picture: Ultrafiltration unit UF 6D6 with CEB-dosing pump (optional)

Amortisation of the unit within 1/2 - 2 years thanks to lower water supply costs

e.g.: UF 4D6 + disk filter DISC UF 40
consumption 300 m³/day, tap water: 1 €/m³
Amortisation within < 1 year

Ultrafiltration units UF 1D6 − UF 8D6

70 - 1100 m³/day or 3 - 48 m³/h

Ultrafiltration unit for the filtration of pre-filtered or settled surface or well water, operating on the principle of ultrafiltration.

- Significant **reduction in operating costs** by use of raw water (such as surface or well water) instead of city water
- Ultrafiltrate water as **ideal raw water supply** for subsequent reverse osmosis unit
- **Fully automatic operation** with periodic backwashing of the UF membranes with ultrafiltrate
- **Best use for raw water with contamination in the range of 20 to 0.2 µm** and turbidity levels **< 5 NTU**
- No operating pump required: **use of on-site water pressure** of 2.5 bar

Ultrafiltration Units UF 1D6 – UF 8D6

70 - 1100 m³/day or 3 - 48 m³/h

Unit design

Stainless steel main frame.

Raw water input at 2,5 bars needed to feed the system starting with inlet valve, high efficiency **ultrafiltration modules**, vertical mode, housing multibore PES-fibres as membranes, **separate tank and frequency-controlled pump** for backwash and **optional CEB-operation** driven by optional available **dosing pumps** for the introduction of CEB-Chemicals (CEB = chemical enhanced backwash).

Pneumatic operated valves (air-compressor optional available) with solenoid pilot-valves for fully automated filtration and backwash-cycles, optional SIP/CIP-cycles.

Monitoring units - such as pressure gauges for inlet and outlet pressure of the ultrafiltration modules. Pressure switches for compressed air monitoring, pressure sensors for transmembrane pressure monitoring. Sample valves for raw water/filtrate and backwash water.

Flow rate sensor each for filtrate and backwash water flow rate.

Control cabinet with lockable main switch, electrical switch gear controlling the backwash pump.

P**LC SIEMENS S7-1200 control unit** with 7" Comfort Panel with graphical display and logging functions for information on operating status and automatic sequence of operating and backwash cycles in alternating top/bottom mode.

Free adjustable times for frequency backwash, rinse, disinfectant rinse and duration of each step. Fault indicators for level underflow in the filtrate tank.

Inputs: 2 fixed level switches ON/OFF (demand /stop) filtration, switch-off by external signal, backwash interlock, (feed water pump malfunction).

Outputs: Collective malfunction signal, collective warning, filtration, backwash, CEB, release of feed pump as potential-free signal. Integrated Profinet interface for data transfer (current operating status, error messages, same IP network required).

Options and accessories:

- Disc filter system **DISC UF** for pretreatment
- chemical enhanced backwash by **CEB-dosing pump**
- **Pilot unit UF PILOT 1** for safe design of the system under real conditions

Unit completely wired, pre-assembled and ready for installation. Electrical equipment in accordance with VDE 0100 part 600, VDE part 1. The system is designed for a free outlet on product and waste water side.

For effective pre-treatment we recommend the use of Disc filters, type DISC UF to protect the UF system from rough dirt particles, as well as the use of inorganic coagulants (FeCl3) against organic foulants (particularly with COD-values >2 mg/l) and small colloids.

Fully automatic, periodic CEB cleaning procedures are enabled using dosing pumps CEB 30/50 (optional).

Requirements referring to the treatment of work water need to be checked on site.

Technical data		UF 1D6	UF 2D6	UF 4D6	UF 6D6	UF8D6
Filtrate flow rate·	m³/h	3 - 6	6 - 12	12 - 24	18 - 36	24 - 48
Filtrate recovery approx.	%	95				
Filtrate counter pressure·	bar	0.1 - 2.0				
Separation limit approx.	µm	0.02				
Feed water pressure min/max	bar	2.5 - 4				
Feed water temperature	°C	5 - 35				
Turbidity	NTU	< 5				
Raw water connection	DN	32	50	65	80	100
Filtrate connection	DN	32	50	65	80	100
Waste water connection	DN	50	80	100	125	150
Motor power	kW	2.3	7.5		11.0	15.0
Voltage	V/Hz	3 x 400/50				
Protection class		IP 54				
Controller		SPS Siemens S7-1200 incl. 5.7" touch screen display				
Ambient temperature max.	°C	40				
Rel. humidity max.		<95 %, non condensing				
Height	mm	2,050	2,100	2,200		2,500
Width	mm	2,200	3,050	4,200	4,800	5,450
Depth	mm	1,150	1,850	2,500	2,800	3,000
Weight	kg	220	560	1,000	1,600	1,800
Item no.		428 044	428 054	428 064	428 074	428 084

· Filtrate flow rate depends on the raw water quality. The system is designed for a free outlet on product and waste water side. We will gladly provide the performance data for your operating parameters.