

# EC-TYPE EXAMINATION CERTIFICATE (MODULE B)

Certificate No:  
**MEDB00001JF**  
Revision No:  
**8**

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 GL AS under the authority of the Government of Norway.

**This is to certify:****That the Automatically self-righting liferafts**

with type designation(s)

**12DKS,12DKSN,16DKSN,25DKS,25DKSN,39DKS,50DKS,50DKS+VENOC,100DKS,100DKS  
VENOC,100 DKSU,100 DKS SBS, 150DKS,150 DKSU,12DKS S30,12DKSN S30,16DKSN  
S30,25DKS S30,25DKSN S30,39DKS S30,50DKS S30,100DKS S30,150DKS S30,150 DKS  
SBS,12DKS E,25DKS E,39DKS E,50DKS E,100DKS E,150DKS E**

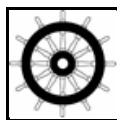
Issued to

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

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

Regulation **(EU) 2018/773,****item No. MED/1.14. SOLAS 74 as amended, Regulation III/4, III/26, III/34 & X/3, LSA Code,  
IMO MSC/Circ.809 & 811 and 2000 HSC Code 8**

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

This Certificate is valid until **2021-10-24.**Issued at **Høvik** on **2019-05-13**DNV GL local station:  
**Denmark CMC**for **DNV GL AS**Approval Engineer:  
**Tessa Bieber**Notified Body  
No.: **0575****Roald Vårheim**  
**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 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 This certificate remains valid unless suspended, withdrawn, recalled or cancelled.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.



Job Id: **344.1-003284-39**  
 Certificate No: **MEDB00001JF**  
 Revision No: **8**

## Product description

Automatic self-righting inflatable liferaft with the following type designations:

- 12 DKS, 12 DKS<sub>N</sub>, 16 DKS<sub>N</sub>, 25 DKS, 25 DKS<sub>N</sub>, 39 DKS, 50 DKS, 50 DKS+ VENOC, 100 DKS, 100 DKS VENOC, 100DKSU, 100 DKS SBS, 150 DKS, 150 DKS<sub>U</sub>, 150 DKS SBS
- 12 DKS S30, 12 DKS<sub>N</sub> S30, 16 DKS<sub>N</sub> S30, 25 DKS S30, 25 DKS<sub>N</sub> S30, 39 DKS S30, 50 DKS S30, 100 DKS S30, 150 DKS S30
- 12 DKS E, 25 DKS E, 39 DKS E, 50 DKS E, 100 DKS E, 150 DKS 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.12 DKS S30. Liferaft environmentally packed to allow for extended service intervals up to 30 months. The life raft is subject to an annual onboard inspection.

**N:** added to type designation e.g. 12 DKS<sub>N</sub>. The liferaft is equipped with an improved "stairway" like boarding arrangement.

**VENOC:** added to type designation e.g. 50 DKS VENOC: The liferaft equipped with reduced SOLAS A emergency pack: 1 liter of drinking water per person is replaced by manually powered reverse osmosis desalinator according to LSA Code §4.1.5.1.19.

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

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	18m	22m	25m	30m	33m	35m	36m	60m	Cap.
12 DKS 12 DKS S30 12 DKS E	A 9044 A 0119		A 0120						12 persons
12 DKS <sub>N</sub> 12 DKS <sub>N</sub> S30	A 9044 A 0119		A 0120						12 persons
16 DKS <sub>N</sub> 16 DKS <sub>N</sub> S30							A 5200 A 5200		16 persons
25 DKS 25 DKS S30 25 DKS E							B 0162	A 8600	25 persons
25 DKS <sub>N</sub> 25 DKS <sub>N</sub> S30	A 0162 B 0162 B 8900						A 8600		25 persons
39 DKS 39 DKS S30 39 DKS E			A 8601				A 5700 B 5400		39 persons
50 DKS 50 DKS S30 50 DKS E 50 DKS+ VENOC				A 0142 B 7500 B 5700			A 7600		51 persons
100 DKS 100 DKS S30 100 DKS E 100 DKS <sub>U</sub> 100 DKS SBS		A 0500 A 0501 A 0502 B 0530 B 0531 B 0532		A 0135 A 0185 B 8800	A 9100	A 9700			101 persons

Job Id: **344.1-003284-39**  
 Certificate No: **MEDB00001JF**  
 Revision No: **8**

