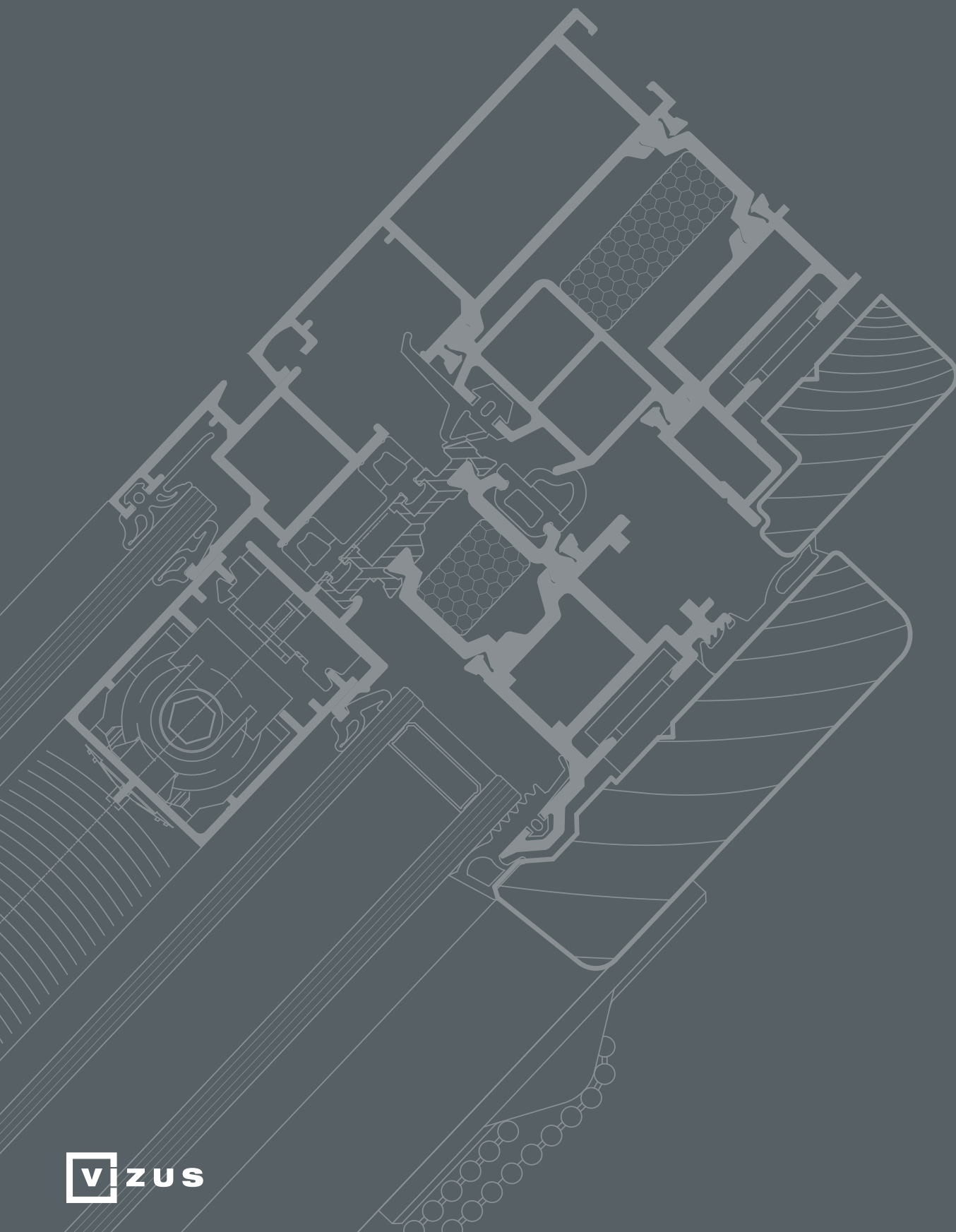


The background of the entire page is a low-angle photograph of a modern building's facade, showing a grid of windows and metallic panels. Overlaid on the lower-left portion of the image is a detailed, light-grey architectural line drawing. This drawing shows a cross-section of a window and its integration with a building's structural elements, including floor slabs, insulation, and internal shading mechanisms. The drawing highlights how the shading system is built into the window frame and the surrounding wall structure.

