



## SB-Batteries

With the SB-product line, we have got a complete range of the most common maintenance-free lead-acid batteries. Lead-acid batteries continue to hold a representative position of storage batteries for so many years because of their high reliability and good balance in quality, cost, and supply. All of our SB-batteries are produced on the basis of the absorbing glass matt technology (AGM). The capacity ranges from 0,5 Ah to 200 Ah in 6 and 12 volt varieties. Where the need for an efficient maintenance-free back-up power is required, SB-batteries are first choice. The batteries are produced at state-of-the-art production lines and stringent quality checks are continually carried out at all stages of plate manufacturing and battery assembly. Each of our batteries is rigorously tested for capacity, voltage and appearance. The batteries can be used in a wide range of operating temperature and they are equipped with heavy duty grids providing high performance and long life.



## Features

- Extended service life at low self-discharge level approximately 3% per month at 20°C
- Standard container is flame retardant according to UL 94 HB
- Mechanically strong ABS - container
- Manufacture of SB batteries within ISO 9001 Quality Assurance Standard
- Valve-regulated design with nearly 100% gas recombination during float charging
- AGM = Absorbing Glass Matt Technology in which the electrolyte is absorbed
- Maintenance-free operation – no addition of water to the electrolyte is required
- High current drain grid being resistant to corrosion by virtue of a lead-tin-calcium alloy
- Heavy duty grids giving high performance and long life
- Wide range of operating temperatures with temperature compensated charging
- Very good charging efficiency
- Classified as „non-spillable“ and therefore exempt from IATA Dangerous Goods Regulations
- Conforming to IEC 896-2
- Very good cyclability properties, at 30% depths of discharge the battery may reach up to or even more than 1000 discharge/charge cycles
- 6-9 years life time according to Eurobat (general purpose) at proposed float charging voltage



## Storage

Danger: Batteries are electrochemically live at all times. Do not short circuit the battery terminals or bridge them without any load. The float charge voltage at 20°C should be  $2,275 \pm 0,005$  Volt / cell. For operational temperatures above 20°C the float charge voltage should be reduced by  $-3mV / ^\circ C$ . For temperatures above 40°C such a voltage reduction has to be applied as a matter of necessity. The charging current must not exceed 0,3 C (Amp) (C= nominal capacity). If the batteries have been in store for more than 12 months they have to be recharged. Do not store discharged batteries for a longer period.

