



# WOOD & WOOD ALUMINIUM WINDOWS

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and aluminum.

**DIVERSITY AND DESIGN** 

The diversity of wooden windows is impressive. From size

to shape, various types of openings, they can satisfy almost

From windows used in historically protected buildings to

examples in modern architecture where wood-aluminum

windows simply have no competition. Additionally, there is

a wide range of color combinations available for wood

any desire. There are virtually no limits to design.



#### THE AMBIANCE AND BEAUTY

Wooden or wood-aluminum windows not only look beautiful but also create a special ambiance, especially indoors, where they are crucial for the decision to install wooden windows. The shades of color, liveliness, and naturalness of the surface contribute to the overall impression, and modern optics enhance this effect. The extremely low thermal conductivity of wood ensures that window frames create a pleasant atmosphere in the space you inhabit.

2







## HEALTH

Wood, unlike any other building material, contributes to health. **How?** 

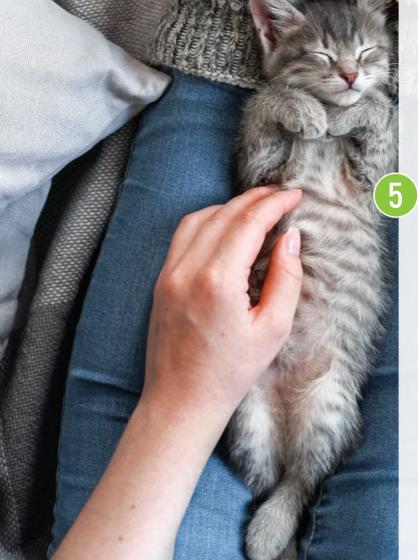
This is due to its natural appearance and physical properties that we sometimes only perceive subconsciously. Its ability to regulate air humidity ensures a comfortable indoor climate, thus increasing your comfort. Wood regulates humidity by absorbing moisture and releasing it back into the air when it's too dry. By regulating moisture, it prevents the formation of mold and fungi indoors, while also improving the air for the respiratory system and reducing the risk of mucosal irritation. Infectious diseases mostly spread in enclosed spaces, and bacteria and viruses thrive more easily in high humidity.

# QUALITY OF LIFE

Modern humans spend 90% of their lives indoors, meaning that our psychological health is significantly influenced by the designed environment, and natural materials like wood have advantages due to their good anti-allergic, insulating, and other health effects. Scientific research has discovered that people in workplaces surrounded by more than 20% natural wood surfaces are more satisfied. There is a correlation found between the presence of wood and overall employee satisfaction, leading to lower absenteeism, higher levels of concentration, and improved productivity.

WHYARE WOODEN WINDOWS THE BEST CHOICE









#### THE SENSE OF WARMTH

Scientists have developed measurement methods that provide clear results on why people feel more or less comfortable. An important criterion is thermal conductivity. Objects with warmer surfaces are perceived as more comfortable than those with cold surfaces because their temperature matches our body temperature. In addition to this tangible advantage of wood, doctors are increasingly highlighting the positive psychological impact of wooden windows.

Did you know that wood as a material has 15 times better thermal insulation than concrete, 400 times better than steel, and even 1770 times better than aluminum?

#### VALUE AND INPRESSIVE DURABILITY

The lifespan of wooden or wood-aluminum windows is longer than that of windows made of artificial materials. Modern wooden windows demonstrate remarkable advancements in acrylic lacquering techniques, which provides protection against weather and make maintenance easier than ever before. Wood-aluminum windows feature an aluminum mask on the entire outer side, offering complete protection to the wood from weather impacts, resulting in exceptional window durability that requires minimal maintenance. The lifespan of wood/wood-aluminum windows is much longer than that of windows made of artificial materials. Modern wooden windows show remarkable avancements in acrylic lacquering techniques, which provides protection against weather and make maintenance easier. Wood-aluminum windows feature an aluminum mask on the outer side, offering complete protection to the wood from direct weather impacts, resulting in exceptional window durability that requires minimal maintenance.







### FIRE RESISTANCE

Windows made of artificial materials deform much faster, the glass breaks much earlier, and sudden oxygen supply can have devastating effects. Additionally, highly toxic vapors (dioxin, corrosive hydrochloric acid) are generated, which can have huge negative effects on health as well as on the restoration of the building itself.

Wood gradually burns, and stability is maintained for a longer time with minimal smoke production.

## **TECHNICAL CHARACTERISTICS**

Windows made of artificial materials are usually reinforced with steel profiles. Since steel reinforcements cannot be placed in the corners of the window, and plastic tends to yield under constant loads, the window sash can deform under certain circumstances. With plastic, even normal temperature fluctuations can lead to deformations, resulting in: leaking, difficulty in opening and closing the window. Wooden and wood-aluminum windows have significantly better stability and mechanical strength.

WHYARE WOODEN WINDOWS THE BEST CHOICE

The profiles of wooden and wood-aluminum windows are made from multi-layer laminated wooden elements, which are much more resistant to deformations.







# 9

## ECOLOGICAL PRODUCTION

The production of wooden windows requires up to 11 times less energy, which also results in significant CO2 savings. In the production of wooden windows, fossil fuels, harmful additives, and chemicals are not used, making wood much easier and cheaper to dispose of, recycle, or process into new materials. Wood is by far the most natural and cost-effective ecological building material.

The construction of an average family house with wooden windows helps protect our climate and saves approximately one ton of CO2.

#### THE GREEN FUTURE

In EU countries, forests are sustainably managed, making wood available in almost unlimited quantities. Significantly less wood is used than what regrows. As trees grow, they store CO2 and release oxygen into the atmosphere. The bound CO2 remains stored throughout the tree's life cycle and during the subsequent period of wood use. The more wood is processed into final products such as windows, the more CO2 is extracted from the environment.

If all windows being replaced were switched to wooden windows in Germany alone, it could save an incredible amount of over 18 million tons of the climate pollutant CO2 annually, which is equivalent to the annual production of 3 million cars.





Lokve d.o.o. Homer 39 51316 Lokve Croatia

T +385 51 508 300 E lokve@lokve.com

www.lokve.com