HIPOWER®
A YANMAR COMPANY

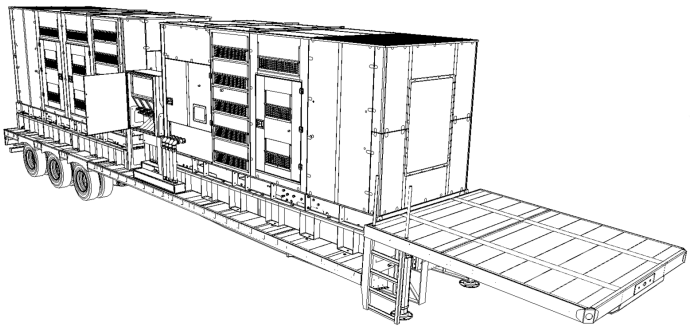
RENTAL DIESEL GENERATOR SET
1MW Twin-packGENERATOR

MODEL

HRVW-1250 T4F

60Hz RENTAL/PRIME/STANDBY POWER

1000kW/60Hz/Rental/1800RPM



VOLTAGE VAC	120/208V		139/240V		277/480V		347/600V**	
RATING	Prime	Standby	Prime	Standby	Prime	Standby	Prime	Standby
PHASE	3		3		3		3	
PF	0.8		0.8		0.8		0.8	
HZ	60		60		60		60	
KW	1000	1100	1000	1100	1000	1100	1000	1100
KVA	1250	1360	1250	1360	1250	1360	1250	1360
AMPS	3468	3774	3006	3272	1504	1636	1204	1308
SKVA@30% VOLTAGE DIP	2070		2070		2070		N/A	
MLCB (AMPS)	2000 (x2)		2000 (x2)		2000 (x2)		600 (x2)	

* Photo depicts a typical model but may not include options such as trailer.

Description

HIPOWER® rental generators are an efficient, reliable and versatile source of mobile electrical power. Designed to operate in the most extreme working conditions. All HIPOWER® Rental 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 VOLVO PENTA Diesel engine, which meets current Environmental Protection Agency (EPA) TIER 4 Final non-road 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 105 degree °C alternator winding temperature rise.

HIPOWER® Features and Benefits

VOLVO PENTA 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 permanent magnetic generator (PMG), with Class F insulation. Automatic voltage regulator (AVR) providing close voltage regulation and skVA starting capability for electric motor loads.

Certification: ISO 8528-5.

Fuel Tank: Environmentally friendly steel base welded sub-base fuel tank with internal filling system and 110% containment capability for any diesel fuel, coolant or engine oil spills. Easy access for maintenance activities.

Enclosure: Fully sound attenuated enclosure, fabricated in 11-gauge steel, powder coated with finish that exceeds 1400-hr salt spray test, curved edges, minimum outside fasteners and single point lift. Ample layer of durable Rockwool sound insulating material placed all around the inside of the container, doors and ducting with metal retaining frames. It can be cleaned with high-pressure water and is oil and fire resistant. Vertical air discharge for quiet operation. Wide steel lockable access doors with rubber seals, easy access for maintenance and service activities, lift off stainless steel hinges, corrosion resistant hardware and fasteners.

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

Voltage Change Over Board: Two-position, manual change over board. 120/208 and 277/480V 3-phase.

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.

