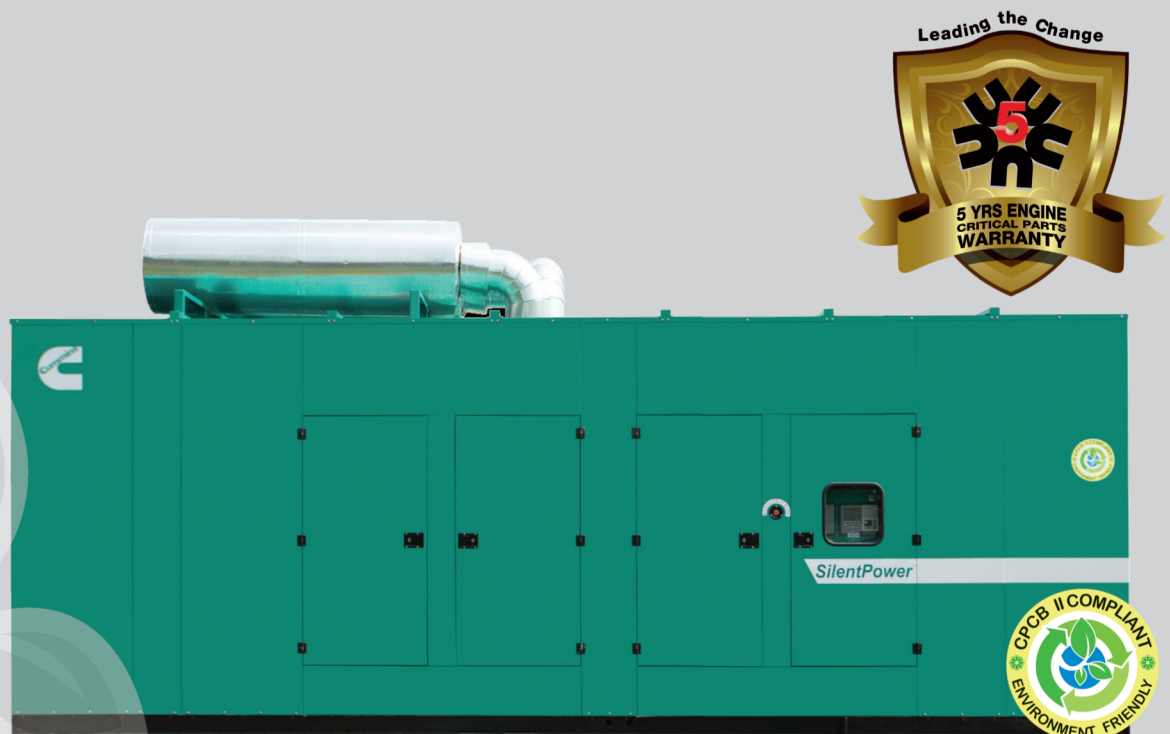


Diesel Generator Set K38 Series

750-810 kVA, 600-648 kW Prime



Latest Technology Product with Global Cummins® Platform

- The Cummins® K38 series heavy-duty engine and world class Stamford alternator powered diesel generator set
- Proven technology with mechanical simplicity of Cummins PT fuel system.
- Advanced in-cylinder technology and 2P2L Cooling system to meet latest emission norms without any after-treatment device
- Smart aesthetic and superior finish
- 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

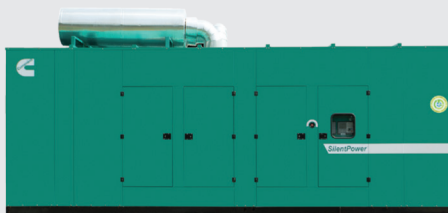
- Highly reliable and durable product
- All elements are designed to work together to maximize efficiency even at part loads, offering the advantage of lowest operating costs
- 500 Hours / 1 year service interval
- Industry acknowledged best-in-class comprehensive warranty on the entire package including 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
- All these things put together, Cummins® offers you SINGLE SOURCE POWER ASSURANCE

Engine

- Cummins K38 series, 12 cylinder, Vee, 4 stroke, radiator cooled engine
- Highly stable and reliable design with square engine
- Well designed air handling system with
 - Dry type, Heavy duty, Replaceable paper element air cleaner with restriction indicator
 - Outboard aftercooling with 2 pump 2 loop system
 - Optimised turbocharger for increased altitude capabilities
- Best in class fuel economy with
 - PT fuel system with Electronic Step Timing Control (ESTC) injectors which smoothly stabilise engine speed under load with A1 class electronic governing
 - Dual fuel filter system: Pre filter including water separator and Water In Fuel (WIF) sensor and main filter
- Standard integral set-mounted radiator system, designed and tested for 50°C ambient temperature
- Full flow spin on lube oil filter
- Plate type lube oil cooler
- First fill of lube oil and coolant
- Electrical starter motor with soft start engagement feature
- Battery charging alternator
- 2 x 12 V DC batteries



Alternator

- Stamford HC6 alternator frames from Cummins Generator Technologies
- Brushless type, Screen protected, Revolving field, Self excited alternator conforming to IS/IEC 60034-1
- PMG standard
- 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
- Automatic Voltage Regulator MX321/322/341

PS0601 Features

Cummins® PowerStart™ PS0601 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 sets



