

## Composite Tension & Suspension Insulator

Composite tension/suspension insulator mainly consists of a core rod (ECR type or FRP type), silicone rubber housing and metal end fittings. LANGAO POWER is producing and exporting tension and suspension insulators from 10kV to 400 kV with various core rod sizes for distribution and transmission systems. (We HAVE exported 138kV, 245kV,330kV, 400kV, insulators).

**Core Rod-** Made of high-quality Pultruded Epoxy Fiberglass Rod (FRP and ECR Types).

**End Fittings-** #45 Forged Steel or Ductile Iron, Hot Dip Galvanized, then directly crimp to the core rod through a circumferential crimping process to achieve better performance.

**Housing to Core-** They are Chemically Bonded and the interface strength between the housing and core is higher than the tearing strength of housing itself.

**Silicone Rubber Housing-** HTV Silicone Rubber; made of high quality raw materials.

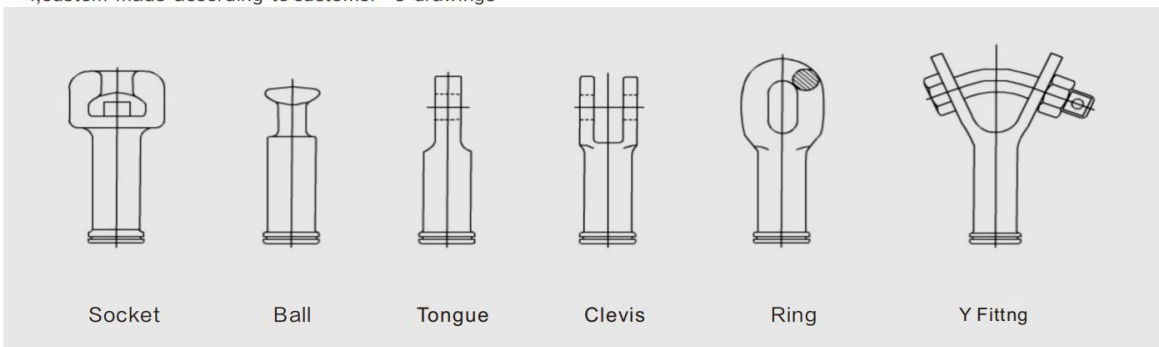
**Corona/Grade Ring-** Made of High-Grade Aluminum Alloy, suitable for (above) 110kV insulators.

**Sealing-** Juncture between end fitting and Core rod is totally embedded in HTV silicon rubber, eliminating conventional and traditional sealing defects. (The other type is available that use RTV Silicone Sealant to seal the juncture between end fitting and core rod.)

### Two Ends Of Connecting Hardware List

Attached to the letter	WQ	WD	WU	QQ	CT	TT	UU	YQ	RR
On behalf of fittings	Socket -Ball	Socket -Tongue	Socket -Clevis	Ball - Ball	Clevis-Tongue	Tongue-Tongue	Clevis-Clevis	Y-Ball	Ring- Ring
Connection mark	16-16	16-7	16-7	16-16	7-7	7-7	7-7	7-7	7-7

- 1, According to the requirements of hardware in models are indicated in the attached letter;
- 2, According to the requirements of users can formulate and match ends fitting;
- 3, Silicone rubber color gray as the default, can also choose the other colors.
- 4, custom made according to customer' s drawings



