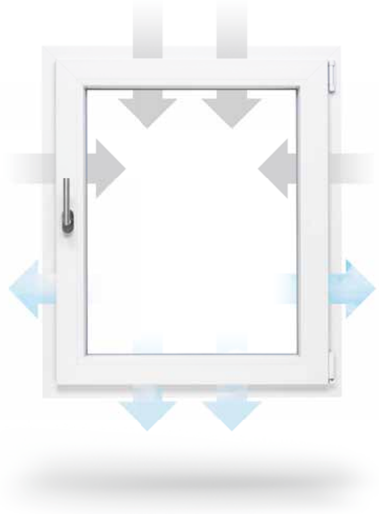
Always precise

activPilot Comfort

Fitting for windows with parallel action



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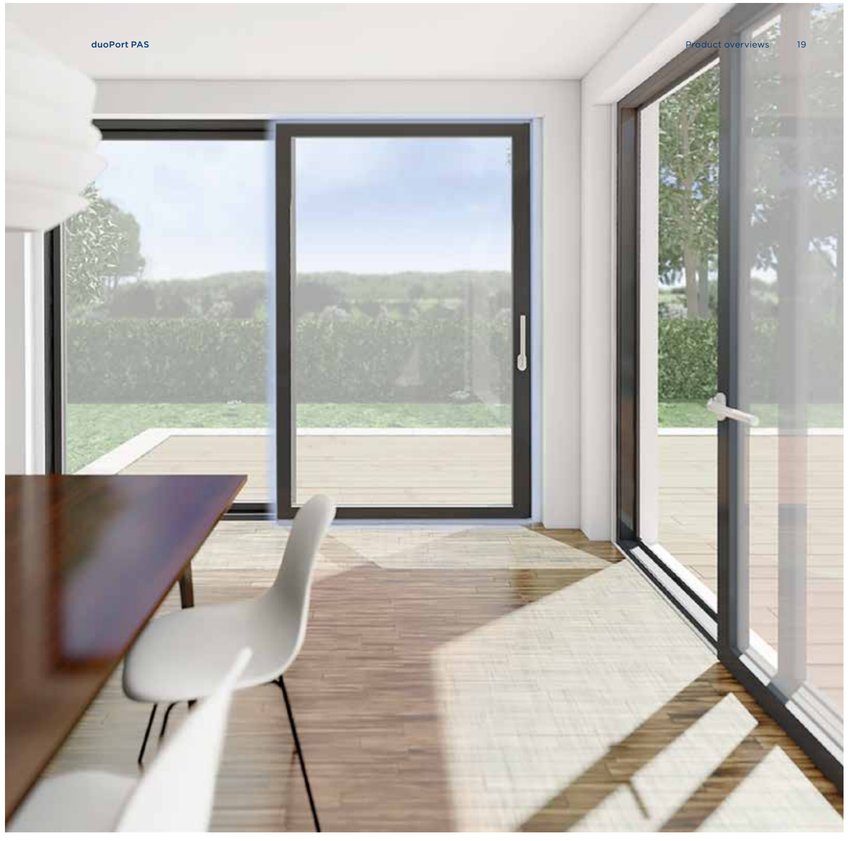
All windows
open and close.
**Only one
can ‘opelose’.**



duoPort PAS – innovative room ventilation with closed sliding door

The duoPort PAS fitting system takes sliding doors to the third dimension. In addition to opening, sliding and locking functions, the activPilot central locking system also enables the door element to be set to parallel position. All functions are controlled by an easy-to-use hand lever.

duoPort **PAS**

Technical features
- Fitting system with parallel action and sliding function
- Accommodates resistance classes up to RC2 as per DIN EN 1627-1630
- For sliding elements up to 160 kg sash weight

Operation, operating sequence and function.

1 Locked

When the hand lever is pointing vertically downwards, the sliding element is locked. The mushroom-head bolt is in position 1 of the locking keep.

2 Open

If the hand lever is moved to the transverse position from below, the fitting will be in the open position.

