

TVOLTTECH CONTROL TRANSFORMERS LLP



TVolTech
TRULY INSPIRING NEXT

www.tvolttech.com

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ABOUT OUR COMPANY PROFILE



TVOLTTECH CONTROL TRANSFORMERS LLP is an ISO 9001:2015 company Established in 2024; we have Supply current and potential transformers and Distribution transformers and epoxy components with Physical presence in India.

- In house Testing Lab facilities Up to 33 kV voltage class
- We supplied current and potential transformer and Distribution transformers in Private and Government sector.
- Products designed and manufactured as per all in Indian and international standards as per customer requirements
- Standardization service provided

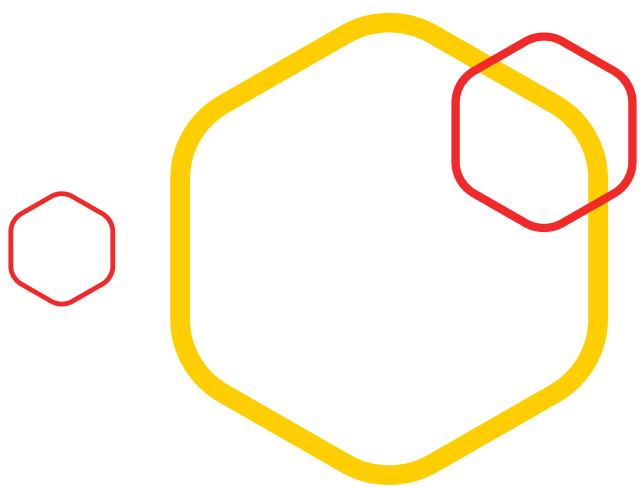
OUR CSR POLICY:-

We believe in Engineering Excellence with focus on fast development and innovations. A well-balanced mix of sophisticated machines and team of expert engineers enables us to offer the products for Generation, Transmission and Distribution equipment's.

We are driven by process approach towards total customer satisfaction.

MISSION :- To create a world class organization, valued by customers.

GOAL :- TBe industry leader in customer values:



VALUES



HONESTY

RESPECT

TRANSPARENCY

THE COMPANY:

OUR MANAGEMENT

1

Mr.Suneel Kumar
Managing Director

2

Mr. Niranjan Kumar
Managing Director

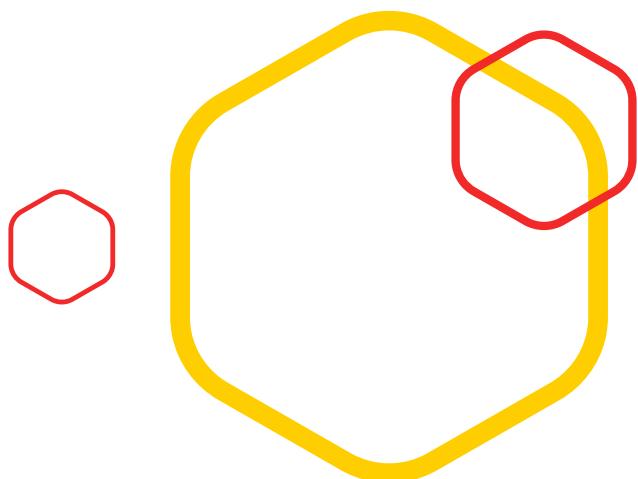
3

Mr. Sunil Kumar
Managing Director

ENSURE QUALITY-

Our TVOLTTECH CONTROL TRANSFORMERS LLP quality system is organized in accordance with the Indian and international Quality standard. It covers all quality-related activities -from development, design, purchasing, production, interim and final inspection to sales and customer support. It goes without saying that our TVOLTTECH CONTROL TRANSFORMERS LLP quality assurance system is certified and complies with the ISO 9001:2015 standard.

All our products are subjects to strict routine testing. Based on the valid IS and IEC standard as per customer requirements, you can be sure, TVOLTTECH CONTROL TRANSFORMERS LLP every product testing by Quality.



VISION



We supplied the Quality product to our customer with competitive price, TVOLTTECH CONTROL TRANSFORMERS LLP has stood for first-class Instruments transformers and Distribution transformers and innovative solution in the electrical engineering. Together with our customers, we develop customized solution and design durable products to strengthen and expands our electrical networks for a sustainable future.

MISSION: – To create a world class organization, valued by customers.

