

Cross Hose & Fittings Helps Highland Brewing Add Hop Cannon to Brewing Process

Highland Brewing, based in Asheville, NC, is the largest independent, family-owned brewery native to the Southeast. For the past several years, the craft brewing industry has seen increased demand for hop-forward Indian Pale Ales, or IPAs. These products gain their hop aromas and flavors from a process known as dry hopping. Unlike traditional hopping methods that add hops to the boiling wort in the brew kettle, dry-hopping adds the hops to the fermenter when the beer is actively fermenting or being cooled in preparation for filtration. This process allows the delicate compounds to enhance the beer. However, actually getting the hops into the fermenter is a challenge because they need to be added to the top of the fermenter.

According to Andrew Klosinski, Brewery Operations Director at Highland, “this meant using an articulated boom lift to repeatedly ascend more than 20 feet to the top of a vessel, prepare the tank and perform the dry hop. This was a two-person job with one in the boom lift and another on the ground acting as a safety spotter as well as assisting with the process. In all, from start to finish, a single dry hop would be performed in two hours. With our ongoing drive towards continuous improvement to enhance safety and cellar labor efficiency, Highland elected to purchase and incorporate a hop cannon to perform dry hopping.”

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– Andrew Klosinski

A hop cannon is a sanitary pressure-rated vessel that allows brewers to dose hops directly into the fermenter from ground level, thus eliminating the cumbersome process of manually hopping. In addition, it reduced the time from two hours to about 30 minutes which dramatically helped to improve efficiency while also reducing the risk of injury. To make the hop cannon work, it needed to be connected to the fermenter as well as a CO2 air supply.



The brewers came to Cross Hose & Fittings and explained what they were trying to accomplish. The team at the Asheville store was able to help identify the parts they needed for the project and get them in their hands quickly. The required components included stainless steel tri-clamp fittings and heavy-duty crimp ferrules that are designed specifically for the food & beverage industry.

Because the Cross Hose & Fittings store in Asheville stocks more than \$20,000 worth of brewing hose (1"-3") and stainless steel fittings, most of the parts Highland needed including Transair piping, vented valves, brewing hose, and the hi-flow regulator were already in stock and available for same-day pick-up. There was one product that wasn't in stock, but Cross was able to source it quickly and have the item shipped next-day air so Highland had all the parts they needed within 24 hours.

Highland Brewing's facility was already utilizing Transair piping to run CO2 through their process. Because Transair pipes are made to be easily installed and modified, they were able to use their existing Transair system to feed the CO2 into the hop cannon. Cross provided air fittings and pipes needed to tie the hop cannon into the existing line.

Klosinski said of his experience, "I want to thank Cross Hose & Fittings for their help and support with this project. From sanitary hose to Transair products to Parker regulators to custom high-pressure tubing and fittings, Cross was there every step of the way."

Since the hop cannon project, Cross has continued to help Highland Brewing identify and source the parts that they need to make exceptional beer. Recently, they needed to upgrade the brewing hose on the hop cannon to a brewing hose made especially for dry goods. They had discovered that because the original hose was specified for liquids, the dry powder was causing it to wear out too quickly. Cross was able to source a new hose that was made specifically for dry goods and would last longer and reduce their risk of downtime.

Cross Hose & Fittings served as an extension of Highland Brewing's engineering department and helped them to determine the parts they needed for their project. Through this project, Cross was able to support Highland in improving their efficiency. They did this in two ways, first, by helping to improve their existing process and, second, by saving them the time they would have otherwise spent tracking down all the individual components needed to make the hop cannon work. Their speed and technical expertise, delivered with world-class customer service helped Highland Brewing to get the job done right.



About Highland Brewing

Highland Brewing was founded in 1994 by retired engineer and entrepreneur Oscar Wong, establishing it as the pioneer of Asheville, NC's now booming craft beer industry. Proudly regional, Highland's beers are distributed in North Carolina, South Carolina, Tennessee, and Georgia. Highland is committed to quality and sustainability, boasting the sixth largest solar array in an American craft brewery. Today, the company is led by Wong's daughter, Leah Wong Ashburn, and serves as the largest independent, family-owned, and operated brewery native to the Southeast. Located in a rehabilitated manufacturing facility in East Asheville, the brewery affords space for visitors to enjoy limited-release beers, walking trails, volleyball courts, and live music. In spring 2021, the brewery opened its second taproom and returned to downtown Asheville. The Downtown Taproom within the S&W Market, Asheville's first food hall, is a great spot to try a taste of the city. For more information, visit www.highlandbrewing.com.

About Cross Company

Cross Company is a 100% employee-owned solutions company that is innovating the industrial world one customer at a time. Cross specializes in robotics and machine automation, industrial measurement and calibration, process solutions, industrial and hydraulic hoses & fittings, and is an original equipment supplier in the mobile vehicle systems integration industry. To learn more about Cross visit www.crossco.com.