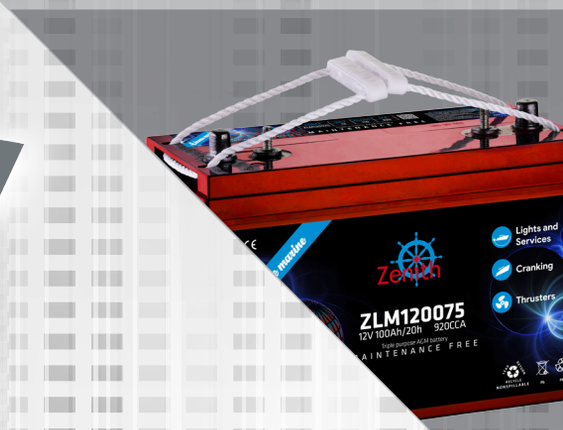


Zenith
THE MAINTENANCE FREE BATTERY

MORI RADDRIZZATORI
power to work

Eternity
TECHNOLOGIES

YUASA
BATTERY

GS YUASA

GS

Battery
Regenerator

UBS UNION BATTERY Service

moving energy

MORI GROUP
battery & charger

01/2022

UBS UNION BATTERY Service
moving energy

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.

3.500 mq

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

STOCK

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

98% Customer Satisfaction

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

GLOBAL SOLUTION

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

INNOVATION

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

STRENGTH certified

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

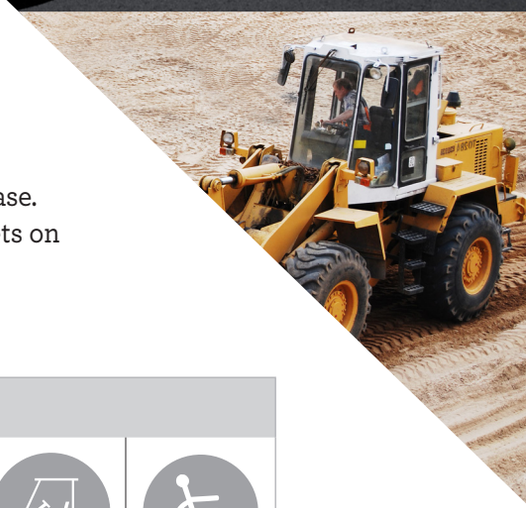
OFF LINE

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

Battery Regenerator · Zenith THE MAINTENANCE FREE BATTERY · MR MORI RADDRIZZATORI power to work · Zenith LITHIUM · Eternity TECHNOLOGIES · YUASA BATTERY

Zenith
THE MAINTENANCE FREE BATTERY

AGM MAINTENANCE FREE BATTERIES

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*
- *For starter batteries we suggest our ZPC series (page 9)*

WARRANTY* 24 MONTHS

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

CODE	V	CAPACITY		DIMENSIONS (mm)				TERMINAL	WEIGHT (KG)	PALLET QUANT.
		Ah/20h	Ah/5h	L	W	H	TOTAL H			
Battery 6V										
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
ZGL060026	6	12,00	10,20	151,0	50,0	93,0	98,0	F1	1,86	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	230.0	138,0	210,0	215,0	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	M6	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
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	220,0	223,0	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
THE MAINTENANCE FREE BATTERY

AGM MAINTENANCE FREE BATTERIES

EXTRA POWER

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

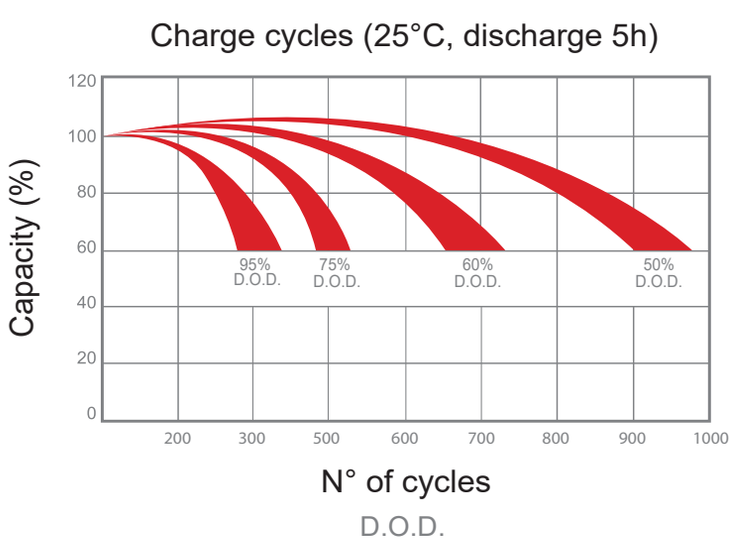
- *See battery data sheets for proper charge cycle and charger set-up*
- *Never discharge more than 80%. Deeper discharges void any warranty*

