

# PWIFY-P

## Water Heating Units



The new VRF water heating units provide an energy efficient solution to commercial heating, cooling and hot water supply. **The unique booster unit can provide hot water at 70°C** utilising the most advanced and efficient VRF based system available to date. The high efficiency achieved enables a significant reduction in running cost and CO<sub>2</sub> emissions.



[Technical Information >](#)

## PWFY-P | 00VM-E-BU

**The new Mitsubishi Electric booster unit can achieve a flow temperature of 70°C and is an ideal solution for providing a hot water supply to commercial buildings in an energy efficient manner.**

Heat pump technology works by extracting heat from the air and upgrading it to heat a building. This process in itself is energy efficient, however we can take this a step further by using heat recovery. Heat recovery technology taps into and utilises otherwise wasted heat energy, extracted from areas of a building that require cooling, providing heating for hot water almost for free. Recovering the heat in this manner maximises the efficiency of the system all year round, therefore increasing energy savings and lowering running costs.

Taking full advantage of heat recovery technology, the 12.5kW PWFY booster unit upgrades the heat pump energy to higher temperatures required to achieve 70°C water temperatures. This is possible using the first ever VRF cascade refrigeration system between R410A and R134a refrigerant.

The benefit of having air conditioning as well as a hot water supply from a single system means that the unit is suitable for a variety of applications. Offices, hotels, gyms, restaurants etc are typical examples of buildings that already have an air conditioning system in place. Providing the essential hot water supply to these applications is a simple addition of the booster unit to the existing air conditioning system. It is a perfect solution that allows inconveniences that arise when installing gas boilers such as gas grid connection costs, meter installation and maintenance costs to be eliminated. Not to mention the reduction in running costs and carbon emissions due to the high efficiency of these units over gas boilers.



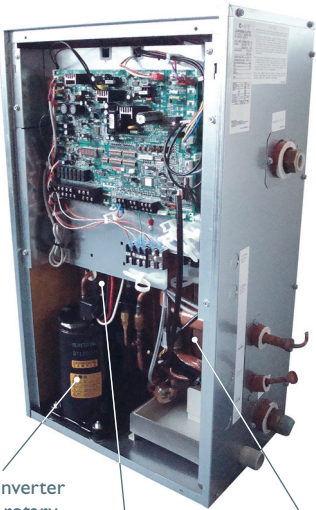
## PWFY-P | 00/200VM-E-AU

**The new Mitsubishi Electric air to water heating unit can achieve flow temperatures of 45°C in heating and 5°C in cooling, making it perfect for application on underfloor heating/cooling systems.**

Using heat pump technology both the 12.5kW and 25kW units are able to attain a high COP compared to an equivalent gas boiler, whilst providing an optimum level of comfort. However, the energy efficiency of these units is maximised when using the built-in flow temperature controller, which automatically varies the flow temperature depending on the outside temperature. This enables the output temperature to be reduced on milder winter days, substantially reducing running costs and CO<sub>2</sub> emissions and allowing the system to run at partial load.

**The increased growth in the use of heat pumps for heating (and cooling) in the UK, portrays the positive attitude being adopted to reduce carbon emissions and combat global warming.**

