



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





#### **GENERATOR GENERAL INFORMATION**

GENERATOR	FREQUENCY	VOLTAGE	POWER FACTOR	SPEED	DIESEL	ENGINE		ALTERN	IATOR		TYPE OF	GENEF	RATOR O	UTPUT
Model	Hz	V	Cos Q	Rpm	Brand	Model	Series	Brand	Model	Series	Operation	kVA	kW	А
							i. Cei			Standby	26,0	20,8	37,6	
JCN 26	50	231/400	0.8	1500							Prime	23,6	18,9	34,2
					JCN E32		EII	BENERG	JCB	180M	Continuous	16,5	13,2	23,9
	60			1800		LJZC	LII	Я	JCB	100101	Standby	31,0	24,8	44,8
JCN 31		277/480	0.8					ធ្វី			Prime	28,2	22,5	40,7
								<u>,</u>			Continuous	19,7	15,8	28,5

<ul> <li>Diesel Engines with Advanced Technology and Quality</li> <li>Alternators with Advanced Technology and Quality</li> <li>Low Exhaust Emission</li> <li>Control Panel Suitable for Flexible Application</li> <li>Patented Compact Designed and Sound proof Canopy</li> </ul>	<ul> <li>Tropical 50 °C Radiator, First Class Product Support</li> <li>Fuel Filter with Water and Particle Separator</li> <li>Low Fuel Consumption, Low Oil Consumption</li> <li>Global Technical Service and Maintenance Support</li> <li>Wide Range of Affordable Spare Parts</li> </ul>
<ul> <li>Patented Compact Designed and Sound proof Canopy</li> <li>Low Operating Cost, Suitable for Heavy-Duty</li> </ul>	<ul> <li>Wide Range of Affordable Spare Parts</li> <li>High Quality and Reliable Technology</li> </ul>
<ul> <li>Durability, Low Noise Level</li> </ul>	<ul> <li>High Quality and Reliable Technology</li> <li>Half Century Experience in Generator Manufacturing</li> </ul>

#### **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

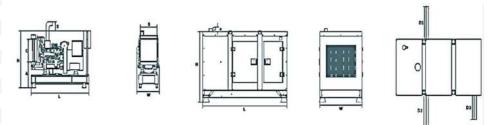




VALUES		OPEN TYPE GENERATOR	CANOPY TYPE GENERATOR		
WIDTH	mm	597	1000		
LENGTH	mm	1400	2000		
HEIGHT	mm	1309	1444		
WEIGHT (NET)	Kg	553	690		
FUEL TANK CAPACITY	L	58	100		

SYMBOL	OPEN	CANOPY
L	1400	2000
W	597	1000
н	1004	1240
S	360	90
Α	555	
В	500	
С	480	
D1		800
D2		800
D3		400
D4		
D5		

ENE



## **FUEL CONSUMPTION**

PERCENT OF PRIME POWER	1500 rpm	1800 rpm
	l/hr	l/hr
110 %	6,17	7,40
100 %	5,60	6,74
75 %	4,30	5,18
50 %	3,07	3,70



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#### **DIESEL ENGINE MAIN TECHNICAL PARAMETERS**

GENERAL		
Number of Cylinders		4
Configuration		Vertical, In Line
Aspiration		Naturally
Combustion System		Direct Injection
Compression Ratio		19.1:1
Bore	mm	93
Stroke	mm	102
Displacement	L	2,27
Governing Type	L	Mechanic
Governing Lass		G2
Rotation		Counterclockwise
Firing Order		1-3-4-2
Emission		Tier II
Moments of Rotation Inertia		
Engine	Kg - m²	0,44
Flywheel	Kg - m²	2,55
Performance Rating		
Speed Droop	%	≤3
Steady State Speed Band	%	≤0,5
FILTERS		
Air Filter		Dry Type, Replaceable
Fuel Filter		With Water Separator
Oil Filter		Element Type, Particulate Trap
FLYWHEEL HOUSING AND FLEX COUPLING		
Flywheel Housing	SAE (J620)	4
Flex Coupling Disc	Inch (")	7,5
TEST CONDITIONS		
Ambient Temperature	%	25
Atmospheric Pressure	КРа	100
Relative Humidity	Rh (%)	30
Max. Operating Intake Resistance	КРа	5
Exhaust Backpressure Limit	КРа	5
Fuel Temperature (Fuel Inlet Pump)	°C	38±2
OVERALL DIMENSIONS		
Length*	mm	1078
Width	mm	572
Height	mm	749
Dry Weight	kg	275
*From front end of radiator to near end of air filter FAN		
Diameter	mm	400
Drive Ratio		1,25:1
Number of Blades		8
		Plastic
Material		Plastic



