



TYPE EXAMINATION CERTIFICATE (MODULE B)

Certificate No:
MERB00001JE
Revision No:
0

This Certificate is issued by DNV UK Limited based on authorisation of the Maritime & Coast Guard Agency (MCA) as an UK Approved Body to undertake conformity assessments on marine equipment in accordance with the requirements of the Merchant Shipping (Marine Equipment) Regulations 2016 as amended.

This is to certify:

That the Inflatable liferafts

with type designation(s)

6 DK+, 6 DKN, 8 DK+, 10 DK+, 10 DKN, 12 DK+, 16 DK+, 20 DK+, 25 DK+, 35 DK+, 6 DK+S30, 6 DKN S30, 8 DK+S30, 10 DK+S30, 10 DKN S30, 12 DK+S30, 16 DK+S30, 20 DK+S30, 25 DK+S30, 35 DK+S30, 6 DK+E, 8 DK+E, 10 DK+E, 12 DK+E, 16 DK+E, 20 DK+E, 25 DK+E, 35 DK+E

Issued to

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

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

Regulation **MSN 1874 Amendment 7,**

item No. UK/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 **2026-10-17**.

Issued at **London** on **2023-05-16**

DNV local unit:
Denmark CMC



for **DNV UK Ltd.**

Approval Engineer:
Helge Bjørnarå

Approved Body No.: **0097**

.....
Frederik Tore Elter
MER Service Responsible



UK Approved Body Authorised
by the MCA

This certificate will not be valid if the manufacturer makes any changes or modifications to the approved type of equipment, which have not been notified to, and agreed with the approved body named on this certificate.

During the period of validity of this certificate the applicable regulations (international conventions and the relevant resolutions and circulars of the IMO) and testing standards may change, therefore the product conformity may need to be re-assessed by the Approved 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-control phase module (D, E or F) of Schedule 2 of the Merchant Shipping (Marine Equipment) Regulations 2016, as amended is fully complied with and controlled by a written inspection agreement with an approved body. In case limitations of use apply, these should be indicated in the Annex.

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

Throw overboard inflatable liferaft with the following type designations:

- 6 DK+, 6 DK+S30, 6 DK+E, 6 DKN, 6 DKN S30
- 8 DK+, 8 DK+S30, 8 DK+E
- 10 DK+, 10 DK+S30, 10 DK+E, 10 DKN, 10 DKN S30
- 12 DK+, 12 DK+S30, 12 DK+E
- 16 DK+, 16 DK+S30, 16 DK+E
- 20 DK+, 20 DK+S30, 20 DK+E
- 25 DK+, 25 DK+S30, 25 DK+E
- 35 DK+, 35 DK+S30, 35 DK+E

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., 6 DK+ 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.

N added to type denomination e.g., 6 DKN. The raft is equipped with an improved “stairway” like boarding arrangement.

E: added to type designation e.g., 6 DK+ E. Environmental packed liferaft prepared for extended service intervals

Notes to below with respect to 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 | Max. permitted height of stowage above waterline for container type [m] | | | | | | | Max. capacity [persons] | Weight of liferaft ± 2% [kg] |
|--------------------------------|--|--------|------------------|--------|--------|----|------------------|-------------------------|---|
| | 18 | 25 | 36 | 37 | 50 | 60 | 73 | | |
| 6 DK+ 6 DK+S30 6 DK+E | A 0011 A 0039 A 0040 A 9041 B 0009 B 0011 B 0040 B 9040 B 9041 | | B 5000 | | | | A 5000 | | 6 78 (SOLAS A-pack) cont. 00XX 52 (SOLAS B-pack) cont. 00XX 70 (SOLAS A-pack) cont. 50XX 59 (SOLAS B-pack) cont. 50XX 74 (SOLAS A-pack) cont. 90XX 56 (SOLAS B-pack) cont. 90XX |
| 6 DKN 6 DKN S30 | B 0022 | | | | | | | | 6 80 (SOLAS B-pack) |
| 8 DK+ 8 DK+S30 8 DK+E | A 0039 A 9042 B 0040 B 9042 | B 5000 | A 5000 | | | | | | 8 90 (SOLAS A-pack) 65 (SOLAS B-pack) |
| 10 DK+ 10 DK+S30 10 DK+E | A 9042 B 9042 B 0040 | | A 6100 B 6100 | | | | | | 10 100 (SOLAS A-pack) 80 (SOLAS B-pack) |
| 10 DKN 10 DKN S30 | B 0026 B 0027 | | | | | | | | 10 85 (SOLAS B-pack) |
| 12 DK+ 12 DK+S30 12 DK+E | A 9042 B 9042 | B 6100 | B 6100 | | | | A 6100 B 0021 | | 12 110 (SOLAS A-pack) 95 (SOLAS B-pack) |
| 16 DK+ 16 DK+S30 16 DK+E | A 9044 B 9042 | | B 5100 | | | | A 5100 | | 16 130 (SOLAS A-pack) 100 (SOLAS B-pack) |
| 20 DK+ 20 DK+S30 20 DK+E | A 9044 B 9042 | | B 6000 | | | | A 6000 | | 20 153 (SOLAS A-pack) 110 (SOLAS B-pack) |
| 25 DK+ 25 DK+S30 25 DK+E | A 9045 B 9045 | B 5100 | B 6000 | | | | A 5200 B 6000 | | 25 176 (SOLAS A-pack) 125 (SOLAS B-pack) |
| 35 DK+ 35 DK+S30 35 DK+E | | | | A 5700 | B 5400 | | A 5700 | | 35 281 (SOLAS A-pack) 204 (SOLAS B-pack) |

