

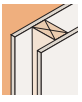
Timber stud partitions are frequently used in timber-frame houses, in small renovation projects and in home extensions where they may be load bearing or non-load bearing, depending on specification.

Plasterboard can be nailed directly to timber. Alternatively screw fixing, which offers superior performance, can be used.



3





Introduction

Lafarge Drywall Timber Stud Partitions

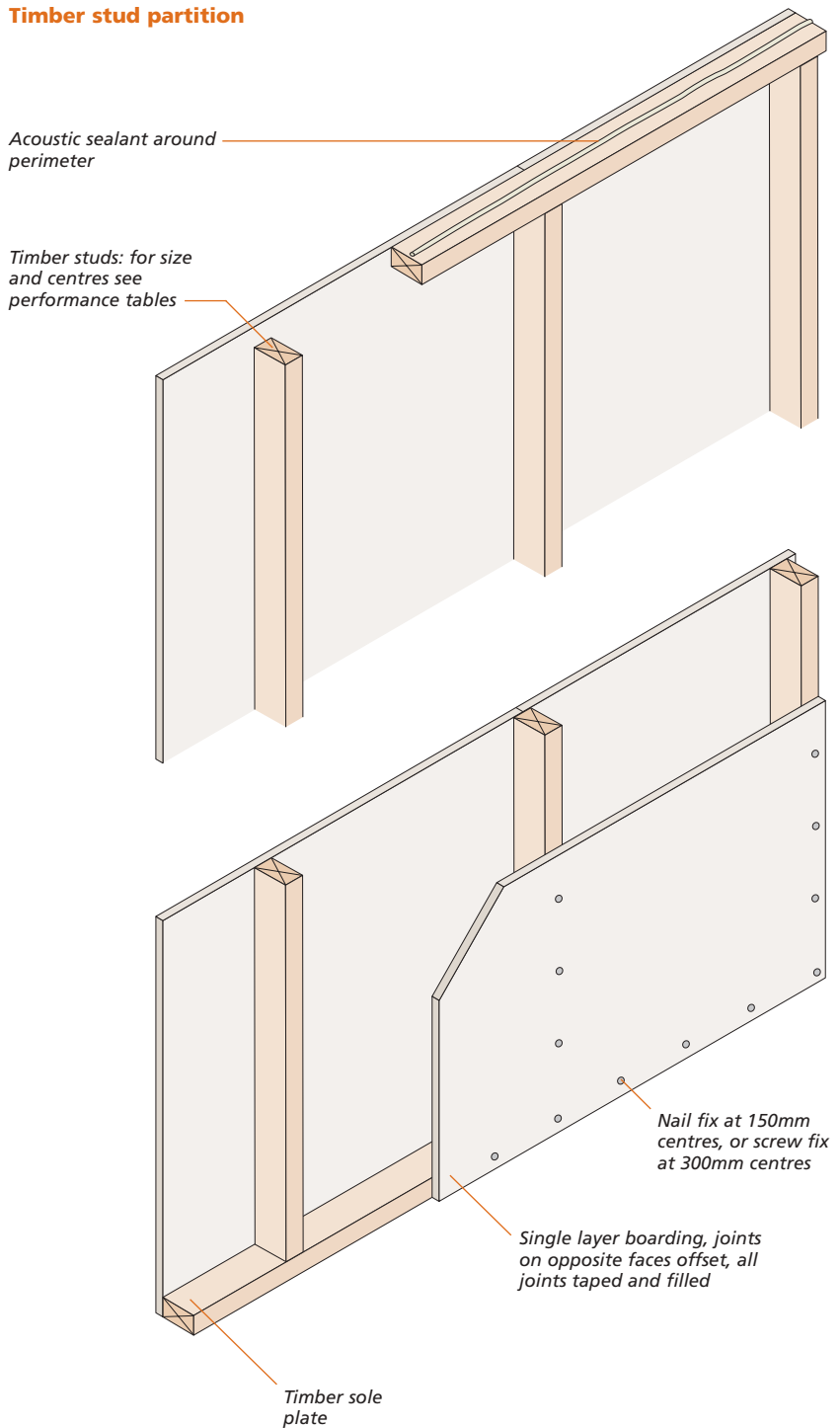
Timber stud partitions are suitable for limited heights, and typically for domestic use.

