

## SafeGuard NG/LPG Rental Spark Ignited

MODEL

# HRSG-36









60Hz Prime Power Rated





VOLTAGE VAC	120/240 <b>V</b>		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	34.9	36	36	36	36	36	36	36	36	36
KVA	34.9	36	45	45	45	45	45	45	45	45
AMPS	145.4	150	125	125	108	108	54	54	43.3	43.3
SKVA@30% VOLTAGE DIP	63		59		5	9	g	00	13	34

<sup>\*\* 600</sup> 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

Manufacturer         FORD           Model         CS6837           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)         225.7 (3.7)           Bore and Stroke ins (mm)         3.7 x 3.4 (94 x 86)           Nominal Power         56 hp           Cooling         Liquid           Governor         Electronic           Governor Regulation Class         ISO 9528 Part 1 Class G3           Frequency Regulation         Isochronous           Starting Motor & Alternator         12 volt           Compression Ratio         10.5:1           Air Cleaner Type         Dry - light duty, single stage           Exhaust ges flow cu. ft./minute (cu.m./minute)         250 (7.1)           Max. Exhaust temp at full load degrees °F (°C)         1324 (717)           Max. Permissible back pressure - ins H2O (kPA)         81 (20.3)           COOLING SYSTEM         4450 (126)           Alternator cooling air flow - cu. ft./min (cu. m/min)         447 (12.66)	ENGINE SPECIFICATION	
Model         CSG637           EPA Certified         Yes           Crankshaft speed         1.800 rpm           Type         NGLPG Uvaled, 4-stroke           Ignition         Spark Plug           Aspiration         Natural           Number of Cylinders         6           Cylinder Arrangement         V-Type           Displacement CID liters         225 7.3.7           Bore and Stroke ins firmi)         3.7 x 3.4 (91 x 80)           Nominal Power         56 hp           Caoling         Liquid           Governor         Electronic           Governor Regulation         Isodinonous           Starting Motor & Alternator         12 volt           Compression Ratio         10.5-1           Art Cleaner Type         Dry - light duty, single stage           Exhaust tamp at full load degrees "F CCI         1324 (717)           Mix. Permissible back pressure - ins H2O (RFA)         4450 (120)           Alternator cooling afflow - cu. ft/min (cu. m/min)         4450 (120)           Alternator cooling afflow - eu. ft/min (cu. m/min)         447 (12.69)           Total cooling are flow regime - alternator - combustion' - cu. ft/min (cu. m/min)         4979 (141)           Total cooling are flow regime - alternator - combustion' - cu. ft/min (cu. m/		FORD
EPA Certified         Yes           Crinchatt speed         1,800 rpm           Type         NGLPG fueled, 4-stroke           Ilgation         Spark Pug           Aspiration         Natural           Number of Cylinders         6           Cyrinder Arrangement         VType           Deplacement CID (liters)         225, 73, 77           Bore and Stroke ins fmml         3, 7 x 3.4 (94 x 96)           Nominal Power         66 hp           Cooling         Liquid           Governor         Electronic           Governor Regulation Class         ISO 8528 Part 1 Class G3           Frequency Regulation         Isochronous           Starting Motor & Alternator         10 5:1           Air Cleaner Type         Dry - light dury, single stage           Erbatuat gas flow cu. ft,/minute (num, /minute)         250 (21)           Max. Exhaust temp at full load dogrees = F (PC)         1324 (717)           Max. Exhaust temp at full load dogrees = F (PC)         1324 (717)           Max. Exhaust temp at full load dogrees = F (PC)         1324 (717)           Max. Exhaust temp at full load dogrees = F (PC)         147 (12.66)           COULING SYSTEM         447 (12.66)           Colic cooling air flow - ou. ft,/min (ou. m/min)         447 (1		
