



# Unique **SEAFLEX**

A Unique Maritime Group Company

SEAFLEX WATERLOAD™ & LIFEBOAT TESTING OVERVIEW

[www.seaflex.co.uk](http://www.seaflex.co.uk)



# Seaflex Ballast - Compliant. Tested. Proven.

Depending upon where you are in the world, and who you are speaking to, there are many different philosophies as to how to go about testing critical weight-bearing structures such as cranes, davits and lifeboats.

In those places where HSE is still lax, such load testing is unregulated and therefore often not undertaken. In other parts of the world, such work is undertaken but via the use of bulky and often un-calibrated test weights made of materials such as concrete or steel. However an increasing number of people are now, either through compulsion via local regulation or through a heightened awareness of the safety and insurance implications of not carrying out such work to a recognised standard, insisting upon regular test and certification regimes. And where this is happening, then the quality and flexibility of Seaflex WaterLoad™ range is becoming increasingly in demand.

The Lifting Equipment Engineers Association (LEEA) document 051 is generally seen as the industry standard for such waterbags. Users who are looking to comply with their guidelines should therefore ensure that their waterbag manufacturers have complied with the key elements of these LEEA recommendations, namely:

- *Lifting element (ie webbing slings and fittings) to be separate from the bags themselves, to conform to relevant BS norms, and to be documented and traceable as such.*
- *The safety factor of each type and size of bag to be proven via drop test to at least 6 times the working load limit (WLL).*
- *Verification of each bag manufactured via either inflation of the bag to a pressure in the range of 0.25- 0.5 bar and then visual checks of the welded seams for integrity and no leakage, or via a proof (drop) test to at least 2 times the WLL - both being equally valid methods.*

The “or” in that last statement is a critical point and is sometimes overlooked. The UK Health and Safety Executive’s Lifting Operations and Lifting Equipment Regulations (LOLER) Operational Circular 234/11 runs in parallel to LEEA 051 and recommends that no lifting structure shall be subject to proof load test greater than its WLL - which runs contrary to the principle of drop-testing every bag to 2 times its WLL. So whilst Seaflex can provide such testing, for a surcharge, should customers request it, our bags are fully compliant with both LEEA and LOLER in the way that they are designed and manufactured, the way they have been type-tested and the way in which we inflation-test them prior to delivery - without the need for expensive additional drop tests on each product supplied.

**Unlike those who market bags made by others, as the manufacturer, we know Seaflex bags better than anyone else and we are ultimately qualified to determine the most appropriate test regime for our bags which strikes the ideal balance between necessity, efficacy and cost for our customers.**

As with our range of buoyancy products, Seaflex WaterLoad™ bags are available for hire or purchase as best suits your requirements from an ever-increasing number of stock locations worldwide. In addition, the Seaflex ballast proposition has a unique combination of further advantages:

- Fully compliant with LEEA 051.
- Quality and load-assured duplex strops and connectors conforming to BS EN 1492-1 and, all fully traceable back to source.
- Designed and tested to a minimum Factor of Safety of 6 x Working Load Limit.
- Sale and hire options available - the latter from over 12,000t of lifting capability stocked worldwide.
- Hi-performance Trevira structural fabric canopy.
- In our rental fleet, every bag is inspected and tested between every single job.
- RF-welded seams include structurally-optimised overlaps.



Seaflex WaterLoad™ bags working on typical cluster crane test

## Lift Confidently

With a track record spanning more than 15 years and taking in many of the biggest names in lifting, testing and inspection worldwide, Seaflex WaterLoad test weights have proved themselves time and time again to be:

- Safe.
- Easy to use and to maintain.
- Reliable.
- Excellent value for money.
- Versatile.



Made from High Tensile Trevira® Polyester 3/3, coated with heavy duty UV stabilised PVC coating, and with integrated slings and fittings which comply with relevant British Standards and LEEA guidelines, our WaterLoad test weights are built to last. High quality performance, robust fabrics, reliable RF welded seams and versatile filling/ discharge arrangements have made Seaflex WaterLoad bags the first choice for an ever-increasing numbers of test houses around the world.

A range of bag capacities from 1 ton to 50 tons allow Seaflex WaterLoads to be used singly or in clusters to produce test loads of up to 150 tonnes in a single cluster. Multiple clusters can be utilised for larger test loads.

