This section includes updated information, added since it was first published in December 2015.
Last updated 10/06/2019

C06. S04. P02 – P14
GypLyner UNIVERSAL

Including C06. S01. P02 – P08
Floors and ceilings introduction

Floors and ceilings

This section details floors and ceilings systems which cover a multitude of performance requirements in all sectors

Floors and ceilings

British Gypsum offers a full range of specifications from simple plasterboard ceilings through to a range of gypsum-based, acoustic suspended ceilings and lay-in grid systems. They cover all building categories, including private and social housing, apartments, healthcare, educational facilities, recreational and industrial properties in both new-build and refurbishment and can satisfy the most demanding performance requirements.

When specifying floor and ceiling solutions, a number of performance characteristics are normally used to determine the required solution. Depending on the project or construction type, these performance parameters could be set by minimum regulatory standards, or a client or customer requirement, for buildings that offer the highest standards of performance and comfort.

Our quick-reference floors and ceilings system guide, below, allows you to simply select the performance categories of interest and identify the British Gypsum floor and ceiling systems which best satisfy your project requirements.

Fire performance mins	Installed cavity depth mm	Acoustic performance				System	Page
		R_wdB	$R_w + C_{tr}$dB	$L_{n,w}$dB	α_w		
30 - 120	≥100	56 - 66	50 - 55	68 - 50	0.35 - 0.85	CasoLine MF	C06. S02. P02
-	≥100	-	-	-	0.35 - 0.85[2]	CasoLine CURVE	C06. S03. P02
30 - 90	25 - 175	52 - 63	50	66 - 55	0.35 - 0.85	GypLyner UNIVERSAL	C06. S04. P02
30 - 90	-	54 - 63	47 - 51	63 - 55	-	GypFloor SILENT[1]	C06. S05. P02
30 - 120	-	36 - 66	50 - 55	78 - 48	-	Timber floors	C06. S06. P02
30 - 60	-	-	-	-	-	Cavity barriers	C06. S07. P02

[1] Where the floor can only be accessed from above, the fire and accoustic performances can be upgraded with the GypFloor SILENT system.
[2] Indicative first test performance only.

Acoustic performance

Table 1 – Recommended laboratory performance to meet requirements of Building Regulations Approved Document E (England and Wales)

Where applicable	Minimum airborne sound insulation $D_{nT,w} + C_{tr}$ (site test result)	Recommended performance $R_w + C_{tr}$ (laboratory test result)	Maximum impact sound transmission $L'_{nT,w}$ (site test result)	Recommended performance $L_{n,w}$ (laboratory test result)
Separating walls between new homes	45dB	54dB	-	-
Separating walls between purpose-built rooms for residential purposes	43dB	52dB	-	-
Separating walls between rooms created by a change of use or conversion	43dB	52dB	-	-
Separating floors between new homes and purpose-built rooms for residential purposes	45dB	54dB	62dB	57dB - 52dB (depending on construction method)
Separating floors between rooms created by a change of use or conversion	43dB	52dB	64dB	59dB - 54dB (depending on construction method)

Table 2 – Recommended laboratory performance to meet requirements of Technical Handbook Section 5 (Scotland)

Where applicable	Minimum airborne sound insulation $D_{nT,w}$ (site test result)	Recommended performance R_w (laboratory test result)	Maximum impact sound transmission $L'_{nT,w}$ (site test result)	Recommended performance $L_{n,w}$ (laboratory test result)
Separating walls between new homes, purpose-built rooms for residential purposes and conversions (not including traditional buildings[1])	56dB	63dB	-	-
Separating walls between rooms created by a change of use or conversion (traditional buildings[1])	53dB	60dB	-	-
Separating floors between new homes, purpose-built rooms for residential purposes and conversions (not including traditional buildings [1])	56dB	63dB	56dB	51dB - 46dB (depending on construction method)
Separating floors between rooms created by a change of use or conversion (traditional buildings[1])	53dB	60dB	58dB	53dB - 48dB (depending on construction method)

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

Good practice specification guidance

British Gypsum's systems are designed and tested to meet every performance requirement and are fully supported by our **SpecSure®** lifetime system warranty.

This means that when our systems are installed following our guidance they will achieve every performance claim we make, and if they don't then we'll put it right. To maximise the performance achieved on site, consider the following good practice specification guidance:

— Consider flanking transmission at the design stage and ensure construction detailing is specified to eliminate, or at least to minimise, any downgrading of the acoustic performance. The sound insulation values quoted in system performance tables are laboratory values and the practicalities of construction will mean that acoustic performances measured in the laboratory will be difficult to achieve on site

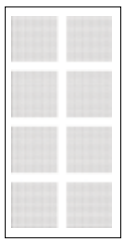
— Small openings such as gaps, cracks or holes will conduct airborne sounds and can significantly reduce the sound insulation of a construction. For optimum sound insulation a construction must be airtight

— When designing spaces requiring separation by sound insulating floors and ceilings abutting structural steelwork, consideration should be given to the potential loss of sound insulation performance through the steelwork

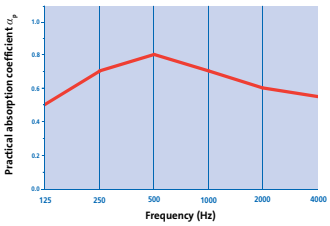
Gyptone performance

Table 3 – Sound absorption data for Gyptone boards

QUATTRO 41



Sound absorption coefficient α_p



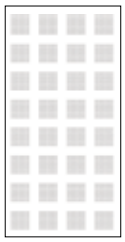
System reference C10A091

Gyptone QUATTRO 41 (plenum depth 187mm)

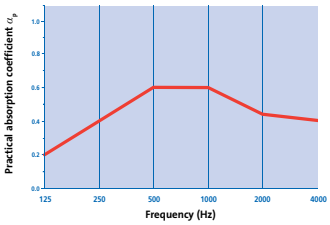
Practical absorption coefficient α_p

125	250	500	1k	2k	4k	α_w	AC[1]	NRC[2]
0.50	0.70	0.80	0.70	0.60	0.55	**0.65**	**C**	**0.70**

QUATTRO 42



Sound absorption coefficient α_p



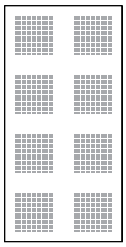
System reference C10A110

Gyptone QUATTRO 42 (plenum depth 50mm)[3]

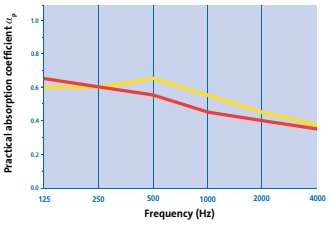
Practical absorption coefficient α_p

125	250	500	1k	2k	4k	α_w	AC[1]	NRC[2]
0.20	0.40	0.60	0.60	0.45	0.40	**0.50**	**D**	**0.55**

