



UNION **BATTERY** *Service*

Moving Energy



03/2019





Batteries, Battery chargers and Accessories

We are a Company specialized in the distribution and processing of exclusive products in the field of batteries.

A single partner saves time and money.



The **central warehouse** is equipped with an integrated logistics system to 2500 pallet spaces, to deliver shipments within 24 hours of receiving your order.



All **products on the catalogue** are managed in stock. Distributors have access to our availabilities in real time.



98% of our customers are satisfied with our service and products.



Not only a **quality battery** but also a **correct battery charger** along with the **best accessories** to ensure energy over time.

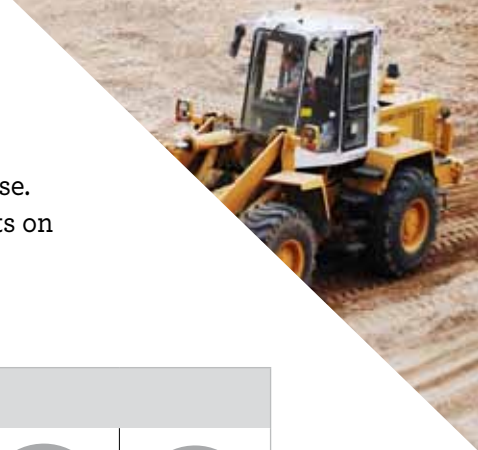


The **REGENERATION** of the batteries with **WARRANTY** is an absolute innovation in the field.



Union Battery Service has a **certified strength index** among the highest in the sector: we are not interested in the hit and run, but in following our customers over time.

ENERGY, EVERYWHERE, ALWAYS, SOON



OFF LINE

Commercial Assistance

The sales department is at complete disposal to ensure customers timely and complete responses, make quotations and place prompt orders.

ON LINE

The new website contains any technical information necessary for the purchase. A search engine will guide you to choose the right battery; detailed data sheets on each product can be downloaded immediately.

Range of action of products:							
Van Starter	Bulldozer Starter	RV Starter	Golf trolley	Motorcycle Starter	Car Starter	Golf Car	Vehicles for Disable
Scissor lift	Truck Starter	Tractor Starter	Boat Starter	Antique car starter	Hi-Fi Car	Electric Boats	Quad Starter
Electric Moped	Electric Scooter	Electric Bike	Telecommunication	Boat thruster	Torch flashlights	Toys	Alarm System
Small Tools	Forklift Trucks	Emergency booster	Floor washers	UPS	Renewable Energy Storage	RV Service	Boat Service
Electric Car	Watercraft Starter	Electric lawn mower	Lighting Towers	Transpallet	Electric tug	Road Signals	Sweepers





Zenith ZGL

APPLICATIONS

- UPS
- Toys
- Marine/RV
- Alarm System
- Telecommunication

This series of **batteries is not suitable for cyclic applications.**

If used in boating / RV applications, the battery pack capacity must be sized so that the discharge current does not exceed 0.2C/20h (i.e. Max. 20A discharge of 100Ah / 20h of battery). This allows the battery to gain a reasonable autonomy and more acceptable battery life.

- **Never discharge more than 80%. Deeper discharges void any warranty**



WARRANTY*
24 MONTHS



* for further details on the mode, see general warranty conditions on our website



Battery 6V

CODE	V	CAPACITY		DIMENSIONS (mm)				TERMINAL	WEIGHT (KG)	PALLET QUANT.
		Ah/20h	Ah/5h	L	W	H	TOTAL H			
ZGL060005	6	3,20	2,55	134,0	34,5	61,0	67,0	F1	0,65	600
ZGL060016	6	5,00	4,25	70,0	47,0	100,0	107,0	F1	0,75	420
ZGL060020	6	7,00	5,95	151,0	34,0	94,0	100,0	F1	1,10	420
ZGL060024	6	10,00	7,40	151,0	50,0	93,0	98,0	F1	1,67	420
ZGL060026	6	12,00	10,20	151,0	50,0	93,0	98,0	F1	1,86	264
ZGL060029	6	20,00	16,00	162,0	83,0	126,0	126,0	F3	3,50	264



Battery 12V to 22Ah

ZGL120005	12	1,20	1,02	97,0	43,0	52,0	58,0	F1	0,60	420
ZGL120010	12	2,00	1,70	178,0	35,0	60,0	66,0	F1	0,87	420
ZGL120014	12	2,40	1,94	178,0	35,0	61,0	67,0	F1	0,97	420
ZGL120020	12	3,20	2,45	134,0	67,0	59,5	66,0	F1	1,30	420
ZGL120024	12	5,00	4,45	90,0	70,0	101,0	107,0	F1	1,54	420
ZGL120026	12	7,20	6,12	151,0	65,0	93,5	100,0	F1	2,10	360
ZGL120027	12	7,20	6,12	151,0	65,0	93,5	100,0	F2	2,10	360
ZGL120028	12	8,50	6,95	151,0	65,0	94,0	100,0	F2	2,30	360
ZGL120032	12	12,00	10,70	151,0	99,0	95,0	101,0	F2	3,40	200
ZGL120034	12	18,00	16,00	181,0	77,0	167,0	167,0	M5	5,60	128
ZGL120035	12	18,00	15,30	180,0	75,0	167,0	167,0	F3	5,50	128
ZGL120036	12	22,00	18,70	181,0	77,0	167,0	167,0	M5	6,35	128



Battery 12V from 26Ah to 100Ah

ZGL120042	12	26,00	24,00	165,0	176,0	125,0	125,0	M6	8,20	80
ZGL120048	12	35,00	29,80	193,5	130,0	166,5	166,5	M6	10,50	75
ZGL120054	12	45,00	38,30	198,0	166,0	171,0	171,0	M6	13,50	60
ZGL120058	12	55,00	48,00	239,0	132,0	205,0	210,0	M6	17,30	60
ZGL120062	12	65,00	57,00	349,5	166,0	174,0	174,0	M6	23,00	48
ZGL120070	12	80,00	68,00	260,0	169,0	211,0	215,0	M6	24,50	36
ZGL120073	12	90,00	75,00	349,5	166,0	174,0	174,0	M6	24,00	48
ZGL120077	12	100,00	83,00	306,0	169,0	210,0	215,0	M8	29,00	36
ZGL120078	12	100,00	85,00	328,0	172,0	215,0	219,0	M8	31,00	36



Battery 12V from 120Ah to 260Ah

ZGL120085	12	120,00	102,00	327,0	172,0	217,0	222,0	M8	31,20	36
ZGL120086	12	135,00	118,00	341,0	173,0	283,0	287,0	M8	40,00	24
ZGL120088	12	160,00	136,00	483,0	170,0	240,0	240,0	M8	46,00	24
ZGL120092	12	200,00	170,00	530,0	209,0	215,0	219,0	M8	52,00	18
ZGL120094	12	210,00	178,50	522,0	238,0	218,0	220,0	M8	61,00	18
ZGL120096	12	240,00	204,00	522,0	238,0	218,0	220,0	M8	64,50	12
ZGL120098	12	260,00	221,00	520,0	269,0	203,0	208,0	M8	73,20	12

