



RATINGS 400 V - 50 Hz		
Standby	kVA	550
	kWe	440
Prime	kVA	500
	kWe	400



### Benefits & features

#### KOHLER 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
- Approved for use with HVO (Hydrotreated Vegetable Oil) according to EN15940

#### KOHLER 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
- Built with a class H insulation and IP23

#### Cooling

- A compact and complete solution using a mechanically driven radiator fan
- Designed or optimized by KOHLER
- 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	VOLVO
Alternator commercial brand	KOHLER
Voltage (V)	400/230
Standard Control Panel	APM403
Optional control panel	APM802
Optional Control Panel	M80
Optional control panel	Terminal block
Consumption @ 100% load ESP (L/h)	112
Consumption @ 100% load PRP (L/h)	101
Emission level	Emission optimization - Stage IIIA
Type of Cooling	Mechanical driven fan
Performance class	G3

### GENERATOR SETS RATINGS

	Voltage	PH	Hz	Standby Rating			Prime Rating	
				kWe	kVA	Amps	kWe	kVA
KV550C3	415/240	3	50	440	550	765	400	500
	400/230	3	50	440	550	794	400	500
	380/220	3	50	440	550	836	400	500
	200/115	3	50	440	550	1588	400	500
	240 TRI	3	50	440	550	1323	400	500
	230 TRI	3	50	440	550	1381	400	500
	220 TRI	3	50	440	550	1443	400	500

### DIMENSIONS COMPACT VERSION

Length (mm)	3470
Width (mm)	1630
Height (mm)	2095
Tank capacity (L)	610
Dry weight (kg)	3650

### DIMENSIONS SOUNDPROOFED VERSION

Type soundproofing	NOT AVAILABLE
Length (mm)	5031
Width (mm)	1690
Height (mm)	2672
Tank capacity (L)	610
Dry weight (kg)	5170
Acoustic pressure level @1m in dB(A) 50Hz (75% PRP)	81
Acoustic pressure level @7m in dB(A) 50Hz (75% PRP)	71

Reference Conditions: 25°C Air Inlet Temperature, 40°C Fuel Inlet Temperature, 100 kPa Barometric Pressure; 10.7 g/kg of dry air Humidity. Intake Restriction set to maximum allowable limit for clean filter; Exhaust Back pressure set to maximum allowable limit.

Data was taken from a single engine test according to the test methods, fuel specification and reference conditions stated above and is subjected to instrumentation and engine-to-engine variability. Test conducted with alternate test methods, instrumentation, fuel or reference conditions can yield different results. Data and specifications subject to change without notice.

Engine		
<b>General</b>		
Engine brand	VOLVO	
Engine ref.	TAD1651GE *	
Air inlet system	Turbo	
Fuel	Diesel Fuel/HVO	
Emission level	Emission optimization - Stage IIIA Compliant	
Cylinder configuration	L	
Number of cylinders	6	
Displacement (l)	16.12	
Bore (mm) * Stroke (mm)	144 * 165	
Compression ratio	16.5 : 1	
Speed 50Hz (RPM)	1500	
Maximum stand-by power at rated RPM (kW)	484	
Charge Air coolant	Air/Air	
Frequency regulation, steady state (%)	+/- 0.25%	
Injection Type	Direct	
Governor type	Electronic	
Air cleaner type, models	Dry	
<b>Fuel system</b>		
Maximum fuel pump flow (l/h)	141	
Max head on fuel return line (m)	0	
<b>Consumption with cooling system</b>		
Fuel consumption @ ESP Max Power (l/h)	113.90	
Fuel consumption @ PRP Max Power (l/h)	102.70	
Fuel consumption @ 75% of PRP Power (l/h)	79.80	
Fuel consumption @ 50% of PRP Power (l/h)	55	
<b>Emissions</b>		
Emission PM (g/kW.h)	0.14	
Emission CO (g/kW.h)	0.77	
Emission NOx (g/kW.h)	3.49	
Emission HC (g/kW.h)	0.14	
<b>Lubrication System</b>		
Oil system capacity including filters (l)	48	
Min. oil pressure (bar)	0.70	
Max. oil pressure (bar)	6.50	
Oil sump capacity (l)	42	
Oil consumption 100% ESP 50Hz (l/h)	0.10	
<b>Air Intake system</b>		
Max. intake restriction (mm H2O)	500	
Combustion air flow (l/s)	500	
<b>Exhaust system</b>		
	<b>PRP</b>	<b>ESP</b>
Heat rejection to exhaust (kW)		317
Exhaust gas temperature (°C)	492	523
Exhaust gas flow (L/s)	1267	1367
Max. exhaust back pressure (mm H2O)	1000	
<b>Cooling system</b>		
Radiator & Engine capacity (l)	60	
Fan power 50Hz (kW)	11	
Fan air flow w/o restriction (m3/s)	8.60	
Available restriction on air flow (mm H2O)	25	
Type of coolant	Glycol-Ethylene	
Radiated heat to ambient (kW)	19	
Heat rejection to coolant HT (kW)	200	
HT circuit flow rate (l/min)	383	
Coolant capacity HT, engine only (l)	33	
Outlet coolant temperature (°C)	93	
Max coolant temperature, Shutdown (°C)	107	
Thermostat begin of opening HT (°C)	82	
Thermostat end of opening HT (°C)	92	

