



ZTELEC GROUP

Powered Green & Reliability



CAST RESIN DRY-TYPE TRANSFORMER

Selection Guide

河南中天宇光电气装备有限公司

ZTELEC YUGUANG ELECTRIC TECHNOLOGY (HENAN) CO.,LTD

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Order information

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Founded in 1958, Henan Zhongtian Electric Equipment Group (hereinafter referred to as Ztelec Group) was formerly owned by the Ministry of Light Industry. Ztelec Group adheres to the core value concept of “Vision, Innovation, and Responsibility” and takes “Power the world with green and reliability” as its own responsibility. Focusing on production and manufacturing for over 50 years, the group has developed into an integrated group company specializing in four industries: Electric equipment, Composite materials, Enamelled copper wires, and Photovoltaic energy. Ztelec Group is represented by 5 manufacturing bases across 4 cities (Xuchang, Guiyang, Chengdu, and Dongguan) in China, with more than 1500 employees worldwide.

Ztelec is focusing on manufacturing MV and LV power generation, transmission, and distribution equipment, as well as PV equipment, including flexible solar panels, energy storage system, energy management devices, and substations. Ztelec owns 1 national postdoctoral research station and 2 provincial technology centers. It closely cooperates with the National Advanced Materials Laboratory of Beihang University and the Institute of Plasma of the Chinese Academy of Sciences to promote intelligent manufacturing levels and digital transformation. Ztelec is a Chinese enterprise committed to the global development, promoting an open technology and partner ecosystem, and actively practicing the common values of meaning, inclusiveness, and empowerment.

5

Manufacturing base

1500+

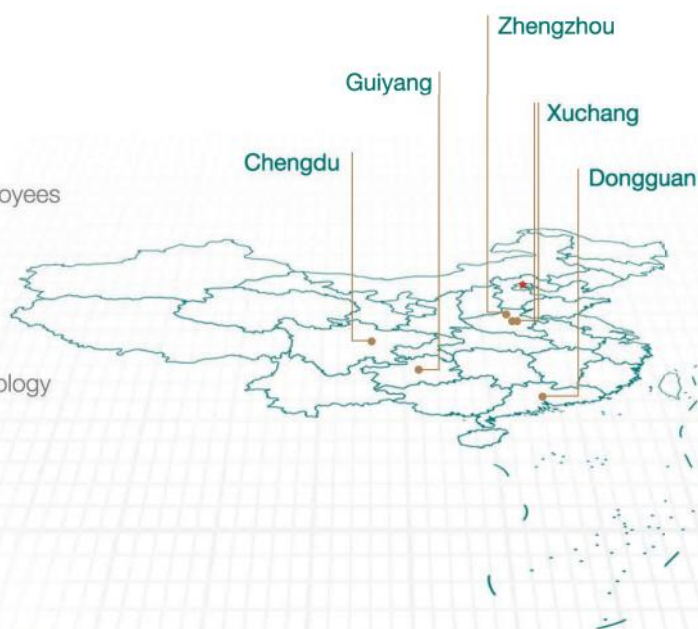
Number of employees

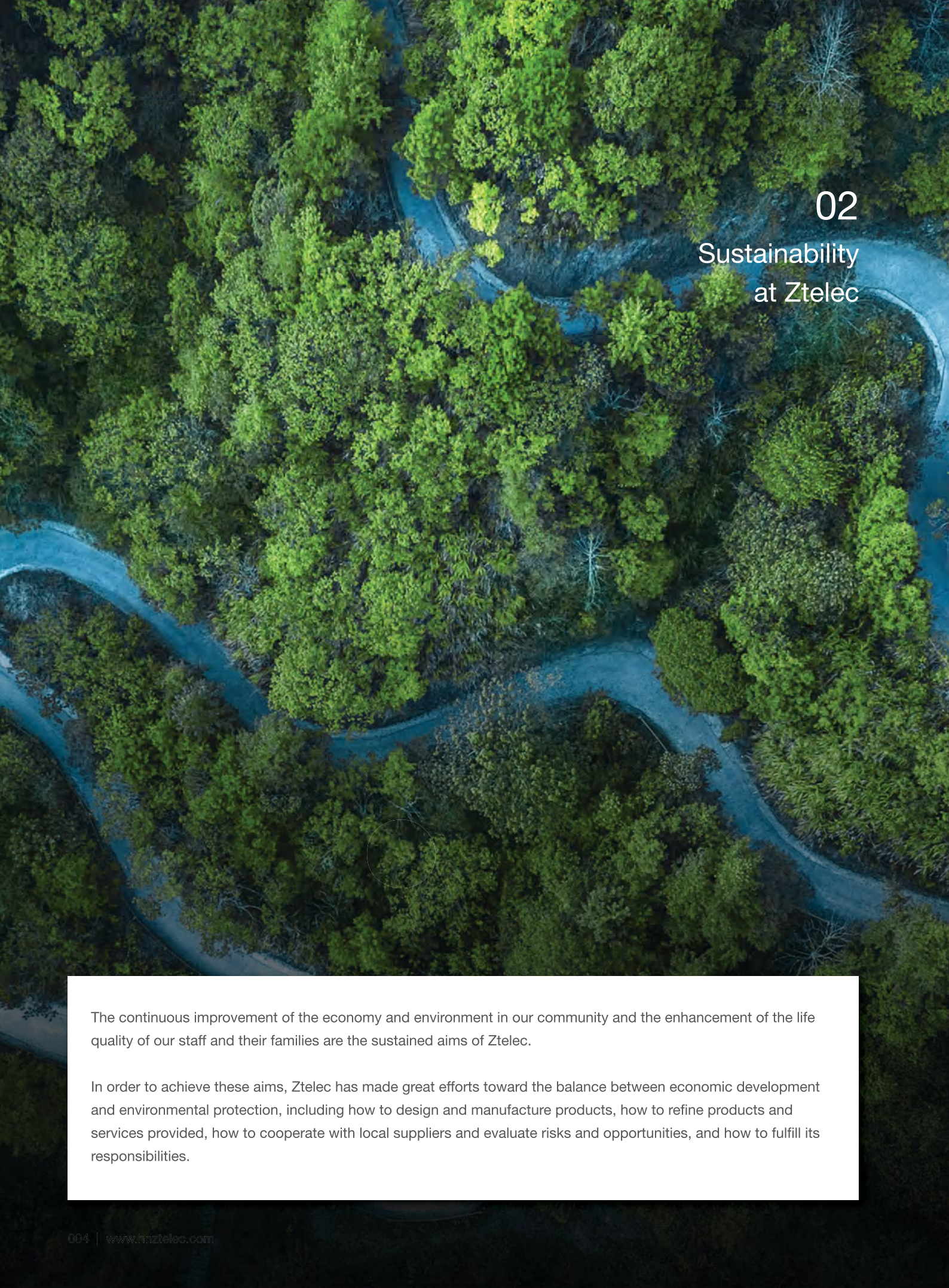
1

National postdoctoral research station

2

Provincial technology centers



An aerial photograph of a lush green forest. A river or stream winds through the trees, creating a meandering path. The trees are dense and vibrant green, with some areas showing more yellowish-green foliage. The river is a light blue-grey color, contrasting with the green of the forest.

