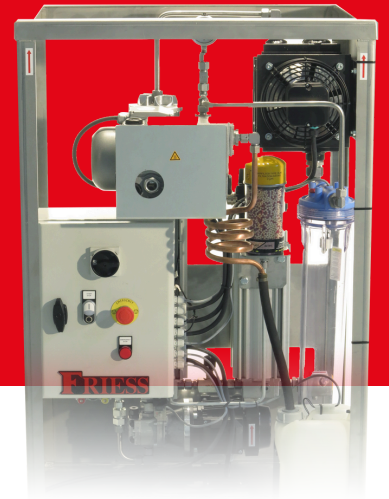


Oil Dewatering



The VOD vacuum oil dewatering system removes free and emulsified water from mineral oils, preventing damage to the system in the form of rust or pump damage due to cavitation.

This is done by connecting the system to the oil circuit in a bypass flow. The water-containing oil is sucked into the system and heated to approx. 60°C using a continuous flow heater. Once the oil has reached temperature, it is fed into the vacuum chamber, where the water contained in the oil evaporates due to the negative pressure. The evaporated water is sucked out by the vacuum pump and condensed in a connected container. The dewatered oil is pumped out of the vacuum chamber by a gear pump and filtered through a depth filter before re-entering the oil circuit. The entire process runs fully automatic and is regulated by a built-in control system. The water content in the oil is thus greatly reduced.

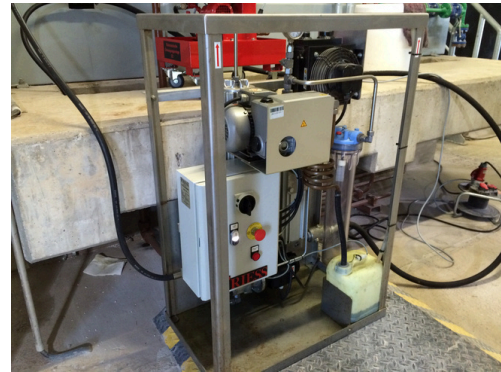
Advantages:

- Rapid return on investment due to extended service life of the oil
- Less wear on pumps, valves, cylinders and seals
- Dewatering down to a residual water content of less than 50 ppm water
- Efficient removal of water, gases and particles. Requires no machine downtime and little monitoring. No pressure drops due to bypass connection. All additives contained in the oil are retained.

Application Examples

Hydraulic oil at a press

In a company that manufactures pressed steel parts, a new hydraulic press was experiencing repeated malfunctions due to hydraulic oil with a high water content, which led to corrosion and malfunctions of the servo valves. As the press was urgently needed for a large order, the operator worked with the manufacturer to find a quick solution. The use of a VOD 16 oil dewatering system from Friess GmbH,



which was available at short notice, proved to be effective. The system was installed and the water removed from the oil within four hours of the order being placed. After 72 hours, the water content in the oil was reduced to below 500 ppm, allowing the press to be taken into service again and production to continue. The system remained in operation to remove any remaining water from the system and a final analysis confirmed the purity of the oil.

Gear oil in the paper industry

In a paper manufacturing company, a massive amount of cooling water was leaking into a gearbox due to a heat exchanger breakdown. As the machine could not be shut down due to deadline pressure, the maintenance manager was looking for a quick and efficient solution that would not disrupt the continued operation of the plant. By using our rental system, which was available at short notice, we were able to fulfill the customer's wishes: In less than 12 hours, the system was on site at the customer's premises and could be put into operation. Due to the massive influx of water, the system remained at the customer's site for several months and was thus able to prevent consequential damage to the gearbox and the connected components.

