

Vanguard  
ELECTRIC



A Southern States Company



# ANSI DISTRIBUTION TYPE INSULATORS CATALOG





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# INTRODUCTION

## General Info

**Vanguard Electric, LLC** is a U.S. member company of the Southern States Group of companies ([www.southernstatesllc.com](http://www.southernstatesllc.com)) dedicated to sourcing top quality electrical components for internal use by other group companies, as well as by the customers they serve.

**Vanguard Electric** brings to its customers high quality products that have been carefully researched, vetted and adapted to the U.S. market so they meet all technical requirements at very competitive prices. Our highly specialized team is dedicated to source OEM products from top world manufacturers that comply with the highest standards that we have defined for our brand. Vanguard Electric stands for quality, competitive pricing and total reliability on all aspects that are critical for your successful projects.

At **Vanguard Electric, LLC**, consistent with the spirit of the group we are part of, we recognize the importance of providing a quality product to our customers. Further, we believe that the customer's buying experience as a whole ultimately determines whether or not continued success is attainable. To ensure successful projects for our customers, we strive to offer a combination of features that we are confident will provide a very satisfactory experience with our company:

- Top quality product manufactured to our specification (and in full compliance of applicable U.S. and international standards) by world-class manufacturers.
- Long-term relationships, in which our partners facilities are constantly monitored for the highest quality standards.
- Volume purchasing practices which results in savings to our customers.
- Competitive pricing so you know you are paying for top quality products but not for large overheads or overpriced brand names.
- Seasoned team of engineers and specialized consultants that provide our customers with effective and reliable support at every step (selection, application, troubleshooting, service).
- Tough quality assurance requirements, which we monitor constantly to assure compliance.
- Clear, complete and easily available technical information (online and in printed format).

- Professional inside sales group supported by a solid network of local agents in the U.S. We want to always be available to you.
- Domestic (U.S.A) service and support.
- Large stock of the most popular references used in the market (customer specific stocking programs available).

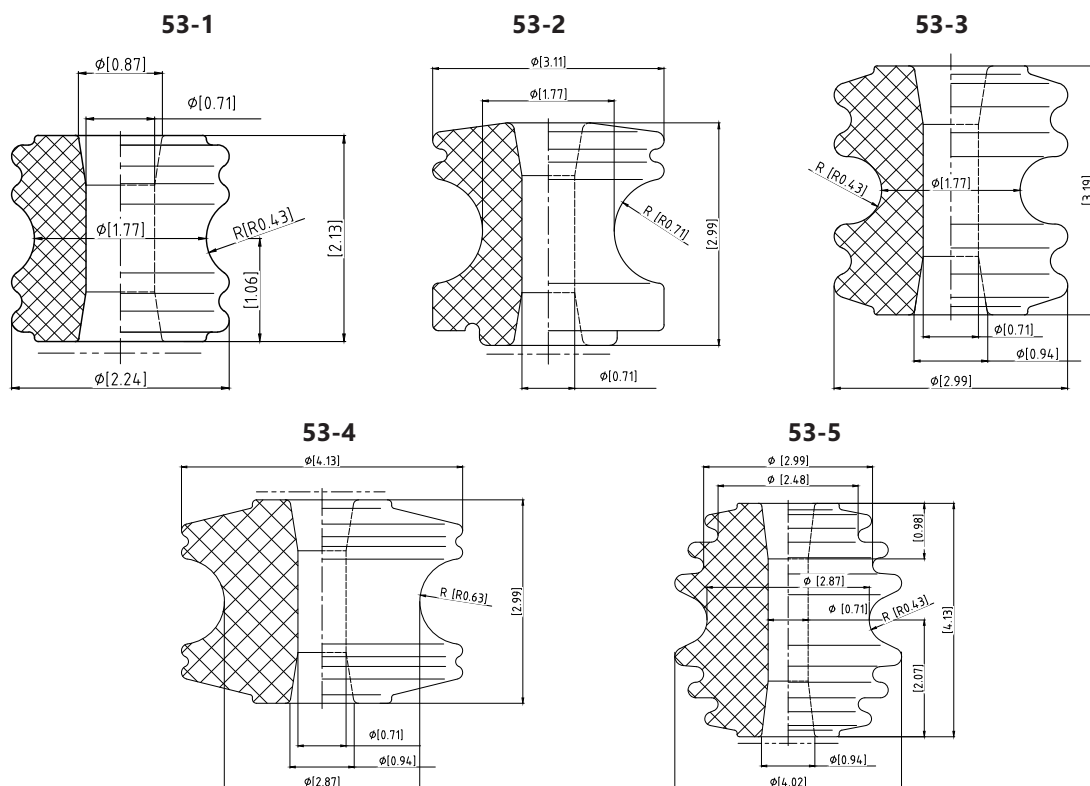
### **SPOOL TYPE, STRAIN TYPE, LOW AND MEDIUM VOLTAGE PIN TYPES, HIGH-VOLTAGE PIN TYPE, LINE POST-TYPE INSULATORS**

