

Uponor PP-RCT Pressure Testing Instruction Form

The guidelines in this document are published for construction managers, supervisors, contractors, inspectors, plumbers, or other competent personnel responsible for the integrity of the system pressure test. The guidelines cover Uponor PP-RCT pipe and fitting systems intended for mechanical, hot-potable, or cold-potable applications. **Note Uponor requires all testing be done by an Uponor qualified installer.**

While Uponor has made reasonable efforts to collect, prepare, and provide quality information and material in this guidelines document, it is ultimately the responsibility of the pressure test owner to verify that all required inspection, testing, and examination are acceptable to the local authority having jurisdiction (AHJ). Before testing any piping, discuss the test procedure with local building and plumbing officials as local codes may be amended, and local ordinances may affect the specific code language.

Uponor is not liable for the design, installation, and operation practices that deviate from this guidelines document or are not acceptable practices within the codes or standards of practice. Please direct any questions regarding the test pressure guidelines to Uponor Technical Services at 888.594.7726 or support.una@uponor.com.

Uponor requires all installations be pressure tested in accordance with the following instructions. Installers must submit proof of the pressure test to Uponor before warranty coverage can go into effect. Warranty coverage will begin after the completion of a proper test and Uponor's receipt of this completed pressure test form within **30 days** after completing piping installation. Uponor's warranty does not cover failures caused by improper installation, operation outside the recommended parameters and damage from mishandling the product or freezing conditions. Additionally, the warranty does not cover elastomeric components (e.g., seals, gaskets, O-rings), components made by other manufacturers, or connections made to other non-Uponor systems or components.



Complete Project Information

Project name _____

Project owner _____

Project address _____

City _____ State _____ ZIP _____

Type of system installed _____

Pressure Zones Test

Zone #	Description/Location	Test Pressure (specify psi, bar, or kPa)	Media (air, water, gas)	Duration

Note: If not testing the system in zones, simply complete the top row of this table.

Design Operating Conditions

Select	Application	Temperature (specify °F or °C)	Pressure (specify psi, bar, or kPa)
<input type="checkbox"/>	Domestic Hot and Cold Water		
<input type="checkbox"/>	Domestic Hot-Water Recirc		
<input type="checkbox"/>	Closed-Loop Heating		
<input type="checkbox"/>	Chilled Water		
<input type="checkbox"/>			

Note: If entering a chemical transport application, please list the chemical in the application field.

What manufacturer of fusion equipment was used? McElroy Ritmo Widos

What socket fusion heads were used? (specify type) _____

Was flushing of the system performed? Yes No

If yes, was flushing of the system performed before or after the pressure test? Before After N/A

If flushing was performed, what chemicals were used for flushing of the piping system? _____

Certified Installer Section

First name _____

Last name _____

Company _____

Phone number _____

Email _____

Certified installer signature _____ Date _____

Additional information (optional)

Other piping materials connected or joined to Uponor PP-RCT

Approved Methods of Pressurizations

A **hydrostatic** pressure test utilizes water as the test medium. **It is Uponor's preferable choice** of pressurization, as it does not store high levels of energy given its incompressibility nature.

A **pneumatic** pressure test utilizes non-toxic, non-flammable gas (**e.g., air, nitrogen**). Uponor is aware a hydrostatic test is not always feasible, and factors can play a role in choosing a pneumatic test over a hydrostatic such as: availability of supply or disposal of water, freeze vulnerability, and/or structural support (water weights more than gas). For these reasons, **Uponor has approved pneumatics as an alternative pressurization method.**

Safety First

Perform a thorough visual inspection with extra attention on the joints prior to a pneumatic pressure test. A pressurized gas contains high levels of stored energy that can instantaneously damage its surroundings given the chance to escape. **Isolate equipment (or parts)** not integral to the test which cannot withstand the pressure. **Include vents, drains, relief valves** as needed to mitigate against overpressure.

Maximum Design Pressure vs. Maximum Working Pressure

Maximum design pressure indicates **the maximum pressure the system will see in its lifetime.** *It is the design pressure designated by the engineer or person in charge of the project.*

Maximum working pressure indicates **the maximum pressure that the system can handle.** *It is the maximum pressure designated by the engineer who designed the system.*

Determining Test Pressure

Method	Test Pressure	Pipe System
Hydrostatic	1.5 x Design Pressure	SDR 7.4, 9, 11
Pneumatic	1.25 x Design Pressure; <i>Maximum: 150 psi</i>	
Hydrostatic	1.5 x Design Pressure	SDR 17.6
Pneumatic	1.5 x Design Pressure if > 65 psi, 100 psi if ≤ 65 psi	

If the system contains multiple-size SDRs, use the test pressure corresponding to the largest SDR (thinnest-wall pipe).

Procedure Guidelines

- 1. Ensure safety prior to starting the pressure test.**
 - Refer to the "Safety First" section for examples.
- 2. Apply low pressurization and gradually increase until the test pressure is reached.**
 - If pneumatic, increase in stages of no more than 25% of the test pressure.
 - If pressure cannot be reached, locate the leak, repair, and start over.
- 3. Once test pressure is met, sustain for two hours or the time required by the local authority having jurisdiction, whichever is more stringent.**

If there is a reduction in pressure, refer to the following guidelines.

- If hydraulic, inspect for leakages of the piping and at all joints and connections.
 - If pneumatic, inspect for leaks by utilizing soap bubbles or other suitable means.
- 4. If no leakage is detected, then the pressure test is complete. If not, start over.**

Estimate for Total Number of Compressed Gas Containers

Use the following equation to estimate how many containers will be needed for your project:

$$\# \text{ of compressed gas containers} = \frac{(\text{Desired pressure})_{\text{psi}} \times 0.068 \times (\text{Total Volume})_{\text{cubic feet}}}{(\text{Container size})_{\text{cubic feet}}}$$

$$\text{Total Volume} = 0.785 \times (\text{inside pipe diameter}_{\text{feet}})^2 \times (\text{total length of pipe})_{\text{feet}}$$

Referenced Standards and Publications

ASME B31.9 Building Services Piping, ASME Code for Pressure Piping, B31

Submit Completed Form

To ensure warranty coverage, email completed form to the Uponor North America Warranty Department at warrantyclaims@uponor.com within **30 days** after completing piping installation.

Office Use Only

Reviewed by _____ Date received _____

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