INTERNAL PARTITIONS AND WALLS

For illustration purposes only

Highly versatile lightweight, non-loadbearing partition systems. A full range of lightweight partition and wall systems for use in new and existing buildings. They cover all applications, from simple space division to high performance walls.

We offer a full range of lightweight partition and wall systems. Our systems are non-loadbearing and constructed using modern, drylining techniques. Our metal framed partitions and walls can be used in all types of new and existing buildings, including private and social housing, apartments, healthcare, educational facilities, recreational and industrial properties.

They cover all applications, from simple space division, through to high performance walls designed to meet the most demanding fire resistance, sound insulation, impact and height requirements.

Our partition systems are constructed using lightweight materials, which can offer significant savings in structural design compared to masonry alternatives. Benefits also include the speed of installation and reduction to overall build costs.

SpecSure®
BRITISH GYPSUM SYSTEMS WARRANTY

There are specifications within this system that qualify for our **SpecSure**® warranty. For more information, contact us through **british-gypsum.com**

Internal partitions and walls

Internal partitions and walls

When specifying partitions, a number of performance characteristics are normally used to determine the required solution.

Depending on the project or construction type, these performance parameters could be set by minimum regulatory standards, or a client or customer requirement for buildings that offer the highest standards of performance and comfort.

Additional information

Try out The White Book Specification Selector, an online tool designed to help find the ideal solutions for your project needs. Additional information such as BIM data (Revit), Technical Specifications, CAD drawings and other associated items can be downloaded. Visit **british-gypsum.com**

GypWall Single Frame

Create all the rooms you need with the industry's original lightweight non-loadbearing drywall partition system.
See page 4.19.

Fire resistance **30-240 mins** | Sound rating **34-63 R_wdB** | Duty rating **medium to severe**

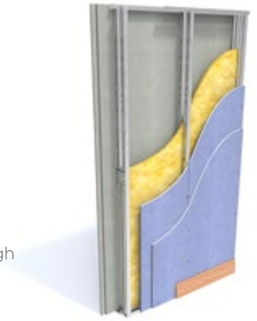
GypWall Single Frame Enhanced

Keep busy areas in great condition with robust partitions.
See page 4.27.

Fire resistance **30-120 mins** | Sound rating **38-60 R_wdB** | Duty rating **severe**

GypWall Twin Frame Braced

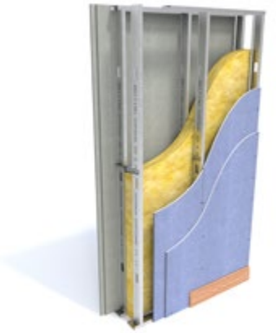
Keep the peace by reducing sound transmission through separating walls.
See page 4.63.



Fire resistance **60-120 mins** | Sound rating **59-64 R_wdB** | Duty rating **severe**

GypWall Twin Frame Audio

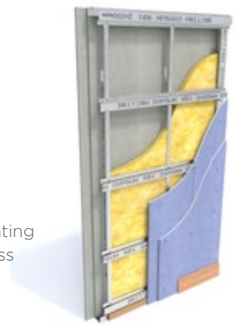
Build an acoustic sanctuary without losing floor space.
See page 4.75.



Fire resistance **60-120 mins** | Sound rating **67-80 R_wdB** | Duty rating **severe**

GypWall Resilient

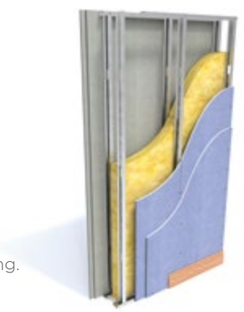
Improve acoustic performance of your partitions and separating walls with minimal loss of floor space.
See page 4.39.



Fire resistance **60-120 mins** | Sound rating **61-65 R_wdB** | Duty rating **severe**

GypWall Twin Frame Independent

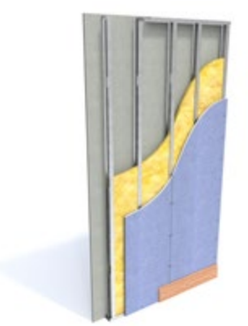
Reduce sound transmission without the need for pre-completion testing.
See page 4.51.



Fire resistance **90-120 mins** | Sound rating **65-70 R_wdB** | Duty rating **severe**

GypWall Staggered

Space-saving sound insulation.
See page 4.89.



Fire resistance **30-90 mins** | Sound rating **49-63 R_wdB** | Duty rating **heavy to severe**

GypWall Secure

Build secure spaces with attack-resistant walls.
See page 4.101.

Fire resistance **120 mins** | Sound rating **40 R_wdB** | Duty rating **severe**

Internal partitions and walls

Internal partitions and walls

Good practice specification guidance

To maximise the performance achieved on site, consider the following good practice specification guidance:

- Consider flanking transmission at the design stage and ensure construction detailing is specified to eliminate, or at least to minimise, any downgrading of the acoustic performance
- Small openings such as gaps, cracks or holes will conduct airborne sounds and can significantly reduce the sound insulation of a construction. For optimum sound insulation a construction must be airtight
- When designing the layout of rooms requiring separation by sound insulating walls abutting structural steelwork, consideration should be given to the potential loss of sound insulation performance through the steelwork
- Deflection heads, by definition, must be able to move and, therefore, achieving an airtight seal is very difficult without incorporating sophisticated components and techniques. Air leakage at the partition heads will have a detrimental effect on acoustic performance of any partition. Where acoustic performance is a key consideration, steps must be taken to minimise this loss of performance
- A common mistake made when designing a building is to specify a high performance element and then incorporate a lower performing element within it; for example, a door within a partition. Where the difference between insulation is relatively small (7dB or less), there needs to be a comparatively large area of the lower insulation element before the overall sound insulation is significantly affected. However, where there is a greater difference in sound insulation performance between the two elements, this would usually result in a greater reduction of overall sound insulation performance

Table 1 – Sound insulation performance for residential specification

Approved Document E (England and Wales)	On-site	Laboratory**	
	$D_{nT,w} + C_{tr}$ dB	Minimum solution $(R_w + C_{tr})$ dB	Recommended solution $(R_w + C_{tr})$ dB
Separating walls between new homes	45	(49)	(54)
Separating walls between purpose-built rooms for residential purposes and rooms created by a change of use or conversion	43	(47)	(52)
Technical Standards Section 5 (Scotland)	**On-site**	**Laboratory****	
	$D_{nT,w} + C_{tr}$ dB	Minimum solution R_w dB	Recommended solution R_w dB
Separating walls between new homes, purpose-built for residential purposes and conversions (not including traditional buildings*)	56	60	63
Separating walls between rooms created by a change of use or conversion (traditional buildings*)	53	57	60

* Definition of traditional buildings – A building or part of a building of a type constructed before or around 1919:
a) using construction techniques that were commonly in use before 1919; and
b) with permeable components, in a way that promotes the dissipation of moisture from the building fabric.

