



RHINO
TOUGH-STRONG-PROTECTED

POWER



GERMAN
TECHNOLOGY

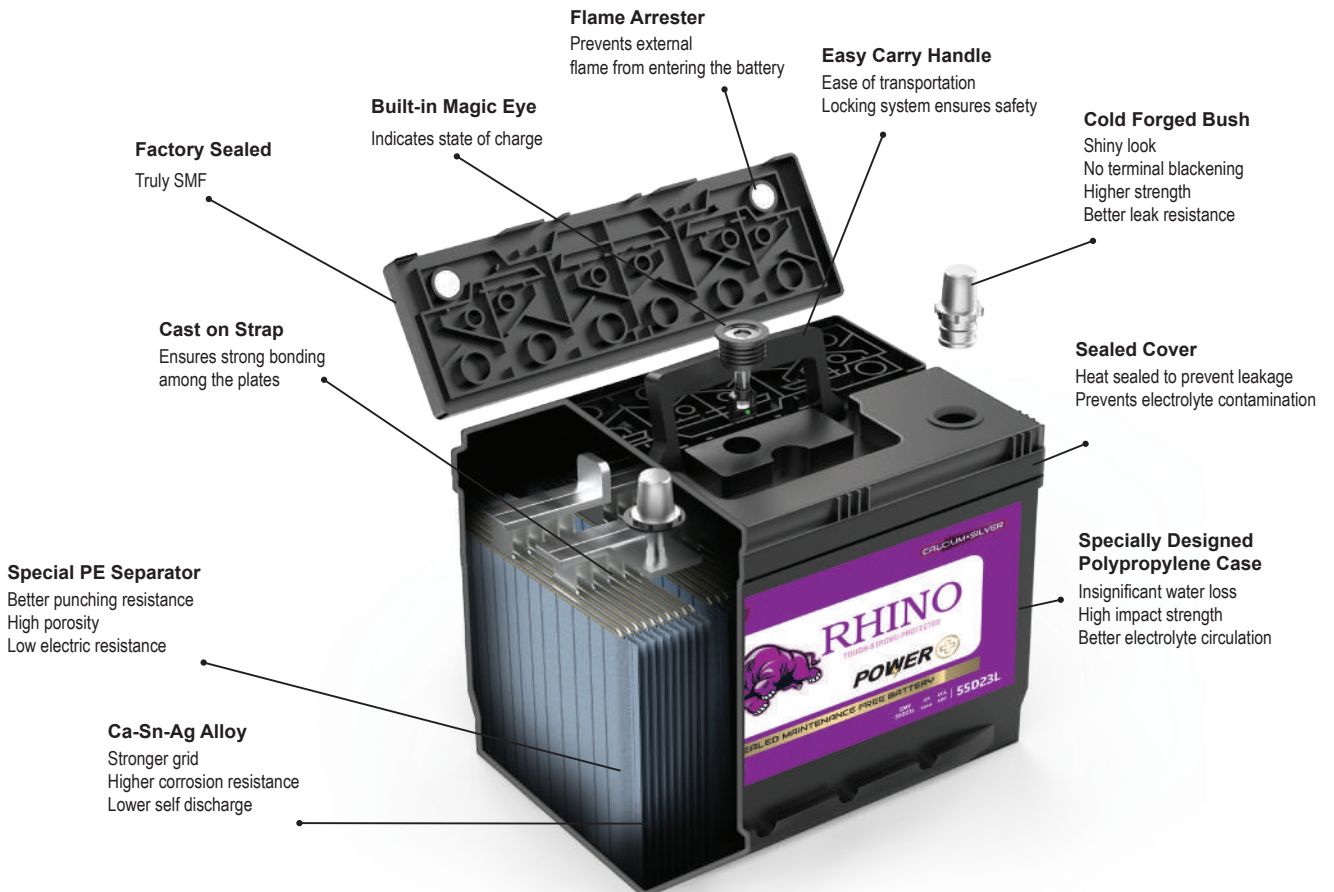
