

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

www.tdps.co.in

tdpsTM is

power

Manufacturers of
AC Generators upto 250MVA

TD Power Systems Limited

tdps is
improvements
growth
solutions
creativity
value
welfare
power
energy
empowerment
new
potential
ideas
you

TDPS IS INNOVATION

We are a young company – founded in 1999. Growth for us came from the efforts of our people – a team of competent and dedicated employees who took the company to a frontline position in the industry. Getting listed on the BSE and NSE in the year 2011 was another milestone that helped the company push this growth story forward.

At TDPS, we are constantly on the move - always working on improvements - in user markets, customer segments and other key focus areas such as product development, energy efficiency and reliable solutions.





TDPS IS SOLUTIONS

Over the years, TDPS has established itself as one of the leading AC generator manufacturers, delivering across a wide product spectrum - from 1 to 250MVA. Our AC generator range has been developed to cater to all prime movers such as steam turbines, gas turbines, hydro turbines, wind turbines, diesel and gas engines. Our product offering also has solutions for geothermal, solar thermal, motor, transformer and propulsion engine testing, oil & gas applications.

Since inception, the company has manufactured 4000+ generators with an aggregate output capacity of 29000+ MW. Our growing user base illustrates the success story of a young company with growth plans to become the world's leading generator manufacturer and solutions provider.



TDPS IS VERSATILE

TDPS has its own design for generators up to 68MVA and is a licensee of Siemens for 2-Pole generators from 75 MVA up to 250 MVA. We have two dedicated manufacturing units located in Bangalore, spanning an area of 122,371 square metres – with advanced facilities for design, development, production and testing. Both our manufacturing units are ISO 9001:2015 compliant.

Highlights of our production process and capability

- Precision machine shop can handle large components with lengths of 8m, widths of 2.5m, heights of 3m and weights of 35T - to very close tolerances.
- Automated coil shop and advanced quality control

procedures with strict compliance to process standards.

- Co-ordinate Measuring Machine from Zeiss, Germany - to measure components ranging from 3 meters on the x-axis, 6 meters on the y-axis and 2 meters on the z-axis - with a least count of zero point one micron. This machine can handle weights up to 20T.
- Our range of process equipment includes automatic coil taping machines, automatic coil spreading machines, GVPI plants for stator and rotor impregnation, rotor coil brazing unit and dynamic balancing machines that are capable of carrying out hot balancing even at overspeed.

TURBO GENERATORS

Steam turbine & Gas turbine generators from TDPS are used for base load applications in cogeneration power plants of cement, sugar, steel, paper, biomass, chemicals and other industries.

Typical operating conditions

- In power plants, Steam turbine generators utilized for captive power generation are also connected to the national grid, enabling excess power to be supplied back into the grid
- Criticality in operating conditions call for high efficiency and extra reliability.
- The generators are designed in compliance to the latest IEC standards suitable to meet S1 operating conditions.

TDPS has its own design for generators up to 68MVA and has a license with Siemens to manufacture generators from 75-250MVA.

Key Features

- Range: 1 – 250MVA
- Voltage levels: Up to 15.75kV
- Speeds: 1500/1800/3000/3600RPM
- Frequency: 50/60Hz
- Bearings: Antifriction/Sleeve
- Protection: IP23 to IP56
- Cooler: Top/Bottom/Side
- Cooling: TEWAC/TEAAC/DAC
- Termination: Side/Top/Bottom/Cubicle
- Shaft End: Cylindrical/Flanged
- Excitation: Brushless/Static
- Others: PMG, Slip Ring, etc.
- Installation: Hazardous/Non-hazardous
- Standards: IEC/NEMA/API/JIS



Generators with special voltage/ frequency requirements can be manufactured against customer specifications.

HYDRO TURBINE GENERATORS

Hydro turbine driven generators are located in remote places where accessibility and grid conditions are generally demanding. This calls for flexibility and ruggedness in electrical design for long operational life.

