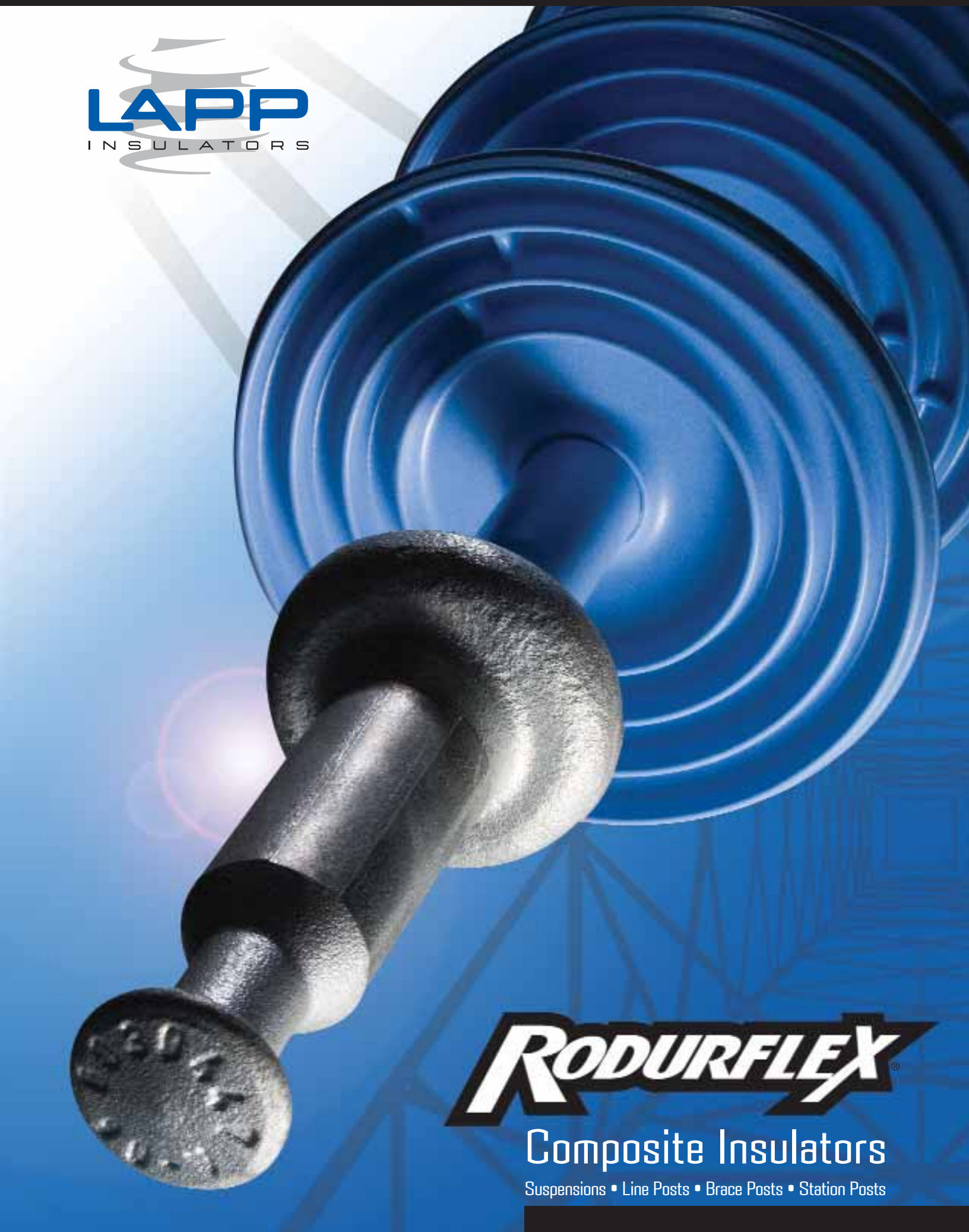
LAPP INSULATORS



RODURFLEX®

Composite Insulators

Suspensions • Line Posts • Brace Posts • Station Posts

Quality, reliability and consistency for over four decades

As an alternative and complement to our range of proven ceramic insulators, Lapp Insulators offers the Rodurflex® advanced technology insulator system. Today these composite insulators made of high-grade synthetic materials have exhibited outstanding mechanical and electrical characteristics, and have exceeded all overhead line and switchgear engineering applications in more than 50 countries worldwide.

1965 Development of composite insulators begins with a two-component system consisting of a rod made of fiberglass reinforced plastics (FRP) encased in a silicone elastomer housing.

1967 Suspension class Rodurflex® production begins.

1974 Hydrolysis resistant resin system for a fiberglass reinforced resin rod is introduced.

1979 High temperature vulcanized (HTV) silicone rubber is introduced, improving the mechanical characteristics of the material.

1979 Sheath thickness of the housing is increased to 3mm to reduce electrical field strength within the FRP rod and provide better protection during handling and installation.

1982 Metastable silicone sealing system is developed to prevent moisture ingress to the FRP rod.

1983 Acid resistant glass fibers (ECR) are introduced to prevent brittle fracture of the FRP rod.

1985 Compression type, forged steel end fittings are introduced to improve the system's mechanical strength.

2001 Lapp Insulators purchases Ph. Rosenthal & Company – the polymer insulator division of German-based CeramTec AG – inventor of Rodurflex® composite insulators, and a global leader in the production of lightweight silicone rubber polymer insulators.

2005 Lapp Insulators begins domestic production of Rodurflex® high voltage composite insulators capable of servicing North American utility companies from its Sandersville, Georgia international distribution center.

Rodurflex Insulators

are well-suited for:

- **High contamination applications**
- **Areas where vandalism is a problem**
- **High creepage on a short length**
- **Compact line applications**

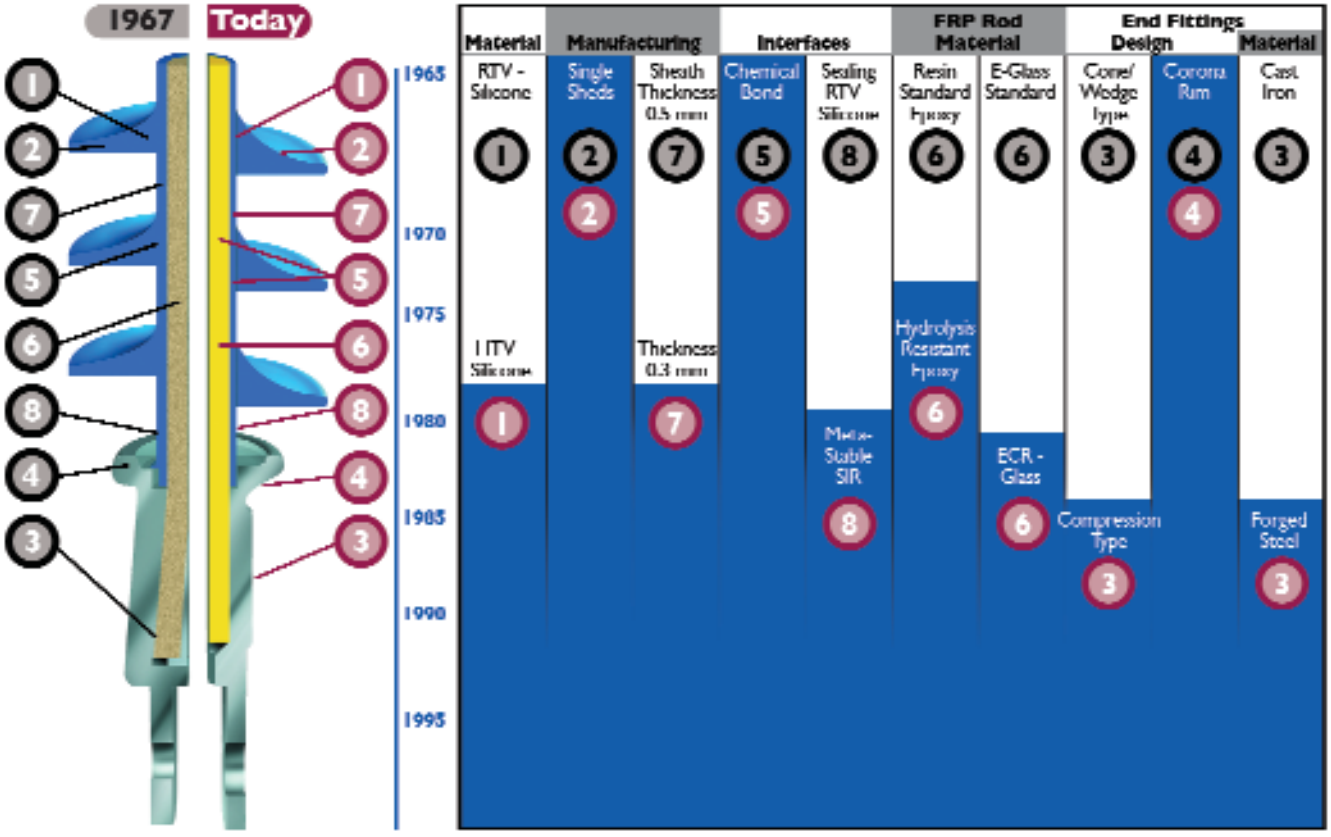
Key Features

- Outstanding resistance to environmental factors such as UV light, ozone, acid, contamination and moisture.
- Interior tensile strength higher than steel, despite weighing approximately 75% LESS.
- Worldwide transmission system applications up to 765 kV.
- Reduced installation costs. No heavy lifting equipment required.
- High resistance to discharges and leakage currents.
- Reduced creepage requirtements for optimal performance when compared to porcelain, due to hydrophobic properties.
- Greater resistance to vandalism.
- High explosion resistance of hollow insulators in case of internal pressure build-up.

20 INCHES **UP TO 24** FEET

The Rodurflex design allows for infinitely variable section lengths & creepage distances for every product.

