Condensate Purification

ultrasep

Condensate Drain

ultramat

Member of

COMPRESSED AIR AND GAS INSTITUTE CAGI

Condensate drain ultramat: Drainage without compressed air loss (zero loss)

Condensate drainage without compressed air loss actually pays well:

- The investment costs for a UFM-T unit are equivalent to the energy savings achieved in half a year. The economic facts. If a time-controlled drain with a $^{1}/_{8}$" opening blows off just 10 secs of air (at 115 psi) every 10 mins, the cost will be US $ 509 each year. And for the ultramat? No waste of air and US $ 6 for electricity on avarage!
- Essentially improved function of oil/water separators due to the reduced condensate emulsification – particularly as compared to time-controlled drains.
- Low-noise operation: particulary important, if the condensate drain is installed at workplaces.

Ideal design and function:

Float- or time-controlled drains are very sensitive to dirt particles in the condensate – with the large outlet cross section and without any moving parts, the UFM-T guarantees reliability and an optimum price/performance ratio.

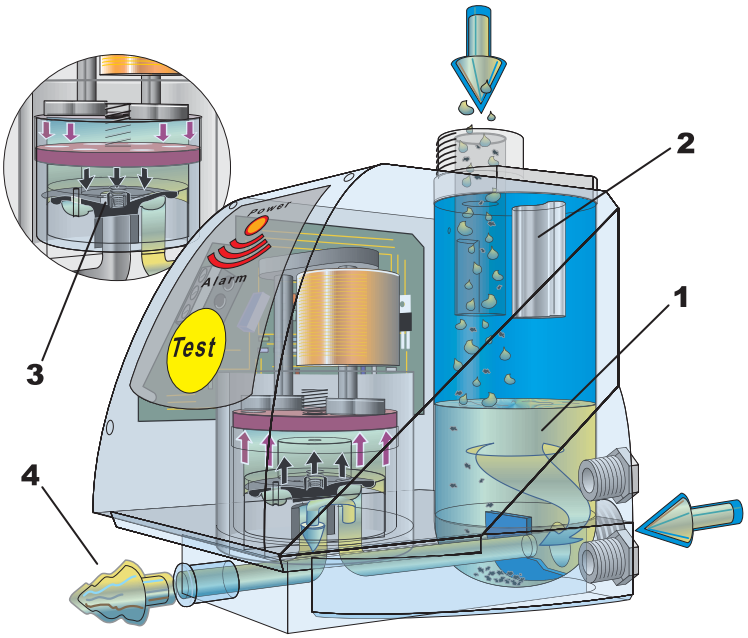
Features and advantages:

- compact, rigid aluminium structure
- standard coating providing maximum protection against corrosive stubstances
- ergonomic design:
  rounded, clearly visible control panel
- standard equipment: potential-free contact
- worldwide application due to the voltage range from 24 V to 230 V alternating or dual voltage, without additional voltage transformer
- easy installation and maintenance

Rear view with condensate entry from behind

The function

Condensate collects (1) in the drain, the diaphragm is closed by the system pressure.
As soon as the condensate reaches the sensor (2), the diaphragm (3) opens and the condensate is ejected by the system pressure. The diaphragm then closes before the air can escape (4). Condensate purification with ultrasep superplus.



Condensate purification with ultrasep superplus

With an oil content of 5 % on an average, condensate is too harmful to the environment and must not pass into the wastewater without purification.

The limit value prescribed by legislation comes up to 20 PPM (measured according to DIN 38409H18) – some local regulations of today are even more restrictive.

ultrafilter systems for oil/water separation fulfill these requirements, reduce disposal costs and protect the environment.

All systems are tested by independent authorities and approved by the IFBT - Institut für Bautechnik (Structural Engineering Institute) in Berlin.

Features and advantages:

- The optimum solution for each application: 7 sizes for compressor capacities ranging from 75 cfm to 4,000 cfm.
- The highly sensitive special activated carbon is protected by a preadsorbent.
- A bright yellow floater warns against critical operating conditions.
- Service label with all maintenance instructions required arranged on the unit's cover: non-erasable, indelible.
- Easy and quick filter exchange.
- Wastewater test set included in the scope of supply.

ultrasep superplus – *well-considered details which prove to be reliable in application and which really pay.*

Automatic maintenance indication: The floater rises, thus indicating the degree of pollution of the pre-filter and the adsorption filter. Preventive maintenance of the oil-/water separator can thus be carried out and will help to save further costs.

Test set for operational safety: The test set – which is included in the system's cover and is thus available at all times – helps to check the wastewater for pollution.

Easy Cleaning: The removable sedimentation compartment can be cleaned easily. It is not necessary to clean the complete oil-/water separator.

Quick filter exchange: The large-sized maintenance opening permits quick and easy exchange of the pre- and adsorption filter.

