



# Product Guide

A concise guide to our  
products and services

[supertecceilings.co.za](http://supertecceilings.co.za)

**SUPERTEC**  
Ceilings & Board





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## ■ ABOUT US

For over a decade Supertec has provided a complete solution to your ceiling and partitioning requirements. Not only do we pride ourselves in being one of the **leading manufacturers of steel ceiling & partitioning systems**, but through national network of branches we have become one of the largest **suppliers** and **distributors** of well known brands including:

**Gyproc / Knauf Ceiling Solutions / Rockfon / Etex / Fabufill / Casofour & More.**

Supertec Ceilings takes pride in ensuring that the products and systems that we supply conform to industry standards. The South African Bureau of Standards is a statutory body which develops, promotes and maintains South African National Standards (SANS); promotes quality of commodities, products and service; and renders conformity assessment services. Our products are therefore inspected and tested according to the relevant SANS standards. Standards that we use as reference include (but are not limited to) the following:

- SANS 266:2003 Gypsum Plasterboard
- SANS 803:2005 Fibre Cement Boards
- SANS 622:2005 Gypsum Cove Cornice
- SANS 10400 Part XA: Energy Usage in Buildings
- SANS 10400 The Application of the National Building Regulations

The South African Building Interior Systems Association (SABISA) is an organisation that falls under the Association of Architectural Aluminium Manufacturers of South Africa (AAAMSA). This association represents the ceiling and partition industry at national forums and ensures that the correct standards and practices are adhered to. The SABISA guidelines for the installation of ceilings and partitions are frequently used by the Built Environment Professions as specifications as well as a basis for dispute resolutions. Supertec Ceilings is an active member in SABISA and is also involved with maintaining and enforcing the relevant standards with regards to ceiling and partition installations.

Services include but are not limited to formulation and revision of guidelines and various standards, site inspections, certifications and recommendations, electronic certification for members, workshops and facilitating open discussion of industry matters.





## ■ SERVICE OFFERINGS

**Technical Advice and Support** - Supertec Ceilings are there to assist you with any technical advice and support that you may need. We are available telephonically or via email and will gladly meet with you to discuss your requirements.

**General Training** - We are passionate about all areas of the Ceiling and Partition Industry. From Architects to Contractors to Warehouse and Distribution Managers – Supertec Ceilings is committed to provide training on specification, solutions and product. Both theoretical and practical training is on offer at various locations in South Africa.

**Specification Consulting and Project Packs** - Supertec Ceilings is a product independent supplier with a strong focus on specification. Our range of specifications are in accordance with South African product and performance standards as opposed to a particular product. This allows the best and most economic product to be used in strict accordance to quality and standards.

Our Specification Consulting Service is aimed at working with industry professionals to produce product independent solutions based on standards and certifications required to achieve the required performance as stipulated by SABISA and SANS Projects packs can be made up to suit your unique requirements for a particular project with tailor made specifications and solutions.

**Acoustic Predictions on Systems** - Supertec Ceilings has software that can predict the sound performance of ceiling and drywall partition systems. We can also design systems to achieve specific acoustic performance criteria.

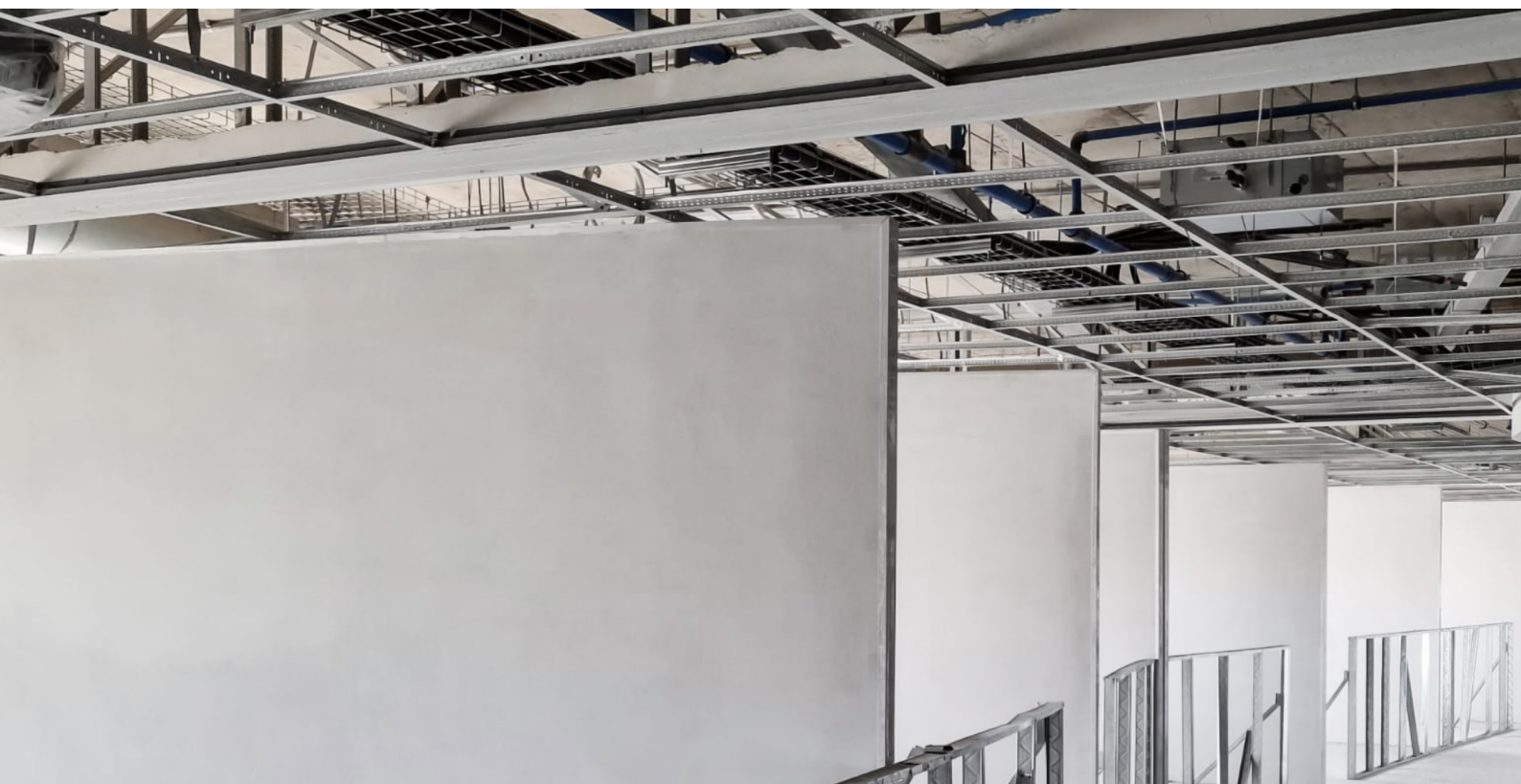
**Material Take Offs and Pricing** - We are able to assist contractors with plans and Take Offs where necessary in order to produce a material list for pricing.

**Engagement with Various Professionals** - In addition to assisting architects, quantity surveyors and other professionals with advice and support, we can also consult with various professionals for specific acoustic, fire and structural requirements pertaining to ceilings and drywall partitions.

**Support Documents and Warranties** - Should you require assistance with data sheets, certificates, etc. Please contact our technical services department. Warranties on request can be issued on certain systems.

**Site Inspections and Reports** - Site inspections can be conducted on your request and a report is issued after every inspection. This can be for the purpose of general installation and guidance or specific certification.

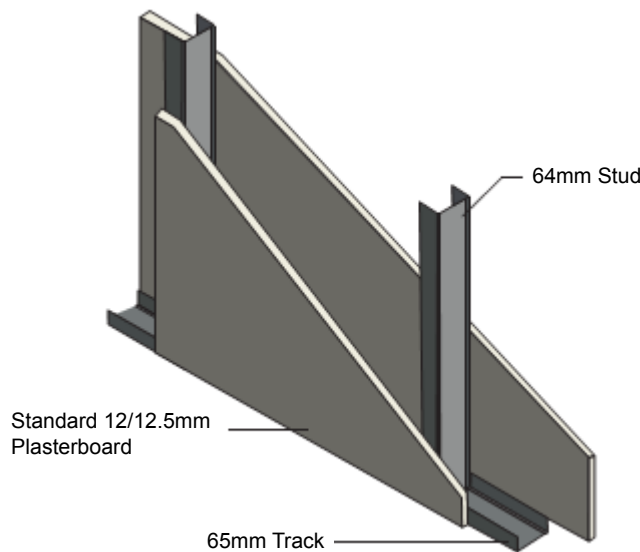
**Certifications** - In order to have a ceiling or partition system certified, site inspections are to be conducted at various intervals during installation from the start to completion. Please ensure that you advise your Supertec Ceilings representative if you require certification before the installation commences so that site inspections can be scheduled timeously.



## STANDARD DRYWALL PARTITION SYSTEM

76mm or 89mm wide partitioning walls up to 3.6m high – this system consists of a single layer of standard 12/12.5mm plasterboard on both sides of a 51mm or 64mm stud and track system. The studs are to be spaced at 600mm centres and all joints are to be staggered, taped and jointed with jointing compound. The boards are to be fixed with 25mm drywall screws and the screw spacing is not to exceed 220mm centres. Moisture resistant plasterboard can be used instead of standard plasterboard in wet areas – see “wet areas specifications”.

Insulation:	14kg/m <sup>3</sup> Cavity Batt Insulation 63mm thick (optional)
Fire Rating:	30 Minutes (with no aluminium and 64mm stud)
Sound Insulation Prediction:	Rw 36 dB without insulation, 39 dB with insulation (76mm) Rw 36 dB without insulation, 40dB with insulation (89mm)



## FIRE RATED DRYWALL PARTITION SYSTEMS

### WHAT IS FIRE RATING AND HOW IS IT TESTED?

- A fire-resistance rating typically means the duration for which a passive fire protection system can withstand a standard fire resistance test. This can be quantified simply as a measure of time, or it may entail a host of other criteria, involving other evidence of functionality or fitness for purpose.
- In terms of drywall partitions, it is to protect one element from another for a specific amount of time.
- Fire rating requirements is determined by SANS 10400 – The South African National Building Regulations.
- Drywall partitions are tested for fire resistance at specialized testing facilities such as the SABS or Firelab at the CSIR.
- The drywall system to be tested is build according to specification within a moveable steel frame, approximately 2.7m high and 2.7m wide.
- All products used are recorded by the testing facility for use in the final report.
- NO SINGLE ELEMENT IS FIRE RATED – only systems as a whole are fire rated.
- Thermocouples are placed at various points on the wall.
- The frame with the system built in is lifted with a crane and placed against the opening of the furnace.
- The time taken to reach failure and then to reach complete destruction is recorded – this is what the fire rating is.
- Aluminium Sections are not used in fire rated partitions. Suitable fire rated doors and frames are to be used.

