

Case study

The Met Office, Exeter



The Met Office's £80 million headquarters relies on drywall systems from Lafarge Plasterboard. The company's products have been used throughout the complex to create dramatic design features for partitions, wall linings, ceilings, and fire resistant column and beam encasements. Approximately 100,000m² of board have been installed, along with a range of metal stud configurations, in the construction of 22 different partition specifications. Key design features include a striking conical viewing area looking out over the development, a central indoor street and elliptical meeting rooms.

Client: The Met Office

Architect: Buro Happold

Drywall contractor: Ultimate IPD Interiors/ECL Contractors

Main contractor: Costain Skanska Joint Venture





Cormet Twin Wall Partitions are designed for installations requiring enhanced fire, sound or impact resistance and for use in creating exceptionally wide or high partitions.

Ideal for fast-track projects, they offer markedly better sound performance/thickness ratios than can be achieved using blockwork.

This has made them popular for buildings ranging from manufacturing facilities, multiplex cinemas and multi-occupancy domestic properties to hospitals.



3



Introduction

Cormet Twin Frame Systems

Cormet non-load bearing Twin Wall Systems constructed from plasterboard facings on metal studs have considerable advantages compared with traditional heavy masonry construction.

They are:

- lightweight
- quick to construct
- cost effective
- compact
- able to achieve high levels of fire resistance and acoustic insulation.

There are two types of Cormet systems:

- **staggered stud systems** in single track
- **twin frame systems** constructed using two separate metal frames, set a minimum of 40mm apart and braced together.

Performance

The selection of system, and the type, number and thickness of board layers will depend on the partition height and the performance required for fire resistance and sound insulation. Refer to the performance table 3.1, 3.3, 3.5 and 3.6.

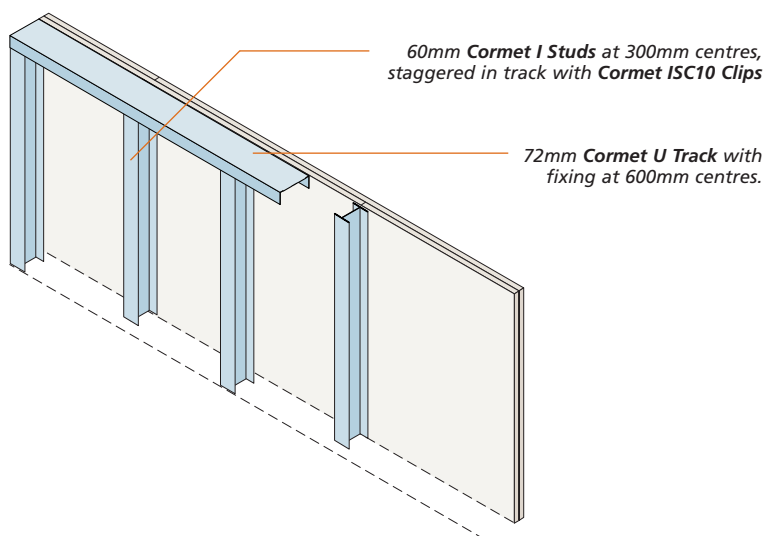
Lafarge plasterboards are defined as Class 0 in accordance with National Building Regulations 1991 Approved Documents B1/2/3/4/5 *Fire Safety* and Building Standards (Scotland) Regulations 1990, Regulation D2 when tested to BS 476: Part 6: 1989 and Part 7: 1997 and Euroclass A2. The gypsum core is classified as non-combustible when tested in accordance with BS 476: Part 4: 1970 and Euroclass A1. Lafarge jointing compounds, textures and bonding compounds and Cormet metal systems are non-combustible when tested in accordance with BS 476: Part 4: 1970 and Euroclass A1.

Boarding

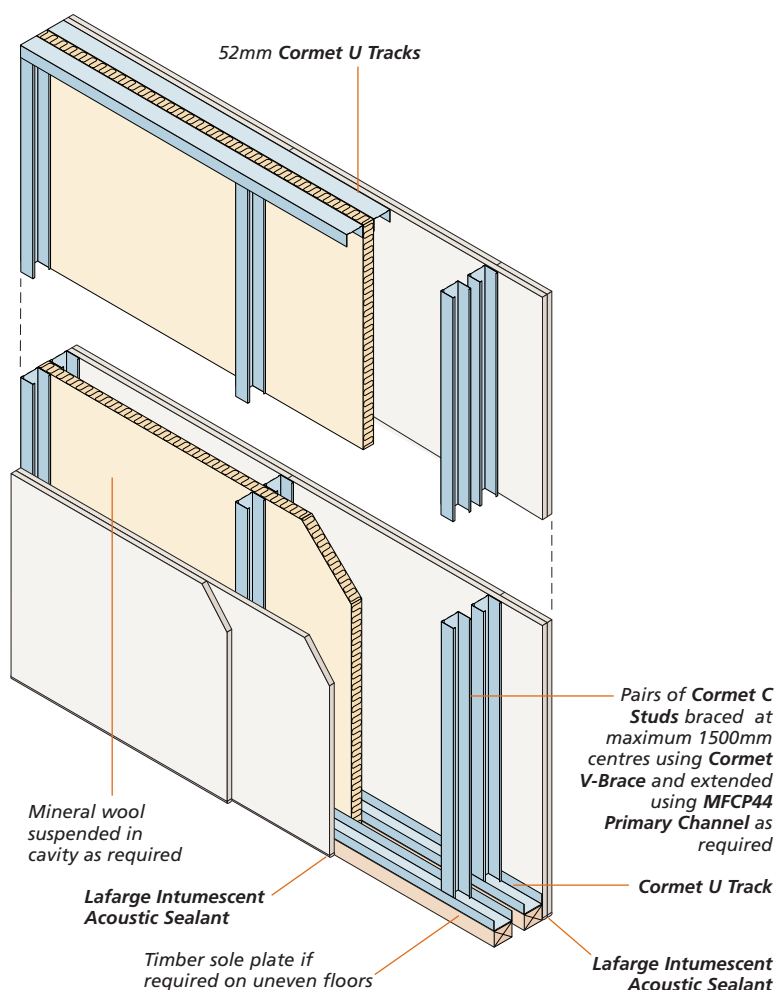
On partitions over single board height, stagger layers by a minimum of 300mm.

Stagger layers on each side of partition with previous layer.

Cormet Staggered I Stud system (system RSP 019 shown)



Cormet Twin frame system



Components

Components

Components used are as on pages 123-124, with additional components as shown on the right.

Colour coding is used to identify metal thickness:

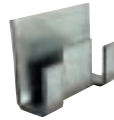
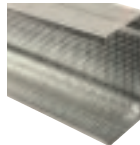
Red (R) 0.5mm

Blue (B) 0.7mm

White (W) 0.9mm

Maximum heights shown in tables 3.1, 3.3, 3.5 and 3.6 refer to 0.50mm thick studs (red gauge). If 0.70mm thick studs (blue gauge) are used then the maximum heights can be increased by 0.30m for single layer systems 0.60m for double layer.

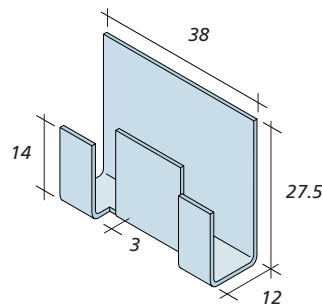
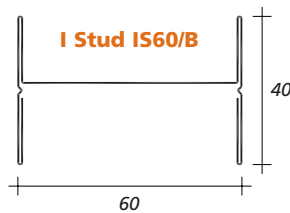
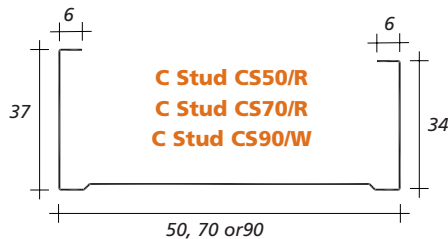
All framing components are manufactured to BS 7364: 1990 specification for galvanised steel studs and channels for stud and sheet partitions and linings using screw fixed gypsum wallboards.



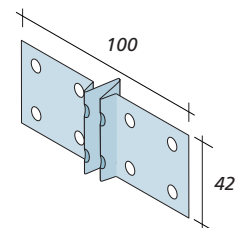
3.12 Components for Cormet High Performance Partitions

Component colour code metal thickness (mm)	Lafarge code	Dimensions (mm)
I Stud blue gauge 0.5mm	IS60/B	40 x 60
C Stud	CS50/R CS70/R CS90/W	36 x 50 x 34 36 x 70 x 34 36 x 90 x 34
Staggered Stud Clip	ISC10	12 x 27.5 x 38
V Brace	VBACE	100 x 42
Lafarge Resilient Tape	RAFT50	12 x 50

Components

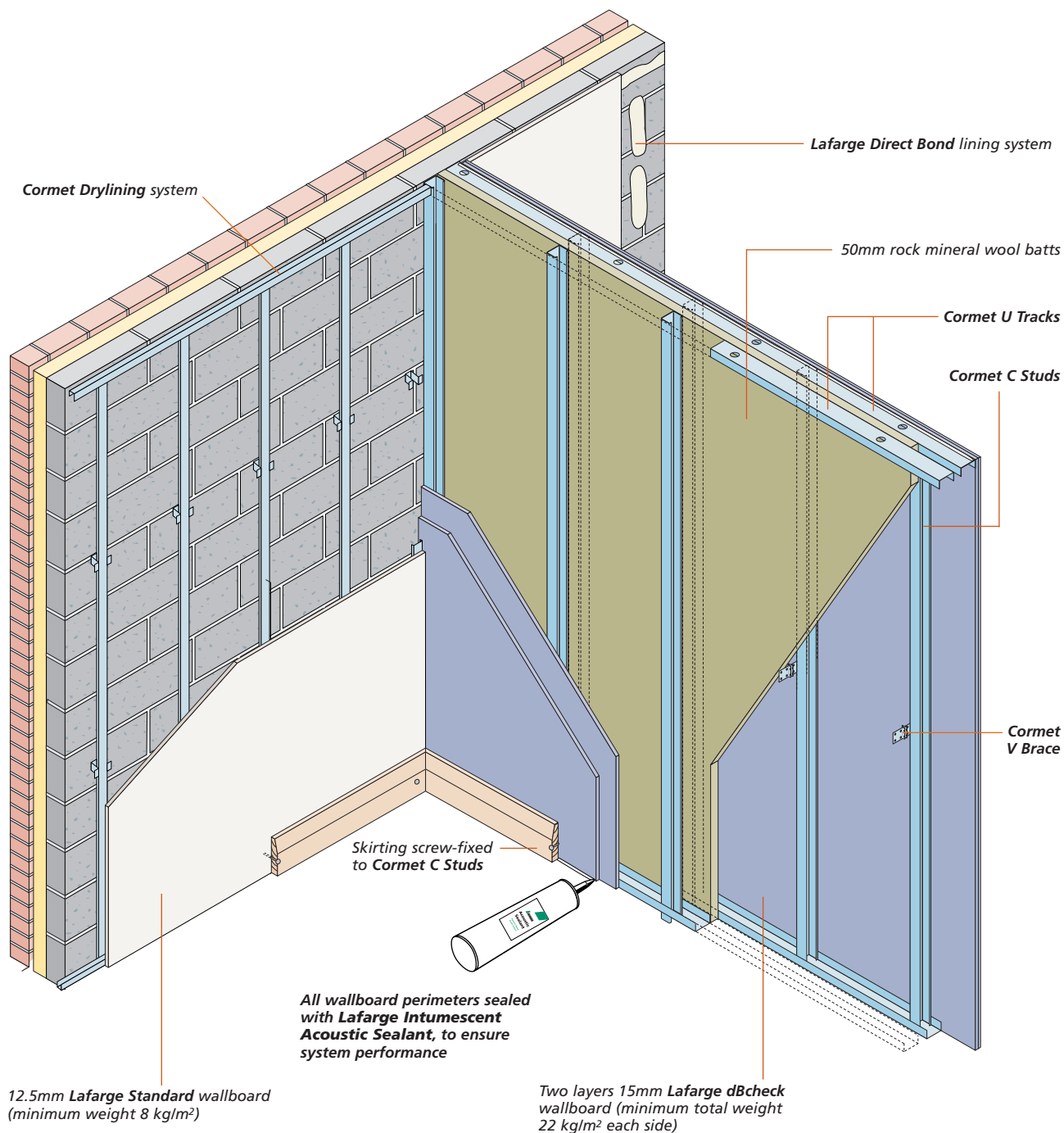


Staggered Stud Clip ISC10

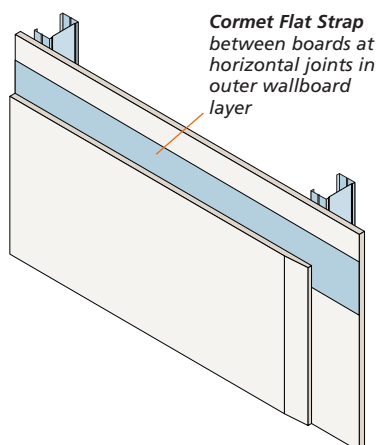


Cormet V Brace VBACE

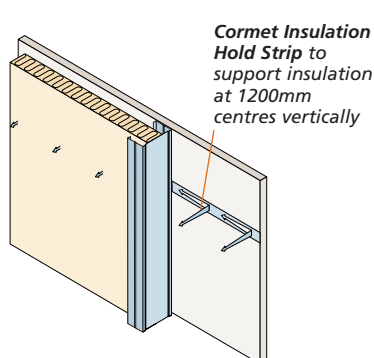
Cormet Twin Wall Solutions



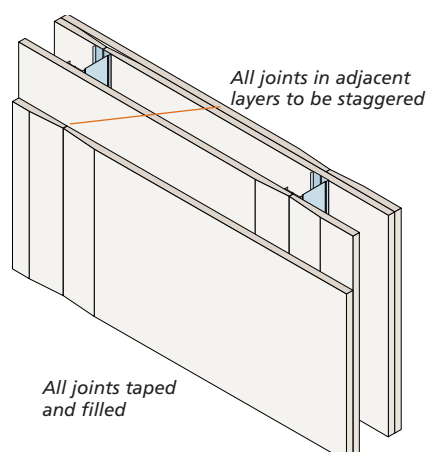
Overheight partitions



Suspension of mineral wool

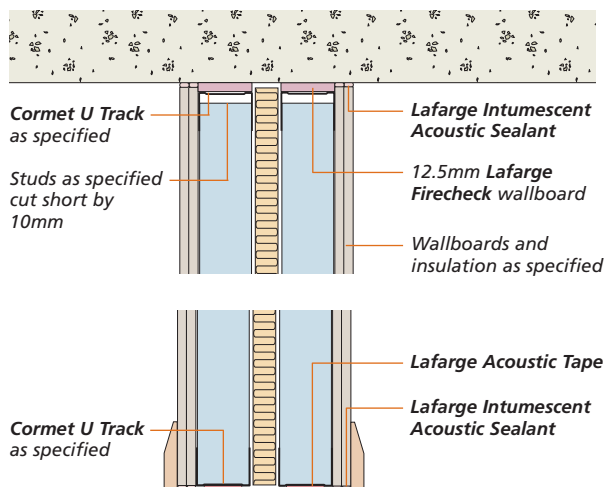


Partitions with double layer boarding



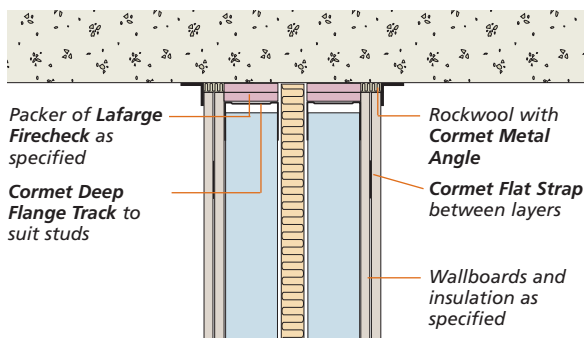
Ceiling and skirting detail

Fire rating up to 60 minutes, maximum deflection 10mm



Typical deflection head detail

Fire rating up to 60 minutes, maximum deflection 25mm



Note on head packer:

Max deflection	Packer required
8mm	1x12.5mm Firecheck*
10mm	1x15mm Firecheck*
15mm	1x19mm Plank
20mm	2x12.5mm Firecheck**
25mm	2x15mm Firecheck*

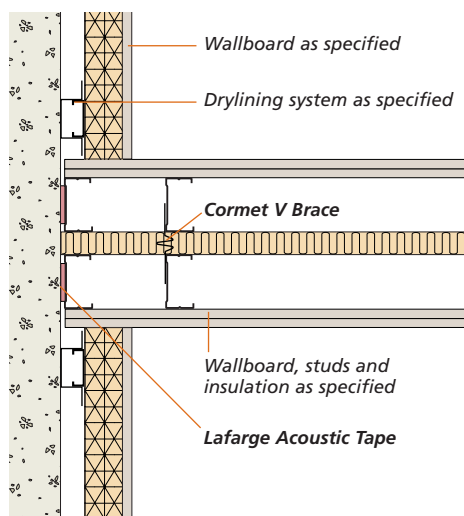
Notes:

* Firecheck can be substituted by Megadeco, Toughcheck or MR Firecheck

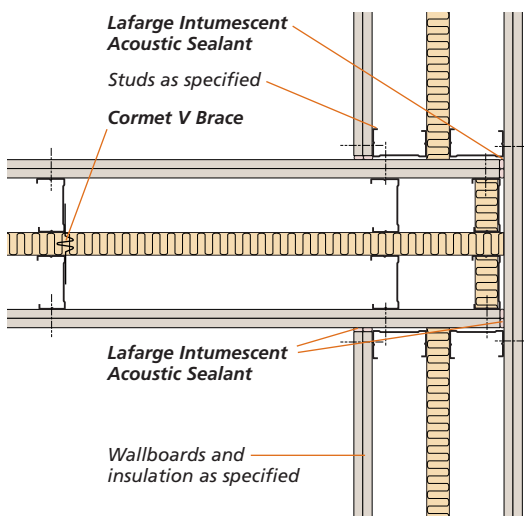
** Firecheck can be substituted by 25mm Firecheck Coreboard

3

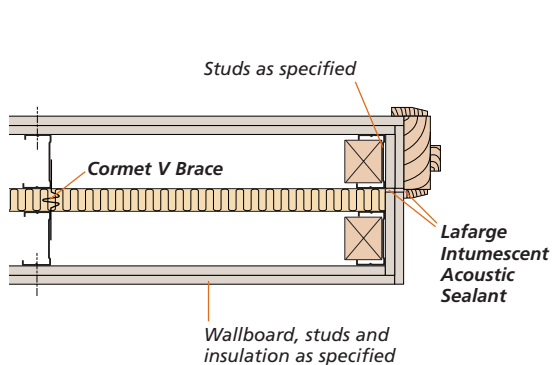
Junction with external concrete wall



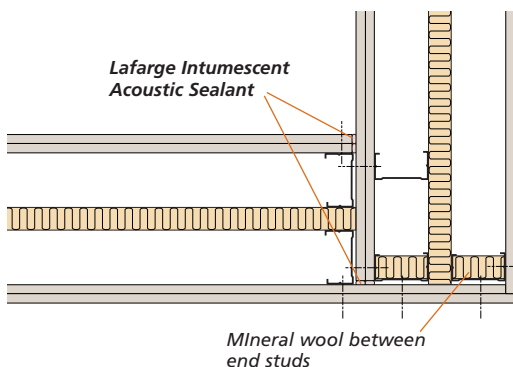
T junction (plan)



Typical door jamb detail



Corner detail



Specification

Cormet Twin Wall Systems

Scope

Cormet Twin Wall partition using twin **Cormet C Studs** fitted into **Cormet U Track** at head and floor where superior fire and acoustic performance may be required.

Additional clauses

Add general clauses (see Section 8) if required for:

- Expansion/movement joints
- Health and safety
- Storage of materials
- Site conditions and workmanship

NBS clauses

When using the NBS Specification, use clause K10 PLASTERBOARD DRY LININGS/PARTITIONS/CEILINGS.

The Lafarge Plasterboard website contains a full set of NBS clauses, completed for each Lafarge Plasterboard system. See: www.lafargeplasterboard.co.uk/nbssearch/index.asp



Notes:

Red text lists alternative product specifications.

(Italic red text within brackets gives advice on selecting the information needed).

System reference *(Insert Lafarge system reference from Performance Tables)*

Location

Client reference

Performance

Maximum heightm

Fire ratingmins

Airborne insulationR_wdB

Thicknessmm

Weightkg/m²

Grade to BS 5234:

Horizontal joints

If partition height exceeds board height, use **Cormet Channel MFIX** or **Cormet Fixing Strap FS90/W** in single boarded partitions or **Cormet Fixing Strap FS50/R** or **FS90/W** in double boarded partitions.

Insulation

(Specify insulation thickness and grade/density from the Performance Tables)

Acoustic mastic

6mm bead of Lafarge Acoustic Sealant around perimeter of the framing.

Studs

Two Cormet C Studs, reference **CS50/R**, **CS60/R**, **CS70/R**, **CS90/R**, **CS146/R**, **CS70/B**, **CS90/B**, **CS146/B**, **CS90/W**, **CS70/Y**, **CS90/Y** or **CS146/Y**, width **50**, **60**, **70**, **90** or **146mm** at max 600mm centres

Bracing

Cormet Acoustic Brace (VBACE) at centres as defined in performance tables.

Floor track

Cormet U Track, reference **UT52/R**, **UT62/R**, **UT72/R**, **UT92/R**, **UT148/R**, width **52**, **62**, **72**, **92**, **148mm** fixed at 600mm centres.

Head track

Cormet U Track, reference **UT52/R**, **UT62/R**, **UT72/R**, **UT92/R**, **UT148/R**, width **52**, **62**, **72**, **92**, **148mm** fixed at 600mm centres.

Floor/head track fixings

Spit Pula 700P nailing system for concrete or steel using fixings dependent on material substrates at max 600mm centres

Standard concrete use Spit C6 Pins *(Select from 20, 25, 30, 35, 40)mm*, or

Hard concrete use Spit HC6 Pins *(Select from 17, 20, 22, 27)mm*, or

Steel use Spit SC6 Pins *(Select from 15, 20)mm*

Spit Hammer-In fixing for concrete at maximum 600mm centres

Type Spit Hit CL35 *(Select from 30, 40, 50)mm*

Boarding

Single or **double** layer of wallboard.

Inner layer *(Specify wallboard from the Performance Tables)*

Outer layer *(Specify wallboard from the Performance Tables)*

Board fixings

Lafarge screws at 300mm centres

Type **Drywall Self-tapping**, or **Toughcheck Self-tapping**, or **Checkpoint Self-tapping**, or **Megadeco Self-tapping**.

Length, inner layer *(Select from 25, 32, 38, 41, 44, 51, 57, 63, 67, 76)mm*

Length, outer layer *(Select from 25, 32, 38, 41, 44, 51, 57, 63, 67, 76)mm*

Finishing

Lafarge Taping and jointing system, or

Lafarge Supreme Skim Plaster, or

Lafarge Predeco taping and jointing system

Installation

All materials, unless otherwise indicated, shall be supplied by Lafarge Plasterboard Ltd. and shall be installed in accordance with their current literature and in accordance with BS 8212: 1995.

Given the vast selection of different types of substrate that are encountered on-site, it is strongly recommended that adequate site tests be carried out to establish a recommended load on fixings.

Specification

Cormet Staggered I Stud Systems

Scope

Cormet Staggered I Stud partition using Cormet I Studs in a staggered pattern fitted into a single Cormet U Track at head and floor. Used where acoustic performance may be required.

Additional clauses

Add general clauses (see Section 8) if required for:

- Expansion/movement joints
- Health and safety
- Storage of materials
- Site conditions and workmanship

NBS clauses

When using the NBS Specification, use clause K10 PLASTERBOARD DRY LININGS/PARTITIONS/CEILINGS.

The Lafarge Plasterboard website contains a full set of NBS clauses, completed for each Lafarge Plasterboard system. See: www.lafargeplasterboard.co.uk/nbssearch/index.asp



Notes:

Red text lists alternative product specifications.

(Italic red text within brackets gives advice on selecting the information needed).

System reference *(Insert Lafarge system reference from Performance Tables)*

Location

Client reference

Performance

Maximum heightm

Fire ratingmins

Airborne insulationR_wdB

Thicknessmm

Weightkg/m²

Horizontal joints

If partition height exceeds board height, use **Cormet Channel MFIX** or **Cormet Fixing Strap FS90/W** in single boarded partitions or **Cormet Fixing Strap FS50/R** or **FS90/W** in double boarded partitions.

Insulation

(Specify insulation thickness and grad/density from the Performance Tables)

Acoustic mastic

6mm bead of Lafarge Acoustic Sealant around perimeter of the framing.

Studs

Cormet I Studs, reference **CS70/R** and **IS60/B** at max 300mm centres

Bracing

Cormet Staggered Stud Clip, reference ISC10.

Floor track

Cormet U Track, reference **UT72/R** at 600mm centres.

Head track

Cormet U Track, reference **UT72/R** at 600mm centres.

Floor/head track fixings

Spit Pula 700P nailing system for concrete or steel using fixings dependent on material substrates at max 600mm centres

Standard concrete use Spit C6 Pins *(Select from 20, 25, 30, 35, 40)mm*, or

Hard concrete use Spit HC6 Pins *(Select from 17, 20, 22, 27)mm*, or

Steel use Spit SC6 Pins *(Select from 15, 20)mm*

Spit Hammer-In fixing for concrete at maximum 600mm centres

Type Spit Hit CL35 *(Select from 30, 40, 50)mm*

Boarding

Single or **double** layer of wallboard.

Inner layer *(Specify wallboard from the Performance Tables)*

Outer layer *(Specify wallboard from the Performance Tables)*

Board fixings

Lafarge screws at 300mm centres

Type **Drywall Self-tapping**, or **Toughcheck Self-tapping**, or **Checkpoint Self-tapping**, or **Megadeco Self-tapping**.

Length, inner layer *(Select from 25, 32, 38, 41, 44, 51, 57, 63, 67, 76)mm*

Length, outer layer *(Select from 25, 32, 38, 41, 44, 51, 57, 63, 67, 76)mm*

Finishing

Lafarge Taping and jointing system, or

Lafarge Supreme Skim Plaster, or

Lafarge Predeco taping and jointing system

Installation

All materials, unless otherwise indicated, shall be supplied by Lafarge Plasterboard Ltd. and shall be installed in accordance with their current literature and in accordance with BS 8212: 1995.

Given the vast selection of different types of substrate that are encountered on-site, it is strongly recommended that adequate site tests be carried out to establish a recommended load on fixings.

Case study

Ster Century cinema, Basingstoke

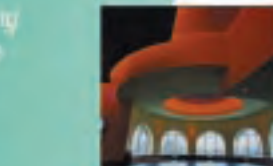


The new Ster Century cinema at Festival Place, Basingstoke provides a stunning example of the versatility of modern drywall materials. Systems from Lafarge Plasterboard have been used to create a dramatic entrance foyer, with eye-catching curved and barrelled features along with cut-outs to house recessed lighting. The drop bulkheads, which create a canopy over retail areas, are constructed using a suspended metal furring system in conjunction with twin layers of Contour board. Other curves within the dramatic ceiling design are formed from pre-wetted Firecheck. Toughcheck boards are used for vertical linings.

Client: Grosvenor Developments

Drywall contractor: Hilted

Main contractor: Loring Construction



LAFARGE
PLASTERBOARD



Cormet Resilient Bar provides a degree of isolation between the wallboard surface and the supporting structure, thus improving the acoustic performance of the partition.

3



Introduction

Cormet Resilient Bar Systems

Partitions using the **Cormet Resilient Bar** are constructed in the usual way, but the **Cormet Resilient Bars** are fixed to one side of the stud partition and faced with wallboard.

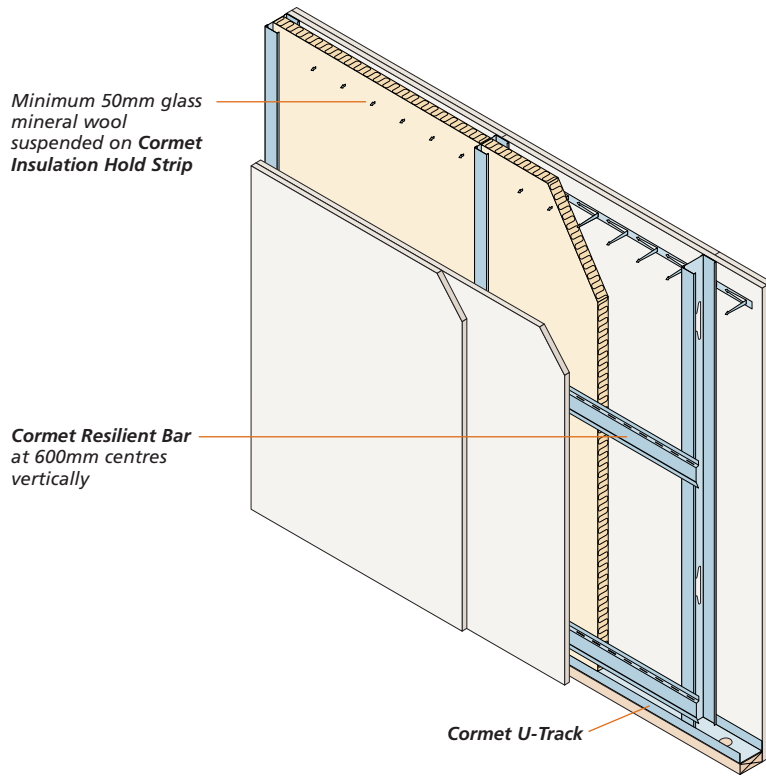
The benefit of **Cormet Resilient Bar** is that it improves the acoustic performance of the partition with little increase in partition width or weight.

Performance

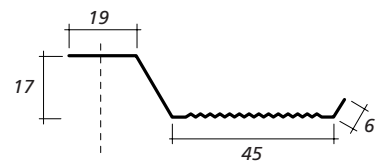
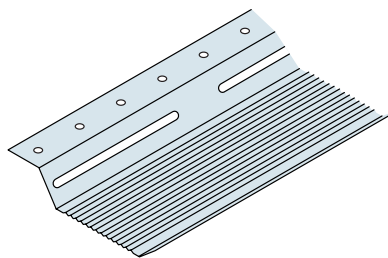
The selection of system, and the type, number and thickness of board layers will depend on the partition height and the performance required for fire resistance and sound insulation. Refer to the performance tables 3.3, 3.4, 3.5, 3.6 and 3.9.