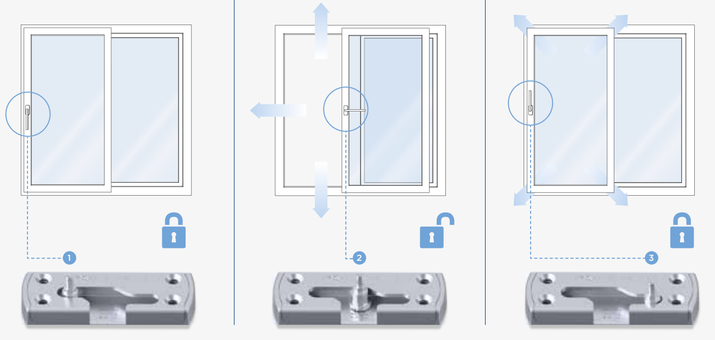
The mushroom-head bolt is now in the middle (position 2) – the sliding element is open.

3 Parallel action position

The sliding element is brought into the parallel position by turning further by 90° to the 180° position.

The mushroom-head bolt is in position 3 and the window element is now approx. 6 mm in parallel position.

To close the sliding element, the hand lever must be moved down to the starting position.



The perfect mix of open and closed

Winkhaus is revolutionising ventilation as you know it with the innovative new ‘opelose’ function.

Thanks to the activPilot Comfort fitting, a practically invisible ventilation gap approximately 6 mm wide is formed on all sides between the window sash and frame.

Windows which are ‘opelosed’ are open wide enough to provide a continuous supply of fresh air in order to improve the climate in the room and to prevent damage from mildew. At the same time, they are closed enough to provide burglary protection, noise reduction and energy efficiency.

‘Opelose’ combines the benefits of both opening types in one solution for the first time – brilliant, isn’t it?

Closed

Open/
Tilted

‘Opelosed’

Good reasons to ‘opelose’ the window

‘Opelose’ protects against break-ins

Increased burglary protection is achieved with the unique locking keeps. Hard as steel, Winkhaus security components on all sides of the window make it difficult to pry the window sash open. It is also very difficult to recognise from outside that the window is ‘opelosed’. Therefore, continuous and secured basic ventilation can also be provided in your absence.

Other security benefits

+ Even in an ‘opelosed’ window, the locking bolts are entirely located in the special keeps
+ Burglary resistance up to EN 1627 – 1630 RC2 can be achieved
+ No need to break through the wall for an outside air outlet etc.

‘Opelose’ increases living comfort

Healthy indoor climate
Continuous ‘opelose’ is an ideal way of preventing mildew wherever there is a lot of moisture.

Energy-saving air exchange
‘Opelose’ means fresh air with less temperature loss.

Protection from insects
With a gap of only 6 mm, pesky insects hardly have a chance to enter the house.

Further benefits for the living space

+ In the ‘opelosed’ ventilation position, there is no draught in the living space
+ Compared to a tilted window, the noise level and temperature loss are lower with an ‘opelosed’ window
+ Water ingress under a driving rain is significantly reduced compared to tilted windows

	Tilted	‘Opelosed’
Air exchange	✓	✓
Easy to use	✓	✓
Saves energy		✓
Burglary-resistant*		✓
Better noise suppression		✓
Better protection from driving rain		✓
Protection from insects		✓
Protection of pets		✓
Temperature loss**	2 °C / 10 min.	0,5 °C / 10 min.

*Up to RC2 possible. I **Source: Study by the Technical University of Münster.

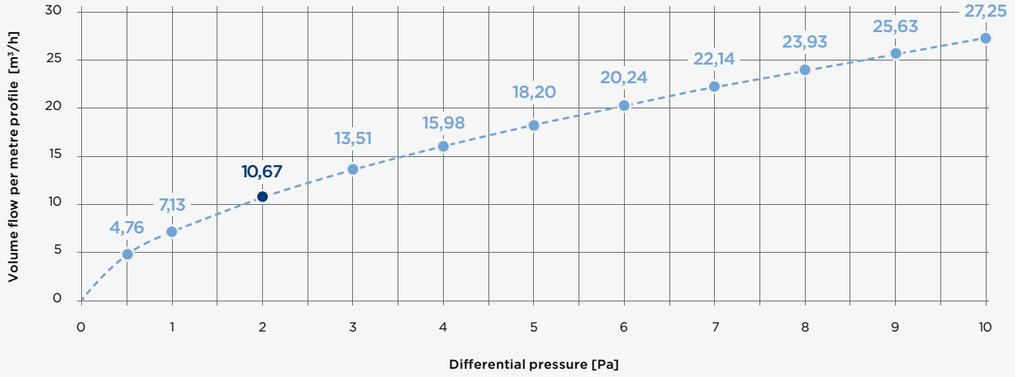
Small gap – big impact.

activPilot Comfort, the fitting system for healthy and energy-saving ventilation.

