Products

BEKOSPLIT®

Condensate processing

Splitting, saving, and preserving

BEKOSPLIT®: economical, environmentally friendly emulsion treatment

BEKO

Clean separation with environmental benefits: the BEKOSPLIT® method

One litre of oil contaminates 1,000,000 litres of groundwater. Therefore, the legislator stipulates the professional and responsible handling of emulsified condensates which accumulate during many production processes. In many cases, processing according to purely physical gravitational separation is not sufficient.

Environmentally-friendly processing

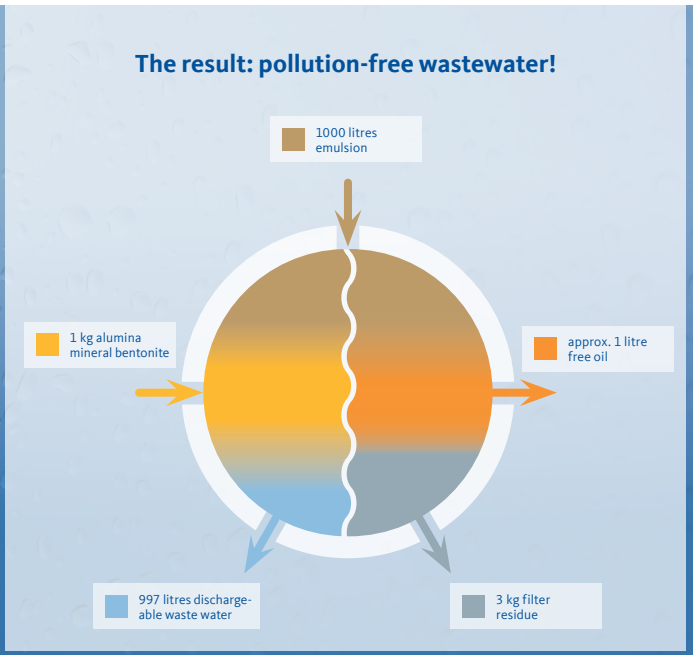
The BEKOSPLIT® splitting plant allows for reliable, economic, and in-house processing of emulsified condensates that accumulated as a result of unfavourable initial conditions, or due to certain lubricant/compressor combinations. Water-insoluble organic pollution, such as oils and solid impurities, is removed via the addition of a special alumina mineral. Subsequently, the outflowing water, that is pollution-free, can directly be introduced into the wastewater system.

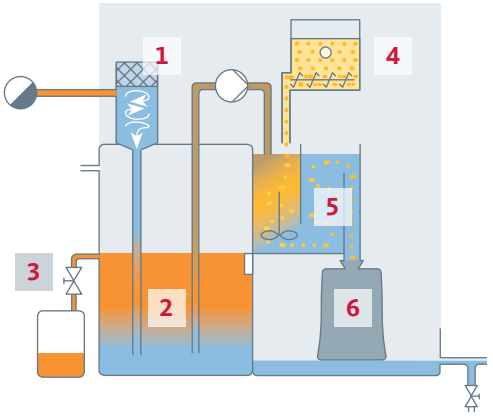
Cost-effective operation

Compared with other methods, BEKOSPLIT® offers convincing advantages: the plant operates with low splitting agent consumption, long filter service lives, and electronic monitoring of the operating states. Moreover, it is easy to handle, reliable in processing, economical as far as operation is concerned, and it only requires rather little maintenance effort. BEKOSPLIT® has also proved itself at an international level: **BEKO** TECHNOLOGIES is the global market leader regarding emulsion splitting plants for compressed-air condensates.

