



WORLD WIDE WEAVE

Paris Expo Porte de Versailles:

Metal fabric sail for Pavilion 1

The transformation of the renowned *Porte de Versailles* exhibition center in the southwest of Paris is spectacular: Dominique Perrault, Christian de Portzamparc, Valode & Pistre, Jean Nouvel and Jean-Michel Wilmotte, five of France's star architects, have completely redesigned the pavilions and hotels. The 35-hectare site is being rebuilt over three construction phases into a multifunctional event and recreation center. Perrault gave Pavilion 1 a new face with a 240-meter-long façade made of metal fabric from GKD – Gebr. Kufferath AG.

The Paris Expo Porte de Versailles exhibition center was built within sight of the Eiffel tower in 1923. Thanks to this central location in the heart of the French capital, it draws tremendous numbers of people. With 7.5 million visitors and more than 200 events per year, it is now one of the largest event centers in Europe. Eight exhibition pavilions spread over a useful area of 220,000 square meters are used primarily for end-user exhibitions. In order to extend this leading position as an event venue among the European competition in the long term, a renovation project set to last ten years was begun in 2015. With a planned total investment of 500 million euros, an architecturally ambitious complex consisting of reception area, hotels, parking, and restaurants will be created. Events and exhibitions continue to take place over a reduced capacity of seven pavilions, which amalgamate to form a harmonious whole despite their individual design concepts. A number of different parks provide a total of 20,000 square meters of green space, making it an attractive recreation area that is accessible to the public. The first of three construction phases saw the modernization of Pavilions 1, 4,



and 7, the plaza at the entrance to the site, and the 50,000-square-meter convention center.

Floating façade

Dominique Perrault took on the task of designing the façade of Pavilion 1 – the largest – with an area of 44,000 square meters. The central element of his design was a 240-meter-wide and up to 20.5-meter-high façade made of metal mesh panels fastened to a steel construction made from narrow steel struts several meters in front of the actual façade. This creates a gallery that invites visitors to stroll along the length of the pavilion. 24 mesh panels, each 13 meters wide and 14 meters high, form a sail eight meters above the ground. Depending on the perspective of the observer and how the light falls, it grants a shadowy view of the glass front behind, extending beyond it over broad stretches. It is this effect that gave the façade its name, *la grande voile* (the great sail). Yet the transparency of the Escale spiral mesh still allows visitors to the pavilion an unencumbered view of outside.

Interwoven sun reflections

The façade used a total of 3,355 square meters of the special stainless steel mesh with a spacing of 10.5 x 1.2. To compensate for the limited incidence of light typical of a north-facing façade, Perrault had a third of the spirals coated gold and distributed in seemingly random lines across the surface of the fabric. They give it the appearance of reflected sunlight and shimmer in the daylight or evening lighting of the site, depending on the angle from which it is viewed. Integrated in the center of the floating membrane is a giant LED screen on which events from the pavilion are transmitted. This representative combination of metal mesh and video platform also makes the façade the perfect entrance for the Olympic Games in 2024: As the venue for the handball competitions, Pavilion 1 of the Paris Expo Porte de Versailles



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will draw the attention of sports fans from around the world with its large, shimmering sail.

3.774 characters incl. spaces

Building:	Paris Expo Porte de Versailles, Pavilion 1
Building owner:	Viparis
Architect:	DPA Dominique Perrault Architecture
Start of construction:	2015
Completion:	2017
Mesh type:	Escale 10.5 x 1.2
Mesh manufacturer:	GKD – Gebr. Kufferath AG
Mounting fixture:	flat/eyebolt
Total mesh area:	3,355 m ²

GKD – WORLD WIDE WEAVE

As a privately owned technical weaver, GKD - Gebr. Kufferath AG is the world market leader in metal, synthetic and spiral mesh solutions. Four independent business divisions bundle their expertise under one roof: Industrial Mesh (woven metal mesh and filter solutions), Process Belts (belts made of mesh and spirals), Architectural meshes (façades, safety and interior design made of metal fabrics) and Mediamesh[®] (Transparent media façades). With its headquarter in Germany and five other facilities in the US, South Africa, China, India and Chile – as well as its branches in France,



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Spain, Dubai and worldwide representatives, GKD is close to markets anywhere in the world.

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