



WE MAKE YOUR POWER SOLUTIONS SUSTAINABLE

# Generating Set

TECHNICAL DATA SHEET

SGT 50



Silent / Closed Type  
Image for illustration purposes only.

Prime Power*	Standby Power**	Voltage/Ph	Hz/rpm***	PF
45 kVA/36 kWe	50 kVA/40 kWe	400/3Ph	50/1500	0.8

**Prime power\***

Unlimited hours usage with an average load factor of 80% of the published Prime power over each 24 hours period. A 10% overload is available for 1 hour in every 12 hours operation.

**Standby power\*\***

Limited to 500 hours annual usage with an average load factor of 80% of the published Standby power rating over each 24 hour period. Up to 300 hours of annual usage may be run continuously. No overload is permitted on Standby power. Available in 60HZ for all voltage ratings.\*\*\*

**Standard Reference Conditions**

Note: Standard reference conditions 40°C (104°F) Air Inlet Temp, 100m (328 ft) A.S.L. 30% relative humidity.

Diesel Generator Set	
Engine Make /Model	PERKINS 1103A-33TG1
Alternator Make /Model	Leroy Somer TAL-042-F
Control Panel	DSE 4520
Base Frame / Silent Canopy	Robust Structure/ Corrosion Resistant
Circuit Breaker Type	3 Pole MCCB (4P Available as optional)
Built in Base Fuel Tank Capacity	90L
Battery	Maintenance free Lead Acid

Dimensions	Length (mm)	Width (mm)	Height (mm)	Weight (KG)
Close Type	2522	972	1260	994
Open Type	1700	700	1345	737

ENGINE SPECIFICATIONS	
Engine Make Model	PERKINS 1103A-33TG1
No. of Cylinders	3 vertical in-line
Cycle	4 Stroke
Aspiration	Turbocharged
Cooling Method	Water cooled
Governing Type	Mechanical
Governing Class	G2 - ISO 8528 Part 1
Compression Ratio	17.25:1
Displacement	3.3 L
Bore/Stroke	105 x 127 mm
Dynamic Charging Alternator	65AMP, 12V

LUBRICATION SYSTEM	
Oil Filter Type	Spin-On Full Flow
Total Oil Capacity	8.3 L
Oil Type	API-CH-4 or ACEA E5

AIR SYSTEM	
Air Filter Type	Dry Element
Combustion Air Flow (PRP)	2.9 m <sup>3</sup> /min
Combustion Air Flow (ESP)	3.1 m <sup>3</sup> /min
Max Air Filter Intake Restriction	8 kPa

COOLING SYSTEM	
Total Coolant Capacity (L)	10.2 L
Cooling Fan Air Flow	53 m <sup>3</sup> / min
Radiator Fan Load	0.9 kW
Cooling system design	50°C
Heat Radiation to Room (PRP)	8 kW

Exhaust System	
Muffler Type	Residential Grade
Max. Back Pressure	10 kPa
Exhaust Gas Flow (PRP/ESP)	7.0/7.7 m <sup>3</sup> / min
Exhaust Gas Temperature	< 537°C

Comply with Standards
ISO 3046, BS 5514, DIN 6271, NEMA-MGI, DIN EN, BS 5000, IEC 60034, IEC 60947-2

Powered By:



## Why Sun & Energy (SGT)?

Generator Technology  
When you are running a business every competitive advantage counts, choosing a right Generator Set can make all the difference to bottom line.

### 1. Features & Benefits:

- SGT Gen set is powered by Perkins Engine , the world leader having over 85 years of innovation and excellence, with customers support in 182 countries from 3500 outlets.
- SGT Gen set is powered by Leroy Somer France Alternator, the Global number 1 in Alternators, with over 99 years of Experience, Having 120+ active patents, in over 40 countries and over 80 service centers.
- SGT Gen set is equipped with DSE controller, one of the world's top manufacturers in UK, having over 40 years of excellence, the most advanced and user friendly controller.
- Low fuel consumption, saving on fuel spend
- Compact and rugged design, saving on transport and storage cost
- Designed to occupy less space considering critical applications and cities where space is at a premium.
- Low noise and vibration, considering critical applications where noise level matters
- Easy maintenance and long service intervals , saving on maintenance cost
- Subject to rigorous tests including load acceptance, cooling, vibration and noise level prior shipment to customer.
- Simple to operate and environment friendly in worst ambient conditions
- Equipped with built-in fuel tank sufficient for 8 to 10 hours of operations.
- Fully Engineering wide range of optional accessories available.

