

Carbon Dioxide The Clean Fire Extinguisher

Carbon Dioxide (CO₂) is a colorless, odorless, electrically nonconductive gas with an approximate density 50% greater than air.

It is stored in steel cylinders as a liquid, under pressure. When applied to a fire, it provides a blanket of heavy gas that reduces the oxygen content of the atmosphere to a point where combustion becomes impossible. In addition, CO₂ gas provides a cooling effect and leaves no residue. It dissipates into the atmosphere, allowing for rapid cleanup and minimal downtime.

System Operation

Kidde Automatic Carbon Dioxide Systems utilize fire detectors which sense fire conditions in the hazard area. An electric signal is sent through a control panel to a control head, which releases CO₂ from the cylinders. The CO₂ is delivered through a fixed piping network to discharge nozzles directed at the hazard.

System Types

Kidde Fixed Carbon Dioxide Systems are designed using three (3) methods of application:

- Total Flooding
- Local Application
- Hand Hose Line Systems

Total Flooding-(figure 1)

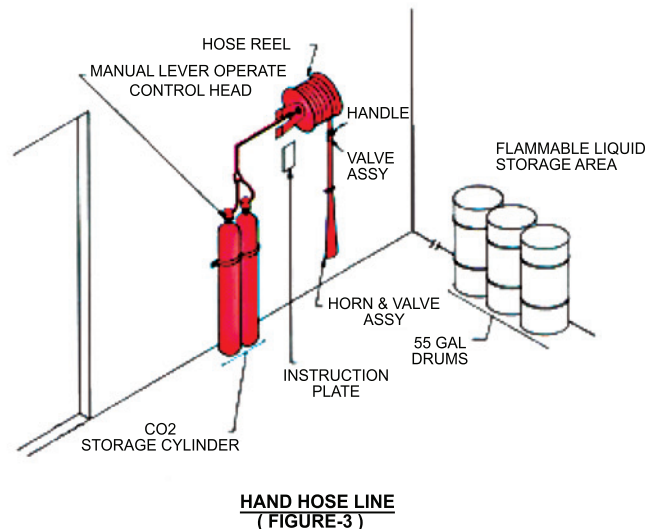
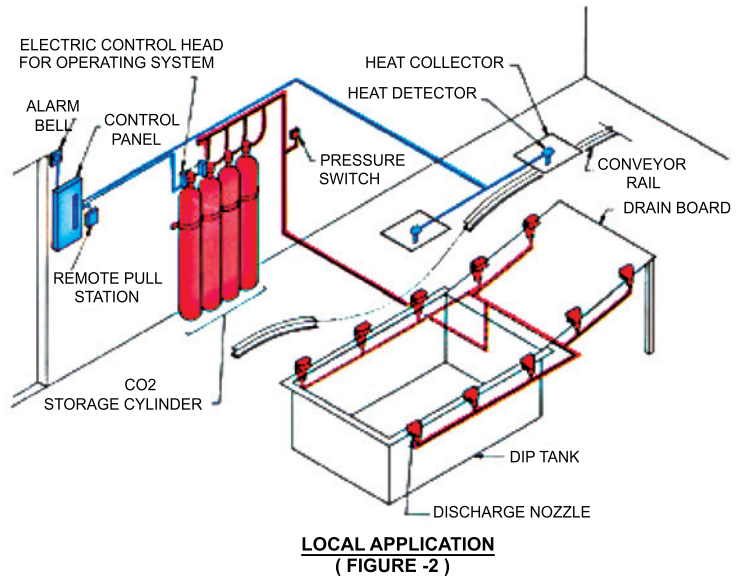
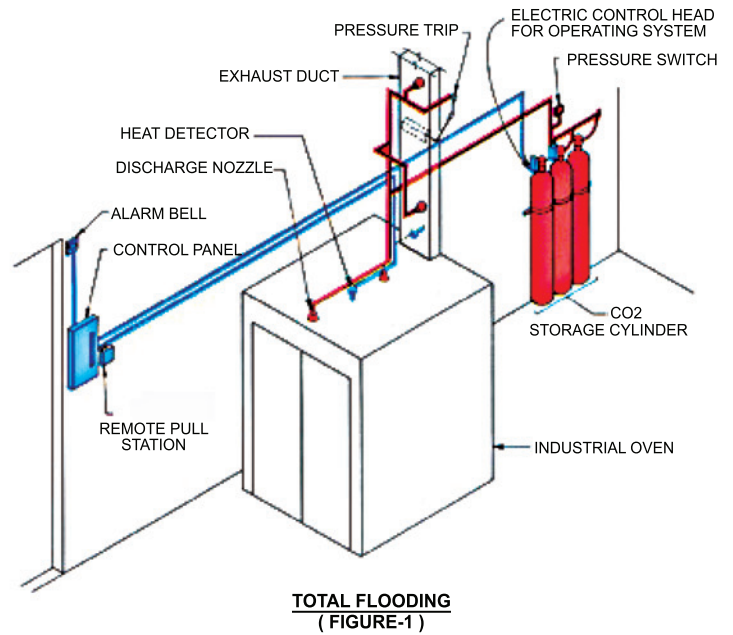
“A total flooding system consists of a fixed supply of carbon dioxide normally connected to fixed piping with nozzles arranged to discharge carbon dioxide into an enclosed space or enclosure around the hazard.”*

Local Application-(figure 2)

“A local application system consists of a fixed supply of carbon dioxide normally connected to fixed piping with nozzles arranged to discharge carbon dioxide directly on the burning material.”*

Local Hose Line-(figure 3)

“A hand hose line consists of a fixed supply of carbon dioxide supplying hose lines.”*



*National Fire Protection Association (NFPA) Standard No. 12