



B65

Gas-insulated Substations 145 kV, 40 kA, 3 150 A

GE makes the most of 50 years of experience in design, material selection, development, engineering, manufacturing and servicing of gas-insulated substations.

GE's B105 GIS meet the challenges of networks up to 145 kV for all applications: power generation, transmission, distribution, tertiary and heavy industry.

Environment Friendliness

- First-in-class SF₆ sealing system

Highest Availability

- Best experience and reliability data
- Current transformers outside SF₆
- Single-phase enclosures: no phase-to-phase fault
- Pure-spring circuit-breaker drives

Lowest Costs of Land and Civil Works

- Most compact 145 kV GIS with single-phase enclosures

Shortest Site Works

- Light and small single-phase components, easy to handle

Smart Grid Features

- Full-digital monitoring, control and protection

Key Benefits

- Maximum safety
- Compact and accessible
- Field-proven reliability
- Low total cost of ownership
- Smart Grid ready
- Low environmental impact

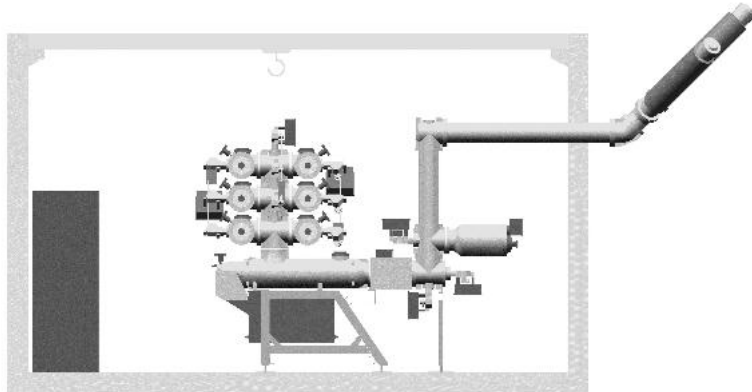
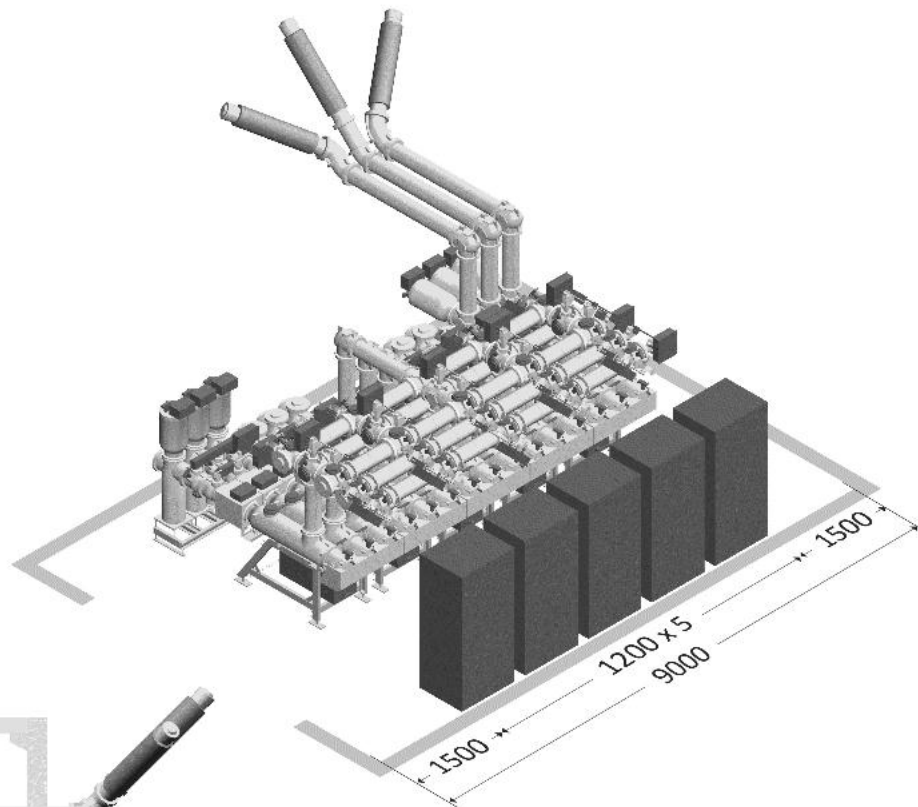


