



FRANCO-GERMAN LYCÉE OF BUC

PROJECT DESCRIPTION

As part of the restructuring and extension project of the Franco-German institute in Buc, 5 separate inverted parasols are incorporated to protect the students from the sun and the weather.

Each of the 5 parasol is composed of 4 triangular ETFE single-layer membranes arranged in succession to give rise to a trapezoidal plan geometry in which the vertices of the 4 triangular membranes meet at the central post of the supporting metal structure. The altimetry of the outer perimeter of each sunshade is constant, while the central post is at a lower level so that the rainwater collected by the membranes can drain inside it, thus creating an inverted sunshade configuration.

The parasols are distributed throughout the playground, covering a total area of 645m².

CHARACTERISTICS

Material	ETFE
Application	Infrastructure and equipment
Surface	645m ²
Measures	5 parasols up to 15.6m (average length) and 14.3m (average width)
Location	Buc
Architect	Behnisch Architekten & Atelier 2A+
Year	2021

TECHNICAL DATA

This work has been carried out with the single-layer ETFE system, 250 microns thick, screen-printed with a design of aluminium-coloured dots and 4.2mm diameter over 65% of the surface according to the light transmission and solar factor criteria imposed.

Each of the ETFE membranes is fixed on its perimeter to the metal support structure by means of a semi-rectangular aluminium profile that allows the membrane tensioning system to be concealed inside. The membranes are in turn reinforced by stainless steel cables, anchored to the metal structure with a system of staples and brackets.

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Between the triangular membranes of each sunshade, waterproofing membranes have been installed integrated into the profiling, which channel the rainwater into the channels between the membranes that converge at the central drainage post located at the lowest point.

