

POVER TO GO!

VARTA Professional: our new product range for leisure and marine applications





OUR CONTRIBUTION TO TOP PERFORMA

As the global market leader in lead-acid batteries, we are now applying our expertise and innovative power to leisure and marine applications.



NCE

VARTA customers put their trust in our pioneering technical expertise. Anyone who's been travelling in a caravan or on a boat knows that one thing matters above all else when you've left the world behind: reliability. You can rely on our high-tech VARTA batteries for caravan and marine applications not to let you down, wherever your adventures take you! Our satisfied customers have long been putting their trust in the VARTA Blue Dynamic, the battery that's always as good

as the original and is characterised by high capacity, exceptional cold start performance, outstanding safety and unbeatable reliability. Now, with its VARTA Professional Deep Cycle and VARTA Deep Cycle AGM batteries, VARTA is now applying its renowned expertise specifically to supplying caravans and marine craft with energy. Thanks to our new VARTA Professional batteries, not only basic functions but also mod cons are sure to run like a dream.

Here at VARTA, we work day in, day out to exceed our customers' expectations.





VARTA PROFE

FULLY CHARGED PROFESSIONAL POWER

Who wouldn't want to be prepared for their valuable leisure time? Our new VARTA Professional batteries for caravan and marine applications are absolutely ideal for seasonal use.

VARTA Professional Deep Cycle and VARTA Professional Deep Cycle AGM are two high-performance batteries that have been optimised for use in boats, caravans and motorhomes. The former is based on flooded tech-

nology and the latter on AGM, with both of them boasting high cyclic durability and an extremely long service life whilst being completely maintenance-free.

VARTA Professional Deep Cycle

This battery is based on our tried-andtested flooded technology, the product of years of continuous improvements in cyclic durability. Its sealed construction prevents any liquid from leaking out and, thanks to its minimal self-discharge, it's ideal for seasonal use.

VARTA Professional Deep Cycle AGM

AGM (Absorbent Glass Mat) is currently the best technology around for meeting especially demanding requirements. Key benefits are the high cyclic durability of approximately 600 to 700 cycles, around five to six times that of conventional batteries, and shorter recharge times.





VARTA Blue Dynamic for starter applications

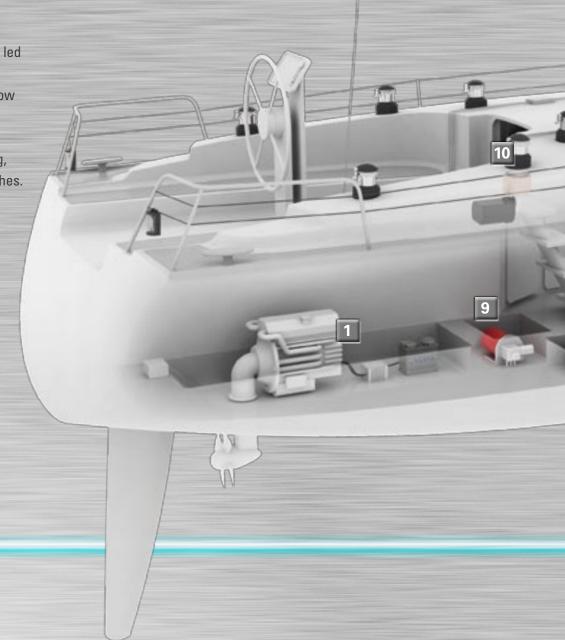
The VARTA Blue Dynamic provides tailor-made power for starter applications. And as it excels in terms of cold start performance, output, capacity and reliability, it's a real all-rounder too. In other words, a battery that you can rely on to always get you going.

