

JCB ENERGY ELECTRIC POWER INDUSTRY











IVECO

















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





GENERATOR GENERAL INFORMATION

GENERATOR	FREQUENCY	VOLTAGE	POWER FACTOR	SPEED	DIESEL EI	NGINE		ALTERN	ATOR		TYPE OF	GENER	ATOR O	UTPUT			
Model	Hz	V	Cos Q	Rpm	Brand	Model	Series	Brand	Model	Series	Operation	kVA	kW	Α			
								Ĺ			Standby	500,0	400,0	722,5			
JCD 500	50	231/400	0.8	1500	TCD13.0G1			. 📙	315	315MXA	Prime	455,0	364,0	657,5			
						Д	Λ	λλ	TCD12 0C1	TCD	EVERG	JCB		Continuous	413,6	330,9	597,7
						10013.001	ICD13.0G1 ICD	- 23	JCB		Standby	510,0	408,0	737,0			
JCD 510	60	277/480	0.8	1800			9		315M	Prime	436,6	370,9	670,0				
							•		*		Continuous	431,2	345,0	623,2			

- 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.



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

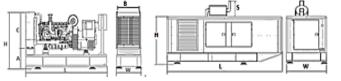
GENERATOR DIMENSIONS AND TECHNICAL DRAWINGS

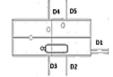




VALUES		OPEN TYPE GENERATOR	CANOPY TYPE GENERATOR
WIDTH	mm	1200	1646
LENGTH	mm	3374	4632
HEIGHT	mm	1953	2641
WEIGHT (NET)	Kg	2878	3740
FUEL TANK CAPACITY	L	673	400

SYMBOL	OPEN	CANOPY
L	3374	4632
W	1200	1646
Н	1953	2000
S		641
Α	775	
В	940	
С	1000	
D1		1002
D2		800
D3		800
D4		800
D5		800





FUEL CONSUMPTION

PERCENT OF PRIME POWER	1500 rpm	1800 rpm
TERCEIT OF TRIBLET OWER	l/hr	l/hr
110 %	96,61	98,83
100 %	87,52	90,79
75 %	65,64	68,09
50 %	43,08	44,69



