

RATINGS 400 V - 50 Hz		
Standby	kVA	825
	kWe	660
Prime	kVA	750
	kWe	600

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	APM403
Optional Control Panel	APM802
Consumption @ 100% load ESP (L/h)	172
Consumption @ 100% PRP load (L/h)	160
Type of Cooling	Mechanical driven fan
Performance class	G2

GENERATOR SETS RATINGS

	Voltage	PH	Hz	Standby Rating			Prime Rating	
				kWe	kVA	Amps	kWe	kVA
KH830	415/240	3	50	660	825	1148	600	750
	400/230	3	50	660	825	1191	600	750
	380/220	3	50	660	825	1253	600	750

DIMENSIONS COMPACT VERSION

Length (mm)	3470
Width (mm)	1630
Height (mm)	2185
Tank capacity (L)	610
Dry weight (kg)	4080

DIMENSIONS SOUNDPROOFED VERSION

Type soundproofing	M230
Length (mm)	5031
Width (mm)	1690
Height (mm)	2672
Tank capacity (L)	610
Dry weight (kg)	5720
Acoustic pressure level @1m in dB(A) 50Hz (75% PRP)	86
Acoustic pressure level @7m in dB(A) 50Hz (75% PRP)	76

Engine			
General		Lubrication System	
Engine brand	DOOSAN	Oil system capacity including filters (L)	40
Engine ref.	DP222LC	Min. oil pressure (bar)	0.50
Air inlet system	Turbo	Max. oil pressure (bar)	
Cylinders configuration	V	Oil sump capacity (L)	
Number of cylinders	12	Oil consumption 100% ESP 50Hz (L/h)	0.76
Displacement (L)	21.93	Air Intake system	
Bore (mm) * Stroke (mm)	128 * 142	Max. intake restriction (mm H2O)	220
Compression ratio	15 : 1	Intake air flow (L/s)	750
Speed (RPM)	1500	Exhaust system	
Maximum stand-by power at rated RPM (kW)	723		PRP
Charge Air coolant	Air/Air	Heat rejection to exhaust (kW)	639
Frequency regulation, steady state (%)	+/- 0.25%	Exhaust gas temperature (°C)	502
Injection Type	Direct	Exhaust gas flow (L/s)	1800
Governor type	Electronic	Max. exhaust back pressure (mm H2O)	600
Air cleaner type, models	Dry	Cooling system	
Fuel system		Radiator & Engine capacity (L)	68
Maximum fuel pump flow (L/h)	540	Fan power (kW)	24
Max head on fuel return line (m)	1	Fan air flow w/o restriction (m3/s)	17
Consumption with cooling system		Available restriction on air flow (mm H2O)	30
Consumption @ 100% load ESP (L/h)	172.80	Type of coolant	Glycol-Ethylene
Consumption @ 100% PRP load (L/h)	161	Radiated heat to ambient (kW)	65
Consumption @ 75% PRP load (L/h)	119.10	Heat rejection to coolant HT (kW)	306
Consumption @ 50% PRP load (L/h)	79.30	Max coolant temperature, Shutdown (°C)	103
Emissions		Thermostat begin of opening HT (°C)	71
Emission PM (g/kW.h)	0.08	Thermostat end of opening HT (°C)	85
Emission CO (g/kW.h)	0.73		
Emission NOx (g/kW.h)	10.70		
Emission HC (g/kW.h)	0.11		

* 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.	KH03544T
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 (+/- %)	0.50
Wave form : NEMA=TIF	<40
Wave form : CEI=FHT	<2
Total Harmonic Distortion in no-load DHT (%)	2.5
Total Harmonic Distortion, on linear load DHT (%)	2.2
Recovery time (Delta U = 20% transient) (ms)	200

Performance datas

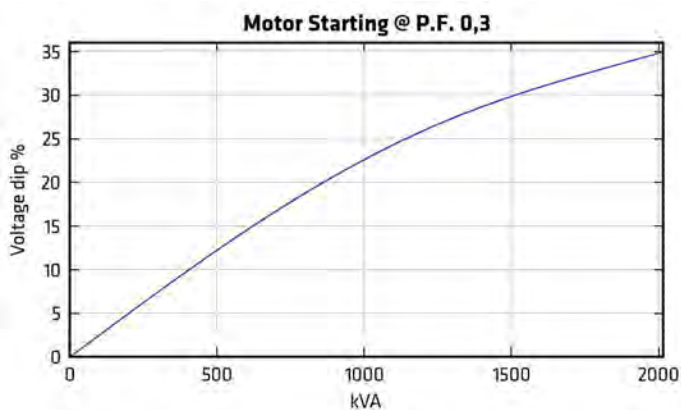
Continuous Nominal Rating 40°C (kVA)	750
Unbalanced load acceptance ratio (%)	100

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)	3470 * 1630 * 2185
Dry weight (kg)	4080
Tank capacity (L)	610

Dimensions soundproofed version**M230**

Length (mm) * Width (mm) * Height (mm)	5031 * 1690 * 2672
Dry weight (kg)	5720
Tank capacity (L)	610
Acoustic pressure level @1m in dB(A) 50Hz (75% PRP)	86
Measured acoustic power level (Lwa) 50Hz (75% PRP)	106
Acoustic pressure level @7m in dB(A) 50Hz (75% PRP)	76

**Dimensions DW compact version**

Length (mm) * Width (mm) * Height (mm)	5083 * 1690 * 2440
Dry weight (kg)	4780
Tank capacity (L)	1950

Dimensions DW soundproofed version**M230 DW**

Length (mm) * Width (mm) * Height (mm)	5083 * 1690 * 2932
Dry weight (kg)	6410
Tank capacity (L)	1950
Acoustic pressure level @1m in dB(A) 50Hz (75% PRP)	88
Measured acoustic power level (Lwa) 50Hz (75% PRP)	108
Acoustic pressure level @7m in dB(A) 50Hz (75% PRP)	78

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



ADVANCED POWER PLANT MANAGEMENT CONTROL

Dedicated to power plant management APM802 provides advanced control, system monitoring, and system diagnostics for optimum performance and compatibility

- Graphic display with touchscreen
- User language selectable
- Specially researched ergonomics
- High level of equipment availability
- USB and Ethernet ports
- Modbus protocol
- Making it easy to extend the installation
- Complies with the international standard IEC 61131-3

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