QUATTRO 46



Sound absorption coefficient α_p



System reference C10A014
C10A015

Gyptone QUATTRO 46 (plenum depth 400mm)
Gyptone QUATTRO 46 (plenum depth 400mm plus 100mm Isover Spacesaver Ready-Cut)

Practical absorption coefficient α_p

125	250	500	1k	2k	4k	α_w	AC[1]	NRC[2]
0.65	0.60	0.55	0.45	0.40	0.35	**0.45(L)**	**D**	**0.50**
0.60	0.60	0.65	0.55	0.45	0.40	**0.50(L)**	**D**	**0.55**

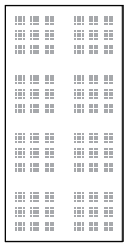
[1] AC - Absorption Class.
[2] NRC - Noise Reduction Coefficient.
[3] Due to installation limitations the minimum cavity size that can be constructed with **CasoLine MF** or **CasoLine CURVE** system is 100mm. The sound absorption performance for these systems is estimated to be equivalent to that of the same system built with a 50mm plenum.

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

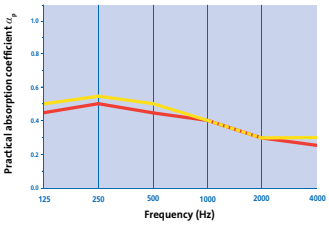
Gyptone performance (continued)

Table 3 (continued) – Sound absorption data for Gyptone boards

QUATTRO 47



Sound absorption coefficient α_p



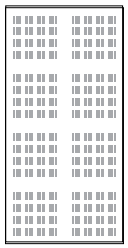
System reference
- C10A016
- C10A017

- **Gyptone QUATTRO 47** (plenum depth 400mm)
- **Gyptone QUATTRO 47** (plenum depth 400mm plus 50mm Isover Acoustic Partition Roll (APR 1200))

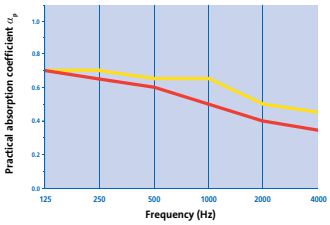
Practical absorption coefficient α_p

125	250	500	1k	2k	4k	α_w	AC[1]	NRC[2]
0.45	0.50	0.45	0.40	0.30	0.25	**0.35(L)**	**D**	**0.40**
0.50	0.55	0.50	0.40	0.30	0.30	**0.40(L)**	**D**	**0.45**

LINE 6



Sound absorption coefficient α_p



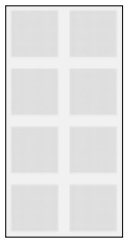
System reference
- C10A001
- C10A002

- **Gyptone LINE 6** (plenum depth 400mm)
- **Gyptone LINE 6** (plenum depth 400mm plus 100mm Isover Spacesaver Ready-Cut)

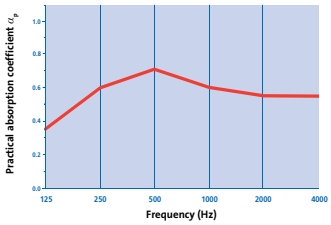
Practical absorption coefficient α_p

125	250	500	1k	2k	4k	α_w	AC[1]	NRC[2]
0.70	0.65	0.60	0.50	0.40	0.35	**0.45(L)**	**D**	**0.55**
0.70	0.70	0.65	0.65	0.50	0.45	**0.55(L)**	**D**	**0.65**

SIXTO 63



Sound absorption coefficient α_p



System reference
- C10A115

- **Gyptone SIXTO 63** (plenum depth 200mm)

Practical absorption coefficient α_p

125	250	500	1k	2k	4k	α_w	AC[1]	NRC[2]
0.35	0.60	0.70	0.60	0.55	0.55	**0.60**	**C**	**0.60**

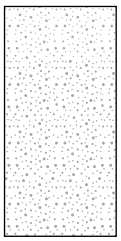
[1] AC - Absorption Class.
[2] NRC - Noise Reduction Coefficient.

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

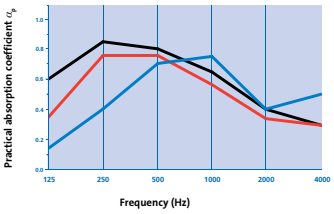
Rigitone performance

Table 4 – Sound absorption data for Rigitone boards

8-15-20 SUPER



Sound absorption coefficient α_p



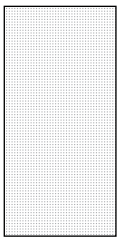
System reference
C10A058
C10A059
C10A069

Rigitone 8-15-20 SUPER (plenum depth 50mm)[3]
Rigitone 8-15-20 SUPER (plenum depth 200mm)
Rigitone 8-15-20 SUPER (plenum depth 200mm plus 50mm Isover Frame Batt 32)

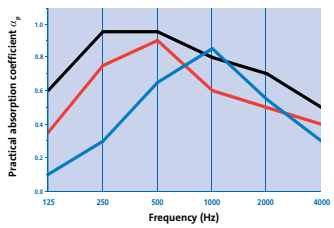
Practical absorption coefficient α_p

125	250	500	1k	2k	4k	α_w	AC[1]	NRC[2]
0.15	0.40	0.70	0.75	0.45	0.40	**0.50(M)**	**D**	**0.55**
0.35	0.75	0.75	0.55	0.40	0.30	**0.45(LM)**	**D**	**0.60**
0.60	0.85	0.80	0.65	0.45	0.30	**0.45(LM)**	**D**	**0.70**

8/18



Sound absorption coefficient α_p



System reference
C10A036
C10A037
C10A060

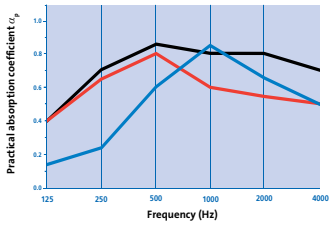
Rigitone 8/18 (plenum depth 50mm)[3]
Rigitone 8/18 (plenum depth 200mm)
Rigitone 8/18 (plenum depth 200mm plus 50mm Isover Frame Batt 32)

Practical absorption coefficient α_p

125	250	500	1k	2k	4k	α_w	AC[1]	NRC[2]
0.10	0.30	0.65	0.85	0.55	0.30	**0.50(M)**	**D**	**0.55**
0.35	0.75	0.90	0.60	0.50	0.40	**0.55(LM)**	**D**	**0.70**
0.60	0.95	0.95	0.80	0.70	0.50	**0.70(LM)**	**C**	**0.85**