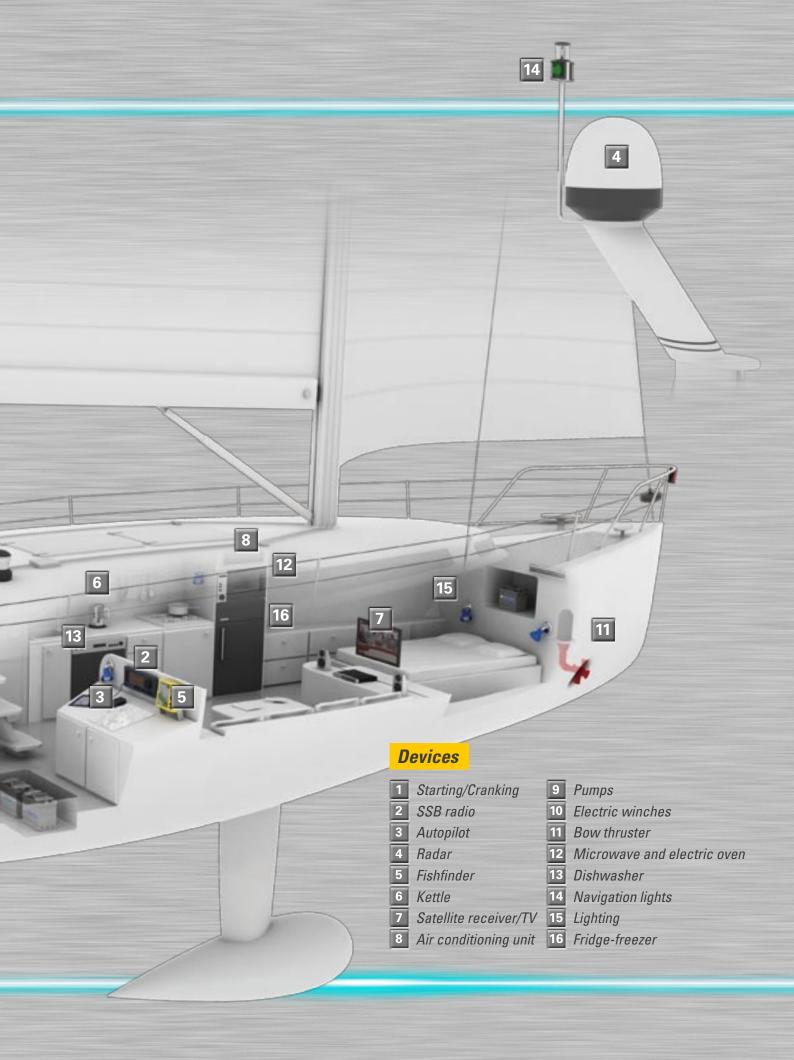
For more information, please visit www.varta-automotive.com

THE BATTERY — THE HEART OF YOUR BOAT

Giving you the peace of mind to enjoy your passion. As smoothly functioning technology is more important than ever once you've left the coastline behind, why not put your trust in the exceptional quality of the new VARTA Professional product range for caravan and marine applications?

Rising levels of comfort on board boats and yachts have led to increasing demands being placed on batteries, which now power a host of additional electronic devices such as navigational systems, lighting, kitchen appliances and winches. And when all these devices are connected, the battery has to deliver exceptional performance.





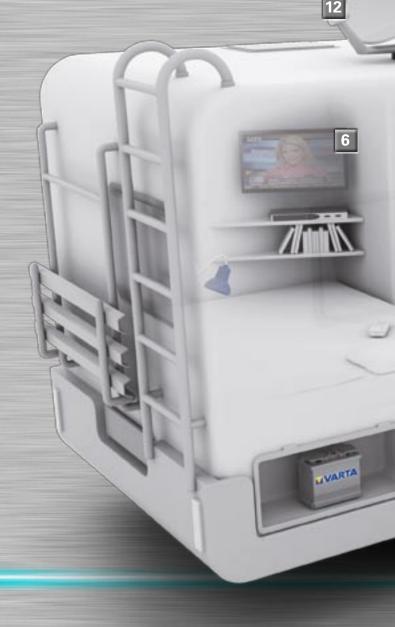
THE BATTERY -THE HEART OF YOUR MOTOR

Make the most of your free time! Now you can stay independent from campsites without sacrificing your creature comforts - all thanks to our new VARTA Professional batteries.

Motorhomes and caravans have now become fascinating high-tech vehicles, inevitably resulting in higher demands being placed on the battery. This results in a need for maximum performance and the new VARTA Professional product range for motorhomes and caravans represents an exceptionally intelligent solution. It's nice to know that you can rely on VARTA Professional.

