

SUPER MAINTENANCE FREE BATTERY

KRANK™

PREMIUM SMF BATTERY



GERMAN
TECHNOLOGY





We offer a wide range of lead acid batteries for:

Passenger vehicles - all JIS, all DIN, and fast moving BCI types.

Commercial vehicles - including heavy-duty trucks, buses and other commercial vehicles.

Recreational vehicles - such as golf cars, marine vehicles and power-sports vehicles.

Deep cycle purpose - such as IPS, UPS, SOLAR, 2-Volt batteries, etc.

Start-stop technology - wide range of EFB battery.

Our Capabilities

German technology.

World class engineers.

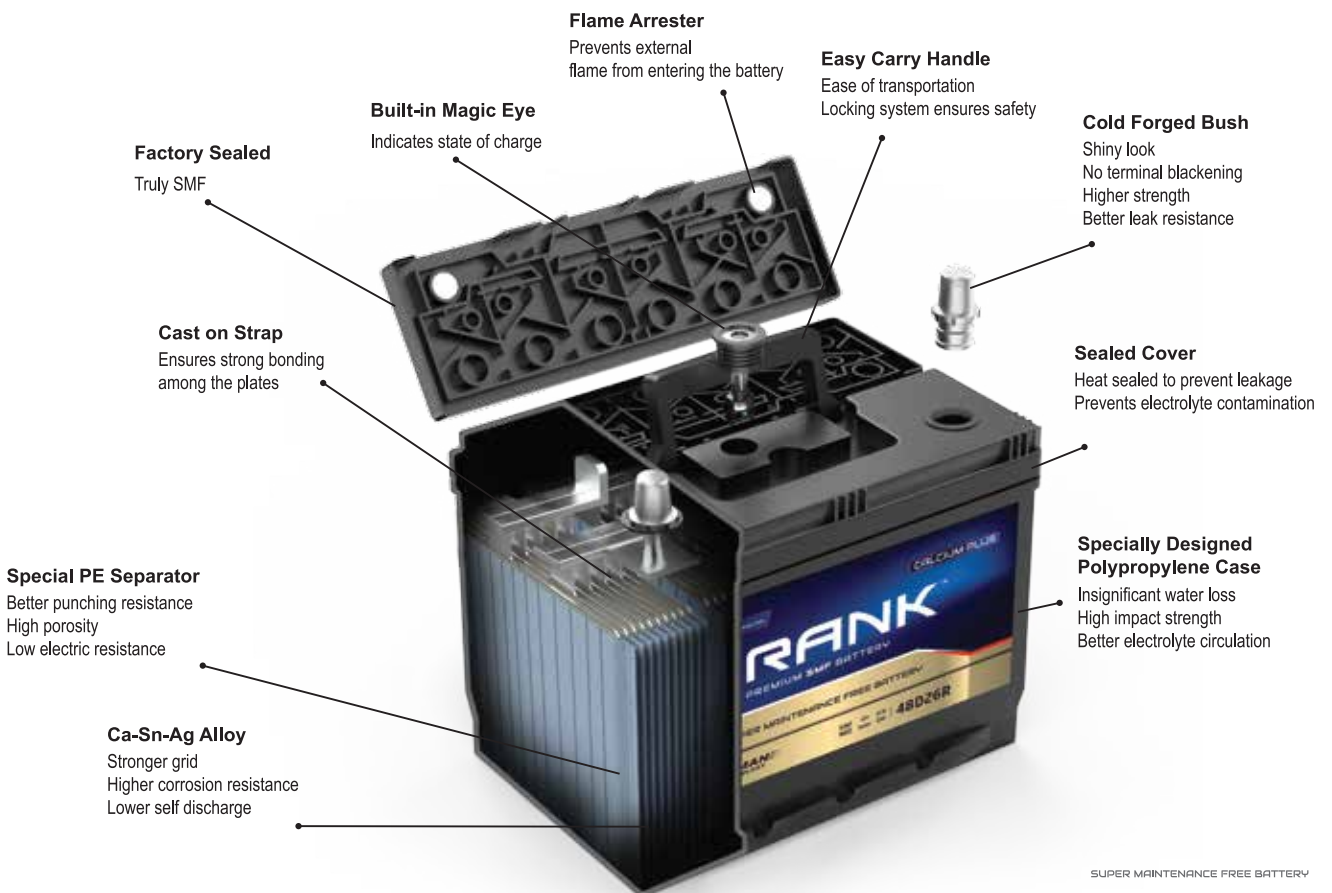
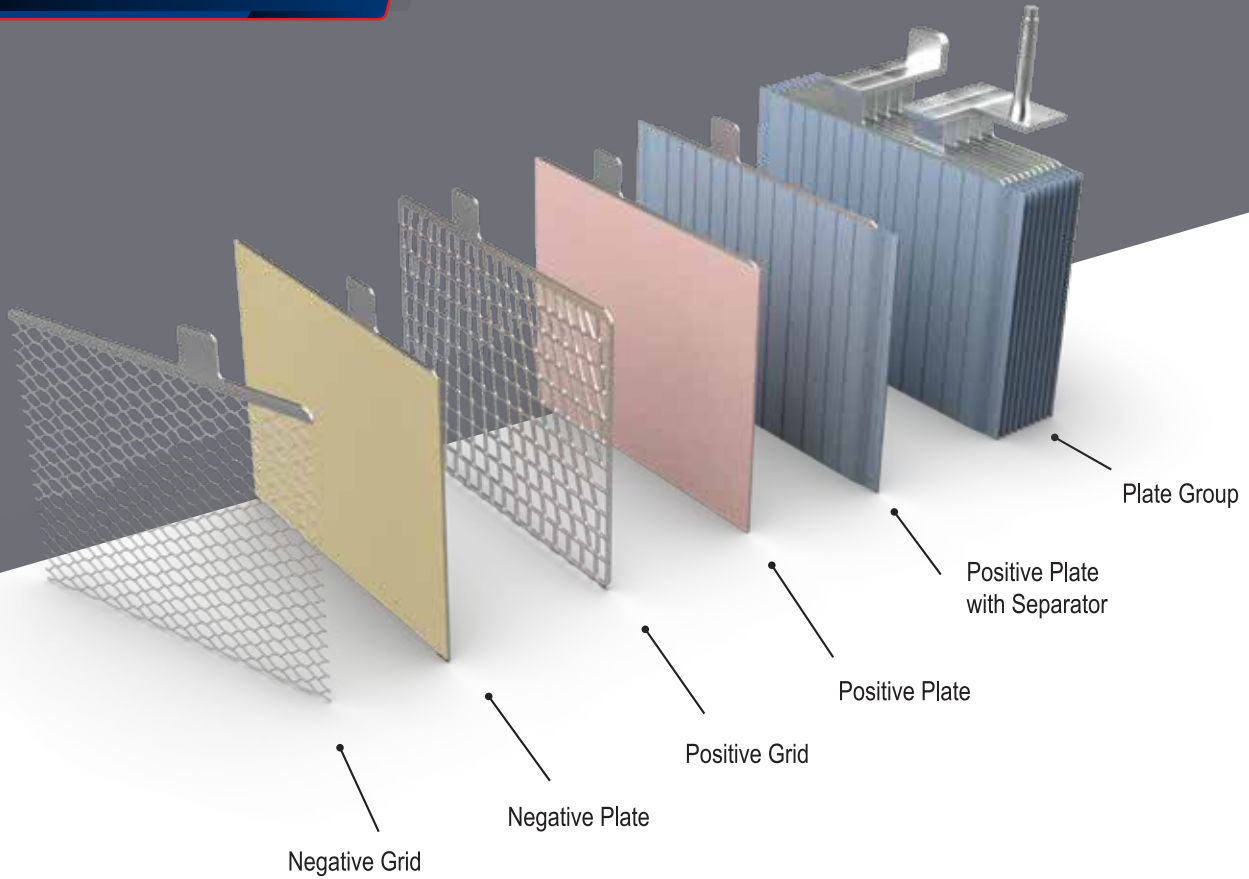
Consistent quality.

European machines of the highest quality.

Fully automated or semi-automated production process.

Supply-chain optimization for consistent product delivery.

