

SAPP[®] CEILING

N°1
climate
solution
for sustainable
BUILDINGS

interalu
SMART CEILINGS 

A SAPP® ceiling is the perfect climate-control solution for a wide range of projects, from both an environmental and architectural perspective.



The open structure of the SAPP® ceiling allows the mass of the building to be integrated in the climate-control system.



Interlu provides complete solutions: your SAPP® ceiling is tailor-made to fit your specific project, whether you require a continuous ceiling or an island ceiling.

Smart Acoustic Passive Power

SAPP®: four letters that elevate the climate-control ceiling to an unprecedented new level. SAPP stands for: Smart Acoustic Passive Power. This climate-control system from Interlu is designed for developers striving to meet the highest standards with respect to sustainability and eco-friendliness. It is a system that combines passive construction with thermal and acoustic comfort.

Comfort Class A

Interlu climate-control ceilings guarantee maximum comfort through their utilisation of the principles of radiation and absorption. Cold or hot water flows through the ceiling pipes and quickly brings your space to the desired temperature. The process is extremely energy-efficient (Comfort Class A) with a water supply of between 18 and 20°C for cooling and between 30 and 40°C for heating.

An environmentally-friendly and highly efficient open-structure system

Another advantage of the SAPP®ceiling is its open structure. This makes it possible to integrate the entire building in the energy plan of your project through the use of night-time cooling. Its open structure also makes it possible to utilise natural convection, resulting in excellent efficiency and quick temperature adjustment.

Comfort from above

Due to its low inertia and high conductivity, the ceiling itself barely absorbs any heat energy. The pipes are distributed over the full surface of the ceiling ensuring an even temperature from wall to wall across the whole space.

“From design to installation, the SAPP®ceiling is characterised by its impressive degree of sustainability. At Interlu we produce our own green energy in a CO₂-free production process. The separation between raw material and installation is minimal and all materials are highly recyclable.”

Anthony Schrauwen, Managing Director

Why opt for a SAPP[®] ceiling?

With a SAPP[®] ceiling you're getting a climate-control ceiling (heating or cooling your space as required) that is extremely sustainable and energy-efficient whilst also opening up possibilities for creative construction solutions.

Greater energy efficiency

Every room can be brought quickly and evenly to the desired temperature with the minimum use of energy and without the need for an additional cooling or heating system. With a water supply of between 18 and 20°C, the SAPP[®] ceiling maintains the standard of 'Comfort Class A': your guarantee for energy efficiency and comfort.

Better for the environment

The SAPP[®] system cools and heats only as required, making optimal use of external air for free chilling, as well as heat pumps, geothermic and other environmentally friendly sources.

Increased comfort

You have complete control over the temperature and the air humidity of your building, without the discomfort of draughts. The SAPP[®] ceiling's open structure (40-70%) facilitates the integration of the entire building in the energy plan of your project through its use of night-time cooling.

Better acoustics

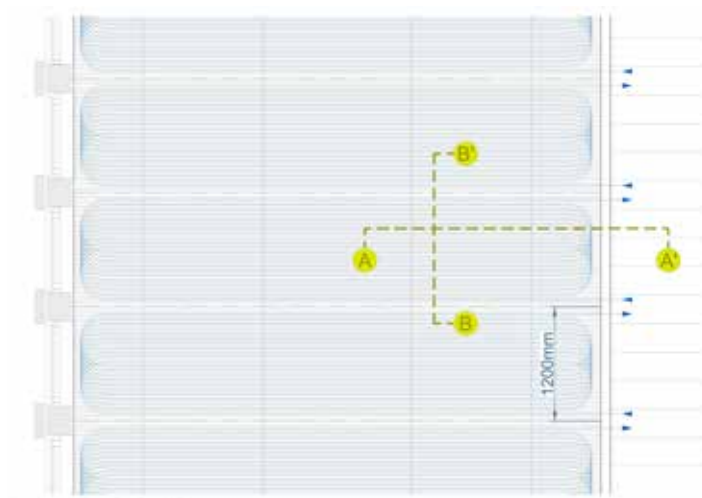
The SAPP[®] ceiling's steel ceiling panels have excellent acoustic qualities. Any echo is negligible. Depending on the function of the space, acoustic barriers can be used to dampen environmental noise.

Maintenance-free

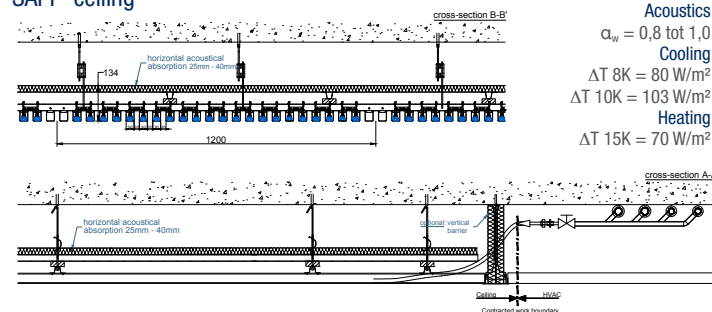
Interalu climate-control ceilings have 90% fewer internal connections compared to other systems. Furthermore, these connections are kept to corridors and technical areas and are never located in offices, conference rooms or other working areas. Our climate-control ceilings contain no motors or filters, making them maintenance-free.

