

# Fletcher Insulation

Building Better, Together



Hospitals and medical centres

## HEALTHCARE

Building healthier places, together

## CREATING SUSTAINABLE, HEALTHY, AND MORE COMFORTABLE ENVIRONMENTS FOR PATIENTS AND STAFF

Insulation is integral to smart building design.

It has an important role in creating both thermal and acoustic comfort for people within a healthcare environment. Not only does it help shape the conditions essential for positive patient outcomes, insulation has an important role in creating a more comfortable, safe, and productive workplace for hospital staff.

Fletcher Insulation provides architects and specifiers with the insulation solutions they need to create world-class, energy-efficient healthcare facilities.

Using our range of sustainable insulation solutions – in walls and ceilings, under floors and roofs, around building services, and in and around the HVAC – we help designers build more comfortable environments to support patients, visitors and staff.

### HOW INSULATION HELPS TO CREATE BETTER HEALTHCARE ENVIRONMENTS

- Creating an environment where people can comfortably rest, recover, sleep, offer and receive treatment, consult and concentrate, is essential within a hospital or other patient-care facility. A research review found that the quality of indoor thermal and acoustic comfort and indoor air quality has a direct impact on the patient recovery and staff wellbeing.<sup>1</sup>

- Noise in hospitals has been identified as a serious issue that can negatively affect patient wellbeing.<sup>2</sup> Though more research is needed, it's clear that reducing ambient noise and supporting patient privacy, helps decrease patient recovery time, reduces the need for analgesics, and increases staff efficiency.<sup>3</sup>

- Hospitals are some of the most energy-intensive buildings in Australia - and driving down these costs is a challenge.<sup>4</sup> Optimising the building envelope to manage heating, ventilation and air quality is crucial in cutting down on energy costs.

At Fletcher Insulation we'll help you specify the optimal insulation materials for use in your healthcare building projects.

We provide solutions that contribute to creating:

- ✓ a healthier indoor environment for patients, visitors, and staff
- ✓ reduced energy solutions to control costs and environmental impact
- ✓ higher Green-Star ratings and WELL certification
- ✓ safe, fire-resistant construction systems



## FLETCHER INSULATION HELPS AUSTRALIA'S LEADING ARCHITECTS AND BUILDERS DESIGN SUSTAINABLE, HUMAN-CENTRED AND ENERGY EFFICIENT HEALTHCARE ENVIRONMENTS.

We specialise in developing industry-leading sustainable insulation solutions that contribute to creating healthier indoor environments for patients, visitors and staff – and energy efficiency solutions to control costs and environmental impact.

Fletcher Insulation's holistic approach to developing the best insulation solutions for hospitals and other medical facilities means we consider a range of performance indicators. These include energy efficiency, thermal bridging, fire resistance, internal comfort, acoustics, moisture, air tightness, and durability.

## SUPPORTING THE WELLBEING OF PEOPLE IN HEALTHCARE ENVIRONMENTS CALLS FOR A HOLISTIC APPROACH

The hospital environment is complex. From waiting rooms to intensive care units, emergency departments to operating rooms, each area has its own needs when it comes to thermal and acoustic comfort. An understanding of what comfort levels are needed by patients, staff and visitors within a hospital or other medical facility is a first step for a designer.



And when it comes to insulation, having a technically sound understanding of acoustics, indoor thermal control, air quality, and fire safety requirements is critical.

### THE IMPORTANCE OF ACOUSTIC COMFORT

While all human-centred buildings should be designed for people's acoustic comfort, medical environments pose challenges for architects and designers.

- Noise can be a health risk for patients recovering from an illness or operation. The negative impacts of noise pollution on patients include sleep disturbances, such as reduction of sleep depth, continuity, or duration, as well as cardiovascular response, wound healing, and pain management.<sup>5</sup>
- In most medical settings, background noise is constant. It comes from a variety of sources including air-conditioning systems, alarms, medical devices, such as respirators, televisions, and the sounds of people in conversation.

- Poor acoustic privacy can also affect a patient's health outcomes. Not only can increased disturbance and intrusion affect patient healing, it may also lead to people withholding important, perhaps vital information if they feel they'll be overheard.<sup>3</sup>
- Internal noise levels also take a toll on hospital staff. Consequences include increased stress levels and fatigue, decreased job performance, hearing loss at high noise levels, general annoyance, and an increased rate of job burnout.

Fletcher Insulation products are designed on the principal that quality acoustic design supports the health and wellbeing of all people in our community.



## HEALTH



Royal Darwin Hospital

### CONTROLLING INDOOR THERMAL COMFORT, AIR QUALITY AND BUILDING CONDENSATION



A well-managed indoor environment supports the wellbeing of its occupants. But within a hospital, maintaining the health and comfort of patients is a primary purpose.

While there are many factors influencing a patient's perception of their overall comfort, thermal comfort and indoor air quality are two of the top influences affecting people within a hospital.<sup>1</sup>

The key to Fletcher Insulation's approach is to devise a tailored solution for each healthcare project.

We offer a range of insulation solutions that help reduce reliance on artificial cooling and heating systems and improve the indoor air quality.

