

## Reactors

Range	Upto 6 MVA
Voltage	Upto 38 kV
Type	Oil Cooled
	Dry type
	Series Reactors
	Shunt Reactors
	Detuned Reactors
	Tuned Reactors
	High Voltage
	Low Voltage
	TCR
	Inrush Suppression



## Tests

All transformers are subjected to routine tests in compliance with relevant standards.

Special tests that can be conducted at factory,

- Temperature rise test (set up available for water forced cooled transformers also)
- Capacitance tan delta test and Zero sequence impedance measurement
- Noise level measurement and No load harmonics measurement
- Measurement of power consumed by fans and pumps

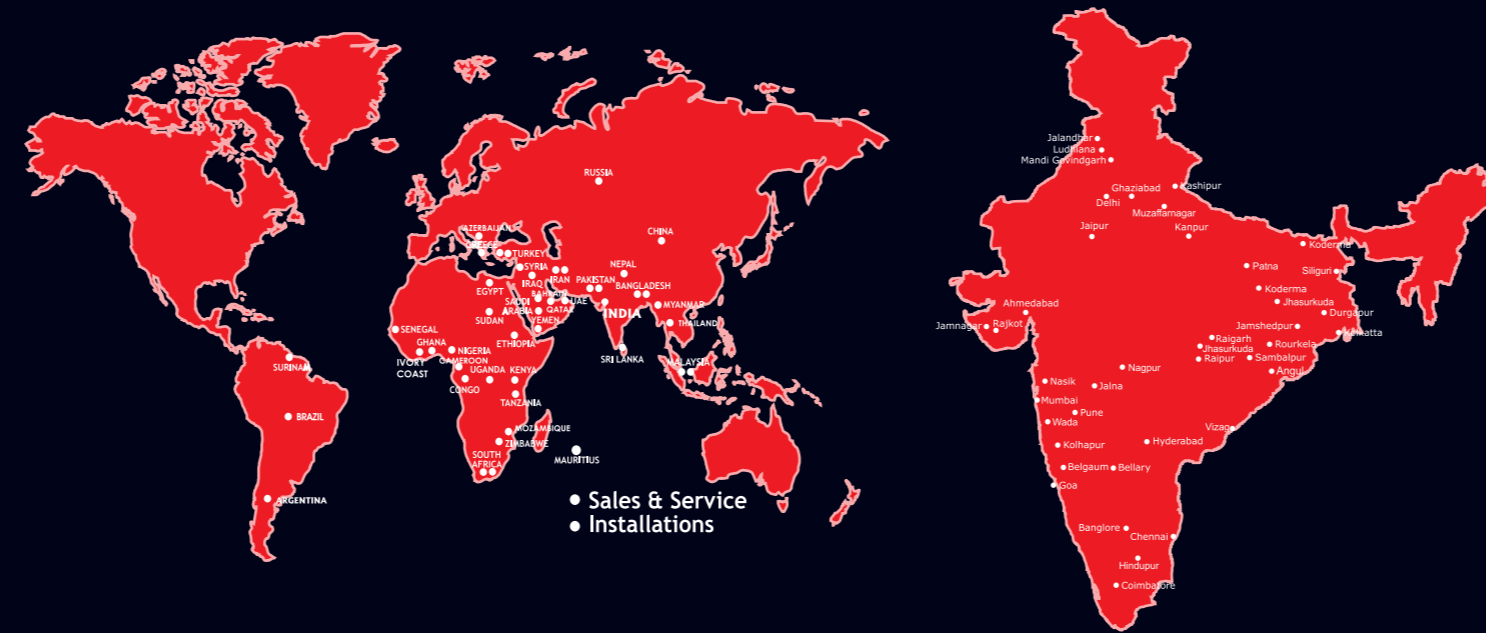
## Design Features incorporated for Converter Transformers

- Lower current densities to account for current Harmonics
- Additional heat dissipation considerations
- Secondary terminals mounted on large insulating plates to avoid structural heating
- Designed for higher voltage stresses due to Voltage Harmonics and for frequent switching
- Additional mechanical support to account for Frequent short-circuit like conditions, Rapid and large load fluctuations
- Where desired by customer, electrostatic shield installed between primary & secondary windings
- Water cooling system with redundancy provided to ensure reliability