## Composite Tension & Suspension Insulator Series



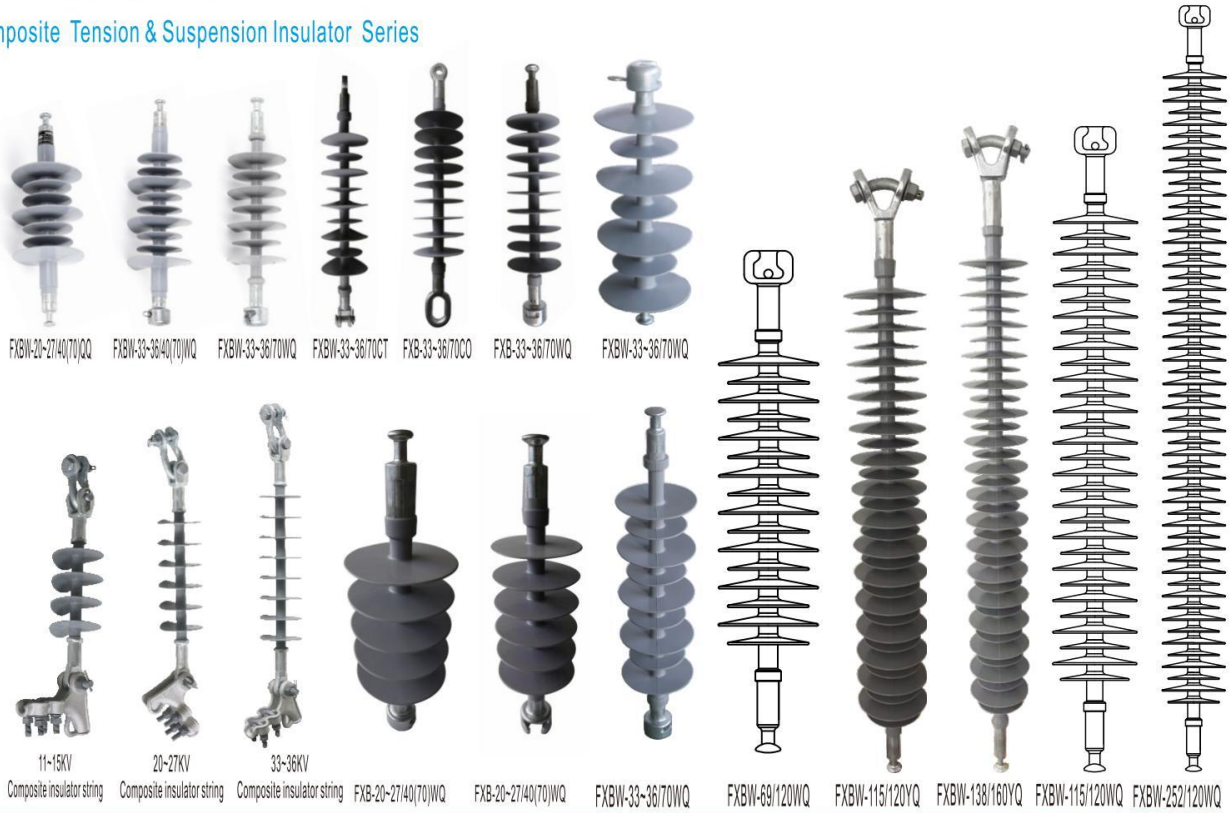
FXB-11~15/70CT FXB-11~15/70WT FXB-11~15/70CT FXB-11~15/70WC FXB-11~15/70CC FXB-11~15/70WT FXBW-11~15/70CT FXBOW-11~15/70 FXBW-11~15/70 FXBW-11~15/70



FXBW-1/70 FXB-11~15/70WT FXB-11~15/70TQ FXB-20~27/70CT FXB-20~27/70WQ FXB-33~36/70CT FXBW-33~36/70WT FXB-33~36/70CT FXBOW-20~27/70 FXB-20~27/70YQ FXB-20~27/40WQ

Product Type	Dimensions						Mechanical		Electrical		
	Height (mm)	Min Dry Arcing Distance (mm)	Min Creepage Distance (mm)	Diameter of the rod (mm)	Number of sheds (mm)	Sheds of diameter (mm)	Specified Mechanical Load (SML) (kN)	Routine Test Load (RTL) (kN)	Rated Voltage (kV)	Lightning Impulse withstand voltage (kV)	Power Frequency withstand Voltage (kV)
FXB-11~15/70CT	310±10	170	330	17	3	98	70	35	11~15	105	55
FXB-11~15/70WT	365±10	200	450	17	4	98	70	35	11~15	105	55
FXB-11~15/70CT	365±10	200	450	17	4	98	70	35	11~15	105	55
FXB-11~15/70WC	365±10	200	450	17	4	98	70	35	11~15	105	55
FXB-11~15/70CC	365±10	200	450	17	4	98	70	35	11~15	105	55
FXB-11~15/70WT	365±10	200	450	17	4	98	70	35	11~15	105	55
FXBW-11~15/70CT	365±10	200	450	18	4	115/85	70	35	11~15	105	55
FXBOW-11~15/70	365±10	190	360	18	4	115/85	70	35	11~15	105	55
FXBW-11~15/70	310±10	190	360	18	4	100/65	70	35	11~15	105	55
FXBW-11~15/70	350±10	190	480	18	4	115/85	70	35	11~15	105	55
FXBW-1/70	280±10	115	240	18	2	115/85	70	35	1	45	20
FXB-11~15/70WT	365±10	200	450	17	4	98	70	35	11~15	105	55
FXB-11~15/70TQ	365±10	200	450	17	4	98	70	35	11~15	105	55
FXB-20~27/70CT	460±10	200	675	17	6	98	70	35	20~27	135	65
FXB-20~27/70WQ	460±10	315	675	17	6	98	70	35	20~27	135	65
FXB-33~36/70CT	545±10	360	915	17	8	98	70	35	33~36	230	95
FXBW-33~36/70WT	545±10	360	915	17	8	98	70	35	33~36	230	95
FXB-33~36/70CT	590±10	410	1025	17	9	98	70	35	33~36	230	105
FXBOW-20~27/70	475±10	270	725	16	8	105/75	70	35	20~27	160	85
FXB-20~27/70YQ	450±10	280	680	18	5	120	70	35	20~27	230	75
FXB-20~27/40WQ	405±10	280	680	18	5	120	40	20	20~27	230	75

