

Ultimate impact and abrasion resistant partition system

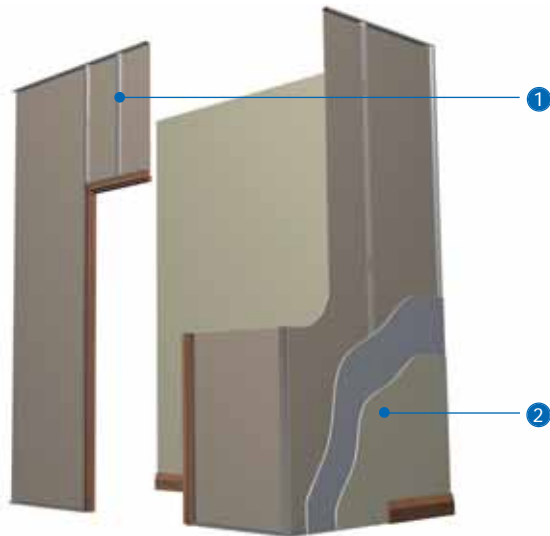
GypWall EXTREME is British Gypsum's ultimate impact resistant partition system for use where extra durability is required above and beyond Severe Duty.

GypWall EXTREME is designed specifically to cope with the rigours of intensive high traffic use in commercial applications.

GypWall EXTREME combines Gyproc plasterboards and Rigidur H advanced fibre reinforced gypsum board to create a lightweight, cost-effective solution both in terms of construction and lifetime costs. GypWall EXTREME is fully adaptable and compatible with other British Gypsum systems, offering the potential to fully value engineer your project.

Additional time should be allowed for the cutting, handling and fixing of Rigidur H compared to standard Gyproc plasterboard.






- 1 Gypframe AcouStud
- 2 Rigidur H

Key facts

- Tested above and beyond the performance requirements of *BS 5234: Part 2: 1992 Severe Duty*
- Capable of securing heavy fixings on a single layer without the need for additional pattressing¹
- Extremely durable and resilient linings
- Excellent resistance to vandalism
- Reduces cost of repair – ideal for PFI maintenance agreements
- Excellent acoustic performance – achieves up to 52dB in single layer system on standard Gypframe 'C' Studs
- Extremely cost effective system compared to other fibre board offerings due to the use of inner layer Gyproc plasterboards

¹ Dependant upon fixing and geometry of the object.

Components**Gypframe metal products**


			Take-off quantities ¹
	70 S 60 'C' Stud Length	3600, 4200mm	167m
	70 AS 50 AcouStud Length	2400, 2700, 3000, 3600, 4200mm	167m
	146 S 50 'C' Stud (for door details) Length	3000, 3600, 4200mm	as required
	146 AS 50 AcouStud Length	2700, 3000, 3600mm	167m
	Deep Flange Floor & Ceiling Channel 72 DC 60, 148 DC 60 Extra Deep Flange Floor & Ceiling Channel 72 EDC 80, 148 EDC 80 All channels are available in 3600mm only.		Dependant on partition length

¹ Quantities are for 100m² of straight partition boarded with a double layer of board each side. Quantities are approximate and for guidance only, no allowance has been made for waste, openings, abutments, etc.







Gypframe metal products

			Take-off quantities ¹
	99 FC 50 Fixing Channel Length	2400mm	as required
	150 FC 90 Fixing Channel Length	1194mm	as required
	GFS1 Fixing Strap Length or	2400mm	as required
	GFT1 Fixing 'T' Length	2400mm	as required

Board products

	Rigidur H Thickness Width	12.5, 15mm 1200	200m ² per layer
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² Moisture resistant boards are specified in intermittent wet use areas e.g. shower cubicles.

