



Vanguard
ELECTRIC



VTR205SSG0
33430
40705

ANSI
Post Type
INSULATORS
CATALOG



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TR-202 through TR-267

TR-216 through TR-295

TR-304 through TR-369

TR-330 through TR-391

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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) 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 applicable international standards) by top world-class manufacturers. We establish long-term relationships, constantly monitor their facilities, and require the highest standards.
- We buy in large quantities (in many products for our sister group companies) and transfer the savings to our customers. We offer very competitive pricing so you know you are paying for top quality products but not for large overheads or overpriced brand names.
- Vanguard Electric, LLC keeps a 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).
- A 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.
- A large stock of the most popular references used in the market (customer specific stocking programs available).

VANGUARD ELECTRIC – ANSI POST TYPE INSULATORS

Our post type insulator product lineup is among the most complete in today's market. We offer all ANSI C29.9 TR references from the TR-202 to the TR-391, with many variations in strength, leakage distance, shed configuration, color, and special seismic requirements.

General Features

- Manufactured in state of the art ISO9001 certified, highly automated facilities which results in highly uniform and reliable production.
- High strength solid-core porcelain body.
- Wet Process porcelain manufacturing system (isostatic process used for some of ultra high strength designs).
- Designed in compliance to ANSI C29.9 and CSA C156.1 standards (please contact us to certify compliance to other standards).
- Routine testing as per ANSI C29.9 includes dimensional, alignment, ultrasonic, mechanical strength.
- Multiple options of shed designs, strength, leakage distance, color, fittings, special seismic requirements.
- 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. Bolt holes are protected against oxidation with special silicone grease and plastic caps. Fittings are cemented to the porcelain using carefully formulated and cured high strength Portland cement and silica sand.
- **5 Year warranty.**



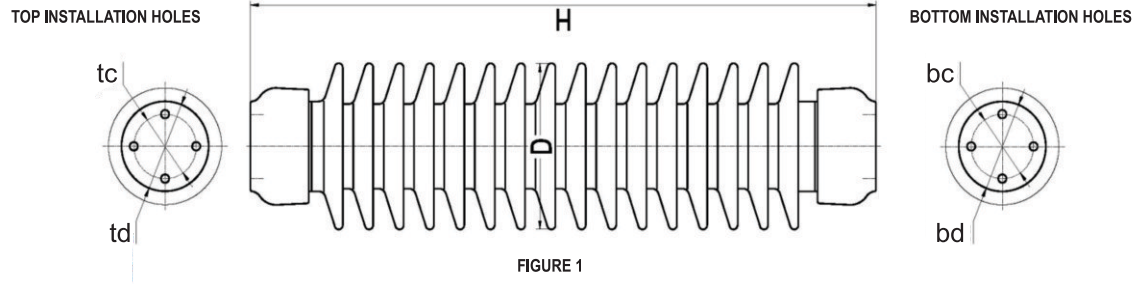


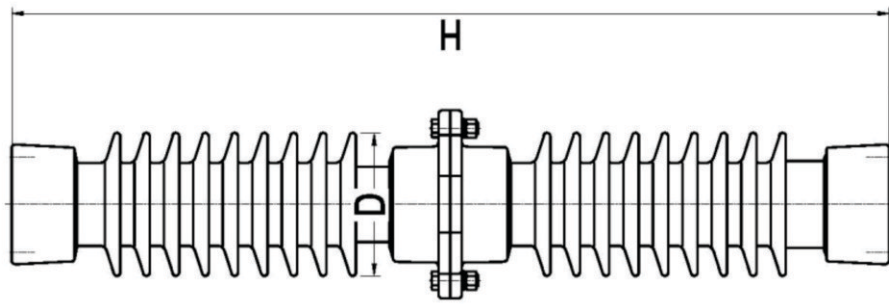
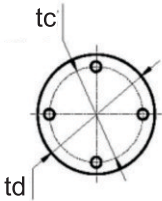
FIGURE 1

