

# Marine Battery Solutions



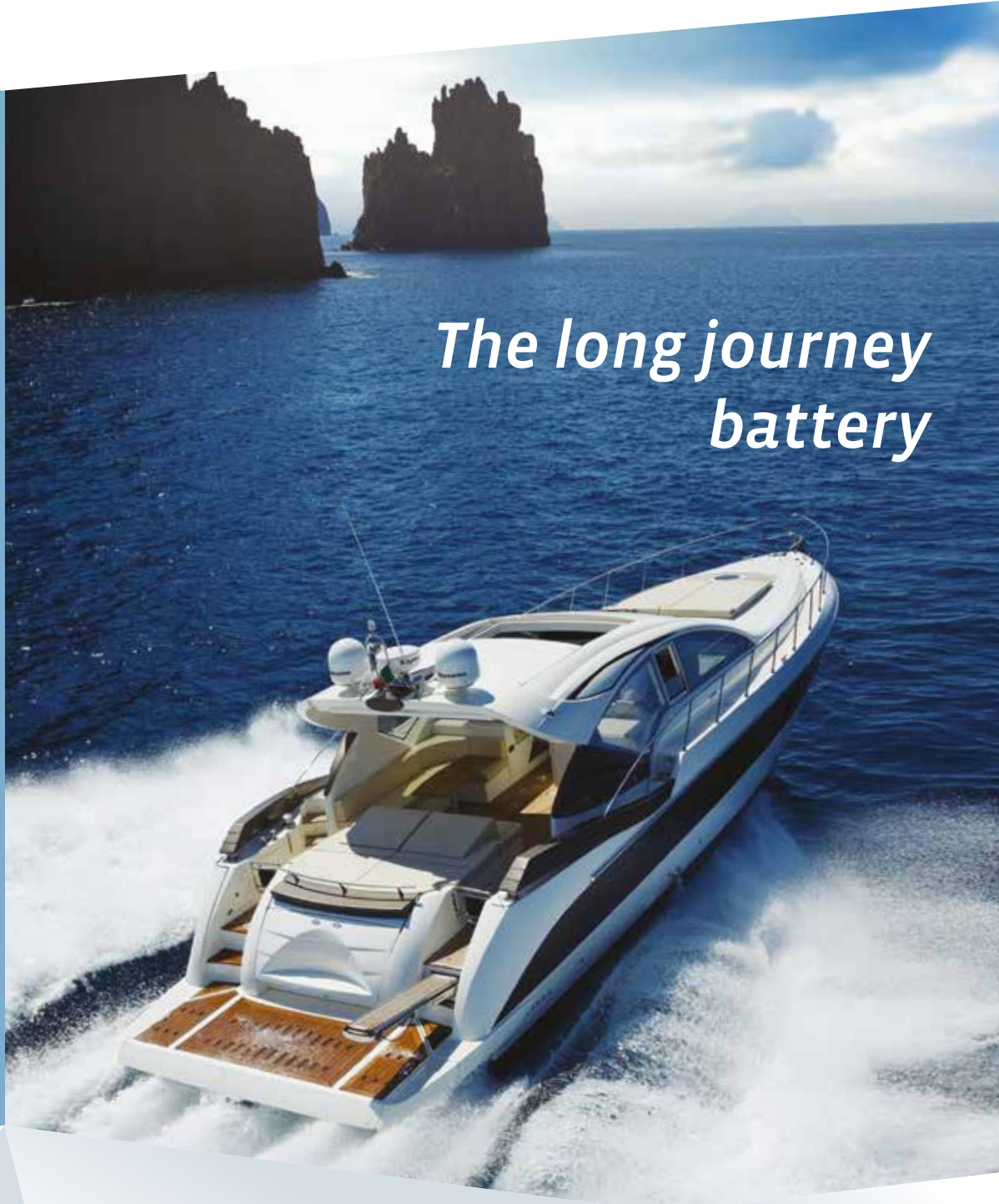
*The long journey  
battery*

Comprehensive  
battery range for all  
marine needs:

Engine start

Equipment supply

Dual supply



Made in Europe  
by Exide Technologies  
Original Equipment  
Manufacturer



# Ensure safer & longer trips by choosing the right battery

On board, safety and comfort during navigation depend on the electrical supply to boat equipment. Usually provided by batteries, the electrical supply is capable of powering key operations such as engine start, radio/GPS and navigation lighting. As efficient energy storage is crucial to keep the boat moving, Exide presents the new marine battery offer, able to cover all the energy needs of both professional installers and private users.

