



# Types of windows

The **Wood Window** Alliance



**WOOD. AT THE HEART  
OF A GOOD WINDOW**



The term 'window type' usually describes the opening arrangement and should not be confused with window styles, which may vary within a window type.

Wood windows included in this section:

- Standard side hung casements, including side-swing casements
- Projecting top-hung casements, such as fully reversible and H-windows
- Tilt and turn
- Vertical sliding sash, traditional and spiral balance
- Pivot-hung, including bulls-eye and circular
- Multi-light or combination types
- Other styles and combination frames.

## Why window types are important

Window type has a considerable effect on:

- The size, shape and proportion of the window
  - Window type can have a major impact on the overall appearance of a building
- The range of sizes available for each window type represents those which are most commonly used and are functionally and ergonomically most satisfactory
- The percentage of 'openable area'
  - This varies from 100%, in the case of side-hung casement windows, to less than 50% in vertical or horizontal sliding types. This difference can affect the size or number of windows required and has implications for daylighting, energy-efficiency and cost
- The method of cleaning
- Suitable types of security fittings.

## Casement windows

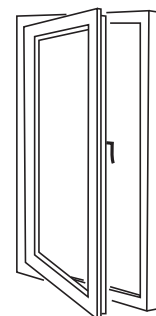
Traditionally, casement windows in the UK and in most parts of Northern Europe open on the outside of the building. Outward opening windows have a weather performance advantage as the sash is made tighter against the weather gaskets in the frame by increased wind pressure.



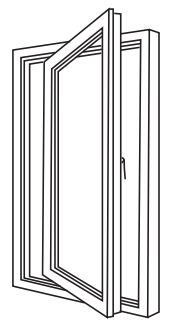
## Side hung casement windows

Side hung casement windows are:

- The most common type of window
- They normally have a maximum casement width of 600mm, with a maximum height of 1500mm
- Available with different hinge mechanisms. The simplest (A) has hinges which attach the sash directly to the frame



A. Side hung casement



B. Projecting side hung casement

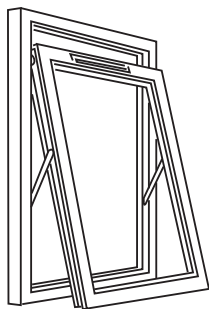
- Projecting side-hung casements (B) operate using a different hinge mechanism to allow cleaning from the inside; hinges (often referred to as easy-clean or projecting hinges) are fitted to the top and bottom of the sash and frame rather than the side
- An alternative 'sideswing' version is also available from some window manufacturers.



## Projecting top hung casements

These window types, also known as “reversible windows”, are increasingly popular especially in flats or any medium to high-rise developments. They can prevent curtains and blinds being disturbed when the window is reversed.

- The mechanism, sometimes known as ‘topswing’ or ‘H-type’, allows the outside of the window sash to fully reverse into the room by rotating on the outside of the frame, making cleaning from the inside possible
- The mechanism often incorporates an ‘espagnolette’ locking system and child safety locks which restrict opening to 100mm; these can be overridden for cleaning
- A ‘sideswing’ version of the mechanism allows a side-hung casement window to be reversed in the same way.

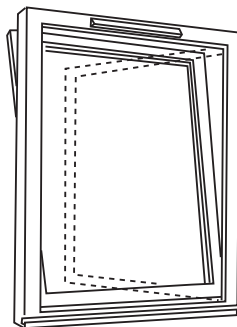


C. Projecting top hung casement

## Tilt and turn windows

Tilt and turn windows have been popular in mainland Europe for many years.

- The mechanism tilts the window from the bottom allowing secure ventilation at the top. Turning the handle in the opposite direction allows the window to fully open inside the room
- Although this allows cleaning from inside, the opening sash can interfere with any curtains or blinds around the window.

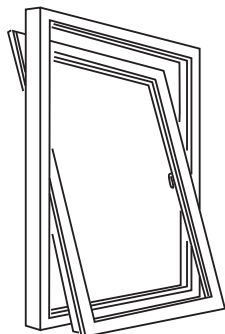


D. Tilt and turn windows

## Pivot hung windows

These were popular in medium-rise and high-rise flats in the 1960s and ‘70s and are still used today in roof windows and ‘bull’s eye’ or circular windows.