### PLEASE NOTE:

SANS 10400 Part -T-2011 Edition 3  
 Clause 4.41  
 Services in structural or separating elements.  
 Sub clause 4.41.2

A service that penetrates through any wall or floor where such wall or floor is required to have a fire resistance shall be sealed in such a manner that the fire shall not penetrate such wall or floor. Such fire stop shall have a fire resistance of not less than the requirements for structural stability given in table 6, subject to a maximum requirement of 120 min.

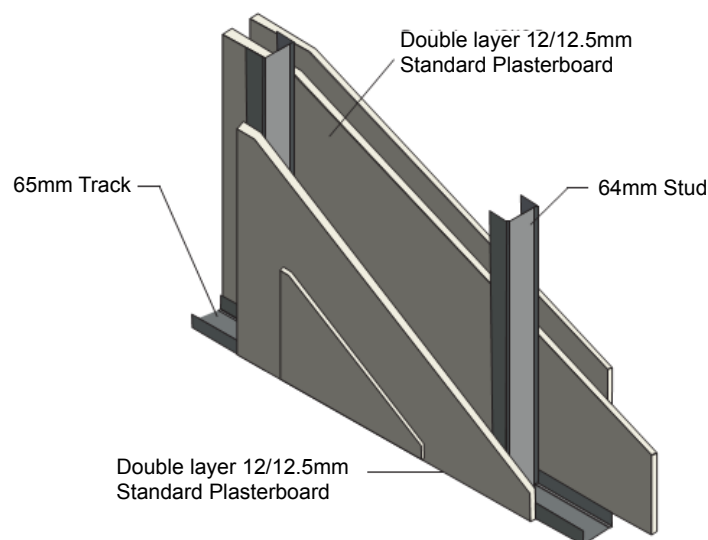
The sealing of gaps and cavities in a fire rated drywall partition system can be done with jointing plaster (for very small openings), fire retardant foam or rockwool with intumescent paint. As long as the material used performs to fire rating required.

## ■ 60 MINUTE FIRE RATED PARTITIONS

### OPTION 1

Partitioning walls up to 4.2m high – this system consists of a double layer of 12.5mm standard plasterboard on both sides of a 64mm stud and track system. The studs are to be spaced at 600mm centres and all joints are to be staggered, taped and jointed with jointing compound. The boards are to be fixed with 25mm drywall screws and the screw spacing is not to exceed 220mm centres. A layer of 12.5mm moisture resistant plasterboard can be used instead of one or both of the face layers in wet areas without affecting the fire rating – see “wet areas specifications”.

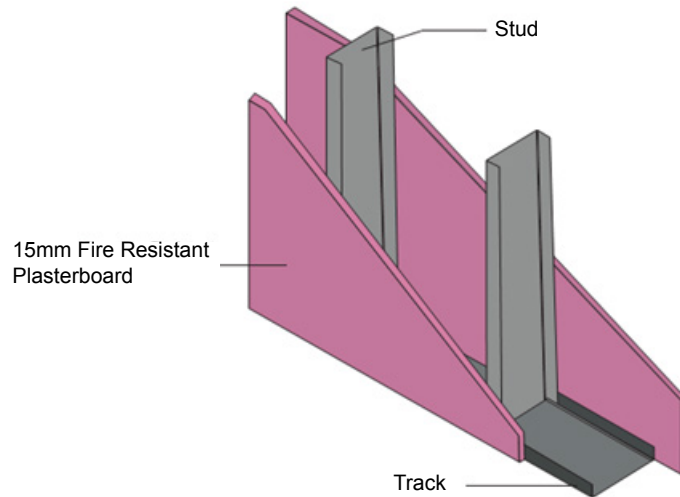
Insulation: 14kg/m<sup>3</sup> Cavity Batt Insulation 63mm thick (optional)  
 Fire Rating: 60 Minutes  
 Sound Insulation Prediction: Rw 46dB without insulation, 51dB with insulation.



### OPTION 2

Partitioning walls up to 3.6m high with 64mm Stud and track or up to 4.7m high with 102mm stud and track, this system consists of a single layer of 15mm fire resistant plasterboard on both sides of a 64mm or 102mm stud and track system. The studs are to be spaced at 600mm centres and all joints are to be staggered, taped and jointed with jointing compound. The boards are to be fixed with 25mm drywall screws and the screw spacing is not to exceed 220mm centres. A layer of 15mm moisture resistant plasterboard can be used instead of one or both of the face layers in wet areas without affecting the fire rating – see “wet areas specifications”.

Insulation: 14kg/m<sup>3</sup> Cavity Batt Insulation 63mm thick (optional)  
 Fire Rating: 60 Minutes  
 Sound Insulation Prediction: Rw 42dB without insulation, 47dB with insulation on 64mm Studs  
 Rw 45dB without insulation, 52dB with insulation on 102mm Studs



## ■ 120 MINUTE FIRE RATED PARTITIONS

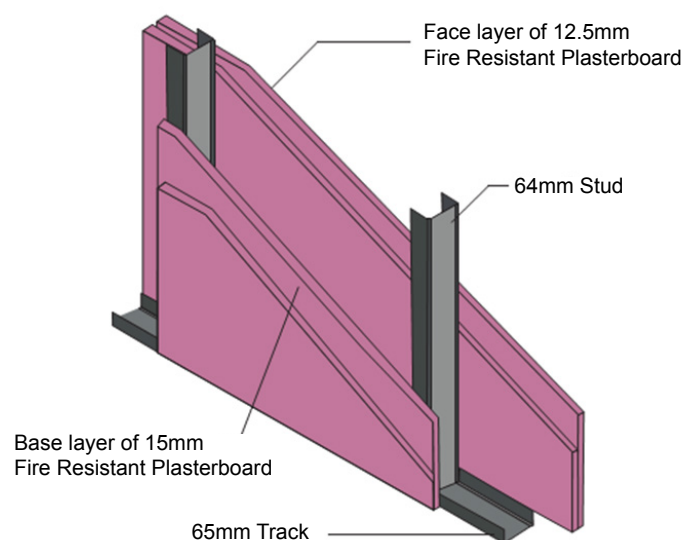
### OPTION 1

Partitioning walls up to 4.4m high, this system consists of a single base layer of 15mm fire resistant plasterboard and a face layer of 12.5mm fire resistant plasterboard OR double 15mm fire resistant boards on both sides of a 64mm stud and track system. The studs are to be spaced at 600mm centres and all joints are to be staggered, taped and jointed with jointing compound. The boards are to be fixed with 25mm drywall screws on the base layer and with 41mm drywall screws on the face layer, screw spacing is not to exceed 220mm centres. A layer of 12.5mm moisture resistant plasterboard can be used instead of one or both of the face layers in wet areas without affecting the fire rating – see “wet areas specifications”.

Insulation: 14kg/m<sup>3</sup> Cavity Batt Insulation 63mm thick (optional)

Fire Rating: 120 Minutes

Sound Insulation Prediction: Rw 53dB without insulation, 59dB with insulation

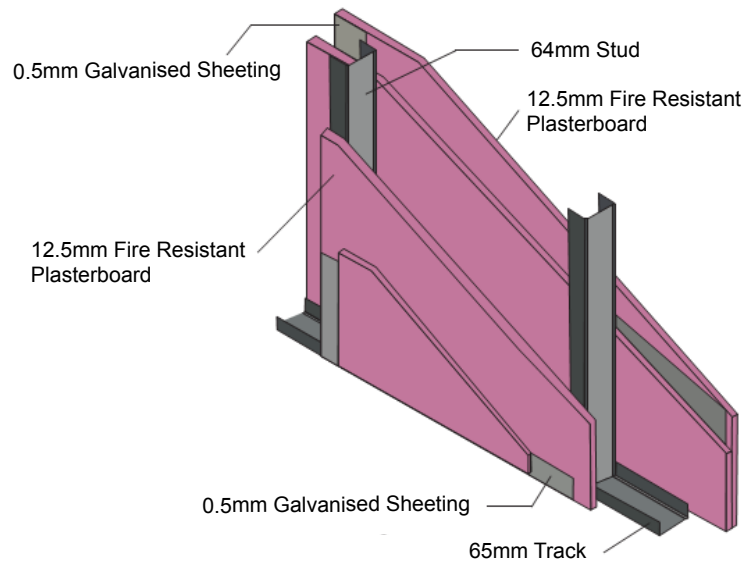




## OPTION 2

Partitioning walls up to 4.2 high, this system consists of a double layer of 12.5mm fire resistant plasterboard on both sides of a 64mm stud and track system. The studs are to be spaced at 600mm centres and all joints are to be staggered, taped and jointed with jointing compound. The boards are to be fixed with 25mm drywall screws on the base layer and with 41mm drywall screws on the face layer, screw spacing is not to exceed 220mm centres. A layer of 0.5mm galvanised steel is to be installed on both sides in between the layers of board. A layer of 12.5mm moisture resistant plasterboard can be used instead of one or both of the face layers in wet areas without affecting the fire rating – see “wet areas specifications”.

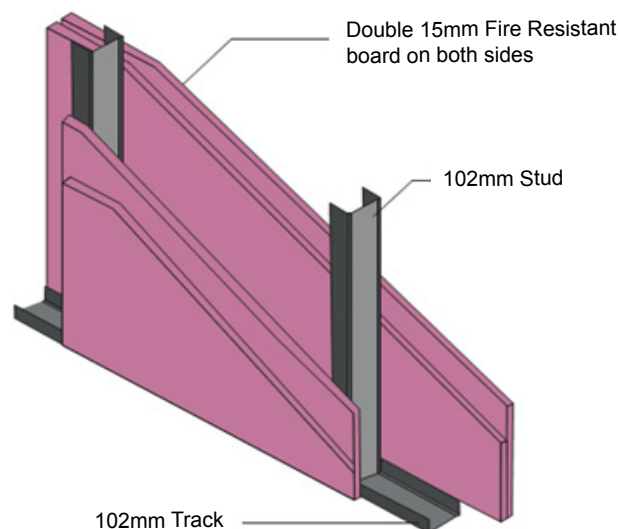
Insulation: 14kg/m<sup>3</sup> Cavity Batt Insulation 63mm thick (optional)  
 Fire Rating: 120 Minutes  
 Sound Insulation Prediction: Rw 54dB without insulation, 60dB with insulation



## OPTION 3

Partitioning walls up to 6.1m high, this system consists of double 15mm fire resistant boards on both sides of a 102mm stud and track system. The studs are to be spaced at 600mm centres and all joints are to be staggered, taped and jointed with jointing compound. The boards are to be fixed with 25mm drywall screws on the base layer and with 41mm drywall screws on the face layer, screw spacing is not to exceed 220mm centres. A layer of 15mm moisture resistant plasterboard can be used instead of one or both of the face layers in wet areas without affecting the fire rating – see “wet areas specifications”.

