

### Ratings Range

		<b>400V-50 Hz</b>
<b>Standby:</b>	<b>kW</b>	640
	<b>kVA</b>	800
<b>Prime:</b>	<b>kW</b>	582
	<b>kVA</b>	727



### Standard Features

- Kohler Co. provides one-source responsibility for the generating system and accessories.
- Approved for use with certified renewable Hydrotreated Vegetable Oil (HVO)/Renewable Diesel (RD) fuels compliant with EN15940/ASTM D975.
- The generator set and its components are prototype-tested, factory-built, and production-tested.
- The generator set accepts rated load in one step.
- A standard three-year or 1000-hour limited warranty for standby applications in Europe, Midde East and Africa..
- A standard two-year or 8700-hour limited warranty for prime power applications.
- A worldwide product support
- Other features:
  - Kohler designed controllers for one-source system integration and remote communication. See Controllers on page 4.

### General Specifications

Manufacturer	Kohler
Engine: model	KD18L06
Alternator Choices	KH03546T04D KH02970T04D
Performance Class	G3, Per ISO 8528-5
One Step Load Acceptance Voltage	100%
Controller	380V, 400V, 415V M80-D, APM403, APM802
Fuel Consumption, L/h 100% at Standby *	156
Fuel Consumption, L/h 100% at Prime Power *	144
Emission Level Compliance	Tier 2
Open Unit Noise Level @ 7 m dB(A) at Rated Load	91
Data Center / Mission Critical Rating	Same as the Standby Rating below
Type of cooling	Unit mounted Radiator
Factory installed enclosures	M240

\* Volumetric Fuel consumption is up to 4% higher when using HVO/RD than Diesel Fuel.

### Conscious Care™ Qualified

- Reduce operating costs, fuel consumption, and greenhouse gas emissions with Conscious Care™ maintenance program.

### Generator Set Ratings

Alternator	Voltage	Ph	Hz	Standard Unit mounted Radiator		
				kVA	kW	A
KH03546T04D	415/240	3	50	800	640	1113
	400/230	3	50	800	640	1155
	380/220	3	50	800	640	1216
	200/115	3	50	800	640	2309
	240 TRI	3	50	800	640	1925
	230 TRI	3	50	800	640	2008
	220/127	3	50	800	640	2100

RATINGS: All three-phase units are rated at 0.8 power factor. **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. **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. Ratings are in accordance with ISO-8528-1 and ISO-3046-1. For limited running time and continuous ratings, consult the factory.

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.

The generator set manufacturer reserves the right to change the design or specifications without notice and without any obligation or liability whatsoever.

Alternator	Voltage	Ph	Hz	Standard Unit mounted Radiator		
				kVA	kW	A
KH02970T04D	415/240	3	50	800	640	1113
	400/230	3	50	800	640	1155
	380/220	3	50	800	640	1216
	200/115	3	50	800	640	2309
	240 TRI	3	50	800	640	1925
	230 TRI	3	50	800	640	2008
	220/127	3	50	800	640	2100

### Engine Specifications

Manufacturer	Kohler
Engine model	KD18L06
Engine type	4-Cycle, Turbocharged, Charge Air Cooled
Cylinder arrangement	6-L
Displacement, L	17.96
Bore and stroke, mm	148 x 174
Compression ratio	16.5:1
Rated rpm	1500
Max. power at rated rpm, kWm	710
Governor: type, make/model	KODEC Electronic Control
Frequency regulation, no-load to full-load	Isochronous
Frequency regulation, steady state	±0.25%

### Lubricating System

Type	Full Pressure
Oil pan capacity with filter initial filling, L	97
Oil filter: quantity, type §	2, Cartridge
Oil cooler	Water-Cooled
§ Kohler recommends the use of Kohler Genuine oil and filters.	