## ET advantage

- Probably the only transformer manufacturer focused only on Industrial customers – very high dependence on repeat orders possible with User satisfaction only
- Highly skilled manpower to support various specialties involved in Industrial Transformers
- Wide spread Customer Support Network to provide Installation, Commissioning or maintenance support
- Effective Quality assurance Plan for incoming material and for in-process.
- Short lead time even for very special transformers

Special transformers manufactured by ELECTROTHERM (INDIA) LTD are operational across four continents



## SOME OF OUR CUSTOMERS

Abhijeet Group	Aditya Birla Group	Amtek Group
Continental Group	Enrich Energy	Epsilon
FCC RICO	Hitachi Hirel	ISGEC
Jindal Group	Kalika Steel	Kirloskar
Lanco Solar	LNJ Bhilwarha Group	Larsen & Toubro
Meta Rolls	MITC Rolling Mills	Noida Power Company
Om Besco	Ordnance Factory	R.P Multi Metal
RASHMI Group	Sadguru Sri Sri Sakhar	Siemens
Suryadev Alloys	Tata Steel	Titagarh Wagons
Vallabh Tin Plate	Vedanta Group	Welspun Group
African Commodities. Nigeria	Ferrum Vor Shipment. Kazakhstan	Foolad Kimiya Saba. Iran
Jeumont. France	Kabkan Steel. Turkey	Kavir Damghan Steel. Iran
Mega Demir. Turkey	OLAM International. Congo	Samsung Overseas. Nigeria
Shahariar Steel. Bangladesh	UCC Industry. Thailand	Watania Steel, Saudi Arabia



**ELECTROTHERM<sup>®</sup> (INDIA) LIMITED**

Head Office & Works : 72, Palodia, (Via Thaltej), Ahmedabad – 382 115, Gujarat (INDIA)  
 Phone : +91-2717-234544, 660550. Fax : +91-2717-234616, 234866  
 E-mail : mkt@electrotherm.com ; tinfo@electrotherm.com



Website : [www.electrotherm.com](http://www.electrotherm.com) / [www.ettransformers.com](http://www.ettransformers.com)

**ET**  
**ELECTROTHERM<sup>®</sup>**

# Transformers



**ELECTROTHERM<sup>®</sup>**  
 Leader in Special and industrial Transformers



Electrotherm (India) Limited, an ISO 9001:2008 certified, public limited company, was founded in 1983 to cater to the needs of all segments of steel industry, foundries and heat treatment industry. Today, Electrotherm is a well diversified conglomerate having businesses in the field of Engineering & Projects catering to steel and foundry industry; transformer manufacturing; steel making; ductile iron pipe making; manufacturing of battery operated vehicles; renewable energy; transmission line tower and education.

Electrotherm has a Global network in the form of 32 offices within India and supports International Customer through offices at Bangladesh, China, Iran Malaysia, Pakistan, South Africa, Brazil, Argentina and Turkey with qualified and experienced Sales and Service Engineers. Electrotherm has installations in more than 42 countries.

Backbone of Electrotherm is its world class in-house Research and Development facility accredited by Department of Science & Technology, Government of India, for product development, design and engineering.



**Passion for Engineering excellence at ELECTROTHERM (INDIA) LTD makes us leader in what we attempt!**

## RANGE

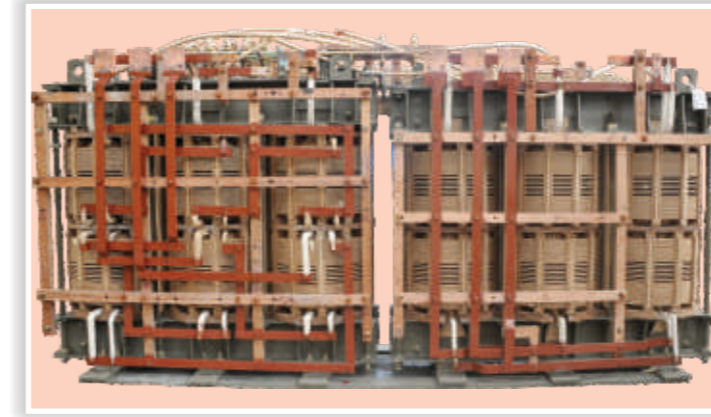
We produce transformer of high quality and reliability, design to satisfy varied application and sophisticated technical requirements.

### Standards

Our Transformers are designed, manufactured and tested to comply with various standard including IS, IED, BS or any standard as specified by Customer.

