

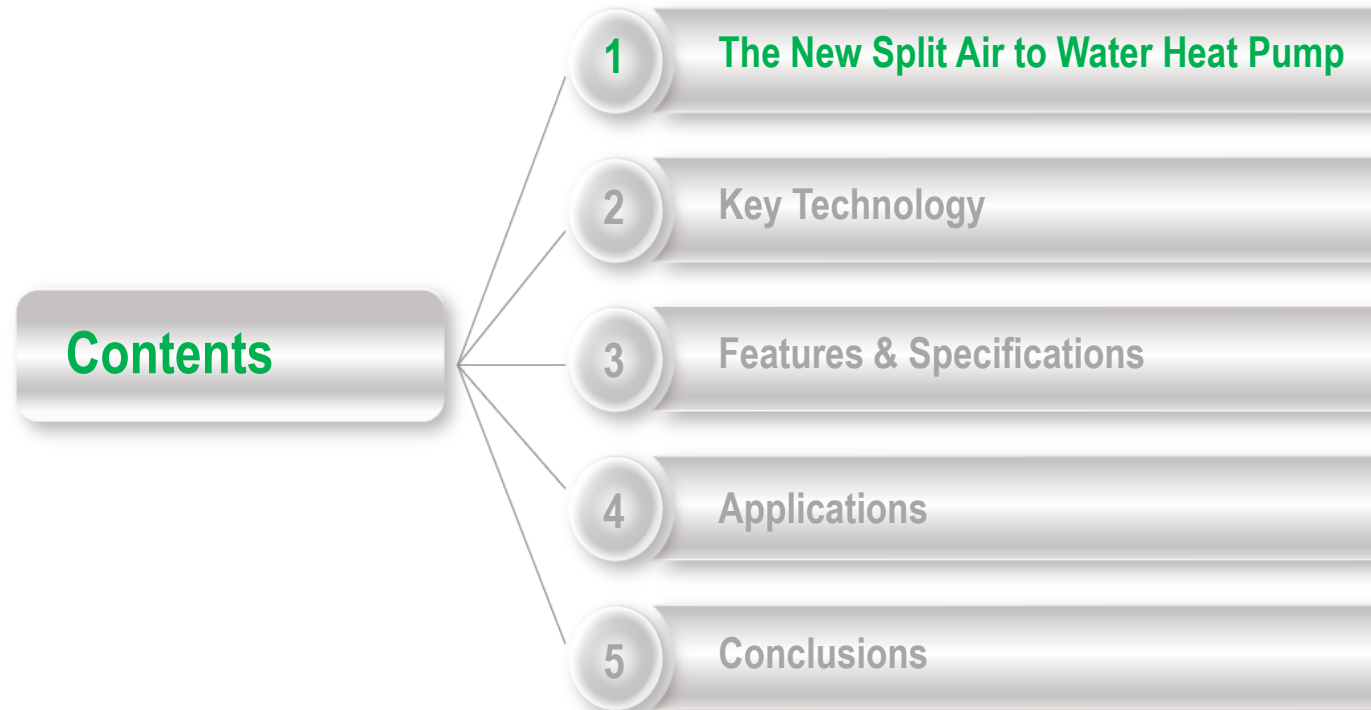


SPHERA EVO 2.0 Tower

SQKN-YEE TC + MiSAN-YEE 1 S 2.1 - 8.1

Product Presentation

SPHERA EVO 2.0



SPHERA EVO 2.0: The New split Air to Water Heat Pump

INTEGRATED SOLUTION FOR EACH APPLICATION: Heating, Cooling and Domestic Hot Water

- **SPHERA EVO 2.0** it is the integrated system that provide heating, cooling and domestic hot water for all the family.
- **A total comfort solution** for all the year,
- It **completely replaces** the traditional fuel or gas boilers,



SPHERA EVO 2.0 : Applications

Each version has been carefully designed to meet in the best way the different demands of each type of residential home .

Medium-Low consumption single-family Houses



SPHERA EVO 2.0 T Comfort thanks to the storage of 190 or 250 litres meets perfectly the demands of the sanitary comfort of single-family houses of recent construction, where the heating power required is low-to-medium

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

- New R-32 refrigerant
- 7 capacity sizes to cover every needed
- Class A+++ on heating mode BT (LWT 35°C)
- Class A++ on heating mode MT (LWT 55°C)
- Class A+ Profile L on Domestic Hot Water production
- Twin Rotary DC inverter compressor and DC inverter Fan
- Electronic pump with variable flow
- From -25°C on heating mode to +43°C on cooling mode
- Silent mode during the night - 4 dB(A)
- ICE Protection System to protect the outdoor unit

Nominal heating capacity:
(A7/W35) da 4 a 16 kW

Nominal cooling capacity :
(A35/W7) da 4 a 16 kW



DC Inverter



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 **66 dB[A]** on the 16 kW
- Highest efficiency
- Capacity range **up to 16 kW**
- **COP** up to **5,40**
- Wide operating range **Two 60 °C a -15 °C**
- **Hybrid** Version with separated gas boiler size **24 or 34 kW**
- Gas boiler management with **0-10 V signal**
- **Euroswitch Function** for optimal management of the **gas boiler** and **heat pump** combination
- Maximum water output that can be set on the Hybrid **75 °C**
- **Single fan** outdoor units
- **New accessories**


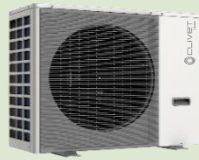
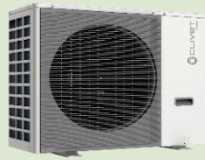




