

SUCCESSFUL CRAFT BREWING



ALLAGASH
BREWING COMPANY

Allagash Challenges

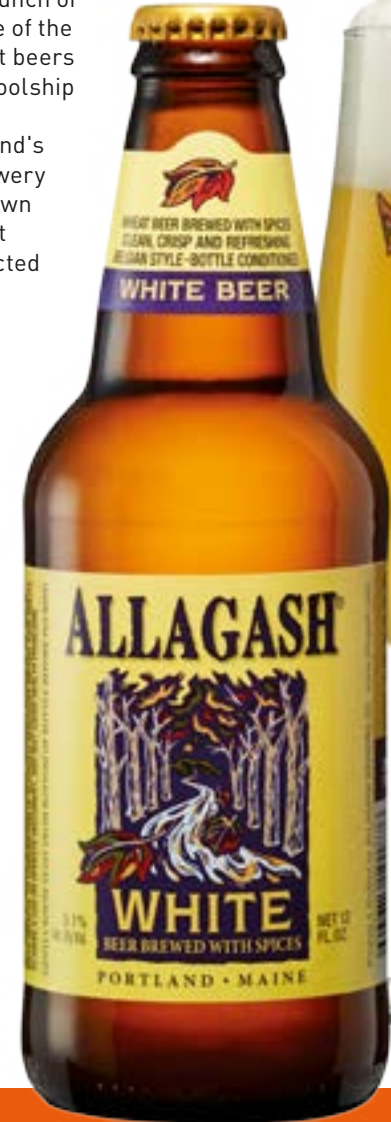
Taking the Allagash Brewery from hose connections to a hard piped semi automated piping system.

Automated and repeatable CIP process for cellar equipment.

Allagash Brewing Company

Allagash Brewing Company started in 1995 as a one-man operation in a small space on the outskirts of Portland, Maine. Founder Rob Tod had worked in a brewery setting before and recognized a void within the craft brewing movement. While both German and British styles had become prevalent throughout the U.S., the ever-creative Belgian styles were very difficult to find. Through his travels, Tod had sampled many of these unique beers and felt that the flavors and traditions of Belgium needed to be shared with the American drinking public. He designed a small 15-barrel brewhouse, gathered the finest array of authentic raw materials and began his quest towards the production of traditional Belgian style ales. Rob sold his first batch of beer – Allagash White, modeled after a traditional Belgian witbier – in the summer of 1995.

Today, Allagash has grown from a one-man operation into one of the Top 50 Craft Breweries in U.S. (by sales volume) and has earned a spot on Maine's Best Places to Work list for four years in a row running. Allagash has six year round beers in its portfolio, eight yearly releases and numerous specialty and draft-only releases. Among U.S. breweries, they have served as a pioneer of barrel-aging beer in oak barrels (beginning with the launch of Curieux in 2004) and were one of the first to spontaneously ferment beers with the use of a traditional Coolship (beginning in 2007). Allagash began as New England's original Belgian-inspired brewery and over two decades has grown into one of the industry's most distinguished and well-respected brands.



Team Allagash



Allagash Brewing Co., Portland, ME

Jason Perkins
Brewmaster
Allagash Brewing Company

Handtmann Solution

Piping system for Fermentation/Aging and Hybrid CIP system including automation.

Prefabricated customized pipe fence elements with stand pipe solution at the tank outlet already prepared for future growth.

Handtmann-Hybrid CIP skid guarantees best cleaning performance by intelligent mechanical engineering and software solutions.

Automation

The automation of the system enables a clear control of the program sequences and the actual process parameters. The integrated data acquisition, data storage allows a representation of current process data, as well as a documentation of expired processes.

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Ideas for the future.



Stand pipe with double outlet



Pipe fence for 20 CCT's





Avery Challenges

**“For us the quality of the product is driven by what happens in the cellar and the yeast propagation system.”
(Adam Avery)**

It's all about producing beer that we are proud of.

Due to the immense demand for Avery Beers, their previous 25,000-square-foot brewery has hit capacity in 2014. In the meantime, Adam Avery (Co-Founder and Owner) and his team moved to the new Green Field brewery in Boulder. Since 2015 another 2 successful expansions of the fermenting cellars were completed.

During the latest expansion, fermenting cellar No. 3, 10 outdoor tanks are now sitting on a deck and allow working with an advanced semi-automated pipe fence inside the building.

