

# ÖWAMAT®

**OIL / WATER SEPARATION**

**DOUBLE EFFICIENCY.**

**DOUBLE FILTER LIFE.**



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National technical approval

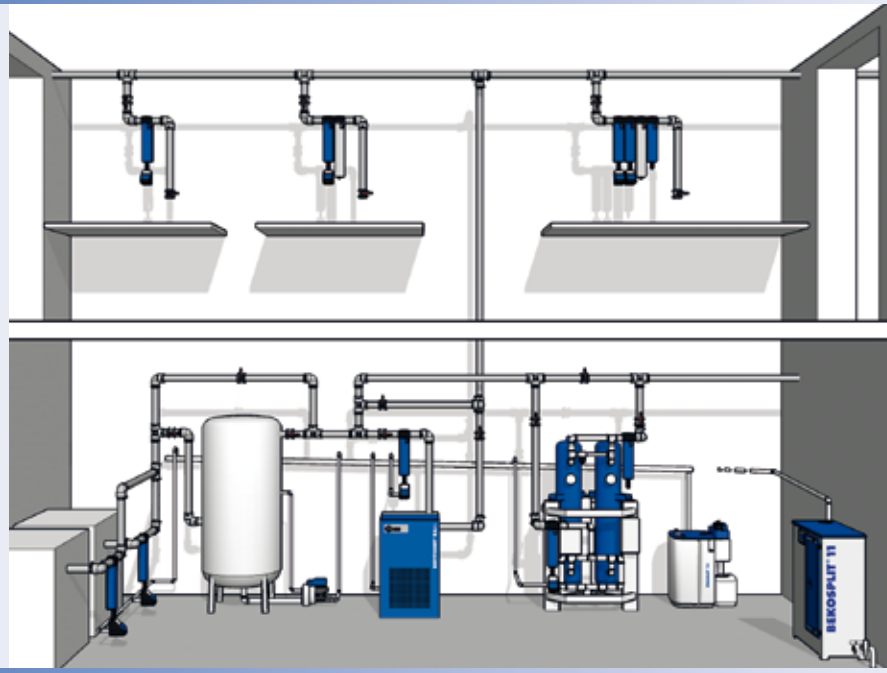
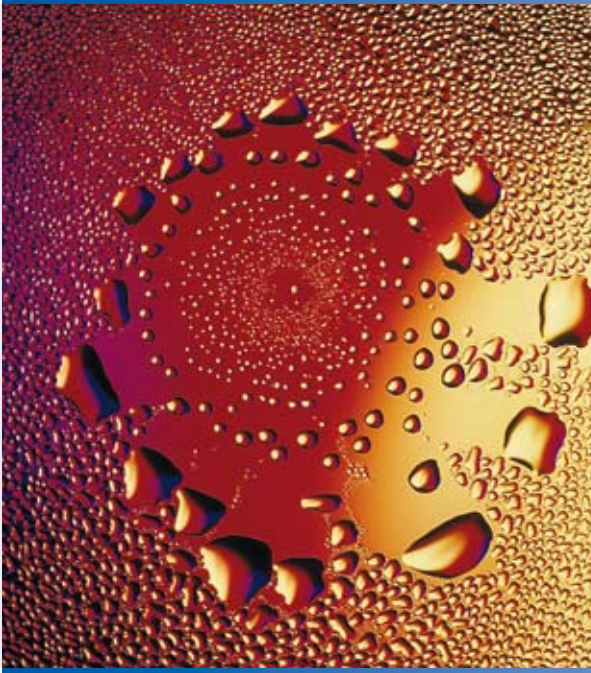
**Z-83.5-9**

Deutsches Institut für Bautechnik, Berlin

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## EXPERT KNOWLEDGE FOR EFFICIENT TECHNOLOGY



### INEVITABLE

Anyone who runs compressed air equipment needs to control and treat the inevitably occurring condensate. This is what economic and technical reasons, as well as ever increasing legal regulations, demand.

