

# Your HB3-C system configuration

[siemens.com/hb3-c](https://www.siemens.com/hb3-c)

## The most versatile solution for your retrofit application and new projects

With its HB3-Compact Siemens provides an unique generator circuit breaker solution to the most challenging constraints. It offers one of the highest level of customization: The HB3-C can be mounted either vertically or horizontally, its phase-to phase spacing and phase height axis can be adjusted to match perfectly the existing busbar connection points. Optionally, the circuit-breaker can be fitted with integrated line disconnecting switch and earth disconnecting switch on generator side and/or on transformer side.

### A compact design that meets all requirements:

- Maintenance free vacuum technology with up to 10,000 operating cycles at full nominal rated current
- Features full-spring operating mechanism stated to be the most reliable\* way to operate a GCB with lifespan up to 20,000 operation
- Equipped with sealed-for-lifetime\*\* vacuum interrupter
- Simplified footprint without dynamic forces during switching operations that facilitates designing and sizing of the GCB supporting structure
- Effortless on-site erection thanks to forklift-ready design or retractable wheels

Your configuration

### Horizontal installation

### Common frame

|                             |                             |
|-----------------------------|-----------------------------|
| Rated nominal current up to | Short circuit ratings up to |
| <b>15,000 A</b>             | <b>110 kA</b>               |

Save up to  
**75% OPEX**

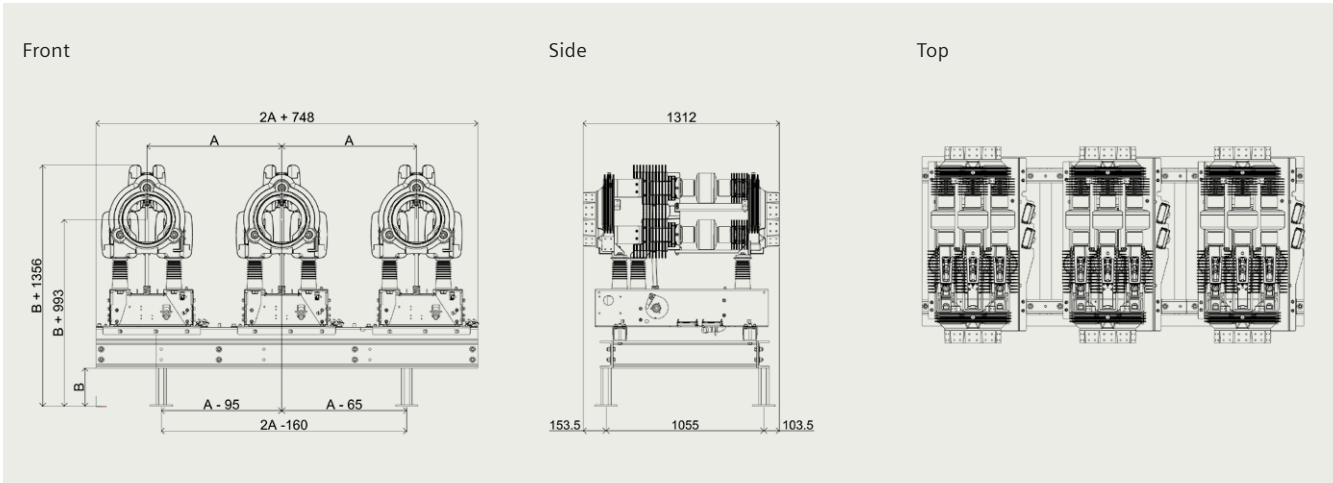
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# Technical information

## Footprint view in mm



### Switchgear mechanical configuration

|   |                         |
|---|-------------------------|
| Arrangement   | Horizontal installation |
| Type of frame   | Common                  |
| Surface treatment of the supporting steel frame structure     | Hot dip galvanized      |
| Distance between the local control panel and the nearest pole | 2 m                     |

