

Carbon Dioxide Fire Suppression Systems

- High flow 'Klem' cylinder valve
- Manual or Automatic operation
- Pilot cylinder or Direct Acting Solenoid operating system
- Continuous weight monitoring option
- Fully compatible with Kidde Fire Protection control panels

CO₂ is stored as liquid, under its own vapour pressure of ~59 bar at 21°C. The agent's low boiling point means that the liquid vaporises rapidly during the discharge, providing a penetrative three-dimensional action. The rapid expansion of the gaseous agent allows fires to be targetted even in the most inaccessible areas of the risk.

CO₂ is Clean

CO₂ is colourless and odourless. After extinguishing a fire it vaporises fully leaving no residue. With non-conductive properties it can be used on energised electrical equipment and safely used to protect delicate electronic equipment, antiques or archive materials.

CO₂ is Low Cost

Carbon dioxide is a standard commercial product with many other uses and is readily available throughout the world. Because of its universal use it can be obtained inexpensively. This is an important consideration when frequent recharging of storage containers is necessary such as in local application systems, where fires may be more frequent.



Carbon Dioxide

Flexible Design

The wide range of components manufactured by Kidde Fire Protection enables systems to be either automatically or manually operated, arranged to protect single or multi-zone hazards and supplemented with a reserve discharge facility. Automatic control can be achieved mechanically, pneumatically, electrically or by any combination of these to suit site conditions.

Facilities are available for providing a pre-alarm and delayed discharge as well as various methods of preventing automatic release while protected rooms are occupied by personnel.

Total Flooding

Total flooding systems extinguish fires by rapidly discharging CO₂ into an enclosed volume to create an atmosphere that is incapable of supporting combustion. This concentration of CO₂ presents

a serious hazard to personnel and under no circumstances should CO₂ be released into areas that may be manned at the time of discharge.

Kidde Fire Protection offers time delays, isolating valves including distribution valves and control head lockout pins to facilitate the safe use of CO₂.

Local Application

This method of system design is used to protect hazards that are open or have only partial enclosure, situated within a larger area that would be unsafe or uneconomic to protect using a total flood system. Discharge nozzles are placed so as to provide direct agent flow at the points and areas prone to fire.

Major approvals include:

FM Global • Lloyd's Register • Det Norske Veritas

Typical Applications

Flammable liquid storage areas
Printing presses, flow solder machines
Quench tanks/exhaust fume ducts
Paint spray booths
Transformers
Generators

CO₂ is not the agent of choice for manned areas due to its toxicity at extinguishing concentrations