Since 1993 the brewery has been committed to producing eccentric ales and lagers that defy styles or categories. Our products are thoroughly American at heart: blending Old World tradition and expertise with ingenuity, creativity and boldness.



Adam Avery
President/CEO
Avery Brewing Company



Process Analyst Dan Strevey



Avery Brewing Company, Boulder, CO



Handtmann Solution

**“With their yeast propagation system Handtmann made a huge difference in our brewery, I might say they revolutionized the way we make beer.”
(Adam Avery)**

Yeast Management

- Tailor-made yeast propagation and yeast storage/pitching systems
- Wort/yeast aeration devices
- Best performance in terms of growing rates, hygienic execution and gentle treatment of yeast
- Sophisticated and validated yeast processes

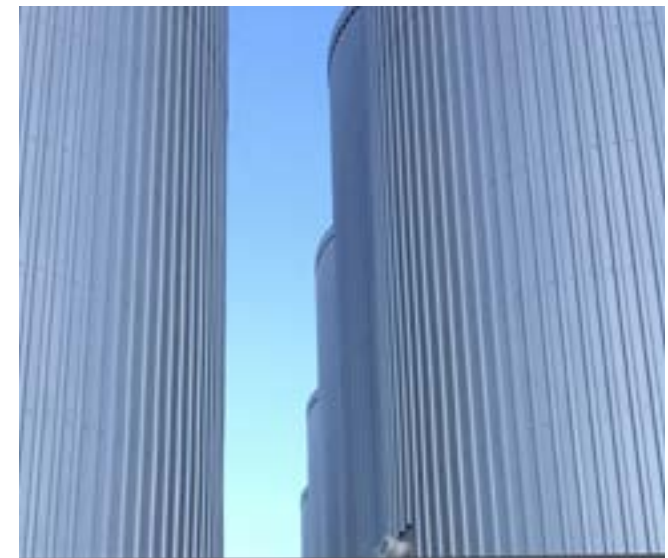
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New fermenting cellar No. 3 "inside"



Yeast Management Versa Flex



New fermenting cellar No. 3 "outside"





Bell's Challenges

Fully automated new „Two Hearted“ fermentation cellar with automated foam trap.

“Replace hose connections” to generate hygienic, controllable and safe process structures.

It started with a 15-gallon soup pot

Founded by Larry Bell as a home brewing supply shop in 1983, Bell's Brewery, Inc. sold its first commercial beer in September 1985. Beer was initially brewed in a 15-gallon soup kettle and the company has grown remarkably from its production of 135 barrels (1 barrel = 31 gallons) in 1986 to over 310,000 barrels in 2014.

Originally self-distributed, Larry and his staff of 9 employees bottled and delivered all of the beer to market for the company's first four years. By 1989, Bell's was shipping more than 500 barrels annually and assigned its first wholesaler to further establish itself across the state of Michigan. In 1993, Bell's became the first Michigan brewery to open an onsite pub.



Bell's Brewery, Inc., Galesburg, MI



Tap room

John Mallet
Brewmaster
Bell's Brewing Company



Handtmann Solution

„SOL –piping system“ for new fermentation cellar with foam trap.

Latest Pipe fence expansion with individual tank pressure regulation and multifunctional tank utilization for 24 tanks.

SOL (Short Outlet Loop) piping system

The idea of the fully automated SOL piping systems is:

- Keep the tank outlet pipe as short as possible to avoid yeast autolization
- Keep the main product lines as short as possible to minimize product losses
- Reduce the number of elbows for gentle product treatment
- Guarantee easy maintenance and accessibility to valves and tank outlet for inspection

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Ideas for the future.



Fully automated
"Two Hearted"
fermentation cellar





Dogfish Head Challenges

Fully automated yeast management system to propagate and store up to six yeast types simultaneously.

Semi-automated fermentation and aging process with minimum work load.

High demand for CIO performance and execution with efficient water usage to be environmentally conscious.

Beer all year

Dogfish Head Craft Brewery makes off-centered ales for off-centered people throughout the year. Many of their beers are available throughout the year, but some are only brewed once a year and in extremely limited supply – so be sure to grab them while you can. Log on to dogfish.com and click on the "Fish Finder" for a list of retailer accounts.



