
Bolts, Machine, Square Head, with Square Nut



1. Scope

This standard covers the requirements for zinc-coated, square head, steel machine bolts, each provided with one square nut.

This standard applies to the Seattle City Light (SCL) stock numbers cited in Section 4.

2. Application

Machine bolts and nuts are used in overhead line construction and where the applied load is primarily a tensile load.

Refer to IEEE C135.1 for minimum tensile strength values.

3. Industry Standards

Machine bolts and nuts shall meet the applicable requirements of the latest revision of the following industry standards:

IEEE C135.1 - Standard for Zinc-Coated Steel Bolts and Nuts for Overhead Line Construction

ASME B18.12 - Glossary of Terms for Mechanical Fasteners

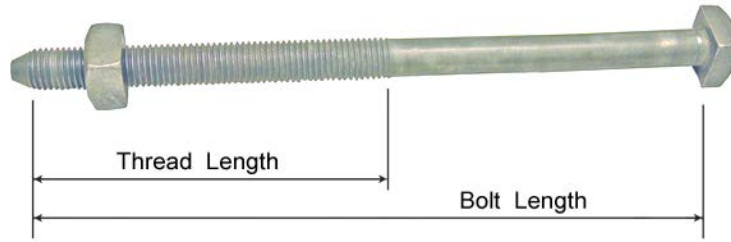
ASTM A153/A153M - Standard Specification for Zinc Coating (Hot-Dip) on Iron and Steel Hardware

4. Requirements

4.1 General

Thread length and bolt length shall be defined as shown in Figure 4.1.

Figure 4.1 Thread Length and Bolt Length



4.1a. Bolts

Bolts shall be as defined below.

	Requirements	Reference
Product Name	square head bolt	ASME B18.12
Material	steel	IEEE C135.1
Dimensions	per reference	IEEE C135.1
Minimum Thread Length	product length 4 in. or greater	IEEE C135.1
	product length 4 in. or less	ASME B18.2.1
Corrosion Protection	zinc-coated	IEEE C135.1

Machine bolt threads shall be machine-rolled; cut threads are not acceptable. This requirement is a clarification to IEEE C135.1.

Bolt heads shall bear the manufacturer's symbol or identification mark according to IEEE C135.1.

4.1b. Nuts

Nuts shall be as defined below.

	Requirements	Reference
Product Name	square nut	ASME B18.12
Material	steel	IEEE C135.1
Dimensions	per reference	IEEE C135.1
Corrosion Protection	zinc-coated	IEEE C135.1

Nuts shall be provided installed on bolts, one nut per bolt.

MATERIAL STANDARD

4.2 Detailed Requirements

Nominal Size (in)	Threads per in.	Minimum Thread Length (in)	Product Length (in)	Stock No.			
1/2	13	1-1/4	1-1/2	780794			
			2	780796			
			3	780800			
		3	4-1/2	780803			
			5	780804			
			5-1/2	780805			
			6	780806			
			7	780808			
			8	780810			
		4	9	780812			
			10	780814			
			12	780815			
		6	14	780816			
			16	780817			
			18	780818			
			5/8	11	1-1/2	2	780827
						2-1/2	780828
						3-1/2	780831
3	5	780834					
	6	780836					
	7	780838					
4	8	780840					
	10	780844					
	6	12	780845				
14		780846					
16		780847					
18		780848					
20		780849					
22		780850					
3/4	10	1-3/4	2	014535			
			6	780875			
		6	12	780876			
			14	780877			
			16	780878			
			18	780879			
			20	780880			
			22	781070			
7/8	9	6	24	781072			
			26	012636			
			14	012637			
			16	012638			
			18	012639			
			20	012640			
22	012643						
24	012641						
26	012642						

5. Packaging

Individual packages shall be legibly marked with:

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

Each shipping container shall be legibly marked with:

- Manufacturer name
 - Seattle City Light purchase order number
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6. Issuance

Stock Unit: EA

7. Approved Manufacturers

A. B. Chance (Hubbell Power Systems)
Hughes Brothers, Inc., Seward NE
Joslyn Manufacturing (MacLean Power Systems)
Kortick, Hayward, CA
Portland Bolt, Portland, OR

8. Sources

SCL Material Standard 7807.1; "Square Head Machine Bolt with Square Nut"
(canceled / renumbered to 7807.15)