Insulation: 14kg/m<sup>3</sup> Cavity Batt Insulation 63mm thick (optional)  
 Fire Rating: 120 Minutes  
 Sound Insulation Prediction: Rw 53dB without insulation, 59dB with insulation



## ■ OTHER TECHNICAL DRYWALL SOLUTIONS

There are various options to choose from when it comes to the more technical drywall partitions. This includes systems for heights exceeding 3.6m (extra high walls), walls for security, impact resistant walls and high strength walls.

### EXTRA HIGH WALLS

Depending on the height that must be achieved, additional layers of board, wider studs or studs at closer centres may be recommended.

A few examples may be:

- Walls between 4.2m and 4.6m require 63.5mm studs at 300 – 600mm centres respectively with double 12mm standard plasterboard on both sides.
- Partitions 4.7m – 5.4m high can be constructed with 102mm studs at 300 – 600mm centres with a single layer of 15mm fire resistant plasterboard on both sides.
- Walls between 6.1m and 6.5m require 102mm studs at 300 – 600mm centres with double 15mm fire resistant board on both sides.
- An option for 7 – 9m high walls is the use of a double stud system where studs are placed next to each other at 400mm centres to create a 190mm wide cavity. The studs are backed with 15mm fire resistant plasterboard and both sides of the framework are clad with a double layer of 15mm fire resistant plasterboard. Vertical structural supports are required at every 5 meter centers.

The above examples are subject to fire rating required. Please free to contact our technical department or one of our branches for further information.

### WALLS FOR SECURITY

To add an element of security to a drywall partition 0.5mm thick galvanised sheeting can be fixed to one or both sides of the drywall partition. Depending on the number of layers of boards, this sheeting may be fixed directly to the stud framework or sandwiched between the plasterboards.

- An example of a 2 hour fire rated drywall partition with galvanised sheeting for security would be double 12.5mm fire resistant plasterboard with a layer of 0.5mm galvanised sheeting on both sides of a 63.5mm stud framework. Studs to be located at 300 – 600mm centres for heights 4.2 – 4.6m.
- Another example would be also for a 2 hour fire rated system but for heights 6.1m – 6.5m. The configuration is the same as the above but with 102mm studs and 15mm plasterboard.

### IMPACT RESISTANCE

There is a specific plasterboard specially made for high impact areas, these include commercial kitchens, hospitals, passages and any area subject to high traffic. These boards are higher in density than other board and are more rigid. They contain higher levels of rock particles and glass fibres to increase performance.

### HIGH STRENGTH

Extremely high density plasterboards with thicker studs are available to create walls in areas that will contain fixtures and fittings. The purpose of these boards is to reduce the amount of internal stud and noggin support required (thereby reducing cost and labour) and to also allow for flexibility in moving fixtures and fittings without damage. Special screws are required for these boards because of their rigidity.

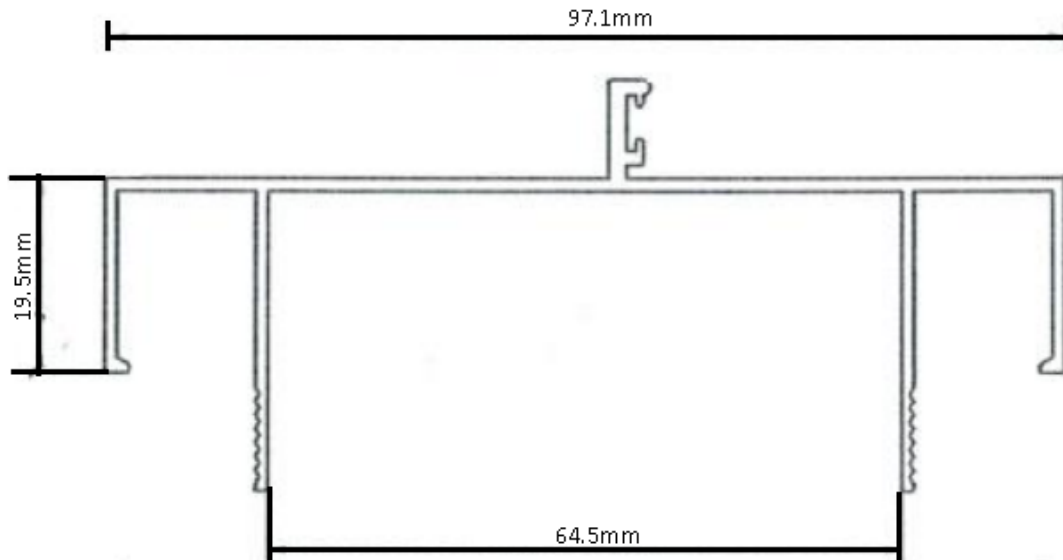
Please feel free to contact our technical department or one of our sales representatives for any technical requirements you have regarding the above.

## ■ DRYWALL PARTITION ALUMINIUM SECTIONS

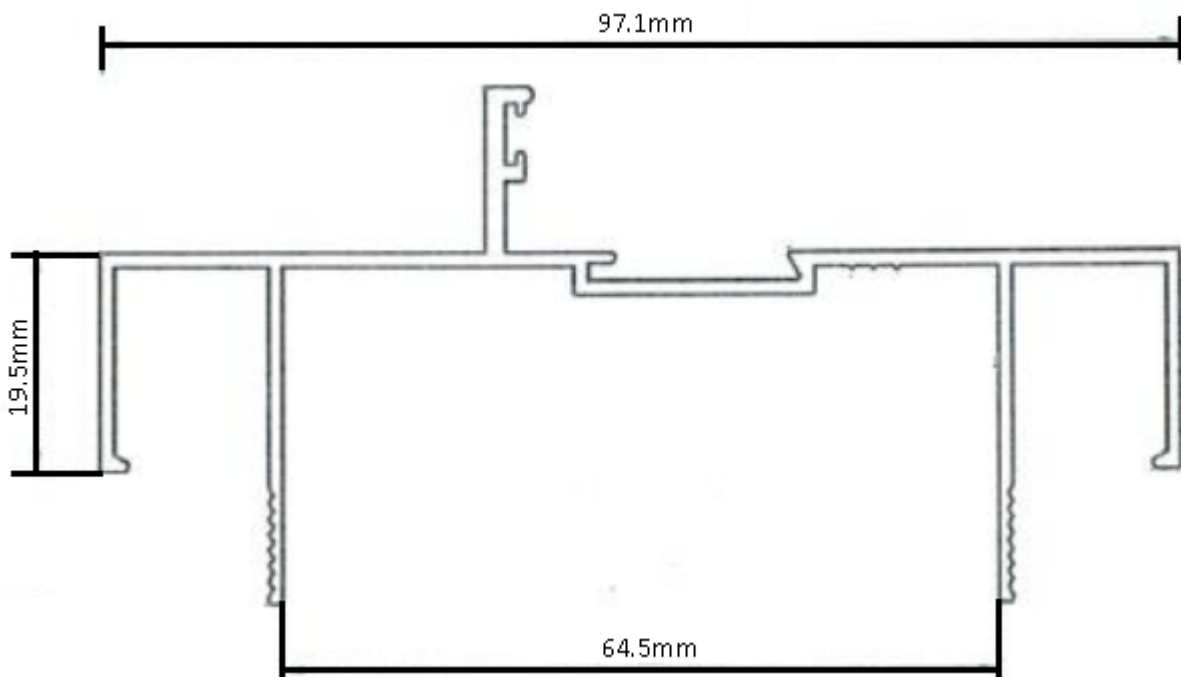
Supertec supplies high quality aluminium sections designed to give drywall partitioning a sleek and modern look. The male (2-legged) and female (4-legged) are designed to clip together easily resulting in a neat and aesthetically pleasing finish. These sections come standard in a natural anodised finish but can be powder coated on special orders (lead times may apply). Available to suit 89mm or 76mm standard drywalls.

The range includes:

- Female door frame sections – accepts bubble seal gasket and is used predominately when fixed to plasterboard.

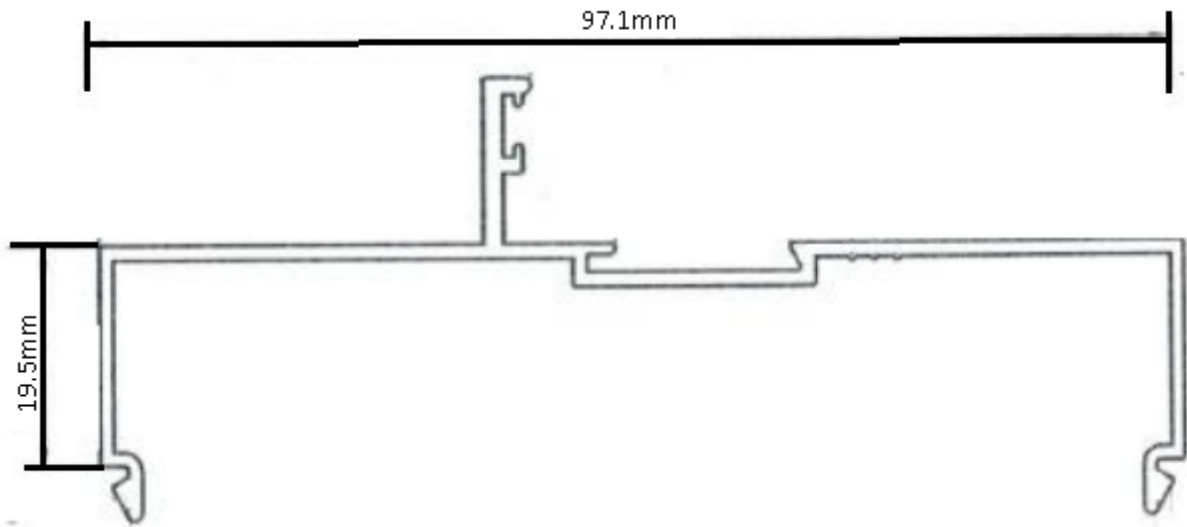


- Female glazing sections – accepts bubble seal gasket and is used where glazing meets a plasterboard surface or where mullions are to be formed with male sections.

