

Super Maintenance Free  
**NOVA**

GREEN ENERGY POWER

***SUPER BATTERY***  
***CALCIUM MAINTENANCE FREE***

Global Battery Co., Ltd.

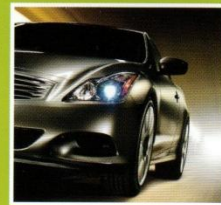
# Super Battery

# NOVA

GREEN ENERGY POWER

## It gives you a quicker start.

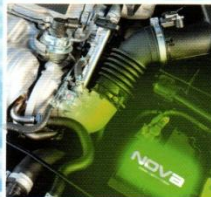
You know how you become No.1?  
It's always to be a step ahead.  
If you have driven your car in freezing temperatures,  
you know the ignition doesn't always start as easily as you want.  
What you need is a powerful battery, NOVA,  
from the largest battery maker in Korea.  
With the overwhelming power of NOVA,  
you will always be the first one out of the blocks.



## Green Energy Power

## It saves you a lot of troubles.

Another secret of No.1 is long-lasting power.  
You may travel through the forests, deserts, mud, water, or  
snow NOVA will set you at ease, with long  
lasting power, wherever you go.  
NOVA, the symbol of power and durability, makes you No.1.



# Main features

1. Designed to keep a proper level of electrolyte in the upper part of plates via accommodating an acid volume by 10mm or so higher than competitors' to sustain an acid volume in case of water consumption caused by an evaporation at a high temperature.



2. Application of cold-forged bushing & leakage-proof



- Minute tissue (Increase of strength)
- Prevention of whitening & discoloration via oil applying



Terminal Bushing



Constraint to a leakage around terminal



No interfacial crack

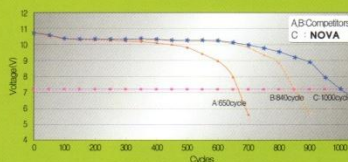
3. An increase of life span via adoption of spun-bonded paper



Spun-bonded paper

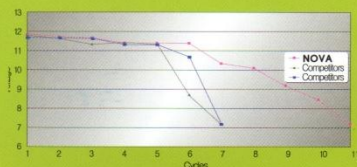
An increase of life span via adoption of spun-bonded paper

An increase of life span via maintenance of active materials of positive plates



4. An increment of anti-corrosion & life span via an adoption of grid in high Sn(tin)

Ranking in life span under overcharging of high temperature



Ranking in an anti-corrosion under the condition of specific gravity 1.280 at 25 degrees celcius of an ambient temperature