Our distribution type insulators are produce using high quality materials in compliance with ANSI C29.3, C29.4, C29.5, C29.6 and C29.7 with many available variations in shape, leakage distance, color, and special weather resistance glazing.

#### **General Features**

- Manufactured in state of the art ISO9001 certified facilities.
- Wet Process porcelain manufacturing system.
- Designed in compliance to ANSI C29.3, C29.4, C29.5, C29.6 and C29.7 standard (please contact us to certify compliance to other standards).
- Routine testing as per ANSI C29.3, C29.4, C29.5, C29.6 and C29.7.
- We stock ANSI 70 Gray insulators (most commonly used in the U.S) chocolate brown insulators available upon request.
- ASTM A153M galvanized cast iron fittings are cemented to the porcelain using carefully formulated and cured high strength Portland cement and silica sand (Line Post insulators only).
- **5 Year warranty.**

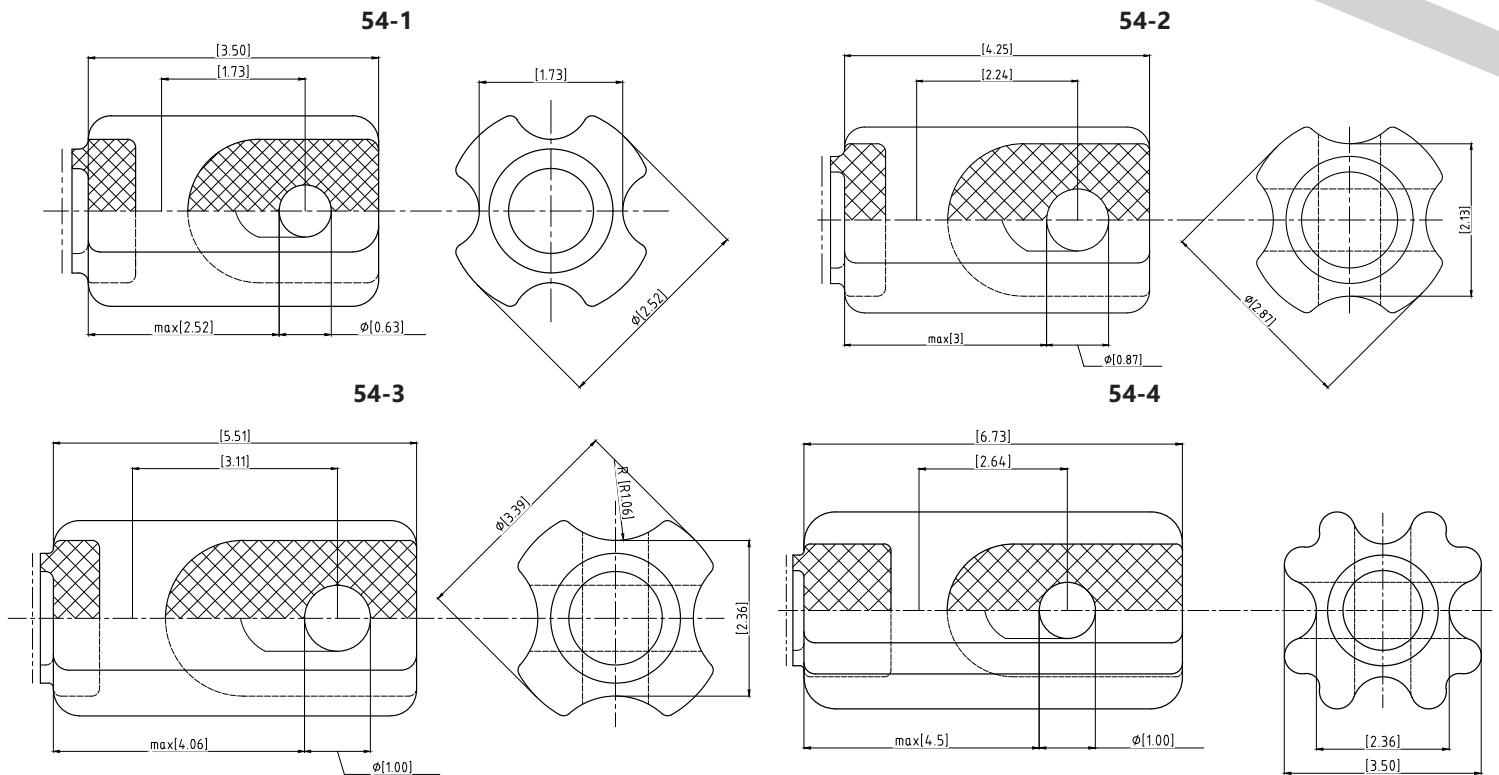
# Spool type insulators 53 series according to ANSI C29.3