Board products – inner layer options (cont'd)			Take-off quantities ¹
	Gyproc SoundBloc² Thickness 12.5, 15mm Width 1200		200m ² per layer
Fixing and finishing products			
	Gyproc Drywall Screws For fixing boards to stud framing up to 0.79mm thick.		1 st layer - 1750
	Gyproc Wafer Head Drywall Screws For metal-to-metal fixing up to 0.79mm thick.		as required
	Rigidur Screws For fixing Rigidur H to Gypframe metal (available in 30mm or 40mm).		Single or 2 nd layer - 2250
	Gyproc Sealant For sealing airpaths for optimum sound insulation.		1 cartridge per 35m based on a 6-10mm bead
	Gyproc jointing materials For a seamless finish.		as required

Fixing and finishing products		Take-off quantities ¹
	Gyproc edge beads Protecting and enhancing board edges.	as required
	Gyproc Control Joint To accommodate structural movement.	as required
	Gyproc FireStrip For sealing deflection heads.	as required
	Thistle Multi-Finish, Thistle Board Finish or Thistle Durafinish Providing a plaster finish.	10m ² per 25kg bag
	Thistle Spray Finish Gypsum finish plaster for spray or hand application.	11m ² per 25kg bag
	Isover APR 1200 For enhanced acoustic performance.	100m ² where specified
	Isover ULTIMATE Piano Plus 60mm thick, for improved acoustic performance and fire insulation.	100m ² where specified

Construction tips for GypWall partitions

- Estimated construction time 1.5m² - 2m² / man hour (single layer partition) or 1m² - 1.5m² / man hour (double layer partition) ready for finishing
- Use full height boards wherever possible - if horizontal joints are unavoidable, endeavour to position them above the suspended ceiling or below access floor level. Avoid eyeline and strong wall lighting areas
- Fixtures / fittings - additional framing will be required to support heavyweight items (e.g. sanitary ware)
- Support horizontal joints with Gypframe GFT1 Fixing 'T', Gypframe GFS1 Fixing Strap or Gypframe 99 FC 50 Fixing Channel (where specified)
- Install Gyproc Control Joints where specified
- Incorporate deflection heads where specified
- Consider skirting fixing - mechanical or using Gyproc Sealant
- If doorsets are fixed at a later stage allow a 10mm overall tolerance in width, 5mm in height
- Consider additional door detailing to *BS 5234*
- Single layer Rigidur H should be fixed to Gypframe 70 S 60 'C' Studs. Double layers should be fixed to Gypframe 70 AS 50 AcouStuds or Gypframe 146 AS 50 AcouStuds

Construction recommendations specific to GypWall EXTREME

Handling - due to the density of Rigidur H, additional time and equipment is required. This needs to be factored into installation costs.

Table 1

Board type	Board thickness mm	Board width mm	Board length mm	Board weight kg
Rigidur H	12.5	1200	2400	43
	12.5	1200	2800	50
	12.5	1200	3000	54
Rigidur H	15	1200	2400	52
	15	1200	2800	61
	15	1200	3000	65

Please consider the board weights before handling the board and use mechanical handling equipment where necessary. Only lift what you feel you can manage and use the tips below to reduce board handling:

- Always position the pallet of boards as close to the construction as possible to avoid prolonged lifting
- Cut the boards on the stack to further reduce handling
- Cuts for doorways and window details can be made on the stack using a hand held circular saw

NB The information in this document is provided in good faith, as a guide to good practice. It should be used in addition to, and not as a replacement for, the normal processes of on-site assessment and site safety management.

Information is also included over the following two pages on specialist handling equipment, as featured within the Gyproc Tools catalogue, available from the Artex website, www.artextld.com

Board handling equipment

The Gyproc Tools specialist range of plasterboard handling equipment has been specifically designed to minimise manual handling of board products and therefore increase safety and efficiency on-site. For more information, please visit the Artex website, www.artextld.com

G-In Lift Rack

Used to hoist plasterboard from delivery vehicle to required destination.

Order Code: 19553



G-In Lift Truck

Used to transport plasterboard to place of installation.

Order Code: 19550



G-In Trestle

Foldable supports providing a working load capacity of 400kg per trestle.

Order Code: 19552



G-In Transit Bench

A combined workbench and board transporter.

Order Code: 19551



G-In Branch Rack

Suitable for storing strip components off ground, avoiding damage and trips. Ideal for metal stud components.

Order Code: 19554



Gyproc Jackal

Trigger grip board lifter.

Order Code: 19409



Gyproc Drywall Cart

A transporter with a removeable vertical support bar.