### Switchgear main electrical ratings (up to)

|   |  |
|---|--|
| Standards   |  |
| Applicable standards  | IEC 62271-1: 2012<br>IEEE C37.013: 1997<br>IEC / IEEE 62271-37-013: 2015 |
| Current rating  |  |
| Operated current at ambient temperature of 40°C at 50 Hz              | 15,000 A   |
| Voltage ratings   |  |
| Rated frequency   | 50 & 60 Hz   |
| Rated maximum voltage   | 24 kV  |
| Rated power-frequency withstand voltage / across isolating distance   | 60 kV  |
| Rated lightning impulse withstand voltage / across isolating distance | 125 kV   |
| Short time and peak current   |  |
| Rated operating short-circuit breaking current                        | 110 kA   |
| Rated operating short-circuit making current                          | 302 kA   |
| Rated operating short-time withstand current / duration               |  |
| Generator circuit   | 110/3 kA/s   |
| Rated operating peak withstand current                                | 302 kA   |

### Switchgear dimensions

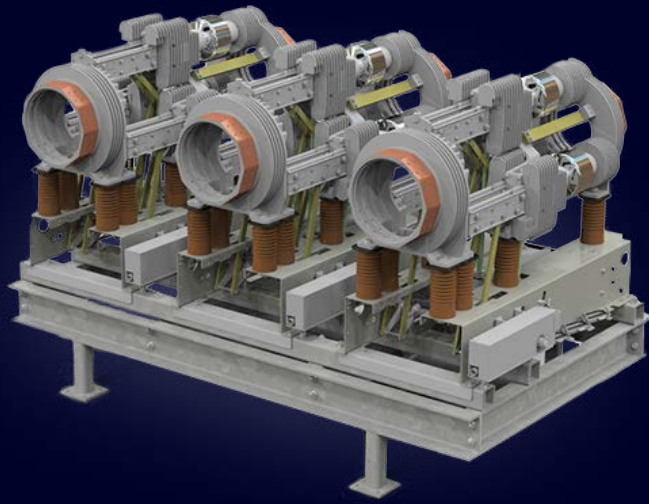
| Dimension  | Un                | BIL    |
|------------|-------------------|--------|
| A          |                   |        |
| min 750 mm | < 12 kV           | 75 kV  |
| min 800 mm | < 15 kV           | 95 kV  |
| min 800 mm | < 17.5 kV         | 110 kV |
| min 900 mm | < 27 kV           | 125 kV |
| B          | Customer specific |        |

