

MODEL

# HNSG-25



60Hz STANDBY UL2200 & CSA

25kW/60Hz/STANDBY/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	24.7	25	25	25	25	25	25	25	25	25
KVA	24.7	25	31.3	31.3	31.3	31.3	31.3	31.3	31.3	31.3
AMPS	103	104	86.7	86.7	75.2	75.2	37.6	37.6	30.1	30.1
SKVA@30% VOLTAGE DIP	N/A		N/A		N/A		N/A		N/A	

\*\* 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 120 °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. Capable of full rated load acceptance in one step.

**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 11-gauge 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.

Codes and Standards Compliances used where applicable



## APPLICATION DATA

### ENGINE SPECIFICATION

Manufacturer	FORD
Model	MSG425
EPA Certified	Yes
Crankshaft speed	1,800 rpm
Type	NG/LPG fueled, 4-stroke
Injection	Spark Plug
Aspiration	Natural
Number of Cylinders	4
Cylinder Arrangement	In-line
Displacement CID (liters)	152.5 (2.5)
Bore and Stroke ins (mm)	3.5 X 3.93 (89 X 100)
Nominal Power	41 hp
Cooling	Liquid
Governor	Electronic
Governor Regulation Class	ISO 8528 Part 1 Class G3
Frequency Regulation	Isochronous
Starting Motor & Alternator	12 volt
Compression Ratio	9.7:1
Air Cleaner Type	Dry - light duty, single stage
Exhaust gas flow cu. ft./minute (cu.m. /minute)	205.7 (5.8)
Max. Exhaust temp at full load degrees °F (°C)	1226 (663)
Max. Permissible back pressure - ins H2O (kPA )	81 (20.3)

### COOLING SYSTEM

Engine cooling air flow - cu. ft./min (cu. m/min)	4089 (115.8)
Alternator cooling flow - cu. ft./min (cu. m/min)	448.5 (12.7)
Total cooling air flow (engine + alternator + combustion) - cu. ft./min (cu. m/min)	4605 (130.4)
Total cooling capacity - US gallons (liters)	2.25 (8.5)
Max. Operating Temperature °F (°C)	131 (55)

### LUBRICATION SYSTEM

Oil Pan Capacity with filter - US gallons (liters)	1.75 (6.6)
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 Alternator	
Battery Capacity	740 Amps

Codes and Standards Compliances used where applicable



## APPLICATION DATA

### FUEL SYSTEM

Fuel type	LPG or Natural Gas, vapor withdrawal
Fuel supply line - inlet (NG)	1" FNPT
Fuel supply line - inlet (LPG)	1/2" FNPT
Natural gas and LPG fuel supply pressure - in. H <sub>2</sub> O (kPa)	7 to 11 ins. (1.74 - 2.74)

### FUEL COMPSUMPTION

#### Standby Power Rating

LPG - Gal/hour at 100% standby rating	3.35
NG - cu. ft./hour (cu. m/hour) at 100% standby rating	301.16
LPG - Gal/hour at 75% standby rating	2.68
NG - cu. ft./hour (cu. m/hour) at 75% standby rating	243.29
LPG - Gal/hour at 50% standby rating	2.0
NG - cu. ft./hour (cu. m/hour) at 50% standby rating	185.82
LPG = 2500 BTU X FT <sup>3</sup> /HR = Total BTU/HR NG = 1000 BTU X FT <sup>3</sup> /HR = Total BTU/HR	1 Gal. LPG = 36.4 cf

### ALTERNATOR SPECIFICATION

Manufacturer	STAMFORD
Model	S1L2-J1 - S0L2-P1 - S0L2-U1 - P1144E(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	125/40° 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

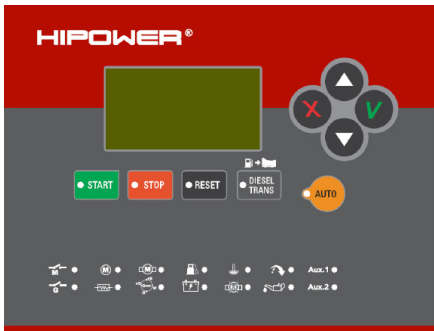
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# CONTROL SYSTEMS STANDARD FEATURES - Generator Digital Control Panel

**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.

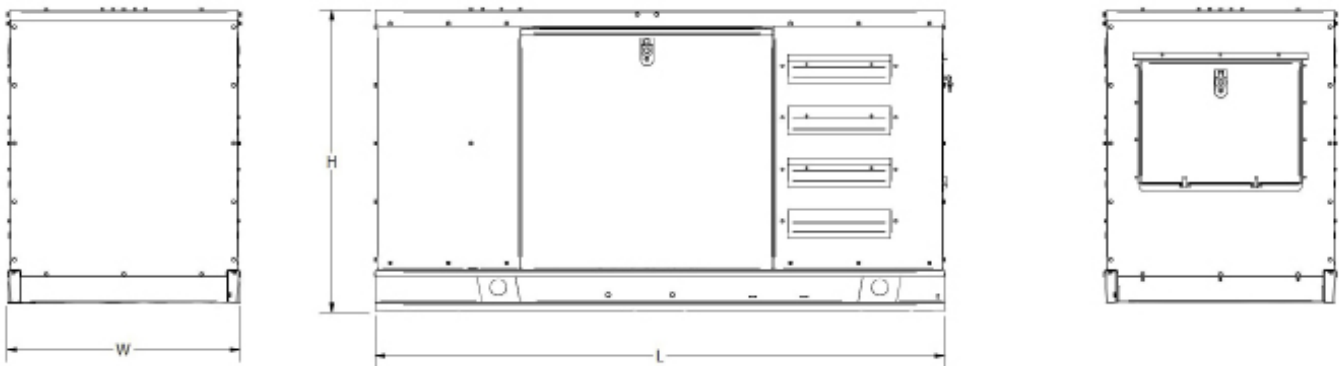
**Engine Alarms Included:** High coolant temperature, low oil pressure, low coolant level, unexpected shutdown, low fuel level, stop failure, low battery voltage, battery charging alternator failure, over-speed, under-speed, start failure and emergency stop. Support of engines with ECU (J1939, Modbus 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	88.4"	36"	45.1"	1515	67*

\*Noise level @ 100% load



**Intertek**

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

REV2

Codes and Standards Compliances used where applicable

