



Types of windows on the market

Type	Description	Price range
Standard Aluminium	Metal window frames conduct heat and cold, reducing thermal efficiency. Even double glazing these frames will allow heat and cold to transfer through the frame. Our client's can't see the benefits of double glazing aluminium.	Cheapest
uPVC	Insulated frames and we only do double glazing. Various eco balance studies have been undertaken internationally to compare the materials used in window profiles. These have shown that, in window profile applications, PVC has a good ecological balance when compared with wood and is, generally, much better compared with aluminium.	Price competitive with standard double glazed aluminium
Timber	Timber frames are good insulators, they weather and need careful maintenance.	Mid-range
Fibreglass	Still fairly new to Australia and unproven in terms of longevity.	Around timber price
Themally broken aluminium	Thermal break or thermal heart has a material of low thermal conductivity that is inserted between the aluminium to reduce heat transfer. Their thermal ratings are nowhere near that of uPVC.	Next price point
Timber/Composite	These windows and doors have aluminium on the outside and timber on the inside. The insulation rating is pretty good.	Highest price point

FAQ

“What are uPVC Windows and doors?”

uPVC (unplasticised Poly Vinyl Chloride) or rigid PVC is extensively used in the building industry as a low-maintenance material. UPVC is known as having strong resistance against chemicals, sunlight, and oxidation from water. Unplasticised is the modification of PVC by adding with some additives and chemical stabilizers such as Heat Stabilizer, UV Stabilizer, Titanium Dioxide, etc.

“I used to have PVC pipes that cracked from the sun - are windows the same?”

Because they are “unplasticised” and have additives such as Titanium Dioxide, they won't be affected by the sun. If you were to import windows and doors directly into Australia then they would not have these compounds added as they are not needed in the Northern Hemisphere.

“What is the window testing in Australia?”

uPVC Window manufacturers in Australia are now required to produce windows and doors that meet mandatory specifications under Australian Standards AS1288 and AS2047-1999. The following performance tests need to be done before they can be labelled with an identification mark and a performance rating, verifying any product performance claims:

- >> Deflection/Span Ratio Tests - positive and negative wind pressures are applied to the face of the window to test the maximum deflection limits.
- >> Operating Force Tests - to verify that an opening sash is capable of opening and closing without undue effort.
- >> Air Infiltration Tests - the air leakage of a window is tested to ensure energy and acoustic efficiency.
- >> Water Penetration Tests - this test is designed to ensure no water leaks through the window into the building.
- >> Ultimate Strength Tests - negative and positive wind pressures are applied to the window to ensure it does not fail in unusual wind conditions. Make sure that your windows and doors have undergone these tests as there are some companies selling in Australia that do not test their windows and doors.

“Can I improve my current home?”

The short answer is “yes”, of course you can and we have hundreds of happy home owners that have done just this. We have solutions for aluminium, timber and steel replacements and each of our solutions will work with the various types you have in place now. Timber replacement is particularly important to get right and we have a unique system that works like a dream.

Replacing windows with uPVC double glazed windows can lead to significant reductions in carbon emissions because of improvements in energy efficiency of the building. Overseas, uPVC is the dominant material in the major windows replacement markets.

