

# MARINE & LEISURE BATTERY SOLUTIONS



# ENSURE SAFER & LONGER TRIPS BY CHOOSING THE RIGHT BATTERY

The battery is critical to safety and comfort. It powers key operations like engine start, radio, GPS, lighting, heating and refrigeration, allowing passengers to feel sheltered, entertained and connected to the outside world.

Exide's new marine range covers all the energy needs of both professional installers and private users. It offers the very best in reliability and electrical performance, allowing you to extend average trip length, experience improved luxury and comfort on board, and benefit from exceptional battery lifespan.

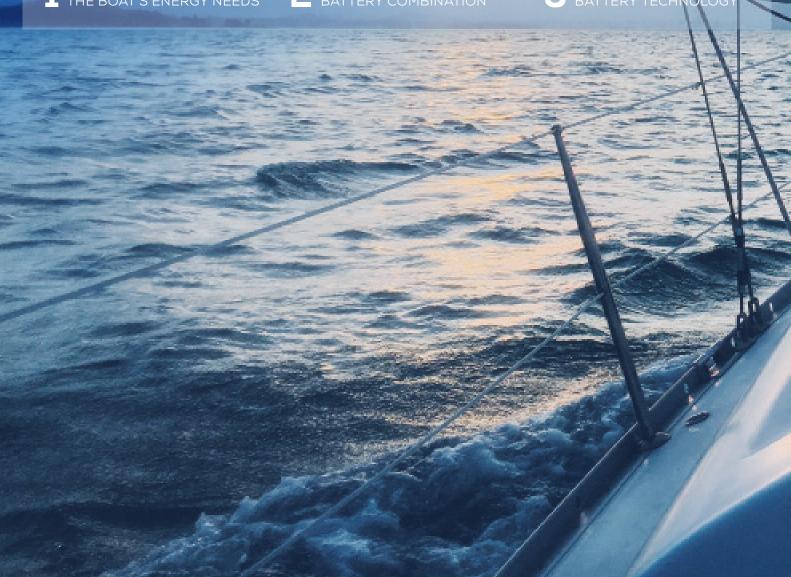
Exide's premium marine batteries are a preferred choice for boat builders. Exide's Gel and AGM batteries are DNV approved, the highest endorsement for a marine market product, making it easier to align with European naval regulations for newly built boats.

# HOW TO SELECT THE BEST BATTERY SOLUTIONS

1 IDENTIFY
THE BOAT'S ENERGY NEEDS

2 FIND THE RIGHT
BATTERY COMBINATION

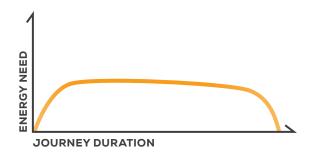
3 SELECT THE BEST
BATTERY TECHNOLOGY



# IDENTIFY THE BOAT'S ENERGY NEEDS

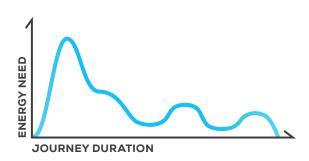
#### **EQUIPMENT SUPPLY NEED**

An uninterrupted supply to emergency or comfort equipment uses power at consistently high levels, causing deep battery discharge during the journey. The electrical unit used to measure equipment supply need is Wh\*.



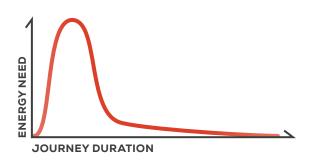
#### **DUAL SUPPLY NEED**

Starting engine in combination with the supply to other electrical equipment requires high peaks of power and also a variable power drain, causing battery discharge during the journey. The electrical unit used to measure dual supply need is Wh\*.



#### **ENGINE START NEED**

Starting a combustion engine requires high peaks of power during a short time, leaving batteries unused for the rest of the journey. The electrical unit used to measure engine start need is MCA\*.



\*MCA = Marine Cranking power in Amps at 0°C

\*Wh = Available Watt x hour at 20h rate from a battery, without exceeding its recommended depth of discharge

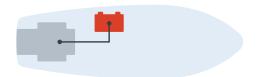


# **EXAMPLES OF DIFFERENT**CONFIGURATIONS



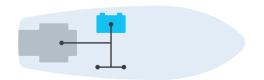
#### Case A - Engine only

Boats for which batteries are applied to engine start only. The electrical equipment is not supplied with energy when the engine is switched off. This configuration corresponds to Engine start need.



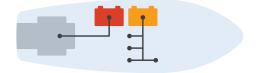
#### Case B - Engine & Equipment

Boats for which one unique bank of battery has to supply power for engine start and electrical equipment. This configuration corresponds to Dual supply need.



