

Perfect Carbonated Drinks
Time After Time



MVE
Beverage Systems



A Chart Company

McDonald's Bulk CO₂ and Syrup Systems

The Chart Bulk program includes the bulk CO₂ system and the bulk system for Coca-Cola® Classic. Both systems are permanently installed inside the restaurant and become an integral part of the beverage system. The tanks are refilled from outside the restaurant without entering the stores or interrupting operations. The McDonald's bulk CO₂ and bulk syrup program is a convenient and safe way to improve profits, safety and quality in a restaurant operation.

Improve Operations

- Eliminates carrying, storing and rotating 9 tons of CO₂ cylinders and 25 tons of Coca-Cola® syrup annually.
- Improves crew productivity.
- Maximizes floor space in the restaurant. A single bulk CO₂ tank can replace 37 cylinders (20 lb) or 15 cylinders (50 lb). A single bulk tank of Coca-Cola® syrup replaces 15 BIB or 15 figals.
- Eliminates running out of CO₂ and syrup during peak rush periods.
- Increases the ability to provide CO₂ to all your CO₂ gas requirements.

Improve Quality & Service

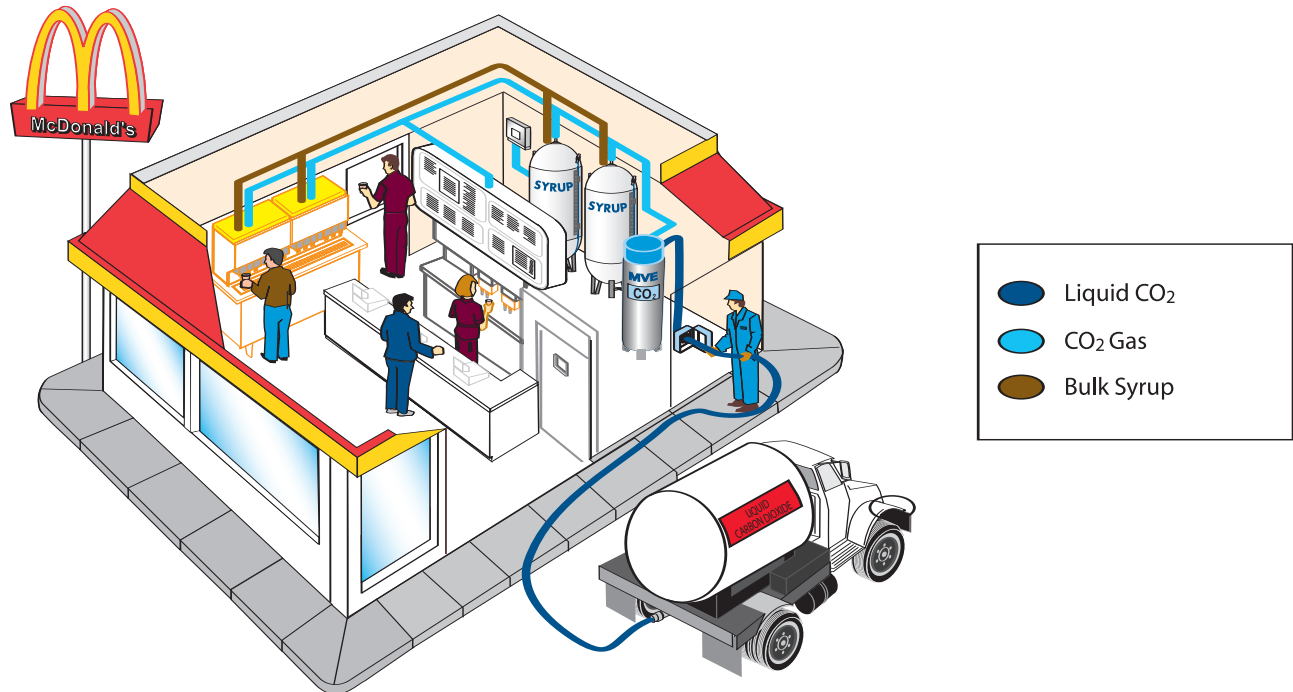
- Uninterrupted supply of CO₂ and syrup from an automatic bulk system assures consistent beverage carbonation and produces a high quality drink.
- Improves customer satisfaction.

