

# W450

Tilt & Turn Thermal  
Insulating System

Maximum energy saving.



## System Identity

The W450 system belongs to the thermal insulation systems generation and has been designed with attention to detail in order to meet contemporary architectural needs for energy efficiency and safety. This line's wide range of profiles offer numerous innovative solutions, from flat to curved sections, as well as the ability to apply complex typologies such as "aller-retour" doors, rotating windows and opening frames with hidden sash in order to achieve a high-level aesthetics.

The available profiles collaborate perfectly with high-quality components and mechanisms which underline the system's multi-faceted and ergonomic nature.

The system's non-negotiable priority for maximum energy savings and high safety is ensured due to the possibility of perimeter locking and the use of 24 mm reinforced polyamides offering a Thermal insulation Index  $U_f=2.2-2.6 \text{ W/m}^2\text{K}$  and a Sound Reduction Index  $R_w$  of 43 dB.

Thanks to its innovative features, the W450 system is extremely efficient, user-friendly, unique in its kind.

## Features & Benefits

- The maximum security provided by the use of multiple locking combined with the high performance of thermal and sound insulation guarantee excellent quality, functionality and significant energy saving.
- Use of glass reinforced polyamides of 24 mm.
- Multi-chamber central gasket that secures optimum impermeability preventing energy loss.
- Option of using mechanisms CAMERA EUROPEA & CAMERA ALU 16 (stainless steel locking mechanism on perimeter system).
- Manufacturing capabilities with bead cutting of 45° and snap-joined bead for excellent aesthetic result to the inside of frames.
- "Curtain" gaskets that deliver extra thermal insulation.

## Configurations

### Casement windows

1Leaf - 2Leaf - 3Leaf - 4Leaf - Pivot

**Casement-awning windows:** 1Leaf - 2Leaf

**Shutters:** 1Leaf - 2Leaf - 3Leaf - 4Leaf

**Doors:** 1Leaf - 2Leaf - Aller Retour - Tilt & Slide (VW)

**Angular structure:** 90°-224°

### Fixed-picture windows

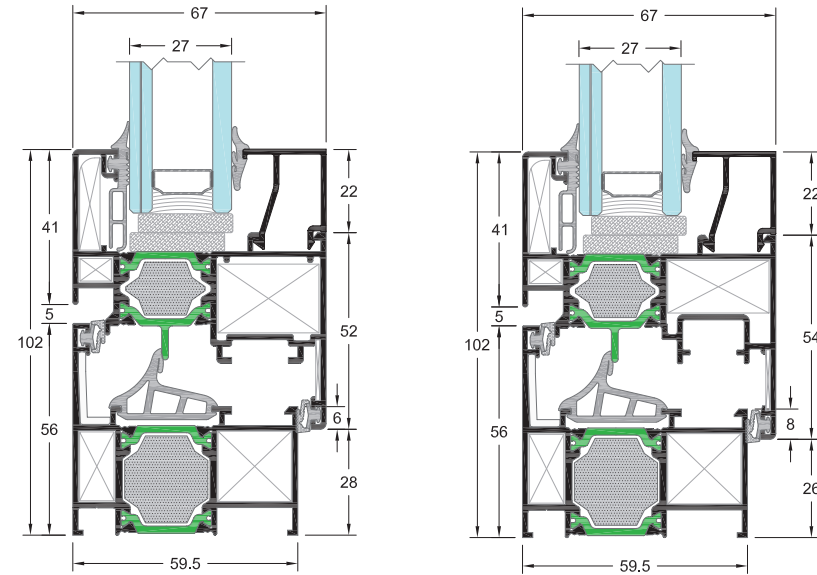
#### Combinations

2Leaf sliding SL200 & SL2450 with opening W450

2Leaf sliding with insect screen SL200 with opening W450



FLAT CURVED



### HARDWARE

CAMERA	CE	ALU 16
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### INSULATION

POLYAMIDES mm	24	24
FOAM	•	•

### SYSTEM PROFILE DIMENSIONS

MIN. FRAME DEPTH mm	59.5	59.5
MIN. FACE HEIGHT mm	102	102
GLASS THICKNESS mm	15-51	15-51

### CONSTRUCTION DIMENSIONS

SASH WIDTH mm	365-1600	360-1490
SASH HEIGHT mm	360-2400	450-2360
MAX. SASH DIMENSIONS mm (WxH)	1600x2100 / 1300x2400	1490x2100 / 1300x2360
MAX. SASH WEIGHT Kg	130, 150*, 200**	130, 150*, 200**