Crankshaft speed         1,800 rpm           Type         NQLPG fueled, 4-stroke           Ignition         Spark Plug           Aspiration         Natural           Number of Cylinders         6           Cylinder Arrangement         V-Type           Displacement CID liters)         225.7 (3.7)           Bore and Stroke ins (mm)         3.7 x 3.4 (94 x 86)           Nominal Prover         56 hp           Cooling         Liquid           Governor         Electronic           Governor Regulation Class         ISO 8528 Part 1 Class G3           Frequency Regulation         Isochronous           Starting Motor & Alternator         12 volt           Compression Ratio         10,5.1           Air Cleane Type         Dry - light duty, single stage           Exhaust gas flow cu. ft./min tel (cu.m./minute)         250 (2.1)           Max. Exhaust temp at full load degrees "F (*Cl         1324 (17)           Max. Permissible back pressure - ins H20 (kPA)         1 (20.3)           COOLINS SYSTEM           Engine cooling air flow - cu. ft./min (cu. m/min)         447 (2 86)           Total cooling air flow - cu. ft./min (cu. m/min)         470 (2 86)           Total cooling air flow - cu. ft./min (cu. m/min)         470 (2 86)		
Type		1,800 rpm
Ignition         Spark Plug           Aspiration         Natural           Number of Cylinders         6           Cylinder Arrangement         V-Type           Displacement CID (liters)         225.7 (3.7)           Bore and Stroke ins (mm)         3.7 x 3.4 (94 x 86)           Nominal Power         56 hp           Cooking         Liquid           Governor         Electronic           Governor Regulation Class         ISO 8528 Part 1 Class G3           Frequency Regulation         Isochronous           Starting Motor & Alternator         12 voit           Compression Ratio         10.5:1           Air Cleaner Type         Dry - light duty, single stage           Exhaust gas flow ou. ft./minute (cu.m. /minute)         250 (7.1)           Max. Permissible back pressure - ins H2O (kPA)         81 (20.3)           COOLING SYSTEM         ***           Engine cooling air flow - cu. ft./min (cu. m/min)         445 (12.66)           Alternator cooling flow - cu. ft./min (cu. m/min)         47 (12.66)           Total cooling air flow (engine + alternator + combustion) - cu. ft./min (cu. m/min)         4979 (141)           Max. Operating Temperature - F (**C)         106 (41)           UBBRICATION SYSTEM         ***Classified Temperature - F (**C)         106		
Aspiration Number of Cylinders 6 Cylinder Arengement CID (liters) 225.7 (3.7) Bore and Stroke ins (mm) 3.7 x 3.4 (94 x 86) Nominal Power 56 hp Cooling Liquid Governor Electronic Governor Regulation Class Frequency Regulation Isochronous Starting Motor & Alternator 12 volt Compression Ratio 10.5:1 Air. Cleaner Type Dry Light duty, single stage Exhaust gas flow cu. ft./minute (cu.m./minute) 250 (7.1) Max. Permisable back pressure - ins H2O (kPA) 81 (20.3) COOLING SYSTEM Engine cooling air flow - cu. ft./min (cu. m/min) 4450 (126) Alternator cooling air flow (cu.m. t./min (cu. m/min) 447 (12.66) Total cooling air flow (cu.m. t./min (cu. m/min) 447 (12.66) Total cooling air flow (engine + alternator + combustion) - cu. ft./min (cu. m/min) (2.9) (11.7) Max. Operating Temperature F F C) (2.9) (12.7) ULUBRICATION SYSTEM  ULUBRICATION SYSTEM  ULUBRICATION SYSTEM  Oil Pan Capacity with filter - US gallons (liters) (15.6) Oil Cooler Recommended Lubricating Oil Grade (15.4) (15.6) Oil Cooler Recommended Lubricating Oil Grade (15.4) (15.6) Oil Cooler (15.6) ENGINE ELECTRICAL SYSTEM  Starting motor voltage (12 volt Cool Cranking Amps - minimum (15.6) (12.7) Starting motor voltage (12. volt Cool Cranking Amps - minimum (15.6) (15.6) ENGINE ELECTRICAL SYSTEM  Starting motor voltage (12. volt Cool Cranking Amps - minimum (15.6) (15.6) Oil Corlor (15.6) (15.6) Cool Cranking Amps - minimum (15.6) (15.6) (15.6) Cool Cranking Amps - minimum (15.6) (15.6) (15.6) Cool Cranking Amps - minimum (15.6) (15.6) (15.6) (15.6) (15.6) (15.6) (15.6) (15.6) (15.6) (15.6) (15.6) (15.6) (15.6) (15.6) (15.6) (15.6) (15.6) (15.6) (15.6) (15.6) (15.6) (15.6) (15.6) (15.6) (15.6) (15.6) (15.6) (15.6) (15.6) (15.6) (15.6) (15.6) (15.6) (15.6) (15.6) (15.6) (15.6) (15.6) (15.6) (15.6) (15.6) (15.6) (15.6) (15.6) (15.6) (15.6) (15.6) (15.6) (15.6) (15.6) (15.6) (15.6) (15.6) (15.6) (15.6) (15.6) (15.6) (15.6) (15.6) (15.6) (1		Spark Plug
