

MODEL
HNI-500

60Hz | STANDBY POWER

500kW | 1800RPM



VOLTAGE VAC	120/240V	120/208V	139/240V	277/480V	347/600V**
RATING	Standby	Standby	Standby	Standby	Standby
PHASE	N/A	3	3	3	3
PF	N/A	0.8	0.8	0.8	0.8
HZ	N/A	60	60	60	60
KW	N/A	500	500	500	500
KVA	N/A	625	625	625	625
AMPS	N/A	1734	1503	751	601

DESCRIPTION

HIPOWER[®] Heavy Duty Industrial generators are an efficient, reliable and versatile source of back-up electrical power that have been designed to operate in the most extreme working conditions. All HIPOWER[®] Heavy Duty Industrial generators combine 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 Engine: Long-life, heavy-duty, 4-cycle, spark-ignited 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, PMG-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.

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

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 - US quarts (L)	11 (10.4)
Model	21.9L HO	Oil pan capacity w/ filter - US quarts (L)	42.4 (40)
EPA certified	Yes	Oil cooler	Liquid
Crankshaft speed	1,800 rpm	Recommended lubricating oil grade	SAE 5W-30 LOW ASH OIL API RATING OF CP/CF OR HIGHER
Type	NG fueled, 4-stroke	Oil consumption at full load	N/A
Ignition	Spark Plug	Oil pressure @ 1000 RPM – psi (kPA)	58 (400)
Aspiration	Charged Cooled Forced Induction	ENGINE ELECTRICAL SYSTEM	
Number of Cylinders	12	Starting motor voltage	12 volt
Cylinder arrangement	V-Type	Cold Cranking Amps - minimum	N/A
Displacement CID (liters)	1388 (21.9)	Battery charging Alternator	60 Amp
Bore and Stroke ins (mm)	5 x 5.6 (128 x 142)	Battery capacity	650CCA 850CA 115RC GROUP SIZE 24F
Nominal power	764 hp		
Cooling	Liquid		
Governor	Electronic		
Governor Regulation Class	ISO 8528 Part 1 Class G1		
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	HCI534E		
Model 277/480V Three phase	HCI534D		
Model 347/600V Three phase	HCI534D		
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		

HIMOINSA POWER SYSTEMS, INC.

16600 S. Theden Street, Olathe, KS 66062

Toll Free: 866-710-2988 | HIPOWERSYSTEMS.COM

Codes and Standards Compliances used where applicable



STANDARD FEATURES

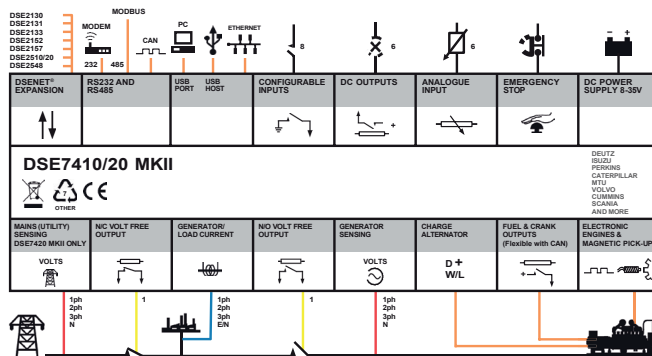
ENCLOSURE (If selected)	ENGINE SYSTEM	GENERATOR SET
Rust-Proof Fastener with Rubber Washers Protect Finish	Oil Drain Extension w/ Valve	Internal Genset Vibration Isolation
High Performance Sound-Absorbing Material	Air Cleaner	Separation of Circuits – High / Low Voltage
Gasketed Doors	Fan Guard	Wrapped Exhaust Piping
Air Discharge Hoods for Radiators- Upwards Pointing	Factory Filled Oil	Standard Factory Testing
Lift Off Door Hinges	Battery Charging Alternator	2 Year/2000 Hours Limited Warranty
Stainless Steel Lockable Handles	ALTERNATOR SYSTEMS	Emergency Stop
Textured Polyester Powder Coat + Primer	12 Leads (3-Phase, Non-600V)	ELECTRICAL SYSTEMS
COOLING SYSTEM	Class H Insulation Material	Battery
Factory-Installed Radiator	Vented Rotor 2/3 Pitch	Battery Cables
Radiator Drain Extension w/ Valve	Full Load Capacity Alternator	Battery Tray
50/50 Ethylene Glycol Antifreeze	Protective Thermal Switch	DSE 7410 Controller
	PMG w/ MX341 AVR	

CONTROL SYSTEM



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

- “Protections disabled” feature
- kW protection
- Reverse power (kW) protection
- LED and LCD alarm indication
- Power monitoring (kWh, kVA, 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
- License-free PC software
- Multiple date and time scheduler
- DSENet® expansion compatible
- PLC editor allows user configurable functions to meet specific applications requirements.



