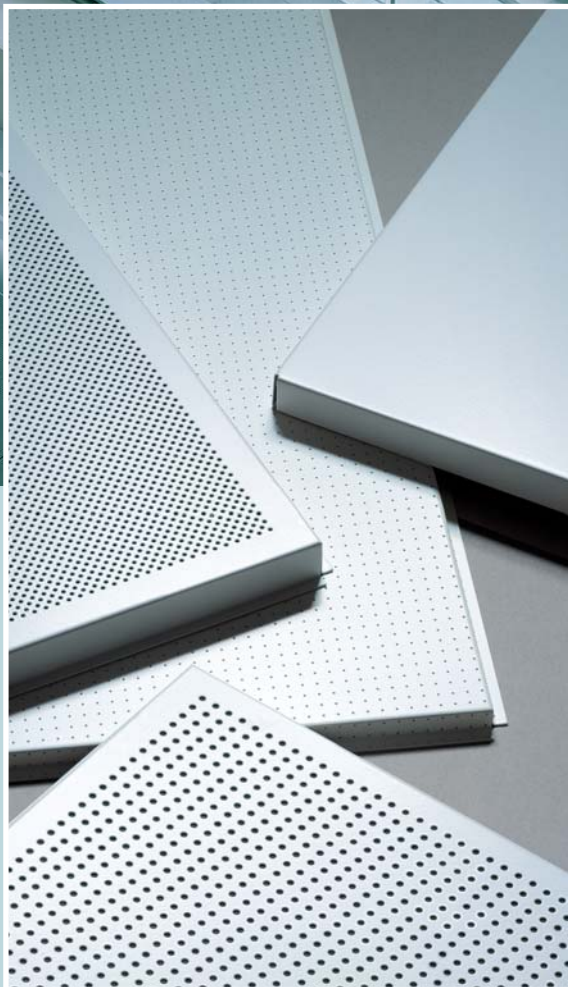


CEILING SYSTEMS

Between us, ideas become reality®

Armstrong
METALWORKS
Metal Ceilings



Armstrong



Armstrong METALWORKS Metal Ceilings

CORPORATE PROFILE

Armstrong ceiling solutions offer the highest levels of reliability and performance.

As the world's leading manufacturer of acoustical ceiling systems, the Armstrong name is synonymous with quality – from our outstanding range of products through to our project management, distribution and support services. Armstrong ceiling solutions combine innovation with tradition, safety with functionality, and aesthetic appearance with practicality.

We believe that our collaborative approach is the key to our success. Armstrong works closely with an ever-increasing number of customers, building owners, developers, architects, and contractors who have come to rely on our innovative strength and project expertise to turn even the most complex and challenging concepts into an inspiring reality.



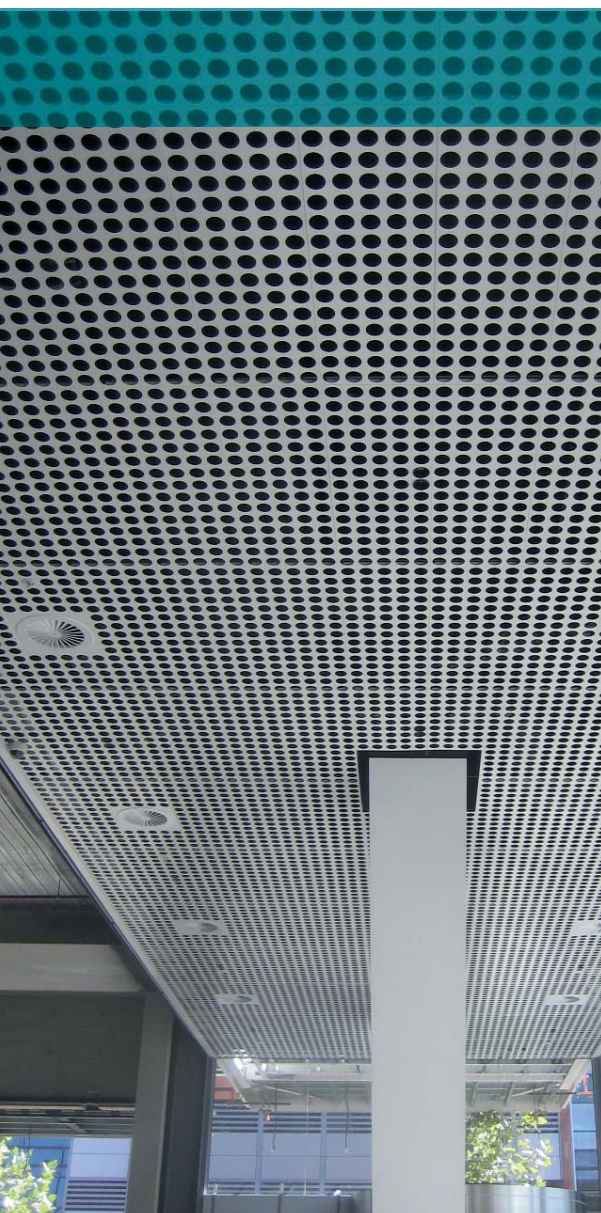
High quality smooth appearance.

