



# SPRAY NOZZLES FOR INDUSTRIAL APPLICATIONS



**SPRAY NOZZLES  
FOR FIRE  
PROTECTION SYSTEMS**

# SPRAY NOZZLES FOR FIRE PROTECTION SYSTEMS

PNR Italia began its business in 1968 to produce and sell **components and accessories for fire-fighting systems**.

Over the years, our offer has expanded and specialized.

Today, we can offer various types of **nozzles for fire suppression systems such as full cone, hollow cone, flat and spiral jet**, but also **fire sprinklers, water mist nozzles** (*water mist system*), **spray nozzles for water nebulization, bell-shaped nozzles for cisterns and tanks, foam and cluster nozzles**.

## HOW DO SPRAY NOZZLES FOR FIRE PROTECTION SYSTEMS WORK?

When it comes to fire protection nozzles, it is essential to highlight the different types of applications:

### 🌊 FIRE PREVENTION NOZZLES

In this case, the applications can be:

#### HUMIDIFICATION

The nozzles humidify the environment to prevent fire in the presence of large quantities of potentially combustible material such as paper piles or fine and explosive dust. For this application, RX or RZ hydraulic atomizers are generally used.

#### COOLING

the nozzles cool large containers of flammable materials such as oil or gas tanks to prevent fires. For this application, K nozzles are generally used.

### 💧 NOZZLES FOR EXTINGUISHING FIRES

The applications of fire extinguishing nozzles are:

#### SUFFOCATION

The water mist nozzles proceed to suffocate the fire, evaporating a large number of fine drops and subtracting oxygen from the fire that will go out eventually.

#### DROWNING

For this application, E, AA, full cone spray nozzles with large flow rates or sprinklers are generally used. Deluging is the most classic method to extinguish a fire and involves the spillage of large quantities of water capable of completely drowning the fire. This method is used in large areas and where the size of the potential fire is so large that a suffocation intervention would be ineffective.

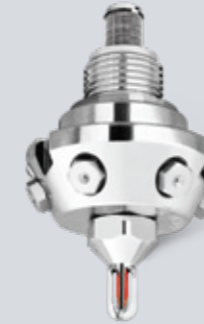
### HYDRAULIC ATOMIZERS RX | RZ

Hydraulic atomizers used mainly for humidification



### WATER MIST NOZZLES CJ

Nozzles that suffocate the fire by removing heat



### FLAT FAN NOZZLES K

Nozzles with deflected and wide-angle, mainly used for cooling large tanks



### NOZZLES FOR DELUGING SYSTEMS

#### E | D high flow rates | A | RO

Nozzles used for deluge systems, which extinguish fires by pouring large quantities of water



## WHERE ARE THE FIRE PROTECTION NOZZLES AND WATER MIST SYSTEMS INSTALLED?

WAREHOUSES WITH STACKED GOODS such as libraries, data processing centers, paper warehouses

