

**CERAM**  
INSULATORS



# The very Best.



**T & D Insulators**



**PPC INSULATORS**

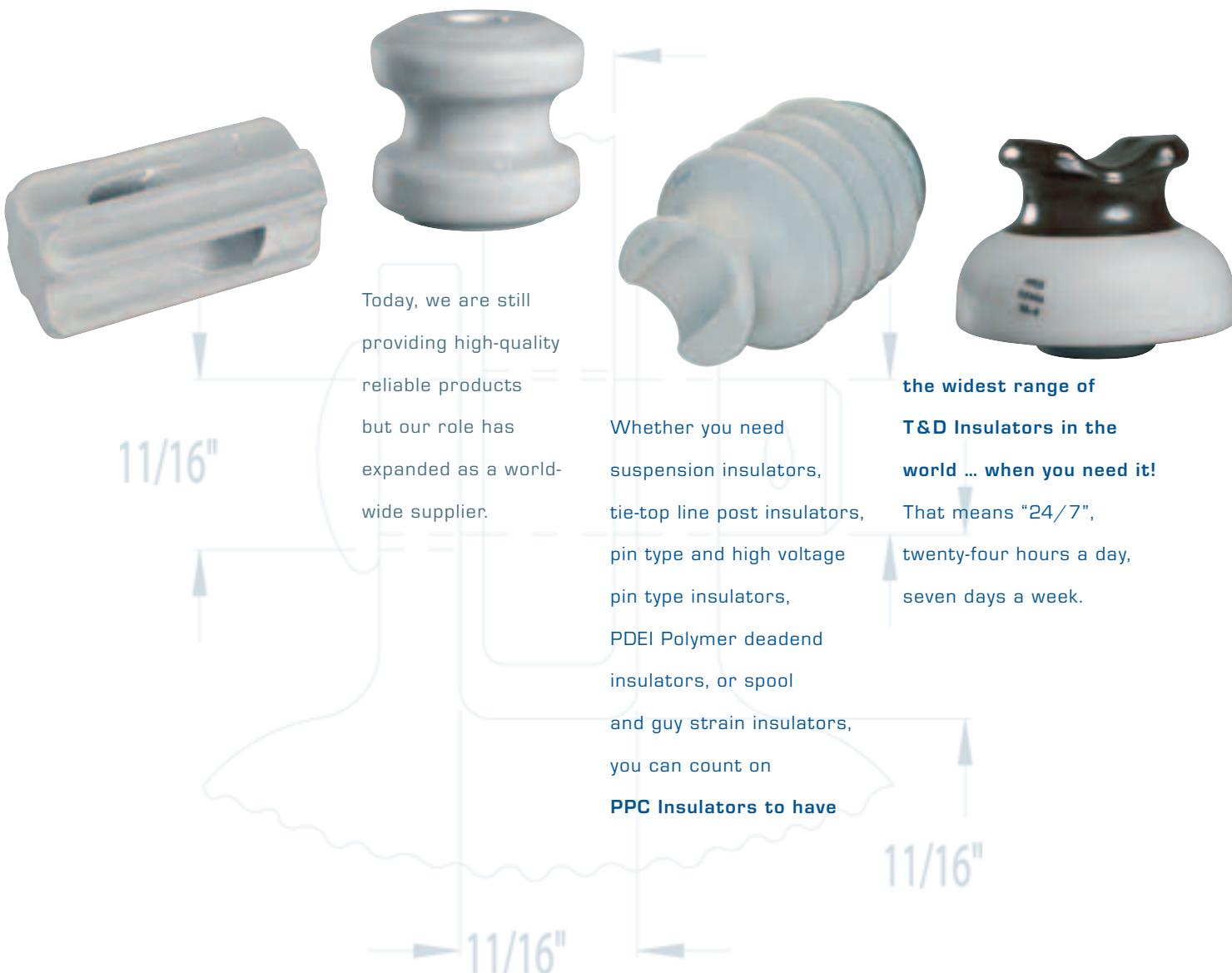
# Quality Engineered Expect

## Product

PPC insulators has its roots in providing high-quality, reliable Transmission and Distribution products dating back to 1917, when it was known as Federal Porcelain Co., in Carey, OH.

**you can trust**

› ANSI



# T&D Insulators

## The Best!

### Index

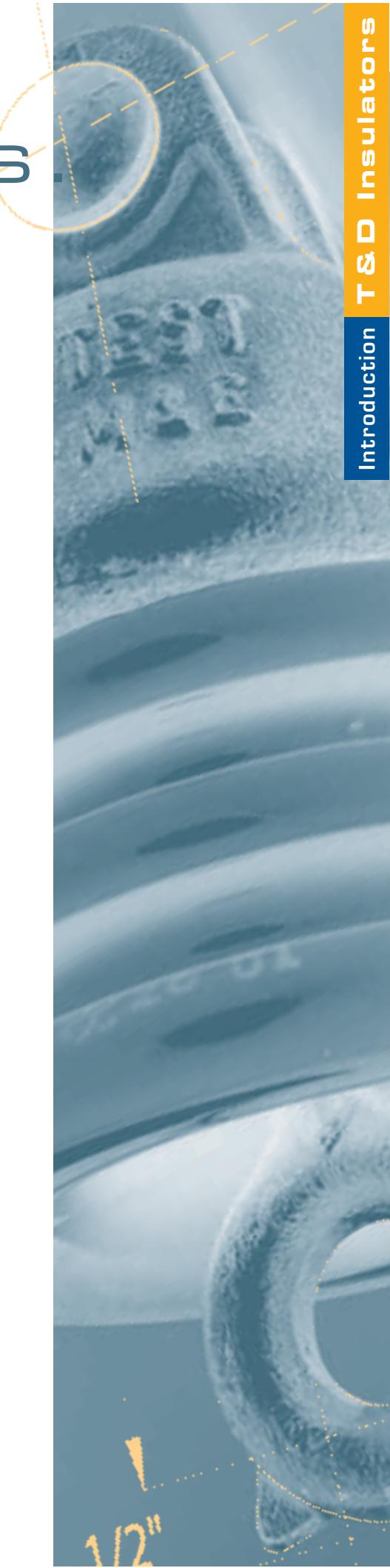
#### › Types

Suspension Insulators	PAGE	4
Tie-Top Line Post Insulators	PAGE	4
Horizontal & Vertical Clamp Top Line Post	PAGE	5
PDEI Polymer Deadend Insulators	PAGE	5
PinType Insulators	PAGE	6
High Voltage PinType Insulators	PAGE	6
Pin Post Insulators	PAGE	6
Spool And Guy Strain Insulators	PAGE	7

#### › Features

Hardware (Where Applicable)	PAGE	8
Cementing (Where Applicable)	PAGE	8
Hardware Coating (Where Applicable)	PAGE	8
Bonded Sand Bands (Where Applicable)	PAGE	9
Porcelain Body	PAGE	9
Protected Leakage Configuration	PAGE	10
Forged Steel Eye & Ball Bolts (Where Applicable)	PAGE	10
Interference Free	PAGE	10
Glaze	PAGE	11
Reduced incidence of puncture	PAGE	11

› Mechanical & Electrical Characteristics	PAGE	12
Cross Reference Guide	PAGE	23



## Suspension Insulators

**PPC** Insulators standard suspension insulators with high mechanical and electrical strength are designed to meet the most modern demands of high voltage and EHV transmission line usage today.

**PPC** Insulators makes one of the widest ranges of ANSI approved Ball-Socket and Clevis type distribution suspension insulators for overhead distribution and transmission systems in the world.

Each suspension shell undergoes rigorous electrical testing before and after assembly before being shipped.

Catalogue numbers 81022, 81012, 86012, 84300 conform to ANSI Class 52-1 through 52-9 specifications and are also REA accepted.

## Tie-Top Line Post Insulators

The one – piece design utilized in **PPC** Insulators tie – top line post insulator eliminates the need for suspension shells while providing maximum protection under severe flashover and mechanical impact. Designed for upright or angle mounting on a crossarm, a choice of stud assemblies is available for both wood and steel crossarms. All Line Post Insulators are manufactured by **PPC** Insulators in strict compliance to ANSI standards.

