

# 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.

**BACKUP**

### 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)



Cars



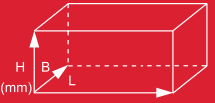






Cars with start/stop systems



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.

**START** → **STOP**



### 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, 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 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.

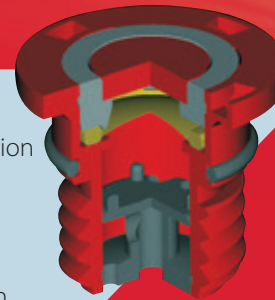
More than twenty years ago, Banner set a new benchmark in the battery design field with the Uni Bull, which was intended to reduce the diversity in the replacement business area. The new Uni Bull with calcium technology is absolutely maintenance-free. The electrode design has been computer-optimised, 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



# UNI BULL

Typ	Info	Box	Ah 20 h	A EN									T	N	Application
							Length	Width	Box height	Total height					
1	<b>50 100</b>	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	<b>50 200</b>	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	<b>50 300</b>	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	<b>50 400</b>	= P45 23/24, 545 23/24													
5	<b>50 500</b>	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	<b>PRO P63 40</b>	H5	63	600	0	1	241	175	190	190	mGGA	B13	-	√	555 19*/59, 560 09*, 562 05*/19		
2	<b>PRO P75 40</b>	H6	75	680	0	1	278	175	190	190	mGGA	B13	-	√	566 13*/38, 570 44*, 572 09*/12, 574 05*/12		
3	<b>PRO P100 40</b>	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	<b>P40 25</b>	35NS	40	300	0	3	187	137	204	226	mGGA	B01	-	√	535 04		
5	<b>P40 26</b>	35NS	40	300	0	3	187	127	204	226	mGGA	B00	-	√	535 20, 540 26		
6	<b>P40 27</b>	35NS	40	300	1	3	187	127	204	226	mGGA	B00	-	√	535 22, 540 27		
7	<b>P44 09</b>	T4	44	420	0	1	210	175	175	175	mGGA	B13	-	√	536 53, 540 45**/63, 544 09/59*		
8	<b>P45 23</b>	45NS	45	360	0	1+3	238	129	203	225	mGGA	B00	-	√	545 23/84		
9	<b>P45 24</b>	45NS	45	360	1	1+3	238	129	203	225	mGGA	B00	-	√	545 24/51		
10	<b>P50 03</b>	H4	50	450	0	1	210	175	190	190	mGGA	B13	-	√	544 09*/59, 550 03		
11	<b>P55 19</b>	T5	55	480	0	1	241	175	175	175	mGGA	B13	-	√	545 19**, 555 19/59*		
12	<b>P60 68</b>	D23	60	480	0	1	233	173	203	225	mGGA	B00	-	√	560 68, 565 33		
13	<b>P60 69</b>	D23	60	480	1	1	233	173	203	225	mGGA	B00	-	√	560 69, 565 34		
14	<b>P62 05</b>	T5	62	540	0	1	241	175	175	175	mGGA	B13	-	√	560 09, 562 05/19*		
15	<b>P62 19</b>	H5	62	540	0	1	241	175	190	190	mGGA	B13	-	√	560 09*, 562 05*/19		
16	<b>P66 13</b>	= P72 09															
17	<b>P70 24</b>	D26	70	570	1	1	260	174	200	222	mGGA	B01	-	√	560 49, 570 24		
18	<b>P70 29</b>	D26	70	570	0	1	260	174	200	222	mGGA	B01	-	√	560 48, 570 29, 580 09		
19	<b>P72 09</b>	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	<b>P72 12</b>	= PRO P75 40/P74 12															
21	<b>P74 05</b>	= P72 09															
22	<b>P74 12</b>	H6	74	680	0	1	278	175	190	190	mGGA	B13	-	√	566 13*/38, 570 44*, 572 09*/12, 574 05*/12		
23	<b>P80 14</b>	T7	80	700	0	1	315	175	175	175	mGGA	B13	-	√	575 39, 580 14/35*/42*		
24	<b>P80 42</b>	= P80 14	In the case of a bracket mounting with 15mm height compensation – adjustment plate Art.No. 3050001120														
25	<b>P88 20</b>	T8	88	680	0	1	354	175	175	175	mGGA	B13	-	√	585 15, 588 20/27*/34*		
26	<b>P95 04</b>	D31	95	680	0	1	303	173	203	225	mGGA	B01	-	√	595 04, 600 32		
27	<b>P95 05</b>	D31	95	680	1	1	303	173	203	225	mGGA	B01	-	√	595 05, 600 33		
28	<b>P95 33</b>	H8	95	760	0	1	354	175	190	190	mGGA	B13	-	√	595 21/33, 600 44		
29	<b>P100 32</b>	= P95 04															
30	<b>P100 33</b>	= P95 05															
31	<b>P100 44</b>	= PRO P100 40/P95 33															
32	<b>P110 42</b>	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