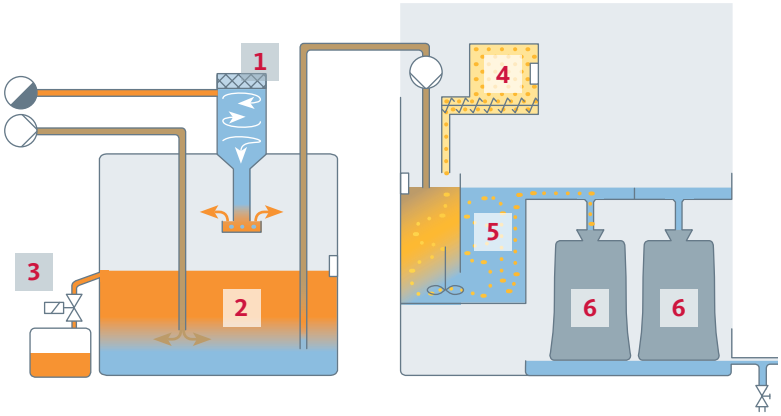
Approved by the German Institute of Contruction Engineering, Berlin

Approval No. Z-83.2-2





Function of BEKOSPLIT® 11



Function of BEKOSPLIT® 12 – 16

Effective separation of oil/water emulsion: the operating principle of BEKOSPLIT®

For the preliminary purification, the wastewater to be processed is supplied to the preseparation container **(2)** via a pressure relief chamber **(1)**. This process is unaffected by fluctuations in the wastewater inflow. The separated oil is discharged automatically **(3)**, and the liquid levels are monitored by a capacitive electronic system that distinguishes accurately between air, oil and emulsion. This ensures that emulsion cannot get into the oil collector, and free parts cannot enter the splitting process.The pretreated wastewater is then pumped into the BEKOSPLIT® reaction chamber **(5)** for fully automatic treatment. The reaction process uses bentonite as a splitting agent, a non-toxic natural alumina mineral which is stored in a metering unit **(4)** and stirred into the wastewater in amounts precisely adapted to the particular application. The splitting agent encapsulates the oil and dirt particles. This results in easily filterable macro flocs which are then removed by a bag filter **(6)**. The purified water can now be discharged into the sewerage system.

Floc formation using bentonite

The BEKOSPLIT® components in detail

1 Preseparation container with a pressure relief chamber

A pressure relief chamber ensures a steady wastewater introduction into the preseparation container. Through this, the free-oil separation is considerably supported, the splitting agent consumption significantly reduced, and the filter service life is noticeably prolonged.

2 Environmentally-friendly splitting agent

The broad-range (pH 4 to 10), highly effective splitting agent eliminates not only the need for the continual adaptation of pH values, but also for the use of chemicals.

3 Filtration via a bag filter

Through the large filter surface, a high drainage degree of the filtration residue can be ascertained (semi-solid filter cake resistant to leaching). The filtration via bag filters significantly reduces filter consumption. If required, the filter can quickly and easily be replaced.

4 Electronic monitoring of all the operating states

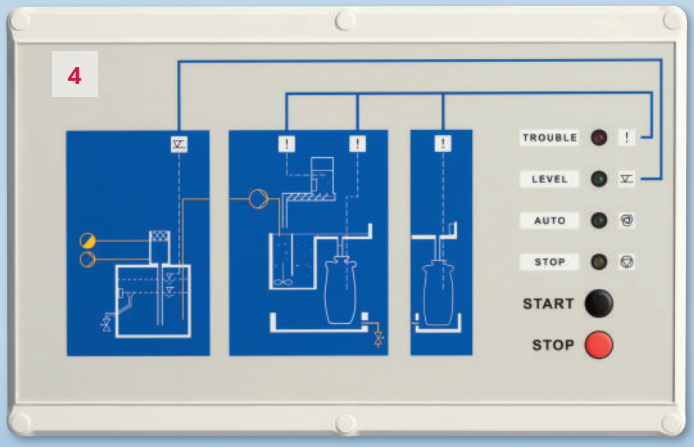
The process sequence during processing is microprocessor-controlled. The splitting agent stock and filters are continuously monitored. Maintenance and fault messages can be processed externally via signal outputs. The electronic control and monitoring allows for automatic operation.