WINDOWS AND
TERRACE DOORS

Vizus **AT** + sun control

integrating the shading system
into the window system



Characteristics of design

Research has shown the most acceptable light intensity to the human eye is that of twilight and that brightly lit spaces diminish the experience of the interior. The phenomenon of glare is considered visual noise in the literature. However, there is no precisely defined maximum intensity of light in space, rather regulating it is left to the skill of architects or consumers. By using various window shading systems, the desired light level can be adjusted. The spatial relationship between the window and the shading element defines the depth of the facade.

Architectural tendencies that promote clean, shallow relief forms do not leave much room for combining these two systems. Vizus finds the solution in integrating the shading system into the window system by designing Vizus AT + sun control.

The particularity of the design is in the fact that the window is viewed as a single-sash unit that can be multiplied on the facade in the horizontal or vertical directions. In this way, Vizus AT + sun control corresponds to the aesthetics of highly precise, modular architectural facades.



University Campus Suffolk-Ipswich/primenjeni sistem Vizus AT80



Vizus AT+sun control / AT80 i AT96

The Vizus AT + sun control window system, in addition to all the standard features, is also characterized by the possibility of controlling the amount of daylight in the room. It is formed of aluminum profiles with a thermal break and solid wood paneling on the interior side. The window assembly features a 1 + 2 and 1 + 3 glazing system, which enables the placement of venetian blinds in the space between the single outer and thermal insulation glass, with a maximum width of 15 mm. For maintenance purposes, it is possible to open the external glazing in the open window position, according to the sash-to-sash system. The wood paneling, made of industrially joined frames, of impeccable workmanship and surface finish, is a great contribution to the comfort and warmth of the interior.

The use of double and triple thermopane glass determines both the base width of the window system and the value of the heat transfer coefficient.

Vizus **AT80**

Base width of the system 80mm
glazing 1+2
heat transfer coefficient $U_f=1.75\text{W/m}^2\text{K}$

Vizus **AT96**

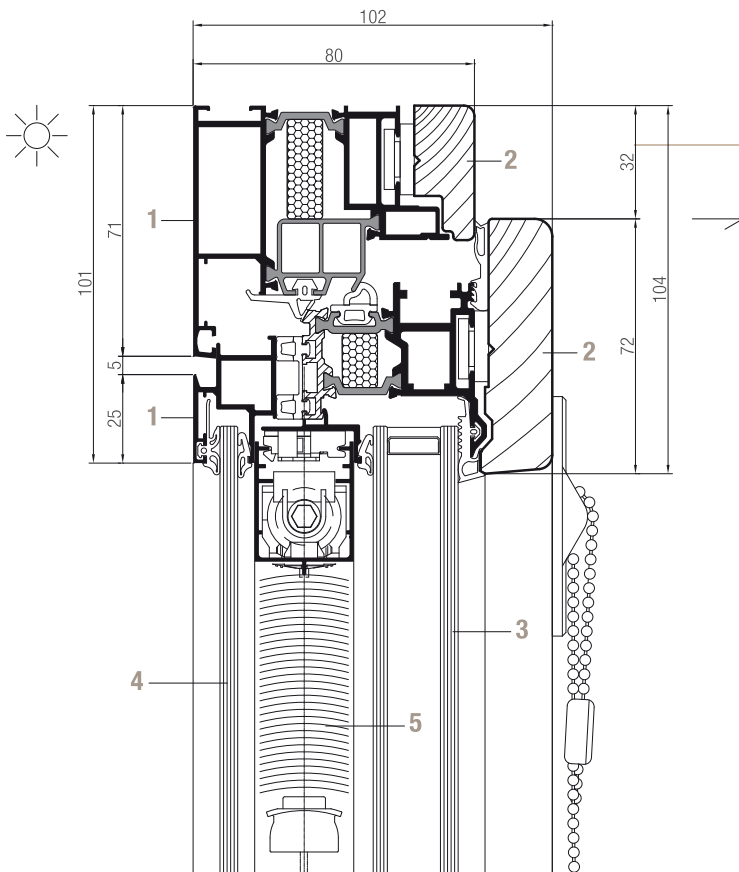
Base width of the system 96mm
glazing 1+3
heat transfer coefficient $U_f=1.40\text{W/m}^2\text{K}$