GOAL – Be industry leader in customer values:

VALUES

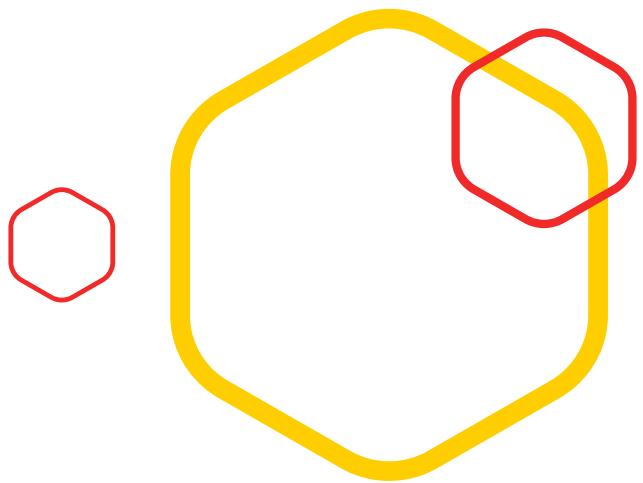
HONESTY

RESPECT

TRANSPARENCY

OUR PRODUCT; –

- 1-** Low tension instruments Transformer
- 2-** Medium voltage instruments Transformers
i- Resin cast Current transformer (Up to 33 KV)
ii- Resin Cast Voltage Transformer (Up to 33 KV).
- 3-** Oil cool CT-PT meter unit up to 33 Kv.
- 4-** Epoxy Insulators (Up to 33 KV)
- 5-** DISTRIBUTION TRANSFORMER UPTO 5000KVA
- 6-** Epoxy components



1-LOW TENSION INSTRUMENTS TRANSFORMER



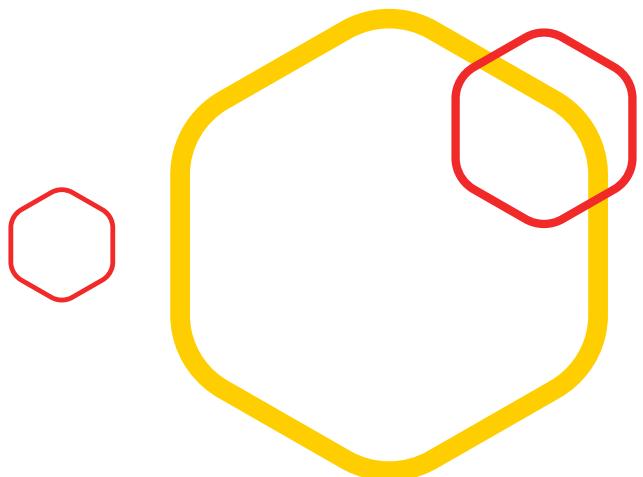
A. CURRENT TRANSFORMERS

TVOLTTECH CONTROL TRANSFORMERS LLP has a full range of LV CTs -Indoor as well as Outdoor, outline electrical parameters are as below:

- Can be resin casted, tape insulated.
- Primary current rating up to 10,000 Amps.
- Secondary current rating of 1 Amps, 5 Amps, 0.577 Amps (or any relay feed current value) or custom specified.
- Multi core CTs up to 5 cores or more.
- Burden value up to 50 VA (IEC 61869, IS 2705) or more.
- Accuracy class up to 0.1 for metering (IEC 61869, IS 2705), up to 10P, 15P for relaying/protection (IEC 61869, IS 2705), 0.1 for metering.

INDOOR RESIN CASTED TYPE

- Can be resin casted or tape insulated
- Different Ratios with primary rating up to 10000 Amps
- Can be wound type, bar type or window type
- Multi ratio with tapings on primary or secondary
- Special electrical/mechanical/mounting needs possible
- For up to 10 kA 1 seconds STC rating



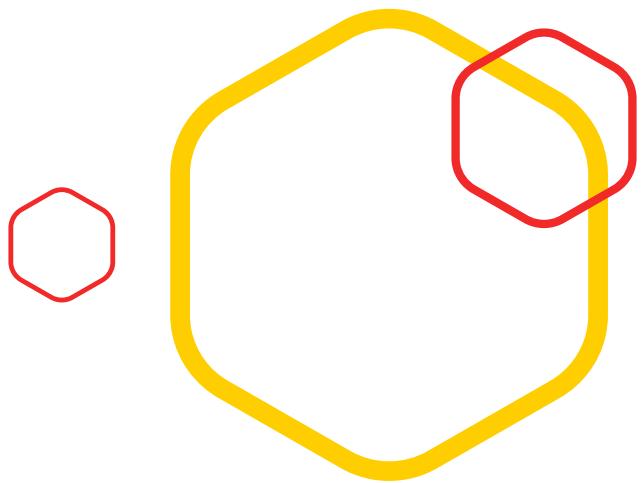
1-LOW TENSION INSTRUMENTS TRANSFORMER



B. POTENTIAL TRANSFORMERS

TVOLTTECH CONTROL TRANSFORMERS LLP has a full range of LV VTs-Indoor as well as Outdoor, outline electrical parameters are as below:

- Primary voltage rating up to 1100 volts
- Secondary voltage of 27V, 63V, 100V, 110V, 120 V or custom defined
- Multi winding VTs up to 3 windings possible
- Burden value up to 200 VA (IEC 60044, IS 3156) or more.
- Thermal burden of up to 1kVA possible
- Accuracy class up to 0.1 for metering (IEC 61869, IS 3156), up to 3P, 5P for relaying/protection (IEC 61869, IS 3156), 0.1 for metering CLASS.



