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Notified Body authorised by
BSH 0800-S23/4822:013

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Certificate No: LR2489151MB

Issue Date: 30/04/2024

Expiry Date: 29/04/2029

EC Type Examination (Module B) Certificate

This is to certify that:

LLOYD'S REGISTER Marine Deutschland GmbH (LRMD), designated as a "notified body" based on the notification of the Federal Maritime and Hydrographic Agency of Germany, did undertake the relevant type approval procedures for the type of equipment identified below which was found to be in compliance with the requirements of Marine Equipment Directive (MED) 2014/90/EU and the valid Commission Implementing Regulation (EU) in force indicating design, construction and performance requirements and testing standards for marine equipment, subject to the conditions below and the attached Schedule which also forms part of this Certificate.

Manufacturer	Vanguard Marine LDA
Address	Zona Industrial No.2, 4920-012 Campos, Vila Nova de Cerveira, Portugal
Reference	Marine Equipment Directive (MED) 2014/90/EU, Regulation (EU) 2023/1667
Regulation Item (No. & Item Designation)	MED/1.43 Rigid-inflated rescue boats
Product Type	Rigid/Inflated Rescue Boat
Product Description	6 Person Rigid/Inflated Rescue Boat
Specified Standard	SOLAS 74 Reg. III/4, SOLAS 74 Reg. X/3. SOLAS 74 Reg. III/21, SOLAS 74 Reg. III/31, SOLAS 74 Reg. III/34 IMO Res. MSC.36(63)-(1994 HSC Code) 8 IMO Res. MSC.48(66)-(LSA Code) I IMO Res. MSC.48(66)-(LSA Code) V IMO Res. MSC.97(73)-(2000 HSC Code) 8 IMO MSC.1/Circ.1631 IMO Resolution MSC.81(70) as amended by Resolution MSC.200(80), MSC.226(82), MSC.274(85), MSC.295(87), MSC.321(89), MSC.323(89), MSC.378(93), MSC.427(98), MSC.472(101), MSC.488(103) and MSC.544(107) as applicable IMO MSC/Circ.1006 ISO 15372:2000 + A1:2021

Lloyd's Register Marine Deutschland
GmbH, Willy-Brandt-Straße 59-65, 20457
Hamburg, Germany.
A member of the Lloyd's Register group

Lijo Thomas

Fire & Safety - Senior Surveyor
For and on behalf of Lloyd's Register Marine
Deutschland GmbH (2923)

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Row of the Regulation Item Row 2 of 2 of Regulation (EU) 2023/1667

Trade Name SOLAS 450RB

The attached Design Appraisal Document (schedule) forms part of this certificate. This certificate remains valid unless suspended, expired or withdrawn, provided the conditions in the attached schedule are complied with and the equipment remains satisfactory in service.

This certificate will not be valid if the manufacturer makes any changes or modifications to the approved type of equipment, which have not been notified to and agreed with the notified body named on this certificate. The manufacturer should notify LRMD of any modification or changes to the equipment in order to obtain a valid Certificate.

Should the specified regulations or standards be amended during the period of validity of this certificate, the product is to be re-approved prior being placed on the market and on board vessels to which the amended regulations or standards apply.

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-control phase module (D,E, or F) of ANNEX II of the Directive is fully complied with and controlled by a written inspection agreement with a notified body.

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ATTACHMENT TO EC TYPE EXAMINATION (MODULE B) CERTIFICATE No. LR2489151MB

The undernoted documents have been appraised for compliance with the relevant requirements of International Conventions and European Union legislation for the EC Type Examination of Marine Equipment for use on Merchant Ships Registered in the European Economic Area.

This Design Appraisal Document (schedule) forms part of the Certificate.

This Certificate Supersedes and is a Renewal of Certificate Number 2814-MED-NL-MED 1950068-02

Approval Documentation

Operation & Maintenance Manual for Rescue Boat Type: "SOLAS 450 RB" Rev. E, dated 24/03/2020.

