

11111

THE REPORT OF

ISO

150 27001

GCR CERT

AND A

ARS

GCR GERT

JCP SERIES



1

www.jcbenergy.es



231 / 400 V – 50 Hz





GENERATOR GENERAL INFORMATION

FREQUENCY	VOLTAGE	POWER FACTOR	SPEED	DIESEL EN	IGINE	ALTERN	ATOR		TYPE OF	GENER	ATOR O	υτρυτ
Hz	V	Cos Q	Rpm	Brand	Model	Brand	Model	Series	Operation	kVA	kW	А
									Standby	1.500,0	1.200,0	2.167,6
50	231/400	0.8	1500	PERKINS	4012-46TWG3A	ENER	JCB	B 400L1	Prime	1.363,6	1.090,9	1.970,6
						ΥGΥ.			Continuous	954,5	763,6	1.379,4
 Diesel Engines with Advanced Technology and Quality Alternators with Advanced Technology and Quality Low Exhaust Emission 			• Fuel Filter w	ith Wat	er and Pa	rticle Sep	arator					
	Hz 50 gines with Adva rs with Advanc	Hz V 50 231/400 gines with Advanced Techn rs with Advanced Technolo	FREQUENCY VOLTAGE FACTOR Hz V Cos Q 50 231/400 0.8 gines with Advanced Technology and Quality rs with Advanced Technology and Quality	FREQUENCY VOLTAGE FACTOR SPEED Hz V Cos Q Rpm 50 231/400 0.8 1500	FREQUENCY VOLTAGE FACTOR SPEED DIESEL EN Hz V Cos Q Rpm Brand 50 231/400 0.8 1500 PERKINS gines with Advanced Technology and Quality rs with Advanced Technology and Quality	FREQUENCY VOLTAGE FACTOR SPEED DIESEL ENGINE Hz V Cos Q Rpm Brand Model 50 231/400 0.8 1500 PERKINS 4012-46TWG3A gines with Advanced Technology and Quality rs with Advanced Technology and Quality Fuel Filter w Fuel Filter w 	FREQUENCY VOLTAGE FACTOR SPEED DIESEL ENGINE ALTERN Hz V Cos Q Rpm Brand Model Brand 50 231/400 0.8 1500 PERKINS 4012-46TWG3A Image: Comparison of the comparison	FREQUENCY VOLTAGE FACTOR SPEED DIESEL ENGINE ALTERNATOR Hz V Cos Q Rpm Brand Model Brand Model 50 231/400 0.8 1500 PERKINS 4012-46TWG3A Image: Comparison of the second seco	FREQUENCY VOLTAGE FACTOR SPEED DIESEL ENGINE ALTERNATOR Hz V Cos Q Rpm Brand Model Brand Model Series 50 231/400 0.8 1500 PERKINS 4012-46TWG3A JCB 400L1 gines with Advanced Technology and Quality • Tropical 50 °C Radiator, First Class Pro • Fuel Filter with Water and Particle Segret	FREQUENCY VOLTAGE FACTOR SPEED DIESEL ENGINE ALTERNATOR TYPE OF Hz V Cos Q Rpm Brand Model Brand Model Series Operation 50 231/400 0.8 1500 PERKINS 4012-46TWG3A JCB 400L1 Prime gines with Advanced Technology and Quality • Tropical 50 °C Radiator, First Class Product Support • Tropical 50 °C Radiator, First Class Product Support	FREQUENCY VOLTAGE FACTOR SPEED DIESEL ENGINE ALTERNATOR TYPE OF GENER Hz V Cos Q Rpm Brand Model Brand Model Series Operation KVA 50 231/400 0.8 1500 PERKINS 4012-46TWG3A JCB 400L1 Prime 1.363,6 gines with Advanced Technology and Quality • Tropical 50 °C Radiator, First Class Product Support • Tropical 50 °C Radiator, First Class Product Support • Fuel Filter with Water and Particle Separator	FREQUENCY VOLTAGE FACTOR SPEED DIESEL ENGINE ALTERNATOR TYPE OF GENERATOR O Hz V Cos Q Rpm Brand Model Brand Model Series Operation kVA kW 50 231/400 0.8 1500 PERKINS 4012-46TWG3A JCB 400L1 Prime 1.363,6 1.090,9 gines with Advanced Technology and Quality • Tropical 50 °C Radiator, First Class Product Support • Tropical 50 °C Radiator, First Class Product Support • Fuel Filter with Water and Particle Separator

 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.



231 / 400 V – 50 Hz



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.

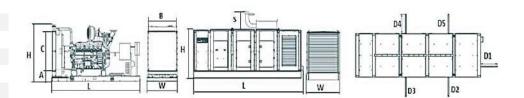
GENERATOR DIMENSIONS AND TECHNICAL DRAWINGS





VALUES		OPEN TYPE GENERATOR	CANOPY TYPE GENERATOR
WIDTH	mm	1800	2352
LENGTH	mm	5070	7883
HEIGHT	mm	2291	2706
WEIGHT (NET)	Kg	9570	14590
FUEL TANK CAPACITY	L	2500	2500

SYMBOL	OPEN	CANOPY
L	5070	7883
W	1800	2352
н	2291	2706
S		700
А	210	
В	1805	
С	1644	
D1		1044
D2		1044
D3		1044
D4		1044
D5		1044



