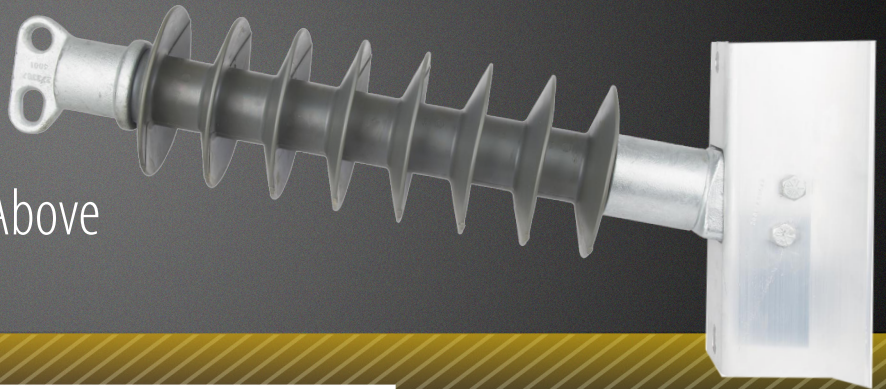


HI*LITE Insulators

for 69 kV Applications & Above
ESP Rubber, Live Interface



Catalog Number Key

Hi*Lite XL Suspension Insulators

a

HI*LITE XL

51 = 2.5" S.L. (63mm)

A1 = 2.9" S.L. (73mm)

D1 = 3.3" S.L. (83mm)

G1 = 3.8 S.L. (96mm)

S.L. = Specified Leak (approx. leak/dry arc)

+These codes apply to our ESP silicone alloy compound. For other polymer materials contact Ohio Brass

For example, if you want a suspension insulator with 83 mm (3.3" S.L.), this is what your form would look like so far:

D	1							
a	a	b	b	c	d	d	e	e

b

STRENGTH

0 = 120kN, 5/8" (16mm)

1 = 25k lbs. SML (111kN), 5/8" (16mm)

2 = 36k lbs. SML (160kN)/30k lbs. SML (133kN), 7/8" (22mm)

3 = 50k lbs. (210kN/222kN), 7/8" (22mm)

5 = 30k lbs. (133kN), 5/8" (16mm)

For example, if you want a suspension insulator with 120kN SML, this is what your form would look like so far:

D	1	0						
a	a	b	c	d	d	e	f	g

c

CONSTRUCTION

0 = Standard Hardware/ 0 Added Sheds

1 = Standard Hardware/ 2 Added Sheds

For example, if you want a suspension insulator with Standard Hardware/ 0 Added Sheds, this is what your form would look like so far:

D	1	0	0					
a	a	b	c	d	d	e	f	g

d

WEATHERSHED CONFIGURATION

Number of sheds equals this number times four, plus any added sheds listed in the construction

For example, if you want a suspension insulator with 32 Sheds, this is what your form would look like so far:

D	1	0	0	0	8			
a	a	b	c	d	d	e	f	g

e

LABELING

1 = English

2 = Metric

R = With 8" Corona Ring

W = With 12" Corona Ring

Fill in your selection in the box designated for section "e." In this example, Metric is requested.

D	1	0	0	0	8	2		
a	a	b	c	d	d	e	f	g

f

GROUND END FITTINGS

1 = ANSI Ball

0 = Chain Eye

2 = Y-Clevis

3 = ANSI Socket

4 = ANSI Straight Clevis

8 = IEC Straight Clevis

A = IEC Socket

Fill in your selection in the box designated for section "f" In this example, an IEC Socket is requested.

D	1	0	0	0	8	2	A	
a	a	b	c	d	d	e	f	g

g

LINE END FITTINGS

00 = Chain Eye

01 = ANSI Ball

02 = Y-Clevis

03 = ANSI Socket

04 = ANSI Straight Clevis

07* = IEC Ball

08 = IEC Straight Clevis

*For 160 kN, 20 mm ball, use "09" code.

Fill in your selection in the box designated for section "g." In this example, an ANSI Ball is requested.

D	1	0	0	0	8	2	A	0
a	a	b	c	d	d	e	f	g

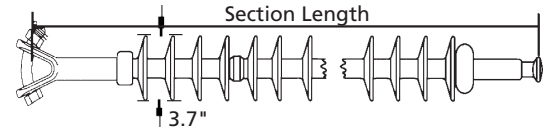
example

83mm (3.3" S.L) suspension insulator, 120kN SML strength, standard hardware/ 0 added sheds, 32 sheds, Metric labeling, IEC Socket ground fitting with an IEC ball line end fitting. **D100082A07**

(1) For IEC Ball and Socket fittings, contact Hubbell Power Systems.
(2) Metric labeling of ANSI, or IEC insulators.

Suspension Insulators

Mechanical Ratings SML = 25,000 lbs/111 kN RTL = 12,500 lbs/56 kN
5/8" (16 mm) Rod Diameter



Selection Guide: Typical Line Voltage, kV						Catalog Number with Y-Clevis - 52.5 Ball	Section Length inches (mm)	Number of Sheds	Dry Arc Distance inches (mm)	Leakage Distance inches (mm)	⁽²⁾ 60 Flashover ANSI		⁽²⁾ Critical Flashover ANSI		Net Weight pounds (kg)
69	115	138	161	230	345						Dry-kV	Wet-kV	Pos-kV	Neg-kV	
						5110041201	34.7 (881)	16	24.7 (627)	61 (1549)	245	240	410	390	4.8 (2.2)
						5110051201	40.7 (1034)	20	30.7 (780)	76 (1930)	310	295	505	490	5.6 (2.5)
						5110061201	46.8 (1189)	24	36.8 (935)	92 (2337)	370	350	605	595	6.4 (2.9)
						5110071201	53.0 (1346)	28	42.9 (1090)	107 (2718)	430	405	700	695	7.1 (3.2)
						5110081201	59.1 (1501)	32	49.1 (1247)	122 (3099)	490	455	795	795	8.0 (3.6)
						5110091201	65.1 (1654)	36	55.1 (1397)	138 (3505)	545	505	890	890	8.8 (4.0)
						5110101201	71.3 (1811)	40	61.2 (1554)	152 (3861)	600	555	985	990	9.5 (4.3)
						5110111201	77.4 (1966)	44	67.4 (1712)	168 (4267)	655	605	1080	1090	10.4 (4.7)
						5110121201	83.5 (2121)	48	73.5 (1867)	184 (4674)	710	655	1170	1185	11.2 (5.1)
						5110131201	89.5 (2273)	52	79.5 (2019)	198 (5029)	760	700	1260	1280	11.9 (5.4)
						5110141201	95.7 (2431)	56	85.6 (2174)	214 (5436)	810	750	1350	1370	12.7 (5.8)
						5110151201	101.8 (2586)	60	91.7 (2329)	229 (5817)	855	790	1440	1465	13.5 (6.1)
						5110161201	108.0 (2743)	64	97.9 (2487)	245 (6223)	905	835	1530	1560	14.4 (6.5)
						5110171201	114.0 (2896)	68	103.9 (2639)	260 (6604)	945	880	1615	1650	15.2 (6.9)
						5110181201	120.1 (3051)	72	110.0 (2794)	275 (6985)	990	920	1705	1740	15.9 (7.2)
						5110191201	126.2 (3205)	76	116.2 (2951)	290 (7366)	1030	960	1790	1830	16.7 (7.6)

Notes:

- For voltages above 345 kV, and other section lengths, contact Hubbell Power Systems.
- Tests in accordance with ANSI C29.1. Electrical values are without corona ring. For voltages equal to or greater than 161 kV, refer to the dedicated page within this section for corona rings and associated physical/electrical changes to the above data.

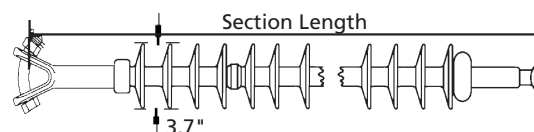
Ground Fitting	Line Fitting	Suffix Code	Length Change		Weight Change	
			Inches	mm	lbs	kg
Eye	Ball	1001	-0.06	-1.5	-2.5	-0.11
Eye	Eye	1000	1.28	32.5	-2.5	-0.11
Socket	Ball	1301	-0.97	-24.6	-0.05	-0.01
Clevis	Ball	1401	-1.00	-25.4	-0.15	-0.07
Y-Clevis	Eye	1200	1.34	34.0	0	0
Clevis	Eye	1400	0.34	8.6	-0.15	-0.007

For configurations not shown contact Hubbell Power Systems, Inc.



Suspension Insulators

Mechanical Ratings SML = 30,000 lbs/133 kN RTL = 15,000 lbs/67 kN
5/8" (16 mm) Rod Diameter



Selection Guide: Typical Line Voltage, kV						Catalog Number with Y-Clevis - 52.5 Ball	Section Length inches (mm)	Number of Sheds	Dry Arc Distance inches (mm)	Leakage Distance inches (mm)	⁽²⁾ 60 Flashover ANSI		⁽²⁾ Critical Flashover ANSI		Net Weight pounds (kg)
69	115	138	161	230	345						Dry-kV	Wet-kV	Pos-kV	Neg-kV	
						5150041201	34.7 (881)	16	24.7 (627)	61 (1549)	245	240	410	390	4.8 (2.2)
						5150051201	40.7 (1034)	20	30.7 (780)	76 (1930)	310	295	505	490	5.6 (2.5)
						5150061201	46.8 (1189)	24	36.8 (935)	92 (2337)	370	350	605	595	6.4 (2.9)
						5150071201	53.0 (1346)	28	42.9 (1090)	107 (2718)	430	405	700	695	7.1 (3.2)
						5150081201	59.1 (1501)	32	49.1 (1247)	122 (3099)	490	455	795	795	8.0 (3.6)
						5150091201	65.1 (1654)	36	55.1 (1397)	138 (3505)	545	505	890	890	8.8 (4.0)
						5150101201	71.3 (1811)	40	61.2 (1554)	152 (3861)	600	555	985	990	9.5 (4.3)
						5150111201	77.4 (1966)	44	67.4 (1712)	168 (4267)	655	605	1080	1090	10.4 (4.7)
						5150121201	83.5 (2121)	48	73.5 (1867)	184 (4674)	710	655	1170	1185	11.2 (5.1)
						5150131201	89.5 (2273)	52	79.5 (2019)	198 (5029)	760	700	1260	1280	11.9 (5.4)
						5150141201	95.7 (2431)	56	85.6 (2174)	214 (5436)	810	750	1350	1370	12.7 (5.8)
						5150151201	101.8 (2586)	60	91.7 (2329)	229 (5817)	855	790	1440	1465	13.5 (6.1)
						5150161201	108.0 (2743)	64	97.9 (2487)	245 (6223)	905	835	1530	1560	14.4 (6.5)
						5150171201	114.0 (2896)	68	103.9 (2639)	260 (6604)	945	880	1615	1650	15.2 (6.9)
						5150181201	120.1 (3051)	72	110.0 (2794)	275 (6985)	990	920	1705	1740	15.9 (7.2)
						5150191201	126.2 (3205)	76	116.2 (2951)	290 (7366)	1030	960	1790	1830	16.7 (7.6)

Notes:

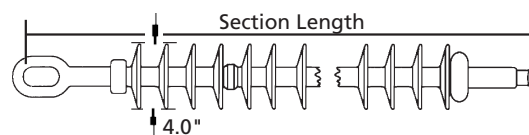
- For voltages above 345 kV, and other section lengths, contact Hubbell Power Systems.
- Tests in accordance with ANSI C29.1. Electrical values are without corona ring. For voltages equal to or greater than 161 kV, refer to the dedicated page within this section for corona rings and associated physical/electrical changes to the above data.

Ground Fitting	Line Fitting	Suffix Code	Length Change		Weight Change	
			Inches	mm	lbs	kg
Eye	Ball	1001	-0.06	-1.5	-2.5	-0.11
Eye	Eye	1000	1.28	32.5	-2.5	-0.11
Socket	Ball	1301	-0.97	-24.6	-0.05	-0.01
Clevis	Ball	1401	-1.00	-25.4	-0.15	-0.07
Y-Clevis	Eye	1200	1.34	34.0	0	0
Clevis	Eye	1400	0.34	8.6	-0.15	-0.007

For configurations not shown contact Hubbell Power Systems, Inc.

