



**Medium Voltage  
Distribution Transformers  
6.6, 11, 22, 33 kV class  
50 to 3 000 kVA  
& Compact Secondary  
Substations  
up to 2000 kVA 33 kV class**

# SOLUTION FOR ELECTRICAL MV DISTRIBUTION NETWORK

> PRIVATE SECTORS

Energy, Private utilities, Industry, Infrastructure, Solar, Wind and Buildings



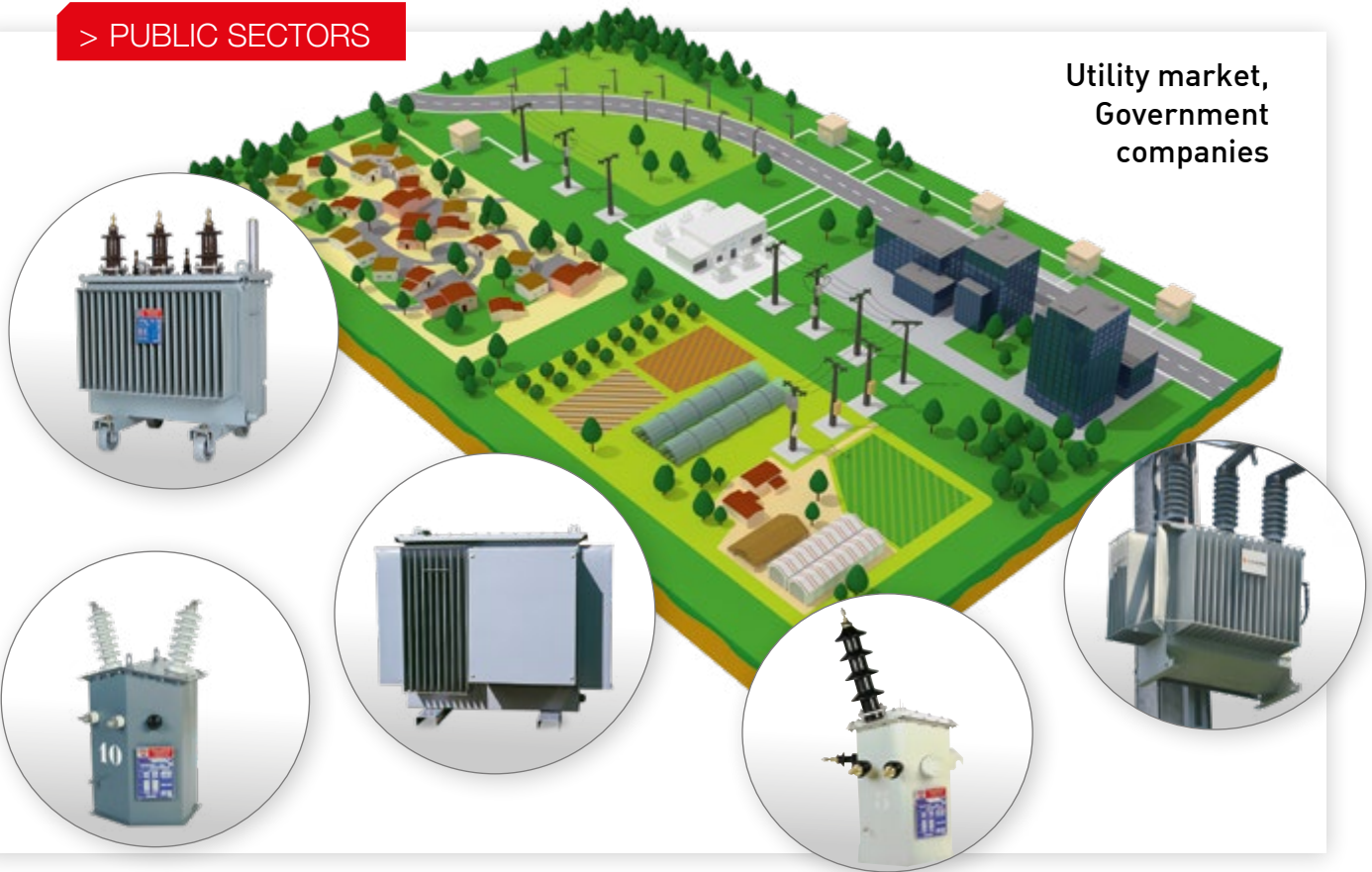
## Approvals

- Indian Railways
- Goa Electricity Board
- BESCOM
- DRDO
- MIDC
- GIDC
- Pune Municipal Corporation
- Thane Municipal Corporation
- TATA Power
- Reliance
- PWD
- GTDC
- GSIDC
- Pimpri Chinchwad Municipal Corporation
- Leading Consultants in India



Our Products are type tested at ERDA, NABL (National Accreditation Board for Testing and Calibration Laboratories) and approved by utilities.

