

drywall manual

**linings
section**

version **2.0.0**



For ease of download, the Siniat Drywall Manual has been split into separate volumes with their own page numbering.

Linings section

This section includes updated information, added since it was first published in December 2018.

Revision history

Version	Date of publication
1.0.0	December 2018
2.0.0	July 2022: Technical content updated and rebranded

Please check that this is the current version by visiting the Siniat website. For archived versions please contact technical services.

lining systems

GTEC lining systems offer a wide range of plasterboard lining fixing options to walls and roofs for most typical substrates. Different depths of cavity spaces can be created between the GTEC Board or GTEC Thermal Board lining and underlying wall. These cavities hide services or help to achieve high levels of fire resistance, U-Values and sound insulation.


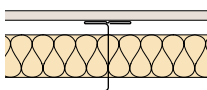
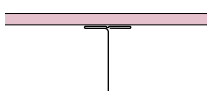
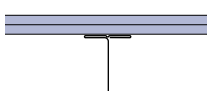
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System performance tables

GTEC independent wall lining systems	3
Creason independent lining systems	7
GTEC lining systems to thermally upgrade external walls	9
GTEC dryliner systems to acoustically upgrade existing walls	12
GTEC independent wall lining systems	17
Creason independent lining systems	27
GTEC dryliner lining systems	33
GTEC shallow wall lining systems	43
GTEC direct bond lining systems	51

System performance tables

GTEC independent wall lining systems

System Ref.	Component	Max Height ¹ (m)	Min Thickness ² (mm)	Fire Perf. EN 13381-2 ³ (from room side only)	Fire Perf. BS476-22 BS EN 1364-1	Acoustic Perf. ⁴ Rw dB
IWL 001: Independent wall lining						
	Facing Layers (s): 1x12.5mm GTEC Standard Board or GTEC Thermal Board Lining: Min. 50mm GTEC I-Stud at 600mm centres Insulation: None Substrate: Any IS50R-12St#0	IS50/Rx = 2.8m IS60/B = 3.6m IS70/B = 4.0m IS90/B = 4.8m	62.5	–	–	27
IWL 002: Independent wall lining						
	Facing Layers (s): 1x12.5mm GTEC Standard Board or GTEC Thermal Board Lining: Min. 50mm GTEC I-Stud at 600mm centres Insulation: Min. 25mm glass mineral wool Substrate: Any IS50R-12St#0-25G	IS50/Rx = 2.8m IS60/B = 3.6m IS70/B = 4.0m IS90/B = 4.8m	62.5	–	–	28
IWL 003: Independent wall lining						
	Facing Layers (s): 1x15mm GTEC Fire Board Lining: Min. 70mm GTEC I-Stud at 600mm centres Insulation: None Substrate: Any IS70B-15F#0	IS70/B = 4.0m IS90/B = 4.8m	85	Concrete: 60 Steel Beams/ Columns: 60 ⁵	–	29
IWL 004: Independent wall lining						
	Facing Layers (s): 2x12.5mm GTEC dB Board Lining: Min. 50mm GTEC I-Stud at 600mm centres Insulation: None Substrate: Any IS50R-212dB#0	IS50/Rx = 2.8m IS60/B = 3.6m IS70/B = 4.0m IS90/B = 4.8m	75	Concrete: 60 Steel Beams/ Columns: 60 ⁵	30 EI 30	34

¹ Maximum height calculated with deflection limit of L/240.² In order to achieve fire performances in accordance with EN 13381-2 a 20mm air gap between lining and substrate must be achieved.³ Only applicable to substrates of thermal resistance less than 0.42 K/W.⁴ Upgrade performance including substrate can be simulated. Please contact Technical Services for more information.⁵ Maximum Hp/A—300 steel limiting surface temperature=510°C as set in BS EN 13381-2.

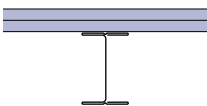
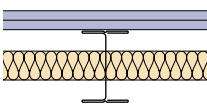
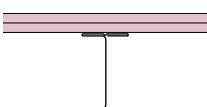
EN 1364-1 — Fire resistance tests for non-load-bearing elements – Part 1: Walls.

BS EN 13381-2:2014 — Test methods for determining the contribution to the fire resistance of structural members.

Vertical protective membranes.

The maximum lining height may vary from the quoted values if the fire resistance of the system is specified according to BS EN 1364-1.

GTEC independent wall lining systems continued

System Ref.	Component	Max Height ¹ (m)	Min Thickness ² (mm)	Fire Perf. EN 13381-2 ³ (from room side only)	Fire Perf. BS476-22 BS EN 1364-1	Acoustic Perf. ⁴ Rw dB
IWL 005: Independent wall lining						
	Facing Layers (s): 2x15mm GTEC dB Board Lining: Min. 50mm GTEC I-Stud at 600mm centres Insulation: None Substrate: Any IS50R-215dB#0	IS50/Rx = 2.8m IS60/B = 3.6m IS70/B = 4.0m IS90/B = 4.8m	80	Concrete: 60 Steel Beams/ Columns: 60 ⁵	30 EI 30	35
IWL 006: Independent wall lining						
	Facing Layers (s): 2x15mm GTEC dB Board Lining: Min. 50mm GTEC I-Stud at 600mm centres Insulation: Min. 25mm glass mineral wool Substrate: Any IS50R-215dB#0-25G	IS50/Rx = 2.8m IS60/B = 3.6m IS70/B = 4.0m IS90/B = 4.8m	80	Concrete: 60 Steel Beams/ Columns: 60 ⁵	30 EI 30	36
IWL 007: Independent wall lining						
	Facing Layers (s): 2x12.5mm GTEC Fire Board Lining: Min. 50mm GTEC I-Stud at 600mm centres Insulation: None Substrate: Any IS50R-212F#0	IS50/Rx = 2.8m IS60/B = 3.6m IS70/B = 4.0m IS90/B = 4.8m	75	Concrete: 60 Steel Beams/ Columns: 60 ⁵	30 EI 30 E 60	34

¹ Maximum height calculated with deflection limit of L/240.² In order to achieve fire performances in accordance with EN 13381-2 a 20mm air gap between lining and substrate must be achieved.³ Only applicable to substrates of thermal resistance less than 0.42 K/W.⁴ Upgrade performance including substrate can be simulated. Please contact Technical Services for more information.⁵ Maximum Hp/A—300 steel limiting surface temperature=510°C as set in BS EN 13381-2.

EN 1364-1 — Fire resistance tests for non-load-bearing elements – Part 1: Walls.

BS EN 13381-2:2014 — Test methods for determining the contribution to the fire resistance of structural members.

Vertical protective membranes.

The maximum lining height may vary from the quoted values if the fire resistance of the system is specified according to BS EN 1364-1.

GTEC independent wall lining systems continued

System Ref.	Component	Max Height ¹ (m)	Min Thickness ² (mm)	Fire Perf. EN 13381-2 ³ (from room side only)	Fire Perf. BS476-22 BS EN 1364-1	Acoustic Perf. ⁴ Rw dB
IWL 008: Independent wall lining						
	Facing Layer(s): 2x15mm GTEC Fire Board Lining: Min. 70mm GTEC I-Stud Insulation: None Substrate: Any IS70B-215F#0	IS70/B = 4.0m IS90/B = 4.8m	100	Concrete: 120 Steel Beams/ Columns: 120 ⁵	30 EI 30 E 60	35
IWL 009: Independent wall lining						
	Facing Outer Layer(s): 1x12.5mm GTEC Fire Board Facing Inner Layer(s): 2x12.5mm GTEC Fire Board Lining: Min. 50mm GTEC I-Stud Insulation: None Substrate: Any IS50R-312F#0	IS50/Rx = 2.8m IS60/B = 3.6m IS70/B = 4.0m IS90/B = 4.8m	87.5	Concrete: 120 Steel Beams/ Columns: 120 ⁵	60 EI 60	37

¹ Maximum height calculated with deflection limit of L/240.

² In order to achieve fire performances in accordance with EN 13381-2 a 20mm air gap between lining and substrate must be achieved.

³ Only applicable to substrates of thermal resistance less than 0.42 K/W.

⁴ Upgrade performance including substrate can be simulated. Please contact Technical Services for more information.

⁵ Maximum Hp/A—300 steel limiting surface temperature=510°C as set in BS EN 13381-2.

EN 1364-1 — Fire resistance tests for non-load-bearing elements – Part 1: Walls.

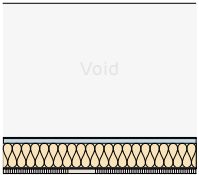
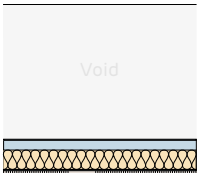
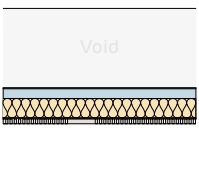
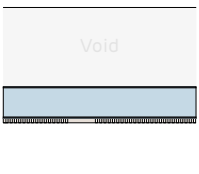
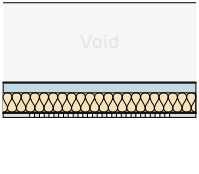
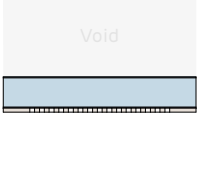
BS EN 13381-2:2014 — Test methods for determining the contribution to the fire resistance of structural members.

