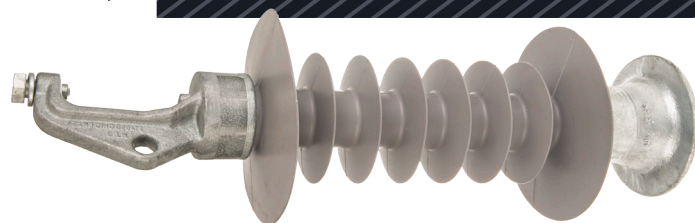
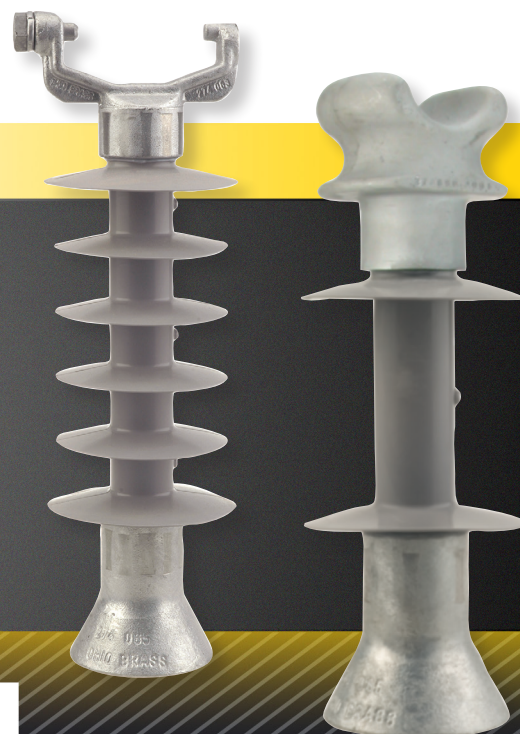


Veri*Lite™ LINE POST INSULATORS

for 15-69kV Applications

Experience & Reliability



Warranty—Material

Hubbell Power Systems, Inc. warrants all products sold by it to be merchantable (as such term is defined in the Uniform Commercial Code) and to be free from defects in material and workmanship. Buyer must notify the Company promptly of any claim under this warranty. The Buyer's exclusive remedy for breach of this warranty shall be the repair or replacement, F.O.B. factory, at the Company's option, of any product defective under the warranty which is returned to the Company within one year from the date of shipment. NO OTHER WARRANTY, WHETHER EXPRESS OR ARISING BY OPERATION OF LAW, COURSE OF DEALING, USAGE OF TRADE OR OTHERWISE IMPLIED, SHALL EXIST IN CONNECTION WITH THE COMPANY'S PRODUCTS OR ANY SALE OR USE THEREOF.

The Company shall in no event be liable for any loss of profits or any consequential or special damages incurred by Buyer. The Company's warranty shall run only to the first Buyer of a product from the Company, from the Company's distributor, or from an original equipment manufacturer reselling the Company's

product, and is non-assignable and non-transferable and shall be of no force and effect if asserted by any person other than such first Buyer. This warranty applies only to the use of the product as intended by Seller and does not cover any misapplication or misuse of said product.

Warranty—Application

Hubbell Power Systems, Inc. does not warrant the accuracy of and results from product or system performance recommendations resulting from any engineering analysis or study. This applies regardless of whether a charge is made for the recommendation, or if it is provided free of charge.

Responsibility for selection of the proper product or application rests solely with the purchaser. In the event of errors or inaccuracies determined to be caused by Hubbell Power Systems, Inc., its liability will be limited to the re-performance of any such analysis or study.



Line Posts

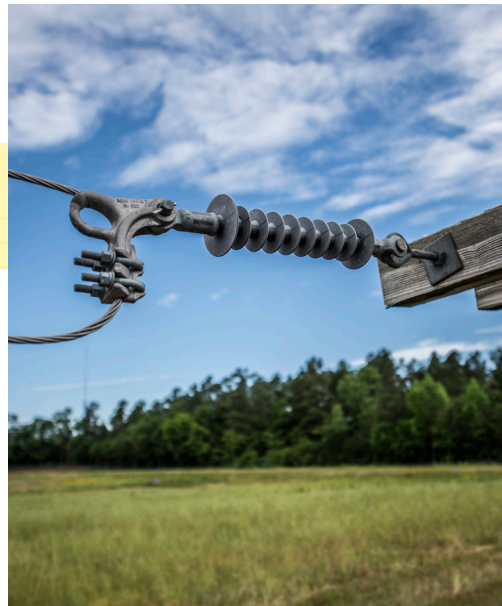
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Experience

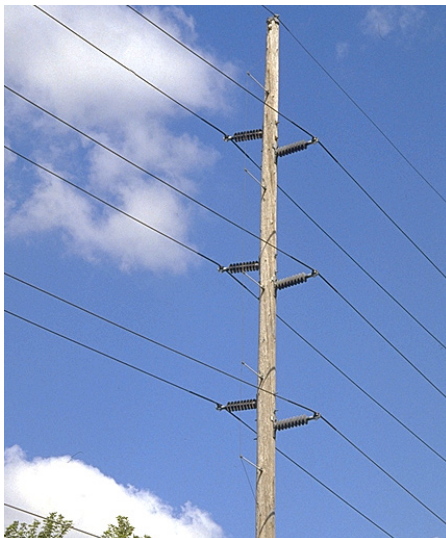


Veri*Lite Insulators embody the latest features available in polymer insulator design and manufacture.

Ohio Brass began its efforts in polymer research in the early 1900s. After years of production and research with polymeric compounds in the high voltage insulation field, Ohio Brass introduced the



Hi*Lite insulator in 1976. A decade later the Ohio Brass polymer distribution arrester, PDV-100, was introduced as the first U.S. made polymer-housed MOV arrester.



Today's Veri*Lite post insulators build upon the experience of placing nearly 30 million polymer distribution arresters, 20 million polymer deadend distribution insulators and 2 million high voltage transmission insulators in service. Ohio Brass is dedicated to providing a quality product for the electric utility industry.

Performance



Distinguished by Design

The structural design of the Veri*Lite insulator consists of three basic parts:

Rod — Veri*Lite insulator fiberglass rod is produced from the highest quality materials. Strands are aligned for maximum tensile strength. The rod is filled 65 percent, by volume, with electrical grade corrosion resistant glass fibers.

End Fittings — Ferrous end fittings are directly crimped to the fiberglass rod by a circumferential crimping process originated by Ohio Brass. The crimp requires no intermovement of the parts to achieve high strength, nor does it introduce potting compounds or adhesives.

Weathersheds — Veri*Lite insulators are manufactured with OB's proprietary silicone rubber, the same proven material used in Quadri*Sil Transmission Insulators.

Ohio Brass uses several tests to evaluate materials. Tracking, QUV, corona cutting, salt fog, oxidative stability and variations of differential thermal analysis tests assure the quality of OB's shed material.

Product Performance

Leakage Distance — Veri*Lite Insulators feature high leakage distance for optimum contamination performance.

Cleaning — The Veri*Lite insulators listed in this catalog are suitable for washing by all known methods in current use. Washing tests have been conducted with high-pressure equipment at close nozzle-to-insulator distances. No water intrusion occurred after multiple washings.

Standards — Veri*Lite line post insulators meet the latest ANSI C29.18 and CSA C411.6 standards. The Ohio Brass facility in Aiken, SC, USA is registered for successful implementation of a quality system in accordance with ISO 9001-2008.

Mechanical Ratings — Specified Cantilever Load (SCL) is the ultimate cantilever strength rating. Maximum Design Cantilever Load (MDCL) or Working Cantilever Load (WCL) is the maximum continuous cantilever load to which the post insulator should be applied, usually 50% of SCL.

Markings — Markings are 0.12 inch high raised letters in the rubber and include: Base catalog number, CSA C411.6 Class, SCL in pounds, MDCL/WCL in kN and date code. Ohio Brass identification is cast into the end fittings.

Equivalency — Equivalency of line post insulators involves a check of the general characteristics.

Mechanical

Compare the SCL of the polymer insulator to the cantilever strength rating of the porcelain insulator.

Electrical

Compare porcelain to Veri*Lite leakage distance.
Compare porcelain to Veri*Lite section length.

Insulation Coordination — The operating performance of a distribution or transmission line depends on its insulation level. It must not flash over under practically any operating condition. Several methods of coordination of line and station insulation have been proposed. Generally, the best method is to establish a definite common insulation level for all the station insulation and then match that level with the line insulation. With this approach, the Satisfactory performance is generally achieved with an insulator which has a dry 60 Hz flashover of three to five times the phase-to-ground voltage and a leakage distance approximately twice the shortest air-gap (strike) distance.

Packaging — Veri*Lite insulator standard packing is cartons on pallets. Larger orders for Veri*Lite posts may be shipped in wood crates.



Sample Polymer Specification

Purpose: To ensure a suitable service life of polymer insulating materials.

I. Material Design Tests

The following must be performed to certify a material for use in production.

1. Tracking test: Performed on a sample of material inclined at 30° and electrodes positioned 35 mm apart. Samples are sprayed with a conductive solution (400 Ωcm) and energized at 10 kV. The cycle is repeated every 90 seconds. The sample passes if there is:

1. No carbonization or tracking.
2. No erosion through sample.
3. No leakage current flow at the end of 90 seconds.

The sample must withstand 20,000 test cycles.