Devices

- 1 Mover
- 2 Air conditioning unit
- 3 Pumps
- 4 Kettle
- Coffee machine
- Satellite receiver/TV
- Microwave and electric oven
- Hi-fi
- 9 Power inverter
- 10 Lighting
- Fridge-freezer
- Satellite dish



HOME OR CARAVAN



VARTA PROFESSIONAL DE LONG-LASTING



EP CYCLE – AND DURABLE

Thanks to cutting-edge technology, VARTA Professional Deep Cycle batteries have what it takes to meet demanding requirements.

In comparison with conventional batteries, our highperformance VARTA Professional Deep Cycle batteries can withstand up to twice as many charging and discharge cycles, with the use of our innovative, sealed Labyrinth lid with single point venting for outstanding safety. VARTA Professional Deep Cycle batteries are ideal for seasonal use.

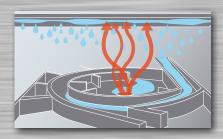
Characteristic	Benefit
Innovative plate technology	Up to twice the cyclic durability of conventional flooded batteries
Minimal self-discharge	Ideal for seasonal use
Ergonomic handle	Easy to carry
Easy to carry	Increased safety

Characteristic	Benefit				
High energy output	Suitable for dual-power applications (can be used for both starting and supply)				
Labyrinth lid	Maintenance-free				
Sealed construction	Leak-proof (can be tilted up to an angle of 90° for short periods)				



VARTA PROFESSIONAL DE TECHNOLOGY YOU

The importance of Labyrinth lid technology:



- 1. The water vapour condenses on the battery lid.
- 2. The Labyrinth lid ensures that the water flows back into the battery.

Spill-proof

Our innovative Labyrinth lid technology prevents any liquid from leaking out when the battery is tilted up to 90° for short periods (such as during installation and removal).

Safety caps

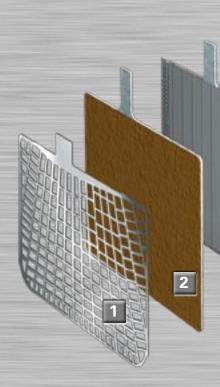
The safety caps act like a breakwater inside the battery and provide maximum protection against leaks even on extremely rough terrain.

Single point venting

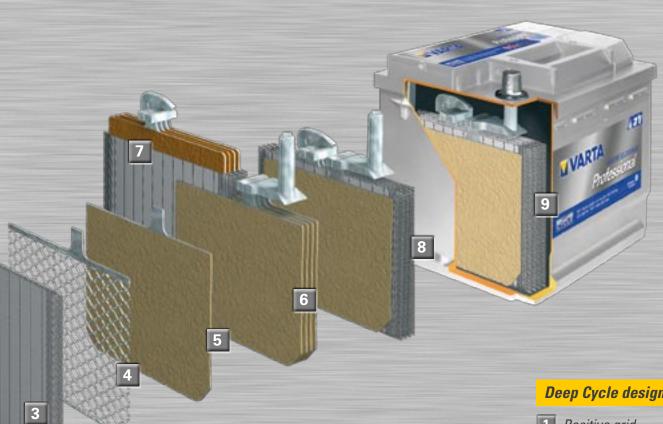
Single point venting is an integrated feature of the Labyrinth lid that ensures any gas produced is safely discharged.

Integral flame arrestors

Integral flame arrestors protect the battery from sparks and flames.



EP CYCLE: CAN RELY ON



Whether large or small, our innovative VARTA Professional Deep Cycle batteries provide you with optimum performance, thanks in large part to their cyclically optimised plate design and Labyrinth lid technology.

Deep Cycle design

- Positive grid
- Positive plate
- Positive plate in separator
- Negative grid
- 5 Negative plate
- Negative plate set
- Positive plate set Plate block
- Battery casing

VARTA PROFESSIONAL DEEP CYCLE AGM – LONG-LASTING AND



EXCEPTIONAL

VARTA Professional Deep Cycle AGM batteries are the very latest in lead-acid battery technology and are ahead of anything else on the market.