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Your configuration

**Horizontal installation**

**Common frame**

**Main-disconnector**

Rated nominal current up to

**14,000 A**

Short circuit ratings up to

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Save up to

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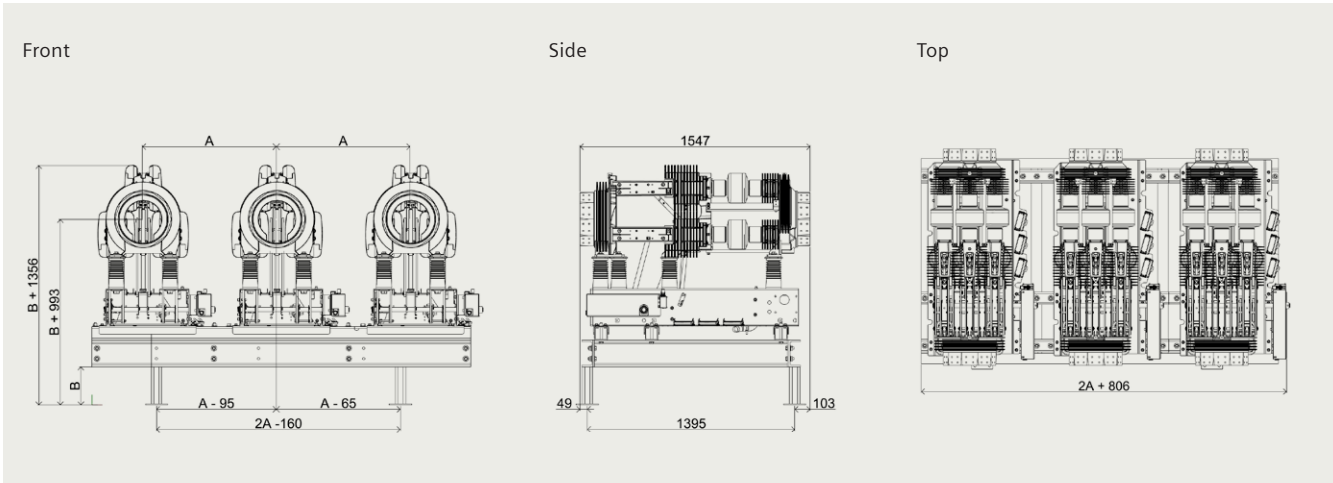
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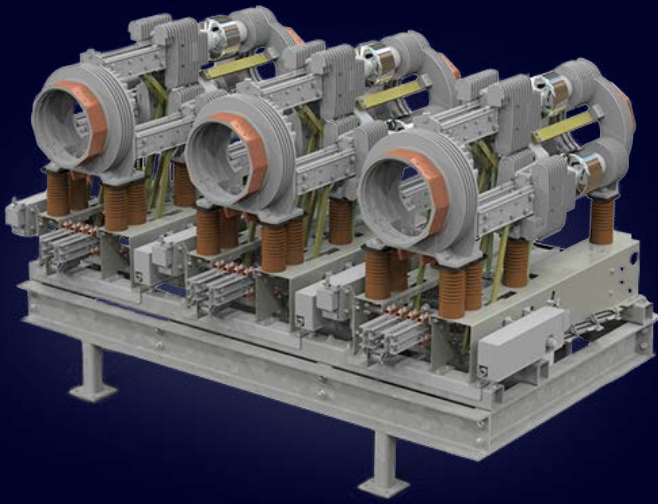
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Your configuration

**Horizontal installation**

**Common frame**

**Main-disconnector**

**Earthing switch  
transformer side**

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Short circuit  
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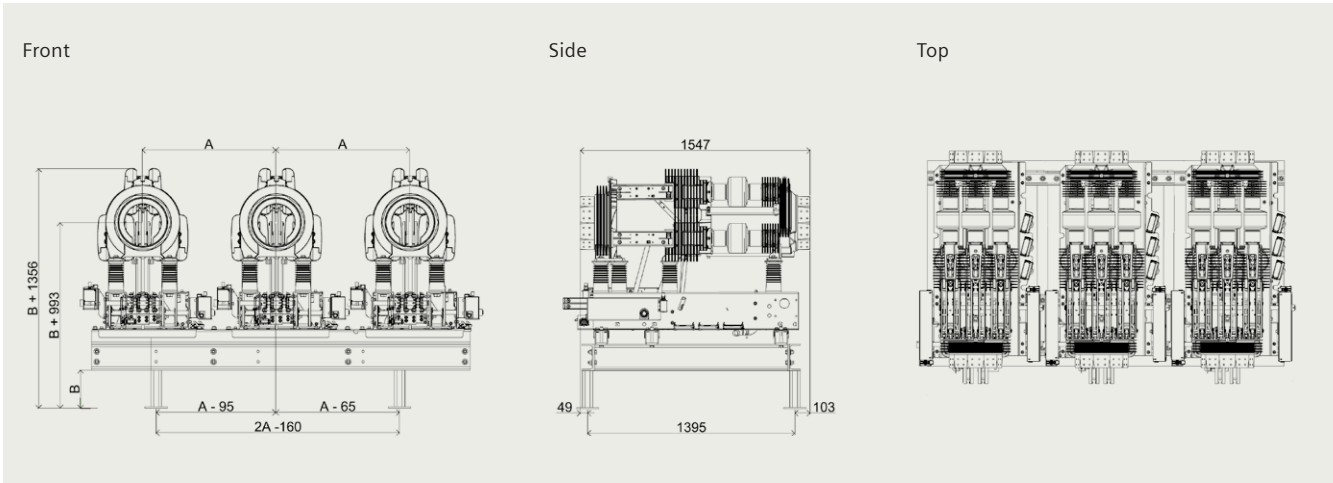
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### Switchgear dimensions