Suspension Insulators

Mechanical Ratings SML = 50,000 lbs/222 kN RTL = 25,000 lbs/111 kN
7/8" (22 mm) Rod Diameter



Selection Guide: Typical Line Voltage, kV						Catalog Number with Y-Clevis - 52.5 Ball	Section Length inches (mm)	Number of Sheds	Dry Arc Distance inches (mm)	Leakage Distance inches (mm)	⁽²⁾ 60 Flashover ANSI		⁽²⁾ Critical Flashover ANSI		Net Weight pounds (kg)
115	138	161	230	345	500						Dry-kV	Wet-kV	Pos-kV	Neg-kV	
						5130071001	55.8 (1417)	28	42.9 (1090)	106 (2692)	430	400	700	695	12.7 (5.8)
						5130081001	62.0 (1574)	32	49.0 (1245)	121 (3073)	490	455	795	795	13.7 (6.2)
						5130091001	68.0 (1727)	36	55.0 (1397)	136 (3454)	545	505	890	890	14.8 (6.7)
						5130101001	74.1 (1882)	40	61.2 (1554)	151 (3835)	600	555	985	990	15.9 (7.2)
						5130111001	80.3 (2040)	44	67.3 (1709)	167 (4242)	655	605	1080	1090	16.9 (7.7)
						5130131001	92.4 (2347)	52	79.5 (2019)	197 (5004)	760	700	1260	1280	19.1 (8.7)
						5130141001	98.5 (2502)	56	85.6 (2174)	212 (5385)	810	745	1350	1370	20.2 (9.2)
						5130151001	104.7 (2659)	60	91.7 (2329)	228 (5791)	855	790	1440	1465	21.2 (9.6)
						5130171001	116.8 (2967)	68	103.9 (2639)	258 (6553)	945	875	1615	1650	24.4 (11.1)
						5130181001	123.0 (3124)	72	110.0 (2794)	273 (6934)	990	915	1705	1740	24.5 (11.1)
						5130191001	129.1 (3279)	76	116.2 (2951)	288 (7315)	1030	955	1790	1830	25.5 (11.6)
						5130211001	141.2 (3586)	84	128.3 (3259)	319 (8103)	1110	1035	1960	2005	27.6 (12.5)
						5130231001	153.5 (3899)	92	140.6 (3271)	349 (8885)	1180	1105	2125	2175	29.8 (13.5)
						5130251001	165.7 (4209)	100	152.7 (3879)	379 (9627)	1245	1175	2285	2345	31.9 (14.5)
						5130271001	177.9 (4519)	108	165.0 (4191)	410 (10414)	1305	1240	2445	2510	34.0 (15.4)
						5130281001	184.1 (4676)	112	171.1 (4346)	425 (10795)	1330	1270	2520	2590	35.1 (15.9)

Notes:

- For voltages above 500 kV, and other section lengths, contact Hubbell Power Systems.
- Tests in accordance with ANSI C29.1. Electrical values are without corona ring. For voltages equal to or greater than 161 kV, refer to the dedicated page within this section for corona rings and associated physical/electrical changes to the above data.

End Fitting Example

You need the electrical and mechanical characteristics of Catalog #5130101001. But, a Y-clevis is needed at the ground end instead of an eye. From the table at the right, find the code for the Y-clevis/ball configuration 1201. You should order Catalog #5130101201. The same process is used for 5/8" (25k) and 7/8" (30k) insulators.

Ground Fitting	Line Fitting	Suffix Code	Length Change		Weight Change	
			Inches	mm	lbs	kg
Y-Clevis	Ball	1201	-0.58	-14.7	0.4	0.18
Eye	Eye	1000	1.26	32.0	-0.4	-0.18
Socket	Ball	1301	-0.72	-18.3	0.4	0.18
Y-Clevis	Eye	1200	-0.58	-14.7	0	0

For configurations not shown contact Hubbell Power Systems, Inc.

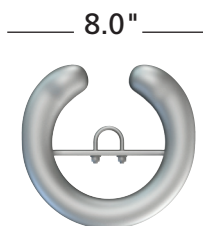


Corona Performance

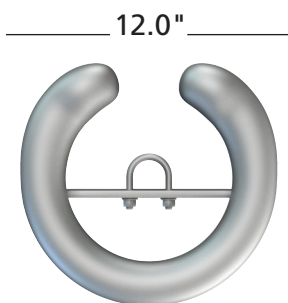
Hi*Lite insulators are RIV and corona free through 161 kV. The use of an external corona shielding ring is required at 220 / 230 kV and above. The table below details the rings necessary for 220 / 230 kV and above.

Normal Applications						
Insulator	230 kV Ring		345 kV Ring		500 kV Rings	
	Ground End	Line End	Ground End	Line End	Ground End	Line End
Suspension 25/30 K SML	None	2717613001	None	2717053001	2717613001	2717513001
Suspension 50 K SML	None	2717613002	None	2717053002	None	2717513002

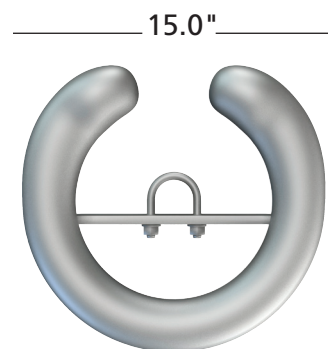
The physical and electrical values for the insulators detailed on previous pages of this section are shown without corona protection above 161 kV. Hubbell Power Systems, Inc. has therefore provided the table below that yields the physical and electrical changes to the insulator when rings are installed for voltages above 161 kV.



Part Number 271761



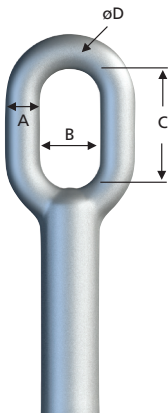
Part Number 271705



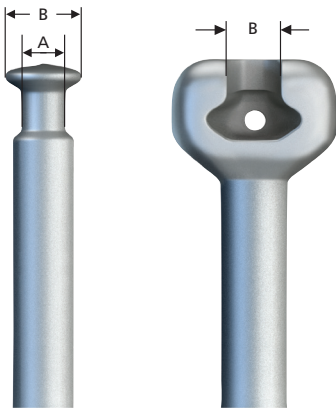
Part Number 271751

Physical & Electrical Change Table			
Physical & Electrical Characteristics	230 kV Ring	345 kV Ring	500 kV Rings
Dry Arc Distance inches (mm)	-1.2 (-30.48)	-2 (-50.8)	-5 (-127.0)
Leakage Distance inches (mm)	0	0	0
60 Hz Flashover Dry - kV	-10	-15	-30
60 Hz Flashover Wet - kV	0	0	0
Critical Flashover Positive - kV	-15	-25	-65
Critical Flashover Negative - kV	-20	-30	-65
Net Weight pounds (kg)	2.1 (0.9)	2.9 (1.3)	6.5 (3.0)

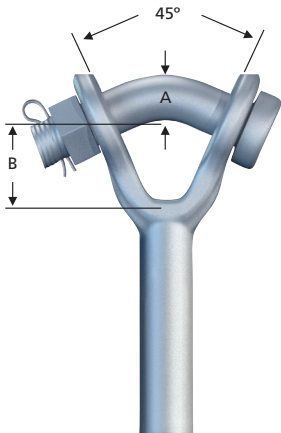
Most Common End Fittings



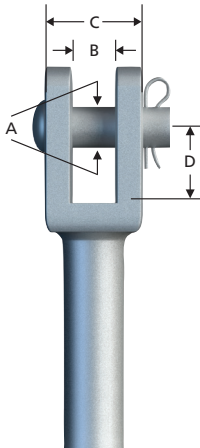
Chain Eye



ANSI Ball/Socket



Y-Clevis Fitting



ANSI Clevis

Fitting Type	SML k-LB (kN)	ANSI Class	Dimensions Inches (MM)			
			A	B	C	D
CHAIN EYE	25 (111) – 30 (133)	-	0.62	1.00	2.00	0.62
	50 (222)	-	0.75	1.00	2.00	0.85
BALL & SOCKET	25 (111) – 30 (133)	52-5	0.73	1.29	-	-
	50 (222)	52-11	0.92	1.63	-	-
Y-CLEVIS	25 (111) – 30 (133)	-	0.75	1.53	-	-
	50 (222)	-	0.88	1.59	-	-
CLEVIS	25 (111) – 30 (133)	52-6	0.62	0.75	1.50	1.10

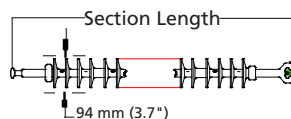


Suspension Insulators

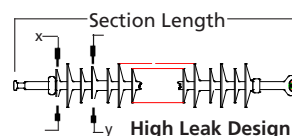
Mechanical Ratings SML = 111 kN (25,000 lbs.)

RTL = 55 kN (12,500 lbs.)

5/8" (16 mm) Rod Diameter



Standard Design



High Leak Design

Type	x mm (in.)	y mm (in.)
A10..	97 (3.8)	114 (4.5)
D10..	109 (4.3)	140 (5.5)
G10..	130 (5.1)	160 (6.3)

Selection Guide Typical Line Voltage, kV ⁽¹⁾								Leakage Distance mm (in.) XX =				Catalog Number with ANSI 52-5 ball and Y-Clevis	Section Length mm (in.)	No. of Sheds	Dry Arc Distance mm (in.)	⁽²⁾ IEC Wet Switching Impulse Withstand (ANSI 60 Hz. Dry F.O.) kV	⁽²⁾ IEC Power Freq. Wet Withstand (ANSI 60 Hz. Wet F.O.) kV	(2) IEC Lightning Impulse Withstand (ANSI Critical Impulse F.O.) kV	
70	110	132	161	220	330	400		51	A1	D1	G1							Pos-kV	Neg-kV
								1160 (45)	1340 (53)	1530 (60)	1760 (69)	XX10032201	725 (28.6)	12	470 (18.5)	260 (180)	135 (180)	275 (310)	255 (285)
								1550 (61)	1790 (70)	2040 (80)	2350 (92)	XX10042201	881 (34.7)	16	625 (24.6)	345 (245)	180 (240)	365 (410)	350 (390)
								1940 (76)	2230 (88)	2540 (100)	2920 (115)	XX10052201	1033 (40.7)	20	775 (30.6)	420 (310)	220 (295)	450 (505)	440 (490)
								2320 (91)	2680 (105)	3060 (120)	3520 (138)	XX10062201	1189 (46.8)	24	930 (36.8)	500 (370)	260 (350)	540 (605)	530 (595)
								2710 (107)	3130 (122)	3570 (140)	4110 (162)	XX10072201	1345 (53.0)	28	1090 (42.9)	570 (430)	305 (405)	630 (700)	620 (695)
								3100 (122)	3580 (141)	4080 (160)	4700 (185)	XX10082201	1501 (59.1)	32	1245 (49.0)	650 (490)	340 (455)	715 (795)	710 (795)
								3490 (137)	4020 (158)	4580 (180)	5280 (207)	XX10092201	1654 (65.1)	36	1395 (55.0)	720 (545)	380 (505)	800 (890)	800 (890)
								3880 (152)	4480 (176)	5100 (200)	5870 (231)	XX10102201	1810 (71.3)	40	1555 (61.2)	790 (600)	420 (555)	885 (985)	890 (990)
								4270 (168)	4930 (194)	5610 (221)	6460 (254)	XX10112201	1966 (77.4)	44	1710 (67.3)	860 (655)	455 (605)	970 (1080)	975 (1090)
								4660 (183)	5370 (211)	6120 (241)	7050 (277)	XX10122201	2121 (83.5)	48	1865 (73.5)	930 (710)	490 (655)	1050 (1170)	1065 (1185)
								5040 (198)	5820 (229)	6620 (261)	7630 (300)	XX10132201	2274 (89.5)	52	2015 (79.5)	995 (760)	525 (700)	1135 (1260)	1145 (1280)
								5430 (214)	6270 (247)	7140 (281)	8220 (323)	XX10142201	2430 (95.7)	56	2175 (85.6)	1060 (810)	560 (750)	1215 (1350)	1230 (1370)
								5820 (229)	6720 (264)	7650 (301)	8810 (347)	XX10152201	2586 (101.8)	60	2330 (91.7)	1120 (855)	595 (790)	1295 (1440)	1315 (1465)
								6210 (244)	7170 (282)	8160 (321)	9400 (370)	XX10162201	2742 (108.0)	64	2485 (97.9)	1185 (905)	625 (835)	1375 (1530)	1400 (1560)
								6600 (260)	7610 (299)	8670 (341)	9980 (393)	XX10172201	2894 (114.0)	68	2635 (103.9)	1240 (945)	655 (880)	1455 (1615)	1480 (1650)
								6990 (275)	8060 (317)	9180 (361)	10570 (416)	XX10182201	3050 (120.1)	72	2795 (110.0)	1300 (990)	690 (920)	1530 (1705)	1565 (1740)
								7380 (290)	8510 (335)	9700 (381)	11170 (439)	XX10192201	3206 (126.2)	76	2950 (116.2)	1355 (1030)	720 (960)	1610 (1790)	1645 (1830)
								7770 (306)	8960 (353)	10210 (402)	11760 (463)	XX10202201	3362 (132.4)	80	3105 (122.3)	1410 (1070)	745 (1000)	1685 (1875)	1725 (1920)
								8150 (321)	9400 (370)	10710 (421)	12330 (485)	XX10212201	3514 (138.4)	84	3260 (128.3)	1460 (1110)	775 (1040)	1760 (1960)	1800 (2005)
								8540 (336)	9860 (388)	11220 (442)	12930 (509)	XX10222201	3670 (144.5)	88	3415 (134.4)	1510 (1145)	800 (1075)	1835 (2040)	1880 (2090)
								8930 (351)	10310 (406)	11740 (462)	13520 (532)	XX10232201	3826 (150.7)	92	3570 (140.6)	1560 (1180)	830 (1110)	1910 (2125)	1955 (2175)

Notes:

- For voltages above 400 kV, and other section lengths, contact your HPS representative.
- Electrical values are without corona ring. For voltages equal to or greater than 161 kV, refer to the dedicated page within this section for corona rings and associated physical/electrical changes to the above data.