Sam Calagione
Founder and CEO
Dogfish Head Craft Brewery



Dogfish Head Craft Brewery, Milton, DE



Handtmann Solution

Handtmann Versa Flex yeast management system supports the Dogfish philosophy of creativity and flexibility, easily achieving the required cell growth for all strains and gentle yeast treatment.

Only 1 brewer per shift is needed to run the semi automated fermentation cellar. 4 Hybrid CIP skids guarantee great micro conditions from Brewhouse to bottling.

Brewmaster's Quote

"Handtmann are truly partners in our cellaring and cleaning solutions. They place a great effort to ensure that all of the requirements Dogfish Head set were provided in a truly value engineered solution. This process worked great for Dogfish from conception to design and ultimately build, with the support continuing well after installation is over."

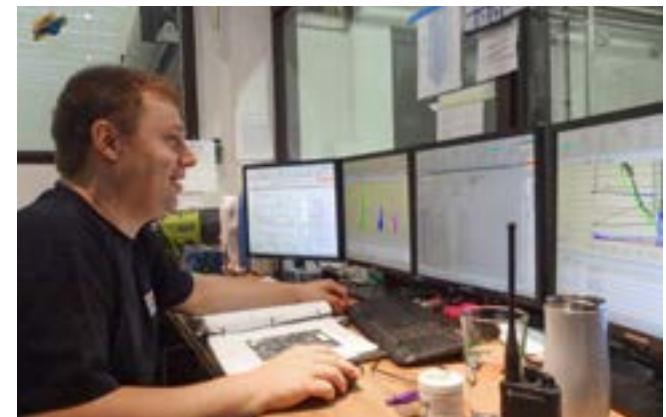
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Fermentation cellar



Yeast Management Versa Flex



Automation



Firestone Walker Challenge

“High quality equipment standards are needed to create amazing, extraordinary beers”.

“Once beer production gets over 60 - 80,000 bbl, it starts getting complicated and the need for technology and process comes in.”

(Adam Firestone)

Firestone Walker Brewing Company

brewed its first beer in 1996 in a small facility rented from the Firestone Vineyard estate in Santa Barbara County. In 2001 owners Adam Firestone and David Walker purchased the SLO Brewing Company located in Paso Robles, CA.

Firestone Walker's ales are selectively fermented in the Firestone Union oak barrel brewing system. The Firestone Union incorporates 65-gallon, medium and heavy toast American oak barrels. Firestone Walker Brewing Company continues to grow as the palates of Americans migrate to craft beer. Their brew staff have picked up “Mid Size Brewery of the Year” at the World Beer Cup an unmatched four times.



Firestone Walker Brewery, Paso Robles, CA



Matt Brynildson,
Brewmaster
Firestone Walker Brewing Company



Handtmann Solution

Semi-automated piping system for “tanks on skirts” with flexible usage as fermentation/storage and bright beer tanks.

The Inova double seat valves with single seat lifting and balancer cleaning will ensure the fully automated process in the bright beer cellar.

Automated Hybrid CIP solutions are responsible for hygienic conditions 24/7.

CIP - Hybrid system

- Customized CIP programming and recipe development
- Low water and chemical consumption are guaranteed by carefully engineered components and intelligent programming
- Backwash features, dedicated tank cleaning procedures, hot cleaning of tanks

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Ideas for the future.



Fully automated bright beer cellar



CIP Hybrid



Pipe fence semi-automated



KARBACH

BREWING CO.

Karbach Challenges

“Basic hard piped system” prepared for a future semi-automated pipe fence solution.

More than 30 different beer types with various production methods calls for individual CIP recipes.

Fully automated cleaning of current and new tanks.

Proudly brewed in Texas

The founders of Karbach Brewing Co. had a collective 120+ years' experience in the beer biz. Everything from distribution and importing, to brewing award winning beer and brewery operations. When they had the chance to open up their own brewery in 2011 they jumped on it. They are excited about their brewery and their beers, and brewing beer is just plain fun!

The drinkers of Karbach beers must be sharing that passion because in less than four years the brewery needed a major expansion to keep up with the demand for the beers. It was critical for Karbach to be able to maintain the hands-on feel of operating a brewery, but also automate certain processes to make the quality of the beer even better, all while being to brew any style of beer the brewers could imagine.



Karbach Brewing Co., Houston, TX



Eric Warner
Brewmaster
Karbach Brewing Co.