2- MEDIUM VOLTAGE INSTRUMENTS TRANSFORMERS



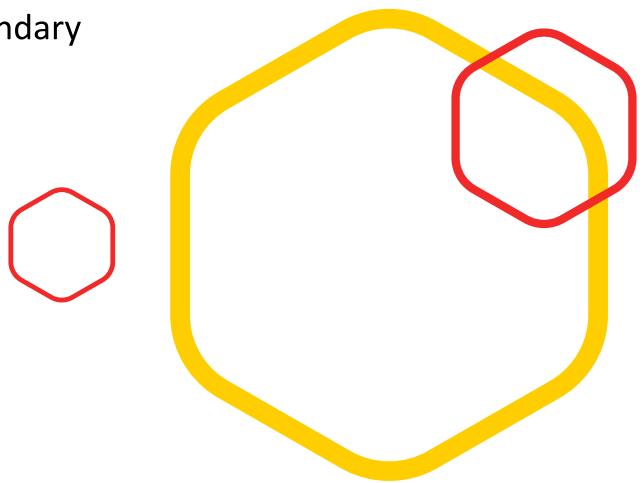
A -CURRENT TRANSFORMERS

TVOLTTECH CONTROL TRANSFORMERS LLP has a full range of MV CTs -Indoor as well as Outdoor, outline electrical parameters are as below:

- Up to 36 kV system voltage application.
- Primary current rating up to 10,000 Amps.
- Secondary current rating of 1 Amps, 5 Amps.
- Multi core CTs up to 5 cores or more.
- Burden value up to 50 VA (IEC 61869, IS 2705) or more.
- Accuracy class up to 0.1 for metering (IEC 61869, IS 2705), up to 10P, 15P for relaying/protection (IEC 61869, IS 2705), 0.1 for metering.
- Special accuracy class like class PS (IS 2705)/PX (IEC 60044) with specific values of V_k and I_{mag} , PR Class, TPS, TPX, TPY and TPZ

INDOOR RESIN CASTED TYPE CURRENT TRANSFORMERS.

- Different Ratios with primary rating up to 10000 Amps
- Can be wound type, bar type or window type
- Multi ratio with tapings on primary or secondary

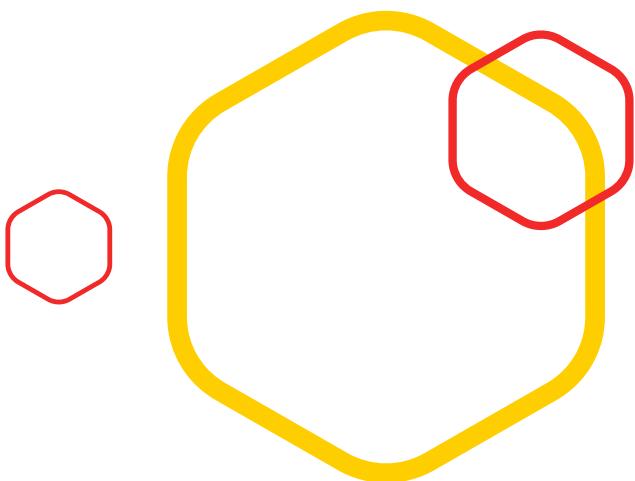


2- MEDIUM VOLTAGE INSTRUMENTS TRANSFORMERS



INDOOR RESIN CASTED TYPE CURRENT TRANSFORMERS.

- Different Ratios with primary rating up to 10000 Amps
- Can be wound type, bar type or window type
- Multi ratio with tapings on primary or secondary
- Special electrical/mechanical/mounting needs possible
- For up to 40 kA 3 seconds STC rating
- Insulation level Up to 36 kV; BIL 170kVp
- Frequency 50 - 60 Hz