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



DIESEL ENGINE MAIN TECHNICAL PARAMETERS

Top	50 Hz – 1500 min ⁻¹			60 Hz – 1800 min ⁻¹		
Net Frequency Power Standard 112 50 Power Standard Net Frequency 12 G Power Dower Standard 117 Power Level 50 Power Level 50 Power Standard 50 Power Level 50 Power Level 61 Power Level 50 Power Level	Туре		TCD13.0	Туре		TCD13.0
Power Islandard	Speed	min ⁻¹	1500	Speed	min ⁻¹	1800
Power Level Exhaust Emission Standard Pelo Optimized Pelo Optimize	Net Frequency	Hz	50	Net Frequency	Hz	60
Exhabat Emission Standard Fuel Optimized Exhabat Emission Standard Fuel Optimized EXPERAY Aspiration Turbo, CAS Sockernor Brand Sockernor Brand Sockernor Brand Common Rail Common Rail Common Rail Common Rail Common Rail Common Rail Linguition In-line Common Rail Linguition Turbo, CAS Aspiration Turbo, CAS Common Rail Common Rail Linguition Linguition Linguition Linguition Linguition Linguition Common Rail Common Rail Linguition Common Rail Linguition Common Rail Linguition Linguition </td <td>Power Standard</td> <td></td> <td>LTP</td> <td>Power Standard</td> <td></td> <td>LTP</td>	Power Standard		LTP	Power Standard		LTP
Maria Mari	Power Level		G1	Power Level		G1
Aspiration Governing System Governor Brand Governo	Exhaust Emission Standard		Fuel Optimized	Exhaust Emission Standard		Fuel Optimized
Governing System Electronic Governing System Electronic Governor Brand 80x8h Governor Brand 80x8h No of Cylinders 6 60 of Cylinders 6 Configuration in-line Configuration 1 Injection System Common Rail Injection System L 12,94 Bore mm 133 Bore mm 1313 Stroke mm 160 Stroke mm 160 Compression Ratio mm 133 Bore mm 160 Compression Ratio mm 133 Mean Effective Pressure Bar 26 Macan Effective Pressure mm 8 8 Mean Effective Pressure Bar 26 Piston Speed mm/s 8 8 Relation (looking at flywheel) Coverning Standards of Standards (looking at flywheel) Coverning Standards (looking at flywheel) Coverning Standards (looking at flywheel) Speed droon (station) % 0 0 Speed droon (station) lectric person flooking at flyw						
Governor Brand Bosch (prinders) Governor Brand Bosch (prinders) 6 (no of Cylinders) 6 (no figuration) 7 (no figuration) 7 (no figuration) 7 (no figuration) 7 (no figuration) 8 (no figuration) 7 (no figuration) 8 (no figuration) 9 (no figuration) <t< td=""><td></td><td></td><td>Turbo, CAC</td><td>-</td><td></td><td>ŕ</td></t<>			Turbo, CAC	-		ŕ
No of Cylinders 6 No of Cylinders 6 Configuration in-line Configuration in-line Configuration in-line	Governing System		Electronic	Governing System		Electronic
Configuration Injection System In-June Common Rail Injection System Common Rail Injection System Injection System Injection System Common Rail Injection System	Governor Brand		Bosch	Governor Brand		Bosch
Injection System Common Rail Injection System Common Rail Injection System Common Rail Late, 12,94 Displacement Late, 12,94 Late, 12,94 Late, 12,94 Late, 12,94 Late, 12,94 Late, 12,94 Late, 13,13 Bore mm 131 Stroke mm 131 Bar 132 Stroke mm 136 Cate, 13,14 Stroke mm 136 136 Cate, 13,14 Stroke mm 136	No of Cylinders		6	No of Cylinders		6
Displacement L 12,94 Displacement L 12,94 Bore mm 131 Bore mm 136 Stroke mm 160 Stroke mm 160 Compression Ratio 19:1 Compression Ratio 19:1 Mean Effective Pressure Bar 28 Mean Effective Pressure Bar 26 Piston Speed m/s 8 Piston Speed m/s 9 6 Rotation (looking at flywheel) cw Rotation (looking at flywheel) cw 8 6 7 6 <td>Configuration</td> <td></td> <td>in-line</td> <td>Configuration</td> <td></td> <td>in-line</td>	Configuration		in-line	Configuration		in-line
Bore mm 131 Bore mm 136 Stroke mm 160 Stroke mm 160 Compression Ratio 19:1 Compression Ratio 19:1 Compression Ratio 19:1 Compression Ratio 19:1 Compression Ratio Bar 29:6 Piston Speed m/s 8a 28 Meant effective Pressure Bar 29:6 Rotation (looking at flywheel) * Cow No dation (looking at flywheel) * Cow No of Teeth on Flywheel Ring Gear * 143 No of Teeth on Flywheel Ring Gear * 143 Governing standards to Iso 8528 Parts 1 and 5 * 0 Speed droop (static) electr. gov. % 0 0 Governing standards to Iso 8528 Parts 1 and 5 * 0 Speed droop (static) electr. gov. % 0 0 Governing standards to Iso 8528 Parts 1 * * Moment Flexity % 0 \$ Flywheel (standard genset spec.) kg m² * *	Injection System		Common Rail	Injection System		Common Rail
