

The Lithium Safety Store™
The world's premier lithium battery safety box with 4 advanced warning signals. Safe storage, unmatched peace of mind.

With over 1,000 spontaneous lithium battery fires reported every week, every captain and boat owner should responsibly store all lithium batteries on board.



The Lithium Safety Store™ has been designed to prevent an uncontrolled fire caused by the thermal runaway during charging, or from damaged, degraded, old, or poorly manufactured lithium batteries, whilst also providing a safe space to store other hazardous materials such as fuel, flares, gas canisters and other combustible liquids and materials.

Keep your boat and passengers safe with the patented Lithium Safety StoreMarket Store Market Store Market

Ensure everyone on board sleeps safely at night by storing and charging all your lithium battery products in the Lithium Safety Store™

Lithium Safety Store™ Features

Contains uncontrolled fires

Contains an uncontrolled fire developing due to the thermal runaway associated with lithium battery faults.

Heavy-duty construction

Features a 1-inch/2.5cm thick wall fortified with Kevlar®, ensuring blast protection, and against fires

over 2000°F/1100°C. The UL-94 V-O insulated core ensures the heat stays contained, while the sleek, high-gloss fiberglass or carbonfibre finish adds both strength and elegance to your yacht.

Kevlar® armoured inner

Kevlar® is lightweight yet is still five times stronger than steel so is ideal to contain lithium, gas and flammable liquid explosions. Due to its strength, lightness, heat protection properties, and low thermal conductivity it is the number one material used for bullet

proof vests, and all fire protection equipment, such as fire-fighters suits and gloves.

1-inch/2.5cm inner core of UL-94 V-0 fire/heat block

UL-94 V-O is the highest rated level of flame resistance and means the material will self-extinguish in less than 10 seconds once the flame is extinguished, with no dripping of flaming particles.

Can be moved or discarded overboard safely during a fire

The Lithium Safety Store™ is designed for safe handling, even during an internal reaction with fire temperatures exceeding 1000°C. Thanks to its heat-blocking construction, you can safely move the unit, with exterior temperature typically around 70°C, wearing standard protective safetywear. This enables relocation to an open area or, if necessary, discarding it overboard.

Space saving & stackable

These units are designed for secure stacking. Each one features four marine-grade non-slip rubber feet, which interlock with recesses on the lid of the unit below. For easy lifting, there are four large side handles, which also serve as sturdy tiedown points for added stability and security.

Safe charging and battery protection

Over 50% of lithium fires ignite during charging. Many overlook the risks, leaving equipment such as banks of walkie talkies, or yacht water toys to charge in vulnerable spots. Lithium fires can engulf large areas in just a few moments, with nearby materials such as furniture, wall coverings, teak decks or the resin in your boats GRP fuelling the flames. Lithium fires spread and get out of control in just seconds and most crews are unaware and unprepared for such an event. The Lithium Safety Store™ is designed to allow your lithium powered tools and water toys to be charged safely and remain on trickle charge preventing the batteries from draining. This prevents permanent failure of expensive batteries due to natural discharge/draining, thus protecting your investment, prolonging device life, and maintaining peak performance.

Safe filtration & controlled ventilation

Controlled filtration using Hybrid Active Carbon Gas Adsorption (HCGA) and High Efficiency Particulate Air (HEPA) systems effectively neutralizes toxic fumes. Controlled ventilation prevents gas entrapment, and also allows the contents to air preventing humidity build-up.

Heavy-duty 316 grade stainless steel

Crafted with marine grade 316 stainless steel for all key components, the safety store is tailored to endure the harsh demands of the marine environment.



Beautifully finished to compliment your yacht

Finished in weather-proof high-gloss fibreglass/gelcoat, or carbon-fibre, it offers boat owners a stylish solution to compliment their yacht. The standard gel-coat finish is high-gloss marine white, or carbon-fibre mesh. Additional finishes available are light grey, navy blue or beige. Custompaint finishes and special designs to match any yacht styling can also be supplied.

