



RATINGS 400 V - 50 Hz		
Standby	kVA	300
	kWe	240
Prime	kVA	273
	kWe	218

### Benefits & features

#### KOHLER SDMO premium quality

- Design offices using the latest technical innovations
- Modern fully certified factories
- A cutting edge laboratory
- The generating set, its components and a wide range of options have been fully developed, prototype tested, factory built, and production tested

#### KOHLER SDMO premium performances

- Optimized and certified sound levels
- Reliable power, even in extreme conditions
- Optimized fuel consumption
- Compact footprint
- Best quality of electricity, high starting and loading capacity, according to ISO8528-5
- Robust base frames and high-quality enclosures
- Protection of installations and people
- Approved in line with the most stringent standards

#### Engines

- Premium level engines, in-house or from strong partners
- High power density, small footprint
- Low temperature starting capability
- Long maintenance interval

#### Alternator

- Provide industry leading motor starting capability
- Made in Europe
- Excitation system to permit sustained overcurrent > 300% In, during 10 sec
- Built with a class H insulation and IP23

#### Cooling

- A flexible solution using an electrical driven radiator fan
- Designed or optimized by KOHLER-SDMO
- High temperature and altitude product capacity available

#### Base frame and enclosure

- High quality steel with enhanced corrosion resistance
- Highly durable QUALICOAT-certified epoxy paint
- Minimum 1000 hours of resistance to salt spray in accordance with ISO12944
- Ergonomic access to allow easy maintenance and connection of the generator
- Robust design optimized for transportation

### GENERAL SPECIFICATIONS

Engine brand	DOOSAN
Alternator commercial brand	KOHLER
Voltage (V)	400/230
Standard Control Panel	APM303
Optional Control Panel	APM403
Consumption @ 100% load ESP (L/h)	64
Consumption @ 100% PRP load (L/h)	58
Type of Cooling	Mechanical driven fan
Performance class	G3

### GENERATOR SETS RATINGS

	Voltage	PH	Hz	Standby Rating			Prime Rating	
				kWe	kVA	Amps	kWe	kVA
KH300	415/240	3	50	240	300	417	218	273
	400/230	3	50	240	300	433	218	273
	380/220	3	50	240	300	456	218	273
	200/115	3	50	240	300	866	218	273
	240 TRI	3	50	240	300	722	218	273
	230 TRI	3	50	240	300	753	218	273
	220 TRI	3	50	240	300	787	218	273

### DIMENSIONS COMPACT VERSION

Length (mm)	2900
Width (mm)	1300
Height (mm)	1670
Tank capacity (L)	390
Dry weight (kg)	2400

### DIMENSIONS SOUNDPROOFED VERSION

Type soundproofing	M227
Length (mm)	4004
Width (mm)	1380
Height (mm)	2145
Tank capacity (L)	390
Dry weight (kg)	3250
Acoustic pressure level @1m in dB(A) 50Hz (75% PRP)	83
Acoustic pressure level @7m in dB(A) 50Hz (75% PRP)	73

### Engine

#### General

Engine brand	DOOSAN
Engine ref.	P126TI
Air inlet system	Turbo
Cylinders configuration	L
Number of cylinders	6
Displacement (L)	11.05
Bore (mm) * Stroke (mm)	123 * 155
Compression ratio	17 : 1
Speed (RPM)	1500
Maximum stand-by power at rated RPM (kW)	272
Charge Air coolant	Air/Air
Frequency regulation, steady state (%)	+/- 0.25%
Injection Type	Direct
Governor type	Electronic
Air cleaner type, models	Dry

#### Fuel system

Maximum fuel pump flow (L/h)	270
Max head on fuel return line (m)	1

#### Consumption with cooling system

Consumption @ 100% load ESP (L/h)	66.20
Consumption @ 100% PRP load (L/h)	58.10
Consumption @ 75% PRP load (L/h)	43.60
Consumption @ 50% PRP load (L/h)	30

