

# Model: HMW 615 T6U

## MTU Detroit Diesel Series

**Specification & Application Data** 



<sup>\*</sup> Prime power rating for reference only.

60Hz Power Ratings kW (kVA)

Voltage VAC	Phase	PF	Standby		Prime	
			kW	kVA	kW	kVA
120/240	1	N/A	N/A	N/A	N/A	N/A
120/208	3	0.8	600	750	540	675
120/240 Delta	3	0.8	600	750	540	675
277/480	3	0.8	600	750	540	675
347/600**	3	0.8	600	750	540	675

**Rating Definitions:** (*N*/*A* = *Not available for model designated*)

Standby - All Industrial Sets are Standby Rated, applicable for a varying emergency load for the duration of a utility power outage with no overload capability. Alternator winding temperature rise is 120°C.

Prime - Prime rating is applicable for supplying power to a varying load in lieu of utility for an unlimited amount of running time. (Max. load factor = 80%) A 10% overload capacity is available for 1 out of every 12 hours.

\*\* 600 Volt configuration not available as UL2200 certified generator set.

## Overview of the HIPOWER® MTU Detroit Diesel Series of Industrial Generator Sets:

HIPOWER<sup>®</sup> Industrial generators are factory-built in facilities that utilize the latest technology in sheet metal fabrication, mechanical and electrical component assembly, production and testing.

Each model is the result of computer aided design and modeling backed up by exhaustive prototype-testing. Our development technology results in a unique range of inovative designs for highly reliable generator sets backed-up by a limited warranty covering all components.

## Standard Configuration of Industrial Sets:

- MTU Detroit 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, 4-pole, 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.
- Certification: Generator set is UL 2200 Listed and CSA certified and meets ISO 8528-5.
- Arrangement: Open skid with engine and alternator units closed coupled together and with resilent 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
- Auto Start Control Panel: Digital auto-start microprocessor based control panel with remote start capability.
- **Starting System:** 24 volt starter motor, battery cables, battery and belt driven charging alternator.

#### Standard Features of Industrial Sets:

- HIPOWER<sup>®</sup> is a single source for all the generator system
- Generators are produced in a facility dedicated to generator set manufacture
- The generator set can accept rated load in one step
- 2 years or 1000 hours limited warranty given as standard. Extended warranties offered as options to the standard
- Base set meets NFPA 110, Level 1, when accessorized with the required equipment and installed per NFPA standards
- Test certificates available for the fully factory tested industrial generator sets

- HIPOWER<sup>®</sup> generator sets are designed to fit a full range of options for complying with many diverse applications
- Full range of safety features to ensure full protection of the generator system. (See back-page for details).



Generator depicted with sound attenuated option, some accessories for display only.



