



Document Title:
Hex Washer Head Concrete Screw Anchors

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Author
 Alexander Moraza Ramos
 Technical Specialist II, Distribution Standards & Materials

Signature and Date:
 Nov 21, 2025

Reviewer
 Rodolfo A. Flores Ortiz, PE (Lic. 27131)
 Senior Engineer, Distribution Standards & Materials

Signature and Date:
 Nov 21, 2025

Approver
 Ricardo Castro Gómez, PE (Lic. 12135)
 Manager, Distribution Standards & Materials

Signature and Date:
 Nov 21, 2025

Management Approval (If apply)

Approver
 Name, Position

Signature and Date:

Related/Referenced Documents

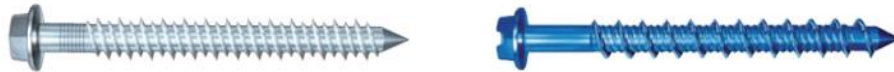
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Version History

Version	Date	Revision
01	Feb. 11, 2022	Initial release.
02	Oct. 04, 2022	General format modifications, Sections 3, 4, 8, and 9 modified, and sections order rearranged. TOC added.
03	Nov. 21, 2025	Modified sections 1, 6-10, 12, Appendix and Title. Changed Document Number (Legacy Number: 4350.213) to new Engineering Records nomenclature number 4300.50.213. Also added item 038-87851.

Item Version History

Warehouse Catalog #	Asset Suite #	Version	Date
038-83157	83157	03	11/21/2025
038-87851	87851	01	11/21/2025



1. Introduction

This is a general specification that covers the minimum requirements for the Hex Washer Head Concrete Screw Anchors to be used in the distribution system in Puerto Rico. Further information will be provided by LUMA Energy at the time of order placement and will provide information on site specific conditions, quantity, and other requirements. This document includes the general characteristics of the anchors.

2. Special Requirements

Samples shall be furnished as requested by LUMA Energy. Vendors that have supplied this product to LUMA on previous orders, will not have to furnish samples at bid opening. The product will be received at LUMA's general warehouse (011) at Palo Seco, Puerto Rico. Shipping will include transportation and unloading at the indicated warehouse.

3. Literature

- 3.1. Descriptive and technical literature must be supplied by the vendor at time of bidding. This literature must include, but is not limited to, details of material, drawings, documented testing, and instructions for use and installation. **The literature must be an official document from and certified by the manufacturer.** Failure to submit documents on time and duly certified by the manufacturer will cause bidder disqualification.
- 3.2. If required by LUMA, final drawings and documentation shall be submitted by the vendor before the manufacturing and shipping process for approval.

4. Compatible with

For compatible manufacturers and models, see Table 2. These models are examples of the product described in this document and do not represent a preference. LUMA will evaluate equally any model not listed here during any acquisition event.

5. Markings

- 5.1. Containers shall be marked outside with LUMA Energy's purchase order and item number.

5.2. Individual package(s) shall be clearly marked with manufacturer name and item information (part number, serial number, quantity, etc.).

5.3. Packaging labels and tags shall be waterproof.

6. Packaging

6.1. All products shall be packaged and marked in such a way as to facilitate handling and protection from damage and that the receiving warehouse can readily identify it and send it, in one complete unit, to a field location without opening crates or boxes to sort items and/or parts.

6.2. A list of all parts included in the container and/or package must be provided at the time of delivery so that the receiving personnel can verify that everything requested is present, avoiding any delay in the receiving process.

7. Number Per Package (Logistics)

7.1. Two hundred twenty-five units or less per box, or as requested by LUMA.

7.2. The supplier must specify the quantity included in their standard package.

8. Acceptance Criteria

8.1. Test required: certified by external qualified laboratories.

8.2. Product shall be manufactured in accordance with the latest issue below (section 8.3). When conflicts occur between purchaser's specifications and the latest issue below, the purchaser's specification shall prevail.