Greater flexibility

A SAPP[®] ceiling is an integral system that's tailored to your space and incorporates all the required technology, such as ventilation, (LED) lighting and sprinklers. This makes it flexible, eco-friendly and suitable for a wide range of architectural applications: from island ceilings to continuous ceilings, in offices, public buildings, shopping centres, transport infrastructure, and many other contexts.



SAPP[®] ceiling



"A SAPP[®] ceiling is sustainable in both its production and its application. We have developed and tested this climate-control system in collaboration with the University of Stuttgart"

Carlo Miers, consulting engineer



SAPP® ceilings can be integrated seamlessly with all aspects of your building's interior.



This level flexibility is one of the greatest advantages afforded by a SAPP® ceiling. Constructing an additional wall or removing a wall is very straight-forward.

SMART

Intelligent simplicity

ACOUSTIC

Excellent sound absorbency

PASSIVE

Storage of thermal energy in the concrete structure of the building through the use of night-time cooling (free chilling)

POWER

Powerful and highly efficient in both cooling and heating.



SAPP[®] ceilingHybrid: the combined forces of water and concrete

Always active

SAPP[®] ceilingHybrid turns your ceiling into an active climate-control system that regulates the temperature of your space in a continuous day-and-night cycle.

Day and night

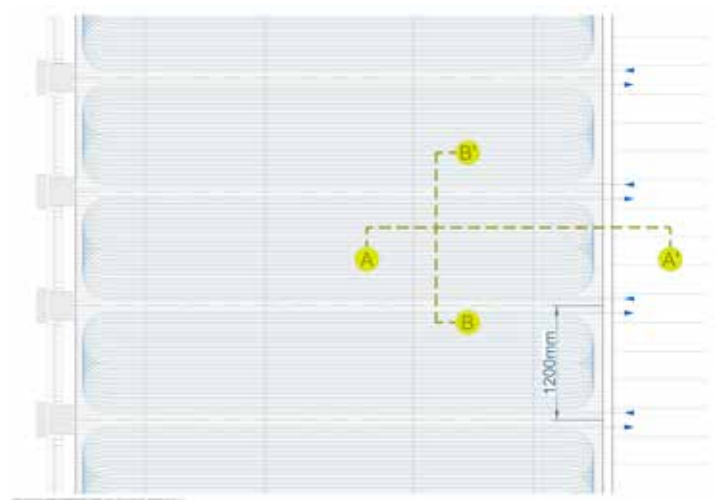
During the daytime, the water flowing through the pipes of the SAPP[®] ceilingHybrid system works together with the concrete structure to absorb the heat of the building. At night, the SAPP[®] ceilingHybrid system remains active (free chilling) so that the concrete structure discharges the stored thermal energy. As such, the building becomes its own thermo-active regulator, thanks to the SAPP[®] ceiling working as a hybrid climate-control system that draws off the excess heat stored in the concrete structure in the daytime.

A SMART choice

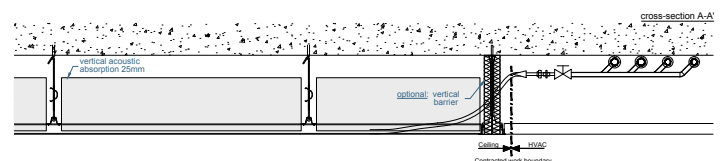
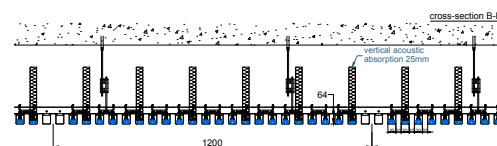
The SAPP[®] ceilingHybrid offers a flexible solution for those seeking to realise a passive construction that integrates the building's climate-control system with its concrete structure. This system is extremely efficient in its use of energy, storing an average of 10W/m² of the available cooling potential in the building's concrete structure.

Higher efficiency

Through its use of free chilling at night, the required installed capacity drops by 20 to 30%. The SAPP[®] ceilingHybrid saves on other resources, too. It requires less equipment for the cooling of your building, whilst retaining a high level of flexibility, comfort and sustainability.



SAPP[®] ceilingHybrid



Acoustics
 $\alpha_w = 0,45$ tot 0,70
 Cooling
 $\Delta T 8K = 80 \text{ W/m}^2$
 $\Delta T 10K = 103 \text{ W/m}^2$
 Heating
 $\Delta T 15K = 70 \text{ W/m}^2$
 Night-time storage
 10 tot 17 W/m²

