

# VMF

VARIABLE MULTI FLOW  
ONE TOUCH SYSTEM CONTROL



Centralised control of air conditioning, heating, demand control ventilation and sanitary hot water production



**Variable Multi Flow**®

# VMF Variable Multi Flow

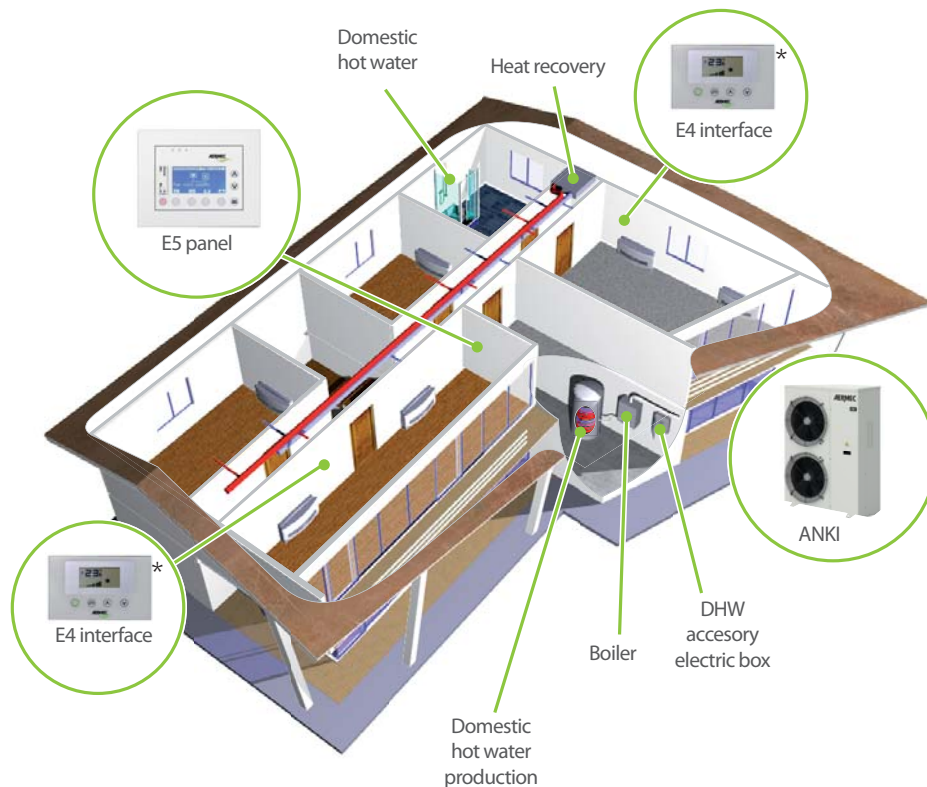
## Total control, Green Comfort

## Noiselessness, Savings

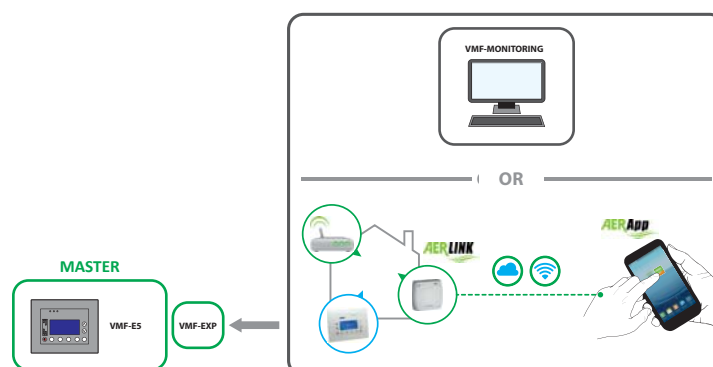
The VMF System, the result of years of research and development at the Aermec laboratories, is destined to revolutionise the world of home comfort and more;

VMF is the new management and control system of the entire air conditioning-heating and domestic hot water system;

The system allows the various elements of the system to interact: heat pump; fan coils and possible integrated heating systems (solar, boiler, etc).



Nowadays two further control systems have been added to VMF accessory: VMF Monitoring allows connection and management of maximum 10 control panels, each of them equipped with their own components, AERLINK which allows to control the whole hydronic system through Smartdevice, both for wi-fi and cloud options.



As awarded by  
The Chicago Athenaeum:  
Museum of  
Architecture and Design.