The oil / water separation for dispersed condensates usually represents a cost-saving and permanently reliable solution to the problem.

The purified water meets the legal requirements regarding discharge.

With many innovations and the respective know-how, BEKO's newly developed ÖWAMAT® generation demonstrates the head start of an experienced producer.

**Allow yourself to be convinced!**

### DECENTRAL AND RELIABLE

Outsourcing sounds progressive – but is not always the best solution. The disposal of condensate via external service providers, for example, is a complex and costly procedure. Furthermore, internal investments, such as certified collection tanks, monitoring devices and installation works need to be added to the disposal costs.

Decentralised processing of the condensates directly where they develop represents a solution which is more elegant and, above all, more cost efficient. In this respect, ÖWAMAT® oil / water separators perform much better than light-liquid separators in accordance with DIN 1999 and simple gravity separators. In contrast to these devices, ÖWAMAT® installations meet all legal requirements. Additional investment costs and infrastructural conversions are not necessary.



## EXPERIENCE GUARANTEES THE LEAD

ÖWAMAT® devices made by BEKO are optimally adjusted to the operating requirements. Having been consistently upgraded and improved over more than two decades, in particular the generation now available has become the standard of this industrial sector with devices which have often been copied but never equalled.

ÖWAMAT® devices are known for superior cost-effectiveness and function:

- Plant-specific sizes
- No energy costs
- National technical approval for all sizes
- No permit according to the law on water required
- Low maintenance. Control once a week only
- Payback within a few months
- 90-125 % higher performance according to unit type

**+1: DOUBLE EFFICIENCY**

**+2: SIMPLE HANDLING THANKS TO CARTRIDGE TECHNOLOGY**

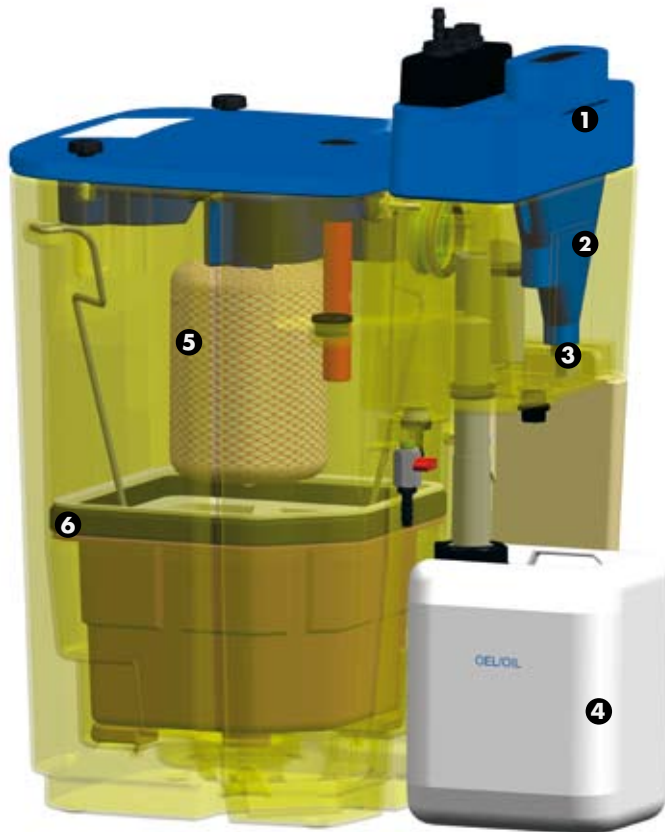
**+3: DOUBLE SERVICE LIFE OF FILTER UNITS**

**+4: TYPE APPROVAL INCLUDING OR EXCLUDING THE SEPARATION OF FREE TRAMP OILS**

**+5: EASY RETROFITTING OF A HEATING SYSTEM AT ANY TIME**



# INNOVATIVE, EFFICIENT, RELIABLE



## THE OPERATING PRINCIPLE: YOUR GUARANTEE FOR COST-EFFECTIVE CONDENSATE TREATMENT

The oil-contaminated condensate flows under pressure into the newly designed pressure relief chamber. **1** Here, the pressure is released without creating turbulence in the downstream **2** separation tank. Any entrained coarse dirt particles are held back in a **3** removable trap.

