

## Frequently asked questions and answers:

**1. What is the appropriate minimum depth of contact insulation if I want to have built-in exterior blinds above the windows?**

It depends on several aspects. It should be noted that the actual box for exterior blinds placed in the space of contact insulation is a huge intervention in the thermal envelope of the building and in one of the most sensitive details, i.e. when connecting the window frame to the masonry. There is a high risk of thermal bridges without losing the thickness of the insulation. There are several approaches to this problem.

The use of a purenite concealed box is considered to be the most complex solution. Its use compensates for the reduction of the insulation layer due to effective insulation (PIR insulation) and the creation of space for the blind with a material that behaves well in CTIS (Purenit). In the case of using a purenite concealed box, the minimum depth of the CTIS is 180 mm (provided that we use a PIR of 30 mm to insulate the lintel).

\* (KZS - contact thermal insulation system)

**2. Is there a difference in the types of individual slats of blinds? For example S 65 and Z 90, will there be a difference of contact insulation in cm ?**

Individual types of slats of exterior blinds can be divided into two groups. The first group of narrower slats - C65, S65, Z70. The second group are slats of standard width - C80, S90, Z90.

The minimum CTIS depth of 160 mm is recommended for the first group and 180 mm for the second group (assuming 30 mm PIR back insulation).

**3. What is the ideal composition of contact insulation if I want to have the best possible insulation properties and how can I influence the depth of contact insulation and why?**

A simple rule applies when insulating the outer envelope of a building. The more the better. It all depends on the possibilities and circumstances. If we imagine the composition of the CTIS in the space of the blind box, the most important for insulation is the quantity and quality of the insulation above the lintel and the window frame.

The most used types of slats are C80 or Z 90 and for them the inner space of the box is at least 135 mm. The front side of the box is made of a 15 mm thick purenite board (the basic layers of the facade can be applied directly to the board), the sufficient thickness of the lintel insulation in common buildings is 30 mm PIR. If possible, a better variant can be chosen, namely insulation with a thickness of 50 mm. In this case, the depth of the CTIS would be 200 mm.

**4. With another solution (for example, covering aluminium sheets or OSB boards) is it possible to achieve smaller depths of contact insulation?**

In general, it is not good solution. The insulation of the lintel and the connection joint of the window cannot be skimmed in any way. Insulators of the appropriate quality must be used and their width depends accordingly. In the case of using purenite boxes, PIR of 30 mm is

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suitable. Whether sheet metal or a box is used, again there must be minimal space for the blind. In the case of aluminium sheets, the internal space compared to the box is reduced by the brackets required for sheet metal assembly. Another board must be placed on the cover plate, on which the actual facade is just being applied.

The most commonly used is extruded polystyrene with a thickness of 20 mm. Due to the access of moisture from the inside, OSB boards are not recommended for this type of CTIS composition. The use of a purenite box as the most effective solution is based on a comparison of all variants.

**5. What if my lintels have already been insulated, do I still need a purenite box?**

If the lintel has already been insulated, two variants of the purenite box can be used. Namely, a purenite box in the shape of U or L. This will create a space in the CTIS from a material that will cooperate with it and achieve better insulating properties.

**6. Can I install the facade directly on the purenite box?**

Yes. That is its great advantage. However, the condition is a good penetration of the purenite box surface or the use of a contact or adhesive bridge.

**7. What does the manufacturer of purenite boxes and exterior blinds need to know for processing price offers? Is the window area report enough?**

Yes. All you have to do is communicate production dimensions of the windows, the type of the planned blind and information on how they will be mounted on the windows (in the face of the masonry, suspended installation).

**8. What is the installation procedure if I want to have exterior blinds plastered and use purenite boxes?**

After sending the dimensions taken by an assembly company, the boxes are entered into production. The manufactured boxes are delivered to the construction site already in the finished state and are assembled as follows.

The base rail is mounted on the window frame (which also solves the aesthetic detail of the connection of the box and actually the entire facade to the window frame). The box is fitted into the rail and fixed with mounting brackets. Subsequently, the insulation lining is installed, if it is part of the order. That's all and the CTIS application can be continued. It's fast and convenient. Subsequently, related operations on the surface of the object wall can take place.

**9. Won't it be cheaper with own box?**

A distinction must be made between quality and price. If an effective solution is to be used, it will never be the cheapest option. Honestly, right now is the best time to do the details properly. Repairing the details that were poorly carried out is always more expensive than fixing everything right the first time. Often the repair cannot even be performed subsequently. Currently, the most expensive commodities on the construction site are time and human craftsmanship. Taking all these aspects into account, it is logical that the purenite

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box appears to be the most effective variant. It solves construction details excellently, it does not delay the construction within either delivery or assembly. If the price of the cover plates and the purenite box is compared, not only the value of the material used can be compared, but also the time and work that must be made in both variants so that the CTIS works properly.

**10. Can I use only the top boxes that affect the thermal insulation and the lining supplied systematically replace only by a case for guide rails? Will I save?**

Yes, only purenite boxes can be used separately. After all, it is primarily a matter of solving the space for the blind and effective insulation of the space above the window. However, the use of a separate under-plaster case is more laborious, despite the fact that its purchase price is lower than the price of a prefabricated insulating lining with a case. The great advantage of the insulating lining is the speed and ease of installation. Functionally, both solutions are correct.

From a financial point of view, it is necessary to evaluate the invested material, including the work done. According to the general opinion, in the construction industry, the assembly of prefabricated parts is most worthwhile with common procedures. Even with regard to the lack of quality craftsmanship and its price.

**11. How and when should I bring power to the exterior blind when it is hidden in the purenite box?**

Electrical preparation must be performed before the implementation of CTIS. The advantage of the purenite box is that we can then drill the passage for the cable anywhere in the upper part of the box without disturbing its properties. We recommend sealing the cable entry into the box with mounting foam.

**12. How is the purenite box attached to the masonry? Are there no thermal bridges at the consoles holding the box?**

The ideal procedure is to break the thermal bridge at the console with a purenite pad. In the case of more demanding projects, a composite mounting bracket can be used.

**13. How many cm is recommended to cover the window frame with contact insulation, and how many cm will the system lining take?**

In most cases, the window frame is covered with a layer of 30 mm insulation. This is to eliminate heat loss at the junction of the window and masonry. The system of mounting purenite boxes is standardly set so that the upper part of the window and the lining is covered with 30 mm of insulation.

**14. Can I use a purenite box if I have a window with a masonry face or a window that is suspended?**

For both variants, standard installation of a purenite box is possible. If, for some reason, the window is partially recessed in the scuncheon, this is also not a problem. This situation is solved by an atypical base slat made to measure.

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