



## Generator Technical Data Sheet for

### Model: PHG440Do



### GENERATORS AND UPS



- Intelligent Auto-Start Controller with Generator
- Monitoring and Protection Systems Suitable for Remote Starting or Connection with shentonggroup AMF Panel
- Battery Trickle Charger
- Thermostatically controlled Engine Heater
- Long Range Bunded Base Fuel Tank
- Ability to be Customised to Specific Requirements
- Output Circuit Breaker

### GENERAL

Shenton Group Generators range from 10 to 2500kVA, and are built to a world-class standard. These remarkably competitive standby generators provide the most cost-effective solution for 'standard package' requirements.

A first-class range of diesel-powered generators for prime and standby power application which feature reliable components from leading manufacturers, these are premium products upon which your company can build its reputation.

### Model PHG440Do

Standby Power	kVA	440
	kW	352
Prime Power	kVA	400
	kW	320
Rated Speed	r.p.m	1500
Voltage	V	400/230
Rated Power Factor	Cos Phi	0,8
Data Sheet Number	PHG440Do NS Rev 3	

**Prime:** This rating is for the supply of continuous electrical power (at variable load) in lieu of commercially purchased power. There is no limitation on the annual hours of operation and 10% overload power can be supplied for one hour in twelve hours.

**Standby:** This rating is for the supply of continuous electrical power (at variable load) in the event of a utility power failure. No overload is permitted. Max rating, is available for one in twelve hours

**Note:** Standard reference conditions: 25deg C (77deg F) air inlet temperature, 152.4m (500feet) above sea level, 60% relative humidity. All engine performance data based on the above mentioned maximum continuous ratings. Fuel consumption data at full load for diesel fuel with specific gravity of 0.85 and conforming to BS2869: 1998, class A2.

In line with our policy of continuous development, we reserve the right to change specification without notice.



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### ENGINE

Rated Output (Standby)	kWm	398
Manufacturer		Doosan
Model		P158LE
Engine Type		Diesel 4 Strokes-Cycle
Aspiration Type		Turbo charged & intercooled
Cylinders Arrangement		V-type, 8-Cylinder
Bore & Stroke	mm	128 x 142
Displacement	L	14.618
Cooling System		Water
Compression Ratio		15.0:1
Fuel Consumption 100% PRP	l/h	89.3
Fuel Consumption 75% PRP	l/h	65.1
Fuel Consumption 50% PRP	l/h	43.9
Total Oil Capacity	L	21
Total Coolant Capacity	L	80
Governor	Type	Electronic
Air Filter	Type	Dry Paper Cartridge
Battery Capacity	Ah	2 x 200 Ah
Battery Voltage	V	24

Doosan engines have proven to be a popular choice for shentongroup, although a newcomer into the genset arena in the UK. Doosan has been manufacturing diesel engines since 1958 and are well established in the construction industry machinery market globally. This robust and competitively priced engine is now a firm favourite with many of our clients, including our own rental fleet.



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### ALTERNATOR

Manufacturer		Mecc Alte
Model		ECO 40-1S/4
Poles		4
Frequency	Hz	50
Insulation Class		H
Efficiency at 75% load class H 400v	%	94.2
Reactance Xd'' Unsaturated	%	14.2
Reactance Xd' Unsaturated	%	22.5
Reactance Xo Unsaturated	%	3.5
Short Circuit Current Capacity	%	>300
Heat Dissipation 400v	W	19703
Radio Interference		EN61000-6-3, EN61000-6-2
Waveform Distortion (THD) at Full Load	%	2.6
Enclosure (according IEC-34-5)		IP 21
Weight of Complete Generator	Kg	1040
Cooling Air Requirement	m3/min	54
Overload	%	1 in 6 hours
Overload per 20 sec	%	300
Exciter System		Auxilliary Winding
Voltage Regulator		DER1
Voltage regulation Performance +/-	%	1
Coupling		Flexible Disk

Mecc Alte has sixty years of experience in the electromechanical field, and is today at its height in the world production of synchronous alternators. Committed daily to research, development and updating activities, Mecc Alte is a testimony to constant improvement in all areas such as technology, organisation and quality. The company has ISO 9001 certification, awarded in 1996 and ISO 14001 since 2010. With 54.000 square meters of factory area, almost 850 employees and a turnover of approximately 130 million euro, Mecc Alte is a well-established company ready to challenge the markets in every product sector.

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## APPLICATION DATA

### Exhaust System

Maximum Exhaust Temperature	°C	520
Exhaust Gas Flow	M3/min	80.1
Maximum Allowed Back Pressure	kPa	3.9

### Air Flows

Intake Air Flow	m3/h	1746
Cooling Air Flow	m3/s	8.7
Available Air Restriction		N/A

### Fuel System

Fuel Oil Spec		Diesel Class A2
Fuel Tank Capacity	L	1000
Autonomy	Hrs	15

### Enclosure Specs

Length	mm	4300
Width	mm	1600
Height	mm	2240
Dry Weight	Kg	4320
Sound Pressure Level @ 7 mtrs	dB(A)	70

### Electrical

Output Circuit Breaker	Type	MCCB
	Model	ABB T6N PR221DS-LS/I 800A
Max Load Current at 400V .8 p.f.	Amps	635



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## SG7410DS GENERATOR CONTROLLER

The SG7410DS is an Auto Start Control Module. Monitoring an extensive number of engine parameters, the modules will display warnings, shutdown and engine status information on the back-lit LCD screen, illuminated LEDs, remote PC. The modules include USB, RS232 and RS485 ports as well as dedicated DSENet® terminals for system expansion. The module is compatible with electronic (CAN) and non-electronic (magnetic pick up/alternator sensing) engines and offers an extensive number of flexible inputs, outputs and engine protections so the system can be easily adapted to meet the most demanding industry requirements. The full list of features includes enhanced event and performance monitoring, remote communications and dual mutual standby.