Double Busbar

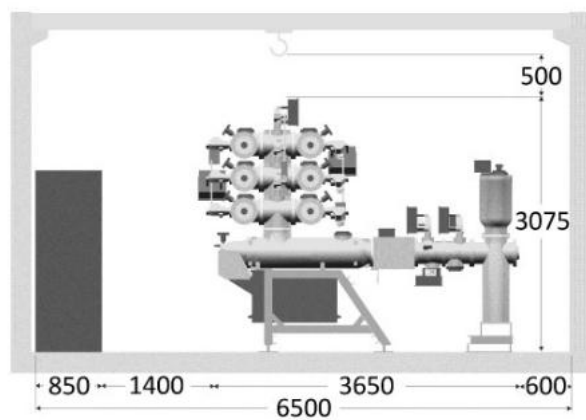
Bay width: 1 200 mm

Also available:

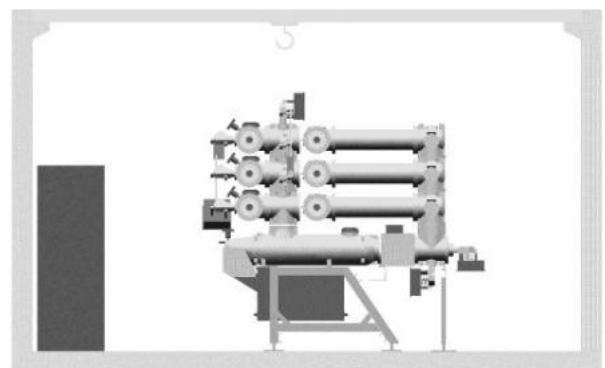
- Other single-line diagrams
- Standalone control cubicles
- Specific layouts



Line bay with SF₆-air bushing

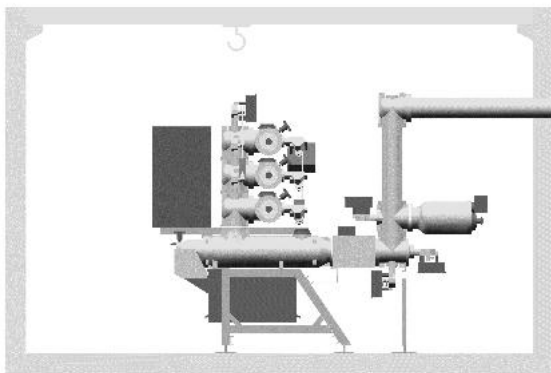
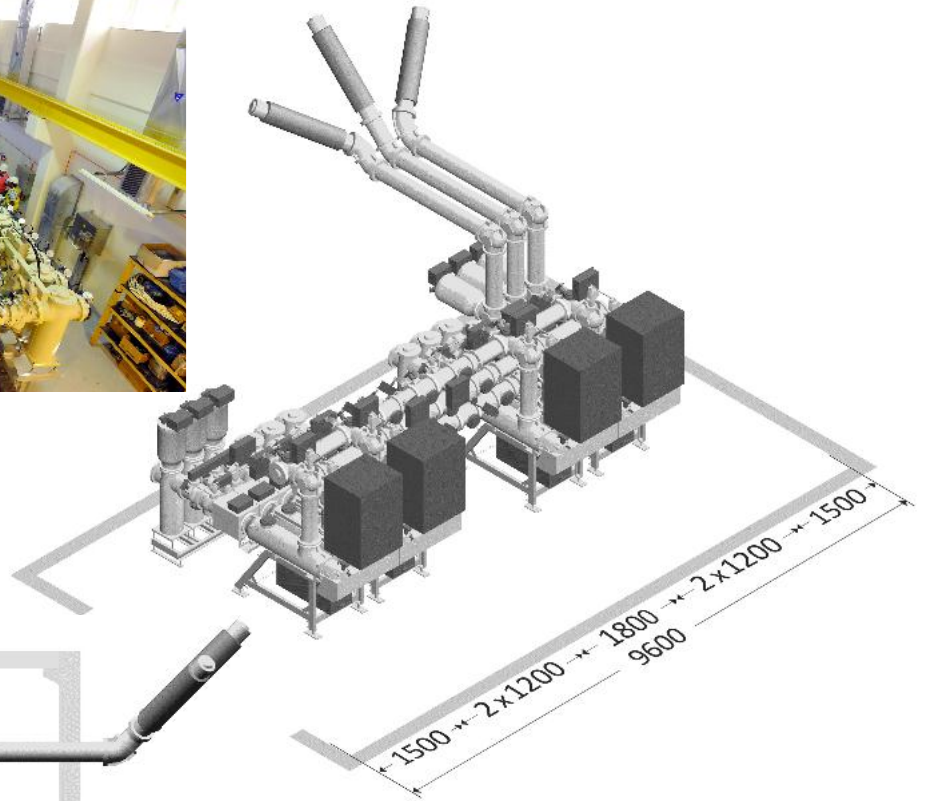