2. Ultraviolet Test: Samples of the rubber must be tested in a QUV tester or equivalent cyclic weatherometer. The samples are exposed to high ultraviolet radiation and high humidity without cracking, checking or becoming hydrophilic. The sample is judged to have passed this test if it exceeds 8,000 hours of exposure without damage.

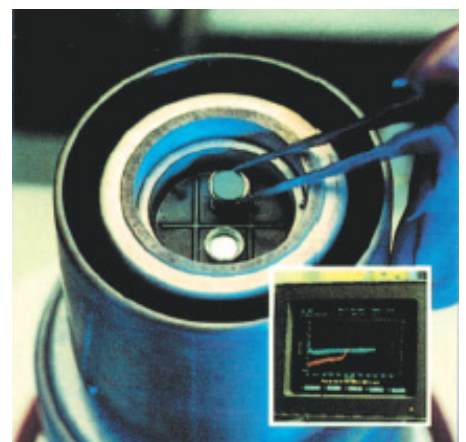
3. Corona Cutting: Samples 5 cm by 7 cm are subjected to mechanical stress of 300,000 microstrain by bending samples around a grounded electrode. A needle-like electrode is placed 1 mm from the surface of the sample and energized at 12 kV in a controlled humidity chamber. The sample is judged to have passed this test if there is no splitting or cutting. Samples must pass 1,000 hours of exposure to this test.

4. Oxidative Stability: Samples of the polymer compound are tested using differential scanning calorimetry. Samples are heated rapidly in a nitrogen atmosphere to the test temperature of 200°C. The atmosphere is then changed to oxygen, and the temperature is maintained until the antioxidant is consumed, as measured by an exothermic chemical reaction. The time for this reaction to occur must exceed 400 minutes.

5. Tear Strength: Rubber test slabs are prepared in accordance with ASTM Standards and are tested to determine tear strength of the material. The acceptable nominal tear strength, per ASTM method B, is 100 lb./in.

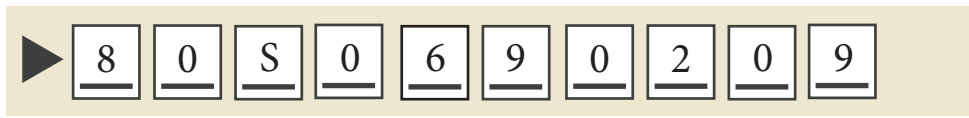
II. Other Requirements

The manufacturer must supply upon request a listing of routine tests performed to ensure production compliance with design tests.



Reliability

Catalog Number Key - Veri*Lite Line Post Insulators - Silicone



Polymer Type

80S = Veri*Lite SR Polymer

Hardware Finish

0 = Standard

Rating

15 = 15kV (1.5" rod)
 25 = 25kV (1.5" rod)
 28 = 35kV (1.5" rod)
 46 = 46kV (1.75" rod)
 69 = 69kV (1.75" rod)

Bottom End Fitting

00 = Gain Base-Transverse
 09 = 3/4" Stud Base
 10 = 7/8" Stud Base

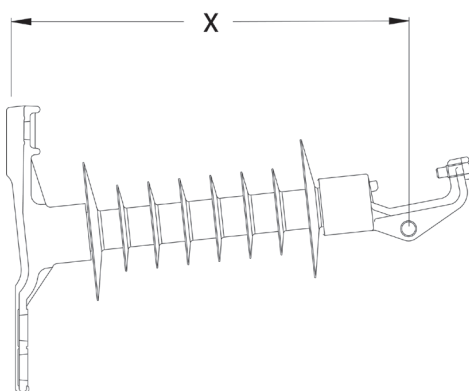
Top End Fitting

0 = Teardrop Blade*
 1 = Horizontal Clamptop
 2 = Vertical Clamptop
 5 = 5" B.C. Through
 6 = Horizontal Clamptop (longer pintle bolt)
 A = Vertical Clamptop (longer pintle bolt)
 F = 'F' Neck
 U = Universal Clamp Fixed Saddle
 H = Hotstick Operable Universal Clamp

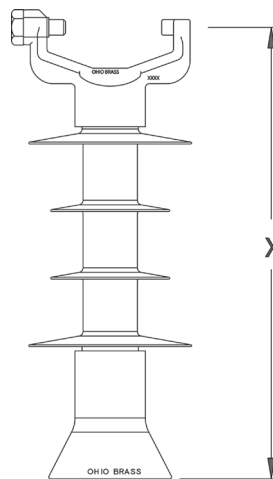
*Teardrop Blade only available for 46-69kV

Dimensioning

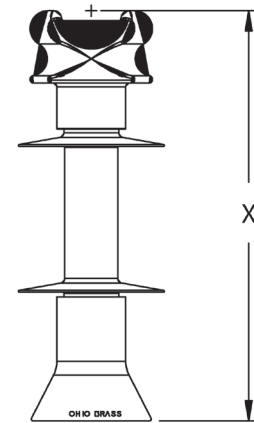
0 = ANSI C29.18 Quality Conformance Tests
 6 = Sample Tests
 9 = Special



Horizontal Clamptop & Gain Base
(0100)



Vertical Clamptop & Stud
Base (0209 & 0210)



F-Neck & Stud Base
(0F09 & 0F10)

Silicone Rubber Line Post Insulators

Veri*Lite™ Silicone Rubber Line Post Insulators with Universal Clamp for 15-69kV Applications

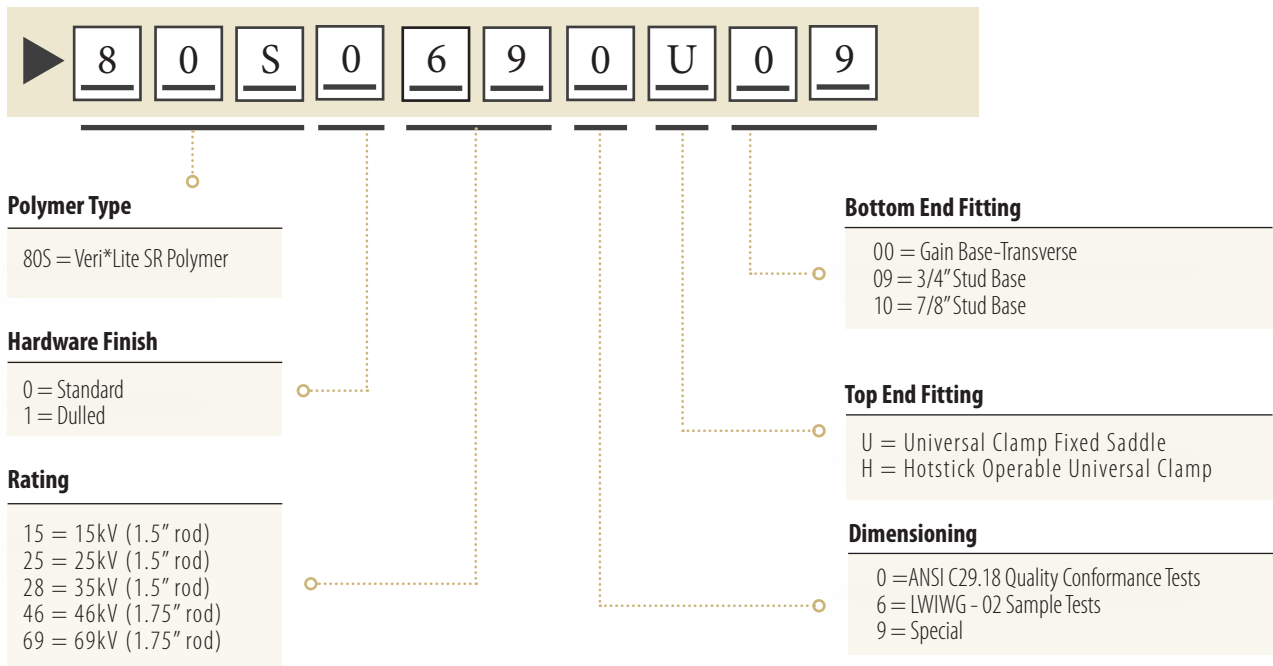
The Ohio Brass Universal Clamp end fitting is used with the Veri*Lite™ Line Post (VLLP) insulator family. Combining the proven direct bond silicone technology of the Ohio Brass VLLP design, the Universal Clamp offers a flexible range-taking connection that can be installed in either the vertical or horizontal direction. The Universal Clamp design eliminates the need for a separate additional conductor clamp; saving both money and installation time. In addition, the optional hotstick-operable feature provides flexibility for live-line work.

Design Features

- Proven direct bond interface
- Weathersheds molded with proprietary silicone rubber compound
- Universal clamp works for a conductor diameter range of 0.30" (7.6 mm) to 1.34" (34 mm) to provide flexibility in the field
- Hot Stick option allows for live-line operability
- Can be installed in vertical or horizontal directions, thus reducing inventory
- Integral design eliminates need for additional trunnion clamp
- Meets requirements of the latest edition of CSA 411.6 and ANSI C29.18
- Ductile iron end fittings compatible with copper conductors.