Natural ventilation

The amount of fresh air intake depends on local wind conditions. The diagram can thus be used to read the air volume (volumetric flow) per running metre of window (sash rebate dimension) in relation to the various wind speeds.

Example: Even in a slight breeze (6 – 11 km/h wind speed), the result is an air exchange of approx. 10.7 m/h per running metre. This means that approx. 42.5 m³/h air is exchanged with a window of 1 m x 1 m (4x 10.67).

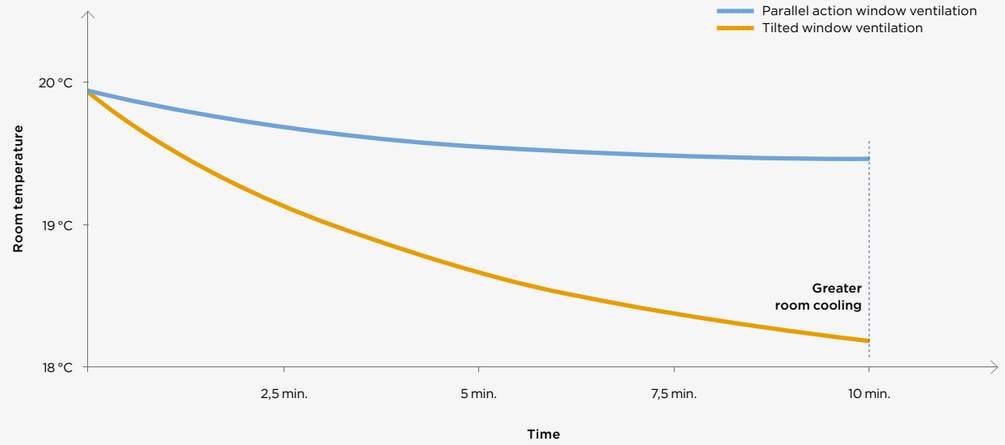


Wind speed data			
Differential pressure [Pa]	Wind speed [km/h]	Wind strength in Bft	Designations
2	6,6	2	Moderate breeze
3	8,1		Fresh breeze
4	9,3		
5	10,4		
8	12,7	3	Strong breeze
10	14,7		Strong wind
15	18,0		Gale
20	20,8	4	Storm
50	32,9	5	Hurricane
100	46,5	6	
300	80,5	9	
600	113,8	11	

Source:
Fraunhofer Institute

Energy-efficient ventilation

When windows are placed in ‘opelosed’, fresh outdoor air flows into the room more slowly and more evenly. Air is thus warmed to room temperature more quickly and energy losses are reduced considerably (see graphic).

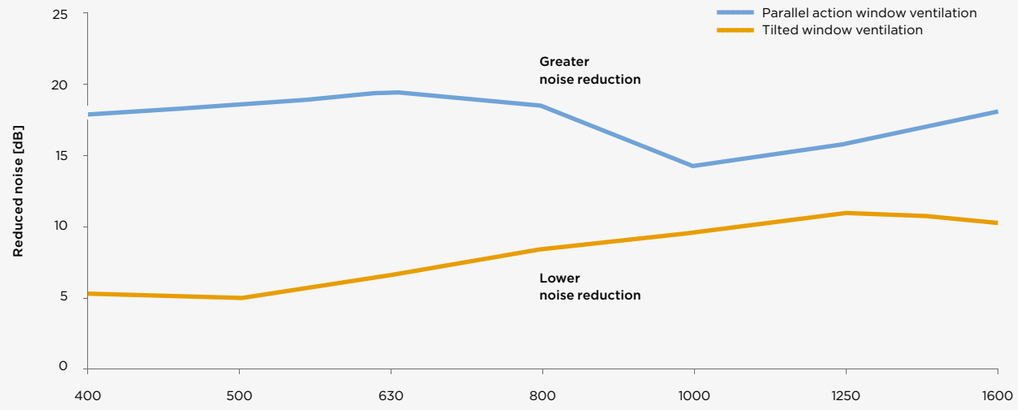


Source:
Münster Technical University

When you ventilate with a tilted window (at an outside temperature of 0 °C), the indoor air temperature falls by 2 °C after just ten minutes, but by a mere 0.5 °C when the window is placed in the parallel position!

