Edge EVO 2.0 - EXC

WiSAN-YME 1 S 2.1 ÷ 14.1

Product presentation

MideaGroup
humanizing technology

The way for a sustainable future

The way for a sustainable future

The world (Paris agreement - 2015):

- ✓ To contain the climate change
- ✓ To limit the world's heating to +1,5°C
- ✓ To support countries to face climate change's impacts
- ✓ Zero net greenhouse gas emissions in the second half of the century
- ✓ Supervision monitoring recurrent meetings

The European Union (EU Green Deal - 2019):

- ✓ Climatic neutrality within 2050
- ✓ Zero net greenhouse gas emissions connected to economy
- ✓ European law about climate
- ✓ National strategies for emissions' reduction

How: recycle, biodiversity, green mobility, research, sustainable industry, **renewable energies**, **building's efficiency**

Budget: 1.800 bilions EUROS in 7 years

The way for a sustainable future

- ✓ Buildings' refurbishment
- ✓ Sostitution of old heating generators
- ✓ Heat pumps' installation
- ✓ Use of renewable energy sources
- ✓ Increase of building-installation's efficiency
- ✓ National incentives

Corrispondance to main national incentives

RISTRUTTURAZIONI 50% EDILIZIE

✓ all sizes

Houses

Condomin.

Shops

ECO 65% BONUS

COP (A7/W35) ≥ 3,90
EER (A35/W18) ≥ 3,61

✓ all sizes

Houses

Condomin.

Shops

Public Adm.

Slovenia

- *Full electric: $\eta_{S@W35} \geq 140\%$*
- *Hybrid: $\eta_{S@W35} \geq 150\%$*

✓ all sizes

Germany

- *$\eta_{S@W35} \geq 135\%$*
  $\eta_{S@W55} \geq 120\%$

✓ all sizes

Austria

COP (A2 / W35) ≥ 3,6

✓ sizes 2.1÷8.1

Poland

- Eff. class (W55) ≥ A+

✓ all sizes

SUPER 110% BONUS

COP (A7/W35) ≥ 3,90
EER (A35/W18) ≥ 3,61

✓ all sizes

Houses

Consdomin.

CONTO 2.0 TERMICO

COP (A7/W35) ≥ 3,90

✓ all sizes

Houses

Condomin.

Public Adm.

REGIONE PIEMONTE

COP (A7/W35) ≥ 3,20
COP (A-7/W35) ≥ 2,70

✓ sizes 2.1÷9.1

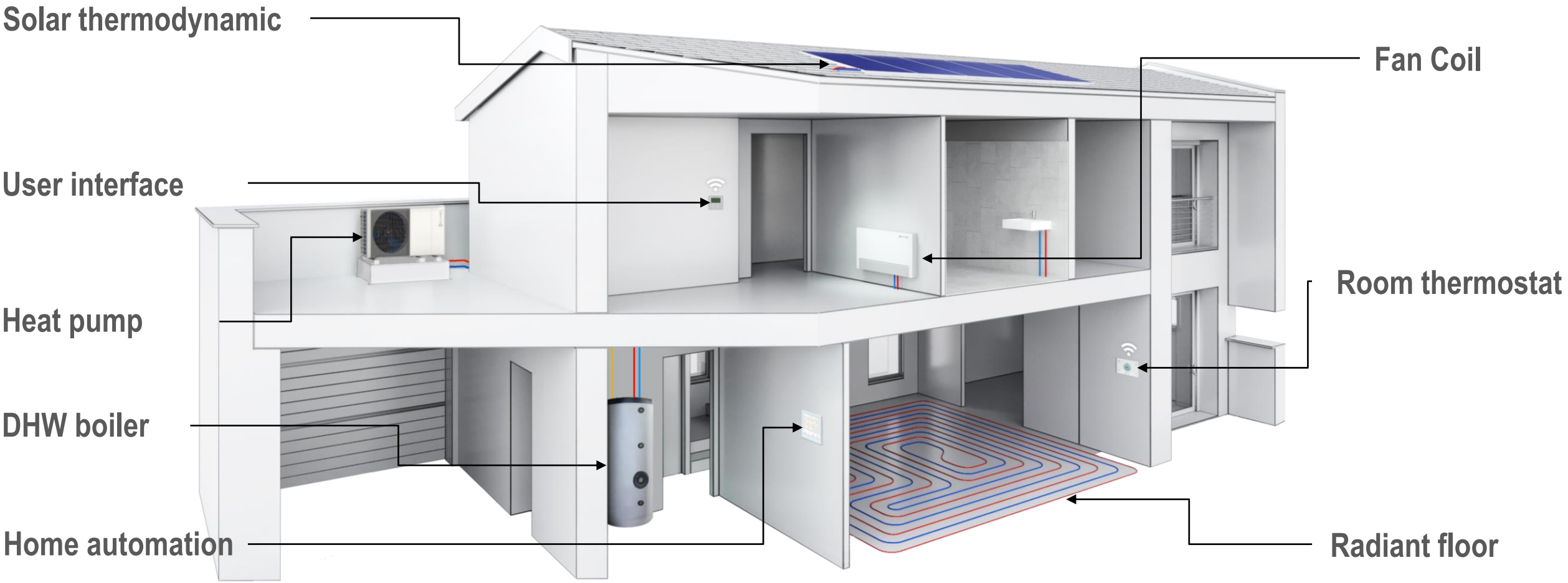
Houses

Condomin.

Edge EVO 2.0 - EXC
New heat pump for residential applications

New heat pump for residential applications

Edge EVO 2.0 - EXC is the new monobloc heat pump for outdoor installations suitable for the house
It's able to produce Heating, Cooling and Domestic Hot Water



For every application

Autonomous systems - new buildings

Full Electric version

Autonomous systems - important refurbishment

Full Electric version / with back-up heater

Autonomous systems - «light» refurbishment

Hybrid version

Centralized systems

Cascade units

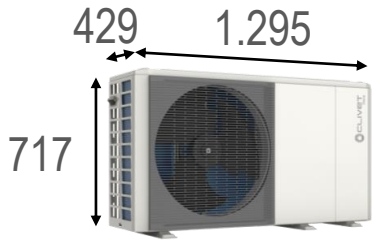
Suitable for all water distribution systems

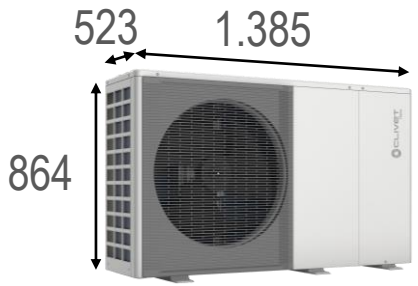
Radiators
Heating only
Water up to 75°C

Fancoils
Cooling / Heating
Water at 7°C / 45°C

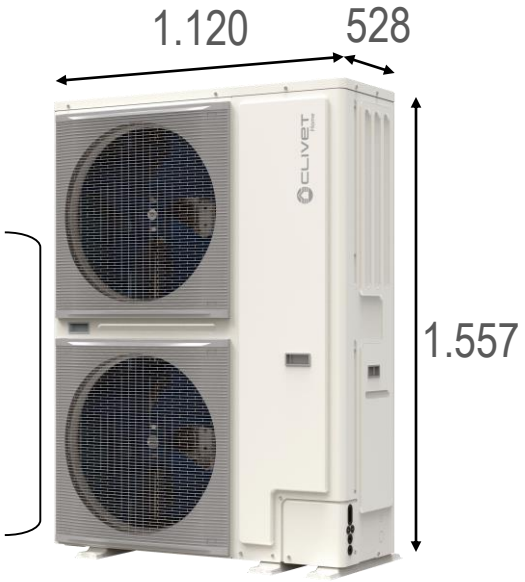
Radiant
Cooling / Heating
Water at 18°C / 35°C

