

EC-TYPE EXAMINATION CERTIFICATE (MODULE B)

Application of: Directive 2014/90/EU of 23 July 2014 on marine equipment (MED), issued as "Forskrift om Skipsutstyr" by the Norwegian Maritime Authority. This Certificate is issued by DNV GL AS under the authority of the Government of the Kingdom of Norway.

This is to certify:

That the Rigid rescue boats

with type designation(s)
VG 4.5 DR4 / VG4.5 DRS

Issued to

Vanguard (Nantong) F.R.P. Co., Ltd.
Nantong Jiangsu, China

is found to comply with the requirements in the following Regulations/Standards:
Regulation **(EU) 2017/306,**
item No. MED/1.18. SOLAS 1974 as amended, Reg. III/4, III/21, III/31, III/34 & X/3, LSA
Code, 2000 HSC Code 8 and IMO MSC/Circ.1006

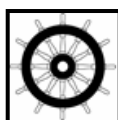
Further details of the equipment and conditions for certification are given overleaf.

This Certificate is valid until **2022-05-02.**

Issued at **Høvik** on **2017-05-03**

DNV GL local station:
Nantong CMC

Approval Engineer:
Aleksandr Jegorov



Notified Body
No.: **0575**

for **DNV GL AS**

Vidar Dolonen
Head of Notified Body



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-surveillance module (D, E or F) of Annex B of the MED is fully complied with and controlled by a written inspection agreement with a Notified Body. The product liability rests with the manufacturer or his representative in accordance with Directive 2014/90/EU.
This certificate is valid for equipment, which is conform to the approved type. The manufacturer shall inform DNV GL AS of any changes to the approved equipment. This certificate remains valid unless suspended, withdrawn, recalled or cancelled.
Should the specified regulations or standards be amended during the validity of this certificate, the product is to be re-approved before being placed on board a vessel to which the amended regulations or standards apply.



Job Id: **344.1-001680-46**
Certificate No: **MEDB00002GM**

Product description

This rigid rescue boat with self righting arrangement is available in 2 types:

- VG4.5 DR4, equipped with 4 point lifting slings
- VG4.5 DRS, equipped with a single point lifting hook with 4 connecting rods

Length:	4.54 m
Breadth:	2.03 m
Depth:	0.89 m
Weight of boat, fully equipped:	830 kg
Weight of boat, fully manned 82.5 kg:	1490 kg
Lifting arrangement:	4 point lifting slings
Or:	
Hook manufacturer and type:	Vanguard Nantong F.R.P. Co.,Ltd. Csafe3.5 (off-load)
Hook SWL:	35 kN
Hull material:	GRP
Propulsion system:	Inboard engine
Engine manufacturer and type:	Zhenjiang Siyang 380J-3
Bollard pull:	1.2kN
Engine manufacturer and type:	BUKH DV29RME
Bollard pull:	3.0 kN

Application/Limitation

Approved engine power:	19.7/21.3 kW
Number of persons, max:	8
Maximum load of persons 82.5 kg:	660 kg

Rescue boat equipment and marking/instructions to be inspected after installation onboard the ship. Equipment shall comply with LSA Code and IMO Res.MSC.81(70).

The rescue boat is fitted with a release hook without on-load release capabilities, in accordance with LSA Code 4.4.7.6.9. Hence, if it is to be combined with launching appliances with permanent high speed tensioning device (LSA Code 6.1.7.3), compatibility must be assured.

The design assessment is based on IMO Res. MSC. 48(66) as amended by IMO Res. MSC. 207(81), IMO Res. MSC. 218(82) and IMO Res. MSC. 272(85) and IMO Res. MSC. 320(89).

Production and installation testing shall be carried out according to IMO Res. MSC. 81.(70), part 2 as amended.

Various components transferring the load ("loose gear") such as shackles, chains, links, blocks etc. shall comply with recognised standard or code and shall be delivered with manufacturer's certificate, confirming a safety factor minimum 6 compared to the sustained load (LSA Code Ch. 6.1.1.6).

Type Examination documentation

Basis for approval:

Drawings (as applicable)	2010-06-23
Updated drawings as specified in DNV Approval letter	2012-02-09 /2013-04-30
Additional drawings as specified in below drawing list	2014-09-09/10
Prototype test report witnessed by DNV	2008-07-02 / 2011-10-21 / 2012-02-07 /2014-09-26/ 2015-02-09
Water tight test report	2013-03-13

Job Id: **344.1-001680-46**
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Fire test report	2008-11-06
Material test report	2008-04-02

Drawing list:

Drawingnr /rev /title	
VG4.5 DRS-02, Rev. 02, Operation and maintenance manual	2017-02-15
VG4.5 DRS-07, Rev. 02, Lifting device strength calculations	2017-02-15
VG4.5 DRS-15, Rev. 02, General arrangement	2017-02-15
VG4.5 DRS-16, Rev. 0, Seating Plan	2013-09-03
VG4.5 DRS-17, Rev. 02, Lifting device arrangement	2017-02-15

Tests carried out

Tests are documented in accordance with recommendation on testing of Lifesaving Appliances, IMO Res. MSC. 81.(70) part 1, as amended by IMO Res. MSC. 226(82) & IMO Res. MSC. 274(85), IMO Res. MSC. 323(89), IMO Res. MSC. 321(89) and IMO MSC./Circ. 1006.

Marking of product

The product is to be indelibly marked with name and address of manufacturer, boat model and serial number, month and year of manufacturer, number of persons approved for and operational restrictions, if any, according to LSA code item 4.4.1.2 and the mark of conformity (see page 1).

List of rescue boat equipment to be posted in the boat.