

Condensate Treatment **AQUAMAT Series**

For compressor capacities up to 67,3 m³/min



AQUAMAT Series

Condensate treatment pays off

Increasingly strict environmental legislation makes disposal of untreated condensate from compressor stations complicated and expensive. This alone is reason enough therefore for compressed air systems operators to treat condensate themselves in accordance with applicable regulations. This is where AQUAMAT condensate treatment systems from KAESER KOMPRESSOREN help provide efficient and dependable assistance.

Why treat condensate?

Condensate is an unavoidable result of air compression. It is a chemically aggressive fluid that mainly consists of water, but also contains oil and pollutant particles. This combination of substances can consequently cause serious environmental harm if released in its raw state. Water resource legislation stipulates that contaminated water must be treated to achieve prescribed safety levels regarding purity. AQUAMAT condensate treatment systems from KAESER KOMPRESSOREN do precisely that: They ensure that contaminant levels are kept well within regulation limits (e.g. 10 or max. 20 mg/litre for hydrocarbons).

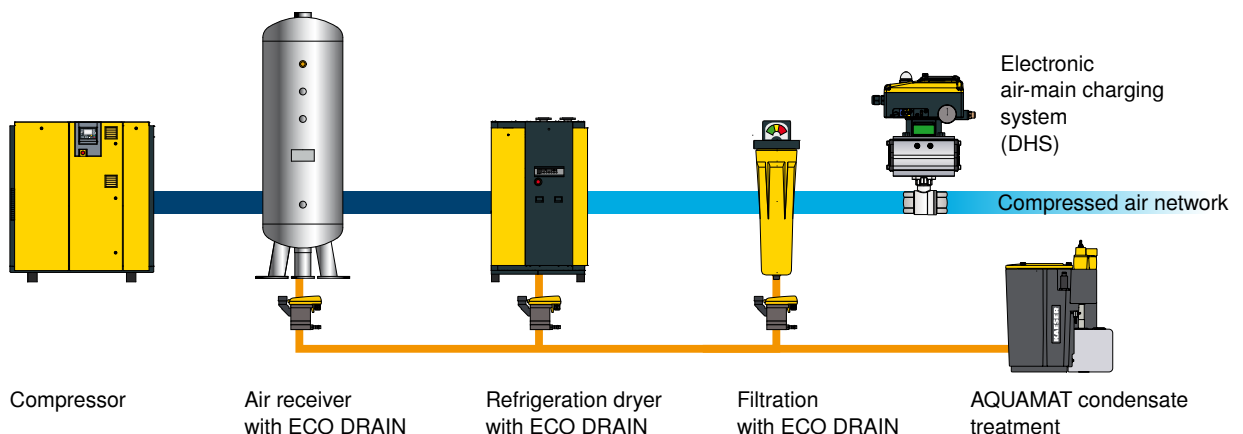
Cost-saving treatment

The AQUAMAT treatment system allows compressor operators to treat compressed air condensate in-house, thereby greatly reducing the overall cost of condensate waste treatment and disposal.

Condensate treatment with the KAESER AQUAMAT system saves up to 90 percent of the disposal costs that would be required for a specialist company to dispose of all of the condensate. Investment in these highly effective treatment systems is therefore quickly returned through the resultant savings.

Tested and certified condensate treatment

Tested and certified by the Berlin Institute for Design and Technology, the AQUAMAT system provides state-of-the-art condensate treatment. This not only assures outstanding system performance coupled with significantly reduced waste treatment costs, but also provides considerable benefits for the environment.



Dependable drainage must be provided at every condensate collection point within a compressed air supply system. This is implemented most effectively via electronically controlled condensate drains.

Minimises costs!



Fig.: AQUAMAT CF 9

AQUAMAT Series

Tested and certified condensate treatment



High performance filter material

All pre- and main filter cartridges feature high performance filter material (not activated charcoal). Furthermore, the upstream separation reservoir with gravitational pre-separation enables maintenance intervals to be significantly extended (except for CF3 models) and enhances reliability.



Clean filter change

Removal of the main filter cartridge is made simple via the convenient lifting handle. The filter can then be easily fixed to the AQUAMAT casing to drain. Filter changes are therefore quick and clean. Pre-soaking of the new filter is not necessary.



Clearly visible alarm indicator

A raised float indicates "Alarm", which means that the filter needs to be replaced without delay. The user can check operation of the AQUAMAT by referring to the cloudiness test containers and consequently schedule maintenance as necessary (Recommendation: Check operation 1 x per week).