CATALOG NUMBER KEY Veri*Lite Line Post Insulators - Silicone



Line Post Mechanical and Electrical Characteristics

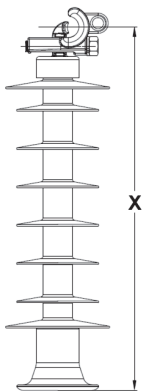
kV	Post Style	Line	Base	Catalog Number	ANSI C29.18 Class	CEA LWIWG-02 Class	"X" Dimension Inches (mm)	Line & Gnd End Shed Dia. Inches (mm)	Intermediate Shed Quantity	Intermediate Shed Dia. Inches (mm)	Dry Arc Distance Inches (mm)
15	Horz	Clamptop	Gain	80S015-0100	51-31	LP 15	12.5 (318)	4.8 (121)	0		7.4 (188)
	Horz	Clamptop	3/4-10 Tap	80S015-0109	51-21		13.3 (339)				
	Vert	Clamptop	3/4-10 Tap	80S015-0209	51-11		12.8 (324)				
	Vert	F-Neck	3/4-10 Tap	80S015-0F09	51-1F		12.4 (315)				
25	Horz	Clamptop	Gain	80S025-0100	51-32	LP 25	14.3 (362)	5.2 (132)	2	3.8 (96)	9.6 (244)
	Horz	Clamptop	3/4-10 Tap	80S025-0109	51-22		15.1 (383)				
	Vert	Clamptop	3/4-10 Tap	80S025-0209	51-12		14.5 (368)				
	Vert	F-Neck	3/4-10 Tap	80S025-0F09	51-2F		14.2 (360)				
35	Horz	Clamptop	Gain	80S028-0100	51-33	LP 28M	16.5 (420)	5.1 (130)	4	4.6 (117)	11.7 (297)
	Horz	Clamptop	3/4-10 Tap	80S028-0109	51-23		17.4 (441)				
	Vert	Clamptop	3/4-10 Tap	80S028-0209	51-13		16.8 (425)				
	Vert	F-Neck	3/4-10 Tap	80S028-0F09	51-3F		16.5 (418)				
46	Horz	Blade	Gain	80S046-0000	--	LP 46	19.2 (488)	7.1 (179)	6	4.4 (112)	14.4 (390)
	Horz	Blade	3/4-10 Tap	80S046-0009	--		20.0 (508)				
	Horz	Clamptop	Gain	80S046-0100	51-34		19.0 (482)				
	Horz	Clamptop	3/4-10 Tap	80S046-0109	51-24		19.8 (504)				
	Vert	Clamptop	3/4-10 Tap	80S046-0209	51-14		20.1 (510)				
	Vert	F-Neck	3/4-10 Tap	80S046-0F09	51-4F		19.5 (495)				
69	Horz	Blade	Gain	80S069-0000	--	LP 69M	25.8 (656)	7.5 (190)	8	5.2 (132)	22.3 (566)
	Horz	Blade	3/4-10 Tap	80S069-0009	--		26.6 (676)				
	Horz	Clamptop	Gain	80S069-0100	51-36		25.6 (650)				
	Horz	Clamptop	3/4-10 Tap	80S069-0109	51-26		26.5 (672)				
	Vert	Clamptop	3/4-10 Tap	80S069-0209	51-16		26.8 (680)				
	Vert	F-Neck	3/4-10 Tap	80S069-0F09	--		26.1 (663)				

NOTES:

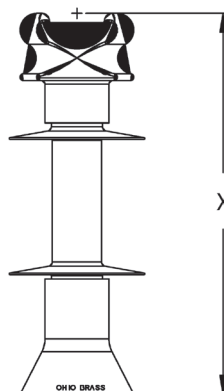
1. Maximum Design Tension for Clamptop is 2500 pounds (11 kN) - See addendum #1
2. 15, 25 & 28 kV Units use 1.5 inch (38 mm) Diameter Rod
3. 46 & 69 kV Units use 1.75 inch (44 mm) Diameter Rod
4. Maximum Design Tension for Teardrop Blade is 5000 pounds (22 KN)



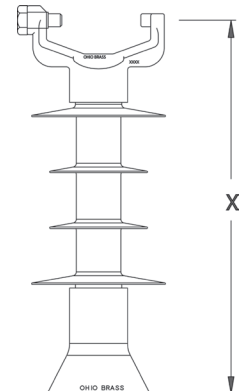
Leakage Distance Inches (mm)	60 Hz (Low Frequency) Flashover		Impulse Critical Flashover Pos. kV	Impulse Positive Withstand kV	SCL pounds (kN)	MDCL/ WCL pounds (kN)	Net Weight pounds (kg)	Standard Package Quantity			kV
	Dry-kV	Wet-kV						Carton	Pallet	Max/Crate	
11.0 (279)	90	70	150	140	2800 (12.5)	1235 (5.5)	9.8 (4.5)	3	36	--	15
							6.9 (3.1)		60		
							6.5 (2.9)		60		
							6.6 (3.0)		60		
17.3 (439)	110	75	185	170	2800 (12.5)	1235 (5.5)	10.3 (4.7)	3	36	--	25
							7.3 (3.3)		60		
							7.0 (3.2)		60		
							7.1 (3.2)		60		
26.1 (662)	135	100	215	200	2800 (12.5)	1235 (5.5)	11.2 (5.1)	3	36	--	35
							8.2 (3.7)		60		
							7.8 (3.5)		60		
							8.0 (3.6)		60		
34.3 (872)	170	125	260	235	2800 (12.5)	1235 (5.5)	19.7 (8.9)	--	--	14/21/28/35	46
							14.6 (6.6)			70	
							18.6 (8.4)			14/21/28/35	
							13.5 (6.1)			70	
							14.1 (6.4)			70	
							13.9 (6.3)			70	
58.2 (1478)	230	180	360	330	2470 (11.0)	1235 (5.5)	22.1 (10.0)	--	--	14/21/28/35	69
							16.9 (7.7)			35	
							21.0 (9.5)			14/21/28/35	
							15.9 (7.2)			35	
							16.5 (7.5)			35	
							12.0 (5.4)			35	



Universal Clamp-top & Stud
Base (0U09 & 0U10)

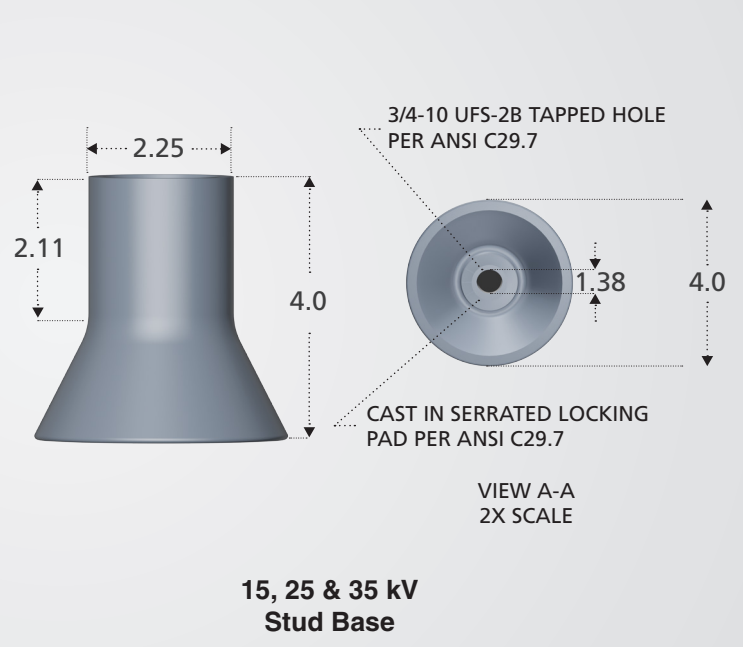
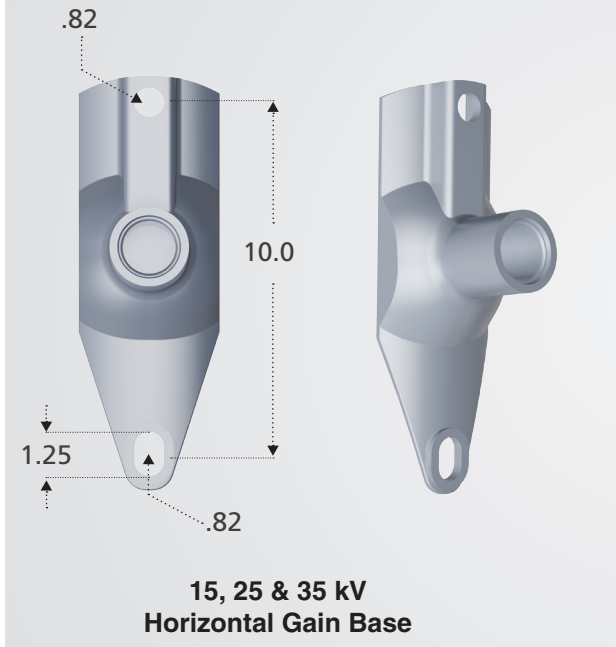


F-Neck & Stud Base
(0F09 & 0F10)

