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Anchor Shackles

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Specification

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Material Specification

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Distribution

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Related/Referenced Documents

N/A

Version History

Version	Date	Revision Comments
1	Nov. 01, 2021	Initial Release
2	Feb. 21, 2022	Genera revision.
3	Apr. 13, 2022	Table of compliance created.
4	Jul. 16, 2024	Format corrections, TOC update, Section 4 modified, and sections order rearranged.



Item Version History

Warehouse Catalog #	Asset Suite #	Version	Date
002-82318	82318	4	7/16/2024



1. Introduction

This is a general specification that covers the minimum requirements for anchor shackles 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 electrical and mechanical characteristics of the equipment/material.

2. Special Requirements

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

3. Literature

Descriptive and technical literature must be supplied by the vendor at time of bidding. This literature may include, but is not limited to details of material, drawings, documented testing, and instructions for use and installation. Failure to submit documents on time will cause bidder disqualification. If required by LUMA, final drawings shall be submitted by the vendor before the manufacturing and shipping process for approval.

4. Compatible with

For compatible manufactures and models, see Table 1 in Section 12 These models are examples of the equipment/material 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 purchase order and item number.
- 5.2. Packaging labels and tags shall be waterproof.

6. Packaging

All equipment/material 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.

7. Number Per Package (Logistics)

One thousand eight hundred and fifty (1890) units per pallet or as required by LUMA Energy.

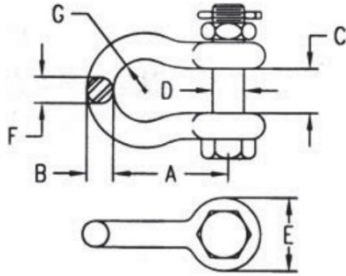
8. Acceptance Criteria

- 8.1. Test required: certified by external 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: ASTM-ANSI-IEEE-UL
 - a. ASTM A153 – Standard Specification For Zinc Coating (Hot-Dip) On Iron And Steel Hardware
- 8.4. If any other standard 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 anchor shackles are used for the attachment of hardware to the tower pad. Shall include bolt, nut, and cotter that secures load.
- 9.2. Shall be hot-dip galvanized steel per ASTM A-153
- 9.3. Minimum Ultimate Strength: 30,000 lbs.
- 9.4. Dimensions:
 - a. Inner Radius: 11/16 in (1.746 cm).
 - b. Length from inner border to center of pin: 2-3/4 in (6.985 cm).
 - c. Length from outer to inner border: 5/8 in (1.588 cm)

d. Refer to schematic for detailed dimensions:



A	2-3/4 in	6.985 cm
B	5/8 in	1.588 cm
C	7/8 in	2.223 cm
D	5/8 in	1.588 cm
E	1-1/2 in	3.810 cm
F	9/16 in	1.429 cm
G	11/16 in	1.746 cm

10. Inspection

The acceptance of any equipment/material 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 equipment/materials were found later to be defective.

11. Proposal Information

11.1. Submitted proposals must include:

- a. Technical information, tests, and drawings.
- b. Table of Compliance completed by the bidder with reference (see Appendix 1).

12. Table 1: Warehouse and Asset Suite Identification Number

Warehouse Catalog #	Asset Suite #	Suggested Manufacturer	Model
002-82318	82318	Maclean Power	ASH-55-BC

— End of Specification —



Appendix

Appendix 1: Table of Compliance

Line	Criteria	Description	Pass/Fail (P / F)	Comments
1	Specification	The Proponent complies with the corresponding specification document (4350.026)		
2	Industry Standards	The Proponent complies with the industry standards established in the specification document. (ASTM)		
3	Description	The anchor shackles are used for the attachment of hardware to the tower pad. Shall include bolt, nut, and cotter that secures load. Shall be hot-dip galvanized steel per ASTM A-153.		
4	Minimum Ultimate Strength	30,000 lbs.		
5	Dimensions	Inner Radius: 11/16 in (1.746 cm), Length from inner border to center of pin: 2-3/4 in (6.985 cm), Length from outer to inner border: 5/8 in (1.588 cm).		

NOTE: This table is only a check list 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.











4350.026 Anchor Shackles (7-17-2024)

Final Audit Report

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