HIPOWER®

SafeGuard[™] DIESEL GENERATOR SET

HYSG-30

60Hz STANDBY UL2200 & CSA



VOLTAGE VAC	120/240V	120/208V	139/240V	277/480V	347/600V**
RATING	Standby	Standby	Standby	Standby	Standby
PHASE	1	3	3	3	3
PF	1.0	0.8	0.8	0.8	0.8
HZ	60	60	60	60	60
KW	30	30	30	30	30
KVA	30	37.5	37.5	37.5	37.5
AMPS	125	104	90	45	36
SKVA@30% VOLTAGE DIP	N/A	N/A	N/A	N/A	N/A

** 600 Volt configuration not available as UL2200 certified generator

Description

HIPOWER[®] SafeGuard[™] generators are an efficient, reliable and versatile source of mobile electrical power. Designed to operate in the most extreme working conditions. All HIPOWER® SafeGuard[™] Generators combine an 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. Powered by a radiator-cooled, industrial YANMAR Diesel engine, which meets current Environmental Protection Agency (EPA) TIER 4 Interim 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 °C alternator winding temperature rise.

HIPOWER® Features and Benefits

YANMAR Diesel Engine: Long-life, heavy-duty, 4-cycle, direct injection engine 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: ISO 8528-5.

HIPOWER® Features and Benefits

Enclosure: Fabricated in 11-gauge steel, powder coated with finish that exceeds 1000-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.

Fuel Filtration: Standard and secondary water separator with visible level on fuel filters.

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. Load Connections: Covered distribution panel for easy access to cable power outlets, receptacles, lugs and Camloks.





30kW/60Hz/STANDBY/1800RPM

APPLICATION DATA

ENGINE SPECIFICATION	
Manufacturer	YANMAR
Model	4TNV98-ZGGEH
EPA certified	Tier 4 i
Crankshaft speed	1,800 rpm
Туре	Diesel, 4-stroke
Injection	Direct
Aspiration	Natural
Number of Cylinders	4
Cylinder arrangement	In-line
Displacement CID (liters)	202.5 (3.319)
Bore and Stroke ins (mm)	3.85 X 4.33 (98 X 110)
Nominal power	54.7 hp
Cooling	Liquid
Governor	Electronic
Governor Regulation Class	ISO 8528 Part 1 Class G3
Frequency Regulation	Isochronous
Starting motor & alternator	12 volt
Compression ratio	18.5:1
Air cleaner type	Dry - light duty, single stage
Exhaust gas flow cu. ft./minute (cu.m. /minute)	371.1 (10.51)
Max. Exhaust temp at full load degrees °F (°C)	1067 (575)
Max. permissible back pressure - ins H2O (kPA)	51.2 (12.75)
COOLING SYSTEM	
Engine cooling air flow - cu. ft./min (cu. m/min)	41,53 (1.176)
Alternator cooling flow - cu. ft./min (cu. m/min)	5.66 (0.165)
Total cooling air flow (engine + alternator + combustion) - cu. ft./min (cu. m/min)	48.93 (1.385)
Total cooling capacity - US gallons (liters)	2.37 (9)
Max. Operating Temperature °F (°C)	149 (65)
LUBRICATION SYSTEM	
Oil pan capacity - US gallons (liters)	2.5 (9.5)
Oil pan capacity with filter - US gallons (liters)	2.7 (10.2)
Oil cooler	Water - cooled
Recommended lubricating oil grade	SAE 10W30 - API (CF, CF-4, CI-4) - refer to owners manual
Oil consumption at full load	0.14% of fuel
Oil pressure – psi (kPA)	48.35 (333.3)
ENGINE ELECTRICAL SYSTEM Starting motor voltage	12 volt
Cold Cranking Amps - minimum	70 Amp
Battery charging Alternantor	770 Anne
Battery capacity	770 Amps

