

## A NEW, ECONOMICAL, FAST, STRONG, SIMPLE AND SECURE CONSTRUCTION SOLUTION

DINCEL CONSTRUCTION SYSTEM (DCS), is an **internationally patented** permanent polymer formwork for walls and columns, which when filled with ready mixed concrete, produces an economical, strong, durable structure. The system has been created and developed in Australia by professional engineers and is certified by the **University of New South Wales** and the **CSIRO**.

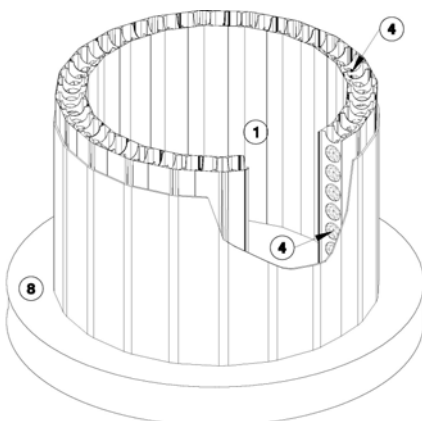
The System's Key Characteristics Are:

- **Environment** – significant reduction in embodied energy use, CO<sub>2</sub> emissions, waste management, resource depletion and eliminates timber formwork use.
- **Low Cost** – the most cost effective construction system which eliminates waterproofing costs, reduces steel reinforcement in walls, excavation and foundation costs, scaffolding needs, generates little or no waste. As a load bearing engineering system, it significantly reduces the quantity of steel and concrete needed in floor slabs. ([Download – Costing Analysis](#))
- **Fast Construction** - DCS achieves the fastest known installation speed of 1m<sup>2</sup>/man/minute, is light weight (13 kg/m<sup>2</sup>), requires no craneage, reduces number of trades, removes services trades from project's critical path and enables windows to be fitted from inside buildings. Achieves 30% to 50% construction time saving.
- **Full Compliance** - with [Building Code of Australia \(BCA\)](#) ([Download](#))
- **Workplace Safety** – reduction in non-skilled labour use, eliminates risk of back injury, cuts, trip hazards, crushing fingers, electrocution and falling from heights.
- **Fewer Defects** – factory produced high quality, high accuracy profiles substantially reduce construction defects.
- **Durability/Longevity** – waterproof, 200 + years life, no concrete cancer and no corrosion.
- **Maintenance Free** – water damage free, damp proof, rot proof, termite proof, joint and crack free.

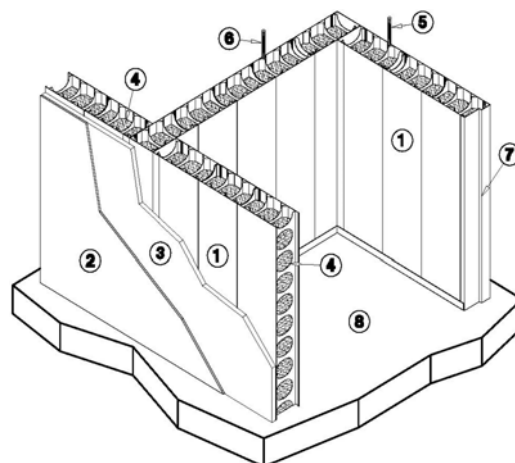


### ① DINCEL®- WALL

- ② Acrylic render / plasterboard finish insulation (optional)
- ③ Insulation (optional)
- ④ Concrete
- ⑤ Service Space/electrical, communication cables
- ⑥ Service Space/water pipes
- ⑦ Door Jamb
- ⑧ Floor / Footing



WATER TANK – GRAIN SILO  
SWIMMING POOLS



BUILDING WALLS

### BUILDING WALLS

**Basement, Façade, Party, Tenancy Walls:**

- Accommodation, Residential, Hotels/Motels, Retirement Homes.
- Health Facilities, Hospitals, Medical Centres, Laboratories.
- Work Places, Shopping Centres, Factories, Warehouses.

