





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





#### **GENERATOR GENERAL INFORMATION**

GENERATOR	FREQUENCY	VOLTAGE	POWER FACTOR	SPEED	DIESEL E	NGINE		ALTERN	ATOR		TYPE OF	GENERA	ATOR OU	ТРИТ
Model	Hz	V	Cos Q	Rpm	Brand	Model	Series	Brand	Model	Series	Operation	kVA	kW	Α
								BII ER JCB			Standby	825,0	660,0	1.192,2
JCN 825	50	231/400	0.8	1500						355MXA 355MX	Prime	750,0	600,0	1.083,8
					ICN				ICD		Continuous	525,0	420,0	758,7
					JCN	B1020JCI	BII		TO JCB		Standby	930,0	744,0	1.343,9
JCN 930	60	277/480	0.8	1800			G,				Prime	845,5	676,4	1.221,8
								,		Continuous	591,8	473,5	855,2	

- Diesel Engines with Advanced Technology and Quality
- Alternators with Advanced Technology and Quality
- Low Exhaust Emission
- Control Panel Suitable for Flexible Application
- Patented Compact Designed and Sound proof Canopy
- Low Operating Cost, Suitable for Heavy-Duty
- Durability, Low Noise Level

- Tropical 50 °C Radiator, First Class Product Support
- Fuel Filter with Water and Particle Separator
- Low Fuel Consumption, Low Oil Consumption
- Global Technical Service and Maintenance Support
- Wide Range of Affordable Spare Parts
- High Quality and Reliable Technology
- Half Century Experience in Generator Manufacturing

#### 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.

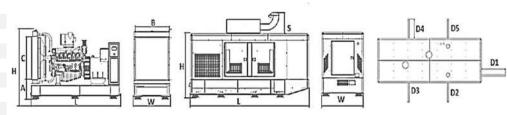
#### **GENERATOR DIMENSIONS AND TECHNICAL DRAWINGS**





VALUES		OPEN TYPE GENERATOR	CANOPY TYPE GENERATOR		
WIDTH	mm	1400	1942		
LENGTH	mm	4000	5166		
HEIGHT	mm	2188	2920		
WEIGHT (NET)	Kg	4240	5530		
FUEL TANK CAPACITY	L	1193	530		

SYMBOL	OPEN	CANOPY
L	4000	5166
W	1400	1942
Н	2188	2282
S		638
Α	560	
В	1302	
С	1446	
D1		1057
D2		961
D3		961
D4		961
D5		961



#### **FUEL CONSUMPTION**

PERCENT OF PRIME POWER	1500 rpm	1800 rpm
TERCENT OF THINE TOWER	I/hr	l/hr
110 %	163,55	184,75
100 %	150,42	169,79
75 %	113,39	127,99
50 %	76,36	86,19



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

GENERAL		
Number of Cylinders		12
Configuration		V-Type
Aspiration		Turbocharged & Intercooled
Combustion System		Direct Injection
Compression Ratio		15.5:1
Bore	mm	128
Stroke	mm	155
Displacement	L	23,922
Governing Type	-	Electronic
Governing Class		G3
Rotation		Counterclockwise
Firing Order		1-12-5-8-3-10-6-7-2-11-4-9
Emission		Tier II
Moments of Rotation Inertia		
Engine	Kg - m²	4,54
Flywheel	Kg - m²	2,1
Performance Rating	Νδ	2,2
Speed Droop	%	≤0,5
Steady State Speed Band	%	≤0,5
FILTERS	,,,	_0,0
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)	1
Flex Coupling Disc	Inch (")	14
TEST CONDITIONS	- ( )	
Ambient Temperature	%	25
Atmospheric Pressure	КРа	100
Relative Humidity	Rh (%)	30
Max. Operating Intake Resistance	КРа	<5
Exhaust Backpressure Limit	КРа	<10
Fuel Temperature (Fuel Inlet Pump)	°C	38±2
OVERALL DIMENSIONS		
Length*	mm	2075
Width Height	mm mm	1456 1558
Dry Weight	kg	1820
*From front end of radiator to near end of air filter	0	
FAN		
Diameter Drive Partie	mm	950
Drive Ratio Number of Blades		1,15:1 7
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Material		Plastic



