

Houses

Product and Range guide



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Better homes 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.

Hebel reduces your total cost to build

The unique Hebel System is a high performance masonry product that makes good business sense because it is fast to construct and easy to install.

The unique Hebel system does away with the need for costly and sometimes unreliable bricklayers and requires fewer skilled trades-people on site - whether you choose to install yourself using existing trades or have it supplied and installed by readily available and experienced crews.

Desired by homeowners for its design and sustainability

Hebel provides an attractive, modern exterior that can be completed in individual finishes and colours to provide a wide range of contemporary and aspirational looks that appeal to today's homebuyers.

Hebel is also highly fire resistant, boasts high acoustic absorbing properties and, because Hebel is a masonry product with in-built insulation, it assists in improving energy ratings (and reducing costly energy bills for cooling and heating).

Hebel has attained endorsement for using 61% and 64% less embodied energy than the comparative products Concrete and Brick and 64% and 55% less Greenhouse gas emissions than the comparative products Concrete and Brick (GECA Report 2006).



HEB-2006
GECA 08-2005-
Environmentally
Innovative Products

Proven in the market and Australian made by CSR

Hebel is 100% manufactured in Australia by CSR Building Products Limited – and has proven durability with a 50 year 'design life' (Mahaffey Report) so you can depend and rely on the product quality, technical expertise, warranty and continuity of stock supplies. With CSR you can trust that everything has been proven, tested and continually improved.

The Hebel logo, consisting of the word 'hebel' in a bold, blue, lowercase sans-serif font, followed by a registered trademark symbol (®). To the right of the text is a stylized graphic of a brick wall section, showing a grey brick pattern on the left and a tan-colored brick on the right.

hebel[®]
The better way to build

Hebel – an incredible and innovative

At the heart of the Hebel system is Hebel AAC (Autoclaved Aerated Concrete) supplied in either blocks or steel reinforced building panels.

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

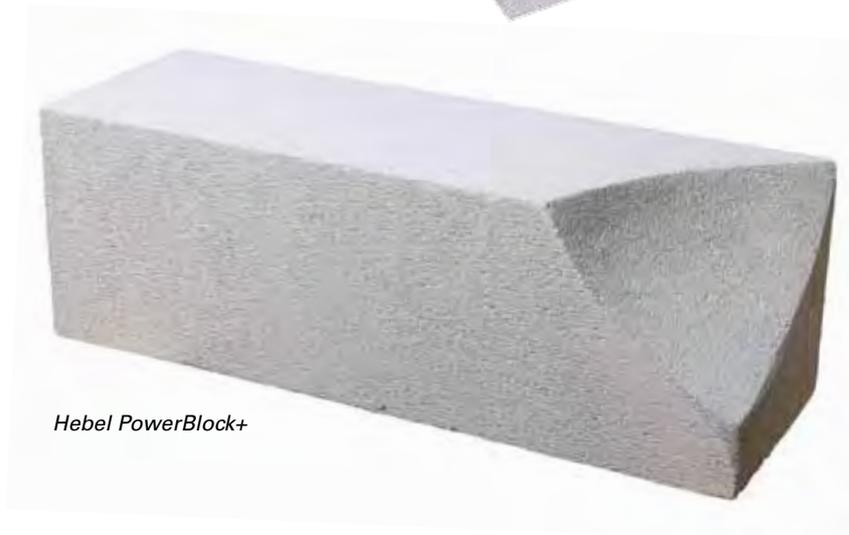


Hebel PowerPanel



Faster construction period

Hebel panels are faster to construct and require significantly less labour compared to traditional masonry construction techniques leading to substantial savings in site costs. Your project reaches key stages quicker (eg: lock-up in housing). Building with Hebel also means a cleaner, safer work area during construction and less clean-up at completion of building.



Hebel PowerBlock+

masonry building product



Lightweight yet solid and tough as brick

Being a lightweight concrete reinforced with steel, Hebel panels pass the critical 'knock test' for consumers.

As strong and tough as bricks – independent tests show that a rendered Hebel PowerPanel has comparable impact resistance to brick (Report 0164 Orica 06.09.05).



Highly fire resistant for peace of mind and added security

Hebel is non-combustible and renowned for its highly fire resistant properties. Hebel panel and block systems comply with all six Bushfire Attack Level (BAL)

requirements and achieve FRL (Fire Resistance Levels) from 60 minutes through to 240 minutes (tested at CSIRO). Another reason when building with Hebel, you're building with peace-of-mind for your own future as well as the home owners future.



A comforting thought for a comfortable living environment

Hebel's unique AAC construction provides superior insulation qualities for a masonry product. The unique

combination of thermal resistance along with thermal mass, makes building with Hebel a smart choice for meeting Australia's stringent building regulations.

For unit and home owners, the thermal efficiencies of Hebel reduces the reliance on heating and cooling appliances – the combined effects of using a heater less in winter and fans or air conditioning less in summer and warmer months, can have a big impact on rising energy costs.



A sound reason for better acoustic qualities

Hebel pioneered the introduction of lightweight wall panels providing acoustic performance levels at or above $R_w + C_{tr} = 50$ in high rise multi-residential buildings.



Sustainability for a better world in the long term starts today

Hebel delivers a diverse number of environmental benefits over brick and concrete. 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, Hebel was found to have clear environmental benefits across all key environmental criteria.