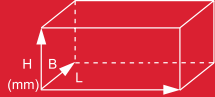













LCV





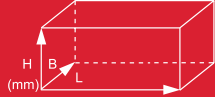














Motorboats



# STARTING BULL

Typ	Info	Box	Ah 20 h	A EN						T	N	Application				
6 Volt			Length    Width    Box height    Total height													
1	<b>066 12</b>		66	360	0	1	178	175	166	188		B04	√	√	VW -1968, Trabant	
2	<b>077 18</b>		77	450	0	1	216	170	166	191		B06	√	√	VW, Ford D, Trabant, Tatra 613	
12 Volt			Length    Width    Box height    Total height													
3	<b>530 30</b>		30	300	0	4	187	128	165	165	mGGA	B00	-	√	Small tractors, BMW-Motorcycles	
4	<b>530 34</b>		30	300	1	4	187	128	165	165	mGGA	B00	-	√	Small tractors	
5	<b>535 04</b>	= P40 25														
6	<b>535 20</b>	35NS	35	260	0	3	187	128	202	224	mG	B00	-	√	Daihatsu, Honda, Mitsubishi, Subaru, Suzuki	
7	<b>535 22</b>	35NS	35	260	1	3	187	128	202	224	mG	B00	-	√	Mazda, Suzuki, Daihatsu, Subaru	
8	<b>536 46</b>	= P44 09**/540 63**														
9	<b>536 53</b>	= P44 09/540 63														
10	<b>540 08</b> 	= 542 08														
11	<b>540 63</b> 		T4	40	330	0	1	210	175	175	175	mGGA	B13	-	√	Skoda, Audi, Seat, VW
12	<b>542 08</b> 		H3	42	330	0	1	175	175	190	190	GA	B13	-	√	Fiat Punto Benzin, Aixam 99-
13	<b>543 17</b>	= 50 100														
14	<b>544 09</b> 		T4	44	360	0	1	210	175	175	175	mGGA	B13	-	√	BMW, Opel, Renault, Fiat, Skoda
15	<b>544 13</b>	= 50 100														
16	<b>544 59</b>	= P50 03														
17	<b>545 19</b>	= P55 19**/555 19**														
18	<b>545 23</b>		45NS	45	330	0	1+3	238	129	201	223	mG	B00	-	√	Toyota, Subaru, Mazda
19	<b>545 24</b>		45NS	45	330	1	1+3	238	129	201	223	mG	B00	-	√	Mitsubishi Colt, Lancer, Galant, Honda
20	<b>545 51</b>	= P45 24/545 24														
21	<b>545 77</b>		E2	45	300	0	1	218	135	203	225		B01	-	√	Renault R8-R13, Dacia
22	<b>545 79</b>		E2	45	300	1	1	218	135	203	225		B01	-	√	Peugeot, Honda, Dacia
23	<b>545 84</b>	= P45 23/545 23														
24	<b>550 03</b>	= P50 03														
25	<b>550 41</b>		D20	50	390	0	1	202	173	202	225	mG	B00	-	√	Isuzu, Kia, Mazda, Nissan, Subaru, Toyota
26	<b>550 42</b>	= P60 69/560 69														
27	<b>550 46</b>	= P55 19/555 19														
28	<b>555 18</b> 	= 560 08														
29	<b>555 19</b> 		T5	55	450	0	1	241	175	175	175	mGGA	B13	-	√	BMW, Fiat, Peugeot, Renault
30	<b>555 59</b>	= PRO P63 40/P62 19/562 19														
31	<b>555 65</b>	= 50 300														
32	<b>557 16</b>	= 50 200 without handle														
33	<b>560 08</b> 		T5	60	480	1	1	241	175	175	175	mGGA	B13	-	√	Lada, Moskvie

