

COLD CRANKING AMPS (CCA)

The most important consideration is that the battery's **CCA** rating **MEETS OR EXCEEDS**, your car's **OEM** cranking requirement in your climate. **CCA** is the discharge load measured in amps that a new, fully charged battery, operating at -18°C , can deliver for 30 seconds and while maintaining the voltage above 7.2 volts (EN).

There are different standards for CCA

EN: European Standard BS EN 50342+A1:2006
50342 + A1: 2001

DIN: German Industrial Standard 43 539 T2

SAE: American Standard

IEC: International Electrotechnical
Commission 95-1

NEW SHORT CODE



LB1 040 036 013

A **B** **C** **D**

A: Battery Box Type

B: Ah

C: CCA (EN)

D: **First digit:** Layout

Second digit: Terminal

Third digit: Holddown

BATTERY CATALOGUE



*Formul A / Formul A Asia
Supr A / Supr A Asia / Supr A Leisure
Supr A Heavy Duty / Supr A Super Heavy Duty*



SHORT CODE	capacity c20 ah	CCA (en)	layout / terminal	H. DOWN	pallet unity 103*110cm	MAX WEIGHT kg	TECH DRAW		
LB3 072 061 013	72	610	0/1	B13	63	16.60			
LB3 072 061 113	72	610	1/1	B13	63	16.60			
L3 066 060 013	66	600	0/1	B13	63	17.30			
L3 072 064 013	72	640	0/1	B13	63	17.60			
L3 072 064 011	72	640	0/1	B01	63	17.60			
L3 074 064 013	74	640	0/1	B13	63	17.60			
L3 074 064 113	74	640	1/1	B13	63	17.60			
LB4 075 066 013	75	660	0/1	B13	60	18.20			
L4 082 072 013	82	720	0/1	B13	60	19.50			
LB5 085 076 013	85	760	0/1	B13	45	20.90			
L5 088 076 013	88	760	0/1	B13	45	21.60			

İNCI AKÜ MILESTONES



Location: Manisa / Turkey
Area: 35,000 m²
Capacity: 4,000,000 battery/year
Employees: 380 people



Location: Kyiv / Ukraine
Area: 5,800 m²
Capacity: 300,000 battery/year
Employees: 50 people

- 1984, Founded in the name, İnci Akü, by İnci Holding
- 1985, First OEM supply,
Transferred license and technology from Europe
- 1993, Formed a joint-venture with a French Company
- 1995, Joint-venture structure was changed after acquisition of French Partner by an American Company,
Obtained ISO 9002 TSE certificate
- 1997, First-time production of Ca alloy batteries in Turkey
- 1998, New plant in Kyiv/Ukraine has been founded
- 1999, First-time introduction of Expanded Metal Batteries in Turkey,
Obtained QS 9000 certificate
- 2000, Acquisition of "EAS" battery brand
- 2002, Obtained TS 16949 certificate
- 2005, 100% of shares re-owned by İnci Holding,
Sealed Maintenance Free Battery with advanced silver alloy introduced to the market,
Starting Kaizen in every level of the organization,
Obtained ISO 14001 certificate
- 2006, Starting six sigma approach,
Obtained Ford Q1 Certificate
- 2007, İnci Akü's production system "İNİS" was improved,
Quality system techniques TPM, QRQC, 5S systems were improved,
Our products have been sold over 40 countries
New foreign OE customers
- 2008, Received supplier award from TOFAS (Fiat Turkey)
Chosen as Fastest Fish of Turkey
Obtained ISO 18001 Ohsas Quality Certificate
Exports reached to 53 countries



"we know how"



