R3 REDUCE REUSE RECYCLE

tekno point®

Invisible Climate System

WATER AS A CIRCULAR RESOURCE

IDRA is the air conditioning system with a concealed water-to-air condensing unit that **uses water as a heat exchange medium**, enabling **invisible installations** for listed buildings and historic city centers.

Thanks to **continuous investment in research and development**, the use of water in IDRA systems has been progressively optimized. Today, we take a further step forward: a more conscious approach, based on the principles of ***Reduce***, ***Reuse***, ***Recycle***, where water is not merely a resource to be used, but one to be **enhanced**.

A circular vision that brings together sustainability, innovation, and well-being, oriented toward a **more responsible future**.

REDUCE
Reduces daily consumption;

REUSE
IDRA reuses the same water multiple times;

RECYCLE
The water is reused for other purposes;

DID YOU KNOW...

An increasing number of newly built homes, designed for **energy efficiency and water autonomy, are equipped with rainwater harvesting systems**. In this context, the recovered water can supply a **closed-loop system** integrating a **water-to-air heat pump** (such as IDRA) and a **storage tank**, creating a solution capable of **optimizing energy exchange** and reducing both energy consumption and the use of once-through water, within a circular resource use approach.

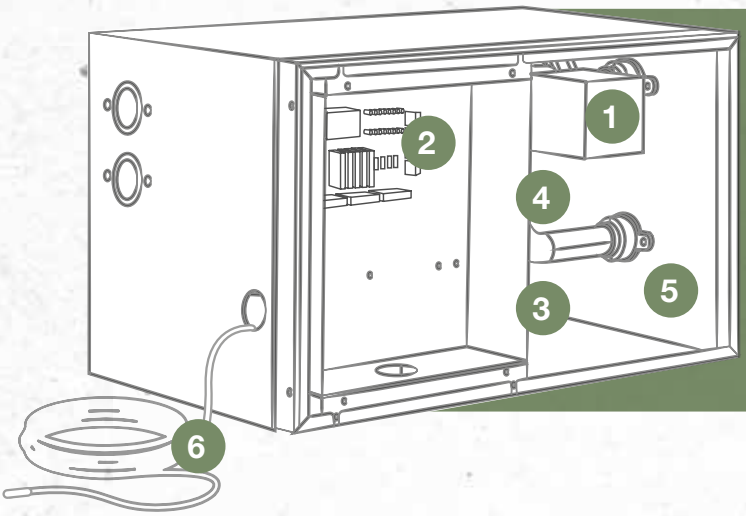
R3 REDUCE REUSE RECYCLE

The R3 Module, a Tekno Point project that translates the principles of Reduce, Reuse, Recycle into concrete and measurable action, born from the concept of water circularity. It is not merely about **adopting a sustainable philosophy**, but about transforming it into a technical solution capable of truly impacting the way we use resources within the home.

With a **focus on real sustainability**, we have developed a system capable of recovering the water used by the **invisible IDRA air conditioning system**: A portion is stored, reused multiple times for the same IDRA unit, and finally repurposed in a smart and functional way in everyday life.

A free reserve of hot water available for domestic services. **One single cycle, multiple functions, greater efficiency**.

