

Rudox Power Generation Natural Gas Generator Set

ERM500GS (500kW) – Mitsubishi

	Stand-by rating for emergency use (*)
ERM500GS rated output	60 HZ
Generator output (kW)	500
Generator output (kVA)	625
Generator speed (RPM)	1800

Minimum operating current	BTU/kWh	CFH
Fuel consumption	9,769	5,664
At 100% load based on L.H.V.		

NOTE: Fuel consumption has a 5% tolerance

HZ	Wire	Voltage range	
60 HZ	3	416–480	208–240
60 HZ	4	240/416–277/480	120/208–138/240

Note: 4,160 & 13,800 are also available

Weight/dimensions with radiator	
W x L x H (in)	72" x 190" x 84"
Wet weight (lbs)	20,750

Weight/dimensions without radiator	
W x L x H (in)	62" x 130" x 80"
Wet weight (lbs)	18,250

The **ERM500GS (500 kW)** prime power duty system stands out as a leader in its class. Boasting a prime power duty output of **500 kW** and powered by a heavy duty **MITSUBISHI** engine, coupled with an efficient **STAMFORD** generator, this Centrica Business Solutions generator set will meet and exceed all your power generation needs. At **9,769 BTU/kWh** at full load, the fuel efficiency of the reliable **MITSUBISHI** engine provides the consistent, dependable performance you have come to expect from any Centrica Business Solutions product. This unit is loaded with standard equipment such as a digital controller and the customer control interface is easy to operate with basic displays such as voltage, current and power as well as alarms like low oil pressure, battery charge failure and high coolant temperature. All of this comes with the exceptional 24 hour, seven day a week service guarantee provided by the Centrica Business Solutions professional service team.

Performance Characteristics

Standard Rudox power generator sets have high performance components to meet the toughest applications

Precise voltage regulation

- + ½ % steady state
- + 1 % from no load to full load

Precise frequency control

- The Woodward electronic isochronous governor has 0% droop,
- No load to full load, and + ½ % steady state

Permanent magnet excitation

- Provides excellent performance with heavy SCR Loads
- 300% Full load current available for 10 seconds during short circuit condition

High motor starting capacity generator

- 250% of Rated Capacity for 10 Seconds

Paralleling options

- Controls can be added for completely automatic multi-unit synchronization and load sharing

Low emissions – meets US EPA standards for prime power use

- The MITSUBISHI lean burn engine has low emissions and can be certified for emergency or prime power use

UL2200

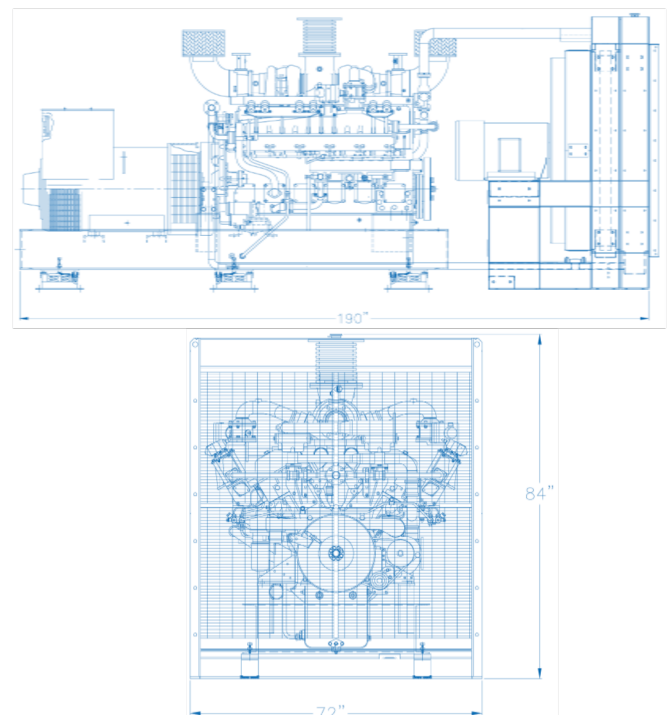
- Units are built to U.L. Standards; U.L. certification is also available

Clean exhaust emissions data (for stand-by)

NOx	2.0 g/bhp-hr (100% load)
CO	4.0 g/bhp-hr (100% load)
NMHC	1.0 g/bhp-hr (100% load)

Standard natural gas supply requirements

Requires a maximum of 5.6 Million BTU/hr of Pipeline Quality Gas at 1040 BTU/CF. Minimum Gas Pressure of 2.0 PSI.