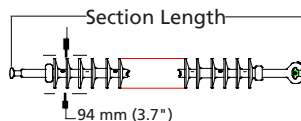
End Fitting Example

You need the electrical and mechanical characteristics of Catalog #5110102201. But chain eye is needed at the ground end instead of a Y-clevis. From the table at the right, find the code for the chain eye/ANSI ball configuration 2001. You should order catalog number 5110102001. The same process is used for other strength Hi*Lite XL insulators.

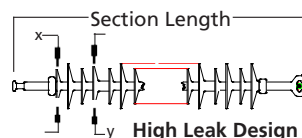
Ground Fitting	Line Fitting	Suffix Code	Length Change	
			Inches	mm
Eye	Eye	2000	+1.5	+39
Eye	ANSI 52-5 Ball	2001	+0.0	+1
ANSI 52-5 Socket	ANSI 52-5 Ball	2301	-0.9	-25
Y-Clevis	Eye	2200	+1.4	+37
ANSI 52-5 Socket	Eye	2400	+0.4	+11

Suspension Insulators

Mechanical Ratings SML = 120 kN RTL = 60 kN
5/8" (16 mm) Rod Diameter



Standard Design



High Leak Design

Type	x mm (in.)	y mm (in.)
A10..	97 (3.8)	114 (4.5)
D10..	109 (4.3)	140 (5.5)
G10..	130 (5.1)	160 (6.3)

Selection Guide Typical Line Voltage, kV ⁽¹⁾							Leakage Distance mm (in.) XX =				Catalog Number with ANSI 52-5 ball and Y-Clevis	Section Length mm (in.)	No. of Sheds	Dry Arc Distance mm (in.)	⁽²⁾ IEC Wet Switching Impulse Withstand (ANSI 60 Hz. Dry F.O.) kV	⁽²⁾ IEC Power Freq. Wet Withstand (ANSI 60 Hz. Wet F.O.) kV	(2) IEC Lightning Impulse Withstand (ANSI Critical Impulse F.O.) kV	
70	110	132	161	220	330	400	S1	A1	D1	G1							Pos-kV	Neg-kV
							1160 (45)	1340 (53)	1530 (60)	1760 (69)	XX00032A07	725 (28.6)	12	470 (18.5)	260 (180)	135 (180)	275 (310)	255 (285)
							1550 (61)	1790 (70)	2040 (80)	2350 (92)	XX00042A07	881 (34.7)	16	625 (24.6)	345 (245)	180 (240)	365 (410)	350 (390)
							1940 (76)	2230 (88)	2540 (100)	2920 (115)	XX00052A07	1033 (40.7)	20	775 (30.6)	420 (310)	220 (295)	450 (505)	440 (490)
							2320 (91)	2680 (105)	3060 (120)	3520 (138)	XX00062A07	1189 (46.8)	24	930 (36.8)	500 (370)	260 (350)	540 (605)	530 (595)
							2710 (107)	3130 (122)	3570 (140)	4110 (162)	XX00072A07	1345 (53.0)	28	1090 (42.9)	570 (430)	305 (405)	630 (700)	620 (695)
							3100 (122)	3580 (141)	4080 (160)	4700 (185)	XX00082A07	1501 (59.1)	32	1245 (49.0)	650 (490)	340 (455)	715 (795)	710 (795)
							3490 (137)	4020 (158)	4580 (180)	5280 (207)	XX00092A07	1654 (65.1)	36	1395 (55.0)	720 (545)	380 (505)	800 (890)	800 (890)
							3880 (152)	4480 (176)	5100 (200)	5870 (231)	XX00102A07	1810 (71.3)	40	1555 (61.2)	790 (600)	420 (555)	885 (985)	890 (990)
							4270 (168)	4930 (194)	5610 (221)	6460 (254)	XX00112A07	1966 (77.4)	44	1710 (67.3)	860 (655)	455 (605)	970 (1080)	975 (1090)
							4660 (183)	5370 (211)	6120 (241)	7050 (277)	XX00122A07	2121 (83.5)	48	1865 (73.5)	930 (710)	490 (655)	1050 (1170)	1065 (1185)
							5040 (198)	5820 (229)	6620 (261)	7630 (300)	XX00132A07	2274 (89.5)	52	2015 (79.5)	995 (760)	525 (700)	1135 (1260)	1145 (1280)
							5430 (214)	6270 (247)	7140 (281)	8220 (323)	XX00142A07	2430 (95.7)	56	2175 (85.6)	1060 (810)	560 (750)	1215 (1350)	1230 (1370)
							5820 (229)	6720 (264)	7650 (301)	8810 (347)	XX00152A07	2586 (101.8)	60	2330 (91.7)	1120 (855)	595 (790)	1295 (1440)	1315 (1465)
							6210 (244)	7170 (282)	8160 (321)	9400 (370)	XX00162A07	2742 (108.0)	64	2485 (97.9)	1185 (905)	625 (835)	1375 (1530)	1400 (1560)
							6600 (260)	7610 (299)	8670 (341)	9980 (393)	XX00172A07	2894 (114.0)	68	2635 (103.9)	1240 (945)	655 (880)	1455 (1615)	1480 (1650)
							6990 (275)	8060 (317)	9180 (361)	10570 (416)	XX00182A07	3050 (120.1)	72	2795 (110.0)	1300 (990)	690 (920)	1530 (1705)	1565 (1740)
							7380 (290)	8510 (335)	9700 (381)	11170 (439)	XX00192A07	3206 (126.2)	76	2950 (116.2)	1355 (1030)	720 (960)	1610 (1790)	1645 (1830)
							7770 (306)	8960 (353)	10210 (402)	11760 (463)	XX00202A07	3362 (132.4)	80	3105 (122.3)	1410 (1070)	745 (1000)	1685 (1875)	1725 (1920)
							8150 (321)	9400 (370)	10710 (421)	12330 (485)	XX00212A07	3514 (138.4)	84	3260 (128.3)	1460 (1110)	775 (1040)	1760 (1960)	1800 (2005)
							8540 (336)	9860 (388)	11220 (442)	12930 (509)	XX00222A07	3670 (144.5)	88	3415 (134.4)	1510 (1145)	800 (1075)	1835 (2040)	1880 (2090)
							8930 (351)	10310 (406)	11740 (462)	13520 (532)	XX00232A07	3826 (150.7)	92	3570 (140.6)	1560 (1180)	830 (1110)	1910 (2125)	1955 (2175)

Notes:

- For voltages above 400 kV, and other section lengths, contact your HPS representative.
- Electrical values are without corona ring. For voltages equal to or greater than 161 kV, refer to the dedicated page within this section for corona rings and associated physical/electrical changes to the above data.

Ground Fitting	Line Fitting	Suffix Code	Length Change	
			Inches	mm
Eye	Eye	2000	+2.3	+59
Eye	IEC 16 mm Ball	2007	+1.0	+26
Y-Clevis	IEC 16 mm Ball	2207	+0.9	+24
Y-Clevis	Eye	2200	+2.2	+57
IEC 16C Clevis	Eye	2800	+1.2	+31



Suspension Insulators

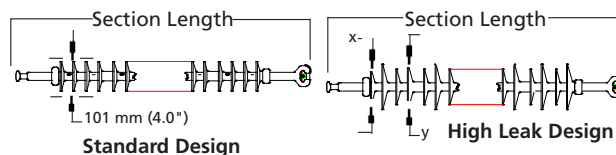
Mechanical Ratings SML = 160 kN (36,000 lbs.)

RTL = 80 kN (18,000 lbs.)

7/8" (22 mm) Rod Diameter

Insulators with either ANSI ball and/or socket end-fittings will be rated 133 kN (30,000 lbs.)

SML and 66 kN (15,000 lbs.) RTL.



Type	x mm (in.)	y mm (in.)
A12..	97 (3.8)	114 (4.5)
D12..	109 (4.3)	140 (5.5)
G12..	130 (5.1)	160 (6.3)

Selection Guide Typical Line Voltage, kV ⁽¹⁾							Leakage Distance mm (in.) XX =				Catalog Number with ANSI 52-5 ball and Y-Clevis	Section Length mm (in.)	No. of Sheds	Dry Arc Distance mm (in.)	⁽²⁾ IEC Wet Switching Impulse Withstand (ANSI 60 Hz, Dry F.O.) kV	⁽²⁾ IEC Power Freq. Wet Withstand (ANSI 60 Hz, Wet F.O.) kV	⁽²⁾ IEC Lightning Impulse Withstand (ANSI Critical Impulse F.O.) kV	
70	110	132	161	220	330	400	51	A1	D1	G1							Pos-kV	Neg-kV
							1150 (45)	1340 (53)	1530 (60)	1760 (69)	XX20032A09	795 (30.8)	12	470 (18.5)	260 (180)	135 (180)	275 (310)	255 (285)
							1540 (60)	1790 (70)	2040 (80)	2350 (92)	XX20042A09	951 (37.0)	16	625 (24.6)	345 (245)	180 (240)	365 (410)	350 (390)
							1920 (75)	2230 (88)	2540 (100)	2920 (115)	XX20052A09	1104 (43.5)	20	775 (30.6)	420 (310)	220 (295)	450 (505)	440 (490)
							2310 (91)	2680 (105)	3060 (120)	3520 (138)	XX20062A09	1260 (49.6)	24	930 (36.8)	500 (370)	260 (350)	540 (605)	530 (595)
							2700 (106)	3130 (122)	3570 (140)	4110 (162)	XX20072A09	1416 (55.8)	28	1090 (42.9)	570 (430)	305 (405)	630 (700)	620 (695)
							3080 (121)	3580 (141)	4080 (160)	4700 (185)	XX20082A09	1572 (61.9)	32	1245 (49.0)	650 (490)	340 (455)	715 (795)	710 (795)
							3470 (136)	4020 (158)	4580 (180)	5280 (207)	XX20092A09	1724 (67.9)	36	1395 (55.0)	720 (545)	380 (505)	800 (890)	800 (890)
							3850 (151)	4480 (176)	5100 (200)	5870 (231)	XX20102A09	1880 (74.0)	40	1555 (61.2)	790 (600)	420 (555)	885 (985)	890 (990)
							4240 (167)	4930 (194)	5610 (221)	6460 (254)	XX20112A09	2036 (80.2)	44	1710 (67.3)	860 (655)	455 (605)	970 (1080)	975 (1090)
							4630 (182)	5370 (211)	6120 (241)	7050 (277)	XX20122A09	2192 (86.3)	48	1865 (73.5)	930 (710)	490 (655)	1050 (1170)	1065 (1185)
							5010 (197)	5820 (229)	6620 (261)	7630 (300)	XX20132A09	2344 (92.3)	52	2015 (79.5)	995 (760)	525 (700)	1135 (1260)	1145 (1280)
							5400 (212)	6270 (247)	7140 (281)	8220 (323)	XX20142A09	2500 (98.5)	56	2175 (85.6)	1060 (810)	560 (750)	1215 (1350)	1230 (1370)
							5790 (228)	6720 (264)	7650 (301)	8810 (347)	XX20152A09	2656 (104.6)	60	2330 (91.7)	1120 (855)	595 (790)	1295 (1440)	1315 (1465)
							6170 (243)	7170 (282)	8160 (321)	9400 (370)	XX20162A09	2812 (110.7)	64	2485 (97.9)	1185 (905)	625 (835)	1375 (1530)	1400 (1560)
							6560 (258)	7610 (299)	8670 (341)	9980 (393)	XX20172A09	2965 (116.7)	68	2635 (103.9)	1240 (945)	655 (880)	1455 (1615)	1480 (1650)
							6940 (273)	8060 (317)	9180 (361)	10570 (416)	XX20182A09	3120 (122.9)	72	2795 (110.0)	1300 (990)	690 (920)	1530 (1705)	1565 (1740)
							7330 (288)	8510 (335)	9700 (381)	11170 (439)	XX20192A09	3276 (128.9)	76	2950 (116.2)	1355 (1030)	720 (960)	1610 (1790)	1645 (1830)
							7720 (304)	8960 (353)	10210 (402)	11760 (463)	XX20202A09	3432 (135.2)	80	3105 (122.3)	1410 (1070)	745 (1000)	1685 (1875)	1725 (1920)
							8100 (319)	9400 (370)	10710 (421)	12330 (485)	XX20212A09	3585 (141.2)	84	3260 (128.3)	1460 (1110)	775 (1040)	1760 (1960)	1800 (2005)
							8490 (334)	9860 (388)	11220 (442)	12930 (509)	XX20222A09	3741 (147.3)	88	3415 (134.4)	1510 (1145)	800 (1075)	1835 (2040)	1880 (2090)
							8870 (349)	10310 (406)	11740 (462)	13520 (532)	XX20232A09	3897 (153.4)	92	3570 (140.6)	1560 (1180)	830 (1110)	1910 (2125)	1955 (2175)

Notes:

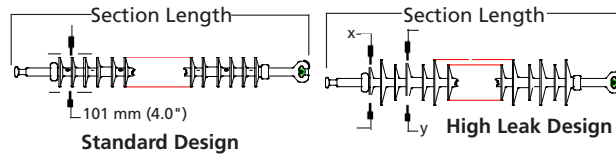
- For voltages above 400 kV, and other section lengths, contact your HPS representative.
- Electrical values are without corona ring. For voltages equal to or greater than 161 kV, refer to the dedicated page within this section for corona rings and associated physical/electrical changes to the above data.

