

SIEMENS

# Your HB3-C system configuration

[siemens.com/hb3-c](http://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

#### Individual 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**

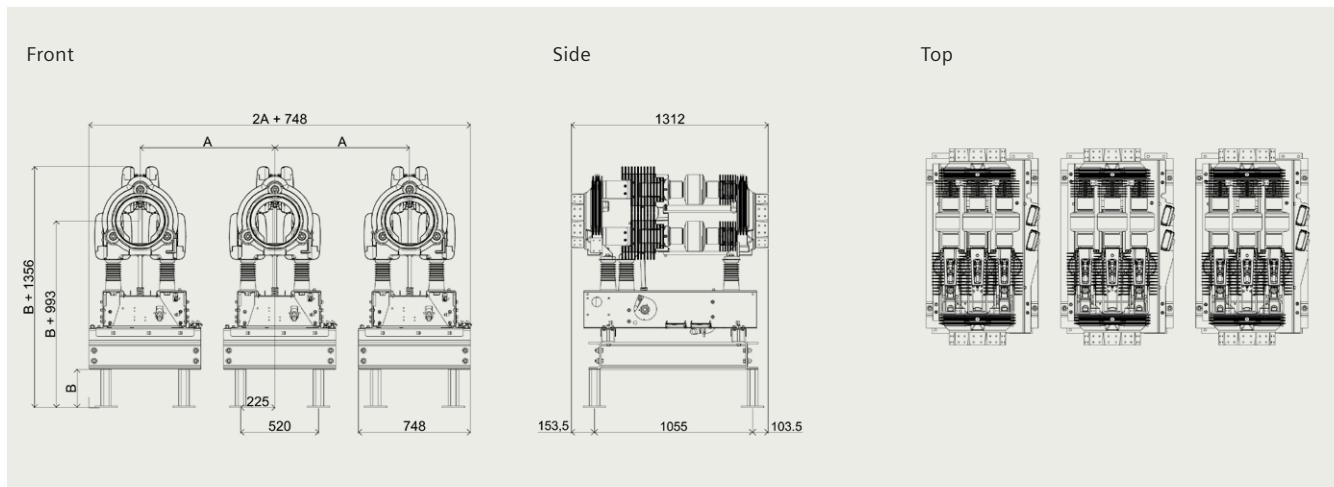
Please contact us to receive detailed information: [generatorswitchgear.energy@siemens.com](mailto:generatorswitchgear.energy@siemens.com)

\* 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	Individual
Surface treatment of the supporting steel frame structure	Hot dip galvanized
Distance between the local control panel and the nearest pole	2 m

## 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	

## Switchgear main electrical ratings (up to)

Standards	IEC 62271-1: 2012 IEEE C37.013: 1997 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
Rated operating peak withstand current	302 kA

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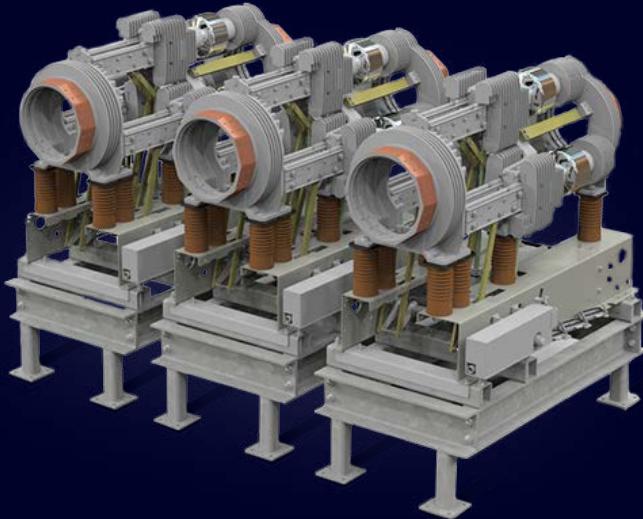
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Your configuration

