



**Ratings Range**

		<b>KM8 50 Hz</b>
<b>Standby:</b>	<b>kW</b>	5.6-6.0
	<b>kVA</b>	7.0-8.0
<b>Prime:</b>	<b>kW</b>	5.1-5.5
	<b>kVA</b>	6.4-6.8



**With Available Enclosure Accessory**  
(Note: Photo depicts the M126 enclosure)

**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**

Alternator	Voltage	Ph	Hz	Standby Rating		Prime Rating	
				kW/kVA	Amps	kW/kVA	Amps
ECO3-2S	115/200	3	50	6.0/7.5	23	5.5/6.8	20
	110/220	3	50	6.0/7.5	21	5.5/6.8	18
	127/220	3	50	5.6/7.0	18	5.5/6.8	18
	115/230	3	50	6.0/7.5	20	5.5/6.8	17
	120/240	3	50	6.0/7.5	19	5.5/6.8	17
	220/380	3	50	6.0/7.5	12	5.1/6.4	10
	230/400	3	50	6.0/7.5	12	5.5/6.8	10
	240/415	3	50	6.0/7.5	11	5.5/6.8	10

**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

Ratings voltage	400 V
Standby rating @ 27°C, kVA	9
Prime rating @ 40°C, kVA	8
Efficiency @ full load, %	83.8
Air flow, m <sup>3</sup> /min. (cfm)	3.5 (124)
Direct axis subtransient reactance (X"d), %	13.3

## Specifications

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

Manufacturer	Mitsubishi
Engine model	L3E.SD
Engine type	4-Cycle, Naturally Aspirated
Cylinder arrangement	3 Inline
Displacement, L (cu. in.)	0.95 (58)
Bore and stroke, mm (in.)	76 x 70 (3.0 x 2.8)
Compression ratio	23:1
Piston speed, m/min. (ft./min.)	210 (690)
Rated rpm	1500
Max. power at rated rpm, kWm (BHP)	7.4 (10)
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

Exhaust manifold type	Dry
Exhaust flow at rated kW, m <sup>3</sup> /min. (cfm)	1.4 (50)
Exhaust temperature at rated kW, dry exhaust, °C (°F)	490 (914)
Maximum allowable back pressure, kPa (in. Hg)	7.7 (2.3)
Exhaust outlet size at engine hookup, mm (in.)	60.5 (2.38)

## Engine Electrical

### Engine Electrical System

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, 510
Battery voltage (DC)	12

## Fuel

### Fuel System

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

Type	Full Pressure
Oil pan capacity, L (qt.)	3.6 (4.0)
Oil pan capacity with filter, L (qt.)	4.1 (4.4)

## Application Data

### Cooling

#### Radiator System

Ambient temperature, °C (°F)	50 (122)
Radiator system capacity, including engine, L (gal.)	3.7 (1.0)
Heat rejected to cooling water at rated kW, dry exhaust, kW (Btu/min.)	8 (455)
Water pump type	Centrifugal
Fan, kWm (HP)	0.2 (0.3)
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

Radiator-cooled cooling air, m <sup>3</sup> /min. (scfm) *	24 (848)
Combustion air, m <sup>3</sup> /min. (cfm)	0.6 (21)

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

#### Fuel Consumption

Diesel, Lph (gph) at % load	Standby Rating
110% (of the standby rating)	—

Diesel, Lph (gph) at % load	Prime Rating
100% (of the prime rating)	2.3 (0.6)
75% (of the prime rating)	1.7 (0.4)
50% (of the prime rating)	1.3 (0.3)

## 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 M125, 60.1 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

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

### Electrical System

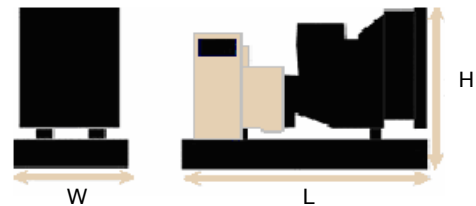
- Battery Charger, Equalize/Float Type
- Battery Isolator Switch

### Miscellaneous Accessories

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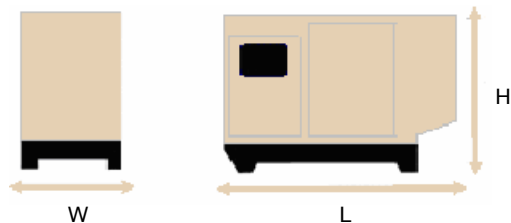
## Dimensions and Weights

### Open Model



Overall Size, L x W x H, mm (in.): 1220 x 700 x 992  
 (48.03 x 27.56 x 39.04)  
 Weight, wet, kg (lb.): 330 (728)

### With Available Enclosure Accessory



Overall Size, L x W x H, mm (in.): 1482 x 760 x 1030  
 (58.35 x 29.90 x 40.55)  
 Weight, wet, kg (lb.): 440 (970)

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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