



# JCB DIESEL GENERATOR TECHNICAL SPECIFICATIONS



**G90QX**



**G90X**

ELECTRICAL			
FREQUENCY	VOLTAGE	PRIME	STAND BY
50Hz 3ph	400/230v	80.2kVA / 64.1kW	88.2kVA / 70.6kW
60Hz 3Ph	380/220v	85.8kVA / 68.6kW	94.8kVA / 75.8kW
60Hz 3Ph	220/127v	86.2kVA / 69.0kW	95.0kVA / 76.0kW
Rated Speed	1500RPM - 50Hz / 1800RPM – 60Hz		
Circuit Breaker	4 pole		
Power Factor	0.8 - 3 phase, 1.0 - single phase		

All ratings to standard reference conditions ISO8528

ALTERNATOR	
Poles	4 pole
Winding Connections	Star
Insulation	Class H
Enclosure	IP23
Exciter System	Self-regulating brushless
Voltage Regulator	AVR
Steady State Voltage Regulation	+/- 1.0%
Bearing	Single bearing sealed
Coupling	Flexible disc
Cooling	Direct drive centrifugal blower fan

**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.

<b>ENGINE</b>			
		<b>50Hz</b>	<b>60Hz</b>
Output Rating	kW	81.0	90.0
Manufacturer and model		JCB Dieselmax 444	
Fuel		Diesel	
Injection		Direct	
Aspiration		Turbo Charged	
Cylinders		4	
Bore and Stroke	mm	103x 132	
Displacement	l	4.399	
Cooling		Water	
Engine Oil Specification		API CH4	
Compression Ratio		17.5 : 1	
Engine Oil Capacity	l	14	
Coolant capacity	l	16	
Governor		Mechanical	
Air Filter		Single paper element	
Fuel Consumption		50Hz	
100% Load Prime	l/h	18.7	
75% Load Prime	l/h	14.3	
50% Load Prime	l/h	10.2	
100% Load Standby	l/h	20.1	

<b>EXHAUST SYSTEM</b>			
Maximum Temperature 100% Standby	°C	542	547
Exhaust Gas Flow 100% Standby	Kg/h	367	487
Maximum Allowed Back Pressure	mbar	100	100

<b>AIR SYSTEM</b>			
Intake Air Flow 100% Standby	m <sup>3</sup> /h	367	463
Total Cooling Air Flow 100% Standby	m <sup>3</sup> /m	198	
Alternator fan airflow	m <sup>3</sup> /m	13	

<b>STARTING SYSTEM</b>			
Starter Motor	kW	4.2	
Battery Capacity	Ah	145	
Auxiliary Voltage	V	12	

<b>FUEL SYSTEM</b>			
Diesel Specification		EN590	
Fuel Tank Capacity - Open Skid	l	150	
- Canopy	l	165	
Extended run tank capacity - canopy	l	540	

**WEIGHT AND DIMENSIONS - OPEN**

Length	mm	2150
Width	mm	780
Height	mm	1492
Shipping Volume (Sea Ready)	m <sup>3</sup>	2.11
Wet Weight (Standard Build)	Kg	1272
Dry Weight (Standard Build)	Kg	1110

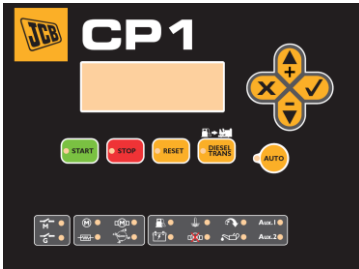
**JCB G90X****WEIGHT AND DIMENSIONS - CANOPY**

Length	mm	2751
Width	mm	1100
Height	mm	1650
Shipping Volume (Sea Ready)	m <sup>3</sup>	4.53
Wet Weight (Standard Build)	Kg	1825
Dry Weight (Standard Build)	Kg	1650
		50Hz
Sound pressure (LpA) - 7m	dB	94

