

EC-TYPE EXAMINATION CERTIFICATE (MODULE B)

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 GL 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) 2020/1170**,

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

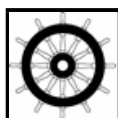
Further details of the equipment and conditions for certification are given overleaf.

This Certificate is valid until **2023-10-18**.

Issued at **Høvik** on **2020-10-19**

DNV GL local station:
Sweden CMC

Approval Engineer:
Helge Bjørnara



Notified Body
No.: **0575**

for **DNV GL AS**

Roald Vårheim
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 GL 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 This certificate remains valid unless suspended, withdrawn, recalled or cancelled.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 GL AS, its parent companies and subsidiaries as well as their officers, directors and employees ("DNV GL") 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)"

consisting of Roxtec S-series steel frames (S, SO, SF, SFO, SFOHK, SR, SK, SRC r20, SRC r40 and SBTB) in sizes 1-8 and combinations thereof, welded or bolted to a steel section. The S frame is filled with Roxtec (standard, Ex or EMC) halogen free RM modules. Assembled with Roxtec wedge kit (standard, Ex or EMC).

Application/Limitation

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

For A-0, A-15 and A-30 applications, the penetration shall be insulated as for A-60 and the division is to be fitted with A-60 insulation for a minimum distance of 200 mm around the penetration.

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

Size	Pipe material	Pipe diameter (OD) [mm]	Min. frame length [mm]	Frame thickness [mm]	Frame position	Frame insulation drawing no.
1 – 8	Steel	10 – 53	60	10	Any	S1553237 Rev. A S1502599 Rev. C
1 – 8	Copper	10 – 54	60	10	Any	S1553238 Rev. A S1502599 Rev. C
1 – 8	Bundle (Steel)	16 – 50	60	10	Any	S1553239 Rev. A S1502599 Rev. C
1 – 8	Bundle (Copper)	20	60	10	Any	S1553239 Rev. A S1502599 Rev. C

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

Size	Pipe material	Pipe diameter (OD) [mm]	Min. frame length [mm]	Frame thickness [mm]	Frame position	Frame insulation drawing no.
1 – 8	Steel	6 – 50	60	10	Any	S1553237 Rev. A S1502062 Rev. B
1 – 8	Copper	10 – 54	60	10	Any	S1553238 Rev. A S1502062 Rev. B
1 – 8	Bundle (Steel)	16 – 52	60	10	Any	S1553239 Rev. A S1502062 Rev. B
1 – 8	Bundle (CuNi)	20	60	10	Any	S1553239 Rev. A S1502062 Rev. B

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. P602999 dated 23 January 2007 from SP, Borås, Sweden.

Test Report No. P603000 dated 23 January 2007 from SP, Borås, Sweden.

Test Report No. RS-17/B-395/E dated 30 October 2017 from CTO, Gdansk, Poland.

Test Report No. RS-18/B-485/E dated 10 December 2018 from CTO, Gdansk, Poland.

Drawing No. S1553237 Rev. A dated 6 March 2020 from maker.

Drawing No. S1553238 Rev. A dated 6 March 2020 from maker.

Drawing No. S1553239 Rev. A dated 6 March 2020 from maker.



Job Id: **344.1-000153-92**
Certificate No: **MEDB00006JA**

Drawing No. S1502599 Rev. C dated 10 March 2020 from maker.
Drawing No. S1502062 Rev. B dated 10 March 2020 from maker.

Tests carried out

Tested according to IMO FTPC Part 3 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/or USCG approval number if applicable (see page 1).

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

Product description

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consisting of Roxtec S-series steel frames (S, SO, SF, SFO, SR, SK, SRC r20, SRC r40 and SBTB) in sizes 1-8 and combinations thereof, welded or bolted to a steel section. The S frame is filled with Roxtec (standard, Ex or EMC) halogen free RM modules. Assembled with Roxtec wedge kit (standard, Ex or EMC).

Application/Limitation

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

Approved for penetration in steel bulkheads or decks limited to a pressure of 4.00 bar watertightness and 2.00 bar gastightness for bundle pipes.

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 not to be used for penetrating boundaries of tanks.

Type Approval documentation

Tests carried out

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