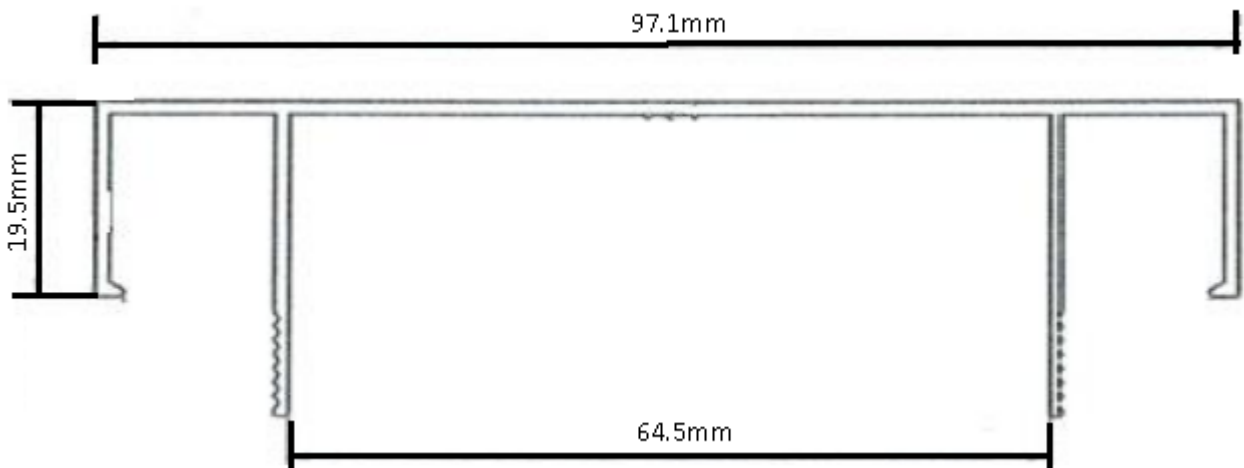




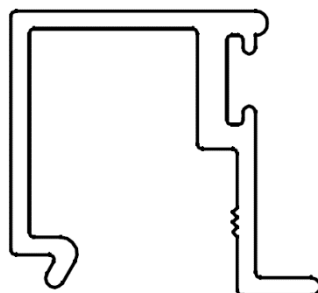
- Male glazing sections – accepts bubble seal gasket and is used to create mullions with female sections.



- Female termination sections (head/wall channel) – used to finish of plasterboard partitions at fair ends or vertical abutments, can be used as a wall starter in conjunction with the male glazing or door frame sections for glazed partitions.



- Glazing beads are used with all glazing sections to ensure that glass is held adequately in place, this section also accepts bubble seal gasket.



PLEASE NOTE: Aluminium sections are not used in fire rated partitions that require a fire rating of more than 20 minutes.

## ■ ACOUSTIC SOLUTIONS

There are three aspects to consider when designing for acoustic performance:

- Sound insulation which is the ability of an element to stop or reduce airborne sound.
- Sound Absorption which is the ability of an element to absorb sound.
- Flanking which is when sound travels around the element (for example from room to room over an unsealed drywall).

Acoustic performance relies on a variety of factors in any given area, which is why one must consider all of the elements in a room holistically.

When designing for acoustic performance it is beneficial to know what acoustic values need to be achieved (decibel rating) – an architect would normally specify this at design stage. Supertec Ceilings has a sound insulation prediction programme that will assist in the design of the correct materials in a system to achieve the acoustic requirements. As this is a theoretical exercise, an acoustician may need to be consulted for onsite testing if required.

Different components will result in different values. For example, wider studs or a double stud system, the presence of insulation and multiple plasterboard layers as well as the type of plasterboard are elements that could improve acoustic performance. Please contact us for further assistance on acoustic performance design.

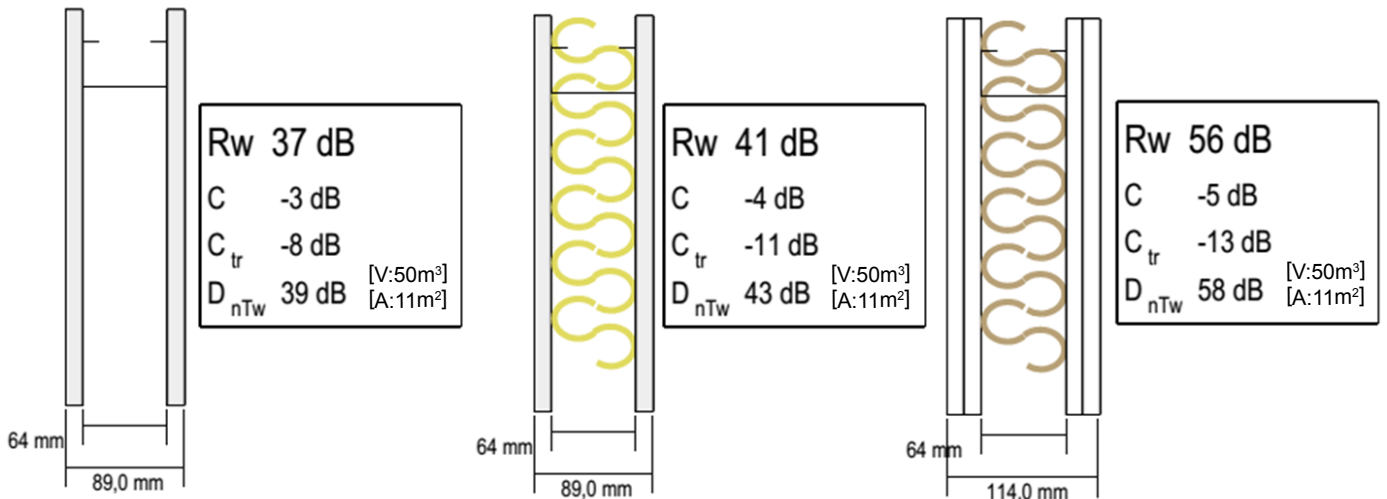
Supertec Ceilings are able to offer a variety of drywall partition systems with acoustic performance in mind. These systems normally contain at least a double layer of acoustic plasterboard as well as insulation.

When designing for acoustic performance, one should look at all aspects of a space holistically – openings, ceilings, partitions, floor covering, etc.

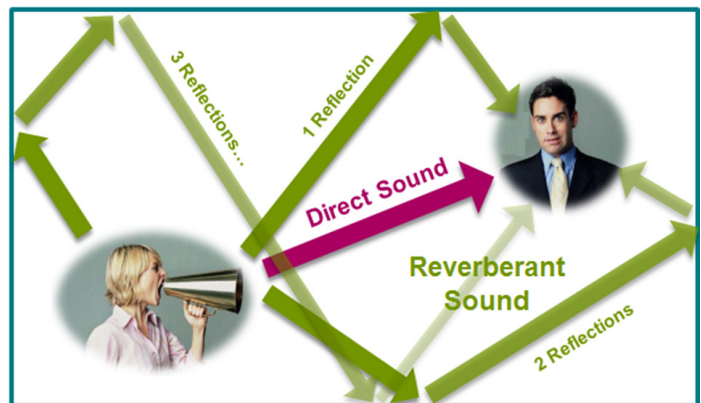
For drywall partitions the Weighted Sound Reduction Index is used (Rw). This measures the sound reduction and attenuation i.e. how much sound is being reduced from one side to the other.

In ceilings, most of the time one looks at the Sound Absorption Class. This is the ability of the ceiling to absorb sound thereby reducing sound reflection in a space.

Intolerable	130 dB	Jet airplane take off at 100m
Deafening	110 dB	Un-silenced pneumatic drill at 1m
Very Loud	90 dB	Inside a moving tube train
Loud	70 dB	Urban road kerbside
Moderate	50 dB	Conversation speech at 1m
Quiet	30 dB	Theatre background noise
Very Quiet	10 dB	Countryside at night

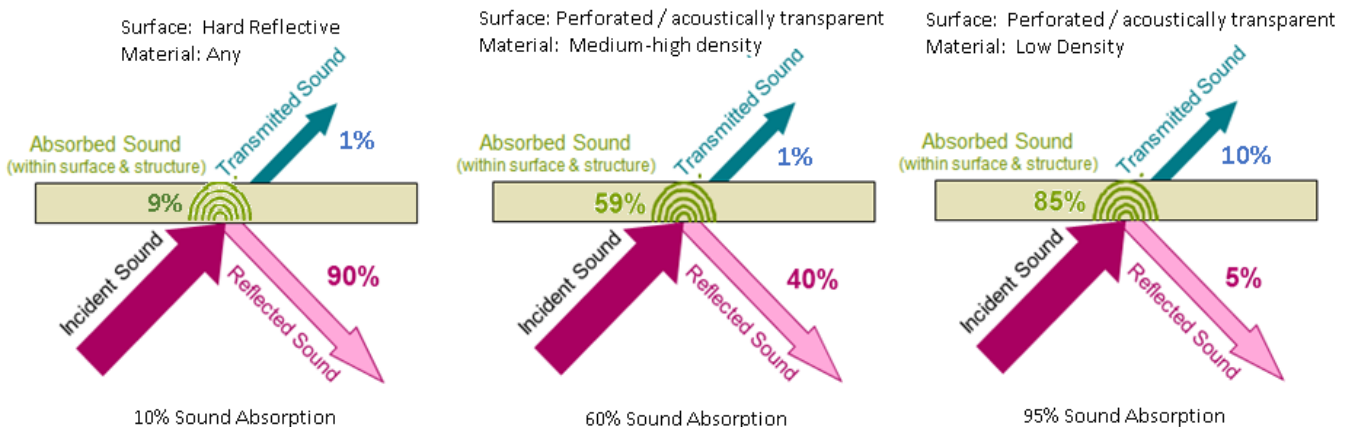


Flanking is the transmission of sound from one room to another over a partition or object. To avoid flanking ensure that the drywall partition extends through the ceiling void to the roof structure.



In a room with no acoustic treatments and hard, low sound absorbing materials, there would be a high rate of sound reverberation and reflection.

When applying high sound absorption materials to the room (ceilings, baffles, etc.) sound is absorbed and acoustic performance in the room is increased.



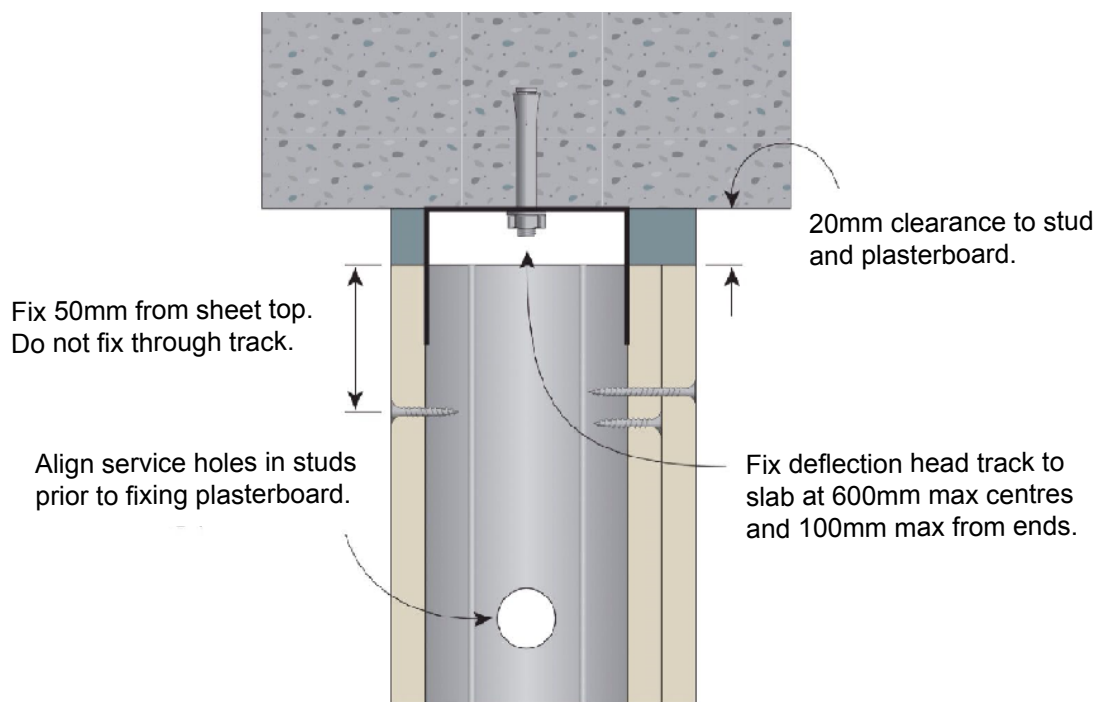


## CONTROL JOINT & DEFLECTION HEAD SPECIFICATION

Control joints may be required in the partition to relieve stresses induced by expansion and contraction of the structure. Control joints shall be specified where any of the conditions listed below exist:

- Where excessive movement is likely to occur,
- Where a drywall or ceiling traverses movement joint within the surrounding structure. The width of the drywall control joint shall be equal to that of the structure,
- Where a drywall is exposed to variable or extreme temperatures and the wall runs in an uninterrupted straight plane exceeding 12m in length. Note that full height door frames may be considered as a control joint. The width of the control joint shall be a minimum of 7mm,
- Where the building/substrate structural system/material changes.