Multiple condensate inlets

Up to four condensate lines can be connected as standard (from the AQUAMAT CF 9 upwards). Plastic blanking plugs for blocking off unused connections are included within the scope of delivery.

Technical Specifications

		AQUAMAT					
		CF 3	CF 6	CF 9	CF 19	CF 38	CF 75
Max. FAD for oil-cooled screw / rotary compressors and oil types in climate zone 1*							
S-460, MOL, MOH, PAO, VCL, VDL	m³/min	2.1	4.2	6.5	13	25.9	51.8
	m³/min	2.8	5.5	8.5	16.9	33.6	67.3
Max. FAD for oil-cooled screw / rotary compressors and oil types in climate zone 2*							
S-460, MOL, MOH, PAO, VCL, VDL	m³/min	1.9	3.8	5.6	11.3	22.5	45
	m³/min	2.4	4.9	7.3	14.6	29.3	58.5
Max. FAD for oil-cooled screw / rotary compressors and oil types in climate zone 3*							
S-460, MOL, MOH, PAO, VCL, VDL	m³/min	1.6	3.2	4.8	9.6	19.1	38.3
	m³/min	2.1	4.2	6.2	12.5	24.9	49.7
Max. FAD for 1- / 2-stage reciprocating compressors and oil types in climate zone 1*							
VDL	m³/min	1.9	3.8	5.9	11.7	23.3	46.6
PAO	m³/min	1.6	3.2	4.9	9.8	19.4	38.8
Ester	m³/min	1.8	3.7	5.6	11.2	22.3	44.6
Max. FAD for 1- / 2-stage reciprocating compressors and oil types in climate zone 2*							
VDL	m³/min	1.7	3.4	5.1	10.1	20.3	40.5
PAO	m³/min	1.4	2.8	4.2	8.4	16.9	33.8
Ester	m³/min	1.6	3.2	4.9	9.7	19.4	38.8
Max. FAD for 1- / 2-stage reciprocating compressors and oil types in climate zone 3*							
VDL	m³/min	1.5	2.9	4.3	8.7	17.2	34.4
PAO	m³/min	1.2	2.4	3.6	7.2	14.3	28.7
Ester	m³/min	1.4	2.8	4.1	8.3	16.5	33
Tank size (volume)	l	10	18.6	30.6	61.3	115.5	228.4
Filling volume	l	4.3	11.7	22.7	46.3	84.3	158.8
Pre-filter	l	2	4.7	2.5	6.7	18.5	37.2
Main filter	l	2.5	3.7	5.4	10.4	20.2	40.3
Condensate inlet connection		2x DN 10	2x DN 10	3x DN 10, 1x DN 25	3x DN 10, 1x DN 25	3x DN 13, 1x DN 25	3x DN 13, 1x DN 25
Water outlet connection		DN 10	DN 10	DN 13	DN 25	DN 25	DN 25
Service valve connection		–	–	DN 13	DN 13	DN 13	DN 13
Oil outlet connection		–	–	DN 25	DN 25	DN 40	DN 40
Oil collection tank		–	–	2 x 5 l	2 x 5 l	2 x 10 l	2 x 20 l
Weight	kg	3.5	5.8	13.5	18.5	36.5	53
Dimensions W x D x H	mm	222 x 290 x 528	205 x 387 x 595	350 x 544 x 702	410 x 594 x 872	530 x 764 x 1090	659 x 939 x 1160
Thermostat-controlled heating							
Heating capacity	W	–	0.4	0.4	1	1	1.4
Weight	kg	–	0.7	0.7	1	1	1.1
Power supply		–	230 V / 1 Ph / 50-60 HZ	230 V / 1 Ph / 50-60 Hz	230 V / 1 Ph / 50-60 Hz	230 V / 1 Ph / 50-60 Hz	230 V / 1 Ph / 50-60 Hz

Note:

Factors such as compressor type and oil should be taken into consideration when selecting AQUAMAT condensate treatment systems.

PLEASE ALSO NOTE: Fresh-oil lubricated compressors and multi-stage reciprocating compressors are prone to emulsion build up.

Please inform KAESER regarding the technical specification of your compressor(s) to obtain an individual AQUAMAT recommendation.

