Model: 80ROZJ

KOHLER® POWER SYSTEMS

190–600 V | **4 Cycle Diesel**

ISO 9001 KOHLER GENERATORS INTERNATIONALLY REGISTERED

Ratings Range

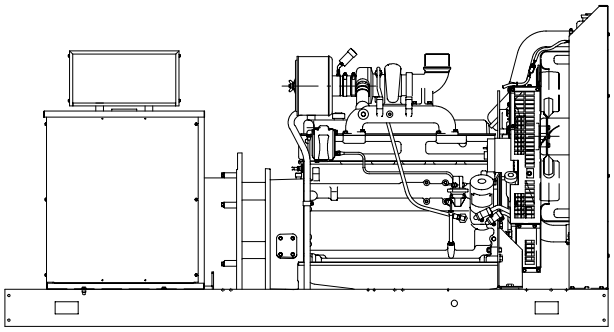
		60 Hz	50 Hz
Standby:	**kW**	61–95	55–80
	kVA	61–119	55–100
Prime:	**kW**	55–86	50–73
	kVA	55–108	50–91

Generator Ratings

				130°C Rise Standby Rating		105°C Rise Prime Rating	
Generator	**Voltage**	**Ph**	**Hz**	**kW/kVA**	**Amps**	**kW/kVA**	**Amps**
4S7	120/208	3	60	80/100	278	73/91	254
	120/240	3	60	80/100	241	72/90	217
	120/240	1	60	61/61	254	55/55	229
	127/220	3	60	80/100	262	73/91	240
	139/240	3	60	81/101	244	74/93	223
	220/380	3	60	75/94	142	68/85	129
	277/480	3	60	81/101	122	74/93	111
	347/600	3	60	81/101	97	74/93	89
	110/190	3	50	70/87	264	60/75	228
	110/220	3	50	66/83	218	60/75	197
	110/220	1	50	55/55	250	50/50	227
	115/200	3	50	70/87	251	60/75	217
	120/208	3	50	70/87	241	61/76	212
	220/380	3	50	70/87	132	60/75	114
	230/400	3	50	70/87	126	60/75	108
	240/416	3	50	70/87	121	61/76	106
4S9	120/208	3	60	94/118	326	85/106	295
	120/240	3	60	94/118	283	85/106	256
	120/240	1	60	80/80	333	71/71	323
	127/220	3	60	94/118	308	85/106	279
	139/240	3	60	95/119	286	86/108	259
	220/380	3	60	88/110	167	80/100	152
	277/480	3	60	95/119	143	86/108	129
	347/600	3	60	95/119	114	86/108	104
	110/190	3	50	78/98	298	71/89	270
	110/220	3	50	78/98	257	71/89	233
	110/220	1	50	70/70	318	63/63	286
	115/200	3	50	79/99	286	72/90	260
	120/208	3	50	80/100	278	73/91	254
	220/380	3	50	78/98	149	71/89	135
	230/400	3	50	79/99	143	72/90	130
	240/416	3	50	80/100	139	73/91	127

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 generator set accepts rated load in one step.
- A one-year limited warranty covers all systems and components. Two-, five-, and ten-year extended warranties are also available.
- Generator features:
  - Kohler's unique Fast-Response™ excitation system delivers the fastest voltage response in the industry.
  - The brushless, rotating-field generator has broadrange reconnectability.
  - Kohler's permanent magnet-excited generator (PMG) provides superior short-circuit capability.
- Other features:
  - Controllers are available for all applications. See controller features inside.
  - The low coolant level shutdown prevents overheating.
  - Integral vibration isolation eliminates the need for under-unit vibration spring isolators.



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 2.0% per 305 m (1000 ft.) elevation above 2440 m (8000 ft.) up to 3050 m (10000 ft.). *TEMPERATURE:* Derate 0.5% per 5.5°C (10°F) temperature above 40°C (104°F).

