

TOSHIBA

Toshiba Transmission & Distribution Systems (India) Private Limited

Innovative Solutions for T & D Sector



-  EHV & UHV Transformers
-  Distribution Transformers
-  EHV & MV Switchgear Products
-  EPC

ISO 9001: 2015
Certified Company

ISO 14001: 2015
Certified Company

OHSAS 18001: 2007
Certified Company

ISO/IEC 17025:2005
Certified Company

About Us

A Global Supplier of Integrated Solutions

Toshiba Transmission & Distribution Systems group is a world leader in the supply of integrated solutions for energy Transmission & Distribution. Our systems effectively control Transmission & Distribution in order to deliver reliable electricity from Power Plants to Industries, Transportation Systems to Agriculture and even to our Homes.

Toshiba has developed its superior technology and has a history of high product quality in this market throughout the course of more than 100 years, manufacturing its first transformer in 1894 and its first switchgear in 1902.

Our vast experience & continued expansion has allowed us to gain immense trust and appreciation from customers around the world. We strive to create products and services that enhance society and protect the environment. This is accomplished through a single component reducing environmental impact or a complete smart grid solution. Toshiba continues to serve the people and the planet that we call home.

Toshiba Corporation, Japan has established **Toshiba Transmission & Distribution Systems (India) Private Limited (TTDI)** in 640,000 Square Meter Area at Hyderabad, Telangana State, India for T&D Business. TTDI will emerge as the global manufacturing hub of Toshiba Corporation to cater products & solutions across the world.



Dr. Katsutoshi Toda
Executive Chairman, TTDI



Bird's Eye view of production base at Hyderabad - India

Vision

- To be the leading Global Transmission & Distribution Systems Company

Mission

To direct our efforts towards exceeding the expectations of our clients, partners and peers by striving:

- To continuously produce high quality products
- To provide reliable engineering solutions
- To meet customer satisfaction by understanding customer's requirements at all times
- To contribute to society

Committed to People, Committed to the Future

Commitment of the Toshiba Group

We, Toshiba Group of companies, based on our commitment to the society and the future, are determined to create a higher quality of life for the society, and to do our part to ensure that progress continues within the world community.

Commitment to People

We endeavour to serve the needs of the society, especially our customers, share holders and employees, by implementing forward-looking corporate strategies while carrying our responsible and responsive business activities. As a good corporate citizen, we actively contribute to further the goals of society.

Commitment to the Future

By continuously developing innovative technologies centering on the fields of Electronics and Energy, we strive to create products and services that enhance human life, which lead to a thriving healthy society. We constantly seek new approaches that helps realize the goals of the world community, including ways to improve the global environment.

EHV & UHV Transformers



333 MVA, 1200 kV Single Phase Auto Transformer

Key Milestones

- Successfully supplied & commissioned 1 No. of 333 MVA, 1200 kV, 1 Ph, Auto Transformer with In-House development for 1200 kV Test Station at BINA, M/s. PGCIL during 2012-13
- Full scale dynamic Short Circuit Test carried out on 25 No's of Power Transformers, including 315 MVA, 400 kV Auto and Generating Transformers
- Supplied more than 60 No's of 400 kV class and above Transformers

Product Range

S.NO	DESCRIPTION	RATING	VOLTAGE CLASS	STANDARDS
1	Generator Transformer	Up to 1000 MVA	Up to 800 kV	ANSI, IS, BS, NEMA, IEC
2	Auto Transformer	Up to 1500 MVA	Up to 1200 kV	ANSI, IS, BS, NEMA, IEC
3	Two Winding Transformer	Up to 1000 MVA	Up to 800 kV	ANSI, IS, BS, NEMA, IEC
4	Medium Power Transformer	25 MVA to 60 MVA	60 kV to 245 kV	ANSI, IS, BS, NEMA, IEC
5	Traction Transformer	Up to 200 MVA	Up to 245 kV	ANSI, IS, BS, NEMA, IEC

Future Products: Gas Insulated Transformers (GIT) Range

Applications

- Industries • Power Generating Stations • Receiving Stations & Substations • Railways

Power Transformers (Oil Filled) have a robust design and sturdy construction to competently handle short circuits.

