

Carbon Dioxide Extinguishing Systems



The carbon dioxide extinguishing system is extremely versatile and effective on a variety of combustible materials. Approved for Class A, B and C hazards, carbon dioxide fire extinguishing systems have recently become one of the most preferred methods. The main reason for this is that the carbon dioxide fire extinguishing system is fast, reliable and effective.

Carbon Dioxide Fire Extinguishing Systems

Carbon dioxide is a clean gaseous agent in abundant supply and can be stored in high pressure cylinders or low pressure tanks.

It has been used effectively as a fire extinguishing gas since the early 1900s.

Carbon dioxide fire extinguishing systems can be used for mass transportation or local application and are ideal for protecting high value assets where large quantities of agent are required.

These include immersion tanks, rolling mills, data processing centers, vaults/tape storage and marine machinery areas.

The CO₂ fire extinguishing system includes detectors, a control unit, agent storage cylinders, piping and discharge nozzles.

Gaseous carbon dioxide quickly suppresses the fire through pressurized cylinders.

Among the most important reasons why carbon dioxide extinguishing systems are so preferred are the following:

- A cheap and easy to access agent when refills are needed
- Wide range of proven safe, hazard protection
- When applied to a fire, a CO₂ fire suppression system provides a heavy blanket of gas that reduces the oxygen level to a point where combustion cannot occur.

CO₂ Fire Extinguishing System Features

The extinguishing agent used by carbon dioxide fire extinguishers is a colorless, odorless, electrically non-conductive gas that is highly efficient. Among the main features of the carbon dioxide fire system are the following:

- The CO₂ fire suppression system uses intelligent, reliable and fast-acting control panels to quickly detect a fire before it causes property damage.
- Carbon dioxide gas has a high expansion rate, which makes the carbon dioxide fire extinguishing system work fast.
- When applied to a fire, CO₂ provides a heavy gas blanket that reduces the oxygen level to a point where combustion cannot occur.
- Since carbon dioxide is a gas, there is no cleaning process associated with CO₂ fire extinguishing system discharge.
This provides a significant advantage in terms of both cost and workload compared to other fire extinguishing systems.
- With carbon dioxide fire extinguishers, cleaning costs and downtime associated with CO₂ discharge are negligible.

As carbon dioxide is a noble gas, it does not react with metals or plastics.

This makes it a superior solution to water, which oxidizes to cause rust.

For example, computer data centers or “server farms” use CO₂ fire suppression systems to protect sensitive electronics.

Once the fire is extinguished, the components affected by the fire can be quickly replaced and the system restarted.

Marine engine rooms use CO₂ instead of water for two reasons: water damages the electrical mechanical components of the engine and no one wants to put water on a ship at sea.

Currently, CO₂ fire suppression systems are used repeatedly by the US Navy and Coast Guard and commercial vessels.

Unlike water, CO₂ is non-corrosive.

Other common uses include gas turbine enclosures, power generation stations, voltage transformers, rolling mill operations and flammable liquid storage areas.

Carbon Dioxide Fire Extinguisher Prices

One of the most common reasons for using carbon dioxide fire extinguishers is undoubtedly their prices. Because carbon dioxide fire extinguisher prices are an extremely performance product based on the service it offers. The prices of the CO₂ system are extremely advantageous compared to other systems. Since it has features such as being recyclable, colorless and odorless, it is also efficient in terms of cost and work.

CO₂ fire extinguishing systems, which are also very attractive in terms of refill cost, can be used safely in fires in transformers, electrical control rooms, power transmission rooms, cable routes, paint booths or liquid storage areas.

How Does CO₂ Extinguishing System Work?

Since CO₂ gas used in carbon dioxide fire extinguishing systems is a heavier gas than oxygen, it extinguishes the fire by creating a heavy blanket in the fire area, cutting the contact of oxygen with the combustible material.

What is a Carbon Dioxide Fire Extinguisher?

Carbon dioxide fire extinguishers are systems in which CO₂ is used as a fire extinguishing agent. CO₂ fire system is advantageous in terms of its features compared to other fire extinguishing systems and is also efficient in terms of cost and labor.

Where is Carbon Dioxide Fire Extinguishing System Used?

Carbon dioxide fire extinguishers can be used safely in many places where there is a fire because they have a colorless, odorless, electrically non-conductive property.