



SPHERA EVO BOX

SRHME-BC + MDAN-YMi 2.1 - 5.1

Full electric and Hybrid

Product Presentation

SPHERA EVO



SPHERA EVO: The New split Air to Water Heat Pump

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

- **SPHERA EVO** it is the integrated system that provide heating, cooling and domestic hot water for all the family.
- **A total comfort solution** for the whole year
- **Hybrid** version combined with the **Clivet condensing gas boiler**



SPHERA EVO : Applications

Each version of SPHERA EVO has been carefully designed to meet in the best way the different demands of all type of residential homes.

Medium-Low consumption single-family Houses and Offices



SPHERA EVO BOX Comfort is suitable for commercial application as offices or houses with specific DHW volume required.

SPHERA EVO: New refrigerant R-32



SPHERA EVO 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**
- **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)
- Twin Rotary DC inverter compressor and DC inverter Fan
- Electronic pump with variable flow
- 3 Way Valve for Domestic Hot Water production and tank probe
- From **-25°C** in heating mode to **+46°C** in cooling mode
- **Silent** mode available during the night: **- 4 dB(A)**
- **ICE Protection System** to protect the outdoor unit
- **24 kW Combi boiler** for space heating and **DHW (Hybrid Version)**



DC Inverter



Nominal heating capacity:
(A7/W35) 4 to 10 kW

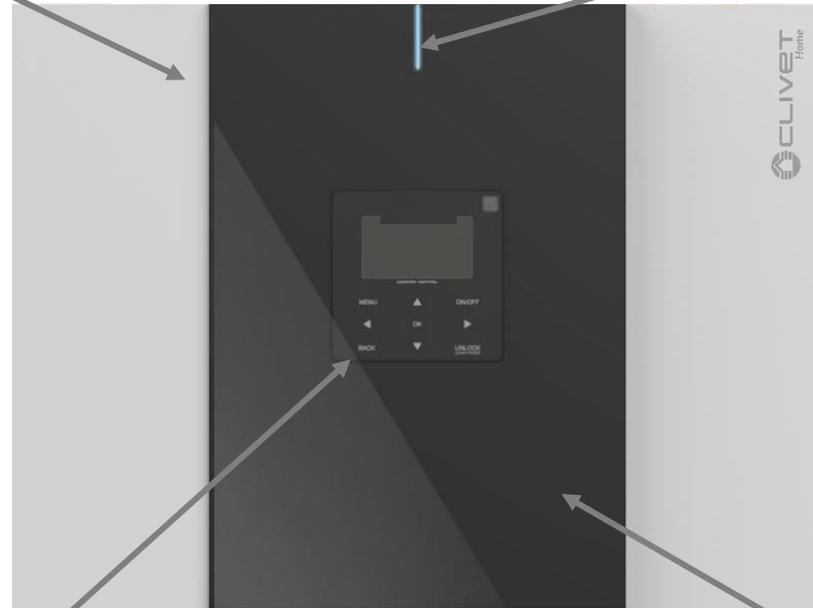
Nominal cooling capacity :
(A35/W7) 4 to 10 kW

SPHERA EVO : What is new?

NEW IDENTITY → Clivet ALTO Design

New Appearance

Led for status and alarm



New User Interface

Polycarbonate panel

SPHERA EVO : What is new?

