

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: electric cable transits

with type designation(s)

Roxtec sealing system with multidiameter technology: GH-, RS- and R-series (sandwich panel)

Issued to

Roxtec International AB
Karlskrona, Sweden

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

Regulation **(EU) 2019/1397**,

item No. MED/3.26a. SOLAS 74 as amended, Regulation II-2/9, IMO 2010 FTP Code and IMO MSC.1/1488

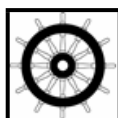
Further details of the equipment and conditions for certification are given overleaf.

This Certificate is valid until **2024-12-02**.

Issued at **Høvik** on **2019-12-03**

DNV GL local station:
Sweden CMC

Approval Engineer:
Grzegorz Wolski



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.

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 This certificate remains valid unless suspended, withdrawn, recalled or cancelled.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



Product description

"Roxtec sealing system with multidiameter technology: GH-, RS- and R-series (sandwich panel)"
Cable transits consisting of the following:

Frame type	Sealing type	Size
GH	Roxtec modules	2x1 to 8+8x3
SLFRS	RS	31 to 125
SLFR	R	50 to 200

All cable transits are fully insulated with A-60 mineral wool.

The frame flanges are sealed with fire rated sealant and bolted to the sandwich panel bulkhead.

For further details see approved drawings listed below.

Application/Limitation

The penetrations are approved for use as a cable penetration system for approved ship cables in class A-60/A-30 bulkheads made of sandwich panel type C.I.S-100 (A-60) manufactured by Norac AS with a thickness of 100 mm and a density of 30.62 kg/m³, or equivalent sandwich panels. Other applications are subject to case-by-case approval.

Frame type	Sealing type	Size	Frame installation side	Penetration class	Max cable diameter (mm)
GH	Roxtec modules	2x1 to 8+8x3	Unexposed	A-60	82
GH	Roxtec modules	2x1 to 8+8x3	Exposed	A-30	82
SLFRS	RS	31 to 125	Either sides	A-60	82
SLFR	R	50	Either sides	A-60	25
SLFR	R	70 to 200	Unexposed	A-60	60
SLFR	R	70 to 200	Exposed	A-30	60

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. 3P07871 rev. 1 dated 2014-10-11 from SP Technical Research Institute of Sweden.

Drawing No. S1040644, rev. B: Insulation of GH frames dated 2014-05-05 from Roxtec

Drawing No. S1040645, rev. B: Insulation of RS / RS-OMD seals dated 2014-05-05 from Roxtec

Drawing No. S1040646, rev. B: Insulation of R frames dated 2014-05-05 from Roxtec

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 of manufacturer, type designation, fire technical rating, the MED Mark of Conformity and USCG Approval Number if applicable (see first page).