KAESER COMPRESSORS

Condensate Treatment AQUAMAT Series

For compressor flow rates up to 100 m³/min

AQUAMAT series

Condensate treatment pays off

Increasingly strict environmental regulations make disposal of untreated condensate from compressor stations cumbersome and expensive. This alone is reason enough for compressed air systems operators to treat accumulated condensate in accordance with applicable regulations. This is where AQUAMAT condensate treatment systems from KAESER KOMPRESSOREN help make a real difference.

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 dirt 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).

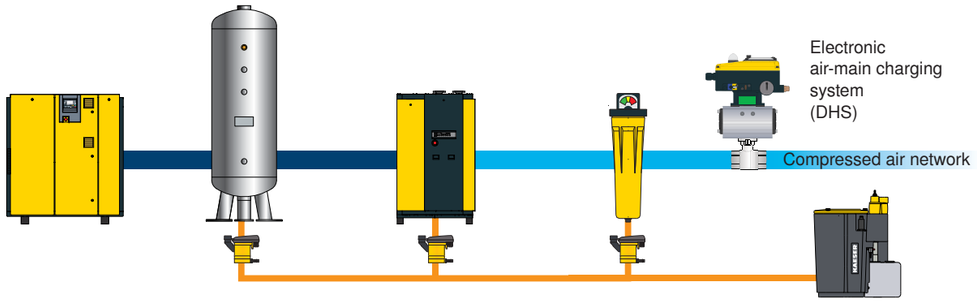
Cost-saving treatment

The AQUAMAT treatment system allows compressor operators to treat compressed air condensate in-house and thereby greatly reduce the overall cost of hazardous 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.



All collection points must be fitted with a reliable means of draining condensate.
Best results are achieved with an electronically controlled condensate drain.

Minimises costs!

Image: 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 and enhances reliability (except for CF3 models).

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 should be replaced as soon as possible. Users can check operation of the AQUAMAT by referring to the cloudiness test containers and can consequently schedule maintenance as necessary (Recommendation: Check operation 1x per week).

Multiple inlets

Up to four condensate lines can be connected as standard (from the AQUAMAT CF 9 upwards). 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	CF 168
Max. flow rate for oil-cooled screw / rotary compressors and oil types in climate zone 1*								
S-460, MOL, MOH, PAO, VCL	m³/min	2.1	4.2	6.5	13	25.9	51.8	80
VDL	m³/min	2.8	5.5	8.5	16.9	33.6	67.3	100
Max. flow rate for oil-cooled screw / rotary compressors and oil types in climate zone 2*								
S-460, MOL, MOH, PAO, VCL	m³/min	1.9	3.8	5.6	11.3	22.5	45	70
VDL	m³/min	2.4	4.9	7.3	14.6	29.3	58.5	90
Max. flow rate for oil-cooled screw / rotary compressors and oil types in climate zone 3*								
S-460, MOL, MOH, PAO, VCL	m³/min	1.6	3.2	4.8	9.6	19.1	38.3	40
VDL	m³/min	2.1	4.2	6.2	12.5	24.9	49.7	50
Max. flow rate from single-/dual-stage reciprocating compressors and oil type in climate zone 1*								
VDL	m³/min	1.9	3.8	5.9	11.7	23.3	46.6	75
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. flow rate from single-/dual-stage reciprocating compressors and oil type in climate zone 2*								
VDL	m³/min	1.7	3.4	5.1	10.1	20.3	40.5	52
PAO	m³/min	1.4	2.8	4.2	8.4	16.9	33.8	–
Ester	m³/min	1.2	2.4	3.6	7.2	14.3	28.7	–
Max. flow rate from single-/dual-stage reciprocating compressors and oil type in climate zone 3*								
VDL	m³/min	1.5	2.9	4.3	8.7	17.2	34.4	35
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	720
Filling volume	l	4.3	11.7	22.7	46.3	84.3	158.8	610
Prefilter	l	2.5	4.7	2.5	6.7	18.5	37.2	30
Main filter	l	2.6	4.8	5.9	11.0	20.4	40.3	90
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	3x DN 13, 1x DN 25
Water outlet connection		DN 10	DN 10	DN 25	DN 25	DN 40	DN 40	DN 30
Service valve connection		–	–	DN 13	DN 13	DN 13	DN 13	DN 13
Connection, oil drain		–	–	DN 25	DN 25	DN 40	DN 40	DN 30
Oil collection container		–	–	2 x 5 l	2 x 5 l	2 x 10 l	2 x 20 l	2 x 30 l
Mass	kg	3.5	5.8	13.5	18.5	36.5	53	90
Dimensions W x D x H	mm	290 x 222 x 528	387 x 254 x 595	350 x 544 x 702	410 x 594 x 872	530 x 764 x 1090	659 x 939 x 1160	1000 x 1200 x 1615
Thermostatically controlled heating								
Heating capacity	W	–	0.4	0.4	1	1	1.4	2.8
Mass	kg	–	0.7	0.7	1	1	1.1	2.2
Electrical connection		–	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	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 NOTE: Fresh-oil lubricated compressors and multi-stage reciprocating compressors are prone to emulsion formation.
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, oceanic, Amazon and Congo regions)

