







Start-stop cars

















Motorhomes





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







Start-stop cars

















	·							
Туре	UK No.	Info	Вох	Ah 20 h	A EN	- + OO	(mm) L H	Application

RUNNING BULL

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

								Length	Width	Box height	Total height			
AGM 550 01	012 AGM OE		H4 / L1	50	540	0	1	210	175	190	190		B13	BMW, Mini, VW, Audi, Opel, Hyundai, Kia, Suzuki
AGM 560 01	027 AGM OE		H5 / L2	60	640	0	1	241	175	190	190	mG	B13	BMW, Mini, VW, Audi, Opel, Hyundai, Kia, Suzuki
AGM 570 01	096 AGM OE		H6 / L3	70	760	0	1	278	175	190	190	mG	B13	BMW, VW, Audi, Mercedes, Porsche, Taxis
AGM 580 01	115 AGM OE		H7 / L4	80	800	0	1	315	175	190	190	mG	B13	BMW, VW, Audi, Mercedes, Porsche, Taxis
AGM 592 01		= AGM 595 01												
N AGM 595 01	019 AGM OE	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	020 AGM OE		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.









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)



т.,	
ιу	μe

UK No. Info

Вох

Ah 20 h <u>-</u>









Application

RUNNING BULL

AGM BACKUP WITH A GLASS MAT AS AN ON-BOARD BATTERY

					Longth	Width	Box	Total		
					Lengui	wiatii	height	height		
509 00/AUX 09 AUX9 OE	9	120	1	10	150	88	106	106	B00	Volvo Start-Stopp, DRIVe
514 00/AUX 14 AUX14 OE	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 AUX18L OE	20	300	0	10	206	91	163	163	B00	BMW i3

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







Start-stop cars



















Motorboats



- + Banner tip. What must be considered when upgrading the technology of startstop 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!







Start-stop cars

TAXI

Taxis











RUNNING BULL

Type

UK

EFB PROFESSIONAL BATTERY WITH EXTRA POWER FOR START-STOP APPLICATIONS

Box

								Length	Width	Box height	Total height			
EFB PRO 565 11	027 EFB UR OE		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	096 EFB UR OE		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	115 EFB UR OE	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

Info

									Length	Width	Box height	Total height			
	EFB 538 15	054 EFB OE		35NS/B19	38	400	0	3	187	127	204	226	mGGA	B07	Mazda, Mitsubishi, Nissan, Subaru, Toyota
		044 / 053 / 158 EFB OE		45NS/B24	55	460	0	1+3	238	129	203	225	mGGA	B00	Mazda, Mitsubishi, Nissan, Subaru, Toyota
NEW	EFB 560 11	027 EFB UR OE		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	100 EFB OE		T6/LB3	65	650	0	1	278	175	175	175	mGGA	B13	Ford, Opel
	EFB 565 15	005L EFB OE	replaces EFB 565 00	D23	65	550	0	1	233	173	203	225	mGGA	B00	Mazda, Mitsubishi, Nissan, Subaru, Toyota
	EFB 565 16	005 EFB OE	replaces EFB 565 01	D23	65	550	1	1	233	173	203	225	mGGA	B00	Mazda, Mitsubishi, Nissan, Subaru, Toyota
NEW	EFB 570 11	096 EFB UR OE		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	068 EFB OE		D26 / MO60	70	680	0	1	260	174	200	222	mGGA	B00	Mazda, Mitsubishi, Nissan, Subaru, Toyota
	EFB 575 12	110 EFB OE		T7 / LB4	75	730	0	1	315	175	175	175	mGGA	B13	Ford, Opel
	EFB 580 11		= EFB PRO 585 11												
	EFB 595 15	249 / 335 FFB OF	replaces EFB 595 00	D31 / 56AT	95	760	0	1	303	173	203	225	mGGA	B00	Mazda, Mitsubishi, Nissan, Subaru, Toyota - D, Fiat Tractors

Application











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.