Portable and safe for lithium transport

With large side handles and roller wheels, they are easy to manouver and can also be used to transport lithium ion products safely.

Digital infrared thermometer gun

Every Lithium Safety Store™ comes with a handheld digital infrared temperature gun operating from 58°F to 932°F (-50°C to 500°C), with backlight for day/night usage. Monitor the heat of the Lithium Safety Store from a distance, so you will be able to follow the progression of the fire and see when it is safe to open the lid or discard the unit.

Water inlet fire extinguishing port

The only way to extinguish a lithium fire is to completely submerge the batteries in water. The Lithium Safety Store™ has a one-way inlet port that allows you to safely connect a hose and quickly flood the box. There is no other method to extinguish a lithium battery fire, which is why it is essential lithium batteries are properly stored on your vessel. Consider this: traditional powder or foam fire extinguishers are completely ineffective, and where submerging is not an option, the fire service estimate it takes 28,000 gallons / 106,000 litres - to put out a lithium fire on a Tesla. With our store, you get effective fire management onboard.

Reduce insurance premiums and prevent claim denial

The captain's number one concern is always for the safety of the passengers, crew and vessel, but usage of the Lithium Safety Store™ can also reduce your insurance premiums, and prevent claim denial for improperly stored flammable liquids, or lithium fire incidents.

Compact Design

The LF335 with two AquaDart sea scooters uses just 0.47m3 and a floor area of 0.8m2. With a 20,000Wh capacity, it can also hold $6 \times 3,000Wh$ e-foil/e-board batteries. No other product exists with such a small footprint or such a large battery capacity.

Available in different sizes

W:530

L: 430

W:330

With three different sizes there is a Lithium Safety Store™ for every application. The larger size to fit all iAQUA and Seabob sea scooters, plus electric/dock scooters. A medium size for larger e-foil and e-surfboard removable batteries, e-bike batteries, fuel cans, and gas bottles. Plus, a smaller size for storage of flares, gas canisters, flammable liquids, plus storage and safe charging of smaller lithium batteries found in walkie-talkies, torches, drones, smaller toys and power tools.

W: 605

H: 592

Highest standards of fire-safety certification

We have designed the Lithium Safety Store™ to exceed the highest standards of fire safety and containment that exist. It is certified to:

American Society for Testing and Materials ASTM 4919(2017). Test standards to cover the storage and carriage of dangerous goods such as lithium batteries by air or sea.

International Organisation for Standardisation ISO 16104(2007). Test standards to cover the transport, storage and packaging of dangerous goods including lithium batteries.

Underwriters Laboratories UL-94(2016). V-0, the highest rating from the Standard for Tests for Flammability.

British Standards Institute BS EN14470 - European Standard governing the internal storage of highly flammable substances.



The World's only solution to warn you of a fire in progress - as it happens, whether on land or sea

4 Independent early warnings, plus optional OceanSentinel™

In-App / e-mail remote alert

In-built temperature and smoke sensors link to our mobile app and send in-App messages and emails to provide the 1st remote early warning. This unique feature means you, your Captain and up to 8 further emergency contacts can be immediately alerted to any fire, even whilst you are not onboard, allowing the situation to be managed without loss of life, or your vessel.

SMS text message remote alert

As a 2nd remote alarm, your 10 emergency contacts will be alerted by SMS text to any lithium fire.

Instant audible smoke detection alarm

A fire/smoke alarm built into the Lithium Safety Store™ provides a 3rd local audible early warning.

Instant visual flashing light alarm

The smoke and temperature sensor activate a flashing red warning light built into the Lithium Safety Store™. This provides your 4th local visual alarm, helpful to immediately warn and identify which unit has the fire.

See how the remote monitoring and alert system works...

In the event of a fire, the Smart Sensor on the Lithium Safety Store™ wirelessly notifies the Communications Module. Up to 50 units can connect to a single Comms Module allowing for one or several stores to be placed around your yacht, or at a larger bank of Lithium Safety Stores at the marina.