By choosing the right marine battery, the electrical supply will last longer, ensuring enhanced trip duration and comfort. The new marine premium batteries are also a preferred choice for boat builders. Thanks to DNV approval, it is simpler to get permission in accordance with European naval regulations for newly built boats.

## How to select the best battery solutions:

- 1 Identify the boat's energy needs
- 2 Identify the boat's electrical configuration to find the right battery combination
- 3 Select the best battery technology according to its conditions of use



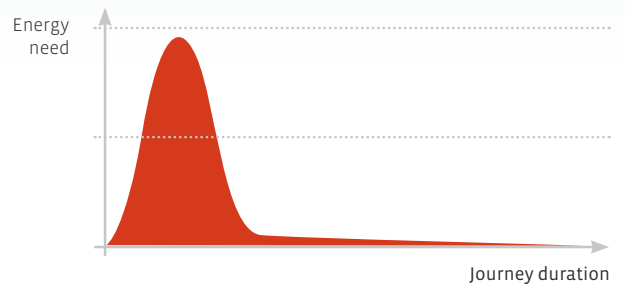
# Identify the boat's energy needs



Three basic energy needs for marine battery uses:

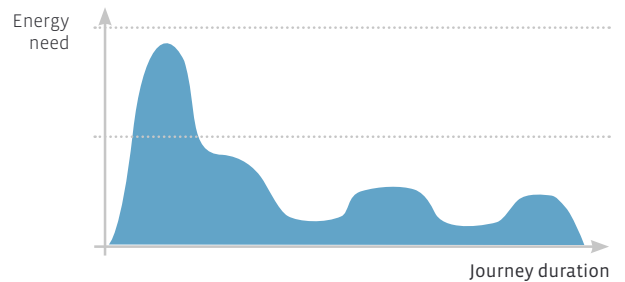
## Engine Start Need

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\*



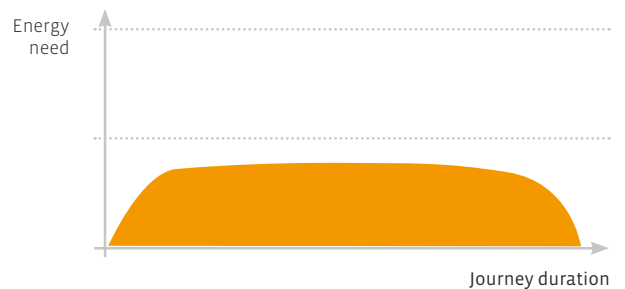
## Dual Supply Need

Starting engine in combination with the supply to other electrical equipment requires not only high peaks of power but also a variable power drain, causing battery discharge during the journey. The electrical unit used to measure dual supply need is Wh\*



## Equipment Supply Need

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



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

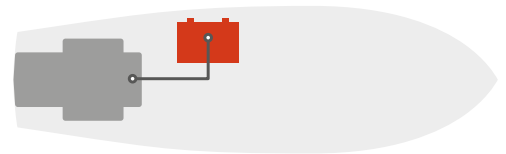
\*Wh = Available Watt x hour at 20h rate from a battery, without exceeding its recommended depth of discharge

# Identify the boat's electrical configuration to find the right battery combination

The boat's electrical configuration determines the battery combination

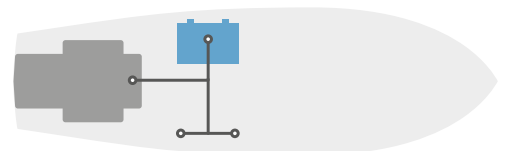
## Case A. Engine only

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



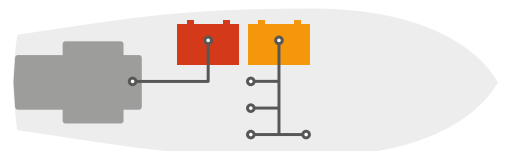
## Case B. Engine & Equipment

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.