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

FUEL SYTEM Recommende fuel # 2-ULSD Rele supply line, min. ID mmlin.) 0.19 (9) Fuel return line, min. ID, mm (in.) 0.19 (9) Max. Iff, fuel pump, type, m (ft) 188 (6) Fuel filter Replaceable Element FUEL COMPSUITION 2.86 100% load - US gailons/hour 2.1 20% load - US gailons/hour 1.46 25% load - US gailons/hour 1.5 25		
Fuel supply line, min. ID mm(in.) 0.19 (9) Fuel return line, min. ID, mm (in.) 0.19 (9) Max. Iff, fuel jump, type, m (th) 186 (6) Fuel titter Replaceable Element FUEL COMPSIVITION Standary Power Rating 100% load - US gallons/hour 2.66 75% load - US gallons/hour 2.1 60% load - US gallons/hour (litters) 1.46 25% load - US gallons/hour (litters) 1.15 AUTERNATOR SPECIFICATION Total Marufacturer STAMFORD Model STAMFORD Votages 120/208V - 277/480 - 120/240V - 347/600V Atternator Type Four pole, rotating field Excitation System 80/810 Number of leads 12/840° - 347/800V Stator Pitch 2/3 Insulation 12/840° C Votages 12/840° C Stator Pitch 2/840° C Stator Pitch 12/840° C Stator Pitch 12/840° C Stator Pitch 12/840° C Stator Pitch 12/840° C Stator Hi		
Fuel return tine, min. 1D, mm (in.) 0.919 (9) Max. Ift, fuel pump, type, m (ft) 186 (6) Fuel fubr Replaceable Element FUEL COMPSUITION Standary Access Paining 100% load - US galons/hour 2.88 75% load - US galons/hour (filters) 1.46 25% load - US galons/hour (filters) 1.15 ACTENATOR SPECIFICATION Table (Filter (Fil		
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FUEL COMPSUNTION Standary Power Pating 100% load - US gallons/hour 2.86 75% load - US gallons/hour 1.46 25% load - US gallons/hour (titers) 1.16 25% load - US gallons/hour (titers) 1.15 ATTENATOR SPECIFICATION TUS Model STAMFOD Model S1L2-K1 - S1L2-H1 - P1144G Voltages 120208/ - 277/480 - 120/240/ - 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) - 4 leads dedicated (Single phase) Stator Pitch 2/3 Insulation Class H Vindings - Temperature Rise 12/5/40° C Enclosure (IEC-34-S) IP23 Bearing Single, sealed Coupling File Attage regulation - no load to full load with AS480 AVR 1% TF -50 Rado Frequency Emissions compliance Keet requirements of most industrial and commercial applications The Anottisceuster Smaximum <		
100% load - US galons/hour2.8675% load - US galons/hour1.4650% load - US galons/hour (iters)1.1525% load - US galons/hour (iters)1.15AUTERNATOR SPECIFICATIONManufacturerSTAMFORDModel1.20/208V - 277/480 - 120/240V - 347/600VVoltages120/208V - 277/480 - 120/240V - 347/600VAlternator TypeFour pole, rotating fieldExcitation System8ushlessPower factor0.88 / 10Number of leads12 leads, reconnectable (three phase) - 4 leads dedicated (Single phase)Stator Pitch2/3InsulationClass HWindings - Temperature Rise125/40° CEnclosure (IEC-34-S)IP23BersingSingle, sealedCouplingFullVoltage regulation - no load to full load with AS480 AVR4 1%TIF<50		
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146 US galons/hour 146 25% load - US galons/hour (liters) 1.15 ATERNATOR SPECIFICATION STAMFORD Model S12_K1-S1L2_J1-S1L2_H1 - P1144G Votages 120/208V - 277/480 - 120/240V - 347/600V Atternator Type Four pole, rotating field Excitation System Brushless Power factor 0.8 / 10 Number of leads 12 leads, reconnectable (three phase) - 4 leads dedicated (Single phase) Stator Pitch 2/3 Insulation Class H Vindings – Temperature Rise 126/40° C Enclosure (IEC.34-S) Four pole, rotating field Vindings – Temperature Rise 126/40° C Enclosure (IEC.34-S) IP23 Bearing Single, sealed Coupling Fluible disc Attor sequency Emissions compliance 41% TIF <50	100% load – US gallons/hour	2.86
25% load-US galons/hour (liters) 1.15 ALTERNATOR SPECIFICATION STAMFORD Mondracturer STAMFORD Model S112-K1 - S112-J1 - S112-H1 - P1144G Voltages 120/208V - 277/480 - 120/240V - 347/600V Alternator Type Four pole, rotating field Excitation System Brushless Power factor 0.8/10 Number of leads 12 leads, reconnectable (three phase) - 4 leads dedicated (Single phase) Stator Pitch 2/3 Insulation Class H Vindings – Temperature Rise 128/40° C Enclosure (IEC-34-S) IP23 Bearing Single, sealed Coupling Four bolat of ull load with AS480 AVR Violtage regulation – no load to full load with AS480 AVR 1 % TIF <50	75% load - US gallons/hour	2.1
ATERNATOR SPECIFICATIONManufacturerSTAMFORDModelS1L2-K1 - S1L2-J1 - S1L2-H1 - P1144GVoltages120/208V - 277/480 - 120/240V - 347/600VAtternator TypeFour pole, rotating fieldExcitation SystemBrushlessPower factor0.8 / 1.0Number of leads12 leads, reconnectable (three phase) - 4 leads dedicated (Single phase)Stator Pitch2/3InsulationClass HVindings – Temperature Rise129/40° CEarlingSingle, sealedCouplingFluible discAmortisseur windingsFullVitage regulation – no load to full load with AS480 AVR± 1%TIF<50	50% load - US gallons/hour	1.46
