

CAST RESIN DRY TYPE TRANSFORMERS

FULL PERFORMANCE IN ALL CONDITIONS

Ambient temperatures of up to -25°C and up to 95% humidity and at high altitudes



Damproof

Low Noise

Suitable for contaminated environments

Suitable for humid environments

Our cast resin dry transformers are specially designed for use at high altitudes, in high humidity and under difficult environmental conditions. They comply with international directives.

As these transformers do not contain any flammable liquids and are made of materials which can extinguish themselves if necessary, a high level of environmental safety is guaranteed. In addition, they do not emit any toxic gases and are characterised by low electromagnetic emissions.

Dry transformers have a wide range of applications. They can be used in distribution systems, combined heat and power plants and as rectifiers be used.

ENERGY PRODUCTION FACILITIES

- Wind Power Plants
- Solar Power Plants
- Hydroelectric Power Plants
- Co-generation Systems
- Industrial Applications



SERVICE FACILITIES

- Hotels
- Schools
- Hospitals
- Banks
- Headquarters
- Stadiums
- Mines
- Shopping and Life Centers



INFRASTRUCTURE SYSTEMS

- Airports
- Ports
- Military Facilities
- Rail Systems



GENERAL INDUSTRY APPLICATIONS

- Induction Furnaces
- Pump Stations
- Vessel Davits
- Ventilation Systems
- Lifting Systems
- Welding Lines
- Underground Transformer Centers



AREAS OF USAGE



ENVIRONMENTALLY FRIENDLY TRANSFORMER

ECONOMIC

- Long service life thanks to slow thermal and dielectric ageing
- Best design for further development with the possibility of using new materials
- Maximum performance with low energy consumption
- Space-saving design

SAFE

- Self-extinguishing
- Resistant to heavy shock and vibration
- High mechanical protection against short circuits
- High capacity prevents overload



ADVANTAGES OF USE

Our dry-type transformers comply with special international guidelines. They are categorised in classes E2, C1 and F1 and can be used at high altitudes, in high humidity and under other difficult conditions.

Environmentally friendly thanks to non-flammable and self-extinguishing materials. Free from the emission of toxic gases, low noise and with low electromagnetic pollution.

AVAILABILITY AND COST

- Minimal maintenance required
- No risk of leaks as there is no liquid filling present
- On-site customer service
- Suitable for installation near shopping centres
- Low transport and installation costs

LIFETIME AND DURABILITY

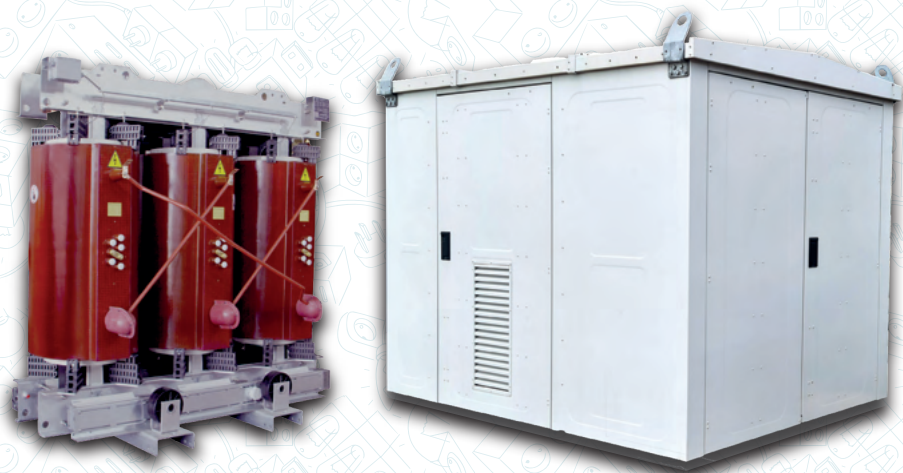
- Cooling fans can increase the rated power of the transformer
- Low partial discharge ensures long service life
- High degree of insulation protects against short circuits and lightning strikes
- Short-term overloads are tolerated without problems

ADVANTAGES OF USE

CAST RESIN DRY TYPE TRANSFORMERS



VISIT OUR WEBSITE!



