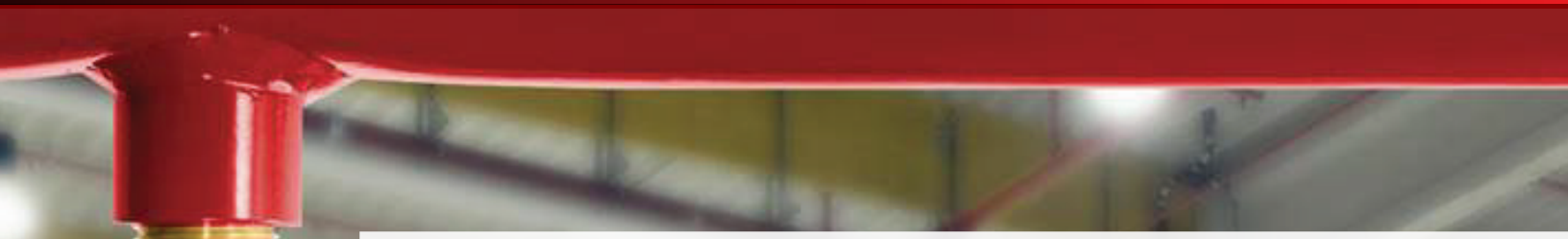
PRÉVENTION INCENDIE SAFETY FIRST FIRE PREVENTION INTERNATIONAL

SPRINKLER SYSTEMS

WET PIPE, DRY PIPE, DELUGE/PREACTION, BACKFLOW PREVENTION DEVICE, FIRE PUMP



SYSTEM DESCRIPTION

Automatic sprinkler systems protect people and buildings in the event of a fire. They consist of one or more fixed piping networks connected to a continuous power source. Their function is to control and / or extinguish the fire pending the arrival of the fire fighters.

Types of automatic sprinklers;

- **Wet Pipe:** This system is an effective fire extinguisher. Sprinkler heads activated by the rise in temperature delivers the water required to control and/or extinguish the fire.
- **Dry Pipe:** This system protects unheated spaces and frost-prone areas. The system is filled with air and during a pressure drop caused by the activation of a sprinkler head, water is admitted into the network to extinguish the fire.
- **Deluge:** This system is used where the risk of spreading a fire is high. The system contains no water until sensors enable the flow into the piping.
- **Preaction:** This system is used to protect against accidental discharge of water.
- **Fire pump:** This system is used where the municipal water supply is insufficient or there is a lack of pressure in the pipes.
- **Backflow prevention device:** It is connected between the fire protection network and drinking water. This is mandatory by the CCQ, plumbing chap.3 since 2008.

These systems are regulated under NFPA 13 and NFPA 20.

METHOD OF CONTROLLING A FIRE

To extinguish a fire, it is not only necessary to eliminate the oxygen, but also to reduce the heat. This is where water is essential. When water comes into contact with the fire, it vaporizes. The vapor cools the area by capturing the heat, thus preventing the fire from spreading.

The water poured onto the fire immediately turns into a vapor. The vapor, as a gas, occupies a greater space than the liquid water. It, therefore, pushes the air around the flame and, without oxygen, the fuel can no longer generate flames.

COMMON APPLICATIONS

Depending upon the type of building, there are a multitude of building codes and safety standard requirements for the installation of automatic sprinklers.