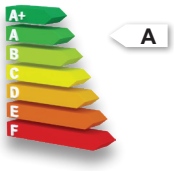
Solarico®

Solarico Plug-in Hybrid Station

DHW • Heating • Cooling



solarico.eu

The Solarico Plug-in Hybrid Station is a compact and intelligent system that provides heating, cooling and hygienic hot water, combining renewable energy and advanced hydraulic integration in a single station solution.

The product is an innovative compact all-in-one solution designed to simplify modern heating installations. All key hydraulic and control components are integrated into a single weather-protected outdoor cabinet. With this the system significantly reduces installation time, minimizes system complexity, and ensures reliable operation.

Modern heating systems are becoming increasingly complex. Multiple components, hydraulic connections, electrical wiring, and control systems often lead to long installation times and potential installation mistakes.

Our hybrid energy station was developed with a clear objective: Simplify installation and eliminate complexity.

Traditional heating installations require the assembly of multiple components on site: storage tanks, hydraulic modules, pumps, expansion vessels, control units etc.

Each additional component increases the risk of incorrect connections, hydraulic imbalance, or system configuration errors. Our integrated system removes this complexity by providing a factory-assembled and pre-engineered solution.

Key advantages

- Pre-assembled hydraulic components
- One solution for both indoor and outdoor installation
- Lower installation costs
- Reduced installation complexity
- No installation mistakes
- Compact and pre-assembled hydraulic concept

Benefits for installers and project developers

- Faster project completion
- Up to 70% faster installation
- Reduced labor costs
- Simplified commissioning
- Predictable system performance
- Install in hours, not days
- All-in-one outdoor comfort
- No boiler room? No problem!

Outdoor version of the Solarico station connected to house installation

Ideal Applications

The hybrid system is suitable for a wide range of applications:

- Residential homes, restaurants, offices and small hotels
- Energy-efficient buildings
- Renovation projects
- Small multi-family buildings
- Modernization of existing heating systems
- Projects requiring outdoor technical installations

Indoor version of the Solarico station connected to house installation

Flexible Installation for Every Project

Our hybrid station offers maximum flexibility by allowing both indoor and outdoor installation, making it suitable for a wide variety of project requirements and installation environments.

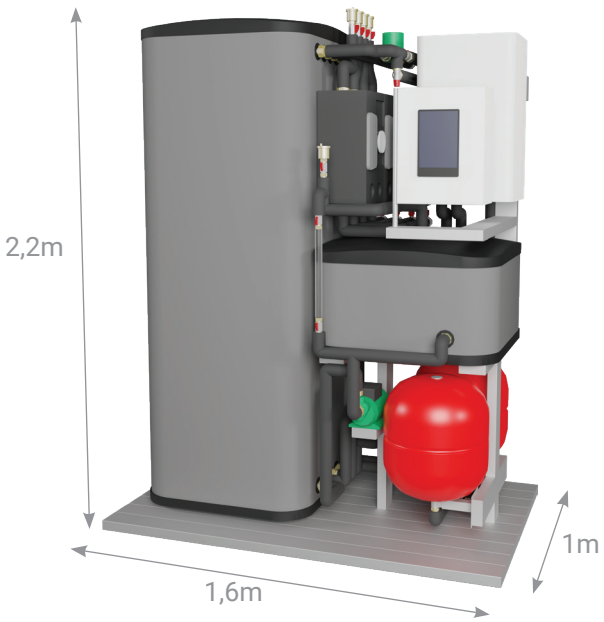
The outdoor model features a durable insulated protective case, designed to withstand external conditions, while the indoor version provides the same high performance in a compact open configuration, ideal for technical rooms or utility spaces.

Thanks to the same hydraulic concept and internal components, installers can easily choose the most suitable installation option without changing the system design.

The integrated concept significantly reduces the complexity of traditional heating installations.

