



# TYPE EXAMINATION CERTIFICATE (MODULE B)

Certificate No:  
**MERB000017T**  
Revision No:  
**0**

This Certificate is issued by DNV UK Limited based on authorisation of the Maritime & Coast Guard Agency (MCA) as an UK Approved Body to undertake conformity assessments on marine equipment in accordance with the requirements of the Merchant Shipping (Marine Equipment) Regulations 2016 as amended.

## 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 **MSN 1874 Amendment 6,**

**item No. UK/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 **London** on **2022-11-30**

DNV local unit:  
**Sweden CMC**



for **DNV UK Ltd.**

Approval Engineer:  
**Roland Priebe**

Approved Body No.: **0097**

**Christine Mydlak-Röder**  
**MER Service Responsible**



**Maritime &  
Coastguard  
Agency**

UK Approved Body Authorised  
by the MCA

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-control phase module (D, E or F) of Schedule 2 of the Merchant Shipping (Marine Equipment) Regulations 2016, as amended is fully complied with and controlled by a written inspection agreement with an approved body. The product liability rests with the manufacturer or his representative in accordance with the Merchant Shipping (Marine Equipment) Regulations 2016.

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 This certificate remains valid unless suspended, withdrawn, re-called, or cancelled.

**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 UK Marine Equipment Regulation 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 and the Mark of Conformity (see front page).

## APPENDIX

### **Additional application/information for Watertightness/gastightness (Not part of the UK Marine Equipment Regulation 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.