


# Series UTD Universal Test and Drain

## Series ARV Adjustable Relief Valve

⚠ **WARNING**



- Read and understand all instructions before attempting to install any Victaulic products.
- Always verify that the piping system has been completely depressurized and drained immediately prior to installation, removal, adjustment, or maintenance of any Victaulic products.
- Confirm that any equipment, branch lines, or sections of piping that may have been isolated for/during testing or due to valve closures/positioning are identified, depressurized, and drained immediately prior to installation, removal, adjustment, or maintenance of any Victaulic products.
- Wear safety glasses, hardhat, and foot protection.

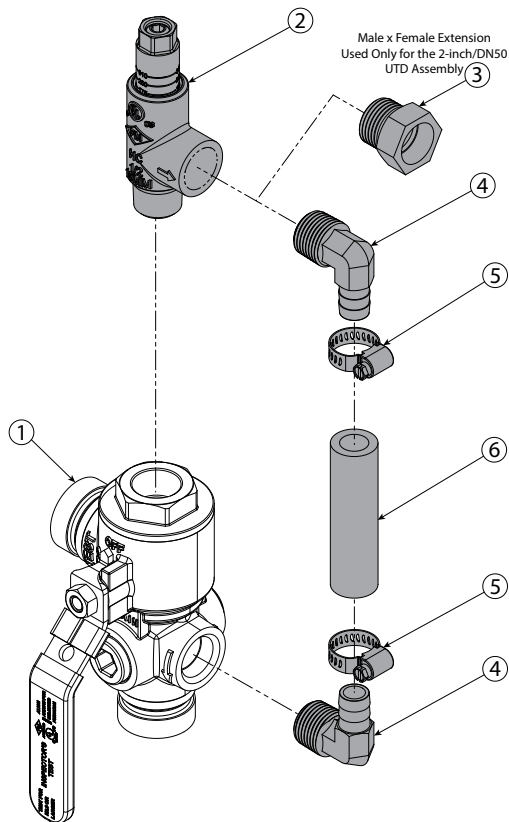
Failure to follow these instructions could result in death or serious personal injury and property damage.

- The Series UTD and ARV shall be used only in fire protection systems that are designed and installed in accordance with current, applicable National Fire Protection Association (NFPA 13, 13D, 13R, etc.) standards, or equivalent standards, and in accordance with applicable building and fire codes. These standards and codes contain important information regarding protection of systems from freezing temperatures, corrosion, mechanical damage, etc.
- These installation instructions are intended for an experienced, trained installer. The installer shall understand the use of this product and why it was specified for the particular application.
- The installer shall understand common industry safety standards and potential consequences of improper product installation. Failure to follow installation requirements and local and national codes and standards could compromise system integrity or cause system failure, resulting in death or serious personal injury and property damage.

### CONTENTS OF UTD AND ARV KITS

When the Series UTD Universal Test and Drain kit is ordered, the Series ARV Adjustable Relief Valve kit (items shaded in gray) comes pre-assembled to the UTD.

**NOTE:** A replacement ARV kit (items shaded in gray) can be ordered separately.



Item	Qty.	Description
1	1	Series UTD Universal Test and Drain
2	1	Series ARV Adjustable Relief Valve
3	1	Male x Female Extension (Used Only for 2-inch/DN50 UTD Assembly)
4	2	Barbed Elbow
5	2	Hose Clamp
6	1	High-Pressure Tubing

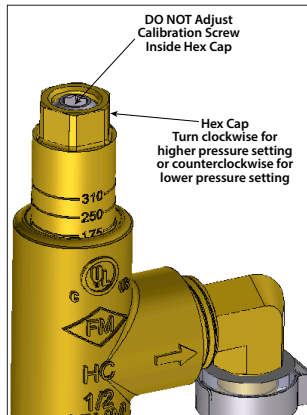
- The ARV alone (Item 2) can be used in place of current relief valves in systems. This allows for required NFPA field hydrostatic testing to be performed without having to remove and plug the relief valve port.
- For flow testing, the 1-inch/DN25 UTD utilizes a K2.8 test orifice; the 1 ¼-inch/DN32 UTD utilizes a K4.2 test orifice; and the 2-inch/DN50 UTD utilizes a K5.6 test orifice.
- Operating positions for the UTD are: Off (normal operating condition), Drain (full drain), and Test (flow through K-factor orifice).
- Per NFPA 13, the relief valve shall be listed and proper hydrostatic test procedures shall be followed. The Victaulic ARV is UL Listed, pre-piped to drain, preset for 175 psi/12 Bar, and adjustable to 310 psi/21 Bar for high-pressure system conditions and hydrostatic tests.
- It is not necessary to remove the ARV to perform a hydrostatic test. The ARV may be adjusted temporarily to a pressure above the test pressure. Verify that the ARV is returned to its normal setting after completing the hydrostatic test.**
- The ARV is not field serviceable. If leakage is observed, test the pressure setting by referring to the "ARV Setting Procedure" on the opposite side of this sheet. The ARV shall be replaced if it does not respond to field adjustments. **NOTE:** Visual calibration lines on the ARV are used for approximate adjustment. Verify the pressure setting with a calibrated pressure gauge.
- The UTD does not require any regularly scheduled maintenance and is not field serviceable.