Handtmann Solution

Basic piping system for 6 Fermentation/Aging/BB - tanks installed in Phase 1 and engineered to allow system upgrade to semi-automated pipe fence and extended to 12 Tanks one year later.

Handtmann Versa Flex fully automated yeast management system stands for independent high level yeast availability at any time.

Handtmann - Hybrid CIP skid is managing a big number of cleaning tasks for the variety of more than 30 different beer types.

Eric's Quote

"As fast as we were growing, we had a very tight timeline for bringing the new brewery on line. Handtmann delivered at every step of the way and we didn't miss a beat." "The Handtmann equipment has proven to be extremely reliable and very user friendly thus far." "Like most craft breweries, we didn't have an infinite budget for the project. Handtmann was very cognizant of this and proposed a very sensible phasing plan that we could implement seamlessly over time." "The CIP skid is the workhorse of any brewery and the Handtmann CIP skid is carrying the load effortlessly!"

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Ideas for the future.



Yeast Management Versa Flex



Upgraded and extended pipe fence in 2017



CIP Hybrid



Power Blow



Pipe fence for start up with hoses in 2015



New Belgium Challenges

New Belgium's goal of environmental leadership and development of a truly sustainable organisation, which is recognised as the best.

The design has to reflect high requirements on flexibility.

All equipment need to support the standard of WCM (World Class Manufacturing)

High Involvement Culture

New Belgium believes that their dedication to high involvement culture and a loving, high performing workforce sets them apart. They believe that the collective is stronger than the individual and that informed coworkers will make responsible decisions.

New Belgium practices open book management, providing coworkers access to company financials and a clear view into managerial decision making processes. They gather input from ALL coworkers as Employee Owners, to help make decisions about the upcoming year's business plan. It's a wonderful way to celebrate, sustain our culture, reconnect ourselves to their Vision, and give out a heck of a lot of hugs & high fives in the process.

They are also a Certified B Corporation. B Corps are companies that are dedicated to proving that business can be a force for good in the world.



Josh Nabours
Plant Engineer
New Belgium Brewing Company



New Belgium Brewing Company, Fort Collins, CO



Handtmann Solution

Fermentation/Aging piping system and yeast management for the New Brewery in Asheville.

Handtmann's "no waste fabrication methods" are in line with the environmental requirements from New Belgium.

The Handtmann design includes high flexibility including the experience of more than 20 year's partnership with New Belgium. Fabrication "made in Germany" meets NBB request for WCM standard.

Foam Trap

Fully automated Handtmann foam traps – to keep the vent line clean.

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Ideas for the future.



CCT cellar



Foam traps





New Glarus Challenges

“From wort aeration to beer to packaging” at the Hill Top brewery at New Glarus Process piping for open fermenters for “Dancing Man Wheat Hefeweizen”.

Dan Carey, a Diploma Master Brewer, is well known in the microbrewery world.

Dan Carey has worked in the Brewing Industry since the age of 20. He earned his Bachelor’s Degree in Food Science with an emphasis in Malting and Brewing Science from the University of California at Davis in 1983. He served his apprenticeship at a small brewery near Munich, Germany and has operated and constructed numerous breweries throughout the United States.

He was valedictorian of the 1987 Siebel Institute Course in Brewing Technology. He passed the Institute of Brewing and Distilling Diploma Examination in 1990 as well as their Master Brewer Examination in 1992. Before starting New Glarus Brewing Company with Deborah Carey, he was a Production Supervisor for Anheuser-Busch. Dan won the Association of Brewers 2003 “Small Brewer of the Year” Award, the 2005 and 2006 “Mid Size Brewer of the Year” Awards, as well as the 2006 “Russell Schehrer Award for Innovation in Craft Brewing” the summer of 1995.



New Glarus Brewing Company, New Glarus, WI



Dan Carey
Brewmaster
New Glarus Brewing Company



Handtmann Solution

Customized process piping for open top fermenter allows for the brewing of unbelievable wheat beers.

Handtmann - Hybrid CIP skid guarantees the cleaning performance and hygiene conditions for the impressive variety of New Glarus beers.

Piping systems

- Pipe concepts are designed individually for your requirements
- Handtmann pipe fence technology with over 40 years of in house experience
- Due to high degree of prefabrication, the installation time is reduced on-site
- Supervision during the entire construction phase by project manager, site manager and commissioning engineer

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Ideas for the future.