Order Code: 15292



Gyproc Footlifter

Used for jacking boards into position.

Order Code: 60381



Gyproc Steel WallBoard Carriers

The pair of steel carriers allows for easy and safe movement of plasterboard.

Order Code: 15398



Construction recommendations specific to GypWall EXTREME

Cutting - due to the high density and hardness of Rigidur H, it is not as easy to score and snap as standard plasterboard, and the use of a hand saw may be required.

- Power tools are required to cut large volumes of the board
- Best practice is to use a hand held circular saw with suitable dust extraction system. Use a fine saw blade with a high ratio of teeth
- Complex details (doors and sockets) will take more time to cut out. It is recommended that a jigsaw or 110 volt rotary cutter is used. Curves can be achieved using a fret saw



Construction recommendations specific to GypWall EXTREME

Fixing - additional time will be required to fix Rigidur H due to its density.

- Always use a mains powered 110 volt screw gun
- Always work from the bottom of the stud up when fixing Rigidur H, as per best site practice
- Pre-drilling the first screws at the base of the partition will aid fixing
- Consider clamping the board to the stud using a g-clamp

Finishing

- Some burring is expected around the screw head. It may be necessary to use a surform or sandpaper to clean prior to finishing
- For information on jointing and plastering Rigidur H please refer to the data sheet - 'Rigidur H for commercial applications', available to download from www.british-gypsum.com

Installation



- Determine and mark the wall position and make allowance for openings.
- Fix Gypframe Deep Flange Floor & Ceiling Channel along the centre line to the floor and ceiling at 600mm centres with suitable fixings.
- On uneven floors, a timber sole plate, 38mm deep x width of stud, may be required.
- On new concrete or screeding, consider installing a damp proof membrane to the full partition width before locating the floor channel or sole plate.



- 148mm channels require two rows of staggered fixings (600mm centres in each row).
- For partitions above 8 metres, Gypframe Extra Deep Flange Floor & Ceiling Channel (EDC) should be used at the head and base.



- Cut studs to a neat fit (maximum possible entry into head channel).
- NB** Cut studs to size using a chop saw, hacksaw or snips.

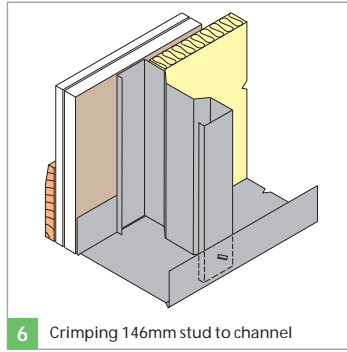


- Locate the first stud, twist into position and fix into the abutting wall at 600mm centres.



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- Locate further studs at 600mm centres to a friction fit within the channel section - this allows for adjustment during boarding. Position the studs so all face the same way.



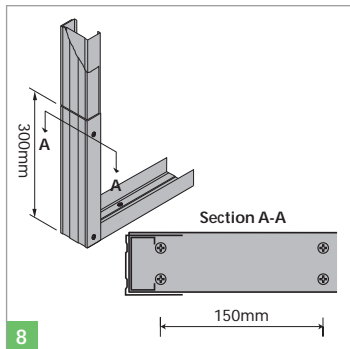
6 Crimping 146mm stud to channel

- Where studs are used at heights greater than 4 metres, consider locking into the floor channels using a Gyproc crimping tool, or Gyproc Wafer Head Screws.



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- Apply Gyproc Sealant to both sides of the frame perimeters to provide optimum acoustic performance.



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- Locate full height studs each side of the door opening, sleeve the studs either side of the opening with channel section, stopping 300mm short of the floor channel.
 - Allow for extension of floor channel. This is then cut, bent, and interleaved as shown in section A-A above, and then fixed twice to each side.



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- At the head, cut and bend channel to extend 150mm down the face of the stud, and fix twice to each side of each stud.

