

TYPE APPROVAL CERTIFICATE

This is to certify:**That the Inflatable liferafts**

with type designation(s)

4UKL, 6UKL, 8UKL, 4UKSL, 6UKSL, 8UKSL, 6 UKCL, 10 DK+ and 12 DK+

Issued to

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

is found to comply with

ISO 9650-1:2005 Small craft – Inflatable liferafts – Part 1: Type I**ISO 9650-2:2005 Small craft – Inflatable liferafts – Part 2: Type II****ISO 9650-3:2009 Small craft – Inflatable liferafts – Part 3: Materials****Application :****NON-SOLAS liferafts for use on non-convention (non-SOLAS) vessels at the discretion of the Authorities.**Issued at **Høvik** on **2019-03-18**for **DNV GL**This Certificate is valid until **2022-12-10**.DNV GL local station: **Fredericia**Approval Engineer: **Tessa Bieber**

Mårten Schei-Nilsson
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.



Job Id: **262.1-015792-5**
 Certificate No: **TALB0000020**
 Revision No: **2**

Product description

The liferaft types 4 UKL, 6 UKL, 8 UKL, 4 UKSL, 6 UKSL, 8 UKSL and 6 UKCL are Non SOLAS inflatable liferafts packed in container or valise in aluminium packing bag.

Container material:	GRP
Buoyancy tube fabric:	ContiTech Elastomer-Beschichtungen, NK 165 Formosa Rubber group RBN28
Exterior canopy fabric:	Rivertex acryl, yellow

The liferaft types 10 DK+ and 12 DK+ are Non SOLAS inflatable liferafts packed in container or valise in aluminium packing bag.

Container material:	GRP
Buoyancy tube fabric:	Formosa Rubber group RBND6, RBT86 OR: Contitech Rubber NK300C, NK205/2
Exterior canopy fabric:	Rivertex 400D PES PU coated

Applications/Limitations

Liferaft type	Max. stowage height (4 m)	Max. stowage height (6 m)	Max. number of persons
4UKL		Iso Pack 1 – Cont. 3900 & Valise 20 Iso Pack 2 – Cont. 3800 & Valise 10 SOLAS B – Cont. 3800 & Valise 10 USA-E – Cont. 3800 & Valise 10	4
6 UKL		Iso Pack 1 – Cont. 3201 & Valise 30 Iso Pack 2 – Cont. 3900 & Valise 20 SOLAS B – Cont. 3900 & Valise 20 USA-E – Cont. 3900 & Valise 20	6
8 UKL		Iso Pack 1 – Cont. 0043 & NA Iso Pack 2 – Cont. 3901 & Valise 20 SOLAS B – Cont. 3901 & Valise 30 USA-E – Cont. 3901 & Valise 30	8
4 UKSL		Iso Pack 1 – Cont. 3901 & Valise 30 Iso Pack 2 – Cont. 3900 & Valise 20 SOLAS B – Cont. 3900 & Valise 20 USA-E – Cont. 3900 & Valise 10	4
6 UKSL		Iso Pack 1 – Cont. 3201 & Valise 30 Iso Pack 2 – Cont. 3901 & Valise 20 SOLAS B – Cont. 3901 & Valise 20 USA-E – Cont. 3901 & Valise 20	6
8 UKSL		Iso Pack 1 – Cont. 0043 & NA Iso Pack 2 – Cont. 3901 & Valise 30 SOLAS B – Cont. 3901 & Valise 30 USA-E – Cont. 3901 & Valise 30	8
10 DK+		USA-E – Cont. 0043 & NA USA-E – Cont. 0044 & NA Iso Pack 1 – Cont. 0043 & NA Iso Pack 1 – Cont. 0044 & NA Iso Pack 2 – Cont. 0043 & NA Iso Pack 2 – Cont. 0044 & NA	10

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Liferaft type	Max. stowage height (4 m)	Max. stowage height (6 m)	Max. number of persons
12 DK+		USA-E – Cont. 0043 & NA USA-E – Cont. 0044 & NA Iso Pack 1 – Cont. 0043 & NA Iso Pack 1 – Cont. 0044 & NA Iso Pack 2 – Cont. 0043 & NA Iso Pack 2 – Cont. 0044 & NA	12
6 UKCL	Costel – Container 3600 Costel – Valise 10		6

May be used on non-convention (non-SOLAS) vessels at the discretion of the Authorities.
 The liferafts shall be equipped with ISO emergency packs according to ISO 9650-1.
 Gas cylinders and components in the pressure gas systems shall be of an approved type.

Type Approval documentation

Certification in accordance with Class Programme DNVGL-CP-0338, September 2018.

This certificate replaces TALB0000020 rev.1

The following documentation is basis for the DNV GL approval:

Assessment Reports	Date
Viking Conformity Assessment Report 4 UKL, 6 UKL, 8 UKL, 4 UKSL, 6 UKSL, 8 UKSL, 6 UKCL, 10 DK+ and 12 DK+ Material test report for RBN28 (Smithers) Strength testreport (SGS)	2013-01-15 2012-10-19
Prototype tests	Date
Prototype tests as listed in Viking Conformity Assessment Report 4 UKL 6 UKL, 8 UKL, 4 UKSL, 6 UKSL, 8 UKSL, 6 UKCL, 10 DK+ and 12 DK+ witnessed by DNV + mooring out prototype test.	2012-10-06 until 2012-11-04
Prototype test reports supporting DC10320	2013-08-15 and 2013-08-21
Test report no. 2033 and 2034 witnessed by DNV (canopy closure test – new designed entrance both sides of liferaft with one Zip fastener of each)	2013-11-22
Test report no. 2511 witnessed by DNV (high temperature inflation test with Leafield M-07-UM-GIST with Leafield B10- brown code pressure relief valve)	2016-11-30
Test report no. 1901 and 1902 witnessed by DNV (cold temperature inflation test with Leafield GIST inflation system)	2013-03-29
Test report no. 1454 witnessed by DNV, liferaft painter test	2010-04-23
Test report 2508, drop test with Leafield GIS inflation system	2016-11-30
Test report 1803 witnessed by DNV, Mooring out test due to new canopy material Rivertex 400D PES PU coated (only for 10 DK+ and 12 DK+)	2012-11-02
Test report no 1870 witnessed by DNV, Seam strength test due to new canopy material Rivertex 400D PES PU coated (only for 10 DK+ and 12 DK+)	2013-02-07
Test report 1912 witnessed by DNV, Jump test due to new canopy material Rivertex 400D PES PU coated (only for 10 DK+ and 12 DK+)	2013-04-15
Test reports for buoyancy tube fabric Contitech Rubber NK300, RBT86, NK205/2 (only for 10 DK+ and 12 DK+): 395 (NK205/2) 2037 /2038 (NK300) 2230 (RBT86)	2002-07-04 2013-12-20 2015-07-17
Test report no. 2800 (boarding ramp test)	2018-08-17
Test report no. 2801 (stabilizing pocket)	2018-08-17

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Design change (DC)	Date
DC 10320, drawing conversion list	2016-05-11
DC 10326, new canopy material Rivertex 400D PES PU coated (orange and yellow/green)	2014-03-24
DC 10333, liferaft painter system arrangement	2013-12-10
DC 10334, new design of zipped entrance	2013-12-11
DC 10387, 4 UKL, 6 UKL, 8,UKL, 6UKCL leaffield GIST inflation system	2016-12-07
DC10429, Iso emergency pack1 and 2 for 10 and 12 DKR+	2018-09-04
DC10431, Additional boarding ramp and stabilizing pocket on UKL and UKSL + supporting drawings: 42005110.000.00 Rev.0 (boarding ramp) dated 2018-07-31 and 42004523.000.01 rev.01 dated 2017-04-18	2018-09-13
DC10441, Alternative hardeners Desmodur RFE / Beyond / Satic-Chem TM93 for yachting liferafts (4-8 UKL, 4-8 UKSL and 6UKCL) + supporting test reports: 3042, 3044, 3047 : 3 x overpressure test 3072, 3073, 2864, 2874, 2875, 2879, 2886, 2887, 2891: seam strength tests	2019-03-15
Drawings	Date
General arrangement 4 UKL ISO 9650-1 (GIST), Yellow: 43002349.001.03 43002349.002.05 43002349.000.09 (partslist)	2018-09-12 2018-09-12 2018-09-12
General arrangement 4 UKSL ISO 9650-1 (GIST), Yellow: 43002352.001.01 43002352.002.02 43002352.003.01 43002352.000.06 (partlist)	2018-09-13 2018-09-13 2018-09-13 2018-09-13
General arrangement 6 UKCL ISO 9650-2: 43002355.001.01 43002355.002.00 43002355.000.08 (partlist)	2013-06-07 2013-06-07 2018-09-13
General arrangement 6UKL ISO 9650-1 (GIST), Yellow: 43002350.001.02 43002350.002.03 43002350.000.09 (partslist)	2018-09-13 2018-09-13 2018-09-13
General arrangement 6 UKSL ISO 9650-1 (GIST), Yellow: 43002353.001.02 43002353.002.02 43002353.003.01 43002353.000.05 (partslist)	2018-09-13 2018-09-13 2018-09-13 2018-09-13
General arrangement 8 UKL ISO 9650-1 (GIST), Yellow: 43002351.001.02 43002351.002.03 43002351.000.08 (partslist)	2018-09-13 2018-09-13 2018-09-13
General arrangement 8 UKSL ISO 9650-1 (GIST), Yellow: 43002354.001.01 43002354.002.03 43002354.003.01 43002354.000.04 (partslist)	2018-09-13 2018-09-13 2018-09-13 2018-09-13
General arrangement 10 DK+: 43002491.001.01	2018-03-21

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43002491.002.01 43002491.000.03 (partslist)	2018-03-21 2018-09-13
General arrangement 12 DK+: 43002492.001.01 43002492.002.01 43002492.003.01 43002492.000.03 (partslist)	2018-03-21 2018-03-21 2018-03-21 2018-09-13

Tests carried out

For 4 UKL, 6 UKL, 8 UKL, 4 UKSL, 6 UKSL, 8 UKSL, 10 DK+ and 12 DK+ the prototype tests are in accordance with the ISO 9650-1:2005, Ch. 6 and ISO 9650-3:2009 as specified in above-mentioned documentation.

For 6 UKCL the prototype tests are in accordance with the ISO 9650-2:2005, Ch. 6 and ISO 9650-3:2009 as specified in above-mentioned documentation.

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 ISO 9650-1:2005, Ch. 5.2.9.5 for 4 UKL, 6 UKL, 8 UKL, 4 UKSL, 6 UKSL, 8 UKSL, 10 DK+ and 12 DK+ and ISO 9650-2:2005, Ch. 5.2.9.5 for 6 UKCL.

Periodical assessment

DNV GL'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 DNVGL-CP-0338, Section 4.