

JCB Diesel Generator Technical Specifications



G275X

Electrical

| Frequency Hz | Phases | Voltage Volts | Prime | | Standby | |
|-----------------|--------|------------------|-------|-------|---------|-------|
| | | | kVA | kW | kVA | kW |
| 50 | 3 | 400/230 | 250.0 | 200.0 | 275.0 | 220.0 |
| 60 | 3 | 380/220 | 282.0 | 225.5 | 305.0 | 244.2 |
| 60 | 3 | 220/127 | 281.0 | 224.8 | 306.0 | 244.8 |
| 60 | 3 | 480 | 283.0 | 226.0 | 307.0 | 246.0 |

| Frequency Hz | Phases | Voltage Volts | MCB Rating Amps | ATP Rating Amps | Rated Speed RPM |
|-----------------|--------|------------------|--------------------|--------------------|--------------------|
| 50 | 3 | 400/230 | 400 | 400 | 1500 |
| 60 | 3 | 380/220 | 630 | 630 | 1800 |
| 60 | 3 | 220/127 | 800 | 800 | 1800 |
| 60 | 3 | 480 | TBC | TBC | 1800 |

Power Factor

| | |
|---------|-----|
| 3 Phase | 0.8 |
| 1 Phase | 1 |

All ratings are to standard reference conditions ISO8528

Prime: This rating is for the supply of continuous electrical power, at variable load, in lieu of commercially purchase power. There is no limitation on the annual hours of operation and 10% over load power can be supplied for 1 hour in 12.

Standby: This rating is for the supply of continuous electrical power, at variable load, in the event of a utility power failure. No overload is permitted.

"Stage IIIa" models are only emissions compliant at 50Hz Prime Power in accordance with 97-68EC

| Alternator | | HM280B I |
|---------------------------------|--|-------------------------------------|
| Poles | | 4 pole |
| Winding Connections | | Star |
| Insulation | | Class H |
| Enclosure | | IP2I |
| Exciter System | | Self-regulating brushless |
| Voltage Regulator | | AVR (electronic) |
| Steady State Voltage Regulation | | +/- 1.0% (G1) |
| Bearing | | Single bearing sealed |
| Coupling | | Flexible disc |
| Cooling | | Direct drive centrifugal blower fan |
| Coating | | Winding Protection Grey |

| Engine | | |
|--------------------------|-----------|-------------------------------|
| 1500 RPM | | |
| Output Rating (PRP) | kW | 226.0 |
| Output Rating (Standby) | kW | 249.0 |
| 1800 RPM | | |
| Output Rating (PRP) | kW | 251.0 |
| Output Rating (Standby) | kW | 276.0 |
| Manufacturer and Model | | Scania DC9-72A (02-11) |
| Fuel | | Diesel |
| Injection | | Direct |
| Aspiration | | Turbo Charged and Aftercooled |
| Cylinders | | 5 |
| Bore and Stroke | mm | 130x140 |
| Displacement | l | 9.3 |
| Cooling | | Water |
| Engine Oil Specification | | ACEA E3, E4, E5 or E7 |
| Compression Ratio | | 16:1 |
| Engine Oil Capacity | | 38 |
| Coolant Capacity | | 57 |
| Governor | | Electronic |
| Air Filter | | Dry |
| Engine Oil Consumption | 100% Load | 0.2 g/kWh |

| Fuel Consumption | | |
|-------------------|-----|------|
| 1500 RPM | | |
| 100% Load Prime | l/h | 49.7 |
| 75% Load Prime | l/h | 37.3 |
| 50% Load Prime | l/h | 25.8 |
| 100% Load Standby | l/h | 55.6 |
| 1800 RPM | | |
| 100% Load Prime | l/h | 57.5 |
| 75% Load Prime | l/h | 43.1 |
| 50% Load Prime | l/h | 29.9 |
| 100% Load Standby | l/h | 63.9 |

