

Ca-Ca-Sn
CALCIUM-CALCIUM-TIN

EMT
EXPANDED METAL TECHNOLOGY



ISO 14001
BUREAU VERITAS
Certification



OHSAS 18001
BUREAU VERITAS
Certification



GLOBAL BATT
THE DRIVE WITHIN

PRODUCT FEATURES

Automotive



- Ca-Tin alloy
- Expanded Metal Grid
- High Cranking Performance
- Optimized Grid Structure
- Durable & Robust Design
- Suitable for all Weather Conditions
- Longer life leads to reduced recycling frequency resulting less environmental pollution.

Tractor



- Expanded Metal Grid
- High precision alloy for heavy duty performance
- High Cranking Performance
- Shock absorbing high performance Glass Mat Envelop Separator
- Durable & Robust Design
- Suitable for all Weather Conditions
- Longer life leads to reduced recycling frequency resulting less environmental pollution.





SALIENT FEATURES OF BATTERY COMPONENTS



EXPANDED METAL GRID

Plate group with Expanded Metal Grid is designed for:

- Fine, uniform surface grain.
- Prevents grid surface from corrosion
- Reduces self-discharge by chemical bonding with grains of calcium
- Reduces water loss
- Prevents over-charging

1



PREMIUM GRADE ALLOY

- Premium grade Calcium-Tin alloy
- Ensures better conductivity and extends battery life
- Ensures desired purity to prevent high self-discharge
- Helps to bring water loss down needed for maintenance free batteries.

2



DOUBLE CHAMBER LID

- Works as condensation chamber for outgoing water molecules
- Prevents leakage and contamination
- Include permanent flame arrestor to prevent accidental explosion from external sparks or flame
- Holds Magic Eye

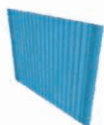
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CENTERED CAST-ON-STRAP (COS) PLATE

- Stronger than thinner gas-burnt conventional connectors
- Reduces lever action movement resulting from road shock
- Resists vibration

4



LOW RESISTANCE ENVELOP SEPARATOR

- Encapsulate positive plates
- Improve vibration durability
- Prevents "treeing" and internal shorting between positive and negative plates
- Increases current capacity
- Prevents acid stratification

5



FLAME ARRESTOR

- Flame arrestor prevents accidental explosion from external sparks or flame
- Minimizes acid leakage through side vent
- Prevents inflow of dust

6



MAGIC EYE

Magic eye (Charge Indicator) helps to understand battery health:

- GREEN- Battery OK
- BLACK- Recharge
- WHITE- Check

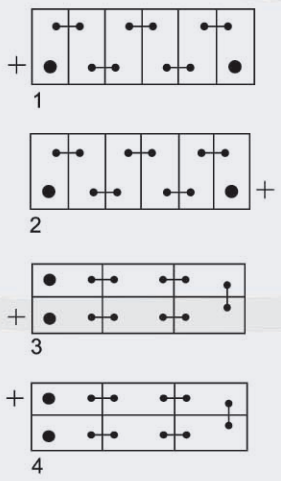
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AUTOMOTIVE JIS RANGE

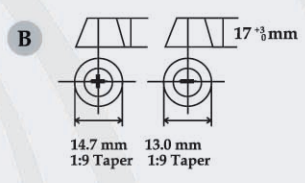
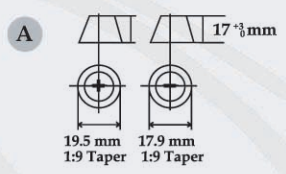
Technical Specifications