Bore mm 131 Bore mm 136 Stroke mm 160 Stroke mm 160 Compression Ratio 19:1 Compression Ratio 19:1 Compression Ratio 19:1 Compression Ratio 19:1 Compression Ratio Bar 29:6 Piston Speed m/s 8a 28 Meant effective Pressure Bar 29:6 Rotation (looking at flywheel) * Cow No dation (looking at flywheel) * Cow No of Teeth on Flywheel Ring Gear * 143 No of Teeth on Flywheel Ring Gear * 143 Governing standards to Iso 8528 Parts 1 and 5 * 0 Speed droop (static) electr. gov. % 0 0 Governing standards to Iso 8528 Parts 1 and 5 * 0 Speed droop (static) electr. gov. % 0 0 Governing standards to Iso 8528 Parts 1 * * Moment Flexity % 0 \$ Flywheel (standard genset spec.) kg m² * *	Displacement	L	12,94	Displacement	L	12,94
Stroke mm 160 Stroke mm 160 Compression Ratio 19:1 Compression Ratio 19:1 Mean Effective Pressure Bar 28 Man Effective Pressure Bar 26 Piston Speed m/s 8 Piston Speed m/s 9,6 Rotation (looking at flywheel) c 133 No of Teeth on Flywheel Ring Gear - 143 GOVERNOR 5 13 No of Teeth on Flywheel Ring Gear - 143 GOVERNOR PERFORMANC 5 9 9 9 0	•	mm	131	•	mm	
19:1			_			-
Mean Effective Pressure Bar 28 Mean Effective Pressure Bar 26 Piston Speed m/s 8 Piston Speed m/s 9,6 Rotation (looking at flywheel) ccw Rotation (looking at flywheel) ccw 143 No of Teeth on Flywheel Ring Gear 13 No of Teeth on Flywheel Ring Gear 143 GOVERNOR PERFORMANCE Speed droop (static) electr. gov. % 0 Speed droop (static) electr. gov. % 0 Governing standards to ISO 8528 Parts 1 and 5 8g 3 Governing standards to ISO 8528 Parts 1 % 0 Flywheel (standard genset spec.) kg m² 2.16 Flywheel (standard genset spec.) kg m² 2.16 Max. step load acceptance, 1st step % 110,30 Sound press. (Im average, full load), incl. cooling system dB(A) 110,30 Sound press. (Im average, full load), incl. cooling system kg 110,30 Sound press. (Im average, full load), incl. degree dB(A) 97,50 Engine Dry, w/o Cooling System kg 115 Engine Dry, w/o Cooling System kg		111111			111111	
Piston Speed m/s 8 Piston Speed m/s 9,6 Rotation (looking at flywheel) ccw Rotation (looking at flywheel) ccw No of Teeth on Flywheel Ring Gear 13 No of Teeth on Flywheel Ring Gear 12 GOVERNOR PERFORMANCE GOVERNOR PERFORMANCE Speed droop (static) electr. gov. % 0 Speed droop (static) electr. gov. % 0 Governing standards to ISO 8528 Parts 1 and 5 col speed droop (static) electr. gov. % 0 0 MOMENT OF INERTIA Flywheel (standard genset spec.) kg m² 1 Flywheel (standard genset spec.) kg m² 2.16 Flywheel (standard genset spec.) kg m² 1 Max. step load acceptance, 1st step % 0 4 0 0 0 0 1 0 0 1 0 0 1 0<	-	D			_	
Rotation (looking at flywheel)						
No of Teeth on Flywheel Ring Gear FOURTRING PERFORMANCE Speed droop (static) electr. gov. Governing standards to ISO 8528 Parts 1 and 5 governing standards to ISO 8528 and 861 By Max. step load accepta	•	m/s	8	•	m/s	9,6
GOVERNOR PERFORMANCE GOVERNOR PERFORMANCE Speed droop (static) electr. gov. % 0 Speed droop (static) electr. gov. % 0 Governing standards to ISO 8528 Parts 1 and 5 63 Governing standards to ISO 8528 Parts 1 63 MOMENT OF INERTIA Hywheel (standard genset spec.) kg m² 2,16 Max. step load acceptance, 1st step % - Max. step load acceptance, 1st step % - Sound power at full load, incl. cooling system dB(A) 110,30 Sound power at full load, incl. cooling system dB(A) 111,30 Sound press. (1m average, full load), incl. cooling system dB(A) 96,50 Sound power at full load, incl. cooling system dB(A) 97,50 Engine Dry, w/o Cooling System kg 1154 Engine Dry, w/o Cooling System Kg 1154 Engine With Cooling System kg 1540 Engine Dry, w/o Cooling System Kg 1540 Uil specification 1 1540/Cl-4/SL Oil specification 1 1540/Cl-4/SL Oil capacity (sump) 1 3 0 0 0 <td>Rotation (looking at flywheel)</td> <td></td> <td>ccw</td> <td>Rotation (looking at flywheel)</td> <td></td> <td>ccw</td>	Rotation (looking at flywheel)		ccw	Rotation (looking at flywheel)		ccw