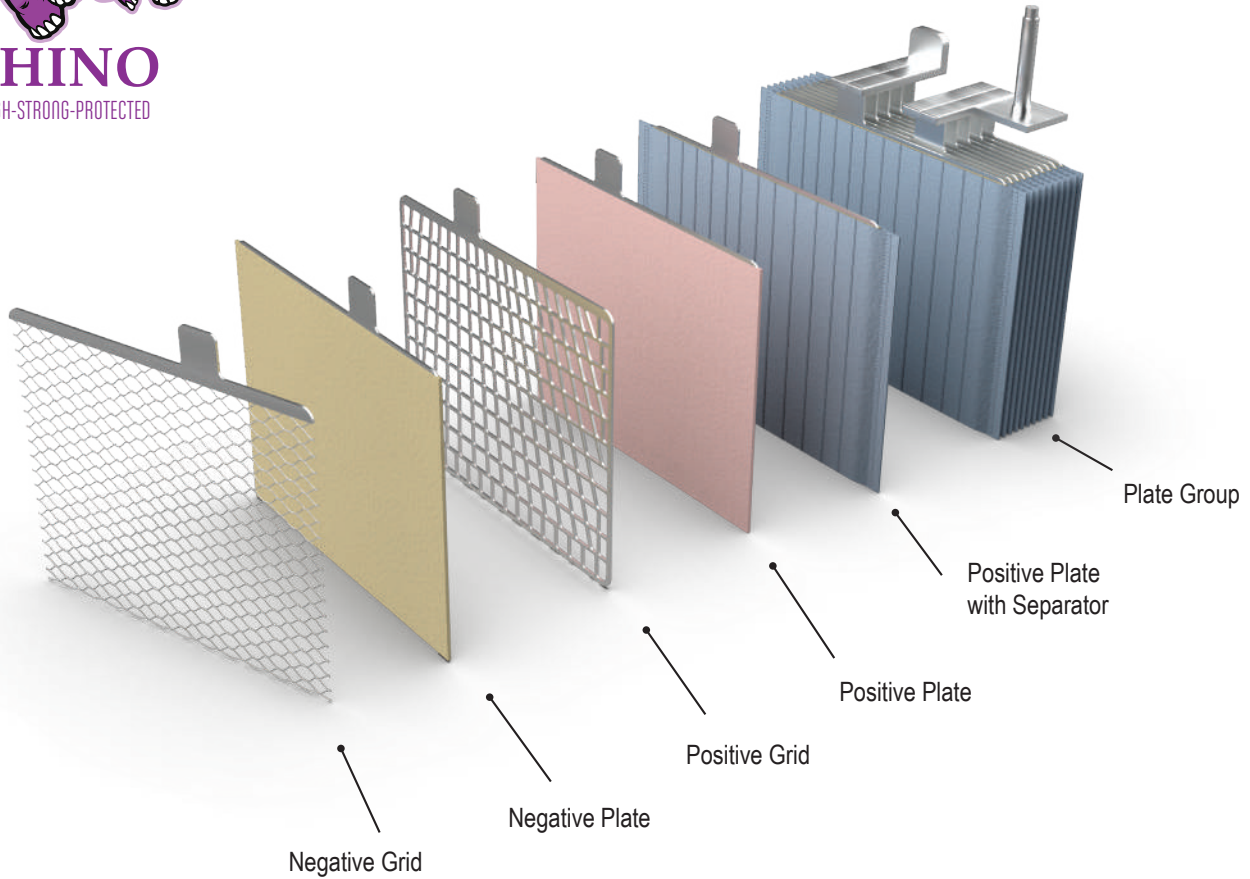
Sealed Maintenance Free Batteries

