

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
- Electronic governor
- Mechanically welded chassis with antivibration suspension
- Main line circuit breaker
- Radiator for core temperature of 48/50°C max with mechanical fan
- Protective grille for fan and rotating parts (CE option)
- Charger DC starting battery with electrolyte
- 24 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.

ASSOCIATED UNCERTAINTY

For the generator sets used indoor, where the acoustic pressure levels depend on the installation conditions, it is not possible to specify the ambient noise level in the operating and maintenance instructions. You will also find in our operating and maintenance instructions a warning concerning the air noise dangers and the need to implement appropriate preventive measures.

KH330

Engine type	P126TI-II
Alternator type	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)	102
Acoustic pressure level @7m in dB(A)	71

GENERAL ENGINE DATA

Engine model	DOOSAN
Engine type	P126TI-II
Air inlet	Turbo
Cylinders arrangement	L
Number of cylinders	6
Displacement (C.I.)	11.05
Air coolant	Air/Air DC
Bore (mm) x Stroke (mm)	123 x 155
Compression ratio	17 : 1
Speed (RPM)	1500
Pistons speed (m/s)	7.75
Maximum stand-by power at rated RPM (kW)	294
Frequency regulation (%)	+/- 0.5%
BMEP (bar)	19.11
Governor type	Electronic

COOLING SYSTEM

Radiator & Engine capacity (L)	50.5
Max water temperature (°C)	103
Outlet water temperature (°C)	N/A
Fan power (kW)	10
Fan air flow w/o restriction (m3/s)	5
Available restriction on air flow (mm Water Column)	76
Type of coolant	Glycol-Ethylene
Thermostat (°C)	71 - 85

EMISSIONS

Emission PM (g/kWh)	0.14
Emission CO (g/kWh)	0.11
Emission HCNOx (g/kWh)	N/A
Emission HC (g/kW.h)	0.33

EXHAUST

Exhaust gas temperature (°C)	590
Exhaust gas flow (L/s)	790
Max. exhaust back pressure (mm EC)	600

FUEL

Consumption @ 110% load (L/h)	77.6
Consumption @ 100% load (L/h)	63.1
Consumption @ 75% load (L/h)	47
Consumption @ 50% load (L/h)	31.3
Maximum fuel pump flow (L/h)	270

OIL

Oil capacity (L)	25
Min. oil pressure (bar)	0.5
Max. oil pressure (bar)	10
Oil consumption 100% load (L/h)	0.063
Carter oil capacity (L)	23

HEAT BALANCE

Heat rejection to exhaust (kW)	254
Radiated heat to ambient (kW)	35.2
Heat rejection to coolant (kW)	150.6

AIR INTAKE

Max. intake restriction (mm EC)	635
Intake air flow (L/s)	335

GENERAL DATA

Alternator type	AT01720T
Number of Phase	Three phase
Power factor (Cos Phi)	0.8
Altitude (m)	0 to 1000
Overspeed (rpm)	2250
Number of pole	N/A
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 (%)	<2.6
Total Harmonic Distortion, on load DHT (%)	<3
Wave form : NEMA=TIF	<40
Wave form : CEI=FHT	<2
Number of bearing	1
Coupling	Direct
Voltage regulation at established rating (+/- %)	1
Recovery time (Delta U = 20% transient) (ms)	200
Protection class	IP 23
Technology	Without collar or brush

OTHER DATA

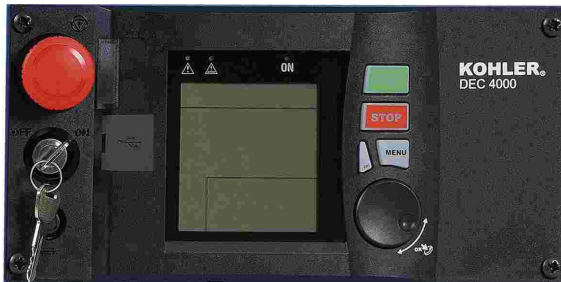
Continuous Nominal Rating 40°C (kVA)	300
Standby Rating 27°C (kVA)	330
Efficiencies 100% of load (%)	93.7
Air flow (m3/s)	0.533
Short circuit ratio (Kcc)	0.43
Direct axis synchro reactance unsaturated (Xd) (%)	215.3
Quadrature-axis synchro reactance unsaturated (Xq) (%)	124.2
Open circuit time constant (T'do) (ms)	1400
Direct axis transient reactance saturated (X'd) (%)	13.1
Short circuit transient time constant (T'd) (ms)	91
Direct axis subtransient reactance saturated (X''d) (%)	7
Subtransient time constant (T''d) (ms)	12
Quadrature-axis subtransient reactance saturated (X''q) (%)	17.9
Subtransient time constant (T''q) (ms)	20
Zero sequence reactance unsaturated (Xo) (%)	2.38
Negative sequence reactance saturated (X2) (%)	13.8
Armature time constant (Ta) (ms)	16
No load excitation current (io) (A)	0.78
Full load excitation current (ic) (A)	3.9
Full load excitation voltage (uc) (V)	61.3
Engine start (Delta U = 20% perm. or 50% trans.) (kVA)	230
Transient dip (4/4 load) - PF : 0.8 AR (%)	14
No load losses (W)	3970
Heat rejection (W)	16137
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

DEC4000, ergonomic and user-friendly



DEC4000

Specifications : Frequency meter, Ammeter, Voltmeter

Alarms and faults : Oil pressure, water temperature, No start-up, Overspeed, Min/max alternator, Min/max battery voltage, Low fuel level, Emergency stop

Engine parameters : Hours counter, Oil pressure, Water temperature, Engine speed, Battery voltage, Fuel level.

APM802 dedicated to power plant management



The new APM802 command/control system is specifically designed for operating and monitoring power plants for markets including hospitals, data centres, banks, the oil and gas sector, industries, IPP, rental and mining. This unit is available as standard on all generating sets from 275 Kva designed for coupling. It is optional on the rest of our range.

The Human Machine Interface, designed in collaboration with a company specialising in interface design, facilitates operations with a large 100% touch screen. The pre-configured system for power plant applications features a brand new customisation function which complies with the international standard IEC 61131-3. New communication functions (PLC and regulation), improve the high level of equipment availability in the installation.

Advantages:

- Dedicated to power plant management.
- Specially researched ergonomics.
- High level of equipment availability.
- Modularity and long service life guaranteed.
- Making it easy to extend the installation

For more information, please refer to the sales documentation.