Formul A



Formul A Asia



Supr A



Supr A Asia



Supr A Leisure



Supr A Heavy Duty



Supr A Super Heavy Duty



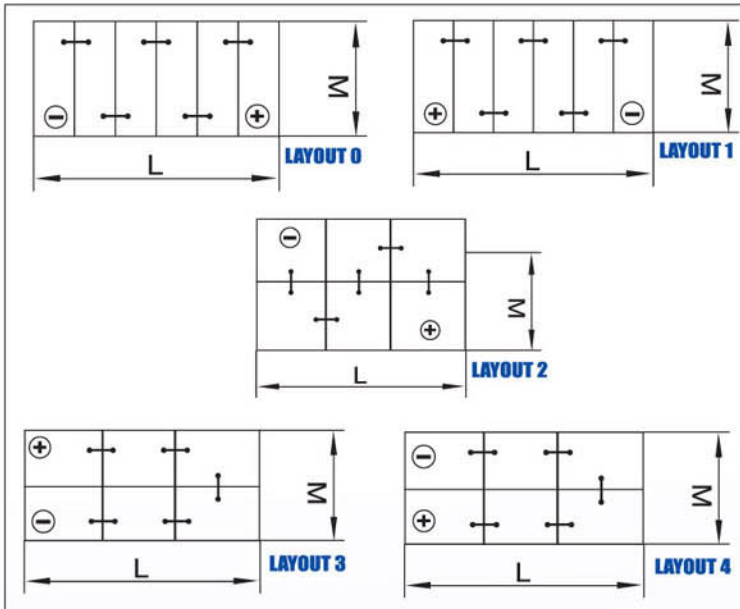
"we know how"

