

Model: M500D5

Powered by MTU

Output Rating

MODEL		Power rating		Voltage available
		PRIME(1)	STANDBY(2)	
M500D5	400V/50HZ	360KW	400 KW	380/220V400/230V415/240V
	PF:0.8	450KVA	500KVA	

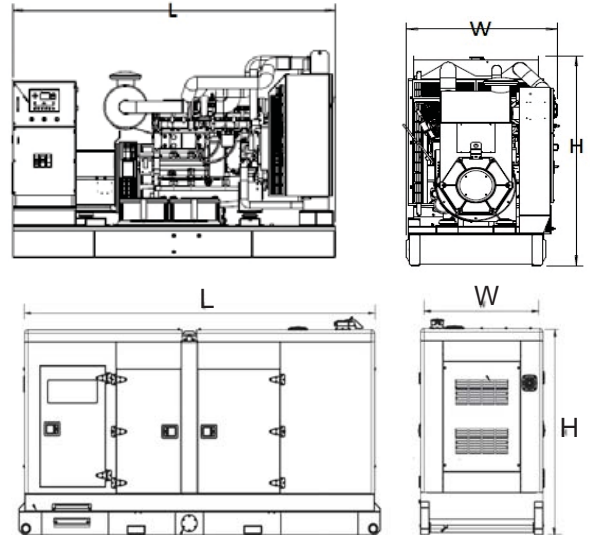
General Information

Model	M500D5	
Engine	10V1600G10F	
Speed control type	ADEC	
Phase	3	
Control System	Digital	
System voltage	24V	
Frequency	50HZ	
Engine Speed(RPM)	1500	
Fuel Consumption (g/kwh)	Standby power(2)	N/A
	Prime Power(1)	190
	75% prime power	197
	50% prime power	217



Dimension and Weight

Dimension	Open	Silent
Length (L)	3230mm	4570mm
Width (W)	1660mm	1540mm
Height (H)	2045mm	2200mm
Net Weight	3870KG	5546KG



AGG POWER gensets are compliant with EC mark which include the following directives:

- * 2006/42/EC Machinery safety.
- * 2006/95/EC Low voltage
- * EN 60204-1: 2006+A1:2009, EN ISO 12100:2010, EN ISO 13849-1: 2008, EN 12601: 2010

(1) Prime Power (PRP):

According to ISO 8528-1:2005, Prime power is the maximum power which a generating set is capable of delivering continuously whilst supplying a variable electrical load when operated for an unlimited number of hours per year under the agreed operation conditions with the maintenance intervals and procedures being carried out as prescribed by the manufacturer. The permissible average power output (Ppp) over 24h of operation shall not exceed 70% of the PRP.

(2) Standby Power (ESP):

According to ISO 8528-1:2005, standby power is the maximum power available during a variable electrical power sequence, under the stated operation conditions, for which a generating set is capable of delivering in the event of a utility power outage or under test conditions for up to 200h of operation per year with the maintenance intervals and procedures being carried out as prescribed by the manufacturers. The permissible average power output over 24h of operation shall not exceed 70% of the ESP.



Engine Specification

BASIC TECHNICAL DATA

Operating method-----Four stroke Diesel
 Combustion system-----Direction Injection
 Bore/Stroke-----122/150mm
 Displacement, Total-----17.5Liter
 Number of cylinders-----10
 Compression ratio-----17.5:1
 Flywheel housing flange-----SAE 01
 Flywheel interface-----14"
 Number of intercooler-----N/A
 Number of Turbocharger-----2

STARTER SYSTEM

Starter, rated voltage-----24V
 Starter, rated requirement max-----800A
 Starter, power requirement at firing speed-----250A

COOLANT SYSTEM

Coolant temperature(at engine outlet to cooking equipment)-----95 °C
 Coolant temperature after engine, alarm-----105 °C
 Coolant temperature after engine, shutdown-----109 °C
 Coolant antifreeze content, max. permissible-----50%
 Cooling equipment: coolant flow rate-----23.3 m³/h
 Coolant pump: inlet pressure, min-----1.4bar
 Coolant pump: inlet pressure, max-----3.50bar
 Pressure loss in off-engine cooling system, max. permissible-----0.7bar
 Cooling equipment: height above engine max. permissible-----15.0m
 Cooling equipment: design pressure-----N/A

Recommended coolant:
 Recommended coolant: 50% anti freeze / 50% water. For complete details of recommended coolant specifications, refer to the Operation and Maintenance Manual for this engine model.

COMBUSTION AIR

Combustion air volume flow-----0.45m³/sec
 Intake air depression-----230mbar

FUEL SYSTEM

Fuel supply flow, max.-----5.7l/min
 Fuel temperature, max.-----55 °C
 Fuel pressure at supply connection on engine, max. admissible-----+2.0 bar
 Fuel pressure at supply connection on engine, min. admissible -0.1 bar

FUEL SPECIFICATION

USA Fed Off Highway - EPA2D 89.330-96
 Europe Off Highway - CEC RF-06-99
 Note: For further information on fuel specifications and restrictions, refer to the OMM Fuels section for this engine model.

