

All the meticulous planning and detailing that goes into producing a rotating machine is not something people think of – nor should they! We work hard to make sure that people don't have to think about Motors and Generators – after all that's what we do for a living. In TDPS, we make first class Motors and Generators for the world.

www.tdps.co.in

tdps[®] is

power

Manufacturers of
**SYNCHRONOUS &
INDUCTION MACHINES**

TD Power Systems Limited



UNIT 1



UNIT 2

SYNCHRONOUS & INDUCTION MACHINES
MOTORS & GENERATORS

We at TD Power Systems (TDPS), take pleasure in introducing ourselves as a leading manufacturers of Synchronous & Induction machines in the range up to 200MW.

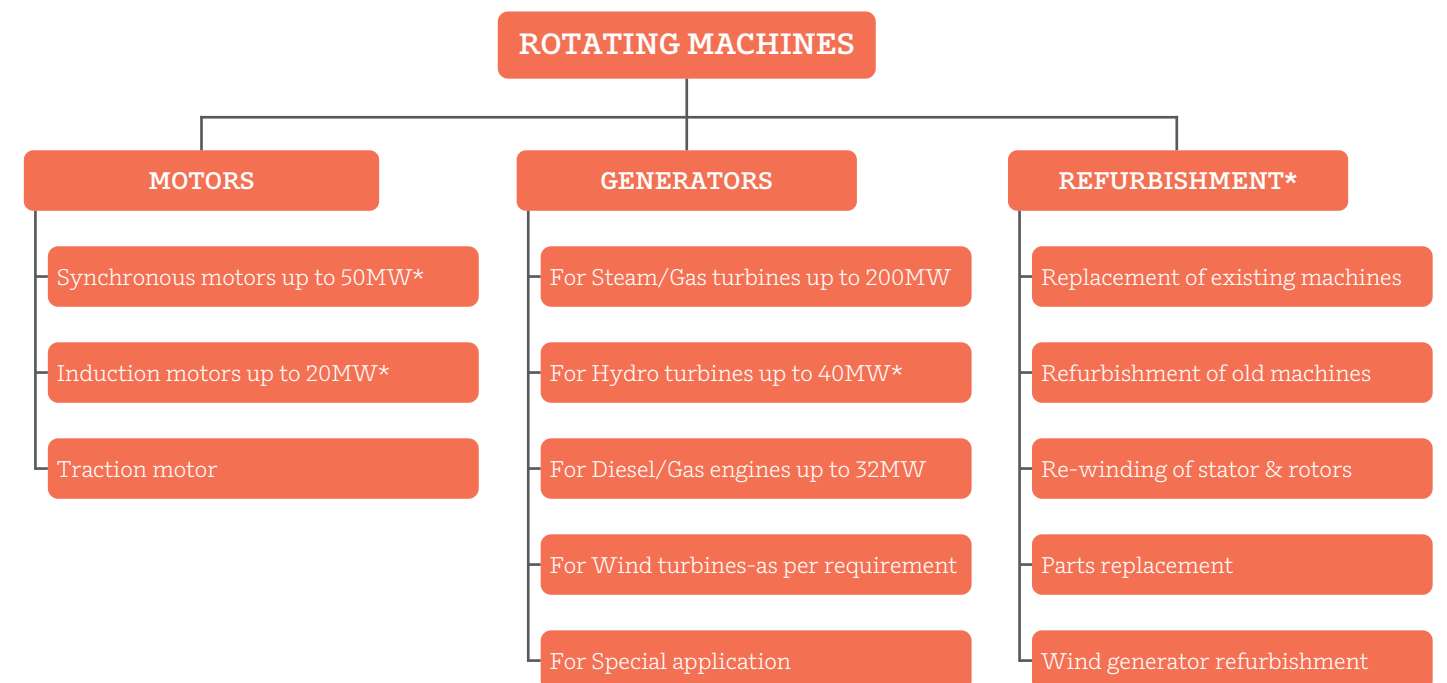
TDPS has state-of-the-art manufacturing facility in Bangalore, India for manufacturing high voltage Synchronous machines for different applications.