Quality Awards 

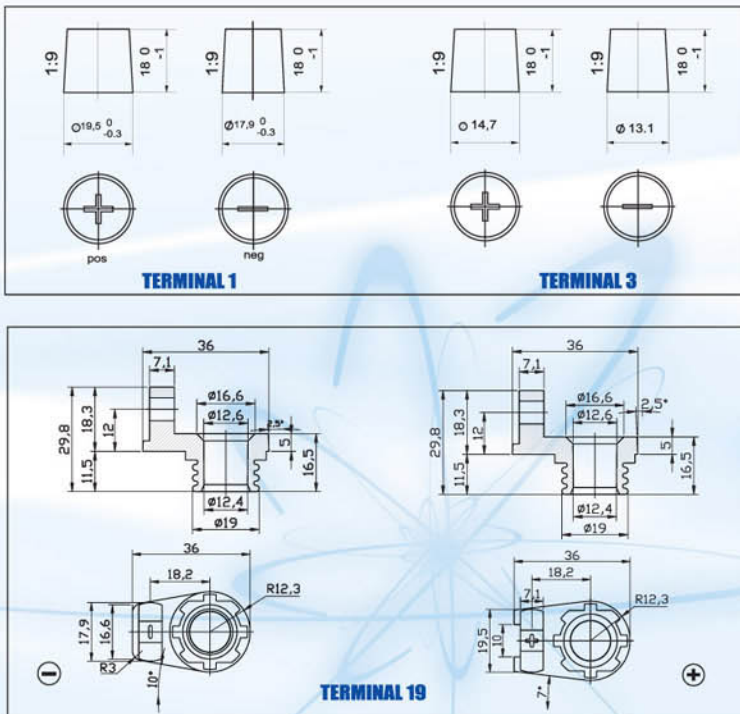
Q1



LAYOUT TYPES

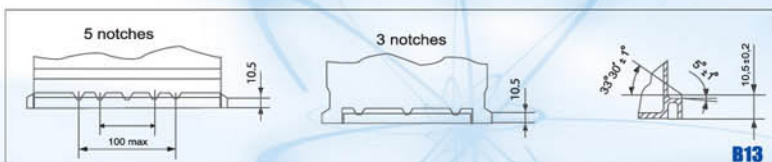
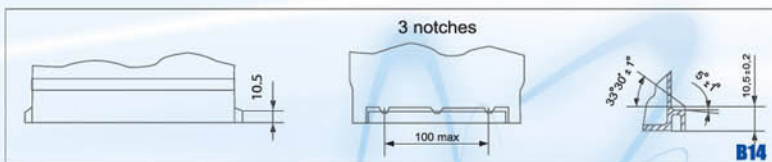
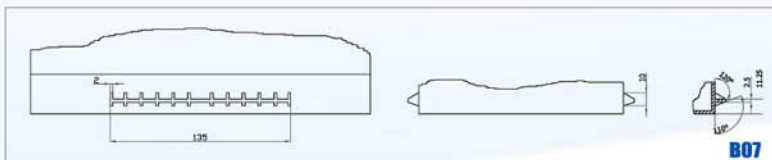
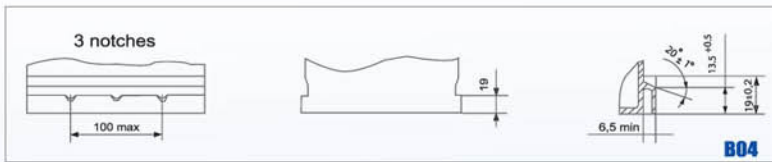
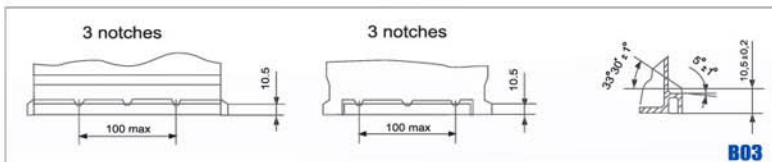
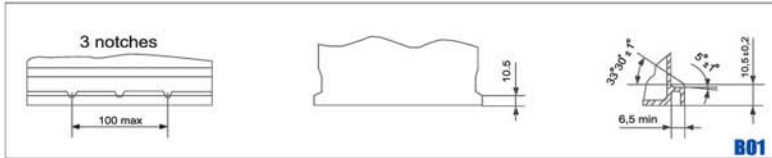


TERMINAL TYPES



HOLDDOWN TYPES

B 00 Without Holddown



BATTERY TESTING PROCEDURE

PROOF OF PURCHASE WITHIN WARRANTY PERIOD GO TO "A"
OUTSIDE WARRANTY PERIOD OR NO PROOF OF PURCHASE GO TO ★

A) VISUAL CHECK:

A1) IS THERE A LEAKAGE:

NO : GO TO B

YES:

A2) IS EXTERNAL DAMAGE VISIBLE IN THE VICINITY OF LEAK:

NO: GO TO ★★

YES: GO TO ★

B) DENSITY CHECK (gr/cm³):

B1) DOES ONE CELL HAS LOWER SPECIFIC GRAVITY:

NO: GO TO B4

YES: GO TO ★★

e.g. :1,260 1,1260 1,140 1,260 1,260 1,260

B2) ELECTROLYTE UNUSUAL (DARKBROWN OR EVIDENCE OF EXCESSIVE WATER CONSUMPTION):

NO: GO TO B4

YES: GO TO ★ Damage caused by overcharging , test voltage regulator on the vehicle.

B3) IF SPECIFIC GRAVITY IS LESS THAN 1,240 IN ALL CELLS THEN CHARGE THE BATTERY. IS THE CHARGE ACCEPTANCE AT LEAST 1/20 TH OF THE NOMINAL CAPASITY

NO: GO TO ★ Damage caused by deep discharge or uncharging. (Check vehicle electrics, ie. Voltage regulator, alternator or fan belt)

YES: Recharge the battery completely then test according to C. If after recharging a reading of 1,240 gr/cm³ (or more) is achieved, there is no reason for a claim Battery is ageing , so it's giving less than a 100% performance , reject claim. " ★ "

B4) IF SPECIFIC GRAVITY IS EQUAL OR MORE THAN 1,240 gr/cm³ IN ALL CELLS – AFTER CHARGING

GO TO "C"

C) ELECTRIC CHECK:

THIS TEST SHOULD ONLY BE CARRIED OUT IF THE DENSITY IS EQUAL OR GREATER THAN 1,250 GR/CM³ OTHERWISE CHARGE THE BATTERY FIRST.

