



Engine ref. KDW1003
Kohler Alternator description E1C13S C/4

Performance class G1

GENERAL CHARACTERISTICS

Frequency (Hz) 50 Hz
Voltage (V) 230 single phase

DESCRIPTIVE

- Telescopic mast 8.5 m high
- Mast movable through 330°
- Fork lift pockets and lifting rings
- Adjustable stabilising and retractable supports
- Road or on-site trailer
- Automatically adjustable towing bar (road trailer)
- Overrun brake + parking brake (road trailer)
- Residual Current Device and earthing rod
- Motorized mast deployment

PROJECTOR

Number of projectors 4

Projector model Metal Halide

Total power (We) 4000 Luminosity (lumens) 340000

FULL VERSION DIMENSION

 Length (mm)
 3127

 Width (mm)
 1492

 Height (mm)
 2270

 Dry weight (kg)
 1095,00

 Tank capacity (L)
 110,00

Autonomy @ 75% of load (h) Autonomy @ 50% of load (h)

SOUND LEVELS

Acoustic pressure level @1m in dB(A) 50Hz
(75% PRP) (Associated uncertainty)
Acoustic pressure level @7m in dB(A) 50Hz
(75% PRP) (Associated uncertainty)

61

POWER DEFINITION

PRP: Prime Power is available for an unlimited number of annual operating hours in variable load applications, in accordance with ISO 8528-1. ESP: The standby power rating is applicable for supplying emergency power in variable load applications in accordance with ISO 8528-1. Overload is not allowed.

TERMS OF USE

According to the standard, the nominal power assigned by the genset is given for 25°C Air Intlet Temperature, of a barometric pressure of 100 kPA (100 m A.S.L), and 30 % relative humidity. For particular conditions in your installation, refer to the derating table.

ASSOCIATED LINCERTAINTY

For the generating sets used indoor, where the acoustic pressure levels depends on the installation conditions, it is not possible to specify the ambient noise level in the exploitation and maintenance instructions. You will also find in our exploitation and maintenance instructions a warning concerning the air noise dangers and the need to implement appropriated preventive measures.



ENGINE CHARACTERISTICS

GENERAL ENGINE DATAS	
Engine brand	KOHLER KDI
Engine ref.	KDW1003
Air inlet system	Atmo
Cylinder configuration	L
Number of cylinders	3
Displacement (I)	1,03
Charge Air coolant	
Bore (mm) x Stroke (mm)	75,00 x 77,6
Compression ratio	22,8 : 1
Speed 50Hz (RPM)	1500
Pistons speed (m/s)	3,88
Maximum stand-by power at rated RPM (kW)	8,5
Frequency regulation, steady state (%)	+/- 2.5%
BMEP @ PRP (bar)	6,0
Governor type	Mechanical

COOLING SYSTEM	
Radiator & Engine capacity (I)	4,50
Fan power 50Hz (kW)	0,25
Fan air flow w/o restriction (m3/s) Available restriction on air flow (mm H2O)	0,85
Type of coolant	Glycol-Ethylene

EMISSIONS	
Emission PM 50Hz (g/kW.h)	
Emission CO 50Hz (g/kW.h)	
Emission THC+NOx (g/kWh) Emission HC 50Hz (g/kW.h)	0,000