Lineup and versions

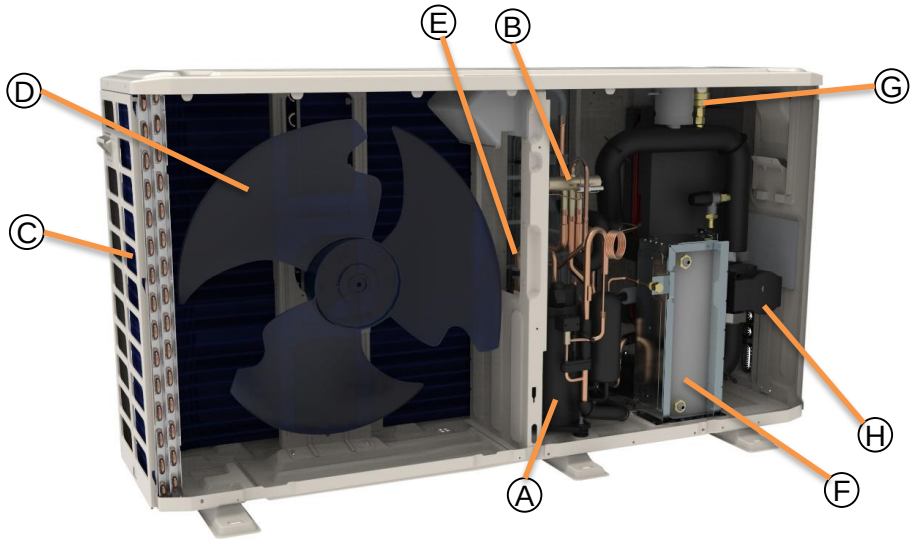


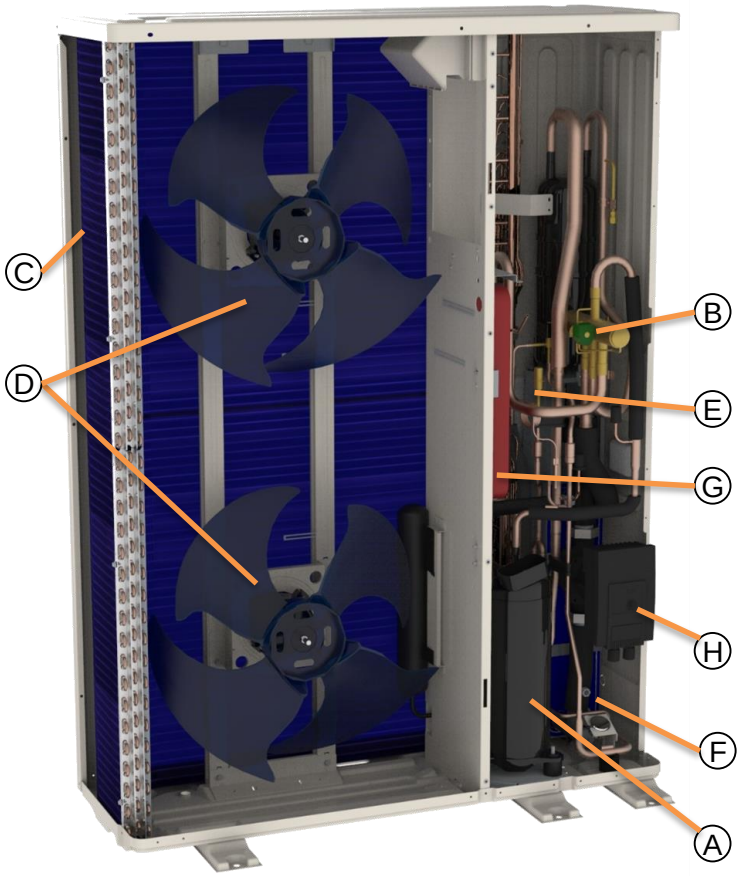


WiSAN-YME 1 S - *230/50*					
Size	Power supply	Heating *(W35)*	Cooling *(W18)*	Hybrid *(gas boiler)*	Built-in heater *(factory)*
2.1	230V	4,2 kW	4,5 kW	24 kW 34 kW 70 kW 115 kW 200 kW	3kW / 230V
3.1		6,4 kW	6,5 kW		
4.1		8,4 kW	8,3 kW		
5.1		10 kW	9,9 kW		
6.1 / 6.1T	230V 400V	12,1 kW	12 kW		3kW / 230V 3-6-9kW / 400V
7.1 / 7.1T		14,5 kW	13,5 kW		
8.1 / 8.1T		15,9 kW	14,2 kW		
9.1	400V	18 kW	18,5 kW		-
10.1		22 kW	23 kW		
12.1		26 kW	27 kW		
14.1		30 kW	31 kW		



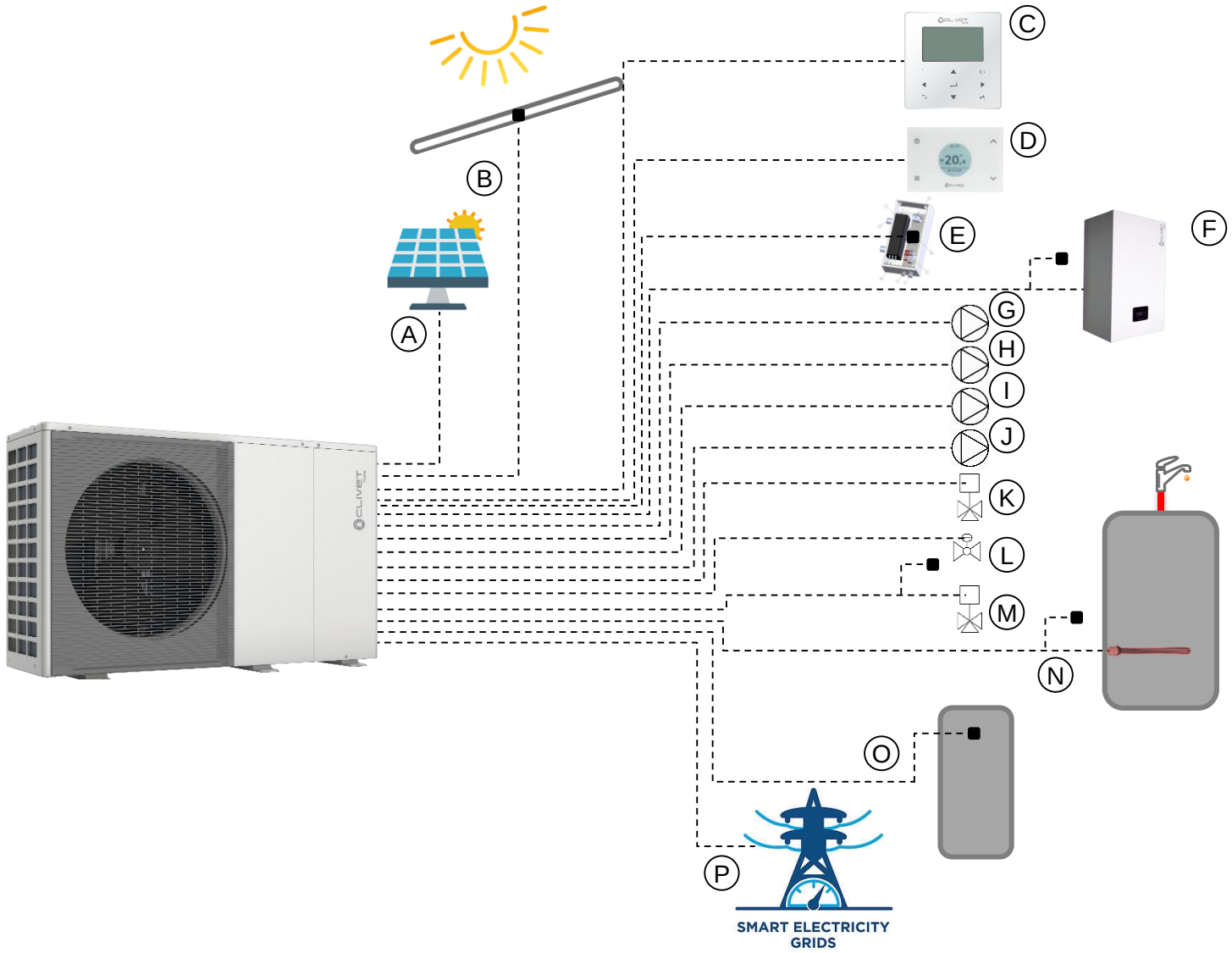
Main components





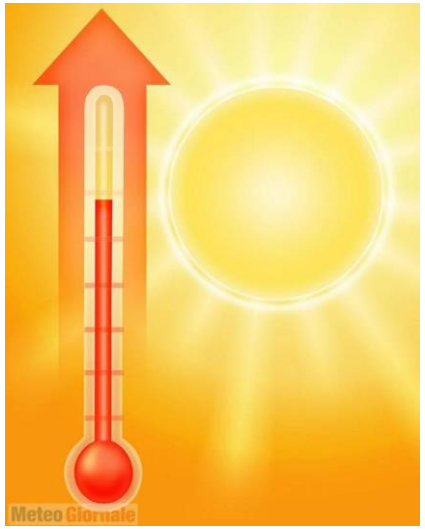
A. compressor
B. 4-way valve
C. Source side heat exchanger
D. fan
E. expansion valve
F. system side heat exchanger
G. expansion vassel *(4,8 litres)*
H. supply water pump
I. Y filter *(to be installed in the field)*

External components manageable by the unit



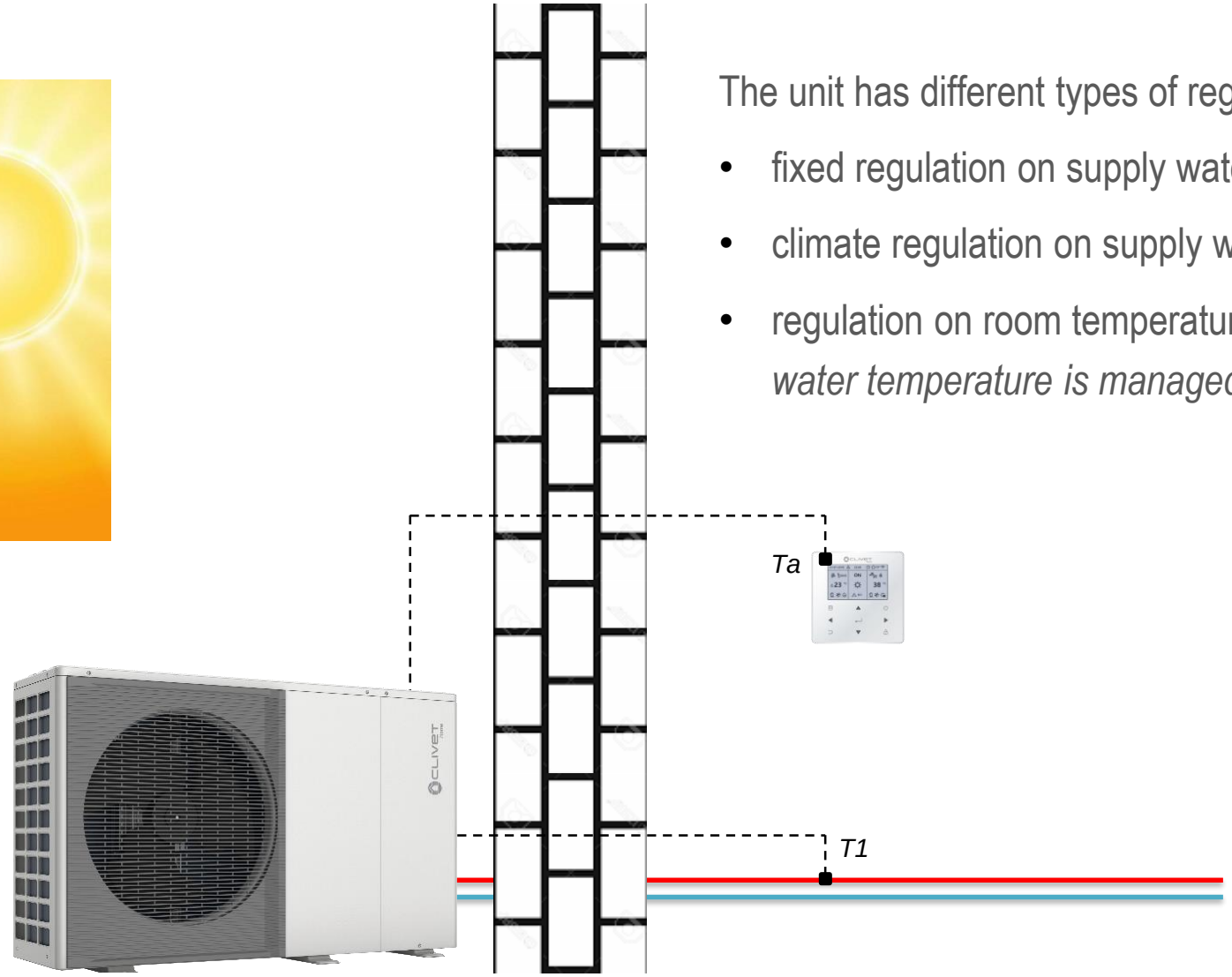
A. solar photovoltaic
B. solar thermodynamic
(water probe on solar circuit)
C. user interface
D. room thermostat (up to 2)
E. back-up electrical heater
F. gas boiler
(management signal and water probe)
G. secondary circuit pump / zone 1
H. zone 2 pump
I. DHW recirculation pump
J. solar circuit pump
K. 3-way diverter valve
(system / DHW)
L. 2-way valve for double emission systems
M. low temperature zone 2 management
(3-way mixing valve and water probe)
N. DHW boiler
(boiler heater management signal and DHW probe)
O. water probe on hydraulic separator
P. Smart Grid

