



Weather Enclosure with Sound Kit (15RES)



Sound Enclosure (30RES)

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 listed and UL listed to Canadian Safety Standards.
- The generator set accepts rated load in one step.
- Model 15/30RES generator sets are approved for outdoor installation in stationary standby applications served by a reliable utility source.
- Five-year limited warranty.
- Engine features:
 - Natural gas or LP fueled
 - Electronic engine controls for optimized fuel and spark performance
 - Four cylinder, four cycle engine
 - An electronic, isochronous governor for precise frequency regulation
 - High silicon content pistons for improved durability
- ADC 2100 digital controller features:
 - LED display provides diagnostic capability
 - Digital voltage regulator with $\pm 1.5\%$ no-load to full-load regulation
 - Superior electronics protection from corrosion and vibration
- Enclosures reduce sound levels and protect the generator set from the elements, animal intrusion, and unwanted entry.
 - Fade-, scratch-, and corrosion-resistant Kohler® cream beige finish
 - Lockable door latches
 - Sound enclosure additional features:
 - Acoustic insulation meeting UL 94 HF1 flammability classification
 - Low profile with pitched roof to minimize water accumulation
 - Sound-attenuated to reduce noise levels
 - Hinged, removeable doors for maximum access
 - Factory-installed
 - Model 15RES available with weather enclosure and sound kit or sound enclosure
 - Model 30RES equipped with sound enclosure

Generator Set Ratings

Model	Alternator	Voltage	Ph	Hz	Standby Ratings *			
					Natural Gas		LP	
					kW/kVA	Amps	kW/kVA	Amps
15RES	4H7	120/240	1	60	13.0/13.0	54	15.0/15.0	63
30RES	2F7	120/240	1	60	27.0/27.0	112	30.0/30.0	125

* RATINGS: *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. Obtain the technical information bulletin on ratings guidelines (TIB-101) for 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 1.5% per 305 m (1000 ft.) elevation above 1006 m (3300 ft.). *Temperature:* Derate 2.0% per 5.5°C (10°F) temperature above 21°C (70°F).

Alternator Specifications

Specifications	Alternator
Manufacturer	Kohler
Type:	
15RES	4-Pole, Brush Type
30RES	2-Pole, Brush Type
Leads: quantity	4 Lead
Voltage regulator	Digital
Insulation:	NEMA MG1-1.66
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 RMS	±1.5%
One-step load acceptance	100% of Rating
Unbalanced load capability	100% of Rated Standby Current
Peak motor starting kVA:	35% dip for voltages below
15RES, 4H7 (4 lead)	42
30RES, 2F7 (4 lead)	42

- NEMA MG1, IEEE, and ANSI standards compliance for temperature rise and motor starting.
- The generator set complies with ISO 8528-5 requirements for transient performance.
- 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 generator field.
- Self-ventilated and dripproof 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.
- Digital voltage regulator with ±1.5% no-load to full-load regulation.

Application Data

Engine

Engine Specifications	15RES	30RES
Manufacturer	GM	
Engine: model, type	GM 1.6L OHC	
Cylinder arrangement	4, Inline	
Displacement, L (cu. in.)	1.6 (98)	
Bore and stroke, mm (in.)	79 (3.11) x 81.5 (3.21)	
Compression ratio	9.4:1	
Piston speed, m/min. (ft./min.)	293 (963)	586 (1925)
Main bearings: quantity, type	5, Replaceable Inserts	
Rated rpm	1800	3600
Max. power at rated rpm, kWm (BHP)	19.0 (25.5)	37.2 (50)
Cylinder head material	Aluminum	
Crankshaft material	Cast Iron	
Valve (exhaust) material	High Alloy Steel	
Governor type	Electronic	
Frequency regulation, no load to full load	Isochronous	
Frequency regulation, steady state	±0.5%	
Air cleaner type, all models	Dry	

Engine Electrical

Engine Electrical System	
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):	525
Battery voltage (DC)	12