2 The Comms Module immediately lets the 24/7 Emergency Response Centre know of an incident in progress, with details of the individual safety store on fire.



If for any reason your Comms Module is not working, it will use your 2nd or 3rd back-up Comms Modules, or any other module in a 200m radius automatically. In a marina the Smart Sensor could use any other yacht or marina's Comms Modules to relay the incident to the 24/7 Emergency Response Centre, giving you a superior level of back-up.



3 The 24/7 Emergency Response Centre will immediately and automatically, send alert SMS texts, emails and in-App warnings to all recipients in your emergency contacts list.



4 Subscribers to OceanSentinel™ will also have a live operator calling all recipients in your emergency contacts list, and optionally the marina office, and local fire service too.



















OceanSentinel™ 24/7 monitoring and emergency response

In the event of an incident, we realise a text or email may not be noticed immediately, or even until the next morning if a fire erupts at night. With OceanSentinel™, our Emergency Response Centre will immediately and continuously call your emergency contacts list. We don't stop until somebody is reached and has confirmed they are dealing with the incident.

OceanSentinel Bridge Alarm

In the event of a fire OceanSentinel™ will also alert one or more Bridge Alarms, a 100-decibel warning alarm, with a high intensity flashing red visual alarm to be located with the Comms Module, or on the bridge, in the crews mess, warehouse, office, or estate control centre. Perfect for overnight passages, the Bridge Alarm (sold separately) alerts your crew and informs them which unit is on fire.

Extended alert network

With their permission, you can also extend your emergency network by adding your harbour master's office, security office, building manager and local fire brigade or emergency services numbers. They too will be promptly notified in case of an emergency.

Automatic battery monitoring with OceanSentinel™

OceanSentinel™ will perform a weekly check of the status of your Lithium Safety Store's Smart Sensor internal battery and notify you well in advance should they need recharging. The Smart Sensor batteries last for several months before recharging. A grim statistic is that nearly 60% of fire deaths are caused by smoke alarm dead batteries. With OceanSentinel™ on your side, this vital task is taken care of.

Daily Communications Check

OceanSentinel™ runs daily checks on all the connections between your safety stores, the communications module and the 24/7 emergency response centre. It'll promptly alert you if any failed connections are detected.

Availability to advanced monitoring tools

Access to advanced monitoring tools in both the desktop and mobile App will allow you to see the current status of all you Safety Stores. You'll be able to see the connection status of all your lithium safety stores by account, location or individual unit. You will also be able to monitor in real-time the battery levels, and the current internal temperatures of all your safety stores.

Weekly status reports

With OceanSentinel™ your system administrator will receive a weekly report of your whole system. It will tell you the current status of your units, and all batteries levels in your Lithium Safety Store. Analysing the report week by week will give you a thorough understanding of the system, battery usage, and give you the information required for early detection of any possible issues.

Automatic re-verification of your emergency

It is a fact of life that personnel come and go, and change their phones, positions and even email addresses. OceanSentinel™ automatically takes care of keeping all of your emergency contacts up to date with periodic checks, alerting you in advance of any incident if an emergency contact needs updating, deleting or verifying. OceanSentinel™ takes away the effort of keeping your emergency contacts up-to-

Extra premium features in the Lithium Safety Store app

With OceanSentinel you'll have access to extra facilities to make setting up and managing your safety stores and contacts effortless. For example setting up a new safety store in two clicks, and copying all the contacts from one store to another, or removing or updating a new telephone number of an emergency contact and it will change the details for every safety store they are an emergency contact for. These tools make managing large numbers of safety stores, across multiple locations very easy and simple to do. You'll also get additional messaging and enhanced controls for safety store status checks and early warning notifications.

Your subscription also includes all communications charges

Never have to pay for call charges wherever you are.

