

Banner



**FULL POWER,
TO GET US MOVING!**



STARTER BATTERY TYPE LIST MAY 2013



RUNNING BULL AGM

AGM FOR START/STOP VEHICLES WITH ENERGY RECUPERATION (ABSORBENT GLASS MAT).

By 2015, over 70 per cent of all new vehicles will be fitted 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 employed 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 on the fuel and CO2 savings that can be attained. Above all, AGM batteries are utilised for start/stop systems with braking energy recuperation in mid-range and premium class vehicles.



TECHNICAL DATA AND INFORMATION

- ▶ Valve-regulated nonwoven battery (VRLA)
- ▶ Range of 5 types with capacities from 60-105Ah
- ▶ Three times greater cycle resistance than standard batteries: highest E4 classification pursuant to EN 50342-1
- ▶ Leak-proof due to electrolyte bonding into a glass nonwoven (absorbent glass mat)
- ▶ Zero maintenance due to recombination technology
- ▶ Highest V3 vibration resistance pursuant to EN 50342-1
- ▶ 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 on-board power supply battery



Cars



Cars with start/stop systems



Taxis



LCV



Off Road



Motorhomes

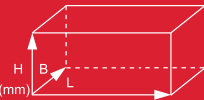


Motorboats



Construction machinery

RUNNING BULL AGM

Typ		Info	Box	Ah 20 h	A EN						T	N	Application			
Length Width Box height Total height																
1	560 01		H5	60	640	0	1	241	175	190	190	mG	B13	-	-	BMW, VW, Audi, Hyundai, Kia
2	570 01		H6	70	720	0	1	278	175	190	190	mG	B13	-	-	BMW, VW, Audi, Mercedes, Porsche, Taxis
3	580 01		H7	80	800	0	1	315	175	190	190	mG	B13	-	-	BMW, VW, Audi, Mercedes, Porsche, Taxis
4	592 01		H8	92	850	0	1	354	175	190	190	mG	B13	-	-	BMW, VW, Audi, Mercedes, Porsche, Taxis
5	595 01	= 592 01														
6	605 01		H9	105	950	0	1	394	175	190	190	mG	B13	-	-	BMW, VW, Audi, Mercedes, Porsche, Taxis

T = Dry, N = Wet, Double Top, = 4-chamber leak protection, RF = vibration-resistant, GA = battery with central degassing, HGI = hard rubber set, mG = with handle, RZS = flame arrester,
* limited use, ** with base hold-down adapter

Start/Stop: replace AGM with AGM.





RUNNING BULL BACKUP

SUPPORT FOR VEHICLES WITH EXTREMELY HIGH ENERGY REQUIREMENTS (ABSORBENT GLASS MAT).

The Running Bull BackUp is the ideal support for starter batteries owing to the fact that it uses the same trend-setting technology as that employed in the "big" Running Bull. The small power pack is utilised in vehicles with a start/stop system and additional consumers with a high energy requirement such as redundant safety systems or power steering.

TECHNICAL DATA AND INFORMATION

- ▶ Valve-regulated nonwoven battery (VRLA)
- ▶ Range of 2 types with capacities from 9-12Ah
- ▶ Used by Audi, BMW, Mercedes and Volvo for first fitting
- ▶ Three times greater cycle resistance than standard batteries: highest E4 classification pursuant to EN 50342-1
- ▶ Leak-proof due to electrolyte bonding into a glass nonwoven (absorbent glass mat)
- ▶ Zero maintenance due to recombination technology
- ▶ Installation in a lateral position possible (max. 90° angle)

BACKUP



Cars

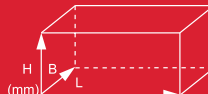


Cars with start/stop systems



Taxis

RUNNING BULL BACKUP

Typ	Info	Box	Ah 20 h	A EN						T	N	Application			
Length Width Box height Total height															
1	AUX 09		9	120	1	10	150	88	106	106		B00	-	-	Volvo Start/Stopp, DRIVE
2	AUX 12		12	200	1	10	150	88	145	145		B00	-	-	Audi, BMW 5/7Start/Stopp, Mercedes E/S-Class, Volvo Automatic

T = Dry, N = Wet,  Double Top,  4-chamber leak protection, RF = vibration-resistant, GA = battery with central degassing, HGI = hard rubber set, mG = with handle, RZS = flame arrester,
* limited use, ** with base hold-down adapter

Start/Stop: replace AGM with AGM.





RUNNING BULL EFB

EFB FOR START/STOP VEHICLES WITHOUT ENERGY RECUPERATION (ENHANCED FLOODED BATTERY).

EFB technology is used mainly in mid-range and small cars with simple start/stop systems, but without energy recuperation. In the coming years, this type of cycle-resistant starter battery will be employed with growing frequency for first fitting.