1. High Sn
2. Low Sn
3. Cast

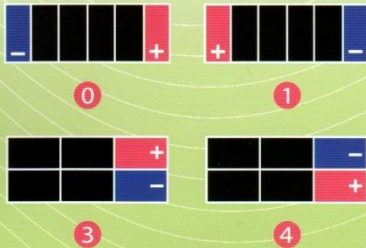




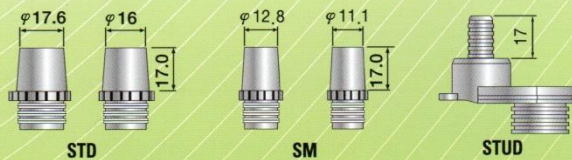
**Green Energy**

**SUPER MAINTENANCE FREE**

**CELL LAYOUT**



**TERMINAL**



**BASE HOLD DOWN (BHD)**



# JIS TYPE CALCIUM MF BATTERY

## Sealed Maintenance Free Battery (ASIA)

Passenger Car & Light Commercial Battery

Old JIS	New JIS	Dimensions(mm)			Voltage (V)	Capacity(Ah)		RC (Min)	CCA (-18° C)	CA (0° C)	Layout	Terminal	Handle
		L	W	TH		5HR	20HR						
B17	SMF 34B17L	167	127	227	12	27	33	47	280	390	0	SM	P/H
	SMF 34B17R	167	127	227	12	27	33	47	280	390	1	SM	P/H
SMF NS40ZL	SMF 40B19L	187	127	226	12	27	35	49	300	410	0	SM	P/H
SMF NS40Z	SMF 40B19R	187	127	226	12	27	35	49	300	410	1	SM	P/H
SMF NS40ZLS	SMF 40B19LS	187	127	226	12	27	35	49	300	410	0	STD	P/H
SMF NS40ZS	SMF 40B19RS	187	127	226	12	27	35	49	300	410	1	STD	P/H
SMF NX100-S6L	SMF 55B24L	238	129	225	12	36	45	80	430	540	0	SM	P/H
SMF NX100-S6	SMF 55B24R	238	129	225	12	36	45	80	430	540	1	SM	P/H
SMF NX100-S6LS	SMF 55B24LS	238	129	225	12	36	45	80	430	540	0	STD	P/H
SMF NX100-S6S	SMF 55B24RS	238	129	225	12	36	45	80	430	540	1	STD	P/H
SMF 50D20L	SMF 50D20L	202	173	225	12	42	50	85	450	590	0	STD	P/H
SMF 50D20R	SMF 50D20R	202	173	225	12	42	50	85	450	590	1	STD	P/H
D23	SMF 55D23L	232	173	225	12	48	60	100	500	630	0	STD	P/H
	SMF 55D23R	232	173	225	12	48	60	100	500	630	1	STD	P/H
	SMF 75D23L	232	173	225	12	52	65	110	580	710	0	STD	P/H
	SMF 75D23R	232	173	225	12	52	65	110	580	710	1	STD	P/H
SMF N50L	SMF 48D26L	260	173	222	12	40	50	80	420	550	0	STD	P/H
SMF N50	SMF 48D26R	260	173	222	12	40	50	80	420	550	1	STD	P/H
SMF N50ZL	SMF 55D26L	260	173	222	12	48	60	100	500	630	0	STD	P/H
SMF N50Z	SMF 55D26R	260	173	222	12	48	60	100	500	630	1	STD	P/H
SMF NX110-5L	SMF 80D26L	260	173	222	12	56	70	120	600	730	0	STD	P/H
SMF NX110-5	SMF 80D26R	260	173	222	12	56	70	120	600	730	1	STD	P/H
SMF N70L	SMF 65D31L	303	173	225	12	56	70	105	560	690	0	STD	P/H
SMF N70	SMF 65D31R	303	173	225	12	56	70	105	560	690	1	STD	P/H
SMF N70ZL	SMF 75D31L	303	173	225	12	60	75	120	630	760	0	STD	P/H
SMF N70Z	SMF 75D31R	303	173	225	12	60	75	120	630	760	1	STD	P/H
SMF NX120-7L	SMF 95D31L	303	173	225	12	72	90	150	750	880	0	STD	P/H
SMF NX120-7	SMF 95D31R	303	173	225	12	72	90	150	750	880	1	STD	P/H

※ B3 BHD IS AVAILABLE BY CUSTOMER'S REQUEST

## Sealed Maintenance Free Battery (ASIA)

Heavy-Duty Commercial Battery

Old JIS	New JIS	Dimensions(mm)			Voltage (V)	Capacity(Ah)		RC (Min)	CCA (-18° C)	CA (0° C)	Layout	Terminal	Handle
		L	W	TH		5HR	20HR						
SMF 1000LA		330	173	240	12	80	100	182	870	1000	0	STD	P/H
SMF 1000RA		330	173	240	12	80	100	182	870	1000	1	STD	P/H
SMF 1000LS		330	173	240	12	80	100	182	870	1000	0	STD	P/H
SMF 1000RS		330	173	240	12	80	100	182	870	1000	1	STD	P/H
SMF N100L	SMF 95E41L	410	175	235	12	80	100	180	830	960	0	STD	R/N
SMF N100	SMF 95E41R	410	175	235	12	80	100	180	830	960	1	STD	R/N
SMF N120L		505	183	240	12	96	120	230	820	950	4	STD	R/N
SMF N120		505	183	240	12	96	120	230	820	950	3	STD	R/N
SMF N150L		508	222	241	12	120	150	300	1000	1130	4	STD	R/N
SMF N150		508	222	241	12	120	150	300	1000	1130	3	STD	R/N
SMF N200L		523	279	248	12	160	200	430	1150	1280	4	STD	R/N
SMF N200		523	279	248	12	160	200	430	1150	1280	3	STD	R/N