Liferaft type	18m	22m	25m	30m	33m	35m	36m	60m	Cap.
100 DKS VENOC						A 9700			101 persons
150 DKS 150 DKS S30 150 DKS E 150 DKSU 150 DKS SBS	A 9200 A 9800  A 9500 A 0202				A 9100 B 9100				153 persons

Towing strain:

Liferaft type	Towing strain 2 knots	Towing strain 3 knots
12 DKS	0.8 kN	1.3 kN
12 DKS N	0.8 kN	1.3 kN
16 DKS N	0.7 kN	1.4 kN
25 DKS	0.7 kN	1.4 kN
25 DKS N	0.7 kN	1.4 kN
39 DKS	1.57 kN	2.65 kN
50 DKS	1.37 kN	2.15 kN
100 DKS	1.1 kN	2.3 kN
150 DKS	1.7 kN	3.1 kN

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 15738:2002.

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.

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.

With ref. to 'Tests 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:

- Such extended service intervals has 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 approval documentation

This certificate replaces MEDB00001JF Rev.7.

Drawings and parts lists as listed below:

Liferaft type	Parts list no.	Drawing no.

Job Id: **344.1-003284-39**  
 Certificate No: **MEDB00001JF**  
 Revision No: **8**

12 DKS, 12 DKS S30	43000435.000	43000435.001/002/003
12 DKS, 12 DKS S30	43001825.000	43001825.001/002/003
12 DKS, 12 DKS S30	43001870.000	43001870.001/002/003
12 DKS, 12 DKS S30	43002376.000	43002376.001/002/003
12 DKS, 12 DKS S30, 12 DKS E	43002448.000	43002448.001/002/003
16 DKS, 16 DKS S30	43002546.000	43002546.001/002/003
25 DKS, 25 DKS S30	43000334.000	43000334.001/002/003
25 DKS, 25 DKS S30	43000445.000	43000445.001/002/003
25 DKS Direct Boarding	43000542.000	43000542.001/002/003
25 DKS, DD-MES	43000547.000	43000547.001/002/003
25 DKS, 25 DKS S30	43001826.000	43001826.001/002/003
39 DKS, 39 DKS S30, 39 DKS E	43002375.000	43002375.001/002/003
50 DKS	43000621.000	43000621.001/002/003
50 DKS, 50 DKS S30, 50 DKS E	43002438.000	43002438.001/002/003
50 DKS	43002444.000	43002444.001/002/003
50 DKS	43002447.000	43002447.001/002/003
50 DKS	43002464.000	43002464.001/002/003
100 DKS Basic canopy no.1	42002623.000	42002623.000
100 DKS basic raft no.1	42002641.000	42002641.001/002/003
100 DKS basic raft no.2	42002693.000	42002693.001/002/003
100 DKS Basic canopy no.6	42002764.000	42002764.001/002/003
100 DKS Basic canopy no.2	42004381.000	42004381.001
100 DKS basic raft no.5	43001954.000	43001954.001/002/003
100 DKSU	43002454.000	43002454.001/002
100 DKS SBS	43002540.000	43002540.001/002/003
150 DKS, 150 DKS S30	43001922.000	43001922.001-009
150 DKS	43002482.000	43002482.001-009
150 DKSU	43002454.000	43002454.001-009
150 DKS SBS	43002488.000	43002488.000/002

### 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 (testreport item 5.4.4 dd. 2009-09-01, item 5.4.6 dated 2009-10-29, item 5.4.7 dated 2009-10-28, item 5.4.8-5.4.10 dated 2009-11-02/2009-11-04)
- Tested according to the MarED recommendation for liferaft occupancy weight increase from 75 kg to 82.5 kg: testreport nos. 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
- Prototype tests and test reports in accordance with IMO Res. MSC. 81(70) part 1 for 39 DKS witnessed by DNV surveyor: 1484, 1485, 1620, 2043, 2080,1814,1406,1583,1631, 254a-c-d-e-f, 1584, 257b-c-d, 1585, 2078, 218, 219, 1948, 1413, 2079, 256a, 2120.
- Test reports supporting the following design changes:


Design change no.	Date	Subject	Test reports
10274	2010-03-22	Change from DKS to DKS	-
10299	2012-02-14	Liferaft type 50 DKS equipped for 35 persons.	1740
10314	2013-03-21	New Inflation System, M-07-UM- GISSERVO	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	1887, 1888, 1901, 1902, 1903,

Job Id: **344.1-003284-39**  
Certificate No: **MEDB00001JF**  
Revision No: **8**

