Certificate No: LR2552964SSTC
Issue Date: 22/10/2023
Expiry Date: 21/10/2028

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, Dunmurry, Belfast, BT17 9AF, United Kingdom
Type	Liferafts
Description	Annually serviced 35 person's davit-launched canopied inflatable automatically self-righting liferafts
Trade Name	RFD Surviva R 35 SR DL (also known as DSB LR 97 R 35 SR DL, SURVITEC R 35 SR DL, SURVITEC ZODIAC R 35 SR DL, CREWSAVER R 35 SR DL, ELLIOT R 35 SR DL)
Specified Standard	IMO Resolution MSC.81 (70), as amended TP 14475 - Canadian Life Saving Appliance Standard

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

Fire & Safety - Senior Surveyor to Lloyd's Register EMEA
A member of the Lloyd's Register group

71 Fenchurch Street, London, EC3M 4BS, United Kingdom

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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 0000226

APPROVAL DOCUMENTATION

DSB, SERVICE MANUAL for SOLAS 74/96 - SELF RIGHTING LIFERAFTS and their equipment Throwover liferafts type LR 97 SR for 25, 35, 50, 102 and 150 persons & Davit launchable liferafts type LR 97 LSR for 25 and 35 persons, Issue 05/2012, Art. No. 8.09.57.15.0, dated 05 May 2012.

DSB, Design Change Sheet No 9968, regarding the introduction of Thanner DK99 as an alternative Inflation System on Marine MK4 SOLAS liferafts.

Design Change Sheet No 9922, regarding the introduction of new container straps and crimps.

Design Change Sheet No 8866, Introduction of alternative fabric related to LIN Report No.0394 RFD 1070, dated 08/05/2008.

Drawing. No	Rev No.	Date	Drawing Title
23511-01 23511-03 23511-02	C	15.06.08	Davit Launchable Liferaft LR97 LSR-SOLAS-LSA 35 Pers. Type 11

TEST REPORTS

Inflatable Liferafts Evaluation and Test Reports DSB LR97 SRL – 35 person, dated 03 September 2007, as witnessed by a Lloyd's Register surveyor.

Drop Test LR97 SR - 35 persons, report no 52403, dated 09 December 1998.

Drop Test Marine 35 SR DL (Endura) 25m, Marine Report No 20/2012, dated 06 June 2012, as witnessed by a Lloyd's Register surveyor.

Drop Test – 36m 35P DL Self Righting Liferaft, Marine Report No TR2018-007, dated 28/02/2018.

Jump Test LR LSR – 35 person, report no 52402, dated 25 November 1998.

Jump Test LR 97 SR 150 person, report no 241111.2, dated 24 November 2011, witnessed by Surveyor acceptable to Lloyd's Register.

Weight Test LR97 LSR – 35 person, report no. 52338, dated 09 December 1998 & 52773, dated 08 March 1999.

Weight Test LR97 LR - 35 persons, report no 52403, dated 09 December 1998 & 20 April 1999.

Towing Test LR97SR – 35 person, report no 52403, dated 07 December 1998.

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Towing Test LR97 LSR 35 person, report no 201011.1, dated 20 October 2011, witnessed by Surveyor acceptable to Lloyd's Register.

Mooring Out Test LR97 - 16 person, report no. 47918 & 47919, dated 21 March – 20 April 1997.

Liferaft Painter System Test LR97 LR – 35 person, dated 25 July 1989.

Loading and Seating Test LR97SR - 35 persons, report no 52403, dated 23 November 1998.

Loading and Seating Test 25 person SRL, Marine Report No 68/11, date complied 24 November 2011.

Boarding Test LR97SR- 35 persons, report no 52403, dated 23 November 1998.

Boarding Test LR97 SR 102, 25 & 150 person, Marine Report No, 76/11, 77/11, 78/11, dated 15 December 2011.

Stability Test LR97SR - 35 person, report no 52403, dated 23 November 1998.

Stability Test LR97 SR 25 person, Marine Report No 81/11, dated 15 December 2011.

Manoeuvrability Test LR97SR - 35 persons, report no 52403, dated 23 November 1998.

Maneuverability Test LR97 SR 25 & 102 person, Marine Report No 88/11, 89/11, dated 15 November 2011.

Swamp Test LR97LSR - 35 persons, report no 52403, dated 23 November 1998.

Canopy Closure Test LR97L – 25 persons, report no 48162, dated 05 February 1997.

Buoyancy of Float-free Liferafts Test LR97 LSR – 35 person, report no 52338, dated 23 November 1998.

Detailed Inspection LR97 LSR – 35 person, report no 52338, dated 09 December 1998.

Davit-launched Liferaft Boarding Test LR97 LSR – 35 person, report no 52338, dated 08 December 1998.

Davit-launched Liferafts Boarding Test LR97 SR 35 person Marine Report No 84/11, dated 14 December 2011.

Davit-launched Liferafts Drop Test LR97 LSR – 35 person 3m, report no 52402, dated 09 December 1998.

Davit-launched liferafts Drop Test LR97 SR 35 person 3m, Marine Report No 83/11, dated 15/11/2011.

Davit-launched Liferafts Impact Test LR97 LSR – 35 person, report no 52338, dated 08 December 1998.

Davit-launched liferafts Impact Test Marine Report No 82/11, dated 14 December 2011.

Davit-launched liferafts - strength test of lifting components, Report No. LR 97 L & LR97 LSR, dated 14 July 1997, witnessed by Surveyor acceptable to Lloyd's Register.

