MITSUBISHI

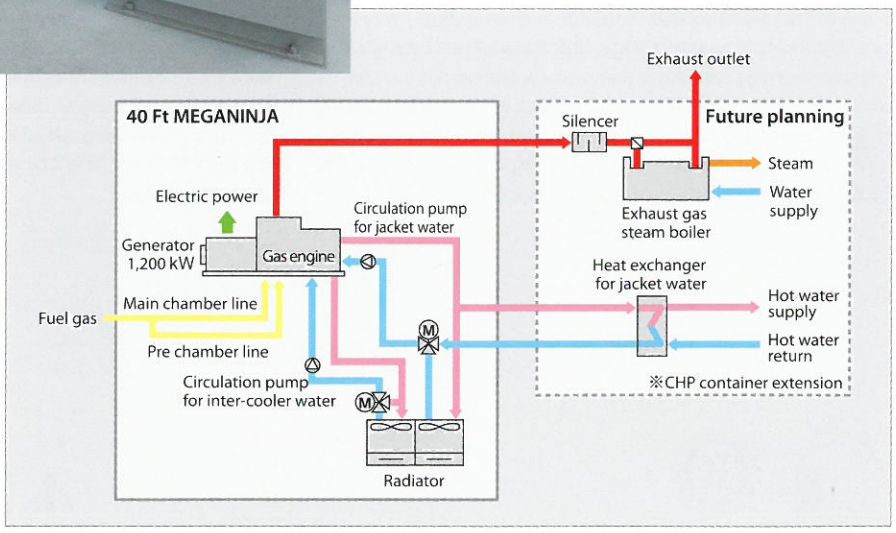
GAS Engine Cogeneration system

Energy Gas Package MEGANINJA

Experience Factory

MHI Machine Tool Main Plant

Cogeneration System Flow



■Facilities

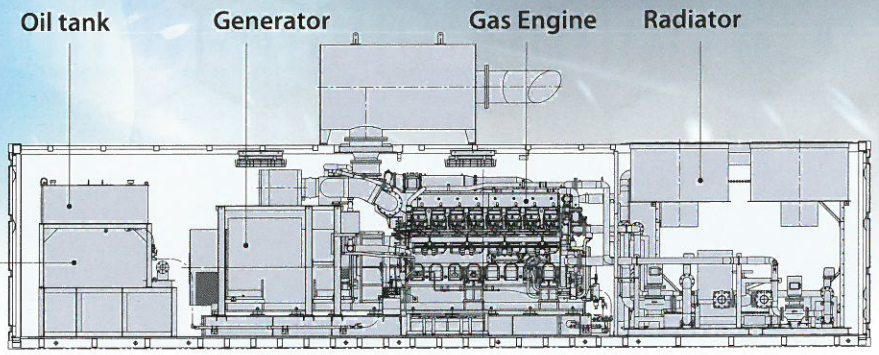
Ground area····· 368,800 m²
Building area····· 79,120 m²

■Stationary Generator System

1,500 kVA (1,200 kW)
60Hz (1,200 min⁻¹) 3,300 V
Mitsubishi miller cycle gas engine (GS16R2-PTK)
synchronous generator·····1set
Heat exchanger for jacket water (Future planning)··1set
Exhaust gas steam boiler (Future planning)·····1set

MITSUBISHI HEAVY INDUSTRIES, LTD.

Feature of Generator System—MHI Machine Tool Main Plant



Gas engine

With an in-built radiator cooling system, the unit generates an impressive 1.2 MW with particularly low level NOx emissions

Generator

Achieves 40.9% electrical efficiency with methane number 65 and above

Generator Control Panel

Ability to handle blackstart in emergencies as well as for standard start-stop activity in both mono and co-generation mode

Radiator

The air-cooled radiator is ideal for emergency situations where water is unavailable

Piping & Wiring

One-touch connectors make piping and wiring works a breeze

For Multi-Power Demands

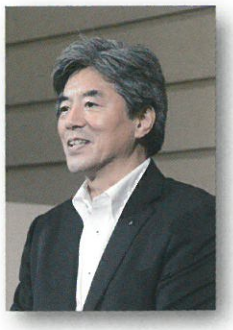
Totally enclosed within a standard ISO 40 foot container with the additional option of a separate co-generation system housed within a standard ISO 20 foot container Multiple units can be easily installed to ensure greater power and heat supply.

Message

MEGANINJA, Essential for the Energy Saving, BCP, Power Supply in Emergency, and Factory Management

We decided to introduce MEGANINJA to our Machine Tool Main Plant (Ritto city Shiga prefecture) which produces gear machineries and heavy machineries to cope with energy demand for the summer 2013.
Since the Great East Japan Earthquake of March 2011, Kansai region has faced the electric power shortage and we applied every possible measure to save energy. Unfortunately we estimated that the shortage would increase in 2013, and we planned for additional power plant to correspond to it. As the peak of energy demand exceeded 95% of generation capacity of Kansai region, additional power supply from MEGANINJA make us feel secured. MEGANINJA became the answer to the power shortage of factories.

Also, in case of another major natural disaster, the power of MEGANINJA which can generate 1200-1500 kW of electricity will assure the minimum power needed to operate the factory in terms of BCP. Our factory is planning to use the power not only for running the factory but for pumping well water in water outage, and for emergency power to shelter neighbors, etc. in case of other major natural disasters.
We are sure that MEGANINJA will be a major advantage to improve the management and production of the factory, a solution to the energy shortage especially during the summer, and an answer for the better BCP, etc. It will be our pleasure to answer to the future customers order.



Yukio Kodama
Mitsubishi Heavy Industries, Ltd.
Member of the Board, Senior Vice President,
Head of Machine Tool,
Head of General Machinery & Special Vehicles

⚠ Please read the accompanying instruction manual and all caution labels before operating equipment.

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