

EC-TYPE EXAMINATION CERTIFICATE (MODULE B)

Certificate No:
MEDB00001JC
Revision No:
7

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 AS under the authority of the Government of Norway.

This is to certify:

That the Inflatable liferafts

with type designation(s)

12 DKF+, 12 DKF+E, 12 DKF+S30
16 DKF+, 16 DKF+E, 16 DKF+S30
20 DKF+, 20 DKF+E, 20 DKF+S30, 20 DKF+GN, 20 DKF+GN S30
25 DKF+, 25 DKF+E, 25 DKF+S30
35 DKF+, 35 DKF+E, 35 DKF+S30

Issued to

Viking Life-Saving Equipment A/S **Esbjerg V, Syddanmark, Denmark**

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

Regulation (EU) 2021/1158,

item No. MED/1.12. SOLAS 74 as amended, Regulation III/4, III/13, III/21, III/26, III/31, III/34 & X/3, LSA Code, IMO MSC/Circ.811, IMO MSC.1/Circ.1328 and 2000 HSC Code 8

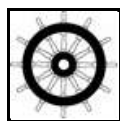
Further details of the equipment and conditions for certification are given overleaf.

This Certificate is valid until **2026-09-26**.

Issued at **Høvik** on **2021-09-27**

DNV local station:
Denmark CMC

Approval Engineer:
Tessa Biever



Notified Body
No.: **0575**

for **DNV AS**

Sverre Olav Bergli
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 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 This certificate remains valid unless suspended, withdrawn, recalled or cancelled.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.

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

Davit launched inflatable liferaft with the following type designations:

- 12 DKF+, 12 DKF+E, 12 DKF+S30
- 16 DKF+, 16 DKF+E, 16 DKF+S30
- 20 DKF+, 20 DKF+E, 20 DKF+S30, 20 DKF+GN, 20 DKF+GN S30
- 25 DKF+, 25 DKF+E, 25 DKF+S30
- 35 DKF+, 35 DKF+E, 35 DKF+S30

Liferaft designs with type designation including S30 comply also with MSC.1/Circ. 1328 (extended service intervals).

Application/Limitation

The liferafts are available with features added on to the existing type approved base raft.

S30: added to type designation e.g., 12DKF+ S30. Liferaft tested according to MSC.1/Circ. 1328 and packed in a sealed packing bag to allow for extended service intervals up to 30 months. The raft is subject to an annual onboard inspection.

E: added to type designation e.g., 12 DKF+ E. Environmental packed liferaft prepared for extended service intervals.

GN: added to type designation e.g., 12 DKF+ GN. SOLAS A emergency pack with desalinator partly replacing the water rations according to LSA Code § 4.1.5.1.19.

Notes to below form Capacity and installation heights: Container type designation is given as 16-xxxx, and emergency packs SOLAS A or B is given as "A" and "B". Listed liferaft types covers types S30 and E variants. Each size listed covers variations with the same capacity.

| Liferaft type | Towing strain 2 knots | Towing strain 3 knots | 25 m | 36 m | 45 m | 60 m | Max. capacity |
|-----------------------------------|--------------------------|--------------------------|----------|--------------------------------------|---------|--------|---------------|
| 12 DKF+ 12 DKF+S30 12 DKF+E | 0.5 kN | 1.1 kN | | A 0114 B 0114 A 690X B 690X | | | 12 persons |
| 16 DKF+ 16 DKF+S30 16 DKF+E | 0.5 kN | 1.2 kN | | B 8000 | | A 8000 | 16 persons |
| 20 DKF+ 20 DKF+S30 20 DKF+E | 0.5 kN | 1.2 kN | | B 8000 | | A 8000 | 20 persons |
| 20 DKF+GN 20 DKF+GN S30 | 0.5 kN | 1.2 kN | A 5500K* | | A 8100* | | 20 persons |
| 25 DKF+ 25 DKF+S30 25 DKF+E | 0.5 kN | 1.2 kN | | B 8100 | | A 8100 | 25 persons |
| 35 DKF+ 35 DKF+S30 35 DKF+E | 1.05 kN | 1.8 kN | | B 8200 | | A 8400 | 35 persons |

*Equipment based on SOLAS A

The liferaft shall be packed with a SOLAS A PACK or SOLAS B PACK.

