABLE LOCAL AND STATE CODES AND REGULATIONS. IN THE ABSENCE OF SUCH CODES, FOLLOW THE CURRENT EDITIONS OF THE NATIONAL PLUMBING CODE AND NATIONAL ELECTRIC CODE, AS APPLICABLE. EXPLOSION OR RUPTURE HAZARD. THE WELL TANK MUST BE OPERATED SO THAT THE PRESSURE DOES NOT EXCEED THE MAXIMUM WORKING PRESSURE.

WARNING EXPLOSION HAZARD. Failure to follow the instructions in the product manual can cause a rupture or explosion; possibly causing serious or fatal injury, leaking or flooding and/or property damage.

WARNING Use only with a potable water system. Do not operate in a setting with freezing temperatures or where the temperature can exceed 100°F and do not exceed the maximum working pressure specified for this Product in the Manual. Mount vertically only.

WARNING Chlorine & Aggressive Water: The water quality can significantly influence the life of this Product. You should test for corrosive elements, acidity, total solids and other relevant contaminants, including chlorine and treat your water appropriately to insure satisfactory performance and prevent premature failure.

WARNING This Product, like most Products under pressure, may over time corrode, weaken and burst or explode, causing serious or fatal injury, leaking or flooding and/or property damage. To minimize risk, a licensed professional must install and periodically inspect and service the Product. A drip pan connected to an adequate drain must be installed if leaking or flooding could cause property damage. Do not locate in an area where leakage of the tank or connections could cause property damage to the area adjacent to the appliance or to lower floors of the structure.

CALIFORNIA PROPOSITION 65 WARNING! This product contains a chemical known by the State of California to cause cancer and to cause birth defects or other reproductive harm. (California Installer/Contractor - California law requires that this notice be given to consumer/end user of this product.) For more information: www.amtrol.com/prop65.html

WARNING EXPLOSION OR RUPTURE HAZARD A relief valve must be installed to prevent pressure in excess of local code requirement or maximum working pressure designated in the Product Manual, whichever is less. Do not expose Product to freezing temperatures or temperatures in excess of 100° F. Do not adjust the pre-charge or re-pressurize this Product except for any adjustments required at the time of initial installation, especially if Product is corroded, damaged or has diminished integrity. Adjustments to pre-charge must be done at ambient temperature only. Failure to properly size the Product or follow these instructions may result in excessive strain on the system, lead to Product failure, serious or fatal personal injury, leakage and/or property damage.

PLEASE READ THE FOLLOWING INSTRUCTIONS CAREFULLY
IMPORTANT GENERAL SAFETY INFORMATION -
ADDITIONAL SPECIFIC SAFETY ALERTS APPEAR IN THE FOLLOWING INSTRUCTIONS.

⚠ WARNING **DANGER! EXPLOSION HAZARD.** WHEN THE WELL TANK HAS BEEN IN SERVICE AND A CHANGE TO A HIGHER PRE-CHARGE PRESSURE IS NECESSARY DUE TO A REQUIRED CHANGE IN THE PRESSURE SWITCH SETTING, FAILURE TO FOLLOW INSTRUCTIONS BELOW CAN CAUSE A RUPTURE OR EXPLOSION, POSSIBLY CAUSING SERIOUS OR FATAL PERSONAL INJURY, AND/OR PROPERTY DAMAGE.

- DO NOT ADJUST OR ADD PRESSURE IF THERE HAS BEEN A LOSS OF AIR.
- DO NOT ADJUST THE PRE-CHARGE PRESSURE IF THERE IS VISIBLE EXTERIOR CORROSION.
- DO NOT ADJUST THE PRE-CHARGE PRESSURE IF THERE HAS BEEN A REDUCTION OF THE PUMP CYCLE TIME OR THE PRE-CHARGE PRESSURE COMPARED TO ITS INITIAL SETTING. THIS IS BECAUSE REDUCTION IN PUMP CYCLE TIME CAN RESULT FROM LOSS OF TANK AIR PRESSURE WHICH IN TURN CAN MEAN THERE MAY BE INTERNAL CORROSION AND ANY RE-PRESSURIZATION OR ADDITIONAL PRESSURE COULD RESULT IN RUPTURE OR EXPLOSION.

