

# PRELIMINARY



## R220C3 (CE)

Engine type	6068HFS86
Alternator type	LSA 46.2 M5
Canopy Type	M3226

### Full version

#### BASE ADDITIONNAL EQUIPMENTS

- ➔ Stage 3a engine
- ➔ Leroy-Somer AREP (TS26-S004) Alternator
- ➔ Four-pole circuit breaker
- ➔ Connection terminal box rental type
- ➔ Containment fuel tank and large autonomy
- ➔ Forks and frame protection pads
- ➔ Mecanical hours meter
- ➔ Adjustable earth fault protection and earthing rod
- ➔ Inlet air preheating
- ➔ Battery isolating switch
- ➔ Oil drainage pump
- ➔ Heavy duty air filter with interchangeable cartridge
- ➔ Primary filter
- ➔ Heat hand protections (EC standard)
- ➔ Access door to the radiator

#### FULL ADDITIONNAL EQUIPMENTS

### 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 Inlet 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.

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.

### GENERAL CHARACTERISTICS

Frequency (Hz)	50
Voltage value	400
Max power ESP (kVA)	220
Max power ESP (kWe)	176
Max power PRP (kVA)	200
Max power PRP (kWe)	160
Intensity (A)	318
Standard Control Panel	NEXYS
Optional control panel	TELYS

### FULL VERSION DIMENSIONS

Length (mm).	3520
Width (mm).	1190
Height (mm).	2120
Dry weight (kg).	N/A
Tank capacity (L).	860
Autonomy @ 75% of load (h)	N/A
Autonomy @ 50% of load (h)	N/A

### BASE VERSION DIMENSIONS

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

### NOISE LEVEL

Acoustic pressure level @1m in dB(A) ( )	N/A (0.7)
Acoustic pressure level @7m in dB(A) ( )	N/A (0.7)
Acoustic pressure level @15m in dB(A) ( )	N/A (0.7)
Sound power level guaranteed (Lwa)	N/A

# PRELIMINARY



## R220C3 (CE)

### TECHNICAL SPECIFICATIONS

#### GENERAL ENGINE DATAS

Description	6068HFS86
Engine model	N/A
Cylinder arrangement	L
Number of cylinders	6
Displacement (C.I.)	6.72
Bore (mm) x Stroke (mm)	106 x 127
Compression ratio	17 : 1
Speed (RPM)	1500
Pistons speed (m/s)	6.35
Maximum stand-by power at rated RPM (kW)	202
Frequency regulation (%)	+/- 0.5%
BMEP (bar)	21.89
Governor type	Electronic

#### COOLING SYSTEM

Radiator & Engine capacity (L)	N/A
Max water temperature (°C)	110
Outlet water temperature (°C)	N/A
Fan power (kW)	N/A
Fan air flow w/o restriction (m <sup>3</sup> /s)	N/A
Available restriction on air flow (mm EC)	N/A
Type of coolant	Gencool

#### EMISSIONS

Emission HC (g/kW.h)	0.13
Emission HCNO <sub>x</sub> (g/kWh)	3.68
Emission CO (g/kW.h)	1.15
Emission PM (g/kW.h)	0.1

#### EXHAUST

Exhaust gas flow (L/s)	502
Exhaust gas temperature (°C)	548
Max. exhaust back pressure (mm EC)	765

#### FUEL

Consumption @ 110% load (L/h)	48.6
Consumption @ 100% load (L/h)	46
Consumption @ 75% load (L/h)	N/A
Consumption @ 50% load (L/h)	N/A
Maximum fuel pump flow (L/h)	N/A

#### OIL

Oil capacity (L)	32
Min. oil pressure (bar)	1.05
Max. oil pressure (bar)	3.75
Oil consumption 100% load (L/h)	0.12
Carter oil capacity (L)	N/A

#### HEAT BALANCE

Radiated heat to ambient (kW)	N/A
Heat rejection to coolant (kW)	84

#### AIR INTAKE

Max. intake restriction (mm EC)	637
Intake air flow (L/s)	215

# PRELIMINARY



## R220C3 (CE)

### ALTERNATOR SPECIFICATIONS

#### GENERAL DATAS

Description	LSA 46.2 M5
Alternator brand	N/A
Number of phase	3
Altitude (m)	0 à 1000
Overspeed (rpm)	2250
Number of pole	4
Excitation system	AREP
Insulation class	H
Regulation	R450
Sustained short circuit current	3 IN for 10S
Harmonic factor, no load TGH/THC (%)	<2.5
Harmonic factor, on load TGH/THC (%)	<2.5C
Wave form : CEI=FHT-(TGH/THC)	<2
Wave form : NEMA=TIF-(TGH/THC)	<50
Number of bearing	1
Coupling	Direct
Voltage regulation at established rating (%)	+/- 0.5%
Air flow (m3/s)	0.43

#### OTHER DATAS

No load excitation current (io) (A)	1
Full load excitation current (ic) (A)	3.7
Full load excitation voltage (uc) (V)	32
Recovery time (Delta U = 20% transient) (ms)	500 ms
Engine start (Delta U = 20% perm. or 50% trans.) (kVA)	434
Transient dip (4/4 load) - PF : 0,8 AR (%)	13.7
No load losses (W)	3040
Heat rejection (W)	13180

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

Short circuit ratio (Kcc)	0.45
Direct axis synchro reactance unsaturated (Xd) (%)	301
Quadra axis synchro reactance unsaturated (Xq) (%)	180
Open circuit time constant (T'do) (ms)	2042
Direct axis transient reactance saturated (X'd) (%)	14.7
Short circuit transient time constant (T'd) (ms)	100
Direct axis subtransient reactance saturated (X''d) (%)	8.8
Subtransient time constant (T''d) (ms)	10
Quadra axis subtransient reactance saturated (X''q) (%)	10.9
Zero sequence reactance unsaturated (Xo) (%)	0.8
Negative sequence reactance saturated (X2) (%)	9.9
Armature time constant (Ta) (ms)	15

#### POWERS

Power factor (Cos Phi)	0.8
Continuous Nominal Rating 40°C (kVA)	200
Standby Nominal Rating 40°C (kVA)	214
Standby Rating 27°C (kVA)	223
Efficiencies 4/4 load (%)	92.3

# PRELIMINARY



R220C3 (CE)

CONTROL PANEL

NEXYS, comprehensive and simple

TELYS, ergonomic and user-friendly



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.

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

For more information, please refer to the sales documentation.

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.

**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.