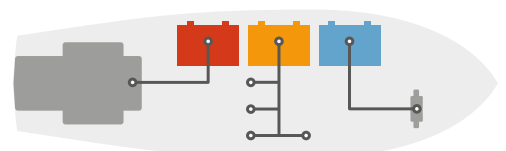
## Case C. Engine + Equipment

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 consequence, 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 consequence, 3 different batteries are required.





Each energy need has its optimal battery solution



### 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 1400A, is the choice to cover all engine start needs from small outboards to big sterndrives.

#### START



### 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.

#### DUAL



### 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.

#### EQUIPMENT



\*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

# Select the best battery technology according to its conditions of use

## Engine Start Need



Two technologies with specific features & benefits are available for engine start need.



**START**



**START AGM**



LOW MAINTENANCE

› Low maintenance



MAINTENANCE FREE

› Absolutely maintenance free  
› Suitable for long resting periods



LOW GAS EMISSION

› To be installed in special container



INTERNAL GAS RECOMBINATION

› No location constraints (safe for cabin mount)  
› Safe and clean (spark & spill-proof)



SLIGHT INCLINATION

› Upright mount



HIGH INCLINATION

› Suitable for side mount  
› High vibration & tilt resistant



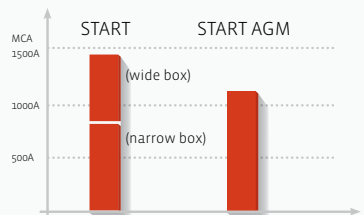
FASTER RECHARGE

› Up to 50% time for recharge saved

**Technology:**  
Standard flooded with plug venting

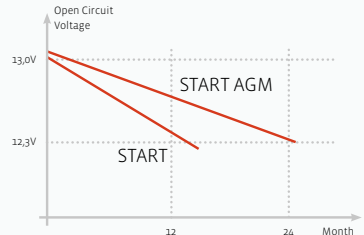
**Technology:**  
AGM flat or orbital with VRLA venting

START & START AGM  
Marine cranking power coverage at 0°C\*

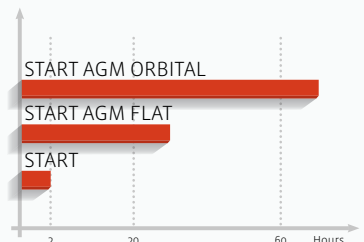


\* Referred to BCI standard for Marine Cranking Amperes (MCA)

START & START AGM  
Shelf life at 20°C



START & START AGM  
Vibration resistance at 6g/35Hz\*



\* Referred to EN50342



# Battery conditions of use determine the right technology

## Dual Supply Need



Two technologies with specific features & benefits are available for dual supply need.



### DUAL

### DUAL AGM



LOW MAINTENANCE

- › Low maintenance



MAINTENANCE FREE

- › Absolutely maintenance free
- › Suitable for long resting periods



LOW GAS EMISSION

- › To be installed in special container
- › Spark arrestor & central degassing for safe gas conduction



INTERNAL GAS RECOMBINATION

- › No location constraints (safe for cabin mount)
- › Safe and clean (spark & spill-proof)



