

## CasoLine MF

### Concealed grid MF suspended ceiling system



This section includes updated information, added since it was first published in July 2009. Please see the WHITE BOOK update document for details.  
**Last updated 05/09/2011**



Joseph Chamberlain College,  
Birmingham

# CasoLine MF

|   |   |   |   |   |   |   |   |  |   |   |   |   |   |  |
|---|---|---|---|---|---|---|---|--|---|---|---|---|---|--|
| <div style="border: 1px solid black; border-radius: 50%; width: 30px; height: 30px; display: flex; align-items: center; justify-content: center; margin: 0 auto;"> <span style="font-size: 12px; font-weight: bold;">0.25</span> </div> <div style="text-align: center; font-size: 8px;"> <math>\alpha_w</math><br/>Sound absorption         </div> | - | <div style="border: 1px solid black; border-radius: 50%; width: 30px; height: 30px; display: flex; align-items: center; justify-content: center; margin: 0 auto;"> <span style="font-size: 12px; font-weight: bold;">0.70</span> </div> | - | <div style="border: 1px solid black; border-radius: 50%; width: 30px; height: 30px; display: flex; align-items: center; justify-content: center; margin: 0 auto;"> <span style="font-size: 12px; font-weight: bold;">56</span> </div> <div style="text-align: center; font-size: 8px;"> <math>R_w</math> dB<br/>Airborne         </div> | - | <div style="border: 1px solid black; border-radius: 50%; width: 30px; height: 30px; display: flex; align-items: center; justify-content: center; margin: 0 auto;"> <span style="font-size: 12px; font-weight: bold;">66</span> </div> | - | <div style="border: 1px solid black; border-radius: 50%; width: 30px; height: 30px; display: flex; align-items: center; justify-content: center; margin: 0 auto;"> <span style="font-size: 12px; font-weight: bold;">68</span> </div> <div style="text-align: center; font-size: 8px;"> <math>L_{nw}</math> dB<br/>Impact         </div> | - | <div style="border: 1px solid black; border-radius: 50%; width: 30px; height: 30px; display: flex; align-items: center; justify-content: center; margin: 0 auto;"> <span style="font-size: 12px; font-weight: bold;">50</span> </div> | - | <div style="border: 1px solid black; border-radius: 50%; width: 30px; height: 30px; display: flex; align-items: center; justify-content: center; margin: 0 auto;"> <span style="font-size: 12px; font-weight: bold;">30</span> </div> <div style="text-align: center; font-size: 8px;">mins</div> | - | <div style="border: 1px solid black; border-radius: 50%; width: 30px; height: 30px; display: flex; align-items: center; justify-content: center; margin: 0 auto;"> <span style="font-size: 12px; font-weight: bold;">120</span> </div> |
|---|---|---|---|---|---|---|---|--|---|---|---|---|---|--|

CasoLine MF is a suspended ceiling system suitable for most internal drylining applications. The fully concealed grid and ceiling lining can be used in conjunction with Gyproc plasterboards and Gyptone and Rigitone boards to create a seamless, monolithic appearance.



## Key facts

- Monolithic appearance
- Suspension from concrete or timber floors and purlins
- Acoustic hangers provide option of resilient suspension
- Durable ceiling lining
- Ventilation ducts and other services accommodated in plenum
- Simple accommodation of access panels
- Easy to create bulkheads and level change
- Easily integrated with **CasoLine GRID**
- Fully integrated access hatches

|  |   |  |   |   |   |  |
|--|---|--|---|---|---|--|
| <div style="border: 1px solid black; border-radius: 50%; width: 40px; height: 40px; display: flex; align-items: center; justify-content: center; margin: 0 auto;"> </div> <div style="text-align: center; font-size: 8px;"> <b>Gypframe MF7</b><br/>Primary Support Channel         </div> | + | <div style="border: 1px solid black; border-radius: 50%; width: 40px; height: 40px; display: flex; align-items: center; justify-content: center; margin: 0 auto;"> </div> <div style="text-align: center; font-size: 8px;"> <b>Gypframe MF6</b><br/>Perimeter Support Channel         </div> | + | <div style="border: 1px solid black; border-radius: 50%; width: 40px; height: 40px; display: flex; align-items: center; justify-content: center; margin: 0 auto;"> </div> <div style="text-align: center; font-size: 8px;"> <b>Gyproc Wafer Head Jack-Point Screws</b> </div> | + | <div style="border: 1px solid black; border-radius: 50%; width: 40px; height: 40px; display: flex; align-items: center; justify-content: center; margin: 0 auto;"> </div> <div style="text-align: center; font-size: 8px;"> <b>Gypframe MF5</b><br/>Ceiling Section         </div> |
|--|---|--|---|---|---|--|

## Applications

A wide range of residential and commercial applications.

### Sector

- |  |  |   |
|--|--|---|
| <ul style="list-style-type: none"> <li>✓ Education</li> <li>✓ High-rise multi-occupancy</li> </ul> | <ul style="list-style-type: none"> <li>✓ Healthcare</li> </ul> | <ul style="list-style-type: none"> <li>✓ Apartment buildings</li> </ul> |
|--|--|---|

## System components

### Gypframe metal products











|   |   |                          |
|---|---|--------------------------|
|    | <b>MF5 Ceiling Section</b><br>Secondary section below Gypframe MF7 Primary Support Channel.                                       | <b>Length</b> 3600mm     |
|    | <b>MF6 Perimeter Channel</b><br>Perimeter support for Gypframe MF5 Ceiling Section.   | <b>Length</b> 3600mm     |
|    | <b>MF7 Primary Support Channel</b><br>Primary support section.  | <b>Length</b> 3600mm     |
|    | <b>MF8 Strap Hanger</b><br>Suspension of ceiling grid.  | <b>Length</b> 25m (coil) |
|    | <b>GA1 Steel Angle</b>  | <b>Length</b> 2900mm     |
|  | <b>GAH1 Acoustic Hanger</b>   | <b>Length</b> 35mm       |
|  | <b>GAH2 Acoustic Hanger</b><br>(supplied with washers).   | <b>Length</b> 70mm       |
|  | <b>MF9 Connecting Clip</b><br>Alternative method for fixing Gypframe MF5 Ceiling Section to Gypframe MF7 Primary Support Channel. |                          |
|  | <b>MF11 Nut and Bolt</b><br>Joining hanger to soffit cleat.   |                          |
|  | <b>MF12 Soffit Cleat</b><br>Suspension point from structural soffit.  |                          |

### Board products

|   |   |                         |
|---|---|-------------------------|
|  | <b>Gyproc WallBoard<sup>1</sup></b><br>Thickness<br>Width | 12.5, 15mm<br>900mm     |
|  | <b>Gyproc SoundBloc</b><br>Thickness<br>Width             | 12.5, 15mm<br>1200mm    |
|  | <b>Gyproc FireLine<sup>1</sup></b><br>Thickness<br>Width  | 12.5, 15mm<br>900mm     |
|  | <b>Glasroc F MULTIBOARD</b><br>Thickness<br>Width         | 6, 10, 12.5mm<br>1200mm |
|  | <b>Glasroc F FIRECASE</b><br>Thickness<br>Width           | 15mm<br>600, 1200mm     |

<sup>1</sup> Also available in DUPLEX grades where vapour control is required.

### Fixing and finishing products

|   |   |
|---|---|
|    | <b>Gyproc Profilex Access Panels</b><br>For access to the plenum for maintenance purposes.  |
|    | <b>Gyptone Access Panels</b><br>To integrate with the Gyptone range of ceiling boards - LINE 6, QUATTRO 41, 46 and 47.  |
|    | <b>Gyproc Wafer Head Drywall Screws</b><br>For Gypframe metal-to-metal fixing less than 0.8mm thick ('T' studs less than 0.6mm thick).  |
|    | <b>Gyproc Wafer Head Jack-Point Screws</b><br>For fixing hanger to Gypframe MF7 Primary Support Channel, and for fixing Gypframe MF5 Ceiling Section to Gypframe MF7 Primary Support Channel. |
|    | <b>Gyproc Drywall Screws</b><br>For fixing boards to Gypframe metal framing less than 0.8mm thick ('T' studs less than 0.6mm thick).  |
|  | <b>Gyproc Sealant</b><br>Sealing air paths for optimum sound insulation.  |
|  | <b>Gyproc jointing materials</b><br>For seamless jointing.  |
|  | <b>Rigitone installation tools</b><br>For installation and finishing of Rigitone boards.  |
|  | <b>Rigitone Vario 60</b><br>For jointing of Rigitone boards.  |
|  | <b>Thistle GypPrime</b><br>For controlling suction on Rigitone board edges.   |
|  | <b>Thistle Multi-Finish or Thistle Board Finish</b><br>To provide a plaster skim finish.  |
|  | <b>Thistle Spray Finish</b><br>Gypsum finish plaster for spray or hand application.   |



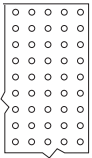
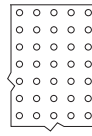


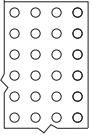
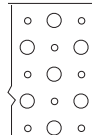


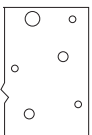
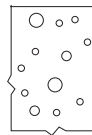

### Insulation products

|   |   |
|---|---|
|  | <b>Isover APR 1200</b><br>25mm and 50mm, for improved acoustic and thermal performance.                                   |
|  | <b>Isover Spacesaver Ready-Cut</b><br>100mm, for improved acoustic and thermal performance.                               |
|  | <b>Isover Frame Batt 32</b><br>50mm, for improved acoustic, thermal and fire performance.                                 |
|  | <b>Isover Sound Deadening Floor Slab</b><br>For providing sound deadening in timber-based intermediate separating floors. |
|  | <b>Stone mineral wool (by others)</b><br>To achieve fire performance.   |



Always use genuine branded British Gypsum components to qualify for SpecSure® lifetime warranty

