



BEKOSPLIT®

**THE ULTIMATE IN
ULTRA HIGH CAPACITY
CONDENSATE SEPARATION**

ONE GALLON OF OIL CAN CONTAMINATE 264,000 GALLONS OF GROUNDWATER

There are good reasons why legislators demand professional, responsible and safe handling & treatment of emulsions and wastewaters produced in the form of condensate or industrial residues.

For companies and company managers protection of the environment and natural resources is one side of the coin, economic efficiency is often the other.



THEREFORE THE RIGHT DECISIONS ARE NEEDED

Should condensate be collected for disposal by a specialist company or treated directly in the plant?

External disposal is rarely a viable alternative. Modern, on-site treatment systems are usually far more advantageous both with respect to cost and environmental compatibility.

Will an oil-water separation system be sufficient or will a splitting plant be required?

Stable emulsions, which often occur with compressed-air condensate or process wastewater, cannot be properly treated by systems functioning only on the basis of gravity separation. For these challenging applications, splitting plants have proved to be the right solution.

Which splitting plant would be best?

BEKOSPLIT®—a successful splitting plant, well established in international markets—offers unrivalled advantages ranging from efficiency and reliability to being an economical value.



As we enter into a new era of consciousness about our environment and our impact on it, the pressure of environmental responsibility for commercial and industrial sites is at an all time high. With new thinking comes new solutions and the disposal of oily, contaminated condensate that once was “acceptable” is now being met with more stringent legislation and harsher penalties, and rightfully so.

Section 309 of the Federal Water Pollution Control Act allows for the issuance of fines not less than \$2,500.00 per day up to \$25,000.00 per day, jail time, or both for first time violators. Such penalties can be assessed against the negligent company and/or the individual person or persons responsible for plant operations and maintenance.



SEPERATES OIL/WATER EMULSIONS EFFECTIVELY

Splitting plants are indispensable in their main area of application: compressed air systems. BEKOSPLIT® splitting plants clean up emulsified condensates which occur under unfavorable process conditions or with certain lubricant/compressor combinations.

In addition to compressed air condensate, BEKOSPLIT® is also suitable for treating other oil-containing industrial wastewaters: water-insoluble organic impurities—oils, vegetable or animal fats—and a large variety of solid contaminants can all be removed. Any heavy metals, dirt or paint particles present in the water are reliably adsorbed.

Typical applications are:

- oil-contaminated wash water
(i.e. from vehicle cleaning)
- leak test liquids
- bilge water

BETTER THAN ULTRA-FILTRATION AND "BOIL-OFF" UNITS

BEKOSPLIT®:

- functions without aggressive cleaning agents
- has no complicated moving parts such as adjustable valves or pumps
- consumes less energy
- requires less investment
- allows longer maintenance intervals

Your BEKO specialist will be pleased to provide you with further details for technology comparison.

+1:

HIGH CAPACITY OIL WATER SPLITTING PLANT

Up to 7,000 scfm at 6,000 operating hours

+2:

INTELLIGENT ELECTRONIC CONTROL

Superb reliability and maximum safety

+3:

ENVIRONMENTALLY FRIENDLY SPLITTING AGENT

No additional chemicals or heat required

+4:

LOWER OPERATING COSTS

Minimal power consumption, maintenance can be done in under ten minutes

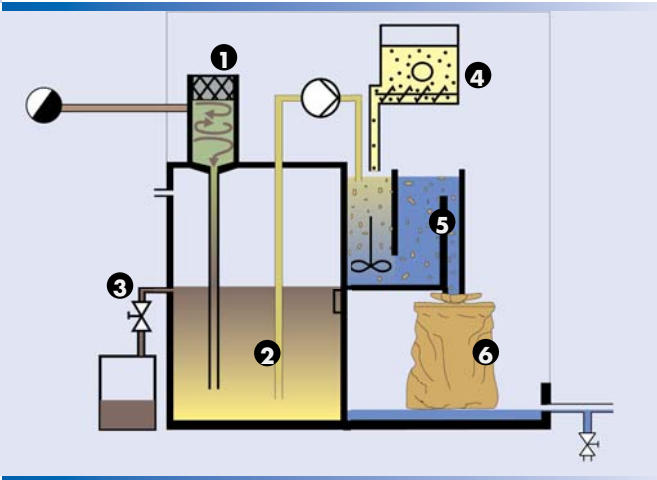
+5:

SAFE OPERATION FOR ALL CONDENSATED

*Guaranteed to work even on the toughest jobs—
Meets every U.S. regulation*

THE BEKOSPLIT® METHOD

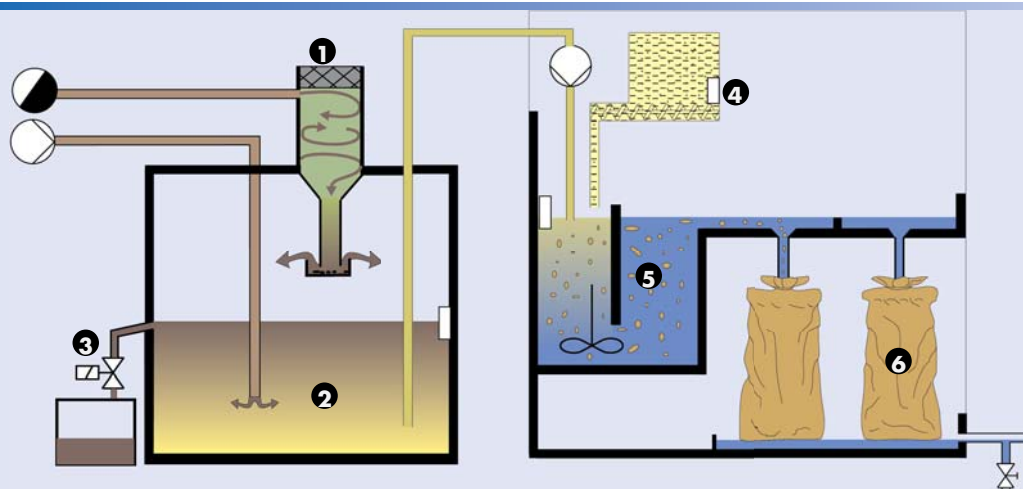
Function of BEKOSPLIT® 11



Floc formation using bentonite



Function of BEKOSPLIT® 12-16



The wastewater flows through a pressure relief chamber **1** for treatment in the pre-separation tank **2** where free oils are reliably separated out by simple gravitational separation. This process is unaffected by fluctuations in the wastewater inflow. The separated oil is discharged automatically **3** while 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 pre-treated 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 **6** filter. The purified water can now be discharged into the sewage system.

Pre-separation tank



Pre-separation tank / pressure relief chamber:

Non-turbulent wastewater flows into the pre-separation tank via a pressure relief chamber. The separation of pure oil is easily facilitated, the consumption of splitting agent is considerably reduced, and the filter lifetime is significantly prolonged.

Splitting agent (bentonite)



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.

Filtration through bag filter:

- Low water content of filter residue because of large filter surface
- Filter cake consisting of a percolating residue mass that won't dissolve
- Low filter consumption owing to filtration through bag filters
- Simple and fast filter replacement

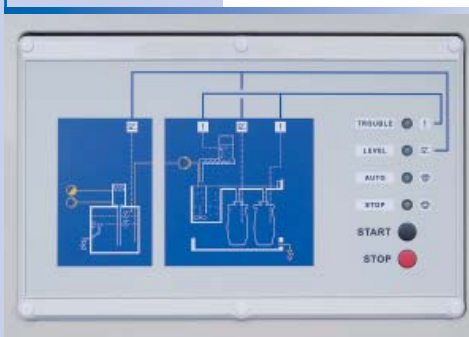
Bag filter



Electronic monitoring of all operating states:

- Microprocessor control of sequences
- Monitoring of the splitting agent supply
- Permanent filter monitoring
- Maintenance and alarm messages can be processed externally via output signals
- The electronic control and monitoring system enables automatic operation

Display



TECHNICAL DATA

BEKOSPLIT®

STANDARD BEKOSPLIT® SELECTOR CHART

BEKOSPLIT®		11	12	13	14	14S	15	16
Peak compressor performance	scfm	675	1238	2700	4050	4050	5625	6750
Peak throughput	g/h	4	8	16	24	24	32	40
Max. operating pressure at inlet	psig	360						
Integrated preseparation tank	gal	18.5						
Reaction tank capacity	gal	2.6	2.6	5.8	5.8	5.8	14.3	14.3
Splitting agent container capacity	gal	0.5	2.3	2.3	2.3	6.6	10.6	10.6
Filter bag capacity	gal	6.6	6.6	2 x 15.9*	2 x 15.9*	2 x 15.9*	2 x 15.9*	2 x 15.9*
Weight empty	lb	approx. 106	approx. 150	approx. 195	approx. 195	approx. 210	approx. 242	approx. 242
Input voltage	V	100–240	115	115	115	115	115	115
	Hz	50–60	50–60	50–60	50–60	50–60	50–60	50–60
Power input	VA	<100	<100	<100	<100	<100	<100	<100
Condensate inlet		3 x ½"	½"	½"	½"	½"	½"	½"
	mm	di = 13, 1 x 1"	di = 13	di = 13	di = 13	di = 13	di = 13	di = 13
Water outlet		1"	1"	1"	1"	1"	1"	1"
	mm	di = 25	di = 25	di = 25	di = 25	di = 25	di = 25	di = 25

* Can be increased through filter module (optional)

Preseparation tank	gal	158	264
Tank capacity	gal	158	264
Max. operating pressure at inlet	psig	360	360
Condensate inlet		3 x ½"	3 x ½"
	mm	di = 13, 1 x 1"	di = 13, 1 x 1"
Oil outlet	mm	di = 32	di = 32
Weight empty	lb	approx. 124	approx. 163



OPTIONAL ACCESSORIES

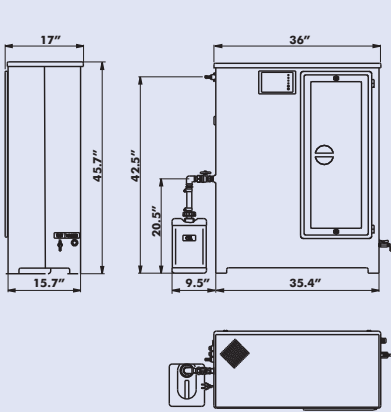
Drying rack for used filters

Spill basin for installation in conformity with legal requirements. Available in three different sizes.

