StrassBurger Filter

MICROCROSS®-SYSTEM

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Crossflow technology

As the name suggests, **crossflow filtration** utilises the cross-flow principle.

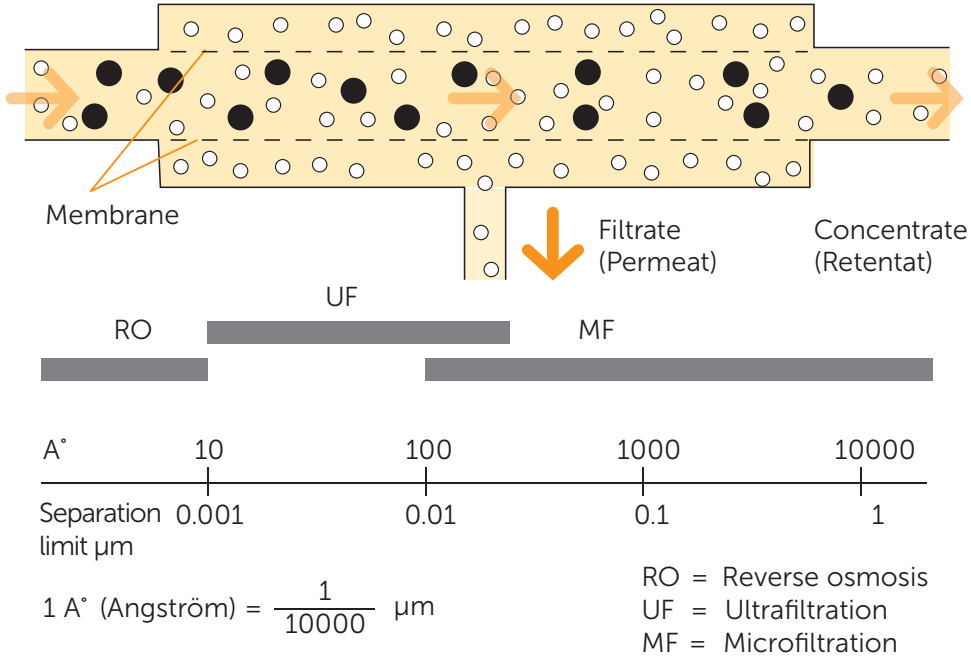
In this process, pressure is applied to force the medium to be filtered through defined pores in a membrane. To avoid pores becoming blocked, solids are kept permanently in suspension by maintaining a high overflow speed within the hollow fibres.

The size of the pores determines whether this is a **microfiltration** process.

During the filtration process, the retentate concentration of the retained solids rises within the system as a whole.

Our specially designed hollow-fibre module has proven its worth for the filtration of wine, fruit juice and vinegar.

An asymmetric membrane structure is used here to improve filtration performance. Pores that grow wider on the outside and a completely smooth surface on the inner surface result in higher rates of flux while also hindering the adsorption of colourants and flavourings. Backwashing and cleaning restores the system to its original level of output.



Hollow-fibre module cross-section

Filtration sequence

A **circulating pump** keeps the medium flowing over the hollow fibres while a **pressure booster pump** creates the filtration pressure required within the hollow fibres.

Unfiltered product is fed into the circulation system to match filtrate outflow; a small quantity of retentate is continuously drained into the holding tank. As a result, the proportion of solids and colloids continues to rise in the holding tank.

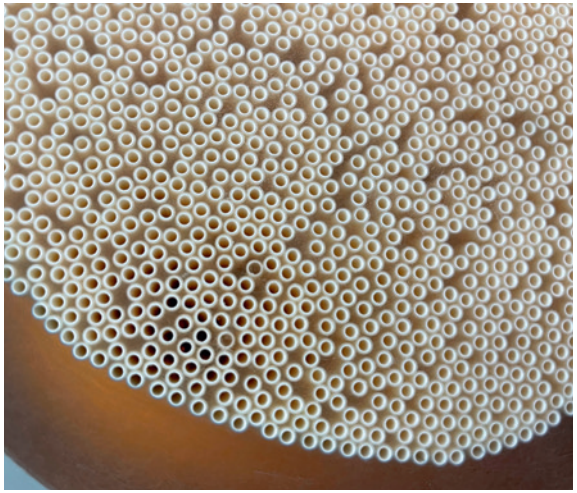
Filtration performance is maintained by periodic backwashing of the hollow-fibre modules.

