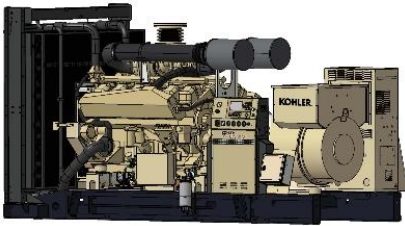


# KOHLER<sup>®</sup> Power Systems



## DESCRIPTIVE

- ➔ Kohler Co. Provides one-source responsibility for the generating system and accessories.
- ➔ Mechanically welded chassis with antivibration suspension
- ➔ Radiator for wiring temperature of 180°C max with mechanical fan
- ➔ Protective grille for fan and rotating parts (CE option)
- ➔ Exhaust compensators with flanges
- ➔ 24 V charge alternator and starter
- ➔ Delivered with oil and coolant -30°C
- ➔ Manual for use and installation
- ➔ Electronic governor

## 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.

## KM900

Engine type	S12A2-PTA
Alternator type	LSA 49.1 L9A
Performance class	G2

## GENERAL CHARACTERISTICS

Frequency (Hz)	50
Voltage (V)	400/230
Optional control panel	M80

## POWER

Voltage	ESP		PRP		Standby Amps
	kWe	kVA	kWe	kVA	
415/240	720	900	655	818	1252
400/230	720	900	655	818	1299
380/220	720	900	655	818	1367

## DIMENSIONS COMPACT VERSION

Length (mm)	4016
Width (mm)	1720
Height (mm)	2152
Dry weight (kg)	6073
Tank capacity (L)	0

## DIMENSIONS SOUNDPROOFED VERSION

Commercial reference of the enclosure	M427
Length (mm)	6400
Width (mm)	2170
Height (mm)	2721
Dry weight (kg)	8653
Tank capacity (L)	930
Acoustic pressure level @1m in dB(A)	85
Sound power level guaranteed (Lwa)	106

**GENERAL ENGINE DATA**

Engine model	MITSUBISHI
Engine type	S12A2-PTA
Air inlet	Turbo
Cylinders arrangement	V
Number of cylinders	12
Displacement (C.I.)	33.93
Air coolant	Air/Water DC
Bore (mm) x Stroke (mm)	150 x 160
Compression ratio	15.3 : 1
Speed (RPM)	1500
Pistons speed (m/s)	8
Maximum stand-by power at rated RPM (kW)	800
Frequency regulation (%)	+/- 0.5%
BMEP (bar)	17.14
Governor type	Electronic

**COOLING SYSTEM**

Radiator & Engine capacity (L)	195
Max water temperature (°C)	98
Outlet water temperature (°C)	95
Fan power (kW)	15
Fan air flow w/o restriction (m3/s)	12
Available restriction on air flow (mm Water Column)	21
Type of coolant	Glycol-Ethylene
Thermostat (°C)	82-94

**EMISSIONS**

Emission PM (mg/Nm3)	120
Emission CO (mg/Nm3)	440
Emission HCNOx (g/kWh)	N/A
Emission HC (mg/Nm3)	50

**EXHAUST**

Exhaust gas temperature (°C)	510
Exhaust gas flow (L/s)	2700
Max. exhaust back pressure (mm EC)	600

**FUEL**

Consumption @ 110% load (L/h)	N/A
Consumption @ 100% load (L/h)	174.8
Consumption @ 75% load (L/h)	130.6
Consumption @ 50% load (L/h)	90.5
Maximum fuel pump flow (L/h)	N/A

**OIL**

Oil capacity (L)	180
Min. oil pressure (bar)	2.5
Max. oil pressure (bar)	5.8
Oil consumption 100% load (L/h)	1
Carter oil capacity (L)	150

**HEAT BALANCE**

Heat rejection to exhaust (kW)	563
Radiated heat to ambient (kW)	54
Heat rejection to coolant (kW)	448

**AIR INTAKE**

Max. intake restriction (mm EC)	400
Intake air flow (L/s)	N/A

### GENERAL DATA

Alternator type	LSA 49.1 L9A
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 (%)	<4
Total Harmonic Distortion, on load DHT (%)	<4
Wave form : NEMA=TIF	<50
Wave form : CEI=FHT	<2
Number of bearing	N/A
Coupling	Direct
Voltage regulation at established rating (+/- %)	N/A
Recovery time (Delta U = 20% transient) (ms)	500
Protection class	IP 23
Technology	Without collar or brush

### OTHER DATA

Continuous Nominal Rating 40°C (kVA)	825
Standby Rating 27°C (kVA)	910
Efficiencies 100% of load (%)	95.3
Air flow (m3/s)	1
Short circuit ratio (Kcc)	0.45
Direct axis synchro reactance unsaturated (Xd) (%)	285
Quadra axis synchro reactance unsaturated (Xq) (%)	171
Open circuit time constant (T"do) (ms)	2111
Direct axis transient reactance saturated (X"d) (%)	13.5
Short circuit transient time constant (T"d) (ms)	100
Direct axis subtransient reactance saturated (X""d) (%)	10.8
Subtransient time constant (T""d) (ms)	10
Quadra axis subtransient reactance saturated (X""q) (%)	11.7
Subtransient time constant (T"q) (ms)	10
Zero sequence reactance unsaturated (Xo) (%)	0.8
Negative sequence reactance saturated (X2) (%)	11.3
Armature time constant (Ta) (ms)	15
No load excitation current (io) (A)	0.9
Full load excitation current (ic) (A)	3.1
Full load excitation voltage (uc) (V)	36
Engine start (Delta U = 20% perm. or 50% trans.) (kVA)	2372
Transient dip (4/4 load) - PF : 0,8 AR (%)	10
No load losses (W)	9860
Heat rejection (W)	32550

**M80, transfer of information**



The M80 is a dual-function control unit. It can be used as a basic terminal block for connecting a control box and as an instrument panel with a direct read facility, with displays giving a global view of your generating set's basic parameters.

Offers the following functions:

Engine parameters: tachometer, working hours counter, coolant temperature indicator, oil pressure indicator, emergency stop button, customer connection terminal block, CE.