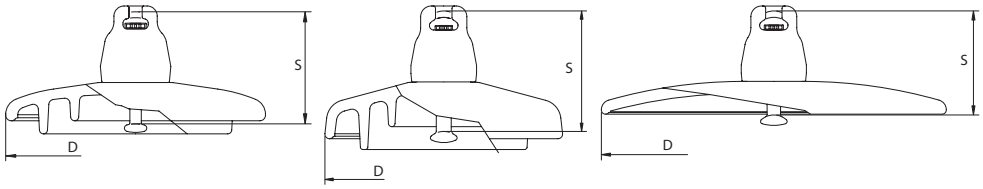
Sediver toughened glass suspension insulators

BS

Ball & Socket type

160 kN



		Standard Profile	Fog Type Profile	Open Type Profile
CATALOG N°		B160/146	B160P/170	B160D/146
MECHANICAL CHARACTERISTICS				
Minimum mechanical failing load	kN	160	160	160
DIMENSIONS				
Diameter (D)	mm	280	330	420
Spacing (S)	mm	146	170	146
Creepage distance	mm	380	545	375
Metal fitting size (1)		20	20	20
Locking device designation		W	W	W
ELECTRICAL CHARACTERISTICS (2)				
Power frequency withstand voltage				
- Dry one minute	kV	75	90	60
- Wet one minute	kV	45	55	50
Dry lightning impulse withstand volt.	kV	110	140	90
Puncture withstand voltage	kV	130	130	130
PACKING AND SHIPPING DATA				
Approx. net weight	kg	6	8.8	8
N° of insulators per crate		6	6	6
Volume per crate	m³	0.07	0.09	0.154
Gross weight per crate	kg	47.1	63.5	60.4
N° of insulators per pallet		72	54	36
Volume per pallet	m³	1.25	1.22	1.34
Gross weight per pallet	kg	517	560	350

(1) in accordance with IEC 60120 & BS 3288
(2) in accordance with IEC 60383-1 & BS 60383-1

Corrosion prevention solution: Insulators with specific protection against corrosion are also available (see page 6)

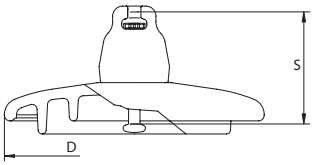
For specific markets we also supply a range of customized products which are not shown here. Please contact our sales department for more details.

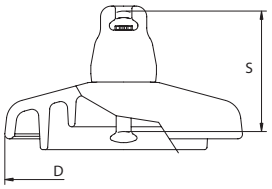
Sediver toughened glass suspension insulators

BS

Ball & Socket type

190 kN





		Standard Profile	Fog Type Profile
CATALOG N°		B190/200	B190P/170
MECHANICAL CHARACTERISTICS			
Minimum mechanical failing load	kN	190	190
DIMENSIONS			
Diameter (D)	mm	280	330
Spacing (S)	mm	200	170
Creepage distance	mm	380	550
Metal fitting size (1)		24	24
Locking device designation		W	W
ELECTRICAL CHARACTERISTICS (2)			
Power frequency withstand voltage			
- Dry one minute	kV	75	90
- Wet one minute	kV	45	55
Dry lightning impulse withstand volt.	kV	110	140
Puncture withstand voltage	kV	130	130
PACKING AND SHIPPING DATA			
Approx. net weight	kg	7.2	10.2
N° of insulators per crate		2	6
Volume per crate	m³	0.03	0.1
Gross weight per crate	kg	24	71.6
N° of insulators per pallet		24	54
Volume per pallet	m³	0.9	0.76
Gross weight per pallet	kg	300	583

(1) in accordance with IEC 60120 & BS 3288
(2) in accordance with IEC 60383-1 & BS 60383-1

Corrosion prevention solution: Insulators with specific protection against corrosion are also available (see page 6)

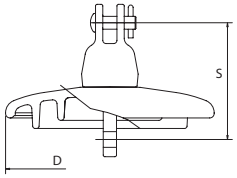
For specific markets we also supply a range of customized products which are not shown here. Please contact our sales department for more details.