► for details refer to the data sheets on our website

To consult the terminals, go to page 27

Tolerance dimensions +/- 2 - 4 mm



Zenith ZL DEEP-CYCLE

APPLICATIONS

- Scrubbers
- Sweepers
- Golf cars
- Electric Boats
- Electric Scooters
- Renewable Energy
- Vehicles for Disables
- All electric vehicles
- Marine
- RV Service
- Lighting towers

- See battery data sheets for proper charge cycle and charger set-up
- Never discharge more than 80%. Deeper discharges void any warranty



WARRANTY*
24 MONTHS



* for further details on the mode, see general warranty conditions on our website

CODE	USA MODEL	V	CAPACITY		DIMENSIONS (mm)				TERMINAL	WEIGHT (Kg)	PALLET QUANTITY
			Ah/20h	Ah/5h	L	W	H	Total H			

Battery 6V-8V

ZL060100	-	6	200	170	306,0	169,0	220,0	226,0	M8	27,0	36
ZL060110	GC105	6	225	182	260,0	180,0	270,0	275,0	M8	30,5	36
ZL060113	GC125	6	240	192	260,0	180,0	270,0	275,0	M8	32,0	36
ZL060115	DIN	6	245	200	245,0	187,0	275,0	275,0	M8	32,0	36
ZL060116	DIN	6	245	200	245,0	187,0	275,0	275,0	AP	32,0	36
ZL060125	305	6	335	275	295,0	178,0	345,0	368,0	DT	45,0	22
ZL060130	L16	6	410	320	295,0	180,0	405,0	425,0	DT	55,0	22
ZL080110	GC875	8	180	150	261,0	182,0	270,0	275,0	M8	34,0	24



Battery 12V to 40Ah

ZL120110	-	12	13	11	151,0	99,0	95,0	101,0	F2	4,2	200
ZL120115	-	12	18	16	181,0	77,0	167,0	167,0	M5	5,7	128
ZL120120	-	12	24	18	181,0	77,0	167,0	167,0	M5	5,8	128
ZL120130	-	12	26	22	165,0	174,0	125,0	125,0	M6	8,4	80
ZL120135	-	12	36	28	196,0	131,0	145,0	165,0	M6	10,8	75
ZL120150	-	12	45	35	198,0	166,0	174,0	174,0	M6	14,5	60



Battery 12V from 55Ah to 120Ah

ZL120155	-	12	55	47	230,0	138,0	210,0	215,0	M6	18,3	60
ZL120165	-	12	75	65	349,5	166,0	174,0	174,0	M6	23,0	48
ZL120175	24	12	86	76	260,0	169,0	215,0	219,0	M6	26,0	48
ZL120185	27	12	110	90	306,0	170,0	210,0	215,0	M8	30,5	36
ZL120190	31	12	130	105	331,0	175,0	217,0	223,0	M8	33,0	36



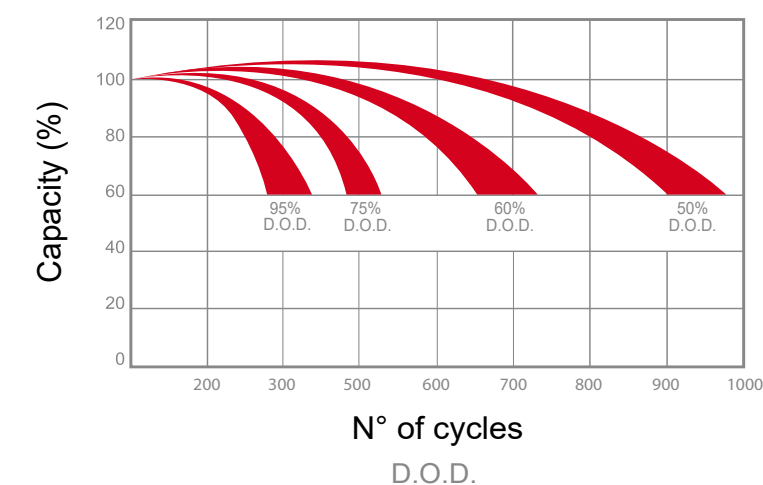
Battery 12V from 130Ah to 260Ah

ZL1201105	DIN	12	140	115	340,0	172,0	280,0	285,0	M8	39,5	24
ZL1201106	DIN	12	140	115	340,0	172,0	280,0	300,0	AP	39,5	24
ZL1201115	-	12	160	125	484,0	171,0	241,0	241,0	M8	46,0	24
ZL1201120	4D	12	200	160	532,0	206,0	216,0	221,0	M8	59,6	18
ZL1201135	4D	12	220	180	522,0	240,0	219,0	224,0	M8	65,8	18
ZL1201145	8D	12	260	215	521,0	269,0	220,0	228,0	M8	77,8	12



► for details refer to the data sheets on our website

Charge cycles (25°C, discharge 5h)



To consult the terminals, go to page 27

Tolerance dimensions +/- 2 - 4 mm



Zenith ZLS

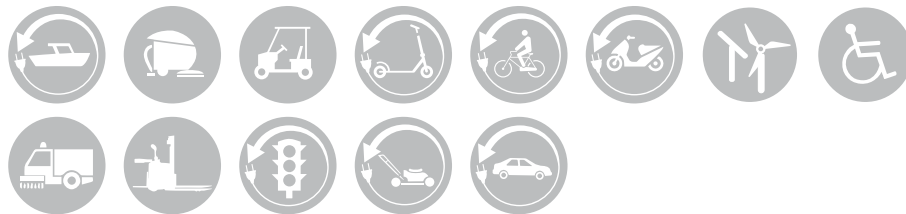
LONGIFE/ DEEP-CYCLE

APPLICATIONS

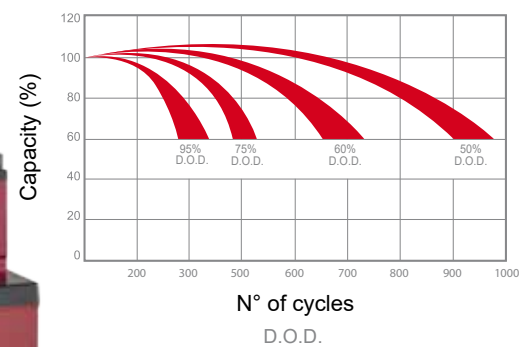
- Scrubbers
- Sweepers
- Electric Boats
- Electric Scooters
- Electric bike
- Vehicles for Disables
- Renewable Energy
- Road signals

WHY CHOOSING A ZLS BATTERY?