Lafarge plasterboards are defined as Class 0 in accordance with National Building Regulations 1991 Approved Documents B1/2/3/4/5 *Fire Safety* and Building Standards (Scotland) Regulations 1990, Regulation D2 when tested to BS 476: Part 6: 1989 and Part 7: 1997 and Euroclass A2. The gypsum core is classified as non-combustible when tested in accordance with BS 476: Part 4: 1970 and Euroclass A1. Lafarge jointing compounds, textures and bonding compounds and Cormet metal systems are non-combustible when tested in accordance with BS 476: Part 4: 1970 and Euroclass A1.

Single frame system with Resilient Bar



Cormet Resilient Bar RBD3000



Cormet Resilient Bar

Where the **Cormet Resilient Bar** is to be fixed to timber or metal studs the following centres apply.

For single layer boarding fix **Cormet Resilient Bar** at 400mm centres.

For double layer board fix **Cormet Resilient Bar** at 600mm centres.

When fixing the **Cormet Resilient Bars**, remember that the top **Cormet Resilient Bar** is fixed in the inverted position, 50mm down from the soffit. The final **Cormet Resilient Bar** should be installed no more than 50mm from the floor. The remaining **Cormet Resilient Bars** are installed at vertical centres to suit boarding, ie 600mm for double layer and 400mm for single layer.

Screw fix the **Cormet Resilient Bars** to the **Cormet** studs using 25mm **Drywall Self Tapping Screws**.

Screw fix the wallboard to the **Cormet Resilient Bar** only, ensuring the screw does not touch the metal substrate.

For screw lengths for fixing plasterboard to **Cormet Resilient Bars** see Table 3.13.

For fixing **Cormet Resilient Bar** to timber studs use 38mm **Lafarge High Thread Screws**.

Table 3.13 Recommended screw lengths for fixing plasterboard to Cormet Resilient Bars

Plasterboard thickness (mm)	Screw length (mm)
12.5	25
15.0	25
19.0	32
12.5 + 12.5	38
19.0 + 12.5	44
15.0 + 15.0	44

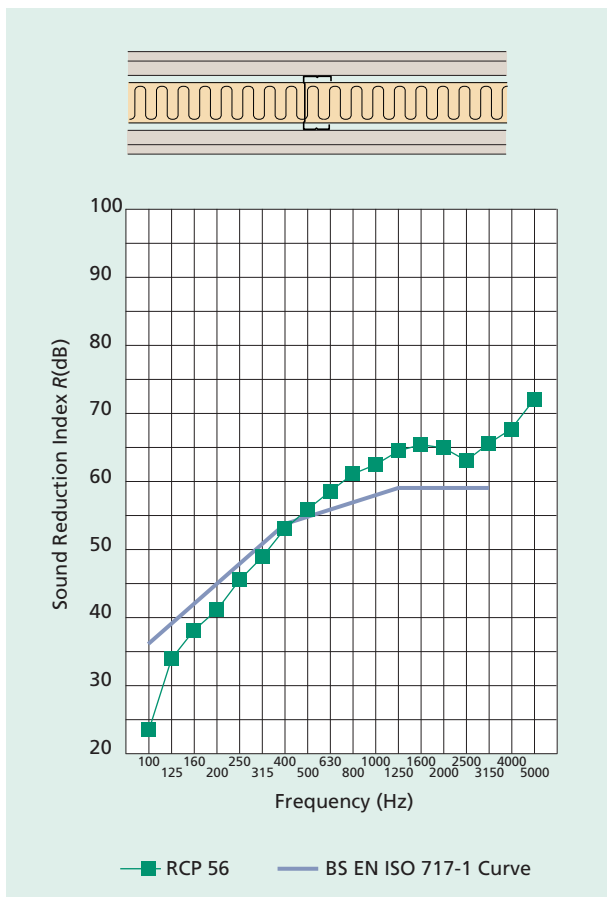
Comparison of systems with and without Cormet Resilient Bar

Studs: 70mm **Cormet C Stud (CS70/R)** at 600mm centres

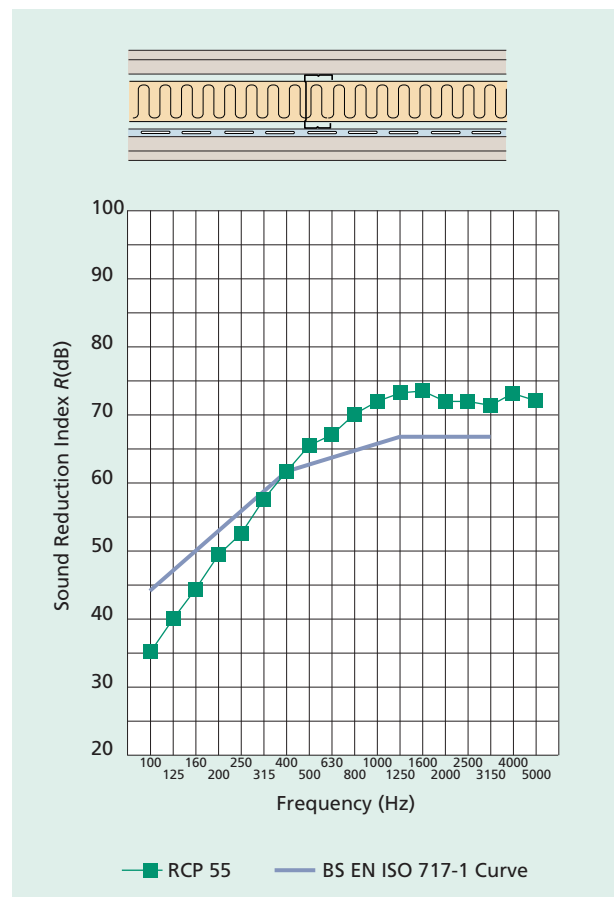
Facings: inner layer 19mm **Lafarge Plank** fixed with long edges horizontally

Facings: outer layer 12.5mm **Lafarge Standard** wallboard each side

Insulation: 50mm glass mineral wool density 16 kg/m³



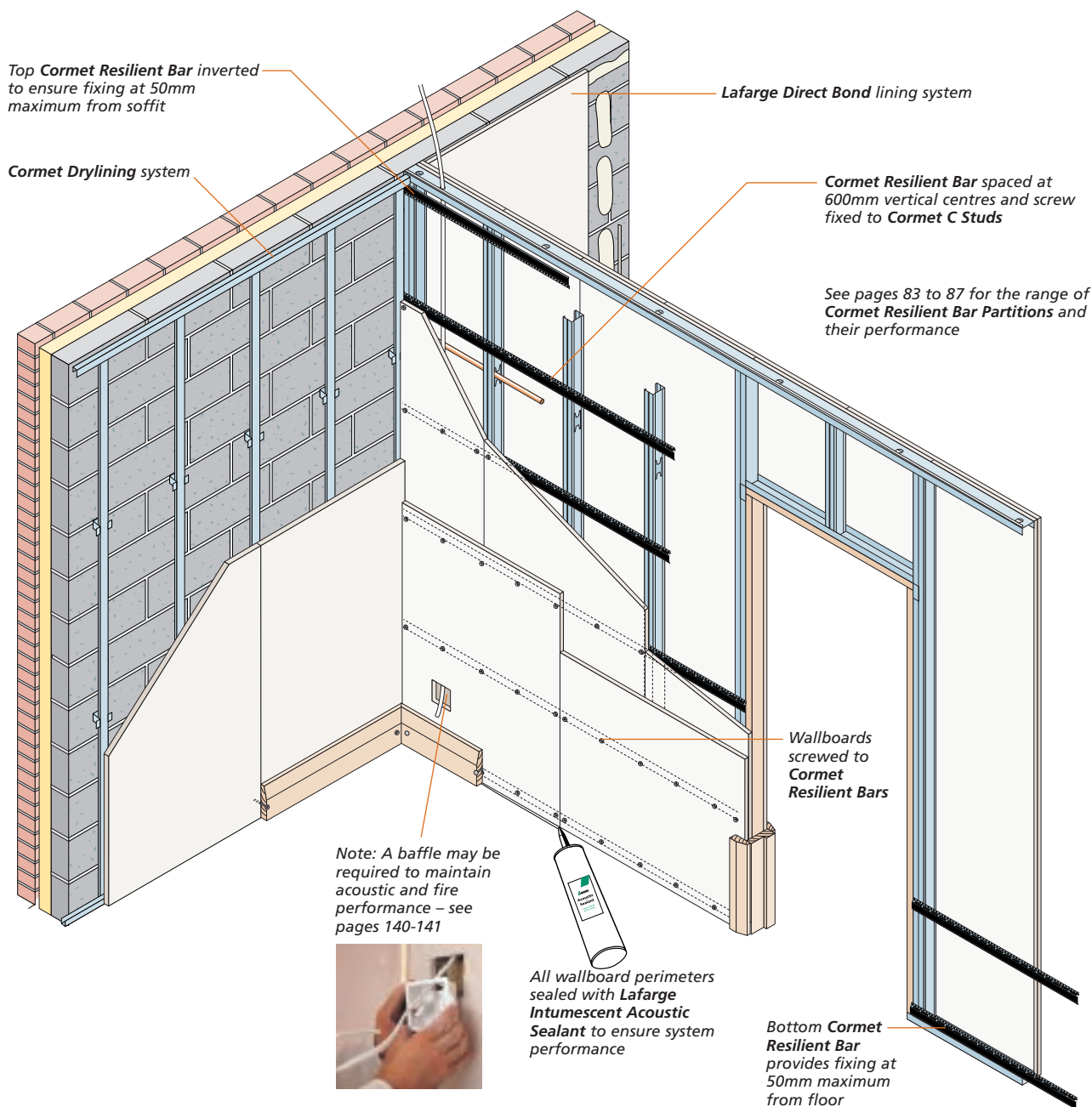
System reference RCP 56 (without Resilient Bar) R_w dB 55



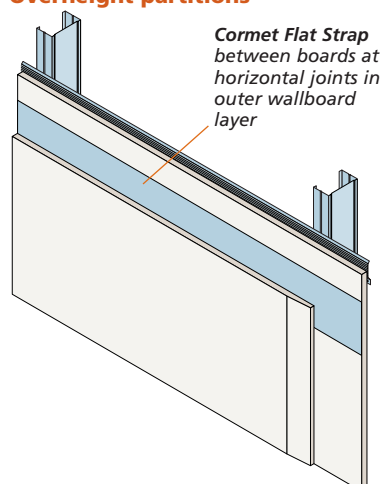
System reference RCP 55 (with Cormet Resilient Bar) R_w dB 63

Note: superior performance with Cormet Resilient Bar

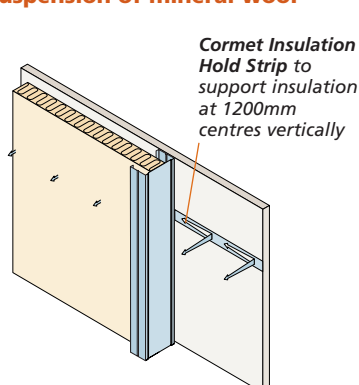
Cormet Resilient Bar Solutions



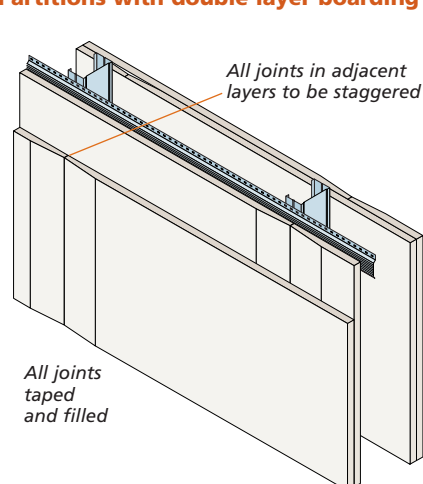
Overheight partitions



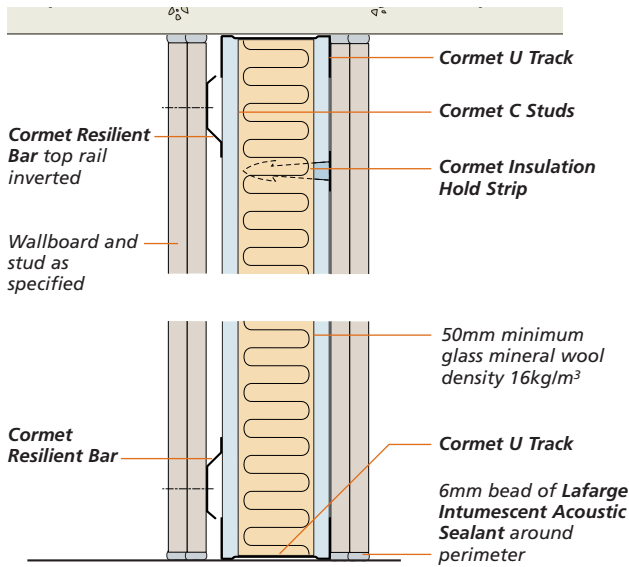
Suspension of mineral wool



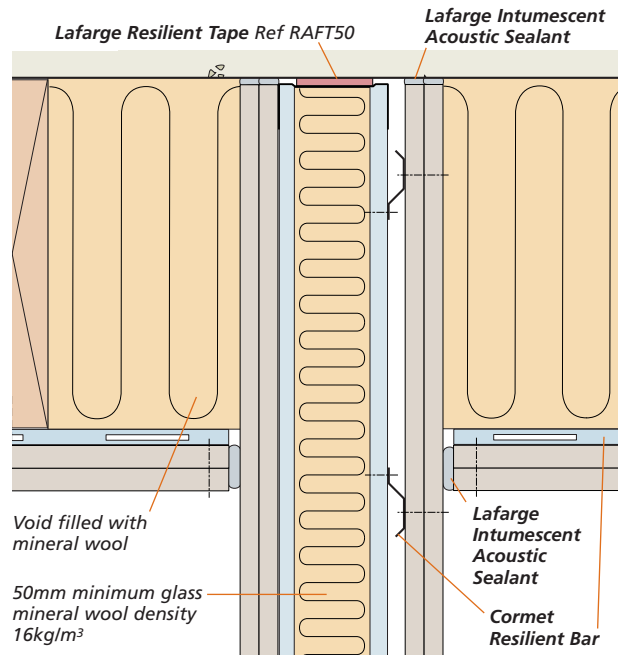
Partitions with double layer boarding



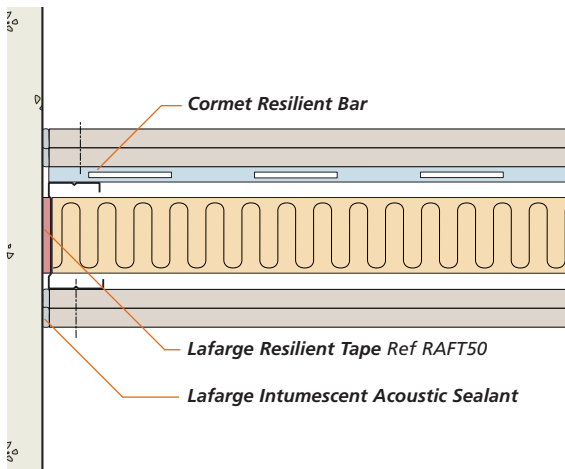
Single frame system with Cormet Resilient Bar – floor and ceiling details



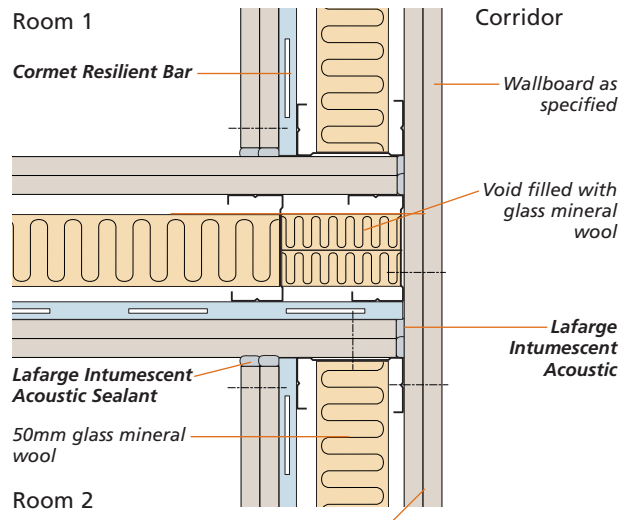
High performance wall head junction



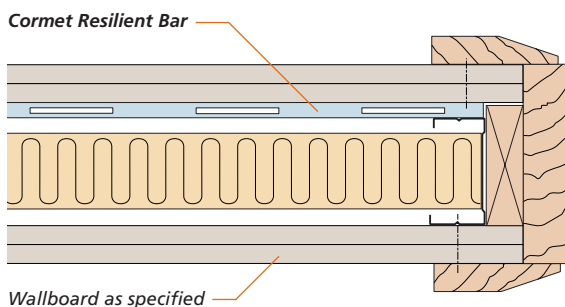
Junction with masonry wall



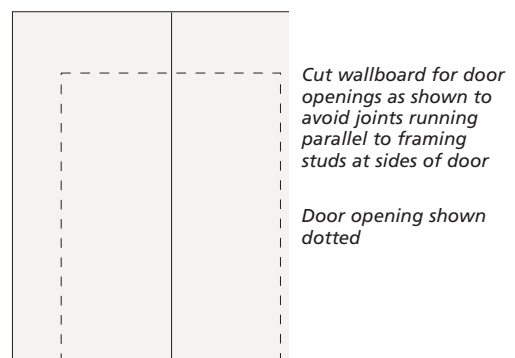
High performance wall T junction



Door opening detail



Wallboard setting out



Specification

Cormet Partition with Resilient Bar

Scope

Partition constructed of **Cormet C Studs** with **Cormet Resilient Bar** to one side of partition to improve acoustic performance.

Additional clauses

Add general clauses (see Section 8) if required for:

- Expansion/movement joints
- Health and safety
- Storage of materials
- Site conditions and workmanship

NBS clauses

When using the NBS Specification, use clause K10 PLASTERBOARD DRY LININGS/PARTITIONS/CEILINGS.

The Lafarge Plasterboard website contains a full set of NBS clauses, completed for each Lafarge Plasterboard system. See: www.lafargeplasterboard.co.uk/nbssearch/index.asp



Notes:

Red text lists alternative product specifications.

(Italic red text within brackets gives advice on selecting the information needed).

System reference *(Insert Lafarge system reference from Performance Tables)*

Location

Client reference

Performance

Maximum heightm

Fire ratingmins

Airborne insulationR_wdB

Thicknessmm

Weightkg/m²

Grade to BS 5234

Horizontal joints

If partition height exceeds board height, use **Cormet Channel MFIX** or **Cormet Fixing Strap FS90/W** in single boarded partitions or **Cormet Fixing Strap FS50/R** or **FS90/W** in double boarded partitions.

Insulation

(Specify insulation thickness and grade/density from the Performance Tables)

Acoustic mastic

6mm bead of Lafarge Acoustic Sealant around perimeter of the framing.

Studs

Cormet C Studs, reference **CS50/R**, **CS60/R**, **CS70/R**, **CS90/R**, **CS146/R**, **CS70/B**, **CS90/B**, **CS146/B**, **CS90/W**, **CS70/Y**, **CS90/Y** or **CS146/Y**, width 50, 60, 70, 90 or 146mm at max 600mm centres

Resilient Bar

Install Cormet Resilient Bar RBD3000 to one side of studs at 600mm vertical centres, using 25mm Lafarge Drywall Self Tapping Screws.

Floor track

Cormet U Track, reference **UT52/R**, **UT62/R**, **UT72/R**, **UT92/R**, **UT148/R**, width 52, 62, 72, 92, 148mm fixed at 600mm centres.

Head track

Cormet U Track, reference **UT52/R**, **UT62/R**, **UT72/R**, **UT92/R**, **UT148/R**, width 52, 62, 72, 92, 148mm fixed at 600mm centres.

Floor/head track fixings

Spit Pulsa 700P nailing system for concrete or steel using fixings dependent on material substrates at max 600mm centres

Standard concrete use Spit C6 Pins *(Select from 20, 25, 30, 35, 40)mm*, or

Hard concrete use Spit HC6 Pins *(Select from 17, 20, 22, 27)mm*, or

Steel use Spit SC6 Pins *(Select from 15, 20)mm*

Spit Hammer-In fixing for concrete at maximum 600mm centres

Type Spit Hit CL35 *(Select from 30, 40, 50)mm*

Boarding

Single or **double** layer of wallboard.

Inner layer *(Specify wallboard from the Performance Tables)*

Outer layer *(Specify wallboard from the Performance Tables)*

Board fixings

Lafarge screws at 300mm centres

Type **Drywall Self-tapping**, or **Toughcheck Self-tapping**, or **Checkpoint Self-tapping**, or **Megadeco Self-tapping**.

Length, inner layer *(Select from 25, 32, 38, 41, 44, 51, 57, 63, 67, 76)mm*

Length, outer layer *(Select from 25, 32, 38, 41, 44, 51, 57, 63, 67, 76)mm*

Finishing

Lafarge Taping and jointing system, or

Lafarge Supreme Skim Plaster, or

Lafarge Predeco taping and jointing system

Installation

All materials, unless otherwise indicated, shall be supplied by Lafarge Plasterboard Ltd. and shall be installed in accordance with their current literature and in accordance with BS 8212: 1995.

Given the vast selection of different types of substrate that are encountered on-site, it is strongly recommended that adequate site tests be carried out to establish a recommended load on fixings.

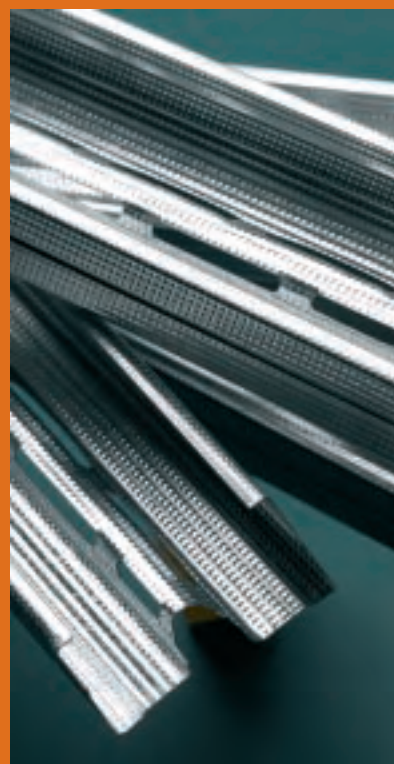


Cormet Acoustic Homespan provides a single solution for all modern domestic partition requirements.

The sound absorbing C studs provide markedly better performance than rigid H studs and the system requires no cross-noggings, contributing to reduced installation time.

Building Regulations now require enhanced acoustic performance in a range of domestic partitions. **Cormet Acoustic Homespan** uses a combination of high performance metals, which minimise sound bridging, and dense core board technology to provide 40 R_w dB sound performance in a 75mm wide partition without the need to install insulation within the system.

The **Cormet Omega Acoustic Stud** has a unique bulb design which means less acoustic energy is transmitted through the stud and so more impact and airborne sound is absorbed within the partition. Substituting the **Cormet Omega Acoustic Stud** for a standard **Cormet C Stud** increases the acoustic performance of the system without any loss in partition strength.



Introduction

Cormet Acoustic Partition Systems

Lafarge produce two acoustic partition systems:

- Cormet Acoustic Homespan
- Omega Acoustic Stud Partition

Cormet Acoustic Homespan

Cormet Acoustic Homespan is a 75mm or 80mm nominal width metal stud partitioning system using 44mm or 50mm metal **Cormet Acoustic Homespan C Studs** set at 450mm centres and one layer of 15mm thick x 900mm wide **Acoustic Homespan** wallboard fixed to each side.

Cormet Acoustic Homespan Partition system is a lightweight durable and high performance system:

- fast and easy to install
- cost effective against equivalent size of timber stud
- eliminates nail popping and cracking

Performance

Cormet Acoustic Homespan C Studs have been specifically developed to achieve at least 40R_w dB sound rating without insulation in-line with the latest Part E Approved Document.

Cormet Acoustic Homespan wallboard has been designed to allow electrical cable installations to meet N.H.B.C. guidelines and BS 7671 requirements for electrical installation.

Lafarge Acoustic Homespan wallboard is defined as Class 0 in accordance with National Building Regulations 1991 Approved Documents B1/2/3/4/5 *Fire Safety* and Building Standards (Scotland) Regulations 1990, Regulation D2 when tested to BS 476: Part 6: 1989 and Part 7: 1997 and Euroclass A2. The gypsum core is classified as non-combustible when tested in accordance with BS 476: Part 4: 1970 and Euroclass A1. Lafarge jointing compounds, metal systems, textures and bonding compounds are non-combustible when tested in accordance with BS 476: Part 4: 1970 and Euroclass A1.

Omega Acoustic Stud Partition

The **Omega Acoustic Stud** has a unique bulb design with engineered twin slots, which creates a resilient spring section. The spring section means less acoustic energy is transmitted through the stud and so more impact and airborne sound is absorbed within the partition.

Cormet Acoustic Homespan Partition System

Rubber grommet used to protect cable passing through service punch

Lafarge Intumescent Acoustic Sealant behind the perimeter of metal framing

Cormet Homespan U Track at floors and ceilings

Cormet Acoustic Starter Stud used in place of **Cormet Acoustic Homespan C Stud** at door frames, wall abutments, corners and T junctions

Cormet Homespan U Track Track snipped and folded to form head to door opening

Cormet Acoustic Homespan C Studs at 450mm centres

15mm **Lafarge Acoustic Homespan** wallboard screw fixed at 300mm centres on studs and at 200mm centres at perimeter

Lafarge Intumescent Acoustic Sealant at the perimeter of the wallboards

Cormet Omega Acoustic Stud Partition

Cormet U Track at floors and ceilings

Omega Acoustic Studs at 600mm centres

Wallboards as specified

Lafarge Intumescent Acoustic Sealant behind the perimeter of metal framing or at the perimeter of the wallboards

Components

Substituting the **Omega Acoustic Stud** for a standard **Cormet C Stud** increases the acoustic performance of the system and improves the overall R_w dB figure with no significant loss of partition strength. For individual system performance see **Cormet Omega Stud** partitions in table 3.8.

System components

All metal components are manufactured to BS 7364: 1990 specification for galvanised steel studs and channels for stud and sheet partitions and linings using screw fixed gypsum wallboard.

Flanges have deep knurlings for easier screw fixing and plasterboard alignment.