Ground Fitting	Line Fitting	SML kN (lbs.)	Suffix Code	Length Change	
				Inches	mm
Eye	Eye	160 kN (36K)	2000	+1.5	+40
Eye	IEC 20 mm Ball	160 kN (36K)	2009	+0.8	+21
Y-Clevis	Eye	160 kN (36K)	2200	+1.0	+27
Eye	ANSI 52-5 Ball	133 kN (30K)	2001	+0.1	+2
Y-Clevis	IEC 20 mm Ball	160 kN (36K)	2209	+0.3	+8
Y-Clevis	ANSI 52-5 Ball	133 kN (30K)	2201	-0.4	-11
ANSI 52-5 Socket	ANSI 52-5 Ball	133 kN (30K)	2301	-1.3	-35

Suspension Insulators

Mechanical Ratings SML = 210 kN RTL = 55 kN
7/8" (22 mm) Rod Diameter

ANSI fittings are capable of 222 kN SML (50K lbs.)



Type	x mm (in.)	y mm (in.)
A13..	97 (3.8)	114 (4.5)
D13..	109 (4.3)	140 (5.5)
G13..	130 (5.1)	160 (6.3)

Selection Guide Typical Line Voltage, kV ⁽¹⁾								Leakage Distance mm (in.) XX =				Catalog Number with ANSI 52-5 ball and Y-Clevis	Section Length mm (in.)	No. of Sheds	Dry Arc Distance mm (in.)	⁽²⁾ IEC Wet Switching Impulse Withstand (ANSI 60 Hz. Dry F.O.) kV	⁽²⁾ IEC Power Freq. Wet Withstand (ANSI 60 Hz. Wet F.O.) kV	⁽²⁾ IEC Lightning Impulse Withstand (ANSI Critical Impulse F.O.) kV	
70	110	132	161	220	330	400		51	A1	D1	G1							Pos-kV	Neg-kV
								1150 (45)	1340 (53)	1530 (60)	1760 (69)	XX30032A07	795 (30.8)	12	470 (18.5)	260 (180)	135 (180)	275 (310)	255 (285)
								1540 (60)	1790 (70)	2040 (80)	2350 (92)	XX30042A07	951 (37.0)	16	625 (24.6)	345 (245)	180 (240)	365 (410)	350 (390)
								1920 (75)	2230 (88)	2540 (100)	2920 (115)	XX30052A07	1104 (43.5)	20	775 (30.6)	420 (310)	220 (295)	450 (505)	440 (490)
								2310 (91)	2680 (105)	3060 (120)	3520 (138)	XX30062A07	1260 (49.6)	24	930 (36.8)	500 (370)	260 (350)	540 (605)	530 (595)
								2700 (106)	3130 (122)	3570 (140)	4110 (162)	XX30072A07	1416 (55.8)	28	1090 (42.9)	570 (430)	305 (405)	630 (700)	620 (695)
								3080 (121)	3580 (141)	4080 (160)	4700 (185)	XX30082A07	1572 (61.9)	32	1245 (49.0)	650 (490)	340 (455)	715 (795)	710 (795)
								3470 (136)	4020 (158)	4580 (180)	5280 (207)	XX30092A07	1724 (67.9)	36	1395 (55.0)	720 (545)	380 (505)	800 (890)	800 (890)
								3850 (151)	4480 (176)	5100 (200)	5870 (231)	XX30102A07	1880 (74.0)	40	1555 (61.2)	790 (600)	420 (555)	885 (985)	890 (990)
								4240 (167)	4930 (194)	5610 (221)	6460 (254)	XX30112A07	2036 (80.2)	44	1710 (67.3)	860 (655)	455 (605)	970 (1080)	975 (1090)
								4630 (182)	5370 (211)	6120 (241)	7050 (277)	XX30122A07	2192 (86.3)	48	1865 (73.5)	930 (710)	490 (655)	1050 (1170)	1065 (1185)
								5010 (197)	5820 (229)	6620 (261)	7630 (300)	XX30132A07	2344 (92.3)	52	2015 (79.5)	995 (760)	525 (700)	1135 (1260)	1145 (1280)
								5400 (212)	6270 (247)	7140 (281)	8220 (323)	XX30142A07	2500 (98.5)	56	2175 (85.6)	1060 (810)	560 (750)	1215 (1350)	1230 (1370)
								5790 (228)	6720 (264)	7650 (301)	8810 (347)	XX30152A07	2656 (104.6)	60	2330 (91.7)	1120 (855)	595 (790)	1295 (1440)	1315 (1465)
								6170 (243)	7170 (282)	8160 (321)	9400 (370)	XX30162A07	2812 (110.7)	64	2485 (97.9)	1185 (905)	625 (835)	1375 (1530)	1400 (1560)
								6560 (258)	7610 (299)	8670 (341)	9980 (393)	XX30172A07	2965 (116.7)	68	2635 (103.9)	1240 (945)	655 (880)	1455 (1615)	1480 (1650)
								6940 (273)	8060 (317)	9180 (361)	10570 (416)	XX30182A07	3120 (122.9)	72	2795 (110.0)	1300 (990)	690 (920)	1530 (1705)	1565 (1740)
								7330 (288)	8510 (335)	9700 (381)	11170 (439)	XX30192A07	3276 (128.9)	76	2950 (116.2)	1355 (1030)	720 (960)	1610 (1790)	1645 (1830)
								7720 (304)	8960 (353)	10210 (402)	11760 (463)	XX30202A07	3432 (135.2)	80	3105 (122.3)	1410 (1070)	745 (1000)	1685 (1875)	1725 (1920)
								8100 (319)	9400 (370)	10710 (421)	12330 (485)	XX30212A07	3585 (141.2)	84	3260 (128.3)	1460 (1110)	775 (1040)	1760 (1960)	1800 (2005)
								8490 (334)	9860 (388)	11220 (442)	12930 (509)	XX30222A07	3741 (147.3)	88	3415 (134.4)	1510 (1145)	800 (1075)	1835 (2040)	1880 (2090)
								8870 (349)	10310 (406)	11740 (462)	13520 (532)	XX30232A07	3897 (153.4)	92	3570 (140.6)	1560 (1180)	830 (1110)	1910 (2125)	1955 (2175)

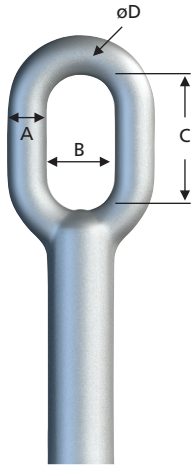
Notes:

- For voltages above 400 kV, and other section lengths, contact your HPS representative.
- Electrical values are without corona ring. For voltages equal to or greater than 161 kV, refer to the dedicated page within this section for corona rings and associated physical/electrical changes to the above data.

Ground Fitting	Line Fitting	Suffix Code	Length Change	
			Inches	mm
Eye	Eye	2000	+1.5	+40
Eye	IEC 20mm Ball	2007	+0.7	+18
ANSI 52-11 Socket	ANSI 52-11 Ball	2301	-0.6	-16
Eye	ANSI 52-11 Ball	2001	+0.1	+2
Y-Clevis	Eye	2200	+0.7	+19
Y-Clevis	ANSI 52-11 Ball	2201	-0.5	-13
Y-Clevis	IEC 20 mm Ball	2207	+0.1	+4
Eye	IEC 19L Clevis	2800	+1.2	+31

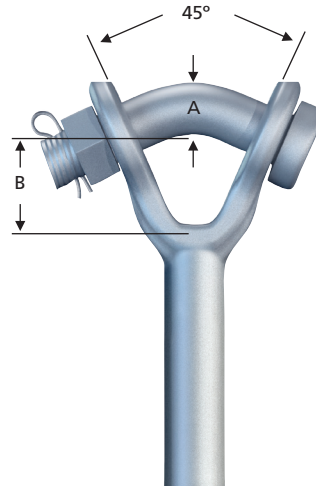


Most Common End Fittings



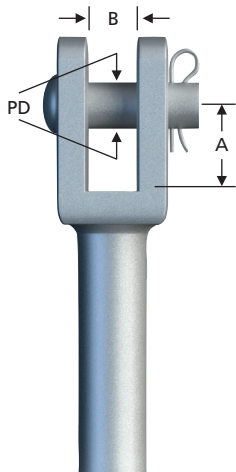
Chain Eye

SML	Dimensions mm (in.)			
	A	B	C	D
111 kN (25K lbs.)	15.74 (0.62)	25.4 (1.00)	50.8 (2.00)	15.74 (0.62)
120 kN	15.74 (0.62)	25.4 (1.00)	50.8 (2.00)	15.74 (0.62)
133 kN (30K lbs.)	19.05 (0.75)	25.4 (1.00)	50.8 (2.00)	21.59 (0.85)
160 kN (36K lbs.)	19.05 (0.75)	25.4 (1.00)	50.8 (2.00)	21.59 (0.85)
210 kN	19.05 (0.75)	25.4 (1.00)	50.8 (2.00)	21.59 (0.85)
222 kN (50K lbs.)	19.05 (0.75)	25.4 (1.00)	50.8 (2.00)	21.59 (0.85)



Y-Clevis

SML	Dimensions mm (in.)		
	A	B	Bolt Dia.
111 kN (25K lbs.)	19.05 (0.75)	38.86 (1.53)	19 (0.75)
120 kN	19.05 (0.75)	38.86 (1.53)	19 (0.75)
133 kN (30K lbs.)	22.35 (0.88)	40.39 (1.59)	22 (0.88)
160 kN (36K lbs.)	22.35 (0.88)	40.39 (1.59)	22 (0.88)
210 kN	22.35 (0.88)	40.39 (1.59)	22 (0.88)
222 kN (50K lbs.)	22.35 (0.88)	40.39 (1.59)	22 (0.88)



Straight Clevis

SML	Dimensions mm (in.)			
	Class	A	B	PD
111 kN (25K lbs.)	ANSI 52-6	36 (1.41)	19 (0.75)	16 (0.62)
120 kN	IEC 16C	36 (1.41)	19 (0.75)	16 (0.62)
133 kN (30K lbs.)	ANSI 52-6	36 (1.41)	19 (0.75)	16 (0.62)
160 kN (36K lbs.)	IEC 19L	46 (1.81)	21 (0.83)	19 (0.75)
210 kN	IEC 19L	46 (1.81)	21 (0.83)	19 (0.75)
222 kN (50K lbs.)	N/A			



Ball/Socket

SML	Class
111 kN (25K lbs.)	ANSI 52-5
120 kN	IEC 16 mm
133 kN (30K lbs.)	ANSI 52-5
160 kN (36K lbs.)	IEC 20 mm (ANSI 52-8)
210 kN	IEC 20 mm
222 kN (50K lbs.)	ANSI 52-11

Catalog Number Key

Hi*Lite XL 2.5" Line Post Insulators

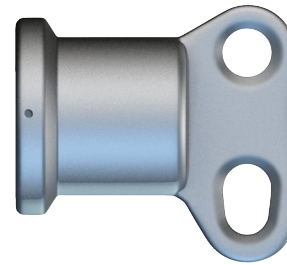
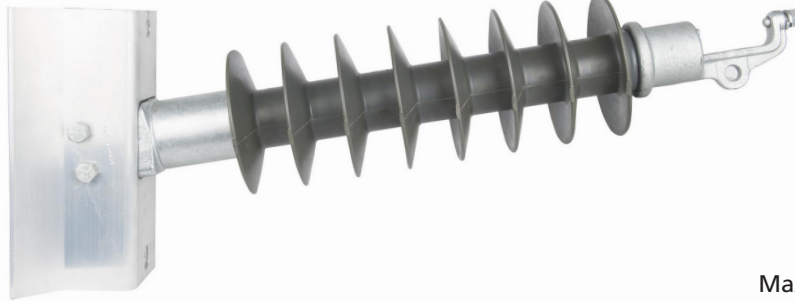
a HI*LITE XL POST The first 2 digits define the insulator type. In this example, we picked a Hi*Lite XL Line Post; therefore, we entered "52" in the boxes designated for "a." 5 2 aabbcddeee	f LINE END FITTINGS 0 = Two Hole Blade 1 = Horizontal Clamptop 2 = Vertical Clamptop 5 = 5" Bolt Circle (through) 9 = Two Hole Long Blade Fill in your selection in the box designated for section "f" In this example, a Two Hole Blade is requested. 5 2 2 0 0 8 1 1 aabcddefgg
b STRENGTH 2 = 2.5" DIA For example, if you want a Line Post with 2.5" DIA, this is what your form would look like so far: 5 2 2 aabcddefgg	g BASE END FITTINGS 00 = Unitary D.I. Gain (15/16" Holes) 02 = Al Gain 12 CL (15/16" Holes) 03 = Al Flat 8x10 (15/16" Holes) 04 = Al Flat 8x13 (15/16" Holes) 05 = 5" Bolt Circle (tapped 11/16" 07 = Steel Gain (15/16" Holes) 08 = Steel Flat 8 x 13 (15/16" Holes) Fill in your selection in the box designated for section "g." In this example, an Al Gain 12 CL (15/16" Holes) base end fitting is requested. 5 2 2 0 0 8 1 1 0 2 aabcddefgg
c CONSTRUCTION 0 = Standard Hardware 1 = Dull Hardware For example, if you want an insulator with Standard Hardware, this is what your form would look like so far: 5 2 2 0 aabcddefgg	example Hi*Lite XL Line Post, 2.5" DIA strength, standard hardware, 16 sheds, English labeling, Horizontal Clamptop line End Fitting with an Al Gain 12 CL (15/16" Holes)base end fitting. 5220081102
d WEATHERSHED CONFIGURATION Number of sheds equals this number times two For example, if you want an insulator with 16 Sheds, this is what your form would look like so far: 5 2 2 0 0 8 aabcddefgg	
e LABELING 1 = English 2 = Metric (1) M = English w/12" Corona Ring Fill in your selection in the box designated for section "e." In this example, English is requested. 5 2 2 0 0 8 1 aabcddefgg	

(1) Metric labeling only. Insulators and hardware are ANSI.



