



Marine & Offshore

Certificate number: 13965/D0 BV

File number: ACI4000/032/006

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

A-class Single-Cable and Multi-Cable sealing system with multidiameter technology, R series frames

Requirements:

Bureau Veritas Rules for the Classification of Steel Ships Part C Chapter 4

SOLAS 74, as amended, Regulations II-2/9.3.1

IMO Res MSC.307(88) (2010 FTP Code)

IMO Res. MSC.61(67)-(FTP Code) with IMO Res MSC.307(88) (2010 FTP Code) article 8

IMO MSC/Circ.1120

This certificate is issued to attest that Bureau Veritas Marine & Offshore 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: 30 Mar 2025

For Bureau Veritas Marine & Offshore,

At BV GOTHENBURG, on 30 Mar 2020,

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 Marine & Offshore. 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 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 Marine & Offshore 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 June 2017

This certificate consists of 3 page(s)

THE SCHEDULE OF APPROVAL

1. PRODUCT DESCRIPTION:

A-Class Single-Cable and Multi-Cable sealing system with multidiameter technology, R series frames
(including EMC and Ex version).

Composed of a R type halogen free rubber frame in size 50 – 200 sealed with Roxtec halogen free RM (standard, Ex or EMC, PE, ES, BG, BGB) modules, mounted in sleeves welded, bolted (incl. SL A) or attached through expansion (RX kit) onto in steel divisions.

Penetration designation	R50 to R200
Type of division tested	Bulkhead and Deck
Depth of the penetration (mm)	71
Overall outer diameter of the penetration (mm)	60 to 215
Packing space (mm)	30 x 30 to 120 x 120
Classification	A-0 to A-60

Maximum cable diameter: 60 mm

Tested fill based on transit opening area and the Roxtec Cable Sealing System. 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.

Additional insulation is to be provided as shown in the referred Manufacturer's drawings. Same insulation material and thickness to be used as used for the insulation of division penetrated. The insulation thickness is to be at least the length of protruding sleeve.

2. DOCUMENTS AND DRAWINGS:

As per the Manufacturer's drawings:

2.1 - Welded or bolted standard sleeve:

- "R-frame with cables - A-60 steel deck/blkhd": N° S1552369 Rev.A dated 13/02/2020
- "R-frame with cables - A-15 & A-30 steel deck/blkhd": N° S1552370 Rev.A dated 13/02/2020
- "R-frame with cables - A-0 steel deck/blkhd": N° S1552360 Rev.A dated 13/02/2020

2.2 - SLXR sleeve (RX kit):

- "RX, R-frame with SLX sleeve and cable - A-60 steel deck/blkhd": N° S1552146 Rev.A dated 13/02/2020
- "RX, R-frame with SLX sleeve and cable - A-15 & A-30 steel deck/blkhd": N° S1552154 Rev.A dated 13/02/2020
- "RX, R-frame with SLX sleeve and cable - A-0 steel deck/blkhd": N° S1552147 Rev.A dated 13/02/2020

2.3 - SL A sleeve:

- "SL A sleeve with R-frame and cables - A-60 steel blkh/deck": N° S1523880 Rev.A dated 15/06/2017
- "SL A sleeve with R-frame and cables - A-15 & A-30 steel blkh/deck": N° S1523902 Rev.A dated 15/06/2017
- "SL A sleeve with R-frame and cables - A-0 steel blkh/deck": N° S1523909 Rev.A dated 15/06/2017

3. TEST REPORTS:

Laboratory	Test report	Date	Division	Fire rating	Test standard
SP, Sweden	N° PX05454rev1	08/09/2011	Bulkhead	A-60	IMO FTP Code Annex 1 Part 3 [test standard: IMO Resolution A.754(18)]
DBI, Denmark	N° PGA10025	22/12/2011	Deck	A-60	
SP, Sweden	N° 4P06068	17/01/2015	Bulkhead	A-60	
SP, Sweden	N° 4P07023	04/02/2015	Deck	A-60	IMO 2010 FTP Code Annex 1 Part 3
DBI, Denmark	N° PGA10723A	04/02/2016	Deck	A-0	
DBI, Denmark	N° PGA10724A	05/02/2016	Bulkhead	A-0	
DBI, Denmark	N° PGA10800A	26/05/2016	Deck	A-60	
DBI, Denmark	N° PGA10871Arev1	09/12/2016	Deck	A-60	
SP, Sweden	N° 7P02167	07/08/2017	Deck	A-60	
RISE, Sweden	N° 8P07094rev 1	16/01/2020	Bulkhead	A-0	
CTO, Poland	N° RS-18/B-485/E	10/12/2018	Bulkhead	A-60	
CTO, Poland	N° RS-19/B-255/E	20/08/2019	Bulkhead	A-60	

4. APPLICATION / LIMITATION:

- 4.1 - Approved for use as cable transits in A-0, A-15, A-30 and A-60 class steel divisions, with limitations contained in §1.
- 4.2 - The fitting aboard to be the same as used for the test.

5. PRODUCTION SURVEY REQUIREMENTS:

- 5.1 - The **A-class single-cable and multi-cable sealing systems** 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.

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 **ROXTEC International AB'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 the Type Approval Certificate N° 13965/C2 BV issued on 28/08/2017 by the Society.
- 7.3 - Testing of the penetrations for gastightness and watertightness as per following inspection reports, witnessed by Third Party surveyor:
- report N° MLM 020408 dated 30/06/2002, from DNV, Sweden.
 - report N° MLM 30473-1 dated 27/01/2003, from DNV, Norway.
 - report N° DNV40007647-1 dated 13/12/2011, from DNV, Norway.
 - report N° N141EX8Z Rev.2 dated 10/08/2017, from DNVGL, Sweden.

	Watertightness test (before fire exposure)	Gastightness test (before fire exposure)
Welded SL and SLF sleeves (size 50-200)	6 bar during 60 min	4 bar during 30 min
Bolted SLF sleeves (size 50-200)	5 bar during 60 min	2.5 bar during 30 min
Bolted SLA sleeves (size 50-100)	4 bar during 60 min	1.5 bar during 30 min

*** END OF CERTIFICATE ***