

## DIESEL GENERATOR SET

Durable | Robust | Built to Last

**DG Model : PBDN 500**

415 V, 3-PH,

Switchable 50/60 Hz

DESIGNED IN FRANCE    MADE IN INDIA

[www.perfecthouseltd.in](http://www.perfecthouseltd.in)



### Unique Advantages Of Perfect Baudouin DG Set

- French technology with make in India product.
- Flexible & creative customized solutions to meet customer needs,
- Single window solution-3s (sale-service- spare parts) erection, installation
- Cast iron cylinder block with rugged body construction designed to minimize vibrations
- Hardened steel forged crankshaft with induction hardening
- Cast iron wet liners, lube oil cooled aluminum alloy pistons with high performance piston rings
- Separate cast iron cylinders heads with 4 valves for efficiency and ease of maintenance
- Cast iron centrifugal freshwater pump
- Full flow multilevel type oil filters along with electrical pump to pre-lubricate engine, reduce friction and better start-ability
- Multilevel fuel filter with water separator to protect engine
- Exhaust manifold & turbo charger provided with shield to isolate heat, More than 50% block loading capacity
- ISO 9001, 14001 and OHSAS 18001 certified

### Standard Scope Comprising

Diesel Engine/ AC Generator/ Base frame/ Standard Control Panel/ Radiator/ Silencer/ Battery & Battery Cable/ Battery Charger / AVMs/ First Fill of Lube Oil/ First fill of Coolant/ DG Set Controller/Fuel Tank DEF Tank/ATS Module/Wiring Harness/ Sensors.

### One Stop Solution (Optional)

Customised Power Solutions, Installation, Commissioning, Operations Contract, Amc/ Camc, Renting Power, Hybrid Solution, Electric Board Approval, Electrical Options Amf/ Auto Synchronising Panel

## DG Technical Specification

Voltage, Frequency & Power		
<b>Switchable to dual frequency with a selector switch (50/60 Hz)</b>		
<b>Specification (50Hz)</b>		
Frequency	Hz	50
Voltage (3PH)	V	380-415-480
Power factor	$\cos \theta$	0.8
Phase		3
<b>Power rating</b>		
Emergency Standby Power ESP	kVA	657
Emergency Standby Power ESP	KWM	490
Prime power PRP	kVA	604
Prime power PRP	KWM	450
<b>Specification (60Hz)</b>		
Frequency	Hz	60
Voltage (3PH)	V	220-380-415-480
Power factor	$\cos \theta$	0.8
Phase		3
<b>Power rating</b>		
Emergency Standby Power ESP	kVA	684
Emergency Standby Power ESP	KWM	510
Prime power PRP	kVA	617
Prime power PRP	KWM	460
<b>Engine specifications</b>		
<b>Engine Brand</b>		Baudouin
Model		6M21G8D0/S
Low exhaust emissions		N/A
Engine cooling system		Liquid (water + 50% antifreeze)
Configuration and no.of cylinders		in line 6
Displacement	ltr	12.54
Aspiration		Turbocharged and Aftercooled
Speed governor		ECU
Prime gross power PRP @1500	kWM	450
Maximum gross power LTP ESP @1800	kWM	460
Oil capacity	ltr	34
Lube oil consumption PRP (max)	ltr/hr	≤ 0.2 %
Total Coolant capacity	ltr	62
Fuel		Diesel
Specific fuel consumption 75%/100% PRP @1500 rpm	g/kWh	187.3/193.5
Specific fuel consumption 75%/100% PRP @1800 rpm	g/kWh	204.3/204.5
Starting system		Electric
Starting engine capability	KW	8.7
Electric circuit	V	24

Alternator Specifications		
Make		Stamford
Model		HCI544C
Voltage	V	220-480
Frequency	Hz	50-60
Power factor	$\cos \theta$	0.8
Poles		4
Type		Brushless
Voltage regulation (with 4% Engine Governing)	%	±1
Efficiency @ 75% load		93.3
Insulation System		Class H
Protection		IP 23
Space heater	W	273
<b>Dimensional Data</b>		
Length	(L) mm	4850
Width	(W) mm	1700
Height	(H) mm	2350
Dry weight	kg	5250
Fuel Tank capacity	ltr	700
Fuel Tank material		metal
<b>Autonomy</b>		
Fuel consumption @ 75% PRP	G/K WH	211
Fuel consumption @ 100% PRP	G/K WH	212.6
Running time @ 75% PRP	Hr	5.5
Running time @ 100% PRP	Hr	5
<b>Installation Data</b>		
Total air flow	m <sup>3</sup> / min	588
Exhaust gas flow	m <sup>3</sup> / min	119.6
Exhaust gas temperature	celci us	≤ 740
<b>Electrical Data</b>		
Battery Capacity ( minimum )	Ah	2X150
Max current ( DG Set)	A	984

\*\*\*Alternator Options available with CG & Leroy Somer.

