

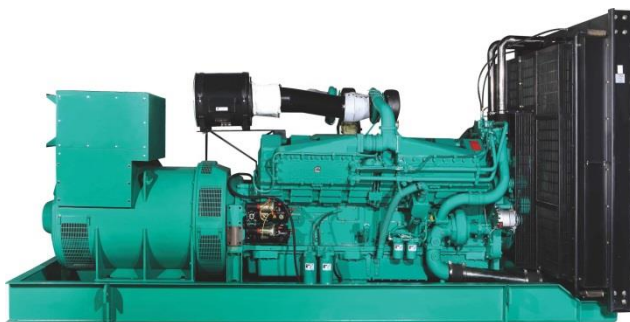
DATA SHEET

DIESEL GENERATOR 310KW

MODEL#FDK-CC310EN/H2

60HZ/1800RPM

CUMMINS MODEL: MTAA11-G3



General Features:

- ♦ All qualified generator sets are subjected to a comprehensive performance test which includes 50% load, 70% load, 100% load, 110% load and to check, verify that all control systems, alarm and shut-down protection.
- ♦ Equipped with battery charger and 24V high performance maintenance-free lead-acid starting batteries and connecting cables.
- ♦ Stainless galvanized zinc plates with strong corrosion-proof.
- ♦ Vibration isolators between the engine/alternator and base frame.
- ♦ Equipped with industrial silencer and flexible exhaust hose.
- ♦ Designed to comply with ISO8528/GB2820.
- ♦ Powered by Cummins engine and coupled with Stamford alternator.
- ♦ Water jacket preheater, oil heater and double air cleaner, etc. are available.

FDK Diesel Generator Set Data

Genset Model	FDK-CC310EN/H2
Prime Power	280KW/350KVA
Standby Power	310KW/388KVA
Output Frequency / Rated speed	60Hz/1800rpm
Rated Voltage	230V/400V

Engine Make	Cummins
Engine Model	MTAA11-G3
Alternator model	Stamford HCI444D
Control System	DSE7320
Phase	Three

(1) **Prime power:** The rating is available for an unlimited of annual operating hours in variable load applications, in accordance with ISO8528-1.A 10% overload is available for a period of 1 hour within 12-hour period of operation, in accordance with ISO 3046-1.

(2) **Standby power:** The rating is applicable for supplying emergency power in variable load applications for up to 200 hours per year in accordance with ISO8528-1. Overload is not allowed.

(3) **Rated voltage:** available with customer requirement.

Engine Specifications (DETAILED in APPENDIX)

Engine Model	MTAA11-G3
Engine Manufacturer	Cummins (CCEC CHINA)
Cylinder quantity	6
Cylinder Arrangement	In-line
Cycle	4

Aspiration	Turbo-charged
Bore x Stroke (mm x mm)	125x147
Displacement	10.8L
Compression Ratio	15.0:1
Prime power / Speed (KW/RPM)	318/1800
Standby power/ Speed (KW/RPM)	350/1800



Type Injection System	Cummins PT-STC	Fuel Consumption at 100% load (L/HOUR)	68 at 1800rpm
Piston Speed	9.2 m/s	Starter motor	24V
Friction Energy Output	32 kw	Low idle	675-750rpm
Total Lubrication System Capacity (L)	39	Coolant Capacity (L)	9.5L

Alternator Specifications

Alternator model	HCI444D	Number of phase	3
Alternator manufacturer	STAMFORD	Rated voltage	440V (Available with custom requirements)
Exciter type	Single bearing, Brushless, Self-excited	Power factor	0.8
Rated output prime power	360KVA	Voltage regulation NL-FL	≤±1%
Rated speed	1800 rpm	Insulation grade	H
Rated frequency	60Hz	Protection grade	IP23

Alternator option: Leroy Somer, MECC, Marathon, Engga, Faraday

Control System DSE7320 (DETAILED in INSTRUCTION)

DSE7320 is an advanced control module based on micro-processor, containing all necessary functions for protection of the genset and the breaker control. It can monitor the mains supply, breaker control and automatically start the engine when the mains are abnormal. Accurately measure various operational parameters and display all values and alarms information on the LCD. In addition, the control module can automatically shut down the engine and indicate the engine failure.

FEATURES

- ♦ Microprocessor control, with high stability and credibility.
- ♦ Monitoring and measuring operational parameters of the mains supply and genset.
- ♦ Indicating operation status, fault conditions, all parameters and alarms.
- ♦ Multiple protections; multiple parameters display, like pressure, temp. etc.
- ♦ Manual, automatic and remote work mode selectable.
- ♦ Real time clock for time and date display, overall runtime display, 250 log entries.
- ♦ Overall power output display.
- ♦ Integral speed/frequency detecting, telling status of start, rated operation, overspeed etc.
- ♦ Communication with PC via RS485 OR RS232 interface, using MODBUS protocol.

Soundproof Enclosure Specification

FDK silent generator is designed by professional acoustic engineers based on years of experience. Now we can make the noise of the generator less than 80-85dB(A) at 1m, or 70-75dB(A) at 7m, 60-65dB(A) at 15m.

FEATURES

- ♦ Multi-way air intake and exhaust guarantee the power performance of the generator.
- ♦ Large-scale impedance combined type silencer effectively reduce noise of the generator.
- ♦ Internal high performance rubber damper and flexible materials reduce vibration.
- ♦ Base mounted fuel tank supports the generator running for 8 hours.