DISTINCTIVE FEATURES and differences compared to R-410A series

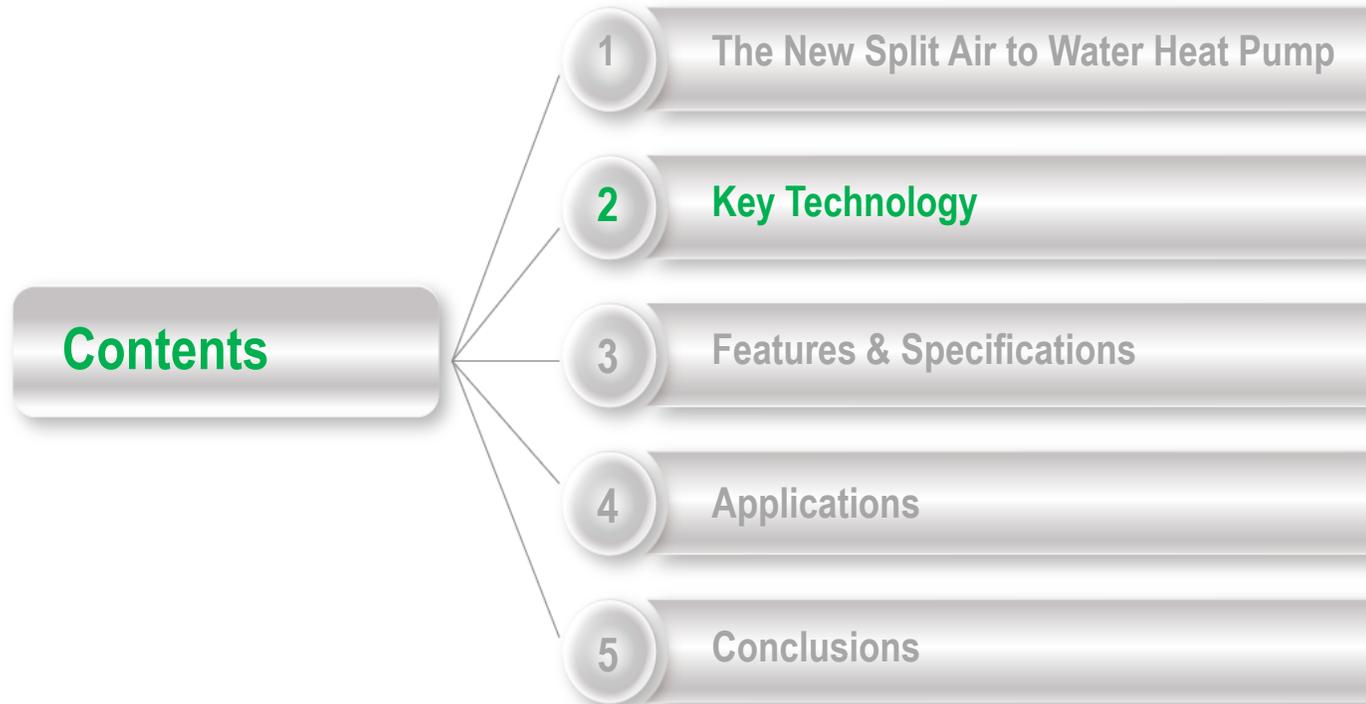
- More **value for Money**
- **Wi-Fi** Connection to use the dedicated **APP**
- **Smart Grid Function** management of the power supply for the photovoltaic and the power supply
- **Greater versatility**: Integrated DHW three way valve and tank probe
- Complete system with **dirt magnetic strainer** and **space expansion vessel**.
- **HYBRID** Version with combi boiler Clivet
- Additional **accessories**:
 - 200lt **DHW tank**
 - **External gas boiler** connection kit
 - 40lt **Buffer tank**
- Longer refrigerant line **up to 30m** and precharged for up to 15 m / 25 m of height difference

SPHERA EVO : What is new?

SYSTEM COMBINATION

SPHERA EVO		2.1	3.1	4.1	5.1
Heating Capacity	Air 7 °C – Water 35°C	4,49 kW	6,32 kW	8,37 kW	10,3 kW
Outdoor Units	MDAN-YMi	2.1	3.1	4.1	5.1
					
Indoor Units	SRHME-BC	A (Pump with max 70 kPa)			
		A - 1PUM (Pump with max 100 kPa)			
				+	
		Hybrid			

SPHERA EVO



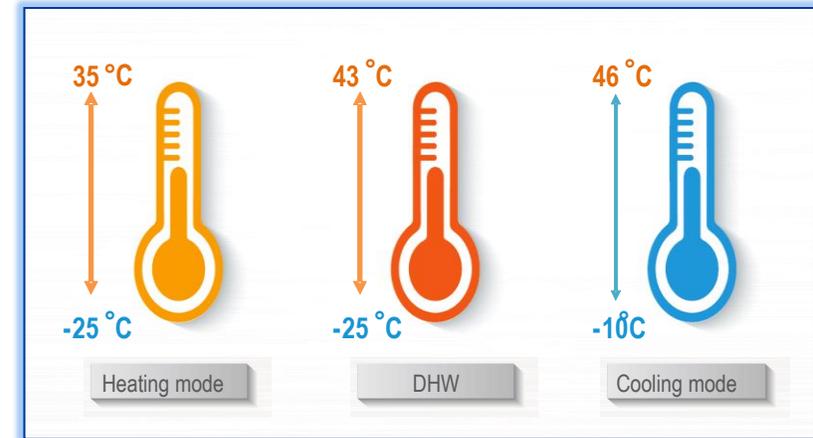
SPHERA EVO the new generation of residential heat pumps :

- **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.
- **DHW production**, it provides heating, cooling and Domestic Hot Water as well, thanks to integrated 3 way valve. It is also possible to combine three different optional tanks with volume 200,300 and 500 liters, with solar exchanger as well.
- **Direct DHW** production on the **Hybrid version** due the combi 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**

