



Marine & Offshore  
Division

Certificate number: 15027/C1 BV

File number: ACI 4000/032/007

Product code: 5302H

*This certificate is not valid when presented without the full attached schedule composed of 7 sections*

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## TYPE APPROVAL CERTIFICATE

*This certificate is issued to*

**ROXTEC International AB**

KARLSKRONA - SWEDEN

*for the type of product*

**CABLE PENETRATIONS IN FIRE DIVISIONS**

H-30 / H-60 / H-120 cable penetrations

Cable sealing system with multidiameter technology, S-series,  
R-series and RS-seals

### Requirements:

Bureau Veritas Rules for the Classification of Offshore Units - Part C, Chapter 4

IMO Res. MSC.61(67)-(FTP code) Annex 1 Part 3

IMO Resolution MSC.307(88) (FTP Code 2010) § 8

*This certificate is issued to attest that BUREAU VERITAS did undertake the relevant approval procedures for the product identified above which was found to comply with the relevant requirements mentioned above.*

**This certificate will expire on: 05 Oct 2020**

**For BUREAU VERITAS,**

At BV GOTHENBURG, on 22 Sep 2016,

Magne MOLLER



This certificate remains valid until the date stated above, unless cancelled or revoked, provided the conditions indicated in the subsequent page(s) are complied with and the product remains satisfactory in service. This certificate will not be valid if the applicant makes any changes or modifications to the approved product, which have not been notified to, and agreed in writing with BUREAU VERITAS. Should the specified regulations or standards be amended during the validity of this certificate, the product(s) is/are to be re-approved prior to it/they being placed on board vessels to which the amended regulations or standards apply. This certificate is issued within the scope of the General Conditions of BUREAU VERITAS Marine & Offshore Division available on the internet site www.veristar.com. Any Person not a party to the contract pursuant to which this document is delivered may not assert a claim against BUREAU VERITAS for any liability arising out of errors or omissions which may be contained in said document, or for errors of judgement, fault or negligence committed by personnel of the Society or of its Agents in establishment or issuance of this document, and in connection with any activities for which it may provide.

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BV Mod. Ad.E 530 October 2014

This certificate consists of 4 page(s)

## THE SCHEDULE OF APPROVAL

### 1. PRODUCT DESCRIPTION :

#### ROXTEC cable sealing system with multidiameter technology

##### **Roxtec S series frames**

Consisting of Roxtec S series frame (S, SO, SF, SFO, SR, SK, SRC r20&r40 and BTB) in sizes 1 - 8 and combinations thereof, welded or bolted on to the steel divisions ;filled with Roxtec (standard, Ex or EMC, PE, ES, BG, BGB) halogen free insert modules.

Assembled with Roxtec Wedge kit or Roxtec EMC, Ex Wedge kit.

##### **Roxtec R frames**

Composed of steel sleeves (welded or bolted) with R type (standard, Ex or EMC, PE, ES, BG, BGB) halogen free rubber frames in size 70 – 200 and filled with Roxtec halogen free RM (standard, Ex or EMC, PE, ES, BG, BGB) modules, mounted in steel divisions.

##### **Roxtec RS seals**

Composed of steel sleeves (welded or bolted) with RS- type (Ex and EMC versions included) halogen free rubber sealings in size 23 - 150, mounted in steel decks or bulkheads.

#### **Type of division :**

<b>Penetration designation</b>	<b>S-series 1x1to 8x1 and combinations thereof</b> Single frame Rectangular Multi-cable	<b>R-series 70 to 200</b> Single frame Circular Multi-cable	<b>RS-series 23-150</b> Single frame Circular Single-cable
<b>External dimensions (mm)</b>	121 x 80 to 298 x 141 depth 60	diameter 85 to 215 depth 80 to 85	diameter 29 to 145 depth 44 to 87
<b>Sleeve dimensions (mm)</b>	121 x 80 to 298 x 141 depth : 60	Inner diameter 70 to 200 depth : 55	Inner diameter 23 to 150 depth : 35-65
<b>Packing space (mm)</b>	60 x 60 to 120 x 240	40 x 40 to 120 x 120	diameter 3.6 to 119
<b>Classification</b>	H60 with cables in deck/ bulkhead when installed/ insulated acc. drawing S1501476. H120 with cables in deck/ bulkhead when installed/ insulated acc. drawing S1501454. H60 with cables incl. MC/ SWA cables in deck when installed/ insulated acc. drawing S1501455. H60 with cables incl. MC/ SWA cables in bulkhead when installed/ insulated acc. drawing S1501429.	H60 - H120 with cables in deck/ bulkhead when installed/ insulated acc. drawing S1501537.	H60 - H120 with cables in deck/ bulkhead when installed/ insulated acc. drawing S1501540.
<b>Maximum cable diameter</b>	Drawing S1501476 Deck: max 82 mm Bulkhead: max 96 mm Drawing S1501454 Deck: max 98 mm Bulkhead: max 80 mm Drawing S1501455 Deck: max 98 mm Drawing S1501429 Bulkhead: max 103 mm	Drawing S1501537 Deck/ bulkhead: max 78 mm	Drawing S1501540 Deck: max 78 mm Bulkhead: max 96 mm

