Transformer solutions across the grid
Generating, distributing and controlling electricity requires proven expertise, in-depth understanding, worldwide experience and a commitment to customer responsiveness. That’s what you get with Prolec GE.

Our products are developed, tested, deployed and continually improved with a focus on delivering reliable, customer-focused performance. And a key to that performance is a relentless commitment to quality.

Our quality systems are based on solid fundamental processes. Key elements of our Total Quality Model include:

- **TQM** – Total Quality Management
- **TPS** – Toyota Production System
- **KDS** – Knowledge Dispersion System
- **Six Sigma** Tools

These world-class quality systems ensure reliable, safe, durable, and environmentally responsible products that meet real customer needs. Enhancing these sound fundamentals with ongoing research and development, global best practices, and continuous process improvement gives you world-class performance in every product and every procedure.

Our processes and products have been certified as meeting or exceeding major international quality standards, including:

- ISO 9001 – 2000
- ISO 14001 – Environmental Certifications
- UL

Thanks to our dedication to quality, the entire Prolec GE line performs precisely as promised. Helping you generate, distribute and control electricity anywhere on the planet.

Tell us what you need, and we’ll deliver for you.

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**Better quality means better performance**

“The one thing you never get from Prolec GE is surprises. They do what they say they’ll do and their products perform as promised.”
Prolec GE designs and manufactures a complete line of single-phase pole-type distribution transformers for installation on utility overhead systems. These highly reliable transformers are available in a wide variety of ratings and accessory combinations.

We utilize state-of-the-art technology in our design and manufacturing systems, supported by our ISO-9001 certified processes and quality assurance programs, to provide you with reliable and cost-effective transformer products matched to your system requirements.

### Product scope / Standard features

- **Rating**
  - 10, 15, 25, 37.5, 50, 75, 100, 167 kVA
- **High Voltage**
  - 4160 GrdY/2400 to 34500 GrdY/19920
  - or 2400 to 19920 (Dual voltages available)
  - BIL: 60 kV to 150 kV
- **Low Voltage**
  - 240/120 and 480/240
- **Meets or exceeds current RUS, NEMA and ANSI Standards C57.12.00, ANSI C57.12.20 as applicable**
- **Mild steel tank with welded lifting lugs and hanger brackets for direct-to-pole mounting**
- **Single piece clamped cover band meets cover retention requirements of applicable ANSI standards**
- **Electrostatically applied polyester powder paint system for superior corrosion protection**
- **High-voltage porcelain cover-mounted bushings**
  - (wall mounted for units with high voltage 4160 or below)
- **Tank wall mounted porcelain or polymer low-voltage bushings**
- **Tin-plated bronze terminals for connection to copper or aluminum**
- **Low-voltage ground provisions**
- **Tank ground provision**
- **Insulated cover for wildlife protection**
- **Laser engraved aluminum nameplate**
- **Non-PCB insulating oil**
- **KVA rating on tank wall**
- **Arrester mounting nuts welded to tank**
  - (single bushing designs)
- **One HV bushing with tank ground strap for grounded wye applications or two HV bushings for wye applications**
- **Recessed tank bottom**
- **Broad selection of design efficiencies to meet specific customer applications and new DOE minimum requirements**

### Optional features

- **Automatic pressure relief valve**
- **High-voltage taps with external tank mounted no load tap changer**
- **Dual high-voltage ratings (not available with taps)**
- **Connectors for grounding**
- **Stencils and labels according to customer requirements**
- **External tank mounted high-voltage lightning arrester**
- **Low-voltage circuit breaker with reset (and optional overload signal light)**
- **Internal high-voltage expulsion fuse**
- **Under oil arrester**
- **External low-voltage surge arrester**
- **Interlaced secondary windings (through 50 kVA ratings)**
- **RUS compliant 1 bushing designs with double hanger bracket configuration (through 50 kVA)**
- **Stainless steel tank, cover, clamping band**
- **Extra creep options for high-voltage bushings**
- **Variety of features available for wildlife protection**
- **Magnex™**

### Tests

All transformers are tested in strict accordance with the latest revision of applicable ANSI™, IEEE™, NEMA, and RUS with test reports available by serial number of the transformer.

**Routine tests are:**

- Leak test
- Polarity and phase relation
- Resistance
- No-load losses and excitation current
- Load losses and impedance
- Applied voltage
- Induced voltage
- Full wave impulse
- Ratio test
Porcelain high-voltage bushings (expulsion fuse internally mounted in self-protected unit)

Cover band

Lifting lug

Low-voltage bushings

Copper ground strap

High-voltage lightning arrester*

Oil fill plug

Welded hanger brackets

De-energized operation tap changer

Nameplate

* Accessories for self-protected units

Popular configurations

Double hanger bracket one high-voltage bushing conventional unit.

