



Transport
Canada
Safety and Security

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Certificate No: LR23392224TC
Issue Date: 08/02/2023
Expiry Date: 07/02/2028

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 Survival One Limited – Trading as Crewsaver
Address	Survitec House, Lederle Lane, Fareham Reach, Gosport, PO13 0FZ, United Kingdom
Type	Lifejackets
Description	Twin chamber inflatable lifejacket for adults – Types: “Seacrewsader” and “Crewfit Twin”, twin chamber
Trade Name	"Seacrewsader"and "Crewfit Twin", twin chamber
Specified Standard	IMO Resolution MSC.81 (70) Part 1, as amended Canadian Life Saving Appliance Standard TP 14475 E

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.

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

Lijo Thomas

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

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ATTACHMENT TO CERTIFICATE OF TYPE APPROVAL No. LR23392224TC

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 of Certificate No LRTC 0000191-02

APPROVAL DOCUMENTATION

<u>Plan Date</u>	<u>Title or Description</u>
April 2010	Component Drawing (Harness)
April 2010	Component Drawing (Non Harness)
April 2010	Dimension Drawing
April 2010	Inflation Chamber Patterns
April 2010	Cover Patterns
April 2010	Construction
April 2010	Hood Pattern
25 August 2010	Product specification PGS 2010
28 September 2011	Product Specification Part (A) Issue 6
5 February 2013	Product Specification Part (A) Issue 10 Seacrewsader 2010
5 February 2013	Product Specification Part (A) Issue 9 Crewfit Twin 2010
12 June 2017	Product Specification Part (a) Issue 9 150N Twin Chamber Lifejacket

TEST REPORTS

SGS test report No: PPE 10786(1)/SM/07 for inflation chamber material, TPU 1001/P, dated 30/April/2007.

Component certification for MK5 automatic inflator issued by Fleetwood Test House, dated 19/01/2010.

FORCE Technology test report for stainless steel buckle, Report No 110-24383.c, dated 01/07/2010.

Test report No 107-38263-b, dated 04/08/2008 issued by FORCE Technology for buckle SS40.

Fleetwood test report no BLS/FTL/2218, dated 29th July 2010 for seacrewsader 2010 and crewfit twin 2010 inflatable lifejacket.

Fleetwood test report no BLS/FTL/2218a, dated 2nd August 2010 for seacrewsader 2010 and crewfit twin 2010 inflatable lifejacket.

Fleetwood test report no DAR/FTL/1182, dated 21st May 2008 for automatic inflation system MA1EC manufactured by CM Hammar.A.B.

Technical report No: SPC0181974/1005/11 issue 2, dated 23rd June 2010 for the fabric.

Technical report No: SPC0181599/1003, dated 12th March 2010 for the webbing.



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Technical report No: SPC0179670/0943, dated 18th December 2010 for the thread.

EC Type Examination certificate for "290 Deck Safety Harness" issued by Fleetwood notified body.

Fleetwood test report no BLS/FTL/2219a, dated 6th September 2010 for Crewsaver 290 deck safety harness to EN ISO 12401:2009.

Fleetwood test report no SLJ/FTL/2276, dated 14th October 2010 for seacrewsader and crewfit twin lifejacket safety harness and integrated cowtail/safety line to EN ISO 12401:2009.

Test report No: 2008000970, Issue 1, dated 12/01/2009, on salt spray testing on lifeline hook.

Test report for Seacrewsader 2010 fitted with mobilarm and integrated elasticated cowtail safety line, report number BLS/FTL/2292, dated 26th November 2010, conducted at Fleetwood testing laboratory.

Technical report No: SPC0181029/0951, dated 19th January 2010 for the tubular webbing used on the elasticated cowtail.

Tri-Burst zipper function test, Fleetwood Test Laboratory test report number DK/FTL/2351a, dated 21.10.2011.

Drop test for lifejacket fitted with Seamarsshall PLB, Fleetwood Testing Laboratory test report number DK/FTL/2351, dated 13.10.2011.

FORCE TECHNOLOGY test report no: 111-24339.a, dated 22-06-2011 for No 0534 Fast Donning Safety Buckles manufactured by Makefast.

Fleetwood Testing Laboratory test of the Seacrewsader 2010 seismic lifejacket with integrated cowtail to EN ISO 12401:2009 for deck safety harnesses and deck safety lines, test report BLS/FTL/2351, dated 18th July 2011.

PRUFBERICHT test report No 0910068-1, dated 05.02.2009.

SATRA Technology Centre test report No FWT0196151/1128/T-3, dated 10th November 2011 for the Fabric Reverseal 200HT.