Concrete slabs that are not yet completely cured may sag, SANS 10160-1 recommends that a gap of 15mm be allowed between the concrete slab and the top track. This gap needs to be filled with compressible material of equivalent fire resistance such as mineral wool. As the slab sags it will compress the fire seal into the wall system to ensure a tight fit of the wall between the floor and the concrete slab. For structural stability the partition wall must be fully anchored at the bottom and vertical sides.



**AN EXAMPLE OF A GENERIC DEFLECTION HEAD**

## ■ FIXTURES & FITTINGS

There are a wide variety of components suitable for securing fixtures and fittings to drywall partitioning. The choice of individual fixing components will depend on the type of system and the loading requirements thereof.

The layout of fixtures and fittings should be considered at the design stage to allow for necessary supports to be installed before the wall is sealed. Retrofitting of supports is far more challenging, especially for heavier fixtures that would require more substantial support.

Fixings (other than to secure lightweight components) should be made into the studs, fixing channel, or timber noggins. Medium to heavyweight components are required to be supported between studs.

**Very lightweight fixtures (pictures, etc.):** Use either a 'stick-on' type of hanger or the nail and hook type, ensuring that the nail is driven downwards into the plasterboard at an angle of approximately 20°.

**Lightweight fixtures (small mirrors/ornaments, etc.):** Use a butterfly bolt type of fastener, which is fitted onto the plasterboard in any position.

**Medium fixtures (shelves):** Fix through the plasterboard into the drywall stud with selftapping screws, or into a cross member between studs which should be provided during the installation of the framing.

**Heavy fixtures (basins, cisterns, etc.):** Drywall studs should be spaced closer together (e.g. 300mm). Run horizontal timber noggins of up to 114mmx38mm or double nested track channels between the vertical notched studs and secure with screw. Fix objects to noggins and studs.

**Extra heavy objects:** These type of fixtures should be supported by a steel framework bolted to the floor and studs. Studs should be spaced closer together as necessary. All plumbing and electrical fitting designs need to be signed off by the architect and must comply with the requirements of SANS 10400:XA-2011.

## ■ WET AREAS SPECIFICATION

### General:

Application of plasterboard in wet areas requires correct installation and proper use of the correct products. A 102mm or 64mm stud and track is to be used, head and floor track fixed with 2 rows of staggered fixings at 400mm centres. Additional timber supports are to be positioned and fixed within studs as noggins for support of fixtures and fittings (see item 8). Adequate support must be provided for head track.

The face layer should consist of 12.5mm or 15mm Moisture Resistant Plasterboard, and plasterboard backing layer to be installed as required and specified. Plasterboards are to be fixed using 25mm drywall screws at a maximum of 220mm centres. Joints are to be taped and jointed as per standard specification or taped and fully skimmed with skimming plaster. Insulation is optional depending on requirements.

Plasterboard in wet areas may be tiled or painted, but in both of these applications it is advisable to keep the plasterboard 10mm off the floor and seal this gap with suitable silicon or Polysulphide sealant before decoration. Also ensure to seal all vertical and horizontal joints with suitable silicon or Polysulphide sealant prior to decoration.



Tiling of Plasterboard (Ceramic Tiles):

The maximum allowable load is 20kg/m<sup>2</sup> for ceramic tile application. Install framework as per wet areas specification – general. Install plasterboard and finish as mentioned above.

Surface preparation: Mix 20kg Cement based primer with 10 litres of latex based liquid primer / keying agent, apply the mixture to the drywall with a block brush at a thickness of 2mm. Allow to dry to 24 hours before commencing tiling.

Fixing tiles: Always fix tiles to a primed drywall. Use suitable tile adhesive. Apply substrate to a minimum base thickness of 3mm. Allow the adhesive to dry for 24 hours before grouting.

Should large, heavy or floor tiles be used then a floor trowel must be used to spread the adhesive to a 6mm bedded thickness.

Grouting: Grout with cement based grout. For more water resistance the grout must be mixed with a latex based liquid additive (replace the water normally used in the mix).

Apply silicon along the wall edges and corners instead of grout.

Painted Surfaces in Wet areas:

Install and finish as per wet areas specification above.

Seal surface of plasterboard with a latex based liquid additive, allow drying for 24 hours. Plaster the complete surface with skimming plaster and allow drying for 24 hours. Seal plastered surface with a latex based additive and allow drying for 24 hours. Paint surface with manufacturers recommended paint for wet areas.



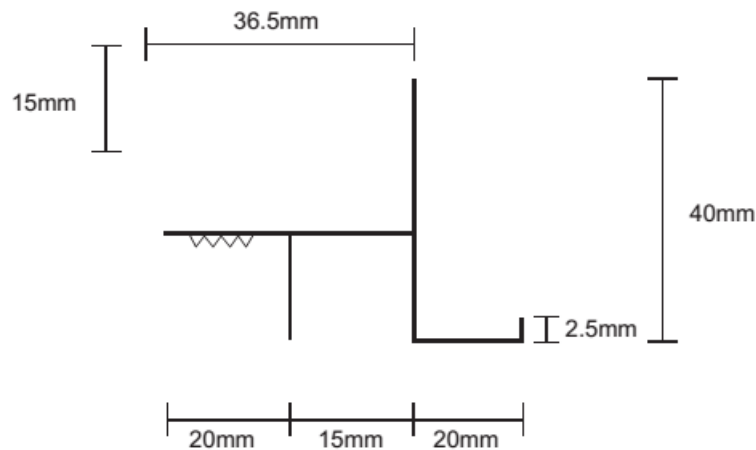


## SUPERTEC PLASTER GRID SYSTEM

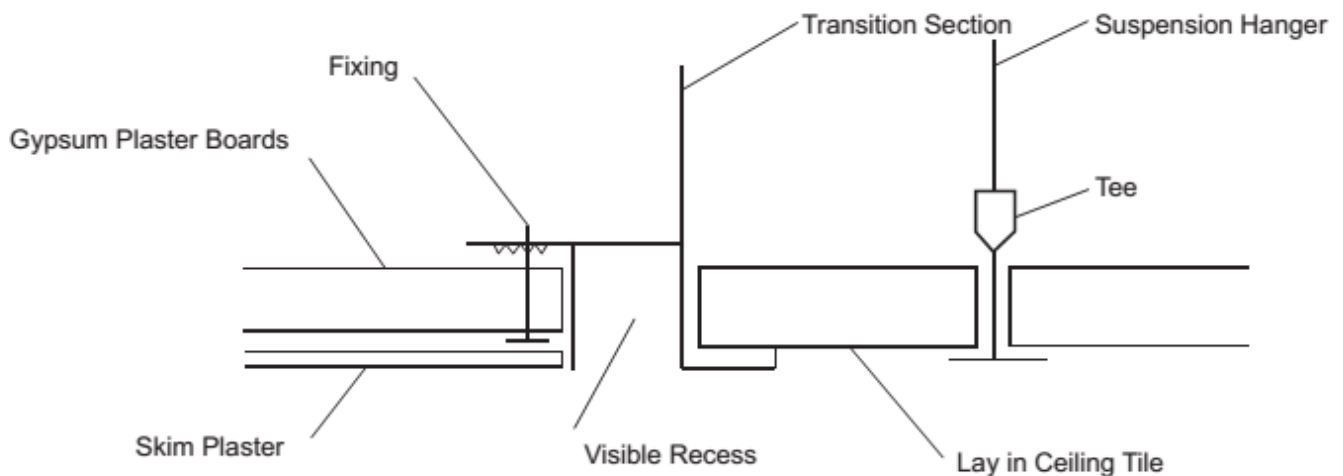
Supply and install suspended Supertec Plaster Grid ceiling system formed of 35mm knurled steel capped main tees at 1.2m centres with cross tees at 400mm centres to the main tees. The ceiling is to be suspended with 25X25mm galvanised angles positioned at no more than 1.2m centres apart. The minimum thickness of the galvanised steel angle hanger is not prescriptive but shall be determined by screw shear strength tests. 9mm Gypsum plasterboard is to be fixed to the underside of the grid with 25mm drywall screws. Screws are to be at centres not exceeding 150mm and joints are to be staggered. Joints are to be taped with Fibatape and ceiling to be full skimmed with appropriate skimming plaster.

- Plaster trim or galvanised angle are to be fixed to the perimeter wall to support the grid; fixings are to be at 300-400mm centres (see "Cornices and Perimeter Trims").
- Sub-grids may be required where necessary, specifically where the plenum exceeds 3m.
- Perimeter suspension should not be more than 400mm from the wall.
- Where the galvanised steel suspension hangers are to be fixed to concrete soffits, express anchors are to be used.
- The galvanised angle must be fixed to the main tees with minimum 3.2mm diameter zinc coated tek screw / jack point screw.

Transition channel is to be installed where plastered ceiling and exposed lay in ceiling meet on the same plane.



