DIESEL GENSET MODEL
320 kVA

Optional equipment and finishing shown. Standard may vary.

Rating	320 kVA / 256 kWe
Voltage	415 Volts
Frequency	50 Hz
Speed	1500 RPM

PRODUCT HIGHLIGHTS

Diesel Gen Set Package

OJUS Diesel Gen Set Package

- Designed to meet ISO 8528 standards
- 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

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

APPLICATION DATA

Engine

Engine Make	Baudouin, India
Engine Model	6M21G0D4/5
Distribution	4 Strokes
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	290 kWm/389 bhp
Gross Engine Power @ 110%	320 kWm/429 bhp
Rated Speed	1500 RPM
Frequency	50 Hz

Cooling System

Method of Cooling	Radiator
Coolant Capacity	62L
Radiator Fan Power	12kW
Thermostat Operating Range	76 / 88 °C
Coolant Alarm (Shutdown) Temperature	105 °C

Fuel System

Governor	Electronic
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: L/hr @ Specific Gravity 850 gms/Litre

100% Load	65.6
75% Load	49.6

*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

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

Induction System

Air Filter Type	Dry
Air Intake Restriction (Dirty element)	6.5 kPa

Electrical System

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

Alternator

Make***	Stamford
Frame	HCI444D
Power Factor	0.8
No. of Phase	3
Frequency	50 Hz
Rated Voltage (L-L)	415 V
Rated Current	445 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%
Design Ambient for Alternator	40 °C
Altitude	1000 m
Protection	IP23
Cooling	Air Cooled
Air flow	0.8 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%	92.80%
75%	93.90%
Short Circuit Ratio	0.355
Xd Dir Axis Reactance	2.82
X'd Dir Axis Transient Reactance	0.18
X''d Dir Axis Sub Transient Reactance	0.13
Xq Quad Axis Reactance	2.38
X''q Quad Axis Subtransient Reactance	0.35
Xl Leakage Reactance	0.06
X2 Negative Sequence Reactance	0.23
X0 Zero Sequence Reactance	0.09

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

DG CONTROL PANEL

Operating Features

- Microprocessor-based digital controller
- Accurate LCD display
- Local and remote Start/Stop capability
- Generator breaker control
- Accessible fascia for easy control
- Supports Manual, Auto modes
- AMF compatibility via mains fail signal

Metering

Engine Parameters

- Engine speed
- Lube oil pressure
- Coolant temperature
- Engine running hours
- Engine battery voltage
- Running status
- Fuel level (%)
- Event log with date and time

Electrical Parameters

- 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 (kWh, kVAh, kVArh)
- Control supply voltage

Protection

Engine

- High water temperature
- Low oil pressure
- Low fuel level
- Over speed
- Engine fail 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

Model: DEIF (Denmark), SGC 420 MK II

- Designed for AMF applications with electronically controlled engine (CANbus) and electronic governor.

Controller Features

- User-friendly interface with full graphics backlit LCD
- Battery monitoring and reverse protection for auxiliary supply
- 7/9 configurable analogue/digital inputs
- Auto, Manual, and Remote Start/Stop
- Island mode operation
- Automatic mains failure function
- CANbus engine interface
- Event log (up to 100 events)
- USB/RS485 communication, PC configurable
- Battery voltage range: 8-32V DC
- Operating temperature: -20 to 65°C
- IP65 protection with gasket
- LCD alarm indication
- Power save mode
- 7 configurable digital outputs

Electrical Specification

- Voltage range: Nominal 12/24V DC
- Cranking drop-out period: 50 ms
- Max reverse voltage protection: -32V DC
- Battery voltage accuracy: ±1% full scale
- Resolution: 0.1V
- Max current consumption: ~200 mA
- Accuracy: ±1% full scale

Environmental Specification

- Operating temp: -20 to 65°C (IEC 60068-2-1,2)
- Vibration: 2G (X, Y, Z axes), 5-500Hz (IEC 60068-2-6)
- Shock: 15g for 11 ms (IEC 60068-2-27)
- Humidity: 0-95% RH (IEC 60068-2-78)
- IP65 protection with gasket (IEC 60529)
- EMI/EMC: IEC 61000-6-2, 4 compliant

Approvals

- CE Compliant
- UL/cUL Recognized to UL/ULC6200:2019 (1st edition)

STANDARD SCOPE OF SUPPLY

- Water-cooled diesel engine
- Engine-driven radiator
- Electric starter with charging alternator
- Electronic governor
- Microprocessor-based genset controller
- Dry-type air filter
- Single-bearing IP23 alternator
- Base frame with anti-vibration mounts
- Flexible fuel lines and lube oil drain pump
- Engine-mounted fuel water separator filter
- Exhaust outlet with flexible and flanged fittings
- DG control panel
- Battery, battery leads & battery stand
- Day fuel tank with high/low level switch
- First fill lube oil
- First fill coolant
- 1 set of documents

OPTIONAL SUPPLY

Engine

- Coolant heater
- Oversize batteries
- Extra fuel pre-filter water separator

Alternator

- Permanent Magnet Generator (PMG)
- Space heater, RTD & BTD sensor
- AVR upgrade (3-phase sensing)

Cooling System

- Air inlet filters
- Heat exchanger
- Remote radiator

General

- Synchronization module
- Isolator panel
- Automatic transfer switch
- Manual/Automatic fuel transfer pump

OUTPUT RATING & DEFINITION

DG Set Rating @ 415V - 50 Hz:

320 kVA | 256 kWe

Note: Ratings based on 0.8 power factor.

Definition

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

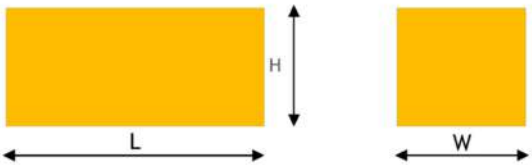
SALIENT FEATURES OF OJUS GENERATORS

- 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

DIMENSIONS & WEIGHT

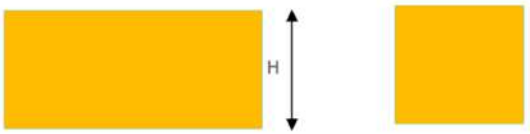
Open Set

Length = L	mm	
Width = W	mm	
Height = H	mm	
Weight, Dry	kg	
Day Fuel tank (Litres)		



Acoustic Set

Length = L	mm	5700
Width = W	mm	2100
Height = H	mm	3113
Weight, Dry	kg	6480
Day Fuel tank (Litres)		900



Note: Dimensions & weights are for reference only.

OJUS Power and Technologies Private Limited

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GENERAL INFORMATION

Documentation

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

Warranty

Refer to the warranty policy