



OIL - WATER SEPARATOR  
FOD 21 ÷ 1440

TECHNOLOGY YOU CAN TRUST

# The reasons

Every process involving the compression, cooling and treatment of compressed air produces condensates that may contain more or less oil depending on the type of compressor.



As an example, if a compression system with a refrigerant dryer with a capacity of 20 m<sup>3</sup>/min, 10 bar were to operate at 60% full load, two shifts a day, for 220 days/year, at a room temperature of 25 °C and 70% relative humidity, its condensate production would be about 39,000 litres/year.

Not only is it illegal to discharge condensates polluted with oil and/or hydrocarbons into sewage systems or the environment, but it also makes the already critical environmental situation worse.

It is well known that oil is a high pollutant. Even a small quantity can cover a vast water surface.

Collecting and disposing of these condensates is both difficult and extremely costly due to factors including:

- local storage,
- transportation to specialised centres for aftertreatment of specific waste,
- maintenance of appropriate registers, where required.



On the basis of the above example, in the space of one year, we must:

- manage the storage of 39,000 litres of industrial condensate;
- organise its transportation to specialised disposal centres;
- sustain the cost of aftertreatment and disposal, which, taking the average cost to be 0.10 euros/litre, would mean a cost of 3,900.00 euros.

Separating the oil from the condensate water right from the outset is undoubtedly less burdensome both in terms of management and general costs.

Ceccato Aria Compressa S.p.A. has always prioritised environmental management, and has held UNI EN ISO 14001 certification since 2001. We offer:

### FOD

- a simple solution to a big problem;
- an aid to help humans protect the environment..

The FOD oil/water separator is simple to install and use, and does not require electrical powering.

The oil is separated through a multistage filtration process. The oil is absorbed by special absorbent substances inert to water which, once saturated, are removed and managed in the same way as normal oil removal filter cartridges.

At the end of the process, the condensate can be discharged into the sewage system in compliance with prevailing local regulations.



# Technology - Principle - Environment



## FOD is state-of-the-art technology

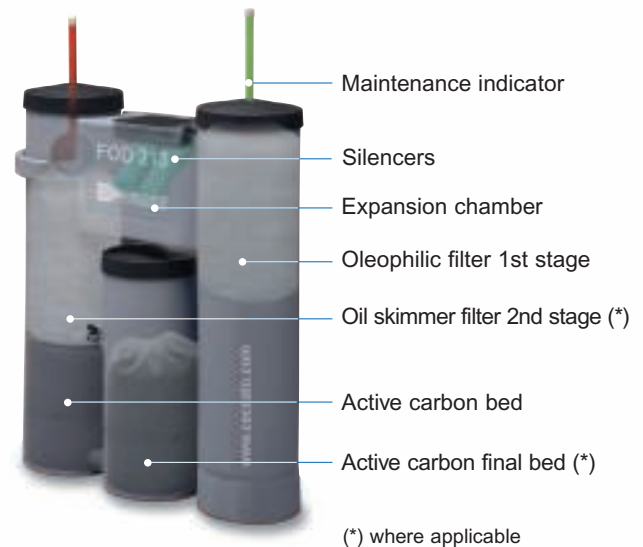
for the treatment of condensates derived from compressed air.

FOD is a state-of-the-art multistage cascade filtration system for the separation of oil from condensate water.

This innovative patented system is not affected by condensate discharge under pressure.

The condensates can be channelled directly into the intake pipe without any need for special collection manifolds.

The floating oil skimmer filters and the final active carbons are not damaged by vibrations, jolts or sprays, and guarantee consistent high long-term performance without problems of any kind.



## Principle

The condensate ① passes through the silencer ② into the expansion chamber ③.

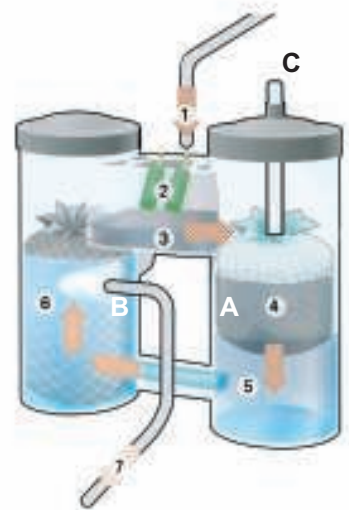
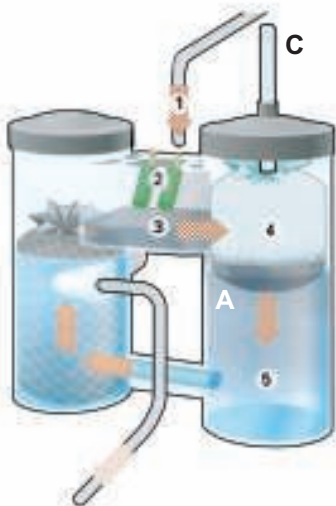
After this, it is channelled into tower A through the oil skimmer-filter ④, which traps most of the oil but allows the water to flow through ⑤.

The floating oil skimmer filter also absorbs the film of oil that commonly forms on the surface.

As the filter slowly absorbs the oil, it begins to get heavy and consequently sinks lower and lower into the liquid triggering the maintenance indicator "C" to withdraw. Once the filter is saturated it sinks completely.

The condensate then passes into tower B and through the active carbon bed, still containing a small amount of oil ⑥. Here the remaining oil particles are trapped, while the condensate can be discharged containing hardly a trace of oil residue ⑦.