Traditional indoor heating installation

Outdoor version

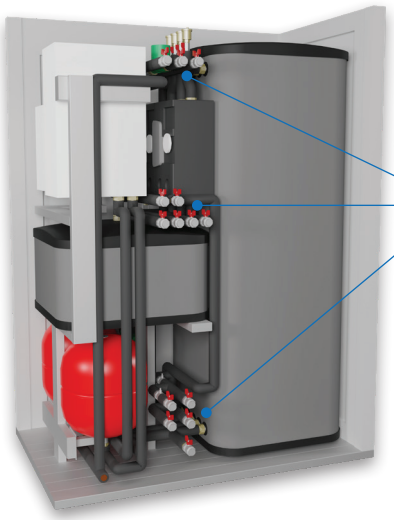


Indoor version

Solarico®

Model 1

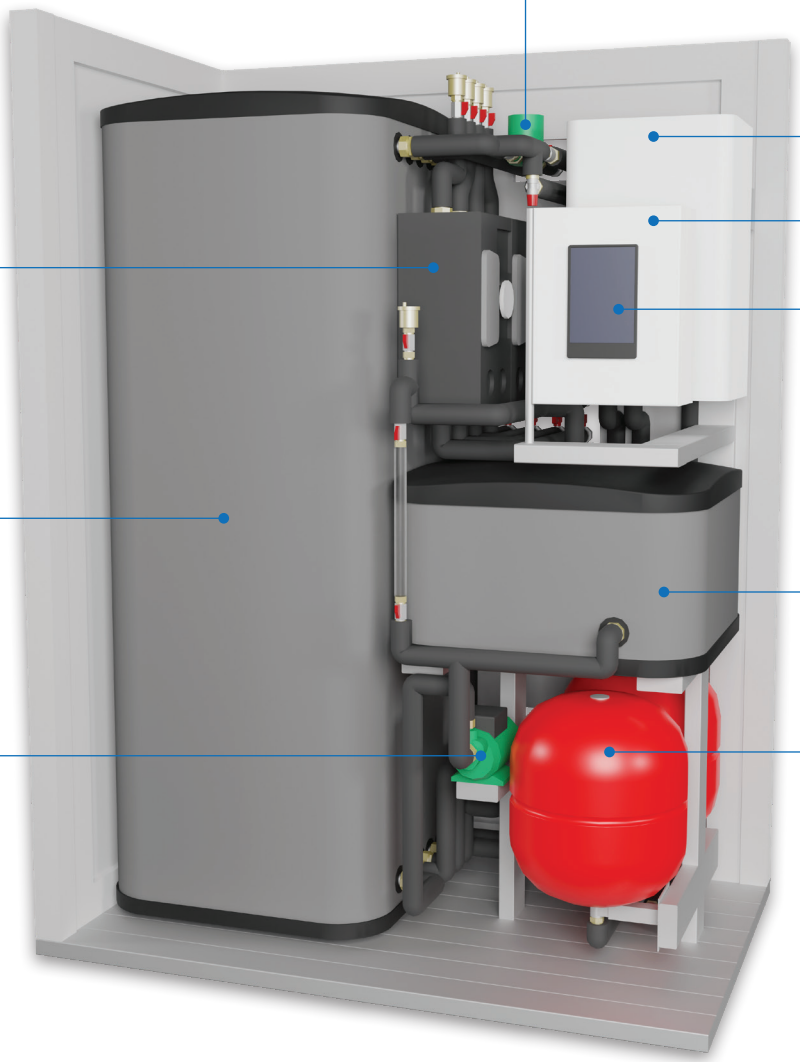
- Support heating with solar thermal collectors with drain-back operation
- Heat pump as the main heat source
- All-in-one tank: buffer and hygienic DHW
- Backup electrical or gas boiler for reliability
- Compact, modular design for indoor or outdoor installation
- Pre-fitted and factory tested
- Smart control with Wi-Fi remote
- Real-time performance monitoring



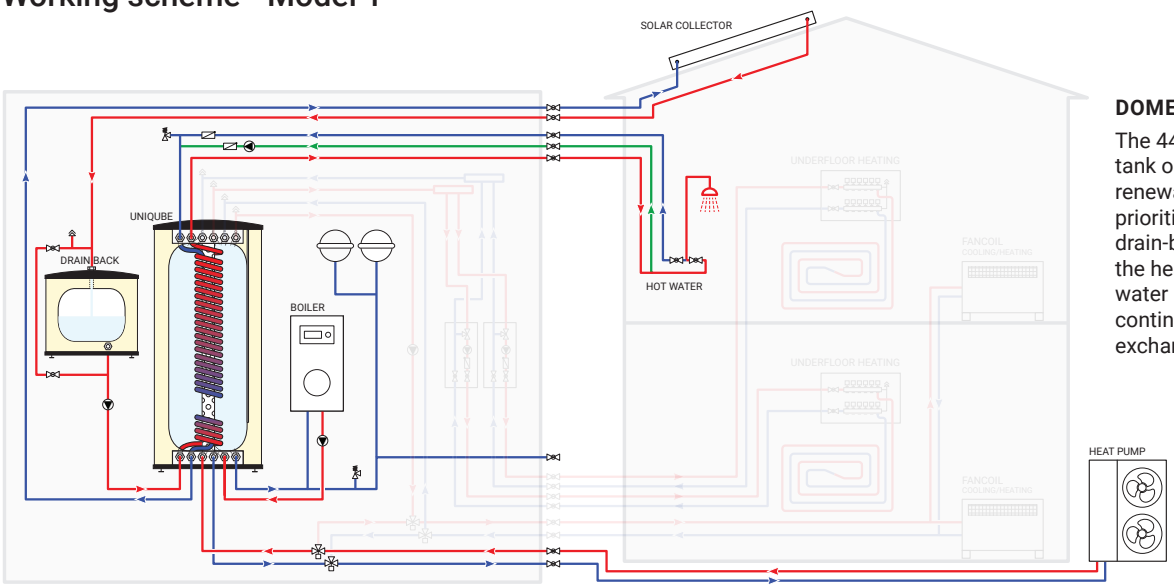
Connections:

DHW
Heating (x2)
Cooling
Solar
Heat pump
Fancoil
Water main

Back view

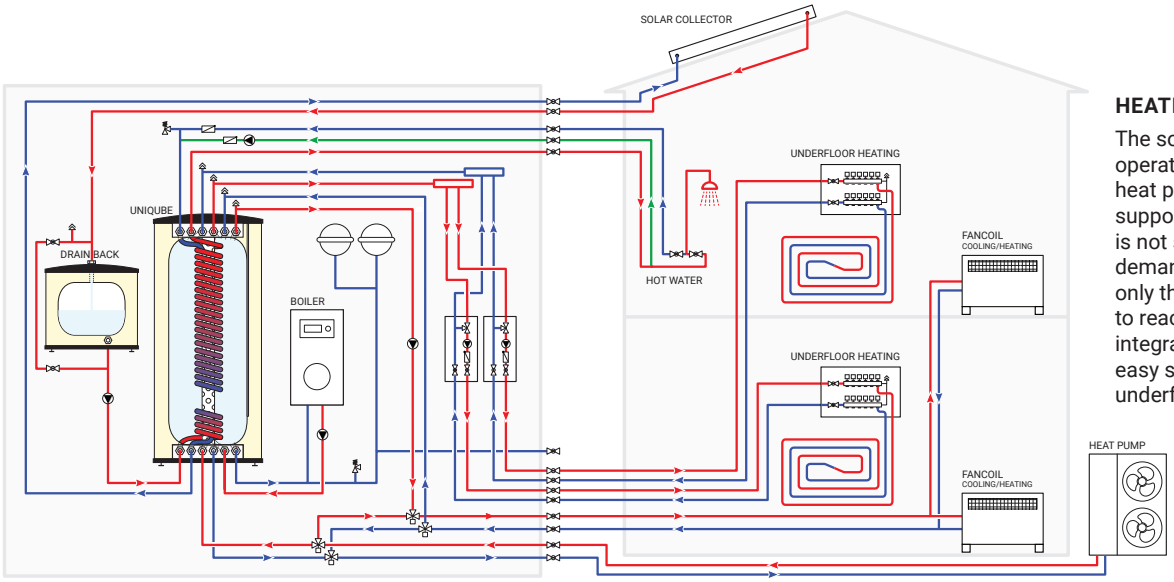


Working scheme - Model 1



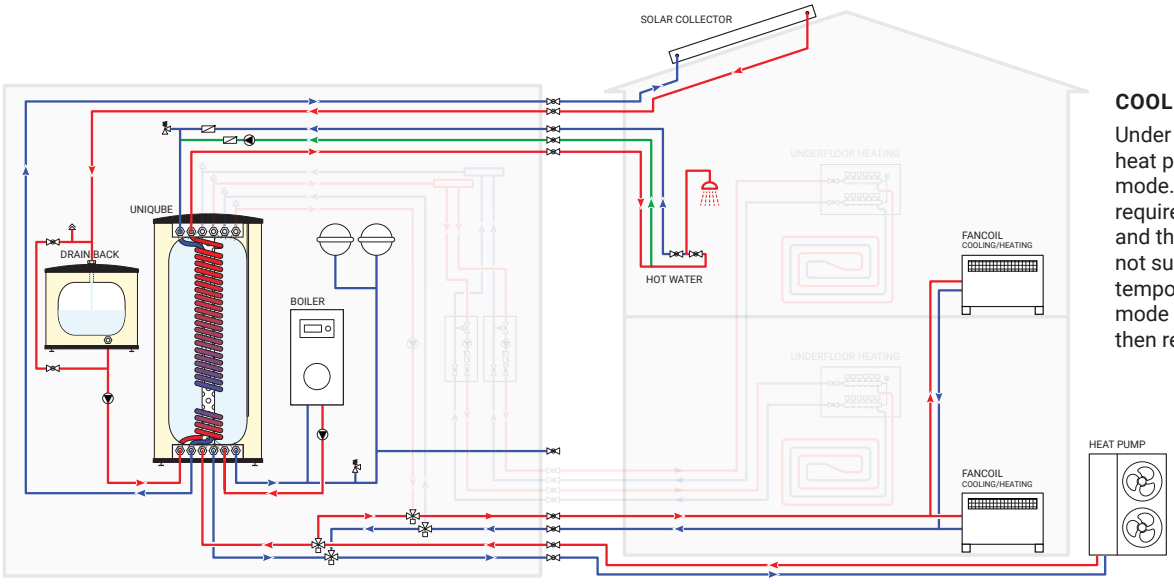
DOMESTIC HOT WATER

The 440-litre UniQube storage tank operates exclusively on renewable energy sources, prioritizing the solar thermal drain-back system, followed by the heat pump. The domestic hot water is produced hygienically in continuous flow through the heat exchanger.



HEATING

The solar thermal collectors operate with priority, while the heat pump provides additional support when the temperature is not sufficient to meet system demand. The heat pump supplies only the minimum energy required to reach the setpoint. Two integrated pump groups allow easy supply to two separate underfloor heating zones.



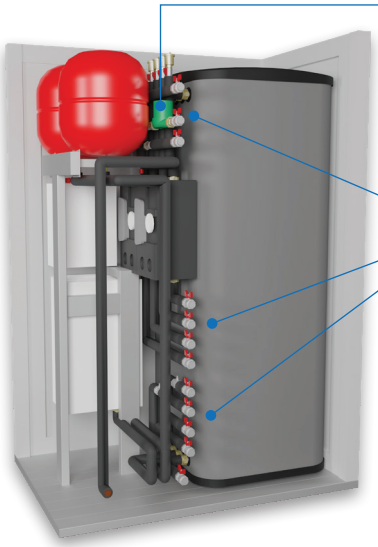
COOLING

Under normal conditions, the heat pump operates in cooling mode. When the UniQube tank requires domestic hot water and the temperature inside is not sufficient, the heat pump temporarily switches to heating mode to raise the temperature, then returns to cooling.

