HIPOWER® A YANMAR COMPANY — SafeGuard NG/LPG Rental Spark Ignited

MODEL

HRSG-36

60Hz Prime Power Rated

36kW/60Hz/PRP/1800RPM

VOLTAGE VAC	120/240V		120/208V		139/240V		277/480V		347/600V**	
RATINGS	NG	LPG	NG	LPG	NG	LPG	NG	LPG	NG	LPG
PHASE	1		3		3		3		3	
PF	1.0		0.8		0.8		0.8		0.8	
HZ	60		60		60		60		60	
KW	32	33	34	36	34	36	34	36	34	36
KVA	32	33	42	45	42	45	42	45	42	45
AMPS	133	137	117	124	102	108	51	54	40	43.3
SKVA@30% VOLTAGE DIP	63		59		59		90		134	

** 600 Volt configuration not available as UL2200 certified generator set.

Description

HIPOWER® SafeGuard Generators are an efficient, reliable and versatile source of electrical power. Designed to operate in the most extreme working conditions. All HIPOWER® SafeGuard Generators combine an innovative design with high quality materials that provide the most dependable non-stop power with easy to operate controls.

Powered by a radiator-cooled industrial FORD NG engine that meets current Environmental Protection Agency (EPA) exhaust emission regulations, driving a single bearing, four-pole alternator, with IP23 protection. The Prime Power kVA rating for generator set is given with a 125°C alternator winding temperature rise.

HIPOWER® Features and Benefits

FORD Engine: Long-life, heavy-duty, 4-cycle, EPA certified, spark-ignited for economy of operation and maximum reliability and durability.

Cooling: Radiator with belt driven pusher fan.

Air Filter: Heavy-duty replaceable element air-cleaner.

Alternator: Single bearing, rotating field, self-excited, self-ventilated, 12-wire re-connectable, and 4-wire dedicated for single phase version, 60Hz brushless alternator, Class H insulation. Automatic Voltage Regulator (AVR) providing close voltage regulation and skVA starting capability for electric motor loads.

Certification: Generator set is UL2200 and CSA certified, and meets ISO 8528-5.

HIPOWER® Features and Benefits

Enclosure: Fabricated in steel, powder coated with finish that exceeds 1400-hr salt spray test, minimum outside fasteners and four points lift. Vertical air discharge for quiet operation. Wide steel lockable access doors with seals, easy access for maintenance and service activities, lift off stainless steel hinges, corrosion resistant hardware and fasteners.

Exhaust: Low noise, steel residential-type exhaust silencer.

Filtration: Heavy duty replaceable element air-cleaner

Controls: Digital control panel with manual and automatic start and stop features. Many programmable automatic functions for local and remote controls with LED lights, tamper proof engine hour recorder.

HIMOINSA POWER SYSTEMS, INC.
16600 S. Theden Street, Olathe, KS 66062
Tel: 913 495 5557 | Fax: 913 495 5575 **www. hipowersystems.com**

Codes and Standards Compliances used where applicable

APPLICATION DATA

ENGINE SPECIFICATION	
Manufacturer	FORD
Model	LSG635
EPA certified	Yes
Crankshaft speed	1,800 rpm
Type	NG/LPG fueled, 4-stroke
Ignition	Spark Plug
Aspiration	Natural
Number of Cylinders	6
Cylinder arrangement	V-Type
Displacement CID (liters)	212 (3.5)
Bore and Stroke ins (mm)	3.6 x 3.4 (94 x 86)
Nominal power	59 hp
Cooling	Liquid
Governor	Electronic
Governor Regulation Class	ISO 8528 Part 1 Class G3
Frequency Regulation	Isochronous
Starting motor & alternator	12 volt
Compression ratio	11.8:1
Air cleaner type	Dry - light duty, single stage
Exhaust gas flow cu. ft./minute (cu.m. /minute)	236.7 (6.7)
Max. Exhaust temp at full load degrees °F (°C)	1049 (565)
Max. permissible back pressure - ins H2O (kPA)	81 (20.3)
COOLING SYSTEM	
Engine cooling air flow - cu. ft./min (cu. m/min)	4450 (126)
Alternator cooling flow - cu. ft./min (cu. m/min)	447 (12.66)
Total cooling air flow (engine + alternator + combustion) - cu. ft./min (cu. m/min)	4979 (141)
Total cooling capacity - US gallons (liters)	2.9 (11.7)
Max. Operating Temperature °F (°C)	106 (41)
LUBRICATION SYSTEM	
Oil Pan Capacity with filter - US gallons (liters)	1.5 (5.6)
Oil Cooler	Water - cooled
Recommended Lubricating Oil Grade	SAE 5W20 - refer to owners manual
Oil consumption at full load	1 quart every 400 hours
Oil pressure – psi (kPA)	30-50 (207-344)
ENGINE ELECTRICAL SYSTEM	
Starting motor voltage	12 volt
Cold Cranking Amps - minimum	66 Amp
Battery Charging Alternantor	
Battery Capacity	740 Amps