02

Sustainability at Ztelec

The continuous improvement of the economy and environment in our community and the enhancement of the life quality of our staff and their families are the sustained aims of Ztelec.

In order to achieve these aims, Ztelec has made great efforts toward the balance between economic development and environmental protection, including how to design and manufacture products, how to refine products and services provided, how to cooperate with local suppliers and evaluate risks and opportunities, and how to fulfill its responsibilities.

03 Our purpose



+ Our culture

Customer First

- Partner with our customers
- Listen first
- Always smile and show enthusiasm

Embrace Changes

- More choices, more joy
- Believe there is always a better way
- Learn from failures as well as successes

Devotion

- Grow faster with more sharing
- Proud of your team
- Speak up and ask for help

Care with Respect

- Take care of our people as well as their families
- Respect and value differences
- Speak directly and act with integrity



04 Industrial development history



We introduced complete testing equipment and manufacturing machines, and started to produce power equipment, including 10kV and 35kV oil-immersed transformers and 10kV switchgear.

2003



Won multiple bids with a total amount of approximately \$6 million for the power transmission and transformation projects from the State Grid Corporation of China.

2009

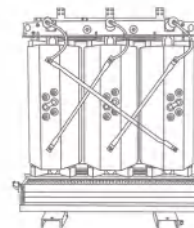
2006

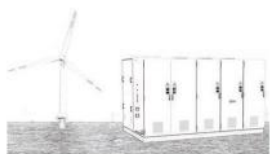
Successfully obtained ISO9001:2008 and ISO14001 certifications; the full series of 6kV, 10kV, and 35kV transformers passed the "type test" and "special test" conducted by the Suzhou Electrical Appliance Research Institute.



2010

Started the production of S11 and S13 series cast resin dry-type transformers. Achieved significant progress in developing the S15 series of high-efficiency amorphous alloy transformers.





Through the cooperation with CNOOC, developed transformers for offshore power supply system under marine operation environment.

2012



Successfully passed the audit of SAM supplier management system from Schneider Electric and became their supplier in the field of Variable frequency transformer.

2017

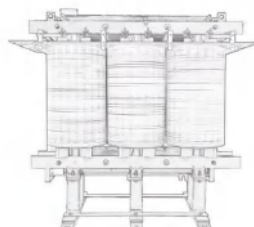


Began to provide container-type or box-type step-up integrated equipment for energy storage power stations (CESS), which integrates 35kV high-voltage switchgear, low-voltage switchgear and dry-type isolation transformers.

2022

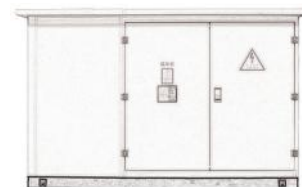
2014

It has gradually formed four product production lines, including oil immersed transformer, dry type transformer, high and low voltage switch gear, and box type substation. Meanwhile, started the sample making and market development of mining transformer, open type transformer and variable frequency transformer.



2019

Started batch production of traction transformer for railway, prefabricated photovoltaic intelligent substation and photovoltaic power generation system equipment.



2023

05 Flexible & High efficient manufacture

Respond quickly to the customer's special requirements regarding environment, appearance, efficiency, delivery time, transportation, special quality requirements, and others. Provide personalized design and shorten the delivery cycle time.

Organize production in accordance with GB and international (IEC and IEEE) standards, implement a full-process control concept from raw material warehousing control to finished product inspection, focus on customers' experiences and core needs, and provide products and services that exceed customers' expectations



+ Manufacturing equipment

- 1 Vacuum casting system
- 2 Cut-to-length line for core sheets
- 3 Vacuum drying equipment
- 4 Winding equipment



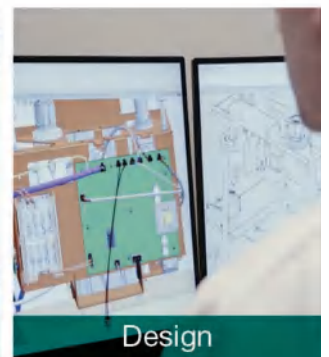


+ Implementation of TQM and System

After introducing the lean production concept, we established 50 lean improvement quality criteria. Each process is provided with operation instructions and standardized operation criteria to implement the production plan, using timely management to improve communication efficiency and continuously shorten delivery time. The Toyota Production System (TPS), with a core focus on production process management (MPS), has gradually been developed by connecting sales, materials, planning, supply chain, services, and other areas.



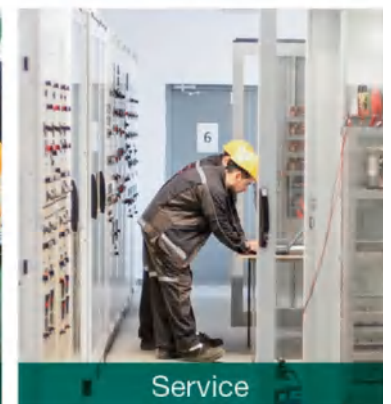
Kanban System



Design



Test



Service

06 Testing

Regular Tests

- + Voltage ratio measurement
- + Applied withstand voltage test
- + Induced withstand voltage test
- + Partial discharge measurement
- + No load loss and current measurement
- + Winding resistances measurement
- + Insulation resistance test
- + Load loss and short circuit impedance measurement
- + Transformer oil test

Type Tests

On customer requirements

- + Temperature rise test
- + Lightning impulse test
- + Noise level test

Special Tests

On customers' requirements, below parameters can be checked

- + Zero-sequence impedance
- + No-load voltage harmonic
- + Parallel capacity of windings
- + Anti-corrosion protection checking
- + Short circuit test



07 Installation and Service

Warehouse

- + In the warehouse, transformers should be protected from the pollution of water droplets, dust and sand. If provided with plastic cover, the transformer should be covered during storage.



Transport

- + The transformer is equipped with safety transport devices. The transformer without shell shall be lifted with lifting lugs, the medium and small dry transformers with shell shall be lifted with lifting rings, and the large transformer shall be lifted with special lifting device for foundation channel steel.



Shipping

- + The product is ready for shipping either by truck or sea freight once it has passed the tests. We take care of all official documents, depending on destinations and delivery terms. We also provide different packaging for special applications or conditions.



Installation

- + We supply the installation guide and user manual for each transformer. Under normal conditions, check the transformer once a year and clear the dust by vacuum cleaner. The frequency of cleaning depends on the running conditions.



Service

- + When some parts need to be replaced or any information is required, the main parameters on the nameplate must be provided, especially the serial number. We provide stock in regular quantities of spare parts, in case of customer needs.



