



Confirmation of Product Type Approval

Company Name: GARLOCK SEALING TECHNOLOGIES

Address: 1666 DIVISION STREET NY 14522 United States

Product: Expansion Joint, Bellows Type

Model(s): Garflex Style 8100

Certificate Type	Certificate Number	Issue Date	Expiry Date
Product Design Assessment (PDA)	19-HS1930207-PDA	17-DEC-2019	16-DEC-2024
Manufacturing Assessment (MA)	19-C3613740	16-JAN-2019	10-FEB-2024
Product Quality Assurance (PQA)	NA	NA	NA

Tier

3

Intended Service

Marine & Offshore Applications - Expansion joints for use in Brine, Base Oil, Potable Water, Bilge, Mud, Engine Cooling Water, Sea Water, Electrical Equipment Cooling, Ballast, Drill Water, Thruster Cooling, Water Maker, Fuel Oil and Lube Oil Systems and class III circulating water system in machinery spaces.

Description

Garflex 8100 expansion joint made of rubber, reinforced with nylon tire cord. CR cover and NBR liner, reinforced with steel wire cord fitted with floating flanges made of black zinc chromate coated cast ductile iron or zinc plated carbon steel.

Ratings

I.D.Size / Max. Allowable Working Pressure

2" to 12" / 232 psi (16 bar)

14" to 16" / 100 psi (10 bar)

Face-to-Face: 5", 6", 8"

Operating Temperature: Up to 122°F (50°C) to 230°F (110°C)

Service Restrictions

i) Unit Certification is not required for this product. 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.

ii) Expansion joints are to be installed as close as possible to an anchor point.

iii) Expansion joints are to be installed in accessible locations to permit regular inspection and/or periodic

servicing.

Comments

i) The Manufacturer has provided a declaration about the control of, or the lack of Asbestos in this product.

ii) Each expansion joint shall be permanently marked with manufacturer's name, nominal diameter, manufactured date (month and year).

Notes, Drawings and Documentation

Drawing Style 8100 Garflex Expansion Joint

Flammability Testing Chem Lab. Job # 9449 Chem Lab Procedure CL-10-32 dated 4-Mar-10

Burst testing dated 26-Mar-10 witnessed by ABS Surveyor

Garlock Sealing Technologies letter dated 29-Mar-10

Aero Nav Laboratories Inc. Report of Fire Test, Style 8100 & 206 Fire Resistance Testing ISO 15540, Revision A. dated 01 October 2014

Term of Validity

This Product Design Assessment (PDA) Certificate remains valid until 16/Dec/2024 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 - 2019: 1-1-4/7.7, 1-1-A3, 1-1-A4, which covers the following:

Rules for Building and Classing Marine Vessels (2019): 4-6-2/5.8.1

Rules for Building and Classing Steel Vessels (2019): 4-6-2/5.8.1

Rules for Building and Classing Steel Vessels Under 90 Meters (295 feet) in Length (2019):

Rules for Building and Classing Offshore Support Vessels (2019): 4-6-2/5.8.1

Rules for Conditions of Classification, Part 1 - 2019 Offshore Units and Structures 1-1-4/9.7, 1-1-A2, 1-1-A3, which covers the following:

Rules for Building and Classing Mobile Offshore Units (2019): 4-2-1/11.7

Rules for Building and Classing Mobile Offshore Drilling Units (2019): 4-2-1/11.7

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 'Joseph W. ...'.

Corporate ABS Programs
American Bureau of Shipping
Print Date and Time: 18-Dec-2019 9:21

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.