

**THE FIRST  
ORIGINAL  
TRUCK AGM**



# UNLOCK YOUR TRUCK'S FULL POTENTIAL.

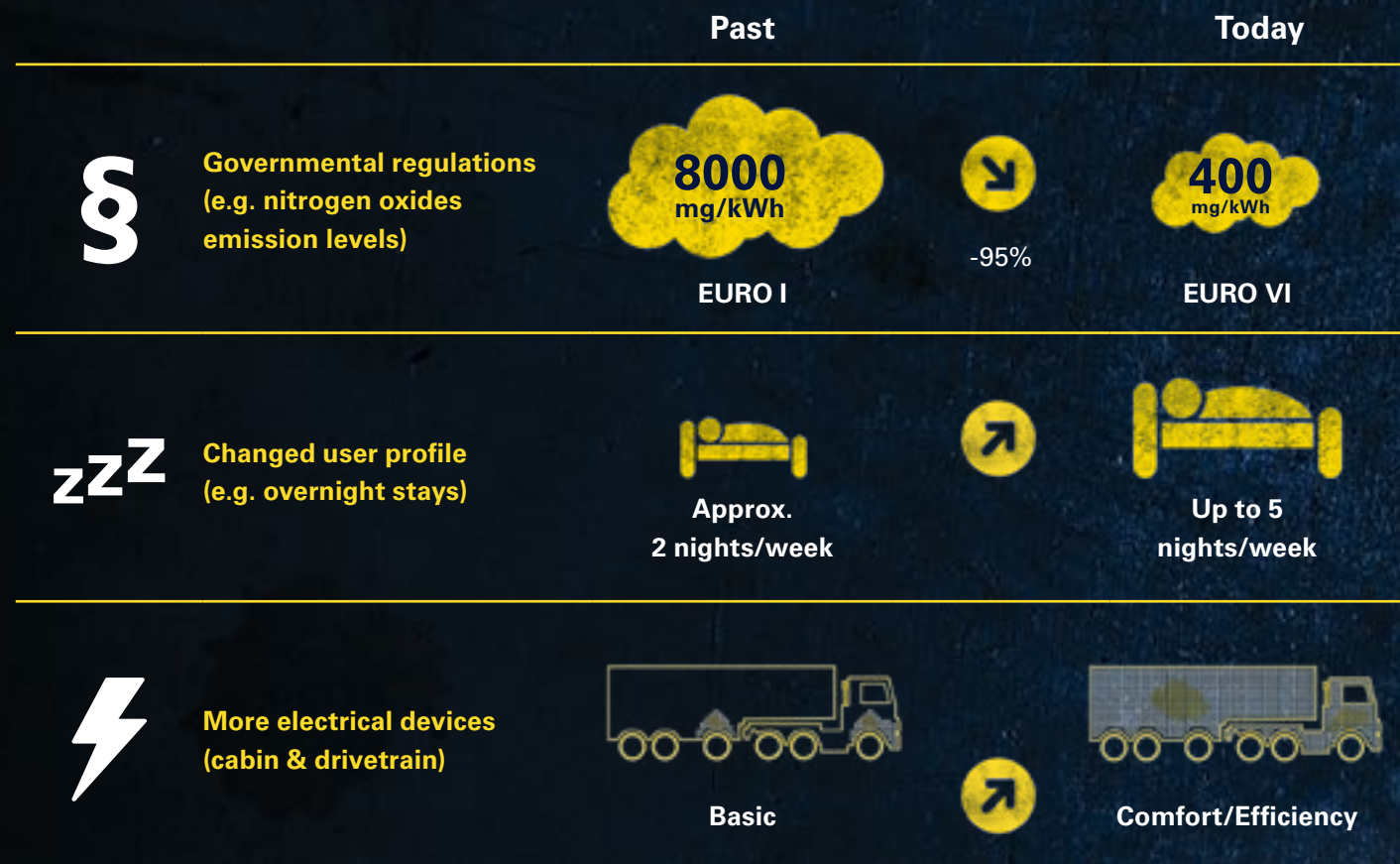
Your essential guide to VARTA® Heavy Commercial Vehicles Batteries.