08 Customer case



Subway Line 01, Zhengzhou 2014



Xinzheng Airport Terminal



A carrier rocket with Shenzhou-11 spacecraft, CASA, 2016



SAIF 225MW Gas Turbine Combined Cycle Power Project, Pakistan



Yuzhou Peak Photovoltaic Power Station Project



Khutul, "CEMENT-SHOKHO" JSC, Mongolia, 2015

Other achievements (in no particular order)

Aerospace and military projects:

- + Xinxiang Aviation Industry Group
- + Guilin Aerospace Electronics Co., Ltd.
- + Guizhou Aerospace Electric Co., Ltd.
- + AVIC Chengdu Aircraft Industry Group

Wind and light new energy projects:

- + Mahayana Wind Power Project
- + Mingyang Electric Co., Ltd.
- + Xuchang City Public Traffic Power Charging Construction

Automation field:

- + Huichuan Technology Co., Ltd.
- + Hekang New Energy Technology Co., Ltd.
- + Wolong Electric Group Co., Ltd.
- + Leadford Electric Technology Co., Ltd.
- + Shandong Xinfeng Electronics Technology Co., Ltd.
- + Shenzhen Kumark Drier & Automation
- + Shanghai Dongfang Electric

Metallurgy and petrochemical:

- + Shenhua Group
- + Yongfeng Iron and Steel Group Co., Ltd.
- + Harbin Electric Wind Energy Co., Ltd.
- + China Pingmei Shenma Group
- + China Shenhua Coal
- + Anyang Iron and Steel
- + State Grid Henan Electric Power Company



Business school program:

- + Xinzheng South China City
- + Xinzheng Wuyue Plaza
- + The main venue of the National Peasant Games
- + Zhengshang Stock Business Centers
- + Jianye Group
- + Yongwei Group
- + CRCC No.18 Bureau Group
- + Country Gradend Holdings Group
- + Henan National University Science Park

Industrial manufacturing project:

- + Puyang Longfeng Power Plant
- + Xuchang Jinhui Stainless Steel Group Co., Ltd.
- + Henan Zhigu Industrial Park
- + Vietnam Tinh Bac Ninh Solar Project
- + Philippine Paper Mill Powering System
- + Geely Automobile Zhejiang Intelligent Plant

Pulp & Paper:

- + Huatai Group
- + Chenming Group
- + Hengan Group
- + Yingde Group
- + Lee & Man Paper Mill
- + Henli Group
- + Yilin Paper Mill

09 Certificates & Patents

36 National Patents Granted -Validated

(Innovations in core technologies, product design, and manufacturing excellence)

Global Compliance & Certification-Certified by ISO, CE, CB,
and International Standards



ZTELEC is a top brand group company
strongly supported by our own R&D team.

Phase-shift rectifier transformer





Phase-shift rectifier transformer



Overview

Our company specializes in manufacturing dry type phase-shift rectifier transformer rated voltage up to 20 kV and capacity up to 5000kVA. The products are widely used in the field of petroleum, chemical, metallurgy, textile, coal, cement, rolling mill (steel mill) etc.



Implementation standards

IEC 60076-1~5 : Power Transformer

IEC 61378-1:1997 : Rectifier Transformer- Industrial Transformer

JB/T 8636-1997 : Power Converter Transformer

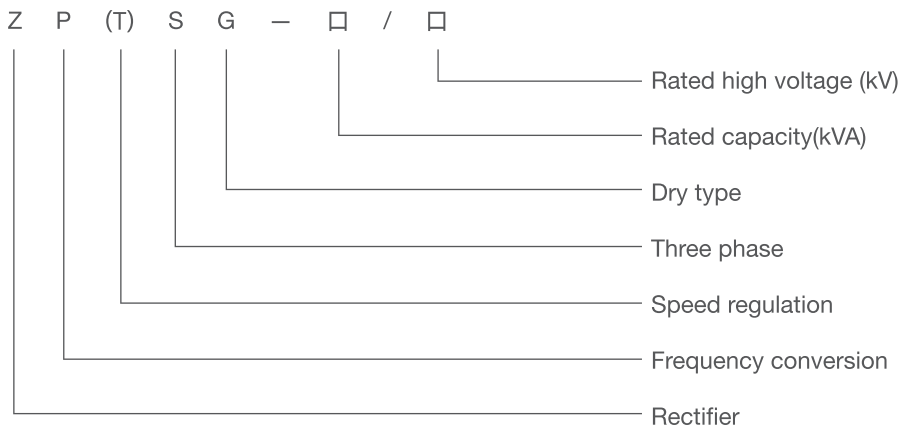
GB1094.11-2007 : Dry type Power Transformer

GB1094.1-2013 : Power Transformer - General

GB1094.2-2013 : Power Transformer - Temperature rise

▶ Type description

Dry type rectifier transformer (For variable frequency drive)

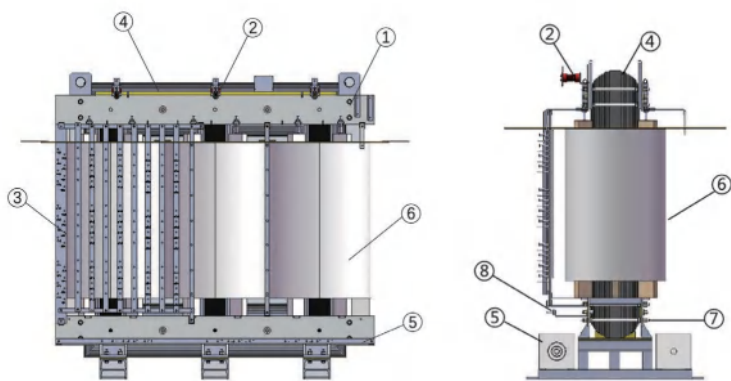


Examples:

Three-Phase Dry-Type Phase-Shift Variable Frequency Rectifier Transformer (ZPSG)

Three-Phase Dry-Type Phase-Shift Speed Control Rectifier Transformer (ZTSG)

▶ Configuration



- ① Nameplate
- ② HV input terminal
- ③ LV output terminal plate
- ④ Core
- ⑤ Fans
- ⑥ Winding
- ⑦ HV tap terminal
- ⑧ Auxiliary power terminal