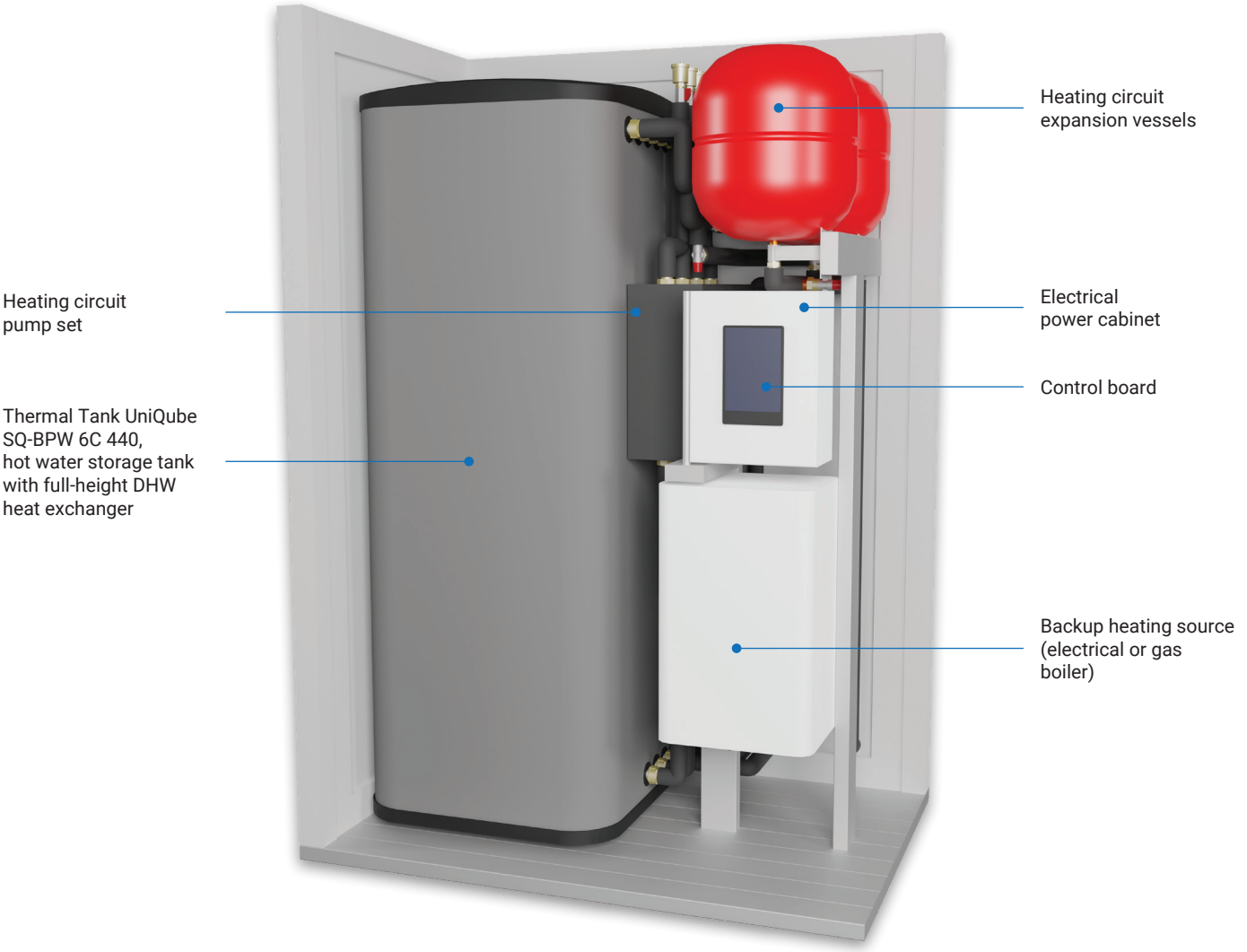
NOTE: The backup electrical or gas boiler will be activated when the primary source does not reach the temperature parameters set by the user.

Model 2

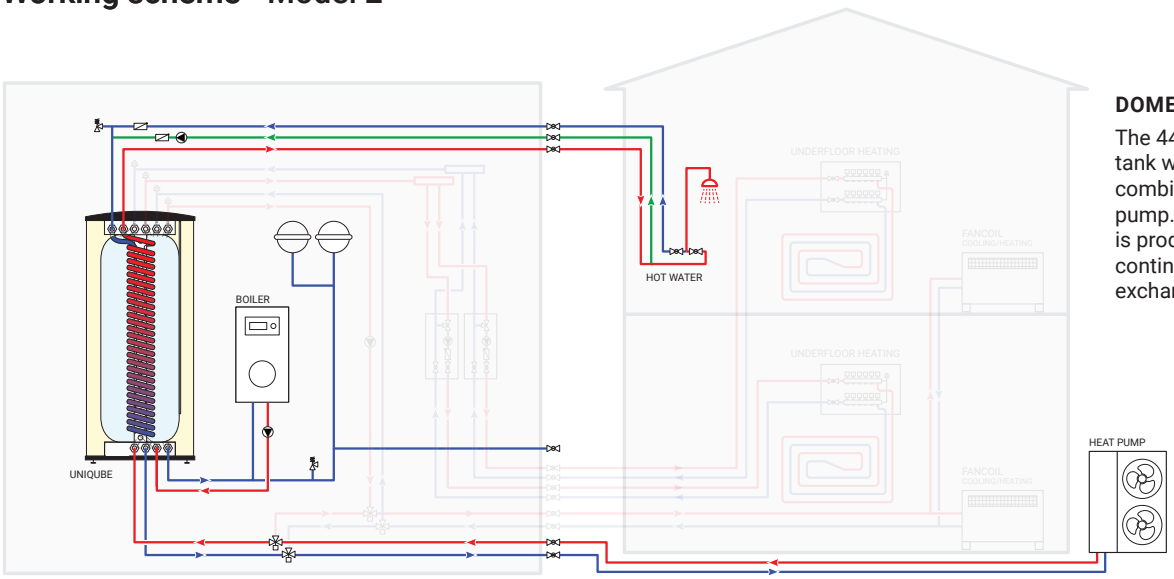
- Heat pump as the main heat source
- All-in-one tank: buffer and hygienic DHW
- Backup electrical or gas boiler for reliability
- Compact, modular design for indoor or outdoor installation
- Pre-fitted and factory tested
- Smart control with Wi-Fi remote
- Real-time performance monitoring



