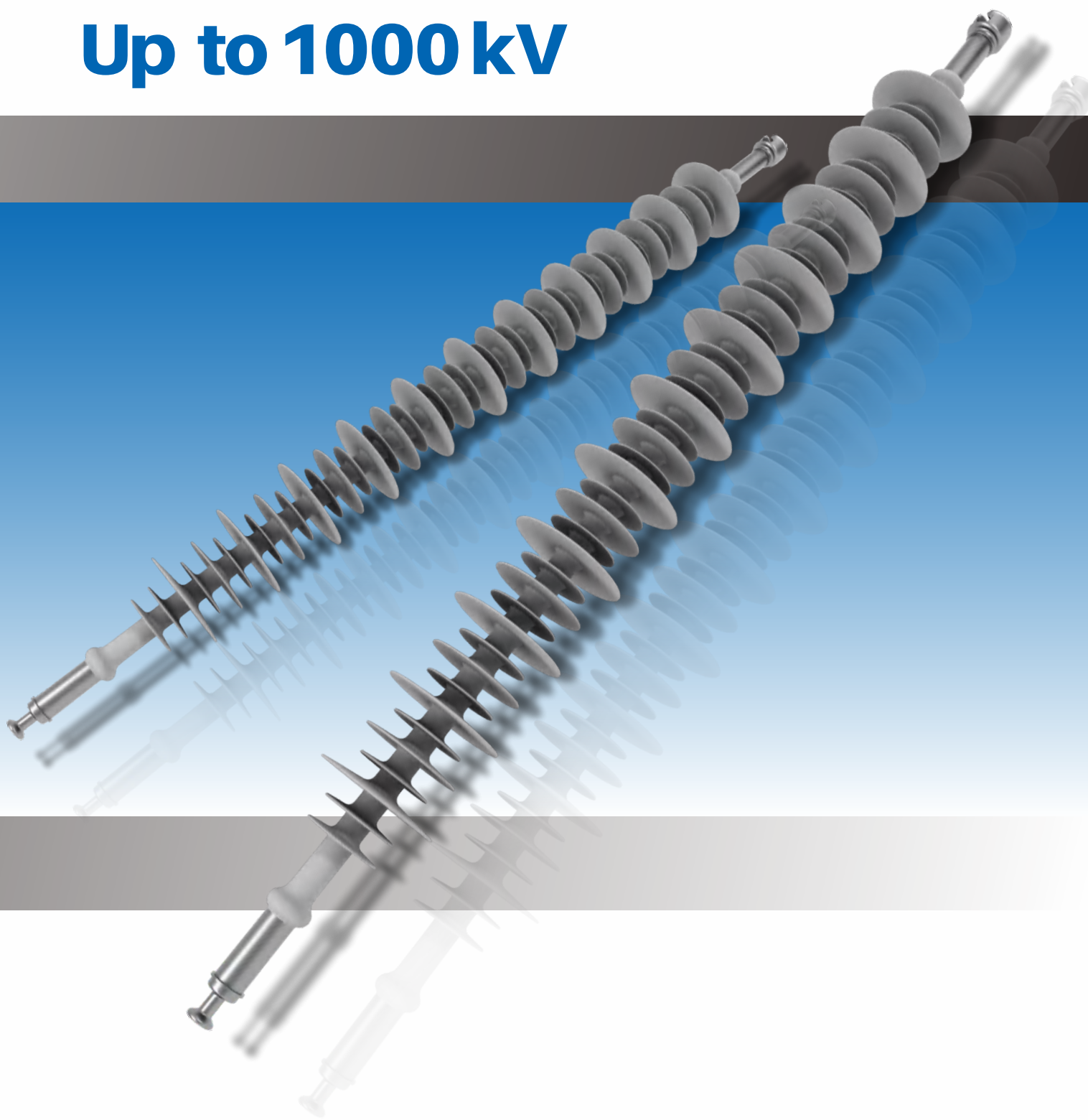


SHEMAR

Suspension Insulators Catalogue

Up to 1000 kV



Leading Innovation in Composite Insulation Technology

SHEMAR



Suspension Insulators Catalogue
Up to 1000 kV

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SHEMAR Composite Insulators

Delivering Superior Ageing Resistance and Longevity in Reliability Performance

SHEMAR composite suspension insulators embody the latest innovations in composite insulation technology combining world leading material science development, cutting edge design technology, state-of-the-art manufacturing and rigorously monitored quality control.

We understand the crucial impact that insulators can have on the long-term performance of transmission lines, which is why at SHEMAR we have prioritized creating composite insulator products and solutions that offer unparalleled, reliability, ageing resistance and exceptional performance.

Design Features and Manufacturing

One Piece Insulator without Joints

SHEMAR's composite suspension insulators are designed with advanced one-piece housing technology that eliminates internal interfaces, providing superior bonding performance and protection against erosion damage. The housing is directly vulcanized to the core, resulting in a single, seamless HTV silicone rubber housing (sheath and sheds) that is impenetrable to moisture ingress and provides ultimate defense against environmental factors.

During manufacturing a single-shot injection molding process is used, which applies high pressure and temperature to ensure a robust, one-piece housing that is chemically bonded to the core rod. This one-piece housing design features only one internal interface, i.e. the boundary interface between the housing and the FRP core rod, which significantly reduces sensitivity to tangential electrical field stress that can cause erosion damage.



500T Injection machine



1500T Injection machine

Excellent Bonding between Core and Housing

SHEMAR's injection molding manufacturing process also creates an unmatched quality of chemically bonded interface between the rod and housing, as well as the end fitting and housing, which eliminates the risk of internal tracking along the longitudinal interface of the composite insulator. The bond between the silicone rubber housing and fiberglass rod is also mechanically stronger than the intrinsic tear strength of the silicone rubber, ensuring an incredibly durable and reliable insulator.



Excellent bonding performance



Bonding pull-off test

Impenetrable Triple Point

SHEMAR's composite suspension insulators feature an innovative and unique impenetrable sealing system to prevent water and contamination from entering the insulator at its triple point. This is achieved by directly molding HTV silicone onto the triple point and overlapping part of the metal end fittings to ensure total enclosure and protection of the sensitive triple junction zone (where metal end fitting/core rod/silicone housing meet).

The highest bonding and adherence of HTV silicone housing on to the end fittings safely protects the fiberglass rod against water or contamination attack and eliminates the needs for inherently weak traditional sealing devices.



Crimping machine and acoustic emission detection device

Maximized Mechanical Integrity

To ensure uniform stress distribution and maximum mechanical integrity of the finished Insulator a circumferential, multi-step crimping system is used for the attachment of metal end fittings to the FRP core. Each crimping process is monitored for acoustic emission, crimp pressure and travel distance of compression dies as control parameters.

Large variability in the ultimate tensile strength of Insulators can occur due to various failure modes at the interface between the core rod and end fitting. To deliver the most consistent reproducibility in tensile strength, SHEMAR's insulator designs are based on uniform failure mode and a safety buffer of approximately 20% is maintained between the ultimate tensile failure load and the specified mechanical load (SML).

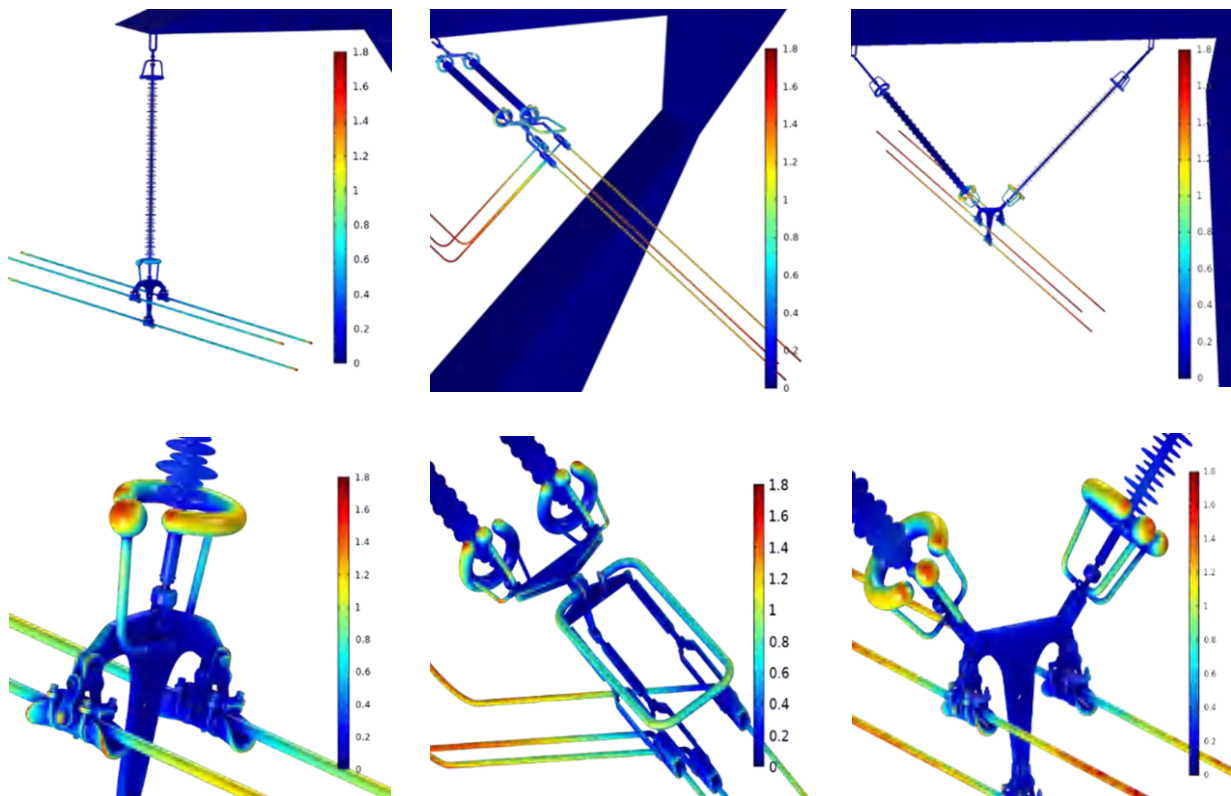
In addition, SHEMAR insulators come with built-in redundancies that contribute to their higher torsional strength rating, which can make the installation and in-service operation of the insulators safer.

Optimal Electric Field Grading - No Water Droplet Corona

At SHEMAR, our composite insulators are carefully engineered to eliminate RIV and corona (under both dry and wet conditions). Rather than taking a one-size-fits-all approach, we design our corona rings in accordance with the actual requirements and use of the individual user. To achieve this, our application engineers utilize state-of-the-art 3D modeling and FEA simulations to determine the optimal size and placement of corona rings based on the specific structure design and overall assembly configuration.