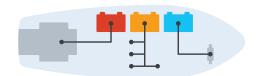
#### Case C - Engine + Equipment

Boats for which 2 separated banks of batteries are dedicated to supply power, one for engine start and the other for electrical equipment. This configuration corresponds to two needs: Engine start plus Equipment supply. In total, 2 different batteries are required.



#### Case D - Engine + Equipment + Other

Boats for which, in addition to 2 main battery banks (engine + equipment), other batteries are installed to supply power directly to electrical winches, thrusters or trolling motors. This configuration corresponds to three needs: Engine start plus Equipment supply plus Dual supply. In total, 3 different batteries are required.





# EACH ENERGY NEED HAS ITS OPTIMAL BATTERY SOLUTION

#### **EQUIPMENT SUPPLY NEED**

EQUIPMENT battery range is designed to supply power for boats with dedicated battery banks for equipment such as navigation, emergency, safety and comfort (cases C&D). The batteries are partially or even deeply discharged during use. This means that the EQUIPMENT's special design, together with a good recharging procedure, is the key to providing the most reliable result and service life duration. EQUIPMENT range, with Wh\* performance from 290Wh to 2400Wh, is the choice to cover all equipment supply needs, from small electronics to emergency power.





#### **DUAL SUPPLY NEED**

Exide DUAL battery range is designed to supply power for boats having one battery bank for all consumers (case B). It is also suitable for additional batteries directly applied to electrical winches, thrusters and trolling motors (case D). The batteries are partially discharged during use. This means that the DUAL's reinforced design, together with a good recharging procedure, is key to providing the best result and service life duration. DUAL battery range, with Wh\* performance from 350Wh to 2100Wh, is the choice to cover all dual supply needs for the most popular recreational boats.

#### **ENGINE START NEED**

Exide START battery range is designed to supply high power for engine start when installed alone for boats with basic equipment (case A). It can also be used when installed in engine-dedicated battery banks for the most sophisticated yachts (cases C&D). The batteries are usually charged after starting the engine, as the alternator quickly returns consumed power. The START design provides good performance and service life duration. START battery range, with MCA\* performance from 500A to 1100A, is the choice to cover all engine start needs from small outboards to big sterndrives.





#### **EQUIPMENT SUPPLY NEED**

## **EQUIPMENT**

Lithium-Ion technology



#### LI-ION

#### **Benefits**



• Ultra light weight



Superior cycling



• Up to 50% faster recharging



• Ready to use



Multiple positions



- Absolutely maintenance free
- Suitable for long resting periods

#### **EQUIPMENT GEL**



Gel (electrolyte fixed in a gel) with VRLA venting.

#### **Benefits**



• Superior cycling



- · Internal gas recombination
- No location constraints • Safe and clean



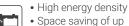
- High inclination
- High vibration & tilt resistant







- Absolutely maintenance free
- Suitable for long resting periods



• Space saving of up to 30%



#### **EQUIPMENT AGM**

Absorbent Glass Mat

#### **Benefits**



· Superior cycling



· Internal das recombination



Maintenance free





Medium inclination



Faster recharging

#### **EQUIPMENT**

Standard flooded with glass mat separators and plug venting.

#### **Benefits**



Superior cycling





- Slight inclination
- Medium vibration & tilt resistant

VERIFIED VERIFIED



 I ow maintenance

#### **DUAL SUPPLY NEED**









**DUAL EFB** 

Standard flooded with central degassing **Enhanced Flooded Battery** 

#### **DUAL AGM**

AGM flat or orbital with VRLA venting

#### **Benefits**



· Extra start & supply



- Absolutely maintenance free
- Suitable for long resting periods



- Faster recharge
- Up to 50% faster recharging



- High inclination
- High vibration & tilt resistant



- Internal gas recombination
- No location constraints (cabin safe)
- Safe and clean (spark & spill-proof)

#### **Benefits**



Extra start & supply



Maintenance free



• Maximum Charge Acceptance

#### **Benefits**

DUAL



Start & supply



Low maintenance



- Low gas emission
- To be installed in special container

Product registered and VERIFIED



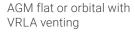
- Upright mount
- Medium vibration & tilt resistant



• Top indicator for electrolyte & charge inspection (except ER660)

#### **ENGINE START NEED**

#### **START AGM**







#### **START**

Standard flooded with plug venting

#### **Benefits**



 Superior starting power



 Absolutely maintenance free



- Very low gas emission
- · Spark arrestor & central degassing for safe gas conduction