| Dimension  | Un                | BIL    |
|------------|-------------------|--------|
| A          |                   |        |
| min 900 mm | < 12 kV           | 75 kV  |
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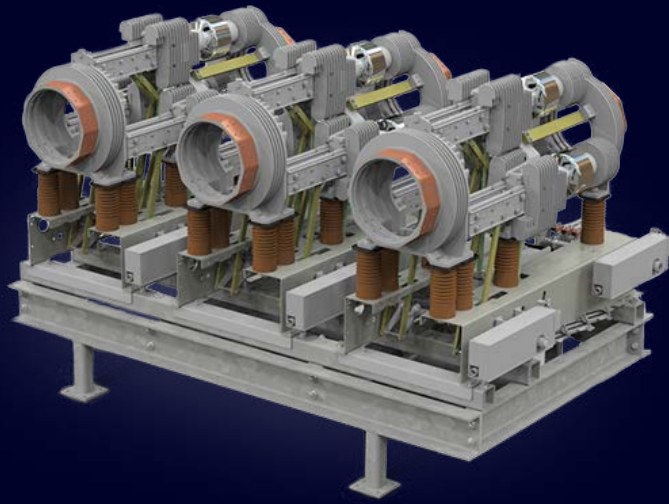
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**Common frame**

**Main-disconnector**

**Earthing switch  
generator side**

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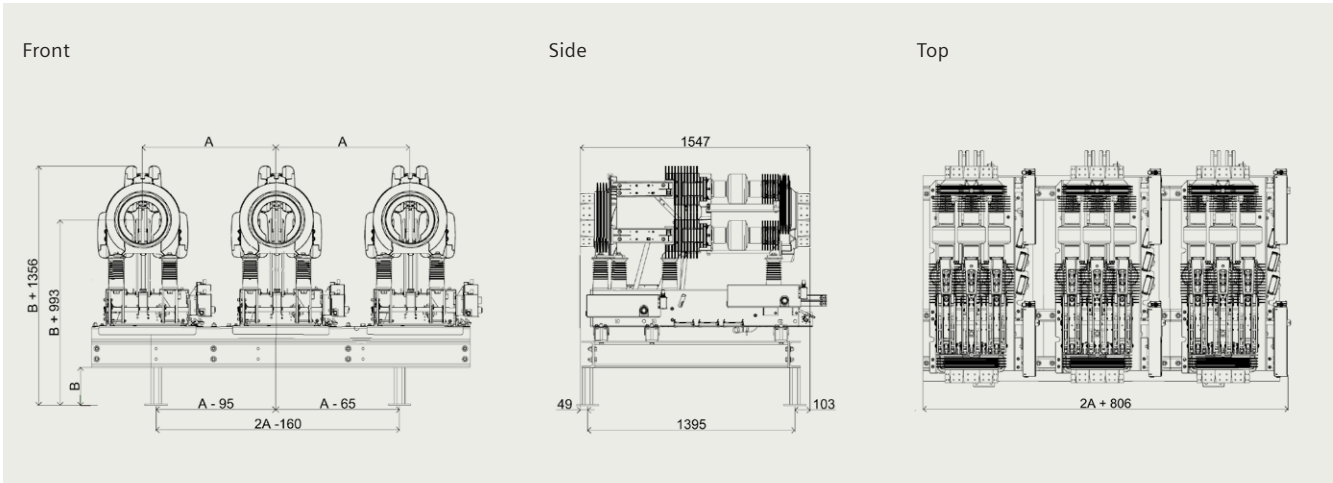
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### Switchgear dimensions

