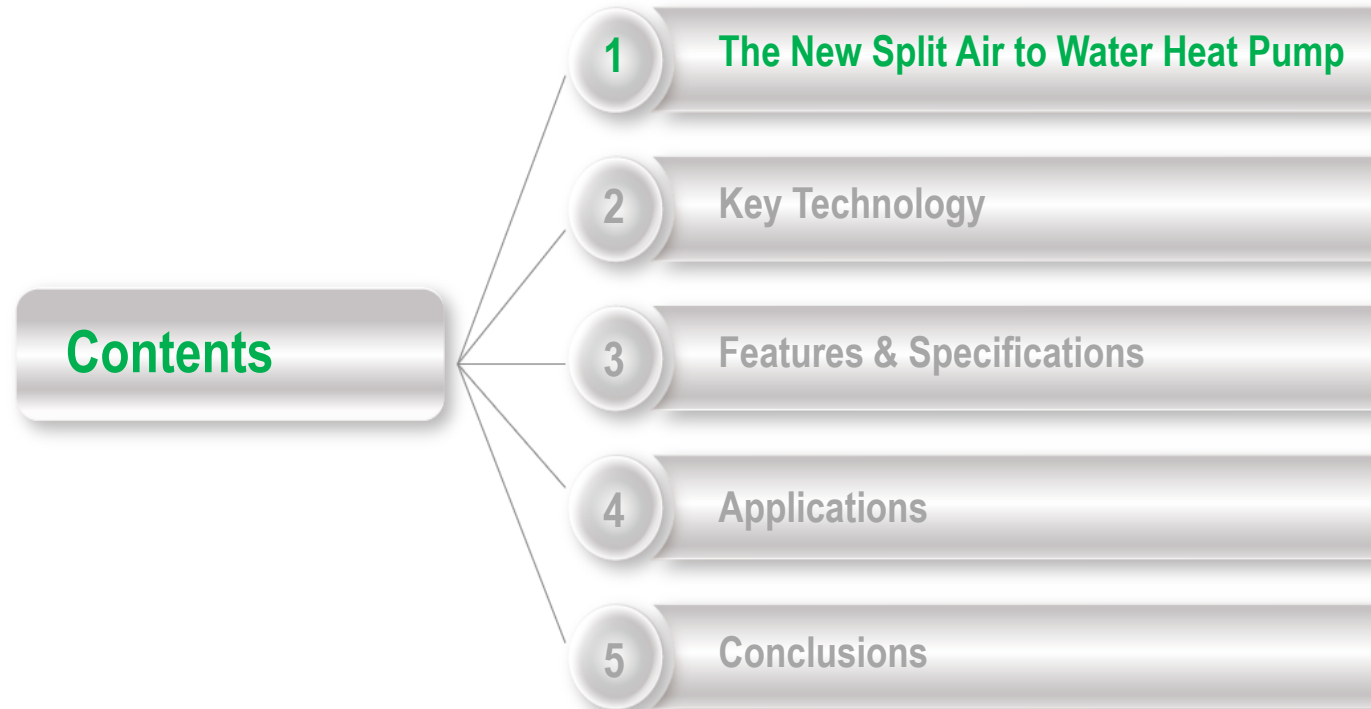




SPHERA EVO 2.0 Invisible

SQKN-YEE 1 IC + MiSAN-YEE 1 S 2.1 - 5.1

Product presentation



SPHERA EVO 2.0 Invisible: the new residential heat pump from Clivet

THE HEAT PUMP THAT DISAPPEARS :

A thermal power plant hidden in the wall of the house!

- **SPHERA EVO 2.0 Invisible** it is the integrated system that, in addition to heating and cooling the rooms, produces domestic hot water.
- It offers a **total comfort solution** for the whole year
- **All that is needed** for the heating system



SPHERA EVO 2.0 Invisible : application

This version has been carefully designed to best respond to the different requests that each type of residential home presents.

Single-family and multi-family homes in the Middle – Low Needs



SPHERA EVO 2.0 Invisible it is the ideal heat pump for multi-family residential applications where every space is studied in detail thanks to the possibility of being embedded in the wall.

SPHERA EVO 2.0: New refrigerant R-32



SPHERA EVO 2.0 is the sustainable solution for the all year round comfort thanks to the new ecological **refrigerant R-32**:

- Low GWP (Global Warming Potential): -70% compared to R-410A
- Better performance under severe conditions
- Less charged volume is needed in the system
- Higher heat transfer coefficient

FULL DC INVERTER TECHNOLOGY

- **R-32 refrigerant**
- **4 capacity sizes** to cover all needs
- **Class A+++** on heating mode BT (LWT 35°C)
- **Class A++** on heating mode MT (LWT 55°C)
- **Class A+ L** profile on DHW production
- Twin Rotary DC inverter compressor and DC inverter Fan
- Electronic pump with variable flow
- 150 litres stainless steel DHW tank
- Condensing Gas boiler integrated for water **up to 75 °C**
- From **-25 °C** in heating mode to **+43 °C** in cooling mode
- **Silent** mode available during the night: **- 4 dB(A)**
- **ICE Protection System** to protect the outdoor unit



DC Inverter



Nominal Heating Capacity:
(A7/W35) da 4 a 10 kW

Nominal Cooling Capacity:
(A35/W7) da 4 a 10 kW

SPHERA EVO 2.0: What is new?

NEW DISTINCTIVE Features and differences compared to SPHERA EVO

- **Very silent outdoor unit only 55 dB[A]** on the 4 kW and only **60 dB[A]** on the 10 kW
- **Highest efficiency**
- **COP up to 5,42**
- **Wide operating range Two 60 °C a -15 °C**
- Gas boiler management with **0-10 V signal**
- **Euroswitch Function** for optimal management of the **gas boiler** and **heat pump** combination
- HMI can be used as **a remote Thermostat** to manage a **single zone**
- Maximum water output that can be set on the Hybrid **75 °C**
- **Single fan** outdoor units
- **New accessories**

WHAT IS NEW?

DISTINCTIVE FEATURES

- **Class A+** profile **L** on **D**omestic **H**ot **W**ater production
- **Wi-Fi** Connection to use the dedicated **APP**
- Capacity range up **10 kW**
- **Smart Grid Function** management of the power supply for the photovoltaic and the power supply
- Complete system with **dirt magnetic strainer**
- Longer refrigerant line **up to 30m** and precharged for up to 15 m / **25 m** of height difference
- **Greater Versatility** with two additional volumes of DHW storage of **50 liters** (New), and **150 liters** Optional.
- **Inertial buffer tank 50 litres (New)** Optional.
- New cabinet with **telescopic frame to** maximize the aesthetic finish of the installation

WHAT IS NEW?



