





















PROTECTION AGAINST LITHIUM-ION BATTERY FIRES.

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Logistics

Residential

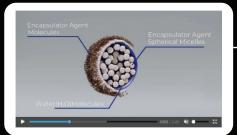
# Are you prepared for a **Lithium-lon Battery Fires?**





LITHIUM-ION BEST PRACTICES

ENCAPSULATOR AGENT - HOW IT WORKS



LITHIUM-ION SOLUTIONS F-500 LI-ION BATTERY FIRE TESTING



HOW THE 4L LITHIUM-ION EXTINGUISHER PERFORMS



HOW THE 9L LITHIUM-ION EXTINGUISHER PERFORMS



ELECTRIC VEHICLE FIRE BLANKET & WATER MISTING SYSTEM



Learn More...







4L WATER TYPE EXTINGUISHER WITH F-500 ENCAPSULATOR AGENT											
FIRE RATING	2A			MODEL NO:	FB	4LF-500					
SIZE	4.0 L		FU	LL WEIGHT	2 KG						
CYLINDER VOLUME	4.7 L		EXTINGUISHER HEIGHT 495 MM								
CYLINDER HEIGHT	410 N	IM	CY	130 MM							
CYLINDER FINISH	HEAV	Y-DUTY	STA	AINLESS STEEI	L CYL	INDER					
PROPELLANT	DRY N	ITROGE	EN								
AGENT	F-500	MULTI	-PU	RPOSE ENCAP	SULA	TOR AGENT					
OPERATING PRESSURE		10 BA	AR	TEST PRESSUR	E	25 BAR					
SUITABLE FOR		A			-	+					

WOOD, PAPER

& PLASTIC

LI-ION BATTERY



9L WATER TYPE EXTINGUISHER WITH F-500 ENCAPSULATOR AGENT											
FIRE RATING	3A		MODEL NO:	9LF-500							
SIZE	9.0 L	FU	LL WEIGHT	12	2.2 KG						
CYLINDER VOLUME	12.5 L	EX	TINGUISHER HEIG	638 MM							
CYLINDER HEIGHT	541 MM	CY	LINDER WIDTH	180 MM							
CYLINDER FINISH	HEAVY-DUTY STAINLESS STEEL CYLINDER										
PROPELLANT	DRY NITROGE	N									
AGENT	F-500 MULTI	-PU	RPOSE ENCAP	SULA	TOR AGENT						
OPERATING PRESSURE	10 B/	AR	TEST PRESSUR	E	25 BAR						
SUITABLE FOR	WOOD, PA & PLAST			- LI-ION I	BATTERY						



#### **PORTABLE RANGE**

As the uptake of li-ion battery-powered technology, vehicles, toys, power tools, solar management and so much more grows, there is a new consideration to make when storing, charging, and using these items. We strongly recommend always following the manufacturer's instructions when using such items, and never using a charger not design for the product! Li-lon batteries can become a fire hazard when exposed to high temperatures, short circuit and/or become damaged. Therefore, store your equipment in cool places where possible, never charge products in a compromised area, such as your phone under your pillow and periodically check batteries for visible damage.



Whether you are looking to add protection against lithium-ion battery fires to your home, vehicle, or workspace, our 4 Litre and 9 Litre Li-lon Fire extinguishers are a good place to start. Rated for a Li-ion battery capacity of up to 2.4kwh for the 4L and 4.8kwh for the 9L, this option is a practical and affordable way to offer protection against lithium-ion battery fires if they occur. Being water-based, these extinguishers should not be deployed on electrically charged fires over 100V, such as an active power board or power point.



