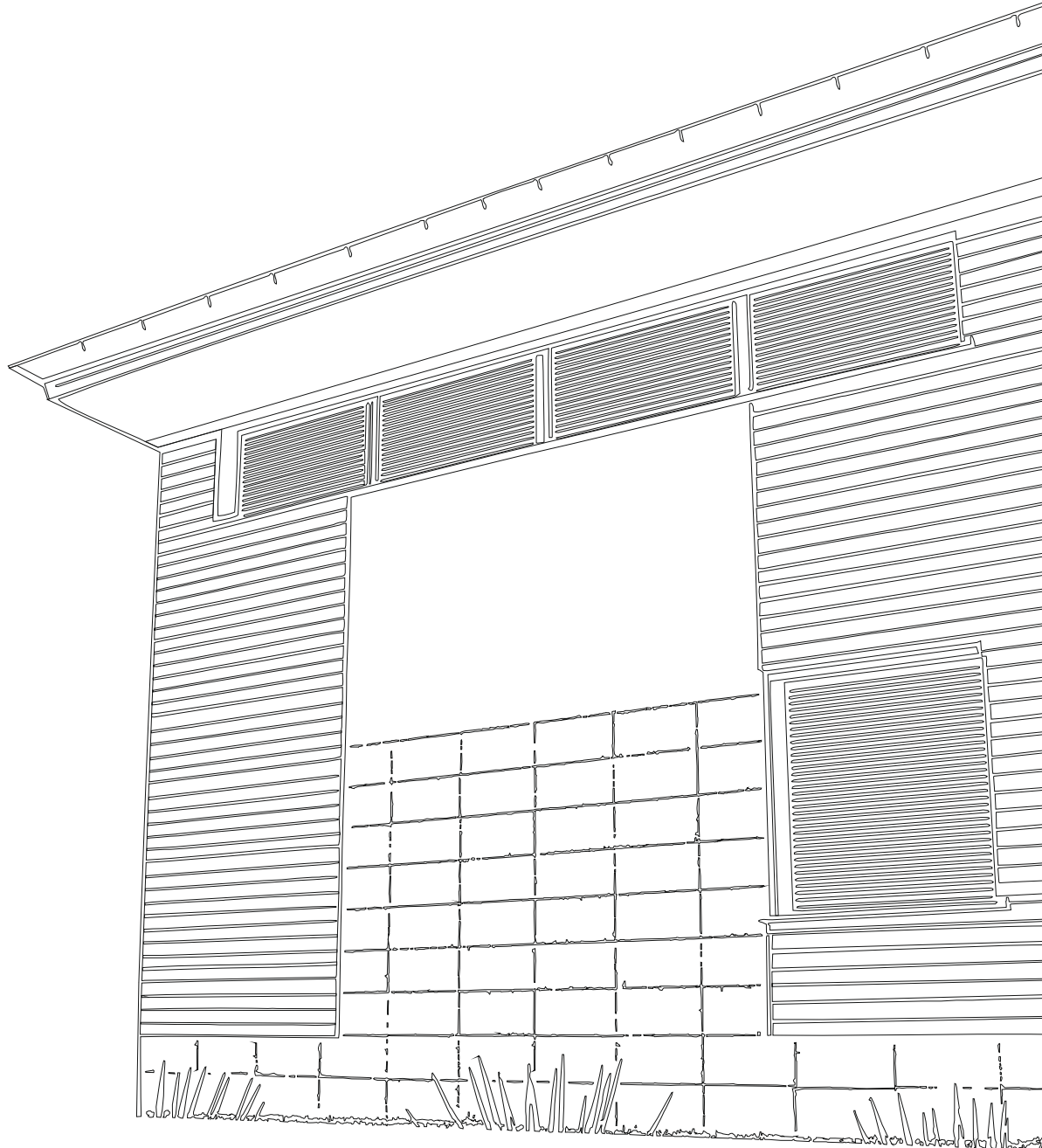




BeClever

EN

folder



on-window  
*CleverBox*

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### *why roller shutters?*

*Thanks to their functionality, on-window roller shutters constitute an integral part of the modern construction technology. They offer excellent protection against the sun, wind, rain, snow and other atmospheric conditions. They improve significantly the thermal insulation of the building, providing measurable advantages in the winter and in the summer. On-window roller shutters also improve the acoustic insulation of windows, reducing visibly the noise level inside rooms. They provide a sense of privacy and they increase greatly the sense of security among the household members.*

