

REVOLUTION Modular High Frequency Battery Chargers CONVENTIONAL, OPPORTUNITY & FAST MODULAR CHARGERS

## Innovative modular architecture with long term savings

The REVOLUTION Series is an innovative line of high frequency battery chargers that incorporates cutting edge modular power design that delivers peak efficiency greater than 93% and efficiencies greater than 90% throughout the entire charge cycle. As the charge cycle progresses and the output current tapers down, the charger will turn off unneeded modules, allowing the remaining modules to operate at

peak efficiency.

- C Flexible and scalable design
- Multi-voltage 1.3kW power modules, that can be combined to produce over 30kW output
- © "Plug and Play" utility makes expansion easy and inexpensive
- Can be programmed for conventional, opportunity or fast applications
- Compatible with Lithium Ion, Lead Acid, VGA and other battery types
- No Downtime! Charger remains operational if a power module fails
- Built-in desulfation cycle
- **Wireless Communication**

The REVOLUTION Series is a combination of cutting edge charging and energy management technologies, with a smaller footprint, lower acquisition costs, easy maintenance, and flexible configurations, which makes updating your fleet of electric lift trucks a more attractive investment than ever before. Free your operation from spare batteries, daily battery changes, battery storage areas, and energy inefficient charging!

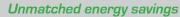




## Variable Configuration Architecture

The REVOLUTION series of chargers are modular concept chargers offering multiple configuration capability. The independent power modules, installed in parallel, allow the user to add individual modules, increasing the charger's output for a minimal upgrade cost.

The parallel module design provides builtin redundancy that ensures that in the
event of a module failure the charger will
continue to operate, at a slightly lower
current output. The unique modular
architecture provides unmatched
value, as diagnosis and repair of an
REVOLUTION is the simplest
and fastest of any charger in
service today.



- C Highest charging efficiency throughout the entire charge cycle
- C Lowest energy costs related to battery charging
  - C Latest generation MOSFET power conversion technology
- © CEC Compliant

#### Cost effective with long term savings

- © Single cable outputs for up to 450 amps
- © Eliminates the need to replace chargers as your lift truck/ battery fleet changes in the future
- PowerCharge.Net monitoring system option allows you to collect and analyze fleet utilization information from a single location, optimizing your cost savings



The REVOLUTION charger, when combined with the PowerTrac 3 or SP+ data logger, has the ability to be multi-voltage (12/24/36/48/72/80), allowing the charger to automatically recognize and charge a wide range of batteries and amp hour capacities. Plus, it provides detailed fleet management information.

### **REVOLUTION Charger Specifications**

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Model	Module Size	e Output Voltage	4kW	5kW	6kW	8kW	9kW	10kW	12kW	13kW	14kW	15kW	18kW	21kW	23kW	26kW	29kW	31kW
Maximum Current Output (16)	36	24/36	90	120	150													
	48	24/36/48	75/67	100/90	125/112													
	80	24/36/48/72/80	39	52	65													
	36	24/36			150	180	210	240										
	48	24/36/48			125/112	150/135	170/157	200/180										
	80	24/36/48/72/80			65	78	91	104										
	, 36	24/36						240	270	300	330	350						
	48	24/36/48						200/180	225/202	250/225	275/247	300/270						
	80	24/36/48/72/80						104	117	130	143	156						
	, 36	24/36										360	420 <sup>sc</sup>	480				
	48	24/36/48										300/270	350/315	sc 400/360s	C			
	80	24/36/48/72/80											182	208				
	, 36	24/36													540	600	660	700
	48	24/36/48													450/405 <sup>sc</sup>	500/4509	<sup>5C</sup> 550/495	600/540
	80	24/36/48/72/80													234	260	286	312
Number of Modules			3	4	5	6	7	8	9	10	11	12	14	16	18	20	22	24
Charger kW Rating			3.9	5.2	6.5	7.8	9.1	10.4	11.7	13.0	14.3	15.6	18.2	20.8	23.4	26.0	28.6	31.2
Input Current Draw			5.5	7.4	9.2	11.1	12.9	14.8	16.6	18.5	20.3	22.2	25.9	29.6	33.3	37.0	40.7	44.4
AC Breaker			5X: 15A	8X: 2	OA 1	2X: 30A	16X: 4	IOA	24X: 60A									
Max. Input Current			5X: 10A	8X: 1	5A 1	2X: 22A	16X: 3	BOA	24X: 44A									
Input Voltage			480VAC, 3-phase ± 10%															
Efficiency			Total cha	irge cycle e	efficiency >	90%												
			Peak charging efficiency > 93%															
User Ir	nterfac	e	LCD/Keypad, Ethernet (optional)															
Cooling			Forced air (fans)															
Dimensions (WxDxH)				." x 8.5" x 2 " x 10" x 48		X: 18.5" x : 4X: 30" x ′		12X: 26.	5" x 9.5" x	21"								
Weight			5X: ≤ 56	lbs 8X:≤	81 lbs 1	2X: ≤ 120	lbs 16X:	≤ 210 lbs	24X: ≤ 30	00 lbs								
Certific	cations	3	UL and c	UL listed; C	CEC Compl	iant												
			470/			001/				1/00/40 /7/	2 (22 )							

Conventional charge rate based on 17% start rate Opportunity charge rate based on 25% start rate Fast charge rate based on 40% start rate

80V chargers are capable of charging 24/36/48/72/80 batteries 48V chargers are capable of charging 24/36/48 batteries 36V chargers are capable of charging 24/36 batteries

Single cable versions available please contact
Power Designers for more details

# Your Complete Power Solution Provider



#### Power Designers Sibex

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