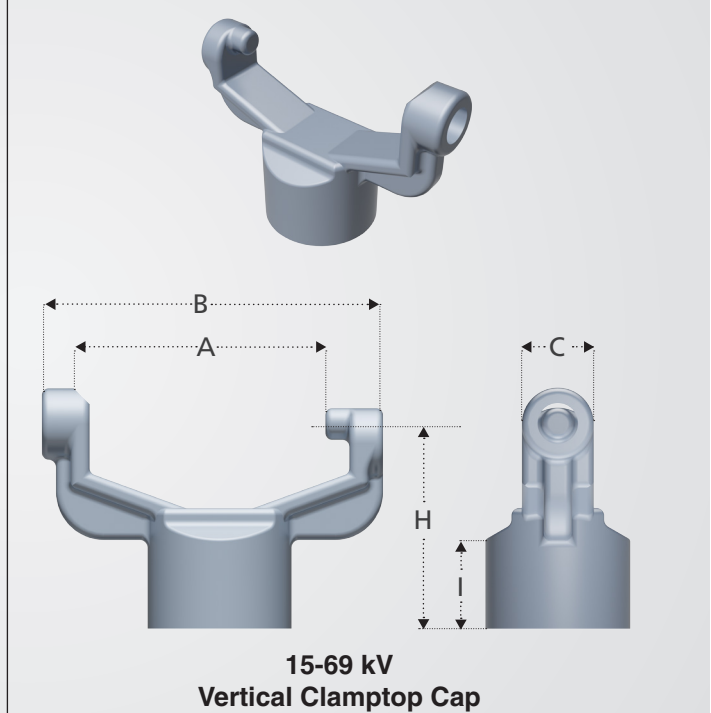
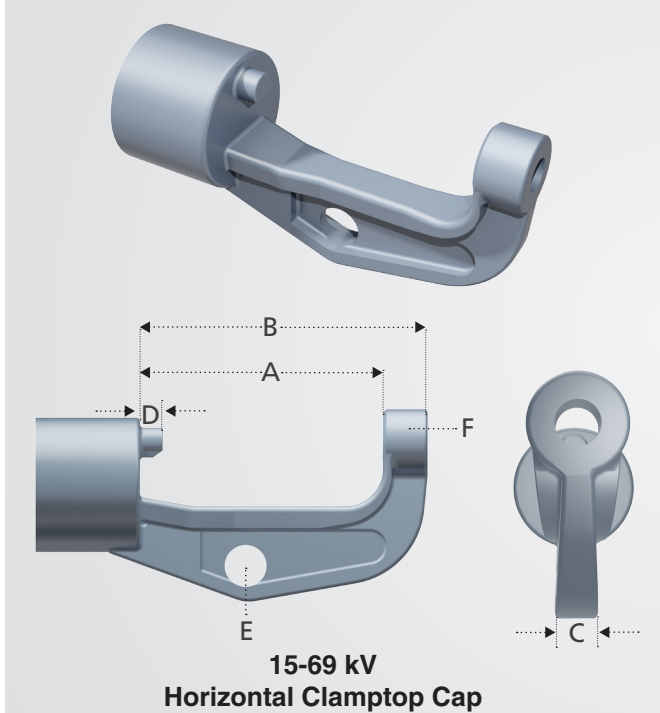


Vertical Clamp-top & Stud
Base (0209 & 0210)

Post Base Fittings Dimensions (In Inches)



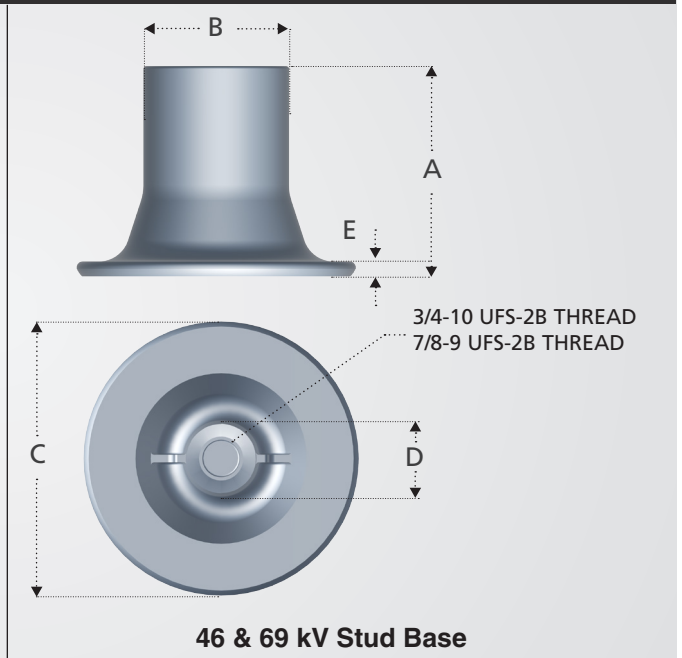
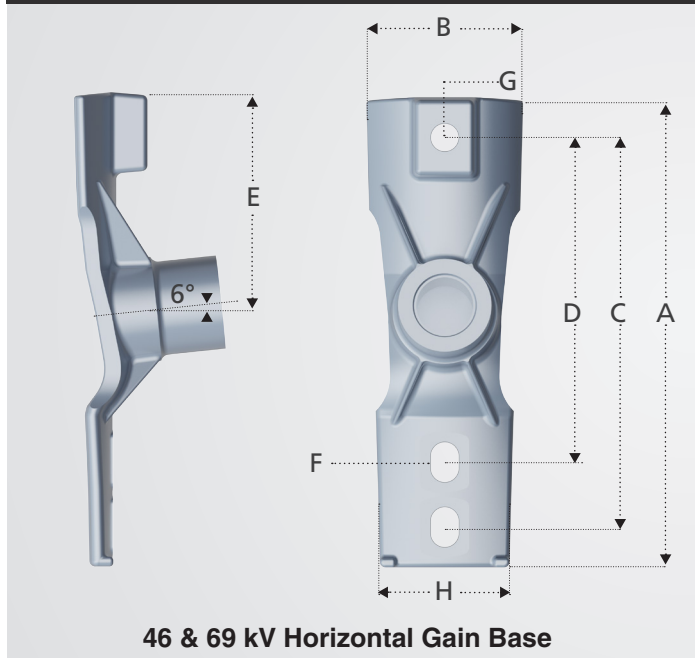
Post Line Fittings Dimensions (In Inches)



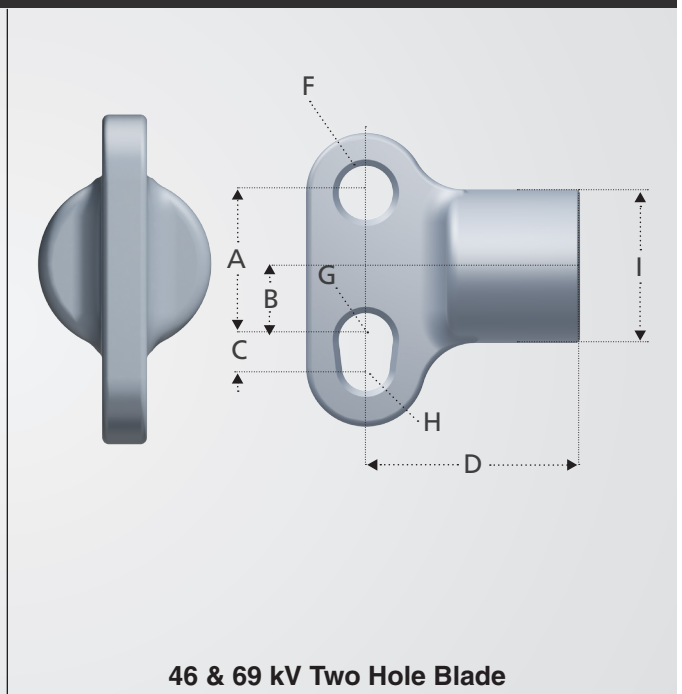
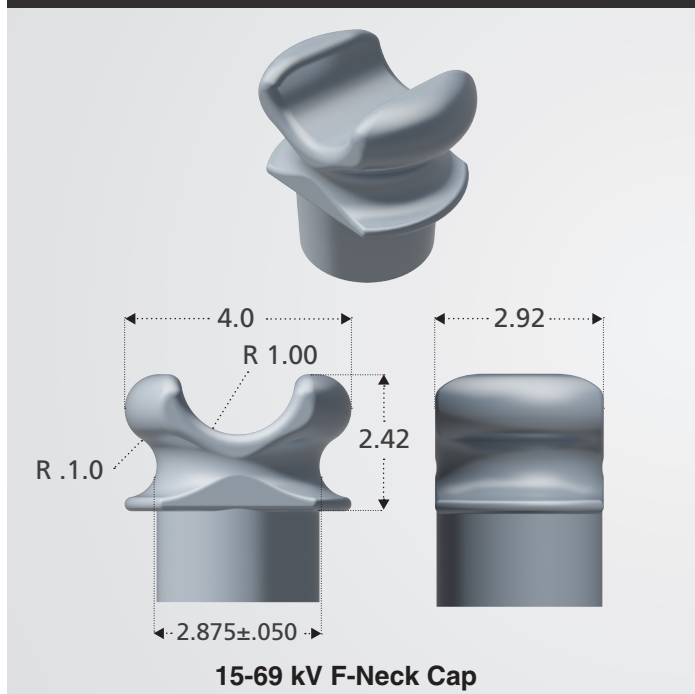
Line Post Line Fittings Dimensions (in inches)

Type	A	B	C	D	E	F	H	I	Material
H. Clamptop Cap	4.00	4.75	0.62	0.38	0.69	5/8-11 UFS-2B	-	-	60-40-18 DI
V. Clamptop Cap	4.00	5.38	1.12	0.38	-	5/8-11 UFS-2B	3.38	1.63	60-40-18 DI

Post Base Fittings Dimensions (In Inches)



Post Line Fittings Dimensions (In Inches)