Horizontal Line Posts

2.5" (63.5 mm) Rod Diameter



Two Hole Blade End Fitting Reduces the "X" dimension by 0.75"

Clamptop:

Maximum Design Tension = 2,500 lb (11.1 kN)

Two-Hole Blade:

Maximum Design Tension = 7,500 lb. (33.4 kN)

Selection Guide: Typical Line Voltage, kV						Catalog # with Gain Base & Clamptop End Fittings	"X" Length Inches (mm)	Number of Sheds	Dry Arc Distance inches (mm)	Leakage Distance inches (mm)	⁽²⁾ 60 Flashover ANSI		⁽²⁾ Critical Flashover ANSI		RCL pounds (kN)	Net Weight pounds (kg)
69	115	138	161	230	345						Dry-kV	Wet- kV	Pos-kV	Neg- kV		
						5220041100	33.5 (851)	8	23 (584)	54 (1372)	215	195	340	455	2500 (11.1)	47 (21.3)
						5220051100	38.6 (980)	10	28 (711)	68 (1727)	270	245	420	535	2500 (11.1)	50 (22.7)
						5220061100	43.9 (1115)	12	33 (838)	82 (2083)	325	295	505	620	2135 (9.5)	54 (24.5)
						5220071100	49.2 (1250)	14	39 (991)	96 (2438)	385	340	590	705	1865 (8.3)	57 (25.9)
						5220081100	54.5 (1384)	16	44 (1118)	110 (2794)	440	385	675	785	1650 (7.3)	61 (27.7)
						5220091100	59.6 (1514)	18	49 (1245)	124 (3150)	490	430	760	865	1490 (6.6)	65 (29.5)
						5220101100	64.8 (1646)	20	55 (1397)	138 (3505)	545	475	845	950	1350 (6.0)	68 (30.9)
						5220111100	70.1 (1781)	22	60 (1524)	152 (3861)	600	520	930	1035	1235 (5.5)	72 (32.7)
						5220121100	75.4 (1915)	24	65 (1651)	166 (4216)	650	560	1015	1115	1140 (5.0)	75 (34.1)
						5220131100	80.5 (2045)	26	71 (1803)	180 (4572)	700	600	1095	1195	1060 (4.7)	79 (35.9)
						5220141100	85.8 (2180)	28	76 (1930)	194 (4928)	755	635	1180	1280	990 (4.4)	82 (37.2)
						5220151100	91.1 (2314)	30	81 (2057)	208 (5283)	805	675	1265	1365	925 (4.1)	86 (39.0)
						5220161100	96.3 (2446)	32	87 (2210)	222 (5639)	855	710	1350	1445	870 (3.6)	89 (40.4)
						5220171100	101.4 (2575)	34	92 (2337)	236 (5994)	905	745	1435	1525	820 (3.6)	93 (42.2)
						5220181100	106.7 (2710)	36	97 (2464)	250 (6350)	955	780	1520	1610	780 (3.5)	97 (44.0)
						5220191100	112.0 (2845)	38	103 (2616)	264 (6706)	1005	810	1605	1695	740 (3.3)	100 (45.4)

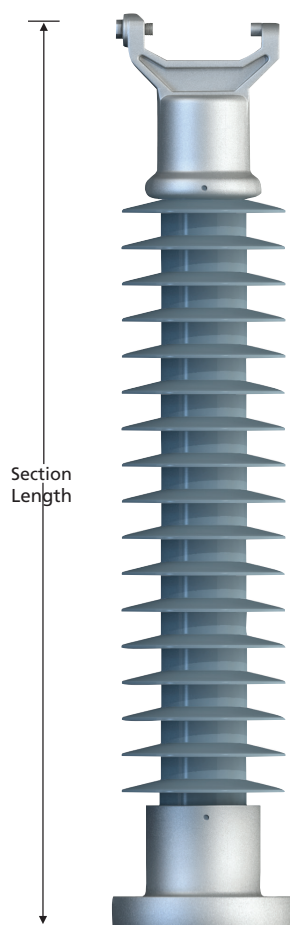
Notes:

- Tests in accordance with ANSI C29.1. Electrical values are without corona ring.
- RCL is the maximum continuous load at which the post should be applied. For voltages above 161 kV refer to the page discussing corona rings in this section. Dimensions are within allowable tolerances as specified in ANSI C29.11.

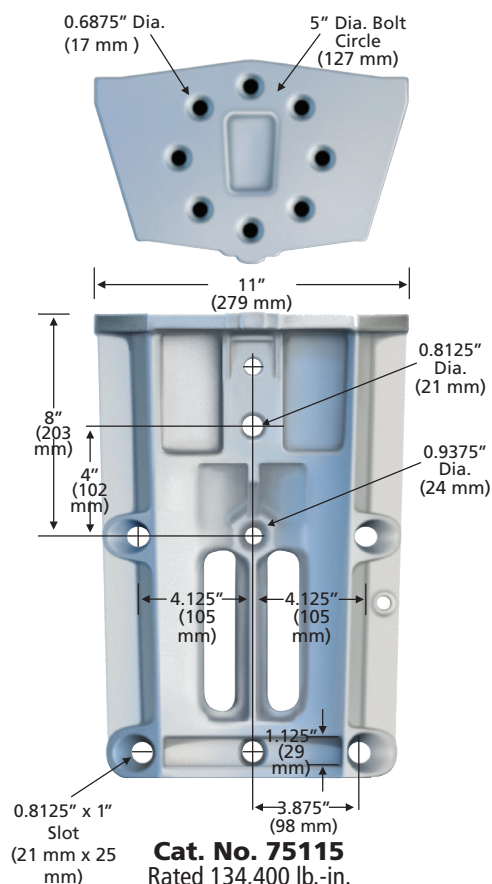
Vertical Line Posts

2.5" (63.5 mm) Rod Diameter

Maximum Design Tension = 2500 lbs. (11.1 kN)



Maximum Design Tension = 2,500 lbs. (11.1 kN)



Selection Guide: Typical Line Voltage, kV				Catalog # with 5" Bolt Circle & Vert. Clamp ⁽³⁾	"X" Length Inches (mm)	Number of Sheds	Dry Arc Distance inches (mm)	Leakage Distance inches (mm)	⁽²⁾ 60 Flashover ANSI		⁽²⁾ Critical Flashover ANSI		RCL pounds (kN)	Net Weight pounds (kg)
69	115	138	161						Dry-kV	Wet-kV	Pos-kV	Neg-kV		
				5220041205	30.7 (780)	8	23 (584)	54 (1372)	215	195	340	455	2500 (11.1)	27 (12.3)
				5220051205	35.9 (912)	10	28 (711)	68 (1727)	270	245	420	535	2475 (11.0)	30 (13.6)
				5220061205	41.3 (1049)	12	33 (838)	82 (2083)	325	295	505	620	2115 (9.4)	34 (15.4)
				5220071205	46.7 (1186)	14	39 (991)	96 (2438)	385	340	590	705	1850 (8.2)	37 (16.8)
				5220081205	52.1 (1323)	16	44 (1118)	110 (2794)	440	385	675	785	1640 (7.3)	41 (18.6)
				5220091205	57.4 (1458)	18	49 (1245)	124 (3150)	490	430	760	865	1480 (6.6)	45 (20.4)

Notes:

1. Tests in accordance with ANSI C29.1.
2. RCL is the maximum cantilever continuous load at which the post should be applied.
3. Mounting Base Catalog No. 75115 may be ordered with these Catalog numbers for a vertical assembly.



Vertical Line Posts

2.5" (63.5 mm) Rod Diameter

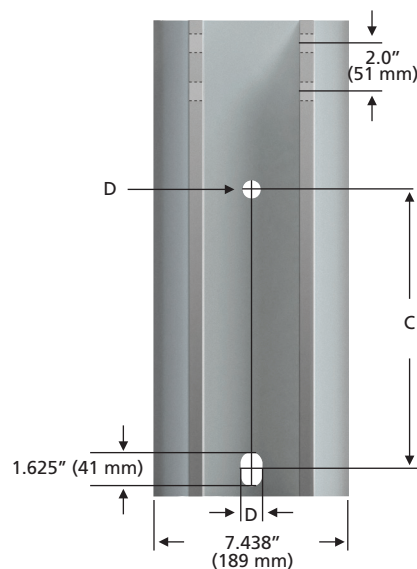
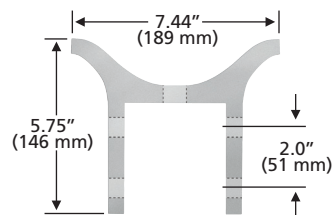
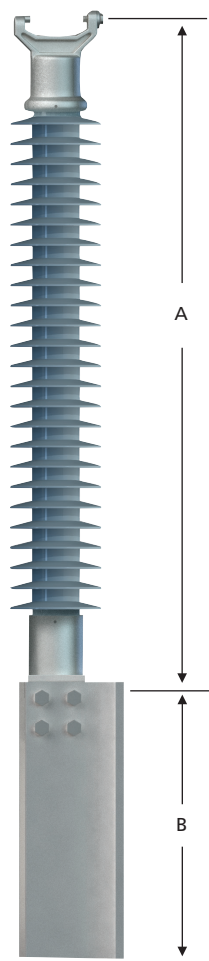


Table A

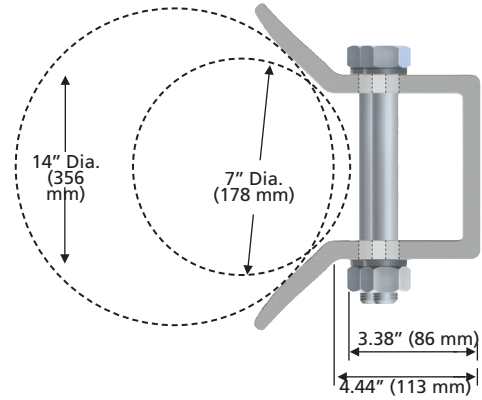
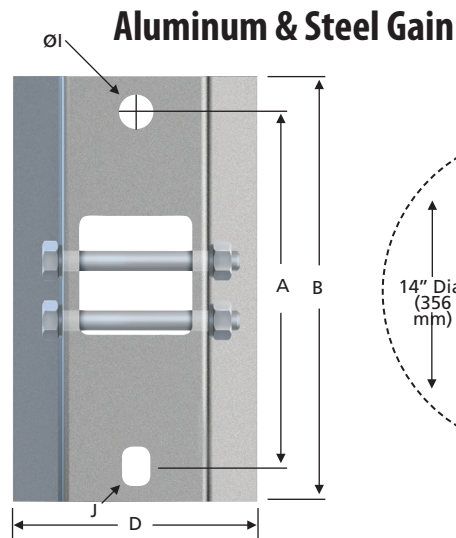
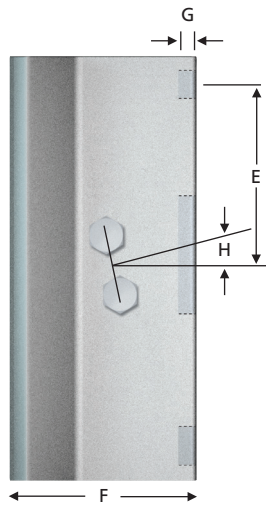
Selection Guide: Typical Line Voltage, kV				Catalog # with Vertical Clamptop & Base Code	"A" Length Inches (mm)
69	115	138	161		
				52200412XX	35.6 (772)
				52200512XX	41.0 (904)
				52200612XX	46.4 (1041)
				52200712XX	51.8 (1179)
				52200812XX	57.0 (1316)
				52200912XX	57.4 (1448)