Codes and Standards Compliances used where applicable

APPLICATION DATA

ENGINE SPECIFICATION	
Manufacturer	VOLVO PENTA
Model	TWD 1672 GE
EPA certified	Tier 4 FINAL
Crankshaft speed	1,800 rpm
Type	Diesel, 4-stroke
Injection	Direct
Aspiration	Turbocharged
Number of Cylinders	6
Cylinder arrangement	In-line
Displacement CID (liters)	983.9 (16.12)
Bore and Stroke ins (mm)	5.67 x 6.5 (144 x 165)
Nominal power	796 HP
Cooling	Liquid
Governor	Electronic
Governor Regulation Class	ISO 8528 Part 1 Class G3
Frequency Regulation	Isochronous
Starting motor & alternator	12 volt
Compression ratio	16.8:1
Air cleaner type	Heavy duty - single cartridge
Exhaust gas flow cu. ft./minute (cu.m. /minute)	4025 (114)
Max. Exhaust temp at full load degrees °F (°C)	793 (423)
Max. permissible back pressure - ins H2O (kPA)	76 (19)
COOLING SYSTEM	
Engine cooling air flow - cu. ft./min (cu. m/min)	30,207 (912)
Alternator cooling flow - cu. ft./min (cu. m/min)	2100 (59)
Total cooling air flow (engine + alternator + combustion) - cu. ft./min (cu. m/min)	TBD
Total cooling capacity - US gallons (liters)	25.3 (96)
Max. Operating Temperature °F (°C)	113 (45)
LUBRICATION SYSTEM	
Oil pan capacity - US gallons (liters)	11.1 (42)
Oil pan capacity with filter - US gallons (liters)	12.7 (48)
Oil cooler	Liquid
Recommended lubricating oil grade	SAE 10W-40 conventional DH4 (refer to owners manual)
Oil consumption at full load	< 0.1% of fuel consumption
Oil pressure – psi (kPA)	58 (399)
ENGINE ELECTRICAL SYSTEM	
Starting motor voltage	24 volt
Cold Cranking Amps - minimum	300 Amp X 2
Battery charging Alternantor	N/A
Battery capacity	225 Amps X 2

Codes and Standards Compliances used where applicable

ANSI EVSI NFPA NATIONAL FIRE PROTECTION ASSN. MEMBER EGSA ARA American Rental Association ASSOCIATE MEMBER AEM MEMBER

APPLICATION DATA

FUEL SYSTEM		
Recommended fuel	# 2 - ULSD	
Fuel supply line, min. ID mm(in.)	9.5 (3/8")	
Fuel return line,min. ID, mm (in.)	9.5 (3/8")	
Max. lift, fuel pump, type, m (ft)	TBD	
Fuel filter	Secondary 5 Microns @ 98% Efficiency	
DEF Tank capacity - US Gal.	42.3	
FUEL and DEF COMPSUMTION	FUEL (Prime Power Rating) - per unit	DEF (% of fuel consumption)
100% load – US gallons/hour (L/hr)	27.9 (105.6)	7.1 %
75% load - US gallons/hour (L/hr)	25 (94.6)	TBA
50% load - US gallons/hour (L/hr)	17.3 (65.4)	TBA
25% load - US gallons/hour (L/hr)	9.9 (37.4)	TBA

ALTERNATOR SPECIFICATION	
Manufacturer	STAMFORD
Model	HCI 534 E with PMG
Voltages	120/208V - 277/480
Alternator Type	Four pole, rotating field
Excitation System	Brushless. PMG-excited
Power factor	0.8 / 1.0
Number of leads	12 leads, reconnectable
Stator Pitch	2/3
Insulation	Class H
Windings – Temperature Rise	Class F (105/40° 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

STANDARD ACCESSORIES	
• Air Filter Restriction Indicator	• Leak Proof Tray
• Leakage Detection Sensor	• MLCB Auxiliary Contacts
• Battery Switch	• Shunt Trip on MLCB
• Crankcase Ventilation Filter	• 2 Positions Voltage Change Over Board
• Oil/Coolant Drain Extention	• PMG Excitation on Alternator
• Distribution Panel 2000A	• Low Coolant Level Sensor

•Distribution power panel *See image RH back-page -
NEMA 3R/IP67 0.09" aluminum panel, black powder coated, weather proof rated; 2 x15A 125V NEMA 5-15P Shore line connector; 6 sets 400A single pin Camlocks rated 400A with snap covers; color coded Camlocks 3Ø - 5W black, red blue, white & green; pad lockable 1/4 turn door access with cable trap; auxiliary bus bars with mechanical lugs; 1 single barrel lug per phase; mechanical lugs up to 2 x 600MCM cable

OPTIONAL ACCESSORIES	
• Battery Blanket	• Low cooland level Sensor
• Hydronic heater (5 kw)	• Engineered Options available upon request
• 3-Way Fuel valve	• Control Panel Heater
• 6 Amp - 10 Amp battery charger, 12/24V, UL Listed	• Oil Pan Heater
• Water Jacket Heater	• Trailer

Codes and Standards Compliances used where applicable

CONTROL SYSTEMS STANDARD FEATURES - Generator Digital Control Panel

HIPOWER® COMAP IntelliGen NT Control Panel: The IntelliGen NT digital control panel is back-lit with icon LCD text display, and is PC configurable. IInteliGen NT is a comprehensive controller for both single and multiple gen-sets operating in standby or parallel modes. Compact construction is optimized for these purposes and various modifications allow customers to select the optimum type for a particular application. A built-in synchronizer and digital isochronous load sharer allow a total integrated solution for gen-sets in standby, island parallel or mains parallel. Native cooperation of up to 32 gen-sets is a standard feature. InteliGen NT supports many standard ECU types and is specially designed to easily integrate new ones.

