

CEILING & PARTITION WAREHOUSE

**CONTENTS:**

Introduction .....	1-2
Call Centre .....	3
Standards and Specifications in South Africa .....	4
Distribution Map .....	5
CPW 360° View .....	6-9
Standard Drywall Partition .....	10
Fire Rated Partition Systems .....	11
60 Minute Fire Rated Partitions .....	12-13
120 Minute Fire Rated Partitions .....	14-17
Moisture Resistant Drywall Partition .....	18
Acoustic Solutions .....	19
Control Joint and Deflection Head Specification .....	20
Jenlock Aluminium .....	21
Fixtures and Fittings .....	22
Wet Areas Specification .....	23-24
CPW Plaster Grid System .....	25-27
CPW Exposed Grid System .....	28
Steel Brander Ceiling System .....	29
Typical Bulkhead Details .....	30-34
Cornices and Perimeter Trims .....	35
Finishing Guide .....	36-37
General .....	38-39
Notes .....	40-42

## ABOUT US

Ceiling and Partition Warehouse (Pty) LTD was established in April 2002 by Tom Bunch, James Jennings, Saint Gobain and other minority shareholders. Tom Bunch and James Jennings were well experienced in the Ceiling & Partition industry having started and grown Insulations Unlimited, which became Macsteel Interior Systems (MIS), then Lafarge Gypsum and now Marley Building Systems. Their experience and expertise allowed CPW to flourish and grow exponentially since its inception. CPW has 8 branches in South Africa with our head office situated in 75 Linksfield road, Linksfield, Johannesburg. Location of branches include Alrode, Wynberg, Strijdom Park, Centurion, Montana, Bloemfontein, Cape Town and now Durban. In addition to this – we have an export department that specializes in the export of our products into Africa.

## PRODUCTS AND SERVICES

Ceiling and Partition Warehouse (Pty) LTD supplies a full range of quality products and accessories related to ceilings, partitions and access flooring which allows the creation of functional and aesthetically pleasing spaces.

While product has always been the focus in the industry, CPW believes there is a lack of support services around these products. In addition to this, there is a lack of product independent services in the industry that spans the different stakeholders and stages of a project. CPW are able to offer vast technical advice on solutions. We also provide fire rating and acoustic solutions. Our products fall under the ISO 9001:2008 Quality Management System which ensures that all products manufactured under this standard are in line with strict quality criteria.

Ceiling and Partition Warehouse (Pty) LTD are proud members of the Green Building Council and supply products that increase energy efficiency in buildings and are non-hazardous to the environment. We are also affiliated to the South African Building Interior Systems Association (SABISA).

## VISION AND MISSION

To be a full service offering to all stakeholders throughout the different stages of an interior building project. In doing this CPW offers both product and services from planning and design (specification) through to product on site and technical services. Through this engagement, CPW aims at reducing costs while maintaining required specification.

## THE HISTORY OF THE JENNINGS RANGE

James Jennings was a well-known and respected personality in the Ceiling & Partition Industry. His relationship approach and integrity are well remembered by all who dealt with him.

The current specifications that are used are product specific as opposed to Standards specific allowing product suppliers to ensure their product is specified at the beginning stages of a project.

The aim of the Jennings Range and Specification is to open up the market to be based on independent standards such as SABISA and SANS . This will allow professionals to greatly reduce cost, while specifying according to an independent credible standard. All Jennings specifications are based on SABISA which is the official standard for Interior Systems in South Africa.

All of our products are fully in accordance SANS and SABISA specification.

**ONE NUMBER GIVES YOU ALL THE ANSWERS**

We add real value with our knowledge and advise of our interior building products, committed to building better customer interactions in order to help you build better with us. Our trained and friendly staff will attend to your queries.

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**010 601 6128**

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[www.cpw.co.za](http://www.cpw.co.za)

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*Technical  
Advise*



*Quotations*



*Account  
Queries*



*Questions*



*Suggestions  
Comments*



*Claims*



*Sales  
Orders*



*Distribution  
Queries*



*Product  
Quality*



*Product  
Information*

CPW 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:

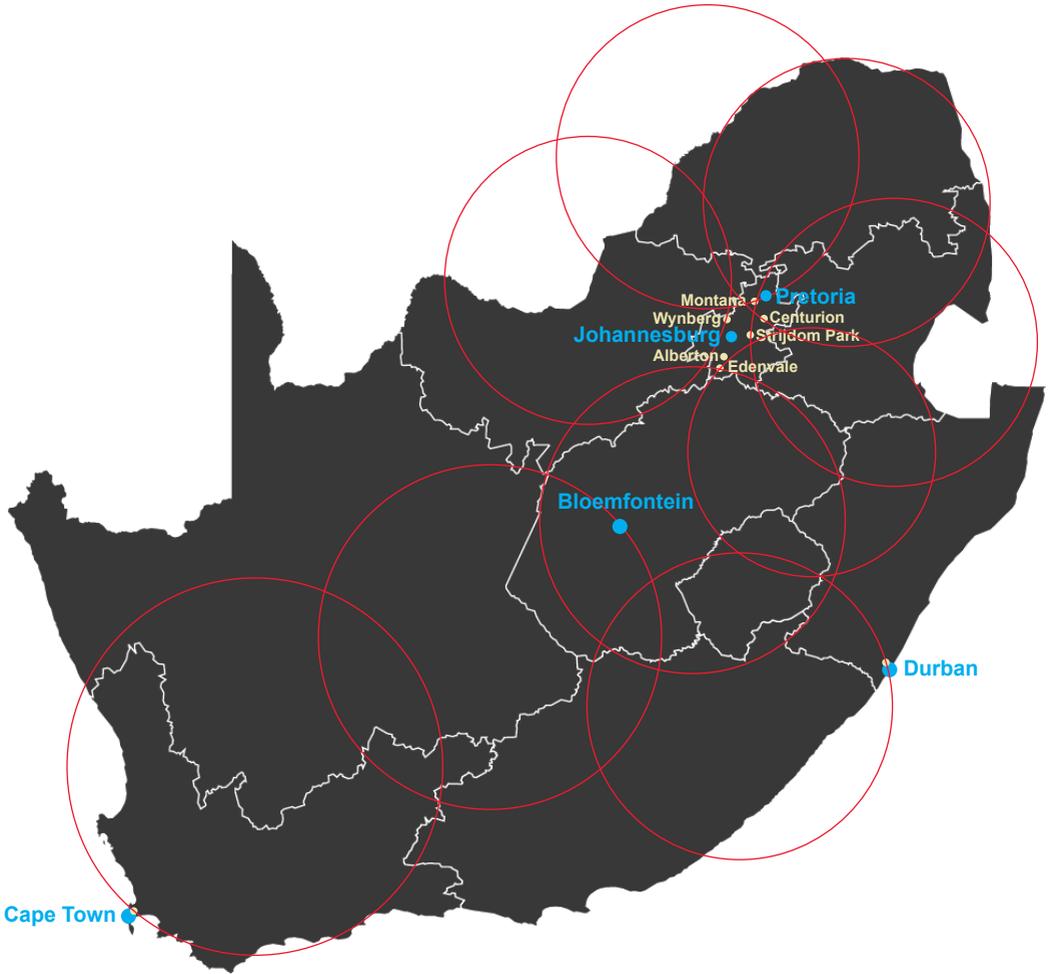
- SANS 266:2003 Gypsum Plasterboard
- SANS 803:2005 Fibre Cement Boards
- SANS 622:2005 Gypsum Cove Cornice
- SANS 204:2011 Energy Efficiency in Buildings
- SANS 10400 The Application of the National Building Regulations
- SANS 2001 EC1:2010 Construction Works – Ceilings, Partitions and Access Flooring

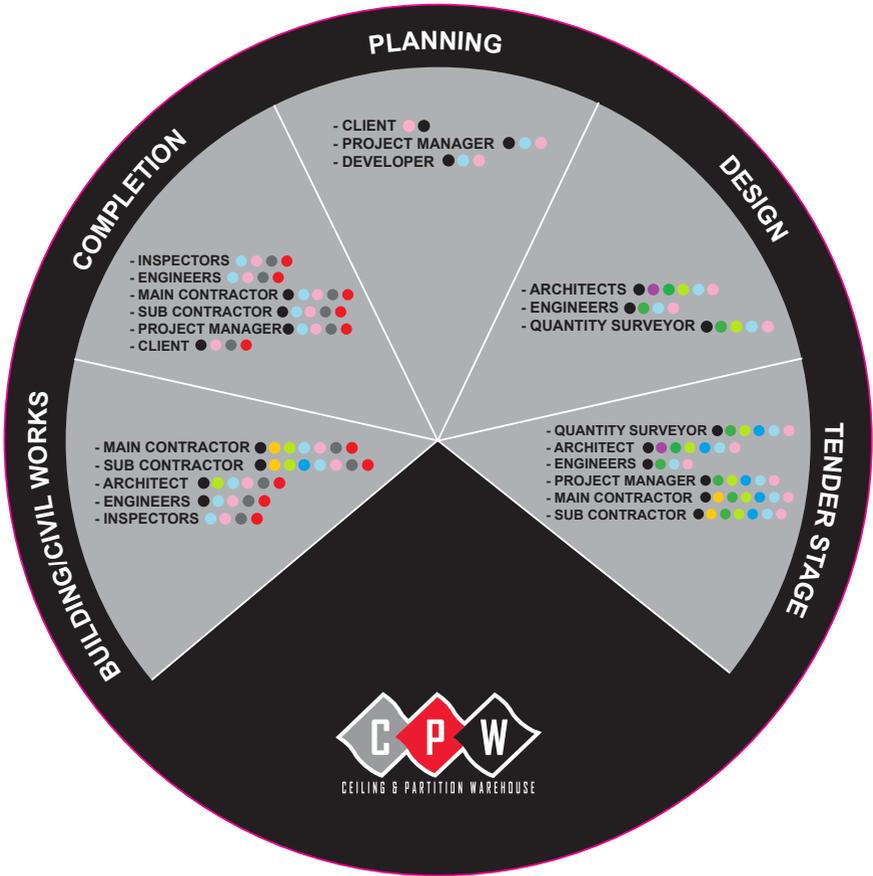
The South African Building Interior Systems Association (SABISA) is an organisation that falls under the Association of Architectural Aluminium Manufacturers of South Africa (AAAMSA). This association represents the ceiling and partition industry at national forums and ensures that the correct standards 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. CPW is an active member in SABISA and is also involved with maintaining and enforcing the relevant standards with regards to ceiling and partition installations.

