

DATASHEET

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Prev5exp20
AUTOMATIC LOW PRESSURE
WATER MIST NOZZLE

PREVENT SYSTEMS

WHEN SAFETY IS TAKEN SERIOUSLY



Prev5exp

AUTOMATIC LOW PRESSURE WATER MIST NOZZLE

Part 1



General description

The Prevent Systems low pressure water mist nozzle Prev5exp20 with fast response thermally actuated bulb, is designed and successfully tested for fixed fire protection systems in Residential and Domestic applications, according to BS 8458 Annex C.

It has also been successfully tested for commercial low hazard occupancies in rooms up to a maximum of 20.25 m², according to BS 8489 Part 7, Category 3, Clause 7.7.

Technical Data	Residential & domestic	Commercial low hazard
Minimum operating pressure	2.2 bar	2.6 bar
Maximum operating pressure	16 bar	16 bar
Maximum standby pressure*	12 bar	12 bar
K-factor	29	29
Minimum flow rate	43 lpm	47 lpm
Nozzle material	Stainless steel 304	
Thread size	0.5 BSP or NPT	
Strainer	0.24mm Stainless steel	
Thermally actuated bulb	Fast response 3 x 16, RTI 36 (ms) ^{1/2}	
Release temperature	57°C, 68°C, 79°C, 93°C, 141°C	
Nozzle position	Pendant	
Nozzle size	Total length = 52mm, max. diameter = 24mm	
SIN	Prev5exp20	

*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 temperature 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 pipe thread 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.



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Maintenance

The nozzles must be handled carefully before, -under and -after installation. Nozzles that are damaged in any way, must be replaced. The nozzles shall 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 manual (DIOM). 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.

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 Prev5exp20 is designed and successfully tested for fixed water mist fire protection systems for use in Residential and Domestic applications, according to BS 8458 Annex C. This would include protection of homes, care institutions, apartment buildings, and sleeping areas in hospitals, hotels etc.

It has also been successfully tested for commercial low hazard occupancies in rooms up to a maximum of 20.25 m², according to BS 8489 Part 7, Category 3, Clause 7.7. This would include protection of typical OH-1 areas such as offices, small classrooms, seating areas and entrance foyers, and common rooms in care institutions, hospitals, hotels etc.

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 must meet the design requirements specified by the Authorities Having Jurisdiction (AHJ).

Application	Residential & domestic	Commercial low hazard
Fire test standard	BS 8458 Annex C.	BS 8489-7, cat. 3, cl. 7.7.
Max. coverage area	4.5m x 4.5m = 20.25 m ²	Rooms < 20.25m
Spacing between nozzles	Max. 4.5m, min. 2.25m	Not applicable
Distance to wall*	Max. 2.25m, min. 0.3m	Max. 2.25m, min. 0.3m
Maximum ceiling height**	3,5m	3.7m
Piping (non-corrosive)	Stainless steel, PrevPex, RedPipe, CPVC, subject to approval in each case.	

*Distance from walls can be exceeded in one direction by up to 20% if the other direction is reduced correspondingly, so that the maximum coverage area per nozzle does not exceed 20.25m².

**The Prev5exp20 nozzle can be installed up to a 3.5m ceiling height for Residential and domestic, and 3.7m for Commercial low hazard applications. For ceiling heights exceeding these heights, the Prev5exp nozzle is a good option.

Section 4 of the DIOM describes in detail the design requirements and limitations, along with design sheets, nozzle spacing, positioning with respect to obstacles, ceiling slopes, etc. Section 5 covers hydraulic calculations.



WARRANTY

10-YEAR PRODUCT WARRANTY ON PREVENT SYSTEMS LOW PRESSURE WATER MIST NOZZLES

The warranty shall cover:

If nozzles should leak or defects arise during the warranty period as a result of material and production defects, Prevent Systems will take on repairing or replacing the water mist nozzle(s) at Prevent Systems' own expense. The warranty shall only apply to low pressure water mist nozzles, which are ordered with and delivered by Prevent Systems to the original customers (owner of the building) from the date of dispatch and only if the nozzles are paid, installed and maintained pursuant to Prevent Systems' directions for installation and maintenance.

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:

Damage arisen due to incorrect installation, storage or handling of the nozzles, insufficient or incorrect maintenance, faulty projecting, consequential damage or exterior loads apart from the type of load which the nozzles should normally resist is not covered by the warranty.

Notification of claim:

Situations which fall under the warranty have to be sent without hesitation to Prevent Systems in writing including the complete nozzle(s) and documented date of purchase. Incomplete nozzles or parts of nozzles will not be accepted. Prevent Systems undertakes to repair or replace the nozzle(s) within a reasonable period of time.

The rights of this warranty is a supplement to the additional rights of the buyer on the basis of 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

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