



ABB Switzerland Ltd, Micafil High Voltage Insulation Components

High Voltage Insulation Components

Specific solutions for our customers



Cast Epoxy Insulators

Insulators for high voltage power distribution



Where we build on

- innovative material know-how supported by the ABB research and development center in Switzerland
- manufacturing process knowledge based on more than 25 years of resin casting experience
- design experience regarding mechanical design and mould design
- large number of reference proved through cooperation with several prestigious cable accessories and/or GIS suppliers

High Voltage Insulation Components

Insulators for Gas Insulated Switchgear (GIS)



What you get

- highest electrical insulating properties
- very low long-term mechanical creep
- operating temperatures up to 105 °C
- integrated field control electrodes
- SF6 - decomposition products resistant
- voltage levels from 145 kV up to 1000 kV
- efficient co-operation during development and engineering phase

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Insulators for high voltage cable sealing ends

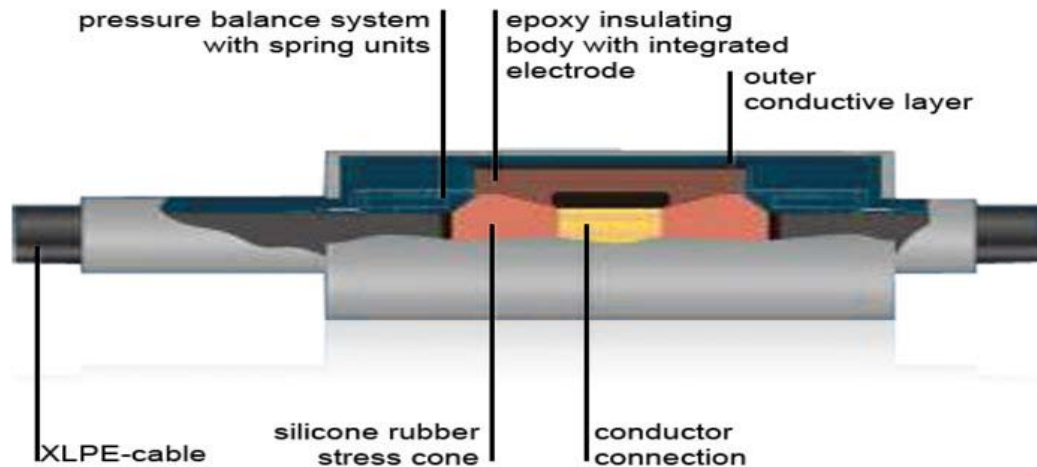


Partner of world class cable accessories suppliers

- voltage levels from 72,5 kV to 420 kV
- design according to IEC 859
- outstanding surface quality
- customized cable contact elements highest electrical insulating properties
- very large number of references with long-term operation experience

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Insulators for high voltage cable joints



Insulator body with integrated electrode for 400 kV cable joint

- 150 kg cast epoxy resin body
- two step casting
- large number of insulators in operation since many years

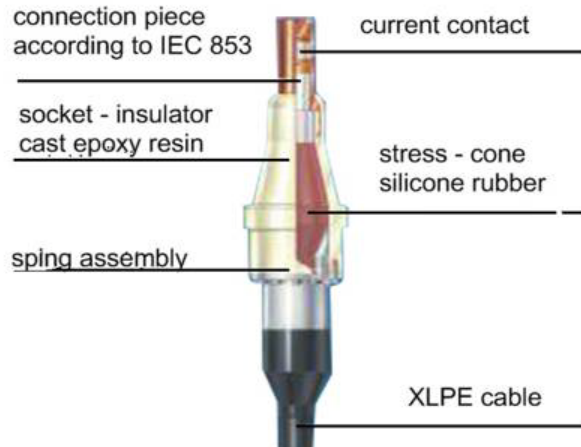
High Voltage Insulation Components

Insulators for high voltage cable connections



Micafil also provides socket-insulators for advanced high voltage cable connection

- high product quality based on long-term manufacturing experience



High Voltage Insulation Components

Advanced production facilities



Vacuum Casting Process (VCP)

Process:

- premixing in batch mixer
- final mixing in static mixer
- casting into mould placed inside vacuumized casting chamber
- curing for several ours in hardening oven

Characteristics:

- void and PD free casting
- excelent surface quality

High Voltage Insulation Components

Advanced production facilities



Automatic Pressure Gelation (APG)

Process:

- preparing and mixing in batch mixer
- final mixing with static mixer in clamping machine
- injection of degassed casting compound under pressure from below into APG mould with continuous supply of fresh material

Characteristics:

- very good utilization of mould investment based on low through put time

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No compromise in quality



Quality

- the quality assurance department has all means as well as skilled personnel to maintain a outstanding ambitious quality level



Washing and Sandblasting

- the surface of inserts must be free of contamination. To get an optimal result of adhesion, washing is applied before and after sandblasting
- combined inversion/ultrasonic cleaning, followed by vapor phase cleaning

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Conclusion

Your benefits with Micafil Cast epoxy insulators

- Micafil cast epoxy insulators combine best-in-class quality with superior production know-how using state-of-the-art vacuum casting and automated pressure gelation
- We serve numerous world-class suppliers of high voltage apparatuses such as:
 - gas insulated switchgears
 - generator circuit breakers
 - cable joints and sealing ends
 - cable connections

Cast Epoxy Insulators References

Gas Insulated Switchgear Manufacturer

- Hyunday / Korea
- Siemens / Germany
- Shiky / China
- Trench / Germany
- Highvolt / Germany
- ETIC / China
- ABB / Switzerland, Germany, Italy, USA, CZ

Cable Accessories Manufacturer

- Brugg cables / Switzerland
- Ixosil / Switzerland
- Nexans / Germany
- Tyco / Germany
- CCC Berlin / Germany
- Südkabel / Germany
- Swiss polymeric / China
- ABB / Sweden
- Prysmian / Italy

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