Discharge the battery at about 3x20hr rate for 10 seconds.
(ie: for 60 Ah = 3x60=180 Amphers.)

The voltage during discharge should be stable. Result of test given by battery tester:

IS BATTERY DEFECTIVE:

NO:Battery is good.

YES: GO TO ★★

★★ ACCEPT CLAIM

Replace the battery under warranty (claim justified)

★ REJECT CLAIM

Out of warranty

Decisions are subject to our current sale and warranty conditions.

WET BATTERIES:

Always store upright in a cool and dry place, far from water sources. (10-25°C, 25-54 RH). Protect from floor.

A) PERIODICALLY CHECK THE CHARGE OF THE BATTERY (EACH 3 MONTHS)

- 1) Before selling, battery voltage must be greater than 12,60 V.
- 2) Min.Voltage for a battery through storage is 12,40 V. Below this value, sulfuration will start on the plates and the battery performance is affected. Charge without delay to prevent permanent damage. Remove wrapping and charge with constant voltage at 16,1 V 1/20 Cn current.

B) USE FIFO (FIRST IN FIRST OUT) METHOD FOR STOCK ROTATION

Always sell the batteries in first place which are in the stock for a longer time. Keeping older batteries at the front of your stock will help.

C) BATTERY FITMENT:

- 1) Check if you have the correct battery for the vehicle –see battery application list.
- 2) Ensure that the engine is turned off.
- 3) Remove the old battery, disconnecting the earth cable first. (negative terminal)
- 4) Check short circuit in the vehicle to see if there is any consumption without running the car.
- 5) Clean the battery tray and terminal connectors using a wire brush, renew if necessary.
- 6) Install the new battery, do not over tighten holddowns, check polarity before connecting the leads beginning with positive cable (red). Smear terminals with petroleum jelly. Always connect earth cable last , do not over tighten connectors.
- 7) Test proper charge circuit operation by running engine and measuring voltage of battery terminals.

The sulfuric acid contained in the batteries is extremely hazardous.

Precautions:

- Always handle batteries with care.
- Always store upright.
- Never over-fill with acid.
- Always charge in a well ventilated place.
- Always wear eye protection when handling batteries.
- Wear protective clothing if there is any risk of acid splashing.

Emergency Action:

- In the event of skin or eye contact, rinse profusely with water.
- Remove any contaminated clothing.
- **Swallowing:** Drink volumes of water or milk. In all cases seek medical attention.
- **Spillages:** Small spillages can be washed away with volumes of water.
- Batteries in operation release hydrogen and oxygen gases which are highly flammable.
- Avoid smoking, sparks and flames near operating or charging batteries.
- Avoid direct contact between both battery terminals or with conductive objects such as metal tools or jewellery etc. This will produce an extremely powerful electric arc.
- Handle all tools and objects with caution (wrenches, screw-drivers, etc.)



Do not throw away



Recyclable Material



Danger of battery acid



Read operating instruction



Danger of explosion



No Smoking
No Naked Flames
No sources



Wear protective goggles



Keep away from children

Disposal:

Batteries, battery acid, lead and lead compounds must be disposed of in accordance with:

- 1) Control of Pollution Act 1974
- 2) Control of Pollution (Special Waste Regulations) Act 1980. Lead acid batteries are subject to the proposed EFC Council Directive on Batteries and Accumulators containing heavy metals which, if it becomes law, requires users to be advised of the need to **"return for recycling"**. The appropriate ISO7000-1135 symbol, is gradually being introduced within the industry as a label on individual batteries. If in a doubt, consult the Environmental Department of your local authority.
- 3) ISO TS 14001/2002.

