



PPC INSULATORS

ELECTRIFYING THE WORLD



**PPC Insulators**

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## **Fiber Optic Hole Post Insulator**

Advanced station post insulators' solution for future fiber optic bushing applications for digital substations and smart grid.

# PPC Fiber Optic Hole Post Insulator.

## Advanced Station Post Design - Technical Necessity for the Future!

PPC Fiber Optic Hole Post Insulator is an in-house solution first designed by PPC Insulators in mid 90'. Forecasting current trends, developments and increased demand for higher safety, more reliability and better control of power systems, PPC Fiber Optic Hole Post Insulator is an advanced concept and well-proven solution for digital substations and smart grid's integrated prognostics systems.

PPC Insulators has a long-standing record of designing PPC Fiber Optic Hole Post Insulator, its application and use. Many of PPC customers have long adopted the solution and have been using it for a prolonged period of time safely monitoring and preventing any imminent failure threats on AC and DC current systems. PPC solution enables efficient implementation of supervisory system monitoring insulation resistance performance and potential risk exposure.

### Isostatic Technology

The specific design features of PPC Fiber Optic Hole Post Insulator are only feasible using Cold Isostatic Pressing (CIP) process. The conventional wet extrusion does not allow the production of a precisely measured design enabling integration of prognostics system. With the many advantages isostatic technology offers, there is one more, i.e. the production of PPC Fiber Optic Hole Post Insulator.

### The Chamber Hole

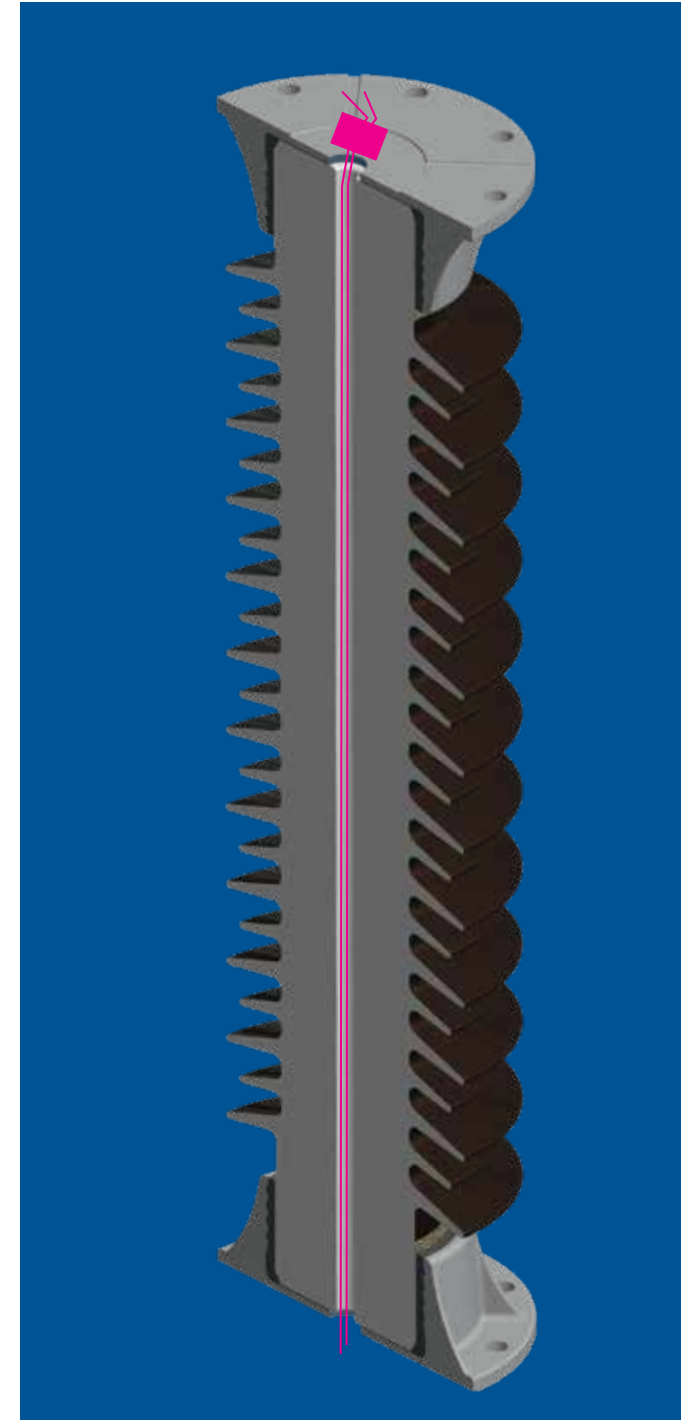
At the core of PPC Fiber Optic Hole Post Insulator is a specially designed insulator chamber with precise specifications and dimensions. With diameter from 15 to 20 mm, the chamber runs straight throughout the whole length of the insulator as well as bottom and top fitting. Equipped with rubber insert, the chamber is sealed for unhindered transmission of data traveling from sensor to data collecting device.