\* Winner for the International design Award "Good Design 2010" for the "Electronics"

# VARIABLE MULTI FLOW: VMF is the future

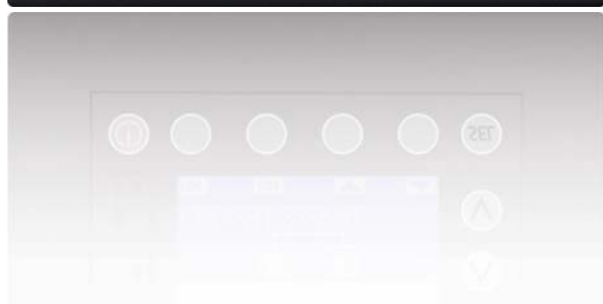
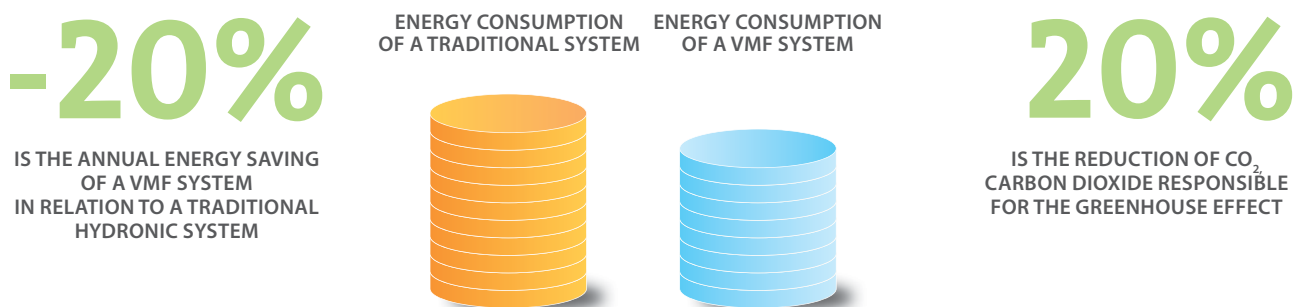
The system can manage and control any type of chiller/heat pump and fan coils, both on-off and inverter.

By exploiting the enormous potential of the innovative inverter heat pump and the fan coils with brushless motor, having continuous variation of the ventilation speed, the system realises the full concept of VMF: VARIABLE MULTI FLOW.

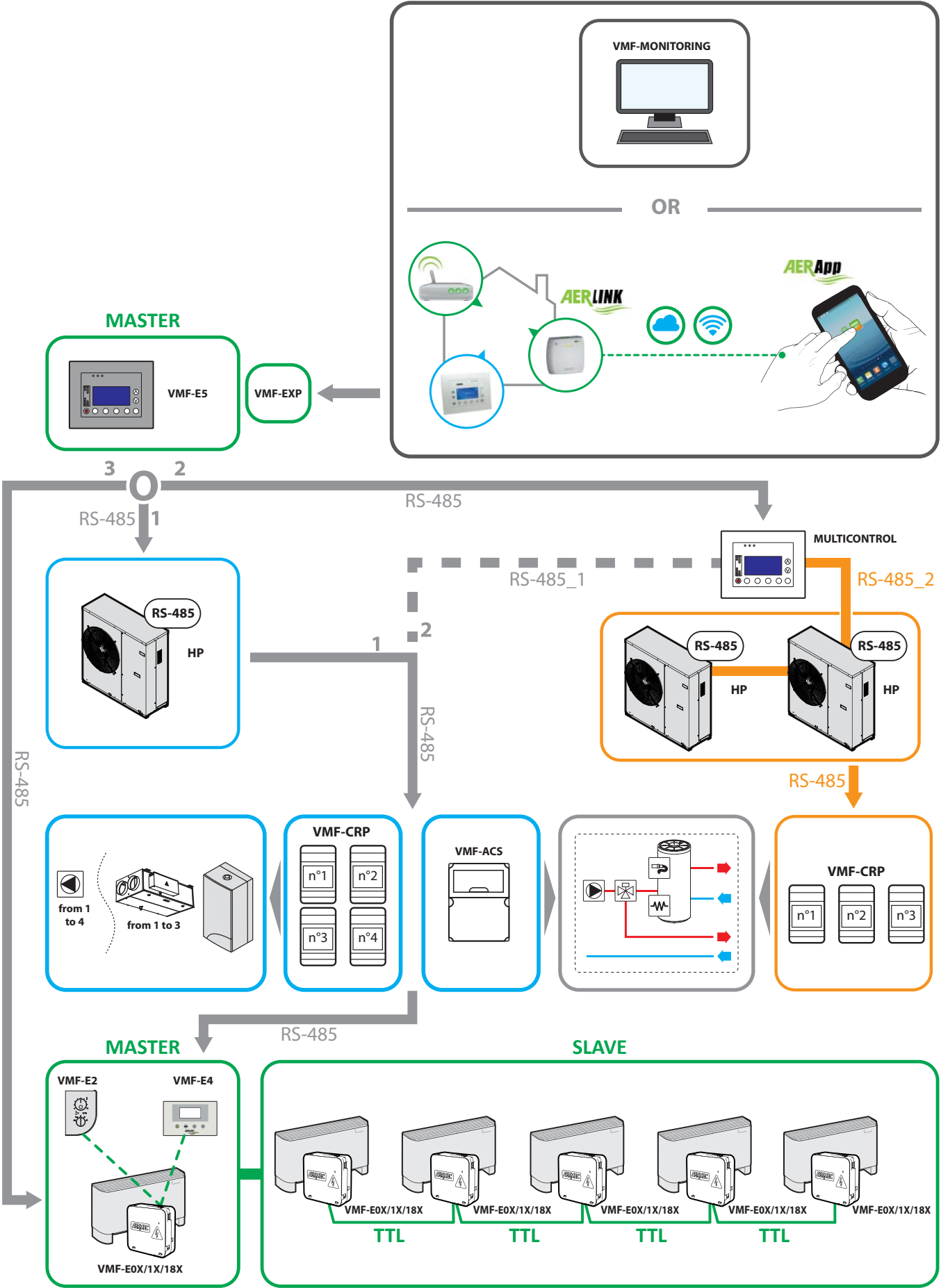
The VMF hydronic system creates maximum comfort and maximum energy saving thanks to the CONTINUOUS VARIATION:

- of the refrigerant flow rate within the chiller/inverter heat pump;
- of the recycled air flow rate from the fan coil with brushless motor;
- of the water flow rate (controlling the inverter hydraulic pumps).

Furthermore, by using the ECONOMY setting, the VMF system adapts the function of each system element (chiller, fan coils, etc.) to obtain maximum energy efficiency.



# Example of system components



# VMF E5 Manager

## The entire system at a Touch

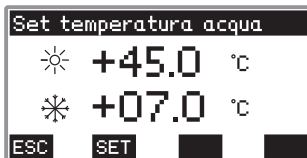
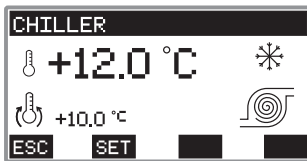
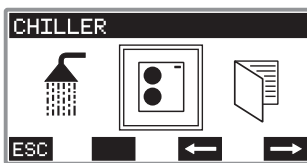
VMF E5 Manager is a practical and elegant built-in touch key LCD panel, available in two colours.

VMF E5 Manager is the mind of the entire VMF system and also controls and manages the more complex hydronic system.

VMF E5 Manager permits quick and simple use: the various functions are in fact organised in a menu with a clear and intuitive graphical interface.



### VMF E5 Manager manages and controls the chiller/heat pump

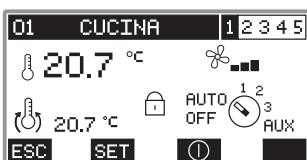


The chiller (cooling only or heat pump), the heart of the hydronic system, is constantly monitored and managed by the VMF E5 Manager.

All operating parameters can be set remotely, by means of the keypad on the central panel:

- Operating mode (heating or cooling)
- Compressor on;
- Temperature and delta of the hot or chilled water produced;
- Operating time program;
- Climatic control ;
- Alarms etc...

### VMF E5 Manager manages and controls a network of fan coils up to 64 zones, for a total of 384 fan coils



Even more complex fan coil networks can be remotely controlled and managed by means of the VMF E5 Manager panel. Acting on the keyboard, the display will show the different zones (up to 64) of the building air-conditioned by the VMF system. The user can assign different names to each of the 64 zones: e.g. KITCHEN, DINNING ROOM,

ROOM 1, ROOM 2 ..., OFFICE 1, OFFICE 2, ... depending on their need or preference.

On each zone one will be able to view and adjust the temperature and the possible operating time bands. The fan speed can be set by the thermostat present in each local area and it will only be viewable from the panel VMF-E5 Manager. At the start of the first fan coil, the VMF E5 Manager monitors and manages the chiller/heat pump adjusting the power delivered to the actual requirement of the environment to be air conditioned and heated.

