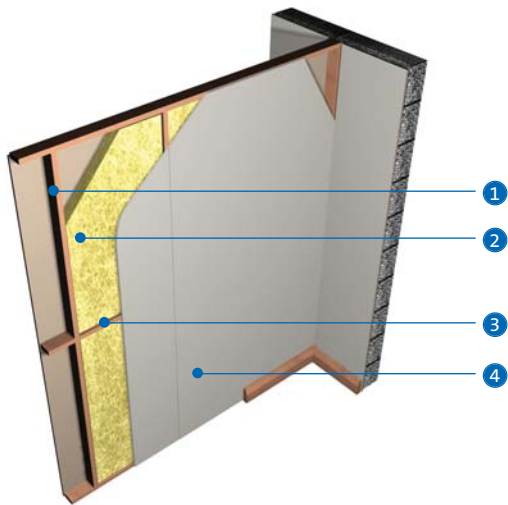


# Timber stud

## Traditional stud partitions and walls with single or twin frames

The 'traditional' form of plasterboard partition often used in residential applications, both in new-build and refurbishment. Timber stud separating or compartment walls are specified as fire and sound resisting walls in residential units such as flats and apartments to meet the requirements of national Building Regulations.





- 1 Timber studs
- 2 Insulation
- 3 Horizontal noggings
- 4 Gyproc plasterboard lining

### Key facts

- Twin frame and Gypframe RB1 Resilient Bar constructions to meet sound resisting separating wall requirements
- Can achieve high levels of sound insulation up to 63Rw dB (twin frame partition)
- Can achieve up to 120 minutes fire resistance

## Components

### Gyproc and Glasroc board products



#### Gyproc WallBoard<sup>1,2</sup>

Thickness	12.5, 15mm
Width	1200mm



#### Gyproc SoundBloc

Thickness	12.5, 15mm
Width	1200mm



#### Gyproc Plank

Thickness	19mm
Width	600mm



#### Gyproc FireLine<sup>2</sup>

Thickness	12.5 <sup>1</sup> , 15mm
Width	900, 1200mm



#### Glasroc MultiBoard

Thickness	6, 10, 12.5mm
Width	1200mm

<sup>1</sup> Moisture resistant boards should be specified in intermittent wet use areas e.g. shower areas, bathrooms and kitchens

### Framing



#### Timber studs (by others)

Depth (min)	75, 89, 100mm
Width	as required



#### Gypframe RB1 Resilient Bar

For improved acoustic performance.	
Length	3000mm



#### Timber battens (by others)

<sup>2</sup> Also available in DUPLEX grades where vapour control is required.

### Fixing and finishing products

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#### **Gyproc Drywall Timber Screws**

For fixing boards to normal softwoods, super-dried timber and engineered 'T' beams.



#### **Gyproc Drywall Screws**

For fixing boards to Gyproframe RB1 Resilient Bars, and Gyproframe RB1 Resilient Bars to softwood timber framing.



#### **Gyproc Sealant**

Sealing airpaths for optimum sound insulation.



#### **Gyproc edge beads**

Protecting and enhancing board edges and corners.

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### Fixing and finishing products

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#### **Gyproc Skimcoat, Gyproc Carlite Finish or Gyproc Board Finish**

Providing a plaster finish.



#### **Gyproc jointing materials**

For seamless jointing.



#### **Moy Acoustic Roll**

For enhanced acoustic performance.

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## Construction tips

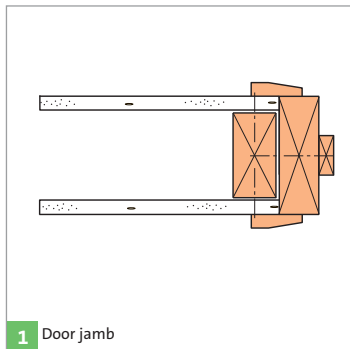
- To minimise the risk of cracking at plasterboard joints, use seasoned timber with a moisture content not exceeding that recommended in *BS 5268: Part 2: 1991*. Even timber complying with the moisture content of *BS 5268* may shrink and twist as it dries, thus nail-popping may still occur
- To minimise the risk of fixing defects occurring, use Gyproc Drywall Timber Screws for fixing into standard softwood, and super-dried timber (approx. 12% moisture content). Fix boards tight to accurately spaced, aligned and levelled framing
- Select the right length of fixing (nominal entry into timber of 25mm, nominal entry into Gypframe RB1 Resilient Bar metal of 10mm)
- Ensure that the dimensions of timber supports are sufficient to allow positive fixing of plasterboards. Bearing surface of existing framing can be increased by fixing timber battens
- Install cavity barriers where specified
- Consider a damp proof membrane on new concrete or screeded floors
- Additional framing will be required to support heavyweight items (e.g. sanitary ware). Ducts and dampers will generally require independent support from the structure

## Construction tips (cont'd)

- Consider fixing Gypframe RB1 Resilient Bars to partially isolate linings from timber framing to provide improved acoustic performance
- Use full height boards wherever possible
- Support single layer horizontal board joints with timber nogging
- Install control joints where specified
- Consider skirting fixing - mechanical or using Gyproc Sealant
- For further construction advice, please approach a timber frame association, such as the Irish Timber Frame Manufacturers' Association or the UK Timber Frame Association.