### CERTIFICATES/PERFORMANCES

AIR PERMEABILITY EN 12207	Class 4	Class 4
WATER TIGHTNESS EN 12208	Class 6A	Class 8A
RESISTANCE TO WIND LOAD EN 12210	Class C3/B3	Class C5/B5
BURGLAR RESISTANCE EN 1627	N/A	N/A
SOUND REDUCTION $R_w$ EN 717	43 dB (-2;-7)	43 dB (-2;-7)
THERMAL INSULATION $U_f$ EN ISO 10077-2	2.2-2.6 $\text{W/m}^2\text{K}$	2.2-2.6 $\text{W/m}^2\text{K}$

\*Reinforced Tilt and Turn | \*\*Hinged with heavy duty hinges



### Rate of Insulation

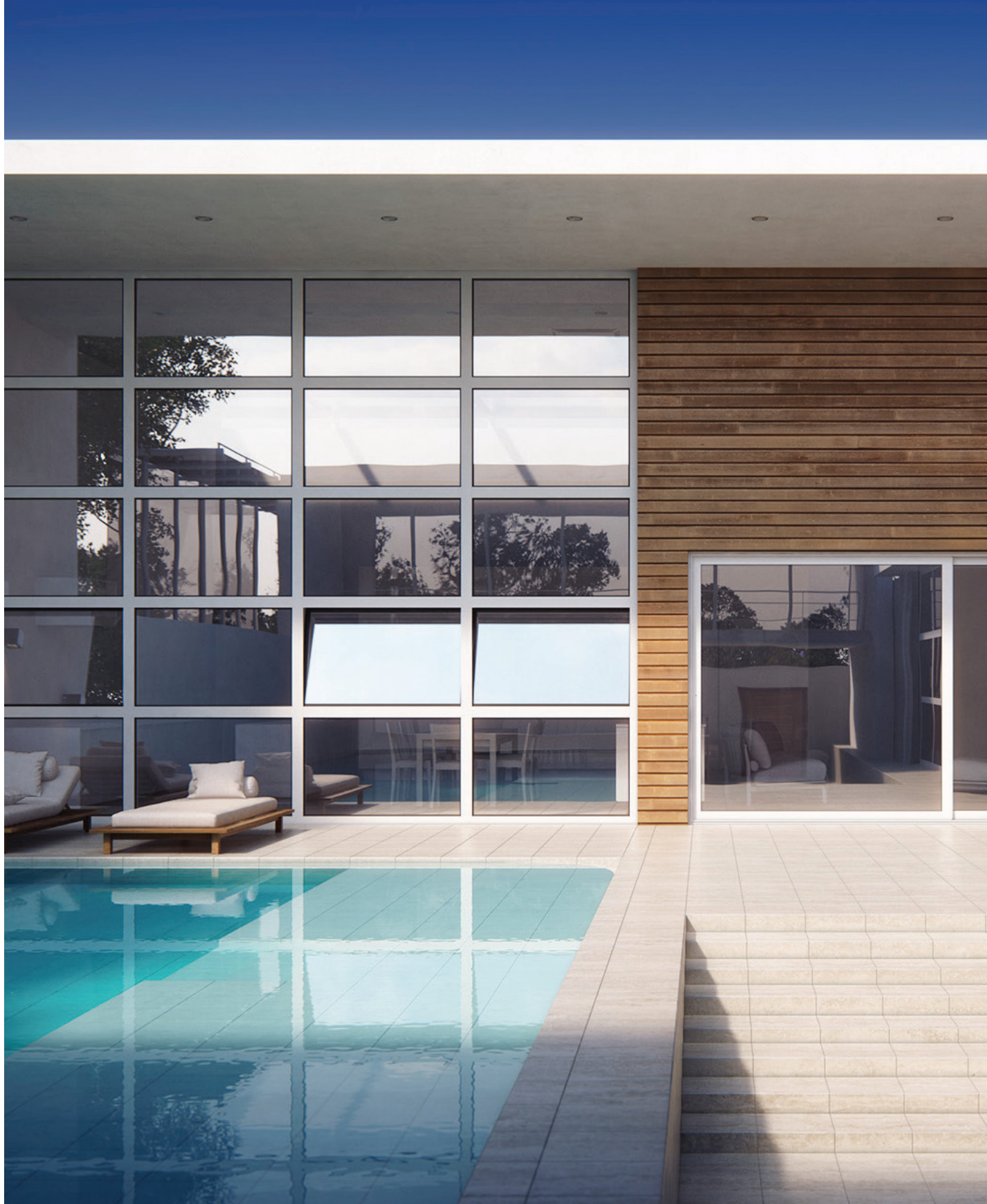
$$U_w = 1.4 \text{ W/m}^2\text{K}$$

Thermal conductivity coefficient has been calculated for the construction:  
1600x2400 with  $U_g=0.6 \text{ W/m}^2\text{K}$   
Glass type: 5/16 (ARGON) / 3+3

# W450HS

## Tilt & Turn Thermal Insulating System

An exceptional aesthetic result.