Quiet ventilation

The 500 – 1500 Hz frequency range is largely responsible for disturbing traffic noise, and this is reduced by an ‘opelosed’ window by about 9 dB more than a tilted window on average (see graphic). In which a reduction of 10 dB is equivalent to halving the volume. This allows ventilation and yet keeps background noise to a pleasant minimum.



Source:
Fraunhofer Institute

activPilot Comfort
Product overviews

Product description

The activPilot Comfort fitting system is highly versatile. The basic components of this innovative fitting are based on the activPilot modular system. Functionality, mature security technology and a high level of operating convenience characterise the versatile turn-tilt fitting system. The activPilot Comfort fitting system has been divided into different product segments for the production of different window formats and to differentiate the switching sequences:

activPilot Comfort **PAD**

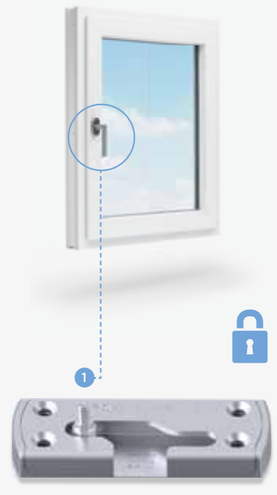
Technical features

- Fitting system with parallel action, turn and close function
- Accommodates resistance classes up to RC2 as per DIN EN 1627-1630

Operation, operating sequence and function.

1 Locked

If the handle is positioned downwards and vertically, the window is locked. The mushroom-head bolt is in position 1 of the locking keep.



2 Turn position

If the handle is moved to the crosswise position from below, the fitting is in the turn position.

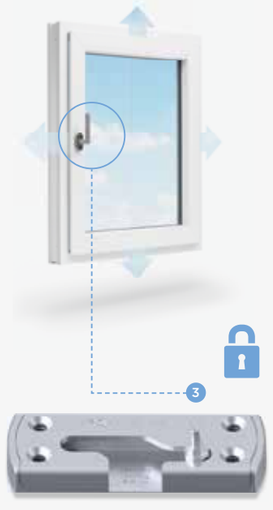
The mushroom-head bolt is now in the middle (position 2) – the window is turn-open.

3 Parallel action position

The sash is brought into the parallel position by turning further by 90° to the 180° position.

The mushroom-head bolt is in position 3 and the window is now approx. 6 mm in parallel position.

To close the window, the handle must be turned downwards to the initial position.



activPilot Comfort **PADM**

Technical features

- Motorised parallel action/turn fitting
- Suitable for user-independent room ventilation as per DIN 1946-6:2009-05
- Accommodates resistance classes up to RC2 as per DIN EN 1627-1630
- Time and automatic ventilation integrated
- Flexible window operation via radio remote control or touch surface

Operation, operating sequence and function.

1 Locked

If the position indicator of the motorised fitting is pointing downwards, the mushroom-head bolt is in position 1 and the window is locked.

2 Parallel action position

If the position indicator is horizontal, the mushroom-head bolt is in position 2 and the window is now approx. 6 mm in parallel position.

3 Turn position

If the bar of the position indicator is pointing upwards, the fitting is in the turn position. In this position, the mushroom-head bolt is in position 3 and the window is turn-open.

activPilot Comfort **PADM**

The motorised drive

Activation of opening positions

activPilot Comfort PADM in combination with fitting drive HF.MD.PADM provides natural air exchange as per DIN 1946-6.

Because ventilation scenarios, such as preset ventilation times, can be set, indoor rooms are supplied with natural fresh air independently of the user. To open the window fully, you simply have to press a button and the fitting drive releases the sash for the turn position. The window can then be opened manually as usual. You can find further information in the original operating instructions.