PWFY-PI00VM-E-BU

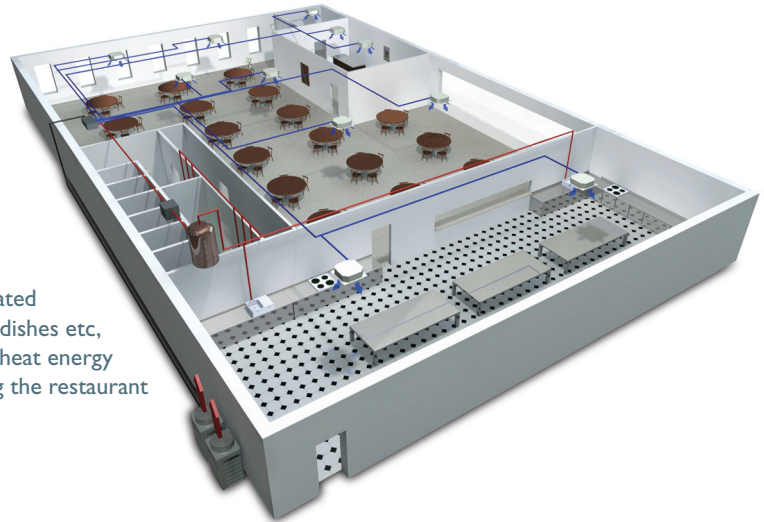


R134a inverter driven rotary compressor

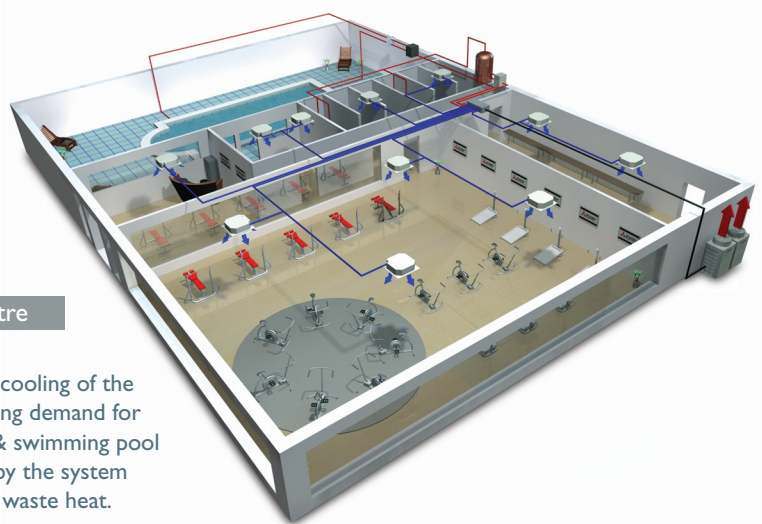
Refrigerant to water heat exchanger

Refrigerant to refrigerant (R410A / R134a) heat exchanger

Restaurant



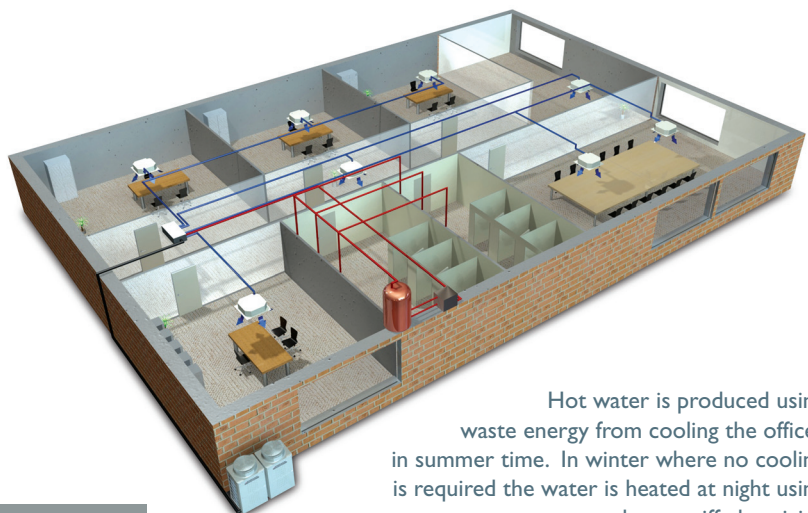
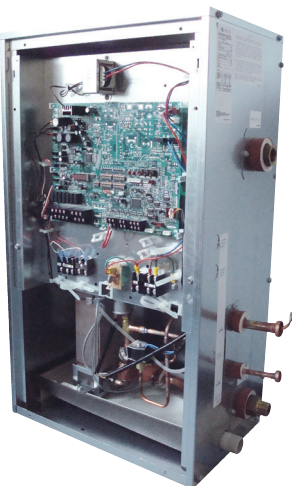
Water is heated for cleaning dishes etc, using waste heat energy from cooling the restaurant and kitchen.