Infrastructure

- Installed Capacity of 28 GVA per annum
- GEORG CNC Cut-to-Length Line for step lap cores
- Winding, Core Coil Assembly are carried out in dust proof clean room with temperature control
- CTC Conductor, Insulation, Tank & Radiators are manufactured In - House



EHV Transformers

Distribution Transformers Division

- Vertically integrated manufacturing base for Transformers
- Leading supplier of Energy Efficient Amorphous Metal Distribution Transformers

Product Range

Description	Core Material	Phase	Primary Voltage	Rating
Medium & Small Power Transformers	CRGO	1	Up to 66 kV	Up to 3333 kVA
		3	Up to 66 kV	Up to 20000 kVA
CRGO Silicon Steel Distribution Transformers	CRGO	1	Up to 33 kV	Up to 167 kVA
		3	Up to 33 kV	Up to 4000 kVA
Amorphous Metal Distribution Transformers	Amorphous	1	Up to 33 kV	Up to 167 kVA
		3	Up to 33 kV	Up to 2500 kVA
Elliptical Tank Distribution Transformers	Amorphous /CRGO	3	Up to 11 kV	Up to 25 kVA
Completely Self Protected (CSP) Distribution Transformers	Amorphous /CRGO	1	Up to 11 kV	Up to 167 kVA
		3	Up to 11 kV	Up to 315 kVA
Dry Type Cast Resin Transformers (CRT)	CRGO	1	Up to 33 kV	25 kVA to 2667 kVA
		3	Up to 33 kV	25 kVA to 8000 kVA
Pad Mounted Transformers	CRGO	1 & 3	Up to 25 kV	Up to 1000 kVA
	Amorphous	1	Up to 25 kV	Up to 167 kVA
		3	Up to 25 kV	Up to 1000 kVA
Underground Distribution Transformers	CRGO	3	Up to 12 kV	Up to 1000 kVA
Inverter Duty Transformers	CRGO	3	Up to 33kV	3 Windings : Up to 8MVA 5 Windings : Up to 16MVA

TTDI also offers Special Transformers for Wind Applications



Medium & Small Power Transformers

(CRGO Silicon Steel)



Medium & Small Power Transformers (Oil Filled) have a robust design and sturdy construction to competently handle short circuits.

Standard Fittings

- ▣ Primary Bushings
- ▣ Secondary Bushings
- ▣ Buchholz Relay
- ▣ Off circuit Tap Changer
- ▣ Pressure Relief Device/ Explosion vent
- ▣ Thermometer
- ▣ Silica Gel Breather
- ▣ Drain / Filter Valves
- ▣ Oil Level Guage
- ▣ Rating and Diagram Plate
- ▣ Lifting Lugs
- ▣ Skid Base / Roller Arrangement

Technical Specification

Ratings	: Single Phase Upto 3333 kVA Three Phase Upto 20000 kVA
Applicable Standards	: IS,IEC,ANSI,JIS,DIN,BS,EN, etc.
Cooling	: ONAN, ONAN/ONAF
Insulating Fluid	: Mineral Oil as per specification
Frequency	: 50 Hz, 60 Hz
Vector Group	: As specified
Primary Voltage	: Upto 66000 V
Secondary Voltage	: 33000 V, 11000 V, 6600 V, 3300 V (Other Voltages as required)
Winding Material	: Copper / Aluminum
Tapping Range	: Off circuit (or) On load tap changers as per customer requirements (or) In line with applicable standards
Impedance	: As per customer requirement (or) In line with applicable standards

Optional Fittings

- ▣ On load Tap Changer
- ▣ Condenser Type Bushings for Voltage Class of 33kV & 66kV
- ▣ RTCC Panel
- ▣ Winding Temperature Indicator
- ▣ Oil Temperature Indicator
- ▣ Terminal Connectors
- ▣ Magnetic Level Guage

Applications

- Industries • Power Stations • Receiving Stations & Substations • Railways • Ports