Taxis





Cars



POWER BULL

A CALCIUM CAR BATTERY OF THE LATEST GENERATION

									ī		Box	Tatal	1 1		
									Length	Width	height	Total height			
	P40 25	054 BH		35NS/B19	40	330	0	3	187	137	204	226	mGGA	B01	535 04
	P40 26	054		35NS/B19	40	330	0	3	187	127	204	226	mGGA	B00	535 20, 540 26
	P40 27	055		35NS/B19	40	330	1	3	187	127	204	226	mGGA	B00	535 22, 540 27
	P42 08	002L / 202		H3 / L0	42	390	0	1	175	175	190	190	mGGA	B13	540 08, 542 08
DT	P44 09	063	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	044 / 053 / 158	replaces Starting Bull 545 77"	45NS/B24	45	390	0	1+3	238	129	203	225	mGGA	B00	545 23/77*/84
	P45 24	043 / 057 / 159	replaces Starting Bull 545 79"	45NS/B24	45	390	1	1+3	238	129	203	225	mGGA	B00	545 24/51/79*
DT	P50 03	012	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												
DT	P60 09	075	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	005L - BH	replaces P60 62	D23	60	510	0	1	233	173	203	225	mGGA	B07	560 62, 560 68, 565 33
	P60 69	005R / 014		D23	60	510	1	1	233	173	203	225	mGGA	B07	560 69, 565 34
DT	P62 19	025 / 027		H5 / L2	62	550	0	1	241	175	190	190	mGGA	B13	560 09*, 562 05*/19
DT	P63 40	027 UR	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	069		D26 / MO60	70	600	1	1	260	174	200	222	mGGA	B01	560 49, 570 24
	P70 29	068		D26 / MO60	70	600	0	1	260	174	200	222	mGGA	B01	560 48, 570 29, 580 09
DT	P72 09	100	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*
DT	P74 12	096		H6 / L3	74	680	0	1	278	175	190	190	mGGA	B13	566 13*/38, 570 44*, 572 09*/12, 574 05*/12
DT	P77 40	096 UR	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	068 HD		D26 / MO60	80	640	0	1	260	174	200	222	mGGA	B01	560 48, 570 29, 580 09
DT	P80 14	110		T7 / LB4	80	700	0	1	315	175	175	175	mGGA	B13	575 39, 580 14/35*/42*
DT	P84 40	115 UR	replaces PRO P84 40	H7 / L4	84	760	0	1	315	175	190	190	mGGA	B13	575 39*, 580 14*/35/42, 584 40
DT	P88 20		= Starting Bull 588 20												
	P95 04	249 / 335		D31 / 56AT	95	740	0	1	303	173	203	225	mGGA	B07	595 04, 600 32
	P95 05	250 / 334		D31 / 56AT	95	740	1	1	303	173	203	225	mGGA	B07	595 05, 600 33
DT	P95 33	019		H8 / L5	95	780	0	1	354	175	190	190	mGGA	B13	595 21/33, 600 44
DT	P100 40	019 UR	replaces PRO P100 40	H8 / L5	100	820	0	1	354	175	190	190	mGGA	B13	595 21/33, 600 44
DT	P110 40	020 UR	replaces PRO P110 40	H9 / L6	110	900	0	1	394	175	190	190	mGGA	B13	610 42

[&]quot; conditionally applicable - With bracket mounting on top, check dimensions, terminal design and layout.









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

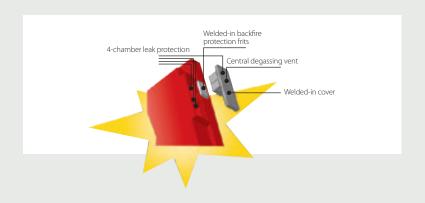
- Four-chamber leak protection with integrated flame arrestor sateguard for 13 best sellers from 44-95 Ah
- · Absolutely maintenance-free due to the use of calcium technology
- Reliable cold starting behaviour
- Niche and supplementary types ensure complete coverage of the current vehicle fleet in Europe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

Banner

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.