Vertical protective membranes.

The maximum lining height may vary from the quoted values if the fire resistance of the system is specified according to BS EN 1364-1.



Creason independent lining systems

System Ref.	Component	Max Height (m)	Weight (kg/m ²)	Acoustic Absorption Class, BS EN ISO 11654	Absorption co-efficient (α_w), BS EN ISO 11654
PGL 001: Creason lining – see page 31					
	Ceiling Outer Layer(s): 1x Creason C10no8 Lining: GTEC IS50Rx/IS60B/IS70B/ IS90B GTEC I Studs at 600mm centres Insulation: 75mm glass mineral wool and 600mm void	IS50/Rx = 2.8m IS60/B = 3.6m IS70/B = 4.0m IS90/B = 4.8m	12	B	0.8
PGL 002: Creason lining – see page 31					
	Ceiling Outer Layer(s): 1x Creason C10no8 Lining: GTEC IS50Rx/IS60B/IS70B/ IS90B GTEC I Studs at 600mm centres Insulation: 50mm glass mineral wool and 600mm void	IS50/Rx = 2.8m IS60/B = 3.6m IS70/B = 4.0m IS90/B = 4.8m	12	C	0.75
PGL 003: Creason lining – see page 31					
	Ceiling Outer Layer(s): 1x Creason C10no8 Lining: GTEC IS50Rx/IS60B/IS70B/ IS90B GTEC I Studs at 600mm centres Insulation: 50mm glass mineral wool and 300mm void	IS50/Rx = 2.8m IS60/B = 3.6m IS70/B = 4.0m IS90/B = 4.8m	12	C	0.70
PGL 004: Creason lining – see page 31					
	Ceiling Outer Layer(s): 1x Creason C10no8 Lining: GTEC IS50Rx/IS60B/IS70B/ IS90B GTEC I Studs at 600mm centres Insulation: 300mm void	IS50/Rx = 2.8m IS60/B = 3.6m IS70/B = 4.0m IS90/B = 4.8m	12	C	0.60
PGL 101: Creason lining – see page 31					
	Ceiling Outer Layer(s): 1x Creason R12no2 Lining: GTEC IS50Rx/IS60B/IS70B/ IS90B GTEC I Studs at 600mm centres Insulation: 50mm glass mineral wool and 300mm void	IS50/Rx = 2.8m IS60/B = 3.6m IS70/B = 4.0m IS90/B = 4.8m	12	C	0.7
PGL 102: Creason lining – see page 31					
	Ceiling Outer Layer(s): 1x GTEC Creason R12no2 Lining: GTEC IS50Rx/IS60B/IS70B/ IS90B GTEC I Studs at 600mm centres Insulation: 300mm void	IS50/Rx = 2.8m IS60/B = 3.6m IS70/B = 4.0m IS90/B = 4.8m	12	C	0.65

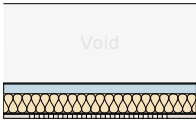
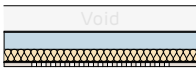
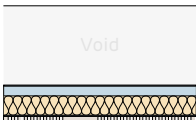

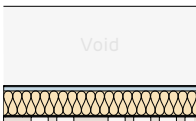

BS EN ISO 11654: Acoustics. Sound absorbers for use in buildings. Rating of sound absorption.

Note: Maximum height calculated with deflection limit of L/240.

Increased heights are achievable with acceptance of increased deflection.

Contact Technical Services for further information.

Creason independent lining systems continued

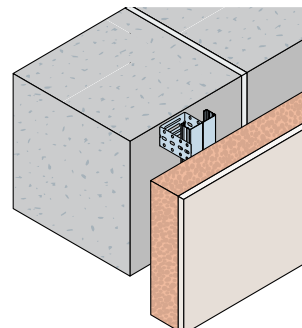
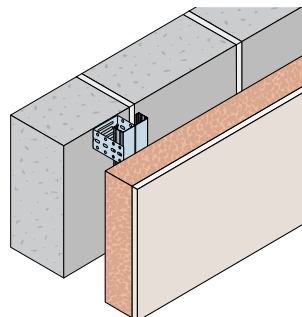
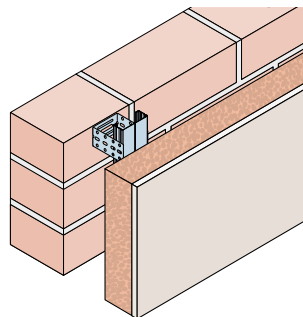
System Ref.	Component	Max Height (m)	Weight (kg/m ²)	Acoustic Absorption Class, BS EN ISO 11654	Absorption co-efficient (α_w), BS EN ISO 11654
PGL 201: Creason lining – see page 31					
	Ceiling Outer Layer(s): 1x Creason R15no1 Lining: GTEC IS50Rx/IS60B/IS70B/ IS90B GTEC I Studs at 600mm centres Insulation: 50mm glass mineral wool and 300mm void	IS50/Rx = 2.8m IS60/B = 3.6m IS70/B = 4.0m IS90/B = 4.8m	12	C	0.70
PGL 202: Creason lining – see page 31					
	Ceiling Outer Layer(s): 1x Creason R15no1 Lining: GTEC IS50Rx/IS60B/IS70B/ IS90B GTEC I Studs at 600mm centres Insulation: 30mm glass mineral wool and 50mm void	IS50/Rx = 2.8m IS60/B = 3.6m IS70/B = 4.0m IS90/B = 4.8m	12	C	0.7
PGL 301: Creason lining – see page 31					
	Ceiling Outer Layer(s): 1x Creason R15no8 Lining: GTEC IS50Rx/IS60B/IS70B/ IS90B GTEC I Studs at 600mm centres Insulation: 50mm glass mineral wool and 300mm void	IS50/Rx = 2.8m IS60/B = 3.6m IS70/B = 4.0m IS90/B = 4.8m	12	C	0.60
PGL 302: Creason lining – see page 31					
	Ceiling Outer Layer(s): 1x Creason R15no8 Lining: GTEC IS50Rx/IS60B/IS70B/ IS90B GTEC I Studs at 600mm centres Insulation: 300mm void	IS50/Rx = 2.8m IS60/B = 3.6m IS70/B = 4.0m IS90/B = 4.8m	12	D	0.50
PGL 401: Creason lining – see page 31					
	Ceiling Outer Layer(s): 1x Creason L5x80no8 Lining: GTEC IS50Rx/IS60B/IS70B/ IS90B GTEC I Studs at 600mm centres Insulation: 80mm glass mineral wool and 300mm void	IS50/Rx = 2.8m IS60/B = 3.6m IS70/B = 4.0m IS90/B = 4.8m	12	D	0.55
PGL 402: Creason lining – see page 31					
	Ceiling Outer Layer(s): 1x Creason L5x80no8 Lining: GTEC IS50Rx/IS60B/IS70B/ IS90B GTEC I Studs at 600mm centres Insulation: 80mm glass mineral wool and 100mm void	IS50/Rx = 2.8m IS60/B = 3.6m IS70/B = 4.0m IS90/B = 4.8m	12	D	0.55

LININGS PERFORMANCE NOTES

- Performance values are for imperforate, jointed systems using Siniat GTEC components (metal studs and tracks, boards, metal accessories, screws and finishing systems) and specified insulation quilt material (type, thickness and density) and installed to Siniat specification and installation guides.
- All calculations are in accordance with Building Regulations: Conservation of fuel and power, Approved Document L: 2010.

GTEC lining systems to thermally upgrade external walls

Approved Document L1B: 2013 recommends upgrading external walls to meet a target U-Value of minimum 0.30W/m²k



	102mm brick ($\lambda=0.77$ W/mK)	100mm dense concrete block ($\lambda=1.21$ W/mK)	215mm dense concrete block ($\lambda=1.21$ W/mK)
	Base U-Value = 3.31 W/m ² K	Base U-Value = 3.96 W/m ² K	Base U-Value = 2.88 W/m ² K
Any Siniat plasterboard ($\lambda=0.25$)	12.5mm - 1.90 15mm - 1.87	12.5mm - 2.10 15mm - 2.06	12.5mm - 1.75 15mm - 1.72
GTEC Thermal EPS Board ($\lambda=0.037$)	22mm - 1.17 30mm - 0.91 40mm - 0.73 50mm - 0.61	22mm - 1.25 30mm - 0.96 40mm - 0.76 50mm - 0.63	22mm - 1.12 30mm - 0.88 40mm - 0.71 50mm - 0.59
GTEC Thermal XP Board ($\lambda=0.033$)	27mm - 0.95 35mm - 0.84 55mm - 0.53	27mm - 0.99 35mm - 0.87 55mm - 0.54	27mm - 0.91 35mm - 0.81 55mm - 0.52
GTEC Thermal PIR Board ($\lambda=0.022$)	37.5mm - 0.60 52.5mm - 0.42 62.5mm - 0.36 72.5mm - 0.31 82.5mm - 0.27	37.5mm - 0.61 52.5mm - 0.43 62.5mm - 0.36 72.5mm - 0.31 82.5mm - 0.27	37.5mm - 0.58 52.5mm - 0.42 62.5mm - 0.35 72.5mm - 0.30 82.5mm - 0.27
Lining System	GTEC Dryliner System only*	GTEC Dryliner System only*	GTEC Dryliner System only*

*GTEC Direct Bond System not recommended on solid masonry walls

- U-Values shown (W/m²k) are calculated using guidance in BR 443 and BRE Digest 465.