A wide range of perforations are possible.

METAL CEILINGS

Armstrong specialises in the development, manufacture and international sales and marketing of metal ceilings. We offer a selected range of standard panel types and systems that cover most general metal ceiling requirements while delivering high quality specialised and custom solutions at a cost effective price.

Whatever your requirements, Armstrong will endeavour to integrate your lighting, air conditioning, acoustic, information technology and fire protection needs into one harmonious ceiling solution.



The Gauge, Docklands, VIC

ARMSTRONG SERVICES

Armstrong has the people, the products and the facilities to deliver quality ceiling solutions throughout Australia and New Zealand.

A world-class organisation

Over the years Armstrong has produced millions of square metres of ceilings for customers around the world. In every location, the Armstrong trademark represents high standards of materials and workmanship.

State-Of-The-Art Manufacturing

With access to modern, fully equipped production facilities and flexible product solutions, Armstrong has the capability to meet ceiling construction needs now and in the future.

Custom-Made Ceilings For Any Purpose

If you have a requirement over and above the wide range of standard products featured in our range, we will be happy to provide a customised solution for your project.

Chilled Beam / Under-floor Air Compatible

Armstrong metal ceiling systems can be specifically engineered to integrate with chilled beam and under-floor air management systems.

Guarantee

The durability and longevity of metal ceilings is a feature of their popularity. Combined with our suspension system, Armstrong metal ceilings are guaranteed for 15 years.

Quality throughout

Armstrong is known for quality the world over, and has achieved ISO 9001 / 9002 accreditation. Armstrong staff recognise the importance of maintaining quality in both our products and customer services, and it is their commitment that places us amongst the leading international providers of metal ceiling solutions.



Sales expertise in your area

Supported by engineers, the Armstrong sales force is the most experienced in the industry and is well equipped to identify the most appropriate ceiling systems and ensure the ordering process goes smoothly.

Fast and effective service

Because of the fast pace of the modern building industry, construction materials must be readily obtainable. At Armstrong, we have a reputation for meeting market demands with high availability and on-time delivery of products.

Armstrong Metal Ceilings are made in:

Switzerland – St. Gallen
Austria – Rankweil
China – Shanghai
England – Stafford
USA – Lancaster



Website

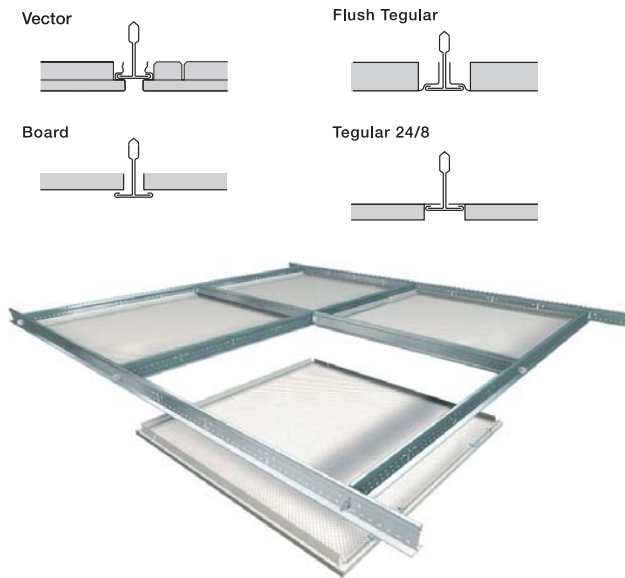
The Armstrong website has been created as a user friendly performance tool to meet your design requirements. It is updated continuously and provides fast access to practical information at the click of a button. Among its many functions you can discover new products, select a ceiling from various criteria, and order samples and literature.

