OWNER'S MANUAL

RED LION

EN English

Red Lion Pressure Tank System

The pressure tank is a closed container. The durable steel shell is constructed in a deep-drawn process for extra strength. Welding eliminates interior rough spots and sharp edges, which prevents damage to the diaphragm. The tank uses a membrane diaphragm to completely isolate compressed air from the water. The tank is certified to NSF 61 for safe drinking water. An air charging valve allows the installer to change the air pressure when the tank is empty.

The Red Lion pressure tank leaves the factory tested and pre-charged to 20 psi. Because air and water are permanently separated, an air volume control is not required.

This product is covered by a Limited Warranty for a period of 5 years from the date of original purchase by the consumer. For complete warranty information, refer to www.redlionproducts.com.

Specifications

Model	Item	UPC	Gallons (liters)	Draw down @ 30-50 psi (gal)	Fixtures	Type	System Connect
RL2A	604652	0 10121 01400 8	2.0 (7.6)	0.7	-	Inline	3/4" MNPT Straight 304 SS
RL4A	604653	0 10121 01401 5	4.5 (17.0)	1.5	-		
RL6AH	604629	0 10121 01402 2	6.0 (22.7)	1.9	1	Horizontal	
RL14AH	604693	0 10121 01403 9	14.0 (53.0)	4.8	4		
RL14A	604687	0 10121 01404 6	14.0 (53.0)	4.9	4	Vertical	1" FNPT Elbow 304 SS
RL20A	604682	0 10121 01405 3	20.0 (75.7)	7.2	6		
RL34A	604683	0 10121 01406 0	34.0 (128.7)	10.8	11		
RL44A	604684	0 10121 01407 7	44.0 (166.6)	12.7	14		1-1/4" FNPT Elbow 304 SS

SAFETY INSTRUCTIONS

This equipment should be installed and serviced by technically qualified personnel who are familiar with the correct selection and use of appropriate tools, equipment, and procedures. Failure to comply with national and local electrical and plumbing codes and within Red Lion recommendations may result in electrical shock or fire hazard, unsatisfactory performance, or equipment failure.

Know the product's application, limitations, and potential hazards. Read and follow instructions carefully to avoid injury and property damage. Do not disassemble or repair unit unless described in this manual.

Refer to product data plate(s) for additional operating instructions and specifications.

Failure to follow installation or operation procedures and all applicable codes may result in the following hazards:

⚠ DANGER

Risk of death, serious injury, or property damage due to explosion, fire, or electric shock.

- Do not use to pump hot water or flammable, combustible, or explosive fluids such as gasoline, fuel oil, kerosene, etc.
- Do not use in explosive atmospheres or hazardous locations as classified by the NEC, ANSI/NFPA70.
- This is a diaphragm-type pressure tank. The tank is designed for operation on well water systems limited to the maximum operating pressure indicated on the tank. Never exceed the maximum operating temperature and/or the maximum allowed pressure indicated on the tank. A 75 psi safety relief valve must be installed. 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. Do not adjust the pre-charge of the tank with the system under pressure.

⚠ WARNING

High voltages capable of causing severe injury or death by electrical shock are present in this unit.

- To reduce risk of electrical shock, disconnect power before working on or around the system. More than one disconnect switch may be required to de-energize the equipment before servicing.
- Wire pump system for correct voltages.
- Check local electrical, plumbing, and building codes before installation. The installation must be in accordance with their regulations as well as the most recent National Electrical Code (NEC), Occupational Safety and Health Act (OSHA), and Canadian Electrical Code (CEC).
- Employ a licensed electrician/plumber.
- Be sure the electrical connection cannot be reached by rising water. Under no circumstances should the junction box be located where it may become flooded or submerged by water.

⚠ CAUTION

Risk of bodily injury, electric shock, or equipment damage.

- This equipment must not be used by children or persons with reduced physical, sensory or mental abilities, or lacking in experience and expertise, unless supervised or instructed. Children may not use the equipment, nor may they play with the unit or in the immediate vicinity.
- Operation of this equipment requires detailed installation and operation instructions provided in this manual for use with this product. Read entire manual before starting installation and operation. End User should receive and retain manual for future use.
- Keep safety labels clean and in good condition.
- Use suitable equipment when moving the tank.
- The system piping must be properly grounded to earth and a dielectric union is recommended in the installation.
- Do not use this tank with water containing sand, clay or other solid substances that may damage the tank or the tank's diaphragm and/or clog its connection. This tank is to be used for storage of well water. Solids in your well water including sand and clay may damage your tank and void the warranty.
- Do not let the unit freeze. Freezing may cause cracking or distortion that may destroy the unit.
- Install this tank in a well ventilated area, far from heat sources, electric generators, and any other source that may be detrimental to the tank.
- 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.