To be awarded the label, products must have a 30% lower impact than alternatives. Hebel uses 61% and 64% less embodied energy and 64% and 55% less greenhouse gas emissions than the comparative products, concrete and brick veneer.

As environmental consciousness and social responsibility increases, Hebel is striving to excel even further to set new sustainability standards in building materials and residential living.

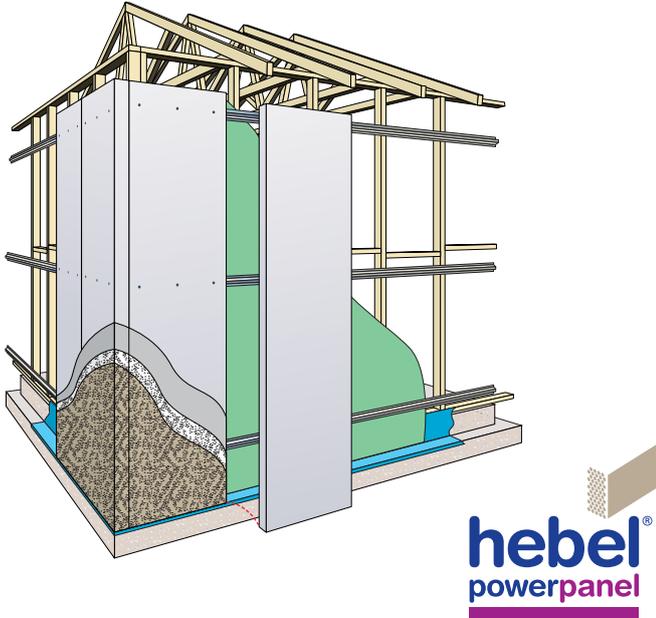
...for all the best reasons

Wherever it is applied, Hebel provides a highly desirable, attractive and distinctive finish, while affording a hard working combination of fire resistance, thermal performance and acoustic suppression.

Choose Hebel Power systems or

Use Hebel Power systems for **framed** construction

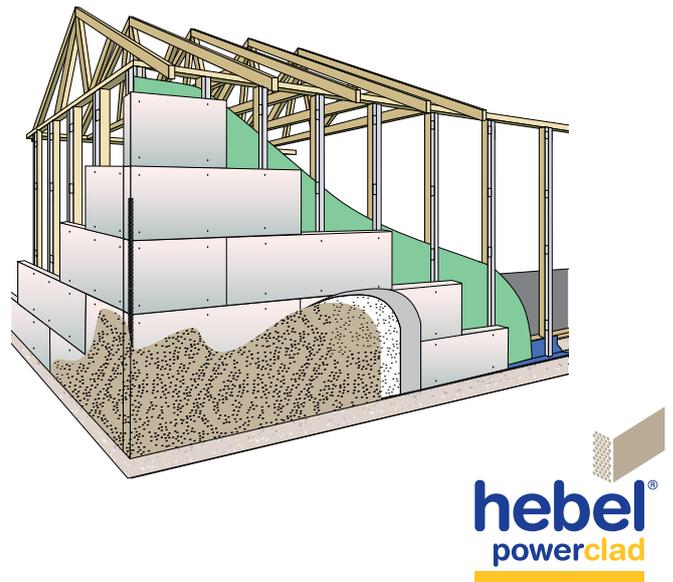
For high volume vertical panels using specialist Hebel installers



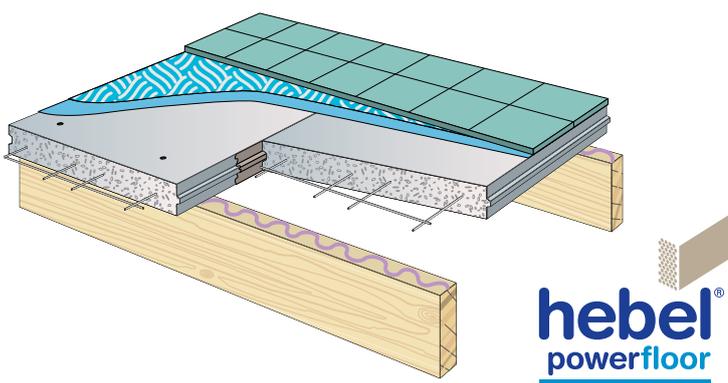
Hebel PowerPanel is the traditional Hebel panel system that is quick and easy to install using vertically installed PowerPanels that are suited to a supply and installation service.

Designed for homes built using either timber or steel framing and can be used in new dwelling construction, extensions or re-cladding. The system consists of 75mm thick, steel-reinforced Hebel PowerPanels, fixed vertically to horizontal battens attached to the loadbearing frame. For quick, clean construction, Hebel PowerPanels can be ordered in standard lengths of 2400mm to 3300mm for standard widths of 600mm.

For smaller, lighter horizontal panels using your generic trades



Hebel PowerClad Panels are smaller, horizontal lightweight, steel reinforced panels that can be easily installed using your normal on-site tradesmen such as carpenters for better control of your building costs. Hebel PowerClad has been designed for homes built using either timber or steel framing and can be used in new dwelling construction, second storey additions, extensions and for re-cladding. The system consists of 75mm thick steel-reinforced Hebel PowerClad Panels, installed horizontally and secured to the unique PowerClad Fixing System (patent pending).



