

OE QUALITY

asimco®
MF BATTERY



PROVEN LONG LASTING

MF BATTERY

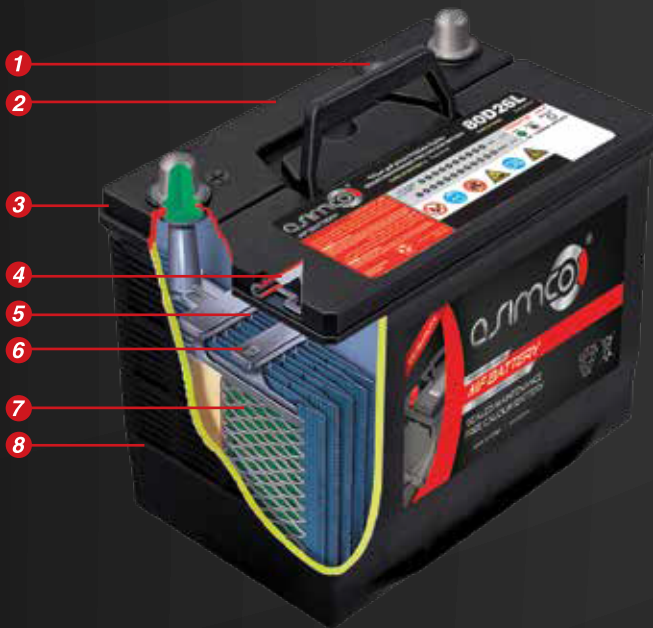
تدوم طويلاً

SEALED MAINTENANCE FREE
CALCIUM BATTERY

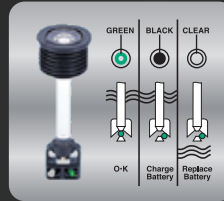
مفلقه لا تحتاج إلى صيانه
بطاريه كالسيوم

MADE IN KOREA / صنع في كوريا

STRUCTURE & CHARACTERISTICS



1



Hydrometer

- at full charge, the electrolyte specific gravity is 1.280 while at 50% of charge considered the minimum serviceable condition, the specific gravity is typically 1.220. In a typical situation when the specific gravity drops to 1.100, the battery is fully discharged.

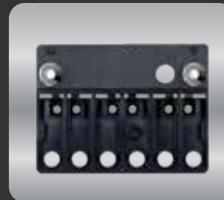
2



Heat-Sealed Covers

- prevents leakage and contamination.
- adds to case strength and rigidity.
- include permanent flame arresters to prevent an accidental explosion from external sparks or flame.
- have hydrometer built in for faster checking.

3



Exclusive Patented Liquid Gas Separator

- prevents electrolyte losses by collecting electrolyte vapor and returning liquid to the reservoir.
- vents allow the battery to "breathe" during temperature changes and charging

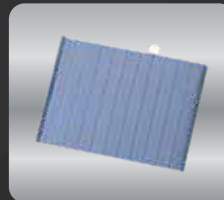
4



Flame Arrester

- safety system
- prevents possibility of explosion from spark of outside
- minimizes acid-leakage
- prevents inflow of dust

5



Low-Resistance Envelope Separators

- encapsulate negative plates
- improve vibration durability
- prevent "treeing" and internal shorting between positive and negative plates

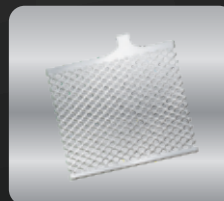
6



Centered Cast-on Plate Straps

- stronger than the thinner gas-burned conventional connectors.
- reduce the lever action movement resulting from road shock.

7



Wrought Lead-Calcium Grids

- offer considerable strength
- resistant to grid corrosion
- over-charge resistant
- minimal gassing and water usage
- less self-discharge
- resist thermal runaway

8



Polypropylene Case

- reinforced design is precisely tailored to support the battery elements for resistance to vibration and road shock damage.
- material is light weight, exceptionally strong, durable and resistant to handling and impact damage.

