



## Underfloor heating and cooling

## Perfect match for our zero-carbon future

The UK has committed to zero carbon by 2050 and decarbonising how we heat our buildings is a key challenge. Underfloor heating is ideally match for a low carbon heat pumps or can used on a district heat network to distribute heat within a building.

For new build residential projects, underfloor heating is now increasingly in popularity in both single houses but in particular in apartments where precious floor space can be saved by removing radiators. The increased comfort for the occupants from a radiant heating system is also driving its growth within the UK.

As we are insulating buildings better, the requirement for cooling in both residential and commercial projects has increased. An underfloor system, with the correct design and controls, can be used to cool a building using the same pipework as for heating. Additionally, cooling can also be achieved via chilled ceiling panels or Thermally Activated Building Structures (TABS).





#### **Underfloor Heating**

Underfloor heating can be up to 20% more efficient than radiators when used with a gas boiler and up to 40% more efficient than radiators when used with a heat pump.

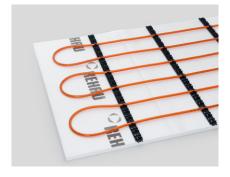


## Floor systems

REHAU have an underfloor heating and cooling solution for all your project needs covering both wet and dry floor constructions

#### Systems include:

- RAUFIX clip rail (screeded)
- Tacker staples (screeded)
- Industrial floor heating (screeded)
- Floating floor (dry)
- Diffusion plate (dry)
- Sprung floor (dry)
- Acoustic batten (dry)







## **REHAU** quality

REHAU have been manufacturing PE-Xa pipes for over 45 years and our PE-Xa pipes go through a strict testing regime throughout the production process. REHAU launched its first underfloor heating range in 1975 in Germany and have been selling underfloor heating for over 30 years in the UK.

- PE-Xa pipe with EVAL oxygen barrier
- 16mm or 20mm (in 240m or 500m coils)
- 12mm available as non-standard
- Lifespan of over 50 years (to BS EN 15785)
- 6 bar / max 95°C rated

PE-Xa has many advantages over alternative pipe materials due to its high flexibility and memory effect. This memory effect is how the renowned Everloc™ compression sleeve can be used for jointing or pipe repairs in an underfloor heating system. It comprises of a fitting and a sleeve, which means no O-rings.

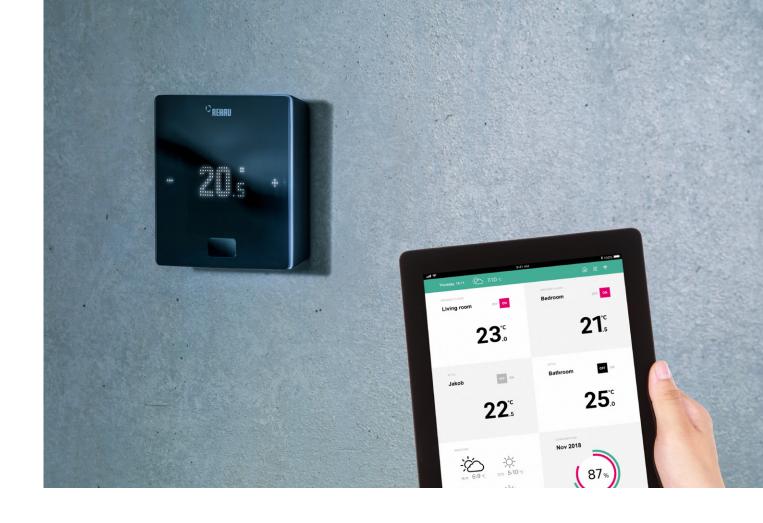




#### **Everloc™ Jointing Solution**

REHAU's Everloc™ compression sleeve system has been used over 850,000,000 times worldwide. A 10 year comprehensive warranty is standard for all REHAU underfloor systems.





## **NEA Smart 2.0**

With the growing demand for smart heating controls, REHAU have launched NEA Smart 2.0 to offer a stylish control solution with a wide range of smart features. Smart controls can offer up to 20% energy savings versus traditional heating controls.

The LED dot-matrix design is ideal for modern buildings and can be used on both residential and commercial projects.

- Unique design with energy saving LED dot-matrix display
- Wired and wireless versions can be paired to the same base station
- Up to 8 zones per base station but up to 60 zones possible when paired together
- Self-learning software to optimise performance
- Amazon Alexa integration and geofencing
- Simple installation wizard and over-the-air software updates







## A first class service

### A partner you can rely on



#### **Accredited installers**

REHAU has a network of trained contractors to ensure the highest installation standards.



#### Academy/CPDs

Training is available for contractors on-site. Our accredited CPDs can be provided online



#### On site support

Our technical team can visit site to assist with tool training, installation and commissioning.



#### UK stock

Our product ranges are stocked in the UK and at major national distributors.



#### **Design services**

Unrivalled design support from concept to detailed design.



#### **BIM** ready

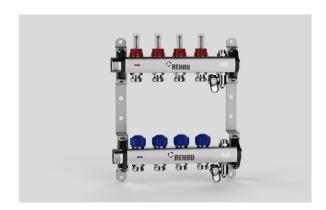
All our products are BIM Level 2 ready.

## Complete range from REHAU



#### **NEAHT**

- Simple thermostat with timer
- 230V system
- Simple wiring installation
- 6 stats per wiring centre



#### Stainless steel manifolds and E-mix module

- 2-12 port variants as standard
- Integrated flowmeters and balancing valves
- Industrial manifolds also available
- E-mix module includes high limit stat and latest high efficiency pump



#### Actuators:

- 24V and 230V options
- 1m cable length
- Includes 'first-open-function' to assist installation
- Adapters available for various manifolds



#### **RAUTITAN** heating & plumbing

- 10 bar WRAS approved plumbing system
- Available as PE-Xa or MLCP PE-Xa
- Simple visual inspection of joint
- No O-rings



# Thermally Activated Building Structures (TABS)

TABS is increasingly in popularity as developers and specifiers are looking at ways to heat and cool building efficiently. It has been extensively used on education, retail and commercial buildings. The UK projects where TABS have been used, are often BREEAM Excellent or Very Good or Passivhaus certified.

TABS utilises the thermal mass of a building for building and cooling. 20mm PE-Xa pipes are embedded in the concrete structure and joints can made in the concrete using the leakproof REHAU Everloc™ jointing system.

It can reduce the demand for air-conditioning which can save up to 30% on the capital costs but up to 50% on the operating costs. This is why it is being specified across the UK on energy efficient projects looking for a low carbon cooling option.





## **Case studies**

#### Installations across the UK



Leicester University – centre for medicine

Building type: Univerisity, Education REHAU products: TABS, AWADUKT Thermo ground-air heat exchanger, Underfloor heating



Llandysul School

Buildingt type: School, education REHAU products: Underfloor heating, heating controls, RAUVITHERM pre-insulated pipework



**White Collar Factory** 

Building type: Offices REHAU products: Thermally Activated Building Structures (TABS)



**South Quay Plaza** 

Building type: Residential apartments REHAU products: Underfloor heating



**Chancery Lane** 

Building type: Offices REHAU products: Chilled ceiling



#### **Ripple Retreat**

Building type: Respite accommodation REHAU products: Underfloor heating



**BBC White City Redevelopment** 

Building type: Hotel, apartments REHAU products: Underfloor heating, plumbing, chilled ceiling



#### Tate Modern

Building type: Gallery REHAU products: Thermally Activated Building Structures (TABS)









