



Confirmation of Product Type Approval

Company Name: DURAMAX MARINE LLC

Address: 17990 Great Lakes Parkway OH 44234 United States

Product: Bearing, Water Lubricated Bearings

Model(s): Romor Staves, Class III

Endorsements:

| Certificate Type | Certificate Number | Issue Date | Expiry Date |
|---------------------------------|---------------------------|-------------------|--------------------|
| Product Design Assessment (PDA) | 21-2117704-PDA | 05-MAY-2021 | 04-MAY-2026 |
| Manufacturing Assessment (MA) | 21-4979970 | 13-OCT-2021 | 25-OCT-2026 |
| Product Quality Assurance (PQA) | NA | NA | NA |

Tier

3 - Type Approved, unit certification not required

Intended Service

Marine Application - Main Propulsion Shafting. Support of Propeller and Propeller Shaft.

Description

Water Lubricated Rubber Stave Bearings with non-metallic backing (Dovetail or Radius-Backed Configuration)

Ratings

OD Shaft or Journal Sizes 6¾ to 36"

Service Restrictions

1) Certification is not required for this product.

2) If the manufacturer or purchaser request an ABS Certificate for compliance with a specification or standard, the specification or standard, including inspection standards and tolerances, must be clearly defined.

Comments

1) Bearing Staves are to be installed in accordance with the Manufacturer's Recommended Procedure.

2) The length of bearing next to and supporting the propeller, should not be less than four (4) times the required tail-shaft diameter.

Notes, Drawings and Documentation

Drawing No. Duramax Marine FQ, Fee Quote and Application, Revision: -, Pages: 1

Term of Validity

This Product Design Assessment (PDA) Certificate remains valid until 04/May/2026 or until the Rules and/or Standards used in the assessment are revised or until there is a design modification warranting design reassessment (whichever occurs first).

Acceptance of product is limited to the "Intended Service" details prescribed in the certificate and as per applicable Rules and Standards.

This Certificate is valid for installation of the listed product on ABS units which exist or are under contract for construction on or previous to the effective date of the ABS Rules and standards applied at the time of PDA issuance. Use of the Product for non-ABS units is subject to agreement between the manufacturer and intended client.

ABS Rules

Rules for Conditions of Classification, Part 1 2021 Marine Vessels Rules 1-1-4/7.7, 1-1-A3, which covers the following:

2021 Marine Vessel Rules 4-3-2/5.15.1

International Standards

NA

EU-MED Standards

NA

National Standards

NA

Government Standards

NA

Other Standards

MIL-DTL-17901C(SH), 10 MAY 2005



A handwritten signature in black ink, appearing to read 'James W. ...', is positioned above the printed name and title.

Corporate ABS Programs
American Bureau of Shipping
Print Date and Time: 10-Nov-2021 2:45

ABS has used due diligence in the preparation of this certificate, and it represents the information on the product in the ABS Records as of the date and time the certificate is printed.

If the Rules and/or standards used in the PDA evaluation are revised or if there is a design modification (whichever occurs first), a PDA revalidation may be necessary.

The continued validity of the MA is dependent on completion of satisfactory audits as required by the ABS Rules. The validity of both PDA and MA entitles the product to receive a **Confirmation of Product Type Approval**.

Acceptance of product is limited to the "Intended Service" details prescribed in the certificate and as per applicable Rules and

Standards.

This Certificate is valid for installation of the listed product on ABS units which exist or are under contract for construction on or prior to the effective date of the ABS Rules and standards applied at the time of PDA issuance. ABS makes no representations regarding Type Approval of the Product for use on vessels, MODUs or facilities built after the date of the ABS Rules used for this evaluation.

Type Approval requires Drawing Assessment, Prototype Testing and assessment of the manufacturer's quality assurance and quality control arrangements. The manufacturer is responsible to maintain compliance with all specifications applicable to the product design assessment. Unless specifically indicated in the description of the product, certification under type approval does not waive requirements for witnessed inspection or additional survey for product use on a vessel, MODU or facility intended to be ABS classed or that is presently in class with ABS.

Due to wide variety of specifications used in the products ABS has evaluated for Type Approval, it is part of our contract that; whether the standard is an ABS Rule or a non-ABS Rule, the Client has full responsibility for continued compliance with the standard.

Questions regarding the validity of ABS Rules or the need for supplemental testing or inspection of such products should, in all cases, be addressed to ABS.