KAESER COMPRESSORS

Condensate treatment

AQUAMAT Series

for compressor capacities
from 1 – 90 m³/min

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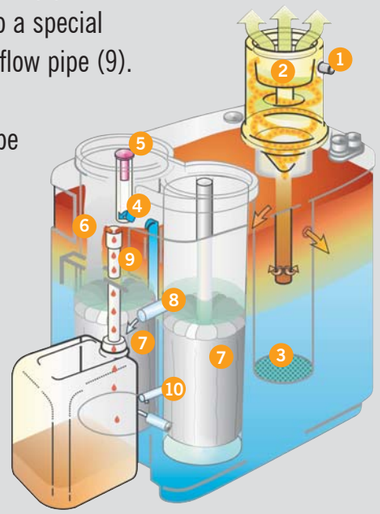
Why treat condensate?

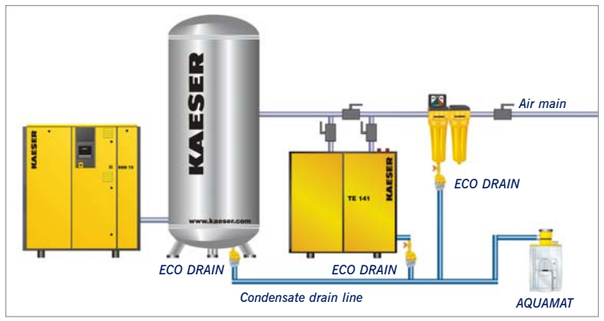
Condensate is an unavoidable result of air compression. It is a chemically aggressive fluid that mainly consists of water, but also contains oil and dirt particles. This combination of substances can consequently cause serious environmental harm if released in its raw state. Water resource legislation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

How the AQUAMAT system works

The condensate passes through the condensate inlet (1) into the expansion / silencing chamber (2). Condensate is separated out of the air, which is allowed to escape. The condensate then flows through the contaminant collector (3) which traps particles and removes oil. The partially cleaned condensate then flows through an overflow pipe (4) into the pre-filter (6); the pre-filter's level of contamination is indicated by the level sensor (5). The condensate then flows into the adsorption filter (7) where the remaining oil content is removed and the now clean water flows out of the AQUAMAT unit via the outflow pipe (8).
The separated oil flows into a special collecting tank via the overflow pipe (9).
A sample take-off tap (10) enables water samples to be easily taken and tested for purity.



Reduce costs with AQUAMAT



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

Cost-saving treatment

The KAESER AQUAMAT system enables the compressor user to carry out in-house condensate treatment and thereby greatly reduce the overall cost of hazardous waste treatment and disposal. Condensate treatment with the KAESER AQUAMAT system **saves up to 90% 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.

1. Condensate inlet
2. Expansion / silencing chamber
3. Contaminant collector
4. Overflow pipe
5. Level sensor
6. Pre-filter
7. Adsorption filter
8. Outflow pipe
9. Overflow pipe (height adjustable)
10. Sample take-off tap

Test set

The easy to use test set allows the quality of the treated waste water to be tested at any time. The set is conveniently stored in the unit cover.

Automatic maintenance indicator

The level sensor clearly indicates the degree of filter contamination. This ensures that service work is carried out when necessary and helps to further reduce costs.

Quick filter change

The large maintenance cover enables filters to be changed quickly and easily.

Multiple inlets

Up to four condensate lines (from AQUAMAT 2 upwards) can be connected as standard. Plastic plugs for blocking off unused connections are included within the scope of delivery.

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.