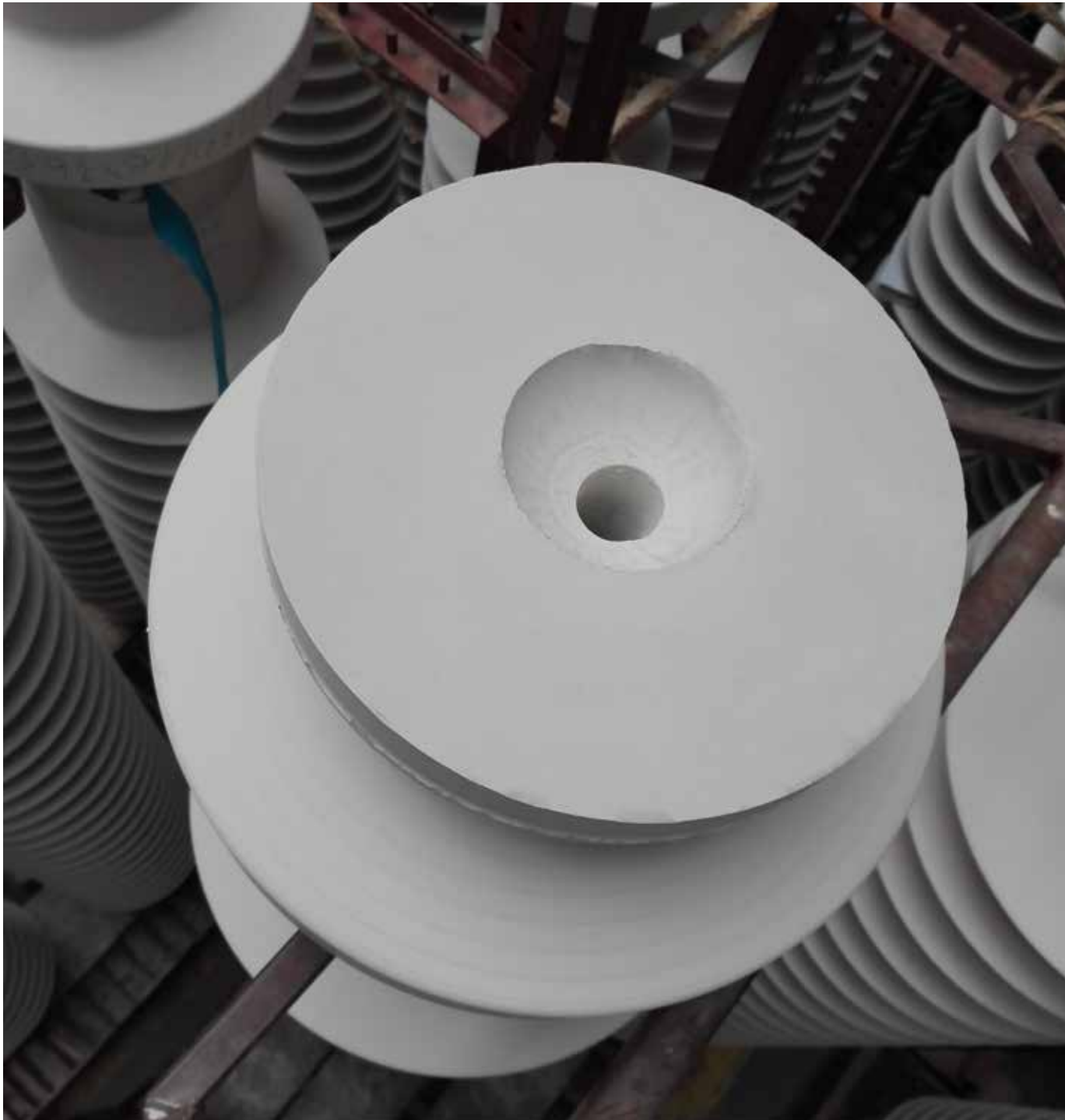
### No Bending Strength Decrease

As the chamber is running on the neutral axis, which is a cross section of the insulator and where there are no longitudinal stresses or strains, the insulator's mechanical strength is in no way affected. Extensive bending tests performed internally and by external laboratories have successfully proven that the chamber does not affect the strength and rigidity of the porcelain body; the bending strength average and standard deviations are within the margin of standard porcelain station post insulators.

### The Data Transmission

There are many different monitoring and data transmission systems available. The most common, widespread and reliable transmission method on the market is an optical signal with light impulses, which are not sensitive to disturbances such as radio frequency transmission under e-field.





PPC Fiber Optic Hole Post Insulator is available with all standard and non-standard PPC porcelain and hybrid station post insulator types. Ranging up to 2,550 kV BIL and designed for the most challenging performance environments, PPC Fiber Optic Hole Post Insulators are a well-proven solution for digital substations and smart grid's integrated prognostics systems.

## Customer Specific Design

PPC Insulators is continuously developing new insulation solutions in collaboration with customers only to deliver leading insulation solutions meeting specific needs and requirements for top quality and performance standards generating added value.

To discuss the possibilities of collaboration custom design of PPC Fiber Optic Hole Post Insulators you can contact us at [R&D@ppcinsulators.com](mailto:R&D@ppcinsulators.com)



PPC Insulators is a leading manufacturer of porcelain and hybrid insulators for more than 130 years. We invest our efforts to offer quick, easy and effective solutions to our customers. Our extensive knowledge, expertise, and production technology enables us to produce the best insulator designs to cater up to 1,200 kV AC and 1,100 kV DC system voltages, that positions us at the forefront of techno-industrial achievements.

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