References

"Žalgirio" Arena



Uponor involvement

- 18 km Uponor Radi 32x2,9 pipes with Q&E fittings | underfloor heating - 10 km Uponor PEXa 20x2,0 pipes with Q&E fittings | 3 km Uponor Radi 25x2,3 with Q&E fittings

"Žalgirio" Arena

Žalgirio Arena has been given a BREEAM In-Use certificate – the first for an existing sports venue in the world.

With an area of 39,684 m2 the Žalgirio Arena is the biggest multi-functional arena in the Baltic States. A huge range of events, from sports to entertainment, takes place here. The arena is situated on Nemunas Island in the Nemunas River which flows through the city of Kaunas.
While the arena was first and foremost designed as a sports complex, it also caters for concerts and other events. Apart from the grand arena which holds up to 17 000 people, the center has an amphitheater for smaller scale events, arts and multimedia spaces, a fitness club, a restaurant, cafés and a bar. Exceptionally good acoustics and sophisticated technical solutions make it a modern, internationally renowned venue.
It was opened in 2011 and is the result of a collaboration between Kaunas City Council and architect Eugenijus Miliūnas. Since its opening, it has attracted a large crowds. In the first 15 months alone, one million people visited the Žalgirio Arena.

BREEAM certification

Kaunas Zalgiris Arena is the 1st arena in the world which has received an "BREEAM In-Use" certification. This assessment shows that the building is energy-efficient, environmentally friendly and properly managed.
Two parts audit of Zalgiris arena lasted 8 months - building itself and its management process were evaluated. Arena was granted certificate "very good" (BREEAM In-Use).

Project Facts:

Location	Completion	
Kaunas, Lithuania	2011	
Building Type	**Product systems**	
Sports facilities	Radiant Heating & Cooling, Multilayer Pipe Systems, PEX Pipe Systems	
Address	**Website**	**Project Type**
Karaliaus Mindaugo ave. 50,	http://zalgirioarena.lt/en	New building

The challenge

The multi-functional purpose of the arena complex requires multi-functional solutions. The arena space frequently needs to be transformed to fit large and small concerts as well as a wide variety of sports events and competitions:
• Ice hockey
• Figure skating
• Basketball
• Martial arts

This versatility poses a tremendous challenge for heating and water distribution systems: different sports require completely different thermal environments.
The most important requirement was therefore the venue's rapid, easy and safe adaptability to a broad range of events. This requires modern, high-performing systems that are able to fulfill complex demands while still remaining reliable and energy efficient.

The solution

Uponor floor heating and water distribution systems were chosen due to Uponor's extensive experience with sports venues as well as the unique flexibility that Uponor pipes and systems offer.

All in all 31 km of Uponor piping were installed:
• 18 km ice-rink piping
• 10 km underfloor heating piping
• 3 km ground energy piping
For maximum flexibility the same pipes that heat the courts also maintain the required temperature when this surface is used for ice-hockey games or figure skating competitions. The use of a thermal primer protects floor structures against the possibility of deformation.

In 2015 the Žalgirio Arena became the first BREEAM certified sports arena in the world. BREEAM is an international environmental assessment method used to evaluate the sustainability of building projects throughout their life cycle. Uponor systems have proudly contributed to the energy efficiency and enhanced value of the arena.

Uponor products used
• Ice rink piping: Uponor PEXa 32x2.9 pipes with Q&E fittings
• Floor heating: Uponor PEXa 20x2.0 pipes with Q&E fittings.

- Cold and hot water distribution piping: Uponor Aqua Pipe PN10 pipes with Q&E fittings
- Ground heating piping: Uponor 25x2.3 pipes with Q&E fittings.

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