

DIESEL GENSET MODEL SGP 20 PR



Rating	Voltage	Frequency	Speed
20 kVA 16 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 - 404D-22G
Base Frame	SGPL
Frequency	50 Hz
Engine Speed	1500 RPM
Fuel Tank Capacity	130 Litres
Rated Current	27 Amps

No. of Cylinders	4
Type of Construction	Inline
Displacement	2.216 L
Bore / Stroke	84X100 mm
Gross Engine Power Output	25 BHP
Rated Speed	1500 RPM
Aspiration	Natural
Governor Type & Class	Mech/Class G2

► Cooling System

Method of Cooling	Radiator
Qty of Coolant (Engine + Radiator)	7 L
Radiator Fan Power	1 kW
Radiator Cooling Airflow	1038 CFM

► Fuel System

Make/Type of Injection System	
Recommended Fuel	HSD
Fuel Filter Type	Spin on paper element
Specific Fuel Consumption : L/hr	
75% Load	100% Load
4.00	5.30

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

► Alternator

Make	Stamford
Frame	PI044D
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	AS480

► Induction System

Air Filter Type	Dry type
Air Intake Restriction	30 mbar

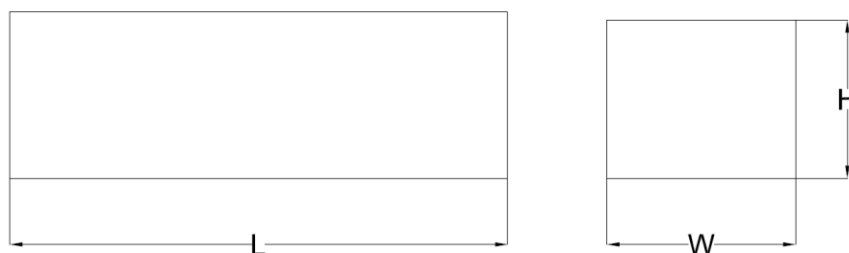
► Lubrication System

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) :	10.6 L

► Exhaust System

Silencer Type	Critical-grade
Number of Silencers	1
Maximum Allowable Back Pressure	103 mbar
Exhaust Gas Temperature	445 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	2120	Wet Weight (Approx.) kg	1100
Width = w	mm	970		
Height = H	mm	1580		

Output Ratings

Generating Set Rating @ 415V - 50 Hz | 20 KVA | 16 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

► The 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 1100:

Standard Supply

Operating Features

Microprocessor based digital controller
 Accurate LCD display
 Local Start/Stop
 Remote Start/Stop
 Generator breaker control
 Easily Accessible through Fascia
 Flexibility for selecting Manual, Auto operations
 Easily Convertible AMF by giving Mains Fail Signal

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

Voltage (Ph-Ph) Generator
 Voltage (Ph-N) Generator
 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

Protection

Engine

High Water Temperature
 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

Power Isolation

Suitable Rating of D.G. outgoing MCB/MCCB

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.

Warranty

Please refer warranty policy.