# Insulators

## Products



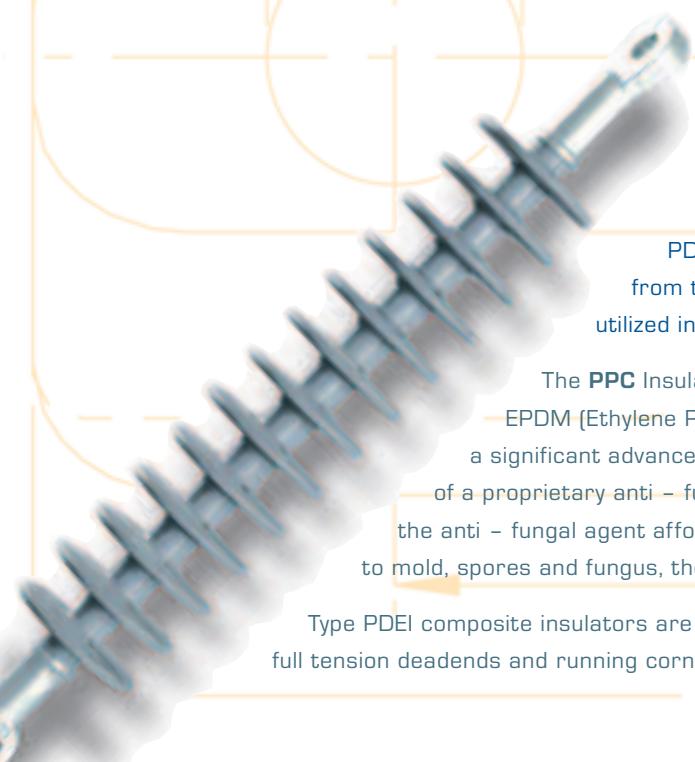
### Horizontal & Vertical Clamp

#### Top Line Post

**PPC** Insulators offer horizontal & vertical clamp top linepost assemblies for ratings 25 kV through 35 kV.

**PPC** horizontal mounting line post assemblies are primarily recommended for downleads, jumper loop control and similar applications. A galvanized metal cap is cemented to the outside of the line post head supporting the trunnion type clamp.

**PPC** vertical clamp top line post insulators are mounted upright on crossarms and structures. Rated at 2800 lb. cantilever strength these insulators offer strength with excellent mechanical as well as electrical characteristics.



### PDEI Polymer Deadend Insulators

PDEI composite insulators are manufactured from two base compounds; silicone, the type most often utilized in highly contaminating areas, and EPDM.

The **PPC** Insulators EPDM version has evolved from the original formulation, EPDM (Ethylene Propylene Diamer Modified), into a formulation representing a significant advancement; the development and addition of a proprietary anti - fungal agent. Since EPDM is an organic compound, the anti - fungal agent affords the industry an insulator with superior resistance to mold, spores and fungus, thereby insuring product longevity.

Type PDEI composite insulators are designed for distribution line suspension, full tension deadends and running corners with maximum high design loads.

# T & D Insulators

## PinType Insulators

Highly resistant to lightning puncture, **PPC** Insulators manufactures a wide range of low and high voltage PinType Insulators designed for distribution and sub transmission circuits. The versatile neck designs in "C, F, K and J," side and top grooves, allow the acceptance of large - diameter conductors to permit easy tying. All neck sizes conform to industry standards allowing factory - formed ties to be used.



## Pin Post Insulators

**PPC** Insulators alternative design offers users the unique advantage of reducing inventory by using the pin type insulator as a line post insulator. The primary advantage of the pin post insulator is really the advantage of better operating characteristics to line post insulators without changing the hardware.

**PPC**'s thimble design ensures the highest strength and is tested for integrity prior to assembly.



# Products

## Spool and Guy Strains

PPC Insulators makes spool and guy strain insulators out of the highest grade electrical wet-process porcelain in a wide range of electrical values and all resistant to mechanical breakage.

Strength ratings are made in accordance with ANSI Standard C29.4 for ultimate strength.



# T & D Insulators Product

## Hardware



Suspension insulators are available for ball & socket or clevis-eye coupling. Standard caps are constructed of hot-dip galvanized malleable iron. Cotter keys for locking ball & socket and clevis pin connections are stainless steel.

## Cementing

Caps, ball bolts and eyebolts are cemented on to the porcelain, loading the porcelain in a large area, low intensity compression grip. PPC Insulators utilizes a special Portland cement, particularly suited for use on porcelain insulator assemblies.

## Hardware Coating

Prior to cementing, all hardware surfaces in contact with cement are coated with a bituminous (asphalt) compound. The compound protects the hardware from chemical attack by the cement and provides thermal movement between parts to relieve mechanical stress created by thermal movement or cement growth.

# Features

## Bonded Sand Bands



Sand bands bonded to the porcelain by glaze provide a rough surface for permanently attaching the hardware and distributing loading evenly through the porcelain. The high strength compression sand is manufactured by PPC Insulators to match the characteristics of the porcelain body.

3/8"

A technical line drawing of a porcelain insulator body. It shows a circular base with a flared top. A vertical dimension line indicates a height of "3/8" from the base to the top. A horizontal dimension line indicates a width of "9/16" across the flared top. Arrows point from the text labels to the corresponding parts of the drawing.

## Porcelain Body

PPC transmission and distribution insulators are constructed of high quality electrical grade porcelain.

Each porcelain body receives a series of electrical tests prior to assembly. 100% of all bodies are subjected to high frequency puncture tests thereby insuring soundness and performance prior to assembly. This same test, in addition to other prescribed ANSI tests, are performed once again after assembly insuring the integrity of the porcelain and the assembled product.



# T & D Insulators Product

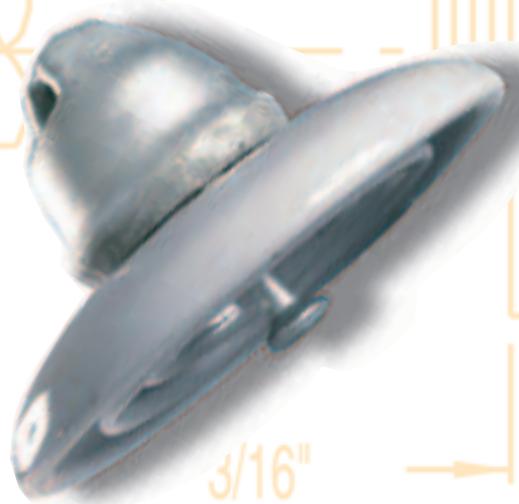
## Protected Leakage Configuration



The umbrella type spreading porcelain shell or shed protects the leakage corrugations on the underside of the insulator from contamination and mechanical damage. The sheds are designed to provide optimum normal and protected leakage distance in relation to size and shape.

## Forged Steel Eye & Ball Bolts

PPC Insulators utilizes hot dip galvanized forged steel for the ball bolt and the eyebolt. Standard production of suspension insulators incorporates a pregnant bolt design for both ball & socket and clevis type units. The extra mass of the pregnant bolt design plus the compound coating provides corrosion protection at the cement line caused by ozone, electrolytic action and other factors. A zinc sleeve may also be supplied on a straight bolt, for corrosion protection, when specified.



## Interference Free

PPC Insulators suspension insulators are radio & television interference free by design and have been completely tested, both individually and as assemblies. Our hardware is smooth contoured with well-rounded edges to reduce RIV build-up and does not require corona rings.