# TRUCKS AND BATTERY REQUIREMENTS HAVE CHANGED ENORMOUSLY.

During the past years, commercial vehicles and battery requirements have changed enormously. Not only because of governmental regulations implementing higher emission standards, but also because of more overnight stays, more comfort devices in the cabin and drivetrain, and an increasing tendency to retro-fit additional energy consumers like parking coolers / heaters.



## How does this impact the battery?

- ▶ Increased vibration resistance required to cope with end-of-frame installation
- ▶ Demand for enhanced charge acceptance to recharge faster during shorter driving times
- ▶ Larger numbers of cycles required to cope with increased amount of overnight stays
- ▶ Increased depth of discharge to support comfort functions like parking the parking cooler/heater

These higher demands on the batteries mean: fitting a conventional battery to these well-equipped long-haul trucks will lead to a shorter battery lifetime, an increased risk of potential breakdowns and an unnecessary TCO increase as these batteries are not suitable for most modern applications.

The market will continue to develop quickly. Modern trucks will come with start-stop, boosting functions, sailing/coasting and eco-rolling functions. Alongside the trend to increased electrification, the main change will be the further reduction of the engine-on driving time available to recharge the vehicle's battery.

# HOW DO THESE CHANGES AFFECT FLEETS?

These changes will challenge fleets in three very important aspects of their business:

## 1. TOTAL COST OF OWNERSHIP

Conventional batteries fitted in the latest generation of commercial vehicles will lead to a larger number of battery failures, increasing the battery-related TCO. Choosing the correct battery technology for specific applications is an important lever when trying to reduce TCO.

## 2. RELIABILITY

Only choosing the right battery technology for the various different applications of your fleet can ensure maximum reliability of your fleet's timing commitments. Using the wrong technology increases the risk of breakdowns, resulting in lost delivery slots.