45L F-500 ENCAPSULATOR AGENT MOBILE EXTINGUISHER										
FIRE RATING	10A		MC	DDEL NO:	DB4	151	LF-500			
TOTAL HEIGHT	1120	MM	НО	SE LENGTH	4	M				
CYLINDER HEIGHT	900 N	1M	M CYLINDER DIAMETER				OMM			
MINIMUM WALL THICK	(NESS	1.8 N	IM	NOZZLE DIAME	TER		12 MM			
DISCHARGE TIME	>180	SEC	DIS	SCHARGE DISTANI	Œ	6	M			
CYLINDER FINISH	STAIN	LESS S	TEE	_						
AGENT	F-500	ENCAF	PSUI	LATOR AGENT						
SUITABLE FOR		DOD, PAPER & PLASTIC		LI-IC	+ ON BATTI	ERY				



90L F-500 ENC	90L F-500 ENCAPSULATOR AGENT MOBILE EXTINGUISHER										
FIRE RATING	10	10A		DDEL NO:	OBS	30LF-500					
TOTAL HEIGHT	1140	MM	HO	SE LENGTH	M						
CYLINDER HEIGHT	900 N	MM	CY	LINDER DIAMETE	406MM						
MINIMUM WALL THI	CKNESS	1.8 N	IM	NOZZLE DIAME		12 MM					
DISCHARGE TIME	>270	SEC	DIS	SCHARGE DISTAN	6	6 M					
CYLINDER FINISH	STAIN	LESS S	TEE	L							
AGENT	F-500	ENCAF	PSUL	ATOR AGENT							
SUITABLE FOR	A				H						

**MOBILE EXTINGUISHERS** 

In commercial sectors across Australia, we are seeing more and more options utilising lithium-ion batteries. Lead Acid batteries have been a popular choice for forklifts and similar vehicles for a while now, but there are more and more Li-lon powered options in the market. And for good reason; they perform consistently better than their predecessor. This example is not limited to forklifts, but an enormous array of other commercial vehicles that benefit from Li-lon batteries.

LI-ION BATTERY

WOOD, PAPER

& PLASTIC

As larger vehicles are adapting to battery power and there are more of them, so do their power requirements and therefore, battery size and their fire risk. Having an option that is large enough to combat Li-ion battery fires up to 24Kwh, and is nimble enough to be moved with ease, around a warehouse or worksite for example, is critical. Our 45L Mobile F-500EA extinguisher up to the task of keeping you and your workforce safe in the event of a lithium-ion battery fire. Like our portable range, our 45L Mobile extinguisher uses the proven cooling, containing, and controlling formula that F-500EA is renown for. Being a water type extinguisher, it must not be directed towards electrically charged fires, over 100v



#### 1.8M X 1.2M LI-ION BATTERY FIRE BLANKET TO 750°C **LION 18X 12 SPECIFICATION MODEL NO:** SPIKE 750°C 550°C TEMPERATURE RESISTANCE FIBERGLASS FABRIC WITH DOUBLE-SIDED SILICONE COATING YES **ELECTRICAL INSULATION WEAR-RESISTANT** YES YES **WATERPROOF** PVC 0.45MM 480G/M2 WEIGHT CASE **THICKNESS APPLICATIONS:** KITCHEN FIRES - COOKING OILS AND ANIMAL FATS SMALL LITHIUM-ION BATTERY FIRES — MOBILE PHONES, LAPTOPS, POWER TOOLS, E-SCOOTER/E-BIKE



112/11 1120			
SPECIFICATI	ON	MODEL NO:	<b>HTR-GLOVES</b>
MATERIAL	TWO LAYER CO Fireproof Wi	WHIDE, INSULATED ALUMI Re	NUM FOIL,
COLOUR	BROWN SIZE	14 INCHES (ABOUT 35CM	M)
WEIGHT	ABOUT 400G	TEMPERATURE RESISTANCE	500°C

**HEAT RESISTANT GLOVES** 



LITHIUM-ION BATTERY FIRE BLANKET LOCATION SIGN										
SPECIFICATION			ı	MODEL NO	):	ID-LION-FB				
MATERIAL <b>l</b>	JV-PRO	TECTE	D PVC							
SINGLE UNITS	YES	SIZE	225N	MM X 15	OMM					
PACKET QTY	50	CARTO	ON QTY	500	WARRANTY	12 MONTHS				