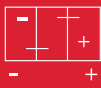

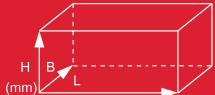




T = Dry, N = Wet,  Double Top,  = 4-chamber leak protection, RF = vibration-resistant, GA = battery with central degassing, HGI = hard rubber set, mG = with handle, RZS = flame arrester,  
 \* limited use, \*\* with base hold-down adapter



# STARTING BULL

Typ	Info	Box	Ah 20 h	A EN						T	N	Application			
12 Volt							Length	Width	Box height	Total height					
34	<b>560 09</b> 	T5	60	480	0	1	241	175	175	175	mGGA	B13	-	√	Mercedes, BMW, Opel, Peugeot, Ford
35	<b>560 10</b>	BCI 75	60	675	1	5	248	178		184	mGGA	B07	-	√	Chrysler USA, Opel/Vauxhall Sintra
36	<b>560 11</b>														
37	<b>560 48</b>														
38	<b>560 49</b>														
39	<b>560 62</b>	D23	60	420	0	1	232	175	204	225	mG	B01	-	√	Hyundai Trajet, Elantra, i10 CRDi, i20 CRDi, i30, i40
40	<b>560 68</b>	D23	60	420	0	1	232	173	204	225	mG	B00	-	√	Mazda, Subaru, Nissan, Toyota
41	<b>560 69</b>	D23	60	420	1	1	232	173	204	225	mG	B00	-	√	Nissan, Toyota, Honda, Mazda, Isuzu, Mitsubishi
42	<b>560 77</b>														
43	<b>560 91</b>														
44	<b>562 05</b> 														
45	<b>562 19</b> 	H5	62	480	0	1	241	175	190	190	mGGA	B13	-	√	Mercedes, BMW, Opel, Peugeot
46	<b>563 18</b>														
47	<b>564 20</b>														
48	<b>565 33</b> 	D23	65	560	0	1	232	173	204	225	mGGA	B00	-	√	Mazda, Mitsubishi, Subaru, Nissan, Toyota
49	<b>565 34</b>														
50	<b>566 13</b> 	T6	66	510	0	1	278	175	175	175	mGGA	B13	-	√	Mercedes, BMW, Porsche, Fiat, Lada
51	<b>566 33</b>														
52	<b>566 38</b>														
53	<b>570 02</b>														
54	<b>570 24</b>	D26	70	510	1	1	269	174	202	225	mG	B05	-	√	Volvo, Honda, Hyundai, Isuzu, Kia, Mitsubishi, Nissan, Moskvië
55	<b>570 29</b>	D26	70	510	0	1	269	174	202	225	mG	B05	-	√	Daihatsu, Honda, Isuzu, Mazda, Mitsubishi, Nissan
56	<b>570 44</b> 	T6	70	640	0	1	278	175	175	175	mGGA	B13	-	√	Mercedes, BMW, Opel, Fiat, Ford
57	<b>571 13</b>														
58	<b>572 09</b> 														
59	<b>572 12</b> 	H6	72	640	0	1	278	175	190	190	mGGA	B13	-	√	Mercedes, BMW, Opel, Fiat
60	<b>572 33</b> 	H6	72	640	1	1	278	175	190	190	mGGA	B01	-	√	Chrysler Voyager
61	<b>574 05</b> 														
62	<b>574 12</b>														
63	<b>580 02</b>														
64	<b>580 09</b>	D26	80	600	0	1	258	174	200	222	mGGA	B01	-	√	Kia, Hyundai, Nissan, Subaru
65	<b>580 14</b> 	T7	80	660	0	1	315	175	175	175	mGGA	B13	-	√	Audi D, BMW D, Nissan D, Renault D, VW D
66	<b>580 42</b>														
67	<b>588 20</b> 	T8	88	660	0	1	354	175	175	175	mGGA	B13	-	√	BMW D, Citroen D, Mercedes D, VW D
68	<b>588 27</b>														

