# JCB ENERGY ELECTRIC POWER INDUSTRY

MADRID / SPAIN

JCBENERGY

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231 / 400 V – 50 Hz & 277 / 480 V – 60 Hz







#### **GENERATOR GENERAL INFORMATION**

GENERATOR	FREQUENCY	VOLTAGE	POWER FACTOR	SPEED	DIESEL ENG	INE		ALTERN	IATOR		TYPE OF	GENER	ATOR O	UTPUT
Model	Hz	V	Cos Q	Rpm	Brand	Model	Series	Brand	Model	Series	Operation	kVA	kW	А
								L			Standby	255,0	204,0	368,5
JDD 255	50	231/400	0.8	1500				. H		270MX	Prime	231,8	185,5	335,0
						DP086LA	DP	Z	JCB		Continuous	162,3	129,8	234,5
					DOOSAN	DI UUULA			100	270MX	Standby	295,0	236,0	426,3
JDD 295	60	277/480	0.8	1800							Prime	268,2	214,5	387,5
								•			Continuous	187,7	150,2	271,3
<ul> <li>Alternator</li> <li>Low Exhau</li> <li>Control Pa</li> <li>Patented 0</li> <li>Low Operation</li> </ul>	rs with Advanc ust Emission unel Suitable fo	ed Technolc or Flexible A ned and So able for Hea	und proof Cano			<ul> <li>Fuel</li> <li>Low</li> <li>Glob</li> <li>Wide</li> <li>High</li> </ul>	Filter wit Fuel Con al Techni Range c Quality a	h Water sumption ical Servi of Afforda and Relia	and Parti n, Low Oil ce and M able Spare ble Techr	icle Separ Consum aintenan e Parts nology				

#### **STAND BY POWER RATING – (ESP):**

ESP is applicable for supplying emergency power for the duration of the utility power outage. No overload capability is available for this rating. Under no condition is an engine allowed to operate in parallel with the public utility at the Stand by Power rating. This rating should be applied where reliable utility power is available. A Stand By rated engine should be sized for a maximum of an 70% average load factor and 200 hours of operation per year. This includes less than 25 hours per year at the Stand by Power rating. Stand By ratings should never be applied except in true emergency power outages. Negotiated power outages contracted with a utility company are not considered an emergency.

#### PRIME POWER RATING - (PRP):

Applicable for supplying electric power in lieu of commercially purchased power. Prime Power applications must be in the form of one of the following two categories:

#### UNLIMITED TIME RUNNING PRIME POWER (ULTP):

PRP (Prime Power) is available for an unlimited number of hours per year in a variable load application. Variable load should not exceed a 70% average of the Prime Power rating during any operating period of 250 hours. The total operating time at 100% Prime Power shall not exceed 500 hours per year. A 10% overload capability is available for a period of 1 hour within a 12-hour period of operation. Total operating time at the 10% overload power shall not exceed 25 hours per year.

#### LIMITED TIME RUNNING PRIME POWER (LTP):

LTP (Limited Time Prime Power) is available for a limited number of hours in a no variable load application. It is intended for use in situations where power outages are contracted, such as in utility power curtailment. Engines may be operated in parallel to the public utility up to 750 hours per year at power levels never to exceed the Prime Power rating. The customer should be aware, however, that the life of any engine will be reduced by this constant high load operation. Any operation

#### **CONTINUOUS POWER RATING (COP):**

COP is the power that the engine can continue to use under the prescribed speed and the specified environment condition in the normal maintenance period stipulated in the manufacturing plant. And Continuous Power is applicable for supplying utility power at a constant 100% load for an unlimited number of hours per year. No overload capability is available for this rating.



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## PAY ATTENTION TO THE POINTS BELOW IN PICKING AND USING THE GENERATOR

\* Generators can work on Continuous Power at 70% of Prime power value if only all maintenances are done on time with original spare parts and high-quality oils that manufacturer advice.

\* Generators should not operate below 50% of Prime Power value. In such a case, the engine will burn excessive oil and eventually have irreparable damage.