Inside the Lapp Rodurflex® System



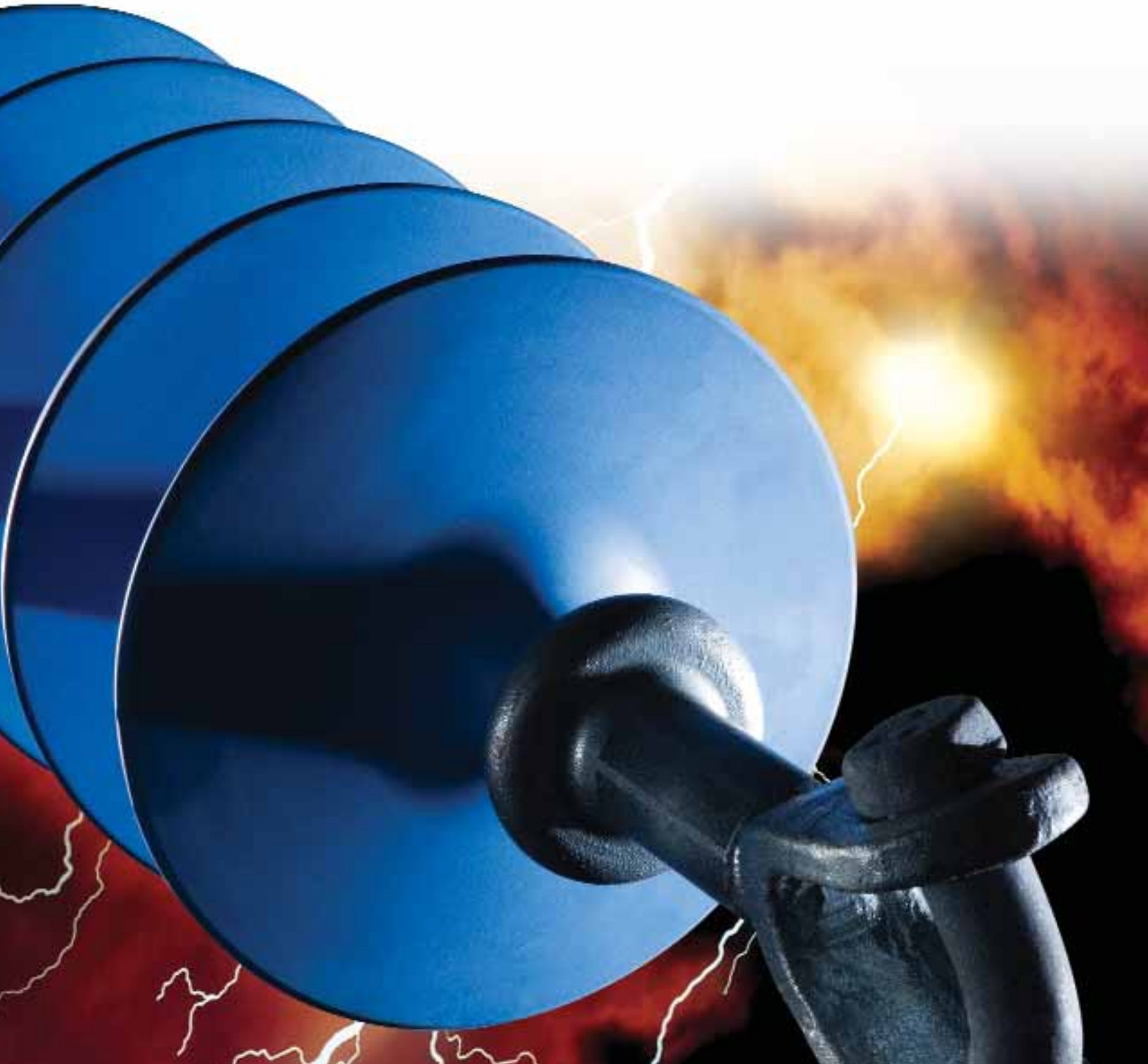
- Water-repellent, UV and corona-resistant silicone rubber base polymer housing.
- Pre-molded weathersheds are chemically bonded to the housing, eliminating mold-lines and allowing variable creepage distances for a fixed insulator length.
- Metal fittings are fixed to the fiber glass core, not the silicone housing for maximum mechanical strength.
- Corona ring applied to the metal fittings to protect the housing.
- Housing is chemically bonded to the fiberglass core.
- Hydrolysis-resistant resin system applied to the fiberglass reinforced resin rod.
- 3mm-thick high temperature vulcanized (HTV) silicone rubber sheath improves the system's mechanical characteristics while reducing FRP rod's electric field strength. Also protects the FRP rod during handling and installation.
- Metastable silicone sealing system prevents moisture ingress to the FRP rod.

Lapp Rodurflex Catalog Numbering System

Suspension Insulators

SML (LBS)	SECTION LENGTH (INCHES)	TOWER END FITTING	LINE END FITTING	CREEPAGE DISTANCE (INCHES)	CORONA RING
CS2=25k CS3=30k CS5=50k CS6=80k CS7=100k	Section length must be indicated with 3 digits and rounded to the nearest inch.	Y= Y Clevis S= Socket E= Oval Eye C= Clevis T= Tongue B= Ball	B= Ball E= Oval Eye T= Tongue Y= Y Clevis C= Clevis S= Socket	Creepage Distance must be indicated with 3 digits and rounded to the nearest inch.	A= None (Standard Design) B= 230 kV (Line End) C= 345 kV (Line End) D= 500 kV (Both Ends)

Sample Number CS2-041-YB-074-A

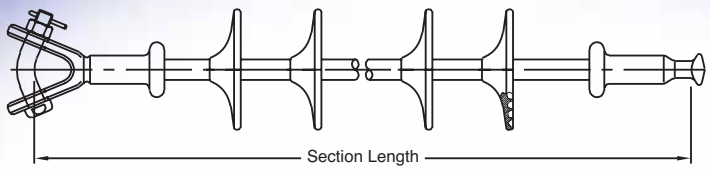


Suspension Insulator

Mechanical Rating

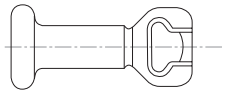
SML: 25,000 lbs • 111 kN

RTL: 12,500 lbs • 56 kN

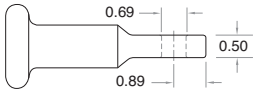


Available End Fittings

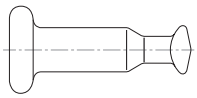
Socket: ANSI 52-5



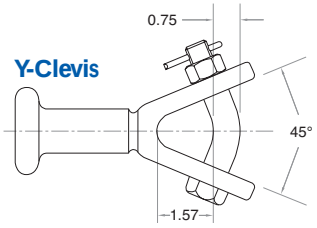
Tongue: ANSI 52-6



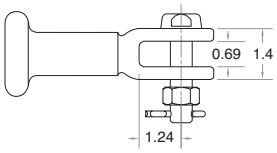
Ball: ANSI 52-5



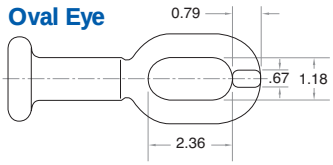
Y-Clevis



Clevis: ANSI 52-6



Oval Eye



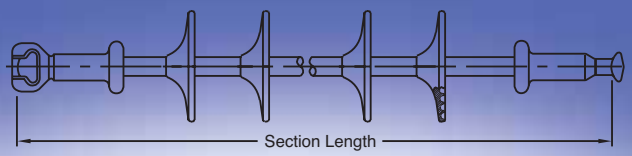
TYPICAL LINE VOLTAGE	PART NUMBER	ANSI CLASS	SECTION LENGTH	CREEPAGE DISTANCE	ARCING DISTANCE	LOW FREQUENCY FLASHOVER DRY	LOW FREQUENCY FLASHOVER WET	CRITICAL IMPULSE FLASHOVER POS	CRITICAL IMPULSE FLASHOVER NEG	WEIGHT
69	CS2-036-YB-064-A CS2-036-YB-092-A	- -	36	64 92	27	269	257	446	455	7 9
69	CS2-040-YB-072-A CS2-040-YB-101-A	- -	40	72 101	31	307	287	506	516	7.5 9
69/115	CS2-047-YB-089-A CS2-047-YB-127-A	60-1	47	89 127	38	374	337	609	622	8 11
115	CS2-054-YB-106-A CS2-054-YB-120-A	60-2	54	106 120	45	442	388	713	729	9 10
138	CS2-060-YB-121-A CS2-060-YB-145-A	60-3	60	121 145	51	499	431	801	820	10 11.5
138/161	CS2-065-YB-140-A CS2-065-YB-159-A	60-4	65	140 159	56	547	468	875	896	11 12
161	CS2-071-YB-141-A CS2-071-YB-170-A	60-5	71	141 170	62	605	511	964	988	11 13
161	CS2-077-YB-157-A CS2-077-YB-190-A	60-6	77	157 190	68	663	555	1053	1079	12 14
161/230	CS2-083-YB-187-A CS2-083-YB-215-A	60-7	83	187 215	74	720	598	1141	1170	13.5 15
230	CS2-088-YB-192-A CS2-088-YB-225-A	60-8	88	192 225	79	768	634	1215	1247	14 16
230	CS2-097-YB-234-A CS2-097-YB-295-A	60-9	97	234 295	88	854	699	1347	1383	16 20
230	CS2-107-YB-244-A CS2-107-YB-305-A	60-10	107	244 305	98	950	772	1495	1535	16 20
345	CS2-120-YB-257-A CS2-120-YB-309-A	60-12	120	257 309	111	1075	866	1688	1734	17 20
500	CS2-137-YB-307-A CS2-137-YB-382-A	60-13	137	307 382	128	1238	990	1939	1991	20 24

1. All section lengths are based on Y-Clevis & Ball end fittings.
2. Electrical data shown for insulators without corona rings. Lapp recommends corona rings to be installed at 230kV and above.
3. Additional section lengths and creepage distances are available. Contact sales agency for details.
4. All dimensions, tolerances and tests are within allowable ANSI standards.
5. All dimensions are in inches and pounds.