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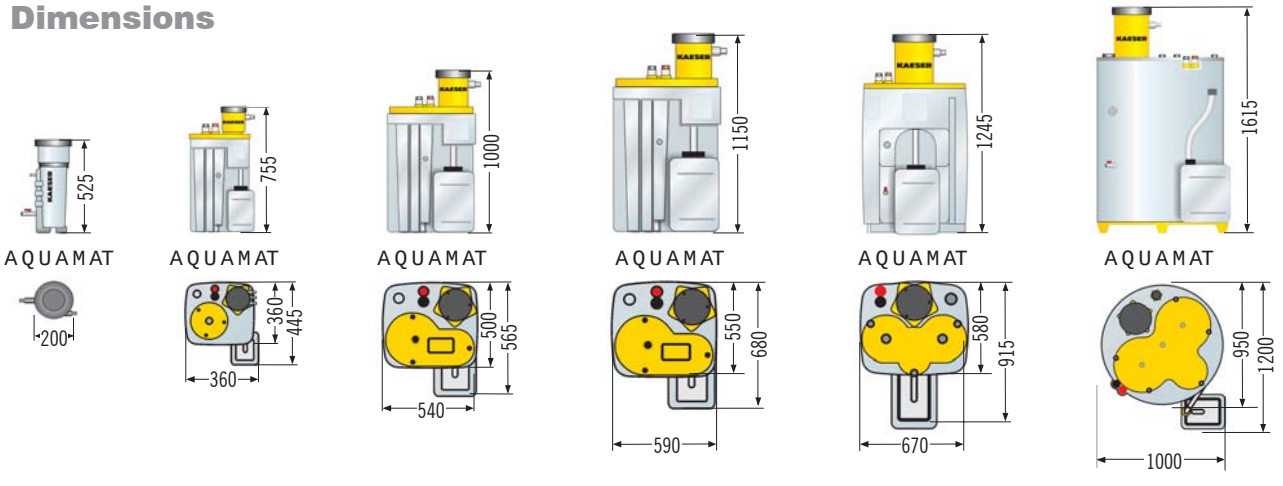
Specifications

Condensate treatment systems [1]		AQUAMAT 1	AQUAMAT 2	AQUAMAT 4	AQUAMAT 5R	AQUAMAT 6	AQUAMAT 8
Suitable for max. compressor capacities		1 / 2 / 3	1 / 2 / 3	1 / 2 / 3	1 / 2 / 3	1 / 2 / 3	1 / 2 / 3
Screw and rotary compressors with oil injection							
SIGMA FLUID S 460, turbine oil		2.5 / **1.5** / 1	4.5 / **4** / 2.5	10 / **8.5** / 5.5	21 / **16.5** / 10.5	45 / **33** / 23	120 / **105** / 60
SIGMA FLUID MOL, VCL oils		1.5 / 1 / 0.5	3 / 2.5 / 1.5	7 / 5.5 / 3.5	14 / 11 / 7	30 / 22 / 15	80 / 70 / 40
VDL oil		2 / 1.3 / 0.7	4 / 3.5 / 2	9 / 7 / 4.5	18 / 15 / 9	40 / 30 / 20	100 / 90 / 50
Synthetic oils [3]	Climate zone 2	0.3 – 1	1.2 – 2.5	2.3 – 5.5	5.5 – 11	11 – 22	25 – 70
1- and 2-stage reciprocating compressors							
Turbine oil		1.2 / 1 / 0.4	2.4 / 2 / 1	5.6 / 4.4 / 2.8	11.4 / 8.8 / 5.6	24 / 22 / 123	80 / 70 / 40
VDL oil or synthetic oil	Climate zone 2	0.4 – 0.7	0.7 – 1.4	1.4 – 3.3	3.3 – 6.5	6.5 – 16.8	17 – 52
Container capacity	l	10	55	180	200	335	720
Filter capacity	l	1 × 2 / 1 × 3	1 × 2 / 1 × 3	1 × 4.5 / 1 × 8	1 × 9 / 1 × 17	1 × 9 / 2 × 17	1 × 30 / 2 × 45
Condensate inlet		2 × G ½	3 × G ½ / 1 × G 1	3 × G ½ / 1 × G 1	3 × G ½ / 1 × G 1	3 × G ½ / 1 × G 1	3 × G ½ / 1 × G 1
Water outlet (hose)		DN 10	DN 13	DN 25	DN 25	DN 30	DN 30
Oil outlet DN		—	DN 20	DN 32	DN 32	DN 30	DN 30
Weight, empty	kg	4	10	24	30	40	90
Width	mm	200	360	540	590	670	1000
Depth	mm	200	445	565	680	915	1200
Height	mm	525	755	1000	1150	1245	1615
Thermostatic heating							
Capacity	kW	—	0.4	1	1	1.4	2 × 1.4
Weight	kg	—	0.9	2.3	2.3	3	3
Power supply	V	230 V — 50–60 Hz — 1 Ph					

[1] 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 have a strong emulsifying tendency. Please inform KAESER regarding the technical specification of your compressor(s) to obtain an individual AQUAMAT recommendation.
[2] 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)
[3] Not ester or polyglycol oils

Dimensions



LGA InterCert Certified QM-System ISO 9001:2000
LGA InterCert Certified EM-System ISO 14001

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P-740ED.9/06 Specifications are subject to change without notice