**JCB G90QX**

## CONTROL PANEL – JCB CPI (Standard)

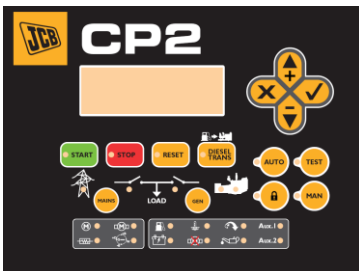
The JCB CPI control system is digital and has the capability to control, monitor and protect the generator. The display allows the user to easily monitor the status of the generator through an LCD display and LED outputs. It enables control of the generator operations through soft touch push button functionality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



## CONTROL PANEL – JCB CP2 (Option)

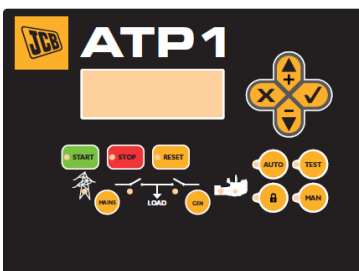
The JCB CP2 control system is digital and has the capability to control, monitor and protect the generator the same as the JCB CPI panel but additionally incorporates the functionality of the control module of the JCB ATP1.

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 (Option)

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
<b>GENERATOR</b>			
Phase to Phase Voltage	•	•	•
Phase to Neutral	•	•	•
Phase Amperage	•	•	•
Frequency	•	•	•
kVA	•	•	•
Kw	•	•	•
kVAr	•	•	•
Power Factor	•	•	•
<b>MAINS</b>			
Phase to Phase Voltage	x	•	•
Phase to Neutral	x	•	•
Phase Amperage	x	•	•
Frequency	x	•	•
kVA	x	x	•
kW	x	x	•
kVAr	x	x	•
Power Factor	x	x	•
<b>ENGINE</b>			
Coolant Temperature	•	•	x
Oil Pressure	•	•	x
Fuel Level Percentage	•	•	x
Battery Voltage	•	•	x
Engine RPM	•	•	x
Battery Charge Alternator Voltage	•	•	x
<b>ENGINE ALARMS</b>			
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	•	•	•
<b>ALTERNATOR ALARMS</b>			
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    x Not Available

CONTROL PANEL FEATURES	CPI	CP2	ATPI
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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

• Standard    x Not Available    △ Optional

## REFERENCE STANDARDS

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

- EN ISO 13857:2008
- 2006/95/EC
- 89/336/EEC
- 2000/14/EC (amended by 2005/88/EC)
- 97/68/EC (amended by 2002/88/EC & 2004/26/EC)
- Ambient reference conditions 1000mbar, 25°C, 30% relative humidity ISO8528
- Power according to ISO3046
- Information based on standard specification equipment unless otherwise stated.

GENERATOR FEATURES	STANDARD	OPTIONAL
<b>ENGINE</b>		
Engine	•	x
Cooling Pack	•	x
Tropical specification Radiator	x	•
Heavy Duty Air Filter	•	x
Electronic Governor	x	x
High coolant Temperature Sender	•	x
Low Oil Pressure Sender	•	x
High Oil Temperature Sender	•	x
Radiator Guards	•	x
Hot Component Guards	•	x
Manual Oil Drain Pump	•	x
Electric Oil Drain Pump	x	•
Fuel Heater	x	•
Electric Fuel Transfer Pump	x	•
Low Coolant Level Senders	x	x
Battery Charger	x	•
Water Jacket Heater	•	x
Industrial Silencer – Open Set	•	x
Residential Silencer – Open Set	x	•
Residential Silencer – Canopy	•	x
<b>ELECTRICS</b>		
Alternator	•	x
Circuit Breaker	•	x
Busbar	•	x
Heavy Duty Batteries	•	x
Battery Isolator	•	x
Preparation for Earth Spike	•	x
Anti-condensation Heater	x	•
Optional Voltages	x	•
Class F Insulation	x	•
JCB CPI Digital Controller	•	x
JCB CP2 Digital Controller	x	•
JCB ATP1 Automatic Transfer Switch	x	•
External Emergency Stop Button	•	x

• Standard    x Not Available    △ Optional