- 20% lifetime cycle more than ZL series
- Innovative solution to reduce the negative effects of stratification
- Specific design increasing performance for the discharge in 2 hrs



Charge cycles (25°C, discharge 5h)



WARRANTY*
24 MONTHS



CODE	USA MODEL	V	CAPACITY			DIMENSIONS (mm)				TERMINAL	WEIGHT (Kg)	PALLET QUANTITY
			Ah/20h	Ah/5h	Ah/2h	L	W	H	Total H			
ZLS120110	-	12	16,5	13,5	12	151	99	97	101	F2	4,3	200
ZLS120120	-	12	28	23	20	181	77	170	172	M5	6,2	128
ZLS120130	-	12	33	27	24	166	175	126	126	M6	9,5	80
ZLS120135	-	12	36	29	27	193,5	130	145,0	165,0	M6	10,8	75
ZLS120150	-	12	45	35	32	197	165	170,5	170,5	M6	14,3	60
ZLS120160	DIN	12	60	49	43	265	166	188	188	AP	20,7	48
ZLS120175	24	12	85	70	60	260	169	211	215	M6	26,0	48
ZLS120185	27	12	105	85	71	307	169	211	215	M8	30,0	36
ZLS120190	31	12	120	110	88	332	176	214	218	M8	34,3	30
ZLS1201105	DIN	12	135	110	95	344	172	280	280	M8	46,0	24
ZLS1201115	-	12	190	165	133	485	170	241	241	M8	53,0	24
ZLS1201120	4D	12	200	160	141	532	206	216	221	M8	59,6	18
ZLS1201145	8D	12	260	213	183	521	269	220	224	M8	77,8	12

► for details refer to the data sheets on our website

Zenith ZPC

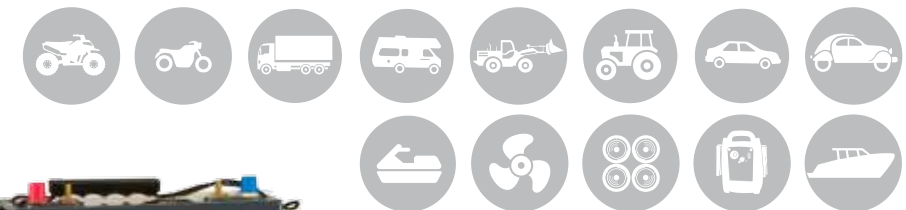
HIGH CRANKING CURRENT

APPLICATIONS

- Booster/starter
- Starter:
Start/Stop Car; Antique Car;
Boats; RV; Farm machinery;
Military vehicles; Trucks
- Boat thruster
- Hi-Fi car

WHY CHOOSING A ZPC BATTERY?

- 30% cranking power more than normal starter batteries
- AGM technology for increased resistance to vibration
- Hybrid: **in some cases**, they can also be used for deep-cycle use



WARRANTY*
24 MONTHS



CODE	V	CAPACITY Ah/20h	CRANKING "EN"		PHCA 5 sec. AMP	DIMENSIONS (mm)				TERMINAL	POL.	WEIGHT (Kg)	PALLET QUANTITY
			CCA (-18°C)	CA (0°C)		L	W	H	Total H				
ZPC120013	12	15	180	230	545	176	86	132	132	M5	DX	5,0	160
ZPC120020	12	20	230	310	680	181	77	167	167	M6	DX	7,0	144
ZPC120025	12	28	410	530	925	165	176	125	125	M8	DX	10,7	84
ZPC120030	12	30	450	550	950	250	97	142	156	M6	DX	10,0	75
ZPC120032	12	35	438	525	975	196	131	167	167	M6	DX	12,1	75
ZPC120040	12	44	560	725	1200	198	166	170	170	M8	DX	15,1	66
ZPC120051	12	65	825	1000	1500	261	171,5	182,5	186,5	M8 + AP	SX	20,9	42
ZPC120065	12	100	965	1170	1950	307	169	214	237	DT	SX	32,2	36
ZPC120075	12	110	1100	1360	2200	330	173	214	237	DT	DX	34,6	36
ZPC120100	12	200	1250	1500	-	530	206	210	248	AP	SX	57	18
ZPC120110	12	260	1450	1750	-	510	267	220	258	AP	SX	72	12

► for details refer to the data sheets on our website

To consult the terminals, go to page 27

Trojan

LEAD ACID DEEP-CYCLE

APPLICATIONS

- Floor washers
- Sweepers
- Golf cars
- Scissor lift



WARRANTY*
24 MONTH



CODE	MODEL	RESERVE OF CAPACITY (min)		CAPACITY		TERMINAL	DIMENSIONS (mm)			WEIGHT (Kg)	PALLET QUANTITY
		25 Amps	75 Amps	Ah/20h	Ah/5h		L	W	H		
Deep Cycle - 6v											
TJ060100	T-105 +	447	115	225	185	ELPT	262	181	281	28	32
TJ060110	T-125 +	488	132	240	195	ELPT	262	181	281	30	32
TJ060120	T-145 +	530	145	260	215	ELPT	262	181	302	33	30
TJ060130	TE-35	500	135	245	201	AP	244	191	269	31	32
TJ060135	J305G-AC	678	175	315	258	UT	314	147	366	40	15
TJ060140	J305P-AC	711	195	330	271	DT	296	176	366	44	15
TJ060145	L 16G-AC	789	200	390	320	UT	313	174	417	49	14
TJ060150	L 16P-AC	850	220	420	344	DT	296	176	425	52	14
Deep Cycle - 8V											
TJ080100	T-875	295	117	170	145	ELPT	260	180	283	29	32
Deep Cycle - 12V											
TJ120145	T1275 +	280	70	150	120	ELPT	329	181	272	39	24

► for details refer to the data sheets on our website

To consult the terminals, go to page 27

* for further details on the mode, see general warranty conditions on our website

Trojan Silver

LEAD ACID DEEP-CYCLE

APPLICATIONS

- Floor washers
- Sweepers
- Golf cars
- Scissor lift



WARRANTY*
24 MONTH



CODE	MODEL	V	BACKUP CAPACITY (min)		CAPACITY		TERMINAL	DIMENSION (mm)			WEIGHT (Kg)	PALLET QUANTITY
			25 Amps	75 Amps	Ah/5h	Ah/20h		L	W	H		
TJS060100	S-105	6	390	105	175	215	ELPT	262	179	273	27	32
TJS060135	S-305	6	624	155	242	295	EUTR	314	174	366	38	15
TJS060145	S-16	6	749	181	269	362	EUTR	313	174	417	45	14
Traction deep-cycle 8 volt												
TJS080100	S-875	8	295	117	145	165	ELPT	259	179	283	28	32

► for details refer to the data sheets on our website

Zenith LITHIUM
LITHIUM BATTERIES

APPLICATIONS

- Electric Vehicles
- Golf Cars
- Vehicles for Disables
- Cleaning Machines
- Transpallets
- Electric Boats
- RV
- Electric Tools
- Renewable Energy

WARRANTY*
36 MONTHSBATTERIES WITHOUT
ANY GAS EMISSION**MAINTENANCE FREE:** maintenance is not required.**SUPERIOR LIFETIME:** the number of charge-discharge cycles is considerably higher than lead-acid batteries, so “cost per cycles” is lower.**LIGHT:** they are up to 70% lighter than lead-acid batteries. Only a minimum amount of the whole battery energy is employed to move the battery itself so the vehicle autonomy is greater .**FAST CHARGE:** they can be fully charged in 1hr (**always** use the proper battery charger). Vehicles, where they will be installed, will increase their productivity/autonomy.