WARRANTY* 24 MONTHS

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

CODE	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	269,0	275,0	M8	30,5	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	285,0	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 45Ah											
ZL120110	-	12	13	11	151,0	99,0	95,0	101,0	F2	4,2	200
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 130Ah											
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 140Ah 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	8D	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



To consult the terminals, go to page 27

Tolerance dimensions +/- 2 - 4 mm

Zenith
THE MAINTENANCE FREE BATTERY

AGM MAINTENANCE FREE BATTERIES

Leisure marine

Zenith ZLM

SPECIFIC AGM BATTERIES FOR LEISURE MARINE

APPLICATIONS

- Boat cranking
- Boat thruster
- Boat service

Complete Triplepurpose batteries for leisure marine

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

WARRANTY* 24 MONTHS

Triple purpose battery:

- Lights and Services
- Cranking
- Thrusters

	CODE	V	CAPACITY Ah/20h	CRANKING "EN"	DIMENSIONS (mm)				TERMINAL	POL.	WEIGHT (Kg)	PALLET QUANTITY
				CCA (-18°C)	L	W	H	Total H				
	ZLM120075	12	100	920	330	172	215	242	M10+AP	DX	32	36
New 2022	ZLM120100	12	200	1200	510	223	220	242	M10+AP	SX	57	18

for details refer to the data sheets on our website

Tolerance dimensions +/- 2 - 4 mm

To consult the terminals, go to page 27

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

AGM MAINTENANCE FREE BATTERIES

PROFESSIONAL

Zenith ZPC

HIGH CRANKING CURRENT PROFESSIONAL USE

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"		DIMENSIONS (mm)				TERMINAL	POL.	WEIGHT (Kg)	PALLET QUANTITY
			CCA (-18°C)	CA (0°C)	L	W	H	Total H				
ZPC120020	12	20	230	310	181	77	167	167	M6	DX	7,0	144
ZPC120025	12	28	410	530	165	176	125	125	M8	DX	10,7	84
ZPC120030	12	30	450	550	250	97	142	156	M6	DX	10,0	75
ZPC120051	12	65	825	1000	260	171	185	207	AP	SX	20,9	42
ZPC120065	12	100	965	1170	307	169	214	237	DT	SX	32,2	36
ZPC120075	12	110	1100	1360	330	173	215	236	M10	DX	34,5	36

for details refer to the data sheets on our website

To consult the terminals, go to page 27

Tolerance dimensions +/- 2 - 4 mm

Eternity TECHNOLOGIES

GEL SEALED BATTERIES

Eternity ETG
DEEP-CYCLE

APPLICATIONS
- Scrubbers
- Sweepers
- Electric Boats
- Electric Scooters
- Vehicles for Disables
- All electric vehicles
- Electric scissor lift

- **Excellent performance at high discharge current**
- **700 cycles (80% D.O.D.)**
- **Gel maintenance free bloc batteries**
- *See battery data sheets for proper charge cycle and charger set-up*
- *Never discharge more than 80% D.O.D. Deeper discharges void any warranty*

WARRANTY* 24 MONTHS

CODE	USA MODEL	V	CAPACITY		DIMENSIONS (mm)			TERMINAL	WEIGHT (Kg)	PALLET QUANTITY
			Ah/20h	Ah/5h	L	W	H			
ETG06180	-	6	210	184	242,0	186,0	274,0	M8	32,0	36
ETG06240	305	6	280	245	302,0	178,0	349,0	M8	45,0	22
ETG1245	34	12	51	46	254,0	168,0	177,0	M6	18,0	48
ETG1252	BCI34	12	61	54	254,0	168,0	177,0	M6	21,0	48
ETG1266	BCI24	12	78	71	254,0	168,0	204,5	M6	25,0	48
ETG1276	BCI31	12	94	85	329,0	170,0	207,0	M8	32,0	36
ETG12105	BCI21	12	123	108	329,0	170,0	260,0	M8	42,0	36

for details refer to the data sheets on our website

To consult the terminals, go to page 27

Tolerance dimensions +/- 2 - 4 mm

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

AGM MAINTENANCE FREE BATTERIES

Zenith
THE MAINTENANCE FREE BATTERY

Zenith ZLS

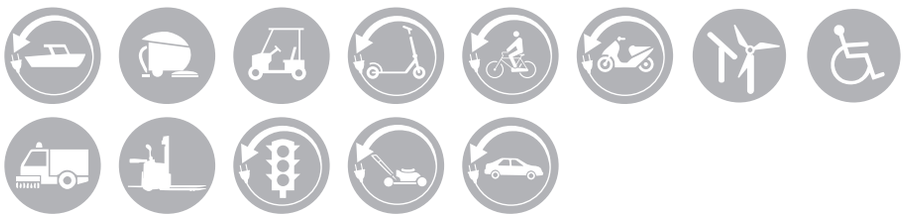
LONGLIFE/ DEEP-CYCLE

APPLICATIONS

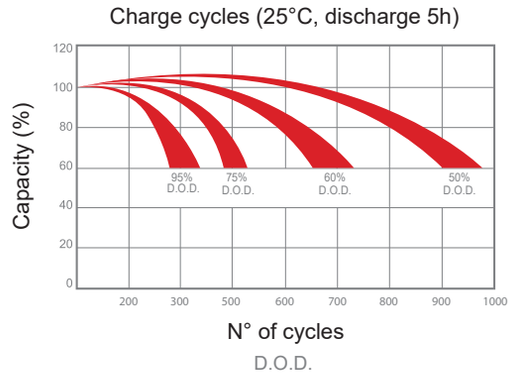
- Scrubbers
- Sweepers
- Electric Boats
- Electric Scooters
- Electric bike
- Vehicles for Disables
- Renewable Energy
- Road signals