Inverter Duty Transformers Reliable for solar grids



Technical Specification

Ratings	: Three Phase CRGO Silicon Steel 3 Windings : Upto 8MVA or As per customer requirement 5 Windings : Upto 16MVA or As per customer requirement
Applicable Standards	: IS 2026, IEC 60076, IEC 61378-1
Insulating Fluid	: Mineral Oil as per Specification / Ester Oil
Frequency	: 50 Hz
Vector Group	: As specified
HV Voltage	: Upto 33kV or As per customer requirement
LV Voltage	: As per customer requirement (or) Inverter Manufacturer Recommendations
Winding Material	: Copper or Aluminium
Tapping Range :	: As per customer requirement (or) In line with applicable standards
Impedance	: As per customer requirement (or) Inverter Manufacturer Recommendations

Optional Fittings

- ▣ HV Cable Box
 - ▣ HV Disconnecting Chamber
 - ▣ HV Plug in Bushings
- ▣ Elbow Connectors For Plug in
 - ▣ LV Disconnecting Chamber
 - ▣ SCADA Provision For WTI and OTI
- ▣ Magnetic Oil Gauge
 - ▣ Rapid Pressure Relay
 - ▣ DGPT2 Or DMCR Relay for Sealed Transformers

Features & Benefits

- ▣ Low Voltage winding has foil wound construction improves the short circuit withstand capability. The axial forces are minimal.
- ▣ Low voltage winding insulation design suitable for high voltage ripples (1.6kV) and high du/dt of 1kV/μs
- ▣ Each LV winding has a dedicated HV winding which improves the impedance and mechanical balance between the windings

Standard Fittings

- ▣ 5 Position off Circuit Tap Changer
- ▣ HV Porcelain Bushings with Cable Box
- ▣ LV Epoxy Bushings with Cable Boxes / Bus Duct
- ▣ Oil Temperature Indicator
- ▣ Winding Temperature Indicator
- ▣ Conservator With Oil Level Indicator and Breather
- ▣ Pressure Relief Device
- ▣ 4 Lifting Lugs
- ▣ 2 Earthing Terminals
- ▣ 1 Rating Plate
- ▣ Oil Drain Device
- ▣ Thermometer Pocket
- ▣ 4 Lashing Eyes



Three Phase Distribution Transformers

(Amorphous Metal/CRGO Silicon Steel)



Standard Fittings

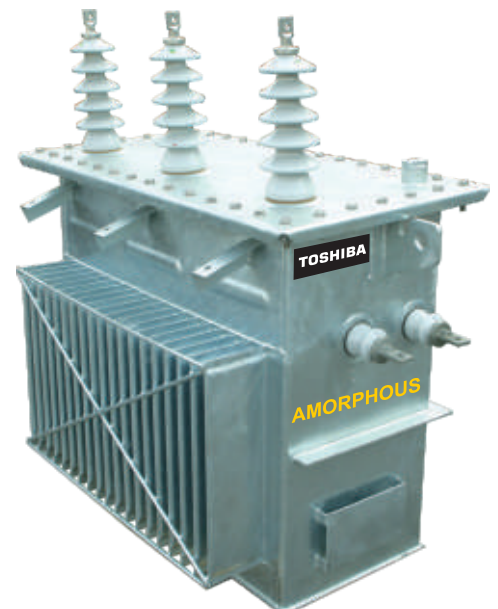
- ▣ Primary Bushings
- ▣ Secondary Bushings
- ▣ Cable Terminations
- ▣ Pole Mounting Bracket / Tank Base Channel
- ▣ Tank Grounding Provision
- ▣ Oil Level Indicator
- ▣ Filling Device
- ▣ Earthing Terminal
- ▣ Rating and Diagram Plate
- ▣ Lifting Cum Clamping Lug
- ▣ Drain Plug

Optional Fittings

- ▣ HV / LV Cable Box
- ▣ Rollers (Uni-Directional / Bi-Directional)
- ▣ Drain Valve
- ▣ Completely Self Protection (CSP) Feature
- ▣ Conservator and Silica Gel Breather
- ▣ Pressure Relief Device
- ▣ Off Circuit Tap Changer / OLTC
- ▣ Lightning Arrester / Arcing Horns
- ▣ Oil Temperature Indicator
- ▣ Terminal Connectors
- ▣ Tap Changer