ANSI Class	53-1	53-2	53-3	53-4	53-5
VE Catalog Number	53-1 SG	53-2 SG	53-3 SG	53-4 SG	53-5 SG
<b>Mechanical Properties</b>					
Transverse strength, lbs	2000	3000	4000	4500	6000
<b>Electrical Values</b>					
Low-frequency dry flashover, kV	20	25	25	25	35
Low-frequency wet flashover, kV					
Vertical	8	12	12	12	18
Horizontal	10	15	15	15	25



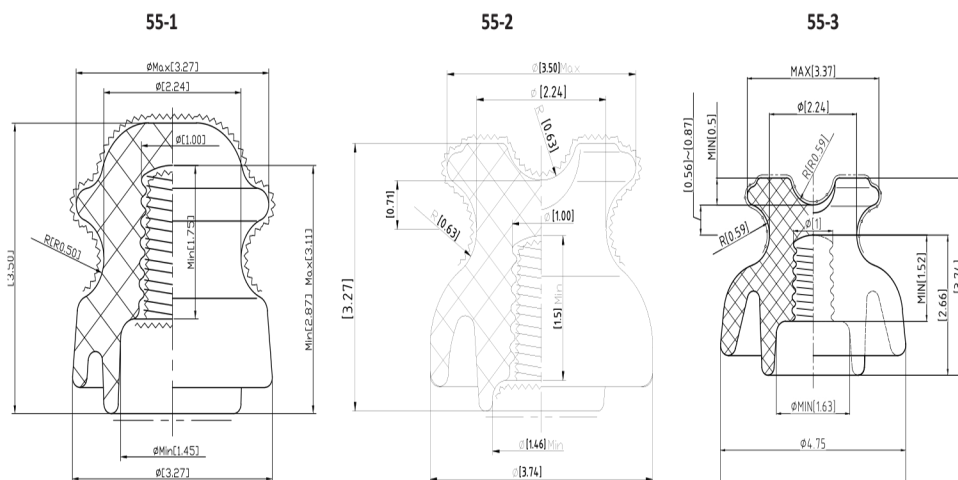
# Guy Strain insulators 54 series according to ANSI C29.4



ANSI Class	54-1	54-2	54-3	54-4
VE Catalog Number	54-1 SG	54-2 SG	54-3 SG	54-4 SG
<b>Dimensions inches</b>				
Leakage Distance, inches	1-5/8	1-7/8	2-1/4	3
<b>Mechanical Properties</b>				
Tensile strength, lbs	10000	12000	20000	20000
<b>Electrical Values</b>				
Low-frequency dry flashover, kV	25	30	35	40
Low-frequency wet flashover, kV	12	15	18	23