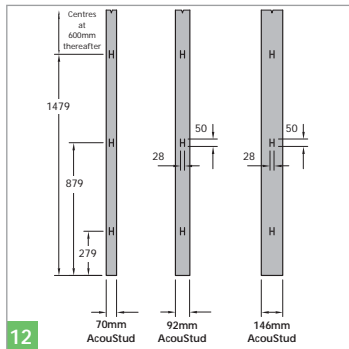


10 Services

- Install services (by appropriate trades), normally after one side is boarded. Pass horizontal runs through cut-outs in the studs and install Gypframe 99 FC 50 Fixing Channel or Gypframe Floor & Ceiling Channel between studs to provide support for recessed switch boxes.



- Where plastic clip-in socket boxes are being used in fire-rated systems, Hilti CP617 Putty Pads can be used. Contact Hilti for full details, tel: 0800 886100.
- Sockets will take more time to cut out. Drill four holes corresponding with the corners of the socket box and then cut out using a jigsaw.
- All performance substantiation has to be provided by the fire-stopping manufacturer as is the case for any fire-stopping material.



- Fig 12 showing position of Gypframe AcouStud cut-out.
- The position of cut-outs is the same for each Gypframe 'C' Stud and Gypframe 'I' Stud.



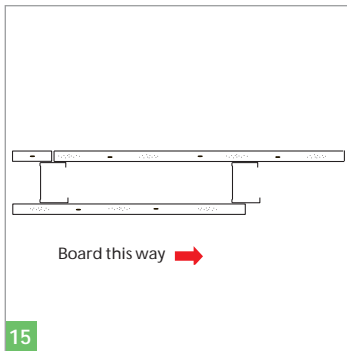
Board fixing - single layer

- Fix Rigidur H boards to all framing members at 300mm centres using Rigidur Screws.
- Reduce centres to 200mm at external angles.
- Always begin fixing from the bottom upwards.
- Due to the high density and hardness of Rigidur H, some burring around the screw heads can be expected. Additional time should be allowed for cleaning off, before finishing with a small surform (or sand paper).



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- Lightly butt boards, inserting screws not closer than 13mm from edges (as with non-bound plasterboard edges).



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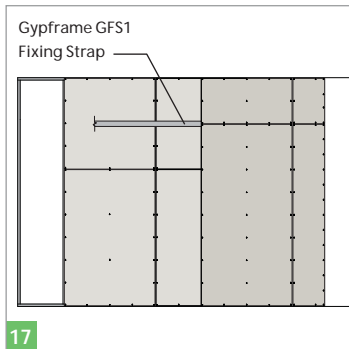
- Adjust studs as boarding proceeds and stagger board joints relative to the opposite side.
- Board partition in the direction of stud flanges, as shown above, to reduce the risk of studs twisting during installation.



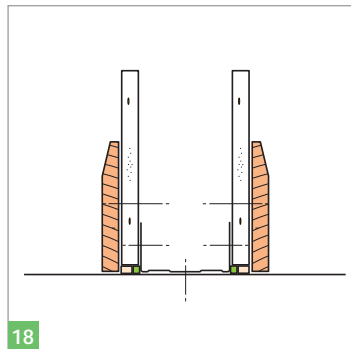
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Board fixing - double layer

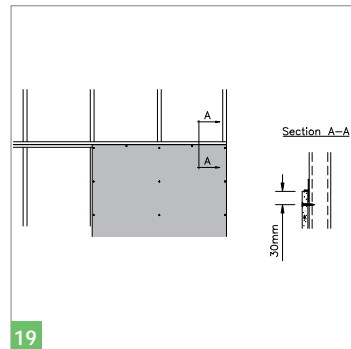
- Inner layers of Gyproc plasterboard should be fixed with 25mm Gyproc Drywall Screws around the perimeter of the board at 300mm centres, and at the intermediate stud at 600mm centres.
- Cut and fix the initial second layer board as appropriate so that subsequent board joints are staggered.



- Typical double layer board configuration is as above.



- Seal any gaps at the base of linings to both sides with Gyproc Sealant (in conjunction with Gyproc Joint Filler) where the partition is required to meet its optimum acoustic performance.



