

# SPECIFICATIONS

	Carbo-Max® 1000	Carbo-Max® 750	Carbo-Max® 450	Bulk Syrup
<b>Capacity</b>				
CO <sub>2</sub> Storage Capacity	1000 lb / 453.6 kg	789 lb / 357.9 kg	477 lb / 216.4 kg	80 gal / 303 L
Tank Capacity equals:				
Cylinders of 20 lb / 10 kg	50 Cylinders	39 Cylinders	23 Cylinders	15 BIB
Cylinders of 50 lb / 23 kg	20 Cylinders	15 Cylinders	9 Cylinders	15 Figals
<b>Dimensions</b>				
Tank Diameter	30 in / 76.2 cm	26 in / 66 cm	20 in / 50.8 cm	22 in / 56 cm
Overall Height	* 72.5 in / 184.2 cm	73.875 in / 187.6 cm	71.875 in / 162.6 cm	66 in / 168cm
Empty Weight (Approx)	788 lb / 357.4 kg	430 lb / 195 kg	273 lb / 123.8 kg	110 lb / 50 kg
<b>Performance</b>				
Peak Drinks per hour**	2916	2333	1150	
Peak CO <sub>2</sub> Flow Rate per hour	50 lb/hr / 22.7 kg/hr	40 lb/hr / 18.1 kg/hr	30 lb/hr / 13.6 kg/hr	
Continuous CO <sub>2</sub> Flow Rate per hour	30 lb/hr / 13.6 kg/hr	15 lb/hr / 6.8 kg/hr	15 lb/hr / 6.8 kg/hr	
<b>Design Criteria</b>				
Pressure Vessel Code***	ASME	ASME	ASME	ASME NSF-STD 18
Maximum Allowed Working Pressure	300 psig / 20.7 barg	300 psig / 20.7 barg	300 psig / 20.7 barg	87 psig / 6.0 barg
Normal Operation Pressure	100-200 psig / 6.9-13.8 barg	100-200 psig / 6.9-13.8 barg	100-200 psig / 6.9-13.8 barg	60 psig / 4.1 barg
<b>Construction</b>				
Inner and Outer Vessels	Stainless Steel	Stainless Steel	Stainless Steel	Stainless Steel
<b>Components</b>				
ASME Relief Valve	300 psig / 20.7 barg	300 psig / 20.7 barg	300 psig / 20.7 barg	87 psig / 6.0 barg
Secondary Relief Valve	450 psig / 31.0 barg	450 psig / 31.0 barg	450 psig / 31.0 barg	

\* Add 6 in. for stainless steel leg base

\*\* Peak drinks are based on calculations established in the "McDonald's Beverage Workbook Equipment Section" and a 14 day CO<sub>2</sub> delivery cycle.

\*\*\* The specifications shown for the McDonald's bulk CO<sub>2</sub> tanks are based on the ASME Boiler and Pressure Vessel Design Code, Section VIII, Division 1. Most countries require compliance by law with one or more pressure vessel codes. Chart manufactures bulk CO<sub>2</sub> vessels which comply with many of the most widely recognized codes.



McDonald's has installed over 15,000 bulk CO<sub>2</sub> and bulk syrup systems, providing significant improvements to McDonald's operations around the world. The Chart Bulk CO<sub>2</sub> 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. - Bulk CO<sub>2</sub> and Syrup Systems**  
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Bulk CO<sub>2</sub> & Syrup Systems  
 McDonald's® Equipment

Ensuring bulk CO<sub>2</sub> & Coca-Cola® syrup supply capabilities.  
 Every day - All day.





# McDonald's Bulk CO<sub>2</sub> and Syrup Systems

The Chart Bulk program includes the bulk CO<sub>2</sub> system and the bulk syrup 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 CO<sub>2</sub> 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 CO<sub>2</sub> cylinders and 25 tons of Coca-Cola® syrup annually.
- Improves crew productivity.
- Maximizes floor space in the restaurant. A single Carbo-Max® 750 Bulk CO<sub>2</sub> System can replace 39 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 CO<sub>2</sub> and syrup during peak rush periods.
- Increases the ability to provide CO<sub>2</sub> to all your CO<sub>2</sub> gas requirements.