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

Radiator Type         50°C         Tropical           Total Coolant Capacity         L         96           Max. Perm. Coolant Cuttet Temperature         °C         105           Max. Perm. Flow Resist. (Cool. System And Piping)         bar         0,5           Max. Temperature of Coolant Shutdown         °C         98           Max. Temperature of Coolant Shutdown         °C         68           Thermostat Operation Temperature - Initial Open         °C         68           Thermostat Operation Temperature - Full Open         °C         71           Delivery of Coolant Pump         m² /h         10,50           Min. Pressure Before Coolant Pump         bar         0,5           Mark Teac Area         m²         1,88           Rows         Row         5           Matrix Density         Per / Inch         18           Material         Width of Matrix         mm         1302           Width of Matrix         mm         1446           Pressure Cap Setting         RPa         70           Estimated Cooling Air Flow Reserve         kPa         0,15           Engine Pre Heater-Tube (with Circulation Pump)         W         3000           Ubricating Oil Pressure (Rated Speed)         L         <	COOLING SYSTEM		
Max. Perm. Coolant Outlet Temperature         °C         105           Max. Perm. Flow Resist. (Cool. System And Piping)         bar         0.5           Max. Temperature of Coolant Warning         eC         95           Max. Temperature of Coolant Shutdown         eC         98           Thermostat Operation Temperature - Initial Open         eC         68           Thermostat Operation Temperature - Full Open         eC         71           Delivery of Coolant Pump         bar         0,5           Radiator Face Area         m² h         1,88           Rows         Row         5           Radiator Face Area         Row         5           Material         mr         1302           Width of Matrix         mm         1302           Height of Matrix         mm         1446           Pressure Cap Setting         kPa         0,15           Estimated Cooling Air Flow Reserve         Rra         0,15           Estimated Cooling Air Flow Reserve         Rra         0,15           Estimated Cooling Air Flow Reserve         Rra         0,15           Engine Pre Heater-Tube (with Circulation Pump)         W         300           UBRICATION SYSTEM         L         55 <t< td=""><td>Radiator Type</td><td>50ºC</td><td>Tropical</td></t<>	Radiator Type	50ºC	Tropical
Max. Perm. Flow Resist. (Cool. System And Piping)         bar         95           Max. Temperature of Coolant Warning         9C         98           Max. Temperature of Coolant Shutdown         9C         98           Thermostat Operation Temperature - Full Open         9C         36           Thermostat Operation Temperature - Full Open         9C         11           Delivery of Coolant Pump         0C         15           Min. Pressure Before Coolant Pump         m² 1         1,88           Radiator Face Area         Row         1,88           Rows         Row         80         18           Matrix Density         Per / Inch         18           Material         Huminum         100           Width of Matrix         mm         102           Pressure Cap Setting         RPa         70           Estimated Cooling Air Flow Reserve         RPa         0,15           Englier Per Heater- Tube (with Circulation Pump)         Wa         300           UBRICATION SYSTEM           Total System         \$         57           Monimal Motor Operating Temperature         PC         40           Lubricating Oil Pressure (Rated Speed)         bar         5	Total Coolant Capacity	L	96
Max. Temperature of Coolant Shutdown         %C         98           Max. Temperature of Coolant Shutdown         9C         98           Thermostat Operation Temperature - Initial Open         9C         68           Thermostat Operation Temperature - Full Open         9C         71           Delivery of Coolant Pump         m³ h         10,50           Min. Pressure Before Coolant Pump         bar O.5         5           Radiator Face Area         m³ Rows         5           Rows         Row         5           Matrix Density         Per / Inch         18           Material         - Hond         140minum           Width of Matrix         mm         1302           Height of Matrix         mm         1446           Pressure Cap Setting         kPa         0,15           Estimated Cooling Air Flow Reserve         kPa         0,15           Englier Pre Heater-Tube (with Circulation Pump)         W         3000           UBRICATION SYSTEM           Total System         L         5           Minimum Oil Level         C         40           Nominal Motor Operating Temperature         Pe         20           Lubricating Oil Pressure (Rated Speed)         Pra	Max. Perm. Coolant Outlet Temperature	ōC	105
