Stairs - A small outdoor timber cut string or open string stair.

Stair building, probably more so than most other categories in building construction, with the exception of maybe roofing, has the most technical names specific to it. Being a UK trained Aussie I tend to use the terms that are familiar to me, so if any of you US guys has other names for what I am talking about, let me know.

String or stringer: When our ancestors wanted something wider than a notched log leaning from one level to another, the next step(funny how trade terms spread into general language:-) was to use two of them and fix other pieces of wood to them. Those two mainload bearing pieces of timber became known as strings. Modern strings are still made of timber but they can also be made ofother materials. For example steel or aluminium. Depending on the layout, the string can either be referred to as open, cut or notched and mitred as in the photo above.closed or routered as in a photo lower down.

Wall string: A string abutting or fixed to a wall.

Face string: An outer, open string.

Step: A support for the foot when walking up or down a flight of stairs.

Tread: The horizontal surface that is stepped on. The term is also used to describe the actual piece of material that forms the tread.

Toe space: The distance by which the tread overhangs the riser. Commonly about 25mm (1").

Riser: The vertical face of a step or the piece of material that is used between one tread to another.

Raking riser: A riser that slopes, typically used for reinforced concrete stairs.

Rise: The height of each step. The distance in height between the tops of adjacent treads.

Go or Going: The horizontal distance travelled with each step. Not the same as the tread, which is the going plus the extra for the toe

Open tread stair: A stair without risers

Newel post: A vertical member that supports the handrails.

Handrail: A metal or timber rail set at a convenient height to aid safety.

Baluster: A vertical member that helps support and infill the space between the handrail and the stairs.

Balustrade: A group of balusters and rails that provide edge safety for a stair and landing or for a balcony.

BCA, Building Code of Australia. The set regulations covering building work in Australia.

Nosing: The front edge of the tread projecting beyond the face of the riser,often rounded.

Landing: A horizontal platform or section at the top or bottom of a flight of stairs. Also for safety reasons landings are also used to break up otherwise too long flight of stairs or they are used when a change of direction is required.

Flight of stairs, Stair flight An unbroken series of steps between landings**.**

Stairway, staircase: A complete set of steps leading from one floor/storey in a building to another. This includes any landings and handrails etc.

Stairwell: A space reserved in a multi-storey for the stairways.

Handrail scroll: The end section of a handrail at the bottom of a flight. It changes from sloping to horizontal and has a spiral curve when viewed in plan. Can be timber masonry or metal.

Curtail step: .The bottom step of a flight that mirrors the shape of the handrail scroll usually.

Handrail wreath: A section of a handrail that negotiates a change of direction. Sometimes as at a quarter space landing it changes direction both horizontally and vertically.

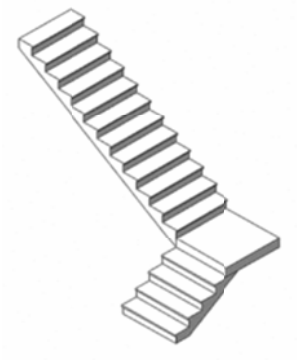
Winder: A step or tread that varies in width. Used to change the direction of a stair. A typical application is three steps that can take the place of a quarter space (90 deg turn) landing. There would be two triangular steps and the middle one is known as the Kite Winder because of it's shape.

A few examples

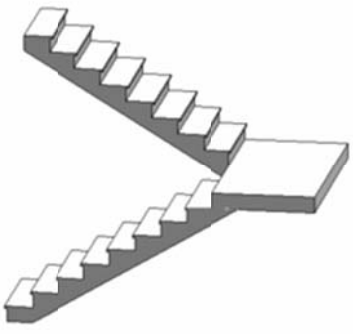
Below to the right is a stairway split into two flights with a half space landing in between. These are very popular because they are compact and economical in space. It is also possible to put in an extra step in the middle of the landing to gain one more step in the same space.

Below left is a flight that has been split with a quarter space landing. Again it is possible to put more steps in the landing to gain height quickly.
Quite often, instead of a quarter space landing it is common to see three steps (winders) where the landing would be. In effect when you have done this, you have created a section of a spiral stair. See below.

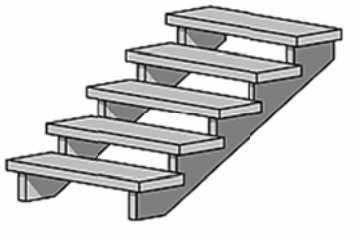
You can vary the number or steps in each flight leading to and from a landing to suit your particular plan. The combinations are endless and it takes time and skill to arrive at a pleasing and efficient layout.



