

MODEL
HRNG-900 T6



60Hz PRIME POWER RATINGS

720kW/60Hz//1800RPM



VOLTAGE VAC	120/240V		120/208V		139/240V		277/480V		347/600V**	
RATING	NG	LP	NG	LP	NG	LP	NG	LP	NG	LP
PHASE	1	1	3	3	3	3	3	3	3	3
PF	1.0	1.0	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8
HZ	60	60	60	60	60	60	60	60	60	60
KW	N/A	N/A	720	459	720	459	720	459	720	460
KVA	N/A	N/A	900	573	900	573	900	573	900	573
AMPS	N/A	N/A	2498	1593	2165	1382	1083	691	866	553

Description

HIPOWER[®] Natural Gas RENTAL generators are an efficient, reliable and versatile source of electrical power that have been designed to operate in the most extreme working conditions. All HIPOWER[®] combines an innovative design and the use of high quality materials that provide the user with the most dependable power that can be relied on for non-stop power with easy to operate controls.

Powered by a radiator-cooled, industrial PSI Spark Ignited engine that meets current Environmental Protection Agency (EPA) exhaust emission regulations, driving a single bearing, four-pole, three-phase alternator, with IP23 protection. The Emergency Power kVA rating is given with a 125 degree °C alternator winding temperature rise.

HIPOWER[®] Features and Benefits

PSI-HD Engine: 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 with Class H insulation. Automatic voltage regulator (AVR) providing close voltage regulation and skVA starting capability for electric motor loads.

HIPOWER[®] Features and Benefits

Enclosure: Fully sound attenuated enclosure, manufactured using 7-gauge steel and thicker for the base; 12-gauge and 14-gauge for the enclosure, Interpon A4700 primer, in combination with Interpon 600 series coatings, are designed for exterior exposure and offers excellent light and weather resistance exceeding 1400-hr salt spray test. A 1" thick layer of durable sound insulating, oil and fire resistant foam material is installed all around the inside of the enclosure to allow high-pressure water cleaning. Vertical air discharge for quiet operation. Wide steel lockable access doors with rubber seals, easy access for maintenance and service activities, lift off Die Cast Zinc hinges textured black powder coat and corrosion resistant hardware and fasteners.

Exhaust: Effective low noise, steel catalytic converter with rain cap.

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.

APPLICATION DATA

ENGINE SPECIFICATION		LUBRICATION SYSTEM	
Manufacturer	PSI Heavy Duty	Oil pan capacity - qts (L)	N/A
Model	40L	Oil pan capacity with filter - qts (L)	154 (146)
EPA certified	Yes	Oil cooler	Liquid
Crankshaft speed	1,800 rpm	Recommended lubricating oil grade	SAE 15W-40 Low Ash Gas engine oil (.25-.5% by wt), API CD/CF or higher
Type	LPG/NG fueled, 4-stroke	Oil consumption at full load	n/a
Ignition	Spark Plug	Oil pressure – psi (kPa)	47 (324)
Aspiration	Charged Cooled Forced Induction	ENGINE ELECTRICAL SYSTEM	
Number of Cylinders	12	Starting motor voltage	24 volt
Cylinder arrangement	V-Type	Cold Cranking Amps - minimum	N/A
Displacement CID (liters)	2392 (39.2)	Battery charging Alternator	55 Amp
Bore and Stroke ins (mm)	5.906x5.906 (150x150)	Battery capacity	1400CCA 1720CA 430RC GROUP SIZE 8D
Nominal power	1110 hp		
Cooling	Liquid		
Governor	Electronic		
Governor Regulation Class	ISO 8528 Part 1 Class G3		
Frequency Regulation	Isochronous		
Starting motor & alternator	24 Volt		
Compression ratio	10.5:1		
Air cleaner type	Dry, replaceable cartridge		
ALTERNATOR SPECIFICATION			
Manufacturer	STAMFORD		
Model 120/208V Three phase	S6L1D-D		
Model 277/480V Three phase	S6L1D-C		
Model 347/600V Three phase	S6L1D-C		
Alternator Type	Four pole, rotating field		
Excitation System	Brushless. PMG-excited		
Power factor	0.8		
Number of leads	12 leads, reconnectable		
Stator Pitch	2/3		
Insulation	Class H		
Windings – Temperature Rise	Class H (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 MX341 AVR	± 1%		
TIF	<50		
Radio Frequency Emissions compliance	Meets requirements of most industrial and commercial applications		
Line harmonics	5% maximum		

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Codes and Standards Compliances used where applicable



