

KOHLER[®] Power Systems



DESCRIPTIVE

- Kohler Co. Provides one-source responsibility for the generating system and accessories.
- The generator set and its components are prototype-tested, factory-built, and production-tested.
- A one-year limited warranty covers all systems and components
- 24 V charge alternator and starter
- Single-bearing alternator with insulation class H.
- Radiator for core temperature of 48/50°C max with mechanical fan
- Skid and vibration isolators.
- Dry type air filter.
- Main line circuit breaker.
- Microprocessor controller.
- 9 dB(A) silencer supplied separately
- Operation and installation literature.

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.

ASSOCIATED UNCERTAINTY

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.

KH330

Engine ref.	P126TI-II
Alternator ref.	AT01720T
Performance class	G3

GENERAL CHARACTERISTICS

Frequency (Hz)	50
Voltage (V)	400/230
Standard Control Panel	APM303
Optional control panel	DEC4000
Optional control panel	APM802
Optional control panel	Basic terminal block

POWER

Voltage	ESP		PRP		Standby Amps
	kWe	kVA	kWe	kVA	
415/240	264	330	240	300	459
400/230	264	330	240	300	476
380/220	264	330	240	300	501

DIMENSIONS COMPACT VERSION

Length (mm)	3160
Width (mm)	1340
Height (mm)	1592
Dry weight (kg)	2440
Tank capacity (L)	470

DIMENSIONS SOUNDPROOFED VERSION

Commercial reference of the enclosure	M228
Length (mm)	4475
Width (mm)	1410
Height (mm)	2430
Dry weight (kg)	3540
Tank capacity (L)	470
Acoustic pressure level @1m in dB(A)	81
Sound power level guaranteed (Lwa)	101
Acoustic pressure level @7m in dB(A)	71

GENERAL ENGINE DATA

Engine brand	DOOSAN
Engine ref.	P126TI-II
Air inlet system	Turbo
Cylinders configuration	L
Number of cylinders	6
Displacement (L)	11.05
Charge Air coolant	Air/Air DC
Bore (mm) x Stroke (mm)	123.00 x 155.00
Compression ratio	17 : 1
Speed (RPM)	1500
Pistons speed (m/s)	7.75
Maximum stand-by power at rated RPM (kW)	294.00
Frequency regulation, steady state (%) +/- 0.5%	
BMEP (bar)	19.11
Governor type	Electronic

COOLING SYSTEM

Radiator & Engine capacity (L)	50.50
Max water temperature (°C)	103.00
Outlet water temperature (°C)	
Fan power (kW)	10.00
Fan air flow w/o restriction (m ³ /s)	5.00
Available restriction on air flow (mm H ₂ O)	76.00
Type of coolant	Glycol-Ethylene
Thermostat modulating range HT (°C)	71 - 85

EMISSIONS

Emission PM (g/kW.h)	0.137
Emission CO (g/kW.h)	0.112
Emission HC+NO _x (g/kWh)	
Emission HC (g/kW.h)	0.332

EXHAUST

Exhaust gas temperature @ ESP 50Hz (°C)	590
Exhaust gas flow @ ESP 50 Hz (L/s)	790.00
Max. exhaust back pressure (mm H ₂ O)	600

FUEL

Consumption @ 110% load (L/h)	77.60
Consumption @ 100% load (L/h)	63.10
Consumption @ 75% load (L/h)	47.00
Consumption @ 50% load (L/h)	31.30
Maximum fuel pump flow (L/h)	270.00

OIL

Oil capacity (L)	25.00
Min. oil pressure (bar)	0.50
Max. oil pressure (bar)	10.00
Oil consumption 100% load (L/h)	0.063
Oil sump capacity (L)	23.0

HEAT BALANCE

Heat rejection to exhaust (kW)	254
Radiated heat to ambient (kW)	35.20
Heat rejection to coolant (kW)	150.6

AIR INTAKE

Max. intake restriction (mm H ₂ O)	635
Intake air flow (L/s)	335.00

GENERAL DATA

Alternator ref.	AT01720T
Number of Phase	Three phase
Power factor (Cos Phi)	0.8
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 (H/125°), continuous 40°C	H / 125°K
T° class, standby 27°C	H / 163°K
AVR Regulation	Yes
Total Harmonic Distortion in no-load DHT (%)	2,6
Total Harmonic Distortion, on load DHT (%)	3,0
Wave form : NEMA=TIF	<40
Wave form : CEI=FHT	<2
Number of bearing	1
Coupling	Direct
Voltage regulation at established rating (+/- %)	1.00
Recovery time (Delta U = 20% transient) (ms)	200
Indication of protection	IP 23
Technology	Without collar or brush

OTHER DATA

Continuous Nominal Rating 40°C (kVA)	300.0
Standby Rating 27°C (kVA)	330.0
Efficiencies 100% of load (%)	93.7
Air flow (m3/s)	0.533
Short circuit ratio (Kcc)	0.430
Direct axis synchro reactance unsaturated (Xd) (%)	215.3
Quadra axis synchro reactance unsaturated (Xq) (%)	124.2
Open circuit time constant (T'do) (ms)	1400.00
Direct axis transient reactance saturated (X'd) (%)	13.1
Short circuit transient time constant (T'd) (ms)	91.000
Direct axis subtransient reactance saturated (X''d) (%)	7.0
Subtransient time constant (T''d) (ms)	12.000
Quadra axis subtransient reactance saturated (X''q) (%)	17.90
Subtransient time constant (T''q) (ms)	20.0
Zero sequence reactance unsaturated (Xo) (%)	2.380
Negative sequence reactance saturated (X2) (%)	13.80
Armature time constant (Ta) (ms)	16.000
No load excitation current (io) (A)	0.78
Full load excitation current (ic) (A)	3.90
Full load excitation voltage (uc) (V)	61.3
Engine start (Delta U = 20% perm. or 50% trans.) (kVA)	230.00
Transient dip (4/4 load) - PF : 0,8 AR (%)	14.00
No load losses (W)	3970.00
Heat rejection (W)	16137.00
	0
Unbalanced load acceptance ratio (%)	100

DIMENSIONS

Containment DW

Commercial reference of the enclosure	M228 DW
Length (mm)	4527
Width (mm)	1410
Height (mm)	2700
Dry weight (kg)	4060
Tank capacity (L)	1368
Acoustic pressure level @1m in dB(A)	81
Sound power level guaranteed (Lwa)	101
Acoustic pressure level @7m in dB(A)	71

APM303, comprehensive and simple



The APM303 is a versatile unit which can be operated in manual or automatic mode. It offers the following features:

Measurements:

phase-to-neutral and phase-to-phase voltages, fuel level
(In option : active power currents, effective power, power factors, Kw/h energy meter, oil pressure and coolant temperature levels)

Supervision:

Modbus RTU communication on RS485

Reports:

(In option : 2 configurable reports)

Safety features:

Overspeed, oil pressure, coolant temperatures, minimum and maximum voltage, minimum and maximum frequency
(Maximum active power P<66kVA)

Traceability:

Stack of 12 stored events

For further information, please refer to the data sheet for the APM303.

DEC4000, ergonomic and user-friendly



The highly versatile DEC4000 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.

It 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.