

EC-TYPE EXAMINATION CERTIFICATE (MODULE B)

Certificate no.:
MEDB000097N

Application of: Directive 2014/90/EU of 23 July 2014 on marine equipment (MED). This Certificate is issued by DNV 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)
FZK-6/10/25/30/50/65/100

issued to

Shanghai Fang Zhan fire Technology Co., Ltd.
Shanghai, China

is found to comply with the requirements in the following Regulations/Standards:

Regulation (EU) 2024/1975,

item No. MED/1.39. SOLAS 74 as amended, Regulation III/4 & X/3, LSA Code, 2000 HSC Code 8 and IMO Res. MSC.481(102)

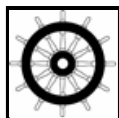
Further details of the equipment and conditions for certification are given overleaf.

This Certificate is valid until **2028-11-16**.

Issued at **Hamburg** on **2025-01-02**

DNV local unit:
Shanghai

Approval Engineer:
Michael Oberländer



Notified Body
No.: **0098**

for **DNV SE**

Mydlak-Röder, Christine
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 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 This certificate remains valid unless suspended, withdrawn, recalled or cancelled.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 AS, its parent companies and their subsidiaries as well as their officers, directors and employees ("DNV") 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.

Product description

FZK-6, FZK-10, FZK-25, FZK-30, FZK-50, FZK-65, FZK-100 are open reversible liferafts with HSC Pack. These liferaft designs are complying with the LSA Code as amended, including MSC.293(87). This liferaft type can be packed optionally in a cylindrical or flat type container.

Application/Limitation

Max. Stowage Height: 18 m

Type	Persons (82.5 kg each)	Weight [kg] with cylindrical container HSC Pack	Required bollard pull [kN]	
			(2 kn)	(3kn)
FZK-6*	6	60	0,50	0,68
FZK-10*	10	66	0,55	0,68
FZK-25*	25	98	0,85	0,96
FZK-30*	30	116	0,93	1,05
FZK-50*	50	168	1,10	1,24
FZK-65*	65	185	1,25	1,40
FZK-100	100	276	1,75	2,05

*FZK-6/10/25/30/50/65 can be optionally packed with a flat container (SP-1-015, SP-1-016, SP-1-017 or SP-1-044)

- The liferafts shall be packed with HSC Pack.
- Gas cylinders shall be of an approved type.
- Components of the gas inflation system should be approved according to ISO 15738:2019.
- The liferafts are intended to be installed with external weak link and a hydrostatic release unit.
- The liferafts are to be serviced at intervals not exceeding 12 months, provided where in any case this is impracticable, the administration may extend this period by one month, at approved service stations which are authorized by the manufacturer.
- 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/EC.

Type Examination documentation

Drawings:

- FZK-6-00, FZK-10-00, FZK-25-00, FZK-30-00, FZK-50-00, FZK-65-00, FZK-100-00
- Operations Manual FZ-JSF-2403 dated 2024-11-15

Liferaft design is identical to the products of Shanghai Youlong Rubber certified with MEDB00001SE Rev.3.

Tests carried out

Prototype testing has been carried out in accordance with IMO Res. MSC.97(73) Annex 11 item 7, MSC.295(87) and MSC.323(89) and have been witnessed and evaluated and found to be in compliance.

Following tests of MSC.81(70), part 1 have been omitted in accordance with HSC Code 2000

Annex 11,7.: 5.8 regarding closing arrangements, 5.12, 5.16, 5.17.2, 5.17.10, 5.17.11, 5.17.12, 5.18 and 5.20.

The drop test in accordance with 5.1.2 was carried out for a height of 18m on 2016-09-13 and witnessed by DNV GL Shanghai.

Test reports :

- Germanischer Lloyd Shanghai of 2003-12-18, 97312 SHA, 10993 SHA 09 and 11680 SHA 09, YL/QI/10008-TR-03, GL SHA dated 2011-07-11(11-096415) and GL SHA of 2013-11-13.
- Towing test in accordance with MSC.81(70) Part1 Para 5.4 was carried out 2019-02-15 and witnessed by DNV GL
- Drop test (MSC.1/Circ.1630) for flat container option for KHK-6/10/25/30/50/65 dated 2023-05-30 and witnessed by DNV (report: YL-TR-DNV-KHK-Box-2023)
- Evaluation and test report dated 2024-07-30 until 2024-08-16 by DNV Shanghai



Job ID: **344.1-013730-1**
Certificate no.: **MEDB000097N**

Material tests:

- Shanghai Monitoring and Inspection Center for Rubber Products Quality No. W(X)2012-230
- Wuhan Testing Center of Marine Life-Saving Appliances, No. 2014048

Marking of product

The product is to be indelibly marked with name and address of manufacturer, type designation, dimensions, date of manufacture and the MED Mark of Conformity (see page 1). The marking shall be according to HSC Code 2000 (IMO Res. MSC.97(73)) Annex 11 item 4 and 5.