## System components (continued)

| Gyptone board products  |   | Rigitone board products   |   |
|---|---|---|---|
|  <p><b>Gyptone QUATTRO 41</b><br/>                     Thickness 12.5mm<br/>                     Length 2400mm<br/>                     Width 1200mm</p> |  <p><b>Gyptone QUATTRO 45</b><br/>                     Thickness 12.5mm<br/>                     Length 2400mm<br/>                     Width 900mm</p>  |  <p><b>Rigitone 8/18</b><br/>                     Thickness 12.5mm<br/>                     Length 1998mm<br/>                     Width 1188mm</p>    |  <p><b>Rigitone 10/23</b><br/>                     Thickness 12.5mm<br/>                     Length 2001mm<br/>                     Width 1196mm</p>         |
|  <p><b>Gyptone QUATTRO 46</b><br/>                     Thickness 12.5mm<br/>                     Length 2400mm<br/>                     Width 1200mm</p> |  <p><b>Gyptone QUATTRO 47</b><br/>                     Thickness 12.5mm<br/>                     Length 2400mm<br/>                     Width 1200mm</p> |  <p><b>Rigitone 15/30</b><br/>                     Thickness 12.5mm<br/>                     Length 2010mm<br/>                     Width 1200mm</p>   |  <p><b>Rigitone 12-20/66</b><br/>                     Thickness 12.5mm<br/>                     Length 1980mm<br/>                     Width 1188mm</p>      |
|  <p><b>Gyptone LINE 6</b><br/>                     Thickness 12.5mm<br/>                     Length 2400mm<br/>                     Width 1200mm</p>     |  <p><b>Gyptone LINE 7 Curve</b><br/>                     Thickness 6.5mm<br/>                     Length 2400mm<br/>                     Width 900mm</p> |  <p><b>Rigitone 8-15-20</b><br/>                     Thickness 12.5mm<br/>                     Length 2000mm<br/>                     Width 1200mm</p> |  <p><b>Rigitone 8-15-20 SUPER</b><br/>                     Thickness 12.5mm<br/>                     Length 1960mm<br/>                     Width 1200mm</p> |
|  <p><b>Gyptone BASE Curve</b><br/>                     Thickness 6.5mm<br/>                     Length 2400mm<br/>                     Width 900mm</p>  |   |   |   |





## Installation overview



### Suspension from concrete soffit

Gypframe MF6 Perimeter Channel is fixed to the wall at maximum 600mm centres, and Gypframe MF12 Soffit Cleats secured to the soffit at 1200mm centres, using appropriate fixings. Gypframe MF8 Strap Hanger or Gypframe GA1 Steel Angles are pre-cut and secured to the soffit cleats with Gypframe MF11 Nut and Bolt. Gypframe MF7 Primary Support Channels are installed over the Gypframe MF6 Perimeter Channels. Fix hangers (two per fixing) to Gypframe MF7 Primary Support Channel using Gyproc Wafer Head Jack-Point Screws. Gypframe MF5 Ceiling Sections are run at right angles to the underside of primary channels to form the secondary grid. The ceiling sections are secured to the primary channels by using two Gyproc Wafer Head Jack-Point Screws. Alternatively, the Gypframe MF5 Ceiling Sections can be secured to the Gypframe MF7 Primary Support Channels using Gypframe MF9 Connecting Clips. Please refer to 'Ceiling lift' in the Design section. Boards are fixed to the secondary grid to form single or multi-layer linings as specified.

### Suspension from timber joists

The procedure is as for concrete except that soffit cleats are not required – hangers are twice fixed directly to the side of the joists.

### Board fixings

Board fixings for Gyproc and British Gypsum specialist boards should be at 150mm centres at board-ends, and at 230mm centres within the field of the board.

Board fixings for Gyptone boards should be at 230mm centres across board-ends and through the field of the board. Board fixings for Rigitone boards should be at 150mm centres at perimeters and 230mm through the field of the board.

A special procedure is used for fixing and jointing Rigitone boards. Detailed installation notes are given in the current British Gypsum **Ceilings Installation Guide**, available to download from [www.british-gypsum.com](http://www.british-gypsum.com)

For full installation details, refer to the British Gypsum **SITE BOOK**, available to download from [www.british-gypsum.com](http://www.british-gypsum.com)

**Performance** (▶ Refer to section 3 - Basic principles of system design)

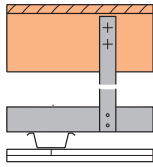
**Fire resistance**



**Table 1 – CasoLine MF fire protection to timber floor construction**  
Solutions to satisfy the requirements of BS EN 1365-2: 2000

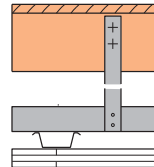


1



Floor boarding of 21mm minimum t&g softwood or wood particle floor boarding. Solid timber joists 38 x 195mm at 600mm centres. **CasoLine MF** suspended ceiling fixed to joists. Ceiling linings as in table.

2



Floor boarding of 21mm minimum t&g softwood or wood particle floor boarding. Solid timber joists 38 x 195mm at 600mm centres. **CasoLine MF** suspended ceiling fixed to joists. Ceiling linings as in table.

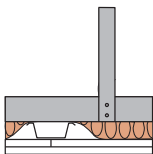
| Detail                               | Board type           | Ceiling lining thickness mm | MF5 support centres mm | MF7 support centres mm | System reference |
|--------------------------------------|----------------------|-----------------------------|------------------------|------------------------|------------------|
| <b>60 minutes fire resistance</b> EN |                      |                             |                        |                        |                  |
| 1                                    | FireLine             | 2 x 12.5                    | 450                    | 1200                   | C106003          |
| <b>90 minutes fire resistance</b> EN |                      |                             |                        |                        |                  |
| 2                                    | Glasroc F MULTIBOARD | 3 x 10                      | 450                    | 1200                   | G106035          |



**Table 2 – CasoLine MF fire protection to floor or roof cavity above suspended ceiling** 1  
Solutions to satisfy the requirements of BS EN 1364-2: 1999



1

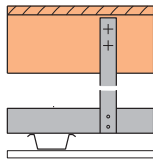


**CasoLine MF** suspended ceiling fixed to structure.  
25mm stone mineral wool slabs (100kg/m<sup>3</sup>) laid over Gyphrame MF5 Ceiling Section.  
Ceiling linings as in table.

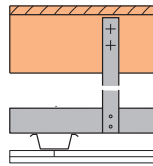
| Detail                               | Board type         | Ceiling lining thickness mm | MF5 support centres mm | MF7 support centres mm | System reference |
|--------------------------------------|--------------------|-----------------------------|------------------------|------------------------|------------------|
| <b>30 minutes fire resistance</b> EN |                    |                             |                        |                        |                  |
| 1                                    | FireLine           | 2 x 12.5                    | 450                    | 1200                   | C106046          |
| <b>60 minutes fire resistance</b> EN |                    |                             |                        |                        |                  |
| 1                                    | Glasroc F FIRECASE | 2 x 15                      | 450                    | 1200                   | G106040          |

<sup>1</sup> The requirement for providing cavity barriers in the same plane as fire-resistant walls may not apply to cavities in floors and roofs if the ceiling beneath the floor or roof cavity provides a minimum of a full 30 minutes fire resistance (30 mins. integrity : 30 mins. insulation) in addition to satisfying other requirements. Refer to section 10 – Cavity fire barriers.

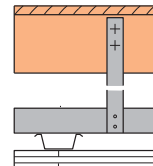
**NB** The fire resistance and sound insulation performances are for imperforate partitions, walls and ceilings incorporating boards with all joints taped and filled, or skimmed according to British Gypsum's recommendations. The quoted performances are achieved only if British Gypsum components are used throughout, and the Company's fixing recommendations are strictly observed. Any variation in the specifications should be checked with British Gypsum.

**Performance** (▶ Refer to section 3 - Basic principles of system design)**BS****Table 3 – Casoline MF fire protection to timber floor construction**  
Solutions to satisfy the requirements of BS 476: Part 21: 1987**1**

Floor boarding of 21mm minimum t&g softwood or wood particle floor boarding. Solid timber joists. 38 x 195mm at 600mm centres. Casoline MF suspended ceiling fixed to joists. Ceiling linings as in table.

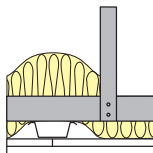
**2**

Floor boarding of 21mm minimum t&g softwood or wood particle floor boarding. Solid timber joists. 38 x 195mm at 600mm centres. Casoline MF suspended ceiling fixed to joists. Ceiling linings as in table.

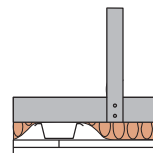
**3**

Floor boarding of 21mm minimum t&g softwood or wood particle floor boarding. Solid timber joists. 38 x 195mm at 600mm centres. Casoline MF suspended ceiling fixed to joists. Ceiling linings as in table.

| Detail                                | Board type           | Ceiling lining thickness mm | Approx. weight kg/m <sup>2</sup> | MF5 support centres mm | MF7 support centres mm | System reference |
|---------------------------------------|----------------------|-----------------------------|----------------------------------|------------------------|------------------------|------------------|
| <b>30 minutes fire resistance BS</b>  |                      |                             |                                  |                        |                        |                  |
| <b>1</b>                              | FireLine             | 1 x 12.5                    | 11                               | 450                    | 1200                   | C106001          |
| <b>2</b>                              | WallBoard            | 2 x 12.5                    | 18                               | 450                    | 1200                   | C106002          |
| <b>60 minutes fire resistance BS</b>  |                      |                             |                                  |                        |                        |                  |
| <b>2</b>                              | FireLine             | 2 x 12.5                    | 21                               | 450                    | 1200                   | C106003          |
| <b>90 minutes fire resistance BS</b>  |                      |                             |                                  |                        |                        |                  |
| <b>2</b>                              | FireLine             | 2 x 15                      | 25                               | 450                    | 900                    | C106004          |
| <b>120 minutes fire resistance BS</b> |                      |                             |                                  |                        |                        |                  |
| <b>3</b>                              | Glasroc F MULTIBOARD | 3 x 10                      | 30                               | 450                    | 1200                   | G106035          |

**BS****Table 4 – Casoline MF fire protection to floor or roof cavity above suspended ceiling <sup>1</sup>**  
Solutions to satisfy the requirements of BS 476: Part 22: 1987**1**

Casoline MF suspended ceiling fixed to structure. Normal fixing centres for Gypframe MF5s and MF7s (450mm and 1200mm respectively). Insulation laid over Gypframe MF5 Ceiling Section. 100mm Isover General Purpose Roll laid over Gypframe MF5 Ceiling Section. Ceiling linings as in table.

**2**

Casoline MF suspended ceiling fixed to structure. Normal fixing centres for Gypframe MF5s and MF7s (450mm and 1200mm respectively). 30mm stone mineral wool slab 45 kg/m<sup>3</sup> laid over Gypframe MF5 Ceiling Section. Ceiling linings as in table.

| Detail                               | Board type | Ceiling lining thickness mm | MF5 support centres mm | MF7 support centres mm | System reference |
|--------------------------------------|------------|-----------------------------|------------------------|------------------------|------------------|
| <b>30 minutes fire resistance BS</b> |            |                             |                        |                        |                  |
| <b>1</b>                             | WallBoard  | 2 x 12.5                    | 450                    | 1200                   | C106045          |
| <b>60 minutes fire resistance BS</b> |            |                             |                        |                        |                  |
| <b>2</b>                             | FireLine   | 2 x 15                      | 450                    | 1200                   | C106051          |

<sup>1</sup> The requirement for providing cavity barriers in the same plane as fire-resistant walls may not apply to cavities in floors and roofs if the ceiling beneath the floor or roof cavity provides a minimum of a full 30 minutes fire resistance (30 mins. integrity : 30 mins. insulation) in addition to satisfying other requirements. Refer to section 10 – Cavity fire barriers.

