

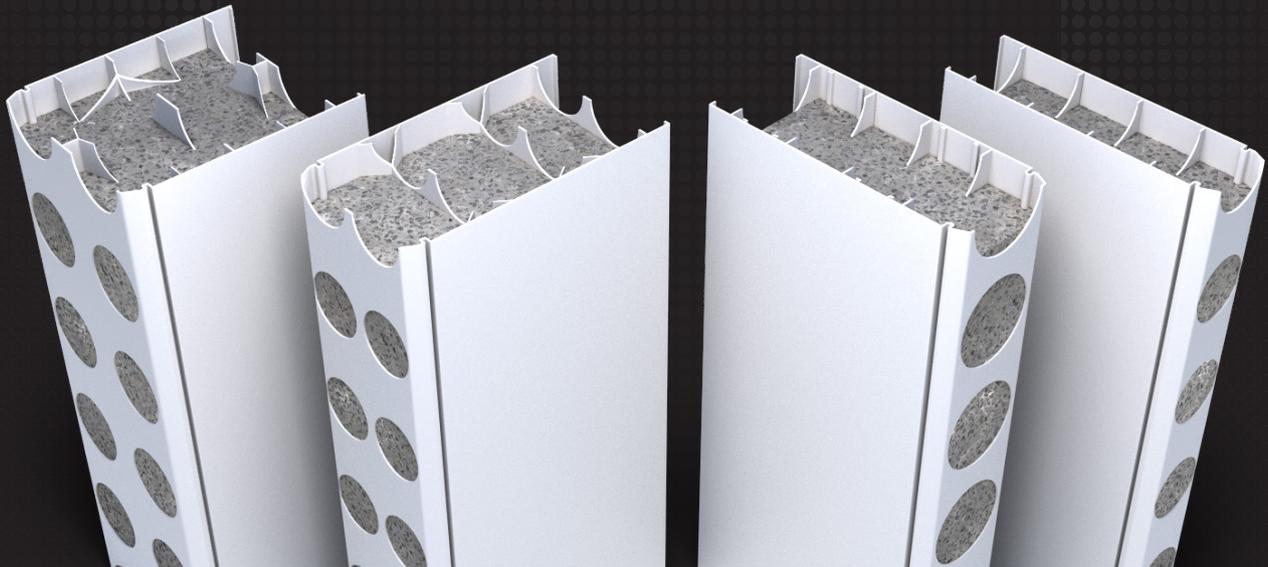


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# THE CONCRETE WALL with Benefits

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Australia's Own Dincel Structural Walling



# THE BCA COMPLIANT ALTERNATIVE TO TIMBER, STEEL, BLOCKWORK & BRICK CONSTRUCTION.

Originating from the foundations of a structural engineering consultancy back in 1977, Dincel Structural Walling was developed to meet the demand and pace of today's building developments.

Dincel's unique and superior snap-lock joint connects the Dincel panel for fast, easy and lightweight manoeuvrability and installation.

Constructed at lower cost, in less time and with lower skill demand over traditional methods, Dincel Structural Walling is suitable for above and below ground applications, delivering a waterproof\* skin and fire compliant permanent polymer formwork solution with a comprehensive range of finishing options.

Best of all, supply is readily available and manufactured in Western Sydney with distribution centres across the Eastern seaboard.

Since the first profile rolled off the production line in 2006, Dincel Structural Walling solutions have been widely used across Australia, New Zealand and the Pacific Islands.

For more information visit our comprehensive website by scanning the following QR Code:







# BUILD BENEFITS

## REDUCED REINFORCING STEEL

Dincel's unique crack inducing web technology removes the need for crack control steel, significantly reducing reinforcing steel requirements. As certified by UNSW.

## REDUCED CONSTRUCTION TIME

Due to Dincel's unique patented 'snapping' vertical connection, even less skilled labour can install the formwork at an incredible rate of 25m<sup>2</sup> / 2 people / hour.