Working with some of the country's leading healthcare designers, we've supplied insulation solutions for many Australian hospitals including;

Prince of Wales Randwick Hospital, Westmead Hospital, Royal Hobart Hospital, Mater Hospital, Royal North Shore Hospital, St. Vincent's Hospital, Concord Hospital, Box Hill Hospital, Maroondah Hospital, Caulfield Medical Centre, The Alfred Hospital, Rockingham Hospital, Wangaratta Hospital, Manangatang Hospital, Linacre Hospital, Moe Community Hospital, Peninsula Private Hospital, Ballarat Base Hospital, the Allan Walker Care Centre at Royal Darwin Hospital and the Royal Dental Institute.



Royal Darwin Hospital



### PROTECTING PEOPLE AND BUILDINGS FROM FIRE

Hospitals are like small communities. Designing a hospital to be fire-safe means considering the needs of the people who use it every day and selecting building materials that will help keep them safe.



The use of passive fire protection strategies helps protect patients, staff and visitors should a fire break out. It's also a best practice approach to mitigating property and equipment damage, and minimising interruption to the delivery of a hospital's essential services.

Insulation installed in external and internal walls, floors, ceilings, roofs, and around HVAC applications, is an integral part of fire safety control within any hospital building.

As well as National Construction Code (NCC 2019, 2022) compliance, designers and hospital owners must also consider the standards and minimum requirements of insurers. Choosing insulation that fails to meet these specifications could mean higher insurance premiums.

Fletcher Insulation has developed a range of rigorously tested insulation solutions. Made of fire-resistant materials, our products are designed to keep people and buildings safe. Whatever the specific challenge of your building design, our expert team are on-hand to help designers and specifiers select the best fire-safe compliant solution for your hospital project.

Using Fletcher Insulation's glasswool products in external cladding, ceilings and internal partition applications ensures your building complies with AS 1530.1 for combustibility.



Fletcher Insulation's glasswool products are deemed non-combustible when tested to AS 1530.1, offering compliance for use in external cladding and internal partition applications, providing peace of mind.

### HEALTH



Up to 80% of the glass used in our glasswool insulation production is recycled.

### FOR THE GOOD OF THE PLANET

As well as creating a range of energy efficient products to help hospital building owners save energy costs, Fletcher Insulation continues to invest in sustainable manufacturing processes.

We help reduce the carbon footprint of the built environment by:

- Making insulation with zero Ozone Depletion Potential (ODP).
- Ensuring our insulation products support healthy indoor air quality and contain no harmful Volatile Organic Compounds (VOCs).
- Using recycled materials in our manufacturing process wherever possible – up to 80% of the glass used in our glasswool insulation is recycled, transforming a waste product and avoiding landfill.





Royal North Shore Hospital

## BUILDING ENVELOPE

A high-performance building envelope can make a big difference to a hospital's energy efficiency. It also has a big role to play in the overall comfort of the people within it.

Our holistic approach to developing the best insulation solutions for hospitals and other medical facilities means we consider a range of performance parameters. These include energy efficiency, thermal bridging, fire resistance, internal comfort, acoustics, moisture, air tightness, and durability.

### ROOFING

When rest is essential for patient recovery, the sound of a helicopter ambulance landing or the noise of rain on a roof, can be a real issue. In a hospital environment, effective roof insulation will help minimise noise disturbance and support patient health.

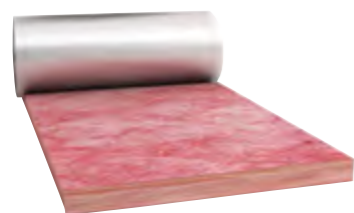
As well as acoustic considerations, quality insulation will also address thermal performance, fire resistance, and condensation control in hospital roofing systems.

Fletcher Insulation has a comprehensive range of insulation solutions to meet the most demanding performance requirements for all types of healthcare buildings.

- The Permastop® range of building blankets has thermal and acoustic properties to effectively reduce heat transfer and minimise the internal reverberation and flow of distracting noise, such as rain on a metal roof.
- The Permastop® range also enables architects and specifiers to optimise building space. Exclusive to Fletcher Insulation, our R3.6 Permastop® Building Blanket, for example, offers the highest thermal performance for a 130mm blanket on the market.

- To reduce thermal bridging, we recommend using Roof Razor® combined with Permastop®. Roof Razor® allows full recovery of the insulation blanket between the safety wire mesh and metal cladding. By combining these products, not only will you achieve optimum thermal performance, your building will meet or exceed NCC requirements.
- For healthcare buildings with a concrete roof structure, your best choice is our Pink® Thermal Slab product. With excellent thermal and acoustic absorption properties, this product drives energy efficiency, and helps control noise and temperature fluctuations common to concrete roofs. Pink® Thermal Slab provides excellent fire performance for ceiling lining applications, achieving a AS 5637.1 Group 1 NCC fire classification.

Within the healthcare setting, the effective management of indoor temperature, moisture and humidity is essential to prevent structural damage and protect the health of people using the building. Permastop® building blankets also help minimise condensation that often forms under metal cladding.