| Exhaust System | | | |
|----------------------------------|---------------------|------|-------|
| Maximum Temperature 100% Standby | °C | 50Hz | 428 |
| Exhaust Gas Flow 100% Standby | m ³ /min | | 0.383 |
| Maximum Allowed Back Pressure | mmWc | | 300 |
| Maximum Temperature 100% Standby | °C | 60Hz | 434 |
| Exhaust Gas Flow 100% Standby | m ³ /min | | 0.467 |
| Maximum Allowed Back Pressure | mmWc | | 300 |
| Exhaust Flange Size | mm | 140 | |

| Air System | | | |
|-------------------------------------|-------------------|------|------|
| Intake Air Flow 100% Standby | m ³ /h | 50Hz | 1110 |
| Total Cooling Air Flow 100% Standby | m ³ /s | | 7.5 |
| Alternator Fan Airflow | m ³ /s | | 0.58 |
| Intake Air Flow 100% Standby | m ³ /h | 60Hz | 1350 |
| Total Cooling Air Flow 100% Standby | m ³ /s | | 9.17 |
| Alternator Fan Airflow | m ³ /s | | 0.69 |

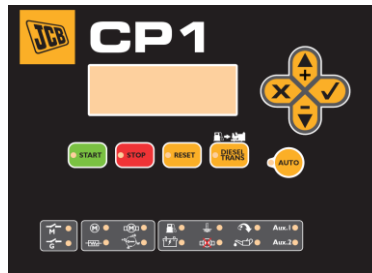
| Starting System | | | |
|---------------------|----|-----|--|
| Starter Motor | kW | 5.5 | |
| Battery Capacity | Ah | 50 | |
| Number of Batteries | | 2 | |
| Auxiliary Voltage | V | 24 | |

| Fuel System | | | |
|-----------------------------|---|-------|--|
| Diesel Specification | | EN590 | |
| Standard Fuel Tank Capacity | l | 449 | |

| Weight and dimensions | | | |
|--|----------------|------|--|
| Length | mm | 3000 | |
| Width | mm | 1224 | |
| Height | mm | 1856 | |
| Shipping Volume (sea ready) | m ³ | 6.82 | |
| Weight (standard build excluding fuel) | Kg | 2172 | |

Control Panel - JCB CPI (Standard)

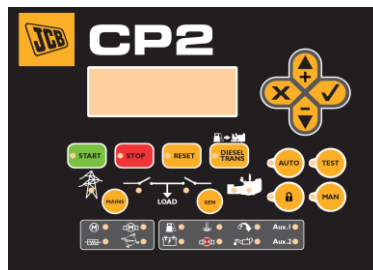
The JCB CPI control system is digital and has the capability to control, monitor and protect the generator. The display allows the user to easily monitor the status of the generator through an LCD display and LED outputs. It enables control of the generator operations through soft touch push button functionality and multi lingual capability



Control Panel - JCB CP2 (Optional)

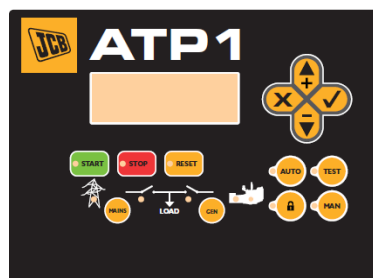
The JCB CP2 control system is digital and has the capability to control, monitor and protect the generator the same as the JCB CPI panel but additionally incorporates the functionality of the control module of the JCB ATP1.

The JCB CP2 Panel constantly monitors the mains and has to be hardwired into both mains and generator contactors. The display allows the user to easily monitor the status of the generator as well as controlling generator operation



Control Panel - JCB ATP1 (Optional)

The JCB ATP1 control module is integrated into an Automatic Transfer Switch, which provides automatic mains failure capability. The JCB ATP1 can communicate with a generator through either 2 wire start volt free contactors or CANBUS through CPI to ATP1 (not compatible with CP2). The JCB ATP1 when connected via CANBUS to the JCB CPI will give control functions and display generator information.



