



streamer®

keeping the light

TRANSEC

Online Transformer Drying Solution



TRANSEC

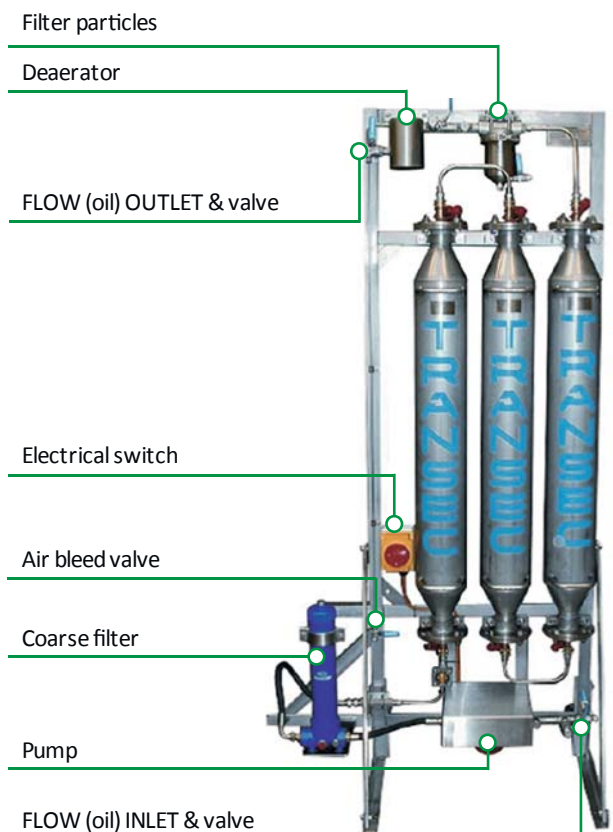
Online Transformer Drying Solution

- Drying transformer continuously during operation
- No shutdown for installation and operation
- For Transformer from 1 MVA capacity and above
- Increase life expectancy of transformer
- Monitoring of percentage of moisture
- Stand-Alone unit, only power supply required

Application

TRANSEC is a system to dry power transformers of all sizes. The problem of wet transformer is already well known. Due to moisture and oxygen, the insulation paper within the transformer degrades. One of the products of this chemical reaction is H₂O. While only a small part of the moisture is absorbed by the transformer oil, more than 95% of the moisture remains in the tons of insulation paper. Depending on the percentage of moisture, the ageing of the transformer increases and failures such as flashovers between the windings, treeing, and creeping discharges can occur. Oil temperature changes during the operation even increases the risk of an outage.

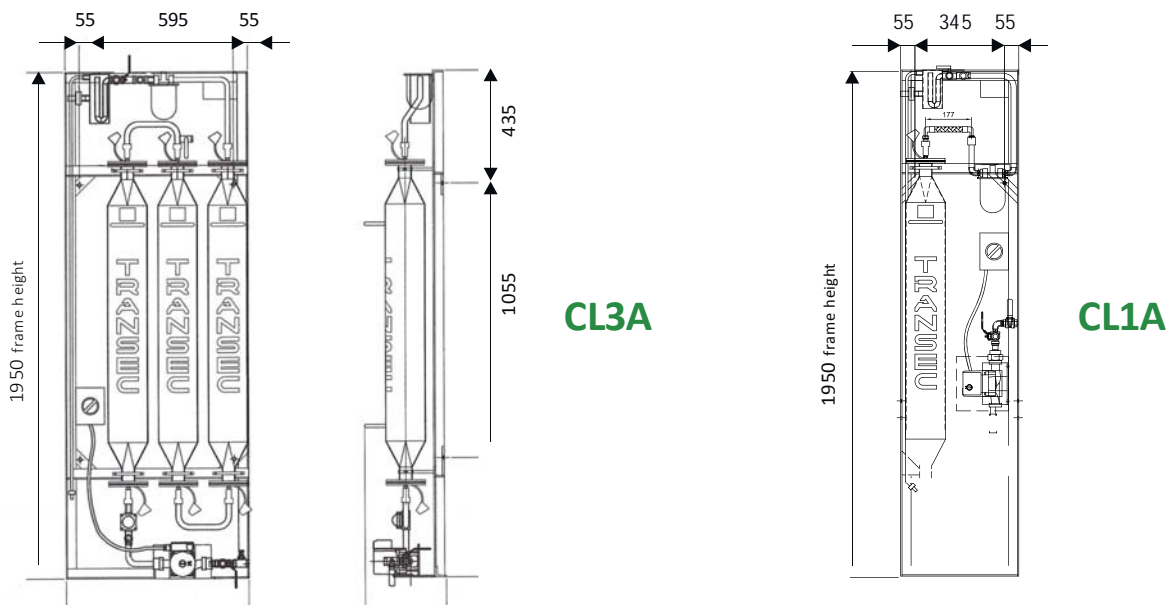
Once the oil in the transformer gets dried by TRANSEC, it dehumidifies the insulation paper and returns back again to the unit. Using this cycle effect, TRANSEC keeps the insulation paper permanently dry, ensures a faultless operation and elongates the life expectancy of the transformer significantly. Comparing to other solutions, the transformer can be dried during its operation. There is no need to transport it or switch it off.