JIS TYPE

JAPANESE VEHICLES

JIS Group	Part No. JIS		Capacity 20Hr (Ah)	CCA (SAE)	RC (Min.)	Dimension(mm)				Cell LayOut	Terminal	Hold down
	New	Old				L	W	H	TH			
B19	40B19R	NS40Z	35	300	50	186	126	202	225	1	B	B0
	40B19L	NS40ZL	35	300	50	186	126	202	225	0	B	B0
	42B19R		38	350	52	186	126	202	225	1	B	B0
	42B19L		38	350	52	186	126	202	225	0	B	B0
B24	50B24R	N40	40	400	65	237	128	202	225	1	B	B0
	50B24RS	N40S	40	400	65	237	128	202	225	1	A	B0
	50B24L	N40L	40	400	65	237	128	202	225	0	B	B0
	50B24LS	N40LS	40	400	65	237	128	202	225	0	A	B0
	55B24R	NX100-S6 / NS60	45	433	80	237	128	202	225	1	B	B0
	55B24RS	NX100-S6(S) / NS60(S)	45	433	80	237	128	202	225	1	A	B0
	55B24L	NX100-S6L / NS60L	45	433	80	237	128	202	225	0	B	B0
	55B24LS	NX100-S6L(S) / NS60L(S)	45	433	80	237	128	202	225	0	A	B0
	MF50AR		50	450	85	206	172	184	204	1	A	B1
	MF50AL		50	450	85	206	172	184	204	0	A	B1
	MF60AR		60	470	95	230	172	184	204	1	A	B1
	MF60AL		60	470	95	230	172	184	204	0	A	B1
D23	65D23R		60	450	90	230	172	200	220	1	A	B0/B1
	65D23L		60	450	90	230	172	200	220	0	A	B0/B1
	75D23R		65	550	110	230	172	200	220	1	A	B0/B1
	75D23L		65	550	110	230	172	200	220	0	A	B0/B1
D26	48D26R	N50	50	450	81	260	175	200	220	1	A	B0/B1
	48D26L	N50L	50	450	81	260	175	200	220	0	A	B0/B1
	55D26R	N50Z	60	500	110	262	172	200	220	1	A	B0/B1
	55D26L	N50ZL	60	500	110	262	172	200	220	0	A	B0/B1
	65D26R		65	550	115	262	172	200	220	1	A	B0/B1
	65D26L		65	550	115	262	172	200	220	0	A	B0/B1
	80D26R	NS70 / NX110-5	70	600	140	260	175	200	220	1	A	B0/B1
	80D26L	NS70L / NX110-5L	70	600	140	260	175	200	220	0	A	B0/B1
	MF80R		80	600	130	262	172	200	220	1	A	B1
	MF80L		80	600	130	262	172	200	220	0	A	B1
D31	65D31R	N70	70	600	130	301	172	200	220	1	A	B0/B1
	65D31L	N70L	70	600	130	301	172	200	220	0	A	B0/B1
	95D31R		80	660	150	301	172	200	220	1	A	B0/B1
	95D31L		80	660	150	301	172	200	220	0	A	B0/B1
	105D31R	NX120-7	90	750	160	301	172	200	220	1	A	B0/B1
	105D31L	NX120-7L	90	750	160	301	172	200	220	0	A	B0/B1
	115D31R		92	760	160	301	172	200	220	1	A	B0/B1
	115D31L		92	760	160	301	172	200	220	0	A	B0/B1
	MF100R		100	750	175	325	172	203	223	1	A	B1
	MF100L		100	750	175	325	172	203	223	0	A	B1
	MF1000RA		100	870	182	330	173	-	240	1	A	B0
	MF1000LA		100	870	182	330	173	-	240	0	A	B0
E41	MF100	115E41R	100	750	175	403	173	209	231	1	A	B0
	MF100L	115E41L	100	750	175	403	173	209	231	0	A	B0
	MF100D		100	730	185	279	247	206	226	0	A	B0
F51	MF120	130F51	120	800	230	503	182	208	230	4	A	B0
	MF120L	130F51L	120	800	230	503	182	208	230	5	A	B0
G51	MF150	145G51	150	950	300	503	216	208	230	4	A	B0
	MF150L	145G51L	150	950	300	503	216	208	230	5	A	B0
	MF170	165G51	170	1050	320	503	216	208	230	4	A	B0
	MF170L	165G51L	170	1050	320	503	216	208	230	5	A	B0
H52	MF200	190H52	200	1000	430	503	261	217	239	4	A	B0
	MF200L	190H52L	200	1000	430	503	261	217	239	5	A	B0
	MF220	245H52	220	1200	430	503	261	217	239	4	A	B0
	MF220L	245H52L	220	1200	430	503	261	217	239	5	A	B0

