

# *Our Solution. Your Transformers.*



## **Dry-type Transformers**

- Distribution and Special Applications
- Ratings up to 10 MVA
- Voltage ratio up to 72,5 kV
- VPI, VPE, Cast Resin and Glass Fibre Reinforced winding concepts

## **Reference Standards**

- IEC 60076-11
- National standards upon request (e.g. ANSI)

## *Dry-type Transformers*

Dry-type transformers are used when you want to minimize the risks for fire hazard and environmental contamination. Dry-type transformers are a good choice for installations in office buildings, warehouses, hospitals and other indoor facilities.

Our standard dry-type transformers are manufactured to meet the requirements of international standards (IEC). Design according to other national standards is available upon request. The transformers fulfil E2-C2-F1 in terms of environmental, climatic and fire behaviour classifications.

We are flexible to meet various customer requirements with our customized design. These transformers will be made to order and handled as an individual project to be sure that all specific requirements are met.



## Standard Design

Our standard dry-type transformers are manufactured to meet the requirements of international standards (IEC). Other national standards (e.g. ANSI) is available upon request.

Our standard dry-type transformers are made with aluminum conductors and with insulation according class F. The insulation system is cast resin for high voltage windings and vacuum pressure impregnation (VPI) for low voltage windings. The transformers are equipped with bolted links for off-circuit voltage regulation in steps of  $\pm 2 \times 2.5\%$ . Our standard transformers are naturally air cooled (AN) and IP00 (unenclosed). Upon request can standard types of painted steel sheet enclosures be provided at different ingress protection classes (IP-class)

The energy losses are standardized according to EN standards; normal and low losses. Other specific requirements in terms of energy losses can be achieved with our customized design.

The level of accessories and monitoring equipment is limited to such types that can be fitted to the standard design.

*“With our standard design we want to achieve high quality transformers that will give our customers good value for money thanks to full scale serial production of standard design.”*

## Customized Design to Meet Various Requirements

These transformers will be made to order and handled as an individual project to be sure that all specific requirements are met.

We can offer various winding concepts (VPI, VPE, Glass Fibre Reinforced). The glass fibre reinforced windings gives better environmental protection for extreme installations and operational conditions.

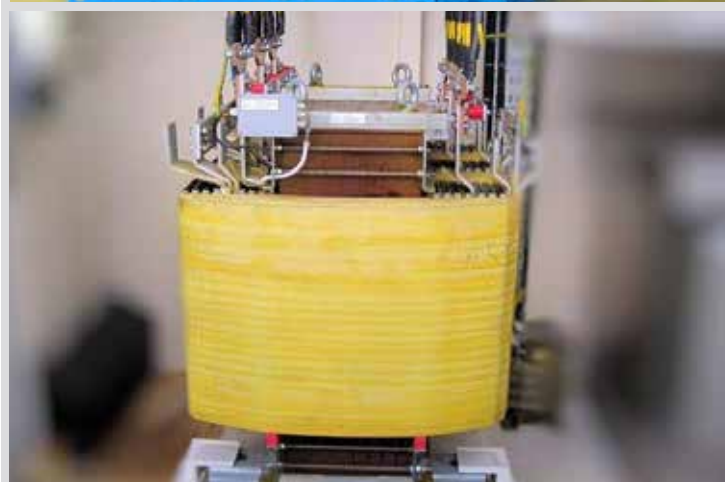
The customization process covers everything from both electrical and mechanical design parameters to the level of accessories and instrumentation. This gives us the possibility to meet special customer requirements in respect of operation as well as for instance installation in places with space restrictions.

*“We are flexible to meet various customer requirements with our customized design.”*

## Special Features

With the customized design we can offer following special features:

- Dual primary or secondary voltages
- Design also suitable for special applications such as; converter, rectifier, furnace, motor starting, windmill, marine etc.
- Increased insulation level with increased withstand to lightning and overvoltage peaks
- Enclosures according to customer requirements with various level of ingress protection (IP-class)
- Surface treatment for harsh conditions
- Forced air cooling (AN/AF) for increased loadability rating
- Voltage regulation with motorized on-load tap changer



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

**BTB** plaza

*The Transformer Marketplace*

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