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# **C**ompany Profile

Electric Powertek Company Ltd. is located in the economic development zone in Xinji city, hebei province, it mainly engaged in the research and development, production and sales of composite insulators, drop out fuses, disconnector switches, surge arresters and safety tools under 500KV.Because of the good service and hard work, the company has been developed a lot since the factory established in 1989. For Electric Powertek Company Ltd., the registered capital of is ¥ 50,000,000RMB, it covers an area of 20,000 square meters and has four closed workshop and a closed test hall. It is equipped with 22 senior technicians and more than 80 other workers. The company has 3 sets of 300T injection moulding machines, 7 sets of flat vulcanizing machines, and it also has the other rubber mixing and machining and processing associated equipment. It has 27 sets of test equipment, such as steep wave impulse voltage generator, high voltage test transformer and horizontal tension machine, so it can ensure the high quality of the products.

In 2002, the company passed the ISO9001 quality management system certification, and obtained the type test report from the national insulator and arrester quality supervision and inspection center. It was rated as the "commitment unit for safeguarding the legitimate rights and interests of consumers" by the consumer association. For many years in a row, the company has obtained the certification letter of qualification and ability of suppliers for composite insulators, disconnector switches, drop out fuses and vacuum circuit breakers, and has also achieved the provincial pre-examination notice of state grid for the products.

The company's product sales cover 20 provinces in China, it has won the biddings of state grid corporation of China for many years, and has exported to Russia and other countries, all the products are well received by customers.

Electric Powertek Company Ltd. has the advanced production technology, excellent product quality and good service, with the spirit of integrity and innovation and basing on the long-term development, the company looks forward the sincere cooperation with the friends from all walks of life.