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 3.2 to 3.4.

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





Components

The components used in Lafarge Drywall Timber Stud partitions are listed in table 3.1.



Table 3.1 Timber stud components

Component	Dimensions	Lafarge code
Lafarge Intumescent	0.9 litres	ACOUSTIC
Acoustic Sealant	0.38 litres	ACO38
Lafarge Drywall High	32-63mm	32DHT25, 38DHT25
Thread Screws		41DHT25, 51DHT25 63DHT25
Resilient Bar	3000mm	RB3000
Drywall Nail	30-65mm	various

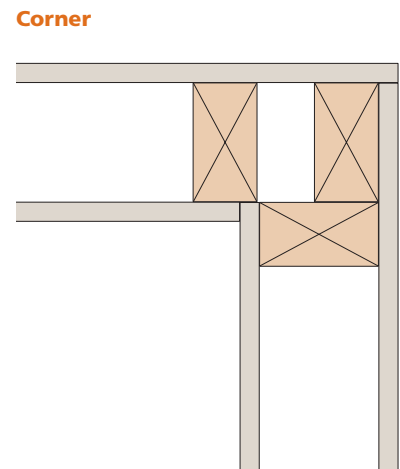
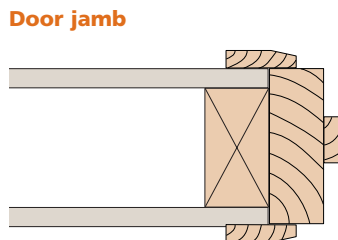
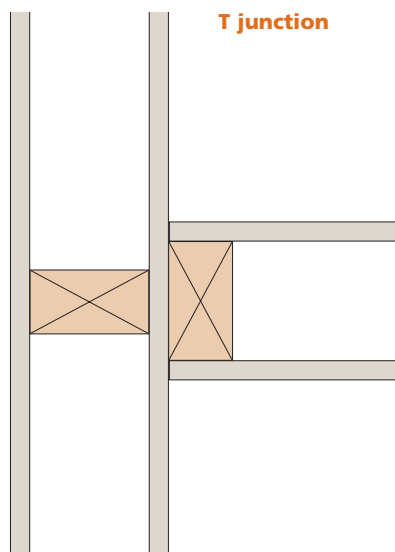
System assembly

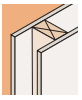
All framing must be straight, plumb and true, and provide a firm support for the plasterboards. Timber studs should be installed at maximum 400mm centres for 9.5mm plasterboard, and at maximum 600mm centres for 12.5mm and 15mm plasterboard. Framing should be arranged so as to avoid plasterboard widths 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 Nails at 150mm centres or Lafarge Drywall High Thread Screws at 300mm centres.

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

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





Application details

Cormet Resilient Bar

Where the 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.

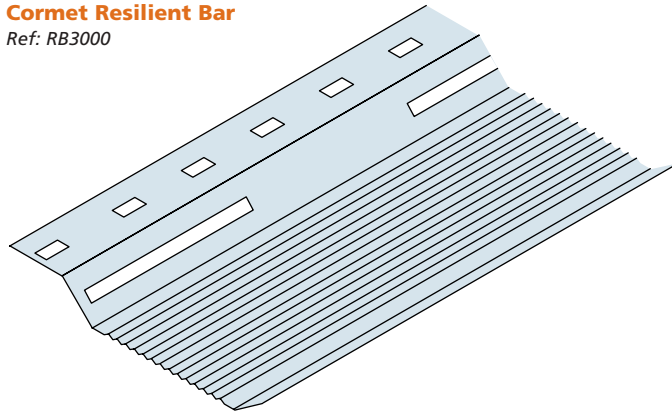
For double layers of 12.5mm plasterboard and thicker plasterboard, fix Cormet Resilient Bar at 600mm centres horizontally.

