



Banner

THE POWER COMPANY



**RUNNING BULL: 12 V
ON-BOARD BATTERY
IN THE E-CAR**



**NEW! ENERGY BULL DUAL POWER:
NOW FOR ENGINE START AND ON-
BOARD POWER SUPPLY**

FULL POWER
IN THE BATTERY BUSINESS

**STARTER AND
ON-BOARD BATTERIES**
TYPE LIST 2024/25





RUNNING BULL – INNOVATIVE POWER FOR ENVIRONMENT-FRIENDLY MOBILITY.

OUR BEST BATTERIES FOR MODERN START-STOP VEHICLES AND E-CARS. The Running Bull AGM, Running Bull EFB / EFB PRO and Running Bull BackUp. With the highly specialised batteries of the Running Bull series, Banner covers the entire start-stop vehicle energy supply segment. The combination of top starting performance and high cyclical resistance makes the Running Bull series the ideal power pack for dealing securely with the extreme stresses caused by multiple starting processes and the constant charging and discharging in micro-hybrid vehicles. Running Bull batteries are also increasingly employed as on-board batteries in e-cars.

The Running Bull is used currently for first fitting by Porsche, BMW, Audi, Mercedes, VW, Volvo, Seat, Aston Martin, Rolls-Royce and Knaus Tabbert.



Cars



Start-stop cars



E-cars



Taxis



LCV



Off-road



Motorhomes



Motorboats



Construction machinery

AGM FOR START-STOP VEHICLES AND E-CARS WITH MAXIMUM ENERGY NEEDS.

Over 95 per cent of all new vehicles are currently equipped with an engine start-stop function, in order to achieve the CO₂ limitation targets set by the EU by means of sustained fuel consumption savings and emission reductions. In general, two differing starter battery types are used in these environment-friendly vehicles consisting of the absorbent glass mat (AGM) and the enhanced flooded battery (EFB) systems.

The use of the appropriate technology depends largely upon the fuel and CO₂ attained. AGM technology is employed for start-stop systems with maximum energy requirements and braking energy recuperation. Within this context, in particular the Running Bull AGM constitutes the optimum solution for mid-range to premium and luxury class vehicles.

TECHNICAL DATA AND INFORMATION

- Valve-regulated AGM battery (VRLA)
- Range of six types with capacities from 50-105Ah
- Three times greater cycle resistance than standard batteries: highest M3 classification pursuant to EN 50342-1:2016
- Leak-proof due to electrolyte bonding into an absorbent glass mat
- Zero maintenance owing to recombination technology
- High V3 vibration resistance pursuant to EN 50342-1:2016
- Maximum starting performance due to the very low internal resistance
- Installation in a lateral position possible (max. 90° angle)
- Flexible use as a starter and electrical system power supply battery
- Original equipment quality



Cars



Start-stop cars



E-cars



Taxis



LCV



Off-road



Motorhomes



Motorboats



Construction machinery

Type

Info

Box

Ah
20 h

A
EN



Application

RUNNING BULL

AGM BATTERY WITH A GLASS MAT FOR PREMIUM START-STOP APPLICATIONS

Type	Info	Box	Ah 20 h	A EN	Terminal	Terminal	Length (mm)	Width (mm)	Box height (mm)	Total height (mm)	Terminal	Application
AGM 550 01		H4 / L1	50	540	0	1	210	175	190	190	B13	BMW, Mini, VW, Audi, Opel, Hyundai, Kia, Suzuki
AGM 560 01		H5 / L2	60	640	0	1	241	175	190	190	mG B13	BMW, Mini, VW, Audi, Opel, Hyundai, Kia, Suzuki
AGM 570 01		H6 / L3	70	760	0	1	278	175	190	190	mG B13	BMW, VW, Audi, Mercedes, Porsche, Taxis
AGM 580 01		H7 / L4	80	800	0	1	315	175	190	190	mG B13	BMW, VW, Audi, Mercedes, Porsche, Taxis
AGM 592 01	= AGM 595 01											
AGM 595 01	replaces AGM 592 01	H8 / L5	95	850	0	1	354	175	190	190	mG B13	BMW, VW, Audi, Mercedes, Porsche, Taxis
AGM 605 01		H9 / L6	105	950	0	1	394	175	190	190	mG B13	BMW, VW, Audi, Mercedes, Porsche, Taxis

BACK-UP FOR START-STOP VEHICLES AND E-CARS WITH EXTREMELY HIGH ENERGY NEEDS.

The use of the same trendsetting AGM technology as contained in the "big" Running Bull AGM makes the Running Bull BackUp the ideal support for the starter battery. This small power pack is utilised in vehicles fitted with start-stop systems and additional consumers with high energy requirements such as redundant safety and power steering. It is also being increasingly employed as a battery for the on-board systems in e-cars.



Cars



Start-stop cars



E-cars



Taxis

TECHNICAL DATA AND INFORMATION

- Valve-regulated AGM battery (VRLA)
- Range of three types with capacities from 9-20 Ah
- Used by Audi, BMW, Mercedes and Volvo for first fitting
- Three times greater cycle resistance than standard batteries: highest M3 classification pursuant to EN 50342-1:2016
- Zero maintenance owing to recombination technology
- Leak-proof due to electrolyte bonding into an absorbent glass mat
- Installation in a lateral position possible (max. 90° angle)



Type	Info	Box	Ah 20 h	A EN						Application
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RUNNING BULL AGM BACKUP WITH A GLASS MAT AS AN ON-BOARD BATTERY

Type	Info	Box	Ah 20 h	A EN			Length (mm)	Width (mm)	Box height (mm)	Total height (mm)	Code	Application
509 00/AUX 09			9	120	1	10	150	88	106	106	B00	Volvo Start-Stopp, DRIVE
514 00/AUX 14			12	200	1	10	150	88	145	145	B00	Audi, BMW 5/7Start-Stopp, Mercedes E/S-Class, Volvo Automatic, Start-Stopp
518 01/AUX 18L			20	300	0	10	206	91	163	163	B00	BMW i3

= Double Top | = 4-chamber leak protection | RF = vibration-resistant | GA = battery with central degassing | HGI = hard rubber set | mG = with handle | RZS = flame arrestor | * limited use | ** with base hold-down adapter

Hint: replace AGM with AGM.

EFB / PRO FOR START-STOP VEHICLES AND E-CARS WITH HIGH ENERGY NEEDS.

The new, performance-enhanced top versions of the Running Bull EFB PROfessional are based on proven Running Bull EFB technology and meet, or even exceed, the specifications for start-stop car batteries of leading German car manufacturers such as BMW and VW. These power packs are designed for modern, start-stop cars with high energy requirements and are also increasingly used as on-board batteries in e-cars.

TECHNICAL DATA AND INFORMATION

- Range of 13 types with capacities from 38-95Ah
- Glass fleece cover on the separator and special active mass composition
- Twice the cycle resistance of standard batteries: M2 classification pursuant to EN 50342-1:2016
- Top V3 vibration resistance rating pursuant to EN 50342-1:2016
- Measures to reduce acid stratification and improve charge absorption
- “Carbon loaded”: The carbon additives lead to a marked reduction of the charging time!
- Double lid for maximum protection against leaks and operational safety
- Zero maintenance owing to modern calcium/calcium mesh technology
- Original equipment quality



Cars



Start-stop cars



E-cars



Taxis



LCV



Off-road



Motorhomes



Motorboats



Construction machinery

+ **Banner tip.** What must be considered when upgrading the technology of start-stop batteries from EFB to AGM? The heat-resistant EFB battery with a fitted thermal protection cover is located directly next to the engine block (combustion engine) and is to be preferred if it has already been installed as the original battery ex-works.

