



## Application

The ultrafiltration units of the KOMPasep C-line can be used for recycling and disposal of different production effluents or for treatment of production waste water, the temperature of which may be as high as 90°C when ceramic membranes are used.

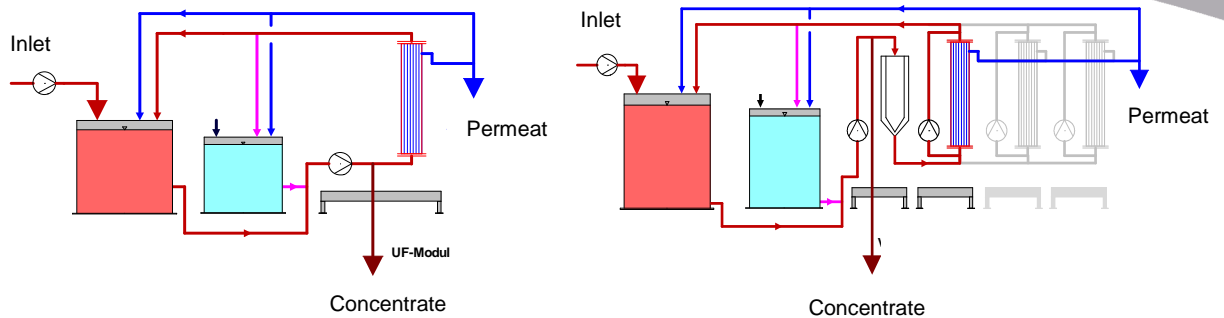
- Degreasing and cleaning solutions
- Cooling lubricants
- Oil/water emulsions
- Grinding waste water and dispersion
- Photo resist effluents
- Recycling of oil from rinsing water
- Laundry water
- Various special applications

## Process Characteristics

The ultrafiltration is a physical separation process. It separates aqueous dispersion and emulsions. The medium to be separated flows along a membrane with high velocity and under specific pressure (so-called “cross-flow” mode).

The pore size of the membrane is carefully chosen so that the passage to the smaller molecules like water and solved materials is granted (permeate) whereas larger molecules such as oils or particles are not allowed to penetrate the membrane (retentate).

The separation process can basically be used either for recycling or disposal.



Type	CK1	CK2	CK3	CK3-2	CK3-3	CM5-1	CM5-2	CM5-3	CM5-4	CM5-5	CX9-1	CX9-2	CX9-3	CX9-4	CX9-5
Flow l/hr	100	120	200	400	610	380	760	1140	1520	1900	640	1280	1940	2580	3220
Membrane area m <sup>2</sup>	1,4	1,7	2,9	5,8	8,7	5,4	10,8	16,3	21,7	27,2	9,2	18,4	27,6	36,8	46,0
Execution	Komp.	Komp.	Komp.	Loop	Loop	Loop	Loop	Loop	Loop	Loop	Loop	Loop	Loop	Loop	Loop
Material of piping	PPH, PVC or VA														
Length mm	900	900	900	2500	3400	1600	2500	3400	4300	5200	1700	2700	3700	4700	5700
Width mm	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	2000	2000	2000	2000	2000
Height mm	2300	2300	2300	2300	2300	2300	2300	2300	2300	2300	2700	2700	2700	2700	2700

Komp. : compact execution  
 Loop: loop execution, Feed and Bleed  
 measures without tanks

### Description of the plant

The KOMPasep-C-Line units consist of storage tank, pre-filtration (option), working tank, ultrafiltration unit and rinsing tank.

Taking procedural and energetic considerations into account, these plants are offered in two different designs in dependence on size: compact type and loop type (Feed and Bleed). The operation of these units is subdivided into the following main steps:

- Separation: Filtration with drain of the permeate and post feeding from the storage tank into the work tank
- Thickening: Filtration with drain of the permeate without post-feeding, for the up-concentration (e.g. oil content 30-40%)
- Rinsing: Cleaning of the membrane at the completion of an operating cycle

### Advantages

- High flow rate
- Cost saving through recycling or minimising of the disposal costs
- Completely preassembled and function tested
- Compact design
- Almost all units are expandable with additional modules without changing of peripheral equipment
- Modern control concept at a central PLC unit
- Energy saving through loop technology
- Wide range of applications through variation of membrane types
- Long durability of the membranes
- Optimal concentration or recovery rate
- High reliability owing to modular design

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