PERCENT OF PRIME POWER	FUEL CONSUMPTION
	l/hr
110 %	333,32
100 %	297,54
75 %	224,21
50 %	158,59





DIESEL ENGINE MAIN TECHNICAL PARAMETERS

number of Qlinders 12 Configuration Vie 60" Appriation Turbo Charged & WAC-Intercooled Compussion Ratio Direct injection Bore mm 18.1 Bore mm 180 Stroke mm 180 Obsplacement L 45,842 Governing Type Electronic Galance Governing Type Counterclockwise Electronic Governing Type Counterclockwise Filter Filter Vie ApS,5A,2B,A,4B,AB,A,3B Electronic Governing Type Vie Counterclockwise Filter Filter Dyrype, Replaceable Filter Filter Dyrype, Replaceable Filter Filter Vie Stafer Vie Stafer Voltage V 24 Stafer A/A 40 Alternator Output Ampers A 40 Alternator Output Ampers A 40 Alternator Output Ampers A 40 Number of Blades <th>GENERAL</th> <th></th> <th></th>	GENERAL		
ConfigurationVee 60°AspirationTurb Charged & WAC-IntercoledCompression RatioDirect injectionCompression RatiommBoremmStrökemmStrökemmStrökemmStrökeStrökeGoverning TypeElectronicGoverning TypeStrökeGoverning TypeStrökeStrökeStrökeRotationStrökeRotationStrökeFiring OrderStröke SA2,B3,A4,B5,A4,B2,A5,B4,A4,B2EmissionVer 100 (Ströke)Firing OrderStrökeStrökeDry Type, ReplaceableFiring TrifterStrökeStrafterNeplaceableStrafterVel 24StarterAdu CallAlternator Output VoltageVStarterStrafterAlternator Output VoltageVStarterStroleStrole StrökeI20Strole StrökeI20Strole StroleI20Strole StroleI20Strole StroleI20Strole StroleI20Strole StroleI20Strole StroleStroleStrole StroleStrole StroleStrole StroleI20Strole StroleI20Strole Strole StroleI20Strole Strole Str			12
AppinonTurbo Charged & WAC-IntercooledCombustion SystemDirect injectionCompression RatioInter injectionBoremm160Strokemm180Objectement45,842Governing TypeElectronicGoverning ClassG3RotationStrokeG3RotationStrokeStrokeFiring Order-StrokeFiring Order-StrokeFiring Order-StrokeFiring Order-StrokeFiriter-Diry Type, ReplaceableConterning Class-StrokeStroke-StrokeFiriter-Element Type, ReplaceableColl Filter-Element Type, ReplaceableColl Filter-Element Type, ReplaceableColl Stroke-24Stater-24Alternator Output VoltageV24Alternator Output VoltageA40Alternator Output VoltageA10.9Dinker-StrokeProve-StrokeAlternator Output Voltage-10.9Orik Ratio-10.9Stater-StrokeAlternator Output Voltage-10.9Coll Stroke-10.9Material Crospection-10.9Stroke Stroke-10.9Stroke Stroke-10.9Stroke Stroke-10.9Mate			
Combustion SystemDirect injectionCompression RatioinitBoremm160Strokemm190Strokemm190Strokeinit190Governing TypeL45,842Governing TypeCounterclockwiseGoverning TypeInit StrokeGoverning TypeGoverning TypeInit StrokeGoverning TypeGoverning TypeInit StrokeGoverning TypeRotationInit StrokeGoverning TypeFiring OrderInit StrokeFiring OrderHirtsInit StrokeFiring OrderGoverning TypeProphereableFiring OrderFiring OrderInit StrokeFiring OrderGoverning TypeInit StrokeFiring OrderGoverning Type	0		
Compresion Ratio13.1Boremm160Strokemm190Displacement190190Coverning TypeLElectronicGoverning TypeStatementGunterclockwiseRotation14.68,5.42,3.48,6.4,18,2.4.58,4.4,38Firing Order14.68,5.42,3.44,6.6,4.18,2.4.58,4.4,38Emission1Statement Type, ReplaceableFiring Order14.68,5.42,3.44,6.6,4.18,2.4.58,4.4,38Firing Order1Statement Type, ReplaceableFiring Context10BriterFiring Context10BriterFiring Context10Statement Type, ReplaceableContext System2%2%StaterXag, 2Alternator Output AmpersAh4200FAR15.0StatementForder1010.9Stateria13.0StatementContext System12StatementForder12StatementForder12StatementForder12StatementForder10.9StatementForder10.9StatementForder10.9StatementForder10.9StatementForder10.9StatementForder10.9StatementForder12StatementForder12StatementForder13.9StatementForder12StatementForder13.9Statement <td< td=""><td></td><td></td><td>-</td></td<>			-
Boremm160Strokemm190DiplacementL45.842Governing TypeElectronicGoverning TypeStableGoverning ClassContrectockwiseRotationYouther StableRotationPuel OptimisedFiring OrderPuel OptimisedHTERSFuel OptimisedAir FilterElement Type, ReplaceableFuel FilterElement Type, ReplaceableOli FilterElement Type, ReplaceableVoltageV24StarterKW2X8,2Alternator Output AmpersA40Alternator Output VoltageV28Batteries CapacityAh4200Alternator Output VoltageV10.9Number of BladesInou1330TypeSouther10Orive RatioSouther10TypeSouther10MaterialSouther10TypeSouther10MaterialSouther10Coolant CapacityL10Max. Perm. Foolant Outlet TemperatureSoutherThermostat Operature of Coolant WarningSouther10.5Max. Temperature of Coolant WarningC13.80PerlynerSouther10.5Max. Temperature of Coolant StudiownPerlyne15.80Max. Temperature of Coolant WarningC10.5Max. Temperature of Full OpenRo15.80PerlynerSouther15.80 <tr< td=""><td></td><td></td><td></td></tr<>			
Strokenm190DisplacementL45,842Governing TypeLectronicGoverning ClassCounterclockwiseRotation-14,68,5,28,34,46,6,41,8,2A,58,44,38Firing Order-14,68,5A,28,3A,46,6A,18,2A,58,4A,38Firing Order-14,68,5A,28,3A,46,6A,18,2A,58,4A,38Firing Order-14,68,5A,28,3A,46,6A,18,2A,58,4A,38Firing Order-14,68,5A,28,3A,46,6A,18,2A,58,4A,38Firing Order-14,68,5A,28,3A,46,6A,18,2A,58,4A,38Firing Order-10,79,20,8eplaceableFiring Order-10,79,20,8eplaceableFiring Order-10,79,20,8eplaceableColl Filter-10,80,20,20,20,20,20,20,20,20,20,20,20,20,20	-	mm	160