## HEALTH

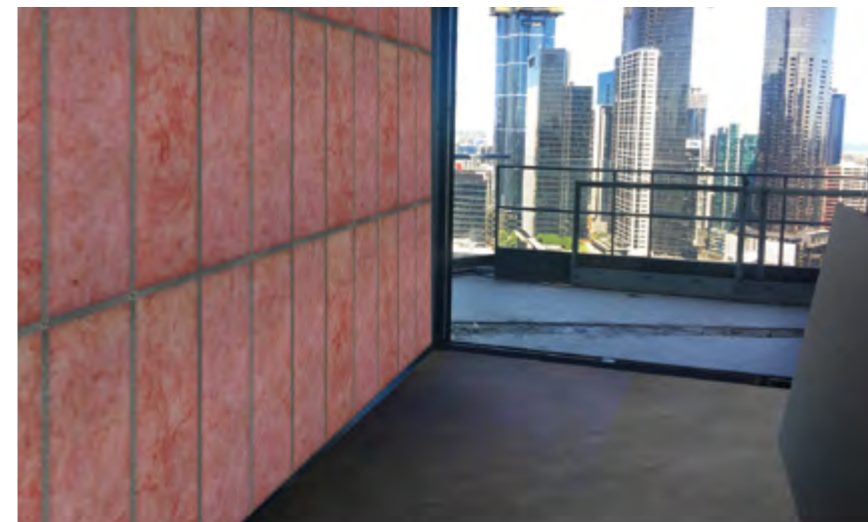


### EXTERNAL WALLS

Whether it's the continuous noise from external vehicles and air traffic, or the transient sound of ambulance sirens, the impact on patient health can be significant.<sup>3</sup> The consequences include an increased sensitivity to pain, sleep disturbance, and a decline in the effectiveness of patient rehabilitation. Staff may also be impacted. Noise disturbance may lead to an increase in fatigue, leading to error and occupational stress.

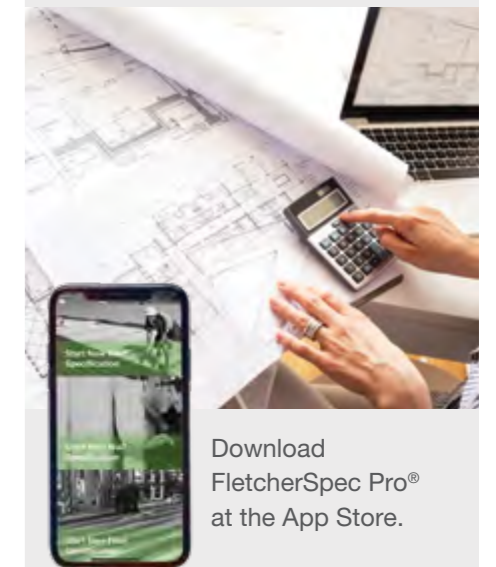
External wall insulation also has an integral role in managing energy efficiency, regulating thermal conditions within the building, and meeting fire performance regulations.

Fletcher Insulation's Pink® Partition range of glasswool insulation has outstanding, high-performance capabilities. With proven non-combustibility and acoustic performance, the product also features a comprehensive range of R-values, densities and thicknesses.



**Fletcher** Spec<sup>pro</sup>

When selecting the ideal insulation products for your design, we recommend using the FletcherSpec Pro® design specification tool. It quickly calculates Total System R-values to meet all National Construction Code (Section J) requirements. With outstanding data integrity and calculation accuracy, this handy tool is kept up-to-date with the latest NCC criteria, giving architects and specifiers complete confidence when specifying insulation products.



Download FletcherSpec Pro® at the App Store.

## FITOUT APPLICATIONS

In a busy hospital, insulation in internal walls, floors, and ceilings helps manage the acoustic environment, energy efficiency, and thermal comfort of patients, staff, and visitors. Our range of fitout solutions are designed to deliver long-lasting, exceptional performance under varying environmental conditions.

### CEILING, PARTITIONS AND SERVICES

Fire protection, thermal performance and acoustic performance. It's the job of ceiling and partition wall insulation to deliver on all three. Fletcher Insulation's Pink Partition range is ideal for all types of healthcare environments.

- Like all Fletcher Insulation glasswool insulation products, Pink Partition is non-combustible. Not only does it protect lives, but it also helps reduce the damage should a fire break out. This also means there's less disruption to the delivery of essential healthcare services, and significantly lower costs should a fire occur.
- Pink Partition insulation provides excellent thermal insulation properties, with R-values ranging from R1.2 to R3.0. By keeping buildings cooler in summer and warmer in winter, it helps meet the thermal comfort needs of patients, staff, and visitors in various hospital departments.

- The negative effect of high noise levels on both patients and staff in hospitals is significant.<sup>5</sup> As well as the adverse effects of noise disturbance on patient sleep, poor acoustic privacy can lead to poor health outcomes. Patients may withhold vital health information from health professionals if they think they may be overheard. Acoustic design guidelines from the Association of Australasian Acoustical Consultants (AAAC) recommend internal noise levels, reverberation times, and airborne and impact sound insulation to minimise the impact on patients and staff. These guidelines cover all types of spaces – from high traffic corridors to wards and surgical theatres.

Australian-made and using up to 80% recycled content, the Pink Partition range is designed to meet AAAC recommendations – from low to high ratings. It's another example of how Fletcher Insulation provides architects and specifiers with the products to help deliver optimised acoustic separation and performance within a healthcare building envelope.



