



**Ratings Range**

		<b>KM11U 60 Hz</b>	<b>KM11.5 50 Hz</b>
<b>Standby:</b>	<b>kW</b>	9-11	8-9
	<b>kVA</b>	11-14	10-12
<b>Prime:</b>	<b>kW</b>	8-10	7-8
	<b>kVA</b>	10-13	9-10



**Standard Features**

- Kohler Co. provides one-source responsibility for the generating system and accessories.
- The generator set and its components are prototype-tested, factory-built, and production-tested.
- A one-year limited warranty covers all systems and components.
- Mitsubishi engine with 12-volt battery charging alternator.
- Mecc Alte single-bearing alternator with insulation class H.
- Unit mounted radiator with 50°C (122°F) ambient air capability.
- Skid and vibration isolators.
- Subbase fuel tank, 50 L (13 gal.).
- Dry type air filter.
- Main line circuit breaker.
- Microprocessor controller.
- Battery, battery rack, and cables.
- Industrial exhaust silencer (loose).
- Operation and installation literature.

**Generator Set Ratings**

Alternator	Voltage	Ph	Hz	Standby Rating		Prime Rating	
				kW/kVA	Amps	kW/kVA	Amps
ECO3-1L	120/208	3	60	11/14	39	10/13	35
	127/220	3	60	11/14	37	10/13	33
	115/230	3	60	9/11	28	8/10	25
	120/240	3	60	11/14	34	10/13	30
	254/440	3	60	11/14	18	10/13	16
	277/480	3	60	11/14	17	10/13	15
	115/200	3	50	9/12	35	8/10	29
	110/220	3	50	9/12	31	8/10	26
	127/220	3	50	8/10	26	7/9	23
	115/230	3	50	9/12	30	8/10	25
	120/240	3	50	9/12	29	8/10	24
	220/380	3	50	9/12	18	8/10	15
	230/400	3	50	9/12	17	8/10	14
	240/415	3	50	9/12	17	8/10	14

**RATINGS:** All three-phase units are rated at 0.8 power factor. See TIB-109 for generator set derate tables. Obtain the technical information bulletin (TIB-101) on ratings guidelines for the complete ratings definitions.  
**PRP:** Prime power is available for an unlimited number of annual operating hours in variable load applications in accordance with ISO-8528/1.  
 A 10% overload capability is available for a period of 1 hour within a 12-hour period of operating in accordance with ISO-3046/1.  
**ESP:** The emergency standby power rating is applicable for supplying emergency power in variable load applications in accordance with ISO-8528/1. Overload is not allowed. The generator set manufacturer reserves the right to change the design or specifications without notice and without any obligation or liability whatsoever.

# Alternator Specifications

- NEMA-MG21, UTE NF C51.111, VDE 0530, BS 4999, CSA standards compliance for temperature rise and motor starting.
- Sustained short-circuit current greater than 300% of the rated current for up to 10 seconds.
- Self-ventilated and dripproof construction.
- Vacuum-impregnated windings with fungus-resistant epoxy varnish for dependability and long life.
- Superior voltage waveform from a two-thirds pitch stator and skewed rotor.

Specifications	60 Hz	50 Hz
Ratings voltage	480 V	400 V
Standby rating @ 27°C, kVA	15	12.2
Prime rating @ 40°C, kVA	13.2	11
Efficiency @ full load	87.8%	86%
Air flow, m <sup>3</sup> /min. (cfm)	4 (141)	3.3 (117)
Direct axis subtransient reactance (X"d)	15.7%	

Specifications	Alternator
Manufacturer	Mecc Alte
Type	4-Pole, Rotating-Field
Exciter type	Brushless
Leads: quantity, type	12, Reconnectable
Voltage regulator	Solid State, SR7/2
Insulation:	NEMA MG1
Material	Class H
Bearing: quantity, type	1, Sealed
Coupling	Direct
Voltage regulation, no-load to full-load	±1%

## Application Data

### Engine

Engine Specifications	60 Hz	50 Hz
Manufacturer	Mitsubishi	
Engine model	S3L2.SD	
Engine type	4-Cycle, Naturally Aspirated	
Cylinder arrangement	3 Inline	
Displacement, L (cu. in.)	1.3 (80)	
Bore and stroke, mm (in.)	78 x 92 (3.1 x 3.6)	
Compression ratio	22.1:1	
Piston speed, m/min. (ft./min.)	331 (1086)	276 (906)
Rated rpm	1800	1500
Max. power at rated rpm, kWm (BHP)	13.9 (19)	11.3 (15)
Governor type	Mechanical	
Frequency regulation, no-load to full-load	ISO 5%	
Frequency regulation, steady state	±2.5%	
Air cleaner type, all models	Dry	

### Exhaust

Exhaust System	60 Hz	50 Hz
Exhaust manifold type	Dry	
Exhaust flow at rated kW, m <sup>3</sup> /min. (cfm)	2.6 (93)	2.2 (77)
Exhaust temperature at rated kW, dry exhaust, °C (°F)	400 (752)	
Maximum allowable back pressure, kPa (in. Hg)	7.0 (2.1)	
Exhaust outlet size at engine hookup, mm (in.)	60.5 (2.38)	

### Engine Electrical

Engine Electrical System	60 Hz	50 Hz
Battery charging alternator:	12 Volt	
Ground (negative/positive)	Negative	
Volts (DC)	12	
Starter motor rated voltage (DC)	12	
Battery, recommended cold cranking amps (CCA):		
Quantity, CCA rating each	One, 680	
Battery voltage (DC)	12	