Technical Specification

Ratings	: CRGO : Upto 4000 kVA AMT : Upto 2500 kVA
Applicable Standards	: IS, IEC, ANSI, JIS, DIN, BS, EN, etc.
Cooling	: ONAN
Insulating Fluid	: Mineral Oil as per specification / Ester Oil
Frequency	: 50 Hz, 60 Hz
Vector Group	: As specified
Primary Voltage	: Upto 33 kV
Secondary Voltage	: 415, 433 V (Other Voltages as required)
Winding Material	: Copper / Aluminium
Tapping Range	: As per customers requirement (or) In line with applicable standards
Impedance	: As per customer requirement (or) In line with applicable standards



Under Ground -Three Phase Distribution Transformers

(Amorphous Metal/
CRGO Silicon Steel)



Standard Fittings

- ▣ Welded Primary Bushing wells and Special Secondary Bushings to keep the necessary insulation even under full immersion
- ▣ Oil Level Indicator
- ▣ Filling Device
- ▣ Stainless Steel Earthing Terminals
- ▣ Rating and Diagram Plate
- ▣ Lifting lugs
- ▣ Drain cum sampling valve
- ▣ Pressure Relief Device
- ▣ Off Circuit Tap Changer / OLTC
- ▣ Parking stands
- ▣ Radiators suitable to withstand high pressure
- ▣ Tank Base Channel

Optional Fittings

- ▣ Primary Bushing insert and elbow connector
- ▣ Current limiting fuses
- ▣ Bay-O-Net fuses
- ▣ Load break switch
- ▣ Oil Temperature Indicator
- ▣ Pressure/Vacuum gauge
- ▣ Parking bushings
- ▣ Stainless steel tank construction
- ▣ Neutral Earthing link to tank

Technical Specification

Ratings	: CRGO : Up-to 4000 kVA AMORPHOUS : Up-to 2500 kVA
Applicable Standards	: IS, IEC, ANSI, JIS, DIN, BS, EN, etc.
Cooling	: ONAN / KNAN
Insulating Fluid	: Mineral Oil as per specification / Ester Oil
Frequency	: 50 Hz, 60 Hz
Vector Group	: As specified
Primary Voltage	: Up-to 33 kV
Secondary Voltage	: 415, 433 V (Other Voltages as required)
Winding Material	: Copper / Aluminium
Tapping Range	: As per customers requirement (or) In line with applicable standards
Impedance	: As per customer requirement (or) In line with applicable standards

Elliptical Tank Three Phase Distribution Transformers

(Amorphous Metal/
CRGO Silicon Steel)



Features and Benefits

- ▣ Oil leakages will be reduced, due to less no. of welding joints
- ▣ Sealed type construction totally eliminates the contact of oil with outside atmosphere
- ▣ Stiffeners are not required due to its capability of withstanding the pressure
- ▣ Oil and MS required is less, hence the end cost will be reduced
- ▣ Easy to transport and handling during commissioning
- ▣ Compact size with Aesthetic look
- ▣ Self venting type top cover arrangement
- ▣ Good mechanical strength
- ▣ Top cover is fixed with welded clamping lugs to avoid theft

Standard Fittings

- ▣ Primary Bushings
- ▣ Secondary Bushings
- ▣ Tank Grounding Provision
- ▣ Pole Mounting Bracket / Tank Base Channel
- ▣ Rating and Diagram Plate
- ▣ Lifting Cum Clamping Lug

Optional Fittings

- ▣ Lightning Arrester / Arcing Horns
- ▣ LV Cable Box
- ▣ Oil Temperature Indicator
- ▣ Pressure Relief Device
- ▣ Terminal Connectors
- ▣ Completely Self Protection (CSP) Feature

Technical Specification

Ratings	: Upto 25 kVA
Applicable Standards	: IS, IEC, ANSI, JIS, DIN, BS, EN, etc.
Cooling	: ONAN
Insulating Fluid	: Mineral Oil as per Specification / Ester Oil
Frequency	: 50 Hz, 60 Hz
Vector Group	: As specified
Primary Voltage	: Upto 11kV
Secondary Voltage	: 415 V, 433 V (Other Voltages as required)
Winding Material	: Copper / Aluminium
Impedance	: As per customer requirement (or) In line with applicable standards

Single Phase Distribution Transformers

(Amorphous Metal/CRGO Silicon Steel)

Single Phase Oil Filled Distribution Transformers are designed to effectively improve the quality and reliability of the electrical distribution systems.