Davit-launched liferafts - strength test of lifting components LR 97 35 SR DL, Marine Report No 64/11, dated 21 December 2011.

Cold Overload Test LR97 LSR – 35 person, report no 52402, dated 07 December 1998.

Cold Overload Test LR97 SR - 35 person, Marine Report No 86/11, dated 15 December 2011.

Damage Test LR97LSR - 35 persons, report no 52403, dated 23 November 1998.

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Damage Test 25 person SRL, Marine Report No 67/11, date complied 24 November 2011.

Davit-launched Inflatable Liferafts Strength Test LR 97 LSR, report no 52338, dated 08 December 1998.

Davit-launched Inflatable Liferafts - Strength Test LR97 SR 35 Person, Marine Report No 85/11, dated 14 November 2011.

Inflation Test (Cold) Marine DLST (Endura) - 35 person, Marine Report No 19/2012.

Ambient Inflation Test 35DL SRL Endura Marine Report No: 03/07 Date compiled 15/05/07 as witnessed by a Lloyd's Register surveyor.

Inflation Test (Hot) Thanner Inflation System LR97LSR – 35 person, report no 52403, dated 26 November 1998.

Hot Inflation Test 35DL SRL Endura Marine Report No 05/07, Date compiled 15/05/07.

Inflation Test (Cold) Thanner Inflation System LR97LSR – 35 person, report no 52773 & 52774, dated 08 March 1999.

Cold Inflation Test 35DL SRL Endura, Marine Report No 04/07, Date compiled 15/05/07.

Lowering Abrasion Test LR97 LSR – 35 person, report no 52338, dated 08 December 1998.

Davit-launched inflatable liferafts Lowering Abrasion Test LR97 SR 35 Person, Marine Report No 87/11, dated 14 November 2011.

Pressure Test LR97 LSR – 35 person, report no 52338, dated 26 November 1998.

Righting Test – Activation of uninflated inverted raft LR97LSR – 35 person, report no 52402, dated 09 March 1999.

Seam Strength Test LR 97 & LR 97 L, dated 25 July 1997, witnessed by Surveyor acceptable to Lloyd's Register.

Automatic Self-righting Liferafts - Self-righting Test, LR97 LSR – 35 person, report no 52402, dated 09 March 1999.

Automatic Self-righting Liferafts - Submergence Test LR97 LSR – 35 person, report no 52402, dated 22 March 1999.

Wind Velocity Tests LR97 LSR – 35 persons, report no. 48329, dated 17 March 1998.

Self Draining Test - self-draining of floors of Canopied reversible Liferafts and automatically self-righting Liferaft LR97 LSR – 35 person, report No. 52338, dated 20 May 1999, witnessed by Surveyor acceptable to Lloyd's Register.

Boxing Glove Test LR97 SR – 50 person, report no 50046, dated 16 December 1997.

Installation and Inflation Test – Davit launchable Self-righting Liferaft LR97LSR – 35 person, with SOLAS -A-Pack, dated 12 March 2006.

Lin Report & Smithers Rapra, Report No.0394 Fabric Material Test Report for Rubber coated Nylon 66 (RFD 1070), dated 18/12/2007.

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CONDITIONS OF CERTIFICATION

Liferaft specification when used with Thanner/Hydrauflax Inflation System

SOLAS Pack	Container Type/Size	Stowage Height	Stowed Weight	Laden Weight
A	35/5F or 35/7F	25M	354 Kg	3242 Kg
B	35/4F or 35/8F	25M	264 Kg	3152 Kg
A	35/5F or 35/7F	36M	354 Kg	3242 Kg
B	35/4F or 35/8F	36M	264 Kg	3152 Kg

Towing Forces:
@ 2 KTS = 0.965 KN
@ 3 KTS = 1.956 KN

1. This liferaft has been approved assuming for each person an average mass of 82.5 kg.
2. The liferaft's container shall be marked as required by the LSA Code Regulation IV/4.2.6.3 with the maker's name or trade mark, serial number, approving authority, number of persons it is approved to carry, SOLAS, the type of emergency pack enclosed, date when last serviced, length of painter, maximum stowage height and launching instructions.
3. The liferaft shall be marked as required by the LSA Code Regulation IV/4.2.7.1 with the maker's 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.
4. Provision shall be made for marking each liferaft as required by the LSA Code Regulation IV/4.2.7.2 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.
5. The service of the liferaft is to be undertaken annually at a Lloyd's Register approved or Flag Administration approved Service station duly authorised and appointed by the manufacturer subject to the following conditions.
6. Detailed instructions for use, maintenance and installation of the liferaft complying with SOLAS Regulations III/35 and 36 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 SOLAS requirements.
7. 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 an approved type in accordance with the applicable IMO requirements.
8. If the specified standards are amended during the validity of this certificate, the product is to be re-approved prior to it being supplied to vessels to which the amended standards apply.

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9. 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.

10. 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.

11. 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 14475E (12/2023) paragraph 1.2. However independent signage can be accepted in lieu of the instructions or marking required in paragraph 1.2 if it is in both English and French, highly visible (size, colour, posting location), water and weatherproof and posted at each muster station and where the appliance is stored.

12. Should a change of Place of Production from that provided at the application stage 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 updated notification about the Place of Production is required for this Approval to be maintained.

Lijo Thomas
Senior Specialist
Fire & Safety, Statutory Discipline Team
UK&I Technical Support Office, Marine & Offshore
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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