

# How to Choose a Window or Door

Window and doors are an important choice when building or renovating a house, because they have a major impact on **comfort**, **temperature** and aesthetics. How to find your way around? How to choose a window frame that meets all the requirements? There are many variables: here is a small guide to recognise them and to make well-considered choices.

## Window and doors: which ones to choose for your home?

The windows and doors must first and foremost be able to **keep the house comfortable** from all points of view: bright, well insulated from outside noise, warm in winter and cool in summer.

However, windows and doors are also **an aesthetic element**, which is why it is important that they reflect the style of the house as well as possible. They must be strong enough to protect the house, but also practical to open, close and clean.

Finally, they must be able to meet various budget requirements.

There are many variables to consider when choosing windows and doors for your home. Although this choice is best made by a professional who can advise on the best solution for one's needs, in this article we give some tips on how to choose windows and doors that meet one's wishes.



# How to choose windows and doors: 10 elements to consider

Those who have never had to choose windows or doors probably do not know where to start.

Even just to get the right quote, and to understand every single item, you need to have a minimum knowledge of the **characteristics of window** and doors and their **materials**, but also of the requirements of your home, which are often not very clear. Here are 11 elements that we can take into consideration right from the start.

## 1 – Type of intervention

It is important to start with the type of intervention being carried out: **new construction** or **renovation**?

In the first case, the freedom on the choice of windows or doors will most likely be unlimited: there will be no problems with sizes, materials and styles.

In the second case, there will probably be limitations to consider: not only specific dimensions, but also masonry solutions that do not correspond to the requirements of the latest generation of windows and doors, and which therefore require more substantial work to adapt the false frame to the new frame. In addition, if you are choosing window and doors for a flat in a block of flats or an area of historical interest, there are likely to be urban planning or landscape requirements to be met when choosing outdoor frames.

## 2 – Location of the house and exposure of rooms

Customers' needs change a great deal depending on the location of their home: a home just a few steps from the sea will have completely different requirements than a modern mountain lodge. This diversity of needs is also, and above all, reflected in the choice of windows and doors. For a house by the sea, for example, it will be advisable to **choose aluminium frames**, a material that is also ultra-resistant to the sun and saltiness.

Likewise, the need for sound insulation will be different for a city flat and a house in a quiet country town. There are many variables; everyone must prioritise those they consider most relevant for their own home.

Another step, before going on to **examine the actual windows and doors**, is to look at your home, perhaps with the help of an expert, to assess the **orientation** and **exposure** of the different rooms. It is likely that south-facing rooms will need windows to screen out excessive sunlight in hot weather.

The type of room is also to be considered. Some people prefer large, bright windows especially in the living area of the house. Others may prefer **casement windows** for certain rooms and **sliding windows** for others, as well as different glazing, even different materials or finishes for window frames in different rooms. These are all issues to consider when requesting a quote for choosing window frames.

### 3 – Choice of materials

The main materials for window and doors are aluminium, wood and PVC.

Each has different characteristics, and it is essential to put all your needs together to understand how to choose windows and doors made of the material that best meets them. At this stage, it is a good idea to **contact an experienced retailer** and go to the showroom in person to see for yourself the quality and characteristics of the different materials.

Many people **[choose aluminium frames](#)** because they are strong, practical, well insulated and also great for giving the home a minimal, modern design.

In very general terms, it can be said that wood is preferred by those who want to give warmth and a sense of comfort to the home, thanks to the presence of a natural material that, however, requires proper and constant maintenance to ensure continuity in appearance and performance over time. PVC, on the other hand, is chosen for its low cost and practicality, even if its appearance is not always elegant and the frame does not guarantee a very long life.

In **[this article](#)** you can learn more about the advantages of aluminium, while you can

read a **[full comparison of aluminium and PVC windows and doors here](#)**.

It will be possible to choose different materials for different rooms in the house, as well as to opt for different materials for interior and exterior window frames.

A really winning product is wood and aluminium frames: wood on the inside and aluminium on the outside, such as the **Aluminium-Wood Line by Alumetals Engineering**. Such a solution combines the warmth of wood with the high durability of aluminium and its unrivalled resistance to weather, wear and tear and burglary. If, on the other hand, you wish to choose a single material, aluminium is certainly the most successful choice from all points of view: it is extremely durable and resistant, provides excellent insulation and allows the house to be illuminated by more sunlight.

We must also not forget that around 90 % of the window is not aluminium, PVC or wood, but glass. The glass must be solid, resistant to breakthrough attempts and the most violent weather conditions, and thick enough to assist the rest of the window frame in the proper thermal and acoustic insulation of the house.

You can choose double or triple glazing for greater strength, as well as double glazing composed of two or three layers of glass interspersed with insulating material, to ensure maximum comfort for the inhabitants of the house. Finally, glass is in most cases smooth and transparent to ensure adequate sunlight but, for certain rooms, opaque, frosted or processed glass may be preferred.

