



FILTERALL Limited

INDUSTRIAL FILTRATION AND ALLIED SERVICES

Technical Specification Number S127 for Cable Oil Degasifier , Purifier Type EC rev Q 2013
www.filterall.com

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1. GENERAL

Cable oil Degasifier type EC is suitable for degasification, dehydration and filtration of electrical insulating fluids used for the filling and pressurising of cables.

2. SCOPE of SUPPLY

The scope of supply under this specification shall include: The design, fabrication & factory testing of a Cable Oil Degasifier. All components shall be mounted on a common base or in a roadworthy weatherproof trailer (**Option M**), and be supplied as a complete unit ready for operation when received by the purchaser.

3. PERFORMANCE

Performance in a **single pass** through the Degasifier at a full flow rate shall be as follows:

Degasification :- From fully saturated condition of 12% down to 0.1% by volume.

Dehydration :- From 50 PPM down to 5 PPM.

Filtration :- 98% of solid particles over 1 micron shall be removed

4. PROCESS DESCRIPTION

We provide, on request, a flow diagram showing the main components of a typical unit and schematically demonstrating the process.

Cable oil enters the Degasifier through the Inlet Strainer, Visual Flow Indicator and is transferred by a metering type Inlet Oil Pump (P1) to the Electric Heater. Oil heated to the desired temperature, usually 60 deg. C then enters the Coalescers in the Vacuum Processing Chamber.

The highly porous Coalescers shear the oil and expose it to the effect of vacuum. At the same time they accelerate the separation of gases and water vapour from the oil. These are removed by the Vacuum Pump and are discharged to the atmosphere.

Degasified and dehydrated oil is pumped out by the robust Gear Pump capable of developing pressures of up to 200 PSI.

The Fine Filter will remove solid particles before the oil is discharged from the Degasifier.

An accurate and automatic Level Control, Pressurization Valve (adjustable from 30 to 150 PSI), Safety Relief Valve and Recirculation System are all included to ensure simple and reliable operation.

Condensed water vapours will be collected in a transparent container below the condenser. A 3-way valve can be operated to drain collected condensate as required.



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If oil contains large quantities of water, an automatic water drain is recommended. Automatic water drain is accomplished by installing a lever sensor and an electrically operated valve.

For easy movement of the purifier to various oil reservoirs in a factory, we recommend mounting it on 2 fixed and 2 swivel castors. **Option P** also includes inlet & outlet oil hoses each 6m long and a phase sequence relay to prevent incorrect rotation of pumps.

A mobile installation (**Option M**) is also portable. This feature is similar to the portable feature except that the purifier is installed into a specially designed, weatherproof and roadworthy trailer, capable of travelling on paved roads up to 120 km/Hr. Oil hoses 10m long and a phase sequence relay are also incorporated.

5. INSTRUMENTATION and ALARMS

Instrumentation :-

- Two oil pressure gauges.
- One vacuum gauge 0 – 1000 mbar.
- One vacuum gauge 0 – 25 mbar.
- One temperature indicator.
- One electronic temperature controller.

Alarms:-

- One low level alarm.
- One high level alarm.

6. OPTIONAL EQUIPMENT

Optional equipment such as portable or mobile installation, or vacuum pump oil conditioner are available. Details available on request.

7. CONSTRUCTION FEATURES

All materials used in the construction of the Degasifier are fully compatible with all types of cable oils.



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8. GUARANTEES

Mechanical Warranty

Filterall warrants the machinery supplied under this specification against defects in material and workmanship under normal use and service for a period of 12 months from date of shipment. Filterall's obligation under this warranty is limited to repairing or furnishing without charge, F.O.B. point of manufacture similar part to replace any part which within warranty period is proven defective. Filterall shall not in any event be held responsible for any specials, indirect or consequential damages.

Performance Guarantee

Filterall guarantees that the performance of the equipment will be within limitations as detailed in " Performance" of this specification.

8. DOCUMENTATION

Two copies of **Operating and Maintenance Manuals** are supplied with each purifier.

FILTERALL RESERVES THE RIGHT TO CHANGE ANY PART
OF THIS SPECIFICATION WITHOUT NOTIFICATION