

RATINGS 400V - 50 Hz		
Standby	kVA	3100
	KWe	2480
Prime	kVA	2818
	KWe	2254

Benefits & features

KOHLER premium quality

- KOHLER SDMO provides **one source responsibility** for the generating set 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 available

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

GENERAL SPECIFICATIONS

Engine brand	KOHLER KD Series	
Alternator commercial brand	KOHLER	
Voltage (V)	400/230	
Performance class	G3	
Standard Control Panel	APM403	
Genset Fuel consumption	PRP	ESP
Consumption @ 100% PRP load (L/h)	546.8	601.5
Engine optimisation	F	
Type of Cooling	Air-cooler	

GENERATOR SETS RATINGS

				Standby Rating			Prime Rating	
KD3100-F	Voltage	PH	Hz	kWe	kVA	Amps	kWe	kVA
	415/240	3	50	2480	3100	4313	2254	2818
	400/230	3	50	2480	3100	4475	2254	2818
	380/220	3	50	2472	3090	4695	2247	2809

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

RATINGS: All three-phase units are rated at 0.8 power factor.

Distributed By:



East Coast Generators Pty Ltd

83 - 89 Westgate Drive,
Altona North, VIC 3025

Phone: 03 93698800

E-mail: sales@eastcoastgenerators.com.au
Web: www.eastcoastgenerators.com.au
ABN 14 202 273 633, ACN 006 517 362

KOHLER DIESEL ENGINE

General

Engine brand	KOHLER KD Series
Engine ref.	KD83V16-5AF5
Distribution	4T
Air inlet system	Turbo
Fuel	GO
Engine optimisation	F
Cylinders configuration	V
Number of cylinders	16
Displacement (L)	82.74
Bore (mm) * Stroke (mm)	175 * 215
Compression ratio	16 : 1
Speed (RPM)	1500
Maximum stand-by power at rated RPM (kW)	2663
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)	720
Fuel Inlet Minimum recommended size (mm)	33.7
Max. restriction at fuel pump (m)	3.5
Max head on fuel return line (m)	3.5
Maximum allowed inlet fuel temperature (°C)	70

Consumption with fan (L/h)

	PRP	ESP
Consumption @ 100% PRP load (L/h)	546.8	601.5
Consumption @ 75% PRP load (L/h)	418.7	455.8
Consumption @ 50% PRP load (L/h)	300.5	324.3
Consumption @ 25% load PRP (L/h)	174.4	187.2

Lubrication System

Oil system capacity including filters (L)	560
Min. oil pressure (bar)	
Max. oil pressure (bar)	
Oil sump capacity (L)	460
Oil cooler	Plate Exchanger
Oil consumption 100% ESP 50Hz (L/h)	1.25

Air Intake system

Max. intake restriction (mm H2O)	510
Intake air flow (L/s)	3031.65

Exhaust system

Heat rejection to exhaust (kW)	1730
Exhaust gas temperature (°C)	PRP 470 ESP 500
Exhaust gas flow (L/s)	7178 8270
Max. exhaust back pressure (mm H2O)	867

Optional cooling system (HT/LT)

Radiated heat to ambient (kW)	120
Heat rejection to coolant HT (kW)	1030
Flow on the HT circuit at 0.7Bars pressure drop off engine (L/min)	1980
Outlet coolant temperature (°C)	85
Maximum Coolant temp without derating (°C)	100
Max coolant temperature, Shutdown (°C)	103
Coolant capacity HT, engine only (L)	270
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)	550
Flow on the LT circuit at 0.7Bars pressure drop off engine (L/min)	620
Temperature of inlet to LT engine water circuit (°C)	55
Coolant capacity LT, engine only (L)	105
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

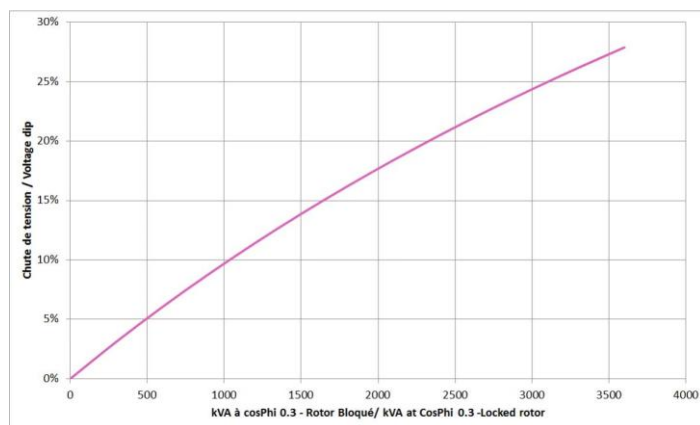
Alternator commercial brand	KOHLER
Alternator ref.	KH06550T
Number of pole	4
Number of bearing	Single Bearing
Technology	Brushless
Indication of protection	IP23
Insulation class	H
Number of wires	6
Capacity for maintaining short circuit at 3 In for 10 s	Yes
AVR Regulation	Yes
Coupling	Direct

Application data

Overspeed (rpm)	2250
Power factor (Cos Phi)	0.8
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 linear load DHT (%)	<3.5
Recovery time (Delta U = 20% transient) (ms)	500

Performance datas

Continuous Nominal Rating 40°C (kVA)	3000
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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Industrial Diesel Generator Set – **KD3100-F** 50 Hz – Fuel Consumption Optimized

Dimensions compact version

Length (mm) * Width (mm) * Height (mm)	5319* 1960 * 2480
Dry weight (kg)	19750
Tank capacity (L)	0

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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.

DEC4000



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

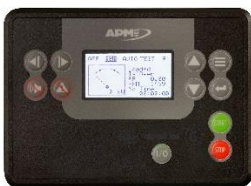
Alarms and faults: oil pressure, coolant temperature, failure to start, overspeed, alternator min/max., battery voltage min. /max., emergency stop, fuel level.

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.

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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HIRE - SALES - SERVICE

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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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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 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

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.

WARRANTY INFORMATION

Standard Warranty Period:

- for Products in "back-up" service
 - o 30 months from the date the Product leaves the plant, **extended to 42 months for KD series**
 - o 24 months from the Product's commissioning date, **extended to 36 months for KD series**
 - o 1,000 running hours

The warranty expires when one of the above conditions is met.

- for Products in "continuous" service (continuous supply of electricity, either in the absence of any normal electricity grid or to complement the grid),
 - o 18 months from the date the Product leaves the plant, **extended to 30 months for KD series**
 - o 12 months from the Product's commissioning date, **extended to 24 months for KD series**
 - o 2,500 running hours, **extended to 8700 running hours for KD series**

The warranty expires when one of the above conditions is met.

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

Standby Ratings: 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 Ratings:** At varying load, the number of generator set operating hours is unlimited. A 10% overload capacity is available for one hour in twelve. Average load factor is <75%. Ratings are in accordance with ISO-8528-1 and ISO-3046-1. For limited running time, continuous or other ratings, consult your contact and obtain technical information for ratings guidelines, complete ratings definitions, and site condition derates. The generator set manufacturer reserves the right to change the design or specifications without notice and without any obligation or liability whatsoever

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