Single hanger bracket two high-voltage bushings conventional unit.

Single hanger bracket one high-voltage bushing self protected unit.

For more information contact your local GE Sales Representative or visit our website at www.prolecge.com

Phone: Toll free 1 800-437-7653 (US & Canada) / +52 (81) 8030-2341 (Mexico) / Fax: +52 (81) 8030-2323 or 2325
Prolec GE manufactures a complete line of single-phase pad-mounted distribution transformers designed to provide the features, performance and aesthetics needed for modern underground residential applications.

We utilize state-of-the-art technology in our design and manufacturing systems, supported by our ISO-9001 certified processes and quality assurance programs.

### Optional features
- High-voltage no load tap changer
- Dual high-voltage ratings (not available with taps)
- Complete stainless steel tank and cabinet or combination of components with mild steel and stainless steel
- High-voltage, load-break 2 positions or sectionalizing switch
- Multiple fusing options and combinations, including internal and external expulsion fuse in series with isolation link or partial range current limiting fuse
- Low-voltage circuit breaker
- Under oil arrester
- Drain valve with sampling device
- Hold-down cleats
- Connectors for ground pads
- Stencils and labels according to customer needs
- Magnex™
- Certification available

(For optional accessories or features not listed above, please contact your GE sales representative).

### Tests
- All transformers are tested in strict accordance with the latest revision of applicable ANSI™, IEEE™, NEMA, and RUS with test reports available by serial number of the transformer

Routine tests are:
- Polarity and phase relation
- Resistance
- No-load losses and excitation current
- Load losses and impedance
- Applied voltage
- Induced voltage
- Full wave impulse
- Ratio test
- Leak test
Mini-Pad (ANSI Type II)

Prolec GE’s Mini-Pad transformers are designed for single-phase residential underground applications where aesthetics and size are important. They meet all applicable ANSI Standard C57.12.38 Type II requirements for cross-cable configuration. Transformers feature loop feed two bushing dead-front primary designs. Ratings are 10 kVA through 167 kVA single-phase, 34.5 kV GrdY and below. Standard voltage ratings as well as dual voltages are offered.

Maxi-Pad (ANSI Type I)

Prolec GE’s Maxi-Pad transformers offer the same tamper-resistant features and accessibility as the Mini-Pad transformer while allowing straight cable configuration with only a small increase in height. The Maxi-Pad is available in 10 kVA through 167 kVA with the same broad range of voltages and optional accessories as the Mini-Pad. This product meets ANSI Standard C57.12.38 Type I requirements.
Prolec GE offers a complete line of liquid-filled Three-Phase Pad-Mounted distribution transformers that meet applicable IEEE standards. These transformers are specifically designed for commercial and residential applications, such as hotels, hospitals, universities, among others. Our transformers are designed for outdoor installation with cabinets meeting C57.12.34 & C57.12.28.

Prolec GE Three-Phase Pad-Mounted Transformers use aluminum or copper windings and are optimized to maximize efficiency and footprint.

Standard offering

- Rating
  - Up to 3,750 kVA ONAN
- High Voltage
  - Up to 34,500 V Delta or Wye Connected
  - BIL up to 200 kV
  - Loop feed
  - Dead front
  - Bushing wells
- Low Voltage
  - Up to 1200 V Delta or Wye Connected
  - BIL up to 60 kV
- Frequency: 60 Hz
- 5-legged Core
- Temperature rise: 65°C
- Cooling class: ONAN
- Insulating fluid: Mineral oil
- Impedance: per C57.12.34
- Altitude: 3,300 FASL
- Mild steel tank & cabinet
- Powder paint system; Color: Green Munsell 7GY 3.29/1.5 or ANSI 70
- Built to all applicable IEEE C57.12.34
- Operation Step down
- Windings per Prolec GE standard

Optional features

- Rating 3,750 – 5,000 kVA
- High Voltage
  - Copper windings
  - Tap changer with 7 positions
  - Radial feed
  - Live front
  - Bushing wells + Inserts
  - Tap changer: ± 2, 2.5%
  - Integral bushing
  - Porcelain bushing
- Low Voltage
  - Copper windings
  - Epoxy, 2 pieces bushings, up to 12 holes blade
  - Epoxy, 1 piece bushings up to 12 holes blade
- Frequency: 50 Hz
- Temperature rise: 55°C, 55/65°C
- Cooling class: KNAN
- Insulating fluid: Natural ester fluid (VG-100 or FR3)
- Impedance per customer request
- Electrostatic shield
- Altitude up to 14850 FASL
- Internal switch
- Bay-O-Net expulsion fuses + current limiting fuses
- Under-oil internal arrester
- Stainless Steel 409 tank & cabinet
- Stainless Steel 304 tank & cabinet
- Infrared window
- Powder paint system & liquid finish color per customer request
- Seismic designs IBC Certified
- Operation Step-Up
### Standard voltages