⚠ WARNING **MAXIMUM WORKING PRESSURES.** Every Well-X-Trol is air tested to 150 psig, the maximum working pressure for the Well-X-Trol line. Should pressures exceed 150 psig, proper selection and sizing of an ASME constructed Well-X-Trol should be made.

⚠ WARNING **RELIEF VALVE REQUIRED.** A relief valve should be installed which is set to open at excessive pressures (125 psig or more). This will protect the Well-X-Trol and other system components should the pressure switch malfunction and fail to shut the pump off. The relief valve should be installed at the connection of the Well-X-Trol to the system piping and have a discharge equal to the pump's capacity at 125 psig.

⚠ CAUTION AS IN ALL PLUMBING PRODUCTS AND WATER STORAGE VESSELS, BACTERIA CAN GROW IN YOUR WELL TANK, ESPECIALLY DURING TIMES OF NON-USE. CONSULT YOUR LOCAL PLUMBING OFFICIAL REGARDING ANY STEPS YOU MAY WISH TO TAKE TO SAFELY DISINFECT YOUR HOME'S PLUMBING SYSTEM.

⚠ WARNING A water test must be taken before installation of any water treatment equipment.

⚠ WARNING **DANGER! EXPLOSION HAZARD.** IF YOU ADJUST THE PRE-CHARGE PRESSURE OR ADD PRESSURE TO A TANK THAT IS CORRODED OR DAMAGED OR WITH DIMINISHED INTEGRITY, THE TANK CAN BURST OR EXPLODE, POSSIBLY CAUSING SERIOUS OR FATAL PERSONAL INJURY AND/OR PROPERTY DAMAGE.

- ONLY ADJUST THE PRE-CHARGE AS DESCRIBED IN THIS MANUAL WHEN THE TANK IS NEW OR WHEN THE INTEGRITY OF THE TANK AND LACK OF INTERNAL OR EXTERNAL CORROSION IS CONFIRMED.
- ONLY QUALIFIED PROFESSIONALS SHOULD CHECK, ADJUST OR RE-CHARGE THE PRE-CHARGE OF TANKS.

⚠ WARNING For your safety, the information in this manual must be followed to minimize the risk of electric shock, property damage or personal injury.

- Properly ground to conform with all governing codes and ordinances.

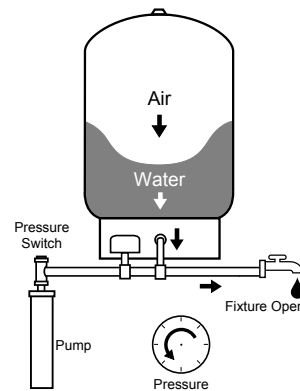
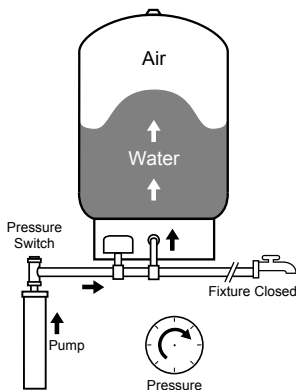
⚠ WARNING Do not install in direct sunlight. Excessive sun heat may cause distortion or other damage to non-metallic parts.

⚠ WARNING Use only lead-free solder and flux for all sweat-solder connections, as required by state and federal codes.

⚠ WARNING **ELECTROCUTION AND EXPLOSION HAZARD.** Before work is performed on the tank, turn off the power to the pump and release all water pressure in the tank and pumping system.

How a Well Tank Works

1. As the pump fills the tank with water, the air above the diaphragm is compressed. This increases the pressure in the tank and causes the pressure switch to turn off the pump.
2. When water is used, it is drawn from the tank and the pressure inside the tank decreases. The reduced pressure starts the pump and refills the tank.