## Installation

- Determine and mark the wall position and make allowance for openings.
- Fix timber of the required dimensions to the perimeter, abutments and to frame any openings, using appropriate fixings.
- Fix timber studs at appropriate centres.
- Install additional framing as required to support medium to heavy fixtures.
- Install noggings (e.g. mid-height) as required.
- Stagger noggings to allow fixing from back of studs.



1 Door jamb

- Form door openings by fixing full height studs to each side, together with a timber head piece. Door casings can then be fixed to these timbers.
  - Apply Gyproc Sealant to frame perimeters to provide optimum acoustic performance.
  - Install services (by appropriate trades), normally after one side is boarded.
- NB** Drills / hole saws are required to form service holes in timber studs.

- Fix timber noggings to support recessed switch boxes / socket outlets. Back service outlets with 30mm stone mineral wool (80 kg/m<sup>3</sup>) to maintain fire integrity, where required.



### Board fixing - single layer

- Fix boards to timber supports using Gyproc Drywall Timber Screws or Gyproc Nails. The former provide a superior fixing and minimises any risk of fixing defects occurring.
  - Install screws at 300mm maximum centres (200mm maximum centres at external angles).
  - Install nails at 150mm maximum centres.
- NB** Select the appropriate length of fixing to provide a nominal 25mm penetration into the timber.

- Lightly butt boards, inserting fixings not closer than 10mm from bound edges and 13mm from cut edges.
- Where door openings occur, cut boards around the openings to avoid a joint directly in line with door jambs.
- Stagger board joints relative to the opposite side.

#### **Board fixing - multi-layer**

- Mark the position of studs prior to installing first layer boards.
- After first layer boards have been installed, transfer these dimensions to the lining and mark lines to indicate the position of timber supports. Under layer boards do not require centre stud fixings.
- Install second layer boards with edges/ends against the centre line of supports with all joints staggered in

relation to the first layer. Fix boards to all supports using Gyproc Drywall Timber Screws (preferred).

- Where Gyproc Plank is specified as the base layer, install horizontally and fix to each stud position with a maximum of two fixings per stud. Half stagger end joints in alternate courses.



- If supports are at closer centres trim the board as appropriate.
- Noggings are required to support horizontal joints.
- Provide support for board ends and edges at the perimeter.
- Stagger horizontal joints and tape all joints when the board is finished.

#### **Twin frameworks**

- Where a twin framework is specified, install the second framework as the first and position so as to achieve the required overall wall thickness.
- Board fixing - follow the instructions in '**Board fixing - single layer or multi layer**' as appropriate.

#### **Acoustic detailing**

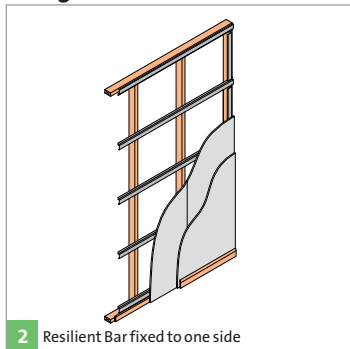
- Install Moy insulation progressively as boarding proceeds.
- **NB** Seal any gaps at the base of linings with Gyproc Sealant (in conjunction with Gyproc Joint Filler) where the partition is required to meet its optimum acoustic performance (see **junction detail 5** later).

## Installation - Gypframe RB1 Resilient Bar fixing



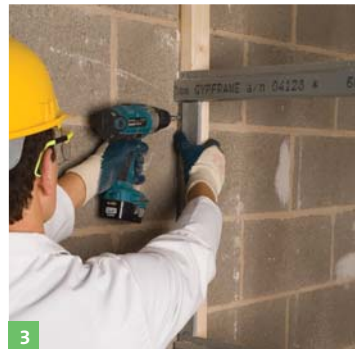
### Installation - Gypframe RB1 Resilient Bar fixing

- Gypframe RB1 Resilient Bars are fixed horizontally to the timber studs, to one or both sides as specified, at 600mm centres with 36mm Gyproc Drywall Screws.
- Resilient bars are joined by nesting them together over a stud.