- Where the partition height exceeds the board lengths, install Gypframe GFT 1 Fixing 'T' progressively between studs to coincide with board end joints, to maintain board alignment. Fix boards to supports using 40mm Rigidur Screws.
- It is important that boards are levelled on their top edge. Position the top screw into the stud nominally 30mm down to allow the Gypframe GFT1 Fixing 'T' to be installed. Lightly butt and lift boards to the Gypframe GFT1 Fixing 'T' as work progresses. Position the next lift of boards to sit on the Gypframe GFT1 Fixing 'T'.



Horizontal joint support - multi-layer

- Where the partition height exceeds the board length, install Gypframe GFS1 Fixing Strap progressively between board layers, to coincide with outer layer horizontal board end joints, to maintain board alignment.
- Fix boards to supports using Rigidur Screws.



Splicing studs

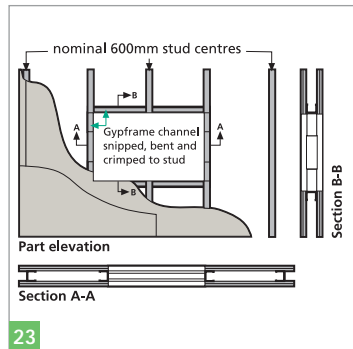
- To extend studs, overlap by 600mm (minimum). Fix together using Gyproc Wafer Head Drywall Screws (two to each flange), or by using the Gyproc Stud Interlocking Tool twice to each flange.



Boxing studs

- Nest studs with minimum half overlap, allowing for an off-set at head and base to facilitate normal engagement into channels. Lock together at 600mm centres using a Gyproc Stud Interlocking Tool or Gyproc Wafer Head Drywall Screws, at 600mm centres on each flange.

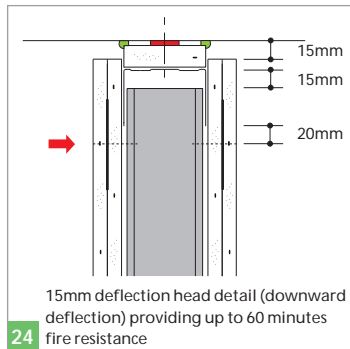
NB Gyproc Stud Interlocking Tool is not recommended for partition heights above 6 metres.



Large service openings

- Construct a framed opening, as shown above.

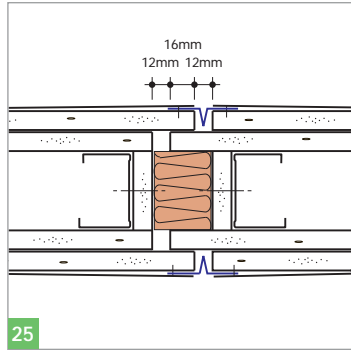
In fire-rated partitions, the service penetration should be fire-stopped, as specified by the appropriate contractor.



Deflection head

- Form the firestop at the head using Gyproc Plank with continuous line of Gyproc FireStrip. Gypframe Deep Flange Floor & Ceiling Channel is fixed through firestop to soffit at 600mm centres using suitable fixings. No fixings should be made through the boards into the flanges of the head channel.

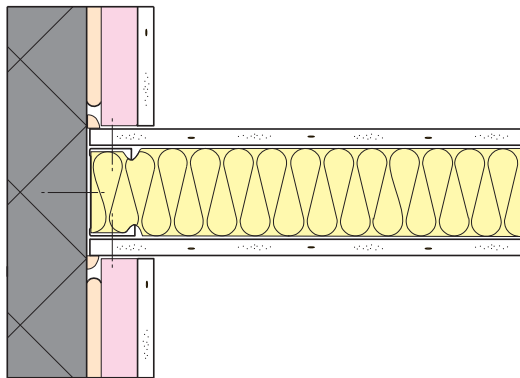
- The arrow (→) denotes the position of the uppermost board fixing, which should be made into Gypframe GFS1 Fixing Strap or Gypframe stud nogging, ensuring the downward movement of the head channel is not impaired.
- Alternative deflection head details are available. Contact the British Gypsum Drywall Academy.



