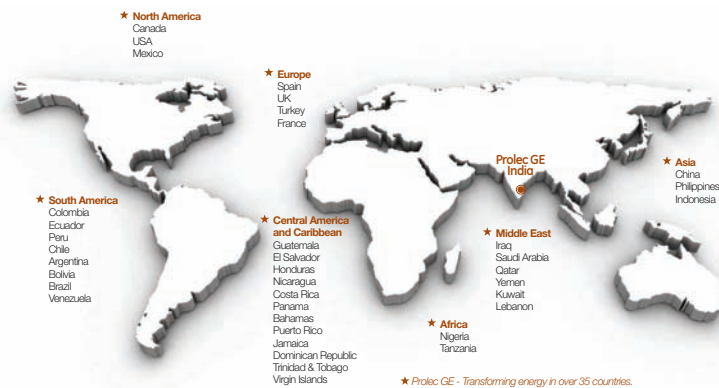




Transmission Power Transformers



With more than 300,000 MVA installed worldwide in over 35 countries around the world, Prolec GE has the engineering and manufacturing expertise to design, build, optimize and deliver solutions to the electric industry.



Electric power transmission is the bulk transfer of electrical energy, from generating power plants to substations located near population centers. Transmission lines, when interconnected with each other, become high voltage transmission networks.

We offer a wide range of Autotransformers, Shunt Reactors, Transformers for FACTS applications such as SVC and VFT, which are needed to lower or increase the voltages used in transmission lines, and to interconnect systems that operate at different voltage classes. Our products are used by utilities worldwide.

Prolec GE offers a complete line of liquid-filled power transformers with:

- 1000 MVA 3 ϕ or 500 MVA 1 ϕ
- 550 kV (1675 kV BIL)
- 50 or 60 Hz
- LTC or DETC in HV
- Low noise level NEMA – 25 dBA

Prolec GE transformers are used in a wide range of utility, commercial and industrial applications. High-grade materials, combined with state-of-art technology in our design and manufacturing systems are key elements of a transformer that will deliver years of high reliability service.

Standard features

- Meets or exceeds current ANSI, IEEE, CSA and IEC standards
- Load tap changers
 - Reactive vacuum
 - Resistive
- Cooling classes
 - ONAN
 - ONAF
 - ODAF
- Cover mounted bushings
- Tank features
 - Lifting lugs
 - Pulling eyes
 - Radiator header valves
 - Jacking bosses
- Accessories
 - Pressures relief device
 - Magnetic liquid level gage
 - Winding temperature indicator
 - Pressure vacuum gage & bleed valve
 - Drain valves – global type
 - Nameplate
 - Removable radiator
 - Manholes in cover (2)
 - Transformer oil, ASTM type I
 - Sealed tank oil preservation systems
 - External core ground bushing
 - HV tap changer, de-energized operation

Optional features & accessories

- Low noise level NEMA – 25 dBA
- Cooling fans
- On load tap changer HV or LV, in tank or external
- Multi-ratio current transformer
- Automatic gas preservation systems
- Rapid pressure rise relay
 - Under oil
 - In gas space
- Lighting arresters
- Transformer oil, ASTM type II
- Side mounted bushings \leq 34.5 kV
- Conservator oil system
- Buchholz relay for conservator
- Forced oil cooling equipment
- Provisions only for safety rails
- Provisions for lighting arresters
- Schnabel preparation
- Vegetable oil
- Extra low gas generation during factory tests (over 75% lower than industry standards)

Tests

Each transformer receives all standard commercial tests in accordance with ANSI, IEEE, CSA and IEC, with test reports available by serial number of the transformer.

- Polarity of windings & angular displacement
- Ratio
- No-load loss & exciting current
- Load loss & impedance
- Lighting impulse (class II)
- Low-frequency dielectric tests
 - Applied voltage tests on all windings
- Insulation power factor (class II)
- Induced tests
- Partial discharge in microvolts (class II)
- Partial discharge in picocoulombs (class II)
- Dissolved gas analysis (class I)
- Temperature rise
- Zero phase sequence
- Front of wave
- Switching surge

Reactors

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.

Shunt reactors can be:

- Up to 50 MVAR (1 ϕ)
- 400 kV (1425 kV BIL)
- 50 or 60 Hz

Prolec GE know-how and experience in the field of shunt reactors provides low vibration and noise levels. Our manufacturing sites are equipped with the necessary testing means for shunt reactors.

SVC (Static Var Compensator)

We supply transformers for SVC operations. An SVC is a device that provides variable impedance, which is achieved by combining elements that have fixed impedances with controllable reactors. This combination is capable of balancing active power flow.

Prolec GE offers a complete line of SVC transformers with:

- 1000 MVA 3 ϕ or 500 MVA 1 ϕ
- 550 kV (1675 kV BIL)
- 50 or 60 Hz

Technology development

Research and development is a priority at Prolec GE. Our Applied Technology Center boasts more than 80 engineers and specialists developing multi-generational product plans, design platforms, and continuous improvement processes. Their expertise and efforts make our customers' operations more reliable, efficient and environmentally sound.

We also draw technology expertise and ideas from our partners, including GE and its worldwide technology resources, our suppliers, customers, consultants, and university centers.

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

For more information about Prolec GE India, go to: www.prolecge.in

