

**INTEGRATED  
3-LAYER  
WINDOW SEALING  
AND INSULATION SYSTEMS**



**WINS**  
WINDOW  
INSULATION  
STANDARD

**20  
YEAR**  
TIGHTNESS  
WARRANTY



**WINS - NEW WINDOW  
INSULATION STANDARD**  
BASED ON LIQUID FOILS

TESTED & CERTIFIED BY:



[www.wins.tytan.pl](http://www.wins.tytan.pl)



## ENERGY-SAVING HOUSE

Windows as external partitions, apart from functional features, should meet the basic security requirements of thermal insulation of buildings, that's way they should high thermal insulation and airtightness. Selection, placement and correct installation of glazed partitions are the most important elements of the design process and building energy-saving construction.

- ▶ **Air penetration through windows and doors is responsible for over 20% of the costs for heating and ventilation of buildings.**
- ▶ **Choosing the right products for insulation and sealing of windows and glazed doors is crucial in the face of legal and environmental challenges for energy-saving construction.**

### Factors and phenomena affecting the insulation and sealing of joints between the window and the reveal

#### EXTERNAL

- rain
- wind
- sunrays
- temperature changes
- air humidity
- noise
- access and burglary attempts
- impacts
- fire

#### CENTRAL

- movements of the structure
- linear expansion
- deformations
- dimensional tolerances
- use and operation

#### INTERNAL

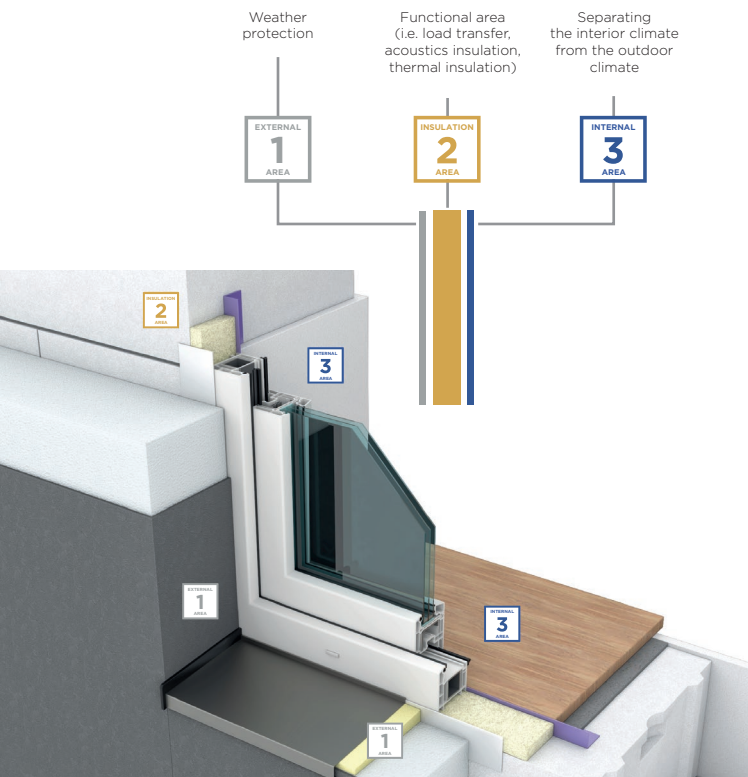
- interior temperature
- air humidity
- impacts
- fire

# INNOVATION 2020

## WINS SYSTEMS

WINS are systems that guarantee long-term tightness of 3-layer windows montage, which mounting WINS foam, creating a layer of heat and sound insulation, is protected by additional layers of liquid foil: vapor tight and vapor permeable.

- ▶ **WINS systems are integrated 3-layer window sealing and insulation systems developed in cooperation with engineers and installers, based on great experience in window frame montage.**
- ▶ **WINS systems increase the tightness of windows by over 75% and they practically eliminate the uncontrolled air infiltration through connectors.**



## GOOD TO KNOW

In the era of growing energy and environmental challenges, investment in high-class windows should go hand in hand with the selection of optimal sealing solutions and insulation of joinery. Tightness and thermal insulation provide investors with a visible return on their bills for heating and air conditioning of rooms as well as invaluable comfort during using.

### **TWO TYPICAL MYTHS ABOUT WINDOW INSULATION AND SEALING**

On the market there is common misconception regarding window insulation and sealing. Remember that even the most energy-saving window will not fulfill its function if it is not installed correctly, i.e. insulated and sealed.

#### **The myth of "natural ventilation"**

Air flow through closed windows to the inside building and housing should not be recognized for natural ventilation allowed, because the air, including the prevailing weather conditions, remain completely beyond our control. It is not as intelligent yet devices that would allow us to regulate them from within smartphone or remote control.

#### **Myth about further construction works for window sealing**

Installed windows which do not meet the required technical conditions or design requirements on the day of issue. It should be done properly, because only as a result of further finishing work, a.i. installation of window sills, compliance with requirements can be achieved.

Making the quality of insulation and sealing of windows dependent on future and uncertain events is incompatible with both applicable regulations as well as a quality standard of performance of carpentry installation works guaranteed in WINS systems.

# A PERFECT CHOICE WARRANTY

## Tightness warranty



WINS systems provide connector tightness to wind and rain penetration three times higher than the applicable legal requirements and resistance to hurricanes at a speed of up to 160 km/h.

- ▶ **Windproofness in class 4**
- ▶ **Watertightness in class E1200**
- ▶ **Resistant to hurricanes at a speed of up to 160 km/h**

## Energy saving warranty



WINS systems provide excellent thermal insulation of joints and level linear thermal bridges in its place.

- ▶ **Linear heat transfer coefficient below 0.15 W/mK**

## Warranty of no condensation and mold



WINS systems provide controlled diffusion of water vapor through the connector and an increase in temperature factor 10% higher than legal requirements.

- ▶ **Sd internal foil  $\geq 30$**
- ▶ **Sd external foil  $\leq 2$**
- ▶ **Temperature factor  $f_{Rsi} \leq 0.8$**

# WINS

WINDOW  
INSULATION  
STANDARD



Air tightness



Resistance to extreme  
weather conditions



Water vapour  
diffusion



UV resistance



Thermal and acoustic  
insulation



Suppressed vibrations  
in window gaps



Protection against  
mould and fungal



Indoor  
air quality

## CHOOSE 3-LAYER WINS WINDOW INSULATION AND SEALING SYSTEMS AND GAIN

**20  
YEAR  
TIGHTNESS  
WARRANTY**



Ask the contractor responsible for assembling, sealing  
or replacing windows in your building or apartment  
for a 20-year warranty on the insulation and sealing  
in WINS systems or find a WINS Certified Contractor at:

[www.wins.tytan.pl](http://www.wins.tytan.pl)