System design

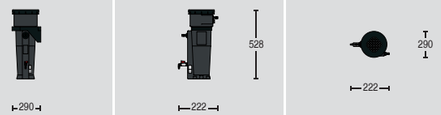
1. Pressure relief chamber
2. Pre-separation tank
3. Removable particle catcher
4. Oil collection container
5. Prefilter
6. Main filter cartridge
7. Water outlet
8. Drain for reference condensate cloudiness test

Under pressure, the oil-containing condensate enters the **pressure relief chamber (1)**. There, the pressure is released without creating turbulence in the downstream **pre-separation 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, from where it flows into the overflow-safe **oil collection container (4).** The partially cleaned condensate then flows through to the filter stage. The prefilter (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)**. What remains is water that can be drained into the wastewater system. The treated condensate is drained from the AQUAMAT via the **water outlet (7)**.

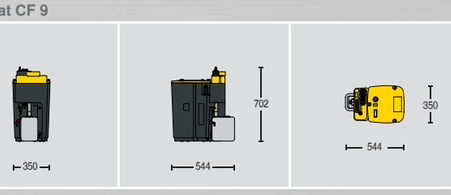
Views

Front view	Left view	Top view

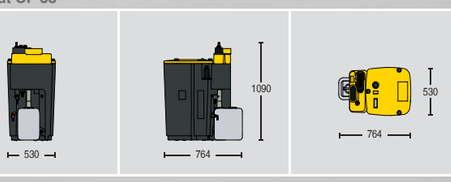
Aquamat CF 3



Aquamat CF 9

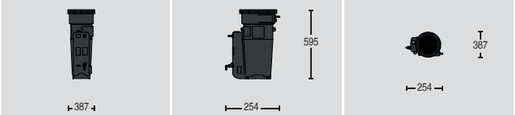


Aquamat CF 38

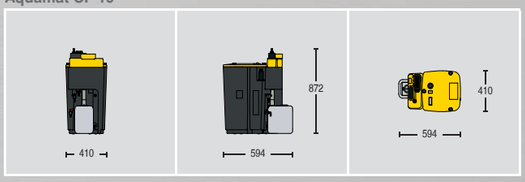


Front view	Left view	Top view

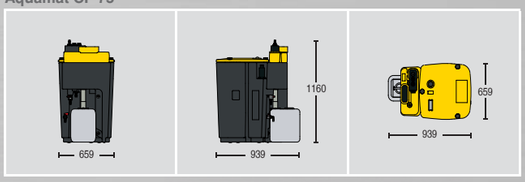
Aquamat CF 6



Aquamat CF 19



Aquamat CF 75



KAESER – The world is our home

As one of the world's largest compressed air systems providers and compressor manufacturers, 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.

LGA InterCert
Certified QM/EM System
ISO 9001:2008 / ISO 14001:2004

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