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#### **DIESEL ENGINE MAIN TECHNICAL PARAMETERS**

Total Colonat CapacityLISMax. Perm. Coolant Outlet TemperaturePC03Max. Perm. Flow Resist. Cool. System And Piping)bar0,5Max. Temperature of Coolant WarningPC9Max. Temperature of Coolant ShutdownPC8Thermostal Operation Temperature - Initial OpenPC7Delivery of Coolant PumpPC1,0Min. Pressure Before Coolant PumpBar0,15Radiator Face AreaRo2RowsRo2Matrix DensityPr/Indh1,5Matrix DensityPr/Indh40Height of MatrixMan90Pressure Before Coolant PumpPr/Indh1,0Matrix DensityProfin1,0Matrix DensityProfin1,0StartingProfin1,0StartingProfin1,0Pressure Experime1,02,0StartingProfin1,0StartingProfin1,0StartingProfin1,0StartingProfin1,0StartingProfin1,0StartingProfin1,0StartingProfin1,0StartingProfin1,0StartingProfin1,0StartingProfin1,0StartingProfin1,0StartingProfin1,0StartingProfin1,0StartingProfin1,0StartingProfin1,0 <t< th=""><th>COOLING SYSTEM</th><th></th><th></th></t<>	COOLING SYSTEM		
Max. Perm. Coolant Dutlet Temperature°C03Max. Perm. Flow Resist. (Cool. System And Piping)For95Max. Temperature of Coolant Warning°C95Max. Temperature of Coolant Shutdown°C86Thermostal Operation Temperature - Initial Open°C72Delivery of Coolant Pumpm1/h1,60Min. Pressure Before Coolant Pumpbar0,15Radiator Face AreaMax.0,26RowsRow2,26Matrix DensityRow1,55Matrix DensityMan.1,50Matrix DensityMan.90Height of Matrixmm40Height of MatrixMan.90Pressure Cap SettingRow1,52Estimated Cooling Air Flow ReserveRPa0,12Engine Pre-Heart-Tube (with Circulation Pump)RPa1,20Delivery of Coolant Flow ReserveRPa0,20Engine Pre-Heart-Tube (with Circulation Pump)RPa1,20Delivery OperatureL32Horizont Delivery StreamR32District Cooling Air Flow ReserveRPa32Engine Pre-Heart-Tube (with Circulation Pump)RPa32District Cooling Air Flow ReserveRPa32District Cooling Air Flow ReserveRPa32Engine Pre-Heart-Tube (with Circulation Pump)RPa32District Cooling Air Flow ReserveRPa32Engine Pre-Heart-Tube (with Circulation Pump)RPa32District Cooling Air F	Radiator Type	50ºC	Tropical
Max. Perm. Flow Resist. (Co.) System And Piping)baro.Max. Temperature of Coolant WarningPC95Max. Temperature of Coolant ShutdownPC86Thermostal Operation Temperature - Initial OpenPC72Delivery of Coolant Pumperature - Full OpenPC72Delivery of Coolant Pumperature - Full Openm <sup>1</sup> / <sub>h</sub> 150RowsRow2150RoksRow2150RoksRow15,5160Mitch DensityPer / Inch15,5160Height of Matrixmm40160Pressure OptimizationMarin150160Height of MatrixMarin150160Pressure OptimizationRow150160Engine Pre Heater - Tube (with Circulation Pump)Walt150Pressure OptimizationRom150160Untractoty StringRom150160Untractoty StringRom150160Untractoty StringRom150160Untractoty Optimization Pump)Rom150160Untractoty StringRom150160Untractoty StringRom150160Untractoty Optimization PumperatureRom160Untractoty Optimization PumperatureRom160Untractoty Optimization PumperatureRom160Untractoty Optimization PumperatureRom160Untractoty Optimization RomRom160 <trr>Untractoty</trr>	Total Coolant Capacity	L	13