The company has grown steadily over the last 2 decades and are capable of manufacturing 60 machines per month in compliance with latest design, manufacturing practices. Since the inception we have delivered over 5700 machines to 101 countries worldwide.

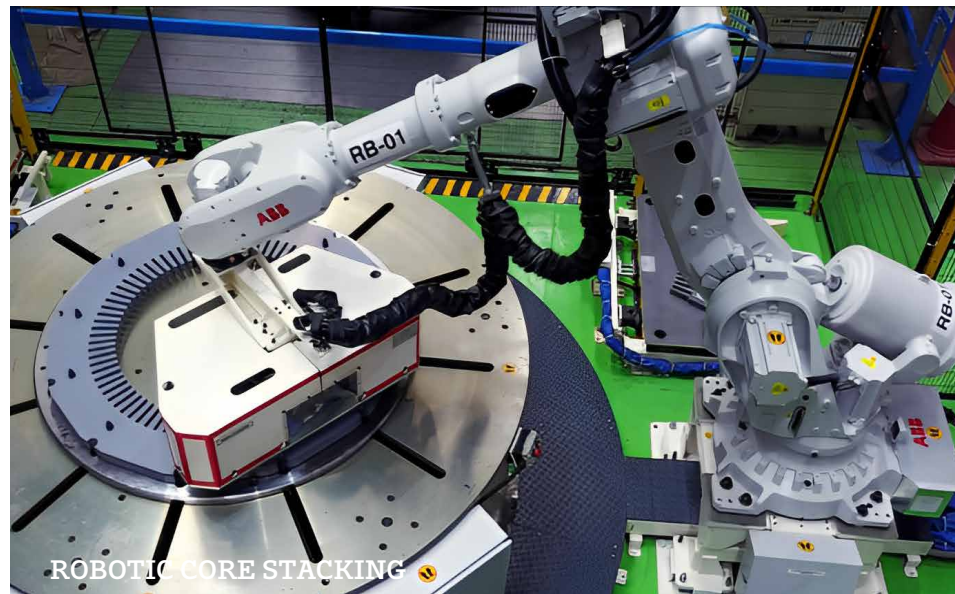
We manufacture Synchronous and Induction motors designed to suit various industrial & irrigation applications while delivering high performance with greater reliability and efficiency.

Our commitment to quality, on time delivery and unparalleled customer support has given TDPS many prestigious and loyal customers.

