



Elporado Energy Private Limited is an **ISO 9001:2008** certified manufacturer of Power and Distribution Transformers from **5 KVA to 2500 KVA upto 11-22-33 KV Class**, Single & Three Phase, with maximum production capacity of 500 transformer of 200 kVA in a month. Company intends to be one of the renowned Transformer manufacturers with its customer oriented and quality centric approach.

We at ELPORADO Energy offers a wide-ranging product portfolio of reliable high-quality of distribution transformers designed to grant the reliability, durability and efficiency required in utility, industrial and commercial applications. Our Transformers are manufactured in accordance with the most demanding industrial standards.

Elporado Energy has started with its state-of-the-art manufacturing unit spread over an area of 10000 sq. feet area with highly experienced man force. Company has been meeting specific customer requirements such as single phase/three phase, Copper/Aluminium, Stack core, CRGO core, Dual-Ratio Transformer, OLTC/OCTC or conversion of existing transformer to any voltage ratio. Currently we are supplying to private industries/ commercial establishments. The company has sophisticated machinery to design, manufacture & test transformers upto 2500kVA as per IS-2026, IS-1180, BS-171, IEC-76, CBIP etc. Our quality policy focuses on customer satisfaction by providing quality product backed by prompt after sales service. Our focus is to consistently delight our customers with our value-added products and services. We are committed to enhance customer satisfaction by providing products and services that meet or exceed the needs of quality and delivery at reasonable cost to ensure customer delight.

Our endeavor is to develop and maintain permanent relationship with its customers by providing full satisfaction. To achieve this, we believe in:

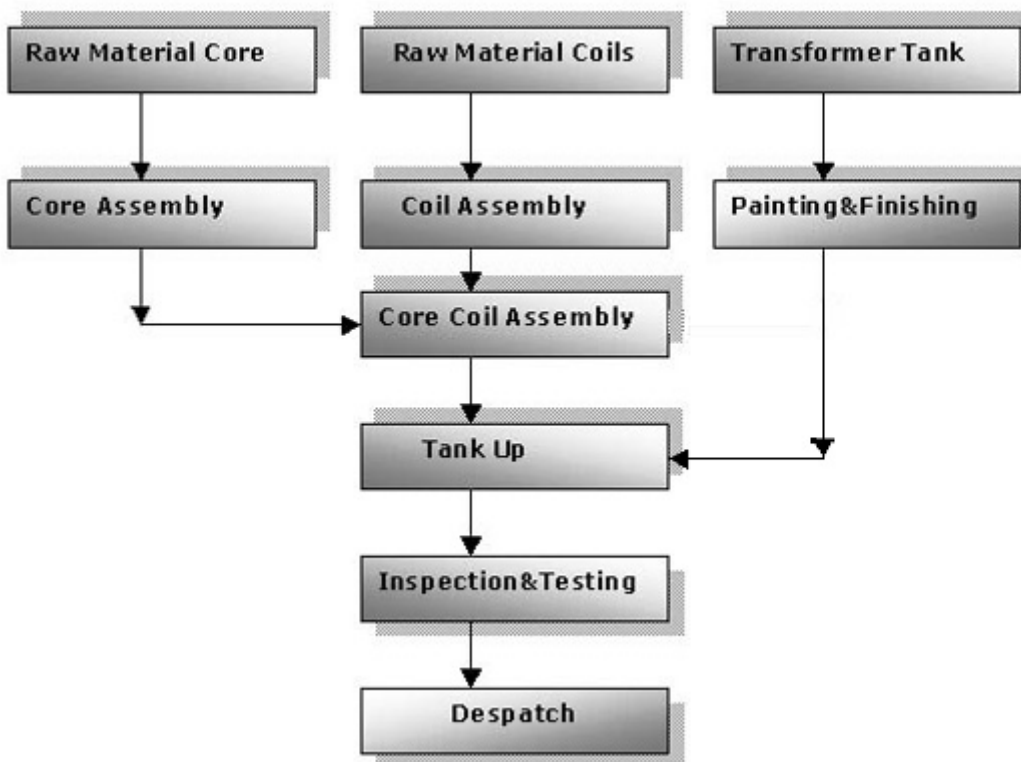
- Use of top-quality raw materials in production
- Timely supply of reliable quality products
- Continuous improvement in the products and processes
- Updating skills of its personnel to maintain the motivation and effective team work

