



BEKOMAT®

**LEADING THE WAY
IN COMPRESSED AIR
CONDENSATE DRAINAGE**

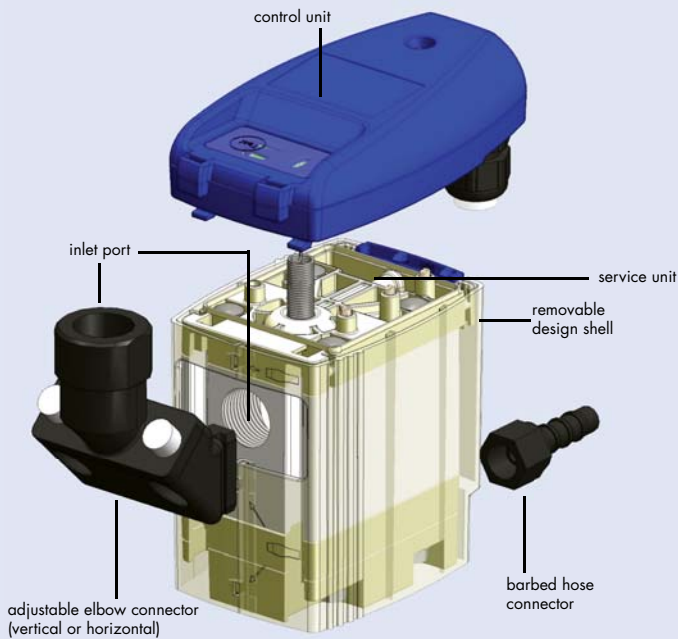
SMALL DROPS WITH A POWERFUL IMPACT ON PRODUCTION

ALWAYS AND EVERYWHERE

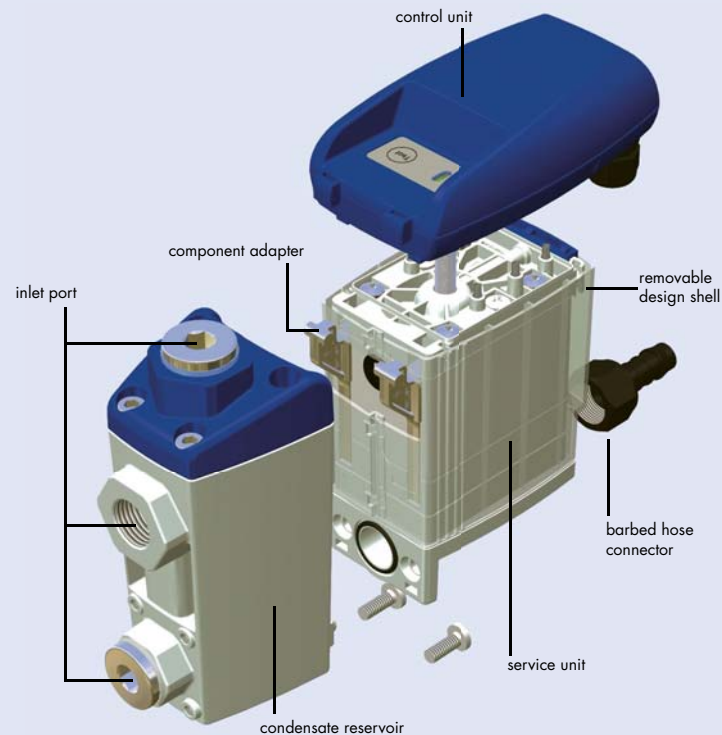
Condensate formation is unavoidable. It is always a "by-product" of compressed air generation and spreads throughout the entire compressed air network. Approximately two-thirds of the condensate is produced in the aftercooler. The rest occurs anywhere in the network as the compressed air cools down. This problem is inherent in the system and can cause both damage and higher operating costs.

The solution is a condensate drainage system adapted to the actual amount produced. This will cut costs and prevent damage. BEKOMAT® condensate drains—designed for the electronically level-controlled discharge of the condensate in compressed air networks—function without unnecessary loss of compressed air and with minimal energy input. Our customers are clearly convinced by the high economic efficiency and reliability of the device: there are now more than 1,500,000 BEKOMAT® units installed worldwide.

BEKOMAT® 31 and 32



BEKOMAT® 33



BEKOMAT® 31, 32 AND 33

The BEKOMAT® 31, 32 and 33 offer significant enhancements to proven solutions. Even more reliable, with fast and problem free installation. Maintenance that used to take hours, now takes only seconds. BEKO achieves these targets through a construction that has never been realized until now, and consists of only two units joined by a simple, snap-fit connection.

