

# Feel-good efficiency.

Indoor Climate Solutions  
by Wavin



Advancing  
Indoor  
Comfort



**wavin**

An Orbia business.



# A human need for ages: Indoor Comfort.

Europeans spend  
**90 %**  
of their time indoors

## A basic human need: Indoor Comfort.

Since prehistoric times, humans have sought shelter and warmth to protect themselves from the weather. Indoor comfort is essential for our survival.

However, it comes at a cost.

This cost has evolved significantly, encompassing financial, ecological, and moral implications. Today, it is evident that our pursuit of comfort impacts both the environment and future generations.

Our Advancing Indoor Comfort concept aims to mitigate these costs.

We are committed to a threefold promise:  
Advancing through efficiency.  
Advancing through sustainability.  
Advancing through intelligence.

Our innovations benefit you and the planet, while maintaining affordability.

Welcome comfort. Welcome to Wavin.

Buildings account for  
**40 %**  
of all energy consumption, of which 78 % goes to space heating and domestic hot water

Wavin's Indoor Climate Solutions can save you up

**21 %**

in energy use through zone control.





# Maximising Indoor Comfort. While minimising the price.

## An unique all-in-one system that optimises itself.

Regardless of whether it's a detached house or a block of flats: if you think of the individual heating, ventilation and cooling systems not in isolation but in combination, completely new possibilities open up. This is the basic idea behind Wavin's Indoor Climate Solutions: ideally, each building should not only be equipped with a customised stand-alone solution but with an all-in-one system that enables the best possible efficiency - because each product knows exactly what the other is doing. The heat source knows the heat requirement in the home to prevent overheating. And the ventilation system knows when to switch off when heat is required. Together with Zone Control, this reduces energy consumption to an absolute minimum.



Controls



Surface Heating and Cooling



Ventilation



Heat Interface Unit



Heat Pump Connection



Digital Services





# Best-possible efficiency: with an integrated All-in-one Climate System.

## A glimpse behind the scenes of single family houses and apartment blocks.

As the only provider to offer such a networked all-in-one solution, Wavin offers the possibility of realising every conceivable indoor climate task. Stand-alone solutions such as Underfloor Heating, Ceiling Heating/Cooling or a Heat Recovery Ventilation Unit can be controlled via the Sentio controller. At the same time, the Sentio Controller will also be at the centre of an all-in-one system that perfectly coordinates the individual components and ensures intelligent and energy-efficient control of the indoor climate – anywhere in the house. Including the option of connecting heat pumps or radiator thermostats. All components are extremely compact - which makes them particularly easy to integrate in closets even in blocks of small flats.



3



1



2



### 1. Controller

A real mastermind: as main controller for every stand-alone solution and as central control unit for every combination solution.



### 2. Surface Heating and Cooling

Underfloor Heating and Ceiling Heating/Cooling will be controlled via room thermostats in each room.



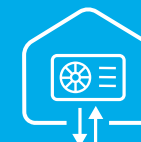
### 3. Heat Interface Unit

With one unit per household, it produces Surface Heating and Domestic Hot Water in domestic buildings.



### 4. Ventilation

Combined with Heat Recovery, the ventilation solution uses the heat from exhausted air to heat up fresh inlet air.



### Heat Pump

Can be easily connected and thus becomes part of an efficiency-optimised overall solution.



### Digital Services

They simplify the installation, use and maintenance of the Sentio Controller.

A warm home turns every square meter into a feel-good zone.

A warm home turns every square meter into a feel-good zone.





# Well-being starts right here: with the perfect room temperature.

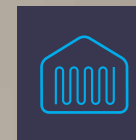
## Turns customers into kings: the Sentio App.

With the Sentio App, Wavin offers full control for home owners at their fingertips.



## Easy-to-install: the Underfloor Heating.

Includes the complete Underfloor Heating portfolio: pipes, manifolds, mixing units and panels.



## All good comes from above: Ceiling Heating & Cooling.

Where Ceiling Heating and Cooling is required, Wavin offers an efficient solution using pipes and panels in the ceiling or walls.



## Surface Heating and Cooling: with the Wavin thermostat.

The only indication of the perfectly installed Surface Heating solution is a perfectly designed thermostat that even displays humidity levels.



