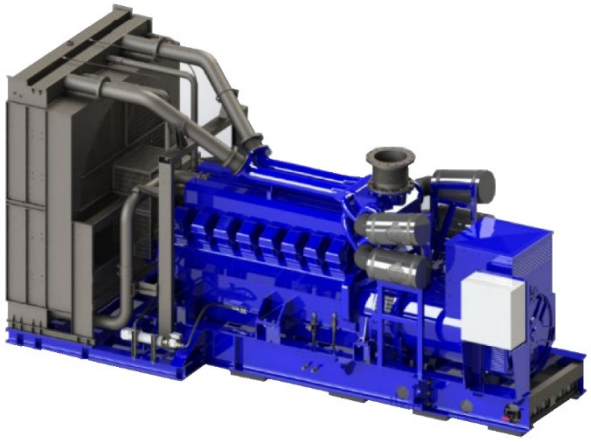
MITSUBISHI GENERATOR SET

MGS-EU 2500-C - RADIATOR

MITSUBISHI GENERATOR SET

EU MADE (France)

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



RATING

Generating set model	MGS-EU 2500-C
Generator voltage	400 V
Frequency	50 Hz
Generator output PRP	1600 kWe 2000 KVA
Power factor - min	0.8
Duty	Unlimited
Rating	PRP – Prime Power
Average load factor for 24h	80% or lower >90% for max 3h/24h
Overload	110% for 1h/12h
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	230 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	S16R PTAA2
Engine speed	1500 Rpm
Engine brake output	1728 kWm
Cylinder configuration	16 V
Total displacement	65.37 liters
Bore x Stroke	170 x 180 mm
Compression ratio	14.0:1
Turbocharged	4 cycles
Governor	Electric
Cooling method (engine driven pump)	Air + Water
Starting method	Electrical 24 V DC

CE COMPLIANCE

I.S. 2006/42/EC : machinery

LANGUAGE – UNITS

Drawings, documents, nameplates in English

SI metric system

MOVE THE WORLD FORWARD MITSUBISHI HEAVY INDUSTRIES GROUP

MITSUBISHI GENERATOR SET

PERFORMANCES @ PRIME (LV : 400V)

Generator output	1600 kWe
Specific consumption – ISO3046/1 : 0/+5%	210 g/kWh
Fuel oil consumption @ 100%	406 L / h
Fuel oil consumption @ 75%	308 L / h
Exhaust gas temperature	550° C
Exhaust gas flow rate	403 m3/min
Air intake flow rate	152 m3/min
Noise level@ 1m (open skid)	110.5 dB (A)

RADIATOR DATA

Heat rejection JW/AA	698/642 kW
Air on temperature by 1000m a.s.l	45°C
Coolant	MEG 30%
Max external pressure drop	250Pa
Max outlet temperature (air)	87.7 °C
Air flow	31.5 m3/s
Coolant capacity incl. engine	400 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
- Alternator space heater

Lube oil priming pump (if applicable)

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

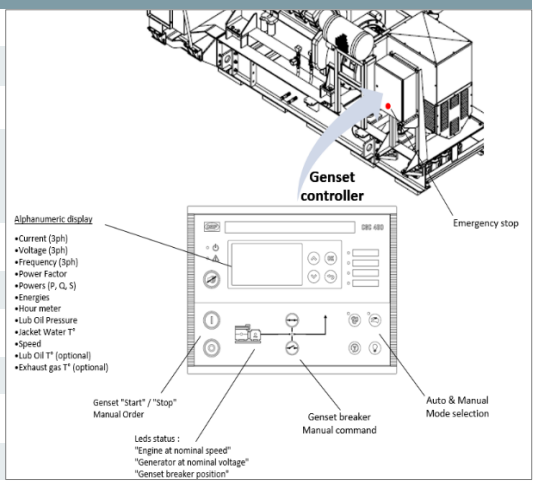
24 V DC charger to supply engine starting batteries

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 – 3200 amp – 400 VAC (4 poles on request)

