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Indoor accessories - available in another catalogue

Flat roof windows - available in another catalogue

For 27 years we have been taking care of the high quality of our products. We believe that quality affects on your life's comfort and satisfaction. We are a family company that hasn't lost its enthusiasm for constant development ever since it's been set up. We are aware of your priority - your family's safety and that is the thing we want to focus on. We deliver our windows to multiple European countries, as well to those beyond the borders of our continent. We constantly invest in the best equipment and improvement of our machinery parks with a view to provide safe, comfortable and long-lasting products for your house.





### //

## Quality - our priority





## **PVC windows**

Produced via the SuperThermo energy-saving technology, made from PVC, mastered at every angle. The PVC windows group is designed for highly humid rooms such as kitchens, bathrooms or laundry rooms. The 130mm thick window frame is a solid base for the whole construction. Carpentry was made from multi-chambered PVC profiles supported with steel profiles and filled with PU foam in order to improve windows' thermal insulation.







## **Wooden windows**

The construction of wooden windows produced via SuperThermo technology not only acquires the solid and stable impregnated pine wood carpentry, but also is one of the most modern solutions for outdoor flashings. The innovative design connecting aluminum and PVC elements emphasizes the roof aesthetics and maintains the increased tightness and thermal insulation of the wndow







//



## What makes our products so special?



Windowpane covered with the self-cleaning SGG BIOCLEAN shield used in a selection of double- and triple-glazed pacquets. Thanks to the self-cleaning function it prevents the dirt settlement on the external glass. It provides the clarity and ease at maintaining the purity of view.



Windowpane with the anti-dew coating in some triple glazing pacquets helps to significantly reduce the water vapour condensation on the external glass.



The group of the most popular centre-pivot windows made of wood, now in a modern SuperThermo technology with a better thermal parameter for the whole window and no need to use any additional thermal blocks.



The laminated windowpane with the soundproof coating allows you to enjoy the safety and quiet in your house. Used in ISO E8 window provides excellent noise reduction parameters = 37dB.

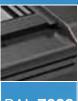


Handle at the bottom part of the sash equipped with a key lock provides safety from unwanted opening, enables micro-ventilation of the sash and ensures the comfortable and functional usage of the window.



**Q-LON** 

The Q-LON foam gasket with awesome recompression properties (it comes back to its original shape right after deformation) ensures excellent functioning in both low and high temperatures. Profiles with very good acoustic values acquire unbeatable thermal properties. It provides increased tightness and energy efficiency.



The flashing made from polyester-covered aluminum tinware in RAL 7022 shade. There is a possibility to adjust the flashing colour to your own preferences from the colour range on page 47.

RAL **7022** 

Warm. Long-lasting. Tight.



## **//** ENERGY EFFICIENT WINDOWS - double glazing

FUNCTION		Cl	ENTRE-PI\	/OT		HIGH-	·PIVOT	TOP-	HUNG		IVOT WITH C MOTOR
	B	B		B		4					1
MODEL/SYMBOL	MSO E2	ISO E2	ISO E8	BGOV E2	IGOV E2	ISH E2	IGHV E2	ISK E2	IGKV E2	ISC <sub>1</sub> E2 ISC <sub>2</sub> E2	IGC <sub>1</sub> V E2 IGC <sub>2</sub> V E2
CARPENTRY	wood	wood	wood	PVC	PVC	wood	PVC	wood	PVC	wood	PVC
FACTOR Uw (W/m²K)	<b>1,2</b> W/m²K	<b>1,2</b> W/m²K	<b>1,2</b> W/m²K	<b>1,3</b> W/m²K	<b>1,2</b> W/m²K	<b>1,2</b> W/m²K	<b>1,2</b> W/m²K	<b>1,3</b> W/m²K	<b>1,2</b> W/m²K	<b>1,2</b> W/m²K	<b>1,2</b> W/m²K
SOLID+ CARPENTRY	<b>√</b>	V	<b>√</b>	<b>√</b>	<b>/</b>	<b>✓</b>	<b>√</b>	<b>√</b>	<b>√</b>	<b>√</b>	<b>✓</b>
NEO VENT VENTILATOR	-	V	<b>√</b>	<b>√</b>	<b>/</b>	<b>√</b>	<b>√</b>	<b>√</b>	<b>√</b>	-	<b>✓</b>
TRIPLE PAINTING ON CARPENTRY	<b>√</b>	<b>√</b>	<b>√</b>	-	-	<b>√</b>	-	<b>√</b>	-	<b>/</b>	-
GLAZING TYPE	E2	E2	E8	E2	E2						
NUMBER OF GASKETS	4	4	4	4	4	4	4	4	4	4	4
ROOF PITCH	15-90°	15-90°	15-90°	15-90°	15-90°	15-90°	15-90°	15-65°	15-65°	15-90°	15-90°
CATALOGUE PAGE	9	9	9	11	11	13	13	15	15	17	19

### **//** GLAZING UNITS

•	OEALING	OIIIIO				
		1	Energy-saving doul	ole-glazed units 24	mm	
GLAZING UNITS CROSS-SECTION					9	
GLAZING UNIT SYMBOL	E2	E3	E4	E5	E6	E8
GLAZING UNIT STRUCTURE	4H/16/4T(AR)	4BH/16/4T(AR)	4BH/14/33.1T(AR)	4BH/14/33.2T(AR)	4BH/14/33.1TSR(AR)	4H/14/33.1TSR (AR)
U VALUE OF GLAZING <b>Ug (W/m²K)</b>	1,0 W/m²K	1,0 W/m <sup>2</sup> K	1,0 W/m <sup>2</sup> K	1,0 W/m <sup>2</sup> K	1,0 W/m²K	1,0 W/m²K
GAS	argon	argon	argon	argon	argon	argon
WARM SPACER	1	1	1	1	1	1
LOW EMISSION COAT	1	1	1	1	1	1
TOUGHENED PANE	1	1	1	1	1	1
ANTI-DEW COATING	-	-	-	-	-	-
SELF-CLEANING COATING	-	<b>√</b>	<b>✓</b>	<b>✓</b>	<b>✓</b>	-
NOISE REDUCTION	-	-	-	-	<b>√</b>	<b>√</b>
LAMINATED INNER PANE	-	-	P1A class	P2A class	P1A class	P1A class
CUSTOMIZED PANE	-	<b>√</b>	<b>/</b>	<b>/</b>	<b>✓</b>	_

### **SUPER ENERGY-SAVING WINDOWS - triple glazing**

FUNCTIONA

**CENTRE-PIVOT** 

TOP-HUNG

**CENTRE-PIVOT WITH ELECTRIC MOTOR** 



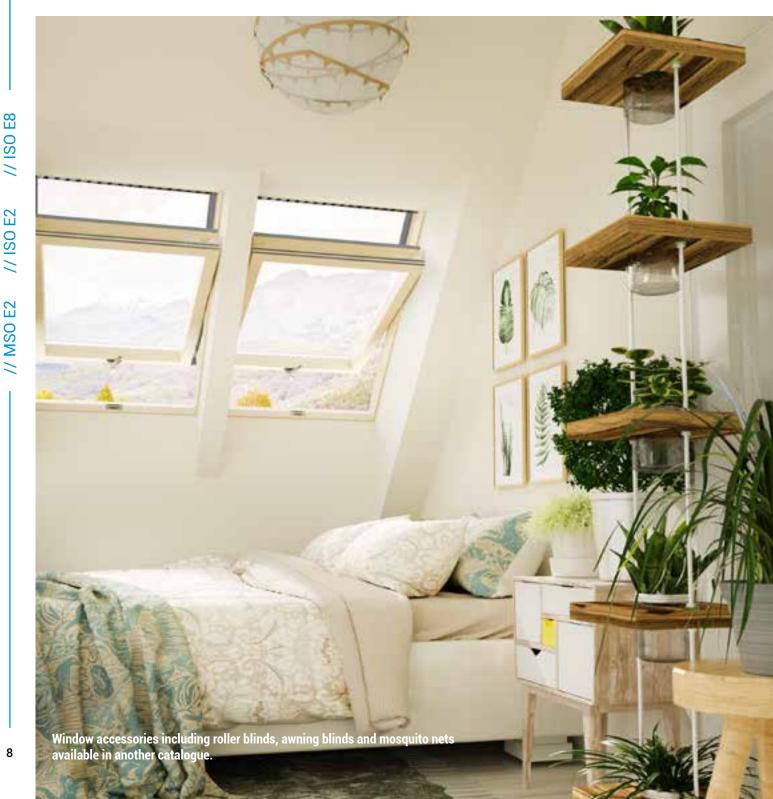
MODEL/SYMBOL	ISO 122	ISO 16	ISO 13	IGOV N22	IGOV N23	ISK 13	IGKV N22	ISC <sub>1</sub> I22 ISC <sub>2</sub> I22	IGC <sub>1</sub> V 122 IGC <sub>2</sub> V 122
CARPENTRY	wood	wood	wood	PVC	PVC	wood	PVC	wood	PVC
FACTOR Uw (W/m²K)	<b>1,0</b> W/m²K	<b>1,0</b> W/m²K	<b>0,93</b> W/m²K	<b>0,83</b> W/m²K	<b>0,83</b> W/m²K	<b>0,8</b> W/m²K	<b>0,83</b> W/m²K	<b>1,0</b> W/m²K	<b>1,0</b> W/m²K
SOLID+ CARPENTRY	<b>√</b>	<b>√</b>	<b>√</b>	<b>√</b>	<b>√</b>	<b>√</b>	<b>√</b>	<b>√</b>	✓
NEO VENT VENTILATOR	<b>√</b>	<b>√</b>	<b>√</b>	<b>√</b>	<b>√</b>	<b>√</b>	<b>√</b>	-	✓
TRIPLE PAINTING ON CARPENTRY	<b>√</b>	<b>√</b>	<b>√</b>	-	-	$\checkmark$	-	<b>√</b>	-
GLAZING TYPE	122	16	13	N22	N23	13	N22	122	122
NUMBER OF GASKETS	4	4	4	4	4	4	4	4	4
ROOF PITCH	15-90°	15-90°	15-90°	15-90°	15-90°	15-65°	15-65°	15-90°	15-90°
CATALOGUE PAGE	23	23	23	25	25	27	27	29	31

SUPI	ER ENERGY-SA\	/ING TRIPLE-GL	AZED UNITS 36r	nm	SUPER ENE	RGY-SAVING T	RIPLE-GLAZED	UNITS 48mm
13	14	15	16	122	N22	N23	N24	N25
4DRYH/12/4TH/12/4T(KR)	4BH/12/4TH/12/4T(KR)	4DRYH/4TH/10/33.2T(KR)	4DRYH/12/4TH/12/4T(AR)	4TH/12/4/12/4T(AR)	4TH/18/4/18/4T(AR)	4TH/18/4/16/33.2T(AR)	4BH/18/4TH/18/4T(AR)	4DRYH/18/4TH/18/4T(AR
0,5 W/m <sup>2</sup> K	0,5 W/m <sup>2</sup> K	0,5 W/m <sup>2</sup> K	0,7 W/m <sup>2</sup> K	0,7 W/m <sup>2</sup> K	0,5 W/m <sup>2</sup> K			
crypton	crypton	crypton	argon	argon	argon	argon	argon	argon
2	2	2	2	2	2	2	2	2
2	2	2	2	2	2	2	2	2
2	2	2	2	1	1	1	2	2
<b>√</b>	-	<b>√</b>	<b>√</b>	-	-	-	-	<b>/</b>
-	V	-	-	-	-	-	<b>\</b>	-
-	-	-	-	-	-	-	-	-
-	-	P2A class	-	-	-	P2A class	-	-
-	<b>√</b>	<b>/</b>	-	-	-	_	<b>/</b>	<b>/</b>



## Centre-pivot wooden windows

Wooden windows are valued for their warm and natural look. Thanks to them, it is much easier to gain coziness and homely atmosphere in the room, especially if there are some wooden elements inside (such as ceiling beams and constructional pillars). The construction of the wooden windows produced by using SuperThermo technology is equipped with modern external flashing that connects aluminum elements with PVC finish. It increases the thickness and thermal insulation levels of the whole window. The pivot hinge located in the middle of the sash enables 180-degree rotation of the sash.