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*



WARRANTY* 24 MONTHS



CODE	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

for details refer to the data sheets on our website

To consult the terminals, go to page 27

Tolerance dimensions +/- 2 - 4 mm

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

LEAD ACID BATTERIES

GS Yuasa
LEAD ACID DEEP-CYCLE

APPLICATIONS

- Floor washers
- Sweepers
- Golf cars
- Scissor lift

- Vibration resistant
- Longer cycle-life time
- Low maintenance
- Deep-cycle

● *See battery data sheets for proper charge cycle and charger set-up*

● *Never discharge more than 80% D.O.D. Deeper discharges void any warranty*

TERMINALS:

ELPT (ET)

LESS WATER CONSUMPTION

WARRANTY* 24 MONTHS

CODE	RESERVE OF CAPACITY (min)		CAPACITY		TERMINAL	DIMENSIONS (mm)				WEIGHT (Kg)	PALLET QUANTITY
	25 Amps	75 Amps	Ah/20h	Ah/5h		L	W	H	Total H		
6 volt											
DCB105-6	447	115	225	185	ET	259	179	245	276	28,6	36
DCB125-6	488	132	240	195	ET	259	179	245	276	30,7	36
DCB145-6	530	145	260	215	ET	259	179	264	295	33,0	36
8 volt											
DCB875-8	295	75	170	145	ET	262	181	245	276	29,0	36
12 volt											
DCB1275-12	290	70	150	125	ET	329	181	245	276	37,5	24

▸ **for details refer to the data sheets on our website**

Tolerance dimensions +/- 2 - 4 mm

LITHIUM LiFePO4 BATTERIES

Zenith LITHIUM

Zenith Lithium

LITHIUM BATTERIES ASSEMBLED IN TRAY
COMPLETE WITH BALLAST

REPAIRABLE!

APPLICATIONS

- Transpallet
- Forklift

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 2hr (**always** use the proper battery charger). Vehicles, where they will be installed, will increase their productivity/autonomy.

Please note: verify that the lithium battery offered is suitable with CE Certificate of the truck.

WARRANTY* 36 MONTHS

Lead Acid ⇄ Lithium

PERFECTLY INTERCHANGEABLE

BATTERIES WITHOUT ANY GAS EMISSION

BATTERIES COMPLETE WITH BALLAST

LITHIUM BATTERY PACKS "LiFePO4", COMPLETE WITH ELECTRONIC CONTROL BMS

CODE	V	Ah	KWh	CHARGE		DISCHARGE				DIMENSIONS (mm)			Weight (Kg)	CAN BUS	Certification UN 38.3	Suitable charger
				Max V	Max A	Min V	Max A	Max A for 15"	Max A for 3"	L	W	H				
ZC.ZLI024065	25,6	100	2,56	29,2	50	20	100	200	400	617	208	627	214	SI	SI	ZHF2460.LH
ZC.ZLI024070	25,6	100	2,56	29,2	50	20	100	200	400	660	145	685	165	SI	SI	ZHF2460.LH
ZC.ZLI024100	25,6	200	5,12	29,2	100	20	200	250	400	622	282	627	285	SI	SI	ZHF2490.PFC.LH

- for details refer to the data sheets on our website
- for numer of cycles go to the page 15

Technical specifications to the page 16

Tolerance dimensions +/- 2 - 4 mm

Zenith LITHIUM

LITHIUM LiFePO4 BATTERY PACKS

Zenith LITHIUM

LITHIUM BATTERIES

REPAIRABLE!

APPLICATIONS

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

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 2hr (**always** use the proper battery charger). Vehicles, where they will be installed, will increase their productivity/autonomy.