+ **Banner note.** Slight deviations in capacity or cold starting have no effect upon safety or the optimum electrical system power supply!



Cars



Start-stop cars



E-cars



Taxis



LCV



Off-road



Motorhomes



Motorboats



Construction machinery

Type	Info	Box	Ah 20 h	A EN						Application
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RUNNING BULL

EFB PROFESSIONAL BATTERY WITH EXTRA POWER FOR START-STOP APPLICATIONS

							Length	Width	Box height	Total height			
EFB PRO 565 11	replaces EFB 560 11	H5 / L2	65	640	0	1	241	175	190	190	mGGA	B13	Alfa Romeo, Audi, BMW, Citroen, Fiat, Peugeot, Seat, Skoda, Toyota, VW
EFB PRO 575 11	replaces EFB 570 11	H6 / L3	75	700	0	1	278	175	190	190	mGGA	B13	Alfa Romeo, Audi, BMW, Citroen, Fiat, Peugeot, Seat, Skoda, Toyota, VW
EFB PRO 585 11	replaces EFB 580 11, Starting Bull 588 34	H7 / L4	85	780	0	1	315	175	190	190	mGGA	B13	Alfa Romeo, Audi, BMW, Citroen, Fiat, Peugeot, Seat, Skoda, Toyota, VW

EFB BATTERY FOR STANDARD START-STOP APPLICATIONS

							Length	Width	Box height	Total height			
EFB 538 15		35NS/B19	38	400	0	3	187	127	204	226	mGGA	B07	Mazda, Mitsubishi, Nissan, Subaru, Toyota
EFB 555 15		45NS/B24	55	460	0	1+3	238	129	203	225	mGGA	B00	Mazda, Mitsubishi, Nissan, Subaru, Toyota
EFB 560 11	replaces EFB 560 00	H5 / L2	60	580	0	1	241	175	190	190	mGGA	B13	Alfa Romeo, Audi, BMW, Citroen, Fiat, Peugeot, Seat, Skoda, Toyota, VW
EFB 565 12		T6 / LB3	65	650	0	1	278	175	175	175	mGGA	B13	Ford, Opel
EFB 565 15	replaces EFB 565 00	D23	65	550	0	1	233	173	203	225	mGGA	B00	Mazda, Mitsubishi, Nissan, Subaru, Toyota
EFB 565 16	replaces EFB 565 01	D23	65	550	1	1	233	173	203	225	mGGA	B00	Mazda, Mitsubishi, Nissan, Subaru, Toyota
EFB 570 11	replaces EFB 570 00	H6 / L3	70	660	0	1	278	175	190	190	mGGA	B13	Alfa Romeo, Audi, BMW, Citroen, Fiat, Peugeot, Seat, Skoda, Toyota, VW
EFB 570 15		D26 / MO60	70	680	0	1	260	174	200	222	mGGA	B00	Mazda, Mitsubishi, Nissan, Subaru, Toyota
EFB 575 12		T7 / LB4	75	730	0	1	315	175	175	175	mGGA	B13	Ford, Opel
EFB 580 11	= EFB PRO 585 11												
EFB 595 15	replaces EFB 595 00	D31 / 56AT	95	760	0	1	303	173	203	225	mGGA	B00	Mazda, Mitsubishi, Nissan, Subaru, Toyota - D, Fiat Tractors



POWER BULL – INNOVATIVE POWER FOR ENVIRONMENTALLY COMPATIBLE MOBILITY.

SUCCESS THROUGH INNOVATION. The Power Bull is Banner's brand quality flagship and THE choice for cars without automatic start-stop. Top ratings in the independent battery tests of Europe's leading automobile clubs underline this high standard. The Banner Power Bull meets the constantly increasing requirements caused by the ever-growing demand for on-board power and quite simply represents original part quality for retrofitting! Thanks to calcium technology and the patented double top lid, Power Bull offers greater safety, an improved deep discharge capability and easier charging.



Cars



Taxis



LCV



Motorboats

POWER BULL – SUPERBLY POWERFUL AND SAFE! MODERN CALCIUM TECHNOLOGY FOR ALL CARS WITHOUT A START-STOP FUNCTION.

The Power BULL constitutes the “PROlongation” of a success story and hence the continuation of the triumphal progress of Power Bull starter batteries. This is because Banner’s “TOP-seller” offers proverbial, multiple award-winning product attributes and premium performance in a perfect symbiosis, which quite simply adds up to original part quality for retrofitting. The top, performance-enhanced Power versions meet the car battery specifications of leading German car manufacturers such as BMW and VW. These power packs are designed for modern passenger cars with very high energy requirements, but without start-stop systems.

TECHNICAL DATA AND INFORMATION

- Robust cyclical behaviour with E2 classification pursuant to EN 50342-1:2016
- Double Top for twice the leak protection and 100 per cent leak protection up to an angle of 55°
- Absolutely maintenance-free due to modern calcium/calcium technology
- Optimised cold start values, highest starting power
- Extensive coverage of the European and Asian vehicle fleets owing to 26 battery types from 40-110 Ah
- V2 vibration resistance rating pursuant to EN 50342-1:2016 due to the bonding of the plates to the battery floor and robust cell connections
- Improved flame arrest and ESD safety levels (against electrostatic discharge)



+ **Banner tip.** A Power Bull battery can be upgraded to an even more powerful Power Bull in H5/L2 (62 Ah), H6/L3 (74 Ah) und H8/L5 (95 Ah) boxes. Please contact your Banner customer advisor.



