

EC-TYPE EXAMINATION CERTIFICATE (MODULE B)

Application of: Directive 2014/90/EU of 23 July 2014 on marine equipment (MED). This Certificate is issued by DNV GL SE based on the notification of the Federal Maritime and Hydrographic Agency of Germany.

This is to certify:

That the Lifeboats: (b) Free-fall lifeboats

with type designation(s)
GFF9.0C / GFF9.0C-T

Issued to

Hatecke GmbH
Drochtersen, Niedersachsen, Germany

is found to comply with the requirements in the following Regulations/Standards:
Regulation **(EU) 2019/1397**,
item No. MED/1.17b. SOLAS 74 as amended, Regulation III/4, III/21, III/31, III/34 & X/3,
LSA Code, IMO MSC/Circ. 1006 & 1423, and 2000 HSC Code 8

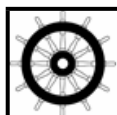
Further details of the equipment and conditions for certification are given overleaf.

This Certificate is valid until **2025-02-03**.

Issued at **Hamburg** on **2020-02-04**

DNV GL local station:
Hamburg

Approval Engineer:
Michael Oberländer



Notified Body
No.: **0098**

for **DNV GL SE**

Gerhard Aulbert
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 SE 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 This certificate remains valid unless suspended, withdrawn, recalled or cancelled.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.

LEGAL DISCLAIMER: Unless otherwise stated in the applicable contract with the holder of this document, or following from mandatory law, the liability of DNV GL AS, its parent companies and subsidiaries as well as their officers, directors and employees ("DNV GL") arising from or in connection with the services rendered for the purpose of the issuance of this document or reliance thereon, whether in contract or in tort (including negligence), shall be limited to direct losses and under any circumstance be limited to 300,000 USD.



Job Id: **344.1-010047-1**
Certificate No: **MEDB0000653**

Product description

A totally enclosed GRP free-fall lifeboat for 46 persons, available as a dry-cargo version GFF9.0C and a tanker version GFF9.0C-T with a self-contained air support system and special fire-protection (water-spray system).

Materials:

Material	Type	Manufacturer
Polyester resin	POLYTE 516 Series with variants	Reichhold AS
Fire retardant polyester resin	DION FR 820 series containing ATH	Reichhold AS
Glass Fiber (Chopped Strand Mat)	E-Glass Chopped Strand M; EMC-Series (20-900 g/m ²)	Changsu Dongyu Insulated Compound Materials Co., Ltd.
Glass Fiber (Combined woven rovings)	Woven Rovings (270-1800 g/m ²) with or without CSM (50-600 g/m ²)	Ahlstrom Glasfibre Plant OY, Mikkeli Plant
Fire retardant gelcoat	Norpol SVG X2 & Norpol SVG X3	Reichhold AS
Buoyancy Foam	LAMOLTAN-Polyurethane-Rigid-Foam-System NG55-40-5	Lackfa Isolierstoff GmbH & Co. KG

Length: 9.07 m
Breadth: 2.84 m
Depth: 3.30 m
Weight of boat, fully equipped: 4450 kg / 4840 kg (cargo / tanker version)
Weight of boat, fully manned (82.5 kg/person): 8345 kg / 8635 kg (cargo / tanker version)

Hook manufacturer and type: Hatecke GFF-R10 (MEDB00001HY)
Hook SWL: 5912 kg (58 kN)

Hull material: GRP

Propulsion system: Inboard engine
Engine Manufacturer and type: Buhk A/S, DV29RME 21.3 kW
or DV36RME 26.5 kW (MEDB00003FK)

Bollard pull: 3.4 kN

Application/Limitation

Approved engine power: 21.3 kW / 26.5 kW

Maximum number of persons (82.5 kg/person): 46

Maximum load of persons (82.5 kg/person): 3795 kg

Maximum free-fall certification height: 18.0 m

Minimum launching ramp length: 9.755 m

Launching ramp angle: 35°

Heel angle: 20°

- Unless the free-fall lifeboat lashing can be released from inside it shall be arranged to preclude boarding until it is removed.

- For free-fall lifeboats inflatable lifejackets are recommended.
- Lifeboat 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 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).
- Production and installation testing shall be carried out according to IMO Res. MSC.81(70), Part 2.

Type Examination documentation

Basis for approval:

Technical documentation as listed in drawing list LIS-GFF90C-0 Rev.1	2020-02-04
Manual for operation, maintenance and training (acc. MSC.1/Circ.1205, 1206) MAN-GFF-C-0-Manual Rev.3	2017-12-20
Acceleration test report for GFF9.0 STR-98-03	1997-12-15
Fire testing of lifeboat laminate acc. to IMO MSC/Circ. 1006, SINTEF, Trondheim, Norway	2010-11-08
Material Specification (GRP) for boat type GFF9.0C & GFF9.0C-T	2019-09-25

Prototype test report numbers:

Report. No.	Dated
PCT-GFF9,0M-1998-01	1998-11-20
PCT-GFF-T9,0-2006-01	2006-09-29
PCT-GFF9,0C-2011-01	2011-02-25
STB-1529-1987	1987-05-12

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) and IMO MSC/Circ.1006.

Marking of product

The product is to be indelibly marked with name and address of manufacture, 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 lifeboat equipment to be posted in the boat.