## HEALTH



Made in Australia from up to 80% recycled content, the Pink Partition range is designed to meet AAAC recommendations – from low to high ratings. It's another example of how Fletcher Insulation provides architects and specifiers with the products they need to deliver optimum acoustic performance in all healthcare spaces.

Thickness mm	Density kg/m <sup>3</sup>	Material R-value	Sound Absorption Coefficients at Frequencies (Hz) of:										NRC	α <sub>w</sub>
			100	125	250	500	1000	2000	3150	4000	5000			
50	11	R1.2	0.15	0.16	0.63	0.88	0.98	0.99	1.00	1.01	1.06	0.85	0.85 (H)	
50	14	R1.3	0.14	0.12	0.30	0.86	1.00	1.02	1.02	0.99	1.04	0.85	0.85 (H)	
50	24	R1.4	0.16	0.17	0.69	1.02	1.09	1.03	1.07	1.04	1.06	0.95	0.95	
50	32	R1.5	0.08	0.16	0.66	1.04	1.10	1.02	1.03	1.05	1.03	0.95	1.00	
75	11	R1.8	0.26	0.27	0.91	0.99	1.04	1.00	1.06	1.05	1.11	1.00	1.00	
75	14	R1.9	0.24	0.24	0.91	1.01	1.03	1.00	1.08	1.03	1.06	1.00	1.00	
75	32	R2.2	0.24	0.24	0.91	1.01	1.03	1.00	1.08	1.03	1.06	1.05	1.00	
90	24	R2.5	0.36	0.43	1.16	1.11	1.05	1.07	1.04	1.07	1.06	1.10	1.00	
90	32	R2.7	0.32	0.58	1.14	1.05	1.05	0.99	1.05	1.04	1.03	1.05	1.00	
110	11	R2.5	0.40	0.42	1.08	1.10	1.02	1.09	1.09	1.06	1.06	1.05	1.00	

### HVAC

The Heating, Ventilation and Air Conditioning (HVAC) systems within a hospital are vital in creating healthy and comfortable indoor environment for patients and staff.

Local design requirements set out by TICA (Thermal Insulation Contractors Association) or state health authorities may apply for healthcare facilities. These guidelines need to be followed as well as the NCC, when determining duct insulation.

But they also have another role. Effective HVAC helps maintain the right indoor air quality conditions to prevent the harbouring of harmful pathogens.<sup>1</sup> Plus, it protects valuable medical equipment from potentially damaging humidity and varying temperatures.

The thermal properties of Fletcher Insulation's HVAC products offer both efficient temperature control and safe indoor air quality in hospitals. Our sound attenuation products complete our holistic systems approach by minimising noise when the HVAC is operating.

Non-combustible and safe to use, our HVAC range is flexible, lightweight and strong, making it ideal for specifying in hospitals, medical centres, and for other healthcare settings.



FI22 Ductwrap installed in a plant room at Royal Hobart Hospital.