It is ensured that the maximum electric field criteria of ≤ 4.2 kVrms/cm on silicone rubber housing recommended by EPRI/STRI* is maintained on all of our designs and thus the phenomenon of water droplet induced corona (WDIC) and corresponding risk of material erosion is avoided. Lowering of electric field stress is also aided by the shape of the silicone rubber housing at the overmolded connection zone which works to decrease the electric field strength at the inner triple point and on the silicone surface itself.

Furthermore, all of our corona rings are designed with an open (c-section) style, making them easy to install and replace.



Electric field simulation

Designed to Endure Severe Environments

SHEMAR's composite suspension insulators are created to endure even the most severe service conditions, such as coastal salt fog, dust and industrial contamination without impairment in performance.

Superior hydrophobicity retention and short hydrophobicity transfer and recovery times prevents the formation of conductive layer and the excellent tracking and erosion performance of the housing provides an additional defense mechanism.

The insulator housing features alternating weathershed profiles with both standard and high leakage distance designs, along with optimized shed spacing (S), overhang (P) and creepage factor (CF) parameters, to ensure maximum effectiveness, self-cleaning performance and resistance to contamination, ice and leakage currents in various environmental applications. All of our housing shed profile designs adhere to the recommendations given in IEC 60815-3 and have a minimum 3mm sheath thickness.

Application Example in Severe Environment: ± 400kV DC Qinghai-Tibet project

Application Environment:

Altitude 4612 m (15,100 ft.) with high ultraviolet radiation intensity ($6680\text{MJ} / \text{m}^2$). The severity is 4 ~ 5 times of the normal working condition.

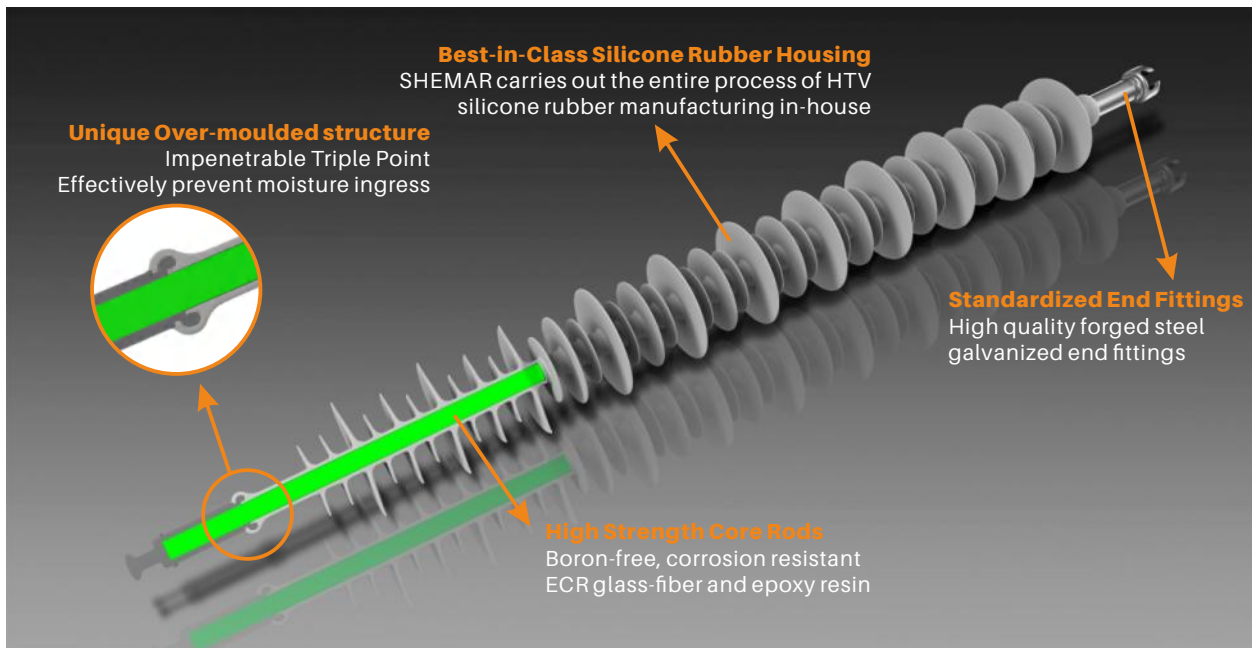
Performance:

After six years of operation under this severe environment, the silicone rubber material of SHEMAR composite suspension insulator still had excellent aging resistance performance, and its elongation at break was still as high as 301%, which had no obvious attenuation compared with the initial value. The electrical, mechanical and material properties of composite suspension insulator fully meet the standard requirements.



± 400kV DC Qinghai-Tibet
Project

Materials and Components



Best-in-Class Silicone Rubber Housing

The special HTV silicone rubber formulation used in SHEMAR's composite insulator housings has been scientifically engineered as a result of extensive R&D in order to overcome the various environmental, electrical and physical degradation mechanisms and deliver the best-in-class ageing resistance and long-term reliable performance.

SHEMAR carries out the entire process of HTV silicone rubber manufacturing in-house from raw material sourcing to mixing with special additives and fillers which achieves the best UV, tracking and erosion, weatherability and contamination resistance performance. SHEMAR HTV silicone rubber formulation has a long-term track record of successfully performing in some of the most extreme and demanding service conditions without degradation.

Fracture-Proof Core Rods

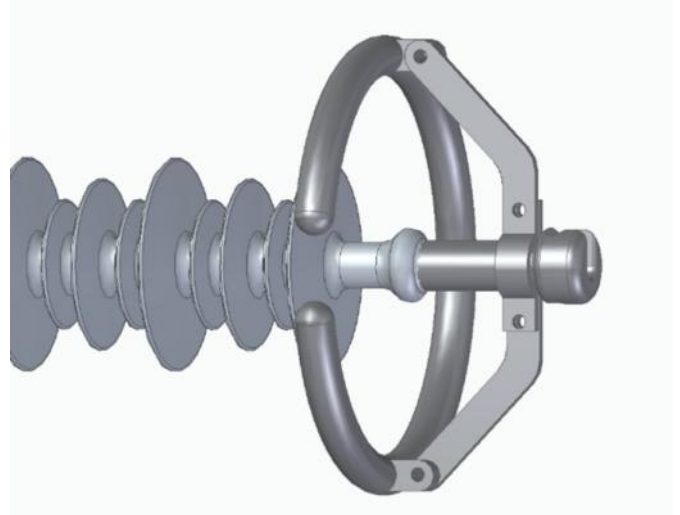
The fiberglass core rods for SHEMAR's composite suspension insulators are manufactured with boron-free, corrosion resistant ECR glass-fiber and epoxy resin. By using this E-CR boron-free formulation of fiberglass, the core rods have exceptional electrical integrity, and they are extremely resistant to hydrolysis and stress corrosion attack, which eliminates the risk of brittle fracture. Additionally, the core rods can withstand a 96-hour nitric acid resistance test as specified in IEC 62039. SHEMAR manufactures all of its fiberglass core rods in-house using a high-quality pultrusion process.

Standardized End Fittings

SHEMAR uses industry standard forged steel or ductile iron galvanized end fittings. All end fittings are subjected to rigorous incoming quality control inspections.

Corona Rings

Standard corona rings are made from high grade aluminum alloy. Rings made of galvanized steel are also available in case of arc current withstand requirements.



Testing and Quality

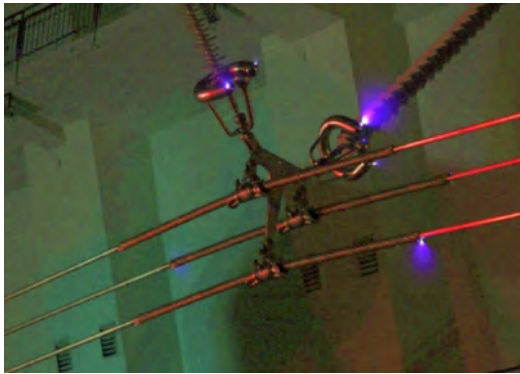
Compliant with National and International Standards

SHEMAR takes pride in being a truly global composite insulator enterprise. We have customized quality control plans for each type of composite suspension insulator and work instructions for each production line. Every composite suspension insulator goes through rigorous process verification, internal testing and third party testing. All of our composite suspension insulators meet ANSI C29.11, CSA C411.4 and IEC 61109, and we carry out routine and sample tests on each batch of insulators to ensure a reliable manufacturing process.

Additionally, SHEMAR's composite insulators also comply with the following tests:

- 5000 Hour Multi Stress Test as specified in IEC 62730
- Accelerated Weathering Test (1000 h UV test) as specified in IEC 61109
- Tracking and Erosion Test (Class 1A 4,5) as specified in IEC 60587
- Resistance to Weathering and UV (5000 h UV test) as per ISO 4892-3
- Resistance to Hydrolysis and Acid Attack on FRP Core as specified in IEC 62039
- Tracking Wheel Test as specified in CSA C411.4
- Resistance to Corona Cutting as per SHEMAR propriety test method
- Resistance to Acid Rain as per SHEMAR propriety test method
- Corona Ring Power Arc Withstand Test (20kA-0.25s, 5 shots) as per IEC 61467

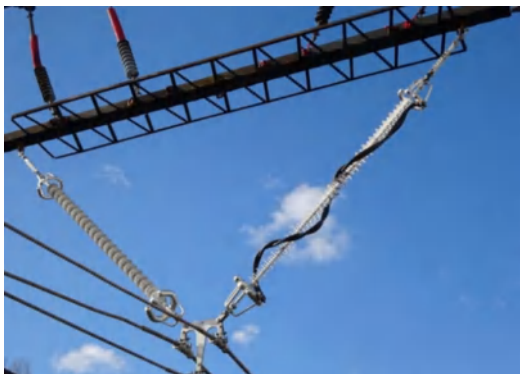
Our in-lab test results are backed-up by SHEMAR insulators proven 25+ years of successful field experience in diverse and severe service conditions.



**RIV and Visual Corona
Test of 400kV suspension string**



**Critical Impulse Flashover
Test of 400kV suspension string**



**Short Circuit Test of 400kV
suspension insulator string**



**Mechanical Failure Test of
400kV double tension string**



**RIV and Visual Corona Test of
345kV suspension string in
SHEMAR's Electrical Test Hall**



**Power Arc Test of 345kV
suspension insulator string**



**Tracking and Erosion Test
(1000h salt fog method)
of suspension insulator**



**Tracking and Erosion Test
(wheel method) of suspension
insulator**

Continuous R&D and Improvement

SHEMAR is dedicated to advancing key technologies, enhancing technical support, and ensuring the success of key projects. We are also focused on improving our independent innovation capabilities and core competitiveness in the rapidly evolving energy industry. This commitment has resulted in significant advancements in technical innovation, exceptional performance, and influential demonstration initiatives. These achievements have also earned recognition from the National Energy Administration. As evidence of our success, the National Energy Administration granted SHEMAR approval to establish the "National Energy Power Insulation Composite Material Key Laboratory" on August 24, 2014.



