HIPOWER®
A YANMAR COMPANY

HS STANDBY DIESEL GENERATOR SET

MODEL

HSY-40

***Not for use or sale in California**

60Hz STANDBY

36kW/60Hz/STANDBY/1800RPM

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	33	36.8	36.9	36.8	36.1
KVA	35	46	46.1	46	45
AMPS	137.5	128.1	110.8	55.4	45.1
SKVA@30% VOLTAGE DIP	N/A	N/A	N/A	N/A	N/A

Description

HIPOWER® HS™ generators are an efficient, reliable and versatile source of stationary electrical power. Designed to operate in the most extreme working conditions. All HIPOWER® HS™ 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 Standby kW 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, 60Hz brushless alternator, and Class H insulation. Automatic voltage regulator (AVR) providing close voltage regulation and skVA starting capability for electric motor loads.

Certification: Generator set is UL 2200 Listed and CSA certified and meets ISO 8528-5.

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.

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	YANMAR
Model	4TNV98ZGGEH
EPA certified	Tier 4 i
Crankshaft speed	1,800 rpm
Type	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	19.0:1
Air cleaner type	Dry - light duty, single stage
Exhaust gas flow cu. ft./minute (cu.m. /minute)	441 (12.5)
Max. Exhaust temp at full load degrees °F (°C)	887 (475)
Max. permissible back pressure - ins H2O (kPA)	39.3 (9.8)
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)	122 (50)
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	66 Amp
Battery charging Alternator	
Battery capacity	740 Amps

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FUEL SYSTEM	
Recommended fuel	# 2 - ULSD
Fuel supply line, min. ID mm(in.)	0.19 (9)
Fuel return line,min. ID, mm (in.)	0.19 (9)
Max. lift, fuel pump, type, m (ft)	1.85 (6)
Fuel filter	Replaceable Element

FUEL COMPSUNTION	Standby Power Rating
100% load – US gallons/hour	3.77
75% load - US gallons/hour	2.82
50% load - US gallons/hour	1.88
25% load - US gallons/hour (liters)	

ALTERNATOR SPECIFICATION	
Manufacturer	STAMFORD
Model	S1L2-N1, S1L2-K1 (600V)
Voltages	120/240V (1 PH) - 120/208 (3 PH) - 277/480 (3PH) - 347/600V (3PH)
Alternator Type	Four pole, rotating field
Excitation System	Brushless
Power factor	0.8 / 1.0
Number of leads	12 leads, reconnectable (three phase) - 12 leads dedicated (600V)
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 AS540 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
• Water Jacket heater	

OPTIONAL ACCESSORIES	
• Battery with Cables	• 6 Amp Battery charger, 12VDC
• Battery Blanket	• 10 Amp Battery charger, 12VDC

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CONTROL SYSTEMS STANDARD FEATURES - Generator Digital Control Panel

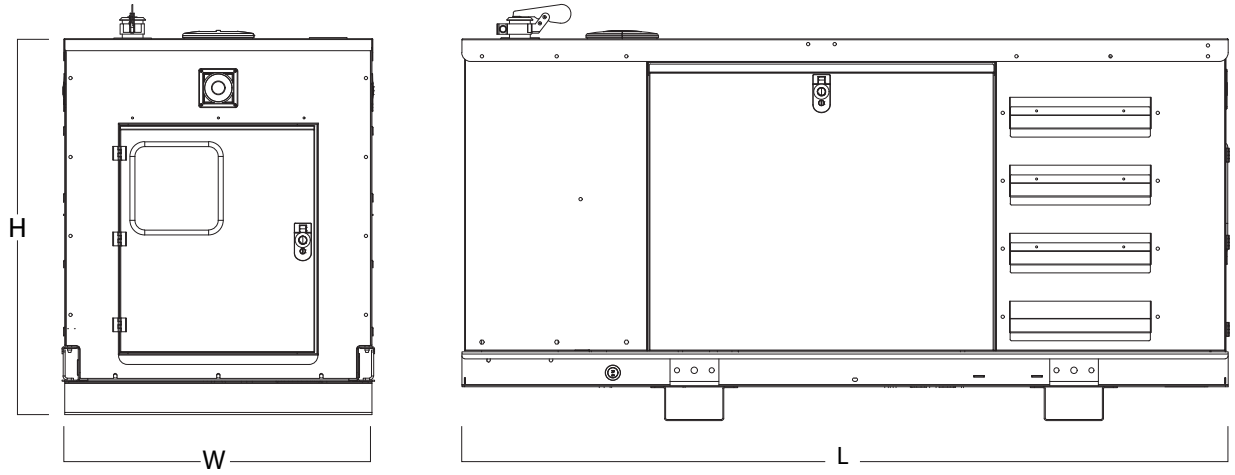
Deep Sea Electronics® Control Panel: DSE7410 digital controller with auto and manual start capability. Digital readout for: volts between each phase & neutral, volts between phases, amps per phase, frequency, kW and kVA power, power factor, KW hour with accumulation by day, month and year, fuel reserve, 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 an 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	Fuel Tank Data (Standard)		Generator Data *				
	Run Time Hours	Capacity (Gals)	L = Length	W = Width	H = Height	Weight lbs	dBA
Enclosed Set	29*	110	88"	36"	48"- (65*)	1900 -(2575*)	68

* Optional 24h ULC142 fuel tank

* All measurements are approximate and for estimation purposes only. Weights are without fuel tank. Sound levels measured at 23ft (7m) and does not account for ambient site conditions.

REV-03

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Intertek

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

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