

**Model: GWRT250XD-271**



**MOBILE/PRIME/STANDBY POWER**



VOLTAGE	480/277VAC		208/120VAC	
	Prime	Standby	Prime	Standby
RATING				
PHASE	3		3	
PF	0.8		0.8	
HZ	60		60	
KW	180	200	176	194
KVA	225	250	220	242
AMPS	271	301	611	673

*Lighting Where You Need  
Power Where You Need*

**STANDARD FEATURES AND CHARACTERISTICS**

**DESCRIPTION**

- GRANDWATT Mobile Generators are efficient, reliable and versatile source of mobile electrical power. Designed to operate in the most extreme working conditions. All GRANDWATT Mobile Generators combine an innovative design and the use of high quality materials that provide the user with the most dependable power that you can rely on for non-stop power with easy to operate controls.
- Powered by a radiator-cooled, industrial PERKINS Diesel engine, which meets current Environmental Protection Agency (EPA) TIER 4 Final non-road exhaust emission regulations, driving a single bearing, four-pole, three-phase alternator, with IP23 protection. The Prime Power kVA rating for generator set is given with a 125 °C alternator winding temperature rise.

**VOLTAGE SWITCHING**

- The output voltage can be switched to 480/277V 3-phase and 208/120V 3-phase by voltage selection switch.

**MANUFACTURE & ASSEMBLY**

- Engine and alternator are coupled via each SAE standard couplers. The torsional analysis for engine & matched alternator has been carried out for avoiding harmful vibration.
- Anti-vibrators are mounted between engine/alternator and the base frame for efficient attenuation of the vibration, and isolating the noise spread via the ground.
- For durability and rust prevention, all galvanized sheet metal components have been got powder coating before assembly, and all base frames or those with sub-base fuel tank have been got paint spraying with basic & surface paint after gotten sand blasting entirely, the optional containers have been got three layers paint spraying for shipping transportation as well.

**CONTROL SYSTEM AND PROTECTION**

- Woodward controller has been recommended for all standard GRANDWATT generators, Deep Sea, ComAp or others are available for choosing. Manual start mode, automatic start mode and PCRC (PC remote control) mode can be switched as different applications on operation interface or setting via laptop or computer.

**WARRANTY & QUALITY TEST**

- GRANDWATT provides one-source responsibility for the generators and its accessories. Everyone will be got at least 1.5 hours Load test, it included 25%,50%,75%,100% and 110% load, and all protections & alarms will be got simulative test before delivery.
- Generator warranty will be through 12 months after shipped from GRANDWATT factory, or refer to manufacturer warranty items of engines or alternators.
- PERKINS and MECC ALTE manufacturers global service network.



● **Engine Model :** **1206F-E70TTAG4**

**BASIC TECHNICAL DATA**

Manufacturer	PERKINS
Number of cylinders	6
Emissions statement	EPA/CARB Tier4 Final
Cylinder arrangement	Vertical inline
Cycle	4 stroke
Induction system	Series turbocharged charge cooled
Combustion system	Direct injection
Compression ratio	16.5:1
Bore (mm)	105
Stroke (mm)	135
Displacement	7.01
Weight (dry) with radiator support brackets (kg)	1125
Overall dimensions (L×W×H)(mm)	1769×916×1461

**TECHNICAL DATA**

Gross engine power - Standby (kW)	239.0
Gross engine power - Prime (kW)	217.5
Fan and battery charging alternator power (kW)	16
Assumed alternator efficiency (%)	92

**COOLING SYSTEM**

Total system capacity (L)	24.25
Bare engine capacity (L)	12.25
Maximum top tank temperature (°C)	108
Thermostat operation range (°C)	82-94

**EXHAUST SYSTEM AFTERTREATMENT**

Aftertreatment system type	DOC,DPF,SCR/AMOX+DEF system
Type of regeneration (high/low temperature)	Low
Aftertreatment weight (kg)	107
Skin temperature for aftertreatment	Maximum 250°C
Aftertreatment exhaust outlet connection	76.2 mm Accuseal