# Production Equipment



















# A corner of the workshop





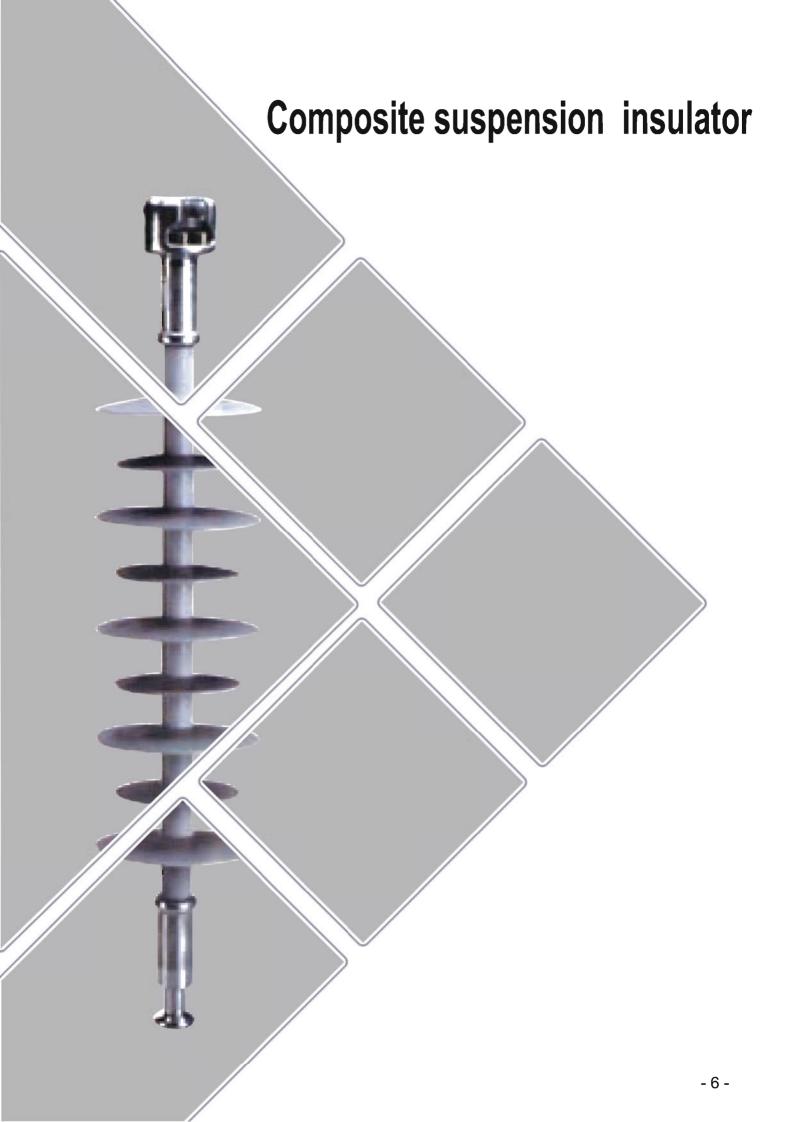






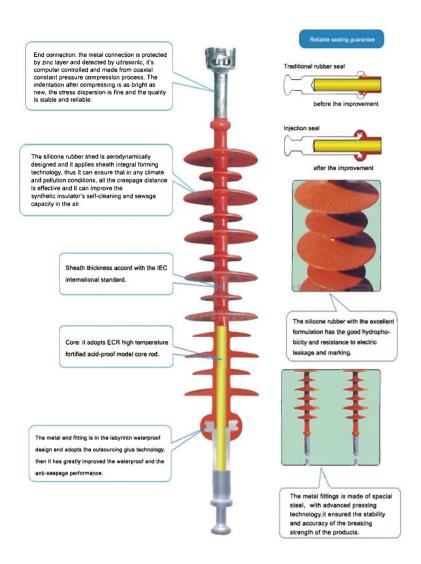
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# **>>>**

# Composite suspension insulator



# The range of application





### Overview

The composite suspension insulator is composed of glass fiber epoxy resin core, silicone rubber shed and metal fittings. The silicone rubber shed adopts integral injection and compression technology, thus solving the key problem of interface electrical breakdown that affects the reliability of composite insulators. The coupling between fiberglass core and metal fittings adopts advanced pressure welding technology, it equipped with automatic acoustic detection system, it's in high strength, beautiful appearance, small size and light weight, the galvanized metal fittings is in anti-corrosion, the insulator can be used interchangeably with the porcelain insulator, with the reliable structure, the product won't damage the core and can give full play to its mechanical strength.

## The performance of the product

- It's small in size and light in weight, that's it is about 1/5 to 1/9 of the porcelain insulator in the same grade voltage, so it is convenient for transportation and installation.
- The composite insulator has high mechanical strength, reliable structure, stable performance and large safety operation margin, which provides a guarantee for the safe operation of the line.
- Composite insulator has excellent electrical performance, the silicone rubber shed has good hydrophobicity and mobility, it has a good anti-pollution performance and strong anti-pollution flashover ability, so it can operate safely in badly polluted areas, and it does not need manual cleaning, the zero maintenance can be also avoided.
- The composite insulator has the characteristics of acid resistance, alkali resistance, heat resistance, aging resistance and electrical resistance, it has good sealing performance, and can ensure that the internal insulation core not be affected by moisture.
- Composite insulators have good brittleness resistance, strong shock resistance and there's no brittle fracture accident.
- Composite insulators are exchangeable and can be used interchangeably with porcelain insulators.