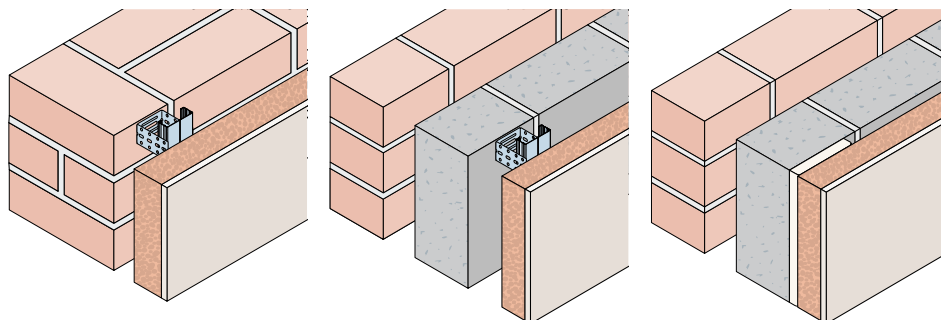
- Condensation risk should be analysed based on usage location and wall type.

- Dryliner cavity depth = 25mm.

- Bespoke build ups can be thermally modelled. Contact Siniat Technical Services for more details.

GTEC lining systems to thermally upgrade external walls continued

Approved Document
L1B: 2013 recommends
upgrading external walls
to meet a target U-Value
of minimum 0.30W/m²k



	215mm Brick ($\lambda=0.77$ W/mK)	102mm brick ($\lambda=0.77$ W/mK) 50mm Air cavity 100mm dense concrete block ($\lambda=1.13$ W/mK)	
	Base U-Value = 2.23 W/m ² K	Base U-Value = 1.75 W/m ² K	Base U-Value = 1.75 W/m ² K
Any Siniat plasterboard ($\lambda=0.25$)	12.5mm - 1.49 15mm - 1.46	12.5mm - 1.26 15mm - 1.24	12.5mm - 1.40 15mm - 1.38
GTEC Thermal EPS Board ($\lambda=0.037$)	22mm - 1.00 30mm - 0.81 40mm - 0.66 50mm - 0.56	22mm - 0.89 30mm - 0.73 40mm - 0.61 50mm - 0.53	22mm - 0.96 30mm - 0.78 40mm - 0.64 50mm - 0.55
GTEC Thermal XP Board ($\lambda=0.033$)	27mm - 0.83 35mm - 0.75 55mm - 0.49	27mm - 0.75 35mm - 0.68 55mm - 0.46	27mm - 0.80 35mm - 0.72 55mm - 0.48
GTEC Thermal PIR Board ($\lambda=0.022$)	37.5mm - 0.55 52.5mm - 0.40 62.5mm - 0.34 72.5mm - 0.29 82.5mm - 0.26	37.5mm - 0.51 52.5mm - 0.39 62.5mm - 0.32 72.5mm - 0.28 82.5mm - 0.25	37.5mm - 0.53 52.5mm - 0.40 62.5mm - 0.33 72.5mm - 0.29 82.5mm - 0.26
Lining System	GTEC Dryliner System only*	GTEC Dryliner System only	GTEC Direct Bond System*

*GTEC Direct Bond System not recommended on solid masonry walls

- U-Values shown (W/m²k) are calculated using guidance in BR 443 and BRE Digest 465.

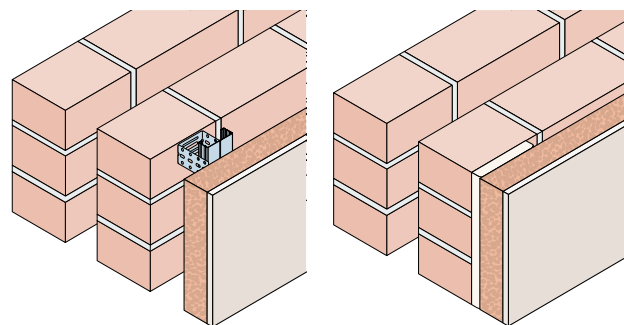
- Condensation risk should be analysed based on usage location and wall type.

- Dryliner cavity depth = 25mm.

- Bespoke build ups can be thermally modelled. Contact Siniat Technical Services for more details.

GTEC lining systems to thermally upgrade external walls continued

Approved Document L1B: 2013 recommends upgrading external walls to meet a target U-Value of minimum 0.30W/m²k



102mm brick ($\lambda=0.77$ W/mK)
50mm air cavity
102mm brick ($\lambda=0.56$ W/mK)

Base U-Value = 1.50 W/m²K

Base U-Value = 1.5 W/m²K

	Base U-Value = 1.50 W/m ² K	Base U-Value = 1.5 W/m ² K
Any Siniat plasterboard ($\lambda=0.25$)	12.5mm - 1.13 15mm - 1.11	12.5mm - 1.23 15mm - 1.22
GTEC Thermal EPS Board ($\lambda=0.037$)	22mm - 0.82 30mm - 0.69 40mm - 0.58 50mm - 0.50	22mm - 0.88 30mm - 0.73 40mm - 0.61 50mm - 0.52
GTEC Thermal XP Board ($\lambda=0.033$)	27mm - 0.70 35mm - 0.64 55mm - 0.44	27mm - 0.75 35mm - 0.68 55mm - 0.46
GTEC Thermal PIR Board ($\lambda=0.022$)	37.5mm - 0.49 52.5mm - 0.38 62.5mm - 0.31 72.5mm - 0.28 82.5mm - 0.24	37.5mm - 0.51 52.5mm - 0.39 62.5mm - 0.32 72.5mm - 0.28 82.5mm - 0.25
	GTEC Dryliner System*	GTEC Direct Bond

*GTEC Direct Bond System not recommended on solid masonry walls

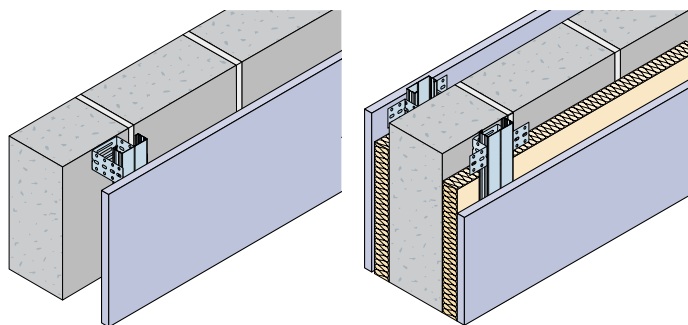
- U-Values shown (W/m²k) are calculated using guidance in BR 443 and BRE Digest 465.

- Condensation risk should be analysed based on usage location and wall type.

- Dryliner cavity depth = 25mm.

- Bespoke build ups can be thermally modelled. Contact Siniat Technical Services for more details.

GTEC dryliner systems to acoustically upgrade existing walls

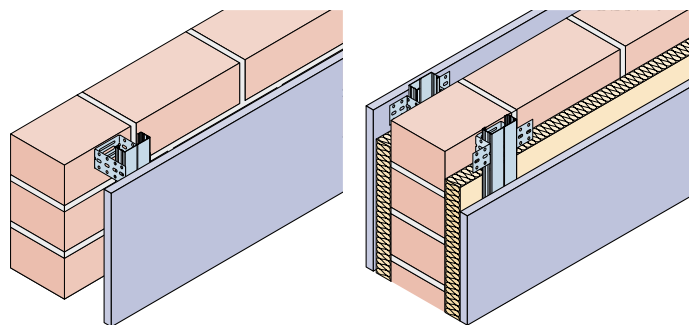


100mm aerated block (min. 575kg/m³)
R_w (R_w + C_{tr}) dB = 36 (33)

	Siniat dryliner to one side	Siniat dryliner to both sides
Facing Outer Layer(s): 12.5mm GTEC Standard Board Framing: GTEC Dryliner System at 600mm centres Cavity Depth: 25mm Insulation: -	Performance: 42 (36)	— —
Facing Outer Layer(s): 12.5mm GTEC dB Board Framing: GTEC Dryliner System at 600mm centres Cavity Depth: 25mm Insulation: -	Performance: 43 (37)	— —
Facing Outer Layer(s): 12.5mm GTEC dB Board Framing: GTEC Dryliner System at 600mm centres Cavity Depth: 25mm Insulation: 25mm Glass Mineral Wool (min. 10kg/m ³)	Performance: 45 (39)	Performance: 51 (39)
Facing Outer Layer(s): 15mm GTEC dB Board Framing: GTEC Dryliner System at 600mm centres Cavity Depth: 25mm Insulation: 25mm Glass Mineral Wool (min. 10kg/m ³)	Performance: 46 (39)	Performance: 53 (39)
Facing Outer Layer(s): 12.5mm GTEC dB Board Facing Inner Layer(s): 12.5mm GTEC dB Board Framing: GTEC Dryliner System at 600mm centres Cavity Depth: 25mm Insulation: 25mm Glass Mineral Wool (min. 10kg/m ³)	Performance: 48 (40)	Performance: 59 (43)

- Performance values shown (R_w, -C_{tr} dB) are simulated in Marshall Day INSUL V9.
- Bespoke build ups can be thermally modelled. Contact Siniat Technical Services for more details.