ANSI TR Reference	TR202	TR222	TR205	TR225	TR208	TR227	TR210	TR231	TR214	TR267
VE Catalog #	VTR202SSG	VTR222SSG	VTR205SSG	VTR225SSG	VTR208SSG	VTR227SSG	VTR210SSG	VTR231SSG	VTR214SSG	VTR267SSG
Dimensions inches										
H	7.5	10	10	12	14	15	18	20	22	24
D (max shed diameter)	5.83	6.1	6.22	6.69	6.22	7.48	7.1	8.27	7.32	8.46
Top Cap diameter (td)	4.02	6.26	4.17	6.26	4.8	6.26	4.8	6.26	5.43	6.26
Bottom Cap diameter (bd)	4.02	6.26	4.17	6.26	4.8	6.26	4.8	6.26	5.43	6.26
Top BCD (tc)	3	5	3	5	3	5	3	5	3	5
Bottom BCD (bc)	3	5	3	5	3	5	3	5	3	5
Leakage distance inches	10.5	10.5	15.5	15.5	24	29.3	37	37	42.99	43
Net weight (approx.) lb	13.2	28.6	15.4	33.9	27.5	49.5	34.1	59.4	45.1	70.4
Mechanical Properties										
Cantilever strength lb	2000	4000	2000	4000	2000	4000	2000	4000	2000	4000
Tension strength lb	7000	15000	8500	20000	10000	20000	12000	25000	13938	25000
Torsion strength inch-lb	6000	12000	10621	14000	8000	16000	10000	20000	12000	20000
Compression strength lb	10000	20000	10000	20000	10000	20000	15000	30000	15000	60000
Electrical Properties										
Critical impulse flashover (+) kV	105	105	125	125	170	170	225	225	280	280
Impulse withstand voltage kV	95	95	110	110	150	150	200	200	250	250
Low frequency withstand voltage (wet) kV	30	30	45	45	60	60	80	80	100	100
Radio Influence Voltage Data										
Test voltage to ground kV	5	5	10	10	15	15	22	22	30	30
Maximum RIV at 1000 kHz μV	50	50	50	50	100	100	100	100	200	200
	Figure 1	Figure 1	Figure 1	Figure 1	Figure 1	Figure 1	Figure 1	Figure 1	Figure 1	Figure 1

ANSI TR Reference	TR216	TR278	TR286	TR287	TR288	TR288-HL	TR289	TR289-HL	TR291	TR295
VE Catalog #	VTR216SSG	VTR278SSG	VTR286SSG	VTR287SSG	VTR288SSG	VTR288S1G	VTR289SSG	VTR289S1G	VTR291SSG	VTR295SSG
Dimensions inches										
H	30	30	45	45	54	54	54	54	62	62
D (max shed diameter)	7.71	8.66	8.46	8.58	7.56	8.5	8.27	8.82	8.15	8.07
Top Cap diameter (td)	5.43	6.26	6.22	6.26	6.26	6.26	6.54	6.54	6.26	6.26
Bottom Cap diameter (bd)	5.43	6.26	6.22	6.26	6.26	6.26	6.54	6.54	6.26	6.26
Top BCD (tc)	3	5	5	5	5	5	5	5	5	5
Bottom BCD (bc)	3	5	5	5	5	5	5	5	5	5
Leakage distance inches	72	72	99	99	116	132	116	132	132	132
Net weight (approx.) lb	66	85.8	141.9	136.4	127.6	160.6	168.9	184.7	178.2	176.4
Mechanical Properties										
Cantilever strength lb	1500	3000	1700	2600	1400	1450	2200	2200	1200	2000
Tension strength lb	16000	25000	20000	25000	20000	20000	25000	25000	20000	25000
Torsion strength inch-lb	15000	40000	40000	90000	40000	40000	90000	90000	40000	90000
Compression strength lb	25000	60000	60000	75000	60000	60000	75000	75000	60000	75000
Electrical Properties										
Critical impulse flashover (+) kV	390	390	610	610	710	710	710	710	810	810
Impulse withstand voltage kV	350	350	550	550	650	650	650	650	750	750
Low frequency withstand voltage (wet) kV	145	145	230	230	275	275	275	275	315	315
Radio Influence Voltage Data										
Test voltage to ground kV	44	44	73	73	88	88	88	88	103	103
Maximum RIV at 1000 kHz μV	200	200	200	200	200	200	200	200	500	500
	Figure 1	Figure 1	Figure 1	Figure 1	Figure 1	Figure 1	Figure 1	Figure 1	Figure 1	Figure 1

NOTE: Please refer to notes on page 6.