SPHERA EVO 2.0: What is still present

MAIN Features

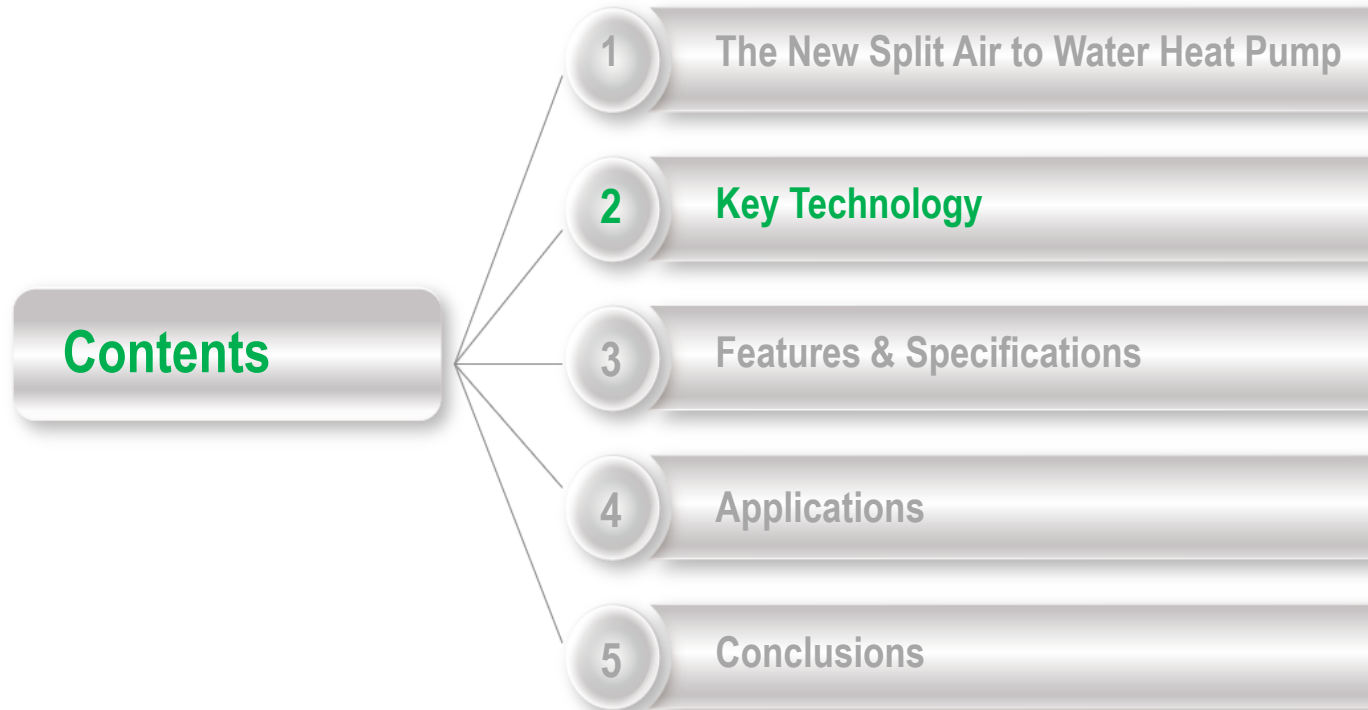
- **WiFi Connection**
- **Dedicated APP**
- **Smart Grid Function** management of the power supply from the photovoltaic and the power supply
- **Greater versatility** two DHW available tank **190** and **250 litres**
- **Small Dimensions** the foot print of the indoor unit is only **600 x 600** mm
- **Completed system** integrated dirt magnetic strainer and space expansion vessel.
- **40 litres Buffer tank** (Accessory)
- **Longer refrigerant line up to 30 m** and precharge ready **until to 15 m**

SPHERA EVO 2.0: What is new?

SYSTEM COMBINATION

SPHERA EVO 2.0		2.1	3.1	4.1	5.1	6.1	7.1	8.1
Heating Capacity	Aria 7 °C Acqua 35°C	4,32 kW	6,18 kW	8,30 kW	10,9kW	12,1 kW	14,5 kW	16,0 kW
Outdoor Units	MiSAN-YEE 1 S	2.1	3.1	4.1	5.1	6.1	7.1	8.1
								
Indoor Units	SQKN-YEE TC	A - 190 l (190 litres DHW tank and pump with max 70 kPa)				B - 250 l (250 litres DHW tank and pump with max 100 kPa)		
		A - 250 l (250 litres DHW tank and pump with max 100 kPa)						
		 +  = Hybrid				 +  = Hybrid		

SPHERA EVO 2.0



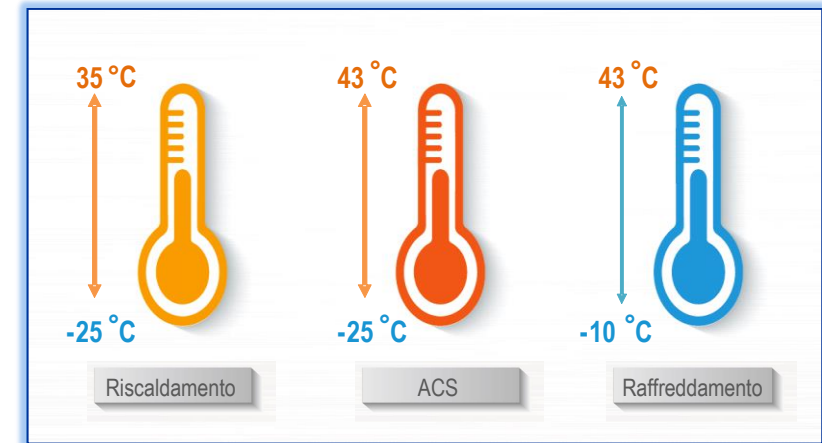
SPHERA EVO 2.0 the new generation of residential heat pumps :