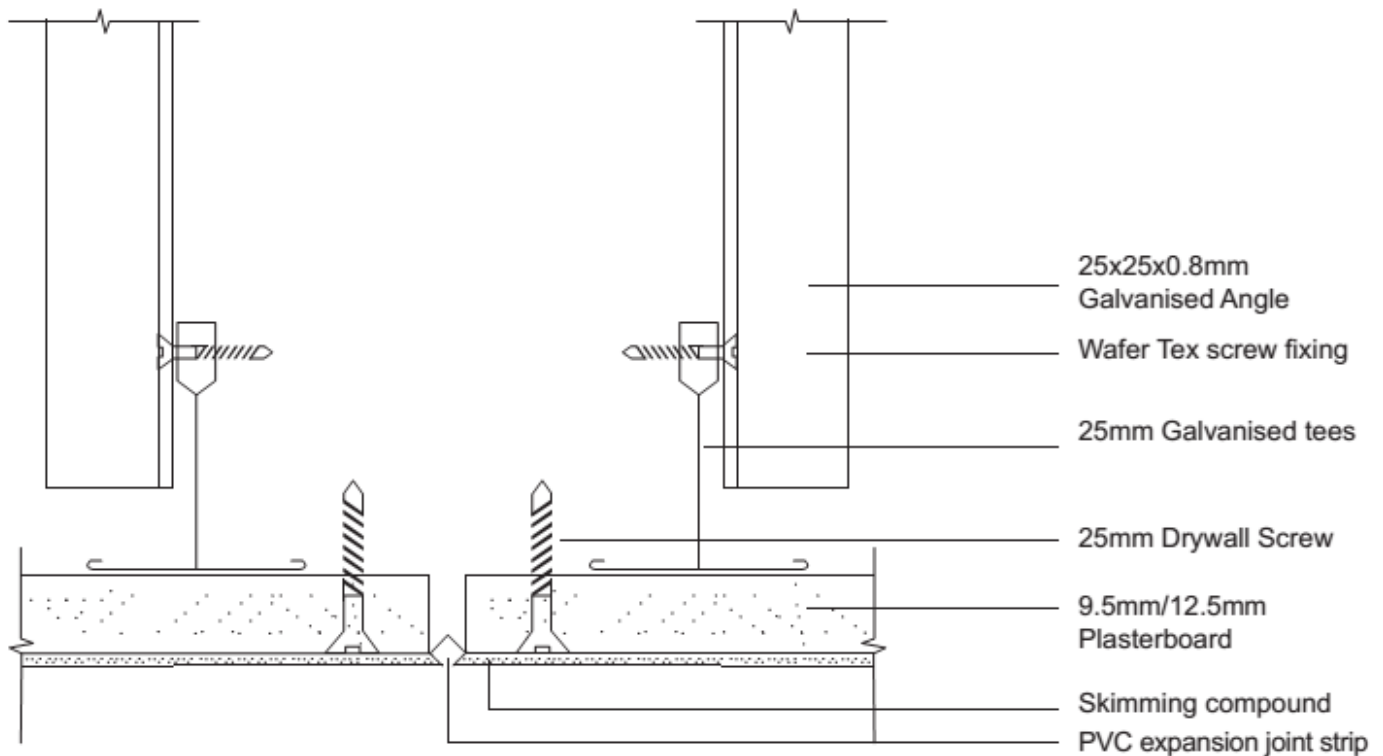
**TRANSITION SECTION**



**TRANSITION SECTION - APPLICATION DIAGRAM**

## EXPANSION JOINTS IN CEILINGS

If the area of the concealed ceiling is more than 225m<sup>2</sup>, expansion joints must be used at 15m intervals in order to prevent cracking (usually specified by the professional team). An expansion joint is a flexible strip made from PVC used to allow for movement. Continuous bulkheads must have expansion joints at every 15m intervals.



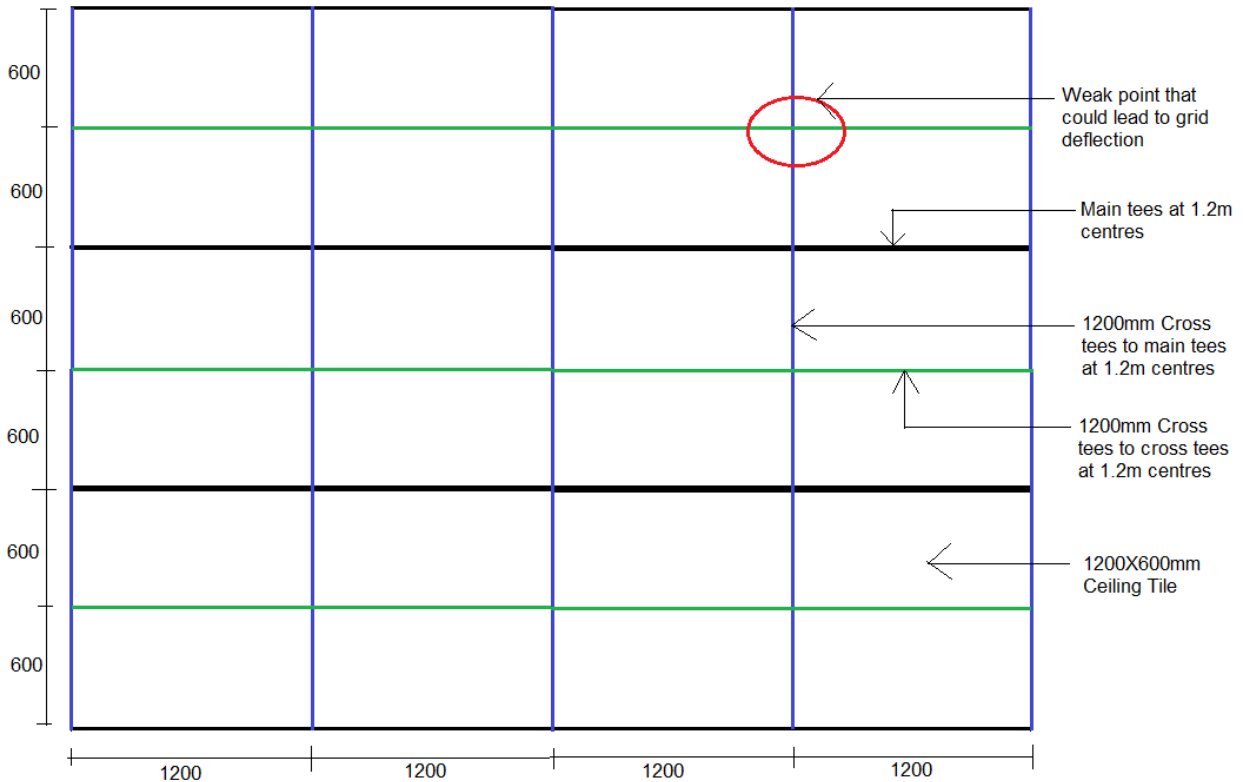
## SUPERTEC EXPOSED GRID SYSTEM

Supertec Exposed suspended ceiling system (Econo Loc) is formed of 24mm white capped main tees at 1.2m centres with cross tees at 600mm centres to form a 600x1200mm grid. The ceiling is to be suspended with hangers positioned at no more than 1.2m centres. Vinyl clad lay-in ceiling tiles, acoustic or other specified tiles are to be installed in the grid. The suspension must not be out of plumb (vertical) more than 25mm for each 150mm of plenum depth. To create a 600x600mm ceiling grid, use 600mm cross tees fixed between 1200mm cross tees parallel to the main tees or run main tees at 600mm centres with 600mm cross tees fixed perpendicular at 600mm centres. Hold down clips should be used in areas where wind updraft could cause tiles to lift or if particularly lightweight tiles are used.

- Suspension may not be from any other services in the ceiling void.
- Where cut cross tees exceed 600mm and rest on the wall angle, additional suspension should be installed.
- Wafer Tex screws are to be used to fix hanger strap to tees.
- Where wire suspension hangers are used, they should be wrapped tightly around themselves at least 3 times.
- Shadow line wall angle or standard wall angle is to be installed spanning the perimeter of the ceiling where exposed lay-in grid is used (see "Cornices and Perimeter Trims").

PLEASE NOTE: Hanger supports are to be fixed to a structurally sound soft-fit or superstructure support in order to support ceilings adequately. The hangers are to be supported in such a way that there is absolute minimal movement and deflection. No sub-grid is required provided that the length of hanger is continuous and not joined in any way. However a sub-grid will still be required if the hangers are out of plumb by more than 25mm for every 150mm depth and with the ceiling suspended more than 2m, if the ceiling mass exceeds 20kg/m<sup>2</sup>, if the main tees are required to run parallel to the suspending structural members (trusses/purlins, etc.) or if the ceiling will be exposed to wind uplift.

The below grid configuration is not recommended due to the high risk of sagging / deflection. This excerpt is from the SABISA General Guidelines for Suspended Ceilings:



## ■ STEEL BRANDERED CEILING SYSTEM

This system is most suited to 6.4mm/7mm ceilings that utilize H-Strips/M-Strips/Bishop Strips on the joints but can also be used with 9mm plasterboard with a full skim finish. Ceilings with H-Strips are not skimmed with any skimming compound and can be painted directly.

Typically used in residential applications, the branders are fixed with suspension brackets perpendicularly to the tie beams at no more than 400mm centres apart. The suspension brackets may not be more than 1.2m apart to support the steel branders adequately.

The Supertec Brander System does not require the use of joiners. It is recommended that a 20x20mm galvanised angle is to be installed at the perimeter to support the brander ends and to provide a support for cornice fixing. Plasterboard is fixed at a right angle to the branders i.e. parallel to the trusses with 25mm drywall screws spaced at no more than 150mm centres apart.

Light fittings, etc. must always be fixed to the branders and never directly to the board itself. Branders are also not to be cut for any reason as this will compromise the structural integrity of the support.

NOTE: While 25mm drywall/streaker screws are used to fix plasterboard to steel branding and plaster grid systems, clout nails or 32mm grabber screws are used to fix plasterboard to timber branders.





## TYPICAL BULKHEAD DETAILS

“Bulkhead” can be defined as “Those areas of the ceiling which occur at a level or plain differing from the general ceiling level or plain. Their function is to conceal services or merely create an architectural feature”.

