KOHLER Power Systems

KR275RC

Engine	6090HFS85
Alternator	LSA 46.2 L6
Canopy Type	M3227 DW
Performance class	G3

Base

N/A

Full Additionnal Equipment

N/A

Standard features

Frequency (Hz)	50
Voltage value	400
Max power ESP (kVA)	275
Max power ESP (kWe)	220
Max power PRP (kVA)	250
Max power PRP (kWe)	200
Intensity (A)	397
Standard Control Panel	DEC1000
Optional control panel	DEC4000

Full Version Dimension

Length (mm).	4332
Width (mm).	1361
Height (mm).	2431
Dry weight (kg).	4090
Tank capacity (L).	1083
Autonomy @ 75% of load (h)	23
Autonomy @ 50% of load (h)	N/A

Basic Version Dimension

Length (mm).	4332
Width (mm).	1361
Height (mm).	2431
Dry weight (kg).	4090
Tank capacity (L).	1083
Autonomy @ 75% of load (h)	N/A
Autonomy @ 50% of load (h)	N/A

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. A 10% overload capability is available for a period of 1 hour within 12-hour period of operation, in accordance with ISO 3046-1 –

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.

Term of use

Standard reference conditions ESP/PRP 27 C°/40 C° Air Intlet Temp, 1000 m/1000 m m A.S.L. 60 % relative humidity.

Sound level

Acoustic pressure level @1m in dB(A)	77
Acoustic pressure level @7m in dB(A)	66
Acoustic pressure level @15m in dB(A)	61
Sound power level guaranteed (Lwa)	96

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Engine specifications

General Data	
Engine	N/A 6090HFS85
Cylinder arrangement	L
Number of cylinders	6
Displacement (C.I.)	8.98
Bore (mm) x Stroke (mm)	118.4 x 136
Compression ratio	16 : 1
Speed (RPM)	1500
Pistons speed (m/s)	6.8
Maximum stand-by power at rated RPM (kW)	253
Frequency regulation (%)	+/- 0.5%
BMEP (bar)	20.52
Governor type	Electronic

Coolant system	
Radiator & Engine capacity (L)	N/A
Max water temperature (°C)	110
Outlet water temperature (°C)	N/A
Fan power (kW)	8
Fan air flow w/o restriction (m3/s)	6.7
Available restriction on air flow (mm EC)	N/A
Type of coolant	Glycol-Ethylene
Thermostat (°C)	85-95

Emissions	
Emission PM (g/kW.h)	0.11
Emission CO (g/kW.h)	0.91
Emission HCNOx (g/kWh)	3.89
Emission HC (g/kW.h)	0.05

Exhaust system	
Exhaust gas flow (L/s)	798
Exhaust gas temperature (°C)	552
Max. exhaust back pressure (mm EC)	765

Fuel system	
Consumption @ 110% load (L/h)	57.2
Consumption @ 100% load (L/h)	57.3
Consumption @ 75% load (L/h)	43.2
Consumption @ 50% load (L/h)	31.1
Maximum fuel pump flow (L/h)	N/A

Oil	
Oil capacity (L)	31
Min. oil pressure (bar)	1.9
Max. oil pressure (bar)	2.4
Oil consumption 100% load (L/h)	N/A
Carter oil capacity (L)	N/A

Energy Balance Sheet	
Heat rejection to exhaust (kW)	179
Radiated heat to ambiant (kW)	25
Haet rejection to coolant (kW)	81

Air intake	
Max. intake restriction (mm EC)	637
Intake air flow (L/s)	302

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Alternator specifications

General Data	
Alternator	N/A LSA 46.2 L6
Number of phase	3
Power factor (Cos Phi)	0.8
Altitude (m)	0 à 1000
Overspeed (rpm)	2250
Number of pole	4
Excitation system	AREP
Insulation class	H
AVR	R450
Harmonic factor, no load TGH/THC (%)	<2.5
Wave form : NEMA=TIF-(TGH/THC)	<50
Wave form : CEI=FHT-(TGH/THC)	<2
Number of bearing	1
Coupling	Direct
Voltage regulation at established rating (%)	+/- 0.5%
Recovery time (Delta U = 20% transcient) (ms)	500 ms

Other datas	
Continuous Nominal Rating 40°C (kVA)	250
Standby Rating 27°C (kVA)	275
Efficiencies 4/4 load (%)	92.4
Air flow (m3/s)	0.43
Short circuit ratio (Kcc)	0.41
Direct axis synchro reactance unsaturated (Xd) (%)	327
Quadra axis synchro reactance unsaturated (Xq) (%)	196
Open circuit time constant (T''do) (ms)	2105
Direct axis transcient reactance saturated (X''d) (%)	15.5
Short circuit transcient time constant (T''d) (ms)	100
Direct axis subtranscient reactance saturated (X''''d) (%)	9.3
Subtranscient time constant (T''''d) (ms)	10
Quadra axis subtranscient reactance saturated (X''''q) (%)	11.5
Zero sequence reactance unsaturated (Xo) (%)	0.7
Negative sequence reactance saturated (X2) (%)	10.4
Armature time constant (Ta) (ms)	15
No load excitation current (io) (A)	1
Full load excitation current (ic) (A)	4
Full load excitation voltage (uc) (V)	34
Recovery time (Delta U = 20% transcient) (ms)	500 ms
Engine start (Delta U = 20% perm. or 50% trans.) (kVA)	504
Transcient dip (4/4 load) - PF : 0,8 AR (%)	14.1
No load losses (W)	3690
Heat rejection (W)	16400

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Control Panel

DEC1000, comprehensive and simple

The DEC1000 is a versatile control unit allowing operation in manual or automatic mode. Equipped with an LCD screen, the user-friendly DEC1000 offers high-quality basic functions to guarantee simple, reliable operation of your generating set.

Offers the following functions:

Standard electrical measurements: voltmeter, frequency meter, ammeter.

Engine parameters: working hours counter, engine speed, battery voltage, fuel level, oil pressure, coolant temperature.

Alarms and faults: oil pressure, coolant temperature, failure to start, overspeed (> 60 kVA), charging alternator fault, low fuel level, emergency stop.

Automatic control: automatic start.

For more information, please refer to the sales documentation.

DEC4000, ergonomic and user-friendly

The highly versatile DEC4000 control unit is complex yet accessible, thanks to the particular attention paid to optimising its ergonomics and ease of use. With its large display screen, buttons and scroll wheel, it places the accent on simplicity and communication.

It offers the following functions:

Electrical measurements: voltmeter, frequency meter, ammeter.

Engine parameters: working hours counter, oil pressure, coolant temperature, fuel level, engine speed, battery voltage.

Alarms and faults: oil pressure, coolant temperature, failure to start, overspeed, alternator min./max., battery voltage min./max., emergency stop, fuel level.

Ergonomics: wheel for navigating around the various menus.

Communication: remote control and operation software, USB connections, PC connection.

Automatic control: automatic start.

For more information on the product and its options, please refer to the sales documentation.