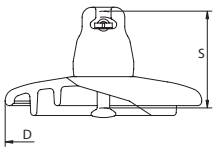
Sediver toughened glass suspension insulators

ANSI

Ball & Socket type

70 kN





		Standard Profile	
CATALOG N°		CT70/146	N70/146
ANSI class (1)		52-4-L	52-3-L
MECHANICAL CHARACTERISTICS			
Combined M&E Strength	kN	70	70
	lbs	*15000*	*15000*
Impact strength	m.N	45	45
	in-pds	*400*	*400*
Tension proof	kN	35	35
	lbs	*7500*	*7500*
DIMENSIONS			
Diameter (D)	mm	255	255
	inch	*10*	*10*
Spacing (S)	mm	146	146
	inch	*5 3/4*	*5 3/4*
Creepage distance	mm	320	320
	inch	*12 5/8*	*12 5/8*
Metal fitting coupling (1)		Clevis type	B & S type B
ELECTRICAL CHARACTERISTICS (2)			
Low frequency dry flashover	kV	80	80
Low frequency wet flashover	kV	50	50
Critical impulse flashover +	kV	125	125
Critical impulse flashover -	kV	130	130
Low frequency puncture voltage	kV	130	130
R.I.V Low frequency test voltage	kV	10	10
Max. RIV at 1 MHz	µV	50	50
PACKING AND SHIPPING DATA			
Approx. net weight	kg	3.6	3.6
N° of insulators per crate		6	6
Volume per crate	m³	0.05	0.05
Gross weight per crate	kg	31.3	31.3
N° of insulators per pallet		90	90
Volume per pallet	m³	1.34	1.34
Gross weight per pallet	kg	452	452

(1) in accordance with ANSI C29.2
(2) in accordance with ANSI C29.1

Corrosion prevention solution: Insulators with specific protection against corrosion are also available (see page 6)

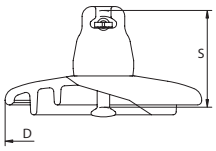
For specific markets we also supply a range of customized products which are not shown here. Please contact our sales department for more details.

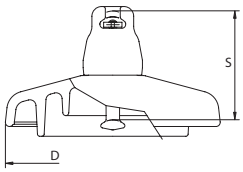
Sediver toughened glass suspension insulators

ANSI

Ball & Socket type

100 kN





		Standard Profile	Fog Type Profile
CATALOG N°		N100/146	N100P/146
ANSI class (1)		52-3-H	
MECHANICAL CHARACTERISTICS			
Combined M&E Strength	kN	100	100
	lbs	*22000*	*22000*
Impact strength	m.N	45	45
	in-pds	*400*	*400*
Tension proof	kN	50	50
	lbs	*11000*	*11000*
DIMENSIONS			
Diameter (D)	mm	255	280
	inch	*10*	*11*
Spacing (S)	mm	146	146
	inch	5 3/4	5 3/4
Creepage distance	mm	320	445
	inch	12 5/8	17 1/2
Metal fitting coupling (1)		B&S type B	B&S type B
ELECTRICAL CHARACTERISTICS (2)			
Low frequency dry flashover	kV	80	100
Low frequency wet flashover	kV	50	60
Critical impulse flashover +	kV	125	140
Critical impulse flashover -	kV	130	140
Low frequency puncture voltage	kV	130	130
R.I.V Low frequency test voltage	kV	10	10
Max. RIV at 1 MHz	µV	50	50
PACKING AND SHIPPING DATA			
Approx. net weight	kg	4	5.8
N° of insulators per crate		6	3
Volume per crate	m³	0.05	0.05
Gross weight per crate	kg	31.3	21.8
N° of insulators per pallet		90	36
Volume per pallet	m³	1.34	0.86
Gross weight per pallet	kg	452	290

(1) in accordance with ANSI C29.2
(2) in accordance with ANSI C29.1

Corrosion prevention solution: Insulators with specific protection against corrosion are also available (see page 6)

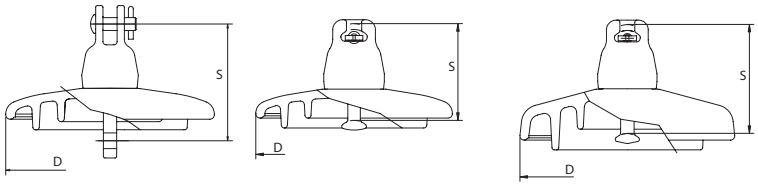
For specific markets we also supply a range of customized products which are not shown here. Please contact our sales department for more details.

