

WHAT'S **INSIDE** APARTMENT WALLS **MATTERS**



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CSR

Why Hebel® matters in apartment walls

Whether you're an architect, designer, builder, wall installer or developer, Hebel wall systems deliver exceptional benefits in terms of quality, project efficiency, risk minimisation and cost and time certainty.



Creating high performance buildings using Hebel PowerPanel

At the heart of the Hebel internal wall systems is the Hebel PowerPanel, a 75mm thick steel reinforced masonry building panel made from autoclaved aerated concrete (AAC).

Developed and warranted by CSR, the Hebel PowerPanel can reduce heating and cooling loads on buildings, is non-combustible, can be produced to the size needed, is easily cut, makes construction fast and efficient, creates minimal waste and is a better choice for the environment compared with concrete or brick.

Using the 'solid wall' advantage in developments

There's a very good reason why Australia's largest apartment developers want Hebel wall systems. They can increase market potential and return for a minimal initial investment.

Hebel walls feel solid when you knock on them, can't be cut through with a knife and overall provide a quality long-term investment. And for builder / developers the benefits are doubled with fast construction and minimised risk.

Maximising floorspace

Hebel wall systems have been developed with floorspace in mind. The intertenancy wall system for concealed services on one side is one of the narrowest systems on the market at just 185mm wide. This means greater design flexibility and more gross sellable floor space.

Single mesh and caged PowerPanel for solid, secure and durable internal walls.



Front cover: Park Lane and The Mark, Central Park.

Left & Right: One Central Park.

Images courtesy of Frasers Property Australia and Sekisui House Australia



Leading the way in AAC innovation, CSR Hebel achieved a FRL rating of -/120/120 for PowerPanel stacked horizontally to an unlimited height. This testing was done without thin bed adhesive at panel joints, proving Hebel is a highly efficient system for shaft riser applications at all heights.

Benefiting from product versatility

The Hebel PowerPanel is used across the full range of internal wall systems - intertenancy, corridor, shaft and service walls - as well as balcony blades and facades.

Each stage of a project benefits from this versatility - in design, estimating, procurement, delivery, handling, installation and certification.

This versatility also applies to wall heights and fire-rating levels. At its base system level the single mesh tongue and groove PowerPanel is suitable for applications with fire ratings up to 90 minutes for wall heights to 3.3 metres. When higher fire ratings up to 2 hours for vertical wall heights up to 4.65 metres are needed, caged tongue and groove PowerPanel steps in.

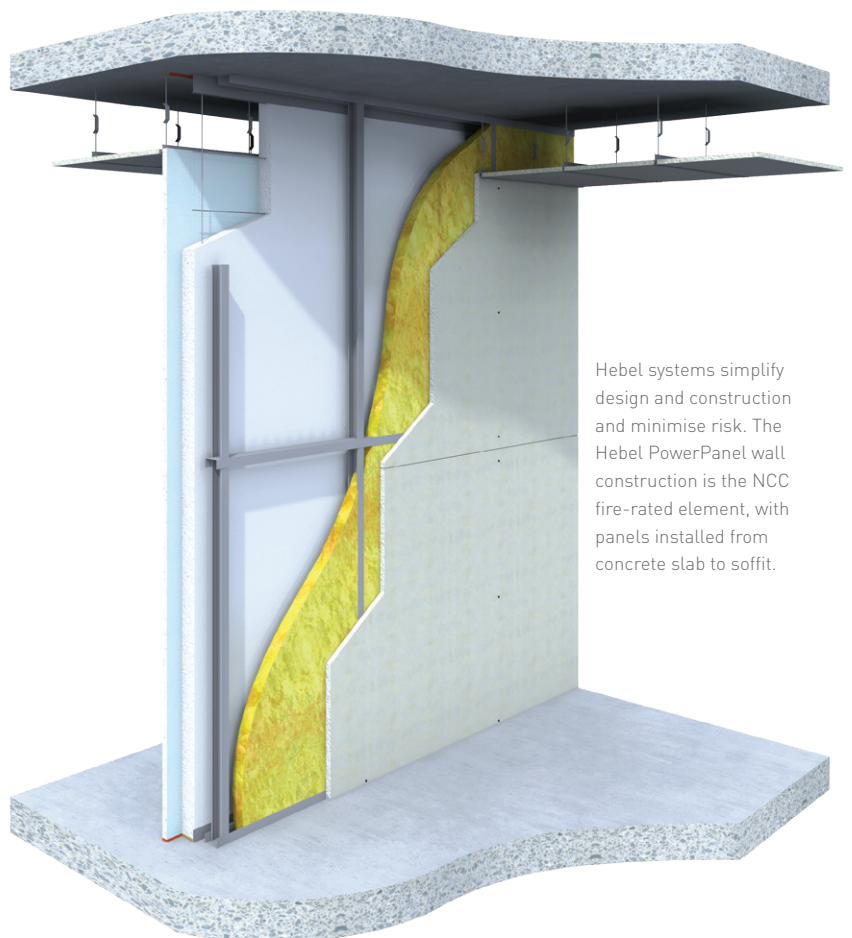
What's more, PowerPanel caged tongue and groove can be installed horizontally to a maximum panel length of 4800mm and to an unlimited height without the need for thin bed adhesive at the panel joints.

