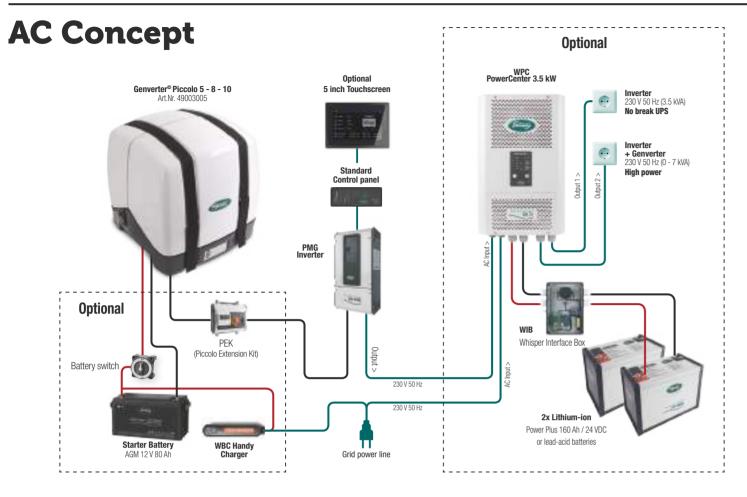
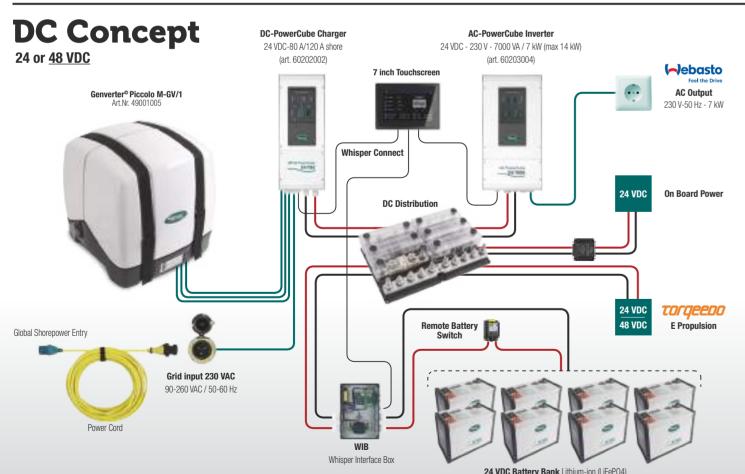
# System variations





#### AC Concept

We offer Genverter AC versions, providing 230 V 50 Hz (110/120 V 50-60 Hz) through the PMG inverter module. 'Raw' energy, which has been generated by the Permanent Magnet alternator, is stabilized to pure sine wave voltage via this cabinet. The PMG is connected to the Genverter<sup>©</sup> by a three wire cable. See drawing at previous, showing the standard supply and the basic options. By installing a WhisperPower Centre inverter/ charger, the Genverter's AC output power can be temporarily increased (by 2-5 kW). The PMG output is coupled to the WPC input which feeds the power from the Genverter<sup>©</sup> to the consumer devices. Whenever the Genverter<sup>©</sup> experiences too much load, the WPC provides additional power by using the battery. With restricted/limited use, the Genverter<sup>©</sup> automatically switches off if set to automatic mode.

#### DC Concept

Another way to compose a system is to take the battery as the main power source together with a DC to AC inverter and let the genverter be the 2e source of power. In this case, the genverter should operate as a battery charger to re-fill the batteries when needed.

#### Main components of this system:

- DC PowerCube battery charger / shore power support system. Available for 24 and 48 VDC
- AC Powercube as the robust inverter, in fact acting as the "generator", available in 4, 7 and 14 kVA powering
- Battery storage, preferably lithium
- TOUCH system monitor

## This is our "low emission Hybrid power system":

- A perfect system for on board AC and DC appliances
- A perfect back-up for electrical propulsion systems

# Essential Installation Parts



▲ Water/gas Separator

For a smooth & silent exhaust system



▲ Hoses and clems supplied in kit form



Syphon breaker kit

▶ Lubrication oil



▲ Touch panel (5 inch)

Ideal remote panel, clear visbility of all functions, includes running hours counter



▲ Base plate kit

To reinforce the mounting surface



Water inlet kit, fuel filter kit



Sales outlets in more than 50 countries **www.whisperpower.com** 

**Headoffice** WhisperPower BV • Kelvinlaan 82 • 9207 JB Drachten • the Netherlands Tel: +31 (0) 512 571 550 • Fax: +31 (0) 512 571 599 sales@whisperpower.com • www.whisperpower.com

WhisperPower sales outlet:

# Genverter<sup>®</sup> Piccolo 5|8|10|12|15 Power Generation

**Variable Speed Marine Diesel Generators** 



### Genverter® Piccolo

# Silent, Compact, Light-weight and Extremely Powerful

The WhisperPower Genverter<sup>©</sup> Piccolo range of marine diesel generators are based on modern, ultra compact diesel engines which meet the latest emission standards.

We apply advanced technology as used in e-mobility and renewable energy markets, resulting in the highest efficiency, lowest exhaust emissions and superior electrical output quality in terms of voltage, frequency and peak power behaviour. Our Variable Speed Technology allows to vary operating speed of the engine to match the connected electrical load, so no energy is wasted.

#### Perfect power for your airconditioning (and more)

All Genverter Piccolo models are supplied with an external inverter "box", so no electronic devices are mounted close to the engine. Our PMG inverter should be mounted in a dry and cool area. Independent of the rotating speed of the Permanent Magnet based alternator, the genverter's PMG delivers the correct power quality for comfort equipment, such as washing machines, airconditioning, electrical cooking devices and various other AC powered equipment. Sensitive appliances work perfect and are not harmed by a poor power supply.

#### The perfect fit

- Extremely compact and light weight
- Virtually vibration free
- Indirect water cooling (sea or fresh), stow away principle
- Lowest noise level (from 50 dBA)
- Pure sine wave output 230 VAC, 50 Hz (+/- 0.1 %) or 120 V 60 Hz
- Five models 5, 8, 10, 12 and 15 kVA
- All necessary first class installation parts available
- Easy to install all engine connections pre-fabricated



Functional start/stop panel with LED indicators delivered as standard with



5 inch Touch panel, optional, Art. Nr. 40280105

#### Up to date technology

- Highly efficient thanks to use of permanent magnet alternator technology
- Automatic speed settings on load sense (for 1 cylinder models)
- Manual speed settings for optimal rpm level (all models)
- PMG inverter fitted with high current IGBT's for high surge
- Tier 4/ EPA emission level (2/3 Cylinder models) as standard Optimal sound reduction by polyester sound shield

#### **Choose from AC or DC variations**

- Standard Versions for 230 Volt 50 Hz (100-120 V 50-60 HZ)
- Version for charging the 24 V batteries by connecting to WhisperPower DC PowerCube









#### **Unique engine**

The small Piccolo 4/5 models are fitted with a modern diesel designed by WhisperPower, entirely for the purpose of generating power the smooth way. The oil is cooled by a heat exchanger designed for indirect watercooling, the circulation water pump is driven by a PTO (no belt). Our Piccolo 8, 10 and 15 kVA models are all-water cooled, back-end and diesel, in one circuit.



#### Any space will do

All our Piccolo models are extremely compact and can be installed in the smallest location. Only minor air ventilation is needed. At picture an installation of a Piccolo 4 in a day cruiser





#### Quiet & vibration free

Vibrations are just as irritating as an over noisy diesel engine. The customized shock mounts, combined with the sound enclosure, result in a super silent and virtually vibration free set-up. All parts needed to be serviced are located at one side of the Genverter. Picture: detail of our WhisperPower WP 1 diesel engine.



#### Highest power quality

Devices such as air conditioning units and electric motors are often controlled by electronics to improve the efficiency and performance. Traditional generators may fail to operate these appliances. All Piccolo models are equipped with a PMG module (Power Module Genverter<sup>©</sup>) to ensure that the voltage and frequency within the rotating speed range remain perfect so that all the equipment continues to run without interruption. Surge power is generated by the PMG to start up inductive loads.

#### **Ease of installation**

All installation parts are available in kit form ensuring an fast and easy job to do. Not a single part or component is needed, all are included.

#### Complete energy system

At the back side of this brochure you will find a complete electrical power system including a Combi inverter/charger, batteries, shore power connection, monitoring etc. This is our great service to you as our customer: we offer complete single brand solutions for the complete on board electrical power system. Everything from one hand. If needed supplied with DC distribution/digital switching, our TOUCH Plus system.















