

# EC-TYPE EXAMINATION CERTIFICATE (MODULE B)

Certificate No:  
**MEDB00003M3**  
Revision No:  
**1**

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: electric cable transits**

with type designation(s)

**Roxtec sealing system with multidiameter technology: G-series (steel)**

Issued to

**Roxtec International AB**  
**Karlskrona, Sweden**

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

Regulation **(EU) 2023/1667**,

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

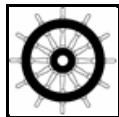
Further details of the equipment and conditions for certification are given overleaf.

This Certificate is valid until **2028-12-20**.

Issued at **Høvik** on **2023-12-21**

DNV local unit:  
**Denmark CMC**

Approval Engineer:  
**Helge Bjørnå**



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 This certificate remains valid unless suspended, withdrawn, recalled or cancelled.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



## Product description

“Roxtec sealing system with multidiameter technology: G-series (steel)”, consisting of G-series steel frames (G, GHM, GHM BG, GO, GOH, G welded Ex and G bolted Ex) and GKO frame in sizes 1-8 and combinations thereof, bolted or welded to a steel section. The frame is filled with Roxtec (Standard, EX, BG or EMC) halogen free RM modules. Assembled with Roxtec Wedge (Standard, EX or ES) and corresponding stay plates.

## Application/Limitation

Approved for use as a single or multiple cable penetration system in class A-0, A-15, A-30 and A-60 steel bulkheads and decks for approved ship cables.

Class A-15 and A-30 shall be insulated as A-60 and in addition the division is to be insulated at least 200 mm around the penetration.

Table 1: Approved cable penetration in A-60 steel bulkhead.

Frame type	Size	Cable type	Max. cable diameter (OD) [mm]	Sleeve length [mm]	Sleeve thickness [mm]	Sleeve position	Penetration insulation
G-series	1x1 – 8x1	Marine	88	60	6	Any	Partially insulated* (S1589743, 4)
G-series	1x1 – 8x1	Marine	88	60	6	Insulated side	Fully insulated. (S1589743, 5)
G-series	1x1 – 8+8x2	Marine	88	60	6	Insulated side	Fully insulated. (S1589743, 6)

\* Restricted application (fire against insulated side).

Table 2: Approved cable penetration in A-60 steel deck.

Frame type	Size	Cable type	Max. cable diameter (OD) [mm]	Sleeve length [mm]	Sleeve thickness [mm]	Sleeve position	Penetration insulation
G-series	1x1 – 8x1	Marine	88	60	6	Any	Partially insulated on the underside. (S1589743, 1)
G-series	1x1 – 8+8x2	Marine	88	60	6	Any	Fully insulated + 250 mm along cables on the underside. (S1589743, 2)
GKO	2x1 – 8x1	Marine	88	100	6	Topside	Partially insulated on the underside. (S1589743, 3)

Table 3: Approved cable penetration in A-0 steel bulkhead.

Frame type	Size	Cable type	Max. cable diameter (OD) [mm]	Sleeve length [mm]	Sleeve thickness [mm]	Sleeve position	Penetration insulation
G-series	1x1 – 8x1	Marine	88	60	6	Any	Partially insulated* (S1589784, 4)
G-series	1x1 – 8x1	Marine	88	60	6	Insulated side	Fully insulated. (S1589784, 5)
G-series	1x1 – 8+8x2	Marine	88	60	6	Insulated side	Fully insulated. (S1589784, 6)

\* Restricted application (fire against insulated side).

Table 4: Approved cable penetration in A-0 steel deck.

Frame type	Size	Cable type	Max. cable diameter (OD) [mm]	Sleeve length [mm]	Sleeve thickness [mm]	Sleeve position	Penetration insulation
G-series	1x1 – 8x1	Marine	88	60	6	Any	Partially insulated on the underside. (S1589784, 1)
G-series	1x1 – 8+8x2	Marine	88	60	6	Any	Fully insulated + 250 mm along cables on the underside. (S1589784, 2)

GKO	2x1 – 8x1	Marine	88	100	6	Topside	Partially insulated on the underside. (S1589784, 3)
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The insulation materials used have 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. 6P10022 dated 7 March 2017 from SP, Borås, Sweden.  
 Test report No. RS-17/B-395/E dated 30 October 2017 from CTO, Gdansk, Poland.  
 Test report No. RS-17/B-396/E dated 30 October 2017 from CTO, Gdansk, Poland.  
 Test report No. RS-18/B-181/E dated 7 May 2018 from CTO, Gdansk, Poland.  
 Test report No. RS-22/B-394/E dated 28 November 2022 from CTO, Gdansk, Poland.

Drawing No. S1589743, Rev. A dated 13 March 2023 from manufacturer.  
 Drawing No. S1589784, Rev. B dated 6 November 2023 from manufacturer.

### Tests carried out

Tested according to IMO 2010 FTP Code part 3 and IMO FTP Code part 3 (IMO Res.A.754(18)) 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, MED Mark of Conformity and/or USCG approval number (see page 1).

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

### **Product description**

“Roxtec sealing system with multidiameter technology: G-series (steel)”, consisting of G-series steel frames (G, GHM, GHM BG, GO, GOH, G welded Ex and G bolted Ex) and GKO frame in sizes 1-8 and combinations thereof, bolted or welded to a steel section. The frame is filled with Roxtec (Standard, EX, BG or EMC) halogen free RM modules. Assembled with Roxtec Wedge (Standard, EX or ES) and corresponding stay plates.

### **Application/Limitation**

Approved for penetration in steel bulkheads or decks limited to a pressure of 4.0 bar watertightness and 2.7 bar gastightness.

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.

### **Type Approval documentation**

Test report No. MLM 020106 dated 19 December 2001 from DNV Malmö.

Test report No. MLM 020133 dated 26 February 2002 from DNV Malmö.

Test report No. MLM 020401 dated 25 March 2002 from DNV Malmö.

### **Tests carried out**

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