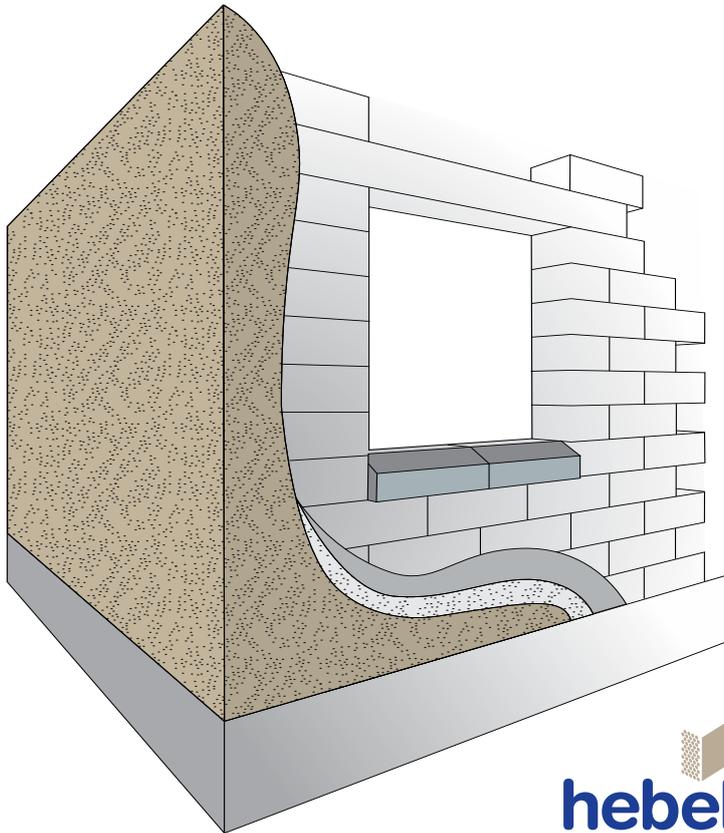
Non load-bearing concrete floors installed using generic trades

Hebel PowerFloor gives you the feel of a concrete floor at significantly lower cost and can be easily laid by your normal on-site tradesman such as carpenters.

The combination of strength, thermal and acoustic insulation properties of Hebel PowerFloor make it an ideal choice for both elevated ground floor and second storey applications. Hebel PowerFloor is installed over a timber or steel framed floor support structure.

Power+ systems for all your needs

Use Hebel Power+ systems for **frameless** construction

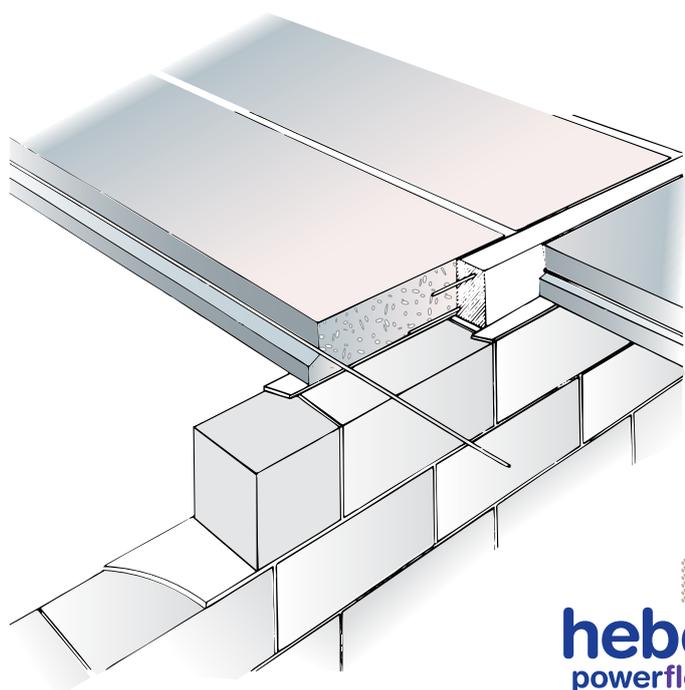


PowerBlock+ delivers load-bearing solid masonry qualities comparable to double brick

Hebel PowerBlock+ provides an economical, solid masonry building system and delivers superior thermal, acoustic and fire protection. Hebel PowerBlock+ are large AAC Blocks with a standard face dimension of 600mm x 200mm, laid in much the same way as bricks but using Hebel Adhesive to form a monolithic structure. Hebel's tight manufacturing tolerances deliver beautifully flat, true surfaces that are easily rendered and painted.

Finally, Hebel PowerBlock+ affords excellent design flexibility due to its capacity to be shaped and routed for added individuality and aesthetic appeal.

