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.
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 pattressing
- Extremely durable and resilient linings
- Excellent resistance to vandalism
- Reduces cost of repair – ideal for PFI maintenance agreements
- Excellent acoustic performance – achieves up to 52 dB 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**

| Product                  | Length                  | Take-off quantities<br>1 |  |
|--------------------------|-------------------------|---------------------------|  |
| 70 S 60 ‘C’ Stud         | 3600, 4200mm            | 167m                      |  |
| 70 AS 50 AcouStud        | 2400, 2700, 3000, 3600, 4200mm | 167m                      |  |
| 146 S 50 ‘C’ Stud (for door details) | 3000, 3600, 4200mm          | as required               |  |
| 146 AS 50 AcouStud       | 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.

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**

| Product                  | Length                  | Take-off quantities<br>1 |  |
|--------------------------|-------------------------|---------------------------|  |
| 99 FC 50 Fixing Channel  | 2400mm                  | as required               |  |
| 150 FC 90 Fixing Channel | 1194mm                  | as required               |  |
| GFS1 Fixing Strap        | 2400mm                  | as required               |  |
| GFT1 Fixing ‘T’          | 2400mm                  | as required               |  |

**Board products**

| Product   | Thickness | Width |  |
|-----------|-----------|-------|  |
| Rigidur H | 12.5, 15mm| 1200  | 200m² per layer |

2 Moisture resistant boards are specified in intermittent wet use areas e.g. shower cubicles.
### Board products – inner layer options (cont’d)

<table>
<thead>
<tr>
<th>Product</th>
<th>Take-off quantities$^1$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gyproc SoundBloc$^2$</td>
<td>Thickness 12.5, 15mm</td>
</tr>
<tr>
<td></td>
<td>Width 1200</td>
</tr>
<tr>
<td></td>
<td>200m² per layer</td>
</tr>
</tbody>
</table>

### Fixing and finishing products

<table>
<thead>
<tr>
<th>Product</th>
<th>Take-off quantities$^1$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gyproc Drywall Screws</td>
<td>1st layer - 1750</td>
</tr>
<tr>
<td></td>
<td>as required</td>
</tr>
<tr>
<td>Gyproc Wafer Head Drywall Screws</td>
<td>Single or 2nd layer - 2250</td>
</tr>
<tr>
<td></td>
<td>as required</td>
</tr>
<tr>
<td>Rigidur Screws</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Gyproc Sealant</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Gyproc jointing materials</td>
<td></td>
</tr>
</tbody>
</table>

### Fixing and finishing products

<table>
<thead>
<tr>
<th>Product</th>
<th>Take-off quantities$^1$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gyproc edge beads</td>
<td>as required</td>
</tr>
<tr>
<td>Gyproc Control Joint</td>
<td>as required</td>
</tr>
<tr>
<td>Gyproc FireStrip</td>
<td>as required</td>
</tr>
<tr>
<td>Thistle Multi-Finish, Thistle Board Finish or Thistle Durafinish</td>
<td>10m² per 25kg bag</td>
</tr>
<tr>
<td>Thistle Spray Finish</td>
<td>11m² per 25kg bag</td>
</tr>
<tr>
<td>Isover APR 1200</td>
<td>100m² where specified</td>
</tr>
<tr>
<td>Isover ULTIMATE Piano Plus</td>
<td>100m² where specified</td>
</tr>
</tbody>
</table>
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.

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

Table 1

<table>
<thead>
<tr>
<th>Board type</th>
<th>Board thickness mm</th>
<th>Board width mm</th>
<th>Board length mm</th>
<th>Board weight kg</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rigidur H</td>
<td>12.5</td>
<td>1200</td>
<td>2400</td>
<td>43</td>
</tr>
<tr>
<td></td>
<td>12.5</td>
<td>1200</td>
<td>2800</td>
<td>50</td>
</tr>
<tr>
<td></td>
<td>12.5</td>
<td>1200</td>
<td>3000</td>
<td>54</td>
</tr>
<tr>
<td>Rigidur H</td>
<td>15</td>
<td>1200</td>
<td>2400</td>
<td>52</td>
</tr>
<tr>
<td></td>
<td>15</td>
<td>1200</td>
<td>2800</td>
<td>61</td>
</tr>
<tr>
<td></td>
<td>15</td>
<td>1200</td>
<td>3000</td>
<td>65</td>
</tr>
</tbody>
</table>

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.artexltd.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.artexltd.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
<table>
<thead>
<tr>
<th>Product Name</th>
<th>Description</th>
<th>Order Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gyproc Jackal</td>
<td>Trigger grip board lifter.</td>
<td>19409</td>
</tr>
<tr>
<td>Gyproc Drywall Cart</td>
<td>A transporter with a removeable vertical support bar.</td>
<td>15292</td>
</tr>
<tr>
<td>Gyproc Footlifter</td>
<td>Used for jacking boards into position.</td>
<td>60381</td>
</tr>
<tr>
<td>Gyproc Steel WallBoard Carriers</td>
<td>The pair of steel carriers allows for easy and safe movement of plasterboard.</td>
<td>15398</td>
</tr>
</tbody>
</table>

Technical support:  T 0844 800 1991  F 0844 561 8816  E bgtechnical.enquiries@bpb.com
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.
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.

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.

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

• 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.

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).
- Lightly butt boards, inserting screws not closer than 1.3mm from edges (as with non-bound plasterboard edges).

- 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.

**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 or steel pop rivets (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

28 Corner detail - single layer

29 Splayed corner

1 Gypframe GA6 Splayed Angle
Technical support:  T 0844 800 1991  F 0844 561 8816  E bgtechnical.enquiries@bpb.com

30 “T” junction - standard double layer

31 “T” junction - where acoustic performance is a key consideration

1 Gypframe GA5 Internal Fixing Angle
1. Rigidur
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