### *why CleverBox?*

*The CleverBox on-window roller shutter system is a product designed using innovative technical and technological solutions. The system's carefully thought out construction allows to adjust the functional and aesthetic qualities of the roller shutters to the user's individual requirements. Various ways of installation and a broad range of finishing possibilities make it possible to perfectly compose the CleverBox roller shutters in every building's architectural design. The system guarantees a high level of living comfort thanks to exceptional thermal and acoustic insulation features.*

*a roller shutter system recommended by the Design Studios: ARCHETON, ARCHIPELAG and the ARCHON+ Design Office*

*unlike in the case of traditional roller shutters, the building elevation is not influenced (architectural purity)*

*aesthetic finishing of the roller shutter box from the room interior (covering possibility)*

### *view from the outside*



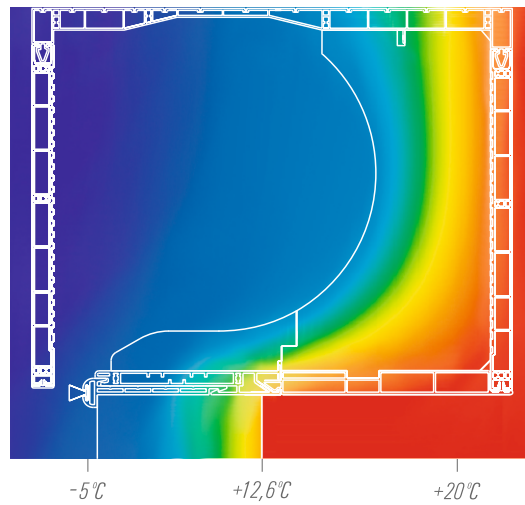
### *view from the inside*



*thermal insulating*

The energy saving is a very important problem of modern building engineering. Increasing costs of thermal energy and improved ecological awareness of investors encourage for looking for building products with very good thermal insulation parameters.

The tests in range of thermal insulating power indicate that the on-window roller shutters in CleverBox system are recommended for the energy saving building engineering. Use of roller shutters increases the building energetic class and limits costs connected with its operation. The CleverBox roller shutters influence the real savings in range of heating the building during winter and maintain comfortable cool during summer.

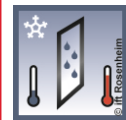


photograph made with use of thermovision camera presents the thermal permeability through the exemplary roller shutter box in given temperatures

thermal insulating research confirmed by certificates of IFT Rosenheim institute in Germany



heat transfer coefficient  
 $U_{30} \geq 0,61 \text{ W/(m}^2\text{K)}$



temperature coefficient  
 $f_{R30} \leq 0,75$

*acoustic insulating*

The acoustic insulating power is, just like the thermal insulating power, one of the most important aspects of modern building solutions. Increasing environmental noise, especially the more and more intensive road traffic force the investors to look for products limiting the strenuous sounds.

The acoustic insulating tests confirm that the CleverBox roller shutters have unique properties in range of insulating the external noise sources. The CB roller shutters have very good tightness, which results from well-thought-out design based on precise connection of elements. Efficient attenuation of strenuous sounds from outside assures desired silence in the building and peaceful relaxation for its residents.

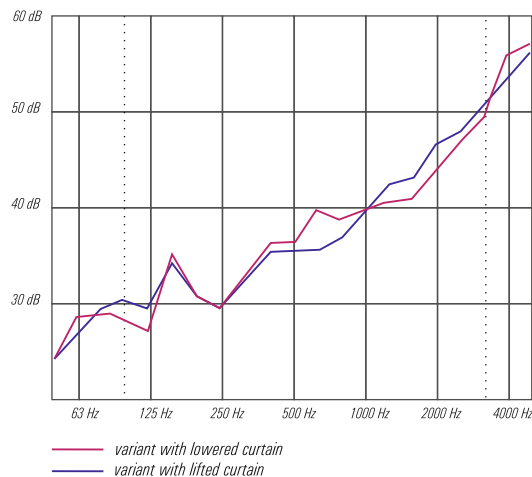


diagram of relation between the acoustic insulating power level (dB) and the noise frequency (Hz) for the exemplary roller shutter

acoustic insulation research confirmed by certificates of IFT Rosenheim institute in Germany



acoustic insulation coefficient  
 $R_w \leq 39 \text{ dB}$

# CleverBox system features

three heights of the roller shutter box:  
165mm, 205mm, 245mm

three depths of the roller shutter box:  
175mm, 215mm, 255mm

two versions of the roller shutter box:  
with no insect screen, with insect screen

a universal connection profile,  
allowing for easy assembly of  
the roller shutters on every window:  
PVC, wooden and aluminium

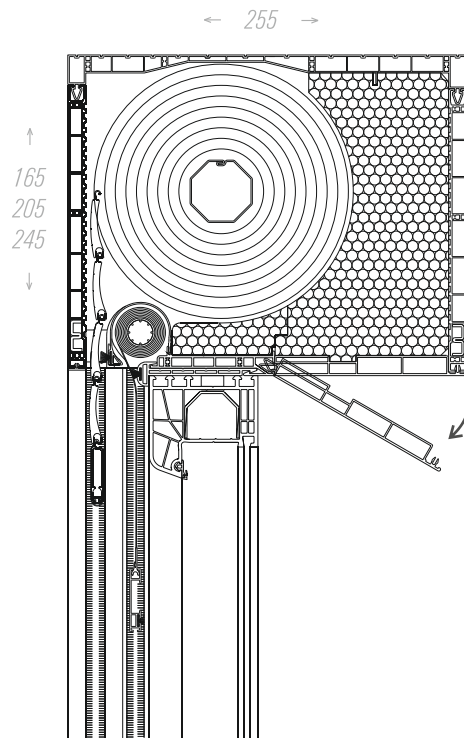
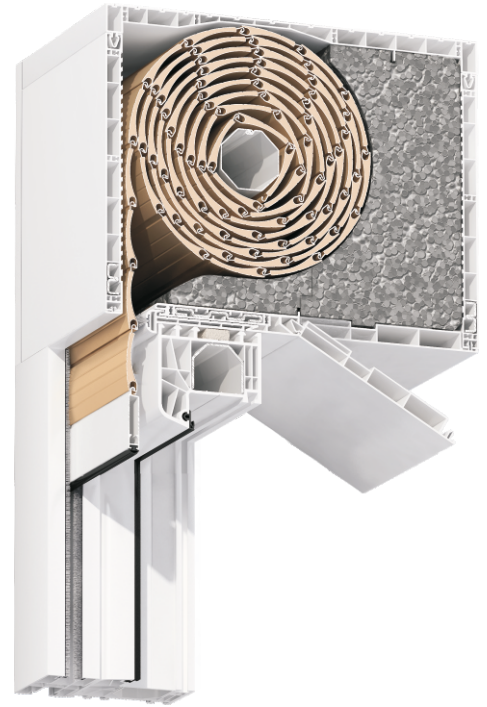
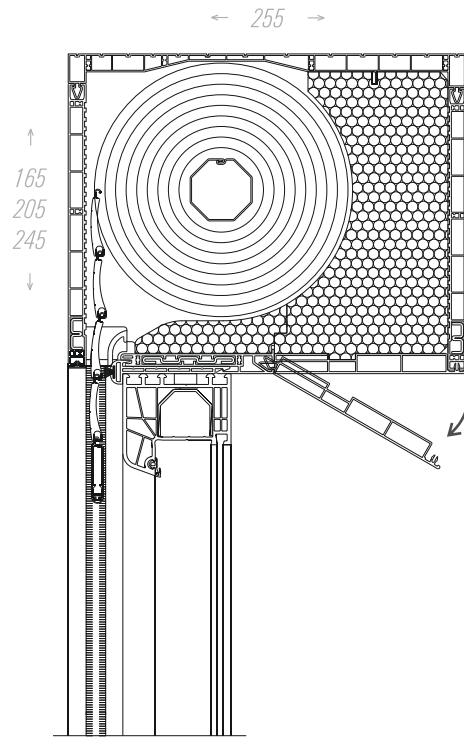
a two-sided front profile with the  
possibility to use a variant for  
covering or without covering

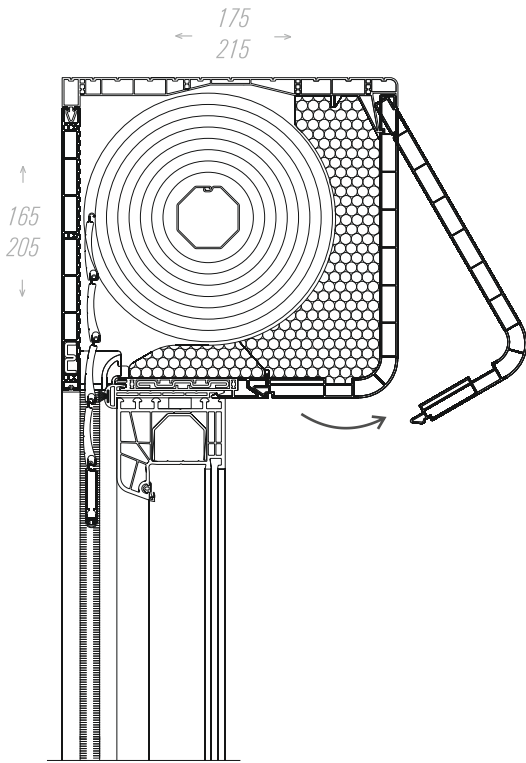
an aesthetic access plate with  
a functional lock located at the bottom  
or rear of the roller shutter box

a innovative element connection  
system of roller shutter box

additional reinforcements and consoles  
ensuring the construction's stability  
even at very large dimensions

installation anchors ensure secure  
connection stability of the roller  
shutter-window set with the  
window recess





*various manners and types of roller shutter heat insulation allow optimal adjustment to climate conditions*

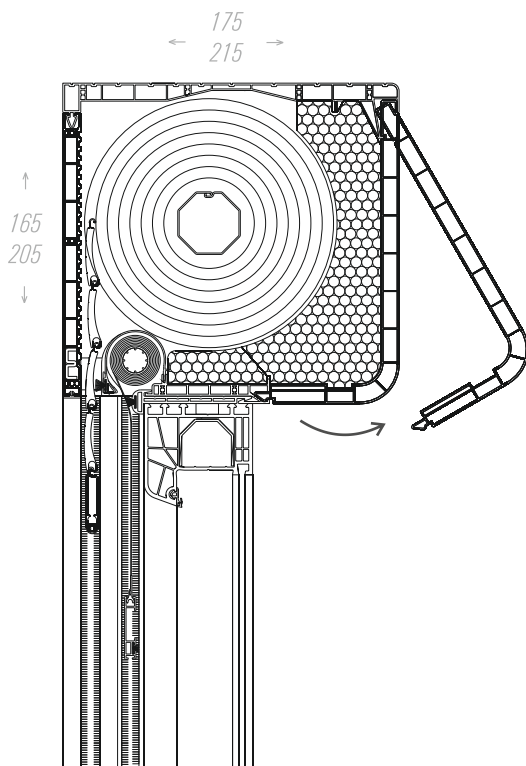
*profiles with thick and wide sides and a chamber structure of shutter elements ensure appropriate rigidity and thermal insulation*