GTEC dryliner systems to acoustically upgrade existing walls continued

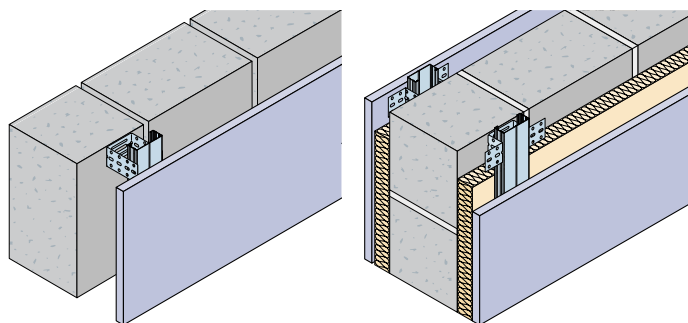


100mm dense brick/block (min. 1880kg/m³)
R_w (R_w + C_{tr}) dB = 46 (43)

	Siniat dryliner to one side	Siniat dryliner to both sides
Facing Outer Layer(s): 12.5mm GTEC Standard Board Framing: GTEC Dryliner System at 600mm centres Cavity Depth: 25mm Insulation: -	Performance: 46 (39)	— —
Facing Outer Layer(s): 12.5mm GTEC dB Board Framing: GTEC Dryliner System at 600mm centres Cavity Depth: 25mm Insulation: -	Performance: 47 (40)	— —
Facing Outer Layer(s): 12.5mm GTEC dB Board Framing: GTEC Dryliner System at 600mm centres Cavity Depth: 25mm Insulation: 25mm Glass Mineral Wool (min. 10kg/m ³)	Performance: 55 (48)	Performance: 60 (47)
Facing Outer Layer(s): 15mm GTEC dB Board Framing: GTEC Dryliner System at 600mm centres Cavity Depth: 25mm Insulation: 25mm Glass Mineral Wool (min. 10kg/m ³)	Performance: 56 (48)	Performance: 62 (47)
Facing Outer Layer(s): 12.5mm GTEC dB Board Facing Inner Layer(s): 12.5mm GTEC dB Board Framing: GTEC Dryliner System at 600mm centres Cavity Depth: 25mm Insulation: 25mm Glass Mineral Wool (min. 10kg/m ³)	Performance: 58 (51)	Performance: 68 (51)

- Performance values shown (R_w, -C_{tr} dB) are simulated in Marshall Day INSUL V9s.
- Bespoke build ups can be thermally modelled, contact Siniat Technical Services for more details.

GTEC dryliner systems to acoustically upgrade existing walls continued

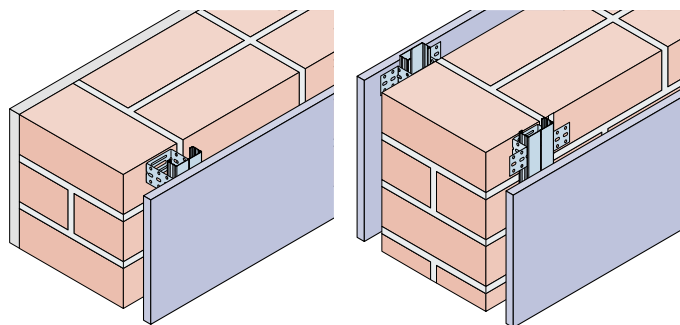


140mm dense block (min. 1880kg/m³)
R_w (R_w + C_{tr}) dB = 51 (47)

	Siniat dryliner to one side	Siniat dryliner to both sides
Facing Outer Layer(s): 12.5mm GTEC Standard Board Framing: GTEC Dryliner System at 600mm centres Cavity Depth: 25mm Insulation: -	—	—
Facing Outer Layer(s): 12.5mm GTEC dB Board Framing: GTEC Dryliner System at 600mm centres Cavity Depth: 25mm Insulation: -	—	—
Facing Outer Layer(s): 12.5mm GTEC dB Board Framing: GTEC Dryliner System at 600mm centres Cavity Depth: 25mm Insulation: 25mm Glass Mineral Wool (min. 10kg/m ³)	Performance: 58 (50)	Performance: 61 (49)
Facing Outer Layer(s): 15mm GTEC dB Board Framing: GTEC Dryliner System at 600mm centres Cavity Depth: 25mm Insulation: 25mm Glass Mineral Wool (min. 10kg/m ³)	Performance: 58 (50)	Performance: 63 (49)
Facing Outer Layer(s): 12.5mm GTEC dB Board Facing Inner Layer(s): 12.5mm GTEC dB Board Framing: GTEC Dryliner System at 600mm centres Cavity Depth: 25mm Insulation: 25mm Glass Mineral Wool (min. 10kg/m ³)	Performance: 61 (53)	Performance: 70 (53)

- Performance values shown (R_w, -C_{tr} dB) are simulated in Marshall Day INSUL V9.
- Bespoke build ups can be thermally modelled, contact Siniat Technical Services for more details.

GTEC dryliner systems to acoustically upgrade existing walls continued

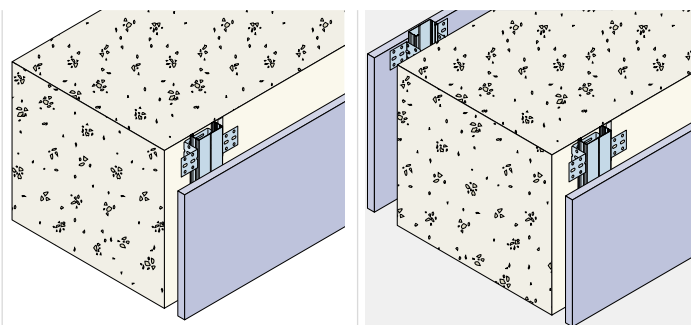


215mm dense brick (min. 1880kg/m³)
R_w (R_w + C_{tr}) dB = 57 (52)

	Siniat dryliner to one side	Siniat dryliner to both sides
Facing Outer Layer(s): 12.5mm GTEC Standard Board Framing: GTEC Dryliner System at 600mm centres Cavity Depth: 25mm Insulation: -	—	—
Facing Outer Layer(s): 12.5mm GTEC dB Board Framing: GTEC Dryliner System at 600mm centres Cavity Depth: 25mm Insulation: -	—	—
Facing Outer Layer(s): 12.5mm GTEC dB Board Framing: GTEC Dryliner System at 600mm centres Cavity Depth: 25mm Insulation: 25mm Glass Mineral Wool (min. 10kg/m ³)	—	—
Facing Outer Layer(s): 15mm GTEC dB Board Framing: GTEC Dryliner System at 600mm centres Cavity Depth: 25mm Insulation: 25mm Glass Mineral Wool (min. 10kg/m ³)	—	—
Facing Outer Layer(s): 12.5mm GTEC dB Board Facing Inner Layer(s): 12.5mm GTEC dB Board Framing: GTEC Dryliner System at 600mm centres Cavity Depth: 25mm Insulation: 25mm Glass Mineral Wool (min. 10kg/m ³)	Performance: 64 (55)	Performance: 74 (63)

- Performance values shown (R_w, -C_{tr} dB) are simulated in Marshall Day INSUL V9.
- Bespoke build ups can be thermally modelled, contact Siniat Technical Services for more details.

GTEC dryliner systems to acoustically upgrade existing walls continued



200mm concrete (min. 2340kg/m³)
R_w (R_w + C_{tr}) dB = 59 (54)

	Siniat dryliner to one side	Siniat dryliner to both sides
Facing Outer Layer(s): 12.5mm GTEC Standard Board Framing: GTEC Dryliner System at 600mm centres Cavity Depth: 25mm Insulation: -	—	—
Facing Outer Layer(s): 12.5mm GTEC dB Board Framing: GTEC Dryliner System at 600mm centres Cavity Depth: 25mm Insulation: -	—	—
Facing Outer Layer(s): 12.5mm GTEC dB Board Framing: GTEC Dryliner System at 600mm centres Cavity Depth: 25mm Insulation: 25mm Glass Mineral Wool (min. 10kg/m ³)	—	—
Facing Outer Layer(s): 15mm GTEC dB Board Framing: GTEC Dryliner System at 600mm centres Cavity Depth: 25mm Insulation: 25mm Glass Mineral Wool (min. 10kg/m ³)	—	—
Facing Outer Layer(s): 12.5mm GTEC dB Board Facing Inner Layer(s): 12.5mm GTEC dB Board Framing: GTEC Dryliner System at 600mm centres Cavity Depth: 25mm Insulation: 25mm Glass Mineral Wool (min. 10kg/m ³)	Performance: 66 (58)	Performance: 76 (65)

- Performance values shown (R_w, -C_{tr} dB) are simulated in Marshall Day INSUL V9.
- Bespoke build ups can be thermally modelled, contact Siniat Technical Services for more details.

system guidance

GTEC independent wall lining systems

Based on the GTEC C Stud Partition system, the GTEC Independent Wall Lining system is a fully dry, light frame, drylining system. It is completely separated from the underlying substrate.

