



CSI: DIVISION: 21 00 00—FIRE SUPPRESSION
Section: 21 13 13—Wet-Pipe Sprinkler Systems

Product certification system:

The ICC-ES product certification system includes testing samples taken from the market or supplier's stock, or a combination of both, to verify compliance with applicable codes and standards. The system also involves factory inspections, and assessment and surveillance of the supplier's quality system.

Products: Aquatechnik FUSIO TECHNIK Fire Sprinkler Pipe and Fittings System

Listee: Aquatechnik Group s.p.a
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Compliance with the following codes:

2024, 2021, 2018, 2015, 2012 and 2009 *International Fire Code*® (IFC)
2024, 2021, 2018, 2015, 2012 and 2009 *International Building Code*® (IBC)
2024, 2021, 2018, 2015, 2012 and 2009 *International Residential Code*® (IRC)
2024, 2021, 2018, 2015, 2012 and 2009 *Uniform Plumbing Code*® (UPC)*
2022, 2019, 2016, 2013 and 2010 *California Plumbing Code* (CPC)
2023, 2020 and 2017 *City of Los Angeles Plumbing Code* (LAPC)

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Compliance with the following standards:

FM 1635-2021, Plastic Pipe and Fittings for Automatic Sprinkler Systems
ANSI/NFPA 13-2025, Installation of Sprinkler Systems
ANSI/NFPA 13D-2025, Installation of Sprinkler Systems in One- and Two-Family Dwellings and Manufactured Homes.
ANSI/NFPA 13R-2025, Installation of Sprinkler Systems in Low-Rise Residential Occupancies

Identification:

Pipe: Each length of FUSIO TECHNIK pipe shall be legibly marked at a minimum every 3 ft (1 m) with the following information:

- a) Manufacturer's name, code or trademark
- b) Material Designation
- c) Nominal Size
- d) Date of manufacture code
- e) Pressure rating, or class, and rating temperature
- f) "UNEXPOSED SERVICE ONLY"

- g) "NOT FOR POTABLE SERVICE"
- h) The ICC-ES PMG listing mark.

Fittings: Each FUSIO TECHNIK fitting shall be legibly marked with the following:

- a) Manufacturer name, code or trademark
- b) Material Designation
- c) Nominal Size
- d) Date of manufacture code
- e) Pressure rating, or class, and rating temperature

Installation:

Aquatechnik FUSIO TECHNIK Fire Sprinkler Pipe and Fitting Systems are intended for use in wet-pipe systems and are to be installed aboveground in accordance with the requirements specified in the manufacturer's installation instructions published installation instructions, ANSI/NFPA 13, and the applicable fire, building and/or plumbing codes. Any installation and design criteria related to pipe hanger spacings, restraints, pressure or temperature rating, piping location, friction loss characteristics are specified in the manufacturer's installation guide.

Installations of the Aquatechnik FUSIO TECHNIK Pipe and Fitting Systems are to be conducted in accordance with ANSI/NFPA 13, IRC P2904, IBC 903, UPC 612, CPC 612, LAPC 612 or National Building Code of Canada Clause 3.1.5.19(2) and Right Testing Laboratory tested and approved assemblies, as applicable.

Pipe and fittings are certified for unexposed service use only and are required to have a permanently installed non-combustible barrier with a minimum 1 hour rating in accordance with ASTM E119 or ULC S101-1.

These pipe and fittings are not intended to be installed in outdoor applications or in dry-pipe or hybrid systems and are intended for use in areas where the maximum ambient temperature does not exceed 120°F (49°C). If the ambient temperature is expected to exceed this limitation, refer to the Installation and Design Manual for additional information on methods to reduce the pipe exposure temperatures.

Models:

The Aquatechnik FUSIO TECHNIK Pipe and Fitting System was evaluated in compliance with FM 1635 and is produced from PP-RCT and PP-R 80 Super fibre-reinforced pipe and PP-R 80 Super fitting

The pipe and fittings are available in nominally 20-, 25-, 32-, 40-, 50-, 63-, 75-, 90-, 110-, 125-, 160-, 200-, 250, 315-, 355- 400- millimeters (1/2, 3/4, 1, 1-1/4, 1-1/2, 2, 2-1/2, 3, 3-1/2, 4, 6, 8, 10, 12, 14 and 16 inches) outside-diameter sizes in 5.79-meter (19 feet) straight lengths.

The pipe and fitting products are pressure-rated for a minimum of 100 psi (690 kPa) at 180°F (82°C) for standard dimension ratios (SDRs) of 7.4, 9, 11, and 17.6 and for a minimum 160 psi (1100 kPa) at 73°F (23°C) for all SDRs. SDR is the ratio of outside diameter to wall thickness and is constant for all pipe sizes.

Manufacturer's installation instructions must be strictly followed to ensure proper performance. The use of these pipes and fittings is prohibited in areas where seismic protection is required. Pipe and fittings must be joined by heat fusion with a proprietary device. Flanged and threaded adapter fittings are available for joining to other materials.

Conditions of Listing:

1. Installation of the pipe and fitting system shall be in accordance with the requirements specified in the manufacturer's installation instructions published installation instructions, ANSI/NFPA 13D, and the applicable fire, building and/or plumbing codes.
2. The manufacturer's installation instructions should be reviewed and authorities having jurisdiction consulted before installation.
3. The tubing installation must be pressure-tested for leaks in the presence of the code official or the official's designated representative.

4. When installation is in fire-resistive assemblies, evidence of compliance with IBC (penetrations), must be provided to the code official for approval.
5. The piping must not be used as a source of electrical ground.
6. Aquatechnik FUSIO TECHNIK Fire Sprinkler Pipe and Fittings are intended for use in wet-pipe systems and are not intended to be installed in outdoor applications or in dry-pipe systems and are intended for use in areas where the maximum ambient temperature does not exceed 120°F (49°C).
7. The pipe and fittings must be protected from exposure to direct sunlight. Pipe and fittings must be protected from physical damage with an oversized sleeve at structural mass penetrations and when the pipe is uncovered. Annular spaces between sleeves and pipes must be filled or tightly caulked in an approved manner.
8. Clearances from heat-producing equipment must be in accordance with the *International Fuel Gas Code*[®], the IRC or the UMC, as applicable.
9. The Aquatechnik FUSIO TECHNIK Pipe and Fitting System is manufactured under a quality control program with inspections by ICC-ES.