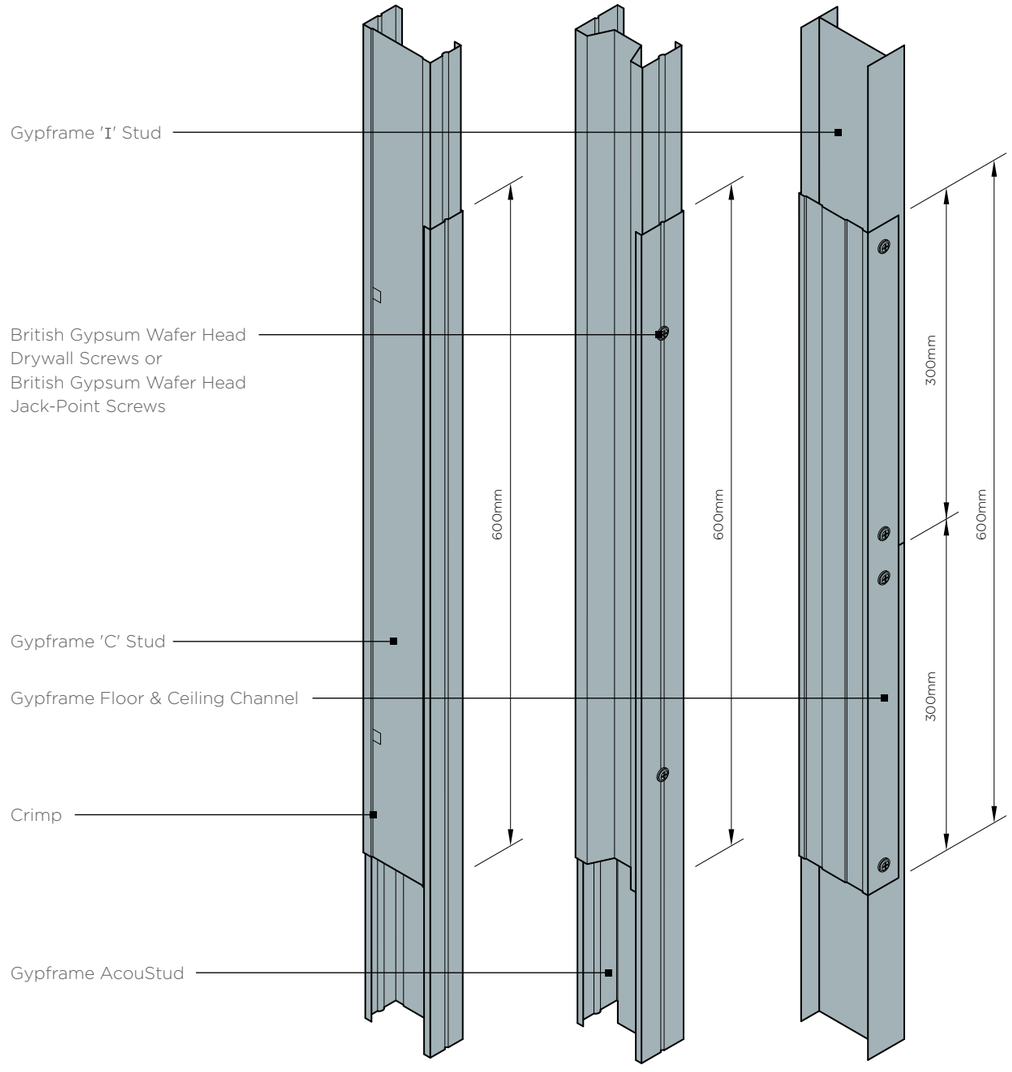
** Minimum solutions provide little or no margin of safety to allow for reduction in performance due to flanking transmission. Recommended solutions have greater potential to satisfy the requirements of Building regulations.

GypWall partitions

Construction details

To be read in conjunction with system specific details. Refer to relevant system sections.

1. Stud splicing detail



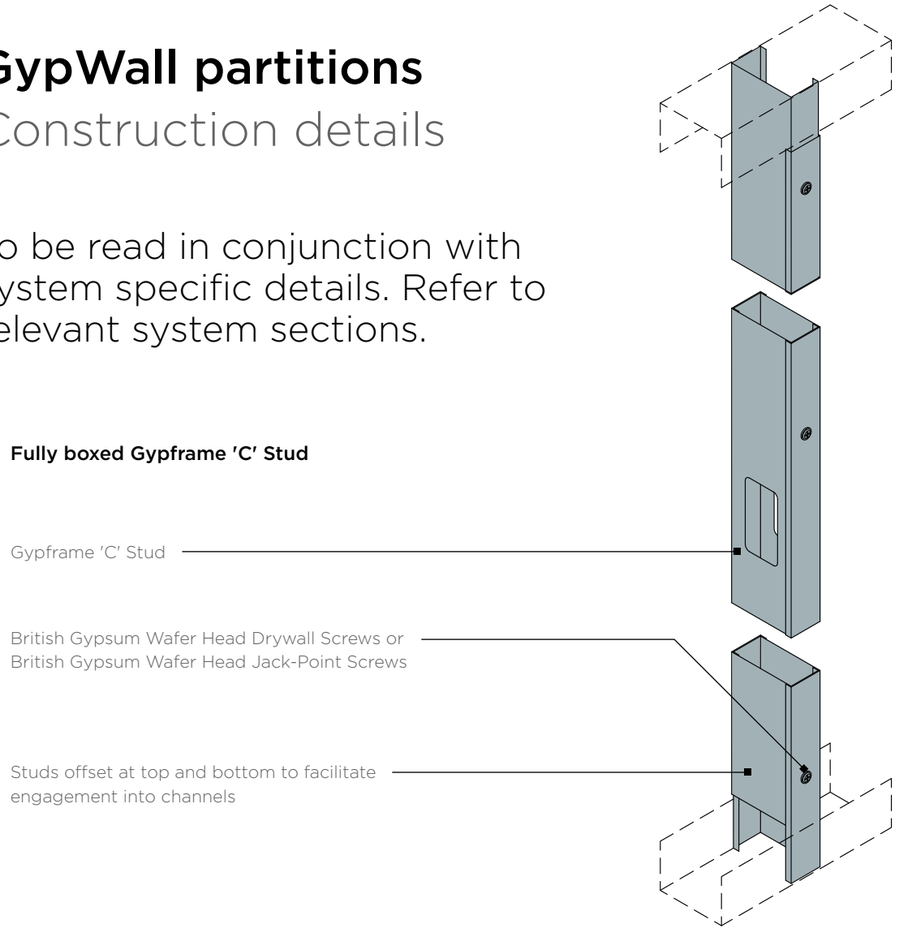
Internal partitions and walls

GypWall partitions

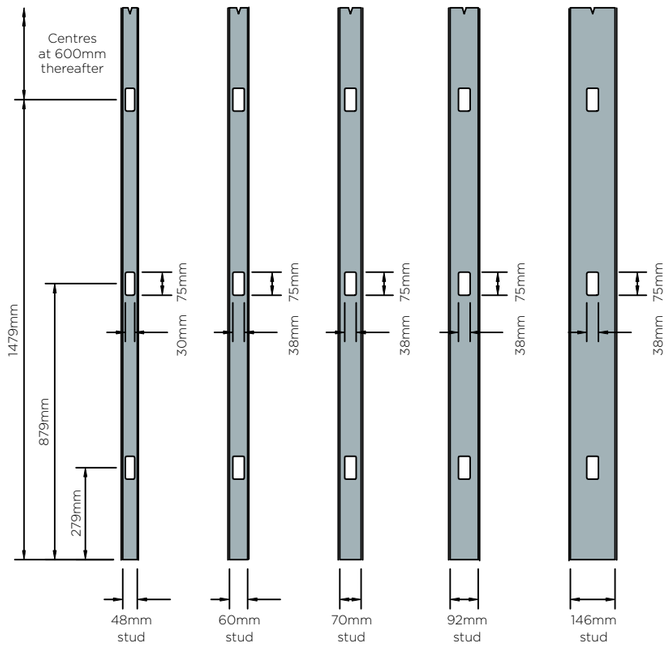
Construction details

To be read in conjunction with system specific details. Refer to relevant system sections.

