



<b>Perkins</b> Engine: <b>4006-23TAG2A</b> Electronic Governor	<b>Alternator</b> Leroy-somer : LSA49.1M6	<b>Generator Model:</b>	<b>TPE750X (Open)</b>
	<b>Optional:</b> Stamford HCI544F Tide TPA354M7		<b>TPE750XC (Silent)</b>

<b>60Hz</b> 1800 r.p.m	<b>3 Phase</b> 4 Wires	<b>Power Factor:</b> Cos $\phi$ = 0.8	<b>Emissions Certification:</b>	N/A
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<b>RATINGS</b>	<b>Prime Power</b>		<b>Standby Power</b>		<b>Rated Current</b>
	(PRP)		(LTP)		
Voltage (V)	kW	kVA	kW	kVA	Amps
480/277	600	750	660	825	902.1
440/254	600	750	660	825	984.1
<b>416/240</b>	<b>600</b>	<b>750</b>	<b>660</b>	<b>825</b>	<b>1040.9</b>
240/138	600	750	660	825	1804.3
220/127	600	750	660	825	1968.3

**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.

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## ***Standard Features***

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- ▲ 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 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.

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## ***Optional***

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- △ 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

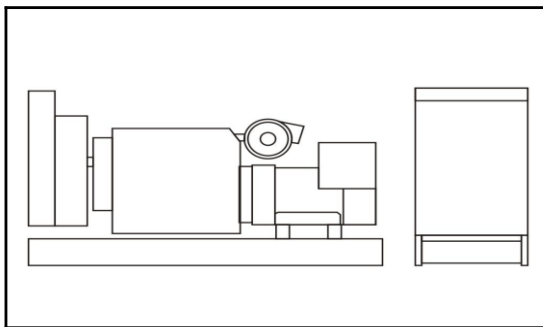
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## ***Overall Dimensions(mm)& Weight(kg)***

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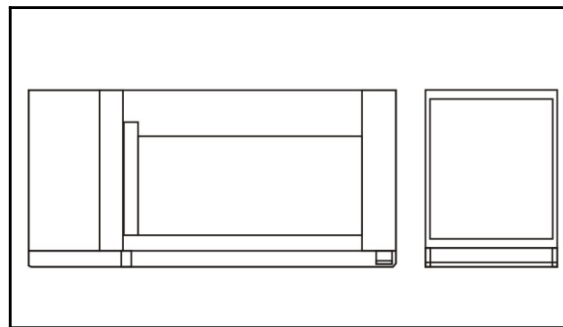
### ***Open Type***

***Length:***  
4150  
***Width:***  
1710  
***Height:***  
2200  
***Weight:***  
5200



### ***Silent Type***

***Length:***  
5800  
***Width:***  
2000  
***Height:***  
2450  
***Weight:***  
6900



Dimension and design are subject to change without notice.

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## ***Warranty***

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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.

<b>General Performance</b>	
Manufacture	Perkins
Engine Model	4006-23TAG2A
Engine Type	4 stroke, Vertical, In-line, 6-cylinder
Engine Speed	1800 r.p.m
Prime Power	640kW/858hp
Standby Power	715kW/959hp
Governor Type	Electronic
Rotation	Anti-clockwise Viewed on Flywheel
Air Intake Way	Turbocharged
Displacement	22.921L
Cylinder Bore * Stroke	160mm × 190mm
NO. of Cylinders	6
Compression Ratio	13.6:1
Brake Mean Effective Pressure	1983-2200kPa
Combustion Air Flow	73 m <sup>3</sup> /min
Mean Piston Speed	11.4 m/s
Engine coolant flow	12 Litres/sec.

<b>Exhaust System</b>	
Exhaust Gas Flow	190 m <sup>3</sup> /min
Exhaust Gas Temperature	430°C
Maximum Back Pressure	610 mm H <sub>2</sub> O
Exhaust Outlet Size (Internal).	2 × 152.4 mm

<b>Induction System</b>	
Maximum Air Intake Restriction	
- Clean Filter	127 mm H <sub>2</sub> O
- Dirty Filter	380 mm H <sub>2</sub> O
- Air Filter Type	Dry-paper

<b>Lubrication System</b>	
Total Lubrication system Capacity	113.4 Litres
Minimum Sump Capacity	90.7 Litres
Maximum sump capacity	113.4 Litres
Oil Pump Flow	4.4 litres/sec.