Max. Temperature of Coolant Shutdown         ©C         98           Thermostat Operation Temperature - Initial Open         9C         68           Thermostat Operation Temperature - Full Open         9C         71           Delivery of Coolant Pump         m³ /h         10,50           Min. Pressure Before Coolant Pump         bar         0,5           Radiator Face Area         R°         1,88           Rows         5         4           Matrix Density         la         14           Mitted of Matrix         mm         1302           Width of Matrix         mm         1446           Pressure Cap Setting         kPa         7           Estimated Cooling Air Flow Reserve         kPa         0,15           Engine Pre Heater-Tube (with Circulation Pump)         W         3000           Total System         L         5           Minimum Oil Level         L         5           Nominal Motor Operating Temperature         P         40           Lubricating Oil Pressure (Rated Speed)         kPa         200           Oil / Fuel Consumption Ratio         %         5           Oring I oil Temperature         P         40           Cuttorial Temperature         P	Max. Perm. Flow Resist. (Cool. System And Piping)	bar	0,5
Thermostat Operation Temperature - Initial Open         ©C         68           Thermostat Operation Temperature - Full Open         ©C         71           Delivery of Coolant Pump         m³/h         10,50           Min. Pressure Before Coolant Pump         bar         0,5           Radiator Face Area         m²         1,88           Rows         5         4           Matrix Density         Per / Inch         18           Material         Muminum         1302           Width of Matrix         mm         1446           Pressure Cap Setting         kPa         70           Estimated Cooling Air Flow Reserve         kPa         0,15           Engine Pre Heater-Tube (with Circulation Pump)         W         30           USBRICATION SYSTEM         L         57           Minimum Oil Level         L         55           Nominal Motor Operating Temperature         ©C         40           Lubricating Oil Pressure (Rated Speed)         bar         5           Relief Valve Opens         kPa         200           Oil / Fuel Consumption Ratio         %         5,5           Normal Oil Temperature         %         5,5           Verage         20,5 <t< td=""><td>Max. Temperature of Coolant Warning</td><td>ōC</td><td>95</td></t<>	Max. Temperature of Coolant Warning	ōC	95
Thermostat Operation Temperature - Full Open         °C         71           Delivery of Coolant Pump         m³ / h         10,50           Min. Pressure Before Coolant Pump         bar         0,5           Radiator Face Area         m²         1,88           Rows         5         1           Matrix Density         Per / Inch         18           Material         Juminum           Width of Matrix         mm         1302           Height of Matrix         mm         1446           Pressure Cap Setting         KPa         0           Estimated Cooling Air Flow Reserve         kPa         0           Etimated Time With Circulation Pump)         W         3000           DIA SYSTEM           Total System         L         5           Minimum Oil Level         L         5           Nominal Motor Operating Temperature         %         40           Ubricating Oil Pressure (Rated Speed)         kPa         20           Relief Valve Opens         kPa         20,5           Oil / Fuel Consumption Ratio         %         30,5           Normal Oil Temperature         C         10           ELECTRICAL SYSTEM         Y         24 <td>Max. Temperature of Coolant Shutdown</td> <td>ōС</td> <td>98</td>	Max. Temperature of Coolant Shutdown	ōС	98
