



Your Partner in Resource Recovery



**NO
MORE
OIL
CHANGE**

**ELECTROSTATIC
OIL
CLEANER**



**CEE DEE
VACUUM EQUIPMENT PVT. LTD.**

www.ceedeevacuum.net



Electrostatic Oil Cleaner (CDOC)

With CDOC
Continuous
Oil
Purifying
System

**No more
oil changes**

OPERATING PARAMETER

Temperature :- below 60° C
Oil viscosity :- below 200 cst.
Moisture Content :- below 5000 ppm.
No water base / detergent oil.



Cee Dee Vacuum having being into the field of oil filtration for past two decades. We are diversified in manufacturing of transformer / insulation oil filtration equipment, vacuum pressure impregnation equipment, autoclave and vacuum system along with **Electrostatic Oil Cleaner(CDOC)**

Cee Dee is certified for ISO 9001:2000 certification for design, manufacturing, installation and commissioning. Also been backed by team of engineers who command combined experience and expertise of decades with constant efforts in research & development to give extensive & relentless service to customer in its' segment

Supplying the Optimum, Cee Dee is committed in keeping its' customers investments productive and profitable throughout the equipment life cycle. This incorporates several goals such as **low maintenance cost, high productivity, low operating cost and long life of oil as well machine parts.**

Problems Due to Contaminated Oil

It is known that most of hydraulic machinery failure / troubles are originated in the hydraulic oil (more than 85% of failure of hydraulic, contaminated substances in hydraulic oil are cause) by the past research. Water and contaminants (metal processing powder, friction powder, dust, fiber thrash and contaminated substances) reduces the original ability of oil, deteriorate lubricant film to lower the performance of machine also causing drop in oil viscosity. Also contamination when adhered to parts surface it causes failure and also leads further to an increase of electric power consumption.

CDOC cleans the oil so effectively that it can improve the performance of machine with oil related problems and provide indefinite oil life for hydraulic systems. CDOC retains clean hydraulic oil and maintains the oil better than new oil.

Principle of Working

System uses electrostatic precipitation to remove sub - micron particle of insoluble material, without effecting soluble oil additives. Tiny particles are electrostatically driven to, then captured on, the positively or negatively charged walls of electrodes. Large particles are trapped in the resin impregnated cellulose filter. Coalesce filter in dehydration cell is used for removal of moisture/water up to 5000 PPM.

Modern additives treated oil is highly resistant to deterioration, it can continue service indefinitely, if kept clean and free from moisture & contamination.

Applications

- ▶ Plastic machinery
- ▶ Construction machinery
- ▶ Hydraulic Press
- ▶ Aviation
- ▶ Mining machinery
- ▶ Transmission equipments
- ▶ Machine tools
- ▶ Automobile Industry etc.
- ▶ Power Press
- ▶ Steel Industries
- ▶ Sugar Mill
- ▶ Turbine oil in hydro power station
- ▶ Instrumentation & Refrigeration
- ▶ Earth moving equipment
- ▶ Aluminum / non ferrous Extrusion plants
- ▶ Plywood hot press.
- ▶ Servo valve - controlled hydraulic system.
- ▶ Leather Processing

Selection Guide

Type	Size (L x B x H)	Pump Flow
CDOC-08	400x330x700	3 LPM
CDOC-25	475x330x819	5 LPM
CDOC-50	525x550x885	10 LPM
CDOC-110	825x550x885	10 LPM
CDOC-220	1150x550x885	20 LPM



Electrostatic Oil Cleaner (CDOC)

Why CDOC ? - Technical Anecdote

Specially designed construction

Oil tanks are designed cylindrical with stainless steel construction instead of conventional Rectangular shape to ensure faster cleaning rate and less power consumption.



Moisture Removal

Only unit in its class to provide dehydration cell for eliminating water / moisture up to 5000 PPM as compared to any other brand of only 500 PPM.



Varied Voltage

CDOC unit is provided with transformer for voltage variation, which can be varied as per requirement which in return gives to optimum level of contamination removal and work only in exact required power consumption, whereas other brand work only on 2 modes.

PLC Display (Two line display)

PLC is provided to give information on status of unit, running mode, fault detection in machine and safety precaution for user in alpha numeric.



Collector Paper

Collector Paper are resin-impregnated filters, which has good life span as compared to other brand. It can be reused 3-5 times by the process of cleaning when clogged. Collector paper offer easy replacement.