Gas cylinders shall be of an approved type.

Components in the gas inflation system should be approved according to ISO 15738:2019.

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.

The design assessment is based on International Life-Saving Appliances (LSA) Code, IMO Res. MSC 48(66) as amended by IMO Res. MSC.218(82) and IMO Res. MSC.293(87).

Production testing shall be carried out according to IMO Res. MSC.81(70) Part 2 as amended.

With reference to 'Test carried out' the liferafts including type designation S30 are approved for extended service intervals up to 30 months in accordance with SOLAS Ch. III, Regulation 20.8.3 on the condition that:

1. Such extended service intervals has been approved by the ships flag administration.
2. The liferafts are checked onboard in accordance with SOLAS Ch. III Regulation 20.8.3.2 at intervals in accordance with SOLAS Ch. III Regulation 20.8.1.1, according to procedures issued by the manufacturer.
3. The liferafts shall be serviced at approved servicing stations in accordance with the recommendations in IMO Res. A.761(18) at intervals not exceeding 30 months.

Type approval documentation

This certificate replaces MEDB00001JC Rev.5 (rev.6 does not exist).

Drawings and parts lists as listed below:

| Liferaft type | Parts list / General arrangement drawings |
|-------------------------------|---|
| 12 DKF+, 12 DKF+S30, 12 DKF+E | ENG-20096161, sheet 1-4 |
| 16 DKF+, 16 DKF+S30, 16 DKF+E | ENG-20093440, sheet 1-4 |
| 20 DKF+, 20 DKF+S30, 20 DKF+E | 43002497.000/001/002/003 |
| 20 DKF+GN, 20 DKF+GN S30 | 43001921.000/.001/002/003 |
| 25 DKF+, 25 DKF+S30, 25 DKF+E | 43002499.000/001/002/003 |
| 35 DKF+, 35 DKF+S30, 35 DKF+E | ENG-20088529, sheet 1-5 |

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), MSC 295(87) and MSC.323(89), have been witnessed and evaluated and found to be in compliance.
- Tests and reports in accordance with test requirements listed in MSC.1/Circ 1328 item 5.4.2 -5.4.10 have been witnessed by DNV surveyor and evaluated and found to be in compliance (test report item 5.4.4 dd. 2009-09-01, item 5.4.6 dd. 2009-10-29, item 5.4.7 dd. 2009-10-28, item 5.4.8- 5.4.10 dd. 2009-11-02/2009-11-04)
- Tested according to the MarED recommendation for liferaft occupancy weight increase from 75 kg to 82.5 kg: 1027-1029, 1228, 1395, 1451, 1497, 1509, 1534, 1544, 1554, 1581-1587, 1589, 1591-1593, 1595-1603, 1605-1617, 1620, 1622, 1627-1642, 1655-1657 and 1682-1685
- Test reports supporting the following design changes:

| Design change no. | date | Subject | Test reports |
|-------------------|------------|--|---|
| 10314 | 2013-03-21 | 35 DKF+ Leafield Servo System to be used on VIKING liferafts | 1858, 1859, 1895, 1897 |
| 10315 | 2013-03-21 | Change to Daniamant RL6 combi light | 1881 ~1889 |
| 10316 | 2013-04-08 | Plastic strapping around container, replacing bursting bands | 1887, 1888, 1901, 1902, 1903, 1904 |
| 10317 | 2013-04-05 | S30 aluminium pouch variants | 1905~1910 |
| 10318 | 2013-04-15 | Eye link with rubber socket | 1916, 1917 |
| 10322 | 2013-09-12 | Alternative shackle for lifting arrangement | Strength report no. LX90433 dated 2009-11-02 from Shanghai Jinyi Materials test technology Co., Ltd, China Salt spray test dated 2012-04-30 from Danish technological Institute (DTI), Denmark |
| 10326 | 2014-03-24 | New canopy material (Rivertex 4000 PES PU coated) | 1899, 1912, 1803, 1993, 1870, 2015 Material Technical Report 1809 A dated 2012-10-25 from SATRA Technology Centre, UK |
| 10333 | 2013-12-10 | Liferaft painter system arrangement | 1454 |
| 10334 | 2013-11-28 | Entrance design for 4-25 DK+ and 12-25 DKF+ | 2033, 2034, 2016 |
| 10335 | 2014-12-11 | 35 DK+ and 35 DKF+ from 3 to 2 entrances | 2120, 2078 |