The amount of water delivered between pump cycles is called drawdown. The larger the well tank, the greater the drawdown capacity, the less the pump needs to run. This saves energy and money, and extends pump life. Larger tank sizes also increase the water storage volume to provide more consistent water pressure.

Installation

System Connection

In-line Models:

WX-101 through WX-103: ¾" NPTM
WX-104 and WX-200: 1" NPTM

Vertical Stand Models:

WX-201 through WX-203: 1" NPTF
WX-205 through WX-350: 1¼" NPTF

Horizontal Models:

WX-102PS through WX-110PS: ¾" NPTM
WX-200PS, WX-202PS and WX-202H: 1" NPTM

Underground Models:

WX-200UG and WX-202UG: 1" NPTF
WX-250UG and WX-251UG: 1¼" NPTF

Location

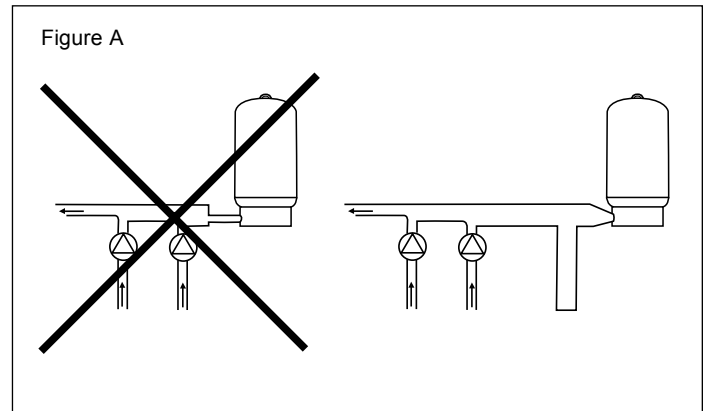
The surface which supports the Well-X-Trol should be capable of supporting its operating weight (including the weight of water). The Well-X-Trol should be installed as close as possible to the pressure switch. This will reduce the adverse effects of added friction loss and differences in elevation between Well-X-Trol and/or water supply main and switch.

- 1. Adjacent to pump:** This is the location chosen most often. The Well-X-Trol tank can be used whether pumps are above or below the surface. In either case, it protects the pump by reducing surge, dampening pressure spikes, offering a point of pressure control, and providing minimum run time. This location also permits all equipment to be placed in an area that's both serviceable and secure.
- 2. At the end of long pipe runs:** The Well-X-Trol tank can be positioned at the end of a long run of pipe so it can provide rapid system response and adequate protection. When this location is chosen, the pressure switch should either be relocated with the Well-X-Trol tank or the setting should be adjusted to compensate for any line pressure drop.

⚠ WARNING DO NOT LOCATE IN AN AREA WHERE LEAKAGE OF THE TANK OR CONNECTIONS COULD CAUSE PROPERTY DAMAGE TO THE AREA ADJACENT TO THE APPLIANCE OR TO LOWER FLOORS.

Connecting Pipe

The connecting pipe between the Well-X-Trol tank and the system should be as short as possible with a minimum of bends. It should also be as large in diameter as possible, consistent with the system piping. You should never bush down from the Well-X-Trol tank (Figure A).