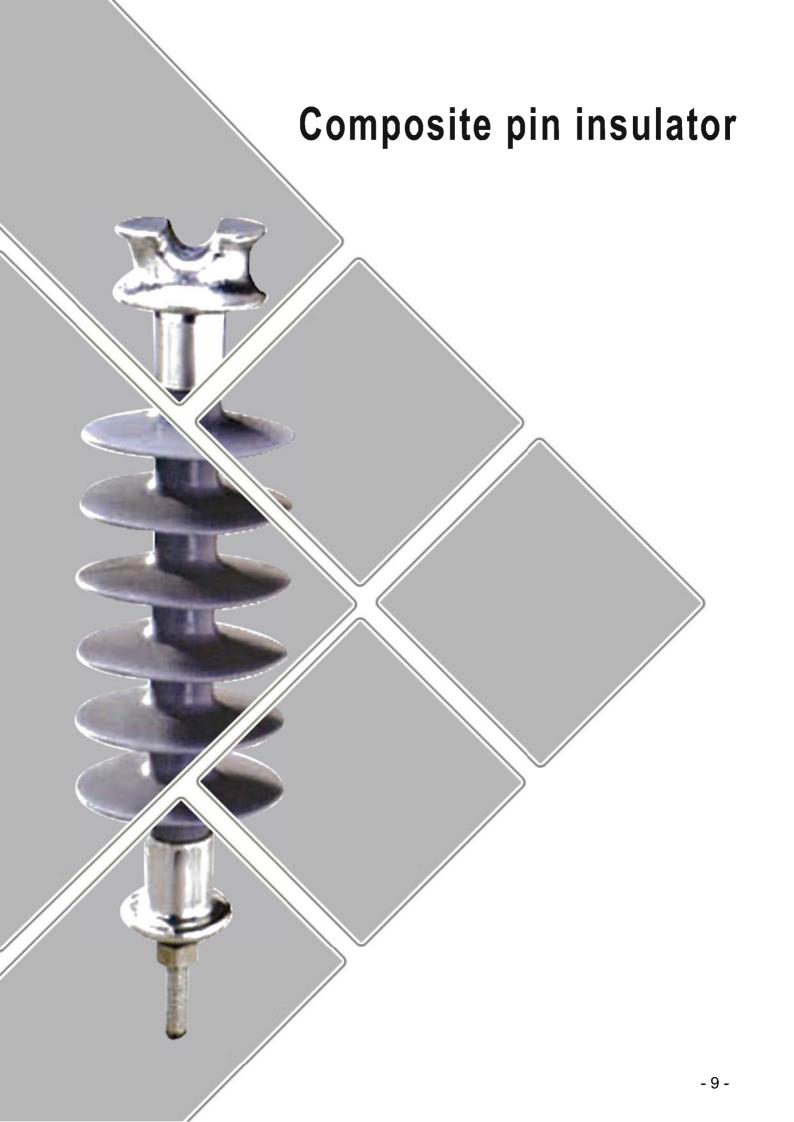
# Rod suspension composite insulator



Rod suspension composite insulators for high voltage lines are suitable for use in polluted areas, especially in badly polluted areas. They have high tensile strength and good antifouling performance, the insulators are easy to install and to use. They adopt standard ball and socket coupling structure.

The company mainly produces 10kv-500kv suspension insulators, and according to the different needs of users, it also produces a variety of suspension insulators that are suitable for various regions and occasions.

Туре	Rated voltage (K <b>V</b> )	Rated mechanical load(KN)	Structure height (mm)	Insulating distance (mm)	Min norninal creepage distance (mm)	Lightning impulse withstand voltage(KV)	1 min power frequency wet withstand voltage (KV)
FXBW4-12/70	12	70	350	180	400	95	45
FXBW4-24/70	24	70	550	370	850	185	95
FXBW4-24/100	24	100	570	370	850	185	95
FXBW4-35/70	36	70	650	450	1000	230	105
FXBW4-35/100	36	100	670	450	1000	230	105



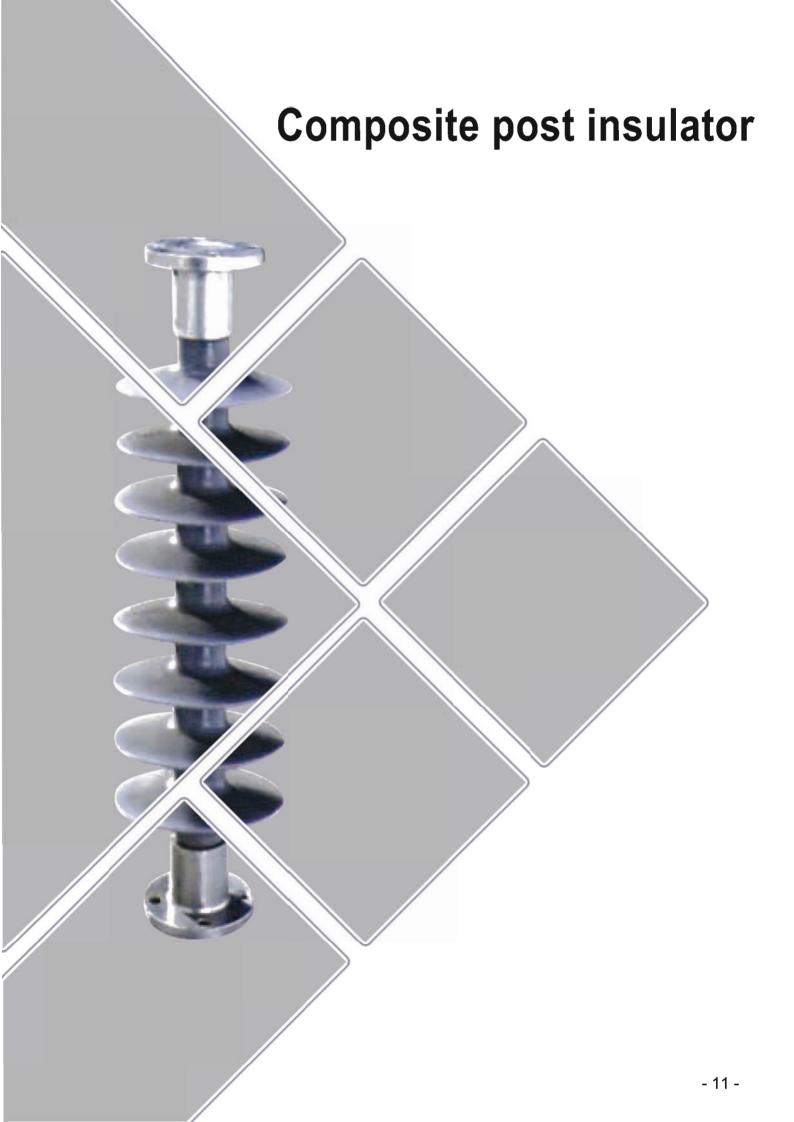


# Composite pin insulator



Composite pin insulators have high bending resistance, torsional strength, impact resistance, seismic resistance and explosion-proof performance. Reliable internal insulation, light weight, easy to install, is the traditional porcelain insulator ideal substitute products.