OceanSentinel includes:

- All network, data and call charges including:
- The cost of thousands of daily inbound connection and status checks
- All network traffic
- Outgoing status messages
- Worldwide SMS text messaging on all mobile networks
- All push notifications and in-app messaging
- All emergency response telephone call charges on all mobile and fixed line networks

It only takes a few mins to set up your Lithium Safety Store™

Once setup, it runs automatically giving you peace of mind. When you first register the unit via the phone App or browser, you set up the names, telephone numbers and email addresses of the persons you wish to be notified in the event of a fire (SMS text and email), you

also give each unit its own individual identifier, and its physical address, either on land or a yacht. From the same interface you can also choose to add the OceanSentinel. That's it! You are now protected. You can erase the fear of having Lithion Ion Batteries on board.



Details

Product

Every week, we hear distressing news of lithium battery fires devastating boats at sea and in marinas, often with tragic loss of life.

Adding to the crisis, insurers are increasingly denying claims related to these fires. A quick



Fire Destroys 8 yachts docked in La Paz, Mexico



34 people died in lithium blaze, Santa Cruz, California



Google search yields hundreds of such incidents,

underscoring the critical importance of proper

lithium battery storage. This issue is now a top

priority for boat owners, captains, and marina

managers alike, who are all keenly aware of the

risks and the need for effective safety measures.

Lithium e-board fire destroys 44m MY Kanga, Dubrovnik, Croatia



Supervacht MY Siempre, moored at the port of Olbia, Italy.



Fire broke out on sailing yacht L'Odyssée, bay of Saint-Tropez.



Fire ravaged three 8m boats in the port of Lavandou, France.



28m Sunseeker Black Diamond destroyed, IMS Shipyard, Saint-Mandrier, France.



Fire on yacht MY Lady D, port of Lignano Sabbiadoro, Italy



Fire on motor yacht MY Blue Magic, bay of Naples, Italy.

Transform Marina Safety with the Lithium Safety Store[™] - Your Essential Guard Against Devastating Multi-Boat Fires

Prevent Catastrophic Fires

Lithium battery fires on boats are not just a risk; they're a reality, with incidents causing the destruction of multiple yachts and severe financial losses now a weekly occurance. The Lithium Safety Store™ is engineered to prevent these disasters, safeguarding the marina and every vessel in your marina from the threat of sudden and uncontrollable fires. A sobering thought is just one faulty or damaged battery, spontaneously combusting on one single boat, could effectively destroy every boat in the marina.

Mandatory Safety Compliance

Elevate the safety standards of your marina by mandating the use of the Lithium Safety Store™ for all boats. This policy not only enhances the protection of individual vessels but also safeguards the entire marina from the domino effect of spreading fires, setting a new benchmark in maritime safety.

New Revenue Opportunity

Marinas can tap into a profitable venture by providing Lithium Safety Stores for rent. This initiative not only adds an extra income stream, but also makes state-of-the-art safety technology accessible to all boat owners, reinforcing the marina's commitment to safety and customer care.

Peace of Mind for Boat Owners

For owners investing tens of thousands in highvalue equipment like sea scooters, e-foils and e-boards, the Lithium Safety Store™ ensures their investments are protected. Safe, off-boat storage and constant trickle charging prevents battery degradation and total failure, offering worry-free maintenance during off-season periods.

Cutting-Edge Safety Features

Equipped with advanced early warning systems, plus fire-suppression technology, including a Kevlarreinforced structure and specialized heat-blocking materials, the Lithium Safety Store[™] is a fortress against lithium battery fires.

Its built-in water inlet fire extinguishing port allows any unit to be manually flooded via a one-way inlet valve.

Simplicity and Convenience

The Lithium Safety Store™ is designed for ease of use, featuring stackable designs, portable handles, and clear temperature monitoring systems. This simplicity encourages widespread adoption among boat owners, integrating seamlessly into the marina environment.

Individual Protection is Pramount

Unlike the traditional approach of using 20 and 40-foot steel containers, which can burn for days or weeks, destroying everything inside and resulting in millions of dollars in losses, our solution offers compartmentalized safety. Each Safety Store acts as a self-contained unit, ensuring that in the event of a fire, only the contents within that specific store are affected and securely contained. This design not only minimizes potential damage but also greatly simplifies incident management. This approach not only safeguards each owner's investment but also ensures that any fire incident is quickly and effectively contained, maintaining the overall safety and integrity of the marina.