www.armstrongceilings.com.au

LAY-IN and VECTOR

The simplicity of Lay-In ceiling systems is the key to their popularity. The tiles are easily lifted out of the grid by hand, allowing full access to the ceiling void. Designed primarily for use with conventional 24mm wide exposed tee grid, the lay in system is available in Square, Tegular, Flush Tegular and MicroLook Tegular (15mm Grid) edge profiles.

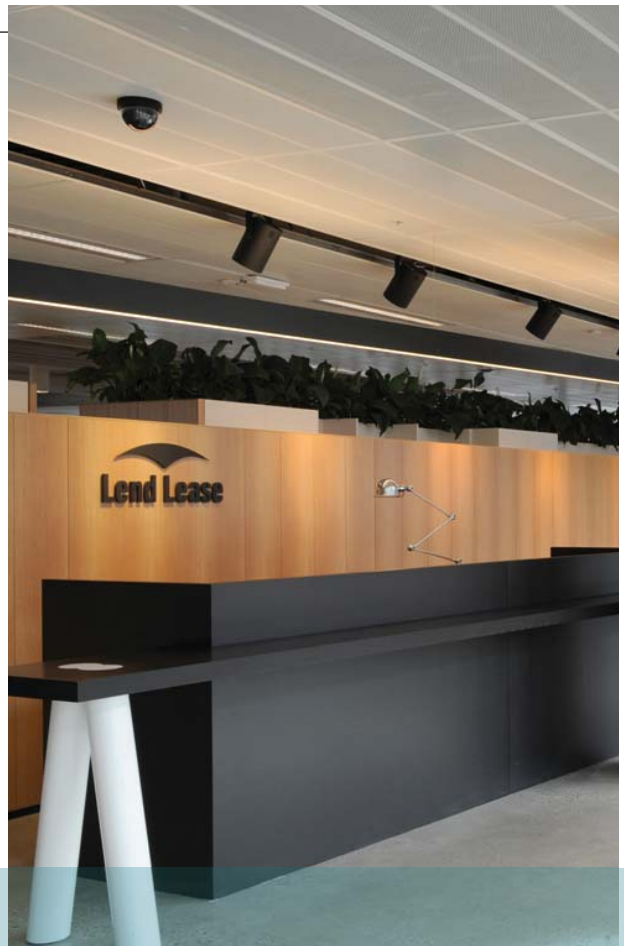
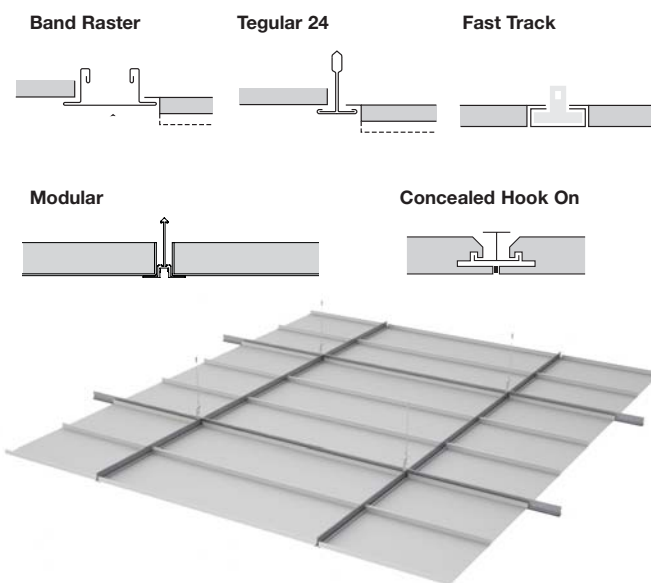
Vector Ceiling Panels achieve a semi concealed appearance, while installing on a conventional 24mm tee system.