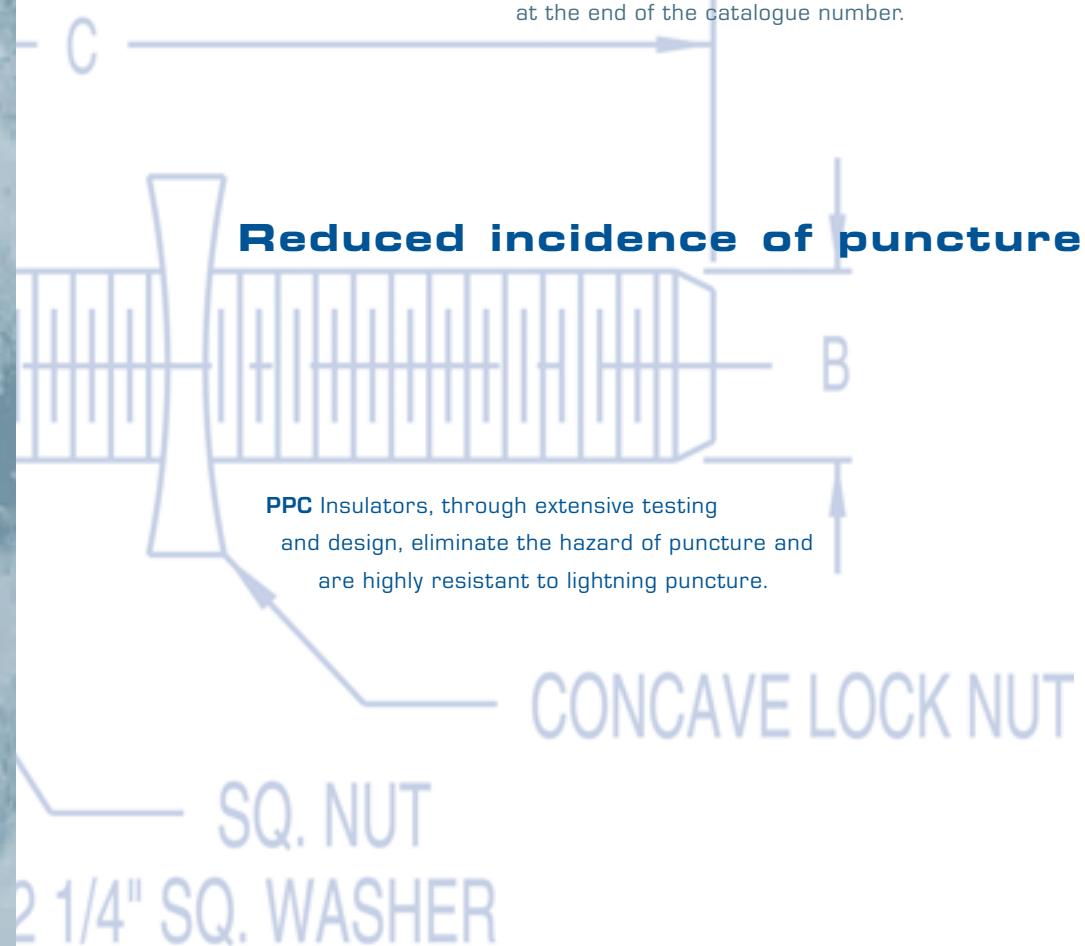
# Features

## Glaze



Skyline gray glaze (ANSI - 70, Munsell 5BG 7.0/0.4) is supplied as standard on all **PPC** suspension insulators unless otherwise specified.

Brown glaze is also available upon request; simply add the letter "B" at the end of the catalogue number.

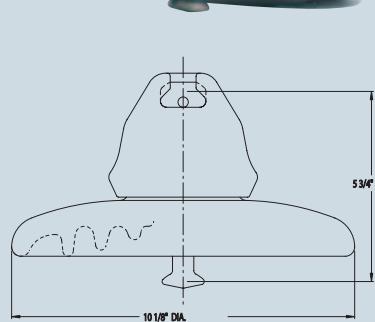


## T&D Insulators

# Suspension Insulators

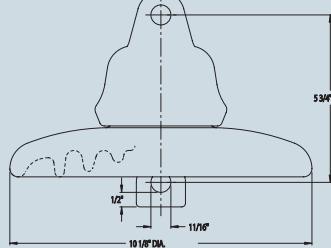
## Steel Hardware

### Ball-Socket



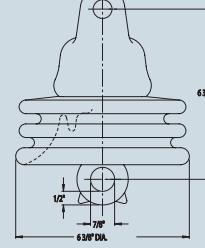
Type 81022

### Clevis Type



Type 81012

### Clevis Type



Type 84166

#### Mechanical & Electrical Characteristics

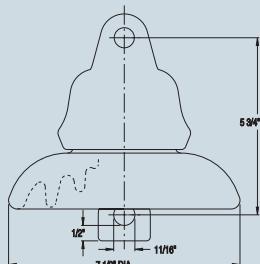
PPC Insulators Catalog Number	81022		81012		84166	
ANSI Technical Reference Number	52-3		52-4		N/A	
<b>Dimensions</b>						
Leakage Distance (in)/(mm)	11 1/2"	292.10 mm	11 1/2"	292.10 mm	10"	254.00 mm
Dry Arcing Distance (in)/(mm)	7 3/4"	196.85 mm	7 3/4"	196.85 mm	6"	152.40 mm
Height (in)/(mm)	5 3/4"	146.05 mm	5 3/4"	146.05 mm	6 3/8"	161.93 mm
Diameter (in)/(mm)	10 1/8"	257.18 mm	10 1/8"	257.18 mm	6 3/8"	161.93 mm
Diameter of Clevis Ring (in)/(mm)	N/A		1 1/6"		26.99 mm	
<b>Mechanical Values</b>						
ANSI M & E Category	15000	lbs.	15000	lbs.	N/A	
Comb. M & E Strength	20000	lbs.	20000	lbs.	10000	lbs.
Mechanical Impact Strength	55	inch lbs.	55	inch lbs.	50	inch lbs.
Routine Proof Test	10000	lbs.	10000	lbs.	5000	lbs.
Time Load Test	13200	lbs.	13200	lbs.	6000	lbs.
<b>Electrical Values</b>						
Low Frequency Flashover Dry	80	kV	80	kV	75	kV
Low Frequency Flashover Wet	50	kV	50	kV	40	kV
Impulse Flashover Positive	125	kV	125	kV	115	kV
Impulse Flashover Negative	130	kV	130	kV	115	kV
Low Frequency Puncture Voltage	110	kV	110	kV	90	kV
<b>Radio Influence Low Frequency Test Voltage Data</b>						
Test Voltage, Rms to Ground, KV	10	kV	10	kV	7.5	kV
Maximum RIV at 1000 kHz - V	50		50		50	
<b>Weight</b>						
Maximum Net Weight	11	lbs.	11.8	lbs.	6.0	lbs.
Packaged Weight Per Unit	12.5	lbs.	13.3	lbs.	6.75	lbs.
<b>Packaging</b>						
Standard Packaging Quantity	6		6		8	
<b>Insulator Coatings</b>						
Standard Glaze "Skyline" ANSI-70, Munsell 5 BG 7.0/0.4	Standard		Standard		Standard	
Special Glaze Requirement Upon Request	¹ REA Accepted					

**T&D Insulators**

# Suspension Insulators

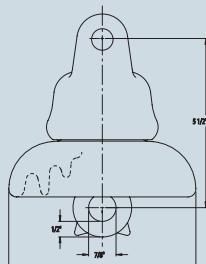
Steel Hardware

## Clevis Type



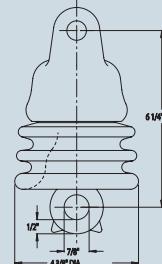
Type 87512

## Clevis Type



Type 86012

## Clevis Type



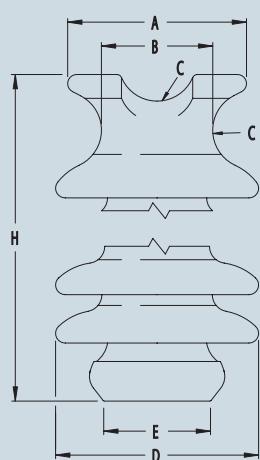
Type 84300

### Mechanical & Electrical Characteristics

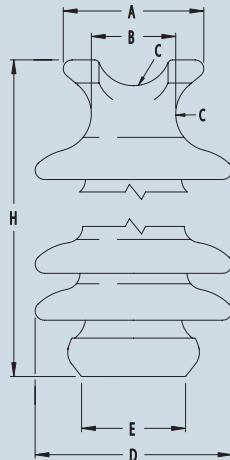
PPC Insulators Catalog Number	87512	86012	*84300
ANSI Technical Reference Number	52-2	52-1	52-9
<b>Dimensions</b>			
Leakage Distance (in)/(mm)	8 1/4" 209.55 mm	7" 177.80 mm	6 3/4" 171.45 mm
Dry Arcing Distance (in)/(mm)	5 1/2" 139.70 mm	4 1/2" 114.30 mm	4" 101.60 mm
Height (in)/(mm)	5 3/4" 146.05 mm	5 1/2" 139.70 mm	6 1/4" 158.75 mm
Diameter (in)/(mm)	7 1/2" 190.50 mm	6" 152.40 mm	4 3/8" 111.13 mm
Diameter of Clevis Ring (in)/(mm)	1 1/6" 26.99 mm	7/8" 22.23 mm	7/8" 22.23 mm
<b>Mechanical Values</b>			
ANSI M & E Category	15000 lbs.	10000 lbs.	10000 lbs.
Comb. M & E Strength	15000 lbs.	10000 lbs.	10000 lbs.
Mechanical Impact Strength	50 inch lbs.	45 inch lbs.	45 inch lbs.
Routine Proof Test	7500 lbs.	5000 lbs.	5000 lbs.
Time Load Test	10000 lbs.	6000 lbs.	6000 lbs.
<b>Electrical Values</b>			
Low Frequency Flashover Dry	65 kV	60 kV	60 kV
Low Frequency Flashover Wet	35 kV	30 kV	30 kV
Impulse Flashover Positive	115 kV	100 kV	100 kV
Impulse Flashover Negative	115 kV	100 kV	90 kV
Low Frequency Puncture Voltage	90 kV	80 kV	80 kV
<b>Radio Influence Low Frequency Test Voltage Data</b>			
Test Voltage, Rms to Ground, KV	7.5 KV	7.5 KV	7.5 KV
Maximum RIV at 1000 kHz - V	50	50	50
<b>Weight</b>			
Maximum Net Weight	9.1 lbs.	5.5 lbs.	5.2 lbs.
Packaged Weight Per Unit	10.1 lbs.	6.0 lbs.	5.8 lbs.
<b>Packaging</b>			
Standard Packaging Quantity	8	12	12
<b>Insulator Coatings</b>			
Standard Glaze "Skyline" ANSI-70, Munsell 5 BG 7.0/0.4	Standard	Standard	Standard
Special Glaze Requirement Upon Request	† Special Note: REA Accepted		

