All information contained within this document was correct at time of printing and may be subject to change.
In 1917, Mitsubishi Heavy Industries became the first Japanese company to develop and build a diesel engine, and since then has steadfastly pioneered technologies for various types of Diesel and Gas engines. The prime movers (engines) are designed to meet the general and specific applications of customers.

MHI Group’s advanced research and development and production technology is highly regarded in Japan and abroad. It is used in a variety of applications, including continuous operation and emergency (stand-by) as well as combined heat and power (CHP) for a wide range of clients including IPPs, industrial heavyweights and commercial centers.

Through supplying the international market with Diesel and Gas generating systems, MHI Group hope to create future societies with a higher quality of life.

MHI Group’s corporate philosophy of “Our Technologies, Your Tomorrow” is based on applying the company’s advanced technology to improving the lives of people everywhere.
Close Collaboration with clients dealing directly with Mitsubishi’s high experienced engineers ensures a customized solution certain to exceed expectations. All load requirements and characteristics can be covered by this tailored approach.

*Strong emphasis on the minimization of losses and robust design to maximize equipment life ensures an economical solution.

*Optimized fault clearance guarantees the system protection and ensures high equipment operational reliability.

**Generator Voltage Classification**
- LV: Low Voltage (Below 690 V AC)
- MV: Medium Voltage above 1000 V up to 4160 V
- HV: High Voltage above 6600 V, up to 13800 V
The MITSUBISHI GENERATOR SERIES MGS, comprises an extensive range of modular designed diesel generator sets. With a wide array of power outputs, operational applications and plenty of customizable features, MGS is the solution for every client’s requirements.

MGS-B
(For Stand-by Power Supply)

MGS-B
(For Prime Power Supply)

MGS-C
(For Prime & Continuous Power Supply)

MGS-HV
(For High Voltage Power Supply)

Features:
1. Low initial investment
2. Rapid product delivery and simple installation
3. Easy operation and quick start
4. Proven reliability and operational flexibility
5. High performance and low running cost
6. Black start capability for uninterruptible power supply
7. Containerized application
8. Wide range of optional features available
   a. Parallel operation with commercial power supply
   b. Oversized radiator for high temperature (up to 50°C)
   c. Remote cooling system
   d. Compliance with emission standards
9. Oil & gas field application (MOG)