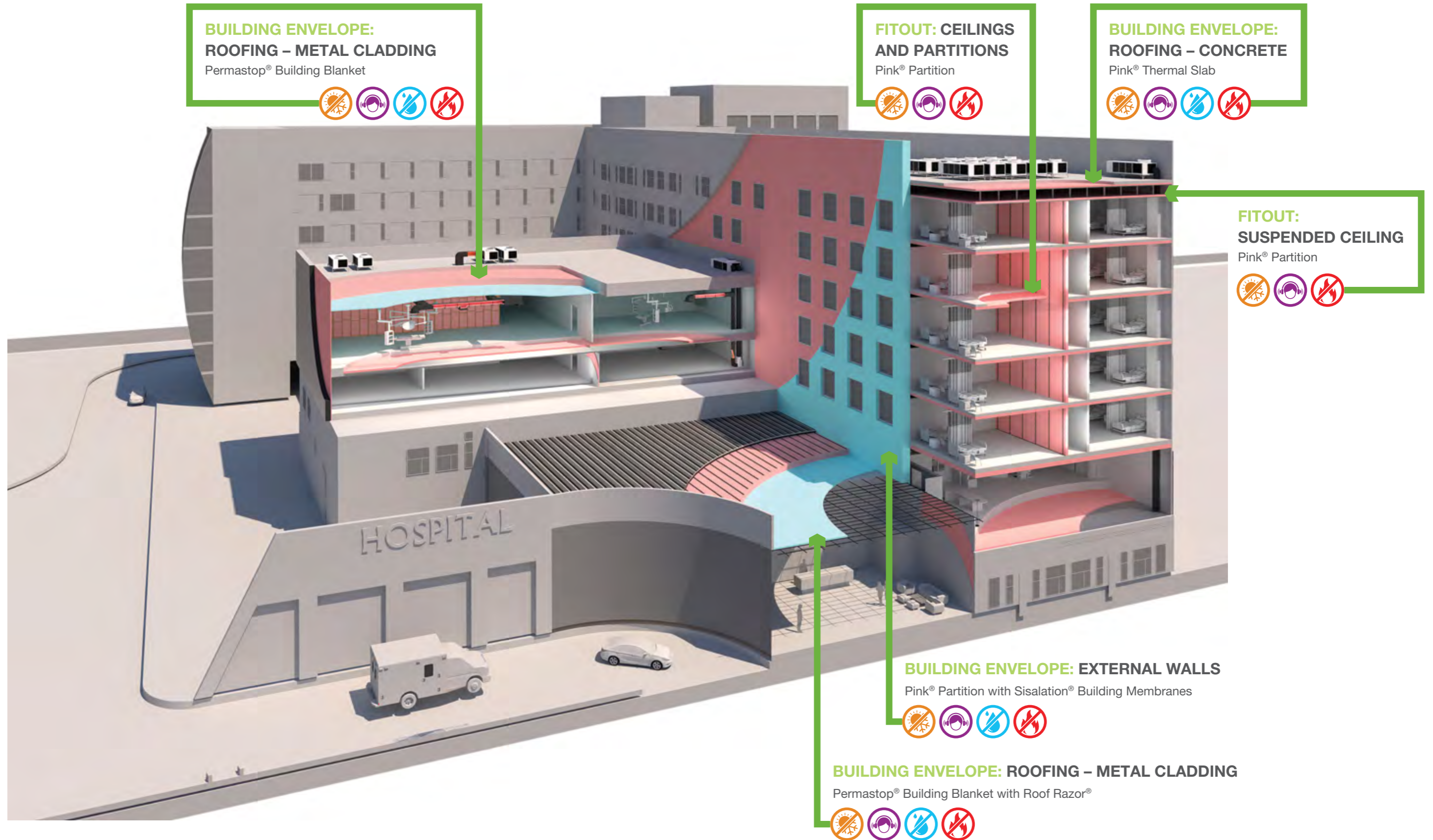
### SINIAT



When choosing building insulation materials, designers can rely on the Siniat systems, certified using insulation products by Fletcher Insulation. The Siniat range of selection tools are robust, save time and effort and include:

- **Siniat Blueprint** a handy technical manual for lightweight steel and timber frame construction; includes complete wall and ceiling insulation solutions for commercial and multi-residential projects.
- **Siniat System Selector** is an online tool that enables selection of the most appropriate and cost-effective wall and ceiling systems.
- **Siniat's library of BIM and CAD files** for all types of systems. Handy to confirm which Fletcher Insulation product is best to use in your design.

HOSPITALS



### SMALL PRIVATE HOSPITALS, DAY SURGERIES AND MEDICAL CENTRES





HEALTH BUILDINGS AND CONSULTANT ROOMS



## SELECTING FLETCHER INSULATION PRODUCTS FOR HEALTH BUILDINGS

Product selection	Product description	Roofing	External walls	Internal walls	Ceilings, partitions and services	Slabs and soffits	HVAC and plant rooms
Roof Razor®	An insulation spacer specifically designed for metal roof construction. It sits between the roof structure and the external cladding, creating a space for insulation to recover to its full nominal thickness, reducing thermal bridging. <b>Roof Razor</b> is a spacer solution to meet the Section J requirement of the National Construction Code (NCC) where insulation must maintain its position and thickness between purlins forming a continuous thermal barrier.	✓					
Roof Safety Mesh	<b>Roof Safety Mesh</b> keeps the insulation blanket in place, provides fall protection for roofing installers and offers long-term fall protection for maintenance and repair workers. Complies with the requirements of Australian Standard AS/NZS 4389 for safety mesh and with all Australian State and Territory Codes of Practice (Safe Work on Roofs Part 1: Commercial and Industrial Buildings).	✓					
Permastop® Building Blanket	Suitable for use in both metal roof and wall applications, as well as under slab concrete soffit applications. Provides effective thermal and acoustic performance by reducing heat transfer and minimising the internal reverberation and flow of unwanted nuisance noise generated from adjacent buildings/rooms and/or the external environment. Additionally, <b>Permastop Building Blanket</b> aids in minimising the risk of condensation that can form with metal cladding.	✓	✓			✓	
Permastop® Tropic Building Blanket	Specifically designed for use in Australia's hot and humid tropical regions to provide increased condensation protection to buildings. In these regions, it is customary to install the vapour barrier on the upper side of the building blanket which faces the roof sheet. This ensures the vapour barrier is installed on the warm side of the building to provide greater protection against the risk of condensation.	✓	✓				
Pink® Partition	Designed for use in commercial metal framed partitions, wall systems and ceilings, <b>Pink Partition</b> insulation delivers exceptional thermal and acoustic performance, contributing to the effective construction of comfortable, energy efficient commercial buildings. It is typically used in partition walls of low and high rise buildings and commercial fit-out healthcare projects such as hospitals and medical consult rooms where acoustic control is essential. <b>Pink Partition</b> may also be used as a ceiling overlay for enhanced thermal and acoustic performance. The range encompasses multiple densities, thicknesses and dimensions to suit commercial steel framed studs and to satisfy a broad spectrum of building requirements. Specification and installation of Australian made <b>Pink Partition</b> insulation enables designers and builders to satisfy National Construction Code (NCC) requirements pertaining to Energy Efficiency, Sound Insulation Provisions and Fire Resistance Performance.		✓	✓	✓		
Pink® SonoMatt Blanket®	Suitable for applications such as partitions, screens and baffles. The black tissue facing makes it ideal for installation behind perforated linings to improve the overall acoustic properties of the internal lining. In addition to providing exceptional acoustic performance, <b>Pink SonoMatt Blanket</b> provides the added benefit of thermal insulation and increases the overall Total R-value of a building envelope, thus improving the energy efficiency of a building. This allows architects and specifiers to satisfy both thermal and acoustic design requirements with the specification and installation of a single product.				✓		
Pink® Thermal Slab	Suitable for use in commercial under slab soffit applications where thermal and acoustic properties are pivotal in controlling noise levels and temperature fluctuations of concrete roofs, floors and walls. <b>Pink Thermal Slab</b> provides excellent fire performance for ceiling lining applications achieving a AS 5637.1 Group 1 NCC fire classification, and delivers excellent thermal performance, which in turn improves the energy efficiency of a building. It also provides the added benefit of exceptional acoustic absorption, which allows architects, specifiers and builders to satisfy both thermal and acoustic design requirements through the specification and installation of a single product.				✓	✓	



