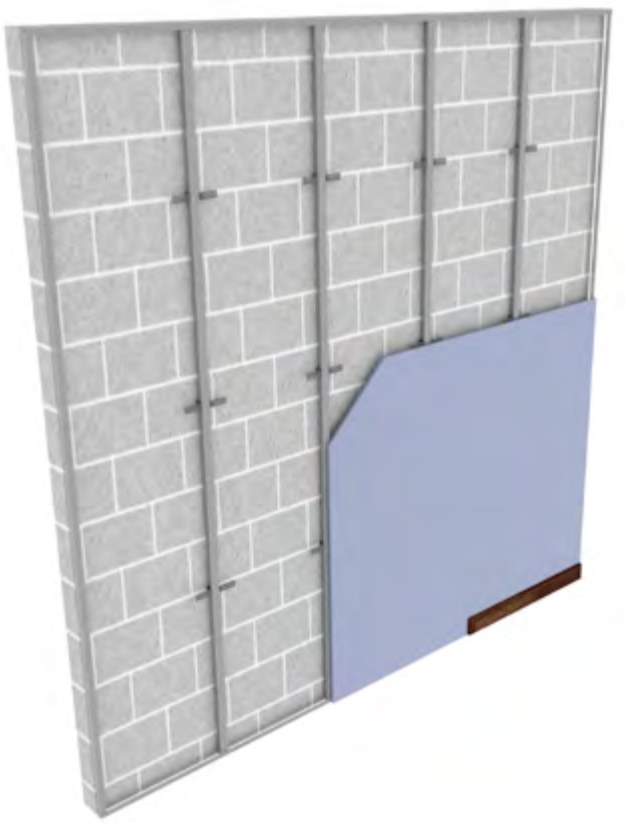
GypLyner
UNIVERSAL

Metal framed
wall lining system

Lapita Hotel
Dubai

GypLyner UNIVERSAL

GypLyner UNIVERSAL wall lining system is a cost-effective, virtually independent metal frame drylining. It is a general purpose system that is suitable for all internal non-loadbearing applications.



49 - 66 R_w dB

Key Benefits

- Background surface undulations are accomodated within the framework cavity
- Services are easily incorporated within the framework cavity, such as water and waste pipe
- Minimal thermal bridging of the insulation layer due to the small, discrete fixings back to the substrate
- Ideal for refurbishing existing walls where enhanced acoustic performance is required

Eligible for the SpecSure warranty from Gyproc

System components

Gypframe metal components

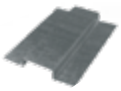
Gypframe GL1 Stud
Main support channel to receive fixing of board

Gypframe GA1 Steel Angle
Primarily used as a perimeter wall angle and also used as a fixing mechanism to hold ISOVER Eco APR in place

Gypframe GLB85 Bracket
For connecting the GL1 lining channel to the background with a maximum of 85mm cavity depth

Gypframe GA4 Steel Angle
Widely used in framed construction to provide support, fixing and additional strength to wall and encasement framing. Also used as an angle to improve the fire performance at deflection heads.

Gypframe GLB135 Bracket
For connecting the GL1 lining channel to the background with a maximum of 135mm cavity depth



Gypframe Service Support Plate
For installation of 18mm plywood within a partition cavity to support medium to heavyweight fixtures

Gypframe GFS1 Fixing Strap
Used to support horizontal board joints and within deflection head details

Board products

Gyproc SoundBloc[1, 2]
(12.5mm, 15mm)
Gypsum plasterboard with a high density core for enhanced sound insulation performance

Glasroc X[2]
(12.5mm)
Glasroc X is a high performance board with a glass-mat liner on both surfaces and a mold & moisture resistant (M2TECH) gypsum core

[1] Moisture resistant (MR) versions of the above boards are specified in intermittent wet use areas, e.g. shower cubicles

[2] Available with Activ'Air technology

ACTIV air

M2TECH MOISTURE & MOLD RESISTANT

System components (continued)

Fixing products

Gyproc Drywall Screws
Corrosion resistant self-tapping steel screws for fixing board to metal framing less than 0.8mm thick

Gyproc Waferhead Screws
Corrosion resistant self-tapping steel screws for fixing metal to metal framing less than 0.8mm thick

