

DIESEL GENSET MODEL

500 kVA



Rating

500 kVA / 400 kWe

Voltage: 415 V

Frequency: 50 Hz

Speed: 1500 RPMz

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	6M21G6D4/5
Distribution	4 Stroke
Aspiration	Turbocharged
No. of Cylinders	6
Type of Construction	In line
Displacement	12.54 L
Bore / Stroke	127x165 mm
Mean Piston Speed	8.25 m/s
Compression Ratio	15.7:1
Gross Engine Power @100% PRP	450 kWm/604 bhp
Gross Engine Power @ 110%	490 kWm/657 bhp
Rated Speed	1500 RPM
Frequency	50 Hz

Electrical System

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

Alternator

Make	Stamford
Frame	HCI544V
Power Factor	0.8
No. of Phase	3
Frequency	50 Hz
Rated Voltage (L-L)	415 V
Rated Current	695 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	1.035 m3/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	AS440

Performance: Efficiency @0.8 p.f

100%	93.70%
75%	94.30%
Short Circuit Ratio	0.347
Xd Dir Axis Reactance	2.88
X'd Dir Axis Transient Reactance	0.17
X" d Dir Axis Sub Transient Reactance	0.13
Xq Quad Axis Reactance	2.34
X"q Quad Axis Subtransient Reactance	0.26
X1 Leakage Reactance	0.07
X2 Negative Sequence Reactance	0.21
X0 Zero Sequence Reactance	0.11

**Alternator Options available with CG & Leroy Somer.

Cooling System

Method of Cooling	Radiator
Coolant Capacity	62 L
Radiator Fan Power	12kW
Thermostat Operating Range	76 / 88 °C
Coolant Alarm (Shutdown) Temperature	106 °C

Fuel System

Governor	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	99.0
75% Load	75.4

*Note: Fuel Data Confirms to ISO 3046 with +5% tolerance

Lubrication System

Recommended Lube Oil	15W 40 CK4
Lube Oil System Capacity	34 L
Lube Oil Consumption	<0.2 % of FC

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

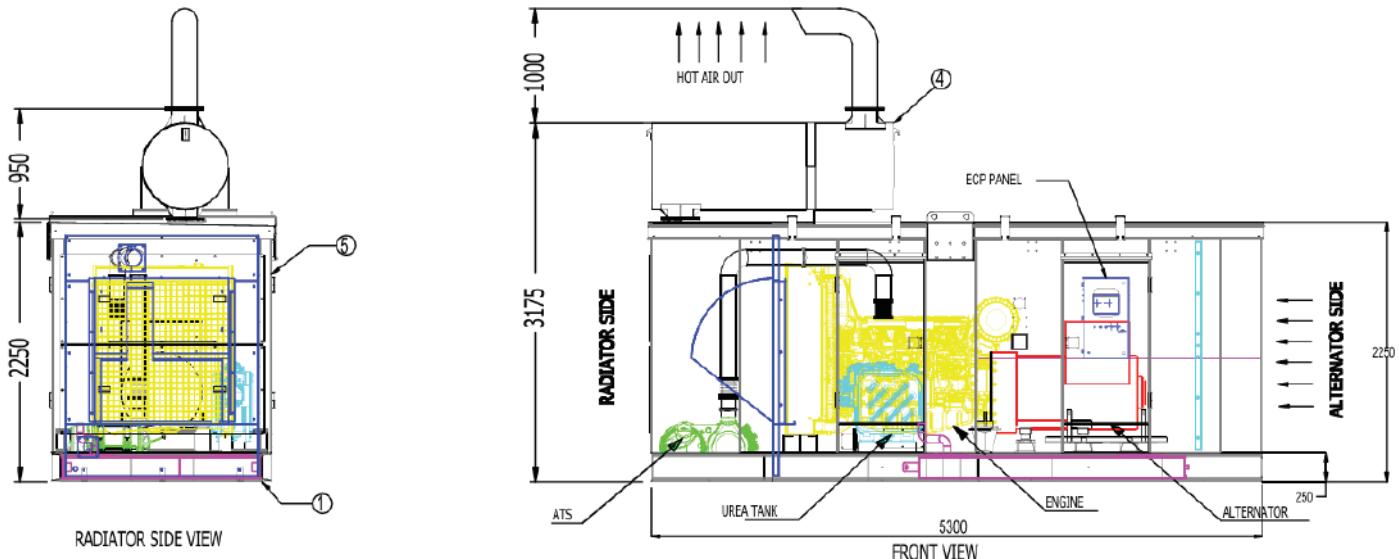
Induction System

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	12 kPa
Exhaust outlet pipe size (min)	105 mm
Exhaust Gas Temperature	≤ 600 °C
DEF Tank Capacity	70 L

DIMENSIONS & WEIGHT



Acoustic Set

Length	5300 mm
Width	1900 mm
Height without Silencer	2250 mm
Height with Silencer	3200 mm
Weight, Dry	6150 kg
Fuel Day Tank	700 litres

OUTPUT RATING & DEFINITION

DG Set Rating @ 415V - 50 Hz :500 kVA / 400 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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