There are also different types of glass according to their technical characteristics; selective glass allows light to pass through but not heat, making it ideal for south-facing windows in particularly hot places; low-emissivity glass guarantees excellent thermal performance, while solar control glass reflects the sun's radiation wonderfully, sometimes even affecting the passage of light. Cutting-edge technologies have also given rise to thermochromic and photochromic glass, which can change colour and degree of transparency depending on sunlight. There are many other types of glass, and each must be considered according to budget and the characteristics of one's home.

## 4 – Security

Windows: **which ones to choose** to really feel safe in your home? Along with doors, windows are the weakest point in any home from a security point of view, and over 30% of all burglaries occur through their break-in.

Faced with this issue, many people wonder whether aluminium or PVC or wooden frames are better. Undoubtedly, aluminium is the most solid of the three in this respect, but if a higher level of security is desired, we must include several elements in the estimate for the choice of windows and doors that are independent of the material.

These include, for example, **shatter-proof triple-glazing**, additional plates at the lock, special locking systems, as well as other anti-burglar devices. As a whole, the window frame thus acquires an anti-burglar capacity that is calculated on a scale of values, from RC1 (schools and gyms) to RC6 (banks).

Alumetals Engineering aluminium windows and doors, for example, are rated RC2 and RC3, optimum values for private homes.

## 5 – Thermal insulation

Once you understand the requirements of your home, you need to think about **thermal insulation**, which is one of the main functions of any window.

In fact, windows represent a point of discontinuity in the building's perimeter walls.

Everything possible must be done to avoid this discontinuity resulting in heat loss and the creation of thermal breaks.

Inadequately insulated windows can cause significant loss of domestic heating in the winter season. This means that a significant part of the cost of heating the house is paid unnecessarily due to poor thermal insulation, resulting not only in a waste of money, but also in terms of **energy efficiency and impact on the environment**.

When choosing windows and doors, it is advisable to pay attention to the linear thermal transmittance value, expressed in  $W/m^2 K$ . This value indicates how the different elements and materials that make up the window, such as glass and frame, interact to ensure an adequate level of thermal insulation. **Thermal break aluminium windows** are the ideal solution to avoid waste and heat loss.

Although it might go without saying, we must always bear in mind certain requirements that windows and doors must be able to guarantee to the maximum, regardless of all other elements. In particular, a self-respecting window must:

- allow adequate air permeability, so that there are no draughts of any kind and wind cannot pass from outside to inside the house;
- ensure a perfect water tightness, i.e. absolutely prevent water seepage from the point where the fixed frame and the opening part of the window meet.

## 6 – Sound Insulation

Based on the evaluations made above regarding the location of one's home, sound insulation is another important factor to consider when trying to figure out how to choose windows and doors.

Especially if you live in a city, in particularly busy areas or in the vicinity of airports and hospitals, the **soundproofing power** of the chosen window frame must be high. This expression indicates the ability of the window to reduce noise: in standard windows it is approx. 32 dB, but in special requirements such as those mentioned above, windows and doors can be chosen that reach values as high as 47 dB.

Of course, and this applies to both thermal and acoustic insulation, a broader assessment must also be made on the basis of living characteristics. Installing windows with a very high sound insulation performance in a house that is not adequately insulated from external noise may result in an unnecessary financial outlay. The best thing to do is to always opt for the right balance between expense and performance.

## 7 – Ventilation

Another of the main characteristics of windows is that they provide an efficient passage between the outside and the inside of the house. It must be well insulated but, at the same time, it must **allow adequate ventilation of the house** in every season and time of day.

Room ventilation **contributes enormously to living comfort**, improving air quality and healthiness. It is important to think about how to choose windows and doors so that they allow proper ventilation, so as to decrease humidity, disperse unpleasant odours, re-oxygenate rooms and eliminate man-made carbon dioxide.

## 8 – Customisation

Certainly, the windows must be excellent in terms of performance but, at the same time, they must be able to meet the tastes of the inhabitants of the house and conform well to the architectural and interior design style.

Sometimes it happens that the windows and doors do not harmonise well with the rest of the house; or, that the chosen colours themselves make the room look a little gloomy and not very bright. The windows and doors are like a picture frame in the room: their aesthetics cannot be left to chance.

When choosing windows and doors, therefore, it is a good idea to **consider the possibility of customising the materials** with paint (for wood or aluminium), oxidation (for aluminium) or with films (in the case of PVC), allowing you to obtain the colour, effect and finish that best corresponds to your wishes. In this case, it must be said that aluminium and wood windows provide a greater degree of customisation than PVC windows.

Aluminium and aluminium-wood frames are the most versatile both in terms of the combination of finishes and shapes: aluminium is a ductile material, while oxidation and painting allow for the colour shade that best suits the style of the house.

Among the general things to consider, it should be remembered that, regardless of the material, dark colours heat up much more. Matt finishes are often more aesthetically pleasing, but are a little more difficult to clean. It is also possible **to choose a frame that allows a double colour**, one for the interior frame and another for the exterior frame, in case you have to comply with town planning or landscape constraints.

## 9 – Laying

The minimum requirements seen above, as well as adequate thermal and acoustic insulation and the right security of windows and doors for the home, can and must be the subject of extreme care by the manufacturer and installer of windows and doors.

