

EC-TYPE EXAMINATION CERTIFICATE (MODULE B)

Certificate No:
MEDB0000006
Revision No:
6

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 Open reversible liferaft

with type designation(s)

12 DKR+, 12 DKR+S30, 12 DKR+ E, 25DKR+, 25 DKR+S30, 25 DKR+ E, 50 DKR+, 50 DKR+S30, 50 DKR+ E, 65 DKR+, 65 DKR+S30, 65 DKR+E, 100 DKR+, 100 DKR+S30, 100 DKR+ E, 150 DKR+, 150 DKR+S30, 150 DKR+ 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) 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.

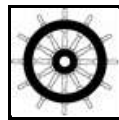
Further details of the equipment and conditions for certification are given overleaf.

This Certificate is valid until **2025-03-09.**

Issued at **Høvik** on **2021-02-02**

DNV GL local station:
Denmark CMC

Approval Engineer:
Tessa Bieber



Notified Body
No.: **0575**

for **DNV GL AS**

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 This certificate remains valid unless suspended, withdrawn, recalled or cancelled.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

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.



Job Id: **344.1-003284-47**
 Certificate No: **MEDB0000006**
 Revision No: **6**

Product description

DKR+ Open Reversible Inflatable Liferaft with capacity as mentioned below under application /limitation.

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

Application/Limitation

Items	12 DKR+ 12 DKR+ S30 12 DKR+ E	25 DKR+ 25 DKR+ S30 25 DKR+ E	50 DKR+ 50 DKR+ S30 50 DKR+E	65 DKR+ 65 DKR+ S30 65 DKR+E	100 DKR+ 100 DKR+ S30 100 DKR+ E	150 DKR+ 150 DKR+ S30 150 DKR+ E
Item identification no.	1049793	1049800	1049789 1070444	1070443	1070445 1008803	1017903 1070446
Max. inst. height	18 metres	18 metres	18 metres	18 metres	18 metres	18 metres
Emergency pack type	HSC	HSC	HSC	HSC	HSC	HSC
Capacity	12 persons	25 persons	51 persons	65 persons	101 persons	153 persons
Containers	016-9041 016-50xx	016-9042 016-61xx	016-52xx 016-9045 016-60xx	016-52xx	016-57xx 016-54xx	016-88xx 016-57xx
Req. towing force: 2 knots 3 knots	0,58 kN 1.56 kN	0,73 kN 1,66 kN	1,47 kN 2,64 kN	2,06 kN 3,3 kN	1,96 kN 3,92 kN	3,45 kN 5,6 kN

S30: Liferaft environmentally packed 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. 50 DKR+E. Environmental packed liferaft prepared for extended service intervals.

The liferafts shall be equipped with HSC emergency 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.

The liferafts are in compliance with MSC.1/Circ.1328 "Guidelines for the approval of inflatable liferafts subject to extended service intervals not exceeding 30 months".

With ref 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:

- Such extended service intervals have been approved by the ships Flag administration.
- The liferaft is 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 liferaft shall be serviced at approved servicing stations in accordance with the recommendations in IMO Res. A.761(18) at intervals not exceeding 30 months.

Job Id: **344.1-003284-47**
Certificate No: **MEDB0000006**
Revision No: **6**

Type Examination documentation

This certificate replaces MEDB0000006 Rev.5.

Basis for approval: See Appendix

Tests carried out

- Prototype tests in accordance with relevant parts of the Recommendation on Testing of Lifesaving Appliances, IMO Res. MSC.81(70), Part 1, as specified in above mentioned documentation. The testing has been carried out in accordance with IMO Res. MSC 97(73), annex 11 item 7, MSC 295(87) and MSC.323(89) , have been witnessed and evaluated and found to be in compliance.
- Tests and reports in accordance with new test requirements listed in MSC.1/Circ. 1328 item 5.4.2 - 5.4.10 for raft types 12, 25, 50, 200 & 150 DKR+ S30 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: 1228, 1534, 1544, 1581, 1582, 1592, 1593, 1597, 1599, 1600, 1620, 1638, 1640, 1642, 1696, 1697, 1698, 1701, 1702, 1703, 1720, 1721, 1724, 1725, 1726, 1727, 2002, 2660, 2661

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
- Laboratory test report no 1530100000 rev. 13 dated 2018-03-05 for NK300C by Contitech Laboratory Northeim, Germany witnessed by DNVGL surveyor
- DNV GL verification statement N141GV0D dated 2018-03-15

Marking

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 be according to HSC Code (IMO Res. MSC 36(63) and MSC 97(73)), Ch. 4 and 5.