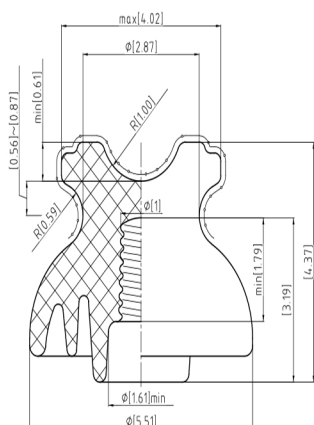
## Low Voltage Pin Type insulators



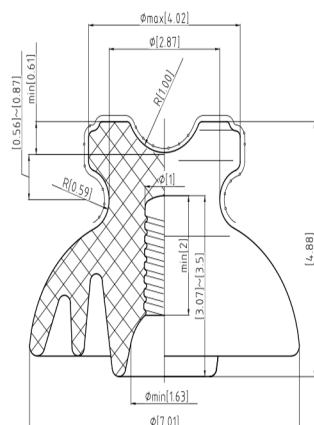
ANSI Class	55-1		55-2		55-3	
VE Catalog Number	55-1 SG		55-2 SG		55-3 SG	
	Plain	Radio Freed	Plain	Radio Freed	Plain	Radio Freed
<b>Dimensions inches</b>						
Leakage Distance, inches	4	4	5	5	7	7
Dry-arcing Distance, inches	2-1/4	2-1/4	3-3/8	3-3/8	4-1/2	4-1/2
Minimum Pin Height, inches	4	4	4	4	5	5
<b>Mechanical Properties</b>						
Cantilever strength, lbs	3000	3000	2500	2500	2500	2500
<b>Electrical Values</b>						
Low-frequency dry flashover, kV	35	35	50	45	65	55
Low-frequency wet flashover, kV	20	20	25	25	35	30
Critical impulse flashover, positive, kV	50	50	75	70	100	90
Critical impulse flashover, negative, kV	70	70	95	85	130	110
Low-frequency puncture voltage, kV	50	50	70	70	90	90
<b>Radio-Influence Voltage Data</b>						
Low-frequency test voltage, rms to ground, kV	5	5	5	5	10	10
Maximum RIV at 1000 kHz	2 500	50	2 500	50	5 500	50

## 55 series according to ANSI C29.5

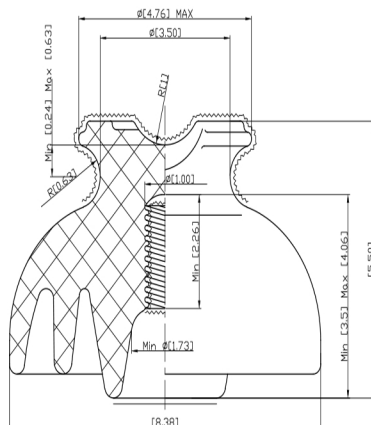
55-4



55-5



55-6

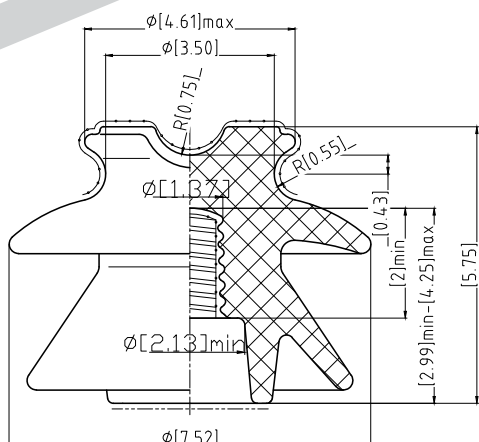


55-4		55-5		55-6
55-4 SG		55-5 SG		55-6 SG
Plain	Radio Freed	Plain	Radio Freed	-
9	9	12	12	15
5	5	6-1/4	6-1/4	8
5	5	6	6	7-1/2
3000	3000	3000	3000	3000
70	65	85	80	100
40	35	45	45	50
110	105	140	130	150
140	130	170	150	170
95	95	115	115	135
10	10	15	15	22
5 500	50	8 000	100	-