Cylinder Arrangement         V-Type           Displacement CID (iters)         225.7 (3.7)           Bore and Stroke ins (mm)         3.7 x 3.4 (94 x 86)           Nominal Power         66 hp           Cooling         Liquid           Governor         Electronic           Governor Regulation Class         ISO 8528 Part 1 Class G3           Frequency Regulation         Isochronous           Starting Motor & Alternator         12 volt           Compression Ratio         10.5:1           Air Cleaner Type         Dry - light duty, single stage           Exhaust gas flow cu. ft./minute (cu.m. /minute)         250 (7.1)           Max. Exhaust temp at full load degrees "F ("C)         1324 (717)           Max. Permissible back pressure - ins H2O (kPA)         81 (20.3)           COOLING SYSTEM         81 (20.3)           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 air flow (engine + alternator + combustion) - cu. ft./min (cu. m/min)         2.9 (11.7)           Max. Operating Temperature "F ("C)         106 (41)           LUBRICATION SYSTEM         2.9 (11.7)	Aspiration	Natural
Displacement CID (liters)   225.7 (3.7)	Number of Cylinders	6
Bore and Stroke ins (mm)   3.7 x 3.4 (94 x 86)     Nominal Power   56 hp     Cooling   Liquid     Governor   Electronic     Governor Regulation Class   ISO 8528 Part 1 Class G3     Frequency Regulation   Isochronous     Starting Motor & Alternator   12 volt     Compression Ratio   10.5:1     Air Cleaner Type   Dry - light duty, single stage     Exhaust gas flow cu. ft./minute (cu.m./minute)   250 (7.1)     Max. Exhaust temp at full load degrees *F (*C)   1324 (717)     Max. Permissible bayerssure - ins H2O (kPA)   81 (20.3)     COOLING SYSTEM     Engine cooling air flow - cu. ft./min (cu. m/min)   447 (12.66)     Total cooling air flow - cu. ft./min (cu. m/min)   447 (12.66)     Total cooling againty - US gallons (liters)   2.9 (11.7)     Max. Operating Temperature *F (*C)   106 (41)     LUBRICATION SYSTEM     Coll Cooler   Varier - cooled     Recommended Lubricating Oil Grade   34.5 (5.6)     Oil Cooler   SAE 5W20 - refer to owners manual     Oil pressure - psi (kPA)   30-50 (207-344)     ENGINE ELECTRICAL SYSTEM     Starting motor voltage   12 volt     Cold Cranking Amps - minimum   86 Amp     Battery Charging Alternantor	Cylinder Arrangement	V-Type
Nominal Power         56 hp           Cooling         Liquid           Governor         Electronic           Governor Regulation Class         ISO 8528 Part 1 Class G3           Frequency Regulation         Isochronous           Starting Motor & Alternator         12 volt           Compression Ratio         10.5:1           Air Cleaner Type         Dry - light duty, single stage           Exhaust gas flow cu. ft./minute (cu.m./minute)         250 (7.1)           Max. Exhaust temp at full load dagrees *F (*C)         1324 (717)           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 require + alternator + combustion) - cu. ft./min (cu. m/min)         4979 (141)           Max. Operating Temperature *F (*C)         106 (41)           LUBRICATION SYSTEM         Use (2012)           Oil Ran 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	Displacement CID (liters)	225.7 (3.7)
Cooling         Liquid           Governor         Electronic           Governor Regulation Class         ISO 8528 Part 1 Class G3           Frequency Regulation         Isochronous           Starting Motor & Alternator         12 volt           Compression Ratio         10.5:1           Air Cleaner Type         Dry - light duty, single stage           Exhaust gas flow cu. ft./minute (cu.m./minute)         250 (71)           Max. Exhaust temp at full load degrees "F ("C)         1324 (717)           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 lengine + 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 ho	Bore and Stroke ins (mm)	3.7 x 3.4 (94 x 86)
Governor Regulation Class ISO 8528 Part 1 Class G3 Frequency Regulation Isochronous Starting Motor & Alternator 12 volt Compression Ratio 10.5:1 Air Cleaner Type Dry - light duty, single stage Exhaust gas flow cu. ft./minute (cu.m. /minute) 250 (7.1) Max. Exhaust temp at full load degrees °F (°C) 1324 (717) Max. Parmissible 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) 106 (41)  LUBRICATION SYSTEM  Dil Pan Capacity with filter - US gallons (liters) 1.5 (5.6) Dil 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 Battery Charging Alternantor	Nominal Power	56 hp
Sovernor Regulation Class   ISO 8528 Part 1 Class G3	Cooling	Liquid