Table B

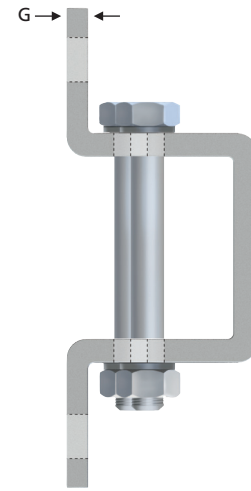
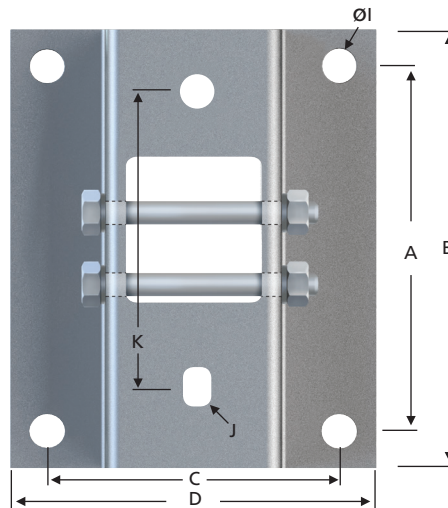
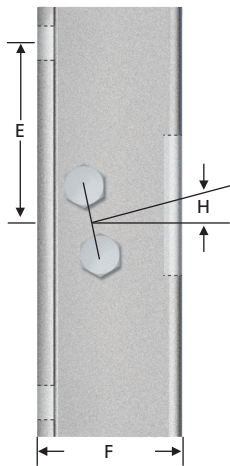
"XX" Code	Style	"B" Length Inches (mm)	"C" Length Inches (mm)	"D" Length Inches (mm)
20	Face	20 (508)	12 (305)	0.8125 (21)
21	Side	20 (508)	12 (305)	0.8125 (21)
22	Face	20 (508)	12 (305)	0.9375 (24)
23	Side	20 (508)	12 (305)	0.9375 (24)
24	Face	31.75 (806)	16 (406)	0.8125 (21)
25	Side	31.75 (806)	16 (406)	0.8125 (21)
26	Face	31.75 (806)	16 (406)	0.9375 (24)

Base Fittings

2.5" (63.5 mm) Rod Diameter



Aluminum & Steel Flat



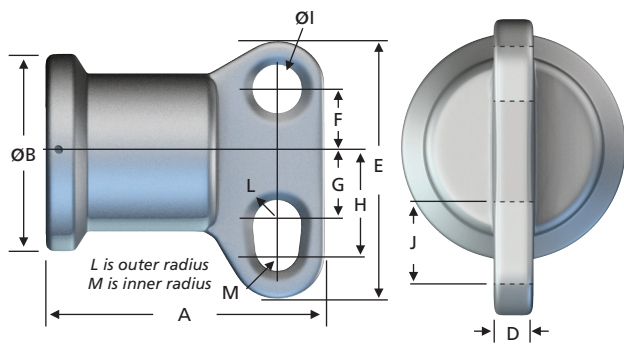
Horizontal and Vertical Bases inches (mm)

Type (Code)	A	B	C	D	E	F	G	H	I	J	K	Material
5" Bolt Circle (15)	4.75 (121)	6.25 (159)	3.63 (92)	0.90 (23)	5.0 (127)	-	-	-	0.69 (18)	-	-	60-40-18 D.I.
5" Bolt Circle (05)	4.75 (121)	6.25 (159)	3.63 (92)	0.90 (23)	5.0 (127)	-	-	-	5/8 - 11 UFS	-	-	60-40-18 D.I.
Aluminum Gain (02)	12.0 (305)	14.0 (356)	-	8.06 (205)	6.13 (156)	5.56 (141)	0.5 (13)	12°	0.94 (24)	0.94 X 1.31 (24x33)	-	6063 T5 AL
Aluminum Gain (12)	12.0 (305)	14.0 (356)	-	8.06 (205)	6.13 (156)	5.56 (141)	0.5 (13)	12°	0.81 (21)	0.94 X 1.31 (24x33)	-	6063 T5 AL
Steel Gain (07)	12.0 (305)	15.0 (381)	-	8.33 (212)	6.5 (165)	6.04 (153)	0.38 (10)	12°	0.94 (24)	0.94 X 2.0 (24x51)	-	Low Carbon Steel
Aluminum Flat (03)	10.0 (254)	12.0 (305)	8.0 (203)	10.0 (254)	5.0 (127)	4.0 (102)	0.5 (13)	12°	0.94 (24)	-	-	6063 T5 AL
Aluminum Flat (13)	10.0 (254)	12.0 (305)	8.0 (203)	10.0 (254)	5.0 (127)	4.0 (102)	0.5 (13)	12°	0.81 (21)	-	-	6063 T5 AL
Steel Flat (08)	13.0 (330)	15.0 (381)	8.0 (203)	10.0 (254)	6.5 (165)	4.0 (102)	0.38 (10)	12°	1.125 X 0.94 (26x24)	0.94 X 2.0 (24x51)	12.0 (305)	Low Carbon Steel
Aluminum Flat (04)	13.0 (330)	15.0 (381)	8.0 (203)	10.0 (254)	6.5 (165)	4.0 (102)	0.5 (13)	12°	0.94 (24)	0.94 X 1.31 (24x33)	12.0 (305)	6063 T5 AL
Aluminum Flat (14)	13.0 (330)	15.0 (381)	8.0 (203)	10.0 (254)	6.5 (165)	4.0 (102)	0.5 (13)	12°	0.81 (21)	0.81 X 1.31 (21x33)	12.0 (305)	6063 T5 AL

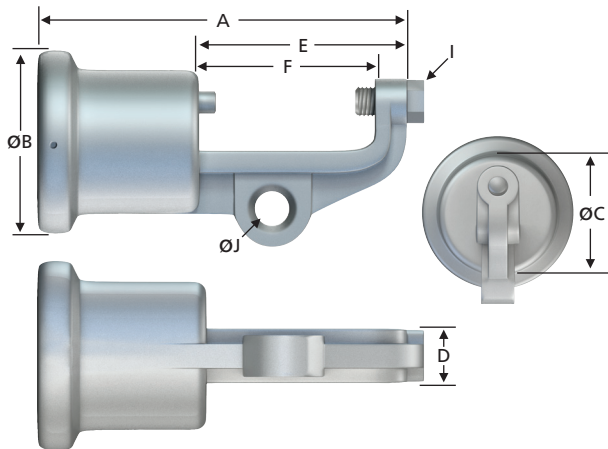
Line Fittings

2.5" (63.5 mm) Rod Diameter

Two Hole Blade

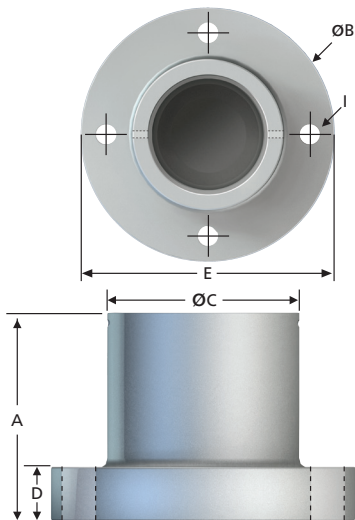


Horizontal Clamp-top



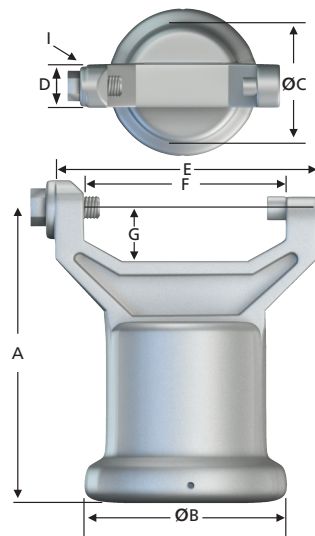
5" Bolt Circle

Line or Base Fitting



Vertical Clamp-top

Part per ANSI C29.7



Horizontal & Vertical End Fittings (in.)

Type (Code)*	A	B	C	D	E	F	G	H	I	J	L	M	Material
2 Hole Blade (0)	5.73	4.0	-	0.75	5.25	1.25	1.50	2.00	1.0	1.44	0.5R	0.44 R	60-40-18 D.I.
2 Hole Long Blade (9)	5.73	4.0	-	0.75	7.75	1.25	4.0	4.5	1.0	1.44	0.5R	0.44R	60-40-18 D.I.
H. Clamp-top (1)	8.24	4.0	3.30	1.12	4.72	4.0	-	-	5/8 - 11 UFS	0.75	-	-	60-40-18 D.I.
5" B.C. (3)	4.75	6.25	3.63	0.90	5.0	-	-	-	5/8 - 11 UFS	-	-	-	60-45-12 D.I.
5" B.C. (5)	4.75	6.25	3.63	0.90	5.0	-	-	-	0.69 x Holes	-	-	-	60-45-12 D.I.
V. Clamp-top (2)	5.88	4.0	3.30	1.12	5.37	4.0	1.06	-	5/8 - 11 UFS	-	-	-	60-40-18 D.I.

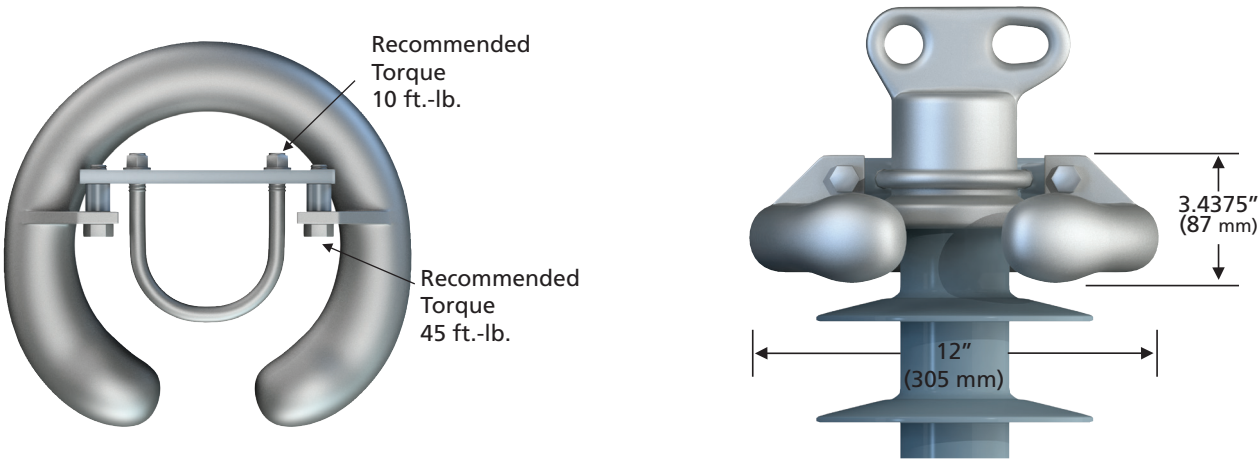
*Code is the 2nd number in the Suffix Code of the Catalog Number.



Corona Performance

Horizontal Line Posts

2.5" (63.5 mm) Rod Diameter



Part Number 2721273001
Control Ring

Application	161 kV & below	230 kV	345 kV
Line End	NONE	2721273001	2721273001
Ground End	NONE	NONE	NONE

Catalog Number Key

Hi*Lite XL 3.0" Line Post Insulators

a HI*LITE XL POST

The first 2 digits define the insulator type. In this example, we picked a Hi*Lite XL Line Post; therefore, we entered "52" in the boxes designated for "a."

5	2								
a	a	b	b	c	d	d	e	e	e

b STRENGTH

3 = 3.0" DIA

For example, if you want a Line Post with 3.0" DIA, this is what your form would look like so far:

5	2	3							
a	a	b	c	d	d	e	f	g	g

c CONSTRUCTION

0 = Standard Hardware
1 = Dull Hardware

For example, if you want an insulator with Standard Hardware, this is what your form would look like so far:

5	2	3	0						
a	a	b	c	d	d	e	f	g	g

d WEATHERSHED CONFIGURATION

Number of sheds equals this number times two

For example, if you want an insulator with 16 Sheds, this is what your form would look like so far:

5	2	3	0	0	8				
a	a	b	c	d	d	e	f	g	g

e LABELING

1 = English
2 = Metric (1)
M = English w/15" Corona Ring

Fill in your selection in the box designated for section "e." In this example, English is requested.

5	2	3	0	0	8	1			
a	a	b	c	d	d	e	f	g	g

f LINE END FITTINGS

0 = Two Hole Blade
1 = Horizontal Clamptop
2 = Vertical Clamptop

Fill in your selection in the box designated for section "f" In this example, a Two Hole Blade is requested.

5	2	3	0	0	8	1	1		
a	a	b	c	d	d	e	f	g	g

g BASE END FITTINGS

02 = Al Gain (1-1/16" Hole and 1-1/16" x 2-5/9" Slot)
04 = St Flat 14" CL (1-1/16" x 2-9/16" Slots)
05 = 5" Bolt Circle (Tapped)
07 = St Gain (1-1/16" Hole and 1-1/16" x 2-5/9" Slot)
08 = St Flat 9" x 13" (59/64" Holes)

Fill in your selection in the box designated for section "g." In this example, a St Flat 14" CL (1-1/16" x 2-9/16" Slots) base end fitting is requested.