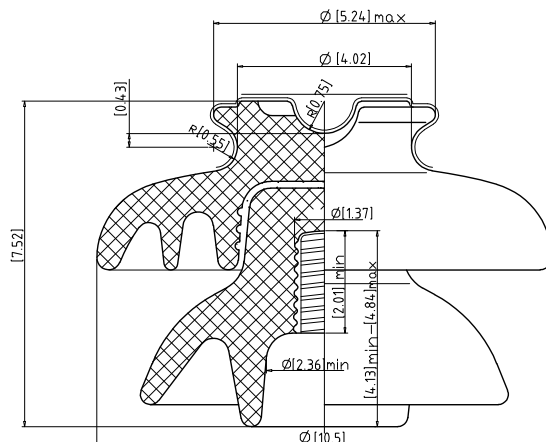


# High Voltage Pin type insulators 56 series according to ANSI C29.6

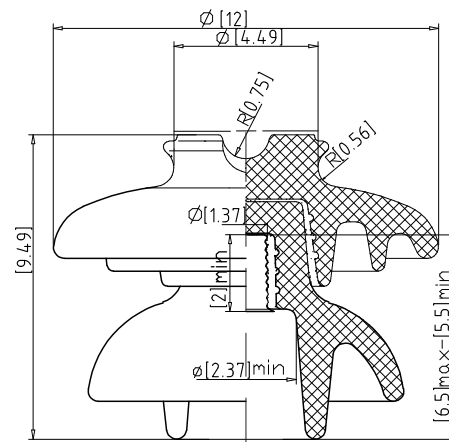
56-1



56-3



56-4

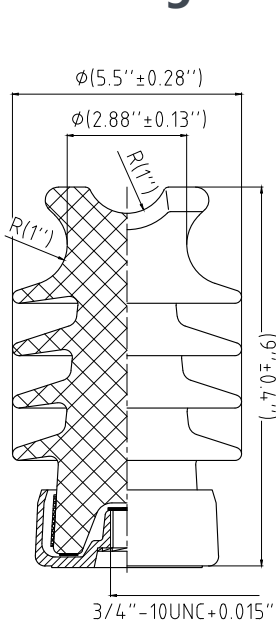


ANSI Class	56-1	56-3	56-4
VE Catalog Number	5601SG	5603SG	5604SG
<b>Dimensions inches</b>			
Leakage Distance, inches	13	21	27
Dry-arcing Distance, inches	7	9.5	11.25
Minimum Pin Height, inches	6	8	10
<b>Mechanical Properties</b>			
Cantilever strength, lbs	2500	3000	3000
<b>Electrical Values</b>			
Low-frequency dry flashover, kV	95	125	140
Low-frequency wet flashover, kV	60	80	95
Critical impulse flashover, positive, kV	150	200	225
Critical impulse flashover, negative, kV	190	265	310
Low-frequency puncture voltage, kV	130	165	185
<b>Radio-Influence Voltage Data</b>			
Low-frequency test voltage, rms to ground, kV	15	30	30
Maximum RIV at 1000 kHz			
Radio freed, microvolts	100	200	200
Plain, microvolts	8000	16000	16000