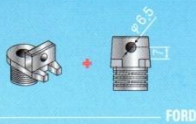
※ B3 BHD IS AVAILABLE BY CUSTOMER'S REQUEST



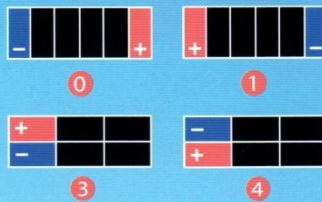
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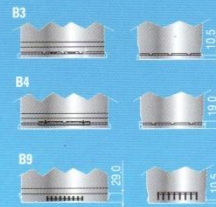
**TERMINAL**



**CELL LAYOUT**



**BASE HOLD DOWN (BHD)**



# DIN TYPE CALCIUM MF BATTERY

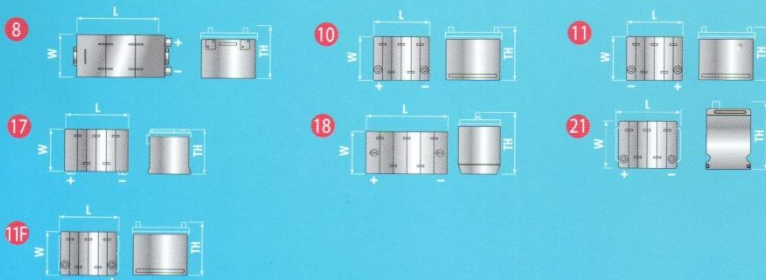
TYPE	Model	Dimensions(mm)			Voltage (V)	Capacity 20HR(AH)	RC (Min)	CCA(-18° C)		Layout	Terminal	BHD
		L	W	TH				SAE	EN			
LO	SMF 54018	175	175	190	12	40	70	350	330	0	STD	B3
LB1	SMF 53529	211	175	175	12	35	52	340	340	0	STD	B3
	SMF 54316	211	175	175	12	43	70	420	420	0	STD	B3
	SMF 54317	211	175	175	12	43	70	420	420	0	FORD	B3
L1	SMF 54459	208	175	190	12	44	71	350	330	0	STD	B3
	SMF 54464	208	175	190	12	44	71	350	330	1	STD	B3
LB2	SMF 54519	245	175	175	12	45	80	420	420	0	STD	B4
	SMF 55040	245	175	175	12	50	86	460	460	0	STD	B3
	SMF 55457	245	175	175	12	54	94	510	510	0	STD	B3
	SMF 55458	245	175	175	12	54	94	510	510	1	STD	B3
	SMF 55459	245	175	175	12	54	94	510	510	0	FORD	B3
	SMF 56220	245	175	175	12	62	100	540	540	1	STD	B3
L2	SMF 55559	245	175	190	12	55	94	480	440	0	STD	B3
	SMF 55565	245	175	190	12	55	94	480	440	1	STD	B3
	SMF 56219	245	175	190	12	62	100	510	480	0	STD	B3
	SMF 56217	245	175	190	12	62	100	510	480	1	STD	B3
L3	SMF 56048	269	174	226	12	60	100	500	460	0	STD	B9
	SMF 56049	269	174	226	12	60	100	500	460	1	STD	B9
	SMF 57029	269	174	226	12	70	120	600	560	0	STD	B9
	SMF 57024	269	174	226	12	70	120	600	560	1	STD	B9
	SMF 55414	277	175	175	12	54	94	510	510	0	STD	B3/B4
LB3	SMF 55415	277	175	175	12	54	94	510	510	1	STD	B3/B4
	SMF 56318	277	175	175	12	63	110	580	580	0	STD	B4
	SMF 56323	277	175	175	12	63	110	580	580	0	FORD	B3
	SMF 56330	277	175	175	12	63	110	580	580	0	STD	B3
	SMF 57113	277	175	175	12	71	115	620	620	0	STD	B3
	SMF 57114	277	175	175	12	71	115	620	620	0	FORD	B3
	SMF 56638	277	175	190	12	66	110	580	540	0	STD	B3
L3	SMF 57220	277	175	190	12	72	120	620	580	0	STD	B3
	SMF 57219	277	175	190	12	72	120	620	580	1	STD	B3
	SMF 57820	277	175	190	12	78	140	700	660	0	STD	B3
	SMF 58014	315	175	175	12	80	135	730	730	0	STD	B3
L4	SMF 59042	315	175	190	12	90	160	780	720	0	STD	B3
	SMF 59043	315	175	190	12	90	160	780	720	1	STD	B3
LB5	SMF 58515	353	175	175	12	85	140	740	700	0	STD	B3
	SMF 59015	353	175	175	12	90	156	820	820	0	STD	B3
L5	SMF 58827	353	175	190	12	88	148	730	700	0	STD	B3
	SMF 59218	353	175	190	12	92	160	780	740	1	STD	B3
	SMF 60044	353	175	190	12	100	170	850	820	0	STD	B3
MAC	SMF 61023	514	175	210	12	110	215	800	800	3	STD	B3
	SMF 63531	514	175	210	12	135	250	910	910	3	STD	B3
SHD A	SMF 64020SHD	513	189	223	12	140	260	800	800	3	STD	B0/B3
	SMF 64028SHD	513	189	223	12	140	260	800	800	4	STD	B0/B3
SHD B	SMF 67018SHD	513	222	220	12	170	330	900	900	3	STD	B0/B3
	SMF 67019SHD	513	222	220	12	170	330	900	900	4	STD	B0/B3
	SMF 68032SHD	513	222	220	12	180	350	950	950	3	STD	B0/B3
	SMF 68033SHD	513	222	220	12	180	350	950	950	4	STD	B0/B3
SHD C	SMF 68021SHD	518	273	241	12	180	350	950	950	3	STD	B0
	SMF 70027SHD	518	273	241	12	200	390	1150	1150	3	STD	B0
	SMF 73011SHD	518	273	241	12	230	430	1200	1200	3	STD	B0