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

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

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

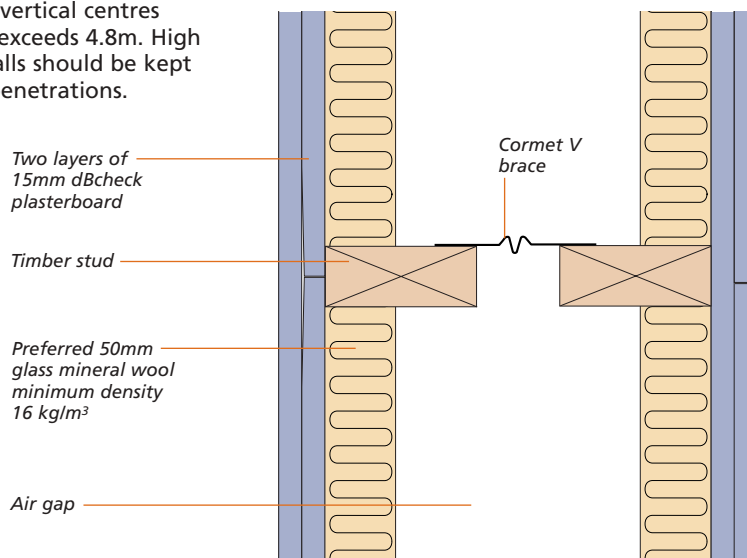
Cormet Resilient Bar
Ref: RB3000



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 Cormet V-brace secures the two frames at mid height, or at maximum 3.0m vertical centres where the wall exceeds 4.8m. High performance walls should be kept free of service penetrations.

Timber frame high performance wall



Partitions: Timber Stud

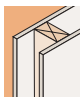
Table 3.2 Lafarge Drywall timber stud partitions, loadbearing

System reference	Specification	Weight (kg/m ²)	Maximum height (m)	Normal thickness (mm)	Fire resistance (minutes)	Sound insulation (R _v dB)	BS 5234 Grade
RTP 01	<p>Studs: 44 x 75mm at 600mm centres</p> <p>Facings: one layer 12.5mm Lafarge Echeck wallboard both sides</p>	21	3.0	100	30	35	Medium
RTP 03	<p>As RTP 01 with 25mm glass mineral wool insulation density 19.5 kg/m³</p>	22	3.0	100	30	40	Medium
RTP 07	<p>Studs: 44 x 75mm at 600mm centres</p> <p>Facings: one layer 12.5mm Lafarge Echeck wallboard one side, other side one layer 12.5mm Lafarge Echeck wallboard fixed to Resilient Bar at 400mm vertical centres</p> <p>Insulation: 25mm glass mineral wool density 19.5 kg/m³</p>	23	3.0	112	30	44	Medium
RTP 02	<p>Studs: 44 x 75mm at 600mm centres</p> <p>Facings: two layers 12.5mm Lafarge Echeck wallboard to both sides</p>	39	3.0	125	60	43	Severe
RTP 04	<p>As RTP 02 with 25mm glass mineral wool insulation density 19.5 kg/m³</p>	40	3.0	125	60	46	Severe
RTP 05	<p>Studs: 38 x 89mm at 600mm centres</p> <p>Facings: one layer 12.5mm Lafarge Echeck to both sides</p>	21	2.7	114	30	37	Medium

(continued next page)

Rock mineral wool density 33kg/m³ may be used in lieu of glass mineral wool as specified.

At the time of publication the exact implications on board weights resulting from changes to Building Regulations Approved Document E for England and Wales are not clear. For this reason systems in this manual that may be specified in dwellings have been illustrated with Lafarge Echeck Wallboard. Echeck Wallboard has a board weight that meets the requirements of the approved document sections 1 and 2. If in doubt contact Technical Enquiryline.