hebel[®]
powerblock+

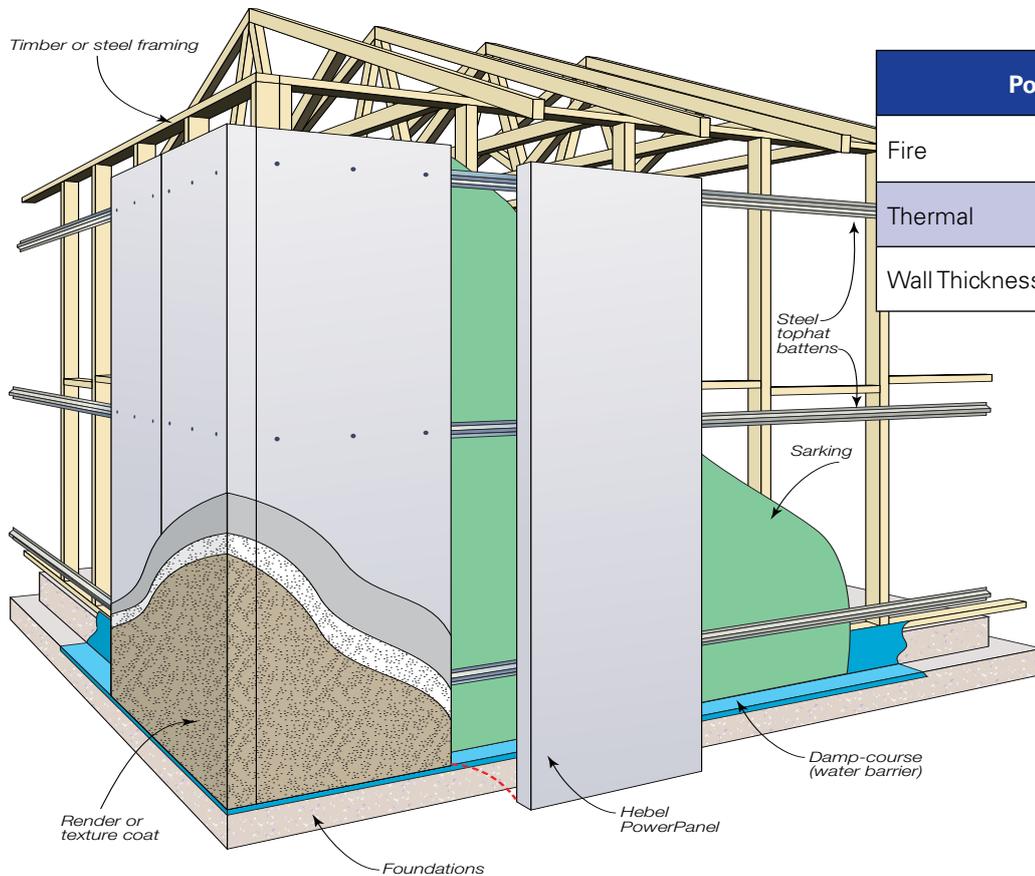


PowerFloor+ for load-bearing solid concrete floors

Hebel PowerFloor+ panels are steel reinforced utilising the ring anchor system to create a consistently flat, solid surface ready for all floor covering from carpet to direct fix tiles. PowerFloor+ is ideally suited to solid home construction such as Hebel PowerBlock+ homes.

hebel[®]
powerfloor+

Building external walls with Hebel.



PowerPanel System	
Fire	240/180/180
Thermal	R1.54 to R3.54
Wall Thickness	165mm to 205mm*

*Depending on stud, cavity and Top Hat selection



High volume using specialist trades

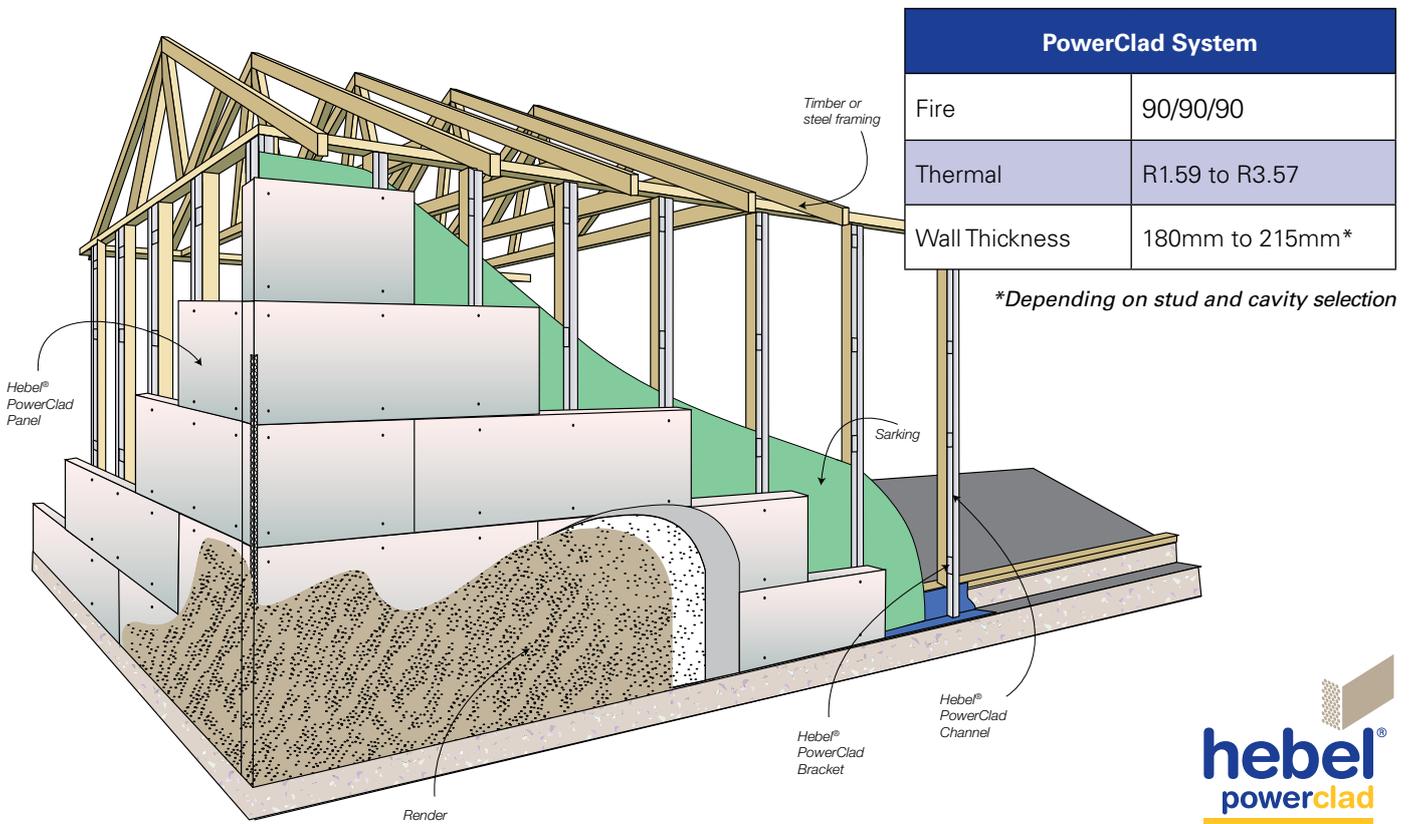
Hebel PowerPanels are **fixed vertically** to horizontal battens attached to the load bearing frame. PowerPanels are steel reinforced 75mm thick and are available in lengths of 2400mm to 3300mm for widths of 600mm. A 3000mm PowerPanel is equivalent in area to approximately **83** standard bricks, making for faster installation than bricks.