Cars



Taxis



LCV



Motorboats



Cars



Taxis



LCV



Motorboats

Type

Info

Box

Ah
20 h

A
EN



Application

POWER BULL
A CALCIUM CAR BATTERY OF THE LATEST GENERATION

Type	Info	Box	Ah 20 h	A EN	Terminal	Terminal	Length (mm)	Width (mm)	Box height (mm)	Total height (mm)	Terminal	Terminal	Application
P40 25		35NS/B19	40	330	0	3	187	137	204	226	mGGA	B01	535 04
P40 26		35NS/B19	40	330	0	3	187	127	204	226	mGGA	B00	535 20, 540 26
P40 27		35NS/B19	40	330	1	3	187	127	204	226	mGGA	B00	535 22, 540 27
P42 08		H3 / L0	42	390	0	1	175	175	190	190	mGGA	B13	540 08, 542 08
P44 09	replaces PRO P50 42	T4 / LB1	44	420	0	1	210	175	175	175	mGGA	B13	536 46**/53, 540 45**/63, 544 09/59*, 545 59*
P45 23	replaces Starting Bull 545 77"	45NS/B24	45	390	0	1+3	238	129	203	225	mGGA	B00	545 23/77*/84
P45 24	replaces Starting Bull 545 79"	45NS/B24	45	390	1	1+3	238	129	203	225	mGGA	B00	545 24/51/79*
P50 03	replaces PRO P50 40	H4 / L1	50	450	0	1	210	175	190	190	mGGA	B13	544 09*/59, 545 59, 550 03
P50 41	no alternative type												
P60 09	replaces PRO P63 42	T5 / LB2	60	540	0	1	241	175	175	175	mGGA	B13	545 19**, 555 19/59*, 560 09
P60 62	= P60 68												
P60 68	replaces P60 62	D23	60	510	0	1	233	173	203	225	mGGA	B07	560 62, 560 68, 565 33
P60 69		D23	60	510	1	1	233	173	203	225	mGGA	B07	560 69, 565 34
P62 19		H5 / L2	62	550	0	1	241	175	190	190	mGGA	B13	560 09*, 562 05*/19
P63 40	replaces PRO P63 40	H5 / L2	63	620	0	1	241	175	190	190	mGGA	B13	560 09*, 562 05*/19, 563 40
P70 24		D26 / MO60	70	600	1	1	260	174	200	222	mGGA	B01	560 49, 570 24
P70 29		D26 / MO60	70	600	0	1	260	174	200	222	mGGA	B01	560 48, 570 29, 580 09
P72 09	replaces PRO P77 42	T6 / LB3	72	670	0	1	278	175	175	175	mGGA	B13	563 18**, 564 20**, 566 13/38*, 570 44, 571 13, 572 09/12*, 574 05/12*
P74 12		H6 / L3	74	680	0	1	278	175	190	190	mGGA	B13	566 13*/38, 570 44*, 572 09*/12, 574 05*/12
P77 40	replaces PRO P77 40	H6 / L3	77	700	0	1	278	175	190	190	mGGA	B13	566 13*/38, 570 44*, 572 09*/12, 574 05*/12, 577 40
P80 09		D26 / MO60	80	640	0	1	260	174	200	222	mGGA	B01	560 48, 570 29, 580 09
P80 14		T7 / LB4	80	700	0	1	315	175	175	175	mGGA	B13	575 39, 580 14/35*/42*
P84 40	replaces PRO P84 40	H7 / L4	84	760	0	1	315	175	190	190	mGGA	B13	575 39*, 580 14*/35/42, 584 40
P88 20	= Starting Bull 588 20												
P95 04		D31 / 56AT	95	740	0	1	303	173	203	225	mGGA	B07	595 04, 600 32
P95 05		D31 / 56AT	95	740	1	1	303	173	203	225	mGGA	B07	595 05, 600 33
P95 33		H8 / L5	95	780	0	1	354	175	190	190	mGGA	B13	595 21/33, 600 44
P100 40	replaces PRO P100 40	H8 / L5	100	820	0	1	354	175	190	190	mGGA	B13	595 21/33, 600 44
P110 40	replaces PRO P110 40	H9 / L6	110	900	0	1	394	175	190	190	mGGA	B13	610 42

" conditionally applicable - With bracket mounting on top, check dimensions, terminal design and layout.



Banner
THE POWER COMPANY

STARTING BULL – PROVEN A MILLION TIMES OVER.

AFFORDABLE QUALITY. Robust, fully proven and thoroughly optimised, the Starting Bull represents a powerful entry into the Banner brand world. This absolutely maintenance-free battery scores with top features and performance. In addition to calcium / calcium technology, the Starting Bull series offers 13 types with reliable four-chamber leak protection and enhanced safety due to central degassing and integrated backfire frits. First class, attractive design with new terminal covers represents a clear indication of the potential of this battery.



Cars



LCV



Motorboats

STARTING BULL

THE ENTRY TO THE Banner BRAND WORLD.

The Banner Starting Bull is the entry level product to the Banner brand. However, safety knows no compromises and therefore this product, which has been proven millions of times meets the very latest battery design standards.

TECHNICAL DATA AND INFORMATION

- Four-chamber leak protection with integrated flame arrestor safeguard for 13 best sellers from 44-95 Ah
- Absolutely maintenance-free due to the use of calcium technology
- Reliable cold starting behaviour
- Niche and supplementary types ensure complete coverage of the current vehicle fleet in Europe
- Simple classification owing to the use of DIN and UK numbers for type designations
- Quality and know-how from Austria
- Optimum price-performance ratio



Cars



LCV

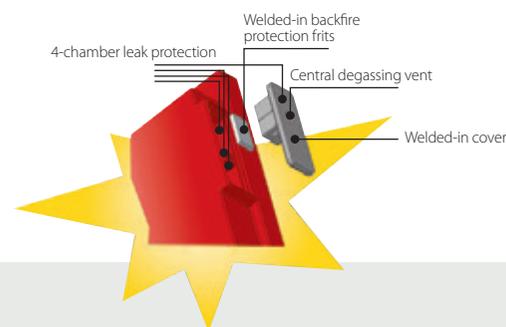


Motorboats

4-CHAMBER LEAK PROTECTION.

THE INNOVATIVE SAFETY GUARANTEE.

Tried and tested, four-chamber leak protection is used in 13 Starting Bull Europa types. In this system, four chambers provide a safeguard against escapes of battery acid during extreme vibrations. Moreover, central degassing and welded-in backfire frits secure optimum operational safety. All these features add up to a significant increase in safety during vehicle use and handling.





Cars



LCV



Motorboats

Type

Info

Box

Ah
20 h

A
EN



Application

STARTING BULL CAR BATTERY IN OEM QUALITY

6 Volt							Length	Width	Box height	Total height			
066 12			66	360	0	1	178	175	166	188		B04	VW - 1968, Trabant
077 18			77	450	0	1	216	170	166	191		B06	VW, Ford D, Trabant, Tatra 613

12 Volt							Length	Width	Box height	Total height			
530 30	replaces Bike Bull 528 16		30	300	0	4	187	128	165	165	mGGA	B00	Small tractors, BMW motorcycles
530 34			30	300	1	4	187	128	165	165	mGGA	B00	Small tractors
544 09		T4 / LB1	44	360	0	1	210	175	175	175	mGGA	B13	Ford, Opel
545 59		H4 / L1	45	400	0	1	210	175	190	190	mGGA	B13	Audi, BMW, VW, Citroen, Peugeot, Renault, Fiat, Skoda
545 77	= Power Bull P45 23"												
545 79	= Power Bull P45 24"												
555 19		T5 / LB2	55	450	0	1	241	175	175	175	mGGA	B13	Ford, Opel
560 09		T5 / LB2	60	480	0	1	241	175	175	175	mGGA	B13	Ford, Opel
560 60 NEW		H5 / L2	60	480	0	1	241	175	190	190	mGGA	B13	Audi, BMW, VW, Citroen, Peugeot, Renault, Fiat, Skoda
562 19		H5 / L2	62	510	0	1	241	175	190	190	mGGA	B13	Audi, BMW, VW, Citroen, Peugeot, Renault, Fiat, Skoda
570 44		T6 / LB3	70	640	0	1	278	175	175	175	mGGA	B13	Ford, Opel
570 70 NEW		H6 / L3	70	600	0	1	278	175	190	190	mGGA	B13	Audi, BMW, VW, Citroen, Peugeot, Renault, Fiat, Skoda
572 12		H6 / L3	72	650	0	1	278	175	190	190	mGGA	B13	Audi, BMW, VW, Citroen, Peugeot, Renault, Fiat, Skoda
572 33		H6 / L3	72	650	1	1	278	175	190	190	mGGA	B01	Chrysler Voyager
580 14		T7 / LB4	80	660	0	1	315	175	175	175	mGGA	B13	Audi D, BMW D, Ford D, Opel D, Nissan D, Renault D, VW D
588 20	replaces Power Bull P88 20 = Running Bull	T8 / LB5	88	680	0	1	354	175	175	175	mGGA	B13	Ford D, Opel D
588 34 RF	= Running Bull EFB PRO 585 11												
595 33		H8 / L5	95	740	0	1	354	175	190	190	mGGA	B13	Audi, BMW, Mercedes, Porsche, VW

" conditionally applicable - With bracket mounting on top, check dimensions, terminal design and layout.



BUFFALO BULL – NEXT GENERATION POWER.