**GLAZING** UNIT



double glazing gas - argon warm spacer low emission coat toughened pane

4H/16/4T (AR)

 $Ug = 1,0 W/m^2K$ 



double glazing gas - argon warm spacer low emission coat toughened pane

4H/16/4T (AR)

 $Ug = 1,0 W/m^2K$ 



gas - argon warm spacer low emission coat toughened pane laminated pane P1A pane with noise reduction

4H/14/33.1TSR (AR)

 $Ug = 1,0 W/m^2K$ 

Carpentry

SOLID+ impregnated pine wood three coats of varnish

Gaskets

Ventilator

Handle

**Roof pitch** 



with key lock and micro-ventilation SOLID+

impregnated pine wood three coats of varnish





with key lock and micro-ventilation



impregnated pine wood three coats of varnish

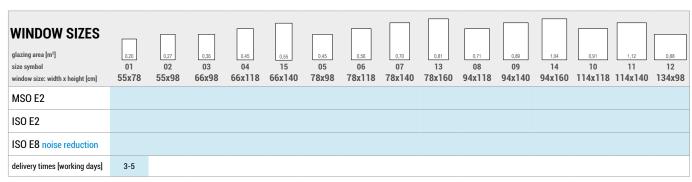




with key lock and micro-ventilation





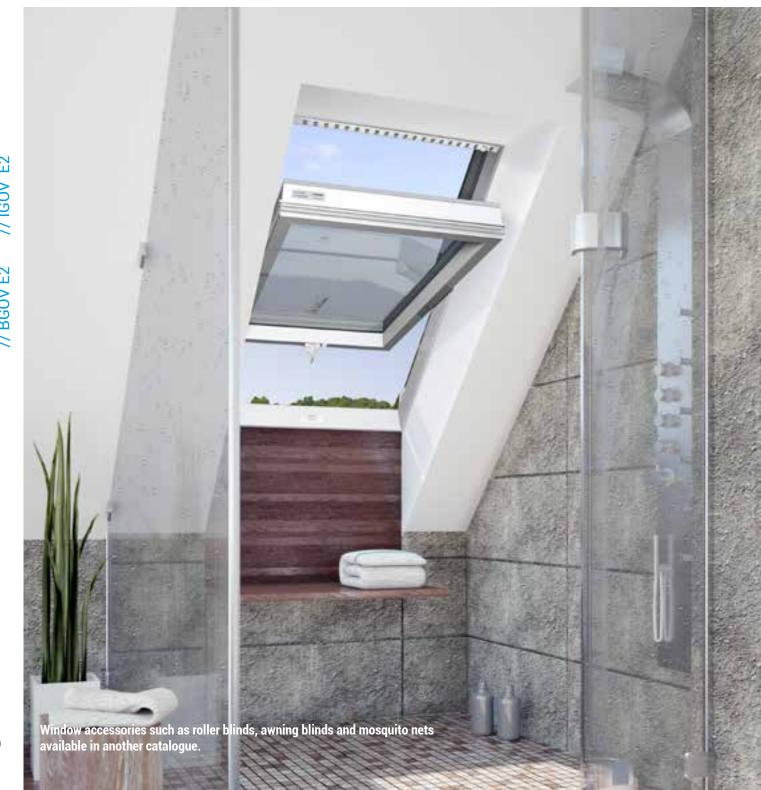






# Centre-pivot PVC windows

PVC roof windows are designed especially for highly humid rooms such as kitchens, bathrooms or laundry rooms. Multichambered profiles are water resistant and maintenance free. They do not absorb the humidity and are resistant to atmospherical, chemical and biological factors. Pivot hinge located in the middle of the sash enables 180-degree rotation of the sash.









**Glazing unit** 



double glazing gas - argon warm spacer low emission coat toughened pane

4H/16/4T (AR)

 $Ug = 1,0 W/m^2K$ 



double glazing gas - argon warm spacer low emission coat toughened panea

multi-chambered PVC profiles in white;

frame and sash fulfilled with PU foam;

resistant to atmospherical factors

4H/16/4T (AR)

SOLID+

 $Ug = 1,0 W/m^2K$ 

U VALUE

W/m²K

Carpentry

SOLID+ multi-chambered PVC profiles in white; frame fulfilled with PU foam; resistant to

atmospherical factors

4

**Gaskets** 



Handle

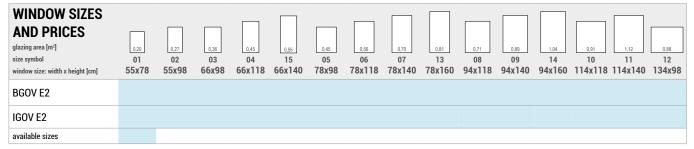


with key lock and micro-ventilation



with key lock and micro-ventilation

### **Roof pitch**





# High-pivot windows

In high-pivot windows, the axis of rotation is placed it 3/4 length of the sash.

The pivot hinge is located higher than usual and thanks to this, the arrangement of the space directly underneath the window is much easier. In addition, it makes the access to the window better for tall people.











**Glazing unit** 



double glazing gas - argon warm spacer low emission coat toughened pane

4H/16/4T (AR)

 $Ug = 1,0 W/m^2K$ 



double glazing gas - argon warm spacer low emission coat toughened panea

4H/16/4T (AR)

 $Ug = 1,0 W/m^2K$ 

Carpentry

SOLID+ glued pine wood triple painting

SOLID+

multi-chambered PVC profiles in white, filled with PU foam, resistant to atmospherical factors

Gaskets



Ventilator

Handle

**Roof pitch** 



with key lock and micro-ventilation







with key lock and micro-ventilation



WINDOW SIZES AND PRICES glazing area [m²] size symbol window size: width x height [cm]	0,20 01 55x78	0,27 02 55x98	0,36 03 66x98	0,45 04 66x118	0,55 15 66x140	0,45 05 78x98	0,56 06 78x118	0,70 07 78x140	0,81 13 78x160	0,71 08 94x118	0,89 09 94x140	1,04 14 94x160	0,91 10 114x118	1,12 11 114x140	0,88 12 134x98
ISH E2															
IGHV E2															
available sizes															

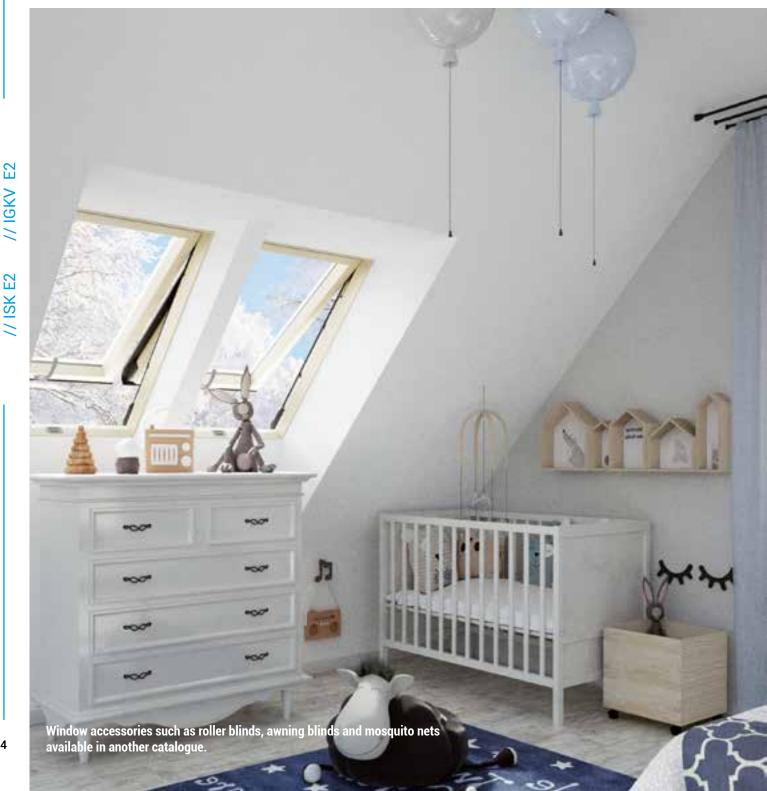






# Top-hung window

Top hung-windows are a unique, confirmed by the Patent Application construction, that provides two absolutely seperate ways of opening the sash: tilting and sliding. The tilting function enables the smooth regulation of the sash in 0-30 degrees angle and 60-degree opening. At any times, the window does not take any place of the room - that ensures not only the incredible ease of movement but also the comfort of adjusting the carpentry even to the really small and tight spaces. For instance, the sliding function eases rotation of the external glass and enables its precise cleaning. Such window can be also used as a safe entrance to the roof.











**Glazing unit** 



double glazing gas - argon warm spacer low emission coat toughened pane

4H/16/4T (AR)

 $Ug = 1,0 W/m^2K$ 



double glazing gas - argon warm spacer low emission coat toughened panea

4H/16/4T (AR)

 $Ug = 1,0 W/m^2K$ 

Carpentry

SOLID+ impregnated pine wood three coats of varnish

Gaskets

4

Ventilator



Handle



with key lock and micro-ventilation

**Roof pitch** 



SOLID+

multi-chambered PVC profiles in white; frame fulfilled with PU foam; resistant to atmospherical factors

4





with key lock and micro-ventilation



WINDOW SIZES AND PRICES glazing area [m²] size symbol window size: width x height [cm]	0,20 01 55x78	0.27 02 55x98	0,36 03 66x98	0,45 04 66x118	0,55 15 66x140	0,45 05 78x98	0.56 06 78x118	0,70 07 78x140	0,81 13 78x160	0,71 08 94x118	0,89 09 94x140	1,04 14 94x160	0,91 10 114x118	1,12 11 114x140	12 134x98
ISK E2															
IGKV E2															
available sizes															

# Centre-pivot wooden windows

### with electric motor

The quick and easy control of the window by the remote control or the wall switch makes the window with electric motor an ideal solution for places that are normally quite difficult to access. A special rain and wind sensor closes the window automatically whenever it detects any heavy wind or rain and makes the window incredibly functional and remote.













double glazing gas - argon warm spacer low emission coat toughened pane

4H/16/4T (AR)

 $Ug = 1,0 W/m^2K$ 



SOLID+

impregnated pine wood three coats of varnish

Gaskets

4

Ventilator

Handle

**Roof pitch** 



**Electric control** 



electric motor 230V with remote control AP4

**Automatic control** 



rain sensor





double glazing gas - argon warm spacer low emission coat toughened panea

4H/16/4T (AR)

 $Ug = 1,0 W/m^2K$ 

SOLID+

impregnated pine wood three coats of varnish





electric motor 230V with AWN switch

WINDOW SIZES															
AND PRICES															
glazing area [m²]	0,20	0,27	0,36	0,45	0,55	0,45	0,56	0,70	0,81	0,71	0,89	1,04	0,91	1,12	0,88
size symbol	01	02	03	04	15	05	06	07	13	80	09	14	10	11	12
window size: width x height [cm]	55x78	55x98	66x98	66x118	66x140	78x98	78x118	78x140	78x160	94x118	94x140	94x160	114x118	114x140	134x98
ISC <sub>1</sub> E2															

ISC<sub>2</sub>E2 available sizes

Flashing types on pages 48-49.