Governing TypeElectronicGoverning ClassG3RotationCounterclockwiseFiring Order1A,685,A218,2A,58.A4,38EmissionVell OptimisedFILTENSElement Type, ReplaceableFILTENSElement Type, ReplaceableCoult Age StatusElement Type, ReplaceableOil FilterElement Type, ReplaceableCoult Age StatusStatusStatterX8,2Alternator Output AmpersAAlternator Output VoltageVStattersX8,2StattersAAlternator Output VoltageAAlternator Output VoltageNameStattersJ30Alternator Output VoltageAAlternator Output VoltageNameStattersJ30Material10.9Coolino StreemJ30Material10.9TypeSo%CRodiator StypeSo%CRodiator StypeSo%CRodiator Coolant Outpat Warning%CMax. Perm. Folow Resist, (Cool. System And Piping)%SMax. Temperature of Coolant Shutdown%C%SSo%CThermostat Operation Temperature%IMax. Temperature of Coolant Shutdown%C%SSo%CMax. Temperature of Coolant Shutdown%C%SSo%CMax. Temperature of Coolant Shutdown%C%SSo%CMax. Temperature of Coolant Shutdown%CMax. Temperature of Coolant Shutdown%C <t< td=""><td>Stroke</td><td>mm</td><td>190</td></t<>	Stroke	mm	190
Governing TypeElectronicGoverning ClassG3RotationCounterclockwiseFiring Order1A,685,A218,2A,58.A4,38EmissionVell OptimisedFILTENSElement Type, ReplaceableFILTENSElement Type, ReplaceableCoult Age StatusElement Type, ReplaceableOil FilterElement Type, ReplaceableCoult Age StatusStatusStatterX8,2Alternator Output AmpersAAlternator Output VoltageVStattersX8,2StattersAAlternator Output VoltageAAlternator Output VoltageNameStattersJ30Alternator Output VoltageAAlternator Output VoltageNameStattersJ30Material10.9Coolino StreemJ30Material10.9TypeSo%CRodiator StypeSo%CRodiator StypeSo%CRodiator Coolant Outpat Warning%CMax. Perm. Folow Resist, (Cool. System And Piping)%SMax. Temperature of Coolant Shutdown%C%SSo%CThermostat Operation Temperature%IMax. Temperature of Coolant Shutdown%C%SSo%CMax. Temperature of Coolant Shutdown%C%SSo%CMax. Temperature of Coolant Shutdown%C%SSo%CMax. Temperature of Coolant Shutdown%CMax. Temperature of Coolant Shutdown%C <t< td=""><td>Displacement</td><td>L</td><td>45,842</td></t<>	Displacement	L	45,842
Governing ClassG3RotationCounterclockwiseFring Order1,6,8,5,A,2,8,3,4,4,8,6,A,18,2,A,5,8,4,A,38EmissionFuel OptimisedEntrestFuel OptimisedHITENSDry Type, ReplaceableFuel FilterDry Type, ReplaceableGil FilterDry Type, ReplaceableOll FilterElement Type, Particulate TrapELECTRICAL SYSTEMVKarterKWStarterKWAlternator Output AmpersAAlternator Output AmpersAAlternator Output VoltageVBatteries CapacityAhAlternator Output VoltageVStarterI.0.9Number of BladesI.0.9TypeSoloColline CrapacityI.0.9Number of BladesI.1TypeSoloColline CapacityQCStarterialSoloMax Perm. Coolant Outlet TemperatureSoloColline CapacityLMax. Permerature of Coolant ShutdownSoloRutaror Temperature of Coolant ShutdownSoloRutaror Temperature of Coolant ShutdownSoloRutaror Starterial Operation Temperature - Initial OpenSoloRutaror Tempe			
RotationContencionFiring Order1A,68,5A,28,3A,48,6A,18,2A,58,AA,38Firing OrderFuel OptimisedFilterFuel OptimisedAir FilterDry Type, ReplaceableFilterElement Type, ReplaceableFilterElement Type, ReplaceableOil FilterVStarterX8,22Alternator Output AmpersAAlternator Output VoltageVStarterX8,22Alternator Output VoltageAAlternator Output VoltageABatteris CapacityAlternator Output VoltageVigSignerPier RatioInspaceDiameterMameriaMaterialInspaceVigSignerRatteris CapacityAluminumNumber of BladesInspaceMaterialInspaceCooline CapacityInspaceAsk Perm. Flow Resti. (Cool. System And Piping)SignerMax. Temperature of Coolant StutionSignerMax. Temperature of Coolant StutionSignerMax. Temperature of Coolant StutionSignerMax. Temperature of Coolant StutionSignerNamere Refore Coolant PumpSignerMin. Pressure Refore Coolant PumpSignerMin. Pressure Refore Coolant PumpSignerMin. Pressure Refore Coolant PumpSignerMin. Pressure Refore Coolant PumpSignerNamere Refore Coolant PumpSignerNin. Pressure Refore Coolant PumpSignerNin. Pressure Refore Coolant PumpSign			G3
EnsisonFuel OptimisedFITERSOry Type, ReplaceableFuel FilterElement Type, ReplaceableFuel FilterElement Type, ReplaceableOil FilterElement Type, ReplaceableOil FilterElement Type, Particulate TrapELECTRICAL SYSTEMVVotageVStarterKWAlternator Output AmpersAAlternator Output VotageVBatteries CapatiyaNaPatteries CapatiyaNaPatteries CapatiyaManoPatteries CapatiyaNaPatteries CapatiyaNaPatteries CapatiyaNaPatteries CapatiyaNaPatteries CapatiyaNaPatteries CapatiyaNaPatteries CapatiyaNaPatteries CapatiyaNaNumber of BladesIno.9Number of BladesSoftTypeSoftRadiator TypeSoftCollens SystemSoftRadiator TypeSoftMax. Perm. Coolant Outlet TemperaturePCMax. Perm. Fold Rout SubdownPCMax. Temperature of Coolant ShutdownPCMax. Temperature of Coolant ShutdownPCNaw. Temperature of Coolant ShutdownPCNaw. Temperature - Fill OpenPCNaw. Temperature - Fill OpenPCNaw. Temperature - Fill OpenPCNaw. Temperature - Fill OpenPCNaw. Temperature - Fill OpenPCNorder Coolant ShutdownPa'Norder Coolant			Counterclockwise
