

DINCEL STRUCTURAL WALLING

WHY DINCEL IS FASTER TO BUILD WITH

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The most difficult structural element to erect in a building construction are the lift and stair shafts, refer to a third party testimonial from Alliance Project Group (and others) at [\(download – testimonials\)](#).

Conventional multi-storey construction dictates that the floor cycle starts with vertical elements. The Dincel system allows floor formwork placement to take place on Day 1 which removes the vertical elements from the critical path and reduces the floor cycle time.

Compared to other conventional removable or permanent formworks, Dincel is as follows:

• FASTER BELOW GROUND CONSTRUCTION

- **Basement Perimeter Walls** – The Snapping Dincel panels (without the need for scaffolding) can be installed in a very short time to protect some basement excavations in comparison to shored basements. Dincel is waterproof without the need for any waterproofing membranes or additives. [\(Download – Waterproof Walls\)](#). Elimination of membrane and additional excavation requirements for membrane installation also adds to time and money savings.

- **Significantly Simpler Footing Construction** – All brittle walls and walls with joints, including brick (clay or concrete), concrete infilled masonry blocks, in-situ concrete and precast concrete require footings. One of the needs for footings arises because wall joints should not open up or walls of a brittle nature should not crack due to the supporting soil's reactivity. Dincel is a monolithic, crack free and joint free wall, therefore footing sizes given in the Residential Footing Standard AS2870 is not required when Dincel is used. The engineer will only need to satisfy the soil bearing capacity for the footing size. This will often result with shallow footings. Shallow footings are of assistance to the contractor, particularly in wet weather conditions.

• **LIGHTER** – The weight of each Dincel panel is 13 kg for 3 metres length which is significantly less than others. This makes Dincel panels man handleable without the need of lifting devices, including cranes. Eliminates injuries due to lifting, access problem with difficult construction activities such as steep sites, existing building restoration/ underpinning and building against existing structures.

• **EASE OF INSTALLATION** – The snap together connection of Dincel panels is erected in a significantly shorter period of time compared to any other wall system. Refer [\(Download – Installation Video\)](#). Non-skilled personnel are adequate to erect Dincel as demonstrated in the video presentation.

• **COMPLEMENTS THE BUSINESS OF FORMWORKING TRADES** [\(Download – Formworkers' Benefits\)](#).

• **CONSTRUCTION EFFICIENCY** – A cost efficient architectural multi-level residential building planning locates wet areas and division walls between sole occupancies at the top of each other. This allows division walls to be used as load bearing walls in lieu of concrete columns plus infill walls. Refer to compare efficiency of load bearing walls: [\(Download – FAQ, Answer No: 21 – System Advantage/ Construction\)](#).

The above described construction system achieves the following construction speed benefits:

- **Critical Path** – The Dincel system allows the structure (floors and vertical elements) to be built simultaneously by the formworking trade from Day 1. This removes the vertical elements from the critical path.
- **Eliminates Trades** – Eliminates the need for masonry trades.
- **Service Trades Off Critical Path** – The factory installed service spacers with 200 mm Dincel panels for electrical wiring and water reticulation services allows the removal of the relevant trades from the critical path of the formworking-concreting trade.
- **Eliminates Scaffolding** – Dincel allows construction without the need for scaffolding for fall protection. The system also allows the application of external finishes and installation of windows without scaffolding.
- **Eliminates Columns, Simpler Floor Slabs** – Load bearing Dincel-Walls totally eliminates the use of any formed columns. In comparison to slabs with columns, the load bearing wall solution allows simpler slabs with less concrete and less reinforcement. The use of reinforcing mesh rather than steel bars is a significant time saving for slab construction. ([Download – Cost Comparison – Dincel vs AAC Walls](#)) or example at ([Download – Costing Analysis](#)).
- **Slab Edge Boards** – Eliminates the need for slab edge boards for concrete pouring.
- **Eliminates Bracings** – Eliminates the need for any wall bracings for walls of up to 5 metres in height when used together with conventional formed deck.
- **Eliminates Wet Weather Delays** – Dincel polymer is an impervious material and unlike the other porous materials cannot be affected with the presence of water. Concrete pouring can commence immediately following wet weather without any concerns of potential blow-outs normally associated with permanent formworks such as fibre-cement sheets or gypsum boards.
- **Eliminates Reinforcement** – Unlike other concrete walls, Dincel-Walls do not need any vertical or horizontal steel reinforcements for walls under squash load (i.e. vertical gravity loads). The elimination of steel bars significantly increases the speed of wall installation ([Download – Common Engineering Questions – refer Items 1, 2, 11 and 12](#)).