Certificate No: LR25308646TATC
Issue Date: 15/10/2025
Expiry Date: 14/10/2030

Certificate of Type Approval

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 contracting governments to issue the relevant certificates, licences, permits etc.

Manufacturer	**Survitec Group Ltd.**
Address	Kingsway, Dunmurry, Belfast, BT17 9AF, United Kingdom
Type	Davit Launched Canopied Inflatable Liferaft
Description	12 persons, 16 persons, 20 persons & 25 persons davit launched canopied inflatable liferafts
Trade Name	RFD Surviva DL Mk IV (also known as Survitec RFD, Survitec Zodiac and Survitec)
Specified Standard	IMO Res MSC.81(70) as amended IMO Res. MSC.481(102) 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 attached Design Appraisal Document forms 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.

Marina Borglin

Fire & Safety - Assistant Specialist 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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DESIGN APPRAISAL DOCUMENT

ATTACHMENT TO CERTIFICATE OF TYPE APPROVAL No. LR25308646TATC

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 Design Appraisal Document forms part of the Certificate.

This Certificate Supersedes and is a Renewal and an Amendment of Certificate Number LR22519554SS & LR22520885TC

APPROVAL DOCUMENTATION

Service Manual for Marine MK IV liferafts Throwover and Davit Launch Liferafts, M269–00 Version 8, dated August 2021.

50864105 Document Schedule – Surviva Mk 4, 12 Persons (DL) – PU/PE, Revision 004, dated 19/03/2025.

50865105 Document Schedule – Surviva Mk 4, 16 Persons (DL) – PU/PE, Revision 004, dated 19/03/2025.

50866105 Document Schedule – Surviva Mk 4, 20 Persons (DL) – PU/PE, Revision 004, dated 19/03/2025.

50867105 Document Schedule – Surviva Mk 4, 25 Persons (DL) – PU/PE, Revision 004, dated 19/03/2025.

Design Change Sheets (DCS):

DCS 8920, Surviva MkIV range of Liferafts with Leafield GIST Inflation System appropriate for USCG compliant product only (Liferafts fitted with US DOT Compliant Cylinders), 08/09/2008.

DCS 9323, Marine Liferafts MK4 Family Introduction of Bostik 6530 Structural Adhesive, dated 22/05/2010.

DCS 9701, Marine Liferafts MK4 Family Introduction of PU coated structural fabric p/n. 10772009, RFD Spec. 1015 Type 1 (single sided) , dated 07/12/2011.

DCS 9968, Marine MK4 SOLAS Liferaft Introduction of Thanner DK99 Inflation System as an alternative to Leafield GIST Inflation System issued on 10/08/2012.

DCS 0110, Marine Liferafts MK4 Introduction of Daniamant RL6 Lighting System, dated 12/03/2013.

DCS 2025-093, MK4 Introduction of RL8 Lighting System, undated.

DCS 2023-053, Mk4 Marine Liferafts - Updated hull design, dated 08/01/2025.

Drawing No.	Rev. No.	Date	Drawing Title
D 50864 (2 Sheets)	16	28/03/2025	Marine Liferaft 12DL General Arrangement/Design Data
D 50865 (2 Sheets)	18	28/03/2025	Marine Liferaft 16DL General Arrangement/Design Data
D 50866 (2 Sheets)	16	01/04/2025	Marine Liferaft 20DL General Assembly
D 50867 (2 Sheets)	18	15/01/2025	Marine Liferaft 25DL General Assembly