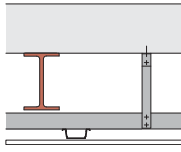
**NB** The fire resistance and sound insulation performances are for imperforate partitions, walls and ceilings incorporating boards with all joints taped and filled, or skimmed according to British Gypsum's recommendations. The quoted performances are achieved only if British Gypsum components are used throughout, and the Company's fixing recommendations are strictly observed. Any variation in the specifications should be checked with British Gypsum.



**Table 5 – CasoLine MF fire protection to steel beams supporting concrete floors <sup>1</sup>**  
**Solutions to satisfy the requirements of BS 476: Part 23: 1987**

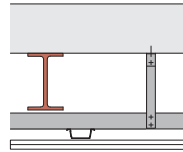


1



CasoLine MF ceiling suspended beneath steel beams supporting a concrete floor. Ceiling linings as in table.

2



CasoLine MF ceiling suspended beneath steel beams supporting a concrete floor. Ceiling linings as in table.

| Detail                                | Board type           | Ceiling lining thickness mm | Approx. weight kg/m <sup>2</sup> | MF5 support centres mm | MF7 support centres mm | System reference |
|---------------------------------------|----------------------|-----------------------------|----------------------------------|------------------------|------------------------|------------------|
| <b>30 minutes fire resistance BS</b>  |                      |                             |                                  |                        |                        |                  |
| 2                                     | WallBoard            | 2 x 12.5                    | 18                               | 450                    | 1200                   | C100013          |
| <b>60 minutes fire resistance BS</b>  |                      |                             |                                  |                        |                        |                  |
| 1                                     | FireLine             | 1 x 12.5                    | 11                               | 450                    | 1200                   | C100014          |
| 1                                     | Glasroc F MULTIBOARD | 1 x 12.5                    | 12                               | 450                    | 1200                   | G100036          |
| <b>120 minutes fire resistance BS</b> |                      |                             |                                  |                        |                        |                  |
| 2                                     | Glasroc F MULTIBOARD | 2 x 10                      | 20                               | 400                    | 1200                   | G100038          |
| 2                                     | FireLine             | 2 x 15                      | 25                               | 450                    | 900                    | C100015          |

<sup>1</sup> Concrete floors as described in BS 476: Part 23. The steel beams subjected to test had a section factor A/V (Hp/A) of 205m<sup>-1</sup> calculated on the basis of three sided profiled exposure. The suspended ceiling will also provide adequate protection to steel beams with a lower section factor.



**Performance** (▶ Refer to section 3 - Basic principles of system design)**Sound insulation****Table 6 – CasoLine MF upgrading the sound insulation of concrete floors**<sup>1</sup>

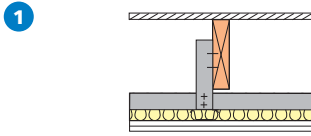
|          |   |          |   |          |   |          |   |
|----------|---|----------|---|----------|---|----------|---|
| <b>1</b> |   | <b>2</b> |   | <b>3</b> |   | <b>4</b> |   |
|          | <b>CasoLine MF</b> ceiling suspended beneath basic floor to give 240mm cavity. Ceiling linings as in table. |          | <b>CasoLine MF</b> ceiling suspended beneath basic floor to give 240mm cavity. Ceiling linings as in table. |          | <b>CasoLine MF</b> ceiling suspended beneath basic floor to give 240mm cavity, with 100mm Isover Spacesaver Ready-Cut in cavity. Ceiling linings as in table. |          | <b>CasoLine MF</b> ceiling suspended beneath basic floor to give 240mm cavity, with 100mm Isover Spacesaver Ready-Cut in cavity. Ceiling linings as in table. |

| Detail   | Board type | Ceiling lining thickness mm | Approx. weight kg/m <sup>2</sup> | Sound insulation   |                           | System reference |
|----------|------------|-----------------------------|----------------------------------|--|---------------------------|------------------|
|          |            |                             |                                  | Airborne R <sub>w</sub> (R <sub>w</sub> + C <sub>tr</sub> ) dB | Impact L <sub>nw</sub> dB |                  |
| <b>1</b> | WallBoard  | 1 x 12.5                    | 10                               | 56 (50)  | 68                        | C100016          |
| <b>2</b> | WallBoard  | 2 x 12.5                    | 18                               | 58 (51)  | 66                        | C100017          |
| <b>3</b> | SoundBloc  | 1 x 12.5                    | 13                               | 61 (51)  | 60                        | C100018          |
| <b>4</b> | SoundBloc  | 2 x 12.5                    | 23                               | 64 (55)  | 57                        | C100019          |

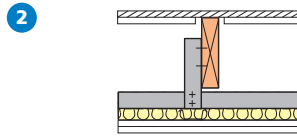
<sup>1</sup> Basic floor construction is lightweight concrete joist floor with insulated concrete infill panel (surface density of infill is 90kg/m<sup>2</sup>) and total depth 150mm. Sound insulation is R<sub>w</sub> 35 dB (airborne) and L<sub>nw</sub> 91 dB (impact).

**NB** The fire resistance and sound insulation performances are for imperforate partitions, walls and ceilings incorporating boards with all joints taped and filled, or skimmed according to British Gypsum's recommendations. The quoted performances are achieved only if British Gypsum components are used throughout, and the Company's fixing recommendations are strictly observed. Any variation in the specifications should be checked with British Gypsum.

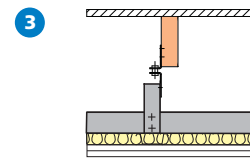
**EN BS** **Table 7 – CasoLine MF upgrading the fire resistance and sound insulation of timber floors** <sup>1</sup>  
**Solutions to satisfy the requirements of BS EN 1365-2: 2000 (where applicable)**  
**and BS 476: Part 21: 1987**



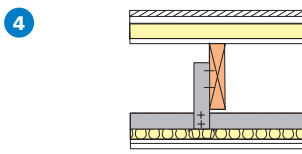
**CasoLine MF** ceiling suspended beneath basic floor (ceiling removed) to give 277mm cavity. 100mm Isover Spacesaver Ready-Cut laid on ceiling boards. Ceiling linings as in table.



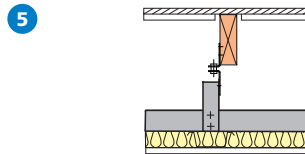
**CasoLine MF** ceiling suspended beneath basic floor (ceiling removed) with a layer of Gyproc Plank fixed to the underside of the chipboard to give a 258mm cavity. 100mm Isover Spacesaver Ready-Cut laid on ceiling boards. Ceiling linings as in table.



**CasoLine MF** ceiling suspended beneath basic floor (ceiling removed) using Gypframe Acoustic Hangers to give 277mm cavity. 100mm Isover Spacesaver Ready-Cut laid on ceiling boards. Ceiling linings as in table.



New floating floor<sup>2</sup> laid over joists. **CasoLine MF** ceiling suspended beneath 195mm x 45mm timber joists at 600mm centres to give 277mm cavity. 100mm Isover Spacesaver Ready-Cut laid on ceiling boards. Ceiling linings as in table.



**CasoLine MF** ceiling suspended beneath GypFloor SILENT using Gypframe Acoustic Hangers to give 277mm cavity. 100mm Isover Spacesaver Ready-Cut laid on ceiling boards. Ceiling linings as in table.

| Detail   | Board type | Ceiling lining thickness mm | Approx. weight kg/m <sup>2</sup> | Floor depth mm | Sound insulation   |                           | System reference |
|--|------------|-----------------------------|----------------------------------|----------------|--|---------------------------|------------------|
|  |            |                             |                                  |                | Airborne R <sub>w</sub> (R <sub>w</sub> + C <sub>tr</sub> ) dB | Impact L <sub>nw</sub> dB |                  |
| <b>30 minutes fire resistance</b> <b>BS</b>    |            |                             |                                  |                |  |                           |                  |
| 1  | SoundBloc  | 2 x 12.5                    | 23                               | 320            | 60   | 60                        | C106007          |
| 2  | SoundBloc  | 2 x 12.5                    | 23                               | 320            | 63 (51)  | 57                        | C106009          |
| 3  | SoundBloc  | 2 x 12.5                    | 23                               | 320            | 63 (55)  | 54                        | C106013          |
| 4  | SoundBloc  | 2 x 12.5                    | 23                               | 376            | 66 (54)  | 50                        | C106011          |
| <b>60 minutes fire resistance</b> <b>EN BS</b> |            |                             |                                  |                |  |                           |                  |
| 1  | SoundBloc  | 2 x 15                      | 27                               | 325            | 60   | 60                        | C106014          |
| 3  | FireLine   | 2 x 12.5                    | 21                               | 320            | 62 (53)  | 55                        | C106022          |
| 3  | SoundBloc  | 2 x 15                      | 27                               | 325            | 63 (55)  | 54                        | C106023          |
| 4  | SoundBloc  | 2 x 15                      | 27                               | 381            | 66 (54)  | 50                        | C106025          |
| 5  | SoundBloc  | 2 x 15                      | 27                               | 336            | 63 (55)  | 51                        | C106026          |
| <b>90 minutes fire resistance</b> <b>BS</b>    |            |                             |                                  |                |  |                           |                  |
| 1  | FireLine   | 2 x 15                      | 25                               | 325            | 59   | 61                        | C106004          |
| 3  | FireLine   | 2 x 15                      | 25                               | 325            | 62 (53)  | 55                        | C106024          |

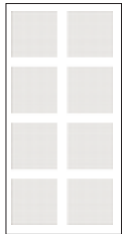
<sup>1</sup> Basic floor construction is 45mm x 195mm timber joists at 600mm centres with 21mm t&g wood chipboard flooring.

<sup>2</sup> 18mm t&g wood chipboard spot bonded to Gyproc Plank on Isover Sound Deadening Floor Slab laid on overlining of 12mm plywood.

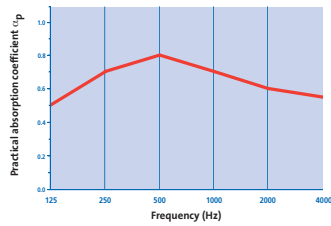
**NB** The fire resistance and sound insulation performances are for imperforate partitions, walls and ceilings incorporating boards with all joints taped and filled, or skimmed according to British Gypsum's recommendations. The quoted performances are achieved only if British Gypsum components are used throughout, and the Company's fixing recommendations are strictly observed. Any variation in the specifications should be checked with British Gypsum.

