

PRODUCT GUIDE

REDRAGON

2017 - 2018

Transformer Oil Regeneration System (TORS-series)

Regeneration systems typically remove the by-products of aging from used transformer oil. By-products that are known as secondary contamination are created because of natural aging of a transformer in service coupled with inadequate maintenance regimens. There are traditionally two approaches to the removal of these contaminants, either approach will result in the used oil being restored to 'as new'.

Flow rates from 200 litres per hour to 10,000 litres per hour in mobile mode, for use on energized or offline transformers and oil tank farms.

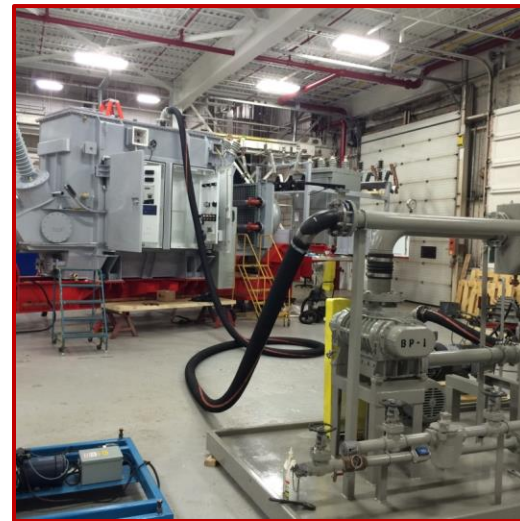


High Vacuum Degasifier (HVD-series)

Designed to remove primary contaminants from transformers operating online or offline, these high vacuum oil purification units are available in flow rates from 50 litres per hour to over 10,000 litres per hour.

- Water removal down to 3 PPM or less
- Particulate removal to less than 1 μ
- Gas content to less than 0.1%

Systems are available as skid-mounted, caster-mounted for in-plant mobility and trailer-mounted for highway travel.



SF₆ Recovery Unit (SHX-series)

The SHX-series of SF₆ recovery units is designed to minimise the impact of SF₆ on the environment. Greenhouse gas reduction, by-product removal from arced gas and cost reduction by recycling SF₆ gas are achieved by use of SHF range of gas recovery units. Gas storage capacities from 40-lb to 2,000-lb are available. Units can be hand-cart mounted, caster-mounted or installed in trailer.

Typical specification

- Water removal down to 10 PPM or less
- Particulate removal to less than 0.1 μ
- Equipment vacuum to below 1 Torr



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Clay Polishing System (CPS-series)

The series is designed to act as a final stage for a wipe-film evaporator or other oil re-refinery. It uses a regenerable clay, good for several hundred reactivations, to remove odour and improve the colour of 100N – 300N and 300N – 500N product streams. The CPS-system will consist of as many as 1000 columns to produce a water-white and odour-free oil from used lube oil. It has also found an application as a cost-effective means of removing sulphur in oil.

Flow rates from 500 litres per hour, 24-hour per day operation.



Centrifuge Oil Treatment System (CNF-series)

Designed to remove very water content, up to 25%, from oils due to be processed. Used primarily as a precursor to subsequent low or high vacuum treatment for water contents down to <5 PPM. High-speed vertical disk-stack centrifuges, with automatic bowl dumping sequences, are the heart of the CNF system, which integrates oil heaters, operating fluid and sludge tanks. Customised design allows for skid-mount or mobile applications, complete with onboard diesel generator if required.

Flow rates up to 4000 LPH.



PCB Dechlorination System (PCB-series)

Polychlorinated biphenyls (PCBs) are man-made chemicals that were first synthesized in the 1880s. Generically known as Askarel, they were found to be toxic and their by-products can be fatal. Many countries have a maximum allowable limit of 50 PPM for equipment to be classified as 'non-PCB'. It is possible to recover low level PCB contaminated oil and restore it to use by essentially reversing the process that created the PCB originally by means of a chemical reaction. Redragon PCB-series has EPA approval on systems that dechlorinate from >2000 PPM to <1 PPM in a single pass. Batches up to 2000 litres.



Oil Pumping Unit (OPU-series)

OPU pump units are designed to operate as either standalone units (manual or PLC controlled from local station) or integrated into sophisticated SCADA systems sitting on top of Allen-Bradley or Siemens PLCs that can be remotely controlled via Ethernet/Devicenet or wireless networks.

- Integrated oil drip pan
- Flow rates to 50,000 litres per hour
- Elevated base for ease of movement
- Choice of wetted materials
- Aluminum frames for weight reduction



Online Tap Changer Filter (OLTC-series)

The OLTC series of online tap changer filters is used to remove particulate and water from insulating or dielectric oils in a load tap changer. It is designed to be permanently attached to an oil filled electrical device such as tap changers, transformers, or circuit breakers. With the use of a suitable cartridge acids can also be removed from the oil.

Options include full stainless steel components and case for durability.



Transformer Oil Level Monitoring Systems (TOLMS)

A PLC-based system that can be purchased as a stand-alone unit to simplify the operation of degasifiers on energised transformers. It allows easy bypassing of the transformer, topping up oil levels in the transformer and automatic monitoring of oil levels in the transformer during oil processing.

Reduces the need for an operator to constantly monitor the transformer and connecting hoses. The TOLMS will isolate the transformer in the event of a hose break, preventing the oil draining in an uncontrolled manner.



SF₆ Refill Unit (RFU)

The Redragon Refill Unit is a handcart system that is designed to refill small SF₆ breakers and devices. It is available, optionally, with a 6 CFM or 10 CFM vacuum pump to first evacuate the device prior to refilling. The vacuum pump typically has a 20-micron blank-off pressure. Inlet pressure regulator is good up to 3000 psig and the secondary side is adjustable up to 120 psig. A safety relief valve protects the device from accidentally exceeding the maximum pressure.

The RFU is available in single or double cylinder carts, cylinders can also be supplied if required.



Edge Filtration Unit (EFU)

The EFU is a high-efficiency, 0.1-micron absolute oil filter, with a reusable filter pack. Once saturated the compressed paper disc rods are back-pressurised to blast the adsorbed contamination off the filter. The rods are continuously adjustable meaning that typical lifetimes in use are around a year to two years, saving a considerable amount of time and labour on switching out consumable pleated paper filter cartridges.

Available in 600 litre per hour or 2000 litre per hour housings.



Anti-Oxidant Inhibitor/Passivator System (DBPC-series)

The DBPC Series Anti-Oxidant Inhibitor/Passivator System from Redragon is a complete system that can be retro-fitted to any make or model of high vacuum degasifier or transformer oil regeneration system. It allows for the addition of an anti-oxidant inhibitor to a transformer during the oil treatment phase of transformer maintenance. The system requires only one pipeline connection to the host degasifier – in the outlet line. The system allows for the use of pre-mixed inhibitor or flakes. The system features a variable speed high quality mixture to ensure good homogeneity in client mixed solutions.