**Horizontal installation**

**Individual frame**

**Main-disconnector**

Rated nominal current up to  
**14,000 A**

Short circuit ratings up to  
**110 kA**

Save up to  
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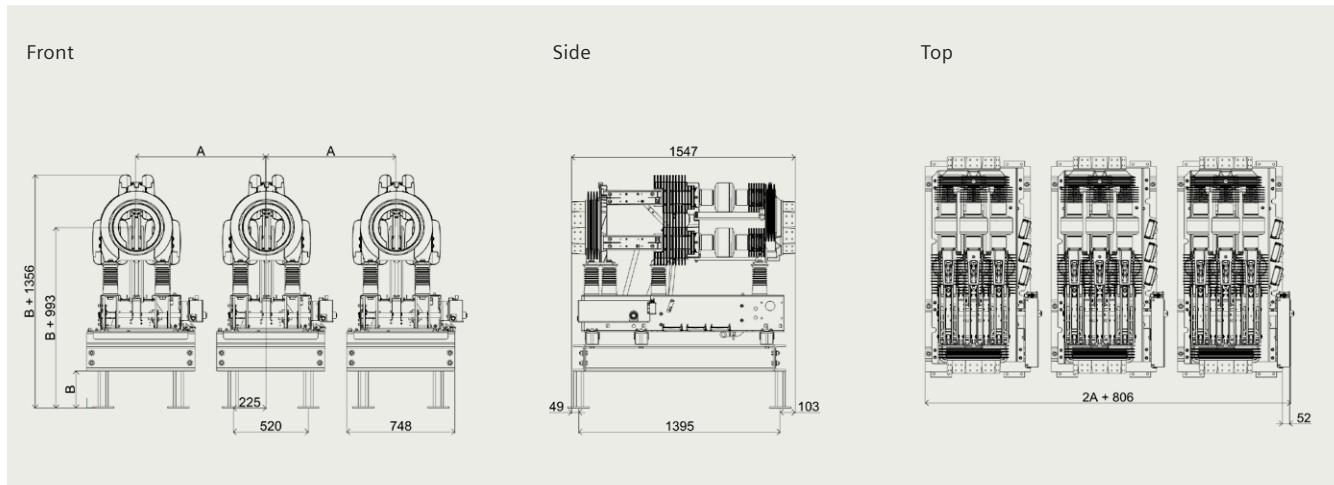
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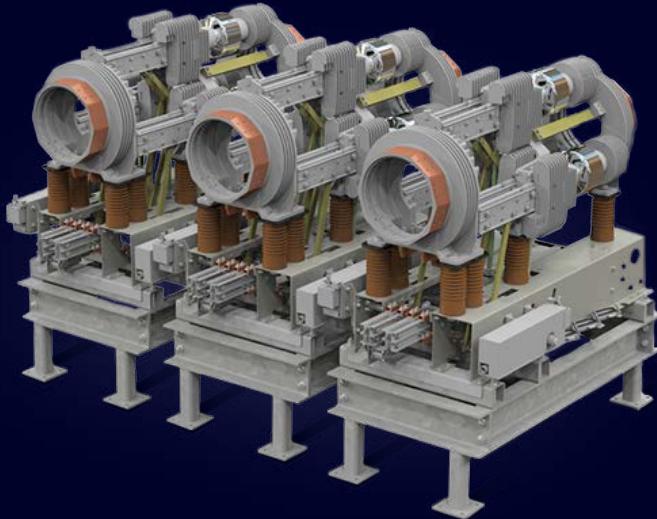
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Your configuration