<u>Drawing No.</u>	<u>Rev.</u>	<u>Date</u>	<u>Title</u>
SOLAS 450 RB/01	B	08/07/19	Drawing Index
SOLAS 450 RB/02	A	06/08/18	General View
SOLAS 450 RB/03	B	08/07/19	General Arrangement
SOLAS 450 RB/04	B	08/07/19	General Dimensions
SOLAS 450 RB/05	B	08/07/19	Seat Arrangement
SOLAS 450 RB/06	B	08/07/19	Hoisting Arrangement
SOLAS 450 RB/07	A	06/08/18	Painter Storage
SOLAS 450 RB/08	B	08/07/19	Tallies
SOLAS 450 RB/09	A	06/08/18	Water Spray
SOLAS 450 RB/100	B	08/07/19	Boat Exploded Details
SOLAS 450 RB/101	A	06/08/18	Hull Structure
SOLAS 450 RB/102	B	08/07/19	Structural Eyebolt
SOLAS 450 RB/103	B	08/07/19	Foam Buoyancy Tubes
SOLAS 450 RB/104	B	08/07/19	Fuel System
SOLAS 450 RB/105	B	08/07/19	Fuel Tank Brackets
SOLAS 450 RB/106	B	08/07/19	Wooden Benches
SOLAS 450 RB/107	A	06/08/18	Stern Protector
SOLAS 450 RB/200	B	08/07/19	Deck
SOLAS 450 RB/300, sheet 1	B	08/07/19	Tube 3D View, Orange
SOLAS 450 RB/300, sheet 2	B	08/07/19	Tube 3D View, White
SOLAS 450 RB/301	B	08/07/19	Tube Arrangement
SOLAS 450 RB/302, sheet 1 and 2	A	08/07/19	Solas Tube Cover

Test Reports

MSC/Circ. 980 Evaluation and Test Report, for SOLAS 450 RB, dated 22/02/2019 and witnessed by Lloyd's Register Surveyor.

Fire test report for the fire-retardant material used in the construction of the Rescue Boat performed as per MSC/Circ. 1006 at Exova Warringtonfire, Report No. 2011-1688-1, dated 17th June 2011.

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Conditions of Certification

1. Maximum weights: -

Lightweight:	319 Kg
Loose Equipment:	21 Kg
Fuel Oil:	35 Kg
Complement weight:	495 Kg (6 Person @ 82.5 Kg)
Recovery weight:	870 Kg

Dimension (Overall): -

4.5 x 1.97 x 0.44 metres (L x B x D)

2. Certified Equipment Details

Rescue Boat Propulsion Engine

Manufacturer: Mercury Marine Division of Brunswick
Type: Mercury 25 HP
Bollard Pull: 1620 N

Manufacturer: Mercury Marine Division of Brunswick
Type: Mercury 40 HP
Bollard Pull: 2550 N

Manufacturer: Yamaha Motor Co., Ltd
Type: Mercury 25 HP
Bollard Pull: 1864 N

Manufacturer: Yamaha Motor Co., Ltd
Type: Mercury 40 HP
Bollard Pull: 3090 N

3. Proof Fabric for Collar Tube:

ORCA 866 Polyester High Tenacity 1670 dtex manufactured by Pennel and Flipo.

Polyurethane fabric Type TC159 1P U4-U4 AR/GR manufactured by Chiorino S.p.A.

4. Material Details:

<u>Materials</u>	<u>Type</u>	<u>Manufacturer</u>
Gel coat	NEOGEL NPG 8373	Bufa
Resin	BÜFA®-FIRESTOP 8175-W-1	Bufa
Composite roving	500G	Quimidroga s.a
Chopped strand mat	300 /450/600 G/M2	Quimidroga s.a
Buoyancy Foam	NG 55-40-5	Lackfa Isolierstoff GmbH & Co KG

5. Maximum Number of Persons: 5 seated persons and one person on stretcher.

6. Maximum permitted speed of the rescue boat is 20 Knots.

7. The fully laden weight including fuel, equipment and persons shall be lower than the certified SWL of the launching device.

8. The rescue boat is provided with a four point suspension arrangement for launching from a ship at sea. The release gear used in conjunction with this boat shall be an approved release mechanism certified for a maximum safe working load (SWL) of not less than the boat's maximum fully laden weight.