## T&D Insulators

# Tie-Top Line Post Insulators



Type "F" Neck



Type "C" Neck



PPC Insulators Catalog Number	5015	5020	5025	5027	5035	5045	5115	5120	5125	5127	5135	5145
ANSI Technical Reference Number	N/A	N/A	57-1	N/A	57-2	57-3	N/A	N/A	57-1	N/A	57-2	57-3
Type "Neck"	C	C	C	C	C	C	F	F	F	F	F	F
<b>Dimensions</b>												
Dimension A - Inches	3 3/4"	3 3/4"	3 3/4"	3 3/4"	3 3/4"	3 3/4"	4 5/8"	4 5/8"	4 5/8"	4 5/8"	4 5/8"	4 5/8"
Dimension B - Inches	2 1/4"	2 1/4"	2 1/4"	2 1/4"	2 1/4"	2 1/4"	2 7/8"	2 7/8"	2 7/8"	2 7/8"	2 7/8"	2 7/8"
Dimension C (radius) - Inches	1"	1"	1"	1"	1"	1"	1"	1"	1"	1"	1"	1"
Dimension D - Inches	4 3/4"	5 1/4"	5 1/2"	5 1/4"	6"	6 1/2"	4 3/4"	5 1/4"	5 1/2"	5 1/4"	6"	6 1/2"
Dimension E - Inches	3 5/9"	3 5/9"	3 5/9"	3 5/9"	4 5/9"	4 5/9"	3 5/9"	3 5/9"	3 5/9"	3 5/9"	4 5/9"	4 5/9"
Dimension H - Inches	7 3/4"	8 3/4"	8 4/5"	9 7/8"	12 1/16"	14 9/16"	7 3/4"	8 3/4"	8 4/5"	9 7/8"	12 1/16"	14 5/9"
Number of Skirts	3	4	4	5	6	8	3	4	4	5	6	8
Leakage Distance - Inches	7 1/2"	11"	14"	16"	22"	29"	7 1/2"	11"	14"	16"	22"	29"
Dry Arching Distance - Inches	5"	5 3/4"	6 1/2"	7 5/8"	9 1/2"	12 1/4"	5"	5 3/4"	6 1/2"	7 5/8"	9 1/2"	12 1/4"
<b>Mechanical Values</b>												
Cantilever Strength - lbs.	2000	2000	2800	1500	2800	2800	2000	2000	2800	1500	2800	2800
Cantilever Proof Load - lbs.	800	800	1120	800	1120	1120	800	800	1120	800	1120	1120
<b>Electrical Values</b>												
Typical Application kV	15	20	25	27	35	45	15	20	25	27	35	45
Low Frequency Flashover - Dry - kV	65	80	80	95	110	125	65	80	80	95	110	125
Low Frequency Flashover - Wet - kV	40	55	60	65	85	100	40	55	60	65	85	100
Critical Impulse Flashover (+) kV	100	110	130	140	180	210	100	110	130	140	180	210
Critical Impulse Flashover (-) kV	130	140	155	190	205	260	130	140	155	190	205	260
<b>Radio Influence Voltage Data</b>												
RIV RMS to Ground Test Voltage - kV	10	15	15	20	22	30	10	15	15	20	22	30
Maximum RIV at 1000 kHz - $\mu$ V	50	50	100	50	100	200	50	50	100	50	100	200
<b>Weight</b>												
Net Weight per Unit - lbs.	7	8.5	9	8.5	18	25	7	8.5	9	8.5	18	25
Packaged Weight Per Unit - lbs.	72	52	55	52	74	102	72	52	55	52	74	102
<b>Packaging</b>												
Standard Package Quantity - Each	10	6	6	6	3	3	6	6	3	6	3	3
<b>Insulator Coating</b>												
Standard Glaze "Skyline" ANSI-70, Munsell 5 BG 7.0/0.4	Std.	Std.	Std.	Std.	Std.	Std.	Std.	Std.	Std.	Std.	Std.	Std.

REA Accepted

All bases tapped for 3/4"-10 Stud Size

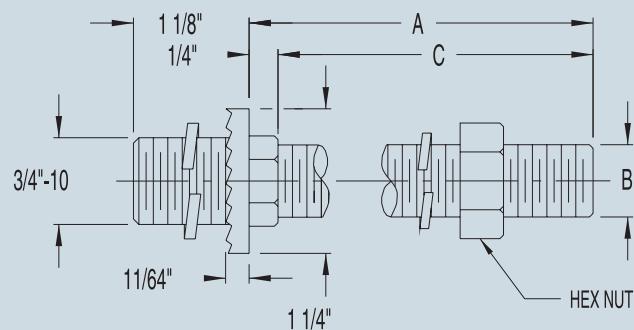
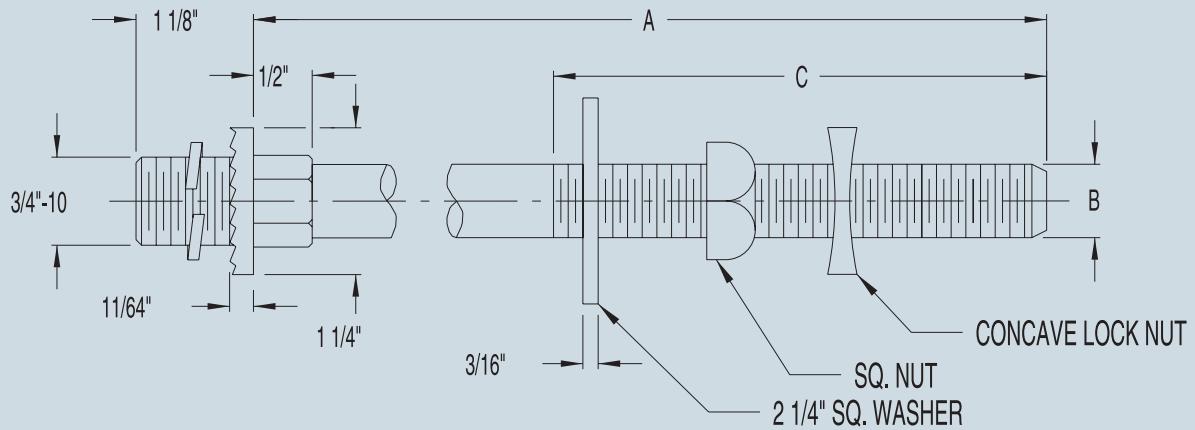
Typical application Voltage Values are listed as a guide for selection where operating conditions are normal.

Environmental factors may require the use of higher rated insulators or allow the use of lower rated insulators.