## DG CONTROL PANEL

### ► 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
- Over Speed
- Engine Fails to Start

#### 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)
- Control Supply under Voltage
- Control Supply over Voltage
- Phase Reversal
- Unbalanced Load

### ► Controller

The DSE 4520 MKII Is A Compact Auto Mains (utility) Failure Control Module That Has Been Developed To Provide An Outstanding Range Of Features Within A Compact Enclosure.

The Module Can Be Configured For Use As An Auto Start Control Module.



### ► Controller Feature

- User-friendly interface and backlite full graphics LCD
- Battery voltage monitoring & reverse protection to aux supply
- 7/9 configurable analogue/digital inputs
- Auto, Manual and Remote Start/Stop Operation
- Island Operation
- Automatic Mains Failure Function
- CANbus Engine interface for communication
- Log with latest 100 events
- Fully configurable via PC using USB, RS485 communication
- DC Battery supply voltage range 8 to 32V
- -20 to 65 °C operating temperature range
- Ip65 Protection class with gasket
- LCD alarm indication
- Power save mode
- 7 configurable Digital output

### ► Electrical Specification

- Supply Voltage Range: Nominal Voltage - 12/24 V DC
- Cranking drop out period: 50 ms
- Maximum reverse voltage protection: -32 V DC
- Measurement accuracy (battery voltage):  $\pm 1\%$  Full scale
- Resolution: 0.1 V
- Maximum current consumption ~200 mA
- Measurement accuracy (battery voltage) -  $\pm 1\%$  full scale

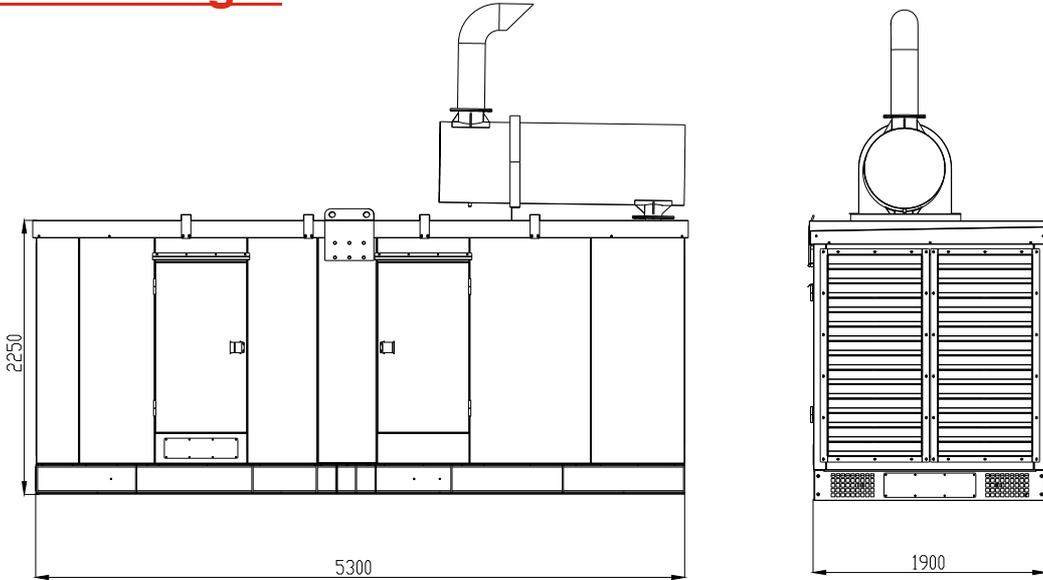
### ► Environmental Specification

- Operating Temp: -20 to 65°C in compliance with 60068-2-1, 2
- Vibration: 2G in X, Y and Z axes for 8 to 500Hz in compliance with IEC 60068-2-6
- Shock: 15 g for 11 ms in compliance with IEC 60068-2-27
- Humidity: 0 to 95% RH in compliance with IEC 60068-2-78
- Protection Degree: IP65 Protection class with gasket in compliance with IEC60529
- EMI/EMC in compliance with IEC 61000-6-2, 4

### ► Approvals

- CE Compliant
- UL/cUL Recognized to UL/ulc6200:2019 1st edition

## Dimensions & Weight



**Overall Size (L x W x H) : 5300x1900x2250 mm**

**Weight (Dry, Max) : 5700 Kg**

**NOTE:** Drawing provided is for reference only and should not be used for planning installation. Please contact the Company or latest updated details. All the data is as per respective manufacturers' specification. PERFECT reserves the right to change the design or specifications without notice and without any obligation or liability whatsoever.

**Disclaimer:** Due to continues product improvements, specifications are subject to change without prior.



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**Factories**

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