The products manufactured for CPW, including all those of the Jennings range, are manufactured under the strict quality management system of ISO 9001:2008. This international standard requires continuous certification in specific time intervals as it ensures that the company is functioning and products are being manufactured to precise quality standards. We have our own specifications that are used in the manufacturing process which enables us to maintain efficient quality control.

The Jennings range by CPW is tailored to conform to the specifications and standards required in the ceiling and partition industry.

# Distribution Map





- Technical Advice And Support
- CPD Training
- General Training
- Specification Consulting And Project Packs
- Acoustic Predictions On Systems
- Material Take Offs And Pricing
- Engagement With Various Professionals
- Suport Documents And Warranties
- Site Inspections And Reports
- Certifications

● **Technical Advice and Support**

CPW 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.

● **CPD Training**

On 1st January 2007, the renewal of professional registration of all persons controlled by the Architectural Profession Act (No 44 of 2000) became conditional upon an accumulation of points earned through the participation in Continued Professional Development (CPD) activities.

While the statutory requirement might be an affront to some, any practitioner who believes in his/her vocation, should, as a matter of principle, want to attain and maintain the highest levels of competence in practice. Many product manufacturers and suppliers take advantage of this requirement by using it as a marketing front. The CPW Jennings specification is product independent and makes use of South African standards to achieve required performance criteria and specifications.

In this context, CPD is understood as a process that “maintains, enhances and increases the knowledge and skills necessary for the proper execution of professional duties” (SACAP circular to all registered persons dated 30 May 2006). The system is structured on a 5-year cycle within which architects must earn a minimum of 25 credit points.

CPD Presentations are done on a continuous basis by CPW to keep professionals informed on changes in the building industry, certified products and technical standards.

● **General Training**

We are passionate about all areas of the Ceiling and Partition Industry. From Architects to Contractors to Warehouse and Distribution Managers – CPW 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**

CPW is a product independent supplier with a strong focus on specification. Traditionally, specifications of projects are driven by product manufacturers trying to secure a specification based on their particular product. This leads to product “lock in” allowing the supplier to charge higher pricing in the market and control the contractor and sub contractor’s choice of product. The Jennings range of specifications are accordance to 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**

CPW 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 often requested to assist contractors with plans and Take Offs in order to product a bill of materials for pricing. This also allows for various options based on manufacturer’s offerings and price comparison thereof. Our investment in resource at Head Office as well as the skills in each branch allow us to quickly service our customers. No job too small.

● **Engagement with Various Professionals**

In addition to assisting architects, quantity surveyors and other professionals with advice and support, we can also consult with various engineers 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 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.

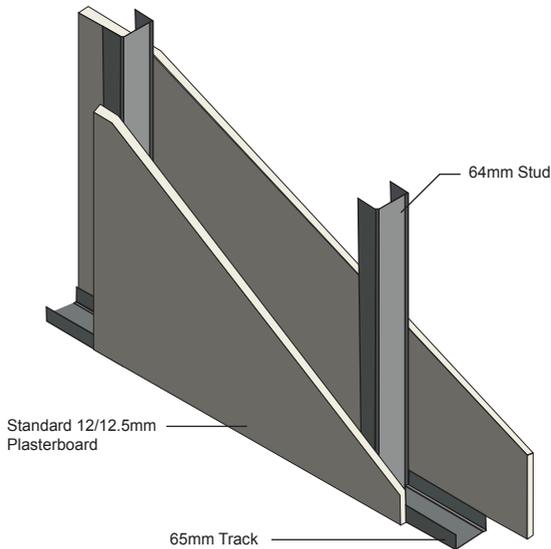
● **Certifications**

Certifications mainly pertain to fire rated systems. In order to have a fire system certified, site inspections are to be conducted at various intervals during installation from the start to completion. Please ensure that you advise your CPW representative if you require certification before the installation commences so that site inspections can be scheduled timeously.

## Standard Drywall Partition

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. To improve acoustic values, install SoundSeal between the building structure and the drywall framework (optional). Walls exceeding 3.6m but not exceeding 4.5m heights are to have 64mm studs fixed at 400mm centres and fire resistant boards installed instead of standard board as per SABISA recommendation.

Insulation: 14kg/m<sup>3</sup> Cavity Batt Insulation 63mm thick (optional)  
Fire Rating: 30 Minutes  
Sound Insulation Prediction: Rw 36 dB without insulation, 39 dB with insulation  
(76mm) Rw 36 dB without insulation, 40dB with insulation  
(89mm)



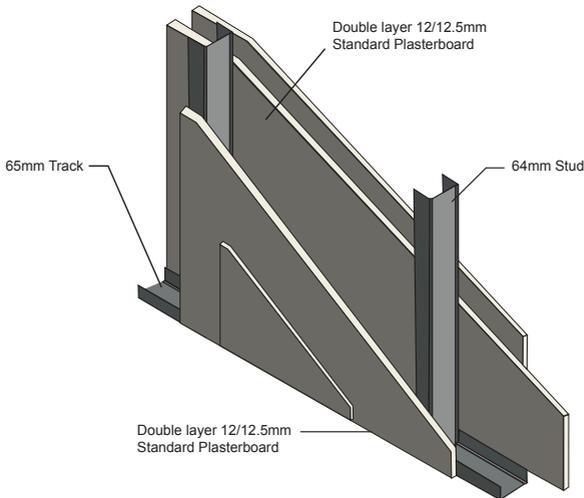
### WHAT IS FIRE RATING AND HOW IS IT TESTED?