Suspension Insulator

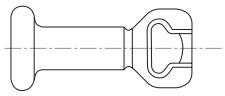
Mechanical Rating

SML: 30,000 lbs • 133 kN
RTL: 15,000 lbs • 67 kN

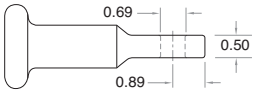


Available End Fittings

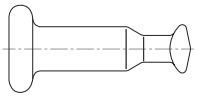
Socket: ANSI 52-5



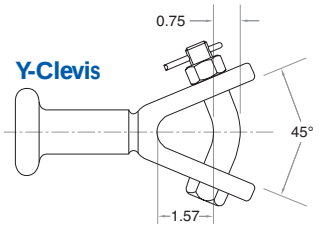
Tongue: ANSI 52-6



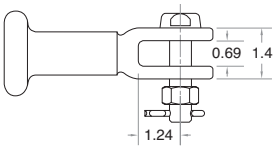
Ball: ANSI 52-5



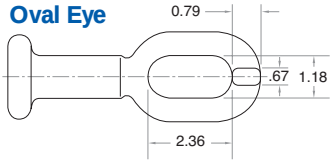
Y-Clevis



Clevis: ANSI 52-6



Oval Eye



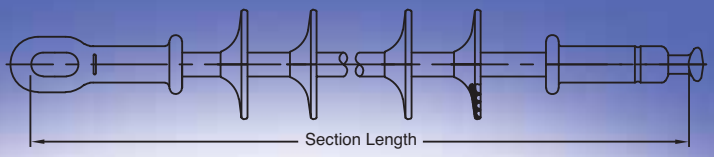
TYPICAL LINE VOLTAGE	PART NUMBER	SECTION LENGTH	CREEPAGE DISTANCE	ARCING DISTANCE	LOW FREQUENCY FLASHOVER DRY	LOW FREQUENCY FLASHOVER WET	CRITICAL IMPULSE FLASHOVER POS	CRITICAL IMPULSE FLASHOVER NEG	WEIGHT
69	CS3-042-SB-080-A CS3-042-SB-113-A	42	080 113	34	333	306	545	557	7 9
69/115	CS3-048-SB-090-A CS3-048-SB-130-A	48	90 133	40	390	349	633	648	8 11
115	CS3-054-SB-101-A CS3-054-SB-120-A	54	101 120	46	449	393	724	741	8 10
138	CS3-060-SB-112-A CS3-060-SB-141-A	60	112 141	52	506	436	812	831	9 11
161	CS3-068-SB-130-A CS3-068-SB-163-A	68	130 163	60	583	494	930	953	10 12
161	CS3-074-SB-145-A CS3-074-SB-178-A	74	145 178	66	641	538	1019	1045	11 13
161/230	CS3-083-SB-168-A CS3-083-SB-201-A	83	168 201	75	726	603	1151	1181	12 14
230	CS3-089-SB-184-A CS3-089-SB-231-A	89	184 231	81	784	647	1240	1272	13 16
230	CS3-096-SB-153-A CS3-096-SB-243-A	96	153 243	87	850	696	1342	1377	11 16
230/345	CS3-104-SB-170-A CS3-104-SB-241-A	104	170 241	95	928	755	1461	1500	11 16
345	CS3-120-SB-243-A CS3-120-SB-333-A	120	243 333	111	1082	871	1698	1744	16 21
345	CS3-130-SB-281-A CS3-130-SB-352-A	130	281 352	122	1178	944	1846	1896	18 22
345/500	CS3-140-SB-301-A CS3-140-SB-372-A	140	301 372	132	1274	1016	1994	2049	19 23
500	CS3-170-SB-350-A CS3-170-SB-482-A	170	350 482	162	1562	1234	2438	2505	21 29
500/765	CS3-180-SB-398-A CS3-180-SB-483-A	180	398 483	171	1658	1305	2584	2656	24 29
765	CS3-195-SB-432-A CS3-195-SB-526-A	195	432 526	187	1801	1414	2806	2884	25 31

1. All section lengths are based on Socket & Ball end fittings.
2. Electrical data shown for insulators without corona rings. Lapp recommends corona rings to be installed at 230kV and above.
3. Additional section lengths and creepage distances are available. Contact sales agency for details.
4. All dimensions, tolerances and tests are within allowable ANSI standards.
5. All dimensions are in inches and pounds.

Suspension Insulator

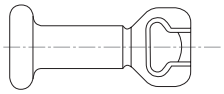
Mechanical Rating

SML: 50,000 lbs • 222 kN
RTL: 25,000 lbs • 111 kN

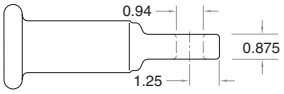


Available End Fittings

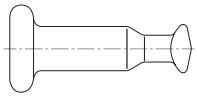
Socket: ANSI 52-11



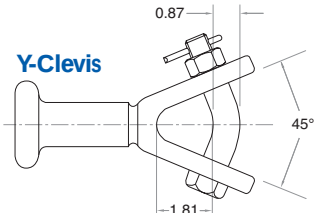
Tongue: ANSI 52-12



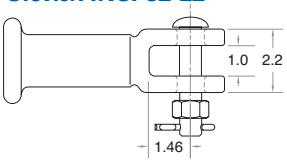
Ball: ANSI 52-11



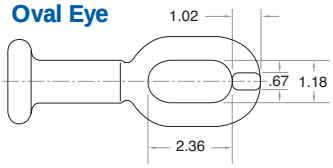
Y-Clevis



Clevis: ANSI 52-12



Oval Eye



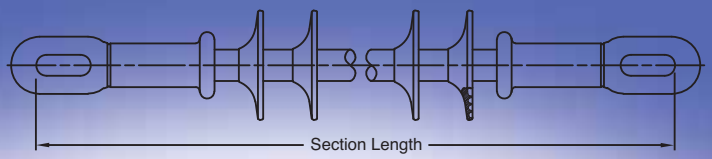
TYPICAL LINE VOLTAGE	PART NUMBER	ANSI CLASS	SECTION LENGTH	CREEPAGE DISTANCE	ARCING DISTANCE	LOW FREQUENCY FLASHOVER DRY	LOW FREQUENCY FLASHOVER WET	CRITICAL IMPULSE FLASHOVER POS	CRITICAL IMPULSE FLASHOVER NEG	WEIGHT
69	CS5-045-EB-073-A CS5-045-EB-087-A	- -	45	73 87	32	314	292	516	527	14 15
115/138	CS5-056-EB-103-A CS5-056-EB-122-A	- -	56	103 122	43	419	371	678	694	17 18
138	CS5-062-EB-114-A CS5-062-EB-132-A	- -	62	114 132	49	477	415	767	786	17 19
138/161	CS5-068-EB-129-A CS5-068-EB-153-A	- -	68	129 153	55	535	458	856	877	19 20
161	CS5-074-EB-140-A CS5-074-EB-173-A	- -	74	140 173	61	593	502	945	968	19 22
161	CS5-080-EB-155-A CS5-080-EB-188-A	70-1	80	155 188	67	650	545	1033	1059	21 23
230	CS5-092-EB-181-A CS5-092-EB-219-A	70-2	92	181 219	79	765	632	1210	1241	23 25
230	CS5-100-EB-199-A CS5-100-EB-237-A	70-3	100	199 237	87	843	691	1330	1365	24 26
230/345	CS5-106-EB-162-A CS5-106-EB-228-A	- -	106	162 228	92	898	732	1415	1452	21 26
345	CS5-112-EB-211-A CS5-112-EB-334-A	70-4	112	211 334	99	958	777	1507	1547	25 33
345	CS5-123-EB-231-A CS5-123-EB-364-A	70-5	123	231 364	109	1062	856	1667	1712	27 36
345	CS5-134-EB-280-A CS5-134-EB-370-A	70-6	134	280 370	121	1169	937	1833	1882	30 36
345/500	CS5-145-EB-315-A CS5-145-EB-381-A	70-8	145	315 381	132	1274	1016	1994	2048	33 37
500	CS5-154-EB-333-A CS5-154-EB-517-A	70-9	154	333 517	140	1360	1081	2127	2185	34 47
500/765	CS5-185-EB-402-A CS5-185-EB-539-A	70-11	185	402 539	171	1657	1306	2583	2655	39 49
765	CS5-195-EB-431-A CS5-195-EB-676-A	- -	195	431 676	181	1751	1376	2729	2805	42 59

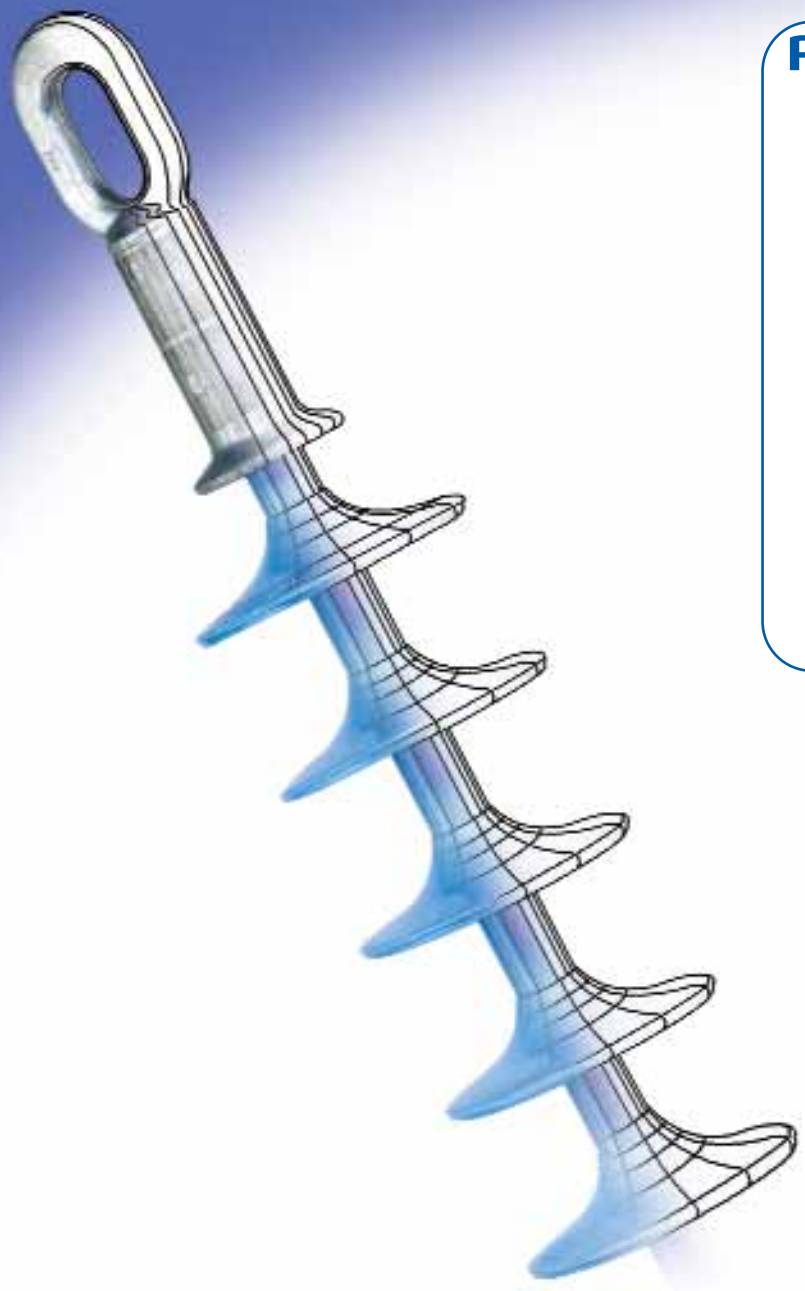
1. All section lengths are based on Oval Eye & Ball end fittings.
2. Electrical data shown for insulators without corona rings. Lapp recommends corona rings to be installed at 230kV and above.
3. Additional section lengths and creepage distances are available. Contact sales agency for details.
4. All dimensions, tolerances and tests are within allowable ANSI standards.
5. All dimensions are in inches and pounds.

