J60U

Engine ref.	4045TF120
Alternator ref.	AT00840T
Performance class	G3

GENERAL CHARACTERISTICS

Frequency (Hz)	60
Voltage (V)	480/277
Standard Control Panel	APM303
Optional control panel	TELYS

POWER

Voltage	ESP		PRP		Standby Amps
	kWe	kVA	kWe	kVA	
480/277	60	75	55	68	90
440/254	60	75	55	68	98
220/127	60	75	55	68	197
208/120	57	71	52	65	197

DIMENSIONS COMPACT VERSION

Length (mm)	1870
Width (mm)	994
Height (mm)	1360
Dry weight (kg)	1020
Tank capacity (L)	180

DIMENSIONS SOUNDPROOFED VERSION

Commercial reference of the enclosure	M128
Length (mm)	2300
Width (mm)	1060
Height (mm)	1680
Dry weight (kg)	1430
Tank capacity (L)	180
Acoustic pressure level @1m in dB(A)	76
Sound power level guaranteed (Lwa)	0
Acoustic pressure level @7m in dB(A)	66

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 (CE option)
- 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 Intlet 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.

ASSOCIATED UNCERTAINLY

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.

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ENGINE CHARACTERISTICS

GENERAL ENGINE DATA

Engine model	JOHN DEERE
Engine ref.	4045TF120
Air inlet	Turbo
Cylinders arrangement	L
Number of cylinders	4
Displacement (C.I.)	4.48
Air coolant	
Bore (mm) x Stroke (mm)	106 x 127
Compression ratio	17 : 1
Speed (RPM)	1800
Pistons speed (m/s)	7.62
Maximum stand-by power at rated RPM (kW)	80
Frequency regulation (%)	+/- 2.5%
BMEP (bar)	10.70
Governor type	Mechanical

COOLING SYSTEM

Radiator & Engine capacity (L)	23.60
Max water temperature (°C)	105
Outlet water temperature (°C)	93
Fan power (kW)	2.50
Fan air flow w/o restriction (m3/s)	3
Available restriction on air flow (mm Water Column)	20
Type of coolant	Glycol-Ethylene
Thermostat (°C)	82-94

EMISSIONS

Emission PM (g/kWh)	
Emission CO (g/kW.h)	
Emission HCNOx (g/kWh)	
Emission HC (g/kW.h)	

EXHAUST

Exhaust gas temperature (°C)	520
Exhaust gas flow (L/s)	220
Max. exhaust back pressure (mm EC)	750

FUEL

Fuel consumption 110% load (L/hr)	20.50
Fuel consumption 100% load (L/hr)	19
Fuel consumption 75% (L/h)	14.50
Fuel consumption 50% (L/h)	10.50
Maximum fuel pump flow (L/h)	112

OIL

Oil capacity (L)	13.50
Min. oil pressure (bar)	1
Max. oil pressure (bar)	5
Oil consumption 100% load (L/h)	0.02
Carter oil capacity (L)	12.50

HEAT BALANCE

Heat rejection to exhaust (kW)	63
Radiated heat to ambiant (kW)	9
Haet rejection to coolant (kW)	39

AIR INTAKE

Max. intake restriction (mm EC)	625
Intake air flow (L/s)	88

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ALTERNATOR CHARACTERISTICS

GENERAL DATA

Alternator ref.	AT00840T
Number of Phase	Three phase
Power factor (Cos Phi)	0.80
Altitude (m)	0 to 1000
Overspeed (rpm)	2250
Number of pole	4
Capacity for maintaining short circuit at 3 In for 10 s	Yes
Insulation class	H
T° class, continuous 40°C	H / 125°K
T° class, standby 27°C	H / 163°K
AVR Regulation	Yes
Total Harmonic Distortion in no-load DHT (%)	3.8
Total Harmonic Distortion, on load DHT (%)	3
Wave form : NEMA=TIF	<45
Wave form : CEI=FHT	<2
Number of bearing	1
Coupling	Direct
Voltage regulation at established rating (+/- %)	+/- 1%
Recovery time (Delta U = 20% transcient) (ms)	500
Indication of protection	IP 21
Technology	Without collar or brush

OTHER DATA

Continuous Nominal Rating 40°C (kVA)	75
Standby Rating 27°C (kVA)	83
Efficiencies 100% of load (%)	92.80
Air flow (m3/s)	0.1450
Short circuit ratio (Kcc)	0.59
Direct axis synchro reactance unsaturated (Xd) (%)	284
Quadra axis synchro reactance unsaturated (Xq) (%)	111
Open circuit time constant (T'do) (ms)	1200
Direct axis transcient reactance saturated (X'd) (%)	13.40
Short circuit transcient time constant (T'd) (ms)	62
Direct axis subtranscient reactance saturated (X"d) (%)	7.10
Subtranscient time constant (T"d) (ms)	14
Quadra axis subtranscient reactance saturated (X"q) (%)	34.60
Subtranscient time constant (T"q) (ms)	
Zero sequence reactance unsaturated (Xo) (%)	3.15
Negative sequence reactance saturated (X2) (%)	23.40
Armature time constant (Ta) (ms)	28
No load excitation current (io) (A)	0.60
Full load excitation current (ic) (A)	2.10
Full load excitation voltage (uc) (V)	23
Engine start (Delta U = 20% perm. or 50% trans.) (kVA)	201
Transcient dip (4/4 load) - PF : 0,8 AR (%)	15.50
No load losses (W)	1204.08
Heat rejection (W)	4686
Unbalanced load acceptance ratio (%)	

DIMENSIONS

Containment DW

Commercial reference of the enclosure	M128 DW
Length (mm)	2344
Width (mm)	1060
Height (mm)	1900
Dry weight (kg)	1677
Tank capacity (L)	390
Acoustic pressure level @1m in dB(A)	76
Sound power level guaranteed (Lwa)	0
Acoustic pressure level @7m in dB(A)	66

J60U

CONTROL PANEL

APM303, comprehensive and simple

The APM303 is a versatile unit which can be operated in manual or automatic mode. Equipped with an LCD screen, the user-friendly APM303 offers high-quality basic functions to guarantee simple, reliable operation and supervision of your generating set. It offers the following features:
Measurements:
phase-to-neutral and phase-to-phase voltages, active power currents, effective power, power factors, Kw/h energy meter
Fuel, oil pressure and coolant temperature levels
Supervision:
Modbus RTU communication on RS485
Reports:
2 configurable reports
Safety features:
Overspeed, oil pressure
Coolant temperatures
Minimum and maximum voltage
Minimum and maximum frequency
Maximum current
Maximum active power
Phase sequence
Traceability:
Stack of 12 stored events
For further information, please refer to the data sheet for the APM303.

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.