

# *Carbon Dioxide Fire Suppression Systems*



 **ANSUL®**  
*Innovative Fire Solutions*

# High Pressure CO<sub>2</sub> Systems

*The original "clean agent," carbon dioxide suppresses fire without leaving behind water, foam or dry chemical to damage sensitive equipment. And because there is no agent to clean up, you're back in business faster.*

*Carbon dioxide systems are still the best fire protection solution for many applications. They provide automatic or manual protection for Class A, B or C fires.*

*Although carbon dioxide fire protection is not a new concept, its versatility and unique benefits have kept it in high demand. Carbon dioxide can be applied by totally flooding an enclosed area or locally discharging the agent directly on the surface of the burning material. Today's systems are equipped with sophisticated detectors, intelligent control panels and computer designed distribution networks.*

**Ansul High Pressure Carbon Dioxide Systems are recommended for hazards like semiconductor wet benches, control rooms and paint lines. Whatever the application, from cylinder to nozzle, each system is custom-designed for your specific fire hazard.**

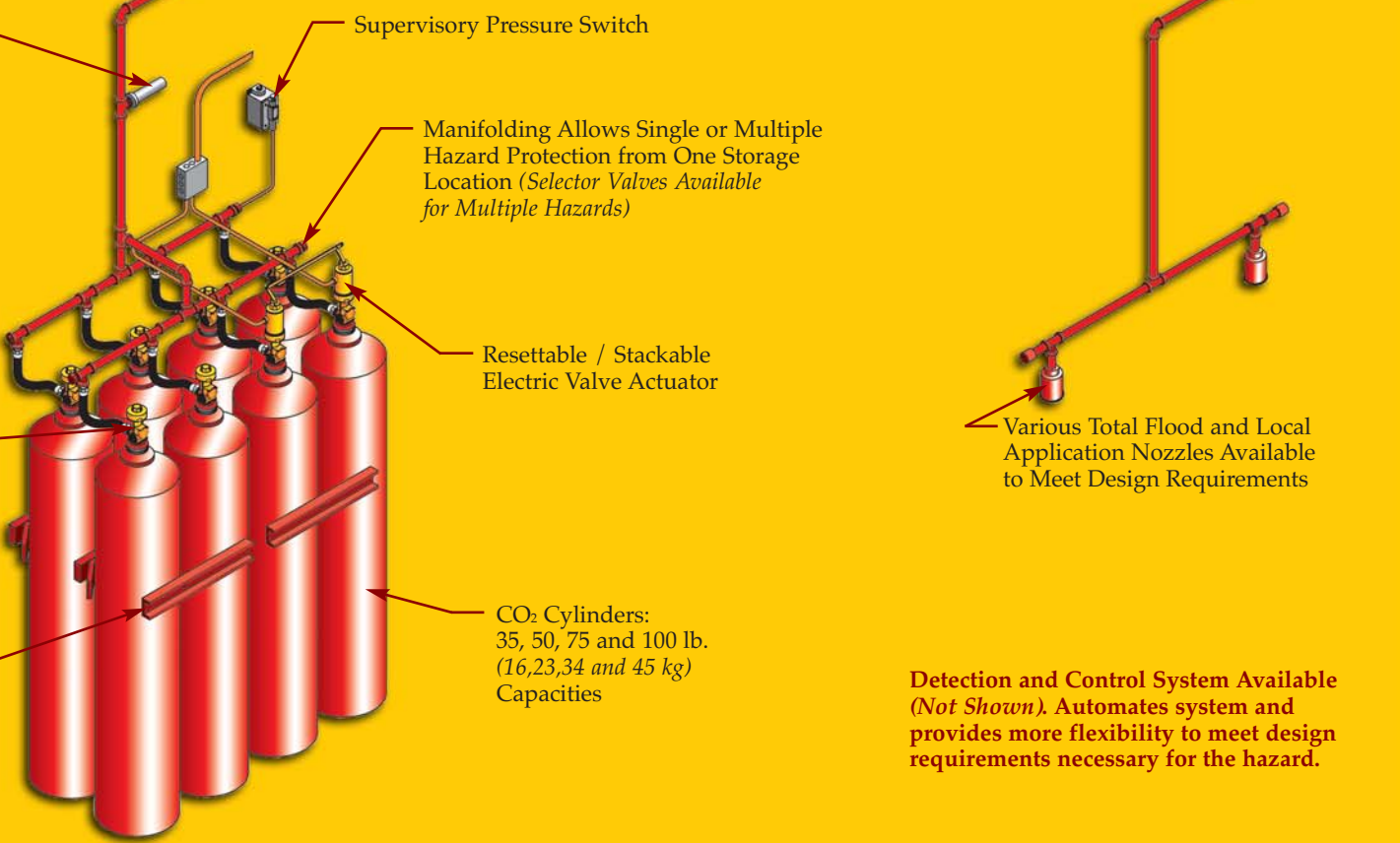
**High pressure systems use individual storage cylinders – up to 100 lb. (45 kg) capacity each - that can be manifolded together for rapid simultaneous discharge. Cylinder valves can be opened automatically or manually, locally or remotely using electric, pneumatic or mechanical valve actuators. Ansul High Pressure Carbon Dioxide Systems are listed by Underwriters Laboratories (UL) and have been approved by Factory Mutual Research Corporation (FMRC) and the U.S. Coast Guard.**



