

CLEARFLOW TECHNOLOGY

CROSS FLOW MEMBRANE FILTRATION



SEPARATION SYSTEMS FOR A WIDE RANGE
OF APPLICATIONS AND REQUIREMENTS



Characteristics:

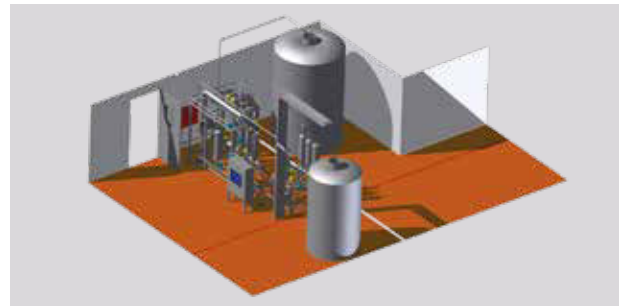
- Systems for pilot scale and industrial applications
- Cut-off for nano-, ultra- and microfiltration
- Modules with polymer or ceramic membranes
- Integrated CIP (Cleaning in Place) system
- Optional hygienic design for sanitary operations
- Different automation standards on demand

CLEARFLOW TECHNOLOGY

WE SOLVE YOUR FILTRATION TASK

For more than one hundred years we have been developing state of the art filtration units to remove particles or biomass from liquids. While in some industries the use of filter aids is still common we have applied membrane processes since the invention of this very effective technology some decades ago. Today we offer

cross flow filtration package units in different scales and with a number of different modules for non sterile or sterile applications. Additionally, we can combine „cross flow filtration“ with „dead end filtration“ units to achieve the most efficient solution for a given separation task.

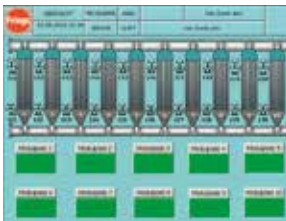


CLEARFLOW for Hygienic Processes

- Continuous sterile filtration
- Design for NF-, UF- and MF-Modules
- Hygienic design standards
- Cleaning in place (CIP)
- Automation with all necessary sequences
- Control, data management and remote system

Services, Engineering and Design

- Laboratory and pilot scale trials
- Basic and detail engineering
- 3D-planning
- Manufacturing
- Installation
- Start-up



Automation, Control and Visualisation

Depending on the process specification and the demand in control and monitoring we will equip the filtration units with different automation systems. Configurations from manual to fully automated systems can be delivered. The standard configuration includes sensors and amplifiers for temperature, pressure, filtrate flow and levels as well as the relevant controls and sequences for operation and cleaning.

General Specifications of CLEARFLOW Filtration Units

| | |
|--------------------------|---|
| Polymer membranes: | Hollow fiber, tubular, spiral wound |
| Ceramic membranes: | Tubular; single and multichannel |
| Module configuration: | Serial, parallel and hybrid |
| Cut-off microfiltration: | 0.14 / 0.2 / 0.45 / 0.8 / 1.4 μm |
| Cut-off ultrafiltration: | 1 / 3 / 8 / 15 / 50 / 150 / 300 kDa |
| Cut-off nanofiltration: | < 1 kDa |
| Membrane surface: | 0.5 – 250 m^2 |
| Sanitisation: | Sterilisation in place (SIP) |
| Cleaning: | Cleaning in place (CIP) |
| Antiscaling: | Automated back flush system |
| Automation: | Siemens PLC |