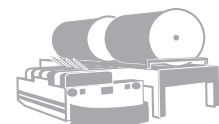
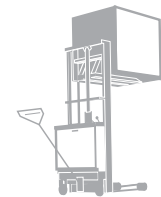




## Smart Chargers Hawker Lifeplus



## Capability of communication with the battery



Hawker®, European leader in motive power batteries, has pioneered High Frequency charger technology. More than 20 years expertise and a constant study of the customer's needs and requirements has lead to Hawker's new range of smart chargers. With the ability to communicate with the battery we can provide the optimal energy pack needed for all motive power applications.

### The optimal solution

#### • Hawker Lifeplus

This range is our premium brand and at the leading edge of smart technology. These three phase, multivoltage and multicapacity chargers are able to communicate with the battery through the Hawker easycontrol or easyplus, the electronic devices located on the battery.

### Benefits of HF technology

Optimal availability for use and long service life can only be achieved from motive power batteries when the battery and the charger are perfectly matched.

#### The HF technology permits:

- compact wall-mounted designs to save floor space
- significantly higher electrical performances.

Thus the necessity for specific chargers is replaced by the capability of multicapacity and multivoltage.

#### The chargers adapt automatically to:

- Capacity of the battery
- Voltage of the battery
- Depth of discharge of the battery.



These factors plus high energy efficiency, very high and constant power factor, reduced overcharge factor and delayed start of charge deliver significant energy cost reductions.

**Our HF charger Lifeplus range matches all technologies of lead-acid batteries (vented, gas recombination: gel or AGM), especially for Hawker battery ranges:**

- Hawker perfect plus (vented batteries)
- Hawker perfect plus with electrolyte circulation
- Hawker Water Less® (vented batteries)
- Hawker Water Less® with electrolyte circulation
- Hawker Water Less® 20 plus (battery with electrolyte circulation, very low maintenance)
- Hawker evolution (valve regulated batteries with gel electrolyte)
- Hawker XFC™

And offer high performances, reliability and multipurpose use.

### Hawker easycontrol or easyplus: electronic device

With the Hawker easycontrol (Hawker evolution batteries) or easyplus (flooded batteries) located on the battery, the Lifeplus is capable of communication with the battery and can display the charge parameters for the last 100 charges.

Automatic profile correction in relation to temperature, when used with Hawker easycontrol or easyplus, ensures correct charge profile to safeguard charging time and optimal service life.



## Smart and flexible state of the art technology

### Main technical features

- High power factor and efficiency
- Optimal charge factor based on depth of discharge
- Temperature regulation (gel, flooded with or without electrolyte circulation)
- Memory of last 100 charges
- Menu:
  - Deferred start
  - Selection of equalization
  - Selection of charging profile
  - Temperature
  - Selection of cable length and section
  - Rest time of the battery
  - Electrically-operated valve (with control)
- Charging status  
(Incomplete Charge, Full Charge, Total Incomplete Charges, Total Full Charges)

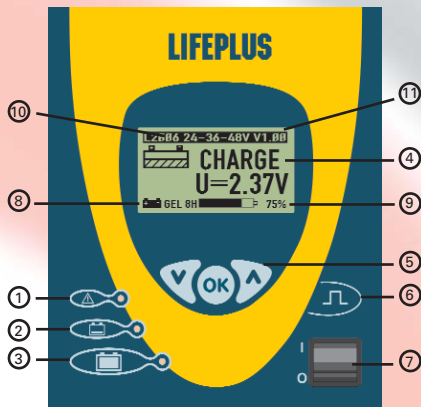
- Download of profiles on PDA through RS232
- Optional extras
  - Red/green light
  - Automatic water topping up kit
  - Pneumatic electrolyte circulation pump kit
  - Download (profiles, memory) on PC, or printer



### Example of parameters stored by the charger

Nb	T°C	Cap	Batt. Serial Number	Technology	U <sub>init</sub>	Ah+	U <sub>final</sub>	I <sub>final</sub>	State of charge Init	Status
1	22	600	AC56123	Gel	2.00	426	2.71	6	29	Complete
...										
100	30	520	AC12562	PbO	2.05	175	2.35	65	40	Disconnect

### Front Panels



No.	Function	No.	Function
①	Red « Fault » light: permanently lit, flashing or unlit	⑥	Desulphation button
②	Yellow « Battery on charge » light: permanently lit, flashing or unlit	⑦	Start (position I) and Stop (position 0) switch
③	Green « Battery available » light: permanently lit, flashing or unlit	⑧	Battery technology
④	Digital display	⑨	State of charge
⑤	Parameter/memory menu	⑩	Type of charger – Available voltage
		⑪	Software version

Clear, easily understood indications of charge parameters on the LCD display for these multivoltage, 3-phase chargers.

### Definition of application fields

#### 1. Low duty

single shift with light operation and discharge lower than 60 % C<sub>5</sub>, electrolyte T°C about 30°C


#### 2. Normal duty

single shift with discharge up to 80 % C<sub>5</sub>, electrolyte T°C 30°C

#### 3. Heavy duty

- single shift with discharges of 80 % C<sub>5</sub> and high discharging currents
- opportunity charging to augment the useable capacity
- multi-shift operation with or without battery changes
- high ambient temperature

1. Low duty	2. Normal duty	3. Heavy duty
Hawker perfect plus		
Hawker perfect plus with electrolyte circulation		
Hawker Water Less®		
Hawker Water Less® with electrolyte circulation		
Hawker Water Less® 20		
Hawker evolution		



Wherever you do business, EnerSys® can support you with motive power energy. The Hawker® branded battery range, matched chargers and systems provide trouble free performance under the most demanding service conditions. Our strategically located manufacturing plants are efficient and responsive with a culture of continuous improvement and added value for our business partners.

EnerSys has an enviable position in technology leadership and with significant investment in research and development we intend to stay at the leading edge in product innovation. The recently developed energy solutions: Water Less® 20 and Hawker XFC™ batteries, Lifetech and Lifespeed IQ™ HF chargers, have defined new benefits for our customers: faster recharge, more machine availability, lower operating and investment costs, reduced carbon footprint. Our team of development engineers is driven by the desire to build the best energy solutions and works closely with our customers and suppliers to identify development opportunities. Our bias for rapid innovation means we get new products to market fast.

EnerSys's integrated sales and service network is dedicated to providing our customers with the best solutions and after-sales support for their business. Whether you require 1 battery or a complete fleet of batteries, chargers, a battery handling system and a state of the art fleet management system, you can count on us. EnerSys is the world's largest industrial battery manufacturer and we are dedicated to being the best.



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[www.energys-emea.com](http://www.energys-emea.com)

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