Typical operating conditions

- Our need-specific solution for these conditions are hydro generators operating in a speed range from 187rpm to 1800rpm and have the benefit of sophisticated design and manufacturing inputs.
- The direct mounting of the turbine on the generator shaft calls for precise machining of the shaft extension. This can be achieved in our world class machine shop with machinery from Spain, and the largest CMM machine in South Asia.
- The column of water powering the turbine imparts a huge load on the generator bearings calling for special oil lubrication and rugged design to ensure mechanical strength and stability during extreme conditions.
- Any failure in the controlling valves of the turbine can drive the generator upto three times the rated speed, referred to as runaway speed, testing its mechanical rigidity and optimum balance.

Our current line meets the stringent requirements suitable for coupling with Pelton, Francis and Kaplan turbines. Design support for each of these product lines calls for function-specific parameters based on installation criteria and application requirements.

Key Features

- Range: 1 – 40MVA
- Orientation: Horizontal/Vertical
- Voltage levels: Up to 15kV
- Speeds: 187 to 1800RPM
- Frequency: 50/60Hz
- Bearings: Antifriction/Sleeve
- Protection: IP23 to IP54
- Cooler: Top/Bottom/Side
- Termination: Side/Top
- Shaft End: Cylindrical/Flanged
- Rotor: Cylindrical/Salient
- Excitation: Brushless/Static
- Others: PMG, Slip Ring etc.
- Standards: IEC/NEMA/JIS



DIESEL ENGINE GENERATORS

Diesel engine generators are used for peak load demands and find wide application in critical installations such as emergency/back up power plants in hospitals, airports, satellite research centers, data farms, and manufacturing plants involving critical processes.

Typical operating conditions

With diesel engine generators, the reciprocating engine transfers very high cyclic loads to the generator resulting in high vibrations. These vibrations need to be effectively absorbed by the generator, calling for specialized design in rotor and stator. Rotor dynamics and stator analysis are carried out using latest finite element analysis softwares.

Key Features

- Range: 1 – 32MVA
- Voltage levels: Up to 15kV
- Speeds : 187 to 1800RPM
- Frequency: 50/60Hz
- Insulation Class: F
- Ambient temperature: 40Deg C and can be customized as per site requirement
- Temperature Rise: F or B
- Bearings: Antifriction/Sleeve
- Protection: IP23 to IP54
- Termination: Side/Top/Bottom
- Shaft End: Cylindrical/Flanged/SAE Flange
- Rotor: Cylindrical/Salient
- Excitation: Brushless/Static
- Others: PMG, Slip Ring, Machine mounted AVR etc.



GAS ENGINE GENERATORS

With the renewing emphasis on green energy, there is a need to develop gas engine generators for prime power application – calling for stringent design specifications and a specialized manufacturing process.

Typical operating conditions

- High vibrations from reciprocating engines and continuous cyclical stress can impact the winding and all mechanical parts resulting in fatigue .
- Manufacturers of gas engines have critical requirements, including global grid code compatibility and end use in varied environments

Using our own technology, we have developed generators to meet specific needs in critical operating environments across the globe.

Key Features

- Range: 1 – 32MVA
- Voltage levels: Up to 15kV
- Speeds: 187 to 1800RPM
- Frequency: 50/60Hz
- Bearings: Antifriction/Sleeve
- Protection: IP23 to IP54
- Termination: Side/Top/Bottom
- Shaft End: Cylindrical/Flanged/SAE Flange
- Rotor: Cylindrical/Salient
- Excitation: Brushless/Static
- Others: PMG, Slip Ring etc.



WIND TURBINE GENERATORS

Eco friendly power generating solutions have now taken center stage considering the concessions provided by governments all over the world to support alternative energy sources.

Our dedicated state of the art manufacturing facilities for wind turbine generators are able to deliver high quality products with quicker lead times. Our highly sophisticated

test set up is capable of carrying out load tests that ensure 100% reliability on site. TDPS caters to the global market by offering two solutions. PMG type and Synchronous Type generators, which are built as per customer specifications and compliant with global standards.



TDPS IS GLOBAL

At TDPS, we focus on custom-designed generators for customers who are based all over the world. Our installation base maps 4000+ generators working in 93+ countries across the globe. Supporting the vast installation base is a well-established network of service partners in 22 countries.

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.

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.