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9. This rescue boat is non self-righting.
10. The launch and recovery appliance is to be capable of raising the Rescue Boat from the water with its full complement of persons and equipment at the rate of not less than 0.3 m/s.
11. The Rescue Boat's launching appliance is to be provided with a 'foul weather recovery strop(s) of Safe Working Load equivalent to at least the maximum laden weight of the boat where heavy blocks (more than 7 Kgs) constitute a danger.
12. It is to be demonstrated to the attending surveyor's satisfaction that the Rescue Boat can be raised /lowered without interference with the occupants of the boat.
13. All equipment onboard should be of an approved type as required by SOLAS and LSA Code.
14. The rescue boat is to be kept in a state of continuous readiness for launching in not more than five minutes when the vessel is at sea. Portable orange covers are to be fitted when the boat is used in rescue mode.
15. The rescue boat may be accepted for use in installations where this is acceptable to the Flag Administration of the installation on which the boat is installed.
16. For compliance with SOLAS Regulation III/35 and III/36 fully detailed operations and maintenance manuals shall be supplied with Rescue Boat.
17. The release gear does not form part of this design appraisal, but it is expected that the release gear used in conjunction with the Rescue Boat covered under this Certificate is of an approved Type.
18. The attachment of each lifting arrangement to the boat structure shall be to satisfaction of the attending surveyor and in accordance with LSA Code Paragraph 4.4.7.6.14.
19. Inflated sections of the Rescue Boat are to be maintained and repaired at a service station authorised by the manufacturer which is also approved by Lloyd's Register or the Flag Administration.
20. Alteration/ modifications of the Type Approved Rescue Boat will invalidate the Type Approval Certificate which, in turn, will affect the validity of the related Statutory Certificate (of the vessel on which the rescue boat is installed.) In such cases, where the equipment requires alterations / modifications, these are only to be carried out with agreement / approval of the Flag State Administration (of the vessel on which the Rescue Boat is installed) on an installation-by-installation basis.
21. The Rescue Boat is to be marked in block capitals of the Roma Alphabet with the number of persons it is approved to carry, the name and port of the ship to which the boat belongs; and means of identifying from above, the ship to which it belongs along with the number of the boat.
22. Items of equipment listed on the current version of the Marine Equipment directive (Commission implementing Regulation (EU)) which are supplied with rigid rescue boat are to be delivered with their own Declaration of Conformity issued by the corresponding manufacturer when delivered to EC Flag vessels.
23. Any inspection, maintenance, thorough examination, operational testing, overhaul and repair shall be carried out according to requirements of resolution MSC.402(96).
24. **Installation on board:** The launching arrangements and installation of the boat are not part of this Design Appraisal or Certificate. All such arrangements are to be to the satisfaction of the attending Surveyors.
25. Each Rescue Boat is to be marked with the information required by LSA Code Paragraph 1.2.2.9 and 4.4.1.2.
26. If the specified standards are amended during the validity of this certificate, the product is to be re-approved prior to it being supplied to vessels to which the amended standards apply.

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27. Production items of the subject equipment are to be manufactured in accordance with either an approved Production Quality Assurance system (Module D), a Product-Quality assurance system (Module E) or a Product Verification Process (Module F). The wheelmark cannot be affixed to the product until a conformity assessment module is in place.
28. Each item, batch or lot of the equipment is to be issued with a "Declaration of Conformity" and have the "Mark of Conformity" affixed after a conformity assessment module is in place.
29. The manufacturer shall keep a copy of the EC type-examination certificate, its annexes, and additions together with the technical documentation at the disposal of the national authorities for at least 10 years after the wheel mark has been affixed on the last product manufactured and in no case for a period shorter than the expected life of the marine equipment concerned.
30. Should a change of Place of Production from that stated below be required i.e. where the stages of manufacture / assembly / testing of this product take place, Lloyd's Register is to be informed of the new Place of Production prior to the change taking place. This Certificate will require to be updated for Approval to be maintained.

Place of Production

Vanguard Marine LDA
Zona Industrial No. 2
4920-012 Campos
Vila Nova De Cerveira
Portugal

Lijo Thomas
Senior Specialist
Fire & Safety, Statutory Discipline Team
UK&I Technical Support Office, Marine & Offshore
For and on behalf of Lloyd's Register Marine Deutschland
LRMD EC Distinguishing No. 2923

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