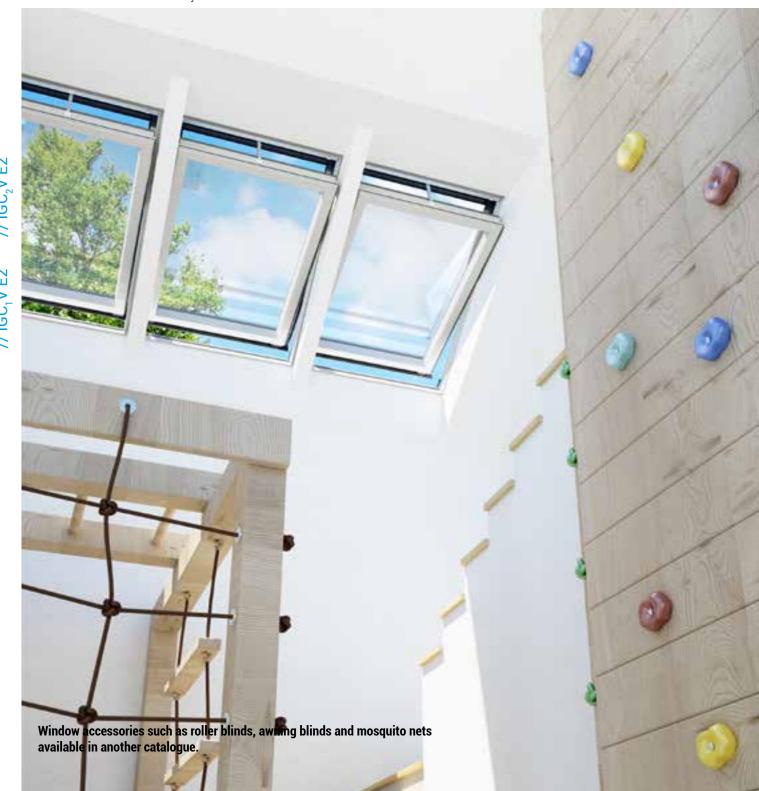




## Okna obrotowe **PVC**

### with electric motor

The quick and easy control of the window by the remote control or the wall switch makes the window with electric motor an ideal solution for places that are normally quite difficult to access. A special rain and wind sensor closes the window automatically whenever it detects any heavy wind or rain and makes the window incredibly functional. These windows can be easily adapted as a part of the smart home system. What is more, PVC windows do not need any maintainance and can be mounted in rooms with increased humidity as well.













double glazing gas - argon warm spacer low emission coat toughened pane

4H/16/4T (AR)

 $Ug = 1,0 W/m^2K$ 

Carpentry

SOLID+ multi-chambered PVC profiles in white; frame fulfilled with PU foam; resistant to atmospherical factors

**Gaskets** 

Ventilator



Handle

**Roof pitch** 



**Electric control** 



electric engine 230V with remote control AP4

**Automatic control** 



rain sensor





double glazing gas - argon warm spacer low emission coat toughened panea

4H/16/4T (AR)

 $Ug = 1,0 W/m^2K$ 

SOLID+

multi-chambered PVC profiles in white; frame fulfilled with PU foam; resistant to atmospherical factors







electric motor 230V with AWN switch

WINDOW SIZES  glazing area [m²] size symbol window size: width x height [cm]	0,20 01 55x78	0,27 02 55x98	0,36 03 66x98	0,45 04 66x118	0,55 15 66x140	0,45 05 78x98	0,56 06 78x118	0,70 07 78x140	0,81 13 78x160	0,71 08 94x118	0,89 09 94x140	1,04 14 94x160	0,91 10 114x118	1,12 11 114x140	0,88 12 134x98
IGC <sub>1</sub> V E2															
IGC <sub>2</sub> V E2															
available sizes															



## L-shaped wooden windows

The L-shaped window is a fashionable way to create a bright and spacious loft arrangement. Its unobvious design takes a large glazing area and enlightens the whole room with precious natural sunlight. The L-shaped windows look stunning both outside and inside and positively affect on indoors design. They are made especially for rooms with a knee--shaped walls.



X - Standard size of wind deflector and flashing cover is 70cm











**Glazing unit** 



double glazing gas - argon warm spacer low emission coat toughened pane

4H/16/4T (AR)

 $Ug = 1,0 W/m^2K$ 



double glazing gas - argon warm spacer low emission coat toughened panea

4H/16/4T (AR)

Ug = 1.0 W/m<sup>2</sup>K

Carpentry

impregnated pine wood three coats of varnish

Gaskets

Ventilator

Handle



with key lock and micro-ventilation SOLID+ impregnated pine wood three coats of varnish

4

-

\_

#### **WINDOW SIZES**

								Windo	w size: wid	dth x heig	ht [cm]							
Window type	66x60	66x75	66x95	66x115	66x137	78x60	78x75	78x95	78x115	78x137	94x60	94x75	94x95	94x115	94x137	114x60	114x75	114x95
IKDU E2																		
IKDN FIP E2																		

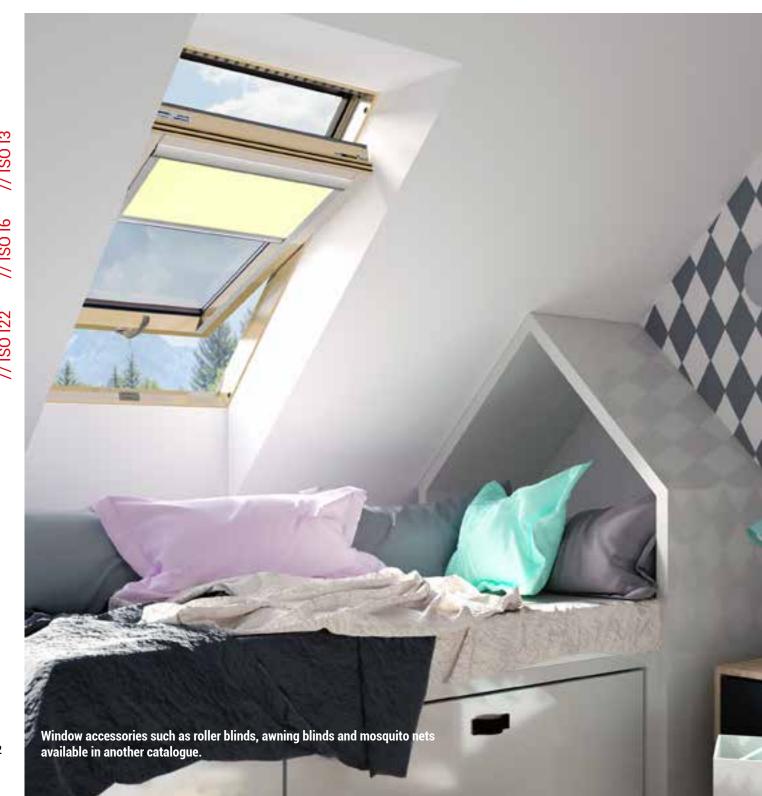
#### L-SHAPED FLASHING SIZES AND PRICES

flashing symbol	size: width x height [cm] size symbol	66x98 03	66x118 04	66x140 15	78x98 05	78x118 06	78x140 07	78x160 13	94x118 08	94x140 09	94x160 14	114x118 10	114x140 11	134x98 12
UKS	for L-shaped complexes for flat or profiled covers up to 5cm high in connection of roof window with geniculate window													
available sizes														



# Centre-pivot wooden windows

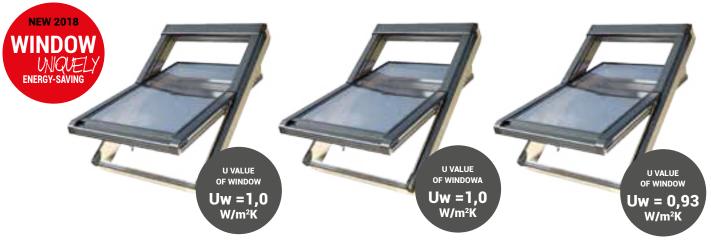
The main aim we had on our mind while designing centre-pivot windows was to save as much thermal energy inside the building as possible, even in cases of the most demanding constructions. Their triple-glazed variant contains 36mm thick units equipped with two low emission coats which help to acquire maximum profits form sunlight and to reduce thermal loss as well. The pivot hinge located in the middle of the sash enables 180 degree rotation of the window.















triple glazing gas - argon 2x warm spacer 2x low emission coat toughened external pane

4TH/12/4/12/AT (AR)

 $Ug = 0.7 W/m^2 K$ 



SOLID+

triple glazing gas - argon 2x warm spacer 2x low emission coat 2 toughened panes coating ANTI-DEW

4 DRY H/12/4TH/12/4T (AR)

impregnated pine wood

three coats of varnish

 $Ug = 0.7 W/m^2 K$ 



triple glazing gas - crypton 2x warm spacer 2x low emission coat 2 toughened panes coating ANTI-DEW

4 DRY H/12/4TH/12/4T(KR)  $Ug = 0.5 W/m^2K$ 

Carpentry

SOLID+ impregnated pine wood three coats of varnish

Gaskets



Handle

**Roof pitch** 

Ventilator



with key lock and micro-ventilation entro-secure

with key lock and micro-ventilation



SOLID+ impregnated pine wood three coats of varnish

4





with key lock and micro-ventilation

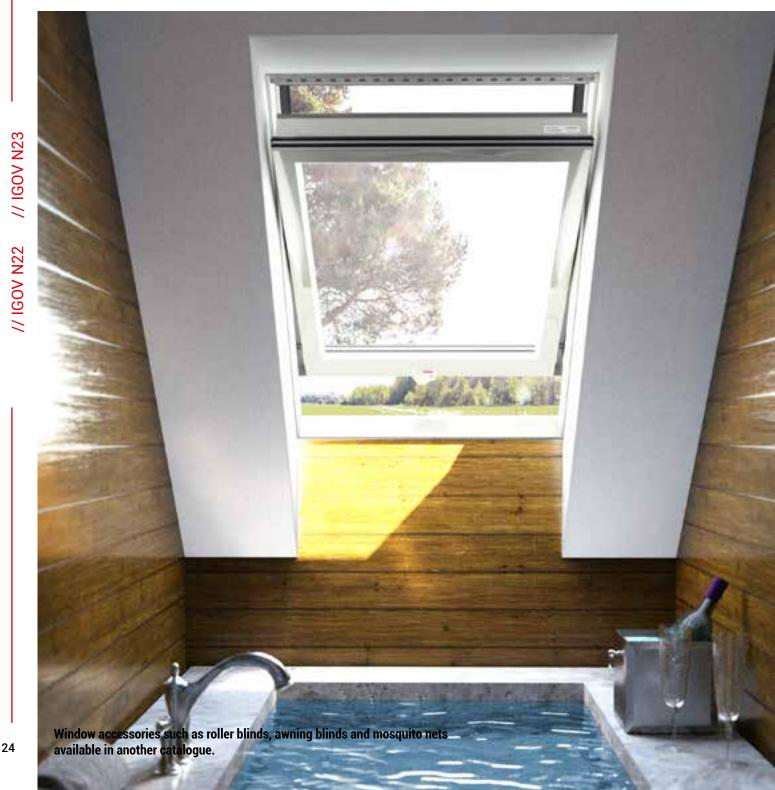


#### **WINDOW SIZES** glazing area [m²] size symbol 01 02 03 Π4 15 05 06 ۸7 13 በጸ nq 14 10 55x78 66x118 66x140 78x98 78x118 78x140 78x160 94x118 94x140 94x160 114x118 114x140 134x98 window size: width x height [cm] 55x98 66x98 ISO 122 ISO 16 ISO 13 avliable sizes



# Centre-pivot PVC windows

The most advanced offer to our customers in the subject of energy-saving centre-pivot PVC windows are models equipped with triple-glazed unit and warm spacer. We combined high thermal parameters with convenience of use. The Neo-Vent ventilator placed inside the frame and the handle with a key lock and micro-ventilation function enable the efficient air stream regulation both summer and winter. The low emission coat maximizes the profits from the sunlight. PVC windows do not need any maintainance.