Job Id: **344.1-003284-47**
 Certificate No: **MEDB0000006**
 Revision No: **6**

Appendix -Type Examination documentation

12 DKR+ 12 DKR+ S30 12 DKR+ E	
Drawings	Date
Parts list no. 1012-1322.4, "Viking 12 DKR+ HSC" and referred drawings.	2000-05-17
Liferaft Part no. 1049793, "Viking 12 DKR+ HSC" and referred drawings	2014-11-14
Reports	Date
Viking Conformity Assessment Report type 12 DKR+ and prototype test reports of various dates attached to the assessment report.	2002-04-11
Prototype tests, witnessed by DNV surveyor	2006-06-01 and 2006-06-23
MCA certificate of inspection and tests	2000-06-29
Evaluation and test report No. 1355, "Ambient Temperature Inflation Test"	2009-03-17
Drop test No. 1398 witnessed by DNV surveyor	2010-01-14
Inflation Test No. 1385 & 1390 witnessed by DNV surveyor	2010-01-11 and 2010-01-12
Overpressure Test No. 1409 witnessed by DNV surveyor	2010-01-15
Seam Strength Test No. 1413 witnessed by DNV surveyor	2010-01-12
Abrasion Lowering Test No. 1394 witnessed by DNV surveyor	2010-01-13
Jump test No. 1405 witnessed by DNV surveyor	2010-01-14
Liferaft Painter System Test No. 1406 witnessed by DNV surveyor	2010-01-14
Impact Test No. 1393 witnessed by DNV surveyor	2010-01-13
Strength Test No. 1395 witnessed by DNV surveyor	2010-01-13
Strength Test of Lifting Components No. 1396 witnessed by DNV surveyor	2010-01-13
Design changes and supporting documentation	Date
Design change 10297 dated and related test reports	2012-11-09
Design change 10315 and related test reports	2013-04-02
Design change 10344 and related test reports	2014-11-24
Design change 10339 and related test reports	2014-01-04
Design change 10346 and related test reports	2015-09-02
Design change 10411 and related test reports	2017-09-27
Design change 10420 and related test reports	2018-05-18
Design change 10434 (Alternative hardener Desmodur RFE) and related test reports: 3x over pressure test (2834) and seam strength tests (2828, 2829, 2830, 2831, 2833)	2018-10-08
Design change 10437 (Alternative hardener 'Beyond') and related test reports: 3x over pressure test (2905, 2914, 2915) and seam strength tests (2880, 2881, 2882, 2883, 2884, 2885)	2018-12-10
Design change 10438 (Alternative hardener 'TM-93') and related test reports (2868, 2869, 2870, 2871, 2872, 2873, 2876, 2877, 2878, 2988, 2989, 2990, 3017, 3019)	2019-04-23
Design change 10451 (Paintersystem with alternative hardener 'TM-93' and 'Beyond') and related test reports (3085, 3086)	2019-04-23
Design change 10458 (adding 'E' to type designation)	2020-02-19
25 DKR+ 25 DKR+ S30 25 DKR+ E	
Drawings	Date
Parts list no. 1025-1322.2, "Viking 25 DKR+/EU HSC" and referred dwg.	2002-05-01
Liferaft Part no. 1049800, "Viking 25 DKR+/EU HSC" and referred dwg.	2014-11-14
Reports	Date
Viking Conformity Assessment Report type 25 DKR+ and prototype test reports of various dates attached to the assessment report.	2002-05-22
Prototype tests witnessed by DNV surveyor	2006-06-01/23