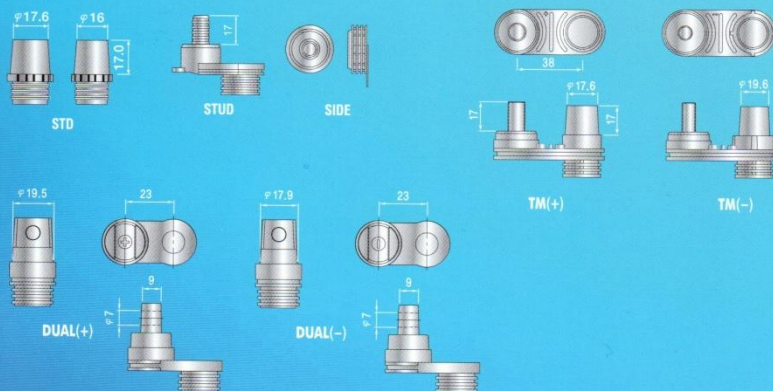
**Green Energy**

**SUPER MAINTENANCE FREE**

**BCI FIGURE**



**TERMINAL**





# BCI TYPE CALCIUM MF BATTERY

## A. Passenger Car & Light Commercial Batteries

Group	Model	Dimensions(mm)			Voltage (V)	Capacity(Ah)		RC	CCA (A)	CA (A)	Figure No.	Terminal
		L	W	TH		5HR	20HR					
58	SMF 58-450	236	183	177	12	40	50	74	450	560	21	STD
	SMF 58-530	236	183	177	12	48	60	86	530	660	21	STD
	SMF 65-660	305	190	191	12	58	72	120	660	780	21	STD
65	SMF 65-700	305	190	191	12	62	78	130	700	830	21	STD
	SMF 65-820	305	190	191	12	70	88	140	820	930	21	STD
22F	SMF 22F-470	240	174	205	12	40	50	86	470	590	11F	STD/DUAL
	SMF 22F-530	240	174	205	12	43	54	95	530	650	11F	STD/DUAL
26	SMF 26-420	208	171	205	12	34	42	60	420	550	10	STD
	SMF 26-560	208	171	205	12	43	54	86	560	690	10	STD
70	SMF 70-420	208	179	185	12	34	42	60	420	550	17	SIDE
	SMF 70-560	208	179	185	12	43	54	86	560	690	17	SIDE
70DT	SMF 70DT-420	208	179	205	12	34	42	60	420	550	10,17	DUAL
	SMF 70DT-560	208	179	205	12	43	54	86	560	690	10,17	DUAL
86	SMF 86-520	231	171	205	12	40	50	79	520	650	10	STD
	SMF 86-710	231	171	205	12	53	66	110	710	840	10	STD
75	SMF 75-520	231	179	185	12	40	50	79	520	650	17	SIDE
	SMF 75-710	231	179	185	12	53	66	110	710	840	17	SIDE
75DT	SMF 75DT-520	231	179	205	12	40	50	78	520	650	10,17	DUAL
	SMF 75DT-710	231	179	205	12	53	66	110	710	840	10,17	DUAL
34	SMF 34-615	260	171	205	12	46	58	94	615	745	10	STD
	SMF 34-780	260	171	205	12	59	74	124	780	910	10	STD
78	SMF 78-615	260	179	185	12	46	58	94	615	745	17	SIDE
	SMF 78-780	260	179	185	12	59	74	124	780	910	17	SIDE
78DT	SMF 78DT-615	260	179	205	12	46	58	94	615	745	10,17	DUAL
	SMF 78DT-780	260	179	205	12	59	74	124	780	910	10,17	DUAL

※ MORE OR LESS CCA BATTERIES ARE AVAILABLE UP ON CUSTOMER'S REQUEST

## B. Heavy-Duty Commercial Batteries

Group	Model	Dimensions(mm)			Voltage (V)	Capacity(Ah)		RC	CCA (A)	CA (A)	Figure No.	Terminal
		L	W	TH		5HR	20HR					