T &amp; D Insulators

# Studs For Line Post Insulators

## Wood/Steel Crossarms



Long-For Wood Crossarms

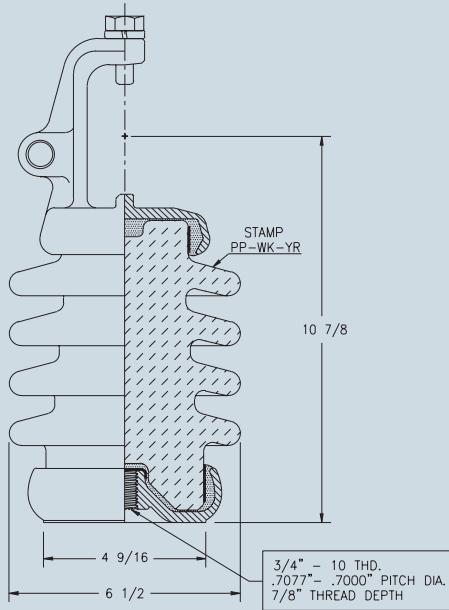
Catalog Number	6510	6512
Dimensions		
A	7 9/16"	7 9/16"
B	5/8" - 11	3/4" - 10
C	6"	6"

Short-For Steel Crossarms

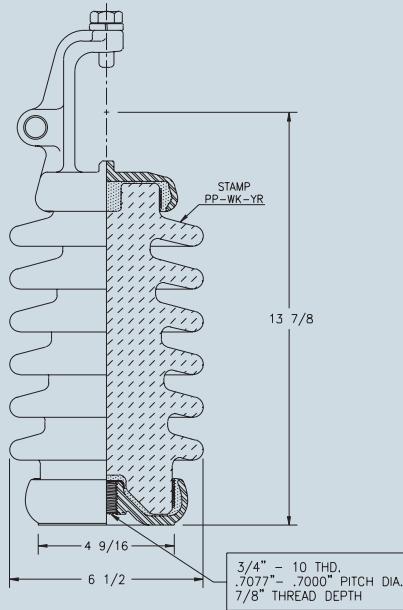
Catalog Number	6500	6502
Dimensions		
A	1 3/4"	1 3/4"
B	5/8" - 11	3/4" - 10
C	1 7/16"	1 7/16"

T&amp;D Insulators

# Horizontal Clamp Type Line Posts



No. 5225



No. 5235

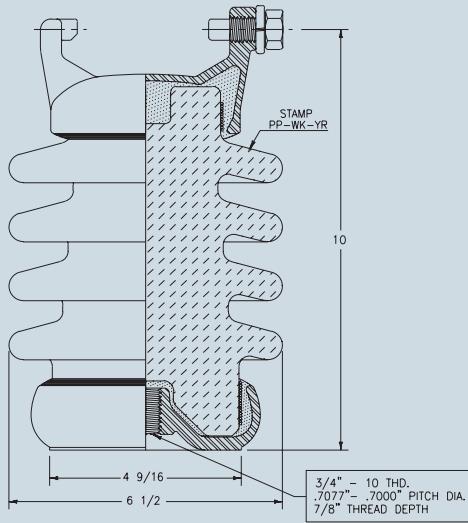


PPC Insulators Catalog Number	5225	5235
ANSI Technical Reference Number	57-21	57-22
<b>Dimensions</b>		
Leakage Distance (in)/(mm)	14" 355.60 mm	22" 558.80 mm
Dry Arcing Distance (in)/(mm)	6 1/2" 165.10 mm	9 1/2" 241.30 mm
Height To Middle of Clamp Assembly (in)/(mm)	10 7/8" 276.23 mm	13 7/8" 352.43 mm
Diameter (in)/(mm)	6 1/2" 165.10 mm	6 1/2" 165.10 mm
<b>Mechanical Values</b>		
Cantilever Strength	2800 lbs.	2800 lbs.
Cantilever Proof Load	1120 lbs.	1120 lbs.
<b>Electrical Values</b>		
Typical Line Voltage Application	25 kV	35 kV
Low Frequency Flashover Dry	80 kV	110 kV
Low Frequency Flashover Wet	70 kV	80 kV
Impulse Flashover Positive	130 kV	180 kV
Impulse Flashover Negative	155 kV	205 kV
<b>Radio Influence Low Frequency Test Voltage Data</b>		
Test Voltage, Rms to Ground, kV	15 kV	22 kV
Maximum RIV at 1000 kHz - $\mu$ V	100	100
<b>Weight</b>		
Maximum Net Weight	15 lbs.	21 lbs.
Packaged Weight Per Unit	18 lbs.	25 lbs.
<b>Packaging</b>		
Standard Packaging Quantity	3	3
<b>Insulator Coatings</b>		
Standard Glaze "Skyline" ANSI-70, Munsell 5 BG 7.0/0.4	Standard	Standard

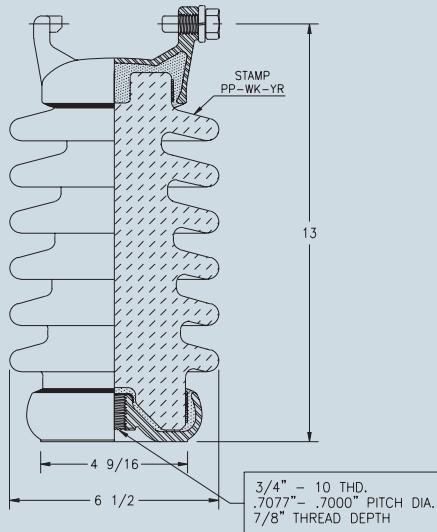
Special Glaze Requirement Upon Request

**T&D Insulators**

# Vertical Clamp Type Line Posts



No. 5325



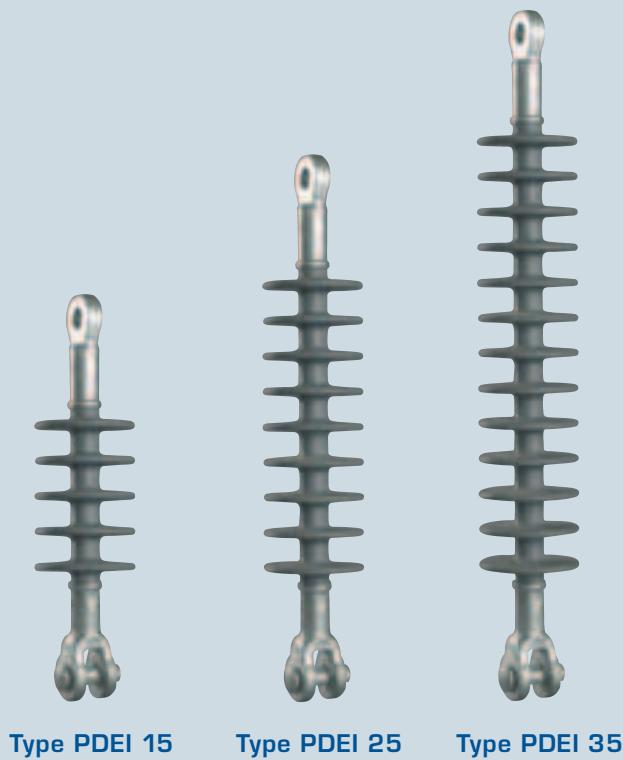
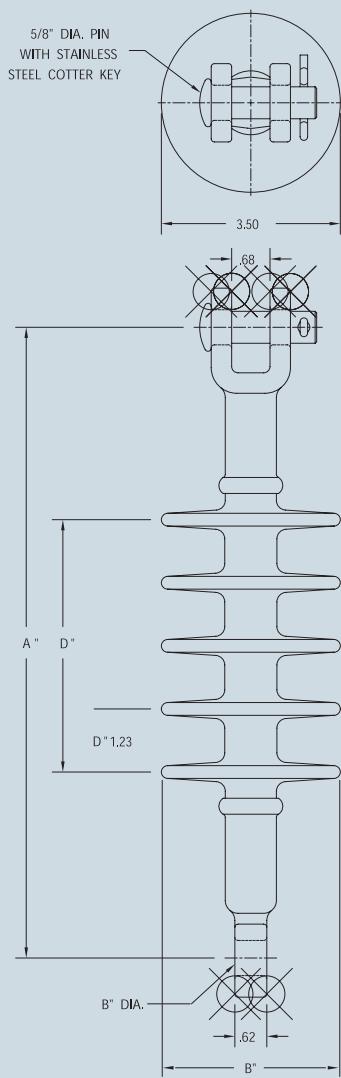
No. 5335



