



Bathyscopes

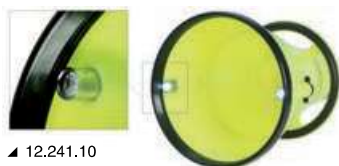
Demountable bathyscope



REGISTERED DESIGN / DISEGNO DEPOSITATO

This bathyscope can be disassembled in 4 parts. Tempered glass viewer, soft grip and soft eyepiece. Available in standard and night/day version with **underwater lighting system fitted with 2 LED lights**. Padded bag to carry the bathyscope and house lights and batteries (OPTIONAL).

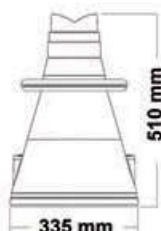
Code	Version	Description	Duration	OPTIONAL spare torches	OPTIONAL padded bag*
12.241.00	Classic	For day use	-	-	12.241.40
12.241.10	Day/Night	For day/night use, equipped with 2 powerful self-powered built-in LED spot lights (2 x AA batteries)	6 continuous hours	12.241.02 1 pair	12.241.40



▲ 12.241.10



▲ 12.241.00/10



Demountable bathyscope



REGISTERED COMMUNITY DESIGN
No. 002305300-0003



▲ 12.241.40

Padded bag
Always protected while not in use. (Optional)

▲ 12.241.02
Night & day version
Two LED lights provide underwater lighting

Inspection/emergency light with 60 LED lights

LED

12.525.00 Power with internal rechargeable battery. Up to 6-hour capacity. 3-hour recharge time. Waterproof rubber body. Equipment accessories: 110/240 volt battery charger, 12 volt cable with lighter-type plug.



LED torches

OSCULATI

Sub-Extreme underwater LED torch

LED

IPX8

Equipped with Cree high-efficiency LED, watertight up to 30 m.

Code	Watertight up to m	Lumen	Range m	Life	Flash mode	Body colour	↔ mm	Battery
12.170.02	30	300	45	3.5	No	Fluo yellow	182x89	2 C (not included)



New

Extreme plus watertight LED torch

Fit with Cree XRE high-efficiency LEDs, watertight up to 1 m. Four operating modes: **full light, medium light, low light, flash.**

Code	Version	Watertight up to	Lumen/Candles		Range m		Duration h full light / half light / low light	Body color	↔ mm	Battery	📦
			Full light	Half light	Full light	Half light					
12.170.12	Extreme Plus	1	750	325	485	321	9,5/24,5/137	Fluo yellow	146x160xØ75	3 C (not included)	515



Extreme Plus watertight and rechargeable LED torch

LED

IP67

Technical features:

- rechargeable low-voltage lithium battery with USB cable included;
- 1A current draw for use of any USB sockets (i.e. 14.516xx/14517.xx);
- small USB port for recharge and large USB port to use the torch as energy source for cell phones;
- floating.

5 light functions:

- A) SPOT+COH-HI, 1400 lm, 1h duration;
- B) SPOT-HI, 950 lm, 1.15h duration;
- C) COB-HI, 750 lm, 1.45h duration;
- D) COB-LO, 45 lm, 20h duration;
- E) FLASH, 45 lm, 3h duration.

Code	Watertight up to m	Lumen	Range m	Duration h in full light / half light / flash mode	Body colour	↔ mm	📦
12.170.13	1	1400/950/750/45	600/300/200	1/1,15/1,45/20	Fluo yellow	150x160xØ70	445



Extreme LED head torch**LED**Fitted with 2 x Nichia high-efficiency LEDs. Shock-proof and watertight. Four operating modes: **full light, half light, red light, red flashing light.**

Code	Watertight up to m	Lumen/Candles			Range m			Duration in 4 functions h	←→ mm	Battery INCLUDED
		Full light	Half light	Red light	Full light	Half light	Red light			
12.170.20	1	80/440	20/120	1/5	42	22	5	10/30/70/115	57x26x35	1 AA

**Sub-Extreme Light underwater LED torch**

Fitted with high-efficiency white Luxeon LED, it generates an light cone efficient up to 30 metres deep. Two operating modes: full light and SOS flash with built-in safety lock.

