



TYPE APPROVAL CERTIFICATE

Certificate No:
TALB0000011
Revision No:
4

This is to certify:

That the Inflatable liferafts

with type designation(s)

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

Issued to

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

is found to comply with

SOLAS 74 as amended, Regulation III/4, III/21, III/31, III/34. IMO Res. MSC 48(66) - Lifesaving Appliance Code.
Tested to IMO Res. MSC 81(70)

Application :

Liferaft fitted with Viking Polar Liferaft Heating System.

Product(s) approved by this certificate is/are accepted for installation on all vessels classed by DNV.

Issued at **Høvik** on **2022-09-15**

for **DNV**

This Certificate is valid until **2026-11-04**.

DNV local station: **Denmark CMC**

Approval Engineer: **Tessa Bieber**

Jowita Permoda
Head of Section

This Certificate is subject to terms and conditions overleaf. Any significant change in design or construction may render this Certificate invalid. The validity date relates to the Type Approval Certificate and not to the approval of equipment/systems installed.

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

“12 DKF+, 12 DKF+S30, 16 DKF+, 16 DKF+S30, 20 DKF+, 20 DKF+S30, 25 DKF+, 25 DKF+S30, 35 DKF+, 35 DKF+S30”,

are davit launched inflatable liferafts fitted with a Viking Polar Liferaft Heating System. This Polar Liferaft Heating system is installed inside the liferaft container which results in a fully operational liferaft at temperatures down to -52°C.

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

For further details, see documentation under Type Approval documentation below.

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 DKF+ S30. Liferaft environmentally packed to allow for extended service intervals up to 30 months. The raft is subject to an annual onboard inspection.

Capacity, towing strains and installation heights: Container no. given as 016 – xxxx Emergency packs SOLAS A or B given as A or B in the form below						
	Towing strain 2 knots	Towing strain 3 knots	Installation height 36 m	Installation height 60 m	Max. liferaft capacity	Liferaft weight (± 2%)
12 DKF+ 12DKF+S30	0.5 kN	1.1 kN	A 0114 B 0114 A 360X B 360X A 690X B 690X		12 persons	134 kg 138 kg
16 DKF+ 16 DKF+S30	0.5 kN	1.2 kN	B 8000	A 5100	16 persons	155 kg 160 kg
20 DKF+ 20 DKF+S30	0.5 kN	1.2 kN	B 8000	A 8100	20 persons	175 kg 180 kg
25 DKF+ 25 DKF+S30	0.5 kN	1.2 kN	B 8100	A 8100	25 persons	196 kg 202 kg
35 DKF+ 35 DKF+S30	1.05 kN	1.8 kN	B 8200	A 8400	35 persons	304 kg 310 kg

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 LSA Code as amended, including IMO Res. MSC.293(87), IMO Res. A1024(26), DNV Rules for Classification DNV-RU-SHIP Pt.6 Ch.6 and the Russian Maritime Register of Shipping (RMRS) Rules for the Classification and Construction of Sea-Going Ships edition 2018, Part XVII Ch.7 requirements to ensure long-term operation in low temperature.

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

With ref. to ‘tests 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 Approval documentation

Certification in accordance with Class Programme DNV-CP-0338, September 2021.

This certificate replaces TALB0000011 Rev. 3.

Documentation	Date
Application Viking including description of the Polar Heating System, listed documentation for heating mats inside the liferaft container and relating thermostat box, cables and connectors.	2011-12-22
MED-B-7380 issued by DNV	2011-12-09
RMRS certificate nr. 11.10037.262 'Electrical control cabinet for liferaft heating category Winterization'	2011-09-10
RMRS Certificate no. 21.10037.262 'System of heated inflatable liferafts VIKING category Winterization (-52)	2021-06-03
Reports	Date
Delta test report, DANAK-1911554, Project no. T200664	-
DNV Technical Report	2012-01-19
Conformity Assessment IMO Res.A1024(26) and RMRS Rules for the Classification and Construction of Sea Going ships, edition 2010- Winterization of Liferafts -50 °C and related test reports 1545, 1546, 1550, 1551, 1553, 1658, 1660, 1661, 1663, 1693 witnessed by DNV and RMRS surveyor	-
Conformity Assessment Report – POLAR S30, Rev.2	2021-11-05
Design changes + supporting test reports/drawings	Date
DNVGL 10430 – container type 016-690X as alternative to 016-0114 2787 and 2788 (drop tests) Drawing No. 16012707 Rev.00 – Container 6901 for 12 DKF S12/S30	2018-09-27
DNVGL 10363 – update Thermo control box Test report 2246 (cold endurance test – winterization -50 °C)	2015-10-27
DNV10499 – Winterization (-52) Certification Test report 3639 (cold endurance test – winterization -52 °C)	2021-08-27 2021-04-27
DNV10519 – Polar Thermal Control box – New heating and control components Test report 4071 (Cold endurance and cold start) Test report 4072 (Temperature relay activation) Test report 4073 (Anti Condense heating)	2022-06-02

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), IMO Res. MSC.295(87) and IMO Res. 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 5.4.1 - 5.4.10 have been witnessed by DNV surveyor and evaluated and found to be in compliance (test report nr. 1767, 1905a/b/c, 1890a, 1415a, DC10206, RD-00043-D-003/4/5/7/8, 3376, 3380, 3381, 3386, 3387, 3902, 3211, 3212, 3396, 3397, 3917, 1238, 1241, RD-00043-P-003/4/5/6/7/8/9/10/11/12, 1239, 1240,1242, 1243, 1831, 1370, 3014, 3130, 3450, 3641, 3132, 3347, 3642, RD-00043-FS-001/2/3, 1418, 1906, 1908, 1909, 1910).

Tested to the requirements given in the RMRS Rules for the Classification and Construction of Sea-Going Ships edition 2018, Part XVII, §§ 7.11.2.2, 7.9.4.1.2 and Part XI § 4.6.1.10.

In addition, Conformity Assessment in accordance with IMO Res.A1024(26), DNV-RU-SHIP Pt.6 Ch.6 and RMRS Rules for the Classification and Construction of Sea-Going Ships edition 2018, Part XVII Ch.7, has been evaluated and tested and found to be in compliance.

Marking of product

The product is to be indelibly marked with the items as required by LSA Code item 1.2.2.9, 4.2.6.3 and 4.2.7.1, as amended.

Periodical assessment

DNV's surveyor is to be given permission to perform Periodical Assessments at any time during the validity of this certificate and at least every second year. The arrangement is to be in accordance with procedure described in Class Programme DNV-CP-0338, Section 4.