PPC Insulators Catalog Number	5325	5335
ANSI Technical Reference Number	57- 11	57- 12
<b>Dimensions</b>		
Leakage Distance (in)/(mm)	14" 355.60 mm	22" 558.80 mm
Dry Arcing Distance (in)/(mm)	6 1/2" 165.10 mm	9 1/2" 241.30 mm
Height To Middle of Single Cap Screw (in)/(mm)	10" 254.00 mm	13" 330.20 mm
Diameter (in)/(mm)	6 1/2" 165.10 mm	6 1/2" 165.10 mm
<b>Mechanical Values</b>		
Cantilever Strength	2800 lbs.	2800 lbs.
Cantilever Proof Load	1120 lbs.	1120 lbs.
<b>Electrical Values</b>		
Typical Line Voltage Application	25 kV	35 kV
Low Frequency Flashover Dry	80 kV	110 kV
Low Frequency Flashover Wet	60 kV	85 kV
Impulse Flashover Positive	130 kV	180 kV
Impulse Flashover Negative	155 kV	205 kV
<b>Radio Influence Low Frequency Test Voltage Data</b>		
Test Voltage, Rms to Ground, kV	15 kV	22 kV
Maximum RIV at 1000 kHz - $\mu$ V	100	100
<b>Weight</b>		
Maximum Net Weight Per Unit	16 lbs.	25 lbs.
Packaged Weight Per Unit	19 lbs.	27 lbs.
<b>Packaging</b>		
Standard Packaging Quantity	3	3
<b>Insulator Coatings</b>		
Standard Glaze "Skyline" ANSI-70, Munsell 5 BG 7.0/0.4	Standard	Standard
Special Glaze Requirement Upon Request		

## T&D Insulators

# Polymer Deadend Insulators



Material	End Fittings	Pin	Cotter Key
EPDM Rubber*	Malleable Iron, Hot dip galvanized	Steel, hot dip galvanized	Stainless steel

\* For optional silicone rubber skirt material, add suffix " -S1" to the Catalog No. (Example: PDEI-15-S1)

1. Type PDEI, EPDM & Silicone Rubber Insulators meet or exceed the requirements of IEEE Standard 1024-1988

2. PDEI-15 and PDEI-25 insulators are REA listed in Bulletin 1728-C-100 "List of Materials Acceptable for Use on Systems of Electrical Borrowers" on page K(2)

### Dimensional Data and Weights

Catalog Number	Dimensions				Number of Skirts	Weight	Standard Package Quantity
	A	B	C	D			
PDEI-15	12 1/2"	3 1/2"	1 1/4"	4 15/16"	5	2 1/2	18
PDEI-25	17 3/4"	3 1/2"	1 1/4"	9 7/8"	9	3 5/16	18
PDEI-35	22 1/2"	3 1/2"	1 1/4"	14 13/16"	13	4 3/32	12

### Specifications

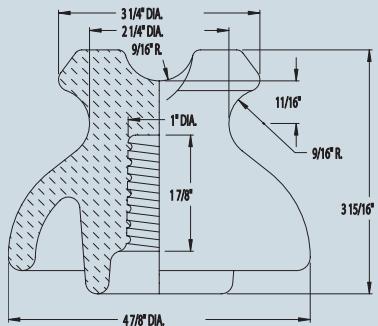
Catalog Number	kV Rating	IEEE Class 1	Tensile Strength Lbs.		Electrical Flashover - kV				Electric Leakage Distance (Inches)
			Rating	Proof Test	60 Hertz	Impulse	Positive	Negative	
PDEI-15	15	CI-1	15000	10000	90	65	140	170	16 1/2
PDEI-25	25	CI-2	15000	10000	130	110	215	225	26 5/8
PDEI-35	35	CI-4	15000	10000	145	130	250	270	42 13/16

## T&D Insulators

# Pintype Insulators



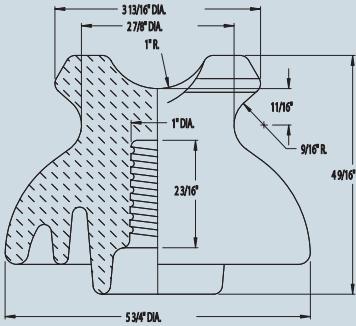
No. 261-S



**No. 261-S**  
ANSI Class 55-3  
"C" Neck



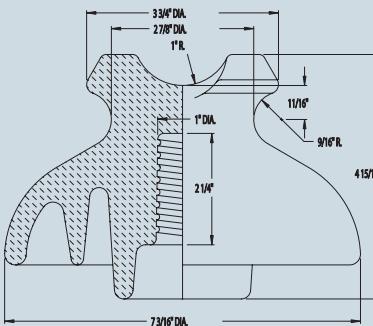
No. 366-S



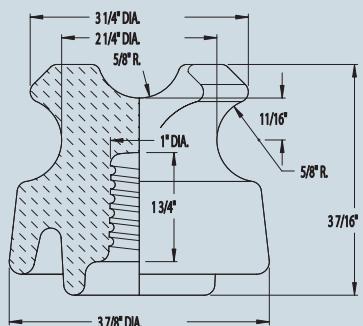
**No. 366-S**  
ANSI Class 55-4  
"F" Neck



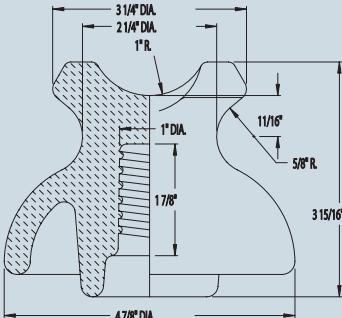
No. 380-S



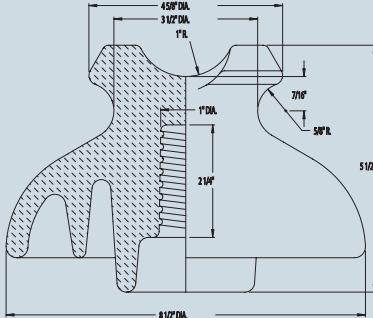
**No. 380-S**  
ANSI Class 55-5  
"F" Neck



**No. 253-S**  
ANSI Class 55-2  
"C" Neck



**No. 263-S**  
"C" Neck



**No. 386-ST**  
ANSI Class 55-6  
"J" Neck

### Mechanical & Electrical Characteristics

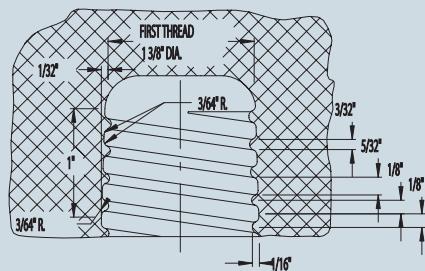
Catalog Number	*253-S	*261-S	263-S	*366-S	380-S	386-ST
Typical Application	7.2 KV	11.5 KV	11.5 KV	13.2 KV	14.4 KV	23 KV
Dry Flashover Voltage	45 KV	55 KV	55 KV	65 KV	80 KV	100 KV
Wet Flashover Voltage	25 KV	30 KV	30 KV	35 KV	45 KV	50 KV
Puncture Voltage	70 KV	90 KV	90 KV	95 KV	115 KV	135 KV
Impulse Flashover Positive	70 KV	90 KV	90 KV	105 KV	130 KV	150 KV
Impulse Flashover Negative	85 KV	110 KV	110 KV	130 KV	150 KV	170 KV
Leakage Distance	5"	7"	7"	9"	12"	15"
Dry Arcing Distance	3 3/8"	4 1/2"	4 1/2"	5"	6 1/4"	8"
Cantilever Strength	2500 lbs.	2500 lbs.	2500 lbs.	3000 lbs.	3000 lbs.	3000 lbs.
Minimum Pin Height	4"	5"	5"	5"	6"	7 1/2"
Net Weight Per 100	183 lbs.	225 lbs.	260 lbs.	390 lbs.	500 lbs.	890 lbs.
Package Weight Per 100	191 lbs.	254 lbs.	288 lbs.	400 lbs.	617 lbs.	938 lbs.
Standard Package Quantity	48	24	24	12	12	8

<sup>†</sup> REA Accepted  
Standard Glaze "Skyline" ANSI-70,  
Munsell 5 BG 7.0/0.4  
Above Insulators furnished Standard with Semi-Conductive Glaze (Type S) to eliminate noise.  
Plain Glaze available on Special Order.  
Type-S Insulator Characteristics shown above.  
See Page 20 for R.I.V. and impulse characteristics.  
Typical application Voltage Values are listed as a guide for selection where operating conditions are normal. Environmental factors may require the use of higher rated insulators or allow the use of lower rated insulators.