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DESIGN APPRAISAL DOCUMENT

ATTACHMENT TO CERTIFICATE OF TYPE APPROVAL No. LR25308646TATC

TEST REPORTS

Report No.	Date	Title
01/13	29/11/2012	46m Drop Test for Mk4 25 Person DL Extended Service Liferaft in MK10 Size 9 HW & MK14 Size 17 HW Containers
KOB 1424176/LIV	21/11/2014	LR Statement of Fact Liferaft Towing Test RFD Toyo 25 Person DL MkIV Liferaft
92/10	22/02/2011 03/03/2011	Towing Test for Marine Mk4 (4 – 25 Person TO) & (12 – 25 Person DL) Liferafts
86/10	16/02/2011	Cold Overload Test for Marine Mk4 25 Person DL Liferaft
82/10	09/12/2010	Strength Test for Marine Mk4 25 Person DL Liferaft
74/10	23/10/2011	3m Drop Test for Marine Mk4 25 Person DL Liferaft
64/10	-	Lifting Components Strength Test for Marine Mk4 12, 16, 25 & 25 Person DL Liferaft
78/10	30/11/2010	Boarding Test for Marine Mk4 25 Person DL Liferaft
60/10	07/12/2010	Impact Test for Marine Mk4 25 Person DL Liferaft
41/10	25/11/2010	Manoeuvrability Test for Marine Mk4 (4 – 25 Person TO) & (12 – 25 Person DL) Liferafts
23/10	03/03/2011	Jump Test for Marine Mk4 25 Person DL Liferaft
90/10	09/12/2010	Lowering Abrasion Test for Marine Mk4 (12 – 25 Person DL) Liferafts
TR2016-014	01/06/2016	Water Pocket Fill, Overload & Mooring Out Test for Marine Mk4 25 Person DL Liferaft
38/10	06/12/2010	Loading and Seating Test for Marine Mk4 (4 – 25 Person TO) & (12 – 25 Person DL) Liferafts
39/10	06/12/2010	Boarding Test for Marine Mk4 (6, 20 & 25 Person TO) & (20 & 25 Person DL) Liferafts
40/10	06/12/2010	Stability Test for Marine Mk4 (4 – 25 Person TO) & (12 – 25 Person DL) Liferafts
42/10	06/12/2010	Damage Test for Marine Mk4 (4 – 25 Person TO) & (12 – 25 Person DL) Liferafts
40/2008	08/07/2010	Wind Velocity Test for Surviva Marine Mk4 8 Person TO & 25 Person DL Liferafts
21/2008	14/08/2008	Inherent Buoyancy Test (Buoyancy of Float-free Liferaft Test) for RFD Surviva Marine Mk4 6 Person TO, 16 & 25 Person DL Liferafts
23/2008	14/08/2008	Righting Test for RFD Surviva Marine Mk4 6 Person TO, 16 & 25 Person DL Liferafts
24/2008	14/08/2008	Swamp Test for RFD Surviva Marine Mk4 6 Person TO, 16 & 25 Person DL Liferafts
28/2008	14/08/2008	Closing Arrangement for RFD Surviva Marine Mk4 6 Person TO, 16 & 25 Person DL Liferafts
44/2008	14/08/2008	Canopy Closure Test for Surviva Marine Mk4 8 Person TO & 25 Person DL Liferafts
09/08	29/07/2008	Painter System Test for RFD Surviva Marine Mk4 6 Person TO & 25 Person DL Liferafts

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DESIGN APPRAISAL DOCUMENT

ATTACHMENT TO CERTIFICATE OF TYPE APPROVAL No. LR25308646TATC

36/07	24/09/2007	Weight Test for RFD Surviva Mk4 & Endura (using Surviva Mk4 Hulls), (6 – 25 Person TO) & (12 – 25 Person DL) Liferafts
59942	22/11/2016 & 07/12/2017	Lin Report & Smithers Rapra, Fabric Material Test Report for 3824 (TPU single side coated fabric material)
DM-QTD 2022-113 Rev 1	07/12/2022	Ambient Inflation Test (MK4 Welded Short and Main Seam) 25 person TO Liferafts
DM-QTD 2022-114 Rev 1	07/12/2022	Cold Inflation Test (MK4 Welded Short and Main Seam Cold Deployment Test) 6 Person TO Liferafts
DM-QTD 2022-115 Rev 1	07/12/2022	Hot Inflation Test (MK4 Welded Short and Main Seam) 16 Person TO
DM-QTD 2022-116 Rev 1	07/12/2022	Over Pressure Test (MK4 Welded Short and Main Seam)
DM-QTD 2022-132 Rev 1	05/09/2022 & 06/12/2022	Seam Strength Test for MK 4 Liferafts (Weld Hydrolysis and Seam Shear) RFD 1015/1 & 1015/2
DM-QTD 2023-050 Rev 1	03/04/2025	36m Drop Test for 25 Person DL MK 4 Liferaft
DM-QTD 2023-051 Rev 1	03/09/2024	Jump Test of MK 4 25 Person DL Liferaft
DM-QTD 2023-053 Rev 1	19/05/2025	Mooring Out Test for 25 Person TO MK 4 Liferaft
DM-QTD 2024-075 Rev 1	19/05/2025	46m Drop Test for 25 Person DL MK 4 Liferaft
DM-QTD 2025-009 Rev 1	12/11/2024	RL8 Illuminate Ambient Deployment (Inflation Test) for Mk4 16 Person TO & 25 Person DL Liferafts
DM-QTD 2025-011 Rev 1	02/12/2024	RL8 Illuminate Cold Deployment for Mk4 25 Person DL Liferaft
DM-QTD 2025-013 Rev 1	12/02/2025	RL8 Illuminate Hot Deployment (Inflation Test) for Mk4 25 Person DL Liferaft
DM-QTD 2025-015 Rev 1	15/05/2025	RL8 Illuminate Drop and Jump Test for Mk4 25 Person DL Liferaft
DM-QTD 2025-017 Rev 1	14/05/2025	RL8 Illuminate Switch Arrangement Test for Mk4 25 Person DL Liferaft

Qualifying Tests for Liferafts Fitted with Transportable Pressure Equipment Directive (TPED) Compliant Cylinders:

Report No.	Date	Title
25/07	11/09/2007	Cold Inflation Test Endura 6 & 25 Person TO & DL Liferafts (using Surviva MK4 hull), completed with Leafield (GIST)
24/07	07/09.2007	Hot Inflation Test of RFD Endura MK4 6 Person TO & 25 Person DL Liferaft, completed with Leafield (GIST)

Qualifying Tests for Leafield GIST Inflation System & Liferafts* fitted with *United States Department of Transportation (DOT) Compliant Cylinders:

Report No.	Date	Title
07/08	01/08/2008	Hot Inflation of RFD Surviva MKIV 6 Person TO, 16 & 25 Person DL Liferafts (Leafield GIST)
02/08	14/04/2008	Cold Inflation of RFD Surviva MKIV 6 Person TO, 16 & 25 Person DL Liferafts (Leafield GIST)
14/08	14/07/2008	36m Drop Test of RFD Surviva MKIV 6 Person TO, 16 & 25 Person DL Liferafts (Leafield GIST)
39/08	04/08/2008	46m Drop Test of RFD Surviva MKIV 25 Person DL Liferafts (Leafield GIST)
06/08	23/04/2008	Ambient Inflation & 150N Painter Pull Test of RFD Surviva MKIV 6 Person TO, 16 & 25 Person DL Liferafts (Leafield GIST)

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ATTACHMENT TO CERTIFICATE OF TYPE APPROVAL No. LR25308646TATC

Qualifying Tests for Thanner Compact Inflation System & Liferafts Fitted *with Transportable Pressure Equipment Directive (TPED)* Compliant Cylinders:

Report No.	Date	Title
16/08	09/06/2008	36m Drop Test of RFD Surviva MK4 25 Person DL Liferaft (c/w Thanner Mk6 Inlet Valve & Thanner DK99 Short Operating Head)
18/08	04/06/2008	Cold Inflation Test of RFD Surviva MK4 25 Person DL Liferaft (c/w Thanner Mk6 Inlet Valve & Thanner DK99 Short Operating Head)
19/08	05/06/2008	Hot Inflation of RFD Surviva MK4 25 Person DL Liferaft (c/w Thanner Mk6 Inlet Valve & Thanner DK99 Short Operating Head)

TECHNICAL CRITERIA

Liferaft Capacity	SoLaS E-Pack	RFD Containers			Weight (Kg)	Drop Height (m)	Laden Weight (Kg)
		Mk10 Size	Mk14 Size	Mk20 Size			
12DL	A	6DL			114	46	1104
	B	4DL			90	46	1080
	A		14DL		113	46	1103
	B		14DL		92	46	1082
16DL	A	7DL			139	46	1459
	B	6DL			107	46	1427
	A		14DL		152	46	1472
	B		14DL		106	46	1426
	A		17DL		141	46	1461
20DL	A	9DL			160	46	1810
	B	7DL			120	46	1770
	A			7DL	160	20	1810
	A		17DL		163	46	1813
	B		17DL		123	46	1773
25DL	A	9DL			183	46	2246
	B	7DL			133	46	2196
	A		17DL		185	46	2248
	B		17DL		135	46	2198
	A			7DL	183	20	2246
	B			7DL	153	20	2216

Towing Forces:

	12 DL	16 DL	20 DL	25 DL
Towing Force @ 2 Knots (kN)	0.80	0.87	0.78	0.92
Towing Force @ 3 Knots (kN)	1.79	2.06	1.50	3.04

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ATTACHMENT TO CERTIFICATE OF TYPE APPROVAL No. LR25308646TATC

CONDITIONS OF CERTIFICATION

1. 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.
2. **Operating head inflation system:**
   i. Manufacturer: Leafield Marine Limited Type: GIST (to be used only with PD 11401 & ARCTIC-04 hose)
   ii. Manufacturer: Thanner & Co A/S Type: DK 99 series
3. The liferaft maximum stowage height of 46m above the waterline.
4. This Inflatable Liferaft is not intended for extended service intervals.
5. Rigid containers for liferafts to be launched by a launching appliance shall be so secured that the container or parts of it are prevented from falling into the sea during and after inflation and launching of the contained liferaft.
6. The liferaft's container shall be marked as required by the LSA Code Regulation IV/4.2.6.3 with the marker's name or trademark, 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. In addition, containers of liferafts carried on ro-ro passenger ships fitted with a radar transponder shall be clearly marked.
7. The liferaft shall be marked as required by the LSA Code Regulation IV/4.2.7.1 with the maker's name or trademark, serial number, date of manufacture, approving authority, name and place of last servicing station, and the number of persons it is approved to carry.
8. 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.
9. Instructions on how to survive complying with IMO Resolution A.657(16) are to be provided on board the liferaft.
10. All equipment installed on board the liferaft is to be of an approved type as required by SOLAS and the LSA Code as applicable.
11. **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.
12. 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.
13. Detailed instructions for use, maintenance, and installation of the liferaft complying with SOLAS Regulations III/35 and 36 and instructions for use and maintenance of the liferaft equipment shall be provided to each purchaser and be available on board.
14. 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.

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ATTACHMENT TO CERTIFICATE OF TYPE APPROVAL No. LR25308646TATC

15. 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.

16. 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 (11/2024) paragraph 2.2. 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 weatherproof and posted at each muster station and where the appliance is stored.

17. 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.

Marina Borglin
Assistant 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).

This product has been verified to be fully in accordance with Transport Canada Procedure TP 14612E "Procedures for approval of life-saving appliances and fire safety systems, equipment and products and is suitable to be placed on Canadian Flagged vessels.

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