

Air / Ground Source VRF Air Con

Mitsubishi Electric

- the Future is Renewable & Sustainable

44% of all emissions are generated in buildings, this fact along with concerns about climate change, fuel security and rising fuel prices mean that buildings in all their forms need to become more efficient, less carbon intensive and where possible incorporate renewable energy solutions. Mitsubishi Electric offer an extensive range of highly efficient and renewable products and integrated solutions that allow clients to not just meet, but exceed the targets set by legislation. This now includes an advanced range of power generating Photovoltaics (PV).

Heat Pumps

Heat pumps upgrade naturally occurring low temperature heat into useful high temperature heat and vice versa, where a cooling load exists (see diagram on right). The operational characteristics of a heat pump totally differ to a gas boiler, where 1kW of energy in gives less than 1kW of heat to the building. With a typical electrically driven heat pump 1kW of electrical energy in will often give over 3kW of heat to the building and these efficiency levels are predicted to rise year on year.

Mitsubishi Electric advocates the use of heat pumps to minimise the energy consumption and CO₂ emissions within both commercial and residential buildings.

Residential Ecodan®

Residential Ecodan® heating systems have set the standard for mass-market, low carbon residential heating. With easy installation, Ecodan® offers large reductions CO₂ emissions and running costs against a gas-fired boiler. Savings are even greater against oil or LPG. From 2011, home owners will also have the potential to claim under the Governments Renewable Heat Incentive.

Commercial Ecodan® Range

The new range of commercial Ecodan® products will help the majority of buildings achieve renewable energy targets with more ease, reliability and flexibility than any other alternative renewable technology including biomass boilers.

The range uses heat pumps to provide radiant heating, warm air, domestic hot water, or a combination of all three. In addition to helping new buildings achieve planning permission, they can be retro-fitted to existing buildings, and will work independently or alongside other heating systems. Air, water and ground source heat pump versions of the system are available in individual modules offering capacities from 22kW to 688kW, multiples of which can be used for larger buildings.

The new commercial Ecodan® products have cascade, backup, rotate and optimisation built in to enable full integration into a commercial heating system.

WR2 / WY Series Ground Source Heat Pumps

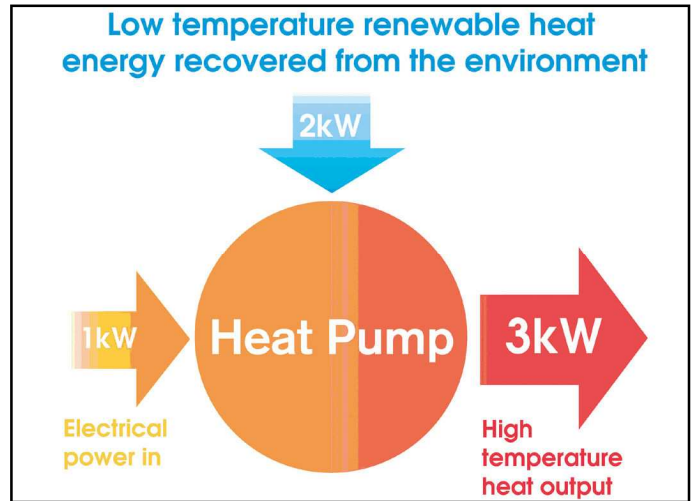
Mitsubishi Electric's water cooled City Multi range is listed on the Government's renewable energy list and tests at the company's Hatfield headquarters have proven that this technology is 300% more efficient at heating and cooling an office than a traditional gas-fired boiler and rooftop chiller combination.

Available in heat pump (WY) with model sizes of 8-36HP and heat recovery (WR2) with model sizes of 8-24HP, both the WY and WR2 units can be integrated with ground loops and boreholes to use the geothermal energy of the earth like a battery to store heating and cooling energy. From 2011, equipment owners will also have the ability to claim under the Governments Renewable Heating Incentive.

Lossnay (Mechanical Heat Recovery Ventilation)

Lossnay's simultaneous air exhaust to air supply heat transfer element provides effective ventilation with total heat recovery (sensible and latent), providing a comfortable air temperature and environment within the room.

The energy saved by using Lossnay contributes towards lowering the running costs of air conditioning and minimising the size of air conditioning systems needed. Both residential (DC Lossnay) and commercial (RX5 Lossnay) are available, giving Mitsubishi Electric a ventilation solution for any type of building application.



Heat Pumps



Photovoltaics



Commercial Ecodan® Range

Photovoltaics

Mitsubishi Electric is unique in the world of solar power because it manufactures all of the photovoltaic components itself, thereby guaranteeing quality and performance for decades to come. Under the Governments Feed in Tariff (FIT) owners of PV can now earn income from generating renewable electricity, which reduces the payback period significantly and ensures low cost energy for the end user.

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Renewable Heating Technology