- 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.

## OPTION 1

Partitioning walls up to 3.6m 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. To improve acoustic values, install SoundSeal between the building structure and the drywall framework (optional). Walls exceeding 3.6m but not exceeding 4.5m heights are to have studs fixed at 400mm centres as per SABISA recommendation.

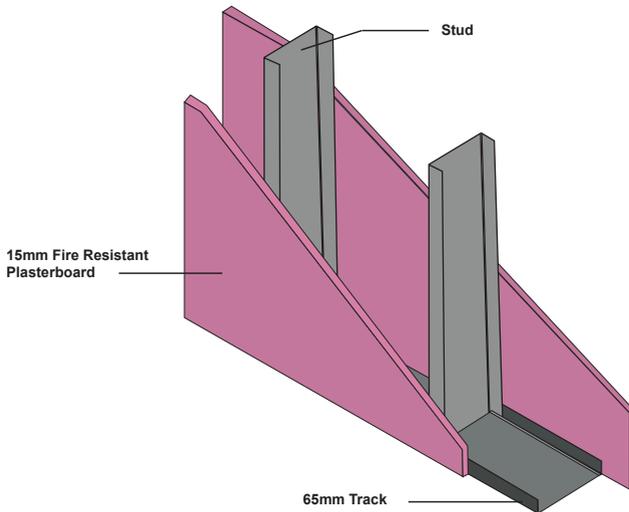
Insulation: 14kg/m<sup>3</sup> Cavity Batt Insulation 63mm thick (optional)  
Fire Rating: 60 Minutes  
Sound Insulation Prediction: Rw 46dB without insulation, 51dB with insulation.



### OPTION 2

Partitioning walls up to 3.6m high, this system consists of a single layer of 15mm 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 and the screw spacing is not to exceed 220mm centres. To improve acoustic values, install SoundSeal between the building structure and the drywall framework (optional). Walls exceeding 3.6m but not exceeding 4.5m heights are to have studs fixed at 400mm centres as per SABISA recommendation.

Insulation: 14kg/m3 Cavity Batt Insulation 63mm thick (optional)  
Fire Rating: 60 Minutes  
Sound Insulation Prediction: Rw 42dB without insulation, 47dB with insulation.

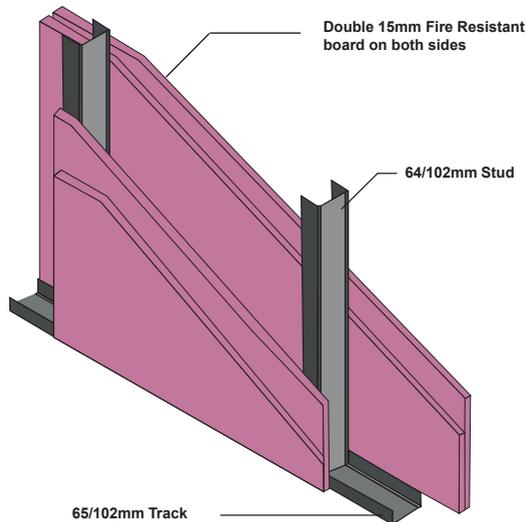


## 120 Minute Fire Rated Partition

### OPTION 1

Partitioning walls up to 3.6m high, this system consists of a double layer of 15mm 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. To improve acoustic values, install SoundSeal between the building structure and the drywall framework (optional). Walls exceeding 3.6m but not exceeding 4.5m heights are to have studs fixed at 400mm centres as per SABISA recommendation.

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.

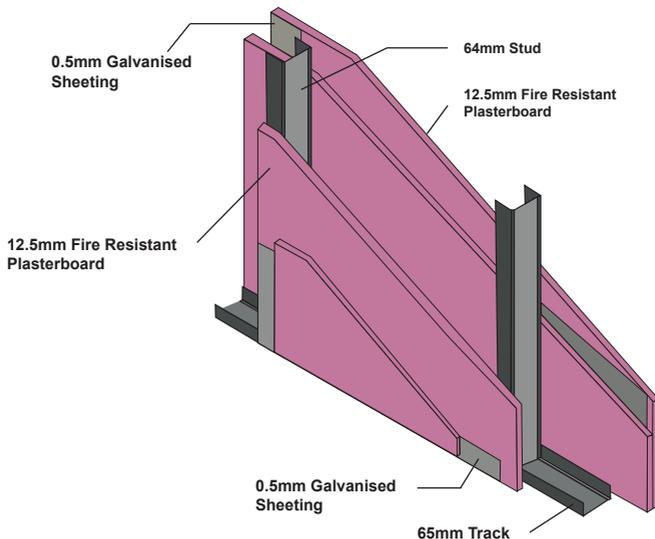


## 120 Minute Fire Rated Partition

### OPTION 2

Partitioning walls up to 3.6m 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. To improve acoustic values, install SoundSeal between the building structure and the drywall framework (optional). Walls exceeding 3.6m but not exceeding 4.5m heights are to have studs fixed at 400mm centres as per SABISA recommendation.

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 minimum.

