



<b>Perkins Engine:</b>  <b>4012-46TWG2A</b>	<b>Alternator</b> Leroy-somer : <b>LSA50.2M6</b>	<b>Generator Model:</b>	<b>TPE1250X (Open)</b>
	<b>Optional:</b> Stamford LVI634E		<b>TPE1250XC (Silent)</b>
<i>Electronic Governor</i>	<i>Tide TPA404M6</i>		

<b>60Hz</b> <i>1800 r.p.m</i>	<b>3 Phase</b> <i>4 Wires</i>	<b>Power Factor:</b> <i>Cos ϕ = 0.8</i>	<b>Emissions Certification:</b>	<i>N/A</i>
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<b>RATINGS</b>	<b>Prime Power</b>		<b>Standby Power</b>		<b>Rated Current</b>
	<i>(PRP)</i>		<i>(LTP)</i>		
Voltage (V)	kW	kVA	kW	kVA	Amps
480/277	1000	1250	1100	1375	1503.6
440/254	1000	1250	1100	1375	1640.2
<b>416/240</b>	<b>1000</b>	<b>1250</b>	<b>1100</b>	<b>1375</b>	<b>1734.9</b>
240/138	1000	1250	1100	1375	3007.1
220/127	1000	1250	1100	1375	3280.5

**RATINGS:**

All three Phase generator sets are rated at 0.8 power factor. All single-phase generator sets are rated at 0.8 or 1.0 power factor. **POWERGEN** reserves the right to change the design or specifications without notice and without any obligation or liability whatsoever.

**Prime Power:**

Available continuously at variable load in lieu of commercially purchased power for an unlimited number of hours per year in accordance with ISO8528-1, and an overload of 10% permitted for one hour in every twelve hours of operation in accordance with ISO 3046-1.

**Standby Power:**

Emergency Standby Power in variable load applications in accordance with ISO8528-1 in the event of a utility power failure. No overload available for this service as relevant alternators are peak continuous rated at 27°C.

## Standard Features

- ▲ High efficient water cooled diesel engine
- ▲ Brushless alternators (Class H, with AVR.)
- ▲ Heavy duty rubber anti-vibration mountings
- ▲ 12/24V starter batteries and connecting cables
- ▲ Separate engine-drive battery charging alternator
- ▲ Industrial silencer for open type generator sets
- ▲ Residential silencer for open type generator sets
- ▲ Auto start / Digital PG Easycon Control Panel
- ▲ Wiring with IEC standard
- ▲ Factory Test Certificate
- ▲ Operation & Maintenance Manual & Diagrams
- ▲ Worldwide Product / Technical Support
- ▲ Radiator with cap and drain point.
- ▲ Fully guarded engine driven fan
- ▲ No MCCB
- ▲ Oil filter - Diesel filter - Air filter
- ▲ Fully welded steel baseframe with lifting and fork-lifting facilities.
- ▲ Sound proof & Weather protective enclosures for silent type generator sets.

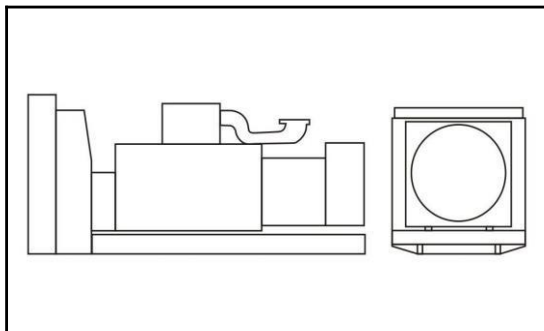
## Optional

- △ Automatic Transfer Switch (ATS)
- △ Water - fuel separator
- △ Water heater for severe cold weather
- △ Lub-oil heater for severe cold weather
- △ 50°C-60°C Radiator
- △ Dual wall fuel tank base
- △ Fuel level sensor
- △ Maintenance free battery
- △ Additional **CE Features** Selection
- △ Extra air filters for time-maintenance
- △ Extra diesel filters for time-maintenance
- △ Extra oil filters for time-maintenance
- △ Separated standing fuel tank
- △ Low coolant level sensor
- △ Full range of attachments and options available for alternator
- △ ACB

## Overall Dimensions (mm) & Weight (kg)

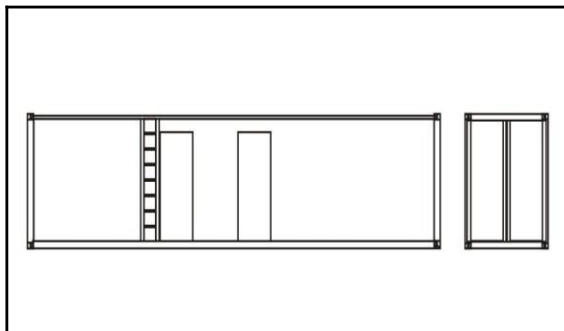
### *Open Type*

**Length:**  
4700  
**Width:**  
2100  
**Height:**  
2240  
**Weight:**  
6900



### *Silent Type*

**Length:**  
12192  
**Width:**  
2438  
**Height:**  
2591  
**Weight:**  
12500



Dimension and design are subject to change without notice.