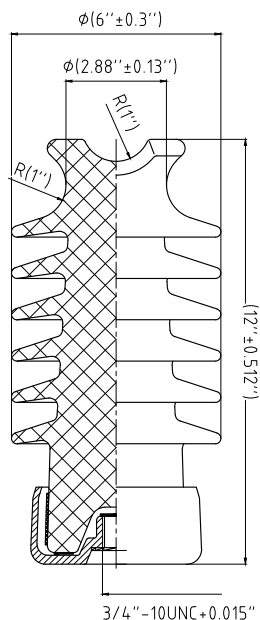


# Line Post insulators 57 series according to ANSI C29.7

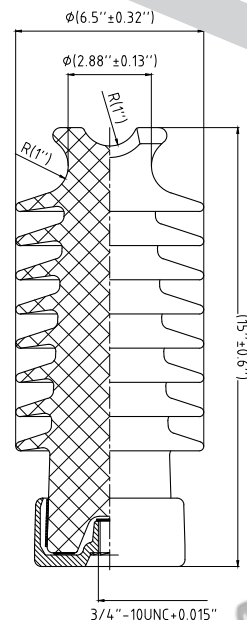
57-1



57-2

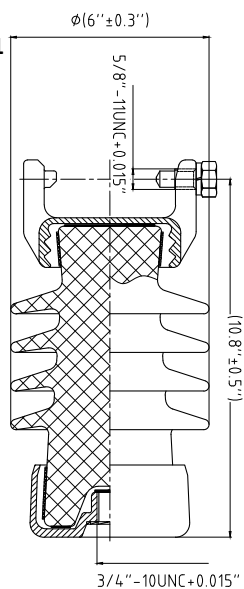


57-3

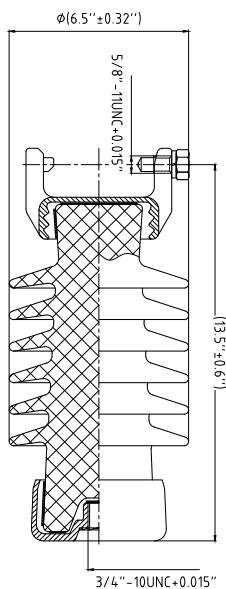


ANSI C29.7 Reference	57-1	57-2	57-3	57-11	57-12	57-13
VE Catalog #	5701SSG	5702SSG	5703SSG	5711SSG	5712SSG	5713SSG
Neck type	F	F	F	N/A	N/A	N/A
<b>Dimensions inches</b>						
H Height/Length	9	12	15	10.8	13.5	16.6
D Nominal diameter insulating	5.5	6	6.5	6	6.5	6.5
Center Hole nominal Threaded size	3/4	3/4	3/4	3/4	3/4	3/4
Leakage distance inches	14	22	29	14	22	29
Dry arcing distance inches	6.5	9.5	12.25	6.5	9.5	12.25
Net weight (approx.) lb	11	17	26	18	23	30
<b>Mechanical Properties</b>						
Cantilever strength lb	2800	2800	2800	2800	2800	2800
<b>Electrical Properties</b>						
Critical impulse flashover (+) kV	120	160	200	120	160	205
Low-Frequency Flashover voltage (Dry) kV	70	100	125	70	100	125
Low-Frequency Flashover voltage (Wet) kV	50	70	95	50	70	95
<b>Radio Influence Voltage Data</b>						
Test voltage to ground kV	15	22	30	15	22	30
Maximum RIV at 1000 kHz μV	100	100	200	100	100	200

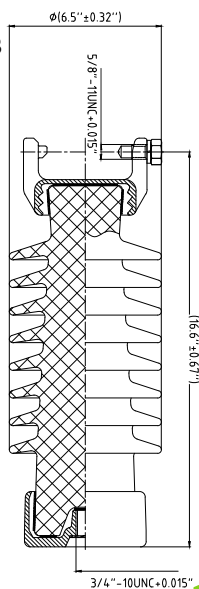
57-11



57-12



57-13



## Picture Gallery





## DATA SHEET NOTES

1. All VE catalog numbers as shown in this chart correspond to gray porcelain designs. For other colors please contact Vanguard Electric.
2. This catalog is intended for general reference. It shows the basic dimensions of each insulator. For detailed dimensional data please contact Vanguard Electric, LLC or download the insulator drawing from [www.vanguardelec.com](http://www.vanguardelec.com)
3. Applicable standards: ANSI C29.3, C29.4, C29.5, C29.6 and C29.7
4. Special designs with different variations to the listed specifications (dimensions, strength, shed designs, etc.) are available upon request.
5. For distribution type suspension insulators please refer to our Suspension Insulators Catalog available at [www.vanguardelec.com](http://www.vanguardelec.com)



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