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FUEL SYSTEM		
Fuel type	LPG or Natural Gas, vapor withdrawl	
Fuel supply line - inlet (NG)	3/4" FNPT	
Fuel supply line - inlet (LPG)	1/2" FNPT	
Natural gas and LPG fuel supply pressure - in. H2O (kPa)	7 to 11 ins. (1.74 - 2.74)	
FUEL COMPSUMPTION	Standby Power Rating	
LPG - Gal/hour at 100% standby rating	5.1	
NG - cu. ft./hour (cu. m/hour) at 100% standby rating	448	
LPG - Gal/hour at 75% standby rating	4.1	
NG - cu. ft./hour (cu. m/hour) at 75% standby rating	360	
LPG - Gal/hour at 50% standby rating	3.3	
NG - cu. ft./hour (cu. m/hour) at 50% standby rating	291	
LPG = 2500 BTU X FT3/HR = Total BTU/HR NG = 1000 BTU X FT3/HR = Total BTU/HR	1 Gal. LPG = 36.4 cf	
ALTERNATOR SPECIFICATION		
Manufacturer	STAMFORD	
Model	S1L2-N1 - S1L2-N1 - S1L2-N1 - PI144K(600V)	
Alternator Model	120/208V - 277/480 - 120/240V - 347/600V	
Alternator Type	Four pole, rotating field	
Excitation System	Brushless	
Power Factor	0.8 / 1.0	
Number of Leads	12 leads, reconnectable (Three phase version)	
Stator Pitch	2/3	
Insulation	Class H	
Windings – Temperature Rise	120/40° C	
Enclosure (IEC-34-S)	IP23	
Bearing	Single, sealed	
Coupling	Flexible disc	
Amortisseur windings	Full	
Voltage regulation – no load to full load with AS480 AVR	± 1%	
TIF	<50	
Radio Frequency Emissions compliance	Meets requirements of most industrial and commercial applications	
Line Harmonics	5% maximum	
STANDARD ACCESSORIES		
• Radiator with pusher fan	• Main line ABB UL listed circuit breaker for overload protection	
• Control Panel PowerEdge (See over for details)	• Heated Control Panel	
OPTIONAL ACCESSORIES		
• Battery with Cables	• Anti-Condensation Heater	
• Battery Blanket	• Water Jacket heater	
• 6 Amp Battery charger, 12VDC	• 10A Battery charger	
• Generator Raiser	• Remote annunciator	

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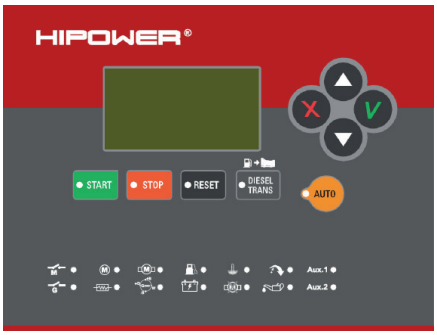
CONTROL SYSTEMS STANDARD FEATURES - Generator Digital Control Panel

HIPOWER® Control Panel: HIPOWER digital controller with auto and manual start capability. Digital readout for: volts between each phase & neutral, volts between phases, amps per phase, frequency, kW and kVA power, power factor, KW hour with accumulation by day, month and year, fuel reserve, oil pressure, coolant temperature, battery volts and charging alternator volts, engine speed, hours running. Engine alarms for high coolant temperature, low oil pressure, emergency stop activated, battery charging failure, low coolant level, low fuel level, over-speed, under-speed and low battery volts.

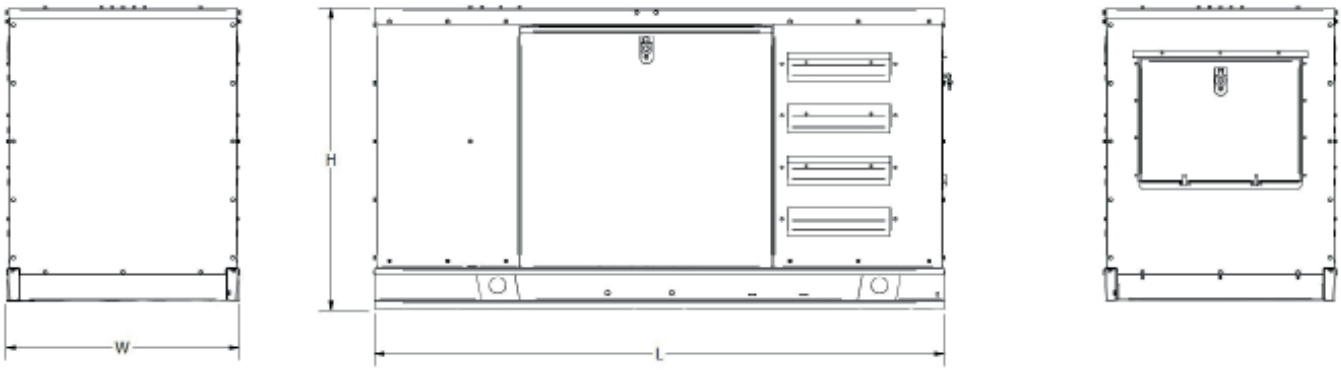
Engine Alarms Included: High coolant temperature, low oil pressure, low coolant level, unexpected shutdown, low fuel level, stop failure, low battery voltage, battery charging alternator failure, over-speed, under-speed, start failure and emergency stop. Support of engines with ECU (J1939, Modbus and 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 and reverse power.

DIMENSIONS, WEIGHTS & SOUND LEVELS

ENCLOSED SET



CONFIGURATION	Generator Data *				
	L = Length	W = Width	H = Height	Weight lbs	dBA
Enclosed Set	100″	36″	47″	1800	68*

*Noise level @ 100% load

Intertek
Conforms to UL STD 2200
Certified to CSA STD C22.2#100
Certified to CSA STD C22.2#14

REV3

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