



**Ratings Range**

|                 |            | <b>KM11U<br/>60 Hz</b> | <b>KM12<br/>50 Hz</b> |
|-----------------|------------|------------------------|-----------------------|
| <b>Standby:</b> | <b>kW</b>  | 10.6-11.2              | 7.6-9.2               |
|                 | <b>kVA</b> | 13.2-14.0              | 9.5-11.5              |
| <b>Prime:</b>   | <b>kW</b>  | 9.6-10.2               | 6.9-8.4               |
|                 | <b>kVA</b> | 12.0-12.7              | 8.6-10.5              |

**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 9 dB(A) reduction exhaust silencer (loose).
- Operation and installation literature.

**Generator Set Ratings**

| <b>Alternator</b> | <b>Voltage</b> | <b>Ph</b> | <b>Hz</b> | <b>Standby Rating</b> |             | <b>Prime Rating</b> |             |
|-------------------|----------------|-----------|-----------|-----------------------|-------------|---------------------|-------------|
|                   |                |           |           | <b>kW/kVA</b>         | <b>Amps</b> | <b>kW/kVA</b>       | <b>Amps</b> |
| ECO3-1L           | 120/208        | 3         | 60        | 10.6/13.2             | 37          | 9.6/12.0            | 33          |
|                   | 127/220        | 3         | 60        | 11.2/14.0             | 37          | 10.2/12.7           | 33          |
|                   | 254/440        | 3         | 60        | 11.2/14.0             | 18          | 10.2/12.7           | 17          |
|                   | 277/480        | 3         | 60        | 11.2/14.0             | 17          | 10.2/12.7           | 15          |
|                   | 115/200        | 3         | 50        | 9.2/11.5              | 33          | 8.4/10.5            | 30          |
|                   | 110/220        | 3         | 50        | 9.2/11.5              | 30          | 8.4/10.5            | 28          |
|                   | 127/220        | 3         | 50        | 7.6/9.5               | 25          | 6.9/8.6             | 23          |
|                   | 115/230        | 3         | 50        | 9.2/11.5              | 29          | 8.4/10.5            | 26          |
|                   | 120/240        | 3         | 50        | 9.2/11.5              | 28          | 8.4/10.5            | 25          |
|                   | 220/380        | 3         | 50        | 9.2/11.5              | 17          | 8.4/10.5            | 16          |
| 230/400           | 3              | 50        | 9.2/11.5  | 17                    | 8.4/10.5    | 15                  |             |
| 240/415           | 3              | 50        | 9.2/11.5  | 16                    | 8.4/10.5    | 15                  |             |



**With Available Enclosure Accessory**

**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,<br>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:                   |          |       |
| 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 lbf/ft<sup>3</sup>)

| Fuel Consumption                   | 60 Hz                 | 50 Hz     |
|------------------------------------|-----------------------|-----------|
| <b>Diesel, Lph (gph) at % load</b> | <b>Standby Rating</b> |           |
| 110% (of the standby rating)       | —                     | —         |
| <b>Diesel, Lph (gph) at % load</b> | <b>Prime Rating</b>   |           |
| 100% (of the prime rating)         | 4.0 (1.1)             | 3.1 (0.8) |
| 75% (of the prime rating)          | 3.2 (0.8)             | 2.5 (0.7) |
| 50% (of the prime rating)          | 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 M126, 60 Hz, 62.5 dB(A) @ 7 m (23 ft.), Standby (with enclosed critical silencer)
- Sound Enclosure M126, 50 Hz, 60.4 dB(A) @ 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

- \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_

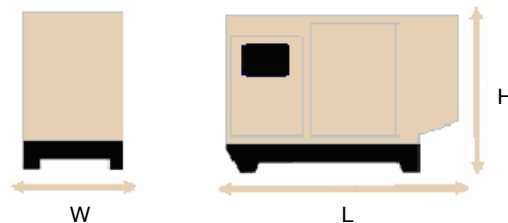
## Dimensions and Weights

### 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 Enclosure Accessory



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.

### DISTRIBUTED BY: