

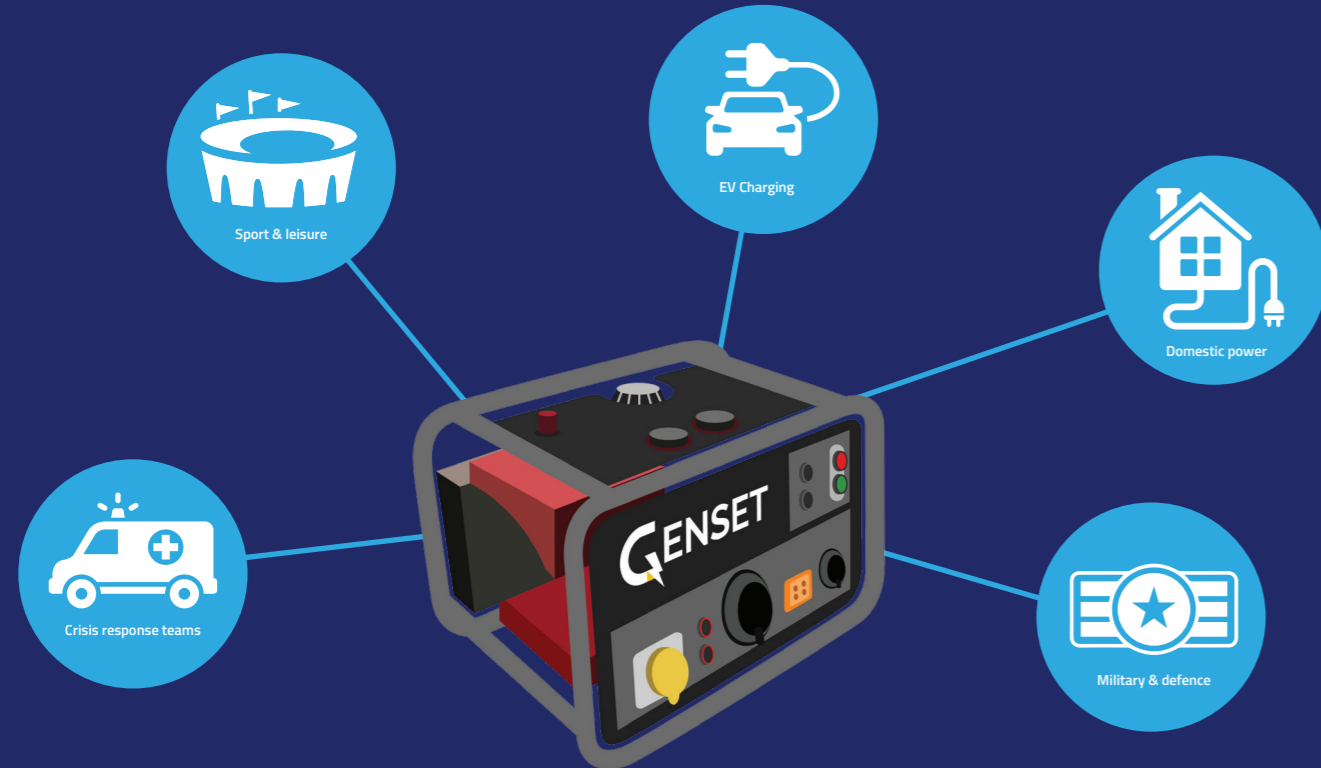
GENSET

Powering the rEVolution

What is Genset?

Genset is an ultra-lightweight, portable electrical power unit capable of delivering 7.5kW of power from a unit that weighs just 50kg. This highly efficient Genset is more compact, lightweight, and power dense than anything else currently on the market.

At the size of a standard microwave-oven, Genset has revolutionised mobile power generation and can provide power to anything with a minimum of 7.5kW of power, with a view of increasing this power output to a full 10kW. This encompasses a broad range of applications from providing a charge to an electric vehicle, providing power generation for crisis response teams, sport and leisure applications, standby domestic power for grid power distributions, or can support in-field power for military and defence organisations.



Why is our Genset unique?

By comparing our Genset to other market leading products you will see how the Genset surpasses the power-to-weight ratio of all other available products of this kind. This includes those power solutions which are battery or fuel powered.

					Genset
■ Power	2.2kW	7kW	7kW	9.6kW	7.5kW (which will eventually increase to 10kW)
■ Weight	76kg	118kg	70kg	161kg	50kg
■ Volume	165 litres	428 litres	378 litres	672 litres	79 litres
■ Dimensions	L: 60cm W: 50cm H: 55cm	L: 85cm W: 70cm H: 72cm	L: 60cm W: 35cm H: 180cm	L: 100cm W: 79cm H: 85cm	L: 52cm W: 39cm H: 39cm

How does Genset work?

Three main components make up the Genset:

1. Wankel rotary engine

The Wankel rotary engine acts as a prime mover to rotate the generator and produce electricity. A rotary engine is used in the Genset as it has a much higher power to size ratio than a conventional piston engine. Furthermore, it has very few moving parts and they are always spinning, meaning the engine is perfectly balanced and vibration free at all times.



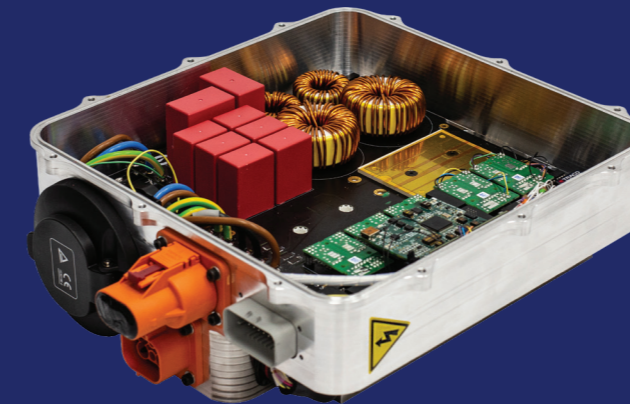
2. Direct drive 10kW generator

The generator converts mechanical power into electrical output. Conventional 10kW generators can be extremely heavy because they use inefficient copper wound rotors to generate the rotating magnetic field. Because we wanted the system to be as lightweight, compact, and portable as possible, a 10kW generator was designed with an internal permanent magnet rotor to generate the rotating magnetic field. This drastically reduces weight and maximises efficiency, to produce a highly power dense machine.



3. Power electronics

The power output from the generator is not of a form which is readily usable by mains electrical devices, therefore a conversion is required. This conversion is achieved by the power electronics which also has the capability to communicate with powered equipment where required, e.g. electric vehicle chargers. This communication, or feedback loop, allows continual control.



Prototype model



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“We chose to work with Original because they are continually adapting their products to suit our needs for the now and for the future. They are ‘out-the-box’ thinkers who forge collaborative partnerships to ensure companies are equipped with world-leading solutions”.

Chris Millward, Technical Development Manager, RAC.

Due to the variety of requests for this system, different configurations of the Genset will be available. Please contact us to discuss your application so we can advise on the most suitable Genset model.



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