Available regulation systems



The unit has different types of regulation:

- fixed regulation on supply water temperature (*T1*)
- climate regulation on supply water temperature (*T1*)
- regulation on room temperature (*Ta*)
  water temperature is managed as per the climatic curve



Hybrid version to pair a gas boiler

The **Hybrid** version is the best solution for substitution or «light» refurbishment

Autonomous systems

- 24 / 34 kW gas boiler
- support / substitution / back-up operations
- management with ON/OFF signal and 0-10V signal
- water up to 75°C
- instant DHW production
- DHW / system simultaneous operations

Centralized systems

- 70 / 115 / 200 kW gas boiler
- support / substitution / back-up operations
- management with ON/OFF signal and 0-10V signal
- water up to 75°C

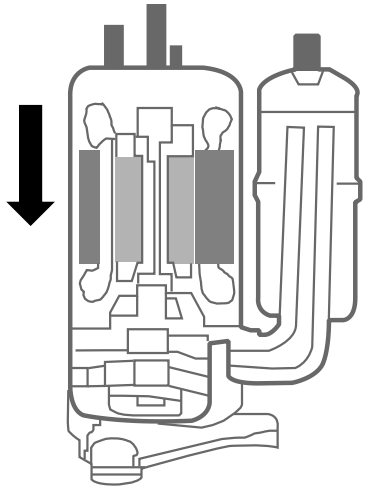
SWITCH

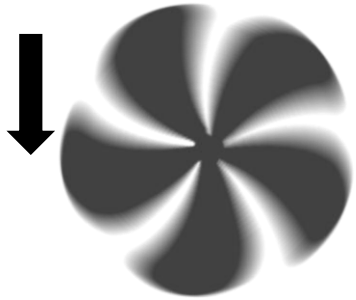
Cheaper cost optimization logic of different available heat sources
Every kW of capacity is always producted in the cheapest way

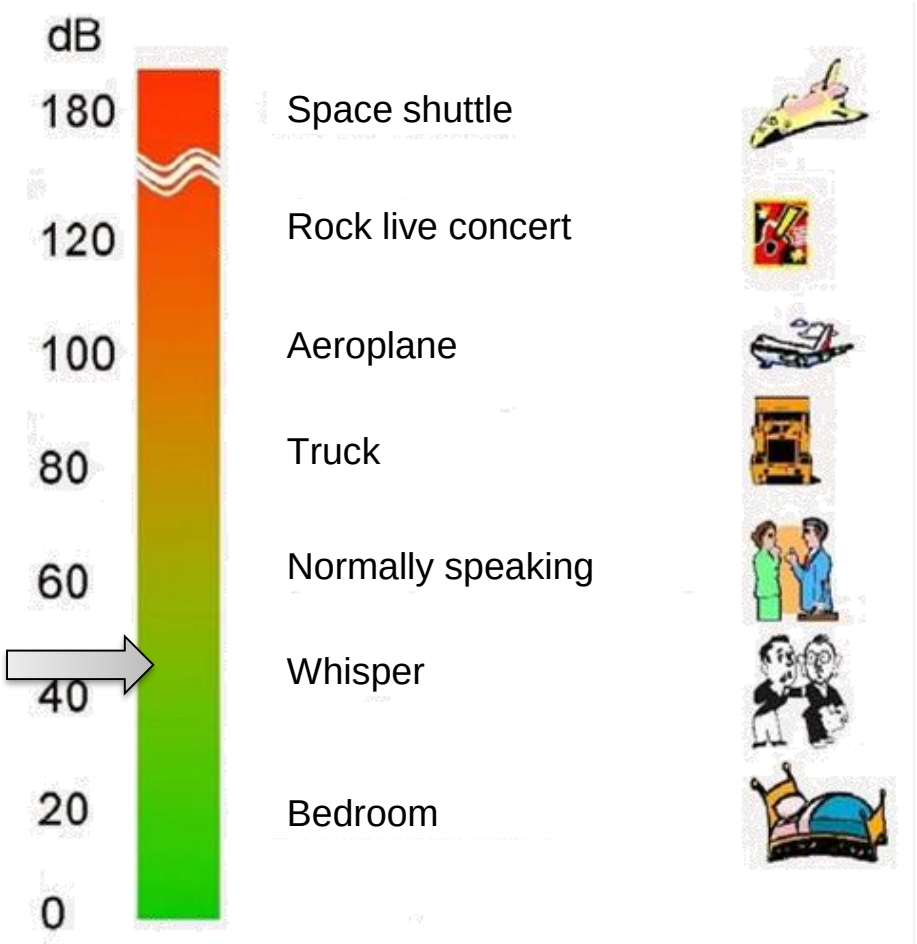
Best silence

In standard operations the units < 16 kW can generate a sound pressure of 41÷53 dB(A), equivalent to a little bit more than a whisper

Silent e Supersilent functions progressively limit the fan and compressor operations to reduce to a half or to a quarter the sound level



