Honeywell | Generators

100 kW Liquid-Cooled Generator Sets

Standby Power Rating

HG10090 – (Aluminium, Dark Gray) – 100 kW 60 Hz

INCLUDES

- **Innovative design and prototype testing:** These are key components of Honeywell's success in "IMPROVING POWER BY DESIGN." But it doesn't stop there. Total commitment to component testing, reliability testing, environmental testing, destruction and life testing, plus testing to applicable CSA, NEMA, EGSA, and other standards, allows you to choose Honeywell with the confidence that these systems will provide superior performance.
- **Test Criteria:** Prototype tested; NEMA MG1-22 Evaluation; System torsional tested; Motor starting ability.
- **Solid-State, Frequency Compensated Voltage Regulation:** This state-of-the-art, power maximizing regulation system is the standard on all Honeywell models. It provides optimized FAST RESPONSE to changing load conditions and MAXIMUM MOTOR STARTING CAPABILITY by electronically torque-matching the surge loads to the engine. Provides precise digital voltage regulation for sensitive electronics.
- **Single Source Service Response:** From Honeywell's extensive dealer network provides parts and service know-how for the entire unit, from the engine to the smallest electronic component.
- **Honeywell Transfer Switches:** Long life and reliability are synonymous with Honeywell. One reason for this confidence is the Honeywell product line is offered with its own transfer systems and controls for total system compatibility.
- **Mobile Link® Wi-Fi Connectivity:** Free with select Honeywell standby generator sets, Mobile Link Wi-Fi allows users to monitor the generator set status from anywhere in the world using a smartphone, tablet, or PC. Easily access information such as the current operating status and maintenance alerts. Users can connect an account to an authorized service dealer for fast, friendly, and proactive service. With Mobile Link, users are taken care of before the next power outage.

FEATURES & BENEFITS

- Two-line multilingual digital LCD controller (English, Spanish, French, Portuguese)
- Closed coolant recovery system
- Smart battery charger
- Voltage regulation designed for sensitive electronics
- Sound attenuated aluminum enclosure
- UV/Ozone resistant hoses
- UL 2200 Listed
- 5 Year limited warranty
- Isochronous electronic governor

100 kW Technical Specifications

GENERATOR SPECIFICATIONS	100 KW
Type	Synchronous
Rotor insulation class	H
Stator insulation class	H
Telephone Interference Factor (TIF)	<50
Alternator output leads 1-Phase	4 wire
Alternator output leads 3-Phase	12 wire
Bearings	Sealed ball
Coupling	Flexible disc
Excitation system	Synchronous Brushless
Total Harmonic Distortion	<5%
VOLTAGE REGULATION	
Type	Full digital
Sensing	All
Regulation	Designed for sensitive electronics
GOVERNOR SPECIFICATIONS	
Type	Electronic
Frequency regulation	Isochronous
Steady state regulation	Designed for sensitive electronics
ELECTRICAL SYSTEM	
Battery charge alternator	40 amp
Static battery charger	2.5 amp
Recommended battery (battery included)	Group 31F, 925CCA
System voltage	12 volts
GENERATOR FEATURES	
Revolving field heavy duty generator Directly connected to the engine Operating temperature rise 135° C above 25° C ambient Class H insulation is NEMA rated All models fully prototype tested	
ENCLOSURE FEATURES	
Aluminum weather protective enclosure	Protects against mother nature. Electrostatically applied textured epoxy paint for added durability..
Enclosed critical grade muffler	Quiet, critical grade muffler is mounted inside the unit to prevent injuries.
Small, compact, attractive	Makes for an easy, eye appealing installation.
SAE	Sound attenuated enclosure ensures quiet operation.