Speed droop (static) electr. gov. % 0.9 Speed droop (static) electr. gov. % 0.0 Governing standards to ISO 8528 Parts 1 and 5 (overning standards to ISO 8528 Parts 1) and 5 a			143	No of Teeth on Flywheel Ring Gear		143
Governing standards to ISO 8528 Parts 1 and 5 an	GOVERNOR PERFORMANCE			GOVERNOR PERFORMANCE		
MOMENT OF INERTIA Flywheel (standard genest spec.) kg m² 2,16 Max. step load acceptance, 1st step % 0.4 0.4 0.4 0.5	Speed droop (static) electr. gov.	%	0	Speed droop (static) electr. gov.	%	0
Flywheel (standard genset spec.) Kg m² 2,16 Flywheel (standard genset spec.) Kg m² 2,16 Max. step load acceptance, 1st step %	Governing standards to ISO 8528 Parts 1 and 5		G3	•		G3
Max. step load acceptance, 1st step % Max. step load acceptance, 1st step %	MOMENT OF INERTIA			MOMENT OF INERTIA		
Sound power at full load, incl. cooling systemdB(A)110,30Sound power at full load, incl. cooling systemdB(A)111,30Sound press. (1m average, full load), incl. cool. syst.dB(A)96,50Sound press. (1m average, full load), incl. cool. syst.dB(A)97,50ENGINE WEIGHTENGINE WEIGHTENGINE WEIGHTENGINE WEIGHTEngine Dry, w/o Cooling Systemkg1154Engine Dry, w/o Cooling SystemKg1154Engine With Cooling Systemkg1260Engine With Cooling Systemkg1260LUBRICATION SYSTEMYAĞLAMA SISTEMIYAĞLAMA SISTEMIOil specification15W40/CI-4/SLOil specification15W40/CI-4/SLOil consumption (as % of fuel consumption)%0,10Oil capacity (sump)I30Oil capacity (sump)I30Oil capacity (sump)I30Min. oil pressure (shut down)Bar0,60Min. oil pressure (shut down)Bar0,60Max. permissible oil temperature (oil pan)°C130Max. permissible oil temperature (oil pan)°C130OUTPUTOUTPUTOUTPUTOUTPUTKw435Gross Output(LTP or StandBy Power)Kw445Fan ReductionKw435Gross Output(LTP or StandBy Power)Kw427,50Electrical Output (Stand By)Kva500Electrical Output (Stand By)Kva510Gross Output(PRP or Prime Power)Kw430Gross Output(PRP or Prime Power)Kw427,50	Flywheel (standard genset spec.)	kg m²	2,16	Flywheel (standard genset spec.)	kg m²	2,16
Sound press. (1m average, full load), incl. cool. syst. Sound press. (1m average, full load), incl. cool. syst. Engine Weight Engine Dry, w/o Cooling System kg 1154 Engine With Cooling System kg 1260 Electrical Output (Stand By) kg 1260 Electrical Output (Stand By) kg 1260 Engine Dry, w/o Cooling System kg 1260 Engine With Cooling System kg 1260 Engine With Cooling System kg 1260 Electrical Output (Stand By) kg 1260 Engine With Cooling System kg 1260 Engine With Cooling System kg 1260 Engine With Cool	Max. step load acceptance, 1st step	%	-	Max. step load acceptance, 1st step	%	-
Sound press. (1m average, full load), incl. cool. syst.dB(A)96,50Sound press. (1m average, full load), incl. cool. syst.dB(A)97,50ENGINE WEIGHTENGINE WEIGHTENGINE WEIGHTEngine Dry, w/o Cooling Systemkg1154Engine Dry, w/o Cooling SystemKg1154Engine With Cooling Systemkg1260Engine With Cooling Systemkg1260LUBRICATION SYSTEMYAĞLAMA SİSTEMİOil specification15W40/CI-4/SLOil specification15W40/CI-4/SLOil consumption (as % of fuel consumption)%010 specification\$15W40/CI-4/SLOil capacity (sump)I30Oil capacity (sump)I30Min. oil pressure (warning)Bar0,80Min. oil pressure (warning)Bar0,80Min. oil pressure (shut down)Bar0,60Min. oil pressure (shut down)Bar0,60Max. permissible oil temperature (oil pan)°C130Max. permissible oil temperature (oil pan)°C130OUTPUTOUTPUTOUTPUTOUTPUTOUTPUTKW445Gross Output(LTP or StandBy Power)KW445Gross Output(LTP or StandBy Power)KW445Fan ReductionKW435Gross Output(LTP or StandBy Power)KW447,50Net FlywheelKW427,50Electrical Output (Stand By)Kva500Electrical Output (PRP or Prime Power)KW427,50	Sound power at full load, incl. cooling system	dB(A)	110,30		dB(A)	111,30
cool. syst. FNGINE WEIGHT Engine Dry, w/o Cooling System kg 1154 Engine With Cooling System kg 1154 Engine With Cooling System kg 1260 Engine With Cooling System kg 126	Sound press. (1m average, full load), incl.	15/4)		•	15/4)	
