



SANCO® tips

Glass replacement perfectly planned

Setting architectural tones with glass has been conceivable since the sixties and to some extent also implemented. However the glass lacked technical quality and perfection. Current advances in glass technology make it possible to lend the building an individual, artistic character. Light, shape and colour describe the appearance.

Physical parameters characterise the trend in the glazing of a building. The highest possible thermal insulation, optimal U_g value, or the utilisation of passive solar energy as an additional source of heat defines the functionality of the building. These functional characteristics are obtained using appropriate coatings. However, mostly at the cost of the optical performance. Precious metal coatings change the impression of colour on looking through the glass, its appearance from the exterior and the amount of reflection. The perception of the colour of the different coatings – thermal insulation or solar control – is also dependent on the weather. In sunshine, snow or rain the colour effects are completely different. These colour effects are used as a specific design element, especially in the area of solar control glazing.

All these factors should be taken into consideration when planning the replacement of glazing. If thermal insulating glazing is already installed, it is particularly recommendable to select the same coating so that the appearance remains the same. Only then is it possible to avoid colour differences, or the colour difference is only minimal.

The optical properties of glass

In the last three decades there has been immense progress in the processing of float glass. Glass is no longer just glass, but an advanced construction material that saves energy and therefore benefits our environment and man.

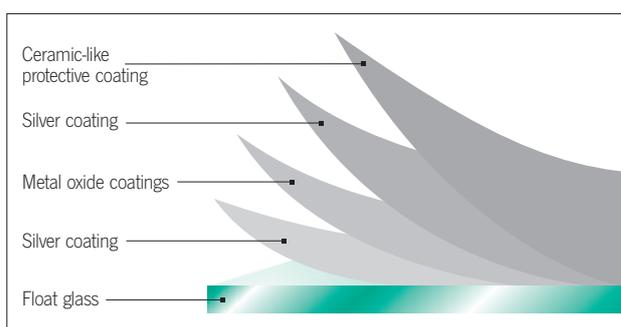
The raw materials used play an important role in the quality and colour. Quartz sand, lime and soda, the basic materials of glass production, have their own natural colour. Float glass has a light green tint due to the iron oxide content. Low iron oxide and iron oxide-free glass also has an inherent tint, but is more transparent and more neutral. Glass is used increasingly in every day architecture as a construction material. Lots of natural daylight and a neutral appearance are the requirements stated

by planners and building owners. At the same time, the desire for the best possible thermal insulation and solar control must be addressed. All of this is possible with the new coating technologies. Wafer-thin precious metal coatings, which are generally applied to the glass surface inside the cavity between the panes, provide excellent visual and economic results. The appearance and view through the glass is changed by the surface coating.

Even 'neutral' coatings have a specific colour. Depending on the thickness of the thermally insulating glazing units, the manufacturing or coating process, there can be minor variations in the perception of the colour. These different impressions of colour should be taken into

account by the building owners during the planning phase. Particularly in the case of renovation or extensions, a visually consistent building appearance is desirable.

Furthermore, over the years the production processes have often changed. When purchasing more glazing at a later date, comprehensive advice is required to ensure colour variations can be excluded as far as possible.



High-vacuum magnetron coating

Clear or tinted glass is coated with a wide variety of metals in a high vacuum, multiple chamber magnetron sputtering machine. The microprocessor-controlled production combined with the finely tuned in-line measuring and control system guarantees continuous high product quality. The modern system technology ensures the physical parameters, the consistent visual appearance of the glass, as well as the reproducibility in series production are maintained.