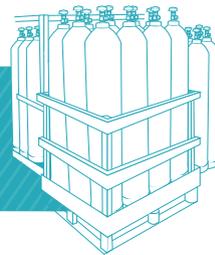


# ..... Distributor zone



## Green CO<sub>2</sub> Systems

An innovative way to move molecules more efficiently

AGNES H. BAKER

What do you do when you see an inefficient operation? If you are Dan Schneider, Mike Schutte, and Brett Schutte, you invent a better system and then develop an entire company around it.

The Founders of Green CO<sub>2</sub> Systems got their start in 2010 with Diverter Valve™ System technology that eliminated the loss of carbon dioxide (CO<sub>2</sub>) during filling and storage for BevCarb and other microbulk CO<sub>2</sub> applications. Nine years later, they lead a full-service company that supplies, installs, and maintains CO<sub>2</sub>, nitrogen, blended gas, and equipment systems to restaurants, bars, swimming pools, indoor cultivation facilities, and convenience stores.

Today, Mike Schutte serves as Chairman of the Board, Dwayne Furmidge serves as CEO, Brett Schutte serves as Chief Administrative Officer, and Dan Schneider serves as Vice President of Research and Development. Mark Schutte joined the team in 2012 as Vice President of Manufacturing. Dan's son David joined in 2014 and is Director in the Research and Development Department and Lloyd Kuefler, an industrial gas industry professional with over 40 years experience, leads Corporate Development. Together, this team heads up employee-owned Green CO<sub>2</sub> with headquarters in Fort Collins, Colorado, and four additional service depots in Denver (2), Colorado Springs, and Las Vegas, Nevada.

### Meeting the fill challenge

As demand for CO<sub>2</sub> grew with the



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**“Green CO<sub>2</sub> is on the cutting-edge of CO<sub>2</sub> delivery and storage systems...”**

emergence of fast food and chain restaurants, larger CO<sub>2</sub> customers moved to uninsulated liquid (low-pressure) microbulk supply, which could be filled from the outside and eliminated the change out of multiple high pressure (HP) cylinders.

However, as Lloyd Kuefler explains, “An uninsulated low-pressure vessel vents when over 300 psi when product is not being used and during the filling process. As CO<sub>2</sub> warms in these tanks, the pressure builds, and if not being used, it is vented into the atmosphere. This amounts to wasted product. What Green CO<sub>2</sub> has developed is a proprietary system that combines the convenience of round-the-clock outside filling with zero venting and, therefore, no waste.”

### The mission

Co-Founder Brett Schutte says of his company's mission: “Green CO<sub>2</sub> Systems is first and foremost a customer service company. Providing excellence in 24/7 product delivery is at the heart of everything we do. We treat our customers as we would want to be treated by our own business partners, like family. At our founding we agreed that Green CO<sub>2</sub> would always conduct business in the most fair and ethical manner, always doing what is best for the customer.”

The Green CO<sub>2</sub> team envisioned a more efficient CO<sub>2</sub> delivery system. Its first technology, the Diverter Valve System, was designed to eliminate the wasteful venting that takes place in the CO<sub>2</sub> delivery process and could be used with any standard high pressure CO<sub>2</sub> cylinder. They recognized that the HP cylinder handling process, especially for bars and restaurants, was fraught with inefficiencies and safety concerns. HP cylinders were heavy, difficult to maneuver in tight spaces, and often handled by people unfamiliar with the vessels, so the team set

about to design the first of its kind zero-vent CO<sub>2</sub> delivery and storage method – a carbon dioxide storage system that remains in place.

The company's original Diverter Valve System for CO<sub>2</sub> delivery to the Bevcarb industry included three HP cylinders (sizes could vary by need) with Green CO<sub>2</sub>'s patented Diverter Valve and a Safe-T-Flo™ line monitor on top. Today, customers in the bar business can have a complete gas delivery system installed by Green CO<sub>2</sub> that includes service for both CO<sub>2</sub> and nitrogen.

Green CO<sub>2</sub>'s flagship system includes high pressure cylinders installed on-location, and all the necessary controls, monitors, regulators, and hoses required to deliver the CO<sub>2</sub> safely and efficiently to the user. The system enables on-site filling of the cylinders by Green CO<sub>2</sub>'s specially designed trucks through an outside fill box, 24/7, and requires no venting of CO<sub>2</sub> at the time of fill.