Engine Dry, w/o Cooling System kg 1154 Engine Dry, w/o Cooling System Kg 1154 Engine Dry, w/o Cooling System Kg 1154 Engine With Cooling System kg 1260 Engine With Cooling System kg 1260 Engine With Cooling System kg 1260 Engine With Cooling System kg 1260 Engine With Cooling System kg 1260 Engine With Cooling System kg 1260 Engine With Cooling System kg 1260 Under Cooling System Kg 1260 Engine With Cooling System kg 1260 Engine With Cooling System kg 1260 Under Cooling System Kg 1260 Under Cooling System Cooling System Cooling System Cooling System Cooling System Cooling System Cooling System Cooling System Cooling S		dB(A)	96,50		dB(A)	97,50
Engine With Cooling System kg 1260 Engine With Cooling System kg 1260 LUBRICATION SYSTEM Oil specification 15W40/CI-4/SL Oil specification 15W40/CI-4/SL Oil consumption (as % of fuel consumption) % O,10 Oil consumption (as % of fuel consumption) % Oil capacity (sump) I 30 Oil capacity (sump) I 30 Min. oil pressure (warning) Bar 0,80 Min. oil pressure (warning) Bar 0,80 Min. oil pressure (shut down) Bar 0,60 Min. oil pressure (shut down) Bar 0,60 Max. permissible oil temperature (oil pan) °C 130 Max. permissible oil temperature (oil pan) °C 0,100 OUTPUT Gross Output(LTP or StandBy Power) Kw 435 Gross Output(LTP or StandBy Power) Kw 445 Fan Reduction Kw 13 Fan Reduction Kw 17,50 Net Flywheel Kw 422 Net Flywheel Kw 427,50 Electrical Output (Stand By) Kva 500 Electrical Output (Stand By) Kva 510 Gross Output(PRP or Prime Power) Kw 4410						
LUBRICATION SYSTEMYAĞLAMA SİSTEMİOil specification15W40/CI-4/SLOil specification15W40/CI-4/SLOil consumption (as % of fuel consumption)%0.10Oil consumption (as % of fuel consumption)%0.10Oil capacity (sump)I30Oil capacity (sump)I30Min. oil pressure (warning)Bar0,80Min. oil pressure (warning)Bar0,80Min. oil pressure (shut down)Bar0,60Min. oil pressure (shut down)Bar0,60Max. permissible oil temperature (oil pan)°C130Max. permissible oil temperature (oil pan)°C130OUTPUTOUTPUTOUTPUTV445Gross Output(LTP or StandBy Power)Kw435Gross Output(LTP or StandBy Power)Kw445Fan ReductionKw435Fan ReductionKw445Net FlywheelKw422Net FlywheelKw427,50Electrical Output (Stand By)Kva500Electrical Output (Stand By)Kva510Gross Output(PRP or Prime Power)Kw435Gross Output(PRP or Prime Power)Kw410	Engine Dry, w/o Cooling System	kg	1154	Engine Dry, w/o Cooling System	Kg	1154
LUBRICATION SYSTEMYAĞLAMA SİSTEMİOil specification15W40/CI-4/SLOil specification15W40/CI-4/SLOil consumption (as % of fuel consumption)%0.10Oil consumption (as % of fuel consumption)%0.10Oil capacity (sump)I30Oil capacity (sump)I30Min. oil pressure (warning)Bar0,80Min. oil pressure (warning)Bar0,80Min. oil pressure (shut down)Bar0,60Min. oil pressure (shut down)Bar0,60Max. permissible oil temperature (oil pan)°C130Max. permissible oil temperature (oil pan)°C130OUTPUTOUTPUTOUTPUTV445Gross Output(LTP or StandBy Power)Kw435Gross Output(LTP or StandBy Power)Kw445Fan ReductionKw435Fan ReductionKw445Net FlywheelKw422Net FlywheelKw427,50Electrical Output (Stand By)Kva500Electrical Output (Stand By)Kva510Gross Output(PRP or Prime Power)Kw435Gross Output(PRP or Prime Power)Kw410	Engine With Cooling System		1260	Engine With Cooling System	kg	1260
Oil specification15W40/CI-4/SLOil specification15W40/CI-4/SLOil consumption (as % of fuel consumption)%0,10Oil consumption (as % of fuel consumption)%0,10Oil capacity (sump)I30Oil capacity (sump)I30Min. oil pressure (warning)Bar0,80Min. oil pressure (warning)Bar0,80Min. oil pressure (shut down)Bar0,60Min. oil pressure (shut down)Bar0,60Max. permissible oil temperature (oil pan)°C130Max. permissible oil temperature (oil pan)°C130OUTPUTOUTPUTGross Output(LTP or StandBy Power)Kw435Gross Output(LTP or StandBy Power)Kw445Fan ReductionKw435Fan ReductionKw445Net FlywheelKw422Net FlywheelKw427,50Electrical Output (Stand By)Kva500Electrical Output (Stand By)Kva510Gross Output(PRP or Prime Power)Kw435Gross Output(PRP or Prime Power)Kw410	LUBRICATION SYSTEM			YAĞLAMA SİSTEMİ		