ManufacturerSTAMFORDModelS1L2-K1 - S1L2-H1 - P1144GVoltages120/208V - 277/480 - 120/240V - 347/600VAlternator TypeFour pole, rotating fieldExcitation SystemRushlessPower factor0.8 / 1.0Number of leads12 leads, reconnectable (three phase) - 4 leads dedicated (Single phase)Stator Pitch2/3InsulationCleas HVindings - Temperature Rise126/0° CEacingSingle, sealedCouplingFile/ Single discAmortisseur windingsFullVitage regulation - no lead to full load with AS480 AVR4 1%TF<50	25% load - US gallons/hour (liters)	1.15
Model S1L2-K1 - S1L2-H1 - PI144G Voltages S1L2-K1 - S1L2-H1 - PI144G Voltages I20/208V - 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) - 4 leads dedicated (Single phase) Stator Pitch 2/3 Insulation Class H Windings - Temperature Rise 12/40° C Enclosure (IEC-34-S) IP23 Bearing Single, sealed Coupling Full Voltage regulation - no load to full load with AS480 AVR + 1% TIF <50	ALTERNATOR SPECIFICATION	
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Alternator TypeFour pole, rotating fieldAlternator TypeFour pole, rotating fieldExcitation SystemBrushlessPower factor0.8 / 1.0Number of leads12 leads, reconnectable (three phase) - 4 leads dedicated (Single phase)Stator Pitch2/3InsulationClass HWindings - Temperature Rise125/40° CEnclosure (IEC-34-S)IP23BearingSingle, sealedCouplingFlexible discAnortisseur windingsFullVoltage regulation - no load to full load with AS480 AVR± 1%TIF<50	Model	S1L2-K1 - S1L2-J1 - S1L2-H1 - PI144G
Excitation SystemBrushlessPower factor0.8 / 1.0Number of leads12 leads, reconnectable (three phase) - 4 leads dedicated (Single phase)Stator Pitch2/3InsulationClass HWindings - Temperature Rise125/40° CEnclosure (IEC-34-S)IP23BearingSingle, sealedCouplingFlexible discVoltage regulation - no load to full load with AS480 AVR± 1%TIF<50	Voltages	120/208V - 277/480 - 120/240V - 347/600V
Power factor0.8 / 10Number of leads12 leads, reconnectable (three phase) - 4 leads dedicated (Single phase)Stator Pitch2/3InsulationClass HVindings - Temperature Rise125/40° CEnclosure (IEC-34-S)IP23BearingSingle, sealedCouplingFlexible discAmortisseur windingsFullVoltage regulation - no load to full load with AS480 AVR± 1%TIF<50	Alternator Type	Four pole, rotating field
Number of leads 12 leads, reconnectable (three phase) - 4 leads dedicated (Single phase) 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	Excitation System	Brushless
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	Power factor	0.8 / 1.0
InsulationClass HWindings - Temperature Rise125/40° CEnclosure (IEC-34-S)IP23BearingSingle, sealedCouplingFlexible discAmortisseur windingsFullVoltage regulation - no load to full load with AS480 AVR± 1%TIF<50	Number of leads	12 leads, reconnectable (three phase) - 4 leads dedicated (Single phase)
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	Stator Pitch	2/3
Enclosure (IEC-34-S)IP23BearingSingle, sealedCouplingFlexible discAmortisseur windingsFullVoltage regulation – no load to full load with AS480 AVR± 1%TIF<50	Insulation	Class H
Bearing Single, sealed Coupling Flexible disc Amortisseur windings Full Voltage regulation – no load to full load with AS480 AVR ± 1% TIF <50	Windings – Temperature Rise	125/40° C
Coupling Flexible disc Amortisseur windings Full Voltage regulation – no load to full load with AS480 AVR ± 1% TIF <50	Enclosure (IEC-34-S)	IP23
Amortisseur windings Full Voltage regulation – no load to full load with AS480 AVR ± 1% TIF <50	Bearing	Single, sealed
Voltage regulation - no load to full load with AS480 AVR ± 1% TIF <50	Coupling	Flexible disc
TIF <50	Amortisseur windings	Full
Radio Frequency Emissions compliance Meets requirements of most industrial and commercial applications Line harmonics 5% maximum STANDARD ACCESSORIES • Main line ABB UL listed circuit breaker for overload protection	Voltage regulation - no load to full load with AS480 AVR	± 1%
Line harmonics 5% maximum STANDARD ACCESSORIES • Main line ABB UL listed circuit breaker for overload protection	TIF	<50
STANDARD ACCESSORIES • Radiator with pusher fan • Main line ABB UL listed circuit breaker for overload protection	Radio Frequency Emissions compliance	Meets requirements of most industrial and commercial applications
Radiator with pusher fan Main line ABB UL listed circuit breaker for overload protection	Line harmonics	5% maximum
	STANDARD ACCESSORIES	
Control Panel CEM7 (See over for details) Heated Control Panel	Radiator with pusher fan	Main line ABB UL listed circuit breaker for overload protection
	Control Panel CEM7 (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	• 24h - ULC142 fuel tank			
• Fuel Tank raiser				





