

DIESEL GENSET MODEL

# 650 kVA



Rating

**650 kVA / 520 kWe**

Voltage: 415 V

Frequency: 50 Hz

Speed: 1500 RPM

# PRODUCT HIGHLIGHTS

## Diesel Gen Set Package

### OJUS Diesel Genset Package

- Conforms to the latest CPCB IV+ norms
- Reliable performance in harsh environments
- Minimal downtime for uninterrupted power supply
- Rigid base frame for enhanced durability
- Anti-vibration mounts for smooth operation
- Rigorous in-house testing ensures consistent, trouble-free performance
- Tested with advanced PLC-based resistive load bank

### Engine Features

- Cooling system rated for 50°C ambient conditions
- Rugged cast iron cylinder block reduces vibration and noise
- Induction-hardened forged steel crankshaft for extended life
- Integrated full-flow oil filter and lube oil cooler for optimal engine temperature
- Cast iron dry liners and aluminum alloy pistons with performance piston rings
- High power-to-weight ratio for cost-effective operation
- Heat-shielded air intake, exhaust manifold, and turbocharger
- HPCR pump with ECU for optimized power and fuel efficiency
- Electronic governing for precise control
- Fast load response
- Stable frequency under varying loads
- Low fuel and oil consumption
- Compliant with ISO 3046-1/1 and ISO 15550 standards

### Controller Features

- Backlit full-graphics LCD with user-friendly interface
- Battery monitoring & reverse protection
- 7/9 configurable analogue/digital inputs
- Auto, Manual & Remote start/stop
- Supports island operation
- Automatic mains failure detection
- CANbus engine interface
- Logs up to 100 recent events
- PC configuration via USB or RS485
- DC battery input range: 8–32V
- Operating temperature: -20 to 65°C
- IP65 protection with gasket
- LCD alarm indication
- Power save mode
- 7 configurable digital output

### Alternator Features

- Brushless, screen-protected, self-excited alternator compliant with BS:5000 / IEC 60034-1
- High motor starting capability
- Consistent efficiency across varying load conditions
- Compact build with sealed bearings for extended life and reduced maintenance
- Optimized for compatibility with engine performance

### SALIENT FEATURES OF OJUS GENERATORS

- Baudouin engine technology - globally recognized
- Global technology, available in India
- High energy efficiency diesel gensets
- Microprocessor-based control panels
- Longer maintenance intervals
- PLC-tested for quality and reliability
- Experienced and trained engineers for after-sales support
- Built to meet the latest environmental standards
- Round-the-clock (24x7) service support
- Expert technical team for troubleshooting and service

# APPLICATION DATA

Engine	
Engine Make	Baudouin, India
Engine Model	6M33G2D4/5
Distribution	4 Stroke
Aspiration	Turbocharged
No. of Cylinders	6
Type of Construction	In line
Displacement	19.6L
Bore / Stroke	150x185 mm
Mean Piston Speed	9.25 m/s
Compression Ratio	15:1
Gross Engine Power @100% PRP	573 kWm/771 bhp
Gross Engine Power @ 110%	633 kWm/849 bhp
Rated Speed	1500 RPM
Frequency	50 Hz

Cooling System	
Method of Cooling	Radiator
Coolant Capacity	159 L
Radiator Fan Power	23.1kW
Thermostat Operating Range	80 / 92 °C
Coolant Alarm (Shutdown) Temperature	108 °C

Fuel System	
Governor	Electronic (ECU)
Governing Class	G3 as per ISO:8528-5
Fuel Injection type	High Pressure Common Rail (HPCR)
Recommended Fuel	IS 1460/ BS2869 Part1 Class A1
Fuel Consumption: Litres/Hour	
100% Load	130.7
75% Load	102.6

Note: Fuel Data Confirms to 150 3040 with +5% tolerance

Lubrication System	
Recommended Lube Oil	15W 40 CK4
Lube Oil System Capacity	61 L
Lube Oil Consumption	<0.3 % of FC

Induction System	
Air Filter Type	Paper Element
Air Intake Restriction (Dirty element)	6.5 kPa

Exhaust System	
After Treatment System	Available
Location	In Front of Radiator
Max. Back Pressure Total System	7.5 kPa
Exhaust outlet pipe size (min)	200 mm
Exhaust Gas Temperature	≤ 550 °C
DEF Tank Capacity	2 x 90 L

Electrical System	
Electrical System Voltage	24 V DC
Starter Motor Power	8.5 kW
Battery Size	2x12V, 150 Ah

Alternator	
Make	Stamford
Frame	HCI544F
Power Factor	0.8
No. of Phase	3
Frequency	50 Hz
Rated Voltage (L-L)	415 V
Rated Current	904.2 Amps
Voltage Regulation	±1%
Insulation System	H Class
Temperature Rise Limit	H Class
Winding Pitch	2/3
Over Load	10 % Over Load for 1 hour once in 12 hours
Waveform Distortion	No-Load < 1.5% NDBLL<5.0%
Design Ambient for Alternator	40 °C
Altitude	1000 m
Protection	IP23
Cooling	Air Cooled
Air flow	1.614 m <sup>2</sup> /sec
Coupling	Single Bearing
Maximum Over Speed	1650 RPM
Stator Winding	Double layer Lap
Control System	Self excited
Excitation System	---
AVR Type	Analogue
AVR Model	Mx321

Performance: Efficiency @0.8 p.f	
100%	95.20%
75%	95.50%
Short Circuit Ratio	0.412
X <sub>d</sub> Dir Axis Reactance	2.43
X' <sub>d</sub> Dir Axis Transient Reactance	0.13
X" <sub>d</sub> Dir Axis Sub Transient Reactance	0.09
X <sub>q</sub> Quad Axis Reactance	2.03
X" <sub>q</sub> Quad Axis Subtransient Reactance	0.21
X <sub>1</sub> Leakage Reactance	0.04
X <sub>2</sub> Negative Sequence Reactance	0.15
X <sub>0</sub> Zero Sequence Reactance	0.07

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

# DIMENSIONS & WEIGHT



## Acoustic Set

Length	6750 mm
Width	2350 mm
Height without Silencer	2550 mm
Height with Silencer	3480 mm
Weight, Dry	9040 kg
Fuel Day Tank	990 litres

## OUTPUT RATING & DEFINITION

**DG Set Rating @ 415V - 50 Hz : 650 kVA / 520 kWe**

Note: Ratings based on 0.8 power factor.

### Definition

**Prime Power:** Suitable for varying electrical loads for unlimited hours. Defined by ISO 8528 (PRP). A 10% overload is allowed as per ISO 3046.

### GENERAL INFORMATION

Documentation: Includes full set of operation and maintenance manuals, plus circuit wiring diagrams

Warranty: Refer to the warranty policy



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