- The steel reinforced aerated concrete and acrylic coated panels are strong and solid and highly durable making them perfect for building in the Australian climate
- Steel reinforcing is specially coated to prevent corrosion and provides maximum durability
- Non-combustible with an FRL of 240/180/180
- Outstanding thermal and acoustic insulation qualities increase levels of comfort and save on energy heating and cooling costs
- Boasts desired environmental imperatives and has been awarded the 'Good Environmental Choice Australia Label' (Heb-2006).

The unique benefits of building with PowerPanel

- Fastest most efficient way to install Hebel (2 people can install up to 150m² within **3 days** depending on site conditions)
- Recommend supply and install service through specialist Hebel installers

A better way to build framed houses



Smaller panels using generic trades

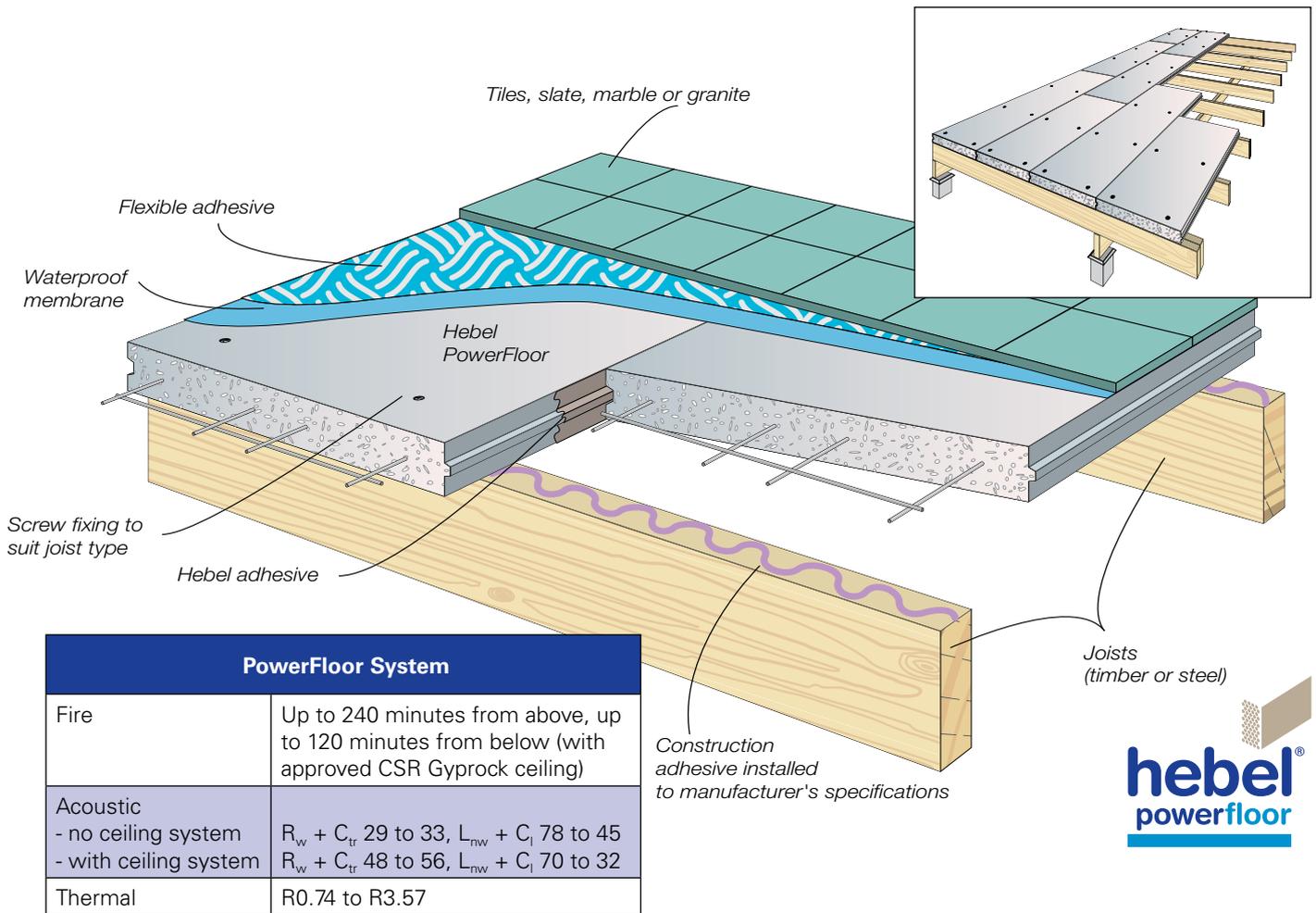
Hebel PowerClad panels are **fixed horizontally** to vertical channels attached to the load bearing frame. PowerClad panels are steel reinforced 75mm thick and are available in lengths of 1350mm and 1800mm in widths of 600mm. Each 1350mm panel weighs just 39kg (calculated at 30% moisture content) when delivered - allowing two trades people to position without the need for a crane or other mechanical lifting device. Each 1800mm panel is equal to **53** standard bricks, making for faster installation than bricks.