Oil consumption (as % of fuel consumption)%0,10Oil consumption (as % of fuel consumption)%0,10Oil capacity (sump)I30Oil capacity (sump)I30Min. oil pressure (warning)Bar0,80Min. oil pressure (warning)Bar0,80Min. oil pressure (shut down)Bar0,60Min. oil pressure (shut down)Bar0,60Max. permissible oil temperature (oil pan)°C130Max. permissible oil temperature (oil pan)°C130OUTPUTOUTPUTGross Output(LTP or StandBy Power)Kw435Gross Output(LTP or StandBy Power)Kw445Fan ReductionKw13Fan ReductionKw17,50Net FlywheelKw422Net FlywheelKw427,50Electrical Output (Stand By)Kva500Electrical Output (Stand By)Kva510Gross Output(PRP or Prime Power)Kw395Gross Output(PRP or Prime Power)Kw410			15W40/CI-4/SL			15W40/CI-4/SL
Oil capacity (sump)I30Oil capacity (sump)I30Min. oil pressure (warning)Bar0,80Min. oil pressure (warning)Bar0,80Min. oil pressure (shut down)Bar0,60Min. oil pressure (shut down)Bar0,60Max. permissible oil temperature (oil pan)°C130Max. permissible oil temperature (oil pan)°C130OUTPUTGross Output(LTP or StandBy Power)Kw435Gross Output(LTP or StandBy Power)Kw445Fan ReductionKw435Fan ReductionKw17,50Net FlywheelKw422Net FlywheelKw427,50Electrical Output (Stand By)Kva500Electrical Output (Stand By)Kva510Gross Output(PRP or Prime Power)Kw395Gross Output(PRP or Prime Power)Kw410	•	%		Oil consumption (as % of fuel	%	
Min. oil pressure (warning) Bar 0,80 Min. oil pressure (warning) Bar 0,60 Min. oil pressure (shut down) Bar 0,60 Min. oil pressure (shut down) Bar 0,60 Min. oil pressure (shut down) Bar 0,60 Min. oil pressure (shut down) C 130 Max. permissible oil temperature (oil pan) C 130 Max. permissible oil temperature (oil pan) C 130 Max. permissible oil temperature (oil pan) C 130 OUTPUT Gross Output(LTP or StandBy Power) Kw 435 Gross Output(LTP or StandBy Power) Kw 13 Fan Reduction Kw 17,50 Net Flywheel Kw 422 Net Flywheel Kw 427,50 Electrical Output (Stand By) Kva 500 Electrical Output (Stand By) Kva 510 Gross Output(PRP or Prime Power) Kw 410	Oil capacity (sump)	I	30		ı	30
Min. oil pressure (shut down) Bar 0,60 Min. oil pressure (shut down) Max. permissible oil temperature (oil pan) C 130 Max. permissible oil temperature (oil pan) C 130 Max. permissible oil temperature (oil pan) C 130 Max. permissible oil temperature (oil pan) C 130 OUTPUT Gross Output(LTP or StandBy Power) Kw 435 Gross Output(LTP or StandBy Power) Kw 13 Fan Reduction Kw 17,50 Net Flywheel Kw 422 Net Flywheel Kw 427,50 Electrical Output (Stand By) Kva 500 Electrical Output (Stand By) Kva 395 Gross Output(PRP or Prime Power) Kw 410		Bar			Bar	
Max. permissible oil temperature (oil pan)°C130Max. permissible oil temperature (oil pan)°C130OUTPUTGross Output(LTP or StandBy Power)Kw435Gross Output(LTP or StandBy Power)Kw445Fan ReductionKw13Fan ReductionKw17,50Net FlywheelKw422Net FlywheelKw427,50Electrical Output (Stand By)Kva500Electrical Output (Stand By)Kva510Gross Output(PRP or Prime Power)Kw395Gross Output(PRP or Prime Power)Kw410			•			
OUTPUTGross Output(LTP or StandBy Power)Kw435Gross Output(LTP or StandBy Power)Kw445Fan ReductionKw13Fan ReductionKw17,50Net FlywheelKw422Net FlywheelKw427,50Electrical Output (Stand By)Kva500Electrical Output (Stand By)Kva510Gross Output(PRP or Prime Power)Kw395Gross Output(PRP or Prime Power)Kw410			•			
Fan ReductionKw13Fan ReductionKw17,50Net FlywheelKw422Net FlywheelKw427,50Electrical Output (Stand By)Kva500Electrical Output (Stand By)Kva510Gross Output(PRP or Prime Power)Kw395Gross Output(PRP or Prime Power)Kw410	, , , ,		130			130
Fan ReductionKw13Fan ReductionKw17,50Net FlywheelKw422Net FlywheelKw427,50Electrical Output (Stand By)Kva500Electrical Output (Stand By)Kva510Gross Output(PRP or Prime Power)Kw395Gross Output(PRP or Prime Power)Kw410	Gross Output(LTP or StandBy Power)	Kw	435	Gross Output(LTP or StandBy Power)	Kw	445
Electrical Output (Stand By)Kva500Electrical Output (Stand By)Kva510Gross Output(PRP or Prime Power)Kw395Gross Output(PRP or Prime Power)Kw410	Fan Reduction	Kw	13	Fan Reduction	Kw	17,50
Gross Output(PRP or Prime Power) Kw 395 Gross Output(PRP or Prime Power) Kw 410	•			•		
		Kva			Kva	510
Gross Output(Continous Power) kw 365 Gross Output(Continous Power) kw 380	• •	Kw			Kw	
	Gross Output(Continous Power)	kw	365	Gross Output(Continous Power)	kw	380



