

Bushings

Expertise up to 1200 kV

For all applications, GE's bushings represent a cost-effective solution to facilitate the electric stress control of your equipment.

GE offers a large portfolio of condenser bushings for AC or DC operation.

Motivated to provide its customers with innovative and superior quality products, GE's vision remains focused on meeting customer requirements anticipating and while exceeding the needs of a continuously changing market.

Together with the Customers Towards the Future

GE began producing capacitance-graded bushings in 1923 and today it is recognized as one of the major reputable manufacturers in the world.

With top quality products, numerous worldwide references and capacity to innovate, GE is also one of the first suppliers of 1,100 kV equipment in China.



Large Portfolio of Condenser Bushings

- Resin Impregnated Paper Bushings up to 36 kV for generators
- Oil Impregnated Paper Bushings for voltages up to 1200 kV for power transformers and through-wall applications
- SF₆ insulated up to 800 kV for GIS, GIL and through-wall applications
- Resin Impregnated Paper Bushings for Power Transformers up to 550kV
- Hybrid - Oil Impregnated Paper (Transformer side insulation) / SF₆ (Valve side insulation) DC bushings for power transformers

Key Benefits

- State of Art Technology
- Research and Development Competence Center
- Over 90 years of technical expertise and On-site experience
- Full property of production technology and know-how
- Bushing with longer lifetime and higher reliability
- Installed Base over 500,000 bushings worldwide



All the winding machines used for condenser bushings product are computer controlled and have been specifically designed and developed for that purpose by GE.



PHI hybrid bushings



OIP wall bushings



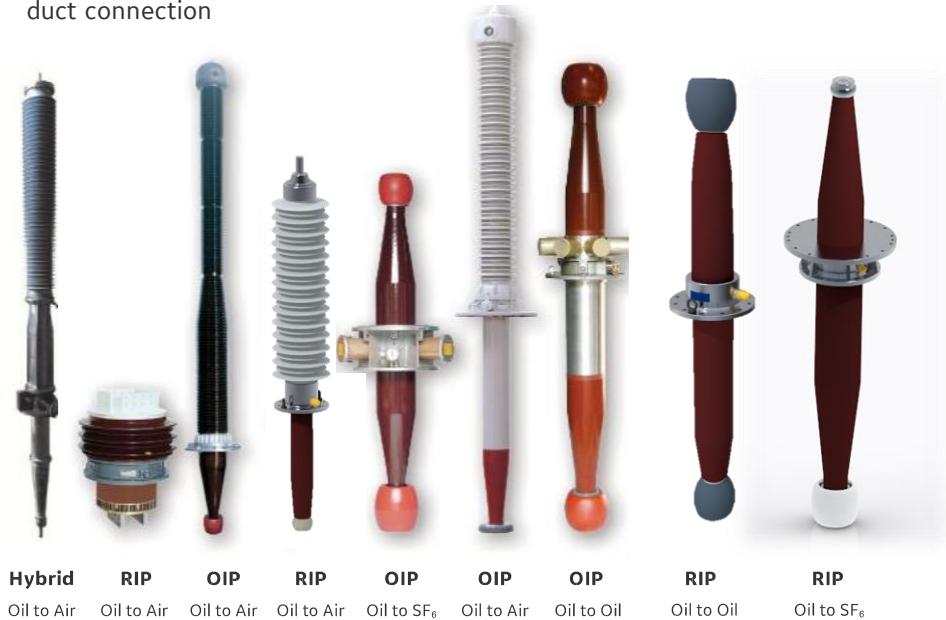
Wall bushings RIP and SF6

Expert in HV Condenser Bushings

For all applications, GE offers cost-effective solutions.

Power Transformers

- Oil-to-air, for the connection to the HV transmission or AC/DC distribution system
- Oil-to-oil, for the connection to HV cables
- Oil-to-SF₆, for the connection to the SF₆ metal enclosed bus ducts
- Oil-to-air, high current (up to 24,000 A) with Aluminium inner conductor for bus duct connection



Through-Wall

Air-to-Air, for Indoor and Outdoor Service

- AC or DC application
- Porcelain or composite envelope both sides
- High-Grade Insulating RIP, oil or SF₆ filled
- Partial discharges <5 pC at 1.5 U_m/V³
- Provided with power factor tap
- Flange of aluminium alloy casting
- Execution with solid conductor
- For horizontal or vertical installation



Power Generator

Turbo-generator, hydrogen or water cooling up to 30 kV, 45,000 A

- Outer envelopes: porcelain and/or fiberglass tube
- Cooling: natural, hydrogen, water
- Coupling by means of a Belleville washer placed on the air side
- Inner conductor made of aluminum or copper casting
- Dry filling (polyurethane foam) of the space between the porcelain and condenser body
- Installation in any position
- CT accommodation on request
- Flange made of aluminium or stainless steel, low permeability



RIP
Generator bushings



GIS

SF₆-to-air, for the connection between GIS, GIL, dead tank circuit breakers and GE's high voltage systems.

GE supplies these bushings according to SF₆ insulation technology:

- SF₆ filled for voltages from 72.5 to 300 kV and condenser-type made of SF₆ impregnated polypropylene film for voltages more than 300 to 550 kV for applications.
- SF₆-to-air, for the connection between GIS, GIL, dead tank circuit breakers and the HV network.



Gas-insulated
SF₆ to Air

Key Advantages

- One source for all bushings types up to 1200 kV
- Improved reliability
- Short delivery time even for higher creepage bushings
- Easy transport and installation
- State-of-the-art technology
- Customers preferred product
- International expertise in UHV



RIP



PTFR/PTHR
Oil-to-high current
24-52 kV



PNR
Oil-to-air
52-550 kV



PCTR
Oil-to-oil
72.5-245 kV



POBR
Oil-to-SF₆
72.5-420 kV



PGFR
Generator bushings
Up to 30 kV



PWR/PWHR
air-to-air
24-245 kV AC and
DC applications

OIP

Oil-to-air
transformer
bushings



PNO
52-1200 kV



PSO
52-170 kV



PAO
25-765 kV



POBO
72.5-1050 kV



PCTO
72.5-1050 kV



PWO
72.5-420 kV

Oil-to-SF₆

Oil-to-oil

Air-to-air

SF₆

PABS
52-550 kV



Hybrid SF₆/OIP SF₆/RIP

PHI
265-820 kV DC
applications



PNHR
52-550 kV DC
applications

PWS/PWHS
24-800 kV AC and
DC applications



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