The innovation made by BEKO.

Setting the standard for the future today.

BEKOMAT® FOR ALL OPERATING CONDITIONS

A wide range of BEKOMAT® models makes it possible to select a suitable and cost-effective device for each particular application. The device can be adapted to all the usual supply voltages; the operating elements and the control system are protected to IP 65.

A SOUND DECISION— AND OPTIMUM RESULTS



BEKOMAT® GUARANTEES A SHORT PAYBACK PERIOD

BEKOMAT® from BEKO has become the industrial standard because of its high reliability and particularly because it offers energy-saving operation without loss of compressed air. There are a number of very good technical reasons for this:

Compared with float drains, BEKOMAT® has decisive advantages, especially since it:

- functions unaffected by dirt, resulting in reliable operation
- is equipped with an alarm signal
- requires very little maintenance
- has large cross-sections to prevent emulsification

BEKOMAT® also has decisive advantages over solenoid valves, especially since it:

- operated in accordance with the actual condensate quantity
- avoids unnecessary loss of compressed air
- is equipped with a fault signal
- has large cross-section value to prevent emulsification

+1: **TRUE ZERO AIR LOSS**

Maximum energy savings

+2: **HIGHEST RELIABILITY**

Unaffected by dirt

+3: **LOWEST MAINTENANCE**

Reduce overall time and costs

+4: **SENSOR CONTROLLED**

Safe for all condensate types

+5: **FULLY AUTOMATIC**

Monitors level and function

+6: **INTEGRATED ALARM**

With remote detection



OVERVIEW OF BEKOMAT® MODELS AND APPLICATIONS



STANDARD BEKOMAT®

BEKOMAT® 12, 13, 14, 16, 31, 32 AND 33

Compressor

Around 60 percent of the total condensate is produced in the aftercooler of the compressor.

Receiver

More than 10 percent of the total condensate stems from the air receiver.

Dryer

Up to 25 percent of the total condensate separates from the vapor in the refrigeration dryer. Therefore, efficient drying requires equally efficient condensate drainage.

Filter

What is the use of a perfect filter if the condensate drain is not matched to the task or not functioning correctly? Our standard BEKOMAT® series of drains are perfectly suitable and have design elements specifically for compressed air filters.



SPECIAL BEKOMAT®

BEKOMAT® 3, 6, 8, AND 9

Multistage compressor

If the condensate from the intercoolers of a multi-stage compressor is not reliably removed, it will get into the next compressor stage.

The BEKOMAT®CV and LA/LP models prevent the impeller of turbo compressors coming under "drop attack" and eliminates condensate build-up and water hammering. They even manage leaking water-coolers.

Vacuum

A device specifically developed for a vacuum or pressureless systems with operating pressures from 1.5 to 25 psi (abs.).

Hazardous Areas

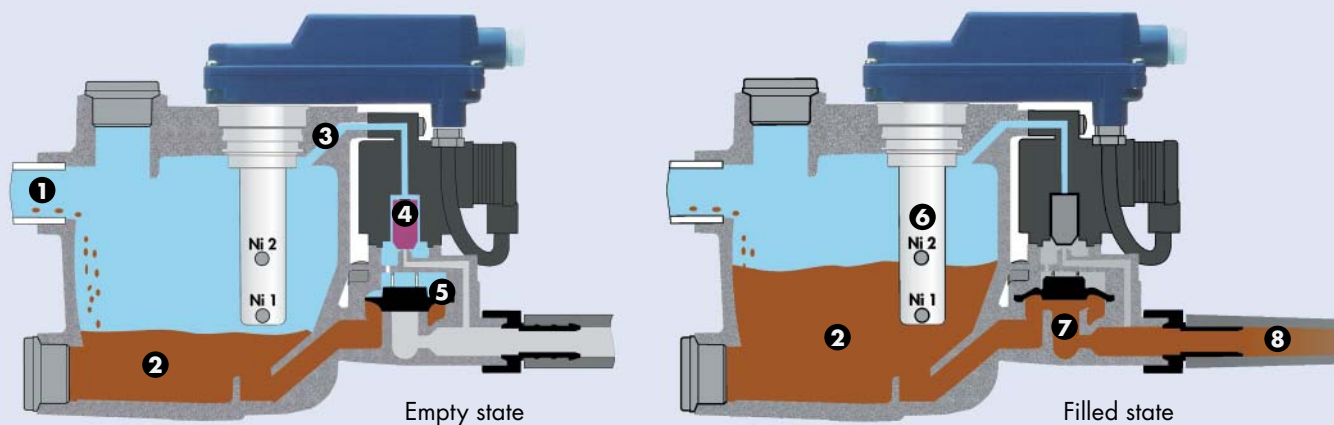
For application in hazardous areas where spark prevention is crucial. The device is rated for use in are II 2G EEx ib IIB T4, i.e., for explosion class II B and temperature class T4. Permissible fluids are: benzene, ethane, methane, town gas, butadiene, ethyl alcohol, methanol, diesel fuel, ethylene, propane, petroleum, heating oil, and hydrogen sulphide.

