

# Houses, Low Rise Multi-Residential and Retirement Solid Fences

**Product Guide**



The better way to build

# Better fences are built with Hebel

Hebel is an amazingly innovative building material that has been used in Europe for over 70 years and here in Australia for over 20 years.

## What is Hebel?

Hebel is Autoclaved Aerated Concrete (AAC) manufactured from sand, cement, recycled material, lime, gypsum and aerating agents and is moulded, cut and steam pressure cured in an autoclave then cut to shape in various lengths and profiles.

## Where can Hebel be used?

Hebel is extremely versatile and is available in blocks and panels of various sizes and widths for a broad range of load bearing and non load-bearing construction applications including external walls, floors and fences.

## Better by design

Hebel PowerFence is an extremely attractive and versatile fence system that provides an efficient and effective privacy and noise barrier for residential applications.

Perfect for boundary fencing and low front walls, Hebel PowerFence provides a modular masonry structure using panels and steel posts which can be easily and quickly erected without the need for extensive excavation or strip footings, as is normally the case for traditional masonry fence construction.

## Better to build with

Hebel PowerFence is the residential cousin of Hebel SoundBarrier an acoustic barrier system with a proven track record in noise reduction used extensively adjacent to motorways and rail corridors. So it helps keep the outside world out and your home and outdoor living areas peaceful and quiet, day and night.

Quick and easy to install double mesh steel reinforced panels are specially coated to prevent corrosion and provide maximum durability.

## Better for the future

Hebel delivers a diverse number of environmental benefits over brick. In an independent Life Cycle Assessment (the leading methodology used to quantify the environmental impacts of a product's entire life) undertaken by Good Environment Choice Australia, in accord with international standard ISO 14 024.

To be awarded the label products must have a 30% lower impact than alternatives.



HEB-2006  
GECA 08-2005-  
Environmentally  
Innovative Products



# PowerFence panels



At the heart of the Hebel system is the Hebel PowerFence – a 75mm thick, double mesh steel reinforced panel made from AAC (Autoclaved Aerated Concrete) supplied in a length 2000mm by 600mm wide.

The unique Hebel attributes are best summarised with the Hebel 'tick' below:



## Faster and easy to erect

Due its modular masonry structure Hebel PowerFence is quickly and easily erected without the need for extensive excavation or strip footings as in the case for a traditional brick fence.



## A sound reason for better acoustic qualities

Hebel PowerFence is the residential cousin of Hebel SoundBarrier an acoustic barrier system with a proven track record in noise reduction used extensively adjacent to motorways and rail corridors. So it helps keep the outside world out and your home and outdoor living areas peaceful and quiet, day and night.



## Solid and tough as brick

Hebel PowerFence provides a modular masonry structure using solid panels and steel posts.

Hebel panels are double mesh reinforced and are as strong and tough as bricks –independent tests show that a rendered Hebel Panel has comparable impact resistance to brick (Report 0164 Orica 06.09.05).

In addition, Hebel won't rot or corrode and is not a food source for termites.



## Highly fire resistant for peace of mind and added security

Hebel is non-combustible and renowned for its highly fire resistant properties. This makes them perfect for boundary fencing.



## Sustainability for a better world

Hebel delivers a diverse number of environmental benefits over brick. Hebel uses 64% less embodied energy and 55% less greenhouse gas emissions than brick veneer.

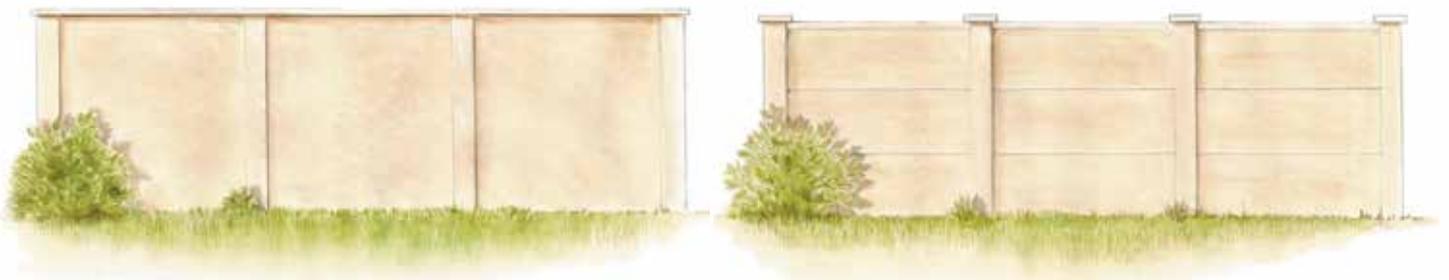


## Australian made and designed for peace-of-mind

Hebel products are 100% Australian manufactured by CSR Building Products Limited (who have been part of Australian business for over 155 years).