AS TOUGH AS THEY COME. The Buffalo Bull is suitable for all commercial vehicles such as trucks, buses, agricultural/forestry/construction machinery and snow groomers, and is available in four product variations. These range from a robust entry-level model to the Buffalo Bull SHD, a super heavy-duty quality version supplemented with SHD PRO battery types. These power packs are certain to start any engine whatever the conditions and because a truck battery also has to reliably supply power on board after a hard day on the road, we have developed two special models for long-distance trucks. These consist of the Buffalo Bull EFB for high energy requirements and the completely redesigned Buffalo Bull AGM for maximum energy demand.



Buses



Trucks



Construction machinery



Agricultural machinery



Snow groomers

**BUFFALO BULL AGM
– TOP NEWS**



**MORE INFO UNDER
bannerbatterien.com**

THE BUFFALO BULL AGM

MEGA-POWER FOR LONG-DISTANCE TRUCKS.

Starter and on-board batteries in the commercial vehicle sector must increasingly meet special needs such as the maximum energy demand emanating from the growing number of comfort functions in long-distance trucks. Drivers often spend the night in their vehicles and use a variety of different electrical consumers, including auxiliary air conditioning or heating.

Banner has launched the new Buffalo Bull AGM onto the market for precisely these toughest requirements because now a long-distance truck is more than just a means of transporting goods from A to B. It is the driver's workplace (keyword: office) and home (keyword: kitchen, living room/bedroom) for more than three days a week and therefore the Buffalo Bull AGM has been designed specifically for this situation.



TECHNICAL DATA AND INFORMATION

- Valve-regulated lead acid battery (VRLA)
- Available in standard battery sizes (C-box) with 210 Ah
- Threefold cyclical resistance as compared to standard starter batteries, owing to the active mass recipe and glass fleece covers
- Robust design und maximum vibration resistance due to special set bonding
- Improved mesh corrosion resistance through the use of a continuous production process
- No acid stratification due to AGM design
- Outstanding charging: the vehicle's regulator voltage is also sufficient for deeply discharged batteries
- Calcium technology for minimal water consumption
- Designed for the maximum energy requirements resulting from increasing comfort functions in long-distance trucks
- Ideal for rear chassis integration (EURO Emission Class 5/6)
- Add-ons such as short-circuit protection and ESD plug for heightened product safety
- Central degassing with integrated flame arrestor
- Dimensions in accordance with EN 50342-4:2009

ESD = electrostatic discharges are disruptive voltage breakdowns caused by major potential differences. These discharges (sometimes visible due to sparks) cause brief, high electrical current and can lead to the ignition of flammable materials. It is precisely this that the ESD plugs prevent with absolute safety.



Buses



Trucks



Construction machinery



Agricultural machinery



Snow groomers

Type

Info

Box

Ah
20 h

A
EN



Application

BUFFALO BULL AGM

COMMERCIAL VEHICLE BATTERY IN OEM QUALITY – AGM-TECHNOLOGY

AGM 710 01	C	210	1200	3	1	517	273	212	240	mGGARZS	B00	Long-distance trucks:: MAN, Mercedes, Volvo, Scania, Steyr Trucks
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pt = Double Top | ak = 4-chamber leak protection | RF = vibration-resistant | GA = battery with central degassing | HGI = hard rubber set | mG = with handle | RZS = flame arrestor | * limited use | ** with base hold-down adapter

Replace AGM with AGM

BUFFALO BULL AGM
– TOP NEWS



THE BUFFALO BULL EFB

THE POWER PACK FOR LONG-DISTANCE TRUCKS.

Starter and on-board batteries in the commercial vehicle field must fulfil a growing variety of special needs such as the maximum energy demand emanating from the increasing number of comfort functions in long-distance trucks. Drivers often spend the night in their vehicles and use various electrical consumers. Moreover, in the case of battery integration into the rear chassis, extreme vibration-resistance is essential.

Banner has launched the new Buffalo Bull EFB onto the market for precisely these toughest requirements because today a long-distance truck is more than just a means of transporting goods from A to B. It is the driver's workplace (keyword: office) and home (keyword: kitchen, living room/bedroom) for often three nights per week and therefore the Buffalo Bull EFB has been designed specifically for this situation.



TECHNICAL DATA AND INFORMATION

- Range of three standard battery sizes (A, B and C boxes) with 150 Ah, 190 Ah and 240 Ah
- Increased cyclical resistance owing to the active mass recipe and glass fleece covers
- Robust design und maximum vibration resistance due to special set bonding
- Improved mesh corrosion resistance through the use of a continuous production process
- Calcium technology for minimal water consumption
- Designed for high energy requirements resulting from increasing comfort functions in long-distance trucks
- Maintenance-free (no topping up with water) under normal operating conditions
- Add-ons such as short-circuit protection and ESD plug for heightened product safety
- Central degassing with integrated flame arrester
- Dimensions in accordance with EN 50342-4:2009

ESD = electrostatic discharges are disruptive voltage breakdowns caused by major potential differences. These discharges (sometimes visible due to sparks) cause brief, high electrical current and can lead to the ignition of flammable materials. It is precisely this that the ESD plugs prevent with absolute safety.



Buses



Trucks



Construction machinery



Agricultural machinery



Snow groomers

Type

Info

Box

Ah
20 h

A

EN



Application

BUFFALO BULL EFB

COMMERCIAL VEHICLE BATTERY IN OEM QUALITY – EFB-TECHNOLOGY

							Length	Width	Box height	Total height			
EFB 650 17		A	150	850	3	1	513	189	195	220	mGGARZS	B00	Long-distance trucks:: MAN, Mercedes, Volvo, Scania, Steyr Trucks
EFB 690 17		B	190	1050	3	1	513	223	195	220	mGGARZS	B00	Long-distance trucks:: MAN, Mercedes, Volvo, Scania, Steyr Trucks
EFB 740 17		C	240	1200	3	1	517	273	212	240	mGGARZS	B00	Long-distance trucks:: MAN, Mercedes, Volvo, Scania, Steyr Trucks

BUFFALO BULL SHD/SHD PRO PUTS FULL POWER INTO EVERY COMMERCIAL VEHICLE, FROM DISTRIBUTION TRUCKS TO BUSES.

Tough and continuous use in commercial vehicles presents batteries with massive challenges and the demands on cyclical and vibration resistance have increased enormously over the years. Therefore, properties such as freedom from maintenance, operational and cold start performance are now more important than ever and the optimised Buffalo Bull SHD batteries represent the answer. The Buffalo Bull SHD PROfessional battery types are the problem solver for stop & go, cold starts and co. and tough conditions that would cause others to quickly give up the ghost! Moreover, they also hold their own in the lucrative aftermarket. In fact, Banner has equipped these batteries with unbeatable advantages, which make them ideal for modern distribution trucks and buses!