- The capacity is constant in lithium battery; it does not change as the discharge current rate varies (see the table)
- Always ask the UNION BATTERY SERVICE authorization if you want to use them in series or parallel



LITHIUM BATTERY PACKS “LiFePO4”, COMPLETE WITH ELECTRONIC CONTROL PCM/BMS

CODE	V	Ah	DIMENSIONS (mm)			TERMINAL	CERTIFICATION UN 38.3	DISCHARGE				CARICA		WEIGHT
			L	W	H			min voltage	max constant current	max current spike	max spike dura- tion	max voltage	max current	
								Volt	Amp	Amp	Secondi	Volt	Amp	Kg
ZLI012030	12	40	195	165	170	M8	NO	<10	50	170	2	14,6	40	6,4
ZLI012040	12	60	260	167	225	M8	NO	<10	50	170	2	14,6	50	9,3
ZLI012050	12	100	305	165	215	M8	SI	<10	100	350	2	14,6	100	13,1
ZLI024020	24	25	195	165	170	M8	NO	<20	40	170	2	29,2	40	6,4
ZLI024035	24	50	302	165	220	M8	SI	<20	50	300	2	29,2	50	12,8
ZLI024060	24	100	490	170	245	M8	NO	<20	100	300	2	29,2	100	26,2

► for details refer to the data sheets on our website

Dimensions are completely suitable whit those of lead batteries for easy interchanges

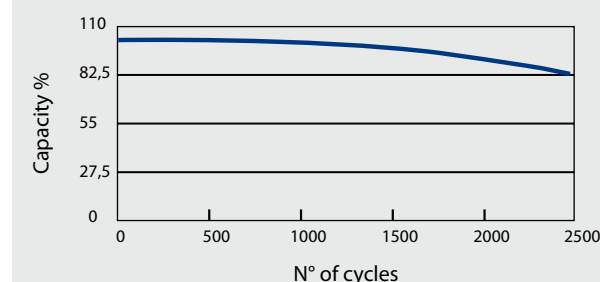
*Batteries in a metal case, complete with display

Tolerance dimensions +/- 2 - 4 mm



SUITABLE BATTERY CHARGERS

CODE BATTERY	Model	Time	Model	Time
ZLI012030	ZBC1215.LI	2h 50min		
ZLI012040	ZBC1215.LI	4h 15min		
ZLI012050	ZBC1215.LI	7h		
ZLI024020	ZBC02405.LI	5h 20min	ZBC02415.LI	1h 50min
ZLI024035	ZBC02415.LI	3h 30min	ZHF2430.LH	1h 50min
ZLI024060	ZBC02415.LI	7h	ZHF2430.LH	3h 40min

N° of charge-discharge cycles using the discharging current
equal to 1C - 25°C - 80% D.O.D.Comparative
Table
AGM-LITHIUMIn order to facilitate the correct
dimensioning

Constant current discharge	NOMINAL CAPACITY = REAL CAPACITY		
	Estimate autonomy		
	ZL120185 (12V 105Ah/20h)	ZL12050 (12V/100Ah)	ZL12040 (12V 60Ah)
5Amp	20,0h	20,0h	12,0h
10Amp	9,4h	10,0h	6,0h
20Amp	4,0h	5,0h	3,0h
30Amp	2,1h	3,3h	2,0h
40Amp	1,5h	2,5h	1,5h
50Amp	50min	120min	70min
60Amp	40min	100min	N.C*
80Amp	25min	75min	N.C*
100Amp	20min	60min	N.C*

N.C*: Discharge current is not suitable with BMS/PCM

Battery chargers for Zenith LITHIUM

WARRANTY*
24 MONTHS

ZBC1215.LI



ZBC02425.LI

CODE	OUTPUT			RECHARGEABLE CAPACITY ZENITH LITHIUM	ALIMENTATION						IP	WEIGHT (Kg)	DIMENSION (mm)		
	V	A	battery plug		V	A (240)	W	cable alim.	Hz	PFC			L	W	H
ZBC1215.LI*	12	15	SB30	20Ah - 40Ah - 60Ah - 100Ah	220-240	-	280	yes	50/60	no	IP32	1,8	260	135	72
ZBC02405.LI*	24	5	SB30	25Ah - 50Ah	100-260	1,1	150	yes	50/60	no	IP30	0,65	133	125	60
ZBC02415.LI	24	15	no	25Ah - 50Ah - 100Ah	100-260	2,0	480	yes	50/60	yes	IP30	1,45	133	240	60
ZBC02425.LI	24	25	no	50Ah - 100Ah	100-260	3,3	800	yes	50/60	yes	IP30	2,50	249	160	80

To consult the terminals, go to page 27

Tolerance dimensions +/- 2 - 4 mm

NEWS 2019!

Zenith LITHIUM

LITHIUM BATTERIES

APPLICATIONS

- Transpallet
- Pickers

MAINTENANCE FREE: maintenance is not required.

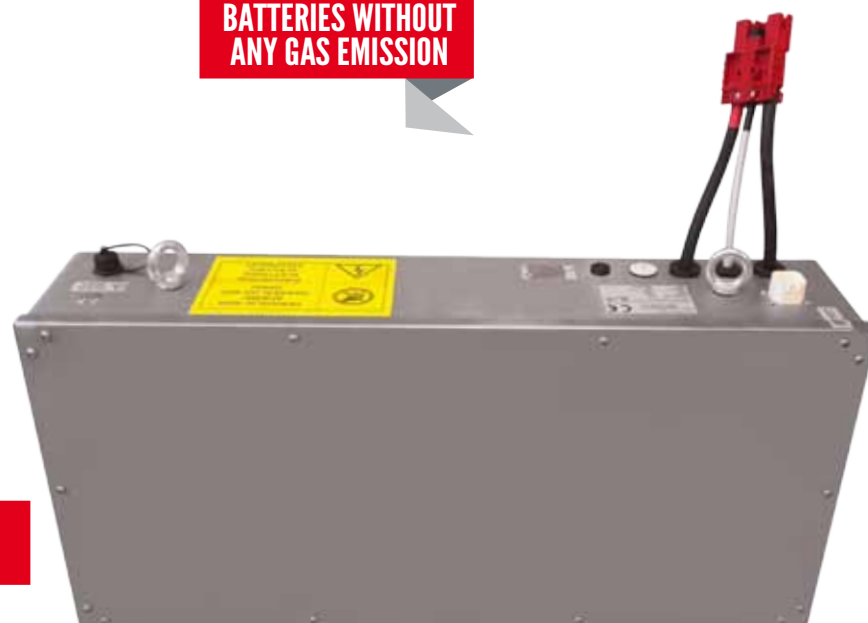
SUPERIOR LIFETIME: the number of charge-discharge cycles is considerably higher than lead-acid batteries, so "cost per cycles" is lower.