## REDUCED CEMENT CONTENT

The protective Dincel skin eliminates durability concerns, offering the option to replace some of the cement content in concrete with cementitious materials such as fly ash.

## MINIMISED WATERPROOFING REQUIREMENTS

Dincel panels which incorporate our superior "snap-lock" joints, when filled with concrete, have been tested by CSIRO and confirmed as waterproof for up to 6m of water head pressure. Additionally, Dincel walls have proven compliant with AS3735-Concrete Structures for Retaining Liquids.

## INCREASED CONCRETE STRENGTH

As the concrete is encapsulated in a polymer shell it prevents moisture loss and provides ideal curing conditions, which maximises concrete strength.

## MAXIMISED LAND USE

Because Dincel walls only require junctions to be waterproofed, with the appropriate site conditions walls can be built closer to the site boundary.

## MAXIMISED SITE SAFETY

Dincel panels are designed to be lightweight and can be safely carried by one person. Cranes are not required to install the formwork, eliminating high risk works.

## ELIMINATE CRACK CONTROL JOINTS

Dincel wall's built-in crack control web technology removes the need for separate crack control joints which leads to greater waterproofing performance, air tightness and resistance to embers.

## EFFORTLESS CURVED WALLS

Accessories can be added to the system to achieve curved walls of virtually any radius and with minimal effort.



# COMPLIANCE & PERFORMANCE

## SUSTAINABILITY & HEALTH

Through the elimination of crack control steel reinforcement and reduction of cement content within concrete mixes, Dincel walls can significantly reduce CO<sub>2</sub> emissions and embodied energy in comparison to conventional construction methods.

The Dincel system is also Best Environmental Practice (BEP) certified and Volatile Organic Compounds (VOCs) are over 25 times less than the recommended Green Star threshold.

## STRUCTURAL PERFORMANCE

The concrete and steel reinforcement inside Dincel formwork can be designed by a structural engineer to NZS 3101 and AS 3600 (Concrete Structures) as certified by UTS and UNSW. The system has been put through an extensive structural testing regime and verifies to resist earthquakes with a magnitude of up to 9.0 on the Richter scale.

In addition, Dincel 275 with its unique ring webbing provides significant benefits against a range of structural actions as tested and verified by UTS.

## FIRE COMPLIANT

Numerous large-scale fire tests have been carried out on the Dincel system including an AS5113 / BS8414 facade test, AS ISO 9705 room test and AS1530.4 fire resistance test.

In Australia, Dincel has been issued a CodeMark Certificate of Conformity by certification body SAI Global and a product accreditation by the Building Regulations Advisory Committee (BRAC). In New Zealand Dincel is certified as a NZBC acceptable solution by BRANZ.

## WALL LONGEVITY

Dincel walls are able to achieve a 120+ year life. The protective polymer skin built into Dincel walls prevents moisture and other contaminants from entering the wall reducing the chance of steel reinforcement corrosion and concrete cancer.







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# FINISHES

## NATURAL

Lending itself to a polished look showcasing a subtle wave deflection in its natural form, Dincel Structural Walling is a clean and maintenance free solution, with an off-white colour palette.

Our natural finish is suitable for both internal and external use, where the functionality of a bare wall takes precedence over finished aesthetics. Typical applications include basements, stair wells, lift shafts, and retaining walls.

## PAINT

Dincel wall lends itself well to a direct paint application using a PVC compatible paint system. Typically most paint systems consist of a primer and top coat which are both applied by roller or spray.

Where aesthetics take precedence, use a textured or stencil paint to smooth out panel joints.

## RENDER

As a non-porous substrate the Dincel wall surface lends itself well to rendering over conventional building materials such as fibre-cement, brick, block and concrete.

The Dincel wall skin ensures no shrinkage cracks within the concrete infill carry through to the external render.

For more information on which renders will not delaminate on Dincel wall scan the following QR Code:



## CLAD

Stone, wood, brick, panel, sheet and tile - the wide range of cladding options available will bring your Dincel wall aesthetic requirements to life. Effortlessly.