- **Wide power range with R-32**, widest range heat pump and DHW production from 4 to 16 kW.
- **DC Inverter technology**, ideal for the operation at partial load.
- **DHW integrated production**, it provides heating, cooling but Domestic Hot Water also, thanks to two different tank volume **190 litres** and **250 litres with** possibility to reach **500 litres**
- **High performances heat exchanger**, it permits to increase the performances and the operation limits also
- **Connectivity** the **WiFi** connection is standard to manage the heat pump by the new dedicated **APP**

WIDE OPERATING RANGE

- Outdoor air temperature operating range

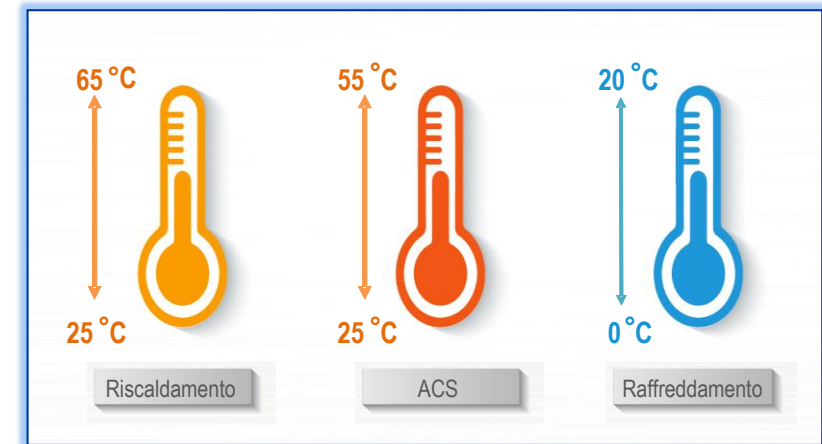
SPHERA EVO 2.0 operates with an inverter compressor optimally regulated according to the outdoor temperature, offering 70% of the nominal heating capacity of at **-15 °C** and reliable anti-freezing protection.



- 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**.*

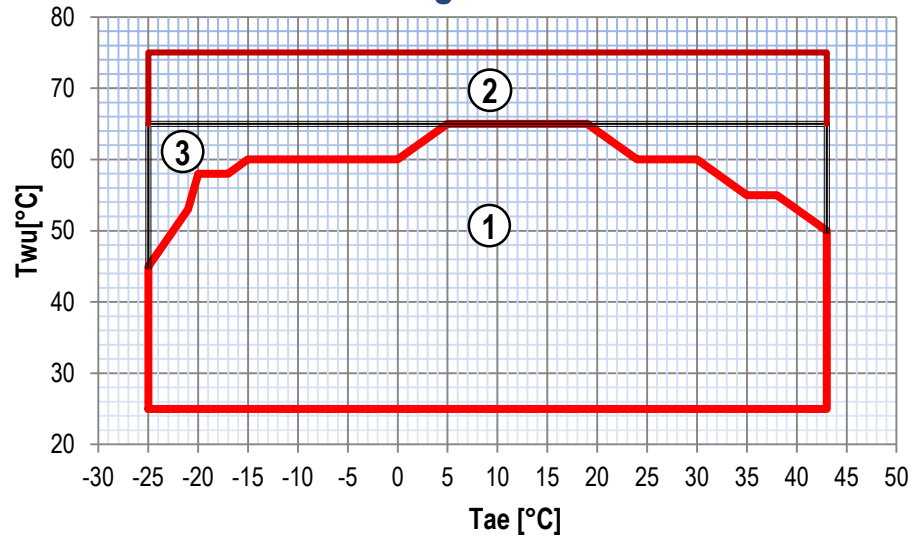
With the Condensing Gas Boiler **75 °C** can be reached.



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

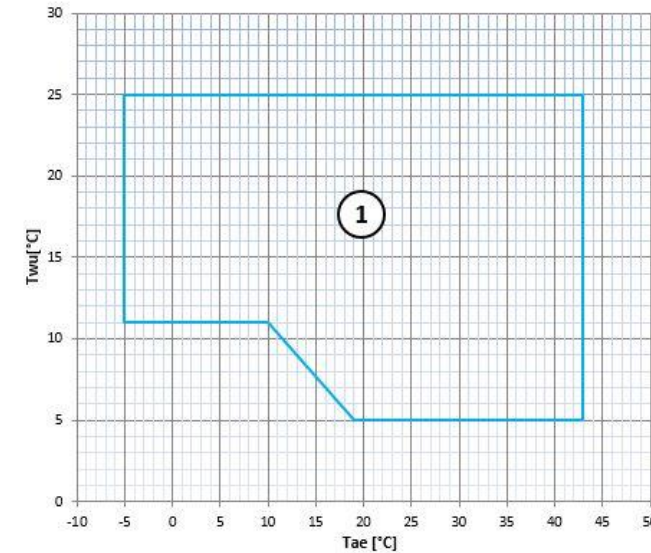
WIDE OPERATING RANGE

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

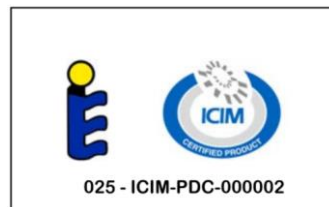
- ① = Normal operating range
- ② = Operating range covered by the condensing gas boiler
- ③ = Operating range with only back-up heater* or additional heating source

