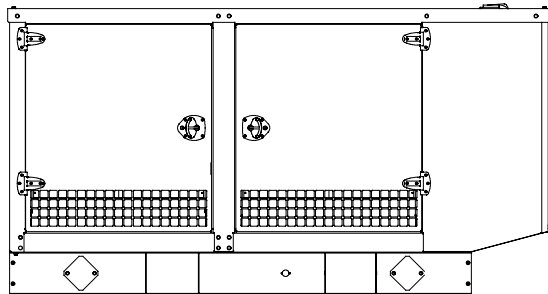




Ratings Range

| | | |
|-----------------|------------|--------------|
| | | 60 Hz |
| Standby: | kW | 37-45 |
| | kVA | 37-56 |



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.
- UL 2200 listing is available. (60 Hz only)
- The generator set accepts rated load in one step.
- The 60 Hz generator set engine is certified by the Environmental Protection Agency (EPA) to conform to the New Source Performance Standard (NSPS) for stationary spark-ignited emissions.
- A one-year limited warranty covers all systems and components. Two- and five-year extended warranties are also available.
- Alternator features:
 - The unique Fast-Response™ II excitation system delivers excellent voltage response and short-circuit capability using a permanent magnet (PM)-excited alternator.
 - The brushless, rotating-field alternator has broadrange reconnectability.
- Other features:
 - Controllers are available for all applications. See controller features inside.
 - The electronic, isochronous governor incorporates an integrated drive-by-wire throttle body actuator delivering precise frequency regulation.
- Quick-ship (QS) models with selected features and a five-year basic warranty are available. See your Kohler distributor for details.

Generator Set Ratings

| Alternator | Voltage | Ph | Hz | Natural Gas 130°C Rise Standby Rating | | LP Gas 130°C Rise Standby Rating | |
|------------|---------|----|-------|---|-------|--|------|
| | | | | kW/kVA | Amps | kW/kVA | Amps |
| 4P7 | 120/208 | 3 | 60 | 41/51 | 142 | 44/55 | 153 |
| | 127/220 | 3 | 60 | 41/51 | 134 | 44/55 | 144 |
| | 120/240 | 3 | 60 | 41/51 | 123 | 44/55 | 132 |
| | 120/240 | 1 | 60 | 37/37 | 154 | 37/37 | 154 |
| | 139/240 | 3 | 60 | 41/51 | 123 | 44/55 | 132 |
| | 220/380 | 3 | 60 | 40/50 | 76 | 40/50 | 76 |
| | 277/480 | 3 | 60 | 41/51 | 62 | 44/55 | 66 |
| 4P8 | 120/208 | 3 | 60 | 41/51 | 142 | 44/55 | 153 |
| | 127/220 | 3 | 60 | 41/51 | 134 | 44/55 | 144 |
| | 120/240 | 3 | 60 | 41/51 | 123 | 44/55 | 132 |
| | 120/240 | 1 | 60 | 39/39 | 163 | 42/42 | 175 |
| | 139/240 | 3 | 60 | 42/53 | 126 | 45/56 | 135 |
| | 220/380 | 3 | 60 | 41/51 | 78 | 44/55 | 84 |
| 277/480 | 3 | 60 | 42/53 | 63 | 45/56 | 68 | |
| 4Q10 | 120/240 | 1 | 60 | 41/41 | 171 | 45/45 | 188 |

RATINGS: All three-phase units are rated at 0.8 power factor. All single-phase units are rated at 1.0 power factor. Standby Ratings: Standby ratings apply to installations served by a reliable utility source. The standby rating is applicable to varying loads for the duration of a power outage. There is no overload capability for this rating. Ratings are in accordance with ISO-3046/1, BS 5514, AS 2789, and DIN 6271. For limited running time and base load ratings, consult the factory. Obtain the technical information bulletin (TIB-101) on ratings guidelines for the complete ratings definitions. The generator set manufacturer reserves the right to change the design or specifications without notice and without any obligation or liability whatsoever. GENERAL GUIDELINES FOR DERATING: Altitude: Derate 1.3% per 100 m (328 ft.) elevation above 200 m (656 ft.). Temperature: Derate 3.0% per 10°C (18°F) temperature above 25°C (77°F). For dual fuel engines, use the natural gas ratings for both the primary and secondary fuels.

