

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 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 broad range 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	Standby130C Standby Ratings	
				kW/kVA	Amps
4S7	120/240	1	60	61/61	254

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, BS5514, AS2789, 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 1.3% per 100 m (328 ft.) elevation above 2500 m (8200 ft.). Temperature: Derate 1.0% per 10°C (18°F) temperature above 25°C (77°F).

Alternator Specifications

Specifications	Alternator
Alternator manufacturer	Kohler
Type	4-Pole, Rotating-Field
Exciter type	Brushless, Permanent-Magnet
Leads, quantity	12, Reconnectable
Voltage regulator	Solid State, Volts/Hz
Insulation	NEMA MG1
Insulation: Material	Class H
Insulation: 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%
One-Step Load Acceptance	100% of rating
Unbalanced load capability	100% of Rated Standby Current

- The brushless, rotating-field alternator has broad range reconnectability.
- 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 down stream 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.

Model: 80REOZJD, continued

Engine

Engine Specifications

Engine Manufacturer	John Deere
Engine Model	4045HF285H
Engine: type	4-Cycle, Turbocharged
Cylinder arrangement	4 Inline
Displacement, L (cu. in.)	4.5 (276)
Bore and stroke, mm (in.)	106 x 127 (4.19 x 5.00)
Compression ratio	19:01
Piston speed, m/min. (ft./min.)	457 (1500)
Main bearings: quantity, type	5, Replaceable Insert
Rated rpm	1800
Max. power at rated rpm, kWm (BHP)	118 (158)
Cylinder head material	Cast Iron
Crankshaft material	Forged Steel
Valve (exhaust) material Intake	Chromium-Silicon Steel
Valve (exhaust) material Exhaust	Stainless Steel
Governor: type, make/model	JDEC Electronic L16 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, m³/min. (cfm)	19.2 (679)
Exhaust temperature at rated kW, dry exhaust, °C (°F)	579 (1074)
Maximum allowable back pressure, kPa (in. Hg)	7.5 (2.2)
Exh. outlet size at eng. hookup, mm (in.)	98 (3.86)

Engine Electrical

Engine Electrical System

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

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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.)	Engine-Driven, 1.8 (6.0)
Max. fuel flow, Lph (gph)	74.6 (19.7)
Fuel prime pump	Manual
Fuel Filter Secondary	2 Microns@ 98% Efficiency
Fuel Filter Primary	30 Microns
Fuel Filter Water Separator	Yes
Recommended fuel	#2 Diesel

Lubrication

Lubrication System	
Type	Full Pressure
Oil pan capacity, L (qt.)	14.7 (15.5)
Oil pan capacity with filter, L (qt.)	15.6 (16.5)
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.)	8.5 (2.25)
Radiator system capacity, including engine, L (gal.)	20.1 (5.3)
Engine jacket water flow, Lpm (gpm)	155 (41)
Heat rejected to cooling water at rated kW, dry exhaust, kW (Btu/min.)	54.4 (3096)
Heat rejected to charge cooler at rated kW, dry exhaust, kW (Btu/min.)	13.5 (768)
Water pump type	Centrifugal
Fan diameter, including blades, mm (in.)	600 (23.6)
Fan, kWm (HP)	8.0 (10.7)
Max. restriction of cooling air, intake and discharge side of radiator, kPA (in. H2O)	0.125 (0.5)

Operation Requirements

Air Requirements	
Radiator-cooled cooling air, m³/min. (scfm) *	161 (5700)
Combustion air, m³/min. (cfm)	6.9 (244)
Heat rejected to ambient air: Engine, kW (Btu/min.)	22.9 (1300)
Heat rejected to ambient air: Alternator, kW (Btu/min.)	9.8 (560)
*Air density = 1.20 kg/m³ (0.075 lbm/ft³)	

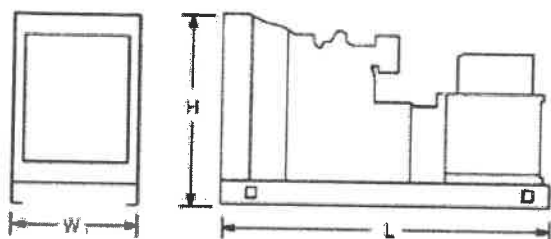
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Fuel Consumption

Diesel, Lph (gph), at % load	Rating
Standby Fuel Consumption at 100% load	26.1 Lph (6.9 gph)
Standby Fuel Consumption at 75% load	21.2 Lph (5.6 gph)
Standby Fuel Consumption at 50% load	15.5 Lph (4.1 gph)
Standby Fuel Consumption at 25% load	8.3 Lph (2.2 gph)
Prime Fuel Consumption at 100% load	23.8 Lph (6.3 gph)
Prime Fuel Consumption at 75% load	19.3 Lph (5.1 gph)
Prime Fuel Consumption at 50% load	14.4 Lph (3.8 gph)
Prime Fuel Consumption at 25% load	7.9 Lph (2.1 gph)

Dimensions and Weights

Overall Size, L x W x H, mm (in.): Wide Skid	2400 x 1040 x 1274 (94.49 x 40.94 x 50.15)
Overall Size, L x W x H, mm (in.): Narrow Skid	2400 x 864 x 1274 (94.49 x 34.02 x 50.15)
Weight (radiator model), wet, kg (lb.):	1125 (2480)



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