

# PNR Italia solution for the protection of fire cloths as firefighting systems

How to ensure certification and maximum efficiency in fire protection for fire frames



## INDUSTRY

Fire prevention



## APPLICATION

Cooling



## PROBLEM

Optimization of the wetting of a fireproof cloth



## SOLUTION

Collector with deflected blade nozzles



## SCENARIO FOR THE SECTOR

Fire protection within companies

The sector is concerned with **fire safety for companies, with particular attention to protection against industrial fires.**

In this context, the focus is on the need to ensure an effective system of water blades that wet a fire cloth in case of fire, with the specific requirement to keep the cloth constantly wet to prevent the spread of flames.

## THE PROBLEM OF OUR CLIENT

A manufacturer of fire protection systems is faced with the challenge of certifying a new product: a fire protection cloth designed to withstand fires and prevent the spread of flames.

**The certification test requires that the fireproof cloth is constantly wetted by a water blade** with a spillage of 6 liters per square meter per minute with nozzles at a distance of 0.8 m and a pressure of 2.2 bar.

## PNR ITALIA SOLUTION

PNR Italia proposes an effective solution to face this challenge. The proposal consists of the use of KHW nozzles in AISI 316L steel.

To ensure adequate coverage of the fire curtain size 3x3 meters, **PNR Italia designs a system that includes a pipe positioned 30 cm above the cloth, equipped with 4 KHW nozzles and ZPM clamps** to ensure a uniform distribution of water.

Considering that the angle of the spray is about 130°, by making them spray vertically and fixing them with a pitch of 80 cm, we derive that after 20 cm of fall overlap with a significant increase in the amount of water spilled on the surface to be wet.

## ADVANTAGES FOR OUR CLIENT

**Guaranteed Certification:** thanks to the solution proposed by PNR Italia, the company can confidently face the certification process, ensuring that the fire protection cloth meets the required standards.

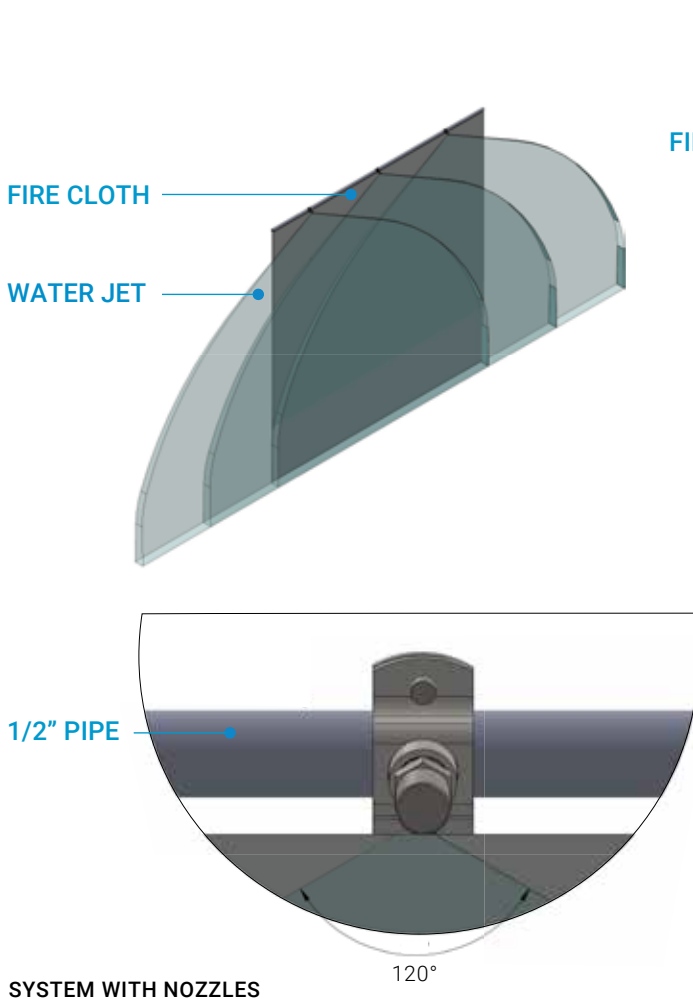
**System Efficiency:** the use of KHW and the careful design of the system ensure optimal efficiency in the distribution of water on the surface of the cloth, avoiding the spread of flames.