### Fuel

Fuel System	60 Hz	50 Hz
Max. fuel flow, Lph (gph)	18 (4.8)	
Fuel prime pump	Electric	
Recommended fuel	#2 Diesel	
Fuel tank capacity, L (gal.)	50 (13.2)	

### Lubrication

Lubricating System	60 Hz	50 Hz
Type	Full Pressure	
Oil pan capacity, L (qt.)	3.7 (3.9)	
Oil pan capacity with filter, L (qt.)	4.2 (4.4)	

# Application Data

## Cooling

Radiator System	60 Hz	50 Hz
Ambient temperature, °C (°F)	50 (122)	
Radiator system capacity, including engine, L (gal.)	4.2 (1.1)	
Heat rejected to cooling water at rated kW, dry exhaust, kW (Btu/min.)	12.2 (694)	9.8 (557)
Water pump type	Centrifugal	
Fan, kWm (HP)	0.4 (0.5)	0.3 (0.4)
Max. restriction of cooling air, intake and discharge side of radiator, kPa (in. H <sub>2</sub> O)	0.1 (0.4)	

## Operation Requirements

Air Requirements	60 Hz	50 Hz
Radiator-cooled cooling air, m <sup>3</sup> /min. (scfm) *	42 (1483)	30 (1060)
Combustion air, m <sup>3</sup> /min. (cfm)	1.0 (35)	0.8 (29)

\* Air density = 1.20 kg/m<sup>3</sup> (0.075 lbm/ft<sup>3</sup>)

Fuel Consumption	60 Hz	50 Hz
<b>Diesel, Lph (gph) at % load</b>	<b>Standby Rating</b>	
110%	—	—
<b>Diesel, Lph (gph) at % load</b>	<b>Prime Rating</b>	
100%	4.0 (1.1)	3.1 (0.8)
75%	3.2 (0.8)	2.5 (0.7)
50%	2.5 (0.7)	2.1 (0.6)

## Controllers



### Decision-Maker™ 1000

#### Automation

- Test LEDs
- Voltage and speed stabilization

#### Engine Parameters

- Engine speed indication (with LCD message)
- Battery voltage indication (with LCD message)
- Elapsed hour meter (with LCD message)
- Fuel solenoid control
- Starter control

#### Measurements

- Frequency, Hz (with LCD message)

#### Operation and/or Safety Lights

- Oil pressure fault
- Water temperature fault
- Fail to start fault
- Overspeed fault (≥60 kVA)
- Set ready for load
- Charging alternator fault
- General alarm
- General fault
- Panel lamp
- Emergency stop fault

#### Safety Devices

- Overspeed fault
- Automatic standby

#### Miscellaneous

- Fault reset
- Three-phase with or without neutral, two-phase, or single-phase use

## Available Accessories

### Enclosed Unit

- Sound Enclosure, 60 Hz, 62.5 dB @ 7 m (23 ft.), Standby (with enclosed critical silencer)
- Sound Enclosure, 50 Hz, 60.4 dB @ 7 m (23 ft.), Standby (with enclosed critical silencer)

### Open Unit

- Exhaust Silencer, Critical 40 dB(A) Reduction
- Exhaust Silencer, Residential 29 dB(A) Reduction
- Extension, 40 cm (16 in.)
- Flexible Exhaust Connector
- Protection Mesh

### Cooling System

- Block Heater [recommended for ambient temperatures below 0°C (32°F)]
- Radiator Core Guard

### Controller

#### Automation

- External Starting Order
- Plug Preheating
- Remote Start Capability
- Utility Sensing, 3-Phase

#### Engine Parameters

- Plug Preheating Control
- Water Preheating Control

#### Measurements

- Analog Indicator
- Line Voltages, Volts
- Phase Currents, Amps
- Single Voltages, Volts

#### Safety Devices

- Overload or Short-Circuit Fault
- Differential Triggering Fault

#### Miscellaneous

- Alarm Horn
- Battery Charger, 12 Volt
- Differential Protection with Time and Sensitivity Adjustment
- External ATS Position
- Permanent Insulation Controller

### Fuel System

- Automatic Fuel Tank Fill Kit
- Subbase Fuel Tank with Secondary Containment Basin
- Subbase Fuel Tank Leak Alarm
- Water Separator Fuel Filter

### Electrical System

- Battery Charger, Equalize/Float Type
- Battery Isolator Switch

### Engine and Alternator

- Lube Oil Drain Pump

### Miscellaneous Accessories

- \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_
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- \_\_\_\_\_
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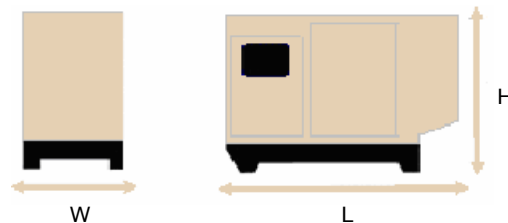
## Dimensions and Weights

### Open Model



Overall Size, L x W x H, mm (in.): 1405 x 715 x 1053 (55 x 28 x 41.5)  
 Weight, wet, kg (lb.): 438 (965)

### With Available Accessory Enclosure



Overall Size, L x W x H, mm (in.): 1750 x 715 x 1230 (69 x 28 x 48)  
 Weight, wet, kg (lb.): 586 (1292)

NOTE: This drawing is provided for reference only and should not be used for planning installation. Contact your local distributor for more detailed information.

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