

Oil-sludge separation with mobile gas-tight decanters



> FILTRATEC

FILTRATEC offers a range of services in the areas of sludge treatment, filtration and oil-sludge separation – with teams of well-trained personnel and high quality equipment

filtratec.com



The nitrogen covering means no explosive zone arises within the plant. The system is technically leakproof, so no (diffuse) emissions can get outside either

> TECHNOLOGY

Gas-tight three-phase decanter

FILTRATEC operates mobile gas-tight three-phase decanter units to separate combustible and harmful substances from each other. The part of the system used to transport the sludge is fully compliant with the ATEX Directive and covered with nitrogen at all times. Not only are the end results outstanding as we are able to treat the material at high temperatures, we also achieve the highest safety standards – preventing explosions and protecting human health and the environment.

Our customers from the chemical and petrochemical industry, the iron / steel sector as well as the construction and waste management business have been using our services for more than 40 years

ATEX Directive 114

Our gas-tight units are covered with nitrogen, comply fully with the ATEX Directive and can be used to process substances with a flashpoint of below 21°C.

The system is fully sealed to protect human health and the environment. Absolutely no emissions are released from the unit – a particularly important factor when carcinogenic or poisonous substances, such as hydrogen sulphide or benzene, are being treated.

Using mobile equipment to treat flammable or harmful substances at the place they are actually generated considerably reduces the amount of waste and, as a result, waste transport costs.

The recovery of recyclable materials, such as oil, helps to protect our environment. Our customers have lower waste disposal costs and higher recovery rates.

The new units are particularly suitable for processing:

- Crude-oil sludge
- Slop residue
- Residue from tank cleaning
- Oily wastewater sludge
- Sludge containing solvents



A complex system of pipes with an integrated heat exchanger

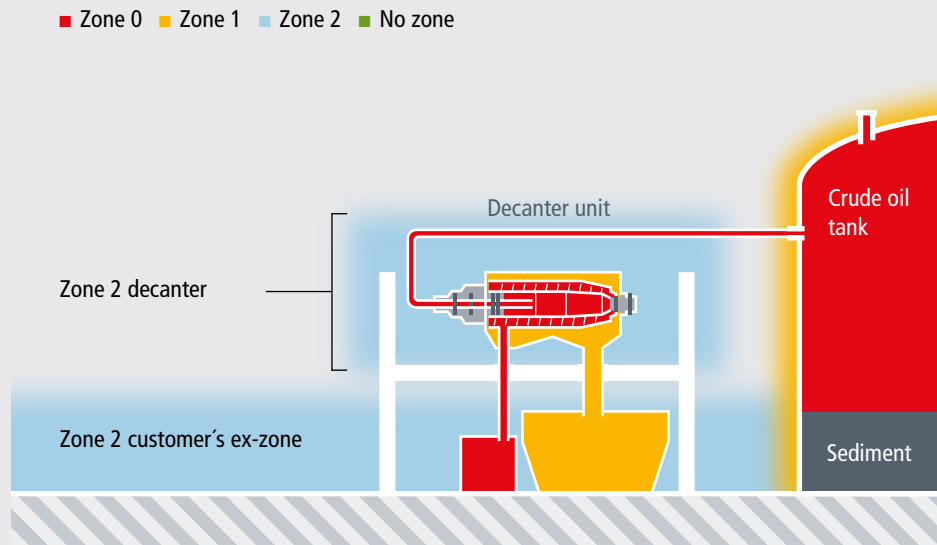


A conventional decanter

without an integrated system to prevent explosions

Conventional "non-gas-tight" decanters always generate their own explosive zone no matter where they are placed – even if the decanters are equipped with electrical explosion-proof systems. A 'Zone 0' is created inside the decanter as soon as a combustible material is processed above its flashpoint. The areas around the decanter must be classified as 'Zone 1' and 'Zone 2'.

This system, therefore, creates its own explosive zone which means the operator must ensure all relevant safety measures are in place.



> ADVANTAGES

A conventional decanter (i.e. non-gas-tight) draws in a considerable amount of air, contaminates it with combustible substances and then releases it back into the atmosphere

Your advantages: Higher quality, lower costs

Separating oil sludge in decanters is a specialist service mainly used by the petrochemical industry. This technology enables sludge to be separated into oil, water and solids in one single step. These gas-tight decanters offer a whole range of advantages compared to conventional systems – especially when it comes to safety and costs.