Analysis service

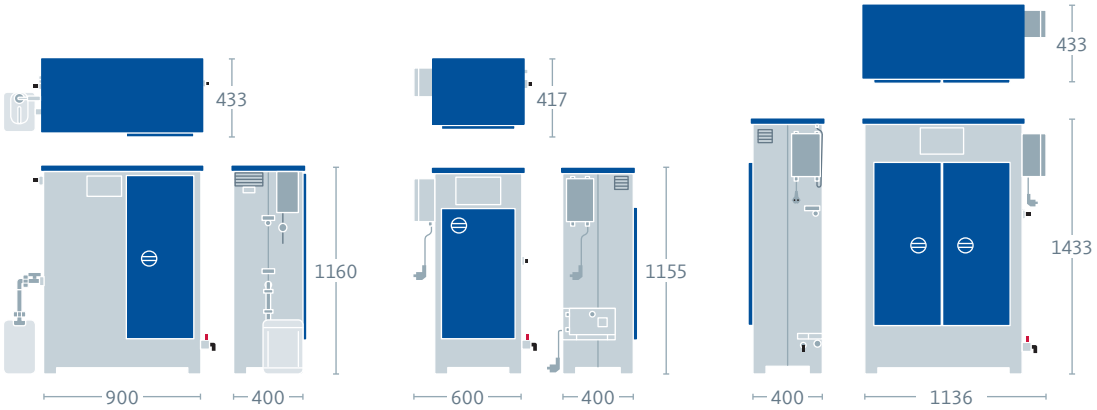
The **BEKO** TECHNOLOGIES analysis service ensures compliance with the legal environmental regulations. By means of condensate samples, the suitability of the method and the correct design of the plant are confirmed in the preliminary stages. As an option, the sender of the samples will be informed about the residual hydrocarbon content and the operating costs.

The BEKOSPLIT® advantages at a glance

Top selling splitting plant for compressed air condensates	Reliable, environmentally friendly treatment system	Safe and easy operation
Economical in terms of price, operation and maintenance	No aggressive cleaners	Type approval for compressor condensates



BEKOSPLIT® Emulsion splitting plant

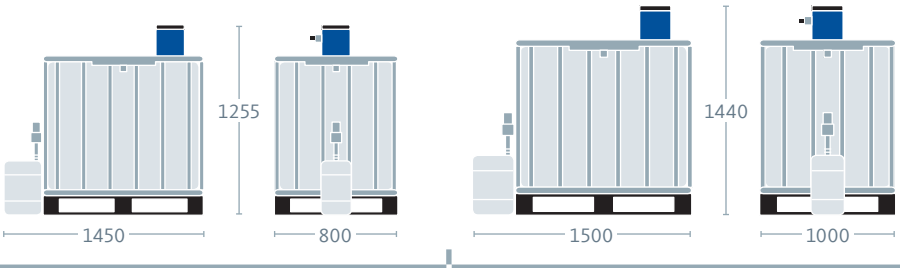


Dimensions in mm	With integrated pre-separation tank (70 l) and oil collector (10 l)	Splitting plant	Splitting plant	
BEKOSPLIT®	**11**	**12**	**13**	**14**
Peak compressor performance (m³/min)	12.5	25	50	75
Peak throughput (l/h)	15	30	60	90
Input voltage (VAC)[1]	100–230	110/200/230	110/200/230	110/200/230
Weight empty (kg)	48	33	54	54
Power input (VA)	< 100	< 100	< 100	< 100
Condensate inlet	3 x G ½" | di = 13 mm, 1 x G 1"	G ½" | di = 13 mm	G ½" | di = 13 mm	G ½" | di = 13 mm
Water outlet	1" | di = 25 mm	1" | di = 25 mm	1" | di = 25 mm	1" | di = 25 mm
Max. operating pressure at inlet (bar)	25	–	–	–
Integrated pre-separation tank (l)	10	10	22	22
Splitting agent container capacity (l)	2.0	8.5	8.5	8.5
Filter bag capacity (l)	25	25	2 x 60	2 x 60

Operation of BEKOSPLIT® plants 12-16 requires a pre-separation tank.