TERMINAL TYPE & BOTTOM HOLD

TERMINAL TYPE



(A)



(B)



(C)



(D)



(E)



(F)



(H)

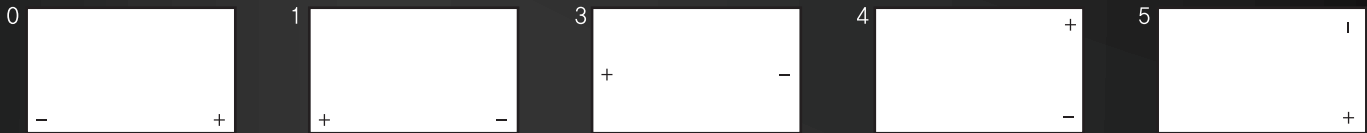


(G)

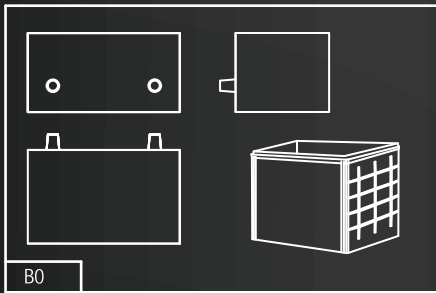


(J)

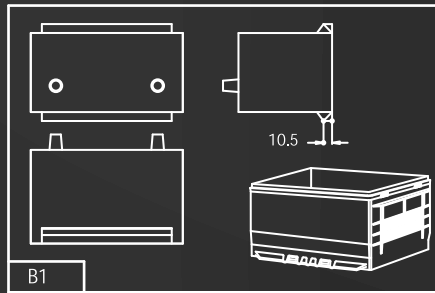
CELL LAYOUT



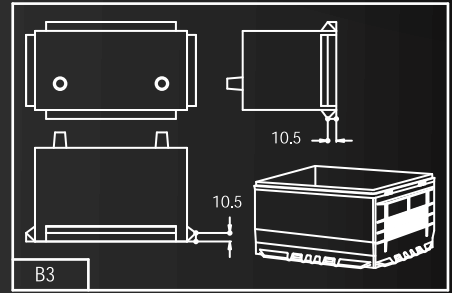
BOTTOM HOLD



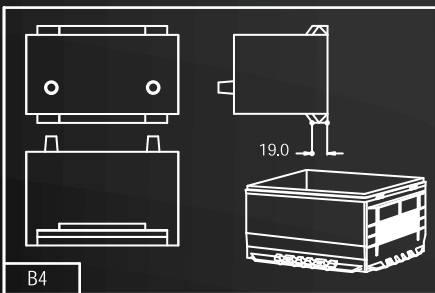
B0
NO BOTTOM HOLD DOWN



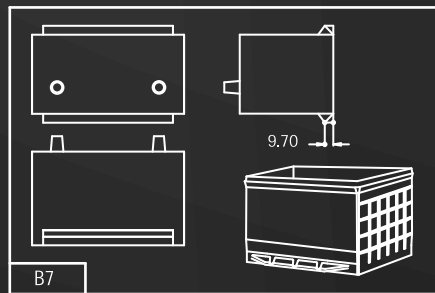
B1
FRONT & BACK 10.5mm
BOTTOM HOLD DOWN



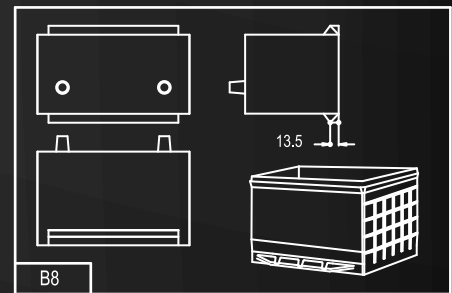
B3
FRONT & BACK, RIGHT & LEFT
10.5mm BOTTOM HOLD DOWN