### ① DINCEL® POLYMER

- Specially formulated polymer for fire, smoke, chemical/acidic/sanitary conditions, salt water resistance, environmental weathering, engineering properties such as ductility, flexural, tensile stiffness and strength, impact resistance.
- Its tested VOC measurement is 50 times less than the recommended Green Star environmental threshold.
- Confirmed by CSIRO as being a Group 1 material (i.e. no limit for its usage for fire purposes) and performing 2½ times better than the minimum Australian smoke limitation requirement. **DINCEL®** and concrete infill provides 4 hours fire rating.
- Manufactured using stabilisers free of heavy metals and no plasticisers, therefore environmentally friendly.
- Provides a perfect concrete curing environment which results in stronger concrete, with durable, waterproof surfaces.
- Ready finish for most applications.

### ② CONCRETE INFILL

- Durability limitations of concrete eliminated by **DINCEL®** polymer. Lower strength concrete can be used for majority of structural applications. **DINCEL®** provides 200 year plus lifespan for structures.
- **DINCEL®** with concrete infill can create earthquake, cyclone and hurricane proof buildings through ductile composite action, thus achieving greater safety for occupants than offered by concrete alone.

### ③ SERVICE CHANNELS/CRACK CONTROLLERS

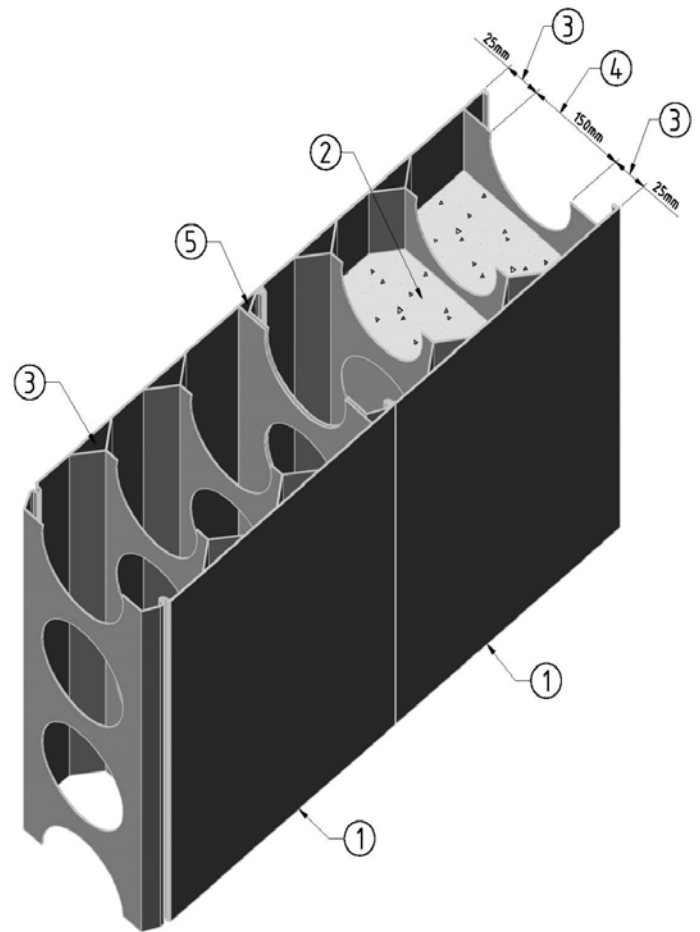
- Electrical cables and water pipes can be installed in the hollow service channels at any time after filling the forms with concrete (these channels remain free of concrete).
- Crack controllers ensure that concrete cracks occur in a controlled fashion, only at service channel locations. The crack control achieved by **DINCEL®** polymer means that reinforcement to control cracks caused by shrinkage and temperature variations are not required, and crack free wall surfaces are achieved as confirmed by the University of New South Wales.
- Finishes such as plasterboard sheets can be screw fixed to the hollow channels with ease.

### ④ ACOUSTIC COMPLIANCE

150mm Minimum concrete between service channels achieves Building Code of Australia's "Deemed To Satisfy" acoustic compliance.

### ⑤ VERTICAL DRAINAGE HOLES

An in-built vertical drainage channel, combined with polymer outer skins achieves secure waterproofing for basement walls even below water tables, and also for water storage tanks. ([Download – Waterproof Walls](#))



## DINCEL® - WALL