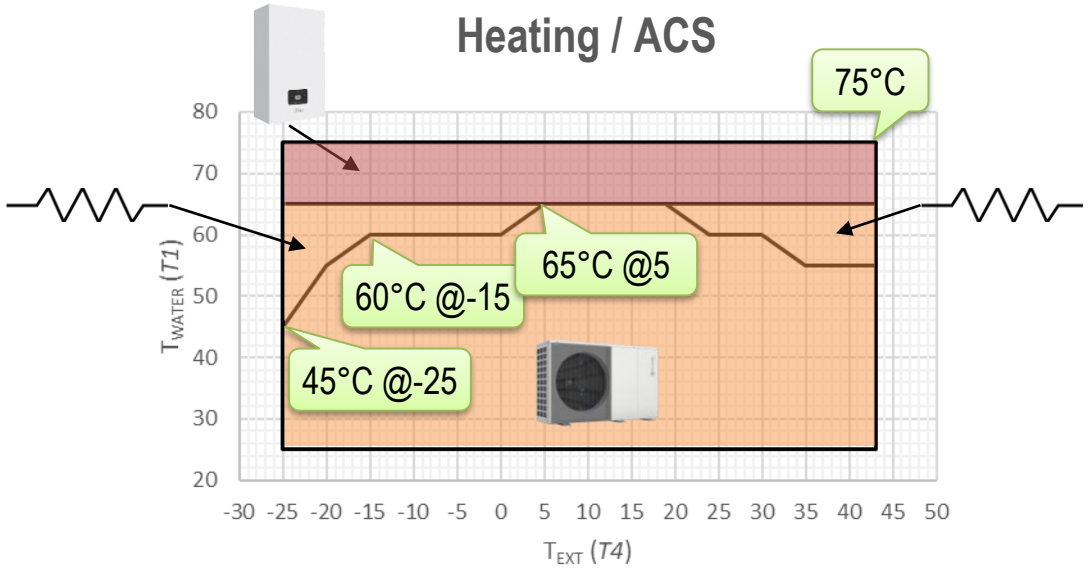




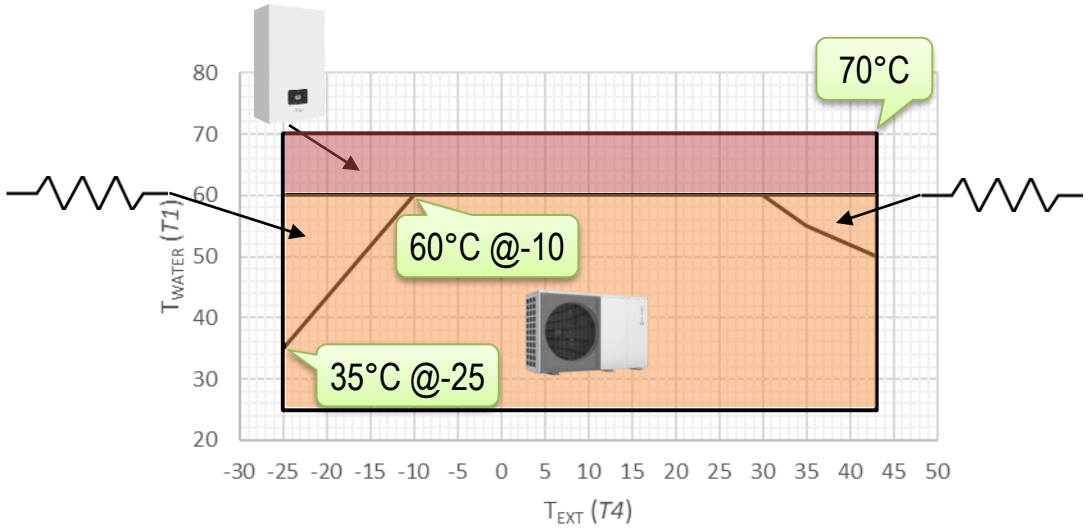
Operation field for every climate

Heating / ACS

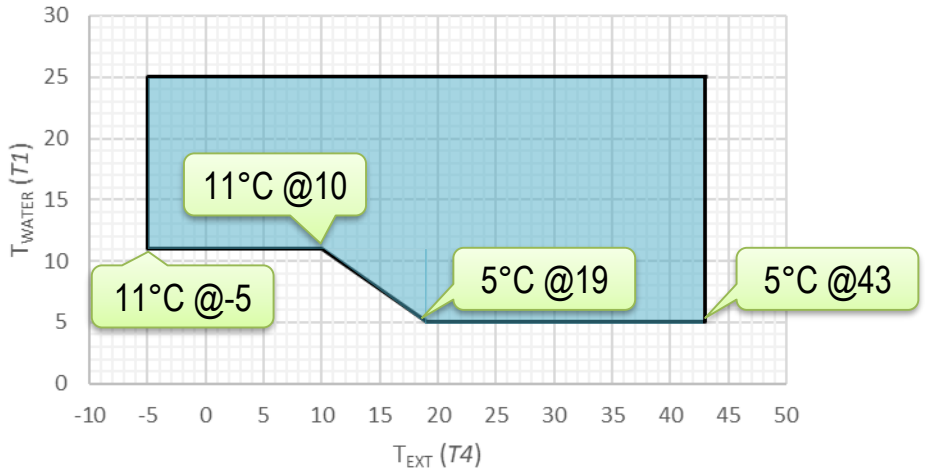
2.1÷8.1

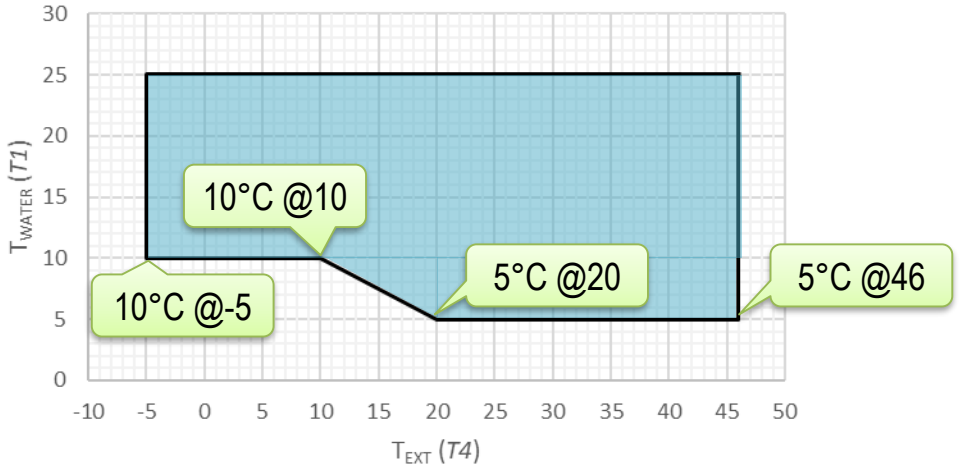


9.1÷14.1

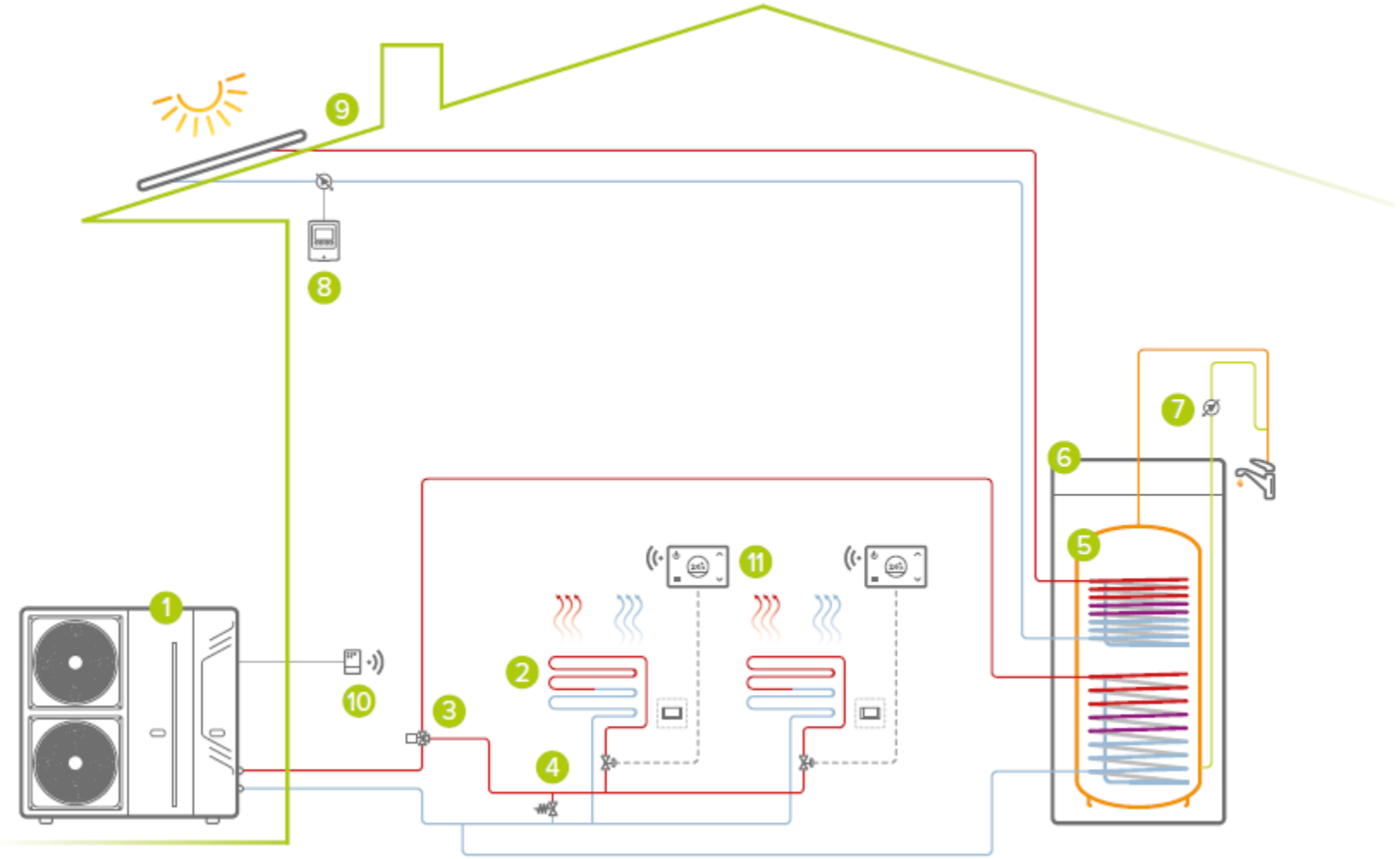


Cooling





Single zone system

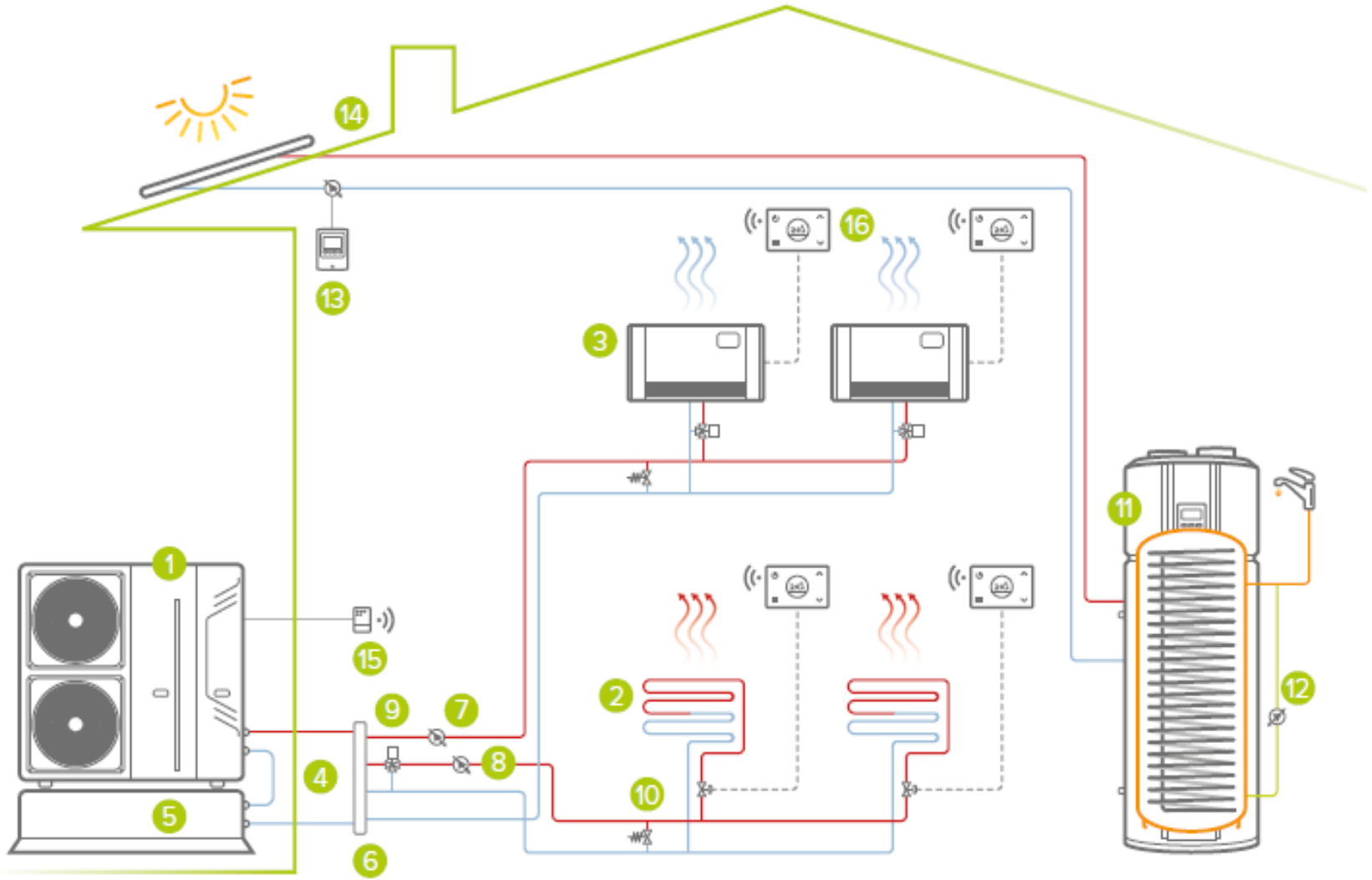


Single zone system with thermod. solar: Heating / Cooling / DHW

1. outdoor unit
2. Heating / Cooling zone (FCU / radiant)
3. 3-way diverter valve (optional)
4. bypass*
5. DHW tank with solar predisposition (optional)
6. QERAX DHW tank connection kit (optional)
7. DHW recirculation pump (optional)
8. solar system pump (optional)
9. ELFOSun thermodynamic solar (optional)
10. SwitchConnect Wi-Fi receiver (optional)
11. HID-Tconnect Wi-Fi chronothermostat (optional)