Table 3.15 Acoustic Homespan wallboard

Properties	Homespan wallboard	MR Homespan wallboard
Thickness	15mm	15mm
Width	900mm	900mm
Length	1800, 2400 and 2700mm	2400mm
Tapered edge	Yes	Yes
Square edge	Yes	No

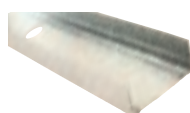


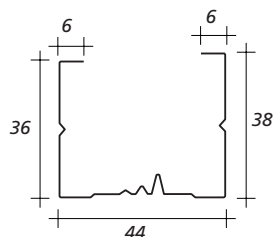
Table 3.14 Cormet Acoustic components

Component	Width (mm)	Lengths (mm)	Lafarge code
Acoustic Homespan C Stud	44	2400	AHS44/R
	50	2400	AHS50/R
Acoustic Homespan Starter Stud	44	2400	CS44/R
	50	2400	CS50/R
Homespan U Track	45	2400, 2700	UT45/R
	52	3000	UT52/R
Homespan U Track Deep Flange	45	2400	XDT45/R
	52	3000	UDT52/B
Omega Acoustic Stud	70	2400, 2700, 3000, 3600	AS70/R
	90	3600, 3900, 4200	AS90/R
U Track	70	3000	UT72/R
	90	3000	UT92/R
Lafarge Intumescent Acoustic Sealant	0.9 litres		ACOUSTIC (intu)
	0.38 litres		ACO38 (intu)

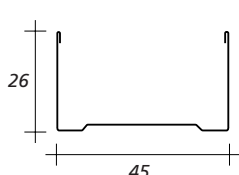
3

Cormet Acoustic Homespan Studs and Tracks

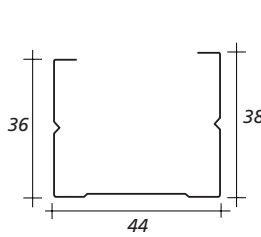
C Stud AHS44/R



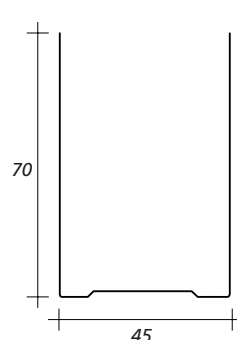
U Track UT45/R



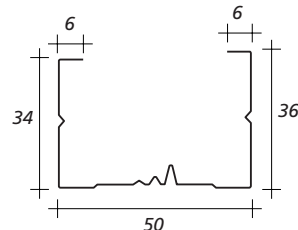
Starter Stud CS44/R



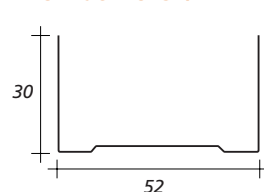
U Track Deep Flange XDT45/R



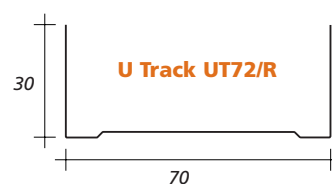
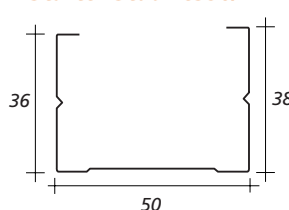
C Stud AHS50/R



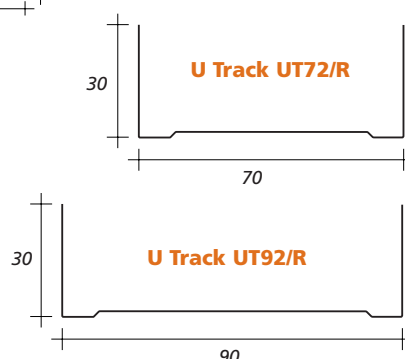
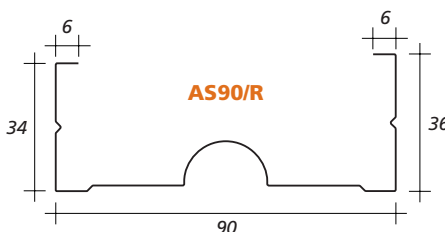
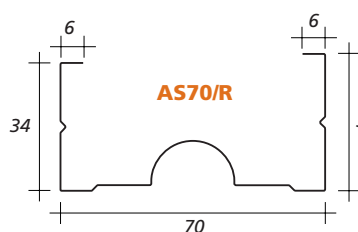
U Track UT52/R



Starter Stud CS50/R



Omega Acoustic Studs



Application details

Cormet Acoustic Homespan

Rubber grommet used to protect cable passing through service punch

Lafarge Intumescent Acoustic Sealant

Cormet Acoustic Homespan C Studs at 450mm centres

15mm Lafarge Acoustic Homespan wallboard

Cormet Homespan U Track snipped and folded to form head to door opening

Cormet Acoustic Homespan Starter Stud

Timber infill in web of stud at door openings

Floor track fixed at 600mm centres – use timber sole plate to underside of track on uneven floors

Omega Acoustic Partition

Lafarge Intumescent Acoustic Sealant

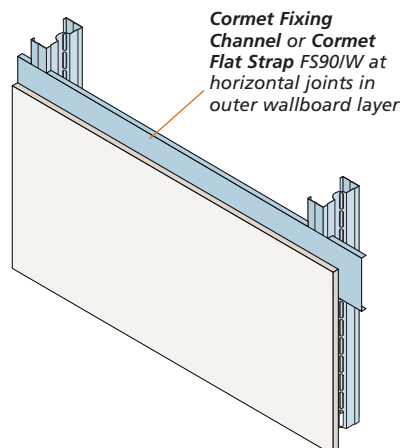
Cormet U Track

Cormet Omega Acoustic Studs at 600mm centres

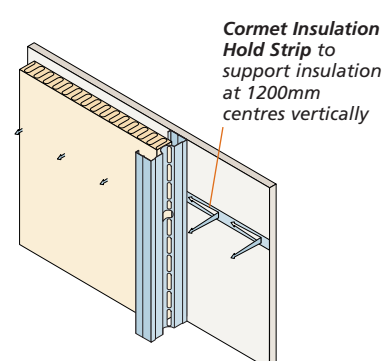
Drylining electrical boxes are available to allow easy installation without the need for timber noggings. Note that a baffle may be needed to maintain the acoustic and fire performance of the partition

All wallboard perimeters sealed with Lafarge Intumescent Acoustic Sealant to ensure system performance

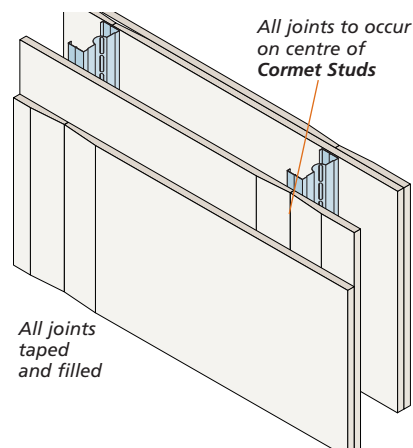
Overheight partitions



Suspension of mineral wool

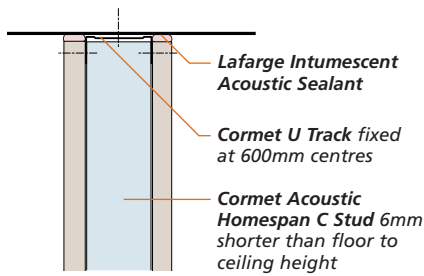


Partitions with double layer boarding

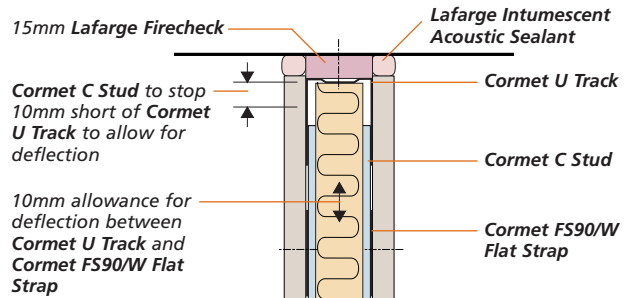


Application details

Ceiling detail (section)



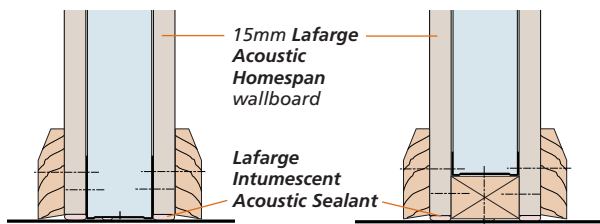
10mm deflection head – 60 minute fire rated



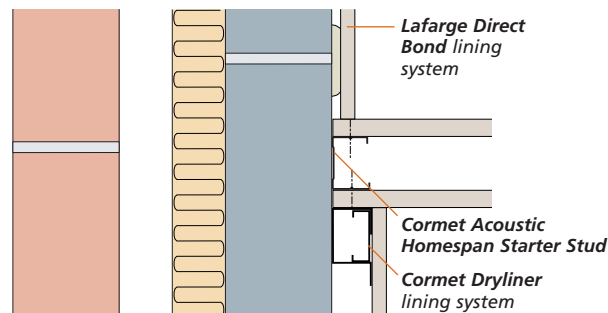
Alternative skirting fixing details (sections)

Cormet Acoustic Homespan Deep Flange U Track

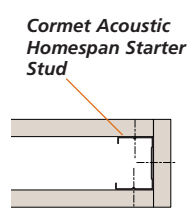
Cormet Acoustic Homespan U Track on sole plate



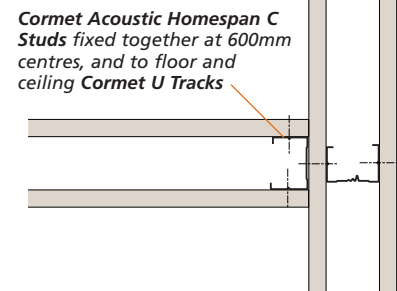
Junction with masonry wall (plan)



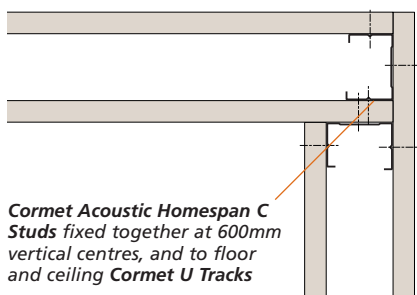
Partition end (plan)



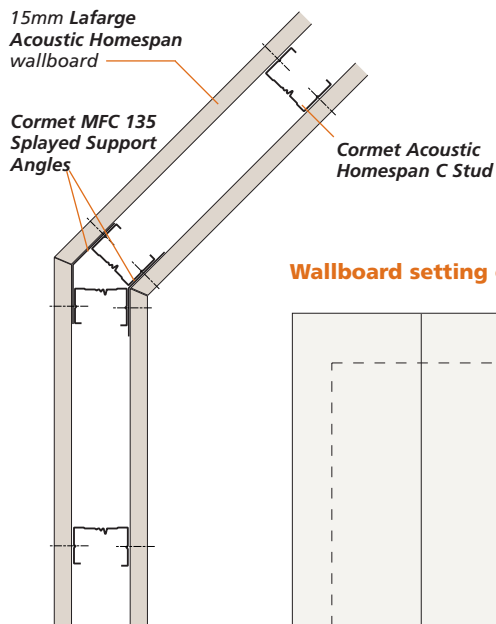
T junction (plan)



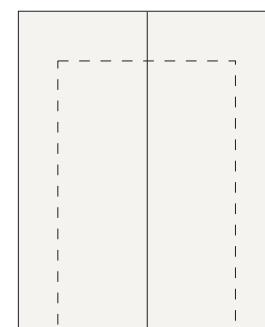
Corner junction (plan)



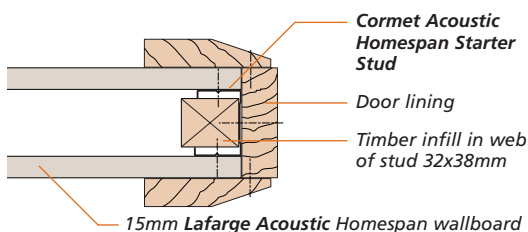
135° splayed corner (plan)



Wallboard setting out



Typical door jamb detail (plan)



Specification clauses

Cormet Acoustic Homespan Partition

Scope

A lightweight, durable and high performance partition systems developed for the housing market.

The system has been designed to achieve a 40 R_wdB sound rating without insulation and meets BS 7671 requirements for electrical installation.

Additional clauses

Add general clauses if required for:

- Expansion/movement joints
- Health and safety
- Storage of Materials
- Site conditions and workmanship

NBS clauses

When using the NBS Specification, use clause K10 PLASTERBOARD DRY LININGS/PARTITIONS/CEILINGS.

To complete the clause select the appropriate data as indicated on the right.

The Lafarge Plasterboard website contains a full set of NBS clauses, completed for each Lafarge Plasterboard system. See: www.lafargeplasterboard.co.uk/nbssearch/index.asp



Notes:

Red text lists alternative product specifications.

(Italic red text within brackets gives advice on selecting the information needed).

System reference *(Insert Lafarge system reference from Performance Tables)*

Location

Client reference

Performance

Maximum heightm

Fire resistance: 30 mins

Airborne sound insulationR_w dB

Thicknessmm

Weightkg/m²

Grade to BS 5234: Heavy

Horizontal joints

If partition height exceeds board height, use **Cormet Channel MFIX** or **Cormet Fixing Strap FS90/W** in single boarded partitions or **Cormet Fixing Strap FS50/R** or **FS90/W** in double boarded partitions.

Acoustic mastic

6mm bead of Lafarge Acoustic Sealant around perimeter of the framing.

Studs

Cormet Acoustic Homespan Studs, reference **AHS44/R** or **AHS50/R**, width **44** or **50mm** at max 450mm centres.

Head deflection allowance

Consult with Lafarge Plasterboard Ltd Technical Dept for recommendations and details.

Floor track

Cormet U Track, reference **UT45/R** or **UT52/R**, width **45** or **52mm** fixed at 600mm centres.

Head track

Cormet U Track, reference **UT45/R** or **UT52/R**, width **45** or **52mm** fixed at 600mm centres.

Floor/head track fixings

Spit Pulsa 700P nailing system for concrete or steel using fixings dependent on material substrates at max 600mm centres

Standard concrete use Spit C6 Pins *(Select from 20, 25, 30, 35, 40)mm*, or

Hard concrete use Spit HC6 Pins *(Select from 17, 20, 22, 27)mm*, or

Steel use Spit SC6 Pins *(Select from 15, 20)mm*

Spit Hammer-In fixing for concrete at maximum 600mm centres

Type Spit Hit CL35 *(Select from 30, 40, 50)mm*

Boarding

Single layer of 15mm Lafarge Homespan wallboard to each side.

Board fixings

Lafarge Drywall Self Tapping screws at 300mm centres.

Length: 32mm

Finishing

Lafarge Taping and jointing system

Primer/sealer

1 coat Lafarge Universal Sealer prior to paint or wallpaper, or

2 coats Lafarge Drywall Sealer when vapour control is a consideration.

Installation

All materials, unless otherwise indicated, shall be supplied by Lafarge Plasterboard Ltd. and shall be installed in accordance with their current literature and in accordance with BS 8212: 1995.

Given the vast selection of different types of substrate that are encountered on-site, it is strongly recommended that adequate site tests be carried out to establish a recommended load on fixings.

Specification clauses

Omega Acoustic Partition

Scope

A lightweight, durable and high performance partition system developed to provide improved sound performance.

Additional clauses

Add general clauses if required for:

- Expansion/movement joints
- Health and safety
- Storage of Materials
- Site conditions and workmanship

NBS clauses

When using the NBS Specification, use clause K10 PLASTERBOARD DRY LININGS/PARTITIONS/CEILINGS.

To complete the clause select the appropriate data as indicated on the right.

The Lafarge Plasterboard website contains a full set of NBS clauses, completed for each Lafarge Plasterboard system. See: www.lafargeplasterboard.co.uk/nbssearch/index.asp

NBSPlus

Notes:

Red text lists alternative product specifications.

(Italic red text within brackets gives advice on selecting the information needed).

System reference *(Insert Lafarge system reference from Performance Tables)*

Location

Client reference

Performance

Maximum heightm

Fire resistance:mins

Airborne sound insulationR_w dB

Thicknessmm

Weightkg/m²

Grade to BS 5234:

Horizontal joints

If partition height exceeds board height, use **Cormet Channel MFIX** or **Cormet Fixing Strap FS90/W** in single boarded partitions or **Cormet Fixing Strap FS50/R** or **FS90/W** in double boarded partitions.

Acoustic mastic

6mm bead of Lafarge Acoustic Sealant around perimeter of the framing.

Studs

Omega Acoustic Studs, reference **AS70/R** or **AS90/R**, width **70** or **90**mm at max 600mm centres.

Head deflection allowance

Consult with Lafarge Plasterboard Ltd Technical Dept for recommendations and details.

Floor track

Cormet U Track, reference **UT72/R** or **UT92/R**, width **70** or **90**mm fixed at 600mm centres.

Head track

Cormet U Track, reference **UT72/R** or **UT92/R**, width **70** or **90**mm fixed at 600mm centres.

Floor/head track fixings

Spit Pulsa 700P nailing system for concrete or steel using fixings dependent on material substrates at max 600mm centres

Standard concrete use Spit C6 Pins *(Select from 20, 25, 30, 35, 40)*mm, or

Hard concrete use Spit HC6 Pins *(Select from 17, 20, 22, 27)*mm, or

Steel use Spit SC6 Pins *(Select from 15, 20)*mm

Spit Hammer-In fixing for concrete at maximum 600mm centres

Type Spit Hit CL35 *(Select from 30, 40, 50)*mm

Boarding

Single or **double** layer of wallboard.

Inner layer *(Specify wallboard from the Performance Tables)*

Outer layer *(Specify wallboard from the Performance Tables)*

Board fixings

Lafarge screws at 300mm centres

Type **Drywall Self-tapping**, or **Toughcheck Self-tapping**, or **Checkpoint Self-tapping**, or **Megadeco Self-tapping**.

Length, inner layer *(Select from 25, 32, 38, 41, 44, 51, 57, 63, 67, 76)*mm

Length, outer layer *(Select from 25, 32, 38, 41, 44, 51, 57, 63, 67, 76)*mm

Finishing

Lafarge Taping and jointing system

Primer/sealer

1 coat Lafarge Universal Sealer prior to paint or wallpaper, or

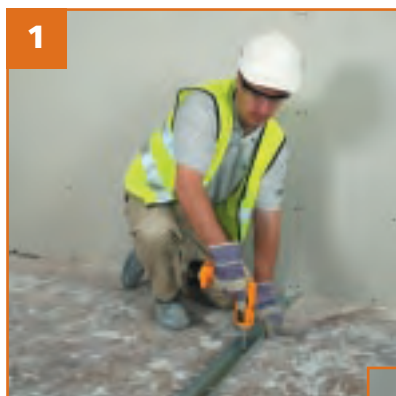
2 coats Lafarge Drywall Sealer when vapour control is a consideration.

Installation

All materials, unless otherwise indicated, shall be supplied by Lafarge Plasterboard Ltd. and shall be installed in accordance with their current literature and in accordance with BS 8212: 1995.

Given the vast selection of different types of substrate that are encountered on-site, it is strongly recommended that adequate site tests be carried out to establish a recommended load on fixings.

Installation



1

Step one

Mark out the line of the partition. Fix **Cormet U Track** to timber or concrete floor along the setting out line at 600mm centres, using suitable fixings.



4

Step four

Place the ceiling **Cormet U Track** on top of the end wall stud. Then, using an **Cormet Acoustic Stud** and spirit level, ensure the opposite end of the ceiling U Track is plumb with the floor U Track and screw-fix it into position at 600mm centres.

Note: When installing the U Tracks directly onto new concrete which has not completely dried out, a damp proofing membrane should be used. On uneven floors a timber sole plate may be required.



*To maximise the acoustic and fire performance use **Lafarge Intumescent Acoustic Sealant** and seal the gap between the perimeters and the wallboard or alternatively a continuous bead can be applied to the back of the **Cormet U Tracks** and perimeter studs.*



2

Step two

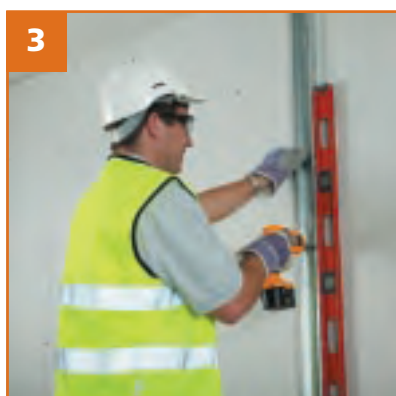
Cut the **Cormet U Acoustic Stud** to length as necessary using **Lafarge tin snips**. Studs should be cut 5mm shorter than the floor to ceiling height.



5

Step five

Install all intermediate **Acoustic C Studs**. Cut Studs 5mm shorter than the floor to ceiling height to allow for floor variations. Insert the Studs into the **Cormet U Tracks** at 450mm centres and twist to lock. The intermediate studs should all face the same way. To allow adjustment when fixing plasterboards, Studs should not be screw fixed to the **Cormet U Tracks**.



3

Step three

Using a spirit level to ensure it is plumb, fix a **Cormet Stud** to the end wall, with suitable fixings at 600mm centres.



6

Step six

Use **Starter Studs**, if required, at door openings, corners, T junctions and stop ends as shown in details. These extra studs must be fixed to ceiling and floor U Tracks with **Lafarge Wafer Head Self Tapping Screws** or using a crimping tool.

*Note: **Lafarge intumescent Acoustic Sealant** should be applied as shown above.*

Installation



Step seven

Form the door header by using a piece **Cormet U Track**. Cut the track so that it is equal to the width of the door frame plus a minimum 300mm, in order to allow 150mm at each end to be cut and folded down.



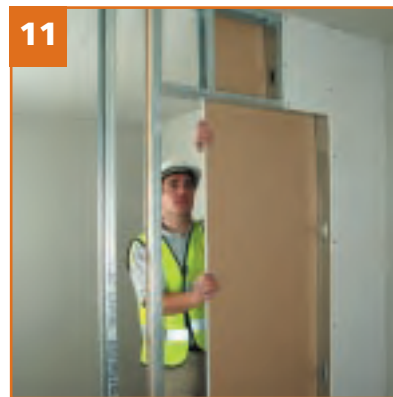
Step ten

Fix **Lafarge** wallboard to one side of the partition. Cut the board 5mm shorter than the floor to ceiling height, butt firmly against the ceiling and fix with **Lafarge Drywall Self-Tapping Screws** at 300mm centres in the field of the board and 200mm at the partition perimeter.



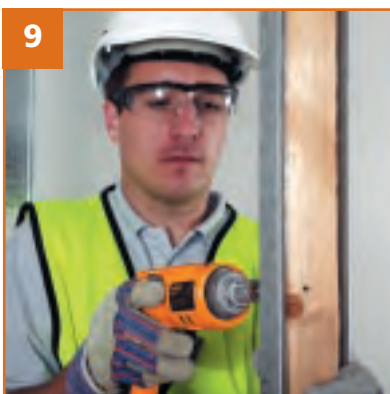
Step eight

Secure the header to the **Cormet Acoustic Studs** using a crimping tool or **Lafarge Wafer Head Self Tapping Screws**.



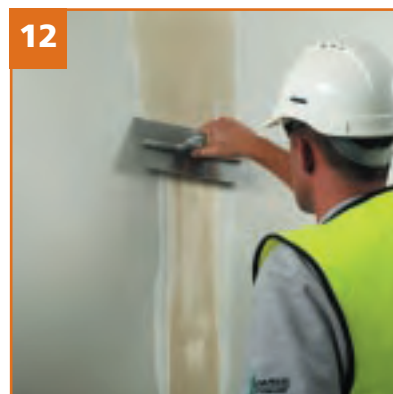
Step eleven

When one side is complete, repeat for the other side of the partition, ensuring that the joints are staggered.



Step nine

Form a timber background construction to create a secure fixing for the door frame by placing a suitably sized timber insert into the back of door frame studs and header Track. Secure these timbers using **Lafarge Drywall High Thread Screws** through the face of the studs into the timber.



Step twelve

Finish as required prior to decoration. Refer to Section 7.

Case study

British Empire and Commonwealth Museum, Bristol



Megadeco board has become a key 'exhibit' at the new British Empire and Commonwealth Museum recently opened in the heart of Bristol. The High performance drywall product has been central to the renovation and refurbishment of Bristol Old Station which houses the museum. The space features a number of internal partitions, from 3 to 5 metres in height, created using Megadeco, which is integral to the design of the display areas. Fixed to timber studs, the boards are installed with 10mm shadow gaps, to create a grid like system which accommodates a number of recessed showcases.

Client: British and Commonwealth Museum

Main contractor: MVA

Exhibition graphics: RIA Design



LAFARGE
PLASTERBOARD
MEGADECO



The wide range of **Cormet Metal Partitions** allows repeatable, guaranteed performance to be achieved across a broad range of applications from apartments, cinemas and factories to hospitals, museums, and schools.



3

Introduction

Cormet Partitions

Cormet metal stud partitioning is an economical friction-fit system used for the assembly of frames for non-loadbearing partitions. The unique design of the components ensures high strength with easy installation.

Cormet partitions are suitable for domestic and commercial use. They are strong high performance systems which are:

- cost effective
- lightweight
- versatile
- able to achieve high levels of fire resistance, acoustic and thermal insulation.

Performance

The selection of **Cormet C Stud** size, and the type, number and thickness of plasterboard layers will depend on the partition height and the performance required for fire resistance and sound insulation. Refer to the performance tables 3.1 to 3.6.

Lafarge Performance Board* Partitions

Lafarge performance partitions comprise **Cormet C Stud** framing and **Lafarge** performance wallboards to provide a stronger partition which is more resistant to knocks and scratches.

In addition, **Lafarge** performance partitions provide superior sound insulation and fire resistance.

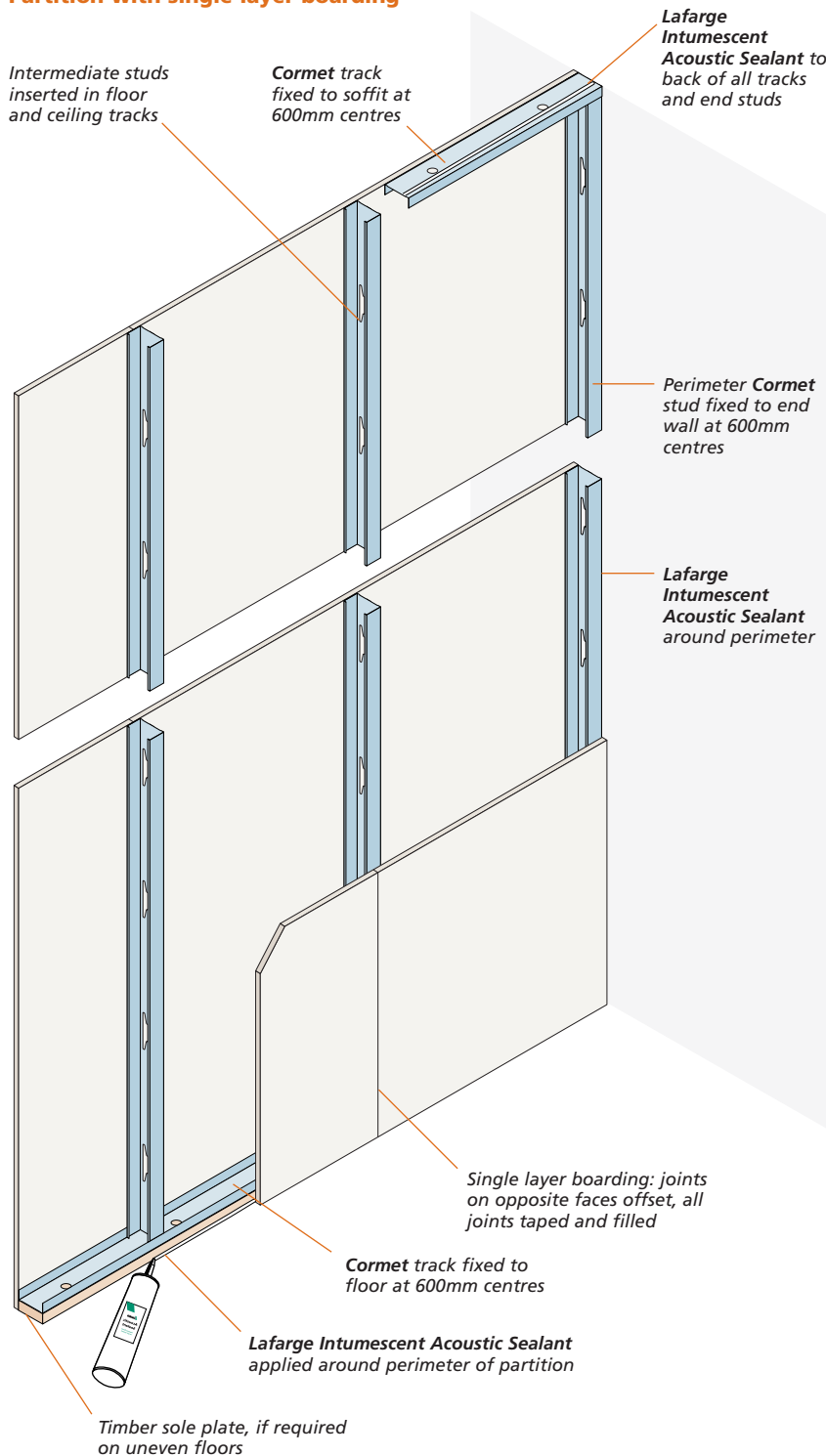
Performance

Lafarge performance wallboards are defined as Class 0 in accordance with National Building Regulations 1991 Approved Documents B1/2/3/4/5 *Fire Safety* and Building Standards (Scotland) Regulations 1990, Regulation D2 when tested to BS 476: Part 6: 1989 and Part 7: 1997 and Euroclass A2. The gypsum core is classified as non-combustible when tested in accordance with BS 476: Part 4: 1970 and Euroclass A1. Lafarge jointing compounds, metal systems, textures and bonding compounds are non-combustible when tested in accordance with BS 476: Part 4: 1970 and Euroclass A1.

Note:

* **Toughcheck**, **dBcheck**, **Firecheck**, **Megadeco** and **Moisture Resistant Firecheck**.

Partition with single layer boarding



Components

The range of **Cormet** partition components is shown in the table opposite and in the drawings on the following page.

Rigidising plus vertical ribs in the stud webs ensures stiffness with strength, whilst the fold-outs allow for better services access. The flanges have deep knurling for easier screw-fixing, and plasterboard alignment guides, all of which makes installation even easier.

Colour coding is used to identify metal thickness:

Red (R) 0.50mm

Blue (B) 0.70mm

White (W) 0.90mm

Yellow (Y) 1.2mm.

Maximum heights shown in performance tables 3.1 to 3.8 refer to 0.50mm thick studs (Red gauge). If 0.70mm thick studs (Blue gauge) are used the maximum height can be increased by 0.30m for systems faced with a single layer of plasterboard and by 0.60m for double layer systems.

Cormet Deep Flange U Tracks are used for partitions with heights above 4.2m, or at the soffit where a deflection head is required.

Cormet Fixing Channel MFIX or **Cormet Flat Strap FS90/W** can be fixed horizontally between two metal studs to provide extra support and maintain fire integrity of the system when board heights are exceeded.

As an alternative **Cormet Flat Strap FS50/R** may be used between wallboards on double layer board systems.

All components are manufactured to BS 7364: 1990 Specification for galvanised steel studs and channels for stud and sheet partitions and linings using screw fixed gypsum wallboards.