KPMG's Head Office in Milton Keynes UK

PLANKS / MODULAR

There is virtually no limit to the possibilities of the Planks family of ceiling panels. Rectangular in design and installing on 24mm Tee, Bandraster, Concealed Hook On or Modular Ceiling Grid Systems, Planks offer a fully accessible, contemporary ceiling solution. Planks are available to suit a wide range of modules, including 1200, 1350 and 1500mm designs.

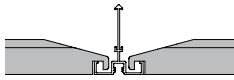


The Gauge, Docklands, VIC

ONE WAY HOOK-ON

The One Way Hook On System provides the perfect balance between form and function, being suitable in a wide range of commercial applications. The One Way Hook On System combines the clean monolithic visual of a fully concealed system with the practicality, and robustness of a two way system. Ceiling panels are simply laid into position and “hooked” onto the primary suspension rails. Access to the plenum is equally simple, with individual panels being easily removed without the use of tools. One Way Hook On systems are available for most module sizes, including 1200, 1350 and 1500mm designs.

One Way Hook On

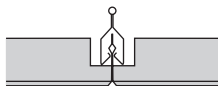


ANZ Docklands, VIC

CLIP-IN

Clip-In is a popular choice for specifiers requiring a concealed grid metal ceiling. The refined 3mm bevel or traditional 5mm bevel bring a monolithic appearance to the ceiling design. The panels are secured into position by simply “clipping” them into the suspension grid. Clip-In panels are downward demountable by use of an extractor tool and provide full access to the plenum.

Clip-in



Millennium Point in Birmingham in UK

ARMSTRONG METALWORKS™ CEILINGS FOR GREEN STAR PERFORMANCE

Chilled Beam and Under-floor Air Compatible

In the pursuit of energy efficiency, many A-Grade commercial buildings are employing alternative systems to traditional HVAC. Under floor air displacement and chilled beams are two such systems. Armstrong is a leader in the manufacture and supply of metal ceilings, engineered to integrate with either under-floor air or chilled beam systems, allowing precise airflow through the ceiling into the workspace. Armstrong's "under-floor air and chilled beam compatible" metal ceilings suit either concealed or exposed grid systems, with a range of standard panels that achieve optimum flatness and rigidity combined with high open area.

Recent Project References:

ANZ HQ, Docklands, VIC
 The Gauge, Docklands, VIC
 City Central 2, Adelaide, SA
 500 Collins Street, Melbourne, VIC
 Deutsche Bank Place, Sydney, NSW
 11 London Circuit, ACT
 University of Melbourne, Economics Building, VIC



The Gauge, Docklands, VIC



ANZ HQ, Docklands, VIC



City Central 2, Adelaide, SA



500 Collins Street, Melbourne, VIC



500 Collins Street, Melbourne, VIC

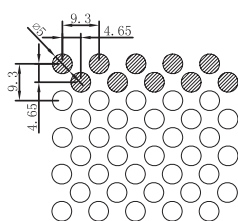


The Gauge, Docklands, VIC

"TYPICAL CHILLED BEAM COMPATIBLE" PERFORATION DESIGNS

Contact your Armstrong Office or visit our web site for other options

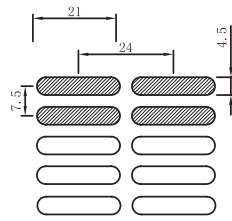
P25



No. P25 | Max. width
Thickness
Open Area

576.6mm
0.5~0.7mm
45.38%

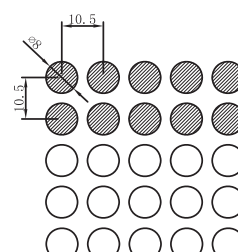
P29



No. P29 | Max. width
Thickness
Open Area

1053mm
0.7mm
50%

P31

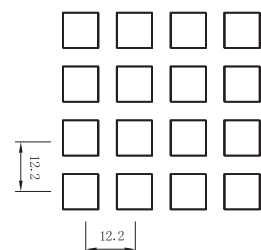


No. P31 | Max. width
Thickness
Open Area

1050mm
0.5~0.8mm
45.6%

Qg 8043 (G)

