



## Version Full Rental Power

### BASE

- Analog engine
- Simplified connection terminal box
- Four-pole circuit breaker
- Central lifting ring
- soundproofed enclosure dedicated to rental
- Fuel low level
- AREP Leroy-Somer alternator
- Easy access to the radiator
- Swing valve

### ADDITIONAL EQUIPMENT - FULL

- Containment fuel tank and large autonomy
- Inlet air preheating
- Connection terminal box rental type
- Primary filter
- Adjustable earth fault protection and earthing rod
- Battery isolating switch
- Drainage pump
- Voltage adjustment potentiometer



### Prime Power

PRP : Prime Power is available for an unlimited number of annual operating hours in variable load applications (Mitsubishi Engines are limited to 2000 hours a year), in accordance with ISO8528-1. The average power output shall not exceed x% of the prime power rating, in accordance with ISO 3046-1.

### Standby power

ESP : The Standby Power Rating is applicable for supplying emergency power in variable load applications for up to 200 hours per year (Mitsubishi Engines are limited to 100 hours a year) in accordance with ISO8528-1. Overload is not allowed.

# R90C2 (CE)

<b>Motor type</b>	4045HFS72
<b>Alternator type</b>	LSA432L8-AR
<b>Canopy Type</b>	M129

## GENERAL CHARACTERISTICS

<b>Frequency (Hz)</b>	50
<b>Reference voltage (V)</b>	400/230
<b>Max power (kVA)</b>	88
<b>Max power ESP (kWe)</b>	70.4
<b>Max power ESP (kVA)</b>	80
<b>Max power PRP (kWe)</b>	64
<b>Intensity (A)</b>	127
<b>Standard Control Panel</b>	NEXYS
<b>Optional control panel</b>	TELYS

## DIMENSIONS

<b>Length (mm)</b>	2602
<b>Width (mm)</b>	1150
<b>Height (mm)</b>	1900
<b>Dry weight (kg)</b>	1984
<b>Tank capacity (L)</b>	505
<b>Autonomy @ 50% of load (h)</b>	44.7
<b>Autonomy @ 75% of load (h)</b>	29.4

## DIMENSIONS BASE VERSION

<b>Length (mm)</b>	2554
<b>Width (mm)</b>	1150
<b>Height (mm)</b>	1680
<b>Dry weight (kg)</b>	1700
<b>Tank capacity (L)</b>	190
<b>Autonomy @ 50% of load (h)</b>	19.1
<b>Autonomy @ 75% of load (h)</b>	12.9

## NOISE LEVEL

<b>dB(A)@1m (50Hz)</b>	77
<b>dB(A)@7m (50Hz)</b>	67
<b>dB(A)@15m (50Hz)</b>	63
<b>LWA (50Hz)</b>	93

## ENGINE SPECIFICATIONS

### GENERAL CHARACTERISTICS

Description	4045HFS72
Motor model	JOHN DEERE
Cylinder arrangement	L
Number of cylinders	4
Bore (mm)	106
Stroke (mm)	127
Displacement (C.I.)	4.48
Compression ratio	17 : 1
Speed (RPM)	1500
Pistons speed (m/s)	6.35
Maximum stand-by power at rated	83
Governor type	Electronic
Frequency regulation (%)	+/- 0.5%
BMEP (bar)	13.38

### COOLING SYSTEM

Radiator & Engine capacity (L)	8.5
Max water temperature (°C)	105
Fan power (kW)	4.57
Available restriction on air flow (mm)	20
Type of coolant	Gencool
Thermostat (°C)	82-94

### EMISSIONS

Emission HC (g/kW.h)	0.43
Emission Nox (g/kW.h)	5.46
Emission CO (g/kW.h)	1.05
Emissions PM (g/kW.h)	0.198

### EXHAUST

Exhaust gas flow (L/s)	281.67
Exhaust gas temperature (°C)	509
Max. exhaust back pressure (mm CE)	750

### FUEL

Consumption @ 110% load (L/h)	21.68
Consumption @ 100% load (L/h)	19.32
Consumption @ 75% load (L/h)	14.76
Consumption @ 50% load (L/h)	9.97
Maximum fuel pump flow (L/hr)	88.24

### OIL SYSTEM

Oil capacity (L)	13
Min. oil pressure (bar)	1.38
Max. oil pressure (bar)	2.75
Oil consumption 100% load (L/h)	0.05
Carter oil capacity (L)	12

### HEAT BALANCE

Heat rejection to exhaust (kW)	62.76
Radiated heat to ambient (kW)	10.12
Heat rejection to coolant (kW)	45+13

### AIR INTAKE

Intake air flow (L/s)	125
Max. intake restriction (mm CE)	300

## ALTERNATOR

### GENERAL CHARACTERISTICS

Description	LSA 43.2 L8
Alternator brand	LEROY SOMER
Number of phase	3
Altitude (m)	0 à 1000
Overspeed (rpm)	2250
Number of pole	4
Excitation system	AREP
Insulation class	H
Regulation	R438
Sustained short circuit current	3 IN" 10s
#Taux d'harmonique à vide TGH/THC	< 2%
#Taux d'harmonique en charge	< 2%
Wave form : CEI=FHT-(TGH/THC)	< 2%
Wave form : NEMA=TIF-(TGH/THC)	< 50
Number of bearing	1
Coupling	Direct
#Régulation de tension à régime	+/- 0.5%
Air flow (m3/s)	0.27

### OTHER CHARACTERISTICS

No load excitation current (io) (A)	0.8
Full load excitation current (ic) (A)	3.2
Full load excitation voltage (uc) (V)	14
Recovery time (Delta U = 20%)	500
Motor start (Delta U = 20% perm. or	240
Transient dip (4/4 charge) - PF : 0,8	11.6
No load losses (W)	1410
Heat rejection (W)	6640

### REACTANCES (R) - TIME CONSTANT(CT)

Short circuit ratio (Kcc)	0.41
Direct axis synchro reactance	284
Quadra axis synchro reactance	170
Open circuit time constant (T'do)	1431
Direct axis transient reactance	9.9
Short circuit transient time constant	50
Direct axis subtransient reactance	5
Subtransient time constant (T"d) (ms)	5
Quadra axis subtransient reactance	6.3
Zero sequence reactance unsaturated	0.1
Negative sequence reactance	5.7
Armature time constant (Ta) (ms)	8

### POWERS

Power factor (Cos Phi)	0.8
Continuous Nominal Rating 40°C	80
Standby Nominal Rating 40°C (kVA)	84
Standby Rating 27°C (kVA)	88
Efficiencies 4/4 load (%)	90.5

## CONTROL PANELS

### NEXYS (comprehensive and simple)



The NEXYS is a versatile control unit allowing operation in manual or automatic mode. Equipped with an LCD screen, the user-friendly NEXYS 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

### TELYS (ergonomic and user-friendly)



The highly versatile TELYS 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.

The TELYS 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.