

Photo may depict optional equipment.

Description

HIPOWER® rental generators are an efficient, reliable and versatile source of mobile electrical power. They are designed to operate in the most extreme working conditions. All HIPOWER® Gaseous Rental Generators have a unique combination of innovative design and the use of high quality materials that provide the user with the most dependable power that you can rely on for non-stop power with easy to operate controls.

The generator set is powered by a radiator-cooled, industrial WAUKESHA gaseous engine, which will meet current Environmental Protection Agency (EPA) non-road exhaust emission regulations, driving a single bearing, four-pole, three-phase alternator, with IP23 protection. The Prime Power kVA rating for generator set is given with a 125 degree C alternator winding temperature rise.

HIPOWER® Features and Benefits

Waukesha Engine: Long-life, heavy-duty, 4-cycle, gaseous engine from a world renown manufacturer for economy of operation and maximum reliability and durability.

Cooling: Remote radiator installed in a separate compartment with 4 electric powered fans.

Filtration: Heavy-duty replaceable element air-cleaner.

Alternator: Single bearing, rotating field, self-excited, self-ventilated, 12-wire re-connectable, 60Hz brushless alternator with permanent magnetic generator (PMG) for reduced service and maintenance requirements, with Class H insulation. Automatic voltage regulator (AVR) providing close voltage regulation. Has a high skVA starting capability for electric motor loads.

Arrangement: Engine and alternator units are closed coupled together and with mobile style anti-vibration isolators, mounted between the assembly and a heavy-duty steel base. The sturdy base frame has openings allowing for winching, slinging and forklift pockets for ease of handling.

60Hz Prime Power Ratings kW & kVA

Voltage VAC	Phase	PF	LPG *		NG	
			kW	kVA	kW	kVA
120/240	1	0.8	N.A.	N.A.	N.A.	N.A.
120/208	3	0.8	222	277.5	312	390
120/240 Delta	3	0.8	222	277.5	312	390
277/480	3	0.8	222	277.5	312	390
347/600	3	0.8	222	277.5	312	390

* LPG Power rating is for HD 5 Propane

Rating Definitions: (N.A. = Not available for model designated)
Prime - All Rental Sets are Prime Rated - Prime rating is applicable for supplying power to a varying load in lieu of utility for an unlimited amount of running time. (Max. load factor = 90%).

HIPOWER® Features and Benefits

Enclosure: Fully sound attenuated enclosure, fabricated in 11-gauge steel, powder coated with finish that exceeds 1000-hr salt spray test, curved edges, minimum outside fasteners.

Ample layer of durable sound insulating material placed all around the inside of the container, doors and ducting with metal retainer frames. Can be cleaned by high-pressure water and is oil and fire resistant.

Vertical air discharge for quiet operation.

Wide steel lockable access doors with rubber seals, for easy entrance of all maintenance personnel and any necessary service by technicians, with stainless steel hinges, hardware and fasteners resistant to corrosion.

Exhaust: Effective low noise, stainless steel catalytic converter with rain cap.

Controls: Digital control panel to operate all manual and automatic start and stop features. Many programmable automatic functions for local and remote controls with LED lights, tamper proof engine hour recorder with analog meters: voltmeter & switch, three (3) ammeters, Hz meter and battery charger.

HIPOWER® Rental Options

Voltage Selector Switch: Two-position, manual voltage selector switch. Lockable in two positions for switching set between 120/208 and 277/480V 3-phase. - NOT AVAILABLE AT 600V CONNECTION.

Power Distribution: Consult HIPOWER® regarding the comprehensive range of power distribution accessories available.

Oil Field heavy duty Rental Skid: Heavy duty sub base.

(See page 3 for additional options)



Application & Specification Data

Gaseous Generator Set Specification:

Governor regulation class	ISO 8528 Part 1 Class G3
Voltage regulation, no load to full load	plus or minus 1%
Frequency regulation	Ischronous
Radio frequency emissions compliance	Meets requirements of most industrial and commercial applications
skVA at 480 volts with 30% voltage dip	1270
Main Line Circuit breaker – amps capacity	600A (480V) - 1600A (208V) - 600A (600V)

ENGINE

Manufacturer	GE Power - WAUKESHA *
Model	F18SE-EPA
EPA certified	Yes
Crankshaft speed	1,800 rpm
Type	LPG/NG fueled, 4-stroke
Ignition	ESM
Aspiration	Rich burn - Turbo Charge Air Cooled
Number of Cylinders	6
Cylinder arrangement	In-line
Displacement CID (liters)	1096 (18)
Bore and Stroke ins (mm)	5.98" x 6.5" (52 x 165 mm)
Nominal power	NG 440 BHP (PRP)
Cooling	Liquid - REMOTE RADIATOR
Governor	Electronic
Starting motor & alternator	24 volt
Compression ratio	8.6:1
Air cleaner type	Dry, replaceable cartridge
Exhaust gas flow at full output lb/hr (kg/hr)	2745 (1245)
Exhaust temperature at full load - dry exhaust °F (°C)	1150 (621)
Maximum permitted back pressure - in. H2O (kPa)	15 (3.8)

