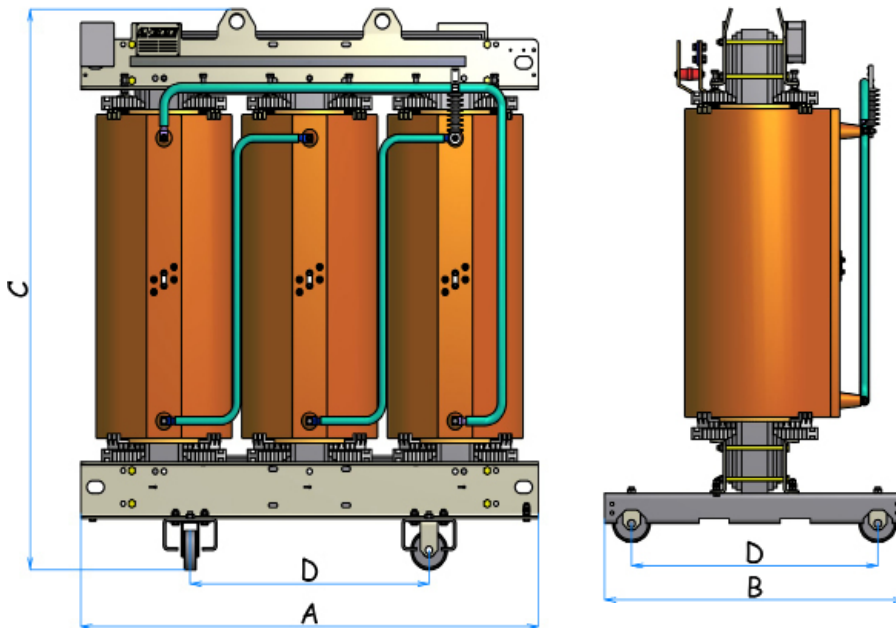


# UNITRAFO

POWER QUALITY – SAFE ENVIRONMENT

## Cast Resin Transformers TU Ecodesign Tier 2 Voltage Class 12 kV

|                                     |                                    |
|-------------------------------------|------------------------------------|
| Standards                           | IEC 60076 - EN 50588 - EU 548/2014 |
| Insulating Class (Temperature Rise) | F (100 K)                          |
| Insulation Class MV                 | 12 kV FI 28 kV BIL 75 kV           |
| Insulation Class LV                 | 1,1 kV FI 3 kV                     |
| Frequency                           | 50 Hz                              |
| Tappings MV                         | ± 2 x 2,5%                         |
| Tolerance                           | IEC tolerance                      |



| Power kVA | Uk* % | P <sub>o</sub> W | P <sub>cc</sub> * W | I <sub>o</sub> % | LwA dB(A) | LpA dB(A) | A mm | B mm | C mm | D mm | Wheel mm | Weight Kg |
|-----------|-------|------------------|---------------------|------------------|-----------|-----------|------|------|------|------|----------|-----------|
| 100       | 6     | 252              | 1360                | 0,58             | 50        | 38        | 1250 | 670  | 1175 | 520  | 125      | 920       |
| 160       | 6     | 360              | 1810                | 0,73             | 53        | 41        | 1250 | 670  | 1285 | 520  | 125      | 970       |
| 200       | 6     | 408              | 2030                | 0,62             | 55        | 42        | 1250 | 670  | 1285 | 520  | 125      | 1160      |
| 250       | 6     | 468              | 2370                | 0,57             | 56        | 43        | 1330 | 670  | 1400 | 520  | 125      | 1400      |
| 315       | 6     | 557              | 2940                | 0,57             | 58        | 45        | 1330 | 820  | 1460 | 670  | 125      | 1480      |
| 400       | 6     | 675              | 3500                | 0,39             | 59        | 46        | 1410 | 820  | 1500 | 670  | 125      | 1920      |
| 500       | 6     | 811              | 4290                | 0,38             | 60        | 47        | 1410 | 820  | 1550 | 670  | 125      | 1990      |
| 630       | 6     | 990              | 4980                | 0,37             | 61        | 47        | 1570 | 820  | 1580 | 670  | 125      | 2290      |
| 800       | 6     | 1170             | 5540                | 0,34             | 63        | 49        | 1570 | 820  | 1680 | 670  | 125      | 2820      |
| 1000      | 6     | 1395             | 6670                | 0,32             | 64        | 50        | 1680 | 1000 | 1950 | 820  | 125      | 3580      |
| 1250      | 6     | 1620             | 8500                | 0,30             | 66        | 51        | 1680 | 1050 | 1990 | 820  | 160      | 3760      |
| 1600      | 6     | 1980             | 9830                | 0,29             | 67        | 52        | 1860 | 1050 | 2200 | 820  | 160      | 4900      |
| 2000      | 6     | 2340             | 13000               | 0,27             | 69        | 54        | 2010 | 1300 | 2380 | 1070 | 200      | 5800      |
| 2500      | 6     | 2790             | 16400               | 0,26             | 70        | 55        | 2100 | 1300 | 2425 | 1070 | 200      | 6700      |

