



Super Silent version

DESCRIPTIVE

- Connection terminal box rental type
- Retention bund
- Primary fuel filter
- Four-pole circuit breaker
- Oil drainage pump
- Dusty atmosphere air filter
- Battery isolating switch
- 3 tracks valve
- Special rental soundproofed container

R1100

Engine ref.	KD27V12-5DEP
Alternator ref.	KH04070T
Performance class	G3

GENERAL CHARACTERISTICS

Frequency (Hz)	50 Hz
Voltage (V)	400/230

Standard Control Panel	APM403
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DIMENSION/ SILENT SOUND LEVEL

Type soundproofing	CIR20 SSi DRY
Length (mm)	6058
Width (mm)	2438
Height (mm)	2591
Dry weight (kg)	13500
Tank capacity (L)	1850
Autonomy @ 75% of load (h)	
Acoustic pressure level @1m in dB(A) 50Hz (75% PRP) #Incert_lb_2_1#	79
Acoustic pressure level @7m in dB(A) 50Hz (75% PRP) #Incert_lb_2_2#	70
Sound power level guaranteed (Lwa) 50Hz (75% PRP)	100

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.



R1100

ENGINE CHARACTERISTICS

GENERAL ENGINE DATAS

Engine brand	KOHLER KD Series
Engine ref.	KD27V12-5DEP
Air inlet system	Turbo
Cylinders configuration	V
Number of cylinders	12
Displacement (l)	26,97
Charge Air coolant	Air/Air
Bore (mm) x Stroke (mm)	135 x 157
Compression ratio	15 : 1
Speed (RPM)	1500
Pistons speed (m/s)	7,85
Maximum stand-by power at rated RPM (kW)	979
Frequency regulation, steady state (%) +/-	0.25%
BMEP @ PRP 50 Hz (bar)	26,40
Governor type	Electronic

COOLING SYSTEM

Radiator & Engine capacity (l)	107
Fan power 50Hz (kW)	33
Fan air flow w/o restriction (m3/s)	17,30
Available restriction on air flow (mm H2O)	20
Type of coolant	Gencool

EMISSIONS

Emission PM (g/kW.h)	
Emission CO (g/kW.h)	
Emission HC+NOx (g/kWh)	0
Emission HC (g/kW.h)	

EXHAUST

Exhaust gas temperature @ ESP 50Hz (°C)	485
Exhaust gas flow @ ESP 50Hz (l/s)	2673
Max. exhaust back pressure (mm H2O)	867

FUEL

Consumption @ 100% load ESP (l/h)	226,10
Consumption @ 100% PRP load (l/h)	204,20
Consumption @ 75% PRP load (l/h)	154,90
Consumption @ 50% PRP load (l/h)	109,70
Maximum fuel pump flow (l/h)	295

OIL

Oil system capacity including filters (l)	101
Min. oil pressure (bar)	3,30
Max. oil pressure (bar)	5,50
Oil consumption 100% ESP 50Hz (l/h)	0,12
Oil sump capacity (l)	89

HEAT BALANCE

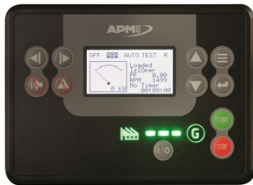
Heat rejection to exhaust (kW)	593
Radiated heat to ambient (kW)	62
Heat rejection to coolant HT (kW)	315

AIR INTAKE

Max. intake restriction (mm H2O)	510
Intake air flow (l/s)	908,58

Alternator ref.	KH04070T	Continuous Nominal Rating 40°C (kVA)	1150
Number of Phase	Three phase	Standby Rating 27°C (kVA)	1250
Power factor (Cos Phi)	0,80	Efficiencies 100% of load (%)	95,70
Altitude (m)	0 à 1000	Air flow (m3/s)	1,50
Overspeed (rpm)	2250	Short circuit ratio (Kcc)	0,35
Number of pole	4	Direct axis synchro reactance unsaturated (Xd) (%)	377
Capacity for maintaining short circuit at 3 In for 10 s	Yes	Quadra axis synchro reactance unsaturated (Xq) (%)	160,40
Insulation class	H	Open circuit time constant (T'do) (ms)	8100
T° class (H/125°), continuous 40°C	H / 125°K	Direct axis transient reactance saturated (X'd) (%)	17,60
T° class (H/163°C), standby 27°C	H / 163°K	Short circuit transient time constant (T'd) (ms)	245
AVR Regulation	Yes	Direct axis subtransient reactance saturated (X''d) (%)	9,10
Total Harmonic Distortion in no-load DHT (%)	2,1	Subtransient time constant (T''d) (ms)	18
Total Harmonic Distortion, on linear load DHT (%)	1,5	Quadra axis subtransient reactance saturated (X''q) (%)	17,60
Wave form : NEMA=TIF	<40	Subtransient time constant (T''q) (ms)	18
Wave form : CEI=FHT	<2	Zero sequence reactance unsaturated (Xo) (%)	3,83
Number of bearing	Single Bearing	Negative sequence reactance saturated (X2) (%)	13,30
Coupling	Direct	Armature time constant (Ta) (ms)	24
Voltage regulation at established rating (+/- %)	0,50	No load excitation current (io) (A)	1,50
Recovery time (Delta U = 20% transient) (ms)	200	Full load excitation current (ic) (A)	4,30
Indication of protection	IP 23	Full load excitation voltage (uc) (V)	45,40
Technology	Brushless	Engine start (Delta U = 20% perm. or 30% trans.) (kVA)	2936
		Transient dip (4/4 load) - PF : 0,8 AR (%)	14,34
		No load losses (W)	16200
		Heat rejection (W)	41338
		Unbalanced load acceptance ratio (%)	8

APM403, basic generating set and power plant control



The APM403 is a versatile control unit which allows operation in manual or automatic mode
Measurements : voltage and current
kW/kWh/kVA power meters
Standard specifications: Voltmeter, Frequency meter.
Optional : Battery ammeter.
J1939 CAN ECU engine control
Alarms and faults: Oil pressure, Coolant temperature, Overspeed, Start-up failure, alternator min/max, Emergency stop button.
Engine parameters: Fuel level, hour counter, battery voltage.
Optional (standard at 24V): Oil pressure, water temperature.
Event log/ Management of the last 300 genset events.
Mains and genset protection
Clock management
USB connections, USB Host and PC,
Communications : RS485 INTERFACE
ModBUS protocol /SNMP
Optional : Ethernet, GPRS, remote control, 3G, 4G,
Websupervisor, SMS, E-mails