POWERICA
A PROMISE FOR POWER

Diesel Generator Set

X3.6 Series

50 - 58.5 kVA, 40 - 47 kWe Prime

CPCB IV+ Emission Compliant

Specification Sheet

Latest Technology and Unmatched Performance

- The Cummins® X3.6 series rugged engine and world class Stamford alternator powered diesel generator set
- Exhaust after-treatment and in-cylinder solution to meet stringent emission norms
- Best in class transient response
- High altitude capabilities
- Superior finish and aesthetics
- Compact in size with optimum power to weight ratio

Environment Friendly Power

- Class defining technology engine is designed to meet stringent exhaust emission tests as per revised MoEF norms, thus offering environment friendly power
- The Cummins® diesel generator sets are available with the lowest noise levels in its range

Lowest Operating Cost and Comprehensive Warranty

- Highly reliable and durable product
- Maximum efficiency even at part loads, offering the advantage of lowest operating costs
- 500 hours/18 months service interval
- Industry acknowledged best-in-class comprehensive warranty on the entire package including rubber components

Single Source Power Assurance

- All the major components - the engine, alternator, control system and canopy are designed, manufactured, and tested by Cummins India
- Best and largest customer support network in India, capable of providing round-the-clock service and spares support

Engine

- Cummins® X3.6 series, 4 cylinder, In-line 4 stroke, radiator cooled engine
- Robust and efficient air handling system with
  - Dry type, Replaceable paper element air cleaner with restriction indicator
  - Air to air aftercooling
  - Optimized turbocharger for increased altitude capabilities
- Optimized fuel consumption with common rail electronic injection
- Spin on fuel filter
- Cooling system is designed and tested for 50°C ambient conditions
- Full flow spin on lube oil filter
- First fill of lube oil and coolant
- Electrical starter motor with soft start engagement feature
- Battery charging alternator
- 1 x 12 V DC battery

Alternator

- Stamford S2L1series alternator frames from Cummins Generator Technology
- Brushless type, Screen protected, Revolving field, Self-excited alternator conforming to IS/IEC 60034-1
- Better motor starting capability
- Best in class efficiency
- Compact design with sealed bearings for longer life and lesser maintenance
- Impregnation on all wound components for better mechanical strength

Control Panel

Control panel is powder coated for weather-proof and long-lasting finish. The control panel consists of the following parts:

- PS0602 Controller
- Bus bars with suitable capacity with incoming/ outgoing terminals
- Indicating lamps for 'Load ON' and 'Set Running'
- Instrument fuses duly wired and ferruled
- MCCB of suitable rating with short circuit protections AC/DC separation inside control panel for safety

PS0602 Features

- Cummins PowerStart™ PS0602 control is a microprocessor-based generator set monitoring and control system. AMF Functionality is inbuilt, and this control includes an intuitive operator interface that allows for complete generator set control as well as system metering, fault annunciation, configuration, and diagnostics
- AMF Functionality
- Electronic Governing
- CAN (J1939) Compatible
- Sync Compatible (Capable to accept external speed signal from 3rd party sync controller)
- Intuitive operator interface which includes LED backlit 128X64 pixel graphic display with tactile feel soft-switches & generator set status LED lamps
- Remote start-stop
- Suitable for FAE based engine architecture
- Engine Metering: Oil pressure, Engine temperature, Starting battery voltage, Engine running hours
- AC Alternator Metering: L-L Voltage and L-N Voltage, Current (phase and total), kVA (phase and total) and Frequency. kwh, Total & per phase (kw & kVA), PF, Utility Voltage and Freq
- Engine Protection: Low lube oil pressure, High/Low coolant temperature, Battery High/Low/Weak Volts, Fail to Crank/Start, Sensor failure, Cranking lockout, Low fuel level
- AC Alternator Protection: Over/Under Voltage, Over/Under Frequency, Loss of AC sensing. Overspeed, Over Current, kW Overload
- Data Logging: Engine hours, Control hours and upto 5 recent fault codes
- Configurable glow plug control
- 12 Volt DC operation
- Sleep mode
- Modbus interface (RS485 RTU)
- In Power compatible (PC based service tool)
- Certifications - meets the requirement of relevant ISO, EN, Mil Std. and CE standards
- Maintenance due alarm based on Engine Run Time and due date
- Exerciser scheduler