Job Id: **344.1-003284-47**
Certificate No: **MEDB0000006**
Revision No: **6**

Evaluation and test report No. 1355, "Ambient Temperature Inflation Test"	2008-12-16.
Drop test No. 1398 witnessed by DNV surveyor.	2010-01-14
Inflation Test No. 1387 & 1392 witnessed by DNV surveyor.	2010-01-11 and 2010-01-12
Overpressure Test No. 1409 witnessed by DNV surveyor.	2010-01-15
Seam Strength Test No. 1413 witnessed by DNV surveyor.	2010-01-12
Abrasion Lowering Test No. 1394 witnessed by DNV surveyor.	2010-01-13
Jump test No. 1405 witnessed by DNV surveyor.	2010-01-14
Liferaft Painter System Test No. 1406 witnessed by DNV surveyor.	2010-01-14
Impact Test No. 1393 witnessed by DNV surveyor.	2010-01-13
Strength Test No. 1395 witnessed by DNV surveyor.	2010-01-13
Strength Test of Lifting Components No. 1396 witnessed by DNV surveyor.	2010-01-13
Design changes and supporting documentation	Date
Design change 10297 and related test reports	2012-11-09
Design change 10315 and related test reports	2013-04-02
Design change 10344 and related test reports	2014-11-24
Design change 10345 and related test reports	2014-12-01
Design change 10339 and related test reports	2014-01-04
Design change 10346 and related test reports	2015-09-02
Design change 10411 and related test reports	2017-09-27
Design change 10420 and related test reports	2018-05-18
Design change 10434 (Alternative hardener Desmodur RFE) and related test reports: 3x over pressure test (2834) and seam strength tests (2828, 2829, 2830, 2831, 2833)	2018-10-08
Design change 10437 (Alternative hardener 'Beyond') and related test reports: 3x over pressure test (2905, 2914, 2915) and seam strength tests (2880, 2881, 2882, 2883, 2884, 2885)	2018-12-10
Design change 10438 (Alternative hardener 'TM-93') and related test reports (2868, 2869, 2870, 2871, 2872, 2873, 2876, 2877, 2878, 2988, 2989, 2990, 3017, 3019)	2019-04-23
Design change 10451 (Paintersystem with alternative hardener 'TM-93' and 'Beyond') and related test reports (3085, 3086)	2019-04-23
Design change 10458 (adding 'E' to type designation)	2020-02-19
50 DKR+ 50 DKR+ S30 50 DKR+E	
Drawings	Date
Parts list no. 1050-13220.5, "Viking 50 DKR+/ EU HSC" and referred dwg.	2000-06-16
Drawings 43002542.001.00 and 43002542.002.00	2018-01-24
Liferaft Part no. 1049789, "Viking 50 DKR+/ EU HSC" and referred dwg.	2014-03-25
Reports	Date
Viking Conformity Assessment Report type 50 DKR+ Prototype test reports of various dates attached to the assessment report.	2002-04-11
MCA certificate of inspection and tests	2000-06-29
Prototype tests witnessed by DNV surveyor	2006-06-01/23
Evaluation and test report No. 1355, "Ambient Temperature Inflation Test" witnessed by DNV surveyor	2009-02-02
Design changes and supporting documentation	Date
Design change 10344 and related test reports	2014-11-24
Design change 10295 and related test reports	2012-11-09
Design change 10345 and related test reports	2014-12-01
Design change 10314 and related test reports	2013-06-19
Design change 10315 and related test reports	2013-04-02
Design change 10346 and related test reports	2015-09-02
Design change 10367 and related test reports	2015-11-06
Design change 10378 and related test reports	2016-02-27