Utility market,  
Government  
companies



# Distribution Transformers



## We comply :

- IS2026-1977 : Indian Standard for Power Transformers.
- IEC 60076-1999 (parts 1 to 11) : International Standard for Power Transformers.
- IS 1180-2014 : Outdoor type Oil immersed Distribution Transformers up to and including 2500 kVA, 33 kV.

## Losses:

- Conformity to the star ratings as promoted by Bureau of Energy Efficiency (BEE).
- Conformity to Indian Standards.
- IS 1180 Energy Efficiency Level 2 & Level 3.
- Customized design for special duty transformers.
- Ester oil transformers on request.

**BIS License No**  
**CM/L-7500159116**



## Our Customers in India

Around 300 000 oil immersed distribution transformers with hermetic technology, installed worldwide.



And many more.

## > FEATURES

Transformers range from 50 kVA to 3000 kVA, with voltage classes from 6.6 kV to 33 kV, Oil-filled under vacuum, with hermetic technology, non gas cushion, sealed type.

- Highly Energy Efficient with very low eddy current and hysteresis losses.
- Advance - modern assembly line and process.
- State of the art internal Quality standard.
- Indian manufacturing, French technology.
- Free breathing and Leak Proof Design.
- Isolation from external atmosphere.
- Completely factory fitted, No site assembly required, ready to install at site.
- Partial Discharge free.
- Extremely Low Noise making design to comply with the local requirements.
- Compact design and virtually Maintenance Free.
- Mechanical characteristics, considering transportation and handling conditions in India. The design of the tank has been strengthened, the fixing of the active part inside the tank has been improved in order to avoid any damage.
- Tank painting performances: > 1000 hours salt spray test for outdoor conditions.
- Reduced temperature rise (IEC 60076-2) and ambient temperature at 50°C
- Protection: DGPT2 (protection against gas, pressure and temperature fault)
- Tap changer: OCTC (Off Circuit Tap Changer) and OLTC (On Load Tap Changer)
- Premium product line available : natural ester and synthetic ester oil filled transformers are also type tested and supplied in Indian utilities and private market.
- After sales services & support available in PAN India basis.



BIS certified as per IS 1180 standards

## > GENERAL ELECTRICAL CHARACTERISTICS

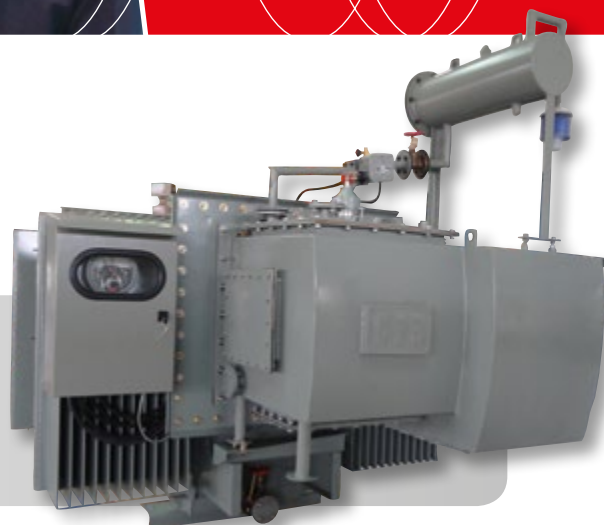
Frequency	50 Hz
Primary voltage	6.6, 11, 22 & 33 kV. Other voltage: on request.
Secondary voltage	400 V, 415 V , 433 V
Vector Group	Dyn11
Tap Changers	OCTC or OLTC
Termination	HV / LV : Bushing / Cable box / Busduct flange
Conductor	Copper or Aluminium



# Distribution Transformers

Hermetic Technology  
(Non gas cushion type)

Distribution transformer  
with OLTC & OCTC



## > DISTRIBUTION TRANSFORMER : LOSSES TABLE

Reference Standards : IS 1180 : 2014 (Energy Level 2) Part 1

Rated Voltage	Up to 11 kV			
Rating (kVA)	Total Losses 50% Load Watts	Total Losses 100% Load Watts	Z% Impedance	Tap changer
250	980	2 930	4,50%	As per customer request
315	1025	3100	4,50%	
400	1225	3450	4,50%	
500	1510	4300	4,50%	
630	1860	5300	4,50%	
800	2287	6402	5,00%	
1000	2790	7700	5,00%	
1250	3300	9200	5,00%	
1600	4200	11800	6,25%	
2000	5050	15000	6,25%	
2500	6150	18500	6,25%	