Details available on request



300C PLANK SYSTEM

Key Selection Attributes

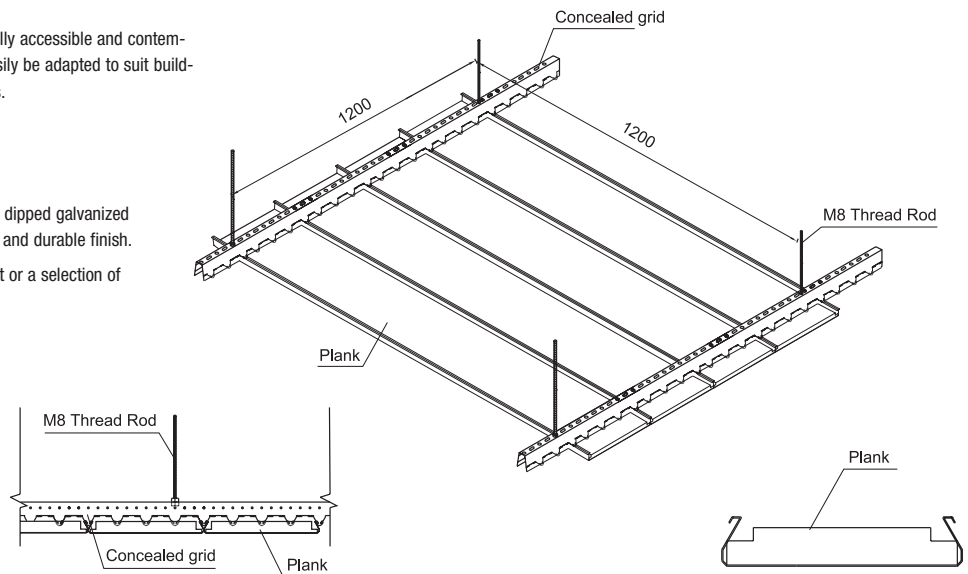
Armstrong Metalworks Plank System offers a fully accessible and contemporary ceiling solution for large areas. It can easily be adapted to suit building layouts and unique aesthetic requirements.

Features

- Install with minimum plenum clearance
- Both panel sides are produced from fully hot dipped galvanized steel or aluminium which provides a smooth and durable finish.
- Available in polyester pre-coated baked paint or a selection of powder coated finishes

Application

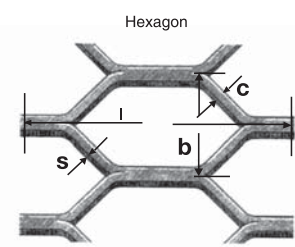
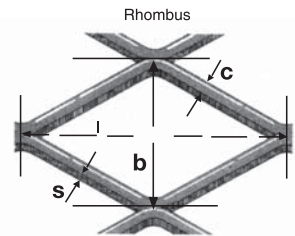
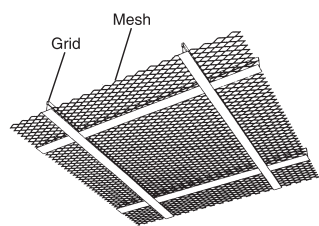
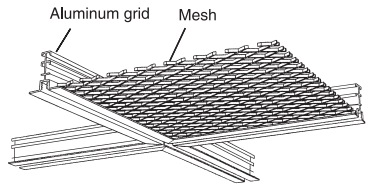
- Retail Stores
- Airports
- Commercial Offices and Corridors
- Hospitals
- Education Facilities



Tampa International Airport, Terminal C, Tampa, FL

MESH CEILING SYSTEMS

Armstrong Mesh Ceilings generate a contemporary feel of open space with simple flexible design options. Lay in Mesh ceiling panels are available in two primary patterns, and finished in Global White or Satin White to match standard Armstrong grid systems (custom colours and mesh designs also available upon request). Armstrong Mesh Ceilings are produced from galvanised mild steel, however also available stainless steel for a contemporary finish.



Mesh size parameter				
B	I	C	S	kg/m2
2.5	4.5	1.0	1.0	3.5
5.0	10.0	1.0	1.0	3.5
4.5	12.5	1.0	1.0	3.5
5.6	12.5	1.0	1.0	3.5
5.0	14.0	1.0	1.0	3.5
8.0	16.0	1.0	1.0	2.9
8.5	16.0	1.0	1.0	2.9
9.0	20.0	1.0	1.0	2.9
12.0	20.0	1.0	1.0	2.9
12.5	30.5	1.2	1.2	3.6
15.0	25.0	1.5	1.5	3.6
Remarks: Mesh can be made per customer request. The min quantity for special is 500sm.				