Performance tables

Table 3.2 Lafarge Drywall timber stud partitions, loadbearing (continued)

System reference	Specification	Weight (kg/m ²)	Maximum height (m)	Normal thickness (mm)	Fire resistance (minutes)	Sound insulation (R _v dB) BS 5234 Grade
RTP 50	<p>Studs: 38 x 89mm at 600mm centres</p> <p>Facings: one layer 12.5mm Lafarge dBcheck wallboard both sides</p>	29	3.0	114	30	38 Medium
RTP 08	<p>Studs: 38 x 89mm at centres</p> <p>Facings: one layer 12.5mm Lafarge Echeck wallboard one side, other side one layer 12.5mm Lafarge Echeck wallboard fixed to Resilient Bar at 400mm vertical centres</p> <p>Insulation: 25mm glass mineral wool density 19.5 kg/m³</p>	23	2.7	126	30	45 Medium
RTP 09	<p>Studs: 50 x 100mm at 600mm centres</p> <p>Facings: one layer 15mm Lafarge Standard wallboard or Predeco wallboard one side, other side one layer 15mm Lafarge Standard wallboard or Predeco wallboard fixed to Resilient Bar at 400mm vertical centres</p> <p>Insulation: 25mm glass mineral wool density 19.5 kg/m³</p>	28	3.0	130	30	47 Heavy
RTP 06	<p>Studs: 50 x 100mm at 600mm centres</p> <p>Facings: one layer 15mm Lafarge Firecheck wallboard or Megadeco wallboard both sides</p>	22	3.8	130	60	38 Heavy
RTP 51	<p>Studs: 50 x 100mm at 600mm centres</p> <p>Facings: one layer 15mm Lafarge dBcheck wallboard both sides</p>	33	3.8	130	60	40 Heavy
RTP 52	<p>Studs: 50 x 100mm at 600mm centres</p> <p>Facings: two layers 15mm Lafarge dBcheck wallboard one side, other side two layers 15mm Lafarge dBcheck wallboard fixed to Resilient Bar at 600mm vertical centres</p> <p>Insulation: 25mm glass mineral wool density 19.5 kg/m³</p>	55	3.6	171	60	59 Severe

Rock mineral wool density 33kg/m³ may be used in lieu of glass mineral wool as specified.

At the time of publication the exact implications on board weights resulting from changes to Building Regulations Approved Document E for England and Wales are not clear. For this reason systems in this manual that may be specified in dwellings have been illustrated with Lafarge Echeck Wallboard. Echeck Wallboard has a board weight that meets the requirements of the approved document sections 1 and 2. If in doubt contact Technical Enquiryline.

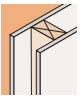
Partitions: Timber Stud

Table 3.3 Lafarge Drywall timber stud partitions, non-loadbearing

System reference	Specification	Weight (kg/m ²)	Maximum height (m)	Normal thickness (mm)	Fire resistance (minutes)	Sound insulation (R _v dB)	BS 5234 Grade
RTP 53	<p>Studs: 38 x 75mm at 600mm centres</p> <p>Facings: one layer 12.5mm Lafarge dBcheck wallboard both sides</p>	25	3.0	100	30	38	Medium
RTP 27	<p>Studs: 38 x 75mm at 600mm centres</p> <p>Facings: one layer 12.5mm Lafarge Echeck wallboard one side, other side one layer 12.5mm Lafarge Echeck wallboard fixed to Resilient Bar at 400mm vertical centres</p> <p>Insulation: 25mm glass mineral wool density 19.5 kg/m³</p>	22	3.0	112	30	46	Medium
RTP 30	<p>Studs: 50 x 75mm at 600mm centres</p> <p>Facings: one layer 15mm Lafarge Standard wallboard or Predeco wallboard both sides</p>	25	3.0	105	30	37	Heavy
RTP 28	<p>Studs: 50 x 75mm at 600mm centres</p> <p>Facings: one layer 12.5mm Lafarge Firecheck wallboard or Megadeco wallboard both sides secured with 50mm Drywall Nails at 150mm centres</p>	21	2.4	100	60	36	Medium
RTP 22	<p>Studs: 38 x 75mm at 600mm centres</p> <p>Facings: two layers 12.5mm Lafarge Echeck wallboard both sides</p> <p>Insulation: 25mm glass mineral wool density 19.5 kg/m³</p>	38	3.0	125	60	46	Severe
RTP 29	<p>Studs: 38 x 75mm at 600mm centres</p> <p>Facings: inner layer 15mm Lafarge Firecheck wallboard, outer layer 15mm Lafarge Firecheck wallboard or Megadeco wallboard both sides</p>	50	3.0	135	120	46	Severe

Rock mineral wool density 33kg/m³ may be used in lieu of glass mineral wool as specified.

