

# BEKOSPLIT®

**ECONOMICAL,  
ENVIRONMENTALLY FRIENDLY  
EMULSION TREATMENT**



## ONE LITRE OF OIL CAN CONTAMINATE 1,000,000 LITRES OF GROUNDWATER

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

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 DECISIONS ARE NEEDED

- Should residues 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 on international markets – offers unrivalled advantages ranging from efficiency and reliability to value.

**+ 1:**

**+ 2:**

**+ 3:**

**+ 4:**

**+ 5:**



## TOP SELLING SPLITTING PLANT FOR COMPRESSED AIR CONDENSATES

## ECONOMICAL IN TERMS OF PRICE, OPERATION AND MAINTENANCE

## RELIABLE, ENVIRONMENTALLY FRIENDLY TREATMENT SYSTEM

## SAFE AND EASY OPERATION

## TYPE APPROVAL FOR COMPRESSOR CONDENSATES

### BEKOSPLIT® – SEPARATES

#### OIL/WATER EMULSIONS – EFFECTIVELY

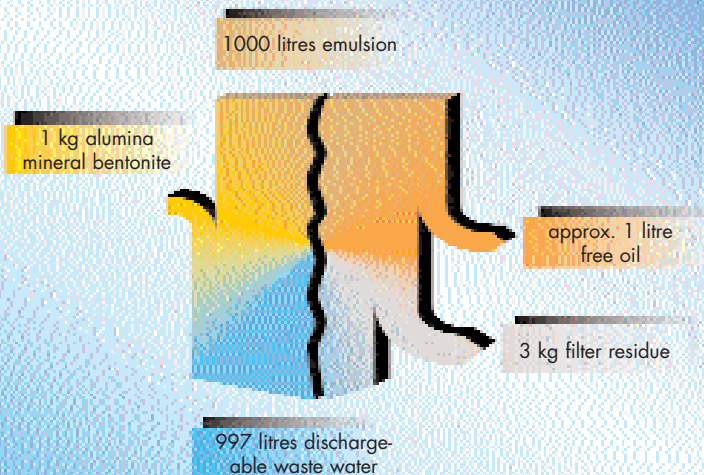
Splitting plants are indispensable in their main area of application: compressed air systems. BEKOSPLIT® splitting plants clean up emulsified condensates which occur under unfavourable process conditions or with certain lubricant/compressor combinations.

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 washing water, e.g., from vehicle cleaning
- leak test liquids
- bilge water

#### THE BEKOSPLIT® METHOD



Quantity balance for the treatment of 1000 litres of emulsion (example).

#### BETTER THAN ULTRAFILTRATION

because BEKOSPLIT®

- functions without aggressive cleaning agents
- 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.