Table 8 – Sound absorption data for Gyptone boards - tested on a 400mm plenum

**QUATTRO 41**



Sound absorption coefficient  $\alpha_p$

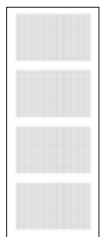


Gyptone QUATTRO 41

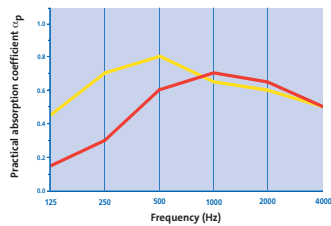
| Practical absorption coefficient $\alpha_p$ |      |      |      |      |      |             |          | AC <sup>1</sup> | NRC <sup>2</sup> |
|---|------|------|------|------|------|-------------|----------|-----------------|------------------|
| 125   | 250  | 500  | 1k   | 2k   | 4k   | $\alpha_w$  |          |                 |                  |
| 0.50  | 0.70 | 0.80 | 0.70 | 0.60 | 0.55 | <b>0.65</b> | <b>C</b> | <b>0.70</b>     |                  |

System reference ■ C10A091

**QUATTRO 45**



Sound absorption coefficient  $\alpha_p$



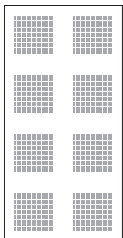
Gyptone QUATTRO 45

Gyptone QUATTRO 45 plus 50mm Isover APR 1200

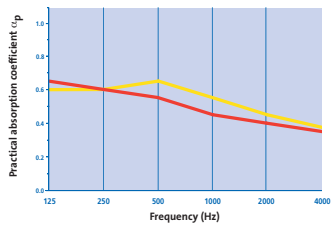
| Practical absorption coefficient $\alpha_p$ |      |      |      |      |      |             |          | AC <sup>1</sup> | NRC <sup>2</sup> |
|---|------|------|------|------|------|-------------|----------|-----------------|------------------|
| 125   | 250  | 500  | 1k   | 2k   | 4k   | $\alpha_w$  |          |                 |                  |
| 0.15  | 0.30 | 0.60 | 0.70 | 0.65 | 0.50 | <b>0.60</b> | <b>C</b> | <b>0.60</b>     |                  |
| 0.40  | 0.70 | 0.80 | 0.80 | 0.70 | 0.60 | <b>0.75</b> | <b>C</b> | <b>0.75</b>     |                  |

System reference ■ C10A106  
■ C10A107

**QUATTRO 46**



Sound absorption coefficient  $\alpha_p$



Gyptone QUATTRO 46

Gyptone QUATTRO 46 plus 100mm Isover Spacesaver Ready-Cut

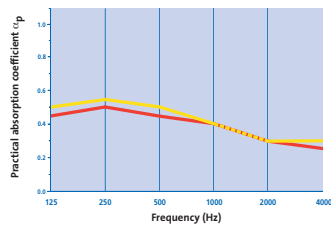
| Practical absorption coefficient $\alpha_p$ |      |      |      |      |      |                |          | AC <sup>1</sup> | NRC <sup>2</sup> |
|---|------|------|------|------|------|----------------|----------|-----------------|------------------|
| 125   | 250  | 500  | 1k   | 2k   | 4k   | $\alpha_w$     |          |                 |                  |
| 0.65  | 0.60 | 0.55 | 0.45 | 0.40 | 0.35 | <b>0.45(L)</b> | <b>D</b> | <b>0.50</b>     |                  |
| 0.60  | 0.60 | 0.65 | 0.55 | 0.45 | 0.40 | <b>0.50(L)</b> | <b>D</b> | <b>0.55</b>     |                  |

System reference ■ C10A014  
■ C10A015

**QUATTRO 47**



Sound absorption coefficient  $\alpha_p$



Gyptone QUATTRO 47

Gyptone QUATTRO 47 plus 50mm Isover APR 1200

| Practical absorption coefficient $\alpha_p$ |      |      |      |      |      |                |          | AC <sup>1</sup> | NRC <sup>2</sup> |
|---|------|------|------|------|------|----------------|----------|-----------------|------------------|
| 125   | 250  | 500  | 1k   | 2k   | 4k   | $\alpha_w$     |          |                 |                  |
| 0.45  | 0.50 | 0.45 | 0.40 | 0.30 | 0.25 | <b>0.35(L)</b> | <b>D</b> | <b>0.40</b>     |                  |
| 0.50  | 0.55 | 0.50 | 0.40 | 0.30 | 0.30 | <b>0.40(L)</b> | <b>D</b> | <b>0.45</b>     |                  |

System reference ■ C10A016  
■ C10A017

<sup>1</sup> AC – Absorption Class.

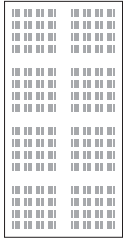
<sup>2</sup> NRC – Noise Reduction Coefficient.

**NB** For further information on sound absorption performance of Gyptone boards, refer to British Gypsum Ceiling Products Acoustic Performance Data publication, available to download from [www.british-gypsum.com](http://www.british-gypsum.com)

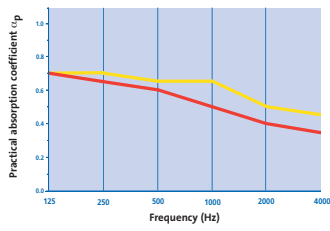
**NB** All products have been tested to BS EN 20354 and ISO 354. The single figure rating practical sound absorption coefficient  $\alpha_w$  is calculated in accordance with EN ISO 11654. Suffix letters indicate where performance is limited at either low, medium or high frequencies.

**Table 8 (continued) – Sound absorption data for Gyptone boards - tested on a 400mm plenum**

**LINE 6**



Sound absorption coefficient  $\alpha_p$

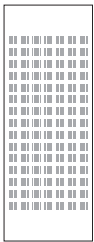


System reference ■ C10A001  
■ C10A002

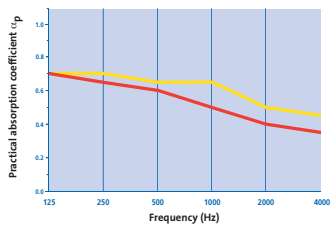
■ Gyptone LINE 6  
■ Gyptone LINE 6 plus 100mm Isover Spacesaver Ready-Cut

| Practical absorption coefficient $\alpha_p$ |      |      |      |      |      |                |                 |                  |
|---|------|------|------|------|------|----------------|-----------------|------------------|
| 125   | 250  | 500  | 1k   | 2k   | 4k   | $\alpha_w$     | AC <sup>1</sup> | NRC <sup>2</sup> |
| 0.70  | 0.65 | 0.60 | 0.50 | 0.40 | 0.35 | <b>0.45(L)</b> | <b>D</b>        | <b>0.55</b>      |
| 0.70  | 0.70 | 0.65 | 0.65 | 0.50 | 0.45 | <b>0.55(L)</b> | <b>D</b>        | <b>0.65</b>      |

**LINE 7 Curve**



Sound absorption coefficient  $\alpha_p$



System reference ■ C10A018  
■ C10A019

■ Gyptone LINE 7 Curve  
■ Gyptone LINE 7 Curve plus 100mm Isover Spacesaver Ready-Cut

| Practical absorption coefficient $\alpha_p$ |      |      |      |      |      |                |                 |                  |
|---|------|------|------|------|------|----------------|-----------------|------------------|
| 125   | 250  | 500  | 1k   | 2k   | 4k   | $\alpha_w$     | AC <sup>1</sup> | NRC <sup>2</sup> |
| 0.70  | 0.65 | 0.60 | 0.50 | 0.40 | 0.35 | <b>0.45(L)</b> | <b>D</b>        | <b>0.55</b>      |
| 0.70  | 0.70 | 0.65 | 0.65 | 0.50 | 0.45 | <b>0.55(L)</b> | <b>D</b>        | <b>0.65</b>      |

<sup>1</sup> AC – Absorption Class.

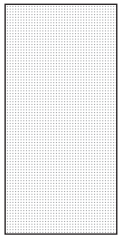
<sup>2</sup> NRC – Noise Reduction Coefficient.

**NB** For further information on sound absorption performance of Gyptone boards, refer to British Gypsum Ceiling Products Acoustic Performance Data publication, available to download from [www.british-gypsum.com](http://www.british-gypsum.com)

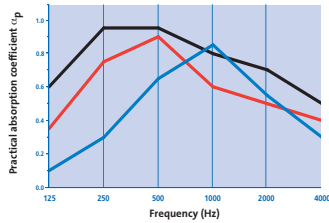
**NB** All products have been tested to BS EN 20354 and ISO 354. The single figure rating practical sound absorption coefficient  $\alpha_w$  is calculated in accordance with EN ISO 11654. Suffix letters indicate where performance is limited at either low, medium or high frequencies.

Table 9 – Sound absorption data for Rigitone boards

8/18



Sound absorption coefficient  $\alpha_p$



System reference

- C10A036
- C10A037
- C10A060

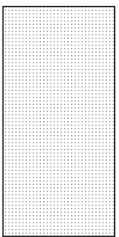
- Rigitone 8/18 (plenum depth 50mm)
- Rigitone 8/18 (plenum depth 200mm)
- Rigitone 8/18 (plenum depth 200mm plus 50mm Isover Frame Batt 32)

Practical absorption coefficient  $\alpha_p$

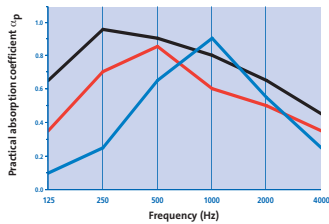
| 125 | 250 | 500 | 1k | 2k | 4k | $\alpha_w$ | AC <sup>1</sup> | NRC <sup>2</sup> |
|-----|-----|-----|----|----|----|------------|-----------------|------------------|
|-----|-----|-----|----|----|----|------------|-----------------|------------------|

|      |      |      |      |      |      |                 |   |             |
|------|------|------|------|------|------|-----------------|---|-------------|
| 0.10 | 0.30 | 0.65 | 0.85 | 0.55 | 0.30 | <b>0.50(M)</b>  | D | <b>0.55</b> |
| 0.35 | 0.75 | 0.90 | 0.60 | 0.50 | 0.40 | <b>0.55(LM)</b> | D | <b>0.70</b> |
| 0.60 | 0.95 | 0.95 | 0.80 | 0.70 | 0.50 | <b>0.70(LM)</b> | C | <b>0.85</b> |

