

Fine Filtration of Distilled Liquors

Particulate and carbon fines removal,
USA



Customer / Project:	Craft Distillery
Industry Sector:	Food and Beverage
Application:	Fine Filtration of Distilled Liquors
Products:	MicroKey™
Primary Motive:	Cost and Process Efficiency
Location:	PA, USA
Project Date:	2019
Division:	Ashland, USA

Customer Overview:

Producer of quality-made distilled spirits including vodka, gin, rum and flavored vodkas.

Customer's Problem:

Customer was looking to reduce their overall operational cost and, at the same time, maintain product clarity when a new higher capacity bottling line was added to their operations. This new line brought their filling capacity to approximately 12,000 bottles per hour.

The conventional pleated polypropylene filter cartridges that were previously used did not offer the optimum sediment holding capability and flow capacity that was desired for their process. Downtime for filter cartridge replacement needed to be minimized.

Porvair Solution:

After meeting with the client and determining the needed flow capacity of the new bottling line, we recommended the use of our MicroKey™ pleated microfiberglass filter cartridges.

These 0.1-micron (nominal) filters provided longer life with better flow characteristics than the polypropylene filters previously used while maintaining product clarity and process quality standards. Because of the exceptional particulate loading capacity of these filters, the frequency of filter cartridge change-out is consequently reduced which lowers their total operating costs.

Project Overview:

The addition of the new bottling line with the MicroKey™ filtration system has allowed our client to increase their product output with cost efficiency to meet their growing demand in this fragmented and competitive market.

Product and System Information:

Filter Cartridges:

MicroKey™ pleated filter cartridges, 20" length, 0.1µm

Housing: Four round stainless steel filter housings with a swing bolt lid for easy filter cartridge change-out and tri clover tri clamp ferrules pipe inlet/outlet connections, which facilitates easy disassembly and cleaning.

Other Opportunities:

The water quality in vodka, whiskey, gin and rum plays an important role in the production of distilled spirits.

In addition to final product filtration prior to bottling, Porvair also provides water filter cartridges to treat the incoming water supply – either municipal or well water – for sediment removal and carbon filters for chlorine reduction in conjunction with reverse osmosis.

According to the American Craft Spirits Association (ACSA) in 2020, there are close to 2,000 active craft distilleries in the US. Producers saw a 23% growth in retail cases sold and a 29.9% rise in sales comparing 2018 vs. 2017, up \$3.7 billion.