AERMEC RESIDENTIAL CATALOGUE

North America

2023

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AIR TO WATER

ANK

Heat Pump
Single Phase

Cooling 2.5 / 3 / 4 Tons
Heating 37,670 – 57, 597 Btu/h

Reversible air to water heat pump for outdoor installation. Suitable for air conditioning and heating as well as the production of domestic hot water for small and medium applications. Provides water as warm as 140˚F as cold as 17.6˚F and operates down to -4˚F. Ideal unit for residential fan coils, radiant heating, and cooling, as well as process heating and cooling. Integrated smart controller. 220/1/ 60.

- Intertek ETL listed (Canada and United States)
- R410A refrigerant
- Cooling and heating
- Domestic hot water (DHW)
- Scroll compressor
- Axial fan
- Plate exchanger
- Pump kit (optional)
- Water tank (optional)
- Network operation (optional)
- Compatible with ModBus protocol (optional)
- Compatible with VMF system (optional)
- Internet connection (optional)
- For two pipe building

AIR TO WATER

ANKI

Heat Pump

Cooling 1.6 – 3.2 Tons
Heating 20,098 – 40,748 Btu/h

The ANKi uses an inverter scroll compressor and has the option to be supplied with an inverter pump. The series is available in 4 sizes that range from 1.6 to 3.2 tons and is able to supply up to 40,748 Btu/h in heating mode. The inverter compressor and pump results in improved part load efficiency and overall energy savings for various applications. ANKi air to water heat pumps are the perfect solution for carbon free highly energy efficient residential or light commercial applications. Outdoor installation.

- Intertek ETL listed (Canada and United States)
- R410A refrigerant
- Cooling and heating
- Domestic hot water (DHW)
- Inverter rotary compressor
- Inverter scroll compressor
- Axial fan
- Plate exchanger
- Pump kit (optional)
- For two pipe building

FANCOILS

FCW

4 Sizes

Cooling 7,100 – 8,000 Btu/h
Heating 8,400 – 25,000 Btu/h

The FCW high wall unit is ideal for summer air conditioning and winter heating. Fed with cooled water coming from a chiller, they make the air of the room fresh, dry, and clean in a short period of time and with great energy efficiency. The units are fed with hot water coming from a heat pump or from a common boiler and supply dry heating during the winter season. Optional: the ability to control an independent heating and cooling valve, two or four pipe.

FANCOILS

FCZ P

19 Two-Pipe Sizes
18 Four-Pipe Sizes

Cooling 0.28 – 2.20 Tons
Heating 4,060 – 28,866 Btu/h

FCZ P units are a universal ducted fan coil that consists of a fan unit, a heat exchange coil, and a filter. They are ideal for summer air conditioning and winter heating as a 2 pipe system. Fed with chilled water, they make the air of the room cool, dry, and clean in a very short time and with great energy efficiency. Fed with heated water they provide comfortable heating. Very well designed, quiet, and only has a depth of 8.5 inches. The cooling coil is available with 3 or 4 rows and you may add an optional heating coil making it a 4 pipe system. Units may be mounted vertically or horizontally.

FCZ US

19 Two-Pipe Sizes
18 Four-Pipe Sizes

Cooling 0.28– 2.20 Tons
Heating 4,060 – 28,866 Btu/h

FCZ US units are a universal cabinet fan coil that consists of a fan unit, a heat exchange coil, and a filter. They are ideal for summer air conditioning and winter heating as a 2 pipe system. Fed with chilled water they make the air of the room cool, dry, and clean in a very short time and with great energy efficiency. Fed with heated water they provide comfortable heating. Very well designed, quiet, and only has a depth of 8.5 inches. The cooling coil is available with 3 or 4 rows and you may add an optional heating coil making it a 4 pipe system. Units may be mounted vertically or horizontally.

FANCOILS

FCZ I EUP

12 Two-Pipe Sizes
11 Four-Pipe Sizes

Cooling 0.45 – 1.85 Tons
Heating 6,278 – 21,500 Btu/h

FCZ I EUP units are ducted fan coils that are fan coils that have continuous 0-100% variation of air flow rate making them extremely quiet. They have inverter technology with brushless DC electric motors with extremely high efficiency levels resulting in 50% energy reduction versus standard 3 speed fan motors. They are equipped with 220/110 dual voltage motors. Unit may have electrical and water connections on the same side. Further, the cooling coil is available with 3 or 4 rows and you may add an optional heating coil to allow for a 4 pipe system. Units may be mounted vertically or horizontally.

FCZ I EU EUF

12 Two-Pipe Sizes
11 Four-Pipe Sizes

Cooling 0.45 – 1.85 Tons
Heating 6,278 – 21,500 Btu/h

FCZ I EU EUF units are universal cabinet fan coils that have continuous 0-100% variation of air flow rate. Thanks to the inverter technology combined with the latest brushless DC electric motor and the extremely high energy efficiency levels, the FCZ I EU EUF fan coils can modulate the airflow rate continuously from 0-100%. This means the capacity is adjusted moment by moment to the specific needs of the air conditioned room. This results in 50% energy savings during winter and summer air conditioning ventilation, compared with the traditional on-off ranges. 220/110 dual voltage motors. The cooling coil is available with 3 or 4 rows and you may add an optional heating coil allowing for a 4 pipe system. Units may be mounted vertically or horizontally.

FANCOILS

MZC MULTIZONE

Plenum

MZC is a plenum with motorized dampers for zone and air control. It adjusts the flow rate of the air along with the damper to create a comfortable environment. The MZC controls the airflow by adjusting the fan speed as dampers open and close to ensure that each zone gets the exact amount of air required. This automatic adjustment of the motor speed allows for no bypass damper and guarantees comfort and extremely quiet operation.

VED | VEDI

8 Two–Pipe Sizes
Cooling 2.23 – 5.15 Tons
Heating 61,323 – 127,000 Btu/h

8 Four–Pipe Sizes
Cooling 2.23 - 5.15 Tons
Heating 32,000 - 74,500 Btu/h

VED units are a ducted fancoil that consists of a fan unit, a heat exchange element, and a filter. The units are ideal for summer air conditioning and winter heating. Fed with cooled water coming from a chiller, they make the air of the room fresh, dry, and clean in a very short time and with great energy efficiency. They can be integrated into the VMF system which allows the control of a single fan coil with accessories and the management of the VED introduced in complex fan coil networks. They are available in two pipe or four pipe configurations. VED's have the option to have a 3 or 4 row main coil and a 1 or 2 row auxiliary heating coil.

VENTILCASSAFORMA

Ventilcassaforma has been designed to suit modern interior architecture. It is a galvanized template that makes it possible to house fan coils in the wall. The template will make masonry work easier during the construction of a space where the fan coil will be installed. When the work is finished, the fan coil will be completely hidden from view. Ventilcassaforma is available for ducted fan coils in two pipe systems or four pipe systems.

ACCESSORIES

VMF

System Management

Variable Multi-Flow system of management and control for hydronic systems for air-conditioning, heating, and domestic hot water production.

The VMF system allows the complete control of every hydronic system component, utilising the communication between the various components of the system itself. It manages performance whilst attaining the end user's request for comfort, reaching this goal as efficiently as possible with consequent energy savings.

