



# TYPE EXAMINATION CERTIFICATE (MODULE B)

Certificate No:  
**MERB00005J9**  
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 , S-series (AL)**

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 and IMO 2010 FTP Code**

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

This Certificate is valid until **2024-07-29**.

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 This certificate remains valid unless suspended, withdrawn, re-called, or cancelled.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™, S-series (Al)”  
consisting of Roxtec S-series aluminium frames (S, SO, SF, SFO, SR, SK, SRC r20, SRC r40, SBTB) in sizes 1-8 and combinations thereof, welded or bolted to an aluminium section. The S frame is filled with Roxtec (standard or EMC) halogen free RM modules. Assembled with Roxtec wedge kit or Roxtec EMC wedge kit.  
Multidiameter™ is a Roxtec technology based on sealing modules with removable layers.

## Application/Limitation

Approved for use as a single or bundle pipe penetration system in class A-0, A-15, A-30 and A-60 aluminium bulkhead and deck as follows:

Steel pipes:	OD up to 54 mm, deck and bulkhead
Copper pipes:	OD up to 57 mm, deck and bulkhead
Bundle pipes (Cu and steel):	OD up to 32 mm for bulkhead and OD up to 50 mm for deck.

Deck or bulkhead to be insulated with approved insulation according to classification covering the edge of the aluminium frame. See insulation drawing specified in the Type Approval Documentation. For fire class A-0, A-15 and A-30, the sleeve and pipes are to be insulated as for class A-60 and in addition the division is to be insulated at least 200 mm around the penetration.

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

The insulation materials used have 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 maintenance.

## Type Examination documentation

Test report No. PG 11898, Serial No. 11923 dated 17 April 2009 from DIFT, Copenhagen Denmark  
Test report No. PG 11955, Serial No. 11979 dated 17 April 2009 from DIFT, Copenhagen Denmark.  
Test report No. P603001 dated 23 January 2007 from SP, Sweden.  
Test report No. P603000 dated 27 January 2007 from SP, Sweden.

Drawing No. S1017332 Rev. 0 dated 15 May 2009 from Roxtec International AB (Insulation drawing).

## Tests carried out

Tested according to IMO FTPC Part 3 and in compliance with IMO 2010 FTP Code Ch. 8.

## 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 page 1).

**APPENDIX**  
to EC Type Examination Certificate, MEDB00005J9  
**Additional application/information for Watertightness/gastightness**  
**(Not part of the UK Marine Equipment Regulation requirement)**

**Product description**

Roxtec sealing system with Multidiameter™, S-series (AI)<sup>®</sup> consisting of Roxtec S-series aluminium frames (S, SO, SF, SFO, SR, SK, SRC r20, SRC r40, SBTB) in sizes 1-8 and combinations thereof, welded or bolted to an aluminium section. The S frame is filled with Roxtec (standard or EMC) halogen free RM modules. Assembled with Roxtec wedge kit or Roxtec EMC wedge kit. Multidiameter™ is a Roxtec technology based on sealing modules with removable layers.

**Application/Limitation**

Approved for penetration in aluminium bulkheads or decks limited to a pressure of 4 bar watertightness and 2.67 bar gastightness (Ref. page 2 of the certificate).

For bolted versions with gasket and self-tapping screws, the pressure is limited to 3.33 bar watertightness and 1.67 bar gastightness.

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

When requested to be used in watertight bulkheads on passenger ships and Special Purpose Ships (SPS), the penetration system has to comply with the requirements given in SOLAS Ch. II-1 Reg. 13.2.3 (2009 issue). Penetrations passing through watertight bulkheads are subject for separate examination and approval by actual flag administration

**Type Approval documentation**

Test reports No. MLM 020133 dated 26 February 2002, No. MLM 020400 and No. MLM 020401 dated 25 March 2005 and MLM050410 dated 20 May 2005 from DNV Malmö.

**Tests carried out**

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