AS ELECTROTECH

HIGH VACCUM TRANSFORMER OIL FILTRATION AND DEHYDRATION PLANTS

1900 Series



A.S.Electrotech is always in a continuous effort to offer excellent products at a fair price & reserves the right to change models, specification and design to upgrade its own products.



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Insulating Oils (which due to its hygroscopic nature absorbs moisture from transformer windings as well as atmosphere leads to a gradual fall in dielectric strength).

The treated oil shall be thus free from suspended particles down to 1 micron (such as rust, dirt, scales, colloidal carbon etc.), moisture (emulsified as well as dissolved) down to <5-10 ppm depending on the working vaccum of the plant, dissolved gases.

Transformer / Insulating Oil Filteration and Dehydration plants / Purifiers are available for : Transformer and capacitor manufacturers, Transformer owners.

The set is available in different types of constructions such as open and enclosed type, stationary, portable and mobile with single and double stage degassing / dehydration system.

The single stage plants are capable of attaining the following oil parameters in 3-5 passes and two stage plants in 1-3 passes depending on the oil condition.

Parameters	Unit	Before Filtration	After Filtration
Breakdown Voltage with 2.5mm Electrode Gap.	KV	25	>50-70
Moisture Removal	РРМ	50-100	upto <5-10
Particle Size (Filter Fineness)	Micron	Visible	<1
Gas Content	%Vol/Vol	<10%	<0.1%

The plants mainly consists of the following outstanding features -

Filtration System: The system is suitable for removing suspended particles such as colloidal carbon, oxidation sludge, dirt, rust, upto <1 micron. It consists of prefilter, Intermediate filter and fine filter elements. Filtering is achieved by means of high efficiency nonhygroscopic cartridges. The filter medium is progressively denser in the direction of flow. This unique feature ensures large dust holding capacity. The filter housing is designed for easy facile replacement of choked cartridges.

Degassing Dehydration System:

It is designed to remove large portion of dissolved impurities (including moisture) from oil. Knitmesh packing systems and oil dispersing system are provided to have sufficient exposure of oil to vaccum during filtration. It will be provided with:

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Designed single / multiple stage degassing chamber with coloums of raschig rings ensure maximum exposure of oil to high vaccum, which enables moisture and gases to evaporate.

- siphon seal to ensure longer travel of oil during degassing (for 2V. plant)
- sight glasses, illuminating lamp to control oil level.
- PRV before degassing chamber and SCV after outlet pump will be provided to avoid flooding of degassing chamber incase power filure.

Heating System

It is capable of heating the oil from 25°C to 80°C. The removable type heater cartridges indirectly heats the transformer oil to the required set temperature (between 60° centigrade). It is provided with electrical resistance elements enclosed in Ms Tubes separating them from oil

Temperature Indication: Temperature Controller

Oil Inlet Gear Pump: A positive displacement pump sucks the oil from the transformer /storage tank and delivers it to the conditioning machine. A built in relief valve takes care of any excessive pressure rise

Oil Outlet Gear Pump: The conditioned oil from the degassing chamber is drawn out by a gearpump.

The pump ensures the isolation of the conditioned oil from the atmosphere.

Guages and Instruments: Plant will be provided with Vaccum Guages, Compound Guages (pressure and vaccum guage), Digital Controller etc.

Valves and Piping: The plant will have necessary oil valves, Drain valves, Airing Valves, Flow Control Valve, Vaccum Valve, Preset valve and piping (Flange type with synthetic rubber O-ring) for easy operation and maintenance.

Control Cabinet: The ms. made sturdy control cabinet housing all the electrical control switchgears like contactor, starter, MCB, MCCB, toggle switch, rotary switches, vaccum guages etc.

A mimic diagram is installed on the cabinet, providing a continual display of the state of operation. The plant shall be mounted on a chasis with pneumatic wheels for easy movement on Road and within substation.

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The set can be supplied with followings:

- * BDV Testing Kit
- * Acidity Testing Kit
- * Flow meter

For selection of plants -

- T Transformer oil.
- O Open type Machine without any canopy.
- E Enclosed type Machine enclosed in CRCA canopy.
- P Portable type Machine Mounted an base frame with small CI castor wheels.
- M Mobile type Machine mounted on pneumatic wheeles trailor with toeing arrangements.
- S Stationary Machine mounted on vehicle or at work place permanently.
- 2D Double Stage Degassing System.
- X Flowrate

Example of Model: ASETTEM2D600X

A S Electrotech offers wide range of models to cater the exact applications of the customers :

Model - ASETT01D600 -

ASETTEM2D600 -

ASETTP2D600 -

ASETTM2D600 -

ASETTS2D600 -

- 1) Single Stage Open High Vaccum Plant (Flow capacity: 600 litres/hour).
- 2) Double Stage Enclosed Mobile High Vaccum Plant (Flow capacity: 600 litres/hour).
- 3) Double Stage Enclosed Portable High Vaccum Plant (Flow capacity: 600 litres/hour).
- 4) Double Stage Mobile High Vaccum Plant (Flow capacity: 600 litres/hour).
- 5) Double Stage Stationary High Vaccum Plant (Flow capacity: 600 litres/hour).

The equipments are available in different types of Constructions such as open and enclosed models, stationery, portable and mobile with single and double stage degassing / dehydration system.

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