Technical parameters

Type	Rated capacity (kVA)	Qty of sec windings	Short circuit impedance (%)	Dimension (L×W×H, mm)	Total weight (kg)
ZT(P)SFG(H)-250/6	250	9 12 15 18 21	6-9%	1300×880×1440	970
ZT(P)SFG(H)-315/6	315			1300×880×1440	1110
ZT(P)SFG(H)-400/6	400			1360×880×1450	1200
ZT(P)SFG(H)-500/6	500			1360×960×1490	1380
ZT(P)SFG(H)-630/6	630			1360×960×1500	1530
ZT(P)SFG(H)-710/6	710			1440×960×1500	1680
ZT(P)SFG(H)-800/6	800			1480×960×1520	1790
ZT(P)SFG(H)-900/6	900			1480×960×1540	1940
ZT(P)SFG(H)-1000/6	1000			1500×960×1550	2110
ZT(P)SFG(H)-1120/6	1120			1550×960×1580	2190
ZT(P)SFG(H)-1250/6	1250			1580×960×1630	2440
ZT(P)SFG(H)-1400/6	1400			1610×1020×1630	2610
ZT(P)SFG(H)-1600/6	1600			1660×1020×1680	2890
ZT(P)SFG(H)-1800/6	1800			1650×1020×1740	3060
ZT(P)SFG(H)-2000/6	2000			1680×1020×1800	3420
ZT(P)SFG(H)-2250/6	2250			1720×1020×1840	3810
ZT(P)SFG(H)-2500/6	2500			1760×1020×1860	4120
ZT(P)SFG(H)-2800/6	2800			1800×1020×1860	4490
ZT(P)SFG(H)-3000/6	3000			1820×1120×1860	4840
ZT(P)SFG(H)-3150/6	3150			1860×1120×1900	5200
ZT(P)SFG(H)-3500/6	3500			1900×1120×1940	5620
ZT(P)SFG(H)-3750/6	3750			1960×1120×2050	5810
ZT(P)SFG(H)-4000/6	4000			1990×1200×2050	6210
ZT(P)SFG(H)-4500/6	4500			2070×1200×2100	6910
ZT(P)SFG(H)-5000/6	5000			2150×1200×2100	7440
ZT(P)SFG(H)-6300/6	6300			2200×1300×2140	8860
ZT(P)SFG(H)-8000/6	8000			2200×1300×2200	9670



Technical parameters

Type	Rated capacity (kVA)	Qty of sec windings	Short circuit impedance (%)	Dimension (L×W×H, mm)	Total weight (kg)
ZT(P)SFG(H)-315/10	315	15 18 21 24 27 30 36	6-9%	1380×920×1450	1090
ZT(P)SFG(H)-400/10	400			1380×920×1490	1250
ZT(P)SFG(H)-500/10	500			1420×960×1520	1410
ZT(P)SFG(H)-630/10	630			1450×960×1550	1640
ZT(P)SFG(H)-710/10	710			1480×960×1580	1780
ZT(P)SFG(H)-800/10	800			1530×960×1620	1860
ZT(P)SFG(H)-900/10	900			1580×960×1640	2050
ZT(P)SFG(H)-1000/10	1000			1640×960×1660	2250
ZT(P)SFG(H)-1120/10	1120			1640×1020×1680	2300
ZT(P)SFG(H)-1250/10	1250			1680×1020×1720	2470
ZT(P)SFG(H)-1400/10	1400			1700×1020×1760	2810
ZT(P)SFG(H)-1600/10	1600			1780×1020×1800	3040
ZT(P)SFG(H)-1800/10	1800			1780×1020×1820	3360
ZT(P)SFG(H)-2000/10	2000			1780×1020×1860	3690
ZT(P)SFG(H)-2250/10	2250			1780×1020×1900	4170
ZT(P)SFG(H)-2500/10	2500			1800×1020×1900	4410
ZT(P)SFG(H)-2800/10	2800			1840×1120×1950	4720
ZT(P)SFG(H)-3000/10	3000			1880×1120×1950	5020
ZT(P)SFG(H)-3150/10	3150			1920×1120×2000	5400
ZT(P)SFG(H)-3500/10	3500			1980×1120×2050	5400
ZT(P)SFG(H)-3750/10	3750			2010×1200×2050	5900
ZT(P)SFG(H)-4000/10	4000			2060×1200×2080	6360
ZT(P)SFG(H)-4500/10	4500			2120×1200×2100	6960
ZT(P)SFG(H)-5000/10	5000			2200×1200×2150	7440
ZT(P)SFG(H)-6300/10	6300			2250×1300×2150	8950
ZT(P)SFG(H)-8000/10	8000			2250×1350×2250	10900

Note: Due to continuous product improvement, the dimensions provided in this sample are for reference only. If necessary, our company can design and produce according to user requirements.



ZTELEC GROUP

Powered Green & Reliability

ZTELEC is a top brand group company
strongly supported by our own R&D team.

Dry-type transformer





Epoxy resin cast dry type transformer



Overview

Our company specializes in manufacturing a variety of epoxy resin cast transformers with a high voltage of up to 35kV and a capacity of up to 6300KVA. The varieties include SC10, SCB10 series, SC11, SCB11 series, SC12, SCB12 series, SC14, SCB14 series, SC18 and SCB18 series, SC(B)12-SC(B)15 series. The products are widely used in power transmission and transformation systems, such as hotels, restaurants, airports, high-rise buildings, commercial centers, residential quarters and other important places, as well as subways, smelting power plants and other harsh environments.



Implementation standards

IEC 60076: Power Transformer

EN50588-1: Medium power transformers for 50 Hz with a highest voltage for equipment not exceeding 36 kV -

Part 1: General requirements

IEEE C57.12.01-2015: IEEE Standard for General Requirements for Dry-Type Distribution and Power Transformers

EU548 Tier 2

GB 1094: Power Transformer

GB/T10228: Specification and Technical Requirements of Dry type Power Transformers

JB/T10008: 6kV~500kV Power Transformer Sound Level

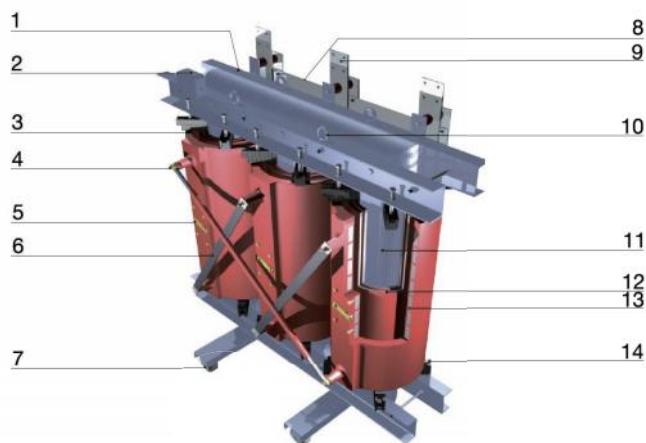
GB/T7354: Partial Discharge Measurements

▶ Type description

Dry type rectifier transformer (For variable frequency drive)



▶ Configuration



- | | | |
|-------------------------------------|---|----------------------|
| 1 Nameplate | 6 HV connection-to triangle | 10 Lifting lugs |
| 2 Distribution box | 7 Wheels for longitudinal and transverse movement | 11 Magnetic circuit |
| 3 Temperature probes Pt 100 | 8 Neutral output | 12 Low voltage |
| 4 HV output | 9 LV output | 13 High voltage |
| 5 For primary coil voltage changing | | 14 Ground connection |



Features

- + Low consumption, energy saving, low noise, no maintenance, no pollution and can be directly installed in the load center;
- + Strong resistance to short circuit, low partial discharge, high reliability;
- + Strong cooling capacity, can be operated under 140% rated load in the condition of forced air cooling;
- + Corrosion resistance, moisture resistance, flame retardant, fireproof, can be operated in high humidity and other harsh environments;
- + Equipped with intelligent temperature controller, which can be monitored and controlled centrally to ensure the reliable operation of the transformer.