EnsisonFuel OptimisedFITERSOry Type, ReplaceableFuel FilterElement Type, ReplaceableFuel FilterElement Type, ReplaceableOil FilterElement Type, ReplaceableOil FilterElement Type, Particulate TrapELECTRICAL SYSTEMVVotageVStarterKWAlternator Output AmpersAAlternator Output VotageVBatteries CapatiyaNaPatteries CapatiyaNaPatteries CapatiyaManoPatteries CapatiyaNaPatteries CapatiyaNaPatteries CapatiyaNaPatteries CapatiyaNaPatteries CapatiyaNaPatteries CapatiyaNaPatteries CapatiyaNaPatteries CapatiyaNaNumber of BladesIno.9Number of BladesSoftTypeSoftRadiator TypeSoftCollens SystemSoftRadiator TypeSoftMax. Perm. Coolant Outlet TemperaturePCMax. Perm. Fold Rout SubdownPCMax. Temperature of Coolant ShutdownPCMax. Temperature of Coolant ShutdownPCNaw. Temperature of Coolant ShutdownPCNaw. Temperature - Fill OpenPCNaw. Temperature - Fill OpenPCNaw. Temperature - Fill OpenPCNaw. Temperature - Fill OpenPCNaw. Temperature - Fill OpenPCNorder Coolant ShutdownPa'Norder Coolant	Firing Order		1A,6B,5A,2B,3A,4B,6A,1B,2A,5B.4A,3B
Fitters Dry Type, Replaceable Air Filter Dry Type, Replaceable Fuel Filter Element Type, Replaceable Oil Filter Element Type, Replaceable Valage V 24 Starter KW 24 Alternator Output Monters A 40 Alternator Output Voltage V 28 Batteries Capacity Ah 4200 FAN 10.0 10.0 Number of Blades In 0.9 10.0 Number of Blades 10.0 10.0 Type Blowing 10 COUNS SYSTEM It 201 Coll System And Piping S0°C Tropical Total Coolant Capacity L 201 Max. Perm. Coolant Outlet Temperature °C 30 Max. Perm. Fow Resist. (Cool. System And Piping) S0 5 Max. Temperature of Coolant Shutdown °C<	-		
Fuel FilterElement Type, ReplaceableOil FilterElement Type, Particulate TrapELECTRICAL SYSTEMV24VoltageV24StarterKW20Alternator Output AmpersA40Alternator Output VoltageV28Batteries CapacityAh40Alternator Output VoltageV28Batteries CapacityMn1530FAN	FILTERS		
Fuel FilterElement Type, ReplaceableOil FilterElement Type, Particulate TrapELECTRICAL SYSTEMV24VoltageV24StarterKW20Alternator Output AmpersA40Alternator Output VoltageV28Batteries CapacityAh40Alternator Output VoltageV28Batteries CapacityMn1530FAN	Air Filter		Dry Type, Replaceable
Oil FilterElement Type, Particulate TrapELECTRICAL SYSTEMVELECTRICAL SYSTEMVStarterVStarterKW2X8,2Alternator Output AmpersA40Alternator Output VoltageV28Batteries CapacityAh4X200FAN	Fuel Filter		
ELECTRICAL SYSTEMVoltageV24StarterkW228,2Alternator Output AmpersA40Alternator Output VoltageV28Batteries CapacityAh4200FAN1530DiameterIn:0.9Drive Ratio10.9.9Number of Blades12MaterialMaluminumTypeBowingCOLING SYSTEM103Colling System103Max. Perm. Coolant Outlet Temperature9C103Max. Perm. Coolant Outlet Temperature9C95Max. Temperature of Coolant Shutdown9C95Max. Temperature of Coolant Shutdown9C95Max. Temperature of Coolant Shutdown9C95Deliver of Coolant Shutdown9C95Deliver of Coolant Shutdown9C95Max. Temperature of Coolant Shutdown9C95Max. T	Oil Filter		
StatekW2x8,2Alternator Output AmpersA40Alternator Output VoltageV28Batteries CapacityAh4x200FAN530FAN10.9Number of Blades10.9Number of Blades12MaterialAluminumTypeBovingsCOUNG SYSTEMCOUNG SYSTEM103Counds CapacityLMak. Perm. Flow Resist. (Cool. System And Piping)barMax. Temperature of Coolant Shutdown°CMax. Temperature of Coolant Shutdown°CMax. Temperature of Coolant Shutdown°CPerivery of Coolant Pump°CPerivery of Coolant Pump°CPerivery of Coolant Pump°CPerivery of Coolant Pump°CPerivery of Coolant Pump°CMax. Temperature of Coolant Shutdown°CPerivery of Coolant Pump°CMax. Temperature of Coolant Shutdown°CPerivery of Coolant Pump°CMax. Temperature of Coolant Shutdown°CPerivery of Coolant Pump°CMax Temperature of Coolant Pump°CMax°CPerivery of Coolant Pump°CMarcine°CVisiti of Matrix°CMaterial°CWith of Matrix°CPerisure Befor Coolant Pump°CPerisure Befor Coolant Pump°CPerisure Befor Coolant Pump°CPerisure Befor Coolant Pump°C<	ELECTRICAL SYSTEM		
Alternator Output VoltageA4Alternator Output VoltageV28Batteries CapacityAh4X200EAH1530Drive Ratiomm1530Drive Ratio10.910.9Number of Blades12Material-AluminumType010.9COOLING SYSTEM-10.9Radiator Type50°CTropicalTotal Coolant CapacityL201Max. Perm. Flow Resist. (Cool. System And Piping)bar0,5Max. Temperature of Coolant Warning°C95Max. Temperature of Coolant Shutdown°C98Delivery of Coolant Pump°C85Delivery of Coolant Pump°C85Delivery of Coolant Pumpm³/ h15,80Min. Pressure Before Coolant Pumpm².96Radiator Face Aream².96RowsA4Matria Densitymm1805Height of Matrixmm1805Height of Matrixmm1644Pressure CapSettingKPa.0125	Voltage	V	24
Alternator Output VoltageV28Batteries CapacityAh4X200FANConstructionmm1530Drive Ratiomm1530Number of Blades12MaterialAluminumTypeBlowingCOLING SYSTEMIterationColling SystemS0°CTropicalTotal Coolant CapacityL201Max. Perm. Coolant Outlet Temperature%C95Max. Temperature of Coolant System And Piping)bar0,5Max. Temperature of Coolant Warning%C95Max. Temperature of Coolant Studiown%C98Thermostat Operation Temperature - Initial Open%C85Delivery of Coolant Pumpm³ /h15,80Min. Pressure Before Coolant Pumpbar2,96Radiator Face Areama*Rew4Matrix DensityRow4Width of Matrixmm1805Height of Matrixmm1644Pressure Capacity FilongkPa0,125	Starter	kW	2X8,2
