



<b>CUMMINS</b> Engine: <b>KTA38-G2</b> Electronic Governor	<b>Alternator</b> Leroy-somer : LSA49.1L9	<b>Generator Model:</b>	<b>TCM950XE (Open)</b>
	<b>Optioanl:</b> Stamford LVI634D Tide TPA404S3		<b>TCM950XEC (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> (PRP)		<b>Standby Power</b> (LTP)		<b>Rated Current</b> (A)
	kW	kVA	kW	kVA	Amps
Voltage (V)					
480/277	N/A		760	950	1142.8
440/254		760	950	1246.6	
380/220		760	950	1443.5	
240/138		760	950	2285.5	
220/127		760	950	2493.2	

**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 POWERGEN 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

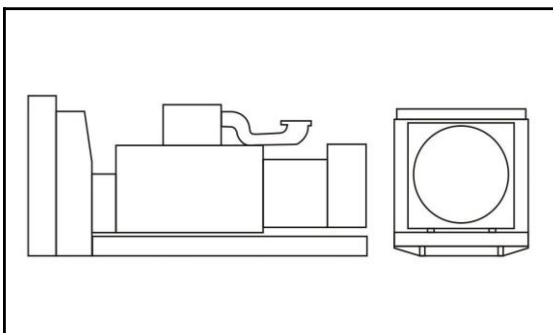
## Optional

- △ 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)

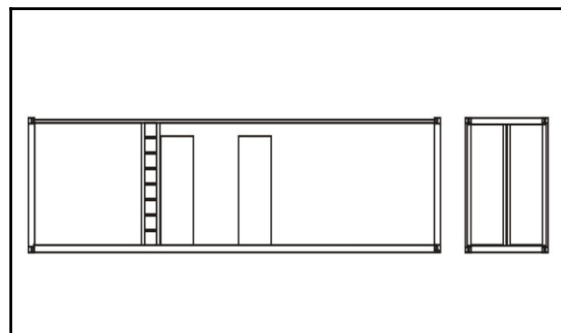
### *Open Type*

**Length:**  
4200  
**Width:**  
1700  
**Height:**  
2400  
**Weight:**  
7600



### *Silent Type*

**Length:**  
5900  
**Width:**  
2000  
**Height:**  
2500  
**Weight:**  
10050



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 18 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.

## EngineSpecification

**60HZ**

<b>General Performance</b>		<b>Lubrication System</b>	
Manufacture	CCEC Cummins	Oil Pan Capacity (High-Low)	114-87 Litres
Engine Model	KTA38-G2	Maximum Oil Temperature	121°C
Engine Type	4 cycle, 60° Vee, 12-cylinder	Maximum Oil Consumption	N/A
Engine Speed	1800 r.p.m	Total System Capacity Including Bypass Filter	135 Litres
Base Output Power	809kW/1085hp	<b>Fuel System</b>	
Standby Power	895kW/1200hp	Type Injection System	Direct Injection Cummins PT
Governor Type	Electronic	Fuel Consumption at 100% Standby power	225 Litres/hour
Air Intake Way	Turbocharged & Aftercooled	Fuel Consumption at 100% Prime power	204 Litres/hour
Displacement	37.8L	Fuel Consumption at 75% Prime power	157 Litres/hour
Cylinder Bore * Stroke	159mm × 159mm	Fuel Consumption at 50% Prime power	111 Litres/hour
NO. of Cylinders	12	Fuel Consumption at 25% Prime power	67 Litres/hour
Compression Ratio	14.5:1	Tank Capacity	
Engine Idle Speed	725-775 r/min	- Open Type Genset	N/A
Piston Speed	9.5 m/s	- Silent Type Gensets	N/A
Intake Air Flow	1369 Litres/sec.	<b>Cooling System</b>	
Air Cleaner Type	Dry	Coolant Capacity - Engine Only	118 Litres
<b>Exhaust System</b>		Standard Thermostat (Modulating) Range	82 - 93°C
Exhaust Gas Flow	3679 Litres/sec.	Maximum Top Tank Temperature	
Exhaust Gas Temperature	485-502°C	- Standby Power	104°C
Maximum Back Pressure	76mm Hg	- Prime Power	100°C
Exhaust Pipe Size	N/A	<b>Electric System</b>	
<b>Air Intake System</b>		Electrical System Voltage	24V
Recommended intake piping size	N/A	Battery	Maintenance-free
Maximum Intake Air Restriction		Connecting Cables	Available
- Dirty Element	635mm H <sub>2</sub> O	<b>Thermal</b>	
- Clean Element	254mm H <sub>2</sub> O	Radiated Heat to Ambient	123-136kW
		Heat Rejection to Coolant	496-548kW
		Heat Rejection to Exhaust	627-681kW

## AlternatorSpecification

<b>GeneralData</b>		<b>60HZ/1800R.P.M</b>	
Manufacture / Brand	Leroy-somer	Prime Output Power	N/A
Model	LSA49.1L9	Standby Output Power	766kW/955kVA
AVR Model	R450	Insulation class	H
Coupling / Bearing	Direct / Single Bearing	Voltage regulation	± 0,5 %
Phase	3 Phase	Total harmonic TGH / THC	at no load<4%-on load<4%
Power Factor	Cos $\phi$ = 0.8	Wave form : NEMA = TIF - (*)	< 50
Winding pitch - Code	2/3 - (N° 6)	Wave form : I.E.C. = THF - (*)	< 2 %
Drip Proof	IP 23	Altitude	≤ 1000 m
Excitation	AREP or PMG	Overspeed	2250 min -1

**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
		0	Low Oil Pressure Pre-Alarm & shutdown -	Oil Pressure
4 . 0 L / H	3 . 0 L / H	L	High Water Temp. Pre-alarm & shutdown -	Genset Running Hours
		H	Volts, Current, Frequency, Rpm (Instruments)- Fuel Sensor as optional - AMF Module as optional -	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.)**

## CircuitBreaker

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

## 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.**



## Enclosure/Canopy

*(Sound-attenuated & Weather Protective)*

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

### **Features:**

#### Extremely Rugged & Security and Safety

- ▲ 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)

#### Easy Commissioning and Maintenance

- ▲ 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

#### Highly Corrosion Resistant Construction

- ▲ 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

#### Transportability

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

#### Quiet (Reduce Sound)

#### **Noise Level:**

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