- *Always ask the UNION BATTERY SERVICE authorization if you want to use them in series or parallel*

WARRANTY* 36 MONTHS

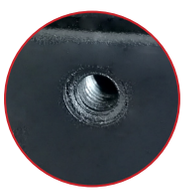
CONNECTABLE IN PARALLEL

BATTERIES WITHOUT ANY GAS EMISSION

S.o.C. Display

Safety valve

MORE ROBUST



4 female threaded inserts, M6, per side

ON/OFF

Carryng handles

Display and CAN BUS connectors

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

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

LITHIUM BATTERY PACKS "LiFePO4", COMPLETE WITH ELECTRONIC CONTROL BMS

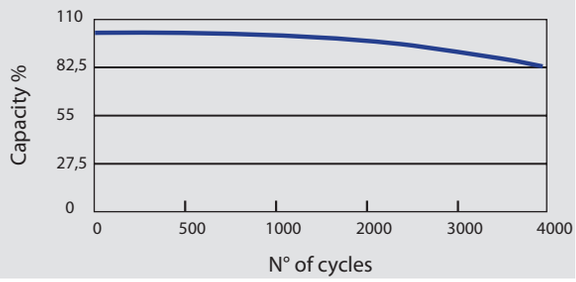
CODE	V	Ah	KWh	CHARGE		DISCHARGE				DIMENSIONS (mm)			Weight (Kg)	CAN BUS	Certification UN 38.3	PALLET QUANTITY
				Max V	Max A	Min V	Max A	Max A for 15"	Max A for 3"	L	W	H				
ZLI012035*	12,8	50	0,64	14,6	35	10	50	100	200	195	165	175	8,5	NO	NO	15
ZLI012051*	12,8	100	1,28	14,6	70	10	100	200	400	165	330	170	14,0	NO	SI	10
ZLI012100	12,8	200	2,56	14,6	140	10	200	250	400	170	340	275	25,0	NO	SI	5
ZLI024036*	25,6	50	1,28	29,2	35	20	50	100	200	165	330	170	14,0	NO	SI	10
ZLI024065	25,6	100	2,56	29,2	50	20	100	200	400	170	340	280	27,5	SI	SI	5
ZLI024070	25,6	100	2,56	29,2	50	20	100	200	400	135	554	275	27,5	SI	SI	5
ZLI024100	25,6	200	5,12	29,2	100	20	200	250	400	200	554	280	50,5	SI	SI	3
ZLI036065	38,4	100	3,84	43,8	50	30	100	200	400	200	420	280	38,0	SI	SI	5
ZLI048060	51,2	100	5,12	58,4	50	40	100	200	400	305	344	280	48,0	SI	SI	3

*not parallelable

- **for details refer to the data sheets on our website**

Discarge temperature	Max	-20°C / +55°C
	Working	-10°C/+45°C
Temperature for charging	Max	0°C / +55°C
	Working	+5°C / +40°C
Storage temperature	Yearly	0°C / 35°C
	Monthly	-20°C / 45°C

Estimated number of cycles:
80% D.O.D. in C/2 - Charge in C/2 - 23°C



The capacity is constant in lithium battery: it does not change at different discharge current rates (see the table)

Comparative Table AGM-LITIUM

In order to facilitate the correct dimensioning

NOMINAL CAPACITY = REAL CAPACITY		
Constant current discharge	Estimate autonomy	
	ZL1201120 (12V 200Ah/20h)	ZLI12100 (12V/200Ah)
10Amp	20h	20h
20Amp	9h	10h
30Amp	5h	6h 30min
40Amp	3h 40min	5h
50Amp	3h	4h
60Amp	2h 30min	3h 30min
70Amp	2h	2h 50min
80Amp	N.C.	2h 30min
100Amp	N.C.	2h
150Amp	N.C.	1h 20min
200Amp	N.C.	1h

N.C: Discharge current not compatible with the battery*

SUITABLE BATTERY CHARGERS

BATTERY CODE	"FAST" CHARGE		"NORMAL" CHARGE		"SLOW" CHARGE	
	Model	Time	Model	Time	Model	Time
ZLI012035			ZHF1225.LH	2h 10min.		
ZLI012051			ZHF1225.LH	2h 10min.		
ZLI012100					ZHF1225.LH	8h 20min.
ZLI024036	ZHF2430.LH	1h 50min.	ZHF2420.LH	2h 40min.		
ZLI024065	ZHF2460.LH	1h 50min.	ZHF2430.LH	3h 10min.	ZHF2420.LH	5h 15min.
ZLI024070	ZHF2460.LH	1h 50min.	ZHF2430.LH	3h 10min.	ZHF2420.LH	5h 15min.
ZLI024100	ZHF2490PFC.LH	2h 15min.	ZHF2460.LH	3h 40min.	ZHF2430.LH	6h 50min.
ZLI036065	ZHF3670.PFC.LH	2h 15min.	ZHF3640.LH	2h 45min.	ZHF3620.LH	5h 15min.
ZLI048060	ZHF4855PFC.LH	2h	ZHF4830.LH	3h 40min.		