PASSENGER | BUS | TRUCK



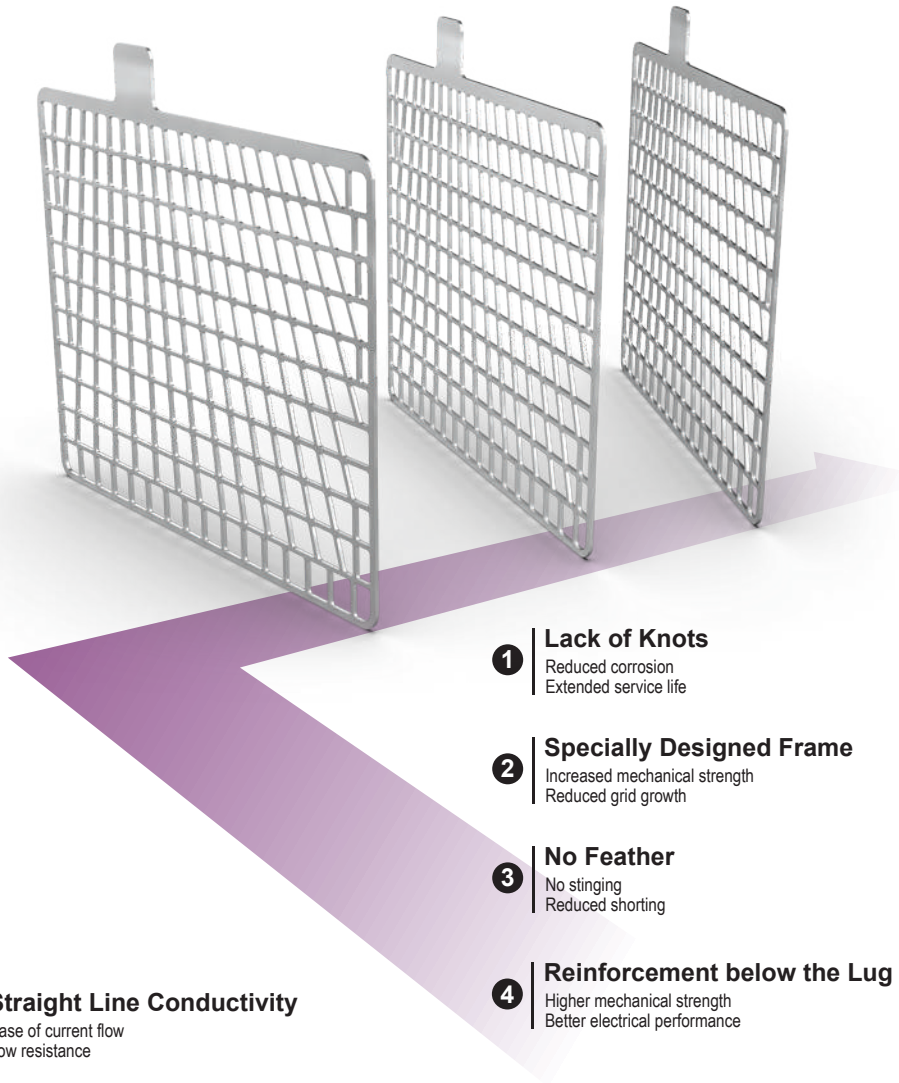
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BATTERY Components





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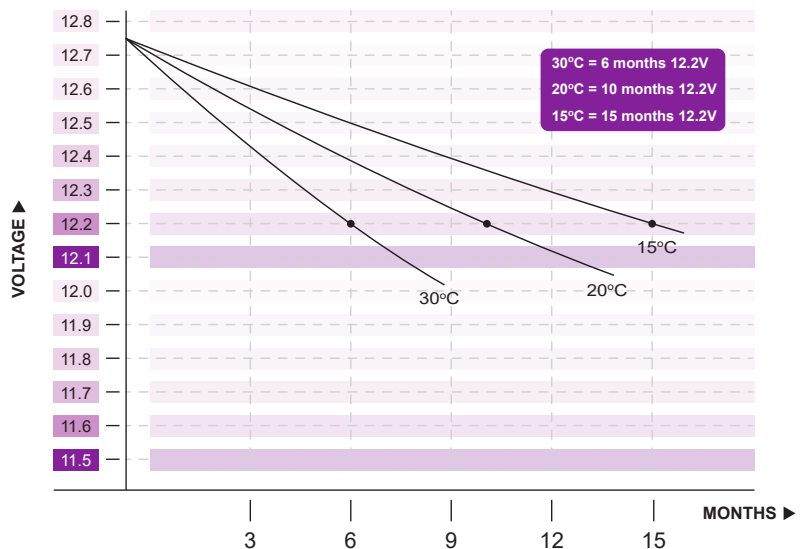
- 1 Lack of Knots**
Reduced corrosion
Extended service life
- 2 Specially Designed Frame**
Increased mechanical strength
Reduced grid growth
- 3 No Feather**
No stinging
Reduced shorting
- 4 Reinforcement below the Lug**
Higher mechanical strength
Better electrical performance
- 5 Straight Line Conductivity**
Ease of current flow
Low resistance
- 6 Lower Energy Consumption**
Less greenhouse gas
Environment-friendly
- 7 Reduced Grid Growth**
Reduced risk of cell shorting
Extended grid life



Cold Forged Bush (Hoffman)

- ✓ Shiny look
- ✓ No terminal blackening
- ✓ Higher strength
- ✓ Better leak resistance
- ✓ Smooth surface
- ✓ Improved grain structure

Self discharge of Pb-Ca battery



Recharge if OCV below 12.2V



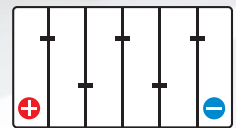
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JIS

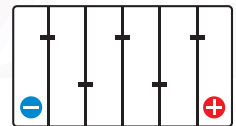


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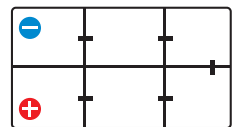
Cell Layout



