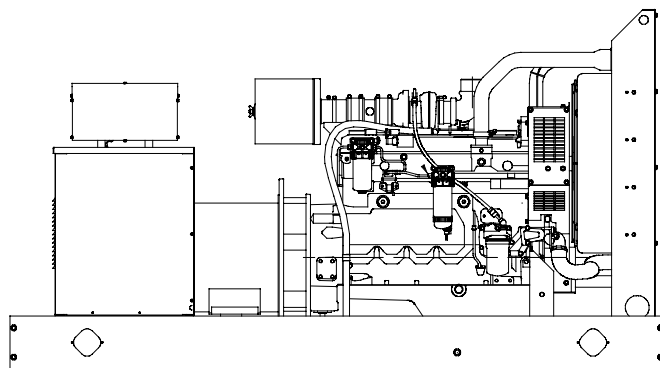




**Ratings Range**

|                 |            |              |
|-----------------|------------|--------------|
|                 |            | <b>60 Hz</b> |
| <b>Standby:</b> | <b>kW</b>  | 95-130       |
|                 | <b>kVA</b> | 95-163       |
| <b>Prime:</b>   | <b>kW</b>  | 90-115       |
|                 | <b>kVA</b> | 90-144       |



**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.
- The 60 Hz generator set offers a UL 2200 listing.
- The generator set accepts rated load in one step.
- The 60 Hz generator set meets NFPA 110, Level 1, when equipped with the necessary accessories and installed per NFPA standards.
- The generator set complies with ISO 8528-5, Class G2, requirements for transient performance in all generator set configurations. Select the Decision-Maker™ 550 controller for improved voltage regulation and ISO 8528-5, Class G3, compliance.
- The 60 Hz generator set engine is certified by the Environmental Protection Agency (EPA) to conform to Tier 3 nonroad emissions regulations.
- A one-year limited warranty covers all systems and components. Two-, five-, and ten-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 low coolant level shutdown prevents overheating (standard on radiator models only).
  - Integral vibration isolation eliminates the need for under-unit vibration spring isolators.

**Generator Set Ratings**

| Alternator | Voltage | Ph | Hz | 130°C Rise Standby Rating |      | 105°C Rise Prime Rating |      |
|------------|---------|----|----|---------------------------|------|-------------------------|------|
|            |         |    |    | kW/kVA                    | Amps | kW/kVA                  | Amps |
| 4S11       | 120/208 | 3  | 60 | 125/156                   | 434  | 110/138                 | 382  |
|            | 127/220 | 3  | 60 | 125/156                   | 410  | 110/138                 | 361  |
|            | 120/240 | 3  | 60 | 125/156                   | 376  | 110/138                 | 331  |
|            | 120/240 | 1  | 60 | 95/95                     | 396  | 90/90                   | 375  |
|            | 139/240 | 3  | 60 | 125/156                   | 376  | 110/138                 | 331  |
|            | 220/380 | 3  | 60 | 125/156                   | 237  | 110/138                 | 209  |
|            | 277/480 | 3  | 60 | 125/156                   | 188  | 110/138                 | 165  |
|            | 347/600 | 3  | 60 | 125/156                   | 150  | 110/138                 | 132  |
| 4S13       | 120/208 | 3  | 60 | 130/163                   | 451  | 115/144                 | 399  |
|            | 127/220 | 3  | 60 | 130/163                   | 426  | 115/144                 | 377  |
|            | 120/240 | 3  | 60 | 130/163                   | 391  | 115/144                 | 346  |
|            | 120/240 | 1  | 60 | 100/100                   | 417  | 91/91                   | 379  |
|            | 139/240 | 3  | 60 | 130/163                   | 391  | 115/144                 | 346  |
|            | 220/380 | 3  | 60 | 130/163                   | 247  | 115/144                 | 218  |
|            | 277/480 | 3  | 60 | 130/163                   | 195  | 115/144                 | 173  |
|            | 347/600 | 3  | 60 | 130/163                   | 156  | 115/144                 | 138  |

**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. *Prime Power Ratings:* Prime power ratings apply to installations where utility power is unavailable or unreliable. 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, overload power 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 DERATION:** *Altitude:* Derate 0.5% per 100 m (328 ft.) elevation above 1600 m (5250 ft.). *Temperature:* Derate 1.0% per 10°C (18°F) temperature above 25°C (77°F).

# Alternator Specifications

| Specifications   | Alternator                       |
|--|----------------------------------|
| Manufacturer   | Kohler                           |
| Type   | 4-Pole, Rotating-Field           |
| Exciter type   | Brushless,<br>Permanent-Magnet   |
| Leads: quantity, type  | 12, Reconnectable                |
| 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<br>due to temperature variation) | 3-Phase Sensing, ±0.25%          |
| Unbalanced load capability                                       | 100% of Rated<br>Standby Current |
| One-step load acceptance   | 100% of Rating                   |
| Peak motor starting kVA:   | (35% dip for voltages below)     |
| 480 V 4S11 (12 lead)   | 460                              |
| 480 V 4S13 (12 lead)   | 515                              |

- 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                               | John Deere                                  |
| Engine model                               | 6068HF285                                   |
| Engine type                                | 4-Cycle, Turbocharged,<br>Charge Air-Cooled |
| Cylinder arrangement                       | 6 Inline                                    |
| Displacement, L (cu. in.)                  | 6.79 (414)                                  |
| Bore and stroke, mm (in.)                  | 106 x 127 (4.19 x 5.00)                     |
| Compression ratio                          | 17.0:1                                      |
| Piston speed, m/min. (ft./min.)            | 457 (1500)                                  |
| Main bearings: quantity, type              | 7, Replaceable Insert                       |
| Rated rpm                                  | 1800  |
| Max. power at rated rpm, kWm (BHP)         | 147 (197)                                   |
| Cylinder head material                     | Cast Iron                                   |
| Crankshaft material                        | Forged Steel                                |
| Valve material:                            |   |
| Intake                                     | Chromium-Silicon Steel                      |
| Exhaust                                    | Stainless Steel                             |
| Governor: type, make/model                 | JDEC Electronic L16<br>Denso HP3            |
| Frequency regulation, no-load to full-load | Isochronous                                 |
| Frequency regulation, steady state         | ±0.25%                                      |
| Frequency                                  | Fixed                                       |
| Air cleaner type, all models               | Dry   |

### Exhaust

| Exhaust System  |             |
|---|-------------|
| Exhaust manifold type                                 | Dry         |
| Exhaust flow at rated kW, m <sup>3</sup> /min. (cfm)  | 31.5 (1112) |
| Exhaust temperature at rated kW, dry exhaust, °C (°F) | 487 (909)   |
| Maximum allowable back pressure, kPa (in. Hg)         | 7.5 (2.2)   |
| Exhaust outlet size at engine hookup, mm (in.)        | 98 (3.86)   |

### Engine Electrical

| Engine Electrical System (12/24 Volt*)         |                   |
|--|-------------------|
| Battery charging alternator:                   | 12 Volt/24 Volt   |
| Ground (negative/positive)                     | Negative          |
| Volts (DC)                                     | 12/24             |
| Ampere rating                                  | 65/45             |
| Starter motor rated voltage (DC)               | 12/24             |
| Battery, recommended cold cranking amps (CCA): | 12 Volt/24 Volt   |
| Quantity, CCA rating each                      | One, 640/Two, 570 |
| Battery voltage (DC)                           | 12                |

\*12-volt or 24-volt engine electrical systems are available.

# Application Data

## Fuel

| Fuel System                         |                            |
|-------------------------------------|----------------------------|
| Fuel supply line, min. ID, mm (in.) | 11.0 (0.44)                |
| Fuel return line, min. ID, mm (in.) | 6.0 (0.25)                 |
| Max. lift, fuel pump: type, m (ft.) | Mechanical, 1.8 (6.0)      |
| Max. fuel flow, Lph (gph)           | 96.9 (25.6)                |
| Fuel prime pump                     | Manual                     |
| Fuel filter                         |                            |
| Secondary                           | 2 Microns @ 98% Efficiency |
| Primary                             | 30 Microns                 |
| Water Separator                     | Yes                        |
| Recommended fuel                    | #2 Diesel                  |

## Fuel Consumption

| Diesel, Lph (gph) at % load | Standby Rating |
|-----------------------------|----------------|
| 100%                        | 37.5 (9.9)     |
| 75%                         | 31.0 (8.2)     |
| 50%                         | 25.1 (6.6)     |
| 25%                         | 16.2 (4.3)     |
| Diesel, Lph (gph) at % load | Prime Rating   |
| 100%                        | 34.1 (9.0)     |
| 75%                         | 29.5 (7.8)     |
| 50%                         | 22.8 (6.0)     |
| 25%                         | 13.7 (3.6)     |

## Lubrication

| Lubricating System                    |               |
|---------------------------------------|---------------|
| Type                                  | Full Pressure |
| Oil pan capacity, L (qt.)             | 27.0 (28.5)   |
| Oil pan capacity with filter, L (qt.) | 27.9 (29.5)   |
| Oil filter: quantity, type            | 1, Cartridge  |
| Oil cooler                            | Water-Cooled  |

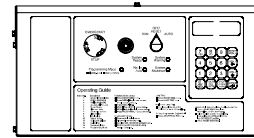
## Cooling

| Radiator System  |             |
|--|-------------|
| Ambient temperature, °C (°F)   | 50 (122)    |
| Engine jacket water capacity, L (gal.)   | 11.3 (3.0)  |
| Radiator system capacity, including engine, L (gal.)   | 22 (5.8)    |
| Engine jacket water flow, Lpm (gpm)  | 174 (46)    |
| Heat rejected to cooling water at rated kW, dry exhaust, kW (Btu/min.)                             | 65.7 (3740) |
| Heat rejected to air charge cooler at rated kW, dry exhaust, kW (Btu/min.)                         | 27.1 (1540) |
| Water pump type  | Centrifugal |
| Fan diameter, including blades, mm (in.)   | 660 (26)    |
| Fan, kWm (HP)  | 7.7 (10.3)  |
| Max. restriction of cooling air, intake and discharge side of radiator, kPa (in. H <sub>2</sub> O) | 0.125 (0.5) |

## Operation Requirements

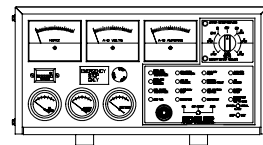
| Air Requirements  |              |
|---|--------------|
| Radiator-cooled cooling air, m <sup>3</sup> /min. (scfm)‡           | 226.5 (8000) |
| Combustion air, m <sup>3</sup> /min. (cfm)                          | 12.7 (450)   |
| Heat rejected to ambient air:                                       |              |
| Engine, kW (Btu/min.)   | 30.4 (1730)  |
| Alternator, kW (Btu/min.)   | 13.5 (770)   |
| ‡ Air density = 1.20 kg/m <sup>3</sup> (0.075 lbm/ft <sup>3</sup> ) |              |

## 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.

## Additional Standard Features

- Alternator Protection (standard with 550 controller)
- Battery Rack and Cables
- Integral Vibration Isolation
- Oil Drain Extension
- Operation and Installation Literature

## Available Options

### Approvals and Listings

- CSA Approval
- IBC Seismic Certification
- UL 2200 Listing

### Enclosed Unit

- Sound Enclosure (with enclosed critical silencer)
- Weather Enclosure (with enclosed critical silencer)
- Weather Housing (with roof-mounted critical silencer)

### Open Unit

- Exhaust Silencer, Critical (kit: PA-354809)
- Exhaust Silencer, Hospital (kit: PA-365349)
- Flexible Exhaust Connector, Stainless Steel

### Fuel System

- Auxiliary Fuel Pump
- Flexible Fuel Lines
- Fuel Pressure Gauge
- Subbase Fuel Tanks
- Subbase Fuel Tank with Day Tank

### Controller

- Common Failure Relay
- Communication Products and PC Software (550 controller only)
- Customer Connection
- Dry Contact (isolated alarm)
- Prime Power Switch (550 controller only)
- Remote Annunciator Panel
- Remote Audiovisual Alarm Panel
- Remote Emergency Stop
- Remote Mounting Cable
- Run Relay

### Cooling System

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

### Electrical System

- Alternator Strip Heater
- Battery
- Battery Charger, Equalize/Float Type
- Battery Heater
- Line Circuit Breaker (NEMA type 1 enclosure)
- Line Circuit Breaker with Shunt Trip (NEMA type 1 enclosure)
- Safeguard Breaker (16-light controller)

### Paralleling System

- Reactive Droop Compensator
- Voltage Adjust Control
- Voltage Regulator Relocation

### Miscellaneous

- Air Cleaner, Heavy Duty
- Air Cleaner Restriction Indicator
- Crankcase Emissions Canister
- Engine Fluids (oil and coolant) Added
- Rated Power Factor Testing
- Rodent Guards
- Skid End Caps

### Literature

- General Maintenance
- NFPA 110
- Overhaul
- Production

### Warranty

- 2-Year Basic
- 2-Year Prime
- 5-Year Basic
- 5-Year Comprehensive
- 10-Year Major Components

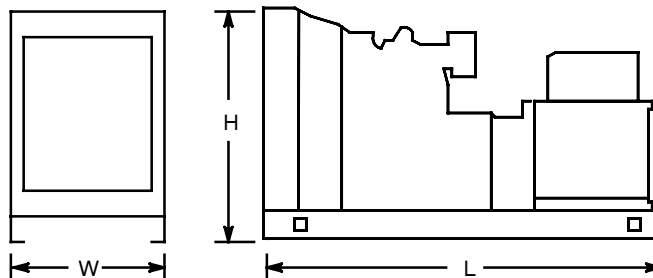
### Other Options

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

## Dimensions and Weights

Overall Size, L x W x H, mm (in.): 2800 x 1040 x 1538  
 (110.24 x 40.94 x 60.55)

Weight (radiator model), wet, kg (lb.): 1429-1497 (3150-3300)



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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