Safety is important in the delivery of carbon dioxide and much of what Green CO<sub>2</sub> has designed is in response to guidelines and regulations that govern the safe handling of this product. David explains, "There are new and emerging regulations regarding installed CO<sub>2</sub> systems. We initially designed our controllers in conjunction with the requirements of the Denver Fire Department and began broadening capabilities from there. The company's new Green Touch™ Controller is an example of our most recent safety innovation. It is a specially designed leak detector with flow control and automatic shutoff capabilities. It also is Ethernet enabled, which allows for offsite monitoring and control."

Its ability to supply nitrogen, which is required for beer dispensing, makes Green CO<sub>2</sub> a full service provider for carbonation customers. The company's Nitro Pro™ Generator produces HP nitrogen from a clean, compressed air supply, using gas membrane technology. David relates, "With our Nitro Pro Generator we offer improved volume output over our original generator. In fact, it can produce 8.0 liters per minute



© Green CO<sub>2</sub> Systems | Left. Green CO<sub>2</sub>'s Green Touch Controller is a specially designed leak detector with flow control and automatic shutoff capabilities. | Right. Green CO<sub>2</sub> Systems Founders (l to r) Dan Schneider, Mike Schutte and Brett Schutte.



of nitrogen, enough to dispense up to 500 pints of beer per hour without the necessity of external nitrogen storage, which is very useful for busy bars. We also designed it to be very quiet and able to be hung on the wall or rest on its legs, reducing footprint requirements."

When combined with the company's Tru-Fusion™ Blender, the Nitro Pro can produce the blends of nitrogen and CO<sub>2</sub> needed by beer dispensers. Depending on customer need, the Tru-Fusion Blender can also be paired with Green CO<sub>2</sub>'s straight nitrogen cylinders.

#### What full service means

From the manufacturing of its high quality equipment in the US, to delivering CO<sub>2</sub> via custom built proprietary delivery trucks, Green CO<sub>2</sub>'s sales process and systems are all designed with the customer in mind.

Service begins with an evaluation of the site to determine customer needs. A proposal with specs is developed for each client and once agreed upon, Green CO<sub>2</sub> builds, installs and maintains the system. All of the company's products are assembled and tested in house before installation in a customer's facility.

Green CO<sub>2</sub> handles all the necessary permitting for the installation and insures each system meets the appropriate safety and fire inspection regulations before beginning its gas delivery service. Carbon dioxide can be delivered anytime and, according to the company, in an emergency it has an average response time of less than two hours with no additional delivery charges.

"Green CO<sub>2</sub> is on the cutting edge of CO<sub>2</sub> delivery and storage systems,"

says Lloyd, "We are a one-stop-shop for design, permitting, installation, supply, monitoring and maintenance of systems at customer sites. We provide a valuable service to customers whose primary business is not related to gases."

#### What's ahead

Green CO<sub>2</sub> serves five primary markets: bars and restaurants, microbreweries, indoor cultivation facilities, convenience stores, and commercial swimming pools. The company has found that its customers can reduce CO<sub>2</sub> usage 30% or more with the installation of its systems. For BevCarb customers this reduction in CO<sub>2</sub> usage is gained by maximizing the use of delivered CO<sub>2</sub> as there is no venting of product, and with outside fill and monitoring, no running out of gas. Beverage carbonation is Green CO<sub>2</sub>'s largest market and they anticipate continued growth in this segment, as well as in all other applications for CO<sub>2</sub>.

Green CO<sub>2</sub> holds several patents and has patents pending covering their CO<sub>2</sub> and nitrogen delivery systems. As research and development continue, David sees a bright future for the company. "Our technology is extremely innovative," he relates, "and we will continue to position ourselves as the market leader for carbon dioxide delivery. We do this by working with our customer base to establish their needs and design systems to meet those requirements."

What's ahead for Green CO<sub>2</sub>? "We plan geographical expansion," says Brett, "and continued development of our market leading technology to address evolving customer needs for efficiency, reliability, and safety." 