

OIL IMMERSED DISTRIBUTION TRANSFORMER



GENERAL DESCRIPTION

Kalpa offers a complete line of oil cooled three-phase distribution transformers that meet applicable IS / IEC standards. With high voltages up to 33kV and ratings up to 10 MVA, transformers are designed for outdoors covering domestic, International , commercial and industrial applications. High-grade materials, combined with sophisticated engineering design systems and state of the art test infrastructure are key elements of a transformer that will deliver years of highly reliable service.

- Design can meet any stringent specifications
- Offering low losses as per request. As per IS1180/EEL - 1, 2 & 3 BEE STAR RATING
- Capacity to Execute large volume orders.

TECHNICAL SPECIFICATION

Construction Type	Indoor/Outdoor
Duty, Type	Outdoor / Indoor, Pole or Ground Mounted
Voltage Class	3.3, 6.6, 11, 22, 33 kV or any specific
No of Phases	1 or 3 Phase, ONAN, KNAN
Frequency	50/60 Hz
Capacity	Up To 10MVA
Vector Group	Dyn1 or Dyn5 or Dyn11 or any specific
Insulating Fluid	PCB FREE Mineral Oil, both inhibited & Biodegradable FR3, uninhibited as per IS335/IEC60296 and customer requirement.
Class of Insulation	Class A
Tap Changer	Off Circuit or On Load
Tapping Range	OCTC or OLTC as per customer requirement
Winding Material	Aluminum or Copper with multi paper covering
Applicable Standards	IS 1180 ,IS 2026, IEC 60076, ANSI, IEEE
Painting	Enamel, Epoxy, Polyurethane or customer specific

ASSURED FEATURES

- Highest dielectric insulation property to withstand Lightning Impulse
- Mechanical design to withstand short circuit forces arising during faults
- Optimum oven heating under vacuum as to achieve desired compression height and maximum insulation resistance (IR) to windings
- Adequate ducts between layers, coils, discs for maximum oil flow and reduced hot spot temperature.
- Step-lap designed CRGO laminations for lower losses and excitation current
- Pre-compressed Insulation material for minimal moisture absorption



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a) Three phase distribution transformers up to and including 200KVA, 11KV Class As per IS 1180-2014

Sl. No.	Rating (KVA)	% Z	Energy Efficiency Level 1		Energy Efficiency Level 2		Energy Efficiency Level 3	
			@ 50%	@ 100%	@ 50%	@ 100%	@ 50%	@ 100%
1	16KVA	4.5%	150W	480W	135W	440W	120W	400W
2	25KVA	4.5%	210W	695W	190W	635W	175W	595W
3	63KVA	4.5%	380W	1250W	340W	1140W	300W	1050W
4	100KVA	4.5%	520W	1800W	475W	1650W	435W	1500W
5	160KVA	4.5%	770W	2200W	670W	1950W	570W	1700W
6	200KVA	4.5%	890W	2700W	780W	2300W	670W	2100W

b) Three phase distribution transformers Higher than 200KVA up to and including 2500KVA, 11KV Class As per IS 1180-2014

Sl. No.	Rating (KVA)	% Z	Energy Efficiency Level 1		Energy Efficiency Level 2		Energy Efficiency Level 3	
			@ 50%	@ 100%	@ 50%	@ 100%	@ 50%	@ 100%
1	250KVA	4.5%	1050W	3150W	980W	2930W	920W	2700W
2	315KVA	4.5%	1100W	3275W	1025W	3100W	955W	2750W
3	400KVA	4.5%	1300W	3875W	1225W	3450W	1150W	3330W
4	500KVA	4.5%	1600W	4750W	1510W	4300W	1430W	4100W
5	630KVA	4.5%	2000W	5855W	1860W	5300W	1745W	4850W
6	1000KVA	5.0%	3000W	9000W	2790W	7700W	2620W	7000W
7	1250KVA	5.0%	3600W	10750W	3300W	9200W	3220W	8400W
8	1600KVA	6.25%	4500W	13500W	4200W	11800W	3970W	11300W
9	2000KVA	6.25%	5400W	17000W	5050W	15000W	4790W	14100W
10	2500KVA	6.25%	6500W	20000W	6150W	18500W	5900W	17500W

STANDARD FITTINGS

- H. V. Bushing
- L. V. Bushing
- Off Circuit Tap Changer
- Conservator oil filling hole With cap & drain plug
- Undercarriage with four Bi-directional rollers
- Earthing terminals
- Drain cum bottom filter Valve with sampling plug
- Top filter valve with Sampling plug
- Plain Oil Level Gauge
- Rating diagram plate
- Air release device
- Thermometer Pocket
- Lifting Lugs
- Pressed Steel Radiators (Fins or corrugated type)
- Double Diaphragm explosion vent
- Silica gel breather
- Additional Neutral bushing
- First filling of oil

OPTIONAL FITTINGS

- Detachable Radiators with isolating valves
- Jacking Pads
- Dial type Oil Temperature Indicator With A/T contacts
- Dial type Winding Temperature Indicator with A/T contacts
- Magnetic Oil Gauge with A/T contactsw
- Buchholz relay with A/T contacts
- Marshaling box with control wiring
- Equalizer pipe between Conservator & explosion vent
- On Load Tap Changer
- RTCC Panel with automatic Voltage Regulator (AVR)
- Pressure Release valve
- DGPT Relay



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