Туре	Rated voltage (KV)	Rated mechanical load(KN)	Structure height (mm)	Insulating distance (mm)	Min norninal creepage distance (mm)	Lightning impulse withstand voltage(KV)	1 min power frequency wet withstand voltage (KV)
FPQ-11/4	11	4	295	140	360	105	45
FPQ-11/10	11	10	300	165	420	105	45
FPQ-15/10	15	10	280	160	665	145	65
FPQ-24/11	24	11	476	165	610	145	65
FPQ-33/8	33	8	425	320	1150	230	95
FPQ-33/10	33	10	406	280	940	200	95
FPQ-33/12	33	12	545	380	1485	250	125



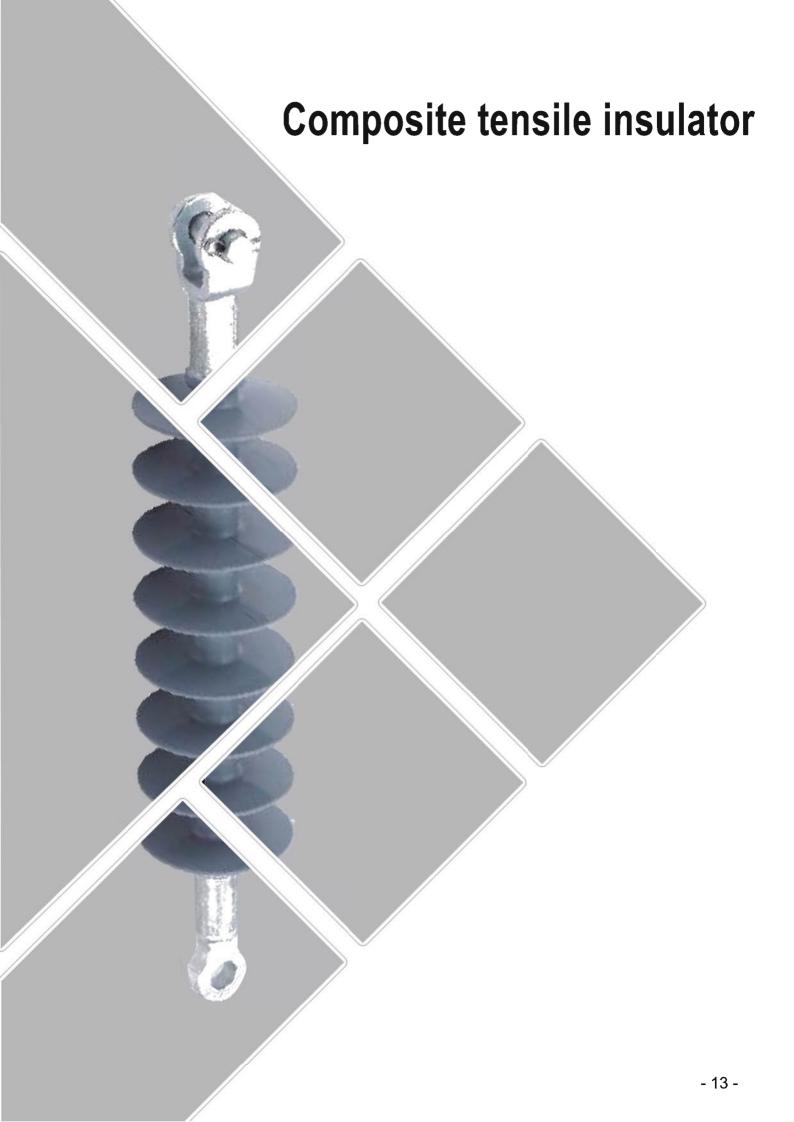


# Composite post insulator



Composite post insulator has good bending resistance, strong anti-fouling ability, strong impact resistance, good breaking performance, small volume, light weight, convenient installation, no maintenance, no need of manual cleaning, and can be used interchangeably with porcelain insulators.

Туре	Rated voltage (KV)	Rated mechanical load(KN)	Structure height (mm)	Insulating distance (mm)	Min norninal creepage distance (mm)	Lightning impulse withstand voltage(KV)	1 min power frequency wet withstand voltage (KV)
FZSW-12/4	12	4	215	290	100/90	75	42
FZSW-24/8	24	8	400	750	142	150	65
FZSW-36/6	36	6	450	946	148/118	185	95
FZSW-66/6	66	6	760	1886	160/130	410	185
FZSW-66/8	66	8	760	2010	220/190	410	185
FZSW-110/10	110	10	1220	3530	220/190	500	230
FZSW-220/10	220	10	2440	7060	220/190	1000	395

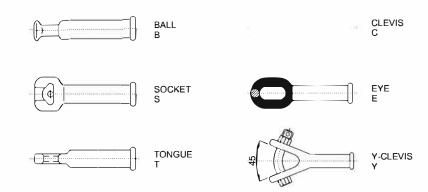


# Composite tensile insulator

# **Overview**

Composite tensile insulators are suitable for polluted areas, especially in heavy pollu5ted areas. Its high tensile strength, good anti-fouling performance, easy to install and use, using a variety of metal fittings to connect the structure, and compact connection to the line fittings.