Batteries CapacityAh4X200FANFANDiametermm1530Drive Ratio10.9Number of Blades12MaterialAluminumTypeBlowingCOUING SYSTEMRadiator Type50°CTropicalTotal Colant CapacityL201Max. Perm. Golant Outlet Temperature°C103Max. Perm. Flow Resist. (Cool. System And Piping)bar0,5Max. Temperature of Coolant Warning°C98Couls Colant CapacityCC98Max. Temperature of Coolant Shutdown°C98Colant Operation Temperature - Initial Open°C71Thermostat Operation Temperature - Initial Open°C85Delivery of Coolant Pumpm³ h15,80Min. Pressure Before Coolant Pumpbar0,5Radiator Face Aream²2,966RowsRow4Matrix Densitymm1805Matrix Densitymm1644Pressure Cap SettingKPa0,125	Alternator Output Ampers	А	40
FANDiametermm1530Diametermm1530Drive Ratio10.9Number of Blades12Material12AluminumType12Radiator TypeS0ºCTropicalCOLING SYSTEMColling GystemColling GystemColling GystemOdiat CapacityL201Nax. Perm. Coolant Outlet Temperature%C103Max. Perm. Flow Resist. (Cool. System And Piping)bar0,55Max. Temperature of Coolant Shutdown%C989Max. Temperature of Coolant Shutdown%C985Delivery of Coolant Pump%C7115,80Min. Pressure Before Coolant Pumpbar0,512Radiator Face Aream²2,96RowRowsRow44Matrix DensityPer / Inch7Materialmm1805Width of Matrixmm1804Pressure Cap SettingkPa70Estimated Cooling Air Flow ReservekPa70	Alternator Output Voltage	V	28
FANDiametermm1530Drive Ratio1:0.9Number of Blades12MaterialAluminumTypeBlowingCOLING SYSTEM1Radiator Type50°CTotal Colant CapacityLOtal Colant CapacityLMax. Perm. Coolant Outlet Temperature°CMax. Perm. Coolant Outlet Temperature°CMax. Perm. Goloant System And Piping)barMax. Temperature of Coolant Warning°CMax. Temperature of Coolant Shutdown°CPersoure of Coolant Shutdown°CPersoure Store Temperature - Initial Open°CPelivery of Coolant Pumpm³/hMin. Pressure Before Coolant Pumpm³/hMatrix DensityPer / InchMatrialmmWidth of MatrixmmWidth of MatrixmmHeight of MatrixmmStore Cap SettingkPaKapacie70Leistinated Cooling Air Flow ReservekPaKapacie70		Ah	4X200
Drive Ratio1:0.9Number of Blades12MaterialAluminumTypeBlowingCOOLING SYSTEMTropicalRadiator Type50°CTropicalTotal Coolant CapacityL201Max. Perm. Coolant Outlet Temperature°C103Max. Perm. Flow Resist. (Cool. System And Piping)bar0,5Max. Temperature of Coolant Warning°C98Max. Temperature of Coolant Shutdown°C85Delivery of Coolant Pumpm³ / h15,80Delivery of Coolant Pumpm²2,96Matrix DensityPer / Inch7Matrialren1805Matrialmm1805Vertialmm1644Pressure Gap SettingkPa0,125			
Number of Blades12MaterialAluminumTypeBlowingCOLING SYSTEMRadiator Type50°CTropicalTotal Coolant CapacityL201Max. Perm. Coolant Outlet Temperature%C103Max. Perm. Flow Resist. (Cool. System And Piping)bar0,5Max. Temperature of Coolant Warning%C%BMax. Temperature of Coolant Shutdown%C%BThermostat Operation Temperature - Initial Open%C%SDelivery of Coolant Pump%C%SMadiator Face Areama²%GRowsAquinum0,5Matrialmm4MatrialMaxMaterialmm1805Meterialmm1805Height of Matrixmm1644Height of MatrixKPa0,125	Diameter	mm	1530
MaterialAluminumTypeBlowingBlowingS0°CTropicalColland CapacityL201Max. Perm. Coolant Outlet Temperature°CMax. Perm. Flow Resist. (Cool. System And Piping)barMax. Temperature of Coolant Warning°C%C95Max. Temperature of Coolant Shutdown°C%C98Thermostat Operation Temperature - Initial Open°C%C85Delivery of Coolant Pumpm³/ hMaitrix DensityPer / InchMatrix DensityRowMatrix DensityPer / InchMatrix DensityMinMaterialMinWidth of MatrixmmHeight of MatrixmmHeight of MatrixMinFressure Cap SettingKPaKPa0,125	Drive Ratio		1:0.9
TypeBlowingCOOLING SYSTEMRadiator Type50°CTotal Coolant CapacityLOtal Coolant Capacity°CMax. Perm. Coolant Outlet Temperature°CMax. Perm. Flow Resist. (Cool. System And Piping)barMax. Temperature of Coolant Warning°CMax. Temperature of Coolant Warning°CMax. Temperature of Coolant Shutdown°CPermostat Operation Temperature - Initial Open°CPermostat Operation Temperature - Full Open°CDelivery of Coolant Pump°CMin. Pressure Before Coolant Pumpm³/ hMark Tenest0,5Radiator Face Aream²RowsRowMaterialPer / InchMaterialMinWidt of MatrixmmHeight of MatrixmmHeight of MatrixMinKeas70Estimated Cooling Air Flow ReservekPaKeas0,125	Number of Blades		12
COOLING SYSTEMRadiator Type50°CTropicalTotal Coolant CapacityL201Max. Perm. Coolant Outlet Temperature°C103Max. Perm. Flow Resist. (Cool. System And Piping)bar0,5Max. Temperature of Coolant Warning°C95Max. Temperature of Coolant Shutdown°C98Thermostat Operation Temperature - Initial Open°C71Persoure Of Coolant Pump°C85Delivery of Coolant Pumpm ³/ h15,80Min. Pressure Before Coolant Pumpbar0,5Radiator Face Aream²2,96RowsRow4Matrix DensityPer / Inch7Materialmm1805Width of Matrixmm1644Pressure Cap SettingkPa0,125	Material		Aluminum
Radiator Type50°CTropicalTotal Coolant CapacityL201Max. Perm. Coolant Outlet Temperature°C103Max. Perm. Flow Resist. (Cool. System And Piping)bar0,5Max. Temperature of Coolant Warning°C95Max. Temperature of Coolant Shutdown°C98Thermostat Operation Temperature - Initial Open°C85Delivery of Coolant PumpeC85Delivery of Coolant Pumpbar0,5Min. Pressure Before Coolant Pumpbar0,5Radiator Face Aream²2,96Rows41Matrix DensityPer / Inch1Width of Matrixmm1805Height of Matrixmm1644Pressure Cap SettingkPa0,125			Blowing