Here is what happens through every step of our proprietary manufacturing process

1. **Core Assembling:** The transformers are built with fully annealed, Cold Rolled Grain Oriented (CRGO) laminations. Fully mitred designs are used to ensure low losses/low magnetising current & low noise levels.
2. **Winding:** The windings are designed to optimise Thermal, Mechanical & Electrical stresses depending upon the current & voltage requirements. They can be of (a) Spiral Type, (b) Cross Over Type, (c) Helical Type, (d) Continuous disc type. The coils are made from paper covered or synthetic enamelled copper or aluminium conductors of EC grade.
3. **Core-Coil Assembling:** It is always ensured that all the HT & LT coils are preshrink, varnished and dried before assembly. Special care is taken to make the assembling mechanically and electrically strong. For this, vertical and horizontal supports of PC Board of required strength & size, suitably interlocked, are provided. Each HT coil section is separated by press board rings. Yoke insulations are made of PC Board, permille wood or Bakelite sheets, depending upon the size and voltage class of the transformer. LT leads are taken to the bushing terminals through proper bus bars/flexible jumpers. HT tapping leads & line leads are taken to the respective terminals through SRBP tubes-all suitability braced. Complete assembly is then dried in thermostatically controlled oven at 80° to 90° C. At the end of the drying cycle, the core assembly is further tightened to take care of the shrinkage.

4. **Tanking:** Tanks are made of mild steel and are of welded type. Suitable stiffeners are provided for robust construction. Enough cooling radiators made from pressed steel fins are provided to maintain the temperature rise within specified limits.
5. **Insulation & Oil** All insulating systems are carefully selected with due consideration given to electrical, mechanical & thermal properties of insulation. The oil is used as a coolant and insulating medium. It is tested for di-electric strength as per IS:335, before topping up.
6. **Testing:** Each transformer is subjected to all the routine tests as recommended by IS:2026. On specific agreement, transformers can also be subjected to certain type tests/special purpose tests. Purchaser may depute his representative to witness these tests.

Process Flow-Chart:



Our Product - Distribution Transformer

Our distribution transformer provides the final **voltage transformation** in the electric power distribution system, stepping down the voltage used in the distribution lines to the level used by the customer. An alternating current (AC) in one winding creates a time-varying magnetic flux in the core, which induces a voltage in the other windings. **Transformers** are **used** to convert between high and low voltages, to change impedance, and to provide electrical isolation between circuits.

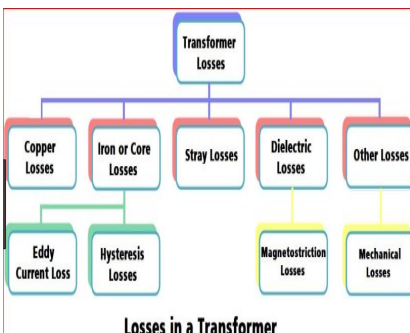
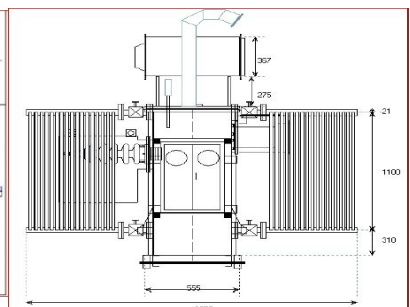
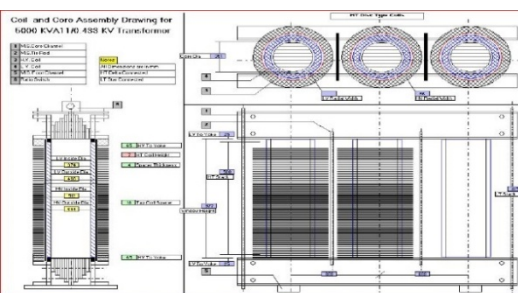
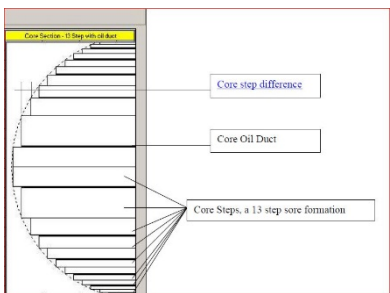
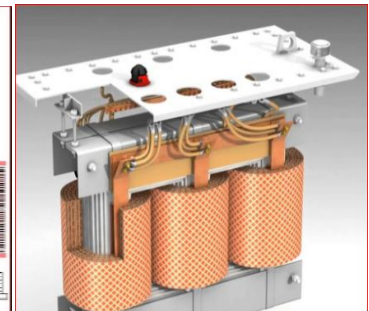
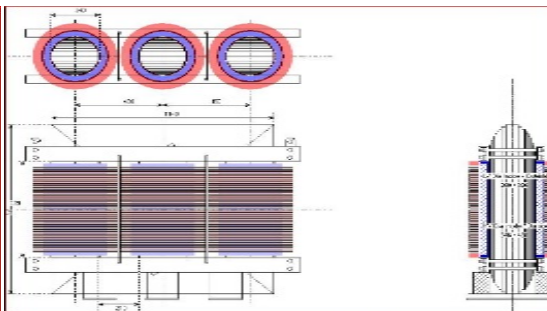
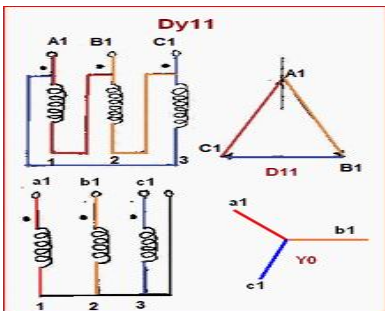
Star Rated Transformers: Energy efficient transformers are that carry standard specifications. The referred Indian Standard are IS-1180 (part 1 & 2) Outdoor type three-phase distribution transformers upto and including 200kva, 11 KV – specification, IS-2026 (part 2). The standard ratings covered under this pilot energy labelling scheme is 16, 25, 63, 100, 160 and 200kva and non-standard ratings from 16 to 200kva. The salient feature of the star rated transformer is the fact that only total losses are specified, both at 50% loading and at 100% loading, so that the manufacturer may use his design, expertise and optimum materials to achieve the given losses.