- **recharge times considered with 100% discharged batteries**

MORI RADDRIZZATORI
power to work

BATTERY CHARGERS FOR LITHIUM BATTERIES

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%*
- *Reccommended temperature at work: -10°C / +50°C*
- *Voltage and current values are programmable, please verify on the data sheet.*

WARRANTY* 24 MONTHS

COMPLETE WITH BUTTON FOR REACTIVATION 'BMS' BATTERY

CODE	OUTPUT		Kw	MAINS VOLTAGE [A] - 230V	DIMENSIONS (mm)			WEIGHT Kg
	V	A			L	W	H	
ZHF1225.LH	12	25	0,45	3,2	233	120	64	1,3
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
ZHF3620.LH	36	20	1,00	6,9	259	145	79	2,3
ZHF3640.LH		40	2,00	12,0	329	174	96	3,9
ZHF4830.LH	48	30	2,00	12,0	329	174	96	3,9
Single-phase with P.F.C.								
ZHF2490.PFC.LH	24	90	3,1	13A 240V	420	303	100	7,2
ZHF3670.PFC.LH	36	70	3,6	16A 230V	420	303	100	7,2
ZHF4855.PFC.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

Tolerance dimensions +/- 2 - 4 mm

BATTERY CHARGERS
HIGH FREQUENCY ZBCO

ZBCO
HIGH FREQUENCY, ONLY FOR ON-BOARD CLEANING MACHINE USES

WARRANTY* 24 MONTHS

- *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		RECHARGABLE CAPACITY	INPUT					IP	WEIGHT Kg	DIMENSIONS (mm)		
	V	A	Ah/20H	V	A (240)	W	Hz	PFC			L	W	H
ZBCO1208	12	8	50/85	100-260	1,0	140	50/60	no	IP30	0,65	133	125	60
ZBCO2405	24	5	30/60	100-260	1,1	150	50/60	no	IP30	0,65	133	125	60
ZBCO2411	24	11	70/120	100-260	1,5	350	50/60	si	IP30	1,20	133	164	64
ZBCO2415	24	15	100/120	100-260	2,0	480	50/60	si	IP30	1,45	133	240	60

WARNING!!! Battery chargers without power cable

Tolerance dimensions +/- 2 - 4 mm

MORI RADDRIZZATORI
power to work

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 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).

Trhree-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)
			LEAD-ACID						SEALED							
			8h		11h		13h		12h							
			Ah/C5 min		Ah/C5 min		Ah/C5 min		Ah/C5 min							
	V	A	min	max	min	max	min	max	min	max			L	W	H	
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	233	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	233	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	420	160	480	160	420	2,00	12,0	329	174	96	3,9
ZHF4815	48	15	60	100	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	1,70	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.																
ZHF2490.PFC	24	90	270	540	270	900	270	1080	270	900	3,1	13A 240V	420	303	100	7,2
ZHF3660.PFC	36	60	180	360	180	600	180	720	180	600	3,1	13A 240V	420	303	100	7,2
ZHF3670.PFC		70	180	420	180	720	180	840	180	720	3,6	16A 230V	420	303	100	7,2
ZHF4845.PFC	48	45	180	270	180	480	180	540	180	480	3,1	13A 240V	420	303	100	7,2
ZHF4855.PFC		55	180	330	180	540	180	660	180	540	3,7	16A 230V	420	303	100	7,2
ZHF4865.PFC		65	180	420	180	660	180	780	180	660	4,4	20A 230V	420	303	100	7,2
ZHF7230.PFC	72	30	120	180	120	300	120	360	120	300	3,1	13A 240V	420	303	100	7,2
ZHF7240.PFC		40	120	240	120	420	120	480	120	420	4,1	20A 240V	420	303	100	7,2
ZHF8030.PFC	80	30	120	180	120	300	120	360	120	300	3,4	20A 240V	420	303	100	7,2
ZHF8040.PFC		40	120	240	120	420	120	480	120	420	4,5	20A 240V	420	303	100	7,2

THREE-PHASE

CODE	OUTPUT		RECHARGEABLE BATTERIES								Kw	MAINS VOLTAGE (A) – 400V	DIMENSIONS (mm)			WEIGHT (Kg)
			LEAD-ACID						SEALED							
			8h		11h		13h		12h							
			Ah/C5 min		Ah/C5 min		Ah/C5 min		Ah/C5 min							
	V	A	min	max	min	max	min	max	min	max			L	W	H	
ZHF24120T	24	120	360	780	360	1200	360	1400	360	1200	4,0	7,8	540	340	130	10,9
ZHF24240T		240	720	1400	720	2400	720	2800	720	2400	8,0	15,6	591	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	780	360	1200	360	1400	360	1200	6,0	11,5	540	340	130	11,5
ZHF36160T		160	600	960	600	1600	600	2000	600	1600	8,0	15,6	540	340	130	15,8
ZHF36240T		240	720	1400	720	2400	720	2800	720	2400	12,0	23,0	591	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	780	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	591	435	265	23,0
ZHF7280T	72	80	300	480	300	840	300	960	300	840	8,0	15,6	540	340	130	12,3
ZHF72120T		120	360	780	360	1200	360	1400	360	1200	12,0	23,4	540	340	130	15,8
ZHF72160T		160	600	960	600	1600	600	2000	600	1600	16,0	31,2	591	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	780	360	1200	360	1400	360	1200	12,8	24,0	540	340	130	15,8
ZHF80160T		160	600	960	600	1600	600	2000	600	1600	17,6	32,0	591	435	265	24,7