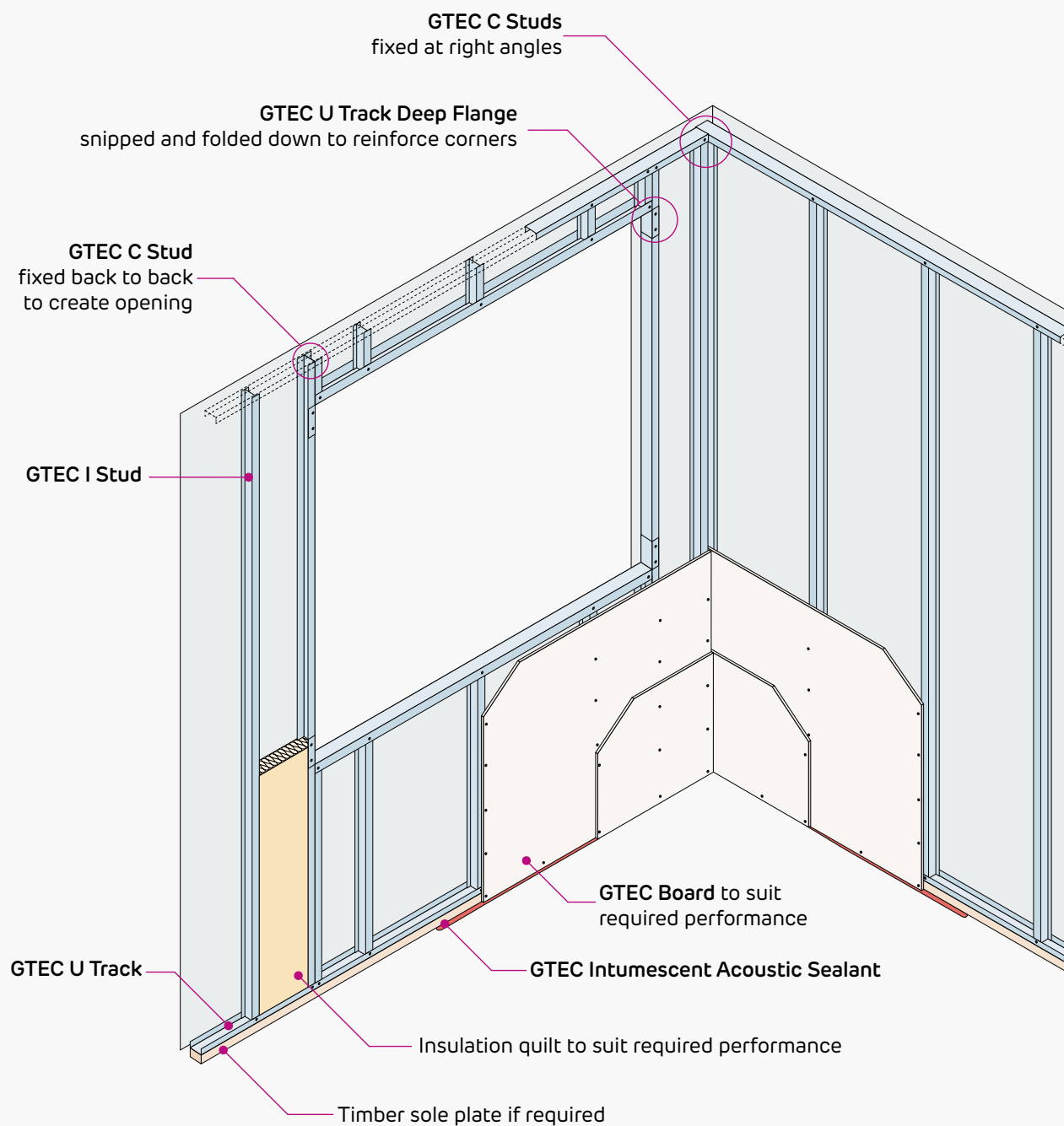
The GTEC Independent Wall Lining system combines GTEC Boards with GTEC I or C Studs fixed into GTEC U Tracks. The cavity created behind the boards can be of any depth. This allows for heavy services, ducting, and insulation.

Once complete, the GTEC Independent Wall Lining system provides a clean, flat and easy to finish plasterboard surface, offering the highest technical performances.

Where to use:

- Ideal for commercial projects where deep continuous cavities behind boards are needed to correct or isolate substrates and accommodate services.
- Particularly suited to substrates which may not be suitable for direct fixing, e.g. metal cladding and other modern methods of construction.

Features	Benefits
Plasterboard finish	Easy to decorate flat surface
Completely variable cavity depth	Provides space for heavy duty services and the highest levels of insulation
Mechanical board fixing	Fixes all GTEC Boards
Cavity frame design	Achieves higher technical performances
Based on GTEC Metal I Stud system	Reliable and commonly used
Completely independent from substrate	No thermal bridging created
Drylines any substrate	Can adjust depth for high level of substrate correction
Creates false wall	Upgrade existing structures



system components

boards



All GTEC Boards

Provides wall surface suitable for finishing in minimum thickness.

See [System performance tables, page 3 to 16](#)

frame



GTEC I Studs

Metal profile for vertical frame elements.

IS50/RX, IS60/B, IS70/B, IS90/B



GTEC C Stud

Metal profile for vertical frame elements.

CS50/RX, CS60/RX, CS70/RX, CS90/RX, CS146/RX, CS70/B, CS90/B, CS146/B, CS90/W, CS70/Y, CS90/Y, CS146/Y



GTEC U Track

Metal profile for head and base frame elements.

UT52/RX/Y, UT62/RX, UT72/RX, UT92/RX, UT148/RX



GTEC U Track Deep

Used for linings with heights exceeding 4.2m.

UDT52/B, UDT62/B, UDT72/B, UDT92/B, UDT148/B



GTEC U Track Extra Deep

Used for linings with heights exceeding 4.2m.

UXT72/B, UXT92/W, UXT148/W



GTEC Acoustic V Brace 90°

For bracing lining to substrate.

VBRACE90



GTEC Metal Angle

Multi-purpose galvanised metal section.

MFC2525, MFC2550, MFC2330



GTEC Flat Strap

Provide support for plasterboard joints and fixtures.

FS50/RX, FS90/W



GTEC Movement Control Joint

Flexible metal profile to create movement joint.

MCJ3048

fix



GTEC Drywall Screws (as appropriate)
For mechanical fixing of boards to
GTEC Shallow Wall Channel.

See [annex d: screw selection guide](#)

insulation

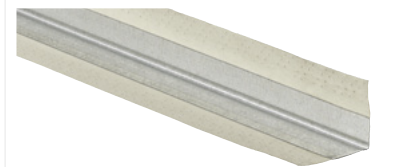


GTEC Insulation Hold
Secures insulation to prevent slump.

Mineral wool insulation: Increases fire and acoustic
insulation performance. (See performance tables
supplied by others.)

INSR

finishing



GTEC Corner and Edge beads
Corner and edge reinforcement.



Siniat Joint Tape
Joint reinforcement in conjunction with
GTEC Jointing Compounds.



GTEC Intumescent Acoustic Sealant
Perimeter sealing to restrict smoke,
sound and fire penetration to achieve
quoted performances.



Siniat Compounds
To finish joints between boards and bed
corner beads prior to decorating. Ensures
system performance.

See [annex b: product reference](#)



GTEC Sealer
To seal plasterboard prior to decoration.



GTEC Socket Pad
To maintain acoustic and fire
integrity at sockets.

PAD1&2

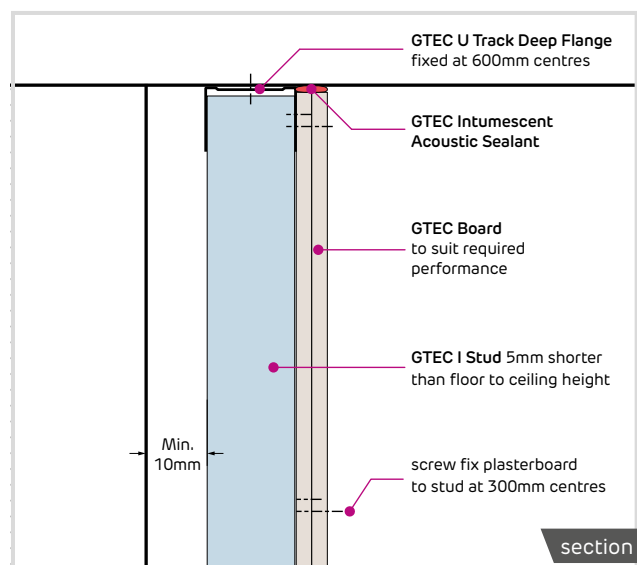
system guidance

Substrate

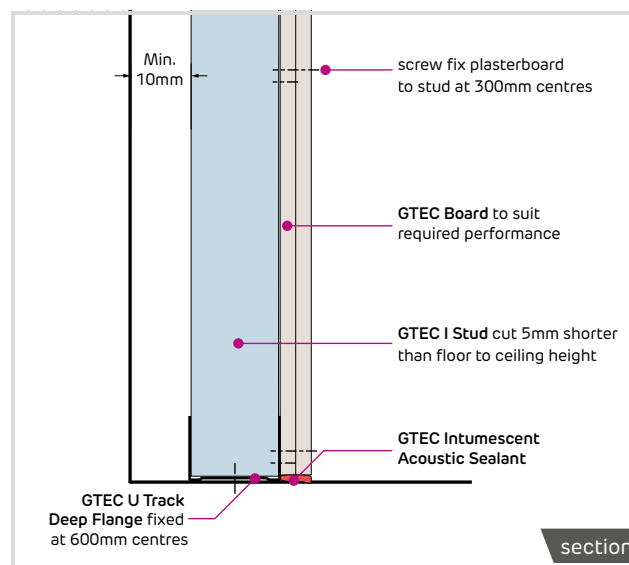
- ▶ GTEC Independent Wall Lining system is fully independent of the substrate.
- ▶ Protrusions greater than design cavity depth to be removed.