TOP INSTALLATION HOLES



BOTTOM INSTALLATION HOLES

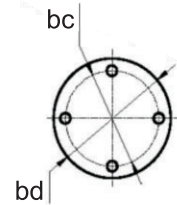
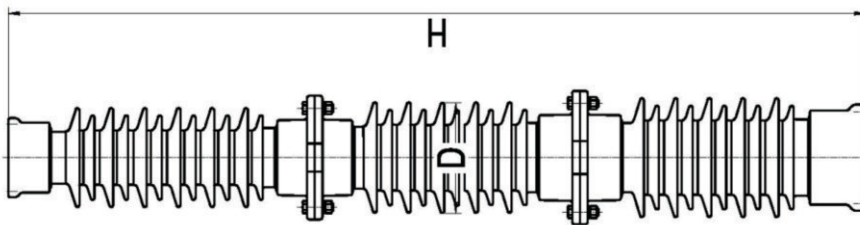


FIGURE 2

ANSI TR Reference	TR304	TR308	TR312	TR316	TR362	TR324	TR367	TR368	TR369
VE Catalog #	VTR304SSG	VTR308SSG	VTR312SSG	VTR316SSG	VTR362SSG	VTR324SSG	VTR367SSG	VTR368SSG	VTR369SSG
Dimensions inches									
H	80	80	92	92	92	106	106	106	106
D (max shed diameter)	7.48	8.07	7.72	8.07	9.45	8.07	8.66	9.45	9.25
Top Cap diameter (td)	6.26	6.26	6.3	6.26	8.46	6.26	6.3	8.46	6.26
Bottom Cap diameter (bd)	6.26	6.26	6.3	6.26	8.46	6.26	8.46	8.46	8.46
Top BCD (tc)	5	5	5	5	7	5	5	7	5
Bottom BCD (bc)	5	5	5	5	7	5	7	7	7
Leakage distance inches	165	165	198	198	198	231	231	231	231
Net weight (approx.) lb	209	242	226.6	261.8	367.4	316.8	314.6	453.2	411.4
Mechanical Properties									
Cantilever strength lb	950	1450	800	1250	2300	1000	1450	2050	2050
Tension strength lb	20000	25000	20000	25000	40000	25000	20000	40000	20000
Torsion strength inch-lb	40000	90000	40000	90000	120000	90000	40000	120000	40000
Compression strength lb	60000	75000	60000	90000	100000	75000	60000	100000	60000
Electrical Properties									
Critical impulse flashover (+) kV	1010	1010	1210	1210	1210	1410	1410	1410	1410
Impulse withstand voltage kV	900	900	1050	1050	1050	1300	1300	1300	1300
Low frequency withstand voltage (wet) kV	385	385	455	455	455	525	525	525	525
Radio Influence Voltage Data									
Test voltage to ground kV	146	146	146	146	146	220	220	220	220
Maximum RIV at 1000 kHz μV	500	500	500	500	500	1000	1000	1000	1000
	Figure 2	Figure 2	Figure 2	Figure 2	Figure 2	Figure 2	Figure 2	Figure 2	Figure 2