Total Colart CapacityL201Max. Perm. Coolant Outlet Temperature°C103Max. Perm. Flow Resist. (Cool. System And Piping)bar0,5Max. Temperature of Coolant Warning°C95Max. Temperature of Coolant Shutdown°C98Thermostat Operation Temperature - Initial Open°C71Thermostat Operation Temperature - Full Open°C85Delivery of Coolant Pumpm³/ h15,80Min. Pressure Before Coolant Pumpbar0,5Radiator Face Aream²2,96RowsRow4Matrix DensityPer / Inch7Materialmm1805Width of Matrixmm1644Pressure Cap SettingkPa70Estimated Cooling Air Flow ReservekPa0,125	COOLING SYSTEM		
Max. Perm. Coolant Outlet Temperature°C103Max. Perm. Flow Resist. (Cool. System And Piping)bar0,5Max. Temperature of Coolant Warning°C95Max. Temperature of Coolant Shutdown°C98Thermostat Operation Temperature - Initial Open°C71Thermostat Operation Temperature - Full Open°C85Delivery of Coolant Pumpm³/ h15,80Min. Pressure Before Coolant Pumpbar0,5Radiator Face Aream²2,96Rows4Matrix DensityPer / Inch7Materialmm1805Width of Matrixmm1644Pressure Cap SettingkPa70Estimated Cooling Air Flow ReservekPa0,125	Radiator Type	50ºC	Tropical
Max. Perm. Flow Resist. (Cool. System And Piping)bar0,5Max. Temperature of Coolant Warning°C95Max. Temperature of Coolant Shutdown°C98Thermostat Operation Temperature - Initial Open°C71Thermostat Operation Temperature - Full Open°C85Delivery of Coolant Pumpm³ / h15,80Min. Pressure Before Coolant Pumpbar0,5Radiator Face Aream²2,96Rows4Matrix DensityPer / Inch7Materialmm1805Width of Matrixmm1644Pressure Cap SettingkPa70Estimated Cooling Air Flow ReservekPa0,125	Total Coolant Capacity	L	201
Max. Temperature of Coolant WarningPC95Max. Temperature of Coolant ShutdownPC98Thermostat Operation Temperature - Initial OpenPC71Thermostat Operation Temperature - Full OpenPC85Delivery of Coolant Pumpm³ / h15,80Min. Pressure Before Coolant Pumpbar0,5Radiator Face Aream²2,96Rows4Matrix DensityPer / Inch7Materialmm1805Width of Matrixmm1644Pressure Cap SettingkPa70Estimated Cooling Air Flow ReservekPa0,125	Max. Perm. Coolant Outlet Temperature	°C	103
Max. Temperature of Coolant Shutdown°C98Thermostat Operation Temperature - Initial Open°C71Thermostat Operation Temperature - Full Open°C85Delivery of Coolant Pumpm ³/ h15,80Min. Pressure Before Coolant Pumpbar0,5Radiator Face Aream²2,96Rows4Matrix DensityPer / Inch7Materialmm1805Width of Matrixmm1644Height of Matrixmm1644Pressure Cap SettingkPa0,125	Max. Perm. Flow Resist. (Cool. System And Piping)	bar	0,5
Thermostat Operation Temperature - Initial OpenPC71Thermostat Operation Temperature - Full OpenPC85Delivery of Coolant Pumpm ³/ h15,80Min. Pressure Before Coolant Pumpbar0,5Radiator Face Aream²2,96Rows4Matrix DensityMaterialPer / Inch7Width of Matrixmm1805Height of Matrixmm1644Pressure Cap SettingkPa0,125	Max. Temperature of Coolant Warning	₀C	95
Thermostat Operation Temperature - Full Open°C85Delivery of Coolant Pumpm ³/ h15,80Min. Pressure Before Coolant Pumpbar0,5Radiator Face Aream²2,96Rows4Matrix DensityPer / Inch7MaterialMm1805Width of Matrixmm1644Pressure Cap SettingkPa70Estimated Cooling Air Flow ReservekPa0,125	Max. Temperature of Coolant Shutdown	ōC	98
Delivery of Coolant Pumpm ³/ h15,80Min. Pressure Before Coolant Pumpbar0,5Radiator Face Aream²2,96RowsRow4Matrix DensityPer / Inch7MaterialMm1805Width of Matrixmm1644Pressure Cap SettingkPa70Estimated Cooling Air Flow ReservekPa0,125	Thermostat Operation Temperature - Initial Open	°C	71
Min. Pressure Before Coolant Pumpbar0,5Radiator Face Aream²2,96RowsRow4Matrix DensityPer / Inch7MaterialMaterialAluminumWidth of Matrixmm1805Height of Matrixmm1644Pressure Cap SettingkPa0,125	Thermostat Operation Temperature - Full Open	-	85
Radiator Face Aream²2,96RowsRow4Matrix DensityPer / Inch7MaterialMaterialAluminumWidth of Matrixmm1805Height of Matrixmm1644Pressure Cap SettingkPa70Estimated Cooling Air Flow ReservekPa0,125	Delivery of Coolant Pump	m ³/ h	15,80
RowsRow4Matrix DensityPer / Inch7MaterialAluminumWidth of Matrixmm1805Height of Matrixmm1644Pressure Cap SettingkPa70Estimated Cooling Air Flow ReservekPa0,125	Min. Pressure Before Coolant Pump	bar	0,5
Matrix DensityPer / Inch7MaterialAluminumWidth of Matrixmm1805Height of Matrixmm1644Pressure Cap SettingkPa70Estimated Cooling Air Flow ReservekPa0,125	Radiator Face Area	m²	2,96
MaterialAluminumWidth of Matrixmm1805Height of Matrixmm1644Pressure Cap SettingkPa70Estimated Cooling Air Flow ReservekPa0,125	Rows		4
Width of Matrixmm1805Height of Matrixmm1644Pressure Cap SettingkPa70Estimated Cooling Air Flow ReservekPa0,125	Matrix Density	Per / Inch	7
Height of Matrixmm1644Pressure Cap SettingkPa70Estimated Cooling Air Flow ReservekPa0,125	Material		Aluminum
Pressure Cap SettingkPa70Estimated Cooling Air Flow ReservekPa0,125	Width of Matrix	mm	1805
Estimated Cooling Air Flow Reserve kPa 0,125	Height of Matrix	mm	1644
	Pressure Cap Setting	kPa	70
Engine Pre Heater-Tube (with Circulation Pump) W 2X3000	Estimated Cooling Air Flow Reserve	kPa	0,125
	Engine Pre Heater-Tube (with Circulation Pump)	W	2X3000





