



Benefits & features

KOHLER premium quality

- KOHLER provides **one source responsibility** for the generating system and accessories
- The generator set, its components and a wide range of options have been **fully developed, prototype tested, factory built**, and production-tested
- The generator sets are designed in accordance to ISO8528-5 performance class **G3** and accepts rated load in one step

KOHLER premium performances

Engines

- Low fuel consumption thanks to a high technology common rail injection engine
- A smaller footprint thanks to a high power density
- Low temperature starting capability
- Long maintenance interval

Alternator

- Provide industry leading motor starting capability
- 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
- High temperature and altitude product capacity, running without power derating

Control panel

The KOHLER wide controller range provide the reliability and performances you expect from your equipment. You can program, manage and diagnose it easily and in an efficient way

KOHLER worldwide support

- A standard three-year or 1000-hour limited warranty for standby applications.
- A standard two-year or 8700-hour limited warranty for prime power applications.
- A worldwide product support

RATINGS 400 V - 50 Hz		
Standby	kVA	2500
	kWe	2000
Prime	kVA	2273
	kWe	1818

GENERAL SPECIFICATIONS

Engine brand	KOHLER	
Alternator commercial brand	KOHLER	
Voltage (V)	400/230	
Performance class	G3	
One step load acceptance (out of ISO criteria)	100%	
Standard Control Panel	M80-D DEC4000 APM403 APM802	
Genset Fuel consumption	PRP	ESP
Consumption @ 100% load (L/h)	487	533.20
Engine optimisation	E	
Type of Cooling	Air-cooler	

GENERATOR SETS RATINGS

				Standby Rating		Prime Rating		
	Voltage	PH	Hz	kWe	kVA	Amps	kWe	kVA
KD2500-E	415/240	3	50	1935	2419	3365	1759	2199
	400/230	3	50	2000	2500	3609	1818	2273
	380/220	3	50	1994	2492	3786	1812	2265

Data Center Continuous (DCP) Power rating is the same as the prime rating when a reliable grid is available

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 is <85%.

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 is <75%.

Data Center Continuous Power (DCP): At varying or constant load, the number running hours is unlimited. 10% overload capacity is available for one hour within 12 hour of operation. For limited running time, continuous or other ratings details, consult your contact and obtain technical information for ratings guidelines, complete ratings definitions, and site condition derates.

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. For particular conditions in your installation, refer to factory for derating performance.

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.



Industrial Diesel Generator Set - KD2500-E

50 Hz - Emission Optimized - EPA Tier 2 Compliant

KOHLER DIESEL ENGINE

General

Engine brand	KOHLER
Engine ref.	KD62V12-5CES (Standby)
Distribution	4 Strokes
Air inlet system	Turbo
Fuel	Diesel
Engine optimization	E
Cylinders configuration	V
Number of cylinders	12
Displacement (L)	62.06
Bore (mm) * Stroke (mm)	175 * 215
Compression ratio	16 : 1
Speed (RPM)	1500
Maximum stand-by power at rated RPM (kW)	2148
Cylinder Head Material	Cast Iron
Crankshaft Material	Steel
Intake and Exhaust Valve Material	Steel
Piston type & material	Steel
Charge Air coolant	Air/Water DC
Frequency regulation, steady state (%)	+/- 0.25%
Injection Type	Direct
Governor type	Electronic
ECU type	KODEC
Air cleaner type, models	Dry

Fuel System

Maximum fuel pump flow (L/h)	530
Fuel Inlet Minimum recommended size (mm)	25.40
Fuel Outlet Minimum recommended size (mm)	19.05
Max. restriction at fuel pump (m)	3.50
Max head on fuel return line (m)	3.50
Maximum allowed inlet fuel temperature (°C)	70

Consumption with cooling system

PRP	ESP
487	533.20
367	405.60
256.20	280.50
147	160.50

Lubrication System

Oil system capacity including filters (L)	375
Min. oil pressure (bar)	3.50
Max. oil pressure (bar)	
Oil sump capacity (L)	308
Oil cooler	Plate Exchanger
Oil consumption 100% ESP (L/h)	1.01

Air Intake System

Max. intake restriction (mm H2O)	510
Intake air flow (L/s)	3023.91

Exhaust System

Heat rejection to exhaust (kW)	1680
PRP	ESP
Exhaust gas temperature (°C)	490 440
Exhaust gas flow (L/s)	7836 7573
Max. exhaust back pressure (mm H2O)	867

Optional Cooling System (HT/LT)

Radiated heat to ambient (kW)	100
Heat rejection to coolant HT (kW)	720
Flow on the HT circuit at 0.7Bars pressure drop off engine (L/min)	1631
Outlet coolant temperature (°C)	100
Maximum Coolant temp without derating (°C)	100
Max coolant temperature, Shutdown (°C)	103
Coolant capacity HT, engine only (L)	254
Restriction pressure drop off engine – HT circuit (mbar)	700
Minimal pressure before HT pump (mbar)	400
Max. pressure at inlet of HT water pump (mbar)	2500
Thermostat begin of opening HT (°C)	71
Thermostat end of opening HT (°C)	81
HT Standard pressure cap setting (kPa)	100
Heat rejection to coolant LT (kW)	620
Flow on the LT circuit at 0.7Bars pressure drop off engine (L/min)	450
Temperature of inlet to LT engine water circuit (°C)	55
Coolant capacity LT, engine only (L)	102
Restriction pressure drop off engine – LT circuit (mbar)	700
Minimal pressure before LT pump (mbar)	400
Max. pressure at inlet of LT water pump (mbar)	2500
LT Standard pressure cap setting (kPa)	100

