

# Natural Gas Generator Set Data Sheet (01-01-2017)

Rated 500kWel, Natural Gas



Picture for Reference Only

<b>Gas Generator Set Model:</b>	TCM625G	<b>Gas Engine Model:</b>	CG12V-38G	<b>Alternator Model:</b>	Leroy Somer LSA49.3S4A
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<b>50Hz</b> 1500 r.p.m	<b>3 Phase</b> 4 Wires	<b>Power Factor:</b> Cos $\phi$ = 0.8	<b>Emissions Standard</b>	N/A
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RATINGS	Prime Power (PRP)		Standby Power (LTP)		Rated Current (A)	Remarks
	kW	kVA	kW	kVA		
Voltage (V)					Amps	
380/220	500	625	N/A	N/A	949.6	
<b>400/230</b>	<b>500</b>	<b>625</b>	<b>N/A</b>	<b>N/A</b>	902.1	
415/240	500	625	N/A	N/A	869.5	
440/254	500	625	N/A	N/A	820.1	

### Conditions and Defintions:

1) Engine output data under ISO8528/1, ISO3046/1, BS5541/1, DIN6271 conditions.

### Genset General Specifications

Gas genset model	TCM625G	Frequency (Hz)	50
Gas engine model	CG12V-38G	Speed (rpm)	1500
Electrical output (kW)	500	Speed regulating rate	0-5% Adjustable
Electrical output (kVA)	625	Open type dimension (L×W×H) (mm)	4100×2060×2230
Fuel	Natural gas	Net weight (kg)	7000

## Engine Specifications

Manufacturer	Tide Power Technology	Direction of rotation	Counter clockwise from flywheel
Model	CG12V-38G	Induction system	Turbocharged & Intercooled
Mechanical power	550 kWm	Combustion type	Spark ignition
Speed	1500rpm	Cooling method	Water cooled
Configuration	V-type	Speed governor	Electronic
Number of cylinders	12	Oil Consumption	≤0.6 g/kW.h
Cycle	4 stroke	Coolant capacity (engine Only)	124 L
Cylinder type	Wet	Oil capacity	151 L
Bore / Stroke	159/159 mm	Gas consumption 100% load	0.31m <sup>3</sup> /kW.H
Displacement	37.7L	Oil grade	15W40-CF4 or above grade
Compression ratio	11:01	Starting method	24V DC motor

## Alternator Specifications

**50HZ/1500R.P.M**

Manufacture / Brand	Leroy-Somer	Prime output power	500kW/625kVA
Model	LSA49.3S4A	Insulation class	H
AVR model	R449	Voltage regulation	± 0,5 %
Coupling / Bearing	Direct /Single bearing	Totale Harmonic distortion THD	in no-load<4%
Phase	3 Phase	Totale Harmonic distortion THD	on linear load<2%
Power factor	Cos $\phi$ = 0.8	Wave form : NEMA = TIF - (*)	< 50
Winding pitch - code	2/3 - (wdg6)	Altitude	≤ 1000 m
Drip proof	IP 23	Overspeed	2250 min <sup>-1</sup>
Excitation	Shunt		

## Control Panel



- Deepsea 7320 controller
- Digital control panel
- Volts, current, frequency, rpm (instruments)
- Genset running hours
- Battery voltage and charging
- Over speed pre-alarm & shutdown
- High water temp. pre-alarm & shutdown
- Low oil pressure pre-alarm & shutdown
- Low voltage pre-alarm & shutdown
- Overcurrent pre-alarm & shutdown

## Standard Features

- High efficient water cooled gas engine with radiator
- Brushless alternators (Class H, with AVR.)
- Heavy duty rubber anti-vibration mountings
- Starter batteries and connecting cables
- Separate engine-drive battery charging alternator
- Industrial silencer for open type generator sets
- Circuit breaker - 3 pole (MCCB)
- Low coolant level sensor
- Oil filter - Air filter
- Fully welded steel baseframe
- Ignition system
- Gas train: mainly Italy Madas gas pressure regulator & gas filter, pressure gauge,electromagnetic valve and fire arrestor and other connection components
- Wiring with IEC standard
- Factory test certificate
- Operation & Maintenance manual & Diagrams
- Worldwide product / Technical support

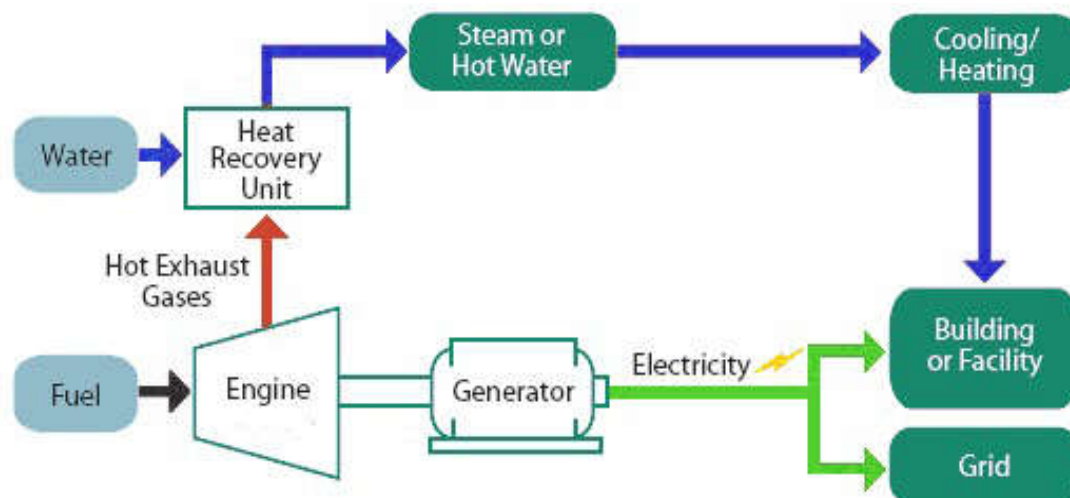
## Optional

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- Automatic Transfer Switch (ATS)
- Radiator or cooling tower
- Water heater for severe cold weather
- Lub-oil heater for severe cold weather
- Silent containerised
- Residential silencer
- Panel for auto synchronization with Mains
- Extra air filters for time-maintenance
- Automatic oil supply system
- Breaker cabinet
- Extra oil filters for time-maintenance
- Parallel cabinet
- Full range of attachments and options available for alternator
- Flame arrestor in gas train
- Desulfurization system
- Gas pretreatment system
- Dehydration system
- Genset Commissioning / Testing on site

## Combined Heat and Power Systems ( Optional )

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We offer Combined Cooling Heating and Power (CHP and CCHP ) packages for our gas generator sets. It can recover 75%-90% combined electrical and thermal efficiency, resulting in major reductions in your overall energy costs. In the past years we have supplied CHP systems to Germany, Russia,Indonesia etc. We have the experience and capabilities to meet your total energy requirements.

## Warranty

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The goods of Tide Power Technology are under warranty against defects in materials and workmanship for period 1 year or 1000 hours operation time whichever come 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.