31S	SMF 31-730S	330	173	240	12	68	85	150	730	860	18	STUD
	SMF 31-1000S	330	173	240	12	96	120	205	1000	1150	18	STUD
31A	SMF 31-730A	330	173	240	12	68	85	150	730	860	18	STD
	SMF 31-1000A	330	173	240	12	96	120	205	1000	1150	18	STD
30H	SMF 30H-830	330	173	229	12	80	100	180	830	960	10	STD
	SMF 30HL-830	330	173	229	12	80	100	180	830	960	10	STD
4D	SMF 4D-850	508	222	241	12	112	140	270	850	980	8	STD
	SMF 4D-1000	508	222	241	12	120	150	300	1000	1080	8	STD
8D	SMF 8D-1200	523	279	250	12	144	180	315	1200	1330	8	STD
	SMF 8D-1400	523	279	250	12	160	200	400	1400	1530	8	STD

※ MORE OR LESS CCA BATTERIES ARE AVAILABLE UP ON CUSTOMER'S REQUEST

## C. General Utility & Marine Batteries

Group	Model	Dimensions(mm)			Voltage (V)	Capacity(Ah)		RC	CCA (A)	CA (A)	Figure No.	Terminal
		L	W	TH		5HR	20HR					
U1	SMF U1-250	195	130	183	12	18	23	35	250	360	10	LUG
	SMF U1-330	195	130	183	12	24	30	45	330	440	10	LUG
U1R	SMF U1R-250	195	130	183	12	18	23	35	250	360	11	LUG
	SMF U1R-330	195	130	183	12	24	30	45	330	440	11	LUG
M24	SMF 24MS-500	260	174	222	12	52	65	85	500	630	10	TM
	SMF 24MS-680	260	174	222	12	64	80	115	680	810	10	TM
M27	SMF 27MS-730	304	173	225	12	72	90	125	730	860	10	TM
	SMF 27MS-780	304	173	225	12	76	95	130	780	910	10	TM
M31	SMF 31MS-850	330	173	240	12	80	100	180	850	980	18	TM
24HCM	SMF 24HCM-500	260	174	222	12	56	70	130	500	630	10	TM
	SMF 24HCM-600	260	174	222	12	66	82	140	600	730	10	TM
27HCM	SMF 27HCM-660	304	173	225	12	70	88	160	660	790	10	TM
	SMF 27HCM-700	304	173	225	12	76	95	170	700	830	10	TM
31HC	SMF 31HC-780	330	173	240	12	80	100	180	700	830	18	STD/STUD

※ MORE OR LESS CCA BATTERIES ARE AVAILABLE UP ON CUSTOMER'S REQUEST

# NOVA

GREEN ENERGY POWER

## SUPER MAINTENANCE FREE CALCIUM MF BATTERY

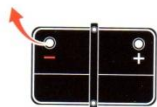


### PROCEDURE OF REPLACEMENT



Switch off the engine and keep sparks, flames, cigarettes away from battery at all times, before removing the old battery.

