



## THE NATIONAL INDOOR STADIUM IN BEIJING

Total area: **80,900 sq.m.**  
 Arena surface: **3,000 sqm**  
 Heating Area: **3,700 sqm**  
 Arena Seating: **18,400**  
 Temporary seats: **1,400**  
 Maximum height: **43 m**  
 Maximum width: **130 m**  
 Construction cost: approx. **€ 81,000,000**  
 Start of construction: **May 2005**  
 Completion: **December 2007**

(China)

AN IMMENSE FAN-SHAPED STRUCTURE THAT REFLECTS CHINESE TRADITIONS. IT WAS AN ARCHITECTURAL PROJECT DEDICATED TO ECOLOGY AND SPORT. AT THE NATIONAL INDOOR STADIUM IN BEIJING, HANDBALL STOLE THE SHOW DURING THE 2008 OLYMPIC GAMES.

### RESPECT FOR TRADITION

The new Beijing National Indoor Stadium, designed by the German firm Glöckner Architekten GmbH was inspired by the traditional Chinese fan. And that's what you see when you are facing the south side of the immense "green" Olympic structure. The fan for Chinese culture is a symbol. It is seen as an object that can provide people facing it with a clear view of their social status. In the past the fan indicated, ranking. We are dealing with an incredible work of art and this fact is confirmed by the many Chinese artists in the past who painted landscapes and memorable scenes on its thin surface. Viewed in this light, the National Indoor Stadium is exactly the same thing: as a fan it immediately expresses China's rank to anyone facing it. But then it becomes art through innovative design worthy of great admiration. The National Indoor Stadium is not just a place dedicated to sports competitions, it is a clear and strong sign of modern Chinese culture.

### ENVIRONMENTAL TECHNOLOGY

The stadium consists of a main structure with an attached gym and other external equipment. The main arena and the small gallery adjacent to the lobby are embedded under the same roof with steel beams. The importance of this structure is not purely aesthetic. The project had to agree perfectly with one of the most important criteria required by the 2008 Olympic organizing committee ; it had to be a "Green Olympics". Environmental respect, energy-efficiency and environmentally-friendly materials have been the cornerstones on which this structure and all of those around it are based on. The wall coverings of the main structure, consist of low-emission glass that provides insulation and enhances energy efficiency, reduces heat loss and acts as a filter for both UVA and acoustic insulation. In addition, beneath the glass surface, there is a photovoltaic system, capable of producing all the energy needed to light the stadium during the day. If this was not enough, the building uses a heating system with water pumps and has a rain water collection system on the roof top.



## THE SELECTION OF

The search for materials that complied with the requirements set forth by the organizing committee are reflected both outside and inside the building. Even here, every detail was scrutinized and nothing was overlooked. The selection of equipment and facilities reflects the philosophy of a "Green Olympics". One of the surfaces that was able to meet these demands was **Mondoflex II**, a product made with non-toxic and environmentally-safe materials in every phase of the manufacturing process: from production to storage, and from installation to end use. The surface was such a success that at the end of the Games, **Manfred Prause**, International Technical Manager for the Beijing Olympics and Member of the IHF Playing Rules and Referees Commission, said: "This flooring was able to demonstrate its high quality throughout the course of the Olympics".

## SAFETY FIRST

The material that covered the Beijing National Indoor Stadium floor, does not only respond to the criteria of eco-sustainability. Security, is also a key feature to consider when designing a sports floor. During competition or training, the athletes run for several miles on the court. Jumps, lateral moves and running on a poorly manufactured surface can cause trauma and injuries. To help prevent such injuries a sports area has to offer good shock absorption and an appropriate coefficient of friction. And even in this case standards were high. "Through a special vulcanization process developed by Mondo and due to the excellent energy return provided by the surface - Manfred Prause continued - we have to note the fact that there were no serious injuries during all 84 matches". Obviously the success of the surface is not taken for granted. At the base of a material with similar characteristics there is a process of long and meticulous research and development. The health and safety of the athletes can not be put at risk. "Even the color of the flooring and design in general have made a good impression. - Resumes Prause - Apart from the logistical efforts that the Olympic Committee had to do, it was essential that the flooring could be easily removed and installed in the passage from the Olympic Sport Gymnasium at the National Indoor Stadium in a few hours." And even that was successfully accomplished.





