

Connectors, Compression, Deadend



1. Scope

This standard covers the requirements for deadend compression connectors for Aluminum Conductor Steel-Reinforced (ACSR) and All Aluminum Conductor (AAC) conductors.

This standard applies to the following Seattle City Light (SCL) stock numbers:

Stock No.	Conductor Size (kcmil)	Conductor Code Name	Stranding
659668	795 ACSR	Drake	26/7
659669	795 ACSR	Mallard	30/19
659799	954 ACSR	Rail	45/7
659239	795 AAC	Arbutus	37

2. Application

Deadend compression connectors consist of a body, eye, and a terminal pad.

Deadend compression connectors are used for connecting ACSR or AAC conductors to deadend insulators in distribution and transmission line construction.

Terminal lugs used to connect ACSR or AAC jumpers to the tongue of connectors are specified in SCL 6505.20.

Tongues and terminal pads are each constructed with a 15-degree angle, which permits connectors to be bolted in either a straight or 30-degree position.

Standards Coordinator
Quan Wang

Handwritten signature of Quan Wang in black ink.

Standards Supervisor
John Shipek

Handwritten signature of John Shipek in black ink.

Unit Director
Andrew Strong

Handwritten signature of Andrew Strong in black ink.

3. Industry Standards

Deadend compression connectors shall meet the applicable requirements of the latest revision of the following industry standards:

ANSI C119.4; American National Standard for Electric Connectors – Connectors for Use Between Aluminum-to-Aluminum and Aluminum-to-Copper Conductors Designed for Normal Operations at or Below 93° C and Copper-to-Copper Conductors Designed for Normal Operation at or Below 100°C

ANSI/NEMA CC1; Electric Power Connection for Substations

4. Requirements

The body and terminal pad of the deadend compression connector shall be aluminum alloy, with a galvanized forged-steel eye.

Deadend compression connectors shall be capable of maintaining a minimum of 95 percent of the rated strength of the respective standard ACSR or AAC conductor without baring the core wire.

Connectors shall be factory-filled with a measured amount of oxide-inhibiting compound that will not affect the dielectric strength or power factor of cables insulated with butyl, cross-linked polyethylene, or ethylene-propylene rubber.

Dimension shall be as shown in Table 4 and Figure 4.

The eye shall be horizontally oriented as shown in Figure 4.

The terminal pad shall be offset 15 degrees as shown in Figure 4.

The terminal pad shall be a 4-hole NEMA pad as specified in NEMA CC1 figure C3.

Figure 4. Deadend Compression Connector with Single Tongue and Horizontal Eye

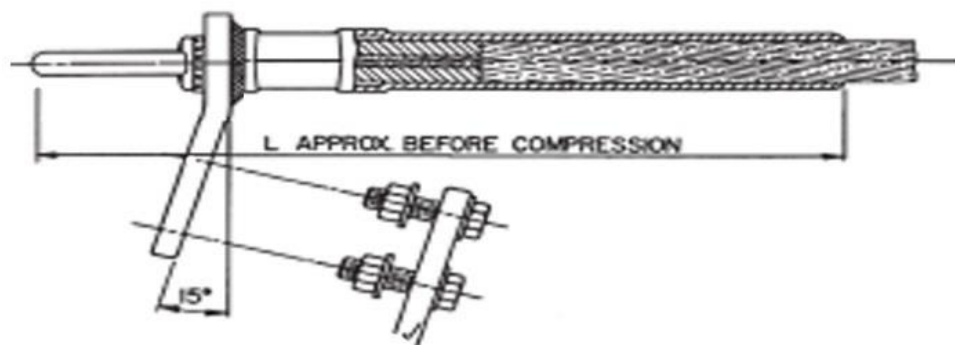


Table 4. Deadend Length and Die Size

Stock No.	Conductor Size (kcmil)	Conductor Code Name	Stranding	Deadend Length Before Compression (L) (in)	Die Size
659668	795 ACSR	Drake	26/7	16.7	12CD
659669	795 ACSR	Mallard	30/19	19.8	14CD
659799	954 ACSR	Rail	45/7	19.0	13CD
659239	795 AAC	Arbutus	37	11.8	11CD

5. Markings

Each deadend compression connector body shall be clearly and indelibly marked with the following:

- Manufacturer name or symbol
- Conductor type
- Conductor range
- Catalog number
- Die size

6. Packaging

Deadend compression connectors shall be packaged to prevent damage during shipping, handling, and storage.

Individual packages shall be legibly marked with:

- Manufacturer name
- Manufacturer part number
- Product description
- Seattle City Light stock number

Shipping containers shall be legibly marked with:

- Seattle City Light purchase order number

7. Issuance

EA

8. Approved Manufacturers

Stock No.	Conductor Size (kcmil)	AFL (formerly Alcoa)
659668	795 ACSR	HES126
659669	795 ACSR	HES146
659799	954 ACSR	HES133
659239	795 AAC	HESE110

9. References

SCL Material Standard 6505.20; "Terminal Lugs, Compression"

10. Sources

AFL, Quick Compress Dead Ends for AAC Conductor, Eye Type, Single Tongue,
VESE/HESE Series, PP-3-00759, Revision 1, 7.18.12, 2003

AFL, Quick Compress Dead Ends for ACSR Conductor, Eye Type, Single Tongue,
VES/HES Series, PP-3-0076, Revision 2, 1.20.16, 2003

www.AFLGLOBAL.com

Stock Catalog Page 65-6 (March 12, 2001)

Wang, Quan; SCL Standards Engineer, subject matter expert, and originator of 6505.15
(quan.wang@seattle.gov)