This means that you can choose the perfect window frame for all your needs, but if it is installed incorrectly, all its advantages will be lost.

The installation of window frames is just as important as all the others. It must be designed and carried out by qualified operators, because even the slightest mistake at

this stage can compromise performance, with economic repercussions on the bill and any subsequent repairs.

Although it may go without saying, it must be underlined that it is essential to turn to professionals in the sector who have adequate experience in the installation of windows and doors and who know how to guarantee maximum performance in the long term. It is important to rely on companies whose dealers have an eqf3 or eqf4 level laying qualification, possibly registered in the Posa-Qualità register.

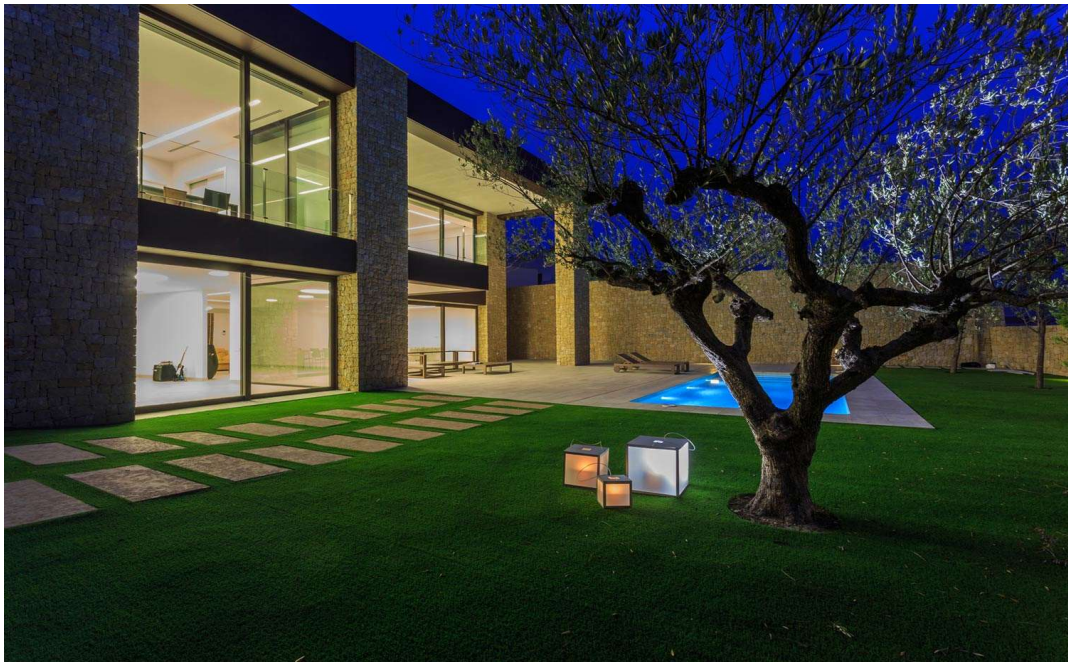
A final but important element to consider is post-assembly, because windows have a long life and you must be sure to receive all the necessary assistance. For this, it is essential to rely on competent dealers, who are able to provide adequate advice not only at the quotation stage, but also in the post-purchase and post-assembly phase. It is advisable to choose a company that guarantees the production of frames 100% in Italy, with performance certifications and, of course, in compliance with the law with CE marking.

## 10 – Costs

The word ‘budget’ recurred often in this article: it is of course one of the most important elements to consider when thinking about how to choose a window frame. Budget constraints differ from person to person, so it is really impossible to make objective considerations about the cost of fixtures.

What is advisable, however, is to make a very careful assessment not only of the initial investment, but also of **the long-term maintenance and durability of the frame**. For example, in the final price of a wooden frame one must also consider the costs to be incurred for the proper and constant maintenance of this material; in the final price of a PVC frame one must bear in mind that this product will have a limited lifespan, even half, compared to aluminium or wooden frames. In this sense, aluminium frames represent the perfect meeting point between cost, resistance and high durability of the frame.

The possible presence of mould due to inadequate thermal insulation, wear and tear of the



outdoor window frame due to high solar radiation, damage caused by unskilled installation... These are just a few examples of undesirable consequences that could result from excessive initial savings. With the choice of windows and doors, it is better to be patient and consider different quotes and products: this is a choice that will greatly affect the healthiness, comfort and appearance of the house in the long run.

## How to choose window frames: meeting your needs

We have seen that there is no such thing as a perfect windows and doors in absolute terms; one must first consider one's own needs and assess them:

- location of the house in terms of latitude and altitude
- location of the house in terms of environment (city, country, sea...)
- exposure and orientation of the house
- sound-environmental characteristics of the house
- aesthetic requirements
- safety requirements based on the environment

After these careful considerations, we will move on to choosing the elements that best meet these requirements: frame material, glazing characteristics, the possible presence of additional elements for greater security, opening mechanisms for adequate ventilation, and so on. Finally, the quality of the installation and the presence of certifications will be fundamental.

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