UK No. Вох Info Type Application

STARTING BULL

CAR BATTERY IN OEM QUALITY

6 Vol	lt								Length	Width	Box				
066 1	12	421			66	360	0	1	178	175	height 166	188		B04	VW - 1968, Trabant
077 1		404			77	450	0	1	216	170	166	191		B06	VW, Ford D, Trabant, Tatra 613
077			į į	Į.	,,	450	·	'	210	170	100	171	i i	ВОО	www, rold b, ridbant, latta ors
						:				-			: :		:
12 V	olt								Length	Width	Box height	Total height			
530 3	30	895 / 101	replaces Bike Bull 528 16		30	300	0	4	187	128	165	165	mGGA	B00	Small tractors, BMW motorcycles
530 3	34	896			30	300	1	4	187	128	165	165	mGGA	B00	Small tractors
532 (02	002R			32	240	1	1	165	170	165	190		B13	>2000 Spanish built Vitara
538 3	37	037			38	300	0	19	239	135	179	200	Ī	B09	Early Fords up to 1976
538 8	ВО	038			38	260	1	1	239	135	179	200	mG	B09	Austin
544 (09	063 (44Ah)		T4 / LB1	44	360	0	1	210	175	175	175	mGGA	B13	Ford, Opel
545 5	59	012		H4 / L1	45	400	0	1	210	175	190	190	mGGA	B13	Audi, BMW, VW, Citroen, Peugeot, Renault, Fiat, Skoda
545 7		048	= Power Bull P45 23"												
545 7	'9	049	= Power Bull P45 24"												
555 1	19	065 / 075		T5 / LB2	55	450	0	1	241	175	175	175	mGGA	B13	Ford, Opel
560 0	09	075		T5 / LB2	60	480	0	1	241	175	175	175	mGGA	B13	Ford, Opel
560 6	60 NEW	025 / 027		H5 / L2	60	480	0	1	241	175	190	190	mGGA	B13	Audi, BMW, VW, Citroen, Peugeot, Renault, Fiat, Skoda
562 1	19	025 / 027		H5 / L2	62	510	0	1	241	175	190	190	mGGA	B13	Audi, BMW, VW, Citroen, Peugeot, Renault, Fiat, Skoda
570 ⁴	44	100		T6 / LB3	70	640	0	1	278	175	175	175	mGGA	B13	Ford, Opel
570 7		096		H6 / L3	70	600	0	1	278	175	190	190	mGGA	B13	Audi, BMW, VW, Citroen, Peugeot, Renault, Fiat, Skoda
572 1		096		H6 / L3	72	650	0	1	278	175	190	190	mGGA	B13	Audi, BMW, VW, Citroen, Peugeot, Renault, Fiat, Skoda
572 3		082 / 086		H6 / L3	72	650	1	1	278	175	190	190	mGGA	B01	Chrysler Voyager
580 1		110		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 2 588 3		017 / 024	replaces Power Bull P88 20 = Running Bull EFB PRO 585 11	T8 / LB5	88	680	0	1	354	175	175	175	mGGA	B13	Ford D, Opel D
590 1	17	643		95Ah	90	680	0	1	344	172	214	230	mG	B00	IHC, Massey Ferguson
590 1	18	644		95Ah	90	680	1	1	344	172	214	230	mG	B00	IHC, Mac Cormick
595 3	33	019		H8 / L5	95	740	0	1	354	175	190	190	mGGA	B13	Audi, BMW, Mercedes, Porsche, VW

[&]quot; conditionally applicable - With bracket mounting on top, check dimensions, terminal design and layout.











Construction machinery



Agricultural machinery



BUFFALO BULL AGM
- TOP NEWS



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 FN 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

Type

Info

Box

20 h











Application

BUFFALO BULL AGM

COMMERCIAL VEHICLE BATTERY IN OEM QUALITY - AGM-TECHNOLOGY

								Length Width	Box height	Total t height	:		
AGM 710 01	632 AGM OE	A 7	c	210	1200	3	1	517 273	212	240	mGGARZS	B00	Long-distance trucks:: MAN, Mercedes, Volvo, Scania, Steyr Trucks

















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 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

