STRASSBURGER FILTER

MICROCROSS®-SYSTEM

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Crossflow technology

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

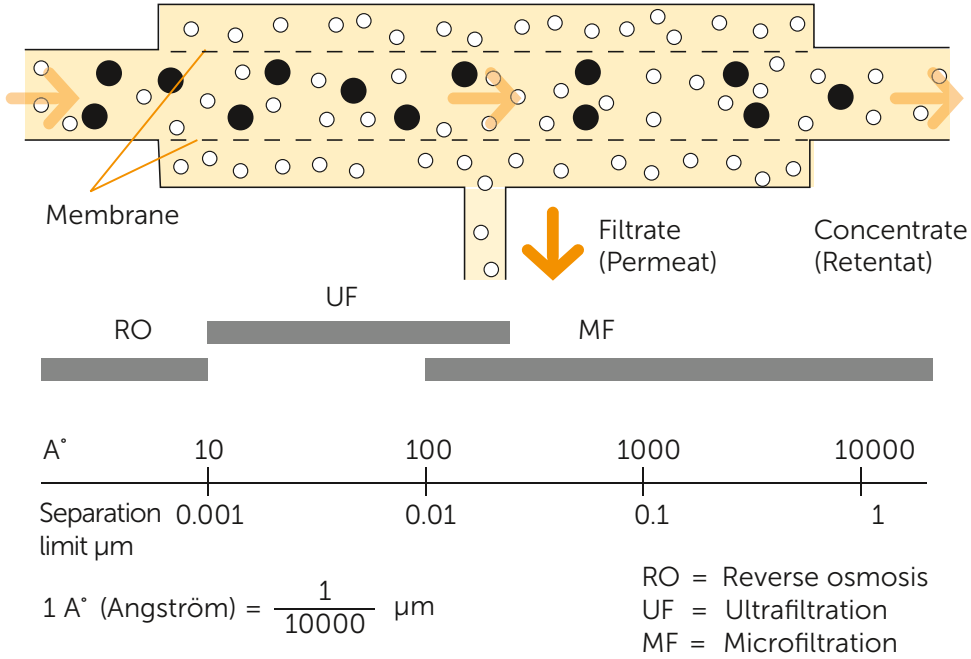
In this process, pressure is applied to force the medium to be filtered through defined pores in a membrane. To avoid pores becoming blocked, solids are kept permanently in suspension by maintaining a high overflow speed within the hollow fibres.

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
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
Fermentation stop
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 2 modules

Fully automatic for 24-hour operation with automated backwashing and cleaning intervals for large-scale output.
→ Can be supplied from 3 modules

Key features of the Strassburger MicroCross® system
High-performance modules
Maximum protection
Complete regeneration after rinsing/cleaning
Chemical suction (premixed)also for manual and semi-automatic standard

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.

MCC 120/2 C 9 kompakt

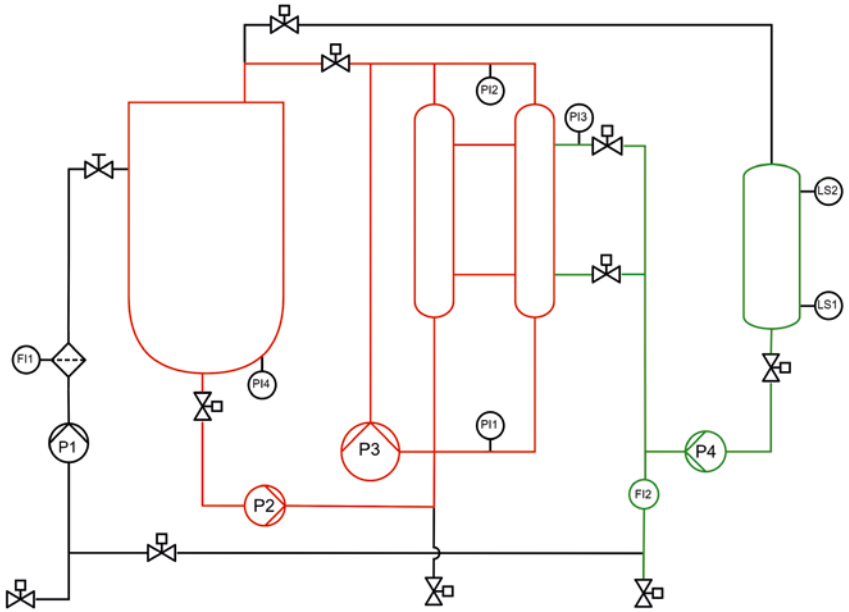
Options
Supply pump
Remote maintenance
Additional sightglass lighting
Rental filter available

Technical data

Type MCC	No. of modules	Filter surface area m²	Output l/h
120/2 C15	2	30 m²	max. 3500
120/3 C15	3	45 m²	max. 5000
120/4 C15	4	60 m²	max. 6500
120/5 C15	5	75 m²	max. 8000
120/6 C15	6	90 m²	max. 10000
120/7 C15	7	105 m²	max. 11500
120/8 C15	8	120 m²	max. 13000

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

Process diagram



P1
Feed pump
(optional internal/external)

P2
Pressure booster pump

P3
Circulating pump

P4
Backwash pump

PI1 - PI4
Pressure sensors

FI1 / FI2
Flow sensors

LS1 / LS2
Level limit switches

Retentate
Permeate

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