WHISPERGEN®
MICRO COMBINED HEAT AND POWER SYSTEM

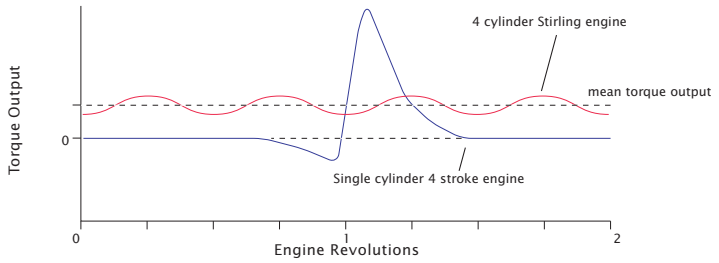
Don’t accept compromise

Onboard power has traditionally been a matter of compromise. Electrical requirements have to be balanced against noise, space, weight and economic considerations. More often than not, the final decision has involved sacrificing one desired feature for another . . .now there is an alternative.

With the WhisperGen the rules have changed and the compromise has been removed. Quiet, compact, lightweight, efficient, and with a state of the art engine management system, your onboard heat and power requirements are taken care of in one package.

Conventional generators are based on the internal combustion engine in which power is created from burning fuel by intermittent ‘explosions’ in the cylinders. This can result in an undesirable level of noise and vibration.

The WhisperGen’s Stirling cycle engine creates power by continuously burning fuel externally from the cylinders, which in turn heats compressed nitrogen gas in the cylinders. This process is clean, quiet, smooth, and efficient.



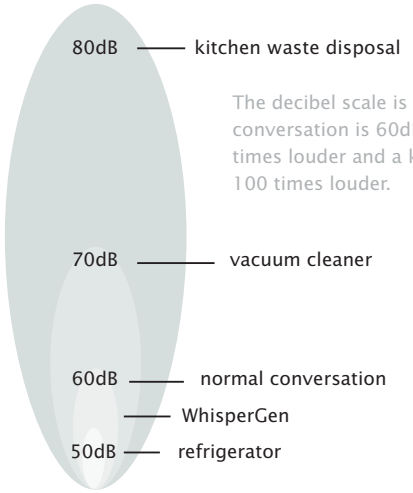
Stirling vs 4 Stroke Engine - Due to the nature of internal combustion, a 4 stroke engine produces a high peak torque but only for a short period of each cycle.The WhisperGen's Stirling engine produces the same power in a smoother manner with very low vibration.

Some sound advice

The noise level produced by a WhisperGen is similar to that of a domestic air-conditioning unit. This enables a WhisperGen to operate unobtrusively, even at night or when the boat is moored.

By comparison, the noise levels of traditional generators generally fall between that of a vacuum cleaner (70dBA) and that of a kitchen waste disposal unit (80dBA) . . .that's over 100 times louder than a WhisperGen.

Some generator manufacturers make a lot of noise about producing quiet generators but fail to provide any figures . . . always listen before you buy.



The decibel scale is exponential. For example normal conversation is 60dB, a vacuum cleaner (70dB) is 10 times louder and a kitchen waste disposal (80dB) is 100 times louder.

Set and forget

Configuring the WhisperGen for your application is as easy as set and forget – simply enter your requirements via the remote mounted control panel and the engine control unit does the rest. This sophisticated microprocessor based control system incorporates battery management, charge control, heat management, and self diagnostic sub-systems. The WhisperGen operates automatically to maintain heat and power levels, even while your boat is unattended.

Battery Management and Charge Control

Unlike many marine generators, the WhisperGen incorporates a battery management and charging system which would otherwise be an added cost and complication. The battery management system monitors an array of charging parameters including battery temperature, level of charge and battery voltage. It automatically starts the WhisperGen when battery charge becomes low, controlling charging through a 3 stage cycle (bulk, absorption and float) to maximise battery life.

Heat Management

With heat management your heating needs are taken care of – all that is required is settings for desired water and room temperatures. The WhisperGen will start unnoticed and regulate its output to meet the heat demand. When heating requirements are satisfied the WhisperGen will shut down.

Both heat management and battery management systems operate simultaneously to ensure optimum WhisperGen efficiency.

Self Diagnostic System

The WhisperGen's built in self-diagnostic system continually monitors operating parameters and will report system settings and operating conditions on the control panel LCD display.

Built from the right stuff

Constructed for long life and minimal maintenance, the WhisperGen is the result of a total commitment to quality of design and manufacture.

No short-cuts have been taken, no compromises have been made. Instead the WhisperGen utilises the highest quality materials, including titanium, ceramic and marine grade stainless steel. The WhisperGen's Stirling engine contains no oil, eliminating the need for oil and filter changes. A brushless permanent magnet alternator, completely sealed within the engine, is maintenance free.

A large investment in quality control and testing has ensured all components used in the WhisperGen meet exacting standards.

If it was any greener it would be a tree

A quieter lifestyle is not the only advantage the WhisperGen offers. When it comes to exhaust emissions the WhisperGen sets a new standard for marine generators. Clean burning and high overall efficiency makes it, without question, the environmentally responsible choice when it comes to heat and power for your boat.

