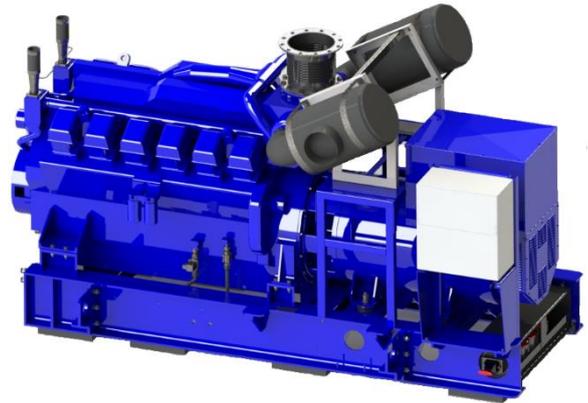


MGS-EU 1200-B

MITSUBISHI GENERATOR SET

EU MADE (France)

Quality, reliability, performance, and partnership
- Mitsubishi Heavy Industries Group.



RATING

| | |
|-----------------------------|-------------------------------------|
| Generating set model | MGS-EU 1200-C |
| Generator voltage | 400 V |
| Frequency | 50 Hz |
| Generator output LTP | 1168 kW/ 1460 KVA |
| Power factor - min | 0.8 |
| Duty | 500 h/year |
| Rating | LTP – Stand-by |
| Average load factor for 24h | 80% or lower >90% for max 3h/24h |
| Overload | Not available |
| Installation location | Indoor |

DESIGN CONDITIONS

| | |
|--|----------------|
| Ambient temp - avg/max | 25/40°C |
| Ambient temp – min | 0°C |
| Altitude (maxi) | 1000 m a.s.l |
| Relative humidity (maxi) | 85% |
| Fuel oil LHV | 42700kJ/kg |
| Fuel oil | Diesel |
| Fuel oil gravity at 15°C | 0.83 to 0.87 |
| Fuel oil sulfur content max | 0.2% by weight |
| Fuel oil viscosity min(60°C)/max(50°C) | 2.0/8.0 cSt |
| Fuel oil cetane number – min | 45 |
| Lube oil capacity - max | 180 liters |
| Emissions-other version available | unregulated |

ALTERNATOR DATA

| | |
|--|----------|
| Enclosed, self ventilated, self-regulated, brushless | |
| Bearing configuration | Single |
| Insulation class | H |
| Temperature rise class | H |
| Cooling method | Air IC01 |
| Protection | IP23 |
| Excitation system | Digital |
| PT100 for bearing and stator winding | |
| AVR for single and parallel operation | |
| Space heater | |
| Set of CT's for measure or protection | |

ENGINE DATA

| | |
|-------------------------------------|------------------------|
| Engine model | S12R PTA |
| Engine speed | 1500 Rpm |
| Engine brake output | 1110 kWm |
| Cylinder configuration | 12 V |
| Total displacement | 49.03 liters |
| Bore x Stroke | 170 x 180 mm |
| Compression ratio | 15.0:1 |
| Turbocharged | 4 cycles |
| Governor | Electric |
| Cooling method (engine driven pump) | Water (loose radiator) |
| Starting method | Electrical 24 V DC |

CE COMPLIANCE

2006/42/EC : machinery

LANGUAGE – UNITS

Drawings, documents, nameplates in English

SI metric system

PERFORMANCES @ PRIME (LV : 400V)

| | |
|--|--------------|
| Generator output | 1168 kW |
| Specific consumption – ISO3046/1 : 0/+5% | 212 g/kWh |
| Fuel oil consumption @ 100% | 271 L / h |
| Fuel oil consumption @ 75% | 207 L / h |
| Exhaust gas temperature | 450 °C |
| Exhaust gas flow rate | 235 m3/min |
| Air intake flow rate | 89 m3/min |
| Noise level@ 1m (open skid) | 105.0 dB (A) |