TECHNICAL DATA AND INFORMATION

- Meets the requirements of Mercedes Trucks
- Maintenance-free: calcium technology ensures minimum water consumption
- Central degassing and patented four-chamber leak protection
- Captive, welded-in flame arrestors and safety screws
- ConCast mesh production process and optimised mesh design provide reliable cold start performance
- SHD means extra cycle/vibration resistance in the highest E3/V3 category pursuant to EN 50342-1:2016
- Short circuit protection against short circuits caused by tools
- EN 50342-4:2009 box height



Buses



Trucks



Construction machinery



Agricultural machinery



Snow groomers

Type

Info

Box

Ah
20 h

A
EN



Application

BUFFALO BULL SHD / SHD PROFESSIONAL COMMERCIAL VEHICLE BATTERY IN OEM QUALITY – SUPER HEAVY DUTY VARIATION

Type	Info	Box	Ah 20 h	A EN	Terminal	Terminal	Length (mm)	Width (mm)	Box height (mm)	Total height (mm)	Code	Code	Application
SHD 610 40		MAC 110	110	760	3	1	513	175	210	210	mGGARZS	B03	MAN, Mercedes, Roman, Robur
SHD 635 44		MAC 110	135	900	3	1	513	175	210	210	mGGARZS	B03	MAN, Mercedes, Roman
SHD 640 35	= SHD PRO 645 03												
SHD PRO 645 03	replaces SHD 640 35	A	145	800	3	1	513	189	195	220	mGGARZS	B00	Neoplan, MAN, Mercedes, Volvo, Scania, Steyr Trucks
SHD 670 33		MAC 140	170	1000	3	1	513	218	210	210	mGGARZS	B03	MAN, Mercedes, Liiaz
SHD 680 32	= SHD PRO 680 08												
SHD PRO 680 08	replaces SHD 680 32	B	180	1000	3	1	513	223	195	220	mGGARZS	B00	Neoplan, MAN, Mercedes, Volvo, Scania, Steyr Trucks
SHD 725 11	= SHD PRO 725 03												
SHD PRO 725 03	replaces SHD 725 11	C	225	1150	3	1	517	273	212	240	mGGARZS	B00	Neoplan, MAN, Mercedes, Volvo, Scania, Steyr Trucks

BUFFALO BULL MEANS RELIABLE BRAND QUALITY.

If they opt for the Buffalo Bull, those looking for a suitable and reliable starter battery for their commercial vehicles will have made precisely the right decision. This is because the Buffalo Bull is a brand battery with proven Banner quality.



TECHNICAL DATA AND INFORMATION

- Niche and supplementary types for agricultural machinery and unusual commercial vehicles
- Simple maintenance due to the externally visible electrolyte level markings and practical screws
- Robust design with set bonding
- Bag separators for backfire protection and high starting current levels


Buses

Trucks

Construction machinery

Agricultural machinery

Snow groomers
Type
Info
Box
**Ah
20 h**
**A
EN**

Application

BUFFALO BULL COMMERCIAL VEHICLE BATTERY IN OEM QUALITY

							Length	Width	Box height	Total height			
605 02		BCI 31	105	1000	9	1	330	171	218	241	mGGA	B00	AGCO Fendt - Massey Ferguson, Caterpillar, US Trucks
610 11		Compact	110	800	0	1	344	175	214	230	mG	B01	Iveco Daily 01.05-, Renault
610 47		Compact	110	800	0	1	344	172	214	230	mG	B00	IHC, Massey Ferguson
610 48		Compact	110	800	1	1	344	172	214	230	mG	B00	IHC, McCormick
620 34		A	120	720	3	1	513	189	195	220	mG	B00	MAN, Mercedes, Roman, MAZ
625 11		Compact	125	760	0	1	345	172	260	283	mG	B00	Massey Ferguson
625 13		Compact	125	760	1	1	345	172	260	283	mG	B00	McCormick
625 23		NATO 6TN	125	720	2	1	280	267	213	230	mG	B00	NATO 6TN
632 11		MAC 132	132	900	0	1	508	174	205	205	mG	B01	CNH Case New Holland, John Deere, Landini, McCormick
640 35		A	140	760	3	1	513	189	195	220	mG	B00	Steyr Trucks, MAN, Mercedes
650 11		A	150	1150	3	1	513	189	195	220	mGGARZS	B00	Municipal vehicles, construction machinery, snow groomers
680 11		B	180	1400	3	1	513	223	195	220	mGGARZS	B00	Municipal vehicles, construction machinery, snow groomers
680 32		B	180	950	3	1	513	223	195	220	mG	B00	Steyr-Trucks, MAN, Roman, Multicar, Magirus
680 89		MAC 154	180	950	4	1	510	216	205	225	mGGA	B03	AGCO Fendt - Massey Ferguson, Fiat Trucks, Tractors
725 11		C	225	1050	3	1	517	273	212	240	mG	B00	Steyr, MAN, Volvo-Trucks, Caterpillar, Tatra

BUFFALO BULL HIGH CURRENT THE MEGA COLD START POWER!

Special machines and vehicles (e.g. municipal vehicles such as sweepers or high-pressure rinsing vehicles, construction machinery and snow groomers) require ever-higher cold start current. This is due to the high lag loads (e.g. in hydraulic units), which have to be dealt with during starting. The Buffalo Bull high current battery has been specifically developed to meet these requirements.



TECHNICAL DATA AND INFORMATION

- Offer of two standard battery sizes (boxes A and B) with 1,150 A or 1,400 A cold start current
- High vibration-resistance
- Calcium technology for minimal water consumption
- Maintenance-free under normal operating conditions
- Central degassing with integrated flame arrestor
- Add-ons for heightened product safety: short circuit protection, ESD plugs*
- Dimensions in accordance with EN 50342-4:2009



Type

Info

Box

Ah
20 h

A
EN



Application

BUFFALO BULL COMMERCIAL VEHICLE BATTERY IN OEM QUALITY

Type	Info	Box	Ah 20 h	A EN	Terminal layout	Terminal layout	Length (mm)	Width (mm)	Box height (mm)	Total height (mm)	Accessories	Accessories	Application
650 11		A	150	1150	3	1	513	189	195	220	mGGARZS	B00	Municipal vehicles , construction machinery, snow groomers
680 11		B	180	1400	3	1	513	223	195	220	mGGARZS	B00	Municipal vehicles , construction machinery, snow groomers



ENERGY BULL – DUAL POWER FOR LEISURE.

THE LEISURE SPECIALIST. New designed as a DUAL POWER battery, the Energy Bull is THE special battery for hobby and leisure activities. The battery is characterised by excellent cyclical stability, simple charging, easy maintenance and operational safety. The Energy Bull thus provides portable energy for sailing and e-boats, yachts, motorhomes and caravans, as well as for camping and caravanning. The battery is also suitable for powering wheelchairs and for use as an energy storage device for signalling systems and solar panels.

Banner Tip: NEW - Now designed as DUAL POWER battery means extended use in direction of launching motorboats and motor yachts!



Yachts



Motorboats



Motorhomes



Caravans



Camping



Solar power systems



Wheelchairs



ENERGY BULL FOR CONVINCING DEEP CYCLE CHARACTERISTICS.

With the Energy Bull, Banner presents a special battery for hobbies and leisure. The robust Energy Bull's characteristics make it an ideal power pack for camping/caravans, boats and use in many other applications, which extend to signal systems and electrical motor drives.

NEW - Now designed as DUAL POWER battery means extended use in direction of launching motorboats and motor yachts!

