

Craft brewing references at a glance

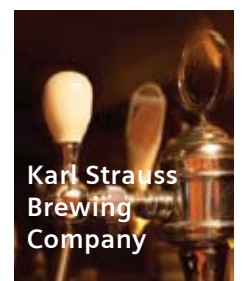
Maintaining the craft in craft brewing

As a craft brewer, you want a process control system that can help you increase your productivity, improve the quality and consistency of your product, and boost production levels – all without turning your staff into system programmers. Simply put, this cost-effective craft brewery process control system gives you the flexibility to automate as little or as much as you want so you can focus on what you do best – craft great-tasting beer – without losing the “craft” in the craft brewing process.

Having a process control system that allows you to tap into all the critical facets of your brewing process, from the brew house to the fermentation cellar, all from a central location, helps you optimize the process while keeping you focused on your craft. With a complete set of predefined monitoring tools that are built into the system, that run systematic checks over your entire process, you will be able to see everything at a glance using overview displays, faceplates, trends, batch reports, recipe viewers, and production schedulers. Now, for example, you can scan all of your fermenter setpoints and instantly see that one fermenter temperature is 3.8 degrees lower than it should be, or view the complete data collected automatically for a batch using Microsoft® Excel.

Additional benefits you'll find with Braumat Compact:

- Improves the work environment for brewery staff by adding technology that makes their jobs easier, not harder
- Expands the flexibility of your process to help you create new recipes, modify existing recipes, and try new types of brews
- Eliminates the need for manual data collection through automatic collection and reporting of production data



Process Automation Systems

Answers for industry.

SIEMENS



Bell's Brewery – "Inspired brewing"

Bell's Brewery was founded by Larry Bell as Kalamazoo Brewing in 1985, the oldest craft brewery east of Colorado. They opened a large production brewery in 2003. After pricing single-loop controllers for their new fermentation cellar, they realized that a Siemens Braumat Compact system was less money to purchase and integrate, and would record and maintain fermentation temperatures automatically, as often as every second, compared to a manually-recorded scenario where temperatures were checked once or twice a day. The Braumat could also display readings from all 76 temperature control points on a single HMI screen, rather than a collection of paper logsheets on clipboards scattered throughout the fermentation cellar.

"We wanted to utilize technology to make better beer. If one of our brands of beer is fermented at the same temperature as another brand, the difference between those products would no longer be as distinct. For us, precision in fermentation temperature control is integral to maintaining our high level of brand integrity."

– John Mallet, Production Manager

- 111,000 bbls. produced in 2008
- Kalamazoo/Comstock, Michigan
- Opened 1985

Year-round beers: Bell's Pale Ale, Amber Ale, Two Hearted Ale, Porter, Kalamazoo Stout, Third Coast Beer, Lager Beer

Seasonals and specials: Oberon, Best Brown, Winter White, Cherry Stout, Double Cream Stout, Java Stout, Hopslam, Third Coast Old Ale, Expedition Stout, Consecrator Doppelbock, Sparkling Ale, Oktoberfest, Hell Hath No Fury . . . Ale

Uses Braumat Compact in their 45-tank fermentation cellar for temperature monitoring and control, ensuring consistent fermentation profiles for 26 different beers; controls carbonation; also integrated single-site control over existing Siemens S7-400 PLC package automating brewhouse processes.

For more information: www.bellsbeer.com



Lagunitas Brewing Company – "Beer speaks. People mumble."

Lagunitas Brewing has succeeded in the competitive environment of west coast craft brewing; in this hop-happy region, their IPA ranks among the very top sellers. That success meant expansion, and when they were ready to move into their fifth brewhouse, they decided to integrate the Siemens Braumat Compact PCS 7. The system, provided by ROLEC, controls everything in the brewhouse from grain handling to hop dosing, to wort aeration to energy storage, and the CIP system as well.

"Automation pays back increasingly in time as capacity utilization increases. Look at the front-loaded costs, then think about how much it would cost when you really need it. The PCS 7 gives us incremental benefits now, but as we grow, those benefits will increase exponentially. I can make four times as much beer as I do now, and I won't need to add any more people. That means I can pay these people more now." – Tony Magee, Founder

- 57,420 bbls. produced in 2008
- Petaluma, California
- Opened December, 1993

Year-round beers: IPA (flagship), Pils, Pale Ale, Censored Ale, Hop Stoopid, Maximus, and Imperial Stout

Seasonals and specials: Brown Shugga, The Hairy Eyeball, Undercover Investigation Shut-Down Ale, Imperial Red Ale

Uses Braumat Compact for grain handling, milling, mashing, lautering, boiling, hop addition, whirlpool, wort cooling, wort aeration, then full CIP for the brewhouse.