CCT cellar 1/2



Wheat beer cellar



Glycol valve station



Yeast Management Versa Flex



Ballast Point Challenges

Need for high efficient wort aeration device.

"Grow and manage our own yeast".

For The Love of Beer

After developing a taste for beer in college, founder Jack White decided to try making more interesting beer than he could find in the store or at a keg party. Jack White, along with his college roommate Pete A'Hearn, began home brewing in their apartment at UCLA and soon realized it wasn't easy to get access to the various supplies and ingredients he wanted – nor did he have anyone with whom to trade ideas about brewing.

In 1992, Jack opened Home Brew Mart, which he filled with the supplies, ingredients, and conversation every brewer needed to make better beer at home. His plan was to one day take this hobby to the pro level and start a brewery. In 1996, Ballast Point Brewing was born.



Team Ballast Point



Ballast Point Brewing Company, San Diego, CA



Handtmann Solution

Handtmann Vario Air for wort and yeast aeration delivers reliable oxygen values.

Yeast Management Versa Flex handles single and multiple yeast strains gently.

Wort-/Yeast Aeration

Two stage hygienic Vario Air aeration device for wort and yeast aeration works with air or oxygen.

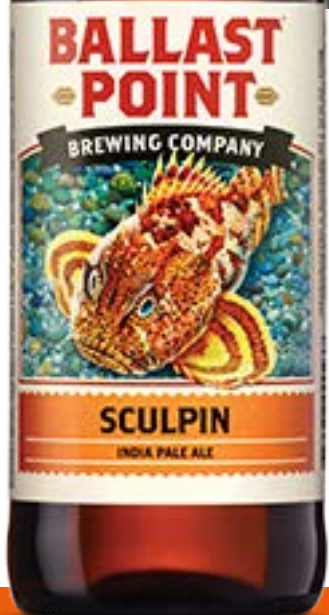
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Yeast Management Versa Flex



Wort aeration





Victory Challenges

Bring your brewery to the next level with a top notch fermentation piping system!

"With the Handtmann Solution, you'll have the opportunity to work closely with Handtmann's engineers to develop a customized, efficient and effective yeast handling solution."

Tasty Tradition

"Having trained in Germany, I learned a lot about traditional German brewing and was excited to bring those traditions back to the U.S. where creativity thrives. Here at Victory, we embrace fusing German traditions with American ingenuity to deliver our dedicated consumers the best of both worlds. To combine imported quality ingredients, freedom of flavor, and the best brewing processes technology can offer is to truly craft a near perfect brew."

(Ron Barchet)



Victory Brewing Company, Downingtown, PA

Ron Barchet
Co-Founder/Brewmaster
Victory Brewing Company

Handtmann Solution

This state of the art semi-automated piping system supports fermentation and aging and provides excellent and flexible yeast management solutions.

Features

- Handtmann offers customized concepts to meet your brewery's objectives and needs
- Handtmann will take your processes and plant parameters into consideration to provide a cost efficient system
- The experienced Handtmann team of engineers and brewing technologists will support your team with training manuals and conceptual diagrams

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Ideas for the future.



Fermentation cellar



Yeast cellar





Okanagan Spring Challenges

Fully automated fermentation/
storage cellar.

Multi Micro System "MMS" sterile
beer filter.

Fully automated bright beer cellar.

Craft-brewed in Vernon, the heart of BC's Okanagan Valley

One of BC's original craft breweries, Okanagan Spring was founded by Buko von Krosigk and Jakob Tobler: two men determined to offer an alternative to the mainstream beers of the region.

Where better to pursue this endeavour than in a region marked by natural beauty and a history of fine brewing? Established in 1985 and continuing to brew from the same location today, the Okanagan Spring Brewery resides in the heart of BC's treasured Okanagan Valley. Surrounded by BC's Interior Mountains and situated among the beautiful Kalamalka and Okanagan Lakes, it's the perfect place to brew BC's favourite beers.

On December 31, 1985, the first Okanagan Spring Premium Lager was poured. Buko and Jakob didn't realize the role that Okanagan Spring would play in popularizing craft brewing, but they did know they'd created a mighty tasty beer.



Stefan Tobler
Brewmaster
Okanagan Spring Brewery



Okanagan Spring Brewery, Vernon,
British Columbia, Canada



Handtmann Solution

Piping system for Fermentation/Aging/BBT and Hybrid CIP system including automation.