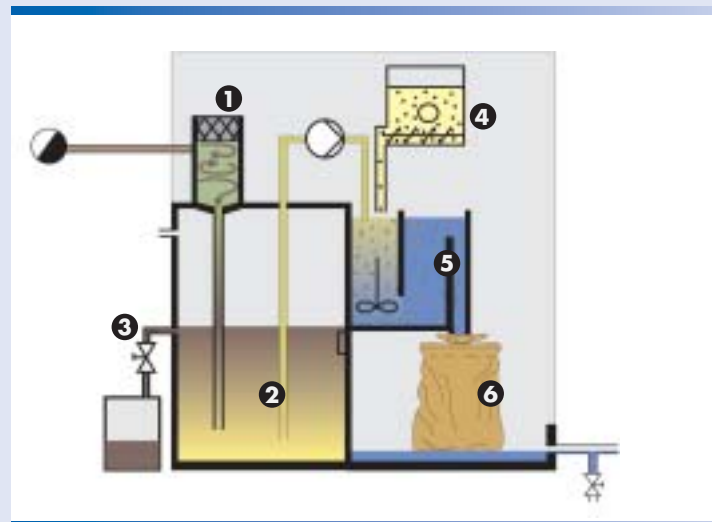


# THE BEKOSPLIT®

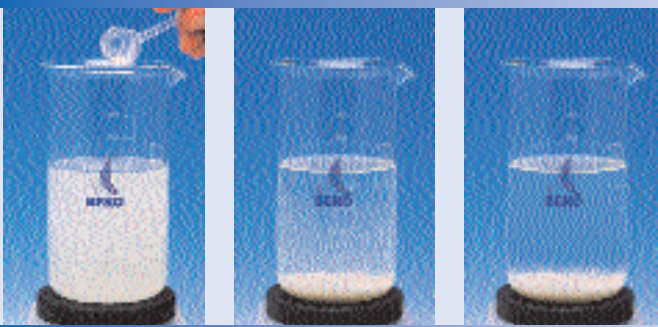
## METHOD

The wastewater flows through a pressure relief chamber **1** for pretreatment in the pre-separation tank **2** where free oil parts 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**, 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.



Funktion BEKOSPLIT® 11



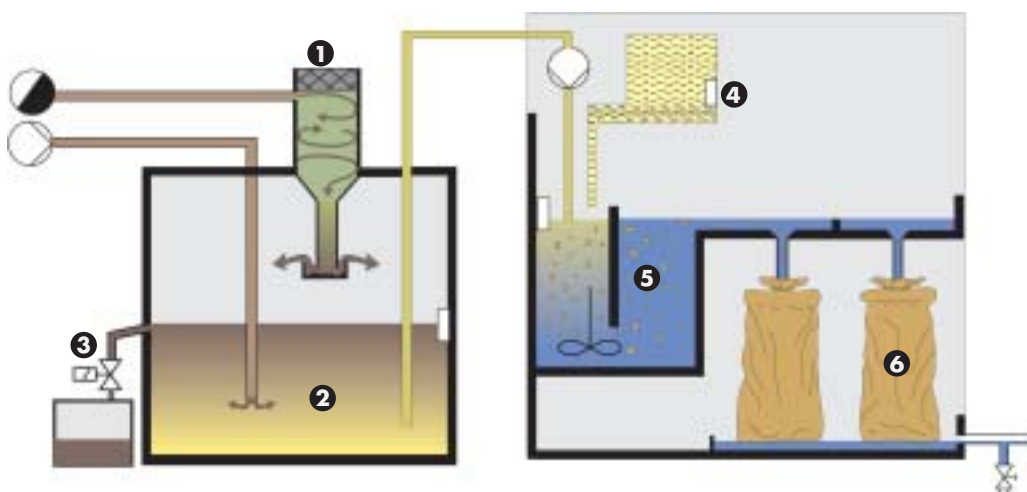
Floc formation using bentonite

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**.

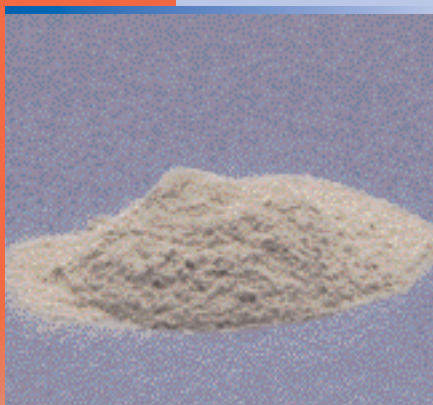
The purified water can now be discharged into the sewerage system.