**Horizontal installation**

**Individual frame**

**Main-disconnector**

**Earthing switch  
transformer side**

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current up to

**14,000 A**

Short circuit  
ratings up to

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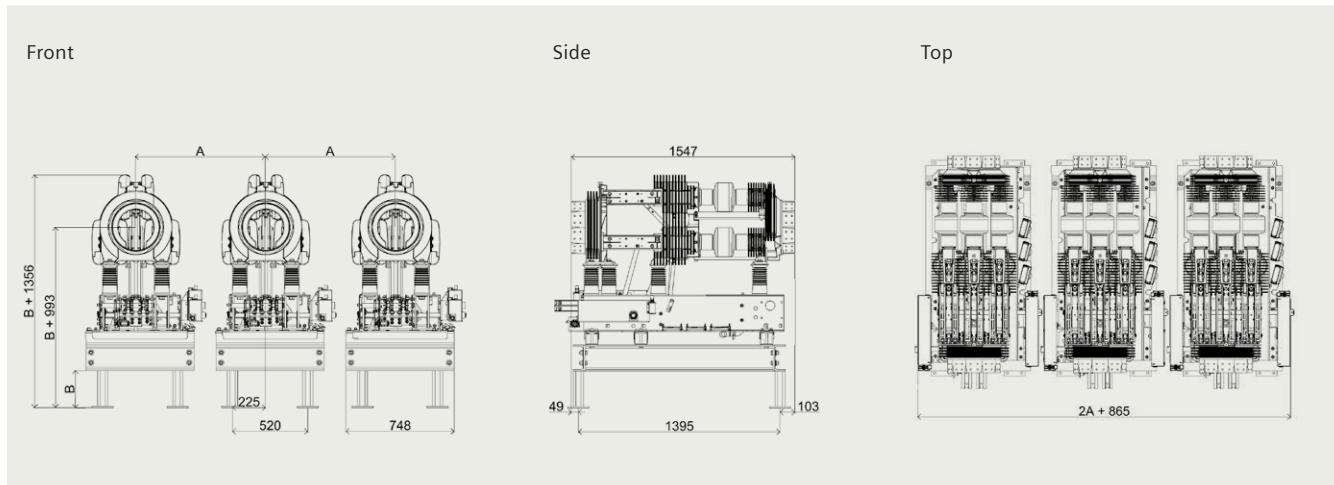
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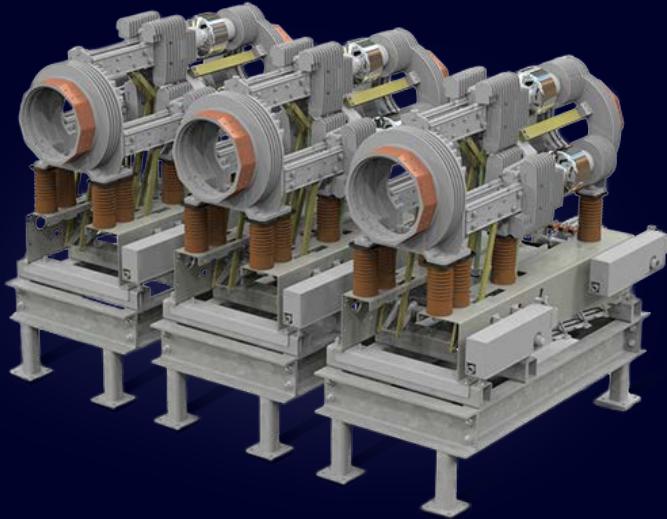
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Your configuration