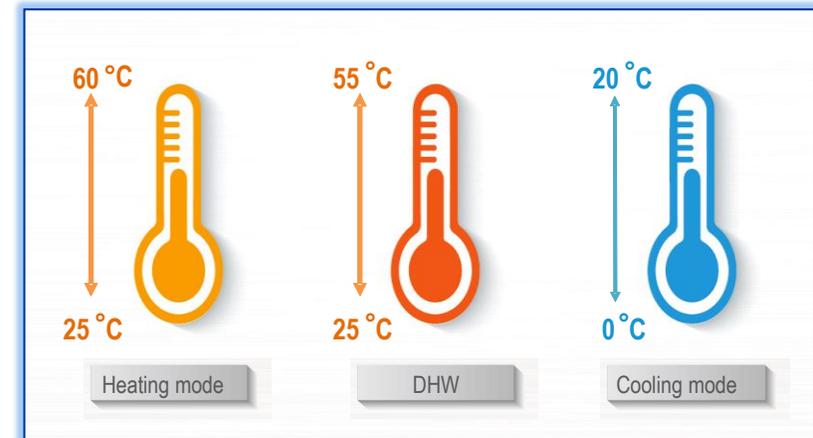
SPHERA EVO operates with an inverter compressor optimally regulated according to the outdoor temperature, offering 80% of the nominal heating capacity of at **-7°C** and reliable anti-freezing protection.



- **Leaving water temperature range**

SPHERA EVO can supply a minimum water temperature in cooling mode of 5°C and a maximum leaving temperature in heating mode of **60°C**.*

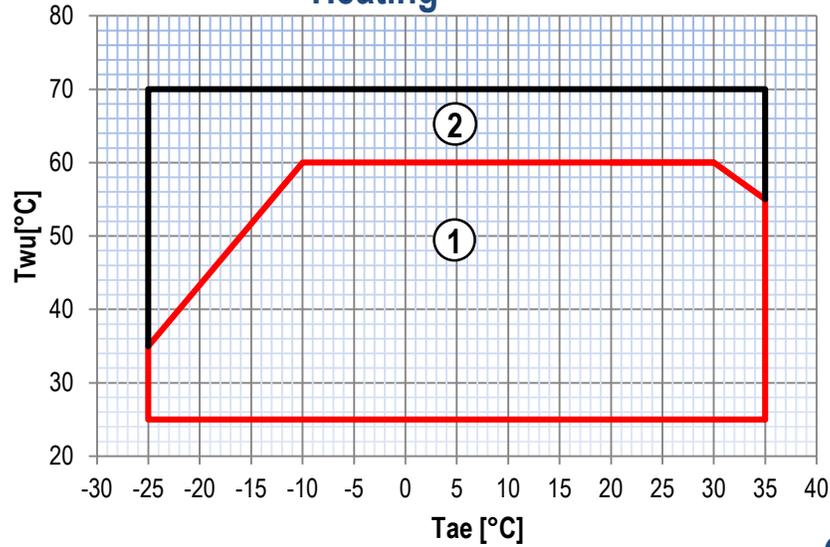
On the Hybrid version the maximum leaving water temperature is **70°C**.



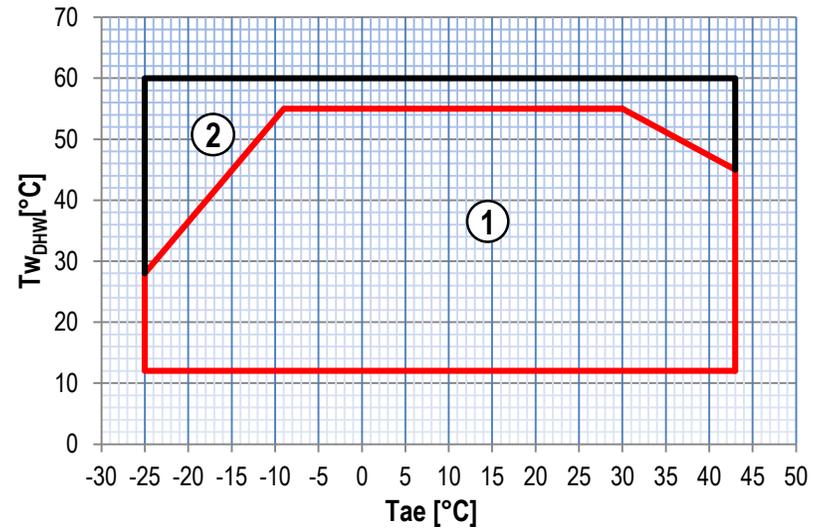
* The leaving water temperature range will differ when setting different mode.