10319	2013-05-13	brusting bands Installation height 35 m for 100 DKS VENOC	1904 1731
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
10330	2013-10-31	Installation height 35 m for 100 DKS	2023-2024
10339	2014-04-01	Plastic strapping – appendix to DC 10316	1887, 1888, 1901~1904
10345	2014-12-01	Replacing painterline for lifrafts > 25 persons	2168
10348	2015-02-27	50 DKS downgraded (35 person@100 kg)	1740
10349	2015-04-22	50 DKS, change in location of the stabilizing pockets	2185, 2186
10359	2015-09-08	DKSU – 100 DKS modified to fit Undertun MES	2235
10362	2015-10-15	DKSU – 150 DKS modified to fit Undertun MES	2260
10371	2015-11-30	9800 container for 150 DKS A pack with desalter	2274, 2275
10378	2016-01-22	Fabric RBND6, new boarding ramp, introducing stabilizing pockets, handles for boarding, change floor to single layer, inner and outer lifelines	1532, 1573, 2252~2254
10389	2017-06-22	Containers for 100 DKS B-pack. Drawing Nos.: 16008569, 16008128, 16008133, 16008131, 16008570, 16008571	2507, 2508, 2509, 2514, 2515, 2516, 2522, 2607, 2608, 2609, 2610, 2611, 2612, 2725~2730
10392	2017-02-03	150 DKS: liferaft inflates outward, away from chute (when used as integrated liferaft for VEMC -MES system)	2532 (150 DKS reverse B-pack)
10396	2017-03-15	39 DKFS packed in container 016-8601	2460, 2468
10402	2017-01-20	Containers for 100 DKS A-pack Drawing Nos.: 16008569, 16008128, 16008133, 16008131, 16008570, 16008571	2427, 2429, 2430, 2431, 2432, 2434, 2438, 2475, 2476, 2477, 2481, 2482, 2483, 2484, 2485, 2486, 2487, 2500, 2528, 2725~2730
10419	2018-05-04	Packing procedure for liferaft 100 and 150 DKS and DKR used in SBS.	2739, 2740, 2743, 2583, 2624, 2625, 2628, 2738, 2741, 2744, 2731, 2735, 2736, 2742
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: - weft distortion dated 2017-12-18, - Test report no. 2747:Coating Adhesion dated 2018-04-13 - Test report no. 2749: Oil

Job Id: **344.1-003284-39**  
 Certificate No: **MEDB00001JF**  
 Revision No: **8**

			<ul style="list-style-type: none"> <li>- resistance dated 2018-04-13</li> <li>- Test report no. 2750: Blocking resistance 2018-04-13</li> <li>- Laboratory test report no 1530100000 rev. 13 dated 2018-03-05 for NK300C by Contitech Laboratory Northeim, Germany witnessed by DNVGL surveyor</li> <li>- DNV GL verification statement N141GV0D dated 2018-03-15</li> </ul>
10421	2018-04-23	100 DKS SBS liferaft with slide entrance (identical to 150 DKS) Drawing no. 43002540.000 (3 sheets) dated 2018-02-06	781, 2753, 2754, 2755, 2756
10422	2018-05-25	Signal Lamp - in box with spare bulb and battery	2456, 2458, 2464, 2466
10424	2018-07-06	16 DKS with average load of 110 kg per person	2764, 2775, 2776, 2766, 2774, 2255, 2077, 1685, 2785, 2765, 659, 1596, 1640, Canopy closure test (no rep no - dated 1997-11-20), 682, Weaklink test - Hammer certificate includes weaklink test, Damage test (no rep no - dated 1998-02-05), 2253, 2762, 2759, 2760, 2761, 1947, 2253, 225, 2116+2120, 1043, 2596, 2667, Buoyancy of float free liferafts (no rep no - dated 1998-02-04)
10434	2018-10-08	Alternative hardener 'Desmodur RFE'	2834 (3x over pressure 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)
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
10450	2019-04-12	Add container 9500 and 0202 to 18m for 150 DKS liferafts	Test report No.: - 1535, 1536, 1538, 1539  Drawing No.: - 16001051 Rev.03 dated 2017-01-20 (150 DKS Container VEDC 2.2/2.3 - (Raft 2 016-0202)) - 16001552 Rev.02 dated 2017-01-20 (150 DKS A desalter container VEDC 2.3 Raft 1 (016-9500))
10451	2019-04-23	Paintersystem with alternative hardener 'TM-93' and 'Beyond'	3085, 3086



Job Id: **344.1-003284-39**  
Certificate No: **MEDB00001JF**  
Revision No: **8**

### **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.