

ultrafilter international®

Oil/water separator for compressed air condensate

Application:

Everywhere, where legal supports for the disposal of compressor condensate exist.

The ultrafilter international® oil/water separator for the purification of air compressor condensate is particularly used with difficultly separable condensate e.g. an emulsion.

The amounts of accumulating condensate can vary depending the place of installation and the season.

Filtrate guarantee:

The physical separation principle guarantees a filtrate quality of less than 5 mg/L to residual oil content* in water, which is usually lower than the limit value that legally prescribed.

* (measured acc. ISO 9377-2)

Function:

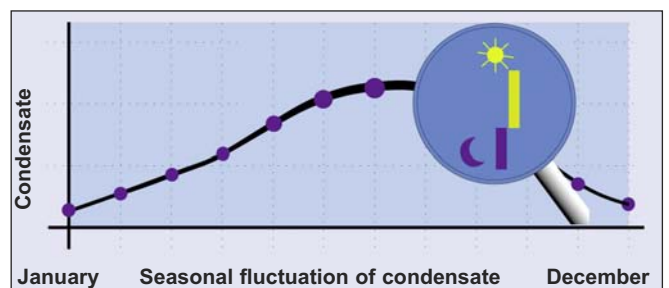
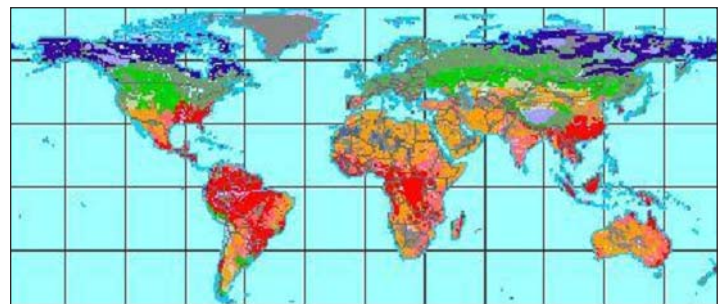
A pressure relief chamber separates condensate and expanding air. The condensate then passes a sedimentation compartment – easy to remove and therefore easy to clean. In order to get a maximum separation, free oil is prematurely rerouted via an overflow into a can. Two coalescence filter reduce the oil content of the condensate again, before it is filtered off after buffering in an internal tank in the actual process vessel.

Oil and water are apart-filtered on reason of their different molecule sizes, i.e. oil molecules are held back, water molecules pass the filtration module. So prepared condensate can be introduced without further procedures into the public sewer net.

Maintenance:

Remaining maintenance work is emptying the oil reservoir and the refill of the cleaner. All other expirations were automated by the intelligent control. The LCD display indicates clear text information.

By the constant measurement of the current condensate entry the plant adapts automatically seasonal, production- or time of day-conditioned fluctuations. The most economical regeneration time of the filtration module is determined by an alignment of the condensate INPUT with the filtrate OUTPUT. The operating costs of the plant are minimized by the intelligent control.



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Features:	Benefits:
UFA-AC	The comparison INPUT vs. OUTPUT extends the regeneration cycles. Thus the running costs of the unit are minimized. The automatic cleaning guarantees the longest service intervals for the user.
Programmable controller	Intelligent process control solution with high process security and best industry standard.
Network connection	To visualization and remote diagnostics for control stations etc. the controller is optionally expandable for Modbus, Profibus and Ethernet.
LCD display	Clear text messages make service and trouble shooting easy.
Process safety	By a thought out system the user will be informed in time, if a manual intervention is necessary, e.g. signaling via an potential free alarm contact for fault signals such as overflow alarm, defective sensors and much more.
Ceramic membrane	High thermal, mechanic and chemical resistance: 1 year service life guarantee!
All sealings made of VITON	Only VITON guarantees highest possible safety for condensate with its various ingredients.
Frost protection for the membrane	The operating temperature is continuously monitored, the heater starts automatically to ensure a minimum process temperature to protect the membrane from freezing conditions.

Performance data:			
Type	Output*	Compressor performance	
		Continental climate (kW)	Tropical climate (kW)
UFA-AC	max.		
0008	8 l/ hr	90	45
0016	16 l/ hr	160	90
0032	32 l/ hr	315	160
0064	64 l/ hr	710	315
0096	96 l/ hr	1025	550
0128	128 l/ hr	1420	710
0192	192 l/ hr	2050	1100
0256	256 l/ hr	2840	1420

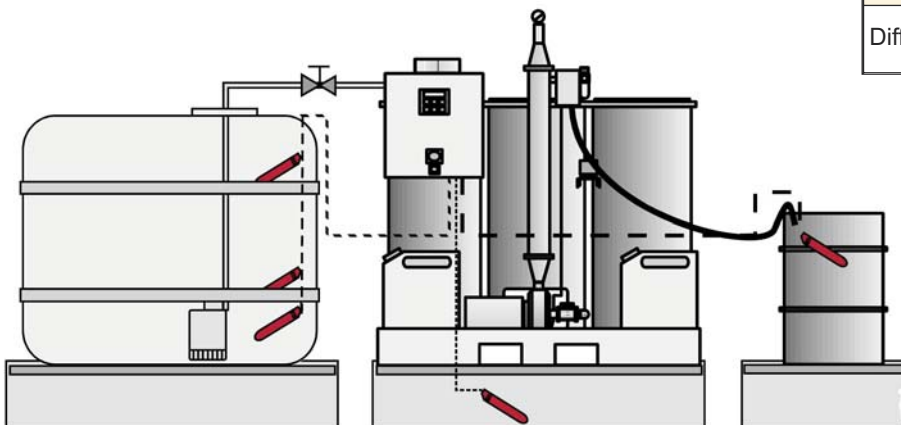
* dependent on used type of oil and its additives

