



Confirmation of Product Type Approval

Please refer to the "Service Restrictions" shown below to determine if Unit Certification is required for this product. This certificate reflects the information on the product in the ABS Records as of the date and time the certificate is printed.

Pursuant to the Rules of the American Bureau of Shipping (ABS), the manufacturer of the below listed product held a valid Manufacturing Assessment (MA) with expiration date of 17/MAR/2015. The continued validity of the Manufacturing Assessment is dependent on completion of satisfactory audits as required by the ABS Rules.

And; a Product Design Assessment (PDA) valid until 04/NOV/2019 subject to continued compliance with the Rules or standards used in the evaluation of the product.

The above entitle the product to be called Product Type Approved.

The Product Design Assessment is valid for products intended for use on ABS classed vessels, MODUs or facilities which are in existence or under contract for construction on the date of the ABS Rules used to evaluate the Product.

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.

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.

Product Name: Expansion Joint, Axial Metallic
Model Name(s): Types: US, UM, UT & UR

Presented to:
EAGLEBURGMANN KE A/S - EXPANSION JOINT SOLUTIONS
ODINSVEJ 1
DK-6950 RINGKOBING
Denmark

Intended Service: Exhaust Gas Systems

Description: US, UM, UT & UR type joints are metallic type expansion joints with two types of connection: welding ends or flanges (loose or welded). US type is to be placed after the turbo charger or manifold where the vibrations are relatively small and where there is a need to compensate for relatively great axial or lateral movements as vibrations. UM type is to be placed in the manifold before the turbo charger where both high pressures and relatively large vibrations and pressure impulses occur. UT type is to be placed directly at the inlet or outlet of the turbo charger where there is a need of absorption of a combination of axial and lateral movements as well vibrations. UR type is to be placed in the manifold before the turbo charger where both very high pressures and relatively large vibrations and pressure impulses occur.

Tier: 3

Ratings: US type: Maximum pressure: 2.5 bar Maximum temperature: 550°C Sizes: DN 100 to DN 2200 UM type: Maximum pressure: 4.7 bar Maximum temperature: 710°C Sizes: DN 40 to DN 1200 UT type: Maximum pressure: 3.5 bar Maximum temperature: 550°C Sizes: DN 150 to DN 1200 UR type: Maximum pressure: 3.5 bar Maximum temperature: 550°C Sizes: DN 300 to DN 2000

Service Restrictions: 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

Comments:	specification or standard, including inspection standards and tolerances, must be clearly defined. 1. The Manufacturer has provided a declaration about the control of, or the lack of Asbestos in this product. 2. Expansion joints are to be installed in accordance with manufacturer's recommendations and 4-6-2/9.5 of the ABS Steel Vessels Rules. 3. Expansion joints are to bear manufacturer's trademark, pressure/temperature rating and material identification. Such markings may be cast or forged integral with, stamped on, or securely affixed by nameplate on the expansion joint, and are to serve as a permanent means of identification of the expansion joint throughout its service life and verifiable against the manufacturer's catalog or similar documentation.
Notes / Documentation:	1. Catalog of expansion joints for exhaust gas 2. UM1FC.0050.1.003 Expansion joint
Term of Validity:	This Product Design Assessment (PDA) Certificate 14-GD1262441-PDA, dated 05/Nov/2014 remains valid until 04/Nov/2019 or until the Rules or specifications used in the assessment are revised (whichever occurs first). This PDA is intended for a product to be installed on an ABS classed vessel, MODU or facility which is in existence or under contract for construction on the date of the ABS Rules or specifications used to evaluate the Product. Use of the Product on an ABS classed vessel, MODU or facility which is contracted after the validity date of the ABS Rules and specifications used to evaluate the Product, will require re-evaluation of the PDA. Use of the Product for non ABS classed vessels, MODUs or facilities is to be to an agreement between the manufacturer and intended client.
ABS Rules:	Steel Vessels (2014) 1-1-4/7.7, 1-1-Appendix 3 & 4, 4-6-2/5.8 Steel Vessels Under 90 Meters (295 Feet) in Length (2014) 1-1-4/7.7, 1-1-Appendix 3 & 4, 4-4-1/9.7 Offshore Support Vessels (2014) 1-1-4/7.7, 1-1-Appendix 3 & 4, 4-6-2/5.8 Steel Vessels for Service on Rivers and Intracoastal Waterways (2014) 1-1-4/7.7, 1-1-Appendix 3 & 4, 4-3-1/7.5 Mobile Offshore Drilling Units (2014) 1-1-4/9.7, 1-1-Appendix 2 & 3, 4-2-1/11.9 High-Speed Craft (2014) 1-1-4/11.9, 1-1-Appendix 2 & 3, 4-4-1/9.5 Steel Barges (2014) 1-1-4/7.7, 1-1-Appendix 3 & 4, 4-1-1/1
National Standards: International Standards: Government Authority: EUMED: Others:	EJMA 9th Edition

Model Certificate	Model Certificate No	Issue Date	Expiry Date
PDA	14-GD1262441-PDA	05/NOV/2014	04/NOV/2019



ABS Programs

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 was printed. Type Approval requires Drawing Assessment, Prototype Testing and assessment of the manufacturer's quality assurance and quality control arrangements. Limited circumstances may allow only Prototype Testing to satisfy Type Approval. The approvals of Drawings and Products remain valid as long as the ABS Rule, to which they were assessed, remains valid. ABS cautions manufacturers to review and maintain compliance with all other specifications to which the product may have been assessed. Further, unless it is specifically indicated in the description of the product; Type Approval does not necessarily waive witnessed inspection or survey procedures (where otherwise required) for products to be used in a vessel, MODU or facility intended to be ABS classed or that is presently in class with ABS. 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.