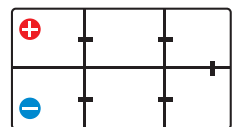
Layout 1



Layout 0



Layout 4

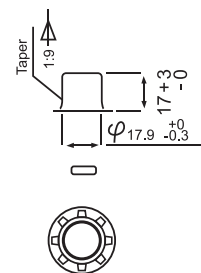
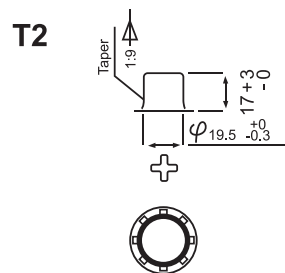
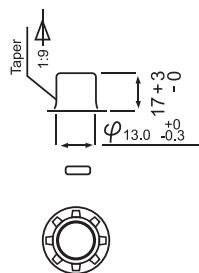
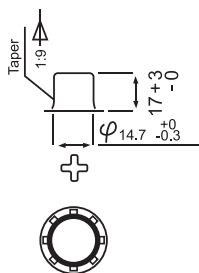
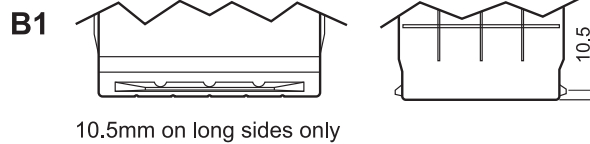


Layout 3



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Bottom Hold



Bottom Hold



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Technical Specification



JIS-PC

Container	New JIS	Old JIS	Dimension (mm)				Capacity AH @ 20	RC	CCA	Cell Layout	Terminal	Bottom Hold
			L	W	H	TH						
B19	38B19R/L	NS40/L	185	127	200	220	32	42	340	1/0	T1	B0/B1
	40B19R/L	NS40Z/L	185	127	200	220	35	54	410	1/0	T1	B0/B1
B24	45B24R/L	N40/L	234	127	200	220	40	71	450	1/0	T1	B0/B1
	45B24RS/LS	N40S/LS	234	127	200	220	40	71	450	1/0	T2	B0/B1
	50B24R/L	NS60/L	234	127	200	220	45	86	500	1/0	T1	B0/B1
D23	50B24RS/LS	NS60S/LS	234	127	200	220	45	86	500	1/0	T2	B0/B1
	55D23R/L	55D23R/L	230	172	200	220	60	112	620	1/0	T2	B0/B1
	85D23R/L	85D23R/L	230	172	200	220	68	118	690	1/0	T2	B0/B1
D26	48D26R/L	N50/L	257	172	200	220	50	95	530	1/0	T2	B0/B1
	60D26R/L	N50Z/L	257	172	200	220	60	116	620	1/0	T2	B0/B1
	65D26R/L	NS70/L	257	172	200	220	65	116	630	1/0	T2	B0/B1
	80D26R/L	NX110-5/L	257	172	200	220	70	120	710	1/0	T2	B0/B1
D31	65D31R/L	N70/L	302	172	200	220	70	121	730	1/0	T2	B0/B1
	90D31R/L	N70Z/L	302	172	200	220	75	124	750	1/0	T2	B0/B1
	95D31R/L	NX120-7/L	302	172	200	220	80	168	810	1/0	T2	B0/B1
	105D31R/L	N90/L	302	172	200	220	90	173	840	1/0	T2	B0/B1

JIS-CV

Container	New JIS	Old JIS	Dimension (mm)				Capacity AH @ 20	RC	CCA	Cell Layout	Terminal	Bottom Hold
			L	W	H	TH						
E41	115E41R/L	N100/L	400	171	200	220	100	194	750	1/0	T2	B0
F51	135F51R/L	N120/L	505	172	210	230	120	238	910	4/3	T2	B0
	150F51R/L	N135/L	505	172	210	230	135	276	980	4/3	T2	B0
G51	185G51R/L	N150/L	505	212	210	230	150	340	1120	4/3	T2	B0
	195G51R/L	N170/L	505	212	210	230	170	363	1210	4/3	T2	B0
H52	210H52R/L	N180/L	509	274	217	237	180	397	1250	4/3	T2	B0
	225H52R/L	N200/L	509	274	217	237	200	447	1330	4/3	T2	B0
	250H52R/L	N225/L	509	274	217	237	225	516	1380	4/3	T2	B0

JIS-EFB

Container	Type No.	Dimension (mm)				Capacity AH @ 20	RC	CCA	Cell Layout	Terminal	Bottom Hold
		L	W	H	TH						
B19	M42/R (55B19L/R)	185	127	200	220	40	61	370	1/0	T1	0/B1
B24	N55/R (70B24L/R)	234	127	200	220	50	79	470	1/0	T1/T2	0/B1
D23	Q85/R (90D23L/R)	230	172	200	220	65	98	600	1/0	T2	0/B1
D26	S95/R (100D26L/R)	257	172	200	220	70	118	710	1/0	T2	0/B1
D31	T110/R (115D31L/R)	302	172	200	220	90	158	950	1/0	T2	0/B1