\* If your need is 1000 kVA or above, you should prefer Synchronic Systems with 2-3 generators with failure back up and simultaneous aging.

\* These points will provide advantage for you with purchasing and operating the generator.

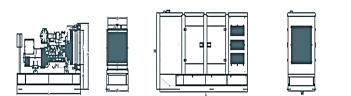
## **GENERATOR DIMENSIONS AND TECHNICAL DRAWINGS**





VALUES		OPEN TYPE GENERATOR	CANOPY TYPE GENERATOR
WIDTH	mm	900	1140
LENGTH	mm	2400	3650
HEIGHT	mm	1549	1900
WEIGHT (NET)	Kg	1450	1810
FUEL TANK CAPACITY	L	256	678

SYMBOL	OPEN	CANOPY
L	2650	3650
W	900	1140
н	1612	2000
S		80
Α	535	
В	810	
С	896	
D1		860
D2		860
D3		860
D4		860
D5		860





## **FUEL CONSUMPTION**

PERCENT OF PRIME POWER	1500 rpm		1800 rpm		
	g/kWh	l/hr	g/kWh	l/hr	
110 %	200,0	53,0	200,0	59,9	
100 %	195,0	46,4	195,0	52,6	
75 %	197,0	35,1	197,0	39,9	
50 %	212,0	25,2	212,0	28,6	



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## **DIESEL ENGINE MAIN TECHNICAL PARAMETERS**

GENERAL ENGINE DATA								
Engine Model	DP086LA	DP086LA						
Engine Type		4-Cycle, In-line, 6-	4-Cycle, In-line, 6-Cylinder Diesel, Water Cooled, Turbo Charged & Intercooled					
Bore x Stroke	111 x 139mm							
Displacement		8.071 liters						
Compression Ratio		16.7:1						
Rotation		Counter clockwise	e viewed from Flyw	heel				
Firing Order		1-5-3-6-2-4						
Fuel System		Wuxi-Weifu in-lin	e pump					
Governor		Electronic						
Governor Class		G3						
Cooling System								
Total System Coolant Capacity		14L						
Thermostat Operation Range	80~90°C							
Maximum Temperature to Engine	105°C							
Minimum Temperature to Engine		70°C						
Coolant Temperature Alarm		105°C						
Limits of the Environment Temper	ature	52°C						
Lubrication System								
Lubrication Oil Capacity		15,5L						
Lubrication Oil Pressure		min 250 kPa (50H	min 250 kPa (50Hz) /min 300 kPa (60Hz)					
Lubrication Oil Temperature		At normal operati	on 105°C, Maximur	n 125°C				
Lubrication Oil Consumption as %	Fuel Consumption	0.1 % maximum	0.1 % maximum					
Pressure of Oil Relief Valve Openin	ng	550 ± 50 kPa	550 ± 50 kPa					
Electrical System								
Alternator		28.5V x 45A alternator						
Starter Motor		24V x 6.0 kW						
FAN								
Diameter	660mm							
Number Of Blade	7							
Material		Plastic						
	DOOSAN IN	FRACORE GENSET	ENGINE					
Engine Model	rpm	Gross Engine (	Typical Generat					
0		Stand-by	Prime	Stand-by	Prime			
DP086LA	1500	224	201	260	234			
	1800	253	228	294	265			



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## JCB ALTERNATOR TECHNICAL PARAMETERS AND SPECIFICATIONS



ALTERNATOR TECHNICAL	PARAMETERS				
Insulation Class		н	Field Control System		Self-Excited
Winding Pitch		2/3 - (N° 6)	A.V.R. Model	Standard	SX460
Wires		12	Voltage Regulation	%	± 1
Protection		IP 23	Sustained Short-Circuit Current	10 sec	300% (3 IN)
Altitude	m	1000	Total Harmonic (*) TGH / THC	%	< 4
Overspeed	rpm	2250	Wave Form: NEMA = TIF - (*)		< 50
Air Flow	m³/sec.	0.514	Wave Form: I.E.C. = THF - (*)	%	< 2
Bearing Drive	N/A	-	Bearing Non-Drive	Bearing	6310-2RZ
Rotor Winding	100%	Copper	Stator Winding	100%	Copper