## Tested and Proven

Each WaterLoad unit is constructed in accordance with rigorous ISO 9001:2008 procedures to ensure full component traceability, all these components in themselves being as per LEEA guidelines. And then they are subjected to a final inflation test, again as per LEEA guidelines, before they are despatched.

All our designs up have physically passed the 6:1 WLL Type Test accreditation at the National Engineering Laboratory in Glasgow, Scotland up to the maximum rig capacity of 35t at 6:1. Our 50t bag is designed and manufactured in accordance with the same principles and will perform to at least 6:1 along with the rest of the WaterLoad™ product family - but we can't find a rig big enough to physically test it at more than 4:1.

## Innovation to Improve Operation

While the water filled ballast bag concept is nothing new, Seaflex WaterLoad Test Weights incorporate several unique features to make the user's life easier and to cut down on unproductive time during the test cycle.

## Versatile, Reliable Filling

The Seaflex 'J' Tube filling system can be positioned anywhere over the hem of the WaterLoad™ bag after attachment to the crane hook / load test point. This neatly avoids the risk of the filling hose finding itself trapped between bags, as can happen to bags with fixed filling points.

## Faster Filling Saves Time and Money

We have designed in 2 1/2" full bore 'fire hose size' fittings which are terminated by quick release couplings compatible with standard hydrants and hoses.

## Faster Draining Saves Even More Time and Money

WaterLoad bags of 15t and above are fitted with a 3 inch bronze camlock coupling which accepts a 3 inch discharge hose. This arrangement can empty our largest 35t unit in just 22 minutes. Similar 2 inch camlock fittings on all sizes up to and including 10t, ensure minimum time is wasted after a test.

## Easier Handling

WaterLoad unit handling is simplified by delivery in its own dedicated ISPM 15 compliant timber storage and transit box. This allows the bag to be hoisted straight out of the box for filling and, when emptied, lowered and flaked back down into the box with minimal onsite handling. This reduces manpower requirements, cuts down on-site time and keeps the bag protected when not in use. Whereas others deliver their bags on pallets and get into arguments about how damage to them may have been caused, we want to ensure that our products arrive with you, and remain, in A1 condition - whether we are selling them to you or hiring them to you.

# Key Features and Benefits at a Glance

## For Your Peace of Mind

- Fully compliant with LEEA 051 guidelines and also with ABS Product Design Approval (PDA).
- Strops compliant to BS EN 1492 Part 1.
- Manufacturing traceability for each product back to component level.
- 6:1 safety factor verified by TÜV NEL Type Test.
- High performance structural fabric canopy.
- RF welded seams for strength and integrity.
- Webbing harness terminates with single steel lifting ring.
- Rental units inspected and tested between every single job.



## For Your Ease of Operation

- User-positioned “swan-neck” filling system.
- Fire-hose inlet and quick-dump outlet.
- Integral handling ladders.
- Can be used in clusters for loads of up to 150 tonnes on a single hook, multiple clusters can be used for higher loads.
- Can be supplied complete with load cells and load shackles.
- Delivered ready for immediate use with universally compliant documentation: WaterLoad bag-specific log book containing certification, service records and operating manual.

Unit		Packed				Filled	
Type	Kg	L	W	H	Kg	Diameter	Height
1-WLB	1,000	0.50	0.35	0.25	22	1.60	1.90
2-WLB	2,000	0.75	0.40	0.25	33	1.80	2.50
3-WLB	3,000	0.80	0.35	0.30	42	1.80	2.70
5LH-WLB	5,000	0.90	0.50	0.35	58	2.20	3.10
10-WLB	10,000	1.10	0.50	0.40	85	2.30	4.80
15-WLB	15,000	1.20	1.00	0.40	145	2.70	5.40
20-WLB	20,000	1.20	1.00	0.55	160	3.20	5.50
25-WLB	25,000	1.20	1.10	0.65	210	3.80	5.90
35-WLB	35,000	1.20	1.10	0.80	240	4.15	6.60
50-WLB	50,000	2.10	1.20	0.80	416	4.20	8.00

# Seaflex Lifeboat Test Systems - Speed and Safety Assured

## Test Confidently

Building on the success of the Seaflex WaterLoad™ range of test weights, and making use of the same top-quality design and construction principles, Seaflex has introduced a versatile multi-unit system for testing lighter, enclosed loads with access issues such as lifeboats and elevators.