U VALUE OF WINDOW

UW = 0,83

W/m²K

**Glazing unit** 



triple glazing gas - argon 2x warm spacer 2x low emission coat toughened external pane

4TH/18/4/18/4T (AR)

 $Ug = 0.5 W/m^2 K$ 



triple glazing
triple glazing
gas - argon
2x warm spacer
2x low emission coat
safe laminated pane P2A
toughened external pane

4TH/18/4/16/33.2T (AR)

 $Uq = 0.5 W/m^2 K$ 

Carpentry

SOLID+

multi-chambered PVC profiles in white; frame fulfilled with PU foam; resistant to atmospherical factors

Gaskets

1

Ventilator



Handle



with key lock and micro-ventilation

**Roof pitch** 



SOLID+

multi-chambered PVC profiles in white; frame fulfilled with PU foam; resistant to atmospherical factors

4





with key lock and micro-ventilation



WINDOW SIZES															
glazing area [m²]	0,20	0,27	0,36	0,45	0,55	0,45	0,56	0,70	0,81	0,71	0,89	1,04	0,91	1,12	0,88
size symbol window size: width x height [cm]	01 55x78	02 55x98	03 66x98	04 66x118	15 66x140	05 78x98	06 78x118	07 78x140	13 78x160	08 94x118	09 94x140	14 94x160	10 114v118	11 114x140	12 134x98
window size. width x neight [chi]	33710	33,30	00,50	001110	007140	10,50	101110	101140	101100	347110	347140	347100	1142110	1147140	134730
IGOV N22															
IGOV N23															
available sizes															

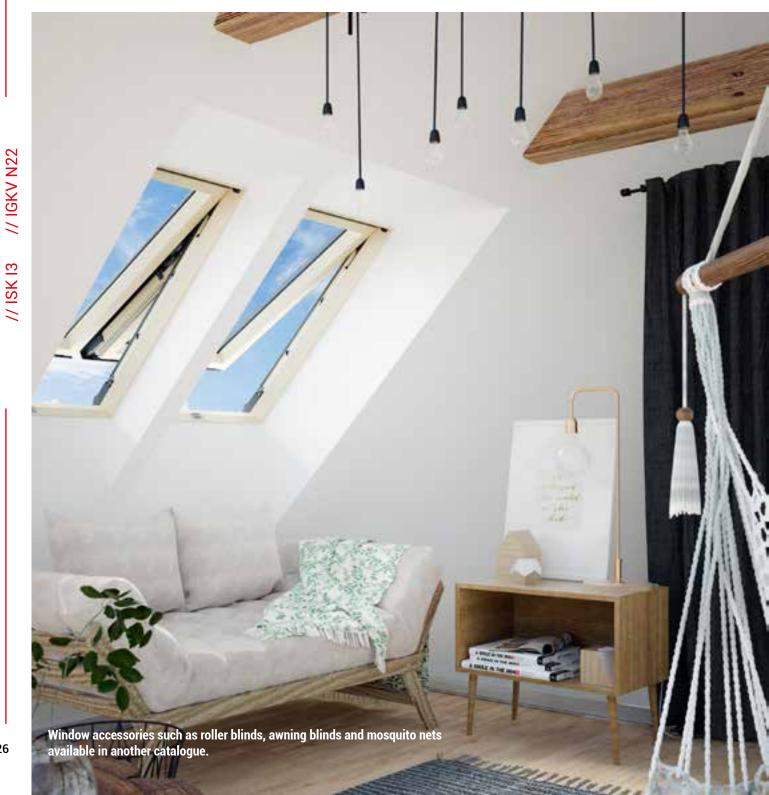






# Top-hung windows

Top hung-windows are a unique, confirmed by the Patent Application construction, that provides two absolutely seperate ways of opening the sash: tilting and sliding. The tilting function enables the smooth regulation of the sash in 0-30 degrees angle and 60-degree opening. At any times, the window does not take any place of the room - that ensures not only the incredible ease of movement but also the comfort of adjusting the carpentry even to the really small and tight spaces. For instance, the sliding function eases rotation of the external glass and enables its precise cleaning.











**Glazing unit** 



triple glazing gas - crypton 2x warm spacer 2x low emission coat 2 toughened panes coating ANTI-DEW

4 DRY H/12/4TH/12/4T(KR)

 $Ug = 0.5 W/m^2 K$ 



triple glazing gas - argon 2x warm spacer 2x low emission coat toughened external pane

4TH/18/4/18/4T (AR)

 $Ug = 0.5 W/m^2K$ 

Carpentry

SOLID+ impregnated pine wood three coats of varnish

Gaskets



Handle

Ventilator



with key lock and micro-ventilation

**Roof pitch** 



SOLID+

multi-chambered PVC profiles in white; frame fulfilled with PU foam; resistant to atmospherical factors





with key lock and micro-ventilation



WINDOW SIZES  glazing area [m²] size symbol window size: width x height [cm]	0,20 01 55x78	0.27 02 55x98	0,36 03 66x98	0,45 04 66x118	0,55 15 66x140	0,45 05 78x98	0,56 06 78x118	0,70 07 78x140	0,81 13 78x160	0,71 08 94x118	0,89 09 94x140	1,04 14 94x160	0,91 10 114x118	1,12 11 114x140	0,88 12 134x98
ISK I3															
IGKV N22															
available sizes															



# Centre-pivot wooden windows

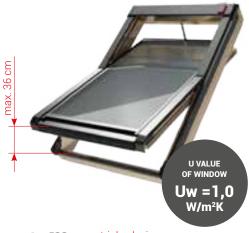
### with electric motor

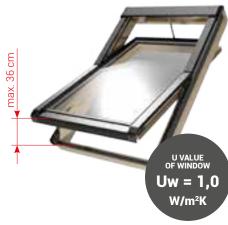
The contactless control via remote control or wall switch makes the window with electric motor an ideal solution for places that are normally quite difficult to access. A special rain and wind sensor closes the window automatically whenever it detects any heavy wind or rain and makes the window incredibly functional.











**Glazing unit** 

**I22** 

triple glazing gas - argon 2x warm spacer 2x low emission coat toughened external pane

4TH/12/4/12/4T (AR)

 $Ug = 0.7 W/m^2 K$ 

**I22** 

triple glazing gas - argon 2x warm spacer 2x low emission coat toughened external pane

4TH/12/4/12/4T(AR)

impregnated pine wood

three coats of varnish

 $Ug = 0.7 W/m^2 K$ 

Carpentry

SOLID+ impregnated pine wood three coats of varnish

Gaskets

Ventilator

Handle

**Roof pitch** 



**Electric control** 



electric motor 230V with remote control AP4

**Automatic control** 



SOLID+

4



electric motor 230V with AWN switch



rain sensor

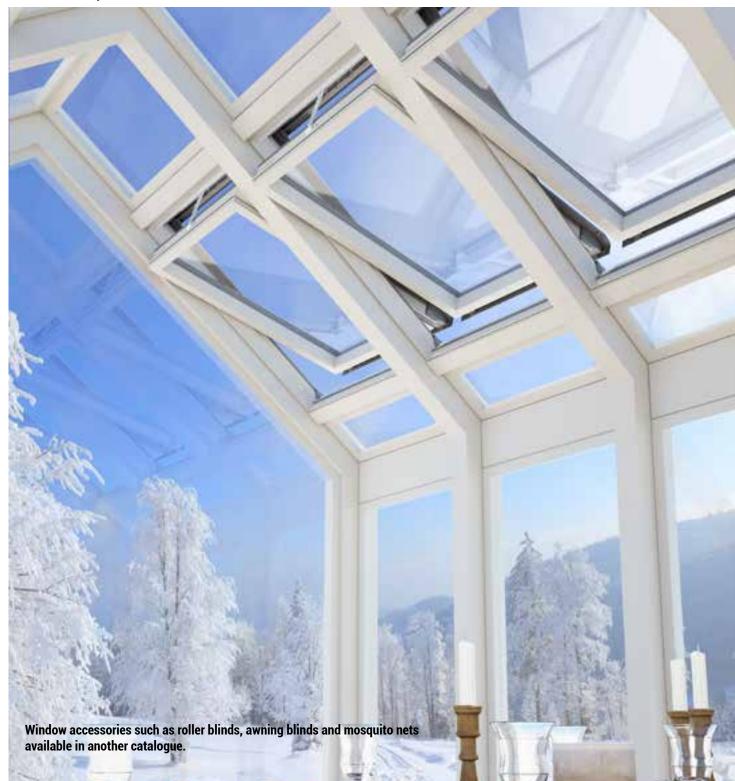
**WINDOW SIZES** glazing area [m²] 94x118 94x140 94x160 114x118 114x140 134x98 window size: width x height [cm] 55x78 55x98 66x140 78x98 ISC<sub>1</sub> I22 ISC, 122 excluding VAT available sizes



# Centre-pivot PVC windows

### with electric motor

The quick and easy control of the window by the remote control or the wall switch makes the window with electric motor an ideal solution for places that are normally quite difficult to access. A special rain and wind sensor closes the window automatically whenever it detects any heavy wind or rain and makes the window incredibly functional. These windows can be easily adapted as a part of the smart home system. What is more, PVC windows do not need any maintainance and can be mounted in rooms with increasd humidity as well.