SC(B)10, SC(B)11-30~4000/10 series dry type transformer



Overview

With filler thin insulation and coil encapsulated by epoxy resin, this series of dry type transformers is flame-retardant, fireproof, explosion-proof, free from maintenance and no pollution and it is compacted and can be installed at load center. Besides, with scientific and reasonable design and coating craftwork, it has advantages of low partial discharge capacity, low noise and good heat dispersion. It can run for a long time with 140% rated load in the circumstance of forced air cooling. It is also equipped with an intelligent temperature controller to conduct centralized monitoring and control.



▶ Technical parameters

Rated capacity (kVA)	Voltage group			Impedance voltage (%)	SC(B)10			Sound level (dB)	Dimension (mm)			Weight (kg)
	HV (kV)	Tap range	LV (kV)		No-load loss (W)	Load loss 120°C (W)	No-load current (%)		L	W	H	
30	10	$\pm 2 \times 2.5\%$ $\pm 5\%$	0.4	4	190	710	2.0	44	620	400	600	220
50					270	1000	2.0	44	650	400	740	320
80					370	1380	1.5	45	750	500	770	460
100					400	1570	1.5	45	800	500	830	580
125					470	1850	1.3	46	950	880	1090	750
160					540	2130	1.3	46	950	880	1090	780
200					620	2530	1.1	47	1050	900	1200	850
250					720	2760	1.1	48	1050	900	1200	1030
315					880	3470	1.0	48	1080	900	1250	1060
400					980	3990	1.0	49	1110	950	1270	1400
500					1160	4880	1.0	49	1130	950	1380	1550
630					1340	5880	0.85	49	1200	950	1450	1820
630				6	1300	5960	0.85	50	1320	950	1375	1850
800					1520	6960	0.85	51	1310	1000	1315	2150
1000					1770	8130	0.85	52	1400	1070	1520	2550
1250					2090	9690	0.85	53	1440	1150	1570	3020
1600					2450	11730	0.85	54	1650	1200	1795	4500
2000					3050	14450	0.7	55	1800	1260	1870	5300
2500					3600	17170	0.7	56	1950	1260	2035	6200

Note: Due to continuous product improvement, the dimensions provided in this sample are for reference only. If necessary, our company can design and produce according to user requirements.



Technical parameters

Rated capacity (kVA)	Voltage group			Impedance voltage (%)	SC(B)11			Sound level (dB)	Dimension (mm)			Weight (kg)
	HV (kV)	Tap range	LV (kV)		No-load loss (W)	Load loss 120°C (W)	No-load current (%)		L	W	H	
30	10	$\pm 2 \times 2.5\%$ $\pm 5\%$	0.4	4	170	710	2.0	44	620	400	600	220
50					250	1000	2.0	44	650	400	740	320
80					330	1380	1.5	45	750	500	770	460
100					360	1570	1.5	45	800	500	830	580
125					420	1850	1.3	46	950	880	1090	750
160					490	2130	1.3	46	950	880	1090	780
200					560	2530	1.1	47	1050	900	1200	850
250					650	2760	1.1	48	1050	900	1200	1030
315					790	3470	1.0	48	1080	900	1250	1060
400					880	3990	1.0	49	1110	950	1270	1400
500					1040	4880	1.0	49	1130	950	1380	1550
630					1210	5880	0.85	49	1200	950	1450	1820
630				6	1170	5960	0.85	50	1320	950	1375	1850
800					1370	6960	0.85	51	1310	1000	1315	2150
1000					1590	8130	0.85	52	1400	1070	1520	2550
1250					1880	9690	0.85	53	1440	1150	1570	3020
1600					2210	11730	0.85	54	1650	1200	1795	4500
2000					2750	14450	0.7	55	1800	1260	1870	5300
2500					3240	17170	0.7	56	1950	1260	2035	6200

Note: Due to continuous product improvement, the dimensions provided in this sample are for reference only. If necessary, our company can design and produce according to user requirements.



SC(B)10-30~5000/20 series dry type transformer



Features

- + Safe, flame retardant, pollution-free, and can be directly installed in the load center;
- + Maintenance-free, easy to install and low integrated operation cost;
- + It has good moisture-proof performance and can operate normally under 100% humidity;
- + Low loss, low partial discharge, low noise, strong cooling ability, and 150% rated load operation under forced air cooling conditions;
- + It is equipped with perfect temperature protection control system to provide reliable guarantee for transformer safe operation;
- + High reliability. According to the operation research of the products that have been put into operation, the reliability index of the products has reached the international advanced level;
- + The transformer adopts BWDK series signal thermometer. The temperature measuring element is embedded in the upper part of the low-voltage coil. It can automatically detect and display the working temperature of the phase coil, and has the functions of over-temperature alarm and trip.
- + Low voltage winding is made of pure copper (or aluminum) foil and manufactured on special low voltage foil winding machine, with turn insulation of class F. Foil coil can solve the problems of low voltage, high short-circuit stress of high current coil winding products, ampere-turn imbalance, poor heat dissipation effect, large spiral angle of winding, unstable quality of manual welding and so on. At the same time, the winding end of our company adopts resin for sealing, solidification, moisture-proof and anti-fouling. Copper bars are welded automatically by argon arc welding.



Technical parameters

Rated capacity (kVA)	Voltage group			Vector group	Impedance voltage (%)	No-load loss (W)	Load loss F/120°C (W)	Load loss H/145°C (W)	No-load current (%)	Dimension (mm)			Weight (kg)
	HV (kV)	Tap range	LV (kV)							L	W	H	
50	20	$\pm 2 \times 2.5\%$ $\pm 5\%$	0.4	Yyn0 Dyn11	6.0	340	1230	1310	2.0	750	600	800	520
100						540	1990	2130	1.8	950	700	840	750
160						670	2470	2640	1.5	1000	950	760	870
200						730	2940	3140	1.5	1100	950	820	900
250						840	3420	3660	1.3	1230	950	1450	1250
315						970	4080	4360	1.3	1260	1000	1500	1420
400						1150	4840	5180	1.1	1340	1050	1650	1820
500						1350	5790	6190	1.1	1400	1150	1650	2180
630						1530	6840	7320	1.0	1410	1150	1650	2380
800						1750	8260	8840	1.0	1470	1250	1750	2640
1000						2070	9780	10400	0.85	1530	1300	1750	3010
1250						2380	11500	12300	0.85	1580	1300	1850	3650
1600						2750	13800	14800	0.85	1680	1400	1850	4450
2000						3240	16300	17500	0.7	1770	1450	2050	5630
2500						3870	19300	20700	0.7	1850	1450	2150	6610

Note: Due to continuous product improvement, the dimensions provided in this sample are for reference only. If necessary, our company can design and produce according to user requirements.