Delivery of Coolant Pump         m³/h         10,50           Min. Pressure Before Coolant Pump         bar         0,5           Radiator Face Area         m²         1,88           Rows         5         1           Matrix Density         Per / Inch         18           Material         - Immun         1300           Width of Matrix         mm         1302           Height of Matrix         mm         1446           Pressure Cap Setting         kPa         70           Estimated Cooling Air Flow Reserve         kPa         0,15           Engine Pre Heater-Tube (with Circulation Pump)         W         3000           USBICATION SYSTEM         L         57           Minimum Oil Level         L         55           Nominal Motor Operating Temperature         9°         40           Lubricating Oil Pressure (Rated Speed)         bar         5           Relief Valve Opens         kPa         200           Oll / Fuel Consumption Ratio         %         30,5           Normal Oil Temperature         9°         10           ELECTRICAL SYSTEM         Y         24	Thermostat Operation Temperature - Initial Open	ōС	68
Min. Pressure Before Coolant Pump         bar         0,5           Radiator Face Area         m²         1,88           Rows         5         1           Matrix Density         Per / Inch         18           Material         Aluminum         100           Width of Matrix         mm         1302           Height of Matrix         mm         1446           Pressure Cap Setting         kPa         0           Estimated Cooling Air Flow Reserve         kPa         0,15           Engine Pre Heater-Tube (with Circulation Pump)         W         3000           LUBRICATION SYSTEM           Total System         L         57           Minimum Oil Level         L         55           Nominal Motor Operating Temperature         PC         40           Lubricating Oil Pressure (Rated Speed)         bar         5           Relief Valve Opens         kPa         200           Oil / Fuel Consumption Ratio         %         5,5           Normal Oil Temperature         Pc         110           ELECTRICAL SYSTEM         Y         4	Thermostat Operation Temperature - Full Open	ōС	71
Radiator Face Area       m²       ,88         Rows       5         Matrix Density       Per / Inch       18         Material       Julminum         Width of Matrix       mm       302         Height of Matrix       mm       1446         Pressure Cap Setting       kPa       70         Estimated Cooling Air Flow Reserve       kPa       0,15         Engine Pre Heater-Tube (with Circulation Pump)       kPa       300         USBRICATION SYSTEM         Total System       L       57         Minimum Oil Level       L       55         Nominal Motor Operating Temperature       vC       40         Lubricating Oil Pressure (Rated Speed)       bar       5         Relief Valve Opens       kPa       200         Normal Oil Temperature       vC       30,5         Normal Oil Temperature       vC       10         ELECTRICAL SYSTEM       V       24	Delivery of Coolant Pump	m³/h	10,50
Rows         5           Matrix Density         Per / Inch         18           Material         Aluminum           Width of Matrix         mm         1302           Height of Matrix         mm         1446           Pressure Cap Setting         kPa         70           Estimated Cooling Air Flow Reserve         kPa         0,15           Engine Pre Heater-Tube (with Circulation Pump)         W         3000           LUBRICATION SYSTEM           Total System         L         57           Minimum Oil Level         L         55           Nominal Motor Operating Temperature         *C         40           Lubricating Oil Pressure (Rated Speed)         bar         5           Relief Valve Opens         kPa         200           Oil / Fuel Consumption Ratio         %         50,5           Normal Oil Temperature         *C         10           ELECTRICAL SYSTEM         Y         24	Min. Pressure Before Coolant Pump	bar	0,5
Matrix Density         Per / Inch         18           Material         Aluminum           Width of Matrix         mm         1302           Height of Matrix         mm         1446           Pressure Cap Setting         kPa         70           Estimated Cooling Air Flow Reserve         kPa         0,15           Engine Pre Heater-Tube (with Circulation Pump)         W         3000           LUBRICATION SYSTEM           Total System         L         57           Minimum Oil Level         L         55           Nominal Motor Operating Temperature         °C         40           Lubricating Oil Pressure (Rated Speed)         kPa         200           Relief Valve Opens         kPa         20,5           Oil / Fuel Consumption Ratio         %         40,5           Normal Oil Temperature         °C         40           Vormal Oil Temperature         90,5           ELECTRICAL SYSTEM         110	Radiator Face Area	m²	1,88
