SIEBTECHNIK TEMA

STFlO

SIEBTECHNIK TEMA Fluid Observer

Your Oil at a Glance

Oil condition monitoring

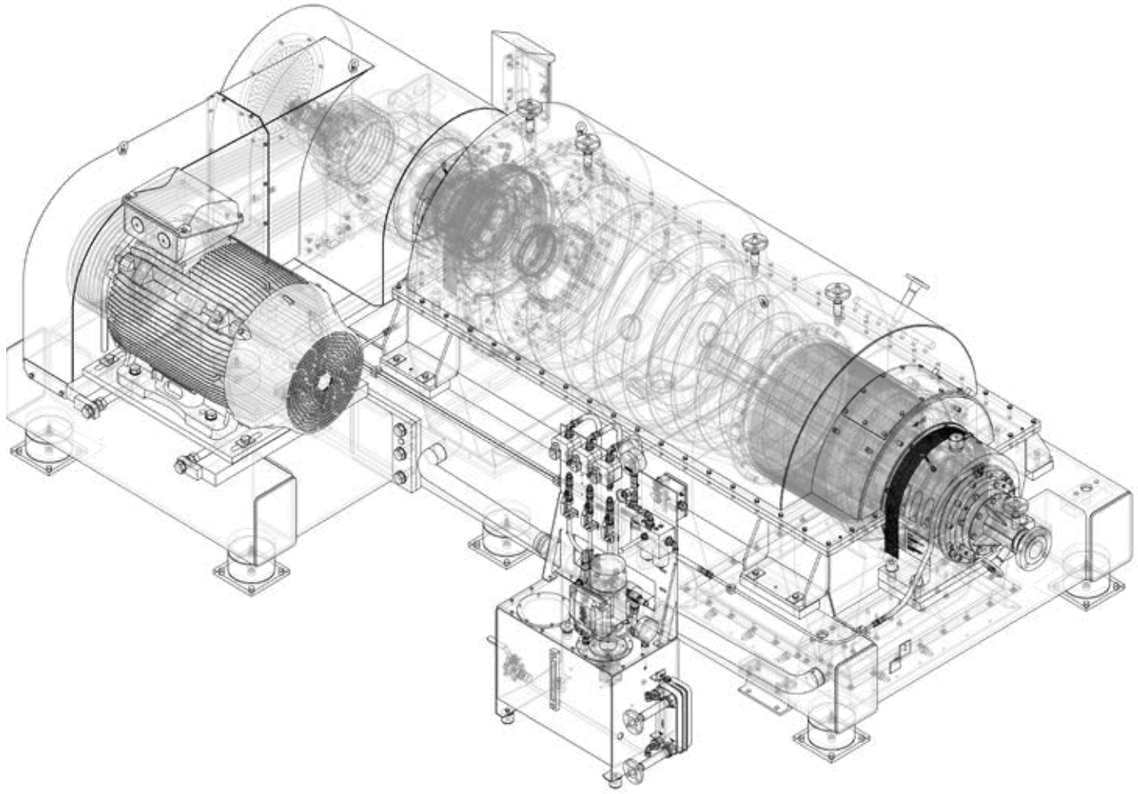
Safeguard machine operation and your corresponding production process!

Our centrifuges constitute key equipment in many facilities. They dewater, clarify and wash your products and make a highly efficient contribution to successful plant operation. As a result, it is of utmost importance to safeguard production processes.
Together with HYDAC – one of the most professional suppliers in this segment – we have developed an oil quality monitoring system specifically tailored to our centrifuges. Reduce downtime and extend machine runtimes with the SIEBTECHNIK TEMA Fluid Observer!

The STFLO Condition Monitoring Package is an online measuring system that – depending on the sensor equipment available – is used to measure solid contamination, water saturation and fluid condition in hydraulic fluids and lubricating oils.

Depending on the version, it comprises a motor, pump and sensor connection block, so it can be easily integrated into the oil circuits of existing systems. Further more, optional data storage and network communication modules as well as application-specific housings for the electrical installation enable optimal transmission of the measured values to data collection and evaluation systems.

The STFLO is therefore a compact, easily retrofittable solution for the condition monitoring of lubricating oils.



Fluid condition monitoring with STFLO is an important component of predictive maintenance and damage prevention. Keeping track of oil condition enables timely decision-making and facilitates timely intervention where required.