NEW CABINET

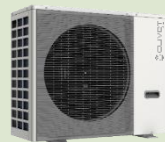

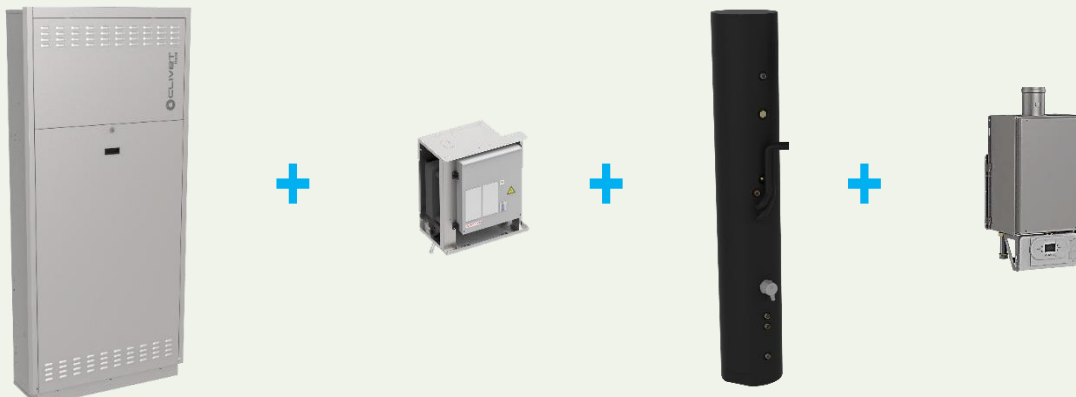
*The wardrobe has been renovated by adding **a telescopic frame***

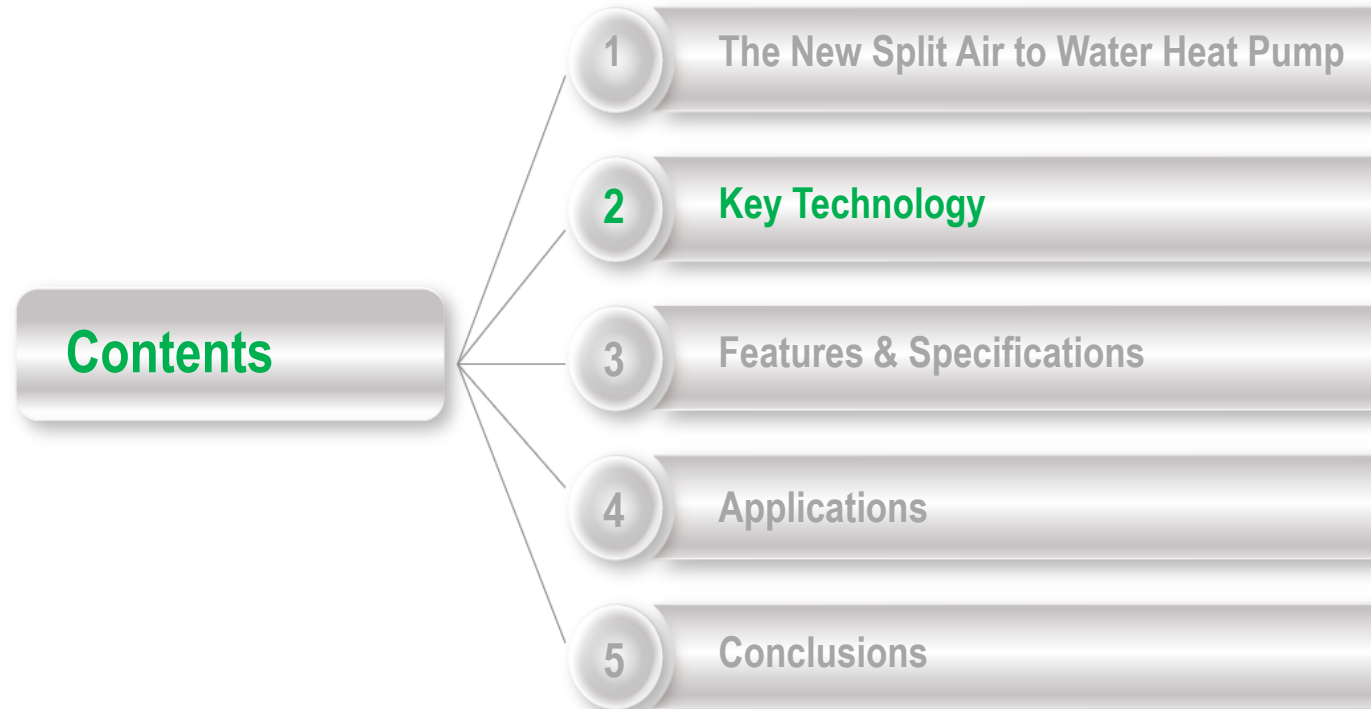
The dimensions of the part inserted in the wall are exactly the same as the previous version, height 2200 mm, width 950 mm and depth 350 mm.

The front protrudes from the wall by only one centimeter, making the installation an integral part of the home.

WHAT IS NEW?

INDOOR UNIT AND OUTDOOR UNIT COMBINATION

SPHERA EVO		2.1	3.1	4.1	5.1
Heating Capacity	Air 7 °C – Water 35°C	4,32 kW	6,18 kW	8,30 kW	10,9kW
Outdoor Units	MiSAN-YEE 1 S	2.1	3.1	4.1	5.1
					
Indoor Units	SQKN-YEE 1 IC	A - (With standard pump max 70 kPa)			
		A - 1PUM (With oversize pump max 100 kPa)			
					



