



M550

50Hz/1500 rpm/380V

POWER RATING (0.8 P.F.)

PRIME 500 kVA

DIESEL ENGINE: MITSUBISHI S6A3-PTAA-S

L-6, 4 stroke-cycle water-cooled, turbocharged and air-to-air cooling system

VOLTAGE VARIATION

- Standard Voltage 3Phase 4 Wires 380V
- Voltages Available 3Phase 4 Wires 380, 400, 415, 440, 190, 200, 208 and 220V

Note: Outputs for optional voltages may differ from standard output mentioned above.

CONDITIONS & DEFINITIONS

Prime [PRP] :

Applicable for supplying power with varying load instead of the utility for an unlimited time. +10% overload is allowed in accordance with ISO3046/1. Prime power in accordance with ISO15550, ISO3046/1, JIS8002-1, DIN6271 and BS5514. Prime power in accordance with ISO8528.

Conditions:

Engine ratings are based on SAE J1349 standard conditions. These ratings also apply at ISO3046/1, DIN6271 and BS5514 standard conditions. Fuel rates are based on fuel oil of 35° API (16°C or 60° F) gravity having a LHV of 42,780 kJ/kg (18,390 Btu/lb.) when used at 29°C (85° F) and weighing 838.9 g/liter (7.001lbs./U.S. gal.).

Note: * Please consult with your nearest dealer for overload and additional rating requirements.

DIMENSION (Reference Data)

Length (L) mm	Width (W) mm	Height (H) mm	Dry kg	Wet kg
3600	1422	2140	4200	4500

Dry = With Lube Oil

Wet = With Lube Oil and Coolant

ENGINE STANDARD EQUIPMENT

Aftercooler	Electronic type governor
Air filter, paper element type	Lubricating oil filter, full flow paper element
Structure steel base	Lubricating oil pump, gear driven Exhaust dry manifold
Crankcase breather	Radiator, blower fan, fan drive
Charging alternator	Manual shutoff
Lubricating oil cooler	24V DC electric starting motor
Fuel filters, full flow paper element	
Fuel transfer pump, gear driven, plunger type	

ENGINE SPECIFICATIONS & TECHNICAL DATA

Bore	mm	150
Stroke	mm	175
Displacement	L	18.6
Piston speed	m/sec.	8.8
Compression ratio		14.5
Lubricating oil capacity	L	80
Coolant capacity without radiator	L	45
Coolant pump external resistance	m water	5.0
Coolant pump flow rate	L/min	580
Cooling fan airflow rate	m ³ /min	431
Cooling fan air flow restriction	kPa	0.1
Ambient air temperature	°C	40
Allowable exhaust back pressure	kPa	6.0
Exhaust flange size (internal diameter)	mm	200

ENGINE OPERATING DATA

Gross Engine Power*	kWm	430
Brake mean effective pressure	MPa	1.9
Regenerative absorption	kW	40
Noise Level at 1 m (excluding: intake, exhaust & fan)	dB(A)	101
Fuel consumption load 100%*	L/hr.	107
Fuel consumption load 75%*	L/hr.	80
Combustion air inlet flow rate	m ³ /min	37
Exhaust gas flow rate	m ³ /min	97
Exhaust gas temperature	°C	510
Heat rejection to coolant	kW	139
Heat rejection to exhaust	kW	340
Heat rejection to atmosphere from engine	kW	32
Heat rejection to atmosphere from generator	kW	27

* WITH FAN basis.

Deration for engine

Altitude: 2.5% per 300m (1000ft) above 1,500m

Temperature: 2% per 5

**2 YEARS
WARRANTY**

CONTROL PANEL

Type & Design

Deep Sea 6010MKII programmable microprocessor control-automatic start/stop panel, generator breaker control, indicating the operational status and fault conditions; automatically shutting down the engine and indicating the engine failure by means of LCD display and LEDs on the front panel.

Mounting Electrical Design

Fabricated cubicle mounted on individual bracket with anti-vibration isolator. In accordance with BS EN 60950 Low Voltage Directive, BS EN 61006-2 and 61006-4 EMC Directive. The optional interface can provide real time diagnostic facilities.

GENERATOR CONTROL PANEL DESCRIPTION

- Manual button
- Auto button
- CB open button (Manual only)
- CB close button (Manual only)
- Start engine button (Manual only)
- Stop/Reset button (Manual only)
- Mute/Lamp test button (Manual only)
- Speed adjusting trimmer
- Emergency stop pushbutton
- LCD display accessed by scroll pushbutton
 - Generator volts L1-N, L2-N, L3-N
 - Generator volts L1-L2, L2-L3, L3-L1
 - Generator amps L1, L2, L3
 - Generator Phase Sequence
 - Generator Frequency Hz
 - Engine speed RPM
 - Engine oil pressure (PSI & Bar)
 - Engine cooling water temperature (°C & °F)
 - Battery volts
 - Engine hours run
 - Power Factor
 - Generator Load kW, kVA, kVar
 - Generator Load kWh, kVAh, kVarh
- Visual indicators on LCD display
 - Shutdown alarm
 - Warning alarm
 - High coolant temperature
 - Low oil pressure
 - Charge fail
 - Over-speed
 - Under-speed
 - Electrical trip
 - Fail to start
 - Fail to stop
 - Generator high current
 - Over voltage (AC)
 - Under voltage (AC)
 - Over voltage (DC)
 - Under voltage (DC)
 - Auxiliary indication
 - Auxiliary alarm (warning or shutdown)
 - Common alarm
 - Over frequency
 - Under frequency
- Visual indicators on LCD display
 - High engine temperature
 - Low oil pressure
 - Fail to start
 - Over-speed
 - High voltage
 - Emergency Stop
 - Over frequency
 - Under frequency
 - Oil pressure sender open circuit
 - Loss of speed signal
 - Low voltage
- Operation status indicated by LED
 - Remote start present
 - Generator ready
 - Lubrication oil filter clogged
 - Electrical trip
- Pre-Programmed Starting Unit

Automatic start/stop sequence timing and delay systems configured via MS-Windows based software.

AC GENERATOR

Type & Design

Original design, single bearing, 4 pole, screen protected, self-exciting, self-regulating and brushless with fully connected damper windings, salient pole rotors, A.C. exciter and rotating rectifier unit. Direct coupled to engine and pre-lubricated maintenance free bearing, direct drive centrifugal blower. Enclosure: Drip-proof IP23

Winding System

Standard 12 wire reconnectable winding provides a wide range of 3 phase voltage. All windings are impregnated in vacuum pressure impregnated with a special polyester resin.

- Overspeed capability: 125% for 2 minutes
- Insulation: Class 'H' of IEC
- Temperature rise: Class 'F'

Voltage Regulator

Fully sealed, RMS sensing AVR with built-in protection against sustained over-excitation. This de-excites the generator after a minimum of 5 seconds.

- Voltage regulation: Less than +/- 1.0% from no load to full load at any power factor between 0.8 lagging and 1.0 allowing for a 4% engine speed variation
- Voltage adjustment: +/- 6%
- Wave form: Less than 5% deviation

Anti-Condensation Heater (ACH)

The alternator is equipped with anti-condensation heater, connected to grid power, to avoid moisture accumulation inside the alternator during genset stop period.

Electrical Design

- Telephone Influence Factor (TIF): Less than 50
- Telephone Harmonic factor (THF): Less than 2%



Warranty: All prime equipment carries a two years manufacturer's warranty. For details on full warranty cover please request for our warranty terms and conditions from your sales contact or email marketing@jmglimited.com