Advanced Calcium Calcium Silver Alloy**Ca-Ca Silver Alloy Plates**

- Max performance
- Lower self discharge during storage and unuse after installation
- Highest resistance to corrosion
- Highest cycle life
- Max acid reserve capacity over the plates
- Polyethylen Envelope Separators to prevent short circuit

+2 AH EXTRA

- More Power and Capacity
- Special Enhanced design for luxury and diesel cars
- Over OEM requirements in CCA and capacity

+10-15% CCA Performance

- More Starting Power
- Extreme Long Life in Every Climate

Maximum Safety

- Completely Sealed Double Lid
- No acid leakage - Suitable for trunk use
- Minimum water consumption by special labyrinth in the plugs
- Flame Arrestor to prevent explosion

User Friendly

- ++ Maintenance Free - Ready to use without acid addition
- ++ Acid level indicator to show charging state
- ++ Integrated Handle for easy carry
- ++ Integrated pole covers to enhance safety and attraction

*Formul A**Formul A Asia*



SHORT CODE	capacity c20 ah	CCA (en)	layout / terminal	H. DOWN	pallet qty 163*110cm	MAX WEIGHT kg	TECH DRAW		
LB1 040 036 013	40	360	0/1	B13	87	11.10			
LB1 044 040 013	44	400	0/1	B13	87	11.80			
L1 036 036 013	36	360	0/1	B13	87	11.00			
L1 044 040 013	44	400	0/1	B13	87	12.30			
L1 050 046 013	50	460	0/1	B13	87	13.00			
LB2 050 046 013	50	460	0/1	B13	72	13.50			
LB2 060 054 013	60	540	0/1	B13	72	14.40			
L2 050 046 013	50	460	0/1	B13	72	14.00			
L2 050 046 113	50	460	1/1	B13	72	14.00			
L2 055 054 013	55	540	0/1	B13	72	14.50			
L2 055 054 113	55	540	1/1	B13	72	14.50			



SHORT CODE	capacity c20 ah	CCA (en)	layout / terminal	H. DOWN	pallet entry 103*110cm	MAX WEIGHT kg	TECH DRAW		
L2 060 054 013	60	540	0/1	813	72	15.30			
L2 060 054 113	60	540	1/1	813	72	15.30			
LB3 066 064 013	66	640	0/1	813	63	16.60			
LB3 070 070 013	70	700	0/1	813	63	17.40			
LB3 070 070 113	70	700	1/1	813	63	17.40			
L3 066 064 013	66	640	0/1	813	63	17.50			
L3 072 068 013	72	680	0/1	813	63	17.80			
L3 075 070 013	75	700	0/1	813	63	17.80			
L3 075 070 011	75	700	0/1	801	63	17.80			
L3 075 070 113	75	700	1/1	813	63	17.80			
LB4 080 074 013	80	740	0/1	813	60	18.60			



Formul A +2Ah EXTRA

SHORT CODE	capacity c20 ah	CCA (en)	layout / terminal	H. DOWN	pallet qty 103*110cm	MAX WEIGHT kg	TECH DRAW		
L4 082 080 013	82	800	0/1	B13	60	20.00			
L5 090 076 013	90	760	0/1	B13	45	22.00			
L5 090 086 013	90	860	0/1	B13	45	23.50			
L5 100 086 013	100	860	0/1	B13	45	23.50			
L5 100 096 013	100	960	0/1	B13	45	24.80			



Formul A ASIA

SHORT CODE	capacity c20 ah	CCA (en)	layout / terminal	H. DOWN	pallet qty 103*110cm	MAX WEIGHT kg	TECH DRAW		
D20 050 042 013	50	420	0/1	B13	60	13.20			
D20 050 042 113	50	420	1/1	B13	60	13.20			
D23 050 042 010	50	420	0/1	B0	72	15.30			
D23 050 042 110	50	420	1/1	B0	72	15.30			
D23 060 052 010	60	520	0/1	B0	72	16.30			
D23 060 052 110	60	520	1/1	B0	72	16.30			



