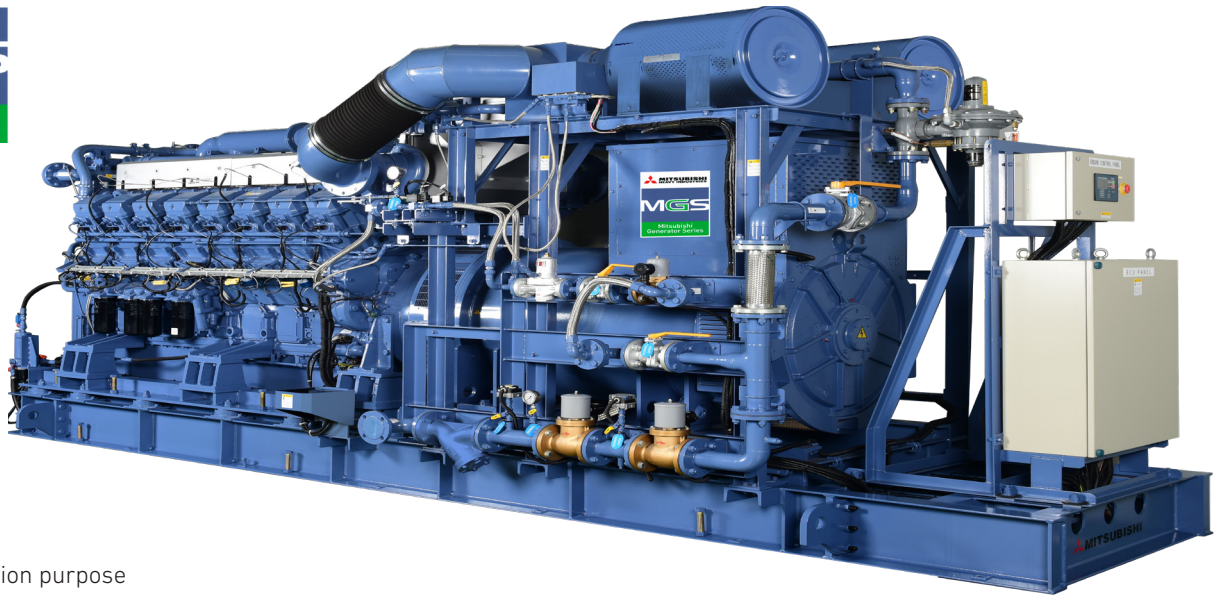
MGS1200G / 60Hz



*For illustration purpose

MGS1200G / 60Hz

POWER RATING	
Continuous	1200kW
Voltage Variation	
Standard Voltage	3Phase 4 Wires, 480V
Voltages Available	3Phase 4 Wires, 380V, 400V, 416V, 440V and 460V

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

DIMENSION (REFERENCE DATA)

Overall Dimensions	Length	6160 mm
	Width	2120 mm
	Height	2475 mm
Total Weight (Dry)		18900 kg
Total Weight (With Water & Oil)		19500 kg

CONDITIONS & DEFINITIONS

SYM	NAME OF RATING	OVERLOAD OPERATION	DEFINITION	LOAD/OPERATING HOUR*		
				AVE. LOAD FACTOR	AVE.LOAD	OPERATING
C	Continuous	Not allowed	Rating that can continuously generate power without limitation for operating hour per year under the required conditions for warranty in this document.	Maximum 100%	Maximum 100%	Unlimited

* Average load factor (per 24Hr or year) shall be calculated as per the formula in ISO 8528-1:2018 'average power output (Ppp)'.

ECONOMICAL

RELIABLE

ECO-FRIENDLY

ROBUST PERFORMANCE

EASY MAINTENANCE

Mitsubishi Heavy Industries Engine System Asia Pte. Ltd.
3 Tuas Avenue 12,
Singapore 639024
Tel: +65 6862 2202

GENERATOR SET OVERVIEW SPECIFICATION

This specification covers the indoor use MHIESA gas engine generator set and attached equipment.