8/18 Q

Sound absorption coefficient α_p



System reference
C10A125
C10A124
C10A126

Rigitone 8/18 Q (plenum depth 50mm)[3]
Rigitone 8/18 Q (plenum depth 200mm)
Rigitone 8/18 Q (plenum depth 200mm plus 25mm Isover Acoustic Partition Roll (APR 1200))

Practical absorption coefficient α_p

125	250	500	1k	2k	4k	α_w	AC[1]	NRC[2]
0.15	0.25	0.60	0.85	0.65	0.50	**0.55(M)**	**D**	**0.60**
0.40	0.65	0.80	0.60	0.55	0.50	**0.60**	**C**	**0.65**
0.40	0.70	0.85	0.80	0.80	0.70	**0.80**	**B**	**0.80**

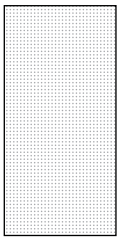
[1] AC - Absorption Class.
[2] NRC - Noise Reduction Coefficient.
[3] Due to installation limitations the minimum cavity size that can be constructed with **CasoLine MF** or **CasoLine CURVE** system is 100mm. The sound absorption performance for these systems is estimated to be equivalent to that of the same system built with a 50mm plenum.

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

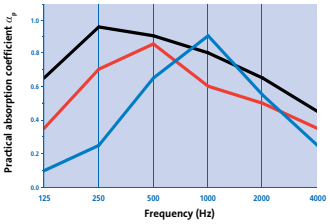
Rigitone performance (continued)

Table 4 (continued) - Sound absorption data for Rigitone boards

10/23



Sound absorption coefficient α_p



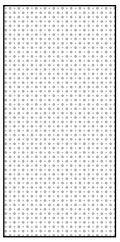
System reference
- C10A038
- C10A039
- C10A061

- **Rigitone 10/23** (plenum depth 50mm)[3]
- **Rigitone 10/23** (plenum depth 200mm)
- **Rigitone 10/23** (plenum depth 200mm plus 50mm Isover Frame Batt 32)

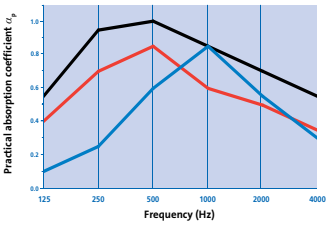
Practical absorption coefficient α_p

125	250	500	1k	2k	4k	α_w	AC[1]	NRC[2]
0.10	0.25	0.65	0.90	0.55	0.25	**0.45(M)**	**D**	**0.60**
0.35	0.70	0.85	0.60	0.50	0.35	**0.50(LM)**	**D**	**0.65**
0.65	0.95	0.90	0.80	0.65	0.45	**0.65(LM)**	**C**	**0.80**

12-20/66



Sound absorption coefficient α_p



System reference
- C10A042
- C10A043
- C10A063

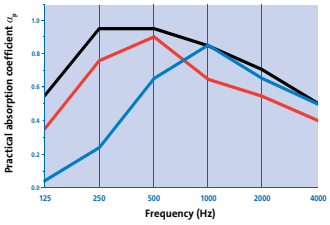
- **Rigitone 12-20/66** (plenum depth 50mm)[3]
- **Rigitone 12-20/66** (plenum depth 200mm)
- **Rigitone 12-20/66** (plenum depth 200mm plus 50mm Isover Frame Batt 32)

Practical absorption coefficient α_p

125	250	500	1k	2k	4k	α_w	AC[1]	NRC[2]
0.10	0.25	0.60	0.85	0.55	0.30	**0.45(M)**	**D**	**0.55**
0.40	0.70	0.85	0.60	0.50	0.35	**0.50(LM)**	**D**	**0.65**
0.55	0.95	1.00	0.85	0.70	0.55	**0.70(LM)**	**C**	**0.90**

12/25

Sound absorption coefficient α_p



System reference
- C10A127
- C10A129
- C10A128

- **Rigitone 12/25** (plenum depth 50mm)[3]
- **Rigitone 12/25** (plenum depth 200mm)
- **Rigitone 12/25** (plenum depth 200mm plus 50mm Isover Frame Batt 32)

Practical absorption coefficient α_p

125	250	500	1k	2k	4k	α_w	AC[1]	NRC[2]
0.05	0.25	0.65	0.85	0.65	0.50	**0.55(M)**	**D**	**0.60**
0.35	0.75	0.90	0.65	0.55	0.40	**0.55(LM)**	**D**	**0.70**
0.55	0.95	0.95	0.85	0.70	0.50	**0.70(LM)**	**C**	**0.85**

[1] AC – Absorption Class.
[2] NRC – Noise Reduction Coefficient.
[3] Due to installation limitations the minimum cavity size that can be constructed with **CasoLine MF** or **CasoLine CURVE** system is 100mm. The sound absorption performance for these systems is estimated to be equivalent to that of the same system built with a 50mm plenum.

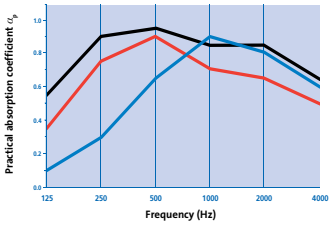
NB All products have been tested to *BS EN 20354* and *ISO 354*. The single figure rating practical sound absorption coefficient α_w is calculated in accordance with *EN ISO 11654*. Suffix letters indicate where performance is limited at either low, medium or high frequencies.

Rigitone performance (continued)

Table 4 (continued) – Sound absorption data for Rigitone boards

12/25 Q

Sound absorption coefficient α_p



System reference

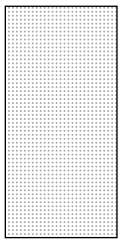
- C10A131
- C10A130
- C10A132

- **Rigitone 12/25 Q** (plenum depth 50mm)[3]
- **Rigitone 12/25 Q** (plenum depth 200mm)
- **Rigitone 12/25 Q** (plenum depth 200mm plus 50mm Isover Frame Batt 32)

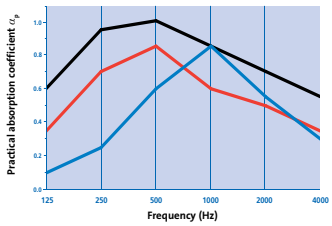
Practical absorption coefficient α_p

125	250	500	1k	2k	4k	α_w	AC[1]	NRC[2]
0.10	0.30	0.65	0.90	0.80	0.60	**0.60(M)**	**C**	**0.65**
0.35	0.75	0.90	0.70	0.65	0.50	**0.65(LM)**	**C**	**0.75**
0.55	0.90	0.95	0.85	0.85	0.65	**0.85(L)**	**B**	**0.90**

15/30



Sound absorption coefficient α_p



System reference

- C10A040
- C10A041
- C10A062

- **Rigitone 15/30** (plenum depth 50mm)[3]
- **Rigitone 15/30** (plenum depth 200mm)
- **Rigitone 15/30** (plenum depth 200mm plus 50mm Isover Frame Batt 32)

Practical absorption coefficient α_p

125	250	500	1k	2k	4k	α_w	AC[1]	NRC[2]
0.10	0.25	0.60	0.85	0.55	0.30	**0.45(M)**	**D**	**0.55**
0.35	0.70	0.85	0.60	0.50	0.35	**0.50(LM)**	**D**	**0.65**
0.60	0.95	1.00	0.85	0.70	0.55	**0.70(LM)**	**C**	**0.85**

[1] AC – Absorption Class.
[2] NRC – Noise Reduction Coefficient.
[3] Due to installation limitations the minimum cavity size that can be constructed with **CasoLine MF** or **CasoLine CURVE** system is 100mm. The sound absorption performance for these systems is estimated to be equivalent to that of the same system built with a 50mm plenum.