Stainless Steel Versions

For the removal of highly aggressive condensates.

FUNCTIONAL DESCRIPTION

USING BEKOMAT® 14 AS AN EXAMPLE



Empty state:

Condensate trickles through the inlet opening and collects in the container **2**. The diaphragm valve is closed, since the pilot supply line **3** and the solenoid valve **4** ensure pressure compensation above the valve diaphragm **5**. The larger surface area above the diaphragm results in a high closing force, so that the valve seat is tight and leakproof.

Filled state:

When the container **2** has filled with condensate and the capacitive level sensor **6** signals at the maximum point, the solenoid valve is energized and the area above the valve diaphragm is vented. The valve diaphragm lifts off the valve seat **7**, and the pressure in the housing forces the condensate into the discharge pipe **8**.

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

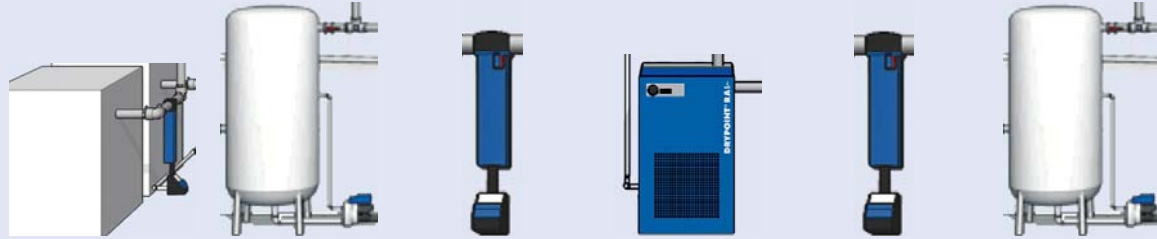
Should the condensate discharge fail to function properly (blocked discharge pipe, faulty diaphragm), the device will change to the alarm mode after 60 seconds. In this case, the red LED flashes and, if desired, the alarm signal is relayed via a potential-free contact. While in the alarm mode, the solenoid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

From the BEKOMAT® the condensate can flow for treatment into the QWIK-PURE® or ÖWAMAT® oil-water separator which is designed to deal with condensate contaminated with free and dispersed non-emulsified or emulsified (QWIK-PURE® only) oil. In the case of 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 requirements concerning the treatment and discharge of compressed air condensate.

