REPORT

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Calculation of thermal transmittance (U-value) according to SS-EN ISO 10077-2

(3 appendices)

The client supplied drawings of a window for calculation of thermal transmittance. Appendix 3 shows the design of the profile section of the window.

Glass combination:	TF-12kr-f-12kr-TF
Spacer:	Thermix TX.N
Size:	1.23 m x 1.48 m

Calculation

Calculation of the profile section was performed using the FRAME 5.1 program. The composition of the glass part is given by Table 1 Appendix 1. Values of the thermal conductivity have been chosen according to Table 2 Appendix 1. The calculation includes a Spilka espagnoletto (bottom sash) and for reversible window hinges (jamb/stile) from Spilka (type S6).

Calculations have been performed and results are shown in Appendix 2. Cut-off planes (adiabatic) have been placed 190 mm from the visibly glass edge and/or by connected wall. The air temperature and surface resistance have in accordance to SS-EN ISO 10077-2 been taken as ϑ_i = +20 °C and R_{si} = 0.13 m²K/W (0.20 m²K/W for inward corners) on the inside and ϑ_e= 0 °C and R_{se} = 0.04 m²K/W on the outside.

Calculation results

The thermal transmittance was obtained to U_W = 0.84 W/(m²·K). The calculations are shown in greater detail in Appendix 1.

The thermal transmittance, which is calculated in this report, is only valid for windows with the same composition as the calculated one. The windows marking must be unambiguous, it has to be clear that the glass structure and profile systems are the same for the current window as for the calculated one.

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