Fuel

Fuel System	
Fuel type	LP Gas or Natural Gas
Fuel supply inlet	3/4-14 NPT
Fuel supply pressure kPa (in. H ₂ O)	1.74-2.74 (7-11)

Exhaust

Exhaust System	15RES	30RES
Exhaust flow at rated kW, m ³ /min. (cfm)	3.7 (131)	8.35 (295)
Exhaust temperature at rated kW, dry exhaust, °C (°F)	649 (1200)	760 (1400)
Maximum allowable back pressure, kPa (in. Hg)	10.2 (3.0)	
Exhaust outlet size at engine hookup, mm (in.)	50.8 (2.0)	

Lubrication

Lubricating System	
Type	Full Pressure
Oil pan capacity, L (qt.)	3.2 (3.4)
Oil pan capacity with filter, L (qt.)	3.5 (3.7)
Oil filter: quantity, type	1, Cartridge

Application Data

Cooling (Standard Radiator)

Cooling System	15RES	30RES
Ambient temperature °C (°F)	50 (122)	40 (104)
Engine jacket water capacity, L (gal.)	3.3 (0.9)	
Engine jacket water flow, Lpm (gpm)	37.8 (10.0)	64.4 (17.0)
Radiator system capacity, including engine, L (gal.)	11.5 (3.0)	
Heat rejected to cooling water at rated kW, dry exhaust, kW (Btu/min.)	15.7 (895)	31.5 (1791)
Water pump type	Centrifugal	
Fan diameter, including blades, mm (in.)	390 (15.35)	406 (16.0)
Fan, kWm (HP)	1.2 (1.6)	1.8 (2.5)
Max. restriction of cooling air, intake and discharge side of radiator, kPa (in. H ₂ O)	0.13 (0.5)	

Operation Requirements

Air Requirements	15RES	30RES
Radiator-cooled cooling air, m ³ /min. (scfm)*	85 (3000)	142 (5000)
Combustion air, m ³ /min. (cfm)	0.7 (25)	1.8 (65)
Heat rejected:		
Engine, kW (Btu/min.)	35.7 (2032)	73.2 (4167)
Alternator, kW (Btu/min.)	2.9 (165)	6.6 (376)

* Air density = 1.20 kg/m³ or 0.075 lbm/ft.³

Fuel Consumption at % rated load	15RES	30RES
Natural Gas, m³/hr. (cfh)		
100%	5.7 (200)	12.7 (450)
75%	4.5 (160)	10.6 (375)
50%	3.5 (125)	8.5 (300)
25%	2.5 (90)	6.4 (225)
LP Gas, m³/hr. (cfh)		
100%	2.4 (85)	5.1 (180)
75%	1.8 (65)	4.2 (150)
50%	1.4 (51)	3.4 (120)
25%	1.0 (37)	2.5 (90)
LP Gas, kg/hr. (lb./hr.)		
100%	4.5 (10.0)	9.5 (21.0)
75%	3.4 (7.6)	7.8 (17.5)
50%	2.6 (5.9)	6.4 (14.0)
25%	1.9 (4.3)	4.7 (10.5)

LP vapor conversion factors:

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

Nominal fuel rating:

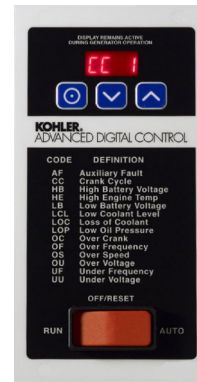
Natural gas: 37 MJ/m³ (1000 Btu/ft.³)
LP vapor: 93 MJ/m³ (2500 Btu/ft.³)

Sound

Average Sound Levels at 7 m(23 ft.) (no load)

Model and Enclosure Type	dBA
15RES with Weather Enclosure w/Sound Upfit Kit	65
15RES with Sound Enclosure	61
30RES with Sound Enclosure	68