Raising the Bar for Marina Excellence

By incorporating the Lithium Safety Store™ into your marina's operations, you're not just investing in safety; you're enhancing your reputation as a forward-thinking, responsible facility. This commitment to the highest safety standards will attract discerning boat owners and set your marina apart as a leader in maritime safety innovation.

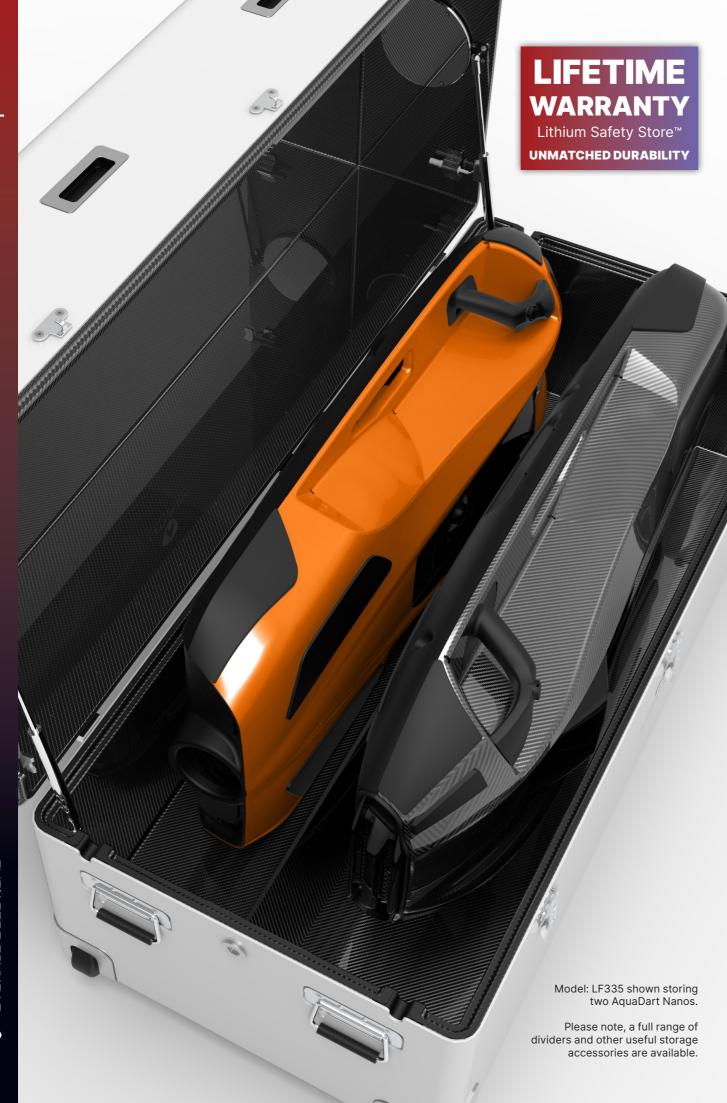




Colour Options

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Model Prices



Models & Prices

Please place your order with your local stockist (found on the back cover)



LF18 - €3,325+IVA L430 x W330 x H280mm / 18 litres



L120 - €4,860+IVA L680 x W530 x H535mm / 120 litres



LF335 - €7,870+IVA L1330 x W605 x H592mm / 335 litres



Optional & Bespoke Colours Available







Model	LF18	LF120	LF335	LF335-CF
Standard colour/ finish	High-gloss marine white with epoxy lacquer			High-gloss carbon fibre w/ep.lacquer
Standard colour and finish options	As standard high-gloss marine white (no cost), or choice of light- grey, navy blue or beige for €140	As standard high-gloss marine white (no cost), or choice of light-grey, navy blue or beige for €285	As standard high-gloss marine white (no cost), or choice of light- grey, navy blue or beige for €450	As standard high- gloss carbon-fi- bre (no cost), or choice of marine white, light-grey, navy blue or beige for €450
Bespoke colours	€785	€1,400	€2,260	€2,260

From a supplied sample/colour reference we can paint the Safety Store in a single colour, to match the colour of your yacht, with either a matt or high-gloss finish. For detailed bespoke artwork, logos and designs please consult your dealer for a quotation.