Alternator Specifications

Specifications	Generator
Manufacturer	Kohler
Type	4-Pole, Rotating Field
Exciter type	Brushless, 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	±2%
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, 380 V 4S7 (12 lead)	270 (60 Hz), 190 (50 Hz)
480 V, 380 V 4S9 (12 lead)	315 (60 Hz), 250 (50 Hz)

- Complies with NEMA MG1, IEEE, and ANSI standards for temperature rise and motor starting.
- Sustains short-circuit current of up to 300% of the rated current for up to 10 seconds.
- Sustains short-circuit current enabling downstream circuit breakers to trip without collapsing the generator field.
- Self-ventilation, dripproof construction.
- Provides dependability and long life from vacuum-impregnated windings with fungus-resistant epoxy varnish.
- Superior voltage waveform from a two-thirds pitch stator and skewed rotor.
- Solid-state, volts-per-hertz voltage regulator with ±2% no-load to full-load regulation.
- Fast-Response™ brushless alternator with brushless exciter for excellent load response.

Application Data

Engine

Engine Specifications	60 Hz	50 Hz
Manufacturer	John Deere	
Engine: model, type	6059T, 4-Cycle, Turbocharged	
Cylinder arrangement	6 Inline	
Displacement, L (cu. in.)	5.88 (359)	
Bore and stroke, mm (in.)	106.5 x 110 (4.19 x 4.33)	
Compression ratio	17.8:1	
Piston speed, m/sec. (ft./min.)	6.6 (1300)	5.5 (1082)
Main bearings: quantity, type	7, Replaceable Insert	
Rated rpm	1800	1500
Max. power at rated rpm, kWm (BHP)	111 (150)	94 (126)
Cylinder head material	Cast Iron	
Crankshaft material	Forged Steel	
Valve material:		
Intake	Chromium-Silicon Steel	
Exhaust	Stainless Steel	
Governor: type, make/model	Mechanical, Stanadyne/DM4	
Frequency regulation, no-load to full-load	3–5%	
Frequency regulation, steady state	±0.33% (mech. governor) ±0.25% (elec. isoch. gov.)	
Frequency	Field-Convertible	
Air cleaner type, all models	Dry	

Exhaust

Exhaust System	60 Hz	50 Hz
Exhaust flow at rated kW, m^3/min. (cfm)	19.5 (690)	15.8 (560)
Exhaust temperature at rated kW, dry exhaust, °C (°F)	538 (1000)	571 (1060)
Maximum allowable back pressure, kPa (in. Hg)	7.5 (2.2)	
Exhaust outlet size at engine hookup, mm (in.)	101.6 (4)	

Engine Electrical

Engine Electrical System	60 Hz	50 Hz
Battery charging alternator:		
Ground (negative/positive)	Negative	
Volts (DC)	12	
Ampere rating	65	
Starter motor rated voltage (DC)	12	
Battery, recommended cold cranking amps (CCA):		
Quantity, CCA rating	1, 800	
Battery voltage (DC)	12	

Fuel

Fuel System	60 Hz	50 Hz
Fuel supply line, min. ID, mm (in.)	8 (0.31)	
Fuel return line, min. ID, mm (in.)	6 (0.25)	
Max. lift, engine-driven fuel pump, m (ft.)	0.9 (3.0)	
Max. fuel flow, Lph (gph)	112 (29.7)	109 (28.7)
Fuel prime pump	Manual	
Fuel filter	1, Final	
Recommended fuel	#2 Diesel	

Lubrication

Lubricating System	60 Hz	50 Hz
Type	Full Pressure	
Oil pan capacity, L (qt.)	16.1 (17)	
Oil pan capacity with filter, L (qt.)	17 (18)	
Oil filter: quantity, type	1, Cartridge	
Oil cooler	Water-Cooled	

Application Data

Cooling (Standard Radiator)