Tolerance dimensions +/- 2 - 4 mm

MORI RADDRIZZATORI
power to work

BATTERY CHARGERS CONVENTIONAL MGX-MORI

MGX Memory Charger

SINGLE-PHASE AUTOMATIC TRADITIONAL CHARGER

WARRANTY* 24 MONTHS

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)							
							Ah/C5 min	Ah/C5 max	Ah/C5 min	Ah/C5 max			L	W	H	
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		30	IWoU/IUoU	310	360	260	300	1,10	7,4	385	200	147	18,5
MGX3620	1	185/265	50/60	36	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 mode, see general warranty conditions on our website*

Battery Regenerator

Your battery will no longer be a mystery!

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 easly 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 tubolar 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

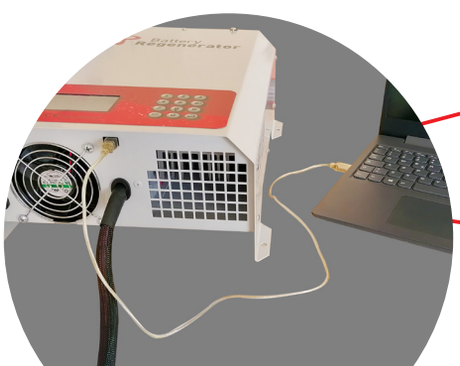
What can you do with the Battery Regenerator?

- **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 and 2h.
- **Cycle new batteries** to check their performance over time: 20h, 5h and 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 continuty groups, UPS and telephone switchboards.
- Installers/maintainers of boat.
- Resellers/maintainers of vehicles for the elderly and disabled.



Minimum requirements:
Windows 10 32/64 Bit versions or Android min. 8.0

Download the app for Android

MORI RADDRIZZATORI
power to work

BATTERIES REGENERATOR

1. Check the batteries and status

- It can be done on a new battery, check the correctness of the declared data, and also on an used battery to check its status/conditions.
- It consist of a fully automatic charge/discharge/charge cycle.
- The discharge current is constant.
- The discharge cycle involves 100% battery discharge.
- Depending on the type of battery and the application, the discharge capacity can be checked in 20 hours, 5 hours and 2 hours.
- The report with the result can be saved in PDF and printed.
- Duration varies by test, between 12 hours and 48 hours ca.

2h discharge capacity value declared by the manufacturer

Detected value

CAPACITY TEST RESULT N 2°

Cliente:
U.B.S. Union Battery Service

Tipo Batteria: **AGM** | Tensione: **12 V** | Matricola: **0000005632**

Marca: **Zenith** | Modello: **ZL120175**

Capacità	C2	C5	C20	% C2	% C5	% C20
Nominale	70 Ah					
Misurata	70,8 Ah			101 %		

2. Charging and discharging cycle sequence ("cycling" battery) *

- It is generally made on a new battery and for cyclic use (DEEP-CYCLE) in order to check its behaviour over time.
- It is possible to set up to 10 charge/discharge.
- The discharge current is constant.
- The discharge cycle involves discharging the battery 100%.
- Depending on the type of battery and the application, the discharge capacity can be checked.
- The report with the result can be saved in PDF and printed.
- Duration varies according to the number of cycles set, keeping in mind that each cycle can be about 15-35 hours.

* do not do this activity on lead acid starter batteries.

Capacity value declared by the manufacturer

Detected value after the first cycle

Detected value after the last cycle

Battery features graph

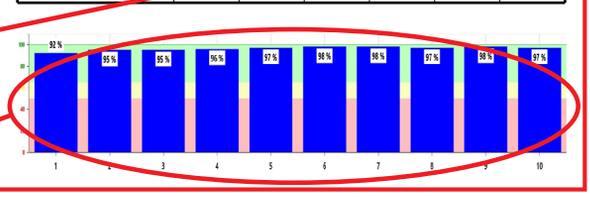
CAPACITY TEST RESULT N 3°

Cliente:
U.B.S. Union Battery Service

Tipo Batteria: **Piombo/Acido** | Tensione: **12 V** | Matricola: **0000000005**

Marca: **Trojan** | Modello: **TJ120145**

Capacità	C2	C5	C20	% C2	% C5	% C20
Nominale		120 Ah				
Primo Ciclo		110,9 Ah			92 %	
Ultimo Ciclo		116,6 Ah			97 %	



BATTERIES
REGENERATOR

3. Equalize/balance new batteries

- The activity is absolutely indispensable to guarantee a longer life of the batteries, especially when installing multiple units connected together in series or in parallel.
- The aim is to make the batteries "homogeneous" with each other, especially if they are produced at different times and stored in different ways.
- It remains essential that the batteries must still be of the same brand and model.
- The cycle lasts about 7 - 20 hours.
- No report is expected.