LITHIUM-ION BATTERY FIRE BLANKET LOCATION SIGN										
SPECIFICATION			ı	MODEL NO		IDF-500				
MATERIAL \	JV-PRO	TECTE	D PVC							
SINGLE UNITS	YES	SIZE	225N	MM X 19	OMM					
PACKET QTY	50	CARTO	ON QTY	500	WARRANTY	12 MO	NTHS			



ELECTRIC VEHICLE FIRE BLANKET LOCATION SIGN										
SPECIFICATION			ı	MODEL N	D:	IDEVFB				
MATERIAL \	JV-PRO	TECTE	D PVC							
SINGLE UNITS	YES	SIZE	2101	MM X 32	20MM					
PACKET QTY	50	CARTO	ON QTY	500	WARRANTY	12 MONTHS				



6M X 8M ELECTRIC VEHICLE FIRE BLANKET											
SPECIFICATI	ON				MODE	L NO:			<b>EV60X80</b>		
TEMPERATURE RESISTANCE 1					00°C	1700°C					
MATERIAL	MATERIAL HIGH-TEMPERATURE SILICA FABRIC WITH DOUBLE-SIDED SILICONE COATING										
WATERPROC	)F	YES	ELE	CTRIC <i>A</i>	L INSUL	ATION	YES	W	EAR-RESIS <sup>*</sup>	TANT	YES
THICKNESS		0.70N	MM	WEIG	HT	8000	6/M2	SI	ZE	6M	X 8M
APPLICATIONS: Vehicle Fires, Lithium-Ion Battery Fires, Forklifts, Service Stations, Charging Stations, Towing Service, Airport											
PACKAGE		WEAT	HER	PROOF	BACK	PACK (	OR CAB	INE	T		



5M X 5M	5M X 5M MOBILITY FIRE BLANKET											
SPECIFICAT	ION				MODE	L NO:			LION	150	<b>X50</b>	
TEMPERATU	IRE	RESISTAI	VCE	80	O°C SPIKE			1200°C				
MATERIAL			GH-TEMPERATURE SILICA FABRIC WITH DOUBLE-SIDED ICONE COATING								D	
WATERPROC	)F	YES	ELE	ELECTRICAL INSULATION YES WEAR-RESISTANT						YES		
THICKNESS		0.70N	IM	WEIG	HT	8000	6/M2	SI	ZE	5M	X 5M	
LITHIUM-I	APPLICATIONS: LITHIUM-ION BATTERY FORK-LIFT, WALKIE STACKER, MOBILITY SCOOTERS, MOWERS WARESTORE BATTERIES											
PACKAGE		WEAT	HER	PROOF	BACK	PACK (	OR CAB	INE	:T			



3M X 4M E-S	SCUUIE	K & F-RIK	t fikti	BLANK	ĿΙ						
SPECIFICATION			MODEL	. NO:			<b>ION30</b>	<b>X40</b>			
TEMPERATURE	RESISTAN	ANCE 800°C SPIKE 1200°C									
		MPERATUI Coating		CA FAB	RIC WI	TH DOU	IBLE-SIDE	D			
WATERPROOF	YES	ELECTRICA	TRICAL INSULATION YES				WEAR-RESISTANT YES				
THICKNESS	0.70M	IM WEIG	SHT	800G	/M2	SIZE	3M	X 4M			
	APPLICATIONS: Electric scooter and electric bike										
PACKAGE	WEAT	HERPROOI	BACKE	PACK O	R CAB	INET					