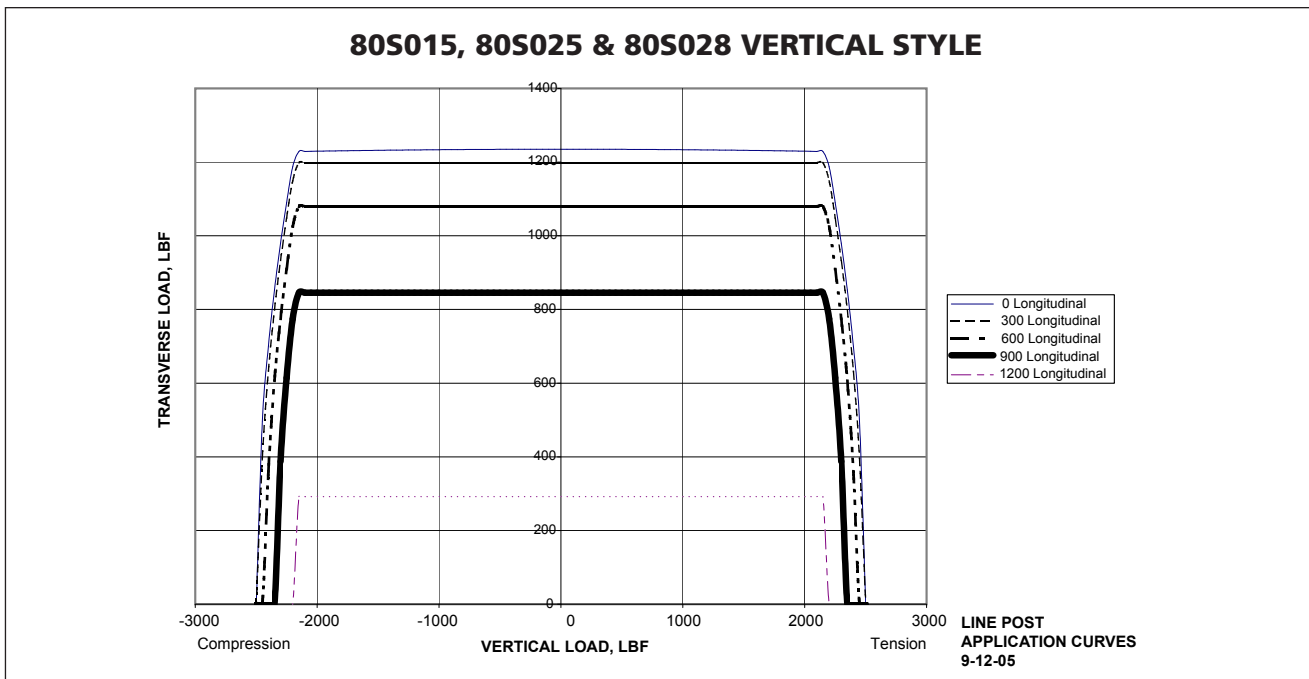
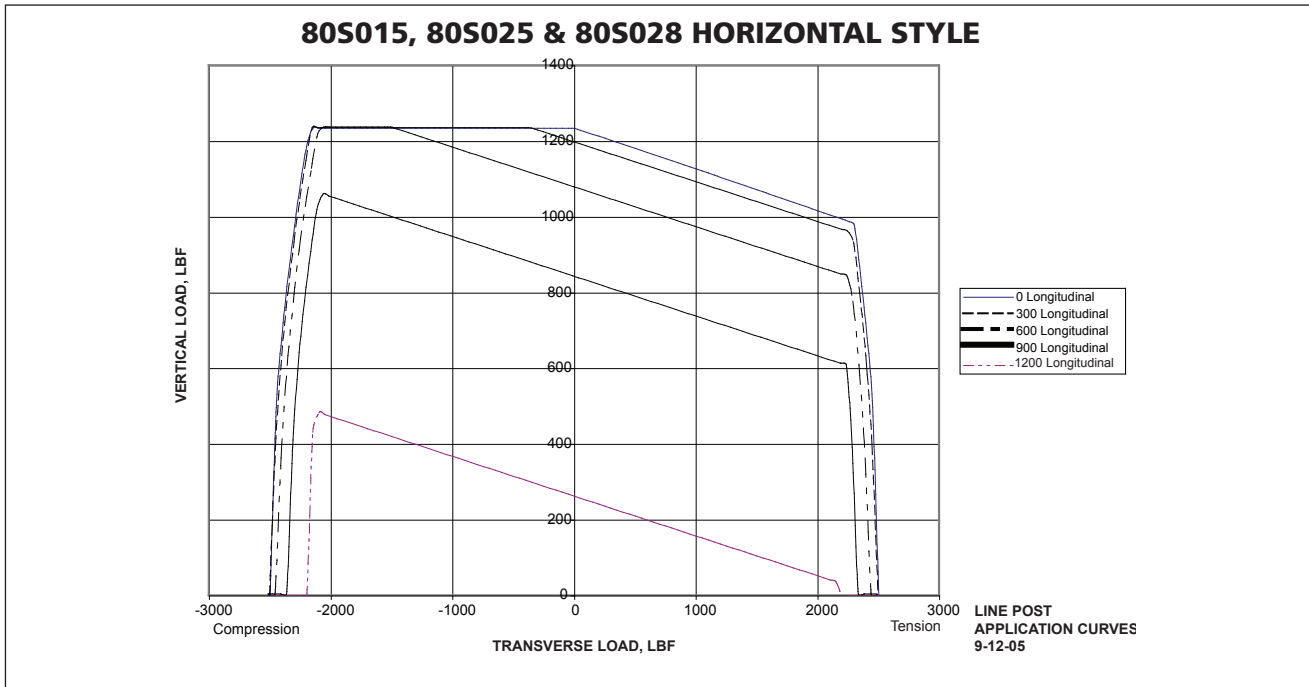
Line Post Base Fittings Dimensions (in inches)

Type	A	B	C	D	E	F	G	H	Material
H. Gain Base	14.50	7.00	12.00	10.00	6.75	1.25 x 0.88	0.88	4.00	60-40-18 DI
Stud Base	4.22	2.875	5.50	1.50	0.50	3/4-10 UFS-2B or 7/8-9 UFS-2B	-	-	60-40-18 DI
Two Hole Blade	2.75	1.38	0.50	4.00	0.75	1.00 Dia.	0.50 R	0.44 R	60-40-18 DI

Application Curves for Veri*Lite Insulators

How to use the application curves. After you have established the loading cases, you can use the curves to determine whether a specific Veri*Lite unit meets your loading requirement. For example, consider the installation of a Veri*Lite post number 80S025-0100 on a line with a vertical cantilever load of 800 pounds and a compression load of 900 pounds. By entering the curve at these

values, find the allowable longitudinal load to be 900 pounds. When the posts are loaded in tension the cantilever loading due to the combined effects of longitudinal, vertical and tensile loads should not exceed the rated tension working value. **IMPORTANT: The application curves should not be extrapolated.**



Maximum deflection for any of the post styles is approximately 1.75" at SCL.
Curves are shown using a 2.0 safety margin to SCL