<table>
<thead>
<tr>
<th>Delta or Wye</th>
<th>Minimum BIL (kV)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2400</td>
<td>45</td>
</tr>
<tr>
<td>4160</td>
<td>60</td>
</tr>
<tr>
<td>4800</td>
<td>60</td>
</tr>
<tr>
<td>7200</td>
<td>75</td>
</tr>
<tr>
<td>7620</td>
<td>75</td>
</tr>
<tr>
<td>12000</td>
<td>95</td>
</tr>
<tr>
<td>12470</td>
<td>95</td>
</tr>
<tr>
<td>13200</td>
<td>95</td>
</tr>
<tr>
<td>13800</td>
<td>95</td>
</tr>
<tr>
<td>16340</td>
<td>95</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Grounded Wye</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>4160GrdY/2400</td>
<td>65</td>
</tr>
<tr>
<td>12470GrdY/7200</td>
<td>95</td>
</tr>
<tr>
<td>13200GrdY/7620</td>
<td>95</td>
</tr>
<tr>
<td>13800GrdY/7970</td>
<td>95</td>
</tr>
<tr>
<td>22860GrdY/13200</td>
<td>125</td>
</tr>
<tr>
<td>23900GrdY/13800</td>
<td>125</td>
</tr>
<tr>
<td>24940GrdY/14400</td>
<td>125</td>
</tr>
<tr>
<td>34500GrdY/19920</td>
<td>150</td>
</tr>
</tbody>
</table>

### Standard ratings

<table>
<thead>
<tr>
<th>Standard kVA Ratings</th>
</tr>
</thead>
<tbody>
<tr>
<td>45</td>
</tr>
<tr>
<td>75</td>
</tr>
<tr>
<td>112.5</td>
</tr>
<tr>
<td>150</td>
</tr>
</tbody>
</table>

### Overall typical dimensions for reference

<table>
<thead>
<tr>
<th>kVA</th>
<th>Height</th>
<th>Width</th>
<th>Depth</th>
<th>Typ Weight (Lb)</th>
<th>Typ Gal Oil</th>
</tr>
</thead>
<tbody>
<tr>
<td>75</td>
<td>66</td>
<td>46</td>
<td>65</td>
<td>2,550</td>
<td>136</td>
</tr>
<tr>
<td>112.5</td>
<td>66</td>
<td>46</td>
<td>65</td>
<td>2,750</td>
<td>145</td>
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<tr>
<td>150</td>
<td>69</td>
<td>46</td>
<td>66</td>
<td>2,900</td>
<td>145</td>
</tr>
<tr>
<td>225</td>
<td>69</td>
<td>50</td>
<td>69</td>
<td>3,500</td>
<td>164</td>
</tr>
<tr>
<td>300</td>
<td>69</td>
<td>53</td>
<td>71</td>
<td>3,800</td>
<td>171</td>
</tr>
<tr>
<td>500</td>
<td>74</td>
<td>62</td>
<td>70</td>
<td>5950</td>
<td>284</td>
</tr>
<tr>
<td>750</td>
<td>75</td>
<td>72</td>
<td>72</td>
<td>6,950</td>
<td>275</td>
</tr>
<tr>
<td>1000</td>
<td>78</td>
<td>75</td>
<td>75</td>
<td>7,800</td>
<td>315</td>
</tr>
<tr>
<td>1500</td>
<td>83</td>
<td>80</td>
<td>83</td>
<td>10,600</td>
<td>375</td>
</tr>
<tr>
<td>2000</td>
<td>86</td>
<td>85</td>
<td>89</td>
<td>12,000</td>
<td>440</td>
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<tr>
<td>2500</td>
<td>87</td>
<td>88</td>
<td>96</td>
<td>14,000</td>
<td>490</td>
</tr>
</tbody>
</table>

For kVAs not listed, contact factory.

Dimensions and weights are approximate and subject to change without notice and should not be used for construction purposes.

