



CARBON DIOXIDE (CO₂) SYSTEMS USED IN BEVERAGE DISPENSING APPLICATIONS

These guidelines are to be followed when a Carbon Dioxide (CO₂) system used in beverage dispensing applications is moved, installed, or otherwise added, within the City of Rockwall City Limits.

All Carbon Dioxide system requirements for the purposes of these guidelines and any other guidelines or requirements of the Rockwall Fire Marshal Division shall conform to the 2015 International Fire Code, as adopted and amended by the City of Rockwall.

These guidelines do not replace, nor supersede any codes and/or ordinances adopted by the City of Rockwall, or determinations and positions of the Rockwall Fire Marshal Division.

General Requirements

- 1) Carbon dioxide systems with more than 100 pounds of carbon dioxide used in beverage dispensing applications shall obtain a permit from the Fire Marshal Division.

Equipment

- 2) The storage, use, and handling of liquid carbon dioxide shall be in accordance with this guideline as outlined in the International Fire Code Chapter 53 and the applicable requirements of NFPA 55, Chapter 13. Insulated liquid carbon dioxide systems shall have pressure relief devices vented in accordance with NFPA 55.

Protection From Damage

- 3) Carbon Dioxide systems shall be installed so the storage tanks, cylinders, piping and fittings are protected from damage by occupants or equipment during normal facility operations.

Required Protection

- 4) Where carbon dioxide systems with more than 100 pounds of carbon dioxide has carbon dioxide storage tanks, cylinders, piping and equipment are located indoors, rooms or areas containing carbon dioxide storage tanks, cylinders, piping and fittings and other areas where a leak of carbon dioxide can collect shall be provided with either ventilation or an emergency alarm system as outline below.

a) Ventilation

- i) Mechanical ventilation shall be in accordance with the International Mechanical Code and shall comply with all of the following:
 - (1) Mechanical ventilation in the room or area shall be at a rate of not less than 1 cubic foot per minute per square foot [$0.00508 \text{ m}^3/(\text{s} \cdot \text{m}^2)$] and shall be constantly in operation.
 - (2) Exhaust shall be taken from a point within 12 inches (305 mm) of the floor.
 - (3) The ventilation system shall be designed to operate at a negative pressure in relation to the surrounding area.

b) Emergency Alarm System

- i) An emergency alarm system shall comply with all of the following:
 - (1) Continuous gas detection shall be provided to monitor areas where carbon dioxide can accumulate.
 - (2) The threshold for activation of an alarm shall not exceed 5,000 parts per million (9,000 mg/m



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- (3) Activation of the emergency alarm system shall initiate a local alarm within the room or area in which the system is installed.

Submittal Requirements

- 5) Please upload the following documents when submitting your permit online:
 - a) Construction Plans
 - b) Equipment/Product Data Cutsheets

Inspection Requirements

- 6) Operational test under normal conditions and alarm conditions.
- 7) Call our office for inspection when installation is completed and prior to release of Certificate of Occupancy.