- The mechanism is simple and allows the sash to turn through 180° pivoted around the centre of the frame.

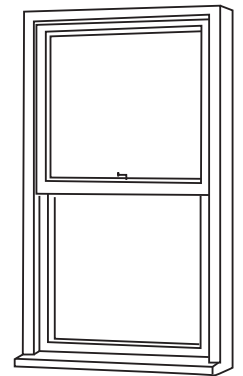


E. Pivot hung casement

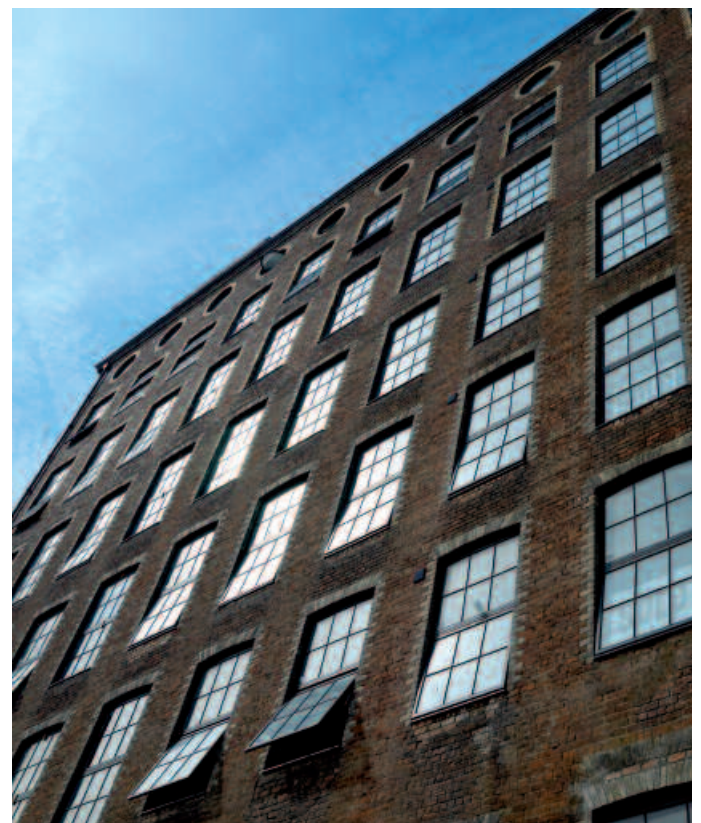
## Vertical sliding sash windows

Vertical sliding sash windows or ‘box sash windows’ were the most popular type of window during the Victorian period. Their elegant proportions were also an important visual element in the Georgian period of 18th and 19th Century buildings.

- Both top and bottom sashes may be opened by sliding them up or down
- Traditionally, the heavy weight of both opening sashes was counterbalanced by two equally heavy lead weights, linked via a rope and pulley mechanism, and hidden in the sash box within the wall surrounding the window opening
- Modern mechanisms generally employ a spiral balance system which acts as a counterweight for the sliding sash, thus allowing slimmer frame profiles without the need to hide the mechanism in the wall
- This window type has gained some popularity in the refurbishment of Georgian, Victorian and Edwardian properties, and in new developments based on these housing styles
- A horizontally sliding window, often known as a Yorkshire sash, is also used in certain parts of the UK.



