



**NEW
PERFORMANCE DATA**



BEKOMAT®

THE ULTIMATE SOLUTION

FOR CONDENSATE DISCHARGE

FOR THE EFFICIENCY OF YOUR COMPRESSED AIR SYSTEM



The secondary product of compressed air is condensate – a threat to your production result.



Do you use compressed air?

Compressed air – an important production aid. No matter for what purpose you are using compressed air, it must always be of high and unvarying quality. This quality can be impaired by compressed-air condensate.

Condensate – Your No. 1 enemy of quality

Compressed-air condensate is unavoidable during the production of compressed air. It is often highly contaminated with oil and usually also contains dirt particles (such as rust) and other harmful substances. "Oil-free" condensate is particularly aggressive. Your primary target: removing and treating the condensate to ensure high quality compressed air.

Why you need an "intelligent" condensate drain:

Condensate does not occur in consistent quantities. A reliable and efficient condensate drain removes condensate from the compressed-air system wherever and whenever it accumulates, and without increasing costs. Many drain types do not meet these requirements.

Avoid problems from the start:

Rely on the BEKOMAT® industrial standard.

BEKOMAT® electronically level-controlled condensate drains – with over 500.000 installations worldwide – have been synonymous with safe, dependable and economical condensate management.

The proven technical features of the **BEKOMAT®** condensate drain, embodied in a range of different models, offer you the right type of drain for your particular application. The **BEKOMAT®** device, a branded product of the highest quality, will enable you to solve all the problems of condensate discharge to your complete satisfaction.



BEKOMAT® condensate drain and **ÖWAMAT®** oil-water separation system:

The ideal combination for the treatment of dispersed condensates



BEKOMAT®
installed on air receiver

THE TECHNOLOGY WELL PROVEN & EFFICIENT



Functional overview based on the operating principle of the BEKOMAT® 14:

FIG. 1:

Condensate trickles through the inlet opening ❶ and collects in the container ❷. The diaphragm valve is closed, since the pilot-supply line ❸ and the solenoid valve ❹ ensure pressure compensation above the valve diaphragm ❺. The larger space above the diaphragm results in a high closing force, making sure the valve seat is absolutely leakproof.

FIG. 2:

Once the container ❷ has filled with condensate, so that the capacitive level sensor ❻ signals at the maximum point, the solenoid valve is energised, closing the pilot-supply line and allowing venting of the air above the valve diaphragm. The diaphragm lifts off the valve seat ❼, and the pressure in the housing forces the condensate into the discharge pipe ❸.

The electronic system of the BEKOMAT® condensate drain now calculates the discharge rate down to the minimum point on the sensor and uses this figure to determine the exact valve opening time required. The valve will again be fully closed and leakproof before any compressed air can escape.

Should the condensate discharge fail to function properly (blocked discharge pipe, faulty diaphragm), the device will change to the alarm mode after 60 seconds. In this case, the red LED flashes and, if desired, the alarm signal is relayed via a potential free contact. While in the alarm mode, the solenoid valve will open every 4 minutes for a period of 7.5 seconds. This ensures that a BEKOMAT® unit filled in an unpressurised state will, under pressure, automatically revert to normal operating conditions and thus clear the alarm.