In the separation tank, the oil settles on the surface as a result of gravity separation. It then flows into the overflow-proof oil collector **4**.

The precleaned condensate flows into the filtration stage. The prefilter **5**, which is characterized by its ideal flow pattern from the inside to the outside, binds the remaining oil droplets. It also deals with any residual floating oil in the filter chamber.

The remaining oil particles are safely and reliably retained in the main filter cartridge **6**. The final result is purified water suitable for discharge directly into the sewer system. Thanks to the cartridge technology, filter replacement is both quick and clean.

The OEKOSORB® cartridge:  
Take grip-straps ...

pull out the cartridge ...

and allow it to drain.







Special ÖWAMAT® version without separation of free tramp oils

### **ÖWAMAT® without separation of free tramp oils**

Special version for condensates without free oils, as typical for certain applications, e.g. in the case of polyglycol lubricated compressors. For dimensioning an ÖWAMAT® version without separation of free tramp oils we recommend obtaining advice either from specialists in the trade or from BEKO.

### **Approval including or excluding the separation of free tramp oils**

For the new ÖWAMAT® generation, a type approval is available for models including or excluding the separation of free tramp oils.

### **Also suitable for piston compressors**

A type approval is also available for ÖWAMAT® devices for the processing of condensate from piston compressors.

### **Operator-friendly cartridge technology**

Enables quick and clean replacement.  
Minimized waste and easy disposal.

### **Superior filter material**

Greater efficiency thanks to improved material of prefilter and main filter. Superior to conventional activated carbon filters.

### **Extended maintenance intervals**

Enable optimum synchronisation with compressor service contracts.

### **Operationally reliable**

The newly designed pressure relief chamber with non-turbulent condensate conduction and the overflow-protected oil receiver constitute important factors in terms of operational reliability.

### **Optional heating system**

Retrofitting of a heating system is possible during operation without emptying the separation tank.