## System Identity

The system W450 HS fully safeguards the sense of simplicity, pure and elegant aesthetic effect.

Reference point is the use of the least possible visible aluminum which gives the system a sense of grandeur.

The muscular appearance confirms the dynamic orientation of the series and the attention to detail is reflected, in addition to aesthetics, to the practicality and usability of the system.

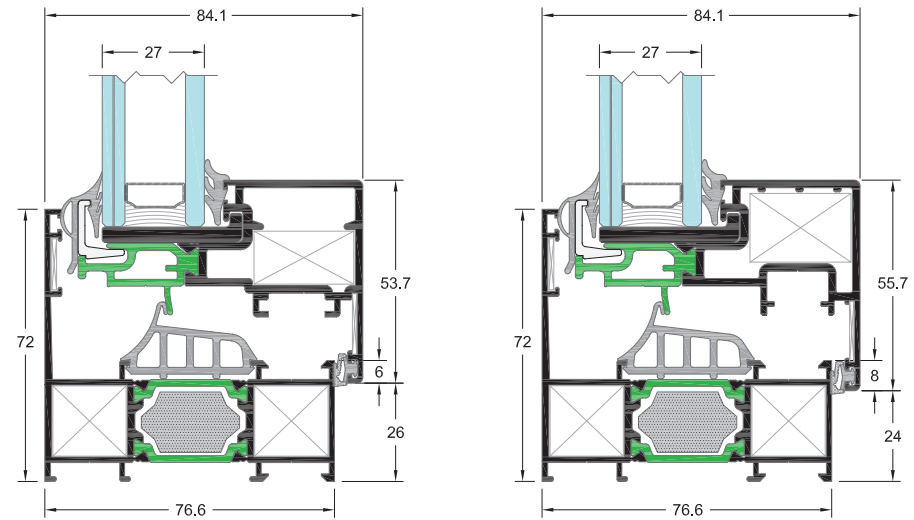
## Features & Benefits

- Hidden sash with frame height 72 mm
- Use of glass reinforced polyamides of 30 mm
- High thermal insulation
- Frameless hinged robust constructions of special design

## Configurations

### Casement-awning windows

1Leaf - 2Leaf & 1Leaf with fixed



### HARDWARE

CAMERA	CE	ALU 16
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### INSULATION

POLYAMIDES mm	30	30
FOAM	•	•

### SYSTEM PROFILE DIMENSIONS

MIN. FRAME DEPTH mm	76.6	76.6
MIN. FACE HEIGHT mm	72 OUT / 79.7 IN	72 OUT / 79.7 IN
GLASS THICKNESS mm	27	27

### CONSTRUCTION DIMENSIONS

SASH WIDTH mm	365-1600	360-1490
SASH HEIGHT mm	360-2400	450-2360
MAX. SASH DIMENSIONS mm (WxH)	1600x2100 / 1300x2400	1490x2100 / 1300x2360
MAX. SASH WEIGHT Kg	130, 150*, 200**	130, 150*, 200**

### CERTIFICATES/PERFORMANCES

AIR PERMEABILITY EN 12207	N/A	Class 4
WATER TIGHTNESS EN 12208	N/A	Class 7A
RESISTANCE TO WIND LOAD EN 12210	N/A	Class B4
BURGLAR RESISTANCE EN 1627	N/A	N/A
SOUND REDUCTION R <sub>w</sub> EN 717	N/A	N/A
THERMAL INSULATION U <sub>f</sub> EN ISO 10077-2	1.6-2.8 W/m <sup>2</sup> K	1.6-2.8 W/m <sup>2</sup> K

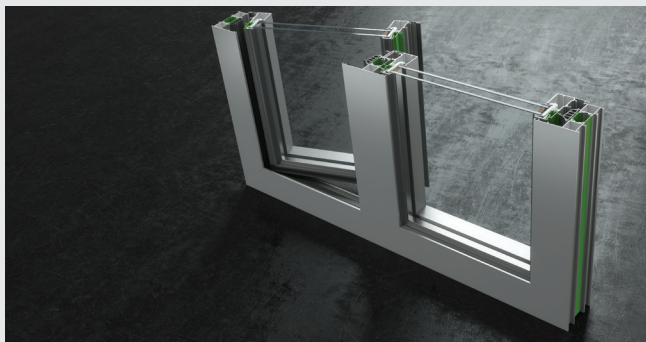
\*Reinforced Tilt and Turn | \*\*Hinged with heavy duty hinges



### Rate of Insulation

**U<sub>w</sub>=1.76 W/m<sup>2</sup>K**

Thermal conductivity coefficient has been calculated for the construction: 1600x2200 with U<sub>g</sub>=1.1 W/m<sup>2</sup>K  
Glass type: 3+3 /16(ARGON)/5



FLAT