OUR PRODUCTS



* Both horizontal & vertical configurations



ROBOTIC CORE STACKING



6-AXIS TAPING MACHINE



COIL STRETCHING UNIT

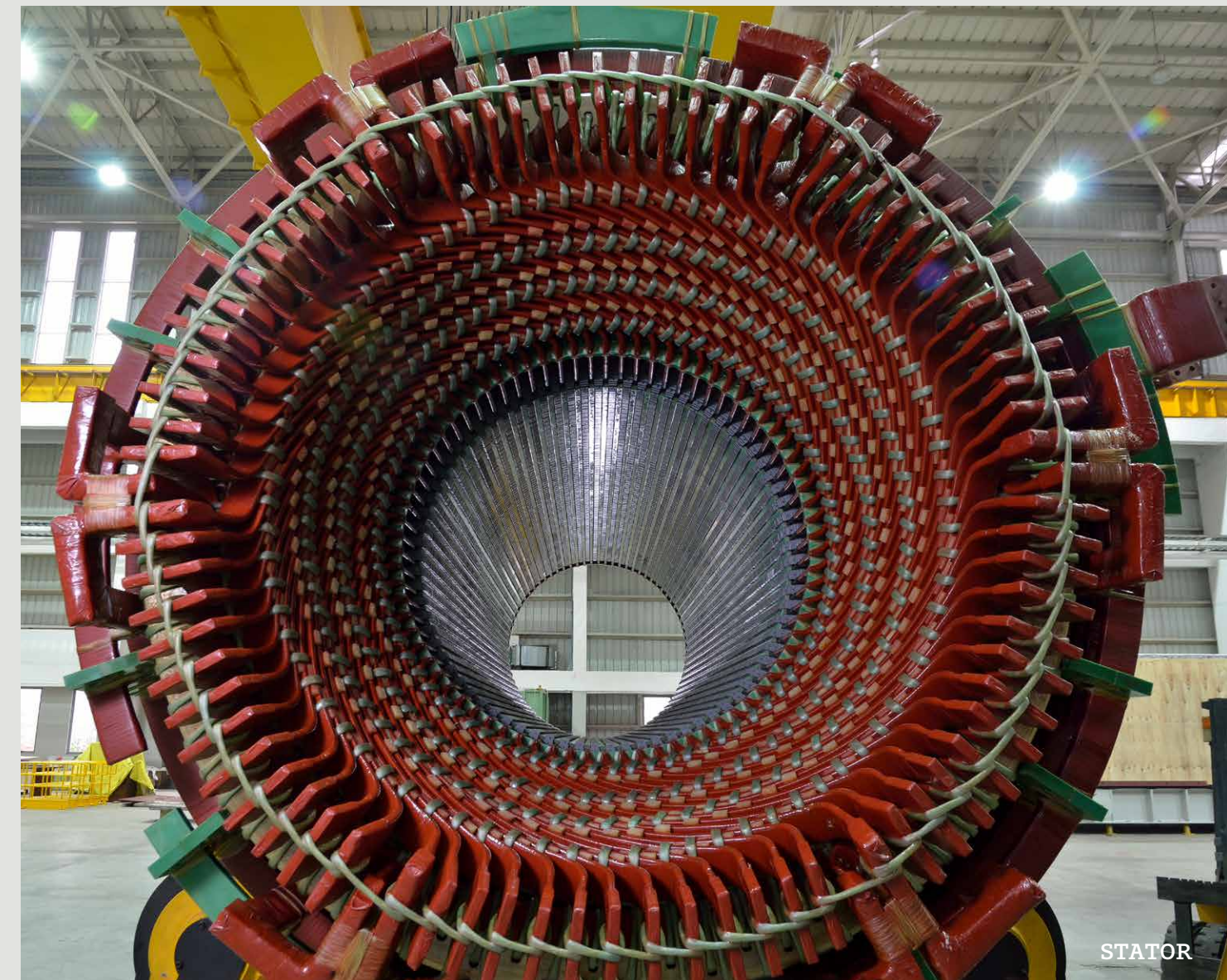
SYNCHRONOUS & INDUCTION MACHINES STATOR CONSTRUCTION

Complete stator consists of Stator Frame, Stator Core & Stator Winding.

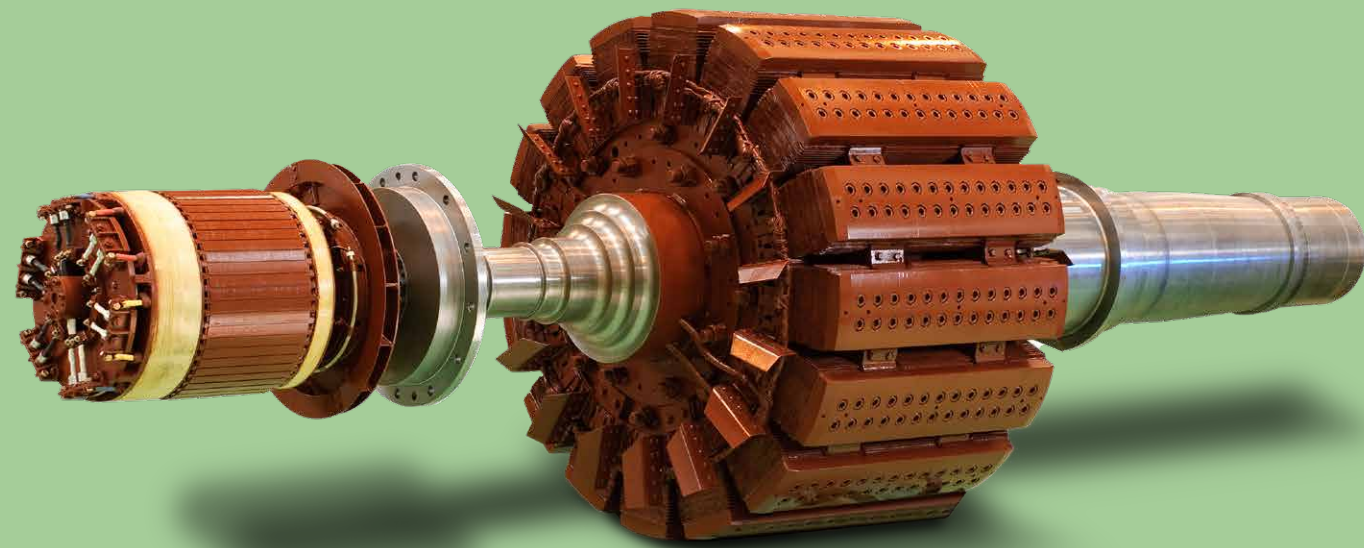
The stator frame is made of Welded Steel Construction and have adequate thickness to prevent distortion underoperation. The frame is robust and rugged, designed to withstand all kinds of stresses and deflections.