DIESEL ENGINE MAIN TECHNICAL PARAMETERS

LUBRICATION SYSTEM		
Total System	L	177
Minimum Oil Level	L	136
Nominal Motor Operating Temperature	₽C	40
Lubricating Oil Pressure (Rated Speed)	bar	4
Relief Valve Opens	kPa	340
Oil / Fuel Consumption Ratio	%	0,52
Normal Oil Temperature	°C	105

DIESEL ENGINE MATCHING PARAMETERS - 50 HZ

· · · · · · · · · · · · · · · · · · ·		
50 HZ @ 1500 R/MIN		STAND BY
Gross Engine Power	kW	1321,0
Net Engine Power	kW	1263,0
Fan Power Consumption (Belt Pulley Driven)	kW	58,0
Other Power Loss	kW	-
Mean Effective Pressure	MPa	2305,00
Intake Air Flow	m ³ / min	115,00
Exhaust Temperature Limit	₽C	479
Exhaust Flow	m ³/ min	245,00
Boost Pressure Ratio		96,00
Mean Piston Speed	m / s	9,5
Cooling Fan Air Flow	m ³/ min	1680,0
Typical Generator Output Power	kVA	1500
HEAT REJECTION		STAND BY
Energy in Fuel (Heat of Combustion)	kW	3269,0
Gross Heat to Power	kW	1321,0
Energy to Coolant and Lubricating Oil	kW	445,0
Energy to Exhaust	kW	1138,0
Heat to Radiation	kW	96,0



231 / 400 V – 50 Hz



ALTERNATOR SPECIFICATIONS



ALTERNATOR TECHNICAL	L PARAMETERS				
Insulation Class		Н	Field Control System		Self-Excited
Winding Pitch		2/3 - (N° 6)	A.V.R. Model	Standard	MX341+PMG
Wires		6	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.	1,614	Wave Form: I.E.C. = THF - (*)	%	< 1.5
Bearing Drive	N/A	-	Bearing Non-Drive	Bearing	6317-2RZ
Rotor Winding	100%	Copper	Stator Winding	100%	Copper

ALTERNATOR SPECIFICATIONS

50 HZ / 231-400V COS	Q 0,8 / 1500 RPM								
STANDARD USING ALT	ERNATOR			OPTIONAL U	SING ALTERN	IATOR			
BRAND/MODEL	JCBENERGY	JCB 400L1		LEROY-SO	OMER	LSA 50.2L7	STAMFORD	Р7 В	
DUTY				Continuous			-	Stand By	
AMBIENT	C°			40°C				27°C	
CLASS / TEMP. RISE	C°			Н/ 125° К				Н/ 163° К	
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	1418,0	1418,0	1471,0	-	1560,0	1560,0	1618,0	-
OUTPUT POWER	kW	1134,0	1134,0	1177,0	-	1248,0	1248,0	1294,0	-



231 / 400 V – 50 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)