Fleetwood test report No BSL/FTL/2426, dated 29th March 2012.

Fleetwood test report JH/FTL/2943, dated 20.05.2017 for acceptance of the spray hood.

Fleetwood Testing Laboratory test of the 01218 3D Seacrewsader twin chamber 275N inflatable lifejacket with UML pro sensor elite auto inflation mechanism with amended manifold position, test report DB/FTL/3147e, dated 26th July 2019.

Fleetwood Testing Laboratory test of the 01218 3D Seacrewsader twin chamber 275N inflatable lifejacket with seismic bladder, zipped viewing panels, test report NW/FTL/3147d, dated 25th June 2019.

**ATTACHMENT TO CERTIFICATE OF TYPE APPROVAL No. LR23392224TC****CONDITIONS OF CERTIFICATION**

Product	Inflation System	Variants		Inflation Chamber material
		Front Closure	Cover	
01218 3D Seacrewsader 2010	Pro Sensor Elite Automatic Inflator, UML	Deck Safety Harness version with stainless steel 3 bar buckle, Waist belt version with plastic buckle and Waist belt version with plastic buckle combined with Fall Arrest Harness	Polyester cover/removable, wipe clean cover/removable, Silver flame proof and fire retardant cover/removable.	TPU 1001/P Riverseal 200-HT
Seacrewsader 2010 with Zipped Inspection Window	MK5, UML	Deck Safety Harness version with stainless steel 3 bar buckle, Waist belt version with plastic buckle and Waist belt version with plastic buckle combined with Fall Arrest Harness	Polyester cover, wipe clean cover, Silver flame proof and fire retardant cover.	TPU 1001/P Riverseal 200-HT
Seacrewsader 2010 Seismic lifejacket.	MK5, UML	Deck Safety Harness version with survivor locating devices Mobilarm/ Sea Marshall and integrated elasticated cowtail safety line.	Polyester cover, wipe clean cover, Silver flame proof and fire retardant cover.	TPU 1001/P Riverseal 200-HT
Crewfit Twin 2010	MA1EC, Hammar	Deck Safety Harness version with stainless steel 3 bar buckle, Waist belt version with plastic buckle and Waist belt version with plastic buckle combined with Fall Arrest Harness	Polyester cover, wipe clean cover, Silver flame proof and fire retardant cover.	TPU 1001/P Riverseal 200-HT

1. 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.
2. Instructions for use shall be provided with each lifejacket. As prescribed by SOLAS Regulation III/35 one or more additional copies shall be provided for inclusion in the vessel's Training Manual.
3. The lifejacket is approved for use by adults with a minimum weight 43 Kg or above and a minimum height of 155 cm or more.



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4. This lifejacket is suitable for persons weighing up to 140 kg and with a chest girth of up to 1,750 mm.
5. As prescribed by SOLAS Regulation III/36 and where applicable, lifejackets shall be maintained as per manufacturers' instructions.
6. Each lifejacket shall also be clear marked with the information required by LSA Code as amended by Regulation I/1.2.2.9 and II/2.2.1.2.
7. An approved lifejacket light meeting the requirements of the LSA Code as amended by Regulation II/2.2.3 is to be fitted. The light is to be tested and meet the requirements of IMO Resolution MSC.81 (70), Part 1, 10.3 and 10.4 and its attachment have to be to the satisfaction of the attending Surveyors.
8. In accordance with SOLAS Chapter III Regulation 20.8, inflatable lifejackets are required to be serviced at intervals not exceeding 12 months, provided in any case this impracticable, the Administration may extend this period to 17 months.
9. Servicing to be carried out at a LR approved or FLAG Administration approved service station, which is competent to service lifejacket having the proper facilities and trained personnel.
10. Each lifejacket shall be fitted with a whistle firmly secured by a lanyard as per LSA Code as amended by Regulation II/2.2.1.14.
11. Each lifejacket shall be provided with a releasable buoyant line or other means to secure it to a lifejacket worn by another person in the water as per LSA Code as amended by Regulation II/2.2.1.16.
12. The storage of this equipment is not part of this Design Appraisal or Certificate. All such arrangements are to be to the satisfaction of the attending Surveyors on board.
13. 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.
14. 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.
15. 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.
16. 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.



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PLACES OF PRODUCTION

Survitec Survival One Limited – Trading as Crewsaver
Survitec House
Lederle Lane
Fareham Reach
Gosport
PO13 0FZ
United Kingdom

Suzhou Betacera Technology Co., Ltd
No 500 Guanquan West Road,
Economic Development Zone,
Wujiang City
Jiangsu Province
215200
People's Republic of China

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)