Customized Application

MOG
Oversized Radiator Type
Container DG

MOG
MOG

**Notes:**
* Brake Mean Effective Pressure

**Features:**
- Overhaul Interval Curve
- Load Condition
- Customized Application

**MGS-B**
- Stand-by Rating
- Prime Rating

**MGS-C**
- Prime Rating
- Continuous Rating

**MOG**
- Oversized Radiator Type
- Container DG
### MGS, MITSUBISHI GENERATOR SERIES / Rating Table

#### Low Voltage (MBS-B, C)

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>MGS2500</td>
<td>S15R-PTA2-S</td>
<td>50 Hz</td>
<td>S15R-PTA2-S</td>
<td>S15R-PTA2-S</td>
<td>S15R-PTA2-S</td>
<td>3.3 kV</td>
</tr>
<tr>
<td>MGS2000</td>
<td>S15R-PTA2-S</td>
<td>60 Hz</td>
<td>S15R-PTA2-S</td>
<td>S15R-PTA2-S</td>
<td>S15R-PTA2-S</td>
<td>3.3 kV</td>
</tr>
<tr>
<td>MGS1500</td>
<td>S15R-PTA2-S</td>
<td>60 Hz</td>
<td>S15R-PTA2-S</td>
<td>S15R-PTA2-S</td>
<td>S15R-PTA2-S</td>
<td>3.3 kV</td>
</tr>
<tr>
<td>MGS1000</td>
<td>S15R-PTA2-S</td>
<td>60 Hz</td>
<td>S15R-PTA2-S</td>
<td>S15R-PTA2-S</td>
<td>S15R-PTA2-S</td>
<td>3.3 kV</td>
</tr>
<tr>
<td>MGS500</td>
<td>S15R-PTA2-S</td>
<td>60 Hz</td>
<td>S15R-PTA2-S</td>
<td>S15R-PTA2-S</td>
<td>S15R-PTA2-S</td>
<td>3.3 kV</td>
</tr>
<tr>
<td>MGS2000</td>
<td>S15R-PTA2-S</td>
<td>60 Hz</td>
<td>S15R-PTA2-S</td>
<td>S15R-PTA2-S</td>
<td>S15R-PTA2-S</td>
<td>3.3 kV</td>
</tr>
<tr>
<td>MGS1500</td>
<td>S15R-PTA2-S</td>
<td>60 Hz</td>
<td>S15R-PTA2-S</td>
<td>S15R-PTA2-S</td>
<td>S15R-PTA2-S</td>
<td>3.3 kV</td>
</tr>
<tr>
<td>MGS1000</td>
<td>S15R-PTA2-S</td>
<td>60 Hz</td>
<td>S15R-PTA2-S</td>
<td>S15R-PTA2-S</td>
<td>S15R-PTA2-S</td>
<td>3.3 kV</td>
</tr>
<tr>
<td>MGS500</td>
<td>S15R-PTA2-S</td>
<td>60 Hz</td>
<td>S15R-PTA2-S</td>
<td>S15R-PTA2-S</td>
<td>S15R-PTA2-S</td>
<td>3.3 kV</td>
</tr>
</tbody>
</table>

#### High Voltage (MGS-HV)

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>MGS2500</td>
<td>S15R-PTA2-S</td>
<td>60 Hz</td>
<td>S15R-PTA2-S</td>
<td>S15R-PTA2-S</td>
<td>S15R-PTA2-S</td>
<td>3.3 kV</td>
</tr>
<tr>
<td>MGS2000</td>
<td>S15R-PTA2-S</td>
<td>60 Hz</td>
<td>S15R-PTA2-S</td>
<td>S15R-PTA2-S</td>
<td>S15R-PTA2-S</td>
<td>3.3 kV</td>
</tr>
<tr>
<td>MGS1500</td>
<td>S15R-PTA2-S</td>
<td>60 Hz</td>
<td>S15R-PTA2-S</td>
<td>S15R-PTA2-S</td>
<td>S15R-PTA2-S</td>
<td>3.3 kV</td>
</tr>
<tr>
<td>MGS1000</td>
<td>S15R-PTA2-S</td>
<td>60 Hz</td>
<td>S15R-PTA2-S</td>
<td>S15R-PTA2-S</td>
<td>S15R-PTA2-S</td>
<td>3.3 kV</td>
</tr>
<tr>
<td>MGS500</td>
<td>S15R-PTA2-S</td>
<td>60 Hz</td>
<td>S15R-PTA2-S</td>
<td>S15R-PTA2-S</td>
<td>S15R-PTA2-S</td>
<td>3.3 kV</td>
</tr>
</tbody>
</table>

**Notices:**
- Outputs are based on the following standard conditions:
  - Ambient temperature: 40°C
  - Altitude above sea level: Below 1,800 meters
- For alternator voltages, overload requirements, extreme climate conditions, and additional rating requirements, please consult your nearest Mitsubishi dealer.

Specifications and some materials may be changed without notice.
The MU-G Series is a fully customizable range of diesel generator sets dedicated to fulfilling every client’s requirement. With our comprehensive support from the design stage to after-sales service, you can select the most appropriate power generation system to meet your needs.

**Features**

1. Wide range of output from 735 kW to 4500 kW
2. A variety of control systems to suit all the user’s requirement
3. For low to high voltage available
4. Black start capability for uninterruptible power supply
5. Low emission, low noise, and low vibration
6. Connection to utility grid, no overload, unlimited annual operation.