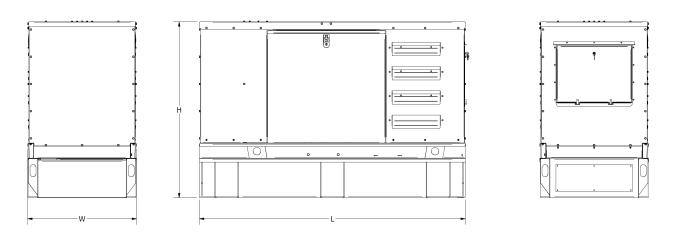
CONTROL SYSTEMS STANDARD FEATURES - Generator Digital Control Panel

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.

DIMENSIONS, WEIGHTS & SOUND LEVELS

ENCLOSED SET



HIPOWER®

reverse power.

• RESET

Alternator alarms included: Overload, unbalanced

voltage, over voltage, under voltage, over

frequency, under frequency, short circuit and

CONFIGURATION	Fuel Tank Data (Standard)		Generator Data *				
	Run Time Hours	Capacity (Gals)	L = Length	W = Width	H = Height	Weight Ibs	dBA
Enclosed Set	24*	70*	88″	36″	45" - (56"*)	1940 - (2640*)	72

* Optional 24h ULC142 fuel tank



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

HIMOINSA POWER SYSTEMS, INC.



Codes and Standards Compliances used where applicable

