

Solid Timber Stairs

Timber is a natural material which can absorb and release moisture and as such slight gaps may appear to newel posts, landings, treads etc. from time to time and may close again. This is particularly common during the summer months, and can be attributed to the dramatic changes in the atmosphere and humidity, and also fluctuations in temperature. Timber alters in a bid to match its environment in terms of moisture and temperature. This is known as equilibrium and whenever there are changes in the environment, the timber will seek to match them itself. Often during the summer, the air moisture content is constantly moving up and down, as well as the temperature, and the timber tries to match this. If the moisture content drops, the timber will dry out further as it looks to reach an equilibrium - which can cause it to crack and split.

Many people instantly assume that this means the timber is damaged and is therefore defective. However, this is not the case. It is simply a case of the natural product adjusting to its environment.

Unless the staircase is in a permanently controlled environment, the timber will always move in response to changing environmental conditions. Gaps between treads and housings, treads and riser boards, etc., can be expected as the timber accommodates seasonal changes. Additional shrinkage to that normally expected may also occur when a staircase is exposed to heat sources such as fireplaces or sunlight through large doors or windows. A small amount of noise can be expected from most timber stairs when walked on. Noises can occur from movement of treads in housings, treads against a riser board or from treads, risers, etc., moving on nails.

Southern Stairs uses Guide to Standards and Tolerances which was produced in collaboration with the Victorian Building Commission, the Office of Fair Trading NSW, the Tasmanian Government and the ACT Government in 2007. This identifies what is considered acceptable movement in timber.

Wide Board Products

Natural timber products expand and contract depending on the weather, humidity, heat, direct sunlight, wind etc. The amount of movement can vary between any or just one part of your product and also varies between the species of timber. Timbers most prone to movement are Australian hardwoods. Whilst in most cases no or little movement occurs this cannot be guaranteed and is the maintenance risk the client is taking selecting a wide board product. With wide board products 'NO WARRANTY' is given for movement, splitting or shrinking as this cannot be controlled with a "solid wide board" and you must be aware this is part of the natural product selection maintenance you may have to address throughout the life of the product.

While a solid 'wide board' product may be desired by our clients and is widely preferred, it is a product that is not covered by warranty for the movement noted above. Alternatively a 'laminated product' can limit movement. A laminated product is different from a Veneered product. A laminated product is still a solid timber product although glued up with multiple small sections of the solid timber selected. Laminated products eliminate the natural grain movement within a solid wide board and in most cases if movement did occur it would only be a fine hairline movement in glue joint.



The following will help limit movement of a solid wide board product:

- All sections of timber to be painted or lacquered to seal both sides to limit movement. This is not part of Southern Stairs works and must be performed by a painter and it is recommended to seal the timber as soon as it is installed including areas not seen. This WILL not stop natural movement but will aid in reducing environmental impact.
- It is best not to install hot water heaters, exhaust fans, lighting under staircase areas. These WILL in most cases cause movement
- Air-conditioning and floor heating WILL impact the movement of a natural product
- Direct sunlight in stairwells or heat from a window will have an effect on your natural timber product

Southern Stairs only sources our material from reputable timber suppliers who test for correct moisture content though this cannot control environmental impact. Slight gaps may appear in your staircase from time to time and may close again. These are not considered a defect but a stabilisation of the material or reaction of the material in an unstable environment.

Maintenance required by the client if gaps appear is to put a colour matched expandable caulking material in the gap, so if the material continues to move the caulking material will move with it. By placing hard putty in a gap it will crack and breakout if the material continues to move.

Colour Variation in Timber

Natural timbers are always in demand for their diverse colours and characteristics. Even though we source our timber from various respected timber merchants with our emphasis on getting a high-quality product, natural timbers will always be inconsistent, with each board of timber being unique from the other. An individual species of timber can have a large range of colour and feature, not only between trees in the same forest, but also in boards sawn from the same tree. As a customer, you need to recognise and understand that when purchasing a particular species of timber, colour and grain variation will most definitely occur. Australian species timbers in particular are renowned for their depth of variation in both colour and grain.