*third-part supplied

Two-zones system



Two-zones system with thermod. solar:

Heating / Cooling / DHW

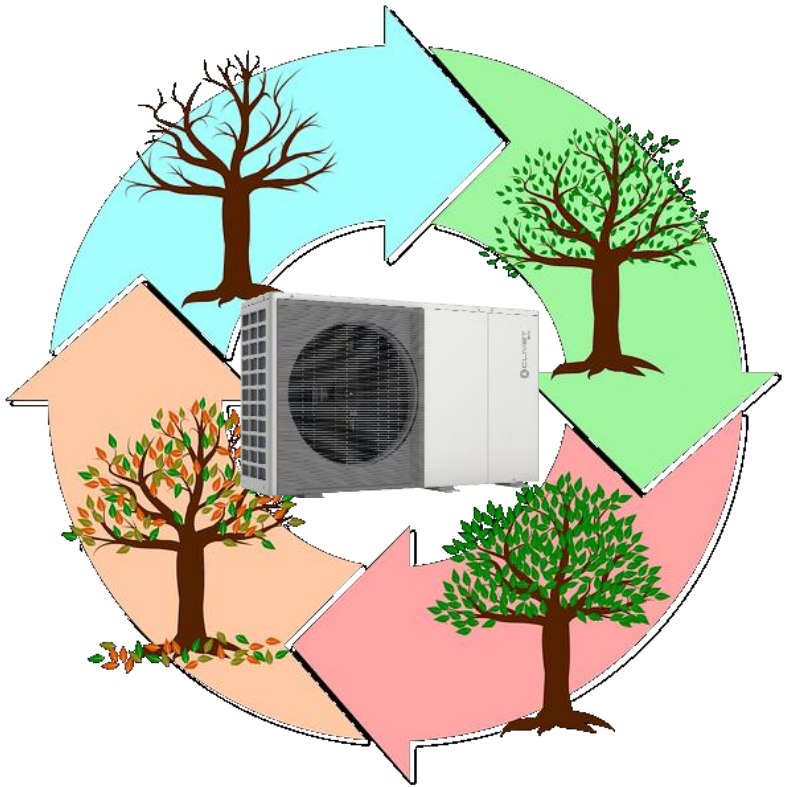
1. outdoor unit
2. Heating zone (radiant)
3. Cooling zone (FCU)
4. system buffer tank connection kit (optional)
5. system buffer tank (optional)
6. hydraulic separator (optional)
7. high temperature zone circulation pump (optional)
8. low temperature zone circulation pump (optional)
9. 3-way mixing valve (optional)
10. bypass*
11. DHW heat pump with solar predisposition
12. DHW recirculation pump (optional)
13. solar system circulation kit (optional)
14. ELFOSun thermodynamic solar (optional)
15. SwitchConnect Wi-Fi receiver (optional)
16. HID-Tconnect Wi-Fi chronothermostat (optional)

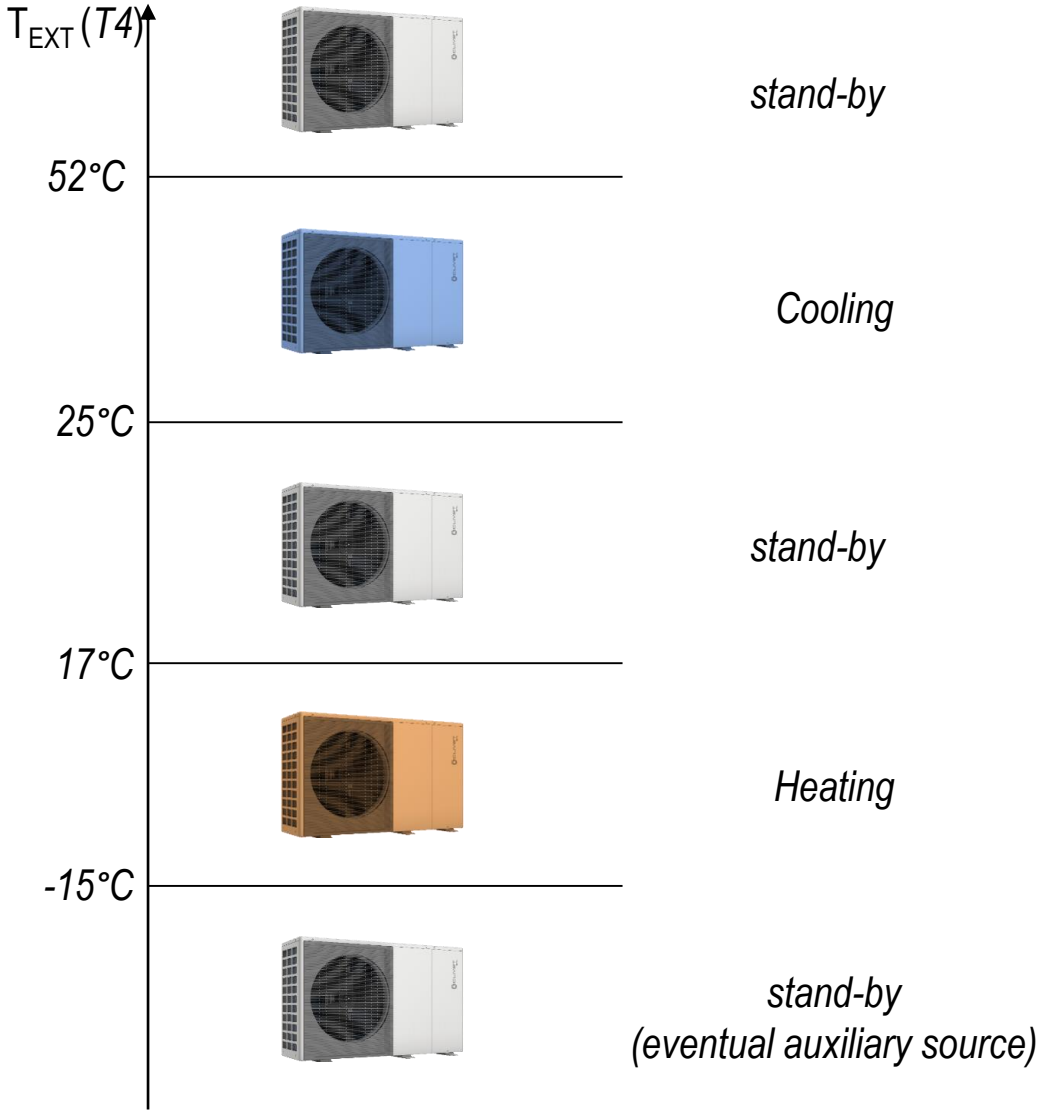
*third-part supplied

Main functions

Operation mode

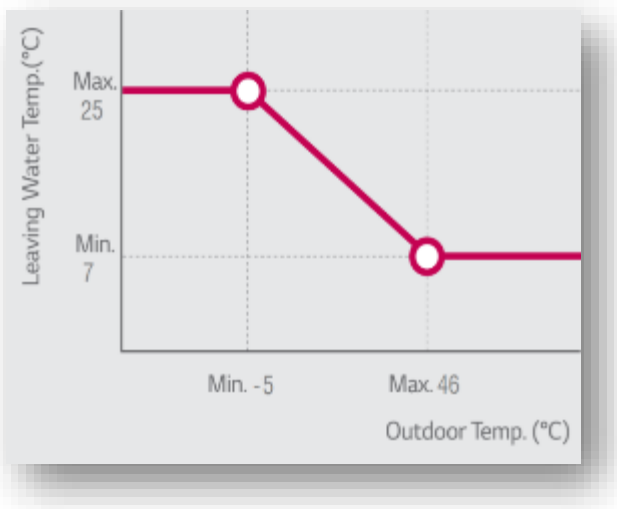
The unit can autonomously manage its own operation mode during the year, basing on outdoor air temperature





Climatic compensation with the outdoor air temperature

User can choose between 9 climatic regulation curves: the system will set automatically the supply water temperature basing on outdoor temperature