Features:

- Data collection, evaluation and monitoring
- Early warning in case of changes to oil condition
- Initiation of fluid maintenance measures (filtering)
- Reduction of oil change intervals
- Cleaning while the machines are running
- Safeguarding of machine availability
- Reduction of operating costs and carbon footprint
- Clearly structured dashboard
- ATEX version possible
- Easy to retrofit

Structure and functionalities of the monitoring unit

The device works continuously and sends the data to the control system or to a secured cloud via the internet or an internal network. The following data (extract) is collected, saved and displayed:

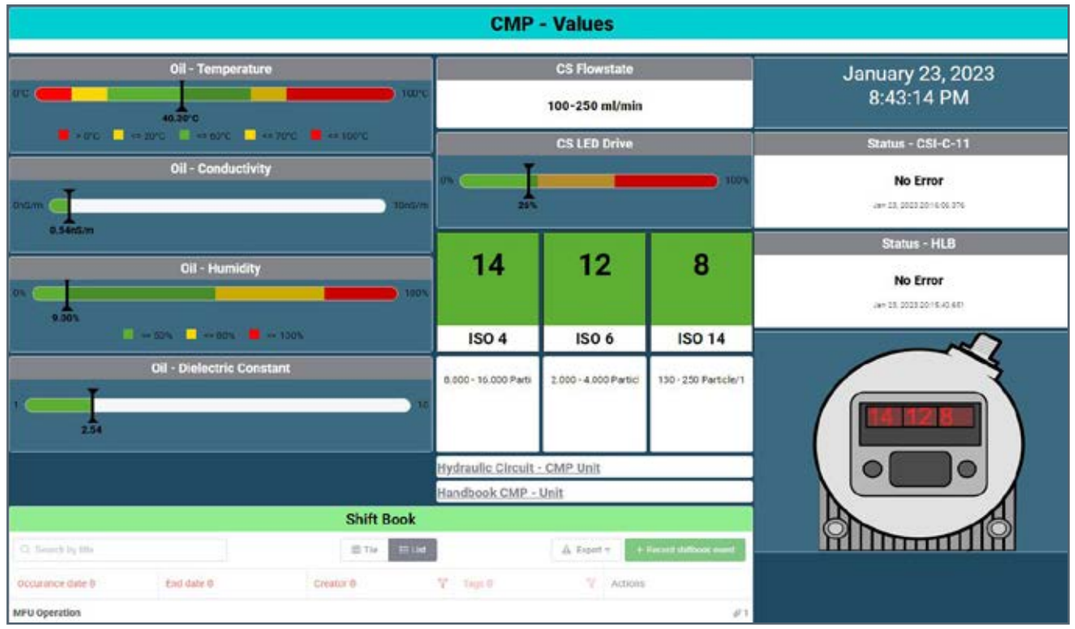
- Contamination in accordance with ISO 4406/1999 (oil contamination)
- Relative saturation (water content, intrusion of water)
- Conductivity of the oil (danger of electrostatic charge)
- Dielectric constant (oil condition change, oil aging)
- Oil temperature (operating temperature)

The display is clear and easy to understand even for unskilled workers. The limit values are displayed using a traffic light system:

OK | Attention | Warning | Max. limit value exceeded

All data is recorded as trends and displayed online. The measurement period is: 24h / >90 days.

All data is available online at all times.
Increasing contamination of the oil during operation is detected and displayed. As soon as a limit value is exceeded, it is marked with the respective color of the traffic light system.

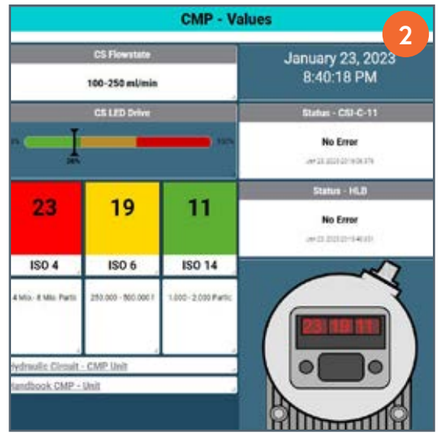


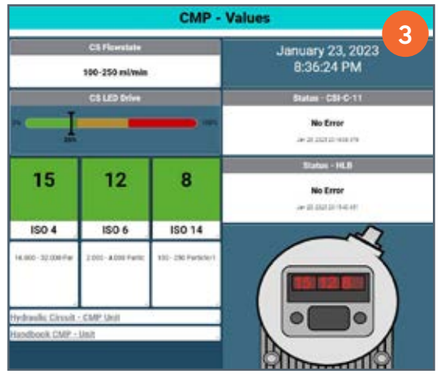
Oil cleaning during operation

Alongside the oil monitoring unit, we also offer an optional bypass filtration in the oil circuit.

It will clean the oil during operation if the contamination limits of the oil are exceeded.
You can initiate bypass filtration either manually or automatically.

After starting the bypass flow filtration (1), solid contamination is significantly reduced.



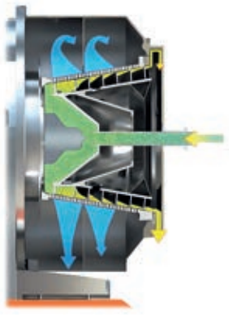


Real-time display of machine data before (2) and after (3) cleaning using the bypass filter.

SIEBTECHNIK TEMA CENTRIFUGES

Continuous centrifuges are the best solution for mechanical separation of solids from liquids from technical and economical point of view.
They can dewater large quantities of solids to low final moistures, while needing little space, energy or time.