From the BEKOMAT® the condensate can flow for treatment

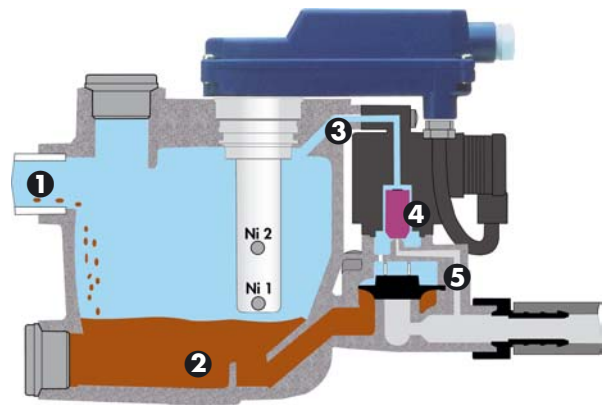


FIG. 1

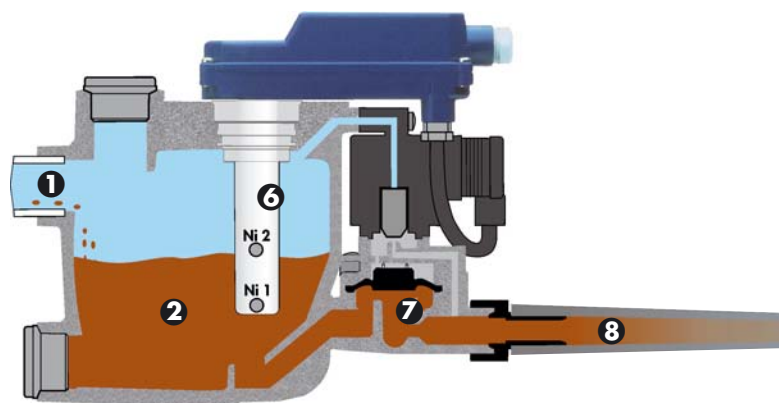
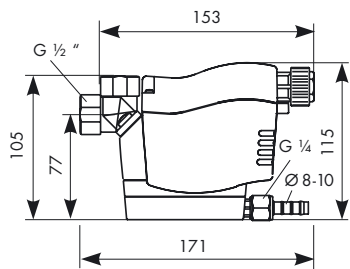


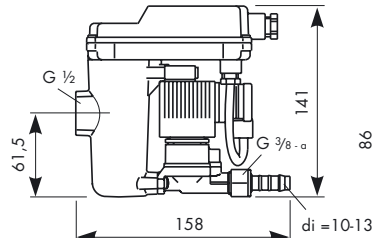
FIG. 2

into the **ÖWAMAT®** oil-water separator which is designed to deal with disperse, oil-contaminated condensate. If the condensate contains stable emulsions, our **BEKOSPLIT®** emulsion splitting plant will clean up the condensate leaving only a minimum of waste for disposal. Either system will help your company to conform to the legal obligations concerning the treatment & discharge of compressed-air condensate.

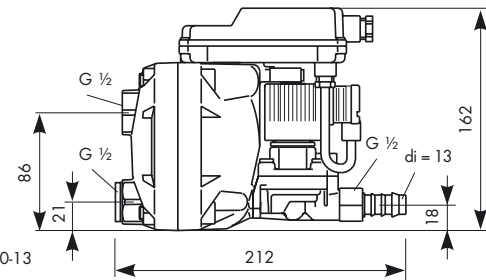
A WIDE RANGE OF SUCCESSFUL MODELS FOR EFFECTIVE CONDENSATE MANAGEMENT



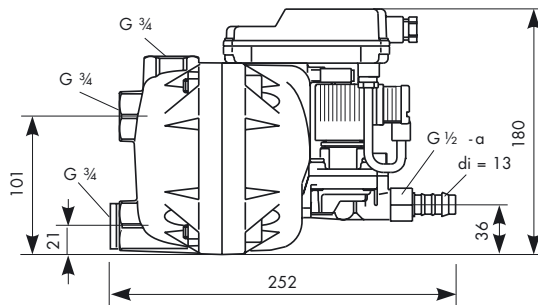
BEKOMAT® 21



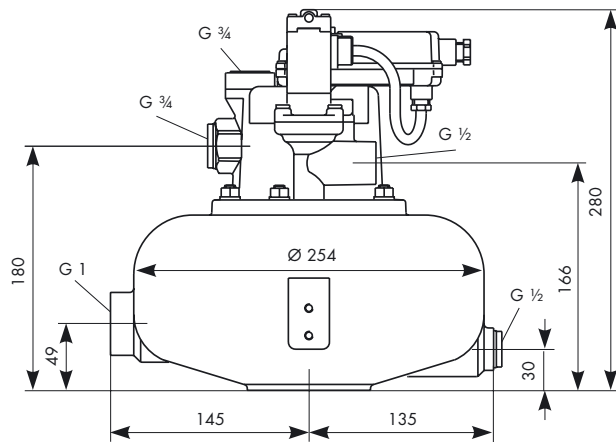
BEKOMAT® 12



BEKOMAT® 13



BEKOMAT® 14



BEKOMAT® 16

The correct **BEKOMAT®** model for your particular compressed-air application is chosen on the basis of the installed compressor performance, the system pressure and the relevant material requirements. Condensate drain **BEKOMAT® 21** is supplied with a plastic housing, while **BEKOMAT® 12** to **16** are available as aluminium units for oil-contaminated condensates and may also be provided with additional hard coating for "oil free", aggressive condensates. A selection of accessories – including fixing brackets, inlet and outlet sets, easily

retrofitable heating for areas where frost is likely to occur, insulating shells, and trace heating – completes the **BEKOMAT®** standard programme.

