

## Cobra - High Efficiency Hydrogen Fuel Cell



- Zero emissions and virtually silent running
- Hybridisation with batteries provides a 60% (or more) power to weight ratio gain over simply adding more batteries - radically extending equipment run times
- Around five times more powerful than comparable fuel cells in a similar size and weight package
- Further run time extensions available by when operating alongside Merlin's DataCell II Battery Monitoring and PowerBank Battery Management systems

Cobra is a 1kW hydrogen operated Fuel Cell designed to automatically recharge batteries either on-board a vehicle or in static applications (such as base stations, command posts, events etc). Its main advantage when compared to a conventional generator is that it operates virtually silently, emits only a small amount of water vapour (zero emissions) and has a much lower weight, size and no servicing required.

In addition, when compared to simply installing more batteries in an application for longer run times, Cobra (in a hybrid fuel cell / battery installation) has a 60% better power to weight ratio, meaning much more power for longer from a smaller and lighter footprint. This can be improved further through fuel storage optimisation and combining Cobra with Merlin's PowerBank battery management or DataCell II battery monitoring systems.

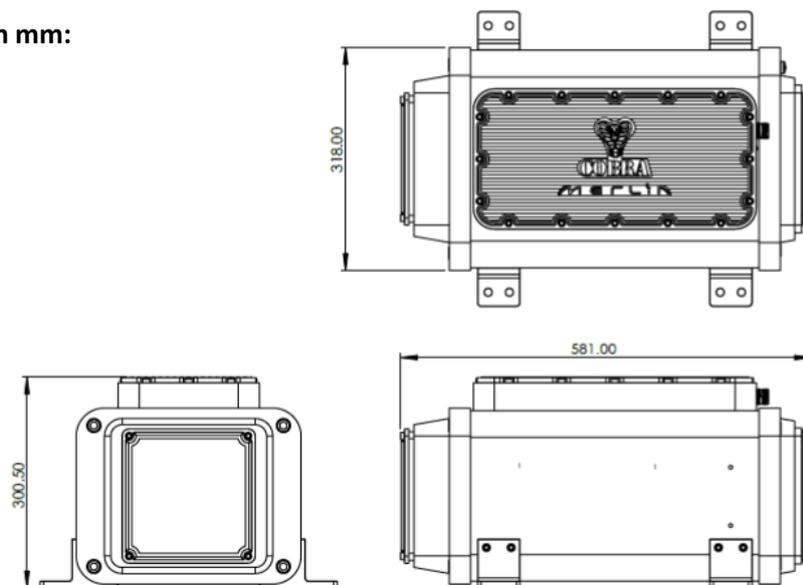
In a static application, Cobra will run from standard compressed gas hydrogen cylinders already available from normal gas suppliers. On vehicles, we are able to offer numerous storage options including vehicle type approved tanks.

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## Specifications:

Performance	Battery Charging (Max)	40A @ 28.8V (12V Available)
	Output Voltage Regulation	Configurable
	Emissions	Water Vapour
Fuel	Fuel Type	Hydrogen Gas
	Fuel Pressure	500 – 800 mbarg
	Fuel Storage	External
Operation	Delayed Start Trigger Voltage	24.6V DC
	Delay Start Trigger Time	30 Seconds
	Turn Off Trigger Voltage	29.5V DC
	Turn Off Trigger Current	2 Amps
	Turn Off Delay	20 Seconds
	Low Voltage Shutdown	18 Volts
Maintenance	Regular Maintenance	Air Filters
	Stack Maintenance	Replacement circa 8000 hours
	Health Monitoring	On-Board (Via CAN Bus Output)
Physical	Weight	21.5Kg (Excluding Fuel)

## Dimensions in mm:



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