Cooling System:

Radiator- cooled cooling air flow - cu. ft./min. (cu. m/min.)	34643 (981)
Alternator cooling flow - cu. ft./min. (cu. m/min.)	1700 (48)
Combustion air - cu. ft./min. (cu. m/min.)	618 (18)
Total cooling air flow (engine + alternator + combustion)	36961 (1047)
Radiator system capacity, including engine - gallons (L)	35 (132.5)

Lubrication system:

Oil pan capacity - quarts (L)	176 (166)
Oil filter - quantity and type	2, Replaceable Spin-On with centrifugal bypass filter
Recommended lubricating oil grade - above 0 ° F (below 0 ° F)	SAE 40 Low Ash (.35 - .55% sulfated ash by weight)
Oil consumption at full load	N.A.
Oil pressure max – psi (bars)	94.5 (6.5)

Engine Electrical System:

Starting motor voltage	24 volt
Battery - AH	200
Maximum battery charge alternator output - amps	50
Cold Cranking Amps - minimum	1000

* Trade mark of General Electric Company

HIPOWER Sound Attenuated Enclosure:**Model - AM1**

Noise level - dBA at 23 feet (7 meters)	75
Dimensions - inches	229x 83 x 139
Dry weight – lbs.	22,100

Fuel System: (*Measured at gen-set fuel inlet, downstream of any dry fuel or filter accessories.)

Fuel type	Natural Gas, draw-through
Fuel supply line - inlet	2" NPTF
*Natural gas fuel supply pressure - psi (kPa)	1.5 - 5 (10 - 34.5)

Prime Rating Fuel consumption:

LPG - cu. ft./hour (kg/hour) at 100%	N.A.
Natural Gas - cu. ft./hour (kg/hour) at 100%	3533 (72)

Alternator Specification:

Manufacturer	Stamford	
Alternator model, winding & AVR model	127/208; 277/480 volts	HCI 434 E N.G.
	600 volts	HCI 434 E N.G.
Voltages	3-phase 120/208, 277/480, 347/600	
Alternator Type	4-pole, rotating field	
Excitation System	Brushless with PMG & AVR MX 341	
Power factor	0.8	
Number of leads	12	
Stator Pitch	2/3	
Insulation	Class H	
Windings – Temperature Rise	125° C	
Enclosure (IEC-34-S)	IP 23	
Bearing	Single, sealed	
Coupling	Flexible disc	
Amortisseur windings	Full	
Voltage regulation – no load to full load with MX341 AVR	plus or minus 1%	
TIF	< 50	
Line harmonics	5% maximum	

Standard Accessories: (see back-page for control panel details)

• Remote radiator with 4 electric fan	• All rotating components (i.e. fan) protected with metal guards
• Dry air cleaner	• All hot components (i.e. exhaust) protected with metal guards
• Heavy-duty engine start batteries in rack with cables	• Ground connection prepared for ground spike (not supplied)
• Emergency stop switch	• Main line ABB UL listed circuit breaker for overload protection
• Control Panel IntelliGen NT (See over for details)	• Operation and installation literature
• Two dry contacts for auto-start	• CSA certified (pending)
• Steel base for mounting on firm surface such as concrete	

Optional Accessories:

<input type="checkbox"/> DOT certified towing trailer	<input type="checkbox"/> Interior lights
<input type="checkbox"/> Alternator anti-condensation heaters	<input type="checkbox"/> Shore power receptacle
<input type="checkbox"/> Winterization kit for low ambient temperature	<input type="checkbox"/> Engine Block heater
<input type="checkbox"/> Electric actuator and louvers for air intake and exhaust	<input type="checkbox"/> Control panel heater
<input type="checkbox"/> Snow hoods for air intake and exhaust	<input type="checkbox"/> NG/LP auto switch system
<input type="checkbox"/> Different distribution panel configuration	

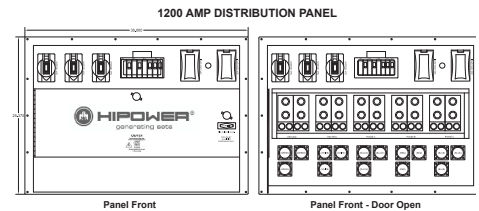
 Distribution power panel *See image RH back-page

