

#### DESCRIPTIVE

- 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)
- 9 dB(A) silencer supplied separately
- 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 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.

## D275

Engine ref.	P126TI
Alternator ref.	KH01380T
Performance class	G3

#### GENERAL CHARACTERISTICS

Frequency (Hz)	50 Hz
Voltage (V)	400/230
Standard Control Panel	APM303
Optional control panel	APM403
Optional Control Panel	APM802
Optional control panel	M80

#### POWER

Voltage	ESP		PRP		Standby Amps
	kWe	kVA	kWe	kVA	
415/240	220	275	200	250	383
400/230	220	275	200	250	397
380/220	220	275	200	250	418
200/115	220	275	200	250	794
240 TRI	220	275	200	250	662
230 TRI	220	275	200	250	690
220 TRI	220	275	200	250	722

#### DIMENSIONS COMPACT VERSION

Length (mm)	2900
Width (mm)	1300
Height (mm)	1670
Dry weight (kg)	2310
Tank capacity (L)	390

#### DIMENSIONS SOUNDPROOFED VERSION

Type soundproofing	M227
Length (mm)	4004
Width (mm)	1380
Height (mm)	2145
Dry weight (kg)	3160
Tank capacity (L)	390
Acoustic pressure level @1m in dB(A)	83
Sound power level guaranteed (Lwa)	102
Acoustic pressure level @7m in dB(A)	73

### GENERAL ENGINE DATA

Engine brand	DOOSAN
Engine ref.	P126TI
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 x 155
Compression ratio	17 : 1
Speed (RPM)	1500
Pistons speed (m/s)	7,75
Maximum stand-by power at rated RPM (kW)	272
Frequency regulation, steady state (%) +/- 0.25%	
BMEP (bar)	17,90
Governor type	Electronic

### COOLING SYSTEM

Radiator & Engine capacity (L)	50,50
Fan power (kW)	7
Fan air flow w/o restriction (m3/s)	5
Available restriction on air flow (mm H2O)	0
Type of coolant	Glycol-Ethylene

### EMISSIONS

Emission PM (g/kW.h)	0,14
Emission CO (g/kW.h)	0,11
Emission HC+NOx (g/kWh)	8,34
Emission HC (g/kW.h)	0,33

### EXHAUST

Exhaust gas temperature @ ESP 50Hz (°C)	560
Exhaust gas flow @ ESP 50 Hz (L/s)	715
Max. exhaust back pressure (mm H2O)	600

### FUEL

Consumption @ 110% load (L/h)	66,20
Consumption @ 100% load (L/h)	58,10
Consumption @ 75% load (L/h)	43,60
Consumption @ 50% load (L/h)	30
Maximum fuel pump flow (L/h)	270

### OIL

Oil capacity (L)	25
Min. oil pressure (bar)	0,50
Max. oil pressure (bar)	10
Oil consumption 100% ESP (L/h)	0,10
Oil sump capacity (L)	23

### HEAT BALANCE

Heat rejection to exhaust (kW)	254
Radiated heat to ambient (kW)	35
Heat rejection to coolant HT (kW)	107

### AIR INTAKE

Max. intake restriction (mm H2O)	635
Intake air flow (L/s)	273

### GENERAL DATA

Alternator ref.	KH01380T
Number of Phase	Three phase
Power factor (Cos Phi)	0,80
Altitude (m)	0 à 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 (H/163°C), standby 27°C	H / 163°K
Total Harmonic Distortion in no-load DHT (%)	2,0
AVR Regulation	Yes
Total Harmonic Distortion, on linear load DHT (%)	2,9
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
Indication of protection	IP 23
Technology	Without collar or brush

### OTHER DATA

Continuous Nominal Rating 40°C (kVA)	250
Standby Rating 27°C (kVA)	275
Efficiencies 100% of load (%)	93,40
Air flow (m3/s)	0,5330
Short circuit ratio (Kcc)	0,44
Direct axis synchro reactance unsaturated (Xd) (%)	214,20
Quadra axis synchro reactance unsaturated (Xq) (%)	121,10
Open circuit time constant (T'do) (ms)	1300
Direct axis transient reactance saturated (X'd) (%)	12
Short circuit transient time constant (T'd) (ms)	85
Direct axis subtransient reactance saturated (X''d) (%)	6,20
Subtransient time constant (T''d) (ms)	13
Quadra axis subtransient reactance saturated (X''q) (%)	18,90
Subtransient time constant (T''q) (ms)	12
Zero sequence reactance unsaturated (Xo) (%)	2,48
Negative sequence reactance saturated (X2) (%)	13,70
Armature time constant (Ta) (ms)	17
No load excitation current (io) (A)	0,71
Full load excitation current (ic) (A)	2,80
Full load excitation voltage (uc) (V)	44
Engine start (Delta U = 20% perm. or 30% trans.) (kVA)	185
Transient dip (4/4 load) - PF : 0,8 AR (%)	13,87
No load losses (W)	3425
Heat rejection (W)	14133
Unbalanced load acceptance ratio (%)	100

## DIMENSIONS

### Dimensions soundproofed version

Type soundproofing	M227
Length (mm)	4004
Width (mm)	1380
Height (mm)	2145
Dry weight (kg)	3160
Tank capacity (L)	390
Acoustic pressure level @1m in dB(A)	83
Sound power level guaranteed (Lwa)	102
Acoustic pressure level @7m in dB(A)	73

### Dimensions DW compact version

Type soundproofing		
Length (mm)		4056
Width (mm)		1360
Height (mm)		1885
Dry weight (kg)		2770
Tank capacity (L)		950
Acoustic pressure level @1m in dB(A)		
Sound power level guaranteed (Lwa)		
Acoustic pressure level @7m in dB(A)		

### Dimensions DW soundproofed version

Type soundproofing	M227 DW
Length (mm)	4056
Width (mm)	1380
Height (mm)	2340
Dry weight (kg)	3960
Tank capacity (L)	950
Acoustic pressure level @1m in dB(A)	83

### Dimensions DW 48h soundproofed version

Type soundproofing	M227 DW48
Length (mm)	4056
Width (mm)	1380
Height (mm)	2618
%PdnetE_5%	3965
Tank capacity (L)	2130
Acoustic pressure level @1m in dB(A)	83

Sound power level guaranteed (Lwa)  
Acoustic pressure level @7m in dB(A)

102  
72

Sound power level guaranteed (Lwa)  
Acoustic pressure level @7m in dB(A)

102  
72

**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

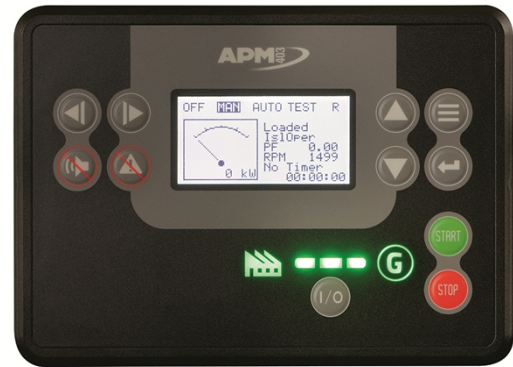
**Reports:**  
 (In option : 2 configurable reports)

**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.

**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

## 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.

## 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.