

# CO<sub>2</sub> Flooding System – Parts & Technical Writeup

This document provides a technical writeup of the CO<sub>2</sub> Total Flooding Fire Suppression System with parts, descriptions, and catalog-ready explanations.

1. CO<sub>2</sub> Storage Cylinders & Manifold:

High-pressure steel cylinders arranged in primary/slave setup connected via manifold for balanced discharge.

2. Solenoid & Manual Valve Actuators:

Electrically or pneumatically operated heads for automatic release, with manual override for emergencies.

3. Distribution Piping & Flex Hoses:

Seamless steel piping with check valves and flexible hoses to deliver CO<sub>2</sub> to the enclosure safely.

4. Discharge Nozzles:

Engineered for uniform distribution and quick flooding concentration.

5. Fire Detection & Manual Call Stations:

Smoke/heat/flame detectors with manual pull stations to initiate system activation.

6. Control Panel & Auxiliary Circuits:

Electronic control unit managing detection, time delays, alarms, and discharge.

7. Warning Devices:

Sirens, alarms, strobes, and signage alert occupants prior to discharge.

8. Time-Delay Mechanism:

20–60 second programmable delay for safe evacuation.

9. Pressure Relief & Venting Panels:

Prevent overpressure and structural damage during CO<sub>2</sub> release.

10. Safety Interlocks:

Shutdown of ventilation, machinery, or power during discharge for safety.

11. Monitoring & Gauges:

Pressure gauges and supervisory switches to ensure system readiness.

Applications:

- Data Centers, Electrical Rooms, Marine Engine Rooms, Power Plants, Paint Booths.

Compliance:

- NFPA 12, ISO 6183, Local Fire Codes.

This technical section can be integrated into Fire Engineering Technology's product catalogue with photos, schematics, and client-focused application callouts.