4. Refresh the batteries in stock

- This is a charger/micro discharge/charge sequence specially developed to try to restore the original characteristics, on batteries that have been in stock for a certain time.
- The cycle lasts about 5 - 10 hours.
- No report is expected.

5. Regenerate batteries used incorrectly

- **Warning:** regeneration treatment is absolutely recommendable even on batteries in use, still working, in order to prevent deterioration: **"Regenerates time and time savings"**.
  The earlier it is done, the greater % success rate will be.
- It can be applied on any type of used lead battery.
- NOT all batteries subjected to treatment will give a positive result.
- It is preferable for AGM batteries to carry out a capacity test after a faw days from the end of the regeneration process, which has a positive result.
- It uses a specific algorithm that manages the sequence of charges/discharges.
- The algorithm adapts to the behaviour of the battery during the process.
- Duration varies form 24 hours to 120 hours.
- The result report can be saved in PDF and printed.

Capacity value
declared by the manufacturer

Detected value before
the regeneration

Detected value after
the regeneration

CAPACITY TEST RESULT N 3°

Cliente:
U.B.S. Union Battery Service

Tipo Batteria **AGM** | Tensione **12 V** | Matricola **0020200268**
Marca **Zenith** | Modello **ZL120175**

Capacità	C5	C20	% C5	% C20	Esito
Nominale	65 Ah	75 Ah			✓
Iniziale	45,6 Ah				
Finale	63,5 Ah		97 %		
Valutazione	**Batteria OK**				

MORI RADDRIZZATORI
power to work

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 easly carreid to the customer in order to try to recover "sulphated" batteries

Single-phase supply:

- correct cherge 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_{DC} PROGRAMMABLE OUTPUT STEP 0.1V		I_{DC} PROGRAMMABLE OUTPUT STEP 1A			MINUMUM VOLTAGE FOR CHARGE	WEIGHT Kg	DIMENSIONS (mm)		
	Min.	Max.	Min.	Max.	Idc 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

ACCESSORIES

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
	00200039	SB120 120A BATTERY RED PLUG

CODE		Model
	00200040	SB175 175A BATTERY GREY PLUG
	00200042	SB175 175A BATTERY RED PLUG
	00200043	SB175 175A BATTERY BLUE PLUG
	00200082	DIN 80A male BATTERY PLUG
	00200083	DIN 160A male BATTERY PLUG

CODE		Model
	00200084	DIN 320A male 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

DISTILLED WATER 10LT. TANK

CODE	Description
ACDEMR	10 lt Tank with tap
ACDEMR25	25 lt Tank with tap

ACCESSORIES

POLE PROTECTION

CPM6

CPM8

CPMORS

CODE	KIT QUANTITY
CPM6	10 pairs
CPM8	10 pairs
CPMORS	10 pairs

AUTOMATIC REFILLING CAPS

00300000

00300005

00300120

CODE	REFILLING CAPS
00300000	Cap automatic refilling “SCREW”
00300005	Cap automatic refilling “BAYONET”

CODE	CAPS ACCESSORIES
00300120	Floating

ADAPTORS

KIT.AP.M6 - KIT.AP.M8

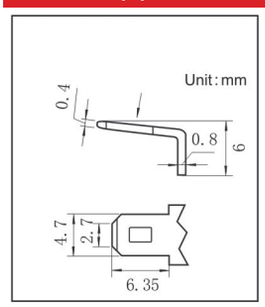
KIT.AP.STUD

CODE	Suitable for	KIT QUANTITY
KIT.AP.M6	terminal M6	10 pieces
KIT.AP.M8	terminal M8	10 pieces
KIT.AP.STUD	screw terminal m8	1 piece
Adaptor TROJAN "AP" positive		1 piece
Adaptor TROJAN "AP" negative		1 piece

