

Custom Crafting an Ionized Air Solution for Beer Bottles

California brewery escapes expensive state water usage fines by switching to Paxton's air rinsing. Paxton's Ionizing Bottle Rinser (IBR) is adapted for the unique needs of craft beer facilities.

The Client: Leading the Craft Beer Boom

Paxton Products recently worked with a well-known Northern California brewery. The popularity of craft beer has created huge demand for the company's authentic, German-style beers served in brewery-owned chain restaurants extending across the United States.

The active expansion of the brewery's distribution network resulted in a doubling of production, increasing the brewery's capacity to over 3 million gallons of beer annually. The volume of suds brewed made our client the largest brewery in the San Francisco Bay Area.

The Challenge: Water Scarcity and Government Fines

Unfortunately, the California drought and resulting governmental regulations threatened to slow the brewery's growth. The State of California decided to levy fines on businesses for levels of water consumption deemed excessive. To avoid paying steep daily fines for water usage, the brewery began to look into alternatives to the ozonated water used in the bottle rinsing process.

The Solution: Paxton Ionized Air

In 2014, Paxton developed the Ionizing Bottle Rinser (IBR) in response to demand from beverage manufacturers faced with the need to move away from water rinsing. The IBR utilizes a custom-engineered and patent-pending ionizing air knife, coupled with a high efficiency centrifugal blower, plus all components needed for a turnkey system. The ionized air generated by the Paxton IBR system eliminates the static that causes dirt and debris to stick to the inside of the bottles, then Paxton's high velocity air blasts the contaminants out of the bottle.

When executives from this Bay Area brewery saw Paxton's IBR System at a Craft Brewers Conference, they were intrigued by the innovative air technology. They requested that Paxton visit their plant to analyze the ways in which the Ionized Bottle Rinser could replace traditional rinsing of bottles using the now cost-prohibitive water rinsing.

Implementation: Tailoring Paxton Technology to the Brewery Industry

Paxton worked with the brewery's operations to ensure the Ionizing Bottle Rinser fit their facility's unique needs. Paxton's engineering team created a customized craft beer version of Paxton's standard Ionizing Bottle Rinser system. The system was re-sized for the slower line speeds (<600 bpm) common to craft beer bottling, reducing both the size of the air knife and the blower. Secondly, clear polyurethane hoses were employed to facilitate sight inspections. The craft beer IBR also utilizes an upgraded power supply which enables relays to the production line control system. Best of all, the Paxton Ionizing Bottle Rinser for breweries uses less energy, due to the small blower needed; and carries a lower price tag than the standard, high speed system.



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The process of aligning the system to the needs of a brewery facility required some tweaks along the way. For instance, the initial location of the system near the filler resulted in syrup gumming up the works. Relocating the blower to the opposite side of the filler resolved this initial issue.

The alterations made to the standard Ionizing Bottle Rinsers as a result of attentive interactions between Paxton and the brewery created the template for delivering Ionizing Bottle Rinsers to other craft breweries throughout the region. This has been a frequent occurrence throughout Paxton's history, as attentiveness to specific client needs creates new versions of products, enabling Paxton to serve a wider range of manufacturers.

Quantifying the Solution

Paxton's Ionizing Bottle Rinser completely replaced water rinsing at the facility for rinsing the inside of the bottles. Switching to Paxton's Ionized Air System enabled the company to avoid expensive governmental fines implemented due to California's severe water shortage.

The new bottle rinsing system at the customer's facility air rinses the bottles at a line speed of 400 bpm, the same speed as was used with water rinsing, so production capacity was maintained. And although this line speed is slower than that of large soft drink manufacturers; it is suitable for medium size craft brewers and other bottlers producing beverages that emphasize craft quality in smaller batches rather than high production volume.

An added benefit was the Paxton IBR's noticeable impact on Target Percentage of Oxygen (TPO). Bottles rinsed using Paxton's IBR revealed a TPO 3 points lower than bottles that were water rinsed. This finding surprised and delighted the QC staff at the brewery, who had not anticipated the improvement in TPO when switching to air rinsing

Client Reaction

The brewery plant managers and executives gave high ratings to the efficiency of Paxton's "craft beer specific" Ionizing Bottle Rinser. They were also extremely pleased with what they described as a "stellar level of customer service in creating a bottle rinsing system that meets our needs." The customer's upper level personnel have already spread the good word about Paxton throughout the California craft beer industry. Their glowing reviews of Paxton have resulted in multiple pending new installations of the Paxton Ionizing Bottle Rinser at other craft brewery facilities in the area.

As the craft beer industry begins to offer more canned as well as bottled beers, many Paxton clients are also adding the IBR's sister product, the Ionizing Can Rinser, which carries the same advantages as the IBR. Paxton's engineering team continues to keep pace with industry by anticipating the needs of clients, and using air technology expertise to create products to meet those needs.



For more information on the Ionized Air System, [click here](#) or scan this QR code with your smart phone.



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