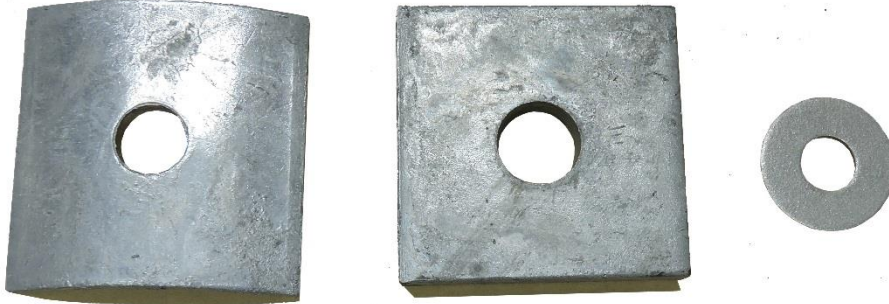


Washers, Galvanized Steel, Flat and Curved



1. Scope

This standard covers the requirements for galvanized steel, flat and curved washers.
This standard applies to the stock numbers cited in Section 4.2.

2. Application

Galvanized steel washers are used in overhead line construction as well as for general use. Washers are used to distribute the load of a threaded fastener and prevent damage to the surface being fixed.

3. Industry Standards

Galvanized steel washers shall meet the applicable requirements of the following industry standards:

ASME B18.22.1-65, Plain Washers

ASME B18.12-2001, Glossary of Terms for Mechanical Fasteners

ASTM A153/A153M-2004, Standard Specification for Zinc Coating (Hot-Dip) on Iron and Steel Hardware

ASTM F844-2007, Standard Specification for Washers, Steel, Plain (Flat), Unhardened for General Use

IEEE/ANSI C135.80-2014, IEEE Standard for Fasteners for Overhead Line Construction

Handwritten signature of Quan Wang in black ink.

Handwritten signature of John Shipek in black ink.

Handwritten signature of Darnell Cola in black ink.

4. Product Requirements

4.1 Material

Washers 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

Washer dimensions shall conform to ASME 18.22.1 and IEEE C135.80 Section 6.2 with the clarifications shown in Table 4.2.

Table 4.2 Washer Dimensions (nominal)

Stock No.	Bolt Diameter (in)	Dimensions (in)			Figure
		B	A	T	
584775	5/8 to 7/8	4 x 4	15/16	1/4	1
584945	1/2	3 x 3	9/16	3/16	2
584947	5/8 to 3/4	3 x 3	13/16	3/16	2
584963	1	4 x 4	1-1/8	1/2	2
585135	5/8 to 3/4	2-1/4 x 2-1/4	13/16	3/16	2
584928	3/4	1-5/8 x 1-5/8	13/16	3/16	2
585020	3/8	1	7/16	5/64	3
585025	1/2	1-3/8	9/16	7/64	3
585030	5/8	1-3/4	11/16	1/8	3
585035	3/4	2	13/16	5/32	3
585040	7/8	2-1/4	15/16	11/64	3
585045	1	2-1/2	1-1/16	11/64	3

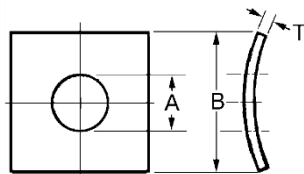


Figure 1

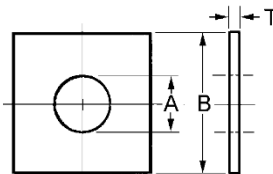


Figure 2

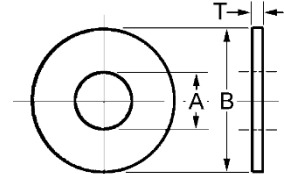


Figure 3

4.3 Finish and Corrosion Protection

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

5. Packaging

Standard package quantity shall not exceed 100 per box or 50 lb.

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

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

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

- Manufacturer identification
- Country of origin
- Product description
- Seattle City Light purchase order number
- Seattle City Light stock number

6. Issuance

Stock Unit: EA

7. Approved Manufacturers

SCL Material Control personnel will identify and approve distributors, and hence manufacturers, for this group of stock numbers.

8. Sources

SCL Material Standard 5847.1 (canceled); "Washers, Galvanized Steel Flat and Curved"

Wang, Quan; SCL Standards Engineer, subject matter expert, and originator of 7829.85 (quan.wang@seattle.gov)