Exhaust gas temperature @ ESP (°C) 440 Exhaust gas flow @ ESP (I/s) 30,7 Max. exhaust back pressure (mm H2O) 750 FUEL FUEL Fuel consumption @ ESP Max Power (I/h) 2,7 Fuel consumption @ PRP Max Power (I/h) 1,9 Fuel consumption @ 50% of PRP Power (I/h) 1,3 Maximum fuel pump flow (I/h) 50,0 OIL Oil system capacity including filters (I) 2,40 Min. oil pressure (bar) 1,4 Max. oil pressure (bar) 7,0 Oil consumption 100% ESP 50Hz (I/h) 0,040 Oil sump capacity (I) 2,30 HEAT BALANCE Heat rejection to exhaust (kW) 9 Radiated heat to ambiant (kW) 1,0 Heat rejection to coolant HT (kW) 9	EXHAUST	
Exhaust gas flow @ ESP (I/s) 30,7 Max. exhaust back pressure (mm H2O) 750 FUEL Fuel consumption @ ESP Max Power (I/h) 2,7 Fuel consumption @ PRP Max Power (I/h) 1,9 Fuel consumption @ 50% of PRP Power (I/h) 1,3 Maximum fuel pump flow (I/h) 50,0 OIL Oil system capacity including filters (I) 2,40 Min. oil pressure (bar) 1,4 Max. oil pressure (bar) 7,0 Oil consumption 100% ESP 50Hz (I/h) 0,040 Oil sump capacity (I) 2,30 HEAT BALANCE Heat rejection to exhaust (kW) 9 Radiated heat to ambiant (kW) 1,0 Heat rejection to coolant HT (kW) 9		
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Fuel consumption @ ESP Max Power (I/h) 2,7 Fuel consumption @ PRP Max Power (I/h) 2,5 Fuel consumption @ 75% of PRP Power (I/h) 1,9 Fuel consumption @ 50% of PRP Power (I/h) 1,3 Maximum fuel pump flow (I/h) 50,0 OIL Oil system capacity including filters (I) 2,40 Min. oil pressure (bar) 1,4 Max. oil pressure (bar) 7,0 Oil consumption 100% ESP 50Hz (I/h) 0,040 Oil sump capacity (I) 2,30 HEAT BALANCE Heat rejection to exhaust (kW) 9 Radiated heat to ambiant (kW) 1,0 Heat rejection to coolant HT (kW) 9		
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Fuel consumption @ 75% of PRP Power (I/h) 1,9 Fuel consumption @ 50% of PRP Power (I/h) 1,3 Maximum fuel pump flow (I/h) 50,0 OIL Oil system capacity including filters (I) 2,40 Min. oil pressure (bar) 1,4 Max. oil pressure (bar) 7,0 Oil consumption 100% ESP 50Hz (I/h) 0,040 Oil sump capacity (I) 2,30 HEAT BALANCE Heat rejection to exhaust (kW) 9 Radiated heat to ambiant (kW) 1,0 Heat rejection to coolant HT (kW) 9	Fuel consumption @ ESP Max Power (I/h)	2,7
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Maximum fuel pump flow (I/h) OIL Oil system capacity including filters (I) Min. oil pressure (bar) Max. oil pressure (bar) Oil consumption 100% ESP 50Hz (I/h) Oil sump capacity (I) HEAT BALANCE Heat rejection to exhaust (kW) Radiated heat to ambiant (kW) Heat rejection to coolant HT (kW) AIR INTAKE	Fuel consumption @ 75% of PRP Power (I/h)	1,9
OIL Oil system capacity including filters (I) Min. oil pressure (bar) Max. oil pressure (bar) Oil consumption 100% ESP 50Hz (I/h) Oil sump capacity (I) Cil sump capacity (I) HEAT BALANCE Heat rejection to exhaust (kW) Radiated heat to ambiant (kW) Heat rejection to coolant HT (kW) AIR INTAKE	Fuel consumption @ 50% of PRP Power (I/h)	1,3
Oil system capacity including filters (I) Min. oil pressure (bar) Max. oil pressure (bar) Oil consumption 100% ESP 50Hz (I/h) Oil sump capacity (I) HEAT BALANCE Heat rejection to exhaust (kW) Radiated heat to ambiant (kW) Heat rejection to coolant HT (kW) AIR INTAKE	Maximum fuel pump flow (I/h)	50,0
Oil system capacity including filters (I) Min. oil pressure (bar) Max. oil pressure (bar) Oil consumption 100% ESP 50Hz (I/h) Oil sump capacity (I) HEAT BALANCE Heat rejection to exhaust (kW) Radiated heat to ambiant (kW) Heat rejection to coolant HT (kW) AIR INTAKE		
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Max. oil pressure (bar) Oil consumption 100% ESP 50Hz (l/h) Oil sump capacity (l) 2,30 HEAT BALANCE Heat rejection to exhaust (kW) Radiated heat to ambiant (kW) Heat rejection to coolant HT (kW) AIR INTAKE	Oil system capacity including filters (I)	2,40
Oil consumption 100% ESP 50Hz (I/h) 0,040 Oil sump capacity (I) 2,30 HEAT BALANCE Heat rejection to exhaust (kW) 9 Radiated heat to ambiant (kW) 1,0 Heat rejection to coolant HT (kW) 9	Min. oil pressure (bar)	1,4
Oil sump capacity (I) 2,30 HEAT BALANCE Heat rejection to exhaust (kW) Radiated heat to ambiant (kW) Heat rejection to coolant HT (kW) AIR INTAKE	Max. oil pressure (bar)	7,0
HEAT BALANCE Heat rejection to exhaust (kW) 9 Radiated heat to ambiant (kW) 1,0 Heat rejection to coolant HT (kW) 9 AIR INTAKE	Oil consumption 100% ESP 50Hz (I/h)	0,040
Heat rejection to exhaust (kW) 9 Radiated heat to ambiant (kW) 1,0 Heat rejection to coolant HT (kW) 9 AIR INTAKE	Oil sump capacity (I)	2,30
Heat rejection to exhaust (kW) 9 Radiated heat to ambiant (kW) 1,0 Heat rejection to coolant HT (kW) 9 AIR INTAKE		
Radiated heat to ambiant (kW) 1,0 Heat rejection to coolant HT (kW) 9 AIR INTAKE	HEAT BALANCE	
Heat rejection to coolant HT (kW) 9 AIR INTAKE	Heat rejection to exhaust (kW)	9
AIR INTAKE	Radiated heat to ambiant (kW)	1,0
	Heat rejection to coolant HT (kW)	9
Max. intake restriction (mm H2O) 200	AIR INTAKE	
	Max. intake restriction (mm H2O)	200
Combustion air flow (l/s) 12,80	Combustion air flow (I/s)	12,80



