References

Kecskemét icerink – Go-kart Hotel



Uponor involvement

1800 m2

Kecskemét icerink – Go-kart Hotel

One of the most famous technical sport institutes of the Southern Alföld is the BirizdoKart Gokart track at Kecskemét.

Project Facts:

Location
Kecskemet, Hungary

Completion
2013

Building Type
Sports facilities

Product systems
Radiant Heating & Cooling

Address
Monostori út 3.

Website
http://gokarthotel.hu/

Project Type
New building

Partners

Investor:
Gokart Hotel Kft, 6000 Kecskemét
Monostori út 3.

One of the most famous technical sport institutes of the Southern Alföld is the BirizdoKart Gokart track at Kecskemét. The aim of the constructor and operator of the institute is to provide high quality services to the arriving guests, any time of the year, thanks to the continuous development. First, a four-star hotel had been built next to the gokart track, then a carpark for hundreds of cars, a tennis court, a playground, and in 2013, even the construction of the open–air icerink was finished.

Within a European Union project, the state–of–the–art, open–air icerink, which has the size of a standard hockey rink, and the two tennis courts were constructed with 174,031,958 Ft grant. The aim of the grant is the development of the touristic services promoting physical activity, specifically that of the leisuretime sports services related to recreation at BirizdoKart institute, Kecskemét.

Distributional supply/return pipes and thecooling piping system of the rink

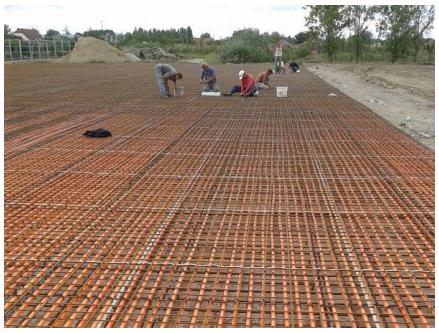
The cooling medium is conducted via a 60 m long supply/return pipe from the chiller to the distributor pipes of the rink and back. The supply pipe is installed into a approx. 1.0 m deep, under–ground concrete pit, outside the perimeter of the rink. The distance between the pipes installed into the concrete layer of the rink is 80 mm. Those are curved at the other side of the rink and connected to the collector pipes adjacent to the distributors. The icerink chilling system, or Uponor Pe-X Meltaway pipe system, consist of DN 110 mm cooling and DN 80 mm heating – to prevent ground icing – PEHD distributor and collector pipes installed in Tichelmann system and 25x2.3 mm Pe-X pipes (delivered in rolls of 1020 m). The Uponor Meltaway cross–linked polyethylene (Pe-X) piping system has been developed for such tasks. Its beneficial physical and mechanical properties provide long life–span and secure operation. In the case of such special demands, it is extremely important to minimize the number of joints inside the concrete layer or avoid them totally in order to achieve a secure, long-lasting operation. The distributor/collector pipes are arranged in a Tichelmann system, which ensures that the differential pressure of the individual circuits is equal, thus the application of balancing valves is not required. The distributor is connected with Rosex fixtures, which is simple, quick, does not require any tool and can be disengaged if needed. The rink pipes are installed so that the adjacent pipes have opposed flow direction, for the even cooling of the rink. The pipes are fixed to the steel–mesh inside the concrete layer of the rink.

The endurance and tightness of the rink pipes was tested at 6 bar pressure. The Pe-X pipes were pressurized at 2 bar during the concrete casting in order to prevent dents. The cooling medium is ethylene–glycol solution, in order to prevent freezing damages during operation breaks. The cooling medium is of neutral, non–explosive, non–flammable material. The chiller has automatic operation, that ensures the needed cooling performance based on the return temperature of the ethylene–glycol.

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