Sediver toughened glass suspension insulators

ANSI

Ball & Socket type

120 kN



		Standard Profile		Fog type Profile
CATALOG N°		CT12/146	N12/146	N120P/146
ANSI class (1)		52-6-L	52-5-L	
MECHANICAL CHARACTERISTICS				
Combined M&E Strength	kN	120	120	120
	lbs	*25000*	*25000*	*25000*
Impact strength	m.N	45	45	45
	in-pds	*400*	*400*	*400*
Tension proof	kN	60	60	60
	lbs	*12500*	*12500*	*12500*
DIMENSIONS				
Diameter (D)	mm	255	255	280
	inch	*10*	*10*	*11*
Spacing (S)	mm	146	146	146
	inch	5 3/4	5 3/4	5 3/4
Creepage distance	mm	320	320	445
	inch	12 5/8	12 5/8	17 1/2
Metal fitting coupling (1)		Clevis type	B&S type J	B&S type J
ELECTRICAL CHARACTERISTICS (2)				
Low frequency dry flashover	kV	80	80	100
Low frequency wet flashover	kV	50	50	60
Critical impulse flashover +	kV	125	125	140
Critical impulse flashover -	kV	130	130	140
Low frequency puncture voltage	kV	130	130	130
R.I.V Low frequency test voltage	kV	10	10	10
Max. RIV at 1 MHz	µV	50	50	50
PACKING AND SHIPPING DATA				
Approx. net weight	kg	4	4	5.8
N° of insulators per crate		6	6	6
Volume per crate	m³	0.05	0.05	0.075
Gross weight per crate	kg	33.1	33.1	45.3
N° of insulators per pallet		90	90	72
Volume per pallet	m³	1.34	0.63	1.24
Gross weight per pallet	kg	452	452	524

(1) in accordance with ANSI C29.2
(2) in accordance with ANSI C29.1

Corrosion prevention solution: Insulators with specific protection against corrosion are also available (see page 6)

For specific markets we also supply a range of customized products which are not shown here. Please contact our sales department for more details.

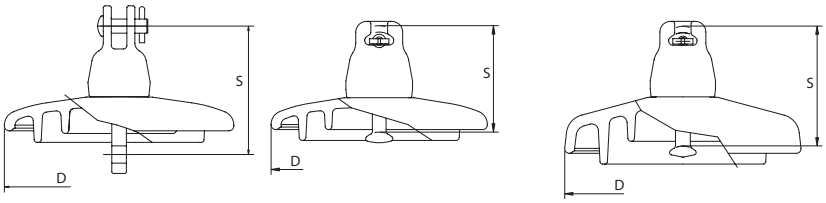
HVAC

Sediver toughened glass suspension insulators

ANSI

Ball & Socket type

160 kN
220 kN



		Standard Profile			Fog type Profile	
CATALOG N°		CT160/165	N160/146	N21/156	N160P/146	N222P/171
ANSI class (1)		52-10-L	52-8-L	52-11		
MECHANICAL CHARACTERISTICS						
Combined M&E Strength	kN	160	160	222	160	222
	lbs	*36000*	*36000*	*50000*	*36000*	*50000*
Impact strength	m.N	45	45	45	45	45
	in-pds	*400*	*400*	*400*	*400*	*400*
Tension proof	kN	80	80	111	80	111
	lbs	*18000*	*18000*	*25000*	*18000*	*25000*
DIMENSIONS						
Diameter (D)	mm	280	280	280	330	330
	inch	*11*	*11*	*11*	*13*	*13*
Spacing (S)	mm	165	146	156	146	171
	inch	*6 1/2*	*5 3/4*	*6 1/8*	*5 3/4*	*6 3/4*
Creepage distance	mm	380	380	380	545	550
	inch	*15*	*15*	*15*	*21 1/2*	*21 5/8*
Metal fitting coupling (1)		Clevis type	B&S type K	B&S type K	B&S type K	B&S type K
ELECTRICAL CHARACTERISTICS (2)						
Low frequency dry flashover	kV	80	80	80	105	105
Low frequency wet flashover	kV	50	50	50	65	65
Critical impulse flashover +	kV	125	125	140	170	170
Critical impulse flashover -	kV	130	130	140	160	160
Low frequency puncture voltage	kV	130	130	130	130	130
R.I.V Low frequency test voltage	kV	10	10	10	10	10
Max. RIV at 1 MHz	µV	50	50	50	50	50
PACKING AND SHIPPING DATA						
Approx. net weight	kg	6.1	6	7.2	8.8	9.7
N° of insulators per crate		6	6	6	6	2
Volume per crate	m³	0.07	0.07	0.08	0.07	0.04
Gross weight per crate	kg	47.6	47.2	52.4	47.2	25
N° of insulators per pallet		72	72	72	72	36
Volume per pallet	m³	1.35	1.25	1.45	1.25	1.15
Gross weight per pallet	kg	590	517	593	517	453