10/23



Sound absorption coefficient  $\alpha_p$



System reference

- C10A038
- C10A039
- C10A061

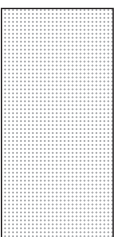
- Rigitone 10/23 (plenum depth 50mm)
- Rigitone 10/23 (plenum depth 200mm)
- Rigitone 10/23 (plenum depth 200mm plus 50mm Isover Frame Batt 32)

Practical absorption coefficient  $\alpha_p$

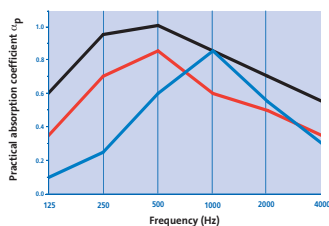
| 125 | 250 | 500 | 1k | 2k | 4k | $\alpha_w$ | AC <sup>1</sup> | NRC <sup>2</sup> |
|-----|-----|-----|----|----|----|------------|-----------------|------------------|
|-----|-----|-----|----|----|----|------------|-----------------|------------------|

|      |      |      |      |      |      |                 |   |             |
|------|------|------|------|------|------|-----------------|---|-------------|
| 0.10 | 0.25 | 0.65 | 0.90 | 0.55 | 0.25 | <b>0.45(M)</b>  | D | <b>0.60</b> |
| 0.35 | 0.70 | 0.85 | 0.60 | 0.50 | 0.35 | <b>0.50(LM)</b> | D | <b>0.65</b> |
| 0.65 | 0.95 | 0.90 | 0.80 | 0.65 | 0.45 | <b>0.65(LM)</b> | C | <b>0.85</b> |

15/30



Sound absorption coefficient  $\alpha_p$



System reference

- C10A040
- C10A041
- C10A062

- Rigitone 15/30 (plenum depth 50mm)
- Rigitone 15/30 (plenum depth 200mm)
- Rigitone 15/30 (plenum depth 200mm plus 50mm Isover Frame Batt 32)

Practical absorption coefficient  $\alpha_p$

| 125 | 250 | 500 | 1k | 2k | 4k | $\alpha_w$ | AC <sup>1</sup> | NRC <sup>2</sup> |
|-----|-----|-----|----|----|----|------------|-----------------|------------------|
|-----|-----|-----|----|----|----|------------|-----------------|------------------|

|      |      |      |      |      |      |                 |   |             |
|------|------|------|------|------|------|-----------------|---|-------------|
| 0.10 | 0.25 | 0.60 | 0.85 | 0.55 | 0.30 | <b>0.45(M)</b>  | D | <b>0.55</b> |
| 0.35 | 0.70 | 0.85 | 0.60 | 0.50 | 0.35 | <b>0.50(LM)</b> | D | <b>0.65</b> |
| 0.60 | 0.95 | 1.00 | 0.85 | 0.70 | 0.55 | <b>0.70(LM)</b> | C | <b>0.85</b> |

<sup>1</sup> AC – Absorption Class.

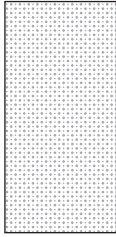
<sup>2</sup> NRC – Noise Reduction Coefficient.

**NB** For further information on sound absorption performance of Gyptone boards, refer to British Gypsum Ceiling Products Acoustic Performance Data publication, available to download from [www.british-gypsum.com](http://www.british-gypsum.com)

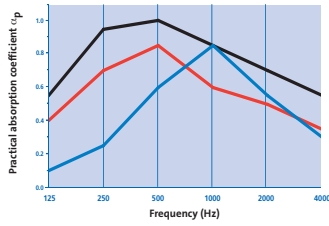
**NB** All products have been tested to BS EN 20354 and ISO 354. The single figure rating practical sound absorption coefficient  $\alpha_w$  is calculated in accordance with EN ISO 11654. Suffix letters indicate where performance is limited at either low, medium or high frequencies.

**Table 9 (continued) – Sound absorption data for Rigitone boards**

**12-20/66**



Sound absorption coefficient  $\alpha_p$



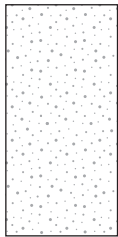
System reference

- C10A042
- C10A043
- C10A063

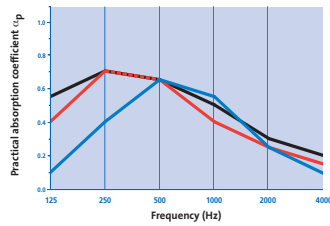
- Rigitone 12-20/66 (plenum depth 50mm)
- Rigitone 12-20/66 (plenum depth 200mm)
- Rigitone 12-20/66 (plenum depth 200mm plus 50mm Isover Frame Batt 32)

| Practical absorption coefficient $\alpha_p$ |      |      |      |      |      |                 | $\alpha_w$ | AC <sup>1</sup> | NRC <sup>2</sup> |
|---|------|------|------|------|------|-----------------|------------|-----------------|------------------|
| 125   | 250  | 500  | 1k   | 2k   | 4k   |                 |            |                 |                  |
| 0.10  | 0.25 | 0.60 | 0.85 | 0.55 | 0.30 | <b>0.45(LM)</b> | D          | <b>0.55</b>     |                  |
| 0.40  | 0.70 | 0.85 | 0.60 | 0.50 | 0.35 | <b>0.50(LM)</b> |            |                 |                  |
| 0.55  | 0.95 | 1.00 | 0.85 | 0.70 | 0.55 | <b>0.70(LM)</b> |            |                 |                  |

**8-15-20**



Sound absorption coefficient  $\alpha_p$



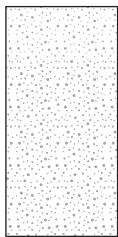
System reference

- C10A056
- C10A057
- C10A068

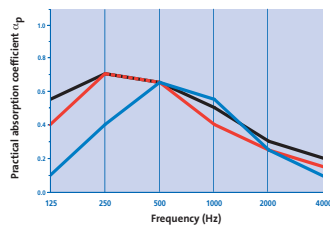
- Rigitone 8-15-20 (plenum depth 50mm)
- Rigitone 8-15-20 (plenum depth 200mm)
- Rigitone 8-15-20 (plenum depth 200mm plus 50mm Isover Frame Batt 32)

| Practical absorption coefficient $\alpha_p$ |      |      |      |      |      |                 | $\alpha_w$ | AC <sup>1</sup> | NRC <sup>2</sup> |
|---|------|------|------|------|------|-----------------|------------|-----------------|------------------|
| 125   | 250  | 500  | 1k   | 2k   | 4k   |                 |            |                 |                  |
| 0.10  | 0.40 | 0.65 | 0.55 | 0.25 | 0.10 | <b>0.25(LM)</b> | E          | <b>0.45</b>     |                  |
| 0.40  | 0.70 | 0.65 | 0.40 | 0.25 | 0.15 | <b>0.30(LM)</b> |            |                 |                  |
| 0.55  | 0.70 | 0.65 | 0.50 | 0.30 | 0.20 | <b>0.35(LM)</b> |            |                 |                  |

**8-15-20 SUPER**



Sound absorption coefficient  $\alpha_p$



System reference

- C10A058
- C10A059
- C10A069

- Rigitone 8-15-20 SUPER (plenum depth 50mm)
- Rigitone 8-15-20 SUPER (plenum depth 200mm)
- Rigitone 8-15-20 SUPER (plenum depth 200mm plus 50mm Isover Frame Batt 32)

| Practical absorption coefficient $\alpha_p$ |      |      |      |      |      |                 | $\alpha_w$ | AC <sup>1</sup> | NRC <sup>2</sup> |
|---|------|------|------|------|------|-----------------|------------|-----------------|------------------|
| 125   | 250  | 500  | 1k   | 2k   | 4k   |                 |            |                 |                  |
| 0.15  | 0.40 | 0.70 | 0.75 | 0.45 | 0.40 | <b>0.50(LM)</b> | D          | <b>0.55</b>     |                  |
| 0.35  | 0.75 | 0.75 | 0.55 | 0.40 | 0.30 | <b>0.45(LM)</b> |            |                 |                  |
| 0.60  | 0.85 | 0.80 | 0.65 | 0.45 | 0.30 | <b>0.45(LM)</b> |            |                 |                  |

<sup>1</sup> AC – Absorption Class.

<sup>2</sup> NRC – Noise Reduction Coefficient.

**NB** For further information on sound absorption performance of Gyptone boards, refer to British Gypsum Ceiling Products Acoustic Performance Data publication, available to download from [www.british-gypsum.com](http://www.british-gypsum.com)

**NB** All products have been tested to BS EN 20354 and ISO 354. The single figure rating practical sound absorption coefficient  $\alpha_w$  is calculated in accordance with EN ISO 11654. Suffix letters indicate where performance is limited at either low, medium or high frequencies.



## Design

### Cavity barriers

Where cavity barriers are required, these can be formed using Gyproc FireLine or Glasroc F MULTIBOARD screw-fixed to a simple metal or timber frame. The framing should be fixed to the structure to avoid undue loading of the ceiling suspension grid or, alternatively, additional hangers should be incorporated to support the ceiling alongside the cavity barrier.

► Refer to section 10 – Cavity fire barriers.

### Relative humidity

Casoline MF ceilings lined with Gyproc, Gyptone, Rigitone or British Gypsum specialist boards are suitable for use under normal occupancy conditions. Buildings in which they are used should be dry, glazed and enclosed, with environmental conditions of no greater than 70% RH at 10°C to 20°C. For high humidity / high moisture conditions use Gyproc plasterboard MR variants or Glasroc F MULTIBOARD.

### Vapour control

For areas other than where perforated Gyptone or Rigitone boards are used, a face layer of DUPLEX grade plasterboard or two coats of Gyproc Drywall Sealer applied to the face of the lining will provide water vapour control.

### Acoustic performance

Gyptone and Rigitone boards are perforated and designed to provide sound absorption when used in conjunction with an airspace behind the ceiling. Increased levels of sound absorption can be achieved by including insulation over the back of the ceiling. Where sound insulation room-to-room is required, sound attenuation ( $D_{ncw}$ ) of 39 dB can be achieved by the inclusion of 100mm Isover Spacesaver Ready-Cut over the back of the ceiling. Alternatively, other design considerations should be adopted such as extending adjoining partitions into the plenum void or installing a plenum barrier.

### Thermal performance

Isover insulation can be laid over the suspension grid to provide the required standard of thermal insulation. Contact the British Gypsum Drywall Academy for further guidance.

### Ceiling lift

Changes to Building Regulations Approved Document L, airtightness requirements within dwellings, can lead to greater changes in air pressure when a door is opened. The ceiling is normally the lightest fixed element in the room, and therefore most likely to be affected by this change in pressure.