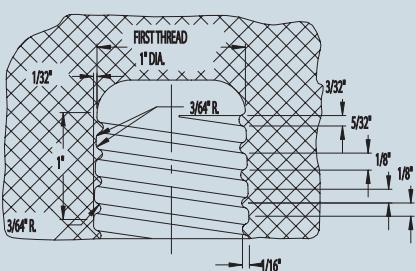
## T&D Insulators

# High Voltage Pintype Insulators

Standard Pinholes For PinType Insulators



1" Pinhole

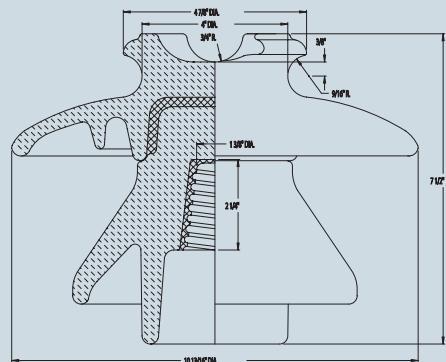


1 3/8" Pinhole

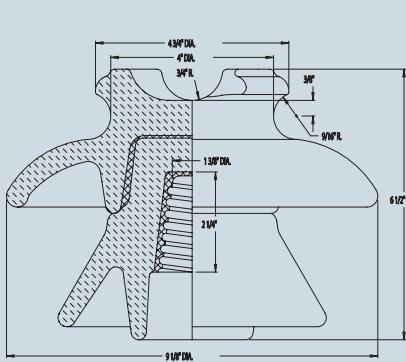
Threads – four threads per inch tapering  $1/16"$  in diameter to  $1"$  in length.  
Each Pintype insulator thread fit is checked with thread gauge according to  
ANSI C29.5 – 1969



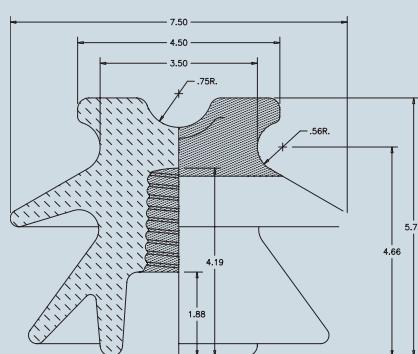
1027 ST



No. 2045-S  
ANSI Class 56-3  
"K" Neck



No. 2033-S  
ANSI Class 56-2  
"K" Neck



No. 1027 ST  
ANSI Class 56-1  
"J" Neck

### Mechanical & Electrical Characteristics

Catalog Number	1027 ST	2033-S	2045-S
Typical Application	23 kV	23 kV	34.5 kV
Dry Flashover Voltage	95 kV	110 kV	125 kV
Wet Flashover Voltage	60 kV	70 kV	80 kV
Puncture Voltage	130 kV	145 kV	165 kV
Impulse Flashover Positive	150 kV	175 kV	200 kV
Impulse Flashover Negative	190 kV	225 kV	265 kV
Leakage Distance	13"	17"	21"
Dry Arcing Distance	7"	8 1/4"	9 1/2"
Cantilever Strength	2500 lbs.	3000 lbs.	3000 lbs.
Minimum Pin Height	6"	7"	8"
Net Weight Per 100	752 lbs.	900 lbs.	1150 lbs.
Package Weight Per 100	800 lbs.	1025 lbs.	1375 lbs.
Standard Package Quantity	8	4	4

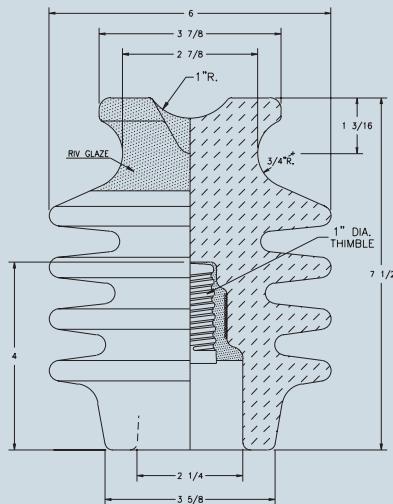
<sup>1</sup>REA Accepted  
Standard Glaze "Skyline" ANSI-70,  
Munsell 5 BG 7.0/0.4  
Above Insulators furnished Standard with Semi-Conductive Glaze (Type S) to eliminate noise.  
Plain Glaze available on Special Order. Type-S  
Insulator Characteristics shown above.  
See below for R.I.V. and impulse characteristics.  
Typical application Voltage Values are listed as a  
guide for selection where operating conditions  
are normal. Environmental factors may require  
the use of higher rated insulators or allow the  
use of lower rated insulators.

### R. I. V. And Impulse Characteristics

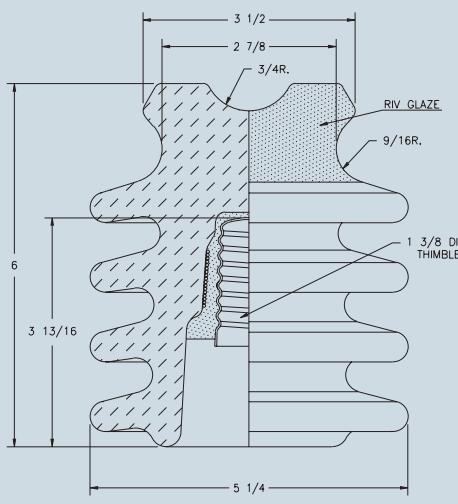
Catalog Number		60 - Cycl Test Voltage	Maximum Radio Influence Voltage at 1000 KC - Microvolts		Type - S Impulse Flashover kV	
Plain	Type - S	kV	Plain	Type - S	Positive	Negative
253	253 - S	15	2500	50	70	85
261	261 - S	10	5500	50	90	110
263	263 - S	10	5500	50	90	110
366	366 - S	10	5500	50	105	130
380	380 - S	15	8000	100	130	150
386	386 - S	22	8000	100	150	170
1027	1027 ST	15	8000	100	150	190
2033	2033 - S	22	12000	100	175	225
2045	2045 - S	30	16000	200	200	265

## T&amp;D Insulators

## Pinpost Insulators



No. 400321



No. 410033



PPC Insulators Catalog Number	400321	410033
<b>Dimensions</b>		
Leakage Distance (in)/(mm)	18" 457.20 mm	13" 330.20 mm
Dry Arcing Distance (in)/(mm)	9" 228.60 mm	6 3/4" 171.45 mm
Height (in)/(mm)	7 1/2" 190.50 mm	6" 152.40 mm
Diameter (in)/(mm)	6" 152.40 mm	5 1/4" 133.35 mm
<b>Mechanical Values</b>		
Cantilever Strength	3000 lbs.	2500 lbs.
<b>Electrical Values</b>		
Typical Line Voltage Application	25 kV	27 kV
Low Frequency Flashover Dry	100 kV	85 kV
Low Frequency Flashover Wet	70 kV	60 kV
Impulse Flashover Positive	155 kV	140 kV
Impulse Flashover Negative	190 kV	170 kV
Low Voltage Puncture Voltage	160 kV	115 kV
<b>Radio Influence Low Frequency Test Voltage Data</b>		
Test Voltage, Rms to Ground, kV	20 kV	15 kV
Maximum RIV at 1000 kHz - $\mu$ V	100	100
<b>Weight</b>		
Maximum Net Weight Per Unit	10 lbs.	5.85 lbs.
Packaged Weight Per Unit	10.50 lbs.	6.20 lbs.
<b>Packaging</b>		
Standard Packaging Quantity	6	6
<b>Glaze</b>		
Standard Glaze "Skyline" ANSI-70, Munsell 5 BG 7.0/0.4	Standard with Semi-Conductive Glaze	Standard Semi-Conductive Glaze

Special Glaze Requirement Upon Request

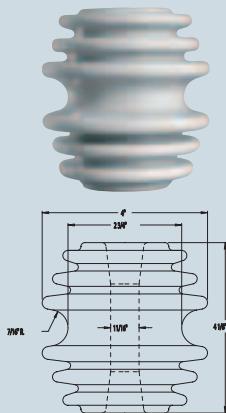
Beside insulators furnished standard with semi-conductive glaze to eliminate noise.  
Plain glaze available on special order.

Typical application Voltage Values are listed as a guide for selection where operating conditions are normal. Environmental factors may require the use of higher rated insulators or allow the use of lower rated insulators.

