Data sheet

Electrostatic oil cleaner model D16

Combined high performance unit to remove dirt, sluge and varnish from hydraulic oil

The electrostaic oil cleaner model D16 removes particles, sludge and varnish from hydraulic oil

Hydraulic systems

In order to operate hydraulic systems without failure, hydraulic systems are equipped with precise high-tech components. Sludge, resin, varnish, and dirt particles in the oil cause friction, wear and malfunction of the hydraulic system. More than 80% of hydraulic failures are caused by impurities in the oil.

Improved precision

The Friess EFC electrostatic oil cleaner removes sludge, varnish, oxydation products and particles from hydraulic oil and other mineral oils. Malfunction of hydraulic system is reduced and operating life of the hydraulic oil is extended. The cleaned hydraulic oil is much cleaner than new oil.

Your advantages:

- Fast return of investment because of longer life for your oil
- Precise operation of your hydraulic system
- Improved process reliability
- Less production cost
- Improved availability of your machines
- Less cost for maintenance, repairing and oil change
- Up to 70% less downtime
- Up to 95% less consumption of hydraulic oil
- Up to 100,000 hours and more service live for your hydraulic oil

Techical Data

Pump capacity:
16 l/min

Volume of cleaning cell:
90 l

Dirt holding capacity of cleaning elem.:
approx. 4 kg

Water holding capacity of dewatering cartridge:
max. 4 l (option)

Surface of cleaning el.:
54,912 m²

Power consumtion:
650 W

Voltage:
230 V

Weight:
235 kg

Dimensions:

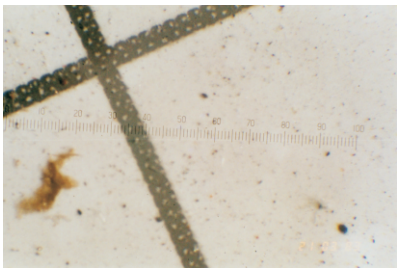
length:	1150 mm
width:	800 mm
height:	1090 mm

Recommended oil:
hydraulic oil type H, HL, HLP
lubrication oil type C, CL, CLP
synthetic oils based on PAO

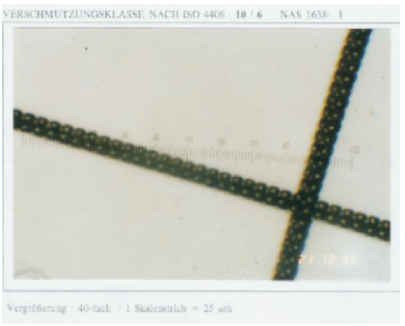
FRIESS GmbH

Working principle:

Just connect the electrostatic oil cleaner with two tubes with your hydraulic tank and it will clean your oil independent from production. The hydraulic oil is pumped through an electric field caused by 14,000 V between the electrodes in the cleaning cell. The electric field force attracts the particles onto the surface of the cleaning elements between the electrodes. The particles are stored on the surface of the cleaning elements, while the oil is returned to the main tank. The special design of the cleaning elements cause a turbulent flow between the electrodes. The turbulences flush the particles towards the surface of the cleaning elements. The result is a fast and effective cleaning. Particles down to 0.05 µm will be removed. The electrostatic oil cleaning has now influence to the liquid additives of the oil. The liquid additives remain in the oil while particles are removed by the electric field force. The high voltage of 14,000 V removes soft and hard particles as well as resins, oxydation products, sludge and varnish. The unique design makes sure that particles of all sizes will be collected in the cleaning cell. The result is an extreme clean oil. The clean oil is able to flush out sticky sludge from the system. Water in the oil can be removed by an optional dewatering cartridge. The cartridge is equipped with fibers that are able to absorb water. The fibres absorb the non- emulsified water and dry the oil.



Filter membrane pore size 0.8 µm showing dirt particles and oxydation products in used oil



Filter Membrane pore size 0.8 µm after filtration of electrostatic cleaned oil

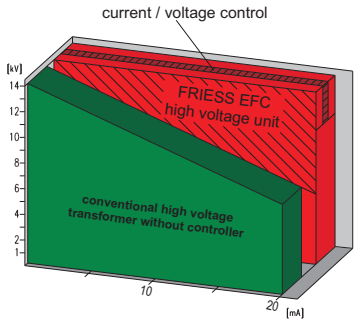
High Capacity

The new designed electronic high voltage unit supplies high electrostatic field force in order to ensure best possible separation of particles. Compared to conventional transformers the electronic high voltage unit of the model D16 supplies constant 14 kV at any current between 0 - 20 mA.

Electrostaic oil cleaner model D16 at work

User friendly

The new designed control unit makes handling easy: All messages are shown on a touch screen monitor. The comfortable menue structure allows fast and safe operation. The control unit stores the data of 100 hydraulic systems. The model D16 calculates the necessary cleaning time based on stored data. As soon as cleaning time is finished, a message is shown on the display, and the cleaner can be connected with the next hydraulic tank. If you type in oil volume and viscosity of the oil, the control unit will calculate the necessary cleaning time. In case you switch of the system all data will be stored and you can continue cleaning with calculated data after restart. In case of leakage the oil will be collected in the saftey pan underneath the cleaning cell and the pump will be switched off. All functions are controlled by sensors and safety switches.



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