SHORT CODE	capacity c20 ah	CCA (en)	layout / terminal	N. DOWN	pallet qty 163*110cm	MAX WEIGHT kg	TECH DRAW
D26 060 053 017	60	530	0/1	807	63	16.60	
D26 060 053 117	60	530	1/1	807	63	16.60	
D26 072 063 017	72	630	0/1	807	63	17.90	
D26 072 063 117	72	630	1/1	807	63	17.90	
D31 090 072 011	90	720	0/1	801	54	22.70	
D31 090 072 111	90	720	1/1	801	54	22.70	
D31 100 085 011	100	850	0/1	801	54	23.80	
D31 100 085 111	100	850	1/1	801	54	23.80	

Super Ca-Ca Alloy*Supr A***Ca-Ca Plates**

- High performance
- High resistance to corrosion
- High Cycle Life
- Polyetylen Envelope Separators to prevent short circuit
- Max acid reserve capacity over the plates

High CCA Performance

- More Starting Power
- Long Life in Every Climate
- Complies with OEM requirements in CCA and capacity

Superior Safety

- Minimised acid leakage
- Minimum water consumption by special labyrinth in the plugs

User Friendly

- ++ Maintenance Free - Ready to use without acid addition
- ++ Acid level indicator to show charging state
- ++ Integrated Handle for easy carry
- ++ Integrated pole covers to enhance safety and attraction

Super Ca-Ca Alloy*Supr A Asia**Supr A Heavy Duty**Supr A Super Heavy Duty**Supr A Leisure***Supr A Asia**

- Produced with Calcium Alloy in negative plates and low antimony in positive plates with the Gravity Technology
- Polyetylen Envelope Separators to prevent short circuit
- Narrow and high boxes specially fitted to Japanese Cars
- Maintenance Free - Ready to use without acid addition
- Max acid reserve capacity over the plates

Supr A Heavy Duty

- Produced with Calcium Alloy in negative plates and low antimony in positive plates with the Gravity Technology
- Specially designed for all commercial vehicles (trucks, buses, agricultural vehicles, tanks etc.)
- Polyetylen Envelope Separators to prevent short circuit
- Highest Vibration resistance with hotmelt over plates
- Max Charge Discharge Cycle
- Maintenance Free with minimum water consumption
- Max acid reserve capacity over the plates

Supr A Super Heavy Duty

- ++ Specially strengthened hybrid plates for commercial use
- ++ Glassmate separators to prevent paste shedding
- ++ Highest Cycle Power with the specially designed plates and separators
- ++ Max performance with high capacity and starting power
- ++ Highest vibration resistance



SHORT CODE	capacity c20 ah	CCA (en)	layout / terminal	H. DOWN	pallet entry 103/110cm	MAX WEIGHT kg	TECH DRAW		
LO 040 033 013	40	330	0/1	813	108	10.70			
LB1 036 030 013	36	300	0/1	813	87	11.00			
LB1 044 036 013	44	360	0/1	813	87	11.50			
LB1 044 036 093	44	360	0/19	813	87	11.50			
LB1 044 036 113	44	360	1/1	813	87	11.50			
LB1 050 042 013	50	420	0/1	813	87	12.20			
L1 036 030 013	36	300	0/1	813	87	11.00			
L1 044 036 013	44	360	0/1	813	87	11.90			
L1 044 036 113	44	360	1/1	813	87	11.90			
L1 045 040 013	45	400	0/1	813	87	12.40			
L1 050 042 013	50	420	0/1	813	87	12.90			