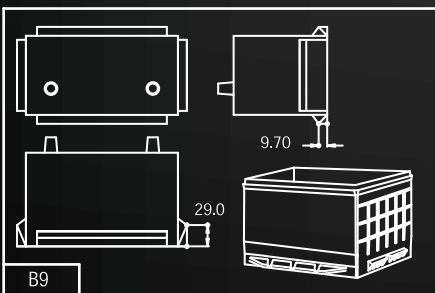
B4
FRONT & BACK 19.0mm
BOTTOM HOLD DOWN



B7
FRONT & BACK 9.7mm
BOTTOM HOLD DOWN



B8
FRONT & BACK 13.5mm
BOTTOM HOLD DOWN



B9
FRONT & BACK 9.7mm ; RIGHT &
LEFT 29.0mm BOTTOM HOLD DOWN

DIN TYPE

EUROPEAN VEHICLES

DIN Group	Part No. DIN	Capacity 20Hr (Ah)	RC (Min.)	EN (CCA)	Dimension(mm)				Cell LayOut	Terminal	Hold down
					L	W	H	TH			
L1	54459	44	80	360	208	174	189	189	0	A	B3
	54464	44	80	360	208	174	189	189	1	A	B3
	55066	50	83	380	208	174	189	189	0	A	B3
LB2	54519	45	80	440	242	174	174	174	0	A	B4
	54520	45	80	440	242	174	174	174	1	A	B5
	55040	50	85	460	242	174	174	174	0	A	B3
L2	55044	50	85	460	242	174	174	174	1	A	B3
	55559	55	90	430	242	174	189	189	0	A	B3
	55565	55	90	430	242	174	189	189	1	A	B3
L3	56030	60	105	520	242	174	189	189	0	A	B3
	56031	60	105	520	242	174	189	189	1	A	B3
	56219	62	105	520	242	174	189	189	0	A	B3
LB3	56220	62	105	520	242	174	189	189	1	A	B3
	56318	63	110	570	275	174	174	174	0	A	B3
	56320	63	110	570	275	174	174	174	1	A	B3
L4	56638	66	110	540	275	174	189	189	0	A	B3
	56640	66	110	540	275	174	189	189	1	A	B3
	57412	74	130	660	275	174	189	189	0	A	B3
LB4	57413	74	130	660	275	174	189	189	1	A	B3
	57528	75	130	660	275	174	189	189	0	A	B3
	58014	80	155	700	314	174	174	174	0	A	B3
L5	58016	80	155	700	314	174	174	174	1	A	B3
	58043	80	150	670	314	174	190	190	0	A	B3
	58044	80	150	670	314	174	190	190	1	A	B3
Commercial & Heavy-duty	58827	88	150	680	351	174	189	189	0	A	B3
	60038	100	170	800	351	174	189	189	0	A	B3
	60036	100		730	303	173	-	225	0	A	B1
Commercial & Heavy-duty	60037	100		730	303	173	-	225	1	A	B1
	64020	140	250	850	503	183	193	215	5	A	B0
	64021	140	250	850	503	183	193	215	4	A	B0
	67018	170	320	950	503	219	193	215	5	A	B0
	67019	170	320	950	503	219	193	215	4	A	B0
	68032	180	330	1000	503	219	193	215	5	A	B0
	68033	180	330	1000	503	219	193	215	4	A	B0
	70018	200	430	1050	503	219	193	215	5	A	B0
	70019	200	430	1050	503	219	193	215	4	A	B0
	70027	200	430	1050	503	261	217	239	5	A	B0
JIS (D23)	70029	200	430	1050	503	261	217	239	4	A	B0
	56068	60	110	520	230	168	200	220	0	A	B0/B1
	56069	60	110	520	230	168	200	220	1	A	B0/B1
JIS (D26)	57024	70	130	560	260	168	200	220	1	A	B0/B1
	57029	70	130	560	260	168	200	220	0	A	B0/B1

