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enzie
spiral
staircases

FOR IMMEDIATE RELEASE

The Surprising new Monocoque stair by **enzie**

enzie have made spiral stairs with a column for structural support since 1974.

The nature and definition of a spiral stair is that the steps spring from the centre of the column. This design is fantastic for stairs 1880 mm diameter or smaller. If you require a larger stair that allows for two way traffic the tread area nearest the centre column on the inside can be uncomfortable due to it's steepness and lack of step depth.

To overcome this difficulty, **enzie** reviewed alternative construction techniques.

Enter monocoque construction. Monocoque, from Greek for single (mono) and French for shell (coque), is a construction technique that supports structural load by using an object's external skin as opposed to using an internal frame or truss. Monocoque construction was first widely used in aircraft in the 1930s. Structural skin or stressed skin, are other terms for the same concept.

enzie has created a monocoque stair hybrid spiral stair without the central column resulting in the removal of the very narrow part of the tread that traditionally occurs close to the column of a spiral stair.

This is rather like removing the core of an apple. It's there to produce the apple, after which, it has no use. In this way, more of the area of stair tread becomes functional whilst also allowing an inner handrail to be produced by a dwarf wall on the inside to form a balustrade and the top to be a handrail.



There are several advantages in using the dwarf wall balustrade in the monocoque stair:

- o The handrail becomes an integral part of the stair.
- o Structurally, the dwarf wall acts as a stringer supporting the staircase. This allows for all the structural forces to be transmitted to the floor giving a clean uncluttered look.
- o Being enclosed, all modesty issues are addressed using this design.
- o When combined with the sculptured lining underneath, it gives a clean contemporary look.
- o And with nowhere for dust to collect, low maintenance is a given.

The monocoque construction is achieved using composite materials such as steel, Timber, polyurethane, plasterboard, and plywood. These materials are CNC and Laser cut using digital information from Auto CAD files.



Making and installing the stairs:

Each stair is custom made to suit the application and comply with the design requirements of the BCA.

The first stairs have been made to the proven geometry of the 1880/16 Enzie System and the monocoque design helical stair (without the column) has an effective width of 700mm on the tread. The helical stair design will enable Enzie to make wider stairs. Plans to make a 800 wide tread, nominally 2100mm diameter, a 900 wide tread, nominally 2300mm diameter and a 1000 wide tread nominally 2500mm diameter are already on the drawing board and larger sizes seem likely in future.

The paint finish applied to this stair is Taubmans Endure, which was used for its durability as the handrail is the top of balustrade. Enzie will offer other finishes and as the technology develops in time, it expects to offer a range of laminate finishes. The underside, if it is sculpted, will need to hand finished so it will be unsuitable for laminate. However, if the underside were to be stepped, then it could be laminated like the balustrade.

Step treads can be finished with timber, concrete, carpet, stone and rubber or vinyl tread pads or any material suitable for steps on stairs.

FAQ

How high can it go? It can go up to any height it is just a matter of the number of flights required. The BCA usually requires a landing every 18 rises, so Enzie designs and checks the custom made layouts for each individual project.

What is the maximum riser height?
With this system rise is limited to 190 mm.

What going does **enzie** use?
Minimum 240 mm measured in the centre of the step.

What height is balustrade?
The minimum is 870 mm measured from the stair tread nosing inside and outside on the stair flight. Balcony height is 1050 mm minimum.

The minimum headroom will be 2040 mm.
Balustrade and handrail thickness is 60mm.

After 35 years of constant innovation and development, the **enzie** monocoque designed columnless, helical stair is a beautiful statement of contemporary architecture whose time is now at

About **enzie** Stairs

enzie has been Australia's best-known name in spiral staircases manufacturing over 7000 stairs since 1974. They have won a string of prestigious awards including the Australian Design Award, BHP Award for Consumer Products and were finalists for Prince Phillip Prize for Australian Design. Their stairs can be found around Australia, Singapore, Hong Kong, Japan, UK and more. For more information on Spiral Stairs, www.spiralstaircase.com.au

For information on the entire range of spirals and roof space ladders, contact **enzie Stairs on 1800 035 078 or www.spiralstaircase.com.au**