- The steel reinforced aerated concrete and acrylic coated panels are strong and solid and highly durable making them perfect for building in the Australian climate
- Steel reinforcing is specially coated to prevent corrosion and provides maximum durability
- Non-combustible with a 90 minute fire resistance for a fire source on the panel side
- Outstanding thermal and acoustic insulation qualities increase levels of comfort and save on energy heating and cooling costs
- Boasts desired environmental imperatives and has been awarded the 'Good Environmental Choice Australia Label' (Heb-2006).

The unique benefits of building with PowerClad

- Smaller panels are easy to handle and install, making it ideal for second storey construction
- Installed by generic trade for better control of your building costs
- Unique patent pending building system easily overcomes frame misalignment

Building solid floors with Hebel



The feeling of concrete for a lot less

Hebel PowerFloor consists of 75mm steel-reinforced aerated solid concrete floor panels installed over steel or timber joists to give an excellent, solid base for just about any floor covering.

This provides a superior floor solution with acoustic and thermal insulation benefits and provides the feel of a solid concrete floor at a significantly lower cost

The unique benefits of constructing your floor with Hebel PowerFloor

- Solid feel eliminating the bounce and flex of timber sheet flooring
- Superior thermal performance – particularly for suspended floors on sloping sites
- Extremely strong, each panel is reinforced with corrosion-protected steel mesh. The panels fit snugly together to form a strong and smooth floor
- Not affected by weather during installation
- Hebel PowerFloor can be easily installed by normal on-site tradesmen such as carpenters
- Reduces foot-fall noise when installed with resilient mounts between floors and eliminates squeaking associated with particle board floors

PowerFence makes fencing easy



The innovative, alternative to brick

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 lightweight 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.

Hebel PowerFence can be finished in either Exposed or Monolithic and can also be adapted to include a range of different decorative treatments such as timber panels or ironwork.

The unique benefits of building fences with Hebel PowerFence

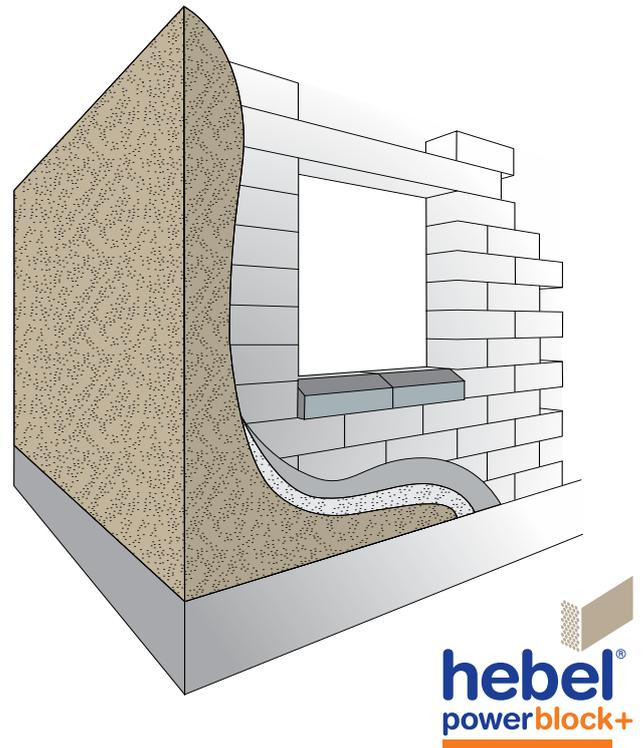
- Simple, cost effective and attractive. Creates privacy and acts as reflective noise barrier system
- Perfect for boundary fencing and as an alternative to standard masonry for low front fences
- Range of wall profiles and looks can be created giving you design freedom and flexibility
- Non combustible – the perfect choice for bushfire prone areas
- Double mesh steel reinforced PowerFence panels are specially coated to prevent corrosion and provides maximum durability