\* Data referred to 120°C at rated voltage

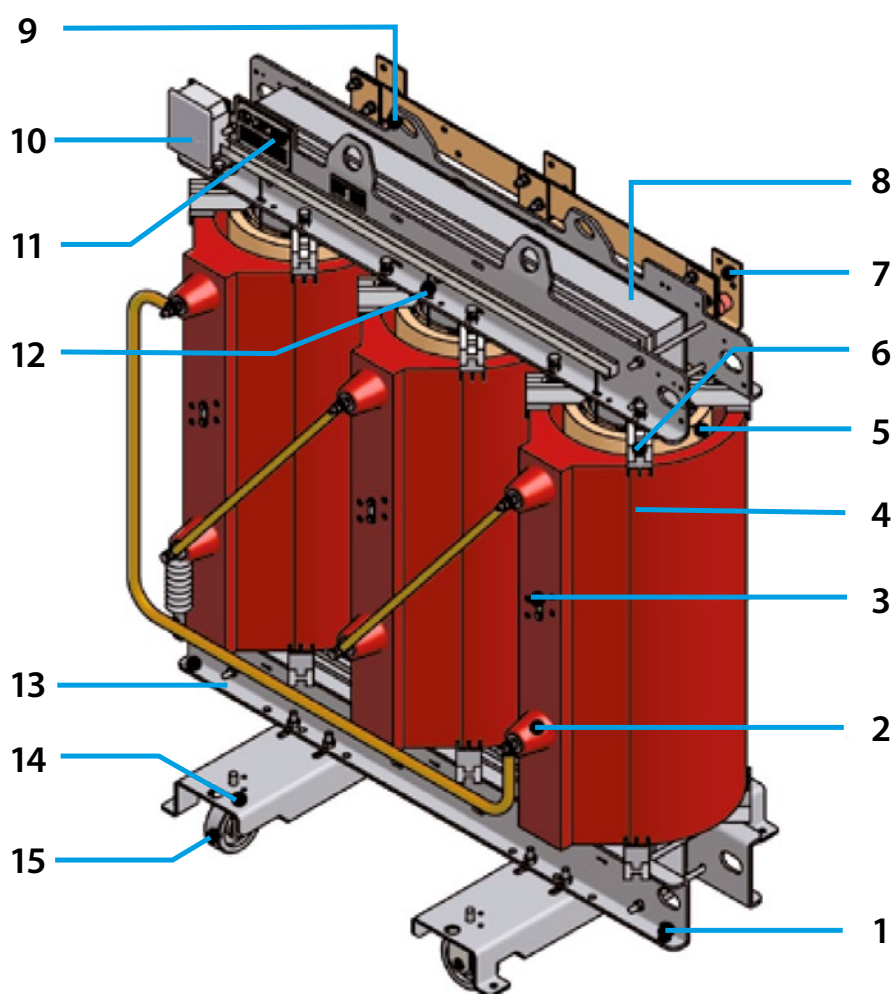
N.B. Dimensions and weights are preliminary and will be confirmed upon order

