

Premier Transformer designs and manufactures both Vacuum Pressure Impregnated (VPI) and Cast Resin Dry-Type Transformers, engineered to meet precise customer specifications as well as national and international standards (such as IEEE, IEC, and IS).

Our product range covers distribution and medium-power transformers up to 20 MVA, 36 kV class, available with Class F or Class H insulation systems, depending on the application requirements.

Each transformer is designed and manufactured using advanced processes that ensure exceptionally low levels of partial discharge, high electrical reliability, and long operational life — making them ideal for use in commercial, industrial, and renewable power applications.

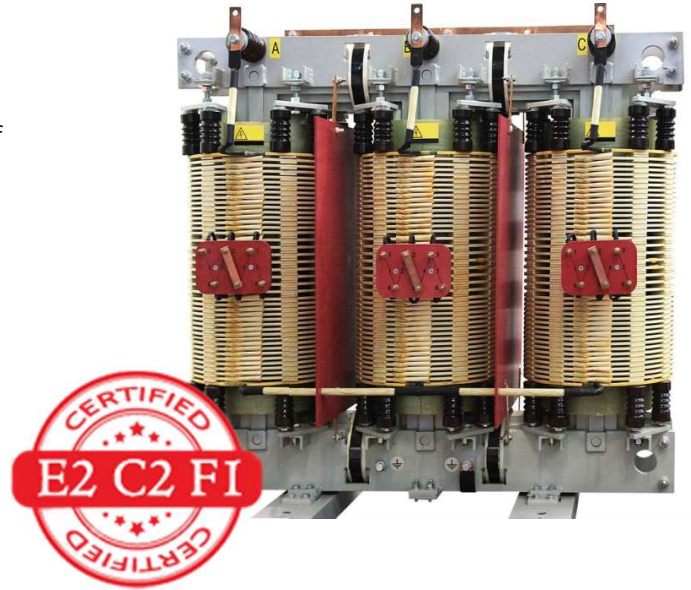
Special Features & Advantages

Premier Transformer is among the few manufacturers in India qualified to perform the E2-C2-F1 testing on transformers as per IEC 60076-11:2018 standards. This certification demonstrates compliance with the highest international requirements for environmental (E2), climatic (C2), and fire resistance (F1) performance categories.

- Certified to E2-C2-F1 class as per IEC 60076-11:2018
- Foil winding technology used for both Low Voltage (LV) and High Voltage (HV) windings
- Option for Copper or Aluminum windings, as specified by the customer
- High-permeability CRGO core laminations with step-lap construction for reduced losses and noise
- Losses compliant with ECBC 2017 (Energy Conservation Building Code)
- Enclosure protection available up to IP44 rating for enhanced environmental protection
- On-Load Tap Changer (OLTC) available for transformers up to 36 kV class
- Highly fire-resistant and self-extinguishing
- Non-toxic combustion gases in case of fire, ensuring safety for people and equipment
- Suitable for humid, coastal, and polluted environments
- Non-hygroscopic insulation provides longer service life
- Ready for immediate energization after installation — no drying or oil filling required
- No need for fire barriers, oil catchment pits, or containment systems
- Low installation cost and no regular maintenance required compared to oil-filled units
- Low operational losses due to the ability to install transformers close to the load center
- High short-circuit strength and over-voltage withstand capability
- Excellent insulation integrity with no partial discharge

Dry Type Cast Resin Transformers

Up to 20 MVA, 36 kV Class



Application Areas

- Power distribution networks
- Converter and inverter applications
- Renewable energy systems (Wind and Solar)
- Traction and railway applications
- Oil & Gas offshore platforms
- Industrial cranes and heavy equipment
- Seismic and vibration-prone environments

Core and Winding Manufacturing Process

Core Construction:

Premier Transformer utilizes a three-limb core construction made from Cold Rolled Grain Oriented (CRGO) silicon steel sheets, precisely cut as per approved drawings. Each sheet is supplied with an inorganic insulation coating to ensure superior electrical performance and reduced losses.

The circular core cross-section is achieved by assembling multiple step-laminations of varying widths. The number of steps and step dimensions are carefully optimized for maximum magnetic efficiency and minimal losses. Mitered joints are employed between limb and yoke plates to reduce joint reluctance and improve flux distribution.

The assembled core is tightly bound with fiberglass tape banding, which minimizes vibration and reduces noise levels. A protective surface treatment is then applied to safeguard the core from atmospheric corrosion and extend service life.