ANZ HQ, Docklands, VIC

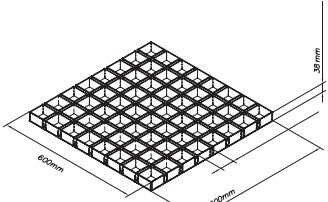
OPEN CELL SYSTEM

Armstrong Open Cell Ceiling Systems offer decorative, durable and functional design solutions for open ceilings. Available in 4 design options, Armstrong Open Cell panels simply install in a standard 1200x600 or 600x600 Suprafine 14mm grid system, which provides full access to services in the plenum.

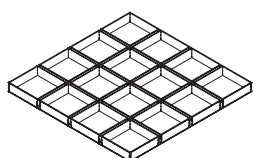


Southern Cross Station, Spencer Street, Melbourne

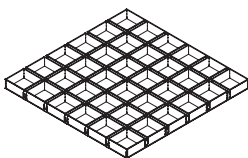
Open Cell Designs



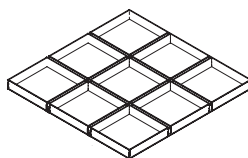
75mm x 75mm Cells



150mm x 150mm Cells



100mm x 100mm Cells



200mm x 200mm Cells

Armstrong Specialty Ceiling Range

ARMSTRONG METALWORKS WINGS

Armstrong MetalWorks Wings creates a 3 Dimensional accent to the ceiling space and the perfect solution for exposed structures or lobbies, reception areas, boardrooms or in specialty retail applications. Featuring a suspended centre spine, Wings comprises of 10 easy to install aluminium panels, with a total span of 2.4 x 3.0m. Armstrong MetalWorks Wings is available in variety of colours and either non perforated or Micro-perforated finish to enhance the acoustical performance of the environment.



ARMSTRONG METALWORKS CANOPIES

Armstrong MetalWorks Canopies can be used to define spaces, accentuate an area, provide focus and create ceiling sculptures. Canopies come in three different designs (flat, concave and convex), and can be used independently or as groups and arrays. Canopies feature a high light reflective, "Extra Microperforated" pattern and finished in a durable paint, making them easy to clean and maintain. Each Canopy panel is 1890 x 1180mm and installation is fast and simple, perfect for new or retrofit applications. In addition to elegant design, Canopies provide the benefit of local acoustic comfort, enhancing speech intelligibility to any area or working zone.



TECHNICAL SOLUTIONS

METAL TYPES, PERFORATIONS, FINISH AND COLOURS

- Metal Types**
 Armstrong metal pan ceiling panels, although typically made from steel are also available in aluminium.
- Perforations**
 While a vast array of perforation designs are available, globally, there are three standard designs that provide a good balance between acoustical comfort, light reflectance and visual appeal.
- Finish**
 Armstrong metal panels are finished with a durable electrostatic, factory applied polyester powder coat.
- Colours**
 Armstrong metal ceiling panels are finished in standard "Global White" to match the Armstrong Peakform™ steel suspension grid. RAL or other special colours are available on request.



SEMI-STANDARD DETAILS

The ability to integrate building services equipment is a major feature of metal ceiling systems. Metal tiles can be engineered with cut-outs, apertures and special details to accommodate the proliferation of services utilised in today's modern building projects. Lighting fittings, air conditioning grilles and fire protection equipment need to be harmonised with the ceiling system. Special size and half module tiles can also be produced when necessary to finish ceilings at perimeters and other junctions.

LIGHT REFLECTANCE

Pattern	Global White	Note: Contact your Armstrong Office for other high light reflective options.
Plain (unperforated)	77%	
Extra microperforated with black fleece	76%	
Microperforated with black fleece	63%	
Standard perforated with black fleece	68%	



ACOUSTIC SOLUTIONS

Over the years, specifiers have come to realise that one of the advantages of perforated metal ceilings is their ability to maintain the same visual appearance across the project while varying the acoustic performance in different areas according to need.