8.3. Latest applicable codes, standards, and other regulations:

- a. ASTM E488: is a standard for testing the strength of anchors in concrete elements, covering both cast-in-place and post-installed anchors. It defines test methods for determining tensile and shear strength under various conditions, including static, seismic, fatigue, and shock loads.

8.4. If any other standards different from the ones indicated in this document are used, the supplier must provide information showing compatibility with the required ones.

9. Description

9.1. The Hex Washer Head Concrete Screw Anchor is a type of fastener designed to be driven directly into concrete, brick, or block materials, for securely attaching items without the need for a separate insert.

- 9.2. The anchor shall be a one-piece screw comprising a hexagonal head and an integrated washer.
- 9.3. The screw anchor dimensions shall be the following:
 - a. Diameter: 1/4 in. (6.4 mm)
 - b. Length: 1-3/4 in. (44.5 mm)
- 9.4. The supplier must provide a 3/16-inch (4.8 mm) drill bit per every 100 screw anchors supplied.
- 9.5. Screw anchors material:
 - a. 038-83157: 410 Stainless Steel
 - b. 038-87851: Carbon Steel (sealed with corrosion resistance coating)
- 9.6. Table 1 - Ultimate tension and shear values in concrete:

Specified Concrete Strength	Tension/Pull-Out (lbs)	Shear (lbs)
F'c = 2,000 PSI	2,020	1,670
F'c = 3,000 PSI	2,200	1,670
F'c = 4,000 PSI	2,380	1,670
F'c= 5,000 PSI	2,770	1,670

10. Inspection

- 10.1. Upon inspection of incoming product, the purchaser reserves the right to refuse product shipments and to determine the acceptability or rejection of the product received. The supplier shall be liable for all costs incurred for a product that is rejected.
- 10.2. The acceptance of any product shall in no way relieve the vendor from his responsibility to meet all the requirements of this specification, and it would not prevent subsequent rejection if such products were found later to be defective.

11. Proposal Information

- 11.1. Submitted proposals must include:
 - a. Technical information, drawings, and tests.
 - b. Table of Compliance completed by the bidder with reference (see Appendix).

12. Table 2: Warehouse and Asset Suite Identification Number

Item	Warehouse Catalog #	Asset Suite #	Compatible Manufacturer & Model
Hex Washer Head Concrete Screw Anchor (410 Stainless Steel)	038-83157	83157	Tapcon 26120
Hex Washer Head Concrete Screw Anchor (Carbon Steel)	038-87851	87851	Tapcon 24520

— End of Specification —

Appendix

Appendix 1: Table of Compliance

Criteria	Description			Pass/Fail	Comments
Item	Hex Washer Head Concrete Screw Anchor				
Documentation	Provided complete technical information and drawings				
Industry Standards	Complies with ASTM E488				
Construction	One-piece screw comprising a hexagonal head and an integrated washer				
Material	038-83157: Stainless Steel (410)				
	038-87851: Carbon Steel (sealed with corrosion resistance coating)				
Dimensions	Diameter: 1/4 in. (6.4 mm)				
	Length: 1-3/4 in. (44.5 mm)				
Ultimate Tension and Shear Values in Concrete	<u>Concrete Strength</u>	<u>Tension (lbs)</u>	<u>Shear (lbs)</u>		
	F _c = 2,000 PSI	2,020	1,670		
	F _c = 3,000 PSI	2,200	1,670		
	F _c = 4,000 PSI	2,380	1,670		
	F _c = 5,000 PSI	2,770	1,670		
Conclusion	Complies with the Specification (Doc. No. 4300.50.213)				

NOTE: This table is only a checklist for reference. The compliance shall be with the complete document. Marking a PASS in the table won't be accepted as a compliance without the technical information required to certify it.











4300.50.213 Hex Washer Head Concrete Screw Anchors (11-21-25)

Final Audit Report

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