Hebel has won wide acceptance as an innovative and environmentally preferred building material.

# PowerFence can be finished in either Expressed or Monolithic



## Monolithic – for a streamlined uniform look

- Panels are glued together with Hebel adhesive which is applied to the edge of the panel
- The top of the fence is capped with Hebel blocks
- Capping blocks can be cut to size using a handsaw. Blocks are laid end to end and must be glued together using Hebel Adhesive or a suitable construction adhesive
- Front and rear of posts are concealed by CSR Cemintel compressed fibre cement sheets of 15mm thickness

## Expressed – where the panel joints are accentuated.

- Panels do not require gluing
- The top of the fence is capped using a 76mm galvanized steel U track
- Hebel blocks may be cut and placed on top of each post for further detail
- Front and rear of posts are concealed by CSR Cemintel compressed fibre cement sheets of 15mm thickness



Fence Panel Specifications	
Thickness	75mm
Width	600mm
Length	2000mm
Density	510kg/m <sup>3</sup> (dry)
Working Mass	Approximately 60kg
Reo	Caged, 20mm cover to top & bottom reinforcement

*PowerFence Panel*

# PowerFence makes fencing easy

## System Components

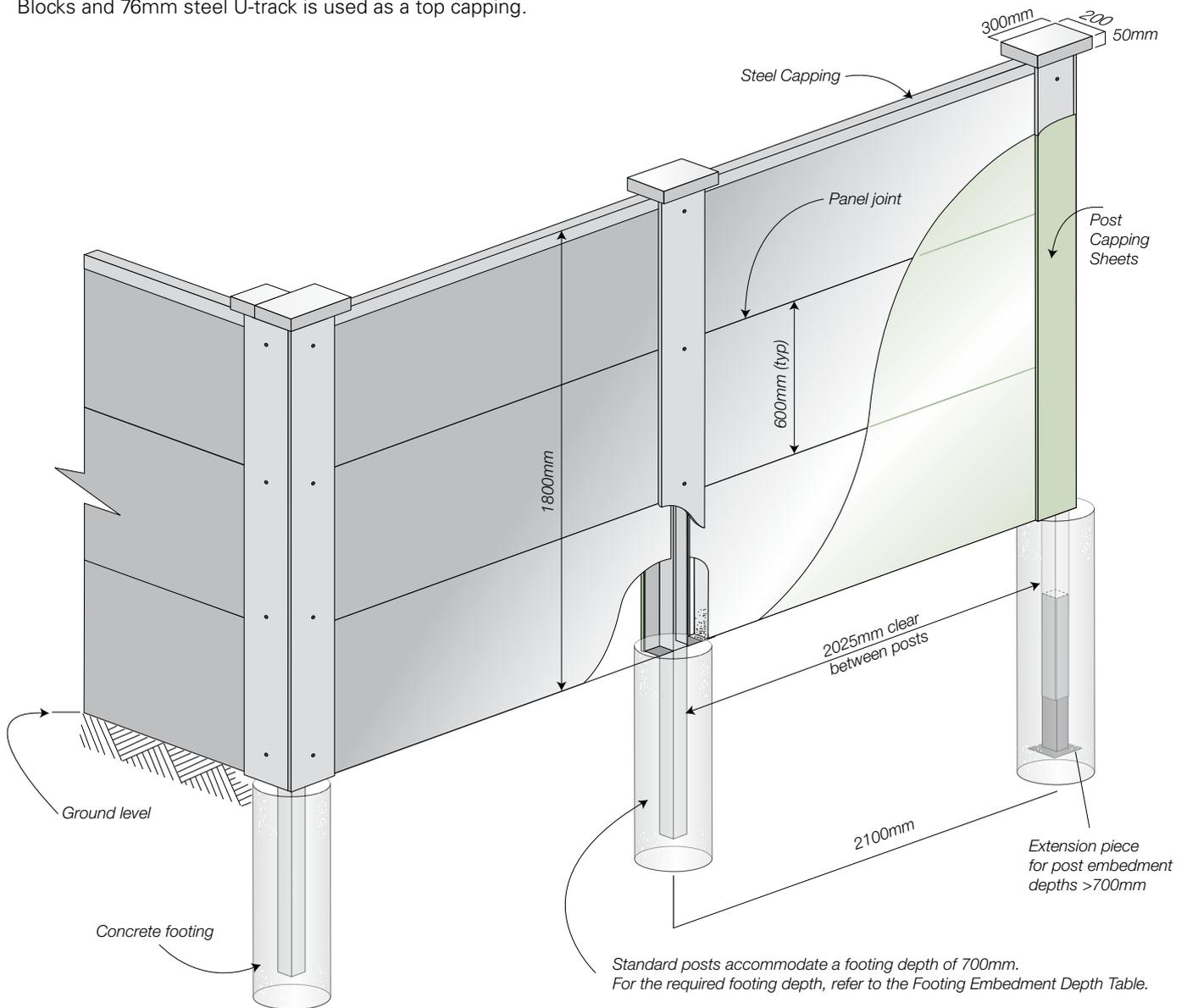
The primary component of the standard PowerFence system is the 75mm thick steel-reinforced panels that are manufactured from Hebel. These PowerFence panels are 600mm wide and come in a standard length of 2 metres.

