



CONDENSATE MANAGEMENT



SUSTAINABILITY

Efficient Condensate Separation and Energy Savings

Condensate occurs at several stages along a compressed air purification chain. This waste product cannot only cause damage to pipes and equipment but can also be a hazard to the environment, especially when compressor or system lubricants are present in the condensate. Implementing a proper condensate management prevents these hazards by efficiently separating condensate. It thus supports companies in achieving ISO 14001 (Environmental Management) certifications.

State of the art condensate management discharges condensate without any pressure loss as it keeps the compressed air where it belongs: in the system. This helps companies to increase their energy savings and supports ISO 50001 (Energy Management) certifications.

Advancing Filtration

At Donaldson, we strive to innovate and improve our technologies and solutions to fulfill our purpose: Advancing filtration for a cleaner world.

Condensate management solutions support our purpose and contribute to a more sustainable compressed air treatment.



INNOVATIVE AND INTEGRATED SYSTEMS SOLUTIONS

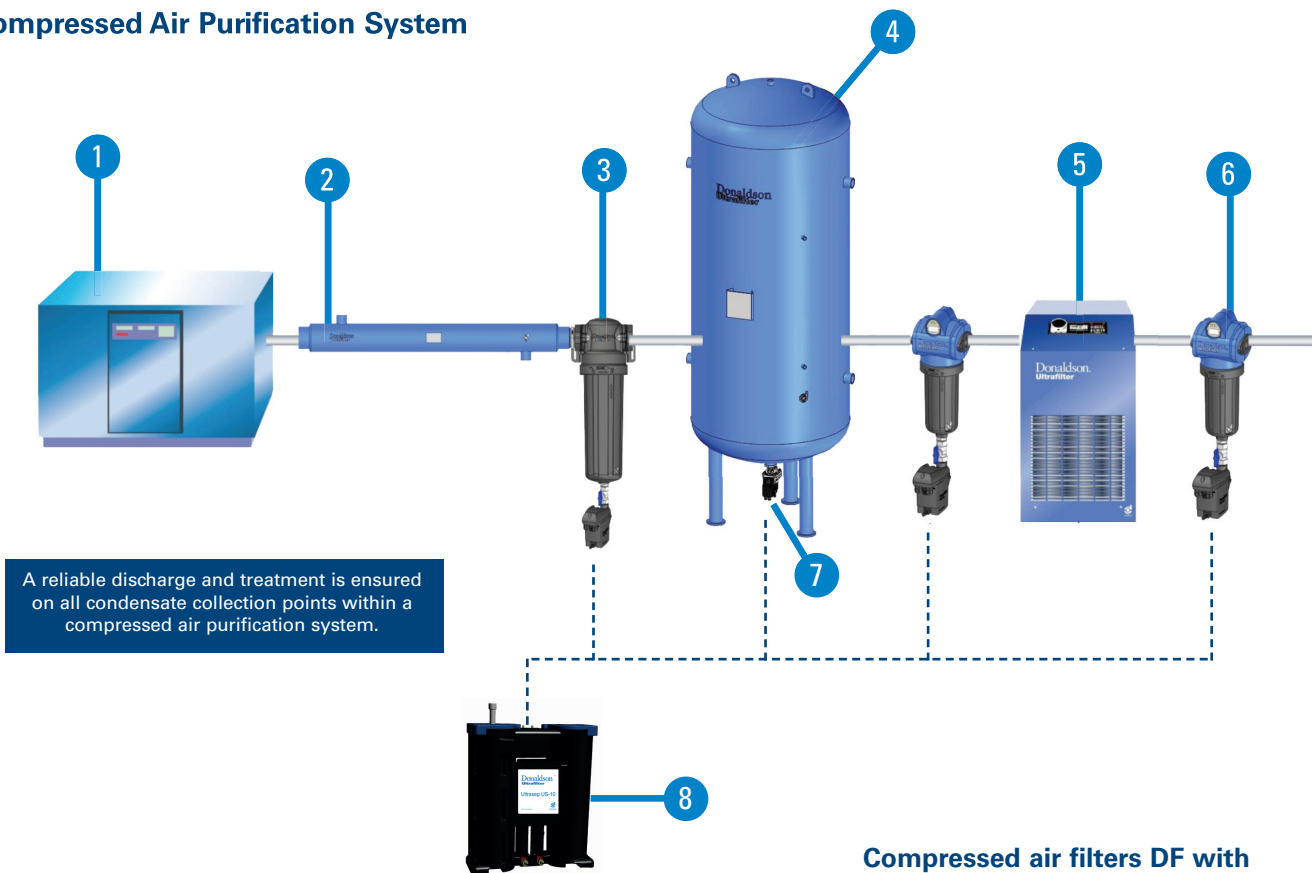
Reliable Condensate Discharge