50 HZ / 231-400V COSQ 0,8 / 1500 RPM

STANDARD USING ALTERNATOR				OPTIONAL USING ALTERNATOR					
BRAND/MODEL	JCBENERGY	JCB 270MX		LEROY-	50MER"	TAL046C	STAMFORD	UC 274	J
DUTY				Continuous			S	and By	
AMBIENT	C°			40°C				27°C	
CLASS / TEMP. RISE	C°			H/ 125° K			H	/ 163° K	
SERIES STAR	V	380/220	400/231	415/240	1 Phase	380/220	400/231	415/240	1 Phase
PARALLEL STAR	V	190/110	200/115	208/120	220	190/110	200/115	208/120	220
SERIES DELTA	V	220	230	240	230	220	230	240	230
OUTPUT POWER	kVA	232,0	232,0	241,0	-	255,0	255,0	265,0	-
OUTPUT POWER	kW	185,6	171,2	192,8	-	204,0	204,0	212,0	-

60 HZ / 277-480V COSQ 0,8 / 1800 RPM

STANDARD USING ALTERNATOR

OPTIONAL USING ALTERNATOR

BRAND/MODEL	JCBENERGY	JCB 270MX		LERO	Y-SOMER	TAL046C	STAN	FORD	UC 274 J
DUTY				Continuous				Stand	Ву
AMBIENT	C°			40°C				27°C	
CLASS / TEMP. RISE	C°			H / 125° K				H/163	°К
SERIES STAR	V	416/240	440/254	480/277	1 Phase	416/240	440/254	480/27	7 1 Phase
PARALLEL STAR	V	208/120	220/127	240/138	-	208/120	220/127	240/13	8 -
SERIES DELTA	V	240	254	277	240	240	254	277	240
OUTPUT POWER	kVA	269,0	284,0	298,0	-	296,0	312,0	328,0	-
OUTPUT POWER	kW	215,2	227,2	238,4	-	236,8	249,6	262,4	-



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## **CONTROL MODULE ALERTS**

Emergency Stop Malfunction High Generator Frequency Low Generator frequency, Low Load Over Current, Unbalanced Current Low Generator Voltage High generator Frequency Phase sequence error Overload, Heat Sensor Broken Low Water Level (Optional) Low Oil Pressure, Reverse Power Low Water Temperature

#### Start Error, Stop Error Magnetic Pickup Error Charge Alternator Error Unbalanced Load Maintenance Time Alarm Low Speed, High Speed Broken Oil Sensor Cable High Oil Temperature (Optional) Low Fuel Level (Optional), High Battery Voltage Low Battery Voltage, High Water Temperature Electronic Can bus Errors (ECU)



- Powder Painted Steel Panel with
- Lockable Door
- ATS (Automatic Transfer Panel) Optional
- Control Module
- Battery Charger
- Emergency Stop Button

- Terminal Blocks
- Load Output Terminal
- System Protection MSBs
- Circuit Breaker-Optional
- LCD Screen
- o Control Relays
- o Backlit, 128x64 Pixel

## **CONTROL MODULE TECHNICAL PARAMETERS**

**CONTROL PANEL SPECIFICATIONS** 

Brand	JEBENERGY	Brand	Trans-MIDIAMF.232.GP
Dimensions	120mmx94mm.	Protection Class	IP65 From the Front
Weight	260 gr.	<b>Environmental Conditions</b>	2000 meters above sea level
Ambient Humidity	Max. %90.	Ambient Temperature	-20°C to +70°C
DC Battery Supply Voltage	8 - 32 V	Battery Voltage Measurement	8 – 32 V
Network Frequency	5 - 99,9 Hz	Mains Voltage Measurement	3 - 300 V phase -Neutral, 5 - 99,9 Hz
Generator Voltage Measurement	3 - 300 V	Generator Frequency	5 - 99,9 Hz
Current Transformer Secondary	5A	Working Period	Continuous
Charge Alternator Voltage Measurement	8 - 32 V	Charge Alternator Excitation	210mA &12V, 105mA &24V Nominal 2.5W
Communication Interface	RS-232	Analog Sender Measurement	0 - 1300ohm
Generator Contactor Relay Output	5A & 250V	Mains Contactor Relay Output	5A & 250V
Solenoid Transistor Outputs	1A with DC Supply	Start Transistor Outputs	1A with DC Supply
Configurable-3 Transistor Outputs	1A with DC Supply	Configurable-4 Transistor Outputs	1A with DC Supply