Variable connection in three directions



Prefilter and OEKOSORB® cartridge

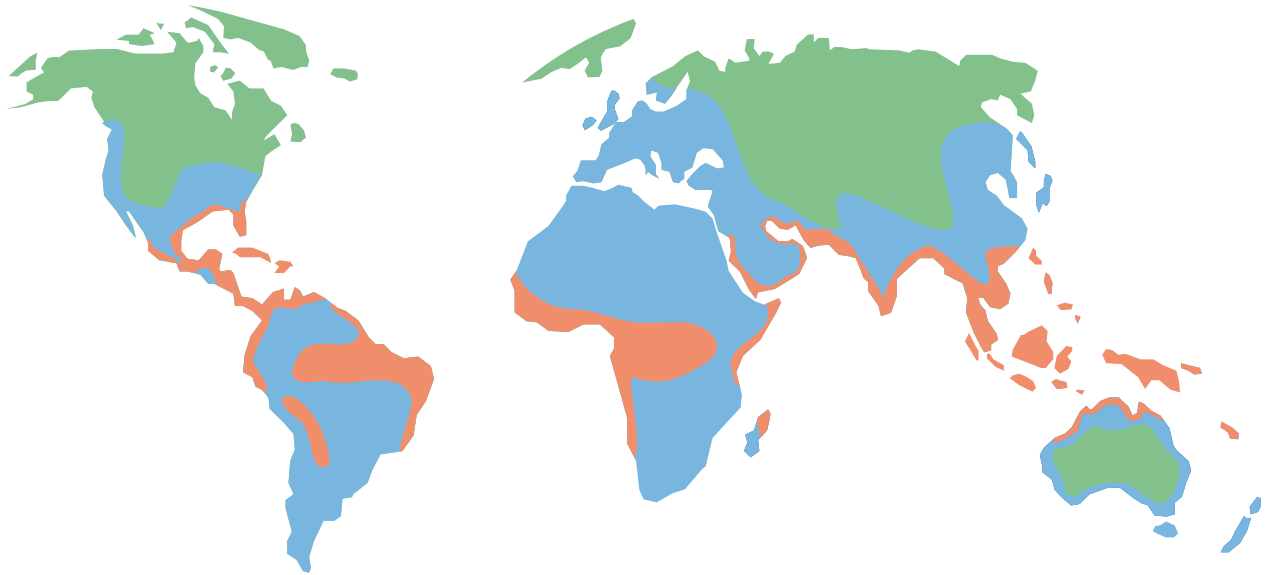


Simple to retrofit: heating system



# CAPACITY AND CLIMATE DATA

## ÖWAMAT®



Our performance classification of BEKOMAT® and ÖWAMAT® units is based on performance tests and many years of experience in this field. Taking account of the different climate zones across the globe enables better plant dimensioning. For region-specific dimensioning of ÖWAMAT® oil / water separation systems see the three climate zones:

- e.g. Northern Europe, Canada, Northern USA, Central Asia
- e.g. Central and Southern Europe, Central America
- e.g. South-East Asian coastal regions, Oceania, Amazon and Congo region

For further details concerning climate zones contact our sales partners, subsidiaries, BEKO Germany or visit our website at <http://www.beko.de>.

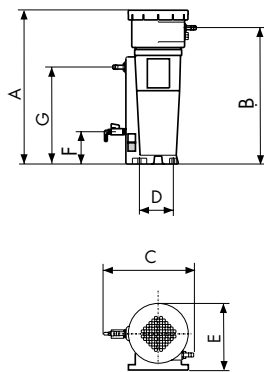
	Installed compressor capacity (m³/min)					
	Screw compressors				Piston compressors 1 or 2-stage	
	Turbine oil LTD	VDL oil	VCL oil	Synthetic oil	VDL oil	Synthetic oil PAO*
ÖWAMAT® 10	2.8	2.8	2.1	2.1	1.9	1.6
	2.4	2.4	1.9	1.9	1.7	1.4
	2.1	2.1	1.6	1.6	1.5	1.2
ÖWAMAT® 12	8.5	8.5	6.5	6.5	5.9	4.9
	7.3	7.3	5.6	5.6	5.1	4.2
	6.2	6.2	4.8	4.8	4.3	3.6
ÖWAMAT® 14	16.9	16.9	13.0	13.0	11.7	9.8
	14.6	14.6	11.3	11.3	10.1	8.4
	12.5	12.5	9.6	9.6	8.7	7.2
ÖWAMAT® 15	33.6	33.6	25.9	25.9	23.3	19.4
	29.3	29.3	22.5	22.5	20.3	16.9
	24.9	24.9	19.1	19.1	17.2	14.3
ÖWAMAT® 16	67.3	67.3	51.8	51.8	46.6	38.8
	58.5	58.5	45.0	45.0	40.5	33.8
	49.7	49.7	38.3	38.3	34.4	28.7

### Coefficients for performance deviation with synthetic oils (based on PAO)

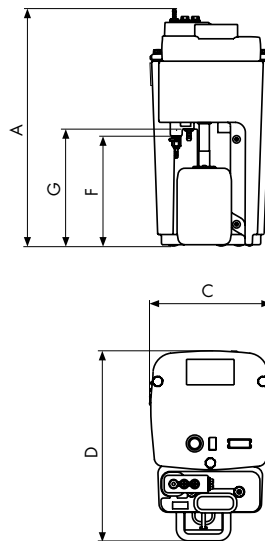
Synthetic oil	Screw compressors	Piston compressors 1 or 2-stage	Possible performance deviation
PAO	1.0	1.0	+/- 20 %
Esters	0.85	1.15	+/- 40 %