Max. Temperature of Coolant WarningPC95Max. Temperature of Coolant ShutdownPC98Thermostat Operation Temperature - Initial OpenPC68Thermostat Operation Temperature - Full OpenPC72Delivery of Coolant Pumpm <sup>1</sup> / h1,60Min. Pressure Before Coolant Pumpbar0,26Radiator Face AreaRow2RowsRow1,55Matrix DensityPer / Inch1,55Matrix Densitymm440Height of Matrixmm440Height of MatrixRoad0,26Persure Cap SettingRalator Face Area0Persure Cap SettingRalator Face Area1,55Stanted Cooling Air Flow ReserveRalator Face Area0,125Engine Pre Heater-Tube (with Groulation Pump)With and1,50Uttricating Of Presure Cap SettingRalator Face Area1,50Nominal Motor Operating TemperatureL7Total SystemL3,20Nominal Motor Operating TemperatureRalator Face Area1,20Nominal Motor Operating TemperatureRalator Face Area1,20Old Fuel Consumption Ratio%a3,201,21Nominal Motor Operating TemperatureV1,21VoltageY1,211,21StatterV1,211,21Alternator Liber AreaY1,211,21Nominal Motor Operating TemperatureV1,21VoltageY1,211,21	Max. Perm. Coolant Outlet Temperature	ΩC	103
Max Temperature of Coolant ShutdownC98Thermostat Operation Temperature - Initial OpenC22Delivery of Coolant Pumpm <sup>1</sup> / h1.60Belivery of Coolant Pumpbar0.15Radiator Face Aream <sup>2</sup> 0.26RowsRow2Matrix DensityFor Inch1.5,5Materialmm440Height of Matrixmm90Pessure Refore Coolant PumpkPa0.26Matrix Densitymm400Matrix Densitymm400Height of Matrixmm90Pessure Cap SettingkPa0.15Entimated Cooling Air Flow ReservekPa0.15Entimated Cooling Air Flow ReservekPa0.10Entimated Cooling Air Flow ReservekPa0.12Ubilinum Oil LevelL301.01Nominal Motor Operating TemperaturekPa0.2Nominal Motor Operating TemperaturekPa0.3Coll Level Consumption RatiokPa0.3Nominal Motor Operating TemperaturekPa0.3Ubilized ColonskPa0.3Nominal Motor Operating TemperaturekPa0.3Ubilized ColonskPa0.1Nominal Motor Operating TemperaturekPa0.1Ubilized ColonskPa0.3Nominal Motor Operating TemperaturekPa0.3Nominal Motor Operating TemperaturekPa0.3Nominal Motor Operating TemperaturekPa0.3Ub	Max. Perm. Flow Resist. (Cool. System And Piping)	bar	0,5
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Thermostat Operation Temperature - Full OpenPCPCDelivery of Coolant Pumpm³h1,60Min. Pressure Before Coolant Pumpbar0,15Radiator Face Aream³0,26RowsRow2Matrix DensityPe/ Inch15,5Matria Constructionman440Height of Matrixmm440Height of Matrixman90Pressure Qas StringKPa0,25Estimated Cooling Air Flow ReserveKPa0,25Total SystemL1,20Minimum Oil LevelL30Nominal Motor Operating TemperatureL30Nominal Motor Operating TemperatureSinated32Oil / Fuel Coosumption RatioKPa32Oil / Fuel Consumption RatioKPa32Normal Oil TemperatureV32VoltageV32StarterKator32Aitemator Output AdmersKPa32Aitemator Output VoltageKPa32Aitemator Output VoltageKPa32Aitemator Output VoltageKPa32	Max. Temperature of Coolant Shutdown	₽C	98
Delivery of coolant Pumpm²/h1,60Min. Pressure Before Coolant Pumpbar0.15Radiator Face Aream²0.26RowsRow2Matrix DensityPer / Inch15,5Materialmm440Height of Matrixmm590Pressure Cap SettingkPa90Estimated Cooling Air Flow ReservekPa0.125Engine Pre Heater-Tube (with Circulation Pump)W100Utiminum Oil LevelL30Minimun Oil Level232Nomial Motor Operating TemperaturekPa32Oll/Fuel Consumption RatiokPa32Oll/Fuel Consumption RatiokPa32Oll/Fuel Consumption RatiokPa32Otal Settervia CancelVoltagekPa32Atternator Output AmperskPa32Atternator Output AttoreskPa32Atternator Output AttoreskPa32Atternator Output AttoreskPa32Atternator Output VoltagekPa32Atternator VoltagekPa32Atternator VoltagekPa32Atternation VoltagekPa32 <td< td=""><td>Thermostat Operation Temperature - Initial Open</td><td>°C</td><td>68</td></td<>	Thermostat Operation Temperature - Initial Open	°C	68
