Pinaco C02 Systems

CO2 FIRE SUPPRESSION SYSTEMS..

APPLICATIONS :-

- Battery Rooms
- Generator Rooms
- Electrical Area
- Engine Rooms
- Flammable Liquid Storage
- Paint Lockers

Pinaco CO2 fire extinguishing system minimizes the potential loss of life and property in today's highly specialized environment and can be used safely and effectively. It has a high ratio of expansion, which facilitates rapid discharge and allows for three-dimensional penetration of the entire hazard area quickly.

CO2 extinguishes a fire by reducing the oxygen content of the protected area below the point where it cannot support combustion. Due to the extreme density of the CO2, it quickly and effectively permeates the protected hazard area and suppresses the fire. Rapid expansion of the gas reduces the ambient temperature in the hazard area, which aids in the extinguishing process and retards re-ignition.

When designed, engineered and properly installed, it will not normally damage sensitive electronics equipment. CO2 has no residual to clean up associated with its use as fire suppressing agent. When it is properly ventilated, the gas escape to atmosphere after the fire has been extinguished.

CO2 can be used to protect a wide variety of hazards, from dedicated electronic equipment to high voltage electrical equipment, without any danger or damage.

Pinaco provides the flexibility of selecting & integrating the right Cylinders Hardware & Alarm Devices into Systems to suit Customers' needs, in terms of :-

- Cost …
- Applications …
- Specifications …

GAS RELEASE PANELS

includes 'Evacuate Area Immediately' and 'Gas Discharged' signage.

Gas Release Panels to meet different requirements :-

- Singapore CP 10
- BS EN54 Pt 2&4
- UL, FM
- NFPA

AUDIO & VISUAL ALARM DEVICES

Flashing Signage

Entrance Caution Sign

Sirens, Strobe Lights and Alarm Bells operate at different stages of alarm

DETECTORS & REMOTE STATIONS

Manual Abort Station

Manual Release Station

Various types of detectors to suit hazard condition

VESDA Aspirating Smoke Detector

CO2CYLINDERHARDWARE

Pinaco range of `K85' High Pressure CO_2 Cylinders Hardware is recommended as a low cost and quality product engineered to International standards such as BS 5306 , and NFPA 12 Standards.

Products are assembled and tested in accordance to Pinaco's certified ISO 9001 : 2000 Quality Management System.

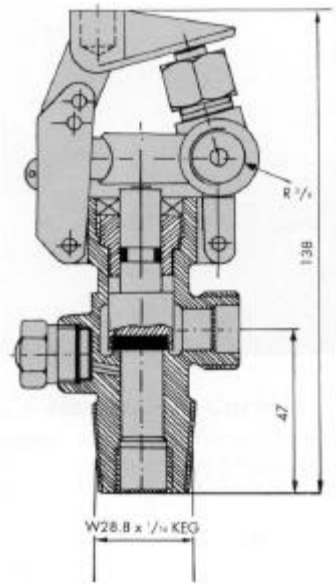
Carbon dioxide is a by-product of the manufacturing process of other products. This would normally be released into the atmosphere and is the same gas that is used in the medical and carbonation industry. It is also a gas that is naturally produced by nature. Carbon dioxide has been used with proven effectiveness for many years and will continue to be used in the future.

The K85 Valve c/w Cylinder is factory filled with carbon dioxide. A single cylinder may be used, or multiple cylinders can be manifold together to obtain the required quantity of agent for total flooding or local application methods. The K85 valve can be actuated electrically, pneumatically, and / or manually with the appropriate valve actuation components.