Advantages of the intelligent fitting motor drive

+ Integrated EnOcean radio protocol
+ Optimised window ‘opelose’ and closing
+ Time-controlled or automatic
+ Remote access via a Smart Home system (wibutler) or EnOcean radio remote control
+ Keeps heating or other sources of heat from running when the window is open
+ Enables CO_2-based room air control

activPilot Comfort PADM – Operating elements

- **A Position indicator**
- **B LED radio display**
- **C CLOSED**
- **D OPEN in parallel action position**
- **E OPEN in turn position**
- **F Timed ventilation**
- **G Automatic/interval ventilation**
- **H Info**

enocean®

Assembly work on the motorised window drive may only be performed by trained professionals!

The installation/removal of the fitting drive and the electrical connection are described in the original operating instructions HF.MD.PADM.01 and HF.PS.SNT1.U.24V.1A.

activPilot Comfort **PADM**

Sophisticated ventilation

Legal requirements of “user-independent ventilation”

Regulations on conserving energy put ever more demanding requirements on building air tightness. The minimum air exchange rate is regulated in DIN 1946-6:2019-12 in order to ensure a sufficient supply of fresh air so as to prevent structural damage, e.g. due to mould.

The necessary verification requires a ventilation concept to be prepared for new buildings and for modernisations in which more than 1/3 of the windows are replaced. The ventilation concept can be prepared by any qualified building planning and modernisation specialist.

Any specialist (such as the window manufacturer) who is in direct contact with the customer is required to provide information regarding the creation of a ventilation concept!

In accordance with DIN 1946-6, the ventilation level “ventilation for moisture protection” is “ventilation necessary to ensure building protection (moisture) under normal conditions of use with partially reduced moisture loads”.
It is absolutely mandatory and must be user-independent.

The solution: Automatic ‘opelose’

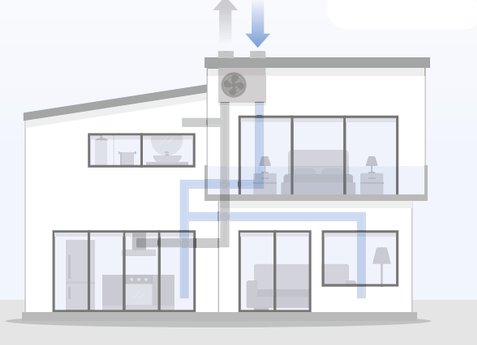
The Winkhaus activPilot Comfort PADM fitting enables user-independent ventilation thanks to the automatic function:

- The window is automatically ‘opelosed’ for 10 min. every hour
- This corresponds to a 4 hours of ‘opelosed’ per day
- The Fraunhofer Institute IBP has confirmed suitability as an outdoor air outlet according to DIN 1946-6

Advantages over a ventilation system

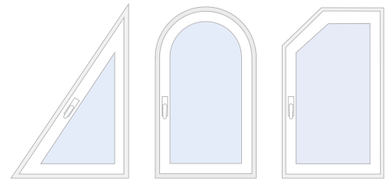
+ No maintenance costs (e.g. expenses for cleaning filters)
+ Significantly lower investment and electricity costs compared to a ventilation system
+ No need to break through the wall for an outdoor air outlet etc.
+ No security issues in the building’s ventilation after many years

Ventilation with conventional ventilation system



Automatic ‘opelose’

activPilot Comfort **PADS**



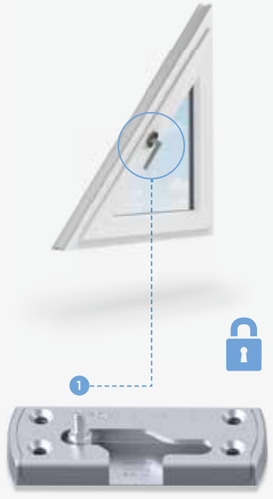
Technical features

- Fitting system with parallel action, turn and close function
- For round arch, studio windows and other special shapes

Operation, operating sequence and function.

1 Locked

If the handle is positioned as shown in the figure below, the window is locked.
The mushroom-head bolt is in position 1 of the locking keep.



2 Turn position

If the handle is moved to the crosswise position from below, the fitting is in the turn position.

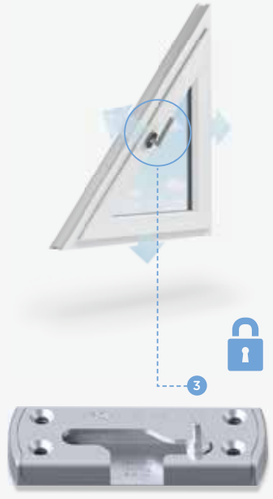
The mushroom-head bolt is now in the middle (position 2) – the window is turn-open.