The VARTA Professional Deep Cycle AGM is a top-class battery whose cyclic durability is five to six times that of conventional batteries. Its ability to provide the energy you need whenever you need it without any hitches is testament to its versatility and it goes without saying that you can also expect the same smooth, long-lasting

performance under standard conditions – with an even longer service life. Even vibrations aren't enough to put this completely maintenance-free and leak-proof battery off its stride. The VARTA Professional Deep Cycle AGM – a battery that does the business.

Characteristic	Benefit
State-of-the-art technology	Suitable for demanding applications
Thick plates for in- creased cyclic durability	5 to 6 times the cyclic durability of conventional flooded batteries
High energy output	Suitable for dual-power applications (can be used for both starting and supply)

Characteristic	Benefit
Minimal self-discharge	Perfect for seasonal use
Sealed construction	Fully leak-proof (even at angles of up to 90°)
Completely maintenance-free	Install and forget
Safety valves	Maximum safety



VARTA PROFESSIONAL DEEP CYCLE AGM -

Simple, high-quality, intelligent: the use of new glass mat technology increases cyclic durability, resulting in shorter recharge times and boosting performance.

The glass mat - the perfect way to regulate pressure.

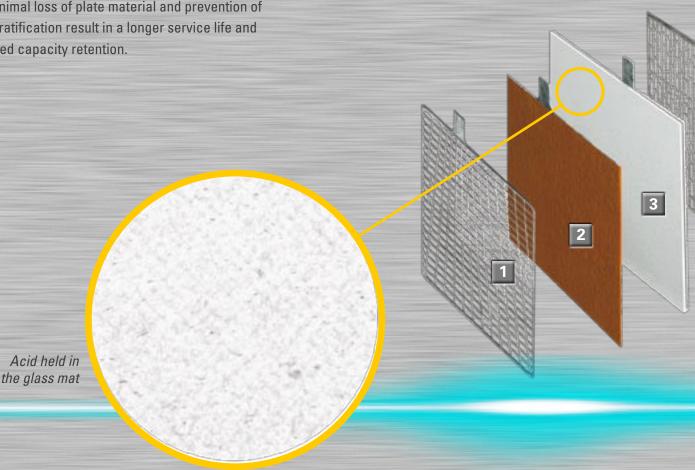
The glass mat applies an even pressure to the plates, keeping the loss of plate material to an absolute minimum. Furthermore, as all the acid is held within the glass mat, there's no need to worry about acid stratification.

Ensuring a longer service life.

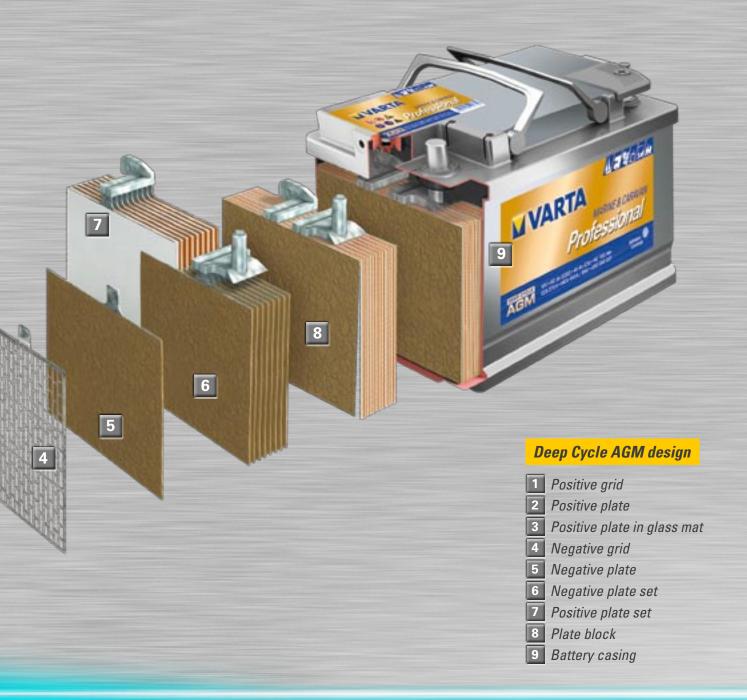
The minimal loss of plate material and prevention of acid stratification result in a longer service life and improved capacity retention.

Starting is just the start.