- (A) High low temperature humid-heat test box.
- (B) Optical Contact Angle Measuring Device.
- (C) Tensile Tester.
- (D) Thermal Gravimetric Analyzer.
- (E) Ultraviolet aging test chamber.

Currently, SHEMAR possesses robust and extensive in-house self-testing facilities that continually undergo refinement and enhancement. The company has established a comprehensive collection of material testing laboratories, structural mechanics testing laboratories, and electrical performance testing laboratories. These facilities are fully equipped to conduct physical and chemical property experiments on raw materials and samples, as well as structural mechanics and highvoltage electrical experiments on semi finished and finished products. These resources enable SHEMAR to meet the research and development demands of high-quality external insulation products.

SHEMAR



(A) Static contact angle
(C) Tensile strength test

(B) Tearing strength test
(D) Tracking and erosion resistance test



Static contact angle Test

Our R&D team currently comprises 155 members, including 7 senior experts with doctorate degrees, 12 foreign technical experts, and 49 individuals with master's degrees. The team's research and development center is fortified by an interdisciplinary and cross-functional approach. With our team's continual expansion, more researchers from both domestic and international backgrounds are choosing to join SHEMAR's R&D efforts, contributing to the advancement of the green energy industry.

As of December 31, 2022, SHEMAR holds a total of **481** patents internationally.



Advantages and Reasons for Choosing SHEMAR Composite Suspension Insulators

- Innovative and reliable design methods and advanced manufacturing technology
- Best-in-class composite materials and high quality components
- Rigorous production quality control plan and strict testing of products
- Fast delivery cycle and rapid after-sales service
- Eliminates or reduces maintenance, more economical life cycle cost

How to Select the Right Transmission Composite Suspension Insulator

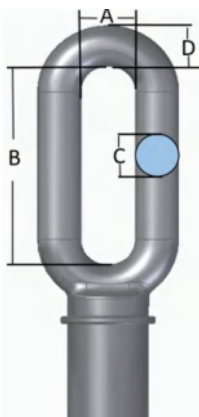
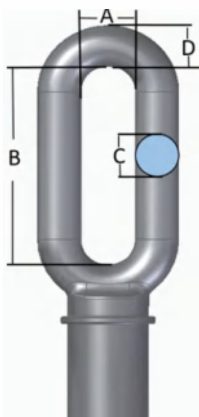
Customized solutions

At SHEMAR, we can offer customized solutions tailored to our customers' specific requirements. We take into consideration the actual working conditions, such as the type of the insulator strings, the required mechanical load, the connection method, coupling size of the end fittings, the pollution level and other unique applications, as well as any unique applications that need to be addressed. By doing so, we guarantee that our products will meet 100% of our customers' needs.

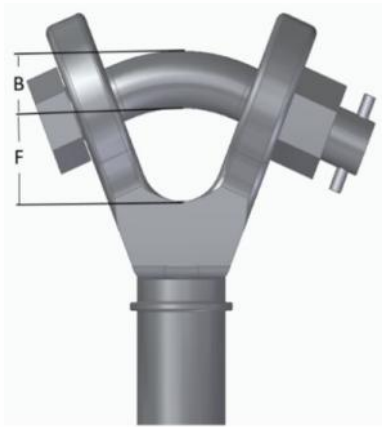
Standard catalogue products

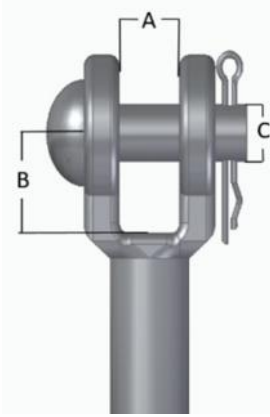
To simplify the promotion of transmission grid projects and to facilitate quick selection by our customers, we have developed a range of standardized catalog products to choose from. These products offer shorter delivery cycles and increased flexibility for future replacements. For ease of reference, our detailed standardized selection library is provided below.

SHEMAR Catalog Number Definition							
30	1	SS	025	Y	J	3	4
SML 25=25Klbs. [111kN] 30=30Klbs. [133kN] 50=50Klbs. [222kN]	Core Dia. 1:0.709"[18mm] 2:0.945"[24mm]	SC: Compact Leakage SS: Standard Leakage SL: Long Leakage SE: Extra Long Leakage SM: Extremely Long Leakage	Number of sheds	Tower EF E: Eye Y:Y-Clevis C: Clevis T: Tongue S: Socket J:Ball [ANSI J] K:Ball [ANSI K]	Line EF E: Eye Y:Y-Clevis C: Clevis T: Tongue S: Socket J:Ball [ANSI J] K:Ball [ANSI K]	Tower Corona ring 0: None 1:9.84"[250mm] 2:12.01"[305mm] 3:13.78" [350mm]	Line Corona ring 0: None 1:9.84"[250mm] 2:12.01"[305mm] 3:13.78" [350mm] 4:14.57" [370mm]

End fitting selection					
SML KIPS [kN]	EYE				
	A	B	C	D	
25[111]	1.02 [26]	2.01 [51]	0.71 [18]	0.71 [18]	
30[133]	1.02 [26]	2.01 [51]	0.71 [18]	0.71 [18]	
50[222]	1.02 [26]	2.01 [51]	0.87 [22]	0.87 [22]	

End fitting selection		
SML KIPS [kN]	Y-Clevis	
	F[min]	B
25[111]	1.51 [38.3]	0.71 [M18]
30[133]	1.59 [40.3]	0.86 [M22]
50[222]	1.59 [40.3]	0.86 [M22]



End fitting selection				
SML KIPS [kN]	Clevis			
	A	B	C	
25[111]	0.75 [19]	1.22 [31]	0.63 [16]	
30[133]	0.75 [19]	1.22 [31]	0.63 [16]	
50[222]	/			

Dimensions are in inch [mm]

End fitting selection

SML KIPS [kN]	Y-Clevis			
	A	B	C	
25[111]	0.51 [13]	0.87 [22]	0.63 [18]	
30[133]	0.51 [13]	0.87 [22]	0.70 [18]	
50[222]	/			

End fitting selection

SML KIPS [kN]	Socket/Ball			
	Type	ANSI Class	Socket	Ball
25[111]	J	52-5		
30[133]	J	52-5		
50[222]	K	52-11		

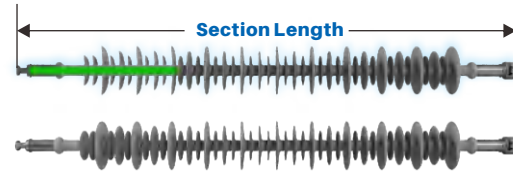
Corona ring selection

Voltage Class /kV	Corona ring size [Ring outside diameter]					
	69	138	161	230	345	500
Towerside	None	None	None	None	12" [305mm]	13.8" [305mm]
Line side	None	None	9.8" [250mm]	12" [305mm]	12" [305mm]	14.6" [370mm]

Dimensions are in inch [mm]

ANSI 25Kips

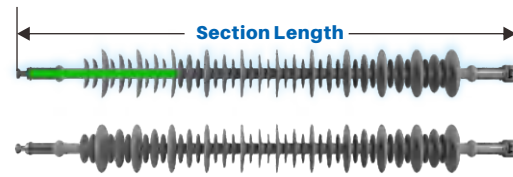
Composite Suspension Insulators Technical Data



Voltage Class [kV]	Catalogue No.	No. of Sheds	Section Length inch[mm]	Leakage Distance inch[mm]	Arcing Distance inch[mm]	Low Frequency Flashover [50Hz]		Critical Impulse Flashover		Approx. Weight lbs.[kg]
						Dry kV	Wet kV	Positive kV	Negative kV	
69	251SS018YJ00	18	36.0[915]	79.9[2030]	26.3[670]	258	217	436	449	7.1[3.2]
	251SL017YJ00	17	36.0[915]	92.9[2360]	26.3[670]	258	217	436	449	8.0[3.6]
	251SE022YJ00	22	36.0[915]	110.2[2800]	26.7[680]	262	220	442	455	9.3[4.2]
	251SM021YJ00	21	36.0[915]	111.8[2840]	26.3[670]	258	217	436	449	9.5[4.3]
69	251SS022YJ00	22	40.7[1035]	96.4[2450]	31.1[790]	301	253	502	521	7.9[3.6]
	251SL021YJ00	21	40.7[1035]	112.9[2870]	31.4[800]	304	256	508	527	8.8[4.0]
	251SE026YJ00	26	40.7[1035]	129.5[3290]	31.1[790]	301	253	502	521	10.3[4.7]
	251SM026YJ00	26	40.7[1035]	138.1[3510]	31.1[790]	301	253	502	521	11.9[5.4]
69	251SS023YJ00	23	42.2[1072]	100.3[2550]	32.6[830]	315	265	524	545	7.9[3.6]
	251SL023YJ00	23	42.2[1072]	122.0[3100]	32.6[830]	315	265	524	545	9.6[4.3]
	251SE027YJ00	27	42.2[1072]	135.4[3440]	33.0[840]	319	268	530	551	10.4[4.7]
	251SM027YJ00	27	42.2[1072]	143.7[3650]	33.0[840]	319	268	530	551	12.0[5.4]
69/115	251SS025YJ00	25	44.2[1125]	107.4[2730]	34.6[880]	333	279	552	575	8.0[3.6]
	251SL023YJ00	23	44.2[1125]	123.6[3140]	34.2[870]	329	277	546	569	9.6[4.3]
	251SE029YJ00	29	44.2[1125]	143.3[3640]	35.0[890]	336	282	557	581	10.5[4.7]
	251SM029YJ00	29	44.2[1125]	152.3[3870]	34.6[880]	333	279	552	575	12.1[5.4]
69/115	251SS028YJ00	28	47.8[1215]	120.4[3060]	38.1[970]	365	306	601	629	8.8[4.0]
	251SL026YJ00	26	47.8[1215]	138.5[3520]	38.1[970]	365	306	601	629	10.4[4.7]
	251SE032YJ00	32	47.8[1215]	158.6[4030]	38.1[970]	365	306	601	629	11.5[5.2]
	251SM032YJ00	32	47.8[1215]	169.2[4300]	38.1[970]	365	306	601	629	13.3[6.0]
115	251SC038YJ00	38	50.3[1280]	125.3[3180]	40.9[1040]	389	327	640	671	8.7[3.9]
	251SC046YJ00	46	57.8[1470]	150.2[3810]	48.4[1230]	457	384	744	785	9.8[4.4]
	251SC038YJ00	38	49.6[1260]	124.5[3160]	40.1[1020]	382	321	629	659	8.6[3.9]
	251SC046YJ00	46	57.0[1450]	149.4[3790]	47.6[1210]	450	378	733	773	9.8[4.4]
115/138	251SS032YJ00	32	52.5[1335]	136.6[3470]	42.9[1090]	407	342	667	701	9.6[4.3]
	251SL030YJ00	30	52.5[1335]	158.2[4020]	42.9[1090]	407	342	667	701	11.3[5.1]
	251SE037YJ00	37	52.5[1335]	181.4[4610]	43.3[1100]	411	345	673	707	12.5[5.7]
	251SM037YJ00	37	52.5[1335]	193.3[4910]	42.9[1090]	407	342	667	701	14.6[6.6]
115/138	251SS033YJ00	33	54.0[1372]	140.1[3560]	44.4[1130]	421	354	689	725	9.6[4.3]
	251SL032YJ00	32	54.0[1372]	168.5[4280]	44.8[1140]	425	357	695	731	12.0[5.4]
	251SE038YJ00	38	54.0[1372]	187.7[4770]	44.0[1120]	418	351	684	719	13.5[6.1]
	251SM038YJ00	38	54.0[1372]	200.0[5080]	44.0[1120]	418	351	684	719	15.8[7.1]
138	251SS036YJ00	36	57.2[1455]	153.1[3890]	47.6[1210]	450	378	733	773	10.4[4.7]
	251SL035YJ00	35	57.2[1455]	182.6[4640]	48.0[1220]	453	381	739	779	12.8[5.8]
	251SE041YJ00	41	57.2[1455]	200.7[5100]	47.6[1210]	450	378	733	773	13.6[6.1]
	251SM042YJ00	42	57.2[1455]	219.6[5580]	47.6[1210]	450	378	733	773	17.0[7.7]
138	251SS038YJ00	38	59.6[1515]	161.4[4100]	50.0[1270]	471	396	766	809	11.1[5.0]
	251SL036YJ00	36	59.6[1515]	188.9[4810]	50.3[1280]	475	399	771	815	12.9[5.8]
	251SE044YJ00	44	59.6[1515]	215.7[5480]	50.3[1280]	475	399	771	815	14.6[6.6]
	251SM044YJ00	44	59.6[1515]	229.9[5840]	50.0[1270]	471	396	766	809	17.1[7.7]
138	251SS042YJ00	42	64.3[1635]	177.9[4520]	54.7[1390]	514	431	832	881	11.9[5.4]
	251SL039YJ00	39	64.3[1635]	204.3[5190]	54.3[1380]	510	428	826	875	13.7[6.2]
	251SE048YJ00	48	64.3[1635]	235.0[5970]	54.3[1380]	510	428	826	875	15.6[7.1]
	251SM049YJ00	49	64.3[1635]	253.9[6450]	54.7[1390]	514	431	832	881	18.4[8.3]