2- MEDIUM VOLTAGE INSTRUMENTS TRANSFORMERS

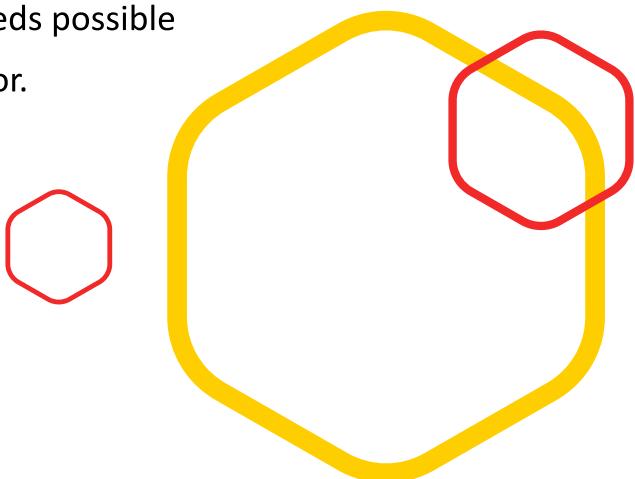


OUTDOOR RESIN CASTED TYPE CURRENTS TRANSFORMERS

- Different Ratios with primary rating up to 10000 Amps
- Can be wound type, bar type or window type
- Multi ratio with tapings on secondary
- Special electrical/mechanical/mounting needs possible
- For up to 40 kA 3 seconds STC rating
- Insulation level Up to 36 kV; BIL 170kVp
- Frequency 50 - 60 Hz

INDOOR RESIN CASTED TYPE POTENTIAL TRANSFORMERS.

- Different Ratios with primary rating up to 33 KV volts
- Can be single (Line to earth) or dual pole (Line to Line)
- Can be supplied with or without fuse
- Multi winding possible with open delta winding
- Special electrical/mechanical/mounting needs possible
- For up to 1.9 times continuous voltage factor.
- Insulation level Up to 36 kV; BIL 170kVp
- Frequency 50 - 60 Hz

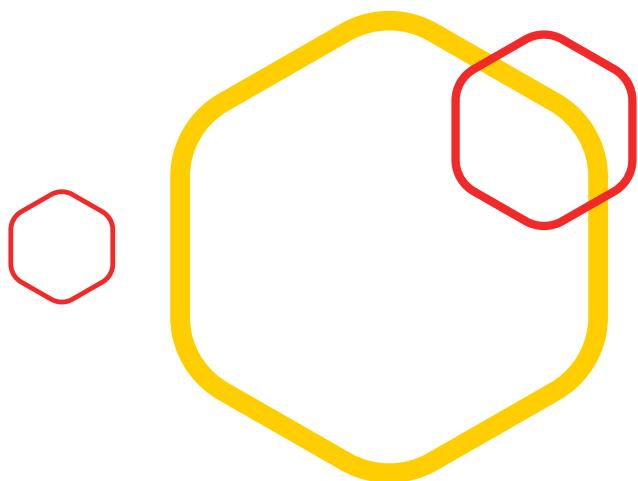


3. OUTDOOR OIL INSULATED TYPE CURRENT AND POTENTIAL TRANSFORMERS.



OUTDOOR OIL INSULATED TYPE CURRENT AND POTENTIAL TRANSFORMERS

- Different Ratios with primary rating up to 6000 Amps
- Dead tank or Live tank type
- Multi ratio with tapings on secondary
- Special electrical/mechanical/mounting needs possible
- For up to 40 kA 3 seconds STC rating
- Secondary Terminals can be brass/copper studs/terminals (8-32/10-32) with hardware housed in IP63 terminal box
- Primary terminals can be copper rod/bar with metric/unc threads suitable for primary current capacity
- Insulation level Up to 36 kV; BIL 170kVp
- Frequency 50 - 60 Hz