Type











Application

BUFFALO BULL EFB

COMMERCIAL VEHICLE BATTERY IN OEM QUALITY - EFB-TECHNOLOGY

							Length	Width	Box height	Total height			
EFB 650 17	637 EFB OE	Α	150	850	3	1	513	189	195	220	mGGARZS	B00	Long-distance trucks:: MAN, Mercedes, Volvo, Scania, Steyr Trucks
EFB 690 17	629 EFB OE	В	190	1050	3	1	513	223	195	220	mGGARZS	B00	Long-distance trucks:: MAN, Mercedes, Volvo, Scania, Steyr Trucks
EFB 740 17	632 EFB OE	С	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

Type

Info

Box

Ah 20 h













Application

BUFFALO BULL SHD / SHD PROFESSIONAL

COMMERCIAL VEHICLE BATTERY IN OEM QUALITY – SUPER HEAVY DUTY VARIATION

								Length	Width	Box height	Total height			
SHD 610 40	615 SHD		MAC 110	110	760	3	1	513	175	210	210	mGGARZS	B03	MAN, Mercedes, Roman, Robur
SHD 635 44	630 SHD		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 PR	637 SHD Ofessional	replaces SHD 640 35	Α	145	800	3	1	513	189	195	220	mGGARZS	B00	Neoplan, MAN, Mercedes, Volvo, Scania, Steyr Trucks
SHD 670 33 MA	AC 140 SHD		MAC 140	170	1000	3	1	513	218	210	210	mGGARZS	B03	MAN, Mercedes, Liaz
SHD 680 32		= SHD PRO 680 08												
SHD PRO 680 08 PR	629 SHD Ofessional	replaces SHD 680 32	В	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 PR	632 SHD Ofessional	replaces SHD 725 11	С	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











Type

UK No.

Info

Box

20 h













Application

BUFFALO BULL

COMMERCIAL VEHICLE BATTERY IN OEM QUALITY

							Length	Width	Box height	Total height			
605 02	Type 31 / DP110 Centre Post	BCI 31	105	1000	9	1	330	171	218	241	mGGA	B00	AGCO Fendt - Massey Ferguson, Caterpillar, US Trucks
610 11	663 BH	Compact	110	800	0	1	344	175	214	230	mG	B01	Iveco Daily 01.05-, Renault
610 47	663	Compact	110	800	0	1	344	172	214	230	mG	B00	IHC, Massey Ferguson
610 48	664	Compact	110	800	1	1	344	172	214	230	mG	B00	IHC, McCormick
620 34	627	A	120	720	3	1	513	189	195	220	mG	B00	MAN, Mercedes, Roman, MAZ
625 11	647	Compact	125	760	0	1	345	172	260	283	mG	B00	Massey Ferguson
625 13	648	Compact	125	760	1	1	345	172	260	283	mG	B00	McCormick
625 23	6TN	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
635 11	655		135	760	0	1	345	172	260	283	mG	B00	Commercial vehicles
635 13	656		135	760	1	1	345	172	260	283	mG	B00	Commercial vehicles
640 35	637	Α	140	760	3	1	513	189	195	220	mG	B00	Steyr Trucks, MAN, Mercedes
650 11	637	Α	150	1150	3	1	513	189	195	220	mGGARZS	B00	Municipal vehicles , construction machinery, snow groomers
680 11	629 (180Ah)	В	180	1400	3	1	513	223	195	220	mGGARZS	B00	Municipal vehicles, construction machinery, snow groomers
680 32	629 (180Ah)	В	180	950	3	1	513	223	195	220	mG	B00	Steyr-Trucks, MAN, Roman, Multicar, Magirus
680 89	623	MAC 154	180	950	4	1	510	216	205	225	mGGA	B03	AGCO Fendt - Massey Ferguson, Fiat Trucks, Tractors
700 29	624	С	200	1000	4	1	517	273	212	240	mG	B00	Volvo, Scania
725 11	632	С	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

Туре

UK No.

Info

Вох

Ah 20 b A









Application

BUFFALO BULL

COMMERCIAL VEHICLE BATTERY IN OEM QUALITY

							Length	Width	Box height	Total height			
650 11	637	Α	150	1150	3	1	513	189	195	220	mGGARZS	B00	Municipal vehicles , construction machinery, snow groomers
680 11	629 (180Ah)	В	180	1400	3	1	513	223	195	220	mGGARZS	B00	Municipal vehicles, construction machinery, snow groomers















Motorhomes



Caravan











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

UK No.