Towing strain:

| Liferaft type | Towing strain 2 knots [kN] | Towing strain 3 knots [kN] |
|----------------------------|-------------------------------|-------------------------------|
| 6 DK+, 6 DK+S30, 6 DK+E | 0.45 | 0.9 |
| 6 DKN, 6 DKN S30 | 0.45 | 0.9 |
| 8 DK+, 8 DK+S30, 8 DK+E | 0.45 | 0.9 |
| 10 DK+, 10 DK+S30, 10 DK+E | 0.50 | 1.1 |
| 10 DKN, 10 DKN S30 | 0.50 | 1.1 |
| 12 DK+, 12 DK+S30, 12 DK+E | 0.50 | 1.1 |
| 16 DK+, 16 DK+S30, 16 DK+E | 0.50 | 1.2 |
| 20 DK+, 20 DK+S30, 20 DK+E | 0.50 | 1.2 |
| 25 DK+, 25 DK+S30, 25 DK+E | 0.50 | 1.2 |
| 35 DK+, 35 DK+S30, 35 DK+E | 1.05 | 1.8 |

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 ref. to 'test carried out' the liferafts with type designation including 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:

- Such extended service intervals have been approved by the ships flag administration.
- 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.
- 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 Examination documentation

Drawings and parts as listed below:

| Liferaft type | Parts list no.: | Drawing no. |
|----------------------------|-----------------|----------------------|
| 6 DK+, 6 DK+S30, 6 DK+E | 43002489.000 | 43002489.001/002 |
| 6 DKN, 6 DKN S30 | 43000336.000 | 43000336.001/002 |
| 8 DK+, 8 DK+S30, 8 DK+E | 43002490.000 | 43002490.001/002 |
| 10 DK+, 10 DK+S30, 10 DK+E | 43002491.000 | 43002491.001/002 |
| 10 DKN, 10 DKN S30 | 43000335.000 | 43000335.001/002 |
| 12 DK+, 12 DK+S30, 12 DK+E | 43002492.000 | 43002492.001/002/003 |
| 16 DK+, 16 DK+S30, 16 DK+E | 43002494.000 | 43002494.001/002/003 |
| 20 DK+, 20 DK+S30, 20 DK+E | 43002496.000 | 43002496.001/002/003 |
| 25 DK+, 25 DK+S30, 25 DK+E | 43002498.000 | 43002498.001/002/003 |
| 35 DK+, 35 DK+S30, 35 DK+E | 43002501.000 | 43002501.001/002/003 |

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 1683-1685.

- Test reports and drawings supporting design changes:

| Design change no. | Date | Subject | Test reports witnessed by DNV/drawings |
|-------------------|------------|---|---|
| 10301 | 2012-03-09 | 25 DK+ packed in container 016-5100, SOLAS B | 1745-1746 |
| 10304 | 2012-10-05 | | 1780, 1781, 1792, 1793, 1794 |
| 10314 | 2013-03-21 | 35 DKF+ Leaffield Serrvo 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 | Eyelink with rubber socket | 1916, 1917 |
| 10321 | 2013-09-09 | Gas cylinder for 12 DK+ liferafts | |
| 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 |
| 10336 | 2014-02-27 | 6 DK+ with SOLAS A-pack to be packed in container type 016-0040 | 963, 964, 468 |
| 10337 | 2014-03-02 | 20DK+ and 20 DK+S30 packed in container type 016-9044 | 2088, 2089 |
| 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 painterline 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 |
| 10411 | 2017-09-27 | New material numbers for non-return valves displayed on GA drawings | |
| 10412 | 2017-11-20 | Stowage height 60 m: 35 DK+ /35 DK+S30 / 35DK+E – A pack | 2658, 2659 |
| 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. 153010000 rev.13 dated 2018-03-05 for NK300C by Contitech Laboratory Northheim, 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 |
| 10434 | 2018-10-08 | Alternative hardener Desmodur RFE | 2834 (3 x over pressure test) 2828, 2829, 2830, 2831, 2833 (seam strength tests) |
| 10437 | 2018-12-10 | Alternative hardener 'Beyond' | 2905, 2914, 2915 (3x over pressure test), 2880, 2881, 2882, 2883, 2884, 2885 (seam strength tests) |
| 10443 | 2019-04-23 | Improved painter system for liferafts with capacity of 26 and more | 3088, 3087, 2952, 2953 |
| 10438 | 2019-04-23 | Alternative hardener 'TM-93' | 2868, 2869, 2870, 2871, 2872, 2873, 2876, 2877, 2878, 2988, 2989, 2990, 3017, 3019 |
| 10451 | 2019-04-23 | Painter system with alternative hardener 'TM-93' and 'Beyond' | 3085, 3086 |
| 10466 | 2020-05-29 | 20 DK+ packed in low profile container | Test report Nos.: - 3365, 3366, 3394, 3395, 3369, 3372 Drawing No.: - 3001837 (SAP no. 42000521) |
| 10504 | 2021-09-13 | 25 DK+ in container type '6000' – 60 m drop height | Test report Nos.: - 3582, 3583, 3475, 3476, 3454, 3449 Drawing No.: - ENG-20082734 |
| 10512 | 2022-11-11 | Black rubber fabric RBND6 BCR | Test report Nos.: - 4035, 4036, 4058, 4059, 4060, 4061, 4062, 4063, 4065, 4066, 4075, 4076, 4079, 4080, 4081, 4082, 4085, 4086, 4087, 4096, 4097, 4098, 4101, 4102, 4103, 4104 Test report TX772622/2022/PL dated 29 September 2022 from SGS, Taoyuan City, Taiwan |
| 10516 | 2022-11-04 | Extended inner tube, long | Test report Nos.: - 4059, 4087, 4066, 4101, 4081 |

Marking of product

The product is to be indelibly marked with name and address of manufacturer, type designation, dimensions, date of manufacture and UK Mark of Conformity (see first page).

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