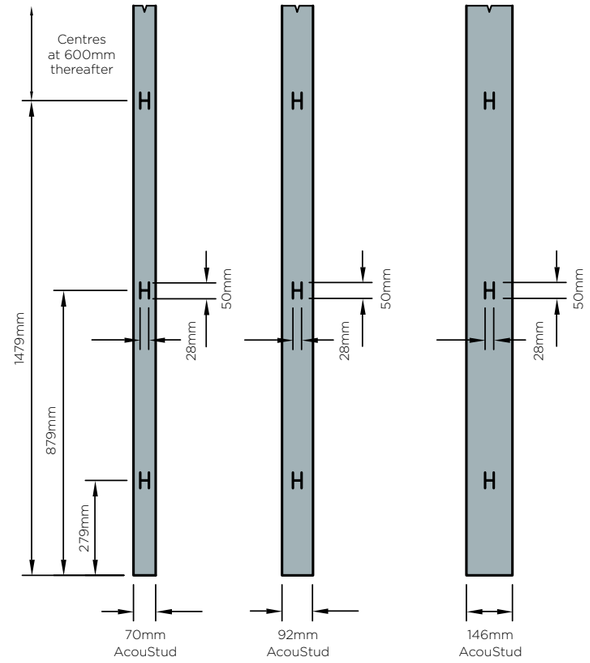
2. Fully boxed Gypframe 'C' Stud



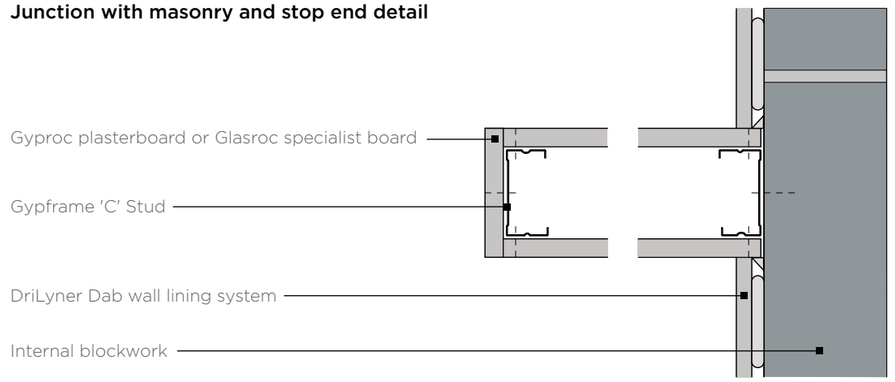
3a. Service cut-outs
Gypframe 'C' and
Gypframe 'I' Studs



3b. Service cut-outs
Gypframe AcouStuds



4. Junction with masonry and stop end detail



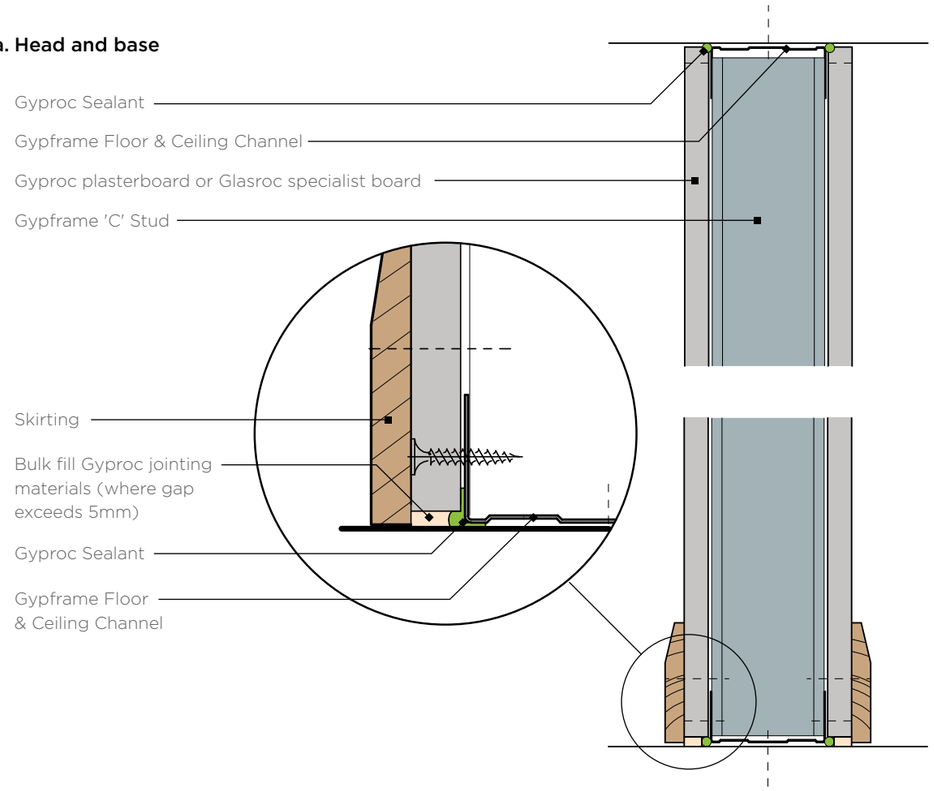
Internal partitions and walls

GypWall partitions

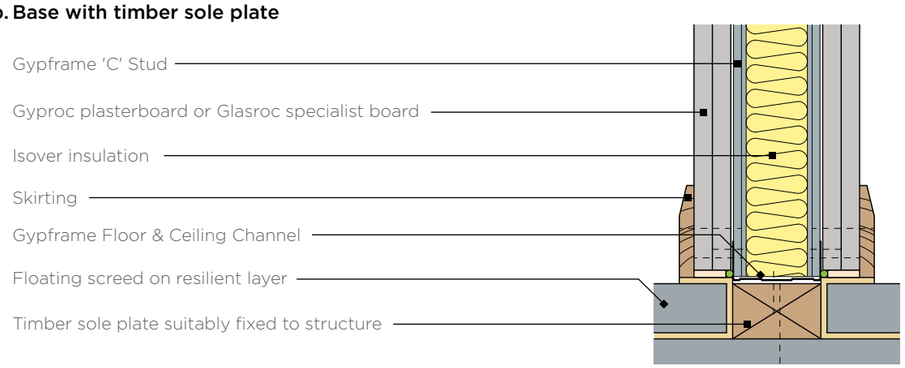
Construction details

To be read in conjunction with system specific details. Refer to relevant system sections.

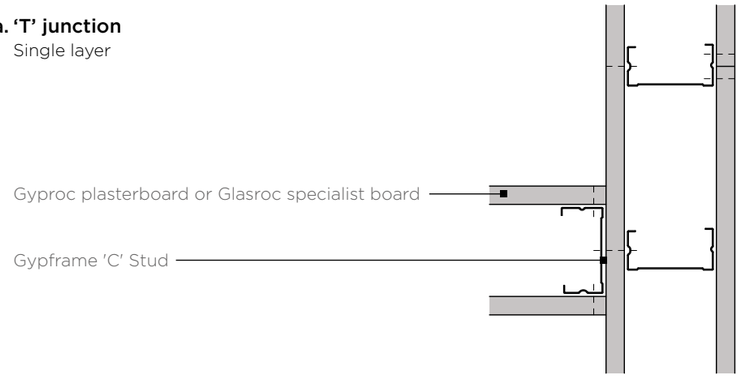
5a. Head and base



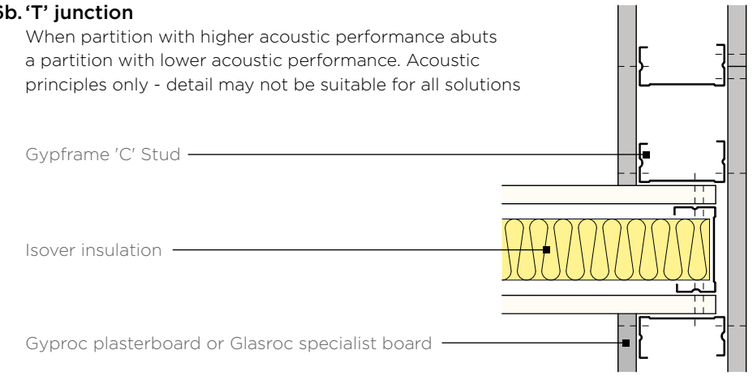
5b. Base with timber sole plate



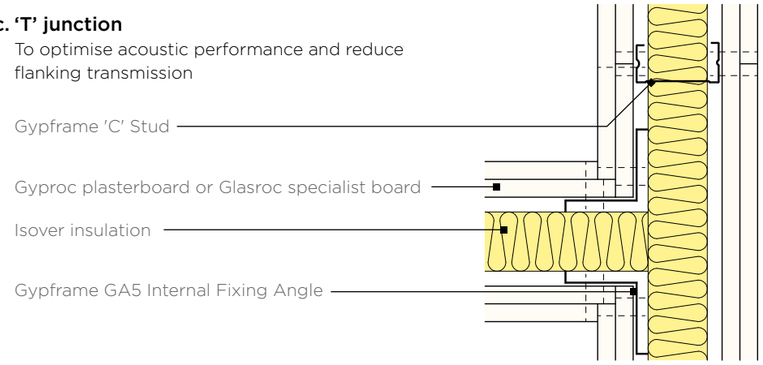
6a. 'T' junction
Single layer



6b. 'T' junction
When partition with higher acoustic performance abuts a partition with lower acoustic performance. Acoustic principles only - detail may not be suitable for all solutions