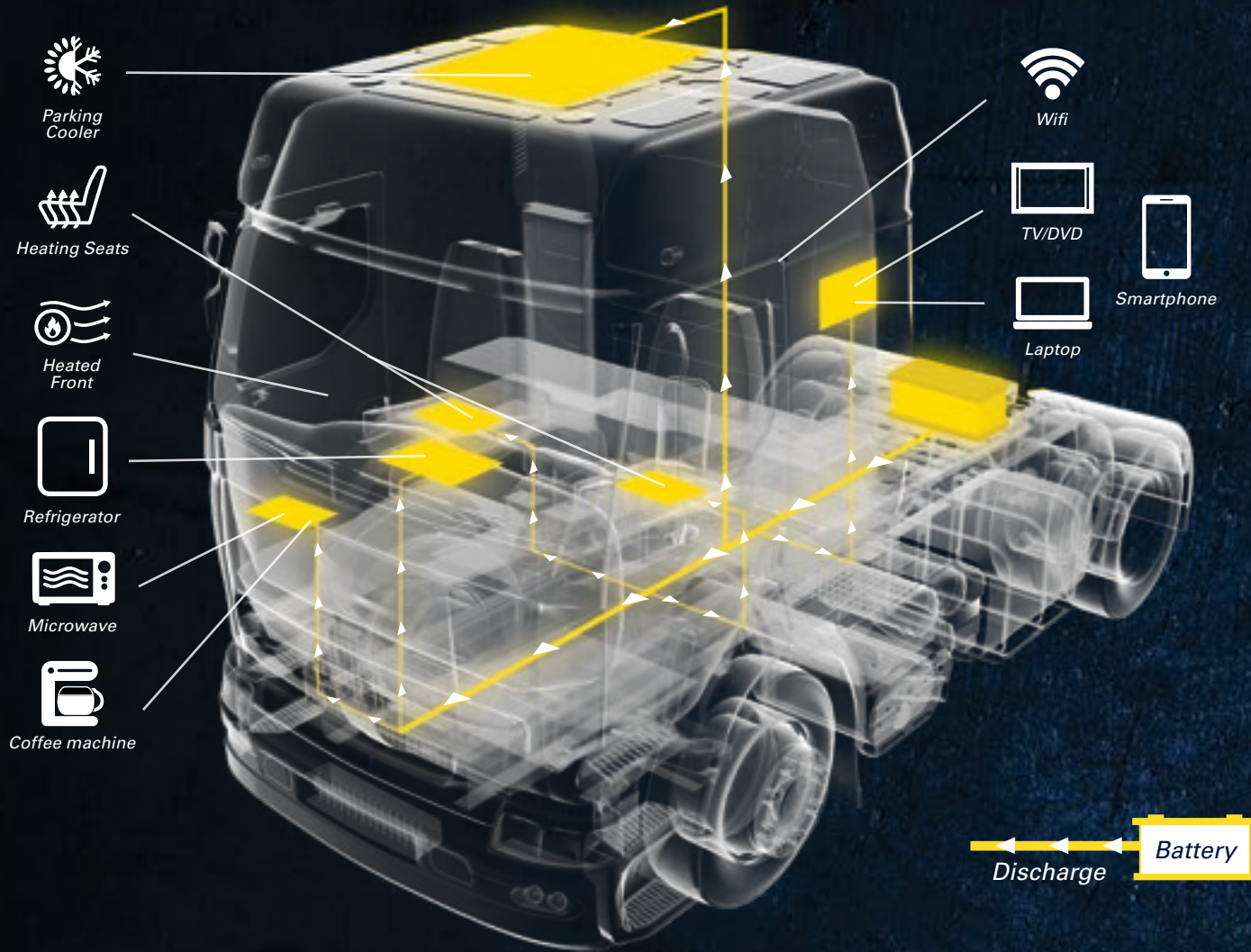
## 3. EMPLOYEE SATISFACTION

With the rising numbers of overnight stays, truck drivers wish to have a highly equipped vehicle with all fittings and comfort like hoteling functions and parking coolers/heaters. Installing the right battery to handle these power demands goes a long way to ensure employee satisfaction.



VARTA® ProMotive batteries always offer suitable solutions. Like cogwheels, they work together to ensure successful business in the commercial vehicle market: with a reduced TCO, perfect fit, reliable battery technologies for each area of application and satisfied employees.





**Many electrical devices put a drain on the battery.**

In recent years many comfort features such as hoteling functions (sleeping, entertainment, cooking) and parking coolers/heaters have been added. Also, fuel-saving

measures like passive-boost and sailing/coasting need to be powered. These changes put higher drains on the batteries resulting in extensive discharging. To cope with

these changes, battery technology needed to evolve. Therefore VARTA®, the technology market leader and main OE supplier, has developed a new truck battery technology.

**VARTA ProMotive AGM.**

# THE BEST SOLUTION TO OPTIMISE YOUR TCO.







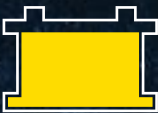












To answer these innovative changes in the commercial vehicle segment, VARTA launches the VARTA ProMotive AGM truck battery: the first original Truck AGM battery which has been developed in collaboration with leading commercial vehicle manufacturers.

Features include: absorbent glass mats ruling out the possibility of battery failures due to acid stratification, the highest vibration resistance, modern fuel-saving functions like start-stop and an ability to deliver reliable performance at even low state of charges.

# THE PERFECT BATTERY TECHNOLOGY FOR EVERY VEHICLE AND APPLICATION.

VARTA ProMotive batteries are the first choice for fleet managers, offering a specific solution for every energy demand level. VARTA ProMotive batteries are specifically designed

for modern trucks and highly equipped commercial vehicles to meet increasing requirements of electrical loads, end-of-frame installation and more overnight stays.

	Demand level	Vibration resistance	Charge acceptance	Cycle life	Depth of discharge
 <b>VARTA ProMotive AGM</b> ▶ 5 or more overnight stays per week ▶ parking cooler/heater ▶ start-stop	<b>ULTIMATE</b>				
 <b>VARTA ProMotive EFB</b> ▶ up to 5 overnight stays per week ▶ no parking cooler/heater ▶ no start-stop	<b>ENHANCED</b>				
 <b>VARTA ProMotive SHD</b>	<b>SUPER HEAVY DUTY</b>				
 <b>VARTA ProMotive HD</b>	<b>HEAVY DUTY</b>				



# VARTA PROMOTIVE AGM.



**MADE IN GERMANY**

## VARTA ProMotive AGM:

- ▶ 6 times the cycle life compared to conventional batteries
- ▶ For advanced hoteling functions with parking cooler/heater
- ▶ Designed for end-of-frame installation (EURO 5/6) due to highest vibration resistance
- ▶ Excellent deep cycle robustness and cycling capability
- ▶ Excellent cranking performance at low SOC
- ▶ Highest charge acceptance for an extended cycle life compared with a flooded battery
- ▶ No acid stratification keeps charge acceptance at the highest levels
- ▶ Reliable batteries that are perfect for a functional safety system
- ▶ Convenient maintenance-free battery, reducing vehicle downtime
- ▶ Superior anti-vibration performance.