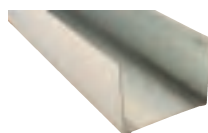
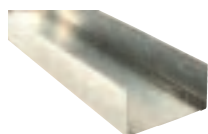
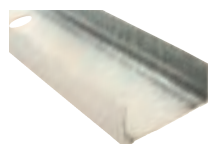
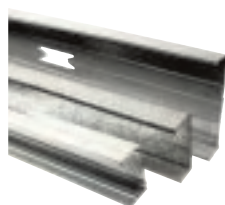
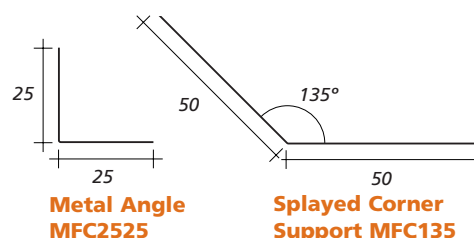
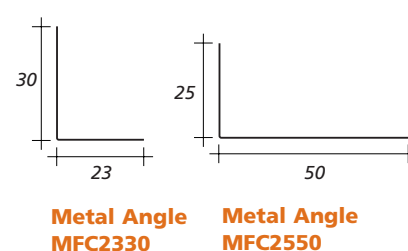
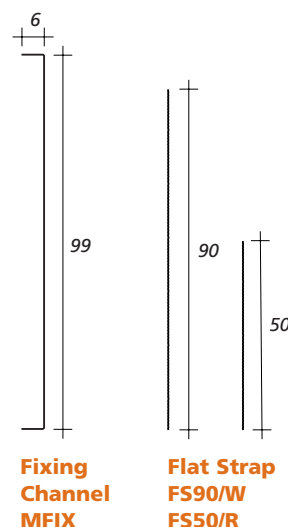
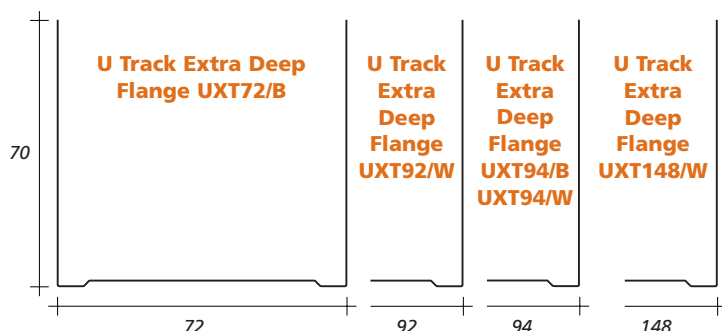
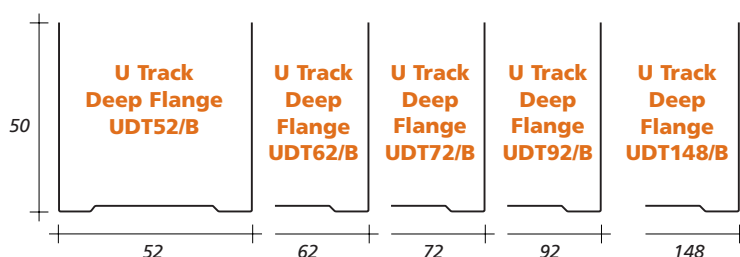
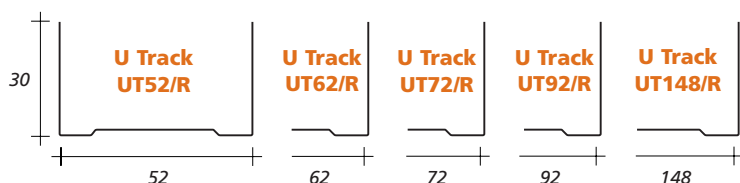
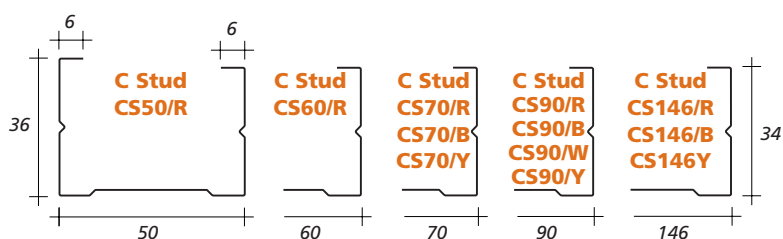


Table 3.16 Cormet Partitions components

Component	Width (mm)	Length (mm)	Lafarge code
C Stud	50	2400, 2700, 3000, 3600	CS50/R
Red gauge 0.5mm	60	2400, 2700, 3000, 3600, 4200	CS60/R
	70	2400, 2700, 3000, 3300 3600, 4200, 4800	CS70/R
	90	2700, 3000, 3600, 4000, 4200	CS90/R
	146	2400, 2700, 3000 3600, 4200, 4800	CS146/R
C Stud	70	3600, 4200	CS70/B
Blue gauge 0.7mm	90	3600, 4200	CS90/B
	146	3600, 4200, 4800, 5400, 6000	CS146/B
C Stud	90	4800, 6000, 7200	CS90/W
White gauge 0.9mm			
C Stud	70	4800	CS70/Y
Yellow gauge 1.2mm	90	3600, 4800, 6000	CS90/Y
	146	6000	CS146/Y
U Track	52	3000	UT52/R
Red gauge 0.5mm	62	3000	UT62/R
	72	3000	UT72/R
	92	3000	UT92/R
	148	3000	UT148/R
U Track Deep Flange	52	3000	UDT52/B
Blue gauge 0.7mm	62	3000	UDT62/B
	72	3000	UDT72/B
	92	3000	UDT92/B
	148	3000	UDT148/B
U Track Extra Deep Flange	72*	3000	UXT72/B
	92**	3000	UXT92/W
*Blue gauge 0.7mm	148**	3000	UXT148/W
**White gauge 0.9mm			
Fixing Channel	99	2400	MFIX
White gauge 0.9mm			
Metal Angle	23 x 30	3600	MFC2330
	25 x 25	3600	MFC2525
	25 x 50	3600	MFC2550
Splayed Corner Support Angle	50 x 50	3600	MFC135
Flat Strap	50	2400	FS50/R
	90	2400	FS90/W
Lafarge Intumescent Acoustic Sealant		0.9 litre	ACOUSTIC (INTU)
		0.38	ACO 38 (INTU)
Lafarge Drywall screws as appropriate	–	25 to 76	See page 327

Component specifications may vary from those shown.

Components

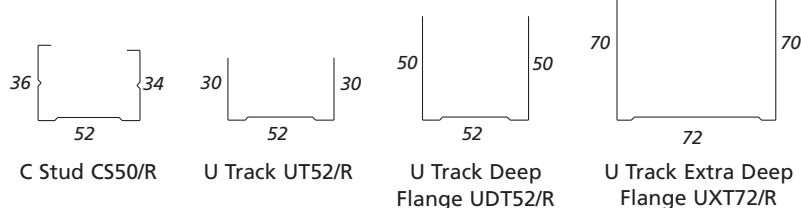


KEY

Product

CS: C Stud
IS: I Stud
UT: U Track
UDT: Deep Flange Track
UXT: Extra Deep Flange Track

Flange Dimensions (mm)



CS50/R

Denotes section profile

Denotes section width

Denotes section gauge

Product

/R Red gauge 0.50mm
/B Blue gauge 0.70mm
/W White gauge 0.90mm
/Y Yellow gauge 1.20mm

Application details

System assembly

Framing

Set out **Cormet U Tracks** along the setting out line of the partition at floor and ceiling, and fix at 600mm centres. If applying the **Cormet U Tracks** direct to new concrete which has not completely dried out, a damp proofing membrane should be used.

Timber sole plates

For floors that are uneven or being screeded after the installation of the partition, a timber sole plate may be required.

Stud lengths

Cut **Cormet C Studs** 5mm shorter than the floor to ceiling height to allow for floor variations. Insert the **Cormet C Studs** into the **Cormet U Tracks** and twist to lock. Perimeter **Cormet C Studs** should be fixed at 600mm centres with the webs flat against abutting walls or partitions.

The intermediate **Cormet C Studs** should all face the same way and be positioned at either 400mm or 600mm centres as required. Arrange the framing so that plasterboard widths of less than 300mm are avoided. Intermediate studs should not be fixed to **Cormet U Tracks** to allow for adjustment when fixing boards.

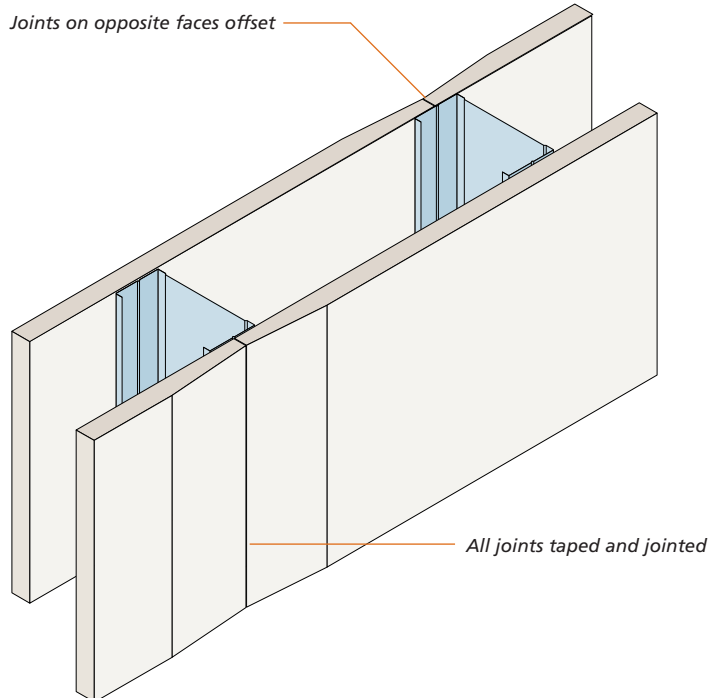
Openings

Use extra **Cormet C Studs** at openings, corners, junctions and stop ends, fixing to head and floor U tracks with **Lafarge Wafer Head Screws** or crimping tool.

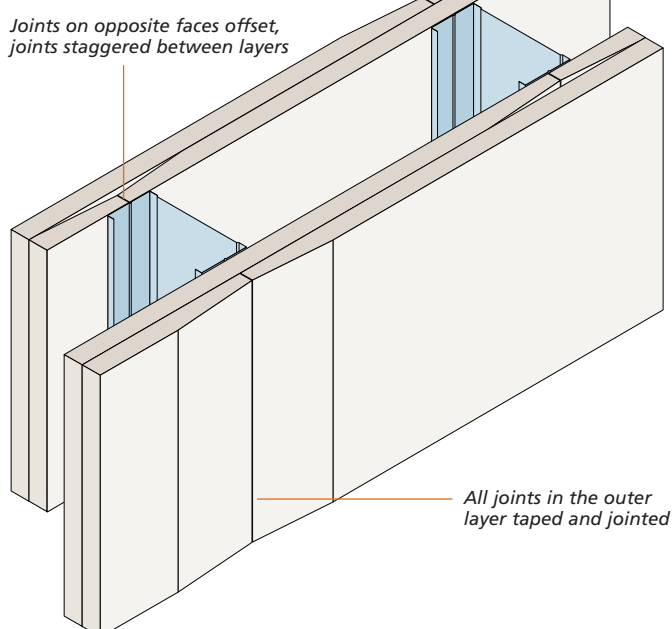
Doors and windows can be built into the partitioning by positioning and fixing full-length studs on each side of the openings. **Cormet U Track** is cut to form the head of the opening, and lined with 38mm deep timber where required.

Make provision for fixtures as described in table 3.23.

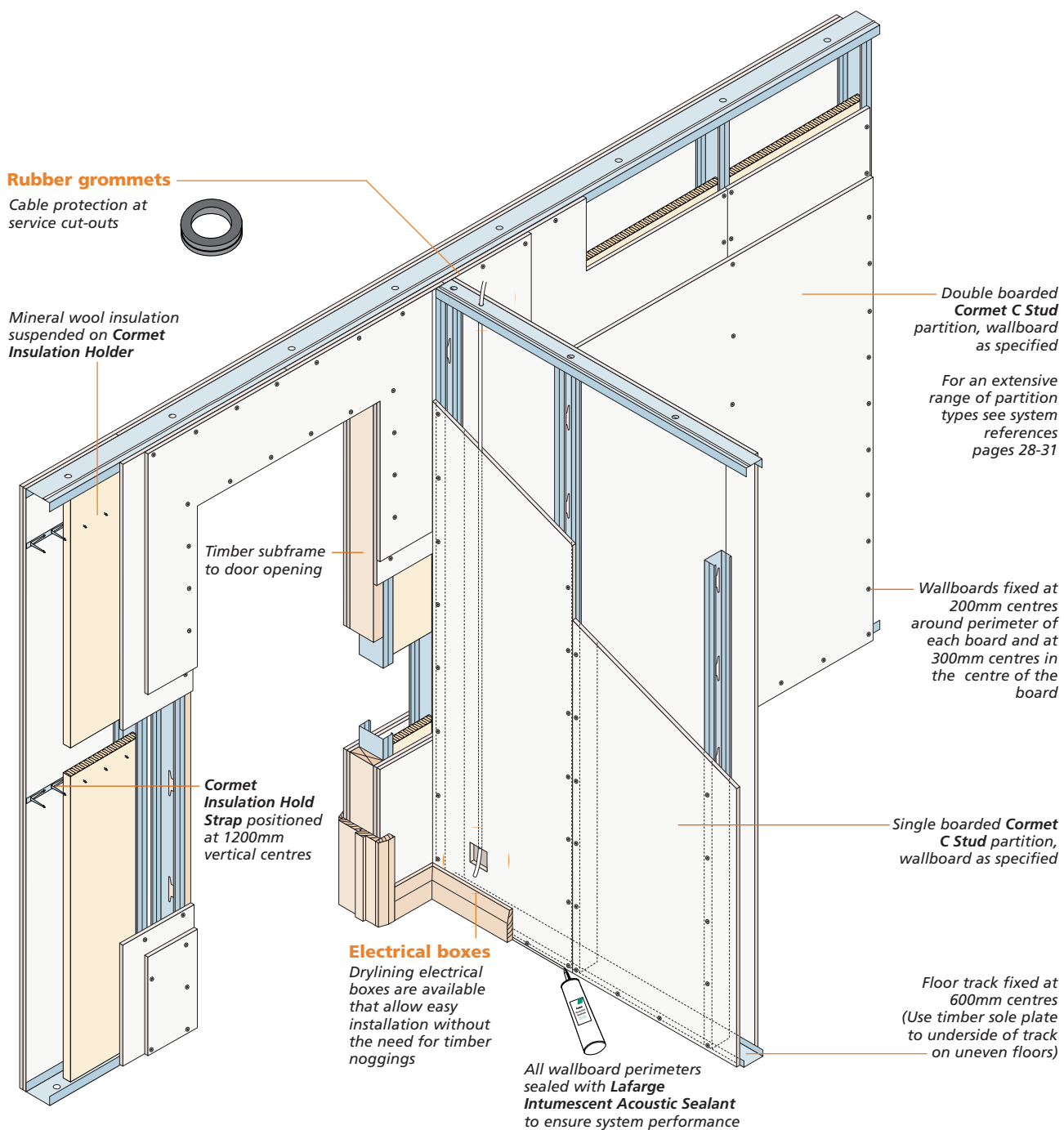
Partition with single layer boarding



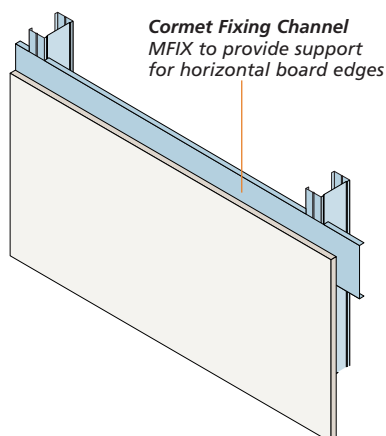
Partition with two layer boarding



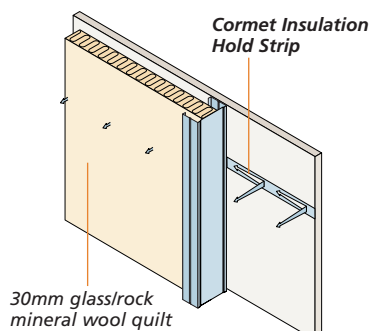
Application details



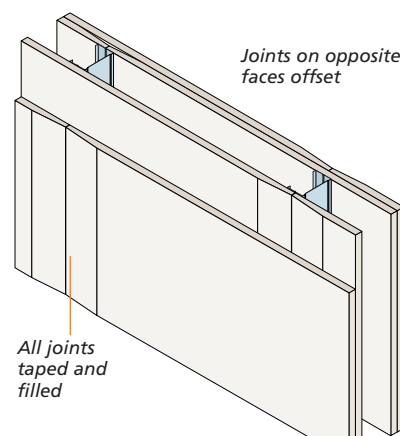
Overheight partition



Suspension of mineral wool quilt

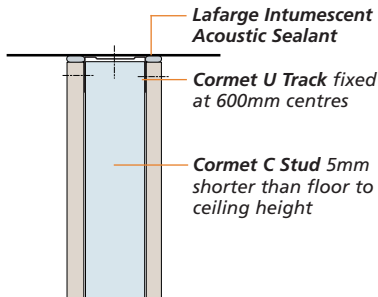


Partition with double layer boarding

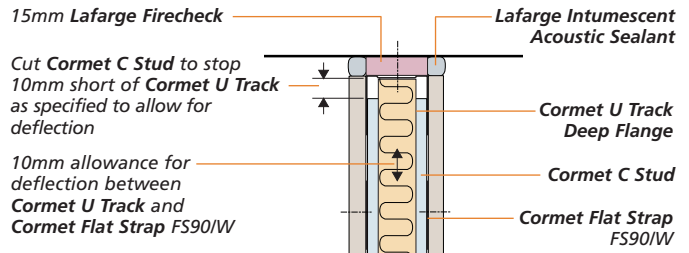


Application details

Ceiling detail (section)



10mm deflection head fire rated up to 60 minutes (section)



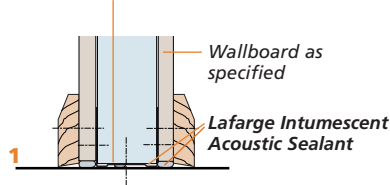
Note on head packer:

Max deflection	Packer required
8mm	1x12.5mm Firecheck*
10mm	1x15mm Firecheck*
15mm	1x19mm Plank
20mm	2x12.5mm Firecheck**
25mm	2x15mm Firecheck*

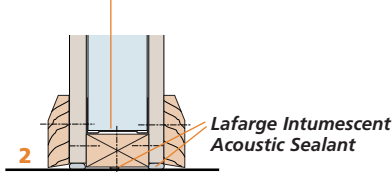
Notes: * Firecheck can be substituted by Megadeco, Toughcheck or MR Firecheck
** Firecheck can be substituted by 25mm Firecheck Coreboard

Alternative skirting fixing details (sections 1 to 3)

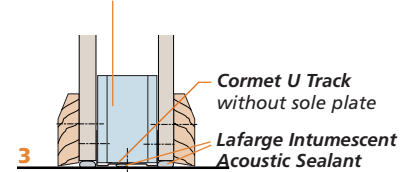
Cormet U Track Deep Flange



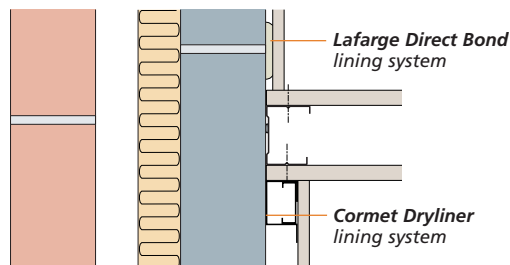
Cormet U Track on sole plate



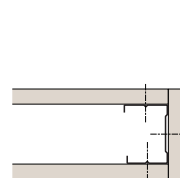
Offcuts of studs boxed together and fixed vertically into track midway between studs



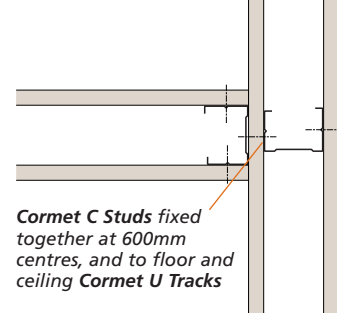
Junction with masonry wall (plan)



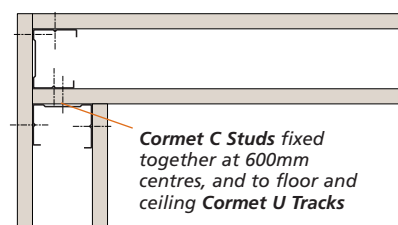
Partition end (plan)



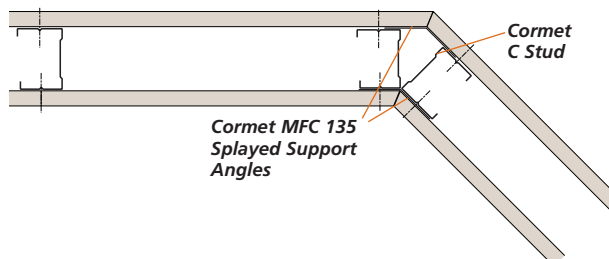
T junction (plan)



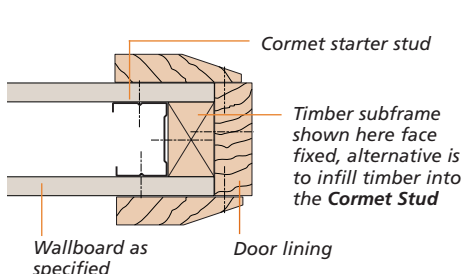
Corner (plan)



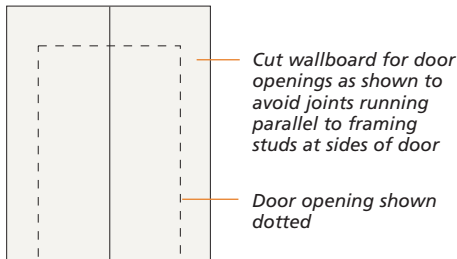
135° splayed corner (plan)



Typical door jamb detail (plan)



Wallboard setting out



Specification clauses

Cormet Metal Stud Partitions

Scope

Metal stud partitions within domestic and commercial buildings where maximum height may exceed board lengths and/or where fire and acoustic performance is required.

Additional clauses

Add general clauses (see Section 8) if required for:

- Expansion/movement joints
- Health and safety
- Storage of materials
- Site conditions and workmanship

NBS clauses

When using the NBS Specification, use clause K10 PLASTERBOARD DRY LININGS/PARTITIONS/CEILINGS.

The Lafarge Plasterboard website contains a full set of NBS clauses, completed for each Lafarge Plasterboard system. See: www.lafargeplasterboard.co.uk/nbssearch/index.asp

NBSPlus

Notes:

Red text lists alternative product specifications.

(Italic red text within brackets gives advice on selecting the information needed).

System reference *(Insert Lafarge system reference from Performance Tables)*

Location

Client reference

Performance

Maximum heightm

Fire ratingmins

Airborne insulationR_wdB

Thicknessmm

Weightkg/m²

Grade to BS 5234

Horizontal joints

If partition height exceeds board height, use **Cormet Channel MFIX** or **Cormet Fixing Strap FS90/W** in single boarded partitions or **Cormet Fixing Strap FS50/R** or **FS90/W** in double boarded partitions.

Insulation

(Specify insulation thickness and grade/density from the Performance Tables)

Acoustic mastic

6mm bead of Lafarge Acoustic Sealant around perimeter of the framing.

Studs

Cormet C Studs, reference **CS50/R**, **CS60/R**, **CS70/R**, **CS90/R**, **CS146/R**, **CS70/B**, **CS90/B**, **CS146/B**, **CS90/W**, **CS70/Y**, **CS90/Y** or **CS146/Y**, width 50, 60, 70, 90 or 146mm at max 600mm centres

Head deflection allowance

Consult with Lafarge Plasterboard Ltd Technical Dept for recommendations and details.

Bracing

Cormet Flat Strap FS50/R at mid height.

Floor track

Cormet U Track, reference **UT52/R**, **UT62/R**, **UT72/R**, **UT92/R**, **UT148/R**, width 52, 62, 72, 92, 148mm fixed at 600mm centres.

Head track

Cormet U Track, reference **UT52/R**, **UT62/R**, **UT72/R**, **UT92/R**, **UT148/R**, width 52, 62, 72, 92, 148mm fixed at 600mm centres.

Floor/head track fixings

Spit Pulsa 700P nailing system for concrete or steel using fixings dependent on material substrates at max 600mm centres

Standard concrete use Spit C6 Pins *(Select from 20, 25, 30, 35, 40)mm*, or

Hard concrete use Spit HC6 Pins *(Select from 17, 20, 22, 27)mm*, or

Steel use Spit SC6 Pins *(Select from 15, 20)mm*

Spit Hammer-In fixing for concrete at maximum 600mm centres

Type Spit Hit CL35 *(Select from 30, 40, 50)mm*

Boarding

Single or **double** layer of wallboard.

Inner layer *(Specify wallboard from the Performance Tables)*

Outer layer *(Specify wallboard from the Performance Tables)*

Board fixings

Lafarge screws at 300mm centres

Type **Drywall Self-tapping**, or **Toughcheck Self-tapping**, or **Checkpoint Self-tapping**, or **Megadeco Self-tapping**.

Length, inner layer *(Select from 25, 32, 38, 41, 44, 51, 57, 63, 67, 76)mm*

Length, outer layer *(Select from 25, 32, 38, 41, 44, 51, 57, 63, 67, 76)mm*

Finishing

Lafarge Taping and jointing system, or

Lafarge Supreme Skim Plaster, or

Lafarge Predeco taping and jointing system

Installation

All materials, unless otherwise indicated, shall be supplied by Lafarge Plasterboard Ltd. and shall be installed in accordance with their current literature and in accordance with BS 8212: 1995.

Given the vast selection of different types of substrate that are encountered on-site, it is strongly recommended that adequate site tests be carried out to establish a recommended load on fixings.

Installation



1

Step one

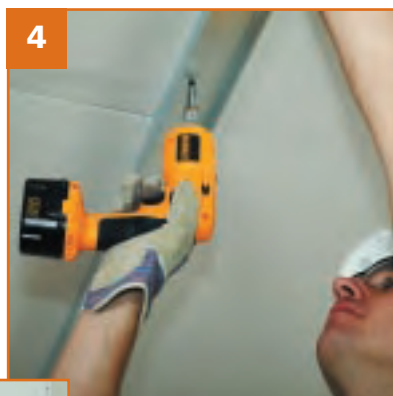
From a fixed point mark out the line of partition. Fix **Cormet U Track** to timber or concrete floor along the setting out line of the partition at 600mm centres using suitable fixings.

Note: A timber sole plate may be required on uneven floors or when partitions are installed prior to screed being laid.

If applying the **Cormet U Track** direct to new concrete which has not completely dried out, a damp proofing membrane should be used.



To maximise the acoustic and fire performance use **Lafarge Intumescent Acoustic Sealant** and seal the gap between the perimeters and the wallboard or alternatively a continuous bead can be applied to the back of the **Cormet U Tracks** and perimeter studs.



4

Step four

Place ceiling **Cormet U Track** onto end wall **Cormet C Stud**. Using a **Cormet C Stud** and spirit level, plumb opposite end of ceiling U track with floor U track and screw-fix into position at 600mm centres.

Fix remaining end wall **Cormet C Stud**.

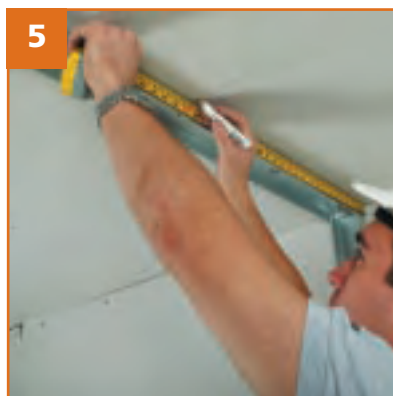


2

Step two

Cut **Cormet U Track** (and **Cormet C Studs**) to length as necessary using **Lafarge tin snips**.

Cormet C Studs to be cut 5mm shorter than floor to ceiling height.



5

Step five

Mark floor and ceiling at centres as specified below for the location of intermediate **C Studs**:

At max. 400mm centres for 9.5mm plasterboard or 600mm centres for 12.5 mm plasterboard. Arrange the framing so that plasterboard widths of less than 300mm are avoided.

See step 9 for installation of intermediate studs.



3

Step three

Install a **Cormet C Stud**, using a spirit level to plumb on end wall; screw fix at 600mm centres using suitable fixings.

*Note: Fix opposite end wall **Cormet C Stud** only after ceiling **Cormet U Track** has been installed.*



6

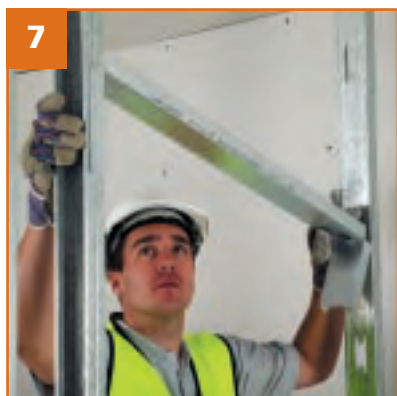
Step six

Use extra **Cormet C Studs** at openings, corners, T junctions and stop ends as shown in details. These extra studs must be fixed to head and floor **Cormet U Tracks** with **Lafarge Wafer Head Self Tapping Screws** or crimping tool.

Note: The door frame background metal construction details shown above, form one of three possible alternatives.

3

Installation



Step seven

Form the door header by using a piece of **Cormet U Track**. The length should be equal to the width of the door frame plus a minimum of 300mm in order to allow 150mm at each end to be cut and folded down.



Step ten

Form as required, one of the following alternative timber background constructions for fixing door frames:

(a) Fix a 38mm x 38mm timber insert into back of door frame **Cormet C Studs** and header. Secure using **Lafarge Drywall High Thread Screws** through face of **Cormet C Stud** into the timber.

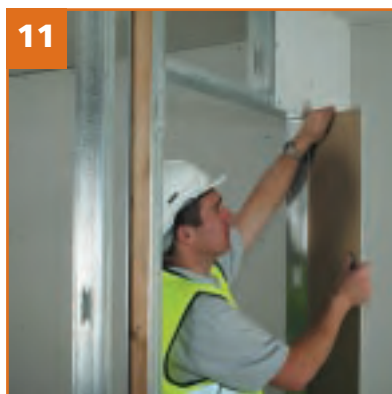
(b) Fix a timber subframe to the face of the door frame **Cormet C Studs** and header using **Lafarge Drywall Self Tapping Screws**.



Step eight

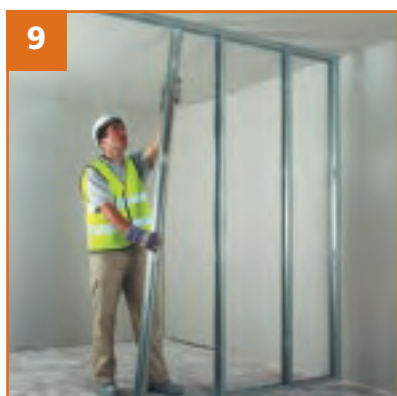
Secure header onto **Cormet C Studs** using a crimping tool or **Lafarge Wafer Head Self Tapping Screws**.

This detail applies to all door frame assembly alternatives. See step 5.



Step eleven

Install door frame into position and secure by screwing through the door frame into one of the alternative background constructions above using **Lafarge Drywall High Thread Screws**. Ensure that the screws penetrate each of the components forming the background constructions.



Step nine

Install all intermediate **C Studs**.

Cut **Cormet C Studs** 5mm shorter than the floor to ceiling height to allow for floor variations. Insert the **Cormet C Studs** into the **Cormet U Tracks** and twist to lock. The intermediate **Cormet C Studs** should all face the same way. They should not be fixed to **Cormet U Tracks** in order to allow for adjustment when fixing plasterboards.



Step twelve

Install plasterboard to one side of the partition. Cut plasterboard 5mm to 8mm shorter than the floor-to-ceiling height, butt firmly against the ceiling and fix with **Lafarge Drywall Self-Tapping Screws** at 300mm centres.

Note: Use **Toughcheck Drywall Screws** for **Toughcheck Partitions** and **Checkpoint Self Tapping Screws** for **dBcheck Partitions**.



Timber stud partitions are frequently used in timber-frame houses, in small renovation projects and in home extensions where they may be load bearing or non-load bearing, depending on specification.

Plasterboard can be screw fixed to timber, which offers superior performance and limits the risk of nail popping caused by the timber sub-frame drying out. Alternatively plasterboard can be nailed directly to the timber.



