

Do you want to know more about The Vertical Panorama Pavilion?

The “Vertical Panorama Pavilion”, a structure designed for The Donum Estate in California, is an impressive example of how stainless steel can be integrated into technically and aesthetically complex architectural projects. This pavilion, conceived as a 14.5 metre diameter canopy, combines innovative design elements, high quality materials and advanced fabrication techniques.

- Glass panel interface

One of the distinctive features of the project is the design of the glass panels, which are fixed in customised frames and secured to a bracing structure via custom U-channels. The panels are placed edge-to-edge without overlapping, which preserves the purity of colour of each panel, creating an extraordinary visual impact. In addition, the design allows for tolerances for thermal expansion, allowing the panels to adjust to environmental conditions without compromising structural integrity. To ensure durability, the system includes an effective water drainage mechanism that protects the structure.

- Manufacture and design of the stainless steel structures

The pavilion structure is constructed from a combination of circular and square hollow sections, carefully optimised to ensure strength and lightness. The dimensions of the brace sections start at 76 mm in diameter and taper to 38 mm, changing at every second joint (~1.5 m intervals). This structural system, with pin joints, is designed to support the canopy via 12 clad columns to ensure effective load transfer.

- Manufacturing and assembly process

The structure was optimised with “Grasshopper” software and then rendered in a 3D model. Hahner Technik fabricated the stainless steel structure, assembled and welded it in Germany and split it up for transport to the USA, where Hahner Technik engineers reassembled and welded it on site. To ensure the result, they installed a flat platform and a temporary dome to serve as a custom jig. Once all the welding was completed, the glass panels were installed, the temporary dome was removed, and the entire roof was lifted onto the columns and secured in its final position.

This project is a clear example of the potential of stainless steel in the creation of iconic architectural works. Find out all the details in our full article “THE VERTICAL PANORAMA PAVILION, NATURALEZA Y ARTE” [</sites/cedinox/.content/cedrevista/cedrevista-00007.xml>] where we reveal what grade of stainless steel was used and how it was integrated into The Donum Estate's project.