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For more information contact your local GE Sales Representative or visit our website at [www.prolecge.com](http://www.prolecge.com)

Phone: Toll free 1 800-437-7653 (US & Canada) / +52 (81) 8030-2341 (Mexico) / Fax: +52 (81) 8030-2323 or 2325

Standards and certifications available

- UL Listed
- CE Marked
- IEC 60 044-1 Listed
- ecomagination

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3PPMTR-0417-06
Step Up Transformers for Solar Energy Applications

Product scope / Standard features
• Rating
  - Up to 4,000 kVA Single Low Voltage winding
  - Up to 2,800 kVA Dual Low Voltage winding
• High Voltage
  - Aluminum windings
  - Up to 34,500 V Delta or Wye Connected
  - BIL up to 200 kV
  - Tap changer: ± 2, 2.5%
  - Loop feed
  - Dead front
  - Bushing wells
• Low Voltage
  - Aluminum windings
  - Up to 1200 V Delta or Wye Connected
  - BIL up to 60 kV
  - Epoxy 2 piece-bushings with 4-holes blade
• Frequency: 60 Hz
• 5-legged Core
• Electrostatic shield
• Temperature rise: 65°C
• Cooling class: ONAN
• Insulating fluid: Mineral oil
• Impedance: 5.75% ± 7.5%
• Impedance between Low Voltage windings > 8%
• Altitude: 3,300 FASL
• Bay-O-Net expulsion fuses plus partial-range current limiting fuses
• Mild steel tank & cabinet
• Powder paint system; Color: ANSI 70 or Green Munsell 7GY 3.29/1.5
• Built to all applicable IEEE C57.12.34

Optional features
• High Voltage
  - Copper windings
  - Tap changer with 7 positions
  - Radial feed
  - Live front
  - Bushing wells + Inserts
  - Integral bushing
  - Porcelain bushing
• Low Voltage
  - Copper windings
  - Epoxy, 2 pieces bushings, up to 12 holes blade
  - Epoxy, 1 piece bushings up to 12 holes blade
• Frequency: 50 Hz
• Temperature rise: 55°C, 55/65°C
• Cooling class: KNAN
• Impedance per customer request, ± 7.5%
• Impedance between Low Voltage > 10%
• Altitude up to 14850 FASL
• Internal switch
• Bay-O-Net expulsion fuses + current limiting fuses
• Under-oil internal arresters
• Stainless Steel 409 tank & cabinet
• Stainless Steel 304 tank & cabinet
• Infrared window
• Solar duty calculation
• Seismic designs IBC Certified

Standards and certifications available

Prolec GE offers step up transformers specifically designed for Solar Power Generation applications. Operational characteristics include thermal design for higher ambient temperature ranges, and core and coils designed for step up application with an electrostatic shield to protect against electrical noise coming from the grid and the inverter. Natural ester fluid (VG-100™), amorphous metal core & solar duty are environmentally-friendly options for this product.

Prolec GE Solar Transformers have the possibility to be connected to 1 or 2 inverters from any brand; using aluminum or copper windings, the transformers optimizes both the efficiency of the system and the area of the skid. Also, optional safety features include external accessories, in order to mitigate the risk of Arc Flash.
Product scope / Standard features

<table>
<thead>
<tr>
<th>Concept</th>
<th>Features</th>
<th>Value point</th>
</tr>
</thead>
<tbody>
<tr>
<td>Step Up</td>
<td>Increased margin for core over excitation, withstanding high magnetizing inrush currents</td>
<td>Prevent core saturation or ferroresonance</td>
</tr>
<tr>
<td>Electronic Protection</td>
<td>Electrostatic Shield</td>
<td>Provide a pathway to ground for any residual resonance</td>
</tr>
<tr>
<td>Network Protection</td>
<td></td>
<td>Prevent capacitive coupling between the grid and capacitive banks of the inverter</td>
</tr>
</tbody>
</table>

Overall typical dimensions reference

<table>
<thead>
<tr>
<th>kVA</th>
<th>A* Height</th>
<th>B* Width</th>
<th>C* Depth</th>
<th>Weight (lbs)</th>
<th>Core Material</th>
</tr>
</thead>
<tbody>
<tr>
<td>700</td>
<td>70</td>
<td>70</td>
<td>80</td>
<td>7000</td>
<td>Silicon Steel</td>
</tr>
<tr>
<td>1000</td>
<td>80</td>
<td>90</td>
<td>80</td>
<td>9000</td>
<td></td>
</tr>
<tr>
<td>1500</td>
<td>85</td>
<td>90</td>
<td>95</td>
<td>11500</td>
<td></td>
</tr>
<tr>
<td>2000</td>
<td>90</td>
<td>100</td>
<td>100</td>
<td>16500</td>
<td></td>
</tr>
<tr>
<td>2500</td>
<td>95</td>
<td>120</td>
<td>100</td>
<td>17500</td>
<td></td>
</tr>
</tbody>
</table>