Job Id: **344.1-003284-47**
 Certificate No: **MEDB0000006**
 Revision No: **6**

Design change 10411 and related test reports	2017-09-27
Design change 10413 and related test reports	2017-11-21
Design change 10418 and related test reports	2018-03-14
Design change 10420 and related test reports	2018-05-18
Design change 10432 (change from rigid to inflated boarding ramp) and related test reports 2810, 2811, 2812, 2813 (cold, hot and ambient inflation tests), 1638 (boarding test) and drawings 43002541.000/001/002	2018-09-12
Design change 10437 (Alternative hardener 'Beyond') and related test reports: 3x over pressure test (2905, 2914, 2915) and seam strength tests (2880, 2881, 2882, 2883, 2884, 2885)	2018-12-10
Design change 10443 (Improved painter system for liferafts with capacity of 26 and more) and related test reports (3088, 3087, 2952, 2953)	2019-04-23
Design change 10438 (Alternative hardener 'TM-93') and related test reports (2868, 2869, 2870, 2871, 2872, 2873, 2876, 2877, 2878, 2988, 2989, 2990, 3017, 3019)	2019-04-23
Design change 10451 (Paintersystem with alternative hardener 'TM-93' and 'Beyond') and related test reports (3085, 3086)	2019-04-23
Design change 10472b (additional variant of S30 add. liferaft 50/100 and 150 DKR) and supporting drawings (ENG-20049788, ENG-20034227, ENG-20035283, ENG-20068838, ENG-20048263, ENG-20049781) and test reports (3405 and A504).	2021-01-15
65 DKR+ 65 DKR+ S30 65 DKR+E	
Drawings	Date
Drawings: 43002541.001.00 and 43002541.002.00	2018-01-24
Reports	Date
Test reports 1696, 1698, 1702, 1711, 2595, 2596, 2661, 2667, 2707, 2708, 2710, 2712, 2714, 2717, 2718, 2733, 2734	-
Design changes and supporting documentation	Date
See under 50 DKR+/50DKR+ S30 (ref. DC 10417 dated 2018-03-09)	
Design change 10432 (change from rigid to inflated boarding ramp) and related test reports 2810, 2811, 2812, 2813 (cold, hot and ambient inflation tests), 1638 (boarding test) and drawings 43002541.000/001/002	2018-09-12
Design change 10437 (Alternative hardener 'Beyond') and related test reports: 3x over pressure test (2905, 2914, 2915) and seam strength tests (2880, 2881, 2882, 2883, 2884, 2885)	2018-12-10
Design change 10443 (Improved painter system for liferafts with capacity of 26 and more) and related test reports (3088, 3087, 2952, 2953)	2019-04-23
Design change 10438 (Alternative hardener 'TM-93') and related test reports (2868, 2869, 2870, 2871, 2872, 2873, 2876, 2877, 2878, 2988, 2989, 2990, 3017, 3019)	2019-04-23
Design change 10451 (Paintersystem with alternative hardener 'TM-93' and 'Beyond') and related test reports (3085, 3086)	2019-04-23
100 DKR+ 100 DKR+ S30 100 DKR+ E	
Drawings	Date
Parts list no. 10100-1322.5, "Viking 100 DKR+/HSC" and referred drawings.	2002-03-13
Liferaft Part no.1008803, "Viking 100 DKR+/HSC" and referred drawings	2014-11-13
Reports	Date
Viking Conformity Assessment Report type 100 DKR? and prototype test reports of various dates attached to the assessment report.	2002-03-20
MCA certificate of inspection and tests,	2002-03-19
Evaluation and test report No. 1355, "Ambient Temperature Inflation Test" witnessed by DNV surveyor	2009-02-02
Design changes and supporting documentation	Date
Design change 10344 and related test reports	2014-11-24