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



DIESEL ENGINE MAIN TECHNICAL PARAMETERS

50 Hz – 1500 min ⁻¹			60 Hz – 1800 min ⁻¹		
COOLING SYSTEM, GENERAL ENGINE COOLING DATA	A		COOLING SYSTEM, GENERAL ENGINE COOLING DATA	A	
Max. perm. Coolant Outlet Temperature	°C	99	Max. perm. Coolant Outlet Temperature	°C	99
Max. perm. Flow Resistance (cool. syst. and piping)	Bar	-	Max. perm. Flow Resistance (cool. syst. and piping)	Bar	-
Max. Temperature of Coolant (warning)	°C	105	Max. Temperature of Coolant (warning)	°C	105
Max. Temperature of Coolant (shutdown)	°C	108	Max. Temperature of Coolant (shutdown)	°C	108
Temperature at Which Thermostat Starts to open	°C	83	Temperature at Which Thermostat Starts to open	°C	83
Temperature at Which Thermostat is Fully Open	°C	95	Temperature at Which Thermostat is Fully Open	°C	95
Delivery of Coolant Pump	m³/h	34,80	Delivery of Coolant Pump	m³/h	34,80
Min. Pressure Before Coolant Pump	Bar	0,80	Min. Pressure Before Coolant Pump	Bar	0,80
Temperature at CAC Outlet at Standard Conditions	°C	50	Temperature at CAC Outlet at Standard Conditions	°C	50
ENGINE COOLING SYSTEM			ENGINE COOLING SYSTEM		
Coolant Capacity (engine)	I	20	Coolant Capacity (engine)	ı	20
Coolant Capacity (incl. cooling unit)	I	35	Coolant Capacity (incl. cooling unit)	I	35
Air to Boil (max. permissible cool. air temp. at fan)	°C	55	Air to Boil (max. permissible cool. air temp. at fan)	°C	55
Fan Power Consumption	kW	13	Fan Power Consumption	kW	17,50
Cooling air Flow	m³/h	38486	Cooling air Flow	m³/h	43298
Air Pressure Loss	mbar	1,64	Air Pressure Loss	mbar	1,64
HEAT BALANCE			HEAT BALANCE		
Heat Dissipation (engine radiator)	kW	158	Heat Dissipation (engine radiator)	kW	133
Heat Dissipation (CAC)	kW	78,60	Heat Dissipation (CAC)	kW	77,00
INLET / EXHAUST DATA			INLET / EXHAUST DATA		
Max. intake Depression (Switch setting)	mbar	50	Max. intake Depression (Switch setting)	mbar	50
Combustion Air Volume	m³/h	1612	Combustion Air Volume	m³/h	1915
Max. Exhaust Back Pressure	mbar	50	Max. Exhaust Back Pressure	mbar	50
Max. Exhaust Gas Temperature	°C	528	Max. Exhaust Gas Temperature	°C	507
Exhaust Gas Flow (at above temp)	m³/h	4485	Exhaust Gas Flow (at above temp)	m³/h	5403
Exhaust Flange / Pipe Diameter	mm	120	Exhaust Flange / Pipe Diameter	mm	120
ELECTRICAL SYSTEM			ELECTRICAL SYSTEM		
Voltage	V	24	Voltage	٧	24
Starter	KW	8,80	Starter	KW	8,80
Starter Alternator Output	KW A	8,80 80	Starter Alternator Output	KW A	8,80 80