BATTERY Components

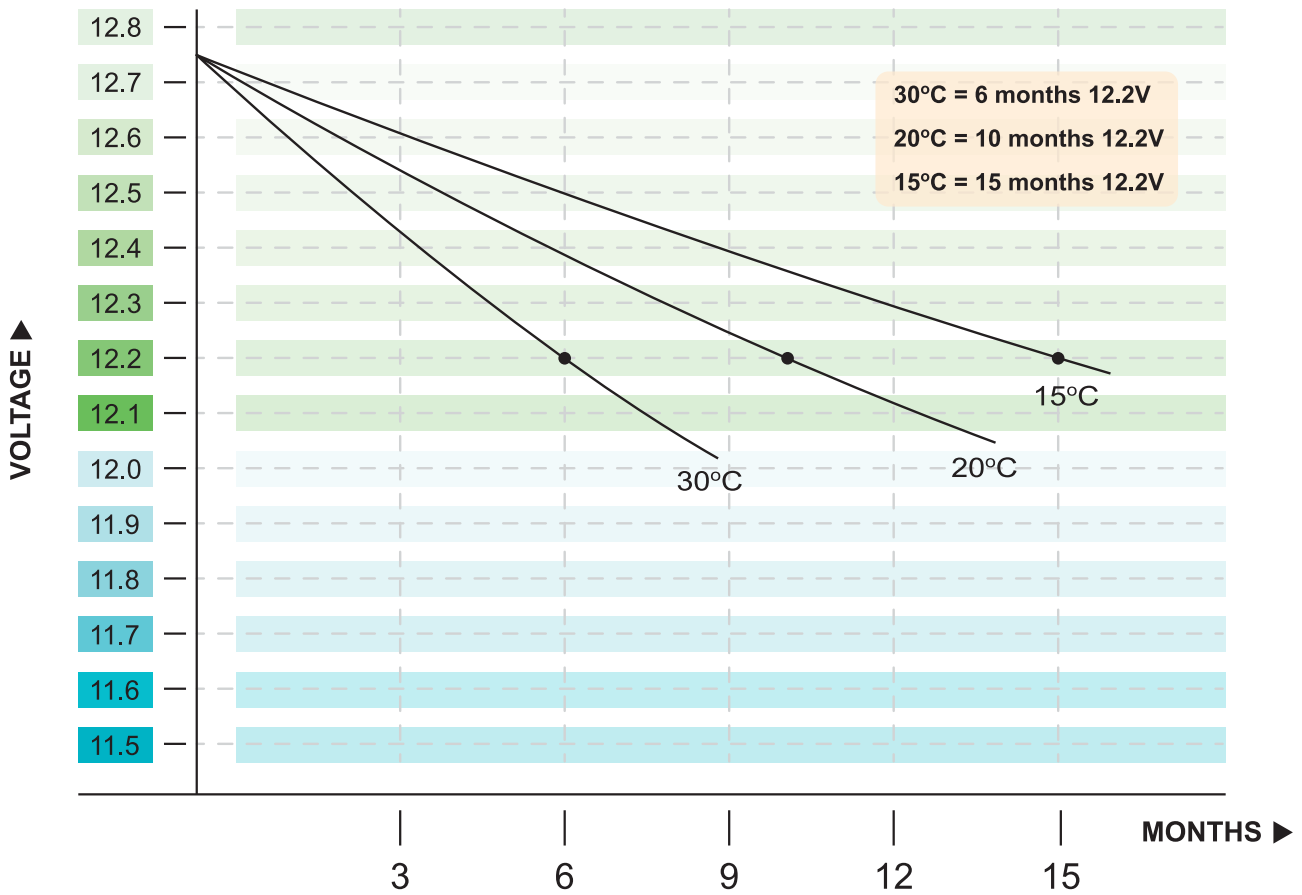


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Features

Self discharge of Pb-Ca battery



Recharge if OCV below 12.2V



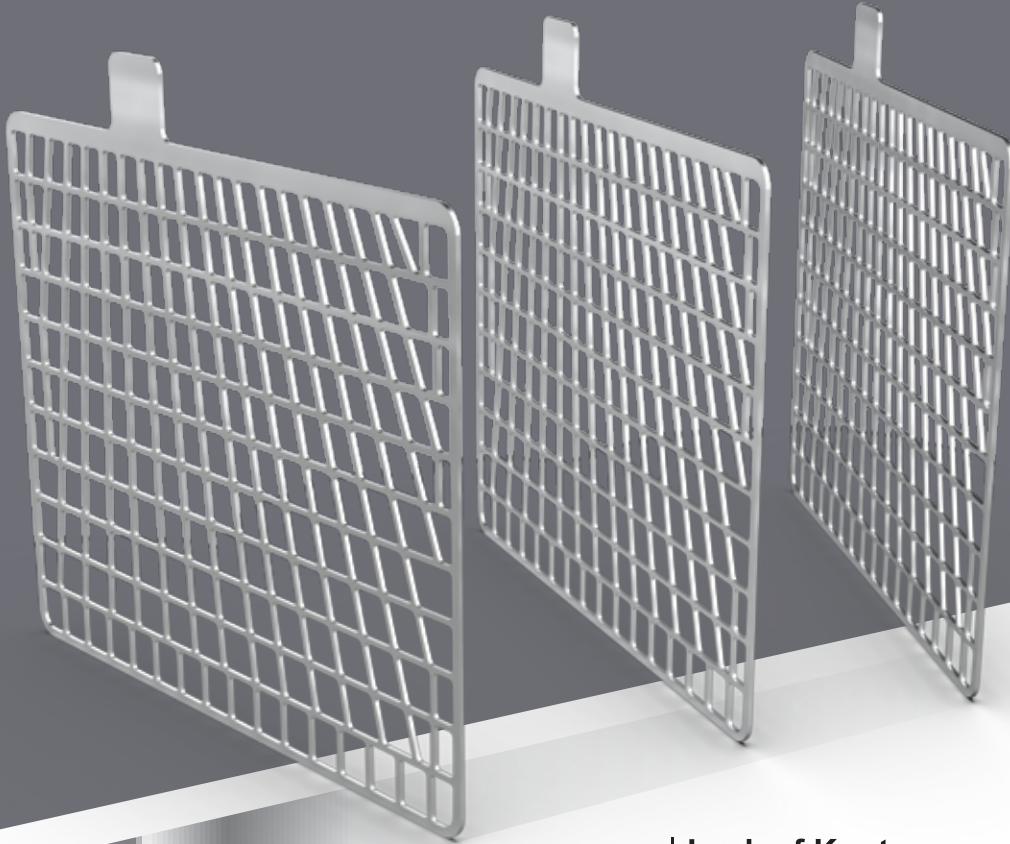
Cold Forged Bush (Hoffman)

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

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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

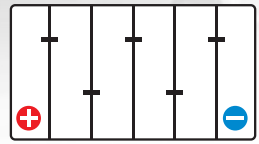
6 Lower Energy Consumption
Less greenhouse gas