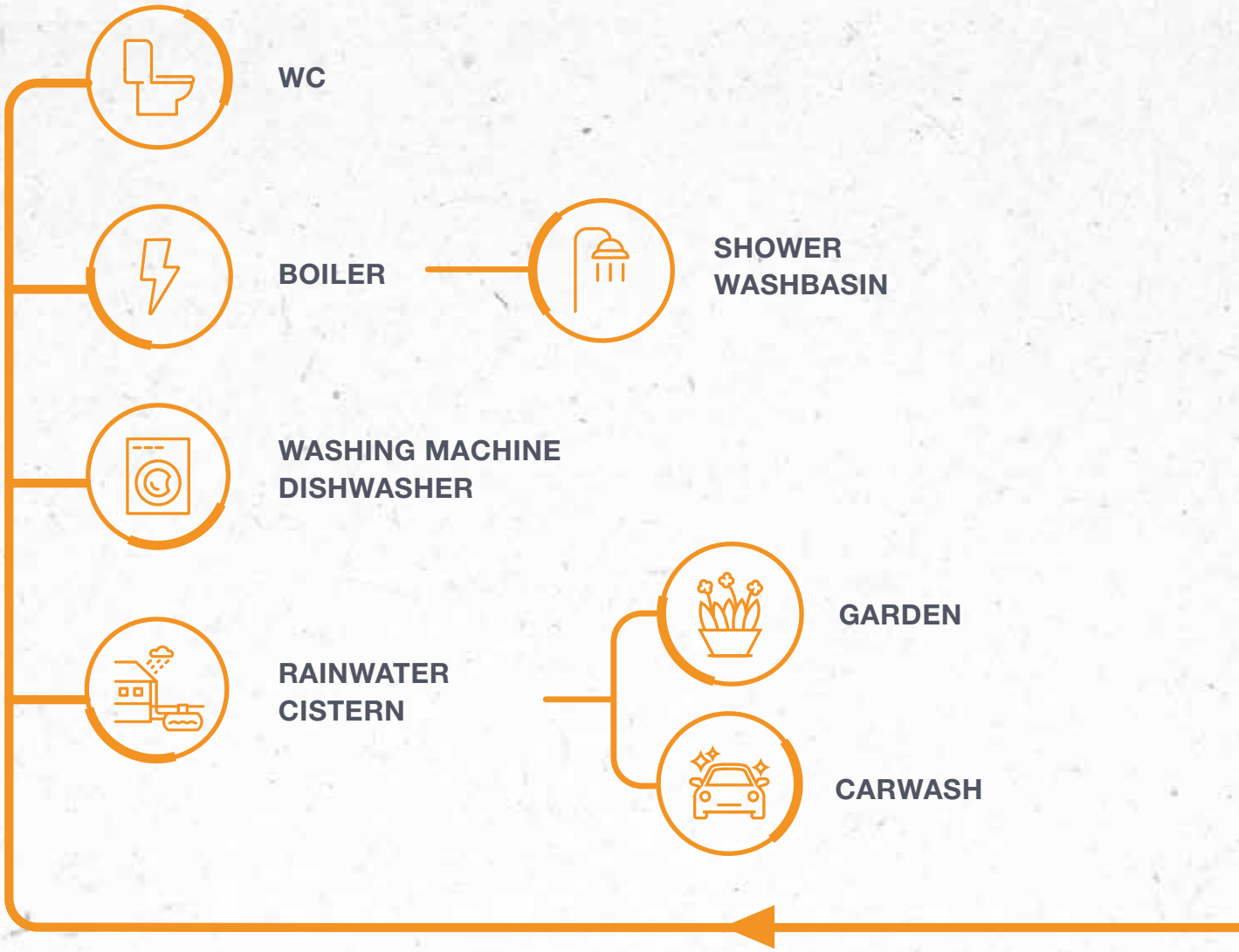
R3 MODULE COMPONENTS



1 - 3-way valve
2 - Electronic control board
3 - Check valve
4 - Circulation pump
5 - Soundproofed structure
6 - Temperature probe for technical storage tank