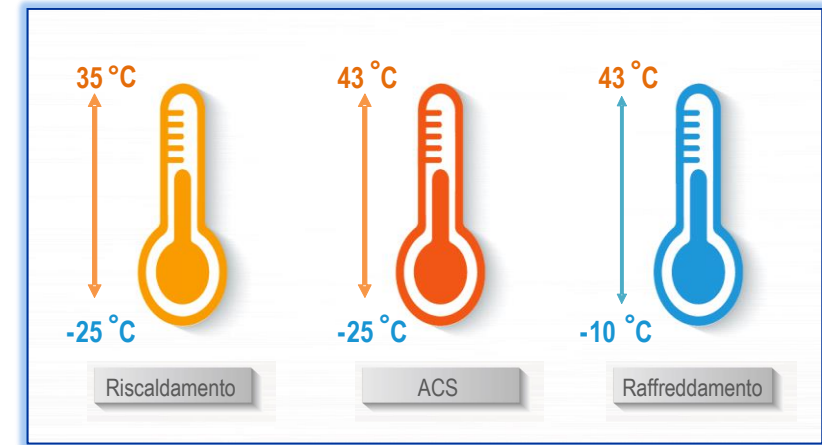
SPHERA EVO 2.0 the new generation of residential heat pumps :

- **Wide power range with R-32**, widest range heat pump and DHW production from 4 to 10 kW.
- **DC Inverter technology**, ideal for the operation at partial load.
- **Hybrid version**, among the available accessories it is also possible to select the 24 kW condensing boiler
- **High performances heat exchanger**, which permits to increase the performances and the operation limits.
- **Connectivity**: the **Wi-Fi** module is supplied as standard, in order to be able to manage the heat pump with the new dedicated **APP**

WIDE OPERATING RANGE

- Outdoor air temperature operating range

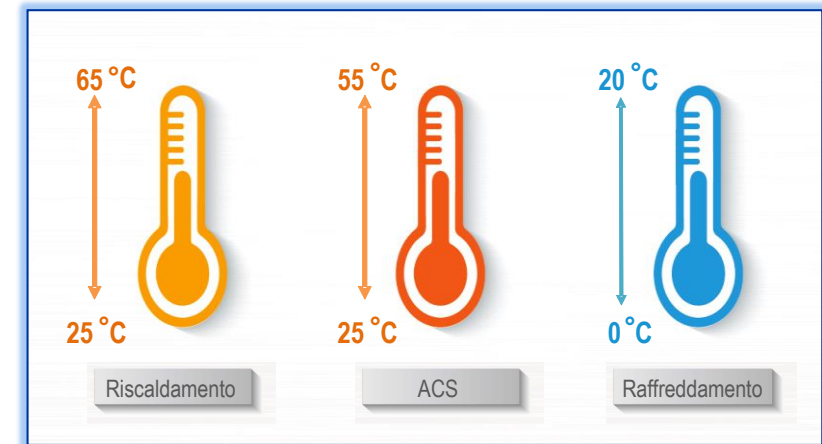
SPHERA EVO 2.0 operates with an inverter compressor optimally regulated according to the outdoor temperature, offering 70% of the nominal heating capacity of at **-15 °C** and reliable anti-freezing protection.



- Leaving water temperature range

SPHERA EVO 2.0 can supply a minimum water temperature in cooling mode of 5 °C and a maximum leaving temperature in heating mode of **65 °C**.*

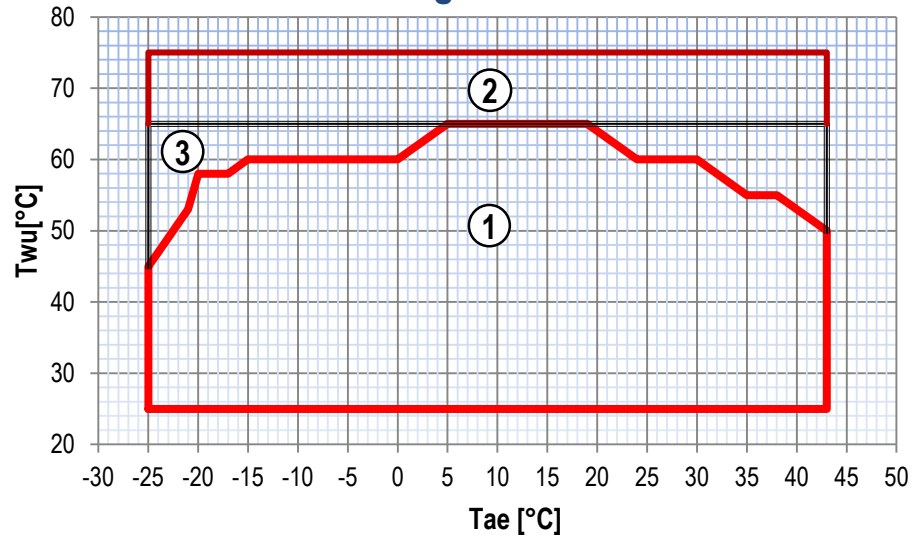
With the Condensing Gas Boiler **75 °C** can be reached.



* The leaving water temperature range will differ when setting different mode.

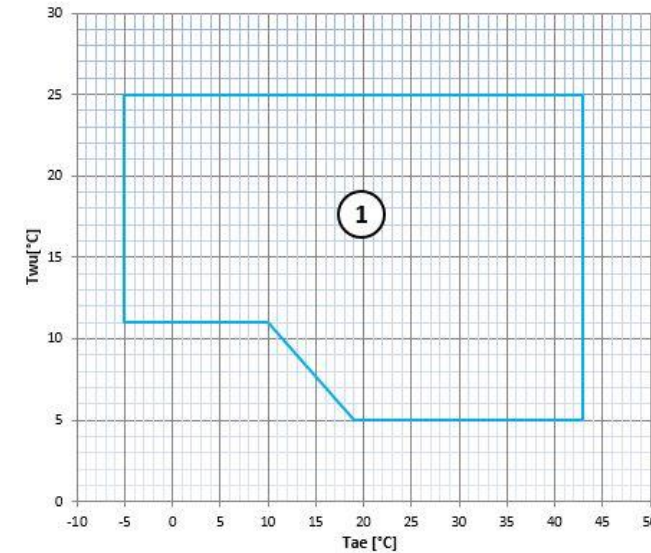
WIDE OPERATING RANGE

Heating



Hot water at 45 °C
production down to -25 °C
air temperature!