**INDUCTION SYSTEM**

Maximum air intake restriction of engine	
- Clean filter (kPa)	5.0
- Dirty filter (kPa)	8.0
- Induction indicator setting (kPa)	5.0

**LUBRICATION SYSTEM**

Maximum system capacity (L) (Oil rail, oil filter, oil cooler)	1.9
Maximum capacity in sump (L)	16
Minimum capacity in sump (L)	13
Oil pressure at rated speed (kPa)	440-540
Lubricating oil flow at rated speed (L/min)	60

**FUEL SYSTEM**

Fuel pump type	HP4
Injection system	Electronic
Injector type	Common rail
Injection pressure	200kPa
Priming pump type	Gerotor
Maximum fuel return flow (L/min)	2.5
Maximum static pressure head (kPa)	20

**GENERATOR FUEL CONSUMPTION**

110% of load US gallons/h (L/h)	17.9 (67.8)
100% of load US gallons/h (L/h)	15.6 (59.2)
75% of load US gallons/h (L/h)	11.7 (44.1)
50% of load US gallons/h (L/h)	7.8 (29.5)
25% of load US gallons/h (L/h)	3.9 (14.7)

**Note:**

**Test conditions:**

1. Air temperature: 25°C
2. Barometric pressure: 101 kPa
3. Relative humidity: 10.7%
4. Air inlet restriction at maximum power: 5.0 kPa
5. Exhaust back pressure at maximum power: 23.0 kPa
6. Fuel temperature (inlet pump): 40°C



## ● Alternator Model : ECO38 2S4A

### BASIC TECHNICAL DATA

Alternator manufacturer	Mecc alte
Frequency and Speed	60Hz/1800rpm
Voltage (V)	480/277V - 208/120V
Standby power(kW)	240 - 230
Prime power(kW)	192 - 184
Power efficiency(%)	93.8- 93.1
Rated power factor	0.8 - 0.8
Insulation class	H
Stator winding	2/3
Maximum overspeed	2250min <sup>-1</sup>
Sustained short circuit	300%(3IN):20S
Protection class	IP23

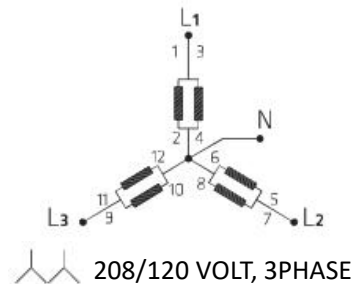
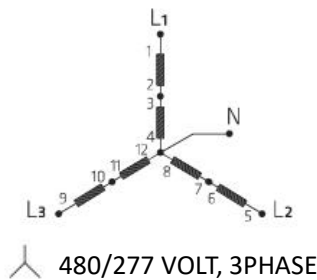
Alternators meet the requirement of BS EN 60034 and the relevant section of other international standards such as , NEMA MG1-32,IEC34, CSAC22.2-100, As1359, and other standards and certifications can be considered on request.

The 2/3 pitch design avoids excessive neutral currents. With the 2/3 pitch and carefully selected pole and tooth designs, ensures very low waveform distortion.

Brushless alternator with brushless pilot exciter for excellent load response.

The insulation system is class H, easy parallelling with mains or other generators, standard 2/3 pitch stator windings avoid excessive neutral currents.

Backed by worldwide service network.