## Standard equipment

- Terminal board for voltage regulation of  $\pm 2 \times 2,5\%$  (Disconnected transformer)
- High Voltage output insulator
- HV connections with n.3 brass details M12
- LV connections plate in aluminum
- Earthing link
- Thermometer with 2 changeover contacts, type JUMO
- Lugs/eyebolts for lifting or horizontal movement
- Trucks (2 pcs) with orthogonal swivelling revolving wheels (4 pcs)
- Ratingplates in accordance with IEC 60076 (2 pcs, whereof one is delivered unmounted)
- Standard testing, including relevant test certificate
- Documentation as digital files

## CAST RESIN TRANSFORMER – PRINCIPLE SKETCH

- 1 Earthing Terminal
- 2 Medium Voltage Output Insulator
- 3 Medium Voltage Tapping
- 4 Medium Voltage Windings
- 5 Low Voltage Windings
- 6 Windings Pressure Plugs
- 7 Low Voltage Output Bars
- 8 Magnetic Core
- 9 Lifting Eyebolts
- 10 Centralization Auxiliary Box
- 11 Data Plate
- 12 Thermal Sensors
- 13 Core Frame
- 14 Eyebolts for Horizontal Movement
- 15 Orthogonal Revolving Wheels



## Options

As an alternative option we can adapt our transformers for your specific needs. For instance we can offer you transformers with extra low losses, windings in copper for special applications, alternative temperature risings and calsses,

double primary- or secondary current, alternative frequencies, low fitted bushings and vector groups as desired. Below you can see some of the options we offer.

### TEMPERATURE SUPERVISION

| ITEM NO. | DESCRIPTION   | ITEM NO. | DESCRIPTION  |
|----------|---|----------|--|
| 2        | Digitalt thermo instrument with 3 contacts for PT100, T154 Tecsystem  | 7        | PT-100-sensor, 3 pcs incl. mounting  |
| 3        | Temperature relay for PTC-termistors, T119 Tecsystem  | 10       | Thermometer with 2 changeover contacts, type JUMO  |
| 4        | Digitalt thermo instrument for PT100 with analogue output 4-20 mA or serial 485-connection or modbus, NT935 Tecsystem | 10-P     | Temperature transmitter incl. program display, with analouge output 4-20 mA for PT100-sensor |

### ADDITIONAL ACCESSORIES

| ITEM NO. | DESCRIPTION   | ITEM NO. | DESCRIPTION  |
|----------|---|----------|--|
| 33       | Complete fan cooling for forced cooling (power increase +30%) including digitalt temperature instrument T154 and protective relay for fan engines VRT200 (pos 2+36.2). Up to 3150 kVA | 42       | Electrostatic screen between primary and secondary voltage, max 1,1 kV |
| 36.2     | Protective relay for fan engine VRT200 for panel mounting. (N.B. included in the package above)   | 43       | Housing protection - plexiglass  |
| 38       | Antivibration pads, set of 4 pcs/ transformer   | 43.1     | Plexiglass protection for terminal boards                              |
| 40       | Earthing bolts for HV- or LV-side (Ø 25 mm)   | 44       | Cupal plates   |
| 40 A     | Earthing link, type Pfisterer (earthing link, control rod och hanger) for work earthing at HV-side with max allowed short circuit current for one second                              | 58       | Low placed secondary voltage connectors                                |
| 40 B     | Earthing switch, type ABB, EB12/24, HV-side. Complete with help contact, locking solenoid, hand lever and front   |          |  |

### TYPPROVER\*

| ITEM NO. | DESCRIPTION                 | ITEM NO. | DESCRIPTION                          |
|----------|-----------------------------|----------|--------------------------------------|
|          | Shock test (up to 6300 kVA) |          | Heat test                            |
|          | Sound test                  |          | Participation in test at the factory |

\* Standard testing according to IEC 60076, is always included.