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Product Type	Dimensions						Mechanical		Electrical		
	Height (mm)	Min Dry Arcing Distance (mm)	Min Creepage Distance (mm)	Diameter of the rod (mm)	Number of sheds (mm)	Sheds of diameter (mm)	Specified Mechanical Load (SML) (kN)	Routine Test Load (RTL) (kN)	Rated Voltage (kV)	Lightning Impulse withstand voltage (kV)	Power Frequency withstand Voltage (kV)
FXBW-20-27/40(70)QQ	400±10	305	700	18	7	130/90	70	35	20-27	135	65
FXBW-33-36/40(70)WQ	440±10	345	900	18	9	130/90	70	35	33-36	230	95
FXBW-33-36/70WQ	495±10	350	900	18	7	132/110	70	35	33-36	230	95
FXBW-33-36/70CT	650±10	460	1200	18	9	130/100	70	35	33-36	230	95
FXB-33-36/70CO	595±10	460	1200	18	9	130/100	70	35	33-36	230	95
FXB-33-36/70WQ	605±10	450	1200	18	9	130/100	70	35	33-36	230	95
FXBW-33-36/70WQ	440±15	445	1060	18	7	160/110	70	35	33-36	230	95
11-15KV Composite insulator string	365±10	200	450	17	4	98	70	35	11-15	100	55
20-27KV Composite insulator string	460±10	315	675	17	6	98	70	35	20-27	135	65
33-36KV Composite insulator string	545±10	410	915	17	8	98	70	35	33-36	230	95
FXB-20-27/40(70)WQ	405±10	280	680	18	5	120	70	35	20-27	135	65
FXB-20-27/40(70)WQ	445±10	320	815	18	6	120	70	35	20-27	135	65
FXBW-33-36/70WQ	600±10	500	1200	18	9	130/100	70	35	33-36	230	95
FXBW-69/120WQ	935±15	735	2150	18	16	142/112	120	60	69	425	165
FXBW-115/120YQ	1460±30	1275	4000	18	30	142/112	120	60	115	550	275
FXBW-138/160YQ	1400±30	1125	3800	24	30	150/115	160	80	115	550	275
FXBW-115/120WQ	1440±30	1275	4000	18	30	142/112	120	60	252	1000	425
FXBW-252/120WQ	2350±30	2215	7040	18	54	142/112	120	60	252	1000	425
FXBW-252/160WQ	2350±30	2125	7600	24	60	150/115	160	80	252	1000	425
FXBW-345/120WQ	3340±30	3150	10250	18	78	142/112	120	60	345	1425	570
FXBW-345/160WQ	3375±30	3100	11300	24	90	150/115	160	80	345	1425	570