U VALUE OF WINDOW

UW = 1,0
W/m<sup>2</sup>K

**Glazing unit** 



triple glazing gas - argon

2x warm spacer
2x low emission coat
toughened external pane

4TH/12/4/12/4T(AR)

 $Ug = 0.7 W/m^2 K$ 

Carpentry

SOLID+ impregnated pine wood three coats of varnish

Gaskets 4

Ventilator

Handle

**Roof pitch** 



**Electric control** 



electric motor 230V with remote control AP4

**Automatic control** 



rain sensor



triple glazing

gas - argon 2x warm spacer 2x low emission coat toughened external pane

4TH/12/4/12/4T(AR)

 $Ug = 0.7 W/m^2K$ 

SOLID+

impregnated pine wood three coats of varnish

4

-





electric motor 230V with AWN switch

WINDOW SIZES															
glazing area [m²] size symbol window size: width x height [cm]	0,20 01 55x78	0,27 02 55x98	0,36 03 66x98	0,45 04 66x118	0,55 15 66x140	0,45 05 78x98	0,56 06 78x118	0,70 07 78x140	0,81 13 78x160	0,71 08 94x118	0,89 09 94x140	1,04 14 94x160	0,91 10 114x118	1,12 11 114x140	0,88 12 134x98
IGC <sub>1</sub> V I22															
IGC <sub>2</sub> V I22															

available sizes



# L-shaped wooden windows was to combi-

The main aim we had on our minds while designing the L-shaped windows was to combine the advantages of both roof and facade windows. They provide a lot of natural sunlight in the room - the best effect you will get by combining such windows into blocks ("KOMBI montage" - 2 and more windows right next to each other). The IKDU construction enables opening the bottom sash - thanks to this function full room can be aired properly. Another element that increases the functionality of L-shaped windows is a special ANTI-DEW coating that reduces the water vapour condensation on the external glass and makes the view pure and clear. Convenience is not the only advantage of these windows - they are energy saving as well. Produced due to SuperThermo technology they have really good thermal insulation parameters.



X - Standard size of flashing cover and wind deflector is 70cm





FIXED WINDOW





**TILTING WINDOW** 



**IKDU 13** 

**TILTING WINDOW** 

### **IKDN FIP 13**

**FIXED WINDOW** 









#### Glazing unit

Carpentry

**Gaskets** 

Handle

triple glazing gas - argon 2x warm spacer 2x low emission coat 2 toughened panes ANTI-DEW coating



gas - crypton 2x warm spacer 2x low emission coat 2 toughened panes ANTI-DEW coating



 $Uq = 0.5 W/m^2 K$ 

4 DRY H /12/4TH/12/4T (KR)

SOLID+ impregnated pine wood three coats of varnish

SOLID+ impregnated pine wood three coats of varnish

4

#### triple glazing

gas - argon 2x warm spacer 2x low emission coat 2 toughened panes ANTI-DEW coating



 $Ug = 0.7 W/m^2 K$ 

4 DRY H /12/4TH/12/4T (AR)

SOLID+ impregnated pine wood three coats of varnish

4



with key lock and micro-ventilation

#### triple glazing gas - crypton

2x warm spacer 2x low emission coat 2 toughened panes ANTI-DEW coating



Ug =0,5 W/m<sup>2</sup>K

4 DRY H /12/4TH/12/4T (KR)

SOLID+ impregnated pine wood three coats of varnish



with key lock and micro-ventilation

#### **WINDOW SIZES**

	window size: width x height [cm]																
Window type	66x60	66x75	66x95	66x115 66x137	78x60	78x75	78x95	78x115	78x137	94x60	94x75	94x95	94x115	94x137	114x60	114x75	114x95
IKDN FIP 16																	
IKDU FIP 13																	
IKDU 16																	
IKDU 13																	

#### L-SHAPED FLASHING SIZES AND PRICES

flashing symbol	size: width x height [cm] size symbol		66x118 04	66x140 15	78x98 05	78x118 06	78x140 07	78x160 13	94x118 08	94x140 09	94x160 14	114x118 10	114x140 11	134x98 12
UKS	for L-shaped complexes for flat or profiled covers up to 5cm high in connection of roof window with geniculate window													
available sizes														

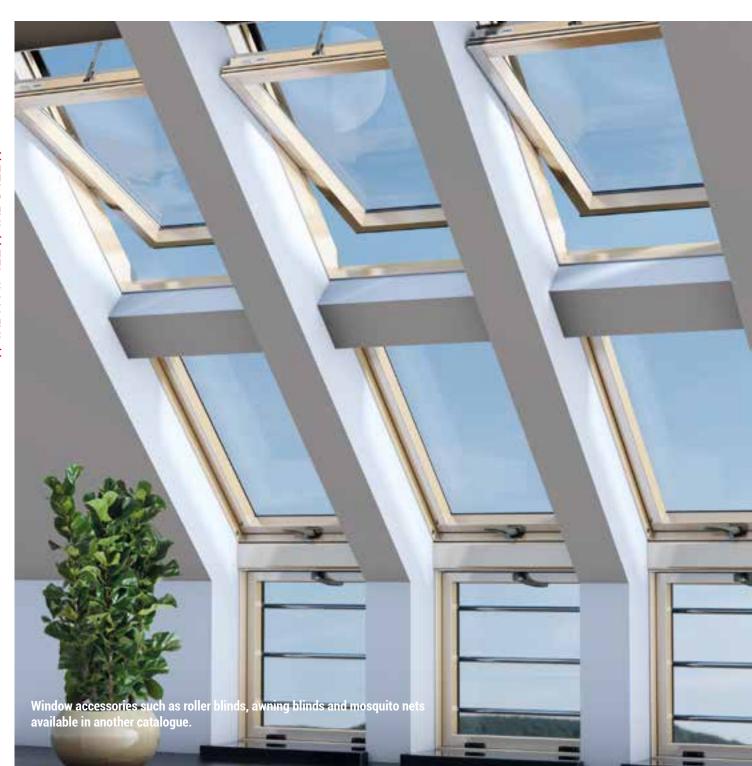


# L-shaped wooden windows

The main aim we had on our minds while designing the L-shaped windows was to combine the advantages of both roof and facade windows. They provide a lot of natural sunlight in the room - the best effect you will get by combining such windows into blocks ("KOMBI montage" - 2 and more windows right next to each other). The IKDU construction enables opening the bottom sash - thanks to this function full room can be aired properly.



X - Standard size of flashing cover and wind deflector is 70cm







FIXED WINDOW







#### Glazing unit

#### triple glazing

gas - argon 2x warm spacer 2x low emission coat toughened external pane



#### triple glazing

gas - argon 2x warm spacer 2x low emission coat toughened external pane



 $Ug = 0.7 \text{ W/m}^2\text{K}$ 

4TH/12/4/12/4T(AR)

4

SOLID+

impregnated pine wood three coats of varnish



with key lock and micro-ventilation

#### Carpentry

....,

Gaskets

SOLID+ impregnated pine wood three coats of varnish

Handle

-

4

#### **WINDOW SIZES**

	Window size: width x height [cm]														
Window type	66x60	66x75	66x95	66x115 66x137	78x60	78x75	78x95	78x115 78x137	94x60	94x75	94x95	94x115 94x137	114x60	114x75 114	4x95
IKDU 122															
IKDN FIP 122															

#### L-SHAPED FLASHING SIZES AND PRICES

flashing symbol	size: width x height [cm] size symbol	66x98 03	66x118 04	66x140 15	78x98 05	78x118 06	78x140 07	78x160 13	94x118 08	94x140 09	94x160 14	114x118 10	114x140 11	134x98 12
UKS	for L-shaped complexes for flat or profiled covers up to 5cm high in connection of roof window with geniculate window													
available sizes														



# L-shaped PVC windows

The main aim we had on our minds while designing the L-shaped windows was to combine the advantages of both roof and facade windows. They provide a lot of natural sunlight in the room - the best effect you will get by combining such windows into blocks ("KOMBI montage" - 2 and more windows right next to each other). The IKDU construction enables opening the bottom sash - thanks to this function full room can be aired properly. Additionally, PVC windows are resistant to atmospherical factors and can be used in rooms with increased humidity level.



X - Standard size of flashing cover and wind deflector is 70cm





**TILT-AND-TURN WINDOW OPENED TO THE LEFT** 



TILT-AND-TURN WINDOW **OPENED TO THE RIGHT** 



TILTING WINDOW



**FIXED WINDOW GLAZED INSIDE OF THE FRAME** 



U VALUE OF WINDOW Uw = 0.98W/m²K



**U VALUE** OF WINDOW Uw = 0.98W/m²K



**U VALUE OF WINDOW** Uw = 0.98W/m²K



**U VALUE OF WINDOW** Uw = 0.98W/m<sup>2</sup>K

#### Glazing unit

#### triple glazing

gas - argon 2x warm spacer 2x low emission coat toughened external pane



 $Ug = 0.5 W/m^2K$ 

4TH/18/4/18/4T (AR)

#### triple glazing

gas - argon 2x warm spacer 2x low emission coat toughened external pane



 $Ug = 0.5 W/m^2K$ 

4TH/18/4/18/4T (AR)

#### triple glazing

gas - argon 2x warm spacer 2x low emission coat toughened external pane



 $Ug = 0.5 W/m^2K$ 

4TH/18/4/18/4T (AR)

triple glazing

gas - argon

2x warm spacer

2x low emission coat

toughened external pane

 $Ug = 0.5 W/m^2 K$ 

4TH/18/4/18/4T (AR)

#### Carpentry

SOLID+ multi-chambered PVC profiles in white; frame fulfilled with PU foam; resistant to atmospherical factors

**Gaskets** 

Handle



with key lock and micro-ventilation

#### SOLID+

multi-chambered PVC profiles in white; frame fulfilled with PU foam; resistant to atmospherical factors

3.



with key lock and micro-ventilation

#### SOLID+

multi-chambered PVC profiles in white; frame fulfilled with PU foam; resistant to atmospherical factors

3



with key lock and micro-ventilation

SOLID+

multi-chambered PVC profiles in white; frame fulfilled with PU foam; resistant to atmospherical factors

2

#### **WINDOW SIZES AND PRICES**

								Wymiary o	kna: szero	kość x wys	okość [cm	]						
Model okna	66x60	66x75	66x95	66x115	66x137	78x60	78x75	78x95	78x115	78x137	94x60	94x75	94x95	94x115	94x137	114x60	114x75	114x95
KPVCL N22																		
KPVCP N22																		
KPVCU N22																		
KPVCN FIX N22																		

#### L-SHAPED FLASHING SIZES AND PRICES

flashing symbol	size: width x height [cm] size symbol	66x98 03	66x118 04	66x140 15	78x98 05	78x118 06	78x140 07	78x160 13	94x118 08	94x140 09	94x160 14	114x118 10	114x140 11	134x98 12
UKS	for L-shaped complexes for flat or profiled covers up to 5cm high in connection of roof window with geniculate window													
available sizes														





## Wooden skylights

for habitable areas | top hinged











Opening way

top-hinged

Glazing unit



double glazing gas - argon warm spacer low emission coat toughened pane

4H/16/4T (AR)

 $Ug = 1,0 W/m^2K$ 

Carpentry

SOLID+ impregnated pine wood three coats of varnish

Gaskets

Ventilator

Handle



with key lock and micro-venitilation

Roof pitch



Hydraulic cylinders

help to open the sash smoothly in 30 degree angle

Vapour permeable underfelt collar



improves anti-humidity insulation thanks to the tighter connection with existing roofing felt top-hinged



double glazing gas - argon warm spacer low emission coat toughened pane

4H/16/4T (AR)

 $Ug = 1,0 W/m^2K$ 

SOLID+ impregnated pine wood

three coats of varnish

4

\_



with key lock and micro-venitilation



-

-

glazing area [m2] size symbol window size: width x height [cm]	0,23 01 55x78	0,30 02 55x98	03 66x98	0,48 05 78x98
ISW+ E2				
ISW E2				
available sizes				



# PVC skylights for habitable areas | top-hinged











Opening way

top-hinged

Glazing unit



double glazing gas - argon warm spacer low emission coat toughened pane

4H/16/4T (AR)

 $Ug = 1,0 W/m^2K$ 

Carpentry

SOLID+

multi-chambered PVC profiles in white; frame fulfilled with PU foam; resistant to atmospherical factors

Gaskets

4 szt.