Condensate accumulates when generating compressed air. This condensate can contain oil and dirt particles, which must be discharged and treated environmentally safe. In addition, the condensate can accumulate in various amounts, so that this should occur without any compressed air losses during the discharge process.

Environmentally-friendly Condensate Treatment

The condensate that developed during the compressed air generation possibly contains dirt particles and can pollute the environment. In order to obtain water capable of being discharged, a condensate treatment according to the respective legal regulations will be required. Treatment systems are hereby available from Donaldson which make it possible that the legal requirements of the environmental aspects are met.

Compressed Air Purification System



Compressed air filters DF with condensate drain Ultramat™



Compressed Air Purification System including zero-loss Condensate Draining and Condensate Treatment

- 1 Compressor
 - 2 Aftercooler
 - 3 Cyclone separator
 - 4 Compressed air receiver vessel
 - 5 Refrigeration compressed air dryer
 - 6 Compressed air filter
 - 7 Condensate drain Ultramat
 - 8 Condensate treatment system Ultrasep US
- Compressed air
 Condensate

ULTRASEP US TECHNOLOGY

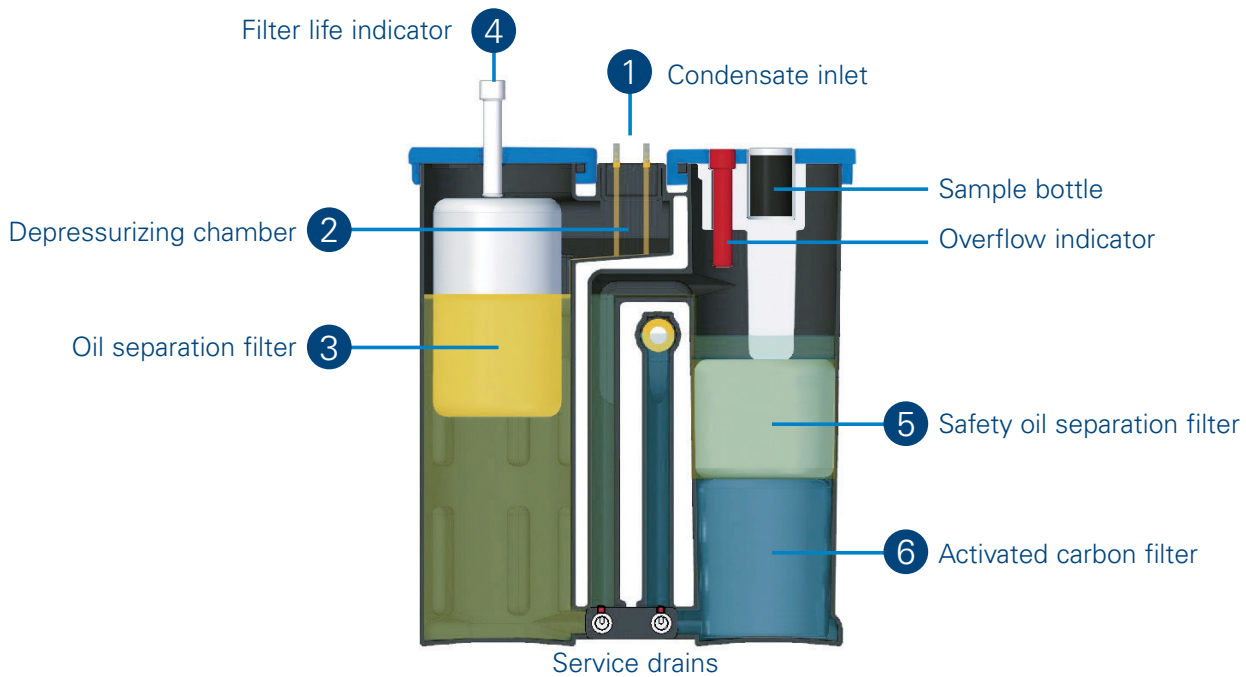
From waste to clean water

The oil-water separator Ultrasep US is designed to separate mineral and synthetic oils from compressed air condensates even in emulsified condition.

