

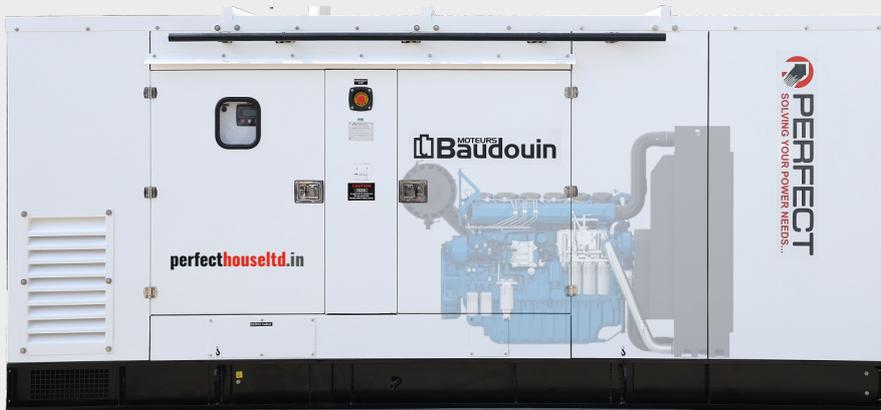
## DIESEL GENERATOR SET

Durable | Robust | Built to Last

**DG Model : PBDN 625**  
**415 V, 3-PH, 50 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

### 625 kVA DG SET TECHNICAL SPECIFICATIONS

| Engine  |                                  | Induction System                                       |  |
|---|----------------------------------|--|--|
| Engine Make   | Baudouin, India                  | Air Filter Type  | Paper Element                              |
| Engine Model  | 8M21G688/5E3                     | Air Intake Restriction (Dirty element)                 | 6.5 kPa                                    |
| Distribution  | 4 Strokes                        |  |  |
| Aspiration  | Turbocharged                     | Electrical System                                      |  |
| No. of Cylinders  | 8                                | Electrical System Voltage                              | 24 V DC                                    |
| Type of Construction  | Vee type                         | Starter Motor Power                                    | 8.5 kW                                     |
| Displacement  | 16.72 L                          | Battery Size   | 2x12V, 150 Ah                              |
| Bore / Stroke   | 127x165 mm                       |  |  |
| Mean Piston Speed   | 8.25 m/s                         | Alternator   |  |
| Compression ratio   | 15:1                             | Make***  | Stamford                                   |
| Gross Engine Power @ 100% PRP                                   | 550 kWm/737.6 bhp                | Frame  | HCI544V                                    |
| Gross Engine Power @ 110%                                       | 615 kWm/824.7 bhp                | Power Factor   | 0.8  |
| Rated Speed   | 1500 RPM                         | No. of Phase   | 3  |
| Frequency   | 50 Hz                            | Frequency  | 50 Hz                                      |
|   |                                  | Rated Voltage (L-L)                                    | 415 V                                      |
| Cooling System  |                                  | Rated Current  | 869 Amps                                   |
| Method of Cooling   | Radiator                         | Voltage Regulation                                     | ±0.1%                                      |
| Coolant Capacity  | 71 L                             | Insulation System                                      | H Class                                    |
| Radiator Fan Power  | 26 kW                            | Temperature Rise Limit                                 | H Class                                    |
| Thermostat Operating Range                                      | 83 - 91 °C                       | Winding Pitch  | 2/3  |
| Coolant Alarm Temperature                                       | 103 °C                           | Over Load  | 10 % Over Load for 1 hour once in 12 hours |
|   |                                  | Waveform Distortion                                    | No-Load < 1.5% NDBLL<5%                    |
| Fuel System   |                                  | Temperature Ambient                                    | 40 °C                                      |
| Governor  | Electronic (ECU)                 | Altitude   | 1000 m                                     |
| Governing Class   | G3 as per ISO:8528-5             | Protection   | IP23                                       |
| Fuel Injection Type   | High Pressure Common Rail (HPCR) | Cooling  | Air Cooled                                 |
| Recommended Fuel  | IS 1460/ BS2869 Part1 Class A1   | Air flow   | 1.035 m3/sec                               |
| Fuel Tank Capacity  | 990 L                            | Coupling   | Single bearing                             |
| <b>Fuel Consumption: L/hr @ Specific Gravity 0.85 gms/Litre</b> |                                  | Maximum Over Speed                                     | 1650 RPM                                   |
| 100% Load   | 127.8                            | Stator Winding   | Double layer lap                           |
| 75% Load  | 92.6                             | Control System   | Self excited                               |
| <b>*Note: Fuel Data Confirms to ISO 3046 with +5% tolerance</b> |                                  | Excitation System                                      | —  |
|   |                                  | AVR Type   | Analogue                                   |
| Lubrication System  |                                  | AVR Model  | AS400                                      |
| Recommended Lube Oil  | CI4+SAE15W-40                    | Performance: Efficiency @0.8 p.f                       |  |
| Lube Oil System Capacity  | 44 L                             | 100%   | 95.00%                                     |
| Lube Oil Consumption  | < 0.3 % of FC                    | 75%  | 95.50%                                     |
|   |                                  | Short Circuit Ratio                                    | 0.380                                      |
| Exhaust System  |                                  | Xd Dir Axis Reactance                                  | 2.63                                       |
| Silencer Type   | Residential-grade                | X'd Dir Axis Transient Reactance                       | 0.14                                       |
| Number of Silencers   | 1 No.                            | X''d Dir Axis Sub Transient Reactance                  | 0.1  |
| Max Back Pressure Total System                                  | 7.5 kPa                          | Xq Quad Axis Reactance                                 | 2.05                                       |
| Exhaust Outlet Pipe Size (min)                                  | 128 mm                           | X''q Quad Axis Subtransient Reactance                  | 0.22                                       |
| Exhaust Gas Temperature   | ≤ 600 °C                         | XI Leakage Reactance                                   | 0.05                                       |
|   |                                  | X2 Negative Sequence Reactance                         | 0.15                                       |
|   |                                  | X0 Zero Sequence Reactance                             | 0.07                                       |
|   |                                  | ***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 DSE7320 MKII is a powerful, new generation Auto Mains (Utility) Failure genset control module with a highly sophisticated level of new features and functions, presented in the usual DSE user-friendly format. Suitable for a wide variety of single, diesel or gas Gen-set applications.



