



DESCRIPTIVE

- Mechanic governor
- Mechanically welded chassis with antivibration suspension
- Main line circuit breaker
- Radiator for wiring temperature of 48/50°C max with mechanical fan
- Protective grille for fan and rotating parts
- 9 dB(A) silencer supplied separately
- Charger DC starting battery with electrolyte
- 12 V charge alternator and starter
- Delivered with oil and coolant -30°C
- Manual for use and installation

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.

J110K

Engine type	4045HF120
Alternator type	LSA 44.2 VS45

GENERAL CHARACTERISTICS

Frequency (Hz)	50
Reference voltage (V)	400/230
Max power ESP (kVA)	110
Max power ESP (kWe)	88
Max power PRP (kVA)	100
Max power PRP (kWe)	80
Intensity (A)	159
Standard Control Panel	NEXYS
Optional control panel	TELYS

DIMENSIONS AND NOISE LEVELS

DIMENSIONS COMPACT VERSION

Length (mm)	1950
Width (mm)	1084
Height (mm)	1330
Dry weight (kg)	1240
Tank capacity (L)	190

DIMENSIONS SOUNDPROOFED VERSION

Canopy	M129
Length (mm).	2554
Width (mm).	1150
Height (mm).	1680
Dry weight (kg).	1640
Tank capacity (L).	190
Acoustic pressure level @1m in dB(A) (associated uncertainty)	78 (0.21)
Sound power level guaranteed (Lwa) in dB(A)	96

POWERS

Voltage	ESP		PRP		Standby Amps
	kWe	kVA	kWe	kVA	
415/240	88	110	80	100	153
400/230	88	110	80	100	159
380/220	88	110	80	100	167
240 TRI	88	110	80	100	265
230 TRI	88	110	80	100	276
220 TRI	88	110	80	100	289
220/127	88	110	80	100	289
200/115	88	110	80	100	318

GENERAL ENGINE DATAS

Engine model	JOHN DEERE 4045HF120 , 4- temps, Turbo , Air/Air DC 4 X
Cylinder arrangement	L
Displacement (C.I.)	4.48
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)	100
Frequency regulation (%)	+/- 2.5%
BMEP (bar)	16.24
Governor type	Mechanical

COOLING SYSTEM

Radiator & Engine capacity (L)	20.2
Max water temperature (°C)	105
Outlet water temperature (°C)	93
Fan power (kW)	2.5
Fan air flow w/o restriction (m3/s)	3.7
Available restriction on air flow (mm EC)	20
Type of coolant	Gencool
Thermostat (°C)	82-94

EMISSIONS

Emission PM (mg/Nm3)	100
Emission CO (mg/Nm3)	310
Emission HCNOx (g/kWh)	N/A
Emission HC (mg/Nm3)	26

EXHAUST

Exhaust gas temperature (°C)	545
Exhaust gas flow (L/s)	283
Max. exhaust back pressure (mm EC)	750

FUEL

Consumption @ 110% load (L/h)	25.5
Consumption @ 100% load (L/h)	23.5
Consumption @ 75% load (L/h)	16.5
Consumption @ 50% load (L/h)	11.5
Maximum fuel pump flow (L/h)	108

OIL

Oil capacity (L)	13.5
Min. oil pressure (bar)	1
Max. oil pressure (bar)	5
Oil consumption 100% load (L/h)	0.02
Carter oil capacity (L)	12.5

HEAT BALANCE

Heat rejection to exhaust (kW)	64
Radiated heat to ambient (kW)	10.5
Heat rejection to coolant (kW)	36

AIR INTAKE

Max. intake restriction (mm EC)	625
Intake air flow (L/s)	106

GENERAL DATAS

Alternator brand	LEROY SOMER
Alternator type	LSA 44.2 VS45
Number of phase	3
Power factor (Cos Phi)	0.8
Altitude (m)	0 à 1000
Overspeed (rpm)	2250
Number of pole	4
Excitation system	SHUNT
Insulation class / T° class, continuous 40°C	H / H / 125°K
Regulation	N/A
Harmonic factor, no load TGH/THC	< 2%
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% transient) (ms)	500 ms

OTHER DATAS

Continuous Nominal Rating 40°C (kVA)	105
Standby Rating 27°C (kVA)	116
Efficiencies 4/4 load (%)	90.8
Air flow (m3/s)	0.37
Short circuit ratio (Kcc)	0.35
Direct axis synchro reactance unsaturated (Xd) (%)	362
Quadra axis synchro reactance unsaturated (Xq) (%)	217
Open circuit time constant (T'do) (ms)	2555
Direct axis transient reactance saturated (X'd) (%)	14.1
Short circuit transient time constant (T'd) (ms)	100
Direct axis subtransient reactance saturated (X''d) (%)	8.5
Subtransient time constant (T''d) (ms)	10
Quadra axis subtransient reactance saturated (X''q) (%)	10.4
Zero sequence reactance unsaturated (Xo) (%)	0.5
Negative sequence reactance saturated (X2) (%)	9.5
Armature time constant (Ta) (ms)	15
No load excitation current (io) (A)	0.5
Full load excitation current (ic) (A)	2.1
Full load excitation voltage (uc) (V)	38
Recovery time (Delta U = 20% transient) (ms)	500 ms
Engine start (Delta U = 20% perm. or 50% trans.) (kVA)	194.4
Transient dip (4/4 load) - PF : 0,8 AR (%)	17.3
No load losses (W)	1800
Heat rejection (W)	8500

CONTAINMENT

Canopy	M129 DW
Length (mm).	2602
Width (mm).	1150
Height (mm).	1900
Dry weight (kg).	2059
Tank capacity (L).	505
Acoustic pressure level @1m in dB(A) (associated uncertainty)	77 (0.21)
Sound power level guaranteed (Lwa) in dB(A)	96

CONTAINMENT 48H

Canopy	M129 DW48
Length (mm).	2602
Width (mm).	1150
Height (mm).	1948
Dry weight (kg).	2065
Tank capacity (L).	825
Acoustic pressure level @1m in dB(A) (associated uncertainty)	77 (0.21)
Sound power level guaranteed (Lwa) in dB(A)	96

DIMENSIONS AND NOISE LEVELS

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.

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.

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.

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

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