SHORT CODE	capacity c20 ah	CCA (en)	layout / terminal	H. DOWN	pallet unity 103*110cm	MAX WEIGHT kg	TECH DRAW		
LB2 045 040 013	45	400	0/1	B13	72	13.30			
LB2 055 046 013	55	460	0/1	B13	72	13.50			
LB2 060 049 013	60	490	0/1	B13	72	14.20			
LB2 060 060 013	60	600	0/1	B13	72	14.90			
L2 050 042 013	50	420	0/1	B13	72	14.10			
L2 055 046 013	55	460	0/1	B13	72	14.40			
L2 055 046 113	55	460	1/1	B13	72	14.40			
L2 060 049 013	60	490	0/1	B13	72	14.80			
L2 060 049 113	60	490	1/1	B13	72	14.80			
LB3 066 060 013	66	600	0/1	B13	63	16.60			
LB3 068 060 093	68	600	0/19	B13	63	16.90			



Supr A

SHORT CODE	capacity c20 ah	CCA (en)	layout / terminal	H. DOWN	pallet qty 183*110cm	MAX WEIGHT kg	TECH DRAW		
L5 092 076 013	92	760	0/1	B13	45	22.20			
L5 100 076 013	100	760	0/1	B13	45	23.00			
L5 100 086 013	100	860	0/1	B13	45	23.50			



Supr A ASIA

SHORT CODE	capacity c20 ah	CCA (en)	layout / terminal	H. DOWN	pallet qty 183*110cm	MAX WEIGHT kg	TECH DRAW		
NS40 035 024 030	35	240	0/3	800	105	10.90			
NS40 035 024 130	35	240	1/3	800	105	10.90			
NS40 042 033 030	42	330	0/3	800	105	12.40			
NS40 042 033 130	42	330	1/3	800	105	12.40			
NS40 042 033 110	42	330	1/1	800	105	12.40			
C24 045 038 010	45	380	0/1	800	84	14.50			



SHORT CODE	capacity c20 ah	CCA (en)	layout / terminal	H. DOWN	pallet qty 183*110cm	MAX WEIGHT kg	TECH DRAW		
C24 045 038 110	45	380	1/1	B00	84	14.50			
C24 045 038 011	45	380	0/1	B01	84	14.50			
C24 045 038 111	45	380	1/1	B01	84	14.50			
C24 060 050 010	60	500	0/1	B00	84	16.30			
D23 050 042 010	50	420	0/1	B00	72	15.30			
D23 050 042 110	50	420	1/1	B00	72	15.30			
D23 060 052 010	60	520	0/1	B00	72	16.30			
D23 060 052 110	60	520	1/1	B00	72	16.30			
M10 060 053 019	60	530	0/1	B09	60	17.90			
M10 060 053 119	60	530	1/1	B09	60	17.90			
M10 070 063 019	70	630	0/1	B09	60	18.40			



Supr A ASIA

SHORT CODE	capacity c20 ah	CCA (en)	layout / terminal	H. DOWN	pallet qty 103*110cm	MAX WEIGHT kg	TECH DRAW
M10 070 063 119	70	630	1/1	809	60	18.40	
M11 090 072 013	90	720	0/1	803	54	23.00	
M11 090 072 111	90	720	1/1	801	54	23.00	
M11 100 085 011	100	850	0/1	801	54	24.70	
M11 100 085 111	100	850	1/1	801	54	24.70	



Supr A HEAVYDUTY

SHORT CODE	capacity c20 ah	CCA (en)	layout / terminal	H. DOWN	pallet qty 103*110cm	MAX WEIGHT kg	TECH DRAW
90CPT 105 070 013	105	700	0/1	803	54	26.50	
90CPT 105 070 113	105	700	1/1	803	54	26.50	



SHORT CODE	capacity c20 ah	CCA (en)	layout / terminal	H. DOWN	pallet qty 103*110cm	MAX WEIGHT kg	TECH DRAW		
TRACTOR L 090 062 010	90	620	0/1	B00	45	27.50			
TRACTOR L 115 076 010	115	760	0/1	B00	45	29.70			
TRACTOR L 125 080 010	125	800	0/1	B00	45	30.30			
TRACTOR 125 080 010	125	800	0/1	B00	45	35.00			
MAC110 110 076 313	110	760	3/1	B03	36	33.50			
MAC110 135 088 313	135	880	3/1	B03	36	36.00			
MAC120 120 080 313	120	800	3/1	B03	36	36.90			
MAC120 120 080 413	120	800	4/1	B03	36	36.90			
MAC120 135 088 313	135	880	3/1	B03	36	37.00			
MAC120 135 088 413	135	880	4/1	B03	36	37.00			