PowerBlock+ the premium alternative to double brick

The unique benefits of home building with Hebel PowerBlock+

- A solid load-bearing masonry home.
- A Hebel PowerBlock+ home 'breathes' and controls moisture making it an incredibly comfortable living environment.
- With over one and half times the thermal resistance of double brick, Hebel PowerBlocks+ systems* easily exceed the Building Code of Australia (BCA) minimum energy requirements for climatic zones 1 to 7 inclusive.
- Excellent acoustic performance and sound insulation attributes.
- Design and build freedom and flexibility – easily worked with standard power tools.
- Non-combustible – up to a four hour fire rating makes the Hebel PowerBlock+ System ideal for rural or bush fire prone areas.
- Enhanced design freedom can be achieved through routing and shaping. Lintels and sill blocks complement the high aesthetic appearance.

*PowerBlock+ systems 1705, 1706, 1707. James Fricker Report 107.69, 107.71, 107.72 and 107.73

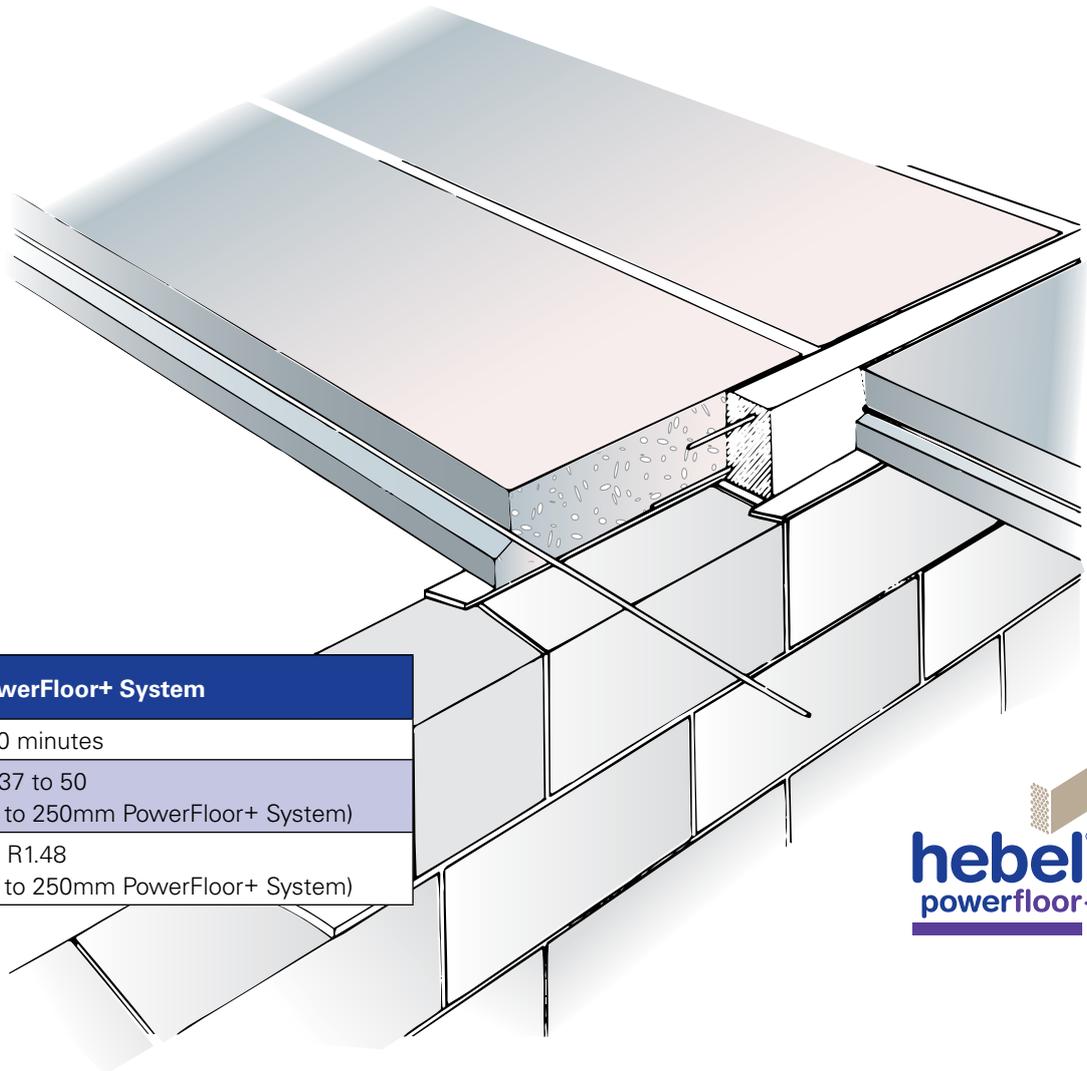


Solid masonry construction has long been regarded as the 'ultimate' home building method. Hebel PowerBlock+ is the ideal alternative to double brick, giving you an extremely solid construction with exceptional acoustic and thermal insulation properties to provide a more comfortable and energy efficient home.

The face size of a PowerBlock+ is 600mm x 200mm. External walls are typically constructed using 250mm thick Hebel PowerBlock+ whilst internal non-loadbearing block walls generally use the 100mm PowerBlock+. The large format blocks are lightweight and, forming a single wall, are rapidly installed.