Battery Type		AH @ 20 Hour Rate	Dimension (mm)				Cell Layout	Terminal Type	CCA SAE (@-18°C)	RC	Filled Weight (kg)
Old JIS Type	New JIS Type		L	W	H (MF)	H (SMF)					
NS40	36B20R	32	197	129	227	225	1	B	250	39	9.60
NS40L	36B20L	32	197	129	227	225	2	B	250	39	9.60
NS40Z	38B20R	35	197	129	227	225	1	B	320	54	10.60
NS40ZL	38B20L	35	197	129	227	225	2	B	320	54	10.60
N40	32C24R	40	238	129	227	225	1	A	340	64	12.00
N40L	32C24L	40	238	129	227	225	2	A	340	64	12.00
NS60	46B24R	45	238	129	227	225	1	B	350	73	12.00
NS60L	46B24L	45	238	129	227	225	2	B	350	73	12.00
NS60S	46B24R(S)	45	238	129	227	225	1	A	350	73	12.10
NS60LS	46B24L(S)	45	238	129	227	225	2	A	350	73	12.10
55D23	55D23	60	231	173	225	227	1	A	410	85	15.50
55D23L	55D23L	60	231	173	225	227	2	A	410	85	15.50
85D23	85D23	60	231	173	225	227	1	A	500	114	16.80
85D23L	85D23L	60	231	173	225	227	2	A	500	114	16.80
N50	48D26R	50	259	173	225	227	1	A	360	75	16.60
N50L	48D26L	50	259	173	225	227	2	A	360	75	16.60
N50Z	55D26R	60	259	173	225	227	1	A	400	85	16.90
N50ZL	55D26L	60	259	173	225	227	2	A	400	85	16.90
NS70	65D26R	65	259	173	225	227	1	A	500	115	17.90
NS70L	65D26L	65	259	173	225	227	2	A	500	115	17.90
NX110-5	80D26R	70	259	173	225	227	1	A	505	117	18.80
NX110-5L	80D26L	70	259	173	225	227	2	A	505	117	18.80
N70	65D31R	70	306	173	225	227	1	A	510	115	20.60
N70L	65D31L	70	306	173	225	227	2	A	510	115	20.60
N70Z	75D31R	75	306	173	225	227	1	A	550	139	20.20
N70ZL	75D31L	75	306	173	225	227	2	A	550	139	20.20
NX120-7	95D31R	80	306	173	225	227	1	A	640	159	21.40
NX120-7L	95D31L	80	306	173	225	227	2	A	640	159	21.40
N90	115D31R	90	306	173	225	227	1	A	665	160	22.80
N90L	115D31L	90	306	173	225	227	2	A	665	160	22.80
N100	95E41R	100	409	173	233		1	A	700	209	26.50
N100L	95E41L	100	409	173	233		2	A	700	209	26.50
N120	115F51R	120	513	182	248		3	A	760	212	34.00
N120L	115F51L	120	513	182	248		4	A	760	212	34.00
N150	145G51R	150	510	221	246		3	A	820	322	41.00
N150L	145G51L	150	510	221	246		4	A	820	322	41.00
N200	190H52R	200	518	274	248		3	A	850	400	55.00
N200L	190H52L	200	518	274	248		4	A	850	400	55.00

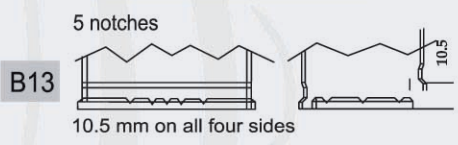
Cell Layout



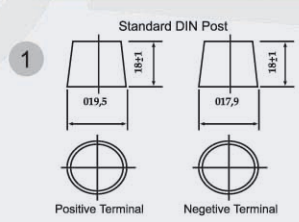
JIS Terminal Type



DIN Bottom Hold



DIN Terminal Type



TRACTOR RANGE

Battery Type	AH (20 Hour Rate)	CCA, SAE (-18°C)	RC (MIN)	Dimension			Weight (KG)		Electrolyte, SP GR 1.280 (LT)	Cell Layout	Terminal Type
				L	W	H	Dry	Filled			
T80/L	80	550	150	306	173	225	16.3	23.6	5.7	1	A
T90/L	90	650	180	409	173	233	18.7	28.2	7.4	1	A
T100/L	100	750	210	409	173	233	20.4	29.9	7.4	1	A