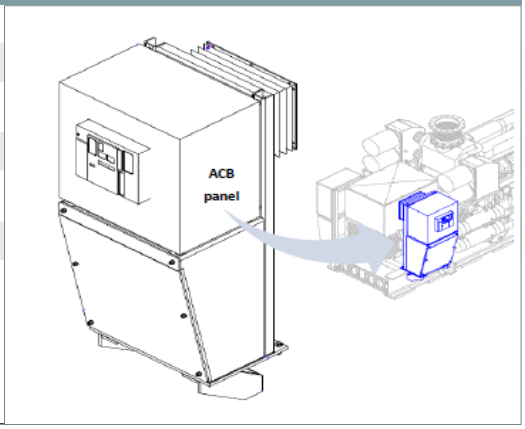
Electric protection relay

Command coil 24 V DC

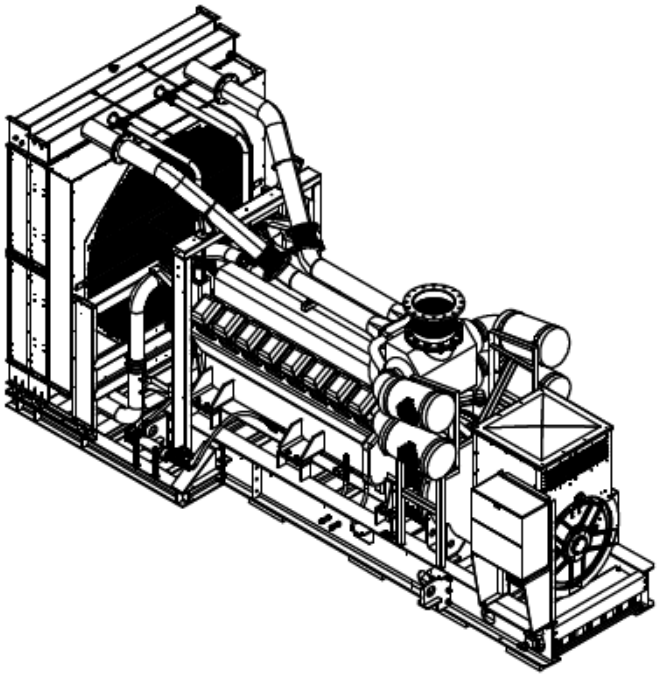
Auxiliary contacts

Key lock, On/Off button lock, Safety labels

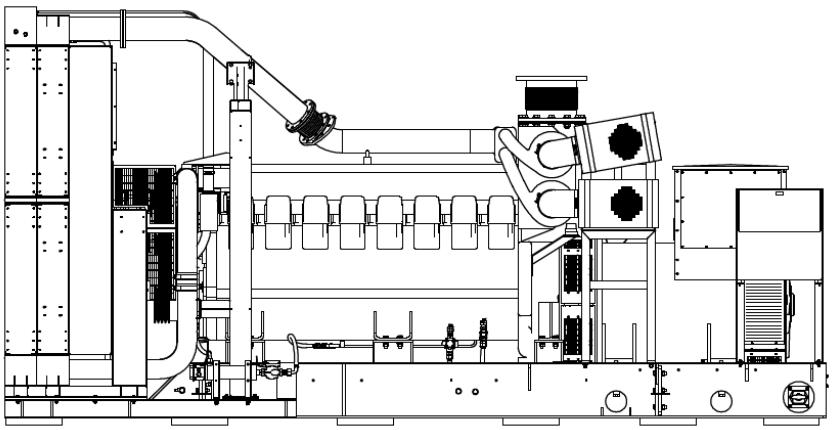
Downstream side protected by cover case for easy cable connection with no free access to live parts



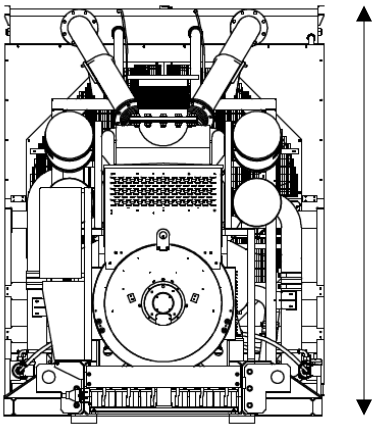
MGS-EU 2500 GENSET (S16R PTAA2 / ECO46 1L/4 SAE 00 21) LAYOUT



Dry Weight = 14630 Kg



5861 mm



2280 mm

MITSUBISHI GENERATOR SET

SCOPE OF SUPPLY

● Standard item
o Option
- Not included or not applicable

	Open skid set		Containerized set	
	LV	HV	LV	HV
Steel base frame with engine-alternator-radiator	●	●	●	●
Elastic suspensions of the generating set	●	●	●	●
Starting batteries and cables	●	●	●	●
High voltage (HV) alternator 3 to 11 kV with 100V VTs	-	o	-	o
Jacket water heating	●	●	●	●
Alternator space heater	●	●	●	●
Pump for lube oil priming, filling and draining	o	o	o	o
Oil mist separator	o	o	o	o
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 (removal of radiator on base frame)	o	o	o	o
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	o	o	o	o
Embedded Generating set protection Circuit Breaker Panel (LV)	o	o	●	●
Remote Generating set protection Circuit Breaker Panel (LV, HV)	o	o	●	●
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)	o	o	●	●
Exhaust bellow on turbocharger outlet	●	●	●	●
Automatic lube oil level regulator on engine sump	o	o	●	●
Lube oil service tank 200 liter capacity (loose supply for open skid)	o	o	●	●
Fuel oil daily tank 500 liter capacity, up to 6000 liter (loose supply for open skid)	o	o	●	●
Set of fuel oil flexible for engine	●	●	●	●
Engine standard tools for routine maintenance	o	o	o	o
Step up transformer LV / HV 15 to 20 kV	-	o	-	o
LV connection busbar from alternator to transformer	-	o	-	o
Sound proofed generating set container	-	-	●	●
Elbow pipe between the engine and the silencer	-	-	●	●
Water pipes from engine to remote dry air cooler	-	-	o	o
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	o	o	o	o
Heavy duty oil bath air filter for dust/sand ambient condition	o	o	o	o
Scada system, connected to genset control panel (remote desktop PC)	o	o	o	o
Fuel oil centrifugal unit (separator) for water and sludge removal	o	o	o	o
Oversized dry air cooler for high ambient temp	o	o	o	o
On site assistance for supervisory, commissioning and training	o	o	o	o
Alternator according to specific country grid code	o	o	o	o

CONTACTS DETAILS

MITSUBISHI TURBOCHARGER AND ENGINE EUROPE B.V.
70 rue Jean Jaurès
59 770 MARLY
France
Phone: + 33 3 27 32 48 48 Fax: + 33 3 27 32 48 49
e-mail : mteef@mtee.eu
Web : www.mtee.eu

[Space for stamp with Dealer contact information]

More information
Contact your local Mitsubishi Engine & Energy dealer for more information regarding Mitsubishi Generator Sets and optional equipment.
Or visit www.mtee.eu

MOVE THE WORLD FORWARD MITSUBISHI HEAVY INDUSTRIES GROUP

PR2500980033 MGS EU 2500-C - Radiator V1.0