**The appearance of the windows Vizus AT80 and Vizus AT96 is identical from the external and internal side*

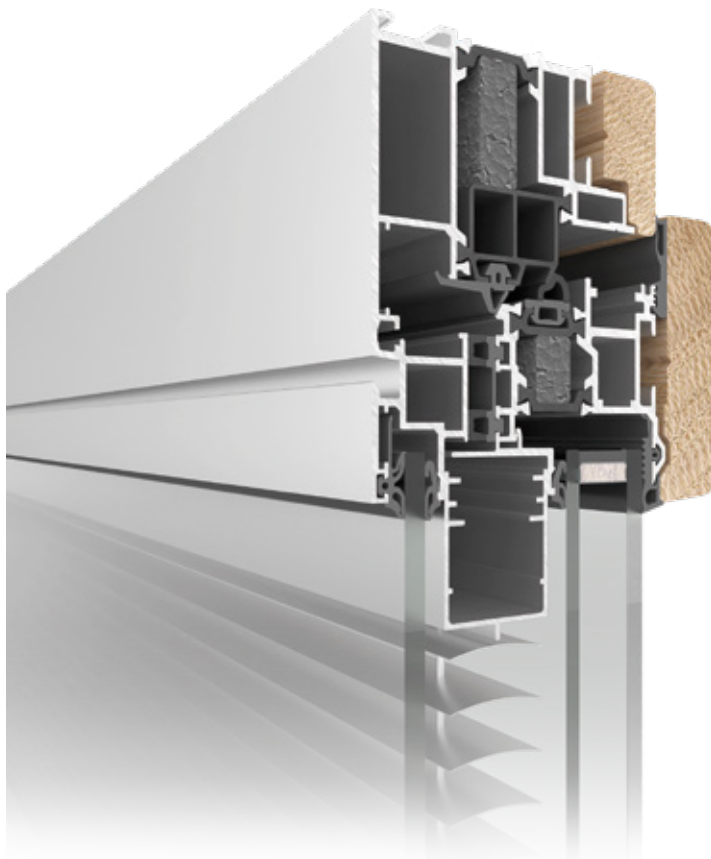
AT80

Composite system components:

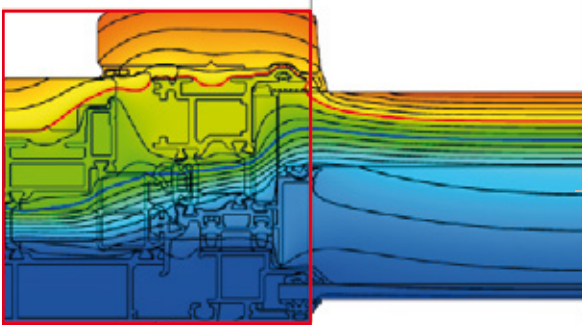


1 Cross-section of the window frame with the opening sash

- 1 Aluminum profiles of the frame and the sash doubled with polyamide profiles, anodized or plastic coated in optional colors
- 2 Oak wood tone colored as specified by the customer, with the finish layer of water-based varnish with a desired sheen percentage
- 3 Double thermal insulation glass, optional in terms of thickness, quality, color and reflection from the market assortment
- 4 Single external glass
- 5 Venetian blinds



2 Drawing of the cross-section of the window frame



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Frame thermal conductivity coefficient