(All ratings in accordance with BS5514, ISO3046, ISO8528, SAE J1349 and DIN6271)

ENGINE SPECIFICATIONS	100 KW
Make	Generac
Type	V
Cylinders	8
Displacement (L)	540 (8.86)
Bore (in / mm)	4.5 / 114.3
Stroke (in / mm)	4.25 / 107.95
Compression ratio	9.9:1
Intake air system	Naturally aspirated
Lifter type	Hydraulic roller
ENGINE LUBRICATION SYSTEM	
Oil pump type	Gear
Oil filter type	Full flow spin-on cartridge
Crankcase capacity (qt / L)	10.5 / 9.9
ENGINE COOLING SYSTEM	
Type	Pressurized Closed
Water pump	Belt driven
Fan speed (rpm)	2,330
Fan diameter (in / cm)	22 (55.9)
Fan mode	Pusher
FUEL SYSTEM	
Fuel type	Natural gas, propane vapor
Carburetor	Down draft
Secondary fuel regulator	Standard
Fuel shutoff solenoid	Standard
NG fuel pressure	11–14 in water column
LP fuel pressure	11–14 in water column

100 Operating Data

GENERATOR OUTPUT VOLTAGE/KW – 60 HZ

		KW LPG	AMP LPG	KW NATURAL GAS	AMP NATURAL GAS	CB SIZE (BOTH)
HG10090	120/240 V, 1Ø, 1.0 pf	96	400	96	400	400
	120/208 V, 3Ø, 0.8 pf	100	347	96	333	400
	120/240 V, 3Ø, 0.8 pf	100	300	96	288	350
	277/480 V, 3Ø, 0.8 pf	100	150	96	144	175

SURGE CAPACITY IN AMPS

		Voltage Dip
		30%
HG10090	120/240 V, 1Ø	854
	120/208 V, 3Ø	430
	120/240 V, 3Ø	372
	277/480 V, 3Ø	244

ENGINE FUEL CONSUMPTION

		Natural Gas		Propane	
		(ft^3 / hr)	(m^3 / hr)	(ft^3 / hr)	(m^3 / hr)
HG10090	25% of rated load	406	11.5	20	0.56
	50% of rated load	655	18.5	294	8.3
	75% of rated load	896	25.4	425	12.0
	100% of rated load	1,128	31.9	528	15.0

Note: Fuel pipe must be sized for full load.

For BTU content, multiply ft^3/hr x 2,520 (LP) or ft^3/hr x 1,000 (NG)

For megajoule content, multiply m^3/hr x 93.15 (LP) or m^3/hr x 37.26 (NG)

See "Emissions Data Sheets" for maximum fuel flow for EPA and SCAQMD permitting purposes.

STANDBY RATING: 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. Design and specifications are subject to change without notice.

100 kW Operating Data

ENGINE COOLING

MODEL	100 KW
Air Flow (Fan Air Flow Across Radiator) - Open Set scfm (m^3 / min)	6,589 (186)
System Coolant Capacity (gal / liters)	5.5 (20.8)
Heat Rejection to Coolant (BTU per hr / MJ per hr)	Contact Factory
Maximum Operation Air Temperature on Radiator (ºF / ºC)	Contact Factory
Maximum Ambient Temperature (ºF / ºC)	122 (50)

COMBUSTION REQUIREMENTS

Flow at Rated Power scfm (m^3/min)	230 (6.5)

SOUND EMISSIONS

Sound Output in dB(A) at 23 ft (7 m) With Generator*	71 db

*In normal operation.

EXHAUST

Exhaust Flow at Rated Output scfm (m^3/min)	771 (21.8)
Exhaust Temperature (Rated Output) °F (°C)	1,350 (732)