SC(B)10-30~6300/35 series dry type transformer

► Features

- + The series of dry type transformers is used to directly reduce the 35kV grid power supply to 400V distribution power supply for users. Remove 10kV power transmission and transformation, significantly reduce operating costs, reduce multi-level power transformation project construction, and have significant social benefit. The product has improved the distribution of inter-layer voltage and capacitance by optimizing the high voltage coil structure, which greatly improves the product's ability to withstand the impact of atmospheric overvoltage and operational overvoltage, and also improves the distribution of electric field, which further reduces the product's partial discharge.

► Type description





Technical parameters

Rated capacity (kVA)	Voltage group			Vector group	Impedance voltage (%)	No-load loss (W)	Load loss 120°C (W)	No-load current (%)
	HV (kV)	Tap range	LV (kV)					
50	33 35 38.5	$\pm 2 \times 2.5\%$	0.4	Yyn0 or Dyn11	6.0	450	1420	2.3
100						680	2090	2.0
160						790	2810	1.5
200						880	3325	1.5
250						990	3800	1.3
315						1170	4510	1.3
400						1370	5410	1.1
500						1520	6650	1.1
630						1860	7690	1.0
800						2160	9120	1.0
1000						2430	10400	0.75
1250						2830	12700	0.75
1600						3240	15400	0.75
2000						3820	18200	0.75
2500						4450	21800	0.75

Note: Due to continuous product improvement, the dimensions provided in this sample are for reference only. If necessary, our company can design and produce according to user requirements.



SC(B)H15-100~2500/10
series of amorphous alloy dry type transformer



Features

- + The iron core of amorphous alloy transformers is made of amorphous alloy. Amorphous alloy materials have a disordered amorphous state of the metal atoms and a lower loss than the silicon steel core, achieving high efficiency and energy saving. The area enclosed by the hysteresis loop of the amorphous alloy is much smaller than that of the cold rolled steel sheet, so the hysteresis loss of the amorphous alloy is much smaller than that of the cold rolled silicon steel sheet and its core loss is very low about 70% lower than the no-load loss of traditional silicon steel sheet iron core transformers, Amorphous alloy transformer is an ideal low-loss and energy-saving transformer. Due to low loss, amorphous alloy transformers generate less heat, have low temperature rise, and have very stable performance.



Type description





Technical parameters

Rated capacity (kVA)	Voltage group		Vector group	Loss (W)		No-load current (%)	Impedance voltage (%)	Weight (Kg)	Boundary dimension (L×W×H, mm)	Gauge
	HV (kV)	LV (kV)		No-load loss (W)	Load loss 75°C					Longitudinal / transverse (mm)
100	11 10.5 10 6.3 6	0.4	Dyn11	130	1570	1.2	4	890	950×600×960	550×550
160				170	2130	1.1		1170	1220×600×1060	550×550
200				200	2530	1.0		1400	1270×710×1160	660×660
250				230	2760	1.0		1560	1350×760×1240	660×660
315				280	3470	0.9		1770	1370×870×1360	820×820
400				310	3990	0.8		2180	1460×870×1360	820×820
500				360	4880	0.8		2440	1490×870×1430	820×820
630				420	5880	0.7		2850	1760×1120×1490	1070×1070
630				410	5960	0.7	6	3015	1710×970×1450	1070×1070
800				480	6960	0.7		3430	1850×1120×1600	1070×1070
1000				550	8130	0.6		4050	1900×1120×1170	1070×1070
1250				650	9690	0.6		4690	2030×1120×1880	1070×1070
1600				760	11730	0.6		5610	2120×1120×1970	1070×1070
2000				1000	14450	0.5		5820	2120×1120×1990	1070×1070
2500				1200	17170	0.5		6730	2190×1120×2110	1070×1070

Note: Due to continuous product improvement, the dimensions provided in this sample are for reference only. If necessary, our company can design and produce according to user requirements.



SC(B)10-30~2500/20(10) dry type transformer

► Features

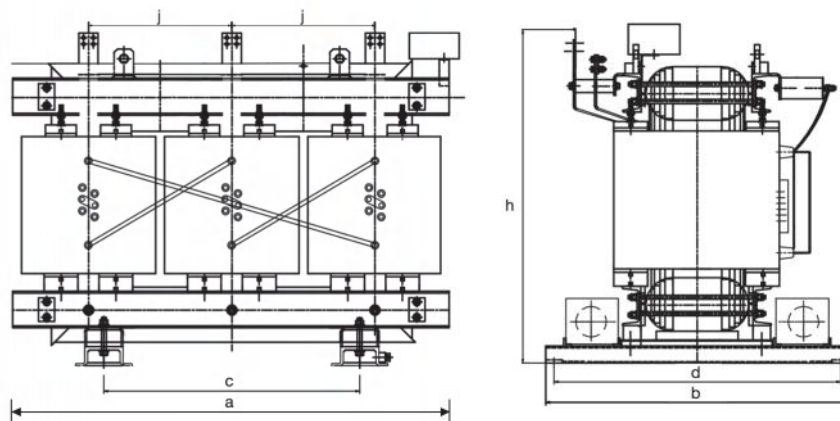
- + When this series of dry - type transformers is connected to a grid voltage of 20 kV or 10 kV, the connection state between two windings of each phase high - voltage coil is controlled by a conversion device, achieving the purpose of voltage conversion by series or parallel connection, while keeping the output voltage constant. Thus, one transformer can be connected to two voltage systems of 10 kV and 20 kV not simultaneously. It can reduce the repetitive investment and enable convenient and quick conversion and also has stable product performance.

► Type description

S	C	(B)	□	—	□	/	□	
								Rated high voltage (kV)
								Rated capacity (kVA)
								Performance level code
								Low voltage foil coil
								Resin casting type
								Three-phase transformer



Boundary dimension



Type	Boundary dimension (mm)					
	a	b	c	d	h	j
SC10-30/20 (10)	770	650	500	500	890	265
SC10-50/20 (10)	790	650	500	500	990	275
SC10-80/20 (10)	830	650	500	500	1050	285
SC10-100/20 (10)	890	650	500	500	1100	300
SC10-160/20 (10)	1350	650	500	500	1250	325
SC10-200/20 (10)	1350	650	500	500	1250	325
SCB10-250/20 (10)	1500	800	680	700	1400	510
SCB10-315/20 (10)	1520	800	680	700	1460	520
SCB10-400/20 (10)	1540	800	680	700	1510	520
SCB10-500/20 (10)	1550	1050	800	800	150	520
SCB10-630/20 (10)	1560	1050	800	800	1580	520
SCB10-800/20 (10)	1620	1050	800	800	1650	545
SCB10-1000/20 (10)	1680	1050	800	800	1700	570
SCB10-1250/20 (10)	1750	1050	800	800	1850	620
SCB10-1600/20 (10)	2200	1300	1050	1050	2150	750
SCB10-2000/20 (10)	2300	1300	1050	1050	2250	800
SCB10-2500/20 (10)	2450	1300	1050	1050	2300	850

▶ Technical parameters

Rated capacity (kVA)	Voltage group			Vector group	Impedance voltage (%)	No-load loss (W)	Load loss 120°C (W)	No-load current (%)
	HV (kV)	Tap range	LV (kV)					
30	20 22 24	$\pm 2 \times 2.5\%$	0.4	Dyn11 or Yyn0	6	300	1100	2.2
50						340	1240	2.0
80						420	1500	2.0
100						540	2000	1.8
160						680	2470	1.5
200						740	2950	1.5
250						850	3420	1.3
315						970	4090	1.3
400						1150	4850	1.1
500						1350	5800	1.1
630						1530	6840	1.0
800						1760	8270	1.0
1000						2070	9790	0.85
1250						2390	11540	0.85
1600						2790	13870	0.85
2000						3240	16390	0.7
2500						3870	19380	0.7

Note: Due to continuous product improvement, the dimensions provided in this sample are for reference only. If necessary, our company can design and produce according to user requirements.