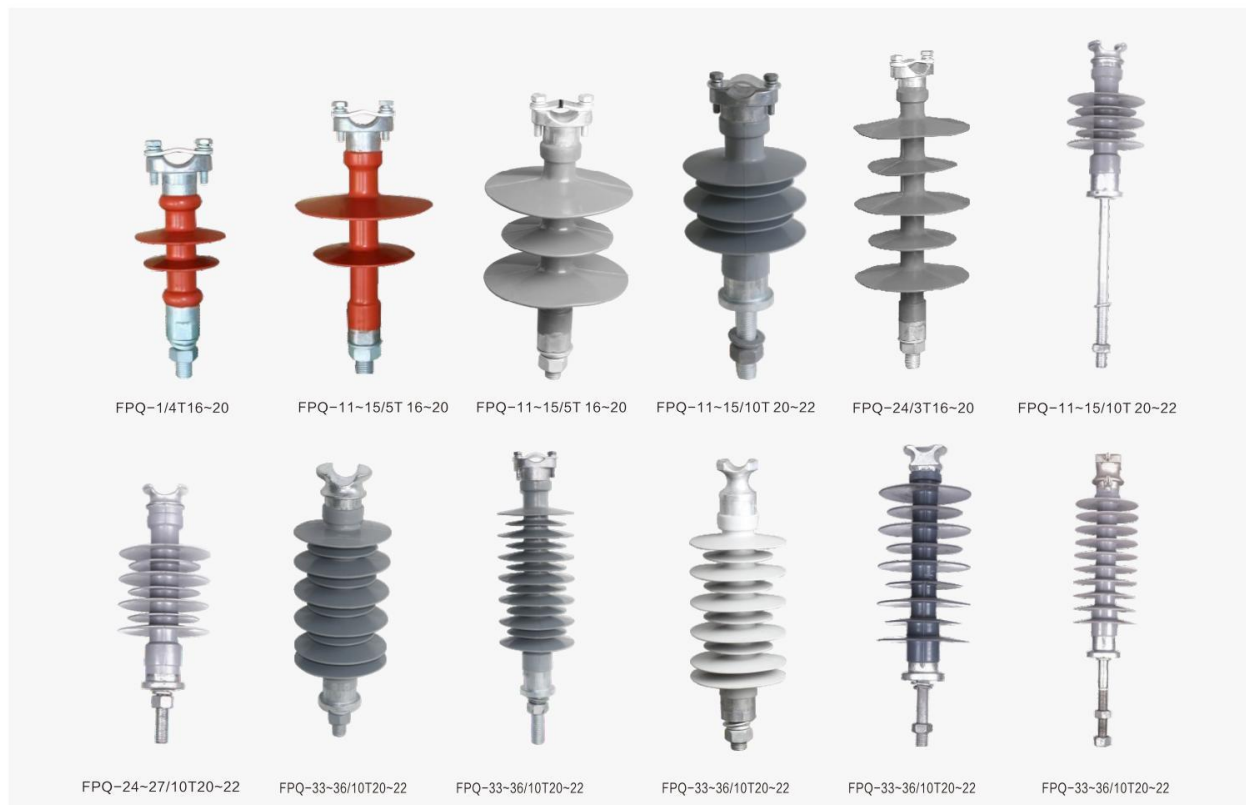
## Composite Post(Pin) Insulator

Composite post (pin) Insulator are made of glassfiber epoxy core rod, silicone rubber shed and metal fittings, The silicon rubber shed adopt the whole packing pressure technique, and then to solve the key problem – interface electric spark puncture, which would affect the reliability of composite insulator.

Connection of the glassfiber rod and metal fittings, adopts the pressure welding technique of the international advanced level, and have the full automatic sound wave detection of defects system, high intension, beautiful outline, small volume, light weight, and the metal fitting of galvanization can corrosion prevention and exchange used with porcelain insulator.

This product is reliable structure, can't damage the core rod, and take full advantage of the mechanical strength.

The dimension can be customized as per client's requirement.



Product Type	Dimensions							Mechanical	Electrical		
	Height (mm)	Min Dry Arcing Distance (mm)	Min Creepage Distance (mm)	Diameter of the rod (mm)	Number of sheds (mm)	Sheds of diameter (mm)	Screw diameter /screw length (mm)	Rated bending Load (kN)	Rated Voltage (kV)	Lightning Impulse withstand voltage (kV)	Power Frequency withstand Voltage (kV)
FPQ-1/4T16~20	170±10	120	165	22	2	Φ85/70	16~20/40-300	4	1	30	15
FPQ-11-15/5T 16~20	225±10	200	345	24	2	Φ140/105	16~20/40-300	5	11~15	105	45
FPQ-11-15/5T 16~20	252±10	210	450	24	3	Φ145/110	20~22/40-300	5	11~15	105	50
FPQ-11-15/10T 20~22	275±10	210	500	38	5	Φ140/110	20~22/40-300	10	11~15	105	50
FPQ-24/3T16~20	345±10	300	650	24	5	Φ145/110	16~20/40-300	3	24	145	65
FPQ-11-15/10T 20~22	275±10	210	500	38	5	Φ140/110	20~22/40-300	10	11~15	105	50
FPQ-24-27/10T20~22	300±10	250	680	38	7	Φ140/110	20~22/40-300	10	24~27	145	65
FPQ-33-36/6T20~22	330±10	260	900	34	6	Φ125/90	20~22/40-300	6	33~36	230	90
FPQ-33-36/10T20~22	385±10	330	1080	38	11	Φ140/110	20~22/40-300	10	33~36	250	105
FPQ-33-36/10T20~22	385±10	330	1080	38	11	Φ140/110	20~22/40-300	10	33~36	250	105
FPQ-33-36/10T20~22	375±10	330	1080	38	9	Φ150/125	20~22/40-300	10	33~36	250	105
FPQ-33-36/10T20~22	400±10	330	1080	34	10	Φ125	20~22/40-300	10	33~36	250	105