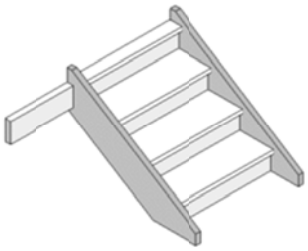
Stairs - Concrete, with a quarter space landing.



Stairs - Concrete with a half space landing.



Stairs - Timber, cut string stair with open risers.



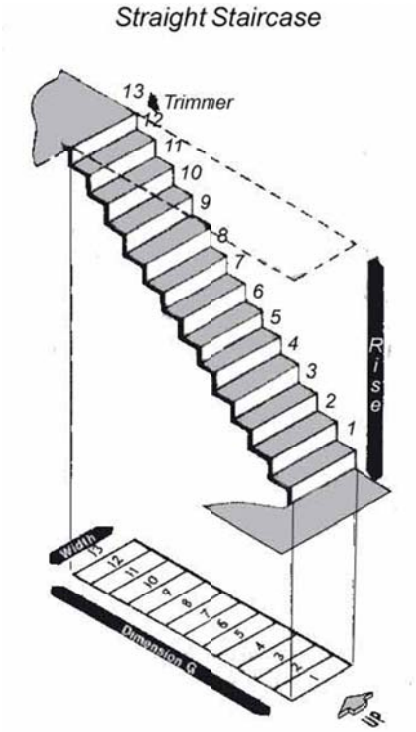
Stairs - Timber, closed string stair with risers, shows joist connection at the top.

Measuring A Staircase

Staircase Measuring

When it comes to measuring your new staircase it is important that you get the correct measurements , use this guide to help you understand the measurements we require to calculate your new staircase.

Straight Staircases | Quarter Landing Stairs | Single Winder Staircase | Half Landing & Double winder Stairs



For a straight staircase measure your rise measurement first, this is the distance from the finished floor level where the staircase starts to the finished floor level on the upper floor where the staircase is going to. If your floors are slightly out of level the make sure you get your rise from the points where the staircase is going to sit.

GOING

Once you have your rise you can work out the going distance (Dimension G)for the stairs this is the distance the staircase will project along the floor, look at our *rise and go chart* to see the correct going to suit your rise height when trying to achieve a 42 degree pitch.

WIDTH

If you are measuring a staircase for between walls make sure you measure the narrowest point and allow a clearance, this is OK if the

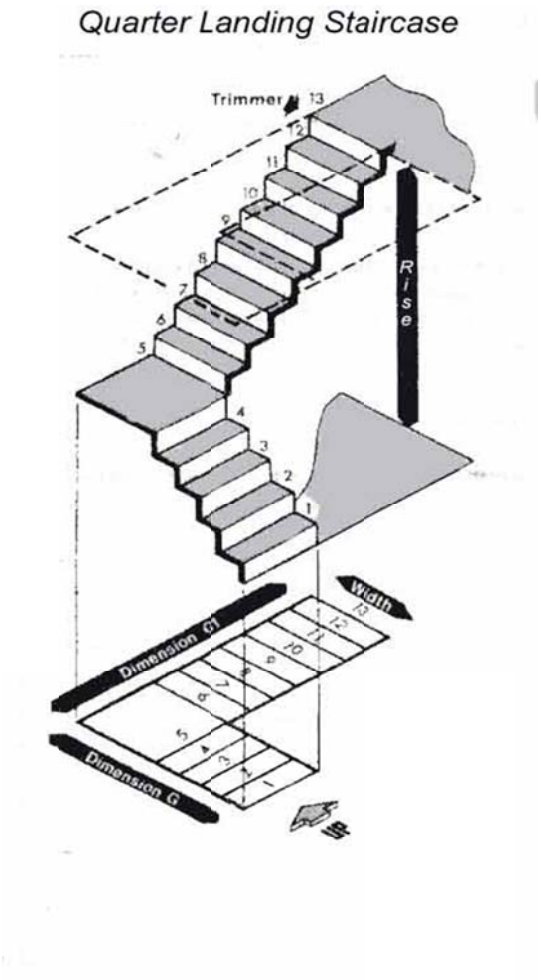
staircase is assembled and the staircase can slide into place without having to be turned in the hole (between the walls) and is also OK if the staircase is ordered flatpack for assembly in situ between the walls, but if your staircase is going to need turning in between the walls you need to allow more clearance normally 75mm is OK but this needs checking before ordering, to work this out you need to draw a rectangle to scale (draw a rectangle the proposed width by 244mm which is the typical depth of the stair stringers we use and measure across the furthest points to check you can rotate the staircase)
The width is also important when it comes to your landing room at the top and the bottom as this needs to be equal or more than the width of the staircase.