ANSI 25Kips

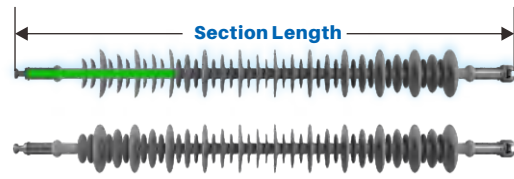
Composite Suspension Insulators Technical Data



Voltage Class [kV]	Catalogue No.	No. of Sheds	Section Length inch[mm]	Leakage Distance inch[mm]	Arcing Distance inch[mm]	Low Frequency Flashover [50Hz]		Critical Impulse Flashover		Approx. Weight lbs.[kg]
						Dry kV	Wet kV	Positive kV	Negative kV	
161	251SS042YJ01	42	64.3[1635]	177.9[4520]	53.5[1360]	503	422	815	863	13.2[6.0]
	251SL039YJ01	39	64.3[1635]	204.3[5190]	53.5[1360]	503	422	815	863	13.7[6.2]
	251SE048YJ01	48	64.3[1635]	235.0[5970]	53.5[1360]	503	422	815	863	17.0[7.7]
	251SM049YJ01	49	64.3[1635]	253.9[6450]	53.9[1370]	506	425	821	869	19.7[8.9]
161	251SS044YJ01	44	65.9[1676]	185.4[4710]	55.5[1410]	521	437	843	893	13.3[6.0]
	251SL041YJ01	41	65.9[1676]	214.1[5440]	55.5[1410]	521	437	843	893	14.5[6.5]
	251SE050YJ01	50	65.9[1676]	244.8[6220]	55.5[1410]	521	437	843	893	17.9[8.1]
	251SM051YJ01	51	65.9[1676]	264.9[6730]	55.9[1420]	524	440	848	899	20.9[9.5]
161	251SS047YJ01	47	70.2[1785]	197.6[5020]	59.4[1510]	556	467	898	953	14.1[6.4]
	251SL044YJ01	44	70.2[1785]	229.9[5840]	59.8[1520]	560	470	903	959	15.3[6.9]
	251SE054YJ01	54	70.2[1785]	264.1[6710]	59.8[1520]	560	470	903	959	19.0[8.6]
	251SM055YJ01	55	70.2[1785]	285.4[7250]	59.8[1520]	560	470	903	959	22.2[10.0]
161	251SS050YJ01	50	73.5[1867]	210.2[5340]	62.9[1600]	588	494	947	1007	14.8[6.7]
	251SL047YJ01	47	73.5[1867]	244.4[6210]	62.9[1600]	588	494	947	1007	16.1[7.3]
	251SE057YJ01	57	73.5[1867]	277.1[7040]	62.5[1590]	584	491	942	1001	19.1[8.6]
	251SM058YJ01	58	73.5[1867]	301.1[7650]	62.9[1600]	588	494	947	1007	23.4[10.6]
161	251SS052YJ01	52	76.1[1935]	218.1[5540]	65.3[1660]	609	512	980	1043	14.9[6.7]
	251SL050YJ01	50	76.1[1935]	258.6[6570]	65.7[1670]	613	515	986	1049	16.9[7.6]
	251SE060YJ01	60	76.1[1935]	292.1[7420]	65.7[1670]	613	515	986	1049	20.1[9.1]
	251SM061YJ01	61	76.1[1935]	314.5[7990]	65.7[1670]	613	515	986	1049	23.5[10.6]
161	251SS056YJ01	56	80.9[2055]	234.6[5960]	70.0[1780]	652	548	1046	1115	15.7[7.1]
	251SL053YJ01	53	80.9[2055]	274.8[6980]	70.4[1790]	655	551	1052	1121	19.0[8.6]
	251SE065YJ01	65	80.9[2055]	314.5[7990]	70.0[1780]	652	548	1046	1115	21.1[9.6]
	251SM064YJ01	64	80.9[2055]	332.2[8440]	70.0[1780]	652	548	1046	1115	24.8[11.2]
230	251SS056YJ02	56	80.9[2055]	234.6[5960]	70.0[1780]	652	548	1046	1115	15.9[7.2]
	251SL053YJ02	53	80.9[2055]	274.8[6980]	70.0[1780]	652	548	1046	1115	19.2[8.7]
	251SE065YJ02	65	80.9[2055]	314.5[7990]	70.0[1780]	652	548	1046	1115	21.3[9.7]
	251SM064YJ02	64	80.9[2055]	332.2[8440]	70.0[1780]	652	548	1046	1115	25.0[11.3]
230	251SS059YJ02	59	84.0[2134]	246.4[6260]	73.6[1870]	684	574	1096	1169	16.7[7.6]
	251SL056YJ02	56	84.0[2134]	288.9[7340]	73.2[1860]	680	571	1090	1163	18.5[8.4]
	251SE068YJ02	68	84.0[2134]	329.5[8370]	72.8[1850]	677	568	1085	1157	22.3[10.1]
	251SM068YJ02	68	84.0[2134]	351.9[8940]	73.2[1860]	680	571	1090	1163	26.2[11.9]
230	251SS061YJ02	61	86.8[2205]	253.9[6450]	75.9[1930]	705	592	1129	1205	16.8[7.6]
	251SL057YJ02	57	86.8[2205]	295.2[7500]	75.9[1930]	705	592	1129	1205	18.6[8.4]
	251SE071YJ02	71	86.8[2205]	344.8[8760]	75.9[1930]	705	592	1129	1205	23.4[10.6]
	251SM070YJ02	70	86.8[2205]	362.9[9220]	75.9[1930]	705	592	1129	1205	27.5[12.4]
230	251SC084YJ00	84	92.9[2360]	266.5[6770]	82.2[2090]	762	640	1217	1301	14.8[6.7]
	251SC089YJ00	89	97.6[2480]	282.9[7180]	87.0[2210]	804	676	1283	1373	15.4[7.0]
230	251SS066YJ02	66	92.7[2355]	275.5[7000]	81.8[2080]	758	637	1211	1295	18.3[8.3]
	251SL062YJ02	62	92.7[2355]	320.8[8150]	81.8[2080]	758	637	1211	1295	20.2[9.1]
	251SE077YJ02	77	92.7[2355]	371.6[9440]	81.8[2080]	758	637	1211	1295	24.5[11.1]
	251SM076YJ02	76	92.7[2355]	393.3[9990]	81.8[2080]	758	637	1211	1295	28.8[13.1]

ANSI 25Kips

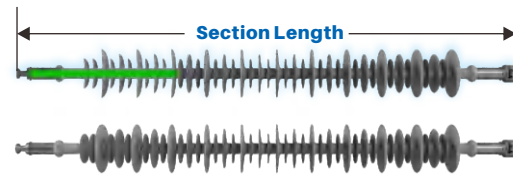
Composite Suspension Insulators Technical Data