For more information: www.lagunitas.com



Yazoo Brewing Company – “A Nashville original”

Yazoo Brewing is located in the old Marathon Motor Works building in Nashville, a company that was doomed by the introduction of early automation at Detroit’s factories. So Yazoo’s owner-brewer Linus Hall had a cautionary example when he added the Braumat Compact to automate temperature monitoring and control in their fermentation cellar. Yazoo’s seen benefits in beer consistency and tank-turns; they’ve also been able to put off buying a bigger chiller, thanks to more efficient automated cooling practices. There was also the time when the Braumat’s alarm system saved an entire 17 tanks of beer from overheating through a weekend; that was a good day.

“There have been enough variables in barley, hops, and water in the past few years. If you can take the human variability out where it’s not intentional, that’s good. But automation doesn’t make good beer...people make good beer. Automation can help people make good beer on a more repeatable basis.”

– Linus Hall, Owner-Brewer

- 6,450 bbls. produced in 2008.
- Nashville, Tennessee
- Opened October, 2003

Year-round Beers: Yazoo Pale Ale (flagship), Dos Perros, Hefeweizen, Onward Stout, Sly Rye Porter, ESB.

Seasonals and specials: Dunkelweizen, Fresh Hop Ale, Wassail, and the Hop Project series.

Uses Braumat Compact in the fermentation cellar for temperature monitoring and control, consistent fermentation profiles, scheduling off-peak electrical usage for glycol chiller, and CIP.

For more information: www.yazoobrew.com



Karl Strauss Brewing Company – “Share the beer”

Two young guys who wanted to make beer: a lot of craft brewery stories start out that way. The difference in this story is that one guy was related to Karl Strauss, a Weihenstephan-trained veteran with 50 years in the brewing business . . . who decided that 50 years weren’t quite enough. Among other huge contributions, they made quality control a foundation of the brewery, which is why they chose the Braumat PCS 7. “We decided it would be the perfect fit for our facility,” said Facilities Engineer Chris Skura. “Siemens reputation and Braumat’s scalability was a big selling feature.”

What is the relationship between automation and craft brewing? “Automation allows us to increase our production while better maintaining quality control, freeing up brewing resources to experiment and try new things. Braumat PCS 7 really helped us reduce our yeast cost; most of this is due to temperature control. The ability for us to cool down our tanks has allowed our yeast to fall out a lot better and has made our filtration go more quickly and smoothly. This allows us to cut down on our filtration media usage, reduce our energy consumption from pumps, and reduce the labor required to filter. Braumat has helped us in reducing our energy usage by three percent, despite doubling our fermentation capacity and adding an entire bottling line.”

– Chris Skura, Facilities Engineer

- 30,000 bbls. produced in 2008.
- San Diego, California
- Opened February, 1989

Year-round Beers: Karl Strauss Amber Lager (flagship), Red Trolley Ale, Tower 10 IPA, Windansea Wheat Hefeweizen, Woodie Gold. Seasonals and specials: Karl Strauss Oktoberfest (fall), Fullsuit Belgian Brown Ale (winter), Saison (spring), Pintail Pale Ale (summer); Altbier, Balboa’s Barleywine, Belgian Abbey Red, Belgian Trippel, Black’s Beach Extra Dark, Bock of America, Conquistador Doppelbock, Double IPA, Extra Special Bitter, Minden Maibock, Oatmeal Stout, Padre Porter, Russian Imperial Stout, Rye IPA, Scottish Ale, Wheat Wine, India Pale Lager, Imperial Amber Lager, 20th Anniversary Bourbon Aged Trippel, 20th Anniversary Munich Dunkel, Imperial Malt Ball Stout

Uses Braumat Compact for temperature control in the fermentation cellar and data collection/record-keeping. Currently planning implementation of energy management and bottling line control functions, and integration with Great Plains business software installation. Uses Braumat Compact in the fermentation cellar for temperature monitoring and control, consistent fermentation profiles, scheduling off-peak electrical usage for glycol chiller, and CIP.

For more information: www.karlstrauss.com

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