TOP INSTALLATION HOLES



BOTTOM INSTALLATION HOLES

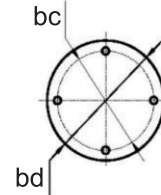


FIGURE 3

ANSI TR Reference	TR330	TR371	TR372	TR373	TR379	TR391
VE Catalog #	VTR330SSG	VTR371SSG	VTR372SSG	VTR373SSG	VTR379SSG	VTR391SSG
Dimensions inches						
H	122	122	122	122	128	152
D (max shed diameter)	8.19	8.58	9.45	9.17	9.76	9.45
Top Cap diameter (td)	6.26	6.26	8.46	6.26	6.26	6.3
Bottom Cap diameter (bd)	6.26	8.46	8.46	8.46	8.46	8.47
Top BCD (tc)	5	5	7	5	5	5
Bottom BCD (bc)	5	7	7	7	7	7
Leakage distance inches	264	264	264	264	280	330
Net weight (approx.) lb	363	396	550	457.6	536.2	510.4
Mechanical Properties						
Cantilever strength lb	900	1170	1750	1750	1700	1400
Tension strength lb	25000	20000	40000	20000	20000	20000
Torsion strength inch-lb	90000	40000	120000	40000	40000	40000
Compression strength lb	90000	60000	100000	60000	60000	60000
Electrical Properties						
Critical impulse flashover (+) kV	1610	1610	1610	1610	1710	2000
Impulse withstand voltage kV	1470	1470	1470	1470	1550	1800
Low frequency withstand voltage (wet) kV	590	590	590	590	620	710
Radio Influence Voltage Data						
Test voltage to ground kV	220	220	210	220	318	318
Maximum RIV at 1000 kHz μV	1000	1000	1000	1000	2000	2000
	Figure 2	Figure 2	Figure 2	Figure 2	Figure 2	Figure 3









DATA SHEET NOTES

1. All VE catalog numbers as shown in this chart correspond to gray porcelain designs. To specify chocolate porcelain please refer to Catalog Coding System page at the end of this catalog.
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
3. All bolt holes are provided with imperial system threads with built in tolerance to accommodate galvanized bolts. For detailed dimensions please download the insulator drawing from www.vanguardelec.com. Special bolt threading available upon request.
4. Applicable standards: ANSI C29.9
5. Special designs with different variations to the listed specifications (dimensions, strength, shed designs, bolt circles, etc.) are available upon request.
6. ANSI C29.9 mechanical ratings are ultimate values not to be used as work load ratings. Designers shall refer to ANSI C2-1997 for recommendations on insulator work loads (which in broad terms specify 40% of ultimate cantilever strength and 50% of ultimate torsion strength).
7. TR288-HL (High Leakage) and TR289-HL are listed in consideration of them being a common requirement for many U.S utilities. For all other TR references this catalog only details the ANSI standard leakage distance version. Higher leakage units are available upon request.



KEY TO THE CATALOG NUMBERS

	V	VANGUARD ELECTRIC
	TR	ANSI C29.9 POST TYPE
	XXX	THREE DIGITS DESCRIBING TR REFERENCE (202, 205, ..., 391)
	S	STRENGTH S: STANDARD STRENGTH H: HIGH STRENGTH
	S	LEAKAGE DISTANCE S: STANDARD LEAKAGE DISTANCE H: HIGH LEAKAGE DISTANCE 1 TO 9: SPECIAL HIGHER LEAKAGE DISTANCE (ASSIGNED BY VANGUARD)
	G	COLOR: G: GRAY B: BROWN

EXAMPLE: VTR208SSG = VANGUARD ELECTRIC TR208, STANDARD STRENGTH, STANDARD LEAKAGE DISTANCE, GRAY COLOR

Available Options (upon request)

For Post Type Insulators there are many variations not necessarily listed in this catalog. Some of the available variations that Vanguard Electric can provide (upon request) are:

- High strength units (extra high strength, special seismic designs, etc.)
- High leakage distance units special for highly humid or contaminated areas.
- Special metal end caps with custom made perforations.
- Special shed designs (alternating large/small, plain, others)
- IEC (Not ANSI) Post Types.





40,000sqf Warehouse - Ample Stock of most common TR references.

Vanguard
ELECTRIC



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PVE009-R7