The stator core is built-up of thin, high quality, low loss non-oriented grains, cold rolled Silicon steel Laminations. Each punching is carefully deburred and laminations are insulated on both sides with high quality insulating varnish to minimize eddy current losses. Ventilation ducts are provided at intervals along the stator core, being formed by means of steel spacing bars securely welded to adjacent punching.

The stator winding has class "F" or higher insulation system. The stator winding is of multi-turn type, insulated throughout with epoxy resin, mica paper tape and glass tape insulation system. Each coil is made up of number of strands of glass braided copper of electrolytic quality, and of rectangular cross section, to minimise eddy current losses. Robots are used for insulation taping to maintain the uniformity and accuracy. The whole stator is Global Vacuum Pressure Impregnated (GVPI).



STATOR



SALIENT POLE TYPE ROTOR

SYNCHRONOUS & INDUCTION MACHINES

ROTOR CONSTRUCTION

The shaft of the rotor is made of Carbon steel .The forged shaft can be of solid forging or webbed shaft that is suitably stress relieved. The shaft is machined appropriately for the core and other components fitment.

The core is built with high grade CRNGO steel. Rotor construction varies based on the type of motor- For squirrel cage motor the rotor consists of Copper bars with Short circuit end rings and for slip ring motor the rotor consist of Copper windings with end connections.

Rotor Core is either solid or with vents to facilitate effective cooling and manage vibration levels especially for 2 pole machines.

In case of slip ring motors , the rotor is Vacuum impregnated and rotary cured.

The rotor and associated components are assembled on the rotor and balanced as per Standards / customer requirements. The complete assembled motor is designed and built to meet Vibration and Noise level as per the Standards/customer requirements.

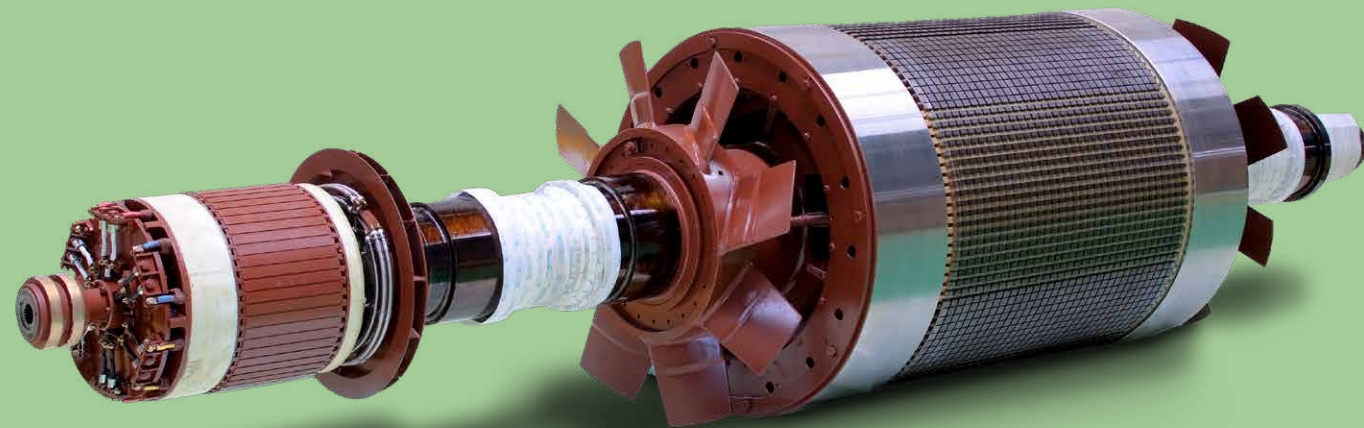
For high speed machines, the shrink rings are enforced and fitted on either sides of the windings/cage.

