

# KOHLER POWER SYSTEMS



## Base

- ➔ Connection terminal box rental type
- ➔ Four-pole circuit breaker
- ➔ Central lifting ring
- ➔ Primary filter
- ➔ Oil drainage pump
- ➔ Battery isolating switch
- ➔ Containment fuel tank and large autonomy
- ➔ Inlet air preheating
- ➔ Voltage adjustment potentiometer
- ➔ Adjustable earth fault protection and earthing rod
- ➔ Super silent enclosure dedicated to rental

## Full Additional Equipment

- ➔ Containment fuel tank and large autonomy
- ➔ Connection terminal box rental type
- ➔ Primary filter
- ➔ Voltage adjustment potentiometer
- ➔ Fixed earth fault protection and earth rod
- ➔ Battery isolating switch
- ➔ Drainage pump



## 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 25 C°/25 C° Air Inlet Temp, 100 m/100 m m A.S.L. 60 % relative humidity.

## KR22C2

Engine	S4Q2-Z261SD
Alternator	LSA422S5-AR
Canopy Type	M127

## Standard features

Frequency (Hz)	50
Voltage value	400
Max power (kVA)	22
Max power ESP (kWe)	17.6
Max power ESP (kVA)	20
Max power PRP (kWe)	16
Intensity (A)	32
Standard Control Panel	DEC 1000
Optional control panel	DEC 4000

## Full Version Dimension

Length (mm)	2160
Width (mm)	966
Height (mm)	1582
Dry weight (kg)	835
Tank capacity (L)	230
Autonomy @ 75% of load (h)	43.1
Autonomy @ 50% of load (h)	60.9

## Basic Version Dimension

Length (mm)	2080
Width (mm)	960
Height (mm)	1415
Dry weight (kg)	835
Tank capacity (L)	100
Autonomy @ 75% of load (h)	20.8
Autonomy @ 50% of load (h)	29.4

## Sound level

Acoustic pressure level @1m in dB(A)	71.9
Acoustic pressure level @7m in dB(A)	61.9
Acoustic pressure level @15m in dB(A)	57.9
Sound power level guaranteed (Lwa)	87

**General Data**

Engine	MITSUBISHI S4Q2-Z261SD
Cylinder arrangement	L
Number of cylinders	4
Displacement (C.I.)	2.51
Bore (mm) x Stroke (mm)	88 x 103
Compression ratio	22 : 1
Speed (RPM)	1500
Pistons speed (m/s)	5.15
Maximum stand-by power at rated RPM (kW)	22.2
Frequency regulation (%)	2.5
BMEP (bar)	6.48
Governor type	MECA

**Coolant system**

Radiator & Engine capacity (L)	8.1
Max water temperature (°C)	100
Outlet water temperature (°C)	93
Fan power (kW)	0.7
Fan air flow w/o restriction (m3/s)	0.8
Available restriction on air flow (mm CE)	10
Type of coolant	GENCOOL
Thermostat (°C)	76.5-90

**Emissions**

Emissions PM (g/kW.h)	0.09
Emission CO (g/kW.h)	0.21
Emissions HCNOx (g/kWh)	N/A
Emission HC (g/kW.h)	0.02

**Exhaust system**

Exhaust gas flow (L/s)	74
Exhaust gas temperature (°C)	600
Max. exhaust back pressure (mm CE)	680

**Fuel system**

Consumption @ 110% load (L/h)	7
Consumption @ 100% load (L/h)	6.4
Consumption @ 75% load (L/h)	4.8
Consumption @ 50% load (L/h)	3.4
Maximum fuel pump flow (L/hr)	36

**Oil**

Oil capacity (L)	6.5
Min. oil pressure (bar)	1
Max. oil pressure (bar)	5
Oil consumption 100% load (L/h)	0.06
Carter oil capacity (L)	5.5

**Energy Balance Sheet**

Heat rejection to exhaust (kW)	21
Radiated heat to ambient (kW)	3
Heat rejection to coolant (kW)	20

**Air intake**

Max. intake restriction (mm CE)	200
Intake air flow (L/s)	29

**Alternator specifications**

**General Data**

Alternator	LEROY SOMER LSA422S5-AR
Number of phase	3
Power factor (Cos Phi)	0.8
Altitude (m)	0-1000
Overspeed (rpm)	2250
Number of pole	4
Excitation system	AREP
Insulation class	H
Regulation	R438
Harmonic factor, no load TGH/THC	<4
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% transitoire) (ms)	500

**Other datas**

Continuous Nominal Rating 40°C (kVA)	20
Standby Rating 27°C (kVA)	25
Efficiencies 4/4 load (%)	87
Air flow (m3/s)	0.15
Short circuit ratio (Kcc)	0.66
Direct axis synchro reactance unsaturated (Xd) (%)	190
Quadra axis synchro reactance unsaturated (Xq) (%)	90
Open circuit time constant (T'do) (ms)	410
Direct axis transient reactance saturated (X'd) (%)	11.5
Short circuit transient time constant (T'd) (ms)	30
Direct axis subtransient reactance saturated (X''d) (%)	5.8
Subtransient time constant (T''d) (ms)	3
Quadra axis subtransient reactance saturated (X''q) (%)	8.1
Zero sequence reactance unsaturated (Xo) (%)	0.1
Negative sequence reactance saturated (X2) (%)	6.9
Armature time constant (Ta) (ms)	4
No load excitation current (io) (A)	0.9
Full load excitation current (ic) (A)	2.3
Full load excitation voltage (uc) (V)	14
Recovery time (Delta U = 20% transitoire) (ms)	500
Motor start (Delta U = 20% perm. or 50% trans.) (kVA)	59
Transient dip (4/4 charge) - PF : 0,8 AR (%)	14.7
No load losses (W)	590
Heat rejection (W)	2400

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.