**MU-G/50 Hz**

<table>
<thead>
<tr>
<th>Model</th>
<th>Stand-by (kW)</th>
<th>Prime (kW)</th>
<th>Continuous (C) (kW)</th>
<th>Continuous (D) (kW)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1200W</td>
<td>1000 min-1</td>
<td>1200 min-1</td>
<td>1200 min-1</td>
<td>1200 min-1</td>
</tr>
<tr>
<td>1300W</td>
<td>1200 min-1</td>
<td>1300 min-1</td>
<td>1300 min-1</td>
<td>1300 min-1</td>
</tr>
<tr>
<td>1500W</td>
<td>1500 min-1</td>
<td>1500 min-1</td>
<td>1500 min-1</td>
<td>1500 min-1</td>
</tr>
<tr>
<td>1800W</td>
<td>1800 min-1</td>
<td>1800 min-1</td>
<td>1800 min-1</td>
<td>1800 min-1</td>
</tr>
</tbody>
</table>

**MU-G/60 Hz**

<table>
<thead>
<tr>
<th>Model</th>
<th>Stand-by (kW)</th>
<th>Prime (kW)</th>
<th>Continuous (C) (kW)</th>
<th>Continuous (D) (kW)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1200W</td>
<td>1000 min-1</td>
<td>1200 min-1</td>
<td>1200 min-1</td>
<td>1200 min-1</td>
</tr>
<tr>
<td>1300W</td>
<td>1200 min-1</td>
<td>1300 min-1</td>
<td>1300 min-1</td>
<td>1300 min-1</td>
</tr>
<tr>
<td>1500W</td>
<td>1500 min-1</td>
<td>1500 min-1</td>
<td>1500 min-1</td>
<td>1500 min-1</td>
</tr>
<tr>
<td>1800W</td>
<td>1800 min-1</td>
<td>1800 min-1</td>
<td>1800 min-1</td>
<td>1800 min-1</td>
</tr>
</tbody>
</table>

**KU Diesel Series**

The KU diesel engines were developed for those clients with major power demand requirements. With its high fuel efficiency, it minimizes the energy cost in the long term.

**Features**

1. High outputs power from 3760 kW to 15400 kW
2. Low fuel cost due to high fuel efficiency
3. Prime:
   - No overload, average load of approximately 70%, annual operation hours of approximately 3000 hours
   - Voltage Range: 50 Hz 3.3 kV, 6.6 kV, 11 kV, 60 Hz 3.3 kV, 4.16 kV, 6.6 kV, 13.8 kV

**KU30B**

<table>
<thead>
<tr>
<th>Model</th>
<th>Output (kW)</th>
</tr>
</thead>
<tbody>
<tr>
<td>750 min-1</td>
<td>10000</td>
</tr>
<tr>
<td>500 min-1</td>
<td>13350</td>
</tr>
<tr>
<td>1000 min-1</td>
<td>15000</td>
</tr>
</tbody>
</table>

**KU40B**

<table>
<thead>
<tr>
<th>Model</th>
<th>Output (kW)</th>
</tr>
</thead>
<tbody>
<tr>
<td>750 min-1</td>
<td>16000</td>
</tr>
<tr>
<td>500 min-1</td>
<td>17700</td>
</tr>
<tr>
<td>1000 min-1</td>
<td>20000</td>
</tr>
</tbody>
</table>

**KU30A**

<table>
<thead>
<tr>
<th>Model</th>
<th>Output (kW)</th>
</tr>
</thead>
<tbody>
<tr>
<td>750 min-1</td>
<td>10000</td>
</tr>
<tr>
<td>500 min-1</td>
<td>13350</td>
</tr>
<tr>
<td>1000 min-1</td>
<td>15000</td>
</tr>
</tbody>
</table>

**KU40A**

<table>
<thead>
<tr>
<th>Model</th>
<th>Output (kW)</th>
</tr>
</thead>
<tbody>
<tr>
<td>750 min-1</td>
<td>16000</td>
</tr>
<tr>
<td>500 min-1</td>
<td>17700</td>
</tr>
<tr>
<td>1000 min-1</td>
<td>20000</td>
</tr>
</tbody>
</table>