Outstanding performance, robust fabrics, reliable RF welded seams and general ease of use have made our LTS the first choice for ever-increasing numbers of lifeboat testing and certification houses around the world.

## Test Easily

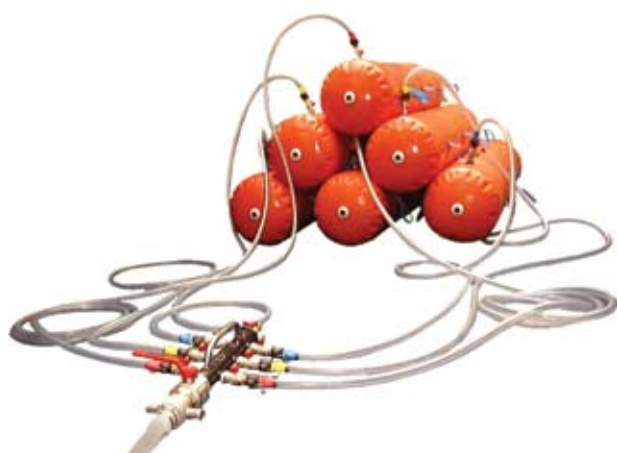
The Seaflex LTS consists of a series of 375 kilogram water bags coupled to a remote filling and discharge manifold. This allows the required load to be safely applied in spaces where traditional solid weights are difficult, and potentially dangerous, to position.

The standard system comprises of a complete kit, supplied in a ISPM 15 compliant timber transit box (fork lift or crane sling) containing all the equipment required to test up to 6t in lifeboats, platforms and other structures.

The kit comprises 16 x 375 kg test bags (sufficient to test an 80 man lifeboat), a calibrated water meter, a 1 x 6 way manifold with quick connectors, 6 x colour coded delivery/ discharge hoses, and an air driven double diaphragm pump with suction tube & delivery hose that can fill up to 7 bags simultaneously and which is rated to work in hazardous environments.

## Test Globally

In addition to the standard (5 man equivalent) 375 kg bag, optional single man bags at 75 kg (for free fall lifeboat testing) and their U.S. standard weight equivalents at 412.5 kg and 82.5 kg are available off the shelf for hire or sale in numerous strategic locations around the world. And where we find a cluster of users with a regular demand for the Seaflex LTS but no local availability, then we will look to find a way to put enough sets in their vicinity to satisfy that demand.



## Key Features and Benefits at a Glance

### For Your Peace of Mind

- Designed and manufactured in general accordance with our LEEA-compliant WaterLoad™ range.
- Constructed from advanced Trevira™ materials for a long life span and reduced risk of in-service damage.
- Six strong strop attachments assist handling when dry or semi-filled, to ensure an evenly spread load.

### For Your Ease of Operation

- Reduced handling of the full test weight reduces manpower requirements and increases safety.
- Light dry weight enhances ease of use and reduces down time between tests.
- High quality all metal colour coded quick connect couplings are both extremely robust and easy to use.
- Multiple bag combinations enable unlimited test weight options.



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## UNIQUE SEAFLEX LIFEBOAT TEST KIT

A complete kit, supplied in a transit box (fork lift or crane sling) containing all equipment required to test up to 6.0t in lifeboats, platforms and other structures.

An air driven double diaphragm pump with suction tube fills up to 7 bags simultaneously and is capable of working in hazardous environments.

16 x 375kg capacity bags are filled and discharged through the hoses supplied to produce the required test load.



### What's in the Box?

Any number of 375kg capacity test weights.

1 x 6:1 gang manifold with quick connectors.

6 x 1" delivery/ discharge hose's.

Air driven double diaphragm water pump.

Suction & discharge hose's to suit.

Extra test bags available upon request.

Robust transit storage crate.



