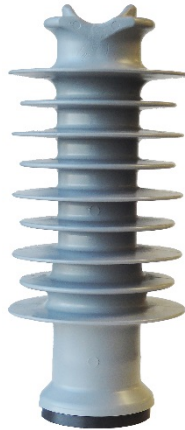


## Insulators, Vertical Line Post, Tie Top, Polymer



### 1. Scope

This standard covers the requirements for polymer, tie top, vertical line post insulators. At Seattle City Light (SCL) the term “tie top” is used interchangeably with “F-neck.” The same goes for the terms “polymer” and “composite” with composite being the more technically accurate of the two.

This standard applies to SCL Stock No. 014304.

### 2. Application

Tie top, vertical line post insulators are used with crossarms and wood poles to support 26 kV, bare, 4/0 copper and smaller size distribution conductors.

In 2017, SCL began a transition from porcelain vertical line post insulators to polymer versions to support overhead 26 kV conductors.

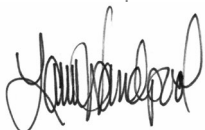
Stock No. 014304 is intended for use in both non-contaminated and contaminated environments.

### 3. Industry Standards


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

**ANSI/NEMA C29.18-2013** – American National Standard for Composite Insulators - Distribution Line Post Type

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#### 4. Requirements

Vertical line post insulators shall meet the requirements of ANSI/NEMA C29.18 and Table 4 below. In cases where ANSI/NEMA C29.18 and Table 4 conflict, Table 4 shall take precedence.

**Table 4. Insulator Requirements**

<b>Attribute</b>	<b>Requirement</b>
Class	ANSI C29.18, 51-4F
60 Hz dry flashover, minimum, (kV rms)	125
60 Hz wet flashover, minimum (kV rms)	95
Positive critical impulse flashover, minimum (kV crest)	200
Section length, nominal (in)	14.0
Leakage distance, nominal (in)	29
Strike/dry arc distance, nominal (in)	12.25
Specified cantilever load (lb)	2240
Neck type	"F" per ANSI/NEMA C29.18
Maximum conductor diameter (in)	1.75
Center hole thread (in)	3/4-10, UFS-2B
Insulator base type	ANSI C29.18, Figure 9a
Weathershed color	Gray

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#### 5. Marking

Vertical line post insulators shall be marked according to the requirements of ANSI/NEMA C29.18, Section 7, which includes:

- Manufacturer name or symbol
- Manufacturing date code or year of manufacture
- Specified Cantilever Load

Labeling shall be legible and durable over the expected life of the product.

Labeling shall be in English.

Load ratings shall be stated in units of pounds.

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#### 6. 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 1100 pounds in weight.

Individual packages shall be legibly marked with:

- Manufacturer name
- Manufacturer catalog number
- SCL stock number

Each shipping container shall be legibly marked with the following information:

- Manufacturer identification
- SCL purchase order number

**7. Issuance**

Stock Unit: EA

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**8. Approved Manufacturers**

<b>Manufacturer</b>	<b>Catalog No.</b>
Hendrix Molded Products	HPI-LP-14FA
Alumaform, Inc.	INS-38-LP-14

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**9. References**

**SCL Material Standard 6901.30** (canceled); “Insulator, Vertical Line-Post, Porcelain, Tie-Top, for Distribution Systems”

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**10. Sources**

**Shipek, John**; SCL Standards Engineering Supervisor, originator, and subject matter expert for 6901.45