Clean burning diesel?

Yes. An advanced burner design and continuous combustion results in a significantly lower level of exhaust emissions. With precisely controlled combustion chamber temperatures, the level of CO (carbon monoxide), NOx (oxides of nitrogen) and unburned hydro-carbons are quoted in parts per million (ppm) not percent. WhisperGen emissions are clean enough to be exhausted above the water line, preventing the unsightly oil slick common with conventional generators.

Energy efficiency of 90%?

Yes. 90% of the energy of the fuel used is turned into usable power or heat. The WhisperGen achieves this by recovering heat from the engine and the exhaust then utilising it to provide space or hot water heating, a task often handled by electricity ...a precious commodity on-board.

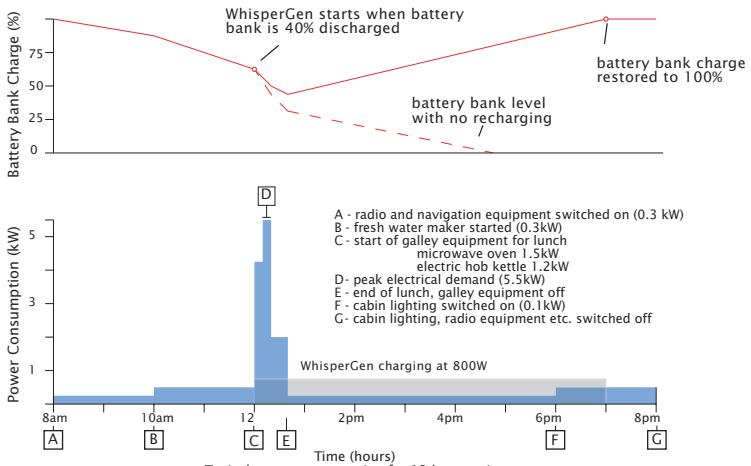
David and Goliath

At first glance a WhisperGen with an 800W DC output competing with a larger AC generator would seem like an unfair fight ...but take a second look.

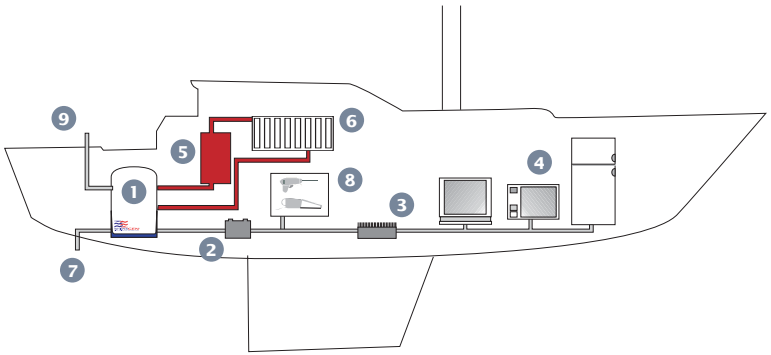
The DC Concept

A WhisperGen operates consistently with low noise and at maximum efficiency to charge a battery bank. This allows the system to store power for times of peak use, and recharge batteries during periods of low electrical demand. An added bonus is the production of heat for hot water and space heating, further reducing the electrical demand.

An AC generator must be sized to meet peak electrical demand, which normally represents only a small proportion of its total operating time. This means the majority of operation is at low electrical output with an associated reduction in efficiency. Periods of peak demand usually coincide with the boat being moored where conventional generator noise is often deemed unsociable.



Typical power consumption for 12 hour cruise
Example shown utilises 165 Ah battery bank and 5.5kW inverter



1. WhisperGen
2. Battery bank
3. DC/AC Inverter
4. Standard domestic appliances
5. Hot water for domestic use
6. Space heating
7. Excess heat removal
8. 12 or 24 Volt equipment
9. Cool exhaust vent

1. Fibre Glass Enclosure
2. Burner Assembly
3. Stirling Engine Assembly
4. Engine Control Unit
5. Burner Fan
6. Control Panel

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WHISPERGEN®
MICRO COMBINED HEAT AND POWER SYSTEM

Get your specs

Models	12 volt diesel fired 24 volt diesel fired 24 volt kerosene fired (available on request)
Engine	4 Cylinder double acting Stirling cycle
Outputs	Electrical: modulated up to 800W Thermal: modulated up to 5.5 kW via sealed liquid circulation
Noise Level	55dBA at 1m
Fuel	Automotive grade diesel - consumption 0.75 l/h at max. output
Battery Charging	Automatic 3 stage
Enclosure	Free standing 2 piece moulded fibreglass IP 54 rated. All service connections are to the back of the enclosure
Heat Exchanger	Titanium plate marine heat exchanger
Dimensions	450 x 500 x 650 (w x d x h)
Dry Weight	90 kg
Environment	Ambient: -10...40°C Humidity: 0...99% non-condensing Orientation: 0...45° about each axis
Service Interval	2000 hour / 12 months*
Warranty	Comprehensive core engine and component warranty available. Contact your WhisperGen regional distributor for details.
Approvals	CE Marked

* whichever occurs first