# All climate aspects under control: with Sentio.

## The controller: heart of any Advancing Indoor Comfort Solution.

Wavin offers a connected solution where Underfloor Heating, Radiator Heating, Ceiling Heating and Cooling, Ventilation and Heat Interface Units can be controlled and maintained via one controller only. Originally developed as a pure Underfloor Heating controller, it is the key element of any Advancing Indoor Comfort solution today.

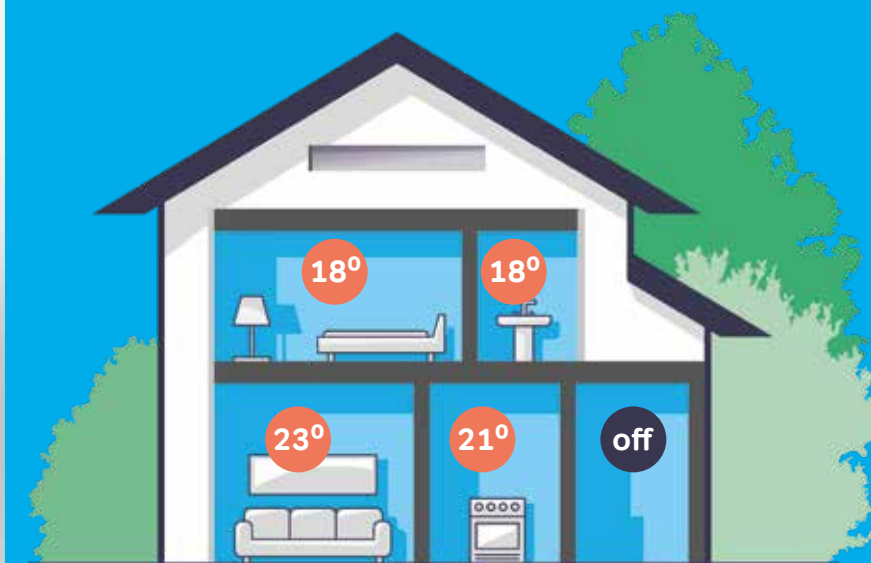


## Full control from anywhere: the Sentio App.

Free to use for your end customers: the Sentio App. Homeowners or tenants can use the Sentio App to set the desired temperatures for all rooms via an intuitive user interface. Daily and weekly settings are also possible. Particularly practical: if you are on the move, you can control all temperature settings from anywhere using your smartphone.

## Best possible efficiency has a name: Zone Control.

The best example of the ultra-modern efficiency of an Advancing Indoor Comfort solution: Zone Control. It enables maximum resource-saving heating as each room is controlled to the exact desired temperature. Simply set a living temperature that suits individual preferences – and everything else regulates itself. Do you want the living room to be at cozy 22 degrees, but 19 is enough in the bedroom? No problem. But you can do even better: just let the built-in humidity and CO<sub>2</sub> sensors automatically take care of the indoor climate.







# If only everything was as easy as working with Wavin's devices & tools.

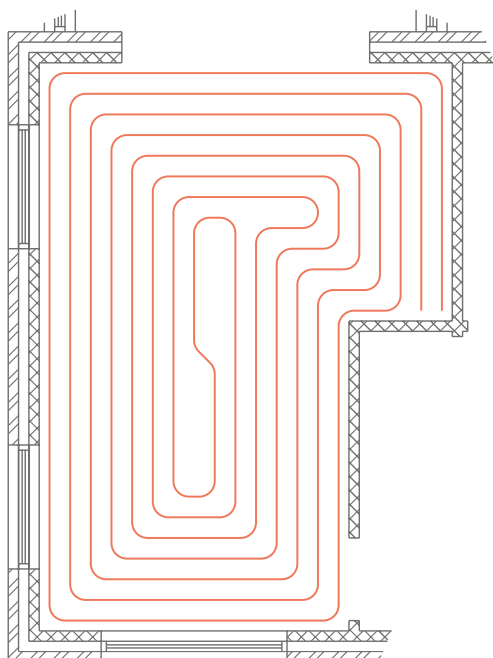
## Wavin All-Inclusive

For installers who prefer a comfortable "unbox & work" solution, we deliver all the required controls in one delivery, Completely packed, precommissioned and ready to be installed.