Materials:	
Vessel	PP, recyclable
Filter/ demister	PUR-foam
Membrane	Ceramic
O-Rings, sealings	VITON
Process pump	Stainless steel
Valve block	Aluminium

Temperatures:	
Operating temperature	+1°C to +70°C
PH-range of the membrane:	1-14 to + 60°C

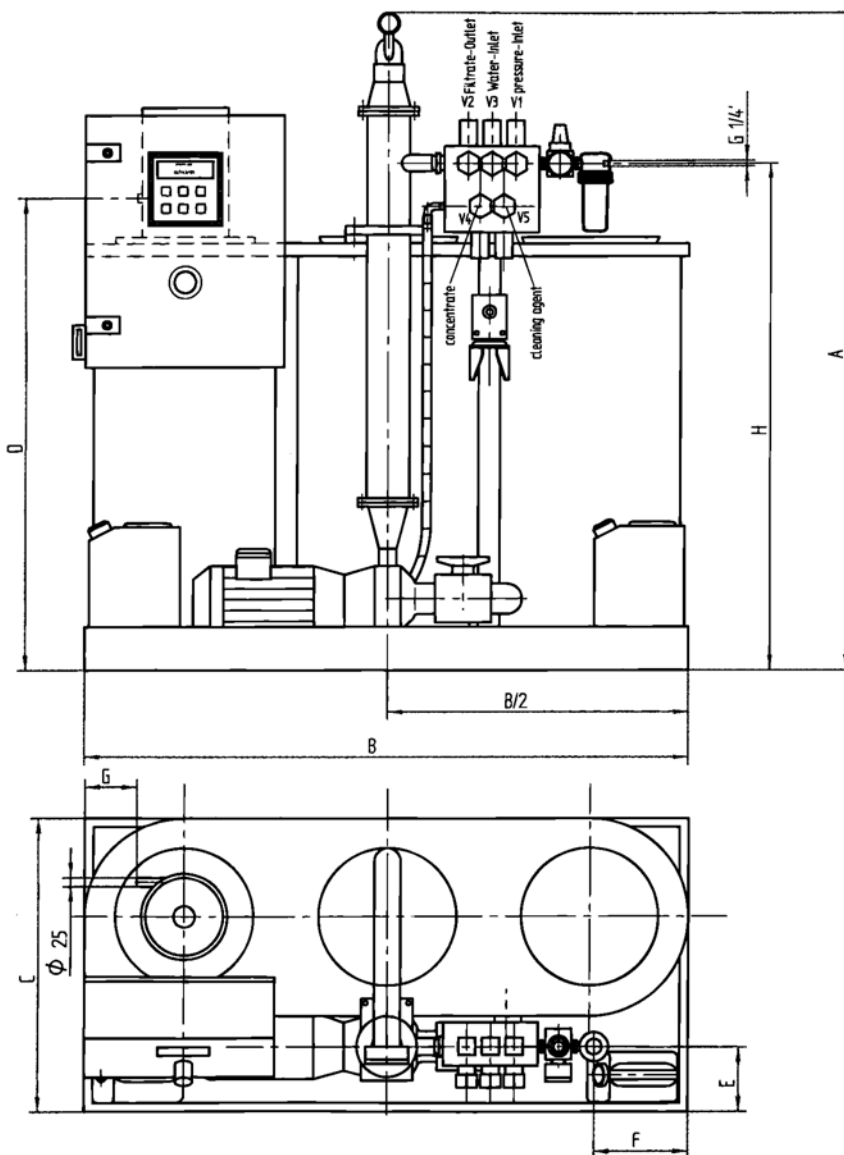
Optionen:	
Heater	Frost protection
Header tank	As buffer storage upstream of the plant at high irregular amount of condensate.
Oil resistant float switches	For the safety of a header tank or further external collecting vessels.
Pump for header tank	230 V/ 50 Hz 115 V/ 60 Hz
Catch pans	To the overflow protection of the unit or a header tank, legally prescribed.
Network module	For the connection to an existing firm network (LAN) for the fast access of the unit status or fault signals.

Consumtion material:
Different cleaning agents



Example of a complete installation

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V1 = compressed air:

V2 = filtrate:

V3 = water:

V4 = concentrate:

V5 = cleaning agent:

Pmin. = 5,5 bar;

G 1/4 at filter

G 1/2 in valve block

G 1/2 in valve block

G 3/8 in valve block

G 3/8 in valve block

Type	Dimensions					Volume	Electrical performance*
	A	B	C	D	G	Vessel	max.
	mm	mm	mm	mm	mm	Liter	kW
0008	1500	1050	700	1025	100	132	2.5
0016	1500	1050	700	1025	100	132	2.5
0032	1650	1500	800	1225	160	430	4.0
0064	1750	1500	800	1225	160	430	4.0
0096	1920	1660	900	1430	165	622	5.5
0128	2000	1840	960	1530	200	847	7.0
0192	2090	2060	1100	1630	275	1160	10.5
0256	2190	2300	1200	1800	320	1660	15.0

* 3 x 400 V/ 50 Hz, alternative 3 x 440 V/ 60 Hz available