[1] Other voltages on enquiry

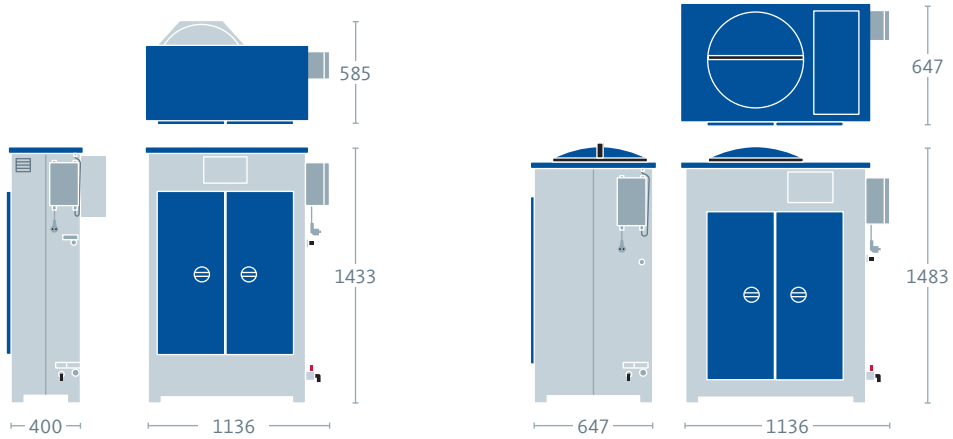
BEKOSPLIT® Pre-separation tank



Dimensions in mm		
Pre-separation tank[2] for BEKOSPLIT®	**12 | 13 | 14 | 14 S**	**12–16**
Tank capacity (l)	600	1000
Max. operating pressure at inlet (bar [g])	25	25
Condensate inlet	3 x G ½" | di = 13 mm, 1 x G 1"	3 x G ½" | di = 13 mm, 1 x G 1"
Oil outlet	di = 32 mm	di = 32 mm
Weight empty (kg)	ca. 56	ca. 74

[2] Incl. pressure relief chamber, integrated oil separation and capacitive START sensor.

BEKOSPLIT® Emulsion splitting plant

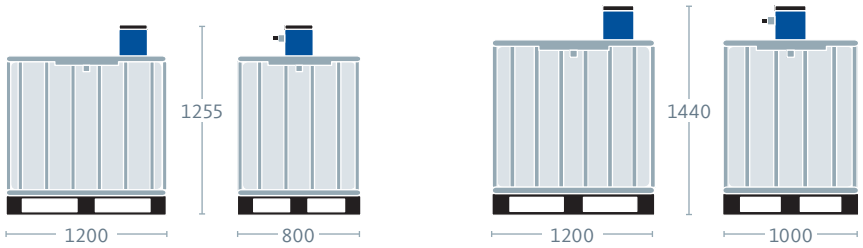


Splitting plant with 25 kg metering unit | Splitting plant | Dimensions in mm

14S	15	16	BEKOSPLIT®
75	100	135	Peak compressor performance (m³/min)
90	120	160	Peak throughput (l/h)
230	110/200/230	110/200/230	Input voltage (VAC)[1]
55	76	76	Weight empty (kg)
< 100	< 100	< 100	Power input (VA)
G ½" | di=13 mm	G ½" | di=13 mm	G ½" | di=13 mm	Condensate inlet
1" | di=25 mm	1" | di=25 mm	1" | di=25 mm	Water outlet
–	–	–	Max. operating pressure at inlet (bar)
22	54	54	Integrated pre-separation tank (l)
25	40	40	Splitting agent container capacity (l)
2 x 60[3]	2 x 60[3]	2 x 60[3]	Filter bag capacity (l)

Operation of BEKOSPLIT® plants 12-16 requires a pre-separation tank.
[1] Other voltages on enquiry
[3] Can be increased through filter module (optional)

