



Confirmation of Product Type Approval

Company Name: BLUCHER METAL A/S

Address: PUGDALSVEJ 1DK-7480 VILDBJERG DK-7480 Denmark

Product: Pipe Fittings, Stainless Steel Push Fit Plumbing Drainage System Special Items

Model(s): Blucher Marine, Blucher Europipe

Endorsements:

| Certificate Type | Certificate Number | Issue Date | Expiry Date |
|---------------------------------|---------------------------|-------------------|--------------------|
| Product Design Assessment (PDA) | 23-2329630-PDA | 13-FEB-2023 | 12-FEB-2028 |
| Manufacturing Assessment (MA) | 19-EG3616076 | 22-JAN-2019 | 17-FEB-2024 |
| Product Quality Assurance (PQA) | NA | NA | NA |

Tier

3 - Type Approved, unit certification not required

Intended Service

Gravity and vacuum sanitary drain systems for Ships and Offshore Facilities. 1) Sanitary discharge systems above freeboard deck and in enclosed spaces below (including machinery rooms) 2) Outside drainage (Scupper and pipes which are located on weather decks or balconies) 3) Vent. pipes for sanitary discharge systems and Central Vacuum Cleaning Systems (CVC) . 5) Food waste systems .

Description

Ships Drains, Pipes, Fittings, Penetrations and Brackets Types: 178, 275, 470, 471, 472, 473, 474, 475, 479, 480, 485, 490, 491, 499, 502, 503, 505, 525, 611, 620, 621, 651, 660, 662, 670, 672, 699, 811, 820, 821, 825, 830, 831, 832, 836, 837, 838, 839, 841, 842, 843, 844, 847, 850, 854, 855, 859, 866, 867, 868, 869, 870, 872, 873, 874, 875, 878, 885, 886 and 899

Pipe sizes (Diameter): 40, 50, 75, 82, 110, 125, 160, and 200 mm

Ratings

Pressure - Atmospheric , Open ended piping

Vacuum- Tested up to -0.95 bar gauge

Temperature range according to sealing material:

EPDM: -40°C to 100°C

NBR : -30°C to 80°C

FPM/FKM: -25°C to 200°C

Service Restrictions

- 1) 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.
- 2) Not to be used in pressurized closed piping systems
- 3) Use in drainage from weather or exposed decks through watertight spaces leading to overboard discharge below the freeboard deck is not permitted.
- 4) Not to be used for vent piping from double bottom and other structural tanks, including void tanks, whose boundaries extend to the shell of the vessel at or below the deepest load waterline.

Comments

- 1) Fixed pipe supports are to be provided on board in accordance with the manufacturer's instructions.
- 2) The Manufacturer has provided a declaration about the control of, or the lack of Asbestos in this product.
- 3) Penetrations covered in this PDA are not rated for fire applications as per IMO Resolution A.754(18).

Notes, Drawings and Documentation

Danish Technological Institute, test report nos. 225392 dated 01 October '07 & 412491-1 dated 17 December 2010.

Document Number: Blucher Marine - Product catalogue for marine pipes and drains

Term of Validity

This Product Design Assessment (PDA) Certificate remains valid until 12/Feb/2028 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

2023 ABS Marine Vessel Rules 1-1-4/7.7, 1-1-A3, 1-1-A4, 4-6-2/3, 4-6-2/5.5

2023 ABS Mobile Offshore Units Rules 1-1-4/9.7, 1-1-A2, 1-1-A3

International Standards

NA

EU-MED Standards

NA

National Standards

NA

Government Standards

NA

Other Standards

NA



A handwritten signature in blue ink, appearing to read "James W. White".

Corporate ABS Programs
American Bureau of Shipping
Print Date and Time: 16-Feb-2023 8:30

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.