HIPOWER®
your partner for power

RENTAL Diesel Generator

Model: HRMW 580 T6

Specification Sheet

MTU-Detroit Diesel Series

Photo depicts a typical model but may not include all options.

Description

HIPOWER® rental generators are an efficient, reliable and versatile source of mobile electrical power. They are designed to operate in the most extreme working conditions. All HIPOWER® Rental Generators have a unique combination of 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.

The generator set is powered by a radiator-cooled, industrial MTU Detroit Diesel engine, which meets current Environmental Protection Agency (EPA) 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 125 degree C alternator winding temperature rise.

HIPOWER® Features and Benefits

MTU Diesel Engine: Long-life, heavy-duty, 4-cycle, direct injection engine from a world renown manufacturer 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.

Filtration: 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) for reduced service and maintenance requirements, with Class H insulation. Automatic voltage regulator (AVR) providing close voltage regulation. Has a high skVA starting capability for electric motor loads.

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

Arrangement: Engine and alternator units are closed coupled together and with mobile style anti-vibration isolators, mounted between the assembly and a heavy-duty steel base. The sturdy base frame has openings allowing for winching, slinging and forklift pockets for ease of handling.

60Hz Power Ratings kVA (kW)

Voltage VAC	Phase	PF	Prime		Standby	
			kVA	kW	kVA	kW
120/240	1	1.0	N.A.	N.A.	N.A.	N.A.
120/208	3	0.8	580	464	636	509
120/240 Delta	3	0.8	N.A.	N.A.	N.A.	N.A.
277/480	3	0.8	578	463	636	509
347/600*	3	0.8	580	464	636	509

Rating Definitions: *(N.A. = Not available for model designated)*
Prime - All Rental Sets are Prime Rated - Prime rating is applicable for supplying power to a varying load in lieu of utility for an unlimited amount of running of amount of running time. (Max. load factor = 80%) A 10% overload capacity is available for 1 out of every 12 hours.
Standby - Applicable for a varying emergency load for the duration of a utility power outage with no overload capability.
***600V** - 347/600 volt connection option does not include voltage change-over.

HIPOWER® Features and Benefits

Fuel Tank: The environmentally friendly steel base contains a welded sub-base fuel tank with external filling system. The base has 110% containment capability for any diesel fuel, coolant or engine oil spills.

Easy access is provided to the tank for periodic fuel tank cleaning. A fuel level gauge is also provided as standard.

Enclosure: Fully sound attenuated enclosure, fabricated in 11-gauge steel, powder coated with finish that exceeds 1000-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 retainer frames. Can be cleaned by high-pressure water and is oil and fire resistant.

Vertical air discharge for quiet operation.

Wide steel lockable access doors with rubber seals, for easy entrance of all maintenance personnel and any necessary service by technicians, with stainless steel hinges, hardware and fasteners resistant to corrosion.

Exhaust: Effective low noise, steel residential-type exhaust silencer with rain cap.

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

Voltage Change-Over Board: Manual, lockable, change-over board for switching set between 120/208 volts and 277/480 volts.

Controls: Digital control panel to operate all manual and automatic start and stop features. Many programmable automatic functions for local and remote controls with LED lights, tamper proof engine hour recorder with analog meters: voltmeter & switch, three (3) ammeters, Hz meter, fuel gauge and battery charge

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

HIPOWER®

Specification Data

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MTU-Detroit Diesel Series

Rental Generator Set Specification:

Governor regulation class	ISO 8528 Part 1 Class G3
Voltage regulation, no load to full load	± 1%
Random voltage variation	± 0.5%
Frequency regulation	Isochronous
Random frequency variation	± 0.25%
Radio frequency emissions compliance	Meets requirements of most industrial and commercial applications
skVA at 480 volts with 30% voltage dip - amps	2200 skVA
Main Line Circuit breaker – amps capacity	800A

Engine Specification:

Manufacturer	MTU Detroit Diesel
Model	10V1600G20S
EPA certified	Tier 2 - TPEM
Crankshaft speed	1,800rpm
Type	Industrial four-stroke
Injection	Direct
Aspiration	Turbocharged and after-cooled
Number of Cylinders	Ten (10)
Cylinder arrangement	Vee configuration
Displacement CID (liters)	1067.9 (17.5)
Bore and Stroke ins (mm)	4.8 X 5.9 (122X 150)
Nominal power	661 hp
Cooling	Liquid
Governor	Electronic
Starting motor & alternator	24 volt
Compression ratio	17.5:1
Air cleaner type	Dry
Exhaust gas flow cu. ft./minute (cu. /minute)	3369 (95.4)
Max. Exhaust temp at full load degrees ˚F (˚C)	858 (459)
Max. permissible back pressure - ins H_2O (kPA)	60 (15.0)

