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Saving energy and generating energy with the Schüco E² façade

Adopting a sensible attitude towards the use of natural resources and developing new ways of generating energy are important tasks facing this and subsequent generations. That is why Schüco has introduced the model "Energy² - saving energy and generating energy" in the Schüco E² façade. This is a modular façade system which intelligently combines the building envelope with system technology and which activates the building envelope for solar energy generation.

High-performance solar shading module

Schüco CTB solar shading consisting of micro louvre blades is an external solar shading system which is completely integrated in the façade. Due to the geometry and the distance between the micro louvre blades, the views to the outside are excellent even when the solar shading is lowered. The solar shading was designed in such a way that it can remain in the solar shading setting even with very high winds speeds of up to 30 m/s (force 11 wind, gale force storm). It is therefore superior to conventional, external solar shading solutions and can even be used in high buildings.

Decentralised ventilation module

The opportunity to reduce investment and operating costs whilst simultaneously permitting a high degree of user comfort makes decentralised ventilation solutions that are integrated in the façade increasingly popular. However, these solutions have so far been used predominantly in large and prestigious projects, and mostly as project solutions. There are 5 different decentralised ventilation concepts that are available for integration in the Schüco E² façade. What all the solutions share in common is that fresh air enters the room either heated or cooled, as required. Depending on the ventilation concept, solutions with or without heat recovery are possible. The decentralised ventilation devices are integrated in the space between the intermediate floor and the façade so that the architectural design of the building envelope is not influenced by the ventilation devices. Even floor-to-ceiling glazing is possible.

Solar energy generation module

The finite nature of our resources and climate change make an economical approach to energy use and the use of renewable energy sources increasingly important. By integrating photovoltaic modules, the façade becomes its own power station. However, until now, the integration has predominantly been restricted to the façade areas where a view from the inside through to the outside was not needed. This meant that only limited areas of the building envelope could be activated for energy generation. By integrating translucent thin-film modules, photovoltaics can be used on a larger scale in the façade.

To make the Schüco E² façade as universal as possible, the modules have been developed in such a way that they can be adapted for the most varied of building types.