The width of a standard domestic staircase is 860mm over all the strings, the minimum width we would recommend for a Loft staircase is 600mm over all the strings.

If you are measuring a staircase which is to have handrails to one side and it is quite tight to the well hole you need to think about finger room between the handrail and the side of your stairwell the minimum clearance we recommend is 40mm this would mean you need to allow 55mm clearance on you over all string measurement from the finished well size.

New - Order a Straight flight online at Tradestairs.com

Quarter Landing Staircases | Top | Straight Staircases | Single Winder Staircase | Half Landing & Double winder Stairs



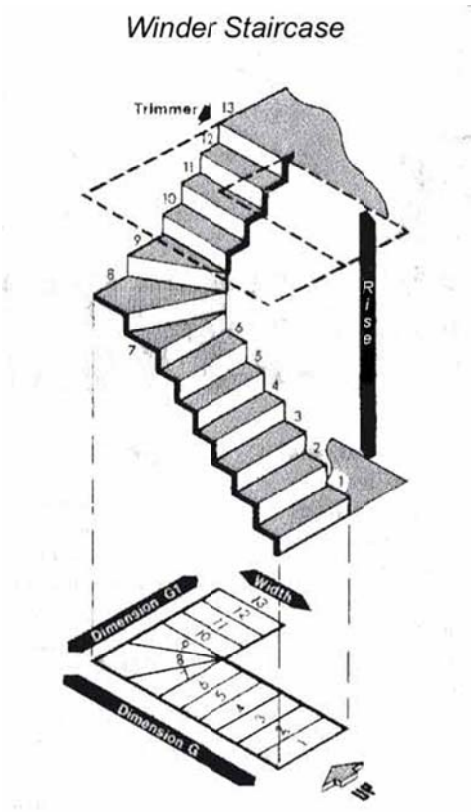
As with straight stairs start with your rise measurement and use the rise and go chart to work out the number of risers required and the going size your treads need to be to give you a 42 degree pitch, take your going dimension G1 and work out how many goings will fit and what width you are left with remember the width of a standard domestic staircase is 860mm, you will probable have 2 choices of rise heights to choose from eg :- 12 or 13 risers these will have different going sizes you need to choose the one that suits best, Your next size the G measurment is governed by the number of goings you need and the width of the staircase.

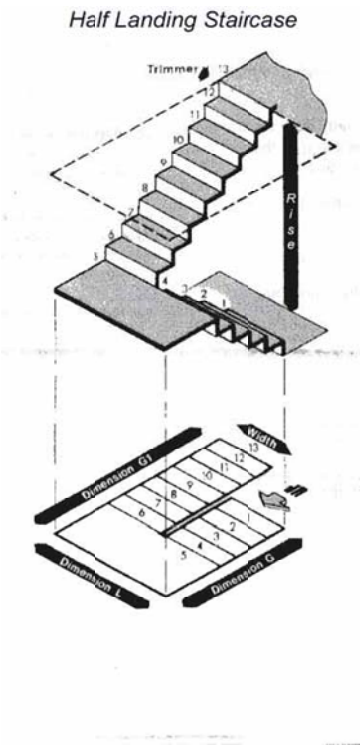
With a quarter landing staircase you will only need to allow the width of the staircase in the corner for your turn, with a winder staircase things get a little more complex. With the UK building regulations there are 2 important factors to remember ; -

1. Minimum 50mm Going - at the inside edge of your winder treads you must have a minimum going of 50mm, this means on a typical 860mm wide staircase with a standard 90mm newel post in the corner the typical area for a 3 tread winder corner increases by around 30mm so on a 860mm wide stair the typical winder box size is 890 x 890mm.

2. Winder Walk line Going - UK building regulations require the distance in the center of a winder tread to have a going no less than the going on the main part of the staircase, on staircases wider than 800mm Overall strings this is not normally an issue but on narrower staircases it is required to increase the winder box size by more than the 30mm as detailed above for the 50mm goings to achieve a walk line going that meets the requirements. EG - a 600mm wide staircase would need a winder box size of typically 750 x 750mm.

Winder Staircases | Top | Quarter Landing Stairs | Straight Staircase | Half Landing & Double winder Stairs





Half Landing Staircases

For Half Landing staircases and Double winder staircases you will need to check the width of the area you can fit the staircase into and also let us know if there is a restriction as to how far the staircase can come out at the bottom other than the restriction goverened by headroom from the stairwell above.