Code	Watertight up to m	Lumen	Range m	Duration h		Body colour	←→ mm	Batteries INCLUDED	📏
				full light	flash				
12.170.04	30	240	163	4	26	Fluo yellow	44x166	4 AA	192

**Extreme Personale emergency LED mini torch****LED**Fitted with a shackle to be hooked to the lifejacket, it can be used as a mini torch. Modes: **fixed or flash light.****IP67**

Submersible up to 1m. Turn the ring to switch on.



Code	Watertight up to m	Lumen	Max range m	Life h		Body colour	←→ mm	Battery	📏
				Fixed light	Flash				
12.170.08	1	25	6	11	16	yellow	22x73	1xAAA	28 (with battery)

GEN2 ultra-compact LED torch**LED**

Fitted with a GEN 2 LG high-efficiency 3W LED and multifaced reflector. Antislip case with safety line.

IPx6

IPx6 watertight. Packed in display blister.

Code	W	Lumen	USA spark plugs	Range m	Duration m	Colour	Dimensions mm	Battery

**Princeton U.S.A. torches**


Princeton Tec®
PRINCETON Sector 5 IPX8 LED underwater torch**IPx8**

1 maxibright high-efficiency LEDs combined with Princeton Tec's lenticular optics.

Code	Watertight up to m	Lumen	Range m		Duration hours		Frame colour	Batteries INCLUDED	📏
			low	high	low	high			
12.150.02	100	1200	113	200	24	3	Fluo yellow	4 C	650

**PRINCETON Sector 7 underwater LED torch****IPx8**

High-efficiency Maxbright LED

Code	Watertight up to m	Lumen	Range m	Duration hours	Frame colour	←→ mm	Batteries INCLUDED	📏



Exide batteries

EXIDE**EXIDE Excell starting batteries****STARTING/AVVIAMENTO**

+15% starting power over a standard battery.
Central degassing system with flame arrestor pads.
Maintenance-free. It can be inclined up to 60°.

Code	A-h	Capacity storage (min)	Peak A -18° (EN)	V	Model	Pole (+)	←→			kg
							Length mm	Width mm	Height mm	
12.403.01	50	85	450	12	EB500	RIGHT	207	175	190	12.8
12.403.02	62	110	540	12	EB620	RIGHT	242	175	190	15.1
12.403.03	74	140	680	12	EB740	RIGHT	278	175	190	17.7
12.403.05	100	190	720	12	EB1000	RIGHT	318	175	205	23.3

EXIDE Premium batteries for ignition**STARTING / AVVIAMENTO**

+30% starting power over a standard battery. Increase of the battery duration in working conditions at high temperature. Double thermowelded cover sealed for maximum safety. Exide-patented labyrinth system allowing the reflux of acid particles thus avoiding leaks. Maintenance-free. It can be inclined up to 60°. Higher capacity storage thanks to the use of thicker plates. Higher corrosion resistance thanks to the use of expanded metal grids (Exmet) and Lead-Calcium alloys.

Code	A-h	Capacity storage (min)	Peak A -18° (EN)	W/h	V	Model	Pole (+)	←→			kg
								Length mm	Width mm	Height mm	
12.404.02	64	106	640	191	12	EA640	RIGHT	242	175	190	15.6
12.404.03	77	130	760	230	12	EA770	RIGHT	278	175	190	19.1
12.404.05	105	190	850	315	12	EA1050	RIGHT	313	175	205	24.4



12.404.02



12.404.03



12.404.05

EXIDE Maxxima batteries with AGM technology**STARTING / AVVIAMENTO****SERVICES / SERVIZI**

+50% starting power over a standard battery.
Resistance to vibrations.
Guaranteed starting from -40° to +75° C.
Maintenance-free.
Totally airtight.
It can be inclined up to 180°.
Resistance to charge and discharge cycles.
Low rate of self-discharge.
Fast recharge.
Limited size and weight in comparison with performance.
Versatile-to-use: four poles and two front couplings.
24-month warranty.