## Composite Post(Pin) Insulator



Product Type	Dimensions							Mechanical	Electrical		
	Height (mm)	Min Dry Arcing Distance (mm)	Min Creepage Distance (mm)	Diameter of the rod (mm)	Number of sheds (mm)	Sheds of diameter (mm)	Screw diameter /screw length (mm)		Rated bending Load (kN)	Rated Voltage (kV)	Lightning impulse withstand voltage (kV)
FPQ-33-36/10T20-22	390±10	330	1100	38	11	Φ140/110	16~20/40-300	10	33~36	230	95
FZSW-11~15/10	285±10	180	500	30	5	Φ125/95	Φ22/255	10	11~15	150	80
FZSW-11~15/10	285±10	180	500	30	5	Φ125/95	Φ22/255	10	11~15	150	80
FZSW-33~36/10	495±10	1080	1080	40	10	Φ140/110	Φ22/255	10	33~36	255	125
FZSW-33~36/10	585±10	425	1080	40	11	Φ144/114	Φ22/255	10	33~36	255	125
FZSW-66~72.5/10	850±10	700	1830	50	15	Φ165/135	Φ22/255	10	66~72.5	410	230

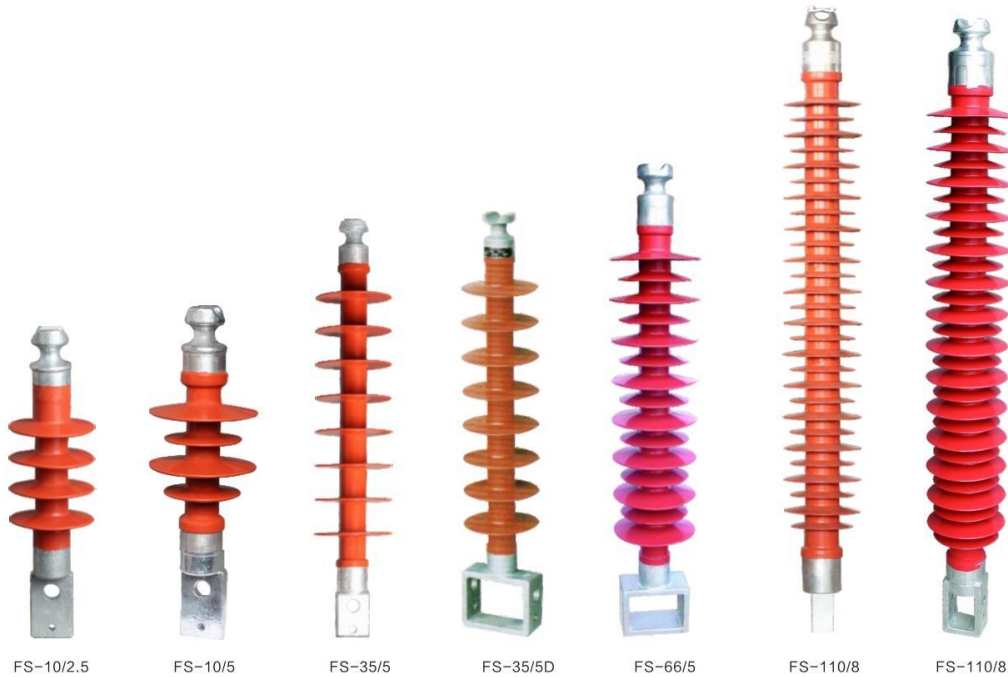
## Composite Cross Arm Insulator

Composite cross arm insulator can effectively use the narrow corridor open pressure transmission, suitable for city network technical transformation, can reduce the pole tower height, can save a large amount of manpower, material and financial resources, because of its highbending strength, can prevent the porcelain cross arm is prone to the cascade failure, is the porcelain cross arm can not replace the product; has the advantages of small volume, light weight, shock, shock resistance ability, does not need manual cleaning, in order to guarantee safe operation of.