(1) in accordance with ANSI C29.2
(2) in accordance with ANSI C29.1

Corrosion prevention solution: Insulators with specific protection against corrosion are also available (see page 6)

For specific markets we also supply a range of customized products which are not shown here. Please contact our sales department for more details.

For extreme pollution: Sedicoat® solution

In case of extreme or exceptional pollution, it may become necessary to wash the glass and porcelain insulators so as to reduce the risk of flashover due to the critical deposit of pollution. Composite insulators can be used in these conditions, nonetheless the benefits linked to the hydrophobicity and profile of this kind of insulators are outweighed by the difficulties of inspection and diagnosis of the aging as well as the difficulty of live line working.

Sedicoat®: no washing is needed anymore

Sedicoat® insulators are Sediver toughened glass insulators coated with silicone. The silicone coating procures hydrophobic properties to the surface of the glass shell and thus significantly enhances its electrical performance under extreme pollution. The hydrophobic behavior of the surface helps mitigating extreme pollution problems by reducing wetting and leakage currents.
Sedicoat® insulators offer a solution that eliminates the need for regular washing in extreme pollution conditions.

A Sediver R&D qualification program

The performance and lifetime of silicone coatings depend on the silicone type, the adherence of the silicone layer to the glass shell, the thickness and the homogeneity of the coating.
To obtain optimum performance, Sediver has set in place a stringent R&D program. The silicones qualified by Sediver have been specifically selected to resist quite severe electrical constraints undergone by cap and pin insulators on overhead lines in polluted environments.

Salt fog withstand test

2000h aging test

Power arc test

Scratch test

The application of the coating is done at the factory according to a specific industrial process qualified by Sediver.

A solution confirmed by about 2 decades of satisfactory service

Applications

- Coastal areas
- Industrial pollution areas
- Desert areas
- Mixed pollution areas
- Applications in HVAC and HVDC

Main advantages:

- Reduce the maintenance cost as there is no need for washing
- Keep the inherent properties of the toughened glass in terms of:
  - easiness and reliability of visual inspection
  - safe live-line working
  - long term electrical and mechanical reliability
  - no aging
- No need to modify line design
- Can be applied on all glass profiles

Sedicoat® is the solution that maintains the unique properties of Sediver toughened glass insulators while eliminating the need for washing under extreme pollution conditions thanks to the silicone coating.

IEC/BS string electrical ratings

Standard profile

Standard profile suspension insulator string withstand voltages based on the test procedure of the International Standard IEC 60383-93 and British Standard BS 60383

	Diameter / Spacing Ø 255/127			Diameter / Spacing Ø 255/146 - Ø 280/146		
Catalog N°	**F70/127 - F100/127 - F12/127**			**F70/146 - F100/146 - F12/146 - F160/146**		
Number of units	Power frequency withstand voltage (kV)		Lightning impulse withstand voltage (kV)	Power frequency withstand voltage (kV)		Lightning impulse withstand voltage (kV)
	DRY	WET		DRY	WET	
2	113	65	175	130	75	195
3	157	100	245	180	115	275
4	204	135	320	235	155	360
5	244	170	395	280	195	430
6	283	200	460	325	230	505
7	326	231	525	375	265	580
8	365	261	585	420	300	660
9	404	283	660	465	325	730
10	444	326	720	510	375	800
11	478	357	785	550	410	880
12	518	383	850	595	440	955
13	552	413	920	635	475	1025
14	587	444	985	675	510	1095
15	622	470	1050	715	540	1160
16	657	496	1115	755	570	1230
17	696	522	1180	800	600	1300
18	744	552	1240	855	635	1370
19	761	578	1310	875	665	1440
20	796	609	1365	915	700	1510
21	826	635	1425	950	730	1575
22	861	661	1490	990	760	1640
23	896	687	1550	1030	790	1710
24	926	713	1610	1065	820	1775
25	957	744	1670	1100	855	1850
26	992	765	1735	1140	880	1920
27	1022	792	1800	1175	910	1990
28	1057	813	1860	1215	935	2060
29	1092	839	1920	1255	965	2130
30	1122	861	1980	1290	990	2200

These electrical ratings are applicable to Sediver suspension insulator strings not equipped with arcing devices or grading rings.