Energy efficiency grade I dry type transformer



Overview

Compared with energy efficiency level II products, the energy efficiency level I has more obvious advantages in terms of performance. The no-load loss is reduced by about 20% on average, and it is safe and fireproof. It can be directly operated in high-load power-consuming places. It is an ideal choice for factories, hospitals, tunnels, airports, power station and so on.



Implementation standards

GB/T 1094.1: Power transformers - Part 1: General

GB/T 1094.11: Power transformers - Part 11: Dry type transformers

GB/T 2900.95: Electrical terms transformers, voltage regulator and reactors

GB/T 10228: Technical parameters and requirements of dry type power transformers

GB/T 22072: Dry type amorphous alloy iron core transformer technical parameters and requirements

GB 20052-2024: Power transformer energy efficiency limit value and energy efficiency level



Type description

S C (B) — □ / □ — NX1

Energy efficiency rating

Voltage rating (kV)

Rated capacity (kVA)

Foil winding

Epoxy resin casting

Three-phase



Technical parameters

10kV dry type three-phase double-winding non-excitation voltage regulating
distribution transformer energy efficiency class

Rated capacity (kVA)	Electrical steel belt				Amorphous alloy				Short-circuit impedance (%)
	No-load loss (W)	Load loss (W)			No-load loss (W)	Load loss (W)			
		B (100℃)	F (120℃)	H (145℃)		B (100℃)	F (120℃)	H (145℃)	
30	105	605	640	685	50	605	640	685	4.0
50	155	845	900	965	60	845	900	965	
80	210	1160	1240	1330	85	1160	1240	1330	
100	230	1330	1415	1520	90	1330	1415	1520	
125	270	1565	1665	1780	105	1565	1665	1780	
160	310	1800	1915	2050	120	1800	1915	2050	
200	360	2135	2275	2440	140	2135	2275	2440	
250	415	2330	2485	2665	160	2330	2485	2665	
315	510	2945	3125	3355	195	2945	3125	3355	
400	570	3375	3590	3850	215	3375	3590	3850	
500	670	4130	4390	4705	250	4130	4390	4705	
630	775	4975	5290	5660	295	4975	5290	5660	
630	750	5050	5365	5760	290	5050	5365	5760	6.0 ~ 8.0
800	875	5895	6265	6715	335	5895	6265	6715	
1000	1020	6885	7315	7885	385	6885	7315	7885	
1250	1205	8190	8720	9335	455	8190	8720	9335	
1600	1415	9945	10555	11320	530	9945	10555	11320	
2000	1760	12240	13005	14005	700	12240	13005	14005	
2500	2080	14535	15445	16605	840	14535	15445	16605	

Note: Due to continuous product improvement, the dimensions provided in this sample are for reference only. If necessary, our company can design and produce according to user requirements.



Energy efficiency grade II dry type transformer



Overview

We adopt domestic advanced technology and design and produce in strict accordance with the relevant standards for energy-saving dry type transformers in GB20052-2024. The products have the advantages of strong short-circuit resistance, convenient maintenance, small size, small footprint, and low noise. They are ideal for factories, hospitals, tunnels, airports, power stations, etc.



Implementation standards

GB/T 1094.1: Power transformers - Part 1: General

GB/T 1094.11: Power transformers - Part 11: Dry type transformers

GB/T 2900.95: Electrical terms transformers, voltage regulator and reactors

GB/T 10228: Technical parameters and requirements of dry type power transformers

GB/T 22072: Dry type amorphous alloy iron core transformer technical parameters and requirements

GB 20052-2024: Power transformer energy efficiency limit value and energy efficiency level



Type description

S C (B) — □ / □ — NX2

Energy efficiency rating

Voltage rating (kV)

Rated capacity (kVA)

Foil winding

Epoxy resin casting

Three-phase

► Technical parameters

10kV dry type three-phase double-winding non-excitation voltage regulating distribution
transformer energy efficiency class

Rated capacity (kVA)	Electrical steel belt				Amorphous alloy				Short-circuit impedance (%)
	No-load loss (W)	Load loss (W)			No-load loss (W)	Load loss (W)			
		B (100°C)	F (120°C)	H (145°C)		B (100°C)	F (120°C)	H (145°C)	
30	130	605	640	685	60	605	640	685	4.0
50	185	845	900	965	75	845	900	965	
80	250	1160	1240	1330	100	1160	1240	1330	
100	270	1330	1415	1520	110	1330	1415	1520	
125	320	1565	1665	1780	130	1565	1665	1780	
160	365	1800	1915	2050	145	1800	1915	2050	
200	420	2135	2275	2440	170	2135	2275	2440	
250	490	2330	2485	2665	195	2330	2485	2665	
315	600	2945	3125	3355	235	2945	3125	3355	
400	665	3375	3590	3850	265	3375	3590	3850	
500	790	4130	4390	4705	305	4130	4390	4705	
630	910	4975	5290	5660	360	4975	5290	5660	
630	885	5050	5365	5760	350	5050	5365	5760	6.0 ~ 8.0
800	1035	5895	6265	6715	410	5895	6265	6715	
1000	1205	6885	7315	7885	470	6885	7315	7885	
1250	1420	8190	8720	9335	550	8190	8720	9335	
1600	1665	9945	10555	11320	645	9945	10555	11320	
2000	2075	12240	13005	14005	850	12240	13005	14005	
2500	2450	14535	15445	16605	1020	14535	15445	16605	

Note: Due to continuous product improvement, the dimensions provided in this sample are for reference only. If necessary, our company can design and produce according to user requirements.



Energy efficiency grade III dry type transformer

Overview

We adopt domestic advanced technology and design and produce in strict accordance with the relevant standards for energy-saving dry type transformers in GB20052-2024. The products have the advantages of strong short-circuit resistance, convenient maintenance, small size, small footprint, and low noise. They are ideal for factories, hospitals, tunnels, airports, power stations, etc.

