

Datasheet

Prev2exp automatic low pressure water mist nozzle

Part 1

General description

The Prevent Systems low pressure water mist nozzle Prev2exp with fast response thermally actuated release element, is approved by the Loss Prevention Certification Board (LPCB), and listed in the “Red Book”, which can be viewed at RedBookLive.com.



Technical Data

Approvals	LPCB
Minimum operating pressure	8.4 bar
Maximum operating pressure	16 bar
Maximum standby pressure*	12 bar
K-factor	13.4
Flow rate	39 lpm
Minimum water density	2.44mm/m ² /min
Nozzle material	Stainless Steel 304
Thread size	½” BSP or NPT
Strainer	0.24mm Stainless steel
Release temp.	57 °C, 68 °C, 79 °C, 93 °C, 141 °C
Nozzle position	Pendent
Nozzle size	Total length = 55mm, Max. diameter = 24mm Length under finished ceiling = 35mm
SIN	Prev2exp

*The jockey-pump shall be set to maintain the standby pressure in the system, up to a maximum of 12 bar.

Installation

The nozzles must be handled carefully before, -under and -after installation. Nozzles that are damaged in any way, must be replaced. Follow these installation steps:

- The temperature bulb must be checked for damage prior to installing the nozzle into the nozzle fitting. A small air bubble in the bulb should easily slide back and forth when tilting the nozzle. There should be no loss of liquid or cracks in the bulb.
- Slide the cover plate onto the nozzle, where applicable.
- Apply appropriate sealant to the nozzle threading before hand tightening it into the nozzle fitting.
- Use an extended 23 mm socket wrench and carefully tighten the nozzle.

Operation

During a fire, the fluid in the fast response thermally actuated glass bulb will expand and shatter. The nozzle valve would then drop down, allowing the water to flow through the nozzle and suppress or extinguish the fire.

Maintenance

The nozzles must be handled carefully before, -under and -after installation. Nozzles that are damaged in any way, must be replaced. The nozzles should not be painted, coated or otherwise altered after leaving the factory.

Notes

For a full description, please refer to the Design, Installation, Operation and Maintenance (DIOM) manual. A full training course is offered for the appropriate design, installation, operation and maintenance of Prevent Systems low pressure water mist automatic fire suppression systems. Contact us for details.

Prevent Systems water mist nozzles are produced and tested to stringent in-house quality standards according to ISO 9001.

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Part 2

The Prev2exp is designed and tested for fixed fire protection systems in Public space applications, according to EN 14972-1, Annex A and IMO 265 (84) Public Space and EN 14972-7 cat. 2. It has identical spray pattern and k-factor to Prev2up nozzle which has been tested for parking car garages according to EN 14972-1, Annex A and CEN Test Protocol Parking, V1 and EN 14972-5.

Applications for this nozzle would include protection of office buildings, schools, kindergartens, retail and public space areas in hospitals, hotels, care home institutions, etc. up to 5m ceiling height, and parking car garages up to 3m ceiling height.

Design

Each system shall be hydraulically designed according to the minimum water flows and water pressure, as specified in the Technical Data section, and the maximum allowable coverage area for the nozzles, as described below. The system shall meet the design requirements specified by the Authorities Having Jurisdiction (AHJ).

Max coverage area	Public Space: 16 m ² Parking car garages - nozzles flush with ceiling: 12.25m ² Parking car garages – below open pipework: 9m ²
Spacing between nozzles*	Public space: Maximum 4m, minimum 2m Parking car garages - nozzles flush with ceiling: Maximum 3m x 4m, or 3,5m x 3,5m and minimum 2m Parking car garages – below open pipework: Maximum 3m x 3m and minimum 2m
Distance to wall*	Maximum 1.75m, minimum 0.1m
Distance to ceiling	0 – 150mm
Maximum ceiling heights	Public space: 5m - Parking car garages: 3m Ceiling heights exceeding these heights are subject to approval in each case.
Piping (non-corrosive)	Stainless steel, PrevPex, RedPipe, CPVC, subject to approval in each case.
Fire test standard	EN 14972-1, Annex A and IMO 265(84) Public Space, EN 14972-7 cat. 2 and CEN Test Protocol Parking, V1, EN 14972-5

*In commercial low hazard rooms smaller than 40m², the maximum distance in one direction can be exceeded by up to 20 % if the other direction is reduced correspondingly, so that the maximum coverage area for the nozzle is not exceeded.

The DIOM manual chapter 5 describes in detail the design requirements and limitations, nozzle spacing, positioning with respect to obstacles, ceiling slopes, etc. Chapter 6 covers hydraulic calculations.

Revision history

Rev. 1 - January 2013

Rev. 2 - August 2015

Rev. 3 - January 2016

Rev. 4 – Part 1 and Part 2 - October 2016 - revised for LPCB certificate

Rev. 5 - Part 2 - October 2025 - revised for EN 14972-series

Limited Warranty

10-year limited product warranty on Prevent Systems low-pressure water mist nozzles.

The warranty shall cover:

This warranty applies to the full extent permitted by law. The warranty applies to the original buyer for 10 years from date of purchase against defects in material or production workmanship, and only if the nozzles are paid for in full, installed and maintained pursuant to Prevent Systems directions for installation and maintenance.

Nozzles found to be defective shall be repaired or replaced by Prevent Systems. Prevent Systems will not cover any costs or obligations in connection with the sale, repair, or replacement without prior written agreement.

The warranty rights shall follow the building and shall apply to the person who can document that he/ she owns the building.

The warranty does not cover:

The warranty does not cover incorrect handling, storage, design or installation of the water mist nozzles. Prevent Systems shall not be liable for any indirect or consequential damages, including labor charges, and the liability shall not exceed the amount of the sales price.

Notification of claim:

Notification of claims which fall under this warranty shall be reported to Prevent Systems in writing without delay, so that immediate action to remedy the issue can be taken.

The rights of this warranty is a supplement to the additional rights of the buyer based on the legislation.

Contact

For further information or for signing up for a training course, please contact us at post@prevent-systems.no or via our web-site www.prevent-systems.com.