TECHNICAL DATA AND INFORMATION

- Range of 2 types with capacities from 60-70Ah
- Nonwoven cover on the separator and special active mass composition
- Twice the cycle resistance of standard batteries: E3 classification pursuant to EN 50342-1
- Top V3 vibration resistance rating pursuant to EN 50342-1
- Double lid for maximum protection against leaks and operational safety
- Zero maintenance due to modern calcium/calcium mesh technology



Cars



Cars with start/stop systems



Taxis



LCV



Off Road



Motorhomes



Motorboats



Construction machinery

RUNNING BULL EFB

Typ	Info	Box	Ah 20 h	A EN						T	N	Application			
Length Width Box height Total height															
1	560 00	H5	60	560	0	1	241	175	190	190	mGGA	B13	-	√	Alfa Romeo, Audi, Citroen, Fiat, Ford, Peugeot, Toyota, VW
2	570 00	H6	70	660	0	1	278	175	190	190	mGGA	B13	-	√	Alfa Romeo, Audi, Citroen, Fiat, Ford, Peugeot, Toyota, VW

T = Dry, N = Wet,  Double Top,  4K = 4-chamber leak protection, RF = vibration-resistant, GA = battery with central degassing, HGI = hard rubber set, mG = with handle, RZS = flame arrester,
* limited use, ** with base hold-down adapter

Start/Stop: replace EFB with EFB.





UNI BULL

THE ABSOLUTELY MAINTENANCE-FREE UNIVERSAL BATTERY WITH PATENTED LEAK PROTECTION AND CALCIUM TECHNOLOGY. NOW IN THE NEW FIFTH GENERATION.

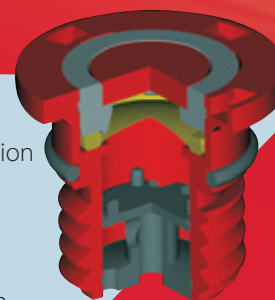
More than twenty years ago, Banner set a new benchmark in the battery design field with the Uni Bull, which was intended to reduce the diversity in the replacement business area. The new Uni Bull with calcium technology is absolutely maintenance-free. The electrode design has been computer-optimised, while the increased conductor cross-section and the very latest separators guarantee top power yield, which represents an important performance plus. What's more, the Uni Bull fits perfectly into more than 900 vehicle models.

COMPLETE PATENTED LEAK PROTECTION - ACCUSAFE WITH A GORE MEMBRANE.

Accusafe ensures total safety. The aerosol filter separates particles of acid from any gases and these can then escape through the partially permeable Gore membrane. Conversely, the acid is retained in the battery. As a result, corrosion and acid burns are simply things of the past.

TECHNICAL DATA AND INFORMATION

- ▶ Absolutely maintenance-free with calcium/calcium technology for minimum water consumption
- ▶ Up to 30% more power, as compared to standard DIN batteries
- ▶ Perfect installation with four-terminal connection that is suitable for 900 vehicle models
- ▶ Reliable in extreme temperatures with full power at all times
- ▶ Safe leak protection and high levels of operational safety due to the patented Accusafe system with Gore membrane



Cars



LCV

Typ		Info	Box	Ah 20 h	A EN						T	N	Application			
								Length	Width	Box height	Total height			Replace DIN-Type		
1	50 100		T4	47	390	0+1	1+19	210	175	175	175	mG	B01/13	-	√	35/36/40/43/44/45/46/48/50 Ah
2	50 200		T5	58	450	0+1	1+19	241	175	175	175	mG	B01/13	-	√	45/46/50/52/53/54/55/58/60 Ah
3	50 300		H5	69	520	0+1	1+19	241	175	190	190	mG	B01/13	-	√	55/58/60/61/62/63/64/66/72 Ah
4	50 400	= P45 23/24, 545 23/24														
5	50 500		H6	80	700	0+1	1+19	278	175	190	190	mG	B01/13	-	√	66/70/72/74/75/76/77/80 Ah

50 100 replace: 535 28*, 536 21/24/27/28/41/46/53/54/55/59, 540 45/63, 543 12/15/16/17*/19/20/23/24, 544 09/13/34/49/59/64/65/66/69, 545 86, 546 14, 548 27*, 550 57*, P44 09, P50 03*

50 200 replace: 545 19/33/98, 546 13, 550 35/40/44/46/48/49/56/57*/69, 552 18/19, 554 14/15/23/26/27/28, 555 18/19/30/31/45/48/59/63/64/65/66/71, 555 72/73, 558 11*, 560 08/09/91*, 562 05/19*, P55 19, P62 05/19*, PRO P63 40*