In synchronous machines, the polar wheel is shrink fitted on the shaft and wound poles are bolted / wedged depending on the speed and rating of machine.

TDPS designs and manufactures sliprings that are used in Generator/Motor wherever applicable.

EXCITER

TDPS can offer Brushless Excitation System as well as Static Excitation System depending on the application requirements.



CYLINDRICAL POLE TYPE ROTOR



SQUIRREL CAGE ROTOR

INDUCTION MOTORS

Key Features

- Range : Up to 20 MW
- Frame : 400 and above
- Voltage levels : Up to 15.75kV
- Speeds : Up to 3600RPM
- Frequency : 50/60Hz
- Insulation Class : F or H
- Temperature Rise : Class B or F
- Bearings : Antifriction / Sleeve / Thrust
- Protection : IP23 to IP68*
- Rotor : Cylindrical – Squirrel Cage/ Slip-Ring
- Inertia (GD2) : Designed to meet application
- Mounting : Horizontal / Vertical
- Cooling : Open type / CACW / CACA
- Installation : Safe Area / Hazardous
- Compatible for Variable frequency drive

* for submersible HT motors upto 2MW



SYNCHRONOUS MOTORS

Key Features

- Range : Up to 50 MW
- Voltage levels : Up to 15.75kV
- Speeds : Up to 3600RPM
- Frequency : 50/60Hz
- Insulation Class : F or H
- Temperature Rise : Class B or F
- Bearings : Antifriction / Sleeve / Thrust
- Protection : IP23 to IP55
- Rotor : Cylindrical / Salient
- Inertia (GD2) : Designed to meet application
- Mounting : Horizontal / Vertical
- Cooling : Open type / CACW / CACA
- Installation : Safe Area / Hazardous
- Excitation : Brushless / Static