### Fuel System

Max. fuel flow, L/h	256
Maximum diesel fuel lift, m	3.5
Fuel filter: quantity, type	1, Primary Engine Filter 1, Fuel/Water Separator
Recommended fuel	#2 Diesel ULSD/HVO/RD

### Fuel Consumption

At % load of Engine power rating	g/kWh	l/h**
100%	190	159
75%	200	125
50%	206	86
25%	212	44

\*\* Assumed volumetric fuel consumption with diesel fuel having an LHV of 42.7MJ/kg and weighing 0.85kg/l.

### Radiator System

Ambient temperature, °C	35
Type of coolant	Kohler Genuine coolant
Radiator system capacity, including engine, L	84
<b>Engine coolant</b>	
Engine jacket water capacity, L	39.5
Heat rejected to cooling water at rated kW	289
Engine jacket water flow, L/min	635
<b>Charge-air cooling system</b>	
Heat rejected to charge cooler at rated kW	165
Fan diameter, including blades, mm	1016
Fan, kWm	21
Max. restriction of cooling air, intake and discharge side of radiator, kPa at Nominal cooling airflow	0.250

RATINGS: All three-phase units are rated at 0.8 power factor. *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. *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. Ratings are in accordance with ISO-8528-1 and ISO-3046-1. For limited running time and continuous ratings, consult the factory.

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.

The generator set manufacturer reserves the right to change the design or specifications without notice and without any obligation or liability whatsoever.

### Exhaust System

Heat rejected to exhaust, kW	501
Exhaust temperature at rated kW at 25°C ambient, dry exhaust, °C	508
Exhaust flow at rated kW, l/s.	2015
Maximum allowable backpressure, kPa	8.67
Exh. outlet size at eng. hookup, mm	See ADV drawing

### Electrical System

Battery charging alternator:	
Ground (negative/positive)	Negative
Volts (DC)	24
Ampere rating	140
Starter motor qty. at starter motor power rating, rated voltage (DC)	Standard: 1 @ 8 kW, 24;
Battery, recommended cold cranking amps (CCA):	
Quantity, CCA rating each, type (with standard starters)	4, 815, AGM
Battery voltage (DC)	12

### Air Requirements

Radiator-cooled cooling air, m <sup>3</sup> /s. ‡	13.4
Combustion air, l/s.	687
Max. air combustion restriction, kPa	5.1
Heat rejected to ambient air:	
Engine, kW	36
Alternator, kW	31
‡ Air density = 1.20 kg/m <sup>3</sup>	

### Alternator Specifications

Type	4-Pole, Rotating-Field
Exciter type	Brushless
Voltage regulator	Yes
Insulation system:	Class H, Synthetic, Non-hygroscopic
Ingress Protection rating	IP23
Bearing: quantity, type	1, Sealed
Number of wire	12
Coupling type	Direct
Overspeed (rpm)	2250
Voltage regulation, no-load to full-load	±0.5%
Unbalanced load capability	8%

### Alternator Standard Features

- The AVR voltage regulator provides superior short-circuit capability.
- All models are brushless, rotating-field alternators.
- NEMA MG1, IEEE, and ANSI standards compliance for temperature rise and motor starting.
- Sustained short-circuit current of up to 300% of the rated current for up to 10 seconds.
- Sustained short-circuit current enabling downstream circuit breakers to trip without collapsing the alternator field.
- Self-ventilated and dripproof construction.
- Superior voltage waveform from two-thirds pitch windings and skewed stator.
- Brushless alternator with brushless pilot exciter for excellent load response.

#### NOTE:

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

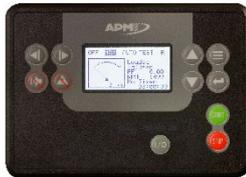
### Controllers



#### APM802 Controller

Provides advanced control, system monitoring, and system diagnostics for optimum performance and compatibility.

- 12-inch graphic display with touch screen and menu control provide easy local data access
  - Measurements are selectable in metric or English units
  - User language selectable
  - Two USB ports allow connection of a flash drive, mouse, or keypad
  - Electrical data, mechanical data, and system settings can be saved to a flash drive
  - Ethernet port allows connection to a PC type computer or Ethernet switch
  - The controller supports Modbus® RTU and TCP protocols
- Refer to G6-152 for additional controller features and accessories. Modbus® is a registered trademark of Schneider Electric.