MaterialAluminumWidth of Matrixmm1302Height of Matrixmm1446Pressure Cap SettingkPa70Estimated Cooling Air Flow ReservekPa0,15Engine Pre Heater-Tube (with Circulation Pump)w3000UBRICATION SYSTEMTotal SystemL57Minimum Oil LevelL55Nominal Motor Operating Temperature%C40Lubricating Oil Pressure (Rated Speed)bar5Relief Valve OpenskPa200Oil / Fuel Consumption Ratio%5,0,5Normal Oil Temperature%C110ELECTRICAL SYSTEMV24	Rows	Row	5
Width of Matrixmm1302Height of Matrixmm1446Pressure Cap SettingkPa70Estimated Cooling Air Flow ReservekPa0,15Engine Pre Heater-Tube (with Circulation Pump)W3000LUBRICATION SYSTEMTotal SystemL57Minimum Oil LevelL55Nominal Motor Operating Temperature°C40Lubricating Oil Pressure (Rated Speed)bar5Relief Valve OpenskPa200Oil / Fuel Consumption Ratio%50,5Normal Oil Temperature°C110ELECTRICAL SYSTEMV24	Matrix Density	Per / Inch	18
Height of Matrix  Pressure Cap Setting  kPa 70 Estimated Cooling Air Flow Reserve kPa 0,15 Engine Pre Heater-Tube (with Circulation Pump)  W 3000  LUBRICATION SYSTEM  Total System L 10 Nominal Motor Operating Temperature Lubricating Oil Pressure (Rated Speed) bar Relief Valve Opens kPa 00 Normal Oil Temperature V 20 Normal Oil Temperature V 30 Normal Oil Temperature V 40 Normal Oil Temperature Normal Oil Temperature V 50 Normal Oil Temperature V 60 Normal Oil Temperature V 70 Notage V 70 Notage V 70 Notage N 70 Normal Oil Temperature V 70 Notage N 70 Normal Oil Temperature V 70 Notage N 70 Normal Oil Temperature N N 70 N 7	Material		Aluminum
Pressure Cap Setting Estimated Cooling Air Flow Reserve Engine Pre Heater-Tube (with Circulation Pump)  Way 3000  LUBRICATION SYSTEM  Total System Total System Inimum Oil Level Inimum Oil Level Inimum Oil Level Inimum Oil Pressure (Rated Speed) Inimum Oil Pressure (Rated Speed) Inimum Oil Fressure (Rated Speed)	Width of Matrix	mm	1302
Estimated Cooling Air Flow Reserve Engine Pre Heater-Tube (with Circulation Pump)  W 3000  LUBRICATION SYSTEM  Total System L Sof Minimum Oil Level Lubricating Temperature Lubricating Oil Pressure (Rated Speed) ERelief Valve Opens Relief Valve Opens Normal Oil Temperature V C Stephane Relief Valve Opens V Rormal Oil Temperature V C V C V C V C V C V C V C V C V C V	Height of Matrix	mm	1446
Engine Pre Heater-Tube (with Circulation Pump)  LUBRICATION SYSTEM  Total System L Minimum Oil Level Nominal Motor Operating Temperature Lubricating Oil Pressure (Rated Speed) Relief Valve Opens Relief Valve Opens Normal Oil Temperature V C C C C C C C C C C C C C C C C C C	Pressure Cap Setting	kPa	70
LUBRICATION SYSTEMTotal SystemL57Minimum Oil LevelL55Nominal Motor Operating Temperature2°C40Lubricating Oil Pressure (Rated Speed)bar5Relief Valve OpenskPa200Oil / Fuel Consumption Ratio%≤0,5Normal Oil Temperature2°C110ELECTRICAL SYSTEMVoltageV24	Estimated Cooling Air Flow Reserve	kPa	0,15
Total SystemL57Minimum Oil LevelL55Nominal Motor Operating Temperature♥C40Lubricating Oil Pressure (Rated Speed)bar5Relief Valve OpenskPa200Oil / Fuel Consumption Ratio%≤0,5Normal Oil Temperature♥C110ELECTRICAL SYSTEMVoltageV24	Engine Pre Heater-Tube (with Circulation Pump)	W	3000
Minimum Oil Level  Nominal Motor Operating Temperature  Lubricating Oil Pressure (Rated Speed)  Relief Valve Opens  Relief Valve Opens  Normal Oil Temperature  Lubricating Oil Pressure (Rated Speed)  Relief Valve Opens  Normal Oil Temperature  PC  Lubricating Oil Pressure (Rated Speed)  Normal Oil Temperature  Voltage  V  200  110  Lubricating Oil Pressure (Rated Speed)  Normal Oil Temperature  Voltage	LUBRICATION SYSTEM		
Nominal Motor Operating TemperatureºC40Lubricating Oil Pressure (Rated Speed)bar5Relief Valve OpenskPa200Oil / Fuel Consumption Ratio%≤0,5Normal Oil TemperatureºC110ELECTRICAL SYSTEMVoltageV24	Total System	L	57
Lubricating Oil Pressure (Rated Speed)bar5Relief Valve OpenskPa200Oil / Fuel Consumption Ratio%≤0,5Normal Oil Temperature°C110ELECTRICAL SYSTEMVoltageV24	Minimum Oil Level	L	55
Relief Valve OpenskPa200Oil / Fuel Consumption Ratio%≤0,5Normal Oil Temperature°C110ELECTRICAL SYSTEMVoltageV24	Nominal Motor Operating Temperature	ōC	40
Oil / Fuel Consumption Ratio%≤0,5Normal Oil TemperatureºC110ELECTRICAL SYSTEMVoltageV24	Lubricating Oil Pressure (Rated Speed)	bar	5
Normal Oil Temperature	Relief Valve Opens	kPa	200
ELECTRICAL SYSTEM  Voltage  V  24	Oil / Fuel Consumption Ratio	%	≤0,5
Voltage V 24	Normal Oil Temperature	ōС	110
•	ELECTRICAL SYSTEM		
Starter kW 9	Voltage	V	24
	Starter	kW	9
Alternator Output Ampers A 45	Alternator Output Ampers	А	45
Alternator Output Voltage V 28	Alternator Output Voltage	V	28
Batteries Capacity Ah 2X135	Batteries Capacity	Ah	2X135