Cooling



T_{wu} [°C] = Leaving exchanger water temperature

T_{ae} [°C] = External exchanger inlet air temperature

- ① = Normal operating range
- ② = Operating range covered by the condensing gas boiler
- ③ = Operating range with only back-up heater* or additional heating source

* Back-up heater supplied as a separate option

CERTIFICATIONS



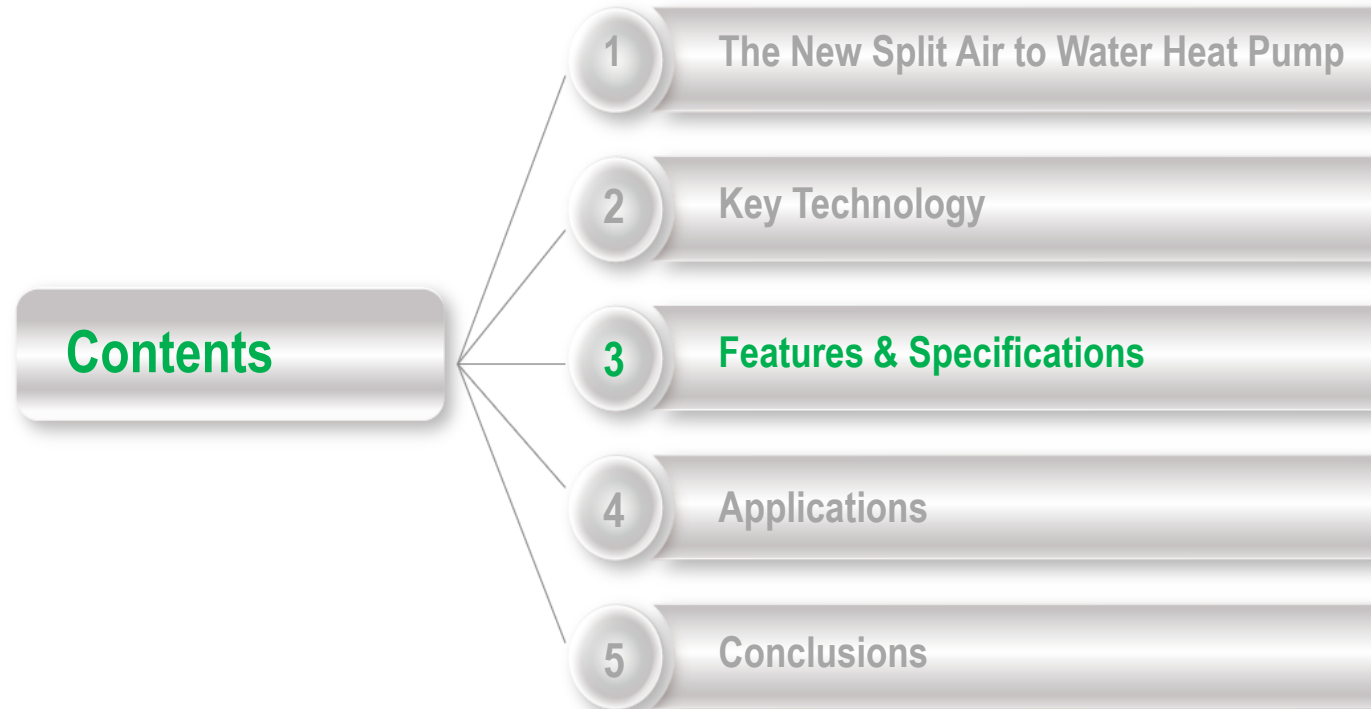
Eurovent Certification



Keymark
End Nov 2021



EKO SKLAD
Feb 2021

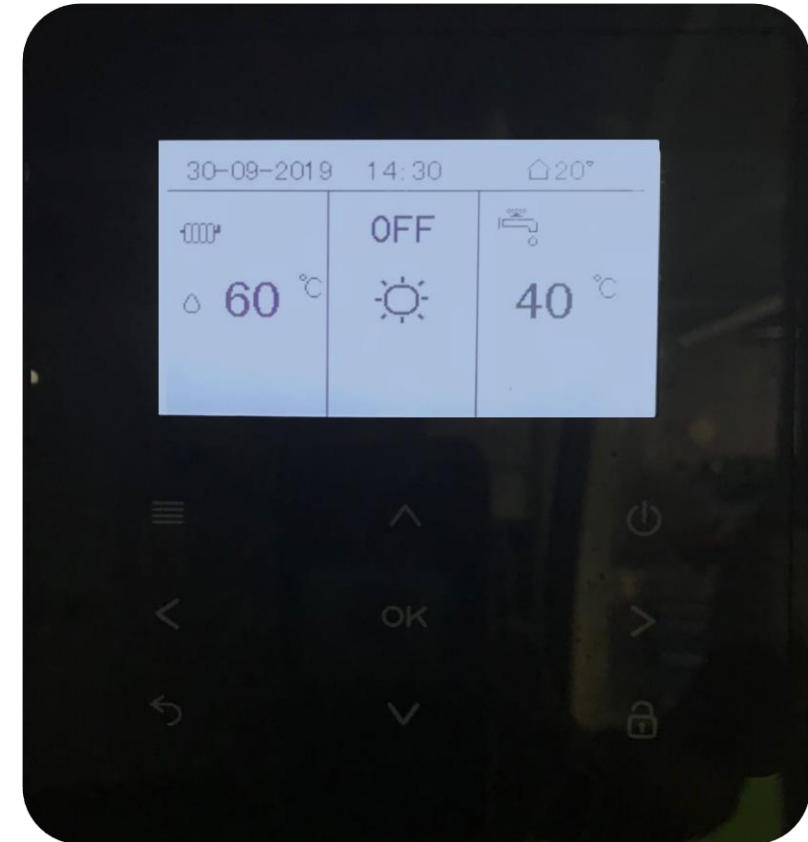


FEATURES & SPECIFICATIONS

Newly designed Remote User Interface

New generation User Interface, for internal installation, that guarantees a **complete control solution**:

- ON/OFF unit
- Operation Mode setting: cooling/heating/AUTO
- DHW setting
- Temp. setting: water outlet temp
- Time setting: 12H/24H
- Timer ON/OFF setting, Day/Weekly
- Display space heating/cooling and DHW set temperature
- Water tank temperature
- Display components status
- Query, malfunction Code, Parameter
- remotely connectable with **thermostat function New !**
- **Modbus connection**
- **WiFi connection**
- Management by **ELFOCONTROL³ EVO**



FEATURES & SPECIFICATIONS

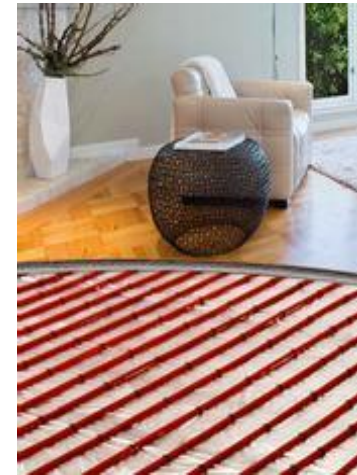
Two zone control (High and low temperature)