## The planning: advanced.

### With advice, tools and guidance.

Wavin supports the planning process with general installation advice including layouts and heat outputs. Further support is available online: with installation guides, product literature, links to step-by-step videos, FAQs and access to our quotation and calculation tool.



## The installation: simplified.

### 1. Connect

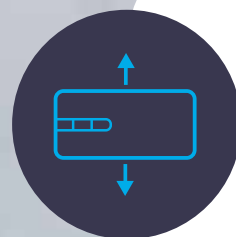
Sentio makes installation an effortless three-step process. Step no. 1: Easily connect the Central Heating and Cooling Control Unit (CCU) with the thermostats. The base unit supports up to eight thermostats, 16 actuators and two circulation pumps.

### 2. Set

Step no. 2: Set the temperature within seconds via laptop or portable touch screen. Pre-set profiles enable fast and doubt-free commissioning. Enjoy maximum flexibility and simplicity: There is no need to have programming skills to change the settings.

### 3. Go

Your job is done: from now on, the Sentio thermostat takes over! Once installed, it scores with stability and reliability thanks to its strong communication protocol. For professional installers, this means fewer call-backs and savings in time and resources.



## The maintenance: remote.

### 1. Install SmartConnect

Install Sentio SmartConnect on your computer.

### 2. Access with two buttons

When issues arise, the customer gives you access just by using two buttons on the controller, or through the Sentio App, providing a convenient solution even when away from home.

### 3. Remote maintenance

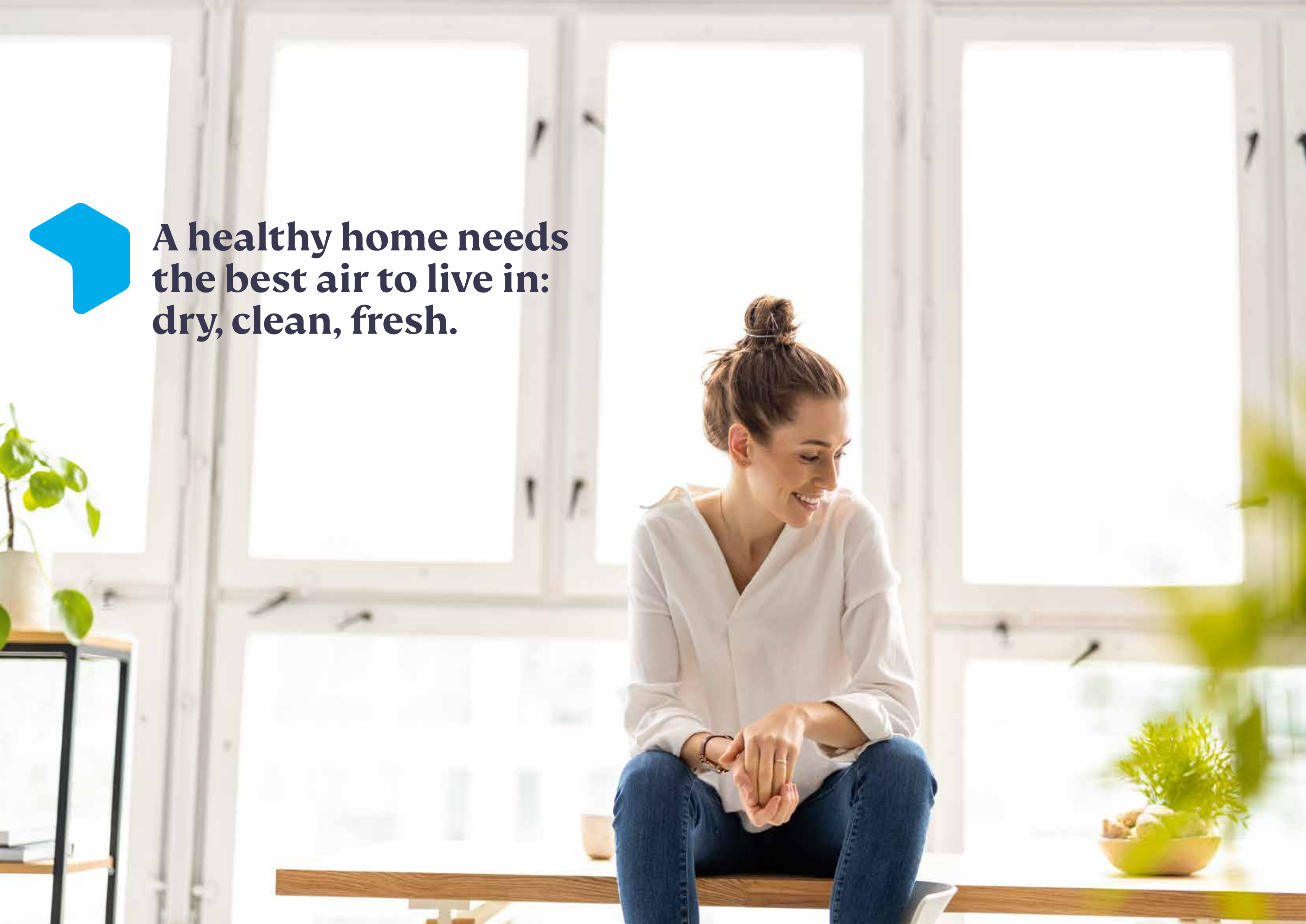
The software mirrors the interface of a Sentio commissioning touch screen enabling you to inspect alarms, identify errors and change settings remotely. This saves time, hassle and costs for everyone involved.