MED INCLINATION

- › Upright mount
- › Medium vibration & tilt resistant



HIGH INCLINATION

- › Suitable for side mount
- › High vibration & tilt resistant



TOP CHARGE INDICATOR

- › Top indicator for electrolyte & charge inspection

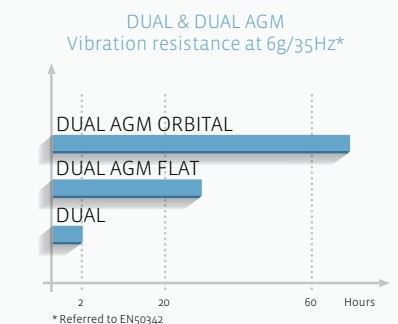
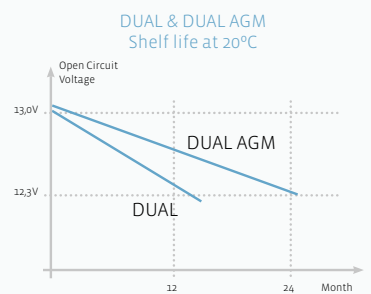
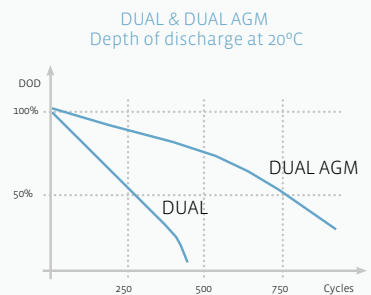


FASTER RECHARGE

- › Up to 50% time for recharge saved

**Technology:**  
Standard flooded with central degassing

**Technology:**  
AGM flat or orbital with VRLA venting





# Equipment Supply Need



Two technologies with specific features & benefits are available for equipment supply need.



## EQUIPMENT

## EQUIPMENT GEL



LOW MAINTENANCE

› Low maintenance



MAINTENANCE FREE

› Absolutely maintenance free  
› Suitable for long resting periods



LOW GAS EMISSION

› To be installed in special container



INTERNAL GAS RECOMBINATION

› No location constraints (safe for cabin mount)  
› Safe and clean (spark & spill-proof)



MED INCLINATION

› Upright mount  
› Medium vibration & tilt resistant



HIGH INCLINATION

› Suitable for side mount  
› High vibration & tilt resistant

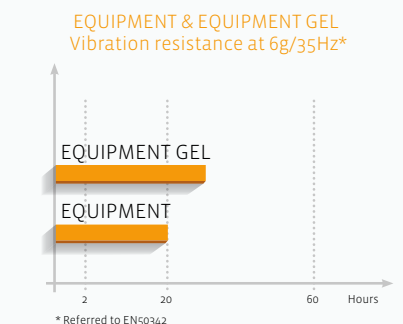
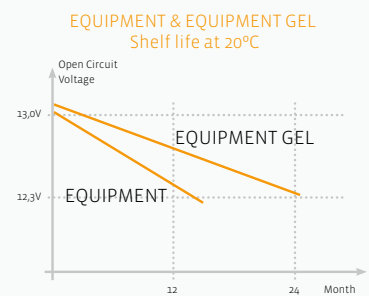
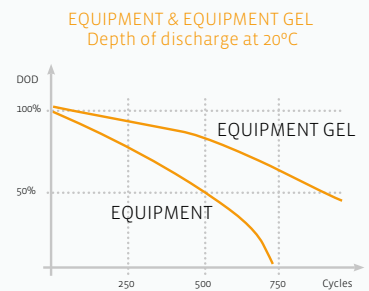


COMPACT SIZE

› Up to 30% space for batteries saved

**Technology:**  
Standard flooded with glass mat separators and plug venting

**Technology:**  
Gel (electrolyte fixed in a gel) with VRLA venting





# More than batteries

Due to the seasonality of marine battery use, tools such as testers and chargers are especially 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.

## Testing





Suitable for marine

### Battery Tester

Exide offers a range of easy-to-use testers that work with all types of batteries.

Battery ok?

## Charging



Suitable for marine

### Battery Charger

Exide chargers can be used on cars, boats and motorcycles, and are ideal for both consumers and professionals alike. Workshops use the device to ensure customers leave with a fully charged battery every time.