Features and Benefits

- ▣ Robust construction having excellent short circuit and thermal withstand capabilities
- ▣ Proven technology, effectively improving the quality and reliability of the electrical distribution system
- ▣ Ability to meet customized design and specification demands

Standard Fittings

- ▣ Pole Mounting Brackets
- ▣ Lifting Lugs
- ▣ Pressure Relief Device / Self Venting Top Cover
- ▣ Tank Grounding Provision
- ▣ Rating and Diagram Plate
- ▣ Primary Bushings
- ▣ Secondary Bushings
- ▣ Oil Level Gauge

Technical Specification

Ratings	: Upto 167 kVA
Applicable Standards	: IS, IEC, ANSI, JIS etc
Cooling	: ONAN
Insulating Fluid	: Mineral Oil as per specification / Ester Oil
Frequency	: 50 Hz, 60 Hz
Vector Group	: As specified
Primary Voltage	: Upto 33 kV
Secondary Voltage	: 120, 120/240, 210-105, 250, 240/480 V (Other Voltages as required)
Winding Material	: Copper / Aluminium
Tapping Range	: As per customers requirement (or) In line with applicable standards
Impedance	: As per customer requirement (or) In line with applicable standards

Optional Fittings

- ▣ Lightning Arrester / Arcing Horns
- ▣ High Voltage Neutral Bushing
- ▣ Terminal Connectors
- ▣ Tap Changer for External Operation
- ▣ Cable Terminations
- ▣ Completely Self Protection (CSP) Feature



Dry Type Cast Resin Transformers

(CRGO Silicon Steel)

TTDI has been producing Dry Type Cast Resin Transformers for more than 15 years.



Features & Benefits

- ▣ Resistant to short circuits (High Mechanical Strengths)
- ▣ Non-Flammable
- ▣ Resistant to Temperature Fluctuations
- ▣ Moisture Resistant since non Hygroscopic
- ▣ Space saving, permitting compact installation
- ▣ Practically no maintenance, Long and Trouble-Free Service
- ▣ Suitable for Hot and Humid environments
- ▣ Automatic temperature control and protection

Standard Fittings

- ▣ Lifting Eyes
- ▣ Tap Changer Links
- ▣ Rating and Diagram Plate
- ▣ High Voltage Bushings
- ▣ Low Voltage Bushings
- ▣ Thermal sensor like PT-100 for Indicator

Applications

In service in diverse Industries, Electricity Boards, Nuclear / Thermal / Hydel Power Plants, Railway Traction, High-Rise Buildings, Hospitals, Subways, Underground Vaults, Tunnels, Schools, Steel Factories, Chemical Plants, etc. Where safety is of prime concern.

- ▣ Coils have smooth finish and are Robust in Construction.
- ▣ Toshiba successfully conducted Seismic Qualification test on Cast Resin Transformers supplied to Nuclear Power Installations in India, way back in 1994.

Technical Specification

Ratings	: Single Phase 25 kVA to 2667 kVA
	: Three Phase 25 kVA to 8000 kVA
Applicable Standards	: IS 11171, IEC 726, ANSI.C.12.01
Cooling	: AN, ANAF
Frequency	: 50 Hz, 60 Hz
Vector Group	: As specified
Primary Voltage	: Upto 33 KV
Secondary Voltage	: 220/127, 480/277 V (Other Voltages as required)
Winding Material	: Copper/ Aluminum
Tapping Range	: As per customers requirement (or) In line with applicable standards
Impedance	: As per customer requirement (or) In line with applicable standards

Optional Fittings

- ▣ Terminal Connectors
- ▣ Special Termination Arrangement
- ▣ Cable Box / Bus Duct
- ▣ Cooling Fan
- ▣ Rollers (Uni-Directional / Bi-Directional)
- ▣ Protection with Temperature Scanner
- ▣ Off Circuit Tap Changer

Pad Mounted Transformers

(Amorphous Metal/CRGO Silicon Steel)



Three Phase Pad Mounted Transformers are compact power centres for commercial or Industrial applications where safety, reliability and aesthetics are especially important. With proper design selection, they can be located near or inside the buildings for greater flexibility and savings.