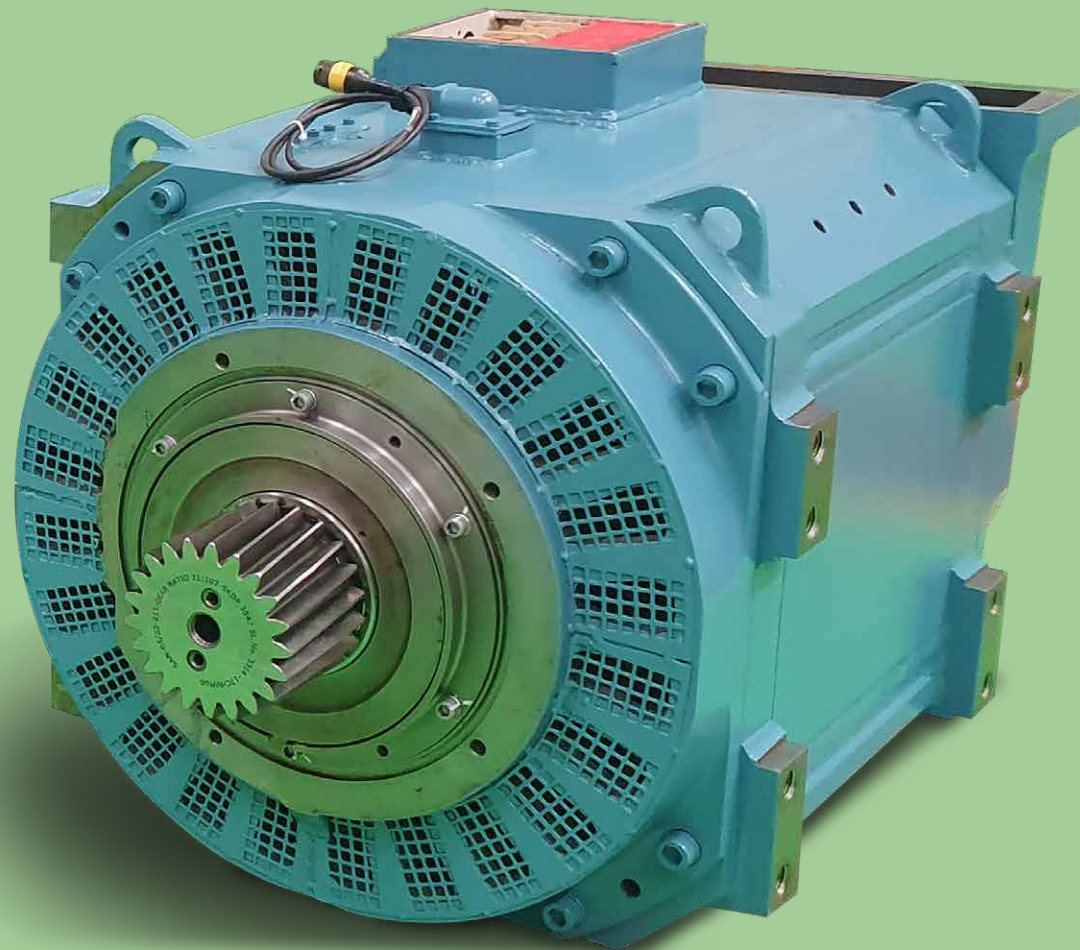
TRACTION MOTORS

Traction motors are the key components of complex propulsion systems that drive freight locomotives and passenger transit vehicles. Combining the best available technology with a superior manufacturing process, our traction motors are built to operate reliably no matter how challenging the application is.

TDPS provides traction motors for locomotives and EMU (Electric Multiple Unit) applications and can also custom-made motors as per customer requirements. Each motor is tailor-made to suit the operating conditions of each vehicle that it powers; enabling superior efficiency, low energy consumption and high reliability

Key features

- Range: Up to 1250KW
- Insulation class: F or higher
- Torque: High starting torque
- Cooling: Forced
- Design: Typical & Compact



TDPS IS GLOBAL

At TDPS, we focus on custom-designed generators and motors for customers who are based all over the world. Our installation base maps over 5700 machines in 101 countries across the globe. We ensure that you get a continued customer support with 57 service centers worldwide.

What customers can expect from our support teams across the world

- Onsite support in erection and commissioning.
- Training field technicians in commissioning, maintenance and trouble-shooting.
- Trouble-shooting assistance.
- Preventive maintenance activities at plant locations, and monitoring at regular intervals.
- Retrofit generator to match current site conditions.

Our global track record reflects a reputation for efficient project management, end-to-end execution and timely completion of projects. This experience has given TDPS the ability to adapt and operate in different work environments and complex power plant locations.

Service Centers



Installations

Afghanistan	China	Georgia	Jordan	Nepal	Rwanda	Togo
Albania	Colombia	Germany	Kazakhstan	Netherlands	Salvador	Tunisia
Algeria	Congo	Ghana	Kenya	Nicaragua	Saudi Arabia	Turkey
Argentina	Costa Rica	Greece	Kosovo	Niger	Sierra Leone	UAE
Armania	Croatia	Guatemala	Laos	Nigeria	Singapore	Uganda
Australia	Czech Republic	Guinea Bissau	Latvia	Norway	Solomon Islands	UK
Austria	Denmark	Honduras	Lebanon	Oman	South Africa	Ukraine
Bangladesh	Ecuador	India	Malaysia	Pakistan	South Korea	USA
Belarus	Egypt	Indonesia	Maldives	Panama	Spain	Vietnam
Belgium	Estonia	Iran	Mauritius	Peru	Sri Lanka	Yemen
Brazil	Ethiopia	Iraq	Mexico	Philippines	Sweden	Zambia
Bulgaria	Faroe Islands	Ireland	Morocco	Poland	Switzerland	
Burkina Faso	Fiji	Italy	Mozambique	Portugal	Taiwan	
Burundi	Finland	Ivory Coast	Myanmar	Romania	Tanzania	
Canada	France	Japan	Nauru	Russia	Thailand	