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CONFIGURABLE OPTIONS

ENCLOSURE	ENGINE SYSTEM	CIRCUIT BREAKER OPTIONS
Open Skid	Water Jacket Heater (w/ Isolation Valves)	LSI Electronic Trip 80% and 100% Rated
Level 1 Sound Attenuation	ELECTRICAL SYSTEM	LS/I Electronic Trip 80% and 100% Rated
Level 2 Sound Attenuation	Battery Warmer	LSIG Electronic Trip 80% and 100% Rated
Level 1 Sound Attenuation (Aluminum Enclosure)	Battery Charger	Thermo-Magnetic Trip 80% and 100% Rated
Level 2 Sound Attenuation (Aluminum Enclosure)	10 Positions Load Center (100 Amps)	Second Main Line Circuit Breaker
ALTERNATOR SYSTEM	Remote ESTOP with N3R Break Glass	Shunt Trip
Anti-Condensation Heater	120V GFCI Receptacle	Auxiliary Contacts for MLCB
PMG w/ MX321 AVR or DSE A109	10A Relay Common Alarm	Auxiliary Contacts for Secondary Breaker
Rheostat	10A Run Relay	Mechanical Lugs
CONTROL SYSTEM	Control Panel Heater	GENERATOR SET
Spare Inputs (4x) / Output (4x)	8, 16, & 24 LEDs Remote Annunciator on Surface Mounted Box	Extended Testing
DSE2130 - DSENet Input Expansion Module	DSE8610 Parallel Controller + Motorized Breakers	Extended Warranty
DSE2157 - DSENet Output Expansion Module	AC/DC Enclosure Lighting Kit + Timer	Custom Testing
Remote Display Module	Enclosure Heater	NFPA110 Kit
		Fuel System Options (Natural Gas, LP/LPV, Dual Fuel)

ENGINEERED OPTIONS

ENCLOSURE	CIRCUIT BREAKER OPTIONS	ALTERNATOR SYSTEM
Air Outlet Gravity Dampers	3rd Breaker System	Bearing RTD's on Alternator
Air Inlet Motorized Dampers (Only with L2)	Shunt Trip on 3rd Breaker	Main Stator RTD's on Alternator (2 per Phase)
ENGINE SYSTEM	Auxiliary Contact on 3rd Breaker	Tropical Coating
Fluid Containment Pan	ELECTRICAL SYSTEM	Alternator Up-Sizing
	240V Twist Lock Receptacle	

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OPERATING DATA

FUEL SYSTEM

(Measured at engine inlet at operating load)

Fuel Type	Natural Gas
Fuel Supply Line - Inlet	2" NPTF
Natural Gas Fuel Supply Pressure	2 PSI

FUEL CONSUMPTION - NATURAL GAS

(Measured at genset fuel inlet, downstream of any dry fuel or filter accessories)

	m3/h	ft3/h	BTU/h
100% load	135	4760	4,886,150
75% load	102	3570	3,664,605
50% load	68	2380	2,443,070
25% load	34	1190	1,221,535

COOLING SYSTEM

Engine Cooling Air Flow	cfm (m ³ /min)	39,995 (1,133)
Alternator Cooling Flow	cfm (m ³ /min)	2202 (62.4)
Combustion Air Flow	cfm (m ³ /min)	917 (26)
Total Cooling Air Flow (Engine+Alternator+Combustion)	cfm (m ³ /min)	43,114 (1223.4)
Total Cooling Capacity	US gallons (liters)	51 (193)
Max. Operating Temperature	° F (° C)	114(46)

EXHAUST

Maximum Allowable Back Pressure	H ₂ O (kPa)	40 (10)
Exhaust Volumetric Flow Rated @ Rated Power 1350°F	cfm (m ³ /min)	3899 (110.4)
Exhaust Gas Flow	cfm (m ³ /min)	876 (469)

STARTING CAPABILITIES (SKVA)

