



HEAT PUMP

CATALOGUE



AIR-SOURCE INSTALLATIONS

Air-source heat pumps harness the energy of the air. Ecoforest has developed two types of air-source heat pumps:

ecoAIR⁺: an innovative range on the market of monobloc air-source heat pumps that guarantees extraordinary performance even in the most unfavorable conditions and adapts to the needs of the installation at all times.

ecoGEO⁺ & AU: a unique solution that combines an ecoGEO⁺ heat pump with an outdoor air unit (AU). It offers extraordinary efficiency and allows the realisation of ground-air source hybrid systems to achieve a perfect balance between investment and performance.




WE'R'290

How air-source systems work

Air-source heat pumps **use outside air as an energy source**, producing domestic hot water, heating and cooling. By means of the thermodynamic cycle, they use the energy of the air to produce the thermal energy required by the building.

Air-source heat pumps **have an average price and a more affordable installation than ground-source systems**, although their efficiency is influenced by external environmental conditions, resulting in a slightly lower performance than geothermal installations.

The installation of air-source heat pumps is simpler than ground-source heat pumps, since they only require the installation of an outdoor unit, which captures energy from the air, and an indoor unit.

Air-source systems require a lower initial investment than ground-source installations and, in turn, offer a slightly lower performance. However, it is still a much more efficient system than conventional heating systems.

Types of air-source heat pumps

AIR – TO – AIR



The air-to-air heat pumps exchange heat with the outside air and emit this heat to the installation by means of hot or cold air. The best-known air-air heat pump of this type is commonly known as air-conditioning.

AIR – TO – WATER



Air-to-water heat pumps exchange heat with the outside air and emit this heat to the installation by means of hot water or cooling with chilled water. This type of air-water heat pump can be connected to radiators, underfloor heating or fan coils, in addition to producing DHW.

Ecoforest air-to-water heat pumps are **monobloc systems**, in which all components are located inside the outdoor unit. Therefore, the connection between the outdoor unit and the building is completely hydraulic, without including refrigerant, which allows for simpler and faster installations and maintenance.

ecoAIR⁺ Inverter air- to-water monobloc heat pumps

DDC - Unique defrost system increasing the average delivered power by 15%.

Natural refrigerant R290: more than 140 kW in cascade.

Compact installation, **no buffer tank** required.



ecoAIR⁺ PRO

WE 'R' 290

SERVICES



DHW



Heating



Cooling



Swimming Pool

EMISSION SYSTEMS



Radiators

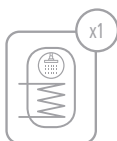


Fan coils

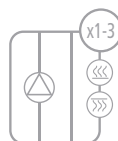


Underfloor heating
and cooling

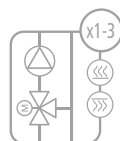
MANAGEMENT OF PRODUCTION AREAS



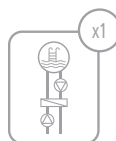
DHW
Management



Management of 1
to 3 direct zones



Management of 1
to 3 mixed zones



Pool
management

AIR - WATER MONOBLOC

Air-source heat pump with natural refrigerant

- | Inverter technology and natural refrigerant R290. GWP: 3. Power ranges: 1-7 kW / 1-9 kW / 3-12 kW / 3-18 kW / 6-24 kW.
- | **Operation in extreme outdoor temperatures from -25 to 55 °C.**
- | **Hot water production temperatures of up to 75 °C** without electrical support.
- | Domestic hot water production, heating, swimming pool and active cooling.
- | Variable speed fan.
- | Integrated energy meters and internet control via ecoSMART easynet.
- | Hybridisation with photovoltaic energy.
- | **Single-phase (230V)** or three-phase (400V) power supply depending on the model.
- | Cascade of up to 6 units.
- | Dynamic Defrost Cycle (DDC): faster defrosting.
- | No need for a buffer tank in most installations (*).
- | **HTR technology** for DHW production, simultaneous production of services up to 75 °C without electrical support in the ecoAIR⁺ 6-24 PRO model.

