

DIESEL GENSET MODEL SGP 500 PR



Rating	Voltage	Frequency	Speed
500 kVA 400 kW	415 Volts	50 Hz	1500 RPM

Optional equipment and finishing shown. Standard may vary.



PRODUCT HIGHLIGHTS

► Engine

- CPCB II compliant
- 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-2506D-E15TAG2
Base Frame	SGPL
Frequency	50 Hz
Engine Speed	1500 RPM
Fuel Tank Capacity	750 Liters
Rated Current	695 Amps

No. of Cylinders	6
Type of Construction	Inline
Displacement	15.2 L
Bore / Stroke	137X171 mm
Gross Engine Power Output	607 BHP
Rated Speed	1500 RPM
Aspiration	Turbocharged
Governor Type & Class	Class G3

► Cooling System

Method of Cooling	Radiator
Qty of Coolant (Engine + Radiator)	48 L
Radiator Fan Power	10 kW
Radiator Cooling Airflow	22306 CFM

► Fuel System

Make/Type of Injection System	MEUI
Recommended Fuel	HSD
Fuel Filter Type	Spin On Paper Element
Specific Fuel Consumption : L/hr	
	75% Load 100% Load
	80.22 103.23

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

► Alternator

Make	Crompton Greaves
Frame	G1R355ME
Power Factor	0.8
No. of Phase	3
Frequency	50 HZ
Rated Voltage	415V
Voltage Regulation	±1%
Excitation System	Brushless
AVR Type	AVR-UVR-7

► Induction System

Air Filter Type	Dry type
Air Intake Restriction	37-62 mbar

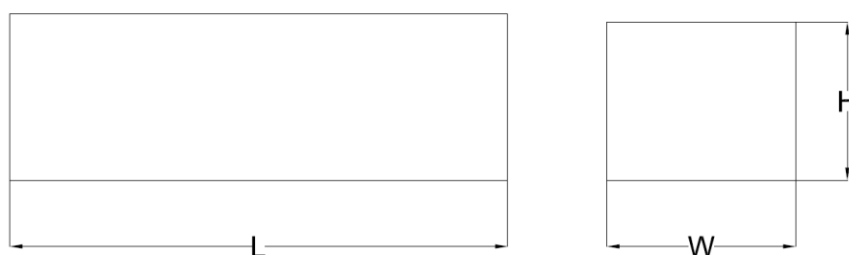
► Lubrication System

Recommended Lube Oil	15W40 API-CI4
Lube Oil Consumption	0.1% Of SFC
Lube Oil Filter Type	Paper element
Lube Oil System Capacity (With Filter) :	62 L

► Exhaust System

Silencer Type	Critical-grade
Number of Silencers	1 No. Dual
Maximum Allowable Back Pressure	68 mbar
Exhaust Gas Temperature	420 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	5950	Wet Weight (Approx.) kg	6727
Width = w	mm	2000		
Height = H	mm	3111		

Output Ratings

Generating Set Rating @ 415V - 50 Hz | 500 KVA | 400 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 2011:

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
- Charge Air Temperature
- Boost Pressure
- Fuel Rate of Flow
- 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
- Control Supply Voltage

General Information

Documentation

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

Warranty

Please refer warranty policy.



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.