Info

Box

Ah 5 h

Ah 20 h

Ah 100 h















Application

ENERGY BULL

DUAL POWER BATTERY - NEW: NOW FOR ENGINE START AND ON-BOARD POWER SUPPLY

										Length	Width	Box height	Total height			
4K	955 01	065 Box Premi- um Leisure	H5/L2	50	60	70	510	0	1	241	175	190	190	mGGA	B13	Boat/Marine, Camping/Caravan, Wheelchairs, Solar
4K	956 01	096 Box Premi- um Leisure	H6/L3	60	75	90	680	0	1	278	175	190	190	mGGA	B13	Boat/Marine, Camping/Caravan, Wheelchairs, Solar
4K	957 51	110LB / 019 Box Premium Leisure NEV	H8/L5	75	100	110	800	0	1	354	175	190	190	mGGA	B13	Boat/Marine, Camping/Caravan, Wheelchairs, Solar
4K	959 01	110 / 679 Box Premium Leisure	LOT7	90	115	135		0	1	350	175	235	235	mGGA	B00	Boat/Marine, Camping/Caravan, Wheelchairs, Solar
	960 51	627 Box Premi- NEVI	A	105	130	140	720	3	1	513	189	195	220	mGRZS	B00	Boat/Marine, Camping/Caravan, Wheelchairs, Solar
	963 51	629 Box Premi- um Leisure	В	135	190	195	950	3	1	513	223	195	220	mGRZS	B00	Boat/Marine, Camping/Caravan, Wheelchairs, Solar
	968 01	625 Box Premi- um Leisure	C	180	230	250	1100	3	1	517	273	212	240	mGRZS	B00	Boat/Marine, Camping/Caravan, Wheelchairs, Solar
	VL678	678 Standard Leisure	D26 / MO6	9 47	55	75		1	1	272	172	202	220	mGGA	B00	Caravan, Motorhome, Camping, Mains Hook Up, Light Cycling
	VL679	679 Standard Leisure		70	90	110		1	1	344	172		235	mGGA	B00	Caravan, Motorhome, Camping, Mains Hook Up, Light Cycling
	or - Double Ton	- 4-chamber leak	rotection RF -	vihration-registar	nt GA - hatte	ary with central	denassina H	SI – hard rubber s	et mG - with	handle	R7S - fla	me arrest	or * lim	ited use **	with hase h	old-down adapter



0













BIKE BULL CLASSICPOWER 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

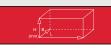
Capacity in Ah (10h)

A (EN)

Low-temperature test current



Terminal



Max. dimensions in mm Length x Width x Total height



Bottom strip



Acid in approx. litres

















Ø O Motorcycles road/cross



Drawing

Jetskis

Riding mowers



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	(a i i i
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	<u> </u>

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	(id iii o
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	Ga±a
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	d lo
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	ta i i ia
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	G ∷ id
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	aa
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 \Box

(mm) L H B





Drawing

BIKE BULL 12 V AGM-TECHNOLOGIE

AGM = ABSORBENT GLASS MAT WITH ELECTROLYTE

						Length	Width	Height			
AGM 503 14	BTX4L-BS	021 503 14 0100	3	50	5	113	70	87	0,19	B00	D
AGM 504 12	BTX5L-BS	021 504 12 0100	4	80	5	113	70	105	0,24	B00	o
AGM 506 14	BTX7L-BS	021 506 14 0100	6	100	5	113	70	130	0,33	B00	0 0
AGM 506 15	BTX7A-BS	021 506 15 0100	6	105	5	150	87	95	0,38	B00	÷ ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ;
AGM 508 12	BTX9-BS	021 508 12 0100	8	110	5	151	87	106	0,45	B00	0 0
AGM 510 12	BTX12-BS	021 510 12 0100	10	160	5	150	87	130	0,60	B00	+: ::- O : : O
AGM 512 14	BTX14-BS	021 512 14 0100	12	190	5	150	87	146	0,69	B00	÷
AGM 514 22	BTX16-BS	021 514 22 0100	14	210	4	150	88	161	0,80	B00	÷ : : : : : : : : : : : : : : : : : : :
AGM 518 21	BTX20L-BS	021 518 21 0100	18	250	4	175	87	154	0,90	B00	a i i
AGM 518 22	BTX20CH-BS	021 518 22 0100	18	220	4	150	87	161	0,70	B00	+
AGM 522 14	BTX50L-BS	021 522 14 0100	22	320	4	205	90	164	1,08	B00	0 +