IEC/BS string electrical ratings

Standard profile

Standard profile suspension insulator string withstand voltages based on the test procedure of the International Standard IEC 60383-93 and British Standard BS 60383

	Diameter / Spacing Ø 280/170			Diameter / Spacing Ø 320/195 - Ø 360/205		
Catalog N°	**F160/170 - F21/170 - F24/170**			**F300/195 - F400/205**		
Number of units	Power frequency withstand voltage (kV)		Lightning impulse withstand voltage (kV)	Power frequency withstand voltage (kV)		Lightning impulse withstand voltage (kV)
	DRY	WET		DRY	WET	
2	140	80	215	155	90	230
3	200	120	305	220	140	340
4	250	160	385	290	180	430
5	300	200	470	350	220	530
6	350	240	560	405	260	620
7	400	280	640	465	300	700
8	450	320	720	515	350	790
9	500	350	810	570	390	880
10	545	380	900	620	440	970
11	590	420	980	675	490	1060
12	635	455	1070	725	540	1150
13	675	490	1140	775	580	1240
14	720	520	1220	825	620	1330
15	760	550	1300	870	660	1425
16	810	585	1380	920	700	1520
17	850	615	1460	970	740	1610
18	895	650	1550	1020	780	1700
19	930	680	1620	1070	820	1790
20	970	710	1690	1110	860	1880
21	1000	740	1770	1160	900	1970
22	1050	775	1840	1210	940	2050
23	1090	805	1920	1260	980	2140
24	1130	835	2000	1310	1015	2230
25	1170	870	2080	1360	1050	2320
26	1210	900	2160	1410	1085	2410
27	1250	930	2240	1460	1120	2500
28	1290	960	2320	1510	1155	2600
29	1330	990	2400	1550	1190	2700
30	1370	1030	2480	1600	1225	2800

These electrical ratings are applicable to Sediver suspension insulator strings not equipped with arcing devices or grading rings.

IEC/BS string electrical ratings

Fog type profile

Fog type profile suspension insulator string withstand voltages based on the test procedure of the International Standard IEC 60383-93 and British Standard BS 60383

Catalog N°	Diameter / Spacing Ø 280/146 - Ø 330/146 F100P/146 - F120P/146 F160P/146 - 100PF/146			Diameter / Spacing Ø 330/170 F160P/170 - F210P/170		
Number of units	Power frequency withstand voltage (kV)		Lightning impulse withstand voltage (kV)	Power frequency withstand voltage (kV)		Lightning impulse withstand voltage (kV)
	DRY	WET		DRY	WET	
2	140	85	210	150	105	235
3	195	115	295	210	150	335
4	240	150	380	265	190	435
5	290	180	465	320	230	535
6	335	210	530	370	270	625
7	380	240	600	420	300	710
8	425	270	680	470	335	800
9	465	300	760	515	365	890
10	510	330	840	570	395	980
11	550	360	920	610	430	1070
12	585	390	1000	660	460	1170
13	630	410	1080	700	490	1260
14	670	430	1160	745	520	1355
15	710	460	1240	785	550	1450
16	750	490	1320	830	575	1540
17	785	510	1410	870	605	1640
18	825	530	1500	910	630	1730
19	860	550	1580	950	655	1810
20	895	570	1655	990	680	1900
21	925	590	1730	1030	700	1990
22	960	610	1810	1060	720	2080
23	995	630	1885	1090	740	2160
24	1025	650	1950	1130	755	2245
25	1060	670	2025	1170	780	2325
26	109	690	2100	1200	800	2410
27	1120	710	2180	1250	825	2490
28	1155	730	2260	1290	850	2575
29	1185	750	2340	1330	885	2650
30	1215	770	2420	1360	910	2720

These electrical ratings are applicable to Sediver suspension insulator strings not equipped with arcing devices or grading rings.