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Radiator Face Aream <sup>4</sup> 0,26RowsRow2Matrix DensityPer/ Inch15,5Materialmm440Width of Matrixmm590Presure Cap SettingKPa0Etimated Cooling Air Flow ReserveKPa0,125Engine Pre Heater-Tube (with Circulation Pump)W1500UBERCATION SYSTEML300Using Matrix Operating TemperatureL300Nominal Motor Operating TemperaturePC400Lubricating Oil Pressure (Rated Speed)Na352Oil / Fuel Consumption Ratio%1312Old Fuel Consumption RatioV100Utardated Stated Speed)%13.2Otal SystemV3.2Old Fuel Consumption RatioNa3.2Otard Stated Speed)Na3.2Atternator Output AmpersA3.2VoltageNa3.2Atternator Output AmpersA3.2Atternator Output VoltageNa3.2Atternator Output VoltageNa3.2 <tr <td=""></tr>	Delivery of Coolant Pump	m ³/ h	1,60
RowsRowRow2Matrix DensityPr/ Inch15,5Matriamm4MinimWitch of Matrixmm40Height of Matrixmm50Presure Cap SettingKa0Estimated Cooling Air Flow ReserveKa0125Engine Pre Heater-Tube (witch Circulation Pump)W300UBERCATION SYSTEML300Munimu Oil LevelL9Nominal Motor Operating TemperatureNa32Relief Valve OpensKa32Oll / Fuel Consumption RatioNa32Oll / Fuel Consumption RatioNa32Old StaterV102VoltageNa32OtageNa32StaterV32Matrix Consumption RatioNa32Autrianto Olity UpdageNa32Matrix Consumption RatioNa32Autrianto Olity UpdageNa32Matrix Consumption RatioNa32Autrianto Olity UpdageNa32Matrix Consumption RatioNa32Matrix Co	Min. Pressure Before Coolant Pump	bar	0,15
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MaterialAluminumWidth of Matrixmm440Height of Matrixmm590Pressure Cap SettingkPa0Estimated Cooling Air Flow ReservekPa0Engine Pre Heater-Tube (with Circulation Pump)W100UBERATION SYSTEMI300UBERATION SYSTEMI300Using Night Pressure (Rate Speed)Relation300Nominal Motor Operating TemperatureV300Lubricating Oil Pressure (Rated Speed)Relation310Normal Oil Temperature%A320Oil / Fuel Consumption Ratio%A320Normal Oil TemperatureV100Using Oil Pressure (Rated Speed)%A320Narmal Oil Temperature%A320Oil / Fuel Consumption Ratio%A320StarterKV320Voltage%A320Atternator Output Voltage%A320Atternator Output Voltage%A320Atternator Output Voltage%A320Atternator Output Voltage%A320Atternator Output Voltage%A320Atternator Output Voltage%A320Maternator Output Voltage%A320Maternation State State%A320Maternation State State%A320Maternation State S	Rows	Row	2
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Height of Matrixmm590Pressure Cap SettingkPa90Estimated Cooling Air Flow ReservekPa0.125Engine Pre Heater-Tube (with Circulation Pump)W500LUERCATION SYSTEML7Total SystemL7Nominal Motor Operating TemperatureVa9Lubricating Oil Pressure (Rated Speed)bar5Relief Valve OpensKa5.03Oil / Fuel Consumption Ratio%3.03Normal Oil TemperatureVa1.04VoltageSc3.03Retief Valve Opens%3.03Normal Oil Temperature%3.03VoltageNa3.04Autoration Station%3.04Autoration Station%3.04Autoration Station%3.04StaterKa3.24Alternator Output VoltageA3.04Alternator Output Voltage%3.04Alternator Output Voltage%3.04Alternator Output Voltage%3.04	Material		Aluminum