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## Series UTD Universal Test and Drain

### Series ARV Adjustable Relief Valve

#### ARV SETTING PROCEDURE



- The 175–310-psi/12.1–21.4-Bar ARV is factory set to fully relieve at approximately 175 psi/12.1 Bar.
- During hydrostatic testing required per NFPA 13 System Acceptance Testing, the ARV may be set to a higher pressure; however, it shall be reset to relieve at a pressure that is in accordance with requirements of the local authority having jurisdiction and NFPA 13.
- To reset the ARV, use an adjustable crescent wrench to turn the hex cap clockwise for a higher pressure setting or counter-clockwise for a lower pressure setting. Use the calibrated lines on the stem for an approximate relief pressure setting. One full turn of the hex cap will result in approximately 25 psi/1.7 Bar increase or decrease.
- DO NOT adjust the calibration screw inside the hex cap, as indicated in the drawing to the left.

#### TESTING

Refer to NFPA 25, FM Datasheets, or any applicable local requirements to perform testing. The authority having jurisdiction in the area may require these tests on a more frequent basis. Verify these requirements by contacting the authority having jurisdiction in the affected area.

Before proceeding with any tests involving water flow, the following precautions shall be taken.

**NOTE: It is not necessary to remove the ARV to perform a hydrostatic test. The ARV may be adjusted temporarily to a pressure above the test pressure. Verify that the ARV is returned to its normal setting after completing the hydrostatic test.**

1. Check for alarm connections to a central station or fire department. If such connections are found, notify the authority having jurisdiction, remote station alarm monitors, and those in the affected area before proceeding with testing. **NOTE:** A main drain test may also operate local fire alarms, unless they are temporarily disabled.
2. Check the location where the test connection discharges to verify that all is clear and that there is no possibility of water flow causing property damage or personal injury.
3. Check the end of the test connection to verify that it is unobstructed. To achieve a satisfactory test, there shall be an unrestricted flow of water when the handle on the UTD is in the “DRAIN” (full drain) position.
4. Move the handle on the UTD to the “TEST” (flow through K-factor orifice) position. Verify that an alarm condition results within the timeframe specified by the local authority having jurisdiction.
5. Move the handle on the UTD to the “OFF” (normal operating) position. **NOTE:** The ARV is located on the system side of the UTD and will continue to relieve excess system pressure with the handle on the UTD in the “OFF” (normal operating) position.

#### NFPA 13 Hydrostatic Testing Procedure Required for System Acceptance Testing

- NFPA 13 requires an initial hydrostatic test of the sprinkler system to ensure that everything is properly assembled and capable of holding system pressure.
- This initial hydrostatic test requires the system to be pressurized to either 200 psi/13.8 Bar or 50 psi/3.4 Bar over the maximum expected system pressure (whichever is greater).
- The system shall maintain this pressure, without a loss, for a period of 2 hours.
- During this procedure, the ARV can remain in the system as long as it is set to a pressure where it will not relieve during the test.
- For systems being tested at 225 psi/15.5 Bar or less, it is recommended that the ARV set pressure be adjusted to 250 psi/17.2 Bar or greater for the duration of the test.
- For systems being tested at pressures higher than 225 psi/15.5 Bar, it is recommended that the ARV set pressure be adjusted to a minimum of 25 psi/1.7 Bar over the required hydrostatic test pressure.
- For systems where the ARV cannot be set to a pressure that is 25 psi/1.7 Bar over the required hydrostatic test pressure, it is recommended to remove and plug the relief valve port during the initial hydrostatic test.
- After the hydrostatic test procedure is complete, the ARV shall be set in accordance with the “ARV Setting Procedure” section above.



Scan Code to Access the  
I-UMC Instructions  
on victaulic.com



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I-UM Instructions  
on victaulic.com

- Always reference the I-UMC or I-UM for complete information regarding installation, maintenance, and testing.

For complete contact information, visit [victaulic.com](http://victaulic.com)

I-UTD/ARV 18903 REV A UPDATED 09/2022 Z000UTDARV

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