



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**
 - Charging
 - 80% Indicator
 - Charge Complete
 - Equalize
 - Power ON

The **PREMIUM Control** offers:

- All the features of the PRO Control **PLUS-**
- **Programmable equalize** - Allows you to program the duration and frequency of equalize.
- **Programmable delayed start** - Delay period can be adjusted from 0 to 25 hours, in 6 minute increments.
- **Programmable cool down** - Allows you to program the cool down time between 0-12 hours.
- **Auto refresh** - A refresh charge is performed every 12 hours for 20 minutes.
- **Programmable refresh charge time limit** - Allows you to program both the duration of charge (from 0-60 minutes) and the charge interval (from 2-24 hours)
- **Programmable post 80% limit** - May be programmed to run from 0-10 hours after reaching 80%.
- **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.
- **Faults** - The charger control circuitry constantly monitors for eleven different fault conditions.
- **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™ 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 and is available in both single and three-phase.

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 Control Your Battery Fleet

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

- In the case of an AC power failure, the charger resumes charging exactly where it stopped charging
- Backup timer and second, separate timer initiate a 15-hour countdown when the charge cycle begins. Should the primary timer fail, the backup timer shuts off the charger 15 hours after it starts.
- Solid-state electronics perform self-diagnostics on the charger and shut it down in case of charger-related problems.