

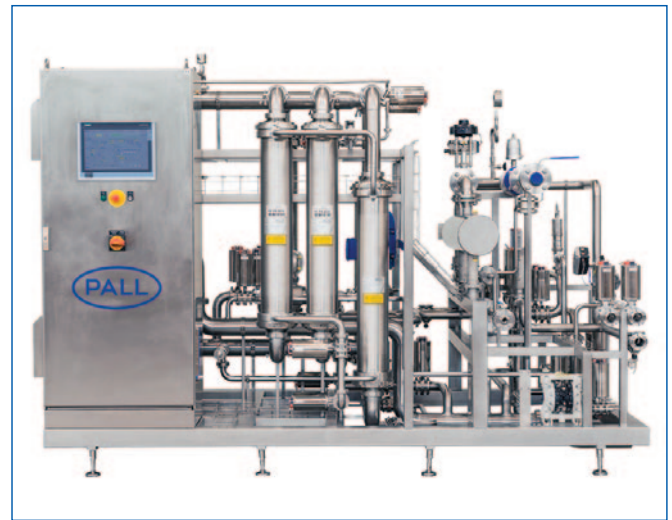
PROFi Craft Systems

For Beer Clarification and Stabilization

Pall's PROFi Craft System is a crossflow membrane-based solution for beer clarification and stabilization specifically designed as an alternative to traditional Diatomaceous Earth filters used in Craft Breweries. Drawing on the experiences at large scale installations, the PROFi Craft combines the advantages of an automated process with simple and robust operation flexible to accommodate the variety of beer types and batch sizes required by the breweries.

Description

The PROFi Craft is a fully automated standalone crossflow filter system for small to medium throughputs. The system operates in combination with a centrifuge positioned upstream of the system to reduce the solids load on the membranes resulting in prolonged membrane life, reduced operation cost and beer losses. Beer flow is always in the forward direction eliminating



PROFi Craft System

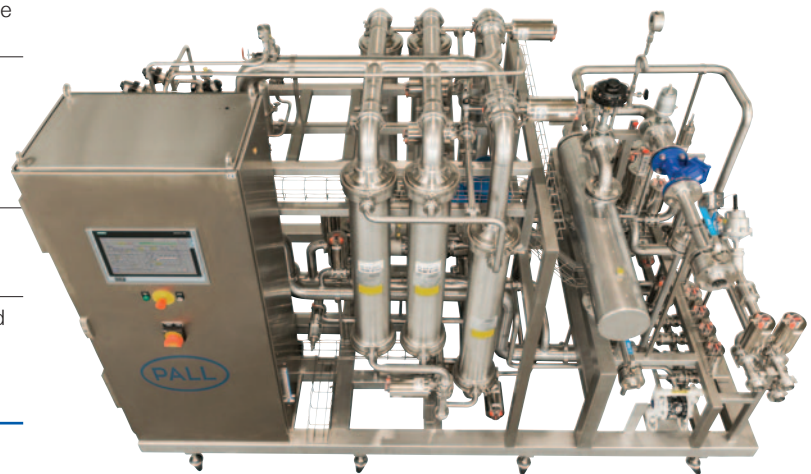
Features	Benefits
Cluster design with unique lower positioned end module	<ul style="list-style-type: none"> Emptying through lower positioned module in forward direction reduces beer losses to < 30 liters/run Negligible oxygen pick up (typically < 0.02 ppm)
Cross failure test on membrane function prior to every filtration run	<ul style="list-style-type: none"> Ensures high microbial safety for every batch
Forward flow principle	<ul style="list-style-type: none"> Reduced solids load at filter inlet results in prolonged cycle time and membrane life Eliminates contamination risk Fast brand changes with negligible beer losses Low crossflow velocity for gentle beer filtration
Patented Pall membrane design with stainless steel housing	<ul style="list-style-type: none"> Quick and easy membrane changes Robust design with optimal service life Operator safety
Simple cleaning process	<ul style="list-style-type: none"> Readily available, standard cleaners to minimize operating costs
Plug and play standalone system	<ul style="list-style-type: none"> Fast and flexible installation and start up Easy to operate – no special skillset required

the need for a retentate tank for easier installation and operation. The system is skid mounted and includes:

- Filter housings with membrane inserts
- Instrumentation and connection valves for beer, water, steam and cleaner inlet and outlet
- CIP capability including heat exchanger, dosing pumps and water filter
- Control cabinet and HMI for fully automated operation

Applications

The PROFi Craft System is applicable for clarification of beer including cold hopped beer and mix beer drinks.



Technical Data

	PROFi Craft 6	PROFi Craft 12
Typical flow rate (hl/h)	30 – 80	80 –150
System volume (l)	300	380
Max pressure (mbar/psi)	2,000/29	2,000/29
Footprint (lwh)	3220 x 1680 x 2305	3720 x 1680 x 2312
Weight (kg/lbs)	1,700/3748	1,950/4299
Beer Connection	DN 50	DN 65
CE Mark	Yes	Yes

Modules

Pall patented design including hollow fiber insert for usage in stainless-steel housings:

Membrane Material	Polyethersulfon (PES)
Pore structure	Reverse asynchron
Pore size	0.65 µm
Fiber diameter	1.4 – 1.6 mm
Filter area /module	12,3 m ²
Typical flux	50 – 80 l/m ² h
Yeast removal rating %	99.9998

Membrane Cleaning

- Cold and warm water flush at max 64 °C- chemical clean with 0.5 to 1% caustic at 64°C
 - Regeneration step with Ultrasil CMF and Peroxide at 75 °C
 - Integrity testing after each cleaning/regeneration
- | | |
|---------------------------------|--------|
| Total time water/caustic flush: | 45 min |
| Total time complete cleaning: | 90 min |

Quality

PROFi Craft is designed for a gentle crossflow filtration at low shear force velocity in order to maintain beer characteristics throughout the filtration process. Fully automated operation results in negligible oxygen pickup enabling fresh product from start to end.

Materials and Regulations

PROFi Craft Filtersystems and modules are manufactured according to ISO 9001:2008 certified Quality Management System. Systems are CE marked. For Food Contact Compliance info please refer to the Pall website www.pall.com/foodandbev for declaration of compliance to specific National Legislation and/or Regional Regulatory Requirements for food contact use.

For specific enquiries please contact Pall to provide you with more detailed information and application specific data.



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Please contact Pall Corporation to verify that the product conforms to your national legislation and/or regional regulatory requirements for water and food contact use.

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