Back view

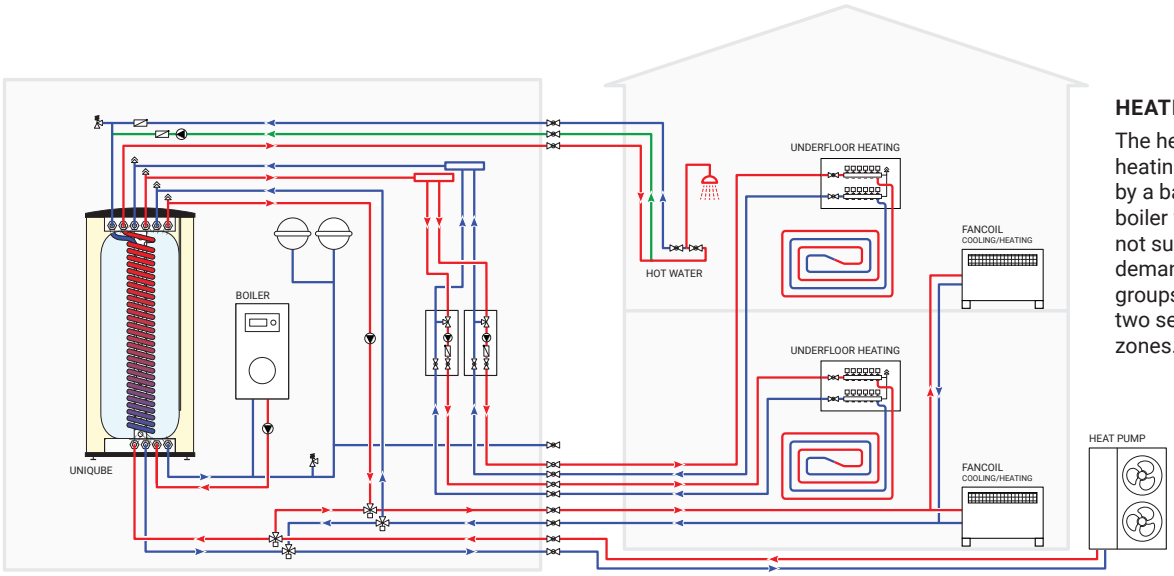


Working scheme - Model 2



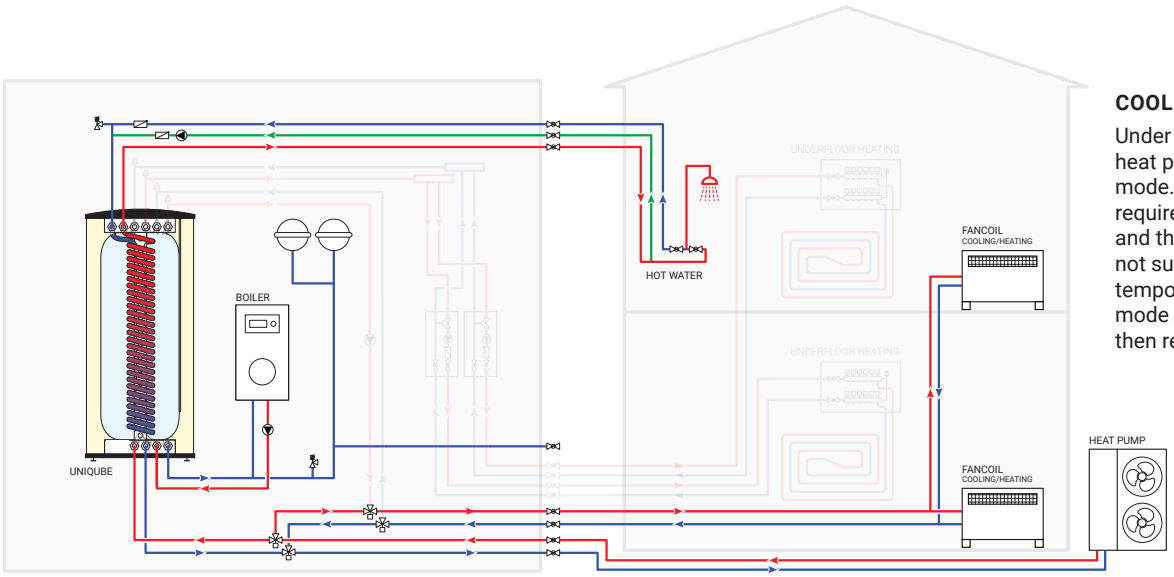
DOMESTIC HOT WATER

The 440-litre UniQube storage tank works efficiently in combination with a heat pump. The domestic hot water is produced hygienically in continuous flow through the heat exchanger.



HEATING

The heat pump is the primary heating source, supported by a backup (electrical / gas) boiler when the temperature is not sufficient to meet system demand. Two integrated pumps groups allow easy supply to two separate underfloor heating zones.



COOLING

Under normal conditions, the heat pump operates in cooling mode. When the UniQube tank requires domestic hot water and the temperature inside is not sufficient, the heat pump temporarily switches to heating mode to raise the temperature, then returns to cooling.

NOTE: The backup electrical or gas boiler will be activated when the primary source does not reach the temperature parameters set by the user.