Generator set specifications

ERM500GS rated output	60 HZ (100% loaded)
Generator speed (RPM)	1800
Generator output (kW)	500
Generator output (kVA)	625
Combustion air flow (CFM)	1736
Heat rejection to ambient (BTU/MIN)	7500
Exhaust temperature	850°F
Exhaust gas flow (SCFM)	1820
Radiator air flow (CFM)	70,000

Standard equipment

- MITSUBISHI GS12A2-PTK natural gas lean burn engine
- STAMFORD single bearing generator (HCI534C) rated for 150°C rise with 3 phase static voltage regulator (MX341) and permanent magnetic excitation. All rated per NEMA code with class H insulation.
- Heavy duty structural steel sub-base
- Woodward electronic governor and air/fuel ratio controller
- 24V electric start system
- Dual 20 Amp battery chargers
- Residential silencer with stainless steel flexible connection
- 2-way oxidation catalyst
- 24V lead acid batteries, rack and cables
- Flexible gas line with duplex gas shutoff valves and natural gas regulator
- Freestanding radiator cooling system for 100°F ambient and 0.5" additional static
- Freestanding control panel with digital controller
- Engine safety switches and pre-alarms to meet NFPA requirement
- Pre-chamber gas compressor mounted integral with generator skid

Optional Equipment

Remote radiator system or high ambient system
Critical silencer
Outdoor sound attenuated enclosure
US EPA certifications or site testing
U.L. certification

High voltage generator - 4,160 or 13,800
Main line circuit breaker
Remote annunciator (NFPA compliant)
Spring vibration dampers
Automatic transfer switch

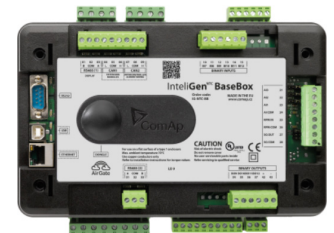
Paralleling controls
Jacket water heater
Starting aids for 10 to 15 second start-up
Gas booster when main gas from utility is less than 30" W.C.
Others, as required

All information detailed is for guidance only and is subject to change without notice due to our commitment to continuous improvement. All values should be confirmed with Centrica Business Solutions on a project specific basis.

Natural gas engine

MITSUBISHI GS12A2-PTK lean burn

Type	4 cycle, water-cooled, turbocharged, intercooled
Combustion chamber	Lean burn with pre-chamber
Compression ratio	11.5:1
Engine speed	1800 RPM
Cylinder arrangement	60° V, 12 cylinder
Displacement	2070 cubic inch; bore, 5.91; stroke 6.3
Exhaust flex diameter (MIN)	8 inches (inside)
Muffler diameter (MIN)	10 inches (inside)
Maximum exhaust back pressure	23.6 inches of water



Displays for digital control panel

Engine speed	Battery voltage	Frequency
Hours run	Phase to neutral voltage	Power factor
Manifold air temp	Phase to phase voltage	kW and kVA output
Intercooler inlet temp	Current (Amps) per phase	Various others

Engine/generator alarms

High manifold air temp	High coolant temp	Reverse power
Low coolant level	Emergency stop activated	Negative sequence current
Low oil pressure	Over and under voltage	Various others
Over-speed	Incorrect phase sequence	
	Over and under frequency	

Want to know more?

Rudox Power Generation is generating new opportunities across various industries. Find out how we can help you.

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