| Control Panel Features | CPI | CP2 | ATPI |
|---|-----|-----|------|
| Generator | | | |
| Phase to Phase Voltage | ● | ● | ● |
| Phase to Neutral | ● | ● | ● |
| Phase Amperage | ● | ● | ● |
| Frequency | ● | ● | ● |
| kVA | ● | ● | ● |
| Kw | ● | ● | ● |
| kVAr | ● | ● | ● |
| Power Factor | ● | ● | ● |
| Mains | | | |
| Phase to Phase Voltage | x | ● | ● |
| Phase to Neutral | x | ● | ● |
| Phase Amperage | x | ● | ● |
| Frequency | x | ● | ● |
| kVA | x | x | x |
| kW | x | ● | ● |
| kVAr | x | x | x |
| Power Factor | x | x | x |
| Engine | | | |
| Coolant Temperature | ● | ● | x |
| Oil Pressure | ● | ● | x |
| Fuel Level Percentage | ● | ● | x |
| Battery Voltage | ● | ● | x |
| Engine RPM | ● | ● | x |
| Battery Charge Alternator Voltage | ● | ● | x |
| Engine Alarms | | | |
| High Coolant Temperature | ● | ● | x |
| Low Oil Pressure | ● | ● | x |
| Low Coolant Level | ● | ● | x |
| Unexpected Shutdown | ● | ● | x |
| Failure to Stop | ● | ● | x |
| Battery Voltage Failure | ● | ● | x |
| Battery Charge Alternator Failure | ● | ● | x |
| Over Speed | ● | ● | x |
| Under Speed | ● | ● | x |
| Failure to Start | ● | ● | x |
| Low Fuel level | ● | ● | x |
| Emergency Stop | ● | ● | ● |
| Alternator Alarms | | | |
| High Frequency | ● | ● | ● |
| Low Frequency | ● | ● | ● |
| High Voltage | ● | ● | ● |
| Low Voltage | ● | ● | ● |
| Over Amperage | ● | ● | x |
| Short Circuit | ● | ● | x |
| Symmetry Between Phases | ● | ● | ● |
| Incorrect Phasing | ● | ● | ● |
| Inverse Power | ● | ● | x |
| Over Load | ● | ● | x |
| Generator Drop | x | x | ● |
| Standard ● : Not Available x : Optional Δ | | | |

| Control Panel Features | CPI | CP2 | ATPI |
|---|-----|-----|------|
| Measurement | | | |
| Total Hours Run | ● | ● | ● |
| Kilowatt Meter | ● | ● | ● |
| Number of Starts | ● | ● | ● |
| Number of Start Failures | ● | ● | ● |
| Service Indicator | ● | ● | ● |
| Connectivity | | | |
| Remote Screen (CAN) | △ | △ | △ |
| Local Monitoring (CANBUS) | △ | △ | △ |
| Local Monitoring (CANLAN) | △ | △ | △ |
| Remote Monitoring (CANModem – Fixed) | △ | △ | △ |
| Remote Monitoring (CANModem – GSM) | △ | △ | △ |
| Features | | | |
| Events History | ● | ● | ● |
| External Start capability | ● | ● | ● |
| Programmable Start Restriction | ● | ● | ● |
| Mains Failure Start | ● | ● | ● |
| Generator Contact Activation | ● | x | x |
| Mains and Generators Contact Activation | x | ● | ● |
| Fuel Transfer Control | ● | ● | x |
| Engine Temperature | ● | ● | x |
| Manual Override | ● | ● | x |
| Programmable Alarms | ● | ● | x |
| Generator Start in Test Mode | ● | ● | x |
| Programmable Outputs | ● | ● | x |
| Multi Lingual | ● | ● | ● |
| Programmable Timer | ● | ● | x |
| Synchronisation | ● | ● | x |

| Synchronisation | DSE8610 | DSE8620 | DSE8660 |
|-----------------|---------|---------|---------|
| DEEP SEA Panels | △ | △ | △ |

| Canopy/Skid | |
|-----------------------------------|---|
| Lockable Maintenance Access Doors | x |
| Control Panel Viewing Window | x |
| Fork Pockets | ● |
| Single Lift Point | x |
| Rental Sledging Base | x |
| Bunding | △ |
| Open Frame | ● |
| Bund Level Indicator | △ |
| 50mm Rock Wool Sound Insulation | ● |
| Yellow Paint | x |
| Red Paint | x |
| White Paint | x |