(Contd.)



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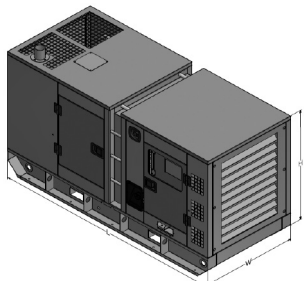
PERKINS Engine  
1103A-33TG1



Leroy Somer  
TAL-042-F



DSE4520 MKII AUTO  
START & AUTO MAINS  
FAILURE CONTROL



SGT ENCLOSURE/CANOPY

Engine Fuel System	
Recommended Fuel	Class A2 Diesel
Fuel Consumption Standby	11.70 L/hr
Fuel Consumption 100% PRP	10.52 L/hr
Fuel Consumption 75% PRP	7.98 L/hr
Fuel Consumption 50% PRP	5.85 L/hr

ALTERNATOR SPECIFICATIONS	
Alternator Make /Model	Leroy Somer TAL-042-F
AVR Model	R120
Number of Poles	4
Number of Winding Leads	6
Type of Bearing	Single Bearing
Insulation Class - Temp Rise	Cont. H - 125/40 C
Ingress Protection Rating	IP 23
Excitation System	Self Excited
Voltage Regulation	+/- 1%
Harmonic Coefficient THF	< 2%
Tel. influence TIF	< 50
Cooling air flow	0.10 m <sup>3</sup> / Sec

Controller Make & Model	DeepSea 4 2
Operation Mode	AMF
Display	Graphic Back-lit LCD (128x64) pixels
Ingress Protection Rating	IP65
Binary Inputs/Outputs	4 / 4
Analog Inputs	3
Measurement	Vac, A, Hz, kVA, kW, Vdc
Event Log	Alarms log, Hrs log
Communication	USB

Please refer to Controller Data Sheet for more details.

Enclosure Type	Acoustic & Weather Proof
Drainage	Fuel and Water Drainage Provision
Transportation	Tested Single Point Lifting Facility & Forklift Pockets
Ingress Protection	IP 23
Lifting	ISO Standard Lifting
Canopy RAL Color	RAL 9010 - Powder coated
Base frame RAL Color	RAL 9011 - Powder coated
Noise Pressure level @	58.8db(A)+/-3 db @ 7 mt

Distributed & Serviced by:



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Building Dubai Investment Park  
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Sun & Energy

## 2. WARRANTY POLICY:

- Sun & Energy Generator technology products has a warranty for all prime equipment, limited to 2000 running hours or 12 months warranty & For Standby equipment, Limited to 500 running hours or 12 months warranty whichever occur first against manufacturing defect.
- Wearing parts (filters), incorrect man-made operation, Back up Genset maintenance failures are excluded from the warranty policy
- For more details please refer to <https://www.sunergysolar.ae>

## 3. DOCUMENTAION

Operation and Maintenance Manual, GAD, Wiring Diagram & FAT Report are Accompanied with Genset.

## 4. OPTIONAL FEATURES

### A. Engine

- Heavy-Duty Air Filter
- Coolant Heater
- Lubricant Oil Heater
- Fuel and Water Separator
- Lube Oil Rotary Pump

### B. Alternator

- Anti Condensation Heater
- PMG + AVR
- Double Bearing Alternator
- RTDs For Bearing and Winding

### C. Cooling System:

- 55 degree Radiator
- Remote Radiator

### D. Control System:

- AMF / Parallel
- Remote Annunciators
- 4 p manual/Motorized Circuit breaker

### E. Automatic Transfer Switch (ATS):

- Contractor or Breaker type ATS
- Motorized changeover type ATS

### F. Start Battery:

- Nickel-cadmium battery
- Maintenance-free battery
- Battery charger and selector switch
- Charging current meter

### G. Exhaust Muffler:

- Residential grade
- Critical grade
- Hospital grade

### H. Available for voltages :

400/230V,480/277V,380/220V,440/254V,  
416/240V,220/127V, 208/120V

Due to continuous research & product development, we reserve the right to change specification with out notice