Cylinder Model	Weight of CO2	Cylinder Capacity
K85 - 45	45 kg	68 Litres
K85 - 30	30 kg	45 Litres
K85 – 9	9 kg	13 Litres

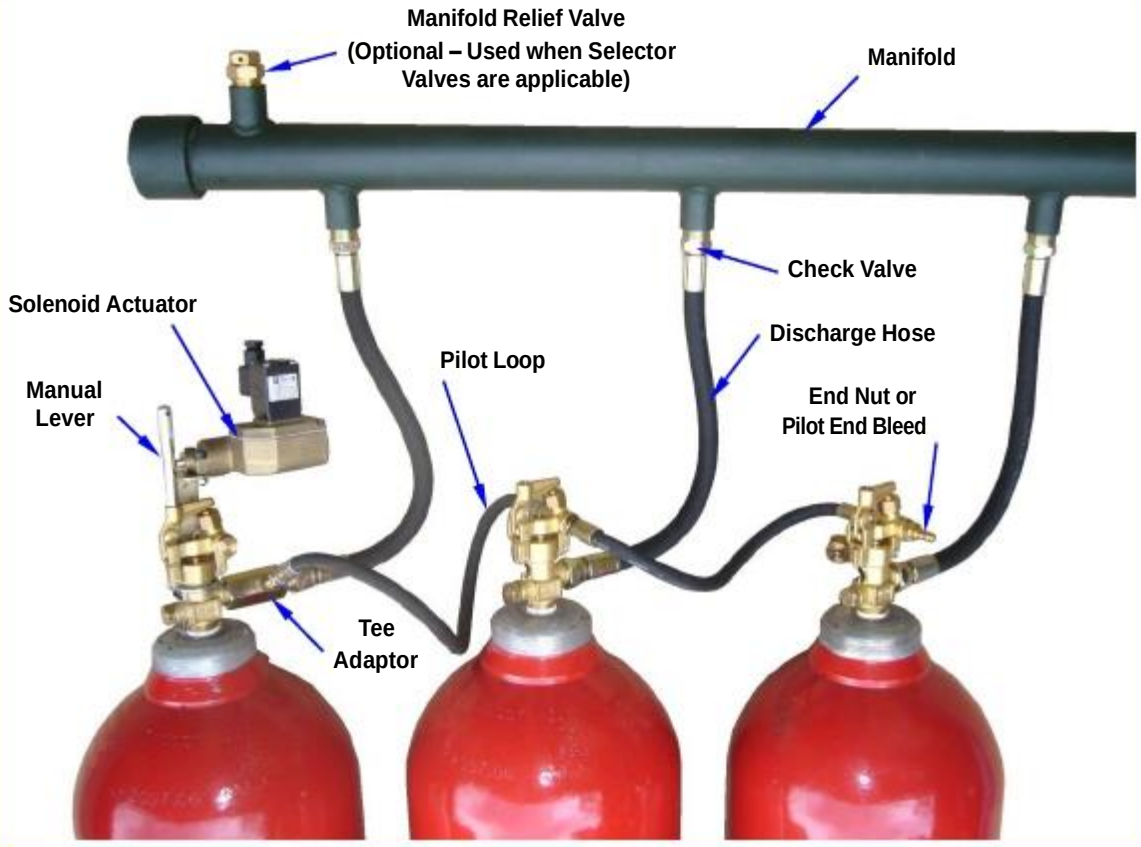
Technical Specifications of K85 Valve

Material	: Forged Brass CuZn39Pb3
Type of Operation	: Manual / Electric / Pneumatic
Leakage Test	: 120 Bar
Bursting Test	: 250 Bar
Standard of Compliance	: DIN 17660