The ability to deliver a high current output for brief periods is the hallmark of a starter battery, whereas a supply battery needs to be able to withstand frequent deep discharge unscathed. But the VARTA Professional Deep Cycle AGM can do both!



TECHNOLOGY



AGM PUTS PAID TO

When it comes to their shared high cyclic durability of around 600 to 700 cycles, there isn't much to choose between gel and AGM technologies. When you analyse a host of other important factors, however, significant differences begin to emerge. We put them together in a head-to-head comparison.



GEL TECHNOLOGY!

GEL

Deep Cycle AGM

High rate discharge capability: poor to average

The mass of gel around the plates, the large distance between plates, and the thick positive plate lead to a high degree of internal resistance, causing the voltage to drop at high discharge rates. This makes the battery less suitable for devices with high power consumption such as starting/cranking and bow thrusters.

Charge behaviour: average

The higher internal resistance of gel batteries limits the charging current to 20% of the nominal capacity. The maximum voltage during charging is 14.4 V in the main charging phase.

A special charger is therefore required.

Performance and service life at extreme temperatures: poor

The gel hinders the battery's performance at low temperatures, whilst the grid alloy increases the likelihood of corrosion at high temperatures.

Performance throughout the service life: average

Due to the lower pressure on the plates compared to AGM technology designs, the battery's performance levels gradually drop over the course of its service life.

High rate discharge capability: excellent

The glass mat's open structure and the short distance between plates make AGM Deep Cycle batteries significantly more suitable for high rate discharge.

Result: optimum performance for devices with high power consumption

Charge behaviour: excellent

The recommended charging current is between 10 and 20% of the nominal capacity and, in certain conditions, the charging times can be reduced. Suitable for standard charging (IUoU charging can be used).

Result: the battery is always fully charged

Performance and service life at extreme temperatures: excellent

The glass mat's open structure and the short distance between plates mean that the chemical processes within AGM Deep Cycle batteries take place quickly even at low temperatures.

Result: an extended service life

Performance throughout the service life: excellent

In comparison to gel and flooded batteries, the performance remains far more consistent over the service life. This is mostly due to the higher pressure applied to the plates.

Result: consistent performance throughout the entire service life

OPTIMA SPIRALCELL AGM RST-CLASS

MADE FOR THOSE WHO EXPECT THE EXCEPTIONAL. THIS OUTSTANDING BATTERY FEATURES UNIQUE TECHNOLOGY FOR EVEN HIGHER PERFORMANCE.

OPTIMA® SPIRALCELL® AGM is a battery you can use whenever and wherever. Thanks to its special cell design, it's extremely vibration resistant. OPTIMA® batteries boast high power output and energy delivery, not to mention outstanding service lifespans.

FOR MEETING THE MOST **EXACTING REQUIREMENTS WHEN IT COMES TO**

- Reliability
- **Energy throughput**
- **Cyclic durability**
- Freedom from maintenance
 High depth of discharge
- **Protection against leaks**

- Environmental friendliness
- Vibration resistance
- **Extreme temperatures**
- Short recharge times

HNOLOGY



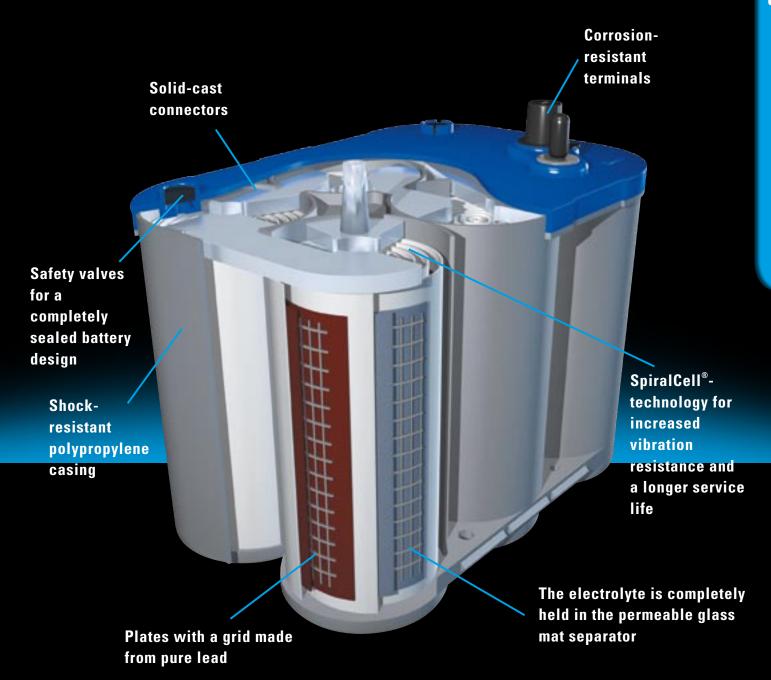
WHAT MAKES THE OPTIMA® SO UNBEATABLE?