700
1000
1500
2000
2500

<table>
<thead>
<tr>
<th>kVA</th>
<th>A* Height</th>
<th>B* Width</th>
<th>C* Depth</th>
<th>Weight (lbs)</th>
<th>Core Material</th>
</tr>
</thead>
<tbody>
<tr>
<td>700</td>
<td>75</td>
<td>85</td>
<td>80</td>
<td>8000</td>
<td>Amorphous Metal</td>
</tr>
<tr>
<td>1000</td>
<td>85</td>
<td>90</td>
<td>80</td>
<td>11000</td>
<td></td>
</tr>
</tbody>
</table>

* Dimensions in inches
** Dimensions and weight are approximate and subject to change without notice and should not be used for construction purposes
*** Other ratings available upon request
Step Up Transformer for Windfarm Applications

Prolec GE offers step up transformers specifically designed for Wind Power Generation applications. These transformers are optimized using duty cycle rating, and can be designed to be used inside or outside the tower, or inside the nacelle. Natural ester fluid (VG-100™) and amorphous metal core are environmentally-friendly options for this product. Also, optional safety features include external accessories, in order to mitigate the risk of Arc Flash.

Product scope / Standard features
- Rating up to 4,000 kVA (2-windings) and 3,400 kVA (3-windings)
- High Voltage
  - Aluminum windings
  - Up to 34,500 V Delta or Wye Connected
  - BIL up to 200 kV
  - Tap changer: ± 2, 2.5%
  - Loop feed
  - Dead front
  - Bushing wells
- Low Voltage
  - Aluminum windings
  - Up to 1200 V Delta or Wye Connected
  - BIL up to 60 kV
  - Epoxy 2 piece-bushings with 4-holes blade
- Frequency: 60 Hz
- 5-legged Core
- Electrostatic shield
- Temperature rise: 65°C

Optional features
- High Voltage
  - Copper windings
  - Tap changer with 7 positions
  - Radial feed
  - Live front
  - Bushing wells + inserts
  - Integral bushing
  - Porcelain bushing
- Low Voltage
  - Copper windings
  - Epoxy, 2 pieces bushings, up to 12 holes blade
  - Epoxy, 1 piece bushings up to 12 holes blade
- Frequency: 50 Hz
- Temperature rise: 55°C, 55/65°C
- Cooling class: KNAN
- Insulating fluid: Natural ester fluid (VG-100 or FR3)
- Silicon fluid available for designs inside the tower or nacelle
- Impedance per customer request, ± 7.5%
- Altitude up to 14,850 FASL
- Internal switch
- Bay-O-Net expulsion fuses + current limiting fuses
- Under-oil internal arresters
- Stainless Steel 409 tank & cabinet
- Stainless Steel 304 tank & cabinet
- Infrared window
- Powder paint system & liquid finish color per customer request
- Duty cycle rating
- Seismic designs IBC Certified
Value features

<table>
<thead>
<tr>
<th>Concept</th>
<th>Description</th>
<th>Value point</th>
</tr>
</thead>
<tbody>
<tr>
<td>Step Up</td>
<td>Increased margin for transformer over excitation</td>
<td>Prevent core saturation, partial discharges, and gassing</td>
</tr>
<tr>
<td>Electronic Protection</td>
<td>* Electrostatic Shield</td>
<td>Provide a pathway to ground for any residual resonance</td>
</tr>
<tr>
<td>Network Protection</td>
<td></td>
<td>Prevent capacitive coupling between the grid and capacitive banks of the inverter</td>
</tr>
<tr>
<td>Tertiary winding</td>
<td>Third winding to feed the induction rotor generator</td>
<td>Reducing the number of components to be installed up in the nacelle</td>
</tr>
<tr>
<td>Duty Cycle Rating</td>
<td>Load calculation based on specific location characteristics</td>
<td>Optimized size and cost</td>
</tr>
</tbody>
</table>

Pad-Mounted transformers recognized as best in class in reliability and DGA measurements in Wind Industry

Prolec GE has the largest fleet of padmounted transformers installed in Wind farm projects in the US Market.

Dissolved Gas Analysis (DGA) is an industry accepted method to detect faults at an early stage and to evaluate the transformer health. DGA Guidelines in IEEE are based on data from large Power Transformers, but can still be a helpful tool to evaluate distribution transformers with proper considerations.

Prolec GE is recognized by customers in the Wind Industry as having the best performance in DGA measurements

This performance is achieved by the following special features:

- Insulation strength of the windings, one BIL level above nominal
- Increased over-excitation capability to absorb voltage fluctuations
- Superior core grounding practice with inside core ground straps to prevent generation of partial discharge and core over-heating
- Optimization of thermal performance based on actual wind loading cycle and ambient temperature conditions
- Special production test beyond routine test requirements
- Use of accessories rated for wind loading cycle duty

For more information contact your local GE Sales Representative or visit our website at www.prolecge.com
Phone: Toll free 1 800-437-7653 (US & Canada) / +52 (81) 8030-2341 (Mexico) / +971 4 429 6101 (Middle East) Fax: +52 (81) 8030-2323 or 2325
Prolec GE offers a flip top cabinet as an option for commercial Three Phase Pad-Mounted Transformers.