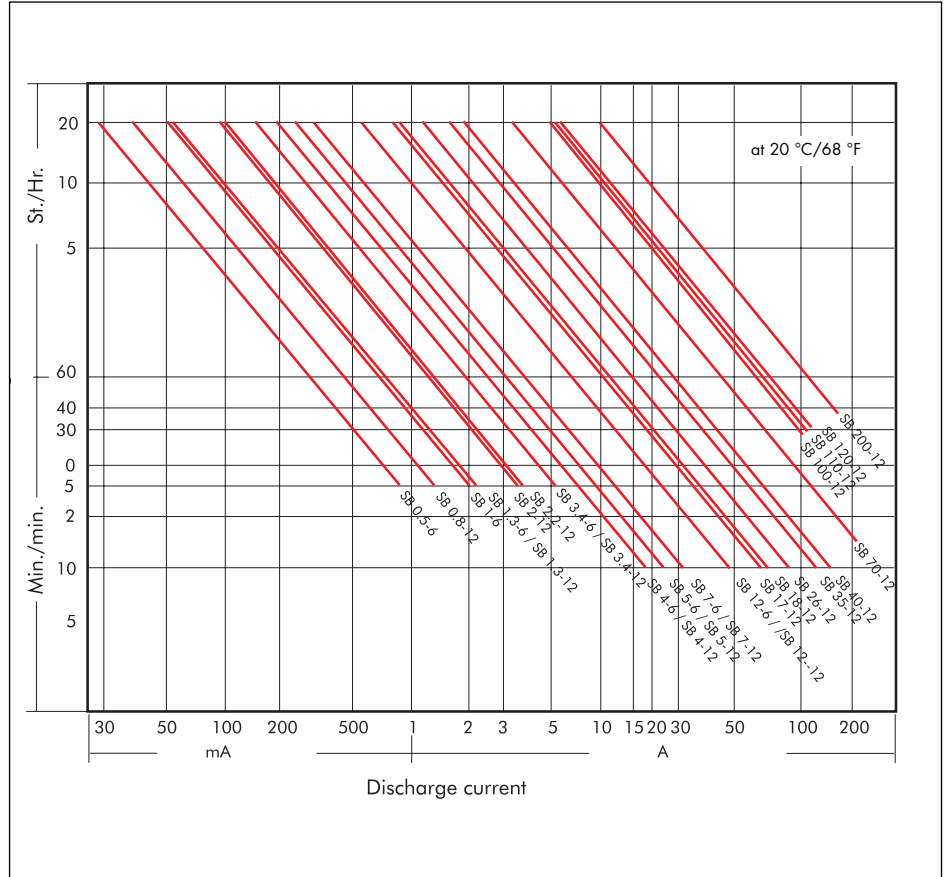


## Main Fields of Application

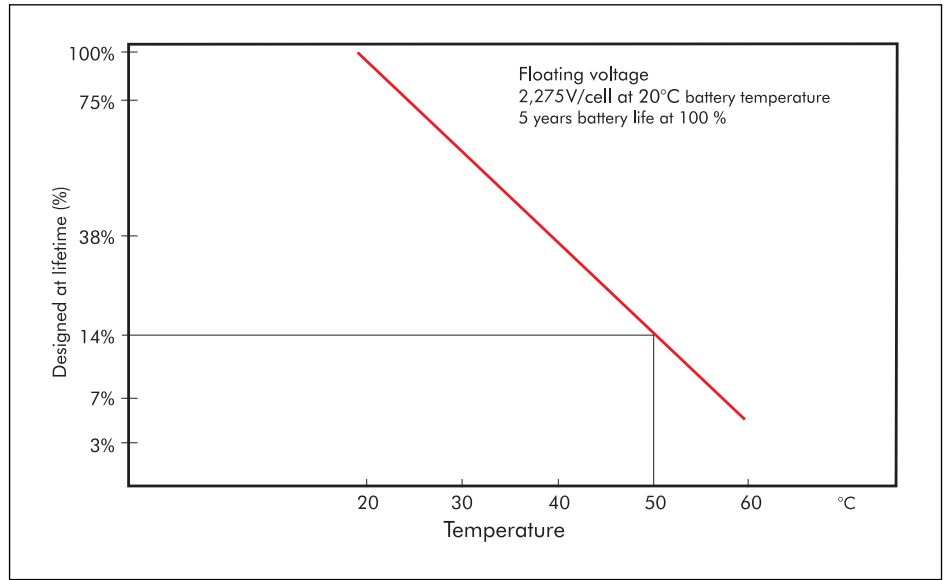
- Uninterruptible Power Supply (UPS)
- Telecommunication
- Emergency lighting
- Fire alarm and security systems
- Medical appliances
- Solar applications
- Electronic test equipment
- Electronic measuring devices
- Geophysical devices
- Marine equipment