# **End fittings**



# Table of end fitting type

Adding the letters	SB	ST	sc	BB	TC	π	CC	CE	EE
Representing the fitting	Socket clevis -Ball eye	Socket clevis -Tongue	Socket clevis -Clevis	Ball eye -Ball eye	Tongue -Clevis	Tongue -Tongue	Clevis -Clevis	Clevis -Eye	Eye -Eye
Link mark	16-16	16-7	16 <sub>-</sub> 7	16-16	7-7	7-7	7-7	7-7	7-7

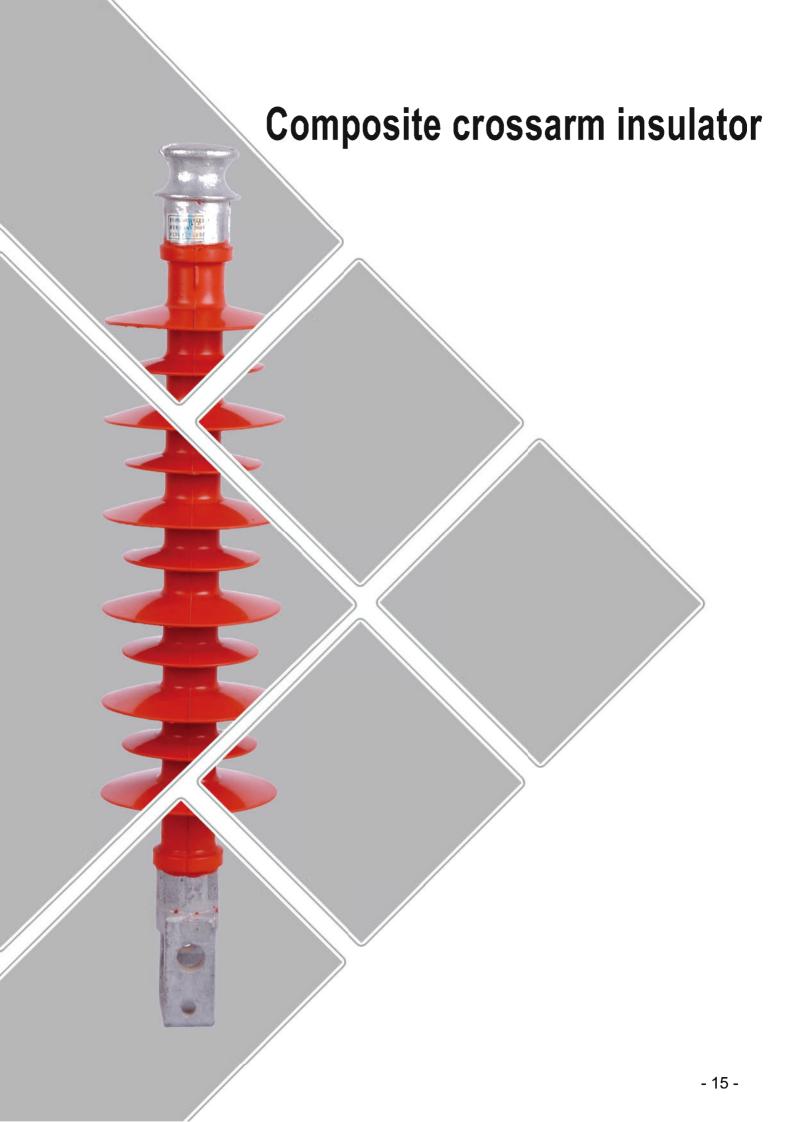
Туре	Rated voltage (KV)	Rated mechanical load(KN)	Structure height (mm)	Insulating distance (mm)	Min nominal creepage distance (mm)	Lightning impulse withstand voltage(KV)	1 min power frequency wet withstand voltage (KV)
FNB4-6/70-XX	6	70	310	120	335	60	25
FNB4-15/70-XX	15	70	390	200	535	110	60
FNB4-20/70-XX	20	70	430	240	635	130	70
FNB4-28/70-XX	28	70	510	320	835	180	85
FNB4-35/70-XX	35	70	590	400	1035	230	95