**A healthy home needs  
the best air to live in:  
dry, clean, fresh.**





# Perfect air, healthy and clean: with included efficiency booster.



How can you recognise fresh, clean, healthy air? By the fact that you don't notice it. Because first-class indoor air quality prevents CO<sub>2</sub> peaks, air pollution and bad odors – thanks to a continuous supply of fresh air. Sounds simple? Not quite. Achieving these goals with maximum energy and resource efficiency requires an overall system that takes all the key factors into account.



## The “Fabulous Five” key factors for optimum ventilation:

- 1.** Continuous humidity control: can minimise the risk of mould, fungi and dust mites.
- 2.** Filters: to remove allergens, pollutants, insects and odors and help prevent the spread of germs and pathogens.
- 3.** Reduced noise pollution: less noise through quiet operation is a must with closed windows.
- 4.** Draught prevention: the system must be able to prevent draughts in airtight buildings.
- 5.** Energy efficiency: Heat recovery ventilation saves energy by transferring up to 90% of the heat from exhaust air to pre-warm incoming fresh air. This means 8-10 times lower energy costs for mechanical ventilation compared to naturally and uncontrolled ventilated buildings.





# Visible: the technical masterpieces. Invisible: the superior Heat Recovery.

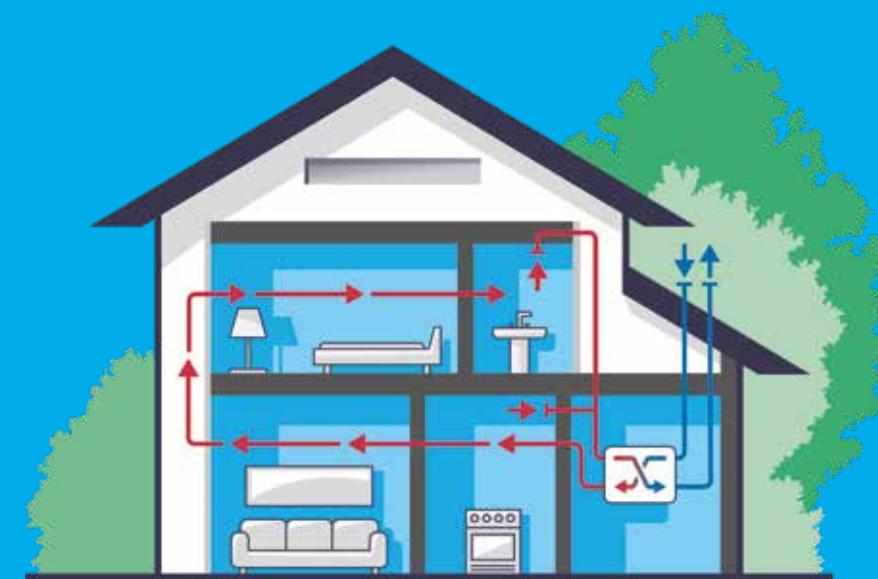



## Central units: the easy-to-handle centerpiece.

A real guarantee for air quality: the central unit enables humidity control at room level either via the Wavin room thermostats or via its own integrated humidity control. CO<sub>2</sub> sensors can be connected for local demand control. Commissioning is extremely simple: the system is calibrated via the Sentio display; daily use is then fully automatic or via the Sentio App. Four duct connections on the top and compact installation dimensions make handling particularly easy for professional installers.

