



Dr. Kolbe
Vogelschutz mit Durchblick

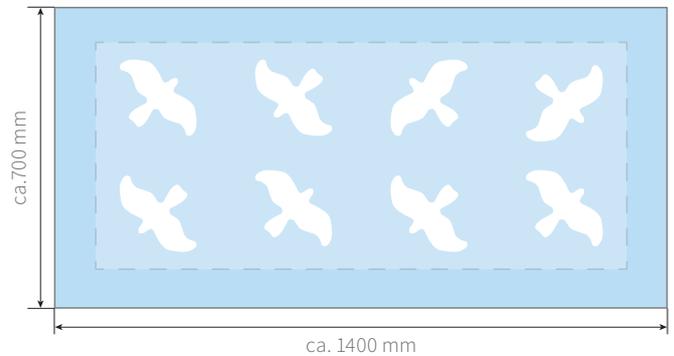
General explanations on the bird strike issue and on **birdpen**[®] and **birdsticker**[®]:

Application example for **birdsticker**[®]: alignment and inclination should be adapted to the dimensions of the window, an irregular arrangement of the stickers is possible and advantageous.

Recommendation:

- ▶ for small windows 5 - 7 **birdsticker**[®] per m²
- ▶ for medium to large windows 8 - 10 **birdsticker**[®] per m²
- ▶ for extra large windows up to 14 **birdsticker**[®] per m²

The **birdpen**[®] and **birdsticker**[®] (highly transparent stickers) are based on the same principle, but are different in the application and handling.



The **birdpen**[®] was developed for the private sector. It is applicable for smaller windows and is enough for up to 10 m². The easiest way is the application of a vertical stripe pattern with a distance of about 8 to 10 cm. The applied marks can become visible to humans over time due to dirt. To avoid this, the stripes can be removed and reapplied during regular window cleaning every 3 to 6 months. The **birdpen**[®] has a shelf life of about 6 months, when stored in a cool place (about 15 °C/60 °F). After that, the transparency may reduce and / or the active liquid may dry.

Likewise, our **birdsticker**[®] has to be applied as a pattern across the surface about 8 to 10 cm both from the edge or visible frame, glazing bar, as well as in between the individual stickers. The application should always be done from the side that birds are approaching, so usually from the outside. We recommend using distilled water to avoid lime scales on the freshly cleaned glass surface. For the wet-on-wet application of our **birdsticker**[®] the outside temperature should always be above the freezing point. We recommend the application above 10 °C (50 °F). Smaller air and water bubbles usually dissolve within a few days to weeks. Windows with **birdsticker**[®] can still be cleaned with a mild medium. Do not use microfibre cloths! Prior to the application of the **birdsticker**[®] or **birdpen**[®], check if the glass surface has been pretreated, e. g. with UV-protection films, vapor-deposited metal layers or non-stick coatings. Such coatings can decrease the effectiveness or the adhesion of the **birdsticker**[®]. If you are not sure please ask the window manufacturer.

In case of further questions and/or information you are welcome to contact us at any time at office@drkolbe.de

BIRD STRIKE PROBLEM

Our products are manufactured according to a special process, and are based on the different perceptions of birds and humans. It is no longer a secret that many birds can see other wave lengths of light than humans, as has been repeatedly shown in scientific publications (e.g. „Spinnennetz-Effekt= Spider web effect“). However, the bird strike problem is extremely complex and depends on many factors. When using the **birdpen**[®] and **birdsticker**[®], the light and weather conditions as well as the time of day or season, the surroundings and reflections in the glass panes all play an important role.

In a tunnel 1 experiment conducted by the Ornithological Observatory in Radolfzell, it was shown that about 70% of bird strike accidents could be avoided. This data can only be taken as a guideline because a test can never take the multiple factors that real life holds into account.

Our customers confirm that our products work well. After years of experience, we can say that through our transparent systems usually 70% or more of accidents could be avoided, where **birdpen**[®] and **birdsticker**[®] are applicable and properly applied. Having local conditions with less UV light (e.g. covered patio) can weaken the effectiveness.

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