SPATIAL STRUCTURE ARQUÉ

PROJECT DESCRIPTION

The objective of this project is to design a roof for a spatial structure of about 5 x 5m. The three-dimensional structure is characterised by its lightness and speed of assembly, being composed of hollow tubes bolted at nodes. Essential characteristics for an itinerating fair stand.

With these starting parameters, a square canvas is designed, fixed to the structure with perimeter bags. Tension is then applied by lower hoists located at the nodes of the structure itself. With this mechanism, the necessary criteria for a stand and for speed of assembly and disassembly are achieved.

CHARACTERISTICS

Material	PES/PVC
Application	Urban spaces
Surface	23.3m²
Measures	4.82 x 4.82m
Location	Mollerussa, Lleida
Client	Estructures Arqué, S.L.
Year	2019

TECHNICAL DATA

A completely flat canvas has been designed, without giving shape to the templates. The width of the 4 templates of the canvas coincide with the distance between the fulcra of the structure, in such a way that the welds meet the lifting pins.

In this case, the templates are sent for cutting without scaling, since the tension in the canvas is applied by lifting the pins once the canvas is fixed to the perimeter. The vertical height of the pins is only 70mm, so there is not much margin for error. If the structure had not been precise we might have come short with the tension.

The canvas is materialised with the VIP FR canvas, which has properties similar to those of the PVC Ferrari 502 canvas, in white. The polyamide joining pieces between

the metal hoists and the canvas itself are replaced by black plastic ferrules which fit perfectly into the geometry of the node.

For future collaborations, it has been decided to leave more slack in the canvas to be able to fasten it to the edges more easily and so that the lower hoists have a longer run.