Gyproc Jack-Point Screws
Corrosion resistant self-drilling steel screws for fixing boards to Gypframe metal framing 0.8mm thick or greater and all 'I' studs

Gyproc Waferhead Jack-Point Screws
Corrosion resistant self-drilling steel screws for fixing metal to metal framing 0.8mm thick or greater and all 'I' studs

Gyproc Wedge Anchor
Corrosion resistant anchor used for fixing fire rated partition and ceiling systems into masonry

Gyproc Hammer Fix
Corrosion resistant nail, screw engaged in a nylon plug, suitable for fixing non fire rated partition systems and ceiling perimeters into masonry

Plasterboard accessories

Gyproc Jointing Compound
Air-drying, asbestos free, ready mixed compound for filling and finishing plasterboard joints and corner beads

Gyproc Paper Tape
Designed for reinforcing flat joints when finishing plasterboard joints providing improved resistance against cracking

Gyproc FireStrip
Soft extruded linear gap seal for use within fire rated Gyproc system deflection head details

Gyproc Fibre Tape
Suitable for flat joint reinforcement

Gyproc Sealant
Used for sealing air paths to reduce air-leakage and optimise sound insulation performance

Glasroc X Tape
Suitable for internal and semi-exposed applications when used in conjunction with Glasroc X, MR and M2TECH range of boards

Corners

Habito Flex 83
Adjustable and superior corner reinforcement that uses structural laminate technology for ultimate impact protection

Levelline Flex
Adjustable corner reinforcement that flexes to any angle and gives high levels of impact protection

Gyproc Drywall Corner Bead
Provides corner reinforcement and protection to plasterboards and plasters

Gyproc Drywall Metal Edge Bead
A galvanised steel channel used to protect plasterboard edges and to form a defined edge commonly used around window reveals

System components (continued)

Insulation products

ISOVER Eco
Acoustic Partition Roll (APR)
(25, 50, 75 and 100mm)*
Non-combustible glass mineral wool roll for sound insulation in partitions, linings and ceiling systems

Minimum density: 16 kg/m³

KIMMCO ISOVER
Stone mineral wool
(50 and 70mm)*
For fire stopping, where required

Minimum density: 33 kg/m³

* Available in other thickness and density

Installation overview

Gypframe GA1 Steel Angle is fixed to perimeters at 600mm centres using Gyproc Hammer Fix.

Vertical lines are marked on the wall at appropriate intervals to indicate Gypframe GLB85/GLB135 fixing centres. Horizontal lines are marked at appropriate centres to determine individual bracket positions. Brackets are then fixed into position.

Gypframe GL1 Studs are installed inline with the Gypframe GLB85/GLB135 Brackets at 600mm centres and screw fixed using Gyproc Waferhead screws to the GA1 Angle at the head and base.

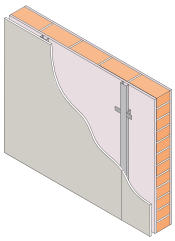
Gypframe GLB85/GLB135 bracket legs are bent forward and each leg fixed to the Gypframe GL1 Studs with Gyproc Waferhead Screws.

The protruding Gypframe GLB85/GLB135 bracket legs are bent back to sit clear of the Gypframe GL1 Studs. At internal angles, Gypframe GL1 Stud is positioned tight into the corner to provide support for the lining boards.

Gyproc boards are screw-fixed to framing members with Gyproc Drywall Screws.

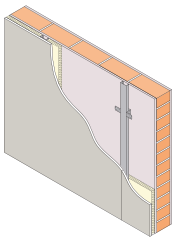
Table 1 – GypLyner UNIVERSAL refurbishment

1



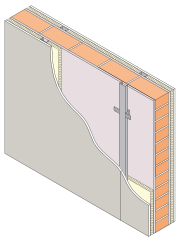
Solid brick wall (103mm) of density 1700 kg/m³ with 13mm plaster each side and Gypframe GL1 Stud framework fixed to **one side** to give 35mm cavity. Lining as in table.

2



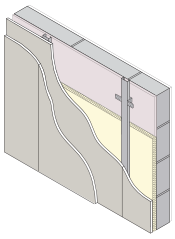
Solid brick wall (103mm) of density 1700 kg/m³ with 13mm plaster each side and Gypframe GL1 Stud framework fixed to **one side** to give 35mm cavity. Cavity filled with 25mm ISOVER Eco APR. Lining as in table.