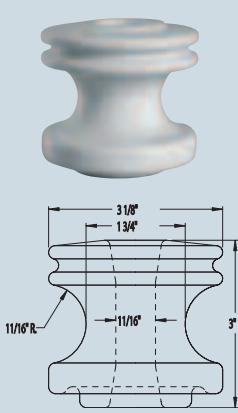
## T&amp;D Insulators

# Spool and Guy Strain Insulators

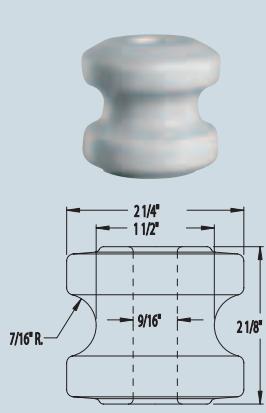
## Wet Process Porcelain



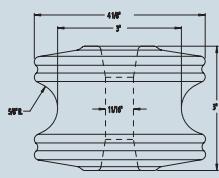
No. 5116



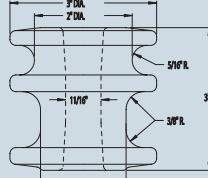
No. 5101



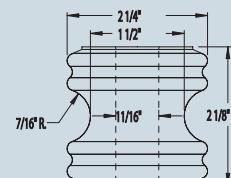
No. 5107



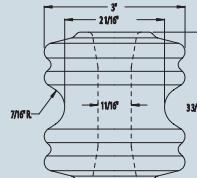
No. 5119



No. 5102



No. 5112



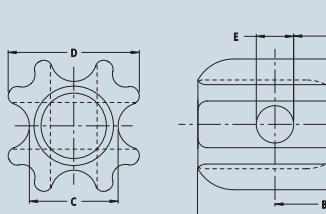
No. 5104

## Mechanical And Electrical Characteristics

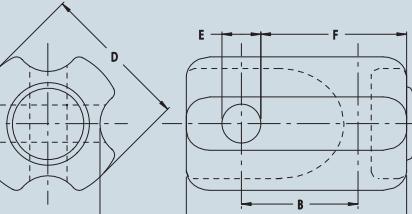
Catalog Number	ANSI	Ultimate Strength	Low Frequency Flashover - kV			Approximate Net Weight (lbs.)	Standard Package Quantity
			Dry	Vertical	Horizontal		
†5101	53-2	3000	25	12	15	120	50
5102	N/A	3000	20	10	12	110	50
5104	53-3	4000	25	12	15	135	50
†5107	N/A	1750	18	7	9	45	100
5112	53-1	2000	20	8	10	50	100
5116	53-5	6000	35	18	25	260	25
†5119	53-4	4500	25	12	15	252	25

† REA Accepted

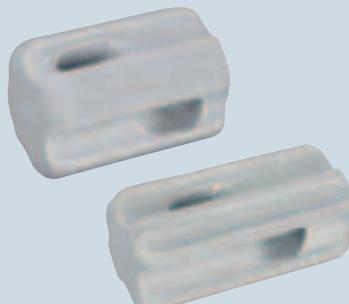
Standard Glaze "Skyline" ANSI-70, Munsell 5 BG 7.0/0.4



No. 708



No. 502-504-506



Catalog Number	ANSI Class	Tensile Strength	Low Frequency Flashover kV		Leakage Distance Inches	Maximum Cable Dia. Inches	Dimensions (Inches)						Approximate Net Weight (lbs.)	Standard Package Quantity
			Dry	Wet			A	B	C	D	E	F		
†502	54-1	10000	25	12	1 5/8"	3/8"	3 1/2"	1 3/4"	1 3/4"	2 1/2"	5/8"	2 5/16"	112	50
†504	54-2	12000	30	15	1 7/8"	1/2"	4 1/4"	2 1/4"	2 1/8"	2 7/8"	7/8"	2 13/16"	188	25
†506	54-3	20000	35	18	2 1/4"	5/8"	5 1/2"	3 1/8"	2 3/8"	3 3/8"	1"	3 13/16"	296	25
†508	54-4	20000	40	23	3"	5/8"	6 3/4"	2 5/8"	2 3/8"	3 1/2"	1"	4 1/2"	475	20

† REA Accepted

Standard Glaze "Skyline" ANSI-70, Munsell 5 BG 7.0/0.4

# T&D Insulators

## Cross Reference Guide

The comparative catalog numbers are intended as a guide only. It is recommended that each item be further identified by referring to that item in this catalog. All possible care has been exercised in preparing this Cross Reference Guide; however, we cannot assume responsibilities for discrepancies.

Suspension And Dead-End Insulators								
ANSI Class Number	PPC Insulators	Ohio Brass	NGK (Locke)	Lapp	Joslyn (Pinco)	A.B. Chance	McGraw Edison	Victor
52-1	86012	32433	16583	6605 G	L 1510 C 907-1211	C 907-1001 804-40		804
52-1	86046			6605 H				
52-2	87512	32435			L 600			801
52-3	81022	32440	205840	8200	L 2060	C 907-1003		900
52-4	81012	32439	205580	8100	L 2070	C 907-1004		800
52-9	20034	47399			6815 G	74002	C 907-1209	877
52-9	20046						C 907-1210	877-40
52-9	84300	42399	16044	6815	L 1814	C 907-1009		817
	20122							
	20166					C 907-1704		
	84166					C 907-1604		
Tie-Top Line Post Insulators And Studs								
ANSI Class Number	PPC Insulators	Ohio Brass	NGK (Locke)	Lapp	Joslyn (Pinco)	A.B. Chance	McGraw Edison	Victor
	5015	37600		4315 X		C 903-1710		
	5020	43400		4320 X		C 903-1711		
	5025							
	5027	43401		4327 X		C 903-1712		
	5035			4335 X				
	5045							
	5115			4315 -PX		C 903-1910		
	5120			4320 -PX		C 903-1911		2120
57-1	5125	37610		9325 X		C 903-1813		2025
	5127	47101		4327 -PX		C 903-1912		2127
57-2	5135	37620		9335 X		C 903-1814		62055
57-3	5145	41640		9345 X		C 903-1815		62056
Studs								
	6500	87563		301613		C 903-9507		72090
	6502	87573		301614		C 903-9508		72088
	6510	87564			11612 A		C 903-9514	72091
	6512	87574			10187 A		C 903-9517	72087
PinType Insulators								
ANSI Class Number	PPC Insulators	Ohio Brass	NGK (Locke)	Lapp	Joslyn (Pinco)	A.B. Chance	McGraw Edison	Victor
55-1	237	29207			L 62	C 905-1001		4
55-1	237 -S					C 905-1301		
55-2	253	12847			L 223	C 905-1002	NP 807	8
55-2	253 -S				L 223 R	C 905-1302	NP 808	8 R
55-3	261				L 63	C 905-1003	NP 907	5
55-3	261 -S	38148			L 63 R	C 905-1303	NP 908	5 R
55-4	366				L 2064	C 905-1004	NP 21D7	6
55-4	366 -S	38149			L 2064 R	C 905-1304	NP 21D8	6 R
55-5	380				L 367	C 905-1005	NP 2207	9
55-5	380 -S	38151			L 367 R	C 905-1305	NP 2208	9 R
55-6	386 -ST					C 905-1306	NP 23D8	11 R
56-1	1027 -S	38246			L 1123 R	C 906-1311		27 R
56-2	2033 -S	38222			L 72 R	C 906-1302		133 R
56-3	2045 -S	38223			L 75 R	C 906-1303		245 R
Guy Strain Insulators								
ANSI Class Number	PPC Insulators	Ohio Brass	NGK (Locke)	Lapp	Joslyn (Pinco)	A.B. Chance	McGraw Edison	Victor
54-1	502	31502			L502	C 9090-1041		502
54-2	504	31504			L504	C 909-1042		504
54-3	506	31506			L506	C 909-1043		506
54-4	708	31352			L539	C 909-1044		556
Spool Insulators								
ANSI Class Number	PPC Insulators	Ohio Brass	NGK (Locke)	Lapp	Joslyn (Pinco)	A.B. Chance	McGraw Edison	Victor
53-1	5112	36139			J 98	C 909-1031		2011
53-2	5101	36361			J 151	C 909-1032		2012
53-3	5104				J 97	C 909-1033		2013
53-4	5119	38911			J 0101	C 909-1034		2026
53-5	5116	36140			J 0613	C 909-1035		2014
	5107				J 150	C 909-1931		
	5102				J 105	C 909-1932		



# The very Best.



**That's what we deliver.**

Only a company that develops,  
produces and delivers products  
worldwide can provide the optimal  
solution for your requirements.

The specialists of **PPC** Insulators  
are dedicated to supplying you with  
superior advice and global support.

**PPC** Insulators quality products  
and service provide time-tested  
value to fulfill your needs!

Please visit us on the web at  
[www.ppcinsulators.com](http://www.ppcinsulators.com)



**PPC INSULATORS**