## Heat Recovery: the resource-saving technology.

Heat recovery ventilation from Wavin, significantly reduces your heating costs – while at the same time providing fresh dry air throughout your living space. The basic principle is simple: heated outgoing air transfers up to 90% of the heat to the incoming fresh air via the heat exchanger before being distributed evenly throughout the building.





**A smart home increases  
room comfort and  
reduces its price at the  
same time.**







# Pretty clever: a Heat Interface Unit that learns adaptively.

Wavin's Heat Interface Unit (HIU) sets new standards for water heating in terms of responsiveness, efficiency and ease of installation. The integrated self-optimisation is outstanding; after just two weeks, the HIU has learned the household-specific consumption, adapts the processes accordingly, minimises energy consumption and thus sets an industry-wide milestone in terms of efficiency.

The HIU generates surface heating and domestic hot water for each individual household, is easy to operate via its user-friendly display and enables system-integrated control of hot water preparation via the Sentic App.

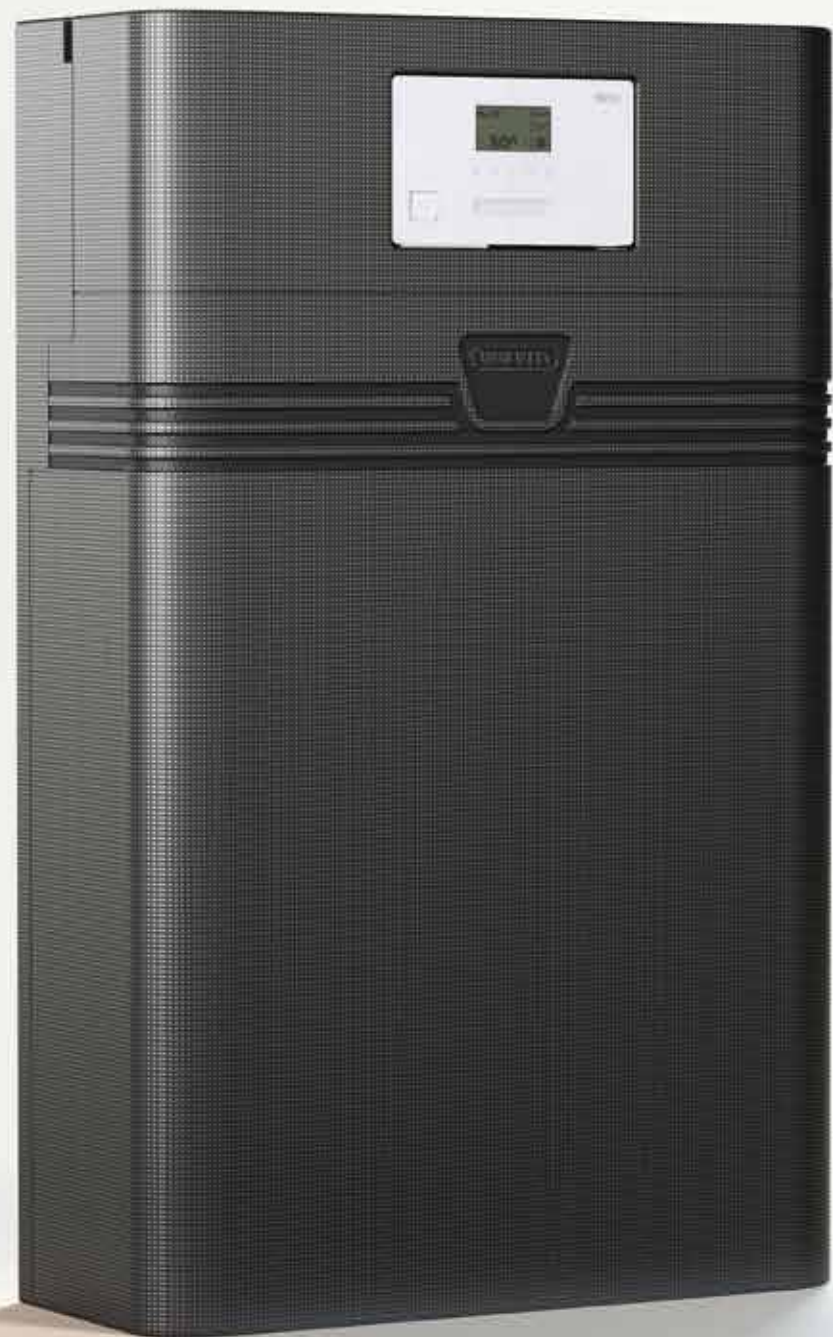
## A smart HIU reacts to weather changes. And to shower marathons in the morning.