Frequency Regulation Isochronous  Starting Motor & Alternator 12 volt  Compression Ratio 10.5:1  Air Cleaner Type Dry - light duty, single stage  Exhaust gas flow cu. ft./minute (cu.m. /minute) 250 (7.1)  Max. Exhaust temp at full load degrees °F (°C) 1324 (717)  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 air 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	Governor	Electronic
Starting Motor & Alternator  Compression Ratio  Air Cleaner Type  Dry - light duty, single stage  Exhaust gas flow cu. ft./minute (cu.m. /minute)  250 (7.1)  Max. Exhaust temp at full load degrees °F (°C)  1324 (717)  Max. Permissible back pressure - ins H2O (kPA)  81 (20.3)  COOLING SYSTEM  Engine cooling air flow - cu. ft./min (cu. m/min)  Alternator cooling air flow - cu. ft./min (cu. m/min)  Alternator cooling air flow (engine + alternator + combustion) - cu. ft./min (cu. m/min)  Total cooling aar flow (engine + alternator + combustion) - cu. ft./min (cu. m/min)  Aav. Operating Temperature °F (°C)  106 (41)  LUBRICATION SYSTEM  Oil Pan Capacity with filter - US gallons (liters)  Oil Cooler  Recommended Lubricating Oil Grade  Oil consumption at full load  1 quart every 400 hours  Oil pressure - psi (kPA)  ENGINE ELECTRICAL SYSTEM  Starting motor voltage  12 volt  Cold Cranking Amps - minimum  Battery Charging Alternantor	Governor Regulation Class	ISO 8528 Part 1 Class G3
Compression Ratio  Air Cleaner Type  Dry - light duty, single stage  Exhaust gas flow cu. ft./minute (cu.m. /minute)  250 (7.1)  Max. Exhaust temp at full load degrees °F (°C)  1324 (717)  Max. Permissible back pressure - ins H2O (kPA)  81 (20.3)  COOLING SYSTEM  Engine cooling air flow - cu. ft./min (cu. m/min)  Atternator cooling air flow - cu. ft./min (cu. m/min)  Atternator cooling air flow (engine + alternator + combustion) - 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  Battery Charging Alternantor	Frequency Regulation	Isochronous
Air Cleaner Type Dry - light duty, single stage  Exhaust gas flow cu. ft./minute (cu.m. /minute)  Exhaust gas flow cu. ft./minute (cu.m. /minute)  Max. Exhaust temp at full load degrees °F (°C)  Max. Permissible back pressure - ins H2O (kPA)  81 (20.3)  COOLING SYSTEM  Engine cooling air flow - cu. ft./min (cu. m/min)  Alternator cooling flow - cu. ft./min (cu. m/min)  Alternator cooling flow - cu. ft./min (cu. m/min)  At 7 (12.66)  Alternator 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)  Brill FLECTRICAL SYSTEM  Starting motor voltage  12 volt  Cold Cranking Amps - minimum  Battery Charging Alternantor	Starting Motor & Alternator	12 volt
Exhaust gas flow cu. ft./minute (cu.m. /minute)  250 (71)  Max. Exhaust temp at full load degrees °F (°C)  Max. Permissible back pressure - ins H2O (kPA)  81 (20.3)  COOLING SYSTEM  Engine cooling air flow - cu. ft./min (cu. m/min)  Alternator cooling flow - cu. ft./min (cu. m/min)  Alternator cooling flow - cu. ft./min (cu. m/min)  Alternator cooling flow one - cu. ft./min (cu. m/min)  Alternator cooling air flow (engine + alternator + combustion) - cu. ft./min (cu. m/min)  Total cooling apacity - US gallons (liters)  Alternator System  Oil Pan Capacity with filter - US gallons (liters)  1.5 (5.6)  Oil Cooler  Water - cooled  Recommended Lubricating Oil Grade  Oil consumption at full load  1 quart every 400 hours  Oil pressure - psi (kPA)  Starting motor voltage  12 volt  Cold Cranking Amps - minimum  Battery Charging Alternantor	Compression Ratio	10.5:1
Max. Exhaust temp at full load degrees °F (°C) 1324 (717)  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	Air Cleaner Type	Dry - light duty, single stage
Max. Permissible back pressure - ins H2O (kPA )  COOLING SYSTEM  Engine cooling air flow - cu. ft./min (cu. m/min)  Alternator cooling flow - cu. ft./min (cu. m/min)  Alternator cooling flow - cu. ft./min (cu. m/min)  Alternator cooling flow - cu. ft./min (cu. m/min)  At (12.66)  Total cooling air flow (engine + alternator + combustion) - cu. ft./min (cu. m/min)  Total cooling capacity - US gallons (liters)  Alternator cooling flow engine + alternator + combustion) - cu. ft./min (cu. m/min)  April (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)  ENGINE ELECTRICAL SYSTEM  Starting motor voltage  12 volt  Cold Cranking Amps - minimum  Battery Charging Alternantor	Exhaust gas flow cu. ft./minute (cu.m. /minute)	250 (7.1)