NOT ONLY DOES THE OPTIMA® SPIRALCELL® BOAST ALL THE ADVANTAGES OF AN AGM BATTERY BUT ALSO SEVERAL EXTRA BENEFITS. THERE ARE SEVERAL REASONS WHY THE SERVICE LIFE OF THE OPTIMA® SPIRALCELL® IS SO LONG.

Instead of the flat plates used in conventional batteries, sets of two bands are wrapped in glass mats to create spiral cells, enabling a higher rate of energy transfer. Moreover, enormous amounts of energy can be supplied in a short space of time. Thanks to the low internal resistance, the battery can be recharged exceptionally quickly.

The plates' cylindrical shape and perfect fit make SpiralCell® batteries extremely vibration-resistant. As a result, the active material demonstrates only very limited degradation over time and the service life is significantly increased. The fine lead also plays a role in extending the service life by ensuring minimal self-discharge.

SPIRALCELL AGM

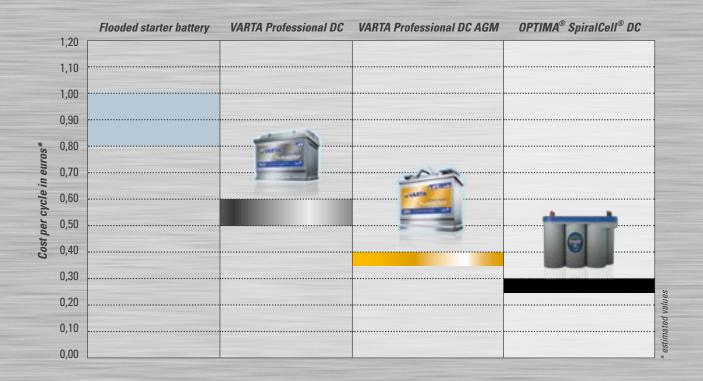


GREAT VALUE FOR A LONG

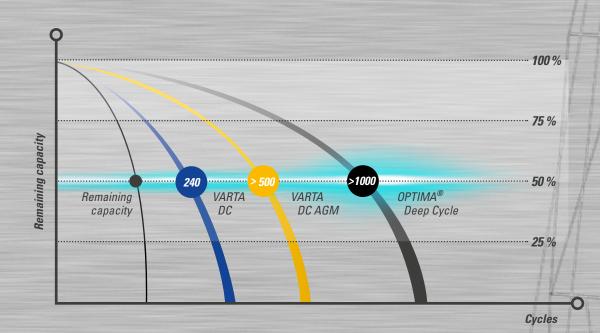
VARTA Professional batteries: the figures speak for themselves.

Whilst genuine supply batteries represent a more expensive initial purchase due to the thickness of the plates and increased amount of lead, they offer a far higher number of cycles than a starter battery. This means that a supply battery is significantly better value

in terms of cost per cycle. So, with VARTA Professional batteries you really do get more for your money. It pays to choose a battery with higher cyclic durability, a key factor in determining the battery's service life.



NONEY SERVICE LIFE!



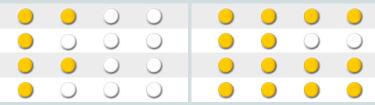
It pays to choose a battery with higher cyclic durability, a key factor in determining the battery's service life.