**Design Overview**
- From 45 kVA to 2500 kVA
- Opening Angles: 45°, 110° (max)

**Advantages**
The new cabinet design has a cover that can be flipped up, with the following benefits:
- Enhanced range of access to front-plate components
- Improved safety for O&M personnel
- Greater visibility, since the open cover allows more sunlight in the cabinet area
- Shorter product height

**Applicable Standards**
- IEEE C57-12-00
- IEEE C57-12-28
- IEEE C57-12-34
Prolec GE has developed options for reducing arc flash risks to personnel responsible for installation, operation and maintenance routines during transformer operation. Typically, in renewable applications, transformers are very close to the generation point, which justifies precautionary measures against an arc flash event. Our solutions focus on the safety of personnel by offering several packages for added protection.

Typical Operation and Maintenance activities performed on a transformer for renewable applications:

- Switching transformers in and out of the collection circuit
- Routinely taking oil samples for dissolved gas analysis testing
- Monitoring tank pressure and adding gas as needed
- Performing infrared temperature scans of the HV and LV connections

Available packages

<table>
<thead>
<tr>
<th>Package</th>
<th>Features</th>
<th>Value point</th>
</tr>
</thead>
<tbody>
<tr>
<td>Basic</td>
<td>Accessories externally accessible with padlock provision</td>
<td>Provides a safe access for O&amp;M routines.</td>
</tr>
<tr>
<td></td>
<td>- Drain valves, liquid level, liquid temperature and pressure vacuum gauges, load break switch</td>
<td></td>
</tr>
<tr>
<td>Off-load</td>
<td>Molded circuit breakers installed in plexiglass barrier in LV compartment</td>
<td>Minimize risk when de-energizing transformer from generation source.</td>
</tr>
<tr>
<td></td>
<td>IR Windows for thermo scanning</td>
<td></td>
</tr>
<tr>
<td>Monitoring</td>
<td>Monitoring capabilities supported via accessories with contact switches, and SCADA digital communication signals</td>
<td>Mitigate the hazard by remote monitoring.</td>
</tr>
</tbody>
</table>

Standards and certifications available

For more information contact your local GE Sales Representative or visit our website at www.prolecge.com
Phone: Toll free 1 800-437-7653 (US & Canada) / +52 (81) 8030-2341 (Mexico) / +971 4 429 6101 (Middle East) Fax: +52 (81) 8030-2323 or 2325

AFTR-0112-01
Product Scope

- **Rating**
  - Up to 540 kVA
- **High Voltage**
  - Aluminum windings
  - Up to 4800 V Delta or Wye Connected
  - BIL up to 60 kV
  - Tap changer: 25 Taps
  - Radial feed
  - Live front
  - Porcelain Bushing
- **Low Voltage**
  - Aluminum windings
  - 480 V Delta
  - BIL 30 kV
  - Epoxy 2 piece-bushings with 4-holes blade
- **Frequency**: 60 Hz
- **5-legged Core**
- **Electrostatic shield**
- **Temperature rise**: 65°C
- **Cooling class**: ONAN
- **Insulating fluid**: Mineral oil
- **Impedance**: 5.75% ± 7.5%
- **Altitude**: 3,300 FASL
- **Mild steel tank & cabinet**
- **Liquid paint system; Color**: ANSI 61
- **Harmonic factor up to 4**

Optional features

- **High Voltage**
  - Copper windings
- **Low Voltage**
  - Copper windings
  - Epoxy, 2 pieces bushings, up to 12 holes blade
- **Frequency**: 50 Hz
- **Temperature rise**: 55°C, 55/65°C
- **Altitude up to**: 14850 FASL

Experience in the industry

Prolec GE has a long experience in advanced technology transformer for the Oil & Gas Industry, drilling and production to refining and petrochemical.
Safe operation under Short Circuit

Excellent mechanical strength provided by diamond pattern, epoxy coated paper insulation and unique compression bonding process which helps to support short circuit forces.

The bond retains the winding from shifting during operation or under short circuit stresses.

Solution for... Oil & Gas

- Artificial Lift application
- Onshore operation

Corrosive environment

Coatings specially designed to operate under several conditions for the Oil & Gas Industry, including high humidity environment, ultra violet radiation, chemical pollution & saline fog.