Winding Construction:

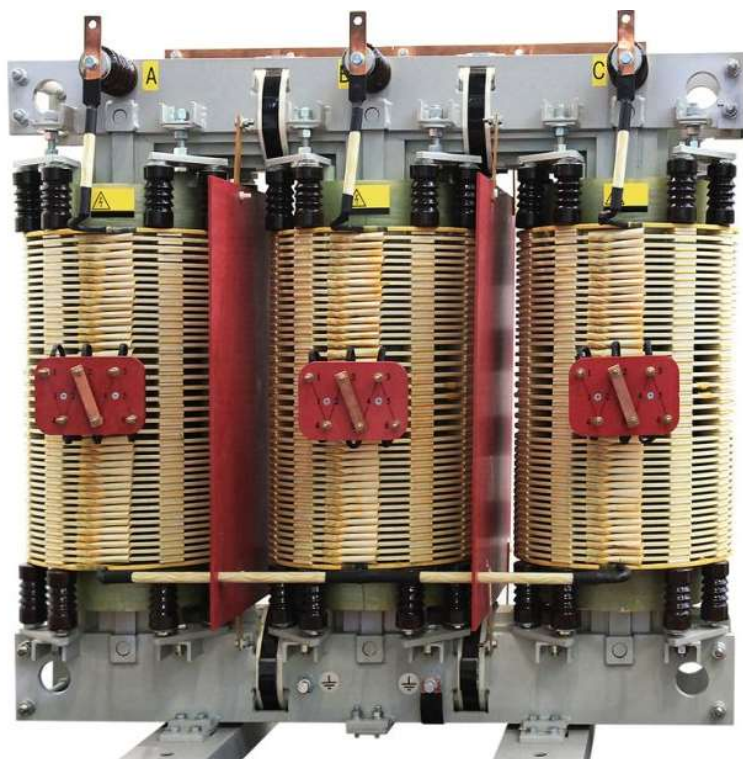
Both High Voltage (HV) and Low Voltage (LV) windings are made using high-conductivity copper conductors. Depending on current and design requirements, round wire, rectangular strip, or foil conductors are used. The winding configuration—layer type or cross-over type—is selected based on the transformer's current and voltage ratings.

All windings are vacuum cast using an advanced automatic casting plant supplied by Heidrich, Germany, ensuring void-free insulation and high dielectric strength.

On the HV side, inserts are provided for tap-changing links. Interconnections between HV phases are made using formed copper tube links, with terminals shaped into lugs for secure connections. These links are further insulated using heat-shrinkable sleeves for enhanced electrical safety and reliability.

Dry Type Transformers – Losses As Per ECBC Guide 2017

Rated Capacity (kVA)	Voltage Combination			Connection Group Symbol	No-Load Loss (W)	Under the different insulation heat-resisting rank load loss (W)			No-Load Current (%)	Short-Circuit Impedance (%)
	H.V (kV)	High Pressure Tapping	L.V (kV)			130°C (B) (100°C)	155°C (F) (120°C)	180°C (H) (145°C)		
30	6-11	±2×2.5	0.4	Yyn0 / Dyn11	105	605	640	685	2.4	4
50	6-11	±2×2.5	0.4	Yyn0 / Dyn11	155	845	900	965	2.4	4
80	6-11	±2×2.5	0.4	Yyn0 / Dyn11	210	1160	1240	1330	1.8	4
100	6-11	±2×2.5	0.4	Yyn0 / Dyn11	230	1330	1415	1520	1.8	4
125	6-11	±2×2.5	0.4	Yyn0 / Dyn11	270	1565	1665	1780	1.6	4
160	6-11	±2×2.5	0.4	Yyn0 / Dyn11	310	1800	1915	2050	1.6	4
200	6-11	±2×2.5	0.4	Yyn0 / Dyn11	360	2135	2275	2440	1.4	4
250	6-11	±2×2.5	0.4	Yyn0 / Dyn11	415	2330	2485	2665	1.4	4
315	6-11	±2×2.5	0.4	Yyn0 / Dyn11	510	2945	3125	3355	1.2	4
400	6-11	±2×2.5	0.4	Yyn0 / Dyn11	570	3375	3590	3850	1.2	4
500	6-11	±2×2.5	0.4	Yyn0 / Dyn11	670	4130	4390	4705	1	4
630	6-11	±2×2.5	0.4	Yyn0 / Dyn11	775	4975	5290	5660	1	4
630	6-11	±2×2.5	0.4	Yyn0 / Dyn11	750	5050	5365	5760	1	4
800	6-11	±2×2.5	0.4	Yyn0 / Dyn11	875	5895	6265	6715	1	6
1000	6-11	±2×2.5	0.4	Yyn0 / Dyn11	1020	6885	7315	7885	1	6
1250	6-11	±2×2.5	0.4	Yyn0 / Dyn11	1205	8790	9270	9335	1	6
1600	6-11	±2×2.5	0.4	Yyn0 / Dyn11	1415	9945	10555	11320	1	6
2000	6-11	±2×2.5	0.4	Yyn0 / Dyn11	1760	12240	13005	14005	0.8	6
2500	6-11	±2×2.5	0.4	Yyn0 / Dyn11	2080	14535	15445	16605	0.8	6



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