#### Emissions

Emission PM (g/kW.h)	0.14
Emission CO (g/kW.h)	0.11
Emission NOx (g/kW.h)	8.01
Emission HC (g/kW.h)	0.33

#### Lubrication System

Oil system capacity including filters (L)	25
Min. oil pressure (bar)	0.50
Max. oil pressure (bar)	10
Oil sump capacity (L)	23
Oil consumption 100% ESP 50Hz (L/h)	0.06

#### Air Intake system

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

#### Exhaust system

	PRP	ESP
Heat rejection to exhaust (kW)		254
Exhaust gas temperature (°C)		560
Exhaust gas flow (L/s)		715
Max. exhaust back pressure (mm H2O)	600	

#### 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)	20
Type of coolant	Glycol-Ethylene
Radiated heat to ambient (kW)	35
Heat rejection to coolant HT (kW)	107
Max coolant temperature, Shutdown (°C)	103
Thermostat begin of opening HT (°C)	71
Thermostat end of opening HT (°C)	85

\* Engine reference may be partially modified depending on genset application, options selected by the customer and lead time required.

### Alternator Specifications

Alternator commercial brand	KOHLER
Alternator ref.	KH01720T
Number of pole	4
Number of bearing	Single Bearing
Technology	Brushless
Indication of protection	IP23
Insulation class	H
Number of wires	12
Capacity for maintaining short circuit at 3 In for 10 s	Yes
AVR Regulation	Yes
Coupling	Direct

### Application data

Overspeed (rpm)	2250
Power factor (Cos Phi)	0.80
Voltage regulation at established rating (+/- %)	1
Wave form : NEMA=TIF	<40
Wave form : CEI=FHT	<2
Total Harmonic Distortion in no-load DHT (%)	2.6
Total Harmonic Distortion, on linear load DHT (%)	3.0
Recovery time (Delta U = 20% transient) (ms)	200

### Performance datas

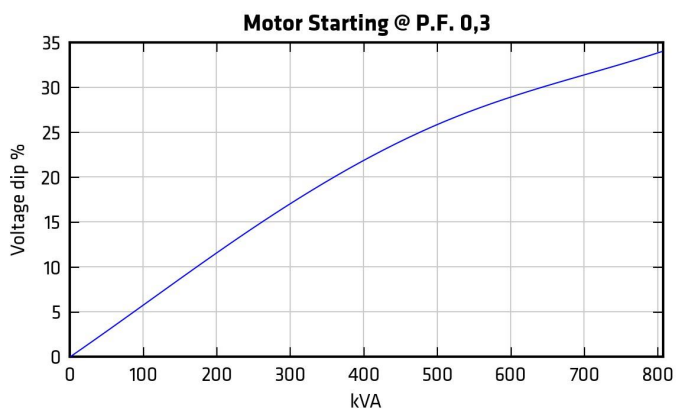
Continuous Nominal Rating 40°C (kVA)	300
Unbalanced load acceptance ratio (%)	100

Peak motor starting (kVA) based on x% voltage dip power factor at 0.3

### Alternator Standard Features

- All models are brushless, rotating-field alternators
- NEMA MG1, IEEE, and ANSI standards compliance for temperature rise and motor starting
- The AVR voltage regulator provides superior short circuit capability
- Self-ventilated and dip proof construction
- Sustained short-circuit current of up to 300% of the rated current for up to 10 seconds
- Superior voltage waveform

*Note: See Alternator Data Sheets for alternator application data and ratings, efficiency curves, voltage dip with motor starting curves, and short circuit decrement curves.*



### Dimensions compact version

Length (mm) * Width (mm) * Height (mm)	2900 * 1300 * 1670
Dry weight (kg)	2400
Tank capacity (L)	390