Standards and certifications available

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Substation Transformers for Industrial Applications

Prolec GE offers Small Primary Substation Transformers (SPSTs) specifically designed for a wide range of commercial, industrial, and utility applications. With high voltages up to 69 kV and ratings up to 15 MVA, Prolec GE transformers are built using high-grade materials and designed with advanced technology in order to provide years of reliable operation. Designed for use in outdoor substations, these transformers comply with the heavy duty requirements of utility and industrial applications.

Our stringent quality assurance practices, state-of-the-art facilities, and highly qualified personnel allow us to deliver products and services according to your needs in a prompt and reliable way. We know that every customer is unique and needs a different level of support and involvement from its transformer supplier. We are committed to providing a reliable and responsive support, from the day you start building your specification to the day in which you start operating the transformer.

Product scope / Standard features

- **Rating**
  - Up to 15,000 kVA
- **High Voltage**
  - Copper windings
  - Up to 69,000 V Delta or Wye Connected
  - BIL up to 350 kV
  - Tap changer: ± 2, 2.5%
  - Radial feed
  - Live front
  - Porcelain bushing
- **Low Voltage**
  - Copper windings
  - Up to 34,500 V Delta or Wye Connected
  - BIL up to 200 kV
  - Porcelain bushings with 4-holes blade
- **Frequency:** 60 Hz
- **3-legged Core**
- **Temperature rise:** 65°C
- **Cooling class:** ONAN
- **Insulating fluid:** Mineral oil
- **Impedance:** 5.75% ± 7.5%
- **Altitude:** 3,300 FASL
- **Mild steel tank & cabinet**
- **Liquid paint system; Color:** ANSI 61 or ANSI 70
- **Built to all applicable IEEE C57.12.36**

Optional features

- **High Voltage**
  - Tap changer with 7 positions
- **Frequency:** 50 Hz
- **Temperature rise:** 55°C, 55/65°C
- **Cooling class:** KNAN, ONAN/ONA, KNAN/KNAF, ONAN/ONAF/ONAF
- **Insulating fluid:** Natural ester fluid (VG-100 or FR3), silicone
- **Impedance per customer request, ± 7.5%**
- **Altitude up to 14850 FASL**
- **Infrared window**
- **Electrostatic shield**
- **Pressure relief device**
- **Winding temperature device**
- **Sudden pressure relay with or without seal in**
- **Devices with alarm contacts**
- **Top filter press valve**
- **HV & LV air terminal compartments**
- **HV lightning arresters in ATC**
- **Current transformers**
- **Neutral grounding resistor**
- **Special environment (i.e.: classified areas)**
- **Special / low sound level**
- **Retrofit to specific dimensions**
- **Non-standard loading conditions such as harmonic loading or specified K-factor**
- **Removable radiators**
- **Stainless steel removable radiators**
- **Galvanized steel removable radiators**
- **Special paint for marine ambient**
- **CSA compliance**
## Typical dimensions

**Oil filled transformer, 65°C, 95 kV BIL**

<table>
<thead>
<tr>
<th>kVA</th>
<th>Height</th>
<th>Width</th>
<th>Depth</th>
<th>Total Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>10000</td>
<td>121</td>
<td>125</td>
<td>160</td>
<td>46300</td>
</tr>
<tr>
<td>12000</td>
<td>121</td>
<td>145</td>
<td>170</td>
<td>48000</td>
</tr>
<tr>
<td>15000</td>
<td>121</td>
<td>170</td>
<td>180</td>
<td>62000</td>
</tr>
</tbody>
</table>

**VG-100 filled transformer, 65°C, 95 kV BIL**

<table>
<thead>
<tr>
<th>kVA</th>
<th>Height</th>
<th>Width</th>
<th>Depth</th>
<th>Total Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>10000</td>
<td>121</td>
<td>170</td>
<td>160</td>
<td>48600</td>
</tr>
<tr>
<td>12000</td>
<td>121</td>
<td>185</td>
<td>170</td>
<td>56700</td>
</tr>
<tr>
<td>15000</td>
<td>126</td>
<td>215</td>
<td>180</td>
<td>72500</td>
</tr>
</tbody>
</table>

*Dims in inches.*  
*Weight in Lbs.*
Secondary Substation Transformers (SST)

Product scope / Standard features

- **Rating**
  - Up to 7,500 kVA
- **High Voltage**
  - Aluminum windings
  - Up to 34,500 V Delta or Wye Connected
  - BIL up to 200 kV
  - Tap changer: ± 2, 2.5%
  - Radial feed
  - Live front
  - Porcelain bushing
- **Low Voltage**
  - Aluminum windings
  - Up to 15,000 V Delta or Wye Connected
  - BIL up to 95 kV
  - Epoxy bushings with 4-holes blade
- **Frequency**: 60 Hz
- **5-legged Core**
- **Temperature rise**: 65°C
- **Cooling class**: ONAN
- **Insulating fluid**: Mineral oil
- **Impedance**: 5.75% ± 7.5%
- **Altitude**: 3,300 FASL
- **Mild steel tank & cabinet**
- **Liquid paint system; Color**: ANSI 61 or ANSI 70
- **Built to all applicable IEEE C57.12.36**