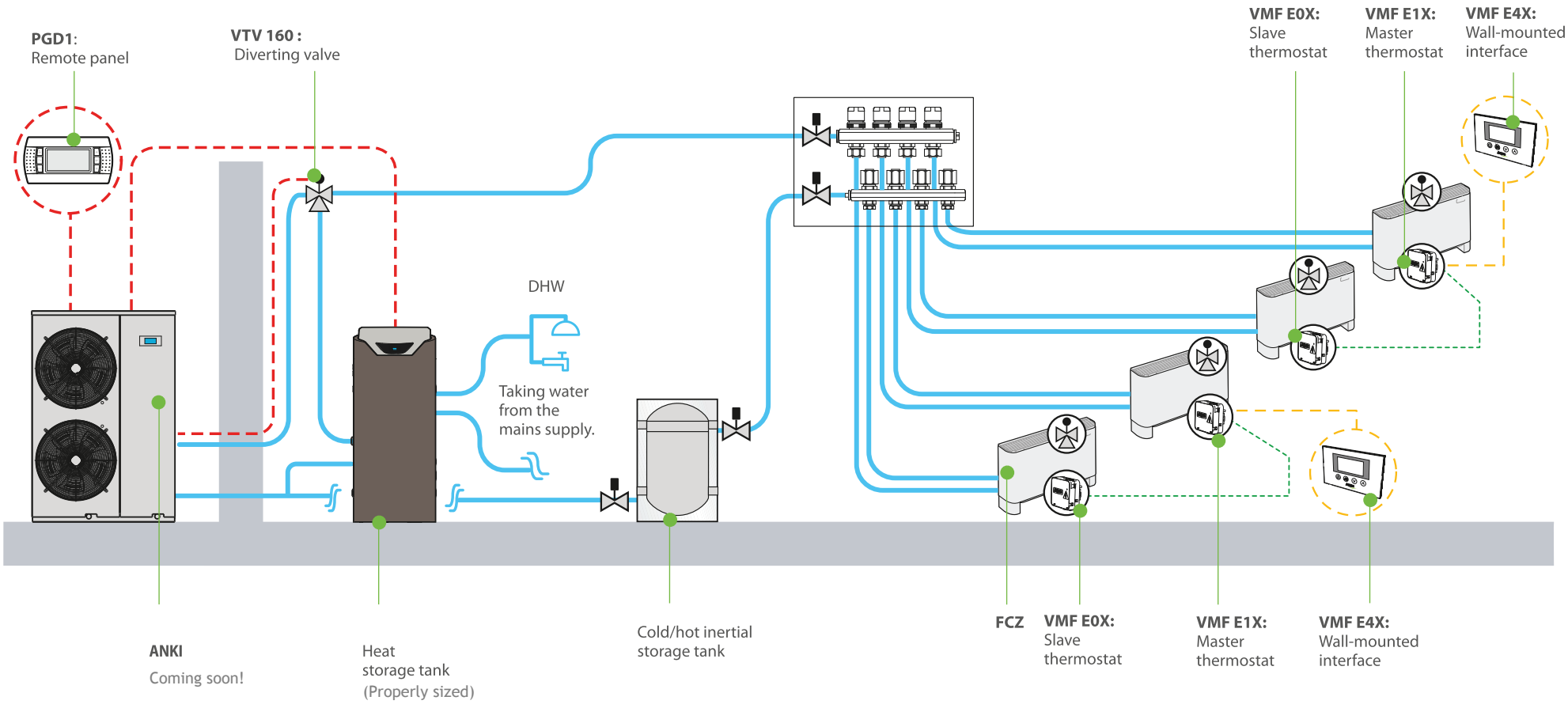
Adding the advantages of innovative control to the flexibility of a hydronic system, the result is an effective alternative to variable refrigerant flow systems (VRF).

The VMF system is extremely flexible, even allowing various levels of control and management that can be developed at specific moments:

- Control of a single fan coil
- Control of a multi-area
- Control of a network made up of several independent areas
- Control of a network of fan coils, heat pump, domestic hot water production, additional circulators and heat recovery unit management

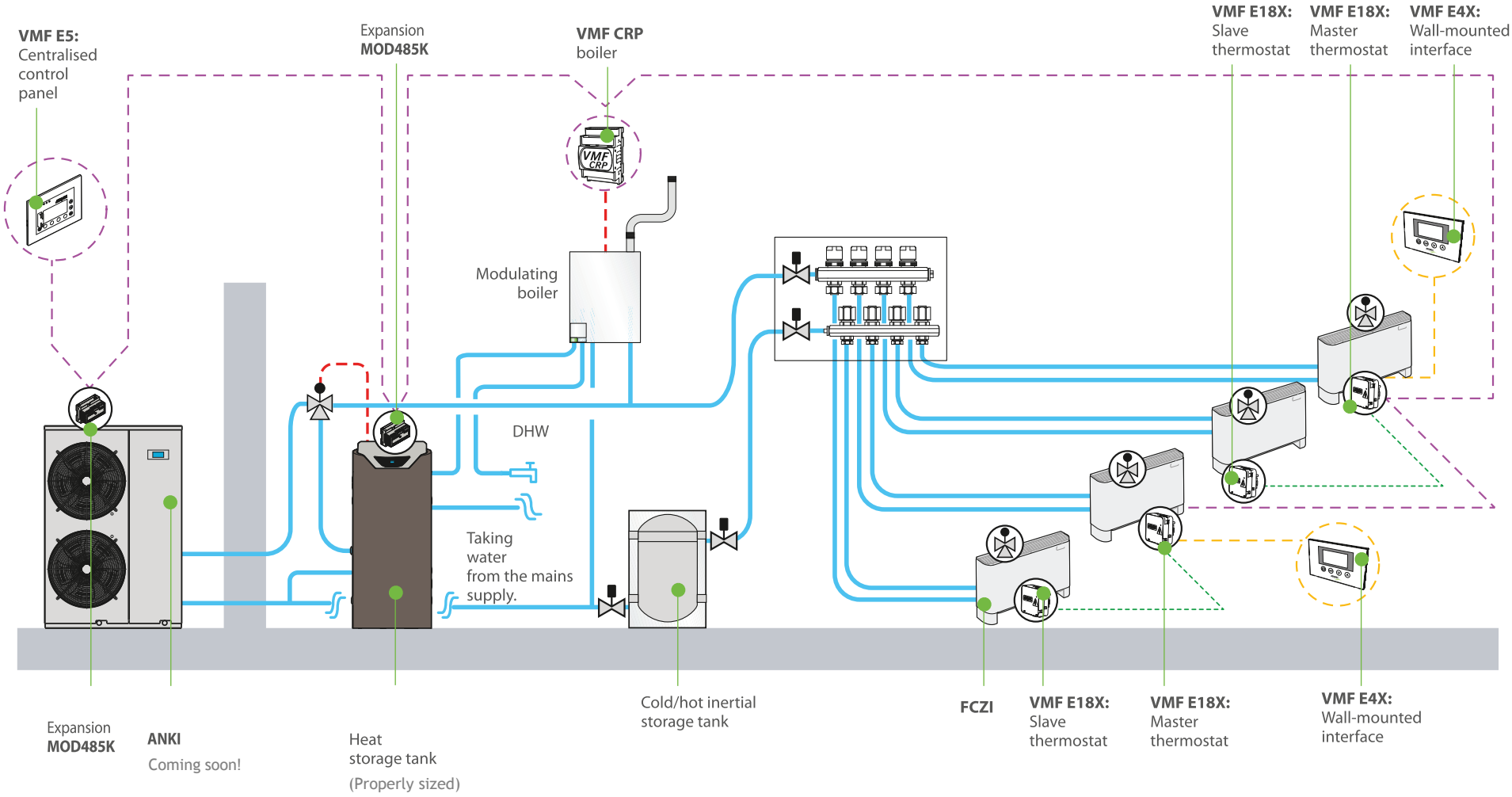
SYSTEM DIAGRAMS

ANKI heat pump with integrated pumping assembly for heating/cooling integrated with a fan coil system – Production of DHW by an SAF heat storage tank