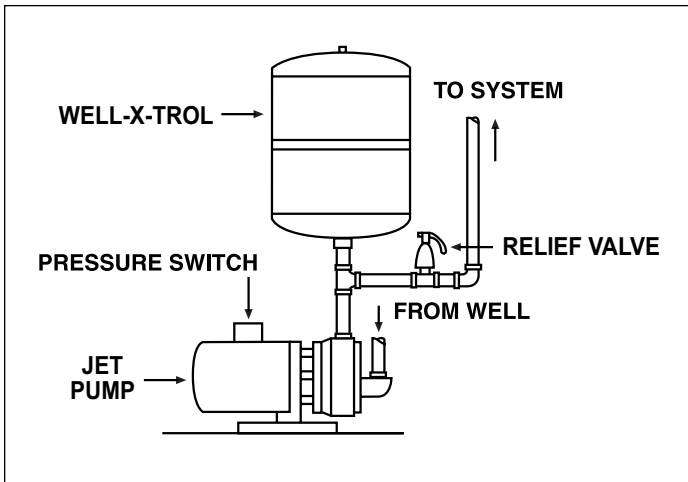


Adjusting Precharge Before Installation

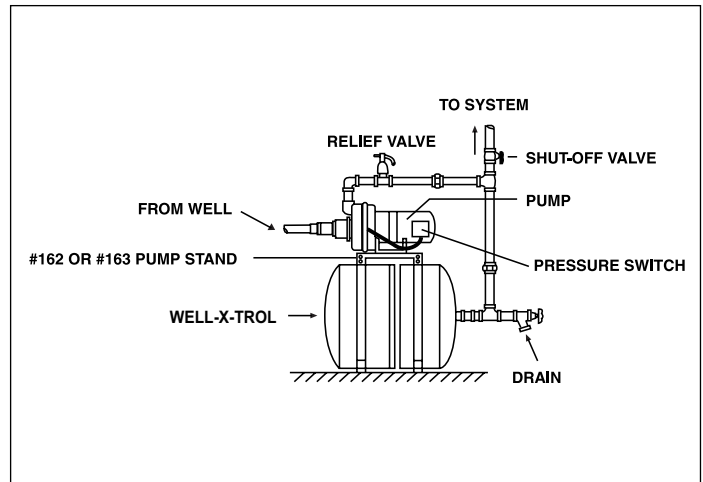
- Step 1.** Remove protective air valve cap.
- Step 2.** Check precharge pressure (pressure should be + or - 10% of the 38 psig factory setting).
- Step 3.** Release or add air as necessary to make the precharge pressure 2 psig below the pressure switch pump cut-in setting. (Example, if you have a WX-202XL with a precharge of 38 psig, and you have a pressure switch setting of 30/50 psig, adjust precharge of your WX-202XL from 38 psig to 28 psig.)
- Step 4.** Replace protective air valve cap.

Suggested Piping Diagrams

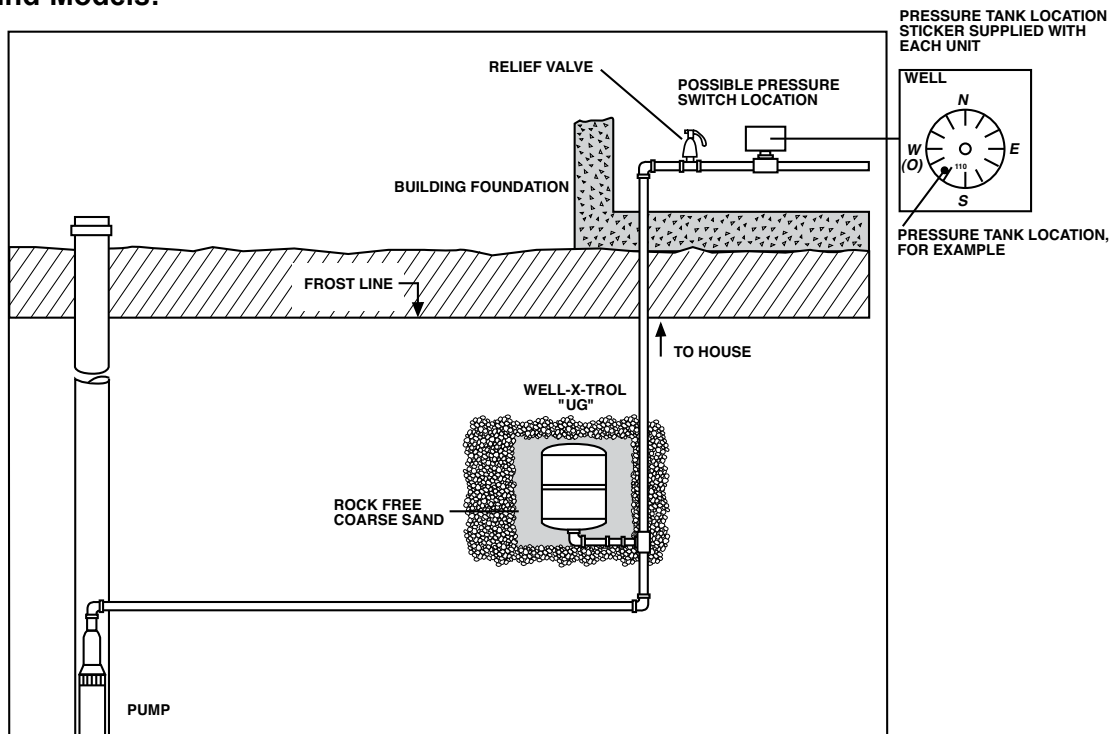
In-line Models:



Horizontal Models:



Underground Models:



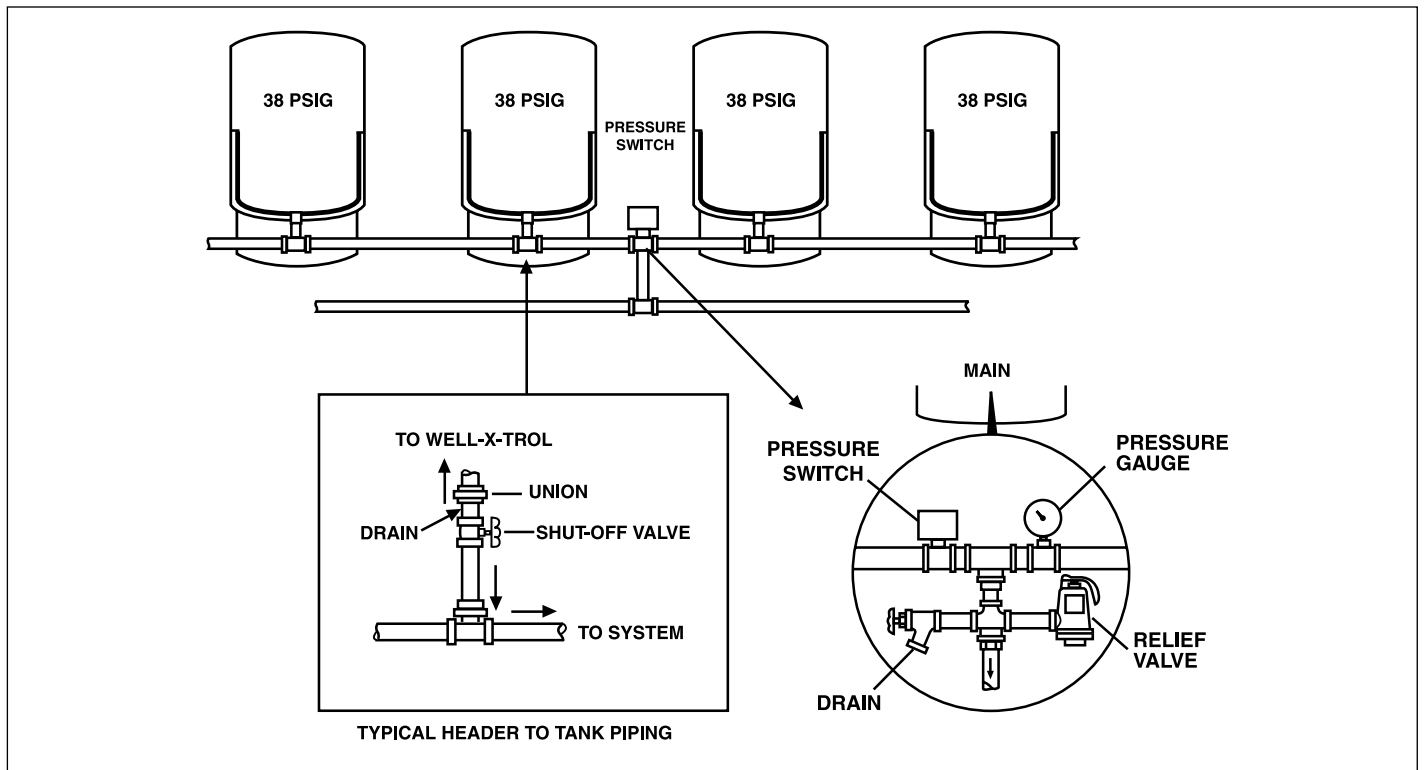
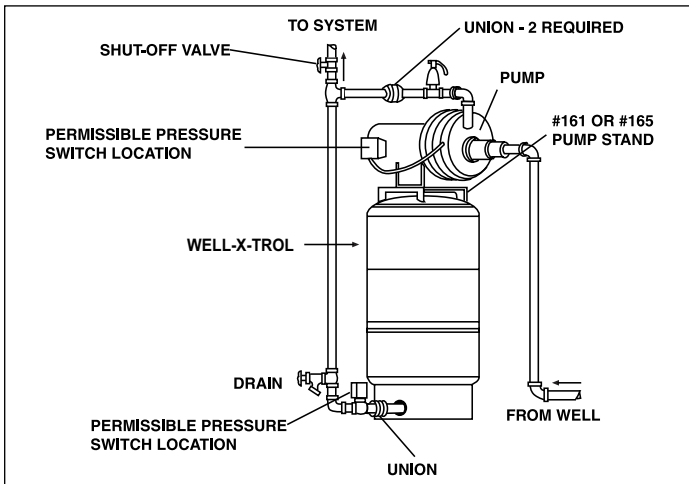
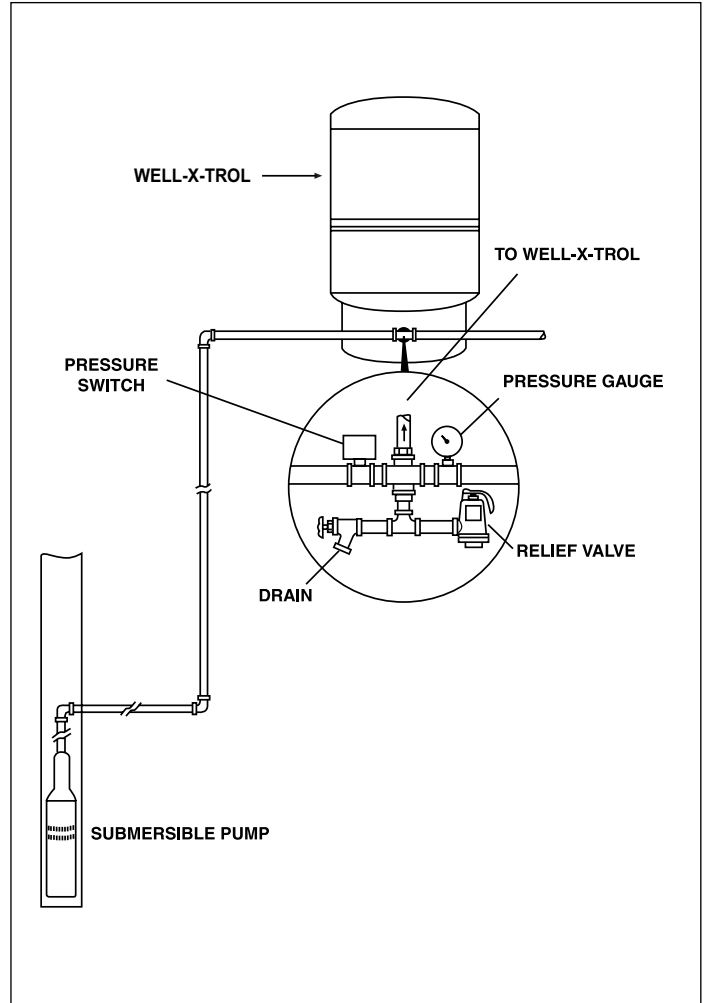
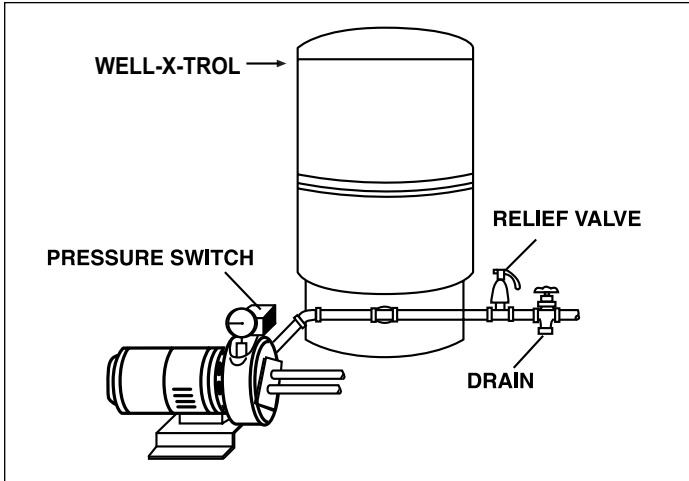
All Well-X-Trol Underground Tanks are designed for direct burial and must be installed in the vertical position **only**. To eliminate danger of freezing, tank should be buried below the frost line.