PARTITIONS

TIMBER STUD SYSTEMS

Introduction

Lafarge Drywall Timber Stud Partitions

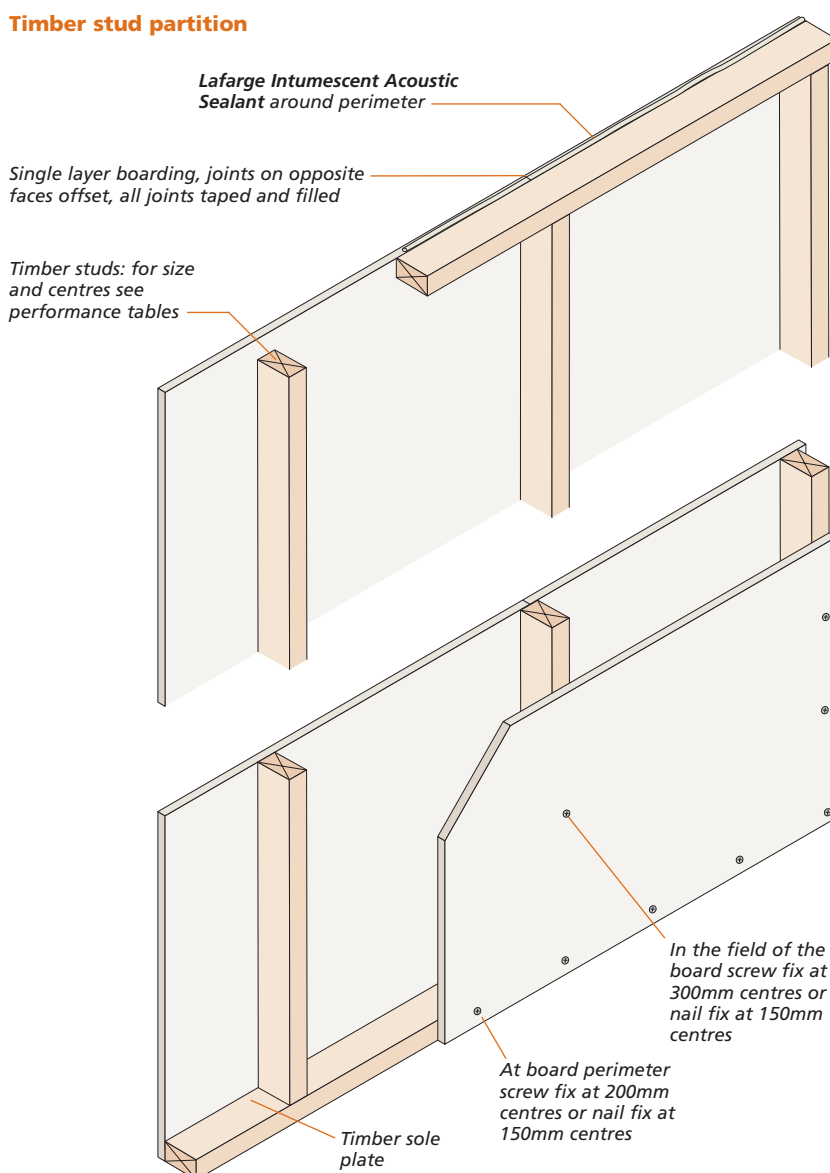
Timber stud partitions are suitable for limited heights, and typically for domestic use.

Performance

The selection of stud size and type, number and thickness of board layers will depend on the partition height and performance required for fire resistance, sound insulation and duty rating to BS 5432: Part 2. Refer to the performance tables 3.9 to 3.10.

Lafarge plasterboards are defined as Class 0 in accordance with National Building Regulations 1991 Approved Documents B1/2/3/4/5 *Fire Safety* and Building Standards (Scotland) Regulations 1990, Regulation D2 when tested to BS 476: Part 6: 1989 and Part 7: 1997 and Euroclass A2. The gypsum core is classified as non-combustible when tested in accordance with BS 476: Part 4: 1970 and Euroclass A1. Lafarge jointing compounds, metal systems, textures and bonding compounds are non-combustible when tested in accordance with BS 476: Part 4: 1970 and Euroclass A1.

Timber stud partition

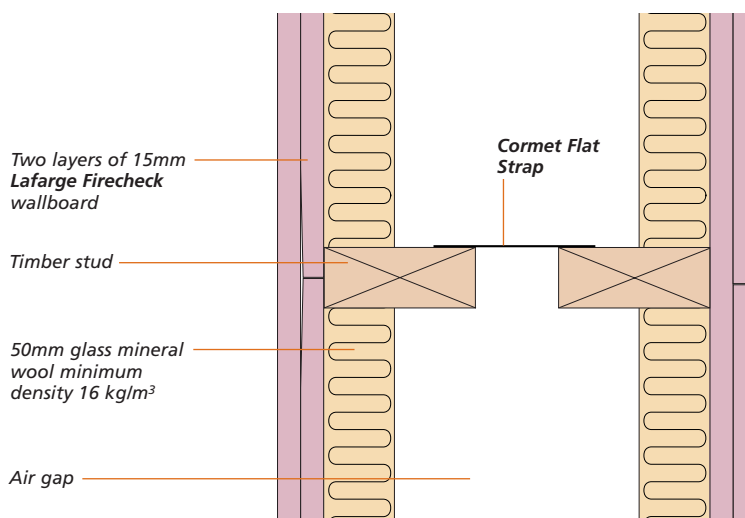


High performance walls

High performance timber framed walls are constructed from two independent timber frames with a cavity between. Each side is lined with two layers of 15mm **Lafarge dBcheck** wallboard. 50mm glass mineral wool insulation is applied between the studs to both frames. A brace secures the two frames at mid height.

High performance walls should be kept free of service penetrations. If this is not possible, baffle details should be installed – for guidance refer to pages 150-151, which offers a number of solutions for **Cormet** metal stud partitions, which work on the same principles for timber frame, or call the Technical Enquiryline for advice.

Timber stud partition – high performance wall (RFL 050 shown)



Components

Components

The components used in **Lafarge Drywall Timber Stud** partitions are listed in table 3.17.

System assembly

All framing must be straight, plumb and true, and provide a firm support for the plasterboards. Timber studs should be installed at maximum 400mm centres for 9.5mm plasterboard, and at maximum 600mm centres for 12.5mm and 15mm plasterboard. Framing should be arranged so as to avoid plasterboard widths of less than 300mm. Plasterboard edges must be supported at all openings and corners. All framing should provide a minimum bearing width for the plasterboard of not less than 38mm. The timber studs must be fixed to timber floor and ceiling plates.

The plasterboard should be fixed with **Lafarge Drywall High Thread Screws** at 200mm centres at the board perimeter and 300mm centres in the field of the board, or **Lafarge Drywall Nails** at 150mm centres for both perimeter and field of boarding. See tables 3.19 and 3.20 for recommended lengths of nails and screws.

Where sound insulation is required, apply a 6mm continuous bead of **Lafarge Intumescent Acoustic Sealant** around the perimeter of the framing or wallboard.

Lafarge Cove provides a neat finish to the wall/ceiling junction. See Section 7.

Cormet Resilient Bar

Where the **Cormet Resilient Bar** is to be fixed to timber studs the following centres apply.

For single layer 12.5mm plasterboard fix **Cormet Resilient Bar** at 400mm centres horizontally.

For double layers of 12.5mm plasterboard and thicker plasterboard, fix **Cormet Resilient Bar** at 600mm centres horizontally.

Fix initial **Cormet Resilient Bar** 50mm down from ceiling, last Resilient Bar 50mm from floor.

Screw fix the **Cormet Resilient Bars** to the timber supports using 32mm Drywall High Thread Screws.

Screw fix the plasterboard to the **Cormet Resilient Bar** only, ensuring the screw does not touch the timber substrate.



Table 3.17 Timber stud components

Component	Dimensions	Lafarge code
Lafarge Intumescent	0.9 litres	ACOUSTIC (INTU)
Acoustic Sealant	0.38 litres	ACO38 (INTU)
Lafarge Drywall High Thread Screws	32-63mm	32DHT25, 38DHT25 41DHT25, 51DHT25 63DHT25
Cormet Resilient Bar	3000mm	RBD3000
Drywall Nail	30-65mm	NAIL30ZINC NAIL40ZINC NAIL50ZINC NAIL60ZINC

Table 3.18 Recommended screw lengths for fixing plasterboard to Cormet Resilient Bars

Plasterboard thickness (mm)	Screw length (mm)
12.5	25
15.0	25
19.0	32
12.5 + 12.5	38
19.0 + 12.5	44
15.0 + 15.0	44

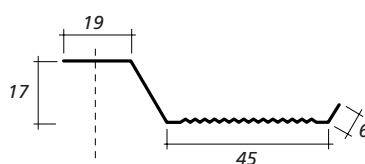
Table 3.20 Recommended nail lengths for timber framing

Construction	Plasterboard thickness (mm)	Nail Length (mm)
Single layer	12.5	40
	15.0	40
	19.0	50
Double layer	12.5 + 12.5	50
	12.5 + 19.0	65
	15.0 + 15.0	65

Table 3.19 Recommended screw lengths for timber framing

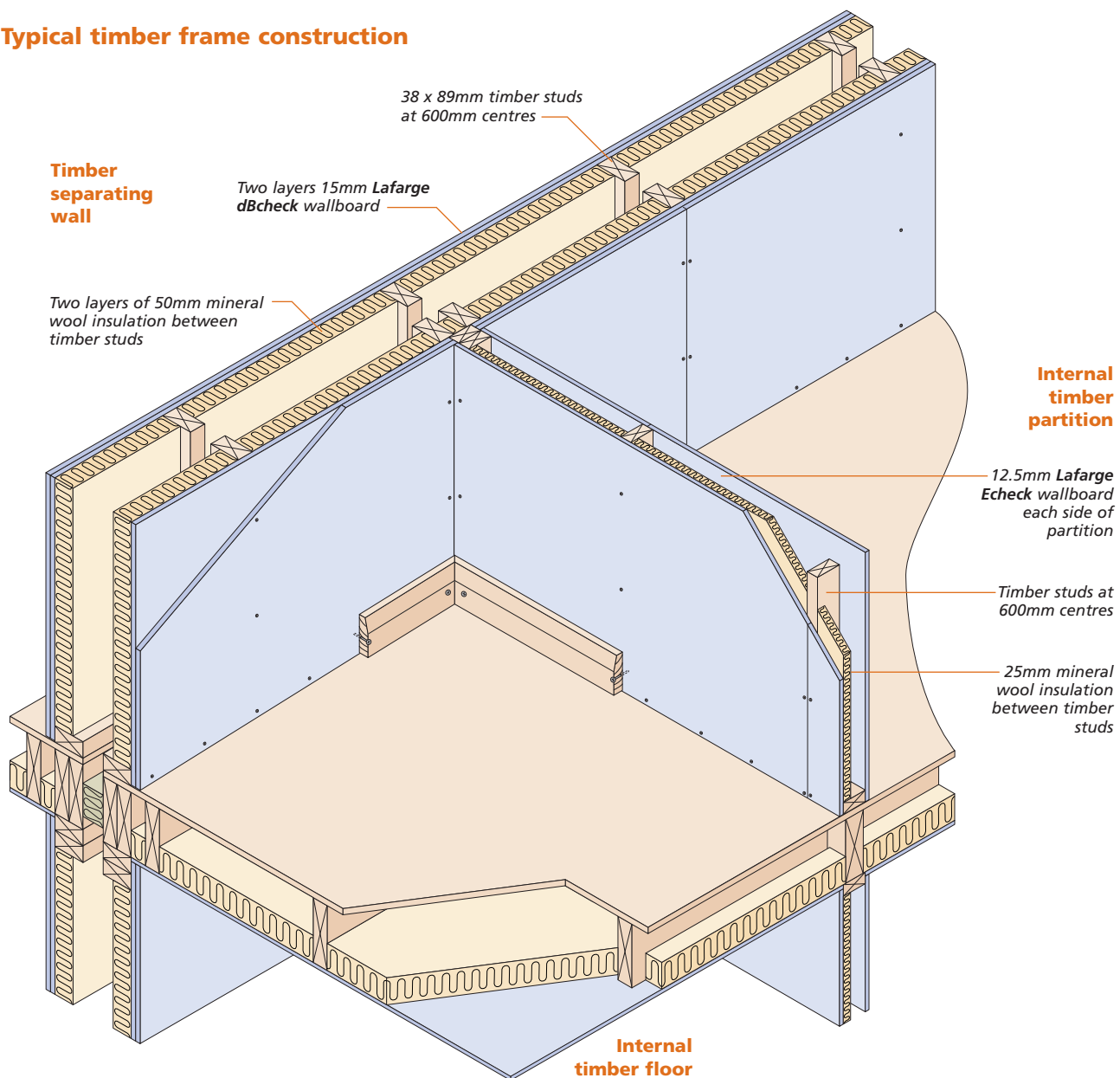
Construction	Plasterboard thickness (mm)	Screw length (mm)
Single layer	6	32
	12.5	38
	15.0	38
	19.0	41
Double layer	6 + 6	38
	12.5 + 12.5	51
	12.5 + 19.0	63
	15.0 + 15.0	63

Cormet Resilient Bar RBD3000

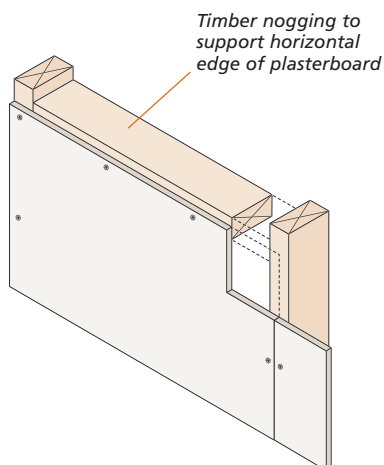


Application details

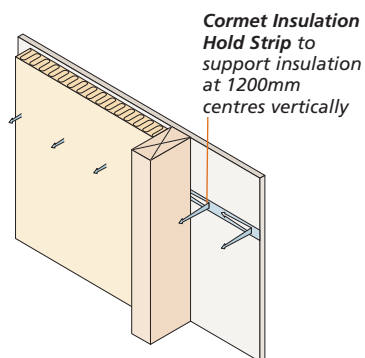
Typical timber frame construction



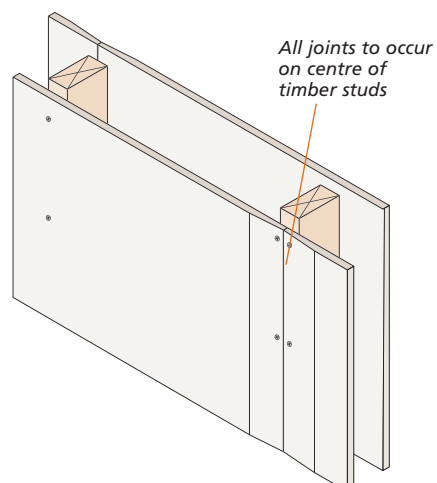
Overheight partitions



Suspension of mineral wool

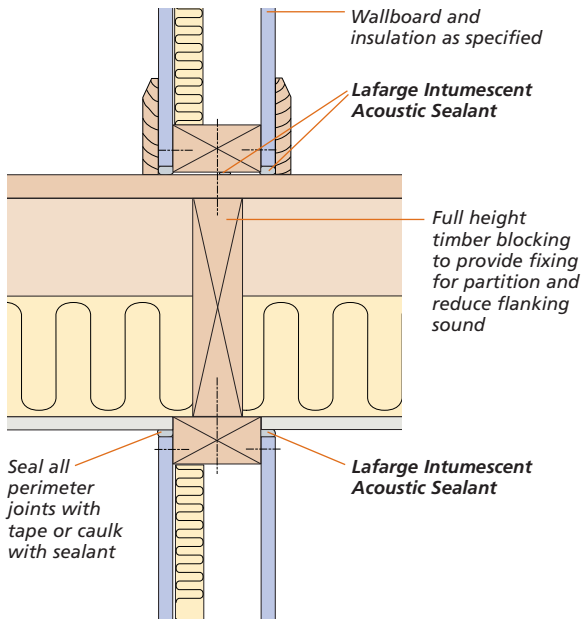


Partitions with double layer boarding

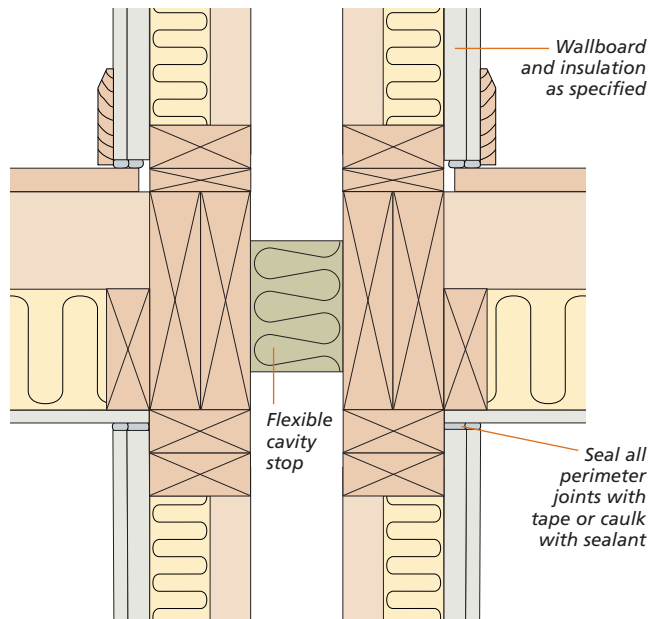


Application details

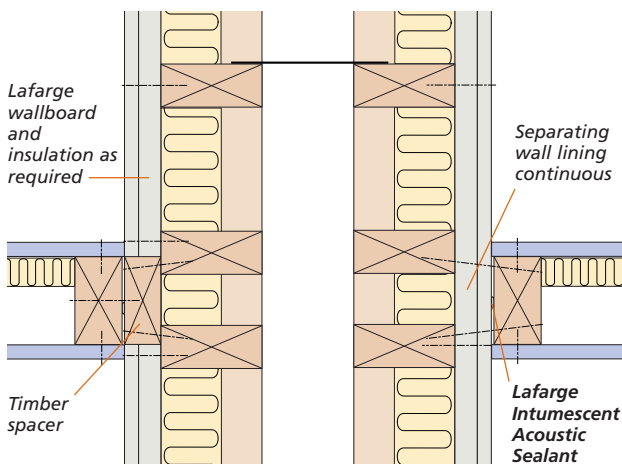
Partition head and sill



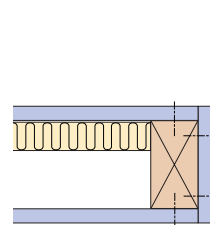
Timber separating wall junction with internal floor



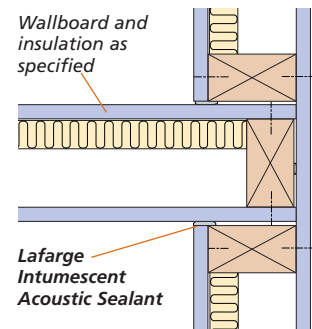
Party wall junction with partition – alternatives (plan)



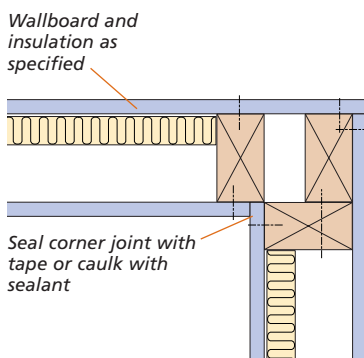
Partition end (plan)



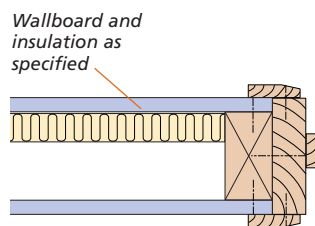
T junction – acoustic (plan)



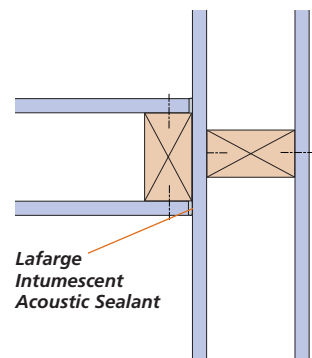
Corner



Door jamb



T junction – alternative



Specification clauses

Lafarge Timber Stud Partitions

Scope

Internal walls, partitions, separating walls and external walls constructed using softwood timber studs lined with Lafarge plasterboards.

Additional clauses

Add general clauses if required for:

- Expansion/movement joints
- Health and safety
- Storage of Materials
- Site conditions and workmanship

NBS clauses

When using the NBS Specification, use clause K10 PLASTERBOARD DRY LININGS/PARTITIONS/CEILINGS.

To complete the clause select the appropriate data as indicated on the right.

The Lafarge Plasterboard website contains a full set of NBS clauses, completed for each Lafarge Plasterboard system. See: www.lafargeplasterboard.co.uk/nbssearch/index.asp0



Notes:

Red text lists alternative product specifications.

(Italic red text within brackets gives advice on selecting the information needed).

System reference *(Insert Lafarge system reference from Performance Tables)*

Location

Client reference

Performance

Maximum heightm

Fire ratingmins

Airborne insulationR_wdB

Thicknessmm

Weightkg/m²

Grade to BS 5234

Horizontal joints

If partition height exceeds board height, use horizontal timber noggings to provide support for fixings.

Insulation

(Specify insulation thickness and grade/density from the Performance Tables)

Acoustic mastic

6mm bead of Lafarge Intumescent Acoustic Sealant around perimeter of the framing.

Timber framing

Timber studsmm xmm at max 600mm centres

Timber sole platemm xmm fixed at 600mm centres.

Timber head platemm xmm fixed at 600mm centres.

Boarding

Single or **double** layer of wallboard.

Inner layer *(Specify wallboard from the Performance Tables)*

Outer layer *(Specify wallboard from the Performance Tables)*

Board fixings

Lafarge Drywall Self Tapping Screws at maximum 300mm centres,

Length, inner layer *(Select from 25, 32, 38, 41, 44, 51, 57, 63, 67, 76)mm*

Length, outer layer *(Select from 25, 32, 38, 41, 44, 51, 57, 63, 67, 76)mm*, or

Lafarge Drywall Nails at maximum 150 mm centres at the board perimeter and maximum 200mm centres in the field of the board,

Length, inner layer *(Select from 30, 40, 50, 65)mm*

Length, outer layer *(Select from 30, 40, 50, 65)mm*

Finishing

Lafarge Taping and jointing system, or

Lafarge Supreme Skim Plaster, or

Lafarge Predeco taping and jointing system

Installation

All materials, unless otherwise indicated, shall be supplied by Lafarge Plasterboard Ltd. and shall be installed in accordance with their current literature and in accordance with BS 8212: 1995.



3

Masonry separating walls remain by far the most common construction method within the housebuilding market. However, in conjunction with Lafarge drywall systems the overall performance with regard to thermal and sound, as well as the speed of completion, can be greatly improved.

Drywall Benefits and Typical System Solutions

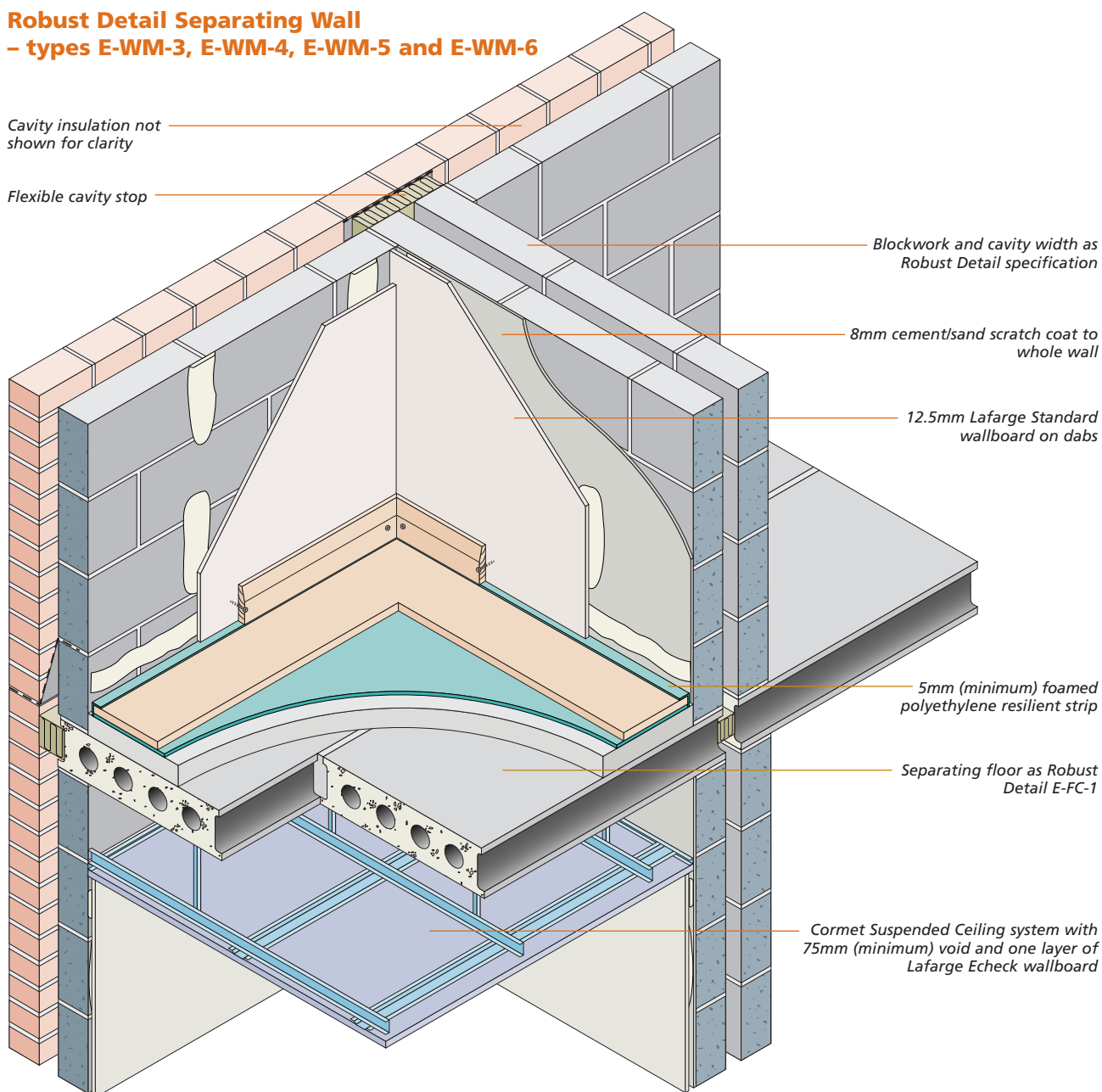
Direct Bond to inner skin of construction

- Reduction in wet trades
- Quicker completion times
- Reduced drying out time
- Improved thermal performance

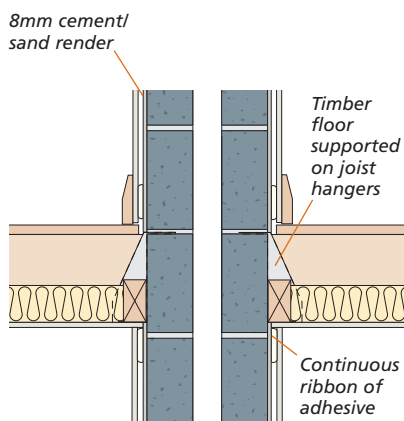
Cornet Dryliner to inner skin of construction

- Improved thermal performance
- Reduction in wet trades
- Quicker completion times
- Reduced drying out time
- Creates cavity in which services can be installed
- Greater acoustic performance

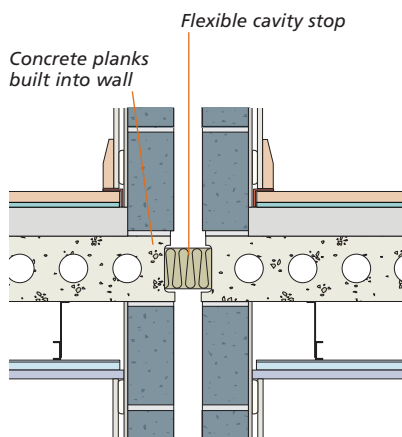
Robust Detail Separating Wall – types E-WM-3, E-WM-4, E-WM-5 and E-WM-6



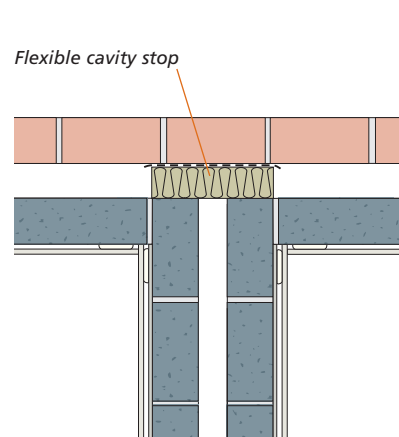
Party wall junction (section with internal floor)



Party wall junction (section with party floor)



Junction with external cavity wall





Drywall solutions are becoming increasingly popular due to the ease of construction and flexibility offered to the architect to accommodate specialist design features – while being able to maintain the practical requirements of fire and acoustic performance.

In the following section we offer a wide range of typical drywall solutions. If the detail you require is not shown, please contact our Enquiryline.