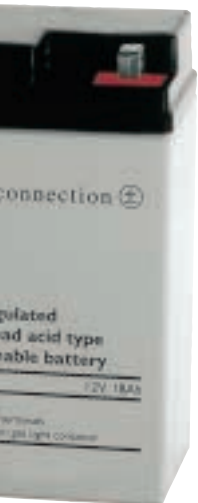
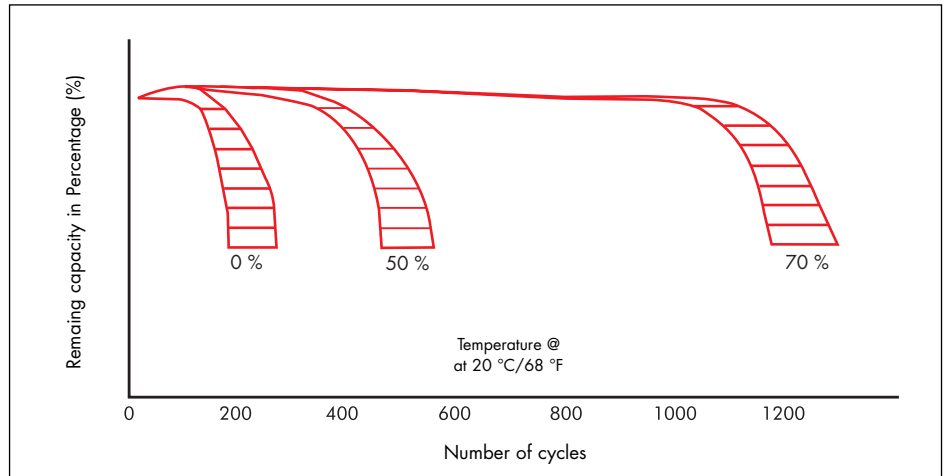
## Capacity Selection Chart