Service Centers



Installations

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

tdps delivers value

TDPS IS IDEAS

TDPS has a consistent R&D focus to address changing market conditions, internal design objectives and customer needs. Working towards this we have made strategic investments in software labs, test and evaluation facilities, training, and process integration. Our focus here also extends to new applications for emerging segments in power generators.

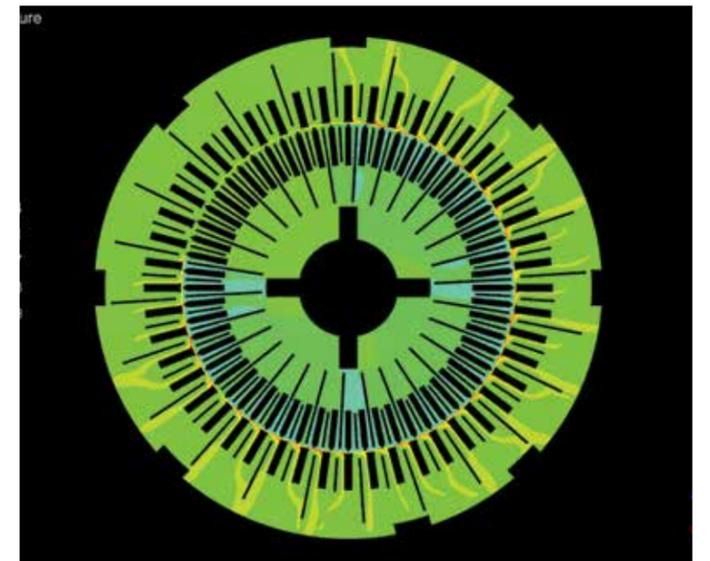
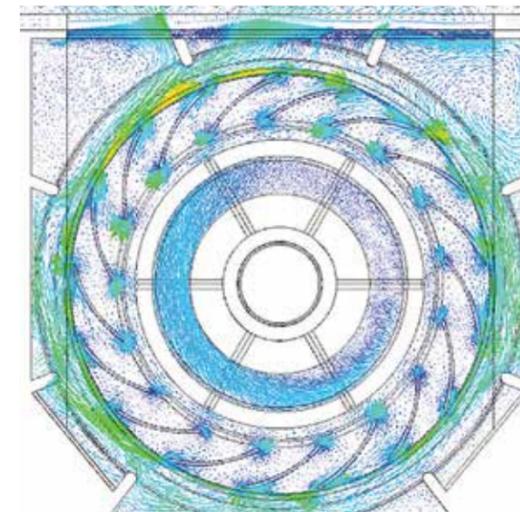
Innovations from our R&D cell

- State of the art insulation systems for medium voltage application.
- Air flow systems to optimize generator performance.
- Material selection to provide highly efficient compact solutions.

TDPS IS EMPOWERMENT

TDPS fosters an excellent work environment - where passion to succeed, commitment to quality and team spirit is our way of life. Today, each of our core functions is headed by experienced professionals who are committed to sharing their experiences, with each and every one at TDPS. Experienced management and technical teams contribute to the growth of our operations and the development of in-house processes and competencies.

Our management team also has the responsibility of inspiring and managing new business drivers, technology partnerships and new product development - augmenting existing facilities and planning for the future. Our engineering teams are strong support arms that help meet challenging targets every time.



ANSYS

TDPS IS
RESPONSIVE



TDPS has in place a rigid quality assurance policy aimed at achieving the following:

- Sustained management of quality processes and levels.
- Improvements in interface systems to optimize customer satisfaction.
- Improvements in processes linked to supplier performance.
- Improvements in systems to ensure on-time delivery.
- Improvements in materials and process planning to reduce wastage.

TDPS IS
TOMORROW

In line with ISO 14001, the generator's design and manufacturing principles are based on environmental sustainability and waste reduction.

High electrical efficiency enables energy consumption to be reduced under any operating conditions. The generator's innovative design concept and carefully selected materials also enable component recycling to be maximized and raw material utilization to be reduced.



Integrated management system :



ISO 3834-2



ISO 9001:2015



ISO 14001:2015



ISO 45001:2018



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