PowerFence posts are 75mm steel box section with flanges and are supplied in a standard 2.5m length to suit a 1.8m high fence.

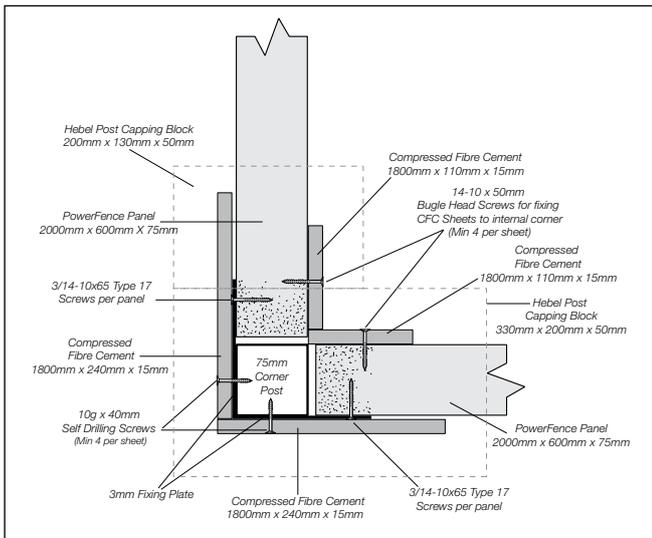
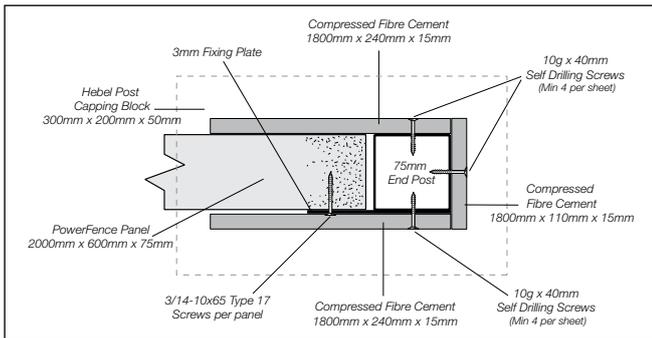
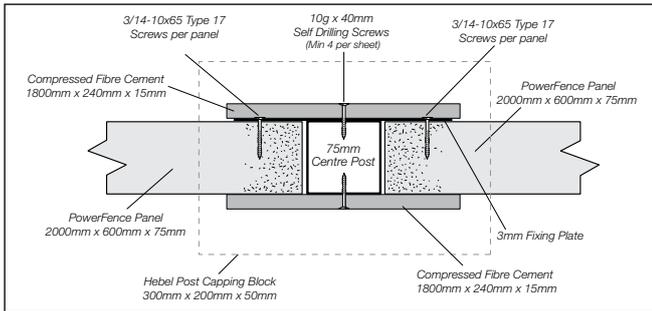
CSR Cemintel™ compressed fibre cement sheets are used as vertical capping for the posts and a combination of Hebel Blocks and 76mm steel U-track is used as a top capping.

The panels are installed horizontally to purpose designed, galvanized steel posts that are anchored into concrete footings.

Construction of Hebel PowerFence can be achieved with standard tools and fasteners. Accessories are available from your local Hebel distributor.



# Technical Information



**Note:** Exposed fence details shown, for Monolithic fence 24mm Thick Compressed Fibre Cement Sheet may be ordered from Hebel to provide a more robust look to the fence posts and 600mm long capping blocks are used to cap the top of the fence.