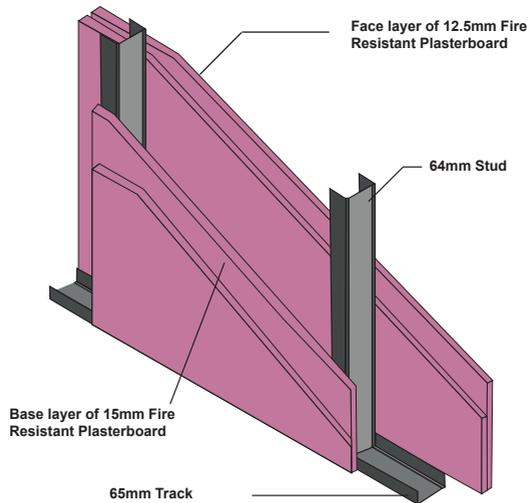


## 120 Minute Fire Rated Partition

### OPTION 3

Partitioning walls up to 3.6m high, this system consists of a single base layer of 15mm fire resistant plasterboard and a face 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. To improve acoustic values, install SoundSeal between the building structure and the drywall framework (optional). Walls exceeding 3.6m but not exceeding 4.5m heights are to have studs fixed at 400mm centres as per SABISA recommendation.

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



**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.

## Moisture Resistant Drywall Partitions

89mm wide partitioning walls up to 3.6m high – this system consists of a single layer of moisture resistant 12.5mm 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. To improve acoustic values, install SoundSeal between the building structure and the drywall framework (optional). Walls exceeding 3.6m but not exceeding 4.5m heights are to have studs fixed at 400mm as per SABISA recommendation.

### **PLEASE SEE WET AREAS SPECIFICATION FOR FURTHER INFORMATION.**

Insulation:	14kg/m <sup>3</sup> Cavity Batt Insulation 63mm thick (optional)
Fire Rating:	30 Minutes
Sound Insulation Prediction:	Rw 40dB without insulation, 46dB with insulation.

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. CPW 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 our technical services manager for further assistance on acoustic performance design.

## *Control Joint and 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.

The Jenlock range of aluminium sections, exclusive to CPW, is a quality product 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.
- Male door frame sections – accepts bubble seal gasket and is used where glazing mullions are required i.e. connected to female sections.
- 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.
- Male termination sections – used at vertical abutments and fair ends in conjunction with the female glazing/door frame section.
- 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.

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 self-tapping 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.

- **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:**

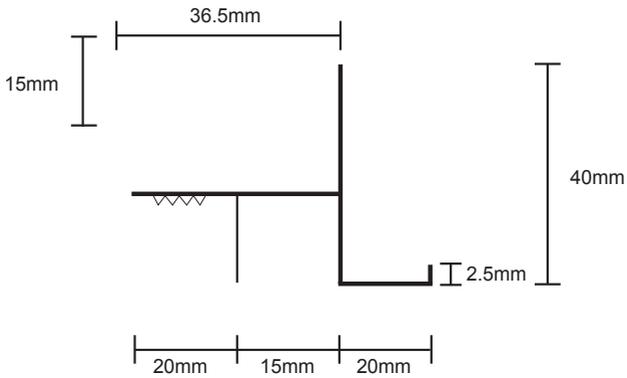
Install and finish as per wet areas specification above.

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.

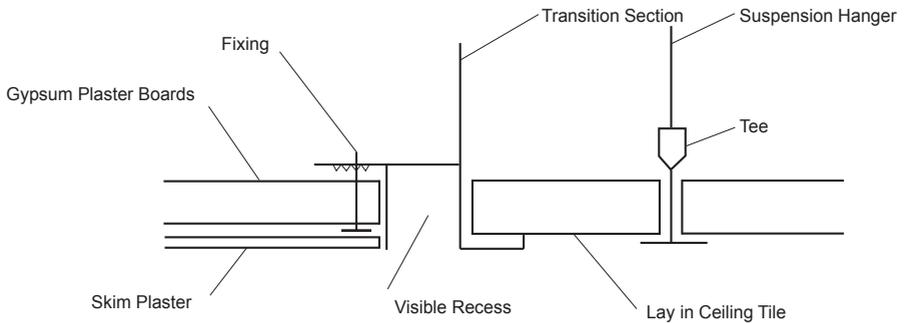
Supply and install suspended CPW Plaster Grid ceiling system formed of 35mm knurled steel capped main tees at 1.2m centres with cross tees at 400mm centres to the main tees. The ceiling is to be suspended with 25x25x0.8mm galvanised angles positioned at no more than 1.2m centres apart. 9.5mm Gypsum plasterboard is to be fixed to the underside of the grid with 25mm drywall screws. Screws to be at centres not exceeding 150mm and joints are to be staggered. Joints are to be taped with Fibatape and jointed with jointing compound or ceiling to be full skimmed with appropriate skimming plaster.

- This system consists of plaster trim or 25x25x0.8mm galvanised angle being fixed to the wall spanning the perimeter to support the grid; fixings are to be at 300mm – 400mm centres (see “Cornices and Perimeter Trims”).
- Sub-grids may be required where necessary, specifically where the plenum exceeds 3.6m.
- Perimeter suspension should not be more than 400mm from the wall.
- Where the galvanised steel suspension hangers are to be fixed to concrete soffits, angle cleats and express anchors are to be used.
- The galvanised angle should be fixed to the main tees and angle cleats with at least 2 Wafer Tex screws or 2 steel pop-rivets.