Features

ecoAIR+ 6-24 PRO outdoor unit
Power output of up to 144 kW



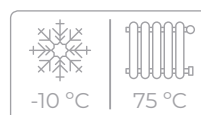
ecoAIR+ 6-24 PRO



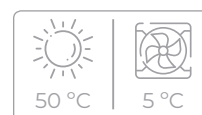
CM / HK
Indoor Unit



CM Lite
Indoor Unit

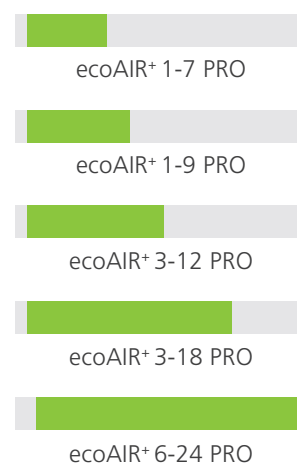


With -10 °C outdoors we reach
75 °C in heating



At 50 °C outdoors, we reach
5 °C of cooling production

MODELS



Propane, innovation is natural

R290 natural refrigerant offers the following advantages:

1. Naturally derived, unlike synthetic refrigerant gases.
2. Sustainable, with a near-zero greenhouse effect (GWP: 3).
3. Highly economical.
4. High performance and energy efficiency.
5. Wide range of working temperatures.
6. No buffer tanks are required.

When replacing a boiler with a heat pump in a radiator system, a key aspect is the **high temperature required by these emitters**. The ecoAIR+ PRO heat pump can reach more than 75 °C without additional electrical support, even in extreme weather conditions, making it fully compatible with radiator installations.

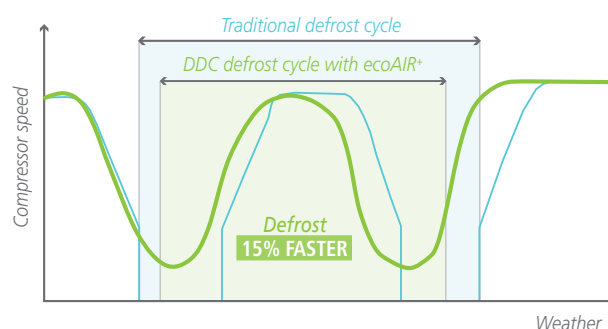
Thanks to the technology developed by Ecoforest, replacing an old boiler with a heat pump is a simple and economical process, while guaranteeing the best thermal comfort.

^(*) In most of the installations

DDC, dynamic defrost system

Ecoforest has developed the Dynamic Defrost Cycle (DDC), an innovative defrost management system that optimizes the effective output of ecoAIR+ heat pumps.

DDC allows the compressor to slow down without stopping operation. Thanks to this innovation, defrosts are managed more quickly and efficiently, increasing the effective power available to the installation.



ecoAIR⁺ EVI



SERVICES



DHW



Heating



Cooling



Swimming Pool

EMISSION SYSTEMS



Radiators

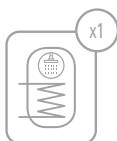


Fan coils

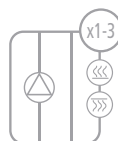


Underfloor heating
and cooling

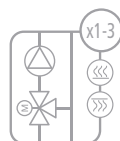
MANAGEMENT OF PRODUCTION AREAS



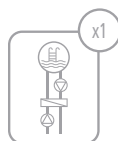
DHW
Management



Management of 1
to 3 direct zones



Management of 1
to 3 mixed zones



Pool
management

AIR - WATER

Air-source heat pump with EVI technology

- | Inverter and EVI technology.
- | Power ranges: 4-20 kW.
- | Operation down to -25 °C, using the exclusive EVI technology through the Flash Tank, to achieve the best performance even in the most adverse conditions.
- | Domestic hot water production, heating, swimming pool and active cooling.
- | Variable speed fan.
- | Integrated energy meters and internet control via ecoSMART easynet.
- | Hybridisation with photovoltaic energy.
- | **Single-phase (230V)** or three-phase (400V) power supply depending on the model.
- | Dynamic Defrost Cycle (DDC): faster defrosting.
- | No need for a buffer tank in most installations (*).