* Back-up heater supplied as a separate option

CERTIFICATIONS



Eurovent Certification



Keymark
End Nov 2021



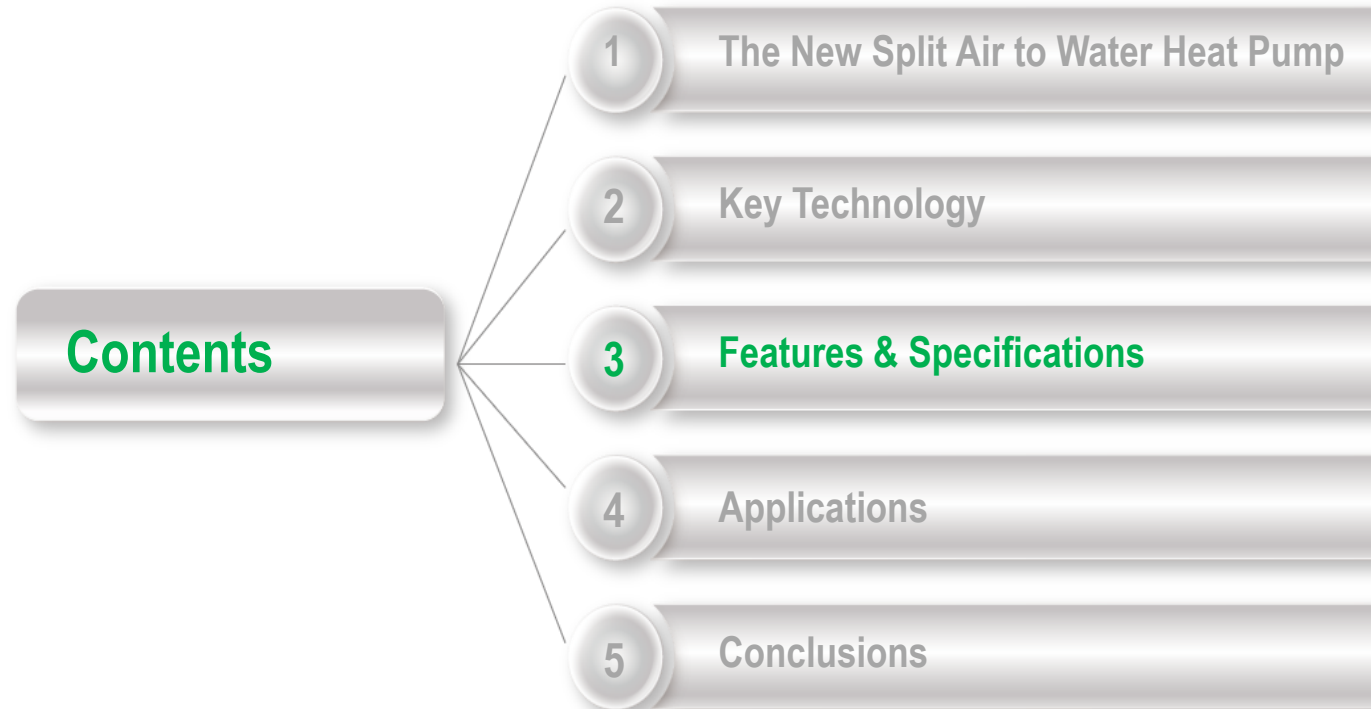
The Certification Mark for Onsite
Sustainable Energy Technologies

MCS
2nd quarter 2022



EKO SKLAD
1st quarter 2021

SPHERA EVO 2.0

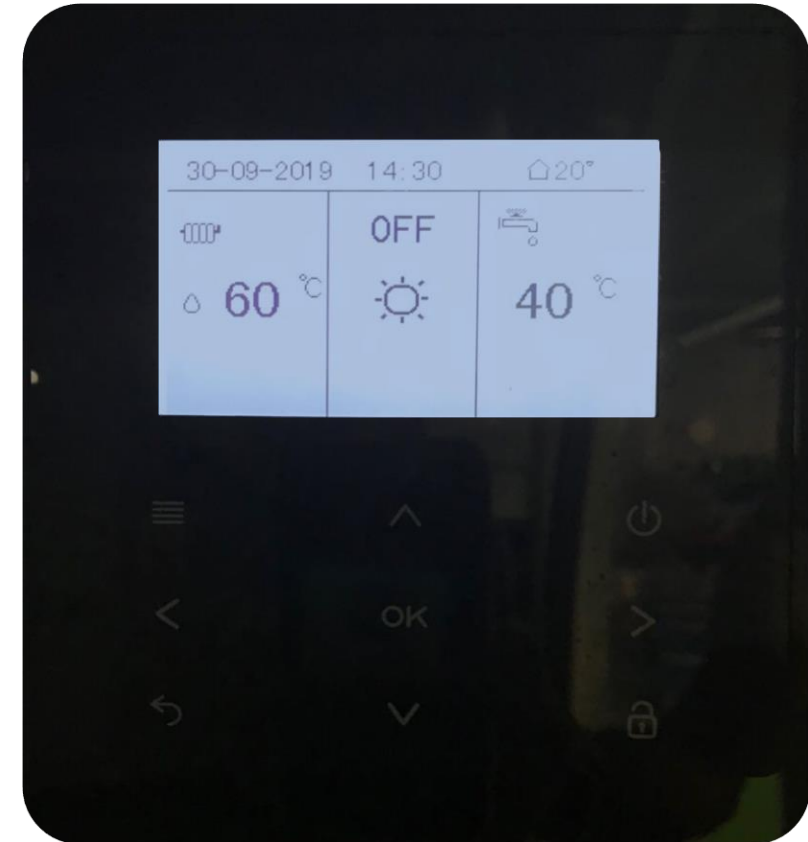


FEATURES & SPECIFICATIONS

Newly designed wired remote User Interface Remotely Now!!!