Key advantages
Reliable, next-generation modules minimise impact on product
Monitoring via Siemens Smart Client (optional)
Intelligent process control ensures straightforward, safe operation
Compact system form factor with high output density

While developing the Strassburger **MicroCross® system** for the filtration of wine, fruit juice and vinegar, we were looking to maximise the level of product quality obtainable.

The **MicroCross® system** can also be used at various stages within a modular installation setup.

Deployment Application options
Filtration of grape juice
New wine
After first tapping
Filtration before bottling



Hollow-fibre module cross-section

Versions

The **MicroCross® system** is available with several levels of automation. With the automated versions, the system is operated by a programmable logic controller from von Siemens.

Manual for small-scale filtration output and unsupervised operation, but with valves that require manual operation.
→ Can be supplied for 2 modules

Semi-automatic with manual selection of the individual process steps (which are then automated).
→ Can be supplied from 4 modules

Fully automatic for 24-hour operation with automated backwashing and cleaning intervals for large-scale output.
→ Can be supplied from 4 modules

Key features of the Strassburger MicroCross® system
Minimal impact on CO_2 and flavour profile
Almost full regeneration with hot-water backwashing
Wine temperature remains virtually constant

MCC 120/2 C 9 kompakt

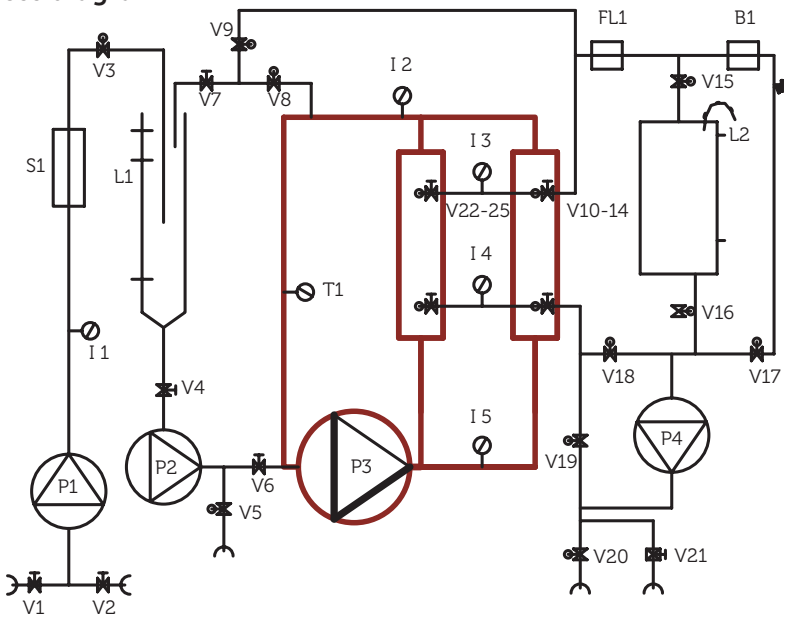
Quality and service
When selecting our component manufacturers, we are looking for proven quality and therefore only leading brands exclusively.
A partner you can trust – thanks to our decades of experience in the development of filtration systems.

Technical data

Type MCC	No. of modules	Filter surface area m²	Output l/h	Dimensions L x W x H in mm	Weight kg	Power consumption kW
120/2 C 9 kompakt	2	18	1000 – 2000	1000 x 1100 x 1800	350	5.0
120/4 C 11	4	42	1900 – 3800	1850 x 1050 x 2050	975	9.0
120/5 C 11	5	52.5	2400 – 4700	2000 x 1050 x 2050	1050	11.0
120/6 C 11	6	63	2800 – 5700	2000 x 1100 x 2050	1150	13.0
120/8 C 11	8	84	3800 – 7500	2300 x 1100 x 2050	1350	14.5
120/10 C 11	10	105	4700 – 9400	2600 x 1100 x 2050	1550	16.0
120/12 C 11	12	126	5700 – 11300	2900 x 1100 x 2050	1750	18.0

** The average output applies for normal wine to be filtered, and will depend on the wine type, pre-treatment and temperature*

Process diagram



P 1
Feed pump
P 2
Pressure booster pump
P 3
Circulating pump
P 4
Backwash pump
V 1 – 25
control valves
L 1 + L 2
level control
S 1
Fine screen
I 1 – 5
Pressure display sensor
FL 1
Flow control
B 1
Backwash control

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Version 1.0, last updated 2021_11