Suspension Insulator

Mechanical Rating

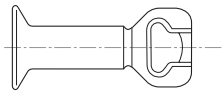
SML: 100,000 lbs • 445 kN
RTL: 50,000 lbs • 222 kN



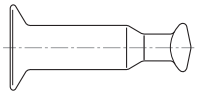


Available End Fittings

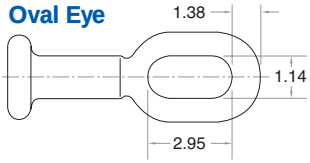
Socket: IEC 60120



Ball: IEC 60120



Oval Eye



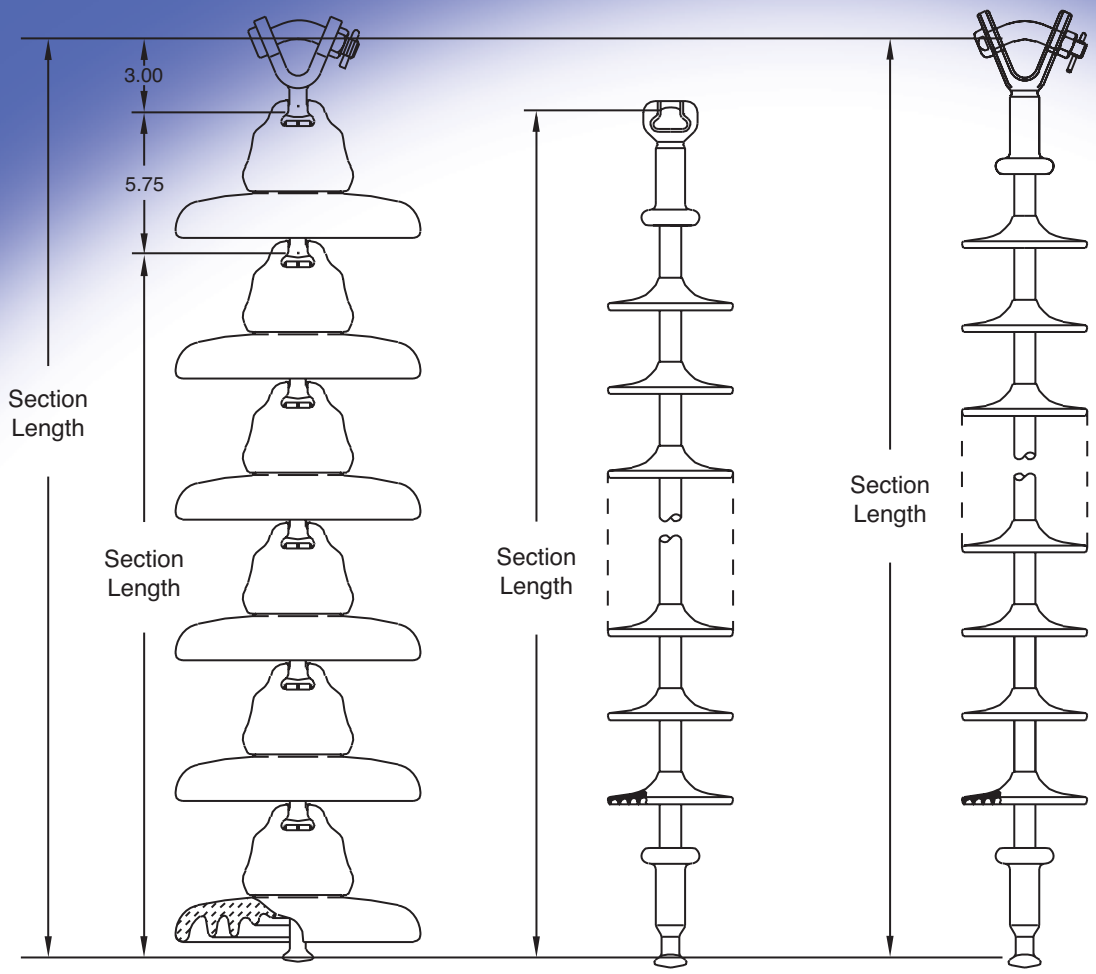
TYPICAL LINE VOLTAGE	PART NUMBER	SECTION LENGTH	CREEPAGE DISTANCE	ARCING DISTANCE	LOW FREQUENCY FLASHOVER DRY	LOW FREQUENCY FLASHOVER WET	CRITIAL IMPULSE FLASHOVER POS	CRITIAL IMPULSE FLASHOVER NEG	WEIGHT
230	CS7-100-EE-245-A	100	245	80	775	665	1285	1300	49
	CS7-110-EE-246-A	110	246	90	910	730	1430	1460	50
345	CS7-120-EE-376-A	120	376	101	>950	790	1590	1630	64
	CS7-130-EE-372-A	130	372	110	>950	860	1770	1800	64
500	CS7-150-EE-371-A	150	371	131	>950	>950	>2000	>2000	65
	CS7-165-EE-372-A	165	372	145	>950	>950	>2000	>2000	66

1. All section lengths are based on Oval Eye-Oval Eye end fittings.
2. Electrical data shown for insulators without corona rings. Lapp recommends corona rings to be installed at 230kV and above.
3. Additional section lengths and creepage distances are available. Contact sales agency for details.
4. All dimensions, tolerances and tests are within allowable ANSI standards.
5. All dimensions are in inches and pounds.

Porcelain String Replacement

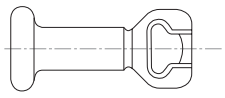
Mechanical Rating

SML: 25,000 lbs • 111 kN
RTL: 12,500 lbs • 56 kN

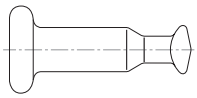


Available End Fittings

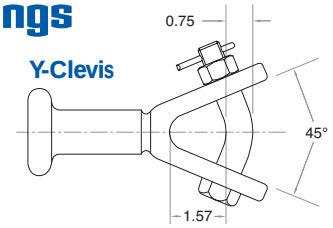
Socket: ANSI 52-5



Ball: ANSI 52-5



Y-Clevis



NUMBER OF BELLS	TYPICAL LINE VOLTAGE	PART NUMBER	SECTION LENGTH PORCELAIN	SECTION LENGTH POLYMER	CREEPAGE DISTANCE	ARCING DISTANCE	LOW FREQUENCY FLASHOVER		CRITICAL IMPULSE FLASHOVER		WEIGHT
							DRY	WET	POS	NEG	
4	69	CS2-023-SB-049-A	23	23	49	16	173	146	275	328	6
		CS2-026-YB-052-A	23	26	52	18	198	167	314	375	7
5	69	CS2-029-SB-062-A	28.75	29	62	22	222	222	374	381	7
		CS2-031-YB-064-A	28.75	31	64	23	230	228	387	394	8
6	69	CS2-036-SB-069-A	34.5	36	69	29	285	270	471	481	7
		CS2-039-YB-072-A	34.5	39	72	31	306	286	504	515	8
7	115	CS2-040-SB-081-A	40.25	40	81	33	323	299	530	541	8
		CS2-043-YB-083-A	40.25	43	83	35	345	315	564	576	9
8	138	CS2-046-SB-094-A	45.6	46	94	39	381	342	619	633	9
		CS2-049-YB-096-A	45.6	49	96	41	401	358	652	667	

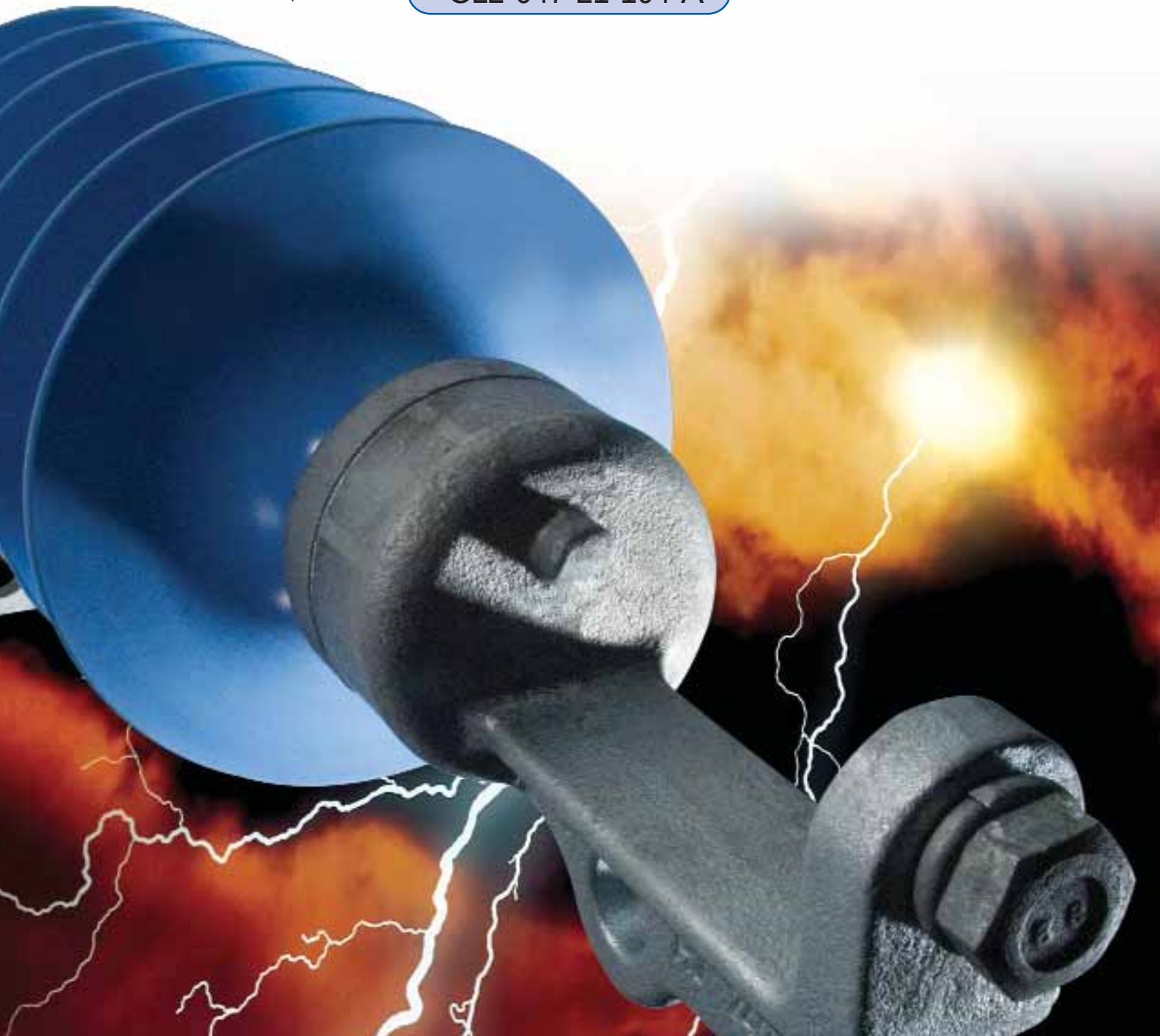
1. All section lengths based on Socket Ball and Y-Clevis Ball combinations.
2. Electrical data shown for insulators without corona rings. Lapp recommends corona rings to be installed at 230kV and above.
3. All dimensions, tolerances and tests are within allowable ANSI standards.
4. All dimensions are in inches and pounds.