Cooling System	60 Hz	50 Hz
Ambient temperature, °C (°F)	50 (122)	
Engine jacket water capacity, L (gal.)	10.4 (2.8)	
Radiator system capacity, including engine, L (gal.)	19.7 (5.2)	
Engine jacket water flow, Lpm (gpm)	189 (50)	158 (42)
Heat rejected to charge cooling water at rated kW, dry exhaust, kW (Btu/min.)	65 (3700)	57 (3250)
Water pump type	Centrifugal	
Fan diameter, including blades, mm (in.)	533 (21)	
Fan, kWm (HP)	3.9 (5.2)	2.2 (3.0)
Max. restriction of cooling air, intake and discharge side of radiator, kPa (in. H_2O)	0.125 (0.5)	

Cooling (Optional Systems)

Remote Radiator System *	60 Hz	50 Hz
Exhaust manifold type	Dry	
Connection sizes:		
Water inlet, mm (in.)	59 (2.32) ID Hose	
Water outlet, mm (in.)	57 (2.25) ID Hose	
Static head allowable above engine, kPa (ft. H_2O)	63 (21)	

City Water Cooling (CWC) System	60 Hz	50 Hz
Exhaust manifold type	Dry	
Connection sizes:		
Water inlet, in.	0.5 NPT	
Water outlet, in.	0.5 NPT	

* Contact your local distributor for cooling system options and specifications based on your specific application.

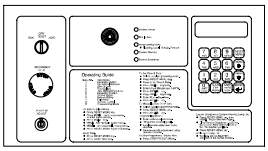
Operation Requirements

Air Requirements	60 Hz	50 Hz
Radiator-cooled cooling air, m^3/min. (scfm)†	159 (5600)	130 (4600)
Cooling air required for gen. set when equipped with CWC or remote radiator, based on 14°C (25°F) rise and ambient temp. of 29°C (85°F), m^3/min. (cfm)	116 (4100)	102 (3600)
Combustion air, m^3/min. (cfm)	7.5 (265)	5.7 (200)
Heat rejected to ambient air:		
Engine, kW (Btu/min.)	19.9 (1130)	15.3 (870)
Generator, kW (Btu/min.)	11.6 (660)	11.8 (670)

† Air density = 1.20 kg/m^3 (0.075 lbm/ft^3)

Fuel Consumption	60 Hz	50 Hz
Diesel, Lph (gph) at % load	**Standby**	**Prime**
100%	24.6 (6.5)	18.9 (5.0)
75%	18.9 (5.0)	12.9 (3.4)
50%	13.6 (3.6)	9.5 (2.5)
25%	9.1 (2.4)	6.4 (1.7)

Controllers



Available Controllers

Decision-Maker™ 340 Controller
Audiovisual annunciation with NFPA 110 Level 1 capability.
Programmable microprocessor logic and digital display features.
12- or 24-volt engine electrical system capability.
Remote start, prime power, remote annunciation, and remote communication options.

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.

Decision-Maker™ 3+, 7-Light Controller
Audiovisual annunciation with NFPA 110 Level 2 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.

Decision-Maker™ 1 Controller
Single-light annunciation and basic controls with NFPA capability.
Relay logic features included with three controller options: standard, standard with engine gauges, and expanded with AC meters and engine gauges.
12-volt engine electrical system capability only.
Remote or automatic start options.

Manual Controller
Single-light annunciation and basic control functions.
Relay logic with AC meters and engine gauge features.
Prime power and mobile application design.
12-volt engine electrical system capability only.

Engine Gauge Box Controller for Paralleling Switchgear
Generator set-to-switchgear interface for paralleling switchgear applications.
Engine gauges and emergency stop switch features.
12- or 24-volt engine electrical system capability.

Note: See the respective controller spec sheet for additional controller features and accessories.

