

MITSUBISHI BASIC DIESEL GENERATOR SET TECHNICAL SPECIFICATION



MGS1100P-CN

MGS Model		MGS1100P-CN	
Frequency (Hz)		50	
Voltage (V)		380 / 400 / 415	
Duty		Standby (ESP)	Prime (PRP)
Rated Output ⁽¹⁾	(kVA)	1025	925
	(kW)	820	740
Engine model		S625KAA321M	
Fuel Consumption ⁽²⁾ (liter/h) (% load)	25%	69	63
	50%	116	106
	75%	164	149
	100%	220	197
Generator	model	MGP-L49L10	
Cooling system	(Type)	Closed looped circuit by integral radiator	
Length	(mm)	5850	
Width	(mm)	2000	
Height	(mm)	2500	
Weight (Dry)	(kg)	8210	
	(Wet)	(kg)	8405

OPERATION CONDITONS

- (1) Ambient Temperature: -25°C to 50°C (coolant heater required below 5°C)
 Relative Humidity: <90% Altitude: ≤1000m
 Please contact technical department for power derating above 40°C or 1000m.
- (2) Tested with GB 19147-2006 #0 diesel (density: 0.835 g/cm³ at 20°C).
- (3) Installation Location: Outdoors or indoors (with adequate ventilation)

STANDARD & CERTIFICATIONS

- Certified to standards ISO 9001:2015
- Complies to GB/T2820(ISO8528), IEC60034-1 / BS EN60034-1, ISO3046, ISO3744, IEC60204, IEC60947, GB/T20136, JB/T10303, GB/T4712, GB12699, GB/T12786, GB/T6072, GB/T1859, GB755, GB/T10585, GB7251, GB4208, GB191, GB/T14315 and GB/T16895.6
- Fully compliant with the NFPA110 Standard for Emergency and Standby Power
- Provides 100% load acceptance in one step to meet these demands

ADVANCED CONTROL PANEL

- Rugged metal sheet with anti-vibrator isolator
- Operator-friendly interface and navigation
- Complete instrument and control accessories to meet a wide range of installation requirements
- Expansion module and custom programming are available for specific customer requirements

FEATURES

(1) High Emission Standard:

Complies with GB20891 China Non-Road T3 emission standards.

(2) Energy efficiency: The engine employs the world's most advanced electronically controlled high-pressure common rail fuel injection technology, achieving a maximum injection pressure of 200MPa. This ensures excellent fuel atomization and fuel consumption surpasses the 230g/kWh standard of YD/T-502 for power generation units in the communications industry.

(3) Ultra-Low Noise:

High-density flame-retardant sound-absorbing foam.

Residential-grade muffler and customized airflow ducts.

Non-load noise Level at 7m: less than 80 dBA.

(4) Dual Fuel Tanks:

Internal and external tanks with a single-handle switch valve; digital fuel level display.

(5) Voltage Stability ($\pm 0.5\%$):

Leroy-Somer™ alternator, AREP auxiliary winding + DAVR (Digital Automatic Voltage Regulator).

(6) Automatic Fuel Bleeding System:

Self-priming fuel pump to remove air after filter replacement.

(7) Mobility:

Lifting points (top/base) and towing holes for narrow spaces.

(8) Wiring Convenience:

Right-rear outlet box with copper busbars.

(9) The standard configuration features a world-renowned VARTA® valve-regulated lead-acid maintenance-free AGM battery for startup, with a cold start current of 1280CCA and exceptional cold resistance. The non-hazardous, flow-free electrolyte allows free transportation, while its cycle life is three times longer than conventional lead-acid batteries.

(10) The fuel system is standard equipped with an fuel-water separator to prevent water from entering the engine.

DIESEL ENGINE

Duty		Standby (ESP)	Prime (PRP)
Net Engine Power (with fan basis)	(kWm)	933	845
Speed	(RPM)	1500	
No. of cylinder		L6	
Bore / stroke	(mm)	170 / 185	
Total displacement	(liter)	25.2	
Compression ratio		14.5:1	
Injection pump	Type	Common rail	
Governor	Type	ECU	
Frequency regulation		G3 class	
Steady state Frequency band		<0.5%	

STANDARD PAINTING

- (1) Enclosure: RAL 5023 (Deep blue)
 (2) Chassis: RAL 9017 (Traffic black)
 (3) Painting Process:

- MHISH utilizes an advanced automated painting line with sandblasting equipment to ensure superior quality.
- Enclosure Painting: Pretreatment: Henkel (Germany) process. Coating : Premium outdoor- grade powder paint.
- Chassis Powder Coating: Sandblasting + premium outdoor-grade powder paint Coating.

LUBRICATION SYSTEM

Lubricating oil capacity	(liter)	75
Lubrication system	Type	Pressure-splash
Lubrication Oil filter	Type	Paper element
Lubrication Oil cooler	Type	Water cooled corrugated

COOLING SYSTEM

Coolant capacity with radiator	(liter)	130
Thermostat		Opens at 77°C Fully opens at 90°C
Maximum Coolant Temperature		98°C (at prime power) 102°C (at standby power)
Cooling fan airflow rate	(m ³ / min)	1145
Cooling fan airflow restriction	(Pa)	100

ELECTRICAL SYSTEM

System voltage	(V)	24 VDC
Starting system		Electric starting
Starter motor capacity		9kW x 1
Charging Alternator		28V 55A

FUEL TANK

Type		Welded sheet metal structure
Capacity		650L / Optional:400L/1800L

BATTERY

Brand/Type:		VARTA / Maintenance-free AGM
Capacity/Model		4 × AGM H4 (1280CCA)

GENSET CONTROL PANEL

- (1) Type: Sheet metal structure, rear-mounted with observation window and control interface.
- (2) Protection Rating: IP54
- (3) Control Panel Configuration:
 - DSE 6120 MKIII auto-start controller (mains failure) × 1
 - Illumination lamp
 - Lamp switch
 - Controller power switch
 - Integrated audible/visual alarm indicator
- Emergency stop button
- (4) Internal Components:
 - Current transformers ×3
 - 1600A molded case circuit breaker (3P)
 - Battery charger (24V/6A)

ALTERNATOR

Alternator	Type	Brushless, AREP excited, self-ventilated and rotating field
Configuration		3 Phase 4 Wire
Protection		IP23
Power factor		0.8 lagging
No of poles		4 poles
Insulation class		Class H
Temperature rise		Class H @125K
AVR	Type	Digital D350
Voltage regulation	0 - 100% load	< ±1.0%
Wave form distortion		< 5% (Non-Distorting Balanced Linear Load)
Unbalance loading		< 25%
Negative phase sequence		< 8%
Overspeed		< 125% of nominal speed

RATING DEFINITION IN ACCORDANCE WITH ISO8528-1

➤ Prime Power (PRP):

For variable load applications with no annual usage hour restrictions.
The average allowable output power over 24 hours must not exceed 80% of the PRP rating.

➤ Standby Power (ESP):

For emergency use during grid failure or testing conditions, with a maximum annual usage of 200 hours.
The average allowable output power over 24 hours must not exceed 80% of the ESP rating.

OPTION CONFIGURATION

- Multi-units parallel system
- Water heater
- Anti condensation heater
- 50°C condition standard
- Spare parts
- Trailer
- PMG