Royal Darwin Hospital



## SELECTING FLETCHER INSULATION PRODUCTS FOR HEALTH BUILDINGS

Product selection	Product description	Roofing	External walls	Internal walls	Ceilings, partitions and services	Slabs and soffits	HVAC and plant rooms
FI32 Semi-Rigid	The medium density specification of FI32 boards and blanket (32kg) provides excellent thermal properties and NRC acoustic values making it suitable for internal and external walls, and roofing systems where a high degree of acoustic performance is required. Available in both roll or board form to allow for greater design flexibility in commercial building applications including HVAC ducting applications. Also suitable for insulating storage tanks, process vessels, appliance cabinets, electrostatic precipitators, plant rooms and for use in the manufacture of acoustic baffles.		✓	✓		✓	✓
FI48 Rigid Board	The higher density specification of FI48 boards (48kg) provides greater thermal properties and NRC acoustic values making it suitable for internal and external walls, and roofing systems where the highest degree of acoustic performance is required for the building's design. Also suitable for HVAC ducting applications, insulating storage tanks, process vessels, appliance cabinets, plant rooms and for use in the manufacture of acoustic baffles.		✓	✓			✓
Sisalation® Foam Cell Multipurpose	Designed for use in wall and roof applications, Sisalation Foam Cell Multipurpose is an extra heavy duty 3-in-1 multipurpose sarking solution: insulation + thermal break + vapour barrier with a Group 2 fire hazard property rating. Ideal for use in NCC Building Classifications 2 to 9, it can reduce up to 95% of the sun's radiant heat, minimises the risk of condensation and acts as an effective water and vapour barrier when installed according to AS/NZS 4200.2.	✓	✓				
Sisalation® Metal Roof MD (433) and HD (453)	Suitable for use as non-vapour permeable sarking solutions in commercial and residential metal roof and wall applications, where the metal roof span does not exceed 1200mm unsupported or is 1200mm or more supported. Also suitable for tiled roof where the roof span does not exceed 900mm supported. Designed to provide an effective approach to managing condensation in the roof space and can assist in minimising draughts, enabling bulk insulation to perform more effectively. Additionally, provides an effective secondary skin against moisture, vapour, wind, heat and dust penetration.	✓	✓				
Sisalation® Vapawrap® Vapour Permeable Metal Roof	Suitable for use as a vapour permeable roof sarking solution in commercial and residential metal roof applications in Australia's colder climate zones, where the metal roof span does not exceed 900mm unsupported or is 1200mm or less supported. Also suitable for wall applications when a higher duty wall membrane is required. Provides an effective approach to managing condensation in the roof space by allowing the controlled escape of moisture from within the building. It also restricts the ingress of liquid water and dust from the outside environment and assists in minimising draughts, enabling bulk insulation to perform more effectively.	✓	✓				
Sisalation® Vapawrap® Vapour Permeable Residential Wall Wrap	Suitable for use as a vapour permeable wall wrap solution in low rise commercial and residential applications in Australia's colder climate zones. Designed for walls and gable applications in brick veneer and/or light weight cladding. Provides an effective approach to managing condensation in walls by allowing for moisture vapour inside the structure to escape, and assists in minimising draughts, enabling bulk insulation to perform more effectively.		✓				
Sisalation® Tuff Wrap™ Wall Wrap (497)	Suitable for use as a non-vapour permeable wall wrap solution in commercial wall applications, and in residential wall applications where permitted. Designed to act as a barrier that helps prevent water vapour from entering the building, as well as restricting the ingress of liquid water and dust from the outside environment, and assisting in minimising draughts for more effective bulk insulation performance.		✓				
Quadzero Loaded Vinyl Barrier	A foil faced flexible acoustic barrier highly suitable for inside cavities or over lightweight wall, ceiling and floor constructions. Ideal for operating theatres, partitions and medical rooms.				✓		✓



For information on HVAC products, please contact Fletcher Insulation.

## SUPERIOR BUILDING PERFORMANCE

Fletcher Insulation conducts extensive research and product testing ensuring all our products and solutions are compliant with the latest standards and building code requirements.



### FIRE

Safety is paramount in building design, with the reduction of fire hazards and prevention of spread of fire considered critically important for designers of healthcare buildings, especially considering the risk of evacuating patients and staff in the event of a fire.