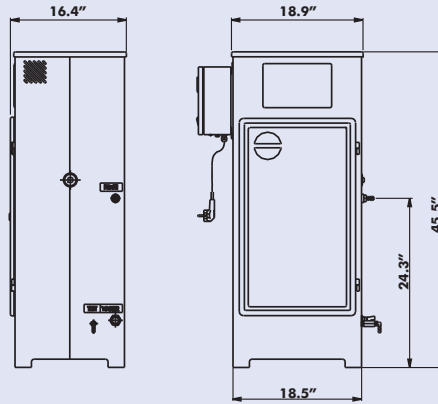
TECHNICAL DATA

BEKOSPLIT®

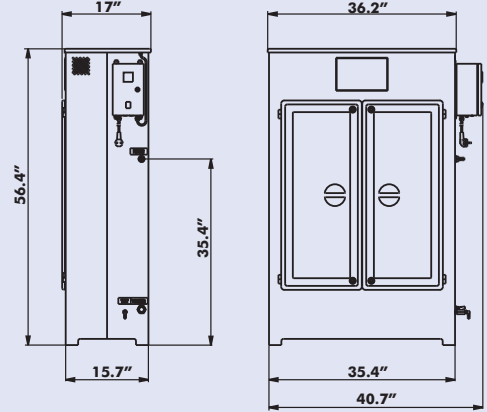
STANDARD BEKOSPLIT® MODEL RANGE



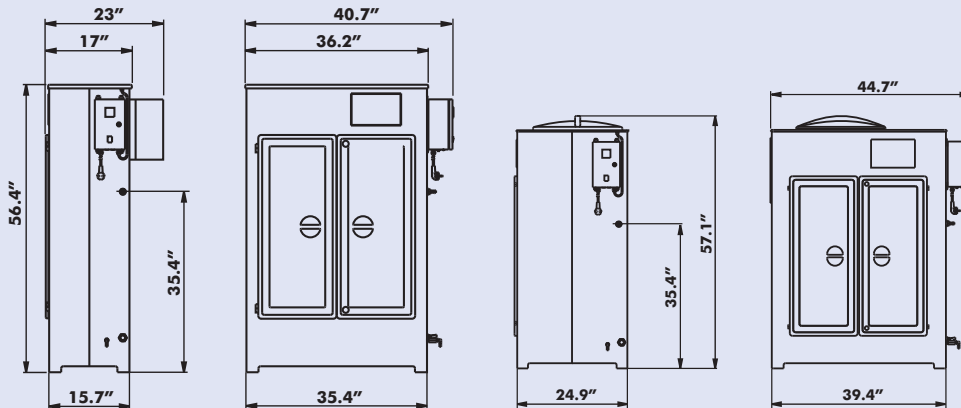
BEKOSPLIT® 11
With integrated pre-separation



BEKOSPLIT® 12

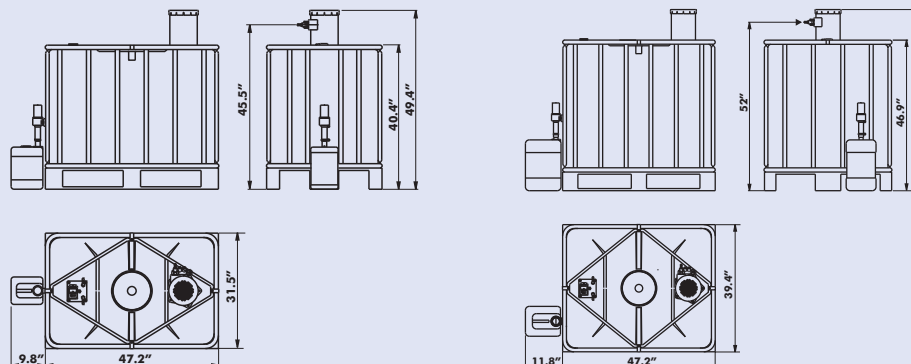


BEKOSPLIT® 13 and 14



BEKOSPLIT® 14S

BEKOSPLIT® 15 and 16



Pre-separation tank, 158 gal

Pre-separation tank, 264 gal

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.

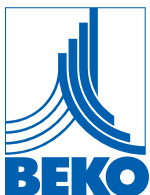
EXPERIENCE

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.



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