IEC/BS string electrical ratings

Open type profile

Open type profile suspension insulator string withstand voltages based on the test procedure of the International Standard IEC 60383-93 and British Standard BS 60383

	Diameter / Spacing Ø 380/127			Diameter / Spacing Ø 380/146 - Ø 420/146		
Catalog N°	**F12D/127**			**F12D/146 - F160D/146 - B160D/146**		
Number of units	Power frequency withstand voltage (kV)		Lightning impulse withstand voltage (kV)	Power frequency withstand voltage (kV)		Lightning impulse withstand voltage (kV)
	DRY	WET		DRY	WET	
2	95	75	160	110	85	165
3	135	110	225	160	125	235
4	175	145	290	205	165	310
5	215	180	355	255	205	380
6	255	210	420	305	240	450
7	290	245	490	355	280	525
8	330	280	555	405	320	595
9	370	310	620	455	360	670
10	410	345	685	505	395	740
11	450	380	750	555	435	810
12	490	410	815	605	470	885
13	530	445	885	655	510	955
14	570	480	950	705	550	1030
15	610	515	1015	755	590	1100
16	650	545	1080	800	625	1175
17	690	580	1145	850	665	1245
18	730	615	1210	900	705	1315
19	770	645	1280	950	745	1390
20	810	680	1345	1000	780	1460
21	850	715	1410	1050	820	1535
22	890	750	1475	1100	860	1605
23	930	780	1540	1150	895	1675
24	970	815	1605	1200	935	1750
25	1010	850	1675	1250	975	1825
26	1050	880	1740	1290	1010	1895
27	1090	915	1805	1350	1050	1965
28	1130	950	1870	1400	1090	2035
29	1170	980	1935	1450	1125	2110
30	1210	1015	2000	1495	1165	2180

These electrical ratings are applicable to Sediver suspension insulator strings not equipped with arcing devices or grading rings.

ANSI string electrical ratings

Standard profile

Standard profile suspension insulator string flashover voltages based on the test procedure of the American Standard ANSI C 29.1.

Catalog N°	Diameter / Spacing Ø 255/146 - Ø 280/146 N70/146 - N100/146 - N12/146 - N160/146 CT70/146 - CT12/146				Diameter / Spacing Ø 280/156 N21/156			
Number of units	Low frequency flashover voltage (kV)		Critical impulse flashover voltage (kV)		Low frequency flashover voltage (kV)		Critical impulse flashover voltage (kV)	
	DRY	WET	+	-	DRY	WET	+	-
2	145	90	220	225	145	90	230	230
3	205	130	315	320	210	130	325	330
4	270	170	410	420	275	170	425	440
5	325	215	500	510	330	215	515	540
6	380	255	595	605	385	255	610	630
7	435	295	670	695	435	295	700	720
8	485	335	760	780	490	335	790	810
9	540	375	845	860	540	375	880	900
10	590	415	930	945	595	415	970	990
11	640	455	1015	1025	645	455	1060	1075
12	690	490	1105	1115	695	490	1150	1160
13	735	525	1185	1195	745	525	1240	1245
14	785	565	1265	1275	790	565	1330	1330
15	830	600	1345	1360	840	600	1415	1420
16	875	635	1425	1440	890	635	1500	1510
17	920	670	1505	1530	935	670	1585	1605
18	965	705	1585	1615	980	705	1670	1700
19	1010	740	1665	1700	1025	740	1755	1795
20	1050	775	1745	1785	1070	775	1840	1890
21	1100	810	1825	1870	1115	810	1925	1985
22	1135	845	1905	1955	1160	845	2010	2080
23	1180	880	1985	2040	1205	880	2095	2175
24	1220	915	2065	2125	1250	915	2180	2270
25	1260	950	2145	2210	1290	950	2260	2365
26	1300	985	2220	2295	1330	958	2390	2465
27	1340	1015	2300	2380	1370	1015	2470	2555
28	1380	1045	2375	2465	1410	1045	2570	2650
29	1425	1080	2455	2550	1455	1080	2650	2740
30	1460	1110	2530	2635	1490	1110	2740	2830

These electrical ratings are applicable to Sediver suspension insulator strings not equipped with arcing devices or grading rings.
According to the American Standard the average value of three tested strings shall equal or exceed:
95% of the guaranteed values as given in the data sheet, for low frequency dry flashover,
90% of the guaranteed values as given in the data sheet, for low frequency wet flashover,
92% of the guaranteed values as given in the data sheet, for critical impulse flashover.