Alternator Specifications

| Specifications | Alternator |
|---|-------------------------------|
| Manufacturer | Kohler |
| Type | 4-Pole, Rotating-Field |
| Exciter type | Brushless, Permanent-Magnet |
| Leads: quantity, type | |
| 4P7, 4P8 | 12, Reconnectable |
| 4Q10 | 4, 110-120/220-240 |
| Voltage regulator | Solid State, Volts/Hz |
| Insulation: | NEMA MG1 |
| Material | Class H |
| Temperature rise | 130°C, Standby |
| Bearing: quantity, type | 1, Sealed |
| Coupling | Flexible Disc |
| Amortisseur windings | Full |
| Voltage regulation, no-load to full-load | |
| Permanent magnet (PM) alternator | ±2% Average |
| 550 controller (with 0.5% drift due to temperature variation) | 3-Phase Sensing, ±0.25% |
| Unbalanced load capability | 100% of Rated Standby Current |
| One-step load acceptance | 100% of Rating |
| Peak motor starting kVA: | (35% dip for voltages below) |
| 480 V 4P7 (12 lead) | 194 |
| 480 V 4P8 (12 lead) | 212 |
| 240 V 4Q10 (4 lead) | 155 |

- 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 drip-proof 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.
- Fast-Response™ II brushless alternator with brushless exciter for excellent load response.

Application Data

Engine

| Engine Specifications | |
|--|--|
| Manufacturer | General Motors |
| Engine: model, type | Industrial Powertrain Vortec 4.3 L, 4-Cycle Natural Aspiration |
| Cylinder arrangement | V-6 |
| Displacement, L (cu. in.) | 4.3 (262) |
| Bore and stroke, mm (in.) | 101.6 x 88.4 (4.00 x 3.48) |
| Compression ratio | 9.05:1 |
| Piston speed, m/min. (ft./min.) | 318 (1044) |
| Main bearings: quantity, type | 4, Babbitt |
| Rated rpm | 1800 |
| Max. power at rated rpm, kW (HP) | 56.0 (75) |
| Engine power at standby rating, kW (HP) | |
| Natural Gas | 50.7 (68) |
| LP Gas | 56.0 (75) |
| Cylinder head material | Cast Iron |
| Piston type and material | High Silicon Aluminum |
| Crankshaft material | Nodular Iron |
| Valve (exhaust) material | Forged Steel |
| Governor type | Electronic |
| Frequency regulation, no-load to full-load | Isochronous |
| Frequency regulation, steady state | ±0.5% |
| Frequency | Fixed |
| Air cleaner type, all models | Dry |

Exhaust

| Exhaust System | |
|---|-------------|
| Exhaust manifold type | Dry |
| Exhaust flow at rated kW, m ³ /min. (cfm) | 9.3 (327) |
| Exhaust temperature at rated kW, dry exhaust, °C (°F) | 649 (1200) |
| Maximum allowable back pressure, kPa (in. Hg) | 10.2 (3.0) |
| Exhaust outlet size at engine hookup, mm (in.) | 76 (3.0) OD |

Engine Electrical

| Engine Electrical System | |
|--|-------------------------|
| Ignition system | Electronic, Distributor |
| Battery charging alternator: | |
| Ground (negative/positive) | Negative |
| Volts (DC) | 12 |
| Ampere rating | 70 |
| Starter motor rated voltage (DC) | 12 |
| Battery, recommended cold cranking amps (CCA): | |
| Qty., rating for -18°C (0°F) | One, 630 |
| Battery voltage (DC) | 12 |