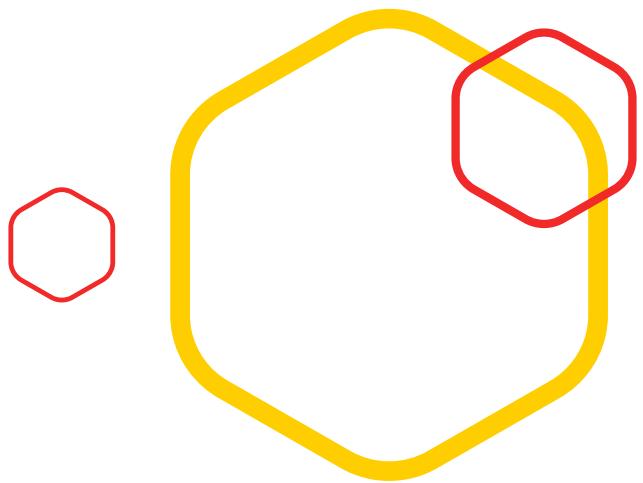
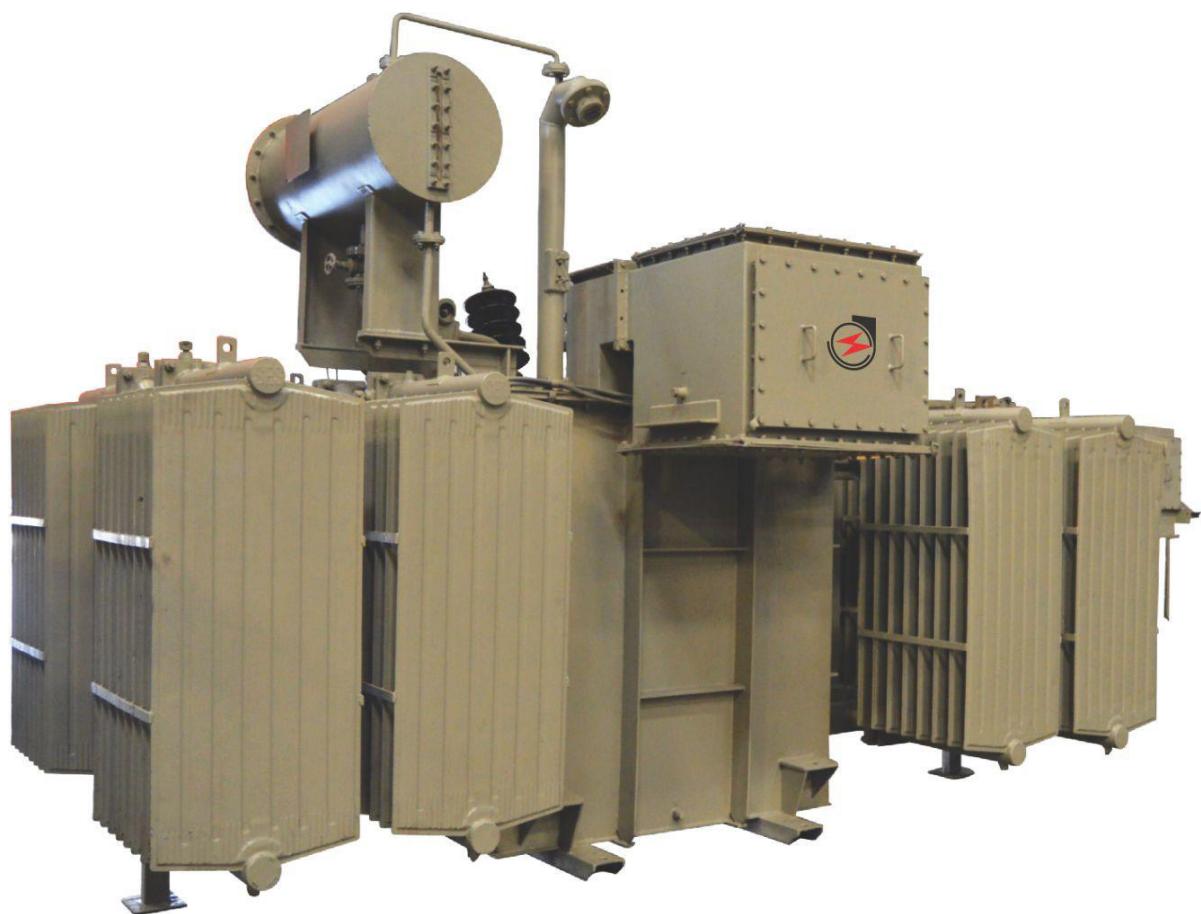


4-DISTRIBUTION TRANSFORMERS



10 KVA – 5 MVA (UP TO 33 KV CLASS)

A Distribution Transformer is a transformer that provides the final voltage transformation in the electric power distribution system, stepping down the voltage used in the distribution lines to the used by the customers.



4-DISTRIBUTION TRANSFORMERS



FEATURES OF BIS-1180

We Manufacture BIS approved distribution transformer starting from 10 KVA to 5000 KVA under BIS-1180(Jan 2016) of all voltage class and covering all level of efficiency.

Distribution transformer has two different variant offload distribution transformer and onload distribution transformer.

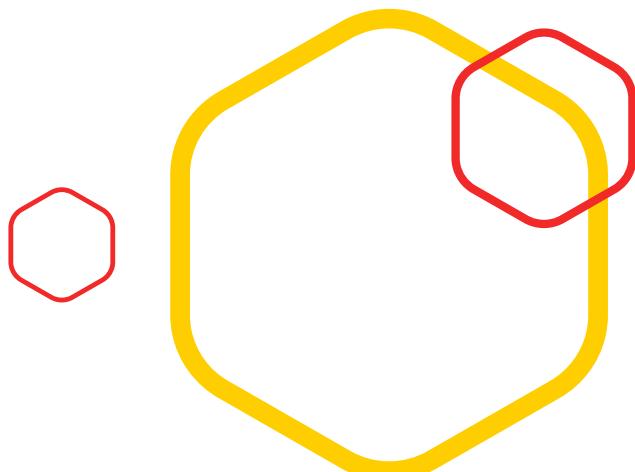
OFFLOAD DISTRIBUTION TRANSFORMERS:

We manufacture ISI approved offload distribution transformer starting from 10 KVA to 2500 KVA under BIS-1180 (Jan 2016) and above 2500 KVA up-to 5000 KVA under IS-2026 of all voltage class and covering all level of efficiency.

Designed for minimum 25 years for 24 x 7 duty with negligible maintenance and silent operation.

Indoor/ Outdoor pad Mounted.

Copper Winding with multiple paper covering.



FEATURES OF OFF LOAD TRANSFORMER

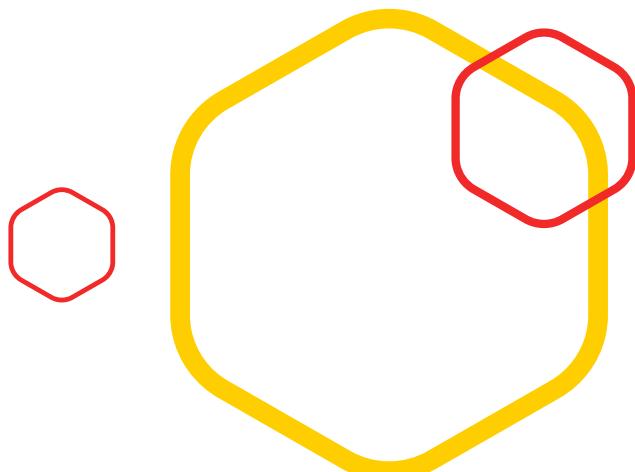


TYPE

- Indoor /Outdoor pad Mounted
- Voltage Class
- 3.3, 6.6, 11, 22, 33 kV or special class by customer
- Vector Group
- Dyn11, Dyn5, Dyn1 or other specified by customer
- No Of phase
- 3 Phases
- Frequency
- 50/60 Hz
- Tap Range
- +/-7.5 %, +5% in 2.5% steps or as per requirement of customer.
- Winding Material
- Copper/Aluminium with multiple paper covering
- Applicable Standards
- BIS-1180, IS -2026, IEC 60076
- Painting
- Epoxy, Polyurethane or Specified by customer.

Maximum Total Losses Upto 11 kV Class Transformers As Per BIS-1180

Sr. No.	KVA	Impedance %	Maximum Total Loss (W) @ 75° Celsius					
			LEVEL 1		LEVEL 2		LEVEL 3	
			50%	100%	50%	100%	50%	100%
1	250	4.5	1050	3150	980	2930	920	2700
2	315	4.5	1100	3275	1025	3100	955	2750
3	400	4.5	1300	3875	1225	3450	1150	3330
4	500	4.5	1600	4750	1510	4300	1430	4100
5	630	4.5	2000	5855	1860	5300	1745	4850
6	800	5	2459	7300	2287	6402	2147	5837
7	1000	5	3000	9000	2790	7700	2620	7000
8	1250	5	3600	10750	3300	9200	3220	8400
9	1600	6.25	4500	13500	4200	11800	3970	11300
10	2000	6.25	5400	17000	5050	15000	4790	14100
11	2500	6.25	6500	20000	6150	18500	5900	17500



SERVING INDUSTRIES

TvoltTech
TRULY INSPIRING NEXT

HOTEL & RESORTS



HOSPITALS



PHARMA INDUSTRIES



PLASTIC INDUSTRY



CERAMIC INDUSTRY



AUTOMOBILE INDUSTRY



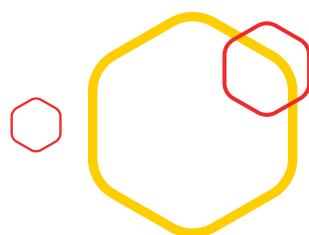
FORGING INDUSTRY



MINING INDUSTRY



FOOD PROCESSING



ON LOAD DISTRIBUTION TRANSFORMERS



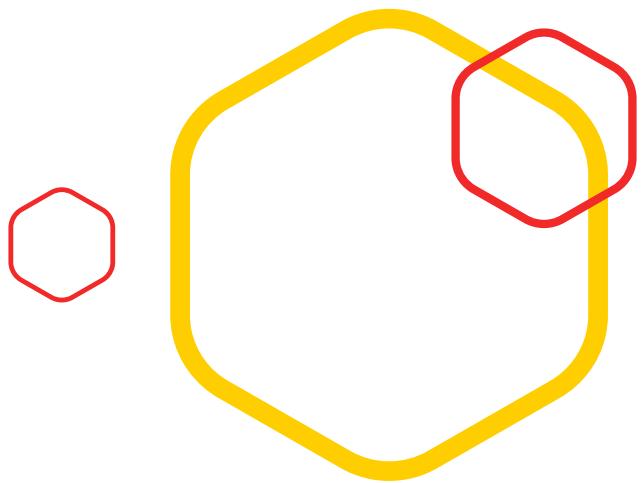
We manufacture ISI approved on load distribution transformer starting from 200 KVA to 2500 KVA under BIS-1180(Jan 2016) and above 2500 KVA up-to 5000 KVA up-to 5000 KVA under IS-2026 of all voltage class and covering all level of efficiency. Designed for minimum 25 years 24 x 7 duty with negligible maintenance and silent operation. Indoor/ Outdoor pad Mounted. Copper Winding with multiple paper covering.