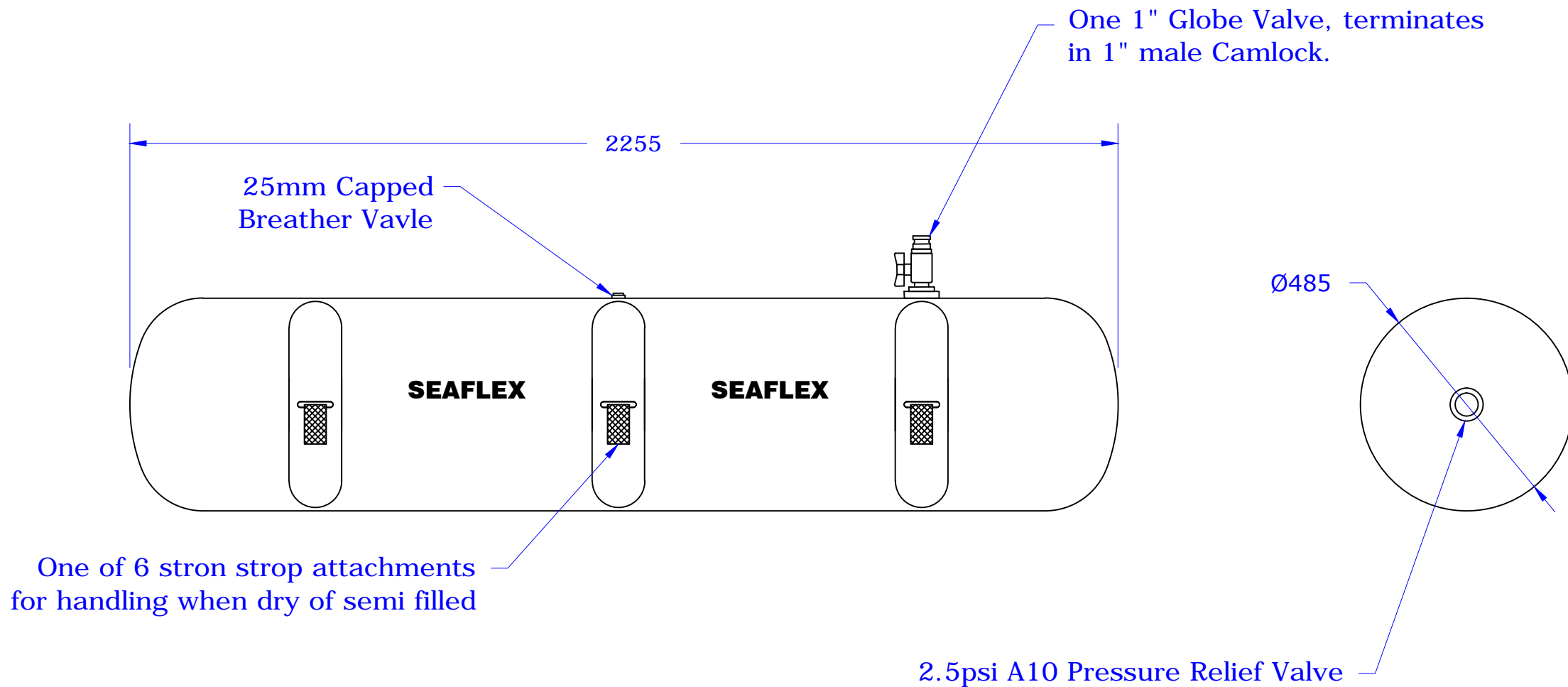
Pump, hoses and manifold in one side of transit case    375kg Test Weights in opposite side of transit case.

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MANUFACTURED IN ACCORDANCE WITH ISO 9001:2008 PROCEDURES SUPPLIED WITH A LOG BOOK

# UNIQUE SEAFLEX STANDARD PRODUCT

## 375kg Life Boat Testing Bag



DIMENSIONS = mm  
UNLESS OTHERWISE SHOWN

PRODUCT WEIGHT - 9kg App.  
PACKED SIZE - 450mm x 450mm x 200mm

01	26.03.14	Initial Issue	GJP	GGB	GGB
Rev	Date	Description	Drawn	Checked	Appd



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<b>DRAWING TITLE</b>	<b>SCALE</b>
375kg Life Boat Testing Bag Specfication	N.T.S @ A3
<b>PROJECT NUMBER</b>	<b>DRAWN</b>
Life Boat Testing Kit	GJP
<b>DRAWING No.</b>	<b>REVISION</b>
375LBTB - LBTK - SS	01





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## PRODUCT OVERVIEW: FREEFALL LIFEBOAT TESTING BAGS

Designed in response to the special demands of testing Freefall Life Boats where each test weight must be secured in a seat and represent the weight of an average person, Seaflex offer a 75kg version of their well proven 375kg life boat test weight.

