



Confirmation of Product Type Approval

Company Name: DESMI PUMPING TECHNOLOGY A/S

Address: TAGHOLM 1 NORRESUNDBY DK-9400 Denmark

Product: Pump, Double Suction Vertical In-Line Centrifugal

Model(s): DSL150-265, DSL250-310, DSL300-320, DSL300-495, DSL350-460, DSL 400-430, DSL 400-460, DSL 400-495, DSL400-498, DSL400-500 DSL450-490, DSL450-490C, DSL450-490E
DSL500-515, DSL500-490

Endorsements:

Certificate Type	Certificate Number	Issue Date	Expiry Date
Product Design Assessment (PDA)	24-2516373-PDA	15-MAR-2024	14-MAR-2029
Manufacturing Assessment (MA)	23-5948943	18-JUL-2023	22-AUG-2028
Product Quality Assurance (PQA)	23-5948943-PQA	18-JUL-2023	22-AUG-2028

Tier

4 - Enrolled in PQA Program

Intended Service

Ballast pumps, cooling-water pumps, general service pumps.

Description

Vertical, horizontal, radially split, single-stage centrifugal pumps.

Model above are in the following material combination:

- 'A' (casing - cast iron / cast iron alloy, impeller - bronze), which is intended for fresh water applications,
- 'D' (casing - bronze, impeller - NiAlBz), which is intended for sea water applications.

Additionally all pumps are approved in material combination 'E' (special bronze) intended for sea water applications.

Ratings

See manufacturer's pump curves. The pump capacity will vary with working conditions and impeller design. See attached file.

Service Restrictions

1. Connection flange standard and rating is to be suitable for the intended application.
2. Unit Certification is required for pumps as per:

- Marine Vessel Rules 4-1-1/Table 6, 4-6-1/7.3.1, 4-6-1/7.3.2
- MOU 6-1-6/Table1, 6-1-6/7.3

3. 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. The Manufacturer has provided a declaration about the control of, or the lack of Asbestos in this product.
2. Hydrostatic and Capacity testing are to be performed at the manufacturer's plant in the presence and to the satisfaction of the Surveyor (ABS Marine Vessel Rules 4-6-1/7.3.2 a) & b).
3. Pump capacity may vary with working conditions and impeller design. Reference should be made to the manufacturer.
4. ABS witnessed additional testing may modify the pump ratings covered by this approval.

Notes, Drawings and Documentation

- DSL150-265 G, Assembly Drawings parts,
- DSL150-265 G-P, Assembly Drawings parts,
- DSL250-310B, Assembly drawings and Impeller
- DSL250-310G, Assembly drawings and Impeller
- DSL300-320, Assembly drawings and Impellers,
- DSL300-495-G, Assembly drawing
- DSL350-460-G, Assembly drawing
- DSL400-430, Assembly drawings and Impellers,
- DSL400-460, Assembly drawings and Impellers
- DSL400-495, Assembly drawings and Impellers,
- DSL400-498, Assembly Drawings parts,
- DSL500-515-F, Assembly Drawings parts,
- DSL500-515-B, Assembly Drawings parts,
- DSL500-515B-B, Assembly Drawings parts,
- DSL500-515C-B, Assembly Drawings parts
- DSL400-498 M Impeller ,
- DSL350-460 M Impeller ,
- DSL300-495 M Impeller
- DSL 400-460 M Impeller,
- DSL 450-490 Assembly drawing and Impeller

DSL 450-490C Assembly drawing and Impeller

DSL450-490E Assembly drawing and Impeller

DSL 400-500 Assembly drawing and Impeller

DSL 500-490 Assembly drawing and Impeller

Desmi Test Report, Test No. DSL150-265-270mm-2P, dated 2016-08-08,

Desmi Test Report, Test No. DSL250-310-310mm, dated 2015-12-07,

Desmi Test Report, Test No. DSL400-498-only-Slide-Bearing, dated 2015-01-08

Desmi Test Report, Test No. DSL500-515C-515mm, 2015-11-09.

Desmi Test Report, Test No. DSL300-495, dated 2018-02-07

Desmi Test Report, Test No. DSL350-460, dated 2017-11-30

DESMI Test Report - DSL-ESL-ESLH-SA Static Pressure Test for Pump, Dated 2018 Dec, QR-92-007

QR-92-007 DSL400-500; Test Report - DSL400-500 Performance Validation Test

QR-92-007 DSL450-490; Test Report - DSL450-490 Performance Validation Test

QR-92-007 DSL450-490C; Test Report - DSL450-490C Performance Validation Test

QR-92-007 DSL450-490E; Test Report - DSL450-490E Performance Validation Test

QR-92-007 DSL500-490; Test Report - DSL500-490 Performance Validation Test

T1513, DSL INLINE OPERATION AND MAINTENANCE INSTRUCTION, Revision: J,

Performance Curves-DSL

Term of Validity

This Product Design Assessment (PDA) Certificate remains valid until 14/Mar/2029 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 - 2024, 1-1-4/7.7, 1-1-A3, 1-1-A4, which covers the following:

Marine Vessels Rules, 2024: 4-1-1/Table 6, 4-6-1/7.3, 4-6-1/7.5.3;

Rules for Conditions of Classification, Part 1 - 2024 Offshore Units and Structures 1-1-4/9.7, 1-1-A2, 1-1-A3, which

covers the following:

Mobile Offshore Unit Rules (MOU), 2024: 4-2-2/3, 6-1-6/7.3.2, 6-1-6/Table 1 and 6-1-8/11, 6-1-8/Table 1;

The Rules for Conditions of Classification - Part 1 (2024) - Light and High-Speed Craft, 1-1-4/11.9, 1-1-A2, 1-1-A3,

which cover the following:

Rules for Building and Classing High Speed Craft - 2024: 4-1-1/3.3

International Standards

NA

EU-MED Standards

NA

National Standards

NA

Government Standards

NA

Other Standards

NA



A handwritten signature in black ink, appearing to read "James J. White".

Corporate ABS Programs
American Bureau of Shipping
Print Date and Time: 17-May-2024 12:17

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.