## Application & Specification Data

### Industrial Generator Set Specification:

## INDUSTRIAL Diesel Generator Model: HMW 615 T6U MTU Detroit Diesel Series

Frequency regulation         Sockhronous           Radio Frequency entisions compliance         Meets requirements of most industrial and commercial applications           Radio Frequency entisions compliance         Metto requirements of most industrial and commercial applications           Wavka308 worksget of k480 vork)         2500           Boundacturer         MU Detroit Dissel           Moundacturer         MU Detroit Dissel           Model         12V 1600 G805           ENA certified         Tier 2           Canskhaft speed         1,800 rpm           Type         Dissel, 4-stroke           Injection         Uurect           Aspiration         Turbochraged, aftercooled           Number of cylinders         12           Cylinder arrangement         Vee           Displacement CID (Inters)         281 50 (21)           Roer and Stroke ins (mm)         4.84 s.5 (122 x 150)           Nominal h.p. power         B6 fip           Cooling         Uquid           Goweror         Electrical           Starting motor and alternator         24 v           Cooling sp flow cu. flymin (cu. m/min)         46615 (132)           Max. exhaust gas trems at full Load * F (*C)         397 (425)           Max. exhaust gas trems ind Load * F (*C) <th>Governor regulation class</th> <th>ISO 8528 Part 1 Class G3</th>	Governor regulation class	ISO 8528 Part 1 Class G3
Radio frequency emissions complianceMeets requirements of most industrial and commercial applicationsskVA@0% voltage dp (48 volts)250Main line (crucit breaker - amps capacity2600 (2089-2040/) - 0000 (480V) - 800A (600V)BandacturerMrU Detroit DieselModel12V 1600 680SEXacttifiedTier 2Canshaht speed1800 rpmCanshaht speedDiesel, 4 strokeInjectionDiesel, 4 strokeSpiration12V 1600 680SSpirationVeeOptical applications281.50 (21)Spiration1281.50 (21)Somman Collinger1281.50 (21)Somman Collinger1281.50 (21)Somman Stroke ins (mm)48 x 5 x 12 x 150)Somman Stroke ins (mm)48 x 5 x 12 x 150)Somman Stroke ins (mm)48 x 5 x 12 x 150)Sorting motor and alternator175.1Compression ratio175.1Air Clamer typeMeelum duly -double cartridgeEabast gas flow cut (fmin (cu. m/min)46.1 (132)Aix extuat gas temp at full load 'f f' C)97 (425)Manator cooling aff flow - cut /fske (cu. m/sec)81.4 (10.8)Charter type19.0 (10.3)Charter type19.0 (10.3)Charter type (cu. m/sec)81.4 (10.8)Charter type (cu. m/sec)8	Voltage regulation, no load to full load	+/- 1%
skxAp330% voltage dip (480 volts)         2350           Main Line Circuit breaker - amps capacity         26004 (208V-240V) - 1000A (480V) - 800A (600V)           Engine Direct         Model           Mandacturer         MTU Detroit Desel           Model         12V 1500 680S           ENA certified         Tier 2           Canskhaft speed         1300 rpm           Type         Diesel, 4.stroke           Injection         Direct           Aspiration         Turbocharged, aftercooled           Number of cylinders         12           Cylinder arrangement         Vee           Displacement CID (Iters)         281.50 (21)           Roward         48 x 5.9 (122 x 150)           Normiah h.p. power         896 hp           Cooling         Liquid           Governor         Electrical           Starting motor and alternator         24 V           Compression ratio         17.51           Air cleaner type         Medium duty - double cartridge           Exhaut ga findow - cu fi/sec (cu. m/sec)         381.4 (10.8)           Atternator cooling air flow - cu. fi/sec (cu. m/sec)         451.4 (13.2)           Total cooling capacity - US gallons (Itters)         37.0 (140)           Labart ga findow - cu. fi/s	Frequency regulation	Isochronous
Main Line Circuit breaker - amps capacity2600A (208Y-200Y) - 1000A (480Y) - 800A (600Y)Engine Specification:ManufacturerMTU Detroit DieselModel12V 1600 G80SEPA certifiedTier 2Crankshaft speed1800 rpmTypeDiesel, 4-strokeInjectionDirectApplicationTurbochrage, afercooledNumber of cylinders12Cylinder arrangementVeeDisplacement Cio (liters)285 50 (122 x 150)Boreand Stroke ins (mm)438 x 50 (122 x 150)CoolingLquidGovernor866 hpCoolingLquidGovernor24 VCooling and thernator24 VCompression ratio17.51Air cleaner type46615 (132)Max, exhaust gas frems at fulload *F (*C)397 (425)Max, exhaust gas frems at fulload *F (*C)397 (425)Max, exhaust gas temps at fulload *F (*C)393 (859)Total cooling grift ow - u. fryker (u. m/sec)48.14 (10.8)Alternator cooling filt ow - u. fryker (u. m/sec)48.14 (10.8)Alternator cooling af flow - u. fryker (u. m/sec)49.3 (13.12)Total cooling argenty - US gallons (liters)19.20 (140)Di pan capacity - US gallons (liters)37.20 (20)Di pan capacity - US gallons (l	Radio frequency emissions compliance	Meets requirements of most industrial and commercial applications
