



Certificate No:  
**TAF00001SH**

# TYPE APPROVAL CERTIFICATE

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## This is to certify:

**That the Class A and B Penetration**

with type designation(s)

**Roxtec sealing system technology: S-, RS-, and R-series**

Issued to

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

is found to comply with

**DNV statutory interpretations DNV-SI-0364 – SOLAS interpretations, Edition July 2021**

**DNV rules for classification – High speed and light craft**

## Application :

**Approved for use as cable penetration system through fire resisting divisions 60 (FRP) on high-speed craft for approved ship cables.**

**This certificate is recognized by Transport Canada.**

Issued at **Høvik** on **2023-09-28**

This Certificate is valid until **2028-09-27**.

DNV local unit: **Sweden CMC**

for **DNV**

Approval Engineer: **Helge Bjørnara**

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**Jowita Permoda**  
**Head of Section**

This Certificate is subject to terms and conditions overleaf. Any significant change in design or construction may render this Certificate invalid. The validity date relates to the Type Approval Certificate and not to the approval of equipment/systems installed.

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.



Form code: TA 251

Revision: 2022-12

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## Product description

Roxtec sealing system with multidiameter technology: S-, RS-, and R-series, Consisting of a S-series frame bolted (SFHM Alu/Steel) or laminated/glued (SRC GRP) into an FRP section. The S frame is filled with Roxtec (standard or EMC) halogen free RM modules. Assembled with Roxtec wedge kit (standard or EMC).

Consisting of a SL sleeve bolted (SLFRS Alu/Steel) or laminated/glued (SL GRP) into an FRP section. The sleeve is fitted with a Roxtec RS frame consisting of two halves with removable layers making it adaptable to a single cable of different diameters.

Consisting of a SL sleeve bolted (SLFR Alu/Steel) or laminated/glued (SL GRP) into an FRP section. The sleeve is fitted with a Roxtec R frame (standard or EMC). The R-frame is filled with Roxtec (standard or EMC) halogen free RM modules.

For further details, see drawings listed under Type Examination documentation below.

## Application/Limitation

Approved for use as cable penetration system through fire resisting divisions 60 (FRP) on high-speed craft for approved ship cables. Other applications are subject to case-by-case approval.

Table 1: Approved cable penetration in fire resisting bulkhead 60 (FRP)

| Type | Size     | Sleeve/Frame type | Max. cable diameter [mm] | Sleeve/Frame Length [mm] | Sleeve/Frame Thickness [mm] | Sleeve/ Frame position | Sleeve/ Frame insulation |
|------|----------|-------------------|--------------------------|--------------------------|-----------------------------|------------------------|--------------------------|
| S    | 1 - 8    | SFHM Alu/Steel    | 82                       | 60                       | 10                          | Symmetric              | S1582662; No.1           |
| S    | 4 - 6    | SRC GRP           | 90                       | 60                       | 15                          | Symmetric              | S1582665; No.1           |
| R    | 50 - 200 | SLFR Alu/Steel    | 82                       | 55                       | 6                           | Symmetric              | S1582678; No.1           |
| R    | 50 - 200 | SL GRP            | 82                       | 75                       | 5                           | Symmetric              | S1582679; No.1           |
| RS   | 25 - 125 | SL GRP            | 90                       | 75                       | 4 - 5                       | Symmetric              | S1582680; No.1           |

Table 2: Approved cable penetration in fire resisting deck 60 (FRP)

| Type | Size     | Sleeve/Frame type | Max. cable diameter [mm] | Sleeve/Frame Length [mm] | Sleeve/Frame Thickness [mm] | 3 <sup>rd</sup> draft TAF | Sleeve/ Frame insulation |
|------|----------|-------------------|--------------------------|--------------------------|-----------------------------|---------------------------|--------------------------|
| S    | 1 - 8    | SFHM Alu/Steel    | 82                       | 60                       | 10                          | Symmetric                 | S1582662; No.2           |
| S    | 4 - 6    | SRC GRP           | 82                       | 60                       | 15                          | Symmetric                 | S1582665; No.2           |
| R    | 50 - 200 | SLFR Alu/Steel    | 82                       | 55                       | 6                           | Symmetric                 | S1582678; No.2           |
| R    | 50 - 200 | SL GRP            | 82                       | 75                       | 5                           | Symmetric                 | S1582679; No.2           |
| RS   | 25 - 125 | SL GRP            | 90                       | 75                       | 4 - 5                       | Symmetric                 | S1582680; No.2           |

Approved for marine cables in RS frame in SL GRP sleeve in FRP bulkheads or decks limited to a pressure of 2.0 bar watertightness and 1.0 bar gastightness.

Approved for marine cables in R frame in SL GRP sleeve in FRP bulkheads or decks limited to a pressure of 2.0 bar watertightness and 1.0 bar gastightness.

Approved for marine cables in SRC GRP sleeve in FRP bulkheads or decks limited to a pressure of 2.0 bar watertightness and 1.0 bar gastightness.

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

Each product is to be supplied with manual for installation and maintenance.

## Type Approval documentation

Certification in accordance with Class Programme DNV-CP-0338, September 2021.

### Fire test:

Test report No. RS-20/B-253/E dated 9 July 2020 from CTO, Gdansk, Poland.

Test report No. RS-20/B-254/E dated 4 August 2020 from CTO, Gdansk, Poland.

Test report No. RS-20/B-341/E dated 22 October 2020 from CTO, Gdansk, Poland.

Test report No. RS-20/B-417/E dated 19 January 2021 from CTO, Gdansk, Poland.

Drawing No. S1582662, Rev. A dated 24 August 2022 from maker.

Drawing No. S1582665, Rev. A dated 24 August 2022 from maker.

Drawing No. S1582678, Rev. A dated 25 August 2022 from maker.

Drawing No. S1582679, Rev. A dated 25 August 2022 from maker.

Drawing No. S1582680, Rev. A dated 25 August 2022 from maker.

### Pressure test

Test report No. N141E2C, Rev.01, dated 19 February 2020 from DNV Sweden CMC.

Test report No. MLM 010238 dated 30 August 2001 from DNV Malmö.

Test report No. MLM 010235 dated 21 August 2001 from DNV Malmö.

Test report No. N142846G dated 2 November 2021 from DNV Sweden CMC.

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

Test report No. MLM 020400 dated 25 March 2002 from DNV Malmö.

## Tests carried out

Tested according to IMO 2010 FTP Code Part 3.

Pressure tests with water and helium according to DNV Type Approval Programme 8.471.19-1 and DNV-CP-0165.

## Marking of product

The product or packing is to be marked with name of manufacturer, type designation and fire-technical rating.

## Transport Canada Approval

Based on the procedures laid down in the Transport Canada publication entitled "Procedures for Approval of Life-Saving Appliances, Fire Safety Systems, Equipment and Products (TP14612)", DNV confirms that the product/s listed in this certificate is/are in accordance with Transport Canada's requirements.

## Periodical assessment

DNV's surveyor is to be given permission to perform Periodical Assessments at any time during the validity of this certificate and at least every second year. The arrangement is to be in accordance with procedure described in DNV-CP-0338, Section 4.