New generation remote 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**



FEATURES & SPECIFICATIONS

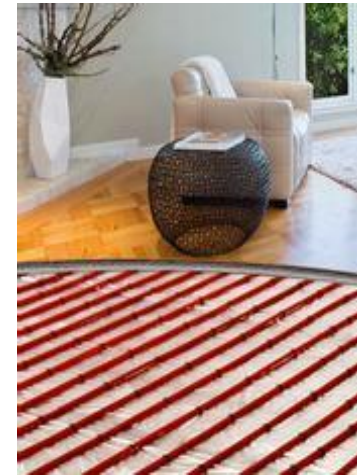
Two zone control (High and low temperature)

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 :

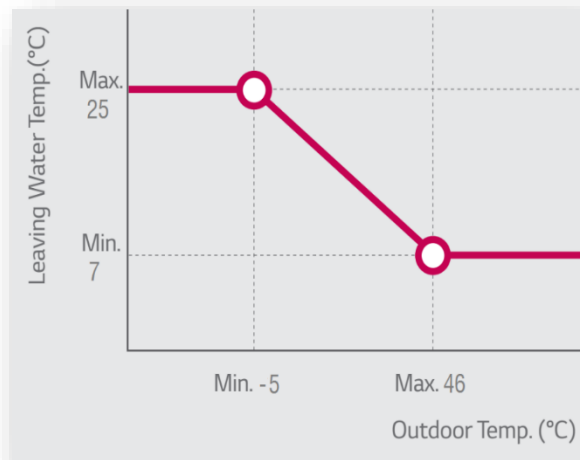
- Thermostatic mixing valve
- Circulating pump for zone A and B (managed by the unit)



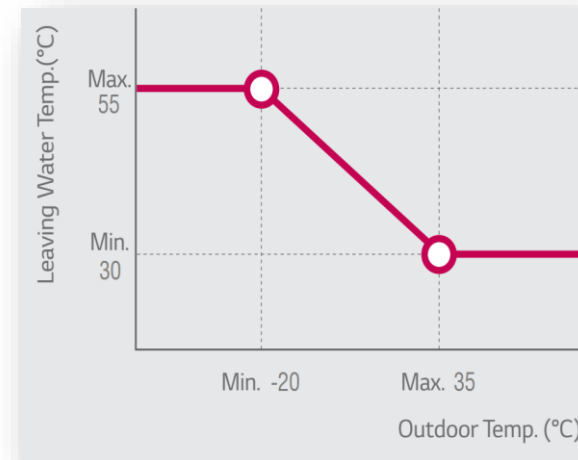
Features & Specifications

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

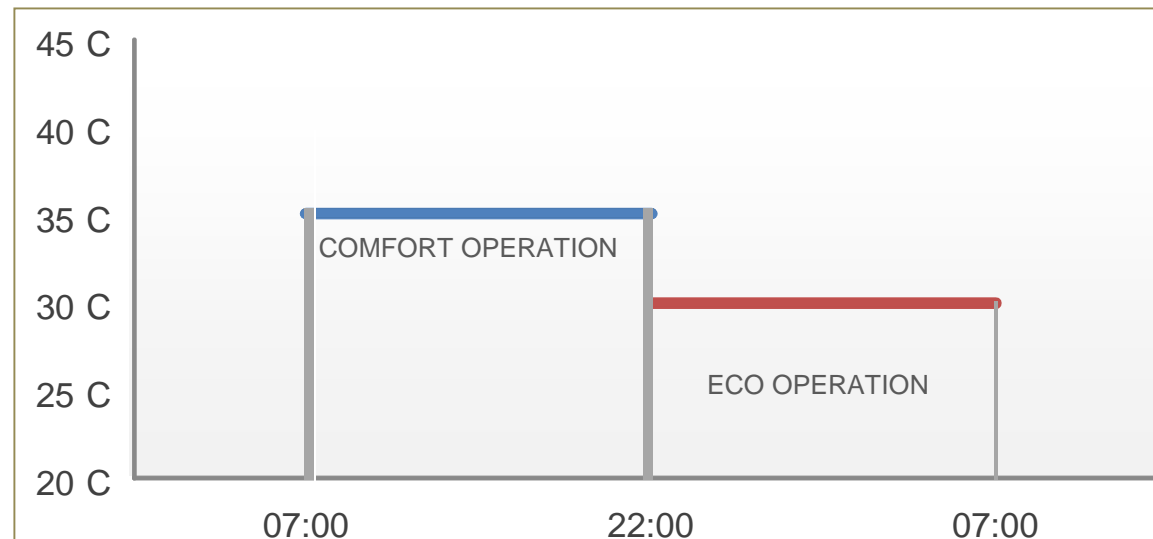
- **Cooling operation:** if outdoor temperature increases, cooling capacity supplied will increase automatically in order to keep comfortable cooling performance.
- **Heating operation:** if outdoor temperature decreases, heating capacity supplied will increase automatically in order to keep comfortable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

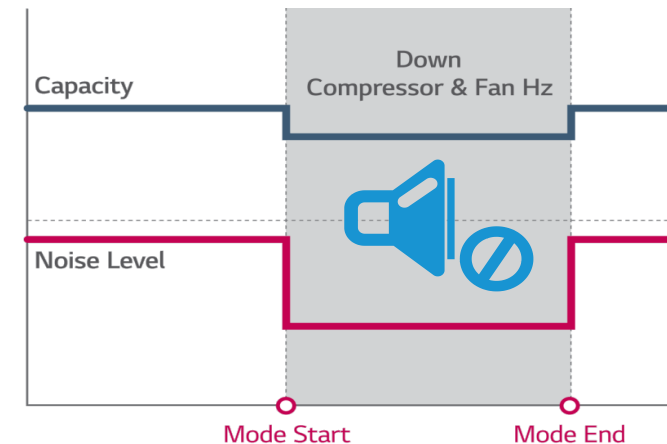


FEAUTURES & SPECIFICATIONS



Silent mode

- Silent mode operation can reduce the noise level specially 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 **60°C**.

