

**Insulator, Vertical Line Post, Porcelain, Clamp Top,
 For Distribution Systems**



1. Scope

This Material Standard applies to porcelain, vertical line post insulators. This Material Standard applies to Seattle City Light Stock Numbers 690159, 690163, and 690166.

2. Application

Vertical line post insulators are used on wood poles to support distribution conductors. The following table gives the application for each of the Stock Numbers.

Stock No	Application
690159	26 kV lines, nominal
690163	46 and 26 kV lines in contaminated areas
690166	69 and 35 kV lines in contaminated areas

3. Industry Standards

Vertical line post insulators shall meet the requirements of the following industry standard:

ANSI C29.7-1996 – American National Standard for Wet Process Porcelain Insulators – High Voltage Line Post Type

4. Requirements

Vertical line post insulators shall meet the following requirements:

	Stock No		
	690159	690163	690166
ANSI C29.7 Class	57-12	57-13	57-15
60 Hz dry flashover, kV rms, minimum	110	125	160
60 Hz wet flashover, kV rms, minimum	85	100	130
Positive critical impulse flashover, kV crest, minimum	180	200	265
Leakage distance, in, nominal	22	29	45
Strike/dry arc distance, in, nominal	9.5	12.25	17.25
Reference length, in, nominal	13	16	21.5

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Material Standard

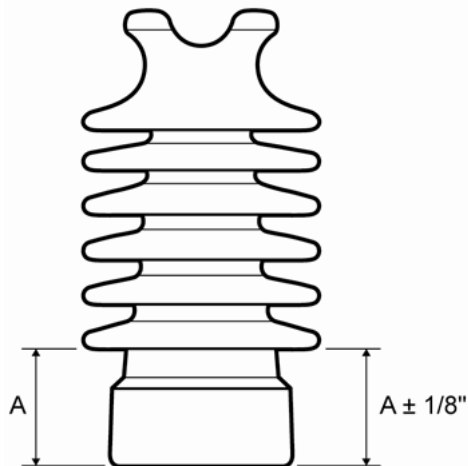
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4. Requirements, continued

	<u>Stock No</u>
	690159, 690163, and 690166
Cantilever strength	
ultimate, lbs	2800
proof test, lbs	1400
Center hole thread, in	3/4 – 10, UFS-2B
Porcelain color	gray, according to ANSI C29.7, Section 5.2
Insulator base and clamp bracket	according to ANSI C29.7, Section 5.3
Trunnion bolt, City Light special	2 inches long with hot-dipped galvanized jam nut

5. Quality Assurance

The distance between the bottom of the base and the bottom skirt around the circumference of the insulator shall be uniform with a maximum difference of 1/8 inch.



6. Testing

Test data that establishes compliance with the requirements of ANSI C29.7, Section 8 shall be provided upon request.

7. Marking

Vertical line-post insulators shall be clearly and indelibly marked in accordance with ANSI C29.7-1996, Section 7. Marking shall include but not be limited to:

- Manufacturer's name or symbol
- Year of manufacture
- Product Identification Number

8. Packaging

Vertical line-post insulators shall be packaged in a way that prevents damage during shipping, handling, and long-term outside storage.

Crates shall be secured to pallets for handling by forklifts. Pallets shall not exceed 4 feet in height or 1,000 pounds in weight.

Individual packages shall be legibly marked with:

- Manufacturer's name
- Manufacturer's catalog number
- Seattle City Light's Stock Number

Shipping containers shall be legibly marked with:

- Seattle City Light's Purchase Order Number
- Seattle City Light's Stock Number

9. Issuance

Stock Unit: EA

10. Approved Manufacturers

Stock No	Manufacturers and Catalog Numbers		
	Lapp Insulator	Newell Porcelain Company	Victor Insulators, Inc.
690159	4235LN70	43930-7401	62155-SL
690163	4245LN70	43940-7401	62156-SL
690166	4266LN70	43970-7401	62158-SL

11. References

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