- AMF Functionality
- Electronic Governing
- Sync Compatible (Capable to accept external speed and Voltage bias 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
- Engine Metering: Oil pressure, Engine temperature, battery voltage, Engine running hours
- AC Alternator Metering: L-L Voltage and L-N Voltage,
- Current (phase and total), kVA (phase and total), Frequency, kWH, kW and kVA (phase and total), PF, Utility Voltage and Freq.
- Engine Protection: Low lube oil pressure, High/Low coolant temperature, Battery Over/Under/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, Over speed, Over Current.
- Data Logging: Engine Hours, Control Hours and upto 5 recent fault codes
- Configurable glow plug control
- 12/24 Volt DC operation
- Sleep mode
- Modbus interface (RS485 RTU)
- InPower 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

- Hospital grade silencer suitably optimised to meet stringent noise emission standards laid down by MoEF / CPCB

Mounting Arrangement

- Engine and alternator are mounted on a common MS fabricated base frame with AVM pads.

Optionals

- Engine: Coolant Heater, Lub Oil heater, Heat exchange, No cool.
- Controller : PC3.3

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 absorbant and fire-retardant grade acoustic insulation material (Rockwool) complying to IS 8183
- Base lifting for easy handling at customer site
- Designed to have optimum serviceability
- Air inlet louvers specially designed to operate at rated load
- Made on special purpose CNC machines for consistency in quality and workmanship
- 11 tank pretreatment process and UV resistant powder coating of all parts to withstand extreme environment
- Use of special hardware for longer life
- Flush styling - no projections
- Fluid drains for lube oil and fuel
- Fuel filling arrangement inside the enclosure

Technical Data

Generator Set Specification

Model	C750D5P	C810D5P
Duty	Prime	Prime
Power Rating kVA / kWe	750/600	810/648
No. of Phases	3	3
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)	1043	1126
RPM	1500	1500

Engine Specifications

Make	Cummins®	Cummins®
Model	KTA38-G12	KTA38-G12
MoEF Certified Power (bhp)	1069	1069
Required Power for Rated kVA (bhp)	891	960
Cooling	Liquid cooled EG Compleat 50:50	Liquid cooled EG Compleat 50:50
Aspiration	Turbocharged Aftercooled	Turbocharged Aftercooled
No. of cylinders	12, Vee	12, Vee
Bore (mm) x Stroke (mm)	159 x 159	159 x 159
Compression ratio	16.7:1	16.7:1
Displacement (litre)	38	38
Fuel	High Speed Diesel	High Speed Diesel
Fuel consumption @75% load with radiator and fan* (litre/hr)	130.42	138.20
Fuel consumption @100% load with radiator and fan* (litre/hr)	165	175.87
Performance class of generator set	ISO 8528-5 G2	ISO 8528-5 G2
Starting system	24 V DC Electrical	24 V DC Electrical
Lube oil specification	CH4 15W40	CH4 15W40
Lube oil sump capacity, High-Low level (litre)	140 - 114	140 - 114
Total lubrication system capacity (litre)	155	155
Total coolant capacity (litre)	330	330
No. of banks x Exhaust pipe size (inch)	2 x 8	2 x 8
Total wet weight (Engine+Radiator)** (kg)	5800	5800
Length x Width x Height (Engine) (mm)	2269 x 1436 x 1764	2269 x 1436 x 1764
Mean piston speed (m/s)	7.95	7.95
Combustion air intake @100% load (±5%) (cfm)	2011	2103
Exhaust Temperature (°C)	520	521

Alternator Specification

Make	Stamford (CGT)	Stamford (CGT)
Alternator frame	HCI634W	HCI634V
Enclosure	IP 23	IP 23
Voltage regulation (Max.)	±1%	±1%
Class of Insulation	H Class	H Class
Winding Pitch	2/3	2/3
Stator Winding	Double layer lap	Double layer lap
Rotor	Dynamically Balanced	Dynamically Balanced
Waveform distortion/ Total Harmonic Distortion	No load < 1.5 %, Non distorting balanced linear load < 5 %	No load < 1.5 %, Non distorting balanced linear load < 5 %
Maximum Unbalanced Load across phases*	less than or equal to 25%	less than or equal to 25%
Telephonic Harmonic factor	< 2%	< 2%

* Fuel consumption data is based on diesel having specific gravity of 0.85 and conforming to IS:1460. Fuel consumption tolerance is +5%

With the condition that none of the phases exceeds its rated current

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.

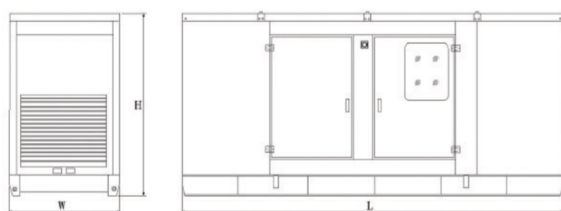
Conformance Standards

- IS/IEC 60034-1 ■ ISO 8528 ■ ISO 9001
- IS 1460 ■ ISO 3046 ■ IS 13018

Typical Enclosed Genset Dimensions

Genset Model	Rating (kVA)	Length (mm)	Width (mm)	Height (mm)	Wet Weight ^{##} (kg)	Standard Fuel tank Capacity (litre)
C750D5P	750	8000	2600	3000	9253	990
C810D5P	810	8000	2600	3000	9253	990

^{##} Approximate Weight



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