FAST CHARGE: they can be fully charged in 1hr (**always** use the proper battery charger). Vehicles, where they will be installed, will increase their productivity/autonomy.



WARRANTY*
36 MONTHS

BATTERIES WITHOUT ANY GAS EMISSION



COMPLETE WITH DISPLAY



► LITHIUM BATTERY PACKS "LiFePO4", COMPLETE WITH ELECTRONIC CONTROL PCM/BMS

CODE	V	Ah	DIMENSIONS (mm)			TERMINAL	DISCHARGE				CHARGE		WEIGHT
			L	W	H		min voltage	max constant current	max current spike	max spike duration	max voltage	max current	
							Volt	Amp	Amp	Seconds	Volt	Amp	
ZLI02480	24	120	635	135	280	-	21.6	180	300	5	29.6	120	40

* see data sheet

Dimensions are completely suitable with those of lead batteries for easy interchanges

*Batteries in a metal case, complete with display

Tolerance dimensions +/- 2 - 4 mm

Zenith High Frequency

AUTOMATIC HIGH FREQUENCY BATTERY CHARGERS
SPECIFIC FOR LITHIUM BATTERIES RECHARGING



- The nominal output current is **CONSTANT CURRENT**.
- All devices are endowed with power cable (SHUKO 16A mains plug included where possible).
- All devices are supplied with output cables of 2,5MT, but **WITHOUT** the connector to the battery.
- The battery connectors are supplied on request.
- Mains supply: single-phase 185V/265V - three-phase 340V/460V.
- Frequency: 47/62 Hz
- Efficiency: single-phase >85% - three-phase >90%
- Recommended temperature at work: -10°C / +50°C

COMPLETE WITH BUTTON FOR REACTIVATION 'BMS' BATTERY

CODE	OUTPUT		Kw	MAINS VOLTAGE [A] - 230V	DIMENSIONS (mm)			WEIGHT Kg
	V	A			L	W	H	
ZHF2420.LH	24	20	0,67	4,6	233	120	64	1,5
ZHF2430.LH		30	1,00	7,0	259	145	79	2,3
ZHF2460.LH		60	2,00	12,0	329	174	96	3,9
Single-phase with P.F.C.								
ZHF2490PFC.LH	24	90	3,1	13A 240V	420	303	100	7,2
ZHF4855PFC.LH	48	55	3,7	16A 230V	420	303	100	7,2
Three-phase								
ZHF48120T.LH	48	120	8,1	15,6	540	340	130	11,5

It is possible to realize models on demand



BATTERY CHARGERS HIGH FREQUENCY

Zenith High Frequency AUTOMATIC HIGH-FREQUENCY BATTERY CHARGERS

STABILIZED: the charge is always optimal even in case of wide mains voltage variations.

The use of very long extension cables does not compromise the correct battery charge.

The minimum mains voltage is 185V and the maximum is 265V.

LIGHT AND COMPACT: the high frequency technology allows to minimize the weight and size.

VERSATILE: all devices allow an easy on board installation (electricity presence block and minimum battery voltage block).

EASY: the charge cycle automatically starts by inserting the mains plug.

The microprocessor checks the battery charge level and the following charge cycle duration.

RELIABLE: the protecting resin enveloping the card protects the circuits from oxidation. It is endowed with a protective rooftop (NO PFC).

DATA MEMORY: the main information related to charge cycles are stored in the battery charger memory. Therefore, the user's behavior during charge / discharge phases can be easily retraced and warranty costs can be substantially reduced.

FLEXIBLE: with the **MP TOP II** programmer (page 52) you can set the battery charger for the charge of lead-acid or sealed batteries (GEL, AGM). Moreover, you can select the capacity of the battery to be charged (within the limits set for every model).



Threese-Phase

- The nominal output current is **CONSTANT CURRENT**.
- The manufacturer provides the recharge of the indicated capacities, within recommended times, with 80% of batteries discharge.
- Lower discharges involve lower charging times.
- The programming of these devices allows them to be adapted for the charge of any battery brand.
- All devices are endowed with power cable (SHUKO 16A mains plug included where possible).
- All devices are supplied with output cables of 2,5MT, but **WITHOUT** the connector to the battery.
- The battery connectors are supplied on request.
- Mains supply: single-phase 185V/265V - three-phase 340V/460V.
- Frequency: 47/62 Hz.
- Efficiency: single-phase > 85% - three-phase >90%
- Recommended temperature at work: -10°C / +50°C.
- Batteries minimum voltage to allow the charge to start: 1,00 V/cell.

SINGLE-PHASE

CODE	OUTPUT		RECHARGEABLE BATTERIES								Kw	MAINS VOLTAGE (A) – 230V	DIMENSIONS (mm)			WEIGHT (Kg)
	V	A	LEAD-ACID						SEALED				L	W	H	
			8h		11h		13h		12h							
			Ah/C5 min		Ah/C5 min		Ah/C5 min		Ah/C5 min							
			min	max	min	max	min	max	min	max						
ZHF1212	12	12	30	80	30	120	30	140	30	120	0,23	1,8	233	120	64	1,3
ZHF1212.C		12	ciclo "IUoU" - 2,43/2,25								0,23	1,8	234	120	64	1,3
ZHF1225		25	100	160	100	240	100	300	100	240	0,45	3,2	233	120	64	1,3
ZHF1225.C		25	ciclo "IUoU" - 2,43/2,25								0,45	3,2	234	120	64	1,3
ZHF2412	24	12	30	80	30	120	30	140	30	120	0,41	3,0	233	120	64	1,3
ZHF2420		20	80	120	80	200	80	240	80	200	0,67	4,6	233	120	64	1,5
ZHF2430		30	120	180	120	300	120	360	120	300	1,00	7,0	259	145	79	2,3
ZHF2460		60	180	360	180	600	180	720	180	600	2,00	12,0	329	174	96	3,9
ZHF3620	36	20	80	120	80	200	80	240	80	200	1,00	6,9	259	145	79	2,3
ZHF3640		40	160	240	160	240	160	480	160	420	2,00	12,0	329	174	96	3,9
ZHF4815	48	15	60	80	60	160	60	180	60	160	1,00	6,8	259	145	79	2,3
ZHF4830		30	120	180	120	300	120	360	120	300	2,00	12,0	329	174	96	3,9
ZHF6020	60	20	80	120	80	200	80	240	80	200	2,10	12,0	329	174	96	3,9
ZHF7220	72	20	80	120	80	200	80	240	80	200	2,00	12,0	329	174	96	3,9
ZHF8020	80	20	80	120	80	200	80	240	80	200	2,10	14,0	329	174	96	3,9
ZHF8420	84	20	80	120	80	200	80	240	80	200	2,10	14,5	329	174	96	3,9

