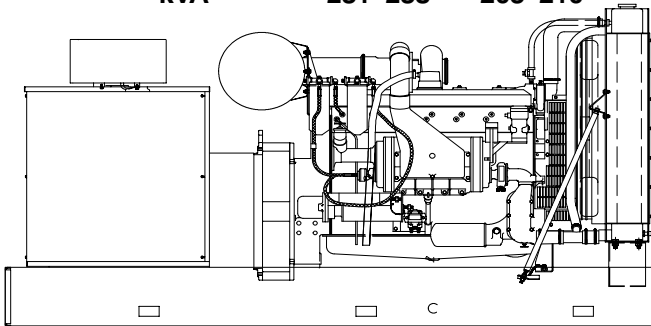




## Ratings Range

		60 Hz	50 Hz
Standby:	kW	205-210	180-184
	kVA	256-263	225-230
Prime:	kW	185-190	164-168
	kVA	231-238	205-210



## Generator Ratings

Generator	Voltage	PH	Hz	130 °C Rise Standby Amps.	130 °C Rise Standby Rating kW/kVA	105 °C Rise Prime Rating kW/kVA
4UA9	120/208	3	60	711	205/256	185/231
	120/240	3	60	616	205/256	185/231
	127/220	3	60	672	205/256	185/231
	139/240	3	60	616	205/256	185/231
	220/380	3	60	389	205/256	185/231
	240/416	3	60	356	205/256	185/231
	277/480	3	60	308	205/256	185/231
	347/600	3	60	247	205/256	185/231
	110/190	3	50	684	180/225	164/205
	110/220	3	50	590	180/225	164/205
	115/200	3	50	650	180/225	164/205
	120/208	3	50	625	180/225	164/205
	220/380	3	50	342	180/225	164/205
	230/400	3	50	325	180/225	164/205
240/416	3	50	312	180/225	164/205	
4UA13	120/208	3	60	729	210/263	190/238
	120/240	3	60	631	210/263	190/238
	127/220	3	60	689	210/263	190/238
	139/240	3	60	631	210/263	190/238
	220/380	3	60	399	210/263	190/238
	240/416	3	60	364	210/263	190/238
	277/480	3	60	316	210/263	190/238
	347/600	3	60	253	210/263	190/238
	110/190	3	50	699	184/230	168/210
	110/220	3	50	604	184/230	168/210
	115/200	3	50	664	184/230	168/210
	120/208	3	50	638	184/230	168/210
	220/380	3	50	349	184/230	168/210
	230/400	3	50	332	184/230	168/210
240/416	3	50	319	184/230	168/210	

## Standard Features

- Kohler Co. provides one-source responsibility for the generating system and accessories.
- All generator sets and components are prototype tested, factory built, and production tested.
- Generator sets provide one-step load acceptance per NFPA 110.
- A one-year limited warranty covers all systems and components. Two-, five-, and ten-year extended warranties are available.
- Generator features:
  - Kohler's unique Fast-Response™ excitation system delivers the fastest voltage response in the industry.
  - Brushless, rotating-field generator has broadrange reconnectability.
  - Kohler's permanent magnet-excited generator (PMG) provides superior short-circuit capability.
- Other features:
  - Controllers are available to meet all applications. See controller features inside.
  - Low coolant level shutdown protects generator set from overheating.
  - Integral vibration isolation eliminates the need for installation of vibration spring isolators under the unit.
  - Electronic, isochronous governor provides precise frequency regulation.

RATINGS: Standby ratings are continuous for the duration of any power outage. No overload capacity is specified at this rating. Prime ratings are continuous per BS 5514, DIN 6271, ISO-3046, and IEC 34-1 with 10% overload capacity one hour in twelve hours. All single-phase units are rated at 1.0 power factor. All 3-phase units are rated at 0.8 power factor. Contact the factory for ratings of city water-cooled and remote radiator models. Larger alternators may be used to meet special application requirements. Availability is subject to change without notice. Kohler Co. reserves the right to change the design or specifications without notice and without any obligation or liability whatsoever. Contact your local Kohler Co. generator distributor for availability. GENERAL GUIDELINES FOR DERATION: ALTITUDE: Derate 1.5% per 1000 ft. (305 m) elevation above 3300 ft. (1007 m). TEMPERATURE: Derate 1.0% per 10°F (5.5°C) temperature above 77°F (25°C).