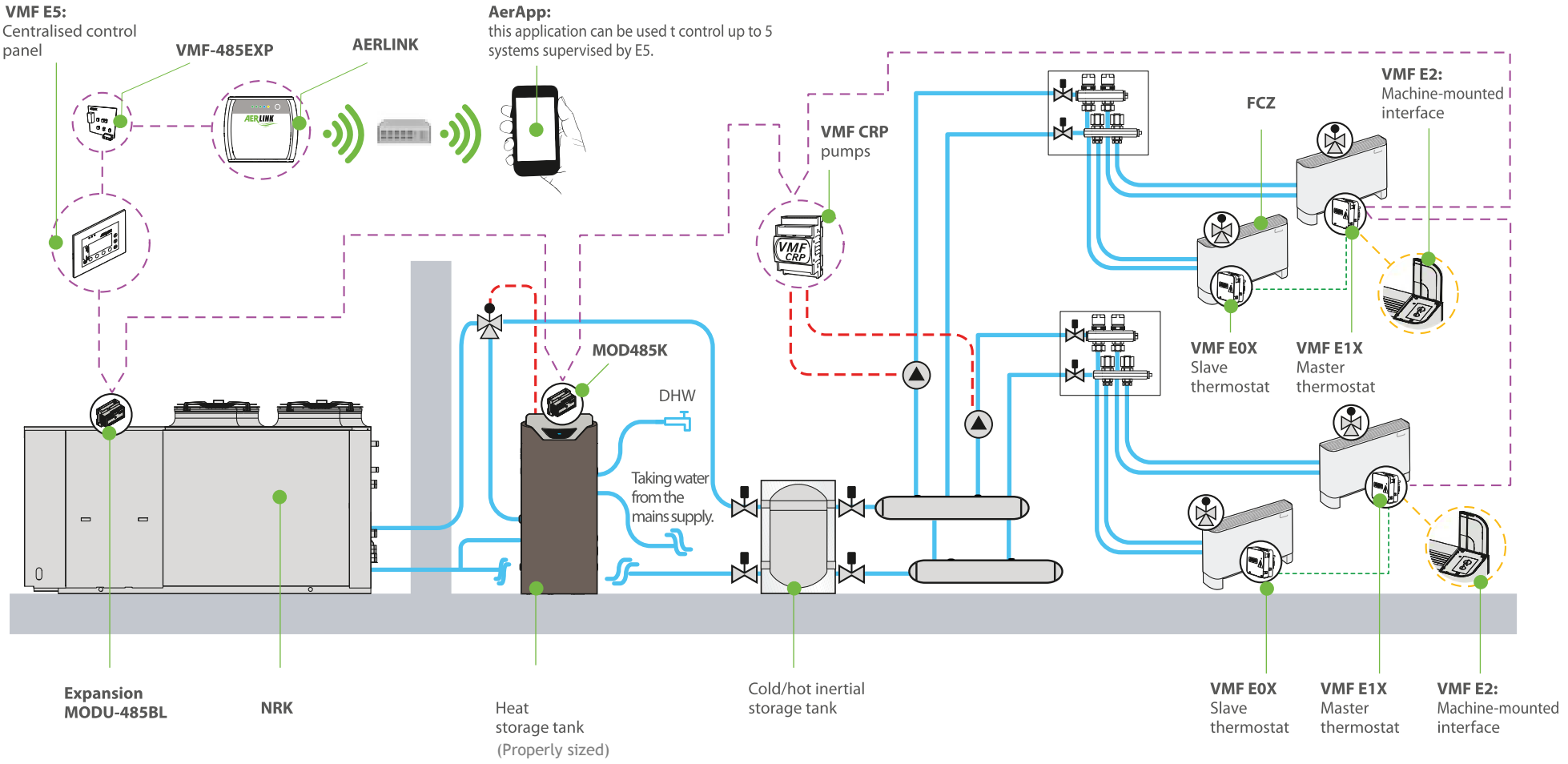
Single loop system for summer cooling and winter heating by an ANKI inverter air-water heat pump with integrated pumping assembly and ON-OFF FCZ fan coils. ANKI is managed as a stand-alone solution by the PGD1 remote panel or, alternatively, by the PR3 simplified remote panel. The terminals are grouped into two different zones, each managed by a wall-mounted VMF-E4X control panel, which is used to set the zone fan coil parameters. The VMF-E4X panel is connected to the E1X thermostat of the zone master fan coil, from which the TTL network starts to which the E0X thermostats of the slave fan coils are connected. The domestic hot water is produced by the SAF heat storage tank: when the temperature in the storage tank goes down below the value set on the SAF panel, the signal requesting DHW is sent to ANKI, which sets its operation to heating with a DHW production set-point and, subsequently, switches the 3-way diverting valve.

ANKI heat pump with integrated pumping assembly and auxiliary boiler for heating/cooling with fan coil system – Production of DHW by an SAF heat accumulation tank and boiler provided standard



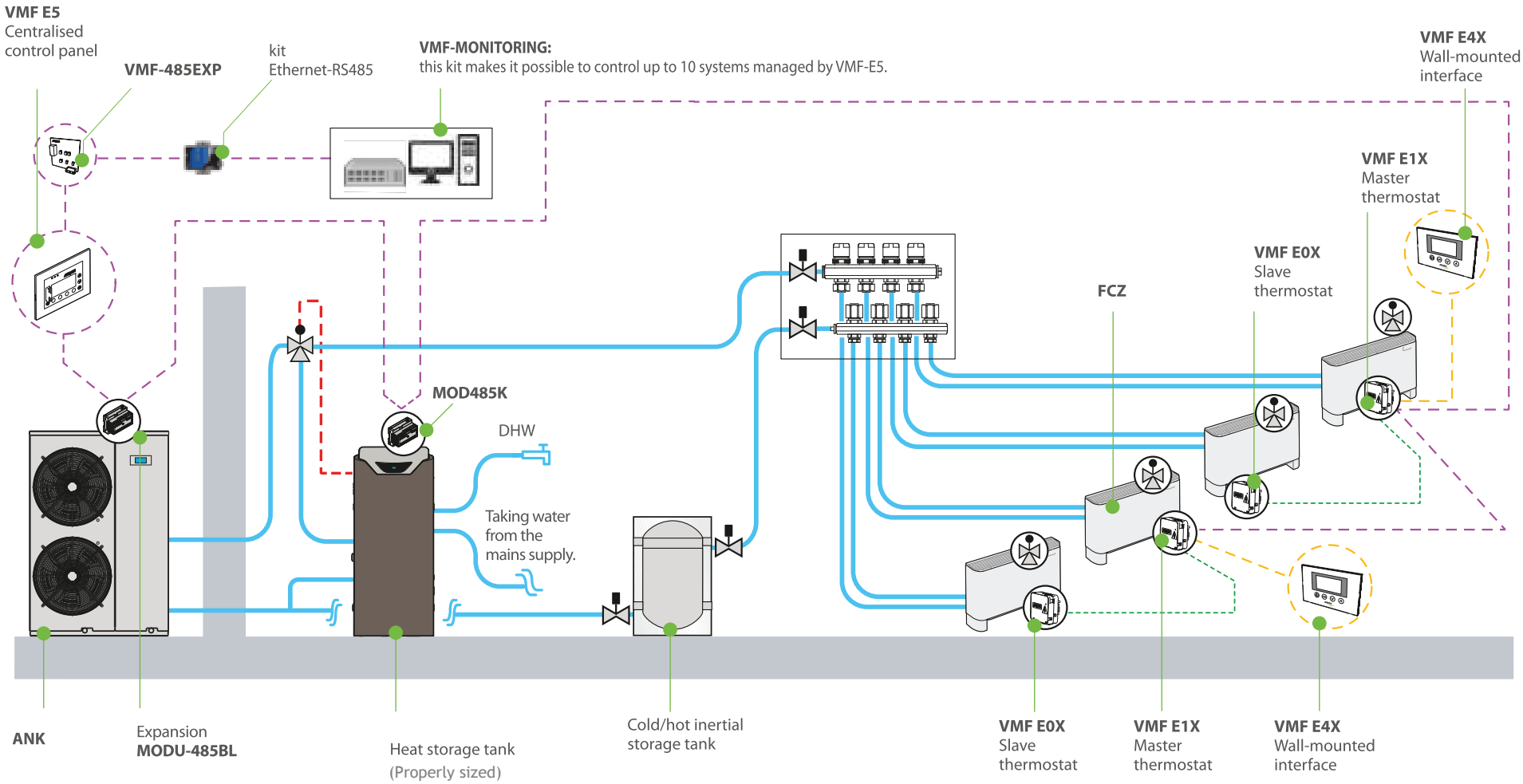
Single loop system for summer cooling and winter heating by an ANKI inverter air-water heat pump with integrated pumping assembly and FCZI inverter fan coils. ANK is managed within the RS485 Modbus serial port via the MOD485K interface card. The terminals are grouped into two different zones, each managed by a wall-mounted VMF-E4X control panel, which is used to set the zone fan coil parameters. The VMF-E4X panel is connected to the E18X thermostat of the zone master fan coil, from which the TTL network starts to which the E18X thermostats of the slave fan coils are connected. The VMF-CRP board makes it possible to replace the heat pump with the modulating boiler when the temperature of the external air drops down below the value set on the VMF-E5 centralised panel, which controls all system components. The domestic hot water is produced by the SAF heat storage tank: when the temperature in the storage tank goes down below the value set on the SAF panel, the signal requesting DHW is sent to the centralised VMF-E5 control panel; E5 first sets operation to heating and the production set-point of the DHW and secondly the switching of the 3-way diverting valve to SAF. If the temperature of the water produced in the SAF does not reach the delivery set point, the downstream modulating boiler guarantees that the set temperature value will be reached.