Function of BEKOSPLIT® 12-16





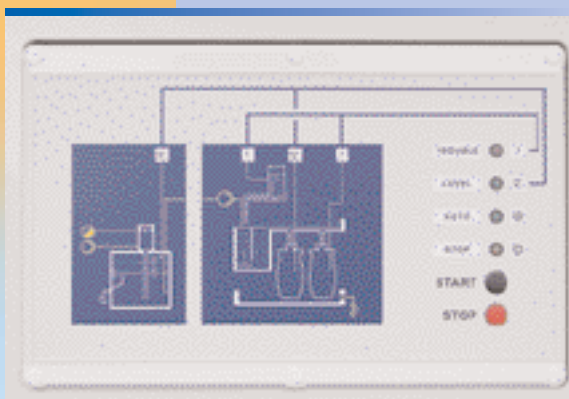
Preseparation tank



Splitting agent (bentonite)



Bag filter



Display

### Preseparation tank / pressure relief chamber:

Non-turbulent wastewater flow into the preseparation tank via a pressure relief chamber.

The separation of pure oil is greatly facilitated, the consumption of splitting agent is considerably reduced, and the filter lifetime is significantly prolonged.

### 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 spadable, non-leachable residue mass
- Low filter consumption owing to filtration through bag filters
- Simple and fast filter replacement

### 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 signal outputs.
- The electronic control and monitoring system enables automatic operation.

## BEKOSPLIT®

## TECHNICAL INFORMATION AND DATA

BEKOSPLIT®		11	12	13	14	14S	15	16
Peak compressor performance	m <sup>3</sup> /min	12.5	25	50	75	75	100	135
Peak throughput	l/h	15	30	60	90	90	120	160
Max. operating pressure at inlet	bar	25						
Integrated preseparation tank	l	70						
Reaction tank capacity	l	10	10	22	22	22	54	54
Splitting agent container capacity	l	2.0	8.5	8.5	8.5	25	40	40
Filter bag capacity	l	25	25	2x 60	2x 60	2x 60*	2x 60*	2x 60*
Weight empty	kg	approx. 48	approx. 33	approx. 51	approx. 51	approx. 54	approx. 76	approx. 76
Input voltage	V	100-240	230**	230**	230**	230**	230**	230**
	Hz	50-60	50-60	50-60	50-60	50-60	50-6	50-60
Power input	VA	<100	<100	<100	<100	<100	<100	<100
Condensate inlet		3x G 1/2"	G 1/2"	G 1/2"	G 1/2"	G 1/2"	G 1/2"	G 1/2"
	mm	di=13, 1x G 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)

\*\*Other voltages on enquiry

Preseparation tank	l	600	1,000
Tank capacity	l	600	1,000
Max. operating pressure at inlet	bar	25	25
Condensate inlet		3x G 1/2"	3x G 1/2"
	mm	di=13, 1x G1"	di=13, 1x G1"
Oil outlet	mm	di=32	di=32 mm
Weight empty	kg	approx. 56	approx. 74



## OPTIONAL ACCESSORIES

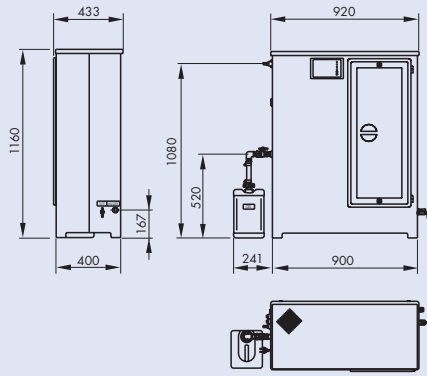
**Drying rack**

for used filters

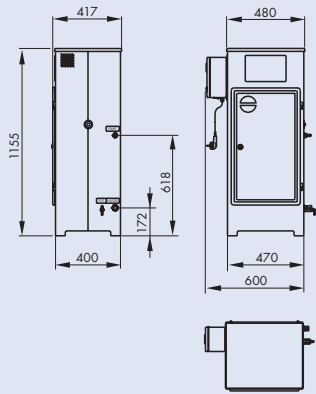
**Spill basin**

for installation in conformity with legal requirements.