HEAT BALANCE

| | |
|--|------------|
| Heat rejection | 649 kW |
| Heat rejection (exhaust) | 758 kW |
| Thermal radiation (engine block) | 78 kW |
| Thermal radiation (generator) | 51 kW |
| Coolant temperature at HT outlet - max | 98°C |
| Flow rate of coolant radiator circuit | 99 m3/h |
| Coolant capacity (engine only) | 125 liters |

TOLERANCES AND CONDITIONS

Efficiency data for average conditions (avg) – derating above 1000 m asl or 40°C intake air temperature

Fuel input: 0/+5% (ISO3046/1). Submitted to fuel oil specification confirmation

Heat rejection data: +/- 12%. Add 17% margin for remote dry air cooler design

Exhaust gas flow / temperature: +/- 6% - +/- 8%

Pictures are not contractual and may include optional accessories

These data are not contractual. They can be modified by MTEE without prior notice

STANDARDS

I.S.O. : International Standard Organization

C.E.N. : European Standard Committee

I.E.C. : International Electric Commission

J.I.S : Japanese Industrial Standards (for engine)

J.E.C. : Japan. Electrotechnical committee (engine)

J.E.M: Japan Elec. Manufacturers Association (Eng.)

Manufacturers standards

GENERATOR SET EMBEDDED CONTROL PANEL

Manual start and stop by push buttons on the (CGC) Compact Genset Controller (DEIF made)

Automatic start and stop sequence (AMF)

Automatic engine and alternator protection

Automatic control of engine auxiliaries and power supply:

- Jacket water heater (if applicable)
- Alternator space heater
- Loose radiator

Lube oil priming pump (if applicable)

24 V DC energy block to supply control system and panel equipment

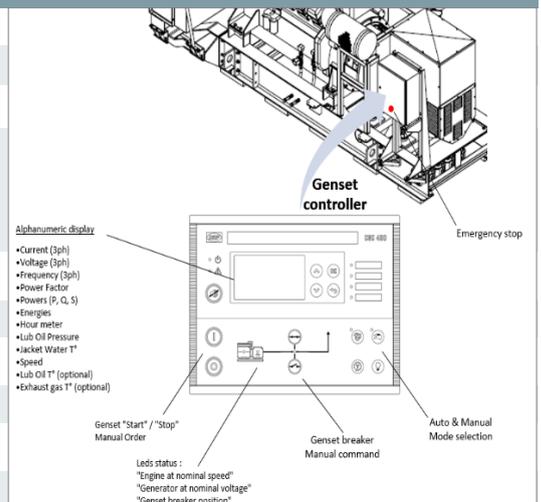
24 V DC charger to supply engine starting batteries

Display and monitoring of operating data, alarms and history logs

Optional functions for parallel operation with other genset or grid

Optional functions for power management, peak shaving, etc...

Modbus RS485 - Optional ethernet TCP/IP com port for internet remote access



GENERATOR SET EMBEDDED CIRCUIT BREAKER PANEL (OPTION FOR CE MARKING)

Air circuit breaker (ACB)

Motorized – 3 poles – 2500 amp – 400 VAC (4 poles on request)