$U_f = 1.75 \text{ W/m}^2\text{K}$

3

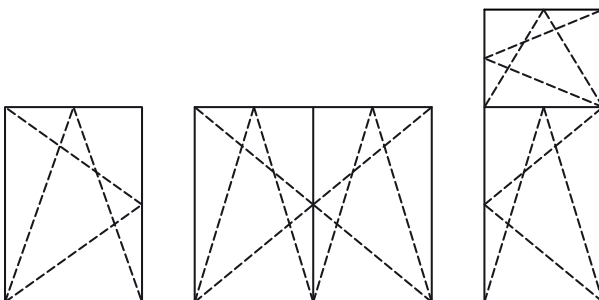
View of isotherms in the cross section of the window frame

*thermal conductivity coefficient on the window of certain dimensions when using the double glazing $U_g = 1.0 \text{ W/m}^2\text{K}$ and WE spacer bars:

dim. 1230 x 1480mm $U_w = 1.12 \text{ W/m}^2\text{K}$

*thermal conductivity coefficient on the window of certain dimensions when using the double glazing $U_g = 1.1 \text{ W/m}^2\text{K}$ and WE spacer bars:

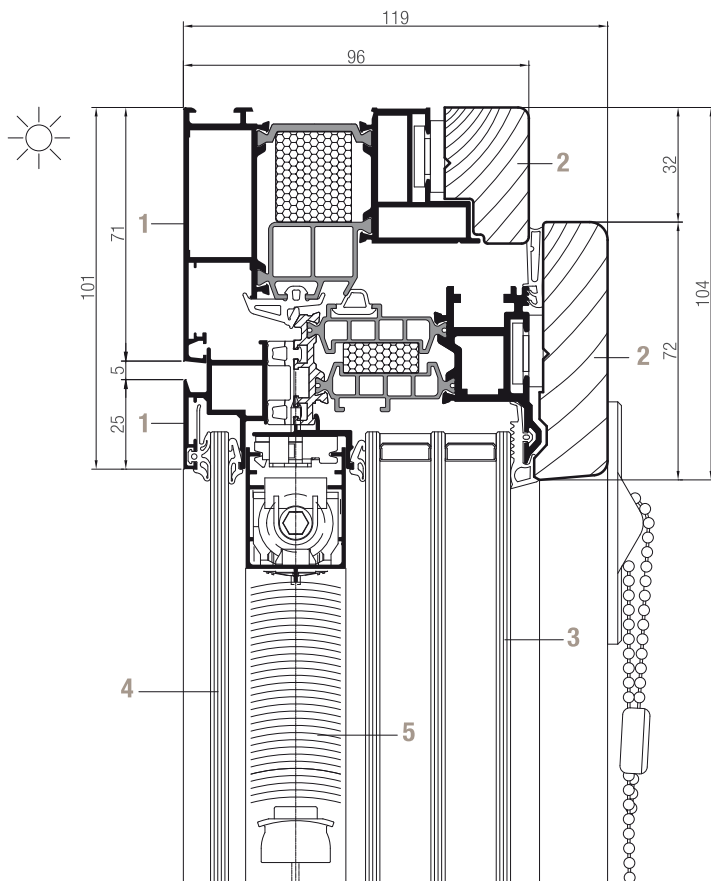
dim. 1230 x 1480mm $U_w = 1.22 \text{ W/m}^2\text{K}$