SINGLE-PHASE with P.F.C.																
ZHF2490PFC	24	90	270	540	270	900	270	1080	270	900	3,1	13A 240V	420	303	100	7,2
ZHF3660PFC	36	60	180	360	180	600	180	720	180	600	3,1	13A 240V	420	303	100	7,2
ZHF3670PFC		70	180	420	180	720	180	840	180	720	3,6	16A 230V	420	303	100	7,2
ZHF4845PFC	48	45	180	270	180	480	180	540	180	480	3,1	13A 240V	420	303	100	7,2
ZHF4855PFC		55	180	330	180	540	180	660	180	540	3,7	16A 230V	420	303	100	7,2
ZHF4865PFC		65	180	420	180	660	180	780	180	660	4,4	20A 230V	420	303	100	7,2
ZHF7230PFC	72	30	120	180	120	300	120	360	120	300	3,1	13A 240V	420	303	100	7,2
ZHF7240PFC		40	120	240	120	420	120	480	120	400	4,1	20A 240V	420	303	100	7,2
ZHF8030PFC	80	30	120	180	120	300	120	360	120	300	3,4	13A 240V	420	303	100	7,2
ZHF8040PFC		40	120	240	120	420	120	480	120	400	4,5	20A 240V	420	303	100	7,2

THREE-PHASE

CODE	OUTPUT		RECHARGEABLE BATTERIES								Kw	MAINS VOLTAGE (A) – 400V	DIMENSIONS (mm)			WEIGHT (Kg)
	V	A	LEAD-ACID						SEALED				L	W	H	
			8h		11h		13h		12h							
			Ah/C5 min		Ah/C5 min		Ah/C5 min		Ah/C5 min							
			min	max	min	max	min	max	min	max						
ZHF24120T	24	120	360	720	360	1200	360	1400	360	720	4,0	7,8	540	340	130	10,9
ZHF24240T		240	720	2800	720	2400	720	1400	720	2400	8,0	15,6	590	435	265	21,5
ZHF3680T	36	80	300	480	300	840	300	960	300	840	4,0	7,8	540	340	130	11,3
ZHF36120T		120	360	720	360	1200	360	1400	360	1200	6,0	11,5	540	340	130	11,5
ZHF36160T		160	600	960	600	1600	600	1900	600	1600	8,0	15,6	590	435	265	15,8
ZHF36240T		240	720	1400	720	2400	720	2800	720	2400	12,0	23,0	590	435	265	23,0
ZHF4865T*	48	65	180	420	180	660	180	780	180	660	4,3	8,5	540	340	130	10,9
ZHF4880T		80	300	480	300	840	300	960	300	840	5,3	10,5	540	340	130	11,3
ZHF48120T		120	360	720	360	1200	360	1400	360	1200	8,1	15,6	540	340	130	11,5
ZHF48160T		160	600	960	600	1600	600	2000	600	1600	10,6	21,0	540	340	130	15,8
ZHF48240T		240	720	1400	720	2400	720	2800	720	2400	16,2	31,2	590	435	265	23,0
ZHF7280T		80	300	480	300	840	300	960	300	840	8,0	15,6	540	340	130	12,3
ZHF72120T	72	120	360	720	360	1200	360	1400	360	1200	12,0	23,4	590	435	265	15,8
ZHF72160T		160	600	960	600	1600	600	1900	600	1600	16,0	31,2	590	435	265	24,7
ZHF8080T	80	80	300	480	300	840	300	960	300	840	8,5	16,0	340	340	130	12,3
ZHF80120T		120	360	720	360	1200	360	1400	360	1200	12,8	24,0	540	340	130	15,8
ZHF80160T		160	600	960	600	1600	600	1900	600	1600	17,6	32,0	590	435	265	24,7

► MGX Memory Charger

SINGLE-PHASE AUTOMATIC TRADITIONAL CHARGER



STABILIZED: optimal charge even in presence of wide fluctuations in the mains voltage (min. 185V - max. 265V).

TRADITIONAL: these devices are of a traditional type (not high frequency).

EASY: the charge cycle takes place automatically, by simply connection the battery. The microprocessor checks the level of batteries discharge and the charge times.

DATA MEMORY: the main information related to charge cycles is stored in the battery charger memory. Then, the user's behavior during charge/discharge phases can be easily reconstructed and warranty costs are dramatically reduced.

FLEXIBLE: with the MP TOP II programmer it is possible to set the battery charger for the charge of both lead-acid and sealed batteries (GEL, AGM).

RELIABLE: 2 years warranty

Dimensions:
305 x 160 x h 127 mm
*385 x 200 x h 147 mm

- The nominal output current is **CONSTANT CURRENT**.
- The manufacturer guarantees the charge of recommended capacities, within 10-13 hours, with 80% of batteries discharge.
- Lower discharges involve lower charging time.
- The programming of these devices allows them to be adapted for the charge of any battery brand.
- All devices are endowed with SHUKO power cable.
- All devices are supplied with output cables, but **WITHOUT** the connector to the battery
- The battery connectors are supplied on request

CODE	INPUT			OUTPUT			RECHARGEABLE BATTERIES				Kw	MAINS VOLTAGE [A] - 230V	DIMENSIONS (mm)			WEIGHT Kg
	PHASE	V	Hz	V	A	CYCLE	LEAD-ACID		SEALED (AGM/GEL)				L	W	H	
							Ah/C5 min	Ah/C5 max	Ah/C5 min	Ah/C5 max						
MGX1210	1	185/265	50/60	12	10	IWoU/IUoU	100	120	80	100	0,18	1,3	305	160	127	5,6
MGX1215	1	185/265	50/60		15	IWoU/IUoU	130	180	110	150	0,29	1,9	305	160	127	6,2
MGX2410	1	185/265	50/60	24	10	IWoU/IUoU	100	120	80	100	0,36	2,5	305	160	127	7,4
MGX2415	1	185/265	50/60		15	IWoU/IUoU	130	180	110	150	0,54	3,7	305	160	127	9,1
MGX2420	1	185/265	50/60		20	IWoU/IUoU	190	240	160	200	0,72	5,0	305	160	127	12,0
MGX2425*	1	185/265	50/60		25	IWoU/IUoU	250	300	210	250	0,90	6,0	385	200	147	13,8
MGX2430*	1	185/265	50/60	36	30	IWoU/IUoU	310	360	260	300	1,10	7,4	385	200	147	18,5
MGX3620*	1	185/265	50/60		20	IWoU/IUoU	190	240	160	200	1,10	7,4	385	200	147	15,8
MGX3625*	1	185/265	50/60		25	IWoU/IUoU	250	300	210	250	1,40	9,3	385	200	147	18,4

* for further details on the made, see general warranty conditions on our website

► ZBCO

HIGH FREQUENCY, ONLY FOR ON-BOARD CLEANING MACHINE USES



- Universal power supply (100V - 260V).
- 24V models endowed with PFC.
- Endowed with electricity presence block
- Cooling fan
- Endowed with data memory
- Supplied with the universal cables kit (power cable not included).
- Endowed with specific charge cycle for ZENITH batteries
- 3 LEDs display



CODE	OUTPUT		RECHARGEABLE CAPACITY	INPUT					IP	WEIGHT Kg	DIMENSIONS (mm)		
	V	A		V	A (240)	W	Hz	PFC			L	W	H
			Ah/20H										
ZBC01208	12	8	50/85	100-260	1,0	140	50/60	no	IP30	0,65	133	125	60
ZBC02405	24	5	30/60	100-260	1,1	150	50/60	no	IP30	0,65	133	125	60
ZBC02411	24	11	70/120	100-260	1,5	350	50/60	si	IP30	1,20	133	164	64
ZBC02415	24	15	100/120	100-260	2,0	480	50/60	si	IP30	1,45	133	240	60
ZBC0.ADAPT	USB ADAPTER DATA DOWNLOAD												

► **WARNING!!!** Battery chargers without power cable

Battery Regenerator

How many batteries did you replace without knowing if they could be still used?
How many batteries did you replace under commercial warranty?
How many batteries did you have to throw because they were old?