Manufacturers suggested retail prices in Euros and do not include VAT/sales tax or delivery charges. Delivered from Inventory located in our European warehouse. Prices are correct as of 06/11/2023. Specifications subject to change. E&OE.

Technical Specifications

Model	LF18	LF120	LF335	LF335-CF	
Price	€3,325+IVA	€4,860+IVA	€7,870+IVA	€9,660+IVA	
Exterior dimensions L x W x H (mm)*	430 × 330 × 280	680 × 530 × 535	1330 × 605 × 592	1330 × 605 × 592	
Interior dimensions L x W x H (mm)	350 × 250 × 200	600 × 450 × 450	1250 × 523 × 508	1250 × 523 × 508	
Internal capacity	18 Lt / 4.75 US gal	120 Lt / 32 US gal	335 Lt / 88 US gal	335 Lt / 88 US gal	
Approx. weight (kg)	7	20.5	40	33	
* Will protect against shrapnel blast, but not against leakage of gas. Should be stored in well ventilated areas. Should not be stored with batteries or any items that could cause a spark.	Walkie talkies, satellite phones, torches Lithium batteries from drones, handheld battery operated tools and polishing machines Gas canisters, gas bottles* Flares Other flammable liquids* Acids and hazardous materials	 4 × 25L Petrol jerry cans* Large removable batteries from e-boards, and e-foils Lithium batteries from drones, handheld battery operated tools and polishing machines Gas canisters, gas bottles* Flares Other flammable liquids* Acids and hazardous materials 	 2 AquaDart Nano 1 AquaDart Pro or 1 x Seabob 8-10 × 25L Petrol jerry cans* Large removable batteries from e-boards, e-foils and e-bikes 3-4 e-scooters Lithium batteries from drones, handheld battery operated tools and polishing machines Gas canisters, gas bottles* Flares Other flammable liquids* Acids and hazardous materials 	 2 AquaDart Nano 1 AquaDart Pro or 1 x Seabob 8-10 × 25L Petrol jerry cans* Large removable batteries from e-boards, e-foils and e-bikes 3-4 e-scooters Lithium batteries from drones, handheld battery operated tools and polishing machines Gas canisters, gas bottles* Flares Other flammable liquids* Acids and hazardous materials 	
Inner shell material	Kevlar® - high-strength, low thermal conductivity				
Core material	Specially formulated UL-94 V-O rated, heat blocking, non-flammable core				
Fully certified for sea and air transport and storage	American Society for Testing and Materials ASTM D4919 – 03(2008); International Organisation for Standardisation ISO 16104:2003; Underwriters Laboratories UL-94 V-0; British Standards EN 14470				
Outer shell material	Heat-resistant fibreglass	Heat-resistant fibreglass	Heat-resistant fibreglass	Heat resistant, high-strength carbon fibre	
Standard colour/ finish	High-gloss marine white with epoxy lacquer High-gloss carbon fibre w/ep.lacquer				

^{*} Exterior dimensions include latches, hinges, handles and approx. 30mm for the feet. Prices exclusive of VAT/Sales Tax

