

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

Rated 500kWel, Natural Gas



Picture for Reference Only

| | | | | | |
|---------------------------------|----------|--------------------------|-----------|--------------------------|-----------------------|
| Gas Generator Set Model: | TCM625XG | Gas Engine Model: | CG12V-38G | Alternator Model: | Leroy Somer LSA47.2M7 |
|---------------------------------|----------|--------------------------|-----------|--------------------------|-----------------------|

| | | | | |
|---------------------------|---------------------------|--|---------------------------|-----|
| 60Hz 1800 r.p.m | 3 Phase 4 Wires | Power Factor: Cos ϕ = 0.8 | Emissions Standard | N/A |
|---------------------------|---------------------------|--|---------------------------|-----|

| RATINGS | Prime Power (PRP) | | Standby Power (LTP) | | Rated Current (A) | Remarks |
|----------------|----------------------|------------|------------------------|------------|----------------------|---------|
| | kW | kVA | kW | kVA | Amps | |
| Voltage (V) | | | | | | |
| 380/220 | 500 | 625 | N/A | N/A | 949.6 | |
| 416/240 | 500 | 625 | N/A | N/A | 867.4 | |
| 440/254 | 500 | 625 | N/A | N/A | 820.1 | |
| 480/277 | 500 | 625 | N/A | N/A | 751.8 | |

Conditions and Defintions:

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

Genset General Specifications

| | | | |
|-------------------------|-------------|----------------------------------|-----------------|
| Gas genset model | TCM625XG | Frequency (Hz) | 60 |
| Gas engine model | CG12V-38G | Speed (rpm) | 1800 |
| Electrical output (kW) | 500 | Speed regulating rate | 0-5% Adjustable |
| Electrical output (kVA) | 625 | Open type dimension (L×W×H) (mm) | 4100×2300×2400 |
| 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 | 1800rpm | 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 ³ /kW.H |
| Displacement | 37.7L | Oil grade | 15W40-CF4 or above grade |
| Compression ratio | 11:01 | Starting method | 24V DC motor |

Alternator Specifications

60HZ/1800R.P.M

| | | | |
|----------------------|------------------------|--|------------------------|
| Manufacture / Brand | Leroy-Somer | Prime output power | 500kW/625kVA |
| Model | LSA47.2M7 | Insulation class | H |
| AVR model | R250 | Voltage regulation | ± 0,5 % |
| Coupling / Bearing | Direct /Single bearing | Totale harmonic distortion THD no load <1.5% - on load <2% | |
| Phase | 3 Phase | Wave form : NEMA = TIF - (*) | < 50 |
| Power factor | Cos φ = 0.8 | Number of wires | 12 |
| Winding pitch - code | 2/3 - (wdg6) | Altitude | ≤ 1000 m |
| Drip proof | IP 23 | Overspeed | 2250 min ⁻¹ |
| Excitation | Shunt | Air flow | 1.1m ³ /s |

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

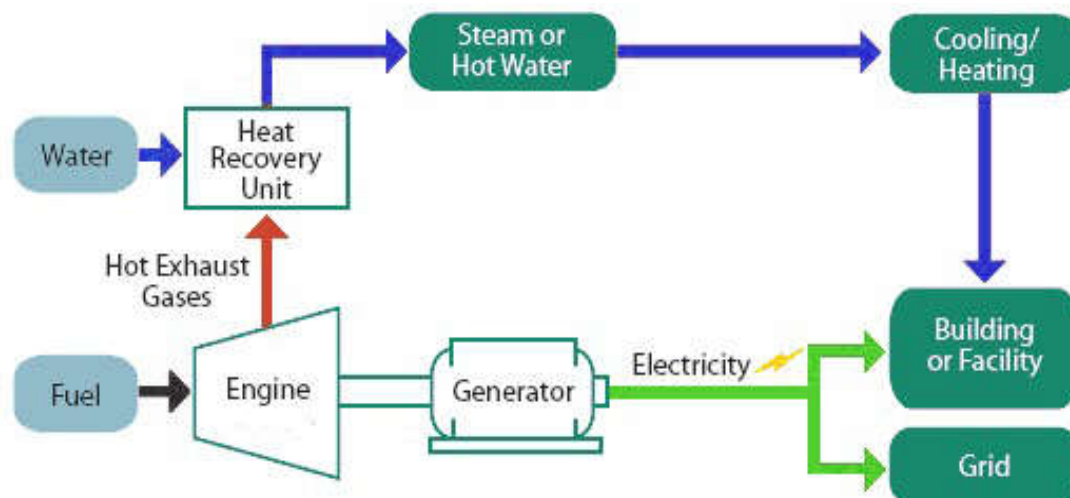
Standard Features

- 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

- 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)



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

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.