



"Providing the perfect climate for your business"

Case Study:



Sintra Pulsion® Temperature Control Solution

Background

Paris La Defense Arena (previously known as U Arena 92), located in Nanterre, Paris, is the biggest concert hall in Europe, and home to Racing 92 Rugby.

The stadium is a multi-purpose venue with variable seating capacity configurations for rugby, concerts, and various indoor sports, and will host the 2024 Summer Olympics gymnastics events. Seating capacity ranges from 5,000 to 40,000 depending on the event.

The stadium was originally planned to have a retractable roof, but was ultimately built with a fixed roof instead. The venue demanded a flexible and dynamic climate control system, able to cope with the large volume, and flexibility for the variety of internal configurations and heat loads.



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The Challenge

With multiple internal layout configurations, and a roof height of 44 metres, a critical analysis was undertaken of the climate control solutions available.

Sintra Pulsion was compared and evaluated in a competitive tender against a “conventional” diffusion solution.

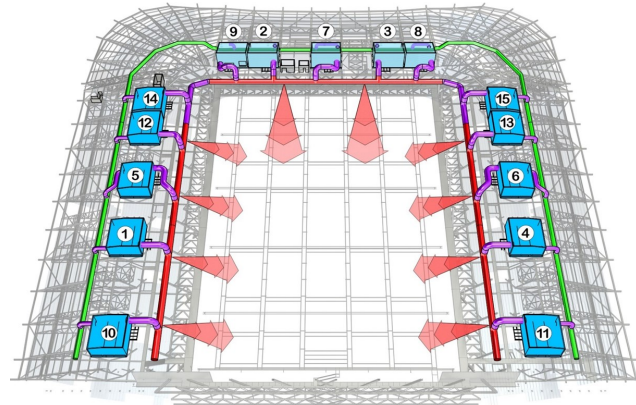
The Solution

Sintra Primary & Secondary Pulsers are mounted in a U configuration at roof level. The Pulsers are connected to 15 AHUs, (Air Handling Units), providing heating and cooling, and fresh air for the occupants.

Air flow from the AHU plant is 720,000 m³/h (70% less than the original 2,400,000 m³/h proposed diffusion solution), delivering substantial fan power reductions.

Air temperature is homogenous throughout the stadium to +/- 1 degree C, regardless of occupancy levels, with no draughts or stratification.

The Sintra Pulsion was also considerably cheaper to install than the original proposed diffusion solution.



Summary

The innovative, and patented Sintra Pulsion temperature control solution provides maximum comfort for the occupants of the Arena.

The solution delivers significant capital costs savings and running cost savings, as compared with conventional diffusion type systems.