## Temperature/Life Characteristics of SB-Batteries

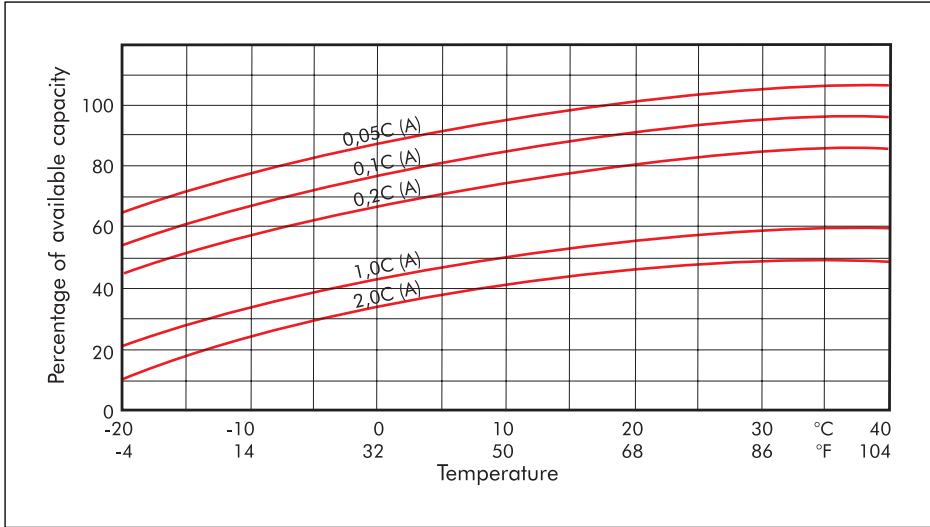


## Cyclic Service Life in Relation to Depth of Discharge

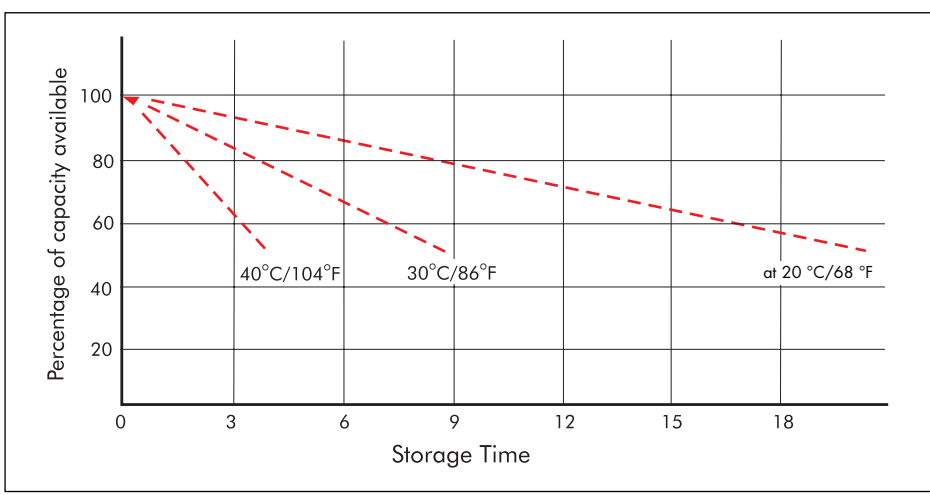




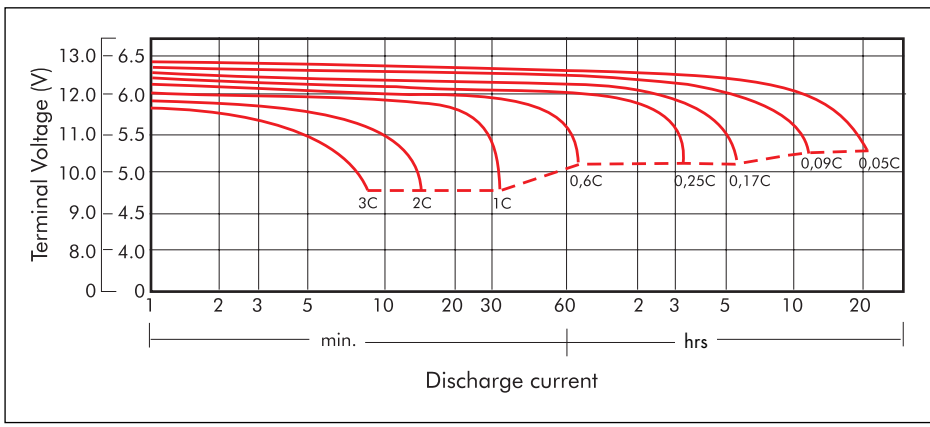
the safe connection



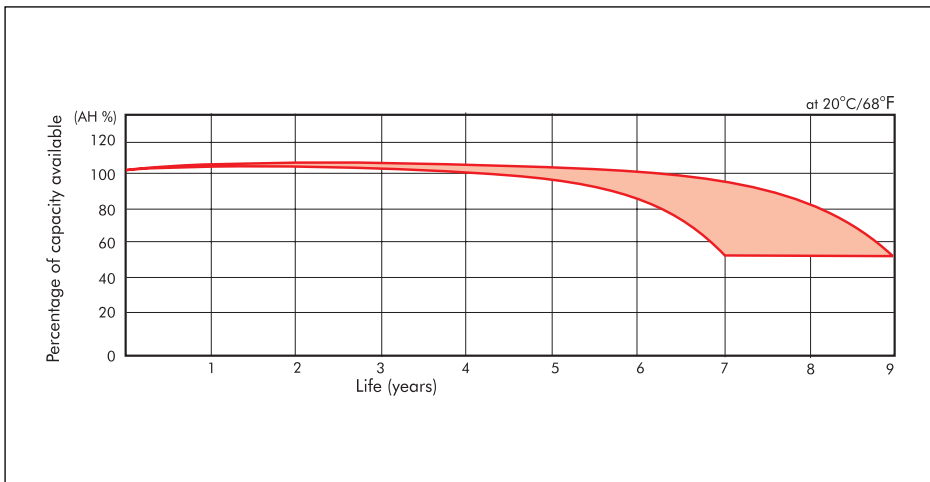
Influence of temperature on battery capacity