The following steps should be taken when installing a Well-X-Trol Underground Tanks:

1. Make sure that the tank will be buried below the frost line and above the water table.
2. Remove plastic bag and check tank precharge. Factory precharge is 38 psig. Replace air stem cap securely. Follow adjusting precharge procedure.
3. Important: Install tank on firm **rock-free earth**.
4. The water lines from the pump to the tank and switch location should be the same size to prevent switch cycling.
5. Check the system for performance and inspect for leaks.
6. Important: Backfill hole with sand. Firmly tamp fill to prevent settling. Failure to do so will shorten tank life.
7. Fill out pressure tank location sticker and affix to power panel or other visible surface so tank can be easily located at a later time.

Suggested Piping Diagrams (cont.)

Vertical Models:

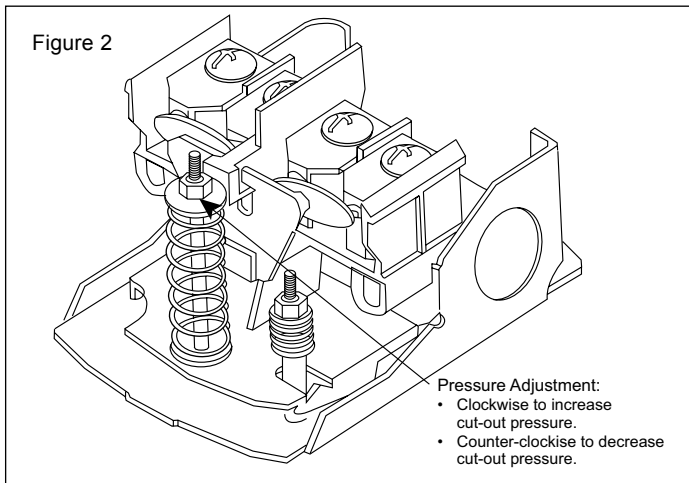


Start Up

Fine Tuning Procedures

Many times the actual pressure switch will vary from the standard pressure range indicated. These variations could cause a momentary lag of water delivery, as the pressure switch is not tuned to the Well-X-Trol precharge pressure.

1. Fill the system and Well-X-Trol until pump cuts off.
2. Open one or more fixtures to drain the Well-X-Trol.
3. If there is a momentary pause in the water flow from the time the Well-X-Trol is emptied and the pump starts, adjust pump cut-in setting clockwise slightly (Figure 2).
4. Close fixtures and refill Well-X-Trol to pump cut off. Check time to fill.
5. Open fixtures and see if pause in water is eliminated. If not, continue adjusting pressure switch.



Adjusting Precharge After Installation

Step 1. Drain tank of all water. Check precharge pressure in the Well-X-Trol Tank.

Step 2. Release or add air as necessary to make the recharge pressure 2 psig below the pressure switch pump cut-in setting.

Maintenance

A qualified professional should check the complete system, including the Well-X-Trol, yearly and more frequently as the system ages.

Warranty

WX Models: Seven (7) Year Limited Warranty

Visit www.amtrol.com for complete warranty details and to register the serial number of your well tank.



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