Lapp Rodurflex Catalog Numbering System

2.5 Inch Line Posts

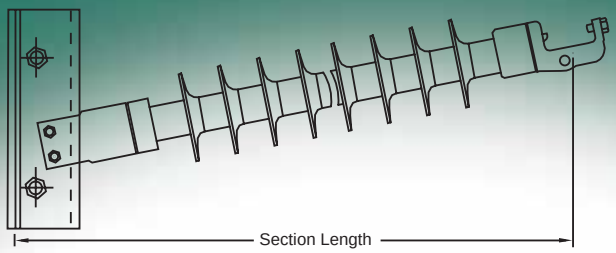
ROD SIZE	SECTION LENGTH (INCHES)	BASE END FITTING	LINE END FITTING	CREEPAGE DISTANCE (INCHES)	CORONA RING
CL2=2.5”	Section length must be indicated with 3 digits and rounded to the nearest inch.	0 = Anchor Only 1 = Flat 12° Standard 0° Optional 2 = Gain 12° Standard 0° Optional 3 = Flange 5” BC 4 = Stud Base 3/4-10 Standard 7/8-9 Optional	1 = Drop Tongue 2 = Horizontal Trunnion 3 = Spade Tongue 4 = Vertical Trunnion 5 = Flange 5” BC	Creepage Distance must be indicated with 3 digits and rounded to the nearest inch.	A= None B= Line End

Sample Number CL2-047-21-104-A



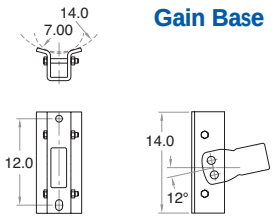
Line Post Transmission Insulator

Rod Diameter 2.5”

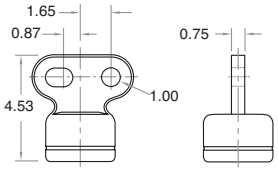


Available End Fittings

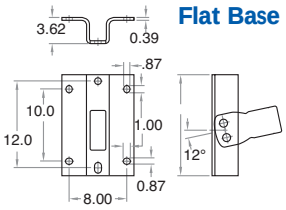
Gain Base



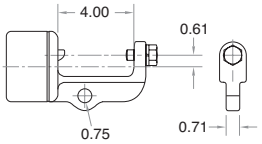
Drop Tongue



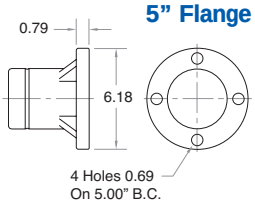
Flat Base



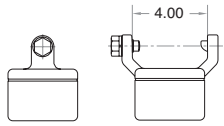
Horizontal Trunnion: ANSI C29.7



5” Flange



Vertical Trunnion: ANSI C29.7



TYPICAL LINE VOLTAGE	PART NUMBER	ANSI CLASS	SECTION LENGTH	CREEPAGE DISTANCE	ARCING DISTANCE	LOW FREQUENCY FLASHOVER DRY	LOW FREQUENCY FLASHOVER WET	CRITICAL IMPULSE FLASHOVER POS	CRITICAL IMPULSE FLASHOVER NEG	RCL LBS	WEIGHT
69	CL2-035-22-059-A CL2-035-22-078-A	- -	35	59 78	22	190	189	368	410	3066	69 65
69/115	CL2-042-22-080-A CL2-042-22-090-A	250-41	42	80 90	29	289	270	482	526	2417	57 69
115	CL2-048-22-096-A CL2-048-22-105-A	250-47	48	96 105	35	370	335	579	624	2048	71 72
138	CL2-054-22-111-A CL2-054-22-130-A	250-54	54	111 130	42	448	397	676	723	1774	75 77
161	CL2-060-22-127-A CL2-060-22-141-A	250-60	60	127 141	48	521	457	773	822	1567	78 80
161	CL2-068-22-154-A CL2-068-22-173-A	250-66	68	154 173	56	615	533	902	954	1355	84 86
230	CL2-075-22-166-A CL2-075-22-190-A	250-75	75	166 190	63	692	595	1016	1070	1211	88 90
230	CL2-085-22-195-A CL2-085-22-223-A	250-85	85	195 223	73	793	676	1178	1234	1052	94 97
230	CL2-090-22-210-A CL2-090-22-238-A	- -	90	210 238	78	841	715	1260	1318	987	98 101
230	CL2-096-22-220-A CL2-096-22-249-A	250-95	96	220 249	84	893	757	1356	1415	920	101 104
345	CL2-105-22-230-A CL2-105-22-291-A	250-105	105	230 291	94	967	817	1502	1565	833	104 111

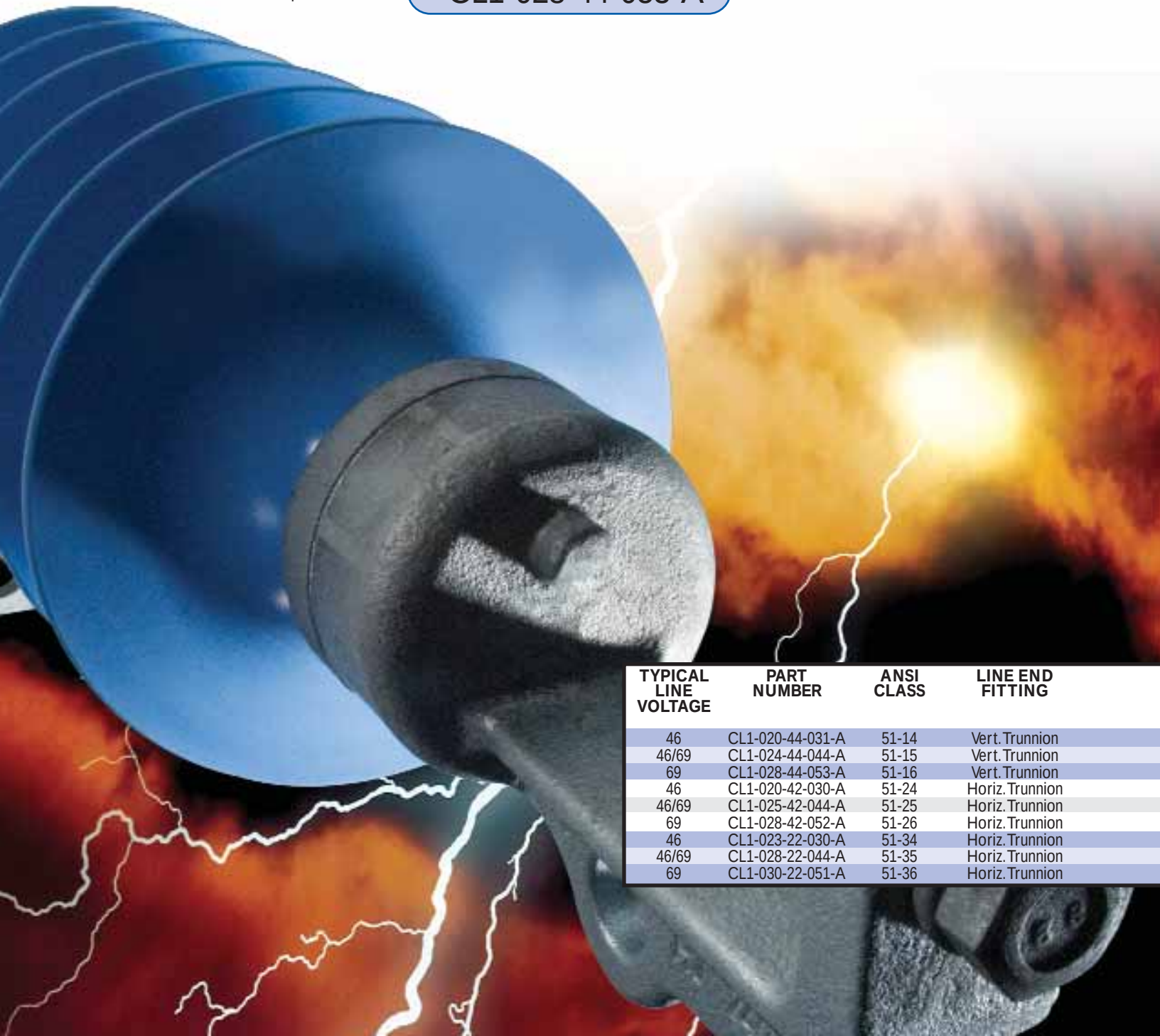
1. All section lengths are based on Gain Base & Trunnion end fittings.
2. Electrical data shown for insulators without corona rings and mounted horizontally. Lapp recommends corona rings to be installed at 230kV and above.
3. Additional section lengths and creepage distances are available. Contact sales agency for details.
4. All dimensions, tolerances and tests are within allowable ANSI standards.
5. All dimensions are in inches and pounds.