WIDE OPERATING RANGE

Heating



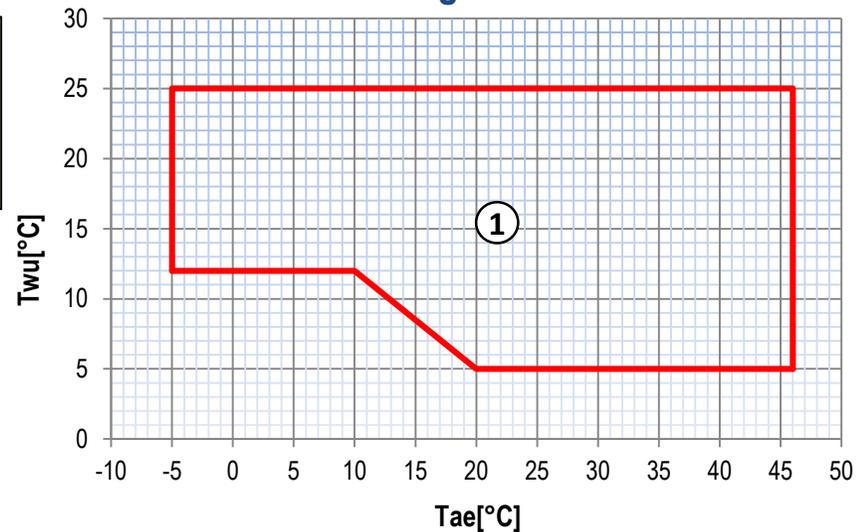
DHW



DHW at 55°C from -9°C to 30°C of air temperature!