At the time of publication the exact implications on board weights resulting from changes to Building Regulations Approved Document E for England and Wales are not clear. For this reason systems in this manual that may be specified in dwellings have been illustrated with Lafarge Echeck Wallboard. Echeck Wallboard has a board weight that meets the requirements of the approved document sections 1 and 2. If in doubt contact Technical Enquiryline.



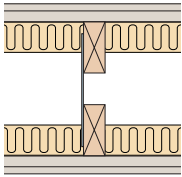
Performance tables

Partitions: Timber Stud

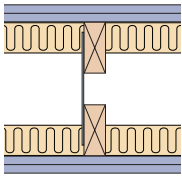
Table 3.4 Lafarge Drywall timber stud high performance, loadbearing

System reference

RFL 11



RFL 50



Specification

Studs: pairs of studs 90 x 38mm at 600mm centres forming two separate frames set 50mm apart, braced at mid-height

Facings: both sides: inner layer 19mm Lafarge Plank with long edges horizontal, outer layer 12.5mm Lafarge Echeck wallboard

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

Studs: pairs of studs 90 x 38mm at 600mm centres forming two separate frames set 50mm apart, braced at mid-height

Facings: both sides 15mm Lafarge dBcheck wallboard with long edges horizontal

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

Weight (kg/m ²)	Maximum height (m)	Normal thickness (mm)	Fire resistance (minutes)	Sound insulation (R _v dB)	
52	3.6	293	60	65	Severe
69	3.6	293	60	66	Severe

Rock mineral wool density 33kg/m³ may be used in lieu of glass mineral wool as specified.

At the time of publication the exact implications on board weights resulting from changes to Building Regulations Approved Document E for England and Wales are not clear. For this reason systems in this manual that may be specified in dwellings have been illustrated with Lafarge Echeck Wallboard. Echeck Wallboard has a board weight that meets the requirements of the approved document sections 1 and 2. If in doubt contact Technical Enquiryline.

Lafarge Timber Stud Partitions

Scope

Internal walls and partitions constructed using softwood framings lined with Lafarge plasterboards.

Exclusions

This specification does not cover external wall linings or sheathed timber framing systems.

Additional clauses

Add general clauses if required for:

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

See Section 8.

Key

- Recommended**
Apply this clause in all situations.
 - Either/or**
Apply either this clause or the other depending on requirement/preference.
 - If required**
Apply this clause only if required.
- * Choice of product.

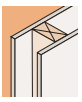
Lafarge Plasterboard recommend the use of detailed specification clauses as shown.

Selection of the appropriate system and subsequent specification clause is made easier by the use of Lafarge SELECT 2 at www.lafargeplasterboard.co.uk.

Alternatively, Lafarge Timber Stud Partitions can be incorporated into the N.B.S.(National Building Specification) work schedule K31 Plasterboard fixed partitions/inner walls/linings. See www.lafargeplasterboard.co.uk/nbssearch/index.asp

For further details please contact our Technical Enquiryline 01275 377789.