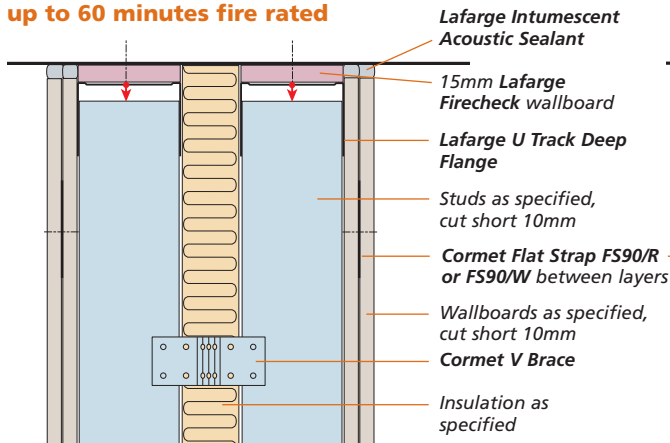


3

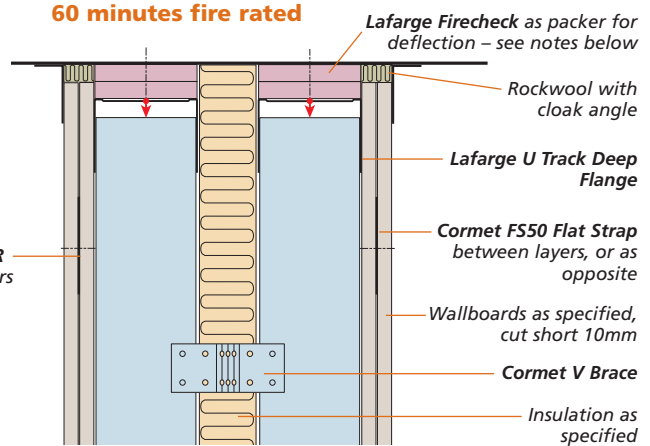


Deflection head details

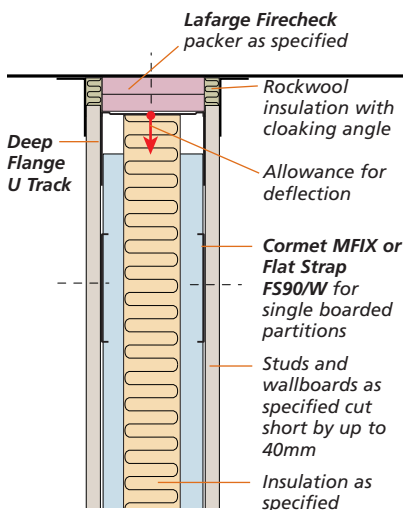
Twin wall 10mm deflection head detail up to 60 minutes fire rated



Twin wall deflection head detail up to 60 minutes fire rated

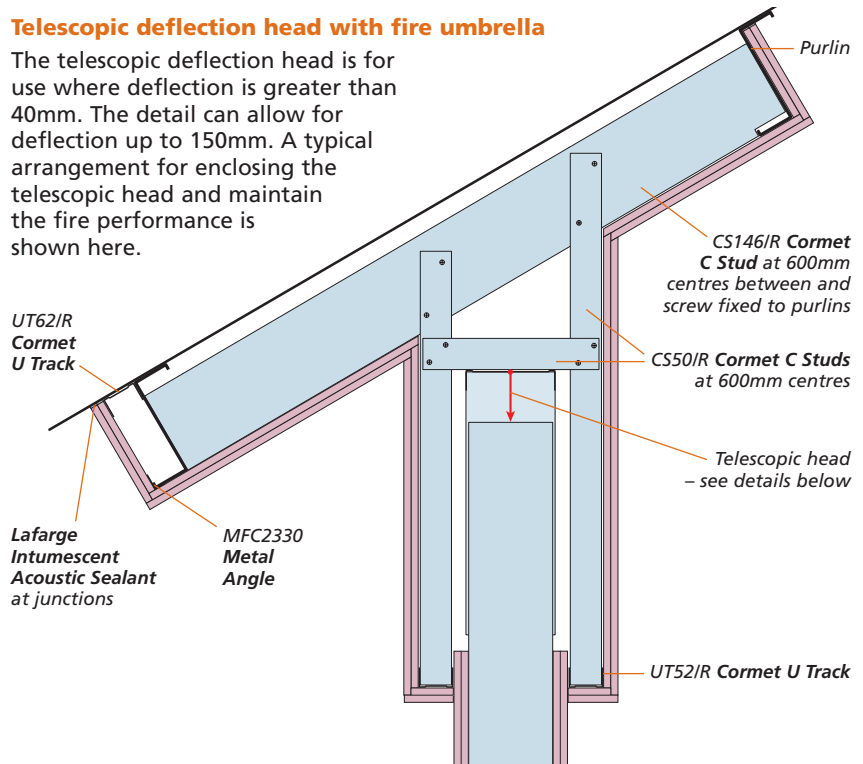


Single stud partition with one layer of plasterboard – deflection head detail up to 60 minutes fire rated



Telescopic deflection head with fire umbrella

The telescopic deflection head is for use where deflection is greater than 40mm. The detail can allow for deflection up to 150mm. A typical arrangement for enclosing the telescopic head and maintain the fire performance is shown here.



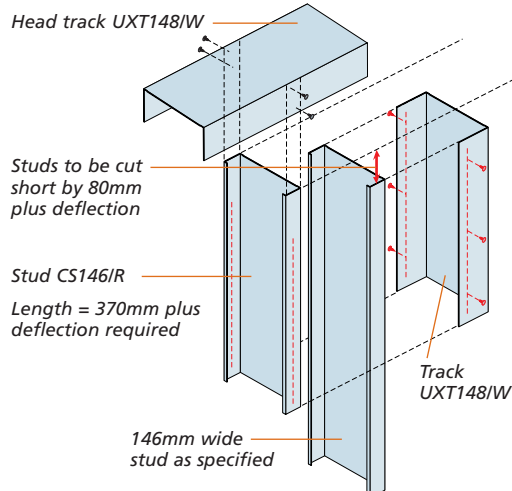
Note on head packer

Max deflection	Packer required
8mm	1x12.5mm Firecheck*
10mm	1x15mm Firecheck*
15mm	1x19mm Plank
20mm	2x12.5mm Firecheck**
25mm	2x15mm Firecheck*

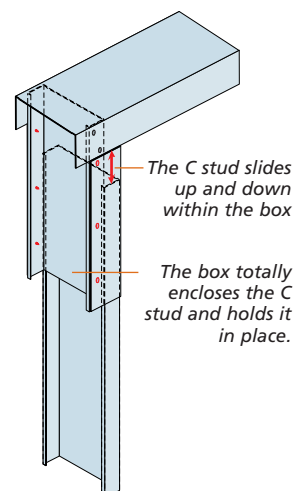
Notes: * Firecheck can be substituted by Megadeco, Toughcheck or MR Firecheck

** Firecheck can be substituted by 25mm Firecheck Coreboard

Detail of telescopic head – exploded view

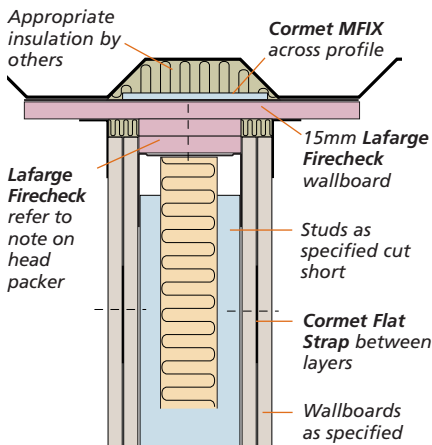


Detail of telescopic head – assembled view

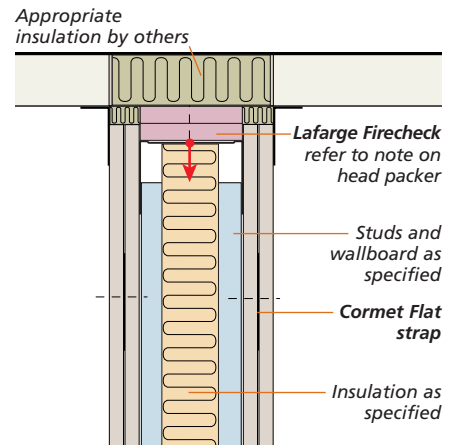
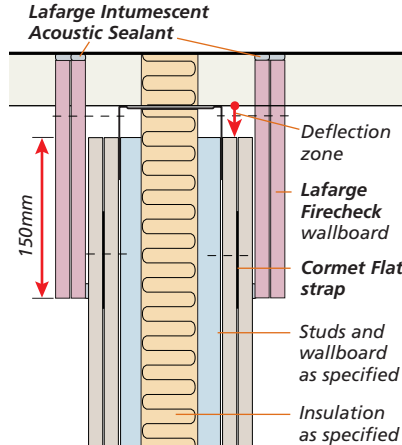


Deflection head details

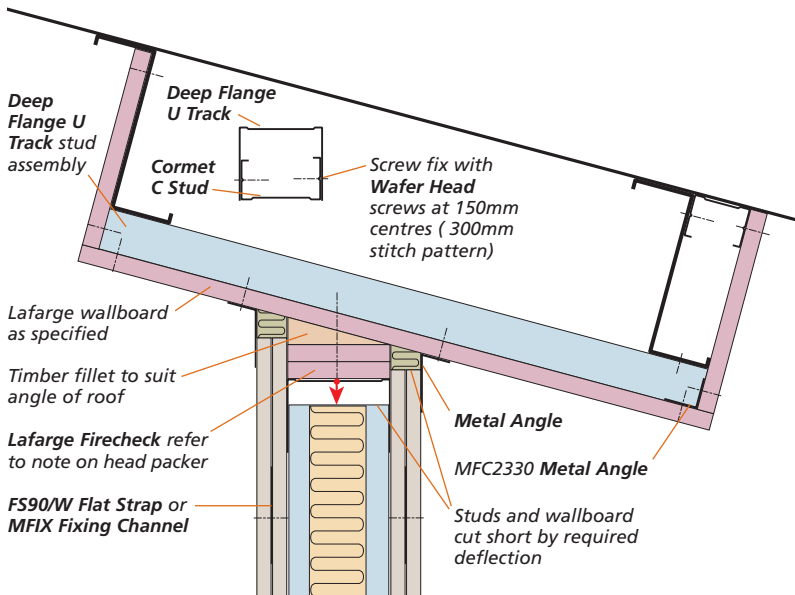
At profiled soffit (along profile)



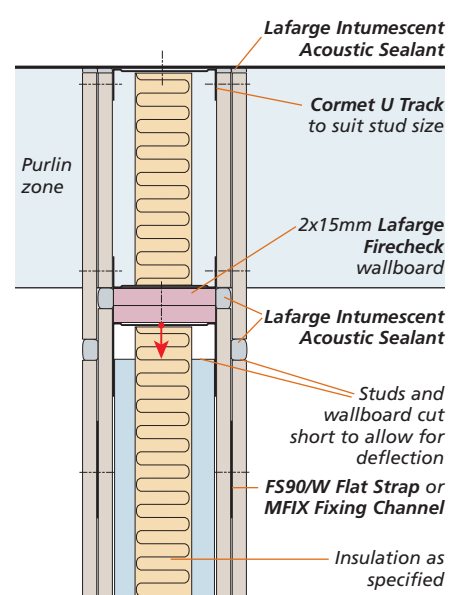
Alternative details at profiled soffit (across profile)



Junction with purlins at 1800mm centres

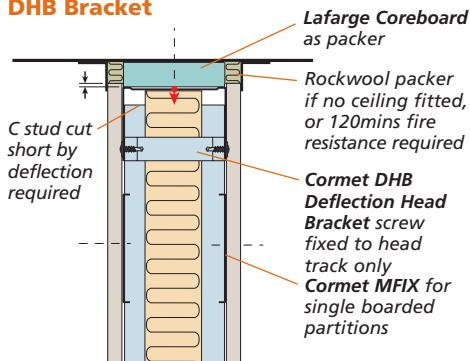


Partition perpendicular to purlins

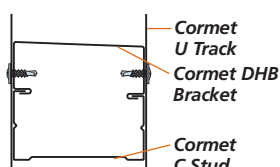


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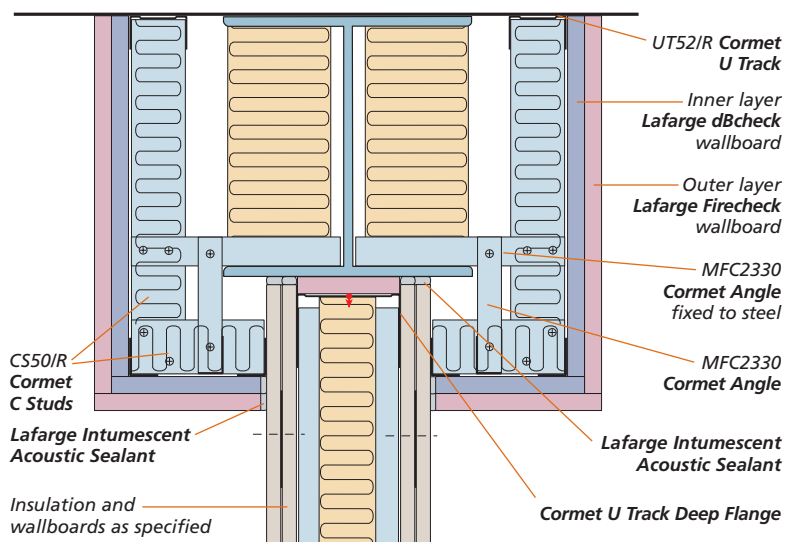
Deflection head using Cormet DHB Bracket



Detail plan view

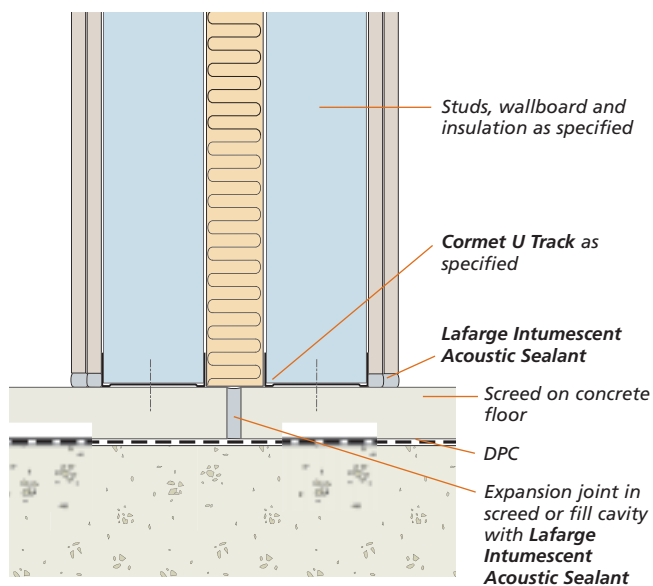


Deflection head under beam

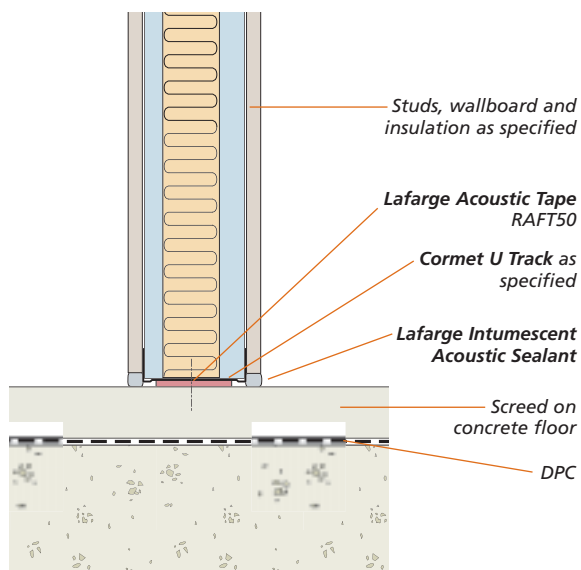


Floor details

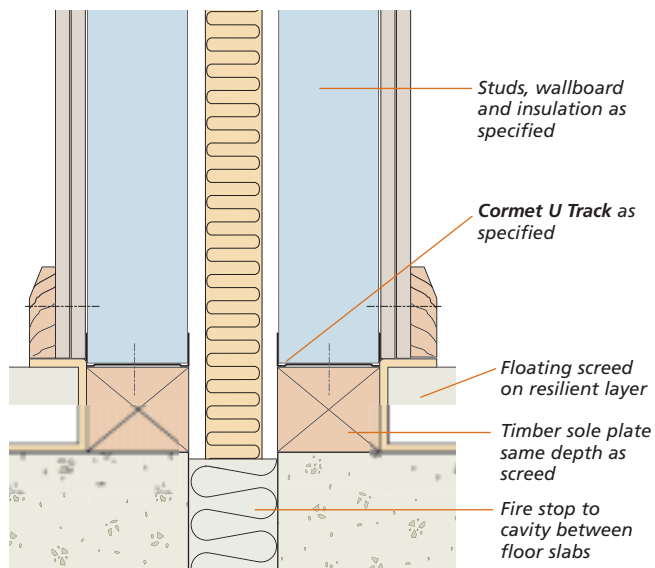
Twin frame separating wall to concrete floor with screed



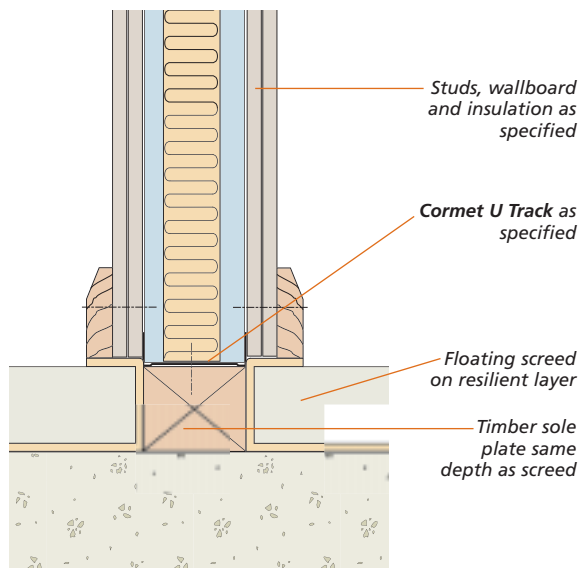
Internal partition to concrete floor with screed



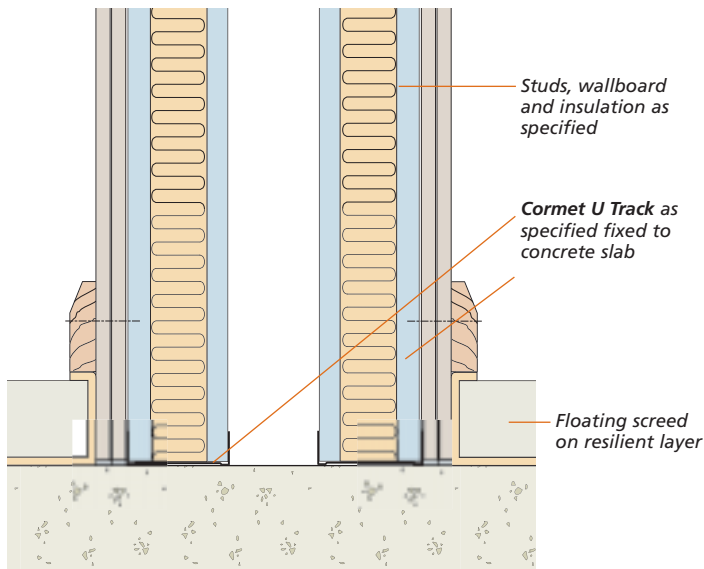
Separating wall with timber sole plate



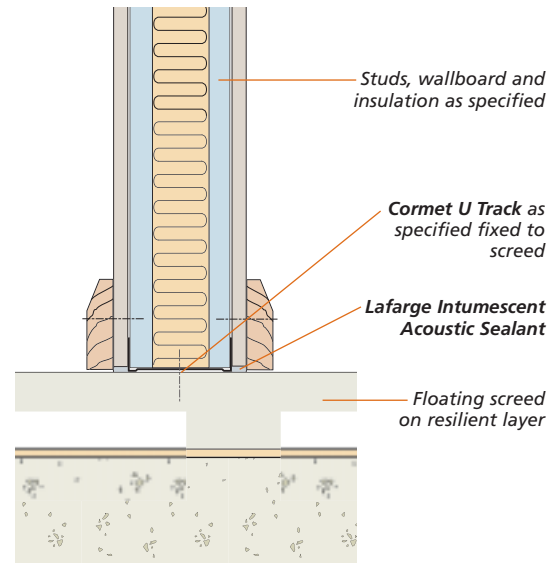
Partition with timber sole plate



Twin frame separating wall with floating screed

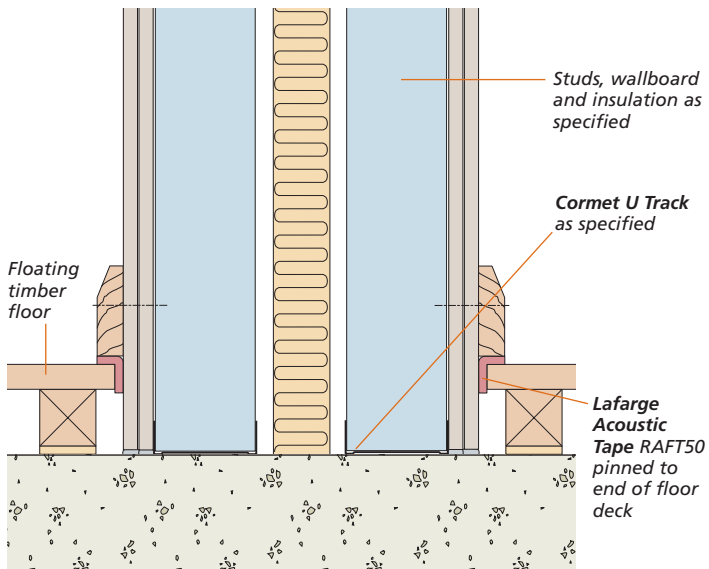


Internal partition on floating screed

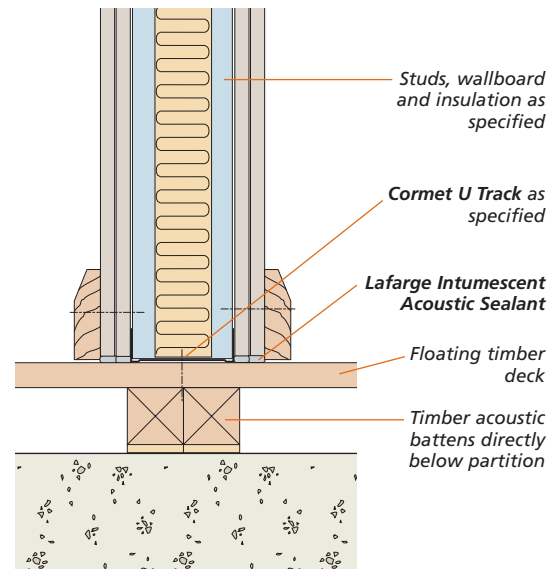


3

Twin frame separating wall with floating timber floor



Internal partition on floating timber floor



Baffle details

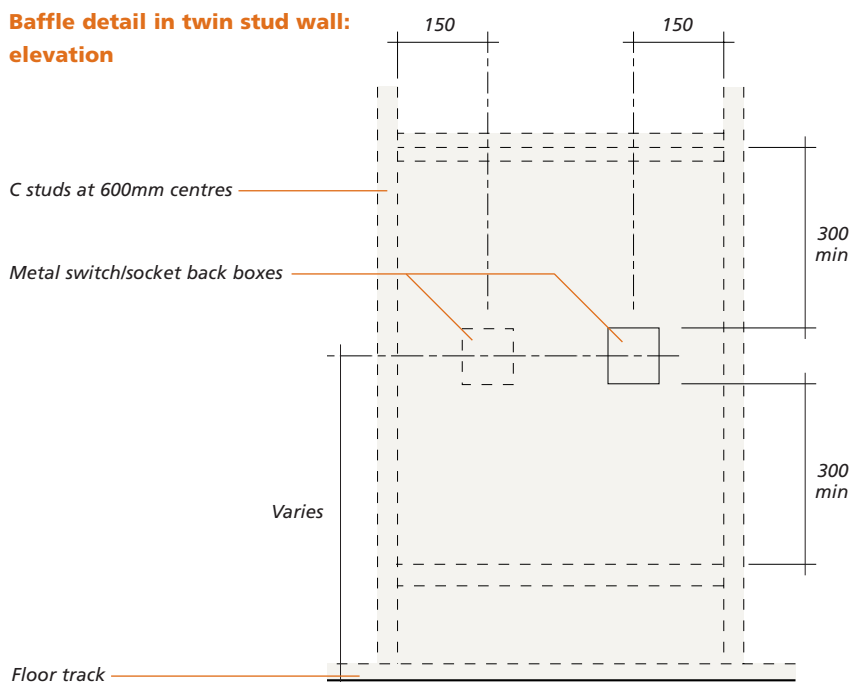
Service outlets

If services are to be installed in high performance partitions it is essential to maintain the fire and acoustic performance of the partition system.

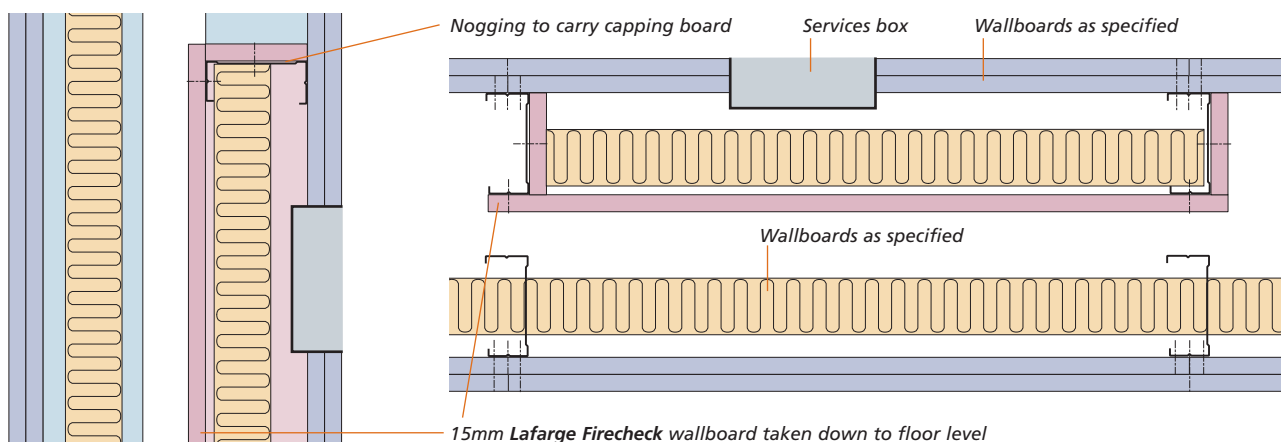
Service outlets should be offset so that they do not lie back-to-back. Use **Cormet Fixing Channel** or noggings to support outlets as necessary, and seal around them with **Lafarge Intumescent Acoustic Sealant**. To maintain fire performance, form a baffle with 15mm **Lafarge Firecheck** wallboard extending at least 300mm above and below the outlets and secured to noggings in the centre of the cavity.

A baffle box is required even where there is a box on one side only.

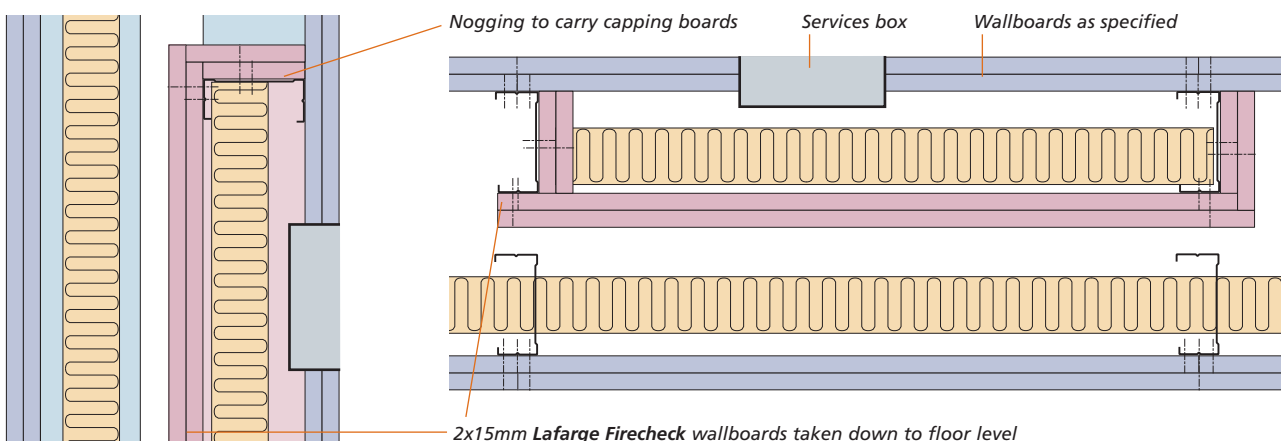
Baffle detail in twin stud wall: elevation



60 minute baffle in twin wall (section and plan)

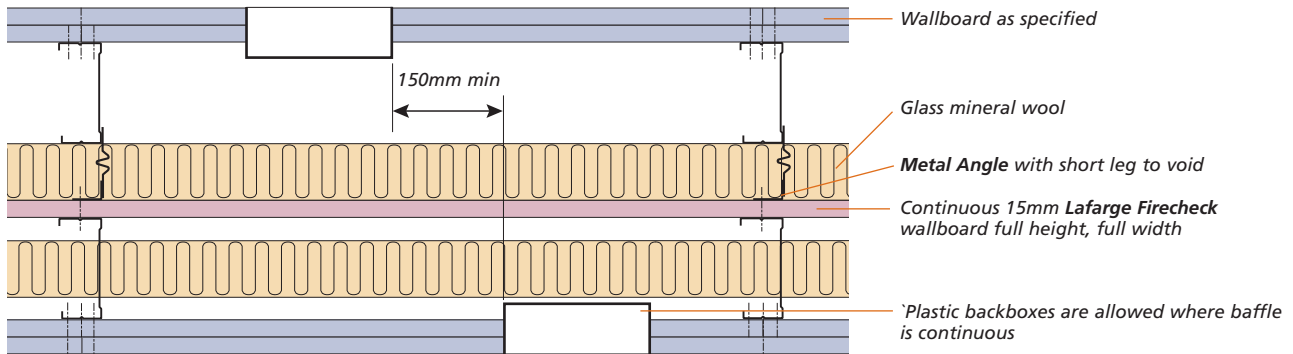


120 minute baffle in twin wall (section and plan)