Frame

LG-IW-101S-Head detail



LG-IW-102S-Base detail



- ▶ Select compatible sized (e.g. 50mm stud and 52mm track) GTEC I Stud, GTEC C Stud and GTEC U Track framing elements to suit system performance.
- ▶ GTEC U Track Deep or Extra Deep Flange to be used for heights greater than 4.2m.
- ▶ GTEC C Studs as starter studs to be fixed with web flat to structure using appropriate fixings at maximum 600mm centres and fixed to head and track with appropriate GTEC Drywall Screws (see [annex d: screw selection guide](#)).
- ▶ GTEC U Track to be fixed flat to structure using appropriate fixings at maximum 600mm centres and positioned a minimum of 10mm from substrate. (For an EN 13381-2 fire rated lining, a minimum 20mm air gap between the lining and substrate must be achieved.)
- ▶ Timber sole plate may be required on uneven floors or where lining is constructed prior to screeding.
- ▶ Protect base track from moisture with damp proof membrane when situated on newly laid concrete floors.
- ▶ All GTEC Studs to be 5mm shorter than floor to ceiling height except in case of deflection requirement.
- ▶ Intermediate GTEC Studs to be friction fitted to allow for adjustment during boarding.
- ▶ GTEC Studs to be at centres required to achieve performance and at a maximum of 600mm centres.
- ▶ For heights over values in performance tables GTEC Acoustic V Brace 90 may be used to brace linings while maintaining acoustic isolation. Contact Technical Services for more information.

Insulation

- ▶ Any insulation to be of type and thickness to achieve performance and installed in a continuous layer between and behind studs to suit required performance.
- ▶ Where insulation may be expected to slump suspend from GTEC Insulation Hold strips fixed across studs, 150mm from top of partition and at 1200mm vertical centres.

Boarding

- ▶ GTEC Independent Lining system is suitable for single, double and multiple layer boarding.
- ▶ Select base layer(s) and finishing layer(s) GTEC Boards by consulting [System performance tables, page 3 to 16](#).
- ▶ Boards to be 5mm less than floor to ceiling height.
- ▶ Strips of board 300mm wide or less to be avoided by stud location rearrangement.
- ▶ Boards to be mechanically fixed to studs at 300mm centres using appropriate GTEC Drywall Screws. See [annex d: screw selection guide](#).
- ▶ Base layers of boarding may be temporarily fixed at 600mm centres providing final layer is fixed through to stud at 300mm centres
- ▶ Board edges to be centred over studs.
- ▶ Stagger all board joints between layers.
- ▶ Stagger all board joints on opposing sides of partition.

Over-height single layer boarding only:

- ▶ Where partition height exceeds board height fix boards to continuous band of GTEC Flat Strap FS90/W or GTEC MFIX behind all horizontal joints to maintain fire integrity.

Over-height multiple layer boarding only:

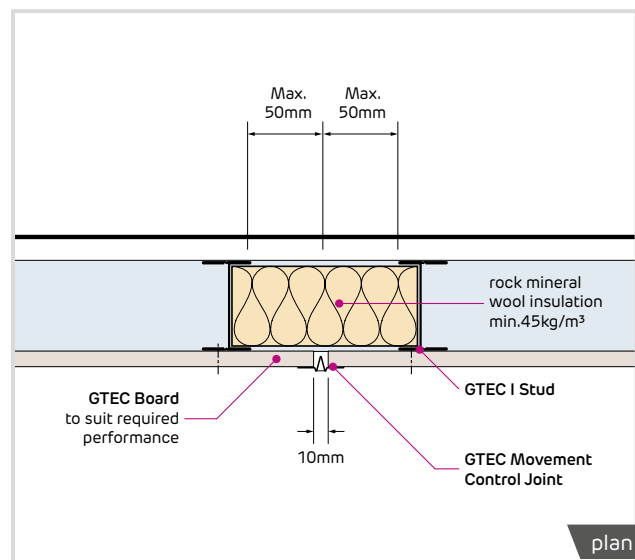
- ▶ Where partition height exceeds board height for double or multiple layer boarding fix outer layer of boards to continuous band of GTEC Flat Strap FS50/RX behind all horizontal joints.

Thermal Boards only:

- ▶ Select GTEC Thermal Board type and thickness according to desired thermal value and requirement for vapour barrier.
- ▶ GTEC Thermal Board thickness may be reduced by utilising higher insulation grade boards, e.g. GTEC Thermal PIR Board.

Movement control joints

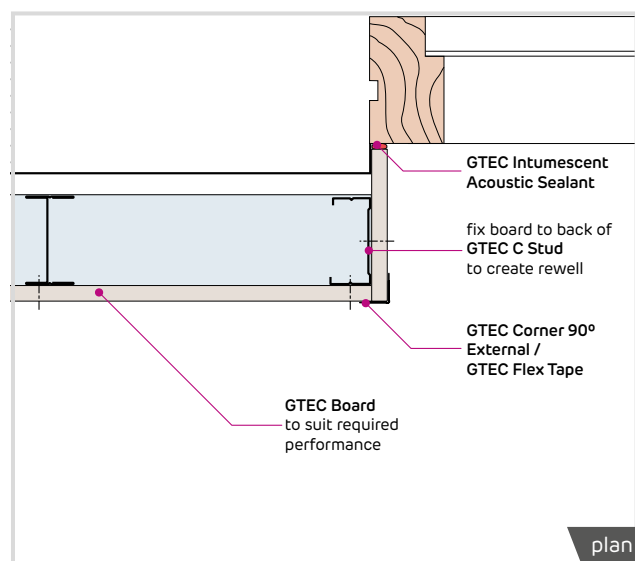
LG-IW-301P-Movement joint



- ▶ Form movement control joints at maximum 10m intervals in the partition run.
- ▶ Form movement control joints where the partition crosses a structural movement joint.
- ▶ Fix GTEC Movement Control Joint, butted end-to-end, to board with sheradised or galvanised staples.

Openings

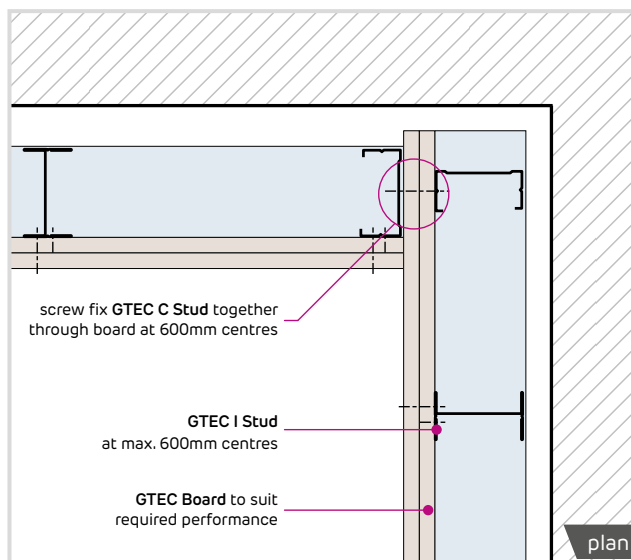
LG-IW-401P-Window reveal



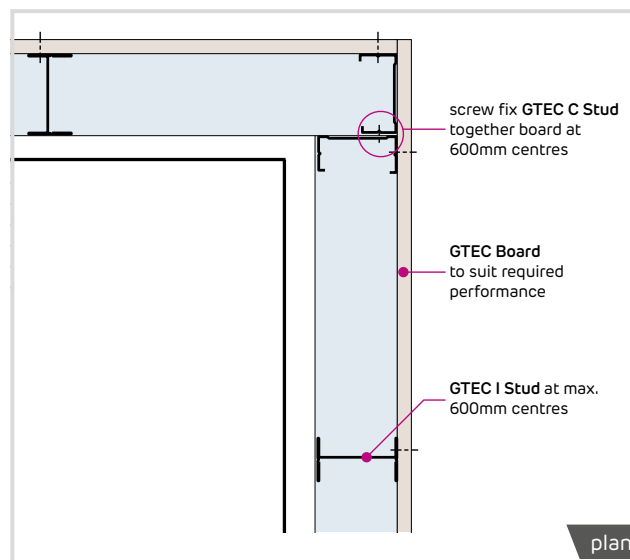
- ▶ Sections of GTEC C Studs to be fitted to back of jamb C Stud above and below opening.
- ▶ Reinforce head-to-jamb junction 150mm down each jamb stud by cutting and folding head track.
- ▶ Jamb studs to be fixed to track with appropriate GTEC Drywall Screws see [annex d: screw selection guide](#).
- ▶ Reveals may be formed by fixing plasterboard to web of GTEC C Stud. Additional studs and tracks may be required for deeper reveals.