Ventilator

Handle



with key lock and micro-ventilation

Roof pitch



Hydraulic cylinders

help to open the sash smoothly in 30 degree angle

Vapour permeable underfelt collar



improves anti-humidity insulation thanks to the tighter connection with existing roofing felt top-hinged



double glazing gas - argon warm spacer low emission coat toughened pane

4H/16/4T (AR)

 $Ug = 1,0 W/m^2K$ 

SOLID+

multi-chambered PVC profiles in white; frame fulfilled with PU foam; resistant to atmospherical factors

4 szt.

\_



with key lock and micro-ventilation



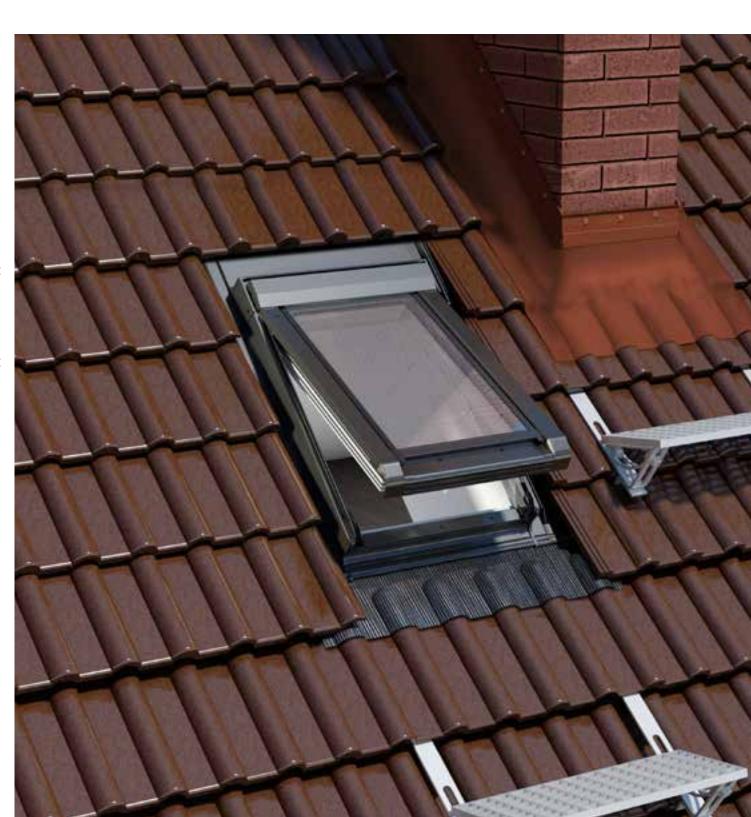
glazing area [m2] size symbol window size: width x height [cm]	0,23 01 55x78	0,30 02 55x98	03 66x98	0,48 05 78x98
IGWX+ E2				
IGWX E2				
available sizes				





## Wooden and PVC skylights

for habitable areas | top-hinged













Opening way | top-hinged

top-hinged

Glazing unit



triple glazing gas - argon 2x warm spacer 2x low emission coat toughened external pane

4TH/12/4/12/4T(AR)

 $Ug = 0.7 W/m^2K$ 

Carpentry

impregnated pine wood three coats of varnish

Gaskets

4

Ventilator Handle

with key lock and micro-ventilation

Roof pitch



Hydraulic cylinders

help to open the sash smoothly in 30 degree angle

N22

triple glazing gas - argon 2x warm spacer 2x low emission coat toughened external pane

4TH/18/4/18/4T (AR)

 $Ug = 0.5 W/m^2K$ 

SOLID+

multi-chambered PVC profiles in white; frame fulfilled with PU foam; resistant to atmospherical factors

4



with key lock and micro-ventilation



help to open the sash smoothly in 30 degree angle

glazing area [m2] size symbol window size: width x height [cm]	01 55x78	02 55x98	03 66x98	0,48 05 78x98
ISW 122				
IGWX N22				
available sizes				



### Wooden skylights

for non-habitable areas

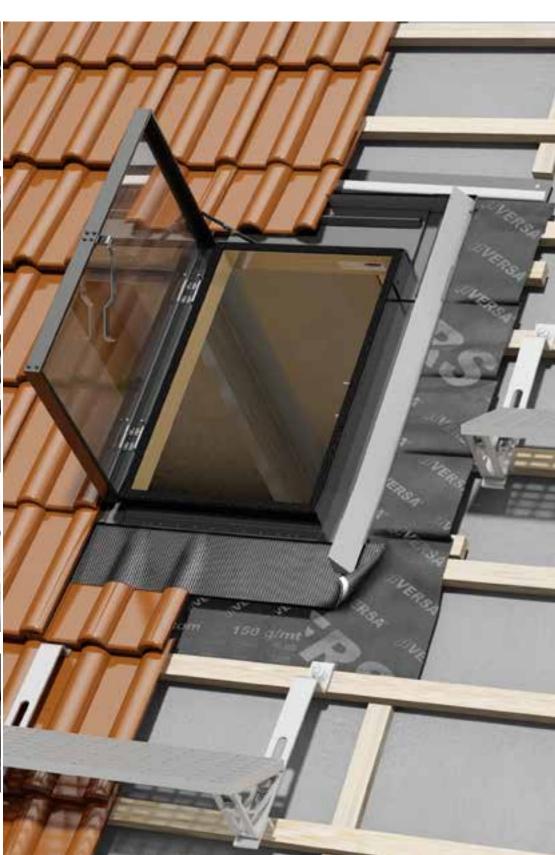












// WVD+

// WVM+









**Opening way** 

top-hinged

Glazing unit



double glazing toughened pane (hailstorm safety)

3H/8/3 (AR)

Carpentry imp

impregnated pine wood

Vapour permeable underfelt collar



improves anti-humidity insulation thanks to the tighter connection with existing roofing felt

Standard equipment

tile support opening restrictor threshold integrated U-flashing with lead apron sealing wedges gutter sash locking handle in 3 positions

Roof pitch



side-hung to the right or to the left (with a possibility to change the opening way)



V3

double glazing toughened pane (hailstorm safety) V3 - two toughened panes in 80x80 cm size

3H/8/3 (AR) 3H/8/3H (AR)

impregnated pine wood



improves anti-humidity insulation thanks to the tighter connection with existing roofing felt

tile support opening restrictor threshold integrated U-flashing with lead apron sealing wedges gutter sash locking handle in 3 positions



glazing area [m2] size symbol window size: width x height [cm]	01 47x57	02 47x73	03 80x80
WVM+			
WVD+			
available sizes			

## Windows customized to your own preferences

Thanks to the modern technological capabilities and advanced production line we can make a window adjusted to our clients' own preferences and needs. You can choose a particular shape and size of the window - we can fit them with 1cm precision. The aesthetical values such as colours and plastic elements types can be matched as well. In case of wooden windows our clients can determine the carpentry color to make the window suit perfectly to their interior design. The non-standard shaping of the roof windows in an innovative approach to modern architecture which gives unlimited design possibilities.



There is a possibility to order a window in a shape adjusted to the roof format. These widows are priced individually.



#### **NON-STANDARD FLASHING**



**TITAN-ZINC** 



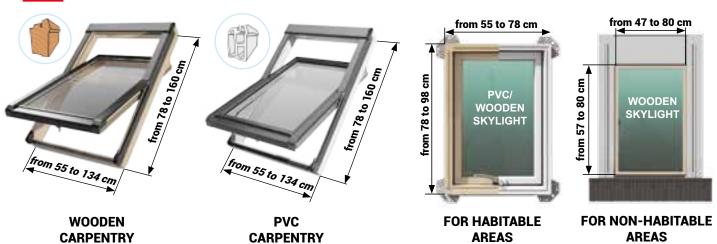
COPPER



THE NON-STANDARD ORDERS ARE CAN BE COMPLETED AFTER A CONSULTATION WITH TECHNICAL SALES ADVISOR OR CUSTOMER SERVICE OFFICE

#### **NON-STANDARD SIZES OF WINDOWS AND SKYLIGHTS:**

WIDTH AND HEIGHT ADJUSTED WITH 1cm PRECISION



#### NON-STANDARD FLASHING COLOURS

POWDER PAINTED IN RAL COLOURS











#### **EXTRA PAYMENT FOR FLASHING PAINTING (colours from RAL pallette)**

					- (				,							
								Window si	ze: width x l	height [cm]						
Product	Painting type	55x78 01	55x98 02	66x98 03	66x118 04	66x140 15	78x98 05	78x118 06	78x140 07	78x160	94x118 08	94x140 09	94x160 14	114x118 10	114x140 11	134x98 12
window	RAL															
flashing	RAL		THE NON-STANDARD ORDERS ARE CAN BE COMPLETED AFTER A CONSULTATION WITH TECHNICAL SALES ADVISOR OR CUSTOMER SERVICE OFFICE													
window + flashing	RAL															

#### **NON-STANDARD WOODEN CARPENTRY COLOURS**



#### **EXTRA PAYMENT FOR CARPENTRY PAINTING (colours from pattern)**

					•			,								
	D. i. di d							Window si	ze: width x l	neight [cm]						
Product	Painting type	55x78	55x98	66x98	66x118	66x140	78x98	78x118	78x140	78x160	94x118	94x140	94x160	114x118	114x140	134x98
		01	02	03	04	15	05	06	07	13	08	09	14	10	11	12
sash + frame	white RAL 9003				THE	NON-STAND	ARD ORDER	S ARE CAN	BE COMPLE	TED AFTER	A CONSULTA	TION				
sash + frame	transparent/ covering		THE NON-STANDARD ORDERS ARE CAN BE COMPLETED AFTER A CONSULTATION WITH TECHNICAL SALES ADVISOR OR CUSTOMER SERVICE OFFICE													

## **Sealing flashings**



#### **SIZES**

JIZEU															
							Window s	ize: width x l	neight [cm]						
	55x78	55x98	66x98	66x118	66x140	78x98	78x118	78x140	78x160	94x118	94x140	94x160	114x118	114x140	134x98
flashing symbol	01	02	03	04	15	05	06	07	13	08	09	14	10	11	12
- 11	х	х	х	х	х	х	х	х	Х	х	х	Х	х	х	х
U	х	X	Х	Х	Х	х	X	Х	Х	Х	Х	X	Х	X	X
Р	Х	х	х	х	х	Х	х	x	х	X	х	Х	х	X	X
Г	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	х	Х	х	Х	Х
Н	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	х	Х	х	Х	Х
П	х	X	х	X	х	Х	X	х	х	X	х	X	х	X	х
L -	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	х	Х	х	Х	Х
	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	х	Х	х	Х	Х
LH	Х	Х	Х	Х	х	Х	Х	х	Х	X	х	Х	х	X	Х
LII	X	X	X	X	X	Х	Х	Х	Х	X	Х	Х	Х	Х	Х
R	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	х	Х	х	Х	Х
	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	х	Х	х	Х	Х
BP	X	X	X	X	Х	Х	X	X	Х	X	Х	Х	Х	Х	Х
DI	Х	Х	Х	Х	X	Х	Х	х	Х	X	х	Х	х	X	Х
D	X	X	X	X	X	Х	Х	X	Х	X	X	Х	Х	Х	Х
<i>U</i>	X	X	X	X	Х	Х	X	Х	Х	X	X	Х	Х	Х	X
UKS	universal for wood	den windows	Х	Х	Х	Х	Х	Х	Х	X	Х	Х	Х	Х	х
	universal for PVC	windows	x	X	X	X	Х	X	х	X	х	х	х	X	x



#### **UNIVERSAL**

Enables connection of the window with flat and profiled roofing up to 5 cm height.