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

Cooling



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

T_{wDHW} [°C] = Domestic hot water temperature

T_{ae} [°C] = Outdoor air temperature

① = Normal operating range

② = Operating range for the Hybrid version with additional boiler

* Back-up heater supplied as separate optional

CERTIFICATIONS



Eurovent Certification

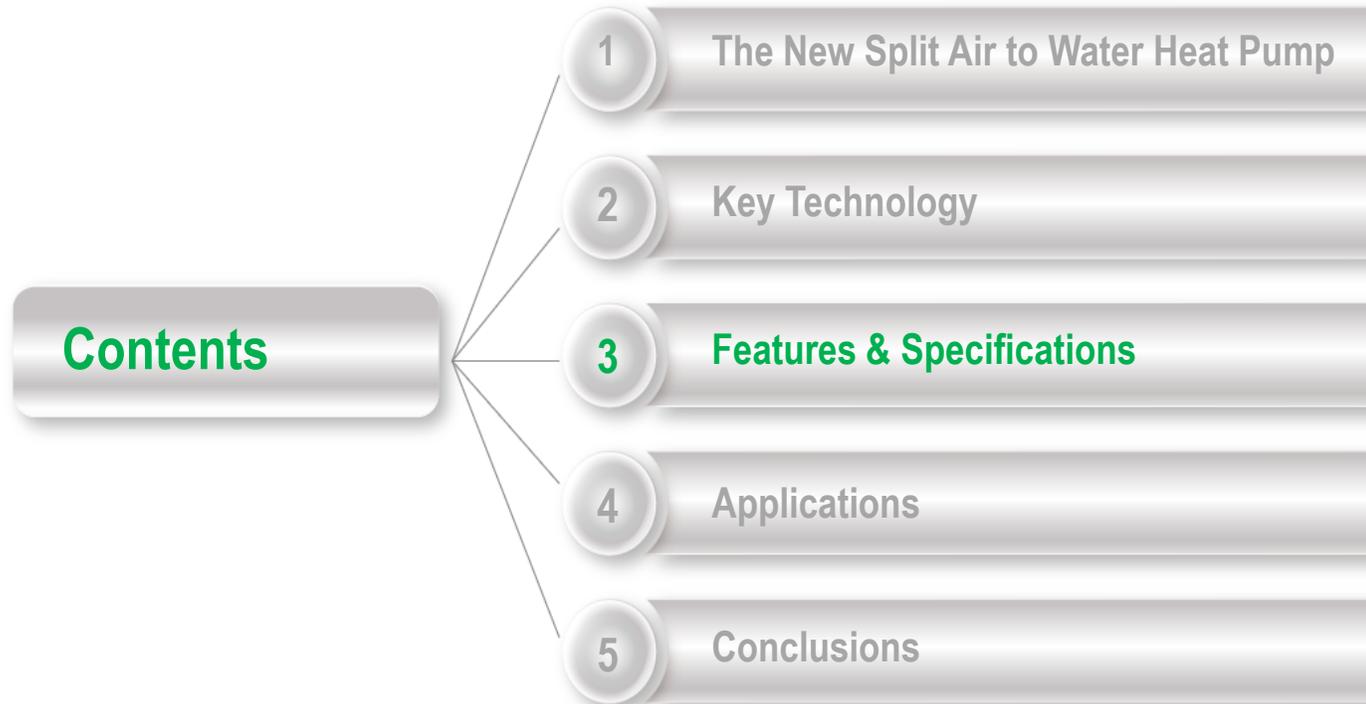


Keymark



EKO SKLAD

SPHERA EVO

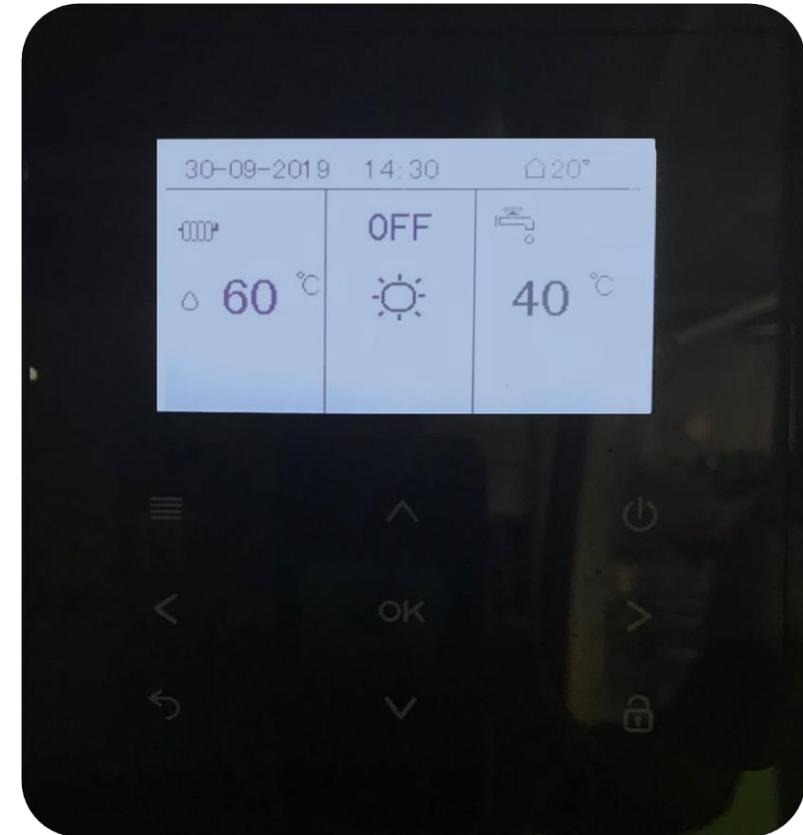


FEATURES & SPECIFICATIONS

Newly designed 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
- **Modbus connection**
- **WiFi connection**
- Management by **ELFOCONTROL³ EVO**



FEATURES & SPECIFICATIONS

Two zone control (High and low temperature)

The unit manages **two different water temperature set-points**:

- **Zone A** High temperature managed by the thermostat (by customer)
- **Zone B** High temperature managed by the thermostat (by customer)

The kit is composed by :

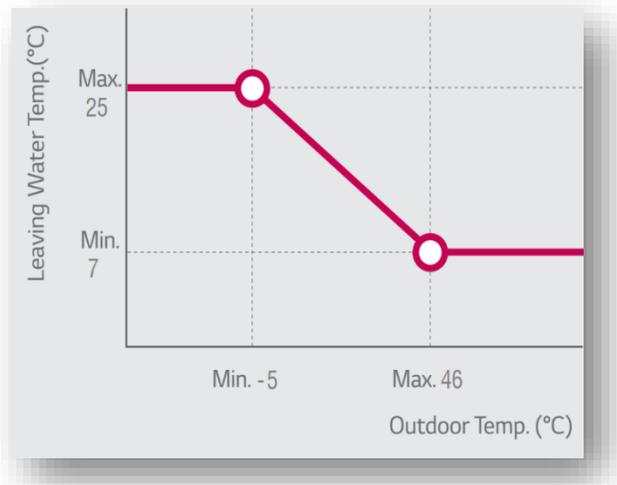
- Thermostatic mixing valve
- Circulating pump for zone A and B (managed by the unit)