BCI TYPE

AMERICAN VEHICLES

A - Passenger Car & Light Commercial Batteries

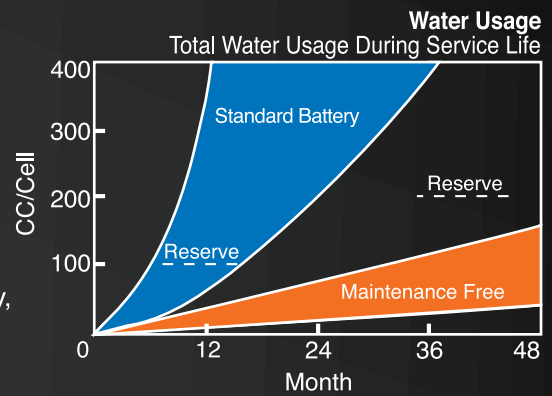
BCI GROUP	Part No. BCI	SAE CCA at 0° F (Amps)	RC (Min.) at 80° F	Dimension(mm)				LayOut	Terminal	Hold down
				L	W	H	TH			
75	75-520	520	90	230	179	184	184	1	G	B7
	75-630	630	100	230	179	184	184	1	G	B7
58	58-500	500	72	241	182	157	177	1	A	B8
	58-560	560	78	241	182	157	177	1	A	B8
58R	58R-500	500	72	241	182	157	177	0	A	B8
	58R-560	560	78	241	182	157	177	0	A	B8
78	78-600	600	110	260	179	184	184	1	G	B7
	78-700	700	130	260	179	184	184	1	G	B7
	78-750	750	135	260	179	184	184	1	G	B7
48/H6	48-540	540	110	275	174	189	189	0	A	B3
	48-660	660	130	275	174	189	189	0	A	B3
65	65-670	670	130	294	189	172	192	1	A	B1
	65-770	770	145	294	189	172	192	1	A	B1
	65-820	820	155	294	189	172	192	1	A	B1
31P	31P-750	750	170	330	172	217	238	3	A	B0
	31P-850	850	180	330	172	217	238	3	A	B0
31S	31S-750	750	170	330	172	217	238	3	F	B0
	31S-850	850	180	330	172	217	238	3	F	B0
31 TWIN	31M-750	750	170	330	172	217	238	3	E	B0
	31M-850	850	180	330	172	217	238	3	E	B0

Notice : The Specifications are subject to change with or without notice

BENEFITS OF CALCIUM LEAD GRID TECHNOLOGY

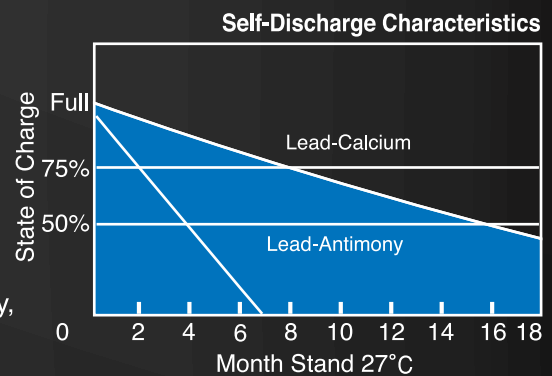
Benefit 1.
Distilled water supplementation free

As the lead-antimony conventional battery incurs unnecessary local action inside battery due to the effects of antimony ion during battery use and discharges gas by electrolyzing water contained in electrolyte, the amount of electrolyte is decreased rapidly. The battery performance is deteriorated and operating life reduced unless distilled water is supplemented frequently to compensate for such decrease of electrolyte. Asimco MF battery, however, uses specially alloyed calcium-lead, which leads to extremely low level of electrolyte decrease. Hence, if the charging system of vehicle remains error-free until the battery is worn out there is no need to supplement distilled water at all.