The Wavin Heat Interface Unit automatically adjusts the hot water temperature to the outside air via a single wireless sensor with a range of 40 meters. This weather compensation saves up to 5 % energy. One sensor is suitable for buildings with several residential units. This simplifies installation and reduces cabling, effort and costs.

Furthermore, the Wavin HIU ensures that hot water is available as a priority in houses and apartments at peak consumption times. The system temporarily interrupts the heating to maintain the flow of hot water, thus increasing the network capacity by 50 %. This eliminates the need for a hot water storage tank - saving space and money. As an alternative to a HIU, the Wavin System can also be connected to a heat pump.



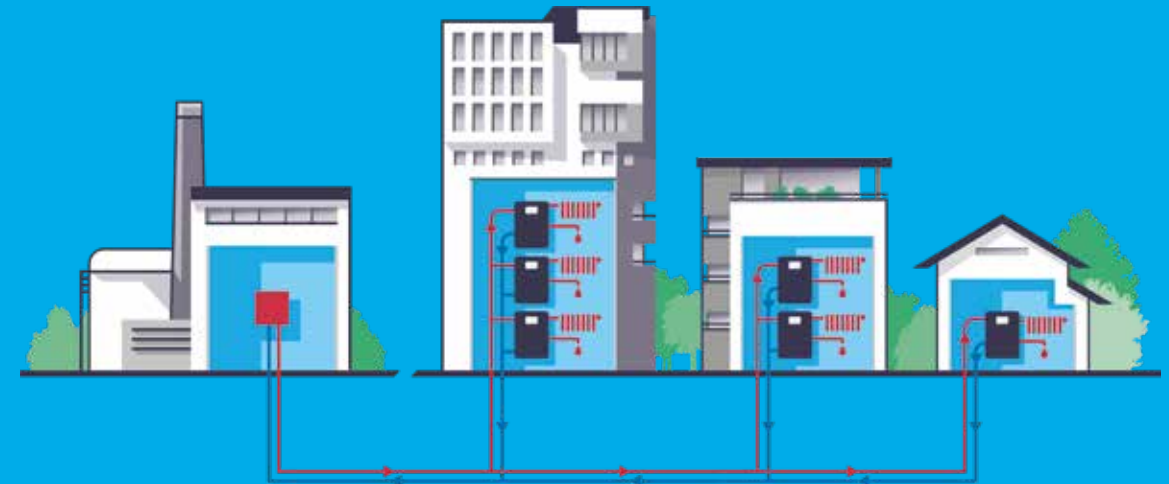
# Efficiency XXL: district heating for a wide variety of building types.



## District heating: the supreme discipline in efficient heat supply.

District heating is one of the most important elements in the transition to greener energy forms, for general energy optimization and for an increased independence on fossil fuels. The UN estimates that 70 % of the world's population will live in cities by 2050. This requires a new way to design buildings, so that we can maintain

our ever-present desire and need for a good and healthy indoor climate while maintaining a high comfort level. Wavin optimizes the efficiency of regional district heating concepts with the local Heat Interface Unit in individual buildings. After the hot water from the district heating network is distributed decentrally to the respective buildings, the local Heat Interface Unit converts the hot water into heat for radiators or underfloor heating and into domestic hot water, e.g. for showers. The now chilled water is then returned centrally to the district heating network.



Ideal for the efficiency-optimised use of district heating: local Heat Interface Units from Wavin.



### Automatic weather compensation:

adjusts hot water temperature  
based on outside air

### Adaptive learning:

gathers data for 2 weeks and automatically  
adjusts to only heat water when needed.

### Domestic hot water prioritisation:

pauses heating to maintain hot water flow,  
boosting network capacity by 50%.

