INDUSTRIAL Diesel Generator

Model: **HMW 1730 T6**

Specification & Application Data

MTU Detroit Diesel Series



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

60Hz Power Ratings kW (kVA)

\/altaga\/AC	Dhasa	e PF	Standby		ndby	Prime	
Voltage VAC	Phase		kW	kVA	kW	kVA	
120/240	1	N/A	N/A	N/A	N/A	N/A	
120/208	3	N/A	N/A	N/A	N/A	N/A	
120/240 Delta	3	N/A	N/A	N/A	N/A	N/A	
277/480	3	0.8	1728	2160	1612	2015	
347/600**	3	0.8	1728	2160	1612	2015	

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 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, 6-wire non re-connectable, 60Hz brushless alternator with Class H insulation. Automatic voltage regulator (AVR) providing close voltage regulation.
- Certification: Generator set is 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 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
- 1-year 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 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).





Application & Specification Data

INDUSTRIAL Diesel Generator Model: HMW 1730 T6

MTU Detroit Diesel Series

Industrial Generator Set Specification:

Governor regulation class	ISO 8528 Part 1 Class G3
Voltage regulation, no load to full load	+/- 1%
Frequency regulation	Isochronous
Radio frequency emissions compliance	Meets requirements of most industrial and commercial applications
skVA@30% voltage dip (480 volts)	4100
Main Line Circuit breaker – amps capacity	2600 (480V - 600V)

Engine Specification:

Manufacturer	MTU Detroit Diesel
Model	12V 4000 G83
EPA certified	Tier 2
Crankshaft speed	1,800 rpm
Туре	Diesel, 4-stroke
Injection	Direct
Aspiration	Turbocharged, aftercooled
Number of cylinders	12
Cylinder arrangement	Vee
Displacement CID (liters)	3491 (57.2)
Bore and Stroke ins (mm)	6.69 x 8.27 (170 x 210)
Nominal h.p. power	2493 hp
Cooling	Liquid
Governor	Electrical
Starting motor and alternator	24 V
Compression ratio	16.5:1
Air cleaner type	Medium duty - double cartridge
Exhaust gas flow cu. ft/min (cu. m/min)	12501 (354)
Max. exhaust gas temp at full load ° F (° C)	824 (440)
Max. permissible back pressure - ins H2O (mbar)	34.12 (85.0)

Cooling System:

Engine cooling air flow - cu.ft/sec (cu. m/sec)	1530.0 (43.33)
Alternator cooling flow - cu. ft/sec (cu. m/sec)	121.9 (3.45)
Total cooling air flow (eng, alt, combustion) cu. ft/min (cu. m/min)	111630 (3161)
Total cooling capacity - US gallons (liters)	153.0 (580)
Lubrication system:	
Oil pan capacity - US gallons (liters)	66.7 (253)
Oil pan capacity with filter - US gallons (liters)	68.6 (260)
Oil cooler	Liquid
Recommended lubricating oil grade	SAE 10W40
Oil consumption at full load	1 % of fuel consumption
Oil pressure – psi (kPA)	79.8 (550)

Engine Electrical System:

Starting motor voltage	24 V
Battery capacity	260 Ah
Cold Cranking Amps - minimum	1600 Amp
Starting current Amps	800

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	
100% load – US gallons/hour	120.0	108.00	
75% load - US gallons/hour	90.0	81.00	
50% load - US gallons/hour	66.8	60.75	
25% load - US gallons/hour	54.7	45.56	

Alternator Specification:

Alternator Specification:	
Manufacturer	Stamford
Model	PI 734 D - PI 734 D WDG 7
Voltages	277/480V - 347/600V (WDG-7)
Alternator Type	Four pole, rotating field
Excitation System	Brushless. self-exciting
Power factor	0.8
Number of leads	6 leads, non reconnectable
Stator Pitch	2/3
Insulation	Class H
Windings – Temperature Rise	163° 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-page 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	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:	☐ 12-hr non-UL ☐ 24-hr non-UL ☐ 24-hr UL142 ☐ 48-hr UL142			☐ 48-hr UL142
☐ Static battery charger 3A non-UL	☐ Static battery charger 2.5A or 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 ATS ☐ Service entrance ATS		e ATS	

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

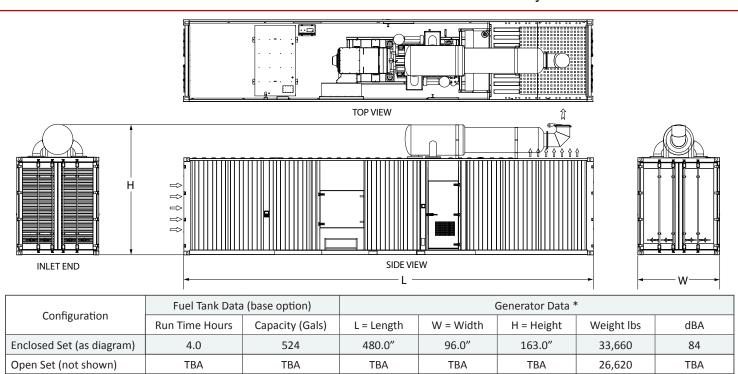
Alternator alarms included: Overload, unbalanced voltage, over voltage, under voltage, over frequency, under frequency, short circuit, reverse power, and incorrect phase sequence.



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

Model HMW 1730 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.

Codes and Standards Compliances used where applicable





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NFPA 99 BS5514 NFPA 110 SAE J1349 ISO 8528-5 DIN6271

ISO 1708A.5 IEE C62.41 TESTING ISO 3046 NEMA ICS 1

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