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	<b>588 34 RF</b>	H8	88	680	0	1	354	175	190	190	mGGA	B13	-	√	Citroen D, Mercedes D, VW D
70	<b>595 04</b>	D31	95	640	0	1	304	173	202	225	mG	B01	-	√	Fiat tractors, Mazda D, Nissan, Toyota D
71	<b>595 05</b>	D31	95	640	1	1	304	173	202	225	mG	B01	-	√	Nissan D, Toyota D, Mitsubishi D
72	<b>595 33</b> 	H8	95	720	0	1	354	175	190	190	mGGA	B13	-	√	Audi, BMW, Mercedes, Porsche, VW
73	<b>600 32</b>	= P95 04/595 04													
74	<b>600 33</b>	= P95 05/595 05													
75	<b>600 44</b> 	= PRO P100 40/P95 33/595 33													
76	<b>610 42</b>	= 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



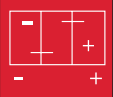

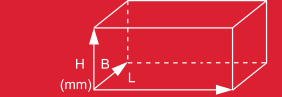



Agricultural machinery





Snow groomers



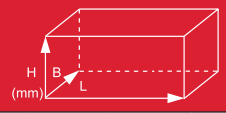







# BUFFALO BULL

Typ	Info	Box	Ah 20 h	A EN						T	N	Application			
							Length	Width	Box height	Total height					
Buffalo Bull SHD PROProfessional															
1	<b>SHD PRO 645 03</b>	A	145	800	3	1	514	189	195	220	mGGARZS	B00	-	√	Neoplan, MAN, Mercedes, Volvo, Scania, Steyr Trucks
2	<b>SHD PRO 680 08</b>	B	180	1000	3	1	514	223	195	220	mGGARZS	B00	-	√	Neoplan, MAN, Mercedes, Volvo, Scania, Steyr Trucks
3	<b>SHD PRO 725 03</b>	C	225	1150	3	1	517	273	212	240	mGGARZS	B00	-	√	Neoplan, MAN, Mercedes, Volvo, Scania, Steyr Trucks
							Length	Width	Box height	Total height					
Buffalo Bull SHD															
4	<b>SHD 610 40</b>	MAC 110	110	760	3	1	514	175	210	210	mGGARZS	B03	-	√	MAN, Mercedes, Roman, Robur
5	<b>SHD 620 34</b>	= SHD PRO 645 03/SHD 640 35/620 34													
6	<b>SHD 630 13</b>	= SHD 670 33													
7	<b>SHD 635 44</b>	MAC 110	135	900	3	1	514	175	210	210	mGGARZS	B03	-	√	MAN, Mercedes, Roman
8	<b>SHD 640 35</b>	A	140	800	3	1	514	189	195	220	mGRZS	B00	-	√	Steyr Trucks, MAN, Mercedes
9	<b>SHD 643 27</b>	= SHD PRO 680 08/SHD 680 32/670 43													
10	<b>SHD 650 38</b>	= SHD PRO 645 03/SHD 640 35/640 35													
11	<b>SHD 670 33</b>	MAC 140	170	1000	3	1	514	218	210	210	mGGARZS	B03	-	√	MAN, Mercedes, Liaz
12	<b>SHD 670 43</b>	= SHD PRO 680 08/SHD 680 32/670 43													
13	<b>SHD 680 32</b>	B	180	1000	3	1	514	223	195	220	mGRZS	B00	-	√	Steyr Trucks, MAN, Roman, Multicar
14	<b>SHD 700 27</b>	= SHD PRO 725 03/SHD 725 11/700 27													
15	<b>SHD 725 11</b>	C	225	1150	3	1	517	273	212	240	mGRZS	B00	-	√	Steyr, MAN, Volvo-Trucks
							Length	Width	Box height	Total height					
Buffalo Bull															
16	<b>600 26</b>		100	600	0	1	413	175	195	220	mG	B00	-	√	Mercedes D, Steyr Tractors, Daihatsu D, Barkas, Ursus
17	<b>600 35</b>		100	600	1	1	413	175	195	220	mG	B00	-	√	Daihatsu, Nissan, Mitsubishi D
18	<b>605 02</b>	BCI 31	105	1000	9	1	330	171	218	241	mGGA	B00	-	√	Caterpillar, US Trucks
19	<b>605 11</b>	= 610 11													
20	<b>605 27</b>	= 610 48													
21	<b>605 28</b>	= 610 47													
22	<b>610 11</b>	Compact	110	720	0	1	344	172	214	230	mG	B01	-	√	Iveco Daily 01.05-, Renault
23	<b>610 40</b>	= SHD 610 40/SHD 635 44													
24	<b>610 47</b>	Compact	110	720	0	1	344	172	214	230	mG	B00	-	√	IHC, Massey Ferguson
25	<b>610 48</b>	Compact	110	720	1	1	344	172	214	230	mG	B00	-	√	IHC, McCormick
26	<b>620 34</b>	A	120	720	3	1	514	189	195	220	mG	B00/01	-	√	MAN, Mercedes, Roman, MAZ
27	<b>625 11</b>	Compact	125	760	0	1	345	172	260	283	mG	B00	-	√	Massey Ferguson
28	<b>625 13</b>	Compact	125	760	1	1	345	172	260	283	mG	B00	-	√	McCormick
29	<b>625 23</b>	NATO 6TN	125	720	2	1	280	267	213	230	mG	B00	-	√	NATO 6TN
30	<b>632 11 #</b>		132	900	0	1	508	174	205	205	mG	B01	-	√	CNH Case New Holland, John Deere, Landini, McCormick
31	<b>635 30</b>	= SHD 640 35/640 35													
32	<b>640 20</b>	= SHD 640 35/640 35													
33	<b>640 35</b>	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	<b>643 29</b>	= SHD 670 33														
35	<b>665 14</b>	= SHD 680 32/670 43														
36	<b>670 18</b>	= SHD 680 32/670 43														
37	<b>670 43</b>		B	170	900	3	1	514	223	195	220	mG	B00/01	-	✓	Steyr Trucks, MAN, Magirus, Roman, Multicar
38	<b>680 32</b>		B	180	950	3	1	514	223	195	220	mG	B00/01	-	✓	Steyr-Trucks, MAN, Roman, Multicar
39	<b>680 89 #</b> 		MAC 154	180	950	4	1	510	216	205	225	mGGA	B03	-	✓	Fiat Trucks, Tractors
40	<b>700 27</b>		C	200	1000	3	1	517	273	212	240	mG	B00	-	✓	Caterpillar, Steyr, MAN, Volvo, Tatra Trucks
41	<b>725 11</b>		C	225	1050	3	1	517	273	212	240	mG	B00	-	✓	Steyr, MAN, Volvo-Trucks