50 300 replace: 555 18/19/30/31/45/48/59/63/64/65/66/71/72/73, 558 16/17, 560 08*/09*, 560 13*/73/74/76/ 78/88/93/94, 561 11/13, 562 05*/16/19/20/ 21, 563 18*/26/32, 564 01*/20*, 566 33*, 572 33*, P55 19*, P62 05*/19, PRO P63 40

50 500 replace: 566 13/18/19/31/38/41/45/47, 570 24*/ 29*, 570 44/58/64/65/68/69/76, 572 17/19/20/ 21/23/25*, 572 09*/12/ 26*/29/30*/32/34, 574 05*/12/13, 575 31/40, 576 11/12, 577 19, 580 14*/34/35/41/42, P66 13*, P72 09*/12, P74 05*/12, PRO P75 40 , P80 14*/42

T = Dry, N = Wet, Double Top, 4-chamber leak protection, RF = vibration-resistant , GA = battery with central degassing, HGI = hard rubber set, mG = with handle, RZS = flame arrester,

* limited use, ** with base hold-down adapter





POWER BULL

SUPERB POWER AND SAFETY LEVELS WITH MODERN CALCIUM TECHNOLOGY FOR EVERY CAR.

First fitter quality for retrofitting! The Power Bull is Banner's premium starter battery for modern vehicles. Designed in accordance with the OEM standards of BMW and VW, the Power Bull is a logical first choice when it comes to replacement battery selection.

POWER BULL PROFESSIONAL, ORIGINAL QUALITY FOR RETROFITTING.

The new top versions of the Power Bull PROfessional with increased performance are based on proven Power Bull technology and fulfil precisely the requirements of leading German automotive manufacturers. These power packs are designed for modern cars with very high energy demands.

TECHNICAL DATA AND INFORMATION

- ▶ Robust cyclical behaviour with E2 classification pursuant to EN 50342-1
- ▶ Double Top for twice the leak protection and 100 per cent leak protection up to an angle of 45°
- ▶ Absolutely maintenance-free due to modern calcium/calcium technology
- ▶ Extensive coverage of the European and Asian vehicle fleets owing to 25 battery types from 40-110 Ah
- ▶ V2 vibration resistance rating pursuant to EN 50342-1 due to the bonding of the plates to the battery floor and robust cell connections
- ▶ Improved backfire and ESD safety levels (against electrostatic discharge)



Cars



Taxis



LCV



Motorboats

POWER BULL

Typ	Info	Box	Ah 20 h	A EN										T	N	Application
Power Bull PROfessional							Length	Width	Box height	Total height						
1	PRO P63 40 	H5	63	600	0	1	241	175	190	190	mGGA	B13	-	✓	555 19*/59, 560 09*, 562 05*/19	
2	PRO P75 40 	H6	75	680	0	1	278	175	190	190	mGGA	B13	-	✓	566 13*/38, 570 44*, 572 09*/12, 574 05*/12	
3	PRO P100 40 	H8	100	800	0	1	354	175	190	190	mGGA	B13	-	✓	585 15*, 588 20*/27, 595 21/33, 600 44	
Power Bull							Length	Width	Box height	Total height						
4	P40 25 	35NS	40	300	0	3	187	137	204	226	mGGA	B01	-	✓	535 04	
5	P40 26	35NS	40	300	0	3	187	127	204	226	mGGA	B00	-	✓	535 20, 540 26	
6	P40 27	35NS	40	300	1	3	187	127	204	226	mGGA	B00	-	✓	535 22, 540 27	
7	P44 09 	T4	44	420	0	1	210	175	175	175	mGGA	B13	-	✓	536 53, 540 45**/63, 544 09/59*	
8	P45 23	45NS	45	360	0	1+3	238	129	203	225	mGGA	B00	-	✓	545 23/84	
9	P45 24	45NS	45	360	1	1+3	238	129	203	225	mGGA	B00	-	✓	545 24/51	
10	P50 03 	H4	50	450	0	1	210	175	190	190	mGGA	B13	-	✓	544 09*/59, 550 03	
11	P55 19 	T5	55	480	0	1	241	175	175	175	mGGA	B13	-	✓	545 19**, 555 19/59*	
12	P60 68	D23	60	480	0	1	233	173	203	225	mGGA	B00	-	✓	560 68, 565 33	
13	P60 69	D23	60	480	1	1	233	173	203	225	mGGA	B00	-	✓	560 69, 565 34	
14	P62 05 	T5	62	540	0	1	241	175	175	175	mGGA	B13	-	✓	560 09, 562 05/19*	
15	P62 19 	H5	62	540	0	1	241	175	190	190	mGGA	B13	-	✓	560 09*, 562 05*/19	
16	P66 13 	= P72 09														
17	P70 24	D26	70	570	1	1	260	174	200	222	mGGA	B01	-	✓	560 49, 570 24	
18	P70 29	D26	70	570	0	1	260	174	200	222	mGGA	B01	-	✓	560 48, 570 29, 580 09	
19	P72 09 	T6	72	660	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*	
20	P72 12 	= PRO P75 40/P74 12														
21	P74 05 	= P72 09														
22	P74 12 	H6	74	680	0	1	278	175	190	190	mGGA	B13	-	✓	566 13*/38, 570 44*, 572 09*/12, 574 05*/12	
23	P80 14 	T7	80	700	0	1	315	175	175	175	mGGA	B13	-	✓	575 39, 580 14/35*/42*	
24	P80 42 	= P80 14 In the case of a bracket mounting with 15mm height compensation – adjustment plate Art.No. 3050001120														
25	P88 20 	T8	88	680	0	1	354	175	175	175	mGGA	B13	-	✓	585 15, 588 20/27*/34*	
26	P95 04	D31	95	680	0	1	303	173	203	225	mGGA	B01	-	✓	595 04, 600 32	
27	P95 05	D31	95	680	1	1	303	173	203	225	mGGA	B01	-	✓	595 05, 600 33	
28	P95 33 	H8	95	760	0	1	354	175	190	190	mGGA	B13	-	✓	595 21/33, 600 44	
29	P100 32	= P95 04														
30	P100 33	= P95 05														
31	P100 44 	= PRO P100 40/P95 33														
32	P110 42 	H9	110	850	0	1	394	175	190	190	mGGA	B13	-	✓	610 42	