#### **Benefits**



· Superior starting power



- · Absolutely maintenance
- Suitable for long resting periods



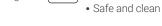
• Up to 50% faster recharging



- High inclination • High vibration & tilt
- resistant



- Internal gas recombination
- No location constraints





• Slight inclination

#### **FINALIZE YOUR CHOICE**

#### BY CALCULATING THE ENERGY REQUIRED IN WATTS PER HOUR

#### 1. START BY CALCULATING DEVICE CONSUMPTIONS













TOTAL ENERGY NEEDED 1070 Wh

#### 2. APPLY A SAFETY FACTOR TO COVER OVERUSE

x1.2

TOTAL REQUIRED 1284 Wh

#### 3. SELECT YOUR BATTERY SET ACCORDING TO THE REQUIREMENTS



**EQUIPMENT** LI-ION

Reference: EV1600 1.600 Wh\* Energy: Weight: 15 kg

**EQUIPMENT** 

GFI

Reference: ES1300 1.300 Wh\* Energy: Weight: 39 kg

DUAL **AGM** 

Reference: **EP900** 2 x 900 Wh\* Energy: Weight: 2 x 32 kg

DUAL FFR

Weight:

LI-ION

48

Reference: **EZ600** 3 x 600 Wh\* Energy:

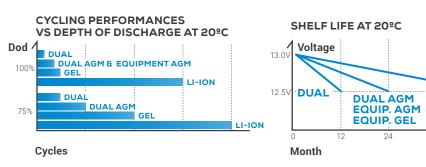
3 x 20 kg

DUAL

Reference: ER450 3 x 450 Wh\* Energy: Weight: 3 x 23 kg

80

<sup>\*</sup>Wh = Available Watt x hour at 20h rate from a battery, without exceeding its recommended depth of discharge



#### **VIBRATION RESISTANCE AT 6G/35HZ\* DUAL & DUAL EFB EQUIPMENT AGM EQUIPMENT GEL**

**DUAL AGM FLAT** LI-ION **DUAL AGM ORBITAL** Time (hours)

\* Referred to EN50342

#### **DID YOU KNOW?**

When selected battery technology does not achieve the required Wh for a vehicle, either the number of batteries connected in parallel has to be increased or the technology has to be upgraded to Equipment Gel.

Jet-skis and scooters, often used as service vehicles, are fitted with the Exide Poxwersport offer.

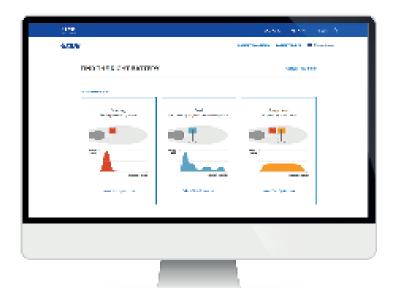
### **MORE** THAN BATTERIES

Because marine battery use is seasonal, tools such as testers and chargers are essential for marine professionals and end users alike. Exide has a comprehensive range of accessories and support for batteries of all kinds of applications. We help you test, charge, select, replace and recycle batteries – everything workshops need to keep work in-house, provide quality service and grow profitability.









# **BATTERY FINDER**ONLINE

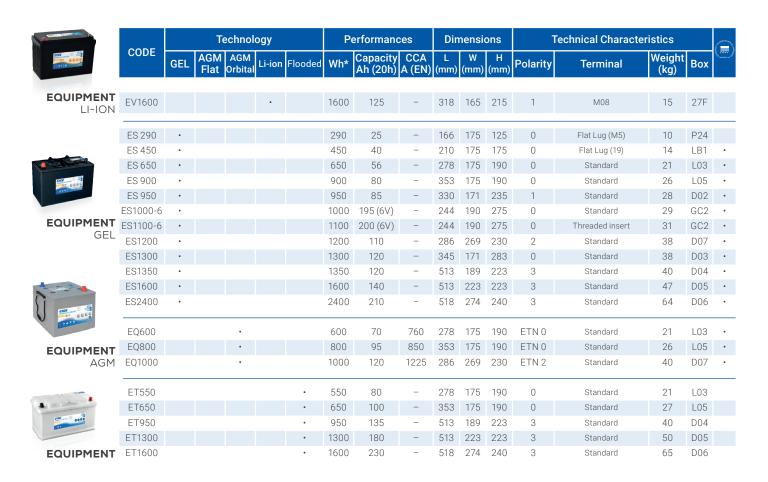
The new Online battery finder features a modern interface and all-new user experience, it supports battery selection and fitting for the most comprehensive range of boats and vehicle types.