Fuel

| Fuel System | |
|--|-----------------------|
| Fuel type | LP Gas or Natural Gas |
| Fuel supply line inlet | 1 NPTF |
| Natural gas/LPG fuel supply pressure, measured at the generator set fuel inlet downstream of any fuel system equipment accessories, kPa (in. H ₂ O) | 1.74-2.74 (7-11) |

| Fuel Composition Limits * | Nat. Gas | LP Gas |
|---|------------|-------------|
| Methane, % by volume | 90 min. | — |
| Ethane, % by volume | 4.0 max. | — |
| Propane, % by volume | 1.0 max. | 85 min. |
| Propene, % by volume | 0.1 max. | 5.0 max. |
| C ₄ and higher, % by volume | 0.3 max. | 2.5 max. |
| Sulfur, ppm mass | 25 max. | |
| Lower heating value, kJ/m ³ (Btu/ft ³), min. | 26.6 (890) | 67.5 (2260) |

* Fuels with other compositions may be acceptable. If your fuel is outside the listed specifications, contact your local distributor for further analysis and advice.

Application Data

Lubrication

Lubricating System

| | |
|---------------------------------------|---------------|
| Type | Full Pressure |
| Oil pan capacity, L (qt.) | 4.3 (4.5) |
| Oil pan capacity with filter, L (qt.) | 5.7 (6.0) |
| Oil filter: quantity, type | 1, Cartridge |

Cooling

Radiator System

| | |
|--|-------------|
| Ambient temperature, °C (°F) * | 50 (122) |
| Engine jacket water capacity, L (gal.) | 6.8 (1.8) |
| Radiator system capacity, including engine, L (gal.) | 19.7 (5.2) |
| Engine jacket water flow, Lpm (gpm) | 106.0 (28) |
| Heat rejected to cooling water at rated kW, dry exhaust, kW (Btu/min.) | 40.8 (2320) |
| Water pump type | Centrifugal |
| Fan diameter, including blades, mm (in.) | 533 (21) |
| Fan, kWm (HP) | 3.0 (4.0) |
| Max. restriction of cooling air, intake and discharge side of radiator, kPa (in. H ₂ O) | 0.125 (0.5) |

* Enclosure with enclosed silencer reduces ambient temperature capability by 5°C (9°F).

Operation Requirements

Air Requirements

| | |
|---|-------------|
| Radiator-cooled cooling air, m ³ /min. (scfm)‡ | 142 (5000) |
| Combustion air, m ³ /min. (cfm) | 2.78 (98) |
| Heat rejected to ambient air: | |
| Engine, kW (Btu/min.) | 19.2 (1090) |
| Alternator, kW (Btu/min.) | 7.4 (420) |

‡ Air density = 1.20 kg/m³ (0.075 lbm/ft³)

Fuel Consumption‡

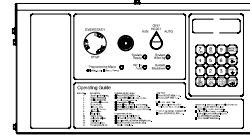
| Natural Gas, m ³ /hr. (cfh) at % load | Standby Rating | |
|--|----------------|-------|
| 100% | 16.5 | (584) |
| 75% | 13.8 | (486) |
| 50% | 10.2 | (360) |
| 25% | 7.7 | (272) |
| LP Gas, m ³ /hr. (cfh) at % load | Standby Rating | |
| 100% | 7.0 | (246) |
| 75% | 5.7 | (202) |
| 50% | 4.2 | (147) |
| 25% | 2.9 | (104) |

‡ Fuel consumption is based on 1015 Btu/standard cu. ft. natural gas.

LP vapor conversion factors:

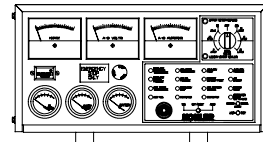
8.58 ft.³ = 1 lb.
0.535 m³ = 1 kg.
36.39 ft.³ = 1 gal.