Rated Voltage	For 22 kV			
Rating (kVA)	Total Losses 50% Load Watts	Total Losses 100% Load Watts	Z% Impedance	Tap changer
250	1029	3077	4,50%	As per customer request
315	1076	3255	4,50%	
400	1286	3623	4,50%	
500	1586	4515	4,50%	
630	1953	5565	4,50%	
800	2401	6722	5,00%	
1000	2930	8085	5,00%	
1250	3465	9660	5,00%	
1600	4410	12390	6,25%	
2000	5303	15750	6,25%	
2500	6458	19425	6,25%	

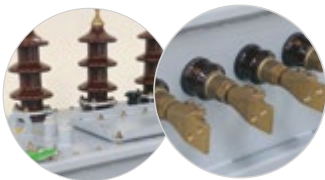
Rated Voltage	For 33 kV			
Rating (kVA)	Total Losses 50% Load Watts	Total Losses 100% Load Watts	Z% Impedance	Tap changer
250	1054	3150	4,50%	As per customer request
315	1102	3333	4,50%	
400	1317	3709	4,50%	
500	1623	4623	4,50%	
630	2000	5698	4,50%	
800	2459	6882	5,00%	
1000	2999	8278	5,00%	
1250	3548	9890	5,00%	
1600	4515	12685	6,25%	
2000	5429	16125	6,25%	
2500	6611	19888	6,25%	

\*Other energy level losses on request.

# Product Accessories & Fittings

All accessories required in conventional design to ensure safety like gas, pressure and temperature have been clubbed into one device DGPT2 for our hermetic technology.

## > ACCESSORIES



HV / LV Bushing



Oil / Winding  
Temperature  
Indicator



DGPT2



Rating Plate



Lifting Lug



Cable Box for  
HV Bushing



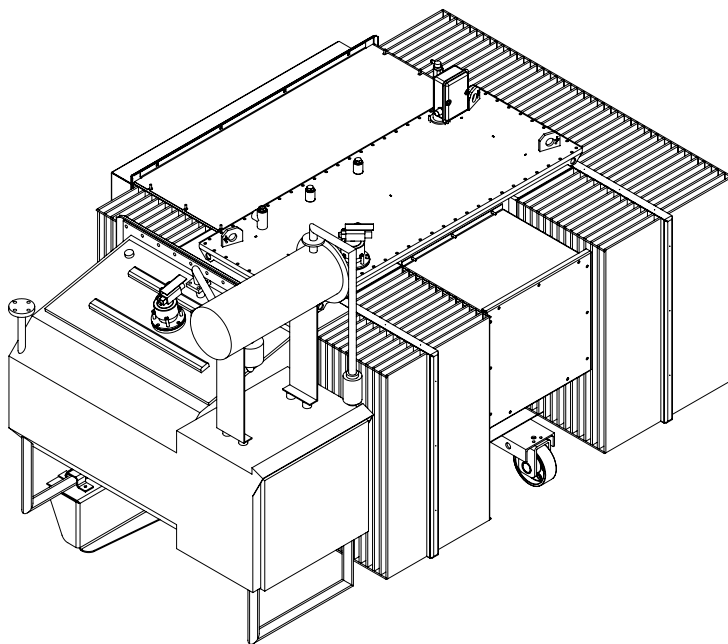
Pressure  
Release Device



On load  
Tap changer



Jacking Pad



Off Load  
Tap Changer



Cable Box for  
LV Bushing



Earthing terminal



Marshalling box



Valve Flange



Roller wheels



# Compact Secondary Substation (CSS)

## NOVA M - METAL HOUSING CSS UP TO 2000 kVA 33 kV CLASS

Cahors Compact Secondary Substation (CSS) is a type tested assembly for applications where power is transformed from MV (medium voltage) to LV (low voltage) systems.

It comprises an enclosure containing all the required MV switchgear, distribution transformer, LV switchboard, connections and auxiliary equipments.



### > FEATURES

- Tested according to the latest IEC 62271-202 specifications
- Internal arc fault Type AB tested at 20 kA, 1 second
- High level of safety for equipment and staff
- All equipment inside the CSS are type tested according to IEC standard.
- Footprint engineered to meet required clearance standards
- Metal housing
- Can be lifted with transformer installed
- Engineered for smooth air flow and natural cooling
- Locking system for all doors to prevent unauthorized entry of staff
- Stainless steel hinges for corrosion resistance
- No access to live parts
- Possibility of container transportation.

## > EQUIPMENT DESCRIPTION

- Transformer – CSS is designed and manufactured to oil filled or dry type transformers.
- Different versions of MV switchgears can be provided: AIS modular RMU, GIS compact RMU and VCB.
- Remote control interface for load break switch.
- LV distribution board with the following equipment :
  - Incoming with a general switch panel or a circuit breaker,
  - Connection strips for outgoing electrical lines with vertical fuseways or circuit breakers.
- Numbers and ratings of outgoing feeders adapted to customer needs.
- Special LV equipment available (LV measuring).
- Capacitor banks can be added on customer's request.



### Range + factors

#### Compact secondary substations up to 2000 kVA 33 kV class :

- Single window world class solution
- Completely factory fitted, ready to charge
- Compact, hence easy to handle for installation & commissioning
- Minimum civil work and hence optimization of XLPE cable, length, cable trench, etc.
- Completely safe, reliable, asthetic.
- Customized designs possible.





## > MANUFACTURING PROCESS

**Our manufacturing facilities are fully & semi automatic, controlled by highly skilled supervisors.**

We have deployed internal Quality Policy Management for our manufacturing process. We combine our high quality production line with the diligent service of workers.



## > MV / LV WINDING

**The winding assembly area is dust free & highly compliant to Cleanliness and Quality Standards.**

Our quality component & manufacturing tolerances ensure partial discharge free & low eddy current losses in the products.



## > OIL FILTRATION

**Oil filling of tanks is done in controlled environment** under vacuum condition so that the characteristics & the quality of duly filtered premium oil remain perfect throughout the lifetime of transformers. Hence the products are maintenance free.



## > TEST FACILITIES

**Our advance & automated testing facilities are well equipped with SCADA System to auto- generate the test reports.**

Our all high end & calibrated testing equipments like High Voltage Tester, MG set, Resistance Meter, Ratio Meter & Megger are used for Routine tests to be performed in-house. Our Products are qualified for type test at Indian Laboratory -NABL & International Laboratory. We ensure the testing & measurement as per IS2026 & IEC-60076.



## > DELIVERY TIME AND LOGISTICS

**Transfix India ensures the ON TIME delivery in the strength that:**

Centralized & structured logistics department is maintained with ERP for inventory Management. Critical Raw material is stocked well in advance to avoid the gap in production.



## > CUSTOMERS SERVICES

**Groupe CAHORS' highly competent ,well experienced & well trained team** of After Sales people offers quick & effective technical support on Installation, Commissioning & Charging of Transformers on the client's site.



# Our installations in India



Government segment



Small scale Industry & Utilities



Large scale industry



Solar & wind renewable energy



IT park, hotels and hospitals



Industry & Utilities

# Visitor's Diary





# CAHORS

## CONNECTING ENERGY AND PEOPLE

Industrial sites and Sales offices  
Sales offices / Distributors /  
Trading partners



Transfix INDIA's Head office  
& Manufacturing Plant

Transfix INDIA's Sales offices

### Connecting. Linking.

For over 100 years, that has been the driving force of Groupe CAHORS. Together, the men and women of CAHORS over the world, work to help transport energies and facilitate access to information. They combine their skills and contribute technical and innovative solutions that enable us to connect individuals and companies to the resources they need, such as electricity, information, water and gas.

CAHORS offers comprehensive solutions and equipment suited to the specificities of electricity, water and gas distribution networks and communication networks all around the world.

### TRANSFIX INDIA

TRANSFIX INDIA is a wholly owned subsidiary of Groupe CAHORS that manufactures & markets Distribution Transformers MV Switchgears and Compact Substations for both public and private distribution networks. TRANSFIX Mother Company is located in Toulon, France, and holds 4 subsidiaries in the worlds : India, China, Morocco and Spain.

- Size 5 acres, built up area 1,00,000 sq ft, office 10,000 sq ft, shop floor 90,000 sq ft.

# QUALITY POLICY

**TRANSFIX INDIA Pvt. Ltd.** subsidiary of **GROUP CAHORS** is manufacturing, supplying MV Transformers & Compact Substation and providing associated services in the state of art of facility.

**TRANSFIX INDIA Pvt. Ltd.** is committed to provide products, solutions & services with world class quality to satisfy customer's current & future needs.

Issue Date :- 07.03.2017  
Revision :- 02

**Alexandre Ramat**  
**Managing Director**

## QUALITY POLICY DEPLOYMENT

To achieve this goal, **TRANSFIX INDIA Pvt. Ltd.** as a team:-

- **We focus on the customer satisfaction by delivering Qualitative products & Services on time.**
- **We continually developing competence & professionalism of our team.**
- **We work as a responsible team for doing right at first time by listening to the internal & external customers, by learning from our experiences,.**
- **We are committed to continually improving our Quality Management System & satisfy applicable requirements.**
- **We believe in beneficial relationship with our customers, employees, suppliers and shareholders.**
- **We pay strong attention towards safety, sustainability & ethical matters.**

**TRANSFIX INDIA Pvt. Ltd.** management ensures Quality policy is recognized by all employees and is supporting continuously improvement process in the interest of each department of the company & of the customers.



You may reach us at : [www.groupe-cahors.com](http://www.groupe-cahors.com)



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