## Technical Parameters Table

Model specifications	kV Rated voltage	kN Rated bending load	Structure height (mm)	Minimal arc distance (mm)	Minimum nominal creepage distance (mm)	Lighting full-wave impulse withstand voltage (kV)	Operation impact resistance and voltage (1minkV)	Mounting dimensions		
								Mounting hole	Stability of hole	Hole center distance
FS-10/2.5	10	2.5	290±15	190	355	95	60	Φ18	Φ8	40
FS-10/5	10	5	290±15	175	355	95	60	Φ18	Φ8	40
FS-20/8	20	8	475±15	328	860	170	70	Φ22	Φ11	40
FS-35/5	35	5	635±15	455	1280	230	95	Φ22	Φ11	40
FS-35/5	35	5	635±15	455	1280	230	95	Φ22	Φ11	40
FS-35/10	35	10	605±15	440	1380	230	95	Φ22	Φ11	40
FS-66/5	66	5	830±15	664	2110	410	185	Φ22	Φ11	40
FS-66/5	66	5	815±15	664	2110	410	185	Φ22	Φ11	40
FS-110/10	110	10	1270±30	1050	3150	550	230	Φ25	Φ25	40(45)
FS-110/10	110	10	1270±30	1050	3150	550	230	Φ22	Φ11	40(45)
FS-110/10	110	10	1270±30	1050	3150	550	230	Φ24	Φ14	40(45)
FS-220/6	220	6	2250±30	2000	6400	1050	395	Φ22	Φ22	52

Order information: 1, If the user needs a different end fittings, mounting dimensions please state.



## Composite Post Insulator

Composite Post insulator bending resistance performance is good, antifouling ability, strong impact resistance, vibration and anti brittle fracture performance, small volume, light weight, convenient installation, maintenance free, not people of dissection, and porce-lain has interchangeability.

## Technical Parameters Table

Model specifications	Rated voltage (kV)	Rated bending load (kN)	Structure height (mm)	Minimal arc distance (mm)	Minimum nominal creepage distance (mm)	Lighting impulse withstand voltage (kV)	Power frequency withstand voltage (wet)	Bore x aperture hole center circle	
								Mounting hole size	Lower mounting hole size
FZN4-12/4	12	4	230 ± 3	125	330	75	30	M10	4 × Φ14-Φ76
FZSW-12/4	12	4	235 ± 3	125	330	75	30	2 × M12-Φ76	4 × M12-Φ76
FZSW-24/8	24	8	345 ± 3	200	540	150	60	4 × M12-Φ76	4 × M12-Φ76
FZSW-24/8	24	8	345 ± 3	200	540	150	60	4 × Φ14-Φ140	4 × Φ14-Φ140
FZSW-33/10	33	10	618 ± 10	450	1080	220	145	4 × Φ14-Φ140	4 × Φ14-Φ140
FZSW-35/6-76	40.5	6	435 ± 3	290	1260	185	80	2 × M8-Φ36	4 × Φ14-Φ76
FZSW-40.5/6L(IEC)	40.5	6	435 ± 3	340	1260	200	80	4 × M12-Φ76	4 × M12-Φ76
FZSW-72.5/8	72.5	8	780 ± 5	600	1850	350	160	4 × Φ14-Φ140	4 × Φ14-Φ140
FZSW-72.5/10	72.5	10	780 ± 5	600	1950	350	160	4 × Φ14-Φ140	4 × Φ14-Φ140
FZSW-126/8	126	8	1240 ± 5	1050	3150	550	230	4 × M12-Φ140	4 × Φ18-Φ140
FZSW-126/10	126	10	1240 ± 5	1050	3150	550	230	4 × M12-Φ140	4 × Φ14-Φ140
FZSW-126/12.5	126	12.5	1440 ± 5	1050	3500	550	230	4 × M12-Φ140	4 × Φ14-Φ140
FZSW-252/6K	252	6	2240 ± 15	2070	6300	1050	460	4 × M16-Φ140	8 × Φ20-Φ225
FZSW-252/8	252	8	2340 ± 15	2000	6700	1050	460	4 × M16-Φ190	8 × Φ20-Φ225

Ordering notice:1, need to be specified when ordering product specifications, model and quantity;2, specifically two center hole distance, if not explicitly according to IEC standards and other related.

