

# POWERGUARD<sup>®</sup> HD

The Power To Choose



# POWERGUARD® HD

## The Power To Choose

The POWERGUARD® HD charger series is HAWKER's new ferroresonant charger line.

The POWERGUARD® HD charger series consists of single-phase and three-phase chargers for every charging need. POWERGUARD® HD features stackable drip-resistant cabinets and are designed to be convection cooled in ambients up to 40°C (104°F).

HAWKER offers two different models in the POWERGUARD® ferroresonant line, the POWERGUARD® HD (for heavy duty applications) and the POWERGUARD® LD (for light duty applications). Let's take a closer look at the two models.

### POWERGUARD® HD

POWERGUARD® HD is designed to return a 100% discharged battery to full charge in eight hours or less; everything from a 6, 12, or 18 cell battery all the way up to a 24 or even a 40 cell battery. With an 18% start rate and 4 to 5% finish rate, the POWERGUARD® HD chargers are built to return 108% to 112% of your battery's rated capacity in an eight-hour period.

The POWERGUARD® HD charger is available with two different controls, the *PRO* and the *PREMIUM*. You can select the control that best meets your charging needs.

The *PRO Control* offers:

- **Auto Start/Stop** – Auto start/stop enables the charger to start/stop the charge cycle automatically.

- **Dv/dt Termination** – Precise termination that tracks rates of change of battery voltage (dv/dt), or you can select time-voltage (t/v) termination.
- **Manual Equalize** – Provides user control to start or stop an equalize charger.
- **Easy to read LED Indicators**
  - o Charging
  - o 80% Indicator
  - o Charge Complete
  - o Equalize
  - o Power ON

The *PREMIUM Control* offers:

- All the features of the *PRO Control*

**PLUS –**

- o **Programmable equalize** – Allows you to program the duration and frequency of equalize.
- o **Programmable delayed start** – Delay period can be adjusted from 0 to 25 hrs., in 6 min. increments.
- o **Programmable cool down** – Allows you to program the cool down time between 0 hr. – 12 hr.
- o **Auto refresh** – A refresh charge is performed every 12 hrs. for 20 min.
- o **Programmable refresh charge time limit** – Allows you to program both the duration of charge (from 0-60 min.) and the charge interval (from 2-24 hrs.)
- o **Programmable post 80% limit** – May be programmed to run from 0-10 hours after reaching 80%.
- o **LED numeric display** – Four digit/seven segment numeric display shows the volts per cell, AH returned, delay time, total charge time and fault condition by fault mode.
- o **Faults** – The charger control circuitry constantly monitors for eleven different fault conditions.
- o **Random restart on power failure** – After a power outage, upon power restore, the charger(s) will have a random short delay before restarting, to prevent a power surge.



POWERGUARD® - The Power to Choose

POWERGUARD® HD allows you to control your fleet operation while at the same time control your operating costs.



## POWERGUARD® LD

POWERGUARD® LD chargers are rated to return an 80% discharged battery to full charge in eight hours and should not be used in applications where overdischarging may occur. POWERGUARD® LD is designed for light duty applications. The POWERGUARD® LD charger is only available with the standard (**PRO**) control board.

POWERGUARD® LD features:

- Choice of dv/dt or time-voltage termination
- Auto Start/Stop
- Manual Equalize
- Easy to read LED Indicators

## POWERGUARD® HD & LD Safeguards

POWERGUARD® HD & LD guards your battery fleet against being over or under charged. See the POWERGUARD® difference . . .

- o In the case of an AC power failure, the charger resumes charging exactly where it stopped charging.
- o Backup timer and second, redundant timer initiate a 15-hour countdown when the charge cycle begins.
- o Solid-state electronics perform self-diagnostics and shut down in case of charger-related problems.

## HAWKER's Power Solutions

HAWKER is the source for power/charger solutions to keep your batteries performing at maximum capacity for the maximum number of cycles.

### **LIFEPLUS® TC3 – High-Frequency Power Source**

LIFEPLUS® TC3 chargers are the result of over two decades of high-frequency smart charging experience. The LIFEPLUS® TC3 features plug-and-play flexibility – adjusting automatically to the needs of a broad range of batteries – and its own IP address for data networking. LIFEPLUS® TC3 high-frequency switching technology offers the highest conversion efficiency and power factor, significantly reducing electrical consumption and demand charges.

### **POWERTECH™ – High-Frequency Intellicharger®**

POWERTECH™ offers all of the savings of the LIFEPLUS® charger but in a simpler single voltage configuration and in an industrial cabinet. POWERTECH™ can recharge batteries from 450 to 1200 AH without any adjustments.

For the right HAWKER power solution to meet your needs, please call **1-877-7HAWKER** for a HAWKER representative in your area.





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