\* Engine reference may be partially modified depending on genset application, options selected by the customer and lead time required.  
 \*\* Fuel consumption is up to 4% higher when using HVO than Diesel Fuel

### Alternator Specifications

Alternator commercial brand	KOHLER
Kohler Alternator description	KH02450T
Number of pole	4
Number of bearing	Single Bearing
Technology	Brushless
Indication of protection	IP23
Insulation class	H
Number of wires	12
AVR Regulation	Yes
Coupling	Direct
Capacity for maintaining short circuit at 3 In for 10 s	No

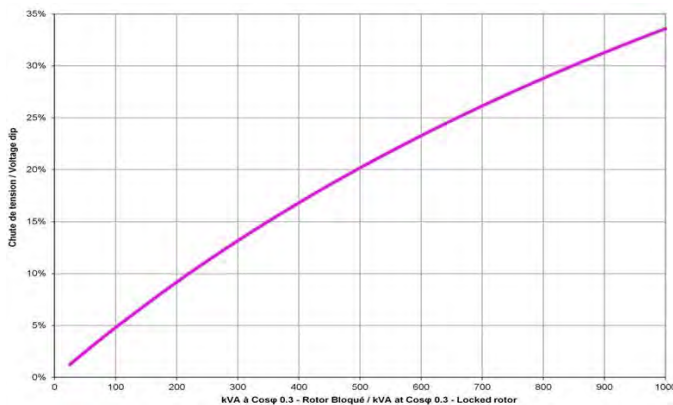
### Application data

Overspeed (rpm)	2250
Power factor (Cos Phi)	0.80
Voltage regulation at established rating (+/- %)	0.50
Wave form : NEMA=TIF	<50
Wave form : CEI=FHT	<2
Total Harmonic Distortion in no-load DHT (%)	<2
Total Harmonic Distortion, on linear load DHT (%)	<2
Recovery time (Delta U = 20% transient) (ms)	500

### Performance datas

Continuous Nominal Rating 40°C (kVA)	500
Unbalanced load acceptance ratio (%)	70

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
- 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.*

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Data was taken from a single engine test according to the test methods, fuel specification and reference conditions stated above and is subjected to instrumentation and engine-to-engine variability. Test conducted with alternate test methods, instrumentation, fuel or reference conditions can yield different results. Data and specifications subject to change without notice.

**Dimensions compact version**

Length (mm) * Width (mm) * Height (mm)	3470 * 1630 * 2095
Dry weight (kg)	3650
Tank capacity (L)	610

**M230 - Dimensions soundproofed version**

Length (mm) * Width (mm) * Height (mm)	5031 * 1690 * 2672
Dry weight (kg)	5170
Tank capacity (L)	610
Acoustic pressure level @1m in dB(A) 50Hz (75% PRP)	81
Sound power level guaranteed (Lwa) 50Hz (75% PRP)	101
Acoustic pressure level @7m in dB(A) 50Hz (75% PRP)	71

**Dimensions DW compact version**

Length (mm) * Width (mm) * Height (mm)	5083 * 1690 * 2354
Dry weight (kg)	4290
Tank capacity (L)	1950

**M230 - Dimensions DW soundproofed version**

Length (mm) * Width (mm) * Height (mm)	5083 * 1690 * 2932
Dry weight (kg)	5780
Tank capacity (L)	1950
Acoustic pressure level @1m in dB(A) 50Hz (75% PRP)	81
Sound power level guaranteed (Lwa) 50Hz (75% PRP)	101
Acoustic pressure level @7m in dB(A) 50Hz (75% PRP)	71



\* dimensions and weight without options

Reference Conditions: 25°C Air Inlet Temperature, 40°C Fuel Inlet Temperature, 100 kPa Barometric Pressure; 10.7 g/kg of dry air Humidity. Intake Restriction set to maximum allowable limit for clean filter; Exhaust Back pressure set to maximum allowable limit.

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### Basic terminal block



It is used as a basic terminal block for connecting a control unit. Offers the following functions:

- emergency stop button
- customer connection terminal block
- CE certified

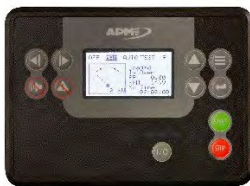
### M8



The M80 is a dual-function control panel. It can be used as a basic terminal block for connecting a control unit 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 certified

### 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

**STANDARD DELIVERY**

All our gensets are fitted with:

- Industrial water-cooled DIESEL engine
- Electric starter & charge alternator
- Standard air filter
- 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
- frame height optimized to allow it to be moved safely by forklift
- enclosure made of new high-quality European steel with enhanced corrosion resistance
- 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 250 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

Reference Conditions: 25°C Air Inlet Temperature, 40°C Fuel Inlet Temperature, 100 kPa Barometric Pressure; 10.7 g/kg of dry air Humidity. Intake Restriction set to maximum allowable limit for clean filter; Exhaust Back pressure set to maximum allowable limit.

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- 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%.



# Industrial Diesel Generator Set – KV550C3

50 Hz

## 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.

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Reference Conditions: 25°C Air Inlet Temperature, 40°C Fuel Inlet Temperature, 100 kPa Barometric Pressure; 10.7 g/kg of dry air Humidity. Intake Restriction set to maximum allowable limit for clean filter; Exhaust Back pressure set to maximum allowable limit.

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