In tandem with bag separators and a special mass composition, the robust mesh structure of the battery ensures extreme cyclical resistance. The advantages at a glance:



TECHNICAL DATA AND INFORMATION

- Battery types in box H5 / L2, H6 / L3, H8 / L5 -> Maintenance-free, Battery types in box A, B, C -> Maintenance-friendly
- Transparent box enables electrolyte level control
- 4K lids (Box H5 / L2, H6 / L3, H8 / L5) and safety glands (Box A, B, C) ensure leakage and operational safety
- Easy to load thanks to carbon additives in the plate material
- Vibration resistant thanks to bottom bonding of the plates
- Higher cycle stability than a starter battery
- Optimised capacity - ideal for cyclic loads
- Solid cold start values - suitable for most starter applications
- Product improvement at the same price level



Type	Info	Box	Ah 5 h	Ah 20 h	Ah 100 h	A EN						Application
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ENERGY BULL DUAL POWER BATTERY - NEW: NOW FOR ENGINE START AND ON-BOARD POWER SUPPLY

Type	Info	Box	Ah 5 h	Ah 20 h	Ah 100 h	A EN			Length (mm)	Width (mm)	Box height (mm)	Total height (mm)	Terminal	Terminal	Application
955 01 NEW 4K		H5 / L2	50	60	70	510	0	1	241	175	190	190	mGGA	B13	Boat/Marine, Camping/Caravan, Wheelchairs, Solar
956 01 NEW 4K		H6 / L3	60	75	90	680	0	1	278	175	190	190	mGGA	B13	Boat/Marine, Camping/Caravan, Wheelchairs, Solar
957 51 NEW 4K		H8 / L5	75	100	110	800	0	1	354	175	190	190	mGGA	B13	Boat/Marine, Camping/Caravan, Wheelchairs, Solar
959 01 4K		LOT7	90	115	135		0	1	350	175	235	235	mGGA	B00	Boat/Marine, Camping/Caravan, Wheelchairs, Solar
960 51 NEW		A	105	130	140	720	3	1	513	189	195	220	mGRZS	B00	Boat/Marine, Camping/Caravan, Wheelchairs, Solar
963 51 NEW		B	135	190	195	950	3	1	513	223	195	220	mGRZS	B00	Boat/Marine, Camping/Caravan, Wheelchairs, Solar
968 01 NEW		C	180	230	250	1100	3	1	517	273	212	240	mGRZS	B00	Boat/Marine, Camping/Caravan, Wheelchairs, Solar

pt = Double Top | **4k** = 4-chamber leak protection | RF = vibration-resistant | GA = battery with central degassing | HGI = hard rubber set | mG = with handle | RZS = flame arrestor | * limited use | ** with base hold-down adapter



BIKE BULL – THE MOTORCYCLE BATTERY WITH Banner POWER.

HEAD FOR FREEDOM. Biking means a feeling of unlimited freedom. Sun, hot tarmac and seemingly endless curves. However, the fun element soon disappears if the bike fails to start. Therefore, when perfect starting and plentiful power are required, the Bike Bull is always the first choice. Especially for bikers, this power pack offers everything that is required for pure cruising pleasure. In addition, the Bike Bull also provides equally safe starts for all-terrain vehicles/quads, jet skis, snowmobiles, utility-vehicles and tractor mowers. The Bike Bull programme contains 61 battery types divided into four grades, which are available all year round.



Motorcycles road/cross



ATV/Quads



Jetskis



Riding mowers



Snowmobiles

BIKE BULL CLASSIC POWER FOR MOTORBIKES.

Entry into the world of the Banner brand is comprised by classic lead batteries with an electrolyte pack. The robust technology has been specially designed for the burdens relating to motorcycle riding. These batteries are only opened for start-up and maintenance.

TECHNICAL DATA AND INFORMATION

- High load-bearing capacity
- Safe starting even in the case of short run use
- Extensive programme consisting of 27 types
- Dry, pre-charged; enclosed electrolyte in the precisely required volume



Ah 10 h

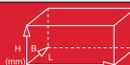
Capacity in Ah (10h)

A (EN)

Low-temperature
test current



Terminal



Max. dimensions in mm
Length x Width x Total height



Bottom strip



Acid in
approx. litres



Motorcycles road/cross



ATV/Quads



Jetskis



Riding mowers



Snowmobiles



Banner battery type

First fitting designation

Banner order number

Ah
10 h



Drawing

BIKE BULL CLASSIC
6 VOLT

					Length	Width	Height			
004 12	B6N4B-2A	020 004 12 0100	4	5	102	48	96	0,20	B00	
007 14	BB39-6	020 007 14 0100	7	6	126	48	126	0,30	B00	
008 11	BB49-6	020 008 11 0100	8	6	91	83	160	0,50	B00	
012 11	B6N11A-3A	020 012 11 0100	11	6	122	62	132	0,40	B00	
012 14	B6N11A-1B	020 012 14 0100	11	6	122	62	132	0,40	B00	
013 14	BB38-6A	020 013 14 0100	14	6	119	83	161	0,70	B00	

12 VOLT

					Length	Width	Height				
503 12 = 503 13											
503 13 replaces 503 12	BB3L-B	020 503 13 0100	3	6	98	56	110	0,20	B00		
504 11	BB4L-B	020 504 11 0100	4	5	120	70	92	0,30	B00		
505 12	BB5L-B	020 505 12 0100	5	6	120	60	130	0,40	B00		
506 11	B12N5,5-3B	020 506 11 0100	6	6	135	60	130	0,40	B00		
507 13	BB7-A	020 507 13 0100	8	6	135	75	133	0,60	B00		
507 14	BB7C-A	020 507 14 0100	8	3	130	90	114	0,60	B00		
509 14	BB9-B	020 509 14 0100	9	6	135	75	139	0,60	B00		
511 12	BB10L-A2	020 511 12 0100	11	8	135	90	145	0,80	B00		
511 13	BB10L-B	020 511 13 0100	11	6	135	90	145	0,80	B00		
512 11	BB12A-A	020 512 11 0100	12	6	134	80	160	0,80	B00		
512 13	BB12AL-A2	020 512 13 0100	12	8	134	80	160	0,80	B00		
512 15	BB12A-B	020 512 15 0100	12	6	134	80	160	0,80	B00		
514 11	BB14L-A2	020 514 11 0100	14	8	134	89	166	0,90	B00		
514 12	BB14-A2	020 514 12 0100	14	8	134	89	166	0,90	B00		
514 13	BB14L-B2	020 514 13 0100	14	8	134	89	166	0,90	B00		
516 15	BB16B-A1	020 516 15 0100	16	7	160	90	161	1,00	B00		
516 16	BB16AL-A2	020 516 16 0100	16	2	207	71	164	1,10	B00		
518 14	Europa	020 518 14 0100	19	10	186	82	171	1,00	B00		
519 12 = AGM PRO 516 21											
520 12	B50-N18L-A	020 520 12 0100	20	7	205	90	162	1,40	B00		
528 16 = Starting Bull 530 30											
530 30		010 530 30 0101	30	10	187	128	165	1,60	B00		
530 34		010 530 34 0101	30	10	187	128	165	1,60	B00		

BIKE BULL AGM

THE LATEST AGM TECHNOLOGY FOR UNIVERSAL APPLICATIONS.

This is Banner power for motorbikes, ATVs/quads, jet skis and tractor mowers. The Bike Bull AGM is an absolutely maintenance-free battery employing the latest absorbent glass mat (AGM) technology. The acid is bound into a glass fibre web and therefore cannot escape.

TECHNICAL DATA AND INFORMATION

- High start performance with safety reserves
- AGM technology (absorbent glass mat)
- Absolute maintenance-free
- Vibration-resistant
- Dry, pre-charged; enclosed electrolyte in the precisely required volume



Banner battery type

First fitting designation

Banner order number

Ah
10 h

A
EN



Drawing

BIKE BULL 12 V AGM-TECHNOLOGIE

AGM = ABSORBENT GLASS MAT WITH ELECTROLYTE

Banner battery type	First fitting designation	Banner order number	Ah 10 h	A EN	Terminal symbols	Length (mm)	Width (mm)	Height (mm)	Akku-Säure (ltr)	Terminal symbols	Drawing
AGM 503 14	BTX4L-BS	021 503 14 0100	3	50	5	113	70	85	0,19	B00	Diagram 1
AGM 504 12	BTX5L-BS	021 504 12 0100	4	80	5	113	70	105	0,24	B00	Diagram 2
AGM 506 14	BTX7L-BS	021 506 14 0100	6	100	5	113	70	130	0,33	B00	Diagram 3
AGM 506 15	BTX7A-BS	021 506 15 0100	6	105	5	150	87	93	0,38	B00	Diagram 4
AGM 508 12	BTX9-BS	021 508 12 0100	8	120	5	150	87	105	0,45	B00	Diagram 5
AGM 510 12	BTX12-BS	021 510 12 0100	10	160	5	150	87	130	0,60	B00	Diagram 6
AGM 512 14	BTX14-BS	021 512 14 0100	12	200	5	150	87	145	0,69	B00	Diagram 7
AGM 514 22	BTX16-BS	021 514 22 0100	14	215	4	150	87	161	0,80	B00	Diagram 8
AGM 518 21	BTX20L-BS	021 518 21 0100	18	250	4	175	87	155	0,90	B00	Diagram 9
AGM 518 22	BTX20CH-BS	021 518 22 0100	18	220	4	150	87	161	0,70	B00	Diagram 10
AGM 522 14	BTX50L-BS	021 522 14 0100	21	330	4	205	90	165	1,08	B00	Diagram 11

BIKE BULL GEL

GEL POWER FOR OFF-ROAD AND TOURING RIDERS.