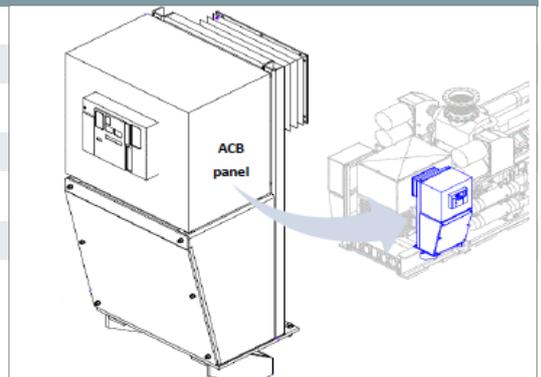
Electric protection relay

Command coil 24 V DC

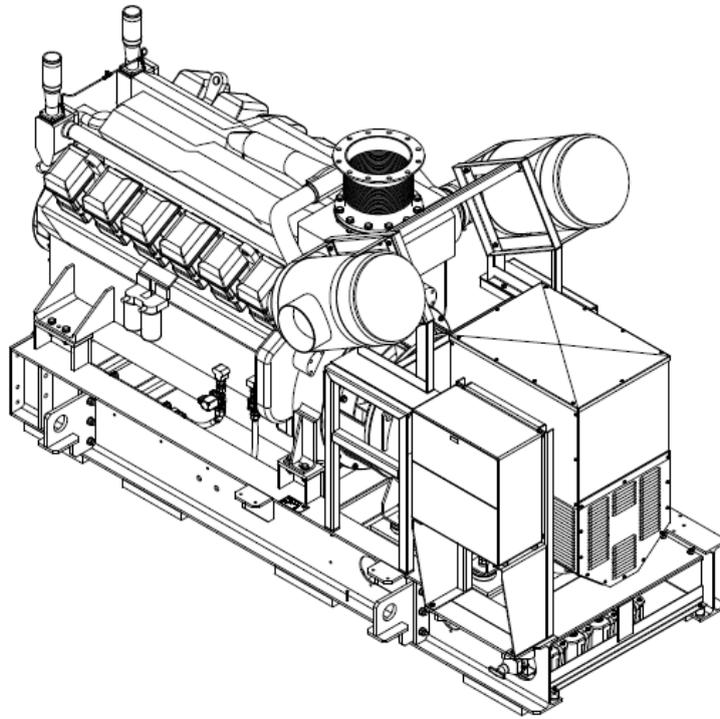
Auxiliary contacts

Key lock, On/Off button lock, Safety labels

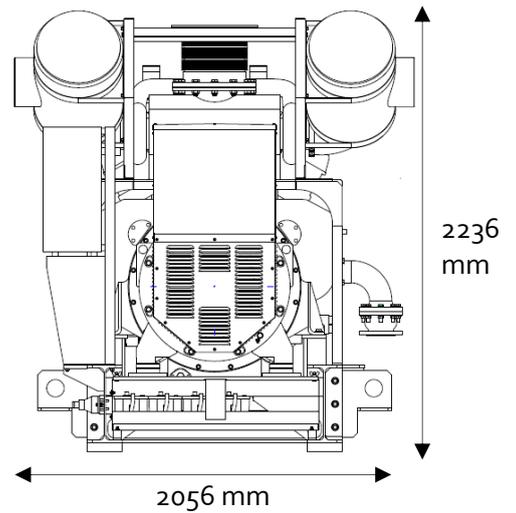
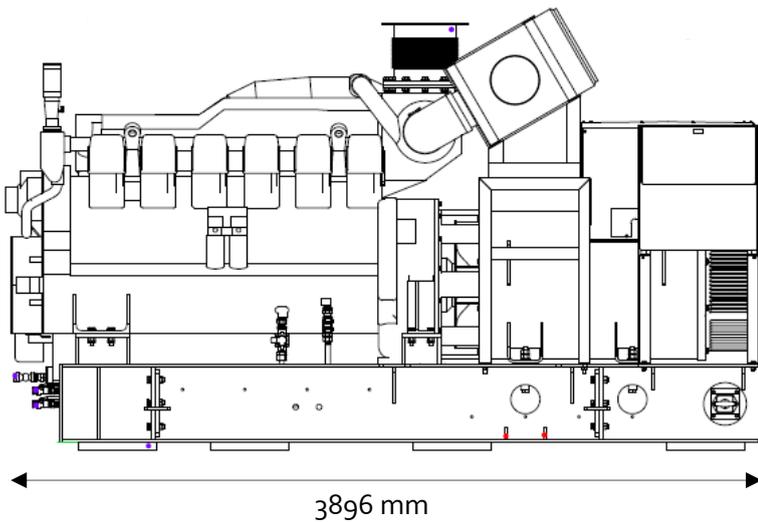
Downstream side protected by cover case for easy cable connection with no free access to live parts