	MGS MODEL		MGS1200G
Generator Set	Frequency	Hz	60
	Voltage	V	480
	Duty		Continuous
	Rated Output	kVA	1500kVA
		kW	1200kW
	Gen. Eff.	%	42.7
	Hot water	%	11.7
	Exhaust heat	%	21.5
	Total Eff.	%	75.8
	NOx emmision at O_2=0%	ppm	320
Engine	MODEL		GS16R2-PTK
	Speed (min^{-1})		1200
	Output (kWm)		1250
	Fuel Consumption m^3 N/h (% Load)	50%	150.7
		75%	214.6
		100%	277.4
	Lub. Oil Consumption (liter/h) 100% Load		0.464
	Cooling System		Closed looped circuit by external radiator

Generation efficiency is based on the following conditions as our standard.
(1) Initial performance of the rated load
(2) Generator power factor : 0.9 or higher (lagging)
(3) Under standard atmospheric according to ISO 3046
(4) Tolerance: +5%
(5) Methane number: 80 or higher, fuel gas lower heating value: 36.47 MJ/m^3
(6) Exhaust gas back pressure : 5.0kPa or lower
(7) Heat output from exhaust: exhaust cooling to 120° C

APPLICABLE STANDARD

Mitsubishi Heavy Industries Engine System Asia (MHIESA) gas generator set is designed in accordance with JIS, JEC, JEM, IEC, ISO and manufacturer's standards unless otherwise specified.

JIS : Japanese Industrial Standards
JEC : Japanese Electrotechnical Committee
JEM : The standard of Japanese Electrical Manufacturers Association
IEC : International Electrotechnical Commission
ISO : International Standard Organization

PAINTING

MITSUBISHI standard colour Munsell 6.0PB 4.4/5.2

ENVIRONMENT ETC.

MHIESA gas generator sets are designed to meet following operating conditions

Relative humidity : Max. 85%
Ambient Temperature : 5°C ~ 40°C
Altitude above sea level : <150m

GAS ENGINE

PARTICULARS OF GAS ENGINE

Engine model	GS16R2-PTK 4 cycle, water cooled, spark ignition pre-mixed fuel gas and air with exhaust turbine turbo charger and intake air cooler
No. of cylinder	16 V
Bore / stroke (mm)	170 / 220
Total displacement	79.9 liter
Frequency regulation	(100% load unloading or 20% loading) Transient --------- 15% or below Steady State ----- 5% or below Recovery Time --- 15 sec or below
Governor	Electronic air-fuel mixture control type
Fuel gas	Dry natural gas
Lubricating oil	Refer to Operation & Maintenance manual
Lubricating system	Forced lubricating by gear pump wet sump system
Lub. oil capacity	460 Liters (oil pan: 430Liters)
Lub. oil filter	Full flow paper element type
Lub. oil cooler	Jacket Water cooled corrugated type
Coolant	Refer to Operation & Maintenance manual
Water pump	Centrifugal type drive by AC motor Required water flow: Jacket water circuit : 75m^3/h Intercooler circuit : 45m^3/h Pressure loss in engine Jacket water circuit : 150kPa Intercooler circuit : 100kPa
Turbocharger	Exhaust gas turbine
Air cleaner	Paper element
Starting system	Electric starting Starter motor capacity : 7.5kW x 2 (DC24V)
Stopping system	de-energize to engine stop type solenoid valve on inlet of fuel gas pipe.

CONTROL & MONITORING SYSTEM

MHIESA gas generator set is standard equipped with an Engine Auxiliary Control Panel, a MHI developed Engine Control Panel (M-Agic), and a Remote Monitoring Panel. An optional Generator Control Panel allows customer easily integrate parallel operation function in their control system.

PARTICULARS OF AC GENERATOR

STANDARD SPECIFICATION

Type	Brushless, self-excited, self-ventilated and rotating field
Protection	IP23
Power factor	0.8 lagging
No. of pole	6 poles
Insulation/ Temp. Rise	Class H/F
Exciter	Brushless
Bearing	Single bearing

Mitsubishi Heavy Industries Engine System Asia Pte.Ltd. serves for the customers with improved products continually.
Therefore specification and some materials will be changed without notice. The International System of units (SI) is used in this publication.

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