FEATURES OF ON LOAD TRANSFORMER:

Magnetic circuit is made using step-lap design for lower losses and low magnetising current of core by using high quality CRGO material with grades such as ZDKH, ZDMH, AMORPHOUS, MOH, Etc. Electric Circuit is made using electrolytic grade with 99.99% pure High Quality Copper from our regular and reputed vendor HINDALCO & STERLITE with Foil winding in LV coil of transformer. High Dielectric insulation property to withstand lightning impulse and voltage surges. ONAN through natural convection for effective cooling through axial and radial ducts.

TECHNICAL SPECIFICATION:

On load Transformers are installed where voltage fluctuations from h.v side are continuous. So onload transformer changes tap using AVR without any power-cut and give constant output voltage. Thus over –all power consumption of industry gets optimised hence results in power savings.



ON LOAD DISTRIBUTION TRANSFORMERS



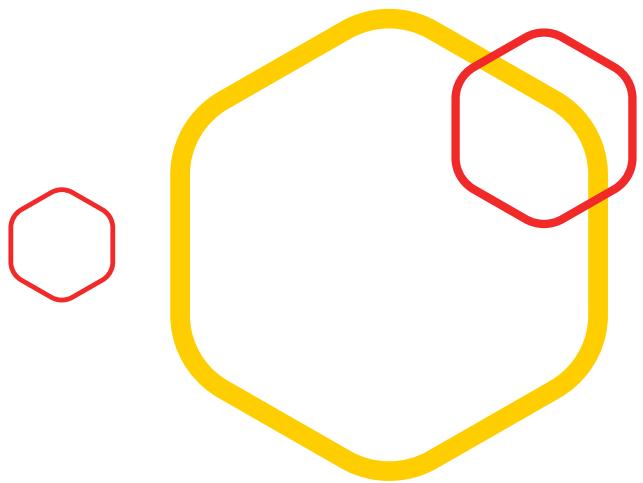
TECHNICAL SPECIFICATION:

TYPE

- Indoor /Outdoor pad Mounted
- Voltage Class
- 3.3, 6.6, 11, 22, 33 kV or special class by customer
- Vector Group
- Dyn11, Dyn5, Dyn1 or other specified by customer
- No Of phase
- 3 Phases
- Frequency
- 50/60 HZ
- Tap Range
- +/-7.5 %, +5% in 2.5% steps or as per requirement of customer.
- Winding Material
- Copper/Aluminium with multiple paper covering
- Applicable Standards
- BIS-1180, IS -2026, IEC 60076
- Painting
- Epoxy, Polyurethane or Specified by customer.

STANDARD FITTING

- Rating & Diagram Plate
- Earthing terminals
- Lifting Lugs
- Thermometer Pocket
- Air Release plug
- Conservator Tank
- Cover Mounted Thermometer
- Oil level indicator
- Explosion vent with suitable Diaphragm
- Drain cum Oil Filter valve
- Top Oil Filter valve
- Bi-Directional Roller
- Silica gel breather
- Cooling Radiators
- H.V & L.V Side cable box with copper bus-bar
- Neutral – earth bushing for earthing of neutral
- RTCC panel for onload distribution transformer



ON LOAD DISTRIBUTION TRANSFORMERS



PROTECTIVE DEVICES:

- Buchholz Relay with alarm and trip contact for transformers from 500 KVA to 5000 KVA
- Oil Temperature Indicator with alarm and trip contract for transformers from 630 KVA to 5000 KVA
- Winding Temperature Indicator with alarm and trip contact for transformers from 800 KVA to 5000 KVA
- Magnetic Oil Level gauge with alarm contact for transformers from 1250 KVA to 5000 KVA

OPTIONAL ACCESSORIES:

- Neutral C.T
- Jacking Pads
- Shut –off Valves
- Annunciation / Inspection Window
- Pressure Release value with contacts