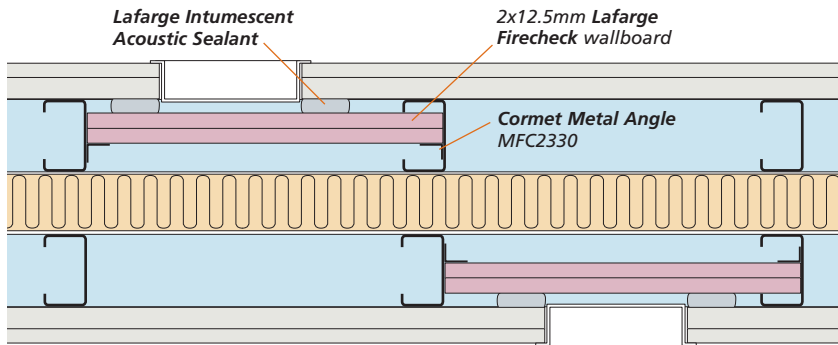


Baffle details

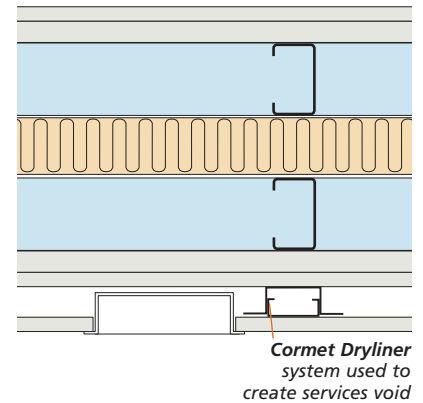
Continuous baffle in twin wall



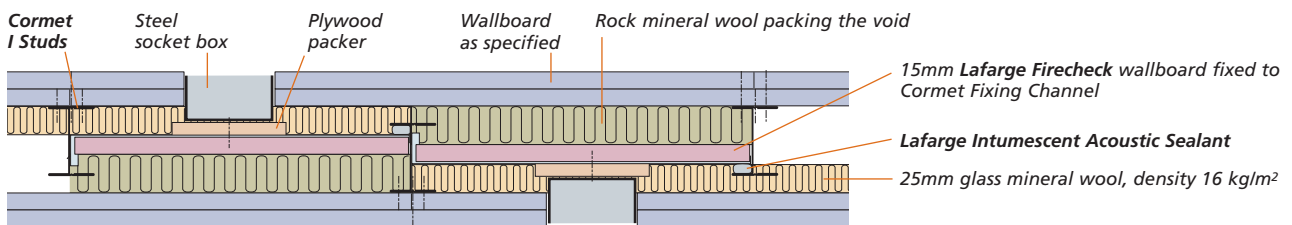
Service baffle in Robust Detail E-WS-1



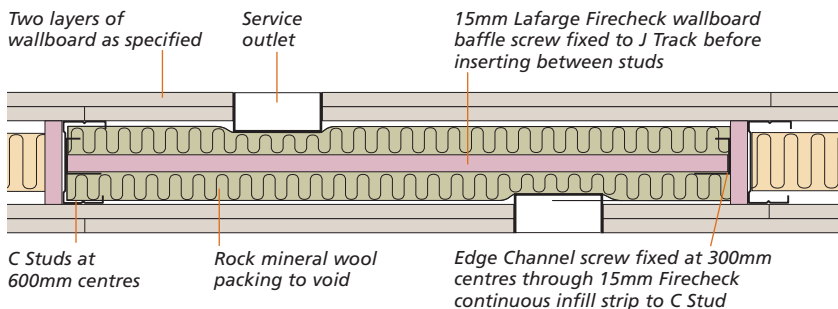
Alternative – service void formed using Cormet Dryliner



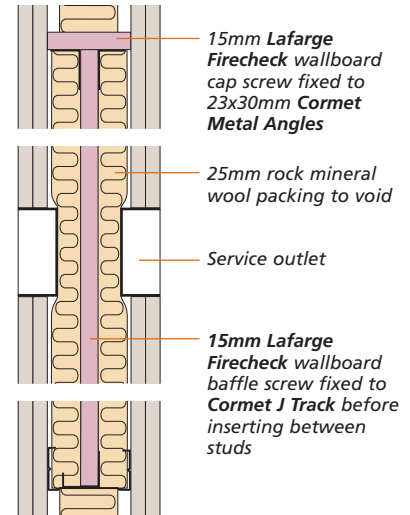
Service baffle in staggered I stud partition



Service baffle in partition with 60 minutes fire rating (plan)

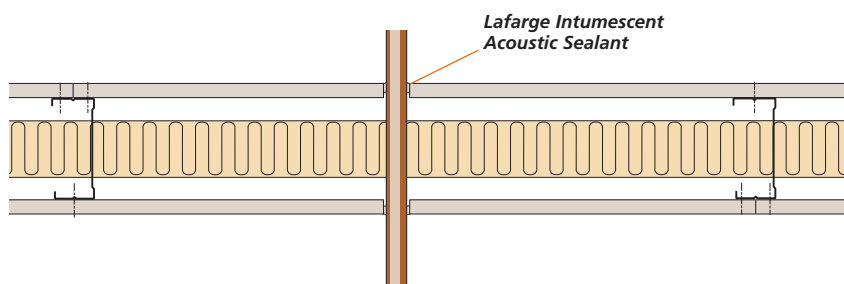


(section)

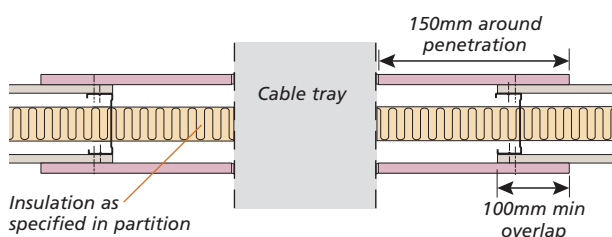
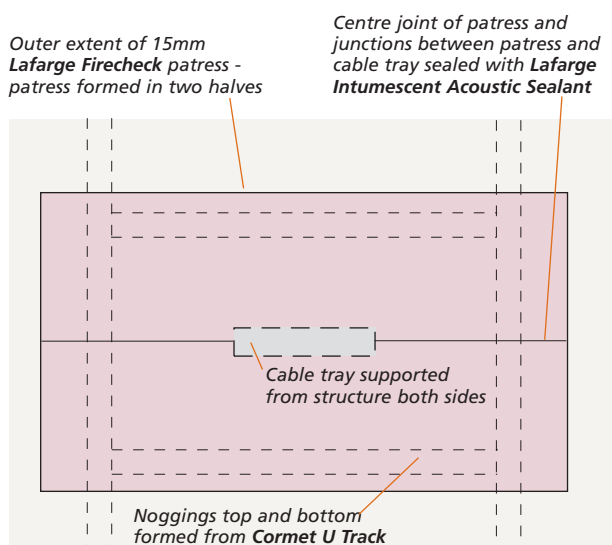


Service and duct penetrations

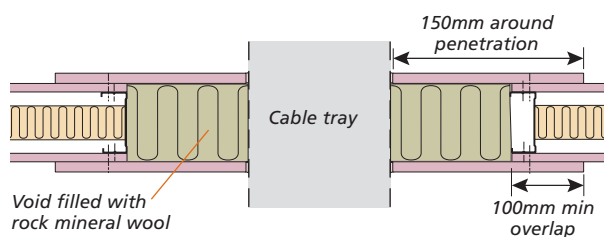
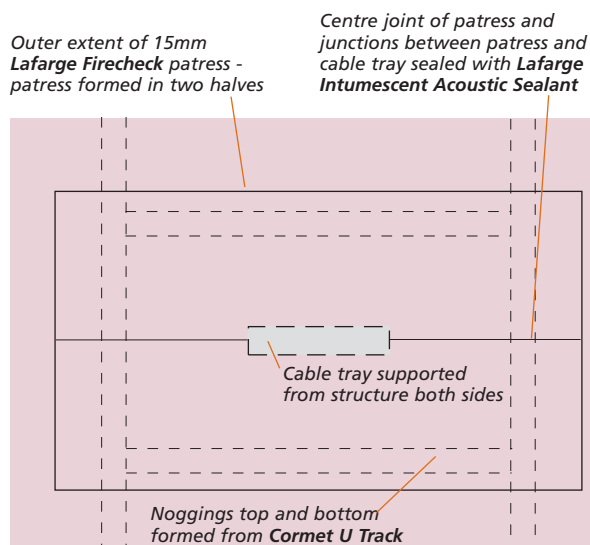
Pipe penetration <50mm



Cable tray penetration through non fire rated partition (elevation and plan)



Cable tray penetration through fire rated partition (elevation and plan)

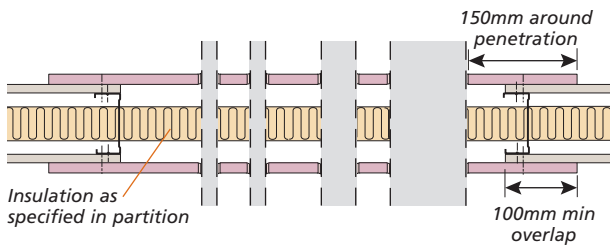
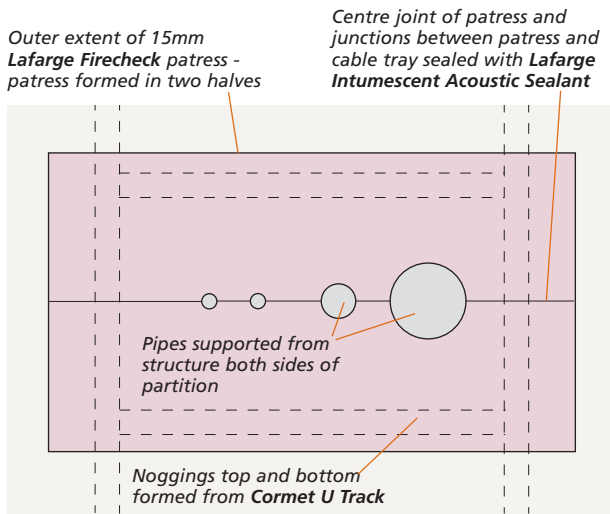


Fire penetrations

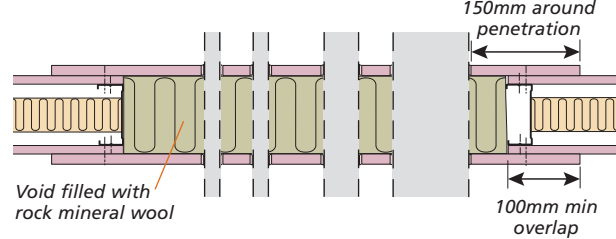
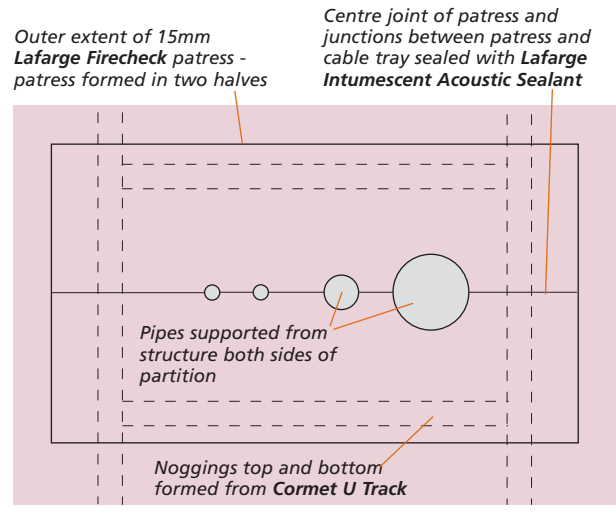
Integrity of penetrations to be maintained by others.

Service and duct penetrations

Multiple pipe penetration through non fire rated partition (elevation and plan)

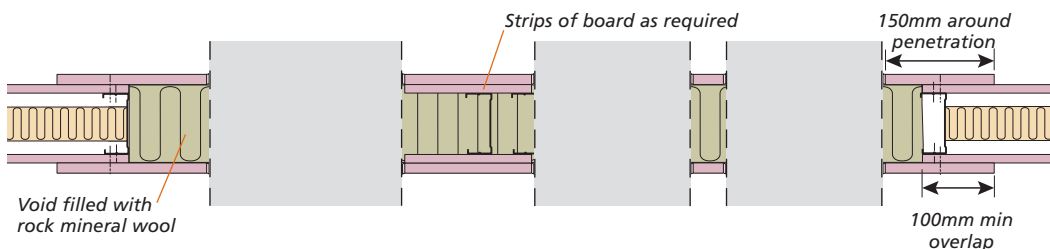
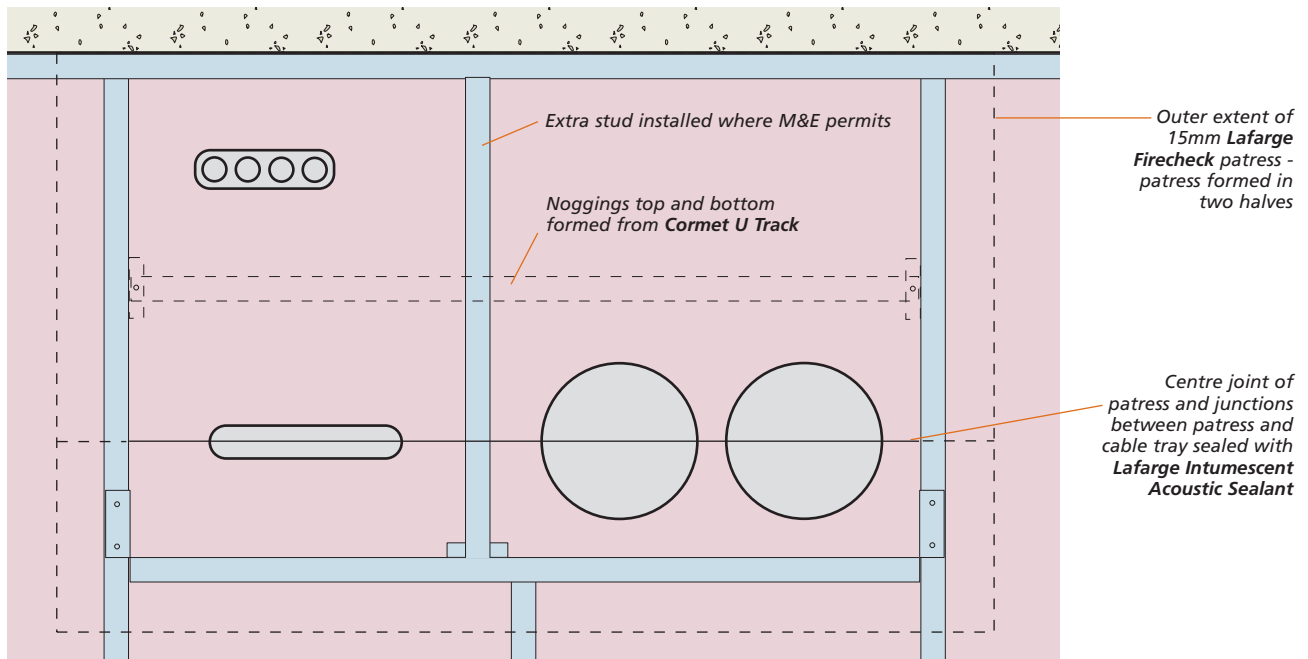


Multiple pipe penetration through fire rated partition (elevation and plan)



3

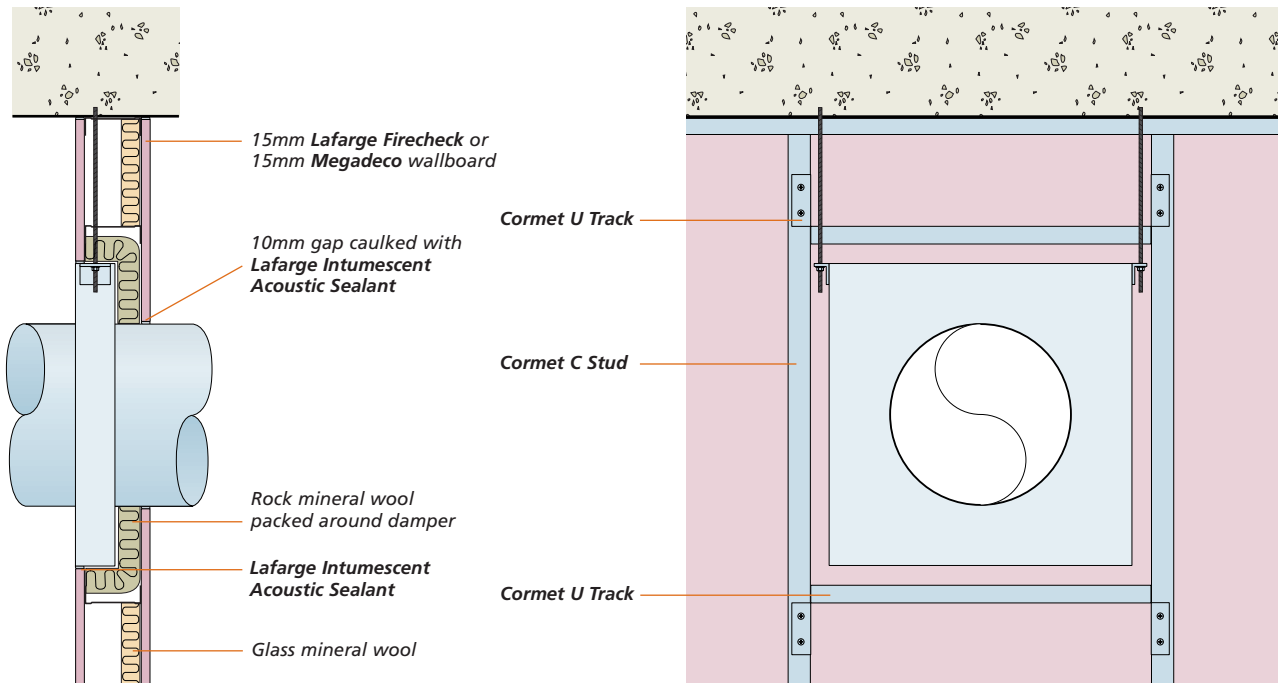
Duct penetration over 600mm wide through fire rated partition (section and plan)



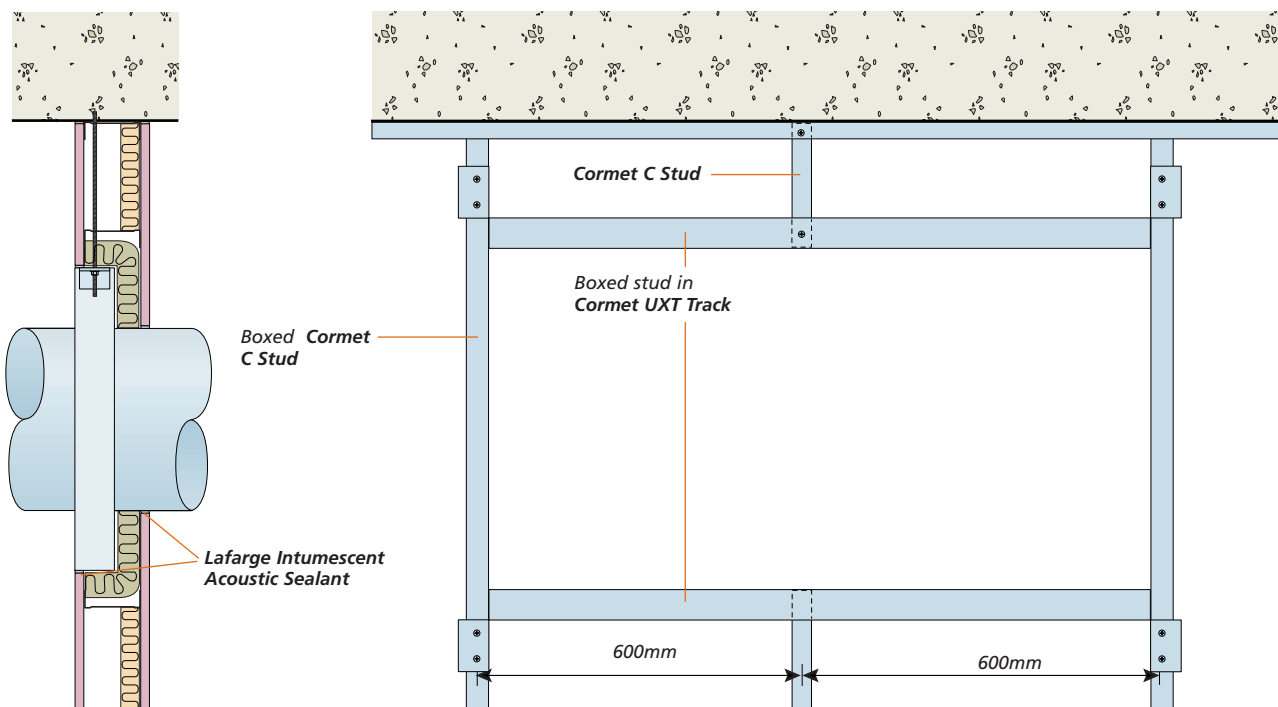
Fire penetrations
Integrity of penetrations to be maintained by others.

Dampers

Damper installation less than 500mm wide



Damper installation over 500mm wide

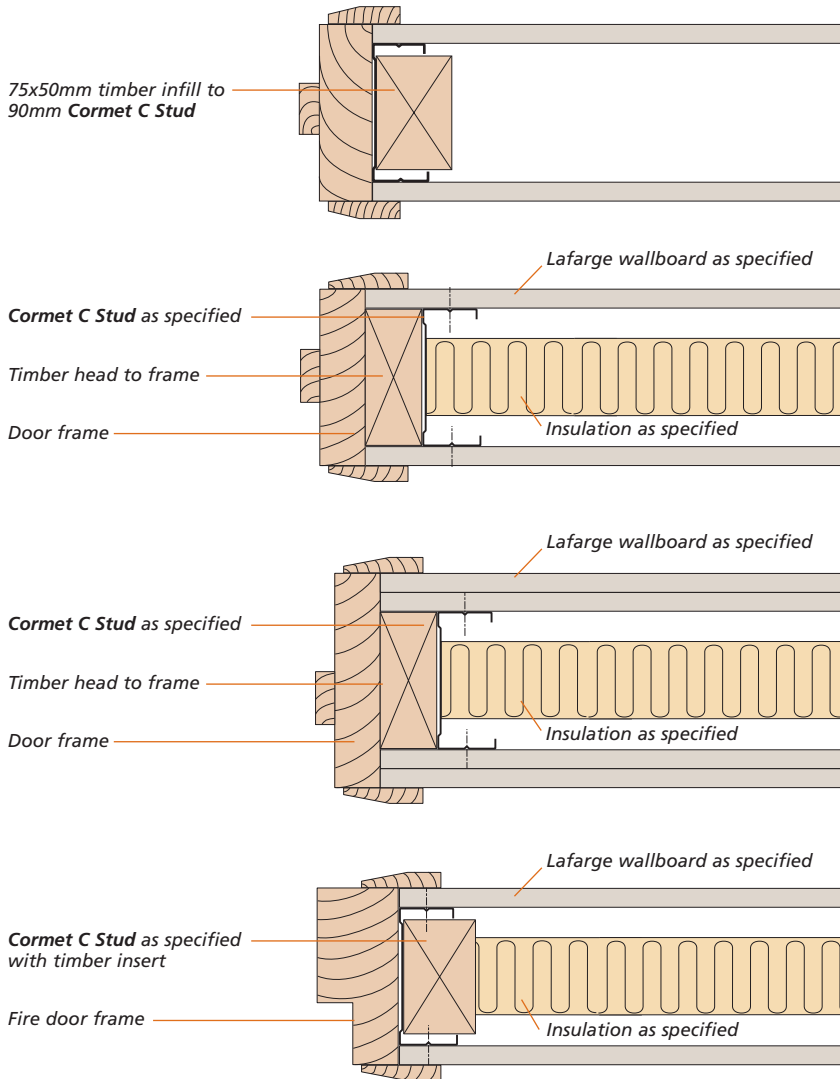


Fire penetrations

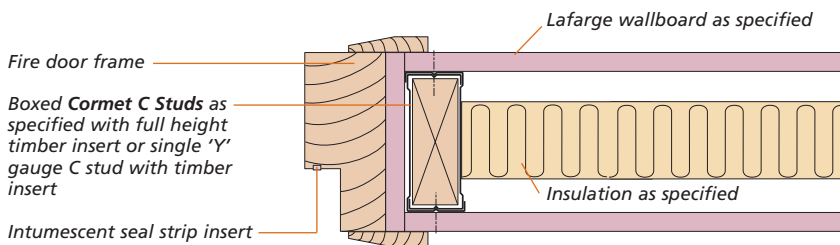
Integrity of penetrations
to be maintained by others.

Door frame details

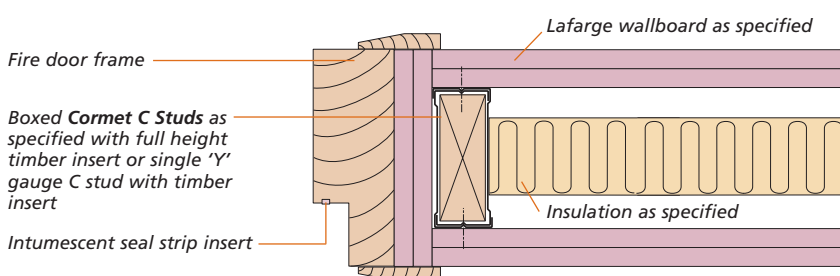
Door frame detail showing timber infill



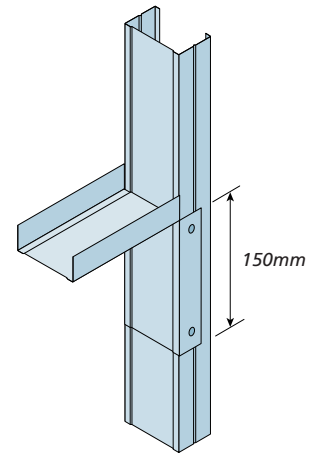
Heavy duty fire door frame in single boarded partition



Heavy duty fire door frame in double boarded partition



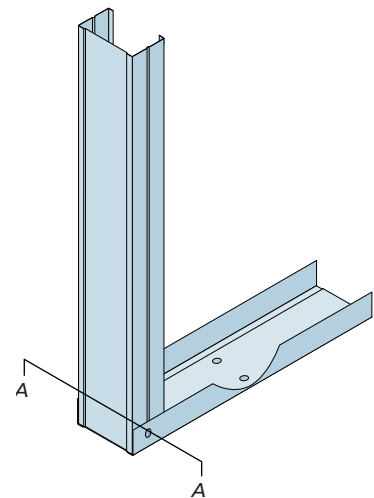
Head detail



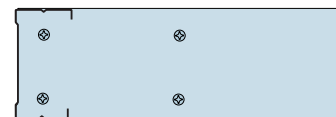
Notes:

At the head, **Cormet U Track** is cut and bent to extend 450mm down the face of the studs and fixed twice to each side.

Base detail



Section AA



Boxing and Splicing studs

Boxed studs

Cormet C Studs may be boxed together to give partitions of greater rigidity and height and to provide support at doorways. The bearing faces of the **Cormet C Studs** are asymmetrical (36mm and 34mm) to allow for boxing. Nest alternate short and long faces and snap together.

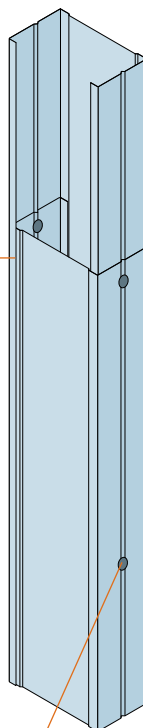
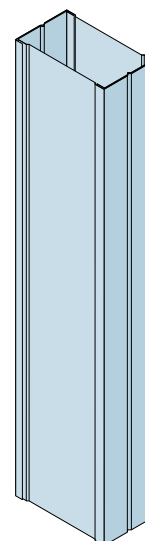
To avoid bulging track leave 50mm both ends as single stud.

Spliced studs

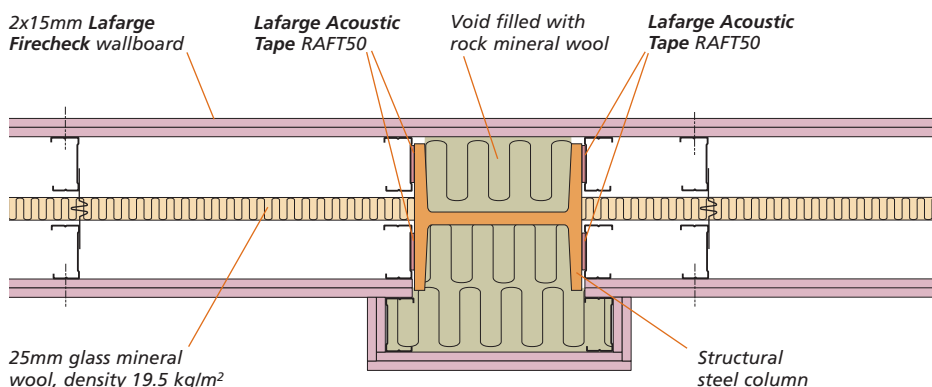
Cormet C Studs with 600mm overlap
(Note: if the partition layout exceeds 4 metres, the overlap should be increased to 1000mm)

Wafer Head screws at 150mm centres on both flanges

Boxed studs



Column in party wall



Movement joints

Movement control joints for partitions

Movement control joints may be required to relieve normal structural movement without loading the partition. Movement control joints are required in partitions at intervals not exceeding **10 metres**, where the partition crosses or abuts a structural movement joint, and where partitions of dissimilar materials meet in the same plane.

At movement joints, leave a 12.5mm gap in the **Cormet U Tracks** at head and base. Fix a **Cormet C Stud** on one side, 10mm from the gap, and line the web with two layers of 15mm **Lafarge Firecheck** wallboards. Place another stud, web facing web on the opposite side of the gap, as shown. Board the partition, leaving a continuous 12.5mm gap between boards along the line of the movement joint.

Cut **Cormet Movement Control Joint** to length; butt joint lengths end to end where necessary. Attach to the plasterboard surface with 13mm galvanised or sherardized or zinc electro-plated staples at 150mm centres. Apply **Lafarge Fast Set** in two coats, feathering out the edges of the second coat. After finishing, remove the masking strip from the centre of the joint.

Wind loading

Cormet Metal Stud Partitions are non-loadbearing but can accept a degree of wind loading, for example when used in buildings with large or multiple external doors. Information can be provided on specifications to suit individual requirements, including the provision of deflection heads. As a guide, a 7.6m high partition consisting of 146mm **Cormet C Studs** with two layers of 12.5mm **Lafarge dBcheck** wallboard resists a pressure of 200N/m², with a deflection limit of L/240 (where L is the partition height in mm)

Electrical services

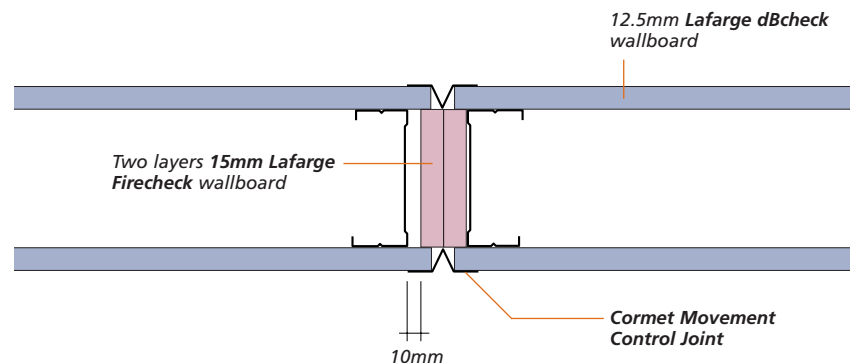
The installation of electrical services should be carried out in accordance with the recommendations of the Institution of Electrical Engineers. The cut-outs in the studs can be used for routing electrical and other small services. Cables should be protected by conduit or other suitable precautions taken to prevent abrasion when they pass through the metal frame.