## Improve Quality & Service

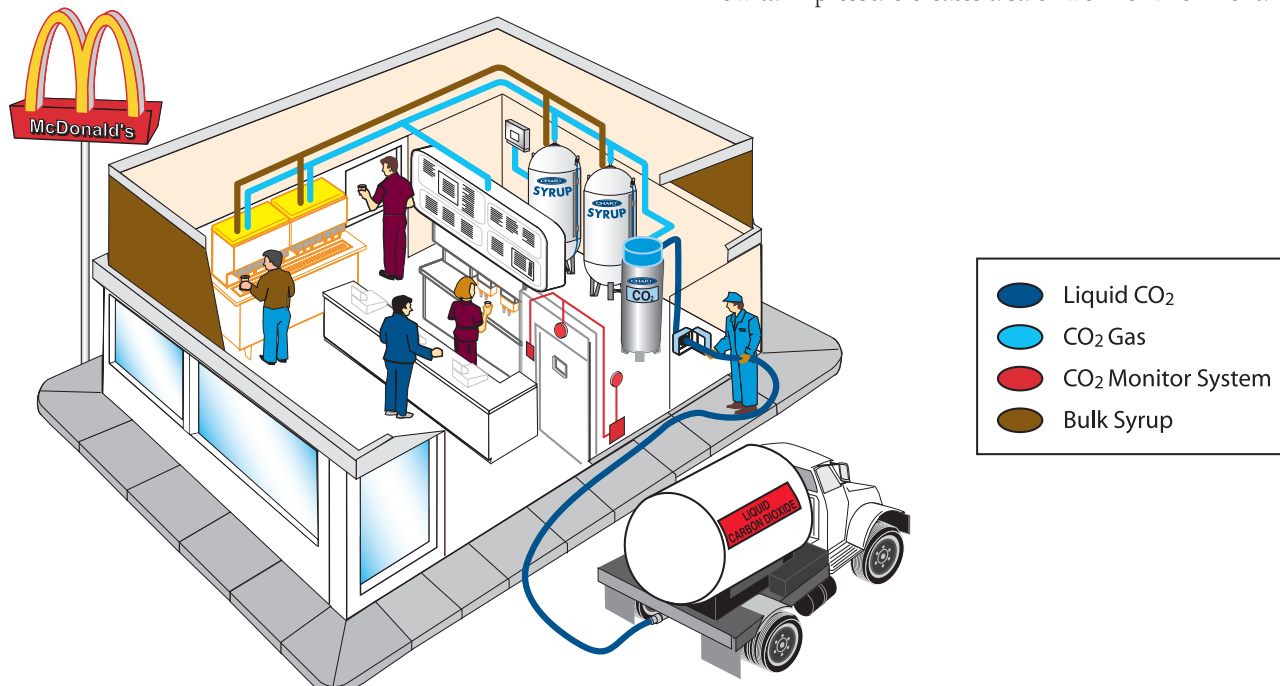
- Uninterrupted supply of CO<sub>2</sub> and syrup from an automatic bulk system assures consistent beverage carbonation and produces a high quality drink.
- Improves customer satisfaction.

## Increases Yields

- The average yield improvement with bulk CO<sub>2</sub> 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 CO<sub>2</sub> 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 CO<sub>2</sub> tank stores carbon dioxide as a cold liquid, which requires less space and lower, safer pressure. When the store needs CO<sub>2</sub>, the Chart Bulk CO<sub>2</sub> tank converts the liquid to gas and supplies CO<sub>2</sub> gas to the carbonator, BIB pumps, bulk syrup or wherever needed.

# The Convenient, Economical and Safe Alternative to High Pressure and Figal Cylinders



## Chart Bulk CO<sub>2</sub>

A bulk CO<sub>2</sub> system is a single storage vessel that provides a continuous supply of CO<sub>2</sub> to the beverage machine, replacing numerous high-pressure cylinders. The bulk CO<sub>2</sub> tank is located conveniently inside the restaurant. An average delivery time is 15 minutes, requires no crew time, and never interrupts store operations. The CO<sub>2</sub> 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 with-drawn 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 Clean-In-Place (CIP) panel system 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.