## CONTROL PANEL DISPLAY FEATURES

Engine RPM	Generator Output Current
Engine Oil Pressure	Earth current
Coolant temperature	Output kW
Battery Volts	Load level %
Run Hours/ No of starts	Output kVA
Fuel level	Power factor
Generator output Voltage	Load kVAR
Frequency	kWh/kVAh/kVArh

SG7410DS is a branded Deep Sea Electronics controller, customized to shentonggroup's specific requirements. shentonggroup has a long history of collaboration with Deep Sea Electronics, and endorse their products with confidence. Our experience has proved this is the market-leading controller having a perfect mix of complex capability and user simplicity.

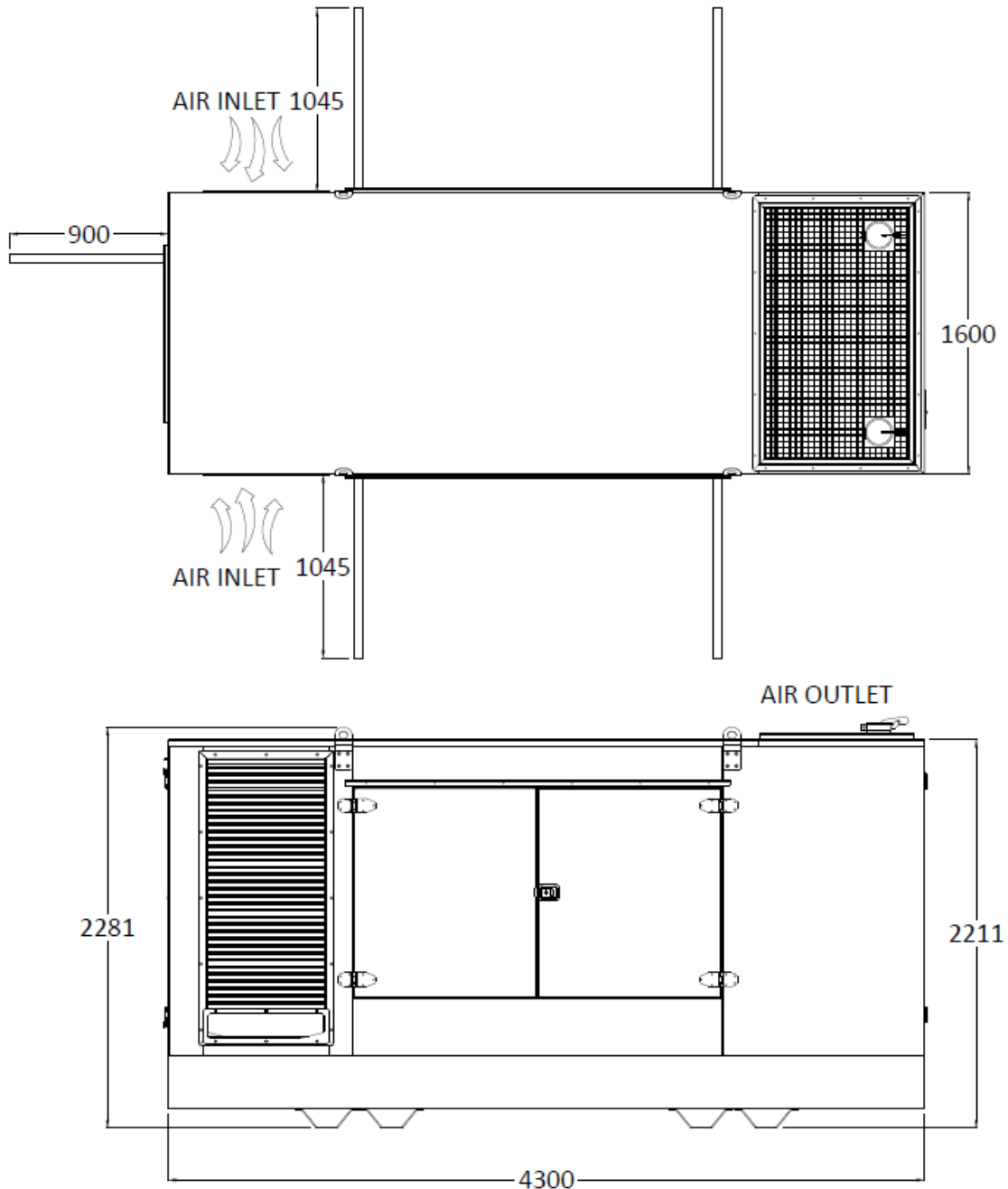


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The above illustration is a representation only for preliminary planning. Specific detailed drawings are available on request. In line with our policy of continuous development, we reserve the right