Voltage Class [kV]	Catalogue No.	No. of Sheds	Section Length inch[mm]	Leakage Distance inch[mm]	Arcing Distance inch[mm]	Low Frequency Flashover [50Hz]		Critical Impulse Flashover		Approx. Weight lbs.[kg]
						Dry kV	Wet kV	Positive kV	Negative kV	
230	251SS071YJ02	71	98.6[2505]	295.2[7500]	87.7[2230]	811	682	1294	1385	19.1[8.7]
	251SL066YJ02	66	98.6[2505]	344.8[8760]	87.7[2230]	811	682	1294	1385	21.0[9.5]
	251SE083YJ02	83	98.6[2505]	401.9[10210]	88.1[2240]	815	685	1299	1391	26.5[12.0]
	251SM082YJ02	82	98.6[2505]	423.6[10760]	87.7[2230]	811	682	1294	1385	31.3[14.2]
230	251SS075YJ02	75	103.3[2625]	311.8[7920]	92.5[2350]	854	717	1360	1457	19.9[9.0]
	251SL070YJ02	70	103.3[2625]	365.7[9290]	92.9[2360]	857	720	1365	1463	22.6[10.2]
	251SE087YJ02	87	103.3[2625]	421.2[10700]	92.5[2350]	854	717	1360	1457	27.5[12.5]
	251SM087YJ02	87	103.3[2625]	448.4[11390]	92.5[2350]	854	717	1360	1457	32.6[14.8]
345	251SS078YJ22	78	106.8[2715]	324.4[8240]	94.8[2410]	875	735	1393	1493	20.7[9.4]
	251SL074YJ22	74	106.8[2715]	380.3[9660]	94.8[2410]	875	735	1393	1493	23.4[10.6]
	251SE091YJ22	91	106.8[2715]	440.1[11180]	95.2[2420]	879	738	1398	1499	28.6[12.9]
	251SM091YJ22	91	106.8[2715]	468.1[11890]	94.8[2410]	875	735	1393	1493	33.8[15.3]
345	251SS083YJ22	83	112.7[2865]	344.4[8750]	100.7[2560]	928	780	1475	1583	21.5[9.8]
	251SL078YJ22	78	112.7[2865]	401.5[10200]	101.1[2570]	932	783	1481	1589	24.3[11.0]
	251SE096YJ22	96	112.7[2865]	464.1[11790]	101.1[2570]	932	783	1481	1589	29.7[13.4]
	251SM097YJ22	97	112.7[2865]	497.6[12640]	101.1[2570]	932	783	1481	1589	35.1[15.9]
345	251SS088YJ22	88	118.7[3015]	364.9[9270]	106.6[2710]	982	825	1558	1673	23.9[10.8]
	251SL082YJ22	83	118.7[3015]	426.7[10840]	107.0[2720]	985	828	1563	1679	25.8[11.7]
	251SE101YJ22	101	118.7[3015]	487.4[12380]	106.6[2710]	982	825	1558	1673	32.3[14.6]
	251SM102YJ22	102	118.7[3015]	525.1[13340]	106.6[2710]	982	825	1558	1673	39.1[17.7]
345	251SS097YJ22	97	129.3[3285]	400.7[10180]	117.3[2980]	1077	905	1706	1835	25.6[11.6]
	251SL091YJ22	91	129.3[3285]	471.6[11980]	117.3[2980]	1077	905	1706	1835	28.2[12.8]
	251SE112YJ22	112	129.3[3285]	540.5[13730]	117.7[2990]	1081	908	1712	1841	35.4[16.0]
	251SM113YJ22	113	129.3[3285]	579.1[14710]	117.3[2980]	1077	905	1706	1835	41.8[18.9]
345	251SS106YJ22	106	139.9[3555]	438.5[11140]	127.9[3250]	1173	985	1854	1997	27.9[12.6]
	251SL099YJ22	99	139.9[3555]	508.2[12910]	127.5[3240]	1170	982	1849	1991	29.9[13.6]
	251SE122YJ22	122	139.9[3555]	588.9[14960]	127.9[3250]	1173	985	1854	1997	38.4[17.4]
	251SM123YJ22	123	139.9[3555]	631.4[16040]	127.9[3250]	1173	985	1854	1997	45.5[20.6]

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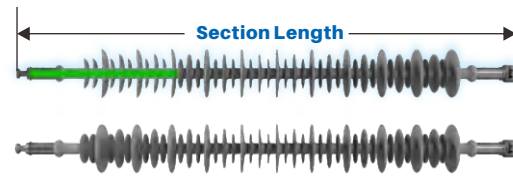
Composite Suspension Insulators Technical Data



Voltage Class [kV]	Catalogue No.	No. of Sheds	Section Length inch[mm]	Leakage Distance inch[mm]	Arcing Distance inch[mm]	Low Frequency Flashover [50Hz]		Critical Impulse Flashover		Approx. Weight lbs.[kg]
						Dry kV	Wet kV	Positive kV	Negative kV	
69	302SC017YJ00	17	36.1[919]	66.5[1690]	23.6[600]	233	196	398	407	12.0[5.4]
	302SS018YJ00	18	36.1[919]	80.3[2040]	22.8[580]	226	190	387	395	13.9[6.3]
	302SL016YJ00	16	36.1[919]	84.6[2150]	23.6[600]	233	196	398	407	12.1[5.5]
	302SE018YJ00	18	36.1[919]	85.4[2170]	23.6[600]	233	196	398	407	13.1[5.9]
	302SM021YJ00	21	36.1[919]	104.7[2660]	25.1[640]	248	208	420	431	13.4[6.1]
69	302SC018YJ00	18	37.7[960]	83.8[2130]	24.8[630]	244	205	414	425	12.9[5.8]
	302SS020YJ00	20	37.7[960]	88.5[2250]	25.1[640]	248	208	420	431	14.6[6.6]
	302SL017YJ00	17	37.7[960]	91.3[2320]	24.8[630]	244	205	414	425	12.9[5.9]
	302SE019YJ00	19	37.7[960]	88.9[2260]	24.8[630]	244	205	414	425	13.1[5.9]
	302SM021YJ00	21	37.7[960]	104.7[2660]	25.1[640]	248	208	420	431	13.4[6.1]
69	302SC022YJ00	22	42.5[1080]	101.1[2570]	29.5[750]	287	241	480	497	14.1[6.4]
	302SS024YJ00	24	42.5[1080]	105.5[2680]	29.5[750]	287	241	480	497	16.1[7.3]
	302SL021YJ00	21	42.5[1080]	112.2[2850]	29.9[760]	290	244	486	503	14.0[6.3]
	302SE024YJ00	24	42.5[1080]	111.0[2820]	29.9[760]	290	244	486	503	14.4[6.5]
	302SM025YJ00	25	42.5[1080]	124.4[3160]	29.9[760]	290	244	486	503	14.7[6.6]
69/115	302SC025YJ00	25	46.0[1170]	112.2[2850]	33.0[840]	319	268	530	551	14.3[6.5]
	302SS029YJ00	29	46.0[1170]	124.0[3150]	33.0[840]	319	268	530	551	17.6[8.0]
	302SL023YJ00	23	46.0[1170]	122.4[3110]	33.0[840]	319	268	530	551	15.0[6.8]
	302SE027YJ00	27	46.0[1170]	123.6[3140]	33.0[840]	319	268	530	551	15.5[7.0]
	302SM028YJ00	28	46.0[1170]	140.5[3570]	33.0[840]	319	268	530	551	15.9[7.2]
69/115	302SC026YJ00	26	47.2[1199]	129.5[3290]	34.2[870]	329	277	546	569	15.3[6.9]
	302SS029YJ00	29	47.2[1199]	125.1[3180]	34.2[870]	329	277	546	569	17.6[8.0]
	302SL024YJ00	24	47.2[1199]	128.3[3260]	34.2[870]	329	277	546	569	15.0[6.8]
	302SE029YJ00	29	47.2[1199]	130.3[3310]	34.6[880]	333	279	552	575	15.6[7.1]
	302SM028YJ00	28	47.2[1199]	140.5[3570]	33.0[840]	319	268	530	551	15.9[7.2]
69/115	302SC028YJ00	28	49.6[1260]	126.7[3220]	36.6[930]	350	294	579	605	15.5[7.0]
	302SS032YJ00	32	49.6[1260]	137.0[3480]	36.6[930]	350	294	579	605	19.0[8.6]
	302SL026YJ00	26	49.6[1260]	137.4[3490]	37.0[940]	354	297	585	611	15.9[7.2]
	302SE031YJ00	31	49.6[1260]	140.1[3560]	36.6[930]	350	294	579	605	16.7[7.6]
	302SM032YJ00	32	49.6[1260]	159.4[4050]	37.0[940]	354	297	585	611	17.1[7.7]
69/115	302SC031YJ00	31	53.1[1351]	144.0[3660]	40.1[1020]	382	321	629	659	16.6[7.5]
	302SS036YJ00	36	53.1[1351]	153.5[3900]	40.9[1040]	389	327	640	671	20.5[9.3]
	302SL029YJ00	29	53.1[1351]	152.7[3880]	40.5[1030]	386	324	634	665	16.9[7.7]
	302SE035YJ00	35	53.1[1351]	157.4[4000]	40.5[1030]	386	324	634	665	17.9[8.1]
	302SM032YJ00	32	53.1[1351]	159.4[4050]	37.0[940]	354	297	585	611	17.1[7.7]
115/138	302SC032YJ00	32	54.3[1380]	144.0[3660]	41.3[1050]	393	330	645	677	16.6[7.5]
	302SS036YJ00	36	54.3[1380]	154.3[3920]	41.7[1060]	397	333	651	683	20.6[9.3]
	302SL030YJ00	30	54.3[1380]	158.6[4030]	42.1[1070]	400	336	656	689	17.0[7.7]
	302SE036YJ00	36	54.3[1380]	162.2[4120]	41.7[1060]	397	333	651	683	18.0[8.1]
	302SM037YJ00	37	54.3[1380]	181.1[4600]	41.3[1050]	393	330	645	677	18.4[8.3]

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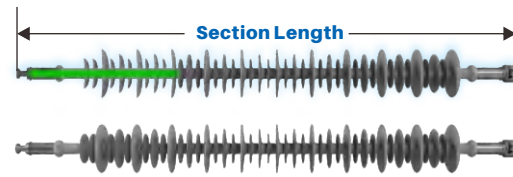
Composite Suspension Insulators Technical Data