Lapp Rodurflex Catalog Numbering System

1.75 Inch Line Posts

ROD SIZE	SECTION LENGTH (INCHES)	BASE END FITTING	LINE END FITTING	CREEPAGE DISTANCE (INCHES)	CORONA RING
CL1=1.75"	Section length must be indicated with 3 digits and rounded to the nearest inch.	0 = Anchor Only 1 = Flat 6° Upsweep 2 = Gain 6° Upsweep 3 = Flange 3" BC 4 = Stud Base 3/4-10 Standard 7/8-9 Optional	1 = Drop Tongue 2 = Horizontal Trunnion 3 = Spade Tongue 4 = Vertical Trunnion 5 = Flange 3" BC	Creepage Distance must be indicated with 3 digits and rounded to the nearest inch.	A= None B= Line End

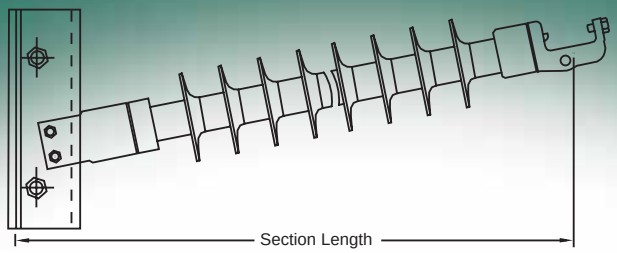
Sample Number CL1-028-44-053-A



TYPICAL LINE VOLTAGE	PART NUMBER	ANSI CLASS	LINE END FITTING
46	CL1-020-44-031-A	51-14	Vert. Trunnion
46/69	CL1-024-44-044-A	51-15	Vert. Trunnion
69	CL1-028-44-053-A	51-16	Vert. Trunnion
46	CL1-020-42-030-A	51-24	Horiz. Trunnion
46/69	CL1-025-42-044-A	51-25	Horiz. Trunnion
69	CL1-028-42-052-A	51-26	Horiz. Trunnion
46	CL1-023-22-030-A	51-34	Horiz. Trunnion
46/69	CL1-028-22-044-A	51-35	Horiz. Trunnion
69	CL1-030-22-051-A	51-36	Horiz. Trunnion

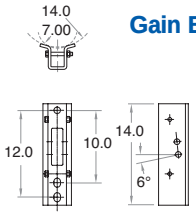
Line Post Transmission Insulator

Rod Diameter 1.75”

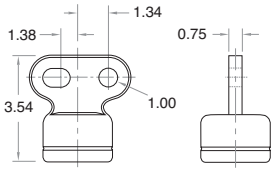


Available End Fittings

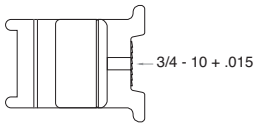
Gain Base



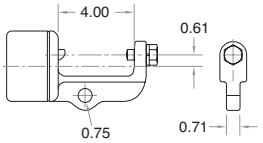
Drop Tongue



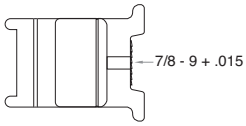
Stud Base 0.75”



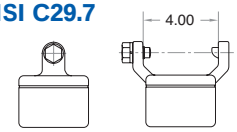
Horizontal Trunnion: ANSI C29.7

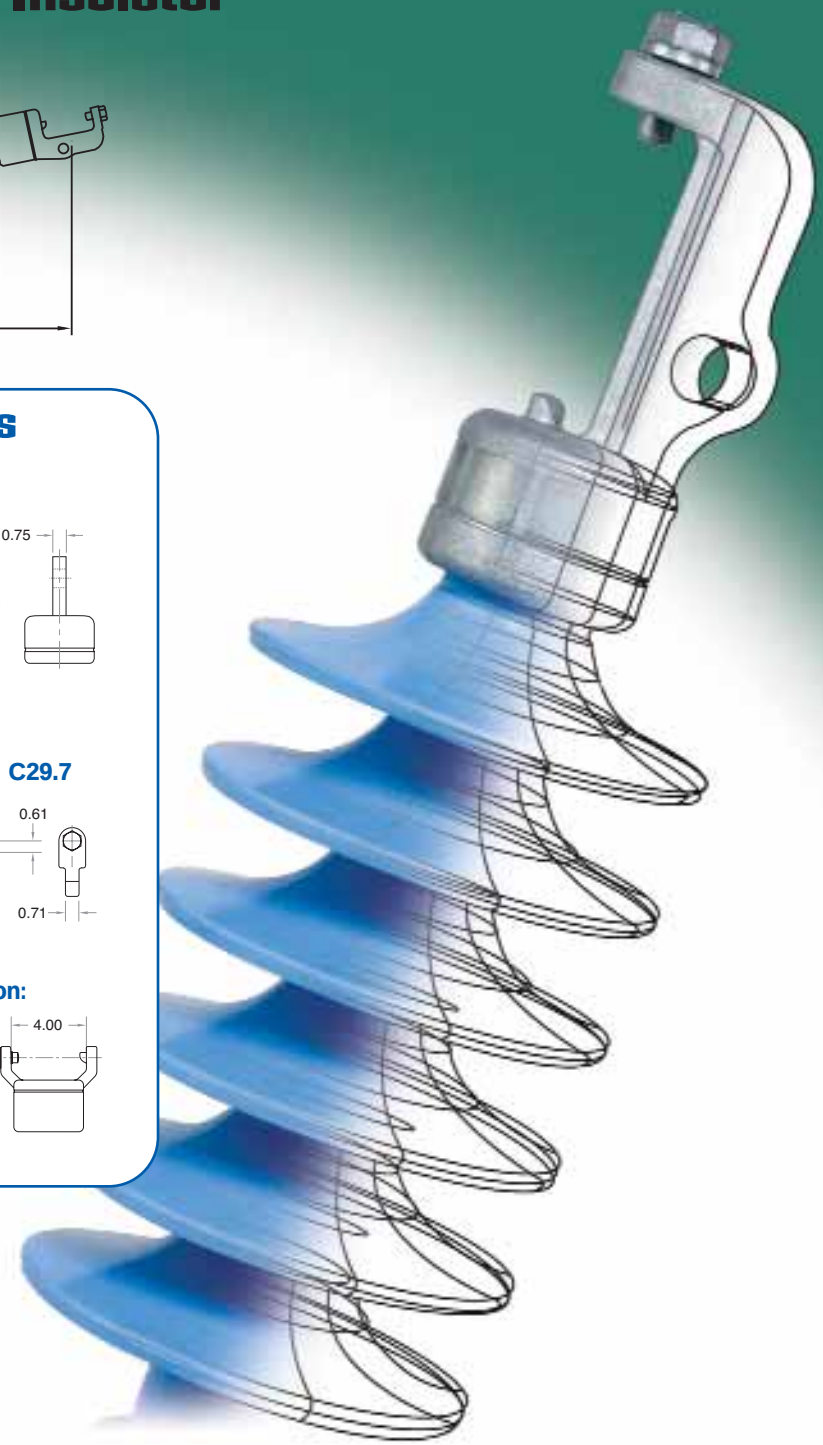


Stud Base 0.875”



Vertical Trunnion: ANSI C29.7





BASE END FITTING	SECTION LENGTH	CREEPAGE DISTANCE	ARCING DISTANCE	LOW FREQUENCY FLASHOVER DRY	LOW FREQUENCY FLASHOVER WET	CRITICAL IMPULSE FLASHOVER POS	CRITICAL IMPULSE FLASHOVER NEG	RCL LBS	WEIGHT
3/4 Stud	20	31	13.8	159	134	250	289	1808	16
3/4 Stud	24	44	17.8	203	171	319	370	1447	18
7/8 Stud	28	53	21.8	190	189	368	410	1209	19
3/4 Stud	20	30	13	150	126	235	272	1808	16
3/4 Stud	25	44	18	205	173	323	374	1380	18
7/8 Stud	28	52	21	239	201	376	435	1209	19
Gain Base	23	30	13	150	126	235	272	1808	35
Gain Base	28	44	18	206	173	323	374	1377	37
Gain Base	30	51	20	229	192	359	416	1258	38

1. Electrical data shown for insulators without corona rings and mounted horizontally.
2. Various section lengths and creepage distances are available.
3. Contact sales agency for details.
4. All dimensions, tolerances and tests are within allowable ANSI standards.
5. All dimensions are in inches and pounds.

Lapp Rodurflex Catalog Numbering System

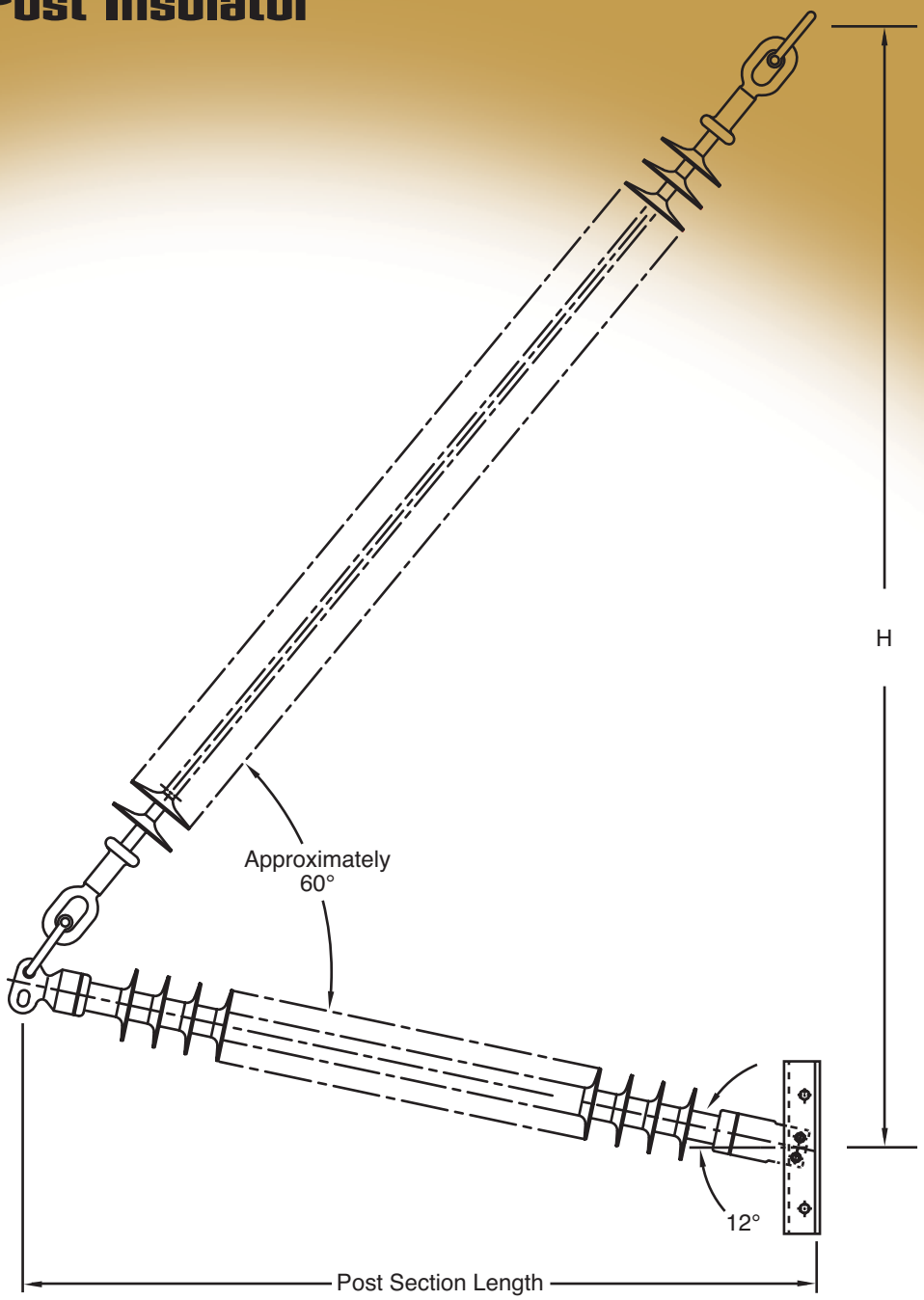
Braced Posts

POST ROD SIZE	SECTION LENGTH (INCHES)	CREEPAGE DISTANCE (INCHES)	DESIGN VARIATION
CBP2=2.5”	Section length of the post must be indicated with 3 digits and rounded to the nearest inch.	Creepage distance of the post must be indicated with 3 digits and rounded to the nearest inch.	This number is assigned by Lapp Engineering. Refer to drawing for individual components.