Corners and junctions

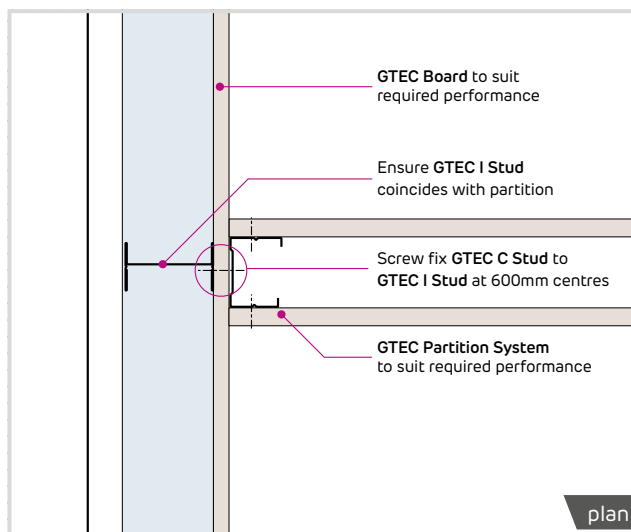
LG-IW-501P-Internal Corner



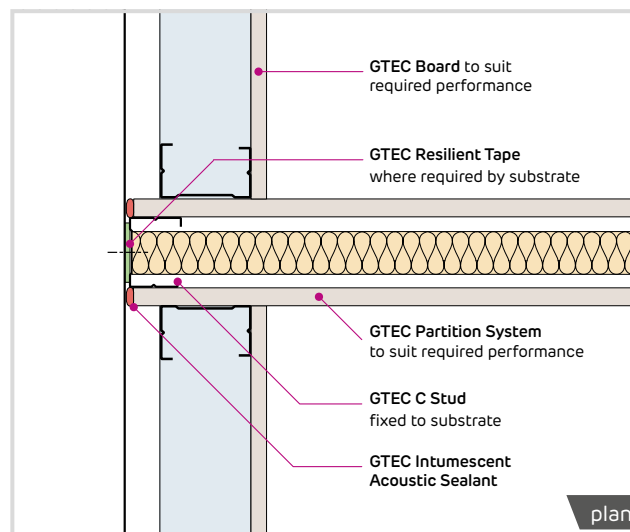
LG-IW-502P-External Corner



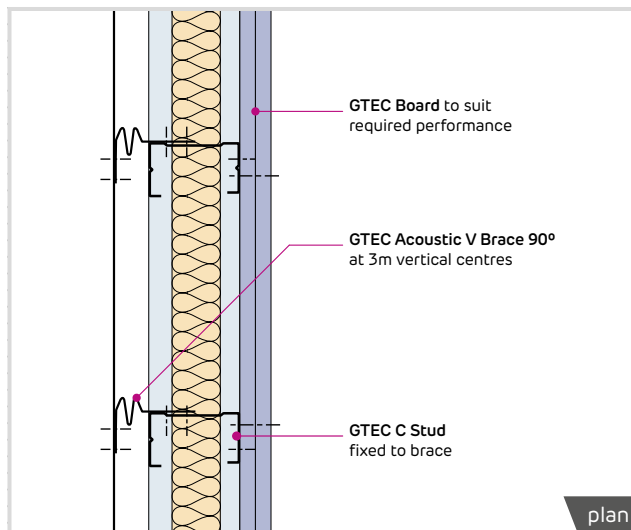
LG-IW-503P-Junction with partition



LG-IW-504P-Acoustic rated junction



LG-IW-505P-Braced acoustic lining



- ▶ Abutting partitions to coincide with studs, install additional intermediate 'pick-up' stud if required.
- ▶ Connect studs through plasterboards at corners and junctions at 600mm vertical centres using appropriate GTEC Drywall Screws.
- ▶ See Construction Details Drawings for further guidance on arrangement and fixing.

Penetrations

- ▶ M&E runs and other services to be pre-planned to minimise or eliminate penetrations through rated partitions.
 - ▶ Penetrations to be fire-stopped with appropriate materials in line with manufacturer and ASFP guidelines.
 - ▶ Pipe penetrations of 40mm or less may be sealed with GTEC Intumescent Acoustic Sealant (for cPVC pipes use Promat HPex Sealant).
-

Fixtures

- ▶ Fixtures may be attached directly to board provided adequate provision has been made. See guidance in [partitions systems](#).
-

Finishing

- ▶ All board joints to be taped, jointed or finished according to guidance in [annex a1: taping and jointing](#) to achieve system performances.
 - ▶ GTEC Finish materials appropriate to board type to be used.
-

System continuity

- ▶ Bead of GTEC Intumescent Acoustic Sealant to be applied to perimeter of all runs and in all other locations specified in Construction Detail Drawings.
 - ▶ GTEC Intumescent Acoustic Sealant to seal all other acoustic or air paths to prevent fire/smoke spread and acoustic transmission.
 - ▶ Full, imperforate system continuity must be maintained to achieve rated performances.
-

Aberdeen Sports Village Aquatics Centre Aberdeen, Scotland

Sector: Leisure
Project Value: 18.2 million
Client: Aberdeen Sports Village
Architect: FaulknerBrowns
Main Contractor: Graham Construction
Sub Contractor: Clarke Contracts
Siniat Innovations: Aquaboard™,
Megadeco, Creason

system guidance

Creason independent lining systems

Sound absorbing wall linings can be created using the Creason Independent Lining system to improve acoustic comfort by reducing sound reflection in larger spaces.

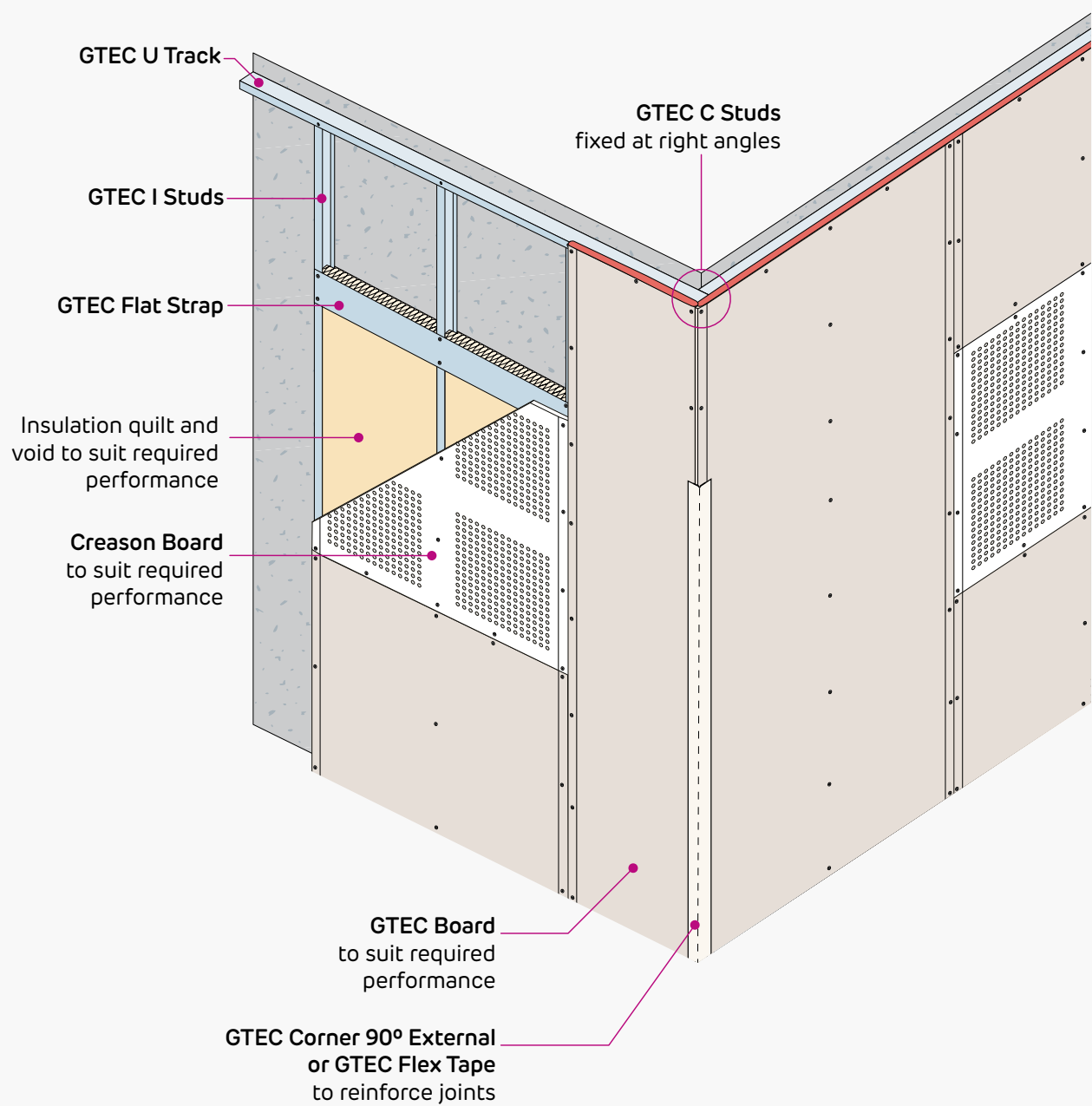
Used above pedestrian height perforated Creason Board is applied to the GTEC Independent Wall Lining system with insulation for an easy to install sound absorbing lining. Flexible design and simple specification can be achieved by using these standard components. Attractive designs are possible created with the variety of patterns in the Creason range.