1



Disconnect the negative terminal, first and avoid short-circuit caused by tools, when removing old battery.

2



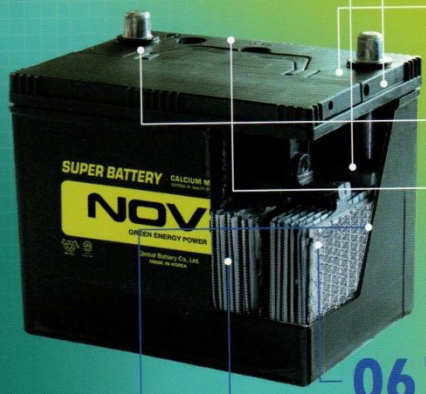
Clean corroded parts in tray and cable clamps, before installation of new battery.

3



Connect the positive terminal, first and check the terminal clamps for tight fit, when installing new battery.

4



**01 Centered Cast-on Plate Straps**  
 - Stronger than the thinner gas-burned conventional connectors.  
 - Reduce the lever action movement resulting from road shock.

**02 Exclusive Patented Liquid Gas Separator**  
 - Prevent electrolyte losses by collection and returning liquid to the reservoir.  
 - Vents allow the battery to "breathe" during temperature changes and charging.

**03 Flame Arrester**  
 - Safety system  
 - Prevent the explosion from spark of outside  
 - Minimize the acid-leakage  
 - Prevent the inflow of dust

**04 Heat-Sealed Covers**  
 - Prevent contamination and also add to the strength and rigidity.  
 - Include permanent flame arresters to prevent accidental explosion from external sparks or flame.  
 - Have hydrometer built in for faster checking.

**05 Hydrometer**  
 - At full charge, the electrolyte specific gravity is 1.28 while at 50% of charge considered the minimum serviceable condition, the specific gravity is typically 1.22. In a typical situation when the specific gravity drops to 1.10, the battery is fully discharged.

**06 Low-Resistance Envelope Separators**  
 - Encapsulate negative plates  
 - Improve vibration durability  
 - Prevent "treeing" and internal shorting between pos. and neg. plates

**07 Polypropylene Case**  
 - Reinforced design is precisely tailored to support the battery elements.  
 - Material is exceptionally strong, durable and withstands road shock and vibration.

**08 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



**CAUTION**

- No Sparks, Flames, or Smoking.
- Charge in well ventilated area.
- Remove from vehicle prior to charging.
- Read your vehicle, booster, and battery manuals prior to charging.

-In case of exposure to acid, flush immediately with water. Then get immediate medical help.  
 -Do not block or alter vent hole.  
 -Keep out of reach of children.

**WARNING! LEAD ACID BATTERIES GENERATE EXPLOSIVE GASES. KEEP SPARKS, FLAMES, & LIGHTED CIGARETTES AWAY FROM BATTERY, WHEN CHARGING OR USING BATTERY IN AN ENCLOSED SPACE, PROVIDE VENTILATION. THIS BATTERY CONTAINS SULPHURIC ACID. AVOID CONTACT WITH SKIN, EYES, OR CLOTHING. IN EVENT OF ACCIDENT FLUSH WITH WATER AND CALL A PHYSICIAN IMMEDIATELY**

MAXIMUM RECHARGING VOLTAGE IS 14.6V BATTERY, WET, FILLED WITH ACID

**Flammables** **Read Instructions Carefully** **Keep out of Reach of Children** **Cautions of Sulfuric Acid** **Shield Eyes** **Explosive**

# Super Maintenance Free

CALCIUM MF BATTERY

**Pinnacle Power Trading LLC**

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**Fax: +9714 2512621**

**Mail Id: [sales@pinnaclepps.com](mailto:sales@pinnaclepps.com)**