*) Climate zone:

1 = Dry/cool (Northern Europe, Canada, Northern USA, Central Asia),

2 = Temperate (Central and Southern Europe, some parts of South America, North Africa),

3 = Humid (South-East Asian coastal regions, Central America, Oceania, Amazon and Congo regions)

System design



- 1 Expansion chamber
- 2 Pre-separation tank
- 3 Removable particle catcher
- 4 Oil collection tank
- 5 Pre-filter
- 6 Main filter cartridge
- 7 Water outlet
- 8 Drain for reference condensate cloudiness test

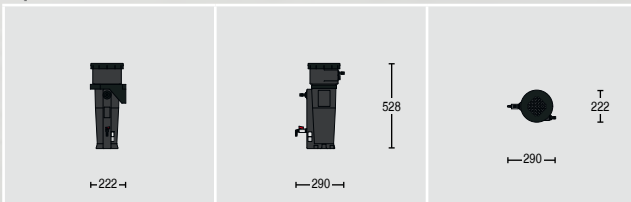
Under pressure, the oil-containing condensate enters the **pressure relief chamber (1)**. There, the pressure is released without creating turbulence in the downstream **separator tank (2)**. Larger contaminant particles are held back by the **removable particle catcher (3)**. As a result of gravitational settling in the separator tank, oil accumulates at the top and then flows into the overflow-safe **oil collection tank (4)**. The pre-cleaned condensate then flows into the filter stage.

The **pre-filter (5)** then binds the remaining oil particles within its material. Condensate flows through the filter from the inside outwards in order to achieve optimum separation results. Any remaining oil is captured by the main filter **cartridge (6)**. All that remains is clean water that can be safely drained away. The treated condensate is drained from the AQUAMAT via the **water outlet (7)**.

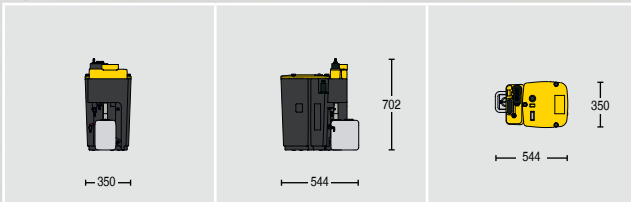
Views

Front view	View from left	View from above
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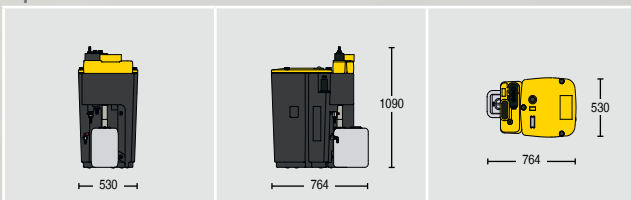
Aquamats CF 3



Aquamats CF 9

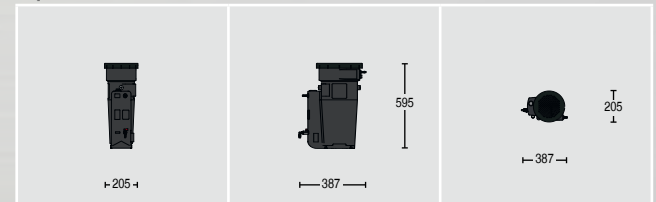


Aquamats CF 38

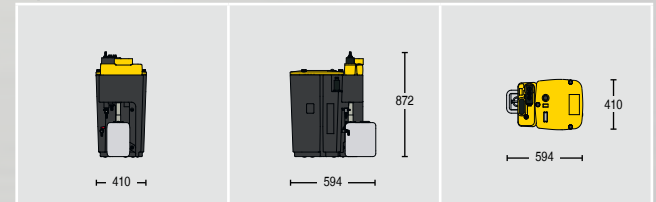


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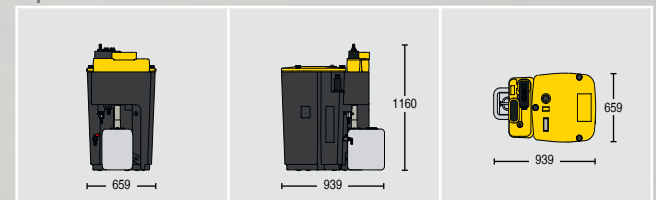
Aquamats CF 6



Aquamats CF 19



Aquamats CF 75



KAESER – The world is our home

As one of the world's largest manufacturers of rotary screw compressors, KAESER KOMPRESSOREN is represented throughout the world by a comprehensive network of branches, subsidiary companies and authorised partners in over 100 countries.

With innovative products and services, KAESER KOMPRESSOREN's experienced consultants and engineers help customers to enhance their competitive edge by working in close partnership to develop progressive system concepts that continuously push the boundaries of performance and compressed air efficiency. Moreover, the decades of knowledge and expertise from this industry-leading system provider are made available to each and every customer via the KAESER group's global computer network.

These advantages, coupled with KAESER's worldwide service organisation, ensure that all products operate at the peak of their performance at all times and provide maximum availability.