Made of aluminum covered with polyester.

Colour RAL 7022





P



#### FOR FLAT ROOFING MATERIALS

Enables the connection of the window with flat roofings up to 1 cm height such as roofing felt or roof shingle. Made of aluminum covered with polyester.

Colour RAL 7022





Н



#### FOR HIGH PROFILED ROOFING MATERIALS

The flashing can be used to connect the roof window with roofing materials up to 9 cm high. Thanks to the lead apron, these flashings are tight enough for such high roofing materials.

Colour RAL 7022





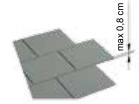
L



#### **FOR SLATES**

These flashings help to connect the window with roofing materials up to 0,8 cm high. Made of aluminum covered with polyester.

Colour RAL 7022





LH



#### **FOR PLAIN TILE**

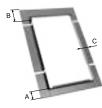
Enables connection between the roof window and plain tiles from 1,2 to 1,6 cm high. Made of aluminum covered with polyester.

Colour RAL 7022





R



#### FOR METAL STANDING SEAM

Because of this flashing, the connection between the roof window and metal standing seam roofing is much easier and aestethically pleasing. Made of aluminum covered with polyester.

Colour RAL 7022

A = 125mm, B = 230mm, C = 150mm





BP



#### FOR PANEL SHEET

Enables connection between the roof window and panel sheet roofing. Made of aluminum covered with polyester.

Colour RAL 7022



D



#### **FOR FLAT TILES**

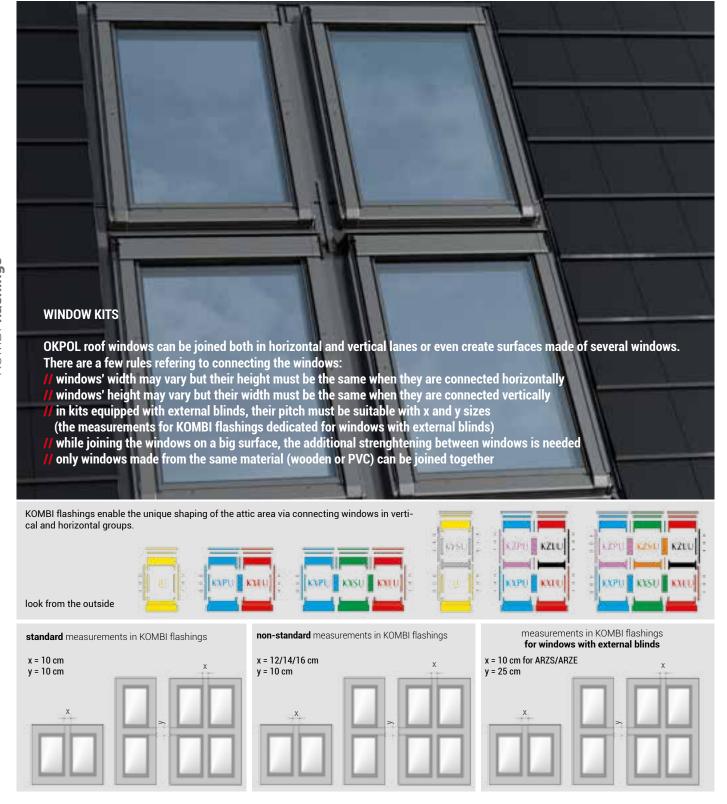
Helps to connect the roof window with flat roof tiles up to 4 cm high.

Colour RAL 7022





### KOMBI FLASHINGS



## Kombi flashings

#### **KOMBI ELEMENTS FOR UNIVERSAL FLASHINGS** (look from the outside)

flashing symbol	size: width x height [cm] size symbol	55x78 01	55x98 02	66x98 03	66x118 04	66x140 15	78x98 05	78x118 06	78x140 07	78x160 13	94x118 08	94x140 09	94x160 14	114x118 10	114x140 11	134x98 12
U	οA	х	х	х	х	х	х	х	х	х	Х	х	х	х	х	х
	<u> </u>	Х	Х	Х	Х	Х	Х	X	X	X	X	Х	Х	X	X	X
KYSU	Q	х	х	х	x	x	X	х	х	X	X	х	X	х	х	х
		X	X	X	х	X	X	X	x	X	X	x	X	X	X	x
KXPU		X	X	X	X	Х	X	X	X	X	X	X	X	X	X	х
		X	X	Х	X	x	X	x	x	Х	х	x	Х	x	x	x
KXSU		Х	х	Х	х	X	X	x	Х	Х	Х	Х	х	x	x	x
10100		x	X	Х	X	x	X	x	x	Х	X	x	Х	x	x	x
KXLU		X	х	Х	х	Х	X	х	Х	Х	Х	Х	Х	х	х	x
KALO		x	x	х	x	x	x	х	х	х	х	х	x	х	x	x
KZPU		х	х	х	х	х	x	х	х	х	х	х	х	х	x	x
INZI O		x	x	х	x	x	x	х	х	х	х	х	x	х	x	x
KZSU		х	х	х	х	х	x	х	Х	х	х	Х	х	х	х	х
NZ30		x	x	х	x	x	x	x	x	x	x	x	x	x	x	x
KZLU		х	х	х	х	х	х	х	х	х	х	х	х	х	х	х
KZLU		х	x	х	x	x	x	x	x	x	x	x	x	х	x	x

#### **MOST POPULAR KOMBI FLASHINGS**

flashing symbol	size: width	x height	[cm]	55x78 01	55x98 02	66x98 03	66x118 04	66x140 15	78x98 05	78x118	78x140 07	78x160	94x118 08	94x140 09	94x160 14	114x118	114x140	134x98 12
	KX2U		KXPU+KXLU	Х	х	х	Х	Х	х	Х	х	х	Х	х	Х	Х	х	X X
7 9				Х	X	х	х	Х	х	Х	X	X	х	х	Х	Х	х	х
EBS/	KY2U		KYSU+U	Х	Х	X	х	X	X	Х	X	X	х	Х	х	Х	x	х
UNIVERSAL FLASHING	KIZO		Kitooio	Х	Х	Х	Х	х	х	Х	Х	Х	Х	Х	Х	Х	х	х
J –	KZ4U		KZPU+KZLU	Х	Х	X	х	X	X	Х	X	Х	х	Х	х	Х	x	х
	IXZ-TO		+KXPU+KXLU	х	Х	X	х	X	х	х	X	Х	X	X	х	х	х	х
누긛	KX2P		KXPP+KXLP	Х	Х	Х	х	х	х	х	Х	Х	Х	Х	х	Х	х	Х
EB/	IXXZI		IXII I IXXLI	Х	Х	Х	х	X	х	Х	Х	Х	Х	Х	х	Х	х	Х
FLASHING FOR FLAT ROOFING MATERIAL	KY2P		KYSP+P	х	X	X	х	х	х	x	X	X	X	X	х	x	х	x
<u>8</u> <u>9</u>	KTZF		KISFIF	x	X	X	х	x	х	x	X	х	x	X	х	х	х	x
LASF	KZ4P		KZPP+KZLP	х	x	x	x	x	x	x	x	x	x	x	х	х	x	x
	NZ4F		+KXPP+KXLP	х	x	x	х	x	x	х	x	х	x	x	х	х	x	х
Ι.,	KASH		NADRITNAI R	х	х	x	х	x	x	х	X	x	х	х	х	х	х	х
월 .	KX2H KXPH+KXLH	KAPHTKALH	х	x	x	х	x	x	х	x	x	x	x	х	х	x	x	
FLASHING FOR HIGH PROFILED ROOFING MATERIAL	KY2H		KYSH+H	х	Х	Х	х	х	х	х	х	х	х	Х	х	Х	х	х
ILED MATE	KYZH		KYSH+H	х	х	x	х	х	x	х	х	х	x	х	х	х	х	x
ASF NOF	1/7.411		KZPH+KZLH	х	Х	Х	х	x	х	х	х	х	х	Х	х	Х	х	х
급 스	KZ4H		+KXPH+KXLH	х	х	х	х	х	х	х	х	х	х	х	х	х	x	х
	10/01		10/01 10/11	х	х	х	х	х	х	х	х	х	х	х	х	х	x	х
. 0	KX2L		KXPL+KXLL	х	х	х	х	х	х	х	х	х	х	х	х	х	х	х
FLASHING FOR SLATES	10.001		10/01 -1	х	х	х	х	х	х	х	х	х	х	х	х	х	x	х
LAS! OR SI	KY2L		KYSL+L	х	х	х	х	х	х	х	х	х	х	х	х	х	х	х
표 원			KZPL+KZLL	х	Х	х	х	х	х	х	х	Х	Х	Х	х	Х	х	х
	KZ4L		+KXPL+KXLL	х	х	х	х	х	х	х	х	х	х	х	х	х	х	х
	10/5111			Х	Х	х	х	х	х	х	х	Х	Х	Х	х	Х	х	х
E	KX2LH		KXPLH+KXLLH	x	Х	Х	х	х	х	Х	Х	Х	Х	Х	Х	Х	х	х
9 H N H I	10.461.11			Х	Х	х	х	Х	х	х	Х	х	Х	Х	х	Х	х	х
FOR PLAIN TILES	KY2LH		KYSLH+LH	x	х	х	х	х	х	х	х	х	х	х	х	х	х	х
7 E			KZPLH+KZLLH	Х	Х	х	х	Х	х	х	Х	Х	Х	Х	х	Х	х	х
	E KZ4LH		+KXPLH+KXLLH	Х	Х	Х	Х	X	Х	Х	Х	Х	Х	Х	х	Х	Х	х

### **Installation accessories**

#### **AKP VAPOUR PERMEABLE UNDERFELT COLLAR**

- Made of highly-permeable roof membrane.
- Enables connection between the window and the vapour permeable foil.



#### **UTB FOILING FOAM**

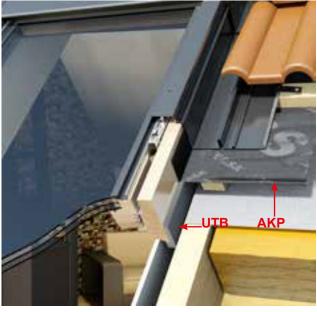
- Fills up the gap between the window frame and the roof.
- Reduces the possibility of thermal bridging via warming the roof window.



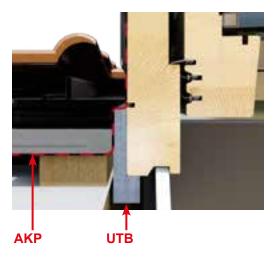
#### **ADO TELESCOPIC CONTROL ROD**

Eases the operations on the windows placed very high. 195cm length.