PRODUCTION OF TRANSFORMERS

Standard Place of use: Indoor (Internal)
Place of use with cabin: Outdoors (External)
Tap Changer Type: OLTC/OCTC
Power Range: 250kVA/25 MVA
Voltage up to 52 kV

- Ambient Temperature: -25°C /+60°C
- Ground Shake: Horizontal acceleration;
Vertical acceleration of 0.5g; 0.4g
- Cooling Type: AN/AF
- Environmental Class: E2
- Climate Class: C2
- Fire Class: F1
- Insulation Class: F/H



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BETA Elektrotechnik GmbH

TESTS

The national and international quality tests listed below are carried out in our accredited laboratory for cast resin dry transformers:

Routine Tests

- Measurement of the winding resistance
- Measurement of voltage transformation ratio and phase difference
- Resistance measurement on the insulator
- Measurement of short-circuit impedance and charging loss
- Measurement of decoupling losses and voltage
- Application of voltage tests
- Induced voltage test
- Partial discharge measurement

Type Tests

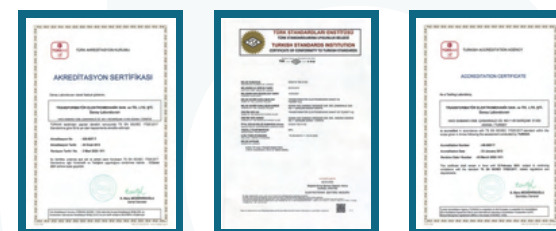
- Testing the temperature rise
- Lightning strike test
- Sound level measurement

Special Tests

- Determination of the capacitance between the coils and the earthing via the coils
- Measurement of the zero-sequence impedance for 3-phase transformers
- Short-circuit resistance measurement
- Harmony test with current switched off
- Measurement of the insulation resistance from coil to earth
- Power factor measurement (tangent-delta measurement)

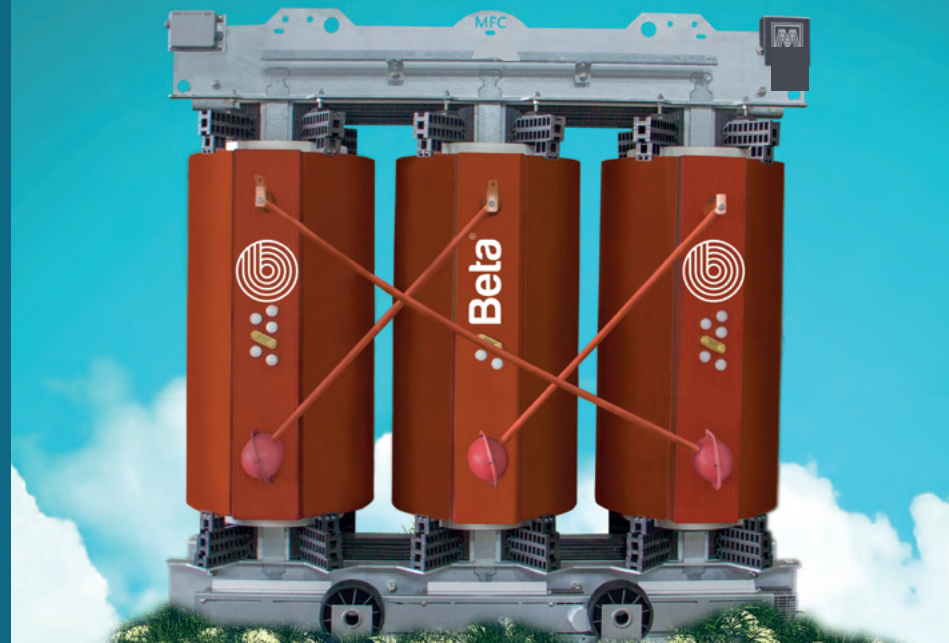
OUR QUALITY STANDARDS AND CERTIFICATES

The manufacture of our cast resin dry transformers is subject to the following quality standards:



- Q EN 60076-11: Power Transformers Part 11: Dry Type Transformers
- Q IEC 60076-12: Power Transformers Part 12: Installation Guide for Dry Type Transformers
- Q IEC 60076-1: Power Transformers Part 1: General
- Q IEC 60076-2: Power Transformers Part 2: Temperature Control
- Q IEC60076-3: Power Transformers Part 3: Insulation and Dielectricity Tests
- Q IEC60076-5: Power Transformers Part 5: Short Circuit Resistance Capacity
- Q TS EN 50588-1: Medium Power Transformers Part 1: General Characteristics

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OUR QUALITY STANDARDS AND CERTIFICATES