### ► 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  $\sim 200$  mA
- Measurement accuracy (battery voltage) -  $\pm 1\%$  full scale

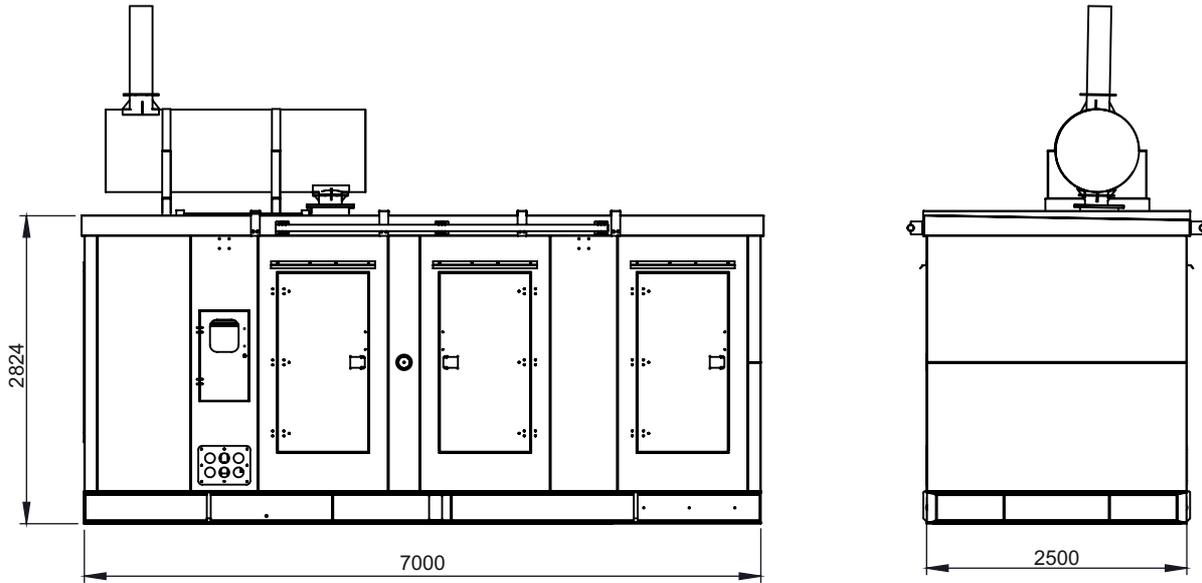
### ► Environmental Specification

- 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) : 7000x2500x2824 mm**

**Weight (Dry, Max) : 9500 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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**Perfect House Pvt. Ltd.**

2nd Floor, 99C Kavya Aura, Next to Rosewood Hotel, Tardeo, Mumbai – 400034, India

Contact No: +9122-62611900/907

✉ exports@perfectgenset.com

**Factories**

Plot no. M-7, J-2/5, J-2/6, J-10, Additional MIDC, Satara -415004, India