### Fast commissioning:

simplifies hot water and heating system setup  
with automatic configuration.

### User friendly display:

simplifies comfort by providing real-time  
system status for residents.





# Supports everyone involved on every process step: Advancing Indoor Comfort.

1

## Building Owner

- One stop shopping: complete Underfloor Heating Portfolio with controller, pipes, manifolds, panels etc., designed to fit together, all tested and proven
- No expansion modules necessary: all functions are built-in to Sentio
- Wireless incl. infrared/wired/combo possible
- All-in-one: 1 controller, 1 app, 1 point of contact
- Wavin supports configuring the solution
- Building health is "included": humidity sensors avoid mould, no need to rely on occupants ventilating apartments

2

## Specifier/Consultant

- Reliable partner: Wavin is an established and experienced global player with international expertise
- Large product portfolio
- Consultancy: Wavin guides to specifying the optimum solution
- Sustainability: biobased products
- Continuous product and services development
- Calculators & BIM models

3

## Installer

- Wavin Academy: On-site training for first installations (not in all countries)
- Advanced and reliable communication with the Wavin experts
- Wavin Installer Network in selected countries
- Calculators
- Proven products with advanced and reliable communication protocols and easy to install (Connect-Set-Go)
- One stop shopping: complete indoor climate solution with 1 controller
- Complete UFH portfolio
- Sentio All Inclusive: precommissioned delivery of controls (not in all countries)
- Simplified remote support via Sentio SmartConnect
- Automatic updates when connected to internet
- Technical support

4

## Home Owner

- One App: just one remote control for the complete indoor climate solution
- Energy savings and comfort with zone control for different temperatures in different rooms
- Option to schedule when to turn down heat
- Well designed room thermostats, only illuminated when operated
- User guides available 24/7 (e.g. when moving into a new house)
- Peace of mind: no counter actions as system elements communicate by themselves
- Healthy indoor climate: optimum ventilated home, no risk of moist, mould, allergies or bad smells
- Scheduling for radiator thermostats and/or fast reacting UFH (enables heating plans according to the family's routines)
- Reduced energy consumption: incoming air is heated by the outgoing warm air
- Hazzle-free operations thanks to remote maintenance by installers/facility managers via Sentio SmartConnect



# The guarantors for Advancing Indoor Comfort.

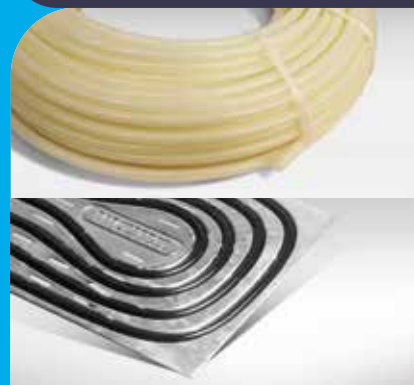
## Superior Indoor Climate Solutions.

With these elements, you can implement integrated all-in-one climate solutions that combine maximum living comfort with the best possible health, economic and ecological characteristics. Please note that design, equipment and availability vary regionally.

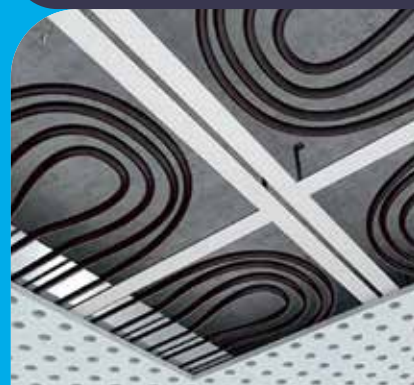
### COMFIA



Manifold



Underfloor heating



Ceiling heating and cooling

### SENTIO



Sentio Controller



Room thermostats



Radiator thermostats

### VENTIZA



Central units



Decentral push-and-pull units



Ducts

### DIGITAL SERVICES



Sentio All Inclusive



Sentio Smart Connect



Sentio App

### CALEFA



Heat Interface units

### EXTERNAL DEVICE CONNECTION



Heat pumps



# Contact us for Advancing Indoor Comfort.



Building &  
Infrastructure



Wavin is part of Orbia, a group of companies  
that masters some of the world's greatest challenges.

United by a common goal:  
To improve lives around the world.

**Wavin GmbH** Wavin B.V. HQ  
Schiphol | Boulevard 425