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







Banner battery type

First fitting designation

Banner order number

Ah 10 h ΕN





Drawing

BIKE BULL 12 V GEL-TECHNOLOGIE

GEL POWER - PLUG-IN POWER

						Length	Width	Height			
GEL 503 01	BGTR4A-S	023 503 01 0101	3	40	12	112	48	85	-	B00	
GEL 503 14 NEW ?	BGTX4-3	023 503 14 0101	3	45	4	113	70	86		B00	o to
GEL 504 11 NEW 3	BGB4L-B	023 504 11 0101	4	35	4	120	70	91		B00	ā i i i i
GEL 506 01	BGT7B-4	023 506 01 0101	6	110	11	150	65	93	-	B00	,
GEL 506 21	BGTZ7-S	023 506 21 0101	6	115	11	113	70	105	-	B00	<u>.</u>
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	9	175	11	150	87	93	-	B00	±
GEL 509 14 NEW	BGB9B	023 509 14 0101	9	110	6	135	75	138	-	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	87	130	-	B00	D
GEL 510 21 replaces AGM PRO 509 01	BGTX12A-4	023 510 21 0101	10	165	11	150	87	105	-	B00	÷
GEL 512 01	BGTZ14-S	023 512 01 0101	11	210	11	150	87	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	14	190	4	134	89	166	-	B00	<u>.</u>
GEL 518 21 NEW	BGTX20-3	023 518 21 0101	18	290	4	175	87	155	-	B00	00
GEL 521 01	BG12-19	023 521 01 0101	22	260	10	181	76	173	-	B00	<u> </u>
GEL 530 01	BGTX30-3	023 530 01 0101	30	380	4	167	126	174	-	B00	<u> </u>









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





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	0 0
AGM PRO 514 21	BETX 14L	024 514 21 0101	12	220	10	150	88	145	-	B00	0 0
AGM PRO 516 01	BETX 16L	024 516 01 0101	19	325	10	175	100	155	-	B00	0 0
AGM PRO 516 21 replaces 519 12	BETX 16	024 516 21 0101	19	325	10	170	100	155	-	B00	0 0
AGM PRO 520 01	BETX 20L	024 520 01 0101	18	310	10	175	88	155	-	B00	<u>.</u>
AGM PRO 530 01	BETX 30L	024 530 01 0101	26	400	10	168	131	176	-	B00	0 0



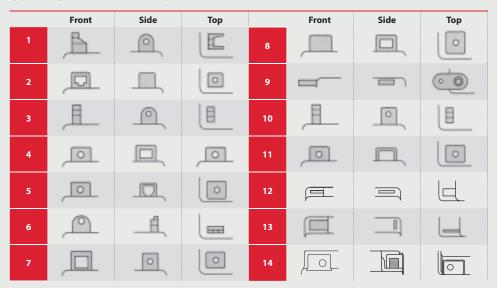






TERMINALS BIKE BULL

CONNECTING TERMINALS



LAYOUT

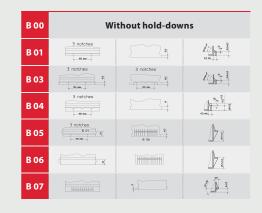
	6 Volt	12 Volt
0	## (B) 55	9 + 9 8 3
1	→ → → → →	** ** ** ** ** ** ** ** ** ** ** ** **
2	● 2	⊖
3	⊕ + + ⊕ >	⊗ •• • • • • • • • • • • • • • • • • •
4	* · · · · · · · · · · · · · · · · · · ·	⊕ · · · · · · · · · · · · · · · · · · ·