**LINE INDUCTOR Z2R** 

SPECIFICATION MODEL NO: AWGZ2-INDUCT

ENSURES A FLOW RATE OF 200L/MIN WITH AVERAGE FLOW RATE



**LINE INDUCTOR Z4R** 

SPECIFICATION MODEL NO: AWGZ4-INDUCT

ENSURES A FLOW RATE OF 400L/MIN WITH AVERAGE FLOW RATE



#### **20L F-500 ENCAPSULATOR AGENT**

**SPECIFICATION** 

MODEL NO:

20LTRF-500

- RAPID COOLING
- ENCAPSULATES FUEL
- INTERRUPTS FREE RADICAL CHAIN REACTION
- DRASTIC CANCER-CAUSING TOXIN & SMOKE REDUCTION
- NO FLUORINATED INGREDIENTS (PFOA/PFAS)
- NO SCALDING STEAM
- SUITABLE FOR LITHIUM-ION BATTERIES



#### F-500 TKO NOZZLE

CAPACITY 2 LITRES MODEL NO: TKO-075L
FLOW RATE 75 LPM COUPLING: FORGED STORZ COUPLING



WOOD, PAPER & Plastic



FLAMMABLE & COMBUSTIBLE LIQUID



COOKING OILS & Fats



#### **EMERGENCY RESPONSE**



FLUORINE-FREE

Current responses to lithium-ion battery fires in electric vehicles, for example, are simply to flood it with as much water as possible. From reports, a well-ignited electric vehicle fire may need in excess of 30,000 gallons or 136,000 litres of water to extinguish, and even then, they typically smolder out. This is equivalent to 517 years of drinking water for the average person!

With F-500E being 6-10 times more effective than water in its cooling effect, the amount of water required to put out the same fire is significantly reduced. With F-500EA's superior performance cooling a lithium-ion battery fire, we not only see water savings, but a reduction in time required to extinguish the fire, toxic gas emission and its ability to prevent reignition by encapsulating the electrolyte material within the battery.

To help combat larger lithium-ion battery fires, such as an electric vehicle or a battery-storage fire, we have our Total KnockOut (TKO) Nozzle to do the job. We can also supply our Lithium-Ion Solution in 20L, 200L and 1000L drums.



# PROTEK 38MM FEMALE COMBINATION PATTERN NOZZLE WITH 115-230-360-475 LPM FLOW RATE

110 200 000 170 21 1111 2011 11111 2					
SPECIFICATION	MODEL NO:	150-366E			
• BRAND: PROTEK	• SUITS: 38MM BSP MA	LE ADAPTOR			
• BOX QUANTITY: 1	• OPERATING PRESSUR	E: 7 BAR			
• SINGLE UNITS: YES	• FLOW RATE: 115-230	-360-475 LPM			
• MATERIAL: ALLOY & PVC					
• SIZE: 38MM					



# PROTEK 38MM FEMALE SELF-EDUCTING VARIABLE PATTERN NOZZLE WITH 230-360-475 LPM FLOW RATE

SPECIFICATION	MODEL NO:	l 150-236AP
• BRAND: PROTEK	• SUITS: 38MM BSP	MALE ADAPTOR
• BOX QUANTITY: 1	• OPERATING PRESS	SURE: 3.5BAR
• SINGLE UNITS: YES	• FLOW RATE: 230-	360-475 LPM
• MATERIAL: ALLOY & PVC		
• SIZE: 38MM		



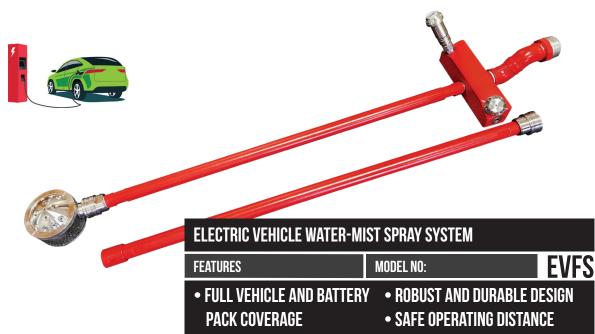
#### PROTEK 888S ADJUSTABLE SELF-EDUCTING MONITOR NOZZLE **COMBINATION PATTERN**