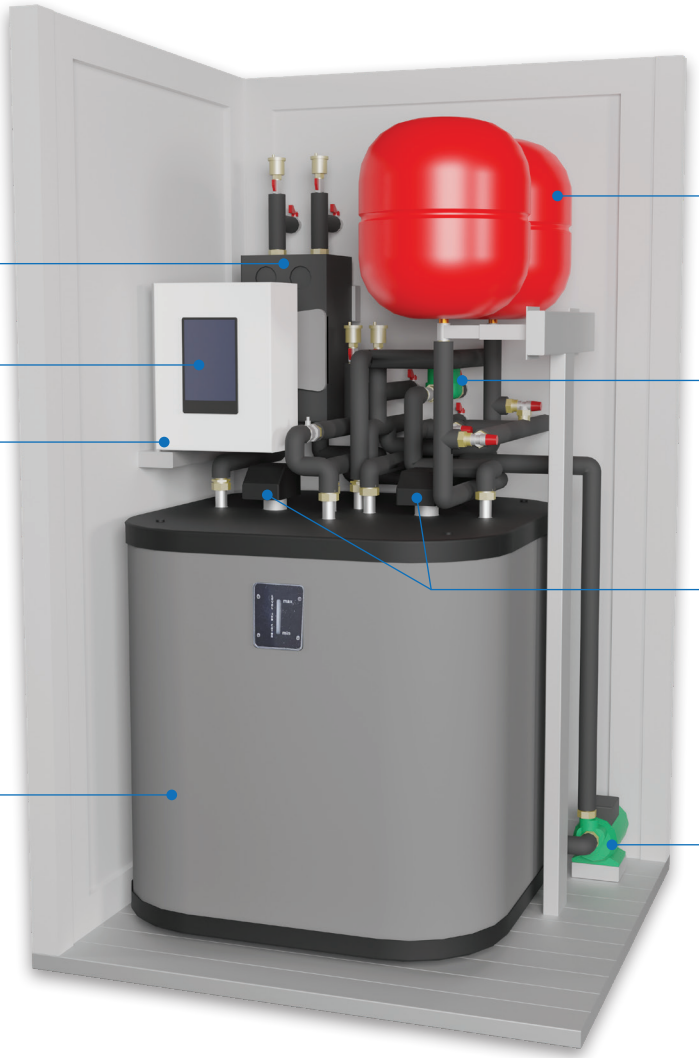
Model 3

- Support heating with solar thermal collectors with drain-back operation
- Heat pump as the main heat source
- All-in-one tank: unpressurized buffer, drain-back and hygienic DHW
- Backup electrical heaters for reliability
- Compact, modular design for indoor or outdoor installation
- Pre-fitted and factory tested
- Smart control with Wi-Fi remote
- Real-time performance monitoring

Connections:

DHW
Heating
Cooling
Solar
Heat pump
Fancoil
Water main

Back view



Heating circuit pump set

Control board

Electrical power cabinet

Thermal Tank Qube X WDHSU 400, unpressurized hot water storage tank with DHW, heating and heat pump heat exchangers

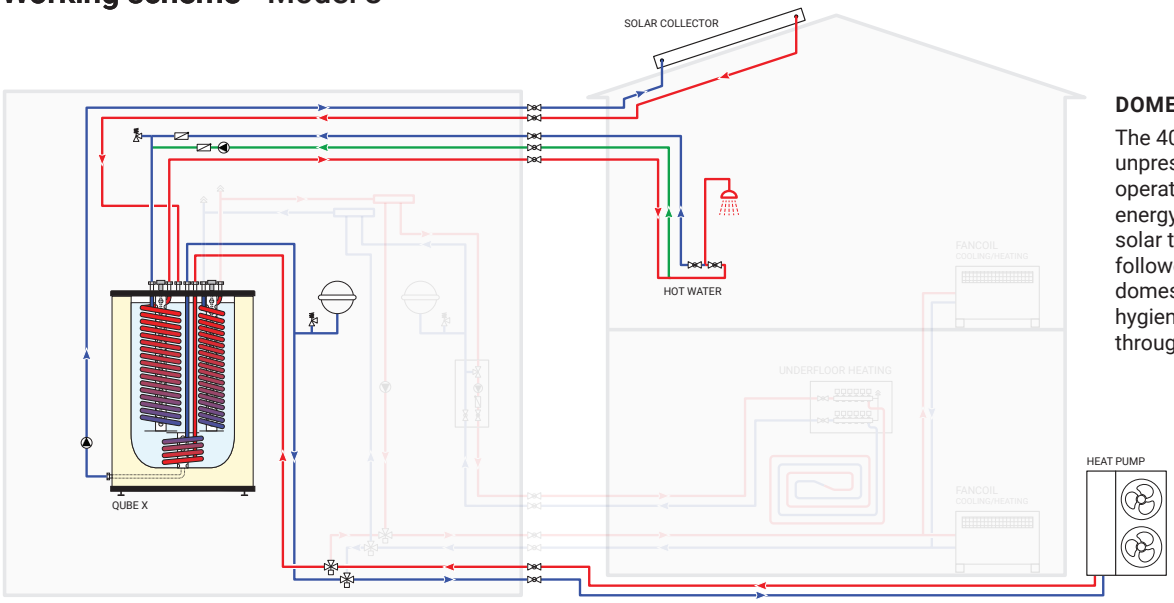
Expansion vessels

DHW recirculation pump

Backup heating source (inserted in heat exchangers)

