

# EC-TYPE EXAMINATION CERTIFICATE (MODULE B)

Certificate No:  
**MEDB000017T**  
Revision No:  
**1**

Application of: Directive 2014/90/EU of 23 July 2014 on marine equipment (MED), issued as "Forskrift om Skipsutstyr" by the Norwegian Maritime Authority. This Certificate is issued by DNV AS under the authority of the Government of Norway.

## This is to certify:

**That the Penetrations through "A" class divisions: pipe, duct, trunk, etc penetrations**

with type designation(s)

**Roxtec sealing system with multidiameter technology: R-series (AI)**

Issued to

**Roxtec International AB**  
**Karlskrona, Sweden**

is found to comply with the requirements in the following Regulations/Standards:

Regulation **(EU) 2021/1158**,

**item No. MED/3.26b. SOLAS 74 as amended, Regulation II-2/9, IMO MSC.1/Circ.1276, IMO 2010 FTP Code and IMO MSC.1/1488**

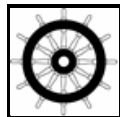
Further details of the equipment and conditions for certification are given overleaf.

This Certificate is valid until **2024-12-07**.

Issued at **Høvik** on **2021-12-08**

DNV local station:  
**Sweden CMC**

Approval Engineer:  
**Kristin Grønnæss**



Notified Body  
No.: **0575**

for **DNV AS**

**Sverre Olav Bergli**  
**Head of Notified Body**

A U.S. Coast Guard approval number will be assigned to the equipment when the production module has been completed and will appear on the production module certificate (module D, E or F), as allowed by the "Agreement between the United States of America and the EEA EFTA states on the mutual recognition of Certificates of Conformity for Marine Equipment" signed 17 October 2005, and amended by Decision No 1/2019 dated February 22nd, 2019.

The mark of conformity may only be affixed to the above type approved equipment and a Manufacturer's Declaration of Conformity issued when the production-surveillance module (D, E or F) of Annex B of the MED is fully complied with and controlled by a written inspection agreement with a Notified Body. The product liability rests with the manufacturer or his representative in accordance with Directive 2014/90/EU.

This certificate is valid for equipment, which is conform to the approved type. The manufacturer shall inform DNV AS of any changes to the approved equipment. This certificate remains valid unless suspended, withdrawn, recalled or cancelled.

Should the specified regulations or standards be amended during the validity of this certificate, the product is to be re-approved before being placed on board a vessel to which the amended regulations or standards apply.



**LEGAL DISCLAIMER:** Unless otherwise stated in the applicable contract with the holder of this document, or following from mandatory law, the liability of DNV AS, its parent companies and their subsidiaries as well as their officers, directors and employees ("DNV") arising from or in connection with the services rendered for the purpose of the issuance of this document or reliance thereon, whether in contract or in tort (including negligence), shall be limited to direct losses and under any circumstance be limited to 300,000 USD.



## Product description

“Roxtec sealing system with multidiameter technology: R-series (Al)”  
 consisting of an aluminium sleeve bolted or welded to an aluminium section. Sleeve is fitted with a Roxtec R frame (standard or EMC) in sizes 50-200. The R-frame is filled with Roxtec (standard or EMC) halogen free RM modules.

## Application/Limitation

Approved for use as a single or multiple pipe penetration system in class A-60 aluminium bulkheads and decks for steel and copper pipes according to below tables. Other applications are subject to case-by-case approval.

For class A-0, A-15 and A-30 applications, the penetration shall be insulated as A-60 and in addition the division is to be insulated at least 200 mm around the penetration.

Table 1: Approved pipe penetration in A-60 aluminium bulkhead

| Type | Size     | Pipe material | Pipe diameter (OD) [mm] | Sleeve length [mm] | Sleeve thickness [mm] | Sleeve position | Sleeve insulation    |
|------|----------|---------------|-------------------------|--------------------|-----------------------|-----------------|----------------------|
| R    | 50 – 200 | Steel         | 6 – 54                  | 55                 | 6                     | Any             | S1566985 Rev.A; No.3 |
| R    | 50 – 200 | Copper        | 6 – 54                  | 55                 | 6                     | Any             | S1566997 Rev.A; No.2 |

Table 2: Approved pipe penetration in A-60 aluminium deck

| Type | Size     | Pipe material | Pipe diameter (OD) [mm] | Sleeve length [mm] | Sleeve thickness [mm] | Sleeve position | Sleeve insulation    |
|------|----------|---------------|-------------------------|--------------------|-----------------------|-----------------|----------------------|
| R    | 50 – 100 | Steel         | 6 – 33                  | 55                 | 6                     | Any             | S1566985 Rev.A; No.1 |
| R    | 70 – 200 | Steel         | 6 – 54                  | 55                 | 6                     | Any             | S1566985 Rev.A; No.2 |
| R    | 50 – 200 | Copper        | 6 – 57                  | 55                 | 6                     | Any             | S1566997 Rev.A; No.1 |

The insulation material used has to be approved according to the Marine Equipment Directive and bear the Mark of Conformity.

Each product is to be supplied with its manual for installation and use.

## Type Examination documentation

Test report No. P603001 dated 23 January 2007 from SP, Borås, Sweden.  
 Test report No. PG11955 Serial No. 11979 dated 17 April 2009 from DIFT, Denmark.  
 Test report No. PGB10016A dated 3 June 2020 from DBI, Hvidovre, Denmark.  
 Test report No. PGB10077A dated 10 December 2020 from DBI, Hvidovre, Denmark.  
 Test report No. RS-20/B-408/E dated 17 December 2020 from CTO, Gdansk, Poland.  
 Test report No. RS-20/B-410/E dated 17 December 2020 from CTO, Gdansk, Poland.

Drawing No. S1566985 Rev.A dated 14 May 2021 from maker.

Drawing No. S1566997 Rev.A dated 14 May 2021 from maker.

## Tests carried out

Tested according to IMO FTPC Part 3 (IMO Res. A.754(18)) and in compliance with IMO 2010 FTP Code Ch. 8, and in accordance with IMO 2010 FTP Code part 3.

## Marking of product

The product or packing is to be marked with name and address of manufacturer, type designation, fire-technical rating, MED Mark of Conformity and USCG approval number if applicable (see front page).

## APPENDIX

### **Additional application/information for Watertightness/gastightness (Not part of the Marine Equipment Directive requirement)**

#### **Product description**

“Roxtec sealing system with multidiameter technology: R-series (Al)”  
consisting of an aluminium sleeve bolted or welded to an aluminium section. Sleeve is fitted with a Roxtec R frame (standard or EMC) in sizes 70-200. The R-frame is filled with Roxtec (standard or EMC) halogen free RM modules.

#### **Application/Limitation**

Approved for penetration in aluminium bulkheads or decks for steel and copper pipes limited to a pressure of 4.00 bar watertightness and 2.67 bar gastightness.

The penetration system is generally not to be used for penetrating boundaries of tanks.

Each product is to be supplied with its manual for installation and use.

#### **Type Approval documentation**

Test report No. MLM 010247 dated 29 August 2001 from DNV Malmö.  
Test report No. MLM 030473 dated 27 January 2003 from DNV Malmö.

#### **Tests carried out**

Pressure tests with water and Helium according to DNV Type Approval Programme 8.471.19-1.