



EC-TYPE EXAMINATION CERTIFICATE (MODULE B)

Certificate No:
MEDB0000452
Revision No:
2

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: S-series (steel)

Issued to

Roxtec International AB
Karlskrona, Sweden

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

Regulation (EU) 2022/1157,

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

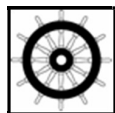
Further details of the equipment and conditions for certification are given overleaf.

This Certificate is valid until **2028-08-08**.

Issued at **Høvik** on **2023-08-09**

DNV local unit:
Denmark CMC

Approval Engineer:
Marcin Tobiasz



Notified Body
No.: **0575**

for **DNV AS**

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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: S-series (steel)” consists of Roxtec S-series frames with a depth of 60 mm (S, SF, SFHM, SO, SFO, SFOH, SR/T, SR/S, SRC r20, SRC r40, SRC r60) in size 2-6 and width 60-120, and combinations thereof up to x4, welded or bolted to the steel sections, to be used together with SE PPS extension frame. The extension frame is equipped with intumescent material strips. The S-series is filled with Roxtec halogen free RM modules (Standard RM, RM Ex). Assembled with Roxtec Wedge and corresponding stayplates.

Application/Limitation

Approved for use as single or multiple pipe penetration system in class A-0, A-15, A-30 and A-60 steel bulkheads and decks. Other applications are subject to case-by-case approval.

Approved for use in class A-0, A-15 and A-30 when the penetration system is insulated as A-60 and in addition the division is to be insulated with A-60 insulation at least 200 mm around the penetration.

Table 1 Approved pipe penetration in A-60 steel bulkhead

Frame type	Size	Pipe type	Pipe diameter (OD) [mm]	Frame length [mm]	Frame thickness [mm]	Frame position	Frame insulation
S-series frames ¹⁾	2 - 6	PP, PE, PB, ABS	16 - 50	60	10	Symmetric	Partially insulated S1590856 No. 1

¹⁾ together with SE PPS extension frame with RM modules

Table 2 Approved pipe penetration in A-60 steel deck

Frame type	Size	Pipe type	Pipe diameter (OD) [mm]	Frame length [mm]	Frame thickness [mm]	Frame position	Frame insulation
S-series frames ¹⁾	2 – 6x4	PP, PE, PB, ABS	16 - 50	60	10	Symmetric, unexposed	Partially insulated S1590856; No. 2

¹⁾ together with SE PPS extension frame with RM modules

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. PGB10111A dated 20 September 2021 from DBI, Hvidovre, Denmark.

Test report No. PGB10112A dated 20 September 2021 from DBI, Hvidovre, Denmark.

Test report No. PGB10113A dated 23 July 2021 from DBI, Hvidovre, Denmark.

Drawing No. S1590856 Rev.A dated 11 April 2023 from manufacturer.

Tests carried out

Tested according to 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 first page).

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

Product description

“Roxtec sealing system with multidiameter technology: S-series (steel)”
consists of Roxtec S-series frames with a depth of 60 mm (S, SF, SFHM, SO, SFO, SFOH, SR/T, SR/S, SRC r20, SRC r40, SRC r60) in size 2-6 and width 60-120, and combinations thereof up to x4, welded or bolted to the steel sections, to be used together with SE PPS extension frame. The extension frame is equipped with intumescent material strips. The S-series is filled with Roxtec halogen free RM modules (Standard RM, RM Ex). Assembled with Roxtec Wedge and corresponding stayplates.

Application/Limitation

Approved for penetration of plastic pipes in steel bulkheads limited to a pressure of 4 bar watertightness and 2.67 bar gastightness.

For bolted versions with gasket and self tapping screws, the pressure is limited to 3.3 bar watertightness and 1.7 bar gastightness.

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

Type Approval documentation

Test report No. MLM 020401 dated 25 March 2002 from DNV Malmö (screws).
Test report No. SKM-04-4088 dated 16 June 2004 from DNV Stockholm.
Test report No. MLM 020408 dated 3 June 2002 from DNV Malmö.

Tests carried out

Pressure tests with water and Helium according to Class Programme DNV-CP-0165.