POWERICA

Cummins

Diesel Generator Set
X2.5 Series

7.5 - 20 kVA, 6 - 16 kWe Prime

CPCB IV+ Emission Compliant

Specification Sheet

Latest Technology and Unmatched Performance

- The Cummins® X2.5 series rugged engine and world class Stamford alternator powered diesel generator set
- Advanced in-cylinder technology to meet stringent emission norms without any after-treatment device
- 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 and technologically advanced engine to meet stringent exhaust emission norms as per the latest MoEF notification
- 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® X2.5 series, 3 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
  - Optimized turbocharger for increased altitude capabilities
- Optimized fuel consumption with Inline fuel pump with A1 class mechanical governing
- Spin on fuel filter
- Cooling system is designed and tested for 45°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 S0L1 and S0L2 alternator frames from Cummins Generator Technologies
- 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:

- PS0600 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

PS0600 Features

- Cummins® PowerStart™ PS0600 control is a microprocessor based generator set monitoring, metering and control system with LCD display designed to meet the demands of today's engine driven generator set
- AMF Functionality
- Intuitive operator interface which includes LED backlit 128X64 pixel graphic display with tactile feel soft-switches & generator set status LED lamps
- Remote start-stop
- Audible & Visual warning for Inducement
- 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 suitably optimized to meet stringent sound 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 drain plug, air vent, inlet and outlet connection 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 CRCA sheets in Munsell green shade and a structural/sheet metal base frame painted in black
- 11 tank pretreatment process and UV resistant powder coating of all parts to withstand extreme environment
- High quality noise absorbent and fire-retardant grade acoustic Insulation material (P.U Foam) complying to IS 8183
- 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
- Fluid drains for lube oil and fuel
- External Fuel filling arrangement outside the enclosure

Technical Data

Generator Set Specification				
Model	CI 7.5D5P	CI 10D5P	CI 15D5P	CI 20D5P
Duty	Prime	Prime	Prime	Prime
Power Rating kVA / kWe	7.5/6	10/8	15/12	20/16
No. of Phases	3 Phase	3 Phase	3 Phase	3Phase
Output Voltage and Frequency (V and Hz)	415 V, 50 Hz	415 V, 50 Hz	415 V, 50 Hz	415 V, 50 Hz
Power Factor	0.8 (lagging)	0.8 (lagging)	0.8 (lagging)	0.8 (lagging)
Current (3 phase/ 1 phase) (A)	10	14	21	28
RPM	1500	1500	1500	1500

Engine Specification				
Make	Cummins®			
Model	X2.5-G5	X2.5-G5	X2.5-G6	X2.5-G6
Required Certified Power for Rated kVA (hp)	16.8	16.8	25.2	25.2
Cooling	Liquid Cooled (EG Compleat 50:50)			
Aspiration	Turbocharged			
No. of cylinders	3, In-line	3, In-line	3, In-line	3, In-line
Bore (mm) x Stroke (mm)	91.4 X 127	91.4 X 127	91.4 X 127	91.4 X 127
Compression ratio	18.5:1	18.5:1	18.5:1	18.5:1
Displacement (litre)	2.5	2.5	2.5	2.5
Fuel	High Speed Diesel	High Speed Diesel	High Speed Diesel	High Speed Diesel
Performance class of generator set	ISO 8528-5 G2	ISO 8528-5 G2	ISO 8528-5 G2	ISO 8528-5 G2
Starting system	12 V DC Electrical	12 V DC Electrical	12 V DC Electrical	12 V DC Electrical
Lube oil specification	CI4+	CI4+	CI4+	CI4+
Lube oil sump capacity, High-Low level (litre)	4 – 3	4 – 3	4 – 3	4 – 3
Total lubrication system capacity (Litre)	8.5	8.5	8.5	8.5
Total coolant capacity (litre)	5.5	5.5	5.5	5.5
Exhaust pipe size (inch)	2	2	2	2
Total wet weight (Engine+Radiator)* (kg)	271	271	271	271
Length X Width X Height (Coolpac) (mm)	718 x 651 x 883	718 x 651 x 883	718 x 651 x 883	718 x 651 x 883
Mean Piston speed (m/s)	6.3	6.3	6.3	6.3
Combustion air intake @100% load (±5%) (cfm)	41.4	41.4	50.2	50.2
Exhaust Temperature (°C)	380	380	500	500

Alternator Specification

Make	STAMFORD (CGT)	STAMFORD (CGT)	STAMFORD (CGT)	STAMFORD (CGT)
Alternator Frame	S0L1-D	S0L1-H	S0L1-P	S0L2-M
Enclosure	IP23	IP23	IP23	IP23
Voltage regulation (Max.)	±1%	±1%	±1%	±1%
Class of Insulation	H Class	H Class	H Class	H Class
Winding Pitch	2/3	2/3	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

Prime Power (PRP):
Applicable for supplying power to varying electrical load for unlimited hours. Prime Power (PRP) is in accordance with ISO 8528.

Conformance Standards

- 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 7.5D5P	7.5	2090	875	1150	772	85
CI 10D5P	10	2090	875	1150	780	85
CI 15D5P	15	2190	875	1150	789	90
CI 20D5P	20	2190	875	1150	820	90

" Approximate Weight

Authorised Representative

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