3



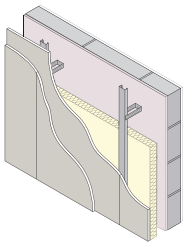
Solid brick wall (103mm) of density 1700 kg/m³ with 13mm plaster each side and Gypframe GL1 Stud framework fixed to **both sides** to give 35mm cavities. Cavities filled with 25mm ISOVER Eco APR. Linings as in table.

4



Solid block wall (100mm) of density 1700 kg/m³ with 13mm plaster each side. Gypframe GL1 Stud framework fixed to **one side** to give 35mm cavity. Cavity filled with 25mm ISOVER Eco APR. Linings as in table.

5



Solid block wall (100mm), of density 1700 kg/m³ with 13mm plaster each side. Gypframe GL1 Stud framework fixed to **one side** to give 85mm cavity. Cavity filled with 50mm ISOVER Eco APR. Linings as in table.

*For fixing details contact the Gyproc Technical Team

Detail	Board type[1]	Lining thickness mm	Sound insulation R_w (R_w + C_{tr}) dB	Improvement over existing wall R_w (R_w + C_{tr}) dB
1	Gyproc SoundBloc	1 x 12.5	49 (43)	+2 (-1)
2	Gyproc SoundBloc	1 x 12.5	57 (50)	+10 (+6)
3	Gyproc SoundBloc	1 x 12.5	60 (42)	+13 (-2)
4	Gyproc SoundBloc	1 x 12.5	57 (50)	+10 (+6)
4	Gyproc SoundBloc	2 x 12.5	60 (55)	+13 (+11)
5	Gyproc SoundBloc	1 x 12.5	64 (56)	+17 (+12)
5	Gyproc SoundBloc	2 x 12.5	66 (59)	+19 (+15)

[1] For greater impact resistance replace Gyproc SoundBloc with 15mm Gyproc DuraLine. For increased fixing capability replace above listed boards with equivalent thickness of Gyproc Habito.

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

NB Where tiling, refer to 'Tiling section' on page 304

Design

Planning – key factors
GypLyner UNIVERSAL comprises Gypframe GL1 Studs installed at 600mm centres fixed back to a masonry background at 800mm vertical centres using either a Gypframe GLB85 or GLB135 bracket dependent on the cavity depth required.

Allow for a stand-off of 25mm - 85mm plus the lining thickness for Gypframe GLB85 Brackets, and 25mm - 135mm plus the lining thickness for Gypframe GLB135 Brackets. These stand-offs are sufficient to correct irregularities normally encountered in solid backgrounds. The standoff will determine the lining dimension required at door and window reveals and soffits. Ceilings should be installed prior to installing GypLyner UNIVERSAL wall linings. Any abutting partitions should also be installed prior to drylining.

Cavity barriers
Local building regulations may require the provision of vertical cavity barriers to long runs of lining. Minimum 12.5mm plasterboard, cut to cavity depth and screw-fixed to the leg of Gypframe GL1 Stud will provide a satisfactory cavity barrier, or alternatively stone mineral wool (by KIMMCO ISOVER) cut neatly to fit across the cavity also forms a suitable closure. The nature of the barrier and its fixing should not detract from the general performance of the wall.

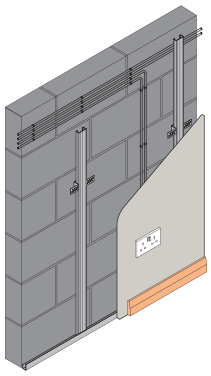
Thermal performance
Uncontrolled air movement through the drylining cavity can result in a reduction in thermal performance through the lining system. U-values for GypLyner UNIVERSAL wall lining systems are typically calculated on a sealed cavity between the lining and the background. This is achieved in practice if the abutting elements and the background are well fitted, and junctions are sealed using Gyproc Sealant.

Condensation and water vapour resistance
The application of two coats of a vapour control sealer (by others) to Gyproc plasterboards after installation and jointing should provide a water vapour resistance of at least 15 MNs/g. Alternatively using an appropriate vapour control layer such as a polythene membrane, prior to installing the plasterboard lining will significantly reduce the risk of interstitial condensation.