12.406.01

Code	Use	A-h	Capacity storage (min)	Peak A		W-h	V	Model	Poles	←→			kg
				-18° (EN)	-0° (MCA)					Length mm	Width mm	Height mm	
12.406.01	Starting	-	95	800	1000	-	12	EM1000	Conical on the head Female front threads	260	173	205	17.9
12.406.03	Services/thruster starting	50	95	750	940	450	12	EP450	Conical on the head Male threads	260	173	205	18.6



12.406.03



Griglie realizzate con una sola banda sottile avvolta a spirale, consentono di ottenere una superficie di scambio ionico molto superiore rispetto a quella delle batterie classiche.

La spalmatura della materia attiva sui due lati e la maggior superficie di contatto tra le piastre aumentano il rendimento elettrico.

I separatori in microfibre migliorano la produzione di energia.

Microfiber separators improve energy production.

Celle a tenuta stagna.
Watertight cells.

EXIDE Professional batteries for starting and onboard services

STARTING/AVVIAMENTO

SERVICES/SERVIZI

Reference battery. Lead/calcium/antimony plates and polyethylene spacers. Standard caps.



Code	A-h	Capacity duration (min)	Peak A/18° (EN)	W-h	V	Model	Pole (+)	←→			kg
								Length mm	Width mm	Height mm	
12.408.01	120	223	680	430	12	EH1206	RIGHT	510	175	225	36
12.408.03	180	360	1000	640	12	EG1803	LEFT	513	223	223	45
12.408.04	225	481	1200	750	12	EG2104	RIGHT	518	279	240	60

EXIDE Agm batteries for services and starting

SERVICES / SERVIZI

STARTING / AVVIAMENTO

No maintenance: thanks to the gas recombination technology.**Starting power:** higher starting power even in extreme conditions.**Longer duration:** 3 times the life cycle of a standard lead/free acid battery (in compliance with the EN 50342-1 CCA tests).**Vibration resistance:** excellent resistance to vibration (V3 level in compliance with the EN 50342-1 CCA tests).**Safety:** 100% sealed battery avoiding acid leaks when the battery is turned upside down. The battery is absolutely airtight thanks to the VRLA safety system.**Easy to install:** easy to transport and install even in vertical position.

▲ 12.412.03/05



▲ 12.412.02

Code	A-h	Reserve capacity (min)	Peak A/18° (EN)	W-h	V	Model	Pole (+)	←→			kg
								Length mm	Width mm	Height mm	
12.412.02	100	205	720	900	12	EP900	LEFT conical+threaded	330	173	240	32
12.412.03	140	300	700	1200	12	EP1200	LEFT	513	189	223	45
12.412.05	240	550	1200	2100	12	EP2100	LEFT	518	279	240	72

EXIDE Gel batteries for services and starting

SERVICES / SERVIZI

STARTING / AVVIAMENTO

Maximum safety: Airtight and sealed battery avoiding acid or gas leaks thanks to the recombination process. Acid is frozen by means of a gel thus making the battery highly eco-friendly.**Higher capacity of use:** Very low self-discharge so that EXIDE GEL still has more than 80% of its nominal capacity in store after 6 months' non-use, and more than 60% after 2 years' non-use.

No need of recharge!

Sturdier built: EXIDE GEL combines sturdier built and the advantages of the gel technology thus standing very high vibrations.**More cycles - longer duration:** Differently from traditional batteries, EXIDE GEL allows 100% discharge.

It can be inclined up to 180°.



▲ 12.413.03



▲ 12.413.08

Code	A-h	Capacity storage (min)	Peak A/18° (EN)	W-h	V	Model	Pole (+)	←→			kg
								Length mm	Width mm	Height mm	
12.413.01	60	95	510	650	12	ES650	RIGHT	278	175	190	21,2
12.413.03	85	130	510	969	12	ES950	LEFT	330	165	236	30
12.413.08	210	320	1200	2394	12	ES2400	LEFT	518	276	242	70
12.413.20*	200	260	950	1100	6	ES1100-6	RIGHT	244	190	275	62

* To be used in series. Smaller size and weight batteries than 12V batteries can deliver greater charge stock.