**Reliability and Safety:** the solution proposed by PNR Italia offers the customer the peace of mind of having a reliable and safe system for fire protection, minimizing the risk of damage and loss.

## OPERATIVE CONDITIONS

### N.4 KHW NOZZLES

WATER FLOW RATE	18.8 lpm @3bar
SPRAY ANGLE	120°



## FOCUS ON THE PRODUCT

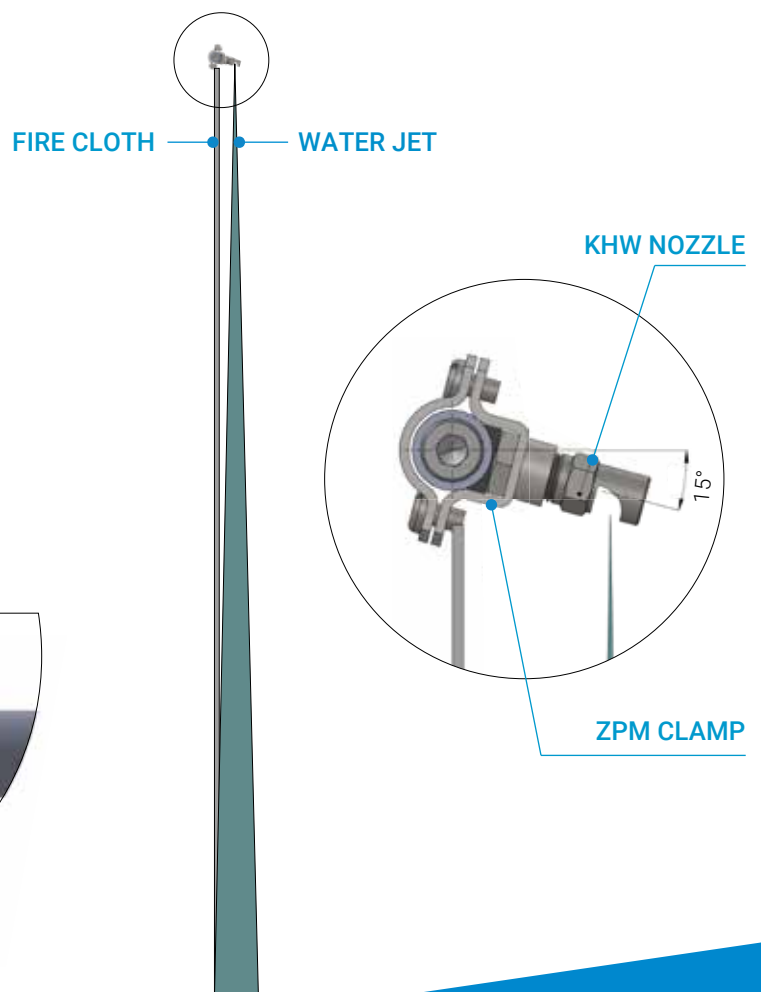


**K LARGE  
FLAT FAN NOZZLE**

The core of the proposed solution uses KHW, a deflected blade, and wide-angle **nozzles designed to ensure precise and constant water distribution.**

The system includes a strategically positioned tube with 4 KHW nozzles and ZPM clamps to secure the 3x3 meter fire curtain is fully covered and kept wet according to strict certification requirements.

Thanks to this innovative solution of PNR Italia, the company can successfully face the challenge of certification of the new product, offering the customer a highly reliable and efficient fire protection system to protect its industrial facilities.



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