T = Dry, N = Wet,  DT = 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, # 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



<b>Ah 20 h</b>	Capacity Ah 20 h rate
<b>A (EN)</b>	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 Bloc SBV

### **Stand by Bull**

The stationary battery for secure supplies of emergency power.

Stand by Bull Bloc GiV



### **Traction Bull**

The traction battery for the toughest industrial requirements.



### **Banner Battery Accessories**

Technology for professional battery servicing.



### **Wuchtofit**

Lead-free wheel weights for all rims and vehicles.



www.bannerbatteries.com

**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	24 Ah, 61 Ah, 70 Ah, 72 Ah, 95 Ah
VW Golf, Touran	68 Ah AGM
Audi Q5 Hybrid	AUX 14 AGM
BMW various models	80 Ah and 90 Ah AGM
Bomag construction equipment	various flooded battery types
Dehliets motor homes	90 Ah AGM
Hymmer motor homes	various flooded battery types
Kesselschreier Pistenbully	various flooded battery types
KTM X-Bow	42 Ah and 61 Ah
Liebherr construction equipment	various AGM types
Mitsubishi Colt	various flooded battery types
Porsche 911	44 Ah, 70 Ah, 72 Ah
Rammex construction equipment	40 Ah
Skoda Octavia, Roomster, Fabia	68 Ah Flooded and 90 Ah AGM
AUXAM	
Aston Martin Rapide, ONE-77	

LEADING COMPANIES OF AUSTRIA

## 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 Ac

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