

# PROTECTION USING PREACTION SYSTEMS

The typical system is composed of:

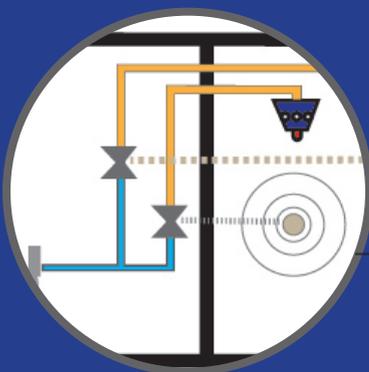
- WATER TANK WITH A FILTRATION AND FILL SYSTEM.
- RG W-FOG UAP IMPULSE PUMP UNIT.
- ELECTRIC CONTROL VALVE.
- CLOSED FUSE NOZZLES FOR FIRE DETECTION.
- CONTROL AND ALARM MECHANISMS

PREACTION WATER MIST SYSTEMS ARE INSTALLED IN AREAS WITH VERY SENSITIVE MATERIALS WHERE AN ACCIDENTAL ACTIVATION IS NOT DESIRABLE. THEY NEED A DOUBLE ACTIVATION TO INITIATE THE DISCHARGE.

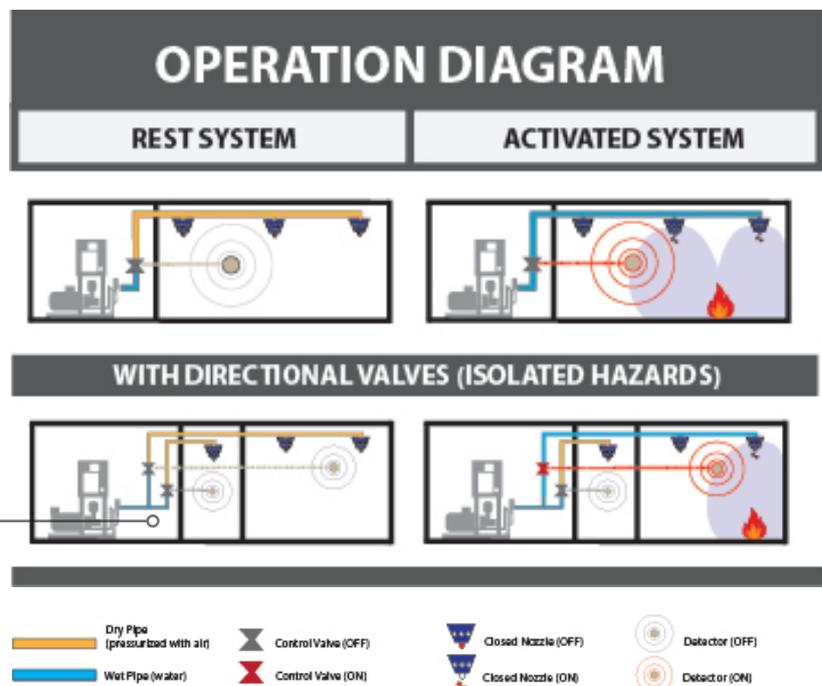
**These installations use closed nozzles, mounted on dry pressurised piping, and are also combined with a fire alarm system.**

This means that there is a safeguard system to avoid false discharges due to an accidental nozzle being blown or a failure in the fire alarm system:

- In the case of a blown fuse, the piping remains dry, sending an alarm signal to detect for depressurisation in the piping, but the discharge does not result if the alarm system does not detect a fire.
- In case of the accidental activation of the control valve, the dry piping is filled with water, sending an alarm signal, but the discharge does not result if a fuse has not been blown.



*Unlike the Dry Piping and Spray Deluge Systems, the network is continuously pressurised with water before the control valve.*

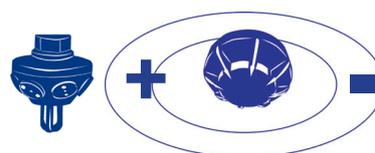


The piping between the control valve and the open nozzle is empty and not pressurised, until the detection panel actuates the control valve and a fuse that permits the discharge of water is blown.

# OPERATION

Preaction equipment requires a double activation, and both conditions must be met before the discharge is initiated. The first condition is the installation of closed nozzles, pressurised with air or nitrogen, as they would be in dry system installations. The second condition is the activation of the fire alarm system, which actuates the control valve that opens up to the passage of water through the nozzles.

To produce a discharge, it is necessary that both systems be triggered, meaning that a nozzle has been broken/open due to an increase in temperature, and that the detection line has been activated to permit the passage of water through the nozzle.



# APPLICATIONS

With the preaction equipment, the goal is to reduce all risks of any accident that could occur in the installation to a minimum and, therefore, until the fire is confirmed, no discharge will be produced.

This application can easily be used in museums, where an accidental activation could noticeably affect works of art located inside, data protection centres, where there are sensitive electrical components, or places where discharges due to vandalism are preferably avoided, such as prisons and homes.