## Warranty

The goods of POWERGEN System are under warranty against defects in materials and workmanship for a period of 12 months or 1000 hours whichever comes first from the date of delivery to the end user (except the damageable spare parts of genset caused by incorrect man-made operation), and that the aforementioned warranty for the same token is back up by the engine & alternator manufactures and their global distributors.

## Engine Specification

60HZ

General Performance		Lubrication System	
Manufacture	Perkins	Total Lubrication system Capacity	177 Litres
Engine Model	4012-46TWG2A	Minimum Sump Capacity	136 Litres
Engine Type	4 stroke, Vee 60°, 12-cylinder	Maximum sump capacity	159 Litres
Engine Speed	1800 r.p.m	Oil Temperature Maximum to Bearings	105°C
Prime Power	1055kW/1414hp	<b>Fuel System</b>	
Standby Power	1166kW/1563hp	Type Of Injection	Direct Injection
Governor Type	Electronic	Fuel Lift Pump-Delivery/hour	1020 Litres/hour
Rotation	Anti-clockwise Viewed on Flywheel	Fuel Consumption at 100% Standby power	288 Litres/hour
Air Intake Way	Turbocharged	Fuel Consumption at 100% Prime power	259 Litres/hour
Displacement	45.482L	Fuel Consumption at 75% Prime power	196 Litres/hour
Cylinder Bore * Stroke	160mm × 190mm	Fuel Consumption at 50% Prime power	143 Litres/hour
NO. of Cylinders	12	Tank Capacity	
Compression Ratio	13:1 Fuel	- Open Type Genset	N/A
Brake Mean Effective Pressure	1619-1780 kPa	- Silent Type Gensets	N/A
Combustion Air Flow	116 m <sup>3</sup> /min	<b>Cooling System</b>	
Mean Piston Speed	11.4 m/s	Total System Coolant Capacity	201 Litres
Engine coolant flow	1000 Litres/min	Engine Only	73 Litres
<b>Exhaust System</b>		Maximum Pressure in Crankcase Water Jacket	170 kPa
Exhaust Gas Flow	235 m <sup>3</sup> /min	Thermostat Operation Range	71-85°C
Exhaust Gas Temperature	435°C	Maximum Top Tank Temperature (standby)	98°C
Maximum Back Pressure	5.0 kPa	<b>Electric System</b>	
Exhaust Outlet Size (Internal).	2 × 254 mm	Electrical System Voltage	24V
Exhaust Outlet Flange Size	10" table D	Battery	Maintenance-free
<b>Induction System</b>		Connecting Cables	Available
Maximum Air Intake Restriction		<b>Energy balance</b>	
- Clean Filter	2.0 kPa	Energy to Coolant and Lubricating Oil	389-457kW
- Dirty Filter	4.0 kPa	Energy to Exhaust	921-1055 kW
- Air Filter Type	Cylindrical Paper Pleat	Energy to Radiation	84-96kW

## Alternator Specification

General Data		60HZ/1800R.P.M	
Manufacture / Brand	Leroy-somer	Prime Output Power	1124kW/1405kVA
Model	LSA50.2M6	Standby Output Power	1236kW/1545kVA
AVR Model	R450	Insulation Class	H
Coupling / Bearing	Direct / Single Bearing	Voltage Regulation	± 0,5 %
Phase	3 Phase	Total harmonic TGH / THC	<3,5%
Power Factor	Cos φ = 0.8	Wave Form : NEMA = TIF - (*)	< 50
Winding Pitch - Code	2/3 - (n°6S)	Wave Form : I.E.C. = THF - (*)	< 2 %
Drip Proof	IP 23	Altitude	≤ 1000 m
Excitation	AREP or PMG	Overspeed	2250 min -1

# ***POWERGEN Easycon Control Systems***

*“Let your Generator always in Control”*

**POWERGEN comprehensive Easycon range control panels are compact, versatile and easy to use.**

Easycon 2.0L/H (GU601A / Deepsea DSE3110) panel is a key-start auto control panel, it's a basic control panel fits for generators up to 100kVA to provide basic operating parameters display and protection.