Silencer

- Critical Grade Silencer integrated with DOC, suitably optimized to meet stringent emission standards laid down by MoEF/CPCB

Mounting Arrangement

- Engine and alternator are mounted on a common MS fabricated base frame with AVM pads
- Skid mounted radiator
- Base frame with integral fuel tank is provided with air vent, inlet and outlet connection, level indicator and provision for cleaning

Optional

- Engine: Cold Start Kit
- Alternator: PMG and Space heater
- Canopy: Inside bolt design
- Remote Monitoring System

Acoustic Enclosure

- Specially designed to meet stringent MoEF/CPCB norms of 75 dBA @ 1mtr at 75% load under free field conditions
- The acoustic enclosure is made of CRCA sheets in munsel green shade, and a structural/sheet metal base frame painted in black
- High quality noise absorbent and fire-retardant grade acoustic Insulation material (Foam) complying to IS 8183
- Two point top lifting for easy handling at customer site
- Designed to have optimum serviceability
- Air inlet louvers specially designed to operate at rated load
- 11 tank pretreatment process and UV resistant powder coating of all parts to withstand extreme environment
- Use of special hardware for longer life
- Fluid drains for lube oil and fuel
- External Fuel filling arrangement outside the enclosure

Technical Data

Generator Set Specification		
Model	CI 50D5P	CI 58.5D5P
Duty	Prime	Prime
Power Rating kVA / kWe	50/40	58.5/47
No. of Phases	3 Phase	3 Phase
Output Voltage and Frequency (V and Hz)	415 V, 50 Hz	415 V, 50 Hz
Power Factor	0.8 (lagging)	0.8 (lagging)
Current (A)	70	81
RPM	1500	1500

Engine Specification		
Make	Cummins®	
Model	X3.6-G3	X3.6-G3
Required Certified Power for Rated kVA (hp)	74.4	74.4
Cooling	Liquid Cooled (EG Compleat 50:50)	Liquid Cooled (EG Compleat 50:50)
Aspiration	Turbocharger Intercooled	Turbocharger Intercooled
No. of cylinders	4, In-line	4, In-line
Bore (mm) x Stroke (mm)	95 X 127	95 X 127
Compression ratio	18.3:1	18.3:1
Displacement (litre)	3.6	3.6
Fuel	High Speed Diesel	High Speed Diesel
Performance class of generator set	ISO 8528-5 G2	ISO 8528-5 G2
Starting system	12 V DC Electrical	12 V DC Electrical
Lube oil specification	CK4	CK4
Total lubrication system capacity (Litre)	9	9
Total coolant capacity (litre)	12	12
Exhaust pipe size (inch)	3	3
Total wet weight (Engine+Radiator)* (kg)	387	387
Length X Width X Height (Coolpac) (mm)	856 x 690 x 853	856 x 690 x 853
Mean Piston speed (m/s)	6.35	6.35
Combustion air intake @100% load (±5%) (cfm)	132	132
Exhaust Temperature (^{0}C)	376	376

Alternator Specification		
Make	STAMFORD (CGT)	STAMFORD (CGT)
Alternator Frame	S2L1D-D41	S2L1D-E41
Enclosure	IP 23	IP 23
Voltage regulation (Max.)	±1%	±0.5%
Class of Insulation	H Class	H Class
Winding Pitch	2/3	2/3
Stator Winding	Double layer lap	
Rotor	Dynamically Balanced	
Waveform distortion/ Total Harmonic Distortion	No load < 1.5 %, Non distorting balanced linear load < 5 %	
Maximum Unbalanced Load across phases•	less than or equal to 25%	
Telephonic Harmonic factor	< 2%	

Rating Definitions	Conformance Standards
Prime Power (PRP): Applicable for supplying power to varying electrical load for unlimited hours. Prime Power (PRP) is in accordance with ISO8528.	• IS/IEC 60034-1 • ISO 1460 • ISO 8528 • ISO 3046 • ISO 9001 • ISO 13018

Typical Enclosed Genset Dimensions

Genset Model	Rating (kVA)	Length (mm)	Width (mm)	Height (mm)	Wet Weight" (kg)	Standard Fuel tank Capacity (litre)
CI 50D5P	50	2950	1150	1550	1535	163
CI 58.5D5P	58.5	2950	1150	1550	1570	163

" Approximate Weight

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