This can cause the ceiling to lift, which may create a noise. Whilst this noise can be annoying to the occupier, it has no detrimental effect on the performance of the ceiling.

The designer should consider incorporating a pressure release system to minimise the risk of ceiling lift. Where sufficient 'pressure relief' cannot be designed in, it is recommended that the Gypframe MF5 Ceiling Section and the Gypframe MF7 Primary Support Channel should be screw-fixed together using two Gyproc Wafer Head Jack-Point Screws at each intersection, particularly where non-perforated board linings are specified.

### Suspension - Gyproc, British Gypsum specialist and Gyptone board linings

Fixing points for suspending the metal grid are required at 1200mm centres in each direction. Suitable fixing devices should be employed when fixing to the structure.

The ceiling grid can be suspended from a concrete soffit using Gypframe MF12 Soffit Cleats and Gypframe MF8 Strap Hanger, or alternatively, Gypframe GA1 Steel Angle. The latter provides a more robust suspension support, which restricts any flexing of the lining when pressure is applied from below. Gypframe GA1 Steel Angle is thus the preferred suspension option when a plaster finish is specified to Gyproc boards. If Gypframe GA1 Steel Angle is used, it is recommended that it is fixed to the soffit via Gypframe MF12 Soffit Cleats.

If fixing Gypframe GA1 Steel Angle direct to the soffit, the angle is cut and bent to fit. However, this will reduce the maximum loads that the grid is capable of supporting by 25%. Furthermore, fixing Gypframe GA1 Steel Angles direct is not suitable if the ceiling is likely to deflect due to varying pressures and is not suitable for fixing to a sloping substrate.

Gypframe Acoustic Hangers can be used to suspend the grid from timber joists to maximise the degree of acoustic isolation (see **Construction details – 7**). In a comparative test a 3 dB improvement in airborne sound insulation and a 6 dB improvement in impact sound insulation were achieved. See **Table 7, Construction details 2 and 4**, relating to double layer Gyproc SoundBloc linings. With concrete floors the high mass of the construction means that high levels of acoustic performance can be achieved when the Casoline MF ceiling is suspended by conventional means, i.e. Gypframe MF8 Strap Hangers or Gypframe GA1 Steel Angle.

### Suspension - Rigitone board linings

Gypframe MF7 Primary Support Channels are fixed at 1000mm centres. Fixing points to the structure for the Gypframe MF7 Primary Support Channels are required at 900mm centres. In addition to this, the Gypframe MF5 Ceiling Section should be installed at nominal 330mm centres.

### Partition to suspended ceiling junction

In situations where a GypWall metal stud partition passes through a Casoline MF ceiling, which is to both sides of the partition and appropriately fixed to both this partition and perimeter partitions / walls, consideration can be given to the lateral restraint provided by the ceiling when developing the partition specification.

The relevant maximum height is the greater of the floor to Casoline MF ceiling or ceiling to structural soffit height. Care should be taken during installation of tall partitions so as to not adversely affect their performance. Contact the British Gypsum Drywall Academy for further guidance.

Where a GypWall metal stud partition is fixed to the framework of a Casoline MF ceiling, in accordance with British Gypsum's installation instructions, the permissible maximum height is equal to that of where it is fixed direct to a structural soffit of the same height.

**Imposed loads**

Tables 11, 12 and 13 provide loading data for the suspension grid for Gyproc, British Gypsum specialist, Gyptone and Rigitone boards respectively. Maximum loads will be reduced by 25% when Gypframe GA1 Steel Angle is fixed directly to the soffit (modified loads are shown in brackets).

**Table 10 – Maximum recommended loads on CasoLine MF with Gyproc or British Gypsum specialist board linings <sup>1</sup>**

| Maximum load including weight of board and any insulation<br>MF5 <sup>1</sup> at 450mm centres<br>kg/m <sup>2</sup> (modified load) | Suspension point centres<br>mm | MF7 <sup>2</sup> channel centres<br>mm |
|---|--------------------------------|--|
| 60 (45)   | 1200                           | 600                                    |
| 40 (30)   | 1200                           | 900                                    |
| 35 (26)   | 900                            | 1200                                   |
| 30 (23)   | 1200                           | 1200                                   |

<sup>1</sup> Gypframe MF5 Ceiling Section.

<sup>2</sup> Gypframe MF7 Primary Support Channel.

**Table 11 – Maximum recommended loads on CasoLine MF with Gyptone board linings**

| Maximum load including weight of board and any insulation<br>MF5 <sup>1</sup> at 600mm centres<br>kg/m <sup>2</sup> (modified load) | Suspension point centres<br>mm | MF7 <sup>2</sup> channel centres<br>mm |
|---|--------------------------------|--|
| 55 (41)   | 1200                           | 600                                    |
| 35 (26)   | 1200                           | 900                                    |
| 25 (19)   | 1200                           | 1200                                   |

<sup>1</sup> Gypframe MF5 Ceiling Section.

<sup>2</sup> Gypframe MF7 Primary Support Channel.

**Table 12 – Maximum recommended loads on CasoLine MF with Rigitone board linings**

| Maximum load including weight of board and any insulation<br>MF5 <sup>1</sup> at 330mm centres<br>kg/m <sup>2</sup> (modified load) | Suspension point centres<br>mm | MF7 <sup>2</sup> channel centres<br>mm |
|---|--------------------------------|--|
| 30 (23)   | 900                            | 1000                                   |

<sup>1</sup> Gypframe MF5 Ceiling Section.

<sup>2</sup> Gypframe MF7 Primary Support Channel.

**Services**

The plenum can be used to route all service requirements including ducting, pipework, electrical cables and conduit. Where light fittings, access panels and similar components are incorporated as part of the design requirements, consideration must be given to maintaining the integrity of the ceiling to meet fire resistance and sound insulation requirements.

**Fixtures**

Fixings to the system should always be made into the metal grid or to supplementary framing. Some adjustment of the primary grid may be required to support particularly heavy loads, see Tables 11, 12 and 13. Where loads outside this range are anticipated, independent suspension should be provided from the structure.

**Control joints**

Gyproc Control Joints may be required in the ceiling to relieve stresses induced by expansion and contraction of the structure. It is recommended that they coincide with movement joints within the surrounding structure.

**Rigitone expansion joints**

Rigitone boards should be cut 10mm short of the perimeter wall and should not be fixed to the perimeter channel, see Construction details – 12 - 13.

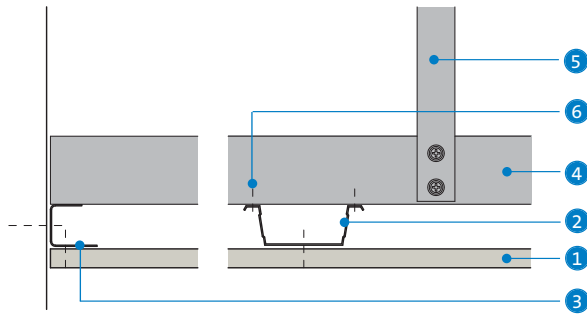
**Board finish**

Additional care and attention should be exercised when jointing Rigitone boards so as not to fill the perforations and impair the acoustic performance of the finished ceiling.

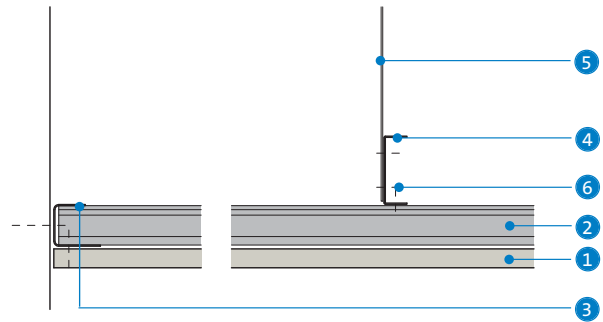
► Refer to section 13 – Finishing systems and decorative effects.

## Construction details

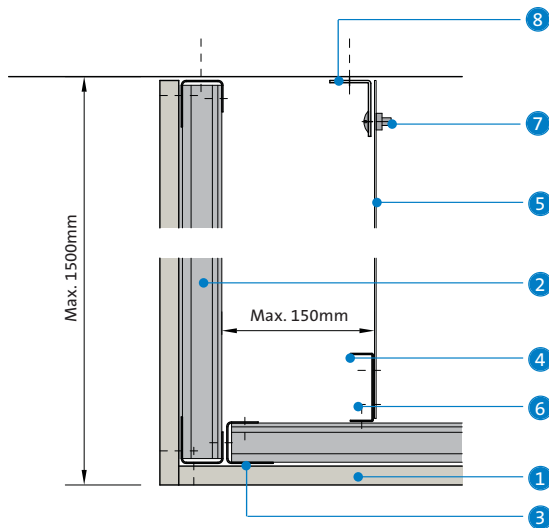
**1** Perimeter parallel to Gypframe MF5 Ceiling Section  
- screw-fixed



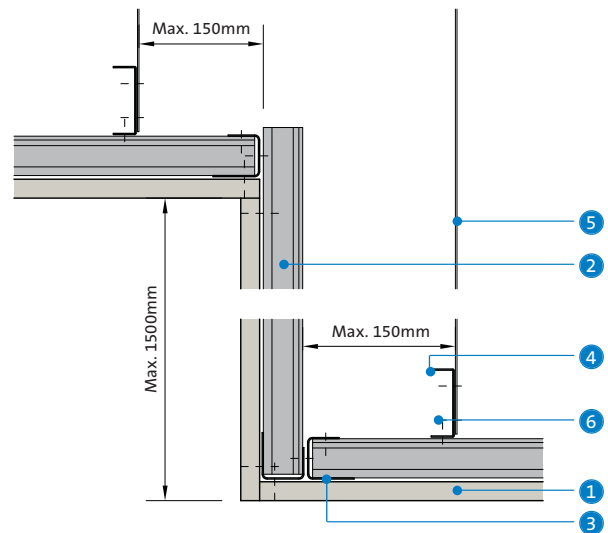
**2** Perimeter perpendicular to Gypframe MF5 Ceiling Section  
- screw-fixed