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



ALTERNATOR TECHNICAL PARAMETERS



ALTERNATOR TECHNIC	CAL PARAMETERS								
Insulation Class			Н	Field Control S	ystem			Se	elf-Excited
Winding Pitch		2	2/3 - (N° 6)	A.V.R. Model			Standard		SX440
Wires			12	Voltage Regula	ation		%		± 1
Protection			IP 23	Sustained Sho	rt-Circuit Cu	rrent	10 sec	30	00% (3 IN)
Altitude	m		1000	Total Harmoni	c (*) TGH / T	нс	%		< 4
Overspeed	rpm		2250	Wave Form: N	EMA = TIF -	(*)			< 50
Air Flow	m³/sec.		0.8	Wave Form: I.	E.C. = THF -	(*)	%		< 2
Bearing Drive	N/A		-	Bearing Non-D	rive		Bearing		6314-2RZ
Rotor Winding	100%		Copper	Stator Winding	g		100%		Copper
50 HZ / 231-400V COSQ 0,8 / 1500 RPM									
STANDARD USING ALTI	ERNATOR			OPTIONAL U	SING ALTERN	IATOR			
STANDARD USING ALTI	ERNATOR JCBENERGY	JCB 315MXA		OPTIONAL US	TH	IATOR TAL0473B	STAMFORD	S4L1D G	
		JCB 315MXA		10% (1000)	TH			S4L1D G	
BRAND/MODEL		JCB 315MXA		LEROY-SO	TH				
BRAND/MODEL DUTY	JCBENERGY	JCB 315MXA		LEROY-50 Continuous	TH		S	tand By	
BRAND/MODEL DUTY AMBIENT	C°	JCB 315MXA 380/220	400/231	LEROY-SC Continuous 40°C	TH		S	tand By 27°C	1 Phase
BRAND/MODEL DUTY AMBIENT CLASS / TEMP. RISE	C° C°		400/231 200/115	LEROY-50 Continuous 40°C H/ 125° K	OMER [™]	TAL0473B	S	tand By 27°C 1/ 163° K	
BRAND/MODEL DUTY AMBIENT CLASS / TEMP. RISE SERIES STAR	C° V	380/220		LEROY-50 Continuous 40°C H/ 125° K 415/240	OMER [™] 1 Phase	TAL0473B 380/220	S H 400/231	tand By 27°C 1/ 163° K 415/240	1 Phase
BRAND/MODEL DUTY AMBIENT CLASS / TEMP. RISE SERIES STAR PARALLEL STAR	C° C° V	380/220 190/110	200/115	LEROY-50 Continuous 40°C H/ 125° K 415/240 208/120	1 Phase	380/220 190/110	S H 400/231 200/115	27°C 1/ 163° K 415/240 208/120	1 Phase 220

60 HZ / 277-480V COSQ 0,8 / 1800 RPM									
STANDARD USING ALTERNATOR OPTIONAL USING ALTERNATOR									
BRAND/MODEL	JCBENERGY	JCB 315S		LEROY-SOM	ER [®]	TAL046H	STAMF	ORD	S4L1D-E
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	421,0	443,0	466,0	-	463,0	487,00	513,0	-
OUTPUT POWER	kW	336,8	354,4	372,8	-	370,4	389,6	410,4	-



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

- o 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	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



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

