

Carrier

DESIGNING INNOVATIVE SOLUTIONS

United Technologies

EVENT
SOLUTIONS



Carrier Rental Systems supplied high efficiency chillers and defrost boilers for the downhill ice track at the Red Bull Crashed Ice event in Belfast.

Customer

**AST EISTECHNIK
GMBH
AUSTRIA**

Location

**BELFAST,
UNITED KINGDOM**

Equipment hired

Feb 15



Carrier Rental Systems delivers high efficiency cooling system for Red Bull's Crashed Ice event

Project

Carrier Rental Systems, one of the UK's leading temporary cooling and heating specialists, delivered four AquaSnap® 30RB 402 air-cooled chillers to the historic Stormont site in Belfast, Northern Ireland, where the steeply raked track was built on the steps of the Parliament building. Carrier team worked closely with ice rink specialist AST Eistechnik GmbH of Austria, who designed, supplied and commissioned the refrigeration piping system and was responsible for the preparation and maintenance of the ice track.

Carrier's experience of delivering high specification cooling and heating for outdoor leisure events ensured the tight timetable for set-up and decommissioning was achieved, and the project was a resounding success.

Project summary

CARRIER CAPABILITIES

Carrier chillers provide critical cooling throughout the high profile event.

Carrier Rental Systems logistical expertise and project planning skills meet tight timescale.

Carrier's offering across cooling and heating delivers all thermal requirements.

Carrier Rental Systems experience of supporting outdoor ice rinks provide total assurance for contractor and end user.

TECHNOLOGIES

Four x AquaSnap® 30RB 402 air-cooled chillers with Greenspeed® intelligence

Two x 400kW boilers

Ancillaries: external pumps, buffer tanks, flanges, adapters and 300m of flexible hosing

Contact

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The Crashed Ice event gets under way in the historic grounds of Stormont, Belfast



The full length of the winding ice track, during build-up to the tournament



An AquaSnap® 30RB 402 air-cooled air-cooled chiller with Greenspeed® intelligence

Background

It was the first such Red Bull event to be staged in the UK. Described as one of the world's fastest sports, the competitive ice cross downhill competition was one of four Red Bull Crashed Ice outings of the Ice Cross Downhill World Championship staged over the year, attracting global participation from competing teams.

The AquaSnap® chillers, with a combined cooling capacity of 1.6MW, circulated a 40:60 mixture of glycol and water at -10°C through the AST Eistechnik "Skateway" system, a flexible carpet of tubes, running the length of the track.

Once the chillers were connected up and commissioned, water was sprayed onto the freezing surface, taking ten days to produce a high quality layer of ice 4.5in thick along the 430m long track.

The serpentine downhill track extended from the steps of Stormont, sweeping down along the line of the road through Parliament park, and rising steeply to clear the central monument and roundabout, enabling cars and buses to continue passing beneath.

In addition to chillers, Carrier Rental Systems also supplied two 400kW boilers, to provide hot water at 45deg C to melt the ice track after the culmination of the three-day competition.

Simon Ward, Carrier Rental Systems national events manager said: "It was a tremendous event, and attracted huge local and international interest. It also provided a superb application of temporary cooling in a spectacular setting, not to mention the equally important application of temporary heating."

He further explained: "Once frozen, the ice track has significant thermal inertia, and the decommissioning required boilers to be connected up. The energy flowing through the Skateway piping system ensured the ice was gone in just two days. The time factor is extremely important for such projects, as decommissioning costs on site are a major component of the overall event costs."

In addition to chillers and boilers, Carrier Rental Systems supplied external pumps, buffer tanks, flanges, adapters and 300m of flexible hosing for the project.

Challenges and solutions

The project presented a number of specific challenges:

- On site logistics presented a challenge, with limited space for chillers and related equipment. Carrier's expertise enabled it to deliver and position equipment accurately alongside and beneath the raised track, reducing pipework distances and conforming with the track design.
- The project had a tight timetable for delivery and commissioning. Carrier's project management and logistical skills enabled the event to achieve these, meeting timescale and budget targets.
- The cooling requirement for the outdoor track was quite high, due to the size of the ice surface and variability of ambient conditions. Carrier's expertise in refrigeration enabled the load to be accurately calculated and catered for with high performance and reliable chillers.