- The DHW will have **the first priority** and stop running any other mode.
- Integrated **3 way valve** .
- Integrated 2 kW Back-up electrical heater.
- Anti legionella function, guarantee all the tank on temperature.
- Possibility of increasing the volume of sanitary water up to 500 litres

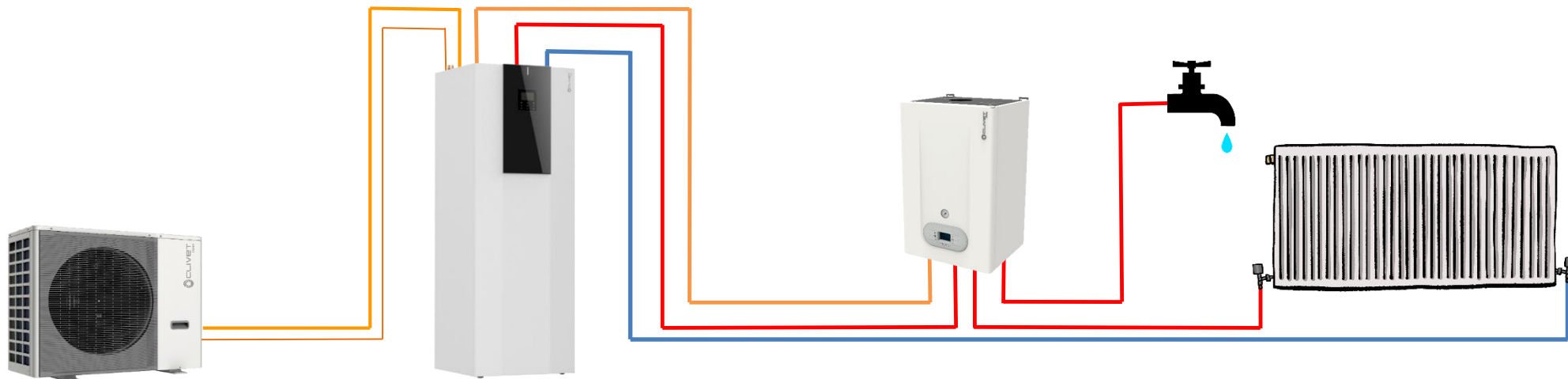


FEAUTURES & SPECIFICATIONS

Hybrid Version

SPHERA EVO 2.0 Tower Hybrid consists of combining the 24 kW or 34 kW condensing boiler with the heat pump and all managed by the latter and both supplied by Clivet..

- Management of high temperature water systems supplied up to 75 ° C
- Intelligent energy management based on the COP (Euroswitch function)
- Replacement with back-up function in case of anomaly
- Instant production of domestic hot water thanks to the boiler.
- Simultaneous cooling or heating operation with DHW withdrawal.

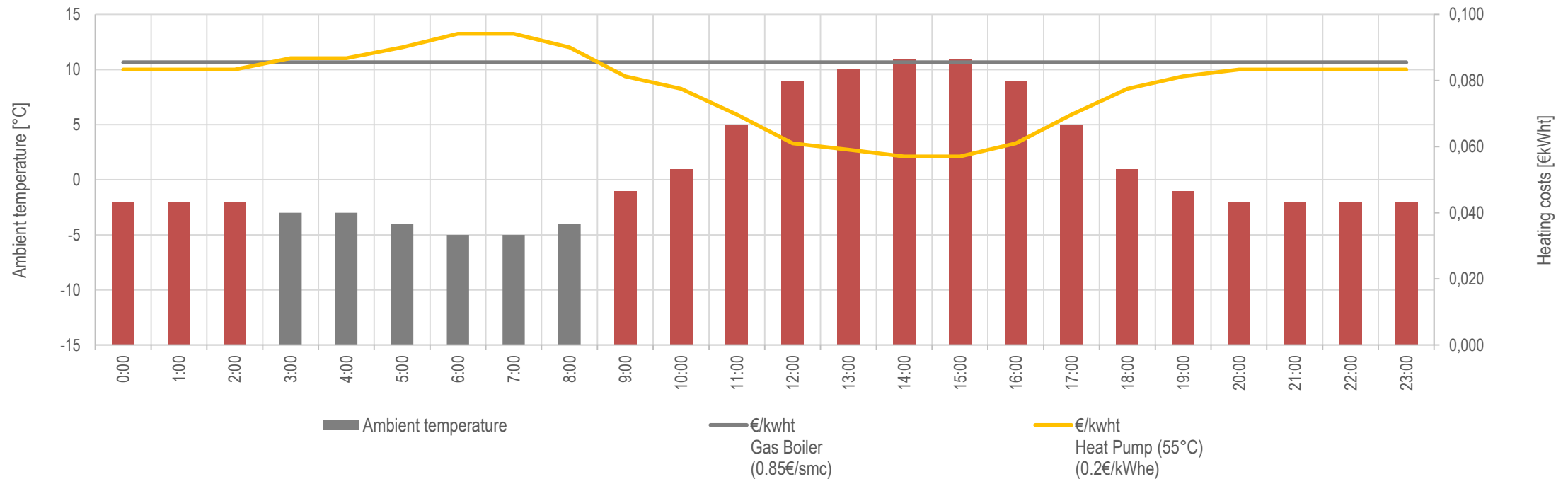


FEAUTURES & SPECIFICATIONS

Euroswitch Function on Hybrid Version

SPHERA EVO 2.0 Tower 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,

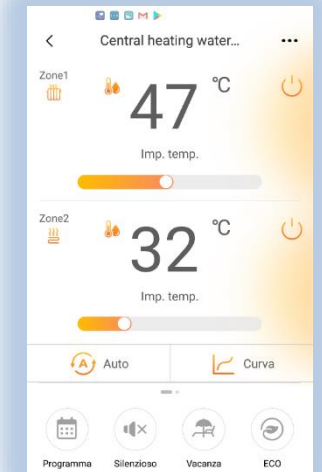
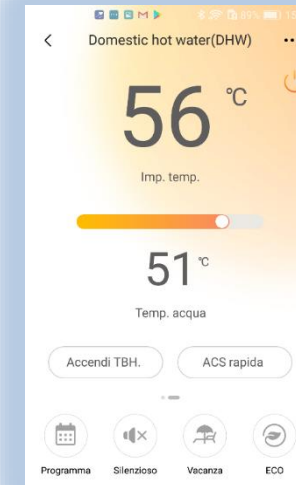