Depending on the size of the machine, one or even two sets of filters can be used (oil skimmer + active carbon)



- Oil separation by means of filtration, prevents the need for separation, resulting in greater health safety and lower cleaning requirements.
- Higher and constant long-term performance regardless of the oil concentration at intake.
- Great load capacity prevents condensate leakage due to any unexpected increase in the intake flow.
- Simple and robust, easy to install, and no need for special settings.
- There is no need for oil recycling containers.
- Simple to maintain.
- Maintenance kits are available to suit all needs with oil residue recycling buckets.



## TECHNICAL DATA

Type	With dryers			Without dryers			gas		mm			kg	
	m³/h'	m³/h	cfm	m³/h'	m³/h	cfm	Inlet	Outlet	L	W	H	Empty	Flooded
COLD climate: Ambient temperature 15 °C; Relative humidity 60%: RESIDUAL OIL 10 mg/litre													
<b>FOD 21</b>	2.600	156	92	4.200	252	149	1 x 1/2"	1 x 1/2"	470	165	600	4	16
<b>FOD 57</b>	7.200	432	256	11.200	672	398	2 x 1/2"	1 x 1/2"	680	255	750	13	51
<b>FOD 87</b>	10.800	648	383	16.600	996	589	2 x 1/2"	1 x 1/2"	680	255	750	15	53
<b>FOD 213</b>	26.600	1.596	944	41.400	2.484	1.470	2 x 3/4"	1 x 3/4"	750	546	900	25	80
<b>FOD 360</b>	46.000	2.760	1.633	72.000	4.320	2.556	2 x 3/4"	1 x 3/4"	750	546	1.030	26	103
<b>FOD 495</b>	62.000	3.720	2.201	96.500	5.790	3.426	2 x 3/4"	1 x 3/4"	945	650	1.100	28	151
<b>FOD 720</b>	88.800	5.328	3.152	138.100	8.286	4.902	2 x 3/4"	1 x 3/4"	945	695	1.100	30	164
<b>FOD 1440</b>	177.700	10.662	6.308	276.000	16.560	9.798	2 x 1"	1 x 1"	945	1185	1.100	60	324
MILD climate: Ambient temperature 25 °C; Relative humidity 60%: RESIDUAL OIL 10 mg/litre													
<b>FOD 21</b>	1.400	84	50	1.800	108	64	1 x 1/2"	1 x 1/2"	470	165	600	4	16
<b>FOD 57</b>	3.800	228	135	4.720	283	168	2 x 1/2"	1 x 1/2"	680	255	750	13	51
<b>FOD 87</b>	5.800	348	206	7.000	420	248	2 x 1/2"	1 x 1/2"	680	255	750	15	53
<b>FOD 213</b>	14.200	852	504	17.400	1.044	618	2 x 3/4"	1 x 3/4"	750	546	900	25	80
<b>FOD 360</b>	24.200	1.452	859	30.000	1.824	1.079	2 x 3/4"	1 x 3/4"	750	546	1.030	26	103
<b>FOD 495</b>	33.000	1.980	1.171	40.800	2.448	1.448	2 x 3/4"	1 x 3/4"	945	650	1.100	28	151
<b>FOD 720</b>	47.250	2.835	1.667	58.250	3.495	2.068	2 x 3/4"	1 x 3/4"	945	695	1.100	30	164
<b>FOD 1440</b>	94.450	5.667	3.353	116.500	6.990	4.136	2 x 1"	1 x 1"	945	1185	1.100	60	324
HOT climate: Ambient temperature 35 °C; Relative humidity 70%: RESIDUAL OIL 10 mg/litre													
<b>FOD 21</b>	680	41	24	800	48	28	1 x 1/2"	1 x 1/2"	470	165	600	4	16
<b>FOD 57</b>	1.800	108	64	2.000	120	71	2 x 1/2"	1 x 1/2"	680	255	750	13	51
<b>FOD 87</b>	2.800	168	99	3.000	180	106	2 x 1/2"	1 x 1/2"	680	255	750	15	53
<b>FOD 213</b>	6.800	408	241	7.600	456	270	2 x 3/4"	1 x 3/4"	750	546	900	25	80
<b>FOD 360</b>	11.600	696	412	13.200	792	469	2 x 3/4"	1 x 3/4"	750	546	1.030	26	103
<b>FOD 495</b>	16.000	960	568	17.600	1.056	625	2 x 3/4"	1 x 3/4"	945	650	1.100	28	151
<b>FOD 720</b>	22.800	1.368	809	25.200	1.512	895	2 x 3/4"	1 x 3/4"	945	695	1.100	30	164
<b>FOD 1440</b>	45.800	2.748	1.626	50.400	3.024	1.789	2 x 1"	1 x 1"	945	1185	1.100	60	324

**Notes:**

- Sizes and weights without packaging

- All capacities refer to:

- residual oil concentration equal to 10 mg/litre.
- compressor operating cycle at 7 bar for 12 hours/day.

- For different conditions: multiply capacity by the relative coefficient:

- residual oil concentration equal to 15 mg/litre: 1.50

- running hours	Hours/day	8	10	12	14	16	18	20	22	24
	Coefficient	1,5	1,2	1	0,86	0,75	0,67	0,60	0,55	0,50



CECCATO ARIA COMPRESSA S.p.A. has a policy of continuous product improvement. We reserve the right to change specifications and product design without prior notice.



Design  
Manufacture, Sales and  
Service of air compressors,  
Air dryers and air filters