Design efficiency, quality and risk minimisation

Hebel wall systems cut through complexity in specifying internal walls. The systems are simple and only two types of plasterboard lining need to be considered for most systems - standard or moisture resistant. This streamlines the design process and minimises the potential for error.

Further, system referencing and access to quality technical support is easy and efficient through the one reliable and trusted source, CSR Hebel.

Overall, the Hebel wall systems enable architects and designers to be confident in specifying a quality solution that's robust, proven, tested, fast and efficient to install and value adding in terms of solidity and security.



Hebel systems simplify design and construction and minimise risk. The Hebel PowerPanel wall construction is the NCC fire-rated element, with panels installed from concrete slab to soffit.



Array by Mirvac. Image: John Gollings



Epping Park by Meriton Apartments.

Greater control over construction schedules and costs

Hebel internal walls systems go up quickly and easily which is why so many developers and construction companies rely on them to keep control of their project schedule and costs.

Builders are already ahead on their project when they specify Hebel systems. Delivery of the Hebel PowerPanels and installation of the Hebel wall leaves isn't held up waiting for windows to go in as wet or damp conditions don't affect the PowerPanel wall leaf installation.

Then there's the simplicity of the systems, which help maximise

construction efficiency and minimise costs. For example:

- PowerPanels can be ordered to length for easy installation with minimal waste
- small number of material types reduces logistical complexity before and during construction
- the Hebel PowerPanel wall leaf is the fire-rated element making compliance easy
- service penetrations installation and compliance is easy, with minimised rework
- plasterboard linings aren't required to go past the ceiling for NCC fire-rating compliance

- ceiling frames can be installed either before or after linings
- one trade can install the whole wall system.

Another significant speed and efficiency saving is in the installation of GPOs and dampers. The Hebel systems don't require fire-rated GPOs and dampers are connected to the Hebel PowerPanel wall leaf only.

Constructing with Hebel internal wall systems means logistics are simple, the number of trades is minimised, work flows easily, project schedules are controlled, cost certainty is enhanced and risk is minimised.



We like it from the point of view of speed because the management of the Hebel system is much simpler than a stud system.

Peter Cotton
National Practice Director
Mircvac Design



We're convinced it's the way to go. The feedback from builders I've worked with is that it is faster.

Craig Baudin
Director
Fender Katsalidis Architects



You can achieve a similar fire rating and a similar acoustic rating by using plasterboard methods but it's a longer and harder process. I would estimate that 80-90% of our residential high rises now use Hebel.

Steve Martin
Quality Inspector
Richard Crookes
Constructions (RCC)

Minimising risk

Hebel wall systems provide a solid foundation for risk minimisation in design and construction. They are tested, well proven and designed to achieve NCC fire and acoustic rating compliance easily.