T = Dry, N = Wet,  Double Top,  = 4-chamber leak protection, RF = vibration-resistant, GA = battery with central degassing, HGI = hard rubber set, mG = with handle, RZS = flame arrester,
 * limited use, ** with base hold-down adapter



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 over, also meets the very latest battery design standards.

FOUR-CHAMBER LEAK PROTECTION, THE INNOVATIVE SAFETY GUARANTEE.

Tried and tested four-chamber leak protection is used in fourteen Starting Bull European 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.

TECHNICAL DATA AND INFORMATION

- ▶ Four-chamber leak protection with integrated backfire protection for 14 best sellers from 40-95Ah
- ▶ Absolutely maintenance-free due to the use of calcium/calcium technology
- ▶ Reliable cold starting behaviour
- ▶ Niche and supplementary types ensure complete coverage of the current vehicle fleet in Europe
- ▶ Simple classification due to the use of DIN and UK number for type designations
- ▶ Quality and know-how from Austria
- ▶ Optimum price-performance ratio



Cars

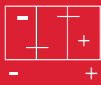
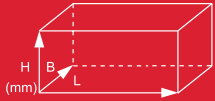


LCV



Motorboats

STARTING BULL

Typ	Info	Box	Ah 20 h	A EN										T	N	Application
6 Volt							Length	Width	Box height	Total height						
1	066 12		66	360	0	1	178	175	166	188		B04	√	√		VW -1968, Trabant
2	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						
3	530 30		30	300	0	4	187	128	165	165	mGGA	B00	-	√		Small tractors, BMW-Motorcycles
4	530 34		30	300	1	4	187	128	165	165	mGGA	B00	-	√		Small tractors
5	535 04	= P40 25														
6	535 20	35NS	35	260	0	3	187	128	202	224	mG	B00	-	√		Daihatsu, Honda, Mitsubishi, Subaru, Suzuki
7	535 22	35NS	35	260	1	3	187	128	202	224	mG	B00	-	√		Mazda, Suzuki, Daihatsu, Subaru
8	536 46	= P44 09**/540 63**														
9	536 53	= P44 09/540 63														
10	540 08 	= 542 08														
11	540 63 	T4	40	330	0	1	210	175	175	175	mGGA	B13	-	√		Skoda, Audi, Seat, VW
12	542 08 	H3	42	330	0	1	175	175	190	190	GA	B13	-	√		Fiat Punto Benzin, Aixam 99-
13	543 17	= 50 100														
14	544 09 	T4	44	360	0	1	210	175	175	175	mGGA	B13	-	√		BMW, Opel, Renault, Fiat, Skoda
15	544 13	= 50 100														
16	544 59	= P50 03														
17	545 19	= P55 19**/555 19**														
18	545 23	45NS	45	330	0	1+3	238	129	201	223	mG	B00	-	√		Toyota, Subaru, Mazda
19	545 24	45NS	45	330	1	1+3	238	129	201	223	mG	B00	-	√		Mitsubishi Colt, Lancer, Galant, Honda
20	545 51	= P45 24/545 24														
21	545 77	E2	45	300	0	1	218	135	203	225		B01	-	√		Renault R8-R13, Dacia
22	545 79	E2	45	300	1	1	218	135	203	225		B01	-	√		Peugeot, Honda, Dacia
23	545 84	= P45 23/545 23														
24	550 03	= P50 03														
25	550 41	D20	50	390	0	1	202	173	202	225	mG	B00	-	√		Isuzu, Kia, Mazda, Nissan, Subaru, Toyota
26	550 42	= P60 69/560 69														
27	550 46	= P55 19/555 19														
28	555 18 	= 560 08														
29	555 19 	T5	55	450	0	1	241	175	175	175	mGGA	B13	-	√		BMW, Fiat, Peugeot, Renault
30	555 59	= PRO P63 40/P62 19/562 19														
31	555 65	= 50 300														
32	557 16	= 50 200 without handle														
33	560 08 	T5	60	480	1	1	241	175	175	175	mGGA	B13	-	√		Lada, Moskvė

