

# OM LOGISTICS

Oil Management Logically



## ELECTROSTATIC LIQUID CLEANING (ELC) MACHINE

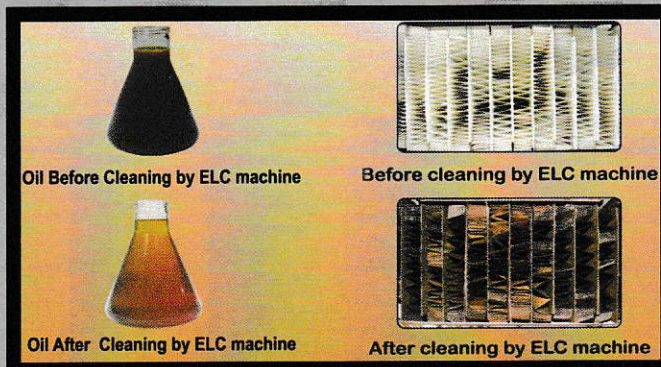


**C 30445  
(With Filter  
Chamber)**

### APPLICATIONS

- Plastic Injection Moulding Machines.
- Hot Press in Plywood Industries.
- Aluminum Extrusion & Die Casting Machines.
- Power Generation. Gas, Hydro & Thermal
- Steel Plant & CNC Machine Tools.
- Cement & Ceramics Industries.
- Aviation, Railways & Automobiles.
- Hydraulic Press & Hot/Cold Steel Mills.
- Bearing Lubrication System.
- Earth Moving, Construction & Mining Equipments.
- Power Transmission Plant.

### COMPARISONS



### OIL CONDITION FOR ELC MACHINE

- ⇒ Temp : upto 600C.
- ⇒ Viscosity below 320 CST Max.
- ⇒ Water content below 500 PPM
- ⇒ Mineral base oil except IC Engine Oil.

### NAS 1638 CONTAMINANTS SPECIFICATIONS (PER 100 ML OF OIL)

Grade		00	0	1	2	3	4	5	6	7	8	9	10	11	12
Number& Sizes Of Contaminants	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	22	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

Not existing

For Missile

For NC M/C

New Oil

### PRINCIPLES OPERATION OF ELECTROSTATIC LIQUID CLEANING (ELC) MACHINE

The ELC system uses the principles of electrostatics to collect fluid contaminants. ELC unique design with gradient force permits it to take advantage of the natural charge that each contaminant contains. Contamination that have a positive charge are drawn towards a negative electrode plate within the system while those with an inherent negative charge are drawn towards a positive plate. Neutral contaminants are drawn and deposited by gradient force to the edge of the collectors where the intensity of the deformed electric field is strongest.

As the fluid flows freely through the system. ELC removes contaminants, submicronic particles as 0.01 micron, dust, dirt and products of oxidation such as tars and varnishes. ELC also removes particles such as paper, wood, plastic and rubber. Contaminants are trapped on Cellulose Collectors for easy disposal. ELC will not affect soluble additives.

The Dust collector paper(s) is hosted in the oil cleaning chamber. Each Dust Collector is made of disposable cellulose fiber and in form of pleated to hold the greatest quantity of contaminants. Dust collector can hold as much as 4.5 kgs. Before change is required and will furnish 2000 hours of use depending upon the actual contaminants of oil.





## EFFECTS OF CONTAMINATED OIL

- System wear & tear • Cycle time variance • Increase in rejections.
- Premature failure of system due to choking of valves / filters etc. resulting in high down time.

## CAUSES OF OIL CONTAMINATION

- Airborne dust, dirt, rust in the environment, which enter the system through air breather, seals etc.
- Metal particles that produced by abrasive wear, corrosion, surface fatigue in the system itself.
- Internally generated contaminations.

OML ELECTROSTATIC OIL PURIFIER is an elegant, modular and comparatively lightweight machine based on electrostatic oil cleaning principal reaching sub micron level cleanliness.

## APPLICATIONS

- All Equipment using Hydraulic Pumps, Valves, cylinders etc.
- Air Craft / Shipping / Defence
- Aluminum Extrusion Machines
- Hot Press Machinery in Plywood Factories
- Mining machinery such as Dozers, Shovels. Etc.
- Turbine oil in Hydro Power Stations
- Hydraulic Presses and Hammers
- Servo Control and Moog Valves
- Plastic injection moulding machines
- Power pressure
- CNC Machine Tools
- Automobile & Ancillaries
- Railways
- Steel Mills
- Leather Processing
- Earth Moving Equipment
- Instrumentation
- Refrigeration

## TYPES OF OIL

- Oils, Which can be cleaned
- LUBRICANT OIL
- HYDRAULIC OIL
- TRANSFORMER OIL
- COMPRESSOR OIL
- TURBINE OIL

## ADVANTAGE / BENEFIT

- Oil Savings - REDUCE COSTS BY 90 TO 95 %
- Low cost Operation & Maintenance. No air bubbling and no loss of oil quality
- Clean oil can be reused for longer periods, rather indefinitely
- Does not remove soluble additives.
- Payback period less than one year for moderate oil consumption
- Elimination of mechanical filters.
- Increase in production and reduction of rejects
- Elimination of environmental degradation of oil completely.
- Reductions in downtime of machinery.
- Stoppage in oil leaks
- Increase in life of seals, pumps, valves etc.

## MACHINE SPECIFICATION

Capacity (Ltr.)	Dimension (mm)	Weight (Kg)	Pump Flow Rate (LPH@1440 RPM)
10	400x250x920	40	2-5
25	400x400x775	60	5-10
50	400x400x1050	80	10-15
100	600x600x1150	120	15-20
200	1250x600x1150	185	30-40