Increases Yields

- The average yield improvement with Bulk CO₂ is 5% to 15%. A high pressure cylinder is never really empty – it is still 3% full when the pressure falls below the usable point for the beverage system.
- Eliminates CO₂ leaks caused by frequent cylinder changes.
- Reduces your Coca-Cola® syrup cost over BIB or figals with the Coca-Cola® bulk system.
- Eliminates replacing BIB or figals that were not completely empty prior to lunch rush.
- Eliminates purging of air from the beverage system when a figal or BIB runs empty.

Improves Safety

- Eliminates the handling of heavy tanks, minimizing store damage and personal injury.
- Low tank pressure creates a safer work environment.



How Does It Work?

The Chart Bulk CO₂ tank stores carbon dioxide as a cold liquid, which requires less space and lower, safer pressure. When the store needs CO₂, the Chart Bulk CO₂ tank converts the liquid to gas and supplies CO₂ gas to the carbonator, BIB pumps, bulk syrup or wherever needed.

The Convenient, Economical and Safe Alternative to High Pressure and Fugal Cylinders



Chart Bulk CO₂

A bulk CO₂ system is a single storage vessel that provides a continuous supply of CO₂ to the beverage machine, replacing numerous high-pressure cylinders. The bulk CO₂ tank is located conveniently inside the restaurant. Filling the tank takes less than five minutes, requires no crew time, and never interrupts store operations. The CO₂ delivery truck connects the hose to a fill box located outside the restaurant, and fills the bulk tank without entering the store.

Chart Bulk Syrup for Coca-Cola®

The Chart Bulk Syrup consists of two or more bulk syrup tanks permanently installed inside the restaurant. Each tank holds 80 gallons of Coca-Cola® syrup and replaces bag-in-a-box and other syrup packages. Syrup is withdrawn from one syrup tank at a time and fed to the beverage machine upon demand. When one tank is completely empty, the system switches to the next full tank. The empty tank is automatically sanitized by the CIP and ready for its next delivery of Coca-Cola®. Filling the syrup tank from the truck takes less than ten minutes and is part of the store's regular delivery service.

Chart Bulk Syrup systems are NSF (National Sanitation Foundation) listed under Standard Number 18.

SPECIFICATIONS

	Carbo-Max 750	Bulk Syrup
Capacity		
CO ₂ Storage Capacity*	772 lb / 350 kg	80 gal / 303 L
Tank Capacity equals:		
Cylinders of 20 lb / 10 kg	37 Cylinders	15 BIB
Cylinders of 50 lb / 23 kg	15 Cylinders	15 Figals
Dimensions		
Tank Diameter	26 in / 66 cm	22 in / 56 cm
Overall Height	73.5 in / 187 cm	66 in / 168 cm
Empty Weight (Approx)	430 lb / 195 kg	110 lb / 50 kg
Performance		
Peak Drinks per hour***	875	
Peak CO ₂ Flow Rate per hour	25 lb / 11.3 kg	
Continuous CO ₂ Flow Rate per hour	15 lb / 6.8 kg	
Design Criteria		
Pressure Vessel Code	ASME**	ASME** NSF-STD 18
Maximum Allowed Working Pressure	300 psig / 20.7 bar	87 psig
Normal Operation Pressure	100 -200 psig	60 psig
Construction		
Inner and Outer Vessels	Stainless Steel	Stainless Steel
Components		
ASME Relief Valve	300 psig	87 psig
Secondary Relief Valve	450 psig	

* For areas with a space constraint, a Carbo-Mizer 450 is available. CO₂ storage capacity: 453 lb (205 kg), Tank Diameter: 20 in (51 cm), Overall height: 71.8 in (182 cm), Empty Weight (Approx) 273 lb (124 kg), Peak Drinks per Hour: 575, Peak and Continuous CO₂ Flow Rate per Hour: 15 lbs. All other specifications are the same as the Carbo-Max 750.

** The specifications shown for the McDonald's bulk CO₂ tanks are based on the ASME Boiler and Pressure

Vessel Design Code, Section VIII, Division I. Most countries require compliance by law with one or more pressure vessel codes.

Chart manufactures bulk CO₂ vessels which comply with many of the most widely recognized codes.

*** Peak drinks are based on calculations established in the "McDonald's Beverage Workbook Equipment Section" and a 14 day CO₂ delivery cycle.



McDonald's has installed over 15,000 bulk CO₂ and bulk syrup systems, providing significant improvements to McDonald's operations around the world. The Chart Bulk CO₂ System and the Chart Bulk Syrup System for Coca-Cola® are convenient and safe ways to improve profits, safety and quality in McDonald's restaurants. Chart provides special systems for international operations.

Chart Inc. - MVE Bulk CO₂ and Syrup Systems

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