SPECIFICATION	MODEL NO:	<u>  150-888-1900</u>	
• BRAND: PROTEK	• MATERIAL: ALLOY		
• BOX QUANTITY: 1	• SIZE: 2.5 INCH FEMALE BSP INLET		
• SINGLE UNITS: YES	• FLOW RATE:	UP TO 2900LPM	



#### PROTEK PORTABLE GROUND MONITOR UP TO 1900LPM FLOW RATE

SPECIFICATION	MODEL NO:	150-600
BRAND: PROTEK     BOY QUANTITY: 1	• SIZE: 2.5 INCH	
<ul><li>BOX QUANTITY: 1</li><li>SINGLE UNITS: YES</li></ul>	INLET, 2.5 INC • FLOW RATE: UF	H MALE BSP OUTLET P to 1900lpm
• MATERIAL: ALLOY		



FAST COOLING EFFECT
ABSORB TOXIC GASES

• MULTI-DIRECTIONAL USE

• COMPACT DESIGN

- QUICK & EASY SET UP
- INSULATING COATING
- EASY MAINTENANCE
- F-500EA SOLUTION SUITABLE



#### **AWG PICK-UP TUBE DN20**

**SPECIFICATION** 

**MODEL NO:** 

**AWGPICKUP-TUBE** 

- SYSTEM INLET: STORZ
- LENGTH [MM]: 1500
- SIZE INLET: 25
- HOSE ID: 20MM
- MATERIAL ADAPTER: ALUMINIUM

# ELECTRIC VEHICLE WATER-MIST SPRAY SYSTEM



The EVFS system is a fire-fighting device specifically designed for electric vehicles. It comprises of a water mist nozzle, and an extension pipe, both made of stainless steel. The EVFS system is designed to spray water and water mist to help cool and extinguish the battery pack under the vehicle chassis.



#### **DUAL EXTINGUISHER MOUNTING POLE**

SPECIFICATION MODEL NO:

DUAL EXTINGUISHER MOUNTING POLE WITH EXTINGUISHER AND ID SIGN MOUNTING PLATES.

(EXTINGUISHER CABINETS AND SIGNS SOLD SEPARATELY)



SPECIFICATION

MODEL NO: LI-4L-BRACKET

**EXT-STAND** 

- HEAVY DUTY
- POWDER COATED (RED)



# 25MM X 30M SWING ARM TYPE FIRE HOSE REEL INDUCTION SYSTEM

SPECIFICATIONS MODEL NO: HR3025-INDUCTION

HEIGHT 1100MM WIDTH 730MM DEPTH 330MM

INCLUSION 25MM X 30M SWING ARM FIRE HOSE REEL, A HOSE REEL CABINET AND AN INDUCTION SYSTEM

SUITS 20L F-500EA AGENT OR NEWTONIAN FIREFIGHTING FOAM SOLUTION

#### LITHIUM-ION ACCESSORIES

Charging Li-lon batteries in environments that are extremely volatile or incredibly sensitive to fire risks need extra care and consideration. For example, inside a workplace that is very hazardous and has the requirement of lithium-ion batteries to be used and charged.

A number of solutions exist for these unique environments, particularly when under charge in incredibly sensitive environments.



#### 20/25L DRUM TROLLEY

**SPECIFICATION** 

MODEL NO:

### TROLLEY-DRUM20L

- HEIGHT: 1095MM
- WIDTH: 475MM
- DEPTH: 560MM
- EMPTY WEIGHT: 9.5KG
- WHEEL DIAMETER: 205MM
- WHEEL MATERIAL: POLY & RUBBER
- DRUM HOLDER SUITS: 20L & 25L

STD DRUMS

• DIMENSIONS & WEIGHT ABOVE DOES NOT INCLUDE ACCESSORIES



#### SERVICE REFILL KIT FOR 4L F-500EA FIRE EXTINGUISHER

**SPECIFICATION** 

MODEL NO:

4LF-500-SERVKIT

- SERVICE KIT INCLUDES: 150ML F-500EA, VALVE O-RING, CHECK STEM, DIP TUBE & INSTRUCTION MANUAL.
- SUITS ONLY: FB4LF-500 (4L LI-ION FIRE EXTINGUISHER)



#### SERVICE REFILL KIT FOR 9L F-500EA FIRE EXTINGUISHER

**SPECIFICATION** 

**MODEL NO:** 

# 9LF-500-SERVKIT

- SERVICE KIT INCLUDES: 300ML F-500EA, VALVE O-RING, CHECK STEM, DIP TUBE & INSTRUCTION MANUAL.
- SUITS ONLY: FB9LF-500 (9L LI-ION FIRE EXTINGUISHER)





#### FIRE RESISTANT BATTERY STORAGE CABINET

SPECIFICATION MODEL NO: LI-CAB-SML
SIZE (EXTERNAL DIMENSION) L X W X H 1400MM X 1000MM X 1100MM

SIZE (INTERNAL DIMENSION) L X W X H 800MM X 600MM X 400MM

SUITS BATTERY SIZE L X W XH 600MM X 400MM X 250MM

CONSTRUCTION CABINET BODY IS MADE FROM 5MM STEEL WITH INSIDE 40MM FIREPROOF MATERIAL

COMMON USE BATTERY MANUFACTURER, STORAGE, CAR DEALER, RECYCLING INDUSTRY, POWER TOOL MANUFACTURER, STORAGE, MINING SITE



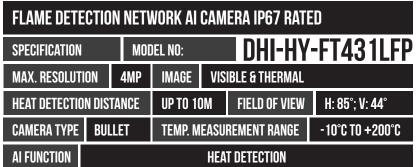
#### FIRE RESISTANT BATTERY STORAGE CABINET

SPECIFICATION		MODEL NO:		LI-CAB-LRG
SIZE (EXTERNAL DIMENSION) L X W X H			3600MM X 250	OMM X 1300MM
SIZE (INTERNAL DIMENSION) L X W X H			2800MM X 185	OMM X 600MM
SUITS BATTERY SIZE L X W XH 2500MM X 1600MM X 400MM				OOMM
CONSTRUCTION CABINET BODY IS MADE FROM 5MM STEEL WITH INSIDE 40MM FIREPROOF MATERIAL				
COMMON USE	ISE BATTERY MANUFACTURER, STORAGE, CAR DEALER, RECYCLING INDUSTRY, POWER TOOL MANUFACTURER, STORAGE, MINING SITE			



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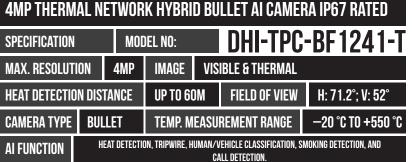












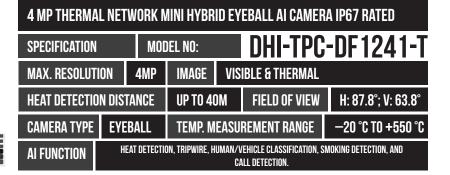




















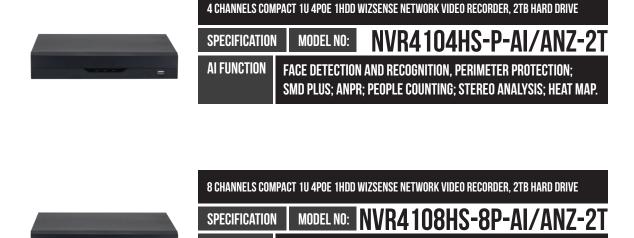


SPECIFICATION	MODEL NO: DHI-HY-SAV			349HAP-ET	
MAX. RESOLUTION 4MP		IMAGE	VIS	IBLE & THERMAL	
HEAT DETECTION DISTANCE		UP TO 10M FIELD OF VIEW H: 87.8°; V: 63		H: 87.8°; V: 63.8°	
CAMERA TYPE INTEGRATED WITH SMOKE ALARM		TEMP. MEASUREMENT RANGE		REMENT RANGE	−20 °C TO +550 °C
AI FUNCTION	FLAME DETECTION				