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## **CONTROL MODULE FUNCTION**

Mains Voltage Level Control	Generator Voltage Level Control	3 Phase Generator Protections	3 Phase AMF Function	Alarm Horn
Network Frequency Level Control	Generator Frequency level Control	- High / Low Voltage	- High / Low Frequency	Heater Tube Thermostat Control
Engine Operating Option Control	Generator Current Level Control	- High / Low Frequency	- High / Low Voltage	Modbus and SNMP
Engine Stop Option Control	Generator Powder Level Control	- Current / Voltage Asymmetry	- High / Low Water Temperature	Working Hour
Engine Speed (RPM) Level Control	Generator work Schedule and Timing Control	- Overcurrent / Overload	- High / Low Load	Ground Leakage
Battery Voltage Options Times	Oil Pressure Controllers Control	Overheat Control	Mains., Generator ATS Control	Analog Modem
Check Engine Maintenance Times	Configurable Analog Inputs and Outputs	1 Phase or 3 Phase, Phase Selection	Network, Voltage, Frequency Display	Ethernet, USB, RS232, RS485
Communication Interfaces GPRS, GSM	Keeping Error Records of Past Events	Parameter Setting via Control Module	Parameter Setting via Computer	Selectable Protection Alarm / Shutdown
Engine Speed, Voltage, Earning	Configurable Programmable Digital Inputs and Outputs	Water Temperature Current and Frequency	Hours of Operation Phase sequence	Battery Voltage Oil Pressure

### SOUND PROOF CANOPY AND BASE FRAME (CHASIS) SPECIFICATIONS



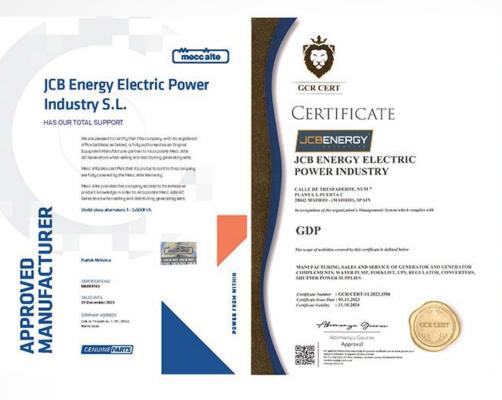
- Special, Registered JCB Energy Design and Colour
- A1 Quality DKP / HRU / Galvanized Steel
- Sensitive Twist on Automatic Press Brake
- Delicate Cut on Automatic Punch and Laser Bench
- Sensitive Welding on Robotic Welding Bench
- Chemical Cleaning Nano Technology Before Painting
- Robotic Painting with Electrostatic Powder Paint
- Drying and stabilizing on 200 °C Ovens
- o 1500 Hour Salt Test
- Glass wool Isolation, A1 Class Material -50/+500 ºC
- Special Covering Over Glass Wool
- Best Sound Level (in Dba)
- Temperature Tests
- Rustproof Accessories

- Cable Exit Connectors and Glands
- Emergency Stop Button
- Fuel Level Gauge
- Fuel Drain Cap
- Fuel Inlet and Return Records
- I permeability Test for Fuel Tank
- Vacuumed Rubber Mounted
- High Quality weatherstrips
- High Quality Shock Absorbers
- Fuel Filling Cap (with ventilation)
- Lifting and Carrying Equipment
- Internal Exhaust Mufflers (Silencers)
- External Exhaust Mufflers (Silencers)
- o Radiator water Filling Cap
- Daily Fuel Tank, External Fuel Tank