6c. 'T' junction
To optimise acoustic performance and reduce flanking transmission



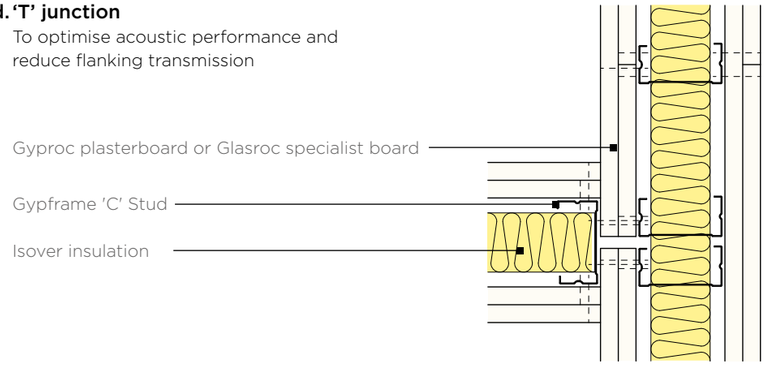
Guidance must be sought from the relevant approval authority e.g. Building Control to establish if a cavity barrier is required (Approved Document B)

Internal partitions and walls

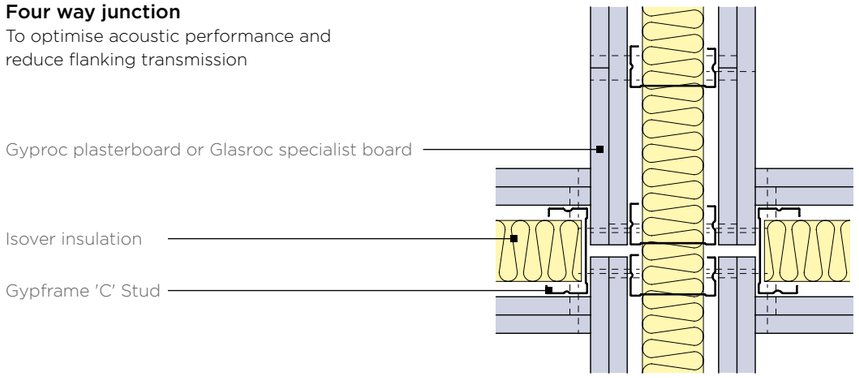
GypWall partitions
Construction details

To be read in conjunction with system specific details. Refer to relevant system sections.

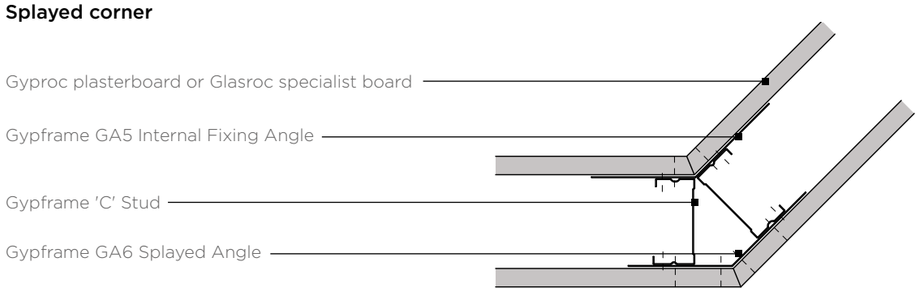
6d. 'T' junction
To optimise acoustic performance and reduce flanking transmission



7. Four way junction
To optimise acoustic performance and reduce flanking transmission

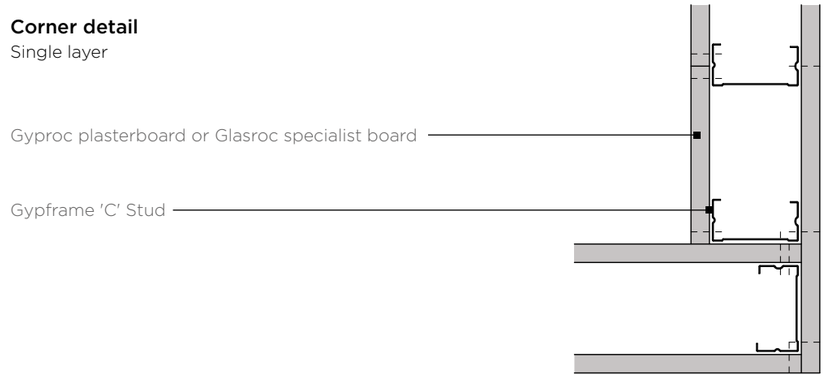


8. Splayed corner

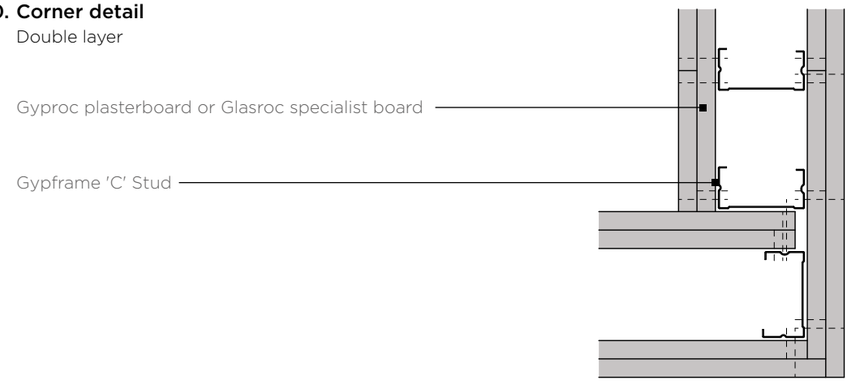


Guidance must be sought from the relevant approval authority e.g. Building Control to establish if a cavity barrier is required (Approved Document B)