## **Composite Insulator**





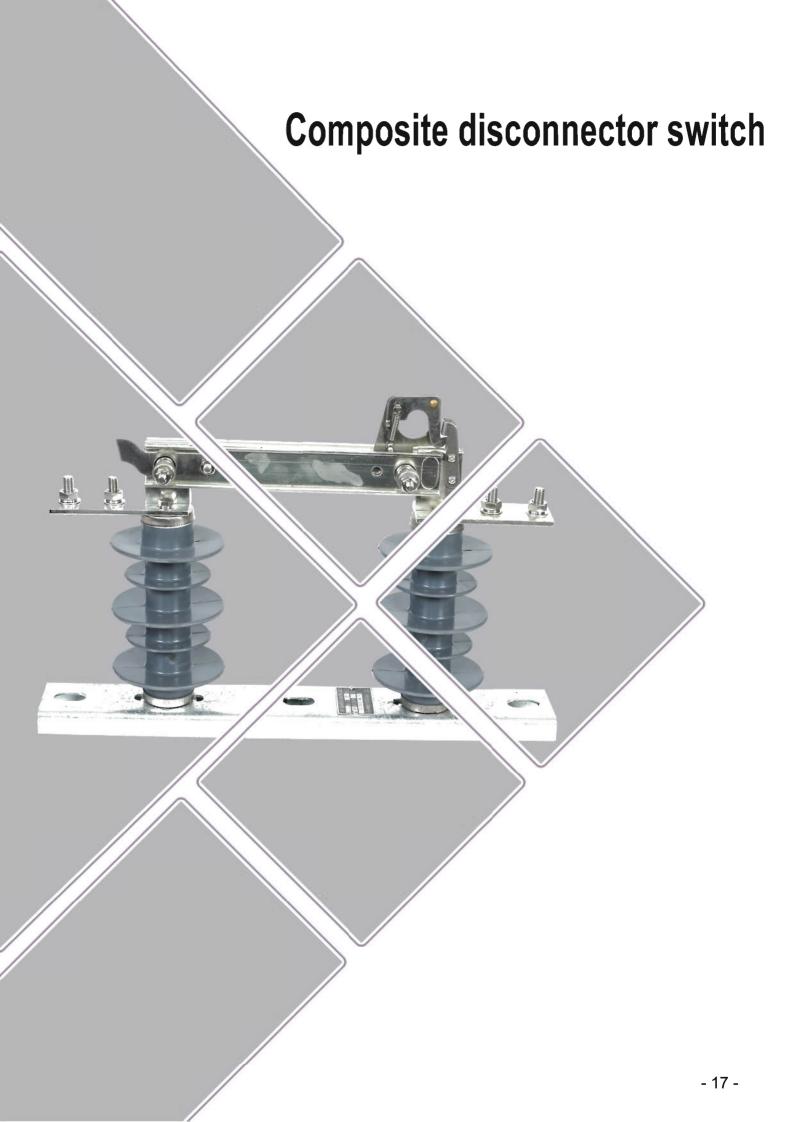


# Composite crossarm insulator

### **Overview**

The composite crossarm insulator can effectively use the narrow corridor to boost the power, it is suitable for the technical transformation of the city network, can reduce the height of the tower, can save a lot of manpower, material and financial resources, and has high bending strength. It can prevent the breakage accident of porcelain crossarm, which is the irreplaceable product of porcelain crossarm. Small size, light weight, shock resistance, strong impact resistance, no need for manual cleaning, to provide security.

Туре	Rated voltage (KV)	Rated mechanical load(KN)	Structure height (mm)	Insulating distance (mm)	Min norninal creepage distance (mm)	Lightning impulse withstand voltage(KV)	1 min power frequency wet withstand voltage (KV)
FS-10/2.5	10	2.5	390	240	370	150	60
FS-66/5	66	5	1020	800	2000	450	180
FS-110/10	110	10	1270	1050	2900	550	230
FS-220/5	220	5	2160	1945	6300	1000	395
FS-220/8	220	8	2018	1800	6300	1000	395