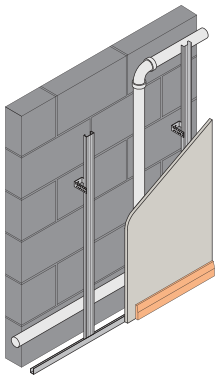
It is important, particularly in new buildings, that external masonry walls are properly dried out before a vapour control layer is provided, otherwise moisture may be trapped, impairing the performance of the construction.

Wall lining rigidity
Gypframe GLB85 or Gypframe GLB135 Brackets should be positioned equidistant at maximum 800mm vertical centres. Where there is a requirement for increased rigidity, these support centres should be reduced accordingly, although acoustic performance may be downgraded. Gyproc Hammer Fix anchors are recommended for fixing brackets to the solid background.

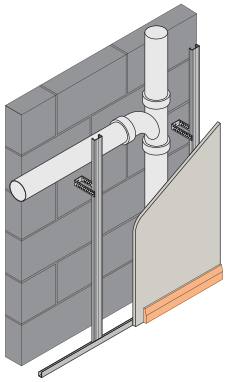
Services
The cavity between the metal framework and the background facilitates the incorporation of services. Pipes and conduits should be fixed in position before installing the framing. Maximum cavity depths (substrate surface to the back of the lining board) of 85mm or 135mm can be achieved using Gypframe GLB85 or GLB135 Bracket respectively. Note that when running services horizontally, there will be the depth of the GL1 Stud (18mm) will need to be accounted for. For example, using a GLB135 Bracket will give a maximum 135mm clear cavity when running services vertically, but 135mm – 18mm (117mm) when running services horizontally.



Cabling



Water and waste pipes



Soil pipes

Design (continued)

Fixtures
Lightweight fixtures can be made directly to the lining. Medium weight fixtures should be made to Gypframe 103 FC 50 Fixing Channel. Heavyweight fixtures (to BS 5234: Part 2) such as wash basins and wall cupboards, can be fixed using plywood secured with Gypframe Service Support Plates. Refer to Service installations for further information.

Where it is not possible to predetermine the exact location of fixtures, or where additional fixtures may be added or moved around the room in the future, Gyproc Habito board should be considered as the lining board where medium and/or heavy weight fixtures are to be included. Refer to GypWall HABITO on page 118 for further information.

Board finishing
Refer to Finishing systems on page 298.

Tiling
Tiles up to 32 kg/m^2 can be applied to the surface of Gyproc plasterboard systems. Tiles up to 60 kg/m^2 can be applied when using Glasroc X or Aquaroc FC board. Refer to Tiling on page 304 for further information.

Mold & moisture protection
Where additional protection against moisture is required, for example in a bathroom, kitchen or other area subject to intermittent humidity, then the moisture resistant grade of the required board type should be specified – for example Gyproc SoundBloc MR. Similarly, if protection against mold spores forming is required then M2TECH (mold & moisture technology) versions of the boards should be specified – for example Gyproc SoundBloc M2TECH.

Using MR or M2TECH versions of any of the plasterboard linings listed in the performance tables, will not affect the fire, acoustic, height or robustness performances listed.

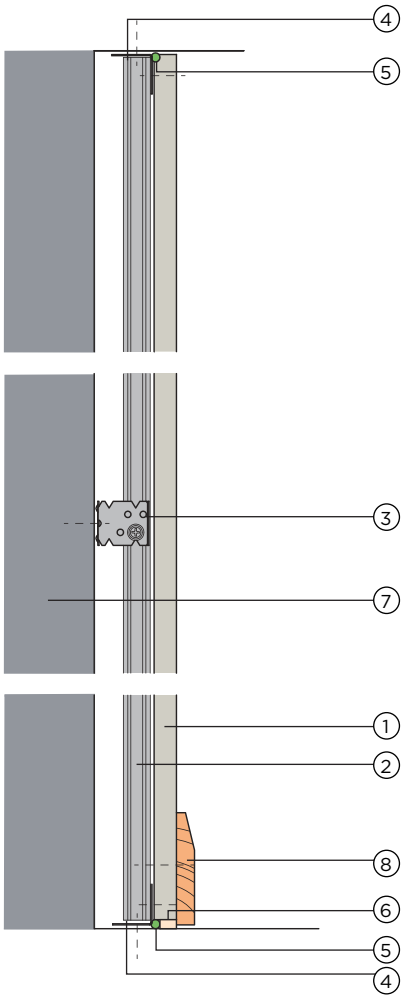
Air quality
Consideration should be given to specifying plasterboard linings that, in addition to the performances listed in the preceding tables on page 210 (covering fire, acoustic, duty rating etc), actively absorb harmful volatile organic compounds (VOC's) such as formaldehyde, from the atmosphere. Where additional protection against VOC's is required, then Activ'Air versions of the boards listed in these pages should be specified – for example Gyproc SoundBloc Activ'Air.