3 Parallel action position

The sash is brought into the parallel position by turning further by 90° to the 180° position.

The mushroom-head bolt is in position 3 and the window is now approx. 6 mm in parallel position.

To close the window, the handle must be turned downwards to the initial position.



activPilot Comfort **PADK**

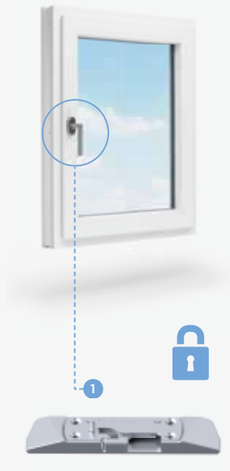
Technical features

- Fitting system with parallel action, tilt and close function
- Accommodates resistance classes up to RC2 as per DIN EN 1627-1630

Operation, operating sequence and function.

1 Locked

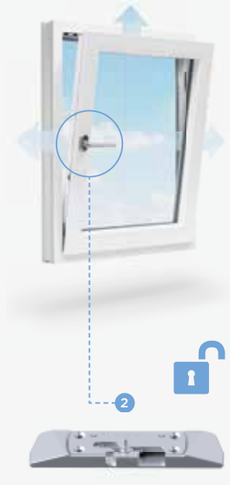
If the handle is positioned downwards and vertically, the window is locked. The mushroom-head bolt is in position 1 of the locking keep.



2 Tilt position

If the handle is moved to the crosswise position from below, the fitting is in the tilt position.

Now the mushroom-head bolt is in position 2 – the window is tilted.



3 Parallel action position

The sash is brought into the parallel position by turning the handle further by 90° to the 180° position.

The mushroom-head bolt is in position 3 and the window is now approx. 6 mm in parallel position.

4 Turn position

Turning the handle back to the crosswise position puts the fitting in the turn position.

The mushroom-head bolt is now in the middle (position 4) – and the window is turn-open.

A system for every situation

activPilot window fittings from Winkhaus are intelligently designed and offer outstanding performance. They meet the highest expectations for function, design and safety. Highly resilient surfaces ensure that aesthetics and function are permanently retained.

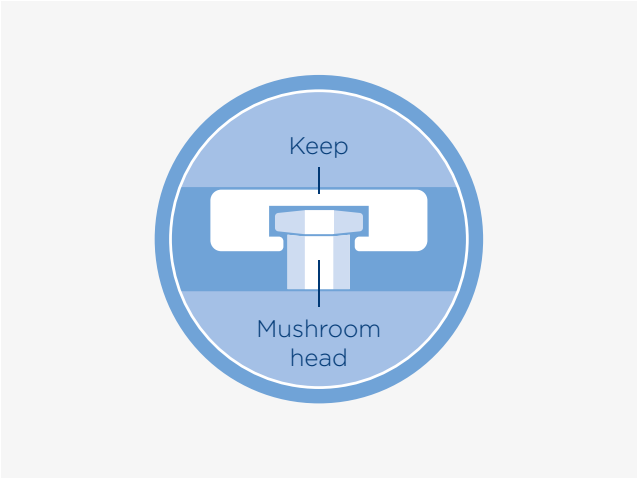
Universal

The activPilot Comfort system is suitable for all conventional window materials: PVCu, wood or aluminium profiles with 16 mm fitting groove and formats with a sash weight of up to 100 kg. Windows with parallel action can be easily created from the activPilot modular system simply by replacing just a few individual parts.

System quality

The Winkhaus activPilot fitting is certified according to QM 328. In this demanding test, the window fittings are subjected to numerous tests that demonstrate durability and quality.

Accessories



Wireless contacts

- For convenient window status monitoring
- Open EnOcean radio protocol
- No cable, ideal for retrofitting
- For all conventional PVCu and wooden windows
- Can be used in smart home systems (such as wibutler)

Retrofitting as per DIN 18104-2

- Normal turn-tilt windows can be retrofitted with activPilot Comfort PAD and PADK
- Suitable for all conventional PVCu profiles with 13 mm groove centre position and min. 29 mm frame rebate depth
- To enhance window burglary resistance