Benefits

- ▣ Robust quality systems ensure implementation of the best design and manufacturing practices
- ▣ Flexibility in designing transformers to customer requirements (Optimum cost)
- ▣ Compliance to international standards like ANSI, IEEE, etc.

Standard Fittings

- ▣ Primary Bushings
- ▣ Secondary Bushings with Terminal Connectors
- ▣ Pressure Relief Device
- ▣ Oil Filling Plug
- ▣ Liquid Level Gauge
- ▣ Drain Valve with Sampler
- ▣ Hinged Cabinet Doors
- ▣ Sealed Tank Oil Preservation System
- ▣ Rating & Diagram Plate

Technical Specification

Ratings	: Single Phase CRGO: Upto 1000 kVA AMT: Upto 167 kVA
	: Three Phase CRGO: Upto 1000 kVA AMT: Upto 1000 kVA
Applicable Standards	: ANSI
Insulating Fluid	: Mineral Oil as per specification / Ester Oil
Frequency	: 50 Hz, 60 Hz
Vector Group	: As specified
Primary Voltage	: Upto 25 kV
Secondary Voltage	: 415, 433 V (Other Voltages as required)
Winding Material	: Copper / Aluminium
Tapping Range :	: As per customers requirement (or) In line with applicable standards
Impedance	: As per customer requirement (or) In line with applicable standards

Optional Fittings

- ▣ Current Limiting Fuses with Breaker for LV
- ▣ Bay-O- Net Fuses / Canister-HV
- ▣ Elbow Connectors - Load Break / Non Load Break Switch
- ▣ Dial Type Thermometer
- ▣ Tap Changer
- ▣ LV Distribution Panel

Applications

- Industrial • Commercial • Institutional and Residential areas
- Indoor installations like Cellars, Malls, Complexes where safety is prime concern



Gas Insulated Switchgear

(upto 800 kV)



Toshiba manufactures Gas Insulated Switchgears (GIS) up to 800 kV.

Toshiba is a Global Leader in the market for over 40 years with highest reliability.

World's first supplies include 800kV GIS in 1985, 550kV- 63kA single break GCB in 1993.

Special Features of Toshiba Design

- Compactness & Indoor / Outdoor Compatibility
- Protection Against Extreme Environmental Conditions
- Safe & Reliable Operation with Minimal Maintenance
- Higher Seismic Stability & Better Aesthetics

- Outdoor GIS : Built to survive in extreme environmental conditions like Snowy Regions, Deserts, Coastal Regions etc.,
- We provide Full Turnkey solutions for GIS substations up to 800kV.
- Customer Satisfaction is our Top Priority.
- Top Quality Guaranteed.

	132 kV	220 kV	400 kV	765 kV
Rated Voltage	72.5 kV / 145 kV	245 kV	420 kV	800 kV
Rated Current	Up to 3150 A	Up to 4000 A	Up to 4000/ 6000	Up to 5000/ 6000 A
Rated Short Time withstand Current	Up to 40 kA - 3 sec	Up to 50 kA - 3 sec	Up to 63/ 80 kA - 3 sec	Up to 50 kA - 3 sec
Rated Frequency	50/ 60 Hz	50 Hz	50/ 60 Hz	50 Hz
Applied Standards	IEC	IEC	IEC	IEC

Clean Room, Assembling & Testing Facilities for GIS at TTDI



Package Substation

(12 kV & 36 kV)



Our Package Substations are factory assembled, fully tested and delivered as a complete solution to the customer, ready for service.