## Selecting



### Battery Finder App

Search by car model, VIN or registration number to quickly find the right battery on the go.



### QR Code

Want to find out more? Scan the QR code on the light vehicle battery label and get more information right away. No more waiting until you get home.



### Web Catalogue

Find the right car or truck battery from your computer, using our web catalogue powered by TecDoc on [www.exide.com](http://www.exide.com).

## Replacing



### Car Battery Replacement Tool

Our award-winning\* Battery Replacement Tool comes pre-loaded with battery codes, and makes it easy to replace batteries and clear faults from the dashboard.

+





Suitable for marine

### Exide recycles!

What to do with old batteries? Subscribe to our recycling programme. We pick them up and reward you for your environmental consciousness.

\* Professional Motor Mechanic magazine Top Product Award 2013.



# Type List

	CODE	TECHNOLOGY			PERFORMANCES			DIMENSIONS			TECHNICAL CHARACTERISTICS				
		GEL	AGM Flat	AGM Orbital	MCA* A (BCI)	Capacity Ah (20h)	CCA A (EN)	L (mm)	W (mm)	H (mm)	Polarity	Terminal	Weight (kg)	Box	
<b>START AGM</b> 	EM 900			•	900	42	700	230	173	206	1	Standard + Threaded	16	G86	•
	EM1000			•	1000	50	800	260	173	206	1	Standard + Threaded	18	G34	•
	EM1100		•		1100	100	925	330	173	240	9	Standard + Threaded	33	G31	•
<b>START</b> 	EN 500				500	50	450	210	175	190	0	Standard	13	L01	
	EN 600				600	62	540	242	175	190	0	Standard	15	L02	
	EN 750				750	74	680	278	175	190	0	Standard	18	L03	
	EN 800				900	90	720	353	175	190	0	Standard	22	L05	
	EN 850				850	110	750	350	175	235	1	Standard	28	D02	
	EN 900				900	140	800	513	189	223	3	Standard	37	D04	
	EN1100				1100	180	1000	513	223	223	3	Standard	45	D05	
	EN1400				1400	225	1300	518	279	240	3	Standard	60	D06	

	CODE	TECHNOLOGY			PERFORMANCES			DIMENSIONS			TECHNICAL CHARACTERISTICS				
		GEL	AGM Flat	AGM Orbital	Wh*	Capacity Ah (20h)	CCA A (EN)	L (mm)	W (mm)	H (mm)	Polarity	Terminal	Weight (kg)	Box	
<b>DUAL AGM</b> 	EP 450			•	450	50	750	260	173	206	1	Standard + Threaded	19	G34	•
	EP500		•		500	60	680	242	175	190	0	Standard	18	L02	**
	EP600		•		500	70	760	278	175	190	0	Standard	21	L03	**
	EP650		•		650	75	775	270	173	222	1	Standard + Threaded	23	D26	**
	EP800		•		600	95	850	353	175	190	0	Standard	27	L05	**
	EP 900		•		900	100	720	330	173	240	9	Standard + Threaded	32	G31	•
	EP1200		•		1200	140	700	513	189	223	3	Standard	45	D04	•
	EP1500		•		1500	180	900	513	223	223	3	Standard	55	D05	•
<b>DUAL</b> 	EP2100		•		2100	240	1200	518	279	240	3	Standard	72	D06	•
	ER 350				350	80	510	260	175	225	1	Standard	19	D26	
	ER 450				450	95	650	310	175	225	1	Standard	23	D31	
	ER 550				550	115	760	350	175	235	1	Standard	29	D02	
	ER 650				650	142	850	350	175	290	1	Standard	35	D03	
	ER 660				660	140	750	513	189	223	3	Standard	38	D04	





## Did you know !

To support distributors on battery dimensions and type recommendation, a **CD-ROM** is available to calculate Wh consumptions, series/parallel connections and required space for batteries.

Jet-Ski or Scooters often used as service vehicles are fit by the Exide Bike offer.