ANSI string electrical ratings

Fog type profile

Fog type profile suspension insulator string flashover voltages based on the test procedure of the American Standard ANSI C 29.1.

	Diameter / Spacing Ø 280/146 - Ø 330/146				Diameter / Spacing Ø 330/171			
Catalog N°	**N100P/146 - N120P/146 - N160P/146**				**N160P/171 - N222P/171**			
Number of units	Low frequency flashover voltage (kV)		Critical impulse flashover voltage (kV)		Low frequency flashover voltage (kV)		Critical impulse flashover voltage (kV)	
	DRY	WET	+	-	DRY	WET	+	-
2	155	95	270	260	160	110	315	300
3	215	13	380	355	230	145	440	410
4	270	165	475	435	290	155	550	505
5	325	200	570	520	350	225	660	605
6	380	240	665	605	405	265	775	705
7	435	275	750	690	460	310	870	800
8	485	315	835	775	515	355	970	900
9	540	350	920	860	570	390	1070	1000
10	590	375	1005	950	625	430	1170	1105
11	640	410	1090	1040	680	460	1270	1210
12	690	440	1175	1130	735	495	1370	1315
13	735	470	1260	1220	790	530	1465	1420
14	785	500	1345	1310	840	565	1565	1525
15	830	525	1430	1400	885	595	1665	1630
16	875	555	1515	1490	935	630	1765	1735
17	920	580	1600	1595	980	660	1860	1845
18	965	615	1685	1670	1030	690	1960	1945
19	1010	640	1770	1755	1075	725	2060	2040
20	1055	670	1850	1840	1120	755	2155	2140
21	1100	695	1930	1925	1165	785	2245	2240
22	1145	725	2010	2010	1210	820	2340	2340
23	1190	750	2090	2095	1255	850	2430	2440
24	1235	780	2170	2180	1300	885	2525	2540
25	1280	810	2250	2265	1345	910	2620	2635
26	1325	835	2330	2350	1385	945	2710	2735
27	1370	860	2410	2435	1430	975	2805	2835
28	1410	890	2490	2520	1470	1005	2900	2935
29	1455	915	2560	2600	1515	1035	2980	3025
30	1495	940	2630	2680	1555	1065	3060	3120

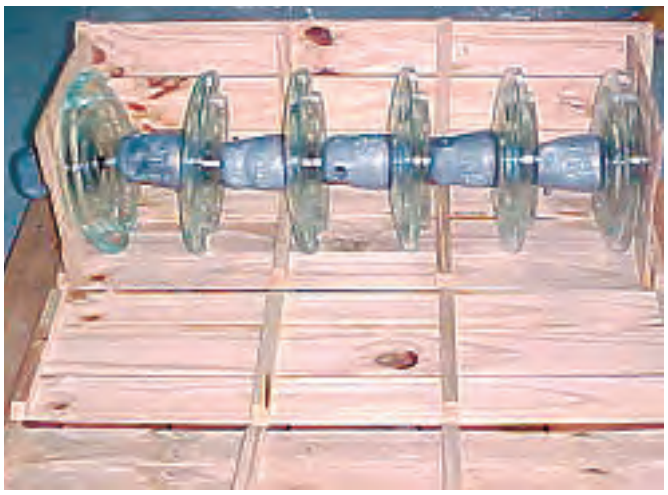
These electrical ratings are applicable to Sediver suspension insulator strings not equipped with arcing devices or grading rings.
According to the American Standard the average value of three tested strings shall equal or exceed:
95% of the guaranteed values as given in the data sheet, for low frequency dry flashover,
90% of the guaranteed values as given in the data sheet, for low frequency wet flashover,
92% of the guaranteed values as given in the data sheet, for critical impulse flashover.

Packing and palletization

Reinforced and optimized packing

The packing and palletizing methods used by Sediver result from the experience gained from the shipment of hundreds of millions of toughened glass insulators to users' warehouses and construction sites in 150 countries as well as from extensive tests performed by packing research organizations.

The packing methods described and illustrated below have been developed expressly to minimize any possible damage during shipment and storage.
The wood used for packing is either standard or treated according to country regulations or/and customer specification.



Strengthened packing

Factory-assembled strings of Sediver insulators are packed in wooden crates, which are reinforced and held closed by external wire bindings. A crate is shown here in the open position and is internally braced to permit stacking.