TECHNICAL DATA

BEKOMAT®

STANDARD BEKOMAT® SELECTOR CHART



COMPRESSOR PERFORMANCE

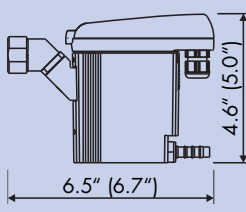
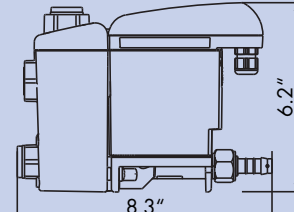
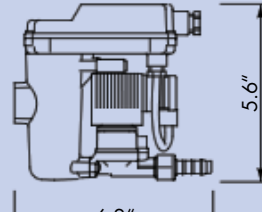
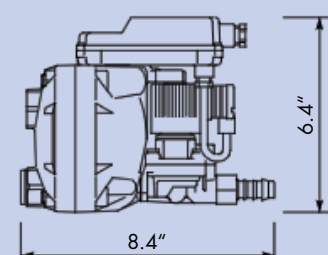
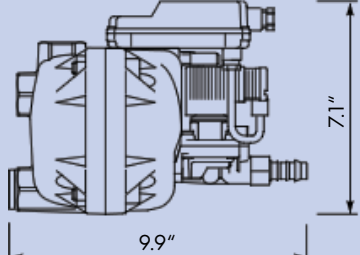
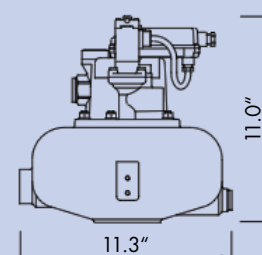
Compressor HP	Compressor SCFM	After Cooler	Wet Receiver Tank	Pre-filter	Refrigerant Dryer	After-filter	Dry Receiver Tank
20	90	31	31	31	31	31	31
40	180	32	32	31	31	31	31
50	225	32	32	31	32	31	32
60	270	33	33	31	32	31	32
75	338	33	33	31	32	31	32
100	500	33	33	31	32	31	32
125	563	13	13	31	33	31	33
150	675	13	13	31	33	31	33
175	788	13	13	31	33	31	33
200	900	13	13	31	33	31	33
250	1125	13	13	32	13	32	13
300	1300	13	13	32	13	32	13
400	1800	14	14	32	13	32	13
500	2250	14	14	32	13	32	13
750	3375	14	14	33	14	33	14
1000	5000	14	14	33	14	33	14
1250	5625	16	16	13	14	13	14
1500	6750	16	16	13	14	13	14
1750	7875	16	16	13	14	13	14
2000	9000	16	16	13	14	13	14
2500	11250	16	16	13	16	13	16
3000	13500	16	16	13	16	13	16
4000	18000	16	16	14	16	14	16
5000	22500	16	16	14	16	14	16

For extremely corrosive applications where excessive rust, scale or particles are present please contact your BEKO representative for special installation instructions.

TECHNICAL DATA

BEKOMAT®

STANDARD BEKOMAT® MODEL RANGE

Model	31	32	33	33CO	12CO PN63		
Maximum flow rate (scfm)	100	225	500	500	280		
Working pressure (psig) min.	12	12	12	12	12		
Working pressure (psig) max.	232	232	232	232	915		
Weight (lbs)	1.8	2.2	3.6	3.6	2.0		
Min. / max. temperature °F	+34/140	+34/140	+34/140	+34/140	+34/140		
Connections (inlet)	1 x 1/2"	1 x 1/2"	3 x 1/2"	3 x 1/2"	1 x 1/2"		
Outlet (hose connector)	1 x 1/4"	1 x 1/4"	1 x 1/2"	1 x 3/8"	1 x 3/8"		
Outlet (hose di)	3/8"	3/8"	1/2"	1/2"	1/2"		
							
Model	13	13CO	13CO PN50	14	14 CO	14 CO PN25	16 CO
Maximum flow rate (scfm)	1300	1300	1300	5400	5400	5400	50000
Working pressure (psig) min.	12	12	12	12	12	12	12
Working pressure (psig) max.	232	232	725	232	232	360	232
Weight (lbs)	4.4	4.4	4.4	6.4	6.4	6.4	13.0
Min. / max. temperature °F	+34/140	+34/140	+34/140	+34/ 140	+34/ 140	+34/ 140	+34/ 140
Connections (inlet)	2 x 1/2"	2 x 1/2"	2 x 1/2"	3 x 3/4"	3 x 3/4"	3 x 3/4"	2 x 3/4" 1 x 1"
Outlet (hose connector)	1 x 1/2"	1 x 1/2"	1 x 3/8"	1 x 1/2"	1 x 1/2"	1 x 1/2"	1 x 1/2"
Outlet (hose di)	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"
							

For dimensional drawings, operating instructions and detailed information about each drain model go to www.bekousa.com. We will also be happy to provide you with information about our large range of special BEKOMAT® models. Just get in touch with us.

HIGH QUALITY COMPRESSED AIR FROM BEKO

The quality of your compressed air.

RELIABLE

The highest level of operational reliability is guaranteed with every product that BEKO manufactures.

EFFICIENT

Maximum energy efficiency and conservation are guiding principles of every product design.

ECONOMIC

Products that provide the quickest return on investment in the industry with the least amount of risk.

EFFECTIVE

German engineered with no compromises on quality.

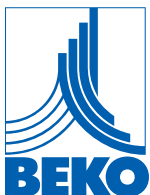
EXPERIENCE

More than 25 years of industry leading experience stands behind our entire product offering.

SOLUTIONS

Your single source for a range of performance compressed air products designed to work in synergy.

*Compressed air treatment and condensate technology.
The complete program. Worldwide.*



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