Leisure Centre

The constant cooling of the gym and heating demand for the showers & swimming pool are balanced by the system recovering all waste heat.

PWFY-PI00/200VM-E-AU



Office

Hot water is produced using waste energy from cooling the offices in summer time. In winter where no cooling is required the water is heated at night using cheap tariff electricity.



# Technical Information

PWFY-P		PWFY-P100VM-E-BU	PWFY-P100VM-E-AU	PWFY-P200VM-E-AU
CAPACITY	Heating (nominal)	12.5	12.5	25.0
	Cooling (nominal)	-	11.2	22.4
POWER INPUT (kW)		2.48	0.015	0.015
COMPATIBLE OUTDOOR UNITS		PUR(Y)(E)P-Y(S)HM-A	PU(H)(R)Y-(E)P-Y(S)HM-A	PU(H)(R)Y-(E)P-Y(S)HM-A
REFRIGERANT CHARGE (kg) High Temp Circuit		1.1 (R134a)	-	-
PIPE SIZE (mm) (in)	Gas	15.88 (5/8")	15.88 (5/8")	19.05 (3/4")
	Liquid	9.52 (3/8")	9.52 (3/8")	9.52 (3/8")
	Water	19.05 (3/4")	19.05 (3/4")	19.05 (3/4")
	Drain	ø32 (1 1/4")	ø32 (1 1/4")	ø32 (1 1/4")
NOISE (dBA)		44	29	29
WEIGHT (kg)		60	35	38
DIMENSIONS (mm)	Width	450	450	450
	Depth	300	300	300
	Height	785 (800)	785 (800)	785 (800)
ELECTRICAL SUPPLY		220-240V, 50Hz	220-240V, 50Hz	220-240V, 50Hz
PHASE		Single	Single	Single
RUNNING CURRENT (A)		10.66	0.063	0.063
FUSE RATING (BS88) - HRC (A)		25	6	6
MAINS CABLE No. CORES		3	3	3
WATER FLOW RATE m³/h		0.6-2.15	0.6-2.15	1.2-4.3

Note: The PWFY-P200VM-E-AU will require 2 expansion joints



Telephone: **01707 282880**  
 Post Sales Technical Support / Spares and Warranty: **0870 3000 300**  
 email: [air.conditioning@meuk.mee.com](mailto:air.conditioning@meuk.mee.com)  
 web: [www.mitsubishielectric.co.uk/aircon](http://www.mitsubishielectric.co.uk/aircon)

UNITED KINGDOM Mitsubishi Electric Europe Air Conditioning Systems Division  
 Travellers Lane, Hatfield, Hertfordshire, AL10 8XB, England. General enquiries Tel: 01707 282880 Fax: 01707 278674

IRELAND Mitsubishi Electric Europe Westgate Business Park, Ballymount, Dublin 24, Ireland.  
 Tel: Dublin (01) 419 8800 Fax: Dublin (01) 419 8890 International code: (003531)

Country of origin: United Kingdom – Japan – Thailand – Malaysia. ©Mitsubishi Electric Europe 2008. Mitsubishi and Mitsubishi Electric are trademarks of Mitsubishi Electric Europe BV. The company reserves the right to make any variation in technical specification to the equipment described or to withdraw or replace products without prior notification or public announcement. Mitsubishi Electric is constantly developing and improving its products. All descriptions, illustrations, drawings and specifications in this publication present only general particulars and shall not form part of any contract. All goods are supplied subject to the Company's General Conditions of Sale, a copy of which is available on request. Third-party product and brand names may be trademarks or registered trademarks of their respective owners.

Printed in August 2008  
 SAP No. 217507



[www.greengatewayinitiative.co.uk](http://www.greengatewayinitiative.co.uk)



The Forest Stewardship Council (FSC) is an international network promoting responsible management of the world's forest. The paper this brochure is printed on supports the development of responsible forest management worldwide. The wood comes from FSC certified, well managed forests, company controlled sources and/or recycled material.