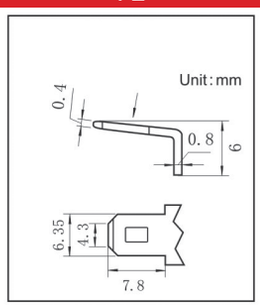
ACCESSORIES

TERMINALS FOR ZENITH BATTERIES

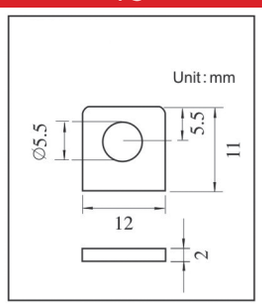
F1



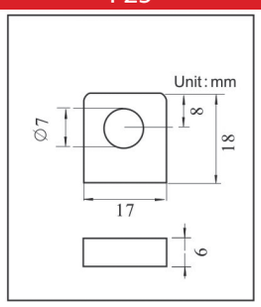
F2



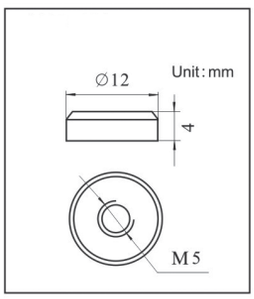
F3



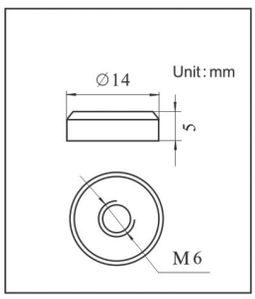
F25



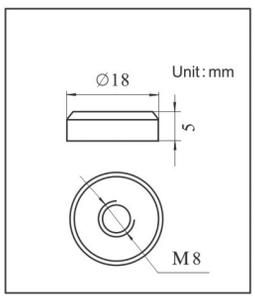
M5



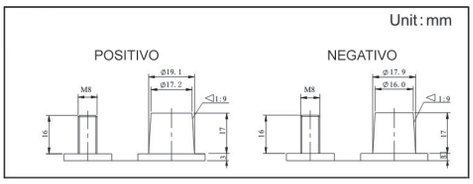
M6



M8



DT



PRACTICAL ADVICE ON LEAD-ACID BATTERIES

1. To assess whether the charger is suitable for charging a battery, we will have to consider three factors:
   - *The voltage of the charger must be the same as the voltage of the battery pack.*
   - *The current charge of the charger must be compatible with the capacity.*
   - *Cycle of charge.*
2. ALWAYS choose the batteries series suitable for the application and setting the model depending on use.
   - *Better battery life over time.*
   - *Any problems are covered by the guarantee.*
3. ALWAYS use the batteries in adequately ventilated places.
4. AVOID any short circuit between the battery poles
5. CONNECTION OF TWO BATTERIES IN PARALLEL

   You get a battery with the same voltage, but with double the capacity.

   ⚠ Use batteries in parallel can be dangerous for two principal reasons:
   - If the connection with the batteries don't allow a correct suddivision of the current delivered between the batteries, in a short time the batteries will become irremediably unbalanced.
   - Any short cut on a battery will damage even the other batteries with eventually damage also on the ambient where the batteries are installed.

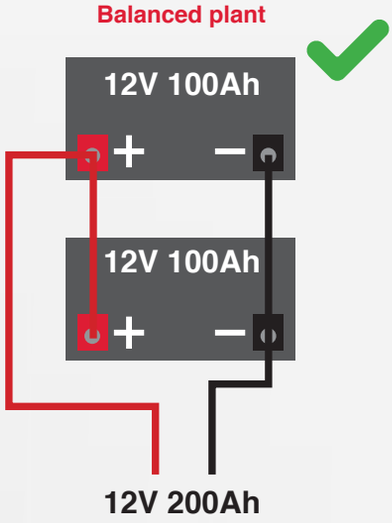
6. CONNECTION OF TWO BATTERIES IN SERIES

   You get a battery with the same capacity, but with double voltage.

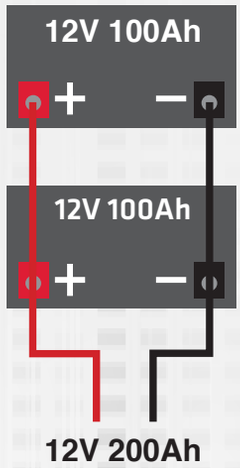
   ⚠ With the connection in series DON'T use batteries of different brands or ages
   - In series connections check periodically (3-4 times a year) the status of the individual batteries. Any problems on a single battery can have an impact on the other batteries.
   - In series connections alternate the position of the batteries 2-3 times a year.

7. In ALL lead acid batteries, the electrolyte level must be checked monthly.
8. Periodically discharge the batteries (better once a month) completely (up to 80%).
9. For long periods of disuse, recharge the batteries periodically (at least once a month).
10. ALWAYS recharge the batteries immediately after discharge.
11. 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
12. Prevent and remove eventual oxidation on the poles. It is recommended the use of rubber end covers.
13. On our website www.unionbatteryservice.it are available all the general warranty conditions

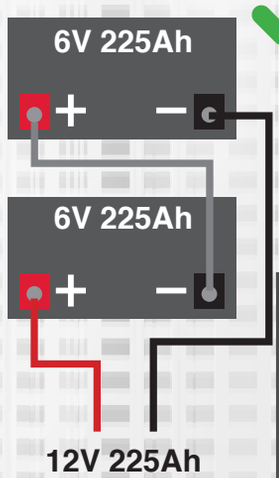
• PARALLEL CONNECTION •
Balanced plant



• PARALLEL CONNECTION •
Not balanced plant
High risk of damaging the batteries



• SERIES CONNECTION •
Always recommendable when it is possible



REFRESH CHARGES FOR BATTERIES AT STOCK		
	(ZL, ZGL, ZPC, ZLS)	(YUASA)
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

U.B.S. UNION BATTERY SERVICE s.r.l. unipersonale
Via Alessandro Volta
25015 Desenzano del Garda (Bs) – Italia
Tel +39 030 9904570 - Fax +39 030 9902207
info@unionbatteryservice.it
www.unionbatteryservice.it
www.mbc.energy