

TYPE EXAMINATION CERTIFICATE – EC MODULE B

Certificate no.:
MEDB00008FD

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: R-, RS-, RS PPS/S-, G-series (Sandwich panel)

issued to

Roxtec International AB
Karlskrona, Sweden

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

Regulation **(EU) 2024/1975**,

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

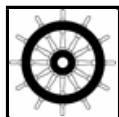
Further details of the equipment and conditions for certification are given overleaf.

This Certificate is valid until **2030-05-25**.

Issued at **Høvik** on **2025-05-26**

DNV local unit:
Denmark CMC

Approval Engineer:
Helge Bjørnara



Notified Body
No.: **0575**

for **DNV AS**

Mydlak-Röder, Christine
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 1/2023 dated August 21st, 2023.



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 This certificate remains valid unless suspended, withdrawn, recalled or cancelled.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 USD 300 000.

Product description

"Roxtec sealing system with Multidiameter: R-, RS-, RS PPS/S, G-series (sandwich panel)",

The R-series sealing system consist of a rubber frame filled with Roxtec RM modules* of different sizes depending on diameter and configuration of the pipes. It is available in standard, Ex and EMC versions depending on application.

The R-seal is installed into a steel sleeve with a flange, the sleeve is attached with self-drilling screws with washers to the sandwich panel together with counter frame. The steel sleeve is sealed with Roxtec Fire Sealant around the perimeter.

The RS pipe penetration seal consist of two halves with removable layers making it adaptable to a single pipe of different diameters. It is available in different versions (RS, RS OMD, RS EMC or RS EX) depending on application. The RS-seal is installed into a steel sleeve with flange, the sleeve is attached with self-drilling screws with washers to the sandwich panel bulkhead together with counter frame. The steel sleeve is sealed with Roxtec Fire Sealant around the perimeter.

The RS PPS/S pipe penetration seal consist of two halves with removable layers making it adaptable to a single pipe of different diameters. It is available in different versions (RS, RS OMD, RS EMC or RS EX) depending on application. The RS-seal is installed into a steel sleeve with flange, the sleeve is attached with self-drilling screws with washers to the sandwich panel bulkhead together with counter frame. The steel sleeve is sealed with Roxtec Fire Sealant around the perimeter.

The G-series sealing system consists of Roxtec GH-frames with a depth of 60 mm (GH, GH BG, GHM, GOH) in height 1-8 and combinations thereof. The GH-series is filled with Roxtec halogen free RM modules*. Assembled with Roxtec Wedge (standard, Ex, ES or ES Ex) and corresponding stay plates. The GH-frame flange is attached with self-drilling screws with washers to the sandwich panel together with counter frame. The steel frame is sealed with Roxtec Fire Sealant around the perimeter.

* RM modules come in the following versions: RM, RM Ex, RM FOC, RM ES, RM ES B, RM PE, RM PE B, RM BG, RM BG B, RM ES Ex, RM ES B Ex, RM PE Ex, RM ES B Ex, RM BG Ex, RM BG B Ex

For further details see approved drawings listed below.

Application/Limitation

Approved for use as a single or multiple pipe penetration system in non-loadbearing A-60/A-30 bulkheads made of sandwich panels type G21 Fire Panel (A-60) manufactured by Interdam with a thickness of 100 mm and a density of 120 kg/m³ or equivalent constructed sandwich panels with A-60 rating.

Table 1: Approved pipe penetration in A-60 bulkheads of sandwich constructions.

Sealing system	Size [mm]	Pipe material	Pipe diameter [mm]	Sleeve length [mm]	Sleeve thickness [mm]	Sleeve position	Penetration insulation
R	50 – 200	Steel, Titanium	6 – 54	35 – 65	4 – 7	Inserted from either side	Fully insulated + 300 mm along pipe. (S1591013)
RS	25	Steel, Titanium	8	35	4	Inserted or exposed on either side.	Fully insulated + 170 mm along pipe. (S1591021, No. 1)
RS	25 – 150	Steel, Titanium	8 – 114	35 – 65	4 – 7	Inserted or exposed on either side.	Fully insulated + 800 mm along pipe. (S1591021, No. 2)
RS	25 – 400	Steel, Titanium	8 - 330	35 – 65	4 – 7	Inserted or exposed on either side.	Fully insulated + 1200 mm along pipe. (S1591021, No. 3)
RS	25	Copper, CuNi	6	35	4	Inserted or exposed on either side.	Fully insulated + 500 mm along pipe. (S1591021, No. 4)
RS	25 – 100	Copper, CuNi	6 – 70	35 – 65	4 – 7	Inserted or exposed on either side.	Fully insulated + 1000 mm along pipe. (S1591021, No. 5)
RS PPS/S	31 – 125	PVC	16 – 90	35 – 65	4 – 7	Inserted from either side	Fully insulated inside panel (S1591097)
G *	1 – 8	Steel, Titanium	6 – 54	60	6	Inserted from either side	Fully insulated + 300 mm along pipe. (S1591104, No.1)

* Restricted application: fire against fully insulated side.

Table 1: Approved pipe penetration in A-30 bulkheads of sandwich constructions.

Sealing system	Size [mm]	Pipe material	Pipe diameter [mm]	Sleeve length [mm]	Sleeve thickness [mm]	Sleeve position	Penetration insulation
G *	1 – 8	Steel, Titanium	6 – 54	60	6	Inserted from either side	Fully insulated + 300 mm along pipe. (S1591104, No.2)

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 maintenance.

Type Examination documentation

Test report No. 2019-Efectis-R001144 dated 2 September 2019 from Efectis, Bleiswijk, The Netherlands.

Test report No. RS-22/B-245/E dated 12 August 2022 from CTO, Gdańsk, Poland.

Test report No. RS-22/B-246/E dated 12 August 2022 from CTO, Gdańsk, Poland.

Test report No. RS-23/B-035/E dated 28 March 2023 from CTO, Gdańsk, Poland.

Drawing No. S1591013, Rev. A dated 24 April 2023 from manufacturer.

Drawing No. S1591021, Rev. A dated 24 April 2023 from manufacturer.

Drawing No. S1591097, Rev. A dated 24 April 2023 from manufacturer.

Drawing No. S1591104, Rev. A dated 24 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).