STANDARD FEATURES

Enclosure (If selected)	Engine System	Controller
Rust-Proof Fastener with Nylon Washers Protect Finish	Oil Drain Extension	DSE8610 with motorized breaker
High Performance Sound-Absorbing Material (L1)	Air Cleaner	
Gasketed Doors	Fan Guard	Generator set
Air Discharge Hoods for Radiators -Upwards Pointing	Factory Filled Oil	2 Year/3000 hours Limited Warranty
Lift Off Door Hinges	Battery Charging Alternator	Separation of Circuits – Multiple Breakers (load center)
Stainless Steel Lockable Handles	Alternator Systems	Separation of Circuits – High / Low Voltage
Textured Polyester Powder Coat	12 Leads (3-Phase, Non 600V)	Internal Genset Vibration Isolation
Cooling System	Class H Insulation Material	Wrapped Exhaust Piping
Factory-Installed Radiator	Vented Rotor	Standard Factory Testing
Radiator Drain Extension	2/3 Pitch	Emergency Stop
50/50 Ethylene Glycol Antifreeze	Full Load Capacity Alternator	ENGINE SYSTEM
Electrical Systems	Protective Thermal Switch	120V-1ph Water Jacket Heater (with Isolation Valves)
Battery Cables and Battery Tray	Permanent Magnet Excitation	
Batteries	Skewed Stator	
	PMG with MX341	

CONTROL SYSTEM



DSE7410 MKII

- “Protections disabled” feature
- kW protection
- Reverse power (kW) protection
- LED and LCD alarm indication
- Power monitoring (kWh, kVAR, kVAh, kVARh)
- Load switching (load shedding and dummy load outputs)
- Independent Earth Fault trip
- Fuel usage monitor and low fuel alarms
- Configurable display languages
- User selectable simultaneous RS232, RS485 & Ethernet communications
- MODBUS RTU & TCP support
- Multiple date and time scheduler
- Configurable event log (250)
- Configurable MODBUS pages
- Fully configurable via DSE Configuration Suite PC software
- Data logging to assist with fault finding
- PLC editor allows user configurable functions to meet specific application requirements
- Licence-free PC software
- Multiple date and time scheduler
- DSENet® expansion compatible

- Charge alternator failure alarm
- 4-Line back-lit LCD text display
- Front panel editing with PIN protection
- Customisable status screens
- Power save mode
- 11 configurable inputs
- 8 configurable outputs
- Flexible sensor inputs
- Configurable timers and alarms
- 3 configurable maintenance alarms

CONFIGURABLE OPTIONS

ENCLOSURE	ENGINE SYSTEM	ELECTRICAL SYSTEM
Open Skid	Oil heater	Battery Warmer
Level 1 Sound attenuated	Oil Level Makeup	10A Battery Charger
	Auto LP Liquid Withdrawal Fuel System with vaporizer	5A Battery Charger
		10 Positions Load Center (100Amps)
		Remote ESTOP with N3R break glass
ALTERNATOR SYSTEM	CIRCUIT BREAKER OPTIONS	120V GFCI receptacle
Tropical coating	Thermal-Magnetic trip 80% and 100% rated	10A Relay common alarm
Anti-condensation heater	LS/I Electronic trip 80% and 100% rated	10A Run Relay
Alternator upsizing	LSI Electronic trip 80% and 100% rated	8 LED Remote Annunciator on Surface mounted Box
Rheostat	LSIG Electronic trip 80% and 100% rated	16 LED Remote Annunciator on Surface mounted Box
MX321 AVR	Second Main Line Circuit Breaker	24 LED Remote Annunciator on Surface mounted Box
	Auxiliary Contacts for Main and Secondary Breaker	Parallel controller with motorized breaker
	Mechanical Lugs	GENERATOR SET
	Shunt Trip	Extended Factory Load Testing
		Extended Warranty
		Seismic Mounts

ENGINEERED OPTIONS

ENCLOSURE	ENGINE SYSTEM	ELECTRICAL SYSTEM
Snow Hood (only with L2)	Fluid Containment Pan	AC/DC Enclosure Lighting Kit with Timer
Air Outlet Gravity dampers		Enclosure Heater
Air Inlet motorized dampers (only with L2)		240V Twist Lock Receptacle
CIRCUIT BREAKER OPTIONS	CONTROL SYSTEM	GENERATOR SET
3rd Breaker System	Spare inputs (x4) / output (x4)	Special Testing
Shunt Trip on 3rd Breaker	DSE8610 - Parallel controller with motorized CB	
Auxiliary contact on 3rd Breaker	DSE2130 - DSENet Input Expansion Module	
	DSE2157 - DSENet Output Expansion Module	
	DSE855 - DSENet USB to Ethernet ModBus TCP/IP Communication Module	
	DSE892 - DSENet USB to Ethernet ModBus TCP/IP - SNMP Comm. Module	
	DSE2520 - Remote Display Module	

OPERATING DATA

FUEL SYSTEM	
Fuel type	Natural Gas, vapor withdrawal
Fuel supply line - inlet	2" NPTF
*Natural gas and LPG fuel supply pressure - in. column H2O (kPa)	NG (30PSI) - LPG 7" to 11" column H2O - (1.7 - 2.7 kPa)