## Construction Notes:

1. When the Hebel PowerFence is in contact with the ground, a suitable waterproofing membrane must be used on the panels that will be covered by or exposed to soil. This is applied to both faces, the base and vertical ends of the panel to a minimum height of 100mm above the finished ground level.
2. PowerFence panels may be cut along the length to a minimum width of 270mm as required, reinstate the bevel as necessary.
3. Paint any reinforcement exposed by cutting with Hebel Anti-corrosion Protection Paint. If the top panel has been cut along the length, it is best practice to place the cut side facing down.

4. Patch any holes and damage to the panels with Hebel Patch prior to coating.
5. Pre-drill and countersink pilot holes in the Compressed Fibre Cement sheets prior to capping sheet installation. Pilot holes should also be drilled in the steel posts, using the capping sheets as a template.
6. Vertical movement joints require a knife cut in the render/coating base prior to application of the final surface coating, to allow differential movement between panels and posts without cracking the coating system.
7. Monolithic option - All top capping blocks are to be glued and screwed (where practical) in place using Hebel adhesive and 14-10x100mm Bugle Head type 17 screws, capping blocks above posts must have saw cuts either side of each post to allow movement without cracking of the capping structure, these movement joints must be filled with a suitable construction sealant and the coating systems must allow movement without cracking of the render or texture.
8. A suitable waterproofing system must be applied to all horizontal and vertical surfaces within 50mm from the top of the fence. In lieu of the waterproofing system a capping channel may be used to cap off the Hebel PowerFence.
9. Fixing of decorative panels to or across posts and any capping blocks should be done in a way that permits differential movement.

**Note:** Refer to the manufacturer's data sheets for suitability of the waterproof membrane systems for this application.

## Safety Notes:

Hebel products are cement based, which may irritate the skin. The wearing of gloves and suitable clothing to reduce the risk of skin irritation is recommended when handling Hebel products.

The use of power tools when cutting concrete or cement based products may cause dust containing respirable crystalline silica, with the potential to cause bronchitis, silicosis and lung cancer after repeated and prolonged exposure.

1. When using hand or power tools on Hebel products a P1 or P2 respirator and eye protection must be worn.
2. Additionally when using power tools for cutting, routing or chasing Hebel products, the use of dust extraction and the wearing of hearing protection is required.
3. Hebel panels are delivered to site in bundled packs and strapped for stability. Prior to cutting of the strapping, the bundles should be stabilised with temporary restraints such as sash clamps, ratchet straps or Hebel stabilising bars. This will prevent panels from toppling over and reduces the risk of panel damage or injury. Care should be taken to ensure panels do not topple when removing individual panels from bundles.
4. Refer to the CSR Hebel MSDS and Safe Work Method Statements (available from [www.hebelaustralia.com.au](http://www.hebelaustralia.com.au)) for guidelines on safe handling practices for Hebel products.
5. Do not stand on capping blocks or fence.

## Footing Embedment Depth Specification

Wind Region and Terrain Category	Steel Post Type and Size	Footing embedment depth (mm) for various soil types			Design Wind pressure (ultimate) (kPa)
		Type 1 Soil	Type 2 Soil	Type 3 Soil	
<b>Region A</b>					
Terrain Category 2	75x75x2.5 SHS	1200	850	650	0.83
Terrain Category 3	75x75x2.5 SHS	1100	800	600	0.7
<b>Region B</b>					
Terrain Category 2 <sup>10</sup>	75x75x2.5 SHS	1400	1000	700	1.14
Terrain Category 3	75x75x2.5 SHS	1300	900	700	0.95

### Notes:

- Fence height = 1800mm maximum. Post spacing is 2100mm centres maximum.
- Project engineer or local council shall nominate regional wind, terrain category and soil type.
- Type 1 Soil is soft clay or loam with an allowable bearing capacity of 50 kPa.
- Type 2 Soil is firm natural ground with an allowable bearing capacity of 100 kPa.
- Type 3 Soil is hard ground with an allowable bearing capacity of 200 kPa.
- The above footing depth is exclusive of fill, soft or loose top soil.
- Specialist advice is required for footings in loose sand or fill.
- Piers to be 300mm diameter minimum, filled with Grade 20 mass concrete; steel post embedded to within 150mm of the bottom of the pier.
- Post section are Grade C350, plate sections are grade 250 manufactured in accordance with relevant Australian standards. Posts supporting large gates require special consideration.
- 75x75x2.5 SHS post can be used for region B, terrain category 2 at spacing not greater than 1750mm centres maximum.
- Screws shall be 14-10 10x65mm Type 17-40mm minimum edge distance and 50mm minimum embedment.
- Screws shall have corrosion protection for external use (Class 3 to AS3566).
- Steel posts are coated 390g/m<sup>2</sup> to NZ/AS4680 Standard.