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



#### **JCB ENERGY DIESEL ENGINE POWER RATINGS**

ENGINE MODEL	B1020JCI		ENGINE FAMILY	JC35	ENGINE SERIES	BII	
		TYPICAL GENERATOR OUTPUT (NI		ENGINE POWE	R		
Speed (Rpm)	Type of Operation			Gr	OSS	Net	
		kVA	kWe	KWm	Нр	kWm	Нр
1500	Stand By(Maximum)	825,0	660,0	725,0	973,2	695,0	932,9
	Prime	749,0	599,0	660,0	885,9	631,0	847,0
1800	Stand By(Maximum)	934,0	747,0	819,0	1.099,3	786,0	1.055,0
	Prime	846,0	677,0	745,0	1.000,0	712,0	955,7

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

50 HZ @ 1500 R/MIN		STAND BY	PRIME
Gross Engine Power	kW	725,0	660,0
Net Engine Power	kW	695,0	631,0
Fan Power Consumption (Belt Pulley Driven)	kW	28,0	28,0
Other Power Loss	kW	2,0	1,5
Mean Effective Pressure	MPa	2,42	2,20
Intake Air Flow	m³/min	59,92	57,07
Exhaust Temperature Limit	ōС	600	600
Exhaust Flow	m ³/ min	146,25	139,28
Boost Pressure Ratio		3,40	3,20
Mean Piston Speed	m / s	7,8	7,8
Cooling Fan Air Flow	m ³/ min	870,0	870,0
Typical Generator Output Power	kVA	825	749
HEAT REJECTION		STAND BY	PRIME
Energy in Fuel (Heat of Combustion)	kW	1813,0	1650,0
Gross Heat to Power	kW	725,0	660,0
Energy to Coolant and Lubricating Oil	kW	308,0	281,0
Heat Dissipation Capacity *	kW	127,0	116,0
Energy to Exhaust	kW	526,0	479,0
Heat to Radiation	kW	54,0	50,0

