



## The Nest of FlowCon in Beijing, China.

**Type of application:** AHU

**Project Name:** National Stadium, Beijing China

**Type of Building:** Stadium

**Capacity:** 80,000

**Developer:** Chinese Government

**Date Opened:** June 28th 2008

**Date Installed with SM valves:**  
Approximately December 2007

**Architect:** Herzog & De Meuron, Arupsport; China  
Architectural Design & Reserch group

**Structural engineer:** Arup.

Located in the Olympic Green in Beijing, the \$423 Million Olympic stadium is the world's largest steel structure. The design was awarded to a submission from the Swiss architecture firm Herzog & de Meuron in April 2003, after a bidding process that included 13 final submissions.

Multiple requirements, including the ability for post-Olympics use, a retractable roof and low maintenance costs were required for the optimum design. The removal of the retractable roof, which was done due to security issues, made the building look lighter. Due to the stadium's appearance, it was nicknamed "The Bird's Nest".

Temperature and airflow of every surface have been optimized to increase ventilation and thereby comfort.

Pipes placed under the playing surface gather heat in the winter to warm the stadium and coldness in the summer to cool the stadium.

The stadium's design originally called for a capacity of 100,000 people; however 9,000 were removed during a simplification of the design, which gave a total of 91,000 seats during the Olympic Games. Today the seated capacity is reduced to 80,000.



FlowCon SM valves, which are pressure independent dynamic flow and temperature control valves, were installed on the Air Handling Units of the VIP gallery. The use of the most advanced control valves in the world was used to ensure the optimum control of air temperature in the gallery.

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