Table 3.20 Wall grades by categories of duty

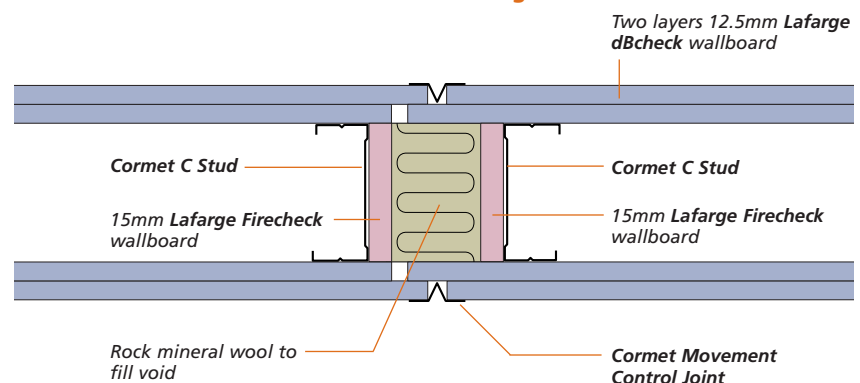
BS 5234 : Part 2 : 1992

Grade	Category of duty	Examples
LIGHT DUTY LD	Adjacent space only accessible to persons with high incentive to exercise care. Small chance of accident occurring or of misuse.	Domestic accommodation
MEDIUM DUTY MD	Adjacent space moderately used primarily by persons with some incentive to exercise care. Some chance of accident occurring and of misuse.	Office accommodation
HEAVY DUTY HD	Adjacent space frequently used by public and others with little incentive to exercise care. Chances of accident occurring and of misuse.	Public circulation areas Industrial areas
SEVERE DUTY SD	Adjacent space intensively used by public and others with little incentive to exercise care. Prone to vandalism and Heavy abnormally rough use.	Major circulation areas Industrial areas

Movement Control Joint 30 minute fire rating



Movement Control Joint 60 minute fire rating



Earth Bonding

The electrical installation should be carried out in accordance with the I.E.E. Wiring Regulations and the advice of the National Inspection Council for Electrical Installation Contracting (NICEIC) should be sought.

Curved partitions

Curved Metal Stud Partitions

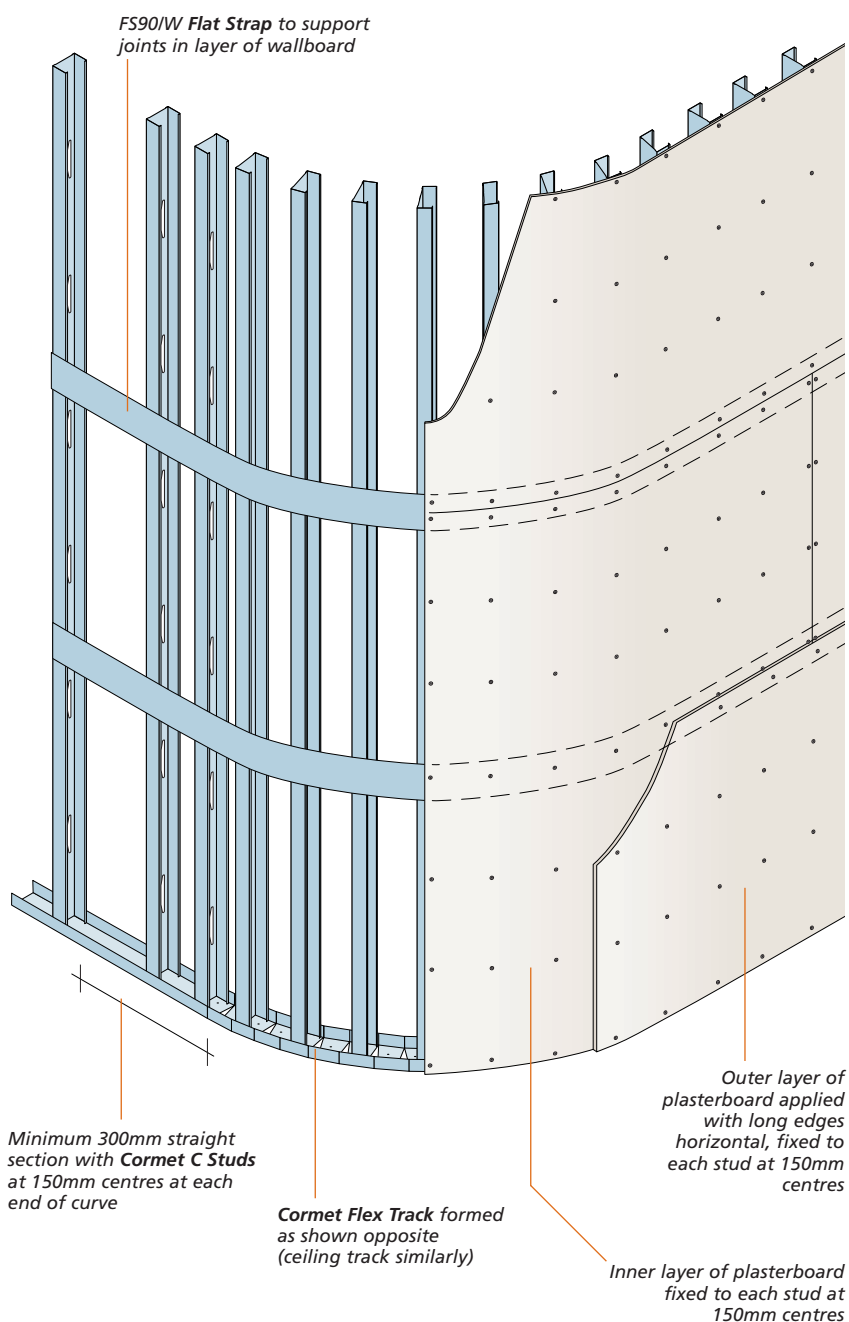
The versatility and strength of **Cormet C Studs** enables curved partitions to be easily constructed, to create flowing surfaces that offset flat wall areas.

To achieve smooth curves, studs are used at close centres, and the plasterboard is wetted before application with long edges horizontal.

Curving plasterboard

Most plasterboards can be curved when wetted. **Lafarge Contour** wallboard however can be curved to similar radii when dry by fixing the wallboard directly to the supporting frame. Curves of a tighter radius can be obtained by using Lafarge Contour wallboard in a wetted form. **Lafarge Contour** wallboard can be curved in either direction and to a minimum radius of 600mm. See table 3.21.

Curved partition



Board wetting

Thoroughly wet the side to be compressed of each plasterboard sheet using a brush or roller. Do not wet the opposite side. Allow the boards to stand for at least one hour before installation.

When bending to a tight radius ensure that the wetting process softens the core of the wallboard.

System assembly

Cormet Flex Track

Cormet Flex Track is designed to allow easy construction of curved walls, partitions and ceilings.

It is a galvanised 0.7mm metal angle used in place of standard metal angle or standard **Cormet U Track**. It is supplied pre-cut to allow a minimum radius of 600mm to be achieved.

Metal stud framing

Mark out the curves on the floor and ceiling. Curve width should be 2mm greater than the width of the **Cormet C Stud**.

Fix the Flex Track to the floor and ceiling at 300mm centres along both lines of the marked curve.

Insert **Cormet C Studs** into the track around the curve at centres shown in table 3.21. Where multiple board layers are installed, it may be necessary to insert extra studs at the board edges to account for the difference which arises between the inner and outer board radii.

Boarding

Start boarding at one end. Butt plasterboards firmly against the ceiling. Screw fix the first stud, fixing from the midpoint of the board, at 150mm centres, as illustrated. Refer to table 3.25 for recommended screw lengths. Carefully screw the board to the framing, stud by stud, pushing the board against the framing.

Ensure that the plasterboards are completely dry before jointing and making cut-outs for services.

On double layer boarding systems, the horizontal joint of the outer layer of wallboard may be supported by the use of FS50/R or FS90/W **Cormet Flat Strap** fixed between wallboard layers if required.

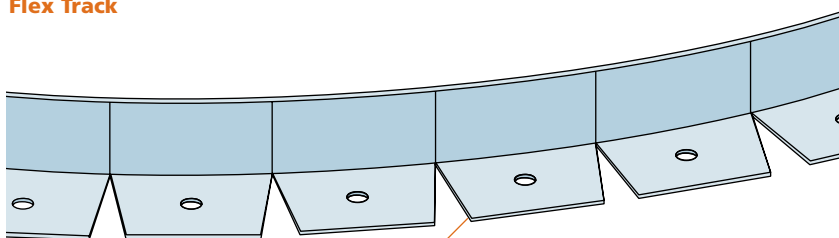
Table 3.21 Bending radii and stud centres

Radius (mm)	Stud centres (mm)			
	6mm Contour wallboard	9.5mm plasterboard	12.5mm plasterboard	15.0mm plasterboard
600 – 900	150w	–	–	–
900 – 1000	200d	150w	–	–
1000 – 1500	200d	200w	150w	–
1500 – 2000	200d	250w	200w	–
2000 – 2500	200d	300w	200w	150w
2500 – 3000	250d	350w	300w	200w
3000 – 4000	300d	450w	400w	200w
4000 +	300d	450w	500w	350w

w = wetted

d = dry

Flex Track



Pre-cut at 50mm centres to allow curves of minimum radius of 600mm

Table 3.22 Cormet Flex Track

Lafarge Code	Metal Thickness (mm)	Dimensions (mm)	Length (mm)
MFLEX	0.7	30 x 23	3000

Jointing

Stagger all joints between layers. All joints should be taped and filled in accordance with Lafarge Plasterboard's instructions. See Section 7.

PARTITIONS

SPECIALIST JUNCTIONS AND INSTALLATIONS

Fixtures

Fixing to Lafarge wallboards

Drywall constructions can accommodate most fixtures providing the appropriate fixings or fixing provisions are used.

Where the locations of fixtures are known before the construction is commenced, fixing provisions can be designed and installed into the construction.

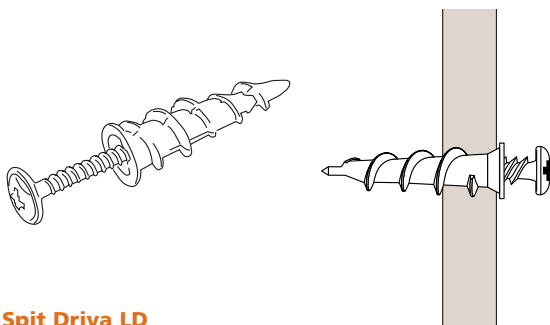
Alternatively, fixtures can be attached directly to the finished dry linings using the recommended fixings given in table 3.23.

For the medium and heavyweight fixings in table 3.23 it is very important that the plasterboard is carefully and accurately drilled and that all fixings are installed as per the manufacturer's instructions. Holes should never be punched. On the bigger fixtures, it is necessary to use a minimum of four fixings.

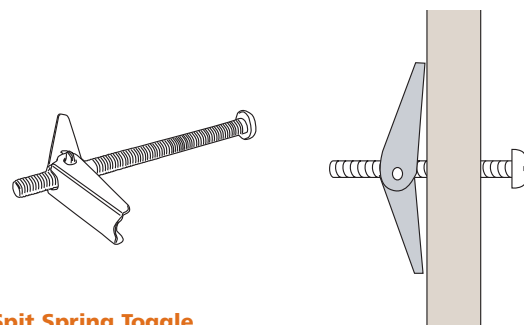
Table 3.23 Fixtures

Fixture load	Examples	Fixing provisions*	Notes
Very light	Small pictures	Picture hooks Wood screws	
Light	Mirrors Floor cupboards Light fittings Coat hooks	Spit Driva LD Spit Driva original Spit Driva Plus Fixing channel	See manufacturer's literature for Maximum loadings
Medium	Radiators Wall cupboards Water heaters Sanitary ware	Spit Spring Toggle Spit Hollow Anchor Spit Satelis Fixing Channel Timber battens Boxed studs Extra studs	See manufacturer's literature for Maximum loadings
Heavy	Wall mounted sanitary ware Large wall cupboards Heavy shelving	See diagrams on opposite page	

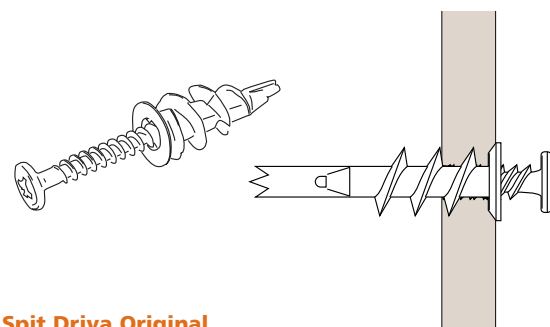
* See manufacturer's literature for maximum loadings



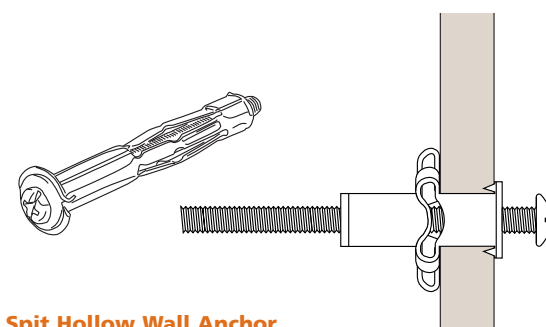
Spit Driva LD



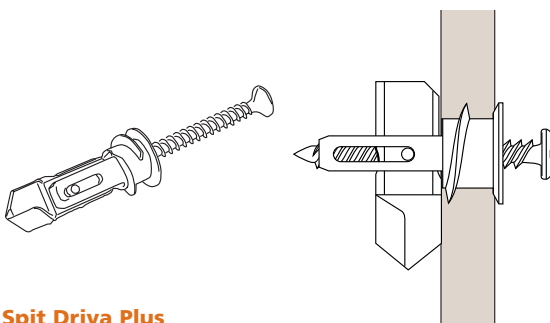
Spit Spring Toggle



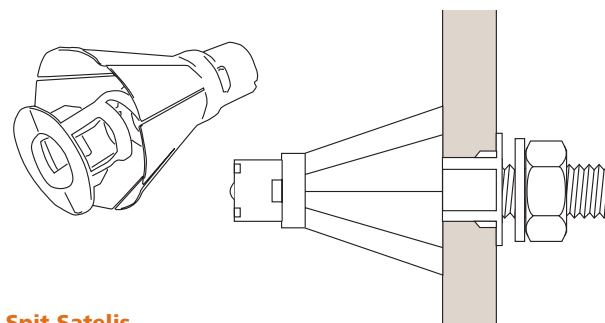
Spit Driva Original



Spit Hollow Wall Anchor

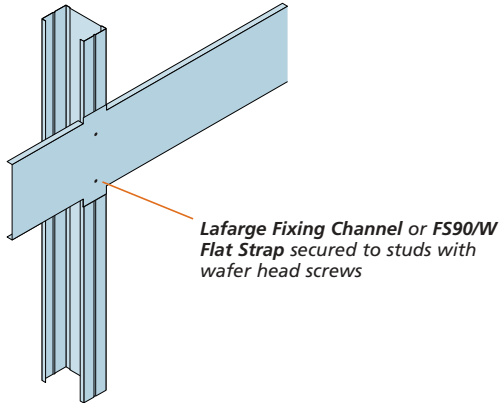


Spit Driva Plus

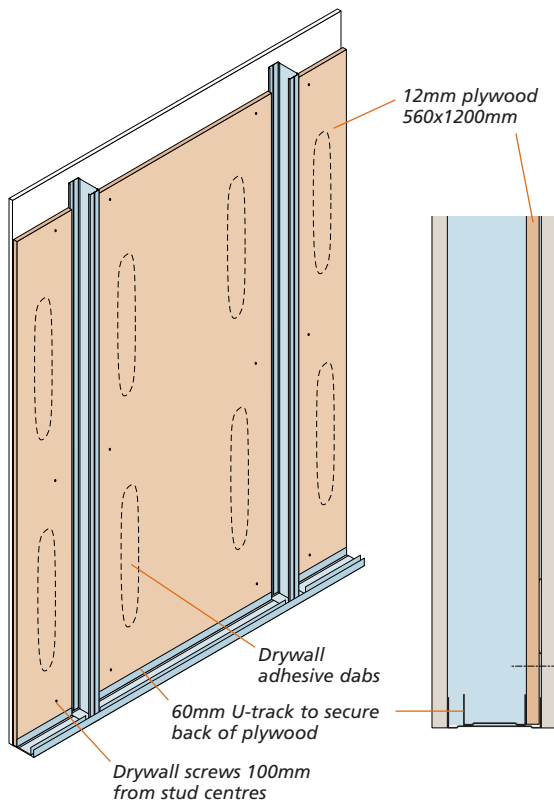


Spit Satelis

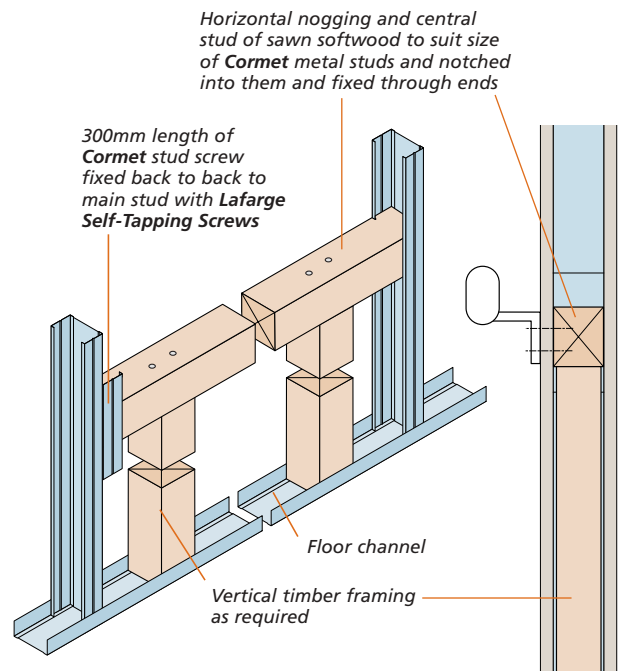
For medium weight items



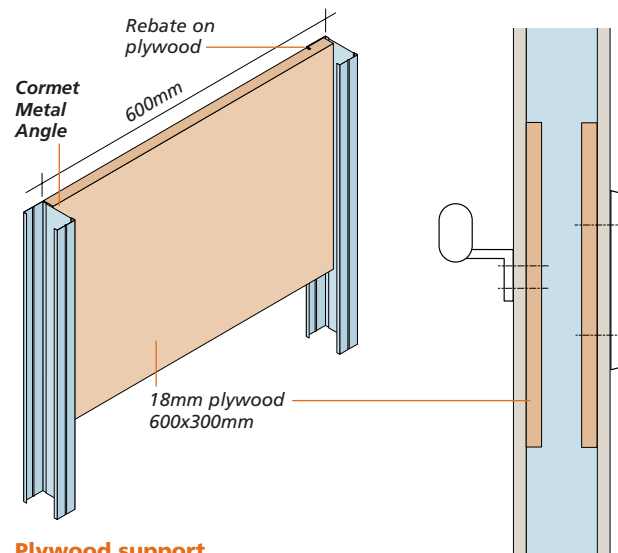
For heavy weight items



Plywood patress



Timber support



Plywood support

Tips on installation

Board fixing

For fixing to timber, use nails or screws as specified in tables 8.4 or 8.9. For fixing to metal, use screws as specified in table 8.5.

Lafarge Drywall Screws

Bugle head screws for fixing plasterboard to metal or timber studs. **Lafarge Drywall Screws** have a unique head design to eliminate paper burrs and provide a flush finish. Extra-sharp points and high-grip threads result in fast penetration through the plasterboard and stud. The screws are black phosphate coated and lightly oiled for protection against corrosion.

Lafarge Drywall High Thread Screws are used for attaching plasterboard to timber framework.

Lafarge Drywall Self Tapping Screws are for light gauge metal up to 0.7mm thick.

Lafarge Drywall Self Drilling Screws are for heavy gauge metal from 0.7mm to approximately 2.0mm thick.

Installation

Drive Screws:

- at least 10mm in from paper-bound edges of plasterboard
- at least 13mm in from cut edges of plasterboard
- at least 6mm in from edges of timber framing
- at least 3mm in from the edges of metal framing.

Screw spacing: Partitions, maximum 300mm. Ceilings, maximum 230mm in the field of the plasterboard, 150mm at cut edges and perimeter. Linings, maximum 300mm.

Table 8.4 Recommended screw lengths*

Construction	Plasterboard thickness (mm)	Screw length (mm)
Timber framing Single layer	6	32
	12.5	38
	15.0	38
	19.0	41
Timber framing Double layer	6 + 6	38
	12.5 + 12.5	51
	12.5 + 19.0	63
	15.0 + 15.0	63
Metal framing Single layer	6	25
	12.5	25
	15.0	32
	19.0	38
	25.0	41
Metal framing	6 + 6	25
	12.5 + 12.5	38
	15.0 + 15.0	44
	12.5 + 19.0	51
	25.0 + 12.5	57
	25.0 + 25.0	63

* Except for fixing to Cormet metal furring wall channels and Resilient Bar. See table 4.16 on page 184.

Drive screws squarely through board and into framing until screw head is just recessed. Spot screw heads with Lafarge jointing compound to provide a flush surface.

Lafarge Pan Head Screws and **Lafarge Wafer Head Screws** are used primarily for fixing **Cormet** metal studs and other **Cormet** metal framing components together: self-tapping for light gauge metal and self-drilling for heavy gauge metal.

Lafarge Toughcheck Screws are used for fixing **Lafarge Toughcheck** wallboard.

Lafarge Checkpoint Screws are used for fixing **Lafarge Moisturecheck**, **dBcheck** and **Firecheck** wallboards to 0.5mm light gauge **Cormet** metal studs.

Lafarge Drywall Nails

Zinc-coated ring shanked Drywall Nails with a thin wide head for maximum board holding without paper breakage. The long, sharp diamond point ensures ease of fixing. Complies with BS 8212: 1995 for fixing plasterboard to timber.

Installation

Drive nails:

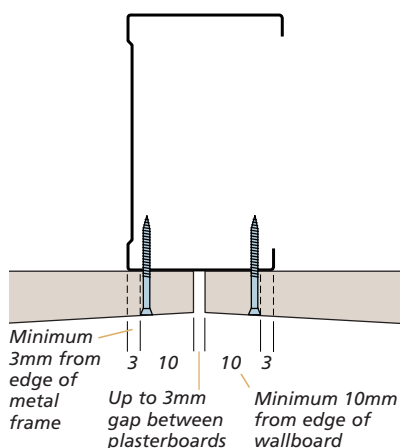
- at least 10mm in from paper-bound edges of plasterboard
- at least 13mm in from cut edges of plasterboard
- at least 6mm in from edges of timber framing.

Nail spacing: maximum 150mm (all systems).

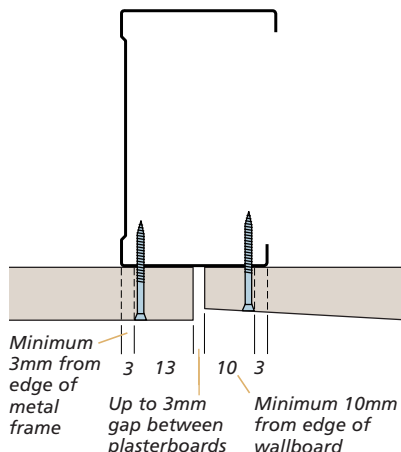
Drive nails squarely through plasterboard and into timber framing using a dimple head drywall hammer until the nail head is just recessed. Spot nail heads with Lafarge jointing compound to provide a flush surface.

Table 8.5 Recommended nail lengths for timber framing

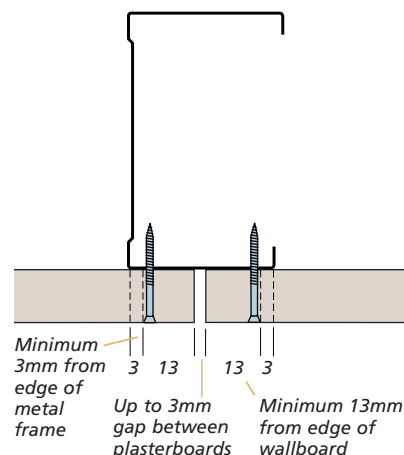
Construction	Plasterboard thickness (mm)	Nail Length (mm)
Single layer	12.5	40
	15.0	40
	19.0	50
Double layer	12.5 + 12.5	50
	12.5 + 19.0	65
	15.0 + 15.0	65



Fixing position at bound edges of boards



Fixing positions at bound edge/cut edge joint



Fixing positions at cut edges of boards

Tiling onto Lafarge Wallboard

Tiling

Tiling is suitable for a wide range of applications with varying conditions, ranging from domestic splashbacks to shower cubicles in public buildings.

Ceramic tiling should be applied to **Lafarge Standard** wallboard or **Lafarge Moisturecheck** wallboard depending on the severity of the conditions. **Lafarge Standard** wallboard may be used as the base for tiling in areas such as splashbacks behind kitchen sinks and wash hand basins. In other areas where there is likely to be more splashing of water on the surface, e.g. showers, it is preferable to use **Lafarge Moisturecheck** wallboard. If **Lafarge Standard** wallboard is used it should be treated on the face with two coats of **Lafarge Drywall Sealer**.

Where the tiling is to cover the entire drylined wall surface, square edge boards may be used. Where an area of the drylining will remain untiled, taper edge boards should be used so that flush joints can be formed in the exposed areas; in this case the concealed joints should be filled with a waterproof ceramic tile adhesive.

Care should be taken to ensure that the framing members and lining boards offer adequate support to prevent flexing, particularly for partitions which may be tiled on one side only. Tiled areas not extending down to the floor should be provided with horizontal supports at the base of the tiling.

Additional support requirements are given in table 3.26. Supports for baths, basins and other plumbing fixtures must be provided independently of the plasterboard.

It is essential that detailing at junctions, angles and perimeters is designed to prevent moisture penetration. Seal around pipes, baths, shower fittings, openings and outlets with a waterproof silicone sealant.

Recommendations in table 3.26 apply to the use of tiles up to 12.5mm thick with a maximum weight of 32 kg/m², fixed in accordance with BS 6431: Part 9, using a thin-bed adhesive (nominal thickness 3mm).**

Drylining systems using **Lafarge Bonding Compound** in their construction should be allowed 10 days to achieve their full strength before tiling.

Repairs

Minor damage to plasterboard may be repaired by filling with **Lafarge Fast Set** and sanding smooth. Areas of damage too large for filling should be repaired by one of the methods below.

Cut out a rectangular piece of the boarding around the damaged area using a fine-toothed keyhole saw. Bevel the edges of the hole inwards at 45° with a rasp or sanding block. Cut a piece of board to the same size as the hole and bevel the edges to an exact fit. Apply **Lafarge Fast Set** to the edges of the hole and fit the patch piece in place using

Lafarge Patching Tape; leave to set for 1 hour. Finish around the patch as described under Jointing above.

If necessary, bond a strip of plasterboard behind the hole to provide extra support before inserting the patch piece.

For larger repairs, cut a rectangular piece of plasterboard 50mm larger than the hole or damaged area. Place it over the hole and mark its position. Cut through the damaged board along the diagonals of the marked rectangle with a fine-toothed keyhole saw; then cut through the paper facing around the rectangle with a sharp knife, break away and remove the cut pieces of the board.

Cut two backing pieces of plasterboard and bond to the back of the boarding using **Lafarge Fast Set** on each side of the hole; allow to harden for 1 hour.

Apply **Lafarge Fast Set** to the backing pieces and fit the patch piece of plasterboard into the hole using **Lafarge Patching Tape**; leave to set for 1 hour. Finish around the patch as described under Jointing above.

3

Table 3.26 Plasterboard to receive ceramic tiling (BS 8212)

System		Board thickness (mm)	Support centres (mm)	Additional support	Maximum tiling height (m)
Drylining	Direct Bond	12.5	450*	Horizontal dabs at 1/3 centres in height	3.6
	Lafarge Dryliner	12.5	400	–	3.6
	Independent 70mm I Studs	2 x 12.5	400	Mid-point support	3.0
Partitions	Laminated	50, 63	–	None	2.4
		55, 70	–	None	2.6
	Timber	12.5	400 – 450	None	3.0
		12.5	600	Timber noggings at 600mm vertical centres	2.4
Cormet metal stud	50mm studs	2 x 12.5	400	None	3.6
	70mm studs	2 x 12.5	400	None	3.6
	146mm studs	2 x 12.5	600	Additional studs at 300mm centres up to tile height	

*Bonding compound dab row centres

**Full specification for ceramic tiling to plasterboard is available from the Tile Association, Forum Court, 83 Copers Road, Beckenham, Kent, BR3 1NR

PARTITIONS

WHAT CAN GO WRONG CHECKLIST

Partitions Checklist

Items to check

	Yes (✓)	No (✓)	Date completed
1. Has sealant been applied to the back of the steel U channels or timber framing before fixing to the wall floor and ceiling? <i>This sealant has the vital role of filling any gaps due to the undulations in the structure and thus preventing unwanted airpaths.</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="text"/>
2. Is the mineral wool the correct thickness and density? <i>Inadequate thickness and density will reduce the acoustic performance.</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="text"/>
3. Is the mineral wool quilt installed with no gaps at the joints and butted up tightly at the perimeter? <i>Gaps will allow the sound to travel right through rather than being partially absorbed as it passes through the mineral wool.</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="text"/>
4. Where Cormet Resilient Bars are used do the wallboard screws come into contact with the main studs? <i>To check this, the side of the partition with the Resilient Bar must be boarded out first, so a visual check can be made before the other side is boarded out.</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="text"/>
5. Are all joints in double boarded applications staggered? <i>Plan the board layout to avoid both layers of board having a vertical joint at the same stud.</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="text"/>
6. Is the gap at the base of the wallboard filled with Lafarge Acoustic Sealant? <i>If left unfilled this will be a weak point for the sound to pass through.</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="text"/>
7. Has the correct type of wallboard been used? <i>The wrong type of wallboard may adversely affect performance. Lafarge wallboards are colour coded to make it easier for the correct board to be identified.</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="text"/>
8. Have electrical sockets and other services been installed correctly? <i>Wallboard baffles must be built behind the electrical boxes to maintain the sound performance of the partition.</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="text"/>