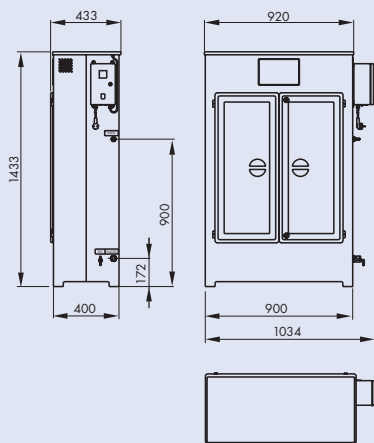
Available in three different sizes.



**BEKOSPLIT® 11**  
With integrated preseparation

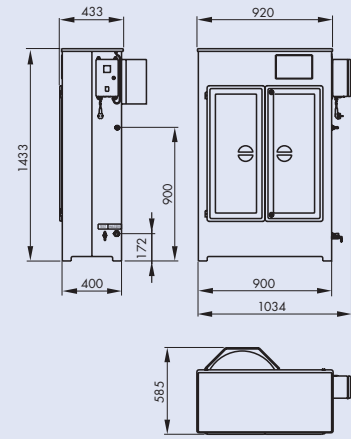


**BEKOSPLIT® 12**

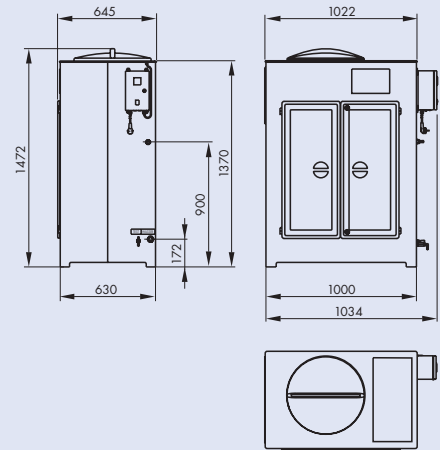


**BEKOSPLIT® 13, 14**

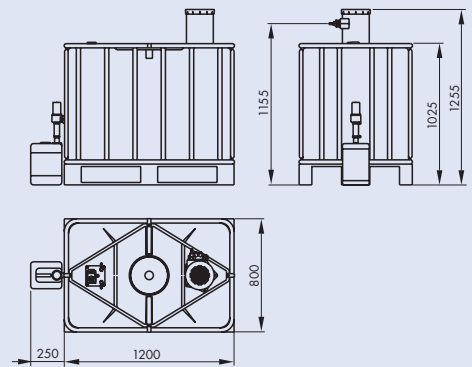
BEKOSPLIT® 12, 13, 14, 14S, 15 and 16 consist of an independently operating splitting unit combined with a suitable preseparation tank.



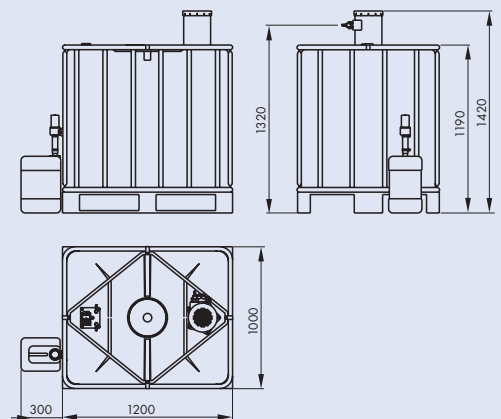
**BEKOSPLIT® 14S**



**BEKOSPLIT® 15, 16**



**Preseparation tank, 600l**



**Preseparation tank, 1,000l**

**BEKO**

## **HIGH-QUALITY COMPRESSED AIR FOR**

### **BEKOMAT®**

The convincing concept for condensate discharge

### **ÖWAMAT®**

Clean & safe oil-water separation. Super efficient with OEKOSORB® replacement filters

### **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

### **CLEARPOINT®**

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

### **BEKOFLOW®**

Innovative, cost-cutting compressed air pipe system

### **BEKOBLIZZ®**

Optimised cooling processes using deep-cooled, dry compressed air



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