5MP IR AI-FIRE SMOKE SENSING NETWORK CAMERA WITH TEMPERATURE AND HUMIDITY DETECTION, BUILT IN LITHIUM BATTERY, PHOTOELECTRIC SMOKE SENSOR WITH A COVERAGE OF 30 ~ 60 M2

#### EARLY FIRE DETECTION AND INFRARED (IR) CAMERA SYSTEMS

Early detection of lithium-ion battery fires, as well as any fire, is crucial in minimizing damage and destruction. Our CCTV fire detection cameras utilize advanced imaging and infrared spectrum technology to ensure early fire detection and reliable monitoring. These cameras can detect fires within seconds and send real-time alerts, allowing for a swift response. Additionally, our CCTV fire detection cameras incorporate Al technology to enhance accuracy by up to 99% and reduce false alarms. Installing specialized fire detection cameras is recommended for early detection in high-risk areas such as battery manufacturing and storage facilities.



MODEL NO:

**AI FUNCTION** 

**SPECIFICATION** 

16 CHANNELS COMPACT 1U 4POE 1HDD WIZSENSE NETWORK VIDEO RECORDER, 4TB HARD DRIVE

FACE DETECTION AND RECOGNITION, PERIMETER PROTECTION; SMD PLUS; ANPR; PEOPLE COUNTING; STEREO ANALYSIS; HEAT MAP.

NVR4216-16P-AI/ANZ-4T **AI FUNCTION** FACE DETECTION AND RECOGNITION, PERIMETER PROTECTION; SMD PLUS; ANPR; PEOPLE COUNTING; STEREO ANALYSIS; HEAT MAP.



# **USER GUIDE**

# LITHIUM-ION BATTERY FIRE

Suggested Use	Estimated Capacity	Recommended Prouducts
SMARTPHONE BATTERY	1.5Wh - 3.0Wh	FB4LF-500 & LION18X12
TABLET	15.39Wh - 31.23Wh	FB4LF-500 & LION18X12
LAPTOP BATTERY	28.8Wh - 86.4Wh	FB4LF-500 & LION18X12
CORDLESS POWER TOOLS	24Wh - 104Wh	FB4LF-500 & LION18X12
JET SKI	680Wh	FB9LF-500 & LION30X40
ELECTRIC BIKE / SCOOTER	360Wh - 480Wh	FB9LF-500 & LION30X40
CARAVAN / MOTORHOME	1.2kWh - 3.36kWh	FB9LF-500 & LION18X12
TRAILER BOAT	1.44kWh - 3.36kWh	FB9LF-500 or MOB45LF-500 & LION50X50
HYBRID CAR	1.3kWh - 1.6kWh	MOB45LF-500 & EVFS & EV60X80
ELECTRIC FORKLIFT	3.6kWh - 15.36kWh	FB9LF-500 or MOB45LF-500 & LION50X50
WALKIE STACKER	2.4kWh - 8.64kWh	FB9LF-500 or MOB45LF-500 & LION50X50
ELECTRIC CAR	38.3kWh - 100kWh	EVFS or TKO-075L & EV60X80
SOLAR PANEL BATTERY	2.5kWh - 15kWh	FB9LF-500 or MOB45LF-500
IIII	13kWh - 48kWh	MOB90LF-500 or TKO-075L



LUXURY BOAT

We encourage you to discuss your individual fire needs with your Fire Service provider to ensure that you are covered for all Fire-types not just Lithium-Ion Battery Fires.











