

# THE QUEST FOR THE HOLY ALE



While the traditional beer market is stagnating across the world, craft beer is flourishing. But scaling up production while keeping quality high can be a challenge. Boston's Harpoon Brewery found an effective solution in the Alfa Laval Rotary Jet Mixer.

TEXT: **ULF WIMAN** PHOTOS: **HARPOON**

**The** times they are a-changing. It used to be that a beer should be large, light-tasting and cold – complete with a refill function. And while this still holds true for many consumers, today's discriminating beer connoisseurs go for quality over quantity.

Small, independent craft breweries are emerging all over the world, challenging the established brewery giants. The USA is something of a forerunner and here the craft beer segment has been all but overflowing the past 30 years.

**THE NUMBER** of brewpubs surged in the late 1990s and the number of microbreweries has increased strongly in the 2010s. According to US trade group Brewers Association, the craft beer segment more than doubled between 2008 and 2014, adding up to 3,418 out of a total of 3,464 breweries. You have to go back to the 1870s to equal that. In 2014, craft beer had an 11 percent market share in the USA, while sales reached USD 19.6 billion, a 22 percent rise compared to 2013.

Harpoon Brewery in Boston, Massachusetts, was one of the craft beer pioneers. The company got started in the 1980s when the enthusiastic founders travelled across Europe

searching for the kind of beer that they missed back home.

Today, Harpoon has grown into the twelfth largest US craft brewery, with production in Boston and Windsor, Vermont. But scaling up the capacity has not been without challenges, such as when bigger tanks in the Boston brewery required a new approach to adjusting alcohol and CO<sub>2</sub>.

**A TECHNOLOGY** search turned up Alfa Laval's versatile and effective Iso-Mix system, which is based on the company's Rotary Jet Mixer technology. Harpoon vice-president and chief brewing officer Al Marzi says: "The Iso-Mix system provides us with a fast, consistent way of adjusting CO<sub>2</sub> content and gravity, as well as making other additions that ensure less manual labour and reduced risk of delays in our packaging operations."

The system also provides an added operational bonus, as explained by cellar manager Aaron Moberger: "Since the Alfa Laval Rotary Jet Mixer is also a very efficient tank-cleaning machine, it has allowed us to redesign our cleaning-in-place procedure such that it has become much safer to operate."

With the right equipment in place, Harpoon Brewery keeps on hitting the spot with unique, flavourful ales, ciders and more. As they say themselves: "Love Beer. Love Life."



**Chief brewing officer Al Marzi.**

## TECHNICAL INSIGHT: ALFA LAVAL ROTARY JET MIXER

■ A skid-mounted pump module draws beer from the bottom of the tank and returns it back into the tank through the nozzles of the Alfa Laval Rotary Jet Mixer, which rotates on two axes to churn the entire volume in the tank with maximum effectiveness. Operators can add water to the circulation loop on the suction side of the pump in order to adjust gravity, and natural flavours can also be added here to adjust the flavour profile. Meanwhile, CO<sub>2</sub> can be added in appropriate amounts on the pressure side of the pump to adjust the carbon dioxide content of the beer.

■ Alfa Laval's Rotary Jet Mixer helps reduce capital expenditure and operating expenses while achieving fast and efficient mixing. A single Rotary Jet Mixer can handle liquid mixing, gas dispersion and powder dispersion applications – plus tank cleaning – without requiring separate equipment for each process, and thereby delivering significant savings.

■ Alfa Laval's Rotary Jet Mixer is used for mixing in beer fermenters. Applying forced mixing in beer fermenters reduces processing times by up to 30 percent.