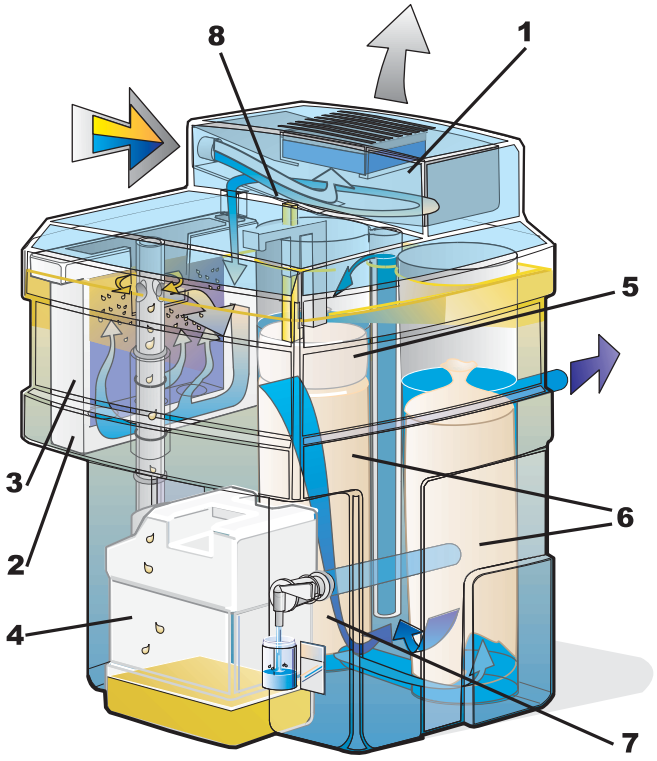
The function

A pressure-relief chamber (1) separates condensate and compressed air. Then, particles are separated in a sedimentation compartment (2) which is removable and thus easy to clean.

A coalescence filter (3) for oil separation essentially contributes to the long life of the activated carbon and to low operating expenses of the system. Free floating oil is siphoned off into an oil can (4).

After gravity separation (7), the water passes a pre-adsorbent (5).

The last oil droplets are removed from the water in the activated carbon adsorber (6) and pure water ready to be drained finally leaves the unit.



Donaldson

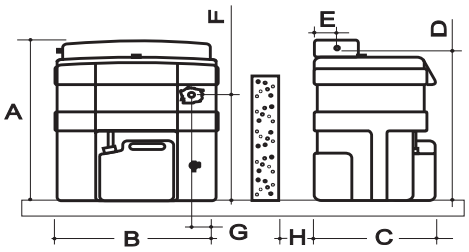
Donaldson® Ultrafilter®

Technical Data

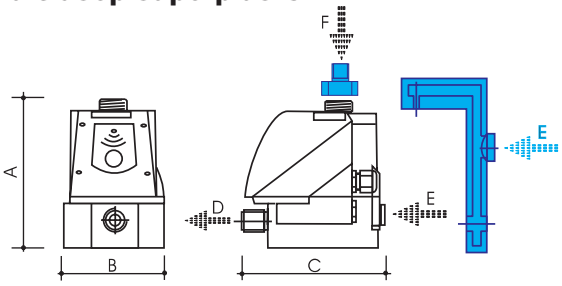
type UFS-SP	nom. capacity of compressor cfm	kW	HP	screw and rotary compressors with oil injection cooling Turbine and VDI-oil	Synthetic and VCL-oil	piston compressor 1 or 2-stage Turbine and Synthetic oil	VDL-oil
0075	75	11	15	75	75	75	75
0150	150	22	30	150	150	100	150
0250	250	45	60	260	260	180	260
0500	500	90	121	520	425	360	425
1000	1000	190	268	1040	850	720	850
2000	2000	375	423	2080	1700	1440	1700
4000	4000	750	953	4160	3400	2880	3400

type UFS-SP	A inch	B inch	C inch	D inch	E inch	F inch	G inch	H inch	Vessel galls	Activated Carbon galls	Pre-adsorbent galls	Oil Can galls	Shipping weight lbs.
0075	23	15	13	20	4	15	3	6	1.5	4.4	0.5	0.25	18
0150	25	17	16	23	4	16	5	4	3	8.8	1	0.4	43
0250	28	18	18	26	4	18	5	4	5	13.2	1	0.7	51
0500	33	26	20	30	5	22	6	4	10	2 x 12	1.25	1.1	77
1000	37	30	25	35	6	24	7	4	20	2 x 17	1.25	1.1	150
2000	37	68	25	35	6	24	7	4	40	4 x 17	2.5	2 x 1.1	300
4000	37	145	25	35	6	24	7	4	80	8 x 17	5	4 x 1.1	600

ultrasep superplus UFS-SP



ultrasep superplus UFM-T



type UFM-T	Pressure range	dimensions A	B	C	D	E	F	weight
	psig	inches	inches	inches	inches	inches	inches	lbs.
05	12 - 250	3.6	3.5	5.1	0.5	-	0.5"	1.5
1	12 - 250	5.0	3.5	4.9	0.5	-	0.75"	2.0
10	12 - 250	5.2	3.5	4.9	0.5	0.5"	0.75"	2.2
20	12 - 250	5.8	3.5	6.9	0.6	0.5"	0.75"	2.6
100	12 - 250	8.0	5.9	9.4	0.6	0.75"	1"	8.2
20 HP	18 - 600	7.5	4.5	9.6	0.6	0.75"	1"	7.3

type UFM-T	capacity compressor	Condensate	electrical connection	performance standard	with heating
	cfm	gall/h.	(IP 65)	W	W
05	125	8	24 VDC ~ 230 VAC	5	-
1	200	8	24 VDC ~ 230 VAC	5	-
10	200	8	24 VDC ~ 230 VAC	5	15
20	720	32	24 VDC ~ 230 VAC	5	25
100	4500	160	110 ~ 230 V 60 Hz altern. 24 VDC	5	25
20 HP	720	32	110 ~ 230 V 60 Hz altern. 24 VDC	5	25

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