Odorizer Emits Wintergreen Scent to Precede Discharge

Cylinder Valves Operate Automatically via Manifold Backpressure

Modular Mounting Bracket Design



Detection and Control System Available (*Not Shown*). Automates system and provides more flexibility to meet design requirements necessary for the hazard.

# Bulk Low Pressure CO<sub>2</sub> Systems



**AUTOPULSE®**  
*Control Systems provide detection, alarm, auxiliary control and automatic release of a carbon dioxide system. Input from sensitive heat or smoke detectors is designed to catch a fire while it's still small. Depending on the nature of your fire hazard, Ansul provides various options to fit your situation.*

*From the agent container to the discharge nozzle, every Ansul carbon dioxide system is computer-designed specifically for your hazard. This provides the most economical system arrangement without sacrificing performance.*

ANSUL PREFERRED Bulk Low Pressure Carbon Dioxide Systems are for fire hazards requiring large amounts of extinguishing agent in a limited amount of space. A single bulk tank can store from 3/4 to 60 tons (680 to 54,430 kg) of carbon dioxide, which is maintained in a stand-by fire ready state allowing the system to provide effective distribution of agent on demand.

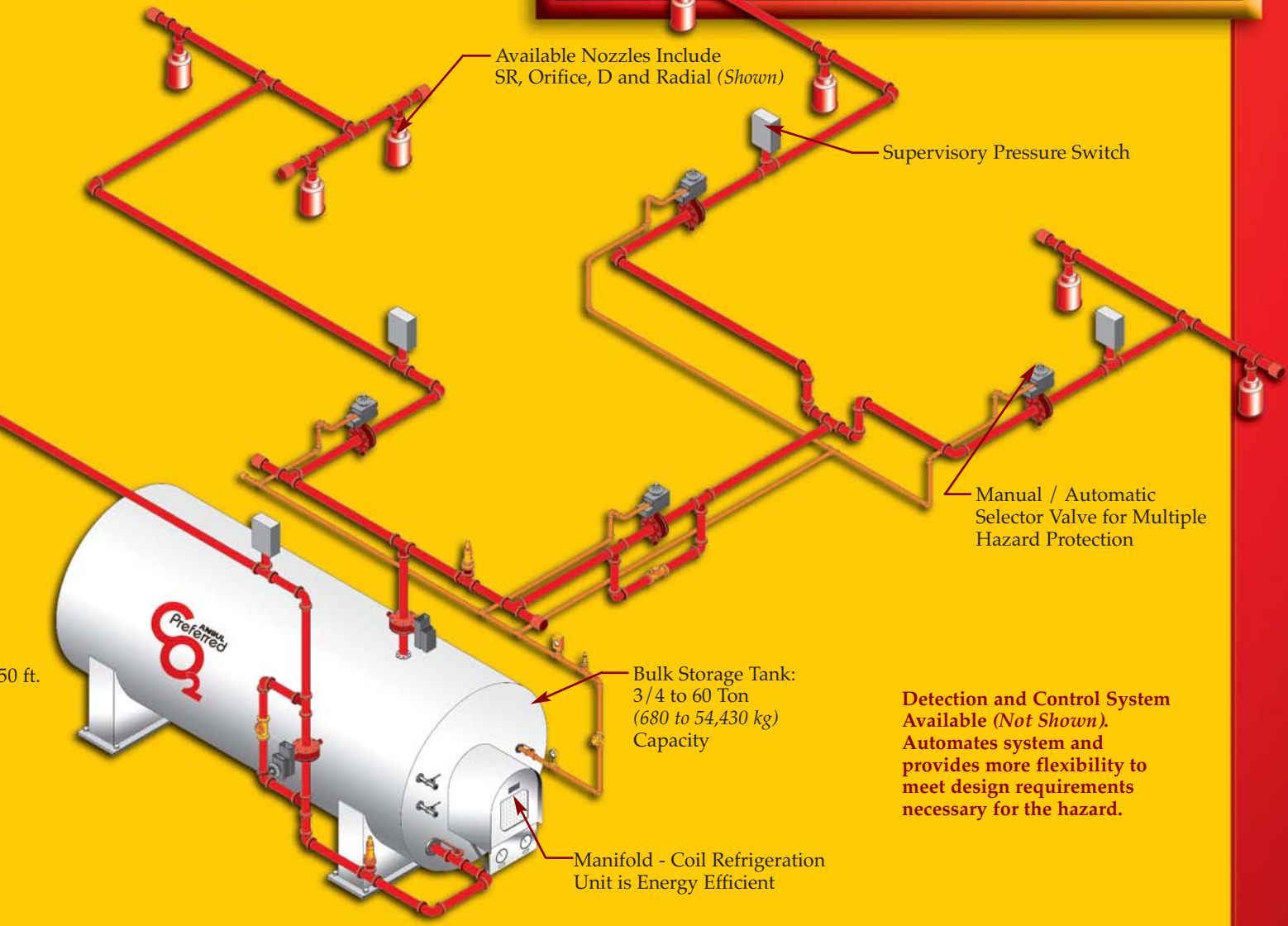