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



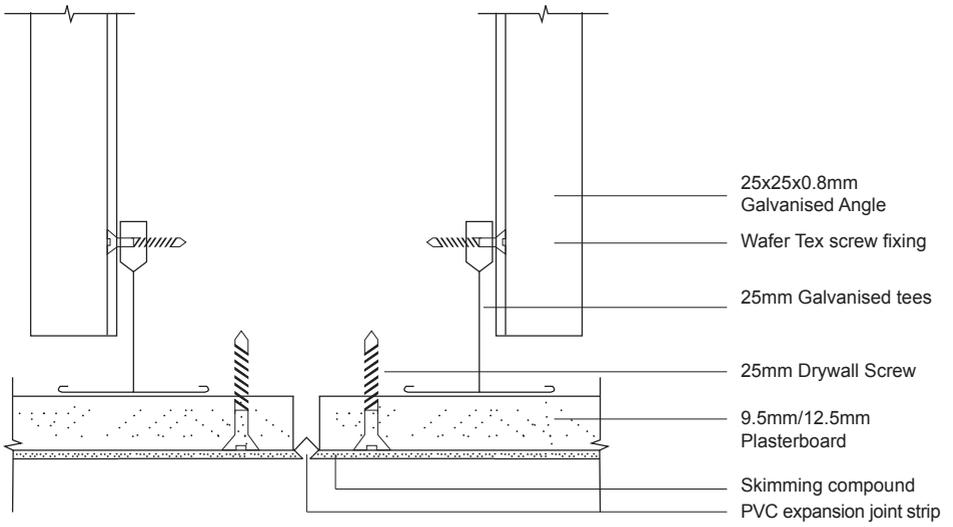
**CPW TRANSITION SECTION**



**CPW TRANSITION SECTION  
APPLICATION DIAGRAM**

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.

# CPW Plaster Grid System



CPW Exposed suspended ceiling system 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, CPW calcium silicate tiles or Armstrong mineral fibre 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.
- Only steel pop rivets are to be used where applicable.
- 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.

## Steel Brandering Ceiling System

This system is most suited to 6.4mm/7mm ceilings that utilize H-Strips/M-Strips/Bishop Strips on the joints and are typically specified for residential applications. Ceilings with H-Strips are not skimmed with any skimming compound and can be painted directly.

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.

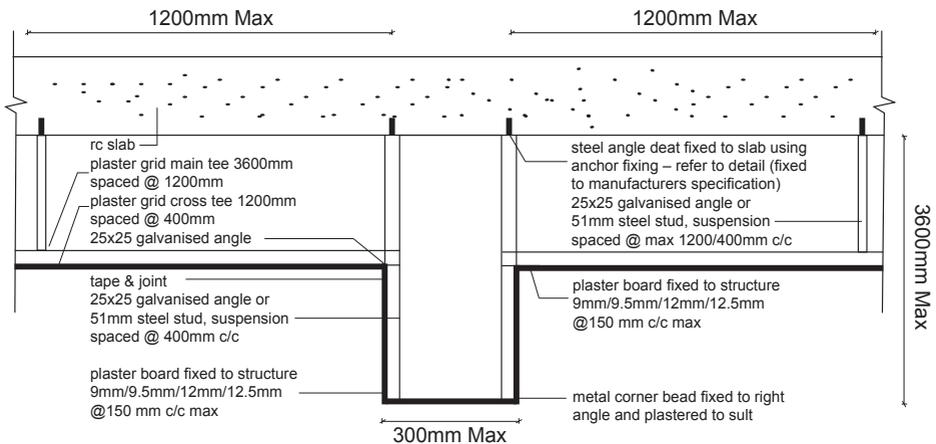
Joiners are typically used to join branders together. It is recommended that a 20x20mm galvanised angle is to be installed at the perimeter to support the brander ends and to provide a support for cornice fixing. Plasterboard is fixed at a right angle to the branders i.e. parallel to the trusses with 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.

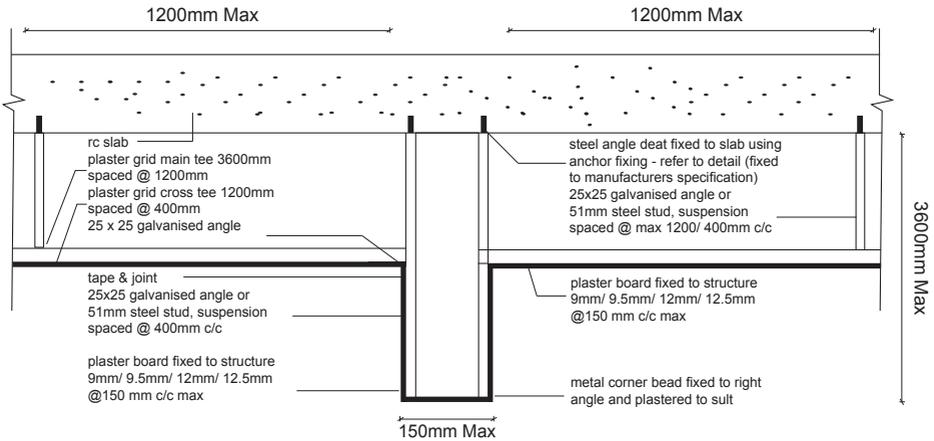
**NOTE:** While 25mm drywall/streaker screws are used to fix plasterboard to steel brandering and plaster grid systems, clout nails or 32mm grabber screws are used to fix plasterboard to timber branders.