Pressure Cap SettingkPa90Estimated Cooling Air Flow ReservekPa0,125Engine Pre Heater-Tube (with Circulation Pump)W1500LURICATION SYSTEMI3Total SystemL7Total SystemL7Minimu Oil LevelV40Nomial Motor Operating Temperaturev240Relief Valve OpenskPa52Oil / Fuel Consumption Ratio%210Normal Oil Temperaturev210StarterValues3,2Alternator Output AmpersA2Alternator Output Voltage%33,2Alternator Output Voltage%33,2Alternator Output Voltage%33,2Alternator Output Voltage%43,4	Width of Matrix	mm	440
Estimated Cooling Air Flow ReservekPa0,125Engine Pre Heater-Tube (with Circulation Pump)W1500LURRICATION SYSTEMTotal SystemL8Minimu Oil LevelL7Nominal Motor Operating TemperaturevC40Lubricating Oil Pressure (Rated Speed)bara5Relief Valve Opens%2352Oil / Fuel Consumption Ratio%210Normal Oil TemperaturevC10ELETERICAL SYSTEMV22VoltageKW3,2StarterKW3,2Alternator Output VoltageV14	Height of Matrix	mm	590
Provide the state of the sta	Pressure Cap Setting	kPa	90
LUBRICATION SYSTEMLUBRICATION SYSTEML8Total SystemL7Minimum Oil LevelL7Nominal Motor Operating Temperature°C40Lubricating Oil Pressure (Rated Speed)bar5Relief Valve OpensKPa352Oil / Fuel Consumption Ratio%20.3Normal Oil Temperature°C10ELECTRICAL SYSTEMV12VoltageNQ3.2Alternator Output AmpersA6Alternator Output VoltageV14	Estimated Cooling Air Flow Reserve	kPa	0,125
Total SystemL8Minimu Oil LevelL7Nominal Motor Operating TemperaturePC40Lubricating Oil Pressure (Rated Speed)bar5Relief Valve OpensKPa352Oil / Fuel Consumption Ratio%26.3Normal Oil TemperaturePC10StatterVoltageN3.2Alternator Output MapersMax3.2Alternator Output VoltageNormal Oil Temperature10StatterNormal Oil Temperature3.2Alternator Output VoltageNormal Oil Temperature3.2Alternator Output VoltageNormal Oil Temperature1.4	Engine Pre Heater-Tube (with Circulation Pump)	W	1500
ArrowL7Minimum Oil LevelL640Nominal Motor Operating TemperatureP05Lubricating Oil Pressure (Rated Speed)kPa5252Oil / Fuel Consumption Ratio%505Normal Oil TemperatureP1010ELECTRICAL SYSTEMVoltageNormal Oil Temperature12StarterKW3232Alternator Output AmpersNa52Minnaud MattersNa12StarterNa12Alternator Output AmpersNa12Matter Output VoltageNa12Matter Output VoltageNa14	LUBRICATION SYSTEM		
Nominal Motor Operating TemperaturePC40Lubricating Oil Pressure (Rated Speed)bar5Relief Valve OpenskPa352Oil / Fuel Consumption Ratio%< 0,3	Total System	L	8
Lubricating Oil Pressure (Rated Speed)bar5Relief Valve OpenskPa352Oil / Fuel Consumption Ratio%<0,3	Minimum Oil Level	L	7
Relief Valve OpenskPa352Oil / Fuel Consumption Ratio%<0,3	Nominal Motor Operating Temperature	₽C	40
Oil / Fuel Consumption Ratio%≤ 0,3Normal Oil Temperature©C100ELECTRICAL SYSTEMVVVoltageV12StarterkW3,2Alternator Output VoltageV14Aternator Output VoltageV14	Lubricating Oil Pressure (Rated Speed)	bar	5
Normal Oil Temperature©C110ELECTRICAL SYSTEMV12VoltageV12StarterkW3,2Alternator Output AmpersA25Atternator Output VoltageV14	Relief Valve Opens	kPa	352
ELECTRICAL SYSTEMVoltageV12StarterkW3,2Alternator Output AmpersA25Alternator Output VoltageV14	Oil / Fuel Consumption Ratio	%	≤ 0,3
VoltageV12StarterkW3,2Alternator Output AmpersA25Alternator Output VoltageV14	Normal Oil Temperature	₽C	110
StarterkW3,2Alternator Output AmpersA25Alternator Output VoltageV14	ELECTRICAL SYSTEM		
Alternator Output AmpersA25Alternator Output VoltageV14	Voltage	V	12
Alternator Output Voltage V 14	Starter	kW	3,2
	Alternator Output Ampers	А	25
Batteries Capacity Ah 55	Alternator Output Voltage	V	14
	Batteries Capacity	Ah	55