INNOVATION THAT RESPECTS NATURE

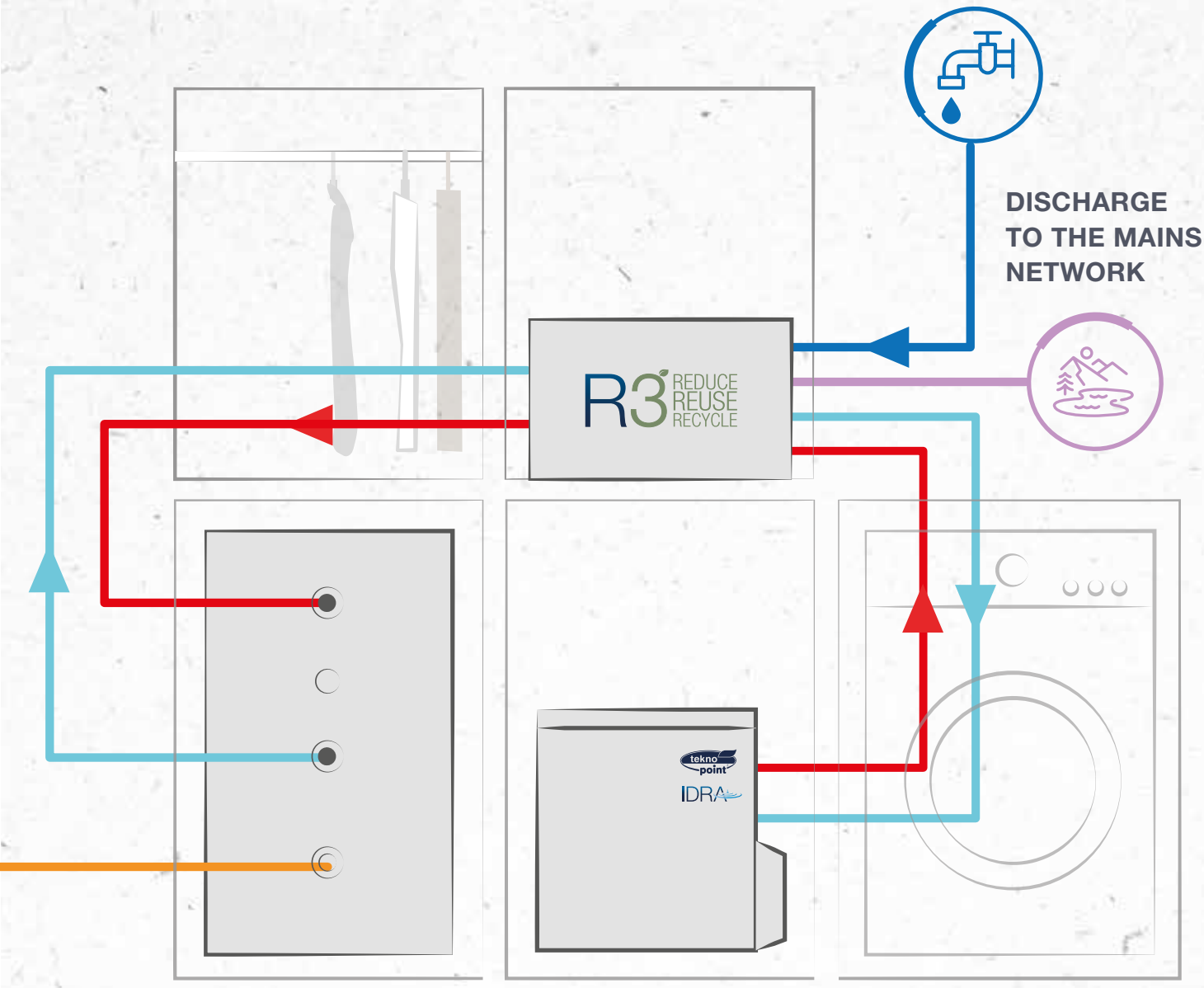
The operation of R3 is simple yet extraordinarily efficient: a closed-loop system equipped with a storage tank that acts as a thermal reserve. This closed system reuses the same water to supply IDRA until its temperature reaches the unit's operating limit, **keeping it within its optimal working range**.



To ensure the continuous operation of IDRA, the module reopens the circuit and refreshes the water in the storage tank, lowering its temperature before returning to the closed loop. **The capacity of the thermal reserve can be selected according to the available space and the specific needs of the customer**. It is also possible to decide how to "reuse" the storage capacity by using the water it contains for purposes other than operating IDRA.

This water can in fact be used to supply WC cisterns, fill household appliances, and serve as preheated water for the domestic hot water (DHW) system.

By reusing the water stored in the tank, the R3 module's circuit remains closed for longer, enabling IDRA to operate with water consumption close to zero.



INSTALLATIONS THAT MAKE THE DIFFERENCE

Every home has different requirements, and the **R3 module** can be easily integrated into a wide range of hydraulic configurations. **Here are some solutions that demonstrate how the system can adapt in a simple, efficient, and sustainable way**.

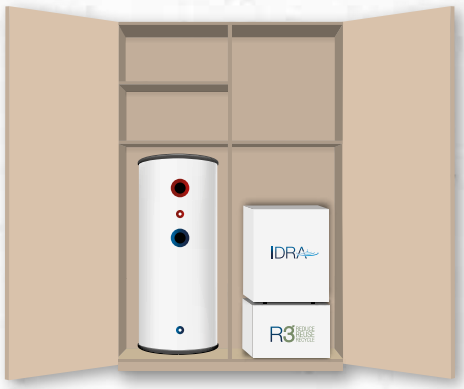
INSTALLATION EXAMPLES

1° CONFIGURATION

In this configuration, the **R3 module** is wall-mounted above the IDRA unit. It is ideal when floor space needs to remain free or when the system requires higher connection points.

2° CONFIGURATION

The most compact solution: IDRA is installed directly on top of the **R3 module**, which has been designed with the same dimensions as IDRA to serve as its base.



3° CONFIGURATION

The most structured solution: at the base there is the storage tank, above it the **R3 module** installed vertically, and at the top the IDRA unit. A clean and linear configuration that optimizes water flows and makes the most of the vertical space available.

3 GREAT REASONS TO CHOOSE THE R3 MODULE

REDUCTION IN WATER CONSUMPTION

The R3 module is designed to reduce water withdrawal from the mains supply.

REUSE OF WATER WITHIN THE SYSTEM

Thanks to a storage tank, the R3 module creates a closed system that **reuses the water multiple times** for the operation of IDRA.