Inova – Double seat valves in most critical areas ensure safe processes in the sensitive yeast management, fermentation/storage and bright beer area.

Handtmann – Hybrid CIP skid is busy in the Bright Beer area.

Inova - Double seat valves

- Pressure hammer safe up to 45 bar
- Upper and lower balancer cleaning is included
- Single seat lifting

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Ideas for the future.



Fermentation cellar



Sampling



Prefabricated valve block



Belgh Brasse Challenges

**“Do it right from the beginning”
Design for new cold block has to take the
brewery from 10.000 bbl/a to its future
capacity.**

**Start with basic essential equipment
and be ready for upgrading the process
technic step by step.**

Canadian Brewery of the year voted best beer in the world

Belgh Brasse was founded in 1999 by Jean-Louis Marcoux in Amos, in Abitibi, the Belgh Brasse Brewery specializes in the manufacturing and bottling of premium beers. The expertise of their master brewer helped develop Belgian Ale beers greatly appreciated by the public. The MONS ABBEY beers have won through the years 60 international medals in worldwide competitions.

2016 marked the end of the Belgh Brasse Brewery construction and expansion, which greatly improved its production capacity.



Brasserie Belgh Brasse,
Québec, Canada



Jean-Louis Marcoux
Operations Director
Brasserie Belgh Brasse



Handtmann Solution

At first phase install hygienic tank top devices, double tank outlets and basic automation system.

Customized 3D – engineering for basic hard piped system allows easy expansion in the future.

Jean- Louis Marcoux Quote

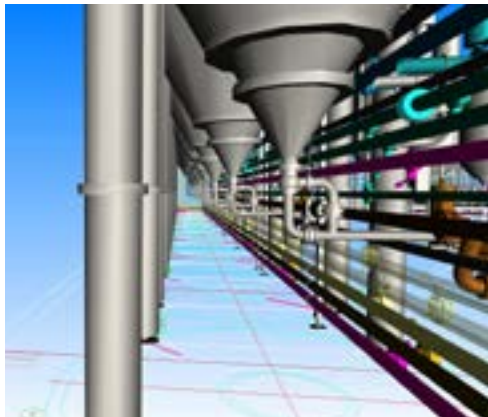
"I am very proud of the work and the progress that brought us to this. The Belgh Brasse Brewery is a history of tenacity, hard work, courage and values that represents the settlers who came to settle in this region. This would not have been possible without the collaboration of visionary individuals, without a strong team and without the encouragement of our customers."

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Ideas for the future.



Cold block



Pre-engineered pipe fence



Double tank outlet





Russian River Challenges

“Design and integrate a semi-automated piping system at our new production brewery but also a design that has expandability.”

**“Install a fully functional yeast propagation and storage system.”
(Vinnie Cilurzo)**

Russian River Brewing Company

was originally owned by Korbel Champagne Cellars in Guerneville, California and was founded on their historic and beautiful property amidst vineyards and redwoods near the Russian River. When Korbel decided to get out of the beer business in 2003, they generously offered the brewmaster, Vinnie Cilurzo and his wife Natalie the rights to the brand.

As of 2017, Russian River Brewing Company (RRBC) employs 100 employees, and gives back to their community via charitable events such as their month-long Breast Cancer Fundraiser in October. As it turns out, demand is still greater than the supply, but they prefer to grow their business organically while focusing on efficiencies and quality. For now, it is easier to make better beer than it is to make more beer. In 2014, RRBC received, among other things, a Bronze Medal for “Pliny the Elder” and a Silver Medal for “STS Pils” at Great American Beer Festival.



Natalie Cilurzo
Co-Owner/President
Russian River Brewing Company

Vinnie Cilurzo
Co-Owner/Brewmaster
Russian River Brewing Company

Handtmann Solution

Taking our "ideas for the future", the process technology for the expansion in phases is already considered.

Step into the new automation century by giving the operators the chance to get connected to the system independent from time and place.

Portfolio

Handtmann develops, designs and manufactures piping systems, pipe fence elements and valve blocks for the brewing and beverage industries. Handtmann systems from brewhouse to bottling are in worldwide use. The Handtmann piping systems are individually designed to the highest quality standards.

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Ideas for the future.



Russian River Brewing Company, Santa Rosa, CA



Brew pub

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YOUR PARTNER.

Made in Germany



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