<p><input checked="" type="checkbox"/> Lafarge Timber Stud Partition system reference</p> <p>RTP See tables 3.2 to 3.4</p> <p>Partition nominal thickness mm</p> <p>Partition height mm</p> <p><input checked="" type="checkbox"/> Location See tables 3.2 to 3.4</p> <p><input checked="" type="checkbox"/> Framing</p> <p>Timber shall be of the appropriate grades and sizes to support the imposed loads in accordance with BS 5268: Part 2 and BS 4978. The moisture content of the timber shall be no greater than 21% and falling at time of installing partitions.</p> <p><input checked="" type="checkbox"/> Studs</p> <p>Timber studs shall be.....mm x.....mm spaced at.....mm centres in accordance with dimensional standards in BS 8212: 1995</p> <p><input type="checkbox"/> Insulation</p> <p>Type By.....</p> <p>Thickness mm Density..... kg/m³</p> <p>Insulation Hold</p> <p>Cormet Insulation Hold Strip to be screw fixed horizontally 150mm down from head and at subsequent 1200mm vertical centres.</p> <p><input type="checkbox"/> Acoustic Sealant</p> <p>Apply a 6mm continuous bead of Lafarge Intumescent Acoustic Sealant around the perimeter of the framing.</p> <p>Boarding</p> <p><input checked="" type="checkbox"/> Facings: One/*two layer Lafarge wallboard to BS 1230: Part 1: 1985</p> <p>Thickness mm each side of framework.</p> <p><input type="checkbox"/> Facings: Cormet Resilient Bar RB3000 fixed horizontally to faces of studs at mm vertical centres.</p> <p>Fixings</p> <p><input checked="" type="radio"/> Nail fixing</p> <p>Lafarge Drywall Nails to BS 8212: 1995 at 150mm centres</p> <p>Length mm for the first layer</p> <p>Length mm for the second layer.</p> <p><input checked="" type="radio"/> Screw fixing</p> <p>Lafarge Drywall Screws at 300mm centres, type Drywall High Thread</p> <p>Length mm for the first layer</p> <p>Length mm for the second layer.</p> <p><input type="checkbox"/> Screw fixing to Resilient Bars</p> <p>Lafarge Drywall Screws at 300mm centres, type Drywall Self Tapping</p> <p>Length mm for first layer</p> <p>Length mm for second layer</p> <p>Finishing</p> <p><input checked="" type="radio"/> Lafarge Taping and Jointing System</p> <p><input checked="" type="radio"/> Lafarge Supreme Skim Plaster</p> <p><input checked="" type="checkbox"/> Finished partition tolerances</p> <p>Finished system to comply with tolerances in BS 8212: 1995 section 3.3.</p> <p><input checked="" type="checkbox"/> Materials and Installation</p> <p>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.</p>	<p><i>See tables 3.2 to 3.4</i></p> <p><i>See tables 3.2 to 3.4</i></p> <p><i>See tables 3.2 to 3.4</i></p> <p><i>Required to meet the sound insulation values as shown in tables 3.2 to 3.4</i></p> <p><i>Repeat clause if two types of board</i></p> <p><i>For systems RTP07, RTP08, RTP09, RTP27, RTP17.</i></p> <p><i>See Section 8 for screw lengths</i></p> <p><i>See Section 8 for screw lengths</i></p> <p><i>For system RTP07, RTP08, RTP09, RTP27, RTP10.</i></p> <p><i>See Section 7 for full specification.</i></p> <p><i>Alternatively specify your own values for setting out the finished surface.</i></p>
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Installation

1. Install timber sole plate and framing members to end walls and ceiling. Ensure all framing is straight, plumb and true, and will provide a firm support for the plasterboards.
2. Fix intermediate vertical studs to timber floor and ceiling plates at maximum 400mm centres for 9.5mm plasterboard, and at 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, junctions and corners. All framing should provide a minimum bearing width for the plasterboard of not less than 38mm.
Note: For all 900mm wide plasterboards, stud centres should be at 450mm.
3. Cut plasterboard 5mm to 8mm shorter than the floor-to-ceiling height, butt firmly against the ceiling and fix with Lafarge Drywall Nails at 150mm centres or Drywall High Thread Screws at 300mm centres. Butt plasterboards lightly against each other, centring joints over the studs. With double layer boarding, the vertical joints should be staggered between layers.

