Transport Canada
Safety and Security

Certificate No: LR21311874TC
Issue Date: 06/10/2021
Expiry Date: 05/10/2026

Certificate Of Type Approval Issued On Behalf Of Transport of Canada

This is to certify that the product detailed below will be accepted for compliance with the applicable Lloyd's Register Rules and Regulations and with the International Convention for the Safety of Life at Sea, (SOLAS), 1974, as amended, for use on ships and offshore installations classed with Lloyd's Register, and for use on ships and offshore installations when authorised by Transport Canada to issue the relevant certificates, licences, permits etc.

Manufacturer	**Survitec Group Ltd**
Address	Kingsway, RFD Beaufort Ltd, Dunmurry, BELFAST, BT17 9AF, United Kingdom
Type	Liferafts
Description	REDUCED CAPACITY LIFERAFTS, 4 person throw over canopied inflatable liferaft - Type: “RFD SURVIVA MKIV 4 Person TO” (also known as “DSB LR07”, Beaufort Seafarer TO, Ev TO M10, Crewsaver, Elliot, Survitec Zodiac and DBC)
Trade Name	“RFD SURVIVA MKIV 4 Person TO” (also known as “DSB LR07”, Beaufort Seafarer TO, Ev TO M10, Crewsaver, Elliot, Survitec Zodiac and DBC)
Specified Standard	IMO Resolution MSC.81 (70) Part 1as amended

This certificate is not valid for equipment, the design or manufacture of which has been varied or modified from the specimen tested. The manufacturer should notify Lloyd's Register EMEA of any modification or changes to the equipment in order to obtain a valid Certificate.

The Design Appraisal Document and its supplementary Type Approval Terms and Conditions form part of this Certificate.

This certificate remains valid unless cancelled or revoked, provided the conditions in the attached Design Appraisal Document are complied with and the equipment remains satisfactory in service.

Lijo Thomas

Lijo Thomas

Senior Surveyor to Lloyd's Register EMEA
A member of the Lloyd's Register group

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The undernoted documents have been appraised for compliance with the relevant requirements of International Conventions, and this Design Appraisal Document forms part of the Certificate.

This Certificate is a Renewal of Certificate Number LRTC 0000105.

EXAMINED DOCUMENTATION

Plan No.	Rev.	Date	Description
D51326	4	07/04/09	General Arrangement RFD Mk IV, 4TO
D51156	4	07/04/09	Buoyancy Assemblies MKIV 4 Person
DCS9124	5	21/04/09	Canopy 4 TO Survival MKIV
LA 4 -0356	0	05/06/02	Seamless Steel Cylinder for gas
D43042	3	11/01/96	Container MK18 Size 1
17938	13	17/04/08	GRP Container Mk 10
M226		Feb 09	Service Manual
DCS0110			Introduction of a new Daniamant RL6 lighting system as an alternative lighting system on Marine MK4 SOLAS liferafts
D52886	A	02.08.2016	Containers N131 to N134 LPC (2 Sheets)

Configuration:
"RFD MKIV 4 Person" liferafts consist of a standard "Survival MK IV" liferaft fitted with Leafield inflation system comprising approved pressure relief valve; A10, B10, non return valve, inlet valve, operating head and cylinders. The liferaft is to be stowed in MK10, MK 18 containers

TECHNICAL CRITERIA (Low profile and extreme low profile containers)

TEST REPORTS

Report No.	Date	Title or Description
84/08	21/10/08	Hot inflation test of RFD Survival MkIV Liferaft
82/08	15/10/08	Cold inflation test of RFD Survival MkIV Liferafts
93/08	19/11/08	Towing Test of RFD Survival Liferafts
94/08	19/11/08	Detailed Inspection and Weight Test of RFD Survival MkIV Liferafts
79/08	21/10/08	Loading and seating test of RFD Survival MKIV Liferafts
77/08	13/10/08	Stability test of RFD Survival MKIV Liferafts
75/08	13/10/08	Boarding test of RFD Survival MKIV Liferafts
76/08	13/08/08	Closing arrangement test of RFD Survival MKIV Liferafts
73/08	13/10/08	Manoeuvrability test of RFD Survival MKIV Liferafts
74/08	13/10/08	Swamp Test of RFD Survival MKIV Liferafts
78/08	13/10/08	Damage test of RFD Survival MKIV Liferafts
71/08	13/10/08	Righting test of RFD Survival MKIV Liferafts
80/08	31/10/08	Ambient Inflation and painter pull test of RFD Survival MKIV Liferafts
72/08	13/10/08	Inherent Buoyancy test of RFD Survival MKIV Liferafts
48/08	15/08/08	3 times pressure test of Survival MKIV Liferafts
49/04	18/11/08	18 m drop test of the RFD Survival Mk3 4 person Liferaft for container types MK10 and MK18
63/08	01/09/08	Material properties of RCN D60001: Compliance with MSC 81(70)
57/08	27/08/08	Material properties of NK205/2: Compliance with MSC 81(70)
58/08	27/08/08	Material properties of RFD 1044/2: Compliance with MSC 81(70)
59/08	27/08/08	Material properties of TTK-PS.3: Compliance with MSC 81(70)