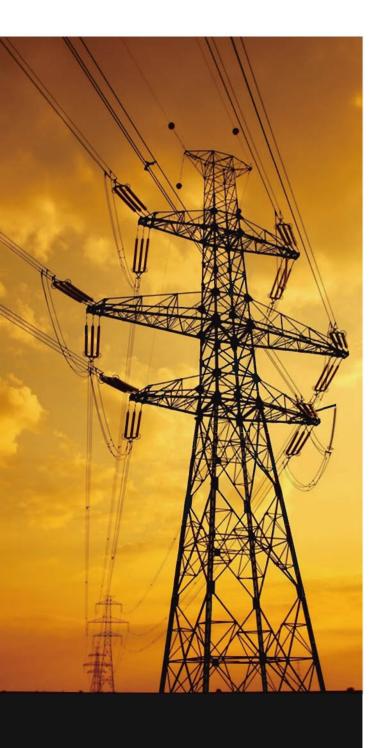








# Composite disconnector switch



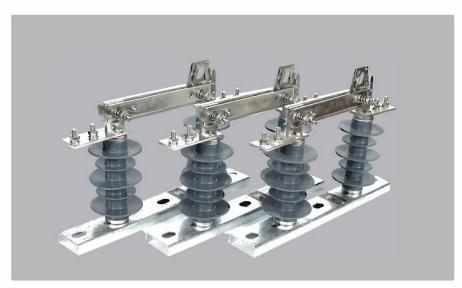
### Product features

This product adopts silicone rubber organic composite insulator, it has good antifouling performance, it's in light weight, high mechanical strength and aging resistance. The creepage distance can be up to 3.2cm/kv.lt is especially suitable for heavy pollution areas with bad environment, it can avoid cracking and explosion of traditional porcelain insulator caused by the change of temperature.

# Working Conditions

- ★Environment temperature: -40°C~+40°C
- ★Earthquake under 8 level
- ★Altitude no more than 1500m
- ★Max wind speed no more than 3SM/S
- ★Places without f \( \text{Fequent violent vibration} \)
- ★Normal installation site should be free from gas, steam, chemical deposition, salt spray, dust and other explosive, corrosive substances which have serious effect on insulating and conducting ability disconnector switch
- ★Anti-pollution type is suitable for the heavy polluted areas, but there should be no material causing fire and explosion

# Composite disconnector switch





### Galvanized process

It adopts galvanized anticorrosion process and has the good conductivity. It's reliable to operate and the anticorrosion performance is fine.



### Easy to install

It's in small size and light weight.It's easy to install.



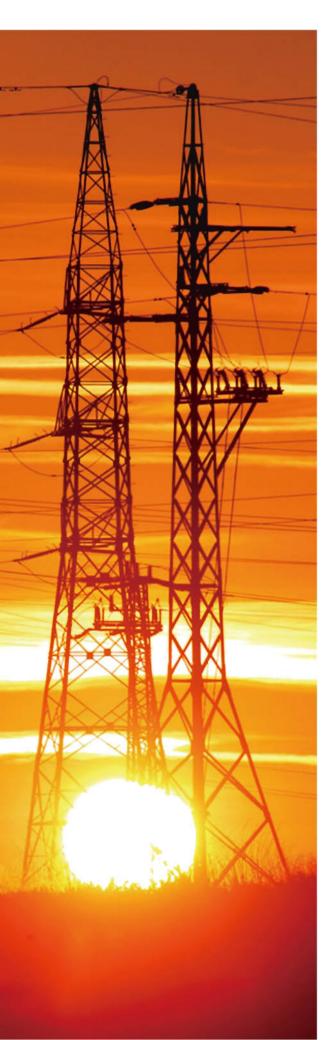
### Silicone rubber material

silicone rubber insulation material is adopted, which not only reduces the weight of the product in the greatest extent, but also has good hydrophobic performance.



			Electrical performance tolerance of the product					
Туре	Rated voltage (KV)	Rated current (A)	1.2/50µs full wave impact tolerance (not less than) (KV)	1.2/50µs full wave impact fracture tolerance (not less than) (KV)		Power frequency humidity tolerance voltage (not less than) (KV)	Insulation creepage ratio distance (not less than) (cm/KV)	
HGW9-10/400	10	400	120 (90)	140 (90)	80 (42)	45 ( 34 )	3.2	
HGW9-10/630	10	630	120 (75)	140 (90)	80 ( 42 )	45 ( 34 )	3.2	
HGW9-10/800	10	800	120 (75)	140 (90)	80 ( 42 )	45 ( 34 )	3.2	
HGW9-0.5/600	0.38	600		140 (90)	60 (3)	45 ( 2.5 )	10	
HGW9-0.5H/800	0.38	800		140 (90)	10 (3)	7 (2.5)	10	





# Drop out fuse

### **Overview**

Drop out fuses and load-drop fuses are outdoor high voltage protection appliances. It is installed on the high voltage side of the distribution transformer or on the branch line of the distribution line, used as a short circuit of the transformer and the line, overload protection and split load current. The drop fuse is composed of two parts: an insulating bracket and a fuse tube. The static contact is installed at two ends of the insulating bracket, the movable contact is installed at both ends of the fuse tube, and the fuse tube is composed of an inner arc extinguishing tube and an outer layer. It consists of a phenolic paper tube or an epoxy glass tube. The load drop fuse enhances the elastic auxiliary contact and the arc extinguishing cover to divide and combine the load current.