| Dimension  | Un                | BIL    |
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| min 800 mm | < 17.5 kV         | 110 kV |
| min 900 mm | < 27 kV           | 125 kV |
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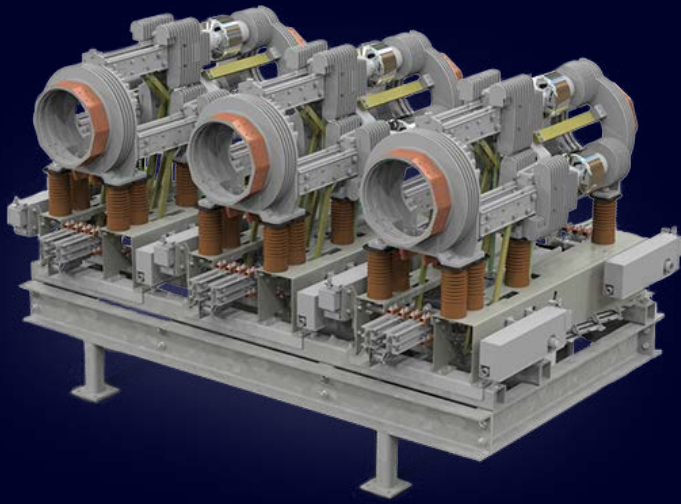
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**Horizontal installation**