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

GypLyner UNIVERSAL

Concealed grid ceiling lining system

SPECSURE Lifetime System Warranty

All our systems are covered by **SpecSure®** when using genuine British Gypsum and Saint-Gobain Isover products

GypLyner UNIVERSAL

GypLyner UNIVERSAL is a versatile ceiling lining system suitable for a wide range of installations, ranging from residential properties to large commercial developments. Simple to install, and compatible with the full range of British Gypsum boards, **GypLyner UNIVERSAL** can be used to significantly improve performance levels in a refurbishment project and can also be used for new build installations.

30 – 90 mins

0.35 – 0.85 α_w

52 – 63 R_w dB

66 – 55 L_{nw} dB

ACTIV air

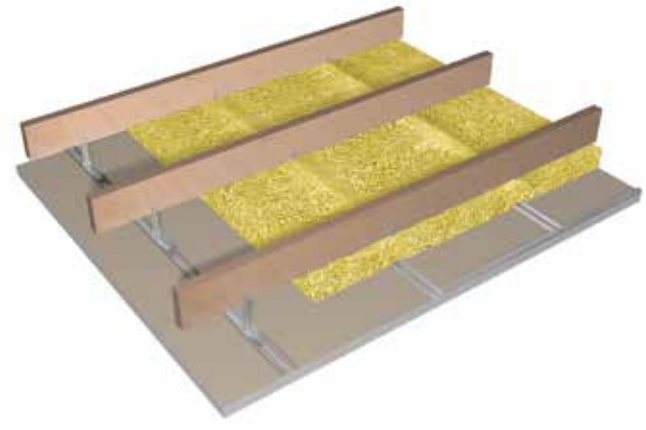
System can be skim finished with ThistlePro PureFinish. Refer to C02. S01. P49

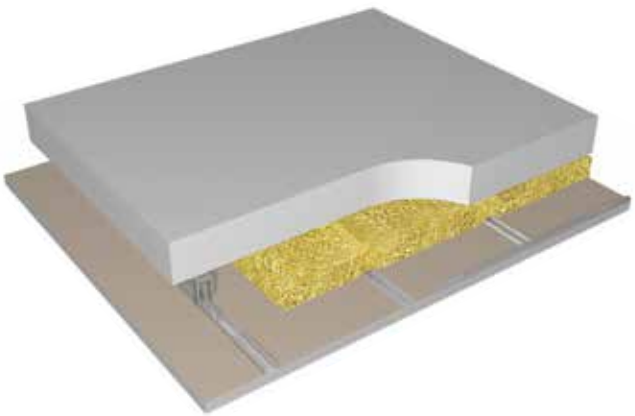
SPECSURE Lifetime System Warranty

Refer to C01. S01. P07

Key benefits

- A versatile system that is suitable for concrete soffits or timber joists, and utilises the same components for either wall or ceiling installations
- Can also be installed onto a plasterboard ceiling, making it ideal for refurbishment projects where it is desirable or necessary to retain the existing ceiling
- Ideal for meeting the diverse range of performance requirements of modern construction - compatible with the full range of British Gypsum boards, including Gyproc, Glasroc, Gyptone and Rigitone ranges
- Minimal loss of room height with as little as 25mm cavity required
- Fire and acoustic performance upgrades can be achieved with access to the underside of the floor only





GypLyner UNIVERSAL performance

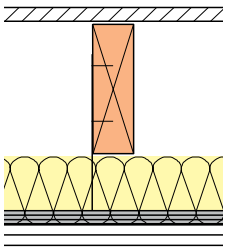
Fixing to new or existing solid timber joist floors
Upgrade to an existing floor requires access from below only

For details of when to specify fire resistance using EN
▶ Refer to **C02. S01. P05**

EN

Table 1 – Solutions to satisfy the requirements of *BS EN 1365-2*

1



21mm t&g flooring over 38mm x 195mm (minimum) timber joists at 600mm (maximum) centres. **GypLyner UNIVERSAL** ceiling fixed to underside of joists with Gypframe GL1 Lining Channels at 450mm maximum centres. 100mm Isover Spacesaver Ready-Cut in the cavity. Ceiling linings as in table. 100% loadbearing ratio.

Detail	Board type	Lining thickness mm	Sound insulation		System reference
			Airborne R_w dB	Impact L_{nw} dB	
60 minutes fire resistance EN					
1	Gyproc SoundBloc	2 x 15	54	65	C106020
1	Gyproc Plank + Gyproc FireLine	1 x 19 + 1 x 12.5	54	65	C106021

▶ For further assistance in choosing the right solution for your project, try the White Book System Selector; an online tool that enables quick and easy filtering by performance criteria. It provides system specific information downloads including BIM (Revit) objects. Go to british-gypsum.com

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 and Saint-Gobain Isover components are used throughout, and the Company's fixing recommendations are strictly observed. Any variation in the specifications should be checked with British Gypsum.

NB If preferred, the existing ceiling may be retained. The new **GypLyner UNIVERSAL** ceiling is installed with Gypframe GL6 Timber Connectors or Gypframe GL2, GL9 or GL12 Brackets, fixed through the existing ceiling into the joists.

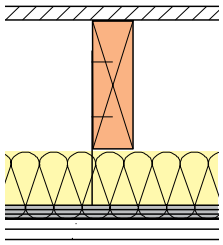
GypLyner UNIVERSAL performance (continued)

Upgrading existing solid timber joist floors - ceiling replaced
Upgrade to an existing floor requires access from below only

For details of when to specify fire resistance using BS
▶ Refer to **C02. S01. P05**

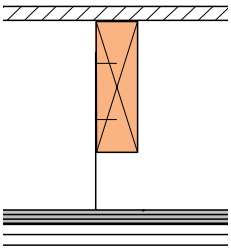
Table 2 – Solutions to satisfy the requirements of *BS 476: Part 21: 1987*

1



Existing floor retained minimum 18mm t&g. Existing wood lath and plaster ceiling removed. **GypLyner UNIVERSAL** ceiling suspended with Gypframe GL1 Lining Channels at 450mm maximum centres. 100mm Isover Spacesaver Ready-Cut in the cavity. Ceiling linings as in table. 100% loadbearing ratio.