Easycon 3.0 L/H (GU641B / Deepsea DSE7210) panel is an auto & digital control panel, it's an entry level control panel which provides full power monitoring and protection facilities. All operating parameters are with LCD display. (Auto Main Failure Version DSE7220 also Available.)



Easycon 4.0L/H (GU620A / Deepsea DSE7310) panel is an auto & digital & Remote control panel which includes all the features of Easycon 3.0, and plus data communication of full telemetry via the RS232/RS485 interfaces, CANBus is also included. (Auto Main Failure Version DSE7320 also Available.)



## ***Specifications***

<b>4 . 0 L / H</b>	<b>3 . 0 L / H</b>	<b>2 . 0 L / H</b>	Over Speed pre-alarm & shutdown - Low Oil Pressure Pre-Alarm & shutdown - High Water Temp. Pre-alarm & shutdown - Volts, Current, Frequency, Rpm (Instruments)- Fuel Sensor as optional - AMF Module as optional -	Auto Start Oil Pressure Genset Running Hours Battery Voltage and Charging
		Digital Control Panel - Switch Opening as Optional Overcurrent Pre-alarm - AMF Module as optional Overcurrent Shutdown - Power Factor Prefix Start, Service Indicate, Fault History for Deepsea Module. Remote Start (Data communication of full telemetry via the RS232/RS485) - CANBus		

## ***Options***

Easycon 5.0H (Deepsea DSE8610) panel fits for Gen-Gen automatic Synchronising and load sharing.

~~Easycon 6.0H (Deepsea DSE8620) panel fits for Single Gen~~  
 - Mains automatic Synchronising.

Deepsea DSE7560 Synchronising Controller for Multi gen – Mains Synchronising. This is a separate control unit which enables multiple Easycon 5.0 equipped Gens to be synchronised with the Mains supply.

**(For details specifications of Control Panels, please consult our sale department.)**

## Circuit Breaker

*NoM CCB-(ACB as optional)*

The generators are supplied together with a circuit breaker that permits a thermal protection against overloads and magnetic protection against short-circuit.

## Automatic Transfer Switch

*A.T.S-4Poles*

POWERGEN offers not only a changeover switch but also an integrated mains detection and switch system for your 24 Hour Power Protection. The system enables automatic start-up and operation of the generating set in the event of a mains power failure, overvoltage or loss of phase; and also mains automatic re-transfer once it come back.

ATS: Automatically transfer and re-transfer load from main power to gen-power without operator intervention. (Both Automatic and manual operation.)

**Please consult our sales department for specifications.**



## Containerized Enclosure/Canopy

*(Sound-attenuated & Weather Protective)*

e)

**“Ensure a quieter life with our sound attenuation system.”**

**Features:**

### Robust Container Design

- ▲ 20ft 40ft (HC also available) ISO footprint
- ▲ Container made from steel components with durable paint system
- ▲ Full bunded steel floor and steel louvres
- ▲ Rugged surface - excellent corrosion & rust protection
- ▲ Long service life

### Excellent Access for Maintenance

- ▲ Separate & Standing control cabinet at one side
- ▲ Walk around interior with access doors
- ▲ Fully bounded steel floor
- ▲ Anti-explosive light bulb

### Transportability

- ▲ ISO shipping dimensioned container
- ▲ Lifting capability

**Quiet (Reduce Sound and Vibration)**

**Noise Level:**

< 85-88dBA at 1m

### Security and Safety

- ▲ Control panel viewing window in a lockable access door
- ▲ Emergency stop button mounted on canopy exterior
- ▲ Fuel fill and battery can only be reached via lockable access doors
- ▲ Fire extinguisher
- ▲ Exhaust silencing system enclosed for operator safety (residential silencer included)
- ▲ Excellent cooling system to avoid high water temp., reliable operation under harshest conditions.
- ▲ (Ambient temp. upto 40-52°C and altitudes up to 1000M)

### Optional

- △ Sockets
  - △ Floor Standing MCCB/ACB (>1250Amp)
  - △ Interior Separate fuel tank volume (100-2000L/depends)
  - △ Automatic fuel fill-in & cut off system
  - △ Exterior Separate fuel tank volume
- (No limitation, shipped by separate container.)

**Please consult actual dimension & weight & freight cost.**