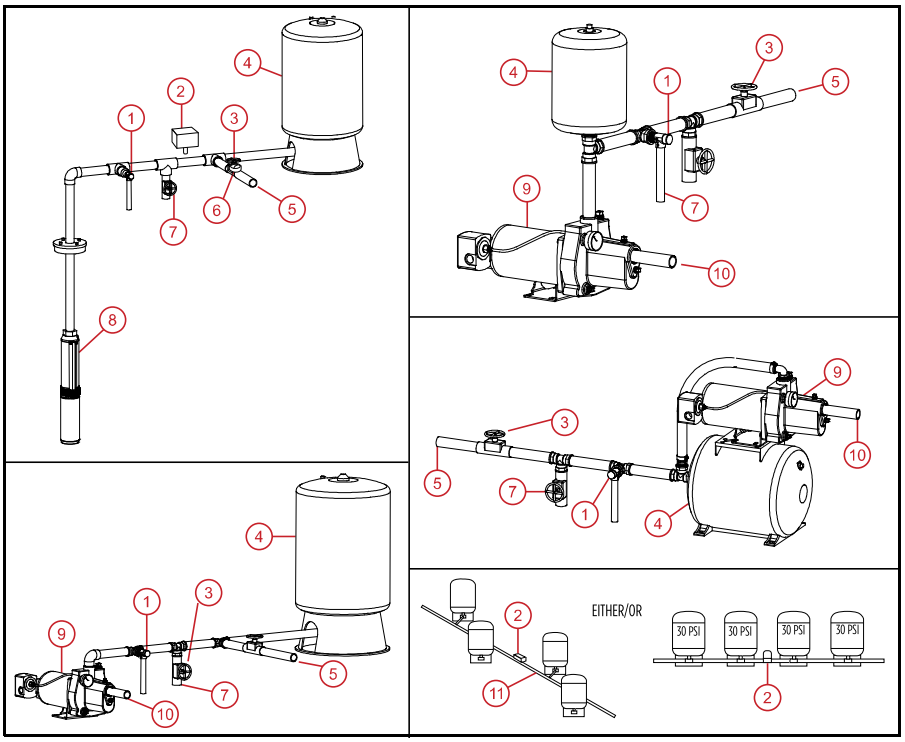
NOTICE

Risk of damage to pump or other equipment.

- Do not use this tank for pumping hot water, sea water, beverages, acids, chemical solutions, or any other liquid that promotes corrosion as this can result in damage to the tank.
- This tank is intended for use on potable water systems only and any other use may be dangerous and will void the warranty.

INSTALLATION

Typical Installation



1 Pressure Relief Valve	4 Tank	7 Drain	10 To well
2 Pressure Switch	5 To house	8 Deep well pump	11 Header to be sized for maximum velocity of 6 ft/sec
3 Shut-off valve	6 Pressure Gauge	9 Jet pump	

Operating Pressures

Pre-charge psi	Cut-in psi	Cut-out psi
18	20	40
28	30	50
38	40	60

Physical Installation

⚠ WARNING

Risk of severe injury or death by electrical shock.

- Completely relieve pressure from the water system before working on the water system. Open the faucet nearest the tank and allow the water to drain until the tank is empty.

NOTICE

Risk of damage to pump or other equipment.

- Failure to properly adjust the pre-charge will shorten the life expectancy of the tank.
- This well 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 tank installation.

1. If this tank is replacing a steel galvanized tank, remove existing air volume controls, and remove or plug any bleeder valves, snifter valves, etc.
   - Carefully remove the Red Lion pressure tank from its carton.
2. Remove the plastic cap on the air valve of the new system.
3. Check the tank pre-charge pressure using a standard tire pressure gauge.
4. Adjust the tank pressure setting to 2 psi below the pressure switch cut-in setting (the pressure at which the pump will start).

   IMPORTANT: Complete initial adjustments to the pre-charge prior to tank installation with tank empty (no water) and with 0 psi pressure on the system. Do not adjust the pre-charge of the tank with the system under pressure.

   - This tank is shipped at a reduced pressure setting.
   - All Red Lion branded jet pumps include a pressure switch with a cut-in setting of 30 psi. Therefore, adjust the pre-charge pressure to 28 psi.

   NOTE: If your pump is not a Red Lion model, verify the cut-in setting. Most pressure switches have the setting marked under their covers. If you cannot determine the settings this way, pressurize the switch and note the cut-in setting. See "Operating Pressures" on page 5 for recommended pre-charge pressure settings.

   - If required, add air to the tank using a manual bicycle tire pump until the proper pre-charge pressure is reached.
5. Replace and tighten the plastic cap on the air valve.
6. Place the tank where it is to be installed.
   - Select a location where a water leak will not cause property damage and provides adequate means for water drainage.
   - If flooring is uneven, level as necessary.

7. Make pipe connections as necessary, in accordance with local or state plumbing codes.
   - Ensure the pipe size from the tank to the house is the same as the pipe size from the pump to the tank.
   - Refer to "Typical Installation" on page 4.
8. Prime the pump and restore power. Refer to the pump owner's manual for instructions.
9. Check to ensure joints are airtight.

MAINTENANCE

⚠ WARNING

Risk of severe injury or death by electrical shock, high temperatures, or pressurized fluids.

- If this water system's 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.

Periodic Maintenance

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

Proper performance of this tank depends on a correct pre-charge of air. When there is no water in the tank, the air pre-charge should be 2 psi below the cut-in pressure setting of the pump pressure switch. Check the tank at least once a year to ensure that the pre-charge pressure is within ±2% of that stated on the identification label.

IMPORTANT: Do not remove the tank from the water system without completely relieving the pressure and draining the water.

1. Disconnect electric power to the pump or control box.
2. Open the faucet nearest to the tank and drain the tank until it is empty. Close the faucet.
3. Check the pre-charge pressure with a standard tire gauge.
4. If necessary, adjust the pre-charge pressure to 2 psi below pump switch cut-in pressure.
5. Check the tank and its connection to the system piping for any signs of water leakage or corrosion.
6. Prime the pump and reconnect the power.
   - Refer to the pump owner's manual for instructions.
7. Ensure joints are airtight.

   NOTE: Even a pinhole can prevent proper operation of the pump.
8. To protect the outside of the tank, periodically clean it using only soap and water.