FEAUTURES & SPECIFICATIONS

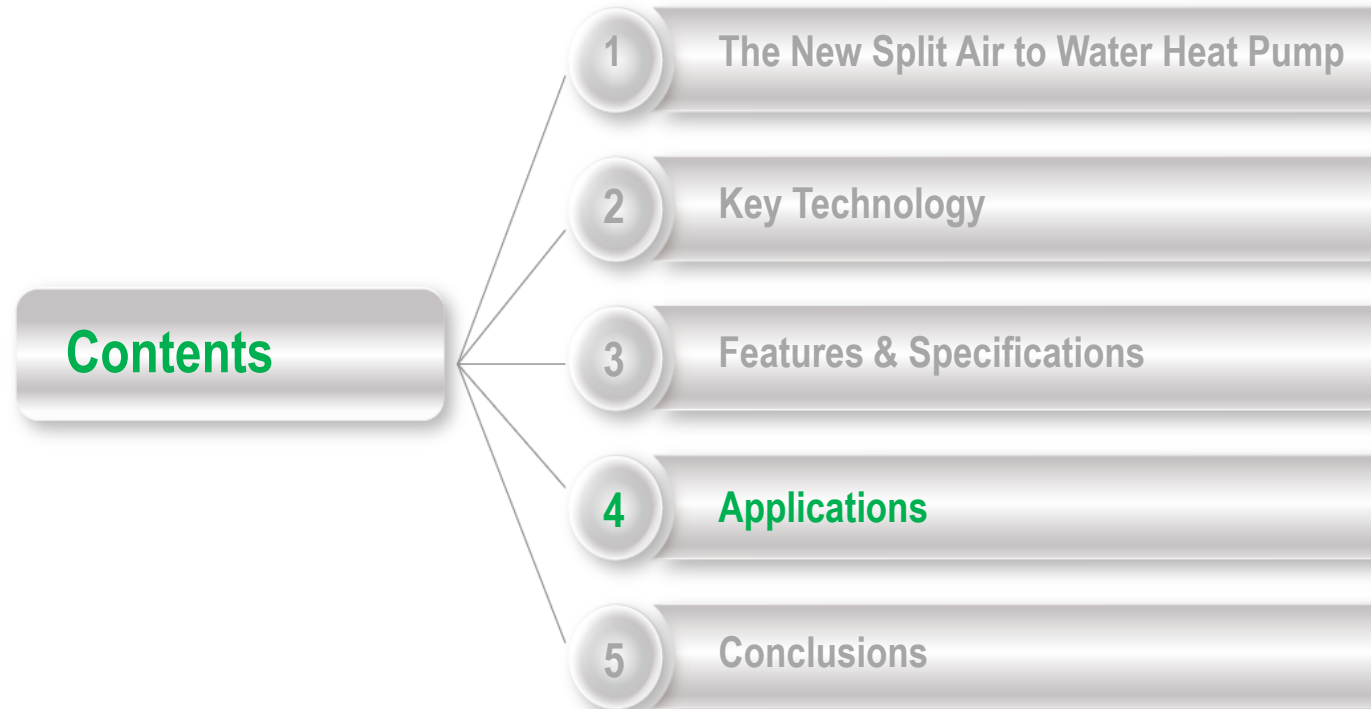
APP

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



SPHERA EVO 2.0



CONFIGURATIONS

➤ Standard unit

- Domestic hot water tank **190 litres 2.1-5.1** and **250 litres 6.1-8.1**

➤ Oversize indoor unit 250l (2.1-5.1)

- Domestic hot water tank **250 litres** (STD 6.1-7.1-8.1)
- High pressure pump up to **100 kPa** (STD 6.1-7.1-8.1)



➤ Auxiliary electric heater

- Adjustable electric heater 2 - 3 - 4 - 6 and 9 kW



CONFIGURATIONS

➤ Hybrid Version **New !**

- combining the 24 kW or 34 kW condensing boiler with the heat pump and all managed by the latter and both supplied by Clivet. Instant production of domestic hot water .



➤ Gas Boiler Accessories

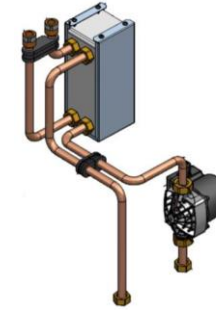
- conversion kit from methane to LPG
- Coaxial fitting for flue gas exhaust and air intake
- smoke splitter
- intake fittings and fume exhaust
- Coaxial fumes discharge with piping



ACCESSORIES

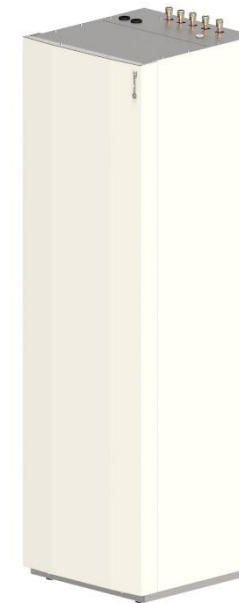
➤ Solar connection kit

- The kit is composed by heat exchanger and DHW pump.



➤ Additional DHW tank

- Additional 250-liter storage tank for domestic hot water that can be placed side by side with the unit.

