PIONEER

Polymer Insulators

Delivering Safe Electricity Across India & Beyond

Certifications

ISO

ANSI
ANSI Accredited Standards Developer

IEC

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Pioneer Insulators

Who We Are



Pioneer Pultrutech Engineering Pvt. Ltd. (PPEPL) is one of India's most trusted silicone rubber composite polymer insulator manufacturers. We have been involved in deep technical expertise backed by hands-on innovation in the composite insulation industry. PPEL is instrumental in serving the global power transmission and distribution sector for over 17 years and has been a trusted vendor to more than 20 Indian DISCOMs and TRANSCOs.

What began as a manufacturer of epoxy-based fiberglass reinforced products has today evolved into a powerhouse producing high-quality silicon composite insulators backed by international certifications and compliance with IEC, ANSI, and CESI standards.

We craft **ultra–efficient** Silicon Rubber Composite Polymer Insulators, **expertly engineered** for **unmatched reliability** from **11kV up to 400kV.**

The Pioneer Advantage

1. 17+ Years of industry expertise in composite and polymer technology
2. 10 Million+ Insulators in the field
3. 2 Million+ Units Annual Production Capacity
4. 200+ Satisfied Clients across public and private power utilities
5. Export-Ready Manufacturing with international QA compliance
6. In-house production of FRP Core Rods using ECR-grade glass fibers
7. Premium fibre materials sourced directly from Owens Corning
8. Trusted Supplier to 20+ Indian DISCOMs & TRANSCOs.

Who We Serve

APTRANSCO
TGTRANSCO
HVPN
SUZLON
meil
MAHAVITARAN
BAJAJ
BHEL
LARSEN & TOUBRO
NCC Limited
RAMK
greenko
KPTCL
MEDHA SERVO DRIVES PVT. LTD.
Angelique International
KEI Wires & Cables

A Look into Composite Polymer Insulators

Redefining Electrical Insulation for Modern Power Systems

Our Composite Polymer Insulators are advanced electrical insulation components made with a robust **Fiber Reinforced Plastic** core rod that provides exceptional mechanical strength. The silicone rubber housing prevents current leakages and protects the internal FRP core from UV, pollution, and moisture. These superior quality insulators are lightweight, vandal-resistant and easier to install compared to traditional porcelain or glass types.

Pioneer's composite insulators are:

- Type-tested by CPRI, ERDA & NABL Labs
- Compliant with IEC 61109, ANSI, and CESI standards
- ISO 9001:2015 certified (IAS-USA)

KEY COMPONENTS





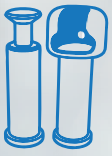
FRP Core Rod

High-quality glass fiber and epoxy resin system for high tensile strength and mechanical stability.



Silicone Rubber

Protects the core and provides excellent hydrophobic properties. The protective parts increase the creepage distance & improve insulation performance.

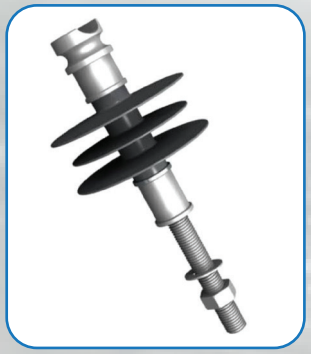


End Fittings

Fittings that transfer mechanical stress to the core and ensure handling of the mechanical load.

Product Range Overview

All insulators are available in a wide voltage range: 11– 400 kV.



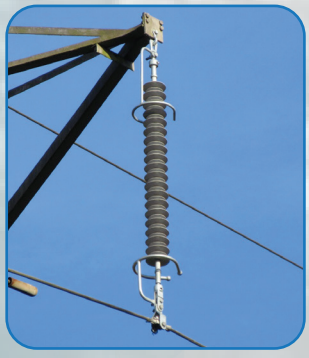
Pin Insulators

Compact and durable for distribution lines. Simple to install with Stud fittings.



Post Insulators

Designed for substations and switchgear. Offers high mechanical stability in compact setups.



Suspension Insulators

Ideal for high voltage A.C and D.C Transmission lines. Withstands environmental stress and mechanical loads in suspension mode



Tension Insulators

Used in dead-end towers for both high & low voltage lines. Delivers high tensile strength up to 210 KN

Product Specifications

Nominal System Voltage	Type of Insulator	Rated Mechanical Load (kN)	Creepage Distance Min. (mm)	Connect Type
11 kV	DISC	45	320	T&C / B&S
11 kV	DISC	70	320	T&C / B&S
11 kV	PIN	5	320	M 20 Stud
11 kV	POST	5	320	POST
33 kV	DISC	70/90	900	T&C / B&S
33 kV	DISC	120	900	B&S
33 kV	DISC	70/90	1150	T&C / B&S
33 kV	PIN	10	900	M 24 Stud
33 kV	POST	10	900	POST
66 kV	SUSPENSION	70/90	2245	B&S(16B)
66 kV	TENSION	120	2245	B&S(20)
110/132 kV	SUSPENSION	70/90	4495	B&S (16B)
110/132 kV	TENSION	120	4495	B&S(20)
220 kV	SUSPENSION	70/90	7595	B&S (16B)
220 kV	TENSION	120/160	7595	B&S(20)
400 kV	SUSPENSION	70/90	13050	B&S (16B)
400 kV	SUSPENSION/TENSION	120/160	13050	B&S(20)
400 kV	TENSION	210	13050	B&S(20)

We can also design and manufacture the insulators as per custom requirements of our clients

Product Applications

Applications of Composite Polymer Insulators

01

Power Transmission Lines

Designed to withstand extreme electrical and mechanical stresses, our insulators perform with stability and efficiency in high-voltage transmission networks.