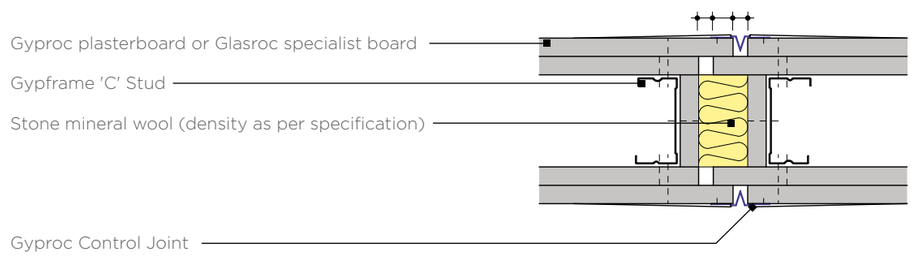
9. Corner detail
Single layer



10. Corner detail
Double layer



11. Typical control joint

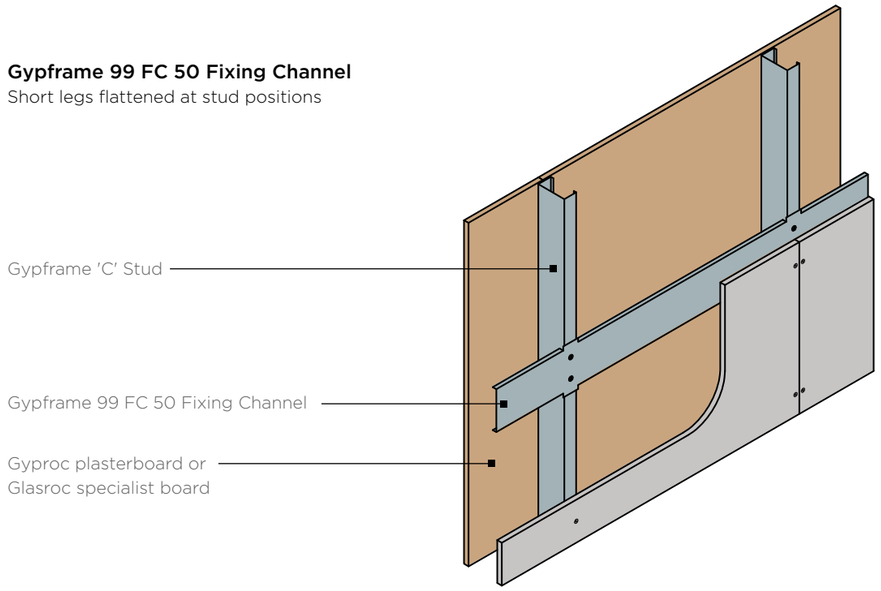


GypWall partitions

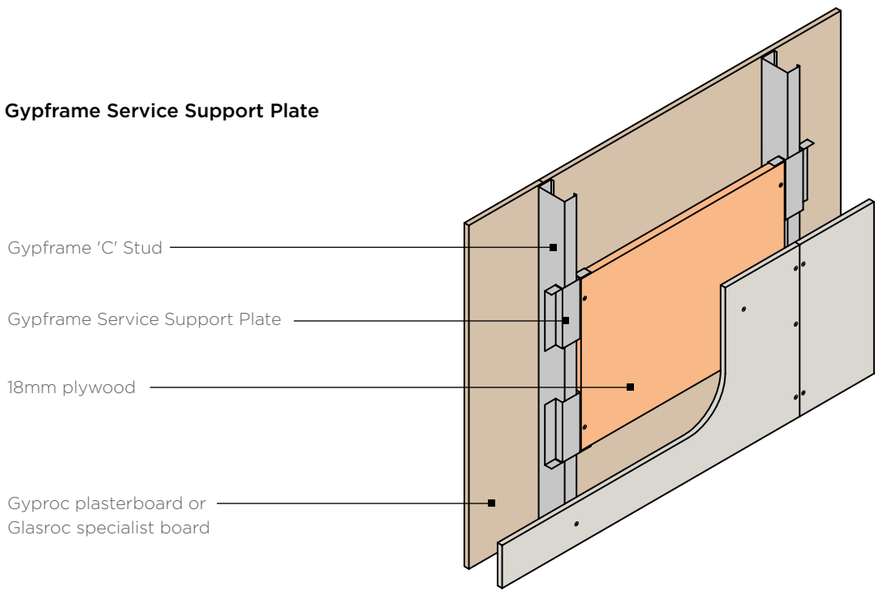
Construction details

To be read in conjunction with system specific details. Refer to relevant system sections.

12. Gypframe 99 FC 50 Fixing Channel
Short legs flattened at stud positions



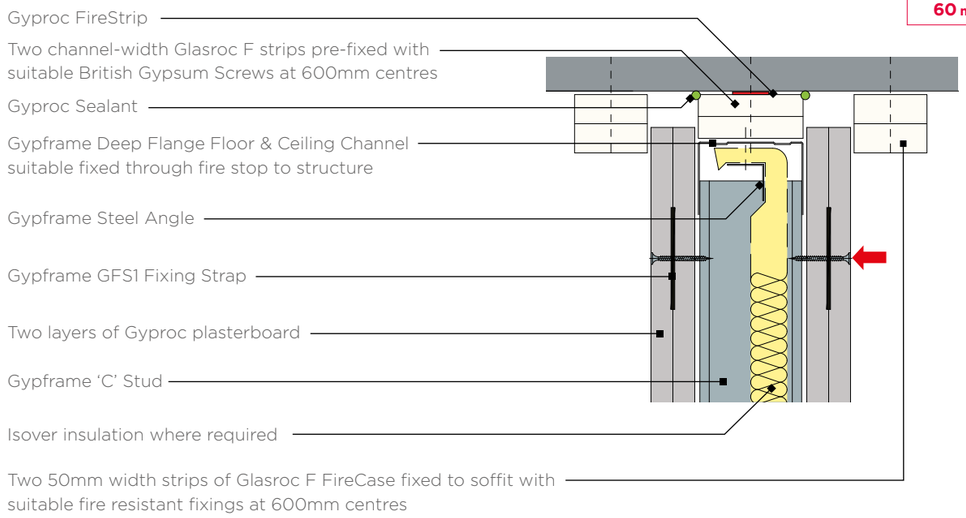
13. Gypframe Service Support Plate



Installing the screw into the side of the Gypframe Service Support Plate and the web of the Gypframe 'C' Stud will avoid creating excessive distortion to the lining board.

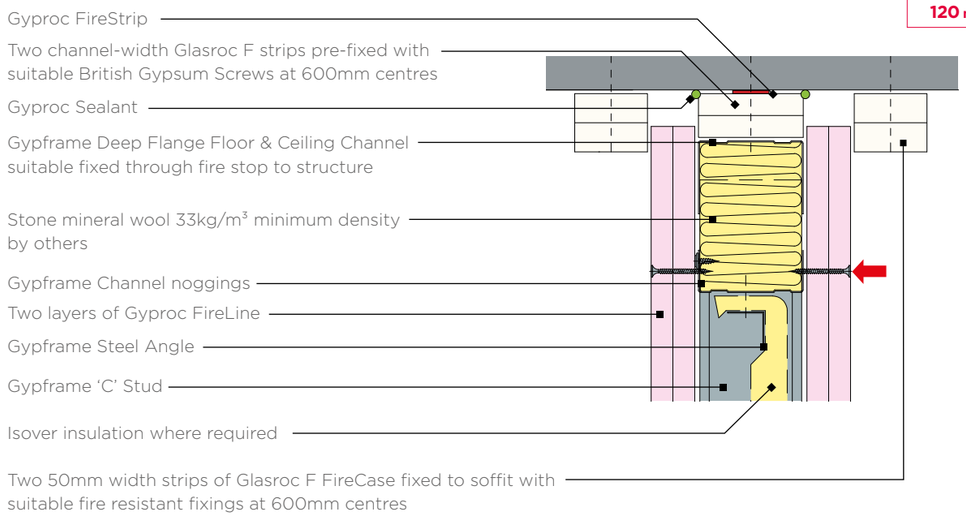
14. Deflection head
25mm downward movement and 60 minutes fire resistance to BS EN 1364-1

Fire resistance **60 mins**



15. Deflection head
25mm downward movement and 120mins fire resistance to BS EN 1364-1

Fire resistance **120 mins**



N.B. No fixings should be made through the boards into the flanges of the head channel. The arrow (⬅) denotes the position of the uppermost board fixing, which should be made into Gypframe GFS1 Fixing Strap. Continuous Gyproc FireStrip must be installed as shown to maintain fire performance.