2



Existing floor retained minimum 22mm t&g. **GypLyner UNIVERSAL** ceiling suspended with Gypframe GL1 Lining Channels at 450mm maximum centres. Ceiling linings as in table. 100% loadbearing ratio.

Detail	Board type	Lining thickness mm	Joist centres mm	Joist size mm	Sound insulation		System reference
					Airborne R_w dB	Impact L_{nw} dB	
30 minutes fire resistance BS							
1	Gyproc SoundBloc	2 x 12.5	450	200 x 50	54	65	C154004
60 minutes fire resistance BS							
1	Gyproc Plank + Gyproc WallBoard	1 x 19 + 1 x 12.5	600	195 x 45	52	66	C206004
1	Gyproc FireLine	2 x 12.5	450	195 x 45	53	66	C154007
2	Glasroc F MULTIBOARD	1 x 12.5	600	200 x 44	-	-	G106030
90 minutes fire resistance BS							
2	Glasroc F MULTIBOARD	2 x 12.5	600	200 x 50	-	-	G106033

▶ For further assistance in choosing the right solution for your project, try the White Book System Selector; an online tool that enables quick and easy filtering by performance criteria. It provides system specific information downloads including BIM (Revit) objects. Go to british-gypsum.com

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 and Saint-Gobain Isover components are used throughout, and the Company's fixing recommendations are strictly observed. Any variation in the specifications should be checked with British Gypsum.

NB For non t&g floors, overlay with 6mm plywood and ensure all joints are staggered.

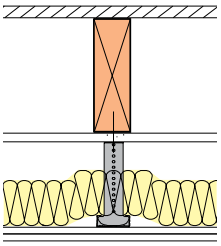
GypLyner UNIVERSAL performance (continued)

Upgrading existing solid timber joist floors - ceiling retained
Upgrade to an existing floor requires access from below only

For details of when to specify fire resistance using BS
▶ Refer to **C02. S01. P05**

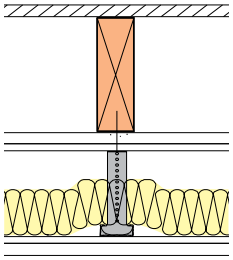
Table 3 – Solutions to satisfy the requirements of *BS 476: Part 21: 1987*

(1)



18mm t&g flooring grade chipboard and existing ceiling of 9.5mm Gyproc WallBoard. **GypLyner UNIVERSAL** ceiling[1] suspended with Gypframe GL1 Lining Channels at 450mm maximum centres to give a minimum cavity of 50mm to a maximum of 145mm. 50mm Isover Acoustic Partition Roll (APR 1200) in the cavity. Ceiling linings as in table.100% loadbearing ratio.

(2)



18mm t&g flooring grade chipboard and ceiling of Gyproc Plank and 12.5mm Gyproc WallBoard to simulate a wood lath and plaster ceiling[2]. **GypLyner UNIVERSAL** ceiling[1] suspended with Gypframe GL1 Lining Channels at 450mm maximum centres to give a minimum cavity of 50mm to a maximum of 145mm. 50mm Isover Acoustic Partition Roll (APR 1200) in the cavity. Ceiling linings as in table. 100% loadbearing ratio.

Detail	Board type	Lining thickness mm	Joist centres mm	Joist size mm	Sound insulation		System reference
					Airborne R_w dB	Impact L_{nw} dB	
30 minutes fire resistance BS							
(2)	Gyproc FireLine	1 x 12.5	450	195 x 45	53	64	C154003
60 minutes fire resistance BS							
(1)	Gyproc FireLine	2 x 12.5	450	195 x 45	56	62	C154005
(2)	Gyproc FireLine	2 x 12.5	450	195 x 45	59	59	C154006

▶ For further assistance in choosing the right solution for your project, try the White Book System Selector; an online tool that enables quick and easy filtering by performance criteria. It provides system specific information downloads including BIM (Revit) objects. Go to british-gypsum.com

[1] Gypframe GL6 Timber Connectors are bent at a position between the third and fourth holes along (forming a 30mm horizontal leg) to form a right angle, and fixed through the existing ceiling with suitable fixings. Alternatively, use Gypframe GL2, GL9 or GL12 Brackets.
[2] Existing lath and plaster ceiling (up to 20mm thick) should be supported by chicken wire, securely fixed to the joists.

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 and Saint-Gobain Isover components are used throughout, and the Company's fixing recommendations are strictly observed. Any variation in the specifications should be checked with British Gypsum.

NB For non t&g floors, overlay with 6mm plywood and ensure all joints are staggered.

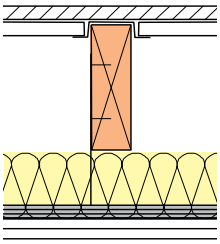
GypLyner UNIVERSAL performance (continued)

Upgrading existing solid timber joist floors
Upgrade to an existing floor

For details of when to specify fire resistance using BS
▶ Refer to **C02. S01. P05**

Table 4 – Solutions to satisfy the requirements of *BS 476: Part 21: 1987*

(1)



GypFloor SILENT comprising minimum 21mm t&g softwood floor boarding with Gyproc Plank on Gypframe SIF Floor Channels. **GypLyner UNIVERSAL** ceiling suspended with Gypframe GL1 Lining Channels at 450mm maximum centres. 100mm Isover Spacesaver Ready-Cut in the cavity. Ceiling linings as in table. 100% loadbearing ratio.

Detail	Board type	Lining thickness mm	Joist centres mm	Joist size mm	Sound insulation		System reference
					Airborne R_w ($R_w + C_{tr}$) dB	Impact L_{nw} dB	
60 minutes fire resistance BS							
(1)	Gyproc Plank + Gyproc SoundBloc	1 x 19 + 1 x 12.5	450	200 x 50	63 (50)	55	C154008

▶ For further assistance in choosing the right solution for your project, try the White Book System Selector; an online tool that enables quick and easy filtering by performance criteria. It provides system specific information downloads including BIM (Revit) objects. Go to british-gypsum.com

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 and Saint-Gobain Isover components are used throughout, and the Company's fixing recommendations are strictly observed. Any variation in the specifications should be checked with British Gypsum.

NB For non t&g floors, overlay with 6mm plywood and ensure all joints are staggered.

GypLyner UNIVERSAL design

Building design

GypLyner UNIVERSAL comprises Gypframe GL1 Channels suspended by Gypframe brackets (for flat soffits) or Gypframe Timber Connectors (for timber joists). The ceilings boards are screw fixed to the underside of the Gypframe GL1 Channels.