ENGINE PARAMETERS

Rated Engine Speed (RPM)	1,800

POWER ADJUSTMENT FOR AMBIENT CONDITIONS

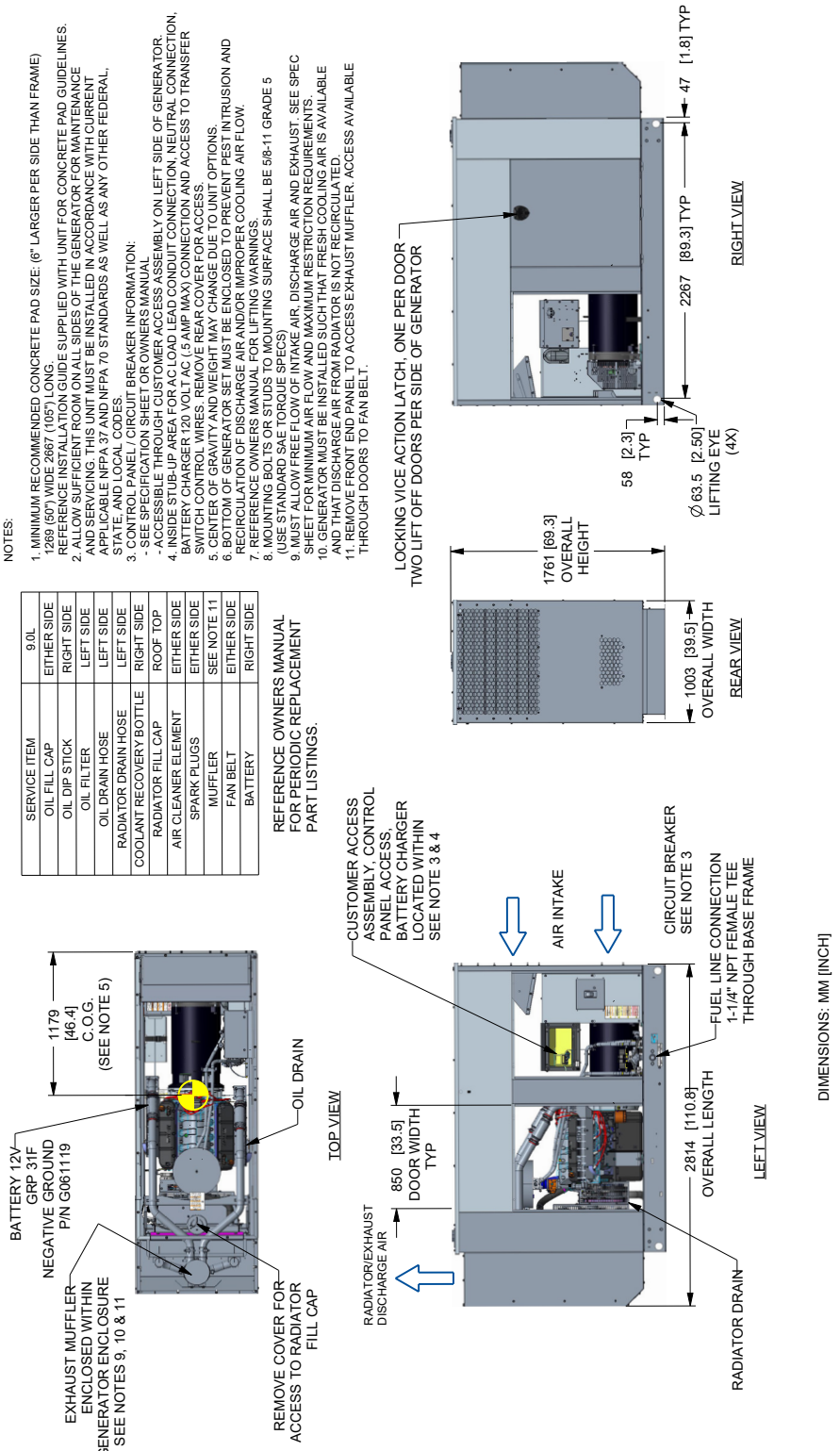
Temperature Deration NG & LP ..... 77ºF before derate, 3.3% per 10ºF above 77ºF
Altitude Deration ..... 3% for every 1,000 ft above 600 ft

