

On-Load tap changers are used for changing the transforming ratio of power transformers without supply interruption. To reduce arcing at the contacts, the tap changer operates in a chamber filled with insulating transformer oil. Some arcing is unavoidable and both the tap changer oil and the switch contacts will slowly deteriorate. The arcing produces the same contaminants in the tap changer as in the transformer. These are the fault gases such as hydrogen and acetylene as well as carbon particles. Changes in ambient temperature causes condensation to accumulate in the tap changer compartment. This, combined with the other contaminants, slowly degrades the dielectric strength to such a degree that it, if left unattended, could cause a failure of the tap changer.

ACORE developed the Online Load Tap Changers Oil Filtration System (TCF) to remove carbon, moisture and metal particles in tap changers, this system can help users reduce the operation and maintenance cost of load tap changers, improve the system reliability. With high quality components and comprehensive design, TCF is ideal system for on-line filtration.



Continuously circulating online filtration of dielectric oil has proven to be a cost-effective means of combating load tap changer problems. The tap changers with permanent installation of our TCF system can enjoy obtain the following benefits:

- Keep high dielectric strength
- Extended maintenance/inspection intervals
- Reduced contact wear and coking
- Extended oil life
- Reduced contact erosion
- Improving the safety and reliability of the tap changer work

### Features:

- Breakdown voltage increases to above 75 kV/2.5mm
- High efficiency micro-glass filter element can remove 99% of particles 1 micron or larger
- Water removal filter element reduce water content down to 20 ppm
- Pressure gage to display the pressure of filter vessels
- Pressure switch turns the system off when filter is plugged
- NEMA4 fully enclosed cabinet
- Automatic Safety Shut-Down
- Stainless steel piping



## Specifications:

**Flow Rate:** 15 liters per min (Optional 1-20 liters per min available)

**Power supply:** 380V 50Hz 3Ph (or Customized)

**Control panel:** power indication, pressure switch/alarm, motor overload switch/alarm, manual starter, temperature controller

**Pump:** Heavy duty self-priming positive displacement pump with electric motor

**Filter Vessel:** Manual vent and pressure gauge, installed filter element for removal of 1 micron particles

**Working Pressure:**  $\leq 0.4\text{Mpa}$

**Oil sample valves:** for convenient oil analysis.

**Inlet/Outlet:** DN 25

**Weight:** 110 KG

### Options

Stainless steel cabinet

PLC controller

Online moisture monitor

Flow meter

Others options as user's requirement



Due to a continuous program of product improvement, information in this document is subject to change without notice.



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