

Dual Gas 420 kV GIL

One GIL design for SF₆ and g³

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

GE's dual gas-insulated lines (GIL) meet the challenges of networks up to 420 kV for all applications: power generation, transmission and heavy industry.

Ready for future SF₆ gas regulations

Anticipating future SF₆ regulations, from 2022 onwards, this dual gas equipment is available in g³ or SF₆. Based on the same design, TSOs can buy the SF₆ version today and later easily switch from SF₆ to GE's SF₆-free g³ solution.

Main Characteristics

Environment friendliness

- New dual gas GIL launched in 2022 is available with g³ gas
- SF₆-free option with g³ gas allows 99 % CO₂e reduction of the gas mass without increasing the dimensions, thus the quantity of aluminum to manufacture the GIL
- Gas mass reduced by more than 15% compared to previous version
- First-in-class gas sealing system
- Improved tightness thanks to sealing length divided by 2 compared to previous version

Reliability based on field experience

- Design grounded with 50 years of field experience in SF₆ GIL and 5 years in g³ GIL
- Superior know-how based on more than 200 km of SF₆-GIL worldwide and more than 5 km of g³ GIL

Smart grid features

Full-digital monitoring: BWatch and PDWatch monitoring devices are available. They are recommended as both devices are SF₆ and g³ gases compatible, which means that there is no need to replace the monitoring system when you replace the SF₆ gas by GE's g³ gas technology.



Customer Benefits

- SF₆ and g³ GIL available with a single design
- Easy move to SF₆-free in short time with g³ adaptation kit
- Low environmental impact
- Field-proven reliability
- Maximum safety
- No induced current
- Lowest electromagnetic field
- Low total cost of ownership
- Smart grid ready



SF₆-free with g³ Adaptation Kit

Only very few GIL components need to be replaced when you decide to adopt GE's g³ gas instead of SF₆:

g³ adaptation kit for 362/420 kV GIL

- g³ gas
 - g³ filling valves
 - g³ molecular sieves
 - g³ conventional densimeter
- Should you have GE's BWatch digital monitoring system, no need of adaptation: Just select g³ on the device



BWatch Integrated SF₆ and g³ Monitoring System and Internal arc localization for GIS/GIL

g³/SF₆ GIL Main Ratings

Voltage	kV	362	420
Standards		IEC/IEEE	IEC/IEEE
Frequency	Hz	50/60	50/60
Withstand voltages, to earth			
Short-duration power-frequency	kV	520	650
Switching impulse	kVp	950	1050
Lightning impulse	kVp	1175	1425
Continuous current	A	4,000/5,000	4,000/5,000
Short-time withstand current	kA	63	63
Peak withstand current	kAp	170	170
Temperature	°C	-30/-40	-25/-30

Other data available on request.

For more information please contact
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