

# Our Solution. Your Transformers.



## BTB Treactor "3 in 1" - 24 kV Series

- Oil immersed, Hermetically sealed
- Corrugated Tank Design
- **Distribution Transformer** up to 1000 kVA, 20500V  $\pm 2 \times 2,5\%$  / 400V, ZNyn11 as standard
- **Earthing Transformer**
  - Maximum Neutral Current 15A as standard
- **Arc Suppression Reactor** for Compensation of Neutral Current
  - Standard Tappings: 0-5-7,5-10-12,5-15 A

**Distributed Compensation for Earth Fault Currents**

## Treactor

The aim to minimize the climatic impact on the distribution network by using underground cables results in new challenges when it comes to compensation of earth fault currents.

Underground cables are better protected against weather than traditional overhead lines, but for rural areas with extensive use of underground cables this results in drastic increase of earth fault current.

The compensation of earth fault currents in overhead lines can be done by centralized compensation at the electrical substations. The additional use of distributed compensation has however certain advantages when it comes to compensation of large networks of underground cables.

Our solution to the problem is called BTB Treactor which is a combined distribution/earthing transformer with inbuilt arc suppression reactor (Petersen Coil).



## General Standard Design

The BTB Treactor is naturally cooled and of hermetically sealed design with corrugated tank. The insulating liquid is inhibited mineral oil. Standard surface treatment is according to C3 (ISO 12944). The product is designed to operate in an environment with ambient temperature between  $-40^{\circ}\text{C}$  and  $+40^{\circ}\text{C}$  and can be installed both in- and outdoors.

The BTB Treactor is equipped with a top oil thermometer including alarm and trip contacts that are pre-wired to an auxiliary wiring box. For personal safety are the low voltage bushings additionally equipped with protective covers. The tank is equipped with a pressure relief device as an additional safety measure.

## Internal Electrical Design

The BTB Treactor consists of a combined distribution / earthing transformer interconnected to an arc suppression reactor (Peterson Coil). The vector group is ZNyn11+ASC as standard.

The Distribution Transformer is equipped with an off-circuit tap changer for voltage regulation in 5 steps ( $\pm 2 \times 2,5\%$ ) on the primary side.

The Earthing Transformer is designed for maximum neutral current of 15A for a duty cycle of 2 hours. Other ratings and duty cycles are available upon request.

The Arc Suppression Reactor can be of fixed rating alternatively with regulation. The regulation is made by means of an off-circuit tap changer. Standard tapping range is 0-5-7,5-10-12,5-15A. The arc suppression reactor is internally interconnected to the neutral of the earthing transformer. The arc suppression reactor can be grounded from the bushing on the tank cover.

## Optional Features

- Plug in bushings on primary side
- Various vector groups
- Various rating and duty cycle for maximum neutral current
- Various tapping range for Arc Suppression Coil
- Multi-functional device for monitoring of gas, temperature and oil level
- Improved surface treatment for environment with very high corrosivity (environmental class C5-I in accordance with standard ISO 12944)

## Our Benefits

- Flexible and custom made design to meet specific customer requirements
- Compact design and minimum need for maintenance
- User friendly - Easy installation



*BTB Plaza has served as the marketplace for transformers since 2004. Our Finnish entrepreneur-driven company is known for its speed, flexibility and reliability.*

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