OSCULATI batteries

OSCULATI



New

Safe Energy Plus batteries

Fitted with double lid that prevents acid leaks from the accumulator in case of overturning.

- PbCa alloy expanded grid technology
- Oversized thickness plates
- Elevated starting capacity
- Hi-performance polyethylene bag separator
- +30% starting power
- 180° overturning without leaks
- DUPLEX watertight lid with centralized degassing
- Explosion-proof pad
- Extremely low self-discharge
- Vibration-resistant.

Code	Ah	Rush -18° C	V	Pole (+)	↔ mm			kg
					length	width	height	
12.480.02	65	640	12	RIGHT	242	175	190	15,6
12.480.03	80	730	12	RIGHT	278	175	190	17,4
12.480.05	95	850	12	RIGHT	310	175	190	20,5

AGM and lithium batteries

BCS
BALANCE OF STORAGE SYSTEMS



New

BOS LE300 - Lithium extension for lead-acid batteries

MODULAR

**PLUG & PLAY WITH
CONVENTIONAL BATTERIES**

**MADE IN
GERMANY**

The LE300 smart battery system is a lithium extension for 12V lead-acid batteries (AGM, GEL or wet cell).

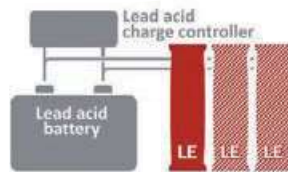
The integrated battery management system takes care of protecting and balancing the lithium cells while monitoring the lead-acid battery.

The intelligent distribution of loads and capacity in the LE300 continuously keeps the lead-acid battery at a full charge and therefore extends the battery life.

Plug & Play installation: simply connect the system to the plus and minus pole of the existing battery with no need to modify the circuit or the charging technology.

The LE300 modules are light, compact and modular, and can be combined up to 24 in parallel, increasing the battery capacity to experience self-sufficiency.

Code	Description	Ah total	V	↔ mm	kg
12.455.02	2 moduls x 25 Ah	50	12	175x229x134	6,8
12.455.04	4 moduls x 25 Ah	100	12	175x229x268	13,6



VICTRON AGM Deep Cycle batteries

SERVICES / SERVIZI

Fitted with VRLA (Valve Regulated Lead Acid) technology, which means that the batteries are sealed. Gas will escape through the safety valves only in case of overcharging or cell failure

Excellent high current performance.

Low self-discharge that enables these batteries to be stored for up to a year without recharging.

Very fast charging time, irrespective of how deep and for how long the battery has been discharged previously.



Code	A-h	Rush A/18° EN	W-h	V	Pole (+)	↔			kg
						length mm	width mm	height mm	
12.416.00 New	90	400	756	12	LEFT	350	167	183	27
12.416.01	110	500	924	12	LEFT	350	171	220	32
12.416.02	130	550	1092	12	LEFT	410	176	227	38
12.416.04 New	165	600	1386	12	LEFT	485	172	240	47
12.416.05 New	220	650	1848	12	LEFT	522	238	240	65
12.416.03	240	650	2016	12	LEFT	522	240	224	67

VICTRON lithium iron phosphate batteries

VICTRON Lithium-iron-phosphate (LiFePO4 or LFP) batteries have integrated cell balancing and cell monitoring. Up to ten batteries can be paralleled and **up to four batteries can be series-connected**, so that a **48V battery bank of up to 3000Ah** can be assembled. The cell balancing/monitoring cables can be daisy-chained and must be connected to a Battery Management System (BMS).

Battery Management System (BMS)

The BMS connects to the BTV and will:

- 1 - Prevent cell undervoltage (lower than 2,5V) by timely disconnecting/switching off the load.
- 2 - Prevent cell overvoltage (exceeding 4.2V) by stopping the charge process.
- 3 - Shut down the system in case of overtemperature (exceeding 50° C).
- 4 - Carry out cell balancing.
- 5 - BMS supplies up to 200 A with any CC load (inverters and inverters/battery chargers included);
- 6 - More features may be included: see the individual BMS data sheet.