Engine cooling air flow - cu. ft./min (cu. m/min)  Atternator cooling flow (engine + alternator + combustion) - cu. ft./min (cu. m/min)  Total cooling air flow (engine + alternator + combustion) - cu. ft./min (cu. m/min)  Total cooling capacity - US gallons (liters)  Alex. 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)  Starting motor voltage  12 volt  Cold Cranking Amps - minimum  66 Amp  Battery Charging Alternantor	Max. Exhaust temp at full load degrees °F (°C)	1324 (717)
Engine cooling air flow - cu. ft./min (cu. m/min)  Alternator cooling flow - cu. ft./min (cu. m/min)  Alternator cooling flow - cu. ft./min (cu. m/min)  Alternator cooling flow - cu. ft./min (cu. m/min)  Total cooling air flow (engine + alternator + combustion) - cu. ft./min (cu. m/min)  Total cooling capacity - US gallons (liters)  Alternator e° F (°C)  Did (41)  LUBRICATION SYSTEM  Oil Pan Capacity with filter - US gallons (liters)  1.5 (5.6)  Oil Cooler  Recommended Lubricating Oil Grade  SAE 5W20 - refer to owners manual  Oil consumption at full load  1 quart every 400 hours  Oil pressure – psi (kPA)  STATING MORE  ENGINE ELECTRICAL SYSTEM  Starting motor voltage  Cold Cranking Amps - minimum  Battery Charging Alternantor	Max. Permissible back pressure - ins H2O (kPA )	81 (20.3)
Alternator cooling flow - cu. ft./min (cu. m/min)  Total cooling air flow (engine + alternator + combustion) - cu. ft./min (cu. m/min)  Total cooling capacity - US gallons (liters)  Alternator cooling flow engine + alternator + combustion) - cu. ft./min (cu. m/min)  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)  SNICINE ELECTRICAL SYSTEM  Starting motor voltage  12 volt  Cold Cranking Amps - minimum  66 Amp  Battery Charging Alternantor	COOLING SYSTEM	
Total cooling air flow (engine + alternator + combustion) - cu. ft./min (cu. m/min)  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)  Starting motor voltage  12 volt  Cold Cranking Amps - minimum  Battery Charging Alternantor	Engine cooling air flow - cu. ft./min (cu. m/min)	4450 (126)
Total cooling capacity - US gallons (liters)  Max. Operating Temperature °F (°C)  106 (41)  LUBRICATION SYSTEM  Oil Pan Capacity with filter - US gallons (liters)  Oil Cooler  Recommended Lubricating Oil Grade  Oil consumption at full load  Oil pressure - psi (kPA)  ENGINE ELECTRICAL SYSTEM  Starting motor voltage  12 volt  Cold Cranking Amps - minimum  Battery Charging Alternantor	Alternator cooling flow - cu. ft./min (cu. m/min)	447 (12.66)
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	Total cooling air flow (engine + alternator + combustion) - cu. ft./min (cu. m/min)	4979 (141)
Coil Pan Capacity with filter - US gallons (liters)  Oil Cooler  Recommended Lubricating Oil Grade  Oil consumption at full load  Oil pressure – psi (kPA)  ENGINE ELECTRICAL SYSTEM  Starting motor voltage  Cold Cranking Amps - minimum  Battery Charging Alternantor	Total cooling capacity - US gallons (liters)	2.9 (11.7)
Oil Pan Capacity with filter - US gallons (liters)  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)  Starting motor voltage  Starting motor voltage  12 volt  Cold Cranking Amps - minimum  Battery Charging Alternantor	Max. Operating Temperature °F (°C)	106 (41)
Oil Pan Capacity with filter - US gallons (liters)  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)  Starting motor voltage  Starting motor voltage  12 volt  Cold Cranking Amps - minimum  Battery Charging Alternantor	LUBRICATION SYSTEM	
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	Oil Pan Capacity with filter - US gallons (liters)	1.5 (5.6)
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	Oil Cooler	Water - cooled
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	Recommended Lubricating Oil Grade	SAE 5W20 - refer to owners manual
Oil pressure – psi (kPA)  ENGINE ELECTRICAL SYSTEM  Starting motor voltage  12 volt  Cold Cranking Amps - minimum  66 Amp  Battery Charging Alternantor		1 quart every 400 hours
ENGINE ELECTRICAL SYSTEM  Starting motor voltage 12 volt  Cold Cranking Amps - minimum 66 Amp  Battery Charging Alternantor	<u> </u>	· · ·
Starting motor voltage 12 volt  Cold Cranking Amps - minimum 66 Amp  Battery Charging Alternantor		
Cold Cranking Amps - minimum 66 Amp  Battery Charging Alternantor		12 volt
Battery Charging Alternantor		
Pattory Supporty 740 Arrips		740 Amns
	Sattory Suputity	, 10 , 411po