Our specialists will advise you on passive fire prevention requirements for roofs, external wall construction, internal wall systems and HVAC services, including:

- **AS 1530.1** Combustibility (NCC 2022 Vol 1 C2D10)
- **AS 1530.2** Flammability of materials (NCC 2022 Vol 1 C2D10, C2D11 & Specification 7)
- **AS/NZS 1530.3** Fire Hazard Properties (NCC 2022 Vol 1 C2D11 & Specification 7)
- **AS 1530.4** Fire resistant construction (NCC 2022 Vol 1 C2D2)
- **AS 5637.1** Fire hazard properties (Group No) for wall and ceiling lining materials (NCC 2022 Vol 1 C2D11 & Specification 7)
- **AS 3959** Bushfire Construction up to BAL-FZ

Our products and solutions are compliant to the above relevant standards and safe for use in external cladding and internal partition applications, offering peace of mind and permitting architects to express design freedom in selecting cladding and partition materials.



### THERMAL PERFORMANCE

It is well established that thermal comfort contributes enormously to the well-being of building occupants, which is most critical in hospital environments. With the breadth of climate zones across Australia we make sure your design works whether in the extreme heat, extreme cold, or somewhere in between.

We also offer advice on NCC Class 9a thermal compliance, upgrade specifications and for general installation to deliver healthier and more sustainable outcomes.

Our Bulk Insulation products comply with:

- **AS/NZS 4859.1** Materials for the thermal insulation of buildings
- **AS 3999** Thermal Insulation of dwellings – Bulk insulation – Installation requirements
- **AS 4254** Part 1 and Part 2 Ductwork for air-handling systems in buildings
- **AS 4508** Thermal resistance of insulation for ductwork used in building air-conditioning
- **NCC 2022 Vol 1** Part J4D2–J4D4, J4D6–J4D7 and J6D6

Building membranes/wraps specification and installation compliance with:

- **AS/NZS 4200.1** Pliable building membranes and underlays – materials
- **AS 4200.2** Pliable building membranes and underlays – Installation requirements
- **NCC 2022 Vol 1** F3D3



### ACOUSTICS

Healthcare has its own set of demands when it comes to the acoustic treatment of walls, ceilings, and services. Our solutions deliver peaceful environs for patients and healthcare staff.

Our products assist in reducing airborne sound through ductwork, and wall and floor construction, in accordance with:

- **AS/NZS ISO717.1** Acoustics – Rating of sound insulation in buildings and of building elements
- **AS/ISO 11654** Acoustics – Rating of sound absorption – Materials and systems
- Project specific high-performance acoustics

Our high density acoustic insulation helps target broad spectrum frequency bands for all round acoustic attenuation in:

- Specialised medical consultant rooms and operating theatres
- Plant service rooms
- HVAC ductwork



### CONDENSATION AND MOISTURE MANAGEMENT

With the vast contrasts in climates and myriad construction systems available, specifying the correct material layers can be very challenging.

We help identify which systems work best in different climates to avoid interstitial condensation – leaving the worry and specification details to us.

We can assist in compliance with:

- **AS/NZS 4200.1** Pliable building membranes and underlays – materials
- **AS 4200.2** Pliable building membranes and underlays – Installation requirements
- Moisture control membranes tested to **ASTM-E96** (Vapour control) and compliant with **AS 4201.4** (Water control)
- **NCC 2022 Vol 1** Part F8D3
- Project specific humidity control

Our membranes and insulation systems can be tailored for vapour permeable or barrier construction, with nominated air control layers and air-tight tapes, so you don't have to worry about matching project specific climatic and/or humidity control requirements.

## COMPLIANCE AND DESIGN ASSISTANCE



Fletcher Insulation is an active member of the **Green Building Council of Australia (GBCA)**, exceeding 10 years of recognition for our commitment to providing energy efficient insulation and acoustic solutions to the residential, commercial and HVAC markets.

As a long-term member of the GBCA, we are upholding our commitment to providing products for a sustainable built environment. As a GBCA member it enables us to contribute our technical and commercial expertise to the development of new Green Star rating tools and obtain access to all Green Star information. This information includes project directories, technical guidelines to support and/or assist our customers with Green Star project submissions and example submissions. The benefit to architects and specifiers, is that they can meet and raise the Green Star rating of their building projects by incorporating our range of Fletcher Insulation products.



**WELL** is the leading tool for advancing health and well-being in buildings globally. Fletcher Insulation can provide you with advice and solutions to help you deliver improved results in the areas of air quality, thermal comfort and sound.



**FletcherSpec Pro**® is a Fletcher Insulation app developed to overcome many traditional issues architects and builders face when specifying insulation. The app provides a near complete support structure, guiding users through the entire insulation specification process.

FletcherSpec Pro® delivers centralisation of the multitude of tasks associated with typical System R-value calculations including but not limited to; determining the relevant climate zone, referencing applicable energy efficiency requirements, considering solar absorption values of roof cladding and selecting the correct insulation products for the application. This drastically minimises the need to manually cross reference inconsistent or out-dated handbooks, technical data sheets and so on. Instead, users simply answer a series of targeted questions which the app uses to determine relevant energy efficiency requirements as outlined in the National Construction Code Deemed to Satisfy provisions. The app then progresses to calculate the Total R-value of the design based on the inputs entered by the user.