- Bulkheads can be constructed from:
  - Plaster grid and galvanised angles (most common)
  - Drywall stud and track
  - Steel branders and galvanised angle
  - Timber branders

### GENERAL:

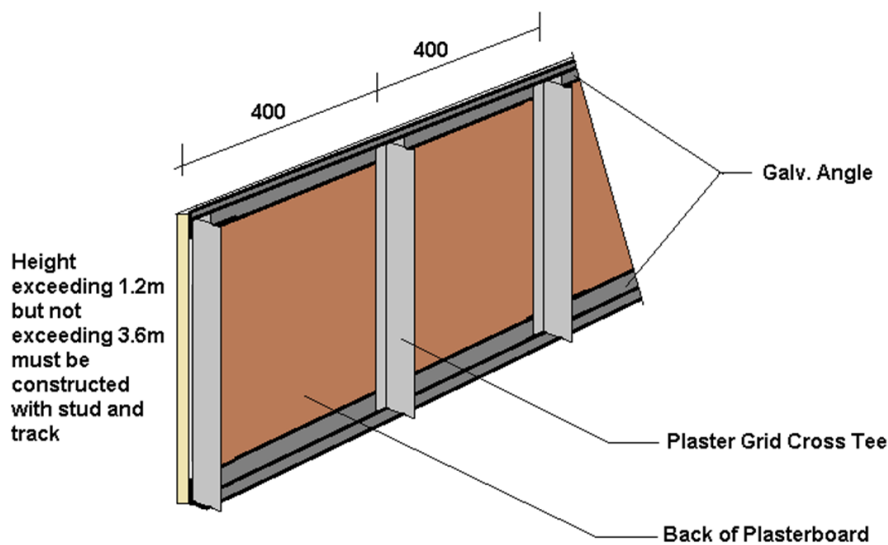
- Bulkheads are measured in meters.
- An expansion joint is required at every 15m.
- Supports must not exceed 400mm centres vertically or horizontally unless otherwise specified by a professional.
- Typically 9/9.5mm thick plasterboard is used to clad bulkheads, however 12/12.5mm board may occasionally be specified.
- Boards are to be fixed with 25mm drywall screws (except on timber branders) at 150mm centres.
- Corner beads are to be applied to all corners.
- Fibatape is to be applied to all joints and the whole area skimmed with skimming plaster.
- In order to work out the materials for bulkheads one would need to know the shape and size of the bulkhead as well as how it ties in with the rest of the ceiling.

## HORIZONTAL & VERTICAL BULKHEADS

“Horizontal bulkhead” refers to the portion of the bulkhead that is situated horizontally, “vertical bulkhead” refers to the portion of the bulkhead that is situated vertically. Quantity surveyors measure these separately even though they can form part of the same bulkhead.

Vertical bulkheads that exceed 1,2m high must be constructed of stud and track. Vertical bulkheads exceeding 3,6m in height must be designed by an engineer.

In the case of steel brander / plaster tee vertical bulkheads not exceeding 1,2m height galv. angle is used to support the tees at the top and bottom. Boards are fixed to the face of the cross tees. Corner bead on corner where horizontal will meet vertical bulkhead.

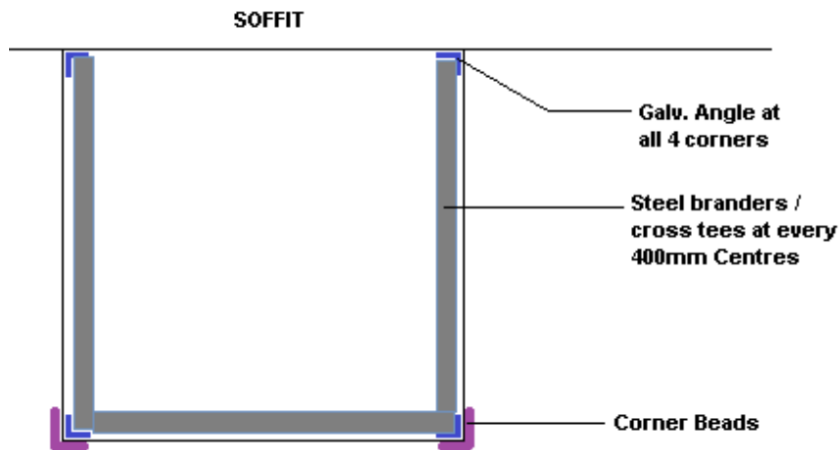


**BACK OF VERTICAL BULKHEAD**

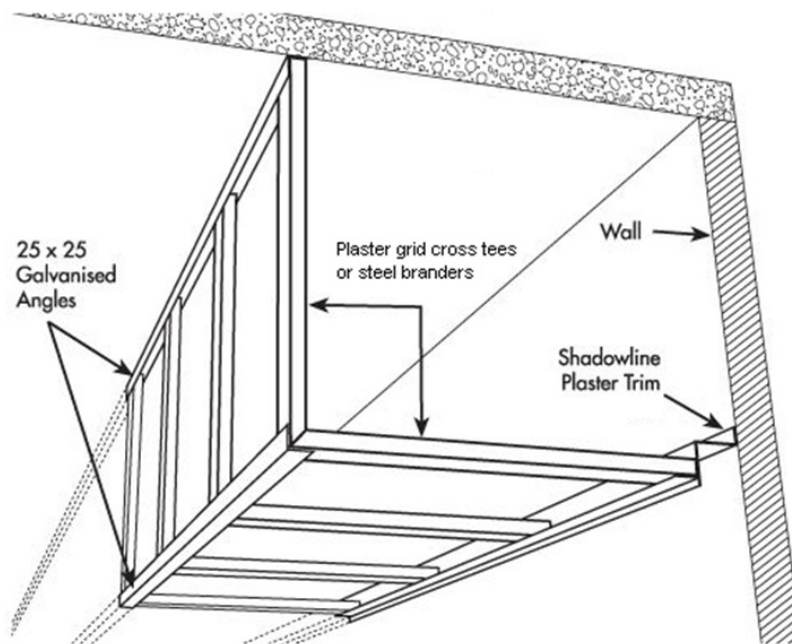
Horizontal bulkheads that exceed 1,2m widths can be treated as plaster grid ceilings as they require main tees. Galvanised angle used to support both sides of cross tees or plaster trim against wall and suspension at centres not exceeding 1,2m centres.

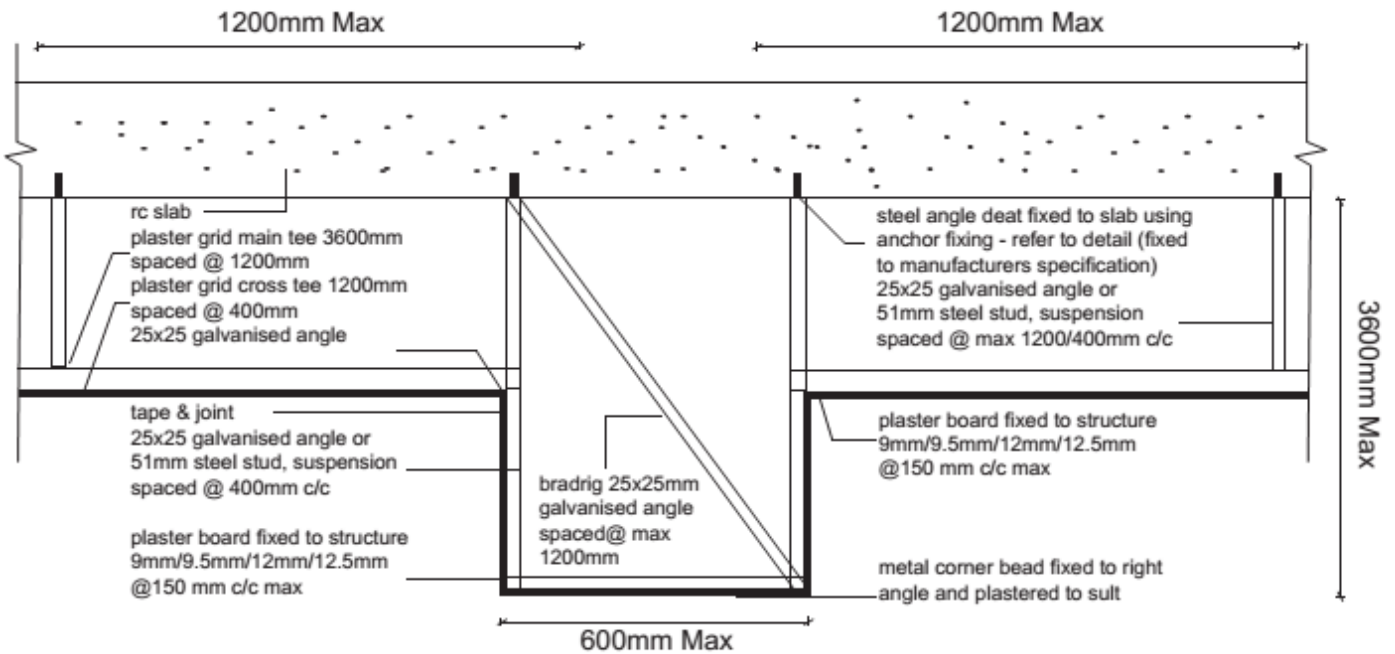
## “L” or “U” SHAPED BULKHEADS

- Cross tees or branders located at every 400mm centres and supported on the corner and soffit with galvanised angles.
- Junction at wall can be supported by plaster trim or galvanised angle.
- Corner bead required on corners.
- All steel components fixed with wafer tex screws.
- Cross bracing may be required for larger bulkheads.
- For U-Shaped bulkheads there are two vertical planes instead of one:

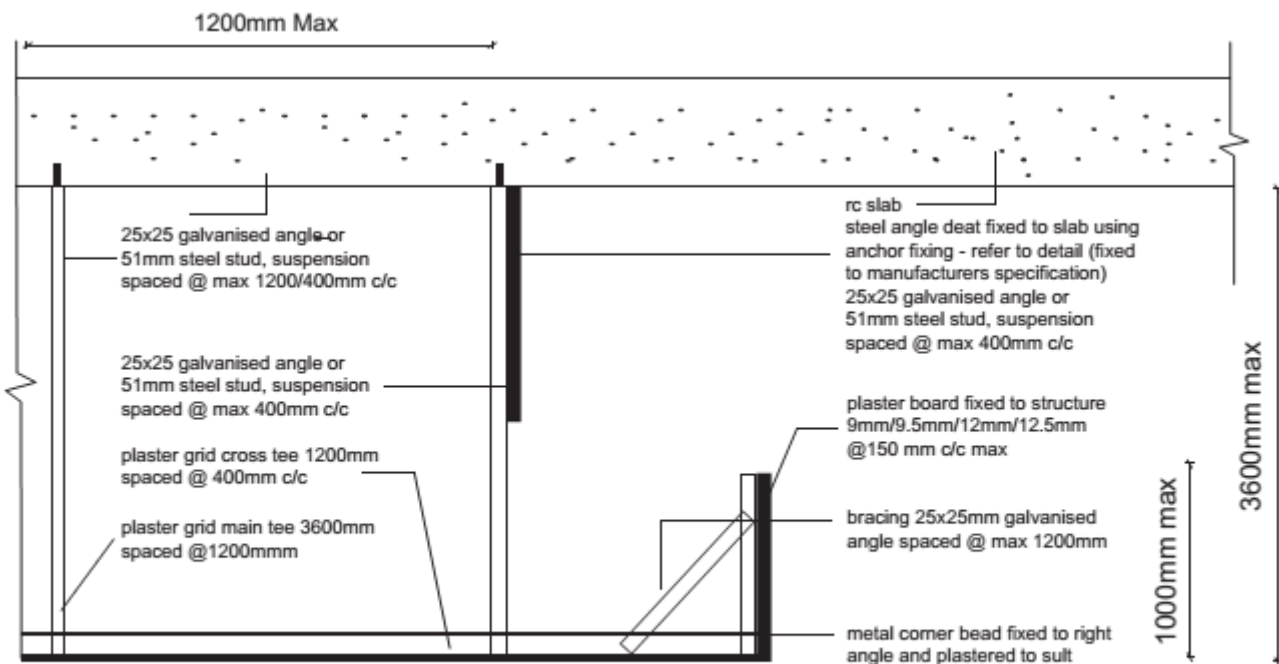


### U-SHAPED BULKHEAD





**600mm Wide – Recommended U – Shaped Bulkhead Fixing Details**



**L-Shaped Recommended Bulkhead Fixing Detail**

## CORNICES & PERIMETER TRIMS

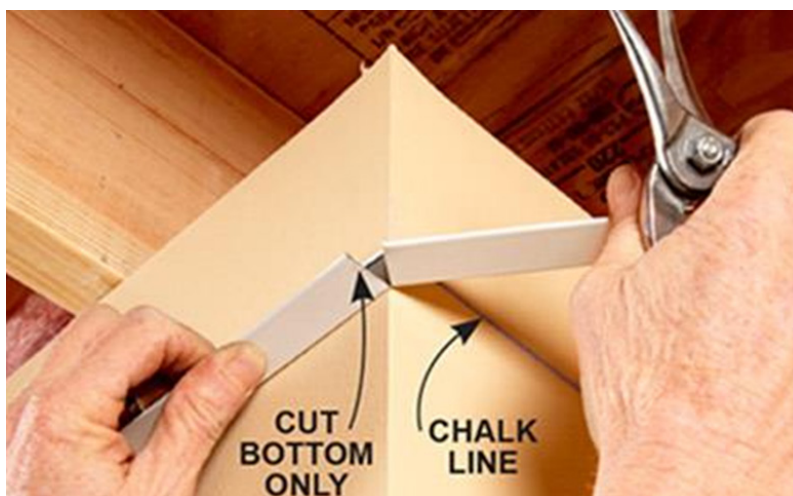
Cove Cornices are used to finish off the perimeter of an area with an H-Strip or Plastered ceiling. These 75mm cornices are composed of a gypsum core with additional fibres for strength and are encased in paper. The cornices are placed at the angle between the wall and the ceiling and can be cut and fixed with ease. An adhesive plaster can be used to fix the cornices into position and concrete nails are used at the wall to hold the cornices in place. If excess movement of the roof structure is found to occur, fix cornices to the wall only. These cornices also improve sound insulation performance by sealing air paths around the perimeter.

Care should be taken when handling cove cornices. The overhang of the cove cornice when being moved with a forklift should not exceed 900mm on either side of the forks. Cove cornice longer than 3.6m should be moved by hand one pack at a time to reduce the possibility of breakages.



A variety of moulded polystyrene cornices are also available, contact your nearest branch to select your design. XPS cornices are fixed with cornice adhesive and are most commonly used with plastered ceilings for aesthetic value. These mouldings are water and humidity resistant therefore a good option for wet areas. Solvent based products are not to be used with this product.

For exposed grid ceilings, shadow line wall angle or standard wall angles are used on the perimeters of the area. These are steel sections with a white capping to match the grid. The angles are installed prior to the installation of the ceiling grid. Angles are fixed to the wall using screws and plugs or fluted nails at no more than 400mm centres and should not be overlapped. Mitre and butt-join for a neat finish. A shadow line wall angle creates a recess in between the ceiling and the wall where as the standard wall angle finished the grid directly to the wall.



Plaster trim is used with plastered ceilings, especially with suspended plaster grid. It is steel or aluminium sections (powder coated or natural anodized) fixed to the wall before grid installation with screws and plugs or fluted nails at no more than 400mm centres. This section creates a recess between the wall and the ceiling for aesthetic purposes. Should plaster trim not be required (for example if cornices are preferred), the grid is then supported on the perimeter with standard 25x25x0.8mm angles.



## FINISHING GUIDE

There are various levels of finishes based on the type of light present in a space, the end use of the system and the type of paint selected to be used. It is important to keep these guidelines in mind when considering the type of finish that is required, especially in areas with critical lighting.

### Selection of Surface Finishing for Drywall Partitions and Lightweight Internal Walls

LEVEL	APPLICATION	DESCRIPTION
1	Temporary Construction.	No jointing or finishing at all.
2	Frequently used in plenum areas above ceilings and in areas that are generally concealed.	All joints shall have the tape embedded in jointing compound. Surface shall be free of excess jointing compound but tool marks and ridges are acceptable.
3	This finish is suitable where moisture resistant boards are used as a substrate for things and may be used in garages or warehouse storage where surface appearance is not of primary importance.	All joints, angles and accessories shall have one coat of jointing compound applied. All screw heads to be spotted. Surface shall be free of excess jointing compound but tool marks and ridges are acceptable.
4	This level is suitable for areas which are to receive heavy or medium textured paint finishes, or where heavy grade wall coverings are to be used all joints etc. Should be carefully sanded to provide a smoother surface.	All joints, angles and accessories shall have two separate coat of jointing compound applied. All screw heads to be spotted. All jointing compound shall be smooth and free of tool marks and ridges. It is recommended that all the areas of jointing compound receive a coat of suitable* based Plaster Prime before finishing. <i>*Refer to paint manufacturers recommendation.</i>
5	This level should be used where gloss, semi-gloss or matt non-textured paints are specified. Any drywall that is subjected to critical lighting shall be finished to this level.	All joints, angles and accessories shall have two separate coat of jointing compound applied. All screw heads to be spotted. A thin skim coat of plaster shall be applied to the entire surface of the drywall. The surface shall be completely smooth and free of any marks and surface blemishes. The entire surface of the drywall shall receive a coat of oil based plaster primer before decoration.

#### FINISHING OF JOINTS ONLY:

Lightly sand or cut edges of plasterboards to remove any paper burrs and apply Fibatape to all joints, gaps and internal angles. Mix jointing plaster as per manufacturers specifications and apply an initial coat over Fibatape. Follow with a second coat of jointing plaster over the Fibatape ensuring that the tapers of the board are adequately covered. When completely dry sand lightly to achieve a smooth, even finish. Apply paint (see "Paint application").

#### FULL SKIM:

Lightly sand or cut edges of plasterboards to remove any paper burrs and apply Fibatape to all joints, gaps and internal angles. Mix skimming plaster as per manufacturer's specification and apply to the entire area evenly. Depending on the type of plaster used, floating and polishing may be required. Apply paint (see "Paint application") if required.

#### CORNERS:

Apply metal corner beads to all external corners and fix with 25mm drywall screws. Embed or cover corner beads in jointing plaster and smooth out to create an even corner.

#### PAINT APPLICATION:

It is good practise that a bonding liquid is applied to the plastered surface before paint is applied, however a paint primer in some cases may be acceptable before subsequent coats are applied. Recommendations of paint manufacturers should be followed as these recommendations may vary greatly between manufacturers.

## ■ GENERAL

Drywall partitions exceeding 3.6m in height have different design requirements based on the height and fire rating requirements of the wall. Design could vary between only decreasing the stud spacing or installing a double stud system with multiple layers of board. Please contact our technical services department should you require assistance with walls exceeding 3.6m in height.

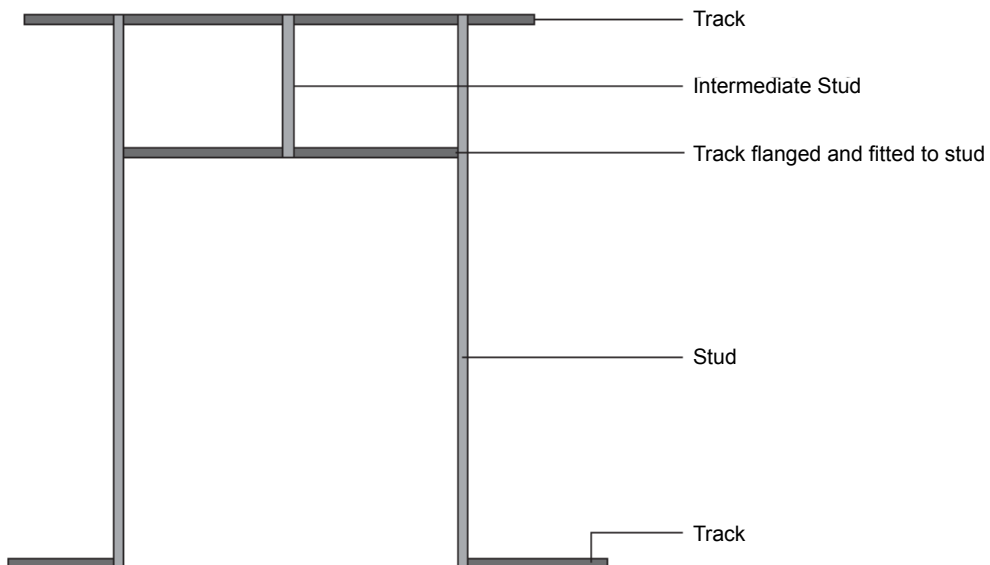
The sound insulation predictions indicated do not take into account a skim plaster finish, thus an additional 1-2 dB can be added to the indicated RW values should the walls be finished with an approximate 3mm thick plaster skim.

Please note that the external envelope of the building in which ceilings and partitions are to be installed must be closed/sealed before any ceilings and/or partitions are installed.

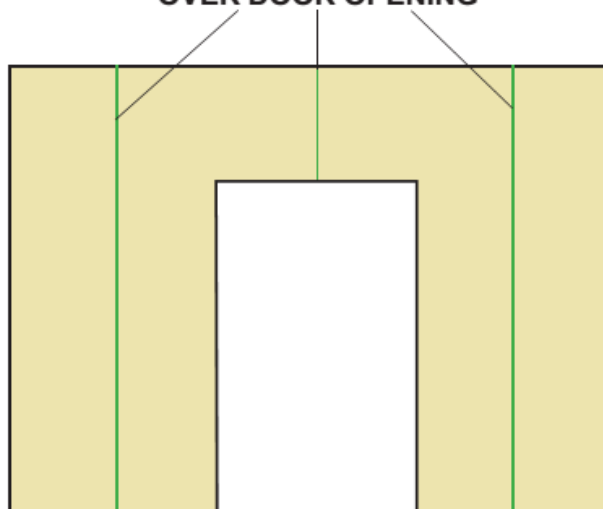
Ceiling tiles should be handled gently and preferably with gloves to ensure that they are not soiled during installation. Minor handling marks can be gently wiped clean with a mild soap solution.

Door openings in drywall partitions are to be supported with additional studs on both sides of the opening located in the track at the top and bottom of the wall.

A section of track shall be flanged and installed horizontally above the location of the door frame section as per sketch below. An intermediate stud is to be fixed vertically between the flanged track and the top track in the middle of the door opening. Plasterboards are to be installed with the joint in the middle of the door opening – not on the sides, this will reduce the possibility of cracking if the joint were on the side of the opening.



### LOCATION OF PLASTERBOARD JOINTS OVER DOOR OPENING







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