



ORDINARY COMBUSTIBLES



FLAMMABLE LIQUIDS



ELECTRICAL EQUIPMENT

SYSTEM DESCRIPTION

Carbon dioxide systems are intended to suppress fire for a wide range of hazards. This type of system can protect specific confined areas (total immersion), localized open risks (local application), or a combination of both. It is also approved for the protection of risks involving deep seated fire.

For "high pressure" systems, carbon dioxide is stored in seamless steel cylinders, in a liquid state, under its own natural pressure. The quantity required is determined by precise evaluation of the various parameters of the risk to protect. For hazards involving smoldering fires, a higher concentration and a longer retention time are necessary to prevent re-ignition of the fire.

These systems are regulated under NFPA 12.

FIRE SUPPRESSION METHOD

Carbon dioxide initiates a significant reduction in oxygen while providing a cooling effect.

HOW THE SYSTEM WORKS

Following the detection of excessive heat via mechanical, electrical or pneumatic detection devices, or via a manual actuator, the suppression agent will be activated by the system's release mechanism. A release panel will be required when detection is electric.

Depending upon the risk, other types of detection may also be used. The suppression agent will then be driven from the cylinders to the nozzles through a fixed pipe network, producing the phase change of the agent so that it transforms from a liquid state to a gaseous state.

Depending upon the risk to be protected, including the risk posed to people or the environment within, several safety measures must be taken into consideration such as adding pictograms, mechanical or electrical delays, lock-out valve, installing several visual and audible signaling devices indicating the different phases of the system leading to the discharge of the agent.

COMMON APPLICATIONS

- Fryers and industrial ovens, (food),
- Grain dryers, dust collectors, cyclones,
- Printing presses, test chambers (turbines, motors, anechoic chambers)
- Ships; engine rooms and other compartments
- Finally, any type of industrial process, regardless of its complexity, and provided people's safety is respected.