FUEL CONSUMPTION (PRIME RATING) - NATURAL GAS (Measured at genset fuel inlet, downstream of any dry fuel or filter accessories)	m3/h	ft3/h	BTU/h
100% load	252	8,903	8,903,000
75% load	194	6,858	6,858,000
50% load	142	5,016	5,016,000
25% load	92	3,264	3,265,000

FUEL CONSUMPTION (PRIME RATING) - LPG (Measured at genset fuel inlet, downstream of any dry fuel or filter accessories)	m3/h	ft3/h	BTU/h
100% load	321	75	
75% load	239	56	
50% load	172	40	
25% load	115	27	

COOLING SYSTEM		
Engine cooling air flow	cfm (m ³ /min)	52,000 (1,472)
Alternator cooling flow	cfm (m ³ /min)	3,638 (103)
Combustion air flow	cfm (m ³ /min)	1,063 (30)
Total cooling air flow (engine+alternator+combustion)	cfm (m ³ /min)	56,701 (1,605)
Total cooling capacity	US gallons (liters)	45.4 (172)
Max. Operating Temperature	°F (°C)	122 (50)

Starting Capabilities (sKVA)

	480V					208/240V					600V				
	10%	15%	20%	25%	30%	10%	15%	20%	25%	30%	10%	15%	20%	25%	30%
Standard	650	875	1250	1650	2150	600	950	1350	1800	2300	675	925	1300	1750	2250
Upsized	800	1250	1800	2400	3100	550	850	1225	1650	2100	800	1250	1800	2400	3100

Circuit Breaker

	277/480V	120/208V	120/240V	347/600V
Make and model	ABB T7SB1DB000000XX	ABB T8VBE3HC00000XX	ABB T8VBE3HC00000XX	ABB T7SB1DB000000XX
Amps	1200 A	2500 A	2500 A	1000 A

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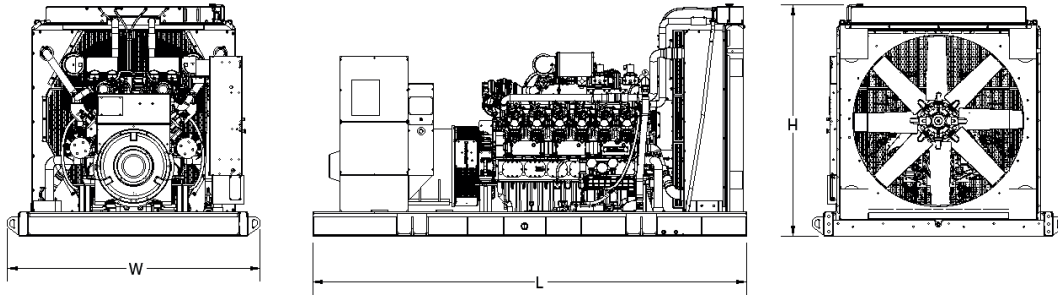
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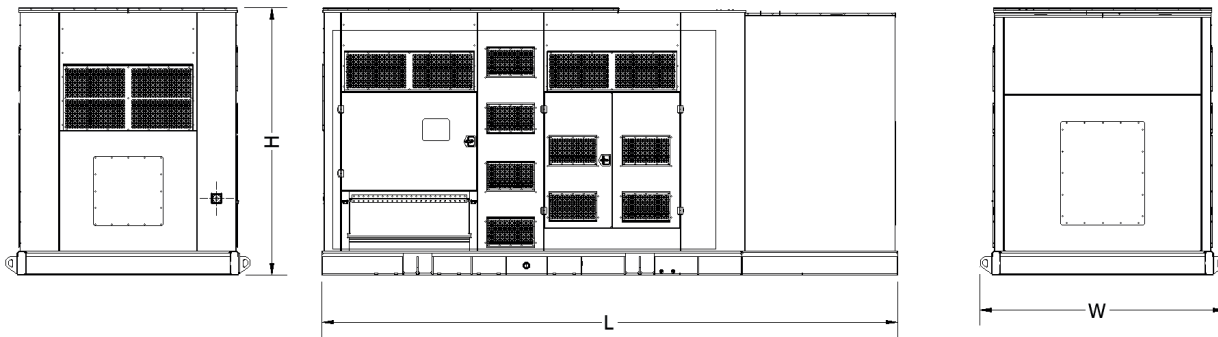
Codes and Standards Compliances used where applicable



DIMENSIONS, WEIGHTS & SOUND LEVELS



CONFIGURATION	RUN TIME (HOURS)	USABLE CAPACITY (Gal.)	L = Length	W = Width	H = Height	Weight lbs	dBA
OPEN SET	N/A	N/A	170"	102"	105"	18,800	TBD



CONFIGURATION	RUN TIME (HOURS)	USABLE CAPACITY (Gal.)	L = Length	W = Width	H = Height	Weight lbs	dBA
LEVEL 1 ENCLOSURE	N/A	N/A	240"	102"	112"	22,500	TBD

* 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.

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