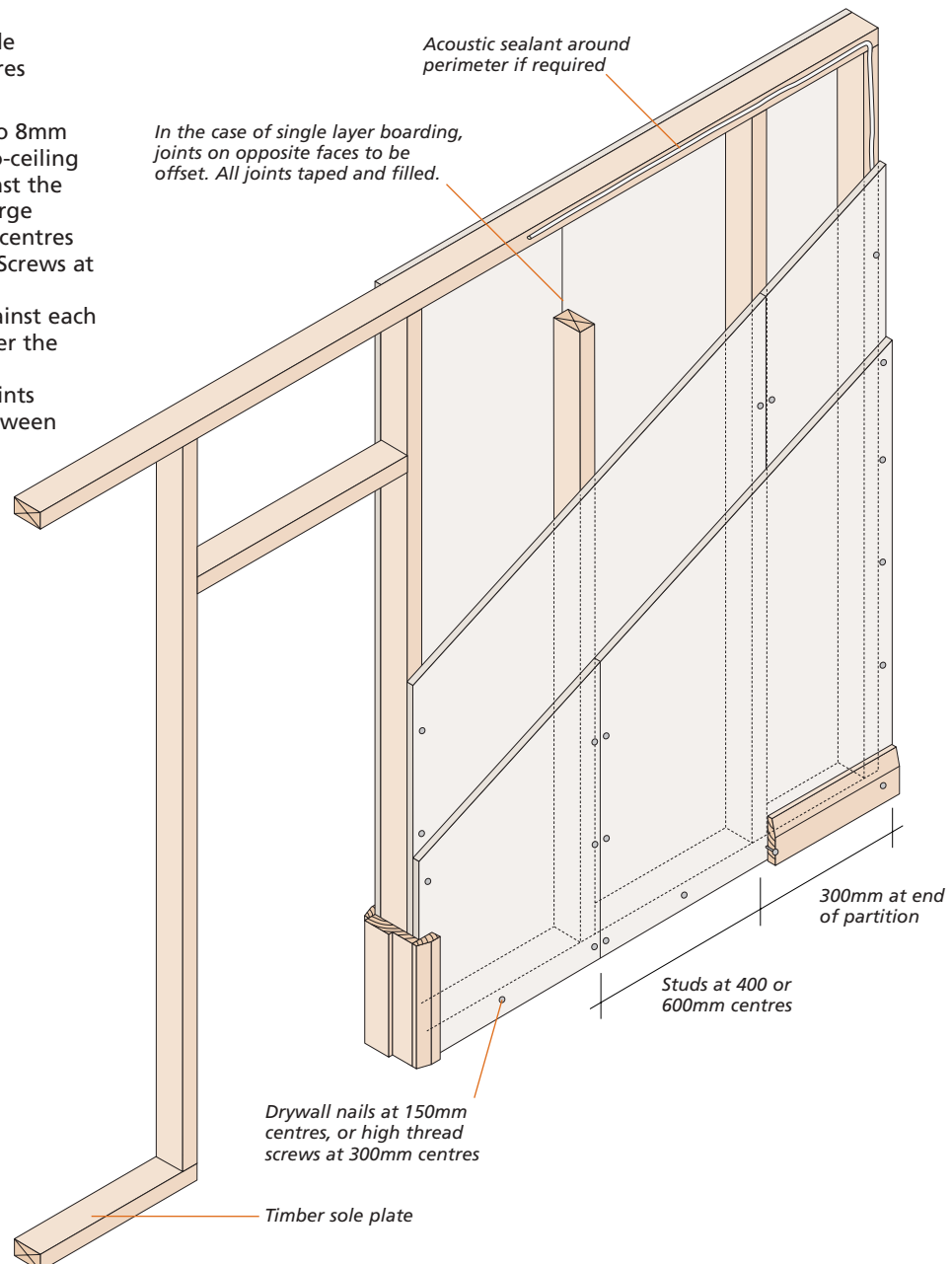
Sound insulation

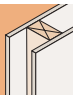
Where sound insulation is required, apply a 6mm bead of Lafarge Intumescent Acoustic Sealant around the perimeter of the framing before applying the plasterboards. Where the Resilient Bar is to be fixed across timber studs to further improve sound insulation the following centres apply.

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

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

Fix initial Resilient Bar 50mm down from ceiling, last Resilient Bar 50mm from floor. Screw fix the Resilient Bars to the timber supports using 32mm Drywall High Thread Screws. Screw fix the plasterboard to the Resilient Bar only, ensuring the screw does not touch the timber substrate.





High performance party walls

High performance walls are constructed from two independent timber frames with a cavity between.

1. Apply 50mm glass mineral wool insulation to the inner face of both frames.
2. Apply two layers of 15mm Lafarge dBcheck wallboard with long edges horizontal and staggered joints.

High performance walls should be kept free of service penetrations.

The use of Cormet Resilient Bars fixed horizontally will give improved sound insulation.