Safety

The units are constructed in accordance with ATEX 114. FILTRATEC operates the units in line with ATEX 137 (1999/92/EC Workplace Directive). This guarantees protection against explosions (both electrical and mechanical). Our customers can be assured that all valid rules and regulations concerning explosive atmospheres in the workplace are fully complied with at all times.

Separating substances into three phases at the right temperature produces particularly dry solid material as well as clean oil and water.

This helps to reduce the costs for disposing of the solid waste and the liquids can be sent on for further processing.

Cost effective

In the past, mobile units were unable to be fully protected against such explosive atmospheres. New developments now make this possible, opening up completely new horizons. With such comprehensive measures in place to prevent explosive atmospheres, sludge can now be safely separated at temperatures above its flashpoint. An integrated heat exchanger is used here to heat up the material.



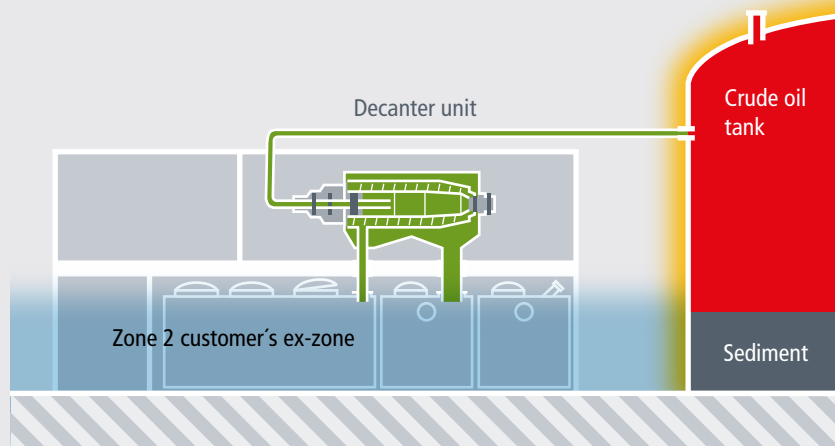
The oil sludge is separated into solids (bottom), water (middle) and oil (top) in one single step

Gas-tight decanter with an integrated system to prevent explosions

An explosive atmosphere is unable to be created within the unit as the whole of the system transporting the substances in this gas-tight decanter is covered in nitrogen – there is no oxygen present. Moreover, as the system is completely sealed, absolutely no diffuse emissions are able to escape into the atmosphere.

The gas-tight decanter in the upper container is unable to create its own explosive zone. The lower container is defined as a 'Zone 2' area as a precautionary measure.

■ Zone 0 ■ Zone 1 ■ Zone 2 ■ No zone



> SAFETY

As the unit is allowed to be placed in the Zone 2 area, the sludge can be processed close to the point it is produced, for example next to the tank

Safety first – Don't compromise on explosion protection

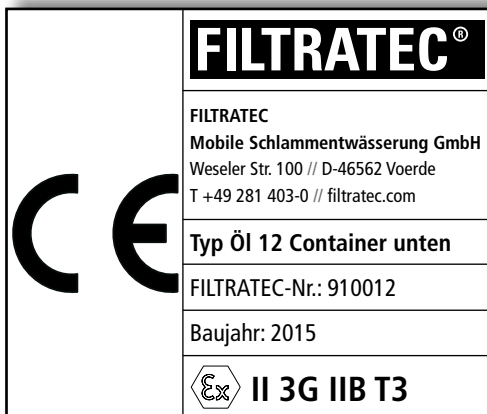
Top priority is always put on health & safety and environmental protection when we plan our projects – which also means deploying the latest technology. FILTRATEC is leading the way when it comes to building and operating mobile gas-tight decanters and supports its customers across the whole of Europe with its specialist knowledge and expertise.