*production of PVC components based on environmentally friendly lead-free stabilizers*

*possibility of use mini and maxi roller shutter curtains*

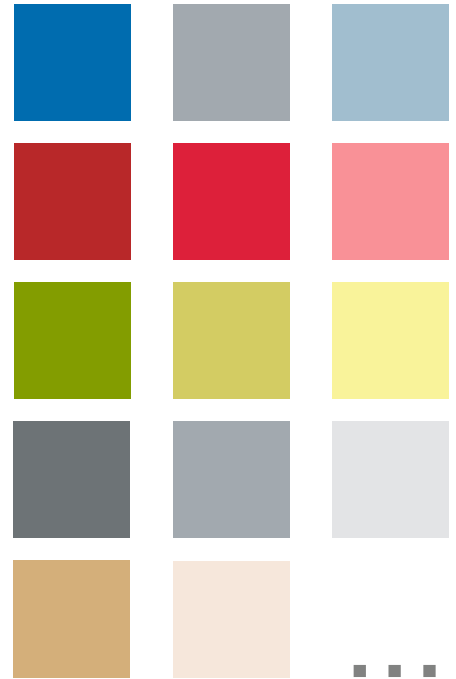
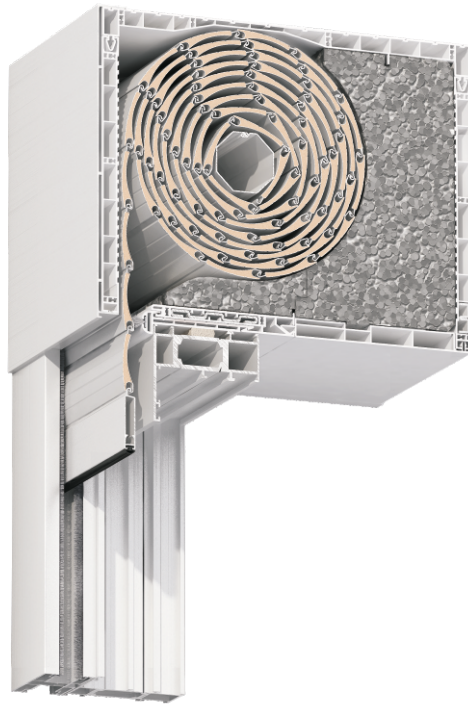
*possibility of use electric and manual roller shutter control*

*possibility of placing roller shutter sets in one box*



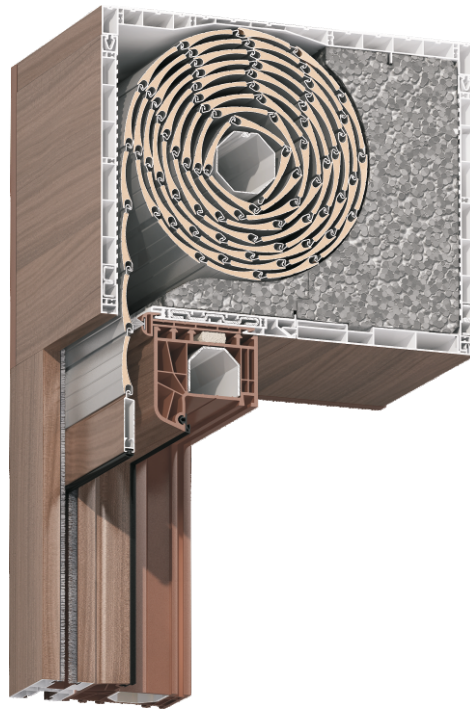
*possibility of providing aluminium finishing and varnishing in any color for the external part of the roller shutter*