5	2	2	0	0	8	1	1	0	4
a	a	b	c	d	d	e	f	g	g

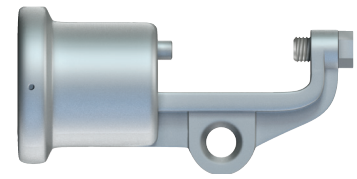
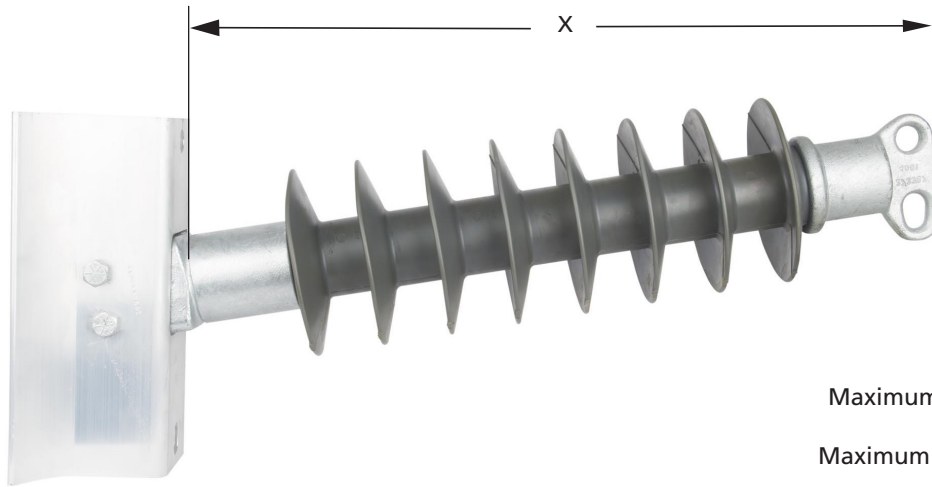
example

Hi*Lite XL Line Post, 2.5" DIA strength, standard hardware, 16 sheds, English labeling, Horizontal Clamptop line End Fitting with a St Flat 14" CL (1-1/16" x 2-9/16" Slots) base end fitting. 5230081104

(1) Metric labeling only. Insulators and hardware are ANSI.

Horizontal Line Posts

Hi*Lite XL 3.0"



Horizontal Clamptop End Fitting
Increases the "X" dimension by 1"

Clamptop:
Maximum Design Tension = 2,500 lb (11.1 kN)
Two-Hole Blade:
Maximum Design Tension = 12,500 lb. (55.6 kN)

Selection Guide: Typical Line Voltage, kV						Catalog # with Flat Base & Two Hole Blade		"X" Length Inches (mm)	Number of Sheds	Dry Arc Distance inches (mm)	Leakage Distance inches (mm)	⁽²⁾ 60 Flashover ANSI		⁽²⁾ Critical Flashover ANSI		⁽²⁾ RCL pounds (kN)	Net Weight pounds (kg)
69	115	138	161	230	345							Dry-kV	Wet-kV	Pos-kV	Neg-kV		
						5230051004		38.8 (986)	10	29 (737)	77 (1956)	295	250	445	540	4405 (19.6)	90 (40.8)
						5230061004		43.8 (1113)	12	34 (864)	93 (2362)	345	295	530	620	3780 (16.8)	95 (43.1)
						5230071004		49.0 (1245)	14	39 (991)	108 (2743)	395	335	615	705	3295 (14.7)	100 (40.9)
						5230081004		54.8 (1392)	16	45 (1143)	124 (3150)	445	380	695	790	2920 (13.0)	106 (48.1)
						5230091004		59.3 (1506)	18	50 (1270)	140 (3556)	495	420	780	870	2620 (11.7)	110 (49.9)
						5230101004		64.5 (1638)	20	55 (1397)	156 (3962)	545	465	865	955	2380 (10.6)	115 (52.2)
						5230111004		69.5 (1765)	22	60 (1524)	171 (4343)	590	505	950	1035	2185 (9.7)	120 (54.4)
						5230121004		74.7 (1897)	24	66 (1676)	187 (4750)	640	550	1035	1120	2015 (9.0)	125 (56.7)
						5230131004		79.9 (2029)	26	71 (1803)	203 (5156)	685	590	1120	1200	1865 (8.3)	130 (58.9)
						5230141004		85.0 (2159)	28	76 (1930)	218 (5537)	735	640	1205	1285	1740 (7.7)	135 (61.2)
						5230151004		90.2 (2291)	30	82 (2083)	234 (5944)	780	670	1290	1365	1630 (7.2)	141 (63.9)
						5230161004		95.2 (2418)	32	87 (2210)	250 (6350)	825	710	1370	1445	1535 (6.8)	146 (66.2)
						5230171004		100.4 (2550)	34	92 (2337)	265 (6731)	870	755	1455	1530	1450 (6.5)	151 (68.5)
						5230181004		105.5 (2680)	36	98 (2489)	281 (7137)	915	795	1540	1615	1370 (6.1)	156 (70.8)
						5230191004		110.7 (2812)	38	103 (2616)	297 (7544)	960	835	1625	1695	1300 (5.8)	161 (73.1)
						5230201004		115.9 (2944)	40	108 (2743)	313 (7950)	1000	875	1710	1780	1240 (5.5)	166 (75.3)

Notes:

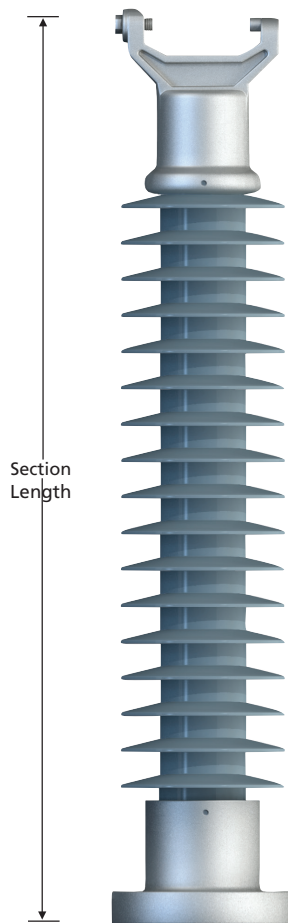
- Tests in accordance with ANSI C29.1. Electrical values are without corona ring.
- RCL is the maximum continuous load at which the post should be applied. Electrical values are shown for insulators without rings. For electricals with rings, contact Hubbell Power Systems.



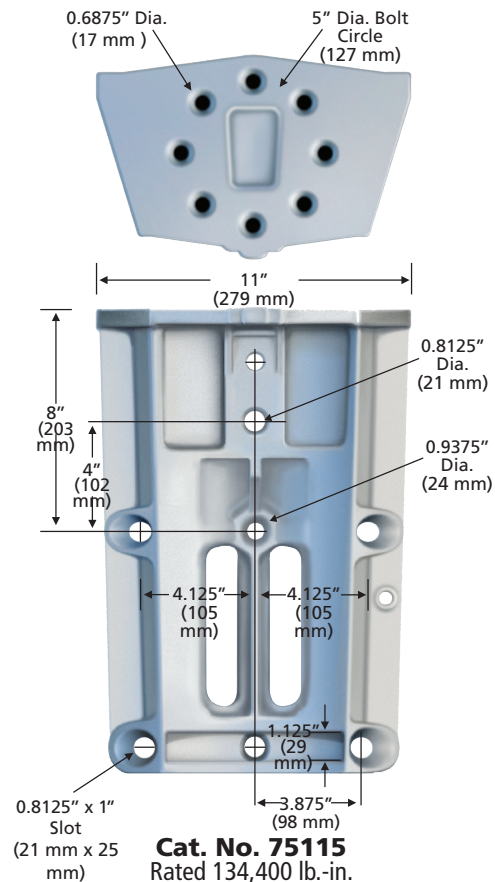
Vertical Line Posts

Hi*Lite XL 3.0"

Maximum Design Tension = 2,500 lb (11.1 kN)



Maximum Design Tension = 2,500 lbs. (11.1 kN)



Selection Guide: Typical Line Voltage, kV				Catalog # with 5" Bolt Circle & Vert. Clamp ⁽¹⁾	"X" Length Inches (mm)	Number of Sheds	Dry Arc Distance inches (mm)	Leakage Distance inches (mm)	⁽²⁾ 60 Flashover ANSI		⁽²⁾ Critical Flashover ANSI		RCL pounds (kN)	Net Weight pounds (kg)
69	115	138	161						Dry-kV	Wet-kV	Pos-kV	Neg-kV		
				5230051205	38.0 (965)	10	29 (737)	77 (1956)	295	250	445	540	2500 (11.1)	54 (24.5)
				5230061205	43.2 (1097)	12	34 (864)	93 (2362)	345	295	530	620	2500 (11.1)	59 (26.8)
				5230071205	48.5 (1219)	14	39 (991)	108 (2743)	395	335	615	705	2500 (11.1)	64 (29.1)
				5230081205	53.8 (1367)	16	45 (1143)	124 (3150)	445	380	695	785	2500 (11.1)	69 (31.4)
				5230091205	59.2 (1504)	18	50 (1270)	140 (3556)	495	420	780	870	2500 (11.1)	74 (33.6)
				5230101205	64.5 (1638)	20	55 (1397)	156 (3962)	545	465	865	950	2335 (10.4)	79 (35.9)

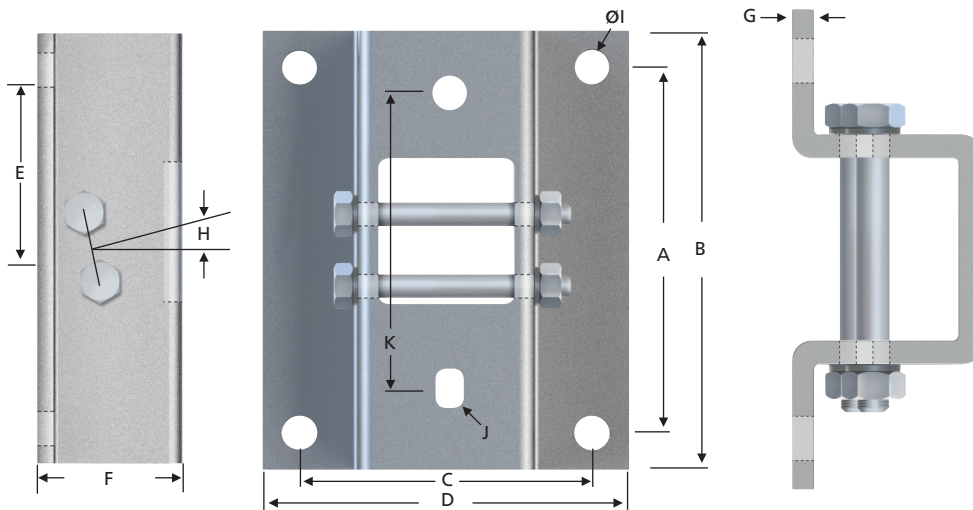
Notes:

1. Tests in accordance with ANSI C29.1.
2. RCL is the maximum cantilever continuous load at which the post should be applied.

Base Fittings

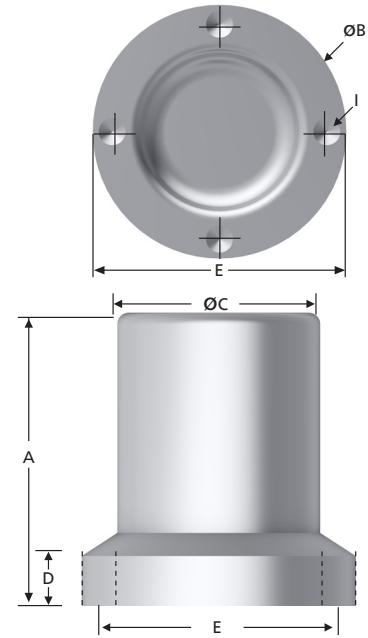
Hi*Lite XL 3.0"

Aluminum & Steel Flat

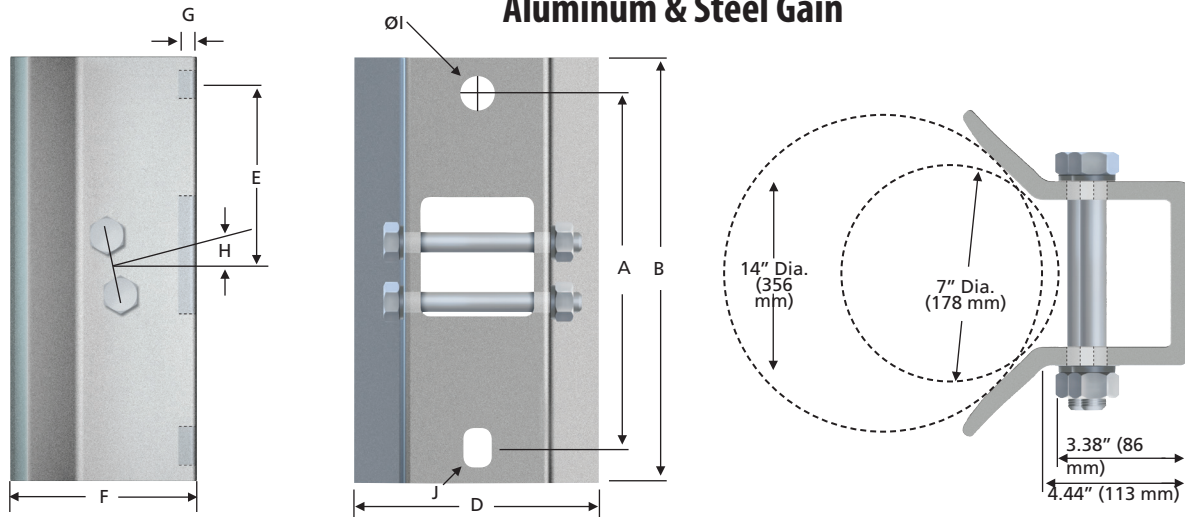


5" Bolt Circle

Line or Base Fitting



Aluminum & Steel Gain



Horizontal & Vertical Bases (in.)