# VMF E5 Manager manages and controls the entire production of Domestic Hot Water

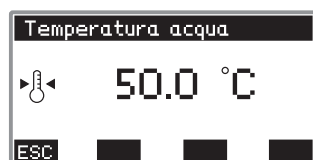


All the domestic hot water you want thanks to the VMF hydronic system. VMF E5 Manager (with the addition of the DHW accessory) can control and manage all elements that make up the Domestic Hot Water production system:

- heat pump/boiler,
- 3-way diverting valve,
- additional electric resistor.

Acting on the keyboard, the display will show the various control parameters of the Domestic Hot Water:

Domestic Hot Water temperature set



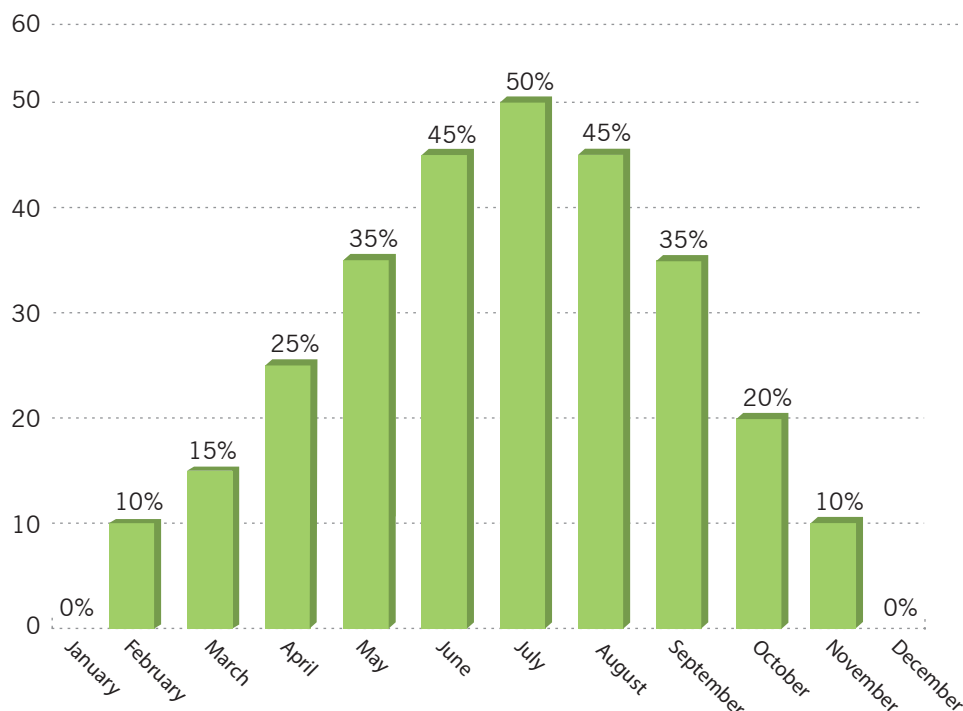
Possible operating time program



Anti Legionella cycle schedule



Huge energy savings in the production of Domestic Hot Water can be achieved with the VMF system.



The figure shows the percentage savings that can be obtained if Domestic Hot Water is produced with the Aermec heat pump compared to a condensing boiler.

# THE VMF AERMEC SYSTEM IS... ...GREEN COMFORT

The Continuous Variation of the involved flow rate (Refrigerant, Water and Air) through which the VMF SYSTEM (VARIABLE MULTI FLOW) concept is achieved, allows to obtain levels of COMFORT that were previously unthinkable.

In fact, the VMF Manager processes, moment by moment, the request signal from the different areas and sends:

- the refrigerant flow rate variation signal to the chiller/heat pump with inverter compressor;
- the chilled/heated water flow rate variation signal to the inverter hydraulic pump;
- the recycled air flow rate variation signal to the fan coils with brushless motor.

The result is the total absence of temperature fluctuations in different environments and consequently COMFORT is absolute.

# THE VMF AERMEC SYSTEM IS... ...MAXIMUM IAQ (INDOOR AIR QUALITY)

Not unreasonably, increasing attention has been given in recent years to air quality in confined non-industrial environments. Each person spends 80 to 90% of their time inside public buildings (offices, schools ...) and residential dwellings. As is known, confined environments are likely to be more polluted environments. The easiest and most effective way to ensure an excellent level of IAQ (Indoor Air Quality) is to conduct an appropriate air exchange, after filtering the external renewal air.

The VMF SYSTEM allows you to manage the renewal of air by controlling the amount of CO<sub>2</sub> present in the confined rooms. VMF is also able to manage a cross flow heat recovery unit to recover much of the energy possessed by the contaminated air expelled.

That's why VMF is also synonymous with Clean Air and Energy Saving.

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