Using Activ'Air versions of any of the plasterboard linings listed in the performance tables, will not affect the fire, acoustic, height or robustness performances listed.

Construction details
For GypLyner UNIVERSAL construction details, refer to the construction details shown on page 213. For more typical or example details, please contact the Gyproc Technical Team.

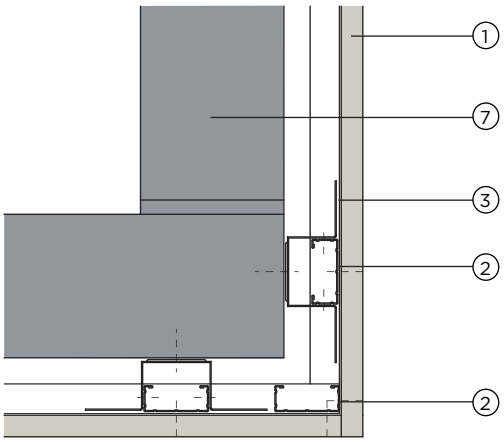
Construction details

1



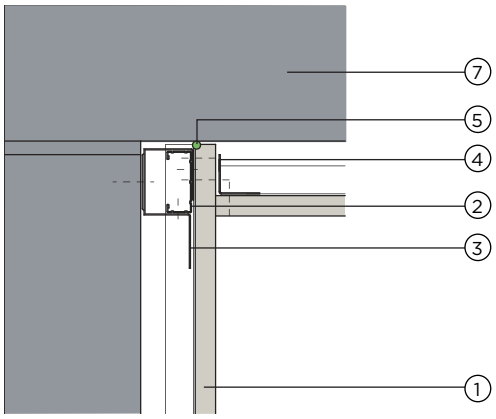
Head and base detail

2



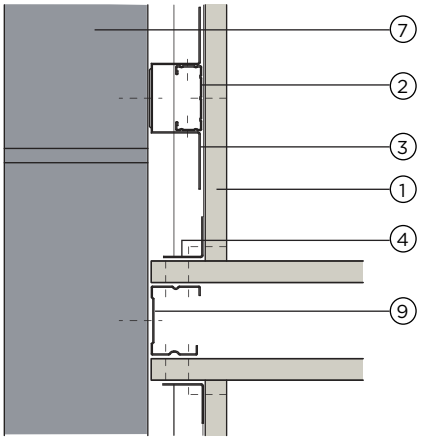
External angle detail

3



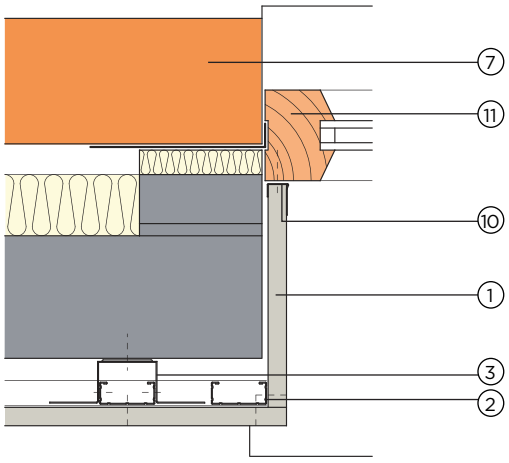
Internal angle detail

4



Partition junction detail

5



Window reveal detail

1. Gyproc SoundBloc
2. Gypframe GL1 Stud
3. Gypframe GLB85/GLB135 Bracket
4. Gypframe GA1 Steel Angle
5. Gyproc Sealant
6. Bulk fill with Gyproc Jointing Compound (where gap exceeds 5mm)
7. Wall structure
8. Skirting
9. Gypframe 'C' Stud
10. Gyproc Edge Bead
11. Window frame