***Check that your chosen material is compliant with NCC fire requirements.***

For more information on the comprehensive range of finishes, including examples, scan the following QR Code:





# SIMPLE INSTALLATION

## EASY AS 1, 2, 3.

1. Snap the panels together, then insert your reinforcement
2. Brace the wall.
3. Pour the concrete.

## SPEED

Dintel requires minimal bracing when compared to in-situ pours. Without the need for specialist trades 2 men can install and pour 100sqm of straight Dintel wall in as little as one day.

## HANDLEABILITY

A Dintel 200P main profile at 3m long is only 13kg. This means no crane is required as each panel can easily be lifted into the installation point. Depending on site conditions the lightweight Dintel panels provide the flexibility of being installed from either a bottom-up or top-down methodology.

## WATERPROOF SKIN

Installation of the Dintel walls is not affected by weather conditions. Once installed the "stay-in-place" polymer formwork provides a waterproof\* skin to the concrete wall. This saves construction time as you only need to treat junctions and cuts of the wall, and not the whole face of the wall as you would with conventional materials such as blockwork.



**Refer to the Dintel Construction Manual  
prior to use.**

\* As tested by CSIRO



# APPLICATIONS

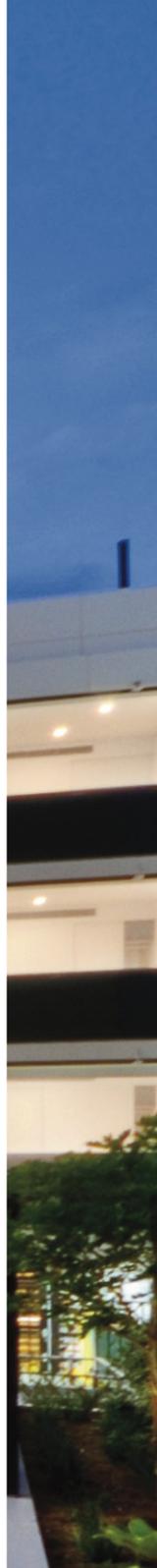
## **ONLY LIMITED BY YOUR IMAGINATION**

Dinzel Structural Walling is an extremely versatile modular building system that can be applied across all applications within the building and construction game.

Talk to us early on in your construction planning for tangible cost and efficiency savings, and we'll help you turn your vision into reality.

Typical applications include:

- Basement Walls
- Retaining Walls
- Party (Intertenancy) Walls
- Core (Lift & Stair) Walls
- Pools
- Columns
- Facade Walls
- Balustrades
- Water Tanks
- Civil Works
- Curved Walls





## **VOID FREE WARRANTY**

\*CONDITIONS APPLY



## **WATERPROOF WARRANTY**

\*CONDITIONS APPLY

### **VOID FREE WARRANTY**

One of the key impacts to structural, fire, acoustic and longevity performance with concrete walls is air voids. Air voids generally occur as a result of improper concrete placement practices.

With extensive testing conducted under the watchful eye of a NATA accredited expert, Dincel Structural Walling is in the enviable position of being able to withstand the pressures associated with Self-Compacting Concrete (SCC).

SCC, as the name implies, is concrete that compacts under its own weight that subsequently flows into every crevice found within the polymer shell.

Quite simply, and with tribute to our engineering roots, our superior "snap-lock" joint is the key differentiator when pairing up SCC with stay-in-place formwork systems.

### **WATERPROOF WARRANTY**

From the foundations of Dincel's engineering roots combined with our commitment to constant innovation Dincel has solved the universal building constraint of water leakage at basement walls, including the wall and wall to slab/ footing junction.

Not only is the Dincel waterproof system less costly and quicker to install, if there is an issue with water leakage only one entity is accountable - Dincel.

The Dincel waterproof system offers complete peace of mind and is backed up with an up to 50 years zero (0) leakage system warranty.



*Scan the QR Code for more information and full Terms & Conditions on the Dincel Void Free Warranty*



*Scan the QR Code for more information and full Terms & Conditions on the Dincel Waterproof Warranty*

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