Shelf Discharge Characteristics at various Temperatures



SB-Discharge Characteristic Curves at 20 °C



Service Life - Float Charge



# the safe connection



## Specification of SB-Batteries

Battery Type	Voltage	C <sub>20</sub> (Ah)	Length (mm)	Width (mm)	Height (mm)	Overall Height (mm)	Weight (Kg)	Terminal Type	Maximum Charging Current (A)	Internal Resistance (mOhm)	Pieces per Box	Pieces per Pallet	Certification by VDS No.
SB 1-6	6	1,0	51	42	51	58,5	0,28	Fast-on 187	0,30	34	40	1920	
SB 1.3-6	6	1,3	97	24	52	59	0,33	Fast-on 187	0,39	42	40	2080	
SB 3-6	6	3,0	66	33	98	104	0,60	Fast-on 187	0,90	25	20	840	
SB 3.4-6	6	3,4	134	34	60	67	0,69	Fast-on 187	1,02	23	20	840	
SB 4-6	6	4,0	70	47	101	107	0,84	Fast-on 187/250	1,20	23	20	720	
SB 7-6	6	7,0	151	34	92,5	100	1,21	Fast-on 187/250	2,10	12	10	480	
SB 10-6	6	10	151	50	92,5	100	1,84	Fast-on 187/250	3,00	8	10	240	
SB 12-6/SB 12-6L	6	12	151	50	94	100	2,09	Fast-on 187/250	3,60	8	10	240	
SB 0.8-12	12	0,8	96	25	62	62	0,37	AWG 20	0,24	160	40	1700	
SB 1.3-12	12	1,3	97	43	52	59	0,61	Fast-on 187	0,39	77	20	1040	G 102077
SB 2.0-12(SUM)	12	2,0	150	20,5	88,3	88,3	0,71	PC-05	0,60	45	30	1100	
SB 2.0-12(VCR)	12	2,0	143,5	24	65	65	0,65	PC-04	0,60	70	20	1100	
SB 2.2-12	12	2,2	178	35	60	67	1,04	Fast-on 187	0,66	45	20	720	G 102031
SB 2.3-12(VCR)	12	2,3	182	24	61,7	61,7	0,75	PC-04	0,60	80	20	720	
SB 3-12R	12	3,0	132	33	98	104	1,20	Fast-on 187	0,90	45	20	420	
SB 3-12S	12	3,0	66	66	98	104	1,20	Fast-on 187	0,90	45	20	420	
SB 3.4-12	12	3,4	134	67	60	67	1,37	Fast-on 187	1,02	43	10	420	
SB 4-12	12	4,0	90	70	101	107	1,58	Fast-on 187	1,20	48	10	400	
SB 4.5-12	12	4,5	90	70	101	107	1,64	Fast-on 187	1,35	48	10	400	
SB 5-12/SB 5-12L	12	5,0	90	70	101	107	1,83	Fast-on 187/250	1,50	32	10	400	
SB 7-12/SB 7-12L	12	7,0	151	65	94	100	2,60	Fast-on 187/250	2,10	22	5	240	G 102003
SB 7.2-12/SB 7.2-12L	12	7,2	151	65	94	100	2,66	Fast-on 187/250	2,16	22	5	240	G 102042
SB 10-12/SB 10-12L	12	10	151	98	94	100	3,69	Fast-on 187/250	3,00	14	4	160	
SB 12-12/SB 12-12L	12	12	151	98	94	100	3,92	Fast-on 187/250	3,60	14	4	160	
SB 17-12/SB 17-12i	12	17	181	76	167	167	5,80	bolt-nut M5/female thread M5	5,10	10	4	108	G 103056
SB 18-12/SB 18-12i	12	18	181	76	167	167	6,40	bolt-nut M5/female thread M5	5,40	10	4	108	G 102099
SB 26-12i	12	26	166	175	125	125	9,25	female thread M6	7,80	9	2	72	G 102004
SB 33-12i	12	33	198	132	170	170	13,23	female thread M5	10	8	1	50	
SB 40-12i	12	40	197	165	170	170	15,63	female thread M6	12,00	8	1	44	G 102044
SB 70-12i	12	70	350	166	174	174	23,80	female thread M6	21,00	7	1	28	G 102081
SB 100-12i	12	100	329	172	214	221	33,60	female thread M6	30,00	7	1	18	
SB 110-12	12	110	407	173	210	235	36,30	bolt-nut M6	30,00	6	1	18	
SB 120-12/SB 120-12i	12	120	407	173	210	235	39,80	bolt-nut M6/female thread M6	36,00	5	1	12	
SB 200-12	12	200	520	260	210	240	73,50	bolt-nut M8	60,00	3	1	8	