TYPE OF WINDING

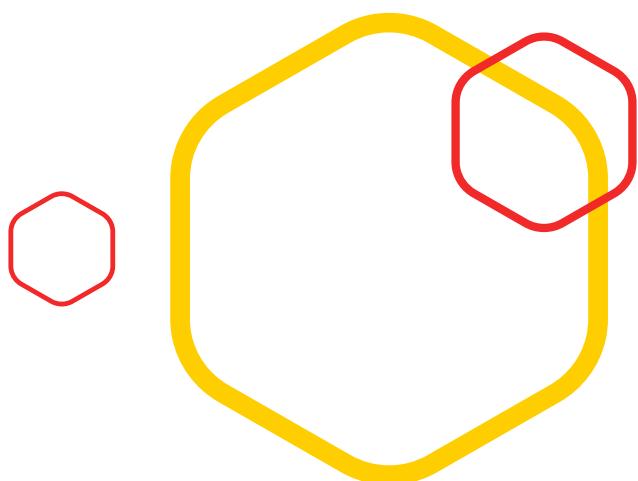
For achieving losses as per BIS-1180 we have developed FOIL WINDDING for LV coil of the transformer, Following are main advantages of foil winding.

Temperature rise is lower due to high face-area for current flow.

High Mechanical strength towards AXIAL and RADIAL forces in comparison to conventional layer winding.

No need of transposition due to foil winding which gives exact results as compare to conventional winding.

Inter-turn Fault is vanished out due to foil winding as compare to layer winding.



ON LOAD DISTRIBUTION TRANSFORMERS



BENEFITS:

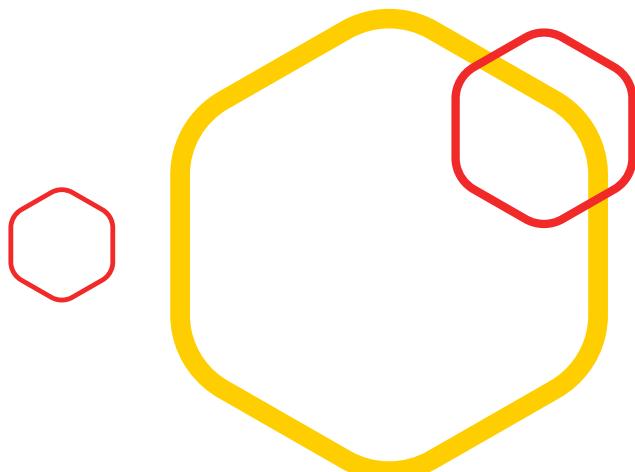
Due to on-load transformer the voltage at LV side remains in limit against the voltage fluctuations from HV side.

For changing a tap, shut down of factory is not reliable. But due to the on-load transformer, you can change tap even when your factory is running.

Due to on-load transformer efficiency of transformer increases, losses of the transformer and other electrical equipment decrease results in low power consumption, and overall life of the transformer and other electrical equipment increases.

Maximum Total Losses Upto 11 kV Class Transformers As Per BIS-1180

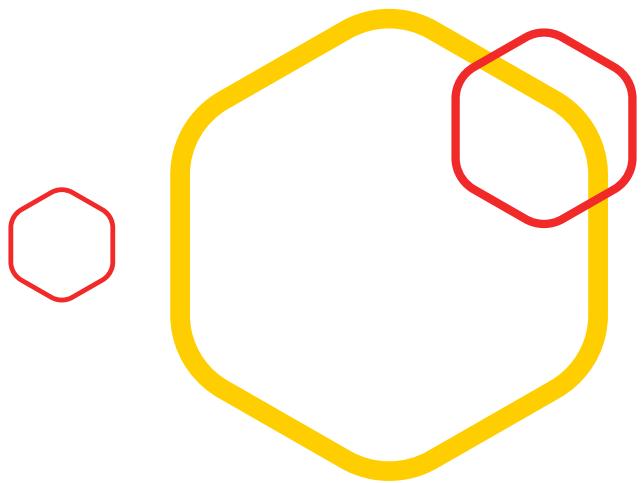
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			LEVEL 1		LEVEL 2		LEVEL 3	
			50%	100%	50%	100%	50%	100%
1	250	4.5	1050	3150	980	2930	920	2700
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7	1000	5	3000	9000	2790	7700	2620	7000
8	1250	5	3600	10750	3300	9200	3220	8400
9	1600	6.25	4500	13500	4200	11800	3970	11300
10	2000	6.25	5400	17000	5050	15000	4790	14100
11	2500	6.25	6500	20000	6150	18500	5900	17500



5-CAST RESIN EPOXY COMPONENTS: -



- All above products Contacts can be copper, Aluminium, Brass ,
- Cast Resin Components range-
- 1-LV insulators
- 2-MV insulators for panel applications
- 3-MV insulators for outdoor applications
- 4-LV Bushings.
- 5-MV bushings for panel applications
- 6-MV bushings for outdoor applications
- 7-MV wall through bushings
- 8-Spouts and bus bar supports



Company address

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