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ManufacturerMTU Detroit DieselModel12V 1600 G805EPA certifiedTier 2Cankshaft speed1,800 rpmTypeDiesel, 4-strokeInjectionDirectAspirationTurbocharged, aftercooledNumber of Vplinders12Cylinder arrangementVeeDisplacement CID (Itters)128.150 (21)Bore and Stroke ins (mm)4.8 x 5.9 (122 x 150)Nominal h.p. power896 hpCoolingLiquidGovernorElectricalStarting motor and alternator24 VCompression ratio17.5:1Air cleaner typeMedium duty - double cartridgeExhaust gas flow cu. ft/min (cu. m/min)46615 (132)Max. exhaust gas flow cu. ft/sec (cu. m/sec)381.4 (10.8)Alternator cooling afflow - cu. ft/sec (cu. m/sec)381.4 (10.8)Alternator coling afflow - cu. ft/sec (cu. m/sec)37.0 (140)Lubrication gaster19.2 (22.5)Otoling againth (Itters)19.2 (22.5)Oil pan capacity - US gallons (Itters)19.2 (22.5)Oil pan capacity - US gallons (Itters)19.2 (22.5)Oil consumption at full load5% for tie consumptionOil consumption at full load5% for tie consumptionOil consumption at full load5% for tie consumptionOil consumption at full load5% for tie consumptionOli par capacity - US gallons (Itters)19.2 (22.5)Oli consumption at full load5% for tie consumptionOil consumption at full load5% for tie consumption </td <td>Main Line Circuit breaker – amps capacity</td> <td>2600A (208V-240V) - 1000A (480V) - 800A (600V)</td>	Main Line Circuit breaker – amps capacity	2600A (208V-240V) - 1000A (480V) - 800A (600V)
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Injection         Direct           Aspiration         Turbocharged, aftercooled           Number of cylinders         12           Cylinder arrangement         Vee           Displacement CD (liters)         1281.50 (21)           Bore and Stroke ins (mm)         4.8 x 5.9 (122 x 150)           Nominal h.p. power         896 hp           Cooling         Liquid           Governor         Electrical           Starting motor and alternator         24 V           Compression ratio         17.5:1           Air cleaner type         Medium duty - double cartridge           Kane xethaust gas flow cu. fl/min (cu. m/min)         4661.5 (132)           Max. exhaust gas temp at full load * F (* C)         797 (425)           Max. exhaust gas temp at full load * F (* C)         797 (425)           Max. exhaust gas temp at full load * F (* C)         391.4 (10.8)           Cooling System:         3033 (58)           Total cooling air flow - cu.fl/sec (cu. m/sec)         46.3 (1.312)           Total cooling air flow - cu.fl/sec (cu. m/sec)         46.3 (1.312)           Total cooling air flow - cu.fl/sec (cu.m/sec)         46.3 (1.312)           Total cooling air flow - cu.fl/sec (cu.m/sec)         46.3 (1.312)           Total cooling capacity - US gallons (liters)         1	Crankshaft speed	1,800 rpm
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Nominal h.p. power896 hpCoolingLiquidGovernorElectricalGovernor24 VCompression ratio17.5:1Air cleaner typeMedium duty - double cartridgeExhaust gas flow cu. ft/min (cu. m/min)4661.5 (132)Max. exhaust gas temp at full load * F (* C)797 (425)Max. permissible back pressure - ins H2O (mbar)34.12 (85)Cooling System:50.1 (132)Engine cooling air flow - cu.ft/sec (cu. m/sec)381.4 (10.8)Alternator cooling diw - cu. ft/sec (cu. m/sec)381.4 (10.8)Alternator cooling air flow - cu.ft/sec (cu. m/sec)363.5 (859)Total cooling air flow (- u. ft/sec (cu. m/sec))37.0 (140)Lubrication system:10Oil pan capacity - US gallons (liters)19.2 (72.5)Oil coolerLiquidOil coolerLiquidRecommended lubricating oil gradeSAE 10040Oil consumption at full load0.5 % of fuel consumptionOil pressure – psi (kPA)37.7(260)Engine Electrical System:24 VStarting motor voltage24 VBattery capacity2x 75 AhCold Cranking Amps - minimum800 Amp	Displacement CID (liters)	1281.50 (21)
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Oil consumption at full load     0.5 % of fuel consumption       Oil pressure – psi (kPA)     37.7(260)       Engine Electrical System:     24 V       Starting motor voltage     24 V       Battery capacity     2 x 75 Ah       Cold Cranking Amps - minimum     800 Amp	Oil cooler	
Oil pressure – psi (kPA)37.7(260)Engine Electrical System:24 VStarting motor voltage24 VBattery capacity2 x 75 AhCold Cranking Amps - minimum800 Amp	Recommended lubricating oil grade	SAE 10W40
Engine Electrical System:         Starting motor voltage       24 V         Battery capacity       2 x 75 Ah         Cold Cranking Amps - minimum       800 Amp	Oil consumption at full load	0.5 % of fuel consumption
Starting motor voltage     24 V       Battery capacity     2 x 75 Ah       Cold Cranking Amps - minimum     800 Amp	Oil pressure – psi (kPA)	37.7(260)
Starting motor voltage     24 V       Battery capacity     2 x 75 Ah       Cold Cranking Amps - minimum     800 Amp	Engine Electrical System:	
Cold Cranking Amps - minimum 800 Amp	Starting motor voltage	24 V
	Battery capacity	2 x 75 Ah
Starting current Amps 250	Cold Cranking Amps - minimum	800 Amp
	Starting current Amps	250