20 kVA	49013005 Piccolo 5 - 230 V / 50 Hz	49005005 wet exhaust - 230 V / 50 Hz	49009005 wet exhaust - 230 V / 50 Hz	49006005 wet exhaust - 230 V / 50 Hz	49007005 wet exhaust - 230 V / 50 Hz
	49003005 Piccolo 5 - 230 V / 50 Hz	49005055 wet exhaust - 120 V / 60 Hz	49009055 wet exhaust - 120 V / 60 Hz	49006055 wet exhaust - 120 V / 60 Hz	49007055 wet exhaust- 120 V / 60 Hz
	49003006 Piccolo 5 - ungrounded		(US voltage splitphase)	(US voltage splitphase)	(US voltage splitphase)
	49002055 Piccolo 4 - 120 V / 60 Hz *	For other versions:	For other versions:	For other versions:	For other versions:
	49003055 Piccolo 5 - 120 V / 60 Hz **	See M-GV 8 (WhisperPowerBook)	See M-GV 8 (WhisperPowerBook)	See M-GV 8 (WhisperPowerBook)	See M-GV 15 (WhisperPowerBook)
MAIN SPECIFICATIONS					
Nom. performance in kVA 1)	0 - 5.0	0 - 8.0	0 - 10.0 1)	0 - 12.0	0 - 15.0
Nom. performance in kW 1)	0 - 4.0	0 - 6.4	0 - 8.0	0 - 10.0	0 - 12.0
Cont. performance in kVA 1)	0 - 4.5	0 - 7.2	0 - 9.0 2)	0 - 11.0	0 - 13.5
Noise level 2)	54 dB(A) at 7 m, 65 dB(A) at 1 m	51 dB(A) at 7 m, 60 dB(A) at 1 m	51 dB(A) at 7 m, 60 dB(A) at 1 m	54 dB(A) at 7 m, 65 dB(A) at 1 m	54 dB(A) at 7 m, 65 dB(A) at 1 m
Rpm range	2400 3600 rpm, adjustable or automatic	2200 2800 rpm, adjustable	2200 2800 rpm, adjustable	2200 3600 rpm, adjustable	2200 3200 rpm, adjustable
Generator	Permanent Magnet Alternator (PMA)				
Inverter Module	WP-PMG frame 1 or frame 1 Plus (Piccolo 5)	WP-PMG frame 1 Plus	WP-PMG frame 2	WP-PMG frame 2	WP-PMG frame 3
Nominal voltage / frequency	230 V / 50 Hz, (or 120 V / 60 Hz)	230 V / 50 Hz, (or 120 V / 60 Hz)	230 V / 50 Hz, (or 120 V / 60 Hz)	230 V / 50 Hz, (or 120 V / 60 Hz)	230 V / 50 Hz, (or 120 V / 60 Hz)
Peak power 2 s	200%	200%	200%	200%	200%
Harmonic distortion	< 5%	< 3%	< 3%	< 3%	< 3%
Frequency tolerance	± 0,1%	± 0.1%	± 0.1%	± 0.1%	± 0.1%
DIESEL ENGINE SPECIFICATIONS					
Engine	WhisperPower WP1	Kubota Z482 (Mitsubishi optional)	Kubota D722 (Mitsubishi optional)	Mitsubishi L3E	Kubota D1105
Cylinder volume	309 cc (one cylinder)	479 cc (two cylinder)	719 cc (three cylinder)	952 cc (three cylinder)	1.123 cc (three cylinder)
Bore & stroke	78 × 76 mm	67 × 68 mm	67 × 68 mm	76 × 70 mm	78 × 78.4 mm
Air consumption	< 0.42 m³/min	< 0.95 m³/min	< 1.22 m³/min	< 1.72 m³/min	< 1.43 m³/min
Cooling system	indirect	indirect (keel cooling closed)	indirect (keel cooling closed)	indirect	indirect
Fuel consumption (no load - full load)	0.8-1.2 l/hr	1.2-2.5 l/hr	1.2-3 l/hr	1.2-3 l/hr	1.5-4 l/hr
Starter battery charge current	charger 12 V/7A	alternator 12 V/12.5 A	alternator 12 V/12.5 A	alternator 12 V/40 A	alternator 12 V/40 A
DIMENSIONS & WEIGHT					
Length $\times$ width $\times$ height (cabinet)	450 × 461 × 520 mm	$660 \times 550 \times 622 \text{ mm}$	$740 \times 550 \times 622 \text{ mm}$	$740 \times 550 \times 622 \text{ mm}$	875 × 570 × 690 mm
Length $\times$ width $\times$ depth (PMG)	420 × 196 × 148 mm	420 × 196 × 148 mm	451 × 200 × 174 mm	451 × 200 × 174 mm	$542 \times 385 \times 255 \text{ mm}$
Dry weight (cabinet + PMG)	68 kg + 7 kg	155 kg + 9.9 kg	175 kg + 9.9 kg	175 kg + 9.9 kg	210 kg + 9.9 kg
Dry exhaust / wet exhaust	Ø 1 inch BSP / Ø 40 mm	Ø 1 inch BSP / Ø 40 mm	Ø 1 inch BSP / Ø 40 mm	Ø 1 inch BSP / Ø 40 mm	Ø 1 inch BSP / Ø 40 mm
Oil dipstick	service side	top and side	top and side	top and side	top and side
Max. operating angle	25° in all directions				
CONTROL PANEL					
Standard	start/stop panel				
Optional	2 <sup>nd</sup> start/stop panel, Touch panel				
CABEL EXTENSION					
00001170	DELCON II I I I III				

\*) Adjustable rpm control \*\*) Our Picccolo 5 is a new model, fitted with a more powerful PMG inverter, capable to deliver a very high peakpower without distortion of the sine wave and disturbance of the frequency. Ideal to operate A/C units of various brands. The Webasto Blue Cool S10 (10,000 BTU) and S16 (16,000 BTU) for example can be started and operated at the same time







WhisperPower's main

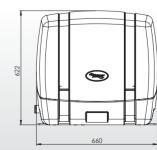
manufacturing facility is

located in Drachten (Friesland) the Netherlands. Our entire conform to ISO 9001-2008 standards. A significant number of our WhisperPowe diesel generators are also certified to various national standards, for example Chinese and Russian Maritime Type Approvals due to the strict investigative procedures and regulations for compliance such as audits that can be carried out by third party





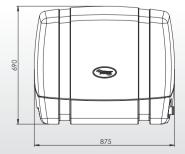












Piccolo 10/12 Piccolo 15



ith the excellent advice, the fast

very and the very simple installat