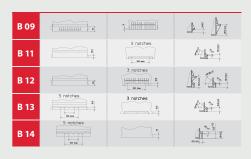
	6 Volt	12 Volt
5		***************************************
6		<u> </u>
9	⊖ 8	○ • • • • • • • • • • • • • • • • • • •
10		6 8

TERMINALS

Terminal 1	Terminal 4	Terminal T4	Terminal 8	Terminal 20
\$	7 800		EAST TO SEE SEE SEE SEE SEE SEE SEE SEE SEE SE	Opening at short in the "break F
Terminal 3	Terminal 5		Terminal 19	Terminal K 21
2 2 2 W				

BASE HOLD-DOWNS





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!



Banner
BATTERY KNOW-HOV



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.

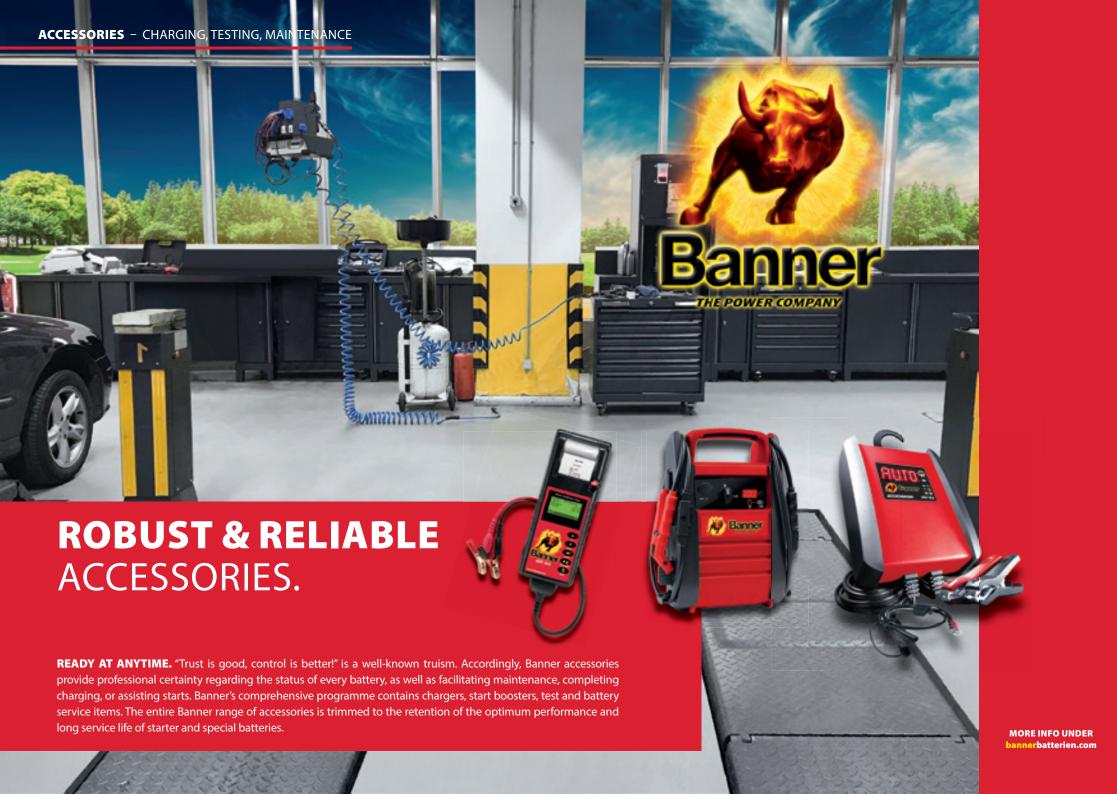
A typical issue in this connection is vehicle and part identification and the objective of making this easier and more effective. Fewer incorrect orders and lower return rates reduce costs for workshops and retailers. In addition, repair appointments can be better calculated and more reliably kept, which 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











Communications systems



Emergency power generators



Explosion protection



Golf cart



AGV:



Small stackers



Cleaning machines



orklifts



ifting platforn



Haulers



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