<b>Fuel System</b>	
Type Of Injection	Direct Injection
Fuel Lift Pump-Delivery/hour	810 Litres/hour
Fuel Consumption at 100% Standby power	199 Litres/hour
Fuel Consumption at 100% Prime power	177 Litres/hour
Fuel Consumption at 75% Prime power	129 Litres/hour
Fuel Consumption at 50% Prime power	90 Litres/hour
Fuel Tank Capacity	
- Open Type Genset	N/A
- Silent Type Gensets	N/A

<b>Cooling System</b>	
Total System Coolant Capacity	105 Litres
Nominal Jacket Water Pressure in Crankcase	170 kPa
Pressure Cap Setting	70 kPa
Thermostat Operation Range	71-85°C
Maximum Top Tank Temperature	98°C

<b>Electric System</b>	
Electrical System Voltage	24V
Battery	Maintenance-free
Connecting Cables	Available

<b>Energy balance</b>	
Energy to Coolant and Lubricating Oil	220-260kW
Energy to Exhaust	649-695 kW
Energy to Radiation	73-81kW

## **Alternator Specification**

<b>General Data</b>	
Manufacture / Brand	Leroy-somer
Model	LSA49.1M6
AVR Model	R450
Coupling / Bearing	Direct / Single Bearing
Phase	3 Phase
Power Factor	Cos $\phi$ = 0.8
Winding Pitch - Code	2/3 - (N°6S)
Drip Proof	IP 23
<u>Excitation</u>	<u>AREPorPMG</u>

<b>60HZ/1800R.P.M</b>	
Prime Output Power	624kW/780kVA
Standby Output Power	686kW/858kVA
Insulation Class	H
Voltage Regulation	± 0,5 %
Total harmonic TGH / THC	no load <4% - on load <4%
Wave Form : NEMA = TIF - (*)	< 50
Wave Form : I.E.C. = THF - (*)	< 2 %
Altitude	≤ 1000 m
<u>Overspeed</u>	<u>2250min-1</u>

**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**

4 . 0 L / H	3 . 0 L / H	2	Over Speed pre-alarm & shutdown -	Auto Start	
		.	Low Oil Pressure Pre-Alarm & shutdown -	Oil Pressure	
0 L / H	0 L / H	0	High Water Temp. Pre-alarm & shutdown -	Genset Running Hours	
		L	Volts, Current, Frequency, Rpm (Instruments)-	Battery Voltage and Charging	
L / H	L / H	/	Fuel Sensor as optional -		
		H	AMF Module as optional -		
L / H	L / H	Digital Control Panel -			Switch Opening as Optional
		Overcurrent Pre-alarm -			AMF Module as optional
L / H	L / H	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.)**

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## CircuitBreaker

NoMCCB-(ACBasoptional)

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

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## AutomaticTransferSwitch

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.**



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## Enclosure/Canopy

(Sound-attenuated&WeatherProtective)

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

**Features:**

- ▲Earth leakage protection
- ▲40-50mm non-inflammable sponge inside
- ▲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
- ▲Exhaust silencing system enclosed for operator safety
- ▲Excellent cooling system to avoid high water temp., reliable operation under harshest conditions.
- ▲(Ambient temp.upto 40-52°C and altitudes up to 1000M)

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### EasyCommissioningandMaintenance

- ▲Separate & Standing control cabinet at one side, quick fix electrical power connections.
- ▲Lube oil drain and radiator drain
- ▲Side doors allowing 180°opening rotation
- ▲Radiator fill access through cover in canopy roof.
- △Sockets and Lifting shelf as Optional

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### Extremely Rugged & SecurityandSafety

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#### HighlyCorrosionResistantConstruction

- ▲Body made from 2.0mm sheet steel components with powder coating
- ▲Excellent design and craftsmanship
- ▲Zinc alloy with black powder coated or Bright polished stainless steel hinges tested and proven to withstand corrosive conditions.
- ▲Compact structure and longer service life

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### Transportability

- ▲Lifting points on baseframe
- ▲Lifting shelf as optional

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### Quiet(ReduceSoundandVibration)

**Noice Level:**

77-88dBA at 1m & 67-78dBA at 7m