

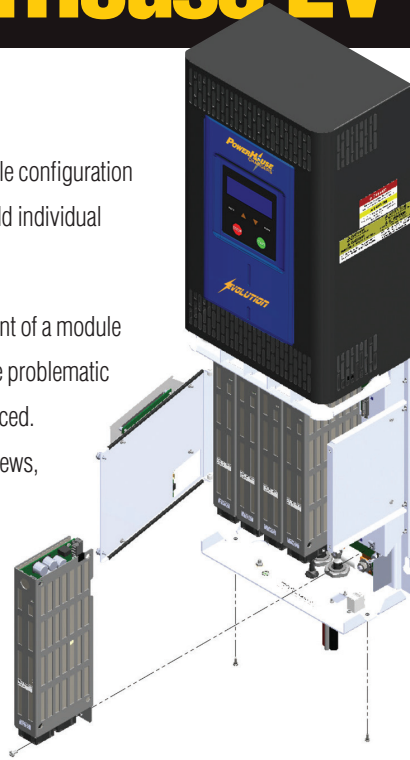
# The Power in PowerHouse EV

## Variable Configuration Architecture

The **EVOLUTION 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 built-in redundancy that ensures that in the event of a module failure the charger will continue to operate, at a slightly lower current output, until the problematic module is replaced. In the event of a module failure, the module can quickly be replaced.

The charger display will indicate the module failure and with the removal of a few screws, the faulted module can simply be unplugged and a new module plugged in, replace the door, re-energize the charger, and it is back to work. The unique modular architecture provides unmatched value, as diagnosis and repair of an **EVOLUTION** is the simplest and fastest of any charger in service today.



## EVOLUTION Charger Specifications

| Model                     | Module Size | Output Voltage | 4kW   | 5kW    | 6kW     | 8kW                    | 9kW      | 10kW           | 12kW                    | 13kW           | 14kW     | 15kW                 | 18kW    | 21kW    | 23kW                 | 26kW    | 29kW    | 31kW    |  |  |
|---------------------------|-------------|----------------|---|--------|---------|------------------------|----------|----------------|-------------------------|----------------|----------|----------------------|---------|---------|----------------------|---------|---------|---------|--|--|
| 5X                        | 36          | 36V            | 90  | 120    | 150     |                        |          |                |                         |                |          |                      |         |         |                      |         |         |         |  |  |
|                           | 48          | 36V/48V        | 75/67   | 100/90 | 125/112 |                        |          |                |                         |                |          |                      |         |         |                      |         |         |         |  |  |
| 8X                        | 36          | 36V            |   |        | 150     | 180                    | 210      | 240            |                         |                |          |                      |         |         |                      |         |         |         |  |  |
|                           | 48          | 36V/48V        |   |        | 125/112 | 150/135                | 175/157  | 200/180        |                         |                |          |                      |         |         |                      |         |         |         |  |  |
| 12X                       | 36          | 36V            |   |        |         |                        |          | 240            | 270                     | 300            | 330      | 350                  |         |         |                      |         |         |         |  |  |
|                           | 48          | 36V/48V        |   |        |         |                        |          | 200/180        | 225/202                 | 250/225        | 275/247  | 300/270              |         |         |                      |         |         |         |  |  |
| 16X                       | 36          | 36V            |   |        |         |                        |          |                |                         |                |          | 360                  | 420     | 480     |                      |         |         |         |  |  |
|                           | 48          | 36V/48V        |   |        |         |                        |          |                |                         |                |          | 300/270              | 350/315 | 400/360 |                      |         |         |         |  |  |
| 24X                       | 36          | 36V            |   |        |         |                        |          |                |                         |                |          |                      |         |         | 540                  | 600     | 660     | 700     |  |  |
|                           | 48          | 36V/48V        |   |        |         |                        |          |                |                         |                |          |                      |         |         | 450/405              | 500/450 | 550/495 | 600/540 |  |  |
| <b>Number of Modules</b>  |             |                | 3   | 4      | 5       | 6                      | 7        | 8              | 9                       | 10             | 11       | 12                   | 14      | 16      | 18                   | 20      | 22      | 24      |  |  |
| <b>Charger kW Rating</b>  |             |                | 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    |  |  |
| <b>Input Current Draw</b> |             |                | 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    |  |  |
| <b>AC Breaker</b>         |             |                | 5X: 15A   |        |         | 8X: 20A                |          | 12X: 30A       |                         | 16X: 40A       |          | 24X: 60A             |         |         |                      |         |         |         |  |  |
| <b>Max. Input Current</b> |             |                | 5X: 10A   |        | 8X: 15A |                        | 12X: 22A |                | 16X: 30A                |                | 24X: 44A |                      |         |         |                      |         |         |         |  |  |
| <b>Input Voltage</b>      |             |                | 480VAC, 3-phase ± 10%   |        |         |                        |          |                |                         |                |          |                      |         |         |                      |         |         |         |  |  |
| <b>Efficiency</b>         |             |                | Total charge cycle efficiency > 90%<br>Peak charging efficiency > 93% |        |         |                        |          |                |                         |                |          |                      |         |         |                      |         |         |         |  |  |
| <b>User Interface</b>     |             |                | LCD/Keypad, Ethernet (optional)                                       |        |         |                        |          |                |                         |                |          |                      |         |         |                      |         |         |         |  |  |
| <b>Cooling</b>            |             |                | Forced air (fans)   |        |         |                        |          |                |                         |                |          |                      |         |         |                      |         |         |         |  |  |
| <b>Dimensions (WxDxH)</b> |             |                | 5X: 12.5" x 8.5" x 20.25"   |        |         | 8X: 18.5" x 9.5" x 21" |          |                | 12X: 26.5" x 9.5" x 21" |                |          | 16X: 22" x 10" x 48" |         |         | 24X: 30" x 10" x 48" |         |         |         |  |  |
| <b>Weight</b>             |             |                | 5X: ≤ 56 lbs  |        |         | 8X: ≤ 81 lbs           |          | 12X: ≤ 120 lbs |                         | 16X: ≤ 210 lbs |          | 24X: ≤ 300 lbs       |         |         |                      |         |         |         |  |  |
| <b>Certifications</b>     |             |                | UL and cUL listed; CEC Compliant*                                     |        |         |                        |          |                |                         |                |          |                      |         |         |                      |         |         |         |  |  |

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

\*Contact Crown Battery for CEC compliant charger models.



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## Innovative Modular Architecture:

- Modular architecture that is scalable and reliable
- 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
- Charger remains operational if a power module fails.

## Unmatched Energy Savings:

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

## Cost Effective with Long-term Savings:

- Low initial cost versus traditional fast chargers
- Charger can be programmed for all lead acid battery types
- 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 **EVOLUTION** charger, when combined with the PowerTrac data logger, has the ability to be multi-voltage (24/36/48), allowing the charger to automatically recognize and charge a wide range of batteries and amp hour capacities. Plus, it provides detailed fleet management information.