

HV/MV Equipment

Power Transformers



Power Transformers

Low maintenance, high performance, digital and environmental-friendly designs

GE's comprehensive suite of power transformers support a wide range of voltage levels with applications in generation, transmission and distribution. GE offers a wide variety of power transformers from medium to ultra-high voltage (1200 kV AC and ± 1100 kV DC) and from small (5 MVA) to very large power ratings (2750 MVA).

Our product lines include conventional, special transmission such as phase-shifting, SVC, HVDC, low maintenance and reactors, as well as green power transformers. GE's power transformers provide exceptional performance, quality and reliability with digitized protection and monitoring schemes and advanced design and testing capabilities.

For specific North America offering



Power & Auto Transformers

To utilities and industrials, Prolec GE power and auto transformers are the product of choice because they deliver the reliability and performance required due to their design, manufacturing and support characteristics. These characteristics aid our customers in offering the best level of energy supply.





High voltage transmission networks must transfer large bulks of electrical energy from generating power plants to distribution substations. For those applications, autotransformers can be used to effectively lower or increase the different voltage levels across the interconnection system.

Prolec GE Autotransformers are used by utilities worldwide, confident that the advanced simulation tools we utilize for our designs result in outstanding quality and reliability.

Key Characteristics:

- Up to 1000 MVA
- Rated Voltage up to 550 kV AC
- OLTC, DETC or combination of both
- Mineral, vegetable or synthetic oil



Substation Transformers are designed for use in substations that typically reduce voltage to a level suitable for local distribution, with ratings matched to common transmission and sub transmission voltages like 138 kV. They can be designed either for SVC Substations or special applications.

With the ability to understand these particular needs and design accordingly we rely on our manufacturing systems and advanced technology to deliver decades of reliable performance and service.

Our state-of-the-art facility gives us the capability to manufacture and test above industry standards using cutting-edge equipment so we can provide reliable products across the entire range of substation transformer applications.

Key Characteristics:

- Up to 500 MVA
- Rated Voltage up to 550 kV AC
- OLTC, DETC or combination of both
- Mineral, vegetable or synthetic oil



Shunt reactors are the most compact and cost efficient means of compensating capacitive generation in long transmission lines. They are placed permanently in service to stabilize power transmission, or switched in under light load conditions.

Neutral grounding reactors are designed to protect a system against phase-earth fault currents for a given fault time duration. Neutral-reactor grounding has a relatively low-impedance, somewhere between direct grounding an isolated neutral, limiting the failure current to a secure level without involving too high voltage on the healthy phases.

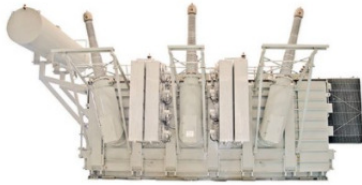
Prolec GE designs and manufactures both types of reactors to meet our customers' needs.

Shunt Reactor

- Up to 50 MVAR, 1Ø
- Voltage up to 400 kV AC
- 60 Hz

Neutral Reactor

- Up to 5 MVAR, 1Ø
- Voltage up to 75 kV AC



GSU Transformers are used worldwide to raise voltages coming from power generation plants, including thermal, nuclear, and hydroelectric. Typical configurations require a Delta connected LV winding to induced currents in the Generator and Wye connected HV windings to connect to the transmission lines.

Prolec GE Generator Step-Up Transformers are manufactured under the most stringent standards that when combined with high quality materials and components surpass our customer's expectations.

Key Characteristics:

- Up to 1000 MVA
- Rated Voltage up to 550 kV AC
- OLTC, DETC or combination of both
- Mineral, vegetable or synthetic oil

Typically, each wind turbine or solar panel is connected to a three phase step-up transformer (located at the base of the wind turbine or panel) which boosts the generating output to a collector bus. From there, all the power is then interconnected to a **Collector Step-Up Transformer** located in a substation where it is transported to the electricity grid.

Prolec GE CSU's are designed with the best practices to withstand any electronic noise coming from the inverter technology used in wind turbines or solar panels.

Key Characteristics:

- Up to 500 MVA
- Rated Voltage up to 345 kV AC
- OLTC, DETC or combination of both
- Mineral, vegetable or synthetic oil



Individual solutions for worldwide needs

Experience and resources to build the right solutions for you

With more than 30 years of experience, Prolec GE knows how to build reliable transformers. But we give you more than high-quality hardware, because we also know how to work with customers to design, build, test, install and maintain transformer solutions that outperform your expectations for a lifetime.

We became one of the world's largest transformer suppliers by focusing our unsurpassed resources on identifying and addressing our customers' challenges, today and into the future. With transformers installed in nearly 40 countries on five continents, we know what it takes to meet your power needs anywhere on the planet.

We can make Power Transformers work better for you.



A complete line of Power Transformers

The breadth and depth of our design and manufacturing capabilities make Prolec GE your one-stop choice for any power transformer need.

Our line includes:

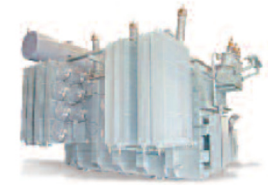


Generator Step Up Transformers

- 1000 MVA 3 ϕ or 500 MVA 1 ϕ
- 550 kV (1675 kV BIL) ● 50 or 60 Hz
- LTC or DETC in HV

Transformer technology, manufacturing expertise and top-grade materials – delivering every day

Our state-of-the-art manufacturing and testing operations are among the top facilities in the world. A completely new manufacturing bay completed in 2009 gives Prolec GE even greater capabilities. With the very latest manufacturing advances and leading-edge testing, we can build performance and reliability advantages into every transformer.



“Quality control and continuous improvement is part of everybody’s job.”



Autotransformers

- 1200 MVA 3Φ or 600 MVA 1Φ
- 550 kV (1675 kV BIL) ● 50 or 60 Hz
- LTC in HV or LV, or DETC in HV

Substation & Auxiliary Transformers

- 1000 MVA 3Φ or 500 MVA 1Φ
- 230 kV (1050 kV BIL) ● 50 or 60 Hz
- LTC in HV or LV, or DETC in HV

Shunt & Neutral Reactors

- 50 MVAr 1Φ
- 550 kV (1450 kV BIL)
- 50 or 60 Hz

Complete range of turnkey services

You can trust Prolec GE with every aspect of your transformer solution for accountability and continuity advantages. Your project team coordinates and orchestrates your entire transformer package, including:

- Rigging and Mobilizations
- Transportation
- Installation
- Storage Preparation
- Field Services
- Maintenance
- Training
- Condition Assessment
- Spare Parts



COMPLETE SERVICE



"Our customers are satisfied because we never are. Rigorous quality control, from design through manufacturing, testing and installation, keeps a close eye on every element. Our internal standards exceed our ISO 9000 certification requirements. We know you can't afford product failure, so neither can we."