The unit manages **two different set-point**

- **Zone A** High temperature managed by the thermostat (**HMI or HIDE-Connect**)
- **Zone B** High temperature managed by the thermostat (**HIDE-Connect**)

The kit is composed by :

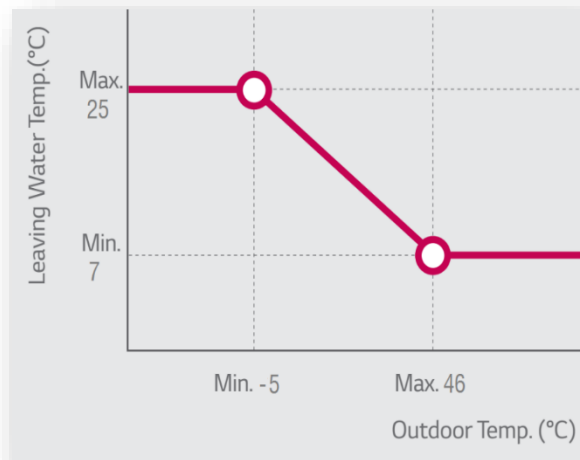
- Thermostatic mixing valve
- Circulating pump for zone A and B (managed by the unit)



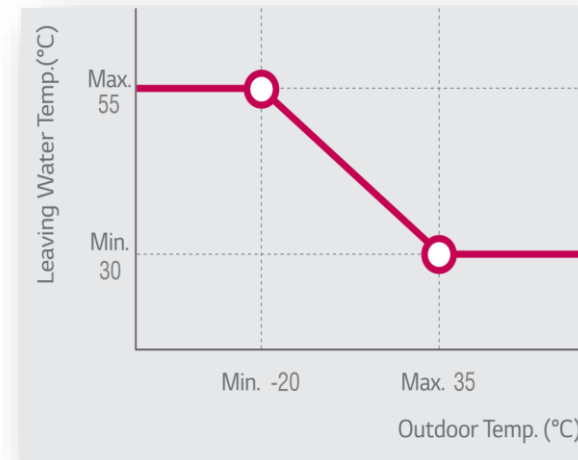
FEATURES & SPECIFICATIONS

Climatic compensation with outdoor air temperature

In cooling/heating mode, the user can set the **desired climate correlation curve** on **9 available** directly on the user interface. Then the system will set the outlet water temperature according to the outdoor ambient temperature automatically.



Cooling Operation



Heating Operation

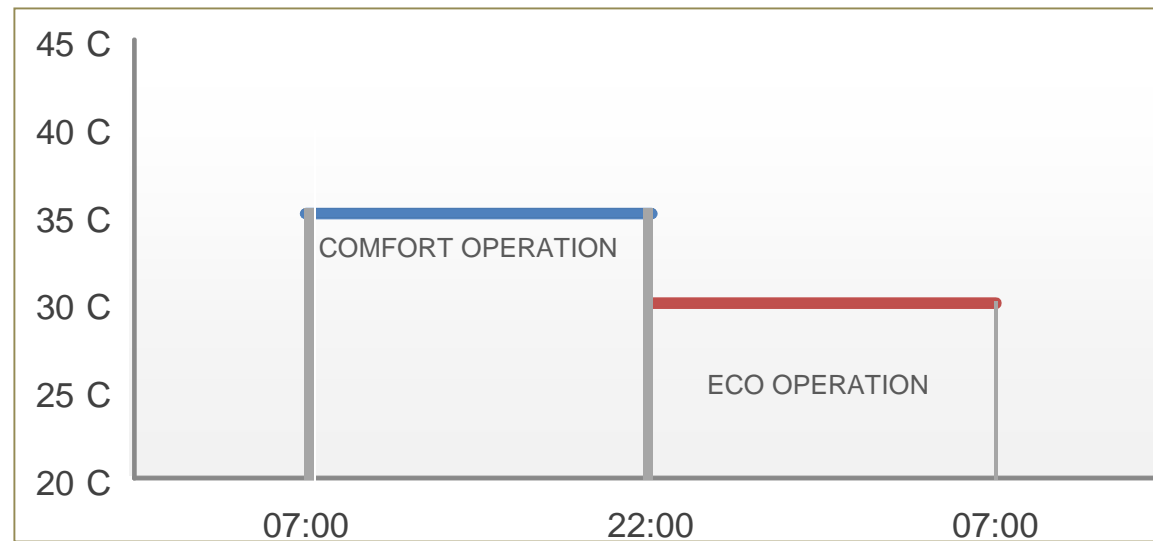
- **Cooling operation:** if outdoor temperature increases, cooling capacity supplied will increase automatically in order to keep comfortable cooling performance.
- **Heating operation:** if outdoor temperature decreases, heating capacity supplied will increase automatically in order to keep comfortable heating performance.

FEATURES & SPECIFICATIONS



ECO Mode

- In heating mode: during the daytime (7:00 – 22:00) the setting leaving water temperature will be **35 °C** in order to keep comfortable heating performance.
- And during the night time (22:00 – 7:00) the setting leaving water temperature will be **30 °C** in order to save energy.
- Above duration (7:00 – 22:00 – 7:00) as well the water temperature (e.g. **30 °C** or **35 °C**) **can be set on the User Interface automatically.**

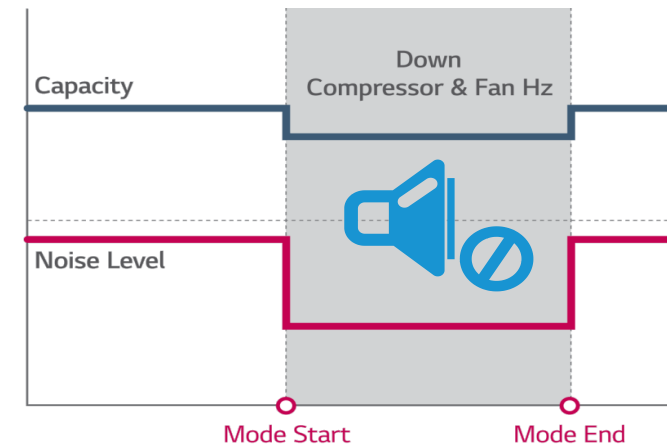


FEAUTURES & SPECIFICATIONS



Silent mode

- Silent mode operation can reduce the noise level, which can be useful especially during the night time.
- When the silent mode operation starts, the outdoor unit will reduce the compressor and fan motor speed to lower the noise.
- The default silent mode operation duration is settable .
- **Two silent mode levels** are available: up to **-4 dB(A)** can be reduced compared with normal operation.
- There are two methods to set the silent mode: ***Silent mode all time*** and ***Silent mode in timer*** (two different timers can be set).