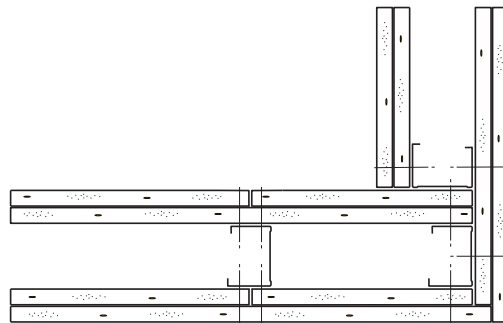
Control joints

- Install as specified to relieve stress / movement and to coincide with movement joints in the external structure.
- Gyproc Control Joint may be cut with a fine-tooth saw. Butt-end joints should be aligned accurately to provide a neat fit. Place the Gyproc Control Joint into position and secure to the Gyproc plasterboard with 13mm corrosion resistant staples at 150mm maximum centres through both flanges.
- Ensure the Gyproc Control Joint is cut to a neat fit at the structural floor and soffit or ceiling perimeters and the ends sealed with Gyproc Sealant.

Junction details

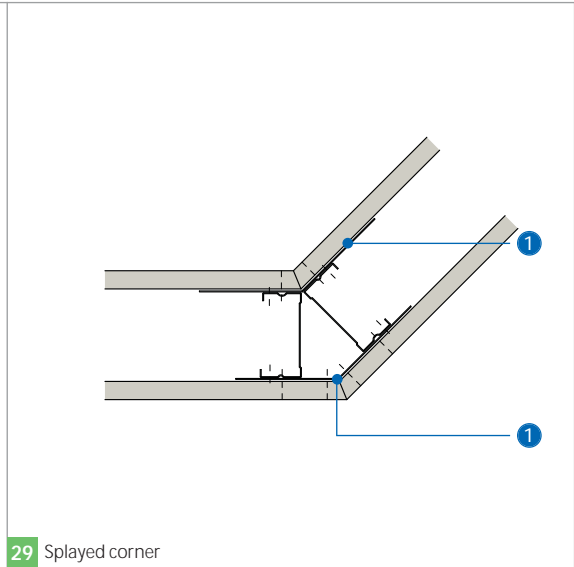
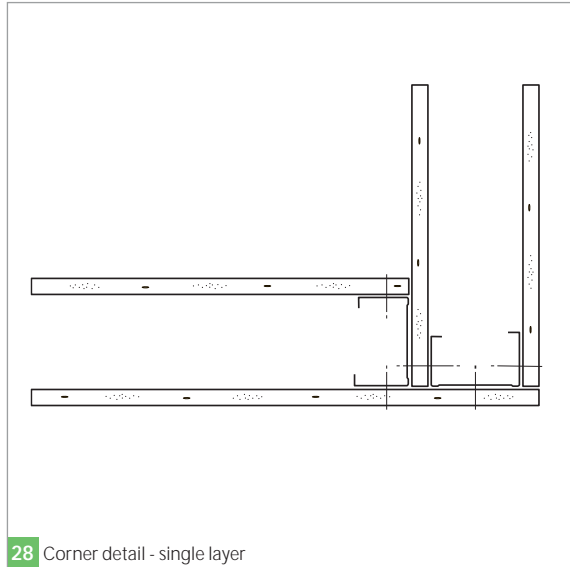


