

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
Address	Kingsway, Dunmurry, Belfast, BT17 9AF
Type	Liferafts
Description	COASTAL LIFERAFTS, 4 person throw over coastal liferaft - Type: "RFD Surviva MKIV 4 Person TO" (also known as "DSB LR07", "Beaufort Seafarer TO", "Crewsaver", "Elliot", "Survitec Zodiac", "DBC", "SSPI" and "New Wave Guardian".)
Trade Name	RFD Surviva MKIV 4 Person TO
Specified Standard	TP 14475E

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.

ATTACHMENT TO CERTIFICATE OF TYPE APPROVAL No. LR2013088TC

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

EXAMINED DOCUMENTATION

Plan No.	Rev.	Date	Description
D51326	11	16/10/13	General Arrangement RFD Mk IV, 4TO
D51156	4	07/04/09	Buoyancy Assemblies MKIV 4 Person
DCS9124	5	17/04/09	Canopy 4 TO Survival MKIV
LA 4 -0356	0	05/06/02	Seamless Steel Cylinder for gas
D43042	5	22/11/12	Container MK18 Size 1
17938	15	07/07/14	GRP Container Mk 10
M269	3	Jun 12	Service Manual
DCS0110	7	26/02/13	Introduction of a new Daniamant RL6 lighting system as an alternative lighting system on Marine MK4 SOLAS liferafts

Configuration: “RFD MKIV 4 Person” liferafts consist of a standard “Surviva MK IV” liferaft fitted with Leaffield 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

TEST REPORTS

Report No.	Date	Title or Description
84/08	21/10/08	Hot inflation test of RFD Surviva MkIV Liferaft
82/08	15/10/08	Cold inflation test of RFD Surviva MkIV Liferrafts
93/08	19/11/08	Towing Test of RFD Surviva Liferrafts
94/08	19/11/08	Detailed Inspection and Weight Test of RFD Surviva MkIV Liferrafts
79/08	21/10/08	Loading and seating test of RFD Surviva MKIV Liferrafts
77/08	13/10/08	Stability test of RFD Surviva MKIV Liferrafts
75/08	13/10/08	Boarding test of RFD Surviva MKIV Liferrafts
76/08	13/08/08	Closing arrangement test of RFD Surviva MKIV Liferrafts
73/08	13/10/08	Manoeuvrability test of RFD Surviva MKIV Liferrafts
74/08	13/10/08	Swamp Test of RFD Surviva MKIV Liferrafts
78/08	13/10/08	Damage test of RFD Surviva MKIV Liferrafts
71/08	13/10/08	Righting test of RFD Surviva MKIV Liferrafts
80/08	31/10/08	Ambient Inflation and painter pull test of RFD Surviva MKIV Liferrafts
72/08	13/10/08	Inherent Buoyancy test of RFD Surviva MKIV Liferrafts
48/08	15/08/08	3 times pressure test of Surviva MKIV Liferrafts
49/04	18/11/08	18 m drop test of the RFD Surviva 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)

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Report No.	Date	Title or Description
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)
42/08	21/05/08	Jump test of RFD of Surviva MKIV Liferrafts
46/08	14/08/08	Mooring out test of Surviva MKIV Liferrafts
44/08	14/08/08	Canopt closure test of Surviva MKIV Liferrafts
14/08	04/07/08	36m Drop Test of RFD Surviva MKIV Liferrafts (Leaffield Inflation System)
40/08	10/07/08	Wind velocity test of Surviva MKIV Liferrafts
60/08	27/08/08	Seam strength test of Surviva MKIV Liferrafts
12/08	29/07/08	Lifeline Strength Test of RFD Surviva MKIV Liferrafts
09/08	29/07/08	Painter System Test of RFD Surviva MKIV Liferrafts
64/08	01/09/08	Visual Inspection of RFD Surviva MKIV Liferrafts
43/08	12/08/08	Seating Arrangement Test of RFD Surviva MKIV Liferrafts
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

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

- The liferafts container shall be marked with the makers name or trade mark, serial number, approving authority, number of persons it is approved to carry, the type of emergency pack enclosed, date when last serviced, length of painter, maximum stowage height and launching instructions. The liferaft container shall not be marked as SOLAS
- The liferaft shall be marked with the makers name or trade mark, serial number, date of manufacture, approving authority, name and place of last servicing station, and the number of persons it is approved to carry
- Detailed instructions for use, maintenance and installation of the liferaft and also instructions for use and maintenance of the liferaft equipment shall be provided to each purchaser and be available on board. 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 requirements
- Each liferaft should be fitted with equipment complying with paragraph 4.8.8.1 of Canadian Life Saving Appliance Standard TP 14475E. The copy of the life-saving signals is to be printed on a waterproof card or placed in a waterproof container

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6. The cylinders used in the inflation system shall be in accordance with the requirements of paragraph 5.10 of the Transportation of Dangerous Goods Regulations and be manufactured and used in accordance with the standards CSA-B339 and CSA-B340 respectively
7. Every coastal liferaft shall have affixed to it a retro-reflective medium that meets the Recommendation on the use and fittings of retro-reflective materials as given in IMO resolution A.658 (16)
8. Installation on board: The on board arrangements and installation of the liferaft are not part of this design appraisal and shall be to the satisfaction of the attending Surveyor
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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PLACE OF PRODUCTION

Survitec Group Ltd,
Kingsway,
Dunmurry,
Belfast,
BT17 9AF,
Northern Ireland



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).