FUEL CONSUMPTION

Power rating %			
g/kwh			
110	100	75	50
N/A	190	197	217

EXHAUST SYSTEM

Exhaust volume flow-----1.14m³/sec
 Exhaust temperature after turbocharger-----549 °C
 Exhaust backpressure limit value-----130mbar

HEAT DISSIPATION

Engine coolant dissipation 100% load-----210kw
 Charge-air heat dissipation 100% load-----47kw
 Radiation and convection heat, engine-----21kw



▪ Alternator

Alternator		
Poles	Num	4
Winding Connections (standard)		Star-serie
Insulation	Class	H class
Enclosure (according IEC-34-5)		IP23
Exciter System		Brushless
Voltage Regulator		A.V.R.
Bearing		Single bearing
Coupling		Flexible disc
Coating type		Standard (Vacuum impregnation)

▪ Options

Engine	Alternator	Generator Sets	Fuel System	Canopy
<ul style="list-style-type: none"> •Water Jacket Preheater •Oil Preheater 	<ul style="list-style-type: none"> •Winding Temperature measuring Instrument •Alternator Preheater •PMG •Anti-damp and anti-corrosion treatment •Anti-condensation heater 	<ul style="list-style-type: none"> •Tools with the machine 	<ul style="list-style-type: none"> • Low fuel level alarm •Automatic fuel feeding system •Fuel T-valves 	<ul style="list-style-type: none"> •Rental Type Canopy •Trailer
Lubricating System	Exhaust System	Cooling System	Control Panel	Voltages
<ul style="list-style-type: none"> •Oil with the machine 	<ul style="list-style-type: none"> •Protection board from hotness 	<ul style="list-style-type: none"> • Front heat protection • Coolant (-30°C) 	<ul style="list-style-type: none"> •Remote control panel • ATS • Remote controller • Synchronizing controller 	<ul style="list-style-type: none"> • 415/240V • 380/220V • 220/127V • 220/127V • 200-115V



■ **Control Panel: AMF20**



Benefits

- Less wiring and components
- Integrated solution
- Less engineering and programming
- Perfect price/performance ratio

Features

- Support of engines equipped with Electronic Control Unit (J1939 interface)
- Comprehensive diagnostic messages; SPN/FMI codes; KWP2000 support
- Automatic or manual start/stop of the gen-set
- Push buttons for simple control, lamp test
- Graphic back-lit LCD display 128x64 pixels
- 6 LED indicators
- Parameters adjustable via keyboard or PC
- Generator C.B. and Mains C.B. control with feedback and return timer
- RS232 interface (AT-LINK CONV cable is necessary for IL-AMF 20)
- Modem communication support (IL-AMF 25 only)
- Dimensions 180x120 mm (front panel)
- Sealed to IP65

- Mains measurements (50/60 Hz): U1-U3, Hz
- Generator measurements (50/60 Hz): U1-U3, I1-I3, Hz, kW, kVAr, kWh
- Selectable protections alarm/shutdown
- 3 phase Generator protections
 - Over-/under voltage
 - Over-/under frequency
 - Current/voltage asymmetry
 - Overcurrent/overload
- 3 phase AMF function
 - Over-/under frequency
 - Over-/under voltage
 - Voltage asymmetry
- Configurable analog inputs
- Battery voltage, engine speed (pick-up) measurement
- Configurable programmable binary inputs and outputs
- Warm-up and cooling functions

The Chart of Functions of IntelLite[®] Controllers

FUNCTIONS/CONTROLLERS	IL-AMF 20	IL-AMF 25	IL-MRS 10	IL-MRS 15	IL-MRS 11	IL-MRS 16
Binary inputs/outputs	7 / 7	7 / 7	6 / 6	6 / 6	6 / 6	6 / 6
Analog inputs	3	3	3	3	3	3
Pick-up	•	•	•	•	•	•
AMF function	•	•	-	-	-	-
Input configuration	•	•	•	•	•	•
Output configuration	•	•	•	•	•	•
Voltage measurement Gen./Mains	3ph / 3ph	3ph / 3ph	3ph / -	3ph / -	3ph / -	3ph / -
Current measurement	3ph	3ph, IDMT overcurrent	3ph	3ph, IDMT overcurrent	3ph	3ph, IDMT overcurrent
kW/kWh measurement	• / -	• / •	• / -	• / •	• / -	• / •
GCB/MCB control with feedback	• / •	• / •	- / -	- / -	• / -	• / -
Extension units (periph.)	-	IGL-RA15, IG-IOM, IGS-PTM	-	IGL-RA15, IG-IOM, IGS-PTM	-	IGL-RA15, IG-IOM, IGS-PTM
Communication interfaces	RS232 ²⁾	RS232, CAN ³⁾	RS232 ²⁾	RS232, CAN ³⁾	RS232 ²⁾	RS232, CAN ³⁾
Modem support	-	•	-	•	-	•
Battery charging alternator circuit	•	•	•	•	•	•

Key: • included; - excluded
 1) GCB control, but without feedback
 2) For IL-AMF 20, IL-MRS 10/11 AT-LINK CONV cable necessary
 3) CAN for periph.

Legend: IG-IOM/IGS-PTM: I/O extension modules
 IGL-RA15: Remote annunciator
 I-RD: Remote display

