

## The Finnish Pavilion at the World Expo 2010 in Shanghai



### Uponor involvement



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Uponor provided a solution for a comfortable indoor climate for the Finnish pavilion at Shanghai World Expo.

### Project Facts:

|                 |                           |
|-----------------|---------------------------|
| Location        | Completion                |
| Shanghai, China | 2010                      |
| Building Type   | Product systems           |
| Municipal       | Radiant Heating & Cooling |
| Address         | Project Type              |
| Expo            | New building              |

### The Project

The Finnish pavilion at Shanghai World Expo 2010 is called "Kirnu", representing a vision of "good life". The six pillars of good life are freedom, creativity, innovation, community spirit, health, and nature. These pillars are integrated into the pavilion's architecture. The life cycle of the building is made as long as possible. After the expo, the building will be sold and put to a new use.

The design of the Finnish Pavilion shows a new environmental-friendly concept. The construction materials and methods have been selected to generate as few greenhouse gas emissions as possible during the construction and operation of the building. Additionally, it will be easy to disassemble and rebuild after the Expo. The open space in the middle of the pavilion provides natural ventilation for the building and solar panels on the roof top deliver electricity to the building grid supporting the cooling of the pavilion. A new light wall and a special window structure will reduce the radiant temperature created by the sunshine and an additional green-roof will balance the heat loads.

#### Uponor's solution

Uponor HL radiant ceiling panels connected to the cooling equipment creates a comfortable indoor environment, saving energy as well as. Optimal thermal performance is provided by integrated pipes made from cross-linked polyethylene embedded in a layer of highly conductive material. Uponor radiant ceiling panels provide maximum indoor comfort.

#### The Benefits of Uponor HL radiant panels

- \*Cooling performance of up to 92.5 W/m<sup>2</sup> at 10 K difference between room and medium temperature

- \*Easy and fast installation

- \*Compatible with existing metal frame constructions

- \*Better sound absorption than with acoustic plaster possible

- \*Homogenous visual appearance of the ceiling

- \*Increase of the thermal performance by almost 70%

- \*Building materials classification C-S2-D0 according to DIN EN 13501-1 corresponding with B1 according to DIN 4101

- \*Available in square sizes 600 and 625, as well 1250 x 625 and 1200 x 600

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