BEKOSPLIT® Buffer tank



Dimensions in mm

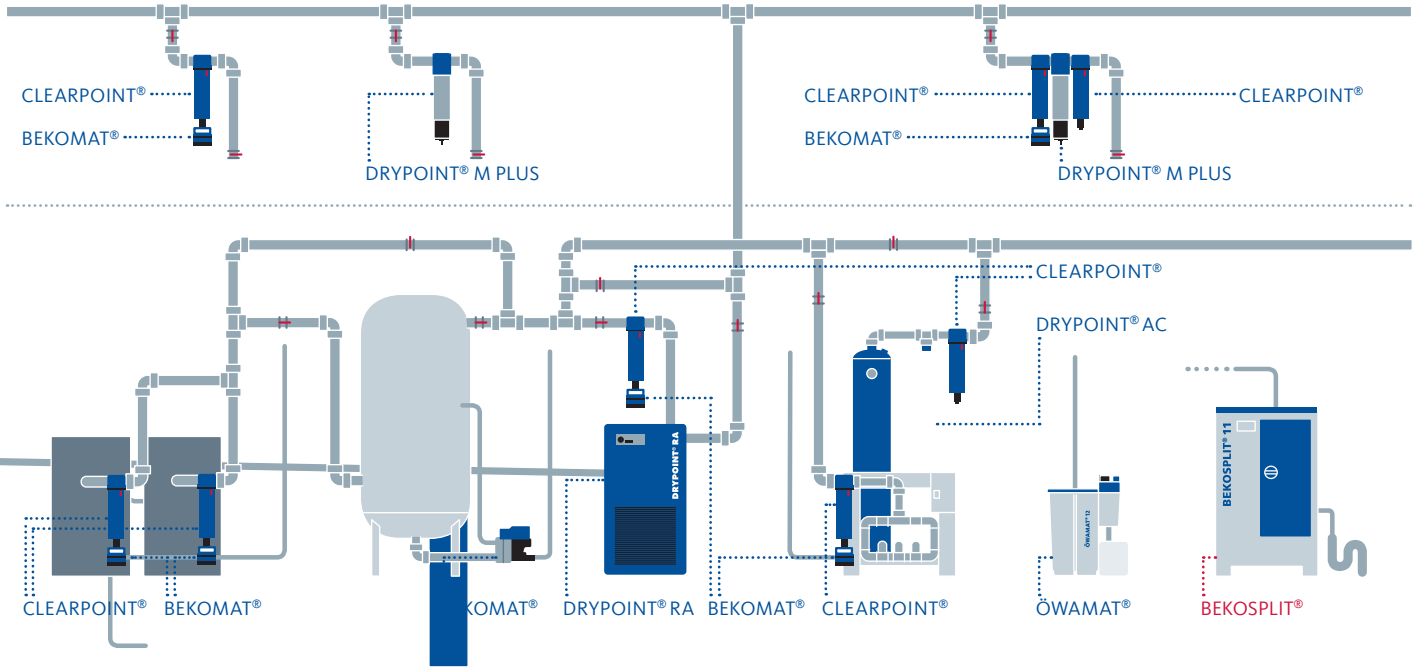
Buffer tank[4] for BEKOSPLIT®	12–16	
Tank capacity (l)	600	1000

[4] Incl. pressure relief chamber, immersion pump with float-switch for pump operation and float-switch "Tank FULL"
BEKOSPLIT® with pump control relay on request.

Quality with a system. Worldwide

We at **BEKO** TECHNOLOGIES develop, manufacture, and distribute products and systems for an optimised compressed-air and compressed gas quality throughout the world. From the processing of compressed air and compressed gases through filtration and drying, via the proven condensate technology, to instruments for the quality supervision and measurement. From the small compressed-air application to demanding process technology.

Since its founding, **BEKO** TECHNOLOGIES has continuously given decisive impulses to compressed-air technology. Our pathbreaking ideas have exerted considerable influence on the development. With this expertise, along with our personal commitment, we at **BEKO** TECHNOLOGIES stand for trend-setting technologies, products and services.



The product categories

Condensate drainage | BEKOMAT®

Filtration | CLEARPOINT®

Measurement technology
METPOINT®

Condensate processing
ÖWAMAT® | BEKOSPLIT®

Drying | DRYPOINT® | EVERDRY®

Process technology
BEKOBLIZZ® | BEKOKAT®

BEKOSPLIT®: splitting plants for the reliable, cost-effective, and environmentally-friendly processing of oil-water emulsions

BEKO TECHNOLOGIES GmbH
Im Taubental 7 | 41468 Neuss | Germany
Phone +49 2131 988-0
Fax +49 2131 988-900

beko@beko.de | www.beko-technologies.com

ISO 9001:2008 DNV Certified Company

BLUECOMPETENCE Alliance Member
Partner of the Engineering Industry Sustainability Initiative

XP ES00 001 INT | Version 2012-08