SHORT CODE	capacity c20 ah	CCA (en)	layout / terminal	H. DOWN	pallet entry 103*110cm	MAX WEIGHT kg	TECH DRAW
A 120 080 310	120	800	3/1	800	30	34,70	
A 140 093 310	140	930	3/1	800	30	37,20	
MAC140 143 095 313	143	950	3/1	803	30	42,80	
MAC140 150 092 313	150	920	3/1	803	30	42,80	
MAC140 165 100 313	165	1,000	3/1	803	30	45,00	
MAC140 180 110 313	180	1100	3/1	803	30	47,50	
B 148 100 310	148	1,000	3/1	800	30	42,20	
B 160 100 310	160	1,000	3/1	800	30	44,00	
B 170 100 310	170	1000	3/1	800	30	44,40	
B 180 110 310	180	1100	3/1	800	30	47,50	
C 200 120 310	200	1200	3/1	800	21	58,00	
C 225 125 310	225	1250	3/1	800	21	61,00	



Supr A SUPER HEAVY DUTY

SHORT CODE	capacity c20 ah	CCA (en)	layout / terminal	H. DOWN	pallet qty 103*110cm	MAX WEIGHT kg	TECH DRAW		
TANK 100 072 210	100	720	2/1	800	27	30,50			
TANK 125 080 210	125	800	2/1	800	27	36,00			
MAC140 165 100 313	165	1,000	3/1	803	30	45,80			
MAC140 180 110 313	180	1100	3/1	803	30	47,50			
C 200 120 310	200	1200	3/1	800	21	58,00			
C 200 120 410	200	1200	4/1	800	21	58,00			

Supr A SUPER TIR

SHORT CODE	capacity c20 ah	CCA (en)	layout / terminal	H. DOWN	pallet qty 103*110cm	MAX WEIGHT kg	TECH DRAW		
B 180 110 310	180	1100	3/1	800	24	48,50			
C 225 125 310	225	1250	3/1	800	21	61,00			

Supra SUPER BUS

SHORT CODE	capacity c20 ah	CCA (en)	layout / terminal	H. DOWN	pallet qty 103*110cm	MAX WEIGHT kg	TECH DRAW
C 210 120 310	210	1200	3/1	800	18	59,00	
C 240 125 310	240	1250	3/1	800	18	63,50	



Supra LEISURE-SEMI TRACTION

SHORT CODE	capacity c20 ah	CCA (en)	layout / terminal	H. DOWN	pallet qty 103*110cm	MAX WEIGHT kg	TECH DRAW
L1 050 036 013	50	360	0/1	813	87	14.70	
L2 060 046 013	60	460	0/1	813	72	16.50	
L3 070 054 013	70	540	0/1	813	63	18.20	
M10 070 054 019	70	540	0/1	809	60	18.50	
L5 090 070 013	90	700	0/1	813	45	24.50	
TRAKTOR L 090 062 010	90	620	0/1	800	45	27.50	
TRAKTOR L 115 076 010	115	760	0/1	800	45	29.70	



SHORT CODE	capacity c20 ah	CCA (en)	layout / terminal	N. DOWN	pallet qty 163*118cm	MAX WEIGHT kg	TECH DRAW		
TRAKTOR 125 080 010	125	800	0/1	800	54	35.00			
MAC120 130 088 313	130	880	3/1	803	36	37.00			
B 180 110 310	180	1100	3/1	800	30	47.00			
C 225 125 310	225	1250	3/1	800	21	61.00			