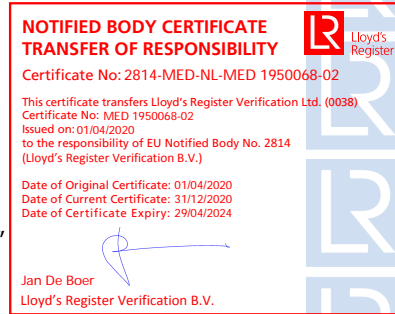


# EC Type Examination (Module B) Certificate

This is to certify that:

LLOYD'S REGISTER VERIFICATION LIMITED (LRV), designated as a "notified body" under the terms of the Merchant Shipping (Marine Equipment) Regulations 2016 (S.I. 2016 No.1025), as amended, 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, subject to any conditions in the Design Appraisal Document attached hereto.

<b>Manufacturer</b>	<b>Vanguard Marine Lda</b>
<b>Address</b>	Zona Industrial nº 2, 4920-012 Campos, Vila Nova de Cerveira, Portugal
<b>Reference</b>	Regulation (EU) 2019/1397
<b>Regulation Item (No. &amp; Item Designation)</b>	MED/1.43 Rigid/Inflated Recue Boats
<b>Product Type</b>	RIGID/INFLATED RESCUE BOAT
<b>Product Description</b>	6 Persons Rigid/Inflated Rescue Boat Type; "SOLAS 450 RB"
<b>Specified Standard</b>	IMO Resolution MSC.81 (70), Part 1 as amended ISO 15372 (2000) IMO MSC/Circular 1006
<b>Trade Name</b>	SOLAS 450 RB



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 This certificate remains valid unless suspended, expired or withdrawn, provided the conditions in the attached schedule are complied with and the equipment remains satisfactory in service.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 is issued under the authority of the MCA. 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 LRV 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.



Lloyd's Register Verification Limited (Reg. no. 4929226) is a limited company registered in England and Wales. Registered office: 71 Fenchurch Street, London, EC3M 4BS, UK. A member of Lloyd's Register group.

**Lijo Thomas**  
Senior Surveyor to Lloyd's Register Verification Ltd  
A member of the Lloyd's Register group

Lloyd's Register Group Limited, its affiliates and subsidiaries and their respective officers, employees or agents are, individually and collectively, referred to in this clause as 'Lloyd's Register'. Lloyd's Register assumes no responsibility and shall not be liable to any person for any loss, damage or expense caused by reliance on the information or advice in this document or howsoever provided, unless that person has signed a contract with the relevant Lloyd's Register entity for the provision of this information or advice and in that case any responsibility or liability is exclusively on the terms and conditions set out in that contract.

**ATTACHMENT TO EC TYPE EXAMINATION (MODULE B) CERTIFICATE No. MED 1950068-02**

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 is an Amendment of certificate Number MED 1950068

**EXAMINED DOCUMENTATION**

Operation & Maintenance Manual for Rescue Boat Type: – “SOLAS 450 RB”, Rev. No E and dated 24/03/2020

<b><u>Drawing No.</u></b>	<b><u>Rev.</u></b>	<b><u>Date</u></b>	<b><u>Title</u></b>
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

**ATTACHMENT TO EC TYPE EXAMINATION (MODULE B) CERTIFICATE No. MED 1950068-02**

**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.

**CONDITIONS OF CERTIFICATION**

**1. Maximum weights: -**

Lightweight:	319 Kg
Loose Equipment:	21 Kg
Fuel Oil:	35 Kg
Complement weight:	495 Kg
Recovery weight:	870 Kg
Fully Laden 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:**

- a) Manufacturer: Mercury Marine -Division of Brunswick  
Type: Mercury 25 HP  
Bollard Pull: 1620 N
- b) Manufacturer: Mercury Marine -Division of Brunswick  
Type: Mercury 40 HP  
Bollard Pull: 2550 N
- c) Manufacturer: Yamaha Motor Co., Ltd  
Type: Yamaha 25 HP  
Bollard Pull: 1864 N
- d) Manufacturer: Yamaha Motor Co., Ltd  
Type: Yamaha 40 HP  
Bollard Pull: 3090 N

**3. Proof Fabric for Collar Tube:**

- a) ORCA 866 Polyester High Tenacity 1670 dtex manufactured by Pennel and Flipo.
- b) Polyurethane fabric Type TC159 1P U4-U4 AR/GR manufactured by Chiorino S.p.A.

**ATTACHMENT TO EC TYPE EXAMINATION (MODULE B) CERTIFICATE No. MED 1950068-02**

**4. Material Details:**

<b><u>Materials</u></b>	<b><u>Type</u></b>	<b><u>Manufacturer</u></b>
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 1 person on stretcher
6. Maximum allowed speed of the rescue boat is 20 knots
7. The fully laden weight including fuel, equipment's 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 his 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. All loose lifting gear is to be tested in accordance with the requirements of chapter 12 of the LR code for lifting appliances as appropriate, to the attending surveyor's satisfaction
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 0.3m/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 on board 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 5 minutes when the vessel is at sea. Portable orange covers to be fitted when the boat is used in rescue mode.
15. The rescue boat may be accepted for use on 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 each 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 an approved type
18. The attachment of each lifting arrangement to the boat structure shall be to the satisfaction of the attending Surveyor and in accordance with LSA Code Paragraph 4.4.7.6.14

**ATTACHMENT TO EC TYPE EXAMINATION (MODULE B) CERTIFICATE No. MED 1950068-02**

19. Inflated sections of the Rescue Boat are to be maintained and repaired at a service station authorized by the manufacture which 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 Roman 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 form above the ship to which belongs along with the number of the boat
22. Equipment items listed on the current version of the Annex of the Marine Equipment Directive (Commission Implementing Regulation (EU) 2018/773 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 flagged vessels
23. **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
24. Each Rescue Boat is to be marked with the information required by LSA Code Paragraph 1.2.2.9 and 4.4.1.2
25. 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
26. 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**
27. Production tests are to be conducted in accordance with the applicable requirements of IMO Resolution MSC.81 (70), Part 2 and be recorded by the manufacturer in accordance with either the approved Production Quality Assurance system (Module D) or Product Quality Assurance (Module E) or witnessed by the Notified Body (LRV) as required by the Product Verification (Module F) of the Marine Equipment Directive. This does not preclude any further testing to additional requirements of the Marine Administration of the country where the ship is registered (i.e. the flag state) or those acting on behalf of that Administration
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. 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, the new Place of Production is to be advised to us prior to the change taking place. This Certificate will require to be updated for Approval to be maintained

**ATTACHMENT TO EC TYPE EXAMINATION (MODULE B) CERTIFICATE No. MED 1950068-02**

**PLACE OF PRODUCTION**

Vanguard Marine Lda  
Zona Industrial n° 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 Verification  
**LRV EC Distinguishing No. 0038**