CASE STUDY: 001

- CUSTOMER: KOVAL DISTILLERY
- FULTON REP: BARR MECHANICAL SALES
- MARKET: BREWING & DISTILLATION
- APPLICATION: PROCESS STEAM
- EQUIPMENT: ICS-30 CLASSIC™ (30HP)

FULTON POWERS WORLD-CLASS DISTILLERY

BOILER PROVIDES DEPENDABLE PROCESS STEAM TO INFLUENTIAL CRAFT WHISKEY MAKER

A Fulton boiler provides hot steam through a series of insulated pipes to a copper pot still, which radiates heat to the liquid it contains. The liquid inside of the still then rises up through the copper reflux column to condense into the different alcohol components used to make whiskey.

When Koval Distillery first acquired Fulton's ICS-30 Classic™ (30HP) Boiler in 2011, it arrived needing new burner and gasket parts that were damaged during shipment.

Enter Barr Mechanical, one of Fulton's many regional representatives, who sourced new parts and coordinated repair efforts with Fulton's Customer Service team to speedily put it all back together.

So began a partnership between Koval — the first distillery to open in Chicago since the mid-1800s — and Fulton, the northern New York corporation that pioneered the original vertical tubeless boiler in 1949 (the direct descendant of the boiler purchased by Koval).

Both businesses are independently-owned, family-operated and built on three generations of experience by people who pride themselves on the customer satisfaction they have achieved through producing a wide array of quality products made possible by their own distinct brand of ingenuity experts.

CRAFTING WORLD-CLASS WHISKEY BEGINS WITH DEPENDABLE BOILER HEAT

For Koval, a company whose signature claim to excellence is control of every step of their spirit-making process — *from grain to bottle*™ — the purchase of a steam boiler was no less important a decision than any other they needed to make.

A steam boiler, itself — or what might more aptly be referred to as a consistent and dependable heat source — is critical to the success of any distillery or brewery.

Besides using steam heat for sanitizing wash-down water, distilleries rely on boilers for producing heat for a succession of two main processes:

- **Mashing** – Heating up the water that is added to the grain that is then fermented to create alcohol.
- **Distilling** – Heating the finished, liquid (mashing) mixture in a still to boil off its alcohol by-product.

Koval didn't really know a lot about Fulton boilers before they purchased one, but have since learned a substantial amount, and have been extremely pleased with its low maintenance requirements.

Says Mark DeSimone, VP of Koval, "When we first started, we had a 'breakdown boiler' — another brand that we won't mention — so we went searching on the internet, found out about the Fulton brand, and luckily we were able to purchase one."

▼ *Pouring grain into mashing tank*

▲ *Operator inspecting mashing tank*

"While Barr Mechanical provided initial support by testing the combustion to make sure it was where it needed to be, and also checking that the water level in the machine was adequate, Joe Singerling (Fulton Sales Engineer) has provided continuing technical support since that time."

"We've had pretty much zero down time in the years we've had it; very little upkeep. . . . It's been a huge plus for us to have Fulton staff supporting us for any questions we might have, not to mention the consistency of the boiler, itself, working all of the time."

Added Koval Distillery Manager Mike Hoffman, "We've had pretty much zero down time in the years we've had it; very little upkeep. We now do the regular maintenance, and then Joe will check things out when he is in town.

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▲ *Fulton's ICS-30 Classic™ Boiler*

CONSISTENT & RELIABLE STEAM IS CRITICAL TO PRODUCT QUALITY

The main factor for boiler use in distilling is having a consistent head of steam, as a consistent flow of steam going to the still enables a distiller to produce consistent results in the amount, safety, cost, purity, and flavor of the alcohol they produce.

Said Mark DeSimone: "Having an output that's not up and down, a flow that stays the same, makes a better product; and Fulton does exactly that for us. We are able to hold the pressure at a steady 5 psi to 10 psi."

Added Mike Hoffman, "We have two stills and one mash tank, and we can run everything without much, if any, pressure drop from use of a single Fulton boiler."

ON-SITE WHISKEY WORKSHOPS, COCKTAIL CLASSES & BOILER BREAKOUT SESSIONS

Similar to Fulton, Koval has its own, in-house learning center. In addition to the courses they teach on distilling and distilling operations, usually about 4 or 5 times a year, they also teach about a brand of stills manufactured by Kothe.

Kothe is the second largest still manufacturer in Germany, one of the top still manufacturers in the world, and the company for whom Koval has exclusive North America distribution rights.

"In the beginning — the first four years or so — the Kothe side of the business was what was paying the bills and keeping the lights on," said DeSimone, "so Koval and Kothe are really complementary businesses."

"What's been an added bonus," said DeSimone, "is that, once every two to three months, after Joe comes out to check to make sure we are doing everything correctly with the boiler, he stays in town to teach at our workshops, where he makes presentations to new distilleries about the science of steam and steam boilers."

"What's been an added bonus . . . is [Joe's] presentations to new distilleries about steam boilers."

DeSimone went on to explain, "People who come to our workshops to learn about distilling have a really good experience meeting Joe and learning about boilers as well as what they need to know to troubleshoot any issues they've had with their boilers. From Joe, they're learned how to run their boilers better."

In the presentations that are given, Fulton describes itself as a high-end boiler manufacturer in much the same way that Koval describes itself as a manufacturer of top-shelf spirits and distributor of high-end stills. Same excellent craftsmanship, same attention to detail, same reputation for quality.

"There's a reason they're slightly more expensive. They last longer, they're a better quality product, and their support in setting up my system, getting me distilling, and maintaining my system, is unparalleled. It's worth the price. People get what they pay for."

Said Mark DeSimone, in referring to the Fulton boiler they own: "There's a reason they're slightly more expensive. They last longer, and they're a better quality product. And their support in setting up my system, getting me distilling, and maintaining my system, is unparalleled. It's worth the price. People get what they pay for."

FULTON STEAM SOLUTIONS, INC.

Fulton Steam Solutions is part of The Fulton Companies, an American multi-national group of companies headquartered in Pulaski, NY. Backed by over 60 years of research, innovation and experience, Fulton designs and manufactures complex heat transfer equipment for a wide range of commercial and industrial applications.

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Fulton products for brewing and distillation:
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