**KU30C**

<table>
<thead>
<tr>
<th>Model</th>
<th>Output (kW)</th>
</tr>
</thead>
<tbody>
<tr>
<td>750 min-1</td>
<td>10000</td>
</tr>
<tr>
<td>500 min-1</td>
<td>13350</td>
</tr>
<tr>
<td>1000 min-1</td>
<td>15000</td>
</tr>
</tbody>
</table>

**KU40C**

<table>
<thead>
<tr>
<th>Model</th>
<th>Output (kW)</th>
</tr>
</thead>
<tbody>
<tr>
<td>750 min-1</td>
<td>16000</td>
</tr>
<tr>
<td>500 min-1</td>
<td>17700</td>
</tr>
<tr>
<td>1000 min-1</td>
<td>20000</td>
</tr>
</tbody>
</table>

**KU30D**

<table>
<thead>
<tr>
<th>Model</th>
<th>Output (kW)</th>
</tr>
</thead>
<tbody>
<tr>
<td>750 min-1</td>
<td>10000</td>
</tr>
<tr>
<td>500 min-1</td>
<td>13350</td>
</tr>
<tr>
<td>1000 min-1</td>
<td>15000</td>
</tr>
</tbody>
</table>

**KU40D**

<table>
<thead>
<tr>
<th>Model</th>
<th>Output (kW)</th>
</tr>
</thead>
<tbody>
<tr>
<td>750 min-1</td>
<td>16000</td>
</tr>
<tr>
<td>500 min-1</td>
<td>17700</td>
</tr>
<tr>
<td>1000 min-1</td>
<td>20000</td>
</tr>
</tbody>
</table>
The MGS-G exhibits high performance while maintaining eco-friendly characteristics through the Miller Cycle gas engine generator sets. Their compact design but powerful output attracts a large variety of industrial and commercial clients.

**Features**

1. World class fuel efficiency, 43.1%
2. Proven reliability and excellent performance
3. Meets rigorous quality requirements
4. From low to high voltage available
5. Both fuel-efficient and eco-friendly
6. Various gas types acceptable
7. High performance heat recovery system available
8. Black start capability for uninterruptible power supply

**GS16R2-PTK**

**Low Noise Level 75 dB(A)**

---

### Features

- **Gas Engine**
  - Mitsubishi Energy Gas Package NINJA Series
  - Achieves 42.0% electrical generation efficiency with methane number 60 and above
  - Gas Engine
  - Gen. Panel
  - Compressor
  - Steam Boiler
  - Air-cooled radiator
  - Silencer
  - Fuel Gas Pre-Exchanger
  - Steam Generator

- **Gas Engine Generator Set**
  - Low noise level 75 dB(A)
  - Tolerance: +5%
  - Generator power factor: 0.9 or higher (lagging)

- **Generator Control Panel**
  - Ability to handle black start in emergencies as well as for standard start-stop activity in both mono and co-generation mode

- **Exhaust Gas**
  - NOx emission: 500 mg/m³N@5% O2
  - Methane number: 80 or higher, fuel gas lower heating value: 36.47 MJ/m³N

