

FERMECRAFT



CRAFTED
WITH INTELLIGENCE

ABOUT **FERMECRAFT**

Created by Deacam Engineering in 2012, Fermecraft delivers an automated, smart, industrial control solution for the manufacture of craft beer, wine and spirits.

Deacam responded to the express need of craft beverage manufacturers to have more systematic control of their production processes.

By harnessing digital technologies and the Industrial Internet of Things (IIoT), Fermecraft provides manufacturers with an endless 'plug and play' solution for growing craft beverage businesses.

It is tough, reliable and capable of being customized to suit any hardware or equipment and size of the kit installed.



WHY FERMECRAFT

Fermecraft gives brewers, winemakers and distillers their weekends back!

Carefully engineered and customized to fit your operations, Fermecraft will automate your production to provide you with more effective, efficient and quality outcomes you can rely on time and time again.

Connect and integrate your production equipment with Fermecraft's sophisticated interface to access real time data and perfect your craft with automated processes and controls.

You can choose to monitor each and every device connected to Fermecraft easily and efficiently either on-site or remotely, with data and alerts captured and allocated to batches, shifts and operators.

With the flexibility to install Fermecraft across all lines of your production, you can use it to efficiently control your grain, brew, fermentation, trade waste, packaging and much more.

It can also save you time and money on resources, labor and materials. Fermecraft will give you the power to streamline your systems and reduce the need for manual adjustments.

With the ability to create, record and manage your recipes, Fermecraft technology can capture the nuances of different products to enable you and your team to deliver better beer... and then repeat it every time.



**With Fermecraft we know
we can get the beer right
every single time.**

Greg Berbusse, Bay 13 Brewery
Miami, Florida

HOW DOES IT **WORK?**

Fermecraft is a hard wired, industrial automation package with local processing units installed at strategic points across your production facility.

Fermecraft uses an industrial ethernet cable we call FermeNet. FermeNet is your communication highway. Installed throughout, FermeNet provides connections wherever they are required.

Masses of cables are a thing of the past. Low energy sensors and valves connect directly to FermeNet via dedicated gateways. It is a 'decentralized' system which is easily extended to include more of your operating equipment as required.

The Fermecraft main control cubicle (MCC) managed by Siemens S7 1500 Programmable Logic Controllers, supports the connection of high powered electronics and switchgear. Variable speed drives, direct on-line starters and safety relays for pumps, rakes, heating elements and the like, are directly connected to the MCC.

With Fermecraft's intelligent automation, you can track the entire production process and respond to alarms or alerts if any action is interrupted by an unexpected development, including the impact of extreme hot or cold weather on your operation.

With all this control and oversight of the brewing process, your brew team can enter recipes, monitor progress and achieve precise results with each recipe every time.

Fermecraft will give you back time, minimize waste and inspire confidence within your team to deliver the best results for your business and your customers.



FERMENET CABLE

A FermeNet cable will connect your brewing processes with Fermecraft's automated technology.



GATEWAYS

Localized, decentralized gateways manage your data points and transmission between the software and the probes, sensors and equipment located across your production line.



MAIN CONTROL CUBICLE

Your data, equipment and systems will be connected to the Fermecraft control cubicle with a Human Machine Interface (HMI) to view, access and manage your operations.



REMOTE ACCESS

You can use and access Fermecraft on-site and remotely using our sophisticated Industry 4.0 software installed on any device you choose.



TEMPERATURE CONTROL

Fermecraft will give you the power to monitor and control the temperature of your brews, supported by SMS, email and system alerts.



PUMP CONTROL

Managing flow across your cellar becomes so much easier with Fermecraft.



PROCESS CONTROL

Life is much easier in the brewery with Fermecraft's ability to integrate and coordinate all your production processes from a single point.



RECIPE MANAGEMENT

Program your recipe requirements into Fermecraft's software system to help you achieve consistency with every batch.

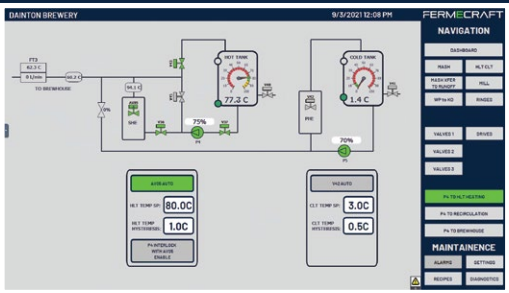
FEATURES

The beauty of Fermecraft is it can be customized to suit your brewing needs.

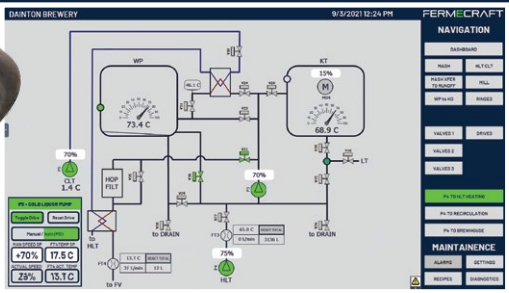
You can choose to automate all parts of your brewing production or you can install Fermecraft where you need it most and choose to bring additional features online when you need them.