Combining the non-combustible property of the Hebel PowerPanel with advanced system designs, CSR Hebel delivers high value cost effective solutions that significantly reduce the number of fire and acoustic risk points in construction.

Gaining high sustainability values

Hebel AAC is a durable inert product, made from raw materials in a process that minimises embodied energy. The low bulk density of Hebel AAC means less than a quarter of the resources in raw materials are used in its production than for concrete and bricks.

Waste in production is reduced through extensive recycling. Production waste, slurry and even the steam generated are all recycled back into the manufacturing

process while waste steel and oil are recycled off site. Even the non-toxic citrus based solvents used for cleaning are recycled.

On site the combination of panel sizes designed to suit standard building modules and the ease of working with standard power tools means there is very little waste. This goes a step further when panels are made-to-order.

Altogether, Hebel is one of the most environmentally responsible building materials for wall system construction.

Leveraging the exceptional value-add of Hebel systems

Quite simply Hebel internal wall systems deliver a holistic solution that no other systems can match. They benefit all stakeholders in the project lifecycle through their role in value-adding to the project's quality, design and construction efficiency, risk minimisation and cost and time certainty.



The biggest risk is associated with penetrations going through the wall and the Hebel system has a lot of known solutions to this. With Hebel it is therefore easy to implement compliant penetration treatment.

Allan Harriman OAM
Director
BCA Logic



We're not called back to deal with problems because they don't arise.

Gary Cory
General Manager Construction
Crown Group



The [Melburnian] resales have been outstanding.

Roger Poole
Past Chairman
Bates Smart Architects



Viking by Crown Group.



Hebel wall system applications



Intertenancy wall - dry to dry / wet and apartment to bathroom pod

Designed for concealed services on one side using lightweight steel-reinforced PowerPanel, these Hebel Intertenancy Wall Systems provide a solid secure wall that maximises floor space, minimises costs and risks and delivers long-term value.

For the bathroom pod system acoustic performance is achieved through the combination of the off-site manufactured pod walls with the Hebel constructed elements.



Intertenancy wall - dry / wet to dry / wet and apartment / bathroom pod to bathroom pod

These Hebel Intertenancy Wall Systems are the ideal solution where there are concealed services on both sides including large services applications such as shower mixers in both apartments. This quality solution using solid and secure PowerPanel maximises floor space and minimises risks and costs.



Corridor wall - dry to dry, dry to wet and corridor to bathroom pod

Hebel Corridor Wall Systems maximise floor space and provide a solid secure wall for services located on one side between common areas and apartments.



Shaft wall - dry areas

Robust and proven Hebel Shaft Wall Systems provide a solid, secure wall with a narrow width around service shafts to dry habitable areas and between scissor stairs. Uses Hebel PowerPanel to maximise space utilisation and minimise risks and costs in multi-residential construction.



Shaft wall - wet areas and bathroom pod

Hebel Shaft Wall Systems are designed for general partitions between service shafts and wet areas or shafts adjacent to common areas. Constructed with Hebel PowerPanel to maximise floor space and minimise risks and costs.



Service wall - plant rooms

Single mesh or caged Hebel PowerPanel is used in the Hebel Service Wall Systems to isolate and secure plant rooms from other areas of the building. For tall shaft risers with fire ratings up to 2 hours, PowerPanel can be installed horizontally to an unlimited height without the need for thin bed adhesive at the panel joints. Solid and secure, these systems maximise floor space and minimise costs and risks.



Balcony Blade

Hebel PowerPanel is used for separating walls between balconies of different sole occupancy units. For more information refer to High Rise Facades Design & Installation Guide.



External facade wall

Hebel PowerPanel is used for external façade walls with hidden or visible beams. This lightweight product provides substantial cost savings compared to traditional masonry. For more information refer to High Rise Facades Design & Installation Guide.

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1300 443 235 or visit www.hebel.com.au