## **JCN 26 & 31** 231 / 400 V – 50 Hz & 277 / 480 V – 60 Hz



### JCB ENERGY DIESEL ENGINE POWER RATINGS

ENGINE MODEL	E32C		ENGINE FAMILY	JC31	ENGINE SERIES	EII	
		TYPICAL GENERATOR OUTPUT (NET)		ENGINE POWER			
Speed (Rpm)	Type of Operation			Gro	SS	Net	
		kVA	kWe	KWm	Нр	kWm	Нр
1500	Stand By(Maximum)	25,8	20,6	26,0	34,9	24,0	32,2
	Prime	23,8	19,0	23,6	31,7	22,1	29,7
1800	Stand By(Maximum)	30,7	24,6	31,2	41,9	28,9	38,8
	Prime	28,2	22,6	28,4	38,1	26,6	35,7

### **DIESEL ENGINE MATCHING PARAMETERS - 50 HZ**

50 HZ @ 1500 R/MIN		STAND BY	PRIME
Gross Engine Power	kW	26.0	23.6
Net Engine Power	kW	24,0	22,1
Fan Power Consumption (Belt Pulley Driven)	kW	1,5	1,5
Other Power Loss	kW	0,5	0,0
Mean Effective Pressure	MPa	0,92	0,83
Intake Air Flow	m <sup>3</sup> / min	1,25	1,25
Exhaust Temperature Limit	ōC	300	300
Exhaust Flow	m ³/ min	1,30	1,15
Boost Pressure Ratio		4,10	3,70
Mean Piston Speed	m / s	5,0	5,0
Cooling Fan Air Flow	m ³/ min	46,6	46,6
Typical Generator Output Power	kVA	26	24
Typical Generator Output Power HEAT REJECTION	kVA	26 STAND BY	PRIME
	kVA kW		
HEAT REJECTION		STAND BY	PRIME
HEAT REJECTION Energy in Fuel (Heat of Combustion)	kW	STAND BY 72,7	<b>PRIME</b> 56,5
HEAT REJECTION         Energy in Fuel (Heat of Combustion)         Gross Heat to Power	kW kW	<b>STAND BY</b> 72,7 26,0	<b>PRIME</b> 56,5 23,6
HEAT REJECTION         Energy in Fuel (Heat of Combustion)         Gross Heat to Power         Energy to Coolant and Lubricating Oil	kW kW kW	<b>STAND BY</b> 72,7 26,0 26,2	PRIME 56,5 23,6 16,1
HEAT REJECTIONEnergy in Fuel (Heat of Combustion)Gross Heat to PowerEnergy to Coolant and Lubricating OilHeat Dissipation Capacity *	kW kW kW kW	STAND BY         72,7         26,0         26,2         -	PRIME         56,5         23,6         16,1         -



## **JCN 26 & 31** 231 / 400 V – 50 Hz & 277 / 480 V – 60 Hz



#### **DIESEL ENGINE MATCHING PARAMETERS - 60 HZ**

60 HZ @ 1800 R/MIN		STAND BY	PRIME
Gross Engine Power	kW	31,2	28,4
Net Engine Power	kW	28,9	26,6
Fan Power Consumption (Belt Pulley Driven)	kW	1,8	1,8
Other Power Loss	kW	0,5	0,0
Mean Effective Pressure	MPa	0,92	0,83
Intake Air Flow	m ³ / min	1,50	1,50
Exhaust Temperature Limit	°C	360	360
Exhaust Flow	m ³ / min	1,57	1,38
Boost Pressure Ratio		4,90	4,50
Mean Piston Speed	m / s	6,0	6,0
Cooling Fan Air Flow	m <sup>3</sup> / min	55,9	55,9
Typical Generator Output Power	kVA	31	28
HEAT REJECTION		STAND BY	PRIME
Energy in Fuel (Heat of Combustion)	kW	86,8	66,1
Gross Heat to Power	kW	31,2	26,6
Energy to Coolant and Lubricating Oil	kW	31,4	19,3
Heat Dissipation Capacity *	kW	-	-
Energy to Exhaust	kW	19,2	15,7
Heat to Radiation	kW	4,9	4,5
*Intake Intercooled system			