FILTERING CENTRIFUGES



CONTURBEX | screen scroll centrifuge

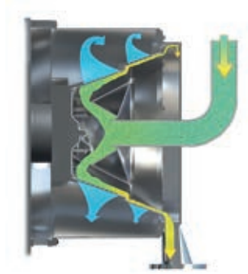
The most versatile of our continuosly operating filtration machines are our screen scroll centrifuges. The cantilever design provides a clear separation of drive end and product housing with only one shaft feedthrough. The solids retained by the screening element are conveyed by the drum inclination and by a scroll with slightly different rotational speed from the small to the large diameter. The feed particle size of the solids to be separated is ideally greater than 80 µm.

SHS | pusher centrifuge

In the pusher centrifuge, the solid matter is retained on a wedge wire basket and pushed ring by ring to the solid discharge by means of a oscillating plate.
With the low transport speed of the thick layer of retained solids, the machine design allows high retention time, low fine losses and minimal particle breakage. Furthermore, the multi-stage design allows high washing efficiency through displacement washing.

TURBOCASCADE | sliding centrifuge

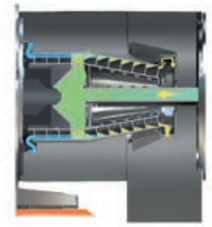
The TURBOCASCADE is specially developed for de-watering solids with a uniform particle size of 0.5 mm and larger. The particles slide individually, i.e. not in a closed layer, over the screens arranged in stages. Despite the very short residence time of the individual particles in the centrifuge, final moistures as low as 0.01 % can be achieved.



HSG | vibrating centrifuge

Our largest capacity machines, these vibrating centrifuges process up to 450 tph of solids. The particles are retained on the screen basket and conveyed from the small to the large diameter by an axial vibration superimposed over the centrifugal motion. The most common applications are dewatering coal, sea salt and sand.

SEDIMENTING CENTRIFUGES

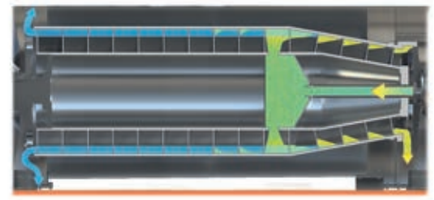


SHORTBOWL | decanter centrifuge

The SHORTBOWL decanter with cantilever design is the optimal solution for hot applications and high cleaning requirements. Precondition for the use of an SBD due to the cantilever-design are good sedimentation properties respectively high density differences between liquid and solid.

DZ | decanter centrifuge (solid bowl)

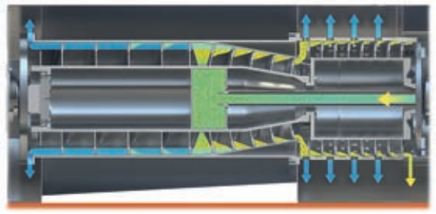
In decanter centrifuges, very fine solids are separated from liquids with a lower specific gravity. The solids sediment from the liquid due to the centrifugal forces inside the rotating bowl. The settled solids are then transported to the small diameter by a scroll and discharged there. The clarified liquid exits the machine via an adjustable weir at the cylindrical end of the bowl.



SCREEN BOWL DECANTER

CONTHICK | screen bowl decanter centrifuge

The design of this centrifuge is based on the cantilever technology. Common to all our hybrid centrifuges is the combination of sedimenting first part with the option to perform a displacement wash. The washing liquid from the screen section can be threat-ed separately.



TURBOSCREEN | screen bowl decanter centrifuge

If higher g-forces are necessary, a TURBOSCREEN decanter is the best choice. In case of products with good filtration properties the screen section can be continued directly with the decanter outlet diameter. For for products with poor filtration properties the screen diameter can be increased to allow a thin layer filtration and dewatering.

LABORATORY CENTRIFUGES

CENTRIFLEX & CENTRILAB | laboratory centrifuges

The laboratory centrifuges CENTRIFLEX & CENTRILAB are universal centrifuges to examine the options for separation of solids/liquids mixtures under the influence of high centrifugal forces. The wide range of inserts allow applications for filtration, washing, rinsing, clarification and continuous separation of two liquids.

SIEBTECHNIK TEMA

Leading Process Solutions

SIEBTECHNIK TEMA offers an extensive product portfolio for a wide range of industries around the world.

As a renowned OEM & system supplier, our group of companies specializes in mechanical engineering, process engineering, components and services. Customized solutions, precisely tailored to the needs of our customers, have been the key to our success for 100 years.

We are experts in the field of solid-liquid separation and processing of bulk mineral materials – with more than 50 local sales offices and representatives worldwide.

Our product portfolio comprises:

Automation Solutions | Decanters | Conveyor Chutes | Gas Pycnometers | Sliding Centrifuges | Control Screening Machines | Laboratory Equipment | Sampling Plants Sample Preparation | Pneumatic Post Systems | Setting Machines | Screening Machines | Screen Scroll Centrifuges | Pusher Centrifuges | Vibratory Centrifuges | Dryers Shredding Machines/Plants

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