Bulkheads can be made up of plaster grid sections, drywall stud and track or steel branders. 25x25x0.8mm Galvanised angle is used to secure and suspend the framework. Framework modules are to be spaced at a maximum of 400mm centres or the centres specified by an engineer. Framework is to be clad with 9mm plasterboard fixed with 25mm drywall screws not exceeding 150mm centres. Corner bead is to be used to finish corners, fixed with 25mm drywall screws. Joints are to be taped with Fibatape and jointed with CPW jointing plaster or full skimmed with an appropriate skimming plaster. An expansion joint should be fitted at every 15m of continuous length of bulkhead.

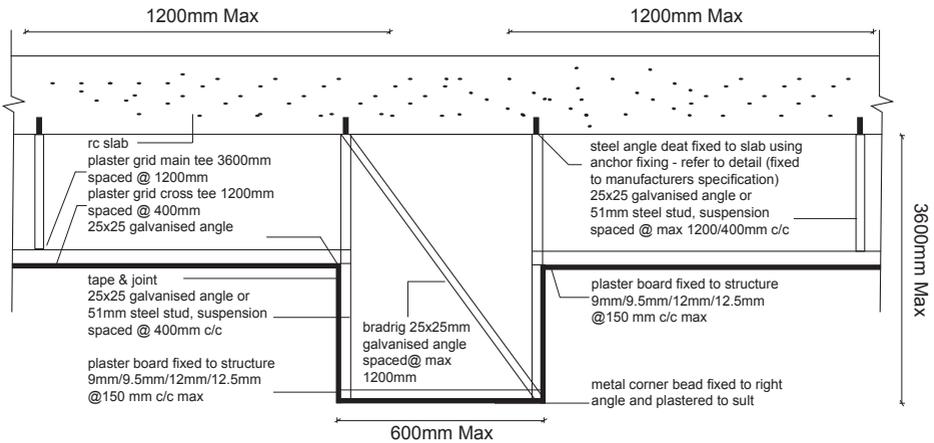
**Please see the following drawings of typical bulkhead sections:**