Standard ● : Not Available x : Optional △

| Mechanical Features | |
|--|-----|
| Cooling Pack | ● |
| Air Filter | ● |
| Mechanical Governor | x |
| Electronic Governor | ● |
| High coolant Temperature Sender | x |
| Low Oil Pressure Sender | x |
| Advanced coolant Temperature Sender | ● |
| Advanced Oil Pressure Sender | ● |
| Oil Temperature Sender | ● |
| Water Level Sender | ● |
| Radiator Guards | ● |
| Hot Component Guards | ● |
| Manual Oil Drain Pump (fitted in canopy) | ● |
| Water Jacket heater | ● |
| Battery Isolator | ● |
| Battery Type | Gel |
| Battery Size (Ah) | 50 |
| Number of Batteries | 2 |
| Battery Charger | ● |
| Manual Fuel Fill | ● |
| Electric Fuel Fill | △ |
| Racor Fuel Filter (no alarm) | △ |
| Racor Fuel Filter (with alarm) | △ |
| Pre-filter with Seperator | x |
| External Spark Arrestor | △ |
| Fuel Level Sender | ● |
| Fuel Heater | △ |
| External Fuel Fill (belly tank) | ● |
| 3 Way Fuel Valve and Coupling Nest | △ |
| Residential Silencer | △ |
| Exhaust Gas Compensator | x |
| Industrial Silencer | ● |

| Fuel Tank Options | | |
|---|----------|--------------|
| | Material | Capacity (l) |
| Standard Tank | Steel | 449 |
| Standard ● : Not Available x : Optional △ | | |

| Electrical Features | |
|--|---|
| AVR DSR | ● |
| AVR DER | x |
| IP23 Alternator Protection Level | △ |
| Winding Protection Standard | x |
| Winding Protection Standard + | ● |
| Winding Protection Grey | △ |
| Winding Protection Total | △ |
| Winding Protection Total+ | ● |
| MAUX | △ |
| PMG | △ |
| Anti-Condensation Heater | x |
| Miniature Circuit Breaker (integrated busbar) | ● |
| Moulded Case Circuit Breaker (with integrated busbar) | ● |
| Earth Leakage Protection (shunt trip) | △ |
| Synchronisation | x |
| Socket Box (inclusive of heavy duty busbar & micro switch) | ● |
| Preparation for Earth Spike | △ |
| Optional Voltages | △ |
| Remote Screen | △ |
| Panel Door Micro Switch | △ |
| Copper Busbar/Tails | ● |
| Emergency Stop Button | x |
| External Emergency Stop Button | x |

| JCB Communication and Control | |
|----------------------------------|---|
| KSI | ● |
| CPI (inclusive of program timer) | △ |
| CP2 (inclusive of program timer) | △ |
| ATP | △ |
| CAN/USB | △ |
| CAN/LAN | △ |
| CAN RS-232 | △ |
| Remote Modem | △ |

Reference Standards

JCB Generators are CE certified and conform to the following Directives (subject to a country requiring such standard):

- EN 12100, EN 13857, EN60204
- 2006/42/CE Machinery safety
- 2006/95/EC Low voltage
- 2004/108/CE Electromagnetic compatibility
- 2000/14/EC Sound Power Level (amended by 2005/88/EC)
- 97/68/EC Emissions(amended by 2002/88/EC & 2004/26/EC)
- Power according to ISO 8528 and ISO 3046
- Ambient reference conditions 1000mbar, 25°C, 30% relative humidity ISO 3046

Information based on standard specification equipment unless otherwise stated.