NRK heat pump with integrated pumping assembly for heating/cooling with a fan coil system – Production of DHW by an SAF heat storage tank – AerApp supervision via the AerLink accessory



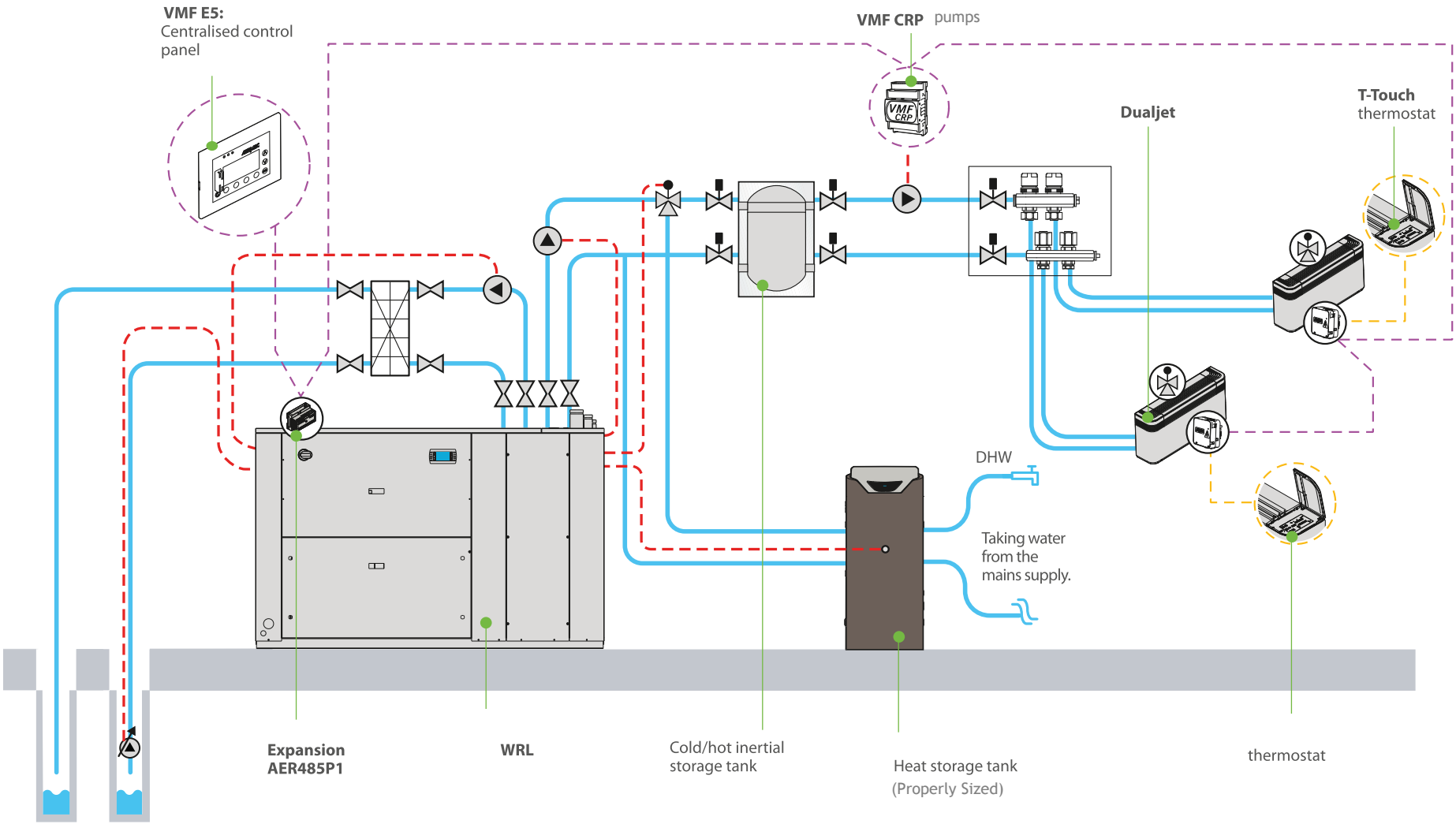
System with primary and secondary circuit for summer cooling and winter heating by an NRK air-water heat pump with integrated pumping assembly and ON-OFF FCZ fan coils. NRK is managed within the RS485 Modbus serial port via the MODU-485BL interface card. The terminals are grouped into two different zones, each managed by a VMF-E2 machine mounted control panel, which is used to set the zone fan coil parameters. The VMF-E2 panel is connected to the E1X thermostat of the zone master fan coil, from which the TTL network starts to which the E0X thermostats of the slave fan coils are connected. The VMF-CRP board makes it possible to associate each pump in the secondary loop with reference terminals: when the first fan coil in the fan coil group associated with the pump activates, the pump is turned on, whereas when the last fan coil associated with the pump reaches the set-point or if there is no thermal load demand, the pump turns off. The domestic hot water is produced by the SAF heat storage tank: when the temperature in the storage tank goes down below the value set on the SAF panel, the signal requesting DHW is sent to the centralised VMF-E5 control panel; IE5 first sets operation to heating and the DHW production set-point for the heat pump and secondly the switching of the 3-way diverting valve to SAF.
The system is supervised by the AerApp: the VMF-485EXP expansion board provides an additional RS485 Modbus interface in VMF-E5 that makes it possible to manage all system parameters from your smartphone via the connection of the AerLink accessory with the domestic network and the dedicated Cloud.

ANK heat pump with integrated pumping assembly for heating/cooling with a fan coil system – Production of DHW by an SAF heat storage tank – PC supervision via the VMF-Monitoring kit



