

## Introduction

Composite insulator consists of insulation core, silicon rubber sheds and end fittings at both terminals.

As the main structure, insulation core is made of epoxy resin, supporting housing, inside insulation and end fittings at both ends and withstanding mechanical load. The core has good tension strength usually over 600Mpa, which is 2 times than ordinary steel, 5 to 8 times than ceramic material, at the same time, the core has good performance at dielectric property, erosion resistance, bending fatigue resistance, creepage resistance and impulse resistance. Silicon rubber sheds mainly protect the core, shield rain and snow, and widen the creepage distance and outside distance. It's made of high molecular polymer silicon rubber, with fire retardant, inhibitor and coupling agent as auxiliaries, the high temperature and pressure vulcanized process provides good hydrophobicity, migratory aptitude, erosion resistance, aging resistance and electric insulation properties. When flashover occurs, it performs good at fracture resistance, distributing voltage averagely and has 2 times electric voltage than ceramic insulator at the same flashover situation.

Composite insulator has strong mechanical strength, Composite insulators made of reinforced steel end fittings with maze design, multilayer protection and good sealing, which have solved the main problem of insulator that is interface electric puncture. Connection of core and fittings uses the most advanced coaxial constant pressure crimping technology, assisted by automatic sound control damage inspection system, assuring the reliability and stability of core and fittings connection. Using ERC high temperature acid-resist bar, surface of the core and silicon rubber is applied with specified coupling agent. The high temperature and pressure disposable molding inspection technology confirms all technical regulations meet domestic and international standards, making the housing and sheds the newest generation insulator unit in high voltage transmission line.

## Working Conditions

- ★ Environment temperature: -40°C ~ +40°C
- ★ Alternate current frequency no more than 100Hz
- ★ Earthquake under 8 level
- ★ Altitude no more than 1500m
- ★ Max wind speed no more than 35M/S

## Property Characteristics

- ★ Small size, light weight equals to weight of same voltage level porcelain insulator 1/5-1/9, which makes it convenient to transport and install.
- ★ Composite insulator has strong mechanical strength, reliable structure, stable properties, long safe running span life, which served a guarantee for line's safe working.
- ★ Composite insulator has excellent electric properties, sheds made of silicon rubber is good at hydrophobic, transference resistance, pollution resistance and pollution flashover resistance, which makes it perform well in heavy pollution areas without human cleaning and maintenance required.
- ★ Composite is good at acid resistance, alkalinity resistance, thermal aging resistance and electric resistance, good sealing protects its inside insulation from moisture.
- ★ Composite insulator has good fracture resistance and earthquake resistance, no fracture accidents occur during working time.
- ★ Composite insulator is exchangeable with porcelain insulator.

Thickness of the housing  $\geq 5\text{mm}$ , all uniform thickness, which meet IEC standard.

Designed as aerodynamics, with the help of shield integral molding technology, the silicon rubber housing assure the effective creepage distance under any climate or pollution circumstances and improves composite insulator's self cleaning capability.

Zinc core: ERC high temperature acid-resistance strengthened zinc core.

Maze design and outside sealing process improve insulator's properties of waterproof and seepage prevention.

Terminal coupling: galvanized fittings crimped by coaxial constant pressure with ultrasonic inspection and computer control makes the fitting shine as new, with good tension distribution property and very stable quality.



Excellent formula silicon rubber has very good properties of hydrophobicity and tracking resistance.



End fittings produced with special steel and advanced crimping technology assure the high stability and precision of insulator.

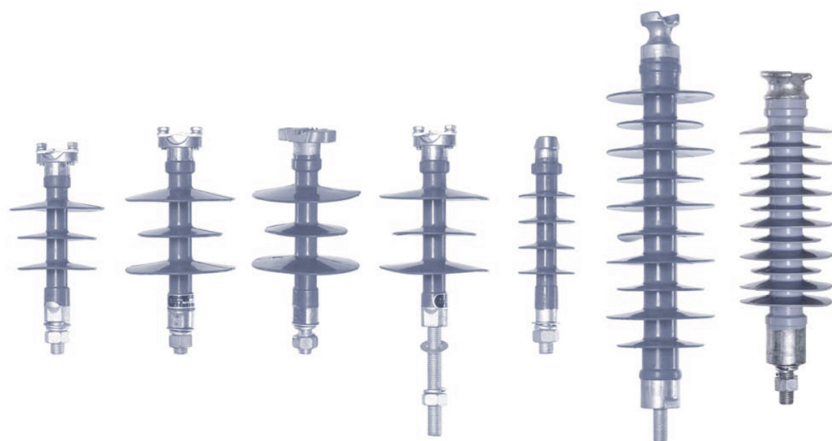
## Composite Suspension Insulator



## Technical Specifications

Type	Rated Voltage (kV)	Rated Bending Resistance Load (kN)	Structure Height (mm)	Leakage Distance (mm)	Lightning Impulse Withstand Voltage (kV)	Power Frequency Withstand (wet) (kV)
MT-FXBW4-10	10	70	420	460	95	42
MT-FXBW4-24	24	70	480	680	230	50
MT-FXBW4-35	35	100	670	1280	230	95
MT-FXBW4-66	66	100	940	1870	410	185
MT-FXBW4-110	110	160	1305	3350	550	230