**Common frame**

**Main-disconnector**

**Earthing switch  
transformer side**

**Earthing switch  
generator side**

Rated nominal  
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Short circuit  
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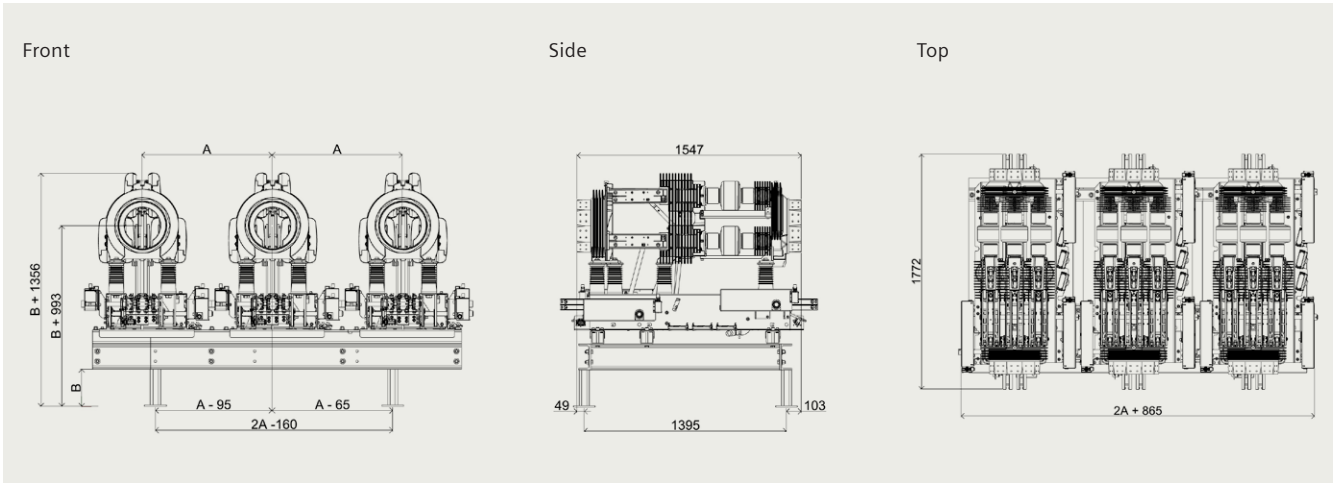
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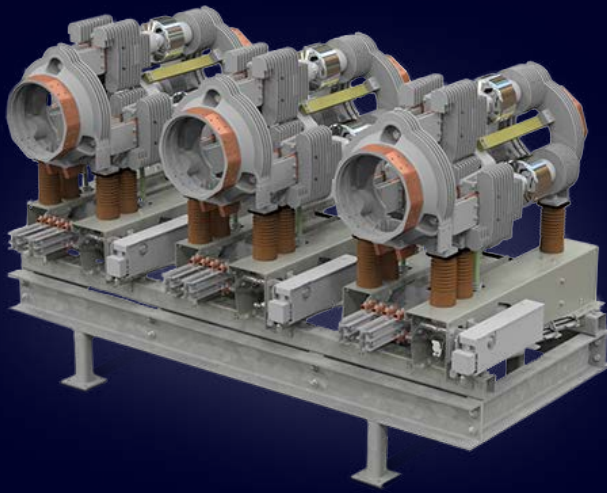
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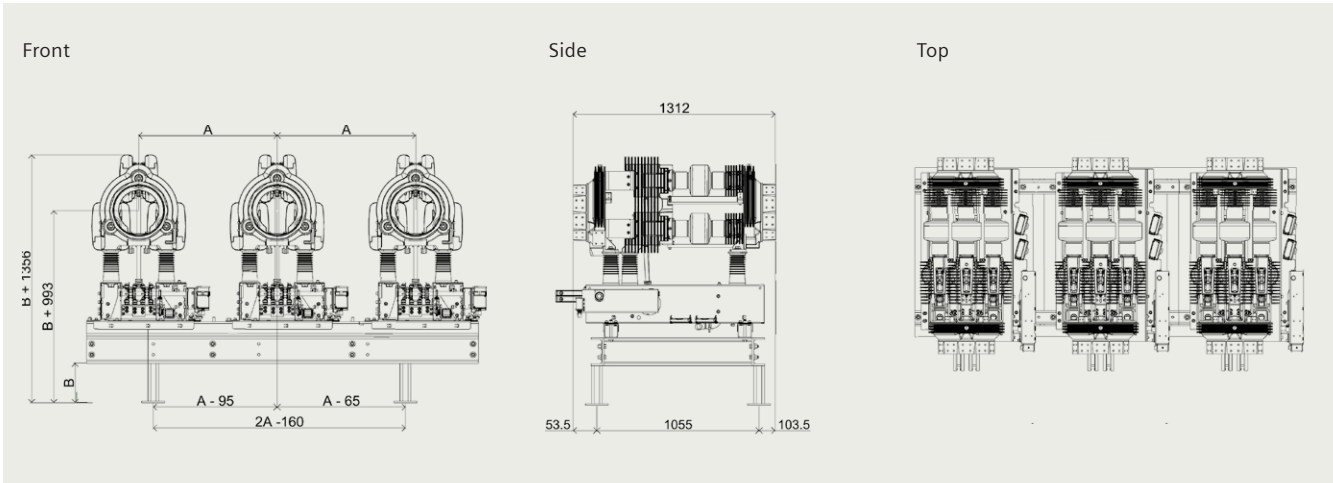
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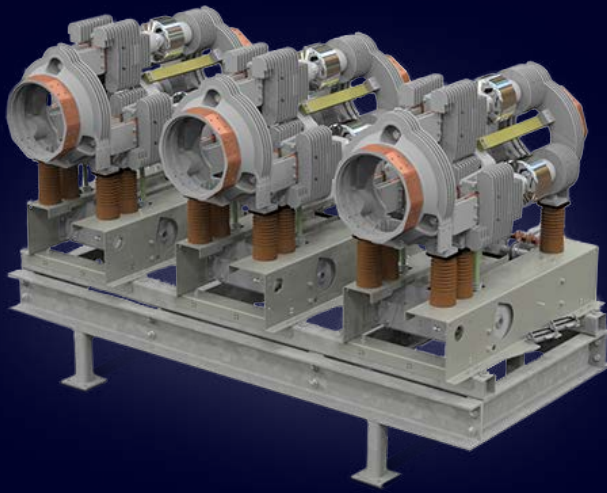
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### The most versatile solution for your retrofit application and new projects

With its HB3-Compact Siemens provides an unique generator circuit breaker solution to the most challenging constraints. It offers one of the highest level of customization: The HB3-C can be mounted either vertically or horizontally, its phase-to phase spacing and phase height axis can be adjusted to match perfectly the existing busbar connection points. Optionally, the circuit-breaker can be fitted with integrated line disconnecting switch and earth disconnecting switch on generator side and/or on transformer side.

