

## Electrostatic Oil Cleaning Machines

The Electrostatic oil cleaner ELC (available in different models) removes particle, sludge and varnish from hydraulic oil. In order to operate a hydraulic system 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 the failures in hydraulic system are caused by impurities in oil.**

Our Electrostatic oil cleaner (EOC) removes sludge, varnish and oxidation products from hydraulic oil and other mineral oils. Malfunction of the hydraulic system is reduced and operating life of hydraulic oil is extended. The cleaned oil is much cleaner than new oil.



| Specifications               | EOC-25                                                                                                           | EOC-50                                                  | EOC-100                                      |
|------------------------------|------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------|----------------------------------------------|
| System Flowrate              | 3 LPM                                                                                                            | 10 LPM                                                  |                                              |
| Oil Inlet and Outlet Ports   | ½" BSP Hydraulic flexible hoses R1 type, 5 meter length                                                          | ¾" BSP Hydraulic flexible hoses R1 type, 5 meter length |                                              |
| Pump                         | Gear Pump – 3 LPM                                                                                                | Gear Pump – 10 LPM                                      |                                              |
| Motor                        | 0.25 Hp, 3 Phase, 1440 RPM                                                                                       | 0.5 Hp, 3 Phase, 1440 RPM, 50 Hz                        |                                              |
| ELC Tank                     | 25 Lit, tested for 3 bar operating pressure                                                                      | 50 Lit, tested for 3 bar operating pressure             | 100 Lit, tested for 3 bar operating pressure |
| Dimensions in MM (L X W X H) | 800 x 505 x 700                                                                                                  | 800 X 520 X 900                                         | 950 x 650 x 1000                             |
| Approx. Weight               | 100 Kgs.                                                                                                         | 140 Kgs.                                                | 180 Kgs.                                     |
| High Voltage Transformers    | 1 No.                                                                                                            | 1 No.                                                   | 2 Nos.                                       |
| Operating Voltage            | 415 VAC 3 Phase, 50 Hz                                                                                           |                                                         |                                              |
| Electric Control Panel       | Comes with pump ON/OFF controls, motor protection circuit, Ammeter, Voltmeter, Hour meter, Indication lamps etc. |                                                         |                                              |
| Rating                       | Continuous operation                                                                                             |                                                         |                                              |

# Working Principle:

Just connect the electrostatic oil cleaner with the two tubes of your oil tank and it will clean your oil independent from production.

The hydraulic oil is pumped through an electric field caused by a voltage of 10000 V between electrodes in the cleaning cell. The electric field force attracts the particles on to the surface of the cleaning element placed between the electrodes and on the covers placed over the electrodes. The particles are stored on the surface of the cleaning elements and clean oil goes back to the tank. Even particles below 0.05 microns can be removed. The electrostatic liquid cleaning has no influence on the additives of the oil. The liquid additives remain in the oil while the suspended contaminants are drawn toward the electrodes and stick to the paper collectors placed over and between the electrodes.

The result is extremely clean oil and the clean oil is also able to flush out sticky sludge from the system.

## Machine Identification:



Inlet point



Outlet point



Collectors- Before Filtration



Collectors- After Filtration



User Interface

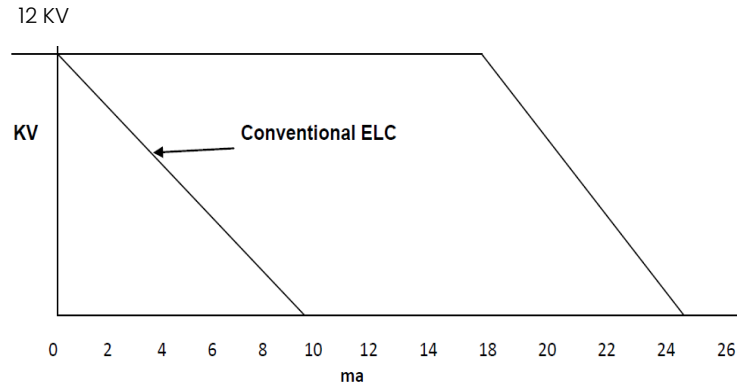


Safety Switch for chamber lid

# Features and Advantages over other Brands:

## ❖ Superior High Voltage Power Source:

The high voltage power source is Switch mode frequency based. Our EOC gives a stable voltage of 12 KV even up to 18 mA load. In conventional EOC machines, the voltage drops with increase in load (moisture content) and becomes zero at 10ma load. Hence oil cleaning in our EOC is faster and superior in comparison to conventional machines.



## ❖ Superior Pump Design:

- Pump can be directly mounted on a BS14 flange motor thus eliminating possibility of misalignment.
- Sturdy shaft with good oil seals preventing leakage.

## ❖ Leakage Sensing Mechanism:

In case of any leakage from the pump or from the cleaning cell the oil will be collected in the safety pan underneath the cleaning cell and the pump will switch off and the reading will be shown on the screen.

## ❖ Moisture:

Moisture is not allowed in oil as well as in EOC machine. Once water enters in EOC, electrodes will short due to collectors. Hence the collector set needs to be replaced.

## ❖ Selection Guidelines:

| ISO-VG<br>Model | 32         | 46         | 68         | 100        | Flow Rate<br>(LPM) | Weight<br>(Kg) | Dimensions<br>(L x W x H) mm |
|-----------------|------------|------------|------------|------------|--------------------|----------------|------------------------------|
| EOC - 25        | 6,000 Lit  | 4,200 Lit  | 2,800 Lit  | 1,500 Lit  | 3.5                | 100            | 800 x 505 x 700              |
| EOC - 50        | 15,000 Lit | 10,000 Lit | 7,500 Lit  | 4,000 Lit  | 10                 | 140            | 800 x 520 x 900              |
| EOC - 100       | 30,000 Lit | 20,000 Lit | 14,000 Lit | 7,600 Lit  | 10                 | 180            | 950 x 650 x 1000             |
| EOC - 200       | 40,000 Lit | 30,000 Lit | 20,000 Lit | 15,000 Lit | 20                 | 280            | 1200 x 1200 x 1100           |
| EOC - 600 R     | 1,20,000 L | 80,000 Lit | 60,000 Lit | 32,000 Lit | 50                 | 450            | 1800 x 1100 x 1200           |



**EOC-100**



**EOC-100 with DHU and Patch Test Kit**



**EOC-200 model with Online Particle Counter, touchscreen HMI, PLC**