The Bike Bull GEL combines innovative GEL technology with outstanding user satisfaction levels and operational safety. It is ideally suited to enduro and touring bikes. The Bike Bull GEL is an advanced, top quality battery with non-woven web separator and fixed electrolyte for increased start performance and outstanding vibration and cyclical resistance.



TECHNICAL DATA AND INFORMATION

- First class start performance
- Excellent vibration and cyclical resistance
- Absolutely maintenance-free
- Completely leak-proof
- Lateral installation possible
- Pre-charged and ready for immediate use



Motorcycles road/cross



ATV/Quads



Jetskis



Riding mowers

Banner battery type

First fitting designation

Banner order number

Ah
10 h

A
EN



Drawing

BIKE BULL 12 V GEL-TECHNOLOGIE

GEL POWER – PLUG-IN POWER

Banner battery type	First fitting designation	Banner order number	Ah 10 h	A EN	Terminal	Length (mm)	Width (mm)	Height (mm)	Weight (kg)	Terminal diagram
GEL 503 01	BGTR4A-S	023 503 01 0101	2,3	35	12	113	48	85	-	B00
GEL 503 14 NEW	BGTX4-3	023 503 14 0101	3	50	4	113	70	85	-	B00
GEL 504 11 NEW	BGB4L-B	023 504 11 0101	4	50	4	120	70	92	-	B00
GEL 506 01	BGT7B-4	023 506 01 0101	6,5	90	11	150	66	93	-	B00
GEL 506 21	BGTZ7-S	023 506 21 0101	6	100	11	113	70	105	-	B00
GEL 508 01	BGT9B-4	023 508 01 0101	8	115	11	150	70	105	-	B00
GEL 509 01	BGTZ10-S	023 509 01 0101	8,6	170	11	150	88	93	-	B00
GEL 509 14 NEW	BGB9B	023 509 14 0101	9	110	6	135	75	139	-	B00
GEL 510 01	BGT12B-4	023 510 01 0101	10	190	11	150	70	130	-	B00
GEL 510 12 NEW	BGTX12-4	023 510 12 0101	10	165	4	150	88	130	-	B00
GEL 510 21 replaces AGM PRO 509 01	BGTX12A-4	023 510 21 0101	10	150	11	150	88	105	-	B00
GEL 512 01	BGTZ14-S	023 512 01 0101	11,2	210	11	150	88	110	-	B00
GEL 512 21	BGT14B-4	023 512 21 0101	12	200	11	150	70	145	-	B00
GEL 514 11 NEW	BGB14L-A2	023 514 11 0101	12	200	4	133	90	164	-	B00
GEL 518 21 NEW	BGTX20-3	023 518 21 0101	18	310	4	176	89	154	-	B00
GEL 521 01	BG12-19	023 521 01 0101	18	250	10	186	82	171	-	B00
GEL 530 01	BGTX30-3	023 530 01 0101	30	385	4	166	126	173	-	B00

BIKE BULL AGM PROFESSIONAL

PROFESSIONAL AGM POWER FOR THE TOUGHEST DEMANDS.

The Bike Bull AGM PROfessional is a top product in first fitter (OEM) quality. This premium AGM battery is used for Harley Davidsons and BMW bikes, as well as for models with ABS and numerous special features. Due to its excellent stability in low temperatures, it is also ideal for snowmobiles. In combination with tipping safety, this leak-proof battery also stands out due to its vibration resistance and exceptional starting performance.

TECHNICAL DATA AND INFORMATION

- Top class start performance
- Maximum vibration and cyclical resistance
- Absolutely maintenance-free
- Completely leak-proof
- Lateral installation possible
- Excellent stability in low temperatures
- Pre-charged and ready for immediate use



Motorcycles road/cross



ATV/Quads



Jetskis



Snowmobiles

Banner battery type

First fitting designation

Banner order number

Ah
10 h

A
EN



Drawing

BIKE BULL 12 V AGM PROFESSIONAL FOR THE HIGHEST DEMANDS

						Length	Width	Height			
AGM PRO 509 01 = GEL 510 21											
AGM PRO 514 01	BETX 14	024 514 01 0101	12	220	10	150	88	145	-	B00	
AGM PRO 514 21	BETX 14L	024 514 21 0101	12	220	10	150	88	145	-	B00	
AGM PRO 516 01	BETX 16L	024 516 01 0101	19	325	10	175	100	155	-	B00	
AGM PRO 516 21 replaces 519 12	BETX 16	024 516 21 0101	19	325	10	170	100	155	-	B00	
AGM PRO 520 01	BETX 20L	024 520 01 0101	18	310	10	175	88	155	-	B00	
AGM PRO 530 01	BETX 30L	024 530 01 0101	26	400	10	168	131	176	-	B00	

TERMINALS BIKE BULL CONNECTING TERMINALS

	Front	Side	Top		Front	Side	Top
1				8			
2				9			
3				10			
4				11			
5				12			
6				13			
7				14			

LAYOUT

	6 Volt	12 Volt		6 Volt	12 Volt
0			5		
1			6		
2			9		
3			10		
4					

TERMINALS

Terminal 1	Terminal 4	Terminal T4	Terminal 8	Terminal 20
Terminal 3	Terminal 5		Terminal 19	Terminal K
				Terminal 21

BASE HOLD-DOWNS

B 00	Without hold-downs			B 09			
B 01	3 notches			B 11			
B 03	3 notches			B 12			
B 04	3 notches			B 13			
B 05	3 notches			B 14			
B 06							
B 07							

Banner KNOW-HOW – THE INFO PLATFORM FOR MORE POWER.

Banner offers an informative and up-to-date information platform, which covers the most important subjects relating to the world of batteries.