Easy to open

External wire bindings are designed to keep crates firmly closed, and to allow easy and quick opening at time of installation with no need for special tools.

Maximum protection

Crates are evenly stacked on a sturdy four-way wooden pallet. This assembly is held tightly in place with either steel or plastic bands and is protected against moisture by a complete covering of polyethylene film.

Sediver Business Unit

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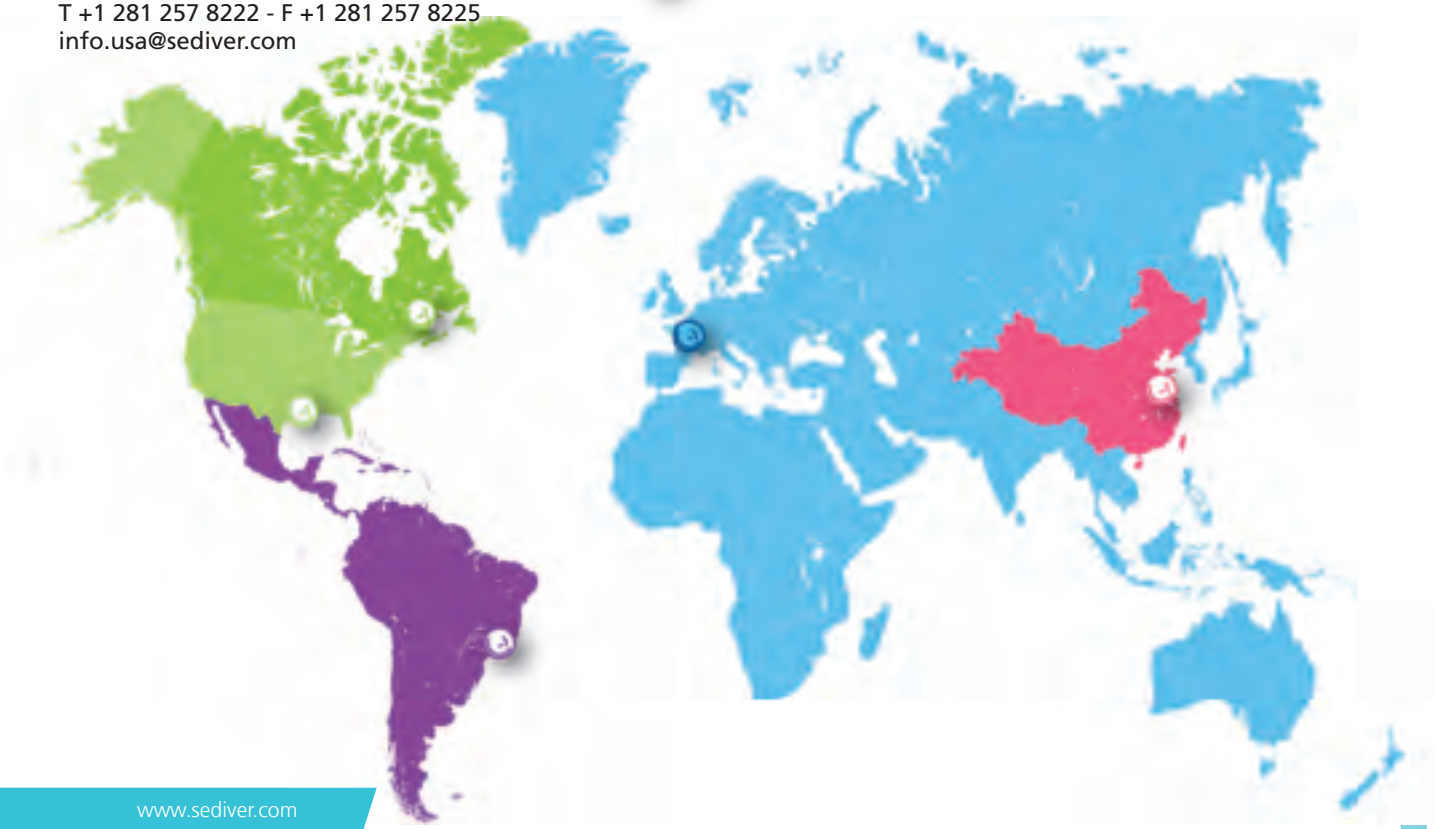

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