**Horizontal installation**

**Individual frame**

**Main-disconnector**

**Earthing switch generator side**

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Short circuit ratings up to

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Save up to

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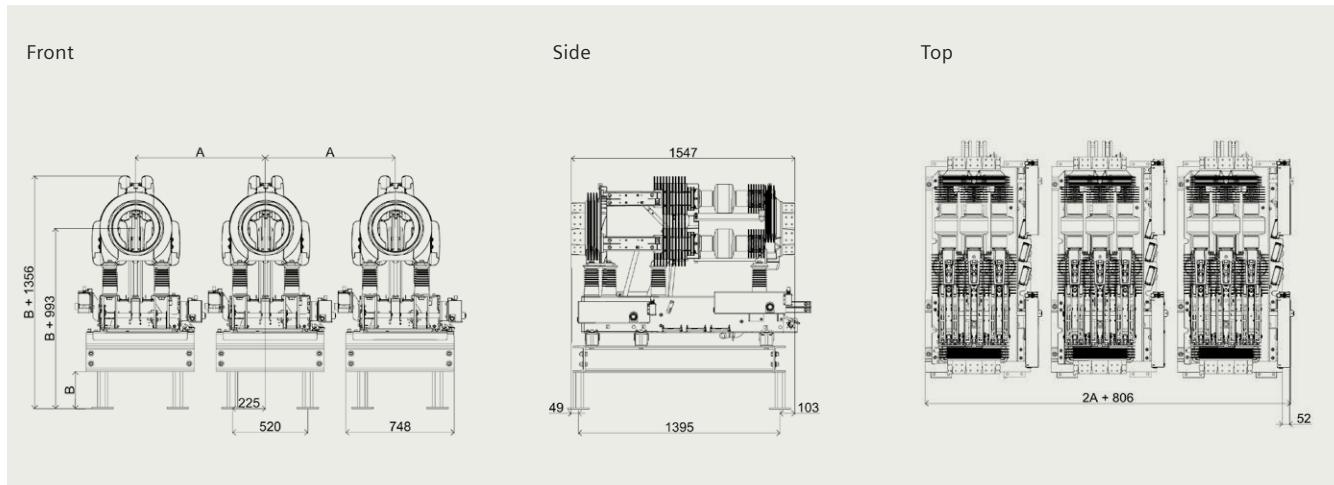
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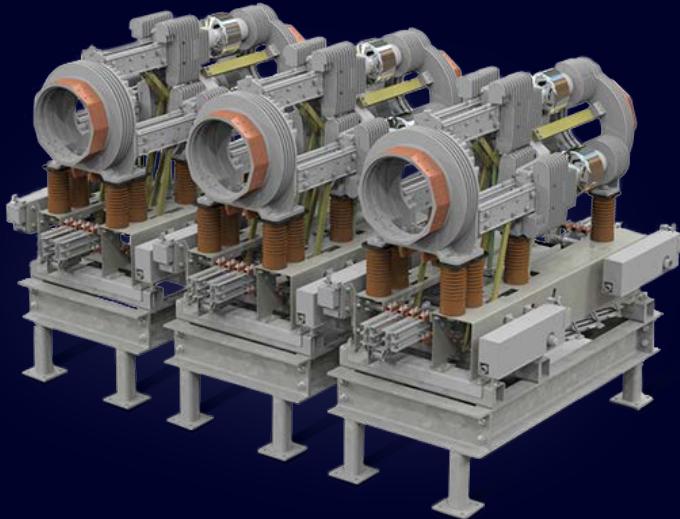
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**Main-disconnector**

**Earthing switch  
transformer side**

**Earthing switch  
generator side**

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current up to

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Save up to  
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Short circuit  
ratings up to