WATER RECOVERY AND REUSE

Before being discharged into the drainage system, the water used for IDRA is reused for other domestic purposes, maximizing its lifecycle and **completing a circular resource management model**.

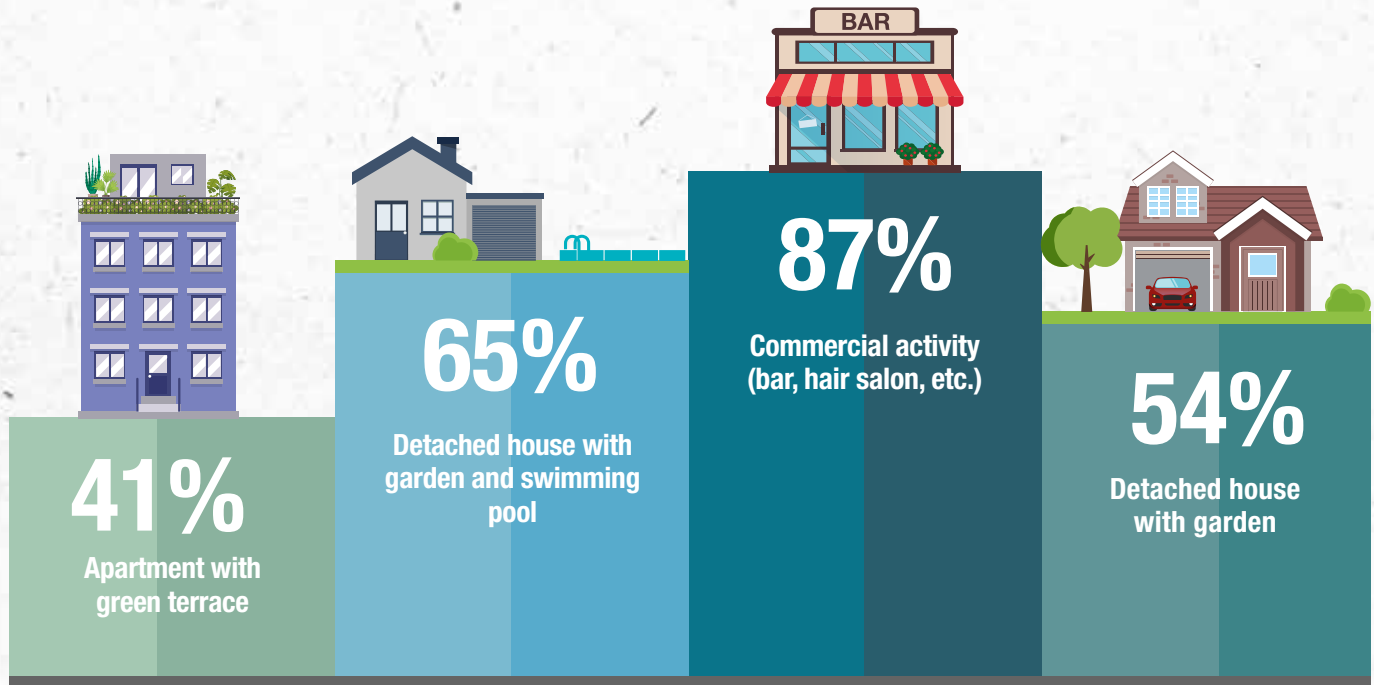
INSIDE THE EFFICIENCY OF THE R3 MODULE

Here you will find all the **technical specifications** that define the performance and reliability of R3.

R3 Module Technical Data Sheet		
Code	-	**R3**
Power supply	V-Hz-Ph	230-50-1
Overcurrent protection	A	6
Power cable cross-section	mm^2	3x1,5
Sound pressure level	dB(A)	18
Sound power level	dB(A)	30
Dimensions (LxPxH)	mm	500x312,5x275
Weight	Kg	16
Circulation pump	-	SHIMGE APM25-12-180
Water connections	Inch	1”
Optimal inlet water pressure	bar	2,5

WATER RECOVERY SCENARIOS BY PROPERTY TYPE

Thanks to the **R3 module**, the water used by the **IDRA air conditioning system** can be recovered and reused for other domestic purposes up to a **very high percentage**. This makes it possible to significantly reduce the use of potable water, as the water already utilized by IDRA is recycled, promoting a more sustainable management of water resources.



Example: in a detached house with a garden and swimming pool, the water used by the IDRA air conditioning system can be recovered and reused for the washing machine, dishwasher, and WC cisterns, or directed into a cistern for garden irrigation, car washing, and pool filling. In this way, approximately 65% of the water used by IDRA for cooling can be reused for other purposes.

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