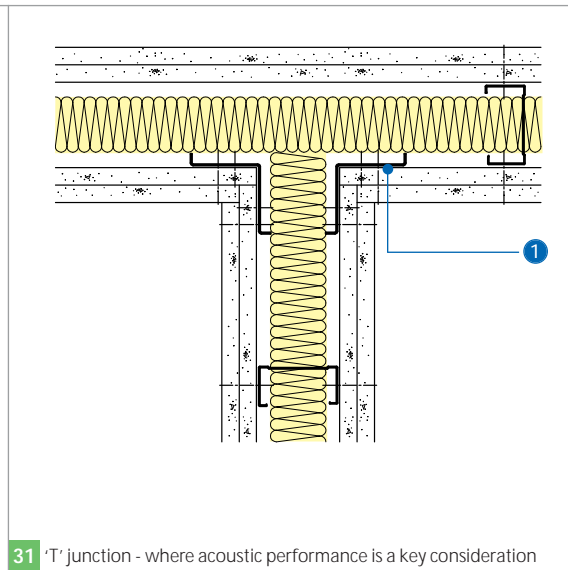
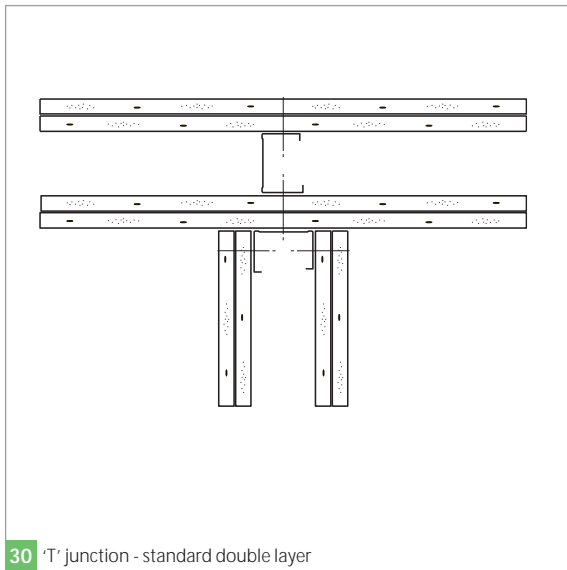
26 Abutment to external wall lined with Gyproc ThermaLine boards

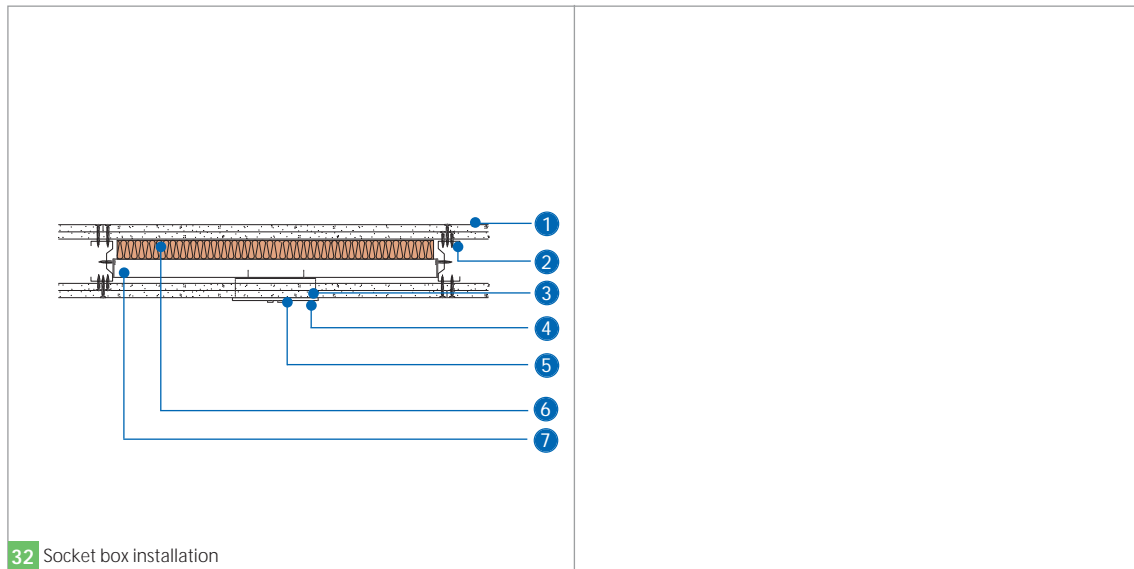


27 Corner detail - double layer

Junction details







32 Socket box installation

- ① Rigidur n
- ② Gypframe 70 AS 50 AcouStuds at 600mm centres
- ③ Lining boards cut to allow a close fitting entry for the socket box
- ④ Gyproc Sealant at switch box perimeter for improved acoustics
- ⑤ Electrical socket with metal back box
- ⑥ Stone mineral wool (minimum 80kg/m³) backing to socket box
- ⑦ Gypframe 72 DC 60 Deep Flange Floor & Ceiling Channel receiving fixing of socket box - channel legs tabbed, bent and fixed to metal studs with Gyproc Wafer Head Drywall Screws