T = Dry, N = Wet,  Double Top,  = 4-chamber leak protection, RF = vibration-resistant, GA = battery with central degassing, HGI = hard rubber set, mG = with handle, RZS = flame arrester,
 * limited use, ** with base hold-down adapter

STARTING BULL

Typ	Info	Box	Ah 20 h	A EN										T	N	Application
12 Volt							Length	Width	Box height	Total height						
34	560 09 	T5	60	480	0	1	241	175	175	175	mGGA	B13	-	✓	Mercedes, BMW, Opel, Peugeot, Ford	
35	560 10	BCI 75	60	675	1	5	248	178		184	mGGA	B07	-	✓	Chrysler USA, Opel/Vauxhall Sintra	
36	560 11 = 50 200															
37	560 48 = P70 29/570 29															
38	560 49 = P70 24/570 24															
39	560 62	D23	60	420	0	1	232	175	204	225	mG	B01	-	✓	Hyundai Trajet, Elantra, i10 CRDi, i20 CRDi, i30, i40	
40	560 68	D23	60	420	0	1	232	173	204	225	mG	B00	-	✓	Mazda, Subaru, Nissan, Toyota	
41	560 69	D23	60	420	1	1	232	173	204	225	mG	B00	-	✓	Nissan, Toyota, Honda, Mazda, Isuzu, Mitsubishi	
42	560 77 = P62 05/560 09															
43	560 91 = 50 200															
44	562 05 															
45	562 19 	H5	62	480	0	1	241	175	190	190	mGGA	B13	-	✓	Mercedes, BMW, Opel, Peugeot	
46	563 18 = P72 09**/566 13**															
47	564 20 = P72 09**/566 13**															
48	565 33 	D23	65	560	0	1	232	173	204	225	mGGA	B00	-	✓	Mazda, Mitsubishi, Subaru, Nissan, Toyota	
49	565 34 = P60 69/560 69															
50	566 13 	T6	66	510	0	1	278	175	175	175	mGGA	B13	-	✓	Mercedes, BMW, Porsche, Fiat, Lada	
51	566 33 = 572 33															
52	566 38 = PRO P75 40/P74 12/572 12															
53	570 02 = P80 14/580 14															
54	570 24	D26	70	510	1	1	269	174	202	225	mG	B05	-	✓	Volvo, Honda, Hyundai, Isuzu, Kia, Mitsubishi, Nissan, Moskvė	
55	570 29	D26	70	510	0	1	269	174	202	225	mG	B05	-	✓	Daihatsu, Honda, Isuzu, Mazda, Mitsubishi, Nissan	
56	570 44 	T6	70	640	0	1	278	175	175	175	mGGA	B13	-	✓	Mercedes, BMW, Opel, Fiat, Ford	
57	571 13 = P72 09/570 44															
58	572 09 															
59	572 12 	H6	72	640	0	1	278	175	190	190	mGGA	B13	-	✓	Mercedes, BMW, Opel, Fiat	
60	572 33 	H6	72	640	1	1	278	175	190	190	mGGA	B01	-	✓	Chrysler Voyager	
61	574 05 															
62	574 12 = PRO P75 40/P74 12/572 12															
63	580 02 = P88 20/588 20															
64	580 09	D26	80	600	0	1	258	174	200	222	mGGA	B01	-	✓	Kia, Hyundai, Nissan, Subaru	
65	580 14 	T7	80	660	0	1	315	175	175	175	mGGA	B13	-	✓	Audi D, BMW D, Nissan D, Renault D, VW D	
66	580 42 = P80 14/580 14	In the case of a bracket mounting with 15mm height compensation – adjustment plate Art.No. 3050001120														
67	588 20 	T8	88	660	0	1	354	175	175	175	mGGA	B13	-	✓	BMW D, Citroen D, Mercedes D, VW D	
68	588 27 = 588 34 RF															