Special Transformers: In compliance with our R&D work and dedication to provide customised services, we always work towards satisfying the demands of our customers. Over the period, we have manufactured and supplied special and different kinds of transformers that have a very niche demand.

Single Phase Transformer: We also manufacture single phase transformers in CRGO Steel core upto 25kva which are widely used by utilities to provide electricity supply as per need.

Technical Specifications (Distribution Transformer)

Ratings	1 Phase, upto 33 kV 167 kVA
	3 Phase upto 33 kV 3000 kVA
Frequency	50/60 Hz
Applicable Standards	IS: 2026, IS: 1180, IEC 76, ANSI.C.57
Core	Wound or Stack (CRGO Steel)
Winding	Copper / Aluminium
Insulating Fluid	Mineral Oil
Class of Insulation	Class A
Tap Changer	QCTC, DLTC as per customer requirement



Transformer rating(KVA)	Losses in watts for different star rating Transformers									
	1 Star		2 Star		3 Star		4 Star		5 Star	
	50%	100%	50%	100%	50%	100%	50%	100%	50%	100%
16	200	555	165	520	150	480	135	440	120	400
25	290	785	235	740	210	695	190	635	175	595
63	490	1415	430	1335	380	1250	340	1140	300	1050
100	700	2020	610	1910	520	1800	475	1650	435	1500
160	1000	2800	880	2550	770	2200	670	1950	570	1700
200	1130	3300	1010	3000	890	2700	780	2300	670	2100

Standard Accessories with transformer: -

Rating & Diagram Plate | HV & LV Bushings with fittings | Lifting & Jacking Lugs | Silica-gel Breather | Filter Valve | | Earthing Terminals | Thermometer Pockets| Magnetic Oil Level Gauge| Conservator| Arcing Horns| Lightning Arrester

Optional Accessories with transformer: -

HV / LV Cable Boxes | Pressure Relief Device | Off Circuit Tap Changer |On Load Tap Changer with RTCC | Oil Temperature Indicator | Double Float Buchholz Relay | Disconnecting Chambers | Winding Temperature Indicator | Epoxy / Touch proof Bushings with connector | Siphon Thermo Filter | Terminal Connectors | Protective Fuse | Secondary Circuit Breaker | Bird Guard

Quality we maintain: -

We have certified quality system as per ISO: 9001 – 2008. Raw materials and components/assemblies are subject to rigorous inspections at every stage of manufacturing process. Quality assurance during production is an important part of the company's policy covering every aspect of manufacturing, supply and service. Each transformer is declared fit for sales after passing the below mentioned Quality Tests:

Routine Test:

- Resistance measurement of all windings.
- Ratio, polarity and phase sequence.
- Polarity and phase relation test
- Test to determine no-load losses at rated voltage and frequency
- Excitation current at rated voltage and frequency
- Impedance voltage and load loss measurement
- Induced potential tests of insulating oil
- No Load current and losses at service voltage and formal frequency
- Load losses at rated current and normal frequency
- Insulation resistance
- Induced over voltage withstand test.
- Separate source voltage withstands test.
- Unbalanced current measurement

Type Test:

- Short Circuit Test
- Impulse Voltage Withstand Test
- Temperature Rise Test
- Tan Delta Test
- Noise Level Measurement

Warranty we offer: -

Our product carries up to 5 years warranty from date of despatch. Extended warranty may be offered subject to mutual agreement.

AFTER SALES SERVICES

The main focus of our business is to provide timely, cost effective and efficient after-sales services. Our team is always geared up for responding to customer's queries. We also provide routine check-ups of transformers as and when required at nominal costs.

Factory / Office Address:

M/s. Elporado Energy Pvt. Ltd.

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