# Alternator Specifications

Specifications	Fast-Response™ Generator
Manufacturer	Kohler
Type	4 Pole, Rotating Field
Exciter type	Brushless, Permanent Magnet, Fast-Response™
Number of leads	12, Reconnectable
Voltage regulator	Solid State, Volts/Hz
Insulation: NEMA MG1-1.66,	
Material	Class H
Temperature rise	130°C, Standby
Bearing: number, type	1, Sealed
Coupling	Flexible Disc
Amortisseur windings	Full
Voltage regulation, no load to full load	±2%
One-step load acceptance per NFPA 110	100% of Rating
Peak motor starting kVA:	(35% dip for 480 V, 60 Hz and 380 V, 50 Hz)
4UA9	700 (60Hz), 420 (50Hz)
4UA13	980 (60Hz), 600 (50Hz)

- Compliance with NEMA, IEEE, and ANSI standards for temperature rise.
- Sustained short-circuit current of up to 300% of rated current for up to 10 seconds.
- Sustained short-circuit capability enabling downstream circuit breakers to trip without collapsing the generator field.
- Self-ventilation 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.
- 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	Detroit Diesel	
Engine, model, type	6-71T (1063-7305) 2-Cycle, Turbocharged	
Cylinder arrangement	6 In-line	
Displacement, cu. in. (L)	426 (6.981)	
Bore and stroke, in. (mm)	4.25 (108) x 5.00 (127)	
Compression ratio	17.0:1	
Piston speed, ft/min. (m/sec.)	1500 (7.6)	1250 (6.3)
Main bearings: number, type	7, Replaceable Insert	
Rated rpm	1800	1500
Max. power at rated rpm, hp (kW)	330 (246)	289 (216)
Cylinder head material	Cast Iron	
Crankshaft material	Forged Steel	
Valve (exhaust) material	Pyromet 31	
Governor: type, make/model	Electronic, Barber-Colman, Dyna 8000	
Frequency regulation, no load to full load	Isochronous	
Frequency regulation, steady state	±0.25%	
Air cleaner type, all models	Dry	

### Exhaust

Exhaust System	60 Hz	50 Hz
Exhaust flow at rated kW, cfm (m <sup>3</sup> /min.)	2240 (63.4)	1990 (56.4)
Exhaust temperature at rated kW, dry exhaust, °F (°C)	655 (346)	700 (371)
Maximum allowable back pressure, in. Hg (kPa)	2.0 (6.8)	1.4 (4.7)
Exhaust outlet size at hookup, in. (mm)	See ADV drawing	

### Engine Electrical

Engine Electrical System	60 Hz	50 Hz
Battery charging alternator:		
Ground (negative/positive)	Negative	
Volts (DC)	24	
Ampere rating	65	
Starter motor rated voltage (DC)	24	
Recommended battery cold cranking amps (CCA) rating	475 above 32°F (0°C) 625 below 32°F (0°C)	
Quantity of batteries	2	
Battery voltage (DC)	12	
Rolling current at 32 °F (0°C)	—	

### Fuel

Fuel System	60 Hz	50 Hz
Fuel supply line, min. ID, in. (mm)	0.5 (13)	
Fuel return line, min. ID, in. (mm)	0.5 (13)	
Max. lift, engine-driven fuel pump, ft. (m)	6.8 (2.1)	
Max. fuel flow, gph (Lph)	88.1 (333)	81.8 (310)
Fuel prime pump	N/A	
Fuel filter	2, Primary/Secondary	
Recommended fuel	#2 Diesel	

### Lubrication

Lubricating System	60 Hz	50 Hz
Type	Full Pressure	
Oil pan capacity, qts. (L)	26 (24.7)	
Oil pan capacity with filter, qts. (L)	28 (26.6)	
Oil filter, quantity, type	1, Cartridge	
Oil cooler	Water-Cooled	

# Application Data

## Cooling (Standard Radiator)

Cooling System	60 Hz	50 Hz
Ambient temperature °F (°C)	105 (40)	
Engine jacket water capacity, gal. (L)	5.5 (20.8)	
Radiator system capacity, including engine, gal. (L)	14.8 (56.0)	
Engine jacket water flow, gpm (Lpm)	88 (333)	75 (284)
Heat rejected to cooling water at rated kW, dry exhaust Btu/min.	10230	8810
Water pump type	Centrifugal	
Fan diameter, including blades, in. (mm)	36 (914)	
Fan hp (kW)	18.0 (13.4)	10.4 (7.8)
Max. restriction of cooling air, intake and discharge side of rad., in. H <sub>2</sub> O (kPa)	0.5 (0.125)	