Manufactured from extra heavy duty PVC coated polyester base cloth with all welded seams, the 75kg LB is fitted with adjustable webbing straps for securing it to a seat if required.

Fittings are compatible with all Seaflex Life Boat Test Kit components so can be used with existing kits as standalone or complimentary ballast.



**Diameter- 360mm, Height-700mm. 1" Camlock filler valve lower front + PRV vent.**

Each unit is manufactured in accordance with ISO 9001-2000 defined procedures certified by Lloyds Register Quality Assurance. A Certificate of Conformity is issued with each 75kg LB test weight which provides details of its construction and full traceability. A very tough and robust product that fulfils the specialised demands of testing Free Fall Lifeboats.

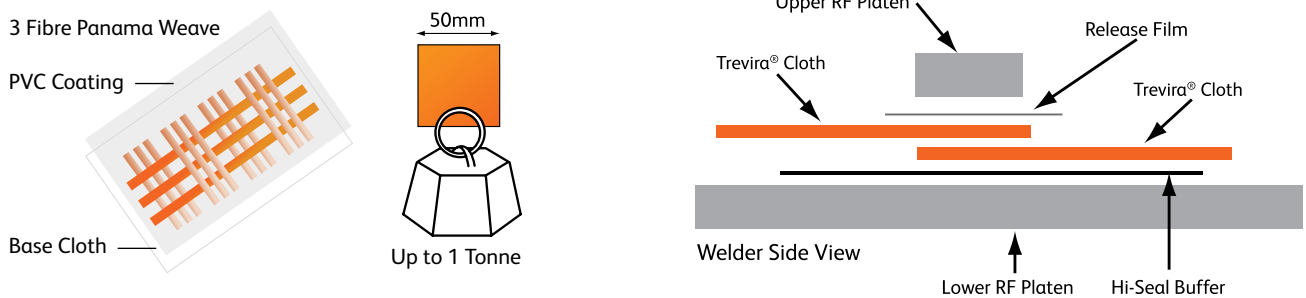
Usually available from stock, orders of 20+ units are supplied in a strong transit/storage box which provided ideal protection while handling.

# Seaflex - Technology, Service and Support

## Manufacturing Technology

All Seaflex products are designed and manufactured in the UK.

Our bag canopies are constructed from High Tensile Trevira® Polyester base cloth (either 2 / 2 or 3 / 3 fibre panama pattern weave) coated with heavy duty UV stabilised PVC coating or, for special applications, polyurethane. Trevira is incredibly strong; a 50 mm wide 3/3 strip has a break load of approximately 1 tonne.



The panels for our bags are precision cut on our 15 metre long, 3 metre wide advanced automated table for perfect repeatability. Once inspected and approved panels are assembled by skilled personnel to using Radio Frequency welding to strict quality control standards.

## Certification

All our work is carried out within a system which complies with the ISO 9001-2009 Quality Management Standard as audited by Lloyds Register Quality Assurance for full traceability - and we have now gained ISO 14001 and ISO 18001 accreditation.



## Service

Whether for hire or sale, all Seaflex products are sent out fully tested and inspected against their build criteria. And we do also offer on-site support to our clients in the use of our products - this most often happens within the more complex buoyancy applications for our products.

In the event that your Seaflex product should suffer minor damage in service, we can supply an approved, boxed field service kit comprising of patches, a professional quality heat gun and instruction manual to make good minor leaks prior to product refurbishment.

We can also advise on the viability of carrying out more extensive repairs, which would typically be undertaken either at our factory or at one of our approved service centres.

## Support

Our support philosophy is “Wherever, Whenever”. This underlines the Seaflex commitment to not just sending out tested, proven products in proper shipping crates and with the most comprehensive documentation package in the business - but to assisting our customers in every way possible throughout their time using our products, whether the job is a hire project or an equipment sale.

We offer worldwide support to our customers via either email or phone from head office in the UK and via our ever-growing network of offices and partners around the world.

Put your trust in Seaflex. We won't let you down.



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