- **Heat Recovery**
  - Efficiency: 79.0%
  - 7.5 MW

- **Electric Power**
  - 50 Hz: 4243.44 kW, 50 Hz: 4243.44 kW

---

### Specifications

**50Hz**

<table>
<thead>
<tr>
<th>Model</th>
<th>Engine</th>
<th>Output (kW)</th>
<th>RPM (min⁻¹)</th>
<th>Efficiency (%)</th>
<th>Heat Recovery</th>
</tr>
</thead>
<tbody>
<tr>
<td>GS16R2</td>
<td>1500***</td>
<td>1500</td>
<td>42.0</td>
<td>1502.9</td>
<td>32.1</td>
</tr>
<tr>
<td>G16R</td>
<td>1500</td>
<td>1000</td>
<td>42.9</td>
<td>1023.2</td>
<td>39.0</td>
</tr>
<tr>
<td>GS16R</td>
<td>900</td>
<td>1500</td>
<td>40.6</td>
<td>900.0</td>
<td>35.9</td>
</tr>
<tr>
<td>GS6R</td>
<td>700</td>
<td>1000</td>
<td>40.6</td>
<td>700.0</td>
<td>34.9</td>
</tr>
<tr>
<td>GS12R</td>
<td>315</td>
<td>1000</td>
<td>41.8</td>
<td>315.0</td>
<td>35.8</td>
</tr>
<tr>
<td>GS6R</td>
<td>320</td>
<td>1500</td>
<td>39.6</td>
<td>320.0</td>
<td>34.8</td>
</tr>
</tbody>
</table>

---

**60Hz**

<table>
<thead>
<tr>
<th>Model</th>
<th>Engine</th>
<th>Output (kW)</th>
<th>RPM (min⁻¹)</th>
<th>Efficiency (%)</th>
<th>Heat Recovery</th>
</tr>
</thead>
<tbody>
<tr>
<td>GS16R2</td>
<td>1200***</td>
<td>1200</td>
<td>43.1</td>
<td>1200.0</td>
<td>42.0</td>
</tr>
<tr>
<td>G16R</td>
<td>1000</td>
<td>1200</td>
<td>42.5</td>
<td>1000.0</td>
<td>41.0</td>
</tr>
<tr>
<td>GS12R</td>
<td>815</td>
<td>1200</td>
<td>42.2</td>
<td>815.0</td>
<td>41.1</td>
</tr>
<tr>
<td>GS6R</td>
<td>315</td>
<td>1200</td>
<td>41.9</td>
<td>315.0</td>
<td>41.8</td>
</tr>
<tr>
<td>GS6R</td>
<td>305</td>
<td>1200</td>
<td>41.3</td>
<td>305.0</td>
<td>41.0</td>
</tr>
</tbody>
</table>

---

### Flow Diagram of GS16R2 Generator Sets (50 Hz)

- Mitsubishi Energy Gas Package NINJA Series
- Features:
  - Generation within 24 hours of delivery
  - Quick connector for external piping/wiring
  - Very quick and efficient maintenance possible
  - Just replace with another container generator set
  - High performance heat recovery system available
  - Additional ISO 20 foot high cube container
  - Supplying both hot water and/or steam

- **Gas Engine**
  - With in-built radiator cooling system and the option to apply low NOx operation, the unit generates an impressive 1.5 MW

- **Generator Control Panel**
  - Ability to handle black start in emergencies as well as for standard start-stop activity in both mono and co-generation mode

- **Exhaust Gas**
  - NOx emission: 500 mg/m³N@5% O2
  - Methane number: 80 or higher, fuel gas lower heating value: 36.47 MJ/m³N

- **Heat Recovery**
  - Efficiency: 79.0%
  - 7.5 MW

---

*Generation efficiency and fuel consumption set based on the following conditions.
1. Initial performance of the rated load
2. Generator power factor: 0.9 or higher
3. Methane number: 80 or higher, fuel gas lower heating value: 36.47 MJ/m³N
4. Under standard atmospheric (par ISO 3046)
5. Tolerance: +5%
The KU gas engines are world class efficient medium speed generator sets which is typically applied to IPP power station and large-scale industrial applications. The optimized design will deliver solutions to all clients’ needs.

**Features**

1. 49.5% electrical efficiency (World highest level)
2. Long planned maintenance interval
3. Responsive load following
4. World’s fastest quick start capability (Start to 100% load within 5 min)
5. Advanced combustion control M-RICS: Mitsubishi Real-time Intelligent Control System
   - Monitoring individual cylinder’s pressure and knocking of each combustion
   - Electronic control of air fuel mixture, ignition timing and combustion
6. Extraordinary durability & reliability
   - Over 200 delivery record since 1990
7. Low emissions, low noise, and low vibration
8. High performance heat recovery system available (Exhaust gas boiler, absorption chiller, etc)
9. Remote monitoring and control system