Voltage Class [kV]	Catalogue No.	No. of Sheds	Section Length inch[mm]	Leakage Distance inch[mm]	Arcing Distance inch[mm]	Low Frequency Flashover [50Hz]		Critical Impulse Flashover		Approx. Weight lbs.[kg]
						Dry kV	Wet kV	Positive kV	Negative kV	
138	302SC036YJ00	36	59.0[1500]	161.0[4090]	46.0[1170]	436	366	711	749	17.8[8.1]
	302SS040YJ00	40	59.0[1500]	171.2[4350]	46.0[1170]	436	366	711	749	22.1[10.0]
	302SL034YJ00	34	59.0[1500]	175.9[4470]	46.0[1170]	436	366	711	749	18.0[8.1]
	302SE040YJ00	40	59.0[1500]	179.9[4570]	46.4[1180]	439	369	717	755	19.2[8.7]
	302SM041YJ00	41	59.0[1500]	200.7[5100]	46.4[1180]	439	369	717	755	19.7[8.9]
138	302SC041YJ00	41	65.1[1656]	178.3[4530]	51.9[1320]	489	411	793	839	19.1[8.6]
	302SS046YJ00	46	65.1[1656]	196.0[4980]	52.7[1340]	496	416	804	851	24.4[11.0]
	302SL039YJ00	39	65.1[1656]	203.5[5170]	52.3[1330]	492	414	799	845	19.9[9.0]
	302SE046YJ00	46	65.1[1656]	206.2[5240]	52.3[1330]	492	414	799	845	21.5[9.7]
	302SM041YJ00	41	65.1[1656]	200.7[5100]	46.4[1180]	439	369	717	755	19.7[8.9]
138	302SC042YJ00	42	66.1[1680]	187.4[4760]	53.1[1350]	499	419	810	857	20.1[9.1]
	302SS047YJ00	47	66.1[1680]	199.2[5060]	53.1[1350]	499	419	810	857	24.4[11.0]
	302SL039YJ00	39	66.1[1680]	204.3[5190]	53.1[1350]	499	419	810	857	19.9[9.0]
	302SE047YJ00	47	66.1[1680]	209.8[5330]	53.5[1360]	503	422	815	863	21.5[9.8]
	302SM048YJ00	48	66.1[1680]	235.8[5990]	53.5[1360]	503	422	815	863	22.1[10.0]
161	302SC042YJ01	42	66.1[1680]	187.4[4760]	52.3[1330]	492	414	799	845	21.4[9.7]
	302SS047YJ01	47	66.1[1680]	199.2[5060]	51.9[1320]	489	411	793	839	24.4[11.0]
	302SL039YJ01	39	66.1[1680]	204.3[5190]	52.3[1330]	492	414	799	845	19.9[9.0]
	302SE047YJ01	47	66.1[1680]	209.8[5330]	52.3[1330]	492	414	799	845	21.5[9.8]
	302SM048YJ01	48	66.1[1680]	235.8[5990]	52.3[1330]	492	414	799	845	22.3[10.1]
161	302SC047YJ01	47	72.0[1830]	208.2[5290]	58.2[1480]	545	458	881	935	22.6[10.3]
	302SS051YJ01	51	72.0[1830]	217.7[5530]	58.2[1480]	545	458	881	935	26.0[11.8]
	302SL044YJ01	44	72.0[1830]	228.7[5810]	58.6[1490]	549	461	887	941	21.8[9.9]
	302SE053YJ01	53	72.0[1830]	233.8[5940]	57.8[1470]	542	455	876	929	22.8[10.3]
	302SM054YJ01	54	72.0[1830]	264.5[6720]	58.6[1490]	549	461	887	941	24.5[11.1]
161	302SC052YJ01	52	77.9[1980]	230.3[5850]	64.1[1630]	599	503	964	1025	23.9[10.8]
	302SS057YJ01	57	77.9[1980]	241.7[6140]	64.1[1630]	599	503	964	1025	28.2[12.8]
	302SL049YJ01	49	77.9[1980]	251.9[6400]	64.1[1630]	599	503	964	1025	22.9[10.4]
	302SE059YJ01	59	77.9[1980]	261.0[6630]	64.1[1630]	599	503	964	1025	25.1[11.4]
	302SM060YJ01	60	77.9[1980]	292.5[7430]	64.1[1630]	599	503	964	1025	25.7[11.7]
161	302SC056YJ01	56	82.6[2100]	247.2[6280]	68.8[1750]	641	539	1030	1097	25.1[11.4]
	302SS061YJ01	61	82.6[2100]	258.6[6570]	68.5[1740]	638	536	1024	1091	29.7[13.5]
	302SL053YJ01	53	82.6[2100]	273.6[6950]	69.2[1760]	645	542	1035	1103	24.7[11.2]
	302SE063YJ01	63	82.6[2100]	278.7[7080]	68.8[1750]	641	539	1030	1097	26.3[11.9]
	302SM064YJ01	64	82.6[2100]	312.2[7930]	68.8[1750]	641	539	1030	1097	26.9[12.2]
230	302SC056YJ02	56	82.6[2100]	247.2[6280]	68.5[1740]	638	536	1024	1091	25.3[11.5]
	302SS061YJ02	61	82.6[2100]	258.6[6570]	68.1[1730]	634	533	1019	1085	29.7[13.5]
	302SL053YJ02	53	82.6[2100]	273.6[6950]	68.8[1750]	641	539	1030	1097	24.7[11.2]
	302SE063YJ02	63	82.6[2100]	278.7[7080]	68.5[1740]	638	536	1024	1091	26.3[11.9]
	302SM064YJ02	64	82.6[2100]	312.2[7930]	68.8[1750]	641	539	1030	1097	27.2[12.3]

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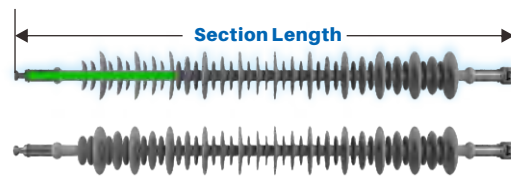
Composite Suspension Insulators Technical Data



Voltage Class [kV]	Catalogue No.	No. of Sheds	Section Length inch[mm]	Leakage Distance inch[mm]	Arcing Distance inch[mm]	Low Frequency Flashover [50Hz]		Critical Impulse Flashover		Approx. Weight lbs.[kg]
						Dry kV	Wet kV	Positive kV	Negative kV	
230	302SC061YJ02	61	88.5[2250]	267.3[6790]	74.4[1890]	691	580	1107	1181	26.6[12.0]
	302SS067YJ02	67	88.5[2250]	283.4[7200]	74.8[1900]	694	583	1112	1187	32.0[14.5]
	302SL057YJ02	57	88.5[2250]	295.2[7500]	74.8[1900]	694	583	1112	1187	25.8[11.7]
	302SE069YJ02	69	88.5[2250]	303.5[7710]	74.8[1900]	694	583	1112	1187	27.6[12.5]
	302SM070YJ02	70	88.5[2250]	340.9[8660]	74.8[1900]	694	583	1112	1187	29.4[13.3]
230	302SC066YJ02	66	94.4[2400]	290.9[7390]	80.3[2040]	744	625	1189	1271	28.7[13.0]
	302SS072YJ02	72	94.4[2400]	304.7[7740]	80.3[2040]	744	625	1189	1271	34.1[15.5]
	302SL062YJ02	62	94.4[2400]	319.2[8110]	80.3[2040]	744	625	1189	1271	27.7[12.5]
	302SE075YJ02	75	94.4[2400]	329.9[8380]	80.3[2040]	744	625	1189	1271	29.9[13.5]
	302SM076YJ02	76	94.4[2400]	368.8[9370]	80.3[2040]	744	625	1189	1271	30.6[13.9]
230	302SC070YJ02	70	99.2[2520]	308.2[7830]	85.0[2160]	787	661	1255	1343	29.9[13.6]
	302SS077YJ02	77	99.2[2520]	324.4[8240]	85.0[2160]	787	661	1255	1343	35.7[16.2]
	302SL066YJ02	66	99.2[2520]	340.1[8640]	85.4[2170]	790	664	1261	1349	28.7[13.0]
	302SE079YJ02	79	99.2[2520]	347.6[8830]	85.0[2160]	787	661	1255	1343	31.1[14.1]
	302SM081YJ02	81	99.2[2520]	390.9[9930]	85.4[2170]	790	664	1261	1349	31.8[14.4]
230	302SC078YJ02	78	108.6[2760]	342.5[8700]	94.4[2400]	872	732	1387	1487	32.3[14.6]
	302SS085YJ02	85	108.6[2760]	358.6[9110]	94.4[2400]	872	732	1387	1487	38.7[17.6]
	302SL074YJ02	74	108.6[2760]	385.8[9800]	95.2[2420]	879	738	1398	1499	31.6[14.3]
	302SE089YJ02	89	108.6[2760]	388.9[9880]	94.8[2410]	875	735	1393	1493	33.6[15.2]
	302SM090YJ02	90	108.6[2760]	435.8[11070]	94.4[2400]	872	732	1387	1487	35.1[15.9]
345	302SC088YJ22	88	120.4[3060]	385.4[9790]	105.1[2670]	967	813	1536	1649	36.4[16.5]
	302SS095YJ22	95	120.4[3060]	401.5[10200]	105.5[2680]	971	816	1541	1655	42.5[19.3]
	302SL082YJ22	82	120.4[3060]	419.6[10660]	105.1[2670]	967	813	1536	1649	33.8[15.3]
	302SE100YJ22	100	120.4[3060]	438.5[11140]	105.5[2680]	971	816	1541	1655	37.2[16.8]
	302SM101YJ22	101	120.4[3060]	487.4[12380]	105.5[2680]	971	816	1541	1655	39.1[17.7]
345	302SC097YJ22	97	131.1[3330]	422.4[10730]	115.7[2940]	1063	893	1684	1811	38.8[17.6]
	302SS106YJ22	106	131.1[3330]	445.6[11320]	115.7[2940]	1063	893	1684	1811	46.9[21.3]
	302SL091YJ22	91	131.1[3330]	464.5[11800]	115.7[2940]	1063	893	1684	1811	36.7[16.6]
	302SE111YJ22	111	131.1[3330]	485.0[12320]	116.1[2950]	1067	896	1690	1817	40.7[18.4]
	302SM112YJ22	112	131.1[3330]	540.5[13730]	115.7[2940]	1063	893	1684	1811	42.5[19.3]
345	302SC106YJ22	106	141.7[3600]	463.3[11770]	126.3[3210]	1159	973	1832	1973	42.2[19.1]
	302SS116YJ22	116	141.7[3600]	487.4[12380]	126.7[3220]	1162	976	1838	1979	50.7[23.0]
	302SL099YJ22	99	141.7[3600]	508.2[12910]	126.3[3210]	1159	973	1832	1973	39.6[18.0]
	302SE121YJ22	121	141.7[3600]	527.1[13390]	126.3[3210]	1159	973	1832	1973	43.2[19.6]
	302SM122YJ22	122	141.7[3600]	588.5[14950]	125.9[3200]	1155	970	1827	1967	45.7[20.7]
500	302SC114YJ34	114	151.1[3840]	497.6[12640]	135.0[3430]	1237	1039	1953	2105	53.1[24.1]
	302SS123YJ34	123	151.1[3840]	518.5[13170]	135.4[3440]	1240	1042	1959	2111	42.4[19.2]
	302SL107YJ34	107	151.1[3840]	547.2[13900]	135.0[3430]	1237	1039	1953	2105	46.6[21.1]
	302SE130YJ34	130	151.1[3840]	568.5[14440]	135.4[3440]	1240	1042	1959	2111	49.4[22.4]
	302SM131YJ34	131	151.1[3840]	631.4[16040]	135.4[3440]	1240	1042	1959	2111	49.4[22.4]

ANSI 30Kips

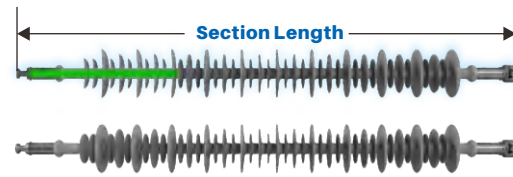
Composite Suspension Insulators Technical Data