Application Curves for Veri*Lite Insulators

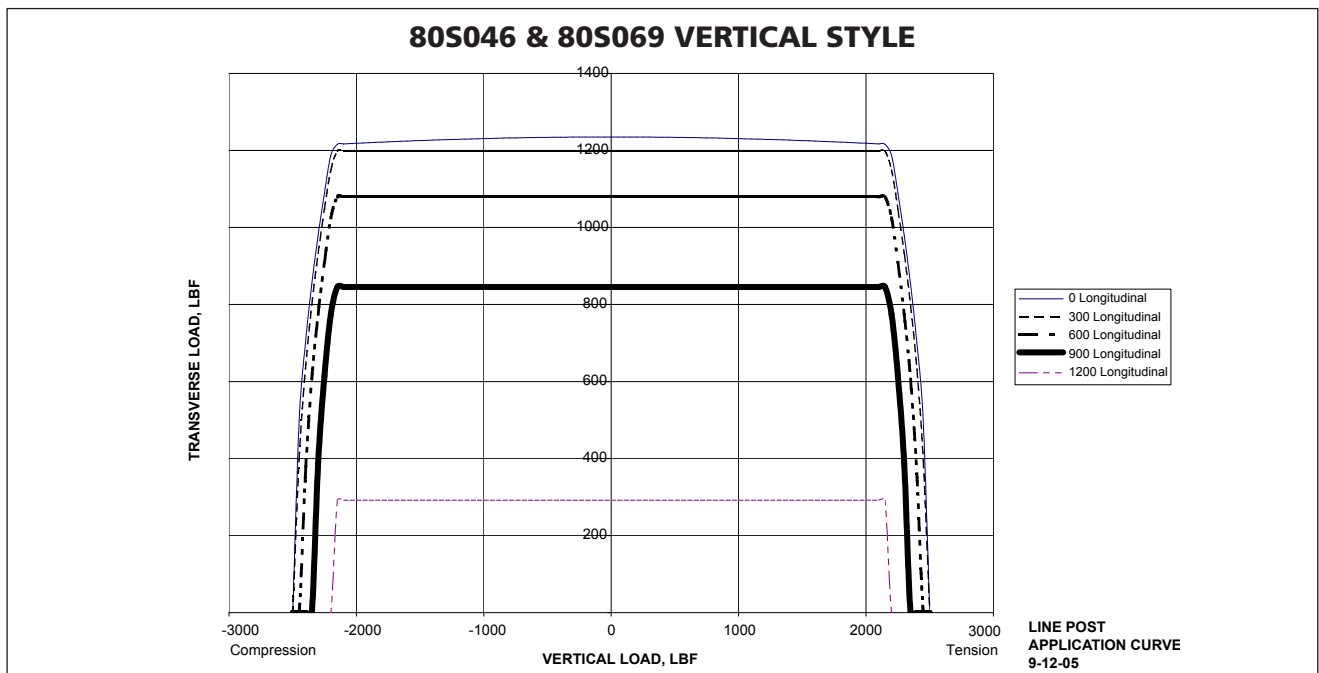
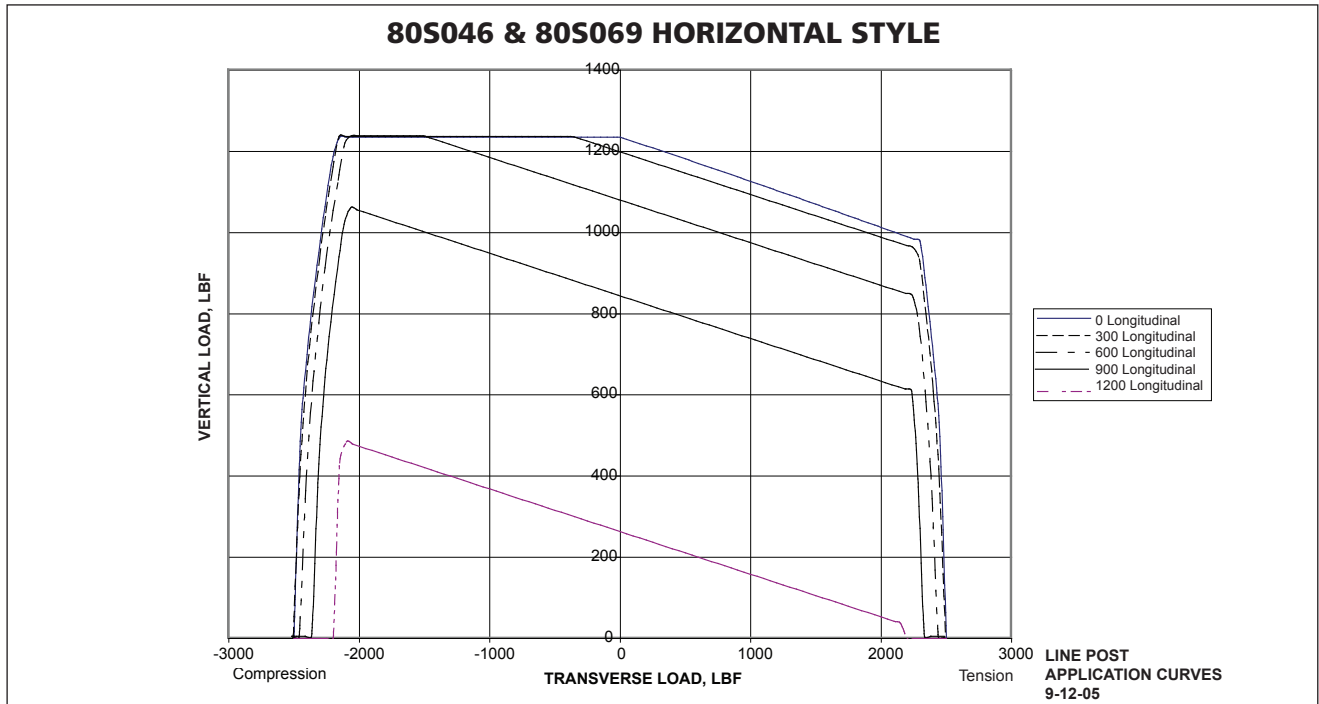
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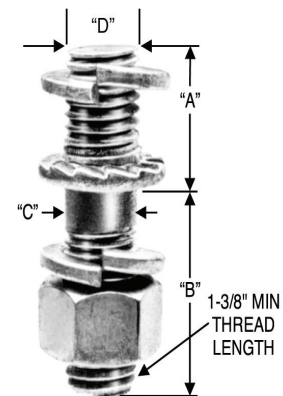
Line Post Insulator Studs

DF19M Series

Serrated collar and lockwasher secure unit to line post insulator and prevent accidental disassembly. Cut threads above serrated collar, rolled threads below collar.

For Steel Crossarms

Catalog No.	Dimensions (in.)				Hardware Included	Standard Package	Weight 100 Pcs.
	A	B	C	D			
DF19M1	1-1/8	1-3/4	5/8	3/4	(1) reg. hexnut and (2) spring lockwashers	100 pcs.	43 lbs.
DF19M3	1-1/8	1-3/4	3/4	3/4	(1) reg. hexnut and (2) spring lockwashers	100 pcs.	54 lbs.
875833001	1-3/8	2	7/8	7/8	(1) reg. hexnut and (2) spring lockwashers	100 pcs.	85 lbs.

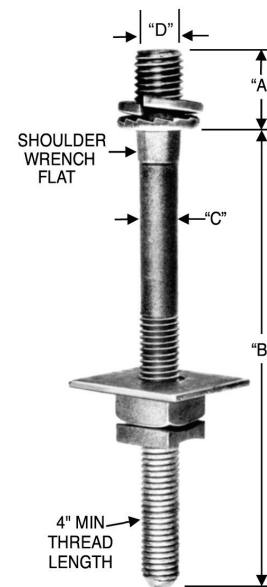


DF19M3

For Wood Crossarms

Catalog No.	Dimensions (in.)				Hardware Included	Standard Package	Weight 100 Pcs.
	A	B	C	D			
DF19M2	1-1/8	7	5/8	3/4	(1) sq. nut, (1) sq. washer (1) spring lockwasher, (1) MF locknut	50 pcs.	102 lbs.
DF19M4	1-1/8	7	3/4	3/4	(1) sq. nut, (1) sq. washer (1) spring lockwasher, (1) MF locknut	40 pcs.	140 lbs.
DF19M19	1-1/8	10	5/8	3/4	(1) sq. nut, (1) sq. washer (1) spring lockwasher, (1) MF locknut	25 pcs.	176 lbs.
DF19M20	1-1/8	12	5/8	3/4	(1) sq. nut, (1) sq. washer (1) spring lockwasher, (1) MF locknut	25 pcs.	192 lbs.
*DF19M29	1-1/8	14	3/4	3/4	(1) sq. nut, (1) sq. washer (1) spring lockwasher, (1) MF locknut	20 pcs.	234 lbs.
*DF19M32	1-1/8	24	3/4	3/4	(1) sq. nut, (1) sq. washer (1) spring lockwasher, (1) MF locknut	15 pcs.	342 lbs.
875843001	1-3/8	8	7/8	3/4	(1) sq. nut, (1) sq. washer (1) spring lockwasher, (1) MF locknut	50 pcs.	277 lbs.

*DF19M29 and DF19M32 include (1) additional double coil lockwasher.



DF19M2

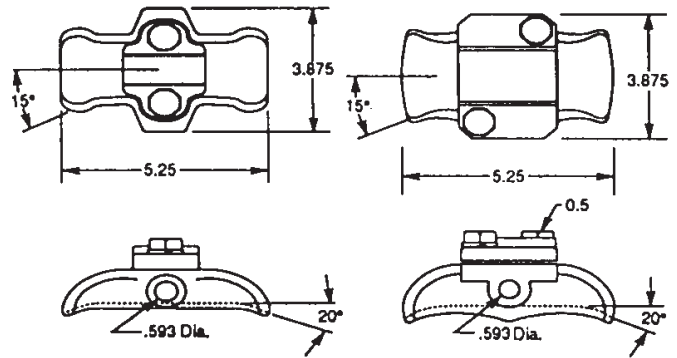
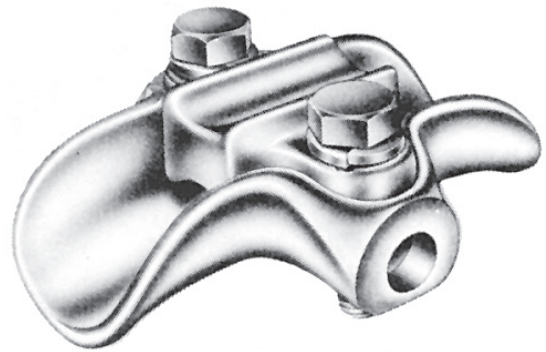
Suspension Trunnion Bolted Aluminum Clamp-top Clamps

For standard voltage applications with all aluminum, ACSR or aluminum alloy conductor.

Designed for use on tangent suspension spans with horizontal or vertical post insulators.

Keeper is reversible for proper fit on different size conductors.