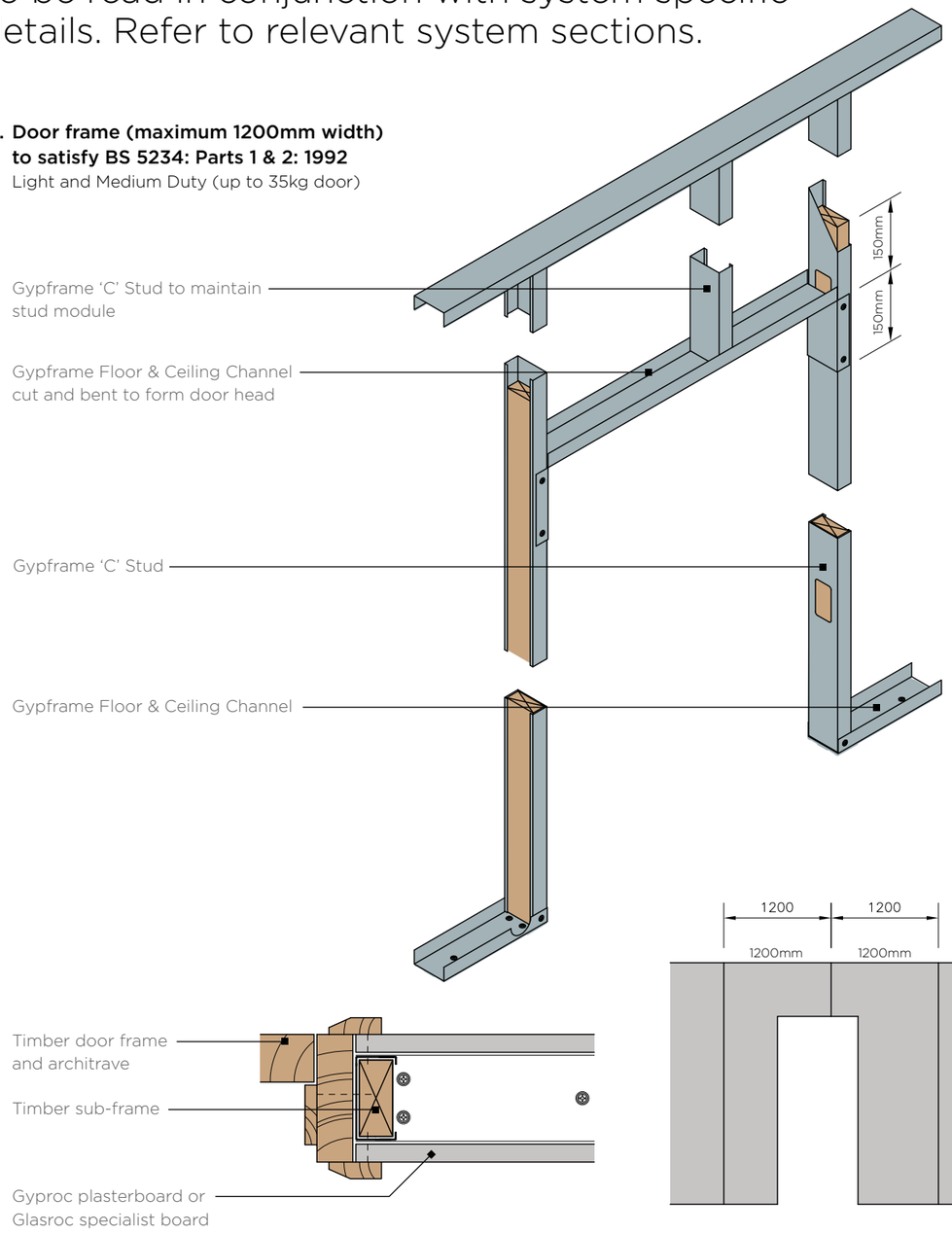
Internal partitions and walls

GypWall partitions

Construction details

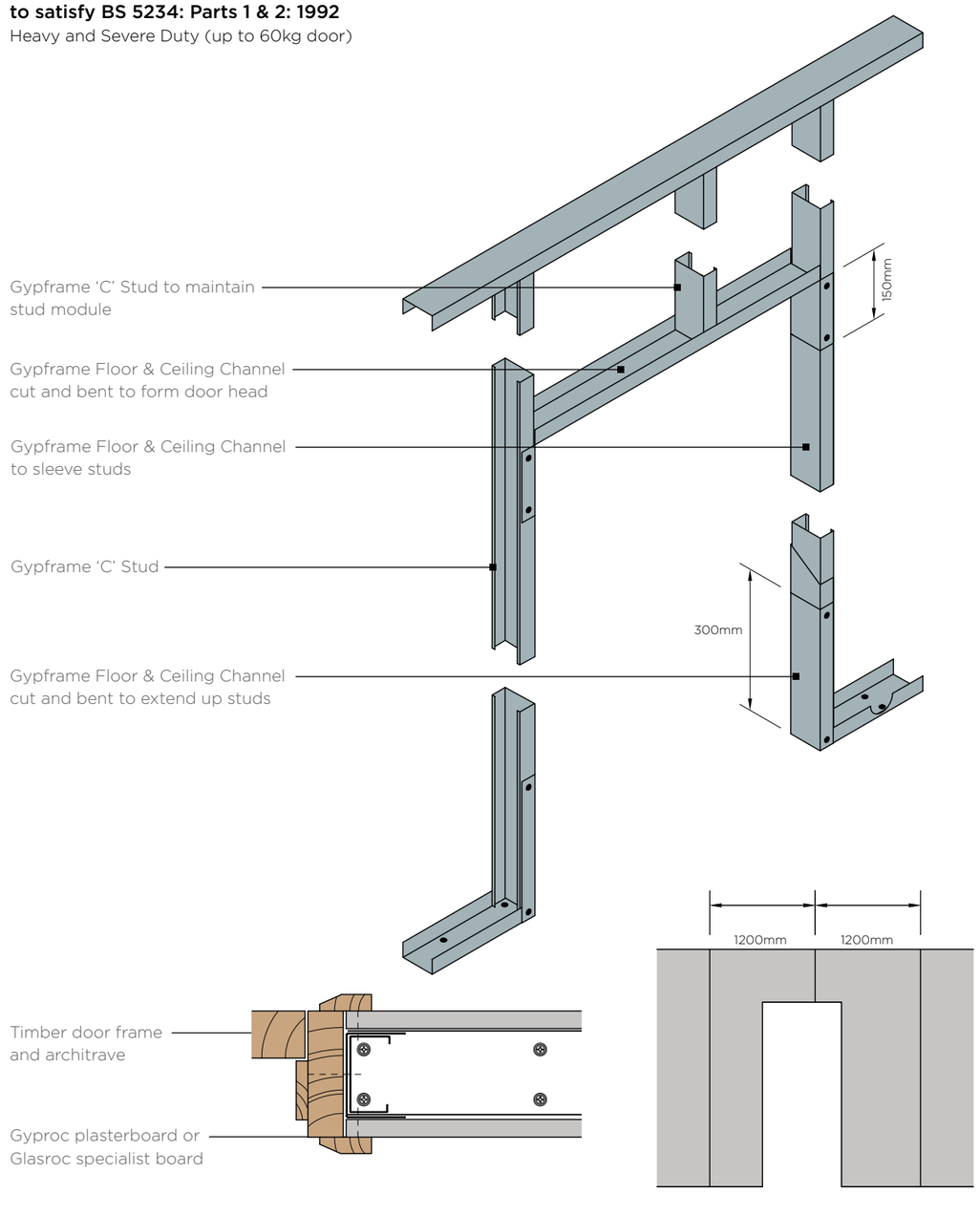
To be read in conjunction with system specific details. Refer to relevant system sections.

16. Door frame (maximum 1200mm width) to satisfy BS 5234: Parts 1 & 2: 1992
Light and Medium Duty (up to 35kg door)



Advice should be sought from the door manufacturer before the construction of these details.

17. Door frame (maximum 1200mm width) to satisfy BS 5234: Parts 1 & 2: 1992
Heavy and Severe Duty (up to 60kg door)



Advice should be sought from the door manufacturer before the construction of these details. At the base, the channel is cut and bent to extend 300mm up the studs and fixed each side with two British Gypsum Wafer Head Drywall Screws. The studs each side of the opening are sleeved full height of opening with Gypframe Floor & Ceiling Channel.