Armstrong has carried out laboratory acoustic tests on an extensive range of infill materials. As a result, and in keeping with our high quality at an economic price, we have selected two infill types for our standard tile range, acoustic fleece and Premium B 15 which we believe cater for most acoustic applications.

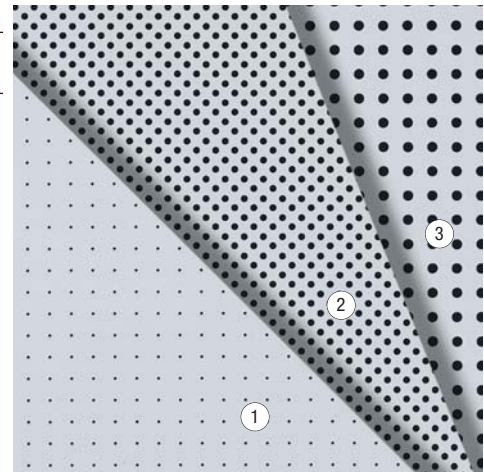
Acoustic Fleece

For most general open plan areas, non-woven acoustic fleece provides a good level of absorbent performance. The acoustic fleece fitted to Armstrong metal ceiling tiles is heat bonded to the rear of the tile and optimises flow resistance characteristics for the best absorption results.



Premium B 15

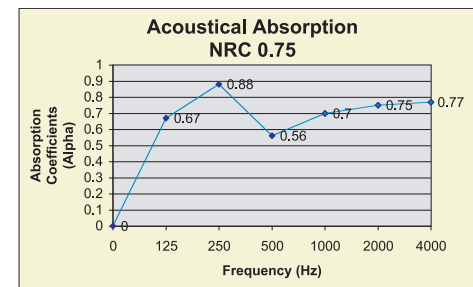
Specifically developed by our mineral ceilings division for use with the Armstrong metal tiles, Premium B 15 is an infill material that blends high sound attenuation and absorption performance in one simple infill solution.



Perforations	Hole Diameter x Open Area
1. Extra Microperforation	0.7mm x 1.5%
2. Microperforation	1.5mm x 20%
3. Standard Perforation	2.5mm x 16%



The variety of building services requires flexible manufacturing details



Typical sound absorption values	α_w / NRC
Standard perforation with acoustic fleece	0.70(L) 0.70
Standard perforation with Premium B15	0.60(H) 0.60
Microperforation with acoustic fleece	0.75 0.80
Microperforation with Premium B15	0.60(H) 0.60
Extra microperforation with acoustic fleece	0.55(L) 0.65
Extra microperforation with Premium B15	0.65 0.60

Typical sound attenuation values	Dncw	Dncw
	with acoustic fleece	with Premium B15
Standard perforation	20 dB	41 dB
Microperforation	20 dB	41 dB
Extra microperforation	30 dB	40 dB

A SUITABLE CEILING

OFFICE

People spend an average of 1800 hours per year in the office. Consequently it is not just a working space. It is important that the level of comfort is taken into account and be flexible enough to integrate new technologies.

- Design • Lighting • Acoustics • Integrated services • Durability



RETAIL

Ambience and product presentation are key elements for a successful retail business. In this scenario, the choice of a ceiling can play an important role.

- Acoustics • Demountability • Design • Durability



TRANSPORT

Design and functionality play an important role in transportation ceiling design. Due to the high density of traffic, durability and demountability are critical factors to be taken into consideration in the overall design.

- Design • Acoustics • Demountability • Durability



HEALTH

Every medical environment requires special treatment. In one instance, hygiene is the prime consideration. There are many criteria, which have to be taken into account for the safety and comfort of staff, doctors, patients and visitors.

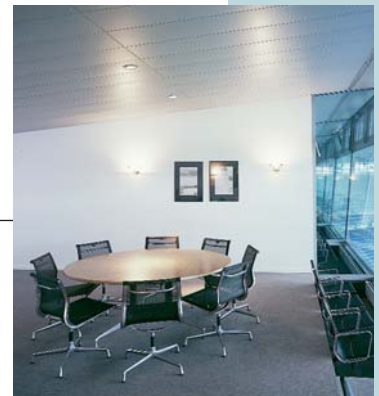
- Washability • Demountability • Acoustics • Design • Light reflectance



LEISURE

To create the right atmosphere, product presentation, combined with performance are critical elements of the ceiling space.

