

# DIESEL GENSET MODEL SGP 2250 PR



Rating	Voltage	Frequency	Speed
2250 kVA 1800 kW	415 Volts	50 Hz	1500 RPM

Optional equipment and finishing shown. Standard may vary.

## PRODUCT HIGHLIGHTS

### ► Engine

- Fast load response
- Stable frequency
- Low vibrations and structure borne noise level
- Competitive fuel and lube oil consumption
- High power to weight ratio
- Proven low life cycle cost

### ► Alternator

- Brushless type, screen protected, self-excited alternator complying to IS 4722/IEC 60034 - 1
- Excellent motor start capability
- Excellent alternator efficiency across the load range
- Compact design with sealed bearings for longer life and lower maintenance
- Optimised engine compatibility

### ► D. G. Package

- Highly optimised and efficient package design
- Excellent performance under most demanding environmental conditions
- Near zero down time for continuous power supply
- Sturdy base frame made from folded sheet metal for increased strength
- Efficient anti-vibration mounts
- Stringent shop floor testing to ensure class leading, hassle-free performance
- Testing carried out using state-of-the-art PLC based, resistive load bank

### ► Product Support

- Seamless 24 x 7 Service support with toll free number **1800 3000 7666**
- Best in class product support with PAN India Presence
- Highly Energetic team with immense experience in troubleshooting.

## APPLICATION DATA

### ► Engine

Engine Make & Model	Perkins-4016-61TRG3
Base Frame	SGPL
Frequency	50 Hz
Engine Speed	1500 RPM
Fuel Tank Capacity	990 Liters
Rated Current	3128 Amps

No. of Cylinders	16
Type of Construction	Vee
Displacement	61.12 L
Bore / Stroke	160X190 mm
Gross Engine Power Output	2648 BHP
Rated Speed	1500 RPM
Aspiration	Turbocharged
Governor Type & Class	Electronic

### ► Cooling System

Method of Cooling	Radiator
Qty of Coolant (Engine + Radiator)	270 L
Radiator Fan Power	100 kW
Radiator Cooling Airflow	117244 CFM

### ► Fuel System

Make/Type of Injection System	Direct injection
Recommended Fuel	HSD
Fuel Filter Type	Spin On Paper Element
Specific Fuel Consumption : L/hr	
75% Load	100% Load
343.43	461.67

\*Note: Specific gravity of fuel considered - 850 gms/Litre with +3% tolerance

### ► Alternator

Make	Leroy Somer
Frame	LSC86M
Power Factor	0.8
No. of Phase	3
Frequency	50 HZ
Rated Voltage	415V ±5%
Voltage Regulation	±1%
Excitation System	Self-Excited Self-Regulated
	Brushless
AVR Type	R 450

### ► Induction System

Air Filter Type	Medium Duty Axial Flow
Air Intake Restriction	12-37 mbar

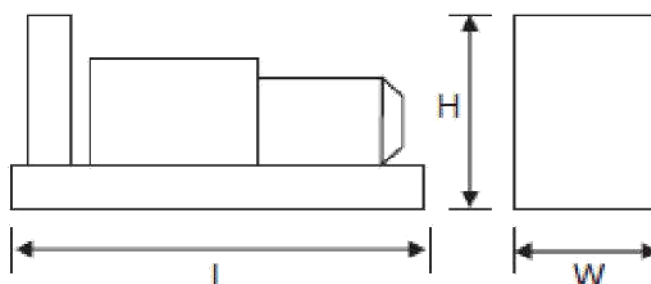
### ► Lubrication System

Recommended Lube Oil	API-CG15W/40
Lube Oil Consumption	0.1% Of SFC
Lube Oil Filter Type	Paper element
Lube Oil System Capacity (With Filter) :	213 L

### ► Exhaust System

Silencer Type	Residential
Number of Silencers	2 No.
Maximum Allowable Back Pressure	40 mbar
Exhaust Gas Temperature	475 Deg C

## Dimensions & Weights



Drawing above for reference purpose only. Dimensions may vary with other voltages. Not to be used for installation purpose.

Length = L	mm	7570	Wet Weight (Approx.) kg	21000
Width = w	mm	2690		
Height = H	mm	3845		

### Acoustic Enclosure Dimensions

Length = L	mm	12000	Wet Weight (Approx.) kg	23500
Width = w	mm	3500		
Height = H	mm	4250		

## Output Ratings

Generating Set Rating @ 415V - 50 Hz | 2250 KVA | 1800 kW

Note: Ratings at 0.8 power factor.

Definitions: Prime Rating

This rating is applicable for supplying continuous electrical power (at variable load) in lieu of commercially purchased power for unlimited number of hours with an average load factor of 80%

Fuel Consumption Data:

Fuel consumption data with diesel fuel of specific gravity 0.85 and conforming to IS: 1460

## Standard Features

### ► Perkins Range

- Sterling provides a range of Perkins engine powered generating sets which are recognised for reliability.
- Global technology available in India.
- Most energy efficient D. G. set in its own rating.
- Microprocessor based control panels.
- Wider maintenance intervals.
- Pre tested at factory with PLC test bench.
- Well experienced and trained engineers for 24 x 7 after sales support.
- Designed to meet the latest environmental norms and approved by CPCB nodal agency.

## Standard Control Panel

SG 2010:

### Standard Supply

#### Operating Features

Microprocessor based digital controller  
 Accurate LCD display  
 Local Start/Stop  
 Auto Main Fail Detection & Mains Monitoring  
 Remote Start/Stop  
 Generator breaker control  
 Easily Accessible through Fascia  
 Engine Protection/Faults Moni through CAN  
 Flexibility for Selecting Manual, AMF Operations

#### Metering

##### Engine Parameters:

Engine Speed  
 Lube Oil pressure  
 Coolant temperature  
 Engine Running Hour  
 Engine Battery voltage  
 Running status  
 Fuel level in Percentage  
 Event Log with date and time

##### Electrical Parameter Generator

Generator Voltage (Ph-Ph)  
 Generator Voltage (Ph-N)  
 Current -(R,Y,B) Generator  
 apparent power (kVA)  
 Generator active power(kW)  
 Generator reactive power  
 (kVAr) Generator Power Factor  
 Generator Frequency (Hz)  
 Cumulative Power Consumption in kWh  
 Cumulative Power Consumption in kVAh  
 Cumulative Power Consumption in kVArh  
 Mains Voltage (Ph-Ph)

#### Monitoring

Generator Breaker Status  
 Generator Healthy Status  
 Mains Healthy Status  
 Mains Breaker Status

#### Engine

High Water Temperature  
 Low Coolant Level  
 Engine Overspeed  
 Low oil pressure  
 Low Fuel Level

#### Electrical

Generator under Voltage (ANSI-27)  
 Generator over Voltage (ANSI-59)  
 Generator under Frequency (ANSI-81L)  
 Generator over Frequency (ANSI-81H)  
 Generator Over Current (ANSI-51)  
 Generator kW Overload (ANSI-32P)  
 Control Supply under Voltage  
 Control Supply over Voltage

#### Breaker/Contactor

DG Breaker	No
Mains Breaker	No

#### Communication

RS485-Modbus Communication Available for BMS/PLC

#### Panel location

Right side of the canopy viewing from Alternator end.

## General Information

### Documentation

A full set of operation and maintenance manuals and circuit wiring diagrams.