**50 Hz/750 min⁻¹**

<table>
<thead>
<tr>
<th>Model</th>
<th>Output (kW)</th>
<th>Efficiency (%)</th>
<th>Heat Recovery</th>
<th>Total Efficiency (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>KU30GSI (high electric efficiency ver.)</td>
<td>1800–3000</td>
<td>46.0</td>
<td>3650</td>
<td>82.8</td>
</tr>
<tr>
<td>KU30GSI (high electric efficiency ver.)</td>
<td>1800–3000</td>
<td>46.5</td>
<td>4250</td>
<td>83.1</td>
</tr>
<tr>
<td>KU30GSI (high electric efficiency ver.)</td>
<td>1800–3000</td>
<td>46.5</td>
<td>4250</td>
<td>83.0</td>
</tr>
<tr>
<td>KU30GSI (high electric efficiency ver.)</td>
<td>1800–3000</td>
<td>46.5</td>
<td>4250</td>
<td>83.0</td>
</tr>
<tr>
<td>KU30GSI (high heat recovery ver.)</td>
<td>1800–3000</td>
<td>46.5</td>
<td>5100</td>
<td>85.5</td>
</tr>
<tr>
<td>KU30GSI (high heat recovery ver.)</td>
<td>1800–3000</td>
<td>46.5</td>
<td>5100</td>
<td>85.5</td>
</tr>
<tr>
<td>KU30GSI (high heat recovery ver.)</td>
<td>1800–3000</td>
<td>46.5</td>
<td>5100</td>
<td>85.5</td>
</tr>
<tr>
<td>KU30GSI (high heat recovery ver.)</td>
<td>1800–3000</td>
<td>46.5</td>
<td>5100</td>
<td>85.5</td>
</tr>
</tbody>
</table>

**60 Hz/720 min⁻¹**

<table>
<thead>
<tr>
<th>Model</th>
<th>Output (kW)</th>
<th>Efficiency (%)</th>
<th>Heat Recovery</th>
<th>Total Efficiency (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>KU30GSI (high electric efficiency ver.)</td>
<td>1800–3000</td>
<td>46.5</td>
<td>5100</td>
<td>85.5</td>
</tr>
<tr>
<td>KU30GSI (high electric efficiency ver.)</td>
<td>1800–3000</td>
<td>46.5</td>
<td>5100</td>
<td>85.5</td>
</tr>
<tr>
<td>KU30GSI (high electric efficiency ver.)</td>
<td>1800–3000</td>
<td>46.5</td>
<td>5100</td>
<td>85.5</td>
</tr>
<tr>
<td>KU30GSI (high electric efficiency ver.)</td>
<td>1800–3000</td>
<td>46.5</td>
<td>5100</td>
<td>85.5</td>
</tr>
<tr>
<td>KU30GSI (high heat recovery ver.)</td>
<td>1800–3000</td>
<td>46.5</td>
<td>5100</td>
<td>85.5</td>
</tr>
<tr>
<td>KU30GSI (high heat recovery ver.)</td>
<td>1800–3000</td>
<td>46.5</td>
<td>5100</td>
<td>85.5</td>
</tr>
<tr>
<td>KU30GSI (high heat recovery ver.)</td>
<td>1800–3000</td>
<td>46.5</td>
<td>5100</td>
<td>85.5</td>
</tr>
<tr>
<td>KU30GSI (high heat recovery ver.)</td>
<td>1800–3000</td>
<td>46.5</td>
<td>5100</td>
<td>85.5</td>
</tr>
</tbody>
</table>

*Generator efficiency is based on the following conditions:
1. Initial performance of the rated load
2. Generator power factor 0.9 or higher (lagging)
3. Under standard atmospheric (par ISO 3046)
4. Methane number 65 or higher, fuel gas lower heating value 40.63 MJ/m³
5. NOx emission: 500 mg/m³N@5% O₂
6. Under standard atmospheric (par ISO 3046)
7. Generator efficiency is based on the following conditions:
1. Pressure: 0.78 MPaG, saturated steam
2. Feed-water temperature: 60°C (It is heated by the cooling system of the engine.)