**Patented PowerFrame® grid for reliable starting power, fast recharge and corrosion resistance.**



**Meets all original criteria of the commercial vehicle manufacturer.**



**For advanced hoteling functions with parking cooler / heater.**



**Highest vibration resistance.**



**Fulfils all of the requirements of governmental regulations on higher emission standards.**



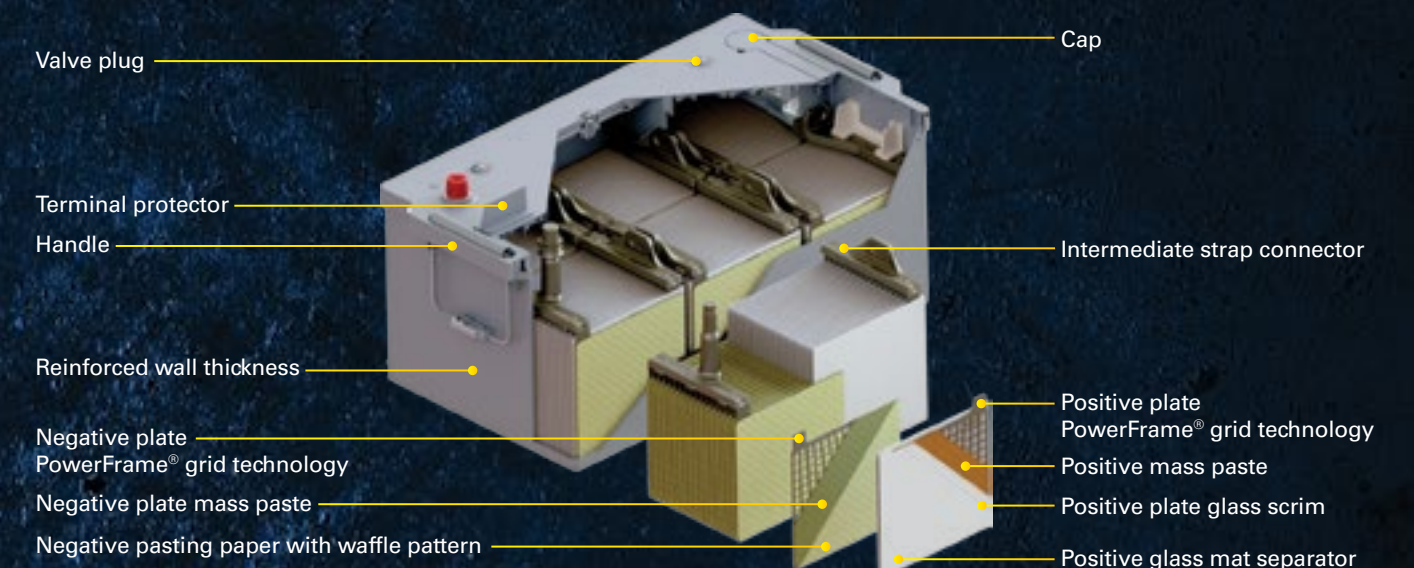
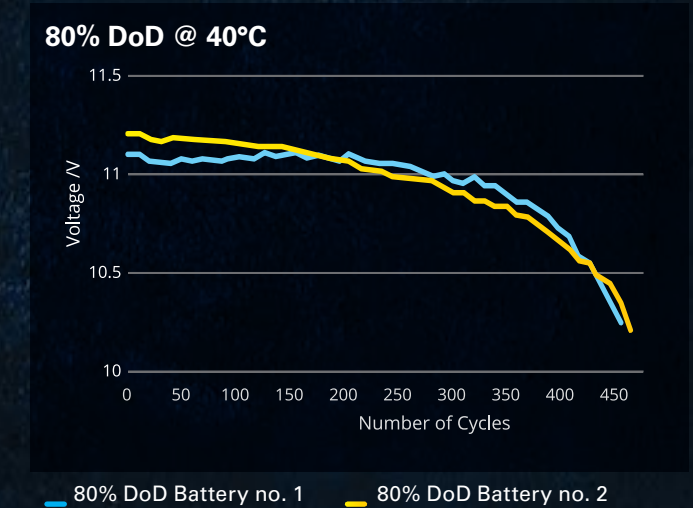
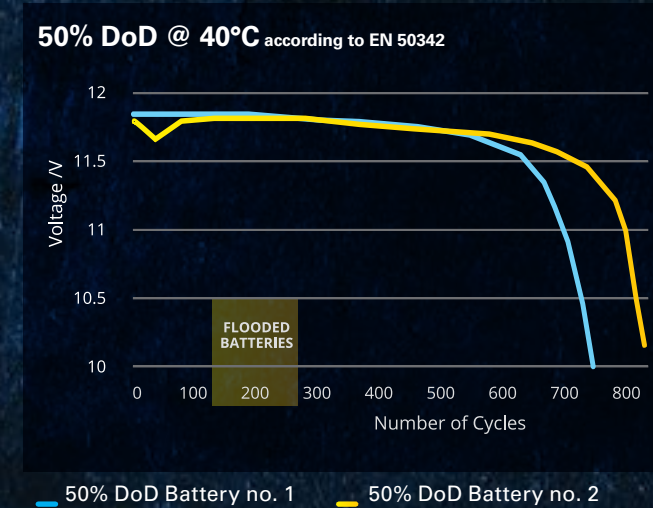
**Suitable for end-of-frame installation.**

