

On-Line Oil Filtration for Load Tap Changer Compartments

The TP3CE was developed in response to the utility industry's desire to reduce operation and maintenance costs and increase system reliability. On-line filtration has proven to be an effective means of combating LTC problems. Tap changers retrofitted with a TP3CE enjoy the following:

- Consistent high oil dielectric strength
- Extended maintenance/inspection intervals
- Reduced contact wear and coking
- Extended oil life
- Reduced contact erosion via reduced re-strikes during tap changing

The Velcon TP3CE is recommended for installation on tap changers that:

- Perform a high number of operations
- Exhibit consistent sludging conditions
- Have a high tap-to-tap voltage difference
- Require frequent attention
- Quality components and comprehensive design features have made the TP3CE an industry standard for on-line filtration. All components are fully enclosed in a NEMA 4 cabinet. Operation of the unit is unattended. A flow rate of 2.5 gpm keeps turbulence in the reservoir to a minimum and allows for maximum filter life.



FEATURES

Change Filter Alarm

Amber alarm light illuminates on front door of enclosure when filter needs to be changed.

High Pressure Shut-Off

A pressure switch turns the system off when the filter is plugged and the red alarm light illuminates on the front door of the enclosure.

Low Flow Shut-Off

A low flow switch turns the system off when flow drops below 0.5 gpm and the red alarm light illuminates on the front door of the enclosure.

Oil Make-Up

LTC reservoir can be topped up by using 3-way make up port valve at inlet to system.

High Capacity Carbon Filter

An oversized high capacity carbon filter provides up to 1 year between change-outs.



SPECIFICATIONS

Mechanical

Flow Rate:

2.5 gallons per minute

Cabinet:

NEMA 4 enclosure, painted grey acrylic, easy opening handle with 3-point latch and lock, with louvers and filters, UL/CSA approved.

Dimensions are: 42" x 30" x 10" (H-W-D)

Pump:

Heavy duty, self priming, positive displacement gear pump with built-in pressure relief bypass.

Piping:

Stainless steel, JIC hydraulic fittings. External connections are 1/2" female npt.

Filter Vessel:

Velcon model VF-71E with manual vent and static pressure gauge, epoxy coated internally and externally. No tools required for filter change.

Filter:

Velcon Model FO-718PL1/2 comes installed for removal of carbon contamination.

Electrical

Motor:

1/3 horsepower, 120 volt, 1 phase, 60 hertz, 1740 rpm TEFC

Control Box:

NEMA 12 with high pressure switch (2 ea), latching relay, time delay relay, control relay, and control circuit fuse

Wiring:

16 ga, XLPE grade, all terminal connections

Power Requirement:

120 volts, 1 phase, 60 hertz, 7 amps

Disconnect:

On-off disconnect switch, wired so unit restarts after power interruption

Remote Alarm Connection:

Terminal connections for user hook-up to remote alarm circuit

OPTIONS AND ACCESSORIES

- 031Y102** SD-718P3 **Superdri**® Cartridge for carbon particle and dissolved water removal, 0.3 micron, installed
- 031Y106** FO-718PLP3 carbon particle removal filter, 0.3 micron, installed
- 031Y105** AC-718P3 **Aquacon**® free water and carbon particle removal filter, 0.3 micron, installed
- 031Y104** AC-7181/2 **Aquacon** free water and carbon particle removal filter, 1/2 micron, installed

RECOMMENDED SPARES

- FO-718PL1/2** Standard 1/2 micron filter cartridge, box of 6 ea
- FO-718PLP3** 0.3 micron filter cartridge, box of 6 ea
- AC-7181/2** 1/2 micron **Aquacon** cartridge, box of 6 ea
- AC-718P3** 0.3 micron **Aquacon** cartridge, box of 6 ea
- SD-718P3** 0.3 micron **Superdri** cartridge, box of 6 ea
- G-1016** Filter housing lid gasket, buna, 1 ea

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