SGG Concept glass

Cool solutions for a hot future

Climate change, CO_2-emissions and Energy savings regulations are the key topics in the current building market. As a response to this it is our responsibility to control energy use and develop new products to become more efficient. Intensive solar incidence and longer warm periods require higher requirements on solar control and energy-saving climate control. They also offer the potential to use solar energy more efficiently. Energy-saving glass types already offer optimal thermal insulation. Intelligent combinations and innovative developments open even more perspectives and demonstrate the potential of the multi-functional material glass.

Using five concept glasses SAINT-GOBAIN GLASS will demonstrate the possibilities and performances of glass in future buildings. One highly efficient component for the clima-concept is GLASSXcrystal: a glass which simultaneously stores warmth and cools. Integrated into the glass are the system components of transparent thermal insulation, protection from overheating, energy transformation and thermal storage. The quadruple-glazed unit provides excellent thermal insulation with a U-value of under 0.5 W/m^2K. The trick: inside the unit is a prismatic glass which reflects the high-standing sun to the outside whereby low-lying (winter) sun can pass through the solar control. The central element of GLASSXcrystal is a thermal storage module which absorbs solar energy, stores it and releases it slowly as a comfortable radiation..

SGG COOL-LITE XTREME, is introduced as the first glass with a true selectivity of greater than 2. This glass is the future of solar control. Selectivity is the relationship from light transmittance to g-value (T_L/g). The goal for solar control glass is to achieve high light transmittance combined with a low g-value. To date the selectivity has had a maximum value of 2.

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SGG CLIMAPLUS COOL-LITE XTREME is neutral, allows lots of natural daylight to enter the room and achieves an extraordinarily good energy barrier.

In addition SAINT-GOBAIN GLASS will show electro-chromic glass, which depending on the amount of power applied, changes its colour and thereby regulates the amount of light transmittance. The glass changes colour when an electrical charge is applied to the microscopicly thin coating (e.g. tungsten oxide) on the glass. The low-voltage power activates the electrochromic coating and the colour changes. Depending on the application, the power can be activated manually or automatically – i.e. by using solar sensors which measure brightness. The fifth concept glass is a triple-glazed insulating glass with a light transmittance of 80% and a g-value of 63% which shifts the limits of thermal insulating glass.

Also in focus are special glass types with extremely high energy transmittance for increased efficiency in Photo-Voltaic modules. A selection of temperable solar-control and thermal insulating coatings will be exibited in an impressive six meter high facade. In addition, the vast range of decorative glass and curved glass will be on show – such as the new SGG MASTER-SHINE with its exceptionally brilliant pattern and SGG PLANILAQUE EVOLUTION.