

## DIESEL GENERATOR SET

Durable | Robust | Built to Last

**DG Model : PBDN 250**

**380-415 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			Alternator Specifications		
<b>Switchable to dual frequency with a selector switch (50/60 Hz)</b>					
<b>Specification (50Hz)</b>					
Frequency	Hz	50	Make		Stamford
Voltage (3PH)	V	415	Model		UCDI274K
Power factor	cos $\theta$	0.8	Voltage	V	380 / 415
Phase		3	Frequency	Hz	50-60
<b>Power rating</b>			Power factor	cos $\theta$	0.8
Emergency Standby Power ESP	kVA	354	Poles		4
Emergency Standby Power ESP	KWM	264	Type		Brushless
Prime power PRP	kVA	322	Voltage regulation (with 4% Engine Governing)	%	$\pm 1$
Prime power PRP	KWM	240	Efficiency @ 75% load		93.3
<b>Specification (60Hz)</b>			Insulation System		Class H
Frequency	Hz	60	Protection		IP 23
Voltage (3PH)	V	380-415	<b>Dimensional Data</b>		
Power factor	cos $\theta$	0.8	Length	(L) mm	3850
Phase		3	Width	(W) mm	1700
<b>Power rating</b>			Height	(H) mm	2350
Emergency Standby Power ESP	kVA	386	Dry weight	kg	4000
Emergency Standby Power ESP	KWM	288	Fuel Tank capacity	ltr	500
Prime power PRP	kVA	351	Fuel Tank material		metal
Prime power PRP	KWM	262	<b>Autonomy</b>		
<b>Engine specifications</b>			Fuel consumption @ 75% PRP	G/K WH	197.5
<b>Engine Brand</b>		Baudouin	Fuel consumption @ 100% PRP	G/K WH	200.1
Model		6M16G6D0/S	Running time @ 75% PRP	Hr	11
Low exhaust emissions		N/A	Running time @ 100% PRP	Hr	8
Engine cooling system		Liquid (water + 50% antifreeze)	<b>Installation Data</b>		
Configuration and no.of cylinders		in line 6	Total air flow	m <sup>3</sup> / min	500
Displacement	ltr	9.726	Exhaust gas flow	m <sup>3</sup> / min	54.3
Aspiration		Turbocharged and Aftercooled	Exhaust gas temperature	celci us	$\leq 700$
Speed governor		Electronic	<b>Electrical Data</b>		
Prime gross power PRP @1500	kWM	262	Battery Capacity ( minimum )	Ah	2X150
Maximum gross power LTP ESP @1800	kWM	288	Max current (DG Set)	A	380
Oil capacity	ltr	22			
Lube oil consumption PRP (max)	ltr/h r	$\leq 0.2$ %			
Total Coolant capacity	ltr	42			
Fuel		Diesel			
Specific fuel consumption 75%/100% PRP @1500 rpm	g/k Wh	197/199.1			
Specific fuel consumption 75%/100% PRP @1800 rpm	g/k Wh	197.5/200.8			
Starting system		Electric			
Starting engine capability	KW	8.5			
Electric circuit	V	24			

\*\*\*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

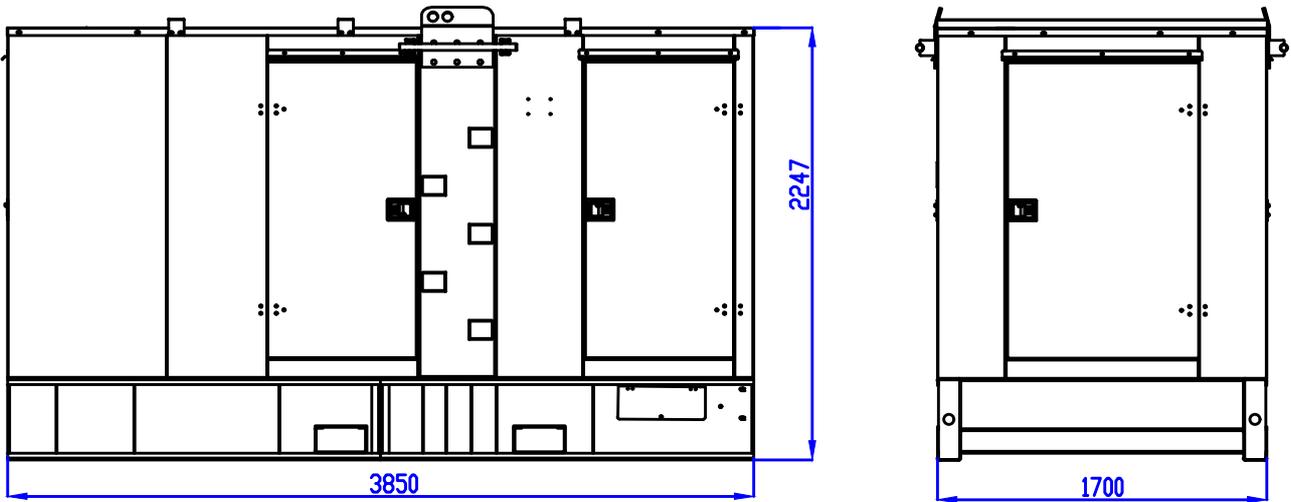
### ► Environmental Specification

- 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): 3850X1700X2247**

**Weight (Dry, Max): 4000 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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