### Dimensions soundproofed version

#### M227

Length (mm) * Width (mm) * Height (mm)	4004 * 1380 * 2145
Dry weight (kg)	3250
Tank capacity (L)	390
Acoustic pressure level @1m in dB(A) 50Hz (75% PRP)	83
Measured acoustic power level (Lwa) 50Hz (75% PRP)	102
Acoustic pressure level @7m in dB(A) 50Hz (75% PRP)	73



### Dimensions DW compact version

Length (mm) * Width (mm) * Height (mm)	4056 * 1360 * 1885
Dry weight (kg)	2860
Tank capacity (L)	950

### Dimensions DW soundproofed version

#### M227 DW

Length (mm) * Width (mm) * Height (mm)	4056 * 1380 * 2340
Dry weight (kg)	4050
Tank capacity (L)	950
Acoustic pressure level @1m in dB(A) 50Hz (75% PRP)	83
Measured acoustic power level (Lwa) 50Hz (75% PRP)	102
Acoustic pressure level @7m in dB(A) 50Hz (75% PRP)	72

### Dimensions DW 48h soundproofed version

#### M227 DW48

Length (mm) * Width (mm) * Height (mm)	4056 * 1380 * 2618
Dry weight (kg)	4050
Tank capacity (L)	2130
Acoustic pressure level @1m in dB(A) 50Hz (75% PRP)	83
Measured acoustic power level (Lwa) 50Hz (75% PRP)	102
Acoustic pressure level @7m in dB(A) 50Hz (75% PRP)	72

### APM303



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

## STANDARD SCOPE OF SUPPLY

All our gensets are fitted with:

- Industrial water cooled DIESEL engine
- Electric starter & charge alternator
- Standard air filter
- Schneider or ABB electric circuit breaker, adapted to the short-circuit current of the generating set
- Single bearing alternator IP 23 T° rise/ insulation to class H/H
- Welded steel base frame with 85% vibration attenuation mounts
- 4 lifting points on the chassis, lifting bar on the top included from 165 kVA ESP or optional
- highly durable QUALICOAT certified epoxy paint
- frame height optimized to allow it to be moved safely by forklift
- enclosure made of new high-quality European steel with enhanced corrosion resistance
- IP 64 locks, made from stainless materials
- enclosures and base frames tested and analyzed by the French Corrosion Institut
- 100% of tanks tested for permeability
- Personal protection ensured by protective grilles on hot and rotating parts
- Separate 9 dB(A) silencer
- Fuel tank welded inside the genset frame
- Retention bund included for gensets up to 110 kVA ESP
- Charged DC starting battery with electrolyte
- Emergency stop button on the outside
- Flexible fuel lines & lub oil drain cock
- Exhaust outlet with flexible and flanges
- User's manual (1 copy)
- Packing under plastic film
- Delivered with oil and antifreeze liquid

## CODES AND STANDARDS

Engine-generators set is designed and manufactured in facilities certified to standards ISO9001:2015 & ISO14001:2015. The generator sets and its components are prototype-tested, factory built and production tested and are in compliance with the relevant standards:

- Machinery Directive 2006/42/EC of May 17th 2006
- EMC Directive 2014/30/UE
- Safety objectives set out in the Low Voltage Directive 2014/35/UE
- EN ISO 8528-13, EN 60034-1, EN 61000-6-1, EN 61000-6-2, EN 61000-6-3, EN 55011, EN 1679-1 et EN 60204-1

## POWER RATINGS DEFINITION according to ISO8528-1 (2018-02 edition) and ISO-3046-1

**Emergency Standby Power (ESP):** The standby rating is applicable to varying loads for the duration of a power outage. There is no overload capability for this rating. Average load factor per 24 hours of operation is <70%.

**Prime Power (PRP):** At varying load, the number of generator set operating hours is unlimited. A 10% overload capacity is available for one hour within 12 hour of operation. Average load factor per 24 hours of operation is <70%.

## TERMS OF USE

According to the standard, the nominal power assigned by the genset is given for 25°C Air Intlet 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