**300mm Wide – Recommended U – Shaped Bulkhead Fixing Details**

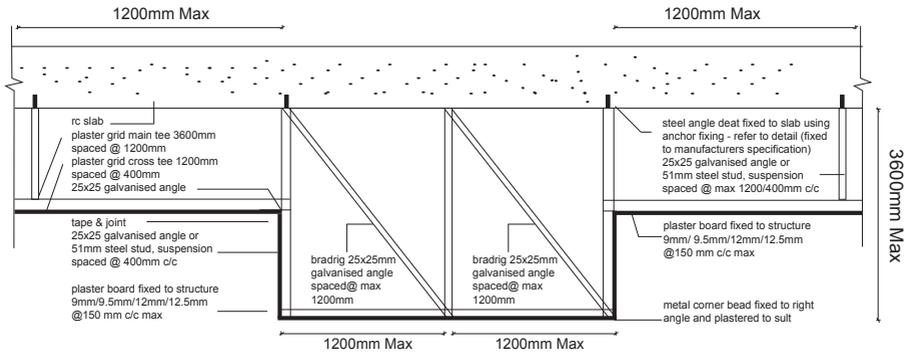


**150mm Wide – Recommended U – Shaped Bulkhead Fixing Details**

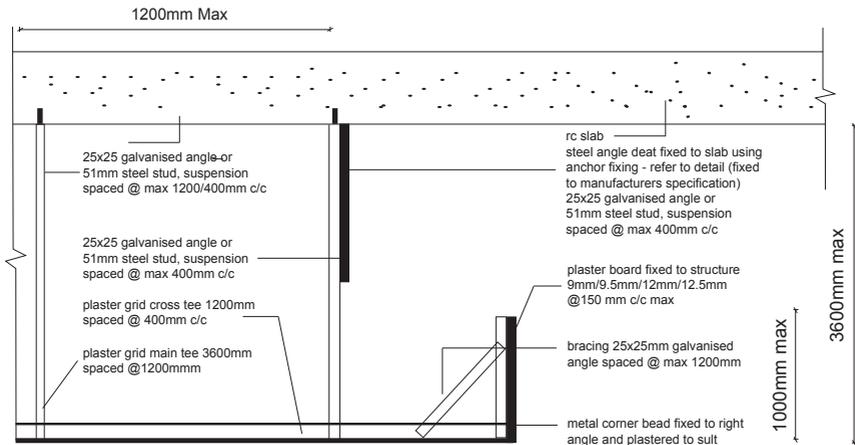


**600mm Wide – Recommended U – Shaped Bulkhead Fixing Details**

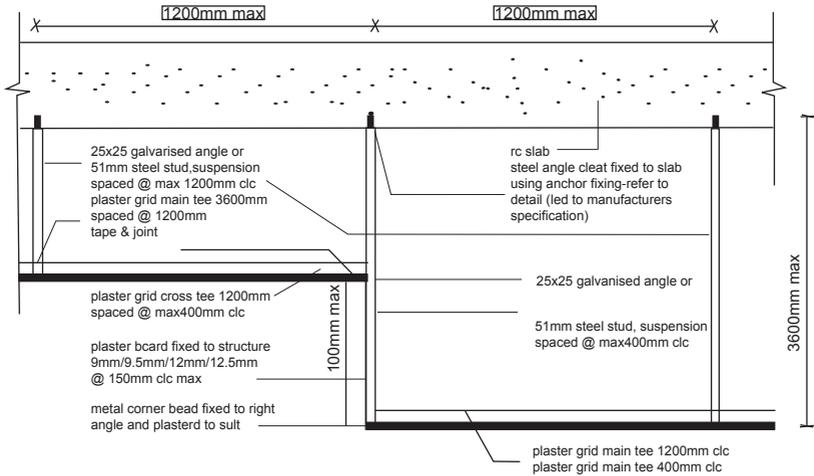
# Typical Bulkhead Details



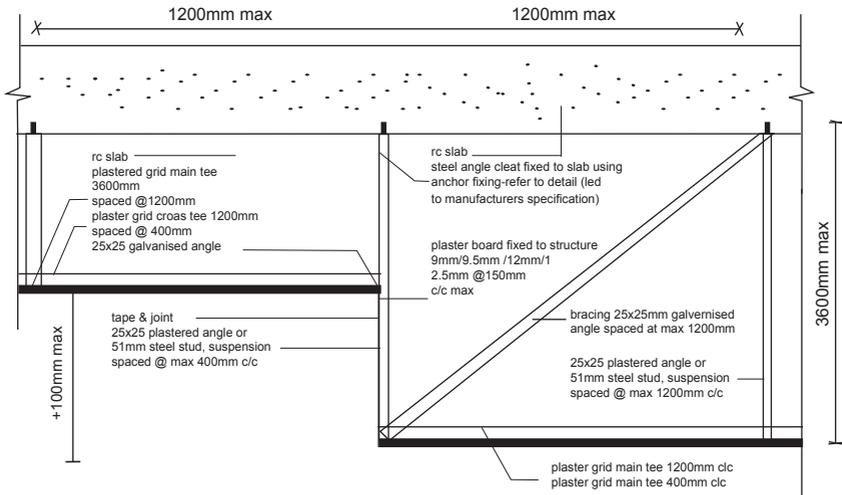
## 1200mm Wide and More – Recommended U – Shaped Bulkhead Fixing Details



## L-Shaped Recommended Bulkhead Fixing Detail

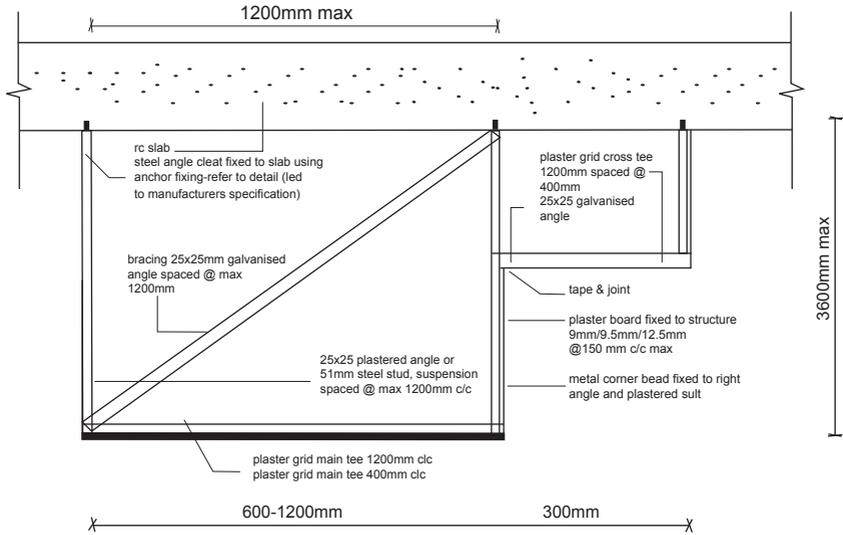


**L-Shaped Recommended Bulkhead Fixing Detail**



**L-Shaped Recommended Bulkhead Fixing Detail**

# Typical Bulkhead Details



## U-Shaped Recommended Bulkhead Fixing Detail

CPW 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.

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.

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.

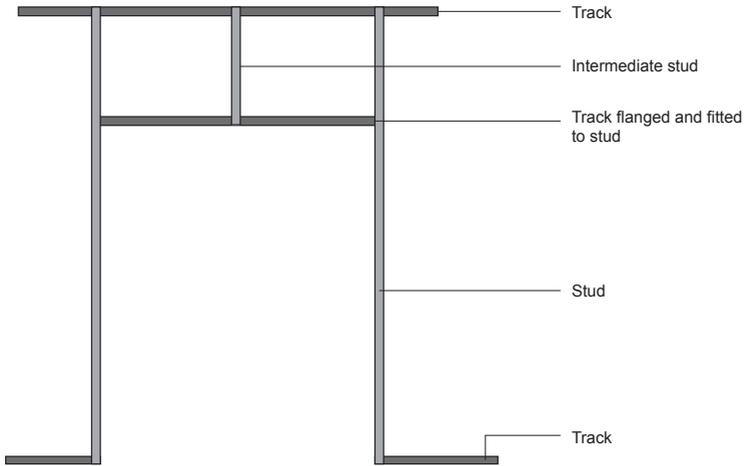
The sound insulation predictions indicated do not take into account a skim plaster finish, thus an additional 1-2 dB can be added to the indicated RW values should the walls be finished with an approximate 3mm thick plaster skim.

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**