REPLACEMENT

With developing technology and continuous improvements generators today are able to provide higher outputs for the same input. TDPS specializes in custom designed, high efficiency compact solutions that can match the existing foot prints and consumptions. With our specialized custom design team, we can cater to all your requirements with world class deliveries and quick lead times.

TDPS has replaced more than 60 machines of various ratings of different make globally and the reference list for the same can be provided on request.

The following points shall be taken care during replacement jobs:

- Footprint
- Centre Height
- Shaft Extension
- Major Dimensions
- Terminals
- Technical Parameters
- Cooling Water Requirements
- Cooler Location
- Inertia
- AVR
- Lube Oil Requirements

RE-FURBISHMENT

With the excellent state-of-the-art facility, TDPS offers in-house refurbishment services of generators and motors.

We have a dedicated team of experts to offer various refurbishment services.

Refurbishment services

- Rewinding of stator and rotor coils
- Upgrading in insulation scheme
- Replacing of magnets and coils for wind generator
- Refurbishment of old machines



REPLACEMENT AT SITE



MACHINE UNDER REFURBISHMENT

OUR GENERATOR PORTFOLIO



Gas Engine Generators



Steam Turbine Generators



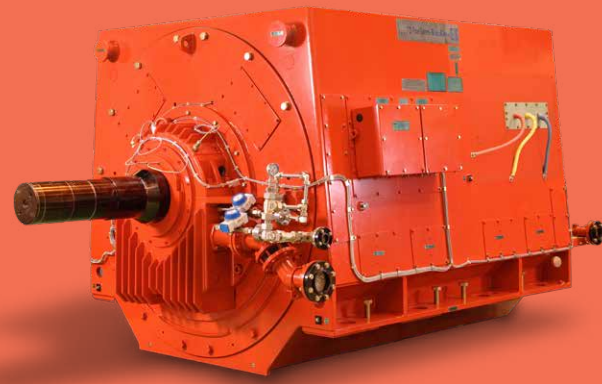
Hydro Turbine Generators



Wind Turbine Generators



Special Application Generators



Gas Turbine Generator

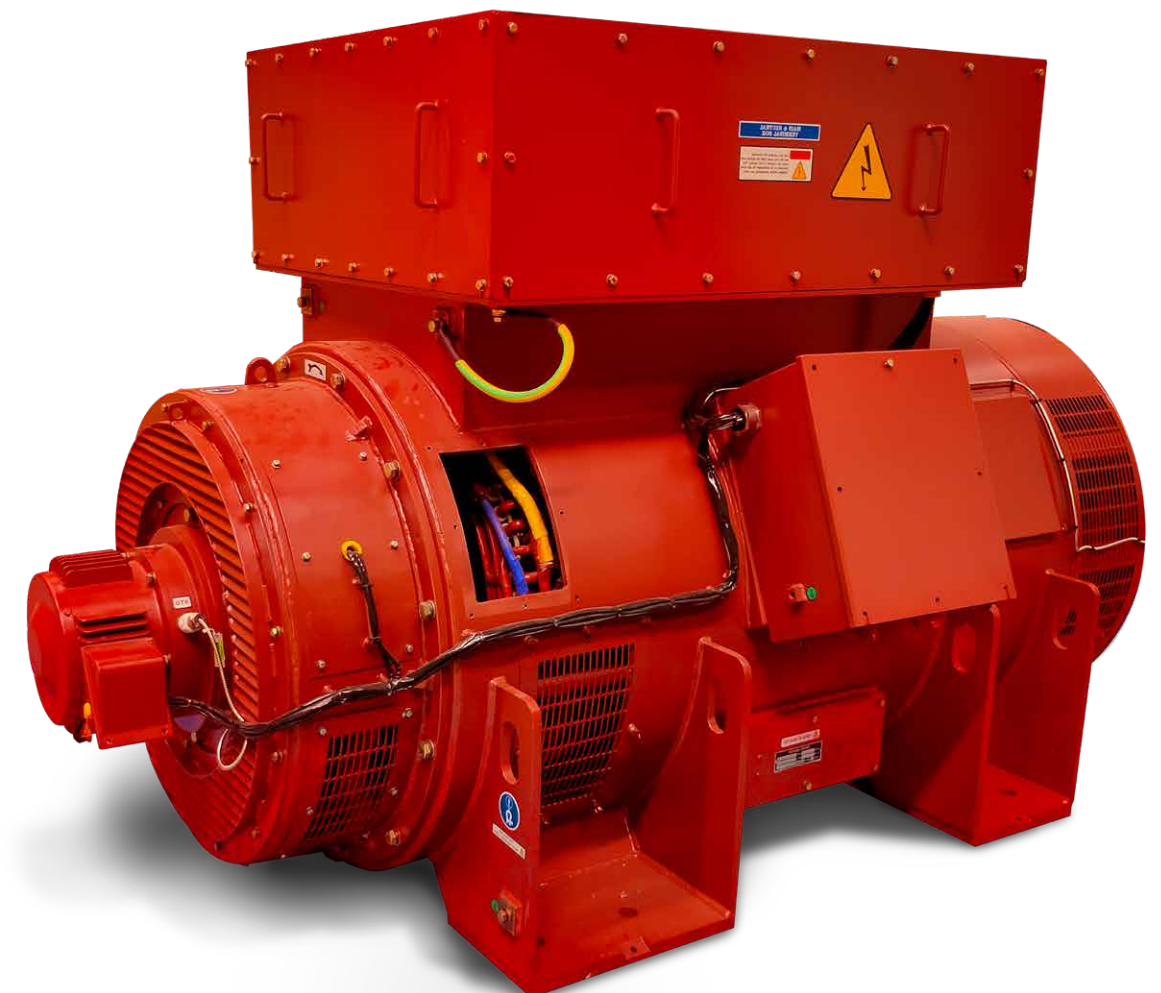


Diesel Engine Generators