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For the nearest sales and service outlet in U.S.A. and Canada
Phone 1-800-544-2444

Kohler Power Systems
Asia Pacific Headquarters
7 Jurong Pier Road
Singapore 619159
Phone (65)264-6422, Fax (65)264-6455

Standard Features and Accessories

Additional Standard Features

- Battery Rack and Cables
- Integral Vibration Isolation
- Oil Drain Extension
- Operation and Installation Literature
- Permanent Magnet-Excited Generator (PMG)

Accessories

Enclosed Unit

- ❑ Exhaust Silencer, Critical (kit: PA-353615)
- ❑ Exhaust Silencer, Industrial (kit: PA-353616)
- ❑ Silencer Mounting Kit for Housing
- ❑ Sound Shield Enclosure
- ❑ Tail Pipe and Rain Cap Kit
- ❑ Weather Housing

Open Unit

- ❑ Exhaust Silencer, Critical (kits: PA-324292, PA-324470)
- ❑ Exhaust Silencer, Industrial (kits: PA-324293, PA-324471)
- ❑ Flexible Exhaust Connector, Stainless Steel

Cooling System

- ❑ Block Heater
- ❑ City Water Cooling
- ❑ Radiator Duct Flange
- ❑ Remote Radiator Cooling

Fuel System

- ❑ Auxiliary Fuel Pump
- ❑ Day Tanks
- ❑ Flexible Fuel Lines
- ❑ Fuel Pressure Gauge
- ❑ Subbase Fuel Tanks

Electrical System

- ❑ Battery
- ❑ Battery Charger, Equalize/Float Type
- ❑ Battery Heater

Engine and Generator

- ❑ Air Cleaner, Heavy Duty
- ❑ Air Cleaner Restriction Indicator
- ❑ Bus Bar Kits
- ❑ CSA Certification
- ❑ Current Transformer Kit
- ❑ Electronic Isochronous Governor (±0.25% freq. reg. steady state)
- ❑ Generator Strip Heater
- ❑ Line Circuit Breaker (NEMA type 1 enclosure)
- ❑ Line Circuit Breaker with Shunt Trip (NEMA type 1 enclosure)
- ❑ NFPA 110 Literature
- ❑ Optional Generators
- ❑ Rated Power Factor Testing
- ❑ Rodent Guards
- ❑ Safeguard Breaker
- ❑ Skid End Caps
- ❑ Voltage Regulation, 1%
- ❑ Voltage Regulator Sensing, Three-Phase

Paralleling System

- ❑ Load-Sharing Module
- ❑ Reactive Droop Compensator
- ❑ Remote Speed Adjust Potentiometer/Electronic Governor
- ❑ Voltage Adjust Potentiometer
- ❑ Voltage Regulator Relocation Kit

Maintenance

- ❑ General Maintenance Literature Kit
- ❑ Maintenance Kit (includes standard air, oil, and fuel filters)
- ❑ Overhaul Literature Kit
- ❑ Production Literature Kit

Controller (Decision-Maker™ 340 and Decision-Maker™ 3+)

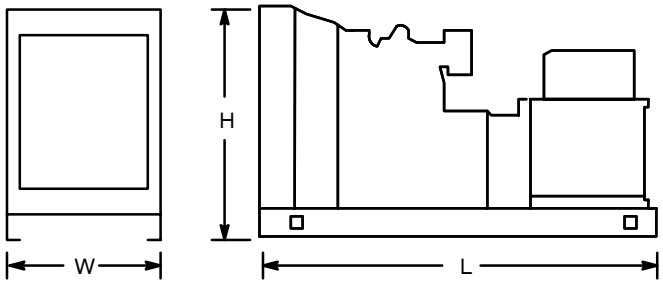
- ❑ Common Failure Relay Kit
- ❑ Communication Products and PC Software (Decision-Maker™ 340 controller only)
- ❑ Controller Cable, 12 m (40 ft.)
- ❑ Customer Connection Kit
- ❑ Dry Contact Kit (isolated alarm)
- ❑ Engine Prealarm Sender Kit
- ❑ Prime Power Switch
- ❑ Remote Annunciator Panel
- ❑ Remote Audiovisual Alarm Panel
- ❑ Remote Emergency Stop Kit
- ❑ Run Relay Kit

Miscellaneous Accessories

- ❑ _____
- ❑ _____
- ❑ _____

Weights and Dimensions

Overall Size, L x W x H, mm (in.):	2489 x 737 x 1324 (98.00 x 29.00 x 52.14)
Weight (radiator model), wet, kg (lb.):	1097 (2418)



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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