#### A compact design that meets all requirements:

- Maintenance free vacuum technology with up to 10,000 operating cycles at full nominal rated current
- Features full-spring operating mechanism stated to be the most reliable\* way to operate a GCB with lifespan up to 20,000 operation
- Equipped with sealed-for-lifetime\*\* vacuum interrupter
- Simplified footprint without dynamic forces during switching operations that facilitates designing and sizing of the GCB supporting structure
- Effortless on-site erection thanks to forklift-ready design or retractable wheels

Your configuration

**Horizontal installation**

**Common frame**

**Earthing switch  
generator side**

Rated nominal  
current up to

**15,000 A**

Short circuit  
ratings up to

**110 kA**

Save up to

**75% OPEX**

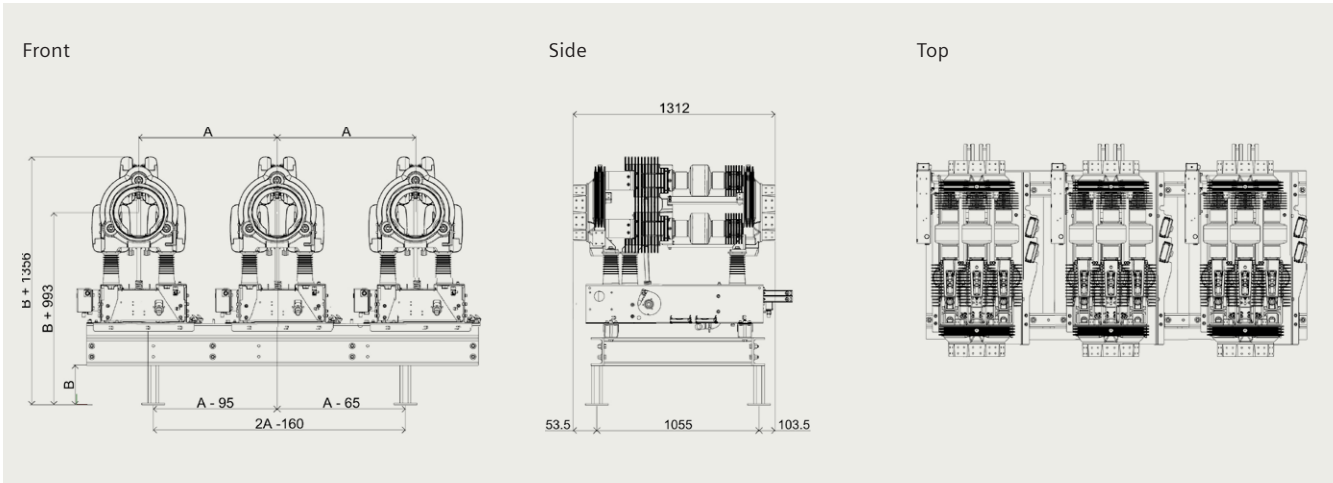
Please contact us to receive detailed information: [generatorswitchgear.energy@siemens.com](mailto:generatorswitchgear.energy@siemens.com)

\* Most reliable operating mechanism as per final report number A3-00 from the CIGRE 2012 General Report SC A3.

\*\* R. Renz, D. Gentsch, P. Slade, H. Fink, M. Schlaug, "Vacuum Interrupters – Sealed for Life", 19th Int. Conf. on Electr. Distr. (CIRED), Paper 0156, 21-24 May 2007

# Technical information

## Footprint view in mm



### Switchgear mechanical configuration

|   |                         |
|---|-------------------------|
| Arrangement   | Horizontal installation |
| Type of frame   | Common                  |
| Surface treatment of the supporting steel frame structure     | Hot dip galvanized      |
| Distance between the local control panel and the nearest pole | 2 m                     |

### Switchgear main electrical ratings (up to)

|  |  |
|--|--|
| Standards  |  |
| Applicable standards                                     | IEC 62271-1: 2012<br>IEEE C37.013: 1997<br>IEC / IEEE 62271-37-013: 2015 |
| Current rating   |  |
| Operated current at ambient temperature of 40°C at 50 Hz | 15,000 A   |
| Voltage ratings  |  |
| Rated frequency  | 50 & 60 Hz   |
| Rated maximum voltage                                    | 24 kV  |
| Rated power-frequency withstand voltage                  | 60 kV  |
| Rated lightning impulse withstand voltage                | 125 kV   |
| Short time and peak current                              |  |
| Rated operating short-circuit breaking current           | 110 kA   |
| Rated operating short-circuit making current             | 302 kA   |
| Rated operating short-time withstand current / duration  |  |
| Generator circuit  | 110/3 kA/s   |
| Earthing circuits  | 110/1 kA/s   |
| Rated operating peak withstand current                   | 302 kA   |