**3** Bulkhead - screw-fixed



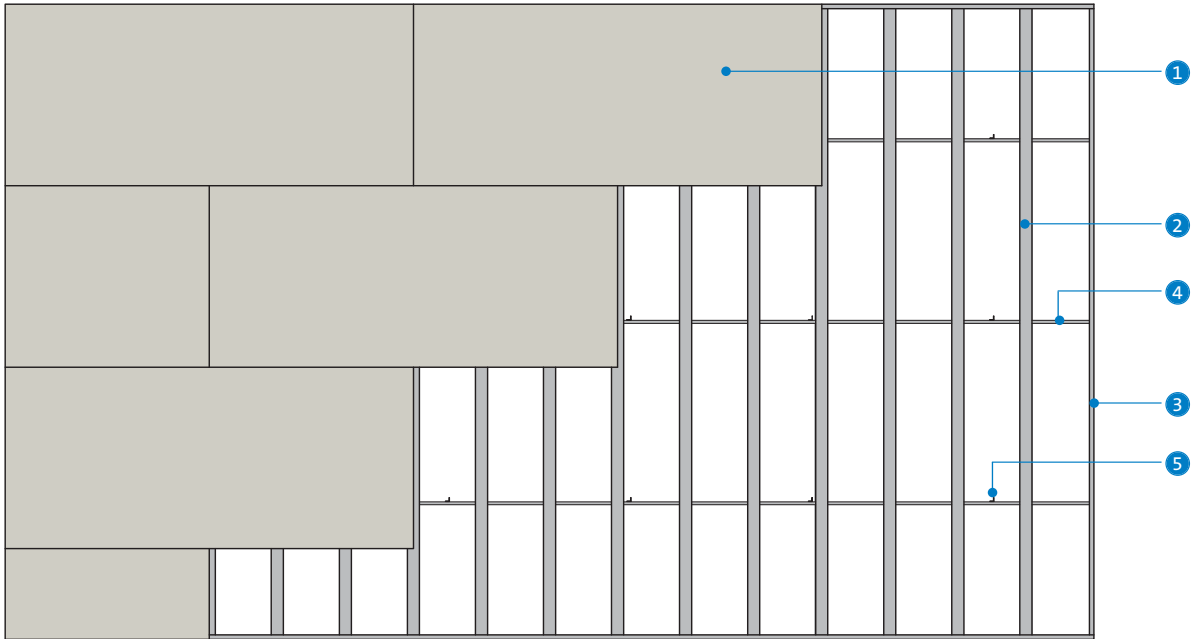
**4** Change of level - screw-fixed



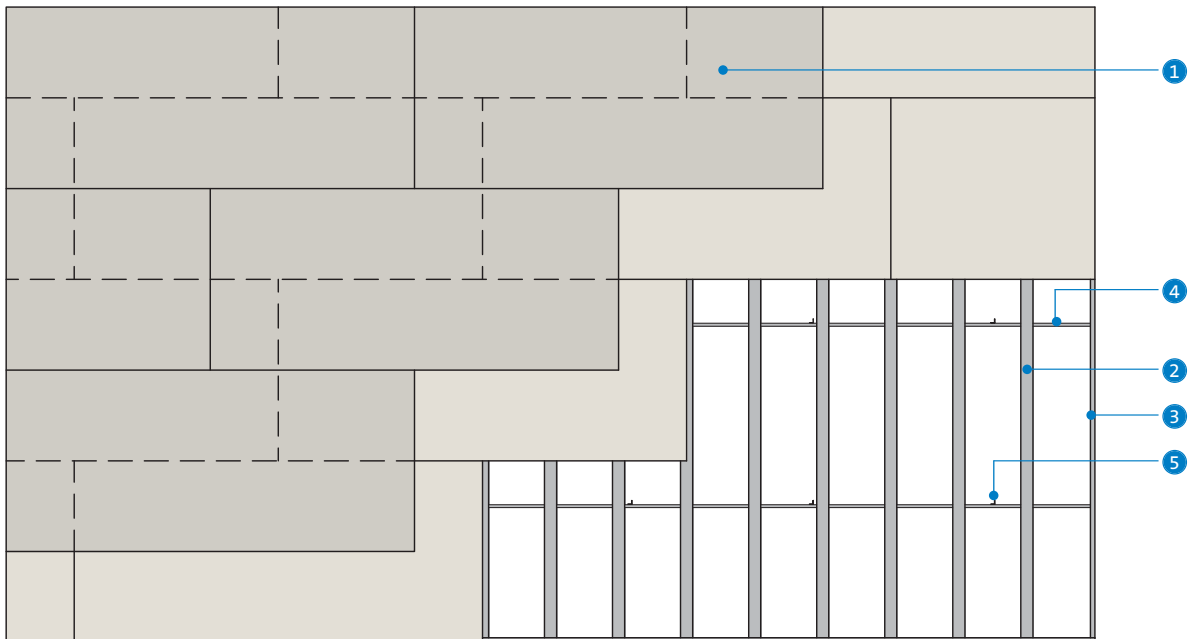
- ① Gyproc plasterboard or British Gypsum specialist board
- ② Gypframe MF5 Ceiling Section
- ③ Gypframe MF6 Perimeter Channel
- ④ Gypframe MF7 Primary Support Channel
- ⑤ Gypframe MF8 Strap Hanger or Gypframe GA1 Steel Angle
- ⑥ Gyproc Wafer Head Jack-Point Screw
- ⑦ Gypframe MF11 Nut and Bolt

- ⑧ Gypframe MF12 Soffit Cleat

5 Reflected ceiling plan - single layer

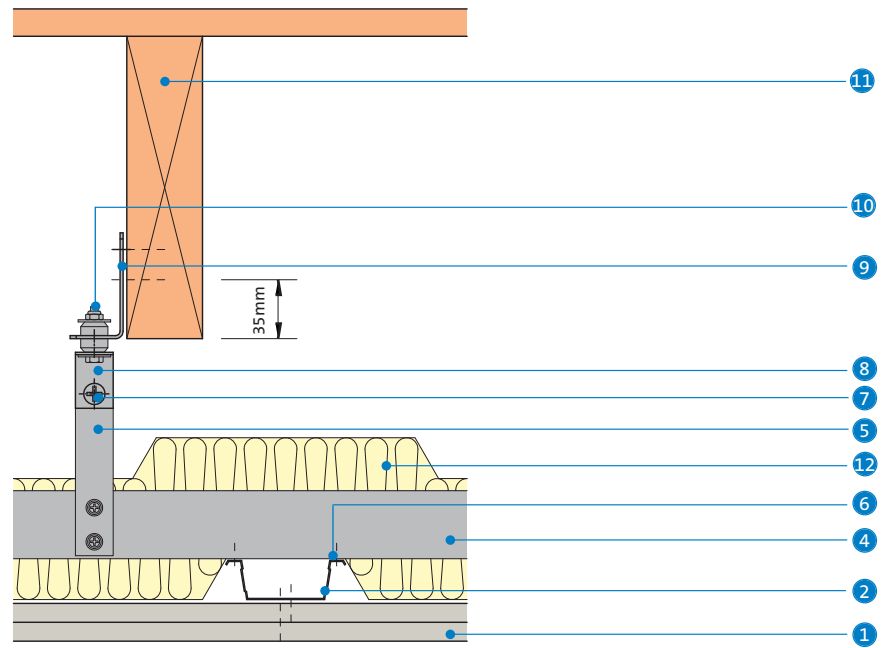


6 Reflected ceiling plan - double layer

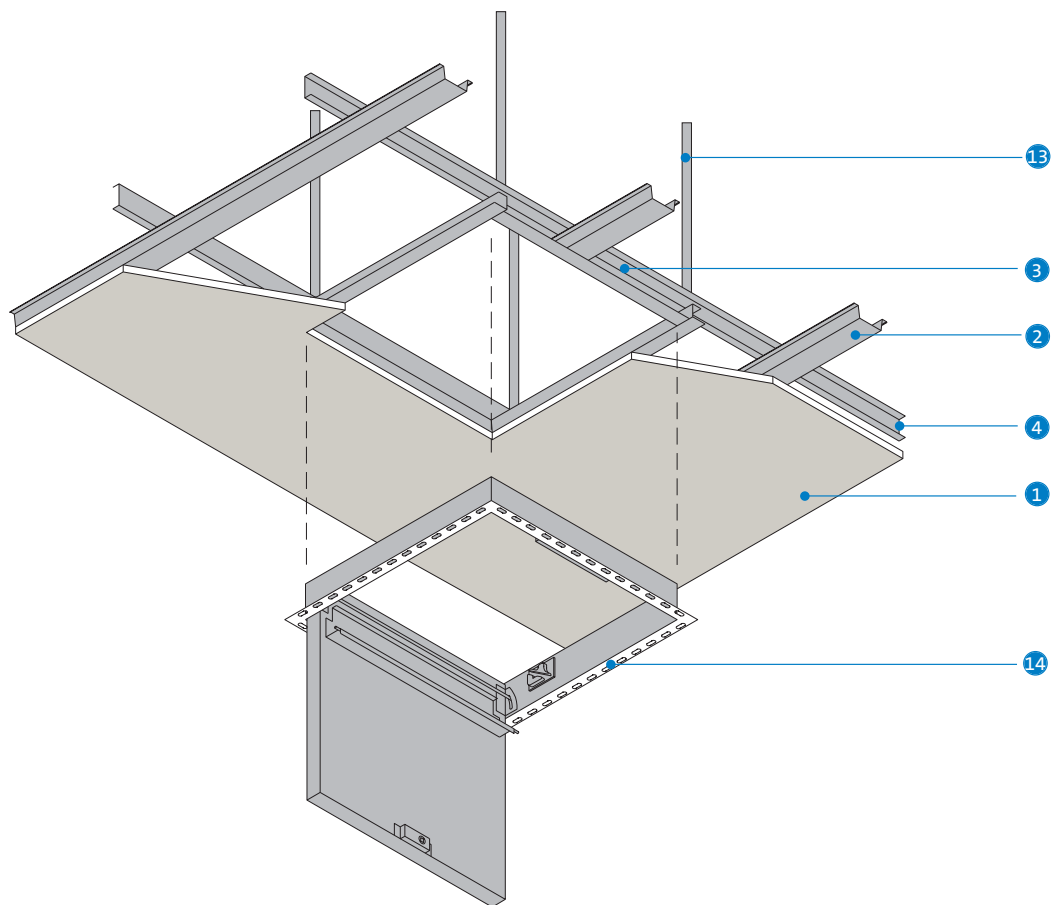


- ① Gyproc plasterboard or British Gypsum specialist board
- ② Gypframe MF5 Ceiling Section
- ③ Gypframe MF6 Perimeter Channel
- ④ Gypframe MF7 Primary Support Channel
- ⑤ Gypframe MF8 Strap Hanger or Gypframe GA1 Steel Angle

