

Certificate No:

LB-486

File No:

A.1/1.12

Job Id:

262.1-018166-1

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Inflatable liferafts

with type designation(s)

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

Issued to

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

is found to comply with

**SOLAS 74, 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 :

This certificate is recognized by Transport Canada.This Certificate is valid until **2019-06-30**.Issued at **Høvik** on **2015-02-11**DNV GL local station: **Fredericia**Approval Engineer: **Silje Helene Waagaard**for **DNV GL**Digitally Signed By: Hoff, Øyvind
Location: DNV GL Høvik, Norway
Signing Date: 16.02.2015, on behalf of**Petter Langnes
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. If any person suffers loss or damage which is proven to have been caused by any negligent act or omission of the Society, then the Society shall pay compensation to such person for his proven direct loss or damage. However, the compensation shall not exceed an amount equal to ten times the fee charged for the service in question. The maximum compensation shall never exceed USD 2 million. In this provision the "Society" shall mean DNV GL AS as well as all its direct and indirect owners, affiliates, subsidiaries, directors, officers, employees, agents and any other person or entity acting on behalf of DNV GL AS.

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Product description

Davit launched inflatable liferaft:

12 DKF+, 16 DKF+, 20 DKF+, 25 DKF+ and 35 DKF+
 20 DKF+GN

12 DKF+S30, 16 DKF+S30, 20 DKF+S30, 20 DKF+GNS30, 25 DKF+S30 and 35 DKF+S30

These liferafts designs are complying with the LSA Code as amended, including MSC.293 (87) and Canadian Lifesaving Appliance Standard TP 14475E, Ch. IV §4.1 and §4.2 and Life saving equipment regulations C.R.C 1436 Schedule VIII.

Application/Limitation

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

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

GN added to type denomination eg. 20 DKF+GN. The raft is equipped with webbings and reinforcements for stretcher transportation.

	Towing strain 2 knots	Towing strain 3 knots	25 metres	36 metres	45 metres	60 metres	Capacity
12 DKF+	0.5 kN	1.1 kN		A+B 0114			12 persons
16 DKF+	0.5 kN	1.2 kN		B 8000		A 5100	16 persons
20 DKF+	0.5 kN	1.2 kN		B 8000		A 8000	20 persons
20 DKF+GN	0.5 kN	1.2 kN	A* 5500K		A* 8100		20 persons
25 DKF+	0.5 kN	1.2 kN		B 8100		A 8100	25 persons
35 DKF+	1.05 kN	1.8 kN		B 8200		A 8400	35 persons
*Equipment based on SOLAS A							

Applications / limitations continued:

- 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.
- Production testing shall be carried out according to IMO Res. MSC 81(70) part 2.

The liferafts may be 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.
4. Regular service intervals according to SOLAS Ch. III Regulation 20.8.1 shall be followed when the age of the liferaft exceeds 10 years of age.

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Type approval documentation

Certification in accordance with Standard for Certification No. 1.2, Type Approval, January 2013.

Basis for approval:

Reports and SAP referencenumber as listed below:

	Conformity Assessment report dated	Specification identification in SAP
12 DKF+	21.12.98	1039210 1041121
16 DKF+	21.12.98	1039212 1041123
20 DKF+	21.12.1998	1039214 1041124
20 DKF+GN	01.12.2008	1039218
25 DKF+	26.07.2002	1039216 1041127
35 DKF+	06.09.2001	1039218

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.
- Tested to the requirements given in the Canadian Lifesaving Appliance Standard TP 14475E, Part II, Ch.5 §5.1.2.
- Tests and reports in accordance with new test requirements listed in MSC.1/Circ.1328 item 5.4.2 - 5.4.10 for 25 DKFS+S30 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 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.

Marking of product

The product is to be indelibly marked with name of manufacturer, type designation and date of manufacture. The marking shall comply with the LSA Code (IMO Res.MSC.48(66) item 4.2.6 and 4.2.7

All instructions and markings accompanying the liferafts, or printed directly on the liferafts, shall be in both English and French, as per "Procedures For Approval of Life-Saving Appliances and Fire Safety Systems, Equipment and Products" (TP14612E) Ch.2.2.1.3.

Transport Canada Approval

Based on the procedures laid down in the Transport Canada Publication entitled "Approval Procedures for, Life Saving Equipment and Structural Fire Protection Products (TP 14612)", Det Norske Veritas confirms that the product/s listed in this certificate is/are in accordance with Transport Canada's requirements.

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 Standard for certification No. 1.2 Type Approval Item 4.