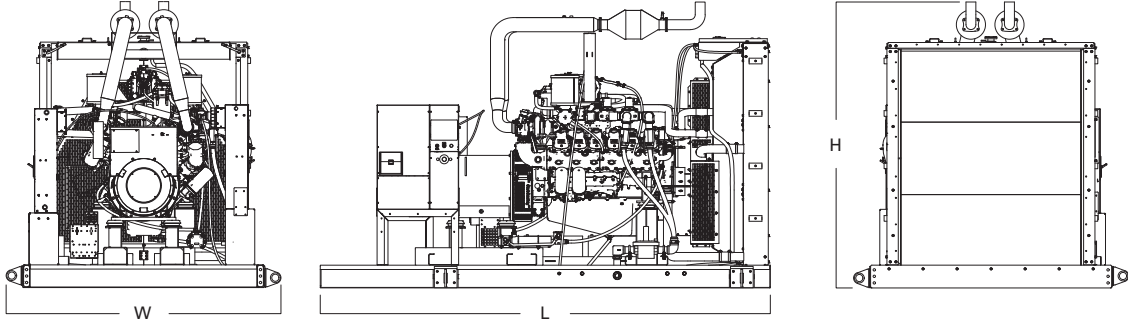
	208/240V					277/480V					347/600V				
	10%	15%	20%	25%	30%	10%	15%	20%	25%	30%	10%	15%	20%	25%	30%
ALTERNATOR															
STANDARD	400	650	925	1230	1580	450	720	1040	1375	1750	400	620	890	1180	1520
UP-SIZED	450	725	1020	1380	1760	550	850	1200	1600	2070	440	680	980	1300	1660

CIRCUIT BREAKER

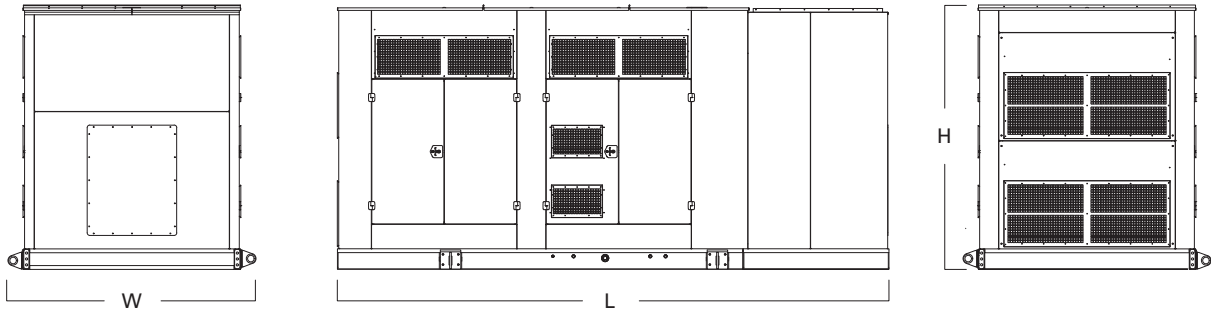
	120/208V	120/240V	277/480V	347/600V
MAKE & MODEL	ABB T8VBD3GC00000XX	ABB T8VBCFC0000000X	ABB XT6NU380BFF000XXX	ABB XT5NU360BFF000XXX
AMPS	2000A	1600A	800A	600A

*Pressure listed is the max working pressure of vaporizer. No minimum pressure listed but must be high enough to keep propane liquefied

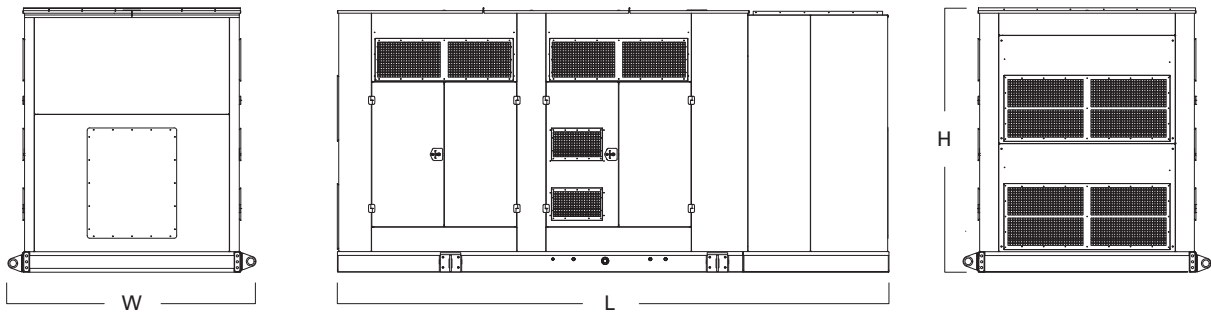
DIMENSIONS, WEIGHTS, & SOUND LEVELS



CONFIGURATION	L = Length	W = Width	H = Height	Weight lbs	dBA
OPEN SET	158.7"	97"	100.8"	11,140	TBD



CONFIGURATION	L = Length	W = Width	H = Height	Weight lbs	dBA
LEVEL 1 ENCLOSURE	215.7"	97"	103.1"	13,870	79



CONFIGURATION	L = Length	W = Width	H = Height	Weight lbs	dBA
LEVEL 2 ENCLOSURE	215.7"	97"	103.1"	14,340	74

* All measurements are approximate and for estimation purposes only. Sound levels measured at 23ft (7m) and does not account for ambient site conditions.

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