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Report No.	Date	Title or Description
42/08	21/05/08	Jump test of RFD of Surviva MKIV Liferafts
46/08	14/08/08	Mooring out test of Surviva MKIV Liferafts
44/08	14/08/08	Canopt closure test of Surviva MKIV Liferafts
14/08	04/07/08	36m Drop Test of RFD Surviva MKIV Liferafts (Leafield Inflation System)
40/08	10/07/08	Wind velocity test of Surviva MKIV Liferafts
60/08	27/08/08	Seam strength test of Surviva MKIV Liferafts
12/08	29/07/08	Lifeline Strength Test of RFD Surviva MKIV Liferafts
09/08	29/07/08	Painter System Test of RFD Surviva MKIV Liferafts
64/08	01/09/08	Visual Inspection of RFD Surviva MKIV Liferafts
43/08	12/08/08	Seating Arrangement Test of RFD Surviva MKIV Liferafts
01/13	29/11/12	Drop test report as witnessed by a LR surveyor
02/13	07/11/12	Cold Inflation test report as witnessed by a LR surveyor
03/13	07/11/12	Cold Inflation test report as witnessed by a LR surveyor
TR2016 – 013	06/06/16	18 m Drop Test Surviva MK4 Liferaft Hull in Low Profile and Xtrem Containers as witnessed by LR Surveyor
TR2016 – 023	01/08/16	Weight Test – MK4 Hull in alternative Low Profile Containers as witnessed by LR Surveyor

Series of MSC/Circ. 980 test reports completed to demonstrate compliance with Resolution MSC.297 (87) and MSC.274 (85), dated 22.04.2010 to 03.03.2011, witnessed by a Lloyd's Register surveyor.

CONDITIONS OF CERTIFICATION

1. Liferaft specifications:-

SOLAS Pack	Type/ Container size /Stowed Weight	Stowed Height	Towing Forces
A-pack	MK18, Size 1, 53 KG	18 m	0.54KN @ 2 kts
	MK10, Size 3, 56 KG		1.35KN @ 3 kts
B-pack	MK18, Size 1, 45 KG	18 m	0.54KN @ 2 kts
	MK10, Size 3, 48 KG		1.35KN @ 3 kts
A-pack	LPC N133 (low profile), 53 KG	18 m	0.54KN @ 2 kts
B-pack	LPC N133 (low profile), 45 KG	18 m	0.54KN @ 2 kts

2. Lloyd's Register's acceptance for the MkIV range of liferafts to be fitted with US DOT approved cylinders is subjected to relevant USCG Approval Certification remaining valid
3. Every reduced capacity liferaft and its container are to be marked in accordance with paragraphs 4.2.6.3 and 4.2.7.1 of chapter IV of the *LSA Code* except, there is to be no reference to SOLAS and all references to "LIFERAFT" are replaced with **"REDUCED CAPACITY LIFERAFT"**
4. Retro-reflective materials, position-indicating lights and the equipment carried on board the liferaft as required by LSA Code Regulations IV/4.1.5 and 4.2.9 are to be approved type
5. Provision shall be made for marking each liferaft with the name and port of registry of the ship to which the liferaft is supplied, in such a form that the ship identification can be changed at any time without opening the container
6. **Installation on board:** The on board arrangements and installation of the liferaft are not part of this design appraisal or certificate. All such arrangements are to be to the satisfaction of the Surveyors attending on board

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7. The liferaft and its equipment shall be kept in good working order at all times and checked at regular intervals according to the manufacturer's instructions and SOLAS requirements
8. Clear operating instructions shall be provided with a suitably worded warning notice using colour coding, pictograms and/or symbols as necessary for clarity. Fully detailed Operations and Maintenance Manuals shall be supplied with each liferaft for compliance with SOLAS Regulations III/35/36 and paragraph 2.2.1.3 & 2.2.1.4 of Transport Canada Procedures for Approval of Lifesaving Appliances and Fire Safety Systems, Equipment & Products (TP 14612E – 05/2011)
9. If the specified standards are amended during the validity of this certificate, this product type is to be re-approved prior to it being supplied to vessels to which the amended standards apply
10. Production items are to be manufactured in accordance with a quality control system which shall be maintained to ensure compliance with SOLAS Regulation III/5
11. Production tests are to be conducted in accordance with the applicable requirements of IMO Resolution MSC.81 (70), Part 2 and each item, batch, or lot be delivered with an LR Certificate of SOLAS Production Testing issued by the attending LR Surveyors following their witness of the tests. This does not preclude any further testing to additional requirements of the Marine Administration of the country where the ship is registered (i.e. the flag state) or those acting on behalf of that Administration
12. Should a change of Place of Production from that stated below be required i.e. where the stages of manufacture/assembly/testing of this product take place, the new Place of Production is to be advised to us prior to the change taking place. This Certificate will require to be updated for Approval to be maintained
13. All instructions or markings that accompany life-saving appliances or are printed directly on the appliances must be in both English and French, as per Canadian procedures for approval of life-saving appliances and fire safety systems, equipment and products document no. TP 14612E (05/2011) paragraph 2.2.1.3. However, independent signage can be accepted in lieu of the instructions or marking required in paragraph 2.2.1.3 if it is in both English and French, highly visible (size, colour, posting location), water and weather proof and posted at each muster station and where the appliance is stored

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PLACES OF PRODUCTION

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Lijo Thomas
Senior Specialist
Statutory Fire & Safety
Marine Technology and Engineering Services
Lloyd's Register EMEA

Supplementary Type Approval Terms and Conditions

This certificate and Design Appraisal Document relates to type approval, it certifies that the prototype(s) of the product(s) referred to herein has/have been found to meet the applicable design criteria for the use specified herein, it does not mean or imply approval for any other use, nor approval of any products designed or manufactured otherwise than in strict conformity with the said prototype(s).

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