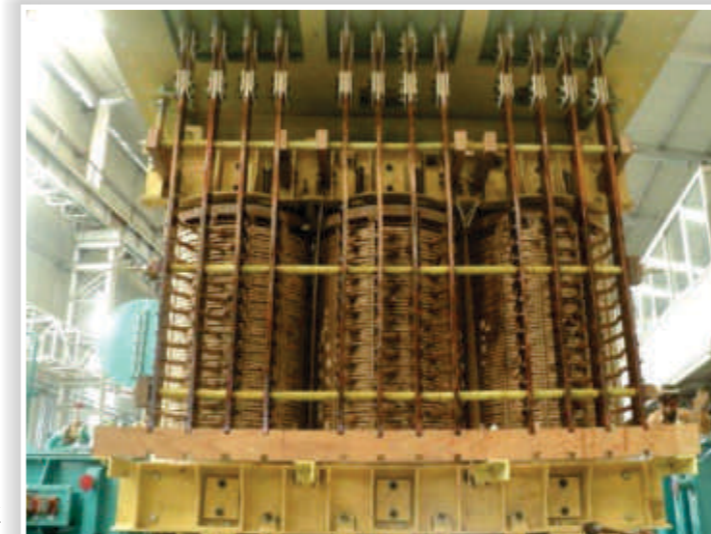
### Converter Transformers (Induction Furnace Transformer / K-Factor Transformers)

Range	Upto 30 MVA
Voltage	Upto 52 kV class
Application	Suitable for 6 Pulse/ 12 Pules/ 18 Pulse/ 24 Pulse/ 36 Pulse Converters for AC & DC Loads
Construction	Single/ Double/ Triple Deck Additional phase shift windings for Pulse higher than 24 Extended Delta on primary/ secondary side to achieve desired phase shift
Cooling	ONAN / ONAF / OFWF



### Arc / Submerged Arc / Refining Furnace Transformers

Range	Upto 30 MVA
Voltage	Upto 52 kV
Construction	On load tap change/ Off Circuit Tap Switch (Motorized or Manual)/ Star Delta Switching arrangement (Motorized or Manual) Buck-boost arrangement Regulating transformer in same tank as main transformer or in separate tank
Cooling	ONAN / ONAF / OFWF



### Rectifier Transformers

Range	Upto 100 KA
Voltage	Upto 52 kV
Type	Suitable for 6 Pluse/ 12 Pulse with or without Inter-phase transformer, Tappings can be provided either in Main Transformer or through regulating Transformer.
Cooling	ONAN / ONAF / OFWF



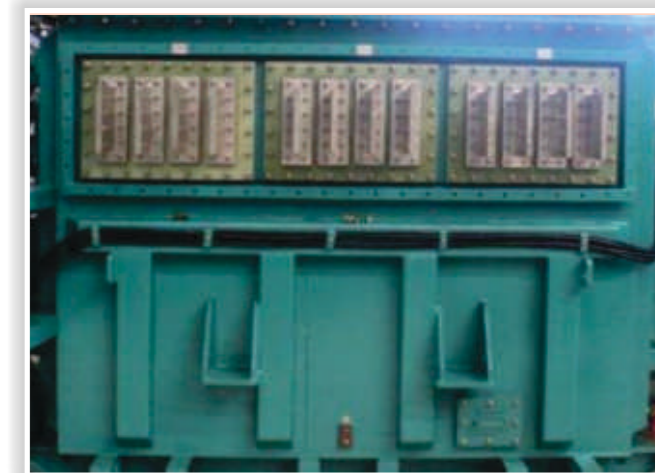
### Power and Distribution Transformer

Range	Upto 63 MVA
Voltage	Upto 145 kV
Application	Station Transformer; Generator Transformer; Auto/ Booster Transformer
Cooling	ONAN / ONAF



### Special Transformers

Earthing transformers	Compensating current fault upto 2000 Amp/ 10 sec; Voltage upto 33 kV
Test Bed transformers	Multiple (4 to 8) secondary Voltages; variable V/f;
Scott-T transformers	3-phase to 1 -phase conversion with minimal current unbalance on primary side upto 5 MVA and 33 kV class
Solar inverter transformers	Suitable for input from single/ multiple inverters



### Packaged / Unitized Sub-Stations

Range	Upto 3150 KVA
Voltage	Upto 33 kV
Transformer type	OLTC / Off Circuit
Features	With conservator / Hermetically sealed Customer specific MV switchgear and LV switchgear; Automatic Power Factor Correction Equipment; Changeover Switches; spacious cable termination on LV side
Type	K20 / K15 / K10