Planning – key factors

The depth of the ceiling cavity is determined by the positioning of the fixing brackets. For concrete soffits the fixing brackets allow sufficient adjustment for levelling the ceiling. When using Gypframe GL2 Brackets, allow for a stand-off of 25mm - 75mm plus the lining thickness. When using Gypframe GL9 Brackets, allow for a stand-off of 25mm - 125mm plus the lining thickness. When using Gypframe GL12 Brackets, allow for a stand-off of 25mm - 175mm plus the lining thickness. When fixing to timber joists using Gypframe GL5 or GL6 Timber Connectors, allow for a maximum cavity depth of 35mm and 120mm respectively, measured from the bottom of the joists to the back of the ceiling lining.

Handy hint

A maximum stand-off of 175mm can be accommodated by the GypLyner UNIVERSAL system. For increased plenum depths.

▶ Refer to C06. S02. P02 – **CasoLine MF.**

Cavity barriers

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

▶ Refer to C06. S07. P02 – Cavity barriers.

Relative humidity

GypLyner UNIVERSAL 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.

▶ Refer to C02. S01. P30 – Robustness.

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 $D_{n,c,w}$ of 39dB 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.

▶ Refer to C06. S01. P04 – Floors and ceilings introduction, table 3 and 4.

Thermal performance

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

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.

Fixing to the structure

Gypframe GL8 Track is suitably fixed to the perimeter at 600mm centres. Gypframe GL11 GypLyner Anchors are suitable for fixing brackets to solid concrete soffits. Refer to table below for fixing centres:

Table 5 – Maximum component centres (mm)

Lining	GypLyner GL1	GypLyner GL2 or GL9 or GL12	GypLyner GL5 or GL6
12.5mm	450	1200	600
15mm	600	1200	600
2 x 12.5mm	450	1200	600
2 x 15mm	600	1200	600
Rigitone board	330	1200	600
Gyptone board	600	1200	600

GypLyner UNIVERSAL design (continued)

Services

The cavity above the metal framework facilitates the incorporation of services. Pipes and conduits should be fixed in position before installing the framing. 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. Cables, pipework and conduits, should be independently supported from the building structure.

Fixtures

Fixtures with a maximum weight of 3kg, e.g. single lights, can be fixed into the channels. For other fixtures, independent suspension should be provided from the structure.

Board finishing

▶ Refer to C08. S01. P02 – Finishes.

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

▶ Refer to **British Gypsum Ceiling Installation Guide.**

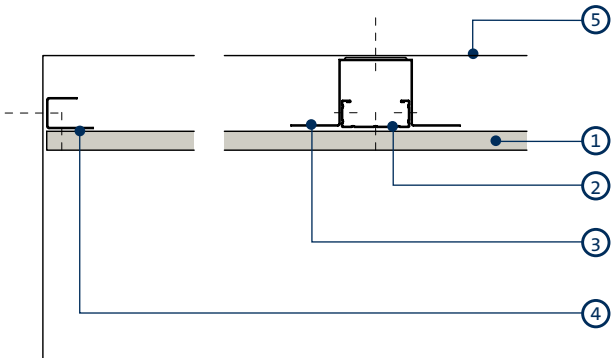
SPECSURE Lifetime System Warranty

SpecSure®

All our systems are covered by **SpecSure®** when using genuine British Gypsum and Saint-Gobain Isover products.

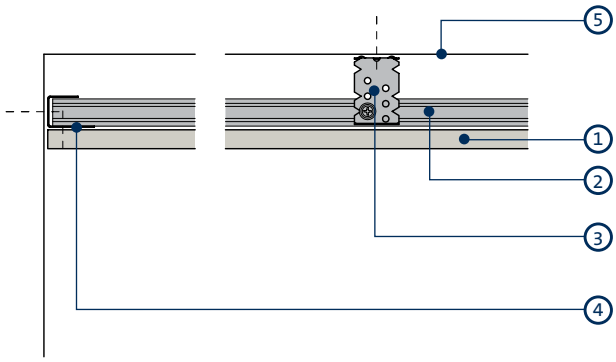
GypLyner UNIVERSAL construction details

1



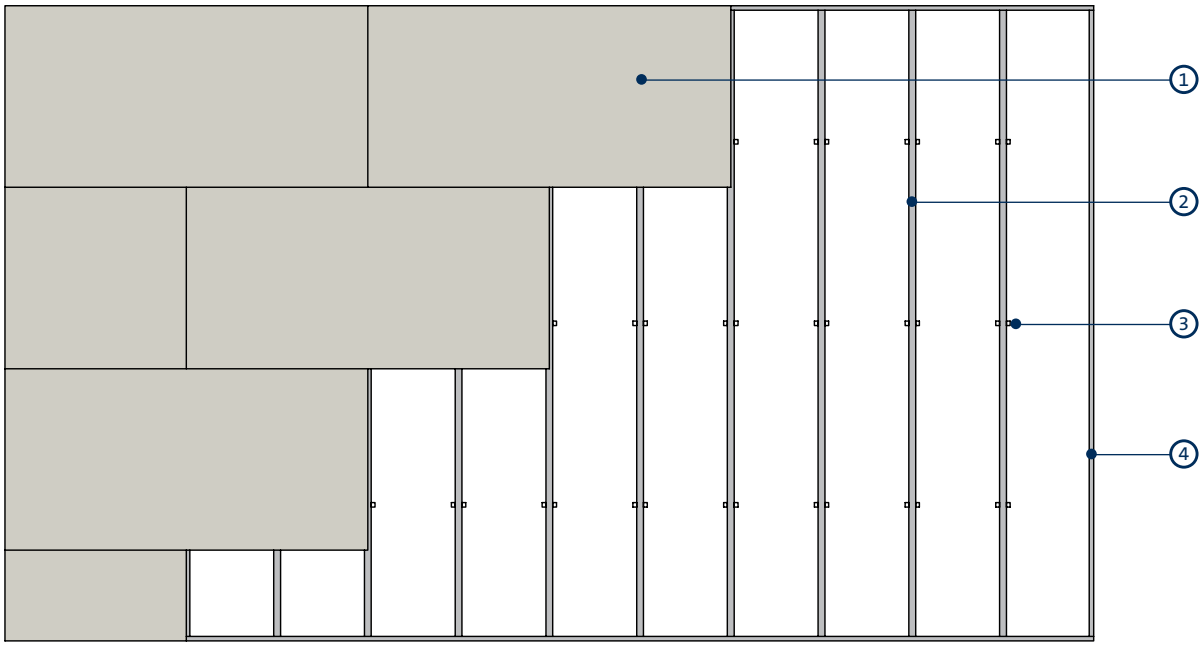
Perimeter parallel to Gypframe GL1 Lining Channel for flat soffit