## APPLICATION DATA

FUEL SYSTEM	
Fuel type	LPG or Natural Gas, vapor withdrawl
Fuel supply line - inlet (NG)	1" 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	4.76
NG - cu. ft./hour (cu. m/hour) at 100% standby rating	420.5
LPG - Gal/hour at 75% standby rating	3.73
NG - cu. ft./hour (cu. m/hour) at 75% standby rating	336
LPG - Gal/hour at 50% standby rating	2.73
NG - cu. ft./hour (cu. m/hour) at 50% standby rating	251.9
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			









## 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.

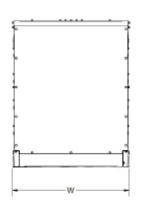
Engine Alarms Included: High coolant temperature, low oil pressure, low coolant level, unexpected shutdown, low fuel level, stop failure, low battery voltage, battery charging alternator failure, over-speed, under-speed, start failure and emergency stop. Support of engines with ECU (J1939, Modbus and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

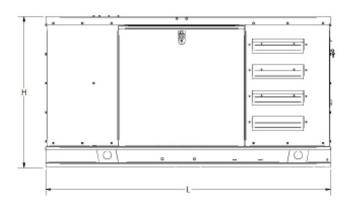


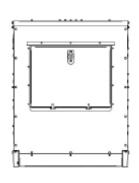
Alternator Alarms Included: Overload, unbalanced voltage, over voltage, under voltage, over frequency, under frequency, short circuit and reverse power.

### DIMENSIONS, WEIGHTS & SOUND LEVELS

#### **ENCLOSED SET**







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

<sup>\*</sup>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