T = Dry, N = Wet,  Double Top,  4-chamber leak protection, RF = vibration-resistant, GA = battery with central degassing, HGI = hard rubber set, mG = with handle, RZS = flame arrester,

* limited use, ** with base hold-down adapter

STARTING BULL

Typ	Info	Box	Ah 20 h	A EN						T	N	Application			
12 Volt			Length Width Box height Total height												
69	588 34 RF	H8	88	680	0	1	354	175	190	190	mGGA	B13	-	√	Citroen D, Mercedes D, VW D
70	595 04	D31	95	640	0	1	304	173	202	225	mG	B01	-	√	Fiat tractors, Mazda D, Nissan, Toyota D
71	595 05	D31	95	640	1	1	304	173	202	225	mG	B01	-	√	Nissan D, Toyota D, Mitsubishi D
72	595 33 	H8	95	720	0	1	354	175	190	190	mGGA	B13	-	√	Audi, BMW, Mercedes, Porsche, VW
73	600 32	= P95 04/595 04													
74	600 33	= P95 05/595 05													
75	600 44 	= PRO P100 40/P95 33/595 33													
76	610 42	= P110 42													

T = Dry, N = Wet,  Double Top,  = 4-chamber leak protection, RF = vibration-resistant, GA = battery with central degassing, HGI = hard rubber set, mG = with handle, RZS = flame arrester,
 * limited use, ** with base hold-down adapter





BUFFALO BULL

THE BUFFALO BULL PUTS FULL POWER INTO EVERY COMMERCIAL VEHICLE FOR STOP & GO AND COLD STARTS.

Those who opt for the Buffalo Bull after having searched for a suitable and reliable starter battery for their commercial vehicles will have made just the right decision. This is because the Buffalo Bull is a brand battery with proven Banner quality.

Rugged, constant use in commercial vehicles puts batteries to the severest test. Moreover, over the years the demands made on modern batteries have increased greatly and in addition to cycle and vibration resistance, characteristics such as ease of maintenance, operational reliability and cold start performance are more important than ever. The optimised Buffalo Bull SHD constitutes the perfect response.

The Buffalo Bull SHD PROfessional is a top product that starts to show its problem-solving capacity in tough situations such as stop & go and cold starts, etc., when other batteries have long given up the ghost. It has thus consolidated its solid position in the lucrative retrofitting market.

Banner has equipped the Buffalo Bull with unbeatable advantages that make this battery ideal for modern trucks and buses.

TECHNICAL DATA AND INFORMATION

- Meets the requirements of Mercedes trucks
- Absolutely maintenance-free due to calcium/calcium technology, which also provides enhanced storage capacity
- Central degassing and patented four-chamber leak protection
- Captive, welded-in backfire frits and safety screws
- PinFin protection against short circuits caused by tools
- SHD means extra cycle/vibration resistance in the highest E4/V3 category pursuant to EN 50342-1
- ConCast mesh production process and optimised mesh design provide reliable cold start performance
- EN 50342-4 casing height



Buses



Trucks



Construction machinery

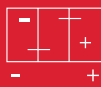
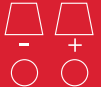