UTB +AKP
(WARMING INSTALLATION)



**PRICE LIST** 

type	size: width x height [cm]	55x78	55x98	66x98	66x118	66x140	78x98	78x118	78x140	78x160	94x118	94x140	94x160	114x118	114x140	134x98
.,,,,	size symbol	01	02	03	04	15	05	06	07	13	08	09	14	10	11	12
AKP	underfelt collar	х	х	х	х	Х	х	Х	х	х	Х	Х	х	Х	х	х
UTB	warming foam	х	х	х	х	х	х	х	х	х	х	х	х	х	х	х
ADO	telescopic control rod (195 cm)								х							

#### **Automatic window control**

#### ACR230 CONTROL UNIT:

- voltage supply 230V
- connection with single motor 230V ASE230
- · wind sensor ADD connection
- remote control (AP4)



#### **ACS24 AND ACS23 CONTROL UNIT:**

- ACS24 output voltage 24V 4 inputs, max. 4 motors, 1 motor to each input
- · ACS230 output voltage 230V 4 inputs, max. 16 motors, 4 motors to each input
- · wind or rain sensor connection possible
- · manual or remote control (wall switch or AP4)



#### ADW WIND DETECTOR:

- enables automatic closing of window when wind force exceeds predefined values
- · including blade system whirling depending on the wind speed
- waterproof cover

#### ADD RAIN DETECTOR:

- · automatically closes the window whenever the sensor gets wet
- insensitive for fog, icing, dew and humidity



#### **CHAIN ACTUATOR ASE24 or ASE 230:**

ning and closing the windows

- voltage supply 24V ASE24 or 230V ASE 230
- stroke 24 and 36 cm
- · absorbed current 0,12A or 0,36A
- speed 10 mm/s or 9,7 mm/s
- time of idle stroke: 26 s or 37 s
- · double insulated
- · protection class: IP30
- · double steel chain installed at the bottom of the frame





#### **AP4 REMOTE CONTROL:**

radio remote control (4 channels)





AUTOMATIC	WINDOW CONTROL
ACS24	control unit 24V
ACS230	control unit 230V
AP4	remote control
ASE24	actuator 24V
ASE230	actuator 230V
ADD	rain detector
ADW	wind detector
AWN	wall switch
ACR230	control station

#### **SUMMARY ROOF WINDOWS PRICE LIST**

				U value of							1	window siz	e: width x	height [cm	ı]					
			model/symbol	window [W/m²K]	window features	55x78 01	55x98 02	66x98 03	66x118 04	66x140 15	78x98 05	78x118 06	78x140 07	78x160 13	94x118 08	94x140 09	94x160 14	114x118 10	114x140 11	134x98 12
			MSO E2	1,2	toughened pane, warm spacer, gas - argon, Ug=1,0W/m²K															
WOODEN WINDOWS		ī	ISO E2	1,2	toughened pane, warm spacer, gas - argon, Ug=1,0W/m²K															
	NG	CENTRE-PIVOT	ISO E8	1,2	(P1A 37dB,toughened pane, warm spacer, noise reduction, gas - argon, Ug=1,0W/m²K															
	DOUBLE GLAZING	J	ISC <sub>1</sub> E2	1,2	remotely controlled, toughened pane, warm spacer, gas - argon, Ug=1,0W/m²K															
	DOO		ISC <sub>2</sub> E2	1,2	electrically controlled with the switch, toughened pane, warm spacer, gas - argon, Ug=1,0W/m²K															
		HIGH- PIVOT 3/4	ISH E2	1,2	toughened pane, warm spacer, gas - argon, Ug=1,0W/m²K															
×		TOP-HUNG	ISK E2	1,3	toughened pane, warm spacer, gas - argon, Ug=1,0W/m²K															
OODE		·	ISO 122	1,0	toughened pane, 2x warm spacer, gas - argon, Ug=0,7W/m²K															
M		Ĺ	ISO 16	1,0	toughened pane, 2x warm spacer, ANTI-DEW coating, gas - argon, Ug=0,7W/m²K															
	LAZING	CENTRE-PIVOT	ISO 13	0,93	toughened pane, 2x warm spacer, ANTI-DEW coating, gas - crypton, Ug=0,5W/m²K															
	TRIPLE GLAZING	35	ISC <sub>1</sub> I22	1,0	remotely controlled, toughened pane, 2x warm spacer, gas - argon, Ug=0,7W/m²K															
			ISC <sub>2</sub> I22	1,0	electrically controlled with the switch, toughened pane, 2x warm spacer, gas - argon, Ug=0,7W/m²K															
		TOP-HUNG	ISK 13	0,8	toughened pane, 2xwarm spacer, ANTI-DEW coating, gas - crypton, Ug=0,5W/m²K															
			BGOV E2	1,3	toughened pane, warm spacer, gas - argon, Ug=1,0W/m²K															
		:-PIVOT	IGOV E2	1,2	toughened pane, warm spacer, gas - argon, Ug=1,0W/m2K															
	DOUBLE GLAZING	CENTRE-PIVOT	IGC <sub>1</sub> V E2	1,2	remotely controlled, toughened pane, warm spacer, gas - argon, Ug=1,0W/m²K															
	DOUBLE		IGC <sub>2</sub> V E2	1,2	electrically controlled with the switch, toughened pane, warm spacer, gas - argon, Ug=1,0W/m²K															
OWS		HIGH- PIVOT 3/4	IGHV E2	1,2	toughened pane, warm spacer, gas - argon, Ug=1,0W/m²K															
PVC WINDOWS		TOP-HUNG	IGKV E2	1,2	toughened pane, warm spacer, gas - argon, Ug=1,0W/m²K															
PVC			IGOV N22	0,83	toughened pane, 2x warm spacer, gas - argon, Ug=0,5W/m²K															
	9N	CENTRE-PIVOT	IGOV N23	0,83	toughened pane, 2x warm spacer, P2A laminate, gas - argon, Ug=0,5W/m²K															
	TRIPLE GLAZING	CENTRI	IGC <sub>1</sub> V I22	1,0	remotely controlled, toughened pane, 2x warm spacer, gas - argon, Ug=0,7W/m²K															
	Ħ		IGC <sub>2</sub> V I22	1,0	electrically controlled with the switch, toughened pane, 2x warm spacer, gas - argon, Ug=0,7W/m²K															
		TOP-HUNG	IGKV N22	0,83	toughened pane, 2x warm spacer, gas - argon, Ug=0,5W/m²K															

**WINDOWS WITHOUT A VENTILATOR** 

There is a possibility to order windows without a ventilator (no extra payment)

#### SKYLIGHTS PRICE LIST

				U value of			skylight size: width x height [cm]									
			model/symbol	window [W/m²K]	equipment	glazing unit	47x57	47x73	80x80	55x78	55x98	66x98	78x98			
HABITABLE			WVD+	-	integrated universal and vapour permeable underfelt AKP collar, opening restrictor, threshold, gutter, sealing wedges, sash locking handle in 3 positions	double-glazed with toughened external pane										
FOR NON-HABITABL AREAS	WOOD	ZING	WVM+	-	integrated universal and vapour permeable underfelt AKP collar, opening restrictor, threshold, gutter, sealing wedges, sash locking handle in 3 positions	double-glazed with toughened external pane										
	W	GLA	ISW+ E2	1,2	vapour permeable underfelt AKP collar, hydraulic cylinders that help to open the sash smoothly, handle with a key lock	double-glazed with toughened external pane, warm spacer, gas - argon, Ug=1,0 W/m²K										
		OUBLE	ISW E2	1,2	handle with a key lock	double-glazed with toughened external pane, warm spacer, gas - argon, Ug=1,0 W/m²K										
BLEAREAS	PVC	DO	IGWX+ E2	1,2	vapour permeable underfelt AKP collar, hydraulic cylinders that help to open the sash smoothly, handle with a key lock	double-glazed with toughened external pane, warm spacer, gas - argon, Ug=1,0 W/m²K										
OR HABITABLE	6		IGWX E2	1,2	handle with a key lock	double-glazed with toughened external pane, warm spacer, gas - argon, Ug=1,0 W/m²K										
	WOOD	GLAZING	ISW 122	1,0	hydraulic cylinders that help to open the sash smoothly, handle with a key lock	triple-glazed with toughened external pane, 2x warm spacer, gas - argon, Ug=0,7 W/m²K										
	PVC	TRIPLE G	IGWX N22	0,83	hydraulic cylinders that help to open the sash smoothly, handle with a key lock	triple-glazed with toughened external pane, 2x warm spacer, gas - argon, Ug=0,5 W/m²K										

#### SEALING FLASHING PRICE LIST

	wymiary okna: szerokość x wysokość [cm]																
flashing symbol	aim	opis	55x78 01	55x98 02	66x98 03	66x118 04	66x140 15	78x98 05	78x118 06	78x140 07	78x160 13	94x118 08	94x140 09	94x160 14	114x118 10	114x140 11	134x98 12
U	universal	for both flat and profiled roofing materials up to 5cm high															
P	for flat roofs	for flat roofing materials up to 1cm high (such as roofing felt or roof shingle)															
Н	for high profiled roofing material	for high profiled roofing materials up to 9 cm high															
L	for slates	for slates up to 0,8 cm high															
LH	for plain tiles	for plain tiles from 1,2 to 1,6 cm high															
R	for special flat roofing materials	for metal standing seam															
BP	for special flat roofing materials	for panel sheet															
D	for flat tilesj	for flat tiles up to 4 cm high															
UKS UKG	for L-shaped windows	for flat or profiled roofing materials up to 5 cm high, roof window connected with L-shaped one (for windows: UKS - wood, UKG - PVC)															

#### NON-STANDARD WINDOW PRICE LIST EXTRA PAYMENT FOR PAINTING THE FLASHING (colour from RAL palette)



THE NON-STANDARD ORDERS ARE CAN BE COM-PLETED AFTER A CONSULTATION WITH TECHNICAL SALES ADVISOR OR CUSTOMER SERVICE OFFICE.

										$\sim$						
	painting type		window size: width x height [cm]													
product		55x78 01	55x98 02	66x98 03	66x118 04	66x140 15	78x98 05	78x118 06	78x140 07	78x160 13	94x118 08	94x140 09	94x160 14	114x118 10	114x140 11	134x98 12
window	RAL															
flashing	RAL		THE NON-STANDARD ORDERS ARE CAN BE COMPLETED AFTER A CONSULTATION WITH TECHNICAL SALES ADVISOR OR CUSTOMER SERVICE OFFICE													
window +flashing	RAL															

#### **EXTRA PAYMENT FOR CARPENTRY PAINTING (colours from pattern)**

	window size: width x height [cm]														
product	55x78	55x98	66x98	66x118	66x140	78x98	78x118	78x140	78x160	94x118	94x140	94x160	114x118	114x140	134x98
	01	02	03	04	15	05	06	07	13	08	09	14	10	11	12
sash + frame white RAL 9003		THE NON-STANDARD ORDERS ARE CAN BE COMPLETED AFTER A CONSULTATION													
sash + frame lazur/RAL		WITH TECHNICAL SALES ADVISOR OR CUSTOMER SERVICE OFFICE													

#### **EXTRA PAYMENT FOR NON-STANDARD GLAZING UNITS IN ROOF WINDOWS**



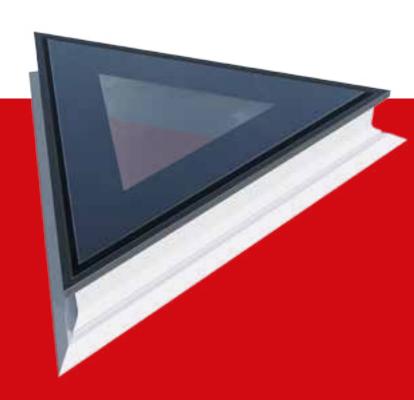
available sizes



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