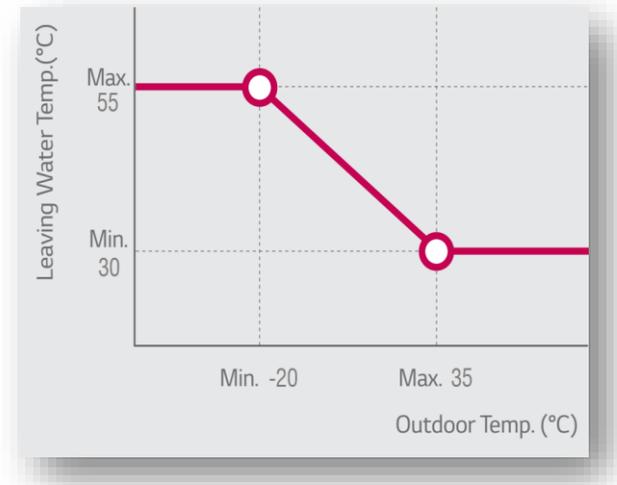
Features & Specifications

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

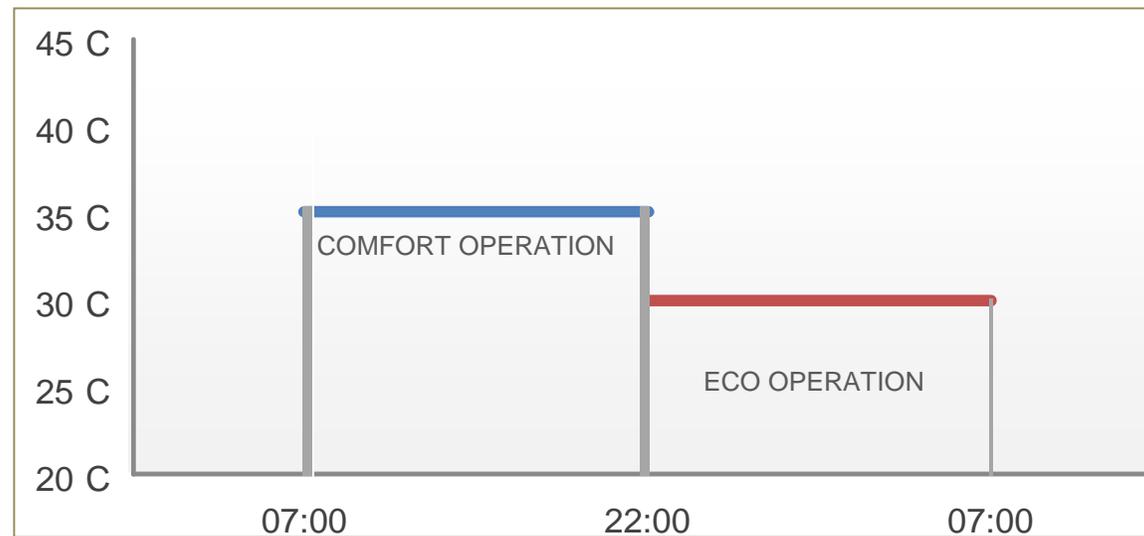
- **Cooling operation:** if outdoor temperature increases, cooling capacity supplied will increase automatically in order to keep comfortable cooling performance.
- **Heating operation:** if outdoor temperature decreases, heating capacity supplied will increase automatically in order to keep comfortable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

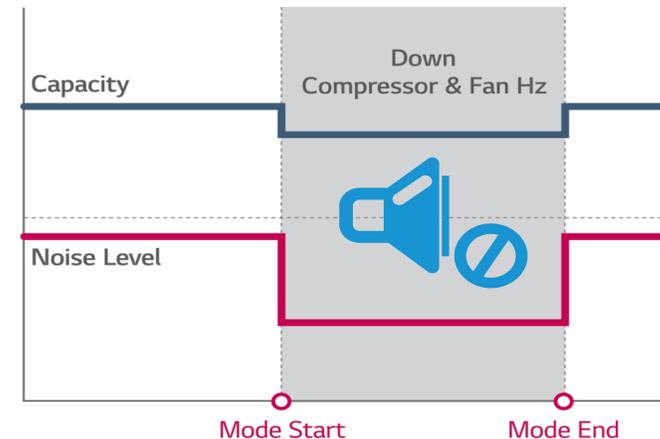


FEAUTURES & SPECIFICATIONS



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 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 to 4 kW Back-up electrical heater on the additional tank.
- Anti legionella function, guarantee all the tank on temperature.

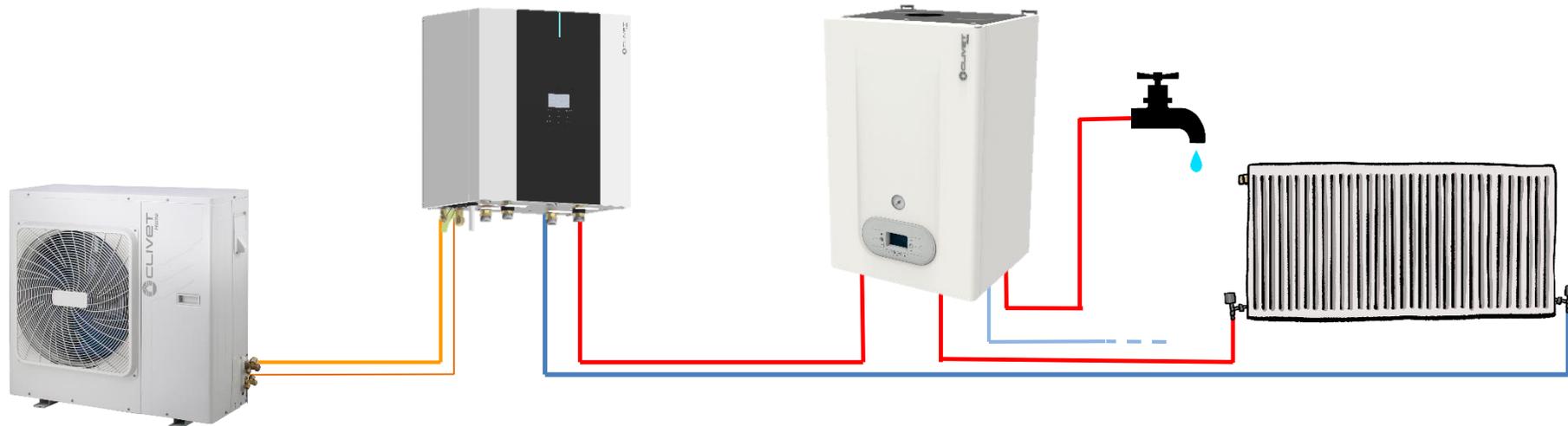


FEAUTURES & SPECIFICATIONS

Hybrid Version

SPHERA EVO Box Hybrid is the combination of the **heat pump** with the **24 kW combi boiler** by Clivet .