THE RIGHT BATTERY FOR

Characteristic

Starting power Cyclic durability Charge acceptance Vibration resistance

STARTER APPLICATIONS







VARTA Blue Dynamic









VARTA Blue Dynamic

OPTIMA® BlueTop® SLI







Sailing yachts **VARTA Blue Dynamic**

OPTIMA® BlueTop® SLI



Electric boats





Motorhomes



VARTA Blue Dynamic



OPTIMA® RedTop® SLI

Our batteries at a glance





Resistant to deep cycling





VARTA Professional Deep Cycle

- Twice the cyclic durability of conventional batteries
- Suitable for dual-power use: starting and supply
- Maintenance-free



VARTA Professional Deep Cycle AGM

- 5 to 6 times the cyclic durability of conventional batteries
- Suitable for dual-power use: starting and supply
- Completely maintenance-free

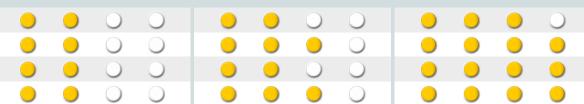


OPTIMA® BlueTop® SLI

- Extremely high cyclic durability
- Exceptionally vibration-resistant
- Very short recharging times

EVERY APPLICATION!

STARTER AND SUPPLY APPLICATIONS





VARTA Professional DC



VARTA Professional DC AGM



OPTIMA® BlueTop® DC



VARTA Professional DC



VARTA Professional DC AGM



OPTIMA® BlueTop® DC



VARTA Professional DC



VARTA Professional DC AGM



OPTIMA® BlueTop® DC



VARTA Professional DC



VARTA Professional DC AGM



OPTIMA® BlueTop® DC



VARTA Professional DC



VARTA Professional DC AGM



OPTIMA® YellowTop® DC



VARTA Professional DC



VARTA Professional DC AGM



OPTIMA® YellowTop® DC



OPTIMA® RedTop® SLI

- For demanding applications
- Outstanding starting power
- ☐ Suitable for use at extreme temperatures



OPTIMA® BlueTop® Deep Cycle

- Extremely high cyclic durability
- Exceptionally vibration-resistant
- Very short recharging times



OPTIMA® YellowTop® Deep Cycle

- For demanding applications
- Extremely high cyclic durability
- Ideal for dual-power use: starting and supply

LET US HELP YOU BOOST YOUR



Brochures to hand out to your customers with boats or caravans!



SALES!

Window stickers to attract the attention of passers-by!



Header cards to help you get customers excited about the VARTA Professional product range for leisure and marine applications!



A desk pad for marine applications and one for caravan applications to give customers a targeted overview of product benefits the first time you meet them.



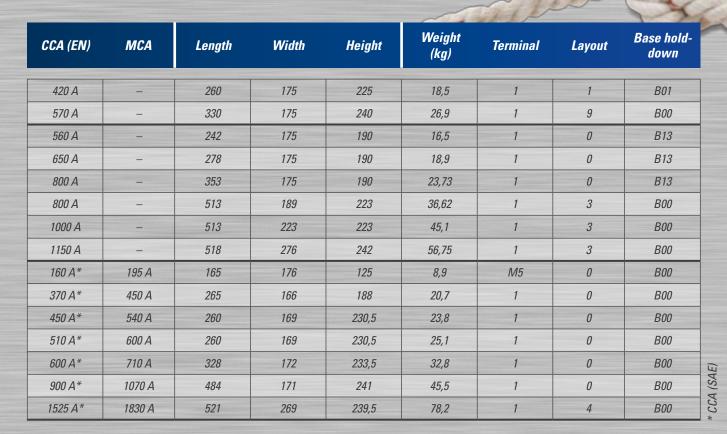
A marine and leisure poster to get customers turning heads from a distance!