Cooling System:

Engine cooling air flow - cu. ft./second (cu. m/second)	424.0 (12.0)
Alternator cooling flow - cu. ft./second (cu. m/second)	38.2 (1.08)
Total cooling air flow (engine + alternator + combustion)	518.35 (14.68)
Total cooling capacity - US gallons (liters)	24.8 (94.0)

Lubrication system:

Oil pan capacity - US gallons (liters)	14.0 (63.0)
Oil pan capacity with filter - US gallons (liters)	15.98 (60.5)
Oil cooler	Water cooled
Recommended lubricating oil grade	10 W 40
Oil consumption at full load	0.5% of fuel consumption
Oil pressure – psi (kPA)	65.27– 78.32 (450 – 540)

Engine Electrical System:

Starting motor voltage	24 volt
Battery capacity	4 X 75 amp/hour
Cold Cranking Amps - minimum	950

HIPOWER Sound Attenuated Enclosure: Model - H1R

Noise level at 23 feet (7 meters)	75 dBA
Dimensions - inches	181.0L X 73.0 W X 111.0 H
Dry weight – lbs.	14,500 lbs.

Fuel System:

Grade	#2 Diesel - ULSD
Tank capacity – US gallons (liters)	634 US gallons (2,400 liters)
Approximate run time at 100% load	17.8 hours

Prime Rating Fuel consumption:

100% load – US gallons/hour (liters/hour)	30.14 (114.08)
75% load - US gallons/hour (liters/hour)	23.78 (90.02)
50% load - US gallons/hour (liters/hour)	17.66 (66.89)
25% load - US gallons/hour (liters/hour)	9.61 (36.40)

Alternator Specification:

Manufacturer	Mecc Alte
Model	ECO40 - 2L/4
Voltages	277/480 volts, 120/208 volts
Alternator Type	4-pole, rotating field
Excitation System	Brushless with AVR model DER-1
Power factor	0.8
Number of leads	12 - re-connectable
Stator Pitch	2/3
Insulation	Class H
Windings – Temperature Rise	125° C
Enclosure (IEC-34-S)	IP 23
Bearing	Single, sealed
Coupling	Flexible disc
Amortisseur windings	Full
Voltage regulation – no load to full load	plus or minus 1%
TIF	< 50
Line harmonics	5% maximum

Standard Accessories: *(see back-page for control panel details)*

● Radiator with pusher fan	● Standard and secondary water separator with visible level on fuel filters
● Heavy duty single-stage air filter with service indicator	● All rotating components (i.e. fan) protected with metal guards
● Heavy-duty engine start batteries in rack with cables	● All hot components (i.e. exhaust) protected with metal guards
● Battery disconnect switch	● Ground connection prepared for ground spike (not supplied)
● External emergency stop switch	● Main line ABB UL listed circuit breaker for overload protection

● **Distribution power panel**
Covered panel NEMA 3R/IP67rated weather proof assembly – Individual Square-D QOU branch breakers - 2 x 20A 125V NEMA 5-20 GFCI duplex receptacles with metal flap cover - 3 x 50A 125/250V CS6369 Twist -lock receptacles - 50A California Style twist lock - 6 sets Camlock devices rated 400A - Color coded Camlock devices 3Φ - 5W black, red, blue, white & green - Pad lockable swing door access - Auxiliary bus bars with mechanical lugs - 2 x Quad Barrel Lug per phase - Mechanical lugs up to 600MCM cable **See image RH back-page*

● Control panel DSE 8610 AUTO START LOAD SHARING MODULE "***incorporates a generator to generator paralleling control system"***

Optional Accessories:

☐ Fuel tank leak detection sensor with alarm	☐ Interior lights
☐ Alternator anti-condensation heaters	☐ Shore power receptacle
☐ Winterization kit for low ambient temperature	☐ Engine Block heater
☐ Electric actuator and louvers for air intake and exhaust	☐ Control panel heater
☐ Snow hoods for air intake and exhaust	☐ Three-way 'Quick' connect fuel valve to external fuel supply
☐ Three- wheel DOT certified towing trailer	☐ Automatic fuel transfer pump

Generator Digital Control Panel - *for manual, automatic and remote control* — Model DSE 8610

The DSE model 8610 digital control panel: Is back-lit with four line LCD text display, and fully configurable. It works with the engine electronic governor and alternator AVR, with PLC functionality, protected front panel programming.