FEAUTURES & SPECIFICATIONS

DHW Mode

SPHERA EVO 2.0 produces Domestic Hot Water up to 55 °C.

- The DHW will have **the first priority** and stop running any other mode.
- Integrated **3 way valve** .
- Manage up the 2 kW Back-up electrical heater om the tank.
- The domestic hot water volume can increase up to 300 liters
- Anti legionella function, guarantee all the tank on temperature.

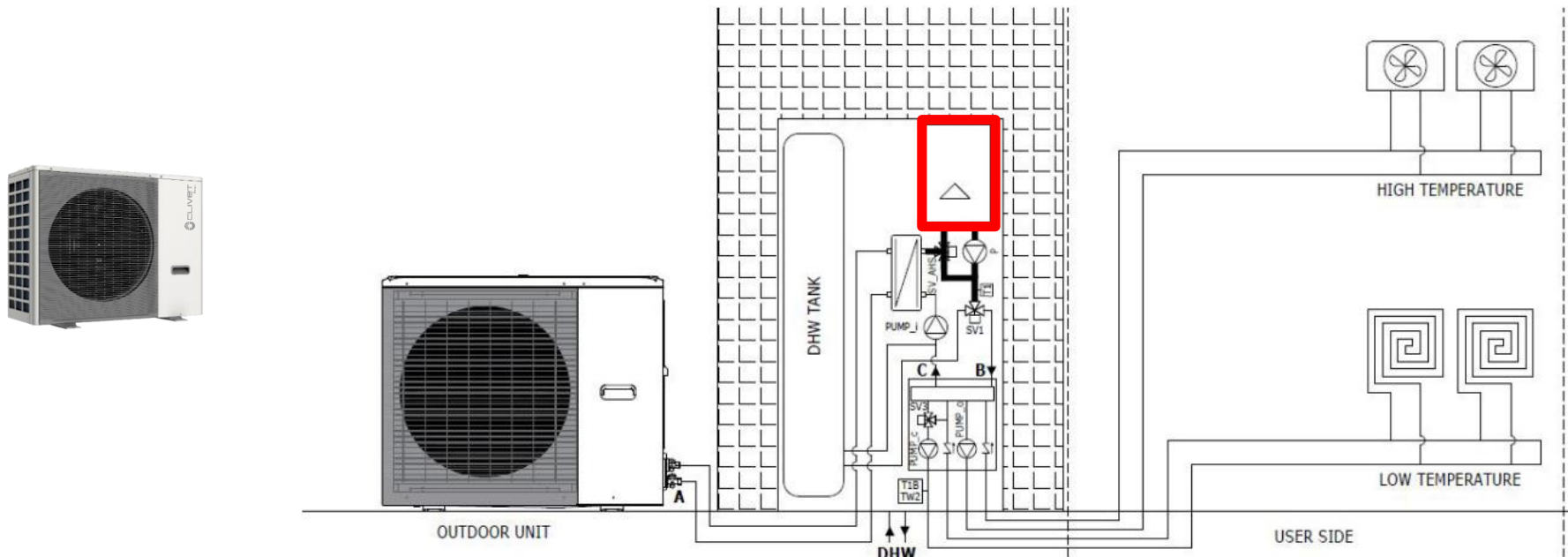


FEAUTURES & SPECIFICATIONS

Hybrid version

SPHERA EVO Invisible can be equipped with and integrated 24 kW condensing gas boiler.

- It can be used as **plant-side integration** in particular climatic conditions.
- It can work as a **backup element** in case maintenance is required on the external unit.
- It can also be used as an **integration and replacement** for the production of domestic hot water.



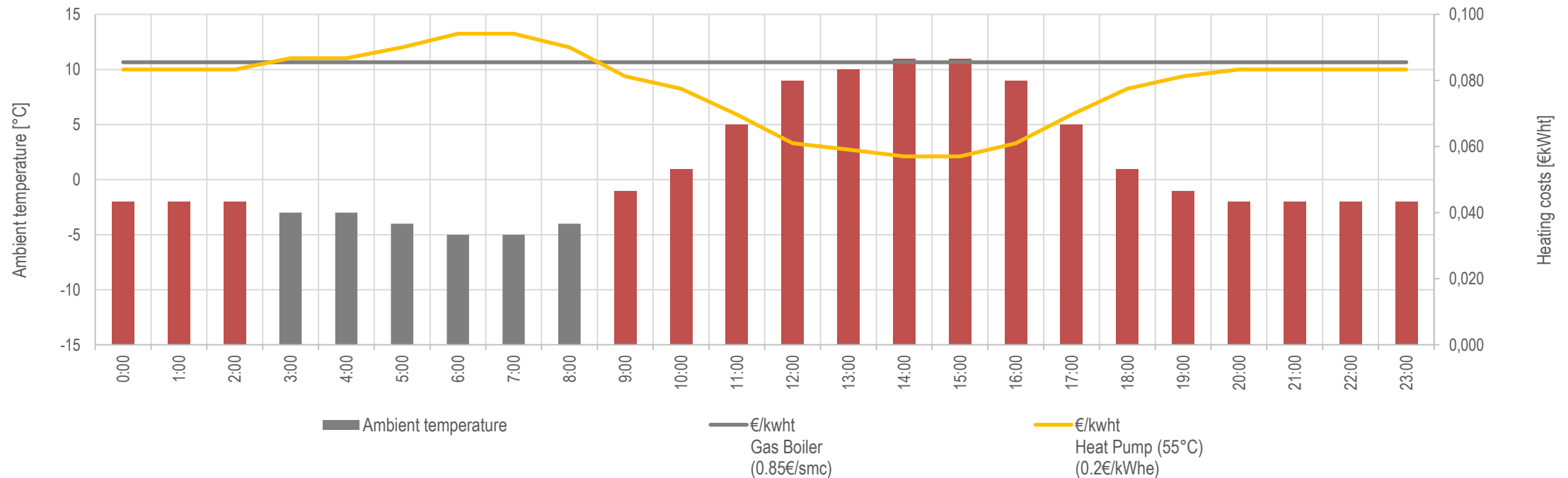
FEAUTURES & SPECIFICATIONS

Euroswitch Function on Hybrid Version

SPHERA EVO 2.0 Invisible

optimally manages the synergy between heat pump and boiler

- The heat pump gives priority to intervention of it or the boiler according to efficiency in the specific working condition.
- By entering the cost of the electricity and gas source, SPHERA EVO 2.0 determines which is the most efficient resource to use.