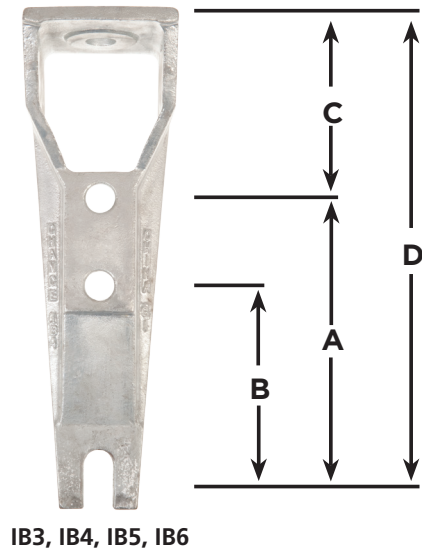
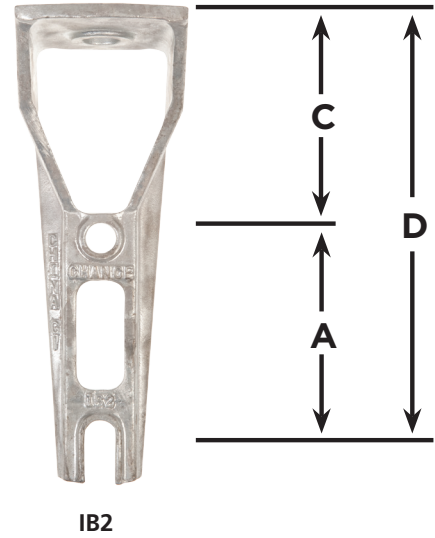
Material: Body and Keeper—356-T6 aluminum alloy
Hardware—Galvanized steel
Anti-static spring 302 stainless steel



Catalog Number	Former Catalog Number	Fig. No.	Clamping Range Inches (mm)	Ultimate Body Strength lbs. (kN)	Dimension Inches (mm)			Approx Wt. Each lbs. (kg)
					L	W	J	
TSC57	270660-3002	1	.25-.57 (6.3-14.4)	2,800 (12.46)	5-1/4 (133.3)	3-7/8 (98.4)	1/2 (12.7)	.42 (.19)
TSC86	-	1	.35-.86 (8.8-21.8)	2,800 (12.46)	5-1/4 (133.3)	3-7/8 (98.4)	1/2 (12.7)	.45 (.20)
TSC106	270661-3002	1	.50-1.06 (12.7 - 26.9)	2,800 (12.46)	5-1/4 (133.3)	3-7/8 (98.4)	1/2 (12.7)	.62 (.28)
TSC150	270662-3002	1	1.00-1.50 (25.4-38.1)	2,800 (12.46)	5-1/4 (133.3)	3-7/8 (98.4)	1/2 (12.7)	.64 (.29)
TSC200	270663-3002	2	1.50-2.00 (38.1-50.8)	2,800 (12.46)	5-1/4 (133.3)	3-7/8 (98.4)	1/2 (12.7)	.75 (.34)

NOTES: (1) Recommended torque on bolts; 1/2"—480 in. lbs.
(2) Anti-static spring can be supplied by adding "ARIV" to catalog number. Example, TSC57ARIV.
(3) Clamp-top clamps can be mounted directly on Veri*Lite posts, if the posts are ordered with the horizontal or vertical clamp-top option.

Pole Top Insulator Bracket



Mounts post or pin type insulator to top of pole. Variety of bolt hole locations for mounting to pole.

Catalog Number	Minimum Ultimate Bending Moment at Base	Accepts Insulator Stud Dia.	Accepts Mounting Bolt Dia.	Dim. A	Dim. B	Dim. C	Dim. D	Dim. E	Top Plate (width x depth)	Approx. Ship Wt. Each
IB2	20,000 in-lbs	5/8" or 3/4"	5/8"	5"	N/A	5"	10 3/4"	1"	3 3/4" Sq.	4.2 lbs.
IB3*	30,000 in-lbs			8"	5 1/4"		13"	1 1/2"		6.2 lbs.
IB4	40,000 in-lbs		5/8" or 3/4"	5/8" or 3/4"	8"		5 1/4"	13 3/4"	1"	4" x 3 3/4"
IB5	50,000 in-lbs				8"	5 1/2"	14"	1 1/4"	4" Sq.	9.8 lbs.
IB6	60,000 in-lbs				8"	5 3/4"	6"	15"	1 1/2"	4 1/2" Sq.

* RUS Listed, eb - Bracket, pole top



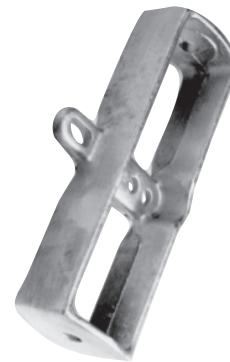
Pole Top Insulator Bracket

Horizontal Insulator Bracket

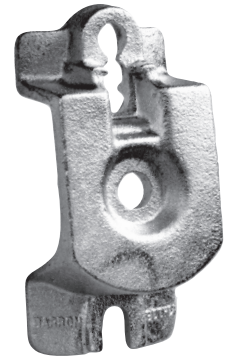
Use for mounting one or two insulator(s) to pole for armless construction.

Catalog No.	Mtg. Bolt Dia.	Max. Insul. Bolt Dia.	Mtg. Bolt Spacing	Insul. Angle Dim.	Space Between Insul. Bases	Approx. Ship. Wt. Lbs. per 100 pcs.
1IPTB	Two 5/8"	3/4"	5", 6"	5°	-	333
2IPTB	Two 5/8"	3/4"	4", 5"	-	14"	1025

Ductile iron per ASTM A-536
Hot dipped galvanized per ASTM A-153



2IPTB



1IPTB

Vertical Insulator Bracket

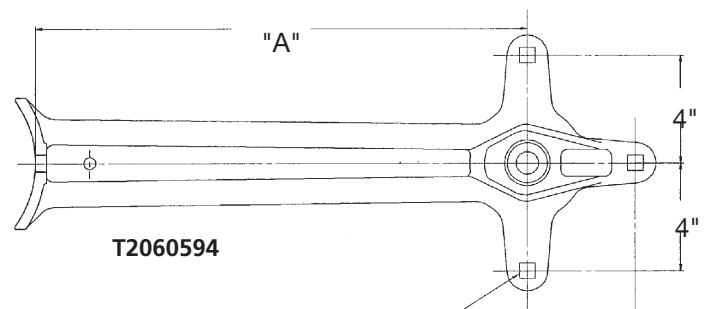
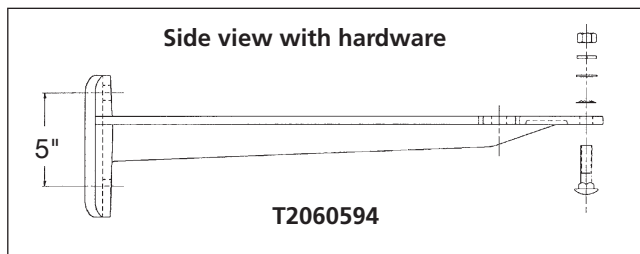
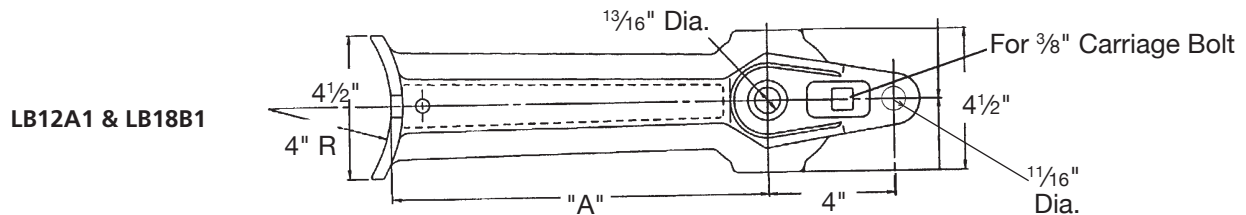
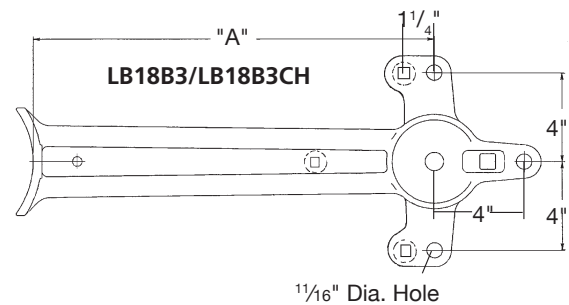
Use for mounting pin or post vertical insulators, cutouts, arresters, or cable terminators. Three-hole style can be used for in-line deadending using suspension insulators.

Catalog No.	Max Insul. Mtg. Bolt Dia.	Max. Equip. Mtg. Bolt Dia.	Pole Mtg. Bolt Dia.	Pole Mtg. Bolt Spacing	Clearance Pole to Insul Bolt. "A"	Approx. Ship. Wt. Lbs. per 100 pcs.
LB12A1	3/4"	5/8"	Two 5/8"	5"	12"	860
LB18B1	3/4"	5/8"	Two 5/8"	5"	18"	1300
LB18B3	3/4"	5/8"	Two 5/8"	5"	18"	1400
*T2060594	3/4"	1/2"	Two 5/8"	5"	12"	86
**LB18B3CH	3/4"	5/8"	Two 5/8"	5"	18"	1400

Ductile iron per ASTM A-536
Hot dipped galvanized per ASTM A-153

*T206-0594 has 3 captive 1/2" x 2" bolts and nuts included

**LB18B3CH has 2 captive 1/2" x 2" bolts and nuts included with LB18B3.



Pole Top Insulator Bracket

Angle Crossarm Bracket

Mounts post insulators at 30° angle on crossarm for use on running corners.