# **Our Quality Certificates**

legistration 🔊	Certificate of Re	egistration 👝		
lanagement System of	This is to certify that the Environmental Management System of			
RGY	JCBENER	RGY		
OWER INDUSTRY	JCB ENERGY ELECTRIC PO	WER INDUSTRY		
ITA C 28042 MADRID - (MADRID), SPAIN	CALLE DE TRESPADERNE, NUM 7 PLANTA 3, PUERT	A C 28042 MADRID - (MADRID), SPAIN		
ts of the following standard	is in accordance with the requirements	of the following standard		
:2015 nt System)		ISO 14001:2015 (Environmental Management System)		
	SCOPE			
RATOR AND GENERATOR COMPLEMENTS, WERTERS, SHUTTER POWER SUPPLIES				
(,19)	(IAF Code: 18,19)			
hital Registration Date : 35-Sec-0020 11 Schwellinere Date : 35-Sec-0020 27 Schwellinere Date : 35-Sec-0026 Centicute Expty Date : 04-Sec-0026	Centices Number: 2010/2020	initial Registration Data : 25-047-0828 1" Serveillance Data : 25-047-2828 2" Surveillance Data : 25-549-2828 Centicute Euply Data : 24-047-828		
Issued by ARS Assessment Private Limited		Issued by ARS Assessment Private Limited		
Managing Director		-Managing Director		
	anagement System of COWER INDUSTRY TA C 20042 MADRID - (MADRID), SPAIN ts of the following standard 2015 mt System) AND GENERATOR COMPLEMENTS, NEATOR AND GENERATOR COMPLEMENTS, NEATOR	enagement System of RECEV OWER INDUSTRY TA C 2004E MADRID. (MADRID]. SPAN ts of the following standard 20155 mt System) Market Contract Cont		







Certificate

#### JEBENERGY

JCB ENERGY ELECTRIC POWER INDUSTRY

CALLE DE TRESPADERNE, NUM ? PLANTA 3, PUERTA C 28642 MADRID - (MADRID), SPAIN

In reception of the organization's Manegoments System which complex with

ISO 22716:2013:GMP GOOD MANUFACTURING PRACTICES The scope of methodise control by this conflictor is defined below

MANUFACTURING, XALIS AND SERVICE OF GENERATOR AND GENERATOR COMPLEMENTS, WATER PUMP, FORKLIFT, UPS, REGULATOR, CONVERTERS, SHUTTER POWER SUPPLIES

Confficute Number : GCR/CERT-11.2023.3585 Confficute Fund Date : 01.11.2023 Confficute Fadialty : 31.31.2024

Abimarya Gaurae Abimarya Gaurae Approval

Approval





GCRCERI

## Certificate

HEALTHY & SAFE WORKPLACE CERTIFICATE

JCB ENERGY ELECTRIC POWER INDUSTRY

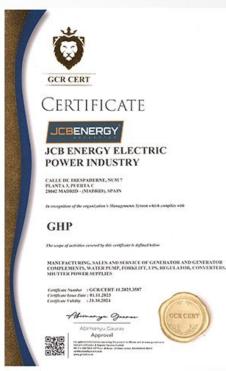
CALLE DE TRESPADERNE, NUN 7 PLANTA & PETRETA C 2006 MARDING - OADBRIDS, PAIN B has been entried to obtain a Healthy and Sele Workslase Conflicts by fulfiling the regimements for COVI-55 measures, within the physical conditions of the Dubries with in the regime of the Nealthy and Sele Workslase Ended on the Dubries

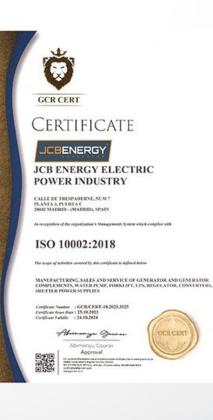
FACTORIES - PRODUCTION LOCATIONS: ELECTRICAL AND ELECTRONICS INDUSTRY

Certifican Number : GCR:CERT-11.2023.3650 Certifican Inac Date : 07.31.2023 Certifican Fullity : 06.31.2024



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