4

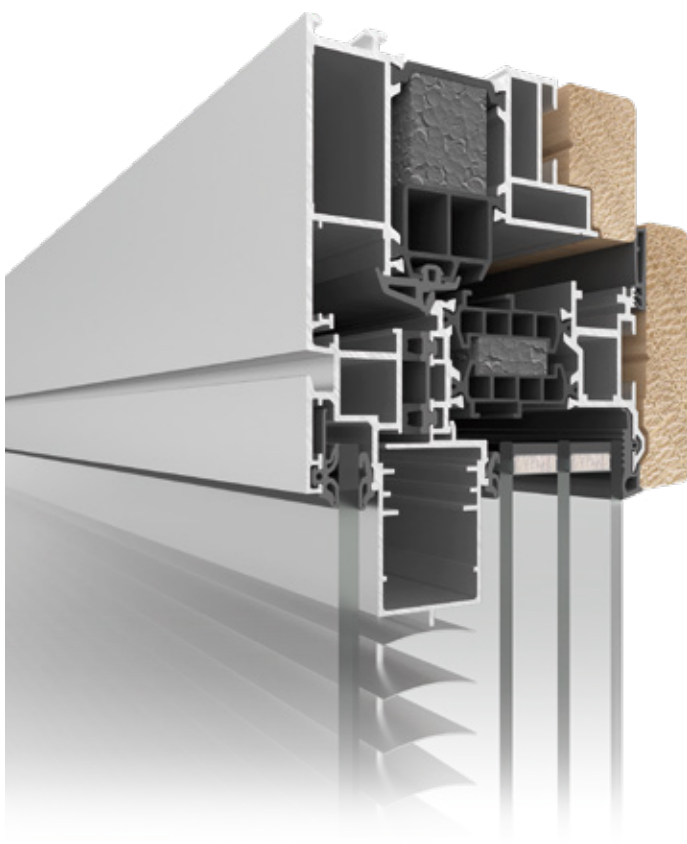
Optional window schemes

The standard offer comprises MACO or ROTO hardware, with visible hinges, and Hoppe Toulon handle

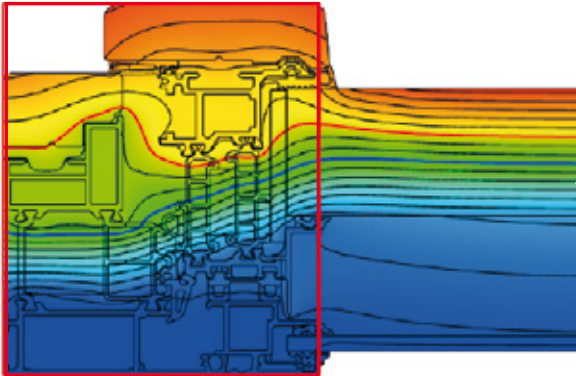


1 Cross-section of the window frame with the opening sash

- 1** Aluminum profiles of the frame and the sash doubled with polyamide profiles, anodized or plastic coated in optional colors
- 2** Oak wood tone colored as specified by the customer, with the finish layer of water-based varnish with a desired sheen percentage
- 3** Double thermal insulation glass, optional in terms of thickness, quality, color and reflection from the market assortment
- 4** Single external glass
- 5** Venetian blinds



2 Drawing of the cross-section of the window frame



3

View of isotherms in the cross section of the window frame

*thermal conductivity coefficient on the window of certain dimensions when using the triple glazing $U_g=0.5\text{W/m}^2\text{K}$ and WE spacer bars:

dim. 1230x1480 $U_w=0.85\text{W/m}^2\text{K}$

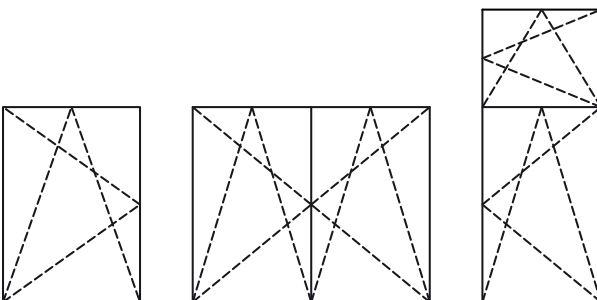
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Frame thermal conductivity coefficient

$U_f=1.40\text{W/m}^2\text{K}$

*thermal conductivity coefficient on the window of certain dimensions when using the triple glazing $U_g=0.6\text{W/m}^2\text{K}$ and WE spacer bars:

dim. 1230x1480 $U_w=0.93\text{W/m}^2\text{K}$



4

Optional window schemes

The standard offer comprises MACO or ROTO hardware, with visible hinges, and Hoppe Toulon handle



University Campus Suffolk-Ipswich/primenjeni sistem Vizus AT80

WINDOWS
AND TERRACE DOORS

Vizus AT
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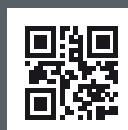
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