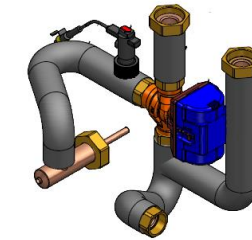


New !

ACCESSORIES

➤ Connection kit for only heating external gas boiler

- Kit consisting of a 3-way valve and pipes that allow you to connect an external boiler in series to the unit also for the production of ACS only for two-pipe boiler,



New !

➤ Buffer tank

- Space heating **40 litres** buffer tank, to install on the return side from the system. Studied to be positioned back to the unit.



➤ Inertial storage covers

- Aesthetic cover sheets to hide the inertial accumulation behind the unit.



New !

ACCESSORIES

➤ Circuit breaker

- Insulated 1 litre circuit breaker
- Insulated 50 litres circuit breaker



New !

➤ Single zone kit

- Single zone management kit Insulated 1 litre circuit breaker + high efficiency pump + installation box



New !

➤ Two zones control kit

- Separately kit to manage two zones with different setting temperature



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



➤ **SwitchConnect Radio receiver**

- Radio receiver for HID-TConnect, for call management of terminal units or radiant systems, heat pump mode change or double set-point.



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

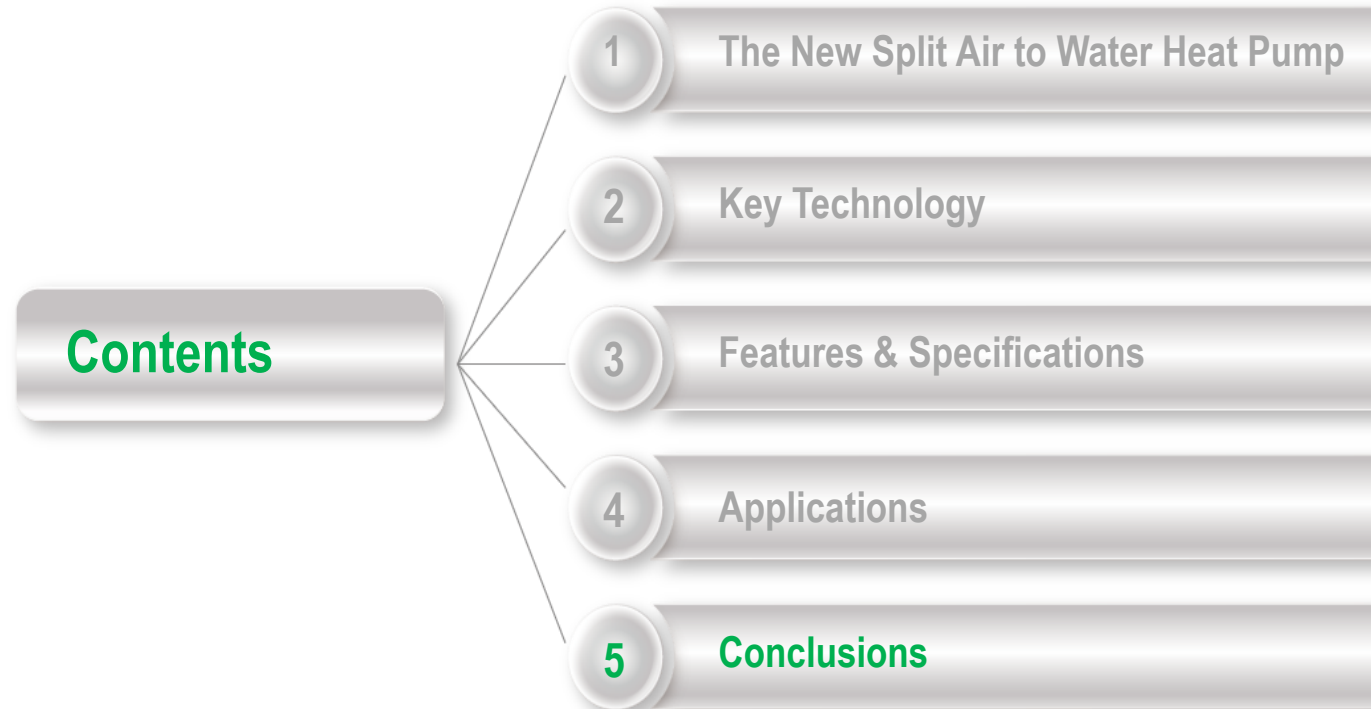


or wall bracket



New !

SPHERA EVO 2.0

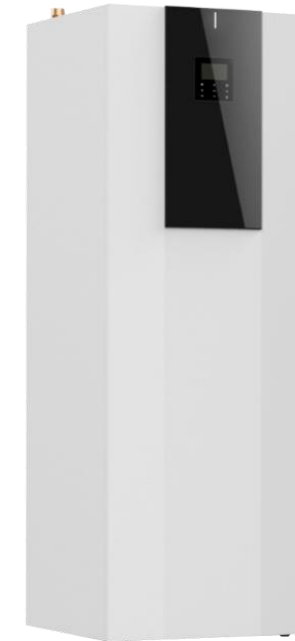


SPHERA EVO 2.0: The better features a residential heat pump

- **New refrigerant R-32**
- **7 capacity sizes** to cover every needed
- High seasonal efficiency
 - **Class A+++** on heating BT (LWT 35°C); η_s up to 210 %
 - **Class A++** on heating MT (LWT 55°C); η_s up to 146 %
 - **Class A+** on DHW
- Advanced **Full DC Technology**
- **Extremely quiet** unit **only 55 dB[A]** on 4 kW
- **Complete integrated system** with many accessories.
- **New functions and options** for a full comfort solution.
- **Dedicated APP** to managing the heat pump on the main functions



DC Inverter



Thank you!

www.clivet.com



MideaGroup
humanizing technology