DNV·GL

Certificate No:
**MEDB000078G**

# 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 Open reversible liferaft**

with type designation(s)
**HYF-K25, HYF-K50, HYF-K65, HYF-K100**
**(Trade names: HYF, HUAYANG, LIFESAVER, OCEAN SAFETY & POLARIS)**

Issued to
**Yantai Huayang Lifesaving Equipment Manufacturing Co., Ltd.**
**Yantai, 120, China**

is found to comply with the requirements in the following Regulations/Standards:
Regulation **(EU) 2020/1170,**
**item No. MED/1.39. SOLAS 74 as amended, Regulation III/4 & X/3, LSA Code and 2000 HSC Code 8, IMO MSC.1/Circ.1328.**

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

This Certificate is valid until **2026-01-21**.

Issued at **Hamburg** on **2021-01-22**

DNV GL local station:
**Qingdao NB & CMC**

Approval Engineer:
**Peter Zell**

Notified Body
No.: **0098**

for **DNV GL SE**

**Christine Mydlak-Roeder**
**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 This certificate remains valid unless suspended, withdrawn, recalled or cancelled.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.



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## Product description

Inflatable liferafts, open reversible, with the following type designations:
HYF-K25, HYF-K50, HYF-K65, HYF-K100 (HSC Pack)
Trade names: "HYF", "HUAYANG", "LIFESAVER", "OCEAN SAFETY" and "POLARIS".

All these liferaft designs are complying with IMO Res. MSC.48(66)-(LSA Code) Ch. I and IV, as amended by IMO Res. MSC.218(82) and IMO Res. MSC.293(87).

## Application/Limitation

| Type | Persons (each 82.5 kg) | Weight [kg] HSC Pack | Required bollard pull [kN] | | Max. Stowage Height [m] |
|---|---|---|---|---|---|
| | | | 2 kn | 3 kn | |
| HYF-K25 | 25 | 93 | 2.45 | 2.80 | 18 |
| HYF-K50 | 50 | 161 | 3.00 | 3.60 | 18 |
| HYF-K65 | 65 | 183 | 3.80 | 4.25 | 18 |
| HYF-K100 | 100 | 305 | 4.30 | 4.85 | 18 |

- The liferaft shall be packed with an HSC emergency pack.
- Gas cylinders shall be of an approved type.
- Components in the gas inflation system should be approved according to ISO 15738:2002.
- The liferaft is intended to be installed with external weak link and a hydrostatic release unit. Float free arrangement to be checked upon installation on board.
- Production tests are to be conducted in accordance with IMO Res. MSC.81(70), Part 2 and recorded by the manufacturer in compliance with the approved Production Quality Assurance System for Module D of the Marine Equipment Directive 2014/90/EU as amended.
- The liferafts are to be serviced annually, provided where in any case this in impracticable, the administration may extend this to a period to 17 months. They shall be serviced at approved service stations which are authorized by the manufacturer.

The type "HYF-K100" has a mass of more than 185 kg and is not suitable for side-to-side transfer and have to be stowed for launching directly from the stowed position under unfavourable conditions of trim and list, according to SOLAS Reg. III/16.1.2.

## Type Examination documentation

This certificate is replacing the previous MED B certificate 14446-15 HH, issued by DNVGL.

Prototype test reports, witnessed by GL:
- HYF-K25, dated 2013-10-06,
- HYF-K50, dated 2013-10-06,
- HYF-K65, dated 2013-10-06,
- HYF-K100, dated 2013-10-06

Supplementary prototype test reports, witnessed by GL:
- HYF-K25, dated 2013-04-08 ~ 26,
- HYF-K50, dated 2013-04-08 ~ 27,
- HYF-K65, dated 2013-04-08 ~ 11,
- HYF-K100, dated 2013-04-08 ~ 11

Prototype test reports (Submergence test), witnessed by DNV GL:
- HYF-K25, dated 2015-12-23,
- HYF-K50, dated 2015-12-23,
- HYF-K65, dated 2015-12-23,
- HYF-K100, dated 2015-12-23

Drawings issued by Manufacturer Yantai Huayang Lifesaving Equipment Manufacturing Co., Ltd. and are all dated 2013-01-10:
- HYF-K25/K50/K65/K100-00 Open Reversible Inflatable liferaft General Drawings,
- HYF-K25/K50/K65/K100-01 Open Reversible Inflatable liferaft Structural Drawings,
- HYQ-K00/K01/K02/K03 Open Reversible Inflatable liferaft Inflation system schematic,
- HYF-K25/K50/K65/K100-3-1 Upper cover of storage container,
- HYF-K25/K50/K65/K100-3-2 Lower cover of storage container,
- HYQT-F1 Structure drawing of HYQT-F1 buoyance tube intake valve,
- HYQT-F2 Safety valve structure drawing,
- HYQT-F4 Structure drawing of HYQT-F4 liferaft platform one-way air valve,
- HYQT-F5 Structure drawing of HYQT-F5 intake and exhaust valve,
- HYQT-F6 Liferaft platform exhaust valve,
- QJF-PF-III Structure drawing of QJF-PF-III type cylinder release valve.

Material test report issued by Testing Center of Shanghai Institute of Rubber Products:
- Fabric of liferaft test report No. W(X)2011-793, dated 2011-06-03,
- Inspection Report No.W(X)2012-785, dated 2012-05-16 ~ 2012-08-31.

## Tests carried out

Prototype tests and test reports in accordance with the Recommendation on Testing of Life-Saving Appliances, IMO Res. MSC 81(70) part 1, including IMO Res. MSC 226(82), IMO Res. MSC 295(87) and MSC. 323(89), have been witnessed and evaluated and found to be complying.

The following tests of IMO Res. MSC.81(70), part 1 have been omitted in accordance with 2000 HSC Code Annex 11 paragraph 7:
- 5.5 Mooring out test
- 5.8 Closing arrangement test
- 5.12 Canopy closure test
- 5.16 Lifting components strength test
- 5.17.2 Righting test
- 5.17.10 Davit-launched inflatable liferafts – strength test
- 5.17.11 Cold overload test
- 5.17.12 Lowering abrasion test
- 5.18 Self-righting test (self-righting liferafts only)
- 5.20 Wind velocity test

In IMO Res. MSC.81(70), part 1 tests 5.17.3 and 5.17.5 the temperature of -30°C has been substituted with -15°C, in accordance with 2000 HSC Code Annex 11 paragraph 7.

## Marking of product