To achieve this, condensate lines are connected to the inlet ports **(1)**. Pressure is released in the depressurization following chamber **(2)** that includes an activated carbon foam exhaust filter.

An oil separation filter with special treated polypropylene fibers **(3)** is filtering the oil in the first filter stage until the material is saturated. The filter life indicator **(4)** is moving down the more oil is adsorbed on the fibers.

The second oil separation filter stage **(5)** is protecting the activated carbon filter **(6)** that is acting as a polishing stage to ensure a maximum oil content of 10 mg/l (ppm) on the clean water outlet.



Carepac and Flow Distributor



The full carepac includes all components to make replacement quick and easy.



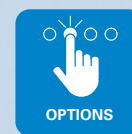
Multiple Ultrasep US separators can be connected for larger flow capacity.



ULTRASEP US BENEFITS

High performance oil separation filters:
 Polypropylene fibers with
 oleophilic & hydrophobic coating.
 Separation of mineral and synthetic oils and
 even emulsified condensates.

Performance control:
 Filter life indicator and sample test bottle included.
 Indication of filter exchange requirement.
 Overflow indicator included.



Quick & Easy Service and Maintenance:
 Carepacs with light-weight filters and pro-
 tection equipment designed for quick and
 easy replacement.
 Service valves included in large units to
 remove condensate for service.

Options available:
 Ultrasep Flow Distributor for multiple installation of
 separators for large condensate flow.
 Wall mounting bracket for US-3.5.

RELIABLE CONDENSATE DISCHARGE WITHOUT PRESSURE LOSSES

Condensate discharge without pressure losses

You will achieve an especially safe and reliable condensate discharge without pressure loss when using the electronically level-controlled condensate drains Ultramat.

The range is distinguished by a compact design and is available in five sizes. A rugged housing design, a low noise development during the discharging process and a high resistance against dirt are only a few of the performance features of the condensate drain. All condensate drains are easy to maintain and functionally tested by the manufacturer.

Minimum Expenditure with Service and Maintenance

- Complete replacement of all wear parts and pressurized parts with one-handed operation*
- Only one spare part is needed
- No assembly of seals and individual parts is required

* Applies to the condensate drains sizes UFM-D03, UFM-D05 and UFM-D10

Function test via test button guarantees a permanent control



Condensate drain Ultramat™ - Available in five sizes



Features and benefits

Extremely efficient

- Prevention of unnecessary compressed air losses
- Reduction of energy costs
- Condensate discharge depending on the accumulated condensate amount
- Detection of the condensate type (also pure oil) via sensors
- A safe discharge is guaranteed, even in case of strong contamination
- Low noise development during draining procedure

High operational Safety

- Use of corrosion-resistant materials
- Very rugged housing construction
- Insensitive to contamination due to generous internal cross-sections
- Permanent function control with LED display and automatic emergency program mode
- An electrical alarm contact is included to transmit alarm signals to external system controllers.

Easy Installation

- Flexible and easy installation on different pipings possible

EXTENSIVE APPLICATION OPTIONS

Condensate management is needed in the majority of production processes to handle oil residuals within the compressed air purification.