The **BATTERY REGENERATOR** allows you to work independently and to eliminate these costs. It pays itself in 6 months of actual work!*



WARRANTY*
24 MONTHS

cod: REGEN.01
dim: 300 x 200 x 460h
weight: 7kg

The innovative device for the **treatment of lead-acid batteries, modular**, is now available to **everyone!**

The **integrated solution of the discharge + multi-voltage charger** allows to realize a variety of activities in a simple and **automatic way**.

The device is **portable** and it is possible to perform tests directly at the customer or at the installation.

The data collected will be easily transferred to a PC in order to elaborate and print.

What kind of batteries can you deal with Battery Regenerator?

- Lead acid starter batteries (MF and SMF) at 12 Volt.
- AGM starter batteries at 12 Volt.
- AGM stand-by batteries at 6 Volt or at 12 Volt.
- Lead acid batteries (both tubular and flat), for cycle use, 6/8/12 Volt.
- AGM batteries for cycle use, 6/8/12 Volt.

How does the Battery Regenerator work?

Three simple actions are needed and **the rest happens automatically**:

- Choose the activity from the 5 options.
- Set the data of the battery to deal.
- START.

What can you do with the Battery Regenerator?

- **Equalize/balance new batteries** before the installation.
- **Refresh the batteries** in stock, .
- **Regenerate batteries** used incorrectly.
- **Check the batteries and status**: discharge in 20h, 5h e 2h.
- **Cycle new batteries** to check their performance over time: 20h, 5h e 2h.

Who needs the Battery Regenerator?

To all the companies that work with modular batteries:

- Dealers/renters of cleaning machines.
- Resellers/renters of scissor lift.
- Resellers/renters of golf cars and/or electric vehicles for touristic village and resorts.
- Resellers/renters of camper.
- Resellers of lead batteries in general.
- Maintainers/ installers of batteries for continuity groups, UPS and telephone switchboards.
- Installers/maintainers of boat.
- Resellers/maintainers of vehicles for the elderly and disabled.

BATTERY CHARGER MULTIFUNCTION

Power-Switch Multisystem

HIGH FREQUENCY SINGLE-PHASE MULTI-VOLTAGE BATTERY CHARGER, IDEAL FOR "REFRESH" CHARGES

MULTISYSTEM, it is a battery charger suitable for any type of batteries (both traction and starter, sealed or lead acid).

It is easy to program through the keyboard and the display.

The operator sets three charging cycle parameters ("IU" cycle):

- maximum battery voltage during the charging phase
- constant current
- time (max. 50 hours)

It offers great flexibility advantages:

- it is possible "refresh" full pallets, connecting them in series or in parallel, according to customer preferences
- it is possible to recharge 6V, 8V, 12V, 24V, 36V, 40V, 48V batteries and any intermediate voltage value
- it is possible to use it as a replacement for other battery chargers (KEYBOARD BLOCK function)
- it can be easily carried to the customer in order to try to recover "sulphated" batteries

Single-phase supply:

- correct charge level even when supply voltage fluctuates from 185V to 265V frequency 50/60Hz

Two models are available:

- code: **PSW.MS.1**
 - programmable voltage: from 6V to 32V
 - programmable constant current: from 3A to 40A
- code: **PSW.MS.2**
 - programmable voltage: from 12V to 64V
 - programmable constant current: from 3A to 30A



It is supplied with battery connection clamps and instruction manual with hints on how to use it.

CODE	V _{oc} PROGRAMMABLE OUTPUT STEP 0.1V		I _{dc} PROGRAMMABLE OUTPUT STEP 1A			MINIMUM VOLTAGE FOR CHARGE	WEIGHT Kg	DIMENSIONS (mm)		
	Min.	Max.	Min.	Max.	I _{dc} out programmable			L	W	H
PSW.MS.1	6V	32V	3A	from 40A to 29V	35A over 29V	3,5V	4,5	295	220	110
PSW.MS.2	12V	64V	3A	from 30A to 58V	25A over 58V	7,0V	4,5	295	220	110

*ask to the representative sales for more details.

Battery Regeneration

Nuova vita alla batteria

The logic of the **Global Solutions** that characterizes our Company also provides for the proposed innovative regeneration service, offered exclusively to U.B.S. UNION BATTERY SERVICE customers.

The regeneration process and the necessary equipment have been developed by our Engineering Department and are applicable to ALL lead acid batteries (starter, stationary, traction both lead-acid and AGM) with the exception of the GEL. The treatment is purely electronic; it does not provide the use of any chemical additive. We take care of anything from battery collection, regeneration to final return. Details are available on our web site www.unionbatteryservice.it



The treated batteries are covered by a special warranty that provides for the full repayment of the cost of regeneration in case of problems within 6 months (for modular batteries) or 12 months (for traction batteries) from the date of regeneration. Regenerated traction batteries will be equipped with the SPY-BATT (page 17).

DO NOT THROW AWAY, REGENERATE it is assumed that over 60% of the batteries, considered exhausted, can be regenerated successfully. The advantage for the customer is tangible and consistent: with only about 30%* off the value of new battery you can have a valid alternative, but above all **GUARANTEED!**

Interested customers are not just end users, but also traders of electric vehicles (cleaning machines, forklifts, aerial platforms, golf carts, etc.), this way they can offer reconditioned vehicles, fully guaranteed, both on the vehicle itself and on the battery.

**Indicative value. For economic details ask to commercial reference.*



REGENERATED IN TIME AND SAVE OVER TIME

responds to the logic of prevention. The performance over time of the batteries are affected by many factors, some of which are not predictable to be checked every day. The consequence is the premature loss of performance. The early regeneration treatment, made roughly halfway through the expected life and then before the battery shows serious performance degradation, is targeted to restore the initial performance with three important advantages:

- Lengthening the expected life of the battery
- Maintaining constant the battery performance over time
- Preventing unexpected breakdowns

Recommended on all batteries, but certainly recommended as follows:


- **GOLF CLUBS/ CAMPING/ HOLIDAY VILLAGES:** treatment of the batteries during closing periods to make sure the battery life for the whole following season.
- **RENTERS OF AERIAL PLATFORMS:** treatment during downtime on big service areas, to reduce battery replacements and be more competitive on the market with top notch rental rates.
- **UPS:** treatment to assess the state of the batteries and restore optimal capacity to ensure the expected autonomy in case of emergencies, avoiding too sudden blackout surprises.
- **RENTAL TRUCKS:** treatment to enable you to complete the long-term rental contract without replacing the battery.
- **TRUCK FOR INTERNATIONAL TRANSPORT:** to avoid sudden and costly replacements of batteries abroad.