#### JCB ALTERNATOR TECHNICAL PARAMETERS AND SPECIFICATIONS



ALTERNATOR TECHNI	CAL 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	%	< 5
Overspeed	rpm	2250	Wave Form: NEMA = TIF - (*)		< 50
Air Flow	m³/sec.	0.095	Wave Form: I.E.C. = THF - (*)	%	< 2
Bearing Drive	N/A	-	Bearing Non-Drive	Bearing	6306-2RZ
Rotor Winding	100%	Copper	Stator Winding	100%	Copper



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



### **ALTERNATOR SPECIFICATIONS**

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

STANDARD USING ALTERNATOR			OPTIONAL USING ALTERNATOR						
BRAND/MODEL		JCB 180M		LEROY-S	OMER	TAL042A	STAMFORD	SOL2N	Л
DUTY				Continuous				Stand 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	24,0	24,0	25,0	16,0	26,0	26,0	28,0	18,0
OUTPUT POWER	kW	19,2	19,2	20,0	12,8	20,8	20,8	22,4	14,4

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

STANDARD USING ALTERNATOR			OPTIONAL USING ALTERNATOR						
BRAND/MODEL	JCBENERGY	JCB 180M		LEROY-S	SOMER TA	L042A	STAMFO	ORD	P1144E- SOL2-M
DUTY				Continuous				Stand By	
AMBIENT	C°			40°C				27°C	
CLASS / TEMP. RISE	C°			H / 125° K				H / 163° K	
SERIES STAR	V	416/240	440/254	480/277	1 Phase	416/240	440/254	480/277	1 Phase
PARALLEL STAR	V	208/120	220/127	240/138	-	208/120	220/127	240/138	-
SERIES DELTA	V	240	254	277	240	240	254	277	240
OUTPUT POWER	kVA	28,0	30,0	30,0	20,0	31,0	33,0	33,0	22,0
OUTPUT POWER	kW	22,4	24,0	24,0	16,0	24,8	26,4	26,4	17,6



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



#### **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)



		ACCORD.	
CRAN	APCR.		

- Powder Painted Steel Panel with
- Lockable Door
   ATS (Automatic Transfer Panel)-
- Control Module
- Battery Charger
- Emergency Stop Button
- Terminal Blocks
   Load Output Terminal
   System Protection MSB
- LCD Screen
- Control Relays
- o Backlit, 128x64 Pixel

### **CONTROL MODULE TECHNICAL PARAMETERS**

**CONTROL PANEL SPECIFICATIONS** 

Brand	JCBENERGY	Brand	Trans-MIDIAMF.232.GP
Dimensions	120mmx94mm.	Protection Class	IP65 From the Front
Weight	260 gr.	Environmental Conditions	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 Nomina 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



# **JCN 26 & 31** 231 / 400 V – 50 Hz & 277 / 480 V – 60 Hz



## **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	<ul> <li>Current / Voltage</li> <li>Asymmetry</li> </ul>	- 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



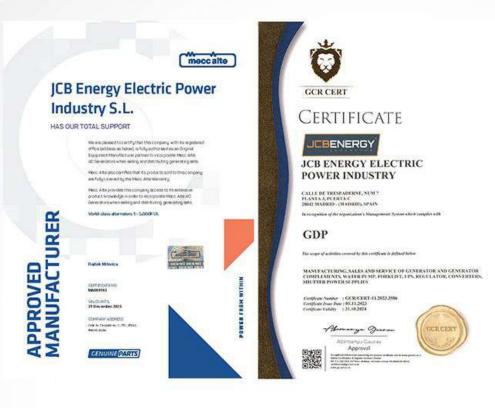
- Special, Registered JCB Energy Design and Colour
- A1 Quality DKP / HRU / Galvanized Steel
- Sensitive Twist on Automatic Press Brake
- Delicate Cut on Automatic Punch and Laser Bench
- Sensitive Welding on Robotic Welding Bench
- Chemical Cleaning Nano Technology Before Painting
- Robotic Painting with Electrostatic Powder Paint
- Drying and stabilizing on 200 °C Ovens
- 1500 Hour Salt Test
- Glass wool Isolation, A1 Class Material -50/+500 °C
- 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)
- Radiator water Filling Cap
- Daily Fuel Tank, External Fuel Tank

