

# Uponor

## Build on Uponor with Varicool Carbon

High-performance cooling ceilings with  
up to 128 W/m<sup>2</sup> cooling output  
and up to 60% less weight

**NEW**



- ✓ Covering of large thermal loads of up to 45% higher heating and cooling output
- ✓ Wide range of applications and simple mounting thanks to up to 60% lower weight
- ✓ Versions for closed metal ceilings as well as ceiling surfaces without joints and directions

# Sustainably to peak performances: Cooling ceilings with graphite activation

The new Varicool Carbon range of products utilises highly conductive graphite for heat transfer and thus attains up to 45% higher output at up to 60% lower weight than conventional solutions.

Uponor Varicool Carbon S has been developed especially for applications with very high thermal loads and highest architectural requirements in mind. Thanks to the pressing of two non-woven graphite panels with a copper register lying between them, inherently rigid heating and cooling elements result which are combined into a ceiling surface without joints and direction after full-surface filling. The use of graphite to activate the ceiling surfaces allows very high outputs to be achieved for cooling ( $128 \text{ W/m}^2$ ,  $\Delta\vartheta = 10 \text{ K}$ ) and heating ( $145 \text{ W/m}^2$ ,  $\Delta\vartheta = 15 \text{ K}$ ).

Uponor Varicool Carbon A has been developed for implementation as a closed metal ceiling. To this purpose heating and cooling registers consisting of copper meanders are embedded into a matrix of highly thermal conductive graphite. Subsequently the light register panels are bonded into the ceiling cladding.

- Architecturally appealing ceiling surfaces
- Highest heating and cooling output thanks to highly thermal-conductive expanded natural graphite as the thermal conductive element.
- Combination of thermally active and passive ceiling areas possible
- Suitable especially for areas with very high thermal loads
- Combination with lights of different designs as well as other ceiling installations and structures such as sprinklers is possible without problems
- Up to 45% lower occupation with activated ceiling panels compared to conventional cooling ceiling systems

Fastening is possible in grid, clamping or suspension systems as well as as a paneled ceiling in insertion system, with a weight per unit of only approx.  $10 \text{ kg/m}^2$ . After being connected via flexible pipe systems and being hydraulically balanced, the ceiling achieves a cooling output of  $120 \text{ W/m}^2$  ( $\Delta\vartheta = 8 \text{ K}$ ) as well as a heating output of  $133 \text{ W/m}^2$  ( $\Delta\vartheta = 15 \text{ K}$ ).



The use of graphite activation in closed metal ceilings makes the Uponor Varicool Carbon A product version possible.



The Uponor Varicool Carbon S ceiling system is suitable for areas with very high thermal loads and highest architectural requirements in mind.

## Uponor I ?

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