CONTROL PANEL SPECIFICATIONS



Powder Painted Steel Panel with
Lockable Door

- ATS (Automatic Transfer Panel)-Optional
- Control Module
- Battery Charger
- Emergency Stop Button
- Terminal BlocksLoad Output Terminal
- System Protection MSBs
- Circuit Breaker-Optional
- o LCD Screen
- Control Relays
- o Backlit, 128x64 Pixels

CONTROL MODULE TECHNICAL PARAMETERS

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 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



JCP 1500 231 / 400 V – 50 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



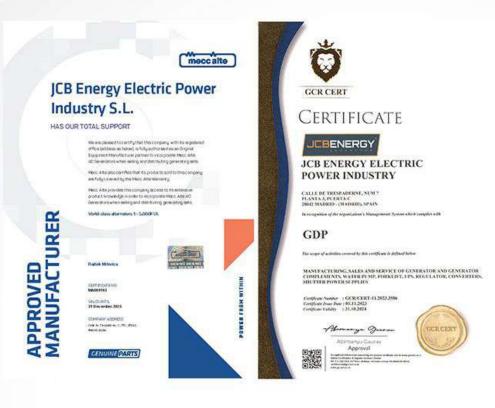
- Special, Registered JCB Energy Design and Colour
- A1 Quality DKP / HRU / Galvanized Steel
- Sensitive Twist on Automatic Press Brake
- Delicate Cut on Automatic Punch and Laser Bench
- Sensitive Welding on Robotic Welding Bench
- Chemical Cleaning Nano Technology Before Painting
- Robotic Painting with Electrostatic Powder Paint
- 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 Registration 👝		Certificate of Registration a		
This is to certify that the Quality Management System of		This is to certify that the Environmental Management System of		
JEBENERGY		JEBENERGY		
JCB ENERGY ELECTRIC POWER INDUSTRY		JCB ENERGY ELECTRIC POWER INDUSTRY		
CALLE DE TRESPADERNE, NUN 7 PLANTA 3, PUERTA C 20042 MADRID - (MADRID), SPAIN		CALLE DE TRESPADERNE, NUM 7 PLANTA 3, PUERTA C 23042 MADRID - (MADRID), SPAN		
is in accordance with the requirements of the following standard		is in accordance with the requirements of the following standard		
ISO 9001:2015 (Quality Management System)		ISO 14001:2015 (Environmental Management System)		
SCOPE		SCOPE		
MANUFACTURING, SALES AND SERVICE OF GENERATOR AND GENERATOR COMPLEMENTS, WATER PUMP, FORKLIFT, UPS, REGULATOR, CONVERTERS, SHUTTER POWER SUPPLIES		MANUFACTURING, SALES AND SERVICE OF GENERATOR AND GENERATOR COMPLEMENTS, WATER PUMP, FORKLIFT, UPS, REGULATOR, CONVERTERS, SHUTTER POWER SUPPLIES		
(IAF Code: 18,19)		(AF Code: 18,19)		
tah Number 2002201342 verify contificate, visit_at : overscent.com ps_thatmacreatiliter.org ps_thatmacreatiliter.com	Initial Registration Data : 35-001-0000 11 Securalizanta Data : 35-001-0000 21 Securalizanta Data : 35-001-000 21 Securalizanta Data : 35-001-0000 Centitiaata Eupoy Data : 36-001-0000	Centrolw Number (2002)(2011) Too vecify, contificate, visit, at ; very warsherd, com https://www.identecrycitation.org https://www.identecrycitation.org	initial Registration Date : 25-04-3828 1° Servivillance Date : 25-54-98288 2° Serve Pance Date : 35-54-9828 Constraint Suppl Date : 24-06-8289	
	Issued by ARS Assessment Private Limited		Issued by APS Assessment Private United	
UAF (AB)				







JEBENERGY

JCB ENERGY ELECTRIC POWER INDUSTRY

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

nition of the organization's Management System which complex with

1SO 22716:2013:GMP GOOD MANUFACTURING PRACTICES The scope of extinuous 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 Number 3 GCRCERT-11.2023.3585 Complexer Journ Date (#1.11.2023 Complexer Failury 1.31.318,2024

Alemany games Abimaryu Casaw Approval

Ki gabad Matania anang Ki Kabal Kelang Ki Igaba anang Ali Selaharan Yang Ki Kabalan Ki Kelang Ki Ki Kabalan Ki Kelang Ki Ki Kabalan Ki Kabalan Kabalan GUR CERT



Certificate

HEALTHY & SAFE WORKPLACE CERTIFICATE

JCB ENERGY ELECTRIC POWER INDUSTRY

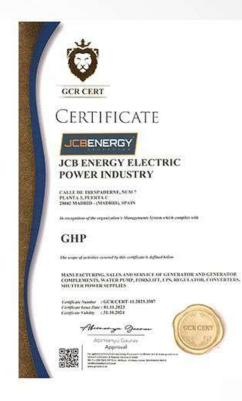
CALLE DE TRESPADERNE, NUM 7 PLANTA L'PUERTA C 20042 MADRID+ (MADRID), SPAIN that been writted to obtain a Healthy and Safe Workplace Certificate by fulfilling the equiversets for COVO-19 resources, when the physical conditions of the business ch is the scope of the Healthy and Safe Workplace Certificate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

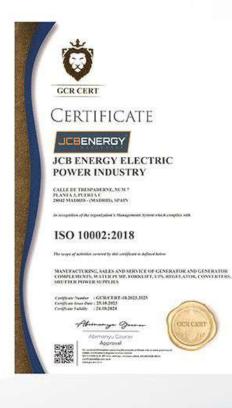
FACTORIES - PRODUCTION LOCATIONS: ELECTRICAL AND ELECTRONICS INDUSTRY

Conglow Namber 1 GCRCERT-11.2023.3658 Conglow New Day 97.11.2023 Conglow Fully 106.11.2023



Alemanya Game Azimanyu Caucav Approval







00



n -

www.jcbenergy.es