#### APM403 Controller

Provides a versatile control unit for single or parallel application.

- graphic display provides easy local data view.
- User language selectable
- Event log and management of the last 300 events; data and system settings can be saved to a flash drive.
- On-board communication and control ports on board (USB, USB host, CAN, RS485)
- The controller supports Modbus® RTU protocols (TCP protocol as option)



#### M80-D

Provides a basic terminal block for connecting a remote-control unit.

Intuitive LCD screen for basic generator parameters (coolant and fuel temperatures, engine speed,...)

Controls and records the main engine functions for quick diagnosis (starting, speed adjustment)

### Codes and Standards

- Engine-generator set is designed and manufactured in facilities certified to ISO 9001 and ISO14001.
- Generator set meets NEMA MG1, BS5000, ISO, DIN EN, and IEC standards,.
- Engine generator set is tested to ISO 8528-5 for transient response.
- The generator set and its components are prototype-tested, factory-built, and production-tested.
- 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

### Warranty Information

- A standard three-year from the commissioning date, 1000 running hours warranty for standby applications in Europe, Middle East and Africa.
- A standard two-year from the commissioning date or 8700-hour limited warranty for prime power applications.
- Five-year basic, five-year comprehensive, and ten-year extended limited warranties are also available

#### Available Warranties for Standby Applications

- 5-Year Basic Limited Warranty
- 5-Year Comprehensive Limited Warranty
- 10-Year Major Components Limited Warranty

### Standard Features

- Industrial water cooled internal combustion Engine
- Single electric starter
- Charging alternator 24Vdc
- Single bearing alternator IP23, T°rise / Insulation class H/H
- Welded steel skid
- M80-D controller
- Closed Crankcase Ventilation (CCV) Filters
- Standard air filter
- Local Emergency Stop Switch
- Oil Drain and Coolant Drain Extension
- Fuel/Water Separator
- Compensators and flanges for exhaust outlets
- Spring Isolation Under the Skid
- Packaging under plastic film
- Operation and Installation Literature
- Delivered with initial oil and coolant fill

RATINGS: All three-phase units are rated at 0.8 power factor. *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. *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. Ratings are in accordance with ISO-8528-1 and ISO-3046-1. For limited running time and continuous ratings, consult the factory.

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.

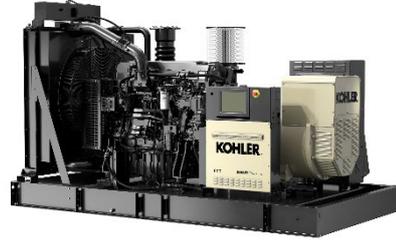
The generator set manufacturer reserves the right to change the design or specifications without notice and without any obligation or liability whatsoever.

### Dimensions and Weights

#### Compact version with unit mounted radiator

Unit-mounted radiator for easy installation, high functional reliability, and operation in harsh conditions

Overall Size, max., L x W x H, mm:	3620 x 1900 x 2220
Weight, radiator model, max. wet, kg :	5170
Fuel tank capacity, L	600



#### Soundproofed version with M240

An integrated solution in a canopy suitable for harsh environments, for a silent, ready-to-use and easy-to-maintain installation.

Overall Size, max., L x W x H, mm:	5303 x 1900 x 2661
Weight, max. wet, kg :	6880
Fuel tank capacity, L	600
Sound Power level LwA in dB(A) 50Hz, 75% PRP	108.4
Sound Pressure level LpA @1m in dB(A) 50Hz, 75% PRP	88.3
Sound Pressure level LpA @7m in dB(A) 50Hz, 75% PRP	78



RATINGS: All three-phase units are rated at 0.8 power factor. *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. *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. Ratings are in accordance with ISO-8528-1 and ISO-3046-1. For limited running time and continuous ratings, consult the factory.

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.

The generator set manufacturer reserves the right to change the design or specifications without notice and without any obligation or liability whatsoever.