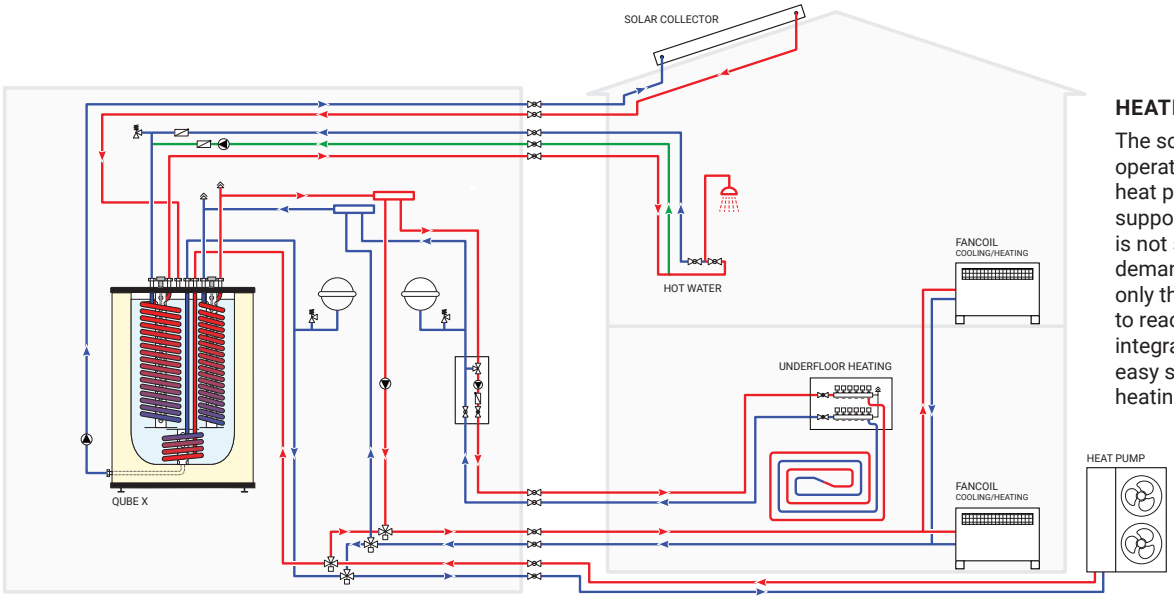
Solar circuit pump

Working scheme - Model 3



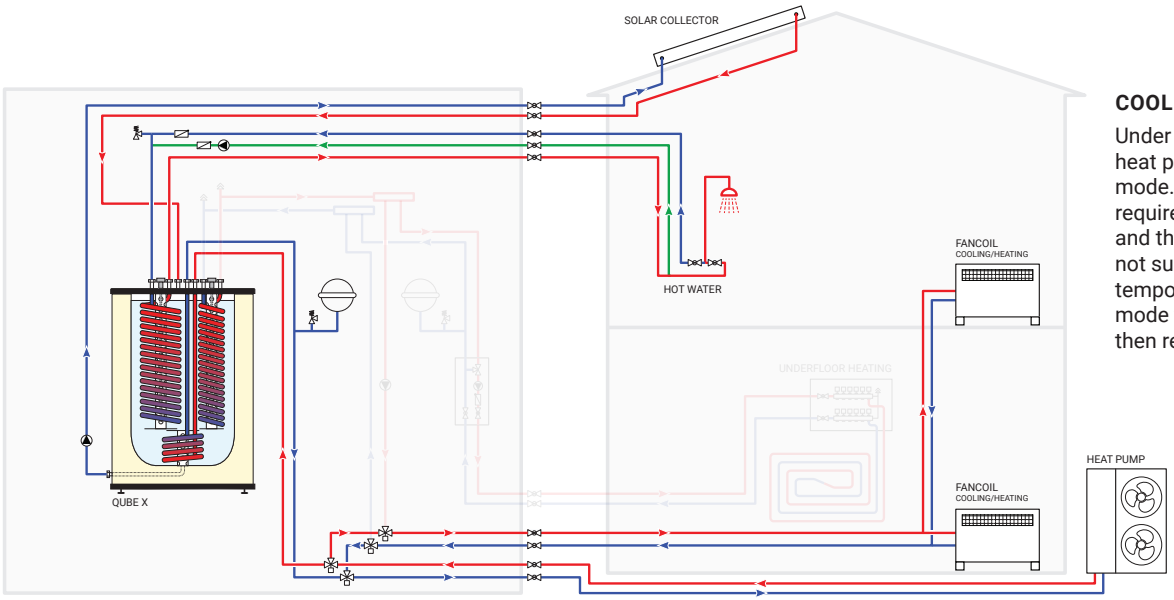
DOMESTIC HOT WATER

The 400-litre Qube X unpressurized storage tank operates exclusively on renewable energy sources, prioritizing the solar thermal drain-back system, followed by the heat pump. The domestic hot water is produced hygienically in continuous flow through the heat exchanger.



HEATING

The solar thermal collectors operate with priority, while the heat pump provides additional support when the temperature is not sufficient to meet system demand. The heat pump supplies only the minimum energy required to reach the setpoint. The integrated pump group enables easy supply to the underfloor heating zone.



COOLING

Under normal conditions, the heat pump operates in cooling mode. When the Qube X tank requires domestic hot water and the temperature inside is not sufficient, the heat pump temporarily switches to heating mode to raise the temperature, then returns to cooling.

NOTE: The backup electrical heaters will be activated when the primary source does not reach the temperature parameters set by the user.

Model 1 - station equipment

Item		Specifications
Combined Thermal Tank	Solarico	UniQube SQ-BPSW 6C 440 liters, hot water storage tank with DHW and solar heat exchangers
Drain Back Tank	Solarico	DB 50 liters, supports connection of max. 6 solar thermal collectors
Backup heating source: Gas, or Electrical	Vaillant	Gas condensing boiler VU 20 CS/1-5 Electrical boiler eloBLOCK VE 12/14 SEE
Heating circuit mixing pump group	Vaillant	Mixing module - 2 x VDM 25M incl. three-way valve with actuator
Solar drain back circuit pump	DAB	Centrifugal pump KPF 30/16 M
DHW recirculation pump	DAB	Circulation pump Evosta 2 San
Fancoil circulation pump	DAB	Circulation pump Evosta 3
Heating circuit expansion vessels	ZILIO	2 x R50 liters 3/4 ZILIO heating system
Three-way mixing valve	IMI Heimeier	4 x Three-way mixing valve 1" incl. EMO-T thermoelectric actuator
Weather-compensated system control	Vaillant	sensoCOMFORT VRC 720

* Recommended heat pump power: 8 ÷ 16kW

Model 2 - station equipment

Item		Specifications
Domestic Thermal Tank	Solarico	UniQube SQ-BPW 6C 440 liters, hot water storage tank with single DHW heat exchanger
Backup heating source: Gas, or Electrical	Vaillant	Gas condensing boiler VU 20 CS/1-5 Electrical boiler eloBLOCK VE 12/14 SEE
Heating circuit mixing pump group	Vaillant	Mixing module - 2 x VDM 25M incl. three-way valve with actuator
DHW recirculation pump	DAB	Circulation pump Evosta 2 San
Fancoil circulation pump	DAB	Circulation pump Evosta 3
Heating circuit expansion vessels	ZILIO	2 x R50 liters 3/4 ZILIO heating system
Three-way mixing valve	IMI Heimeier	4 x Three-way mixing valve 1" incl. EMO-T thermoelectric actuator
Weather-compensated system control	Vaillant	sensoCOMFORT VRC 720