Special **BEKOMAT®** models are available for:

- extremely aggressive condensates.
- areas with potentially explosive atmospheres.
- low pressure and vacuum conditions.
- discharge during no-load operation with multi-stage compressors.



THE ADVANTAGES FULL ATTENTION TO DETAIL

Economical:

The intelligent control avoids unnecessary loss of compressed air, thus permitting considerable energy savings.

Reliable functions:

The non-wearing capacitive sensor registers every type of condensate – including pure oil. Condensate discharge is no problem even with heavily contaminated condensate.

Easy installation:

The connection to the compressed-air system is quite simple, because the inlet and outlet of the **BEKOMAT®** unit are in alignment. Discharge can be arranged either through a hose or piping.

LED-Display
with TEST button



Fully adaptable –
connecting the **BEKOMAT®**
to different feed pipes
takes next to no time.



User-friendly:

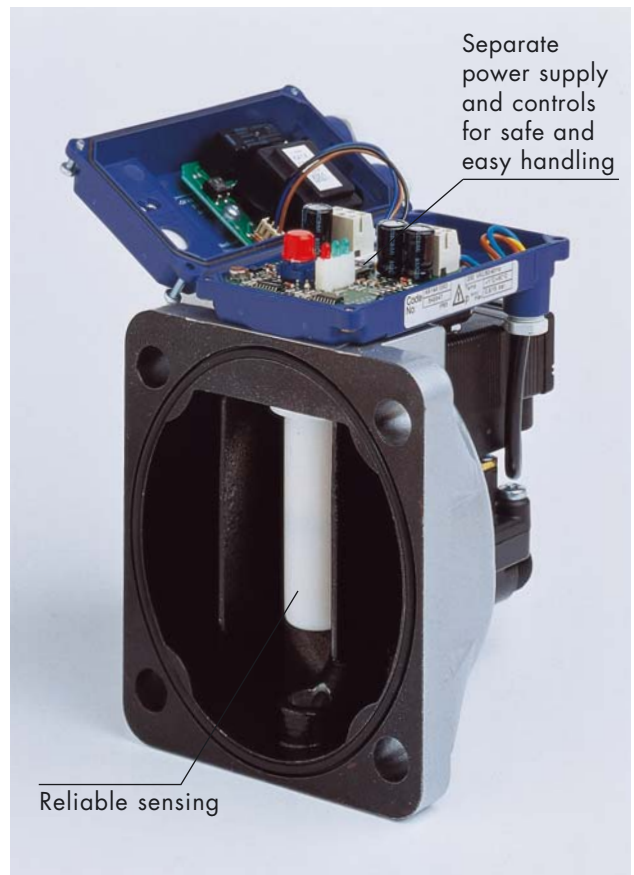
The electronic system consists of an integrated power unit and a control with accessible 24 V direct current. After pulling the plug-in connector to separate the device from the power unit, maintenance work on the device can be performed without danger. This means a qualified electrician is no longer necessary after the initial electrical installation.

Safe:

Constant self-monitoring guarantees maximum reliability. The current operating state is indicated by an LED display. A functional test can be carried out at any time by pressing the TEST button. A potential-free contact makes it possible to relay fault signals to a control centre. All the operator's elements and the electronic control are splash-proof and comply with IP65 protection rating.



