

# Rudox Power Generation Natural Gas Generator Set

## ERM1000GS (1000kW) – Mitsubishi

	Stand-by rating for emergency use (*)
<b>ERM1000GS rated output</b>	<b>60 HZ</b>
Generator output (kW)	1000
Generator output (kVA)	1250
Generator speed (RPM)	1800

Minimum operating current	BTU/kWh	CFH
Fuel consumption	9,495	11,627
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)	90" x 247" x 111"
Wet weight (lbs)	29,000

Weight/dimensions without radiator	
W x L x H (in)	76" x 170" x 97"
Wet weight (lbs)	24,000

The **ERM1000GS (1000 kW)** prime power duty system stands out as a leader in its class. Boasting a prime power duty output of **1000 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 **9,495 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

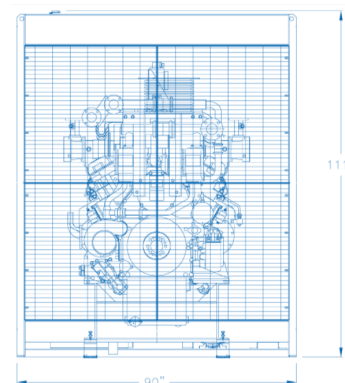
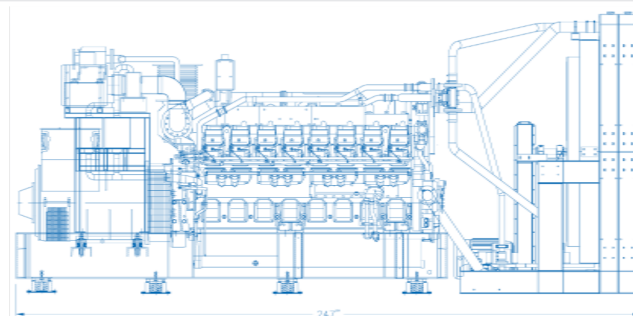
- Units are built to U.L. Standards; U.L. certification is also available

### Clean exhaust emissions data (for stand-by)

NOx	1.0 g/bhp-hr (100% load)
CO	2.0 g/bhp-hr (100% load)
NMHC	0.7 g/bhp-hr (100% load)

### Standard natural gas supply requirements

Requires a maximum of 10.0 Million BTU/hr of Pipeline Quality Gas at 1040 BTU/CF. Minimum Gas Pressure of 3.0 PSI.



## Generator set specifications

ERM1000GS rated output	60 HZ (100% loaded)
Generator speed (RPM)	1800
Generator output (kW)	1000
Generator output (kVA)	1250
Combustion air flow (CFM)	3630
Heat rejection to ambient (BTU/MIN)	10070
Exhaust temperature	800°F
Exhaust gas flow (SCFM)	3793
Radiator air flow (CFM)	65,000

## Standard equipment

- MITSUBISHI GS16R-PTK natural gas lean burn engine
- STAMFORD single bearing generator (HCI634J) rated for 150°C rise with 3 phase static voltage regulator (MX321) 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 30 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
- 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

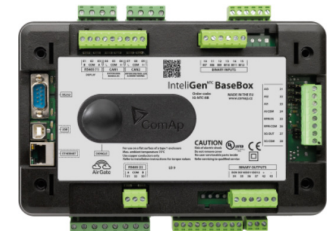
Paralleling controls  
Jacket water heater  
Starting aids for 10 to 15 second start-up  
Gas booster when main gas from utility is less than 2.9 PSI W.C.  
Others, as required

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 GS16R-PTK lean burn

Type	4 cycle, water-cooled, turbocharged, intercooled
Combustion chamber	Lean burn with pre-chamber
Compression ratio	11.3:1
Engine speed	1800 RPM
Cylinder arrangement	60° V, 12 cylinder
Displacement	3989 cubic inch; bore, 6.69; stroke 7.09
Exhaust flex diameter (MIN)	12 inches (inside)
Muffler diameter (MIN)	14 inches (inside)
Maximum exhaust back pressure	25 inches of water



## Displays for digital control panel

Engine speed  
Hours run  
Manifold air temp  
Intercooler inlet temp

Battery voltage  
Phase to neutral voltage  
Phase to phase voltage  
Current (Amps) per phase

Frequency  
Power factor  
kW and kVA output  
Various others

## Engine/generator alarms

High manifold air temp  
Low coolant level  
Low oil pressure  
Over-speed

High coolant temp  
Emergency stop activated  
Over and under voltage  
Incorrect phase sequence  
Over and under frequency

Reverse power  
Negative sequence current  
Various others

## 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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