The liquid CO<sub>2</sub> is stored in an ASME coded pressure vessel equipped with its own refrigeration system. The pressure within the vessel is maintained near 300 psi (20.7 bar) by maintaining the internal temperature at approximately 0°F (-17°C).

Valve control is electro-pneumatic or manual. Each master and selector valve assembly consists of either a ball or butterfly valve, a spring return pneumatic valve operator and a three-way electrically operated solenoid valve. A listed and approved releasing control panel is used to provide automatic detection and control. ANSUL PREFERRED Bulk Low Pressure Carbon Dioxide Systems have been approved by Factory Mutual Research Corporation (FMRC).

*(ANSUL Bulk Low Pressure Carbon Dioxide Systems are listed by Underwriters Laboratories (UL) and have been approved by the U.S. Coast Guard).*



Hose Reel Station  
Available with 50, 100 or 150  
(15, 30 or 46 m) of Hose



Available Nozzles Include SR, Orifice, D and Radial (Shown)

Supervisory Pressure Switch

Manual / Automatic Selector Valve for Multiple Hazard Protection

Bulk Storage Tank: 3/4 to 60 Ton (680 to 54,430 kg) Capacity

Manifold - Coil Refrigeration Unit is Energy Efficient

Detection and Control System Available (Not Shown). Automates system and provides more flexibility to meet design requirements necessary for the hazard.

50 ft.