Advantages:

1) Lithium-iron-phosphate (LiFePO4 or LFP) is the safest of the mainstream li-ion battery types. The nominal voltage of an LFP cell is 3.2V (lead-acid: 2V/cell). A 12.8V LFP battery therefore consists of 4 cells connected in series; and a 25.6V battery consists of 8 cells connected in series.

2) **Up to 70% more lightweight and compact in comparison with traditional batteries.**

3) A lead-acid battery will fail prematurely due to sulphation:

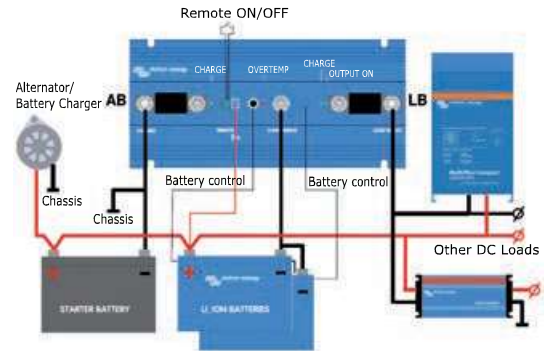
- If it operates in deficit mode during long periods of time (i.e. if the battery is rarely, or never at all, fully charged).
- If it is left partially charged or worse, fully discharged.

An LFP battery does not need to be fully charged. Service life even slightly improves in case of partial charge instead of a full charge. This is a major advantage of LFP compared to lead-acid.

4) Other advantages are the wide operating temperature range, excellent charge cycle performance, low internal resistance and high efficiency (see below).



Code	Description	mm	kg
12.415.01	60-A-h battery	239x286x132	12
12.415.02	100-A-h battery	197x321x152	14
12.415.05	160-A-h battery	237x321x152	18
12.415.08	200-A-h battery	237x321x152	20
12.415.09	300-A-h battery	345x425x274	51
12.415.20	BMS management system	65x120x260	1.8



New Liontron lithium batteries

7 YEARS WARRANTY INTEGRATED BMS DEVELOPED IN GERMANY

Liontron lithium batteries totally replace an AGM or lead battery. They are a lightweight solution still being a large power reserve and offering voltage stability even under very high load.

These batteries have been designed to fully meet the demanding requirements of a storage battery. Utmost safety and long duration are granted also by means of total discharge cycles thanks to the lithium most advanced technology.

Very long life cycle (**over 3000 cycles @ 90%**).

Possible parallel connection to increase capacity.

Fitted with BMS and built-in 4.0 Bluetooth for total control even on your smartphone at all times.

LIONTRON®

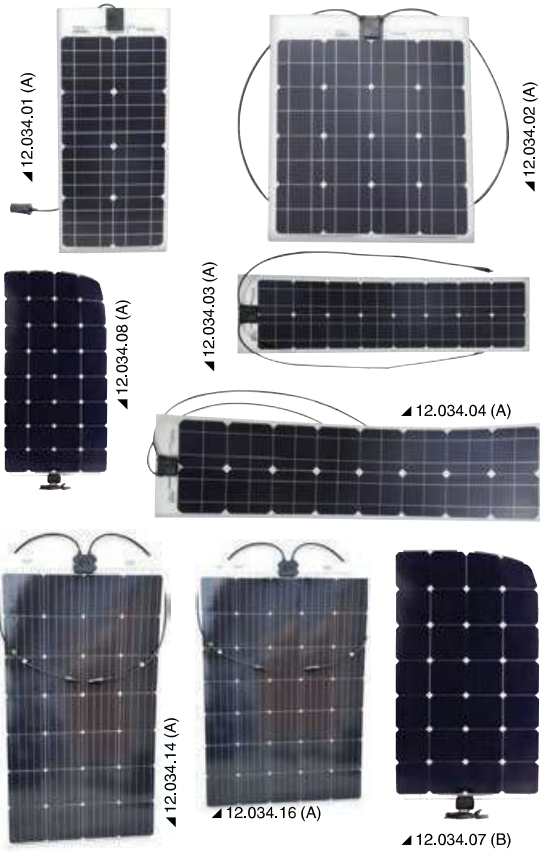


Code	V	Ah	Wh	Pole (+)	mm			kg
					Width	Height	Depth	
12.460.01	12	55	704	LEFT	350	162	170	10,85
12.460.02	12	80	1024	LEFT	260	211	171	10,85
12.460.03	12	100	1280	LEFT	344	202	172	15,5
12.460.04	12	150	1920	LEFT	355	262	170	20,8
12.460.05	12	200	2560	LEFT	390	255	233	27,5