F. Vertical sliding sash





## Multi-light frames

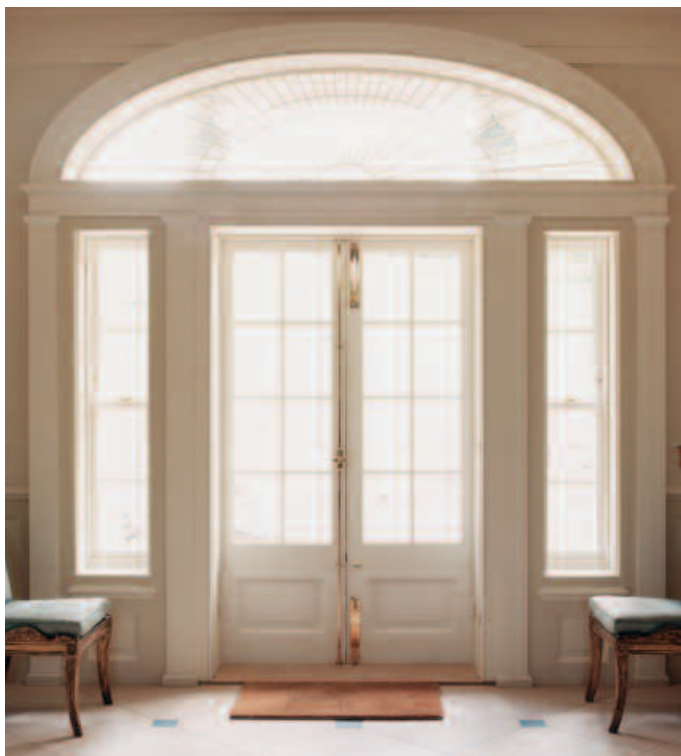
These window types are a combination of varying styles within the same frame and are commonplace in most domestic and some commercial applications.

- The adjacent photograph shows a french door in a combination frame and direct glazed (fixed) lights and reversible casements
- Other combination types may include projecting casement and fixed light, or tilt and turn and fixed light
- In some cases the direct glazing or fixed light may take the form of a 'dummy' or 'fixed' sash in order to provide an aesthetically balanced window.

## Other window types

Window types and combinations of windows are usually based on those described above.

- More often than not, any variation in design is usually brought about by a particular glazing feature of the house or building, or the need to add more daylight, for example at the side of a door
- The 'head' or top of a window often allows for a change in design, for example, fixed or opening arches, or some other form of head design.





## Summary

- Maximum sizes may vary depending on glazing weights and the strength of the hinge mechanism.

Window type	Openable area	Other features
Side hung casement	100%	Can be projecting to allow cleaning from inside
Projecting top hung casement	100%	Fully reversible, allowing cleaning from the inside
Tilt and turn	100%	Opens inwards to allow cleaning from the inside
Pivot	~ 90%	Pivots around centre of frame
Vertical sliding	50%	Top and bottom halves slide up & down



## Traditional glazing bars

Timber glazing bars, to the outside and inside of windows, provide classic traditional styles which are not easily replicated by other materials, especially when fitted within the glazing unit.

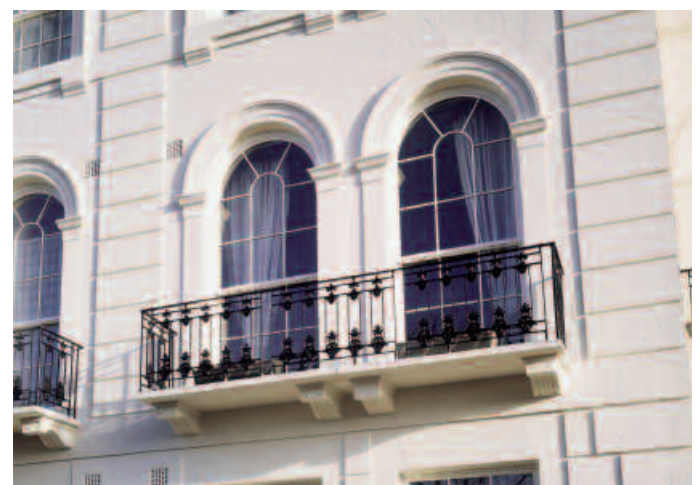
- Modern methods of fixing glazing bars which avoid the need for thick glazing beads, allow double glazing units to be used without compromising the aesthetic features of traditional windows
- This can be particularly important in some Grade II listed buildings and in conservation areas where local planning departments, or building control, often insist on the need for single glazing sightlines
- Most wood window manufacturers are able to replicate exact glazing bars and incorporate energy-efficient double glazed windows without any impact on the aesthetics or traditional sightlines of single glazing.



## Window styles

Further variations on the above windows are often brought about by the addition of glazing bars. In some cases, these are 'mimicked' within the insulated glazing unit.

- Some typical styles include:
  - Georgian bar styles, where a matrix of glazing bars provide smaller panes to the window
  - 'Marginal bar', where glazing bars run vertically at the edges of the glazing
  - Cottage or horizontal style, where a horizontal glazing bar divides the sash and glazed area in two equal halves.



Double glazed sliding sash windows in a Grade II house