### Switchgear dimensions

| Dimension  | Un                | BIL    |
|------------|-------------------|--------|
| A          |                   |        |
| min 800 mm | < 12 kV           | 75 kV  |
| min 800 mm | < 15 kV           | 95 kV  |
| min 800 mm | < 17.5 kV         | 110 kV |
| min 900 mm | < 27 kV           | 125 kV |
| B          | Customer specific |        |

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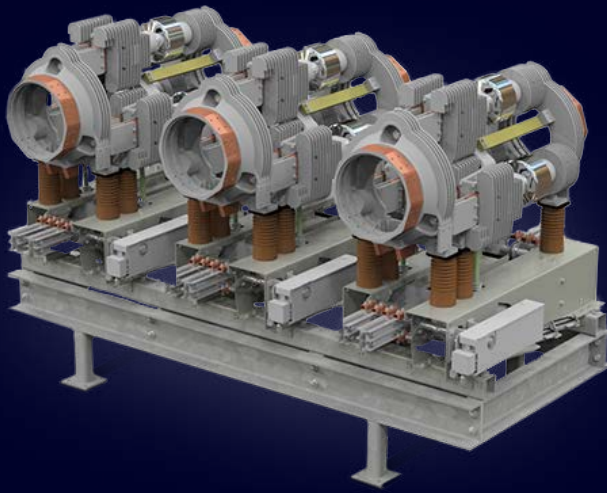
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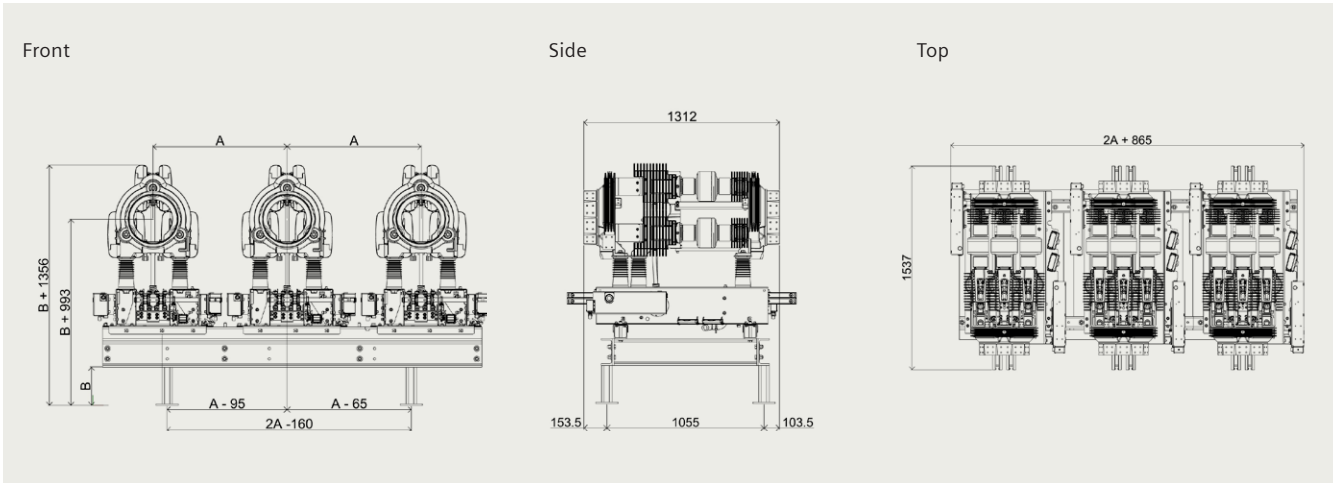
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