Optional features

- **High Voltage**
  - Copper windings
  - Tap changer with 7 positions
- **Low Voltage**
  - Copper windings
  - Porcelain bushings
- **Frequency**: 50 Hz
- **Temperature rise**: 55°C, 55/65°C
- **Cooling class**: KNAN, ONAN / ONAF, KNAN / KNAF
- **Insulating fluid**: Natural ester fluid (VG-100 or FR3), silicone
- **Impedance per customer request, ± 7.5%**
- **Altitude up to 14850 FASL**
- **Infrared window**
- **Seismic designs IBC Certified**
- **Electrostatic shield**
- **Pressure relief device**
- **Winding temperature device**
- **Sudden pressure relay with or without seal in**
- **Devices with alarm contacts**
- **Top filter press valve**
- **HV & LV air terminal compartments**
- **HV lightning arresters in ATC**
- **Current transformers**
- **Neutral grounding resistor**
- **Special environment (i.e. Class 1, Division 2, Group C&D)**
- **Special / low sound level**
- **Retrofit to specific dimensions**
- **Non-standard loading conditions such as harmonic loading or specified K-factor**
- **Removable radiators**
- **Stainless steel removable radiators**
- **Galvanized steel removable radiators**
- **Special paint for marine ambient**
- **CSA compliance**

*Prolec GE* offers Secondary Substation Transformers specifically designed for a wide range of commercial, industrial, and utility applications requiring three-phase substation service with match-ups to switching and/or fusing. With high voltages up to 34.5 kV and ratings up to 7.5 MVA, *Prolec GE* transformers are built using high-grade materials and designed with advanced technology in order to provide years of reliable operation.

Our stringent quality assurance practices, state-of-the-art facilities, and highly-qualified personnel allow us to deliver products and services according to your needs in a prompt and reliable way. We know that every customer is unique and needs a different level of support and involvement from its transformer supplier. We are committed to providing a reliable and responsive support, from the day you start building your specification to the day in which you start operating the transformer.
Typical dimensions

<table>
<thead>
<tr>
<th>kVA</th>
<th>Height</th>
<th>Width</th>
<th>Depth</th>
<th>Total Weight</th>
</tr>
</thead>
<tbody>
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<td>67</td>
<td>100</td>
<td>8250</td>
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<tr>
<td>5000</td>
<td>107</td>
<td>130</td>
<td>129</td>
<td>24600</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>kVA</th>
<th>Height</th>
<th>Width</th>
<th>Depth</th>
<th>Total Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>750</td>
<td>82</td>
<td>50</td>
<td>96</td>
<td>8500</td>
</tr>
<tr>
<td>1000</td>
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<tr>
<td>3750</td>
<td>100</td>
<td>110</td>
<td>118</td>
<td>22000</td>
</tr>
</tbody>
</table>

Dims in inches.
Weight in Lbs.

Standards and certifications available
The people and philosophy behind the products

At Prolec GE, we’re proud of the dedication, integrity, skill and resourcefulness of our people. We carefully recruit, train, develop and promote only motivated, customer-focused professionals to power our operations. These outstanding individuals act as a team to help ensure our customers receive the products, service and support they need to thrive.

Technology development

Research and development is serious business 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.

Professionals at every level

Our people are highly qualified professionals driven by a strong commitment to service, quality and performance. We emphasize the individual development of each member of our team through training and educational programs. We encourage and reward employees who understand the value of building a career, instead of merely holding a job.

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
Community

Our strong values and behavior standards are part of our organizational culture. They guide our daily activities and influence our performance. From a ten-acre, on-site family activity center to integrated efforts that protect our environment, we make a concerted effort to improve the lives of our employees, our neighbors and our planet.

Growing to meet your growing needs

Worldwide energy needs are forecasted to skyrocket as we move through the 21st century. Prolec GE is uniquely situated to meet those needs.

Our state-of-the-art facility continues to grow with multi-million-dollar expansions and ongoing equipment upgrades. Our strong supply-chain connections and worldwide resources provide us with a healthy stream of raw materials, shipping resources and business partners.

So as your energy demands grow, you can continue to count on Prolec GE for the reliable solutions that power your individual needs.
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For information about our facilities in India: www.prolecge.in