



<b>CUMMINS</b> Engine:  <b>QSK38-G5</b> ECU	<b>Alternator</b> Leroy-somer : LSA50.2S4	<b>Generator</b>  <b>Model:</b>	<b>TCM1200QX</b> (Open)
	<b>Optional:</b> Stamford LVI634F Tide TPA404S5		<b>TCM1200QXC</b> (Silent)

<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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RATINGS	Prime Power		Standby Power		Rated Current
	(PRP)		(LTP)		(A)
Voltage (V)	kW	kVA	kW	kVA	Amps
480/277	960	1200	1150	1438	1443.4
440/254	960	1200	1150	1438	1574.6
<b>416/240</b>	<b>960</b>	<b>1200</b>	<b>1150</b>	<b>1438</b>	<b>1665.5</b>
240/138	960	1200	1150	1438	2886.8
220/127	960	1200	1150	1438	3149.3

**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.

## ***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 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.

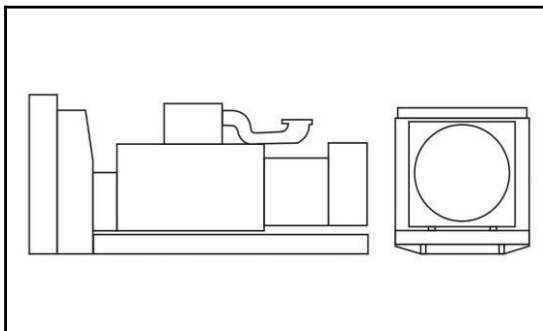
## ***Optional***

- △ 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)***

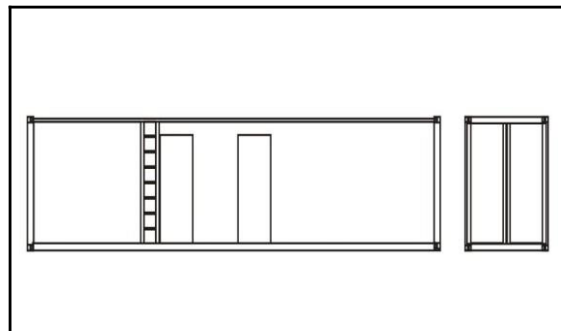
### ***Open Type***

**Length:**  
4900  
**Width:**  
2150  
**Height:**  
2400  
**Weight:**  
9200



### ***Silent Type***

**Length:**  
12192  
**Width:**  
2438  
**Height:**  
2591  
**Weight:**  
15000



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.

**EngineSpecification****60HZ**

<b>General Performance</b>		<b>Lubrication System</b>	
Manufacture	CCEC Cummins	Oil Pan Capacity (High-Low)	140.1-166.6 Litres
Engine Model	QSK38-G5	Maximum Oil Temperature	120°C
Engine Type	4 Cycle, Vee, 12 Cylinder	Maximum Oil Consumption	N/A
Engine Speed	1800 r.p.m	Total System Capacity Including Bypass Filter	170.3 Litres
Base Output Power	1063kW/1425hp	<b>Fuel System</b>	
Standby Power	1279kW/1715hp	Type Injection System	Cummins MCRS
Governor Type	ECU	Fuel Consumption at 100% Standby power	315 Litres/hour
Air Intake Way	Turbocharged & Aftercooled	Fuel Consumption at 100% Prime power	262 Litres/hour
Displacement	37.7L	Fuel Consumption at 75% Prime power	202 Litres/hour
Cylinder Bore * Stroke	159mm × 159mm	Fuel Consumption at 50% Prime power	153 Litres/hour
NO. of Cylinders	12	Fuel Consumption at 25% Prime power	90 Litres/hour
Compression Ratio	15.0:1	Tank Capacity	
Engine Idle Speed	700-900 r/min	- Open Type Genset	N/A
Piston Speed	9.5 m/s	- Silent Type Gensets	N/A
Intake Air Flow	2039 Litres/sec.	<b>Cooling System</b>	
Air Clearner Type	Dry	Coolant Capacity - Engine Only	106 Litres

<b>Exhaust System</b>			
Exhaust Gas Flow	4392 Litres/sec.	Standard Thermostat (Modulating) Range	82 - 94°C
Exhaust Gas Temperature	376 - 398°C	Maximum Top Tank Temperature	
Maximum Back Pressure	7 kPa	- Standby Power	104°C
Exhaust Pipe Size	N/A	- Prime Power	100°C

<b>Air Intake System</b>		<b>Electric System</b>	
Recommended intake piping size	N/A	Electrical System Voltage	24V
Maximum Intake Air Restriction		Battery	Maintenance-free
- Dirty Element	6.2 kPa	Connecting Cables	Available
- Clean Element	3.7 kPa	<b>Thermal</b>	

		Radiated Heat to Ambient	106-126kW
		Heat Rejection to Coolant	383-453kW
		Heat Rejection to Exhaust	746-854kW

**Alt er nat orSp ecificat ion**

<b>GeneralData</b>		<b>60HZ/1800R.P.M</b>	
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° 6)	Wave form : I.E.C. = THF - (*)	< 2 %
Drip Proof	IP 23	Altitude	≤ 1000 m
Excitation	AREP or PMG	Overspeed	2250 min -1

**ol**

**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
	L / H	High Water Temp. Pre-alarm & shutdown -	Genset Running Hours	
			Volts, Current, Frequency, Rpm (Instruments)-	Battery Voltage and Charging
			Fuel Sensor as optional -	
			AMF Module as optional -	
			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.

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.

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

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

## Circuit Breaker

NoMCCB-(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

ATS -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 banded 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 our sales department for dimensions & weight & freight cost.**