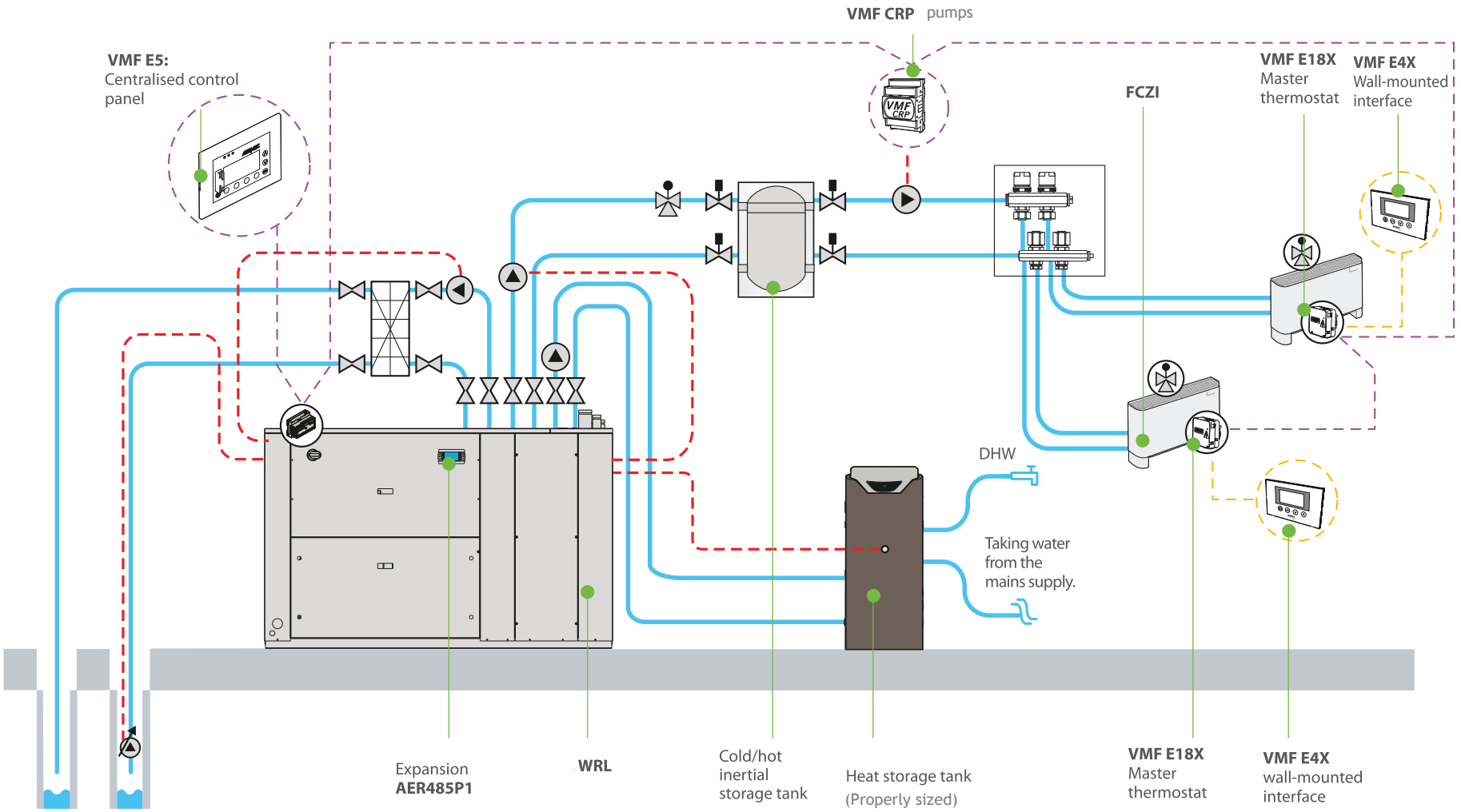
Single loop system for summer cooling and winter heating by an ANK air-water heat pump with integrated pumping assembly and ON-OFF FCZ fan coils. ANK is managed within the RS485 Modbus serial port via the MODU-485BL interface card. The terminals are grouped into two different zones, each managed by a wall-mounted VMF-E4X control panel, which is used to set the zone fan coil parameters. The VMF-E4X panel is connected to the E1X thermostat of the zone master fan coil, from which the TTL network starts to which the E0X thermostats of the slave fan coils are connected. The domestic hot water is produced by the SAF heat storage tank: when the temperature in the storage tank goes down below the value set on the SAF panel, the signal requesting DHW is sent to the centralised VMF-E5 control panel; IE5 first sets operation to heating and the DHW production set-point for the heat pump and secondly the switching of the 3-way diverting valve to SAF. The system is supervised by VMF-Monitoring: the VMF-485EXP expansion board provide an additional RS485 Modbus interface in the VMF-E5 that is used to manage the parameters of the entire system from the PC via the Ethernet-RS485 kit.

WRL-H heat pump for heating/cooling with a fan coil system – Production of DHW by an SAF heat storage tank



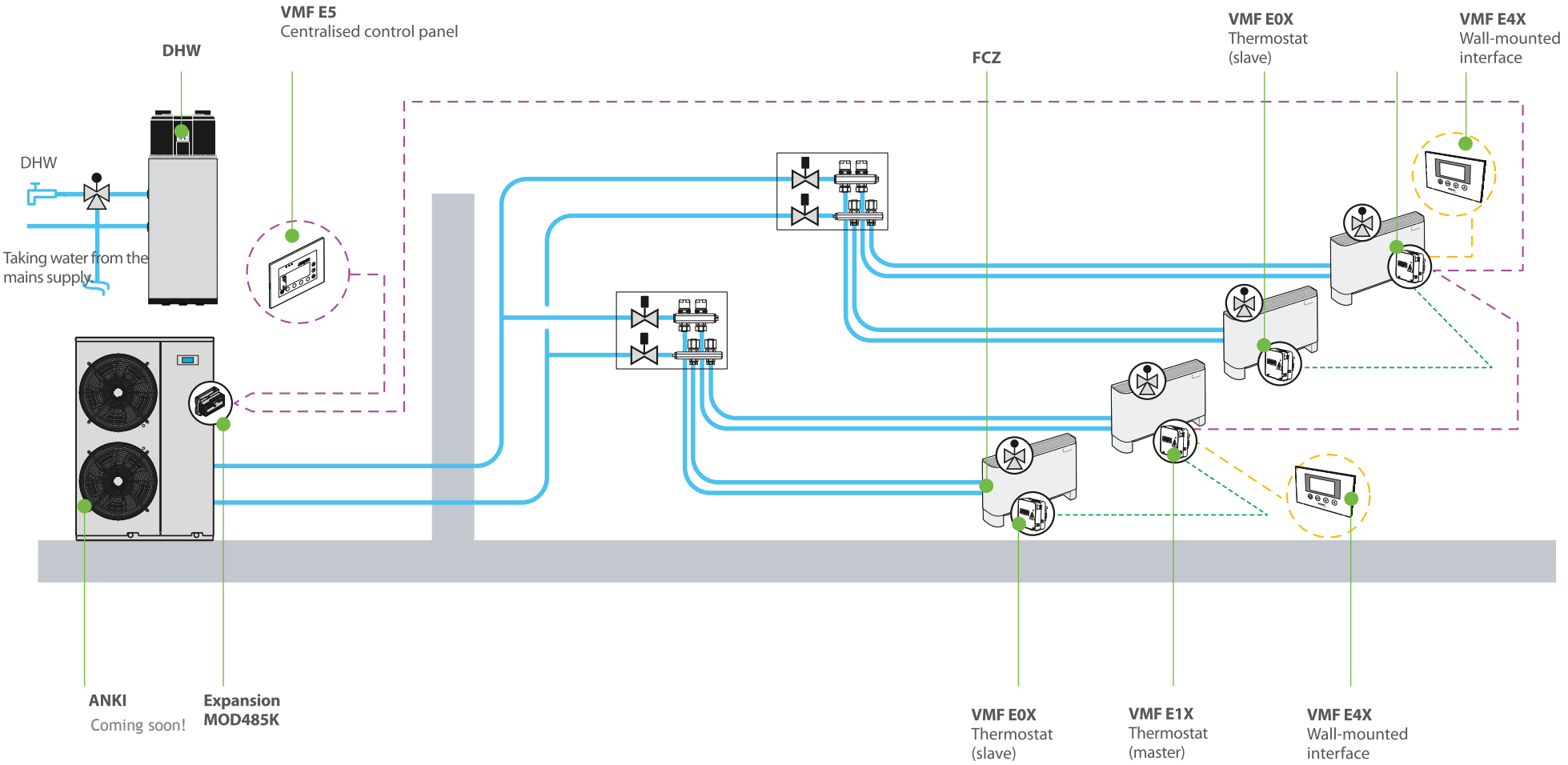
System with primary and secondary circuit for summer cooling and winter heating by a WRL-H water-water heat pump with an external pumping assembly controlled by the machine and FCZ-DS Dualjet ON-OFF fan coils. WRL-H is managed within the RS485 Modbus serial port via the AER485P1 interface card. The terminals are grouped into two zones, each comprised of a single fan coil controlled by the T-touch-machine-mounted control panel, which is used to set the parameters. The T-Touch panels must be connected directly to the main serial port, therefore all the system fan coils are masters. The VMF-CRP board makes it possible to associate each pump in the secondary loop with reference terminals: when the first fan coil in the fan coil group associated with the pump activates, the pump is turned on, whereas when the last fan coil associated with the pump reaches the set-point or if there is no thermal load demand, the pump turns off. The domestic hot water is produced by the SAF heat storage tank: when the temperature in the storage tank goes down below the value set on the SAF panel, the probe signal requesting DHW is sent to WRL-H, which sets its operation to heating with a DHW production set-point and, subsequently, switches the 3-way diverting valve.