You can be a startup brewing company or a long established operation; either way Fermecraft can deliver enormous benefits to your business, enabling you to:

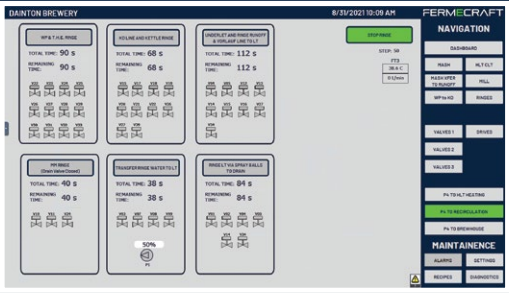
- Control the entire brewing process from grain handling to fermentation
- Monitor and control the performance of your chiller systems
- Monitor and control the performance of your boiler systems
- Install customized ferment profiles across all your fermentation vessels
- Monitor and automate tank levels
- Monitor and automate carbon dioxide supply and consumption
- Connect to power supply facilities to monitor supply and consumption
- Connect and monitor ancillary equipment such as grain silos, canners and bottle packaging lines
- Track and control your waste outputs
- Integrate with other operational data software systems
- Scale up or down to suit your production needs
- Minimize digital interference or signal drift through the integrity of the FermeNet cable
- Operate a certified and validated safety system with confidence



Hot and cold liquor tank control screen.



Piping and instrumentation made simple.



Automated valve sequencing.



Fermecraft has allowed BentSpoke to control its processes. Control equals quality and BentSpoke puts quality first.

Richard Watkins, BentSpoke Brewing
Canberra, Australia



BAY 13
BREWERY AND KITCHEN

Located in Coral Gables Florida, Bay 13 Brewery has a fully automated, temperature controlled brew kit powered by Fermecraft.

The 10BBL two vessel brewpub with six fermenters runs most days and is positioned within arm's reach of Bay 13's guests.

It is visually impressive and the beers are pumped directly to the bar taps in the brewpub to provide immediate access to their freshly finished brews.

The brew team headed up by Greg Berbusse, needed a quietly efficient, easy to monitor and safe brewing system.

"With Fermecraft we know we can get the beer right every single time," affirmed Greg.

"We wanted to have brewing software and an automation system installed at Bay 13, to eliminate as many sources of error as possible, by monitoring and controlling as much as possible."

"Fermecraft's expertise and experience working with breweries combined with the ability to remotely access and modify different processes allowed us the opportunity to customize and set procedures beyond our initial startup," he said.

Fermecraft's touch screen control panel and remote access tablet, provides Greg with real time information across all stages of the brewing process, giving him the ability to easily adjust temperatures, levels, and valves in each tank and to monitor production flow across the cellar with the tap of a few simple buttons.

The team saves time and resources by not having to manually monitor or adjust the flow of beer from tank to tank, providing minimal disruption to their hospitality customers.

"The ability to access everything remotely means that I can check everything when I'm not at the brewery or get some processes started before I've finished my morning coffee," said Greg.

"This level of automation and control has made it possible for me to collect multiple data points, set brewhouse parameters, as well as for fermentation and conditioning to ensure a consistent process."

"It frees me up to focus more on ingredients and beer styles."

Fermecraft is proud to be a partner of Bay 13 Brewery and congratulate the team on the success of their startup brewpub.

The future looks bright with Fermecraft.

BentSpoke
BREWING CO.

BentSpoke Brewing is one of Australia's leading and most awarded independent craft breweries.

Established in 2014 in Australia's capital city Canberra, BentSpoke has been on a fast track of growth and expansion.

They quickly outgrew their original automated brew kit and from 2018, began the transition to fully integrate their entire operation using Fermecraft's intelligent IIoT solution.

Twice crowned Australian Champion Brewer, BentSpoke Brewing's Co-Founder and Head Brewer, Richard Watkins said the ability to integrate Fermecraft into all facets of their production has given Richard and his team the ability to make the best decisions to make the best beer.

"The production team can make informed decisions at every step of the process, resulting in the team being more accurate and able to brew better beer," exclaimed Richard.

"They no longer have to deal with variations in measurement relating to different parts of the equipment."

"Fermecraft has allowed BentSpoke to control its processes. Control equals quality and BentSpoke puts quality first."

Richard said BentSpoke Brewing now uses Fermecraft's touch panel interface to fully monitor and control its production, right from ingredient delivery through to brewing, fermentation, filtering, finishing and packaging.

Fermecraft's design enabled BentSpoke to bring new sections online as required, giving BentSpoke the flexibility to grow their Fermecraft capabilities as their brewery grew.

The Fermecraft team have worked with Richard and his production team at every step of the process to ensure the digital data points, signals and devices work seamlessly across BentSpoke Brewing's operation.

"We have been able to save time and generate more yield since using Fermecraft," said Richard.

"Saving time, allows more time for turns of the brewkit."

"Wastage has also improved which means our COGS [Cost of Goods Sold] has improved."

The software and hardware installed at BentSpoke is fully self-sufficient, requires minimal human data entry or fine-tuning and provides Richard and the team with the option to continually scale their brewery operations to meet their production requirements.

The outcome is a simple yet highly integrated, automated and intelligent brewing production operation, which can continue to adapt and grow as BentSpoke Brewing reaches new heights in production and innovation.





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