



Confirmation of Product Type Approval

Company Name: DURAMAX MARINE LLC

Address: 17990 Great Lakes Parkway OH 44234 United States

Product: Shaft Seal System

Model(s): DXU Type

Endorsements:

Certificate Type	Certificate Number	Issue Date	Expiry Date
Product Design Assessment (PDA)	22-2206967-PDA	04-MAR-2022	03-MAR-2027
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 & Offshore Application - Pleasure and Commercial Vessels of Varying Propeller Shaft Size and Length

Description

Duramax® Mechanical Propeller Shaft Inboard Seal System that replaces the Stuffing Box. for water lubricated propulsion shafting.

Design includes a mechanical face type seal.

Available in 4(four) mounting methods:

- BRZ System-for Steel & FRP Hulls,
- FRP System-for Fiber Glass Hulls,
- Weld on System for Aluminum Hulls,
- Clamp Type-for Steel & FRP Hulls.

Ratings

Inboard Shaft Seal for Propeller Shaft Diameter Sizes: $\frac{3}{4}$ " through $6\frac{3}{4}$ " (DXU-0750 to DXU-6750);

See attached "pdf" DXU Shaft Seal Mounting Matrix Drawing List.

Service Restrictions

Unit Certification is not required for this product. If the manufacturer or purchaser's 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

- a) The Manufacturer has provided a declaration about the control of, or the lack of Asbestos in this product.
- b) Units should be visually inspected by the Surveyor during Annual Survey, with particular attention being given to the Shaft Clamp, Rotating Seal Ring and Stationary Friction Ring. These are to be replaced if deemed necessary.
- c) Shaft Seals including attachments to the hull are to be fitted in accordance with the Manufacturer's Recommended Procedures, as described in the Installation Manual.
- d) With regard to U.S.Coast Guard requirements, in accordance with 46 CFR 58.05-1(a), if the Design and Installation of the Subject Equipment comply with the ABS Rules, the same will be satisfactory to the U.S.Coast Guard.

Notes, Drawings and Documentation

Duramax Mechanical Face Seal System brochure ENG r042415 (S), Revision: -, Pages: 16

Document No. 20161206 DXU Revised Drawings, Pages: 58

Drawing No. 841000008, Material Spec. for Sea Gaskets, Revision: -, Pages: 1

Drawing No. 841003850, Duramax Shaft Seal Ass'y w/ Stern Tube Clamp, Revision: C, Pages: 1

Drawing No. 841104001, Slide Ring - Shaft Sizes Diam. 3/4 & 7/8, Revision: E, Pages: 1

Drawing No. 841106001, Spring Cover - Shaft Sizes Diam. 3/4 & 7/8, Revision: E, Pages: 1

Drawing No. 841107007, Seal Tension Spring - Shaft Sizes Diam. 6 to 6-3/4, Revision: C, Pages: 1

For the complete list of drawings, please see the attached "pdf" DXU Shaft Seal Mounting Matrix Drawing List.

Term of Validity

This Product Design Assessment (PDA) Certificate remains valid until 03/Mar/2027 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

The Rules for Conditions of Classification 2022 Marine Vessels 1-1-4/7.7, 1-1-A3, 1-1-A4, which covers the following:

2022 Rules for Building and Classing Marine Vessel Rules: 4-3-2/5.15.1

2022 Rules for Building and Classing Steel Vessels for Service on Rivers and Intracoastal Waterways: 4-2-1/9, 4-2-1/11.1

2022 Rules for Building and Classing High Speed Craft: 4-3-1/13.1.2

2022 Rules for Materials and Welding: 2-5 and 2-6

International Standards

NA

EU-MED Standards

NA

National Standards

NA

Government Standards

USCG # 46 CFR 58.05-1(a)

Other Standards

NA



A handwritten signature in blue ink, appearing to read 'Joseph W. ...'.

Corporate ABS Programs
American Bureau of Shipping
Print Date and Time: 10-Mar-2022 8:24

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.