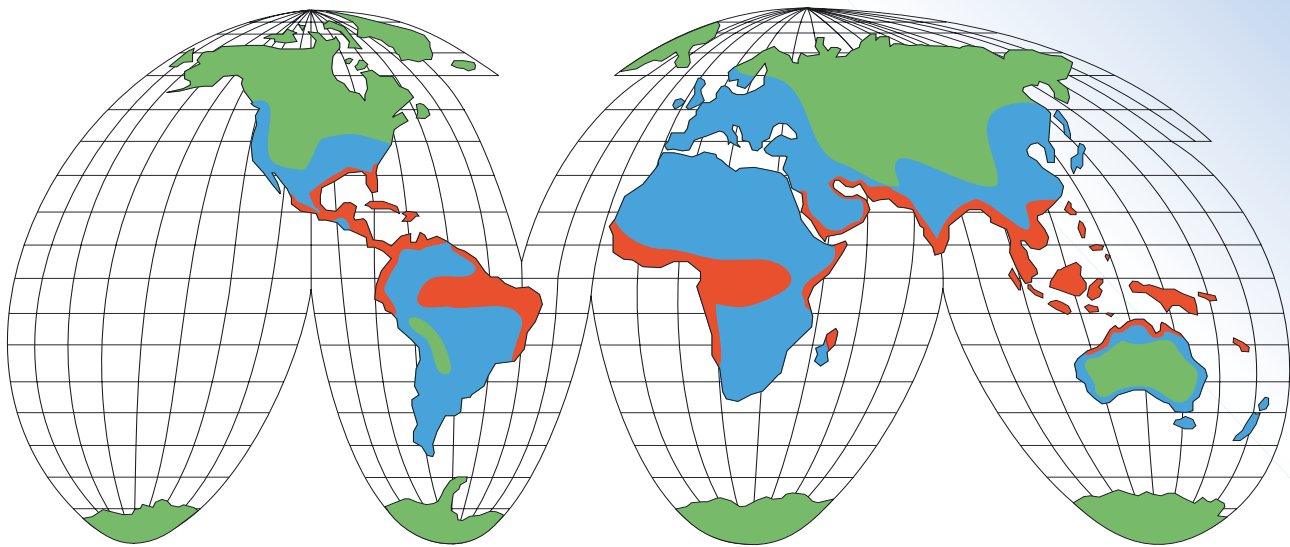
All CO devices with
hard-coated protection
against aggressive
condensates



Separate
power supply
and controls
for safe and
easy handling

Reliable sensing

TECHNICAL DATA



BEKOMAT® performance classification

On the basis of performance tests and many years of market experience, we have drawn up a new performance classification for our **BEKOMAT®** and **OWAMAT®** devices. This takes account of the different climate zones across the globe, so that the selection data of the devices can be calculated with even greater accuracy.

For correct selection of your **BEKOMAT®** condensate drain, please refer to the climate zone where the device is installed:

Green – dry and cool climate (such as in Northern Europe, Canada, Northern states of the USA, Central Asia)

Blue – temperate climate (such as in Central and Southern Europe, Central America)

Red – humid, tropical climate (such as in the coastal regions of South-East Asia, Oceania, Amazon and Congo regions)

You can obtain further information on the climate zones from our marketing partners, branches or **BEKO** Germany or you could simply visit our homepage at www.beko.de.

	Operating pressure min./max. bar	Weight kg	Temperature* min./max. °C	Application**	Climate zone	Peak compressor performance m³/min.	Peak dryer performance	Peak filter performance m³/min.
BEKOMAT® 21	0.8/16	0.7	+1/60	a, b	green	5.0	10.0	50.0
blue					4.0	8.0	40.0	
red					2.5	5.0	25.0	
BEKOMAT® 21 PRO				a, b				
BEKOMAT® 12	0.8/16	0.8	+1/60	a	green	8.0	16.0	80.0
BEKOMAT® 12 CO	1.2/16	0.8		a, b	blue	6.5	13.0	65.0
BEKOMAT® 12 CO PN63	1.2/63	0.9		a, b	red	4.0	8.0	40.0
BEKOMAT® 13	0.8/16	2.0	+1/60	a	green	35.0	70.0	350.0
BEKOMAT® 13 CO	1.2/16	2.0		a, b	blue	30.0	60.0	300.0
BEKOMAT® 13 CO PN25	1.2/25	2.2		a, b	red	20.0	40.0	200.0
BEKOMAT® 14	0.8/16	2.9	+1/60	a	green	150.0	300.0	1500.0
BEKOMAT® 14 CO	1.2/16			a, b	blue	130.0	260.0	1300.0
					red	90.0	180.0	900.0
BEKOMAT® 16 CO	1.2/16	5.9	+1/60	a, b	green	1700.0	3400.0	
					blue	1400.0	2800.0	
					red	1000.0	2000.0	

* with heating unit and proper insulation: down to -25°C

** Application: a = oil contaminated condensate; b = oil free, aggressive condensate

Subject to technical changes without prior notice, errors not excluded.
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