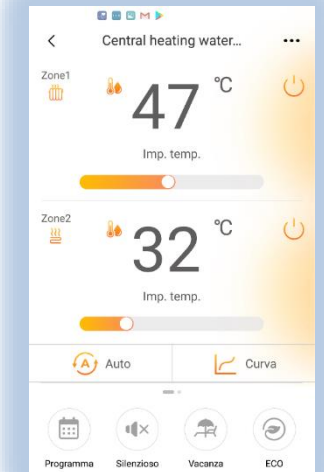
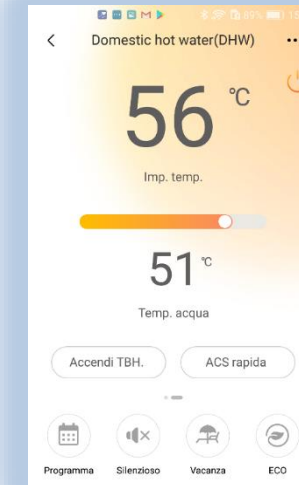


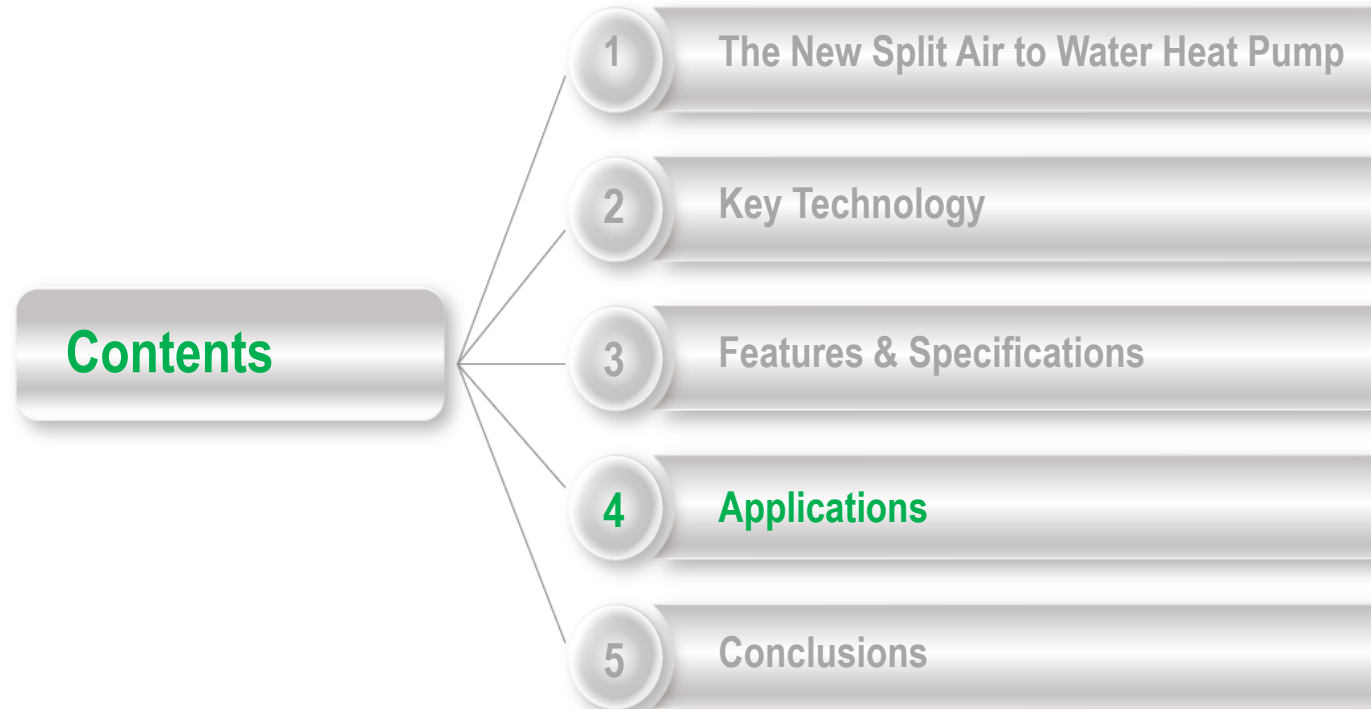
FEAUTURES & SPECIFICATIONS

APP

SPHERA EVO 2.0 Can be managed by the new **APP** on the main functions as

- Manage the set point for space heating and cooling.
- Manage the set point for DHW
- Scheduling for:
 - Space
 - DHW
 - ECO Mode
 - Silent Mode
- Fast recharge fo DHW
- Change mode





CONFIGURATION

➤ Standard Unit

- Hydraulic module, complete with expansion vessels and safety devices which are combined with the built-in cabinet and the sanitary storage tank in stainless steel with 150 liters class C insulation.

➤ Oversized Indoor Unit 1PUM

- High pressure pump up to 100 kPa

➤ Auxiliary electric heater

- Selectable electric heater 2, 4 kW Single phase
6 and 9 kW Three phase (Power supply of the whole indoor unit)



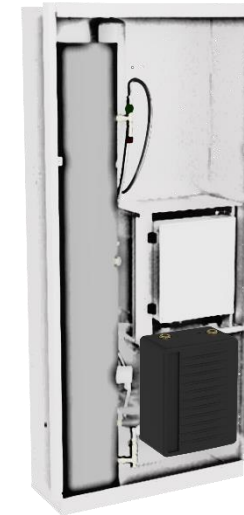
ACCESSORIES

➤ Two zones control kit single temperature / mixed

- Separately kit to manage two zones with different setting temperature.

➤ Inertial 50 liters stainless steel buffer tank

- Inside if there are not the gas boiler or solar kit.
- Installed over the main cabinet if there are or the Gas boiler, the Solar kit or the addictional 50 liters domestic hot water tank.