Implementation standards

IEC60076 Power Transformer

GB/T 1094.1: Power transformers - Part 1: General

GB/T 1094.11: Power transformers - Part 11: Dry type transformers

GB/T 2900.95: Electrical terms transformers, voltage regulator and reactors

GB/T 10228: Technical parameters and requirements of dry type power transformers

GB/T 22072: Dry type amorphous alloy iron core transformer technical parameters and requirements

GB 20052-2024: Power transformer energy efficiency limit value and energy efficiency level

Type description

S C (B) — □ / □ — NX3

Energy efficiency rating

Voltage rating (kV)

Rated capacity (kVA)

Foil winding

Epoxy resin casting

Three-phase

▶ Technical parameters

10kV dry type three-phase double-winding non-excitation voltage regulating
distribution transformer energy efficiency class

Rated capacity (kVA)	Electrical steel belt				Amorphous alloy				Short-circuit impedance (%)
	No-load loss (W)	Load loss (W)			No-load loss (W)	Load loss (W)			
		B (100℃)	F (120℃)	H (145℃)		B (100℃)	F (120℃)	H (145℃)	
30	150	670	710	760	70	670	710	760	4.0
50	215	940	1000	1070	90	940	1000	1070	
80	295	1290	1380	1480	120	1290	1380	1480	
100	320	1480	1570	1690	130	1480	1570	1690	
125	375	1740	1850	1980	150	1740	1850	1980	
160	430	2000	2130	2280	170	2000	2130	2280	
200	495	2370	2530	2710	200	2370	2530	2710	
250	575	2590	2760	2960	230	2590	2760	2960	
315	705	3270	3470	3730	280	3270	3470	3730	
400	785	3750	3990	4280	310	3750	3990	4280	
500	930	4590	4880	5230	360	4590	4880	5230	
630	1070	5530	5880	6290	420	5530	5880	6290	
630	1040	5610	5960	6400	410	5610	5960	6400	6.0 ~ 8.0
800	1215	6550	6960	7460	480	6550	6960	7460	
1000	1415	7650	8130	8760	550	7650	8130	8760	
1250	1670	9100	9690	10370	650	9100	9690	10370	
1600	1960	11050	11730	12580	760	11050	11730	12580	
2000	2440	13600	14450	15560	1000	13600	14450	15560	
2500	2880	16150	17170	18450	1200	16150	17170	18450	

Note: Due to continuous product improvement, the dimensions provided in this sample are for reference only. If necessary, our company can design and produce according to user requirements.

Order Information



Normal use conditions for the product

- a** Environment temperature: highest temperature 40°C , lowest -30°C .
- b** Elevation: no more than 1000m.
- c** Relative humidity: daily average≤95%, monthly average≤90%.
- d** Maximum wind speed (outdoor): 35m/s (10m above the ground and average value over 10 min).
- e** Anti-earthquake performance (withstand): 8.

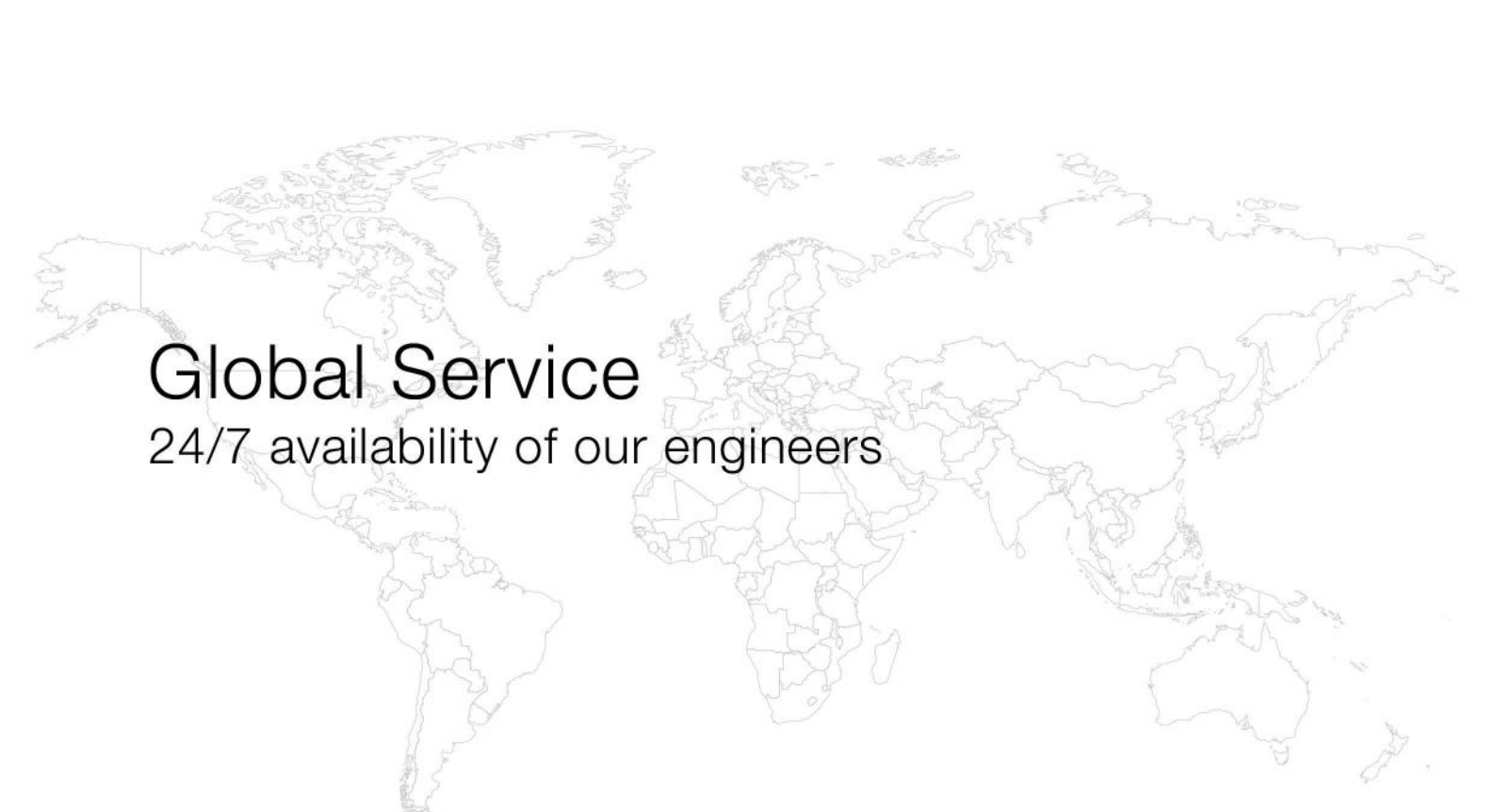


Order Information

In order to provide you with better service, the following data are required when ordering.

- | | |
|--------------------------|-----------------------|
| + Specification and type | + Tapping range |
| + High voltage | + Rated frequency |
| + Low voltage | + Vector group |
| + Coil material | + Insulation grade |
| + Phases | + Ambient environment |

Note: Please specify your requirements for special products.



Global Service

24/7 availability of our engineers



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