PowerBlock+ System	
Fire	up to 240/240/240
Acoustic	$R_w + C_{tr}$ 35 to 42
Thermal	R2.04 to R4.09
Wall Thickness	250mm to 356mm

PowerFloor+ the strong, silent type when it comes to solid floors



PowerFloor+ System	
Fire	up to 180 minutes
Acoustic	$R_w + C_{tr}$ 37 to 50 (150mm to 250mm PowerFloor+ System)
Thermal	R0.89 to R1.48 (150mm to 250mm PowerFloor+ System)



Hebel PowerFloor+ is the ultimate concrete flooring solution, providing superior strength, thermal and acoustic properties in a load bearing modular solid aerated concrete

flooring system. Hebel PowerFloor+ is available in 150mm to 250mm thickness and eliminates the need for a joist system or the pouring of concrete.

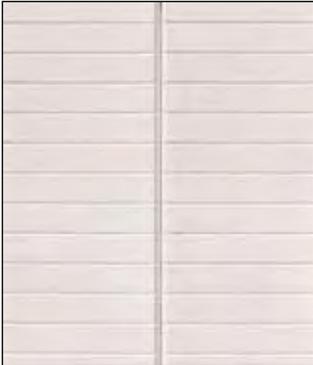
The unique benefits of using Hebel PowerFloor+ Systems

- Hebel Floor provides a load bearing span up to 5.85 metres without floor framing or joists
- Achieves a system fire rating of up to 180 minutes without relying on ceiling systems
- Extremely strong, each panel is reinforced with corrosion-protected steel mesh. The panels fit snugly together to form a strong and smooth floor.
- Reduces foot-fall, airborne noise between floors and eliminates squeaking associated with particle board floors
- Superior thermal efficiency assists in achieving thermal ratings that results in reduced heating and cooling costs.
- Limited propping and no curing of concrete required.

Individualise the look of your home

Hebel PowerPanels provide the added flair and design versatility that gives individuality to your facade, entry or feature wall - so your home can be.....well, uniquely 'you'! While Hebel PowerPanels are strong, solid, robust and resilient they are also perfectly suited to creating patterns through a routing process.

Choose from a discreet choice of pre-routed panel designs or....create your own individual and unique design statement. For added effect and visual appeal your individual design can be rendered and texture coated then painted if desired to complete your own masterpiece.



Modular™



Impress™



Echelon™



Inflexion™



The perfect way to a great finish

CSR Hebel has worked closely with the leading coating manufacturer Dulux AcraTex to develop a range of finishing options for all Hebel systems.

From simple acrylic coatings to high build renders and textures. Hebel has a system that will meet the aesthetic requirements for your project.

Easy to work with, Hebel and Dulux coatings have been designed to help you achieve the perfect finish to any Hebel project, including the highly sought after smooth, monolithic look. The coating systems have been engineered to accommodate the thermal expansion and contraction and physical characteristics that are unique to AAC (autoclaved aerated concrete).

Table 1.0 Dulux AcraTex Coating Specification

Hebel Product	Surface Alignment	Base Render or Levelling Coat	Primer	Acrylic Texture Body Coat	Weatherproofing Finish Coat	Comment
PowerPanel	True & Flush	Hebel PowerBase™ (Acrylic Leveller)	Self priming	PowerFinish™	Optional	Elastomeric Membrane recommended for improved resistance to dirt pick up and coastal environments.
			Sand and spot prime excessive adhesive extending across joints with AcraPrime 501/1			
PowerPanel and PowerClad	≤3mm	Hebel HighBuild™ (Render)	AcraTex Green Render Sealer	Tuscany Coarse or Coventry Coarse	AcraShield Matt or AcraSkin	AcraSkin recommended for maximum crack bridging system performance.
		OR AcraPatch HighBuild (Acrylic Leveller)	Self Priming	Tuscany Coarse or Coventry Coarse	AcraShield Matt or AcraSkin	Application of Finishcoat in 2 coats (first-coat reduced 10% with water) is recommended to provide best results - relevant to project complexity eg. unbroken broadwall, scaffolding or cutting in detail and coastal areas.
PowerBlock+	≤3mm	Hebel HighBuild™ (Render)	AcraTex Green Render Sealer	Tuscany Coarse or Coventry Coarse	AcraShield Matt or AcraSkin	

Note: PowerClad and PowerBlock+ require External Corner Angles at all external corners and openings Hebel recommends installation of 1-2mm Flexible Acrylic Texture plus Weatherproofing Elastomeric Finishcoat providing improved consistency of finish, system flexibility and durability.

Hebel is ideal for bath, shower and spa hobs



Hebel is light, easy to work with and quick to install. The excellent thermal properties help maintain the heat in spas and baths, thereby saving energy and money.

The unique benefits of using Hebel for Hobs

- Easy to use and easy to lay
- Easily cut to size
- Quality Australian made product



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

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

1300 369 448

Guarantee

Hebel guarantees the products manufactured by itself and the systems described in Hebel literature for 7 years, subject to the terms and conditions of the Hebel Guarantee which can be inspected in the Hebel website at hebelaustralia.com.au. Hebel does not however guarantee the components, products or services, such as installation, supplied by others. Hebel recommends that only products, components and systems recommended by it be used.

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HEB1331 August 2011

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