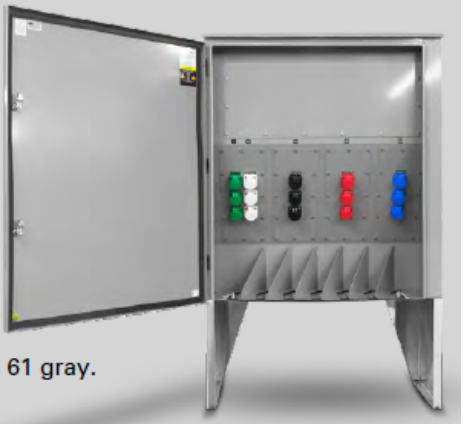
Engine alarms included: High coolant temperature, low oil pressure, low coolant level, unexpected shutdown, low fuel level, stop failure, low battery voltage, battery charging alternator failure, over-speed, under-speed, start failure and emergency stop. Support of engines with ECU (J1939, Modbus and 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, reverse power, and incorrect phase sequence.

Codes and Standards Compliances used where applicable

400/3200 A

GENERATOR CONNECTION CABINET

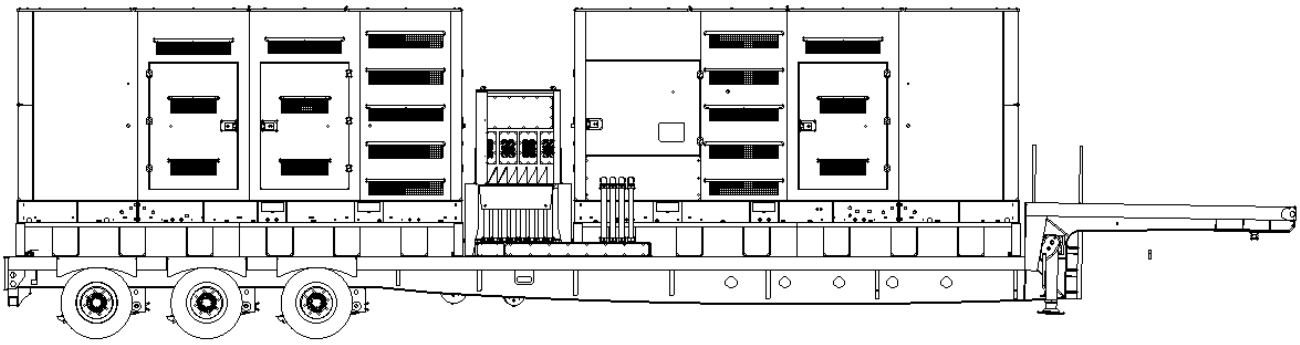


Portable Transformer application:

- 0.090" Aluminum NEMA 3R enclosure, powder coated ANSI 61 gray.
- Indoor/Outdoor rated with corrosion resistant hardware.
- Main swing door with 1/4 turn pad-lockable latch.
- Easy to remove gland plate to access permanent connection lugs.
- Male or Female 400A 16 Series stud type panel mount Camlok devices.
- Camlok color code can be ordered to match any low voltage configuration.
- Bottom access cable trap system with rodent trap door.
- Optional stainless steel leg kit for pad-mount applications.
- Multiple conduit entry space (bottom, top, left side, right side or rear).

- For use as a quick connection port to a per-manent installed switch gear and other similar electrical equipment such as: Automatic transfer switches, manual transfer switches, double throw safety switches, UPS systems, inter-locked switch boards or bolt switches.
- Can be used as a quick connection port or junction point to access and service a stationary generator.

ENCLOSED SET WITH TRAILER



CONFIGURATION	Fuel Tank Data (base option)		Generator Data *				
	Run Time Hours	Capacity (Gals)	L = Length	W = Width	H = Height	Weight lbs	dBA
Enclosed Set	19	600 (per unit)	576"	102"	149"	80,000	72

Codes and Standards Compliances used where applicable