

Mini Oil Degasifier

AE865C


HIGHEST ACCURACY & LOWEST COST



AE865C

amperis

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This lightweight Mini Degasifier cart uses the latest high vacuum technology to filter, dehydrate and degasify insulating and dielectric fluids. The unit is ideally suited for processing oil in pole mounted transformers, bushings, conservators, individual barrels of oil and other similar small fluid amounts.

Scope:

The scope of supply of this specification shall include the design, fabrication and factory testing of one (1) Amperis Model Number AE865C-MINI-21 Vacuum Oil Degasifier, as shown in the Mini Degasifier Bulletin, and shall consist of the equipment and components as subsequently described.

The system, when received by the purchaser, shall provide a fully workable unit and shall perform in accordance with this specification.

Amperis shall supply all necessary physical arrangements, mechanical, electrical connection, piping schematic and all necessary data for use in the operation and maintenance of this system. Prior to delivery of this system, Amperis shall provide one (1) copy of the instruction manual. One (1) complete copy of the manual shall be included with the shipment. This manual shall contain:

- Detailed Operating Instructions
- Maintenance Information
- Equipment drawings including Physical Arrangement, Electrical Diagram and Flow Diagram
- A Recommended Spare Parts List



Features:

- Mounted on a convenient hand cart with 10" (250mm) pneumatic tires for ease of movement
- Connection provided for optional vacuum controller
- Unattended operation
- Vacuum blank off rating <20 microns (0.025 mbar)
- Uses Amperis' exclusive accelerator elements for high performance
- Unit comes complete with 10-foot (3 m) power cord and hoses

Performance:

Clean oil containing 100 PPM total water content and fully saturated with air at 12% by volume shall be dehydrated and degassed at the full rated capacity of the system, at a minimum oil supply temperature of 35°F (2°C) and shall meet the following specifications.

Dielectric strength by ASTM Method D-877 shall not be less than 40 kV with new oil.

Total soluble water content by ASTM Method D-1533-61 or D-1744-64 (Karl Fisher) shall be less than 10PPM.

Total gas content shall not be greater than 0.25% by ASTM Method D-831-63 or by Doble Gas Content Analyzer ASTM D-2945-71.

AE865C Specifications

Type	Mini Degasifier
Physical specifications	23" (585 mm) Wide x 23" (585 mm) Deep x 46" (1,170 mm) // 275 lbs. (125kgs.)
Input power	120Vac/60Hz - 220Vac/50Hz - other available configuration (choose it in the order)
Strainer	One Strainer, complete with a 60 mesh basket.
Heater	One 3 KW Electric Inlet Oil Heater. The heater shall have a watt density not greater than 11W/Sq. In. (1.7 W/cm ²). The heater shall be capable of increasing the oil temperature 45°F(27°C) in a single pass. Fuses shall be used for over current protection of each bank of heater elements.
Temperature Controller	One Temperature Controller, which shall be used to control the electric heating elements to maintain the desired oil temperature. The controller shall be integrally mounted on the heating unit. The temperature controller, on deviation from the set point, activates the heater contactor which energizes the heating element, raising the oil temperature to the set point. The controller set point is adjustable by a dial, thereby changing the set point. The heater controller is designed to drop out the heating load on loss of power or vacuum. On resumption of power or flow, the controller resumes function and begins to energize the heating element as required.
Degasification Chamber	One Degasification Chamber. The chamber shall have a viewing port and a bolted service door.
Float Actuated Level Control Valve	One Float Actuated Level Control Valve. The valve is actuated by a float mechanism in the dehydration chamber to maintain the desired oil level. The level control valve is fully modulating and will maintain an inlet flow equal to the capacity of the discharge pump.
Vacuum Pump	One Rotary Vane Vacuum Pump, 6 CFM (10 m ³ /hr) capacity, blank off rating 0.02 mm Hg. Vacuum required for processing is created by the vacuum pump
Vacuum Gauge	One 0-40 mm Hg Vacuum Gauge to indicate the vacuum in the processing chamber
Vacuum Trap	One Vacuum Trap to protect the vacuum pump from water carry-over
Temperature Gauge	One Temperature Gauge, which is used to indicate the outlet temperature of the oil being processed.
Pressure Gauge	One Pressure Gauge, which is used to indicate the outlet oil pressure and filter condition.
Degasification Header	One Degasification Header, which shall contain chemically inert accelerator elements
High Level Detector	One (1) High Level Detector. This level switch shall stop the vacuum pump to prevent flooding and is a back-up for the flow control valve Float Actuated Level Control Valve
Low Level Switch	One (1) Low Level Switch shall be interlocked with the discharge pump to prevent it from operating unless sufficient oil head is present
Discharge Pump	One (1) Positive Displacement Discharge Pump, with mechanical seals and integral relief valve. The pump shall have a rating of 60 GPH (225 litres per hour) and shall be direct driven by a ¼ HP, 1200 RPM, TEFC electric motor.
Oil Filter	Oil Filter will be installed after the outlet pump. The Afterfilter is furnished with a micron selectivity of 0.5 microns and a filtration efficiency of 98%. Standard filter units are of steel construction and complete with pressure gauge to monitor differential pressure.

All necessary pressure gauges and valves as shown on the Flow Diagram shall be provided to complete the system. Suitable flexible connections shall also be provided in the piping to minimize vibration. A NEMA 12 Control Cabinet shall be provided, which shall contain all necessary control items required for the system. All motors shall be provided with magnetic starters for full voltage, across-the-line starting. Each motor shall have sufficient overload protection. Fuses shall be provided with each motor starter. Also fuses shall be provided with each contactor for heater banks for over current protection. Two (2) 10 foot hoses 1/2" ID, material: EPR c/w Kamlok quick connects on each end. One 10 foot power cord. All components shall be suitable for 220 Volt, 1 Phase, 60 Hertz power supply. One (1) dry-type 100 VA transformer shall be supplied for control circuits. All piping shall be carbon steel, sized for the designed flow, braced and supported to prevent vibration. Piping will be welded construction when possible, to minimize leaks. Special vacuum tight welded 'O' ring unions and pipe flanges shall be provided to allow removal of components for maintenance, when necessary.

AE865C Optional Upgrades

Viton Gaskets	Viton gaskets and seals can be incorporated in the Vacuum Oil Degasifier replacing Buna-N material
Special Options	Unit can be custom engineering