WRL-HT total recovery heat pump for heating/cooling with a fan coil system – Production of DHW by an SAF heat storage tank



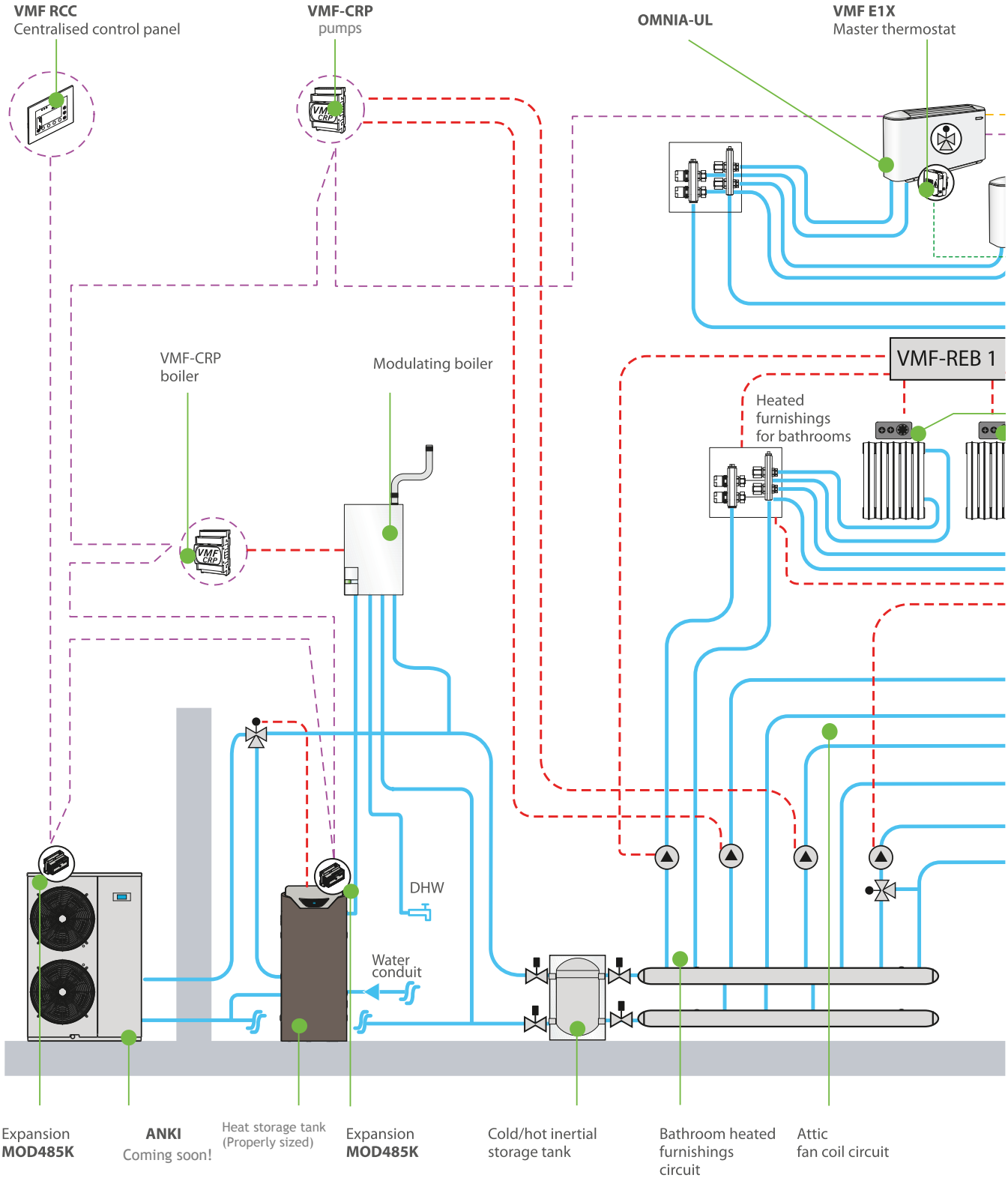
System with primary and secondary circuit for summer cooling and winter heating by a WRL-HT water-water heat pump with an external pumping assembly controlled by the machine and inverter FCZI fan coils. WRL-HT is managed within the RS485 Modbus serial port via the AER485P1 interface card. The terminals are grouped into 2 zones, each managed by a wall-mounted VMF-E4X control panel, which is used to set the zone fan coil parameters. The VMF-E4X panel is connected to the E18X thermostat of the zone master fan coil. The VMF-CRP board makes it possible to associate each pump in the secondary loop with reference terminals: when the first fan coil in the fan coil group associated with the pump activates, the pump is turned on, whereas when the last fan coil associated with the pump reaches the set-point or if there is no thermal load demand, the pump turns off. The domestic hot water is produced by the SAF heat storage tank: when the temperature in the storage tank goes down below the value set on the SAF panel, the probe signal requesting DHW is sent to WRL-HT, which sets its operation to heating with a DHW production set-point, switching condensation to total recovery.

ANKI heat pump with integrated pumping assembly for heating/cooling with a fan coil system - Production of DHW by a dedicated SWP heat pump