# **Our Quality Certificates**

Certificate of I	Registration 🔊	Certificate of Re	gistration 👝		
This is to certify that the Quality I	Management System of	This is to certify that the Environmental Management System of			
JEBENE	RGY	JEBENERGY			
JCB ENERGY ELECTRIC	POWER INDUSTRY	JCB ENERGY ELECTRIC POWER INDUSTRY			
CALLE DE TRESPADERNE, NUW 7 PLANTA 3, PUE	RTA C 28042 MADRID - (MADRID), SPAIN	CALLE DE TRESPADERNE, NUM 7 PLANTA 3, PUERTA C 28042 MADRID - (MADRID), SPAIN			
is in accordance with the requireme	nts of the following standard	is in accordance with the requirements of the following standard			
ISO 9001 (Quality Managem		ISO 14001:2015 (Environmental Management System)			
SCOP	E	SCOPE			
MANUFACTURING, SALES AND SERVICE OF GENERATOR AND GENERATOR COMPLEMENTS, WATER FUMP, FORALIFT, UPS, REGULATOR, CONVERTERS, SMUTTER POWER SUPPLIES		MANUFACTURING, SALES AND SERVICE OF GENERATOR AND GENERATOR COMPLEMENTS, WATER PUMP, FORKLIFT, UPS, REGULATOR, CONVERTERS, SHUTTER POMER SUPPLES			
(IAF Code: 1	u.m	(AF Code: 18,19)			
tah Number 2002201342 <b>verify contificate, visit_at :</b> overscent.com ps_thatmacreatiliter.org ps_thatmacreatiliter.com	Initial Registration Data : 15-001-2020 11 Survivillance Data : 15-366-2020 21 Survaillance Data : 25-366-2020 Certificate Euroy Data : 26-00-2020	Centrol Numor: 399024031 To vecify continuate, visit, at : very an Section of https://www.identicereditation.org	intel Registration Date : 25-04-0428 17. Surveillance Date : 25-54-04284 27. Surveillance Date : 25-54-04284 Confectio Euply Date : 24-04-04284		
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JEBENERGY

JCB ENERGY ELECTRIC POWER INDUSTRY

CALLE DE TRESPADERNE, NUM? PLANTA 3, PUERTA C 28642 MADRED - (MADRED, NPAEN

million of the organization's Management System which complex with

1SO 22716:2013:GMP GOOD MANUFACTURING PRACTICES The scope of activities cannot by this confidence is defined below

MANUPACTURING, SALLS AND SERVICE OF GENERATOR AND GENERATOR COMPLEMENTS, WATER FUMP, FORKLIFT, UPS, REGULATOR, CONVERTERS, SIGTTER POWER SUPPLIES

Complexer Needer : GCRCERT-11.2023.3585 Complexer Jour Date (#1.11.2023 Complexer Failed) : 21.38.2024

Alemany games Abimaryu Casaw Approval

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Certificate

HEALTHY & SAFE WORKPLACE CERTIFICATE

JCB ENERGY ELECTRIC POWER INDUSTRY

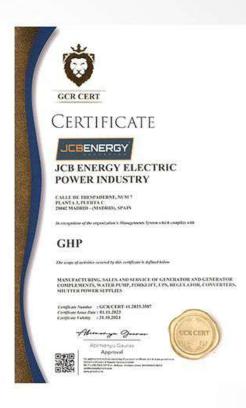
CALLE DE TRESPADERNE, NUM 7 PLANTA L'PUERTA C 20042 MADRID+ (MADRID), SPAIN that been writted to obtain a Healthy and Safe Workplace Certificate by fulfilling the equiversets for COVO-19 resources, when the physical conditions of the business ch is the scope of the Healthy and Safe Workplace Certificate program.

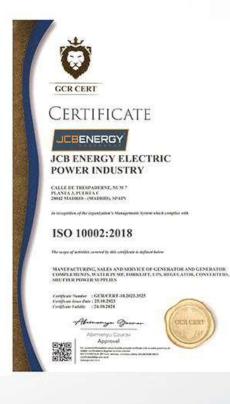
FACTORIES - PRODUCTION LOCATIONS: ELECTRICAL AND ELECTRONICS INDUSTRY

Conglow Namber 1 GCRCERT-11.2023.3658 Conglow New Day 97.11.2023 Conglow Holdy 105.11.2023



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