2 Resilient Bar fixed to one side

- The resilient bars are normally fixed with the base of the flange on the top side, except on the uppermost resilient bar which is fixed base flange down to provide board fixing at the partition head.
- Timber packers (16mm thick) should be used at the base to facilitate skirting fixing.



- Install Gypframe RB1 Resilient Bar noggings where required to support the lining at corners, openings and abutments.



#### Board fixing onto Gypframe RB1 Resilient Bar

- Install boards vertically, fixing at 300mm centres along each Gypframe RB1 Resilient Bar using Gyproc Drywall Screws. Select the fixing to give a minimum 10mm penetration into the metal.
- Lightly butt boards, inserting fixings not closer than 10mm from bound edges and 13mm from cut edges. Stagger board joints relative to the opposite side.
- At abutments and openings, insert screw fixings into Gypframe RB1 Resilient

Bar noggings at 300mm centres. At external corners, fixing centres are reduced to 200mm centres.

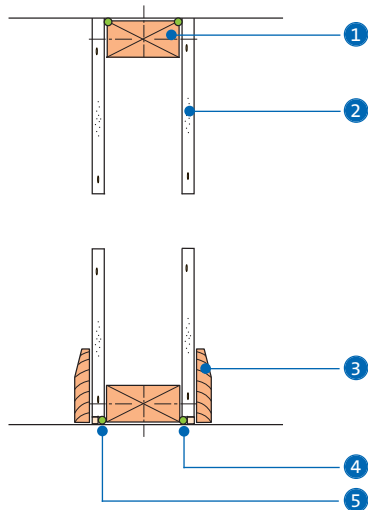
- For double layer linings mark the position of bars prior to installing first layer board. After first layer boards have been installed, transfer these dimensions to the lining and mark lines to indicate the position of bars.
- Fix second layer board to Gypframe RB1 Resilient Bar as for first layer. Stagger board joints.

**NB** Ensure that board fixings into Gypframe RB1 Resilient Bar clear the timber stud position otherwise acoustic isolation will be impaired.

**Table 1 - Fixing plasterboard - Maximum recommended stud centres**

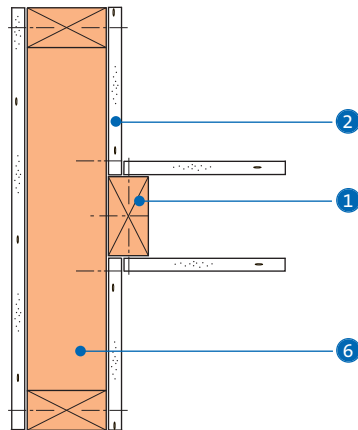
<b>Board type</b>	<b>Thickness mm</b>	<b>Width mm</b>	<b>Recommended stud centres mm</b>
Gyproc WallBoard	12.5	900	450
		1200	600
	15	900	450
		1200	600
Gyproc FireLine	12.5	900	450
		1200	600
	15	900	450
		1200	600
Gyproc Plank	19	600	600
Gyproc SoundBloc	12.5	1200	600
	15	1200	600
Glasroc MultiBoard	6	1200	400
	10	1200	600
	12.5	1200	600

## Junction details



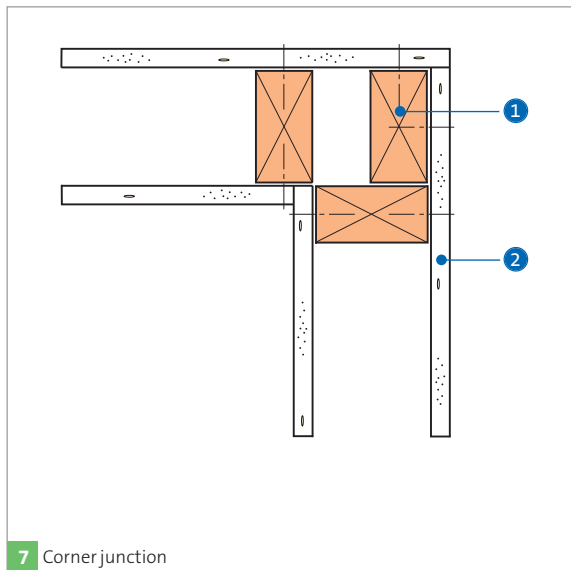
5 Head and base

- 1 Timber framing
- 2 Gyproc plasterboard
- 3 Skirting



6 'T' junction

- 4 Gyproc Sealant
- 5 Bulk filled with Gyproc jointing materials
- 6 Timber ladder frame (ladder members at 600mm max centres)



7 Corner junction

- 1 Timber framing
- 2 Gyproc plasterboard