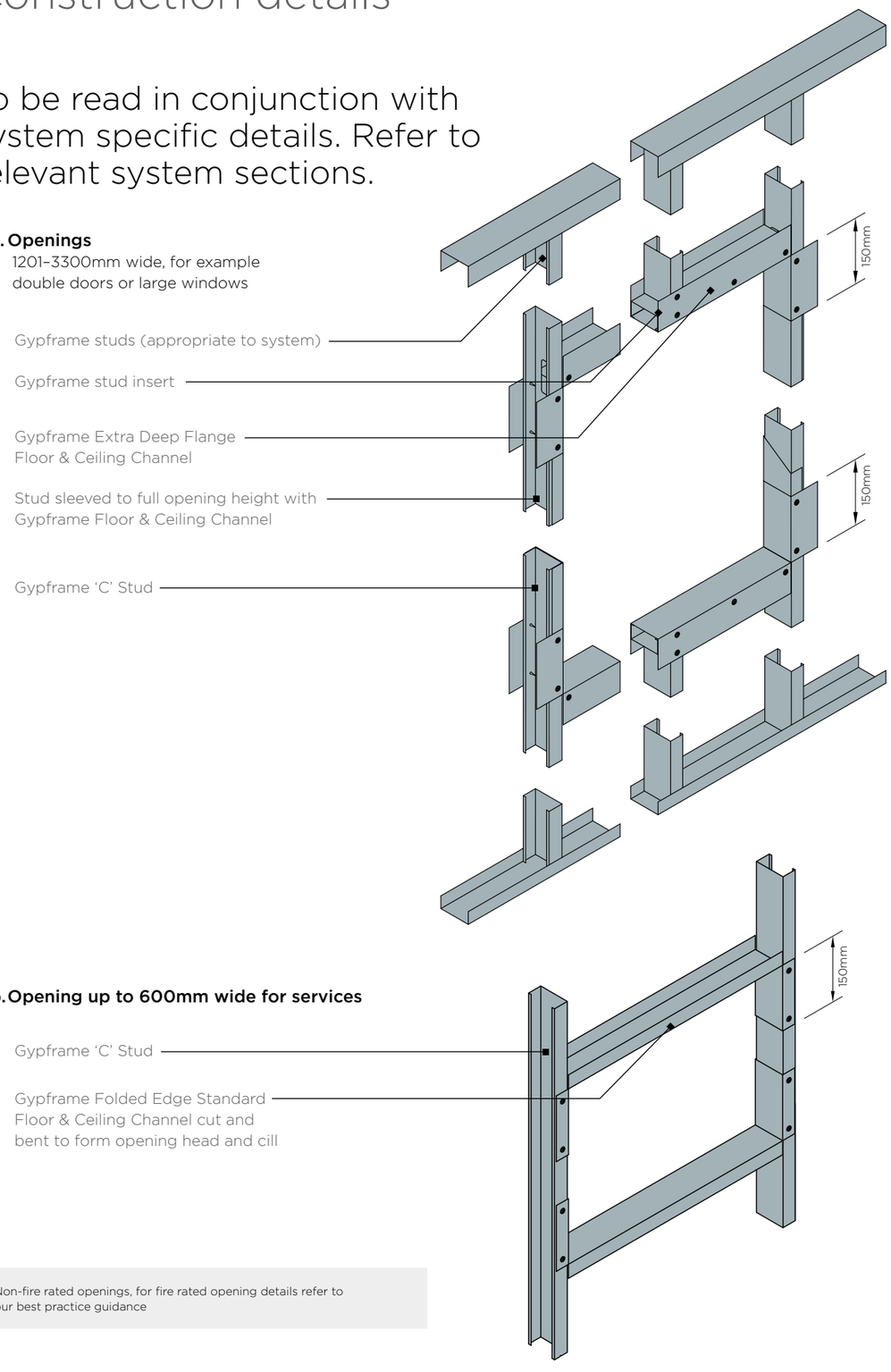
Internal partitions and walls

GypWall partitions

Construction details

To be read in conjunction with system specific details. Refer to relevant system sections.

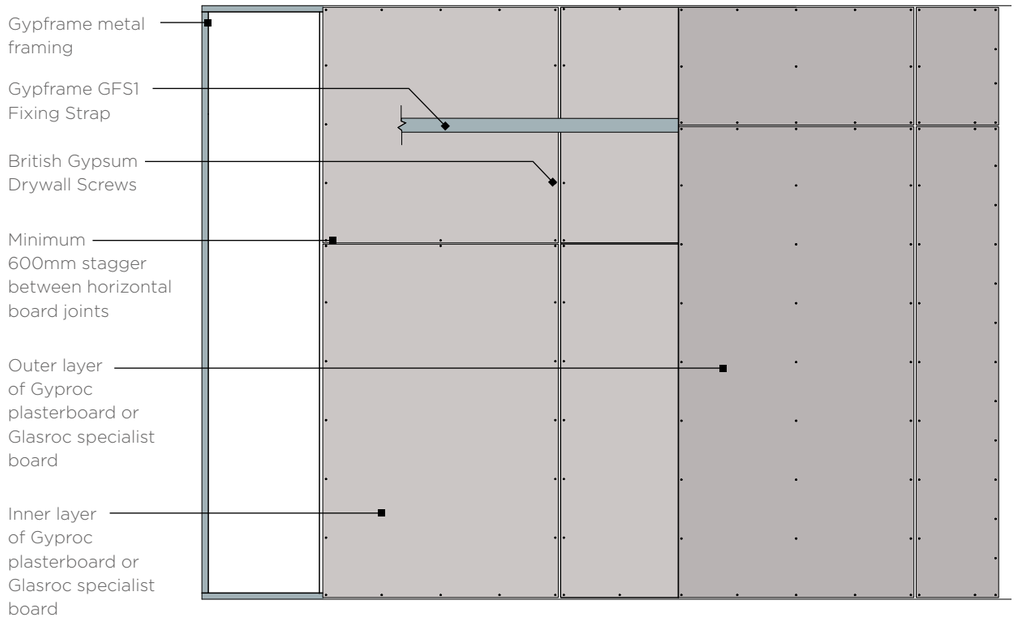
18a. Openings
1201–3300mm wide, for example double doors or large windows



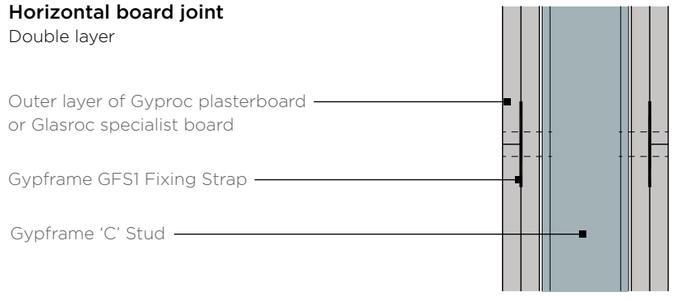
18b. Opening up to 600mm wide for services

Non-fire rated openings, for fire rated opening details refer to our best practice guidance

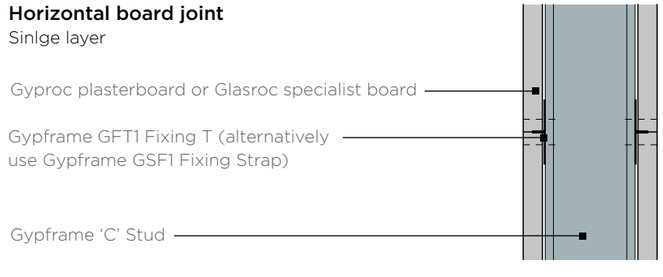
19. Board layout – typical configuration



20. Horizontal board joint
Double layer



23. Horizontal board joint
Sinlge layer



Internal partitions and walls

GypWall Secure
Identification

Build secure spaces with attack-resistant walls.

GypWall Secure is a robust yet lightweight non-loadbearing security wall. It resists determined attack, making it ideal for cash desks, data centres and pharmacy stores. Glasroc F MultiBoard's excellent mechanical properties, combined with the stiffness and resilience of Gypframe Security Sheet, make GypWall Secure a formidable barrier to entry. It resists attacks that use hand tools, and even offers some resistance against power tools.

This system can be skim finished with ThistlePro® PureFinish which contains ACTIVair®. ACTIVair makes indoor air healthier by eliminating up to 70% of formaldehyde present in indoor air.

Design considerations

Security
Glasroc F MultiBoard's excellent mechanical properties, combined with Gypframe Security Sheet's stiffness and resilience, make GypWall Secure a formidable barrier to entry. It provides a high resistance to 'determined attack' using hand tools, and good resistance to attack using power tools.

Head and base fixing
Fix Gypframe GA4 Steel Angles to the structure at 300mm centres. For further information please refer to Technical Support on **british-gypsum.com**

Services
Do not install services or penetrations in this system.

Board finishing
Refer to **british-gypsum.com** for our full range and guidance surrounding board finishing products.

Handy hint

If horizontal board joints are necessary, stagger between layers by a minimum of 600mm, to avoid downgrading performance. For alternative stud types/sizes, to increase maximum partition height, further options are available. Refer to the White Book Specification Selector on the British Gypsum website.