Job Id: **344.1-003284-47**
 Certificate No: **MEDB0000006**
 Revision No: **6**

Design change 10345 and related test reports	2014-12-01
Design change 10314 and related test reports	2013-06-19
Design change 10315 and related test reports	2013-04-02
Design change 10346 and related test reports	2015-09-02
Design change 10411 and related test reports	2017-09-27
Design change 10420 and related test reports	2018-05-18
Design change 10427 (new packing procedure 100DKR SBS) and related test reports: 2758, 2773, 2778 (inflation at +65°C, ambient 20°C and -30°C)	2018-09-03
Design change 10433 (Smaller cylinders and container) and related test reports: 2814~2823 (inflation tests, drop tests, jump, weight and towing tests) and drawings nos. 43002548.000/001/002	2018-10-08
Design change 10437 (Alternative hardener 'Beyond') and related test reports: 3x over pressure test (2905, 2914, 2915) and seam strength tests (2880, 2881, 2882, 2883, 2884, 2885)	2018-12-10
Design change 10443 (Improved painter system for liferafts with capacity of 26 and more) and related test reports (3088, 3087, 2952, 2953)	2019-04-23
Design change 10438 (Alternative hardener 'TM-93') and related test reports (2868, 2869, 2870, 2871, 2872, 2873, 2876, 2877, 2878, 2988, 2989, 2990, 3017, 3019)	2019-04-23
Design change 10451 (Paintersystem with alternative hardener 'TM-93' and 'Beyond') and related test reports (3085, 3086)	2019-04-23
Design change 10458 (adding 'E' to type designation)	2020-02-19
Design change 10472b (additional variant of S30 add. liferaft 50/100 and 150 DKR) and supporting drawings (ENG-20049788, ENG-20034227, ENG-20035283, ENG-20068838, ENG-20048263, ENG-20049781) and test reports (3405 and A504).	2021-01-15
150 DKR+ 150 DKR+ S30 150 DKR+ E	
Drawings	Date
Parts list no. 10150-1322.8, "Viking 150 DKR+/HSC" and referred drawings.	2002-01-04
Liferaft Part no. 1017903, "Viking 150 DKR+/HSC" and referred drawings.	2014-11-13
Submitted documentation listed in DNV approval letter	2007-03-14
Reports	Date
Viking Conformity Assessment Report type 150 DKR+ and prototype test reports of various dates, attached to the assessment report	2002-01-25
Evaluation and test report No. 1355, "Ambient Temperature Inflation Test" witnessed by DNV surveyor	2009-11-26
MCA certificate of inspection and tests	2002-01-18
Design changes and supporting documentation	Date
Design change 10344 and related test reports	2014-11-24
Design change 10345 and related test reports	2014-12-01
Design change 10314 and related test reports	2013-06-19
Design change 10315 and related test reports	2013-04-02
Design change 10346 and related test reports	2015-09-02
Design change 10411 and related test reports	2017-09-27
Design change 10420 and related test reports	2018-05-18
Design change 10437 (Alternative hardener 'Beyond') and related test reports: 3x over pressure test (2905, 2914, 2915) and seam strength tests (2880, 2881, 2882, 2883, 2884, 2885)	2018-12-10
Design change 10443 (Improved painter system for liferafts with capacity of 26 and more) and related test reports (3088, 3087, 2952, 2953)	2019-04-23
Design change 10438 (Alternative hardener 'TM-93') and related test reports (2868, 2869, 2870, 2871, 2872, 2873, 2876, 2877, 2878, 2988, 2989, 2990, 3017, 3019)	2019-04-23
Design change 10451 (Paintersystem with alternative hardener 'TM-93' and 'Beyond') and related test reports (3085, 3086)	2019-04-23

Job Id: **344.1-003284-47**
Certificate No: **MEDB0000006**
Revision No: **6**

Design change 10458 (removal of two thwarts and adding container type 016-57xx), related test reports (2843, 2844, 2845, 2846, 2847, 2850, 2851, 2852, 3206, 3207, 3208, 3221) and drawings nos. 43002549.000, 43002549.001 and 43002549.002.	2020-02-19
Viking Conformity Assessment Report type 150 DKR+	2020-01-29
Design change 10472b (additional variant of S30 add. liferaft 50/100 and 150 DKR) and supporting drawings (ENG-20049788, ENG-20034227, ENG-20035283, ENG-20068838, ENG-20048263, ENG-20049781) and test reports (3405 and A504)	2021-01-15