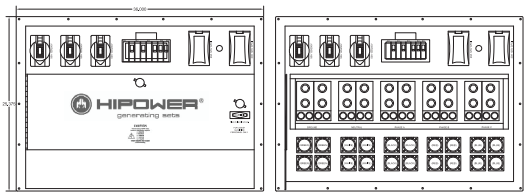
Control panel includes: Manual and automatic start, multiple display languages, PC configurable eleven inputs and eight outputs, multi event exerciser timer, with audible alarm, engine protection, fault condition notification to a designated PC, event log (250), kW overload alarms, RS232 and RS 485 remote communications (usable at the same time), Modbus RTU, SMS alert messaging, DESNet connection for system expansion, auto voltage sensing, data logging and trending, engine preheat, and Ethernet monitoring.

Paralleling ability included: The DSE 8610 provides the ability for parallel operation and load sharing between two or more generator sets.

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.

Alternator alarms included: Overload, unbalanced voltage, over voltage, under voltage, over frequency, under frequency, short circuit, reverse power, and incorrect phase sequence.

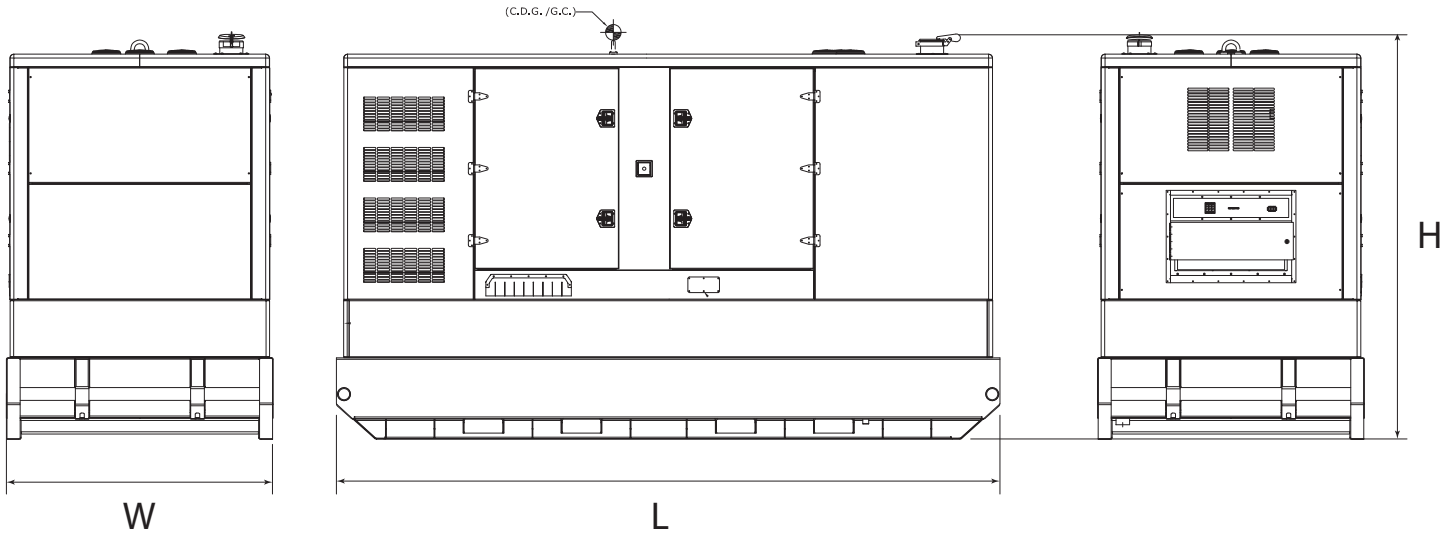
Instrumentation and gauges included: 3 ammeters, frequency meter, voltmeter plus selector, hour meter, fuel gauge, battery charger gauge, oil pressure gauge, water temperature gauge, siren and emergency stop button.



Panel Front — Panel Front - Door Open

Pictures of Control Panel (Top photo) and Distribution Panel may include optional equipment and/or accessories

Model HRMW 580 T6 — key dimensions, weight and sound level



Fuel Tank Data		Generator Data *				
Run Time Hours	Capacity (Gals)	L = Length	W = Width	H = Height	Weight lbs	dBA
21.0	555	181.2”	72.9”	110.6”	14,500	75

* All measurements are approximate and for estimation purposes only. Weights are with dry fuel tank. Sound level measured at 23ft (7m) and does not account for ambient site conditions.

Codes and Standards Compliances used where applicable

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NEMA ICS 1

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