	ÖWAMAT® 10	ÖWAMAT® 12	ÖWAMAT® 14	ÖWAMAT® 15	ÖWAMAT® 16
Container volume	10 l	30.6 l	61.3 l	115.5 l	228.4 l
Filling volume with preseparator		22.7 l	46.3 l	84.3 l	158.8 l
Filling volume without preseparator	4.3 l	20.3 l	41.5 l	72.5 l	137.2 l
Condensate inflow (hose)	2 x G½ (di = 10 mm)	3 x G½ (di = 10 mm) 1 x G1 (di = 25 mm)	3 x G½ (di = 10 mm) 1 x G1 (di = 25 mm)	3 x G½ (di = 13 mm) 1 x G1 (di = 25 mm)	3 x G½ (di = 13 mm) 1 x G1 (di = 25 mm)
Water outflow (hose)	G½ (di = 10 mm)	G½ (di = 13 mm)	G1 (di = 25 mm)	G1 (di = 25 mm)	G1 (di = 25 mm)
Oil outflow		DN 25	DN 25	DN 40	DN 40
Oil collector		2 x 5 l	2 x 5 l	2 x 10 l	2 x 20 l
Weight empty		13.5 kg	18.5 kg	36.5 kg	53 kg
Weight empty without preseparator	3,5 kg	12 kg	16 kg	32 kg	42 kg
Min./ max. temperature	+5 to +60 °C	+5 to +60 °C	+5 to +60 °C	+5 to +60 °C	+5 to +60 °C
Max. operating pressure at inlet	16 bar	16 bar	16 bar	16 bar	16 bar
Prefilter	2.5 l	2.5 l	6.7 l	18.5 l	36.5 l
Main jet	2.0 l	5.4 l	10.4 l	20.2 l	40.3 l

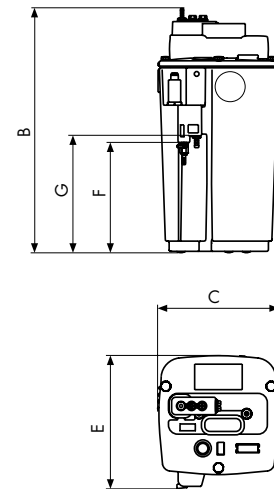
### ÖWAMAT® 10



### ÖWAMAT® 12-16 with preseparator



### ÖWAMAT® 12-16 without preseparator



	ÖWAMAT® 10	ÖWAMAT® 12	ÖWAMAT® 14	ÖWAMAT® 15	ÖWAMAT® 16
A	528 mm	702 mm	872 mm	1090 mm	1160 mm
B	464 mm	724 mm	896 mm	1120 mm	1194 mm
C	290 mm	350 mm	410 mm	530 mm	659 mm
D	100 mm	544 mm	594 mm	764 mm	939 mm
E	222 mm	390 mm	461 mm	573 mm	702 mm
F	110 mm	320 mm	420 mm	505 mm	535 mm
G	330 mm	340 mm	460 mm	550 mm	580 mm

**BEKOMAT®**

The convincing concept for condensate discharge

**ÖWAMAT®**

Clean & safe oil / water separation.  
New with double efficiency and double filter life

**BEKOSPLIT®**

Splitting plants for the reliable, economic and environmentally friendly treatment of emulsions

**DRYPOINT®**

The complete product range for compressed air drying:  
refrigeration dryers, adsorption dryers, membrane dryers

**EVERDRY®**

Compressed air for large volume flows

**CLEARPOINT®**

Flow-optimised, reliable filters and water separators for compressed air and industrial gas

**BEKOKAT®**

Catalytic oil retention.  
The optimum solution for the highest requirements in compressed air treatment

**BEKOFLOW®**

Innovative, cost-cutting compressed air pipe system

**BEKOBLIZZ®**

Optimised cooling processes using deep-cooled, dry compressed air

EVERDRY® – Engineered by EverAir GmbH.  
Member of the BEKO Group of Companies.



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