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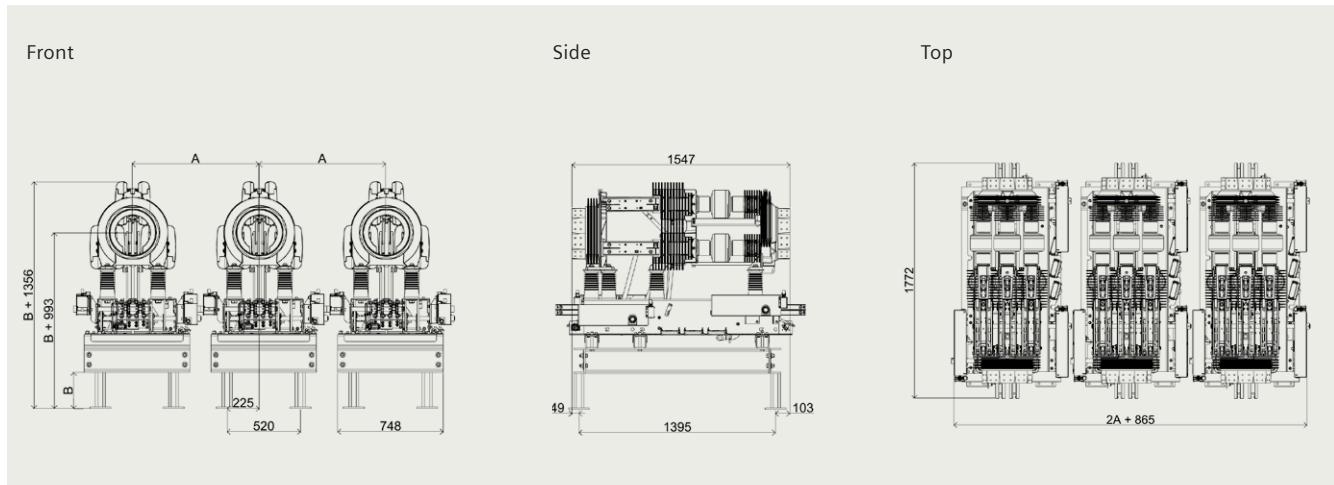
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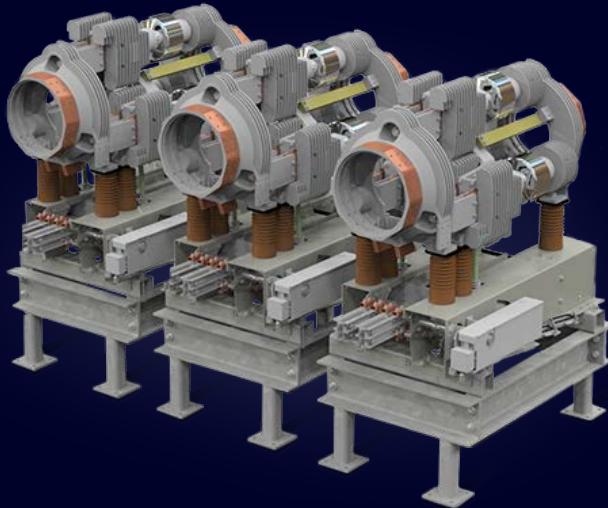
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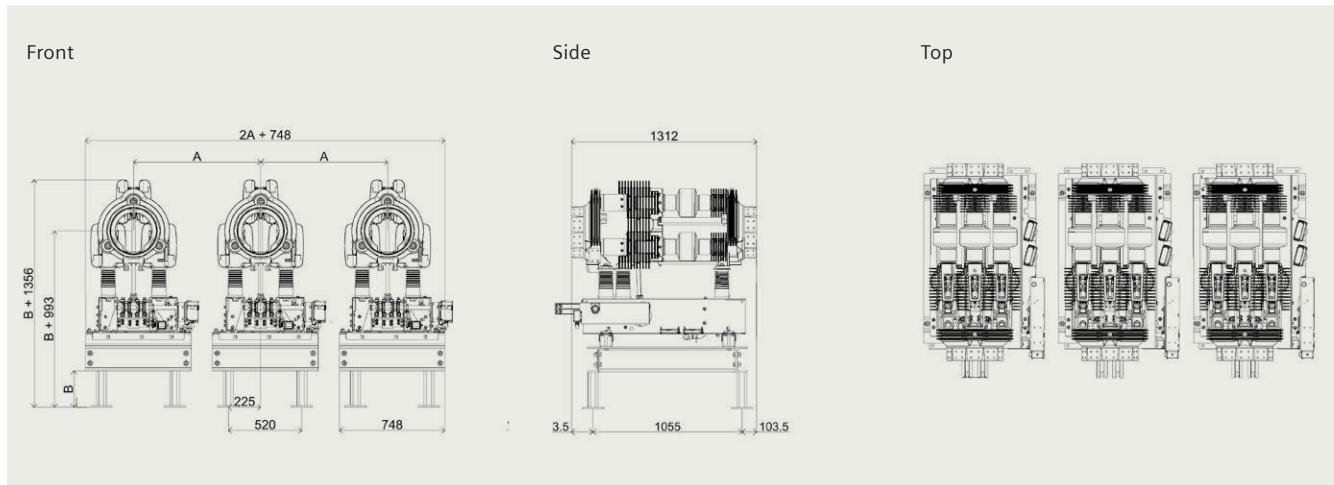
