MITSUBISHI BASIC DIESEL GENERATOR SET
TECHNICAL SPECIFICATION

MGS
Mitsubishi
Generator Series

MGS0900P-CN

Mitsubishi Heavy Industries (Shanghai) co., Ltd.
22F, Office Tower 1, Raffles City Changning, No. 1133 Changning Road, Changning District, Shanghai, China.
TEL：+86-21-6236 9799 FAX：+86-21-6841 5222
Web：http://mitsubishi-engine.mhi.com.cn/

MOVE THE WORLD FORWARD MITSUBISHI HEAVY INDUSTRIES GROUP

*image for illustration only

MGS Model		MGS0900P-CN	
Frequency (Hz)		50	
Voltage (V)		380 / 400 / 415	
Duty		Standby (ESP)	Prime (PRP)
Rated Output (1)	(kVA)	850	763
	(kW)	680	610
Engine model		S625KAA31M	
Fuel Consumption (2) (liter/h) (% load)	25%	55	50
	50%	91	82
	75%	130	118
	100%	179	158
Generator	model	MGP-L49M8	
Cooling system	(Type)	Closed looped circuit by integral radiator	
Length	(mm)	3903	
Width	(mm)	1628	
Height	(mm)	2050	
Weight (Dry)	(kg)	5793	
(Wet)	(kg)	6003	

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

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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 reduces fuel consumption to below 216g/kWh, surpassing the 230g/kWh standard of YD/T-502 for power generation units in the communications industry.

(3) Voltage Stability (±0.5%):

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

(4) Automatic Fuel Bleeding System:

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

(5) Mobility:

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

(6) Wiring Convenience:

Right-rear outlet box with copper busbars.

(7)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.

(8) 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)	745	675
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%	

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STANDARD PAINTING

(1) RAL 5023 (Deep blue)

(2) Painting Process:

- MHISH utilizes an advanced automated painting line with sandblasting equipment to ensure superior quality.
- 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)	165
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)	780
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

BATTERY

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

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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
- 1250A molded case circuit breaker (3P)
- Battery charger (24V/5A)

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.

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