Controllers



Decision-Maker® 550 Controller

Audiovisual annunciation with NFPA 110 Level 1 capability. Programmable microprocessor logic and digital display features. Alternator safeguard circuit protection. 12- or 24-volt engine electrical system capability. Remote start, remote annunciation, and remote communication options. Refer to G6-46 for additional controller features and accessories.



Decision-Maker® 3+, 16-Light Controller

Audiovisual annunciation with NFPA 110 Level 1 capability. Microprocessor logic, AC meters, and engine gauge features. 12- or 24-volt engine electrical system capability. Remote start, prime power, and remote annunciation options. Refer to G6-30 for additional controller features and accessories.

Sound Enclosure

- Sound level at 7 m (23 ft.) with full load: 69 dB(A)
- Sound attenuated enclosure that uses up to 25 mm (1 in.) of acoustic insulation, acoustic-lined air inlet hoods, and acoustic-lined air discharge hood.
- Acoustic insulation that meets UL 94 HF1 flammability classification and repels moisture absorption.
- Internal-mounted critical silencer and flexible exhaust connector.
- Lift base-mounted, steel construction with hinged doors.
- Fade-, scratch-, and corrosion-resistant Kohler® cream beige powder-baked finish.
- Lockable, flush-mounted door latches.
- Vertical air inlet and outlet hoods with 90 degree angles to redirect air and reduce noise.
- High wind bracing, 241 kph (150 mph).
- See Specification Sheet G6-108 for additional information.

Additional Standard Features

- Alternator Protection (standard with 550 controller)
- Battery Rack and Cables
- Electronic, Isochronous Governor
- Gas Fuel System (includes fuel mixer, electronic pressure regulator, and flexible fuel line between the engine and the skid-mounted fuel system components)
- Integral Vibration Isolation
- Local Emergency Stop
- Oil Drain Extension
- Operation and Installation Literature
- Sound Enclosure

Available Options

Approvals and Listings

- CSA Approval
- UL 2200 Listing

Fuel System

- Dual Fuel NG/LPG (automatic changeover)
- Flexible Fuel Line (required when the generator set skid is spring mounted)
- Gas Filter
- Additional Gas Solenoid Valve

Controller (550 and 16-Light)

- Common Failure Relay
- Communication Products and PC Software
- Customer Connection
- Dry Contact (isolated alarm)
- Remote Annunciator Panel
- Remote Audiovisual Alarm Panel
- Remote Emergency Stop
- Run Relay

Cooling System

- Block Heater [recommended for ambient temperatures below 10°C (50°F)]

Electrical System

- Alternator Strip Heater
- Battery
- Battery Charger, Equalize/Float Type
- Battery Heater
- Line Circuit Breaker (NEMA1 enclosure)
- Line Circuit Breaker with Shunt Trip (NEMA1 enclosure)
- Safeguard Breaker (available with 16-light controller)

Miscellaneous

- Air Cleaner Restrictor Indicator
- Engine Fluids (oil and coolant) Added
- Rated Power Factor Testing
- Rodent Guards

Literature

- General Maintenance
- Overhaul
- Production

Warranty

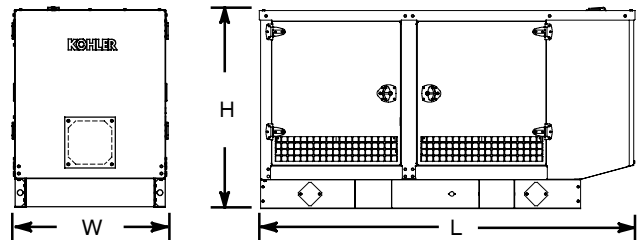
- 2-Year Basic
- 5-Year Basic
- 5-Year Comprehensive

Other Options

- _____
- _____
- _____
- _____
- _____
- _____
- _____

Dimensions and Weights

Overall Size, L x W x H, mm (in.):
 2565 x 1078 x 1364 (101.0 x 42.4 x 53.7)
 Weight, wet, kg (lb.):
 904 (1993)



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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