

## Model: MT1400D5

Powered by Mitsubishi

### Output Rating

MODEL		Power rating		Voltage available		
		PRIME(1)	STANDBY(2)			
MT1400D5	400V/50HZ	1000KW	1120KW	380/220V	400/230V	415/240V
	PF:0.8	1250KVA	1400KVA			

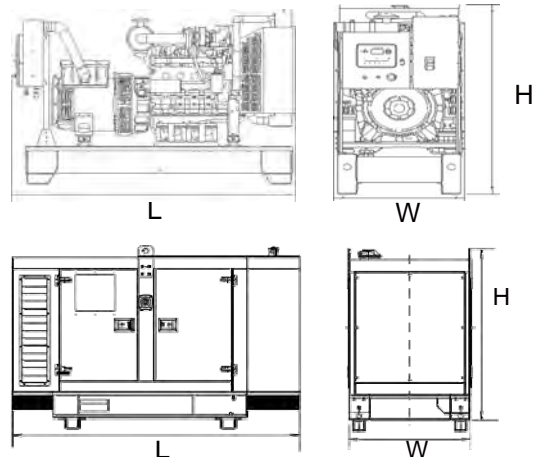
### General Information

Model	MT1400D5		
Engine	S12R-PTA		
Speed control type	Electronic		
Phase	3		
Control System	Digital		
System voltage	12V/24V		
Frequency	50HZ		
Engine Speed(RPM)	1500		
Fuel Consumption L/hr	Standby power(2)	288	
	Prime Power(1)	261	
	75% prime power	202	
	50% prime power	146	



### Dimension and Weight

Dimension	Open	Silent
Length (L)	4457mm	
Width (W)	2050mm	40FT
Height (H)	2348mm	
Net Weight	10486KG	



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 S12R-PTA

### GENERAL ENGINE DATA

Type	4-Cycle, Water Cooled	
Aspiration	Turbo-Charged, After Cooler (Jacket water to Cooler)	
Cylinder Arrangement	60°V	
No. of Cylinders	12	
Bore mm(in.)	170	(6.69)
Stroke mm(in.)	180	(7.09)
Displacement liter(ir <sup>3</sup> )	49.03	(2992)
Compression Ratio	14.0:1	
Dry Weight - Engine only - kg(lb)	4800	(10584)
Wet Weight - Engine only - kg(lb)	5080	(11201)

### PERFORMANCE DATA

Steady State Speed Stability Band at any Constant Load		
Hydraulic (std.) or Electric Governor - %	±0.25 or better	
Maximum Overspeed Capacity - rpr	2100	
Moment of inertia of Rotating Components - kg·m <sup>2</sup> (lbf·ft <sup>2</sup> )	75.3	(1787)
(Includes Std. Flywheel)		
Cyclic Speed Variation with Flywheel a	1800rpm	1/565
	1500rpm	1/394
	1200rpm	1/253

### ENGINE MOUNTING

Maximum Bending Moment at Rear Face of Flywheel Housing - kg·m(lbf·ft)	450	(3256)
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### AIR INLET SYSTEM

Maximum Intake Air Restriction (Includes piping)		
With Clean Filter Element - mm H <sub>2</sub> O (in.H <sub>2</sub> O)	400	(15.7)
With Dirty Filter Element - mm H <sub>2</sub> O (in.H <sub>2</sub> O)	635	(25.0)

### EXHAUST SYSTEM

Maximum Allowable Back Pressure - mm H <sub>2</sub> O (in.H <sub>2</sub> O)	600	(23.6)
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### LUBRICATION SYSTEM

Oil Pressure at Idle - kgf/cm <sup>2</sup> (psi)	2 ~ 3	(29 ~ 43)
at Rate Speed - kgf/cm <sup>2</sup> (psi)	5 ~ 6.5	(71 ~ 93)
Maximum Oil Temperature - °C(°F)	110	(230)
Oil Capacity of Standard Pan	High - liter (U.S.gal)	150 (39.6)
	Low - liter (U.S.gal)	108 (28.5)
Total System Capacity (Includes Oil Filter) - liter (U.S.gal)	180	(47.6)
Maximum Angle of Installation (Std. Pan)	Front Down	6.5°
(Engine Only)	Front Up	6.5°
	Side to Side	22.5°

### COOLING SYSTEM

Coolant Capacity (Engine only) - liter (U.S.gal)	125	(33.0)
Maximum External Friction Head at Engine Outlet - kgf/cm <sup>2</sup> (psi)	0.35	(5.0)
Maximum Static Head of Coolant above Crankshaft Center - m(ft)	10	(32.8)
Maximum Outlet Pressure of Engine Water Pump - kgf/cm <sup>2</sup> (psi)	2	(28.6)
Standard Thermostat (modulating) Range-°C(°F)	71 ~ 85	(160 ~ 185)
Maximum Coolant Temperature at Engine Outlet-°C(°F)	98	(208)
Minimum Coolant Expansion Space - % of System Capacity	10	
Maximum Coolant Temperature at Intercooler Inlet, TK type-°C(°F)		
Maximum Air Restriction on Discharge Side of Radiator and Fan-mm H <sub>2</sub> O(in.H <sub>2</sub> O)	10	(0.4)



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



## Control Panel



## Product description

- Single gen-set controller for Stand-by and Prime-power applications
- Direct communication with EFI engines
- Total remote monitoring and control

## Key features

- Easy to install, configure and use
- Wide range of communication capabilities including:
  - connection via RS232, RS485, CAN and on board USB
  - internet access using Ethernet or GPRS
  - support for Modbus and SNMP protocols
- Cloud-based monitoring and control
- Active SMS and emails in different languages
- 2x 5 A binary outputs for cranking and fuel solenoid
- Option for up to 16 additional binary inputs/outputs
- Flexible event based history with up to 350 events
- Load shedding, dummy load capability
- Automatic temperature based cooling/heating
- Comprehensive gen-set protections
- Multipurpose flexible timers
- True RMS measurement

## Available extension modules

Product	Description	Order code
CM-Ethernet	Ethernet interface	CM2ETHERXBX
CM-GPRS	GSM modem / wireless internet	CM2GPRSXXBX
CM-RS232-485	Dual port interface	CM223248XBX
EM-BIO8-EFCP	8 additional binary inputs/outputs	EM2BIO8EXBX

## Functions and protections

Description	ANSI code	Description	ANSI code
Over voltage	59	Load shedding	32P
Under voltage	27	Overload	32
Voltage asymmetry and Phase rotation**	47	Power factor	55
Over frequency	81H	Temperature	49T
Under frequency	81L	Gas (fuel) level	71
Over current*	50 + 51	Earth fault current	50N + 64
Current unbalance	46		

\* Short current only

\*\* Fixed setting