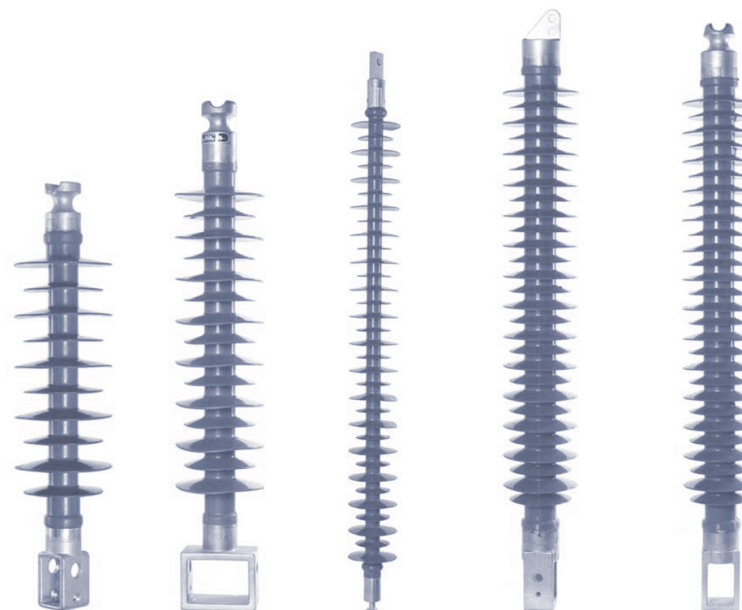
### Composite Pin Type Insulator



#### Technical Specifications

Type	Rated Voltage (kV)	Rated Bending Resistance Load (kN)	Structure Height (mm)	Leakage Distance (mm)	Lightning Impulse Withstand Voltage (kV)	Power Frequency Withstand (wet) (kV)
MT-IP01	10	4	260	460	110	50
MT-IP02	24	5	335	655	125	60
MT-IP03	35	6	450	950	230	95

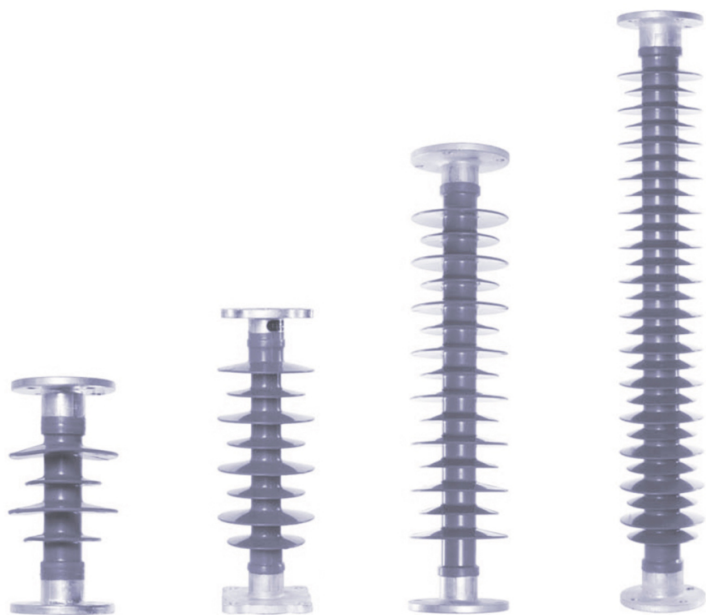
### Composite Cross-arm Insulator



#### Technical Specifications

Type	Rated Voltage (kV)	Rated Bending Resistance Load (kN)	Structure Height (mm)	Leakage Distance (mm)	Lightning Impulse Withstand Voltage (kV)	Power Frequency Withstand (wet) (kV)
MT-IC01	12	5	280	380	90	42
MT-IC02	35	5	620	1200	265	100
MT-IC03	66	8	1020	1825	450	180
MT-IC04	110	10	1270	3160	550	230
MT-IC05	220	5	2160	6300	1000	395

### Composite Station Post Insulator



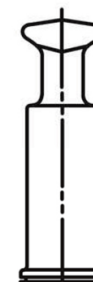
#### Technical Specifications

Type	Rated Voltage (kV)	Rated Bending Resistance Load (kN)	Structure Height (mm)	Leakage Distance (mm)	Lightning Impulse Withstand Voltage (kV)	Power Frequency Withstand (wet) (kV)
MT-ISP01	12	4	215	350	75	42
MT-ISP02	35	6	430	1000	230	95
MT-ISP03	66	8	770	1825	325	165
MT-ISP04	110	10	1220	3160	490	230

### End Fittings



Socket (W)



Ball (Q)



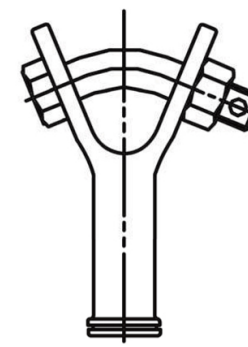
Single Handles (D)



Double Handles (U)



O Shape Ring (E)



Y Shape Ring (Y)