TEST ROOMS FOR CAR AND AIRCRAFT ENGINES

MOTORWAY TUNNELS

SIDES OF BOATS AND CARGO SHIPS, ferries, machinery spaces and cabins, ship decks

LOADING AREAS FOR TRUCKS AND RAIL TRANSPORT

MACHINE TOOLS for working wood and chipboard

CONVEYOR BELTS FOR FINELY GROUND MATERIALS such as tobacco, coffee, or timber

COMPOSTING PLANTS

STORAGE TANKS of liquid and gas refineries, pellets, or grains

HOTEL ROOMS, SHIP CABINS, RAILWAY CARRIAGES, TEACHING ROOMS, OFFICES

CINEMAS AND THEATERS

INDOOR PARKING

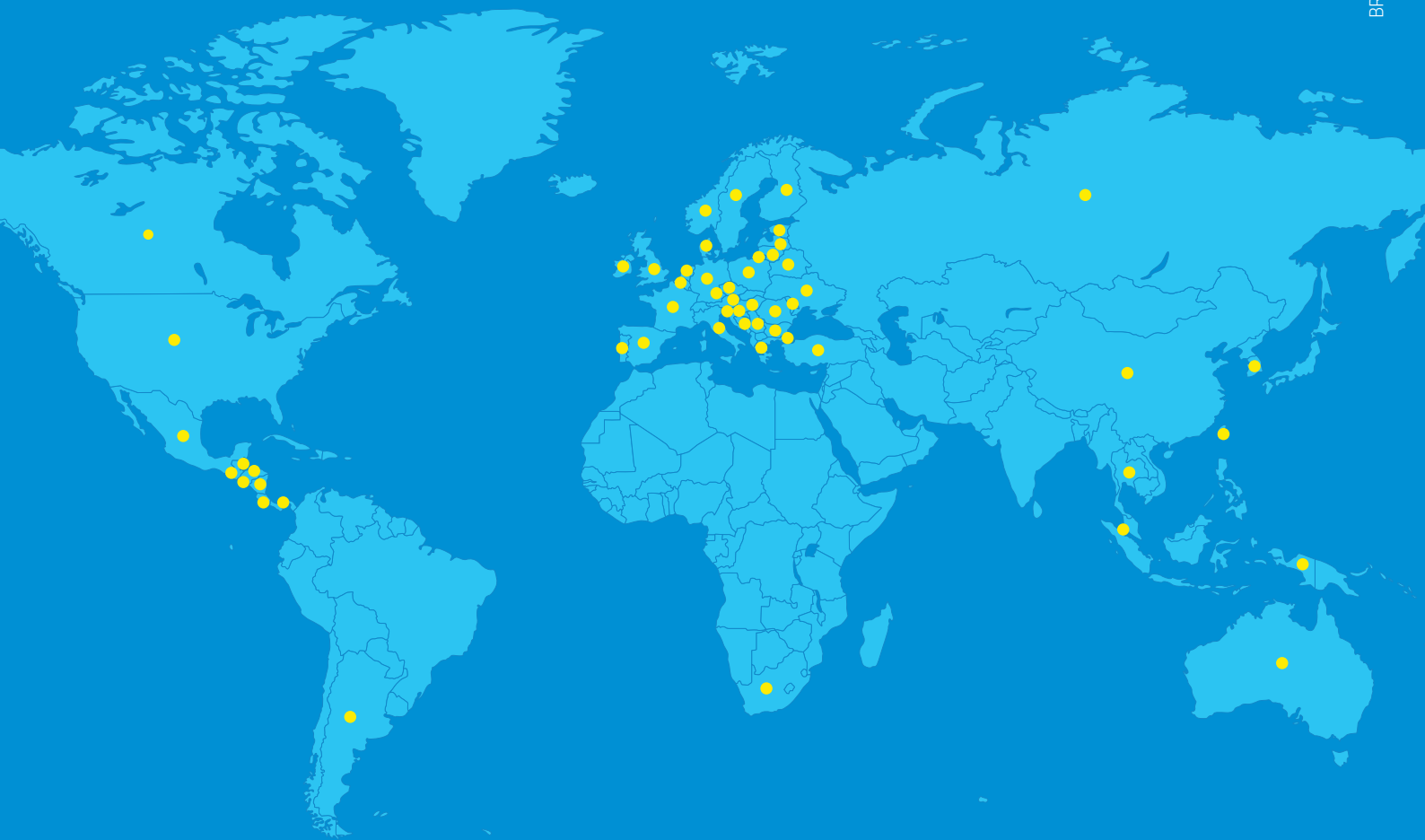
METRO AND RAILWAY STATIONS



**PNR ITALIA IS COMPLETELY AVAILABLE FOR CUSTOMIZED TESTS AND TAILOR-MADE SOLUTIONS**

# A GLOBAL PRESENCE ALL OVER THE WORLD.

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## **PNR ITALIA SRL**

Via Gandini 2, 27058 Voghera (PV) Italy  
For more information, visit [www.pnr.eu](http://www.pnr.eu)

Call or write us for customized solutions!

☎ +39 0383 344 611    ✉ [info@pnr.it](mailto:info@pnr.it)