2



Perimeter perpendicular to Gypframe GL1 Lining Channel for flat soffit

3

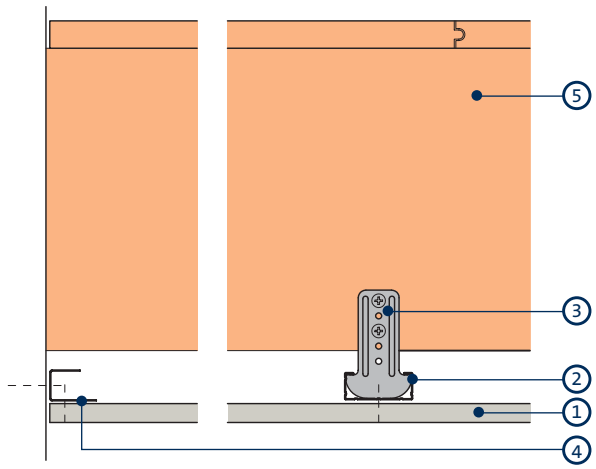


Reflected ceiling plan for flat soffit - single layer 15mm Gyproc plasterboard with channels at 600mm maximum centres, 12.5mm Gyproc plasterboard with channels at 450mm maximum centres, Gyptone board with channels at 600mm maximum centres or Rigitone board at 330mm maximum centres

1 Gyproc, Gyptone or Rigitone boards
2 Gypframe GL1 Lining Channel
3 Gypframe GL2, GL9 or GL12 Bracket
4 Gypframe GL8 Track
5 Flat soffit

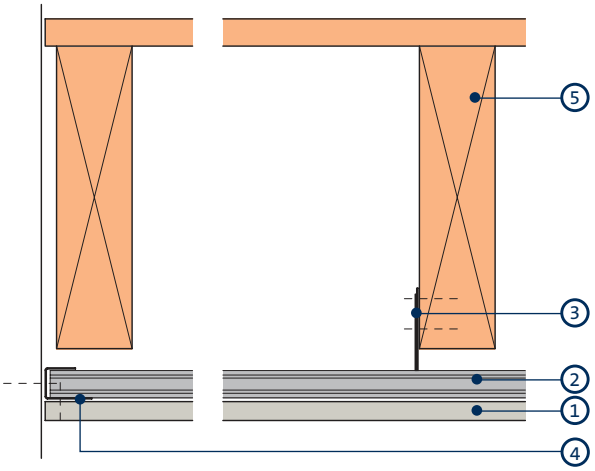
GypLyner UNIVERSAL construction details (continued)

4



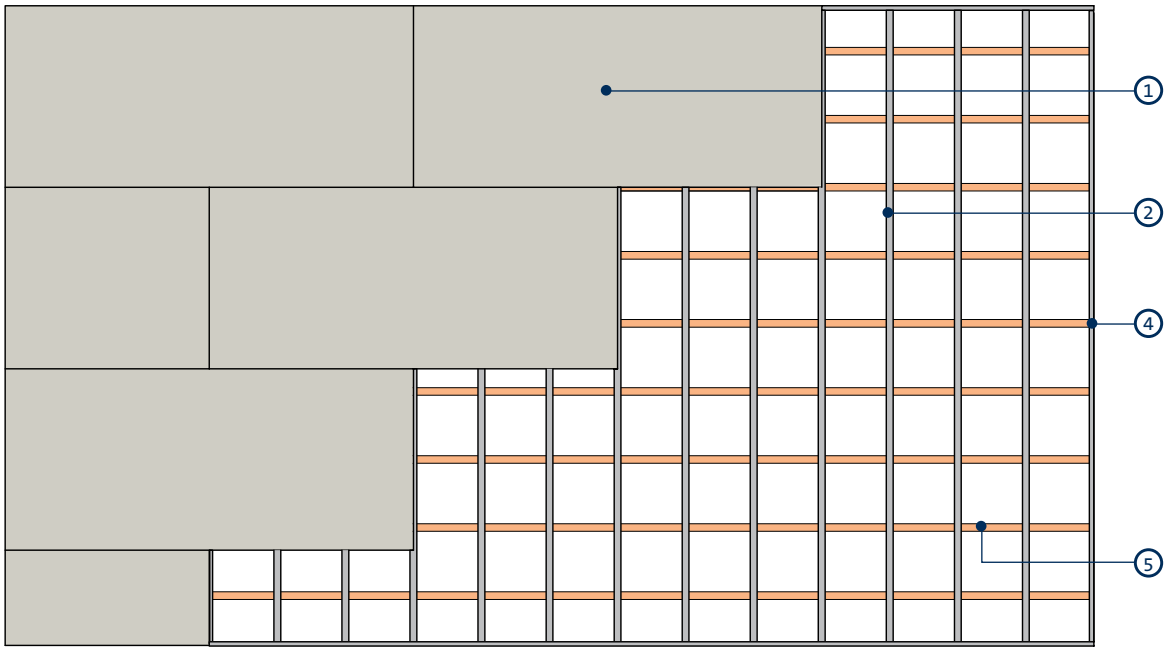
Perimeter parallel to
Gypframe GL1 Lining Channel for timber joist floor

5



Perimeter perpendicular to
Gypframe GL1 Lining Channel for timber joist floor

6



Reflected ceiling plan for timber joist floor - single layer 15mm Gyproc plasterboard with channels at 600mm maximum centres, 12.5mm Gyproc plasterboard with channels at 450mm maximum centres, Gyptone board with channels at 600mm maximum centres or Rigitone board at 330mm maximum centres

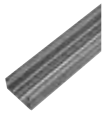
1 Gyproc, Gyptone or Rigitone boards
2 Gypframe GL1 Lining Channel
3 Gypframe GL5 or GL6 Timber Connector
4 Gypframe GL8 Track
5 Timber joist floor

NB Gypframe GL5 or Gypframe GL6 Timber Connectors not shown on construction detail 6.

GypLyner UNIVERSAL system components

Gypframe metal components (▶ Refer to C10. S02. P02 for details)

Gypframe GL8 Track
Ceiling track for retaining the Gypframe GL1 Lining Channel at wall abutments.



Gypframe GL1 Lining Channel
Main support channel to receive fixing of board.

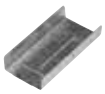
Gypframe GL2 Bracket
For connecting the Gypframe GL1 Lining Channel to the soffit with a maximum 75mm stand-off.

Gypframe GL9 Bracket
For connecting the Gypframe GL1 Lining Channel to the soffit with a maximum 125mm stand-off.

Gypframe GL12 Bracket
For connecting the Gypframe GL1 Lining Channel to the soffit with a maximum 175mm stand-off.

Gypframe GL5 Timber Connector
For connecting the Gypframe GL1 Lining Channel to timber joists with a maximum 35mm drop.

Gypframe GL6 Timber Connector
For connecting the Gypframe GL1 Lining Channel to timber joists with a maximum 120mm drop.



