



Pall Corporation

FB1790

A photograph of a brewery's filtration system. It features several large, vertical stainless steel cylindrical tanks arranged in a row. These tanks are connected by a complex network of pipes and valves. The scene is illuminated with warm, golden light, and there are some purple and yellow light trails or reflections overlaid on the image. The background shows more industrial equipment and structural elements of the brewery.

Pall in the Brewery (more value per hectolitre)

Filtration. Separation. Solution.SM

The Pall World

Pall Corporation is a world leader in the design, production and supply of filters, membranes and systems for the filtration and separation of liquids and gases. With an annual turnover of more than a billion dollars, we are able to handle major projects on a safe and sustainable platform.



Traditional filtration and stabilization systems

Whatever your brewery demands, Pall has designed filtration and stabilization systems that produce beer which is consistently clarified and effectively stabilized. The options are economically matched to individual breweries and range from the unique Ecoflux® Smartline small modular unit for micro breweries, to the **Ecoflux** candle system and the Primus horizontal leaf filter.

DE Management

The new technology BeFIS system successfully recycles DE powder and single use stabilization aids a minimum of 5 times. This method of clarification leads the way in automated DE management and has many economical as well as environmental advantages.

All options can be supplied with full service packages and ongoing consumable filtration supplies including filtration sheets, support sheets and the new enclosed sheet system, Suprapak™.



DE-free filtration

Recognizing the changes that the brewing industry is faced with in the area of beer clarification. Pall has invested significant R&D resource into developing a viable option for replacing DE clarification completely.

The **PROFI** system is a completely DE-free clarification system that improves quality and offers significant cost savings by reducing beer losses, chemicals for CIP and minimizing energy and waste-water costs.

Simple incorporation of stabilization and maximum flexibility is provided by the modular units.



Reliable filtration for every part of the process

The brewing process has many requirements for decontamination and the utilization of hazard analysis at critical control points (HACCP). Pall has solutions providing absolute* rated cartridges, for optimum reliable process quality. These are available for trap and fine filtration following DE systems and for the stringent requirements of final filtration, utilities filtration and vent filters.

Pall filter cartridges are not only manufactured they are engineered to match the needs of the brewing industry. Their unique design includes:

- The high flow potential of the Profile® Star filters
- The superior stability of the Ultipleat® **Profile** filters and the reliability in gas purification of the Emflon® PFW sterilizing filter range

*Based on the modified OSU-F2 test in water

Pall in the Brewery

Pall Food and Beverage are proud to invest in scientific advancement to ensure their customers get more value per hectolitre.



The management of yeast in the brewery

Yeast is a fundamental ingredient in the brewing process, effective removal of beer from spent yeast will allow significant cost savings.

Pall systems provide beer and yeast that is of a consistent quality, that can be reintroduced to the manufacturing process. The strategy of providing individual choices appropriate for different breweries has been continued in this area of yeast management. The PallSep™ system offers high quality and good economical payback for large breweries.

The Pall® Keraflux™ solution is based on ceramic technologies and is available in both Batch TFF and Conti TFF and if a maximum level of extraction is required, a dia TFF system is also available.

Sterile beer filtration at the point of use

The CFS concept was a step change in the economical management of cold stabilization. Cold stabilization requires effective integrity testing and adequate cleaning and sanitization of the filters in-situ.

Pall recognised these significant issues and developed and patented the **Pall** CFS (Cluster Filter System) solution.

This solution allows each cluster of filters to be individually integrity tested. Any cluster can be isolated from the main beer flow, which allows individual cluster cleaning and flushing thus improving cleaning efficiency whilst reducing water consumption and optimizing filter lifetimes and whole life costs.

Water management strategy

Beer production requires large volumes of water in defined qualities. Significant cost savings are achievable for breweries by considering opportunities for simplification of the water treatment for incoming fresh water, the recycling of process water or securing a more economical water source e.g. surface water.

Filtration has a part to play in this water management strategy. Our innovative high flow cartridges for handling the huge incoming water streams are an example of our ability to provide reliable, high quality and economical solutions. For Micro-filtration, the newly developed Aria membrane systems ensures a maximum hygienic standard fulfilling all legal requirements affording the optimum protection of downstream nano-filtration, reverse osmosis and ion exchange systems by supplying drinking water quality feed-water.

Key to your success:

- High Flow water filter systems specifically designed for the efficient removal of particles and coarse colloids
- Aria system supplies defined water conditions in terms of micros, colloidal substances to user and down stream installations
- Nano and RO Filtration give defined chemical qualities for brewing water and process water in power plants and steam generators

Pall's know how in the selection and orchestration of the most appropriate technology is key to a brewery's economic water supply. Minimized water losses, high process reliability and the release of sand filter and ion exchanger result in major financial advantages.

Your Strategic Partner - Pall Support

Pall customer care is the complete support service available to the brewing industry, allowing our customers more time to focus on what they do best - running their breweries.

- Sales and Marketing
Regional contact for application and product support, e-commerce and commercial aspects
- Scientific Laboratory Services (SLS)
Contact for scientific questions, process assessments, feasibility and filterability studies
- Pall Advanced Separation Systems (PASS) System engineering and project management team
- Pall Technology Service
Global service network for system inspections, upgrades, audits, maintenance and spare parts



Pall Corporation

Pall Food and Beverage

New York - **USA**

800.360.7255 toll free
+1 516 484 5400 telephone
+1 516 625 3610 fax

Bad Kreuznach - Germany

+49 (0)671 88 22 0 telephone
+49 (0)671 88 22 200 fax
infobk@europe.pall.com

Portsmouth - UK

+44 (0)23 9230 2269 telephone
+44 (0)23 9230 2509 fax
processuk@pall.com

Contact us on the web at www.pall.com/foodandbev

Pall Corporation has offices and plants throughout the world in locations including: Argentina, Australia, Austria, Belgium, Brazil, Canada, China, France, Germany, Hong Kong, India, Indonesia, Ireland, Italy, Japan, Korea, Malaysia, Mexico, the Netherlands, New Zealand, Norway, Poland, Puerto Rico, Russia, Singapore, Spain, South Africa, Sweden, Switzerland, Taiwan, Thailand, United Kingdom, and the United States. Distributors are located in all major industrial areas of the world.

 Pall, Ecoflux, Emflon, Pallsep, Profile, Suprapak, Ultipleat and Ultipor are trade marks of Pall Corporation.

PROFI is a co-operation between Pall Food and Beverage and GEA Westfalia Separator Food Tech GmbH

® indicates a trade mark registered in the USA

Filtration.Separation.Solution is a service mark of Pall Corporation

© Pall Europe Limited 2005

CS912/72005

Filtration. Separation. Solution.SM