Environment-friendly

7 Reduced Grid Growth
Reduced risk of cell shorting
Extended grid life

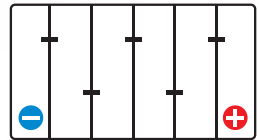
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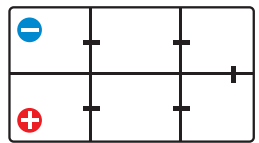
Cell Layout



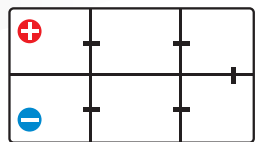
Layout 1



Layout 0



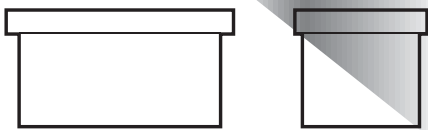
Layout 4



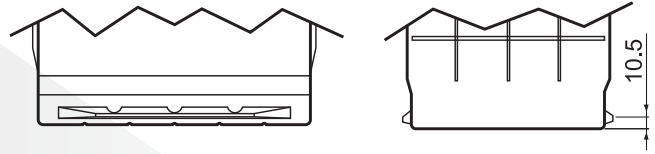
Layout 3

Bottom Hold

B0

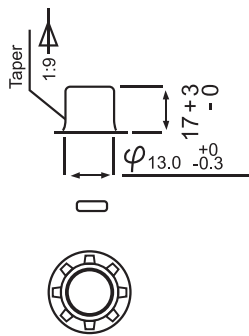
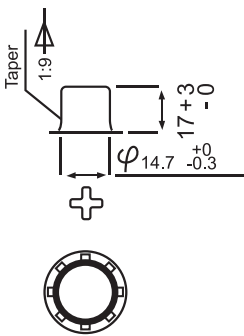