Sample Number CBP2-071-152-01

TYPICAL LINE VOLTAGE	PART NUMBER	POST NUMBER
115/138	CBP2-045-107-01	CL2-045-21-107-A
	CBP2-052-128-01	CL2-052-21-128-A
	CBP2-058-149-01	CL2-058-21-149-A
	CBP2-062-157-01	CL2-062-21-157-A
161	CBP2-067-177-01	CL2-067-21-177-A
	CBP2-070-185-01	CL2-070-21-185-A
	CBP2-075-195-01	CL2-075-21-195-A
230	CBP2-084-227-01	CL2-084-21-227-A
	CBP2-090-242-01	CL2-090-21-242-A
	CBP2-096-263-01	CL2-096-21-263-A

Braced Post Insulator



SUSPENSION NUMBER	POST SECTION LENGTH	POST CREEPAGE DISTANCE	"H"	MAXIMUM WORKING LOAD	LOW FREQUENCY FLASHOVER		CRITICAL FREQUENCY FLASHOVER	
					DRY	WET	POS	NEG
CS2-058-EE-111-A	45	107	60	10,125	320	285	525	585
CS2-068-EE-133-A	52	128	68.5	10,125	385	350	615	670
CS2-077-EE-154-A	58	149	76.5	10,125	455	410	700	770
CS2-083-EE-160-A	62	157	81.8	10,125	505	440	775	860
CS2-091-EE-180-A	67	177	89	10,125	560	500	870	915
CS2-095-EE-189-A	70	185	92.3	10,125	590	520	915	965
CS2-103-EE-197-A	75	195	99.6	10,125	655	560	1000	1035
CS2-116-EE-229-B	84	227	111	10,125	630	560	990	1080
CS2-125-EE-242-B	90	242	119	10,125	685	610	1080	1180
CS2-134-EE-263-B	96	263	127	10,125	745	655	1180	1270

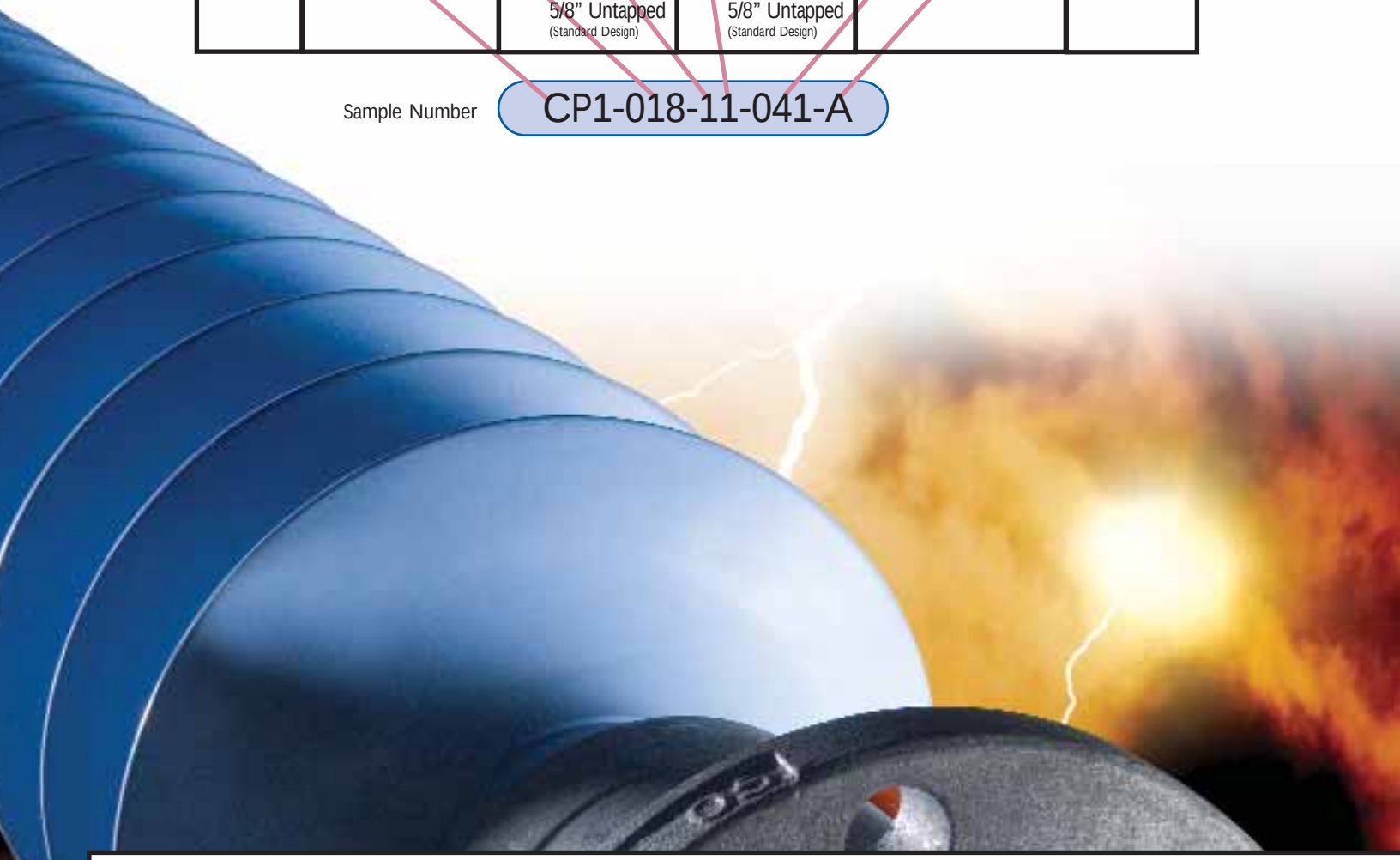
1. All braced posts shown with 12° upsweep bendable gain base and standard coupling shackles.
2. Other hardware combinations are available, contact sales agency for details.
3. All dimensions, tolerances and testing are within allowable ANSI standards.

Lapp Rodurflex Catalog Numbering System

Station Posts

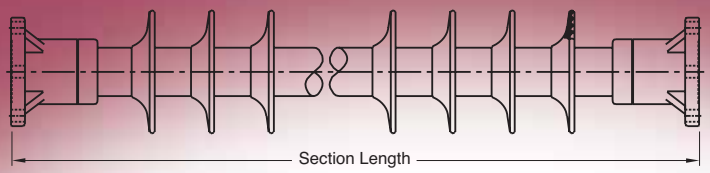
ROD SIZE	SECTION LENGTH (INCHES)	BASE END FITTING	LINE END FITTING	CREEPAGE DISTANCE (INCHES)	CORONA RING
CP1=1.8" CP2=2.5"	Section length must be indicated with 3 digits and rounded to the nearest inch.	1 = Flange, 3" BC, 1/2-13+.015" Tapped (Standard Design) 2 = Flange, 5" BC, 5/8-11+.015" Tapped 3 = Flange, 5" BC, 5/8" Untapped (Standard Design)	1 = Flange, 3" BC, 1/2-13+.015" Tapped (Standard Design) 2 = Flange, 5" BC, 5/8-11+.015" Tapped 3 = Flange, 5" BC, 5/8" Untapped (Standard Design)	Creepage Distance must be indicated with 3 digits and rounded to the nearest inch.	A= None B= Line End

Sample Number CP1-018-11-041-A



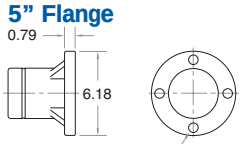
TR NUMBER	TYPE	PART NUMBER	SECTION LENGTH	CREEPAGE DISTANCE	WEIGHT	POLYMER RCL*	PORCELAIN WL**	DEFLECTION AT PORCELAIN WL
214	RODURFLEX PORCELAIN	CP1-022-11-040-A	22	40 43	17 50	1240 2000	800	0.71
216	RODURFLEX PORCELAIN	CP1-030-11-072-A	30	72	21 79	875 1500	600	1.50
278	RODURFLEX PORCELAIN	CP2-030-33-072-A	30	72	42 132	2700 3000	1200	0.75
286	RODURFLEX PORCELAIN	CP2-045-33-101-A	45	101 99	50 161	1911 1700	680	1.69
288	RODURFLEX PORCELAIN	CP2-054-33-120-A	54	120 116	55 200	1575 1450	580	2.64
291	RODURFLEX PORCELAIN	CP2-062-33-132-A	62	132	59 331	1350 1200	480	3.4