Voltage Class [kV]	Catalogue No.	No. of Sheds	Section Length inch[mm]	Leakage Distance inch[mm]	Arcing Distance inch[mm]	Low Frequency Flashover [50Hz]		Critical Impulse Flashover		Approx. Weight lbs.[kg]
						Dry kV	Wet kV	Positive kV	Negative kV	
500	302SC128YJ34	128	167.7[4260]	557.8[14170]	151.5[3850]	1386	1164	2184	2357	49.4[22.4]
	302SS139YJ34	139	167.7[4260]	583.0[14810]	151.1[3840]	1382	1161	2179	2351	59.0[26.8]
	302SL120YJ34	120	167.7[4260]	613.7[15590]	151.5[3850]	1386	1164	2184	2357	46.4[21.1]
	302SE146YJ34	146	167.7[4260]	637.4[16190]	151.5[3850]	1386	1164	2184	2357	51.4[23.3]
	302SM147YJ34	147	167.7[4260]	707.8[17980]	151.5[3850]	1386	1164	2184	2357	54.0[24.5]
500	302SC138YJ34	138	179.7[4565]	601.1[15270]	163.3[4150]	1492	1253	2349	2537	52.8[23.9]
	302SS149YJ34	149	179.7[4565]	625.9[15900]	163.3[4150]	1492	1253	2349	2537	62.8[28.5]
	302SL129YJ34	129	179.7[4565]	660.2[16770]	163.3[4150]	1492	1253	2349	2537	49.4[22.4]
	302SE158YJ34	158	179.7[4565]	688.9[17500]	163.7[4160]	1496	1256	2355	2543	55.0[24.9]
	302SM159YJ34	159	179.7[4565]	764.9[19430]	164.1[4170]	1499	1259	2360	2549	57.4[26.0]

ANSI 50Kips

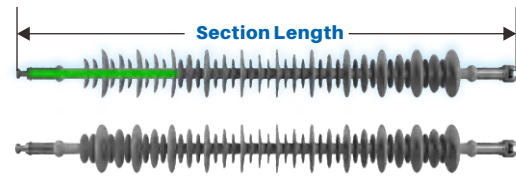
Composite Suspension Insulators Technical Data



Voltage Class [kV]	Catalogue No.	No. of Sheds	Section Length inch[mm]	Leakage Distance inch[mm]	Arcing Distance inch[mm]	Low Frequency Flashover [50Hz]		Critical Impulse Flashover		Approx. Weight lbs.[kg]
						Dry kV	Wet kV	Positive kV	Negative kV	
69	502SC011YK00	11	33.5[851]	54.7[1390]	18.5[470]	187	157	326	329	14.4[6.5]
	502SS015YK00	15	33.5[851]	66.5[1690]	18.5[470]	187	157	326	329	16.1[7.3]
	502SL012YK00	12	33.5[851]	66.9[1700]	18.5[470]	187	157	326	329	14.4[6.5]
	502SE013YK00	13	33.5[851]	62.2[1580]	18.5[470]	187	157	326	329	14.6[6.6]
	502SM020YK00	20	33.5[851]	102.3[2600]	24.8[630]	244	205	414	425	14.9[6.7]
69	502SC015YK00	15	36.4[927]	70.0[1780]	21.2[540]	212	178	365	371	14.4[6.5]
	502SS017YK00	17	36.4[927]	75.9[1930]	22.0[560]	219	184	376	383	16.1[7.3]
	502SL014YK00	14	36.4[927]	76.3[1940]	20.8[530]	209	175	359	365	14.4[6.5]
	502SE016YK00	16	36.4[927]	74.8[1900]	21.2[540]	212	178	365	371	14.6[6.6]
	502SM020YK00	20	36.4[927]	102.3[2600]	24.8[630]	244	205	414	425	14.9[6.7]
69	502SC018YK00	18	39.9[1015]	83.8[2130]	24.8[630]	244	205	414	425	14.4[6.5]
	502SS021YK00	21	39.9[1015]	91.3[2320]	25.1[640]	248	208	420	431	16.1[7.3]
	502SL017YK00	17	39.9[1015]	91.7[2330]	24.8[630]	244	205	414	425	14.4[6.5]
	502SE019YK00	19	39.9[1015]	88.5[2250]	24.8[630]	244	205	414	425	14.6[6.6]
	502SM020YK00	20	39.9[1015]	102.3[2600]	24.8[630]	244	205	414	425	14.9[6.7]
69	502SC020YK00	20	42.5[1080]	92.1[2340]	27.1[690]	265	223	447	461	14.4[6.5]
	502SS023YK00	23	42.5[1080]	100.0[2540]	27.1[690]	265	223	447	461	16.1[7.3]
	502SL019YK00	19	42.5[1080]	101.1[2570]	27.1[690]	265	223	447	461	14.4[6.5]
	502SE019YK00	19	42.5[1080]	88.5[2250]	24.8[630]	244	205	414	425	14.6[6.6]
	502SM020YK00	20	42.5[1080]	102.3[2600]	24.8[630]	244	205	414	425	14.9[6.7]
69	502SC022YK00	22	44.6[1135]	101.1[2570]	29.5[750]	287	241	480	497	15.6[7.1]
	502SS025YK00	25	44.6[1135]	108.2[2750]	29.5[750]	287	241	480	497	17.6[8.0]
	502SL020YK00	20	44.6[1135]	107.4[2730]	29.5[750]	287	241	480	497	15.4[7.0]
	502SE024YK00	24	44.6[1135]	109.4[2780]	29.5[750]	287	241	480	497	15.8[7.2]
	502SM025YK00	25	44.6[1135]	124.4[3160]	29.9[760]	290	244	486	503	16.2[7.3]
69/115	502SC025YK00	25	48.2[1225]	112.2[2850]	33.0[840]	319	268	530	551	15.8[7.1]
	502SS028YK00	28	48.2[1225]	121.2[3080]	32.6[830]	315	265	524	545	19.0[8.6]
	502SL023YK00	23	48.2[1225]	122.8[3120]	33.0[840]	319	268	530	551	16.4[7.4]
	502SE027YK00	27	48.2[1225]	123.2[3130]	33.0[840]	319	268	530	551	17.0[7.7]
	502SM028YK00	28	48.2[1225]	140.5[3570]	33.0[840]	319	268	530	551	17.3[7.8]
69/115	502SC028YK00	28	51.7[1315]	126.7[3220]	36.6[930]	350	294	579	605	16.9[7.7]
	502SS031YK00	31	51.7[1315]	133.4[3390]	36.2[920]	347	291	574	599	19.9[9.0]
	502SL026YK00	26	51.7[1315]	137.7[3500]	37.0[940]	354	297	585	611	17.4[7.9]
	502SE031YK00	31	51.7[1315]	139.7[3550]	36.2[920]	347	291	574	599	18.2[8.2]
	502SM032YK00	32	51.7[1315]	158.6[4030]	36.2[920]	347	291	574	599	18.5[8.4]
115/138	502SC032YK00	32	56.4[1435]	144.0[3660]	41.3[1050]	393	330	645	677	18.1[8.2]
	502SS036YK00	36	56.4[1435]	154.7[3930]	41.7[1060]	397	333	651	683	22.1[10.0]
	502SL030YK00	30	56.4[1435]	158.2[4020]	41.3[1050]	393	330	645	677	18.4[8.3]
	502SE036YK00	36	56.4[1435]	160.6[4080]	41.3[1050]	393	330	645	677	19.4[8.8]
	502SM037YK00	37	56.4[1435]	181.1[4600]	41.3[1050]	393	330	645	677	19.8[9.0]

ANSI 50Kips

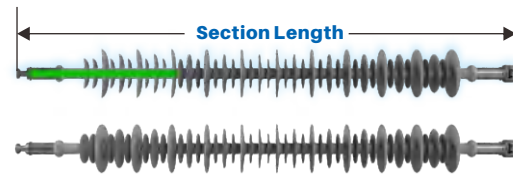
Composite Suspension Insulators Technical Data



Voltage Class [kV]	Catalogue No.	No. of Sheds	Section Length inch[mm]	Leakage Distance inch[mm]	Arcing Distance inch[mm]	Low Frequency Flashover [50Hz]		Critical Impulse Flashover		Approx. Weight lbs.[kg]
						Dry kV	Wet kV	Positive kV	Negative kV	
138	502SC036YK00	36	61.2[1555]	161.0[4090]	46.0[1170]	436	366	711	749	19.3[8.7]
	502SM041YK00	41	61.2[1555]	200.7[5100]	46.4[1180]	439	369	717	755	21.1[9.6]
	502SS040YK00	40	61.2[1555]	171.6[4360]	46.0[1170]	436	366	711	749	23.6[10.7]
	502SL033YK00	33	61.2[1555]	174.0[4420]	45.6[1160]	432	363	706	743	19.4[8.8]
	502SE040YK00	40	61.2[1555]	178.7[4540]	46.4[1180]	439	369	717	755	20.7[9.4]
138	502SC042YK00	42	68.3[1735]	187.4[4760]	53.1[1350]	499	419	810	857	21.5[9.8]
	502SS046YK00	46	68.3[1735]	196.8[5000]	52.7[1340]	496	416	804	851	25.8[11.7]
	502SL039YK00	39	68.3[1735]	204.3[5190]	53.1[1350]	499	419	810	857	21.4[9.7]
	502SE047YK00	47	68.3[1735]	208.6[5300]	52.7[1340]	496	416	804	851	23.0[10.4]
	502SM048YK00	48	68.3[1735]	235.0[5970]	52.7[1340]	496	416	804	851	23.5[10.6]
161	502SC042YK01	42	68.3[1735]	187.4[4760]	52.3[1330]	492	414	799	845	22.9[10.4]
	502SS046YK01	46	68.3[1735]	196.8[5000]	51.9[1320]	489	411	793	839	27.1[12.3]
	502SL039YK01	39	68.3[1735]	204.3[5190]	52.3[1330]	492	414	799	845	22.7[10.3]
	502SE047YK01	47	68.3[1735]	208.6[5300]	51.9[1320]	489	411	793	839	24.3[11.0]
	502SM048YK01	48	68.3[1735]	235.0[5970]	51.5[1310]	485	408	788	833	24.8[11.2]
161	502SC047YK01	47	74.2[1885]	208.2[5290]	58.2[1480]	545	458	881	935	24.1[10.9]
	502SS052YK01	52	74.2[1885]	221.6[5630]	58.2[1480]	545	458	881	935	29.4[13.3]
	502SL044YK01	44	74.2[1885]	228.3[5800]	57.8[1470]	542	455	876	929	24.6[11.1]
	502SE053YK01	53	74.2[1885]	233.8[5940]	57.8[1470]	542	455	876	929	25.6[11.6]
	502SM054YK01	54	74.2[1885]	263.7[6700]	57.8[1470]	542	455	876	929	27.2[12.3]
161	502SC048YK01	48	75.5[1918]	212.9[5410]	59.4[1510]	556	467	898	953	25.4[11.5]
	502SS053YK01	53	75.5[1918]	225.1[5720]	59.4[1510]	556	467	898	953	31.0[14.0]
	502SL045YK01	45	75.5[1918]	235.0[5970]	59.8[1520]	560	470	903	959	25.7[11.6]
	502SE054YK01	54	75.5[1918]	239.7[6090]	59.8[1520]	560	470	903	959	27.9[12.6]
	502SM060YK01	60	75.5[1918]	292.5[7430]	64.1[1630]	599	503	964	1025	28.6[12.9]
161	502SC052YK01	52	80.1[2035]	230.3[5850]	64.1[1630]	599	503	964	1025	25.4[11.5]
	502SS057YK01	57	80.1[2035]	241.7[6140]	63.7[1620]	595	500	958	1019	31.0[14.0]
	502SL048YK01	48	80.1[2035]	250.0[6350]	63.7[1620]	595	500	958	1019	25.7[11.6]
	502SE059YK01	59	80.1[2035]	260.6[6620]	64.1[1630]	599	503	964	1025	27.9[12.6]
	502SM060YK01	60	80.1[2035]	292.5[7430]	64.1[1630]	599	503	964	1025	28.6[12.9]
161	502SC056YK01	56	84.8[2155]	247.2[6280]	68.8[1750]	641	539	1030	1097	26.6[12.0]
	502SS061YK01	61	84.8[2155]	258.6[6570]	68.5[1740]	638	536	1024	1091	32.5[14.7]
	502SL053YK01	53	84.8[2155]	274.0[6960]	69.2[1760]	645	542	1035	1103	27.5[12.5]
	502SE063YK01	63	84.8[2155]	278.3[7070]	68.8[1750]	641	539	1030	1097	29.1[13.2]
	502SM064YK01	64	84.8[2155]	312.2[7930]	68.8[1750]	641	539	1030	1097	29.9[13.5]
230	502SC056YK02	56	84.8[2155]	247.2[6280]	68.5[1740]	638	536	1024	1091	26.8[12.1]
	502SS061YK02	61	84.8[2155]	258.6[6570]	68.1[1730]	634	533	1019	1085	32.7[14.8]
	502SL053YK02	53	84.8[2155]	274.0[6960]	68.8[1750]	641	539	1030	1097	27.7[12.6]
	502SE063YK02	63	84.8[2155]	278.3[7070]	68.5[1740]	638	536	1024	1091	29.3[13.3]
	502SM064YK02	64	84.8[2155]	312.2[7930]	68.8[1750]	641	539	1030	1097	30.1[13.6]