Examples of application areas:

- Automotive
- Chemical
- Electronics
- Energy
- Food processing
- Glass
- Industrial Gases
- Industrial Machinery
- Pharmaceutical

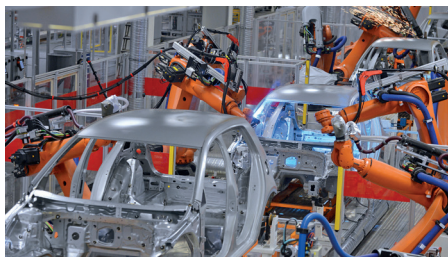


Feel free to send your request to CAP-europe@donaldson.com

Industrial Gases



Automotive



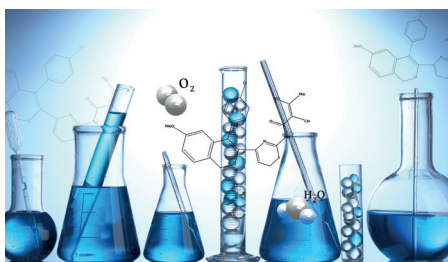
Energy



Pharmaceutical



Chemical



Food processing



Glass



Electronics



Industrial machinery



TECHNICAL DATA

Ultrasep US Size	Flow capacity m ³ /min. (scfm)	Water filling volume (incl. liters) liters (gallon)	Total filling volume (w/o filters) liters (gallon)	Weight kg (lbs)	Dimensions		
					Width (A) mm (inch)	Height (B) mm (inch)	Depth (C) mm (inch)
3.5	3.5 (124)	6.5 (1.7)	10 (2.6)	6.5 (14.3)	385 (15.2)	396 (15.6)	240 (9.4)
5	5 (177)	16 (4.2)	19 (5)	10.7 (23.6)	610 (24)	580 (22.8)	190 (7.5)
10	10 (353)	32 (8.4)	59 (15.6)	18 (39.7)	750 (29.5)	650 (25.6)	240 (9)
20	20 (706)	67 (17.7)	84 (22.2)	39 (86)	900 (35.4)	780 (30.7)	305 (12)
30	30 (1059)	106 (28)	128 (33.8)	66 (145.5)	900 (35.4)	970 (38.2)	380 (15)
60	60 (2119)	197 (52)	250 (66)	105 (231.5)	1040 (40.9)	1160 (47.7)	480 (18.9)



Ultramat™ UFM-D	Min./Max. operating pressure	Min./Max. temperature	Weight (empty)	Max. compressor performance ¹⁾	Max. fridge dryer performance ¹⁾	Max. filtration performance ¹⁾	Protection class
	bar (psi)	°C (°F)	k g (lbs)	m ³ /min (scfm)	m ³ /min (scfm)	m ³ /min (scfm)	
UFM-D03	0.8-16 (12-230)	+1-60 (+34-140)	0.8 (1.8)	2.5 (87.5)	5 (175)	25 (875)	IP 54
UFM-D05	0.8-16 (12-230)	+1-60 (+34-140)	1.0 (2.2)	5 (175)	10 (350)	50 (1,750)	IP 54
UFM-D10	0.8-16 (12-230)	+1-60 (+34-140)	1.65 (3.6)	10 (350)	20 (700)	100 (3,500)	IP 54
UFM-D30	0.8-16 (12-230)	+1-60 (+34-140)	2.0 (4.4)	30 (1,060)	60 (2,120)	300 (10,600)	IP 54
UFM-D30HP	0.8-40 (12-580)	+1-60 (+34-140)	2.0 (4.4)	30 (1,060)	60 (2,120)	300 (10,600)	IP 65
UFM-D130	0.8-16 (12-230)	+1-60 (+34-140)	2.9 (6.4)	130 (4,590)	260 (9,180)	1300 (45,900)	IP 65

Condensate: Containing oil or oil-free

¹⁾ Maximum performance for ambient temperature at 20 °C (70 °C), 50 % relative humidity.



Compressed Air Filtration · Filters for Sterile Air, Steam and Liquids · Refrigerant Drying · Adsorption Drying · Condensate Drains · Condensate Purification Systems · Process Air and Gas Processing



Total Filtration Management

Donaldson offers a wide variety of solutions to reduce your energy costs, improve your productivity, guarantee production quality and help protect the environment.

Total Filtration Service

A comprehensive range of services keeps your production at peak performance and at the lowest total cost of ownership.

Please contact us:
 Donaldson Europe B.V.
 Research Park Building No. 1303 · Interleuvenlaan 1
 B-3001 Leuven · Belgium
 Phone +32(0)16 38 38 11 · Fax +32(0)16 40 00 77
CAP-europe@donaldson.com · www.donaldson.com