- Leaving water temperature up to **70 °C** for high temperature system.
- Integration function to help the heat pump
- Back up function
- Instant production of domestic hot water thanks to the combi boiler
- Simultaneous cooling or heating operation with **DHW** withdrawal.

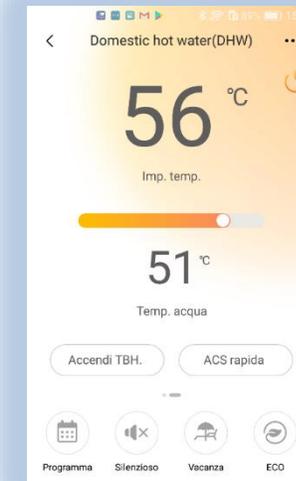


FEAUTURES & SPECIFICATIONS

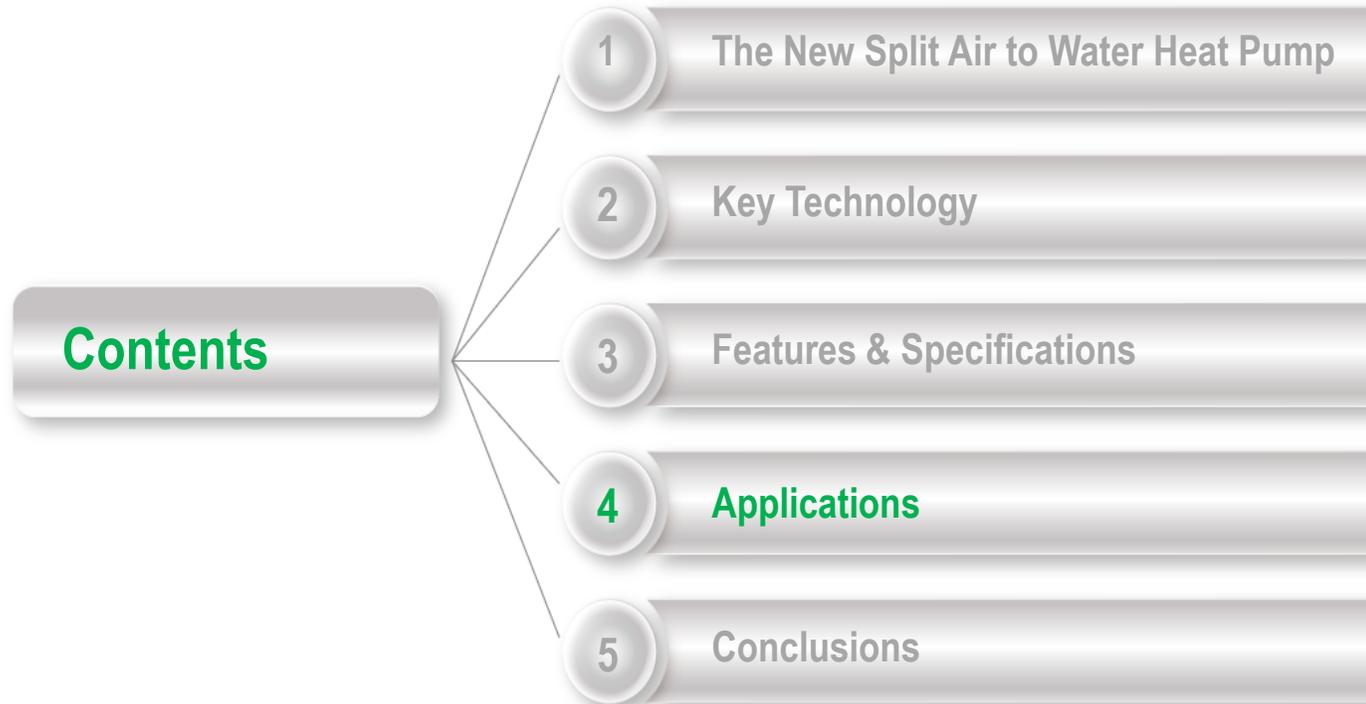
APP

SPHERA EVO Can be managed by the new **APP**:

- 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 for DHW
- Change mode



SPHERA EVO



CONFIGURATIONS

➤ Standard indoor unit

- Domestic Hot Water 3 Way valve integrated

➤ 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)



➤ Hybrid version

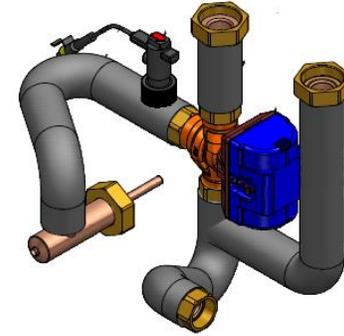
- Combination of the heat pump + Clivet 24 kW gas boiler



ACCESSORIES

➤ External gas boiler connection kit

- The kit is composed by three way and pipes to connect the external gas boiler to produce DHW.



➤ Two zones control kit

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



➤ Buffer Tank

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



ACCESSORIES

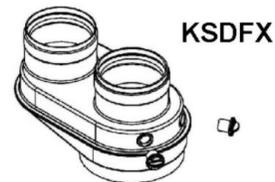
➤ Additional Domestic Hot Water tank

- Enameled steel Domestic hot water tank with capacity of 200, 300 or 500 liters equipped with 2 kW back-up heater, magnesium anode.
- Available with solar exchanger.

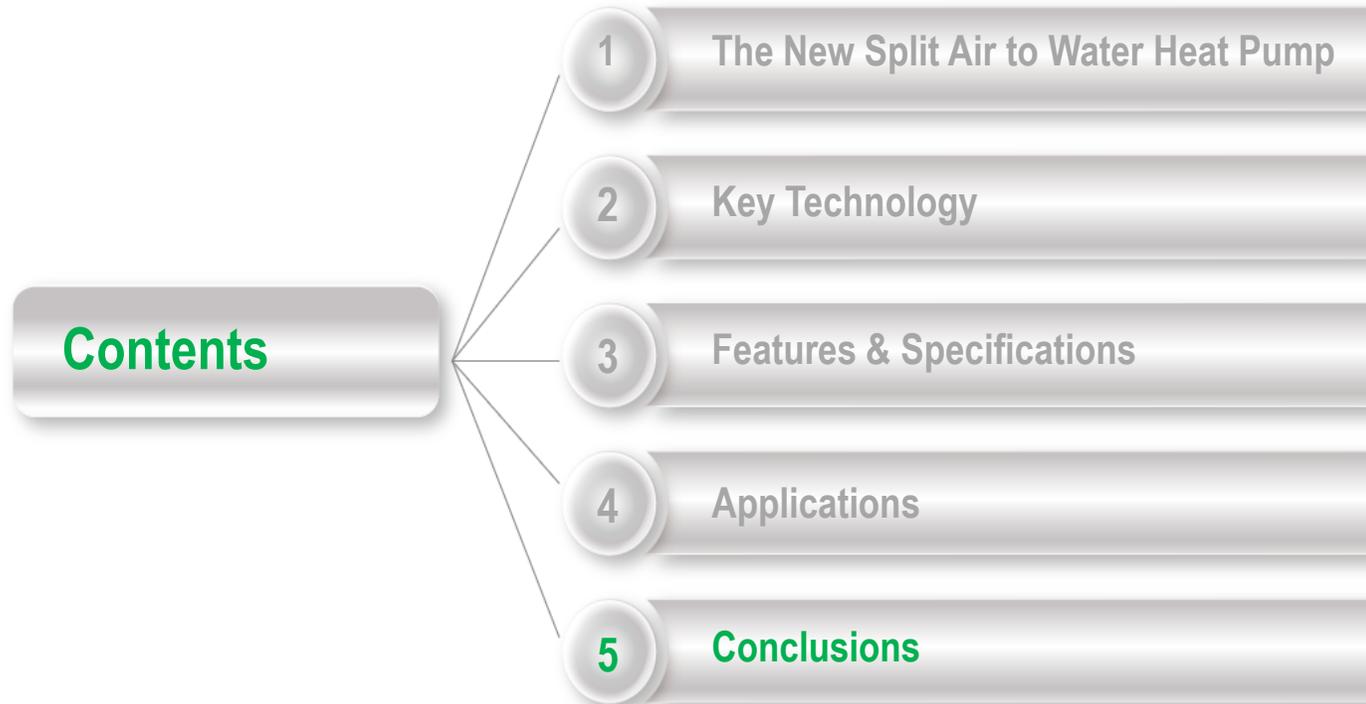


➤ Gas boiler accessories

- Kit to convert boiler from methane to LPG
- Coaxial fitting for smoke discharge and intake (ø60/100)
- Splitter for boiler smoke discharge
- Smoke intake and discharge fittings, 80 mm diameter



SPHERA EVO



CONCLUSIONS

FULL DC INVERTER TECHNOLOGY

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DC Inverter



Thank you!

www.clivet.com