NEMA 3R/IP67 0.09" aluminum panel, black powder coated, weather proof rated; individual Square-D QOU branch breakers; 2 x 20A 125V NEMA 5-20 GFCI duplex receptacles/flip cover; 3 x 50A 125/250V CS6369 twist-lock receptacles & Lexan covers; 50A California style twist lock (1Φ only); 3 sets 400A single pin Camlocks rated 400A with snap covers; color coded Camlocks 3Φ - 5W black, red, blue, white & green; pad lockable 1/4 turn door access with cable trap; auxiliary bus bars with mechanical lugs; 2 x dual lug per phase; mechanical lugs up to 600MCM cable

HIPOWER® COMAP IntelliGen NT Control Panel: The IntelliGen NT digital control panel is back-lit with icon LCD text display, and is PC configurable. IntelliGen NT is a comprehensive controller for both single and multiple gen-sets operating in standby or parallel modes. Compact construction is optimized for these purposes and various HW modifications allow customers to select the optimum type for a particular application. A built-in synchronizer and digital isochronous load sharer allow a total integrated solution for gen-sets in standby, island parallel or mains parallel. Native cooperation of up to 32 gen-sets is a standard feature. IntelliGen NT supports many standard ECU types and is specially designed to easily integrate new ones.

Engine alarms included: High coolant temperature, low oil pressure, low coolant level, unexpected shutdown, low fuel level, stop failure, low battery voltage, battery charging alternator failure, over-speed, under-speed, start failure and emergency stop. Support of engines with ECU (J1939, Modbus and other proprietary interfaces); alarm codes displayed in text form.

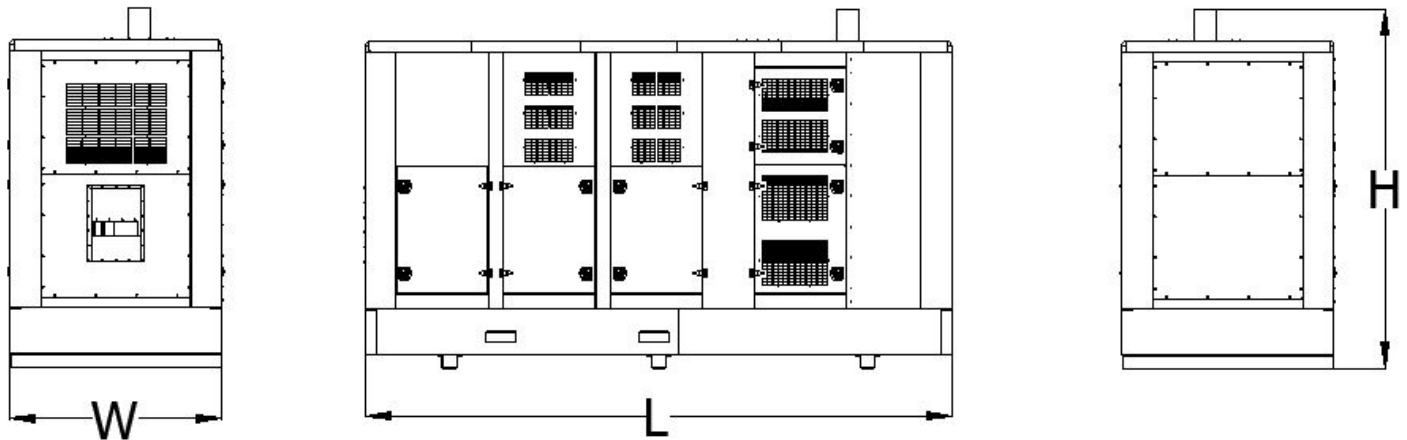
Alternator alarms included: Overload, unbalanced voltage, over voltage, under voltage, over frequency, under frequency, short circuit, reverse power, and incorrect phase sequence.



Pictures of Control Panel RH and Distribution Panel LH may include optional equipment and/or accessories

Model HRNG 400 T6

key dimensions and sound levels



Generator Data (L, W & H dimensions in inches)					
Configuration	L = Length	W = Width	H = Height	Net Weight lbs	dBa
Enclosed	229"	83"	139"	22,100	75
Enclosed (with TRAILER)	396"	102"	156"	27,650	75

* All measurements are approximate and for estimation purposes only. Sound levels measured at 23ft (7m) and does not account for ambient site conditions.

Codes and Standards Compliances used where applicable



NFPA 99
NFPA 110
ISO 8528-5
ISO 1708A.5
ISO 3046

BS5514
SAE J1349
DIN6271
IEE C62.41 TESTING
NEMA ICS 1

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