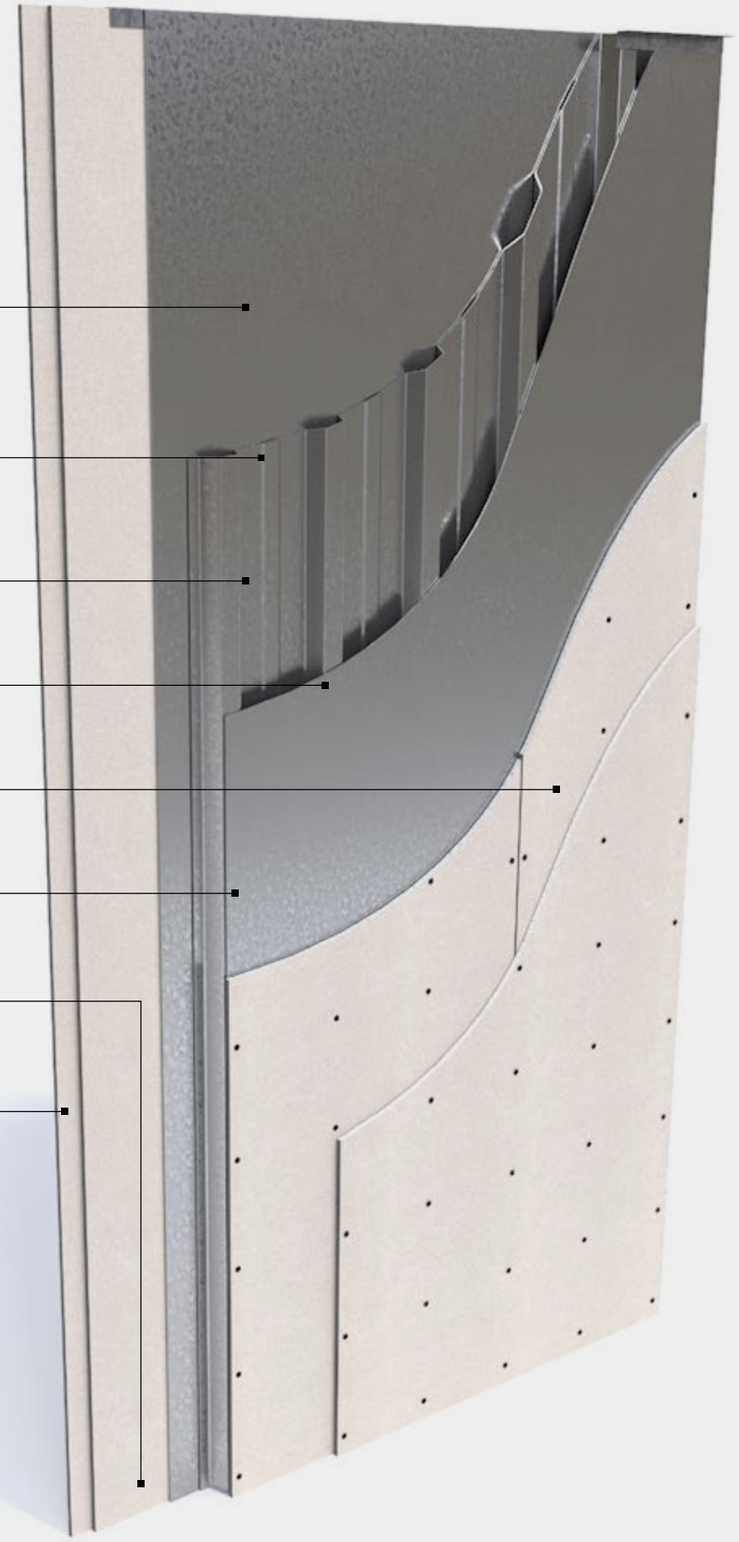
Fire resistance **120 mins**

Sound rating **40 R_w dB**

Duty rating **severe**

Why specify GypWall Secure?

- Prevents attack for safer spaces
- Comes with our **SpecSure®** lifetime warranty
- Up to 120 minutes fire resistance
- Reduces sound transmission by up to 40 dB
- Severe Duty rated
- Achieves even better security when you add more steel sheets
- Frees up floor space with its narrow footprint
- Speak to our Technical Support Team about blast-resistant specifications



SpecSure® BRITISH GYPSUM SYSTEMS WARRANTY

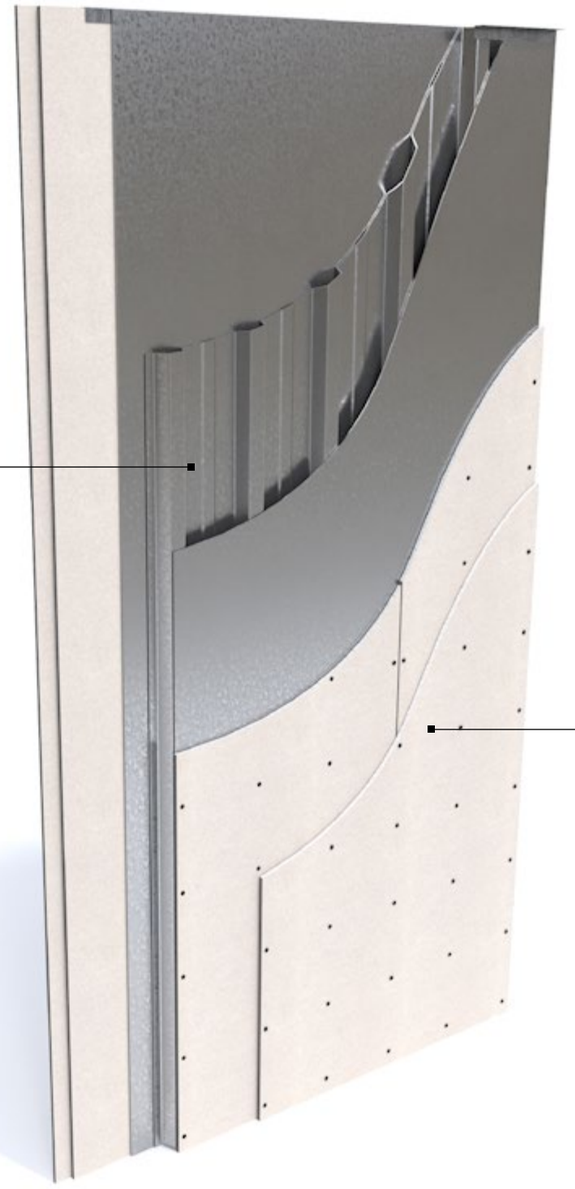
There are specifications within this system that qualify for our **SpecSure®** warranty. For more information, contact us through **british-gypsum.com**

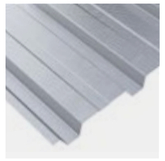
Internal partitions and walls

GypWall Secure

System components

Build secure spaces with attack-resistant walls.





Gypframe Security Sheet
This security sheet is engineered for use in the cavity of the GypWall Secure system to provide additional resistance to determined attack and to support the linings.

Glasroc F MultiBoard
Glasroc F MultiBoard is a highly versatile, non-combustible glass-reinforced gypsum board. Use it for all forms of partitions and ceilings, including curved applications, giving high levels of fire and impact protection. Can be used in semi-exposed situations such as eaves, canopies and carport under linings.

SpecSure®
BRITISH GYPSUM SYSTEMS WARRANTY

There are specifications within this system that qualify for our **SpecSure**® warranty. For more information, contact us through **british-gypsum.com**

Looking for performance selection tables?

We're committed to providing technical information that is transparent, clear, accurate, and always up-to-date. So you can rely on it when making decisions at any stage of the design, specification, installation, use, maintenance and disposal process.

Due to the secure nature of this product, limited performance data is now available to view and download on our website:

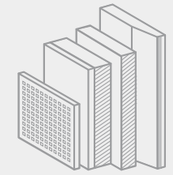
british-gypsum.com/Systems/internal-partitions-walls/gypwall-secure

For more detail refer to Technical Support on **british-gypsum.com**.

Careful product choice is central to maintaining system integrity, performance requirements and eligibility for our **SpecSure**® warranty. **Ensure an optimum standard of build by considering...**

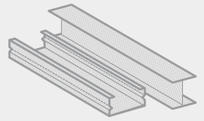
What are you fixing?

Our market leading range of plasterboard linings for walls, ceilings, floors, partitions and encasements for any building type. See **british-gypsum.com** for more details.



What are you fixing to?

Our Gypframe metal profiles provide a strong and versatile structure for fixing our partition lining, floor and ceiling systems. See **british-gypsum.com** for more details.



What are you fixing with?

Our fixings offer guaranteed compatibility with our systems, and are rigorously tested to meet the highest quality standards. See **british-gypsum.com** for more details.

What are you finishing with?

Plaster
Our wide range of Thistle plasters and Thistle accessories give you everything you need to finish a job to the highest possible standard. See **british-gypsum.com** for more details.

Finishing products
Our Gyproc jointing range gives you everything you need to complete a wall lining, partition or ceiling system, whatever the size and complexity of the project. See **british-gypsum.com** for more details.

Where defined performance requirements are required see our White Book Specification Selector on british-gypsum.com