Cooling Operation

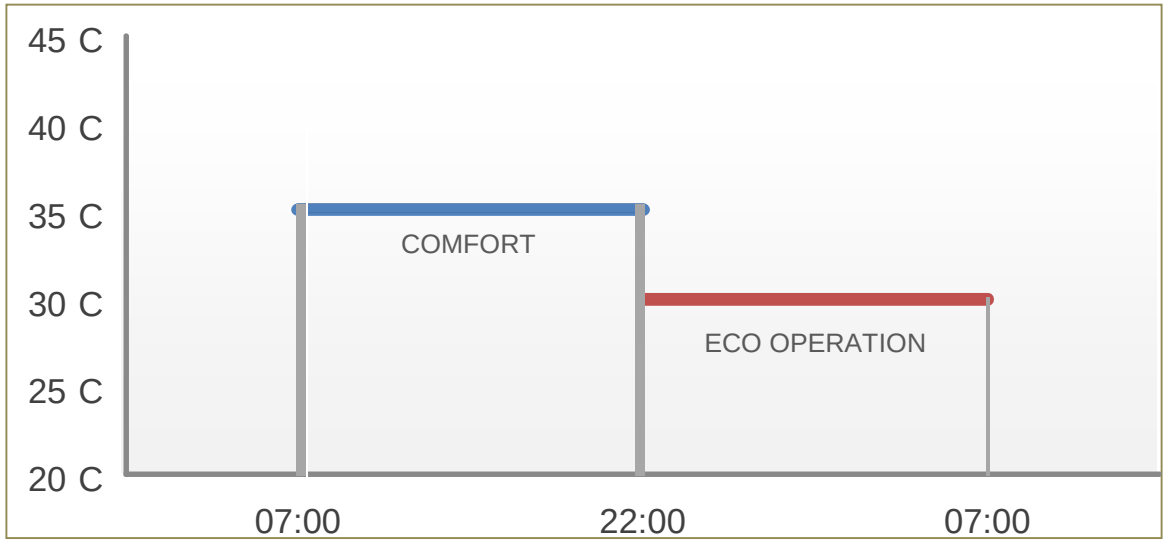
Heating Operation

- ✓ Cooling: if the outdoor temperature increases, supplied cooling capacity will be automatically increased to mantain comfortable cooling conditions
- ✓ Heating:if the outdoor temperature decreases, supplied heating capacity will be automatically increased to mantain comfortable heating conditions

ECO mode

Energy saving mode active in Heating mode:

- ✓ daily hours *(7:00÷22:00)*: supply water temperature in fixed at 35°C to mantain the best comfort conditions
- ✓ night hours *(22:00÷7:00)*: supply water temperature is reduced to 30°C for a better energy saving



Operation time and water temperature can be set by the HMI

Functions based on DHW mode

Antilegionella for DHW

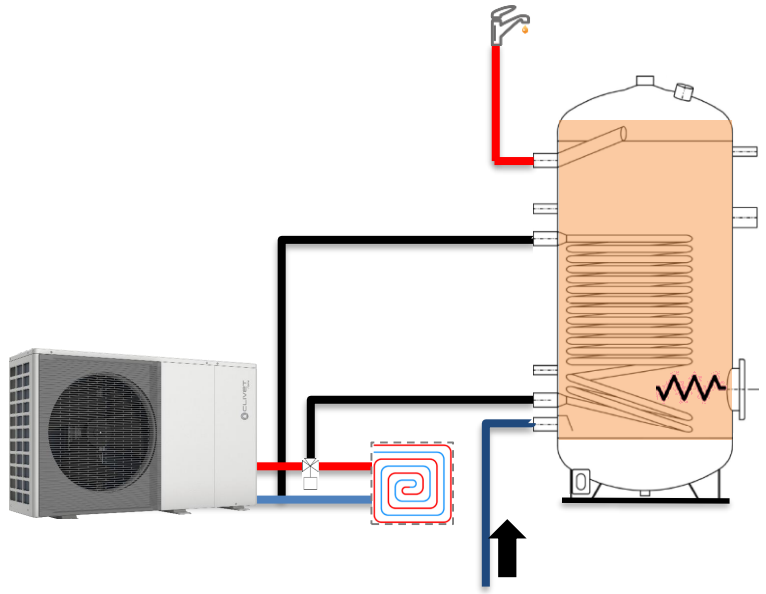
70 — Immediate death of Legionella
60 — Death 90% Legionella in 2 minutes
50 — Death 90% Legionella in 2 hours
40 —
30 — Legionella active
20 —
10 — Legionella inactive
0 —

- scheduling of weekly cycles for antilegionella
- standard cycle takes the DHW tank to 65°C for 15 minutes

Fast DHW production

Force unit and tank's heater to work in DHW to heat the tank in the shortest time possible

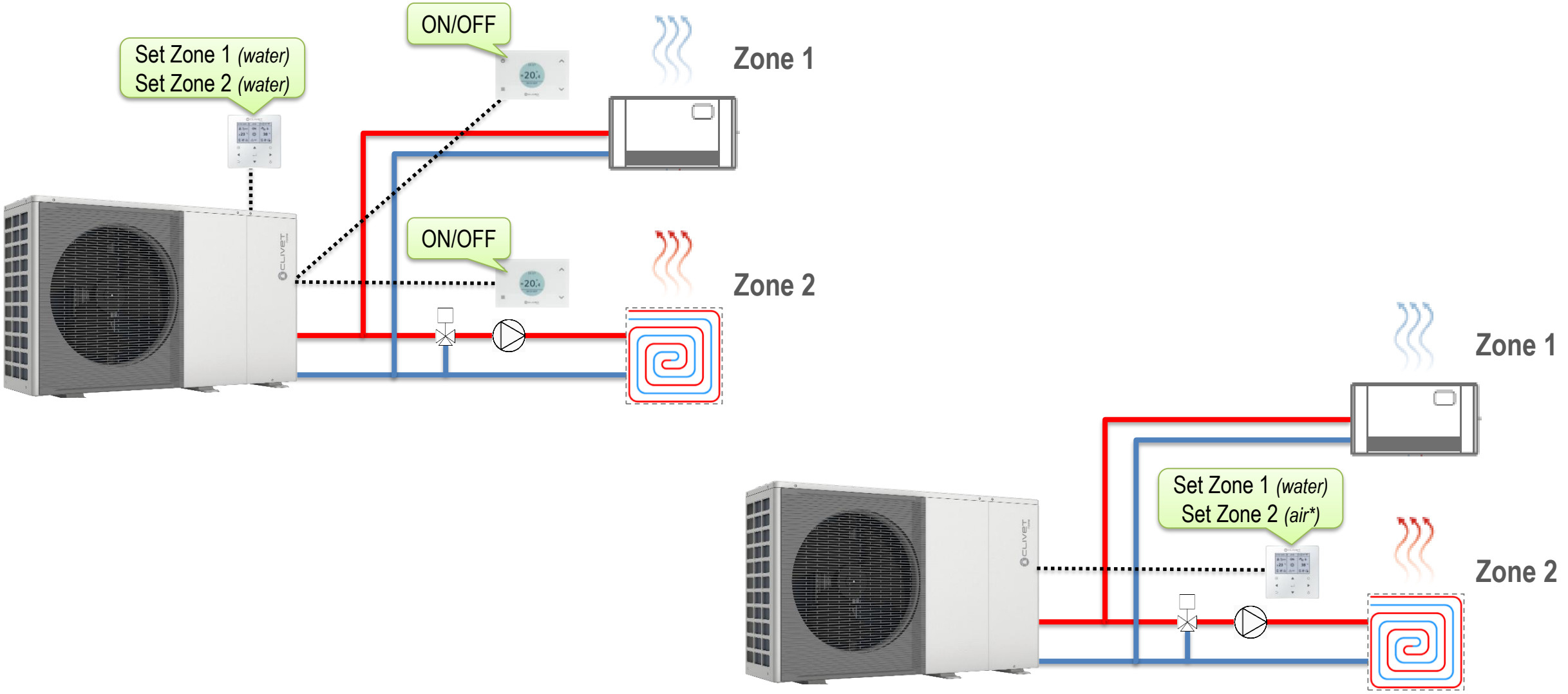
Tank loading



Force the tank heater to work in DHW:

- the unit can work in Heat/Cool if necessary
- can work as a back-up if the unit is offline

Management of two different temperature zones

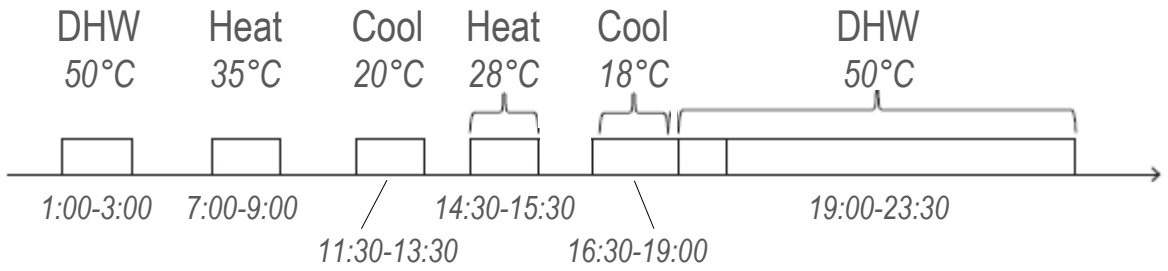


*water setpoint managed by climatic curve

Schedule the system operations

Daily/weekly scheduler

NO.	INIZIO	FINE	MODO	TEMP
T1	1:00	3:00	DHW	50°C
T2	7:00	9:00	Heat	35°C
T3	11:30	13:30	Cool	20°C
T4	14:30	15:30	Heat	28°C
T5	16:30	19:00	Cool	18°C
T6	19:00	23:30	DHW	50°C

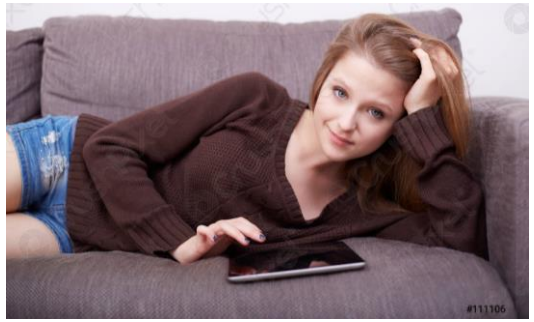


- up to 6 time slots where is possible to set mode/set-point
- possibility to copy or create a new scheduling for other days of the week

Other functions

DHW recirculation
Schedule recirculations of domestic hot water to make DHW usage more comfortable