Agricultural machinery



Snow groomers

BUFFALO BULL

Typ	Info	Box	Ah 20 h	A EN						T	N	Application			
Buffalo Bull SHD PROfessional							Length	Width	Box height	Total height					
1	SHD PRO 645 03	A	145	800	3	1	514	189	195	220	mGGARZS	B00	-	✓	Neoplan, MAN, Mercedes, Volvo, Scania, Steyr Trucks
2	SHD PRO 680 08	B	180	1000	3	1	514	223	195	220	mGGARZS	B00	-	✓	Neoplan, MAN, Mercedes, Volvo, Scania, Steyr Trucks
3	SHD PRO 725 03	C	225	1150	3	1	517	273	212	240	mGGARZS	B00	-	✓	Neoplan, MAN, Mercedes, Volvo, Scania, Steyr Trucks
Buffalo Bull SHD							Length	Width	Box height	Total height					
4	SHD 610 40	MAC 110	110	760	3	1	514	175	210	210	mGGARZS	B03	-	✓	MAN, Mercedes, Roman, Robur
5	SHD 620 34	= SHD PRO 645 03/SHD 640 35/620 34													
6	SHD 630 13	= SHD 670 33													
7	SHD 635 44	MAC 110	135	900	3	1	514	175	210	210	mGGARZS	B03	-	✓	MAN, Mercedes, Roman
8	SHD 640 35	A	140	800	3	1	514	189	195	220	mGRZS	B00	-	✓	Steyr Trucks, MAN, Mercedes
9	SHD 643 27	= SHD PRO 680 08/SHD 680 32/670 43													
10	SHD 650 38	= SHD PRO 645 03/SHD 640 35/640 35													
11	SHD 670 33	MAC 140	170	1000	3	1	514	218	210	210	mGGARZS	B03	-	✓	MAN, Mercedes, Liaz
12	SHD 670 43	= SHD PRO 680 08/SHD 680 32/670 43													
13	SHD 680 32	B	180	1000	3	1	514	223	195	220	mGRZS	B00	-	✓	Steyr Trucks, MAN, Roman, Multicar
14	SHD 700 27	= SHD PRO 725 03/SHD 725 11/700 27													
15	SHD 725 11	C	225	1150	3	1	517	273	212	240	mGRZS	B00	-	✓	Steyr, MAN, Volvo-Trucks
Buffalo Bull							Length	Width	Box height	Total height					
16	600 26		100	600	0	1	413	175	195	220	mG	B00	-	✓	Mercedes D, Steyr Tractors, Daihatsu D, Barkas, Ursus
17	600 35		100	600	1	1	413	175	195	220	mG	B00	-	✓	Daihatsu, Nissan, Mitsubishi D
18	605 02	BCI 31	105	1000	9	1	330	171	218	241	mGGA	B00	-	✓	Caterpillar, US Trucks
19	605 11	= 610 11													
20	605 27	= 610 48													
21	605 28	= 610 47													
22	610 11	Compact	110	720	0	1	344	172	214	230	mG	B01	-	✓	Iveco Daily 01.05-, Renault
23	610 40	= SHD 610 40/SHD 635 44													
24	610 47	Compact	110	720	0	1	344	172	214	230	mG	B00	-	✓	IHC, Massey Ferguson
25	610 48	Compact	110	720	1	1	344	172	214	230	mG	B00	-	✓	IHC, McCormick
26	620 34	A	120	720	3	1	514	189	195	220	mG	B00/01	-	✓	MAN, Mercedes, Roman, MAZ
27	625 11	Compact	125	760	0	1	345	172	260	283	mG	B00	-	✓	Massey Ferguson
28	625 13	Compact	125	760	1	1	345	172	260	283	mG	B00	-	✓	McCormick
29	625 23	NATO 6TN	125	720	2	1	280	267	213	230	mG	B00	-	✓	NATO 6TN
30	632 11 # 		132	900	0	1	508	174	205	205	mG	B01	-	✓	CNH Case New Holland, John Deere, Landini, McCormick
31	635 30	= SHD 640 35/640 35													
32	640 20	= SHD 640 35/640 35													
33	640 35	A	140	760	3	1	514	189	195	220	mG	B00/01	-	✓	Steyr Trucks, MAN, Mercedes

T = Dry, N = Wet,  Double Top,  = 4-chamber leak protection, RF = vibration-resistant, GA = battery with central degassing, HGI = hard rubber set, mG = with handle, RZS = flame arrester,

* limited use, ** with base hold-down adapter, # available 07.2013

BUFFALO BULL

Typ		Info	Box	Ah 20 h	A EN						T	N	Application			
Length Width Box height Total height																
34	643 29	= SHD 670 33														
35	665 14	= SHD 680 32/670 43														
36	670 18	= SHD 680 32/670 43														
37	670 43		B	170	900	3	1	514	223	195	220	mG	B00/01	-	√	Steyr Trucks, MAN, Magirus, Roman, Multicar
38	680 32		B	180	950	3	1	514	223	195	220	mG	B00/01	-	√	Steyr-Trucks, MAN, Roman, Multicar
39	680 89 #		MAC 154	180	950	4	1	510	216	205	225	mGGA	B03	-	√	Fiat Trucks, Tractors
40	700 27		C	200	1000	3	1	517	273	212	240	mG	B00	-	√	Caterpillar, Steyr, MAN, Volvo, Tatra Trucks
41	725 11		C	225	1050	3	1	517	273	212	240	mG	B00	-	√	Steyr, MAN, Volvo-Trucks

T = Dry, N = Wet, Double Top, 4-chamber leak protection, RF = vibration-resistant, GA = battery with central degassing, HGI = hard rubber set, mG = with handle, RZS = flame arrester,
 * limited use, ** with base hold-down adapter, # available 07.2013





ENERGY BULL

PORTABLE POWER WITH THE CYCLE-RESISTANT, SPECIAL BATTERY FOR HOBBIES AND LEISURE.