CONTROLLER FEATURES

Two-line plain text LCD ..... Simple user interface for ease of operation.
Mode buttons: AUTO ..... Automatic Start on Utility failure. 7 day exerciser.
OFF ..... Stops unit. Power is removed. Control and charger still operate.
MANUAL ..... Start with starter control, unit stays on. If utility fails, transfer to load takes place.
Programmable start delay between 10 – 30 ..... 10 sec standard
Engine Start Sequence ..... Cyclic cranking: 16 sec on, 7 rest (90 sec maximum duration)
Engine Warm-up ..... 5 sec
Engine Cool-Down ..... 1 min
Starter Lock-Out ..... Starter cannot re-engage until 5 sec after engine has stopped.
Smart Battery Charger ..... Standard
Automatic Voltage Regulation With Over and Under Voltage Protection ..... Standard
Automatic Low Oil Pressure Shutdown ..... Standard
Overspeed Shutdown ..... Standard, 72 Hz
High Temperature Shutdown ..... Standard
Overcrank Protection ..... Standard
Safety Fused ..... Standard
Failure to Transfer Protection ..... Standard
Low Battery Protection ..... Standard
50 Event Run Log ..... Standard
Future Set Capable Exerciser ..... Standard
Incorrect Wiring Protection ..... Standard
Internal Fault Protection ..... Standard
Common External Fault Capability ..... Standard
Governor Failure Protection ..... Standard

