

# From smart syrups to Smart-Tel™

Gary Fowler, National Sales Manager of Bulk CO<sub>2</sub> Beverage Products at Chart Industries, sits down with Molly Burgess to discuss the company's bulk syrup program and its latest telemetry venture

1955: The year that changed the fast-food world as we know it. Otherwise known as the year the first McDonald's restaurant opened. Situated east of the Mississippi River, the outlet was the first of over 13,000 US and 38,000 global locations that are today operated by the fast-food chain, mainly using franchises (95% in the US are franchised businesses).

Alongside great demand for many of its menu staples, from burgers to French fries, Coca-Cola® has forever been hugely popular with customers at every McDonald's location. And, while customer love for soft drinks has long been a solid revenue stream for the multinational, back in the day it caused some untidiness behind the scenes caused by syrup bag-in-box and high-pressure bottles.

Enter Chart Industries. In 1984, 29 years after the first restaurant opening, the US cryogenic equipment provider developed a one-of-a-kind solution to both help the build-up of bag-in-box containers and streamline soft drink carbonation as more locations opened and demand continued to race ahead.

Back in 1984, however, the

development of the solution was a big challenge, given there was no bulk CO<sub>2</sub> restaurant distribution at the time. This was something Gary Fowler, National Sales Manager of Bulk CO<sub>2</sub> Beverage Products at Chart Industries, told *gasworld* when he discussed how Chart effectively changed the way McDonald's carbonated Coca-Cola was consumed in the US today.

"Chart struck this one-of-a-kind partnership with McDonald's in 1984. It goes without saying that the volume of Coca-Cola is significant for McDonald's, but their original system was cluttering their backrooms with syrup bags and HP cylinders. That meant employees were also having to constantly change out bag-in-boxes as well as cylinders," says Fowler.

"Together with McDonald's and Coca-Cola, we worked to develop a bulk CO<sub>2</sub> system and a bulk syrup system for the Coca-Cola Classic. Of course, there was no bulk CO<sub>2</sub> restaurant distribution at this time, so we had to create this technology utilizing our experience in cryogenics. There were plenty of distributors out there moving CO<sub>2</sub> molecules, but none in the CO<sub>2</sub> liquid restaurant space."

## A brand-new system

Identifying this gap in the market, Chart took full advantage of its early discussions with the corporate titans. And it led to the formation of the Bulk CO<sub>2</sub> and Syrup System. Also referred to as the Chart McBulk program, the system comprises a bulk CO<sub>2</sub> system and a bulk syrup system that is exclusive to the delivery of Coca-Cola Classic.

Both systems are permanently installed inside the restaurant have become an integral part of the beverage system. The tanks are refilled from outside the restaurant, without entering the stores or interrupting operations. "It's unique," Fowler enthuses. "The whole system is unique compared to our standard tank because it has the bulk-syrup circuit. We supply two 80-gallon restaurant tanks and a clean-in-place panel for McDonald's exclusively for Coca-Cola Classic."

When the McDonald's distribution system arrives at a restaurant, and they drop off their burgers, fries and other food products there are also 80-gallon pods on those semi-trailers.

"With that pod, they'll hook up to a fitting on the fill box and they'll pull CO<sub>2</sub>

gas pressure out of the tank and through that syrup circuit,” says Fowler. “That pressure pushes the bulk syrup from the tractor trailer into the 80-gallon tanks at store level.”

Although this innovation was created many years ago, it continues today. While the shelf life of our CO<sub>2</sub> tanks is approximately 20 years, those deployed early in the program are now going through refurbishing or replacement.

Chart offers both a rehabilitation service and replacement tanks. Traditionally, bulk CO<sub>2</sub> distributors have utilized the company’s repair services for a clean-up and re-vacuum and put the tanks back out in the field for a handful of additional years until a replacement tank is required. While this is not only a safer and more efficient way of operating as opposed to high pressure cylinder changeouts, it’s also a greener alternative as you are reducing the number of cylinders that will end up in the trash stream.

“It’s fair to say that back in 1984, 1985 and 1986, we were very busy, but this is ongoing business. We are still working on the program today. There are 13,000 McDonald’s restaurants in the US utilizing this system and replacements are required as well as new and restaurant upgrades in the US. It continues to be a steady piece of our business.”

While the program has been a huge hit for the US McDonald’s restaurants, it has not been adopted in European and Canadian markets. Speaking on the Canadian market specifically, Fowler says there are approximately 1,400 restaurants in Canada, and they continue to use Chart’s standard 550 Carbo-Mizer® Bulk CO<sub>2</sub> Systems.

“McDonald’s opted not to go down the bulk syrup route for Canada,” Fowler confirms. “The bulk CO<sub>2</sub> syrup systems are just in about 13,000 US restaurants. It started in the Baltimore-Washington area and migrated across the country.”

**Staying clean, green and Smart(-Tel)**  
Chart is still developing unique innovations for the food and beverage market – and new products continue to land. The original bulk syrup system was certified to NSF International food safety standards. In 2019 Chart received NSF certification on its entire Carbo-Mizer® and Carbo-Max® series tanks. These technical innovations put Chart beverage systems in a great position to comply with evolving international food safety requirements.

Another key product development is Smart-Tel™, which is a telemetry ready tank that will give Chart customers two sets of eyes on their CO<sub>2</sub>, allowing for safer and more efficient operations. “Smart-Tel sends data to the cloud so a distributor can monitor tank pressure, line pressure and liquid level, amongst other data points. It makes ‘just-in-time’ fill a reality,” Fowler explains to *gasworld*.

“We have been looking at the marketplace to determine what was needed to create efficiencies for distribution. With all the headwinds faced by the world over the last few years, this innovation can be a game-changer.”

Right now, the company is finalizing prototyping, but it hopes to place the tanks in the field before the year-end. For monitoring purposes, Fowler says it is likely these will be placed in the Atlanta area, local to Chart’s manufacturing facility. And while a roll-out date cannot yet be confirmed, and is subject to trial success, Fowler hopes to see Smart-Tel rolled out in the market mid-year (2023).

“I mentioned this idea in passing to one of my national accounts, Chick-fil-A, and they were really excited about it. They monitor everything in their building right now, and they love the idea of being able to tap into that data and see the liquid levels.”

In addition to that, Chart is also developing a retrofit kit for its existing tanks in the field. With that, distributors

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will be able to enhance their current portfolio and operate an entire fleet of tanks on telemetry to create further distribution efficiencies.

These kinds of smart innovations for the food and beverage market are arguably now more important than ever before. This is especially true because of the CO<sub>2</sub> shortages that continue to be a challenge in the US.

And, as explored elsewhere in this edition of *gasworld* US, tightening in supply or shortages made the summer of 2022 one that the food and beverage market will never forget. Of course, with this tight supply, it is key that restaurants, breweries and other CO<sub>2</sub> users are able to best monitor their supplies and make the most of the CO<sub>2</sub> that they have on site. But it’s not just tightened supply that have added to this market need.

“What has also happened in the last few years is that demand for CO<sub>2</sub> has gone up significantly, especially in restaurants and in locations such as convenience stores. Distributors want to minimize distribution and maximize distribution efficiencies – and that is both what the McDonald’s bulk CO<sub>2</sub> syrup systems and Smart-Tel set out to do,” says Fowler in closing. **gw**



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