OUR EXCELLENT PRODUCT RANGE

VARTA BY JOHNSON CONTROLS	Short code	Size	ETN	Voltage	C20	C10	C5	Remaining capacity at 25 A
VARTA	LFS75	EG4	812071000	12 V	75 Ah	67 Ah	60 Ah	124 Min.
Professional Starter	LFS105	Grp31	811053057	12 V	105 Ah	94 Ah	85 Ah	190 Min.
	LFD60	H5	930060056	12 V	60 Ah	55 Ah	51 Ah	109 Min.
FE	LFD75	Н6	930075065	12 V	75 Ah	69 Ah	64 Ah	141 Min.
WARTA	LFD90	H8	930090080	12 V	90 Ah	83 Ah	77 Ah	174 Min.
VARTA Professional	LFD140	А	930140080	12 V	140 Ah	129 Ah	119 Ah	284 Min.
DC	LFD180	В	930180100	12 V	180 Ah	166 Ah	153 Ah	377 Min.
	LFD230	С	930230115	12 V	230 Ah	212 Ah	196 Ah	499 Min.
	LAD24	_	830024016	12 V	24 Ah	22 Ah	20 Ah	27 Min.
-	LAD60	_	830060037	12 V	60 Ah	54 Ah	49 Ah	100 Min.
	LAD70	_	830070045	12 V	70 Ah	63 Ah	58 Ah	115 Min.
VARTA	LAD85	_	830085051	12 V	85 Ah	77 Ah	70 Ah	145 Min.
Professional DC AGM	LAD115	_	830115060	12 V	115 Ah	104 Ah	91 Ah	200 Min.
	LAD150	_	830150090	12 V	150 Ah	135 Ah	123 Ah	285 Min.
	LAD260	_	830260152	12 V	260 Ah	234 Ah	214 Ah	578 Min.

OPTIMA BATTERIES THE ULTIMATE POWER SOURCE	Short code	Size (BCI)	ETN	Voltage	C20	C10	C5	Remaining capacity at 25 A
	YT S 5,5	31	851187000	12 V	75 Ah	71 Ah	68 Ah	155 Min.
	YT R 5,0	27	837327000	12 V	66 Ah	64 Ah	61 Ah	140 Min.
3-8 10	YT S 4,2	34	812254000	12 V	55 Ah	54 Ah	52 Ah	120 Min.
OPTIMA®	YT R 3,7	35	840222000	12 V	48 Ah	46 Ah	44 Ah	98 Min.
YellowTop [®]	YT S 2,7	51	871176000	12 V	38 Ah	36 Ah	33 Ah	66 Min.
	YT S 2,1	-	818356000	6 V	55 Ah	54 Ah	52 Ah	120 Min.
4	RT S 4,2	34	802250000	12 V	50 Ah	48 Ah	45 Ah	100 Min.
OPTIMA®	RT S 3,7	25	820255000	12 V	44 Ah	42 Ah	41 Ah	90 Min.
RedTop®	RT S 2,1	_	810355000	6 V	50 Ah	49 Ah	48 Ah	100 Min.
	BT DC 5,5	31	852188000	12 V	75 Ah	71 Ah	68 Ah	155 Min.
	BT DC 5,0	27	827227000	12 V	66 Ah	64 Ah	61 Ah	140 Min.
OPTIMA® BlueTop®	BT DC 4,2	34	816253000	12 V	55 Ah	54 Ah	52 Ah	120 Min.
Бтаотор	BT SLI 4,2	34	806252000	12 V	50 Ah	48 Ah	45 Ah	100 Min.



CCA (EN)	MCA	Length	Width	Height	Weight (kg)	Terminal	Layout	Base hold- down
975 A	1125 A	325	165	238	26,5	1	8	_
845 A	1025 A	309	172	219	20,62	1	0	-
765 A	870 A	254	175	200	19,5	1	1	_
730 A	910 A	237	171	197	16,6	1	0	~ B 1
460 A	575 A	237	129	227	11,8	1	1	-
765 A	870 A	255	90	206	9,5	1	8	_
815 A	1000 A	254	175	200	17,2	1	1	_
730 A	910 A	237	171	197	14,4	1	1	~ B 1
815 A	1000 A	255	90	206	8,4	1	8	~ B11
975 A	1125 A	325	165	238	26,5	1 & S	8	-
845 A	1000 A	309	172	221	24,4	1 & S	1	_
765 A	870 A	254	175	200	19,7	1 & S	1	-
815 A	1000 A	254	175	200	17,4	1&5	1	_

Technical diagrams can be found overleaf.

Technical information Layout Base hold-downs **Terminals** 12V 0 18 B00 ø 17,9 ø 19,5 12V 1 3 12V 100 max. -ve B01 12V 4 12V 8 100 max. B13 12V 9

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