Gypframe GL3 Channel Connector
For joining two sections of Gypframe GL1 Lining Channel.

Gypframe GL11 GypLyner Anchors
For fixing Gypframe GL2, GL9 and GL12 Brackets to concrete soffits.

Board products (▶ Refer to C10. S03. P02 for details)

Gyproc WallBoard[2]
Standard gypsum plasterboard.

Gyproc SoundBloc[2]
Gypsum plasterboard with a high density core for enhanced sound insulation performance.

Gyproc FireLine[2]
Gypsum plasterboard with fire resistant additives.

Gyproc Plank
Standard gypsum plasterboard located as an inner layer.

Glasroc F MULTIBOARD
Non-combustible glass-reinforced gypsum board.

Ceiling boards
A full range of Gyptone[1] and Rigitone[1] boards are available to meet specific aesthetic and/or acoustic requirements.

▶ Refer to C10. S08. P02

[1] ACTIV*air* technology as standard.
[2] Also available in Moisture Resistant (MR) version. MR boards are specified in intermittent wet use areas.

Fixing products (▶ Refer to C10. S04. P02 for details)

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

British Gypsum Wafer Head Drywall Screws
Corrosion resistant self-tapping steel screws for fixing metal to metal framing less than 0.8mm thick.

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

GypLyner UNIVERSAL system components (continued)

Plasterboard accessories (▶ Refer to C10. S05. P02 for details)

Gyproc Jointing Material
Jointing compounds, ready mixes and adhesives for reinforcement and finishing of board joints. Primers and sealers for treatment of boards for pre-decoration.

Gyproc Sealant
Used to seal air paths for optimum sound insulation.

Gyproc edge and angle beads
Protecting and enhancing board edges and corners

Gyproc Joint Tape
A paper tape designed for reinforcement of flat joints or internal angles.

Finishing products (▶ Refer to C10. S06. P02. for details)

Thistle MultiFinish
To provide a plaster skim finish on most common backgrounds including undercoat plasters and plasterboard.

ThistlePro PureFinish
To provide a plaster skim finish with ACTIV*air* technology. Used to finish most common backgrounds including undercoat plasters and plasterboard. For more information refer to C02. S01. P49.

Thistle BoardFinish
To provide a plaster skim finish to Gyproc plasterboards.

Thistle SprayFinish
To provide a plaster skim finish by spray or hand application, ideal for medium to large projects.

Thistle ProTape FT50
Self-adhesive 48mm wide glass fibre mesh tape.

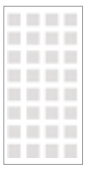
Thistle ProTape FT100
Self-adhesive 100mm wide glass fibre mesh tape.

Plaster accessories
Designed for the reinforcement and finishing of board joints before plaster skimming.

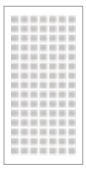
Ceiling products (▶ Refer to C10. S08. P02 for details)

Gyptone QUATTRO 41[1]
Acoustic board with square perforations capable of providing Class C sound absorption.

Gyptone QUATTRO 47[1]
Acoustic board with occasional square perforations and Class D absorption.



Gyptone QUATTRO 42[1]
Acoustic board with square perforations capable of providing Class D sound absorption.



Gyptone LINE 6[1]
Gyptone board with a linear perforated pattern capable of providing Class D sound absorption.

Gyptone SIXTO 63[1]
Gyptone board with a unique hexagonal perforated pattern capable of providing Class C sound absorption.

Gyptone QUATTRO 46[1]
Acoustic board with intermittent square perforations capable of providing Class D absorption.

Rigitone 8/18 Q[1]
Acoustic board with a perforated pattern of 8mm squares capable of providing Class B sound absorption.

Rigitone 12-20/66[1]
Acoustic board with a perforated pattern of 12mm and 20mm circles capable of providing Class C sound absorption.

[1] ACTIV*air* technology as standard.

GypLyner UNIVERSAL system components (continued)

Ceiling products (continued) (▶ Refer to C10. S08. P02 for details)

Rigitone 12/25 Q[1]
Acoustic board with a perforated pattern of 12mm squares capable of providing Class B sound absorption.

Rigitone 12/25[1]
Acoustic board with a perforated pattern of 12mm circles capable of providing Class C sound absorption.

Rigitone 10/23[1]
Acoustic board with a perforated pattern of 10mm circles capable of providing Class C sound absorption.

Rigitone 15/30[1]
Acoustic board with a perforated pattern of 15mm circles capable of providing Class C sound absorption.

Rigitone 8-15-20 SUPER[1]
Acoustic board with a random pattern of 8mm, 15mm and 20mm circles capable of providing Class D sound absorption.

Rigitone 8/18[1]
Acoustic board with a perforated pattern of 8mm circles capable of providing Class C sound absorption.

Rigitone Spacing Tool
Spacer tool used to ensure accurate installation of Rigitone boards.

Rigitone Vario 60 Jointing Material
High-strength jointing material used for jointing of Rigitone boards.

Rigitone Large Jointing Kit
Jointing kit for application of Vario 60 into Rigitone boards.

Insulation products (▶ Refer to C10. S09. P02 for details)

Isover Spacesaver Ready-Cut
Glass mineral wool for enhanced acoustic and thermal performance.

Isover Acoustic Partition Roll (APR 1200)
Glass mineral wool for enhanced thermal performance.

Isover Frame Batts 32
Glass mineral wool for improved acoustic performance.

GypLyner UNIVERSAL installation overview

This is intended to be a basic description of how the system is built.
For detailed installation guidance refer to the **British Gypsum Ceiling Installation Guide.**

Gypframe GL8 Track is fixed at the perimeter of the room with the longer leg at the bottom.

Gypframe GL2, GL9 or GL12 Brackets are fixed to the sofit at the required centres.

Gypframe GL1 Lining Channels are located into the perimeter track and each leg of the Gypframe GL2, GL9 or GL12 Brackets are screw-fixed to the Gypframe GL1 Lining Channels with British Gypsum Wafer Head Drywall Screws.

The protruding legs of each bracket are bent to sit back from the channel face. Gypframe GL1 Lining Channel sections are extended using Gypframe GL3 Channel Connectors.

Additional channel or supplementary framing is installed as required to support fixtures. Boards are fixed to the Gypframe GL1 Lining Channels and Gypframe GL8 Track to form one or two layer linings as specified.

Fixing to timber joists

Gypframe GL5 or GL6 Timber Connectors are fixed to the side of joists using British Gypsum Drywall Screws. The connectors must be aligned accurately since they can not be adjusted once Gypframe GL1 Lining Channel is engaged into a row of timber connectors and twisted into position.

Additional information

For full installation details, refer to the **British Gypsum Ceiling Installation Guide**, available to download from british-gypsum.com