#### **Fuel System:**

Recommended fuel	# 2 Diesel - ULSD			
Fuel supply line, min. ID mm(in.)	11.0 (0.44)			
Fuel return line,min. ID, mm (in.)	6.0 (0.25)			
Max. lift, fuel pump, type, m (ft)	Engine-Driven, 1.8 (6.0)			
Fuel filter	Secondary 8 Microns @ 98% Efficiency			
Fuel consumption:	Standby Power Rating	Prime Power Rating		
Fuel consumption:           100% load – US gallons/hour	Standby Power Rating 36.6	Prime Power Rating 32.94		
•		<b>~</b>		
100% load – US gallons/hour	36.6	32.94		

### Alternator Specification:

Manufacturer	Stamford
Model	HCI 634 G
Voltages	120/208V - 277/480V
Alternator Type	Four pole, rotating field
Excitation System	Brushless. self-exciting
Power factor	0.8
Number of leads	12 leads, reconnectable
Stator Pitch	2/3
Insulation	Class H
Windings – Temperature Rise	150° C
Enclosure (IEC-34-S)	IP23
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 Features: (see back-9page for control panel details)

Radiator with pusher fan	Standard fuel filter		
Medium - duty, two-stage dry element	• 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		
External emergency stop switch	• Ground connection prepared for ground spike (not supplied)		
Control Panel DSE 7310 (See over for details)	Main line ABB UL listed circuit breaker for overload protection		
Oil drain extension	Operation and installation literature		
• Steel base for mounting on fuel tank and/or concrete surface	• UL/CSA certified		

#### Available Options:

□ Sound attenuated canopy with rock-wool insulation, silencer, rounded corners for rigidity and weather protection & stainless steel fixtures				
Electric actuator & louvers for air intake and exhaust (for above)	Alternator anti-condensation heaters			
Residential silencer -35dBA (for open skid only)	Murphy oil make-up tank 2 or 4 gallon			
Fuel Tank Options:	🗆 24-hr UL142	🗆 48-hr UL142		
Static battery charger 2.5A UL	Static battery charger 10A UL			
Engine block heater	Control panel heater			
Racor water-separator filter	Battery blanket			
PMG AVR for Stamford Alternator only	Remote annunicator			
Auto Transfer Switch (ATS) Options:	Open transition ATS     Closed transition ATS		n ATS	
	Delayed transition	on ATS	Service entrance	e ATS

#### Generator Digital Control Panel - for manual, automatic and remote control

#### Model DSE 7310

**HIPOWER DSE 7310 Control Panel:** HIPOWER's auto-start control panel DSE 7310 is supplied by Deep Sea Electronics with a manual or auto start selection switch with push button reset. Displays with indication of: phase to neutral voltage, voltage between phases, current (amps) per phase, frequency, power factor, kW and kVA outputs, fuel level, engine speed, hours run, battery voltage and battery charge voltage.

**Engine and generator alarms for**: battery charge failure, emergency stop activated, over-speed, underspeed, low oil pressure, high coolant temperature, low coolant level, low fuel level, overload, unbalanced voltage, over and under voltage, over frequency, short circuit, inverse power and incorrect phase sequence. All protections are programmable to: Warning alarm without engine shutdown or alarm with engine



shutdown, with or without cooling period. Warning alarms for: low fuel level, battery voltage failure and battery charging alternator failure

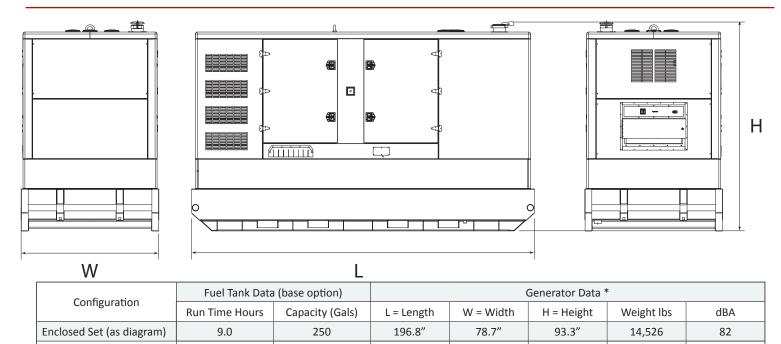
Alternator alarms included: Overload, unbalanced voltage, over voltage, under voltage, over frequency, under frequency, short circuit, reverse power, and incorrect phase sequence.



Pictures of Control Panel RH and Distribution Panel LH may include optional equipment and/or accessories

#### Model HMW 615 T6 Enclosed Set

#### key dimensions and sound levels



\* 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.

TBA

141.7"

63.1"

83.5"

9964

#### Codes and Standards Compliances used where applicable

TBA



#### your partner for power ™

Open Set (not shown)

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TBA

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