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

- ▶ The Energy Bull offers up to three times the cycle resistance of standard starter batteries and is extremely cyclical resistant and durable
- ▶ MIN/MAX markings on the transparent battery casing and easy opening make the battery maintenance-friendly
- ▶ Integrated backfire protection is integrated into the battery cover and surge protectors
- ▶ Low maintenance is secured by minimum water consumption and self-discharge
- ▶ The suitability of any standard charger makes charging straightforward
- ▶ A top V3 vibration resistance rating pursuant to EN 50342-1 is secured by plate bonding to the battery bottom and pocket separators with glass web layer
- ▶ Optimum capacity that is perfect for deal with cyclical loads
- ▶ Delivery in a filled and charged condition is both user- and environment-friendly
- ▶ Practical handles for easy transport



Yachts



Motorhomes



Caravans

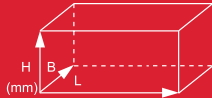


Camping



Solar power systems

ENERGY BULL

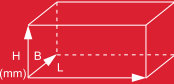
Typ			Info	Box	Ah 5 h	Ah 20 h	Ah 100 h						T	N	Application		
Length Width Box height Total height																	
1	955 01		H5	50	60	70	0	1	241	175	190	190	mGGA	B13	-	√	Wheelchairs
2	955 51		MO60	55	72	85	1	1	256	174	205	225	mGGA	B00	-	√	Boats, Wheelchairs
3	956 01		H6	60	80	90	0	1	278	175	190	190	mGGA	B13	-	√	Wheelchairs
4	957 51		H8	75	100	110	0	1	354	175	190	190	mGGA	B13	-	√	Boats
5	959 01		LOT7	90	115	135	0	1	350	175	230	230	mGGA	B00	-	√	Boats
6	960 51		A	105	130	140	3	1	514	189	195	220	mGRZS	B00	-	√	Boats, Signal units
7	963 51		B	135	180	195	3	1	514	223	195	220	mGRZS	B00	-	√	Boats
8	968 01		C	180	230	250	3	1	517	273	212	240	mGRZS	B00	-	√	Boats
9	725 10 K		= 968 01														

T = Dry, N = Wet,  Double Top,  = 4-chamber leak protection, RF = vibration-resistant, GA = battery with central degassing, HGI = hard rubber set, mG = with handle, RZS = flame arrester,
* limited use, ** with base hold-down adapter



Ah 20 h	Capacity Ah 20 h rate
A (EN)	Cold discharge test current in A

	Layout
	Terminal

	Max. dimensions mm Length x Width x Box-/Total height
---	--

	Battery specifications
	Base hold-down

LAYOUT

	6 Volt	12 Volt
0		
1		
2		
3		
4		

	6 Volt	12 Volt
5		
6		
9		
10		

TERMINALS

 Terminal 1	 Terminal 4
 Terminal 3	 Terminal 5

 Terminal 8	 Terminal 20
 Terminal 19	 Terminal K Terminal 21

BASE HOLD-DOWNS

B 00	without hold down
B 01	
B 03	
B 04	
B 05	
B 06	
B 07	

B 09	
B 11	
B 12	
B 13	
B 14	



Bike Bull

The motorcycle battery with Banner Power.



Traction Bull Bloc

The leak-proof, gel technology, recombination battery for extreme applications.



Stand by Bull

The stationary battery for secure supplies of emergency power.

Stand by Bull Bloc SBV

Stand by Bull Bloc GiV

[illegible]

Technology for professional
battery servicing.



Lead-free wheel weights for all rims and vehicles.



We herewith confirm, that Banner GmbH is a producer and supplier of Original Equipment for the following manufacturers:

Manufacturer, model	Battery type(s)
VW Passat, Golf, Amarok	64 Ah, 61 Ah, 70 Ah, 72 Ah, 95 Ah
VW Golf, Touran	68 Ah AGM
Audi Q2 Hybrid	AUX 14 AGM
BMW various models	80 Ah and 90 Ah AGM
Bomag construction equipment	various flooded battery types
Dehli motor homes	90 Ah AGM
Hymmer motor homes	various flooded battery types
Kissbohrer Pistenbully	various flooded battery types
KTM X-Bow	various AGM types
Liebherr construction equipment	42 Ah and 61 Ah
Mitsubishi Colt	various flooded battery types
Porsche 911	44 Ah, 70 Ah, 72 Ah
Rammox construction equipment	40 Ah
Skoda Octavia, Roomster, Fabia	68 Ah flooded and 90 Ah AGM
AUXAM	
Aston Martin Rapide, ONE-77	

LEADING COMPANIES OF AUTOMOTIVE

CERTIFICATIONS

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

PATENTS

AccuSafe joint patent with Gore - usufruct rights assigned to Gore DE 197 03 444

AccuSafe new applicant Banner A - 943/2001

Double cover joint patent with Moll U - 02027 9204 (registration still in progress, also registered in the USA)

AGM valve stopper joint registered design protection with Accumalux