Integrated GIS - 145 kV and 170 kV
Pre-designed gas-insulated switchgear for permanent, temporary and mobile installations.

ABB’s integrated gas-insulated switchgear (GIS) is a pre-designed, standardized and fully integrated switchgear for fast deployment and high reliability, based on our well-proven GIS technology.

**Integrated GIS**

The growing demand for power in urban areas as well as in the mining, oil and gas industries requires power supply that is reliable, flexible and available at short notice. An interruption in power supply, no matter how short, can be costly to both utility companies and industries. The trailer mounted and fully integrated switchgear units provide highest quality and reliable power supply due to:

- Factory assembled and fully tested units
- Protection relays, control, monitoring and communication devices, as well as auxiliary equipment such as heating, lighting, and air conditioning can be integrated

With a rating up to 170 kV, 4000 A, 63 kA it is the ideal solution for customers in need of a substation that can be quickly energized for grid expansions, for backup or emergency power needs, and for short installation time requirements.

**Major benefits**

- Quick delivery and drastically reduced installation time due to pre-fabricated design
- Significant project cost savings due to reduced work on site
- Fully enclosed and well-protected electrical equipment
- Can be easily deployed in challenging and hazardous site conditions
- The modular design makes it effortless to relocate between different sites

---

Integrated GIS, 145kV in LILO (line-in-line-out) configuration with overhead line connections
### Integrated GIS, 145kV / 170kV (LILO configuration)

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value 145kV</th>
<th>Value 170kV</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rated voltage</td>
<td>145</td>
<td>170</td>
</tr>
<tr>
<td>Rated frequency</td>
<td>50 / 60</td>
<td>50 / 60</td>
</tr>
<tr>
<td>Rated short-duration power-frequency withstand voltage (1 min.)</td>
<td>275</td>
<td>325</td>
</tr>
<tr>
<td>Rated lightning impulse withstand voltage (1.2/50 µs)</td>
<td>650</td>
<td>750</td>
</tr>
<tr>
<td>Rated normal current – busbar / feeder</td>
<td>3150</td>
<td>4000</td>
</tr>
<tr>
<td>Rated short-circuit breaking current</td>
<td>40</td>
<td>63</td>
</tr>
<tr>
<td>Rated short-time withstand current (up to 3s)</td>
<td>40</td>
<td>63</td>
</tr>
<tr>
<td>Rated peak withstand current</td>
<td>104</td>
<td>164</td>
</tr>
<tr>
<td>Housing main dimensions (L x W x H)</td>
<td>7000 x 2438 x 2896</td>
<td>8500 x 3000 x 3500</td>
</tr>
<tr>
<td>Ambient temperature range</td>
<td>-55 ... +55</td>
<td>-55 ... +55</td>
</tr>
<tr>
<td>Mechanical endurance / capacitive switching</td>
<td>M2 / C2</td>
<td>M2 / C2</td>
</tr>
</tbody>
</table>

*The data are not limiting values. Additional data on request.*

---

### Single-line gas schematic diagram

[Single-line gas schematic diagram]

---

### Top view of the GIS in a container

[Top view of the GIS in a container]

---

We reserve the right to make technical changes or modify the contents of this document without prior notice. With regard to purchase orders, the agreed particulars shall prevail. ABB does not accept any responsibility whatsoever for potential errors or possible lack of information in this document.

ABB Ltd
High Voltage Products
Gas-insulated switchgear

[Abb.com/highvoltage]

We reserve all rights in this document and in the subject matter and illustrations contained therein. Any reproduction, disclosure to third parties or utilization of its contents – in whole or in parts – is forbidden without prior written consent of ABB.

Copyright © 2017 ABB. All rights reserved