Special features

- Constructed in acc. with ATEX 114
- Operated in acc. with ATEX 137
- Units inspected and approved by TÜV Nord
- CE label

Your advantages

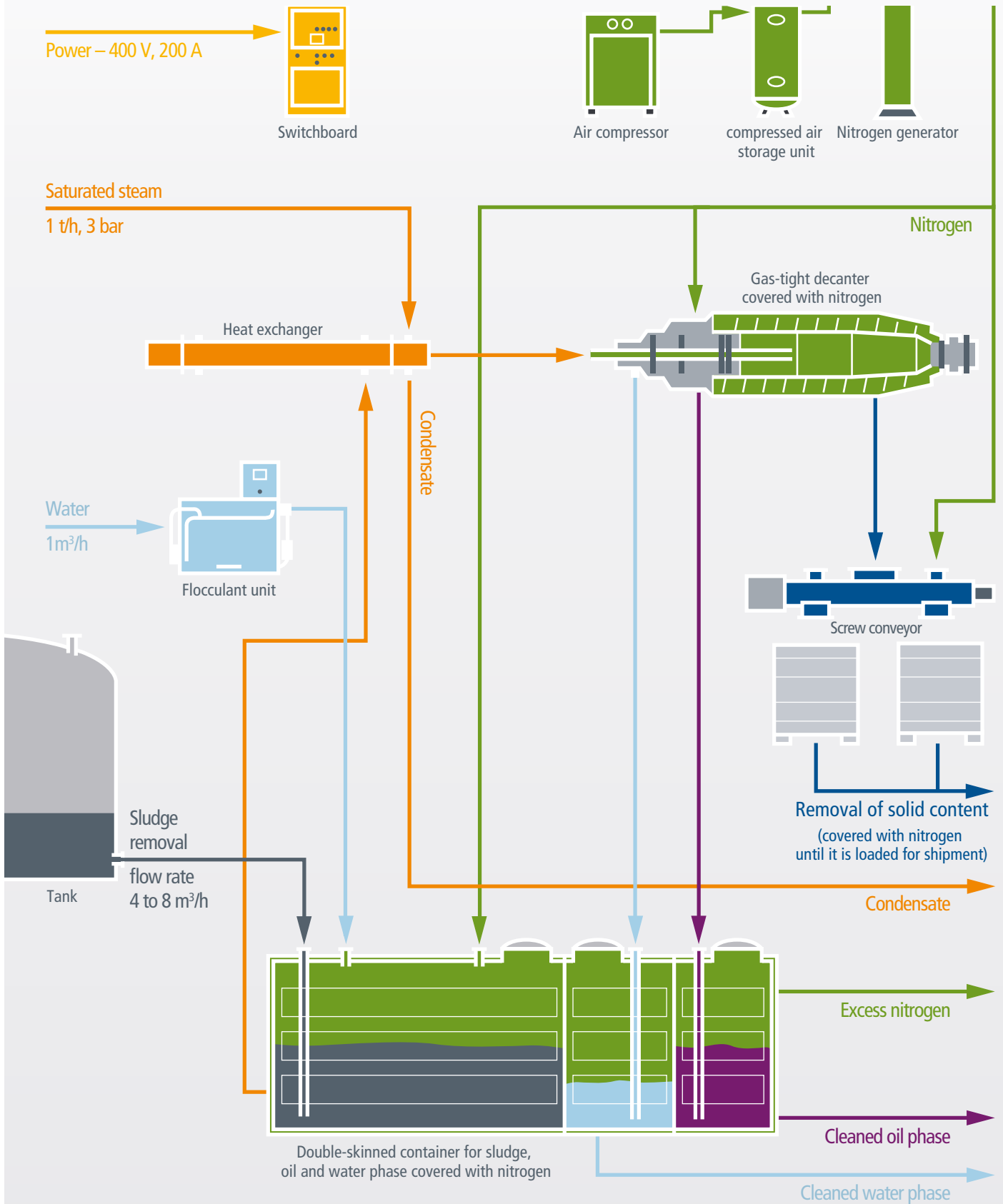
- Effective protection against explosions
- High degree of separation
 - dry solid matter
 - oil and water of very high quality
- Lower waste disposal costs
- High product yield
- Compact design in two high-cube containers (40'), stacked
- Possible to set the unit up close to point of production (Zone 2)



The highest safety standards to protect human health and the environment

The "Ex" label on the identification plate

How our gas-tight decanters work





WORKING FOR THE FUTURE

FILTRATEC is part of the REMONDIS Group, one of the world's largest recycling, service and water companies. The company group has more than 500 branches and associated businesses in 34 countries across Europe, Africa, Asia and Australia. With over 30,000 employees, the group serves around 30 million people as well as many thousands of companies. The highest levels of quality. Working for the future.

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