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Alternator Specifications

Alternator commercial brand	KOHLER
Alternator ref.	KH05794T
Number of pole	4
Number of bearing	Single Bearing
Technology	Brushless
Indication of protection	IP23
Insulation class	H
Winding type	06
Capacity for maintaining short circuit at 3 In for 10 s	Yes
AVR Regulation	Yes
Coupling	Direct

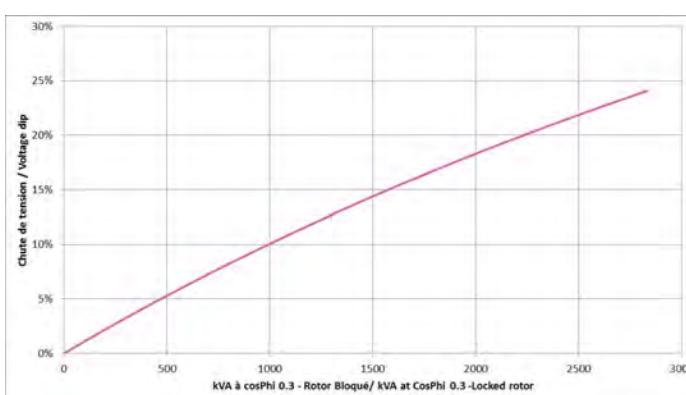
Application Data

Overspeed (rpm)	2250
Power factor (Cos Phi)	0.80
Voltage regulation at established rating (+/- %)	0.50
Wave form : NEMA=TIF	<50
Wave form : CEI=FHT	<2
Total Harmonic Distortion in no-load DHT (%)	<3.5
Total Harmonic Distortion, on load DHT (%)	<3.5
Recovery time (Delta U = 20% transient) (ms)	500

Performance Data

Continuous Nominal Rating 40°C (kVA)	2360
Unbalanced load acceptance ratio (%)	8

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.

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Dimensions compact version

Length (mm) * Width (mm) * Height (mm) 4741* 2100 * 2561

Dry weight (kg) 15637

Tank capacity (L) 500



* Sound levels in dB(A) are given at 75% Prime Power

Container dimensions CPU40 soundproofed version**CPU40 Si**

Length (mm) * Width (mm) * Height (mm) 12192* 2438 * 2896

Dry weight (kg) 29730

Tank capacity (L) 500

Acoustic pressure level @1m in dB(A) 90

Measured acoustic power level (Lwa) 110

Acoustic pressure level @7m in dB(A) 82



* Sound levels in dB(A) are given at 75% Prime Power

Container dimensions CPU40 super soundproofed version**CPU40 SSi**

Length (mm) * Width (mm) * Height (mm) 12192* 2438 * 2896

Dry weight (kg) 30290

Tank capacity (L) 500

Acoustic pressure level @1m in dB(A) 80

Measured acoustic power level (Lwa) 103

Acoustic pressure level @7m in dB(A) 72



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M80-D



The M80-D can be used as a basic terminal block for connecting an electrical cabinet box and as an instrument panel with a highly intuitive LCD screen giving an overview of your generating set's basic parameters:

- Oil gauge
- coolant temperature
- oil temperature
- engine speed
- battery voltage
- charge air temperature
- fuel consumption
- etc.

The engine main functions can be controlled and events are recorded to facilitate diagnostics:

- starting
- speed adjustment
- stopping
- droop
- etc.

ERGONOMIC AND USER FRIENDLY

Large display screen, buttons and scroll wheel,

Electrical measurements: voltmeter, frequency meter, ampmeter, voltage.

Engine parameters: working hours counter, oil pressure, coolant temperature, fuel level, engine speed, battery

Alarms and faults: oil pressure, coolant temperature, failure to start, overspeed, alternator min/max., battery voltage min. /max., emergency stop, fuel level.

Ergonomics: wheel for navigating around the various menus.

Communication: remote control and operation software,

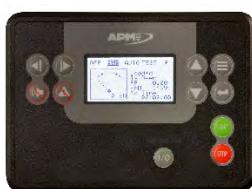
USB connections, PC connection.

For more information on the product and its options, please refer to the sales documentation

DEC4000



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

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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

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50 Hz - Emission Optimized - EPA Tier 2 Compliant

STANDARD SCOPE OF SUPPLY

All our KD Series gensets are fitted with:

- Industrial water cooled DIESEL engine
- Electric starter & charge alternator 24 V D.C
- Electronic governor
- Standard air filter
- Single bearing alternator IP 23 T° rise/ insulation to class H/H
- Welded steel base frame with 85% vibration attenuation mounts
- M80 control panel
- Flexible fuel lines & lub oil drain pump
- Fuel water separator filter
- Exhaust outlet with flexible and flanges
- User's manual (1 copy)
- Packing under plastic film
- Delivered with oil

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 Directive2014/30/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

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 factory for derating performance.

WARRANTY INFORMATION

Standard Warranty for Stand-by application:

- Three (3) years from registered start-up or one thousand (1000) hours limited warranty, whichever occurs first
- In any event, the warranty period will expire not later than fifty-four (54) months from date of shipment from factory

Standard Warranty for Prime application:

- Two (2) years from registered start-up or eight thousand and seven hundred (8700) hours limited warranty, whichever occurs first
- In any event, the warranty period will expire not later than forty-two (42) months from date of shipment from factory

For more details regarding conditions of application and scope of the warranty please refer to our General "terms & conditions of sales".

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