- When bolted (pre-engineered), sealing strips, EPDM rubber, 15 x 6 mm, are installed in between the Roxtec frame and the division.
- Tested fill based on transit opening area and the Roxtec Cable Sealing System: between 0 and 100% (maximum fill of a Roxtec transit is to install cable in every module installed in transit opening and minimum is to not install cable in any

- module in transit opening.
- For multi-cable transits, the transit was tested with the cables evenly spread inside the packing space.

## **2. DOCUMENTS AND DRAWINGS :**

As per Manufacturer's drawings S1501476 Rev A, S1501454 Rev A, S1501455 Rev A, 1501429 Rev A, S1501537 Rev A, S1501540 Rev B S1004649 Rev E, S1005518, Rev A, S1513135, Rev A, S1513136 Rev A, S1007494 Rev B, S1005507 Rev D, S1007536 Rev B and S1005510 Rev E.

## **3. TEST REPORTS :**

- 3.1 - Test report N° 250000.20/90.313, dated 9.11.1990 as per IMO A.517(13) Resolution from SINTEF, Norway
- 3.2 - Test report N° 846007.06, dated 19.9.1997 as per IMO A.754 (18) Resolution from SINTEF, Norway
- 3.3 - Test report N° P400834, dated 31.3.2004 as per IMO A.754 (18) Resolution from SP, Sweden
- 3.4 - Test report N° P703775, dated 7.12.2007 as per IMO A.754 (18) Resolution from SP, Sweden
- 3.5 - Test report N° PX07235, dated 15.12.2010 as per IMO A.754 (18) Resolution from SP, Sweden
- 3.6 - Test report N° 3P04210, dated 24.9.2013 as per 2010-FTP Code from SP, Sweden
- 3.7 - Test report N° PG11087, dated 12.2.2003 as per IMO A.754 (18) Resolution from DBI, Denmark
- 3.8 - Test report N° PG11088, dated 18.2.2003 as per IMO A.754 (18) Resolution from DBI, Denmark
- 3.9 - Test report N° PG11199, dated 4.7.2003 as per IMO A.754 (18) Resolution from DBI, Denmark

## **4. APPLICATION / LIMITATION :**

4.1- Approved for use as cable transits in H-30, H-60 and H-120 class steel divisions, with limitations contained in §1. Penetrations are also acceptable for use in A-30 and A-60 class steel divisions under same dispositions.

4.2 - The fitting aboard to be the same as used for the test.

## **5. PRODUCTION SURVEY REQUIREMENTS :**

5.1 - The "**ROXTEC cable sealing system with multidiameter technology, S-series, R-series and RS-series**" are to be supplied by "**ROXTEC International AB**" in compliance with the type described in this certificate.

5.2 - This type of product is within the category HBV of Bureau Veritas Rule Note NR320 and as such does not require a BV product certificate.

5.3 - **ROXTEC International AB** has to make the necessary arrangements to have its works recognised by Bureau Veritas in compliance with the requirements of NR320 for HBV products.

**ROXTEC International AB** has declared to Bureau Veritas the following production site(s)  
**ROXTEC International AB**  
**BOX 540**  
**371 23 KARLSKRONA**  
**SWEDEN**

## **6. MARKING OF PRODUCT :**

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

**7. OTHERS :**

7.1- It is the manufacturer's responsibility to inform shipbuilders or their sub-contractors of the proper methods of fitting, use and general maintenance of the approved equipment and the conditions of this approval.

7.2 - This certificate supersedes BV type approval certificate 15027/C0 BV, issued on 05/10/2015 by Bureau Veritas.

7.3 - Watertightness and Gastightness: Third Party Inspection report N° MLM 010235 dated 21.08.2001, MLM 010238 dated 30.08.2001, MLM 020106 dated 19.12.2001, MLM 020133 dated 26.02.2002, MLM 020408 dated 03.06.2002 from DNV, Norway:

- Tested watertightness (before fire exposure): 6 bar during 60 min.

- Tested gastightness (before fire exposure): 4 bar during 30 min.

**\*\*\* END OF CERTIFICATE \*\*\***