ALTERNATOR CHARACTERISTICS

E1C13S C/4	Continuous Nominal Rating 40°C (kVA)	8,0
Single phase	Standby Rating 27°C (kVA)	
1,0	Efficiencies 100% of load (%)	79,0
0 à 1000	Air flow (m3/s)	
2250	Short circuit ratio (Kcc)	
4	Direct axis synchro reactance unsaturated (Xd) (%)	
No	Quadra axis synchro reactance unsaturated (Xq) (%)	
н	Open circuit time constant (T'do) (ms)	
	Direct axis transcient reactance saturated (X'd) (%)	
	Short circuit transcient time constant (T'd) (ms)	
	Direct axis subtranscient reactance saturated (X"d)	
NO	· /	
5		
5.5	Quadra axis subtranscient reactance saturated (X"q) (%)	
	Subtranscient time constant (T"q) (ms)	
	Zero sequence reactance unsaturated (Xo) (%)	
Cinalo Poorina	Negative sequence reactance saturated (X2) (%)	
	Armature time constant (Ta) (ms)	
Direct	No load excitation current (io) (A)	
	Full load excitation current (ic) (A)	
	Full load excitation voltage (uc) (V)	
IP 21	Engine start (Delta U = 20% perm. or 30% trans.)	
Brushless		
	Unbalanced load acceptance ratio (%)	
	Single phase 1,0 0 à 1000 2250 4 No H H / 125°K H / 163°K No 5 5.5 Single Bearing Direct	Single phase 1,0 Efficiencies 100% of load (%) 0 à 1000 Air flow (m3/s) 2250 Short circuit ratio (Kcc) 4 Direct axis synchro reactance unsaturated (Xd) (%) No Quadra axis synchro reactance unsaturated (Xq) (%) H H / 125°K H / 163°K No Direct axis transcient reactance saturated (X'd) (%) 5 Subtranscient time constant (T'd) (ms) Direct axis subtranscient reactance saturated (X"d) (%) 5 Subtranscient time constant (T"d) (ms) Quadra axis subtranscient reactance saturated (X"q) (%) Subtranscient time constant (T"d) (ms) Quadra axis subtranscient reactance saturated (X"q) (%) Subtranscient time constant (T"q) (ms) Zero sequence reactance unsaturated (Xo) (%) Negative sequence reactance saturated (X2) (%) Armature time constant (Ta) (ms) No load excitation current (io) (A) Full load excitation current (ic) (A) Full load excitation voltage (uc) (V) Engine start (Delta U = 20% perm. or 30% trans.) (kVA)



CONTROL PANEL