* Recommended heat pump power: 8 ÷ 16kW

Model 3 - station equipment

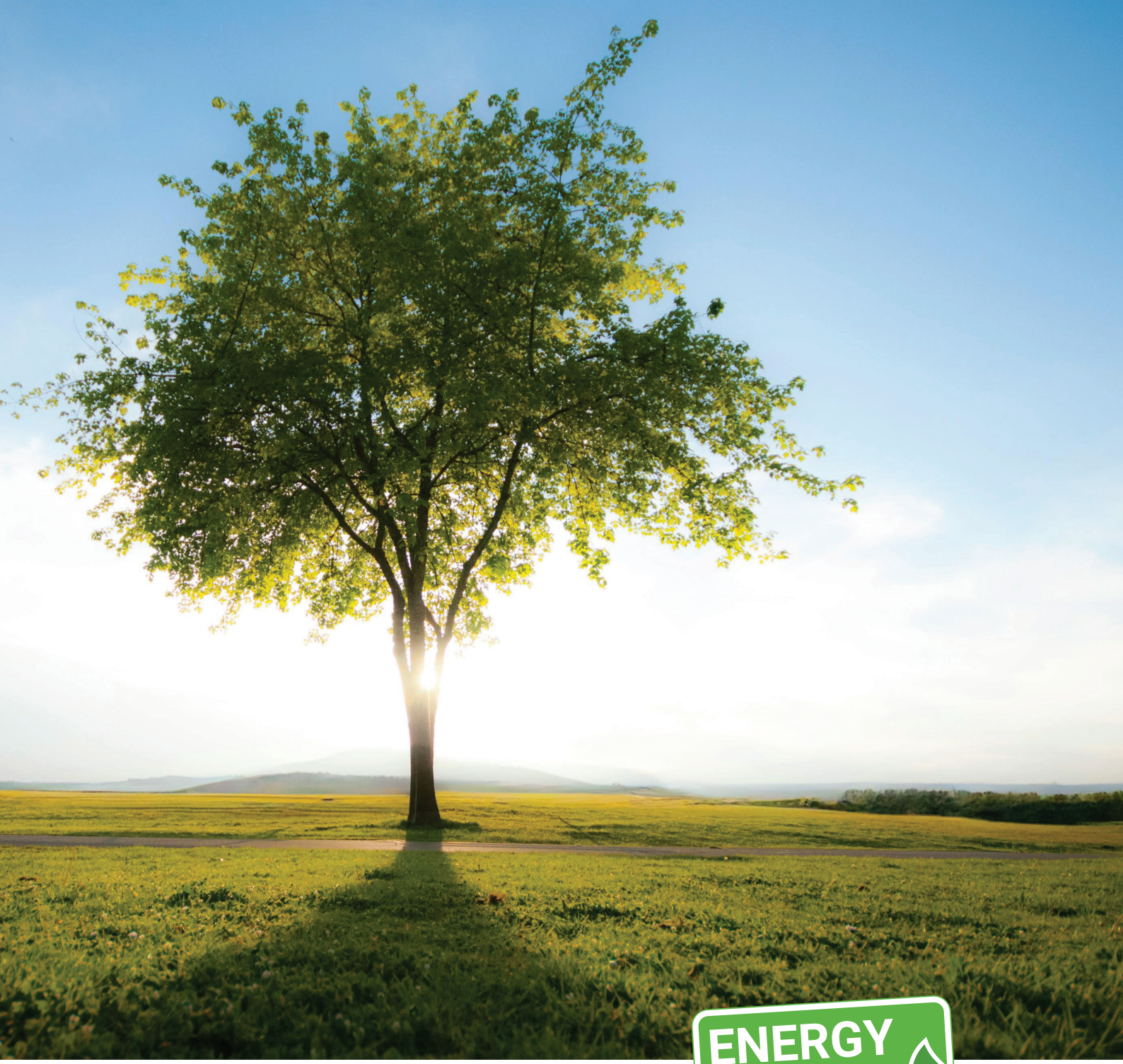
Item		Specifications
Unpressurized Thermal Tank and drain back reservoir	Solarico	Qube X SQ-WDHSU 400 liters, hot water storage tank with three heat exchangers. DHW, heat pump, underfloor heating, supports connection of max. 6 solar thermal collectors
Backup heating source	Thermis	2 x 3kW electrical resistance with thermostat
Heating circuit mixing pump group	Vaillant	Mixing module VDM 25M incl. three-way valve with actuator
Solar drain back circuit pump	DAB	Centrifugal pump KPF 30/16 M
DHW recirculation pump	DAB	Circulation pump Evosta 2 San
Fancoil circulation pump	DAB	Circulation pump Evosta 3
Heating circuit expansion vessels	ZILIO	2 x R50 liters 3/4 ZILIO heating system
Three-way mixing valve	IMI Heimeier	4 x Three-way mixing valve 1" incl. EMO-T thermoelectric actuator
Weather-compensated system control	Vaillant	sensoCOMFORT VRC 720

* Recommended heat pump power: 6 ÷ 12kW

Weather-compensated system control sensoCOMFORT VRC 720

Remotely control your heating system thanks to the wireless Wi-Fi Gateway

- Simply connected and efficient
- Clever installation via smartphone
- Positive ecological impact through minimal energy waste
- Smooth integration into your Smart Home system
- Secure connection through modern IT infrastructure



ENERGY SAVING

WITH SOLARICO PRODUCTS

Solarico®

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