CO2CYLINDERACCESSORIES&SCHEMATIC

TYPICAL CO2 CYLINDER INSTALLATION SCHEMATIC



CO2 CYLINDER ACCESSORIES

K85 Pneumatic Valve

Solenoid Actuator

K85 Pneumatic Valve c/w Manual Lever

Mechanical Pull Station

CO2 Nozzles

Tee Adaptor

Manifold Relief Valve

End Nut

Pilot End Bleed

Pilot Loop and Discharge Hose c/w Check Valve

Special Application Nozzles

FIGURE 1

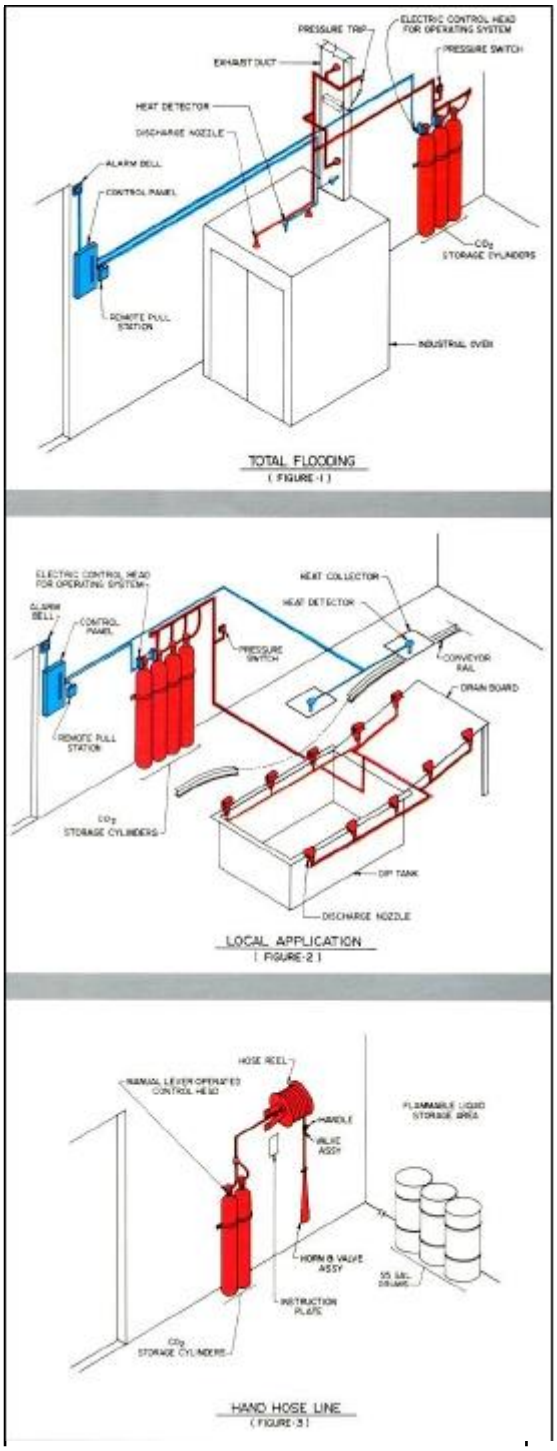
A TOTAL FLOODING SYSTEM CONSISTS OF A FIXED SUPPLY OF CARBON DIOXIDE CONNECTED TO A FIXED PIPING NETWORK WITH NOZZLES ARRANGED TO DISCHARGE CARBON DIOXIDE INTO AN ENCLOSED SPACE AROUND THE HAZARD

FIGURE 2

A LOCAL APPLICATION SYSTEM CONSISTS OF A FIXED SUPPLY OF CARBON DIOXIDE CONNECTED TO A FIXED PIPING NETWORK WITH NOZZLES ARRANGED TO DISCHARGE CARBON DIOXIDE DIRECTLY ONTO THE PROTECTED HAZARD.

FIGURE 3

A HAND HOSE LINE CONSISTS OF A FIXED SUPPLY OF CARBON DIOXIDE SUPPLYING HOSE REEL.



A CO_2 installation consists of one or more cylinders of carbon dioxide connected through a manifold to a distribution pipework. The distribution pipework ends in special carbon dioxide discharge nozzles.

The quantity of carbon dioxide required for installation and the strategic placement of the discharge nozzles is determined by our experience staff. Our designer will study the location, the cubic volume or surface area of the hazard and the type of material involved.

More than one hazard can be protected by the same bank of cylinders. Selector or directional valves are used to direct the carbon dioxide to the fire area.

An interconnected reserve bank of cylinders is desirable for some applications for added protection.

The System can be manually or automatically activated in conjunction with a Fire Detection & Alarm System.