Catalog No.	Crossarm Size	Mtg. Bolt Diameter	Stud Bolt Diameter	Approx. Ship Wt. Lbs per 100 pcs.
1XAB	3-3/4" x 4-3/4" Max. and Round Crossarms	3/4"	3/4"	610

Ductile iron per ASTM A-536
Hot dipped galvanized per ASTM A-153



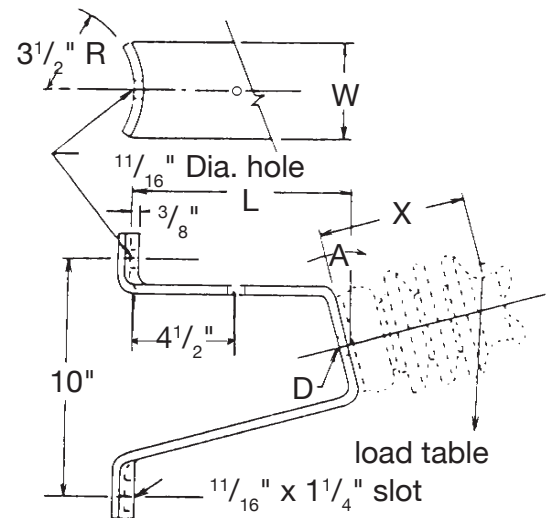
Post Insulator Curved Base Bracket

This bracket can be used for mounting distribution post-type insulators from 15 kV to 34.5 kV on the side of the pole. The base has a pole-shape back for convenient installation. Brackets can be placed in a phase-over-phase arrangement or can be mounted on opposite sides of the pole for "armless" construction.

Insulators not included.

Catalog No.	Dimension (in)			Angle A	Approx. Ship Wt. Lbs per 100 pcs.
	L	D	W		
*C2060009	9-1/2	13/16	4	15°	1220
†*C2060010	12	13/16	4	15°	1669
C2060011	15	4	15°	2066	

*These brackets have 13/16" stringing block holes.
†TRUS listed



C2060009

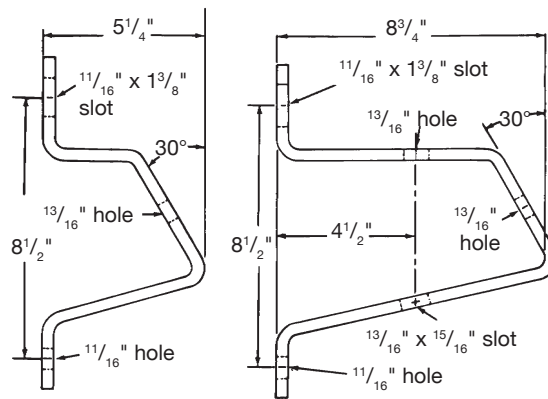
Pole Top Insulator Bracket

Post Insulator Side Mounted Brackets

The bracket is formed from high-quality 3/8" x 2-1/2" bar steel and hot dip galvanized. It can be utilized to mount distribution post insulators from 15 kV to 34.5 kV.

Catalog No.		Pole Mounting Bolts Required	Insulator Stud Bolts Required	Approx. Ship Wt. Lbs per 100 pcs.
13/16" Hole	11/16" Hole			
†*C2060209	16919	Two 5/8"	3/4"	650
C2060162	-	Two 5/8"	3/4"	440

*This bracket is designed to facilitate a stringing block.
†RUS listed



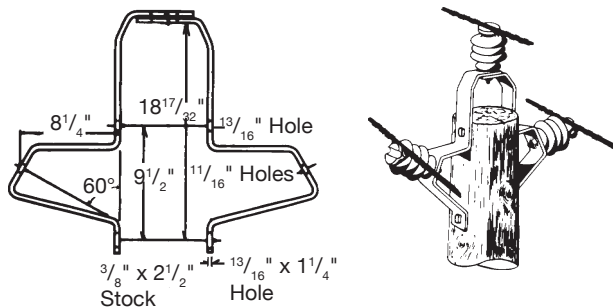
C2060162

C2060209

Post Insulator Uni-Brackets

Chance Uni-Brackets are a clean-appearing, low-cost method of mounting three post-type insulators atop a pole completely eliminating the crossarm. The brackets can be installed on the pole in less than five minutes, requiring only two 3/4" bolts for attachment. Uni-Brackets fit poles having a pole-top diameter from 6" to 8-1/2". Slot on top is 11/16" x 2-1/4".

No. 9183 brackets can be adapted to a variety of distribution construction using post-type insulators from 15kV through 34.5 kV.



Catalog No.	Insulator Stud Bolts Required	Approx. Ship Wt. Lbs per 100 pcs.
†9183	5/8"	2100

†Includes both sections of bracket

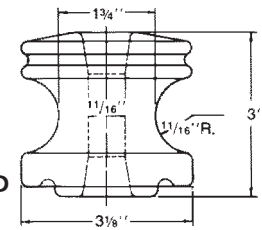
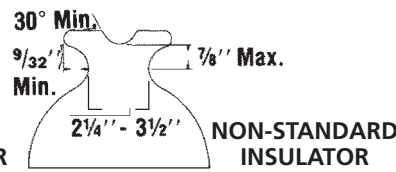
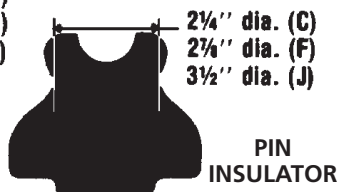
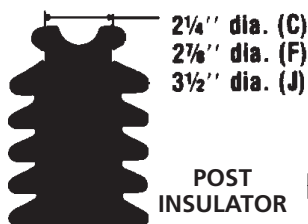
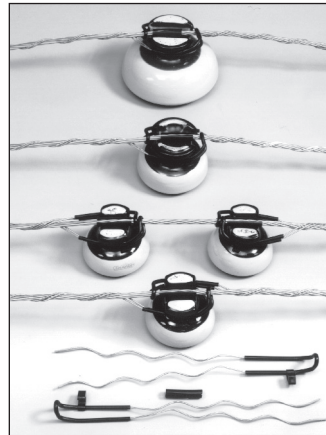
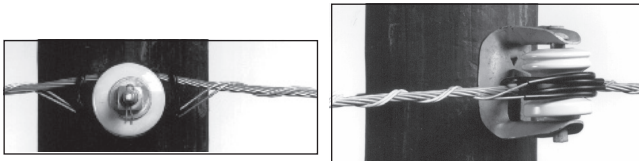
No. 9183



Super Top-Tie® Line Ties - For Pin, Post and Spool Insulators

Made of aluminum-clad steel compatible with aluminum, aluminum-alloy and ACSR conductors in the top grooves of vertical-mounted *ANSI Class C, F, J and many non-standard pin and post insulators (single- or double-support) or on *ANSI 53-2 spool insulators (horizontal or vertical).

High-density polyethylene hooks provide the wide application range and ensure proper installation. If used over armor rods (not required), select tie size based on total conductor/armor diameter. Semiconductive-rubber pad and high-density-polyethylene on loops protect against abrasion of insulator, conductor and tie. Fit is resilient and provides superior performance under galloping and aeolian vibration. Install by hand or with hot-line tools.



*Super Top-Tie STT10 — STT130 also fit many foreign or reclaimed pin and post insulators with neck sizes 2 1/4" - 3 1/2". Consult Hubbell Power Systems, Inc. for use on pins and posts outside these dimensions.

Catalog No.	Aluminum-Type Conductors Typical Sizes				Color Code	Std. Pkg.	Wt. Per 100 pcs, Lb.
	AAC (All-Aluminum)	AAAC (Alum.-Alloy)	ACSR	Diameter Ranges			
STT10	#6, 7W	#6, 7W	#6, 6/1	.184-.220" (4.67-5.59 mm)	None	50	28
STT20	#4, 7W	#4, 7W	#4, 6/1	.221-.257" (5.61-6.53 mm)	Orange	50	28
STT30	#3, 7W	#3, 7W	#3, 6/1	.258-.289" (6.55-7.34 mm)	Purple	50	28
STT40	#2, 7W	#2, 7W	#2, 6/1	.290-.325" (7.37-8.26 mm)	Red	50	28
STT50	#1, 7W	#1, 7W	#1, 6/1	.326-.360" (8.28-9.14 mm)	Gray	50	28
STT60	1/0, 7W	1/0, 7W	1/0, 6/1	.361-.409" (9.17-10.39 mm)	Yellow	50	32
STT70	2/0, 7W	2/0, 7W	2/0, 6/1	.410-.460" (10.41-11.68 mm)	Blue	50	32
STT80	3/0, 7W	3/0, 7W	3/0, 6/1	.461-.516" (11.71-13.11 mm)	Black	50	32
STT90	4/0, 7W	4/0, 7W	4/0, 6/1	.517-.584" (13.13-14.83 mm)	Pink	50	32
STT100	266.8, 19W	266.8, 19W	266.8, 18/1	.585-.664" (14.86-16.87 mm)	Green	50	32
STT110	336.4, 19W	336.4, 19W	336.4, 18/1	.665-.755" (16.89-19.18 mm)	Brown	50	40
STT120	477, 19W	477, 19W	477, 18/1	.756-.859" (19.20-21.82 mm)	Violet	50	40
STT130	636, 37W	556.5, 19W	556.5, 18/1	.860-.977" (21.84-24.82 mm)	Gold	50	40

LEFT-HAND LAY STANDARD

- Applied Length: 29" - 48" (Depends on insulator make and conductor size).
- Strength: Exceeds Rule 261E.2(A) of National Electrical Safety Code.
- REA accepted.
- To obtain outside diameters of conductors, consult Conductor Chart.



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

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