SYNCHRONOUS GENERATORS

Key Features

- Range : Up to 200MW
- Voltage levels : Up to 15.75kV
- Speeds : Up to 3600RPM
- Frequency : 50/60Hz
- Insulation Class : F or H
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- Protection : IP23 to IP55
- Rotor : Cylindrical / Salient
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- Installation : Safe Area / Hazardous
- Excitation : Brushless / Static



CERTIFICATIONS AND ACCREDITATIONS

ISO Certifications

ISO 9001:2015 Quality Management System	ISO 14001:2015 Environment Management System	ISO 45001:2018 Occupational Health and Safety	ISO 3834-2 Welding

PRODUCT Certifications

DNV Wind Application	ATEX Hazardous Application	Lloyd's register/class NK Marine Application	AAR M-1003 American Railway	ISR Indian Register of Shipping

GLOBAL Certifications

CE/UKCA European Market	GOST-R/TRCU Russian Market	CSA Canadian Market	UL American Market	TSE Turkish Market (Made in Turkey)

* Grid code compliance - Country specific



TESTING FACILITY



tdps[®] is Quality



MANUFACTURING UNITS

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 Web: www.tdps.co.in

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 Nelamangala Taluk
 Bangalore Rural - 562111
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 Mail: tdps@tdps.co.in
 Web: www.tdps.co.in

TURKEY MANUFACTURING PLANT:

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 Kocaeli Gebze Dilovasi OSB
 4 Kisim, D-4009 Sokak, No: 5
 41455 Gebze/Kocaeli, Turkey
 GSM: +90 5522660185
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