TECHNICAL CHARACTERISTICS

| | CL3 | | CL1 |
|-----------------------------------|---|--------------|--------------|
| | in frame | in cabinet | in frame |
| Weight, kg | 220 | 350 | 90 |
| Dimension (HxWxD), mm | 1950x705x320 | 2300x915x435 | 1950x455x320 |
| Material | 304 grade stainless steel | | |
| Environmental condition, C | 0° to + 90°C | | |
| Water capacity, litre | 3 x 4 = 12 | | 4 |
| Transformer size | >10 MVA | | <10 MVA |
| Protection class of cabinet/frame | Designed to comply with IP64 (in frame) / IP65 (in enclosure) | | |
| Installation time, h | 5–6 (with two specialists) | | |
| Max oil temperature, C | 110° | | |
| Pump capacity, l/hr | 90 | | |
| Electrical supply for pump | 240V; 50Hz; 0.27kW / (120V; 60Hz - possible) | | |
| Pipes | Stainless steel pipes bent on site or hydraulic flexible pipes; Flange adaptors, non-return valves and bleed valve | | |
| Modules (optional) | Output: Analogue 0-20 mA or 4-20 mA for SCADA | | |
| | Temperature and moisture probes at inlet and outlet with local LCD | | |
| | Monitoring for ppm and temperature | | |
| | IEC61850 SCADA integration via Ethernet or fibre optic | | |
| Type test | System pressurised to 3 bar for 1 hour at 110°C (pump not running) to prove leak free | | |
| Routine test | Each unit is pressurised to 2 bar for 30 minutes at 60°C to prove leak free | | |

DRAWINGS



TWO DIFFERENT MODELS FOR TRANSMISSION OR DISTRIBUTION TRANSFORMER

CL3A

- high capacity for moisture extraction (12 litre)
- for transformer >10 MVA
- long operation duration without maintenance in frame or in cabinet
- measuring and monitoring module available



CL1A

- low weight, easy to move
- for transformer <10 MVA
- cost effective and flexible to operate on different transformer
- measuring and monitoring module available



OPTIONAL ACCESSORIES

Monitoring



- LCD Display with Oil Temp, ppm INPUT and ppm OUTPUT
- Analogue Output 0-20mA or 4-20mA for SCADA
- Alarm on minimum pump current
- Pump overload protection

Prefilter



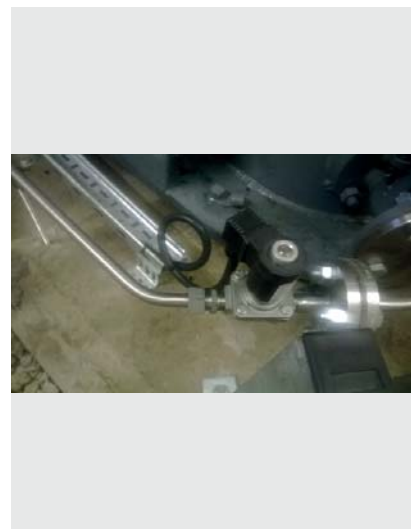
- For heavy sludged transformer
- Filters coarse particles from the oil
- Prevent obstruction of the cylinders

Enclosure



- Protect the unit against outer influence (water, dust etc.)
- Prevent damages due to vandalism
- Made of stainless steel or aluminum

Slam Shut Valve



- Additional safety
- Prevent oil leakage in case of pipe damage

INSTALLATION EXAMPLES



- Directly on the transformer



- Aside, independently from the transformer



- In aluminum or stainless steel enclosure



- Single unit - mobile and flexible

ORDERING REFERENCES

| REFERENCE | DESCRIPTION |
|--------------------|---|
| TR.CL.1.0.OT.00.WW | Transec CL1A Mounting on transformer |
| TR.CL.1.0.SF.00.WW | Transec CL1A on standing frame |
| TR.CL.3.0.OT.00.WW | Transec CL3A mounting on transformer |
| TR.CL.3.0.SF.00.WW | Transec CL3A standing frame |
| TR.CL.3.0.AE.00.WW | Transec CL3A in alu enclosure |
| TR.CL.3.0.SE.00.WW | Transec CL3A in stainless steel enclosure |
| TR.CL.3.M.OT.00.WW | Transec CL3A with monitoring mounting on transformer |
| TR.CL.3.M.SF.00.WW | Transec CL3A with monitoring standing frame |

| REFERENCE | DESCRIPTION |
|--------------------|---|
| TR.CL.3.M.AE.00.WW | Transec CL3A with monitoring in alu enclosure |
| TR.CL.3.M.SE.00.WW | Transec CL3A with monitoring in stainless steel enclosure |
| TR.CL.REGE.01.WW | Regeneration of 1 cylinder |
| TR.CL.REGE.03.WW | Regeneration of 3 cylinders |
| TR.CL.CYLI.03.WW | 3 new cylinders |
| TR.CL.IKIT.00.WW | Installation Kit 2x flange adaptor, 15mm cold drawn seamless annealed pipe, male stud coupling |