Optional

Generator set	Alternator	Low environment Temp	ATS
<input type="checkbox"/> Open generator set <input type="checkbox"/> Silent generator set <input type="checkbox"/> Trailer generator set <input type="checkbox"/> ABB MCCB circuit breaker	<input type="checkbox"/> Stamford <input type="checkbox"/> Marathon <input type="checkbox"/> Mecc Alte <input type="checkbox"/> Leroy Somer <input type="checkbox"/> Farady <input type="checkbox"/> Engga	<input type="checkbox"/> Water heater <input type="checkbox"/> Oil heater <input type="checkbox"/> Battery heater	<input type="checkbox"/> CHINT <input type="checkbox"/> SCHNEIDER <input type="checkbox"/> ABB
Fuel system	Control system	Voltage	Synchronized system
<input type="checkbox"/> 12hrs base tank <input type="checkbox"/> 24hrs base tank <input type="checkbox"/> Dual wall base fuel tank <input type="checkbox"/> Outside fuel tank	<input type="checkbox"/> AMF function <input type="checkbox"/> ATS control cabinet <input type="checkbox"/> DSE7320 <input type="checkbox"/> DSE7510 <input type="checkbox"/> GU620A	<input type="checkbox"/> 415/240V <input type="checkbox"/> 400/230V <input type="checkbox"/> 380/220V <input type="checkbox"/> 220/127V <input type="checkbox"/> 200/115V	<input type="checkbox"/> CHINT Cabinet <input type="checkbox"/> SCHNEIDER Cabinet <input type="checkbox"/> DSE8610 Module <input type="checkbox"/> COMAQ Module <input type="checkbox"/> DEIF Module

Dimension & Weight

Open

Overall Size: LxWxH (mm)	3300x972x1700
Weight (kg)	3220

Soundproof Version

Overall Size: LxWxH (mm)	4200x1400x2000
Weight (kg)	4200

Sales Promises

- ◆ FDK provides a full line of brand new and high quality products. Each and every unit is strictly factory tested before shipment.
- ◆ Quality warranty is according to our standard conditions: 12 months from BL date or 1000 running hours, whichever comes first.
- ◆ Service and parts are available from FDK or distributors in your location.
- ◆ FDK guarantee use **BRAND NEW & GENUINE MACHINE.**



ENGINE DATA

	Engine Family	D35	Emission Level	N/A			
	Engine Model	MTAA11-G3					
Advertised Horsepower	STANDBY: 310kW/1500r/min@50hz PRIME: 282kW/1500r/min@50hz						
Curve Number	FR-237	Data Sheet	DS-237	CPL Code	CQ223	Fuel System	PT-STC
Engine Configuration	D353009GX03	Aspiration	Turbo & Charge Air Cooling		Date Issued	07/2008	

General Engine Data

Type	6 Cylinder, In-line, 4 Cycle
Aspiration	Turbocharged and Charge Air
Bore×Stroke -mm×mm	125×147
Displacement –L	10.8
Firing Order	1-5-3-6-2-4
Compression Ratio	15.0: 1
Dry Weight (Including Flywheel and Generator, Excluding other Electrical Component) -kg	973
Wet Weight -(kg)	1007
Center of Gravity from Front Face of Block -mm	450
Center of Gravity above Crankshaft Centerline -mm	191
Moment of Inertia of Rotation Components (Excluding Flywheel) -kg·m ²	0.85
Installation Drawing	4915163
Engine Mounting	
Maximum of Bending Moment @ RFOB -N.m	1356
Moment of Inertia of Complete Engine (with FW2141) -kg·m ²	2.63

Performance Data

All data is based on:

The engine operating with fuel system, water pump, lubricating oil pump and air cleaner; not included alternator, compressor, fan, optional equipment and driven components.

The engine operating with No.0 diesel fuel which meets GB/T 252.

Standard Test Conditions (Refer to Part 1 of ISO 3046):

Barometric pressure :	100kPa
Inlet air temperature:	25°C
Altitude:	110m
Relative Humidity:	30 %

Data represents gross engine performance capabilities obtained and corrected in accordance with SAE J1995.



Idle Speed -r/min.....	675-750
Minimum Engine Speed -r/min.....	500
Closed Throttle Torque at Minimum Engine Speed -N.m.....	340
Maximum Governed Speed -r/min	1800
Maximum Allowable Altitude -m	1500
Crankshaft Thrust Bearing load Limit:	
—Maximum Intermittent -(N).....	9000
—Maximum Continuous -(N)	4000
Steady State Stability Band at any Constant Load -%	±0.25
Maximum Over Speed Capability r/min	1800

Performance Data (50HZ)	STANDBY	PRIME
Engine Speed -r/min	1500	1500
Power Output -kW	310	282
Maximum Friction Power -kW	22	22
Engine Coolant Flow -L/s	4.8	4.8
Engine Data with Dry Type Exhaust Manifold		
Intake Air Flow -L/s	395	365
Exhaust Gas Temperature (Before Turbo) -°C	595	580
Exhaust Gas Temperature (After Turbo) -°C	440	435
Exhaust Gas Flow -L/s	950	850
Radiated Heat to Ambient - kW	43	40
Heat Rejection to Coolant - kW	95	83
Heat Rejection to Exhaust - kW	270	234
Air to Fuel Ratio	26:1	28:1