**Combined heat and power (CHP) application**

The addition of combined heat and power (CHP) systems optimize the efficiency of the Mitsubishi generator sets. By recovering the waste heat from such as exhaust gas and jacket water, fuel consumption and CO₂ emissions are dramatically reduced.
Medium & High Voltage Switchgear

Technical Data
- In-door Type
- Design flexibility for future expansion
- Internal and external protection - IP3X / IEC60529 / IEC62271, ANSI C37.06 and GB3906*
- Metal clad and partitioned design
- Rated voltage - 12 kV, 28 kV for Power-frequency withstand voltage
- Impulse voltage level - 75 kV peak
- Rated Frequency - 50 & 60 Hz
- RAL7052 finished color and Zinc coated interior
- Cable access from base of unit
- The generator and feeder switching devices are with drawable Vacuum Circuit Breakers (VCB)**
- Breaking capacity and current ratings from 630 A and 1250 A are 25 kA and 3 Seconds
- KEEMA Type test Certificate
- Separate Generator control system with DGICS-MII Module will be applied
- Optional NGR grounding system design

Notice:
* 42 kV Power Frequency Test for GB
** GCB Application applicable with Option VCB:
Electrical and Manual charged
Stored energy type
Draw-out model

Custom-made power generation systems are manufactured to suit project load requirements. Electric power distribution systems which include circuit and generator protectors are also made-to-order.

Whenever operating multiple generator sets in parallel, the prime mover and electrical systems should be protected to ensure stable load sharing characteristics, frequency stabilization, voltage stabilization and the synchronized closing of the circuit breaker.

Low Voltage Switchgear

Technical Data
- In-door Type
- Design flexibility for future expansion
- Internal IP2X protection, external IP42 of IEC60529
- IEC60890, IEC61439, IEC60439, IEC60947, NEMA250
- TN-S distribution system design applied
- Rated insulation voltage - 690 V
- Rated operation voltage - 600 V
- Rated frequency - 50 & 60 Hz
- Finished stove enameled blue to RAL5023 semi gloss
- Access to the cable entry is from the rear with either top or bottom
- The generator and feeder switching devices are withdrawable air circuit breakers (ACB)
- Breaking capacity and current ratings from 800 A @ 65 kA up to 6300 A @ 120 kA
- ASTA busbar certification utilizing ‘Termate Design’ busbar supports
- Load supply feeder section with current switching device are designated under IEC60439 standard as PTTA Partial Type tested assembly to form 3 Type 2

The systems are all designed to maximize the safe distribution of electrical power to optimize operating efficiencies.
Communication and Control with Data Analysis Facilities

MITSUBISHI DGICS Mark-II Generator Control Module

The Mitsubishi DGICS control system module combines both the generator and engine control systems in one easy-to-use digital display. The module incorporates automatic/manual synchronization circuit (patented) and a load sharing system for generator sets and power systems. The module is powered by TORON real-time operating system nucleus stable and secure operation for use in any application.

Remote Monitoring System /
DIASYS (Digital Intelligent Automation System) Netmation

How can we protect our equipment from failure?
How will data analysis lead to more secure system?

The DGICS module will record and present with a broad spectrum of data that with analysis can lead to the avoidance of equipment damage and failure.

Communication Facilities

RS-422
Ethernet
RS-485 / Modbus *

* Modbus/TCP is standard Option board required.
And CC-Link or Device Net option board with special option order with system coordinated arrangements.

Using Modbus protocol for LAN, WAN and local system, it is also capable of displaying BMS and SCADA related data.

Current operating conditions can be monitored through an ethernet and/or RS-422 connection.

Remote Monitoring System / DIASYS (Digital Intelligent Automation System) Netmation

Service Center

Monitoring of all customers
Management log
Real-time monitoring

KU Gas Engine Plant