## Unlock your trucks' full potential.

VARTA ProMotive AGM is designed for heavy commercial vehicles. It is the only battery for unlocking the highest demanding applications and power consuming functions including the parking cooler/heater without the battery wearing out and causing downtime.

The new VARTA ProMotive AGM truck battery is not only ready to cope with the challenges of today's technology. It has been designed in collaboration with leading commercial vehicle manufacturers to be ready once today's innovations have become standard features.

## VARTA Promotive AGM: Excellent Cycling Performance





# VARTA PROMOTIVE EFB.

## VARTA ProMotive EFB:

- ▶ 3 times the cycle life compared to conventional batteries
- ▶ For hoteling functions
- ▶ Designed for end-of-frame installation (EURO 5/6) due to highest vibration resistance

## Unlock your trucks' full potential.

The VARTA ProMotive EFB is designed for heavy commercial vehicles. It is made for high energy demands while coping with overnight stays in vehicles with standard hoteling functions. This makes it the right choice for TCO savings.

**OE ORIGINAL SPARE PART** Meets all original criteria of the commercial vehicle manufacturer.

**EURO 5/6** Fulfils all of the requirements of governmental regulations on higher emission standards.

MADE IN GERMANY

3x CYCLE LIFE



**Patented PowerFrame® grid** for reliable starting power, fast recharge and corrosion resistance.

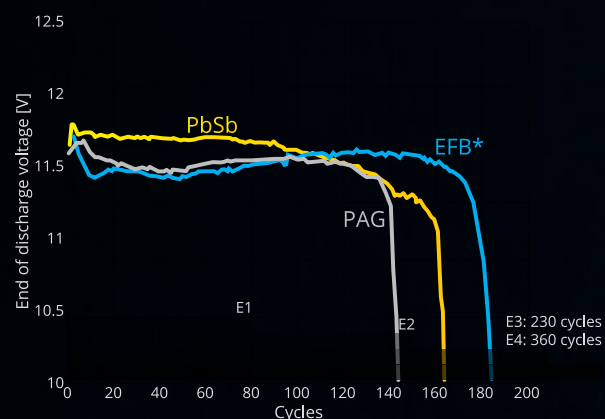


Highest vibration resistance.



Suitable for end-of-frame installation.