*AluLine*



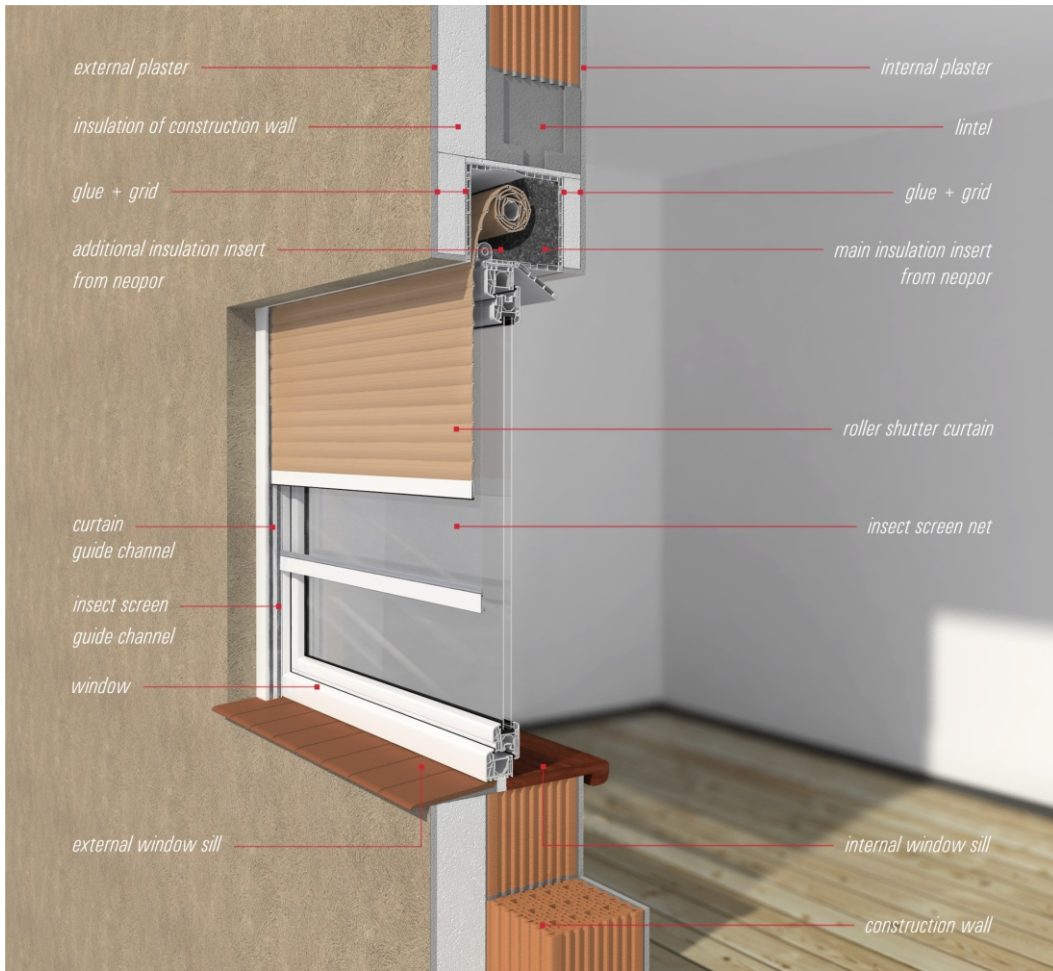
*possibility of finishing the selected elements of the roller shutter using any foil*

*DecorLine*



*CleverBox on-window roller shutter finishing option configuration program available at the website [www.becklever.eu](http://www.becklever.eu)*

*covering possibilities*



*roller shutters used in new construction and modernization of existing buildings*

*possibility to install the shutters in a single-, double- and triple- layer walls*

*different methods of covering of the roller shutter box: completely covered, covered from the inside, covered from the outside, uncovered*





**INNOVATIVE ECONOMY**  
NATIONAL COHESION STRATEGY

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