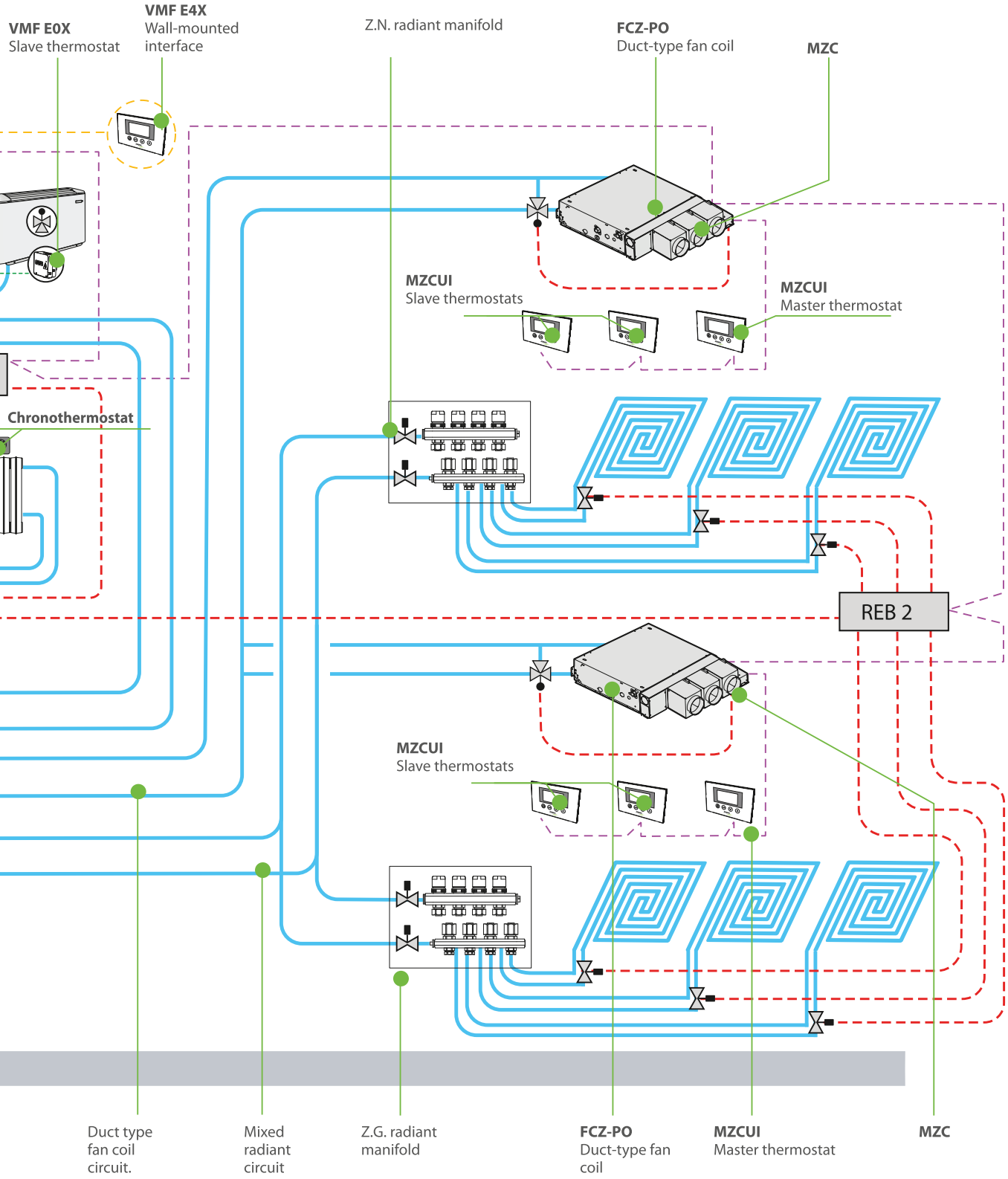


Single loop system for summer cooling and winter heating by an ANKI inverter air-water heat pump with integrated pumping assembly and ON-OFF FCZ fan coils. Production of DHW by an SWP heat pump water heater, ANKI is managed within the RS485 Modbus serial port via the MOD485K interface card. The terminals are grouped into 2 zones, each managed by a wall-mounted VMF-E4X control panel, which is used to set the zone fan coil parameters. The VMF-E4X panel is connected to the E1X thermostat of the zone master fan coil, from which the TTL network starts to which the E0X thermostats of the slave fan coils are connected. The production of domestic hot water by an indoor SWP heat pump water heater: when the temperature in the storage tank drops down below the value set on the SWP control pane, the heat pump is activated to heat the hot water to be sent to the users

ANKI heat pump with integrated pumping assembly and auxiliary boiler for heating/cooling with a fan coil system, MZC motorised plenum, radiant floor and heated furnishings for bathrooms – Production of DHW by SAF heat storage tank and boiler provided standard

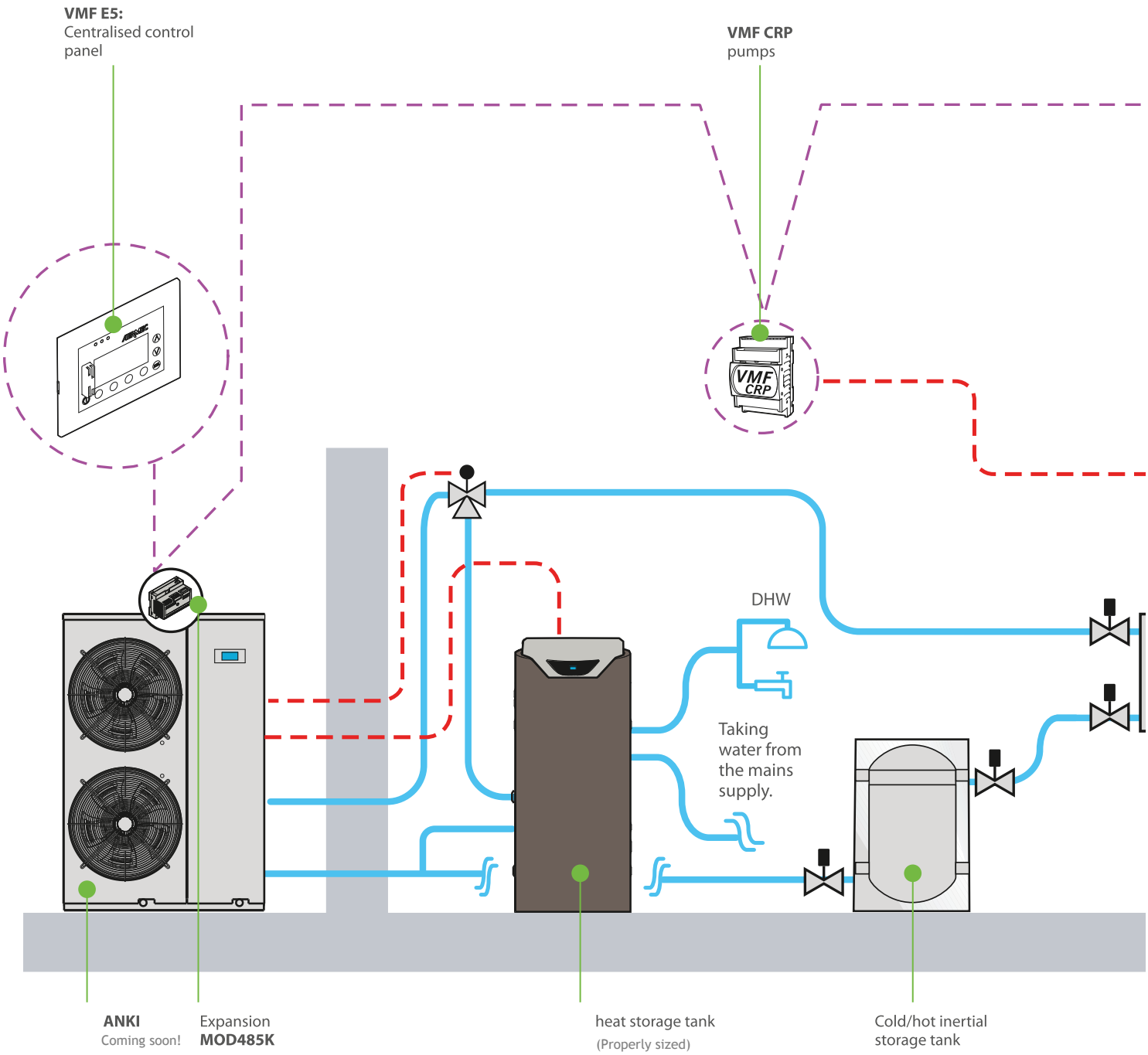


Double loop system for cooling and heating by means of an ANKI inverter air-water heat pump with integrated pumping assembly, Omnia UL ON-OFF fan coils, FCZ-PO duct type ON-OFF fan coils with MZC motorised plenum, radiant floor panels and heated furnishings. ANKI is managed within the RS485 Modbus serial port via the MOD485K interface card. The attic fan coils are grouped into a single zone, managed by the VMF-E4X wall-mounted control panel connected to the E1X thermostat of the master fan coil. From the E1X master thermostat, the TTL network starts, to which the slave fan coil E0X thermostats are connected. The heated furnishings in the bathrooms are managed by the VMF-REB1 board, which, upon request of the chronothermostat installed in the relative bathroom, manages the opening and closing of the electrothermal head and the on/off function of the hydraulic circuit pump of the heated furnishings. Upon request of the VMF-RCC centralised panel, VMF-REB2 controls in winter the opening and closing of the electro-thermal head of the radiant panels depending on the request of the MZCUI thermostats installed in the same zone; REB2 also manages the on/off function of the hydraulic circuit pump of the radiant panels. Based on the thermal and cooling