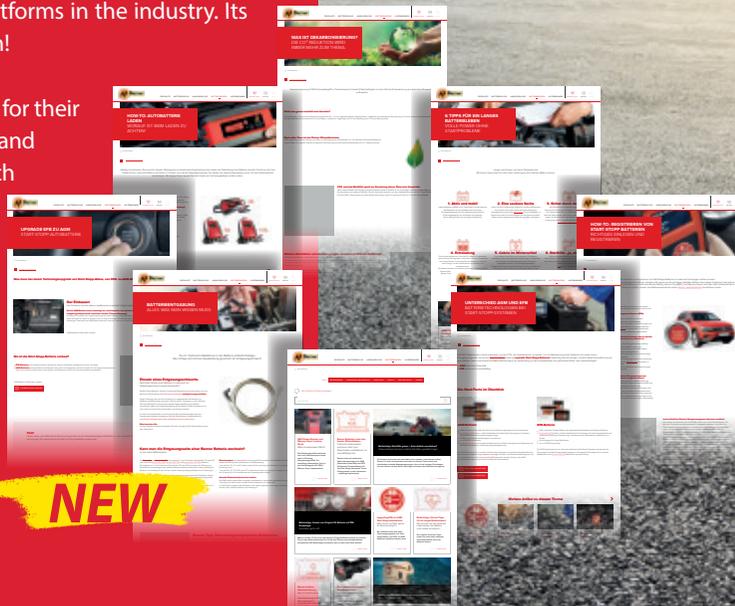
SIX CURRENT MENU ITEMS:

- Battery know-how
- Technologies and products
- Start-stop
- HOW-TO
- Tips and tricks
- Lexicon

This battery know-how is constantly updated and expanded to include interesting topics and is already one of the most comprehensive information platforms in the industry. Its main premises are user-friendly design, simple and fast function!

Banner sales partners will find an inexhaustible source of topics for their own information and inspiration, professional customer advice and a multitude of marketing activities such as newsletters and much more besides. Indeed, irrespective of whether you are a parts retailer, workshop, commercial end user, mechanic or automotive engineer, anyone can make proactive use of this information system!

SO CLICK ON AND TEST THE SYSTEM RIGHT AWAY!



NEW

Banner
BATTERY KNOW-HOW



MORE INFO UNDER
bannerbatterien.com

Banner BATTERY SEARCHES - QUICK, EFFICIENT AND SIMPLE.

AS OF NOW, Banner IS USING THE AVAILABLE DVSE TOPMOTIVE VEHICLE MASTERS IN ITS ONLINE BATTERY SEARCH. These relate to all the passenger vehicle applications, i.e. cars, commercial vehicles and motorbikes. For all other applications, without DVSE Topmotive vehicle masters, the updating of the company's own Excel vehicle masters, e.g. for agricultural and construction machinery, ATV quads and much more besides, will continue.

The Banner battery search is available for online call-up at <https://www.bannerbatterien.com/en/Battery-search>. The aim is to name the best Banner battery for you quickly and easily. Initially, in the form of the most popular type and then, wherever feasible and sensible, with a possible upgrade option. The database is constantly updated in cooperation with battery experts and selected workshops with the goal of making your daily work simpler and more efficient.



WITH THE NEW NUMBER SEARCH we offer our distribution partners an additional service. Here a start with an OE = Original Equipment or Original Spare Part number search is possible. For example, the OE number VW/Audi 000 915 105 CF, can be read on the top label of the original battery = Banner Running Bull AGM 605 01/016605010101. At the moment, more than 3,400 such numbers are recorded here and more are being added every day.



THE SEARCH ON THE APPROVAL CERTIFICATE will give you a result according to the following selections 1. Manufacturer, 2. Model, 3. Fuel type, 4. Engine (type). Further possible search options are undergoing clarification (design, kW/hp, ...).



THE KBA NUMBER SEARCH FOR GERMANY. The KBA number is a unique code under which the vehicle type is registered with the Federal Motor Transport Authority. By searching using the KBA number, you can be sure that exactly the right vehicle is selected. The KBA number is comprised of two parts consisting of the HSN manufacturer key number (four-digit numeric) and the TSN type code number (eight-digit alphanumeric). The first three digits stand for the model and are therefore relevant for the search. You will find the KBA number in the vehicle/registration certificate in the fields 2. or 2.1 and 3. or 2.2.

CHANGING A BATTERY IS NO LONGER AN EASY TASK. Complexity and variety mainly constitute the overall spare parts management challenge. Primarily, it is the diversity of models and the wealth of variants within individual car series that make precise battery identification and ordering difficult.

A typical issue in this connection is vehicle and part identification and the objective of making this easier and more effective. Fewer incorrect orders and lower return rates reduce costs for workshops and retailers. In addition, repair appointments can be better calculated and more reliably kept, which therewith increases customer satisfaction. This is important because in the European parts market the return rate of ordered parts, including batteries, due to insufficient identification is still around 10 to 15 %! In fact, finding the appropriate starter or electrical on-board and dealing with the changes between EFB and AGM technology for start-stop batteries in the same year of manufacture, constitute a genuine challenges!

SPECIFICALLY FOR YOU, AS THE PLATFORM FOR BATTERY IDENTIFICATION AND PROFESSIONAL BATTERY BUSINESS, THE Banner BUFFALO WILL BE CONSTANTLY UPDATED AND FURTHER DEVELOPED FOR ONLINE BATTERY SEARCHES!

PS: Further search options and possibilities for various European countries are currently being clarified (e.g. national codes, number plate searches, Vehicle Identification No. (VIN) searches -, ...).



Banner
BATTERY SEARCHES



MORE INFO UNDER
[bannerbatterien.com](https://www.bannerbatterien.com)

Banner
THE POWER COMPANY

ROBUST & RELIABLE ACCESSORIES.

READY AT ANYTIME. "Trust is good, control is better!" is a well-known truism. Accordingly, Banner accessories provide professional certainty regarding the status of every battery, as well as facilitating maintenance, completing charging, or assisting starts. Banner's comprehensive programme contains chargers, start boosters, test and battery service items. The entire Banner range of accessories is trimmed to the retention of the optimum performance and long service life of starter and special batteries.



ENERGY SOLUTIONS. FOR THE TRACTION, SEMI- TRACTION AND STAND-BY FIELD.

RECHARGEABLE "POWER PLANTS": Banner Energy Solutions batteries are reliable and strong power packs that are suitable for all traction, semi-traction and stand-by tasks. Their uses range from electric forklifts, aerial lifts, self-propelled transport systems, golf carts, security, emergency power, signalling and renewable energy, to electric wheelchairs and camping/boat/caravan applications. Banner markets these special batteries as the Traction Bull, Standby Bull and Traction Bull Bloc in wet, AGM and gel versions, thereby always guaranteeing the optimum battery for the specific use. Professional chargers and a comprehensive range of accessories/spare parts make Banner Energy Solutions reliable partners.



Communications systems and telecommunications



Emergency power generators



Explosion protection



Golf carts



AGVs



Small stackers



Cleaning machines



Forklifts



Lifting platforms



Haulers



Manufacturer, model	Battery type(s)
Aston Martin	90 Ah AGM and 88 Ah flooded battery
Daimler Truck and EvoBus	170 Ah, 220 Ah flooded battery, AUX 14 AGM, AUX 18 AGM
BMW various models	various flooded battery types (AGM and EFB)
Bomag construction equipment	various flooded battery types
Caterpillar	various flooded battery types
Kässbohrer Pistenbully	80 Ah and 95 Ah AGM
Knaus Tabbert caravan	Banner Power Bull
RTM X-Bow	various flooded battery types and AGM batteries
Mitsubishi	various flooded battery types and AGM batteries
Porsche 911, Borster, Cayman	various AGM batteries
Rammox construction equipment	various flooded battery types
Rolls-Royce	AUX 14 AGM
Skoda	EFB 59 Ah
Suzuki	various flooded battery types
VOLVO	AUX 9 AGM
Volkswagen various models	EFB 59 Ah, 70 Ah, flooded battery types

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CERTIFICATIONS

Manufacture at the Austrian production centre in Linz ensures constant, certificated top quality in accordance with **IATF 16949, ISO 9001 and ISO 14001.**

PATENTS

- Double cover joint patent** with Moll U - 02027 9204 (registration still in progress, also registered in the USA)
- Double lid screw connection** utility model with Moll 202 18730.6
- AGM valve stopper joint** registered design protection with Accumalux