CDOC cleans

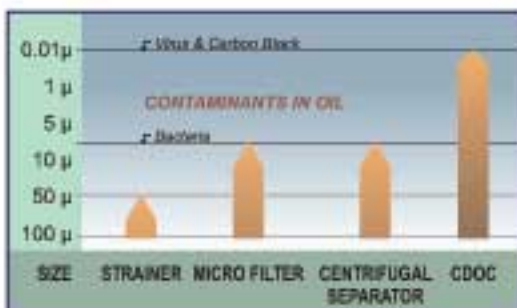
- ▶ Contamination up to 0.01μ
- ▶ Metallic contaminant
- ▶ Non Metallic contaminant
- ▶ Dust, rust
- ▶ Moisture up to 5000 PPM
- ▶ Traps contaminant occurs due to oxidation viz. suspended carbon particles, sludge, tar and varnishes
- ▶ And maintains oil quality better than new oil i.e. Nas class 5-6.

Electrostatic oil cleaner CDOC .. A Must

1. No more oil changes.
2. Alpha-Numeric fault detection time
3. No attendance required during operation.
4. Cleans particulate from any non-conductive fluid.
5. Improve performance of hydraulic components to meet high speed & precision demand by today's computerized hydraulic control systems.
6. Eliminates oil related breakdown such as pump, motor, valve failures & leakages etc.
7. Eliminates oil disposal & recycling problem.
8. Easy to install.
9. Low operating cost.
10. Reduce Power consumption.
11. Extremely short payback.



EFFICIENCY COMPARISON



CLEANING TEST OF HYDRAULIC FLUID OF HYD. PRESS WITH 2,000 LITRES RESERVOIR.

CLEANING TIME (Hr)	NEW OIL	BEFORE CLEANING	IN PROCESS	IN PROCESS	AFTER CLEANING
CONTAMINANTS CONCENTRATION FILTERED BY MEMBRANE FILTER 0.8 Micron 100 mL.					
ENLARGED PHOTO					

NAS 1638 CONTAMINANT SPECIFICATIONS (PER 100ml.)

Grade		00	0	1	2	3	4	5	6	7	8	9	10	11	12
No. & Size of Contaminants (in microns)	5 - 15 μm	125	250	500	1,000	2,000	4,000	8,000	16,000	32,000	64,000	128,000	256,000	512,000	1,024,000
	15 - 25 μm	44	44	89	178	356	712	1,425	2,850	5,700	11,400	22,800	45,600	91,200	182,400
	25 - 50 μm	4	8	16	32	63	126	253	506	1,012	2,025	4,050	8,100	16,200	32,400
	50 - 100 μm	1	2	3	6	11	22	45	90	180	360	720	1,440	2,880	5,760
	Upper 100 μm	0	0	1	1	2	4	8	16	32	64	128	256	512	1,024

For Space

For NC M/C

New Oil

UNI - VAC OIL DEHYDRATION UNIT

For higher water contents
use "UNI-VAC" prior to cdoc

The
Most Effective Method
Of
Removing Water
From
Oil

FEATURES

- Removes water in single pass.
- Does not remove additives from oil.
- Flow pattern does not agitate the oil.
- Modular design.
- Weather-proof enclosures.
- Designed for unattended operations.

TECHNICAL PARAMETER

Viscosity (Max) : 700 cst (at 40° C)

Circulation flow rate : From 5 Lpm. to 30 Lpm.

Max. size of the reservoir : 10 M³

Temperature Range : 15-60° C

Water removal : 100 % of free water & gases. Removal of dissolved water to as low as 50 ppm

Elect. Supply : 230 V of 415 V., 50 Hz, A.C.

Electrical power consumption : 7500 W

Uni - Vac System is designed for fully automatic or manual unattended operation.

The **Uni - Vac** principally functions to remove water and light hydrocarbon from oil. The system is operated under vacuum condition and the oil is forced by atmospheric pressure through heating chamber to raise the oil temperature to a desired level. The oil is then drawn in to a vacuum chamber where it is exposed in the form of thin layer to the vacuum at a very slow flow rate. The oil exposed to vacuum, where water (free, dissolved and emulsi-fied), dissolved gasses, air and other low range volatilise are boiled by a heat / vacuum process.

With this process, the oil is purified and conditioned to a safe operational standard.

No additives or detergent are removed.

Vacuum dehydration is the only comprehensive method for complete removal of water from the oil. Through low temperature distillation in combination with fine filtrations (CDOC), Oil can be returned to 'New' conditions.



* The specifications & Design are subject to change without notice



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