It propose now an exclusive tool that allows to make the best choice based on the specific electrical needs of the user.

www.exidegroup.com/eu/en/battery-finder/leisure/boat



#### **TYPE** LIST



#### **CODE STRUCTURE**





		Technology				P	Dimensions			Technical Characteristics							
CODE		GEL		AGM Orbital	Li-ion	Flooded	Wh*	Capacity Ah (20h)		L (mm)	W (mm)	H (mm)	Polarity	Terminal	Weight (kg)	Вох	(BNV)
And Andrews	EP450						450	50	750	260	173	206	1	Standard + Threaded	19	G34	
	EP500						500	60	680	242	175	190	0	Standard	18	L02	
MANUFACTURE OF CO.	EP600		•				600	70	760	278	175	190	0	Standard	21	L03	•
1 minimum 1	EP800						800	95	850	353	175	190	0	Standard	26	L05	
DUAL	EP 900		•				900	100	800	347	174	238	1	SAE M 3/8«- 5/16» taper&stud	31	G31	•
AGM	EP1200		•				1200	140	700	513	189	223	3	Standard	41	D04	٠
10.00	EP1500		•				1500	180	900	513	223	223	3	Standard	50	D05	•
CODE METERS CODE CODE	EP2100		•				2100	240	1200	518	274	240	3	Standard	70	D06	•
MALA	EZ600						600	70	720	278	175	190	ETN 0	Standard	20	L03	
DUAL	EZ650					•	650	75	750	270	173	222	ETN 0	Standard	19	D26	
EFB	EZ850					•	850	100	900	353	175	190	ETN 0	Standard	26	L05	•
n	ER350						350	80	510	270	173	222	1	Standard	18	D26	
0000	ER450					•	450	95	650	306	173	222	1	Standard	22	D31	
	ER550						550	115	760	349	175	235	1	Standard	28	D02	
	ER650					•	650	142	850	349	175	285	1	Standard	35	D03	
DUAL	ER660					•	660	140	750	513	189	223	3	Standard	37	D04	

The second secon	CODE	GEL	AGM Flat	AGM Orbital	Li-ion	Flooded	MCA* A (BCI)	Capacity Ah (20h)		L (mm)	W (mm)	H (mm)	Polarity	Terminal	١
SXIDS COMMENTS	EM900						900	42	700	230	173	206	1	Standard + Threaded	
a minimum 3	EM960		•				960	100	800	347	174	238	1	SAE M 3/8» taper&stud	
START AGM	EM1000			٠			1000	50	800	260	173	206	1	Standard + Threaded	
	EN500						500	50	450	207	175	190	0	Standard	
	EN600					•	600	62	540	242	175	190	0	Standard	
	EN750					•	750	74	680	278	175	190	0	Standard	
	ENIONO						000	00	720	252	175	100	0	Ctondord	



1	EM1000		•		1000	50	800	260	1/3	206	1	Standard + Threaded	18	G34	•
	EN500				500	50	450	207	175	190	0	Standard	12	L01	
	EN600				600	62	540	242	175	190	0	Standard	14	L02	
	EN750				750	74	680	278	175	190	0	Standard	17	L03	
	EN800				800	90	720	353	175	190	0	Standard	20	L05	
	EN850				850	110	750	349	175	235	1	Standard	25	D02	
Г	EN900				900	140	800	513	189	223	3	Standard	34	D04	
	EN1100				1100	180	1000	513	223	223	3	Standard	43	D05	

16

31

G86

G31

STOR CONTROL C
VINTAGE

COMPLE	MEN I	ARY	RANG	jE F	OR OL	.D FI	IIM	EN	15					
EU72L				-	72	640	278	175	190	1	Standard	16	L03	
EU77-6			•	-	77 (6V)	360	215	169	184	0	Standard	18	H02	
EU80-6				-	80 (6V)	600	158	165	213	0	Standard	11	M02	
EU140-6			•	-	140 (6V)	900	257	175	236	0	Standard	18	M04	
EU165-6				-	165 (6V)	900	330	174	234	0	Standard	25	M05	
EU200-6			•	-	200 (6V)	1150	398	174	234	0	Twin EN taper posts	28	M06	
EU260-6				-	260 (6V)	1300	345	172	286	0	Standard	39	M08	

#### **DID YOU KNOW?**

Exide also produces batteries for light vehicles, commercial vehicles, motorcycles and caravans. Contact your local sales representative or visit www.exide.com to find out more.

<sup>\*</sup>MCA = BCI Marine Cranking power in Amps at 0°C 
\*Wh = Available Watt x hour at 20h rate from a battery, without exceeding its recommended depth of discharge

**Exide Technologies**, with operations in more than 80 countries and more than 130 years of experience, is one of the world's largest producers and recyclers of lead-acid batteries. The company develops state-of-the-art energy storage solutions for the automotive and industrial market. Leading car, truck and lift truck manufacturers trust in Exide Technologies as an original equipment supplier. Exide also serves the aftermarket through a portfolio of successful and well-known brands.

Exide Transportation manufactures batteries for light and commercial vehicles, as well as agricultural and marine leisure applications. Industrial markets – under the division **GNB Industrial Power** – include efficient energy storage solutions for motive power applications such as lift trucks, cleaning machines and other commercial electrical vehicles, and network power applications such as telecommunications systems, renewables, and uninterruptible power supply (UPS).



#### **EMEA HEADQUARTERS**

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