# Mini-Bulk Low Pressure CO<sub>2</sub> Systems

## Typical CO<sub>2</sub> Applications...

- Commercial Fryers
- Dip Tanks
- Drying Towers
- Electrical Generators
- Electric Generating Equipment
- Electrical Panels
- Marine Applications (cargo holds, paint lockers, etc.)
- Spray Booths
- Waste Disposal Equipment
- Gas Turbines
- Coal Silos
- Hazardous Material Storage
- Quench Tanks
- Semiconductor Wet Benches
- Computer Room Sub-Floors
- Control Rooms
- Coating Operations
- Paint lines
- Battery Storage Rooms
- Wave Solder Machines
- Machine Operations
- Hose Reel Stations
- Transformer Vaults
- Dust Collectors
- Printing Presses
- Inerting Systems

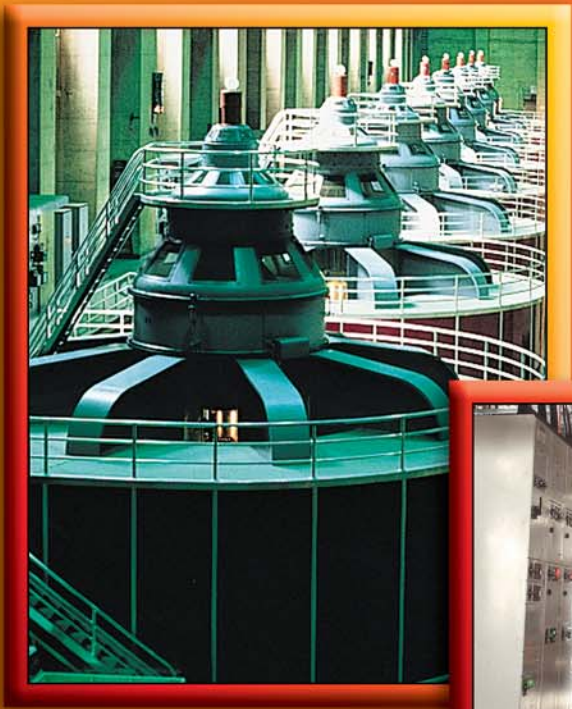
With capacities of 800, 1000 and 1,500 lb. (363, 454 and 680 kg), mini-bulk tanks bridge the gap between high pressure cylinders and low pressure bulk tanks. The ANSUL PREFERRED Mini-Bulk Low Pressure Carbon Dioxide System was developed to provide an alternative to manifolding high pressure cylinders. The tanks are configured vertically to save valuable floor space and their design is accommodating: mini-bulk tanks can provide protection for total flood, local application hazards, hose reels, or custom designs like inerting or spurt systems.

Each mini-bulk tank is equipped with a low cost, high efficiency, air cooled vapor compression unit. The refrigerant media R134a is environmentally safe and is very efficient in this application.

All system components are interchangeable between the mini-bulk system and the larger bulk storage tank system. The system control valves operate on 24 VDC, which is compatible with most approved releasing panels.

Mini-bulk tanks can be filled in place or can be removed for remote filling. When filling in place from a standard delivery truck, fill connections can be extended to an area outside the building. The storage tanks are provided with skid mounted bases for easy handling. ANSUL PREFERRED Mini-Bulk Low Pressure Carbon Dioxide Systems have been approved by Factory Mutual Research Corporation (FMRC).





Available Nozzles Include SR, Orifice, D and Radial (Shown)

Detection and Control System Available (Not Shown). Automates system and provides more flexibility to meet design requirements necessary for the hazard.

Manual / Automatic Selector Valve for Multiple Hazard Protection

Low Cost, High Efficiency Cooling System Operates at 120 VAC

When system is actuated, Automatic Timer Cabinet delays discharge, alerts personnel of pending emission and manages valve operation



Exclusive Mini-Bulk Tank Design: 800, 1000, and 1500 lb. (363, 454, and 680 kg) Capacities





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(USA/Canada)

**1-715-735-7411**

(International)

[www.ansul.com](http://www.ansul.com)

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