Station Post Insulator

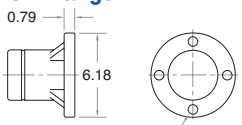


Available End Fittings

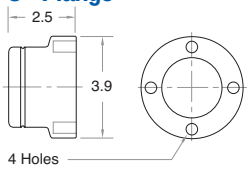
5" Flange

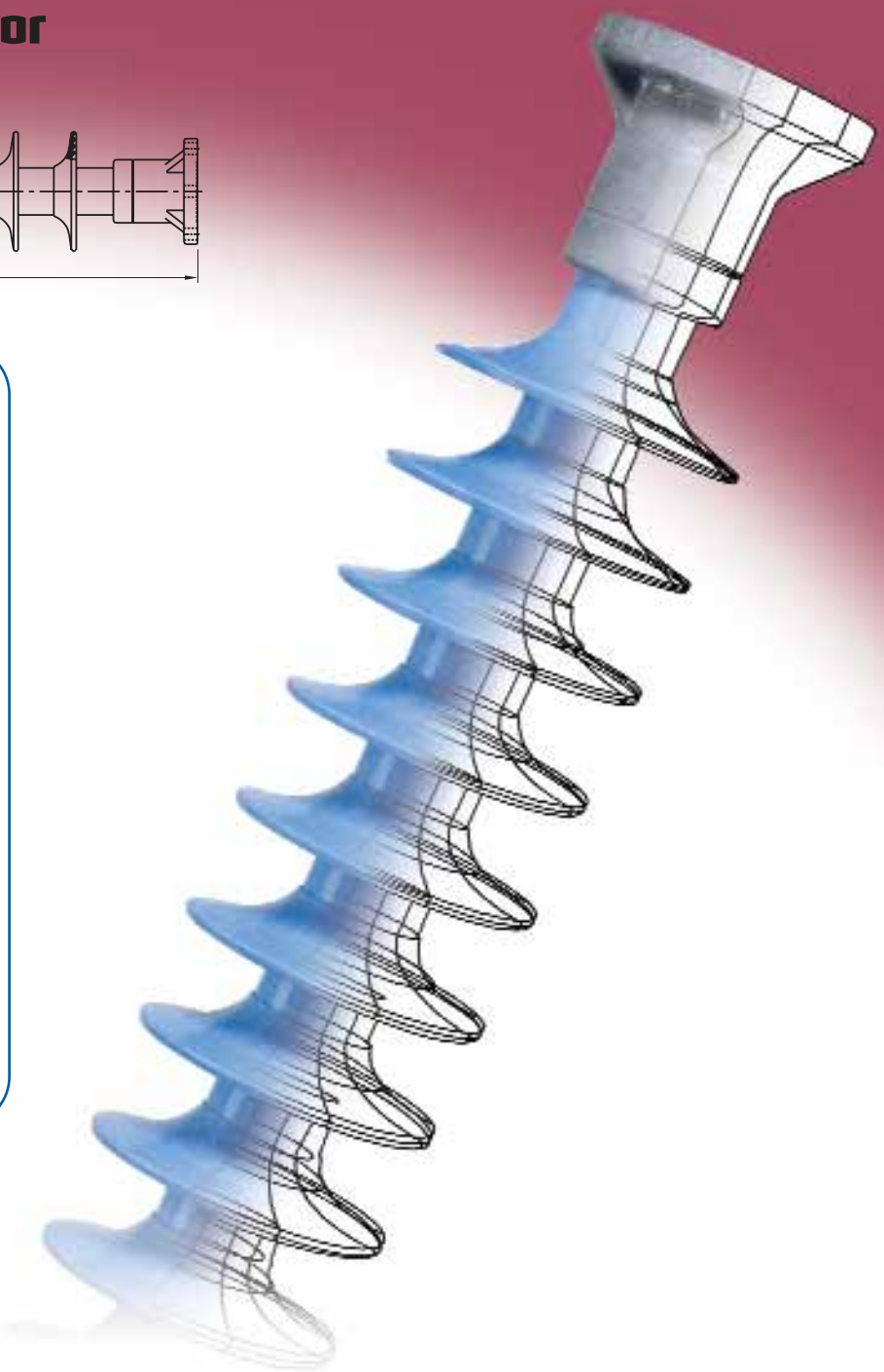


5" Flange



3" Flange



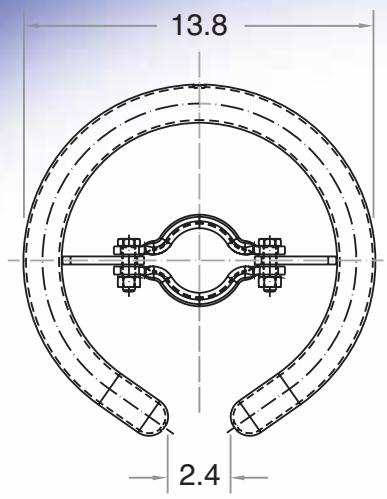


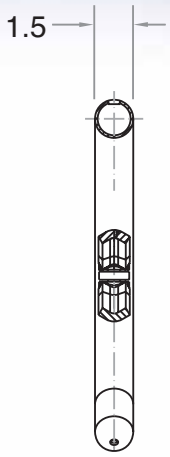
END FITTINGS	MECHANICAL VALUES			ELECTRICAL VALUES			
	TENSILE (LBS)	TORSION (INCH LBS)	COMPRESSION (LBS)	IMPULSE WITHSTAND	60 HZ WET WITHSTAND	RIV TEST VOLTAGE	MAX. RIV. AT 100 KHZ (MICROVOLTS)
3" BC	11250 14000	8140 12000	11250 15000	265 250	135 100	30	< 200
3" BC	11250 16000	8140 15000	5845 25000	390 350	190 145	44	< 200
5" BC	22500 25000	22100 40000	23600 60000	350	160 145	44	< 200
5" BC	22500 20000	22100 40000	10340 60000	550	265 230	73	< 200
5" BC	22500 20000	22100 60000	6750 60000	700 650	355 275	88	< 200
5" BC	22500 20000	22100 40000	5170 60000	750	315	103	<500

1. * RCL = Reference Cantilever Load for polymer and is the maximum load the insulator can withstand in service. It is approximately 50% of the ultimate cantilver rating of each design. Cantilever shown for porcelain is the ultimate value.
2. ** WL = Working Load of porcelain and is approximately 40% of the ultimate rating.
3. All dimensions are in inches and pounds.

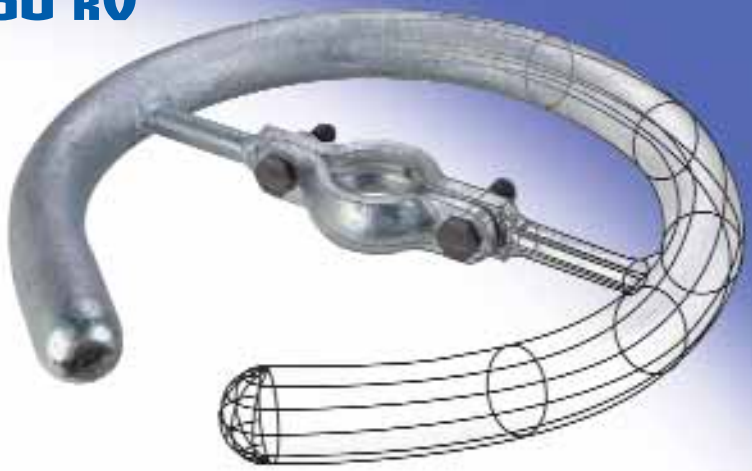
RECOMMENDED CORONA RING APPLICATION		230KV	345KV	500KV	
Line end		YES	YES	YES	
Ground end		NO	NO	YES	
Suspension Part Number suffix		-B	-C	-D	
Line Post Part Number suffix		-B	-B	-	
SUSPENSION INSULATOR ADJUSTMENTS WHEN ADDING CORONA RINGS					
	Arcing distance (in)	-3	-3	-6	**All suspension corona rings are:**
25k, 30k,	Low Frequency Flashover Dry (kV)	-20	-30	-60	•13.8" OD
50k, 80k,	Low Frequency Flashover Wet (kV)	-20	-20	-45	• Galvanized steel
100k	Critical Impulse Flashover Pos (kV)	-40	-40	-90	• Open style
	Critical Impulse Flashover Neg (kV)	-40	-40	-90	• Reversible mounting
	Weight (lbs)	+7	+7	+7.3	
LINE POST INSULATOR ADJUSTMENTS WHEN ADDING CORONA RINGS					
	Arcing distance (in)	-4	-4	-	**All line post corona rings are:**
2.5"	Low Frequency Flashover Dry (kV)	-40	-35	-	• 13.8" OD
Line	Low Frequency Flashover Wet (kV)	-30	-30	-	• Galvanized steel
Posts	Critical Impulse Flashover Pos (kV)	-70	-70	-	• Closed Ring style
	Critical Impulse Flashover Neg (kV)	-70	-70	-	
	Weight (lbs)	+9.5	+9.5	-	

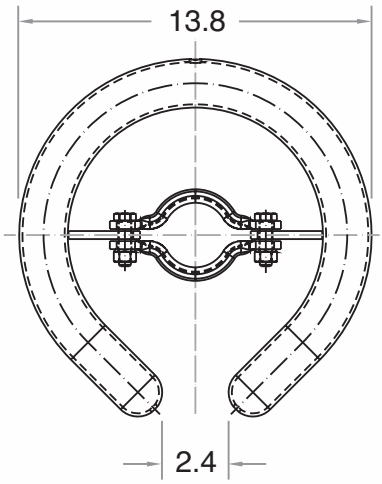
Corona Rings

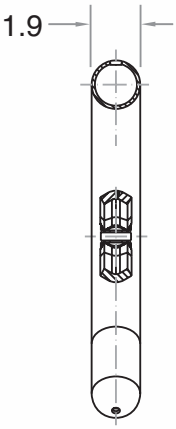




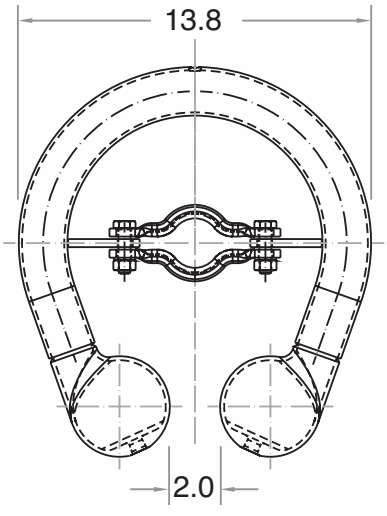
230 kV

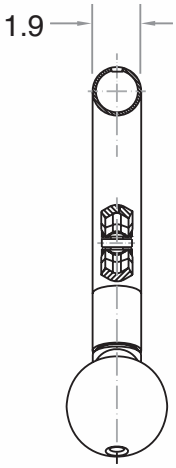




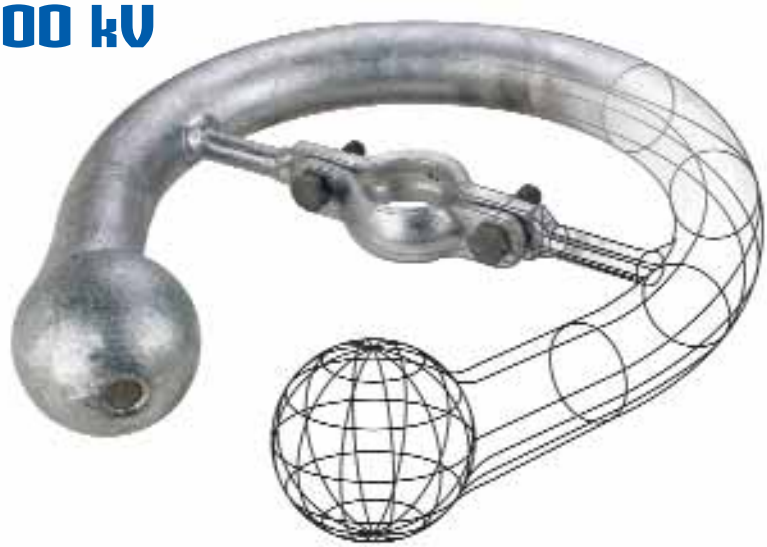


345 kV





500 kV



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Catalog ROD01A
Printed in U.S.A. 10/06