## ACCESSORIES

### STANDARD ACCESSORIES

- |  |   |
|--|---|
| ● 2 Position Voltage Selector Switch       | ● Oil Filter                                  |
| ● Air Filter                               | ● Fuel Filter                                 |
| ● Battery Isolation Switch                 | ● Fuel Pump                                   |
| ● Oil Drain Extention                      | ● Coolant Drain Extention                     |
| ● Coolant Temperature sensor               | ● Oil Pressure Sensor                         |
| ● Low Coolant Level Warning Switch         | ● Low Oil Pressure Shutdown Switch            |
| ● High Coolant Temperature Shutdown Switch | ● Single Leaf-spring Axle with Electric Brake |

### OPTIONAL ACCESSORIES

- |                                    |                            |
|------------------------------------|----------------------------|
| ● Air Filter Restriction Indicator | ● Water Jacket Heater      |
| ● Battery Charger by Solar         | ● Battery Charger by Grid  |
| ● Oil Pan Heater                   | ● Leakage Detection Sensor |





## Control System

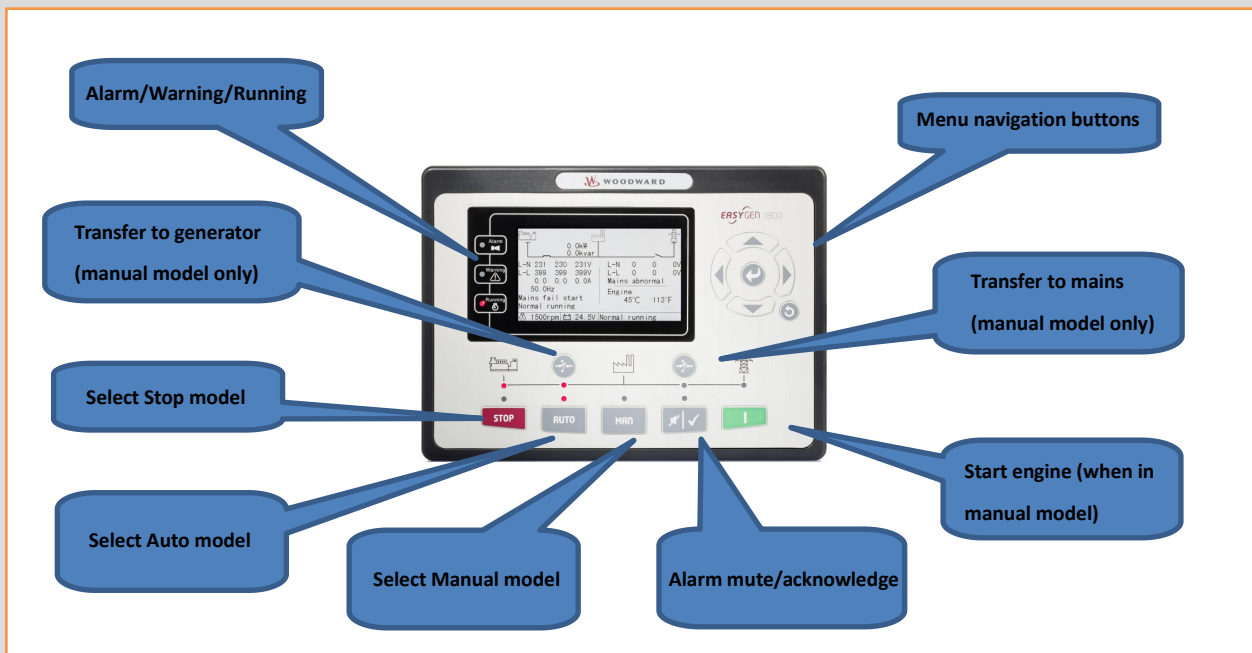
The Gen-set Woodward Controller easYgen-1800 is a microprocessor based control unit containing all necessary functions for protection and control of a diesel engine. Furthermore, it contains a three-phase AC voltage measuring circuit. The unit is equipped with an LCD display presenting all values and alarms. easYgen-1800 is a compact all-in-one unit designed for the following applications:

1. Automatic engine start/stop
2. Engine protection
3. Breaker control
4. Generator protection

## Control Panel



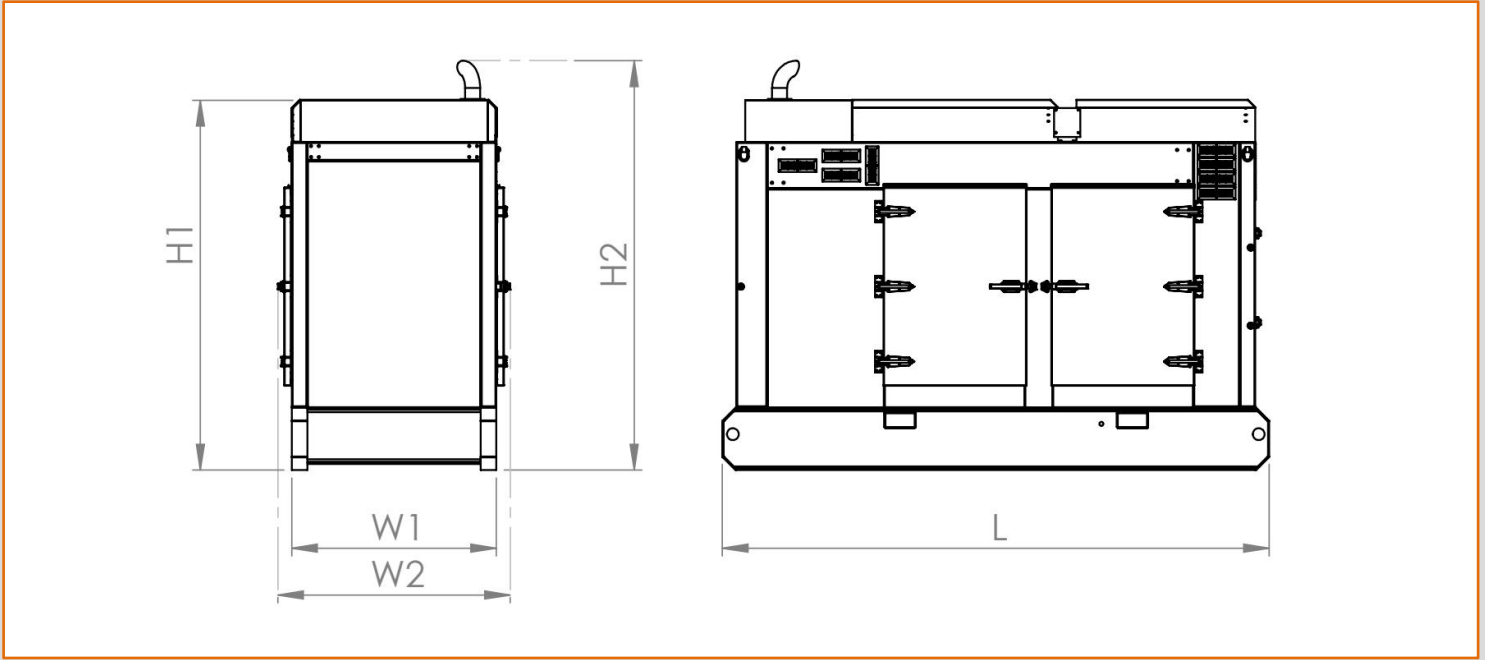
## Description for Model easYgen-1800



Standard functions	Shutdown	Warning
Engine Control	Loss of Speed Signal	Alternator Under / Over Voltage
Generator Monitoring	Alternator Under / Over Voltage	Alternator Under/ Over Frequency
Generator Protection	Alternator Under/ Over Frequency	Mains Under / Over Voltage
Engine Monitoring	Mains Under / Over Voltage	Mains Under/ Over Frequency
Clear Text Display	Mains Under/ Over Frequency	Under / Over Speed
	Under / Over Speed	Low Oil Pressure Pre-Alarm
	Low Oil Pressure	High Engine Temperature Pre-Alarm
	High Engine Temperature	High/Low Battery Voltage
	Phase Sequence Electrical (Option)	Over-current
		Periodic maintenance

