
Number	B-AD4
Indicator name	Shielding structures and shielding by structures
Area	A
Indicator definition	<p>The indicator is determined on the basis of a combination of qualitative and quantitative shading parameters for windows, glazed doors and glazed walls. The indicator expresses the influence of transparent constructions on the overheating of interiors with regard to the sides of the world.</p>
Indicator unit	Point score
Key words	Windows, doors, glass walls, transparent structures, glass, overheating, shading
Reason for tracking and usability	<p>Shading of windows and possibly external entrances is a basic measure for adaptation to heat waves, which is applicable with immediate results even in the reconstruction of older buildings. Interior shading is several times less effective in reducing solar gains than exterior shading of a building. Exterior shading is an effective means of reducing overheating of the interior. Shading can be solved with blinds, shutters, shades and awnings.</p> <p>Due to the low efficiency and practical impossibility to specify the interior shading more technically, it is proposed not to take it into account in the evaluation. By shading the external entrances, we mean an awning or other means ensuring that the entrance areas of the building are permanently protected from sunlight, or this protection can be easily installed manually or automatically as required.</p>
Completeness, representativeness, validity	<p>The indicator offers a simplified evaluation combining several parameters, so it should have a relatively high explanatory power. However, it cannot replace accurate measurements in the conditions of a specific site and building and does not replace accurate calculation methods.</p>

Description of data processing

The calculation is based on a combination of the same qualitative and quantitative parameters as in the case of the B-AD2 indicator, but is further extended by the effect of window shading.

The calculation is performed as for the indicator B-AD2. The value of X is determined on the basis of a table according to the predominant type of windows and their approximate distribution according to the sides of the world (with an example for double glazed windows, where approximately one third of double-glazed windows are oriented north and two thirds west).

East: Original windows ($U_w \geq 2$) 4; Double glazed windows ($U_w \leq 2$) 3; Windows with triple insulating glazing ($U_w \leq 1$ W/m².K) 2; Share of window area (percentage estimate in whole %) 0 %; X=0
West: Original windows ($U_w \geq 2$) 5; Double glazed windows ($U_w \leq 2$) 4; Windows with triple insulating glazing ($U_w \leq 1$ W/m².K) 3; Share of window area (percentage estimate in whole %) 67 %; X=2,64
North: Original windows ($U_w \geq 2$) 2; Double glazed windows ($U_w \leq 2$) 2; Windows with triple insulating glazing ($U_w \leq 1$ W/m².K) 1; Share of window area (percentage estimate in whole %) 33%; X=0,66
South: Original windows ($U_w \geq 2$) 5; Double glazed windows ($U_w \leq 2$) 4; Windows with triple insulating glazing ($U_w \leq 1$ W/m².K) 3; Share of window area (percentage estimate in whole %) 0 %; X=0
Total 100% x = 3,3
The X score obtained is multiplied for each side of the world by the proportion of the area of the windows that are not shaded by exterior blinds or other types of effective exterior shading. For north-facing windows, the shading factor is not taken into account. The resulting values are added to the Y score according to the following table.
East: X=0; Podíl plochy nestíněných oken (%) 0 %, Y=0,0
West: X=0; Proportion of area of unshielded windows (%) 0 %, Y=1,98
North: X=0,66; Does not coun, Y=0,0
South: X=0; Proportion of area of unshielded windows (%) 0 %; Y=0,00
Y=1,98

Data source

Project and construction documentation, approval decision, building office, owner's / administrator's own data

Tracking frequency

One-time, updates on change

Urban influence

The city can directly invest in the installation or reconstruction of the shading of transparent parts of the construction of buildings owned by it, support these measures on the buildings of other owners financially or otherwise.

Presentation method

The results will be presented in a uniform KLIMASKEN framework on a five-point scale according to the specified intervals for the Y score.

Responsibility

Owner, building manager
