WBPS

POWER YOU CAN TRUST

CONTAINERISED J66

ENGINE CHARACTERISTICS

BENEFITS

- Upto 100kVA
- Large internal fuel tank
- Integrated distribution unit
- Internal LED lighting
- Available with remote monitoring
- Available as hybrid package
- Reduced acoustic levels
- Completely self contained

POPULAR FOR

- Construction sites
- Utilities sector
- Telecoms industry
- Highway applications
- Remote locations

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.

GENERAL CHARACTERISTICS

Frequency (Hz)	50
Voltage (V)	400/230
Standard Control Panel	APM303

POWER

Voltage	ESP		PRP		Standby Amps
	kWe	kVA	kWe	kVA	
220 TRI	53	66	48	60	173
	53	66	48	60	173
	53	66	48	60	92
	53	66	48	60	95
	53	66	48	60	100
	53	66	48	60	191
240 TRI	53	66	48	60	159
230 TRI	53	66	48	60	166

OVERALL DIMENSIONS

Length (mm)	2400
Width (mm)	3000
Height (mm)	2700
Dry weight (kg)	3022
Tank capacity (L)	1350

CONTACT US

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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	17:01
Speed (RPM)	1500
Pistons speed (m/s)	6.35
Maximum stand-by power at rated RPM (kW)	70
Frequency regulation (%)	+/- 2.5%
BMEP (bar)	11.24
Governor type	Mechanical

COOLING SYSTEM	
Radiator & Engine capacity (L)	23.6
Max water temperature (°C)	105
Outlet water temperature (°C)	93
Fan power (kW)	1.4
Fan air flow w/o restriction (m3/s)	2.53
Available restriction on air flow (mm Water Column)	20
Type of coolant	Glycol-Ethylene
Thermostat (°C)	82-94

EXHAUST	
Exhaust gas temperature (°C)	545
Exhaust gas flow (L/s)	176
Max. exhaust back pressure (mm EC)	750

FUEL	
Consumption @ 110% load (L/h)	17.50
Consumption @ 100% load (L/h)	16
Consumption @ 75% load (L/h)	12
Consumption @ 50% load (L/h)	8.50
Maximum fuel pump flow (L/h)	108

OIL	
Oil capacity (L)	13.50
Min. oil pressure (bar)	1
Max. oil pressure (bar)	5
Oil consumption 100% load (L/h)	0.0160
Carter oil capacity (L)	12.50

HEAT BALANCE	
Heat rejection to exhaust (kW)	54
Radiated heat to ambiant (kW)	8
Heat rejection to coolant (kW)	35

AIR INTAKE	
Max. intake restriction (mm EC)	625
Intake air flow (L/s)	66

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ENGINE 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)	63
Standby Rating 27°C (kVA)	71
Efficiencies 100% of load (%)	90.2
Air flow (m3/s)	0.1180
Short circuit ratio (Kcc)	0.59
Direct axis synchro reactance unsaturated (Xd) (%)	283
Quadra axis synchro reactance unsaturated (Xq) (%)	111
Open circuit time constant (T'do) (ms)	1200
Direct axis transcient reactance saturated (X'd) (%)	13.4
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
Full load excitation voltage (uc) (V)	22
Engine start (Delta U = 20% perm. or 50% trans.) (kVA)	152
Transcient dip (4/4 load) - PF : 0,8 AR (%)	15.5
No load losses (W)	1130.99
Heat rejection (W)	5476
Unbalanced load acceptance ratio (%)	

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.