- Acoustics • Design • Durability • Light reflectance



HOSPITALITY

In clubs, restaurants and hotel facilities, a combined solution of form and function will always be a major concern.

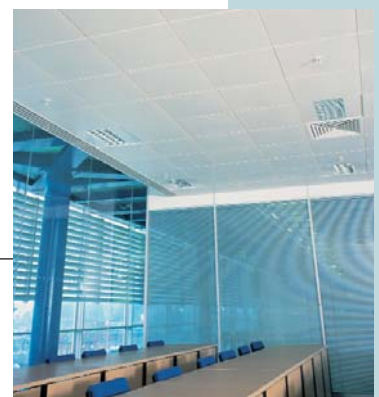
- Acoustics • Design • Integrated services • Durability and strength • Washability and hygiene



EDUCATION

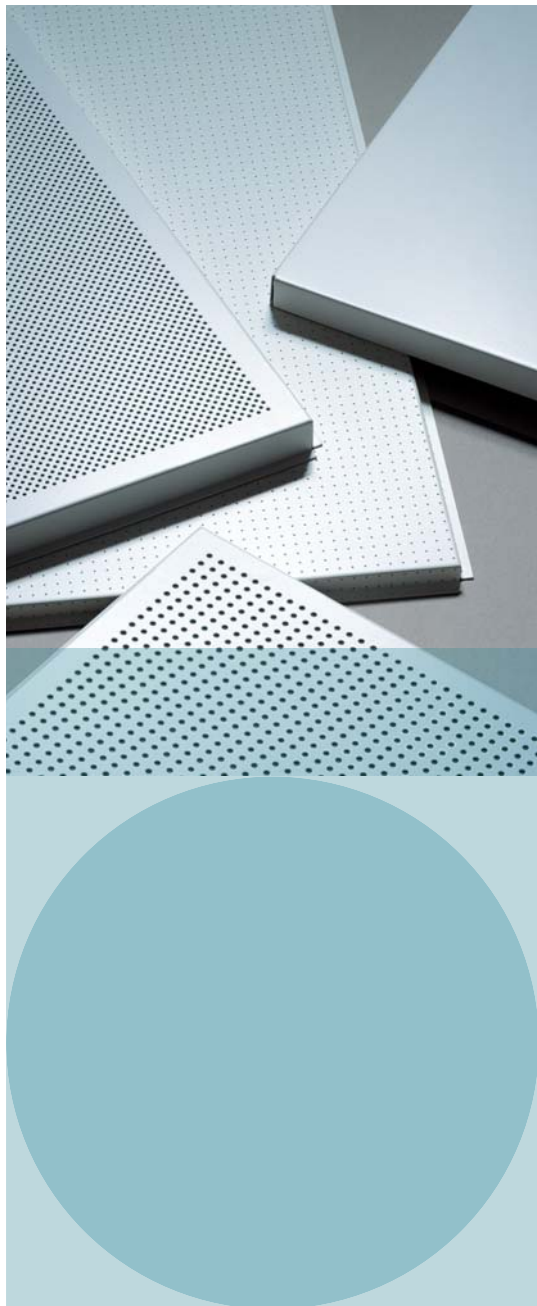
Good acoustical design can increase the ability of teachers and pupils to communicate effectively, which result in an enhancement of the learning process.

- Acoustics • Design • Light reflectance • Integrated services • Durability and strength • Washability and hygiene • Budget



CEILING SYSTEMS

Between us, ideas become reality®



Armstrong, the Global Leader in Acoustic Ceilings

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Braeside VIC 3195

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Facsimile (03) 9587 5139

QLD/NT

Armstrong World Industries Pty. Ltd.
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Slacks Creek QLD 4127

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Facsimile (07) 3809 5507

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376 Cormack Road,
Wingfield SA 5013

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Bayswater WA 6053

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Forman Building Systems Ltd.
PO Box 12349,
Penrose, Auckland

Telephone 64-9-276 4000
Facsimile 64-9-276 4141

www.armstrongceilings.com.au