<sup>\*</sup>Intake Intercooled system



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

60 HZ @ 1800 R/MIN		STAND BY	PRIME
Gross Engine Power	kW	819,0	745,0
Net Engine Power	kW	783,1	709,7
Fan Power Consumption (Belt Pulley Driven)	kW	33,6	33,6
Other Power Loss	kW	2,3	1,7
Mean Effective Pressure	MPa	2,28	2,08
Intake Air Flow	m³/min	67,72	64,40
Exhaust Temperature Limit	ōС	650	650
Exhaust Flow	m³/min	165,27	157,17
Boost Pressure Ratio		3,80	3,60
Mean Piston Speed	m / s	9,3	9,3
Cooling Fan Air Flow	m <sup>3</sup> / min	983,0	983,0
Typical Generator Output Power	kVA	934	846
HEAT REJECTION		STAND BY	PRIME
Energy in Fuel (Heat of Combustion)	kW	1962,0	1751,0
Gross Heat to Power	kW	819,0	712,0
Energy to Coolant and Lubricating Oil	kW	348,0	317,0
Heat Dissipation Capacity *	kW	144,0	130,0
Energy to Exhaust	kW	594,0	540,0
Heat to Radiation	kW	57,0	52,0
*			

<sup>\*</sup>Intake Intercooled system

#### **JCB ALTERNATOR TECHNICAL PARAMETERS AND SPECIFICATIONS**



ALTERNATOR TECHN	NICAL PARAMETERS				
Insulation Class		Н	Field Control System		Self-Excited
<b>Winding Pitch</b>		2/3 - (N° 6)	A.V.R. Model	Standard	MX341+PMG
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.	1,035	Wave Form: I.E.C. = THF - (*)	%	< 2
<b>Bearing Drive</b>	N/A	-	Bearing Non-Drive	Bearing	6314-2RZ
<b>Rotor Winding</b>	100%	Copper	Stator Winding	100%	Copper



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#### **ALTERNATOR SPECIFICATIONS**

50 HZ / 231-400V COS	Q 0,8 / 1500 RPM								
STANDARD USING ALTERNATOR				OPTIONAL USING ALTERNATOR					
BRAND/MODEL	JCBENERGY	JCB 355MXA		LEROY-S	OMER"	TAL049C	STAMFORD	LV6C	
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	750,0	750,0	778,0	-	825,0	825,0	856,0	-
OUTPUT POWER	kW	600,0	600,0	622,4	-	660,0	660,0	648,8	-

60 HZ / 277-480V COSQ (	0,8 / 1800 RPM								
STANDARD USING ALTERNATOR					JSING ALTER	RNATOR			
BRAND/MODEL	JCBENERGY	JCB 355MX	(	LEROY-S	OMER T	AL049B	STAMFO	ORD	HC5F
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	789,0	831,0	875,0	-	868,0	914,0	963,0	-
OUTPUT POWER	kW	631,2	664,8	700,0	-	694,4	731,2	770,4	-



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

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)

#### **CONTROL PANEL SPECIFICATIONS**



**Low Water Temperature** 



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

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

#### **CONTROL MODULE TECHNICAL PARAMETERS**

Brand	JCBENERGY	Brand	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	
<b>Current Transformer Secondary</b>	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	



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	- 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
- o Drying and stabilizing on 200 ºC Ovens
- 1500 Hour Salt Test
- o 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)
- Radiator water Filling Cap
- Daily Fuel Tank, External Fuel Tank

# Our Quality Certificates