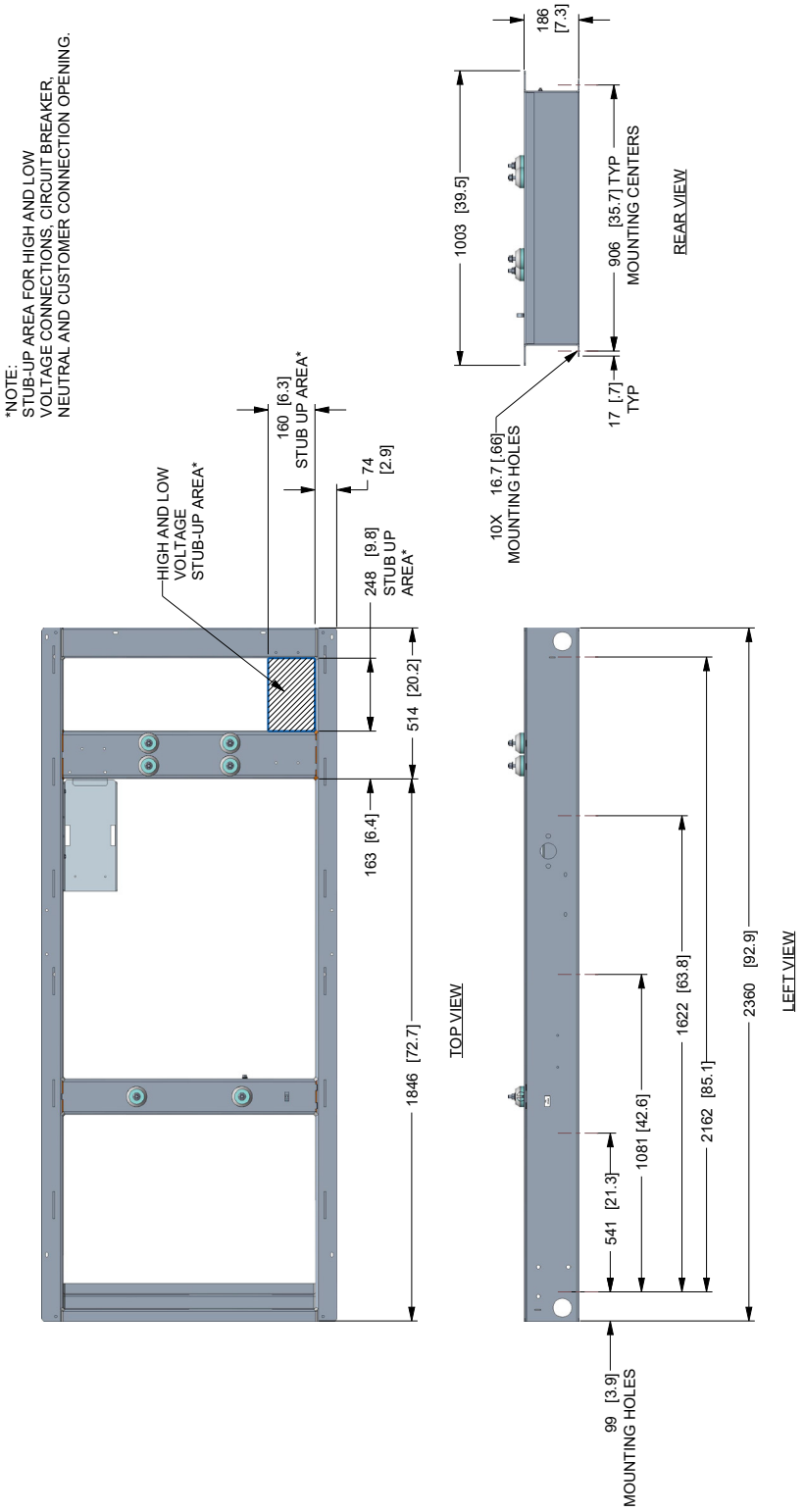
100 kW Installation Layout

Drawing A0001453011 (1 of 2)



100 kW Installation Layout

Drawing A0001453011 (2 of 2)



100 kW Available Accessories

MODEL #	PRODUCT	DESCRIPTION
G007169-0	Mobile Link® 4G LTE Cellular Accessory	Generac's Mobile Link allows you to check the status of your generator from anywhere that you have access to an Internet connection from a PC or with any smart device. You will even be notified when a change in the generator's status occurs via e-mail or text message. Note: Harness Adapter Kit required. Available in the U.S. only.
G009883-0	Cold Weather Kit	If the temperature regularly falls below 32 °F (0 °C), install a cold weather kit to maintain optimal battery temperature. Kit consists of battery warmer with thermostat built into the wrap.
G009884-0	Extreme Cold Weather Kit	Recommended where the temperature regularly falls below 32 °F (0 °C) for extended periods of time. For liquid cooled units only.
G005651-0	Base Plug Kit	Add base plugs to the base of the generator to keep out debris.
G0061600-0	Paint Kit	If the generator enclosure is scratched or damaged, it is important to touch-up the paint to protect from future corrosion. The paint kit includes the necessary paint to properly maintain or touch-up a generator enclosure.
G009882-0	Scheduled Maintenance Kit	The Liquid-Cooled Scheduled Maintenance Kits offer all the hardware necessary to perform complete maintenance on Generac liquid-cooled generators.
G006510-0	E-Stop	E-stop allows for immediate fuel shutoff and generator shutdown in the event of an emergency.
G007005-0	Wi-Fi LP Fuel Level Monitor	The Wi-Fi enabled LP fuel level monitor provides constant monitoring of the connected LP fuel tank. Monitoring the LP tank's fuel level is an important step in making sure your generator is ready to run during an unexpected power failure. Status alerts are available through a free application to notify when your LP tank is in need of a refill.
G007000-0 (50 amp) G007006-0 (100 amp)	Smart Management Module	Smart Management Modules (SMM) are used to optimize the performance of a standby generator. They manage large electrical loads upon startup and shed them to aid in recovery when overloaded. In many cases, using SMM's can reduce the overall size and cost of the system.
G009885-0	400 A CB Kit	400 A Circuit Breaker Kit designed for three phase products built with a factory installed circuit breaker greater than 400 A.
A0000018981	Ultrasonic Cleaner Solution	An ultra-concentrated anti-corrosive cleaning solution engineered to reach the smallest cavities to clean the toughest contaminants. This water based formula is non-toxic, biodegradable, safe for both metal and plastic surfaces, and is superior in rinsability.
A0000019001	All Surface Protectant	All surface protectant for vinyl, rubber, plastics creates a barrier that seals & protects surfaces from water, UV rays while renewing the look of the surface.

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