AUTOMOTIVE DIN RANGE

Technical Specifications

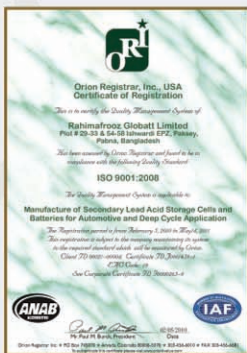
Catalogue Number	Capacity 20HR	Dimension, mm			Cell Layout	Terminal Type	Hold Down	CCA (EN)	CCA (DIN)	RC Min.	Filled Wt (KG)
		L	W	H							
54434/54459	44	207	175	190	2	1	B13	320	192	56	12.4
54464	44	207	175	190	1	1	B13	320	192	56	12.4
55530/55559	55	242	175	190	2	1	B13	410	246	73	14.8
55548/55565	55	242	175	190	1	1	B13	410	246	73	14.8
56030/56059	60	242	175	190	2	1	B13	480	288	89	15.9
56219	62	242	175	190	2	1	B13	480	288	89	15.9
56618/56638	66	278	175	190	2	1	B13	500	300	91	17.5
56633	66	278	175	190	1	1	B13	500	300	91	17.5
57217/57220	72	278	175	190	2	1	B13	570	342	100	18.7
57240	72	278	175	190	2	1	B13	570	318	106	18.7
57219	72	278	175	190	1	1	B13	570	342	100	18.7
57412/57417	74	278	175	190	2	1	B13	590	354	109	18.7
57413	74	278	175	190	1	1	B13	590	354	109	18.7
57512	75	278	175	190	2	1	B13	590	354	109	18.7
57531/57540	75	278	175	190	2	1	B13	590	354	109	18.7
58035/58043	80	315	175	190	2	1	B13	680	408	128	21.0
58533/58535	85	315	175	190	2	1	B13	680	408	128	21.0
58815/58827	88	353	175	190	2	1	B13	680	408	140	24.0
58821	88	353	175	190	1	1	B13	680	408	140	24.0
58833	88	353	175	190	2	1	B13	680	408	140	24.0
59218	92	353	175	190	2	1	B14	681	408.6	140	24.0
60038/60044	100	353	175	190	2	1	B13	780	468	166	25.1
53646	36	207	175	175	2	1	B13	270	162	52	11.5
54321	43	207	175	175	2	1	B13	290	174	55	11.5
54322	43	207	175	175	1	1	B13	290	174	55	11.5
55046	50	242	175	175	2	1	B13	360	216	70	14.4
54519	45	242	175	175	2	1	B13	370	222	72	14.4
55457	54	242	175	175	2	1	B13	370	222	72	14.4
55459	54	242	175	175	1	1	B13	370	222	72	14.4
55506/55566	55	242	175	175	2	1	B13	370	222	72	14.4
56077	60	242	175	175	2	1	B13	370	222	72	14.4
55415	54	278	175	175	2	1	B13	450	270	89	16.4
56318	63	278	175	175	2	1	B13	450	270	89	16.4
56628	66	278	175	175	2	1	B13	510	306	105	17.5
56828	68	278	175	175	2	1	B13	510	306	105	17.5
56821	68	278	175	175	1	1	B13	510	306	105	17.5
57113	71	278	175	175	2	1	B13	520	318	106	17.5
57439	74	278	175	175	2	1	B13	520	318	106	17.5
57539	75	315	175	175	2	1	B13	530	318	107	18.6
58014	80	315	175	175	2	1	B13	620	372	124	19.7
58514	85	315	175	175	2	1	B13	620	372	124	19.7
58515	85	353	175	175	2	1	B13	680	410	140	22.5
58820	88	353	175	175	2	1	B13	690	414	142	22.5
59219	92	353	175	175	2	1	B13	690	414	142	22.5

Standard Height Series

Low Height Series



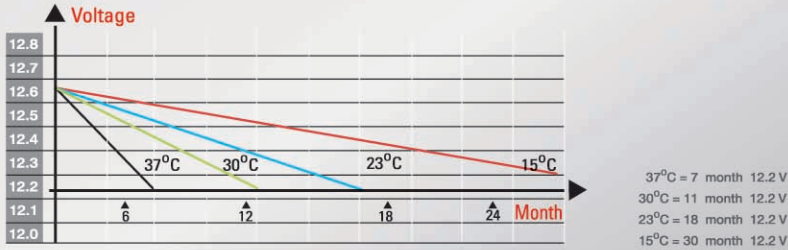
Our Certificate



SELF-DISCHARGE CHARACTERISTICS OF GLOBATT MAINTENANCE FREE BATTERIES

Self-discharge by nature is a common phenomenon for lead-acid batteries. The reason behind this is the impurities contained in lead alloy induce local action, causing electric energy to be consumed. This phenomenon is temperature dependent, higher temperature leads to higher discharge. Compared with the other lead acid batteries, Globatt uses carefully selected highly refined Ca-Tin alloy, rendering extremely low rate of self discharge. That's why a freshening charge is not required for Globatt batteries until the OCV becomes 12.2 V or lower.

Fig : Self - Discharge Characteristics



At 12.2 V latest a recharge is needed

OTHER IMPORTANT BENEFITS

- High resistance to corrosion due to a fine surface grain
- No presence of cranked nodes in the grid
- Reduced electrical resistance i.e. a better energy output
- No water topping up is required during service life
- Minimal overcharge risk compared to conventional lead-antimony battery



Globatt- Largest Export Plant for Automotive Battery in South Asia