Controller



Advanced Digital Control Features

- Compact controller
- Integrally mounted to the generator set
- LED display:
 - Runtime hours
 - Crank cycle status
 - Diagnostics
 - Application software version
- LED display communicates faults:
 - Auxiliary fault
 - High battery voltage
 - High engine temperature
 - Low battery voltage
 - Low oil pressure
 - Overcrank safety
 - Overspeed
 - Overfrequency
 - Overvoltage
 - Underfrequency
 - Undervoltage
- Membrane keypad for configuration and adjustment
 - Password-protected user access to menus
 - Voltage, gain, and speed adjustment
 - System configuration: system voltage, phase, and frequency settings, battery voltage, and generator set model
- Master switch: Run/Off-Reset/Auto
- Remote two-wire start/stop capability
- Superior electronics protection from corrosion and vibration
 - Potted electronics
 - Sealed connections
- Digital voltage regulation: ± 1.5% RMS no-load to full-load
- Automatic start with programmed cranking cycle

Standard Features

- Base Frame with Steel Skid
- Battery Rack and Cables
- ADC 2100 Digital Controller
- Electronic, Isochronous Governor
- Engine Shutdowns for High Engine Temperature and Low Oil Pressure
- Fuel Solenoid Valve and Secondary Regulator
- Integral Vibration Isolation
- Oil Drain Extension
- Operation and Installation Literature
- Sound Enclosure with Silencer (standard on 30RES)
- Warranty, Five-Year Limited

Available Accessories

Enclosure

- Sound Enclosure with Silencer (optional on 15RES)
- Weather Enclosure with Sound Kit and Silencer (15RES only)
- High Wind Kit for Sound Enclosure

Fuel System

- Flexible Fuel Lines
- Natural Gas Strainer

Electrical System

- Battery
- Battery Charger, Equalize/Float Type
- Battery Heater
- Remote Wiring Harness, 305 mm (12 in.) pigtail
- Remote Connection/Extension Harnesses, 4.6 or 7.6 m (15 or 25 ft.)

Engine and Alternator

- Air Cleaner Restriction Indicator
- Block Heater (recommended for ambient temperatures below 0°C (32°F))
- Engine Coolant (installed)
- Line Circuit Breaker
- Optional Alternators
- Rodent Guards

Controller

- Relay Kit, Includes Run Relay and Common Fault Relay
- Remote Digital Gauge

Maintenance and Literature

- General Maintenance Literature Kit
- Overhaul Literature Kit
- Production Literature Kit
- Maintenance Kit (includes air filter, oil filter, and belt)

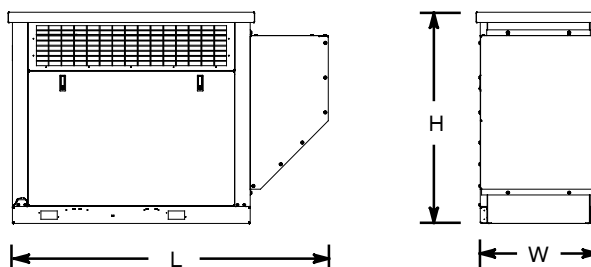
Miscellaneous Accessories

- _____
- _____
- _____
- _____

Dimensions and Weights

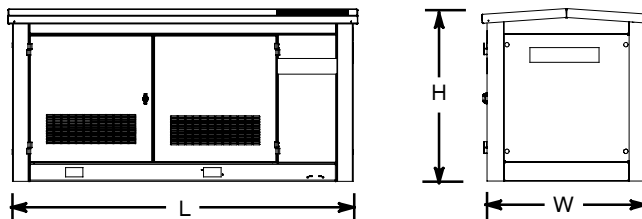
15RES with Weather Enclosure and Sound Kit

Overall Size, L x W x H, mm (in.): 1886 x 736 x 1240
 (74.3 x 29.0 x 48.8)
 Weight, wet, kg (lb.): 490 (1080)



15RES and 30res with Sound Enclosure

Overall Size, L x W x H, mm (in.): 1850 x 861 x 935
 (72.8 x 33.9 x 36.8)
 Weight, wet, kg (lb.):
 15RES 465 (1026)
 30RES 475 (1046)



NOTE: These drawings are provided for reference only and should not be used for planning installation. Contact your local distributor for more detailed information.

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