

MATERIAL STANDARD

**COMPRESSION CONNECTORS, BI-METALLIC TYPE,
FOR 200 A ELBOWS**



1. Scope

This material standard covers the requirements for bi-metallic (copper-top) type compression connectors.

The requirements for all-aluminum compression connectors, intended for use with 600 A separable connectors, are specified in 6863.10. The requirements for all-copper compression connectors, intended for use with 900 A separable connectors, are specified in 6863.30.

This material standard applies to the following Seattle City Light Stock Numbers:

Stock Number	Conductor
686417	#1 AWG stranded, 1/0 AWG solid
686421	#2 AWG stranded, #1 AWG solid
686424	#8 AWG stranded (Kerite)

2. Application

Bi-metallic compression connectors are used to make up 200 A loadbreak and 200 A deadbreak separable connectors (elbows), Material Standards 6864.05 and 6864.15 respectively.

In the majority of cases, 200 A elbow kits include a bi-metallic compression connector. Bi-metallic compression connectors are available separately for situations where the connector provided with a particular kit is lost, damaged, or not the correct size.

Bi-metallic compression connectors can be used with either aluminum or copper conductor cable.

Compression connector, Stock Number 686424, is used exclusively with elbows, Stock Numbers

2. Application, continued

686442 or 686440, to terminate 27 kV, #8 AWG copper cable (Kerite), Stock Number 623650. For cable technical data, refer to E6-1.0/NGE-70.

3. Industry Standards

Compression connectors shall meet the applicable requirements of the following industry standard:

ANSI C119.4-2004 – American National Standard for Electric Connectors – Connectors for Use Between Aluminum-to-Aluminum or Aluminum-to-Copper Conductors

4. Detailed Requirements

Compression connectors shall be designed and fabricated to be used with 200 A loadbreak and 200 A deadbreak separable connectors (elbows), Material Standards 6864.05 and 6864.15 respectively.

Compression connectors shall be bi-metallic, with copper top.

Compression connectors shall be current Class A, as defined in ANSI C119.4.

Compression connectors shall be tensile strength Class 3, minimum tension (or better), as defined in ANSI C119.4.

Compression connector barrel shall be highly conductive aluminum.

Compression connector barrel shall be pre-filled with oxide inhibitor.

Compression connector barrel ends shall be capped or sealed to protect the oxide inhibitor from contamination.

Compression connector shall accommodate conductor according to Section 8, below.

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Compression Connectors, Bi-Metallic Type, for 200 A Elbows

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SUPERSEDING: new

EFFECTIVE DATE: January 25, 2008

4. Detailed Requirements, continued

Each compression connector shall be provided with tool type, die number, and number of crimps information for:

- Burndy
- Kearney
- Alcoa
- Thomas & Betts (T&B)
- EEI reference

5. Marking

Each compression connector shall be permanently marked with:

- Manufacturer's name
- Manufacturer's catalog number
- Conductor types and sizes (ranges)
- Die number

6. Packaging

Compression connectors shall be packaged to prevent damage during shipping.

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

- Manufacturer's identification
- Product description
- Quantity contained
- Seattle City Light's Purchase Order Number
- Seattle City Light's Stock Number

Shipping container weight shall not exceed 50 pounds.

7. Issuance

EA

8. Approved Manufacturers

Stock Number	Manufacturers' Catalog Numbers		Conductor
	Cooper Power Systems	Thomas & Betts (Elastimold)	
686417	CC2C05T	02500230	#1 AWG stranded 1/0 AWG solid
686421	CC2C04T	02500220	#2 AWG stranded #1 AWG solid
686424	na	164LRC-4	#8 AWG stranded

9. References

6863.10; "Compression Connectors All-Aluminum Type; *Material Standards*; SCL

6863.30; "Compression Connectors, All-Copper Type; *Material Standards*; SCL

6864.15; "Separable Connector (Elbow), 200 A, Deadbreak; *Material Standards*; SCL

6864.05; "Separable Connector (Elbow), 200 A, Loadbreak; *Material Standards*; SCL

B100-02024; *Components Master Catalog, 5 kV-35 kV Electrical Distribution Systems, Specifiers Guide*; Cooper Power Systems

E6-1.0/NGE-70; "Properties of Medium Voltage Cables"; *Construction Guideline*; SCL

PG-CA-0506; *Cable Accessories for 5 kV-35 kV Distribution Systems, Product Selection Guide*; Elastimold

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