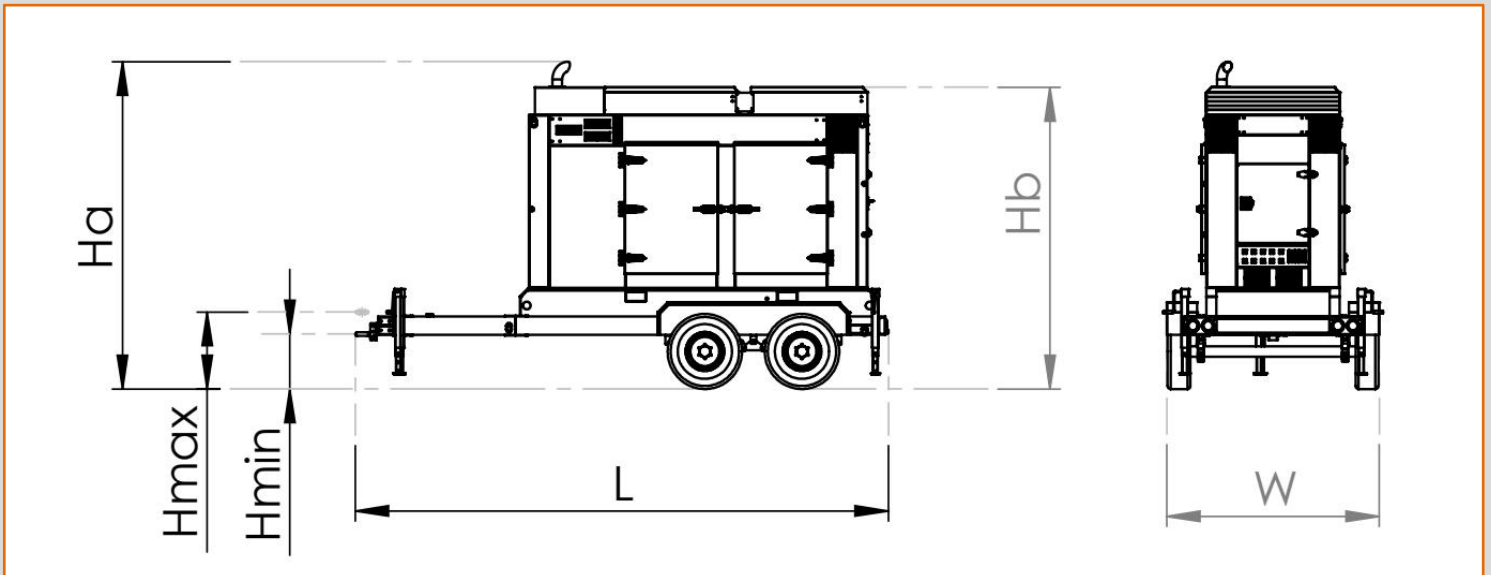


**Silent type**



Generator Data *	L = Length inch (mm)	W1 = Width 1 inch (mm)	W2 = Width 2 inch (mm)	H1 = Height 1 inch (mm)	H2 = Height 2 inch (mm)	Weight (dry) lbs (kg)	dBA @ 7m away	Fuel Tank	
								Running Hours	Capacity Gals (L)
<b>Silent type</b>	141¾ (3600)	52¾ (1330)	57½ (1460)	92¾ (2340)	103¾ (2623)	9350 (4240)	67.5	21	250 (945)

**Silent type with trailer**



Trailer capacity 13,250 lbs, 3" pintle eye and 2<sup>5</sup>/<sub>16</sub>" ball coupler available, double axles with 3 pcs 8,000 lbs jacks, 10" E-brakes, 2 eyes springs and equalizers.

Generator Data *	L = Length inch (mm)	W = Width inch (mm)	Ha = Height a inch (mm)	Hb = Height b inch (mm)	Hmax inch (mm)	Hmin inch (mm)	Weight (dry) lbs (kg)	dBA @ 7m away	Fuel Tank	
									Running Hours	Capacity Gals (L)
<b>Silent type</b>	210¾ (5350)	87 (2210)	128 (3250)	117 (2970)	27¾ (700)	20¾ (515)	11575 (5250)	67.5	21	250 (945)

