



Fig. 4. Dress Your Body, Comondréche

impression of a repeating pattern. 3 x 15 rectangles are cut out and presented with mirrored frames as window openings. The 11 x 74 m wall is otherwise punctuated only by a narrow slit that indicates the main entrance. The façade elements, which were developed especially for the building, are cast in ultra high performance concrete and held by a metal frame. Their round holes are irregularly positioned and are of different sizes, so that the finest possible connecting bridges of up to only 10 mm in thickness are created. Over and above its decorative function, the semi-transparent façade mainly serves as a sun filter: the thickness of the wall and the distance to the glass façade behind it have been chosen so that, in summer when the sun is higher in the sky, the façade breaks the direct light on the one hand and screens the building from the heat on the other. In winter, however, the rays from the lower sun penetrate the façade openings, brightening up the everyday work with daylight and serving as an additional source of energy.

**Museum of European and Mediterranean Civilisations, Provence (France)**

**Architecture: Rudy Ricciotti**

The dramatic MuCEM (Museum of European and Mediterranean Civilisations) was the jewel in Marseille's European Capital of Culture programme in 2013. With this museum, French architect Rudy Ricciotti gave a new dimension to ultra-high performance concrete that has never been explored before. For this project Rudy Ricciotti has imagined a breathtaking design with a double façade (Fig. 5). The main building, with its glass windows, is wrapped in an intricate black concrete mash lacework screen that creates a North African feel. Ornamental concrete shrouds the glazed exterior of the museum like a lacy veil, moderating light through to the building's two exhibition floors. The museum is remarkable in its pioneering exterior skin of delicate filigreed concrete – an architectonic feat of prestressed concrete and building system. In this 15,000 m<sup>2</sup> mineral cube, concrete is king and gives all its strength and lightness to the building. Because of its delicacy, its flexibility and its high resistance, ultra-high performance concrete (UHPC) made possible the architectural feat and technical challenges of the MuCEM. A unique structure worldwide: UHPC prestressed concrete columns are a world première.

Another originality: the floors were manufactured first, then laid on scaffoldings and then bound with columns. The result: the visitors of the museum can enjoy large column-free spaces to admire the art pieces. The ultra-high performance concrete allowed manufacturing the 384 panels of the lace covering with delicacy the two façades and the roof of the museum. A 820 m walkway suspended between the inside space and the outside: Between the columns and the heart of the building, the corridors wind around the museum.



Fig. 5. MuCEM, Marseille (Credit: Lisa Ricciotti)

**Italian national pavilion at EXPO, Milan (Italy)**  
**Architecture: Nemesi & Partners**

For the EXPO 2015 in Milan, the Nemesi & Partners architects from Rome has designed the Italian pavilion, with a facade which is both handsome and pragmatic (Fig. 6). The design of this amazing architecture is characterized in a strong and clear way by its branched skin, which embraces the volumes articulating the public and inner space. The precast manufacturer has been able to give shape and value to this brave skin. It's contribution fits in line with this type of



Fig. 6. Italian EXPO pavilion, Milan