| | | | |
|-------|------------|--|---|
| 10342 | 2014-09-19 | Change to new inflation system: Leaffield GIST For 35 DK+ and 35 DKF+ | 1428, 1429, 1432, 1433, 2145-2149 |
| 10345 | 2014-12-01 | Replacing painter line for liferafts > 25 persons | 2168 |
| 10346 | 2015-02-09 | Introduction of triple approved pressure cylinders. TPED/DOT/T | |
| 10352 | 2015-06-02 | 6-35 DK+ and 12-35 DKF+ protection for operating head | 2170 ~ 2173 |
| 10363 | 2015-10-27 | Updates for Viking Thermal Control Box. | 2246, 1658, 1660, 1661, 1663, 1692, 1693 |
| 10364 | 2015-11-04 | Environmental packed | Extended service interval - S30 tests |
| 10385 | 2016-05-17 | Change of installation height (max. 60 m for 25 DKS and 25 DKFS) | 2413, 2414, 2415 |
| 10411 | 2017-09-27 | New material numbers for non-return valves displayed on GA drawings | |
| 10420 | 2018-05-18 | Fabric NK300C from ContiTech | 2595, 2596, 2667, 2733, 2734, 2673, 2674, 2688, 2682, 2683, 2767, 2768, 2675, 2676, 2677, 2678, 2668, 2669, 2686, 2687, 2692, 2685, 2693, 2684, 2752, 2689, 2690, 2691 Additional buoyancy material (NK300C) supported by the following test reports: Prototype test in accordance with IMO Res. MSC.81(70), Part 1: <ul style="list-style-type: none"> - Weft distortion dated 2017-12-18, - Test report no. 2747: Coating Adhesion dated 2018-04-13 - Test report no. 2749: Oil resistance dated 2018-04-13 - Test report no. 2750: Blocking resistance 2018-04-13 - Laboratory test report no 1530100000 rev. 13 dated 2018-03-05 for NK300C by Contitech Laboratory Norheim, Germany witnessed by DNVGL surveyor - DNV GL verification statement N141GV0D dated 2018-03-15 |
| 10422 | 2018-05-25 | Signal Lamp - in box with spare bulb and battery | 2456, 2458, 2464, 2466 |
| 10430 | 2018-09-27 | Adding container type 016-690X (alternative for 016-0114) - max. 36m | - 2787, 2788 (drop tests) - Drawing No. 16012707 Rev.00 – Container 6901 for 12 DKF S12/S30 |
| 10434 | 2018-10-08 | Alternative hardener Desmodur RFE for 4-35 person liferafts | 2834 (3 x overpressure test), 2828, 2829, 2830, 2831, 2833 (seam strength tests) |
| 10437 | 2018-12-10 | Alternative hardener 'Beyond' | 2905, 2914, 2915 (3 x overpressure test) 2880, 2881, 2882, 2883, 2884, 2885 (seam strength test), 2920 (strength test- davit launched liferaft) |
| 10438 | 2019-04-23 | Alternative hardener 'TM-93' | 2868, 2869, 2870, 2871, 2872, 2873, 2876, 2877, 2878, 2988, 2989, 2990, 3017, 3019 |
| 10443 | 2019-04-23 | Improved painter system for liferafts with capacity of 26 and more | 3088, 3087, 2952, 2953 |
| 10451 | 2019-04-23 | Painter system with alternative hardener 'TM-93' and 'Beyond' | 3085, 3086 |
| 10496 | 2021-09-01 | Capacity update to maximum number of persons | - |

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 first page). The marking shall comply with the LSA Code Ch. 4.2.6 and 4.2.7.