## TECHNICAL DATA SHEETS AND INSTALLATION GUIDELINES

Visit [insulation.com.au](http://insulation.com.au) to discover the excellent array of technical information available to download, whether you need to get into the product details yourself, or reassure the project team that our products are compliant, and safe and easy to install.



## TECHNICAL SUPPORT

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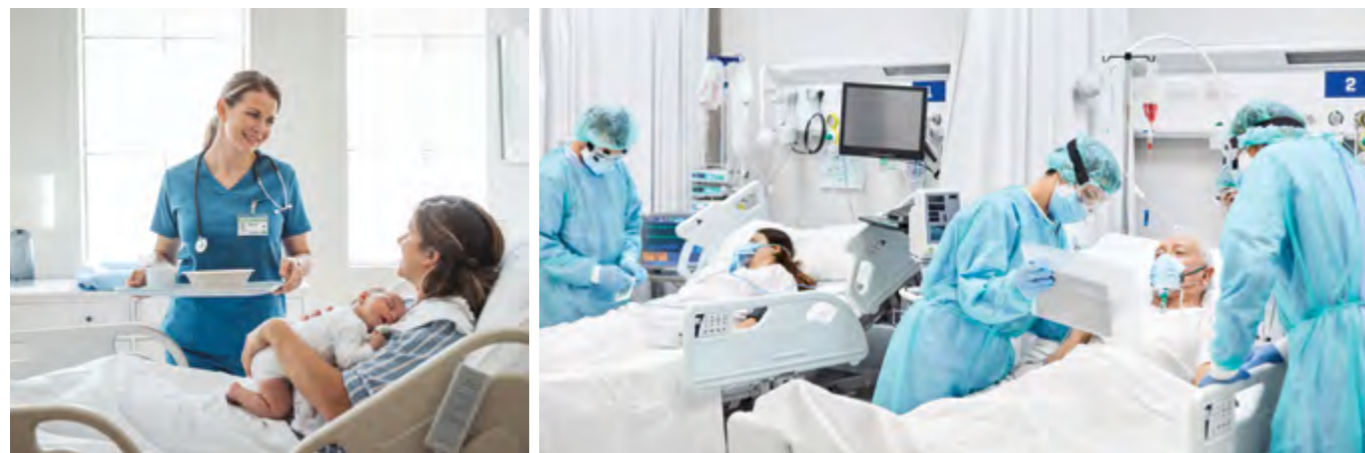


**ADDENDUM:**  
**HEALTH CARE BUILDINGS**

Extract from Association of Australasian Acoustical Consultants Guidelines

**Table 1: Recommended acoustic separation requirements (D<sub>w</sub>)**

Useage	Indicative acoustic separation	
	Adjacent*	Corridor**
Single bed ward (including Mental Health, Parent Accommodation)	40	25
Multiple bed ward	40	25
Ward ensuites	40, Discontinuous	15
Consulting, examination, interview, counselling/bereavement	40	25
Treatment, procedures, surgeries	40	25
Morgue presentation areas	45	25
Birthing room/delivery suites	45	25
Laboratories	40	20
Clean utility/Dirty utility/drug storage or preparation	35	15
Speech and language therapy	40	25
Audiology/audiometry	As per AS 1269.4	-
Dental clinics	45	25
Rehabilitation areas	40	25
Hydrotherapy	45	25
General intensive care wards	45	25
Neonatal or paediatric ICUs (NICU/PICU)	45	30
Pharmacy offices	35	20
Kitchens, sterilisation and service areas	40	-
Operating theatres	40	25



Recommended acoustic separation requirements (D<sub>w</sub>) (cont.)

Useage	Indicative acoustic separation	
	Adjacent*	Corridor**
<b>Public areas</b>		
Corridors and lobby spaces	-	-
Cafeterias/dining	40	15
Family and parents' lounges	40	20
Toilets, amenities	40	15
Waiting rooms and reception areas	40	-
Multi-faith, chapel, lecture theatres, cinemas, multipurpose rooms	Specialist design input required	
Radio broadcast, interview or audio editing	Specialist design input required	
Outdoor seating or activity areas	-	-
<b>Staff areas</b>		
Enclosed nurse stations	35	-
Boardroom/conference	45	25
Private offices	35	20
Executive offices	40	25
Cellular offices (2-4 desks)	35	20
<b>Utility rooms</b>		
Amenities, locker rooms	40	-
Morgue – grossing stations, observation areas	55, Discontinuous	-
<b>Infrastructure</b>		
Engineering, workshops	55, Discontinuous	-
Plantrooms, generators	55, Discontinuous	-

\*Minimum values to nearby noise-sensitive enclosed rooms where no common door exists – where interconnecting doors are proposed, these criteria are very difficult to achieve without effective spatial planning. Discontinuous walls as defined by the National Construction Code are recommended for impact or wall attached noise sources.  
 \*\*To circulation corridor, where the intermediate partition is a solid wall with an operable door or air lock. Subtract 5 dB for listening areas with a visual connection (easily visible to the occupants of the space). Note that walls without a door onto a corridor would fall into the 'Adjacent' category.

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