Transformer bay

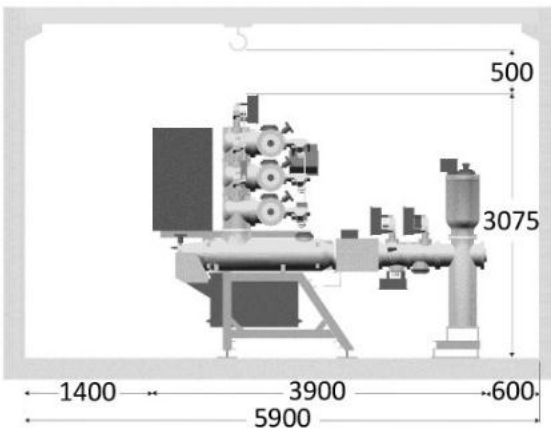


Coupling bay

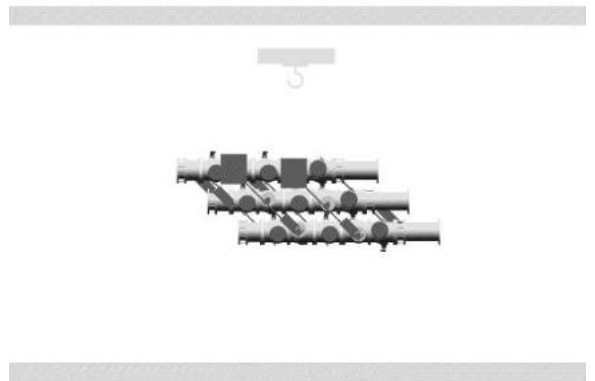
Single Busbar with Longitudinal Disconnectors



Line bay with SF₆-air bushing



Line bay with cable connection



Longitudinal busbar disconnectors

General Ratings

Reference electrotechnical standards		IEC / IEEE
Voltage	kV	145
Withstand voltages		
Short-duration power-frequency, phase-to-earth / across isolating distance	kV	275 / 315
Lightning impulse, phase-to-earth / across isolating distance	kVp	650 / 750
Frequency	Hz	50/60
Continuous current	A	up to 3150
Short-time withstand current	kA	40
Peak withstand current	kAp	100 / 108
Duration of short-circuit	s	3
Installation		indoor
Ambient temperature range	°C	down to -25 / up to +55

Circuit-Breaker Ratings

First-pole-to-clear factor		1.5
Short-circuit breaking current	kA	40
Short-circuit making current	kAp	100 / 108
Operating sequence		O – 0.3 s – CO – 3 min – CO / CO – 15 s – CO
Drive type (three-phase or single-phase)		pure-spring
Breaking time	ms	50
Closing time	ms	95
Mechanical endurance	class	M2
Capacitive switching	class	C2

Disconnecter and Low-speed Earthing Switch Ratings

Capacitive current switching	A	0.1
Bus-transfer current switching capability	A / V	1600 / 10
Mechanical endurance	class	M2

Make-proof Earthing Switch Ratings

Making current capability	kAp	100 / 108
Switching capability - electromagnetic coupling	A / kV	80 / 2
Switching capability - electrostatic coupling	A / kV	2 / 6
Mechanical endurance	class	M1

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Imagination at work