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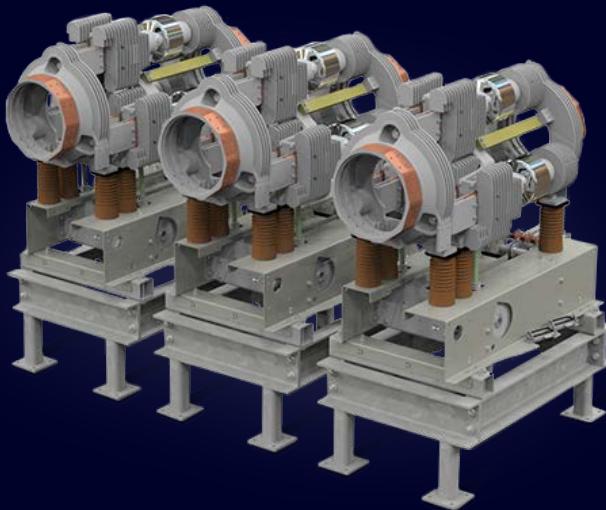
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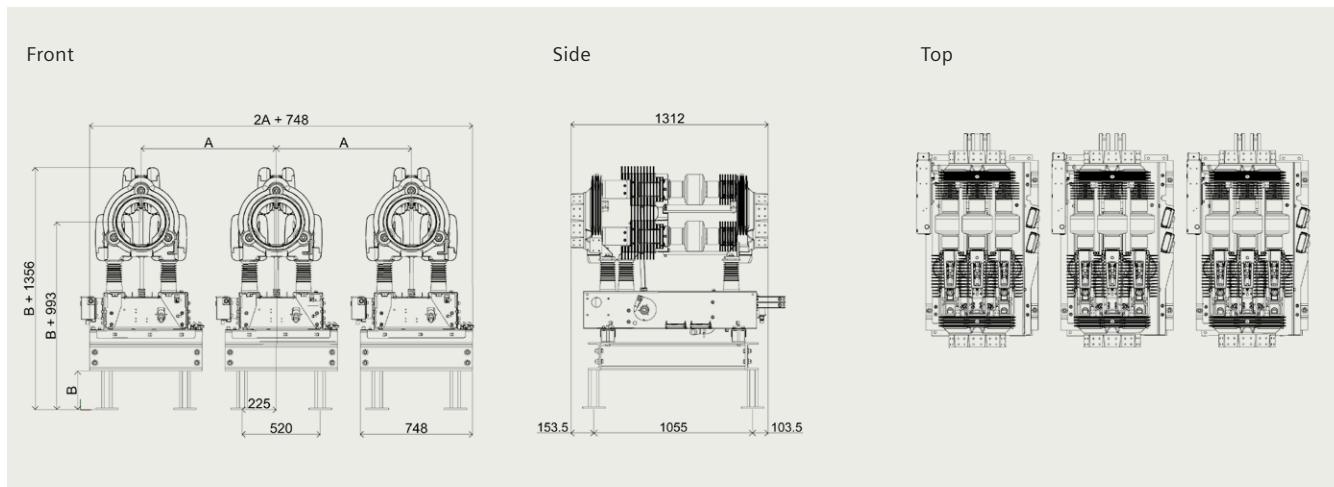
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Rated operating peak withstand current	302 kA