Features

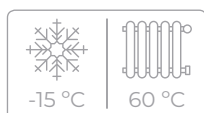
ecoAIR+ EVI 4-20
Outdoor unit

CM / HK
Indoor unit

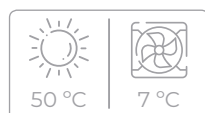
HK-Compact
Indoor unit



CM Lite
Indoor unit



With -15 °C outdoors we reach
60 °C in heating



At 50 °C outdoors we reach
7 °C cooling production

MODEL

ecoAIR+ EVI 4-20

EVI technology, performance in all conditions

The ecoAIR+ EVI heat pump incorporates an EVI scroll compressor, which allows optimised gas re-injection into the compressor, thus achieving higher production temperatures and superior performance. Thanks to this advanced technology, the ecoAIR+ EVI offers three key advantages:

1. **Ideal for retrofitting:** higher capacity and production temperature, reaching more than 60 °C without additional electrical support.
2. **High performance even in extreme outdoor temperatures.**
3. **High temperature water production.**

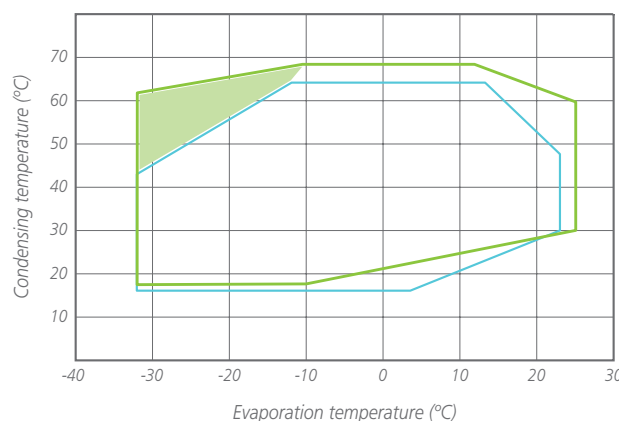
The technology developed by Ecoforest makes the replacement of an old boiler with a heat pump simple and economical, while guaranteeing maximum comfort.

DDC, Dynamic Defrost Cycle

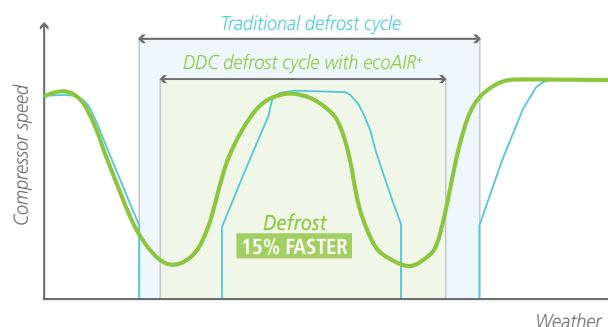
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(*) In most of the installations



— EVI R410 EVI scroll compressor — R410A scroll compressor



Air-source solutions ecoAIR⁺



CM Lite, simplicity

The ecoAIR⁺ system with the CM Lite indoor module offers an economical, compact and efficient solution for heating, cooling and DHW, allowing the management of a supply unit, thermal buffer tank (heating and cooling) and domestic hot water production, ideal for simple and optimised installations.



All in one, HK-Compact

This configuration, which combines an ecoAIR⁺ with the HK-Compact indoor module, allows for more compact and economical installations. The HK-Compact indoor unit integrates all the main elements of the hydraulic system, including a 165-litre stainless steel hot water tank that can be connected to the water circuit.



Maximum efficiency

The ecoAIR⁺ system with HK-EH-S module offers heating, cooling and DHW thanks to the 3-way valve and circulation pump that manages the distribution, with electric resistance as support, filter and integrated controller, allowing up to 3 mixed shunt groups, hybridisation with boiler and connection to DHW and swimming pool for an efficient, compact and versatile climatisation system.



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