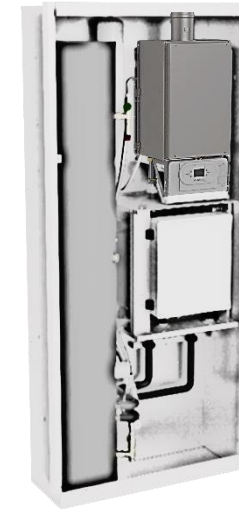
ACCESSORIES

➤ Condensing Gas Boiler / connection kit

- **24 kW** condensing gas boiler
- boiler conversion kit from methane to LPG
- fume splitting
- fume intake and exhaust connections

➤ Additional Stainless Steel DHW Tank

- **50 L DHW tank** Integrated, with circulation pump; if there is no solar kit or boiler.
- External **DHW storage tank 150 L** with circulation pump with dedicated cabinet.



ACCESSORIES

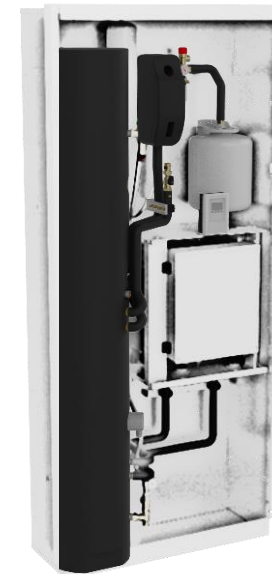
➤ DHW Ricirculating kit

- Recirculation kit consisting of pump and connection pipe



➤ Solar kit

- Kit consisting of solar control unit, expansion vessel and tank with dedicated coil.
(not retrofittable)
- It is available only the water tank with two coil, to connect on an existing solar kit.



ACCESSORIES

➤ Accessories for outdoor unit installation

- bracket kit for fixing to the wall
- Condensate recovery kit

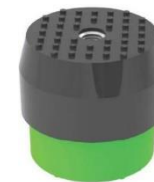


New !

- anti-vibration kit for outdoor unit on base



or wall bracket

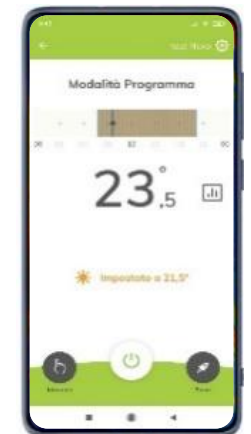


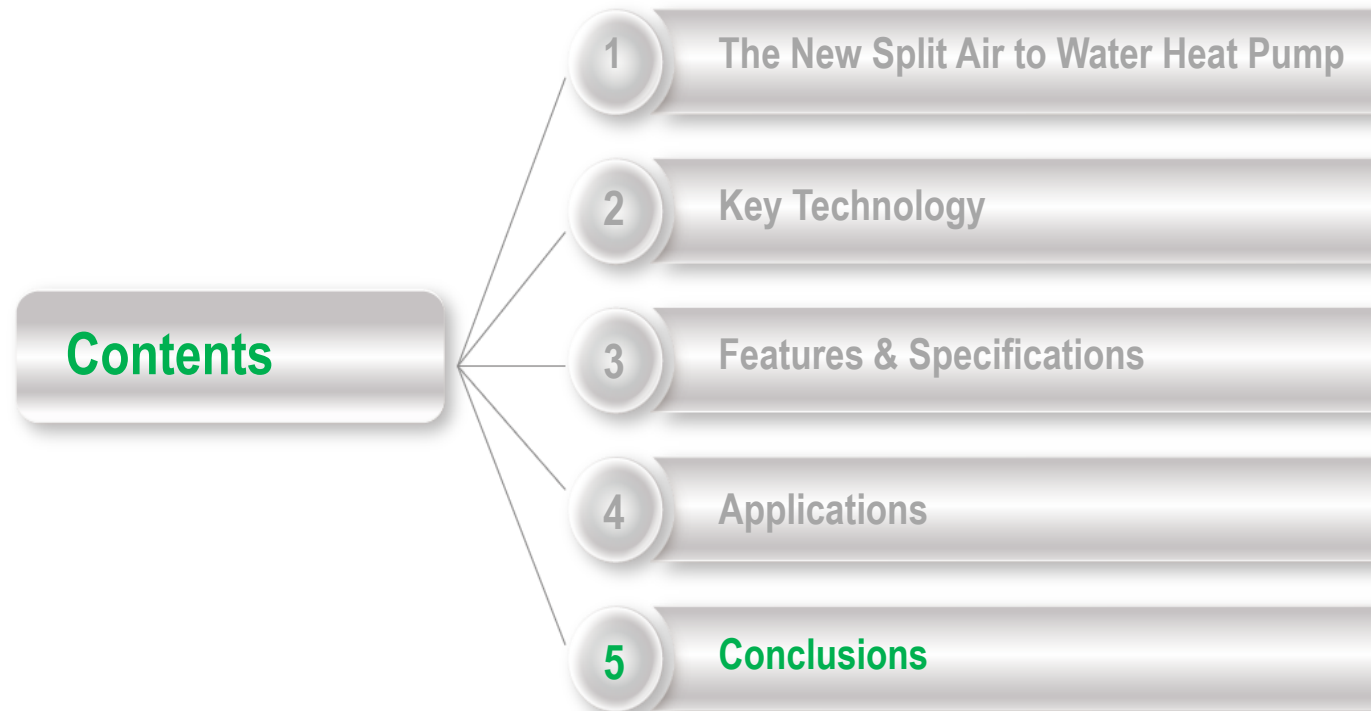
New !

ACCESSORIES

➤ **HIDT-Connect Chronothermostat**

- Soft touch white chronothermostat, room temperature control and App management / Voice control
- Soft touch black chronothermostat, room temperature control and App management / Voice control





SPHERA EVO 2.0 Invisible: the best features for heating, cooling and DHW production

- New **R-32 refrigerant**
- **4 capacity sizes** to cover all needs
- **Class A+++** on heating mode BT (LWT 35 °C)
- **Class A++** on heating mode MT (LWT 55 °C)
- **Class A+ L** profile on DHW production
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- From **-25 °C** in heating mode to **+43 °C** in cooling mode
- **Silent** mode available during the night: **- 4 dB(A)**
- **ICE Protection System** to protect the outdoor unit



DC Inverter



Thank you!

www.clivet.com



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humanizing technology.