MGS-EU 1200 GENSET (S12R PTA / ECO 43 VL4A) LAYOUT



Dry Weight = 9 750 Kg



SCOPE OF SUPPLY

- Standard item

- Option

- Not included or not applicable

| | Open skid set | | Containerized set | |
|---|---------------|----|-------------------|----|
| | LV | HV | LV | HV |
| Steel base frame with engine-alternator | ● | ● | ● | ● |
| Elastic suspensions of the generating set | ● | ● | ● | ● |
| Starting batteries and cables | ● | ● | ● | ● |
| High voltage (HV) alternator 3 to 11 kV with 100V VTs | - | ○ | - | ○ |
| Jacket water heating | ○ | ○ | ○ | ○ |
| Alternator space heater | ● | ● | ● | ● |
| Pump for lube oil priming, filling and draining | ○ | ○ | ○ | ○ |
| Oil mist separator | ○ | ○ | ○ | ○ |
| Dry air filter, high efficiency on turbocharger | ● | ● | ● | ● |
| Engine driven jacket water pump (mounted on engine) | ● | ● | ● | ● |
| Engine driven Intercooler pump (mounted on engine) | - | - | - | - |
| Remote external dry air cooler | ○ | ○ | ○ | ○ |
| Thermostatic valve for jacket water (with by-pass, mounted on engine) | ● | ● | ● | ● |
| Thermostatic valve for Inter cooler (with by-pass, mounted on engine) | - | - | - | - |
| Embedded Genset Control Panel, including auxiliaries power supply | ● | ● | ● | ● |
| Remote control panel, including auxiliaries power supply, with Harness Assy | ○ | ○ | ○ | ○ |
| Embedded Generating set protection Circuit Breaker Panel (LV) | ○ | ○ | ● | ● |
| Remote Generating set protection Circuit Breaker Panel (LV, HV) | ○ | ○ | ● | ● |
| Generating set factory tests (standard program) | ● | ● | ● | ● |
| Generating set finishing color: Blue RAL 5010 | ● | ● | ● | ● |
| Exhaust silencer 30 to 50 dB(A) attenuation (loose supply for open skid) | ○ | ○ | ● | ● |
| Exhaust bellow on turbocharger outlet | ● | ● | ● | ● |
| Automatic lube oil level regulator on engine sump | ○ | ○ | ● | ● |
| Lube oil service tank 200 liter capacity (loose supply for open skid) | ○ | ○ | ● | ● |
| Fuel oil daily tank 500 liter capacity, up to 6000 liter (loose supply for open skid) | ○ | ○ | ● | ● |
| Set of fuel oil flexible for engine | ● | ● | ● | ● |
| Engine standard tools for routine maintenance | ○ | ○ | ○ | ○ |
| Step up transformer LV / HV 15 to 20 kV | - | ○ | - | ○ |
| LV connection busbar from alternator to transformer | - | ○ | - | ○ |
| Sound proofed generating set container | - | - | ● | ● |
| Elbow pipe between the engine and the silencer | - | - | ● | ● |
| Water pipes from engine to remote dry air cooler | - | - | ○ | ○ |
| Lube oil pipes from service tank to engine lube oil level regulator | - | - | ● | ● |
| LV cables from alternator to protection circuit breaker | - | - | ● | - |
| HV cables from transformer to protection circuit breaker | - | - | - | ● |
| Fuel oil mass flow meter fitted on genset baseframe | ○ | ○ | ○ | ○ |
| Heavy duty oil bath air filter for dust/sand ambient condition | ○ | ○ | ○ | ○ |
| Scada system, connected to genset control panel (remote desktop PC) | ○ | ○ | ○ | ○ |
| Fuel oil centrifugal unit (separator) for water and sludge removal | ○ | ○ | ○ | ○ |
| Oversized dry air cooler for high ambient temp | ○ | ○ | ○ | ○ |
| On site assistance for supervisory, commissioning and training | ○ | ○ | ○ | ○ |
| Alternator according to specific country grid code | ○ | ○ | ○ | ○ |

CONTACTS DETAILS

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More information

Contact your local dealer for more information regarding Mitsubishi Generator Sets and optional equipment, or visit engine-genset.mhi.com

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