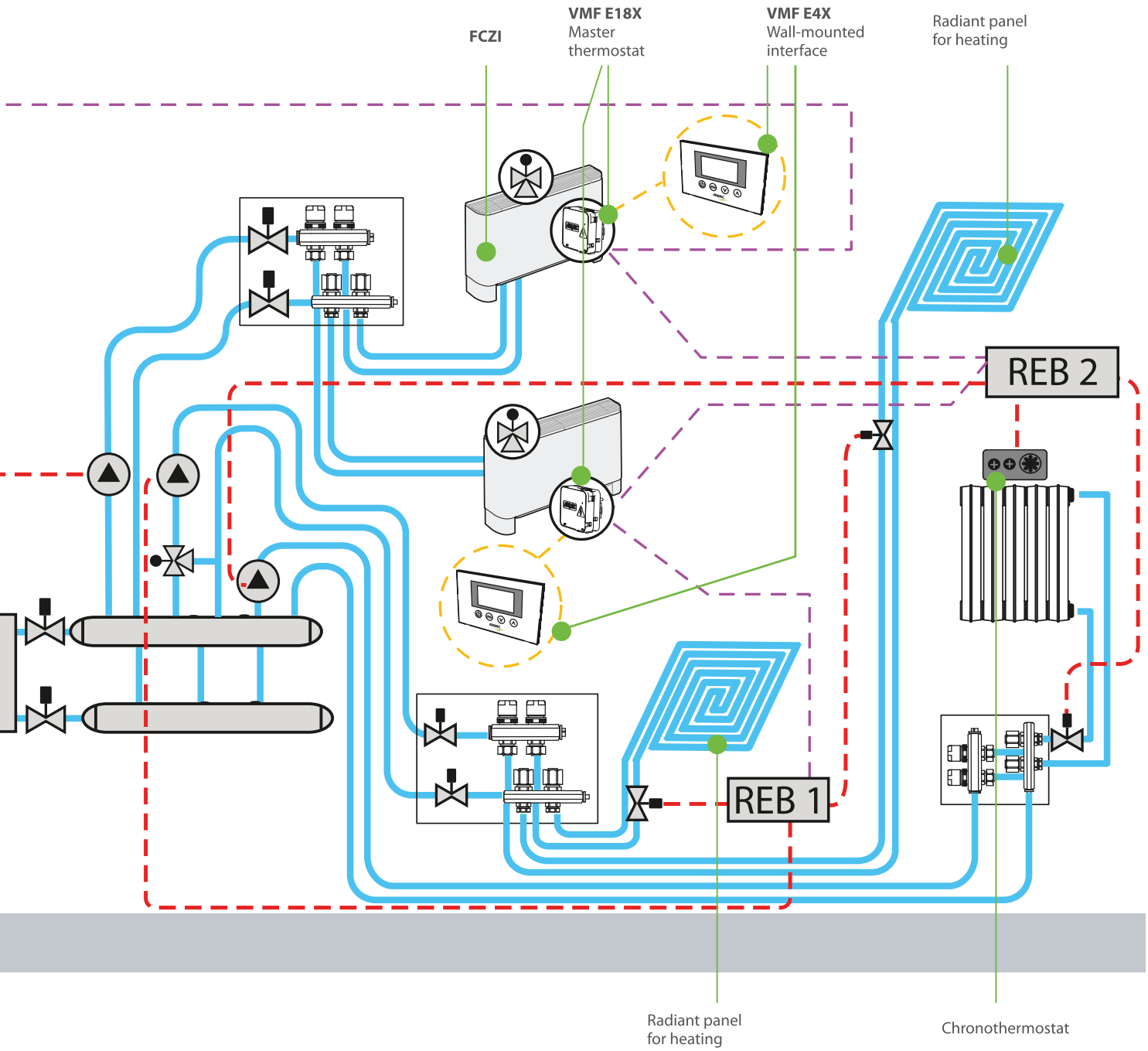


load demanded in winter and in summer perceived by the MZCUI master and slave thermostats, the MZC controller manages the opening of the motorised dampers for the introduction of air treated by two FCZ-PO fan coils into the 3 rooms in the day zone and the night zone. The first VMF-CRP board makes it possible to replace the heat pump with the modulating boiler when the temperature of the external air drops down below the value set on the VMF-RCC centralised panel. The second VMF-CRP board makes it possible to associate each pump in the secondary loop with reference fan coils: when the first fan coil in the fan coil group associated with the pump activates, the pump is turned on, whereas when the last fan coil associated with the pump reaches the set-point or if there is no thermal load demand, the pump turns off. The domestic hot water is produced by the SAF heat storage tank: when the temperature in the storage tank goes down below the value set on the SAF panel, the signal requesting DHW is sent to the centralised VMF-E5 control panel; IE5 first sets operation to heating and the DHW production set-point for the heat pump and secondly switches the 3-way diverting valve to SAF. If the temperature of the water produced in the SAF does not reach the delivery set point, the downstream modulating boiler guarantees that the set temperature value will be reached.

ANKI heat pump with integrated pumping assembly for heating/cooling with a fan coil system, radiant floor and heated furnishings - Production of DHW by an SAF heat storage tank



Single loop system for cooling and heating by an ANKI inverter air-water heat pump with integrated pumping assembly, FCZI inverter fan coils, radiant floor panels and heated furnishings. ANK is managed within the RS485 Modbus serial port via the MOD485K interface card. The fan coils are grouped into two zones, managed by the VMF-E4X wall-mounted control panel connected to the thermostat E18X of the master fan coil. From the E18X master thermostats, the TTL network starts, to which the slave fan coil E18X thermostats are connected. Upon request of the VMF-RCC centralised panel, VMF-REB1 controls in winter the opening and closing of the electro-thermal head of the radiant panels depending on the request of the E18X thermostats of the master fan coils installed in the same zone; REB1 also manages the on/off function of the hydraulic circuit pump of the radiant panels. The VMF-REB2 board, which upon request of the chronothermostat installed in the zone of the heated furnishings,



manages the opening and closing of the electrothermal head and the on/off function of the dedicated hydraulic circuit pump. The VMF-CRP board makes it possible to associate each pump in the secondary loop with reference fan coils: when the first fan coil in the fan coil group associated with the pump activates, the pump is turned on, whereas when the last fan coil associated with the pump reaches the set-point or if there is no thermal load demand, the pump turns off. The domestic hot water is produced by the SAF heat storage tank: when the temperature in the storage tank goes down below the value set on the SAF panel, the probe signal requesting DHW is sent to ANKI, which sets its operation to heating with a DHW production set-point and, subsequently, switches the 3-way diverting valve.

RADIANT COOLING

COOLING STRIP

Radiant Cooling

How It Works

As the warm air rises to the ceiling, natural convection causes the air to flow down over the cooling strip while dehumidifying the air. This natural cooling circuit allows for ultimate comfort with no noise or drafts while maintaining a constant and comfortable humidity level between 50% and 60%. The cooling strip may also provide heating. In northern climates a separate or backup heating system may be required due to extremely cold ambient conditions.

Installation

The cooling strip is simple to install. It is ideal for any type of environment and does not require a separate dehumidification or control system as it has a condensate collection system. The system is installed below the ceiling and painted to disappear or placed above the false ceiling where it is not visible.

Advantages

By cooling all the objects in the space it provides unsurpassed comfort with extreme energy savings and no noise whatsoever. Simple, quick, and cost effective installation. There is no maintenance required in the space and no expensive controls or refrigeration skills required. Individual temperature zones provide superior comfort and energy savings while allowing for simple modifications as building uses change.

- Unsurpassed comfort
- No refrigeration in the space
- No drafts in the space
- No noise in the space
- Simple installation
- No maintenance

Aermec is distributed by Master Distributor
Mits Airconditioning Inc. in North America

Aermec (North America)
1608 Bonhill Road
Mississauga | ON | L5T 1C7
Canada: 1-800-567-2221
US: 1-888-567-2227
aermec@mitsair.com
aermec.us