

Reference values for shading factors

Venetian blinds - external

Der SonnenLicht Manager



Basics

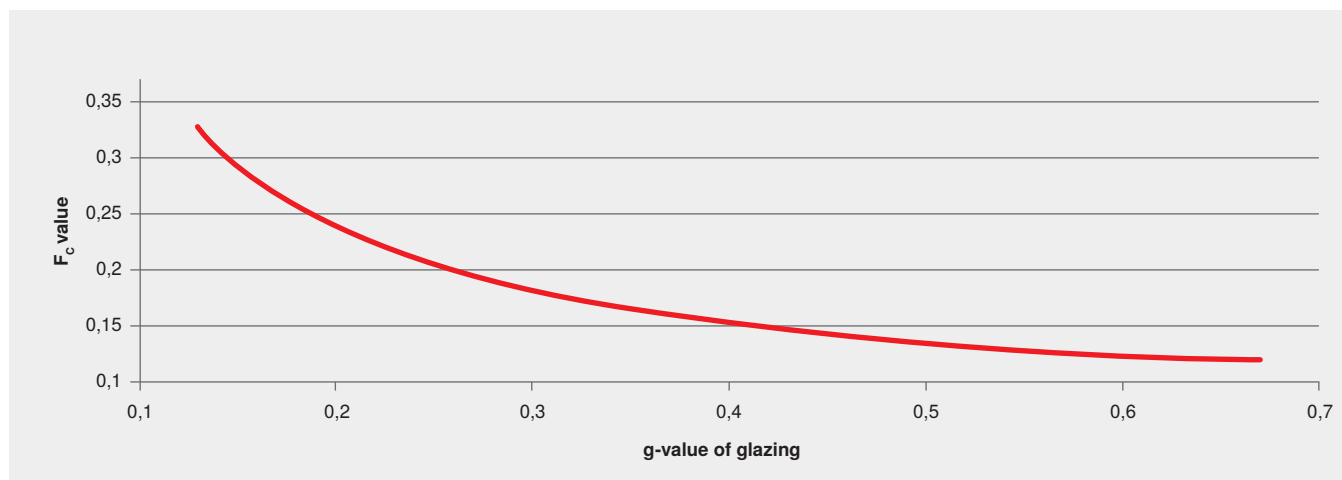
The calculation of the protection against overheating value includes the **total solar energy transmittance** g_{tot} for the combination of sun shading system and glazing or the **shading factor** F_c .

The F_c value is equal to the ratio of the total solar energy transmittance of the sun shading system and glazing combination to the g-value of the glazing:

$$F_c = \frac{g_{\text{tot}}}{g}$$

The glazing is thus also always included in the calculation of the F_c value. This means that it is also not possible to state a fixed F_c value for a sun shading product.

WAREMA RAL 9006 (45° slat position)



Shading factor F_c depending on the g-value. The calculation was performed for an external venetian blind in a slat position of 45° in the colour RAL 9006. The U_g value of the glazing was taken to be 0.6 W/(m²K).

Calculations for Building Projects

For calculations of the g_{tot} and F_c values of project-specific combinations of the sun shading system and glazing, please contact the Building Physics and Sustainable Building hotline:

Phone: +49 9391 20-3025

E-mail: bauphysik@warema.de

You can find reference values on the following pages

For the first estimates, you will find reference values for g_{tot} and F_c values for external venetian blinds in various slat colours and for various glazings on the following pages.

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60 mm and 80 mm slats with triple glazing

Reference values for the combination with a triple heat protection glazing with $g=0.53$ and $U_g=0.5 \text{ W/(m}^2\text{K)}$

Colour	Slat angle	Sun angle	g_{tot}	F_c
White	Closed	1°	0.03	0.06
	45°	30°	0.10	0.19
Silver	Closed	1°	0.03	0.06
	45°	30°	0.08	0.15
Anthracite	Closed	1°	0.04	0.08
	45°	30°	0.05	0.09

Reference values for the combination with a triple heat protection glazing with $g=0.53$ and $U_g=0.7 \text{ W/(m}^2\text{K)}$

Colour	Slat angle	Sun angle	g_{tot}	F_c
White	Closed	1°	0.03	0.06
	45°	30°	0.10	0.19
Silver	Closed	1°	0.03	0.06
	45°	30°	0.09	0.17
Anthracite	Closed	1°	0.05	0.09
	45°	30°	0.06	0.11

Reference values for the combination with a triple sun shading glazing with $g=0.37$ and $U_g=0.6 \text{ W/(m}^2\text{K)}$

Colour	Slat angle	Sun angle	g_{tot}	F_c
White	Closed	1°	0.03	0.08
	45°	30°	0.08	0.22
Silver	Closed	1°	0.03	0.08
	45°	30°	0.07	0.19
Anthracite	Closed	1°	0.04	0.11
	45°	30°	0.05	0.14

The values are calculated according to **DIN EN 13363-1:2007-09/DIN EN ISO 52022-1:2018-01**.

The light and radiation values of a sun shading system are determined by the supplier or by an independent testing institute and are considered to be guidelines. Tolerances in the measurement procedure and batch-related variations from the samples can lead to deviations in the determined values, and in the values calculated from these, for which we cannot assume liability.

If you have any questions, you can contact the Building Physics and Sustainable Building hotline:
+49 9391 20-3025

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Reference values for shading factors

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60 mm and 80 mm slats with double glazing

Reference values for the combination with a double heat protection glazing with $g=0.64$ and $U_g=1.1 \text{ W/(m}^2\text{K)}$

Colour	Slat angle	Sun angle	g_{tot}	F_c
White	Closed	1°	0.04	0.06
	45°	30°	0.13	0.20
Silver	Closed	1°	0.05	0.08
	45°	30°	0.11	0.17
Anthracite	Closed	1°	0.07	0.11
	45°	30°	0.08	0.13

Reference values for the combination with a double sun shading glazing with $g=0.37$ and $U_g=1.0 \text{ W/(m}^2\text{K)}$

Colour	Slat angle	Sun angle	g_{tot}	F_c
White	Closed	1°	0.03	0.08
	45°	30°	0.09	0.24
Silver	Closed	1°	0.04	0.11
	45°	30°	0.08	0.22
Anthracite	Closed	1°	0.07	0.19
	45°	30°	0.08	0.22

Reference values for the combination with a double sun shading glazing with $g=0.28$ and $U_g=1.0 \text{ W/(m}^2\text{K)}$

Colour	Slat angle	Sun angle	g_{tot}	F_c
White	Closed	1°	0.03	0.11
	45°	30°	0.08	0.29
Silver	Closed	1°	0.04	0.14
	45°	30°	0.08	0.29
Anthracite	Closed	1°	0.07	0.25
	45°	30°	0.07	0.25

The values are calculated according to **DIN EN 13363-1:2007-09/DIN EN ISO 52022-1:2018-01**.

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