



AquaRise® Potable Water Piping Systems Suggested Short Form Specification

GENERAL REQUIREMENTS

- (a) AquaRise® is a thermoplastic piping system to be used in hot or cold potable water distribution systems only.
Operating temperature for AquaRise SDR 11 systems shall not exceed 160°F (71°C). Cold water systems using AquaRise SDR 21 pipe shall not exceed 80°F (27°C).
- (b) Installation and testing practices shall conform to the requirements of the applicable code and IPEX guidelines.
- (c) DO NOT test with compressed air or other gases. DO NOT test with air-over-water.
- (a) Installers shall consult with IPEX to resolve any uncertainties before proceeding with installation.
- (b) Pipe and molded fittings (couplings, tees, elbows, bushings and caps) are third-party certified to CSA B137.6, made to Iron Pipe Size (IPS) Outside Diameter. Fittings are made with a wall thickness of SDR 11 (Standard Dimension Ratio). Pipe is made with a wall thickness of SDR 11 or SDR 21.
- (c) Cold water pressure rating of SDR 11 pipe and fittings with only solvent welded joints, Threaded Adapter Fittings, Full Pressure Flange Kits and Maintenance Couplings shall be 400 psi at 73°F (2,758 kPa at 23°C). Cold water pressure rating of SDR 21 pipe and fittings with only solvent welded joints, threaded adapter fittings, full pressure flange kits and maintenance couplings shall be 200 psi at 73°F (1,379 kPa at 23°C).
- (a) AquaRise True Union Ball Valves in nominal sizes 1/2" through 2" are rated to 232 psi at 73°F (1,600 kPa at 23°C). AquaRise Flanges and unions are rated to 150 psi at 73°F (1,034 kPa at 23°C).
- (b) All of the above pressure ratings shall be reduced at elevated temperatures. The maximum AquaRise SDR 11 systems operating temperature must not exceed 160°F (71°C). The maximum AquaRise SDR 21 system operating temperature must not exceed 80°F (27°C).
- (c) All solvent weld joints shall be made in nominal pipe sizes 1/2" through 2" using AquaRise One-Step Cement. For sizes 2-1/2" through 4", AquaRise Two-Step Cement shall be used in conjunction with AquaRise Primer. Specific usage instructions can be found in this manual and on the container labels. No alternatives shall be accepted.

BUILDING CODE REQUIREMENTS

- (a) AquaRise pipe and fittings shall be listed to ULC S102.2 to exhibit a Flame Spread Rating (FSR) of not greater than 25 and a Smoke Developed Classification (SDC) of not greater than 50.
- (b) The above listing shall be achieved without the use of external pipe insulation or filling of the line with water during testing.
- (c) All penetrations of fire-rated separations (i.e. ceilings and wall) shall be sealed with a fire stop device or system which has been listed for use with AquaRise for the specific substrate being penetrated. Fire stop listings shall be tested in accordance with ULC S115 and shall include a 50 Pa pressure differential in the test assembly where required by local building codes.
- (d) Refer to local building code requirements and the local Authority Having Jurisdiction for the suitability of AquaRise within Vertical Service Spaces.
- (e) AquaRise may be used in all areas of buildings classified as Combustible Construction and in most areas of Noncombustible Buildings including Plenums (Sec. 3.6.4.3) and in High Building Construction (Sec. 3.2.6).

MATERIALS

AquaRise pipe material shall comply with the requirements of ASTM D1784 and have a cell classification of 24448. AquaRise fitting and valve material shall comply with the requirements of ASTM D1784 and have a cell classification of 23447.

AquaRise pipe, fitting and valve materials are listed to the requirements of NSF 61 for potable water distribution.

DIMENSIONS AND PHYSICAL PROPERTIES

Pipe: Physical dimensions of AquaRise pipe shall meet the SDR 11 or SDR 21 Iron Pipe Size (IPS) Outside Diameter (OD) requirements in CSA B137.6.

Fittings: Physical dimensions of 1/2" thru 4" socket type fittings shall meet the requirements of CSA B137.6. Physical performance properties of 1/2" thru 4" socket type fittings shall meet the requirements of CSA B137.6 or ASTM F1970.

Threaded adapter fittings shall have a taper pipe thread in accordance with ANSI/ASME B1.20.1. Physical dimensions and physical performance properties shall meet the requirements of CSA B137.6.

MARKING

AquaRise pipe is marked as prescribed in CSA B137.6 and NSF 14. The marking includes the following: AquaRise 24448; IPS CPVC; SDR11 or SDR 21; nominal size; pressure rating at 73°F (23°C); CSA B137.6; NSF pw-G; and IPEX.

AquaRise fittings are marked as prescribed in CSA B137.6 and ASTM F1970. The marking includes the following: IPEX; nominal size; CSA B137.6 or ASTM F1970; NSF pw.

SAMPLE SPECIFICATION

AquaRise SDR 11 or SDR 21 pipe shall be third-party listed to CSA B137.6, and NSF 61. AquaRise pipe material shall comply with the requirements of ASTM D1784 and have a cell classification of 24448. AquaRise fittings shall be third-party listed to CSA B137.6 or ASTM F1970. AquaRise fitting and valve material shall comply with the requirements of ASTM D1784 and have a cell classification of 23447.