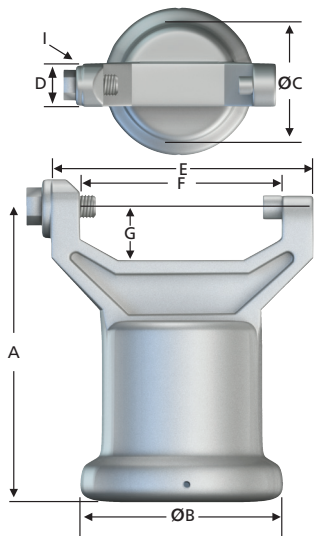
Type (Code)	A	B	C	D	E	F	G	H	I	J	K	Material
Aluminum Gain (02)	14.0 (356)	17.0 (432)	-	8.08 (205)	7.75 (197)	5.95 (151)	0.53 (13)	14°	1.06 (27)	1.06 X 2.56 (27 X 65)	-	6063 T5 AL
Aluminum Flat (03)	13.0 (330)	15.0 (381)	9.0 (229)	11.0 (279)	6.5 (165)	4.67 (119)	0.62 (16)	14°	0.92 (23)	-	-	6063 T5 AL
Steel Flat (04)	-	17.0 (432)	-	10.0 (254)	7.75 (197)	4.12 (105)	0.5 (13)	14°	-	1.06 X 2.56 (27 X 65)	14.0 (356)	Low Carbon Steel
5" Bolt Circle (05)	6.36 (162)	5.91 (150)	4.37 (111)	-	5.0 (127)	-	-	-	5/8-11 UFS	-	-	60-40-18 D.I.
Steel Gain (07)	14.0 (356)	17.0 (432)	-	9.65 (245)	7.75 (197)	7.03 (179)	0.5 (13)	14°	1.06 (27)	1.06 X 2.56 (27 X 65)	-	Low Carbon Steel
Steel Flat (08)	13.0 (330)	15.0 (381)	9.0 (229)	11.0 (279)	6.5 (165)	4.12 (105)	0.5 (13)	14°	0.92 (23)	-	-	Low Carbon Steel
Steel Flat (13)	10.0 (254)	12.0 (305)	8.0 (203)	10.0 (254)	5.0 (127)	4.12 (105)	0.5 (13)	14°	0.81 (21)	-	-	Low Carbon Steel
Aluminum Flat (14)	-	17.5 (445)	-	11.0 (279)	7.0 (178)	4.67 (119)	0.62 (16)	14°	-	1.06 X 2.00 (27 X 51)	14.0 (356)	6063 T5 AL

*Code is the 2nd number in the Suffix Code of the Catalog Number.

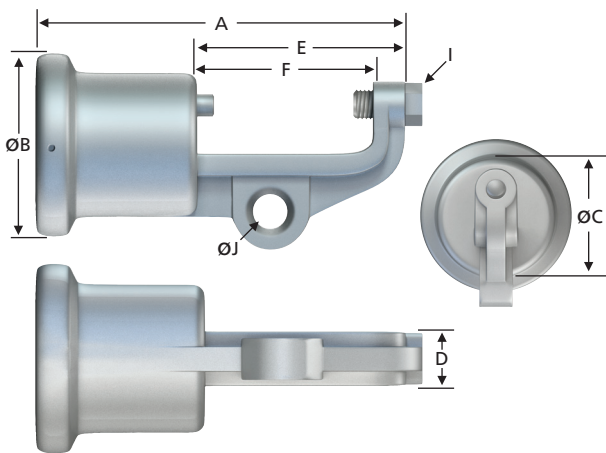


Line Fittings
Hi*Lite XL 3.0"

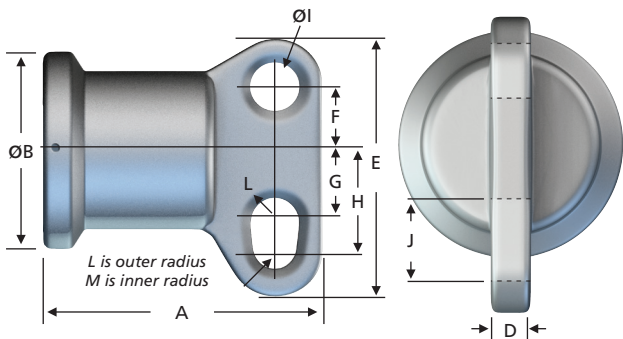
Vertical Clamptop
Part per ANSI C29.7



Horizontal Clamptop



Two Hole Blade



Horizontal & Vertical End Fittings (in.)

Type (Code)*	A	B	C	D	E	F	G	H	I	J	K	L	M	Material
Two Hole Blade	6.16	5.63	3.84	0.75	6.12	1.57	2.0	2.5	-	1.44	1.24	0.5R	0.44 R	60-40-18 D.I.
H. Clamptop (1)	8.64	5.63	3.84	1.12	4.72	4.0	-	-	5/8 - 11 UFS	0.75	-	-	-	6063 T5 Al
V. Clamptop (2)	6.31	5.63	3.84	1.12	5.37	4.0	1.06	-	5/8 - 11 UFS	-	-	-	-	Low Carbon Steel

*Code is the 2nd digit in the Suffix Code of the Catalog Number.



Clamptop Clamp

Hi*Lite XL 3.0"

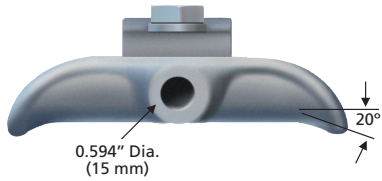
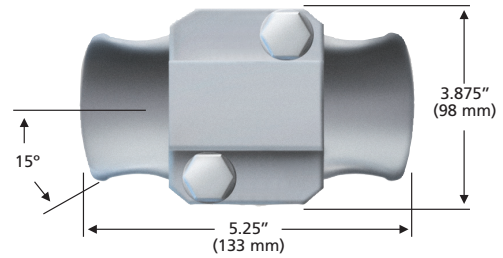
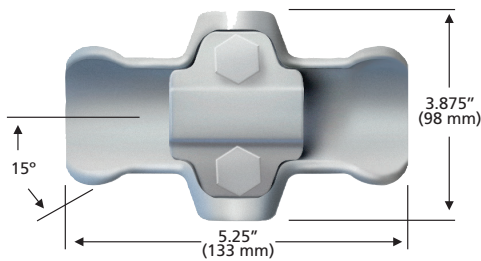


Figure 1

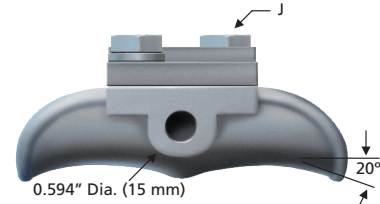


Figure 2

Clamptop clamps can be mounted directly on Hi*Lite XL posts if the posts are ordered with the horizontal or vertical clamptop option.

Catalog Number	Fig. No.	Body & Keeper Material	Clamping Range Inches (mm)	Ultimate Body Strength Lbs. (kN)
TSC57	1	356-T6 Al	0.25-0.57 (6.3-14.4)	2800 (1.273)
TSC106	1	356-T6 Al	0.50-1.06 (12.7-26.9)	2800 (1.273)
TSC150	1	356-T6 Al	1.00-1.50 (25.4-38.1)	2800 (1.273)
TSC200	2	356-T6 Al	1.50-2.00 (38.1-50.8)	2800 (1.273)

Jumper Clamps and Assemblies

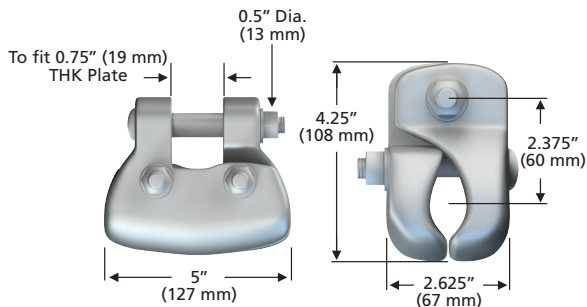


Figure 1

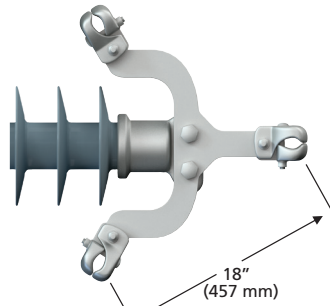


Figure 3

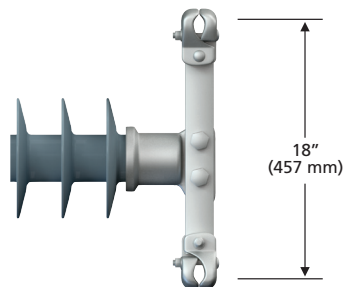


Figure 2

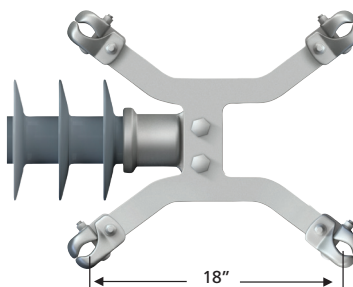


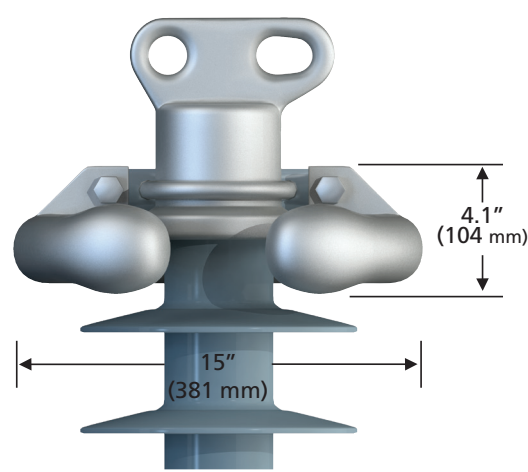
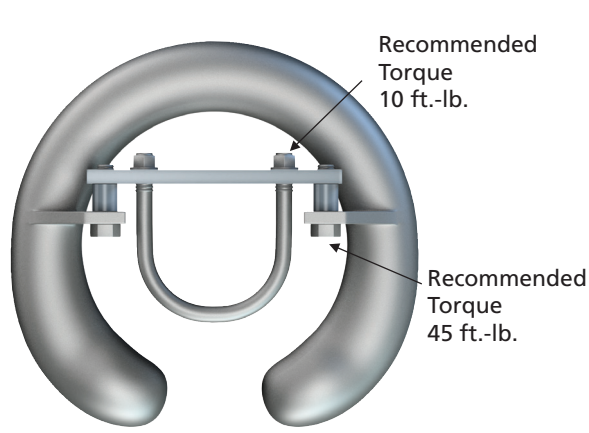
Figure 4

Fig. No.	Catalog Number	Yoke Type	Clamping Range Inches (mm)
1	976423002	None	1.00 - 1.40 (25 - 36)
1	976423003	None	1.40 - 1.60 (36 - 41)
1	600643001	None	1.60 - 2.00 (41 - 51)
2	2717243001	Dual	1.00 - 1.40 (25 - 36)
2	2717253001	Dual	1.40 - 1.60 (36 - 41)
2	2717263001	Dual	1.60 - 2.00 (41 - 51)
3	2721763001	Triple	1.00 - 1.40 (25 - 36)
3	2721773001	Triple	1.40 - 1.60 (36 - 41)
3	2721783001	Triple	1.60 - 2.00 (41 - 51)
4	2721793001	Quad	1.00 - 1.40 (25 - 36)
4	2721803001	Quad	1.40 - 1.60 (36 - 41)
4	2721813001	Quad	1.60 - 2.00 (41 - 51)



Line Posts

Hi*Lite XL 3.0"



Part Number 2737743001
Control Ring

Application	138/161 kV	230 kV	345 kV
Line End	NONE	2737743001	2737743001
Ground End	NONE	NONE	NONE

HI*
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Notes

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About Hubbell Power Systems

Hubbell Power Systems (HPS) manufactures a wide variety of transmission, distribution, substation, OEM and telecommunications products used by utilities. HPS products are also used in the civil construction, transportation, gas and water industries. Our product line includes construction and switching products, tools, insulators, arresters, pole line hardware, cable accessories, test equipment, transformer bushings and polymer precast enclosures and equipment pads.

Because Hubbell has a policy of continuous product improvement. We reserve the right to change design and specifications without notice.

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Catalog CA_08_051_E

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