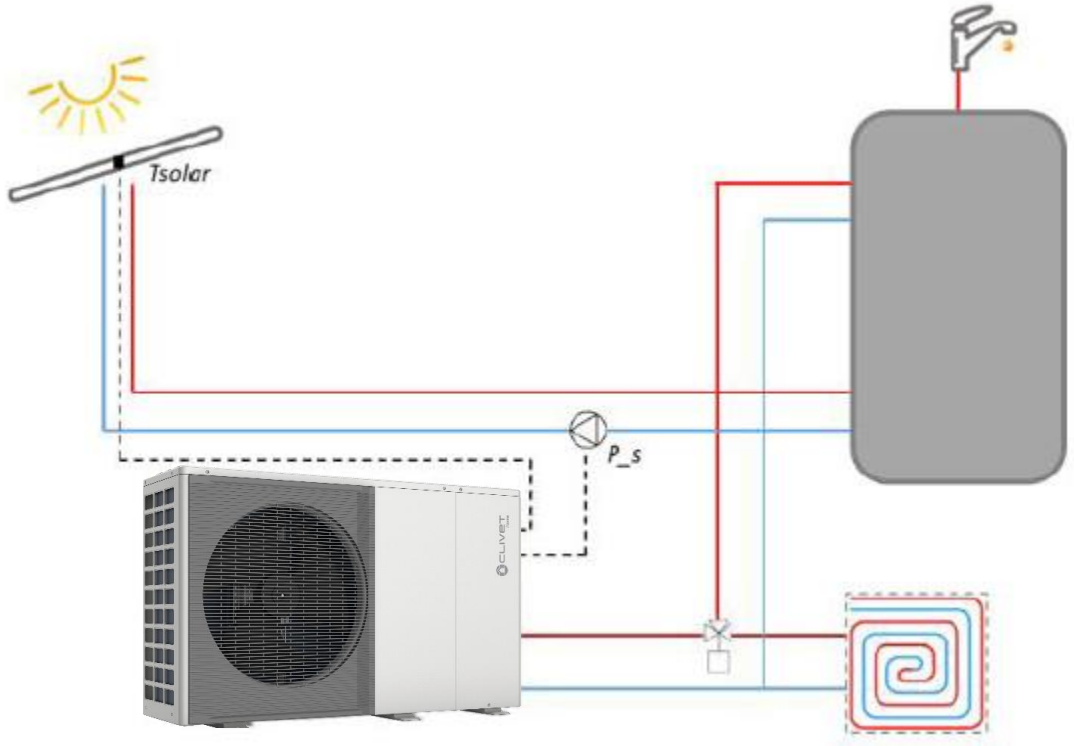
Holiday away function
Prevent system's freezing during long periods of absence end restart the system before coming back home



Holiday home function
set up a temporary scheduling without deleting the standard one

Solar thermodynamic combination

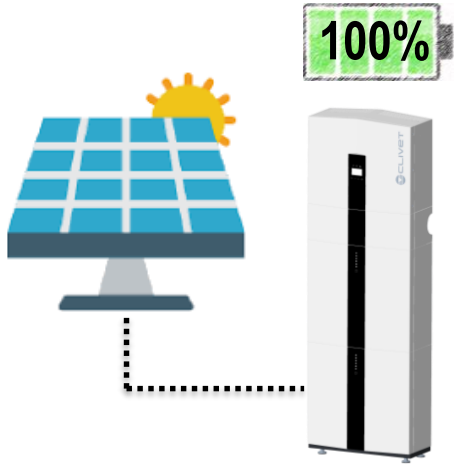
Combination with a solar thermodynamic system allowing to use the sun as a renewable free source for the production of domestic hot water



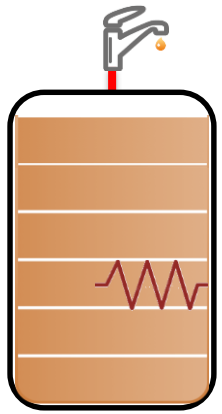
DHW production takes place both via solar panel and heat pump: solar panel works together with heat pump, basing its activity on unit's control logic

Photovoltaic and Smart Grid Ready

The unit con optimize the overproduced electricity by photovoltaic storing it as thermic energy in DHW tank



DHW heater ON



Smart Grid *ON*

Set-point DHW: 70°C
Heat pump available for system

Smart Grid *OFF*

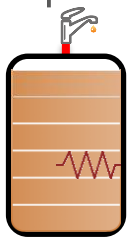
Set-point DHW: +3°C

SG Ready Smart Heat Pumps

The unit can rationalize its own electrical consumptions, by smart managing the its power supply connection to the grid

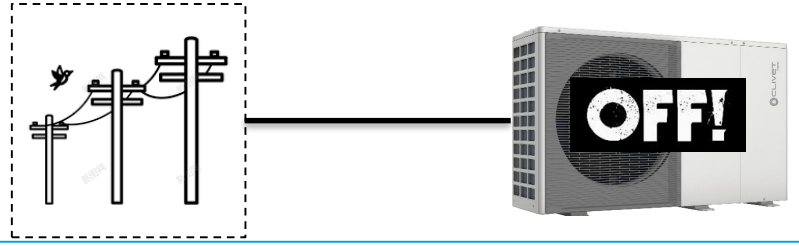
SMART ELECTRICITY GRIDS

Photovoltaic *ON*



Set-point DHW: 70°C
Heat pump available for system

Photovolotaic *OFF*



HMI

User interface manages, controls and gives support to heat pump operations: it can be used as a room thermostat too

Management

- ✓ ON/OFF: unit / gas boiler / el. heater
- ✓ mode: Heating / Cooling / Auto / DHW
- ✓ special functions
  (Silent / Holiday / forced DHW / …)
- ✓ set-point: supply water / room air / DHW
- ✓ scheduling: weekly / timer / DHW recirculation
- ✓ keylock
- ✓ remote ON/OFF

Monitoring

- ✓ set-point: Zone 1 / Zone 2 / DHW
- ✓ outdoor temperature
- ✓ query: operation parameters status
- ✓ active scheduling
  (next settings)
- ✓ mode: Heating / Cooling / Auto / DHW
- ✓ external elements ON/OFF
  (gas boiler / compr. / pump / solar / smart grid / …)

Support

- ✓ air temperature probe: thermostat using
- ✓ alarm codes: anomalies identification
- ✓ remote alarm / defrosting signal
- ✓ Service call: technical support contacts
- ✓ software version (HMI / unit)
- ✓ restore factory settings

16 selectable languages

Italian / English / French / Spanish / Polish / Portuguese / German / Dutch / Romanian / Russian / Turkish / Greek / Swedish / Slovenian / Czech / Slovak

Connectivity

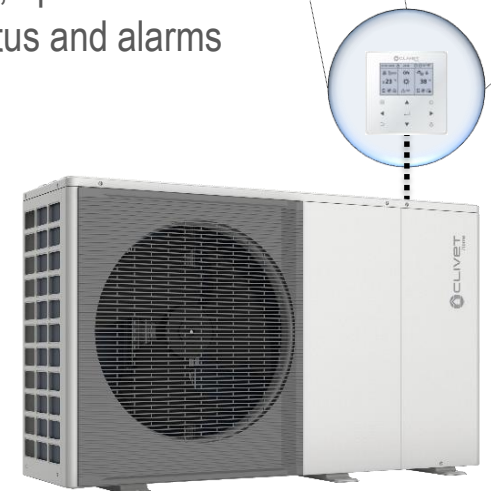
App management through WI-FI

- ✓ modify the main unit's settings from remote
- ✓ two zones management
- ✓ errors display
- ✓ daily and weekly scheduling, Holiday function
- ✓ Silent function

RS485 port with Modbus RTU

Comunication with Home Automation systems, up to 16 units

- ✓ read the main operational parameters, status and alarms
- ✓ set all the main functions



ELFOControl: Clivet Home Automation

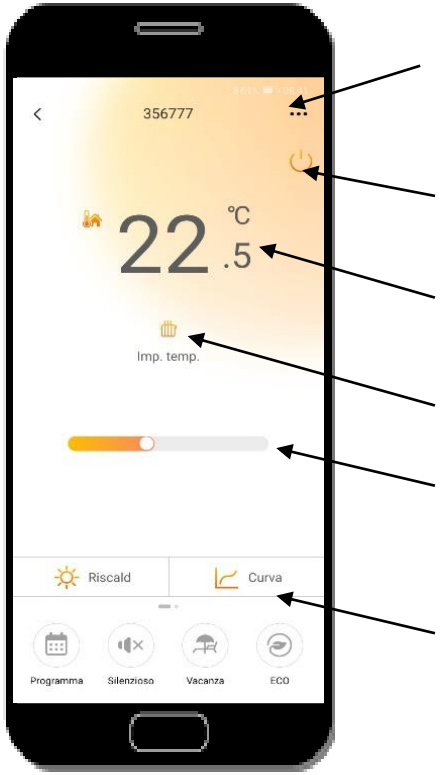
- ✓ Management of the main system's components up to 12 zones
- ✓ measure, analyze and manage the energy of the solar photovoltaic
- ✓ optimize the operations basing on outdoor conditions and comfort conditions