50% DoD cycle life test acceleration according to EN 50342

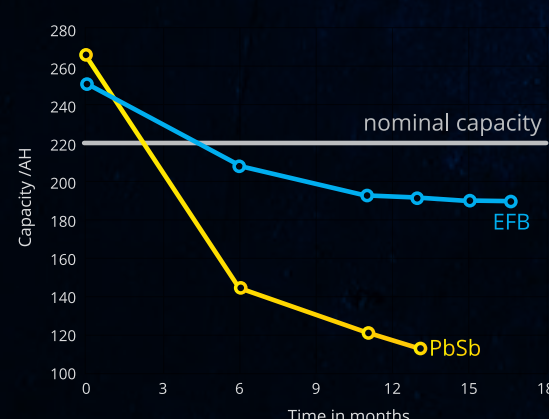


EFB performed better 50% DoD cycle life

\*Test without movement/acceleration, passive mixing device not used

EFB: Enhanced flooded battery PbSb: Conventional SLI battery with antimony alloy

Capacity vs time in field use



EFB: 85% of nominal capacity available after 16 months

PbSb: fast loss of 50% available capacity in 12 months

PAG: Conventional SLI battery

# VARTA PROMOTIVE SUPER HEAVY DUTY.

## VARTA ProMotive Super Heavy Duty:

- ▶ Continuous multi-start
- ▶ Cranking and standard electric demands
- ▶ Ideal vibration resistance for urban distribution applications

## Unlock your fleet's full potential.

The VARTA ProMotive Super Heavy Duty is made for commercial vehicles with reliable starting power demands. Our VARTA ProMotive Super Heavy Duty comes in OE quality and helps your fleet do its job.

ENGINEERED IN GERMANY



**Patented PowerFrame® grid** for reliable starting power, fast recharge and corrosion resistance.



Meets all original criteria of the commercial vehicle manufacturer.



Vibration resistant.

# VARTA PROMOTIVE HEAVY DUTY.

## VARTA ProMotive Heavy Duty:

- ▶ Continuous multi-start
- ▶ Cranking and standard electric demands
- ▶ Ideal vibration resistance for agricultural and construction vehicles

## Unlock your equipment's full potential.

The VARTA ProMotive Heavy Duty delivers reliable power that can handle a high amount of dust and fertiliser while minimising downtime. The perfect choice for TCO savings.

ENGINEERED IN GERMANY





**VARTA® ProMotive AGM**



Short code	VARTA code	Ah (20h)	CCA (EN) [A]	Overall dimensions in mm			Case size	Weight (kg)	Layout	Terminal	Base hold down
				L	W	H					
A1	710 901 120	210	1200	518	276	242	C	61	3	1	B00

**VARTA® ProMotive EFB**



Short code	VARTA code	Ah (20h)	CCA (EN) [A]	Overall dimensions in mm			Case size	Weight (kg)	Layout	Terminal	Base hold down
				L	W	H					
B90	690 500 105	190	1050	513	223	223	B	47.21	3	1	B00
C40	740 500 120	240	1200	518	276	242	C	59.77	3	1	B00

**VARTA® ProMotive Super Heavy Duty**



Short code	VARTA code	Ah (20h)	CCA (EN) [A]	Overall dimensions in mm			Case size	Weight (kg)	Layout	Terminal	Base hold down
				L	W	H					
4D1400	4D1400	200	1400	507	213	231	4D	48.32	4	1	B0
4D160	4D160	160	1050	507	213	231	4D	41.8	4	1	B0
4D160R	4D160R	160	1050	507	213	231	4D	41.8	3	1	B0
8D1500	8D1500	200	1500	510	275	238	8D	57.44	4	1	B0
8D215	8D215	215	1350	510	275	238	8D	56.36	4	1	B0
8D215R	8D215R	215	1350	510	275	238	8D	56.36	3	1	B0
G27	G27	90	780	306	173	225	PGP27	22.7	1	1	B7
G27L	G27L	90	780	306	173	225	PGP27	22.7	0	1	B7
H31A	H31A	100	1000	330	173	239	PGP31	24.3	9	1	B0
H31T	H31T	100	1000	330	173	239	PGP31	24.25	9	1	B0
K7	645 400 080	145	800	513	189	223	A	36.62	3	1	B00
K8	640 400 080	140	800	513	189	223	A	35.76	3	1	B03
M18	680 108 100	180	1000	513	223	223	B	45.1	3	1	B00
M9	670 104 100	170	1000	513	223	223	B	44.2	3	1	B03
N9	725 103 115	225	1150	518	276	242	C	57.5	3	1	B00