Solar panels and accessories

Enecom
SUNPOWER™



ENECOM flexible solar panels

MADE IN ITALY

Built with high-performance aerospace solar cells. Latest generation ultrathin and ultraflexible panels (1.7 mm), 17.25% mono-crystalline cell efficiency. The panel is a sandwich construction made up of a plastic support + solar cell + UV-resistant epoxy resin surface coating. Installation by means of double-sided tape. Connection cable with plug, included.

Version A: mono-crystalline panels.

Version B: fitted with Sun Power top-efficiency cells. This results in more compact dimensions and 23% higher efficiency over standard cells.

Code	Max power (Wp)	Thickness mm	V	Cable cm	mm	kg	Version
12.034.01	20	1.7	12	70	620x272	0.5	A
12.034.02	45	1.7	12	100	604x536	0.8	A
12.034.03	45	1.7	12	100	1120x282	0.8	A
12.034.04	75	1.7	12	100	1370x344	1.2	A
12.034.17	New 75	1.7	12	100	739x731	1.2	A
12.034.11	100	1.7	12	100	1231x536	1.6	A
12.034.07	90	1.7	12	100	977x546	1.5	B
12.034.08	120	1.7	12	100	1230x546	1.8	B
12.034.14	140	1.7	12	100	1194x660	1.85	A
12.034.16*	160	1.7	12	100	1352x660	2.1	A
12.034.18*	New 180	1.7	12	100	1535x671	2.6	A

To be completed with voltage regulator and MC4 connectors if needed depending on the system requirements.

* Provided with fastening eyelets.



Enecom



Pair of MC4 male + female connectors, IP67 for installation of Enecom panels.

Made in Italy 12.034.09 After fixing them to the onboard cables, they ensure an immediate connection to the Enecom panel already fitted with MC4 connectors.



Charge controllers for panels

These charge controllers are used in small-size solar systems for controlled charging of liquid electrolyte or gel dual batteries.

Code	Capacity A	V	Max load No panels
12.035.01	10	12/24	4x20 W, 3x40 W, 2x65 W, 1x90W, 1x130 W
12.035.02	20	12/24	4x60 W; 3x80 W; 3x90 W; 2x130 W

victron energy
BLUE POWER



VICTRON Blue - Solar charge controllers for solar panels

Internal temperature sensor, protection against short-circuit, over-current and reverse polarity. Three stage battery charging: BULK, ABSORPTION, FLOAT. The DUO version charges two separate batteries and its charge current ratio is programmable.

Code	Model	V	Max charge A	No. of chargeable batteries	mm	kg
12.033.01	Blue 5	12/24	5	1	70x133x34	0.15
12.033.02	Blue 10	12/24	10	1	70x133x34	0.15
12.033.03	Blue 20	12/24	20	1	70x133x34	0.23
12.033.04	Blue Duo 20	12/24	20	2	70x153x37	0.20

victron energy
BLUE POWER



Victron Smart - Solar - Solar charge controllers

INTEGRATED BLUETOOTH HIGH PERFORMANCE SMART BATTERY

MPPT solar charge controller (98% performance) with output for CC current draw and built-in Bluetooth for configuration and monitoring via the Victron Connect app. Temperature sensor integrated.

Code	Model	V	Max charge A	Max FV voltage V	mm	kg
12.028.01	MPPT 75/10	12/24	10	75	110x113x40	0.5
12.028.02	MPPT 75/15	12/24	15	75	110x113x40	0.5
12.028.03	MPPT 100/15	12/24	15	100	110x113x50	0.6