	CODE	TECHNOLOGY			PERFORMANCES			DIMENSIONS			TECHNICAL CHARACTERISTICS				
		GEL	AGM Flat	AGM Orbital	Wh*	Capacity Ah (20h)	CCA A (EN)	L (mm)	W (mm)	H (mm)	Polarity	Terminal	Weight (kg)	Box	
<b>EQUIPMENT GEL</b> 	ES 290	•			290	25	–	165	175	125	0	Flat Lug (M5)	10	P24	•
	ES 450	•			450	40	–	210	175	175	0	Flat Lug (19)	15	LB1	•
	ES 650	•			650	56	–	278	175	190	0	Standard	21	L03	•
	ES 900	•			900	80	–	350	175	190	0	Standard	27	L05	•
	ES 950	•			950	85	–	350	175	235	1	Standard	30	D02	•
	ES1000-6	•			1000	190 (6V)	–	245	190	275	0	Standard	29	GC2	•
	ES1100-6	•			1100	200 (6V)	–	245	190	275	0	Threaded insert	32	GC2	•
	ES1200	•			1200	110	–	285	270	230	2	Standard	39	D07	•
	ES1300	•			1300	120	–	350	175	290	0	Standard	39	D03	•
	ES1350	•			1350	120	–	513	189	223	3	Standard	40	D04	•
ES1600	•			1600	140	–	513	223	223	3	Standard	47	D05	•	
ES2400	•			2400	210	–	518	279	240	3	Standard	67	D06	•	
<b>EQUIPMENT</b> 	ET550				550	80	–	278	175	190	0	Standard	21	L03	
	ET 650				650	90	–	350	175	190	0	Standard	27	L05	
	ET 700-6				700	195 (6V)	–	245	190	275	0	Standard	30	GC2	
	ET 950				950	135	–	513	189	223	3	Standard	40	D04	
	ET1300				1300	180	–	513	223	223	3	Standard	50	D05	
	ET1600				1600	230	–	518	279	240	3	Standard	65	D06	

Complementary range for old fitments.

VINTAGE	EU 72	EU 77-6	EU 80-6	EU 140-6	EU 165-6	EU 200-6	EU 220	EU 260-6
	–	–	–	–	–	–	–	–
	72	77 (6V)	80 (6V)	140 (6V)	165 (6V)	200 (6V)	220	260 (6V)
	620	360	600	900	900	1150	950	1300
	491	215	158	257	330	398	450	350
	111	169	165	175	174	174	395	175
	249	184	220	236	234	234	280	290
	1	0	0	0	0	0	1	0
	Standard	Standard	Standard	Standard	Standard	Double	Standard	Standard
	16	18	11	19	25	28	55	40
	3ET	H02	M02	M04	M05	M06	W00	M08

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

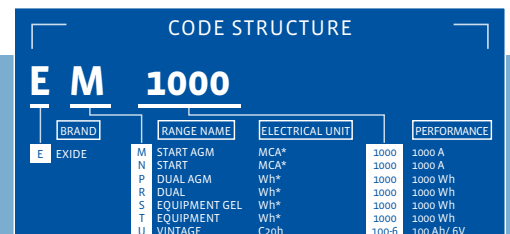
\*\*Wh = Available Watt x hour at 20h rate from a battery, without exceeding its recommended depth of discharge

\*\* Approval in progress



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](http://www.exide.com) to find out more.



**Exide Technologies**, with operations in more than 80 countries and more than 120 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).

Exide's engineers have always been at the forefront of bringing important innovations to the industry. Exide's ISO/TS-certified manufacturing facilities ensure that customers receive products that are produced with maximum efficiency and fulfil the highest quality standards, while minimising impact on the environment.

Exide's extensive sales and distribution network provides quality service and delivers on time to its customers. Its world-class recycling facilities ensure that batteries will be reused, helping to make a positive contribution to the environment. Exide also provides services, accessories and energy consulting to its clients.



## European Headquarter

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