Benefit 2.
Recharging free

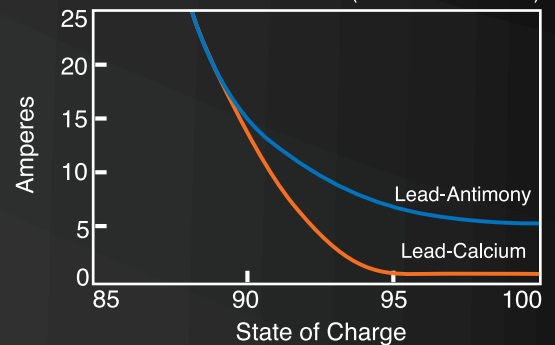
Due to the phenomenon of self-discharge, the lead-acid battery is characterized by its charged power being consumed even when the battery is not in use, such as during storage. The reason behind such phenomenon is that the impurities contained in lead alloy induces local action, causing electric energy to be consumed. Compared with the lead-acid battery, Asimco MF battery uses carefully selected, highly refined lead alloy, rendering extremely low rate of self-discharge, and maintaining high performance even during long-term standing.



Benefit 3.
Overcharge risk free

The battery mounted on vehicles can always be charged while vehicles are in operation. In general, the current being charged is adjusted to high or low level by the regulator which controls the size of voltage. When battery is in the state of near full charge under the condition of voltage already set, the value of current being charged must be decreased to prevent battery from being overcharged to maintain high performance for a long time. As shown on graph, the charging current of Asimco MF's Calcium battery is reduced to extremely low level when the battery is in near full-charge state, eliminating to near zero the danger of battery being overcharged.

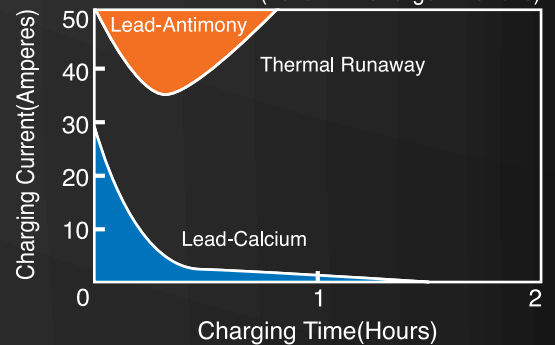
Charging Acceptance at Constant Voltage
(14.5Volts at 27°C)



Benefit 4.
Thermal runaway free

When battery is in near full-charge state while battery is being used in hot places (temperature approximately 70°C), the current being charged must be decreased to prevent battery damage resulting from overcharging. The charging current level of lead-acid battery decreases at initial stage but rises again soon due to the effects of a few kinds of substance contained in the grid alloy, and the grid is damaged and performance deteriorated due to this thermal phenomenon. Asimco MF battery, however, is free of substance containing such harmful effects, and the current being charged becomes extremely low level when battery is fully charged in high-temperature, leading to the prevention of overcharging.

Charging Characteristic at High Temperature
(70°C-Full Charge 14.5Volts)





FLAMMABLES



SHIELD EYES



KEEP OUT OF THE REACH OF CHILDREN



CAUTIOUS OF SULFURIC ACID



READ INSTRUCTION MANUAL CAREFULLY



EXPLOSIVE

How to Handle & Store MF Batteries

Batteries should be stored in cool, dry (27 degrees Celsius) places and out of direct sunlight.

ASIMCO MF batteries are tightly sealed to prevent acid leakage. However, tilting the battery to an angle of 45 degrees can cause acid to leak through the vents on the sides. Therefore, batteries should always be stored in their upright positions. Prevent placing any aqueous or solid (i.e. conductors) bodies on top of the battery.

It is extremely dangerous to use tools, such as hammers, on the battery terminals when connecting cables to the mounted battery.

When storing the battery for long periods of time, check the voltage of the battery every 6 months. If the voltage (OCV) drops below 12.5V, recharge the battery before placing it back in storage.

Check the hydrometer periodically on stored batteries. If the indicators show discharged condition as per the magic eye colour mentioned on the battery top label, immediately recharge the battery.



A quality brand brought to you by



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