B1

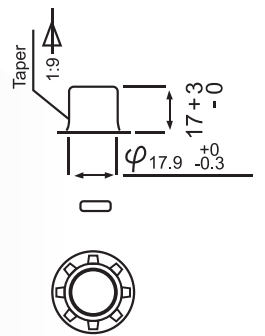
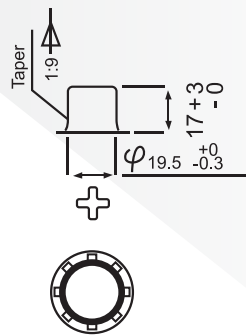


10.5mm on long sides only

T1



T2



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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
D26	85D23R/L	85D23R/L	230	172	200	220	68	118	690	1/0	T2	B0/B1
	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
D31	80D26R/L	NX110-5/L	257	172	200	220	70	120	710	1/0	T2	B0/B1
	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

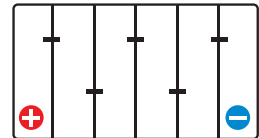
JIS-EFB

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

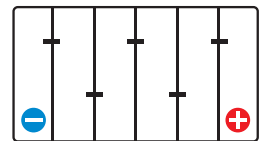
DIN



Cell Layout

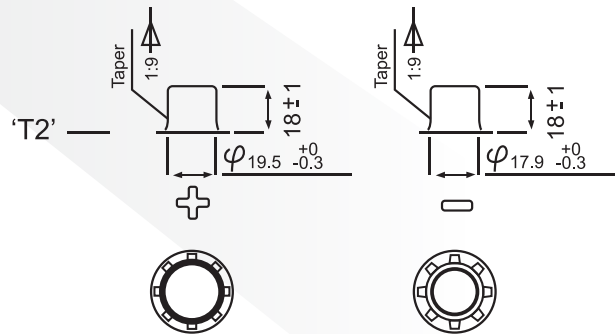
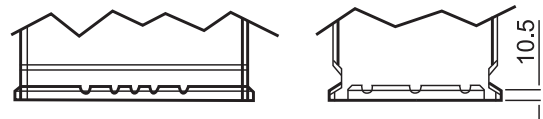


Layout 1



Layout 0

Bottom Hold (B13)



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Technical Specification

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
DIN-B	67018	511	222	203	223	170	365	1130	3	T2	B0
	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
	56077	242	174	175	175	60	110	700	0	T2	B13
LBN3	56628	277	174	175	175	66	122	720	0	T2	B13
	57439	277	174	175	175	74	133	790	0	T2	B13
LBN4	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

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Strip Casting



- » 7-step rolling ensures uniform thickness of the strip
- » Higher material strength of the strip due to Ca, Sn, Ag alloy quality
- » Extreme resistance to corrosion
- » Precisely controlled process

- » Automatic expanded grid width adjustment is possible during the expansion process, as to keep a constant grid width
- » Grid design for better paste retention
- » Follows the movement of the strip and at the same time performs the expansion by punching the strip
- » Material savings- optimized mesh design provides the lightest weight grid available

Expander



- » Enhanced grid design ensures more durability and longevity than traditional grids
- » Better and more reliable performance at engine turn on
- » Continuous process of strip flow (no stop)
- » High speed production

Punch Machine



- » Multiple zone mould cooling
- » Reliable cast on processing
- » Robotic hand- automatic line
- » Using of 'flux' for perfect casting

Cast on Strap (COS)



Inter Cell Welding (ICW)



- » Voltage regulator Online UPS
- » 100% perfect weld quality
- » Reliable weld head design
- » Three axis weld head motion

- » Prevention from cell short damage
- » Prevents plate/cell vibration
- » Uniform temperature control
- » Fully automated melting pot

Hot Melt



- » Automatic formation water bath
- » Temperature controlled formation through water chilled recirculation
- » Built-in ATP in each tank
- » Automatic loading and unloading line and shuttles

Charging Tank



- » Automatic terminal brushing system
- » Automatic and uniform grease pasting on each terminal
- » HRD and HVT testing
- » Code engraving system

5-in-1 Combo Finisher



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Altu Khan Jute Mills Ltd.

(a sister concern of Panna Group)

Manufacturer & 100% Exporter of Jute Yarn & Twine



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Flammables



Shield eyes



Keep out of reach
of children



Sulfuric acid



Read instruction
manual carefully



Explosive gas

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