The Package Substation comprises of the following components:

- ▣ MV Switchgear (SF₆ Ring Main Unit)
- ▣ Hermetically sealed Distribution Transformer
- ▣ LV Switchgear
- ▣ Enclosure
- ▣ Interconnections

Key Features

- ▣ Compact & Robust Construction
- ▣ Safe and Reliable Operation
- ▣ Weather and Vermin Proof
- ▣ Customized Solution
- ▣ Tested for Internal Arc

Standards

Enclosure : IEC 62271-202

Transformer conforms to IEC 60076-1 or 600726-11

MV Switchgear conforms to IEC 62271-200 and IEC 60694

LV Switchgear conforms to IEC 60439-1

Ratings

MV Switchgear : 12/24/36 kV Ring Main Unit

Transformer : HV - 12/24/36kV, LV - 0.44kV , 1250kVA

LV Switchgear : Customized as per the requirement

Applications

Package Substation Units, in Metallic Enclosure, are used in Electricity Cable Distribution Networks, in Urban or Rural Areas, Public or Industrial Areas, Building Sites, Mining, Irrigation in Agriculture etc.

In the recent years, Package Substation Units are being increasingly used in alternative energy production installations, such as those based on Solar Energy, Wind Power, Bio-Fuels, Biomass, Geothermal, Tidal Power and Wave Power.



Turnkey Substation Installations and Solutions with Indoor/ Outdoor GIS Equipments



Turnkey Installations and Solutions Including with Power / Generator Transformers



MV Installations



Control & Protection Panels, Protection Relays, Substation Automation System Installations and Solutions

Energy Systems and Solutions

The Power Generation, Transmission & Distribution market requires innovative and reliable solutions for the power from conventional and renewable generation plants to be efficiently transmitted and distributed to its commercial and industrial consumers.

Toshiba's rich global experience, relevant regional and global centres of competences, domain knowledge encompassing from System Studies to Front End Design to Detailed Design to Project Engineering to Project Management to Construction to Testing & Commissioning, being within easy reach, enable us to provide optimized turnkey solutions and engineered equipment packages.

Our Solutions cover System Solutions, Substations and Installations associated with Power Transmission & Distribution, Railway Electrification and Renewable Energy Systems.

Our offering covers variety of Projects, Systems and Packaged Equipment Solutions and encompassing a range of voltage levels, up to 765 kV and saliently includes:

- Turnkey Gas Insulated Substations (Both Indoor and Outdoor) & Air Insulated Substations.
- Turnkey Underground Substations
- Engineered Substation packages.
- Extension and Upgrade projects
- Substation and Electrical Installation in Renewable Energy Systems

We also offer services for solutions with Toshiba's Products and Systems, which include:

- System Studies
- Front End Design
- Project Management & Engineering
- Installation, Testing and Commissioning
- Preventive, Scheduled and Corrective Maintenance, Troubleshooting
- Training and Support
- Spare parts, Consumables

We cater to our customers' requirements for Turnkey Solutions and Project, by delivering Engineered Product Packages, Project Solutions, and Customised Solution, undertaking these, with our capabilities in Engineering, Products and Project Management, turnkey from design to commissioning, on Single Point Responsibility basis.