Model	LF18	LF120	LF335	LF335-CF	
In-App / e-mail remote alert	In-built temperature and smoke sensors link to our mobile app and send in-App messages and emails. Up to 10 emergency contacts can be immediately alerted to any fire, even whilst not onboard.				
SMS text message remote alert	Up to 10 emergency contacts will be alerted by SMS text to any lithium fire.				
Smoke detector	With 100db alarm plus high-intensity flashing red light				
Temperature detector	With 100db alarm plus high-intensity flashing red light				
Smart Sensor (IP66 waterproof)	Continuously monitors the safety store for any temperature change or smoke. Gives a visual display of the temperature and battery status of the sensor. Rechargeable battery lasts for several months.				
Communications	1 x CM50	1 x CM50	1 x CM50	1 x CM50	
Module Includes GPS, useful for vessels at sea, as the GPS position is transmitted in the event of an incident. Powered by 110/220v, with optional battery back-up.	Connects the Lithium Safety Store to the 24/7 Emergency Response Centre (ERC). One CM50 can connect up to 50 Safety Stores to the ERC. For larger yachts and marina lithiu, storage installations we recommend adding a CM50 communications module for every 5-10 Safety Stores. With more than one Safety Store we always recommend to use at least two communications modules to work in tandem to give an extra layer of redundancy/back-up.				
Digital infrared thermometer gun	For fire/incident management supplied with a digital infrared temperature gun operating from 58°F to 932°F (-50°C to 500°C), with backlight for day and night usage.				
Safe filtration	Controlled ventilation using Hybrid Active Carbon Gas Adsorption (HCGA) and High Efficiency Particulate Air (HEPA) systems effectively neutralizes toxic fumes.				
Water inlet fire extinguishing port	Yes	Yes	Yes	Yes	
Max Wh capacity	6,000Wh	12,000Wh	20,000Wh	20,000Wh	
Max battery size	6,000Wh	12,000Wh	20,000Wh	20,000Wh	
Ventilation ports	2	2	2	2	
Auto-closing cable channels for charging batteries	2	4	4	4	
Number of side handles / wheels	2 / 0	2 / 2	2 / 2	2 / 2	
Stackable	Yes, all models are stackable. All fitted with 4 non-slip rubber mounting feet				
Locks, hinges, handles & fittings	Heavy-duty marine grade 316 stainless steel				
Additional acccessories & options	Personalise your unit by adding • heavy-duty extension leads • kevlar® dividers to organise/separate your batteries and reduce damage in a fire • organise cables/ chargers with mesh storage pouch for the lid • OceanSentinel Enhanced 24/7 Emergency Monitoring Service • OceanSentinel Bridge Alarm				

Bespoke colours, designs and sizes with tailor-made solutions

Captains, refit yards, and boat manufacturers: Enhance your vessel's aesthetic with our bespoke customization. From colours and designs to sizes and shapes, the Lithium Safety Store™ adapts to your boat's unique look. We even craft inserts and storage units from your current designs, from RIBS to Super Yachts. We welcome all enquiries from re-fits and new build yachts. Please ask for our bespoke service.



Technical Specifications

The World's only complete solution for the safe storage of lithium batteries



Unmatched Peace of Mind

No other solution exists that will allow a Captain or Yacht Owner to sleep soundly knowing both the vessel and passengers are protected against an unpredictable and uncontrollable lithium fire.

A Pioneering Creation: The Lithium Safety Store™

Developed over years and backed by multiple patent applications, covering the usage of ground-breaking materials, unmatched construction levels to contain fires violent lithium fires of up to 2000 degrees Fahrenheit, plus rapid-response advanced communications to give you essential early warnings to deal with the fire.

Safety Warning: There is no time to lose

As lithium batteries age, they become more vulnerable to fires. Tiny cracks can form in their casings, allowing seawater or salt moisture to seep in, creating a high risk of spontaneous and uncontrollable fires. Even new batteries aren't immune, especially when charged with high-capacity, quick chargers provided by manufacturers to shorten charging times. Using these batteries is akin to playing Russian Roulette - you never know when a fire might ignite. Don't overlook this risk. With professional marine solutions now available, there's no need to gamble with safety. The potential consequences are simply too devastating to ignore.

Order your Lithium Safety Store today and sleep peacefully knowing your vessel, passengers and crew are protected. Unparalleled marine safety, second to none.

Your local stockist:



Terry Pooley Yacht Protect Services Limited UK +44 777 562 0000

terry@firestop-pro.com www.yachtpsl.com



The Lithium Safety Store™

Setting New Standards in Marine Lithium Battery Safe Storage

LithiumStorageSolutions.com