Display details







► DC CONNECTORS (battery connection)

CODE		Model
	00200001	SB50 50A BATTERY GREY PLUG
	00200002	SB50 50A BATTERY RED PLUG
	00200030	SBE160 160A BATTERY RED PLUG
	00200033	SBE160 160A BATTERY GREY PLUG
	00200038	SB120 120A BATTERY GREY PLUG
	00200039	SB120 120A BATTERY RED PLUG
	00200040	SB175 175A BATTERY GREY PLUG
	00200042	SB175 175A BATTERY RED PLUG
	00200043	SB175 175A BATTERY BLUE PLUG
	00200044	SBE160 160A BATTERY BLUE PLUG










CODE		Model
	00200082	DIN 80A male BATTERY PLUG
	00200083	DIN 160A male BATTERY PLUG
	00200084	DIN 320A male BATTERY PLUG
	00200161	DIN 80A female BATTERY PLUG
	00200162	DIN 160A female BATTERY PLUG
	00200163	DIN 320A female BATTERY PLUG
	00200200	Schaltbau male LV80 BATTERY PLUG
	00200201	Schaltbau male LV160 BATTERY PLUG
	00200202	Schaltbau male LV320 BATTERY PLUG
	00200150	FT80 EURO 80V male BATTERY PLUG

CODE		Model
	00200090	2P 16A 24V BATTERY VIOLET PLUG
	00200036	SBE160 160A BATTERY PLUG
	00200103	SBE320 320A BATTERY BLU PLUG
	00200105	SBE320 320A BATTERY PLUG
	00200120	SB350 350A BATTERY GREY PLUG
	00200141	SB350 350A BATTERY BLU PLUG
	00200142	SB350 350A BATTERY RED PLUG
	00200143	SB350 350A BATTERY GREEN PLUG
	00200101	SBE320 320A BATTERY RED PLUG

► AC PLUGS

	00200500	CE 2P+T 16A POWER SUPPLY PLUG		00200502	CE 3P+T 16A POWER SUPPLY PLUG		00200504	CE 3P+N+T 16A POWER SUPPLY PLUG
	00200501	CE 2P+T 32A POWER SUPPLY PLUG		00200503	CE 3P+T 32A POWER SUPPLY PLUG		00200505	CE 2P+N+T 32A POWER SUPPLY PLUG

► HANDLES AND PINS FOR DC CONNECTORS

CODE		Model	CODE		Model	CODE		Model
	00200046	DIN 160/320 BLACK HANDLE		00200050	SBE50 RED HANDLE		00200300	SBE80/160/320 YELLOW PIN
	00200029	SBE160 / SB175 GREY HANDLE		00200199	Schaltbau LV80 RED HANDLE		00200301	Anderson DIN80 GREEN PIN (GEL)
	00200031	SBE160 / SB175 RED HANDLE		00200151	FT80 RED HANDLE		00200302	Anderson DIN 160/320 GREEN PIN (GEL)
	00200048	DIN 80 BLACK HANDLE		00200051	SBE80 RED HANDLE			
	00200049	SB120 RED HANDLE						

► POLE PROTECTION



CPM6



CPM8



CPMORS

CODE	KIT QUANTITY
CPM6	10 coppie
CPM8	10 coppie
CPMORS	10 coppie

PRACTICAL ADVICE ON LEAD-ACID BATTERIES

It is NOT provided optimal battery for all applications, but on the contrary each series of batteries has optimal constructive solutions, specific for the market to which it addresses to.

In the catalog are clearly identified the areas of application of the various series of batteries, in cases of doubt, please contact us!

1. ALWAYS choose the range of suitable batteries to the application and size the model according to the most proper function:

- Certainty of the duration of the battery over time.
- Any possible problem is covered by warranty.

On the contrary, wrong choices are NOT covered by warranty and affect battery life.

2. ALWAYS use the batteries in adequately ventilated places.

3. AVOID any short circuit between the battery poles.

4. BATTERY CONNECTION IN PARALLEL.

With the parallel connection of two batteries, you get a battery with the same voltage value, but with double capacity.

IMPORTANT TO KNOW: using batteries in parallel can be dangerous for two reasons:

- If the connections between the batteries do not allow a proper subdivision of the current output between the batteries, the batteries will unbalance hopelessly within a short time.
- A possible short circuit of a battery also damages other batteries with eventual damages to the environment in which the batteries are installed.

5. CONNECTION OF BATTERIES IN SERIES

With the series connection of two batteries, you get a battery with the same capacity value, but with double voltage.

- Used in series do NOT mix batteries of different brands or of different ages.
- Used in series occur regularly (3-4 times a year) of the individual batteries.
Eventual problems on a battery may impact upon the other batteries.
- Used in series, alternating the position of the batteries at least 2-3 times a year.

6. In ALL lead acid batteries (eg. Our TROJAN series) electrolyte level must be checked at least monthly, on the contrary in traction cells at least once a week. The plates must ALWAYS be completely immersed. If necessary, add ONLY distilled water AFTER charging.

7. Periodically discharge the batteries (better once a month) completely (up to 80%). Not for the starter ones.

8. For long periods of disuse, recharge the batteries periodically (at least once a month)

9. ALWAYS recharge the batteries immediately after discharge

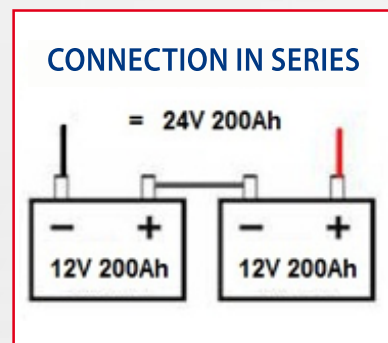
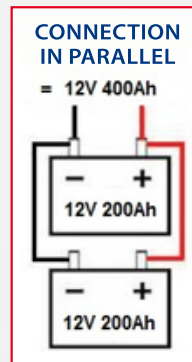
10. The temperature conditions the battery performance. All technical data are related to 25°C (internal battery)

- Lower temperatures reduce the capacity: from 0 °C it will be about 60%
- Higher temperatures reduce DRASTICALLY the battery life

11. Prevent and remove eventual oxidation on the poles. It is recommended the use of rubber end covers

12. On our website www.unionbatteryservice.it are available all the general warranty conditions

FOR FURTHER AND MORE DETAILED TECHNICAL SUPPORT, PLEASE CONTACT US!!!



REFRESH CHARGES FOR BATTERIES AT STOCK

	(ZL, ZGL, ZPC, ZLS)	(TROJAN)
Storage temperature: between 10°C and 20°C	Every 9 months	Every 3 months
Storage temperature: between 20°C and 30°C	Every 6 months	Every 2 months
Storage temperature: between 30°C and 40°C	Every 3 months	Every month