

Bolts, Galvanized, Double-Arming



1. Scope

This standard covers the requirements for galvanized bolts and nuts used to construct double arms. Double-arm bolts are commonly referred to as DA bolts.

This standard applies to the stock numbers cited in Section 8.

2. Application

Double-arm bolts are used to construct double wood crossarm installations where one crossarm is attached on each side of the pole.

3. Industry Standards

IEEE C135.80; "IEEE Standard for Fasteners for Overhead Line Construction"

ASME B18.2.1; "Square and Hex Bolts and Screws (Inch Series)"

ASME B18.2.2; "Square and Hex Nuts (Inch Series)"

ASTM A153/A153M; "Standard Specification for Zinc Coating (Hot-Dip) on Iron and Steel Hardware"

4. General Requirements, Bolts

4.1 Material

Bolts shall be made from hot-rolled steel produced by open-hearth, basic-oxygen, or electric-furnace process, and of a grade that is suitable to meet the requirements of IEEE C135.80.

4.2 Dimensions

Bolts shall have threads the full length of the bolt per ASME B18.2.1.
Diameter, length, and strength are shown in Table 4.2.

Table 4.2 Double-Arming Bolt Dimensions and Strength

Stock No.	Diameter (in)	Bolt Length (in)	Minimum Tensile Strength (lb)
560518	5/8	18	12,400
560520	5/8	20	12,400
560522	5/8	22	12,400
560524	5/8	24	12,400
560526	5/8	26	12,400
560528	5/8	28	12,400
560530	5/8	30	12,400
560532	3/4	32	18,350

4.3 Finish

Bolts shall be free from burrs, seams, laps, and irregular surfaces that affect serviceability.

Bolts shall be hot-dip galvanized as stated in ASTM A153/A153M.

4.4 Assembly

Each bolt shall be fitted with four nuts on the bolt. Nuts shall not be supplied loose within the packaging.

5. General Requirements, Nuts

5.1 Material

Nuts shall be made from hot-rolled steel produced by open-hearth, basic-oxygen, or electric-furnace process, and of a grade that is suitable to meet the requirements of IEEE C135.80.

5.2 Dimensions

Nuts shall be square or hexagonal in accordance with ASME B18.2.2. Nut sizes are shown in Table 5.2.

Table 5.2. Nut Sizes

Diameter (in)	Threads per inch
5/8	11
3/4	10

Nuts shall be tapped oversized in accordance with Table 8, IEEE C135.80.

5.3 Finish

Nuts shall be hot-dipped galvanized as stated in ASTM A153/A153M.

6. Packaging

Each standard package shall be legibly marked with the following information:

- Manufacturer's identification
- Product description
- Seattle City Light stock number
- Quantity contained

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

- Manufacturer's identification
 - Country of origin
 - Product description
 - Seattle City Light purchase order number
 - Seattle City Light stock number
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7. Issuance

Stock Unit: EA

8. Approved Manufacturers

Stock No.	Bolt Length (in)	Cooper Power Systems		
		Hubbell	Joslyn	Cooper Power Systems
560518	18	8868	J8868	DF2D18
560520	20	8870	J8870	DF2D20
560522	22	8872	J8872	DF2D22
560524	24	8874	J8874	DF2D24
560526	26	8876	J8876	DF2D26
560528	28	8877	J8877	DF2D28
560530	30	8878	J8878	DF2D30
560532	32	889832	J8899	–

9. Sources

SCL Material Standard 5610.1 (canceled); "Bolts, Galvanized, Double-Arming"

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