ANSI 50Kips

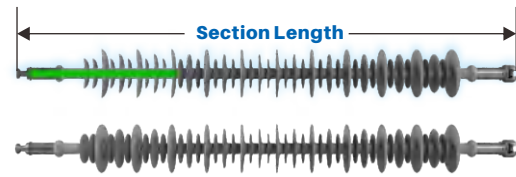
Composite Suspension Insulators Technical Data



Voltage Class [kV]	Catalogue No.	No. of Sheds	Section Length inch[mm]	Leakage Distance inch[mm]	Arcing Distance inch[mm]	Low Frequency Flashover [50Hz]		Critical Impulse Flashover		Approx. Weight lbs.[kg]
						Dry kV	Wet kV	Positive kV	Negative kV	
230	502SC061YK02	61	90.7[2305]	267.3[6790]	74.4[1890]	691	580	1107	1181	28.0[12.7]
	502SS067YK02	67	90.7[2305]	283.4[7200]	74.8[1900]	694	583	1112	1187	35.0[15.8]
	502SL057YK02	57	90.7[2305]	294.8[7490]	74.0[1880]	687	577	1101	1175	28.8[13.0]
	502SE069YK02	69	90.7[2305]	302.7[7690]	74.4[1890]	691	580	1107	1181	30.6[13.9]
	502SM070YK02	70	90.7[2305]	340.1[8640]	74.0[1880]	687	577	1101	1175	32.4[14.7]
230	502SC066YK02	66	96.6[2455]	290.9[7390]	80.3[2040]	744	625	1189	1271	30.2[13.7]
	502SS071YK02	71	96.6[2455]	301.1[7650]	80.3[2040]	744	625	1189	1271	36.5[16.6]
	502SL062YK02	62	96.6[2455]	319.6[8120]	80.3[2040]	744	625	1189	1271	30.7[13.9]
	502SE075YK02	75	96.6[2455]	329.5[8370]	80.3[2040]	744	625	1189	1271	32.9[14.9]
	502SM076YK02	76	96.6[2455]	368.8[9370]	80.3[2040]	744	625	1189	1271	33.8[15.3]
230	502SC070YK02	70	101.3[2575]	308.2[7830]	85.0[2160]	787	661	1255	1343	31.4[14.2]
	502SS076YK02	76	101.3[2575]	322.0[8180]	84.6[2150]	783	658	1250	1337	38.7[17.5]
	502SL065YK02	65	101.3[2575]	335.4[8520]	85.0[2160]	787	661	1255	1343	31.7[14.4]
	502SE079YK02	79	101.3[2575]	347.2[8820]	85.0[2160]	787	661	1255	1343	34.1[15.5]
	502SM080YK02	80	101.3[2575]	388.5[9870]	85.0[2160]	787	661	1255	1343	35.0[15.9]
230	502SC071YK02	71	103.4[2627]	312.5[7940]	87.4[2220]	808	679	1288	1379	31.4[14.2]
	502SS078YK02	78	103.4[2627]	330.3[8390]	87.0[2210]	804	676	1283	1373	38.7[17.5]
	502SL067YK02	67	103.4[2627]	344.8[8760]	87.4[2220]	808	679	1288	1379	31.7[14.4]
	502SE081YK02	81	103.4[2627]	355.1[9020]	87.0[2210]	804	676	1283	1373	34.1[15.5]
	502SM080YK02	80	103.4[2627]	388.5[9870]	85.0[2160]	787	661	1255	1343	35.0[15.9]
230	502SC075YK02	75	107.5[2731]	328.7[8350]	90.9[2310]	840	705	1338	1433	31.4[14.2]
	502SS082YK02	82	107.5[2731]	346.8[8810]	91.3[2320]	843	708	1343	1439	38.7[17.5]
	502SL070YK02	70	107.5[2731]	360.2[9150]	91.3[2320]	843	708	1343	1439	31.7[14.4]
	502SE085YK02	85	107.5[2731]	372.4[9460]	91.3[2320]	843	708	1343	1439	34.1[15.5]
	502SM080YK02	80	107.5[2731]	388.5[9870]	85.0[2160]	787	661	1255	1343	35.0[15.9]
345	502SC088YK22	88	122.6[3115]	385.4[9790]	105.1[2670]	967	813	1536	1649	37.8[17.1]
	502SS095YK22	95	122.6[3115]	401.5[10200]	105.5[2680]	971	816	1541	1655	47.1[21.4]
	502SL083YK22	83	122.6[3115]	425.9[10820]	105.5[2680]	971	816	1541	1655	39.1[17.7]
	502SE100YK22	100	122.6[3115]	437.4[11110]	105.5[2680]	971	816	1541	1655	41.7[18.9]
	502SM101YK22	101	122.6[3115]	487.4[12380]	105.5[2680]	971	816	1541	1655	42.9[19.4]
345	502SC097YK22	97	133.2[3385]	422.4[10730]	115.7[2940]	1063	893	1684	1811	40.3[18.3]
	502SS104YK22	104	133.2[3385]	439.7[11170]	115.3[2930]	1060	890	1679	1805	50.8[23.0]
	502SL091YK22	91	133.2[3385]	465.7[11830]	115.7[2940]	1063	893	1684	1811	41.2[18.7]
	502SE110YK22	110	133.2[3385]	481.4[12230]	115.7[2940]	1063	893	1684	1811	45.2[20.5]
	502SM111YK22	111	133.2[3385]	535.8[13610]	115.7[2940]	1063	893	1684	1811	46.5[21.1]
345	502SC106YK22	106	143.8[3655]	463.3[11770]	126.3[3210]	1159	973	1832	1973	43.6[19.8]
	502SS110YK22	114	143.8[3655]	481.4[12230]	126.3[3210]	1159	973	1832	1973	54.6[24.7]
	502SL099YK22	99	143.8[3655]	508.2[12910]	126.3[3210]	1159	973	1832	1973	44.2[20.0]
	502SE121YK22	121	143.8[3655]	527.1[13390]	126.3[3210]	1159	973	1832	1973	47.7[21.6]
	502SM122YK22	122	143.8[3655]	588.5[14950]	125.9[3200]	1155	970	1827	1967	50.1[22.7]

ANSI 50Kips

Composite Suspension Insulators Technical Data



Voltage Class [kV]	Catalogue No.	No. of Sheds	Section Length inch[mm]	Leakage Distance inch[mm]	Arcing Distance inch[mm]	Low Frequency Flashover [50Hz]		Critical Impulse Flashover		Approx. Weight lbs.[kg]
						Dry kV	Wet kV	Positive kV	Negative kV	
500	502SC114YK34	114	153.3[3895]	497.6[12640]	135.0[3430]	1237	1039	1953	2105	47.1[21.4]
	502SS123YK34	123	153.3[3895]	517.3[13140]	134.6[3420]	1233	1036	1948	2099	58.7[26.6]
	502SL107YK34	107	153.3[3895]	547.6[13910]	135.0[3430]	1237	1039	1953	2105	48.1[21.8]
	502SE130YK34	130	153.3[3895]	566.9[14400]	134.6[3420]	1233	1036	1948	2099	52.2[23.7]
	502SM131YK34	131	153.3[3895]	631.4[16040]	135.4[3440]	1240	1042	1959	2111	53.8[24.4]
500	502SC128YK34	128	169.8[4315]	557.8[14170]	151.5[3850]	1386	1164	2184	2357	50.8[23.0]
	502SS138YK34	138	169.8[4315]	580.7[14750]	151.1[3840]	1382	1161	2179	2351	64.6[29.3]
	502SL120YK34	120	169.8[4315]	614.1[15600]	151.5[3850]	1386	1164	2184	2357	52.1[23.6]
	502SE146YK34	146	169.8[4315]	636.6[16170]	151.5[3850]	1386	1164	2184	2357	57.1[25.9]
	502SM147YK34	147	169.8[4315]	707.8[17980]	151.5[3850]	1386	1164	2184	2357	58.8[26.7]
500	502SC138YK34	138	181.6[4615]	601.1[15270]	163.3[4150]	1492	1253	2349	2537	54.3[24.6]
	502SS149YK34	149	181.6[4615]	625.9[15900]	163.3[4150]	1492	1253	2349	2537	68.5[31.1]
	502SL129YK34	129	181.6[4615]	660.2[16770]	163.3[4150]	1492	1253	2349	2537	55.1[25.0]
	502SE158YK34	158	181.6[4615]	687.7[17470]	163.3[4150]	1492	1253	2349	2537	60.6[27.5]
	502SM159YK34	159	181.6[4615]	764.1[19410]	163.3[4150]	1492	1253	2349	2537	62.5[28.3]

Notes

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