## 7 Suspension from timber joist using Gypframe Acoustic Hangers

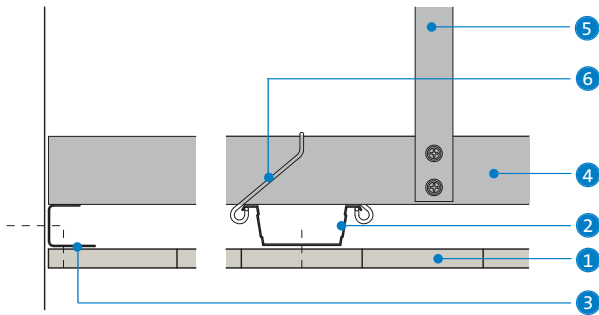


## 8 Gyproc Profiflex Access Panel installation

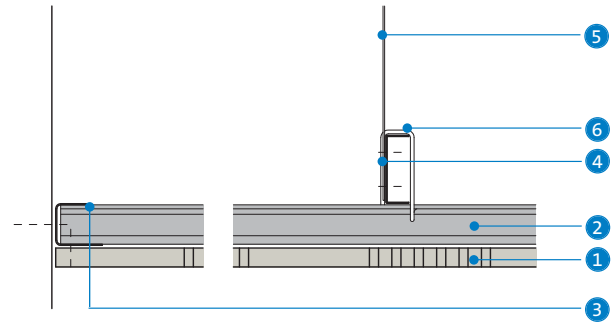


- |  |  |
|--|--|
| ① Gyproc plasterboard or British Gypsum specialist board | ⑧ Gypframe MF12 Soffit Cleat   |
| ② Gypframe MF5 Ceiling Section                           | ⑨ Gypframe Acoustic Hanger fixed with two Gyproc Drywall Timber Screws |
| ③ Gypframe MF6 Perimeter Channel                         | ⑩ M6 bolt and locking nut (by others)                                  |
| ④ Gypframe MF7 Primary Support Channel                   | ⑪ Timber joist floor   |
| ⑤ Gypframe MF8 Strap Hanger or Gypframe GA1 Steel Angle  | ⑫ Isover insulation  |
| ⑥ Gyproc Wafer Head Jack-Point Screw                     | ⑬ Gypframe GA1 Steel Angle   |
| ⑦ Gypframe MF11 Nut and Bolt                             | ⑭ Gyproc Profiflex Access Panel  |

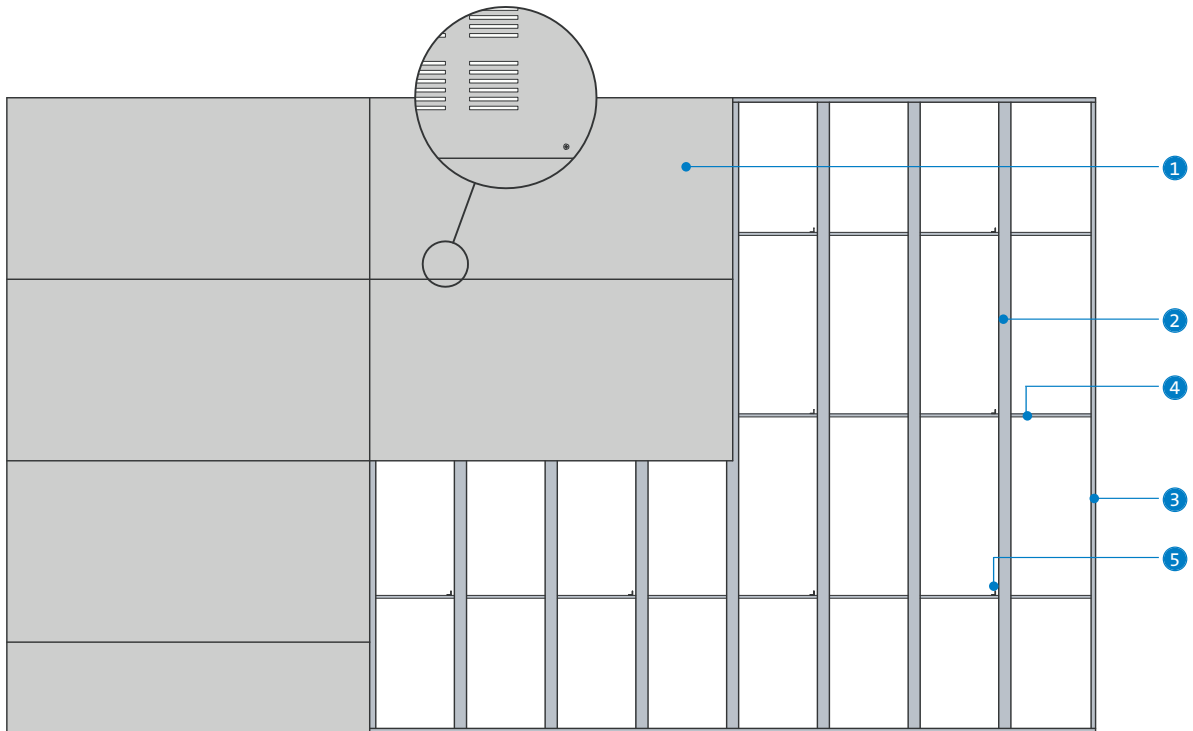
**9** Perimeter parallel to Gypframe MF5 Ceiling Section - Gyptone



**10** Perimeter perpendicular to Gypframe MF5 Ceiling Section - Gyptone



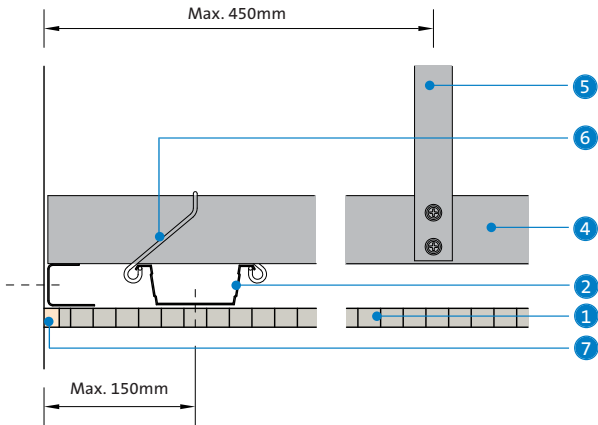
**11** Reflected ceiling plan - Gyptone



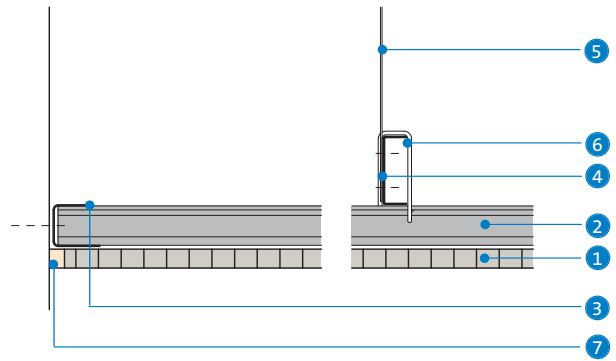
- 1 Gyptone boards
- 2 Gypframe MF5 Ceiling Section
- 3 Gypframe MF6 Perimeter Channel
- 4 Gypframe MF7 Primary Support Channel
- 5 Gypframe MF8 Strap Hanger or Gypframe GA1 Steel Angle
- 6 Gypframe MF9 Connecting Clip



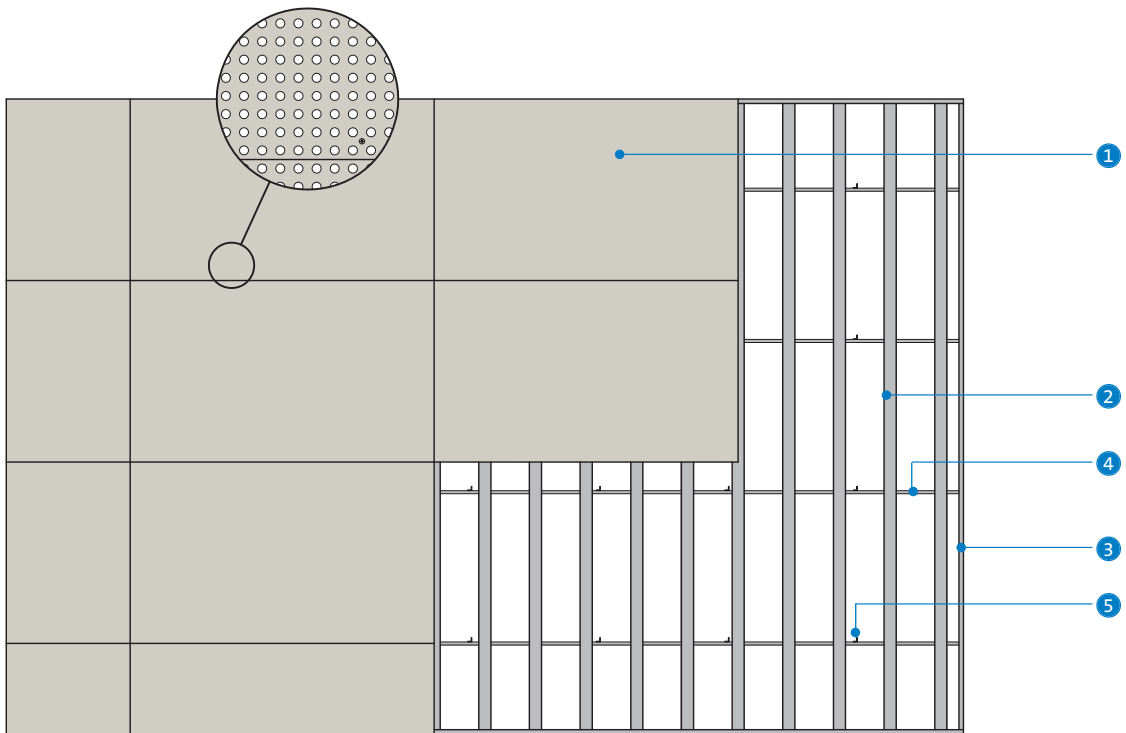
**12** Perimeter parallel to Gypframe MF5 Ceiling Section - Rigitone



**13** Perimeter perpendicular to Gypframe MF5 Ceiling Section - Rigitone



**14** Reflected ceiling plan - Rigitone



- 1 Rigitone boards
- 2 Gypframe MF5 Ceiling Section
- 3 Gypframe MF6 Perimeter Channel
- 4 Gypframe MF7 Primary Support Channel

- 5 Gypframe MF8 Strap Hanger or Gypframe GA1 Steel Angle
- 6 Gypframe MF9 Connecting Clip
- 7 Rigitone Vario 60 filler

**NB** A special procedure is used for fixing and jointing Rigitone boards. Detailed installation notes are given in the current British Gypsum **Ceilings Installation Guide**, available to download from [www.british-gypsum.com](http://www.british-gypsum.com)