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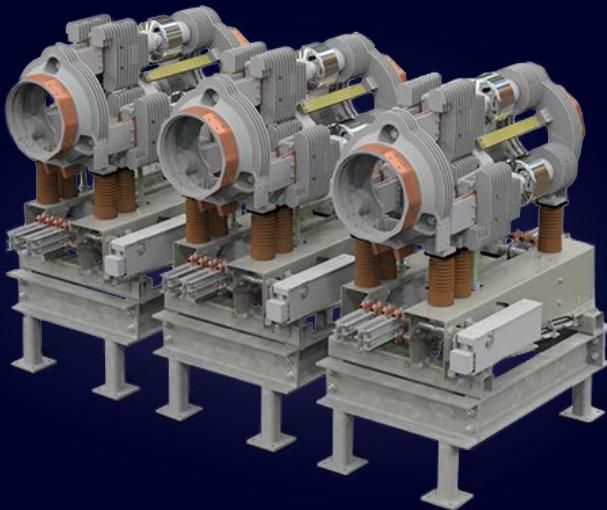
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SIEMENS

# Your HB3-C system configuration

[siemens.com/hb3-c](http://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**

**Individual frame**

**Earthing switch  
transformer side**

**Earthing switch  
generator side**

Rated nominal current up to

**15,000 A**

Short circuit ratings up to

**110 kA**

Save up to

**75% OPEX**

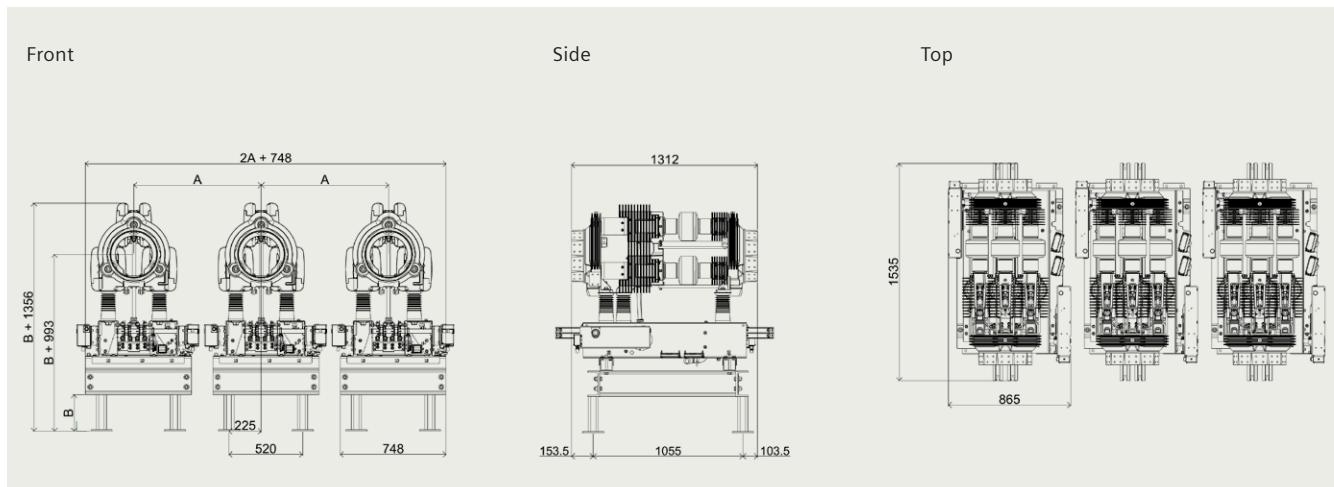
Please contact us to receive detailed information: [generatorswitchgear.energy@siemens.com](mailto:generatorswitchgear.energy@siemens.com)

\* 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	Individual
Surface treatment of the supporting steel frame structure	Hot dip galvanized
Distance between the local control panel and the nearest pole	2 m

## 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	

## Switchgear main electrical ratings (up to)

Standards	IEC 62271-1: 2012 IEEE C37.013: 1997 IEC / IEEE 62271-37-013: 2015
Applicable standards	
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

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