## Cooling (Optional Systems)

High Ambient Radiator System	60 Hz	50 Hz
Ambient temperature °F (°C)	122 (50)	
Engine jacket water capacity, gal. (L)	5.5 (20.8)	
Radiator system capacity, including engine, gal. (L)	20.0 (75.7)	
Engine jacket water flow, gpm (Lpm)	88 (333)	75 (284)
Heat rejected to cooling water at rated kW, dry exhaust Btu/min.	10230	8810
Water pump type	Centrifugal	
Fan diameter, including blades, in. (mm)	36 (914)	
Fan hp (kW)	18.0 (13.4)	10.4 (7.8)
Max. restriction of cooling air, intake and discharge side of rad., in. H <sub>2</sub> O (kPa)	0.5 (0.125)	

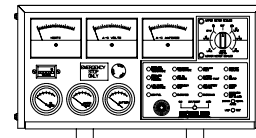
Remote Radiator System*	60 Hz	50 Hz
Exhaust manifold type	Dry	
Connection sizes:		
Water inlet, in. (mm) . . . . .	2.25 (57) ID Hose	
Water outlet, in. (mm) . . . . .	2.25 (57) ID Hose	
Static head allowable above engine, ft. (m)	50 (15.25)	
* Contact your local distributor for cooling system options and specifications based on your specific application.		

City Water Cooling System	60 Hz	50 Hz
Exhaust manifold type	Dry	
System capacity, gal. (L)	2 (7)	
City water consumption, gpm (Lpm) at 50°F (10°C)	13.5 (45.7)	11.3 (38.2)
Connection sizes:		
Water inlet, in. . . . .	1.5 NPT	
Water outlet, in. . . . .	0.75 NPT	

## Operation Requirements

Air Requirements	60 Hz	50 Hz
Radiator-cooled cooling air, cfm (m <sup>3</sup> /min.)	16100 (456)	13500 (382)
Cooling air required for gen. set when equipped with CWC or remote radiator, based on 25°F (14°C) rise and ambient temp. of 85°F (29°C) rise, cfm (m <sup>3</sup> /min.)	5500 (156)	5400 (153)
Combustion air, cfm (m <sup>3</sup> /min.)	1080 (30.6)	920 (26.1)
Heat rejected to ambient air:		
Engine BTU/min. . . . .	1320	1290
Generator BTU/min. . . . .	1060	1070
Fuel Consumption	60 Hz	50 Hz
<b>Diesel, gph (Lph) at % load</b>		
100%	16.1 (60.9)	13.5 (45.6)
75%	12.5 (47.3)	10.6 (40.1)
50%	9.2 (34.8)	7.2 (27.2)
25%	5.9 (22.3)	4.8 (18.2)

## Controllers



### Standard Controller

**Decision-Maker™ 3+, 16-Light Controller**  
 Audio/visual annunciation with NFPA-110, Level 1 capability  
 Microprocessor logic with AC meters and engine gauges  
 Compatible with 12-volt and 24-volt engine electrical systems  
 Remote start, prime power, and remote annunciation capability

### Optional Controllers

**Decision-Maker™ 340 Controller**  
 Audio/visual annunciation with NFPA-110, Level 1 capability  
 Programmable microprocessor logic with digital display  
 Compatible with 12-volt and 24-volt engine electrical systems  
 Remote start, prime power, remote annunciation, and remote communication capability

**Decision-Maker™ 3+, 7-Light Controller**  
 Audio/visual annunciation with NFPA-110, Level 2 capability  
 Microprocessor logic with AC meters and engine gauges  
 Compatible with 12-volt and 24-volt engine electrical systems  
 Remote start, prime power, and remote annunciation capability

**Oversized Meterbox Controllers**  
 Provides additional space for optional engine oil temperature gauge, tachometer, and wattmeter

Available with 16-light or 7-light annunciation and microprocessor logic  
 Same features as Decision-Maker™ 3+ controller  
 Compatible with 12-volt and 24-volt engine electrical systems

**Engine Gauge Box Controller for Paralleling Switchgear**  
 Interfaces between generator set and switchgear for paralleling switchgear applications

Engine gauges with emergency stop switch  
 Compatible with 24-volt engine electrical systems only

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