## Coating Selection Guide to Dulux® AcraTex® Specifications

Hebel PowerFence is built to last and look good year after year with minimal upkeep and maintenance. Various finishing options exist depending on your aesthetic requirements from painter style roller applied textured paint to full "Monolithic" render and texture style. Regardless of what style of home you own, be it traditional, modern or anything in between, Hebel PowerFence is the perfect choice for you.

Style	System Components	Skills / Application	Appearance	Coating Thickness	Selection Considerations
Monolithic Premium	Hebel SkimCoat	Plastering/hawk & trowel	<ul style="list-style-type: none"> <li>Uniform sand texture (render style)</li> <li>Various alternate texture styles are available - refer coating manufacturer</li> </ul>	3-5mm	<ul style="list-style-type: none"> <li>Render-texture profile applied by plastering technique.</li> <li>Acrylic texture over fibre reinforced cementitious levelling coat. Good flexibility &amp; excellent weather resistance protection.</li> <li>Colour incorporated throughout the texture body coat. Long term durability enhanced with AcraShield topcoat.</li> <li>Premium impact resistance</li> </ul>
	Dulux AcraTex Coventry Trowel	Plastering/hawk & trowel			
	Dulux AcraTex AcraShield	Painter/nap roller			
Monolithic Economical	Hebel PowerBase	Plastering/hawk & trowel	<ul style="list-style-type: none"> <li>Uniform sand texture (render style)</li> </ul>	3-5mm	<ul style="list-style-type: none"> <li>Render-texture profile applied by plastering technique.</li> <li>Full acrylic texture levelling and finishing system. Excellent flexibility &amp; weather resistance protection.</li> <li>Colour incorporated throughout the full system. Good impact resistance.</li> </ul>
	Hebel PowerFinish	Plastering/hawk & trowel			
Express Joint Premium	Dulux AcraTex Contempo Coarse 2 coats	Painter/nap roller, float or sponge float finishing	<ul style="list-style-type: none"> <li>Fine grain profile following the panel joint profile</li> </ul>	1mm	<ul style="list-style-type: none"> <li>Express joint feature panel appearance, with defined capping detail.</li> <li>1mm coating thickness, covering the hebel surface texture. Applied by painters technique, "heavily" at 5x conventional paint thickness. Finished by plastic float or sponge to cover the surface texture and follow the express joint profile.</li> <li>Full acrylic finishing system. Good weather resistance.</li> <li>Moderate impact resistance.</li> <li>Colour incorporated through the system.</li> </ul>
Express Joint Economical	Dulux AcraTex Sedona 2 coats	Painter/medium black texture roller	<ul style="list-style-type: none"> <li>Following the panel texture and joint profile, producing light texture pattern</li> </ul>	0.5-1mm	<ul style="list-style-type: none"> <li>Express joint economical system, with defined capping detail.</li> <li>Fine "grit" paint style coating - with light relief texture pattern. Applied by painters technique, at 5x conventional paint thickness.</li> <li>Full acrylic finishing system. Good weather resistance.</li> <li>Colour incorporated through the system.</li> <li>Low impact resistance.</li> </ul>

\* If a monolithic finish is desired, panels must be glued with Hebel Adhesive to prevent movement and consideration should be given to meshing the joints to prevent hairline cracking.

Finishing system recommendations are intended as a guide to meet Hebel PowerFence technical and aesthetic requirements. The performance of any finishing system relies on its installation in strict accordance with manufacturer's specific product guidelines and the suitability of individual system components and specification. Refer to individual component supplier for detailed advice on their products and systems.



**The better way to build**

CSR HEBEL  
112 Wisemans Ferry Road  
Somersby NSW 2250  
Fax (02) 4340 3300

## **The better way to build**

Hebel is a quality building product, and is backed by CSR Building Products Limited.

Further details on engineering and building with Hebel systems are available in the Hebel Design Guides and Technical Manual. To obtain a copy, or for further sales or technical assistance, please visit our website.

**Hebel website:**  
**[www.hebelaustralia.com.au](http://www.hebelaustralia.com.au)**

For sales enquiries or further information, please telephone us from anywhere in Australia:

**1300 369 448**

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