EHV & UHV Transformers Plant Infrastructure



Fabrication



Automatic Core Cutting Line



Air Conditioned Winding Bay



Coil Stabilization

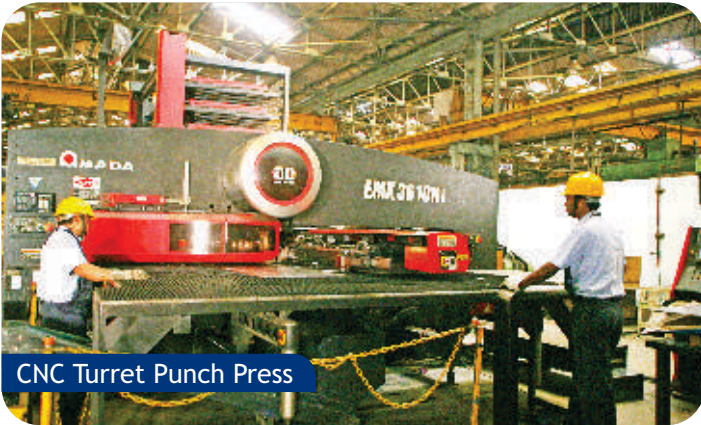


Vapor Phase Drying System

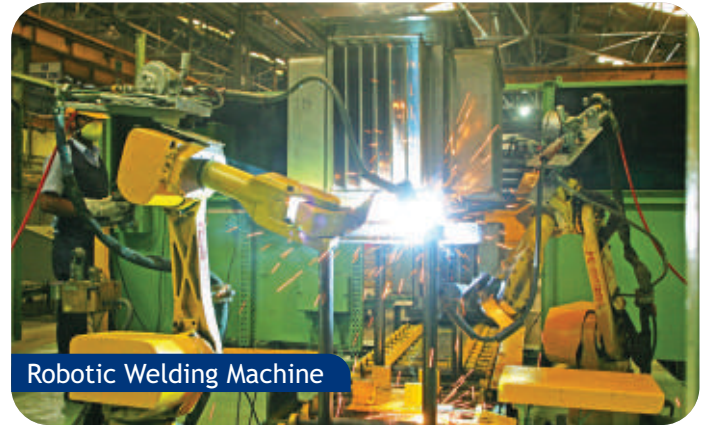


High Voltage Testing Equipment

CRGO & Amorphous Distribution Transformers Plant Infrastructure



CNC Turret Punch Press



Robotic Welding Machine



Automatic Core Cutting & Assembly Line



Production Bay

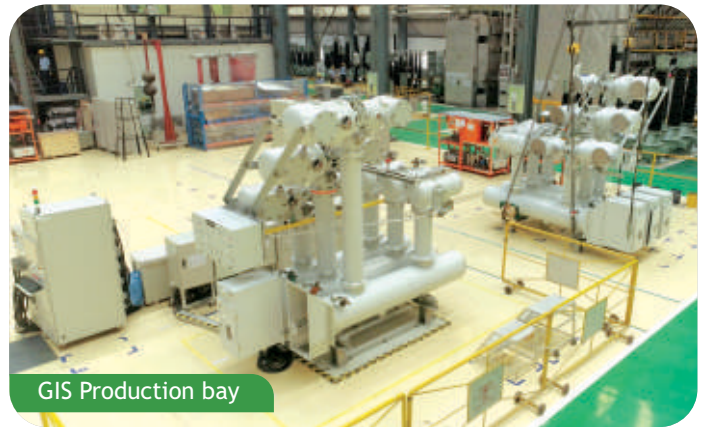


Automatic Core Winding Line



Production Bay

EHV & MV Switchgear Plant Infrastructure



1650 MVA, 765 kV Class Power Transformers



Head Office & Works:

Toshiba Transmission & Distribution Systems (India) Private Limited

Rudraram Village, Patancheru Mandal, Sangareddy Dist. - 502329, Hyderabad, Telangana State, India.

Tel: +91 40 3071 2222, Fax: +91 40 3071 7370, 3071 2245

Email: marketing@toshiba-ttdi.com, exports@toshiba-ttdi.com, Website: www.toshiba-ttdi.com

Landmark: Located on NH9 (Hyderabad - Mumbai Highway), 12 km from Nehru Outer Ring Road

Regional offices

Northern Region:

Office No - 1104, 11th Floor, Surya Kiran Building 19, K. G. Marg
Connaught Place, **New Delhi** - 110001, India. Tel: +91-11-30161070

Eastern Region:

Unit No. 1702, Ecostation, Plot No. 7, Block BP, Sector-V, Bidhannagar
Salt Lake, Dist.: North 24 Parganas, **Kolkata** - 700 091, India.

Western Region:

601, 6th Floor, CNB Square, Big Cinema Complex, 127, Andheri-Kurla Road
Chakala, Andheri (East), **Mumbai** - 400 059, India. Tel: +91-22-61911549

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* Technical Parameters of the products contained in this document are generic in nature. Please contact us for any Latest / Updated / Specific Information.