**VARTA® ProMotive Heavy Duty**



Short code	VARTA code	Ah (20h)	CCA (EN) [A]	Overall dimensions in mm			Case size	Weight (kg)	Layout	Terminal	Base hold down
				L	W	H					
B39	545 200 030	45	300	210	175	175	T4	11.6	0	1	B13
C20	555 064 042	55	420	242	175	190	H5	14.2	0	1	B13
D33	566 047 051	66	510	278	175	190	H6	16.8	0	1	B13
E29	070 011 030	70	300	175	167	220	M1	9.35	0	1	B00
F10	588 038 068	88	680	353	175	190	H8	21	0	1	B13
G1	590 040 054	90	540	347	173	234	LOT7	25.2	0	1	B00
G2	590 041 054	90	540	347	173	234	LOT7	25.2	1	1	B00
H16	605 103 080	105	800	330	172	240	GR31	24.4	9	8	B01
H17	605 102 068	105	800	330	172	240	GR31	24.4	9	1	B01
H4	600 035 060	100	600	413	175	220	D	26.74	1	1	B00
H5	600 047 060	100	600	413	175	220	D	26.74	0	1	B00
H9	600 123 072	100	720	313	175	205	GB28	24.9	0	1	B03
I11	112 025 051	112	510	260	175	236	M4	16.5	0	1	B01
I16	620 109 076	120	760	510	175	235	MAC120	35.12	4	1	B03
I18	610 404 068	110	680	347	173	234	LOT7	28.58	0	1	B01
I2	610 013 076	110	760	514	175	210	MAC110	32.31	3	1	B03
15	610 048 068	110	680	347	173	234	LOT7	28.58	1	1	B00
16	610 050 085	110	850	413	175	220	D	27.8	0	1	B03
18	620 045 068	120	680	513	189	215	A	33.64	3	1	B00
19	620 047 078	120	780	347	173	234	LOT7	29.01	0	1	B00
J1	625 012 072	125	720	349	175	290	WOR7	31.22	0	1	B00
J10	635 052 100	135	1000	514	175	210	MAC110	35.46	3	1	B03
J2	625 014 072	125	720	349	175	290	WOR7	31.22	1	1	B00
J3	625 023 000	125	950	286	269	230	NATO	36.8	2	1	B00
J5	630 014 068	130	680	514	218	208	MAC130	37.83	3	1	B00
K11	643 107 090	143	900	508	174	205	MAC132	36.5	0	1	B01
K13	140 023 072	140	720	260	175	236	M4	19.5	0	1	B01
K4	643 033 095	143	950	514	218	210	MAC140	39.85	3	1	B03
L2	655 013 090	155	900	513	223	223	B	40.98	3	1	B00
L5	655 104 090	155	900	510	218	230	MAC154	42.88	4	1	B03
M11	654 011 115	154	1150	513	189	223	A	39.84	3	1	B00
M12	680 011 140	180	1400	513	223	223	B	40.42	3	1	B00
M7	680 033 110	180	1100	513	223	223	B	44.99	4	1	B03
N12	200 023 095	200	950	403	175	238	M6	31	0	20	B11
N2	700 038 105	200	1050	518	276	242	C	53.61	3	1	B00
N5	720 018 115	220	1150	518	276	242	C	56.79	3	1	B00
L3	690 034 120	190	1200	513	223	223	B	45.73	3	1	B03
M10	690 033 120	190	1200	513	223	223	B	44.99	4	1	B03



## **TRUST IN VARTA®**

Wherever your journey may take you, VARTA® batteries provide all the power to take you there. Whether you are driving your very first car, you own a vehicle with start-stop functionality, or you drive a highly equipped vehicle with high energy demands, VARTA® batteries offer the power you need.

Today, you'll find our products in millions of cars, powerboats, motorcycles and motorhomes. Our engineers put expertise and precision into each and every VARTA® battery. VARTA® batteries provide longer life, less corrosion and lower cost of ownership, qualities you'll find in all our products from our advanced start-stop automotive range to our professional powerboat products. When you choose VARTA®, you go for reliable precision technology that delivers best-in-class manufacturing quality.

## **BACKED BY THE GLOBAL MARKET LEADER: CLARIOS**

VARTA® automotive batteries are powered by Clarios, a world leader in advanced energy storage solutions. We partner with our customers to meet increasing market demand for smarter applications, on a global scale. Our 16,000 employees develop, manufacture, and distribute a portfolio of evolving battery technologies for virtually every type of vehicle. Technologies that deliver uniquely sustainable, next-generation performance, and bring reliability, safety, and comfort to everyday lives. We add value at every link in the supply chain, contributing to the progress of the communities we serve and the planet we all share.

**CLARIOS Australia & New Zealand**  
**Hotline: +61 1300 827 821**