In the normal operation of the drop fuse, the fuse tube is tensioned by the fuse to form a closed position. When the system fails, the fuse fuses rapidly at the fault current, and an arc is formed. The arc extinguishing tube is heated by the arc, and a large amount of gas is decomposed, so that a high pressure is formed in the tube, and a longitudinal blow is formed along the pipe, and the arc is rapidly elongated. And extinguished. After the fuse is blown, the lower moving contact loses tension and doubles down, locks the machine, releases the fuse tube, and the fuse tube drops, forming an obvious breaking position. When the load needs to be pulled, the moving contact is pulled by the insulating rod. At this time, the active and static moving contacts are still in contact, and the contact is continued to be pulled by the insulating rod, the auxiliary contact is also separated, and an arc is generated between the auxiliary contacts, and the arc is generated. It is elongated in the masking slit, and the arc extinguishing cover generates gas, and when the current crosses zero, the arc is extinguished.

### Product use environment

- a. The ambient temperature is not higher than +40 ° C, not lower than -40 ° C;
- b. The altitude does not exceed 3000m;
- c. The maximum wind speed does not exceed 35m/s;
- d. The earthquake intensity does not exceed 8 degrees.

### The product is not suitable for the following locations:

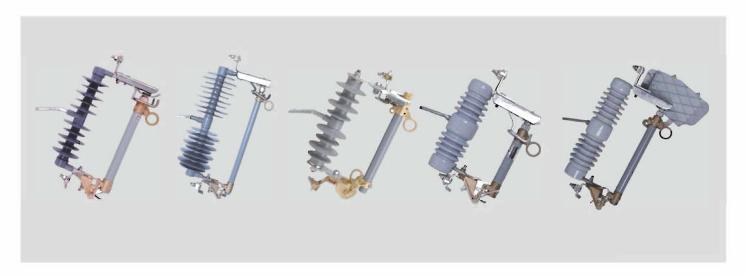
A. where there is a risk of burning or explosion;

B. A place with severe vibration or impact;

### The main application

Outdoor drop fuse, suitable for voltage and frequency 50Hz and 60Hz power systems of 35kv and below, for power transmission and distribution lines and power transformer overload and short circuit protection, for rated load current, mechanical life ≥ 2000 times

# Drop out fuse



# Main technical parameters

Туре	Rated voltage (KV)	Rated current (A)	Breaking current (KA)	Impulse voltage (BIL)(KV)	Min nominal creepage distance (mm)	Power frequency wet withstand voltage 1min (KV)
HRW-15/100(200)-10	15	100/200	10	110	370	40
HRW-27/100(200)-10	27	100/200	10	150	580	45
HRW-36/100(200)-8	36	100/200	8	170	1080	75
HRW-15/100(200)-12	15	100/200	12	110	370	40
HRW-27/100(200)-8	27	100/200	8	150	580	45

# Suitable for Multiple industries

Widely used in national power grid,
petrochemical, wind power, machinery,
construction, communications and
other industries







# Surge arrester

### **Overview**

Arrester has the ability of absorbing lightning overvoltage, operating overvoltage and power frequency transient overvoltage. Composite metal zinc oxide arrester is an international high-tech product in the 1990s. This product uses the integral silicon rubber molding, the sealing performance is good, the explosion-proof performance is excellent, the anti-pollution is free from cleaning, the anti-corrosion is anti-aging, the volume is small the weight is light, is the collision, it is convenient to install and the maintenance. It is a replacement product of porcelain arrester.

# **Environmental conditions**

- a. The environment temperature-40~+40
- b. The altitude no more than 2000m
- c. The power frequency 48Hz~62Hz
- d. The Wind speed not exceed 35m/s
- e. Earthquake intensity 7 degrees and below

### **Product feature**

- a. Small size, light weight, collision resistance Easy to install. Suitable for use in switch box
- b. Special structure, integral molding, sealed, Moisture-proof explosion-proof.
- c. Large creep distance, hydrophobic good Strong resistance to fouling、stable performance, Less maintenance
- d. Special formulation of zinc oxide resistance sheet ,High capacity ,Less leak.



# Surge arrester



	D-t1		Current impulse residual voltage			2ms Rectangular	4/10µs High
Туре	Rated voltage	MCOV	1/4µs Lightning current impulse	8/-20µs Lightning current impulse	30/60µs Switching currentimpulse	current impulse	current impulse withstand
	KV(rms)	KV(rms)	KV(rms)	KV(rms)	KV(rms)	A(rms)	A(rms)
YH5W-3	3	2.55	11.3	9	8.9	150	65
YH5W-15	15	12.7	51	45	38.5	150	65
YH5W-30	30	24.4	102	90	79	150	65
YH5W-36	36	29	123	108	92.4	150	65
YH10W-3	3	2.55	11.3	9	8.9	250	100
YH10W-18	18	15.3	61.5	54	46.2	250	100
YH10W-36	36	29	123	108	92.4	250	100