App for smatphone management

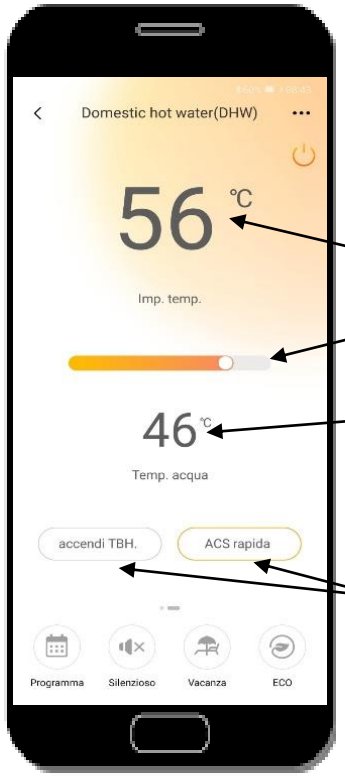
MSmart Home

GET IT ON Google Play

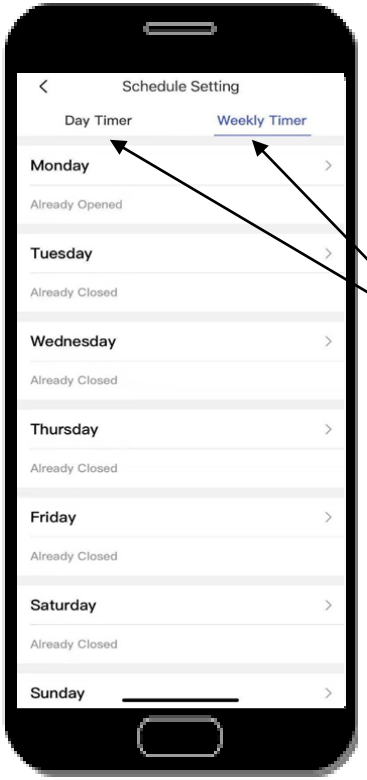
Download on App Store



- Rename the zones
- ON/OFF
- set-point
- *air or water depending by settings*
- type of distribution
- set-point setting
- climate curve activation



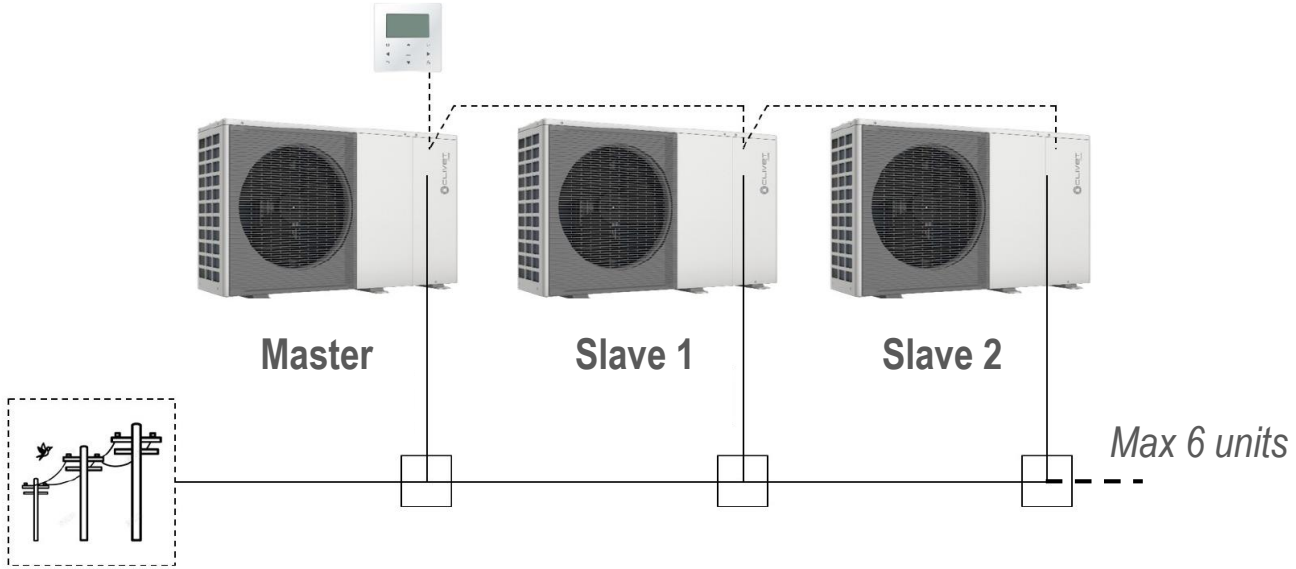
- set-point set
- set-point setting
- DHW tank temperature
- ➢ *TANK WATER* function
- ➢ *FAST DHW* function



Scheduling:
- ➢ weekly
- ➢ daily

Cascade connection

Cascade installation is designed for those applications that require back-up units installation to the main system or that present loads that can significantly change during yearly operations

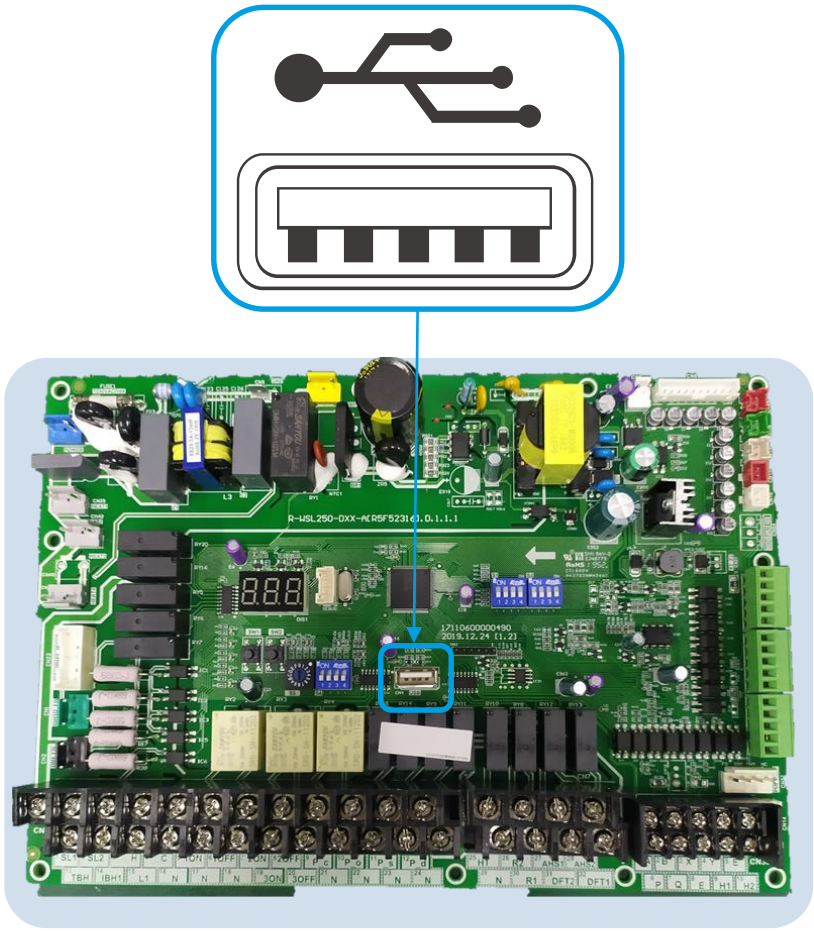


- ✓ **wide range**: up to 180 kW of capacity
- ✓ **continuous operations**: maximum 50% of the units can be simoultaneously in defrosting
- ✓ **rotation:** rotate all the units operations, to use them in an equal way
- ✓ **back-up:** in case of unit's malfunction, Master included, the system guarantees operation continuity
- ✓ **hybrid version**: Master can be connected to a gas boiler

USB port for Service's update

The unit's PCB is equipped with a USB port that can be used for Service's activities or settings transfer

- ✓ unit-s software updates
- ✓ possibility to copy the unit's settings and parameters on a USB key and repeat them in other units *(es: back-up Master)*



Available certifications

Optional accessories

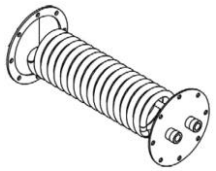
Hot health water production

DHW tanks

standard
(200/300/500/1000 liters)

solar
(1000 liters)

Solar kit



3-way diverter valve

DHW recirculation valve

DHW tank conncection kit

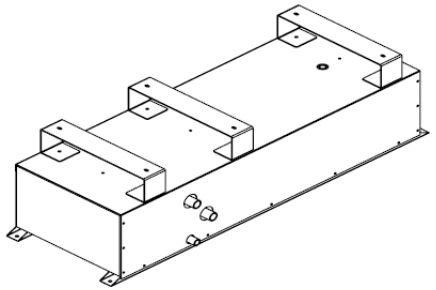
Thermostatic diverter valve

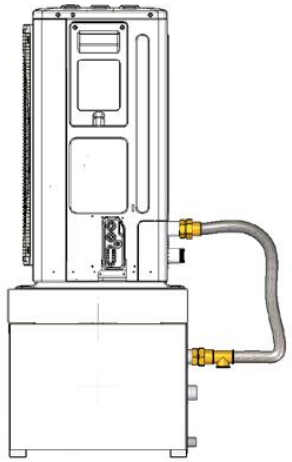
For Hybrid version with DHW tank

System's components

System buffer tank

(30/70/100 litres)





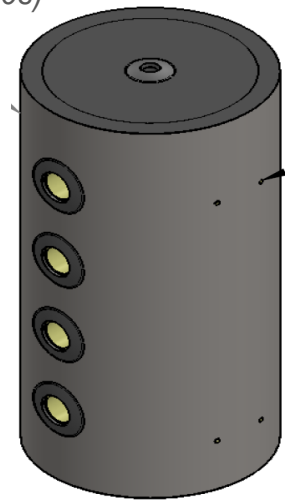
Two-zones distribution kit

two-zones
(direct or mixed)

single zone

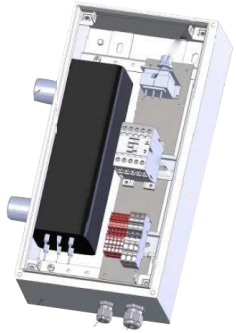
Hydraulic separator

(1/50/100 litres)



Secondary circuit pump

Back-up electrical heater



- 230V *(2-4-6kW)*
- 400V *(3-6-9kW)*

Flexible tubes' kit fot the connection of the unit with the inertial accumulation

Installation and safety

Magnetic separator filter

Drain pan

Safety antifreeze valve

Brackets for wall fixing

Flexible piping kit for connection to the unit

Antivibration mounts kit

antiseismic

standard

Other accessories

Chronothermostat HID-TConnect

App Clivet Home Connect

Voice control

ELFOSun²

Receiver / IoT switch SwitchConnect

Switch IoT:

- ✓ system without wirings
- ✓ operation mode change (2 relè)

ELFOControl

Thank you!

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