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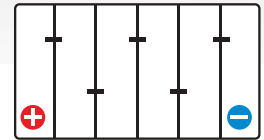


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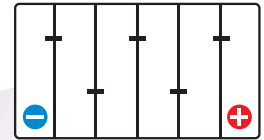
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Cell Layout



Layout 1



Layout 0

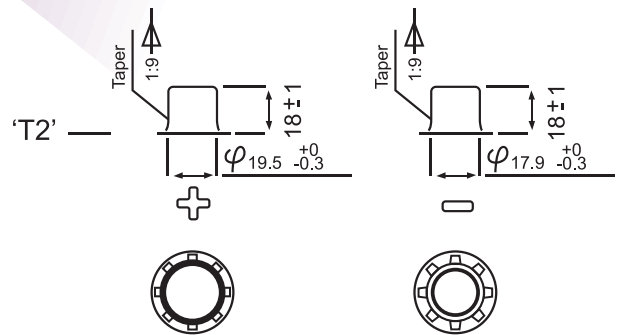
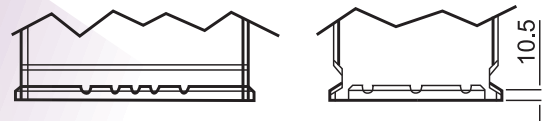


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charge

Bottom Hold (B13)





DIN-LN

Container	Part No.	Dimension				AH @20H	RC	CCA	Cell Layout	Terminal	Bottom Hold
		L	W	H	TH						
LN1	54459	207	174	190	190	44	78	500	0	T2	B13
	54464	207	174	190	190	44	78	500	1	T2	B13
LN2	55559	242	174	190	190	55	89	600	0	T2	B13
	55565	242	174	190	190	55	89	600	1	T2	B13
	56219	242	174	190	190	62	120	680	0	T2	B13
	56218	242	174	190	190	62	120	680	1	T2	B13
LN3	56638	277	174	190	190	66	134	690	0	T2	B13
	56633	277	174	190	190	66	134	690	1	T2	B13
	57417	277	174	190	190	74	138	800	0	T2	B13
	57413	277	174	190	190	74	138	800	1	T2	B13
LN4	58590	314	174	190	190	85	163	860	0	T2	B13
	58591	314	174	190	190	85	163	860	1	T2	B13
LN5	58821	353	174	190	190	88	168	920	1	T2	B13
	58833	353	174	190	190	88	168	920	0	T2	B13
	59218	353	174	190	190	92	176	940	0	T2	B13
	60038	353	174	190	190	100	197	950	0	T2	B13
	67018	511	222	203	223	170	365	1130	3	T2	B0
DIN-B	67019	511	222	203	223	170	365	1130	4	T2	B0
	68032	511	222	203	223	180	395	1220	3	T2	B0
	68033	511	222	203	223	180	395	1220	4	T2	B0

DIN-LBN

Container	Part No.	Dimension				AH @20H	RC	CCA	Cell Layout	Terminal	Bottom Hold
		L	W	H	TH						
LBN1	54321	207	174	175	175	43	74	550	0	T2	B13
	54322	207	174	175	175	43	74	550	1	T2	B13
LBN2	55457	242	174	175	175	54	87	660	0	T2	B13
	55459	242	174	175	175	54	87	660	1	T2	B13
LBN3	56077	242	174	175	175	60	110	700	0	T2	B13
	56628	277	174	175	175	66	122	720	0	T2	B13
LBN4	57439	277	174	175	175	74	133	790	0	T2	B13
	58514	314	174	175	175	85	142	850	0	T2	B13
LBN5	58820	353	174	175	175	88	160	910	0	T2	B13
	59219	353	174	175	175	92	163	930	0	T2	B13

DIN-EFB

Container	Part No.	Dimension				AH @20H	RC	CCA	Cell Layout	Terminal	Bottom Hold
		L	W	H	TH						
LN1	55010	207	174	190	190	50	79	595	1/0	T2	B13
LN2	56010	242	174	190	190	60	98	710	1/0	T2	B13
LN3	57010	277	174	190	190	70	126	950	1/0	T2	B13
LN4	58010	314	174	190	190	80	147	1050	1/0	T2	B13
LN5	59010	353	174	190	190	90	163	1180	1/0	T2	B13

WORLD WIDE DISTRIBUTION



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