02

Electrical Substations

Our insulators provide exceptional dielectric strength and mechanical reliability, ensuring seamless operations in the most demanding electrical environments

03

High-Pollution Zones

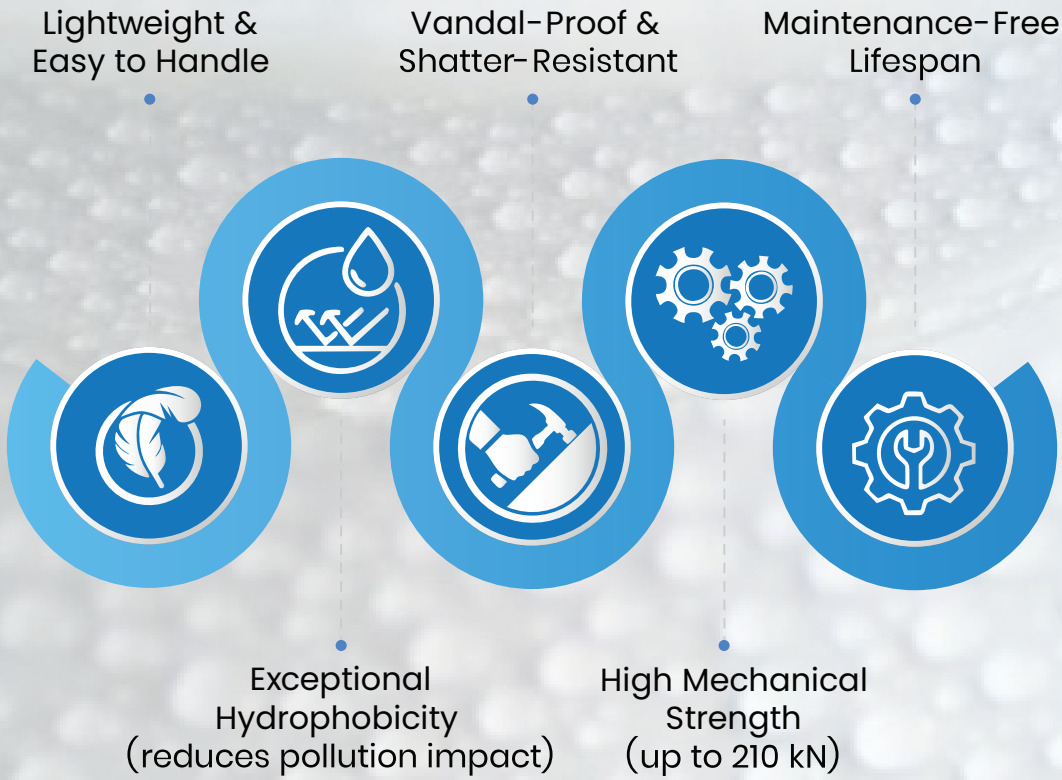
Our Insulators are engineered with specialized anti-pollution designs and coatings, delivering superior resistance and reliable performance in heavily polluted areas



Engineered Excellence:

Inside Our Composite Polymer Insulators

KEY BENEFITS



Technical Features at a Glance

Technical Feature	Description
Core Material	High-strength, in-house Epoxy Fiberglass Reinforced Plastic (FRP) rods
Housing	Injection-molded Silicone Rubber for consistent quality and sealing
End Fittings	Galvanized SGCI castings or Forged Steel for robust mechanical support
UV & Weather Resistance	Built with materials that withstand harsh environmental conditions
Pollution Resistance	A hydrophobic surface minimizes leakage currents and pollution impact
Compliance	Meets international standards (IEC 61109, IEC 60815, ANSI, CESI)
Custom Solutions	Designs tailored to specific project needs
Hydrophobic Property	Surface maintains water repellency over time, preventing water film formation

Our Presence

From Local Expertise to National Impact

Since our founding in 2007, Pioneer Pultrutech Engineering Pvt. Ltd. has steadily built a reputation as one of India's most trusted names in composite polymer insulators. With over **10 million units supplied** across the country, we are proud to support a wide spectrum of clients—from state electricity boards to top-tier EPC contractors.

Our insulators are in service across:

- Transmission & distribution Lines (11kV to 400kV)
- Substations, switching yards, and renewable energy plants.
- Coastal zones and high-pollution environments
- Rural electrification and urban infrastructure projects.

We are **approved by over 20 Indian DISCOMs** and **TRANSCOs** have long-standing associations with leading companies like **SSEL, MEIL, KPTCL**

Leading EPC contractor for the Global Market

Pioneer is fully equipped to serve the international power and infrastructure sectors. With scalable manufacturing, globally certified quality, and a focus on customization, we are ready to be your trusted supply partner worldwide.



We are prepared to fulfill international orders with:

Fast Turnaround and Global Dispatch

Short lead times are supported by streamlined logistics and production efficiency.

Custom Technical Documentation and Certifications

Comprehensive QA/QC documents, type test reports, drawings, and specifications aligned with IEC 61109, ANSI, and CESI standards.

Volume Flexibility

Capability to fulfill small-scale orders or large project tenders with ease.

EPC Support and Spec Matching

Our engineering team assists with EPC bidding, drawing reviews, and technical compliance for international tenders.

Complete In-House Production Capability

From core rod pultrusion to injection molding and crimping, every process is handled internally to ensure full quality control and consistency.

PIONEER

Partner with us Today & Power Your Projects with **Ultra-Efficient Insulators**



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