



The way to see the future

PRESS RELEASE

The retractable pitch of the Santiago Bernabeu Stadium is a project conceived and developed by SENER

The project for the spectacular retractable pitch, recently made public by Real Madrid, was developed by the engineering company SENER based on its own patent and technology.

Madrid, December 9, 2021 - The SENER engineering and technology group is the brains behind the idea and technology involved in the Santiago Bernabeu stadium's retractable pitch system. Based on SENER's own patented system, it was recently presented by Real Madrid [in a video](#), with the construction project being developed by SENER for Real Madrid.

SENER's system allows the natural grass field to be removed from any stadium in the world, even if its original design did not allow for this possibility. As a result, any stadium can become a multipurpose venue and host all kinds of shows, from concerts, conventions and fairs, to all types of sporting events different from the main event, including e-sports or even water sports, thus expanding its potential commercial operation.

Designed from its inception by SENER, the system has two key advantages over similar systems installed in other stadiums. On the one hand, it can be installed in existing stadiums located in developed urban centers where it is impossible to move the field from the interior to the exterior of the stadium. On the other, the system moves the trays with the natural grass to an underground storage chamber called Hypogeum, in reference to the space by the same name under the arena of the Roman Colosseum. This area, provided with ventilation, air conditioning, lighting, control and irrigation systems, can be used to set up ideal ambient conditions to preserve the grass, providing access for groundsmen and landscaping materials for ideal continuous maintenance, regardless of the events that may be taking place in the stadium.

The system also features a set of mechanisms, conceived and designed by SENER, that allow the trays with the pitch to move horizontally and vertically in such a way as to guarantee the maximum reliability of the system while allowing the field to be removed quickly so that events can be organized.

The SENER-patented system has been designed in such a way that all its components can easily be adapted to the geometry and operating requirements of virtually any stadium in the world, whether already built, under construction or yet to be built.

In the words of SENER architect Jorge Vizcaya, one of the project's designers: *"In many ways, stadiums have become the modern shrines. However, the sports function, for which most of them were designed, precludes any use or operation for alternative activities. At SENER, we have always believed that stadiums must be designed in such a way that their function transcends a mere sporting use. Provided with the greatest technological advances, they must become true meeting points for cities that are able to combine different urban functions and infrastructures to serve the public year-round. It is this design premise that inspired us to develop this system at SENER."*

SENER has experience designing soccer stadiums, such as the one in Krakow, Poland, and the Arena Fonte Nova, in Salvador de Bahia (Brazil). As an engineering company that is present in numerous

Further information:

Oihana Casas. Communication. SENER.
Tel (+34) 918077318 / (+34) 679314085

www.group.sener



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sectors of activity, including energy, infrastructure, aerospace and marine, the group has become a benchmark in innovation, with pioneering facilities in all its fields of activity.

About SENER

SENER is a private engineering and technology business group founded in 1956. Its aim is to offer its clients the most advanced technological solutions and to achieve international recognition based on its independence and commitment to innovation and quality. The SENER Group has 2,350 professionals in offices in five continents.

SENER brings together its own Aerospace and Engineering activities with industrial holdings in companies working in the field of Energy. SENER Aeroespacial has more than 50 years of experience and it is a first-rate international supplier in Space, Defense and Science. SENER Engineering has become a leading company worldwide in Infrastructure, Energy and Marine.



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