Standalone acoustic panels can also be created to mount to walls to improve sound absorption.

Where to use:

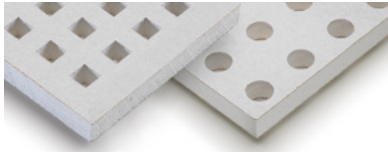
- Creason Independent Linings are used in commercial applications to improve the acoustic conditions in large spaces.

Features	Benefits
Variable cavity depth	Cavity size can be optimised for service and insulation requirements. Up to Class B acoustic absorption
Utilises GTEC Independent Wall Lining framing	One set of components on site. Easy to install.
Creates a false wall	Can be used to upgrade existing structures
Perforated boards in a range of patterns	Provides a range of aesthetic options for variation in large spaces



system components

boards



Creason Boards

Perforated board for acoustic absorption.

See, [System performance tables, page 7](#)

fix



GTEC Drywall Screws (as appropriate)

For mechanical fixing of boards to GTEC Shallow Wall Channel.

See [annex d: screw selection guide](#)

insulation



GTEC Insulation Hold

Secures insulation to prevent slump.

Mineral wool insulation: Increases fire and acoustic insulation performance. (See performance tables supplied by others.)

INSR

frame



GTEC I Studs

Metal profile for vertical frame elements.

IS50/RX, IS60/B, IS70/B, IS90/B



GTEC C Stud

Metal profile for vertical frame elements.

CS50/RX, CS60/RX, CS70/RX, CS90/RX, CS146/RX, CS70/B, CS90/B, CS146/B, CS90/W, CS70/Y, CS90/Y, CS146/Y



GTEC U Track

Metal profile for head and base frame elements.

UT52/RX/Y, UT62/RX, UT72/RX, UT92/RX, UT148/RX



GTEC U Track Deep

Used for linings with heights exceeding 4.2m.

UDT52/B, UDT62/B, UDT72/B, UDT92/B, UDT148/B



GTEC U Track Extra Deep

Used for linings with heights exceeding 4.2m.

UXT72/B, UXT92/W, UXT148/W



GTEC Acoustic V Brace 90°

For bracing lining to substrate.

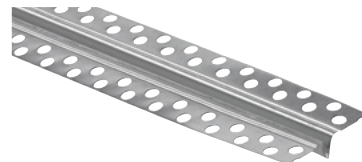
VBRACE90



GTEC Metal Angle

Multi-purpose galvanised metal section.

MFC2525, MFC2550, MFC2330

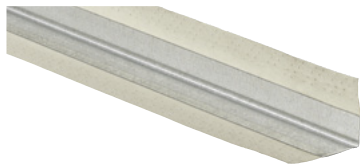


GTEC Movement Control Joint

Flexible metal profile to create movement joint.

MCJ3048

finishing



GTEC Corner and Edge beads
Corner and edge reinforcement.



Siniat Joint Tape
Joint reinforcement in conjunction with GTEC Jointing Compounds.



GTEC Intumescent Acoustic Sealant
Perimeter sealing to restrict smoke, sound and fire penetration to achieve quoted performances.



Siniat Compounds
To finish joints between boards and bed corner beads prior to decorating. Ensures system performance.

See [annex b: product reference](#)



GTEC Sealer
To seal plasterboard prior to decoration.



GTEC Socket Pad
To maintain acoustic and fire integrity at sockets.

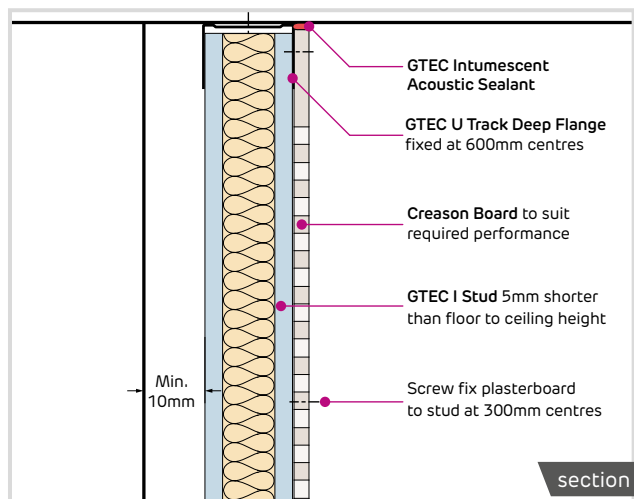
PAD1&2

system guidance

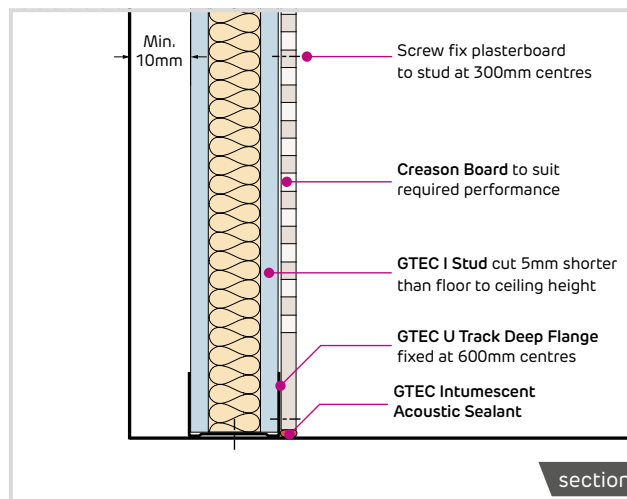
- ▶ GTEC Independent Wall Lining system is fully independent of the substrate.
- ▶ Protrusions greater than design cavity depth to be removed.

Boarding

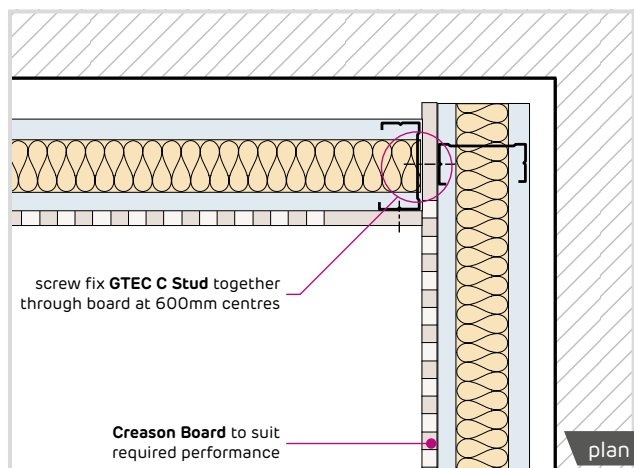
LG-PG-101S-Head detail



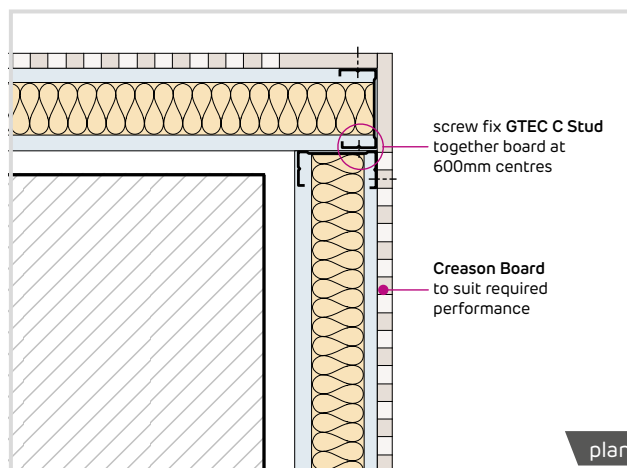
LG-PG-102S-Base detail



LG-PG-501P-Internal Corner



LG-PG-502P-External Corner



- ▶ GTEC Creason Independent Lining system is suitable for single layer boarding.
 - ▶ Select GTEC Creason Board according to acoustic performance required and desired perforation pattern.
 - ▶ GTEC Creason boards to be arranged to achieve desired board pattern. GTEC Creason Boards and GTEC Boards may be mixed for decorative effect
- however acoustic absorption only occurs where board, void and insulation match the system performance.
- ▶ Studs to coincide with areas of un-perforated board.
 - ▶ GTEC Creason boards are recommended for use above pedestrian height unless otherwise protected.

Penetrations

- ▶ M&E runs and other services to be pre-planned to minimise or eliminate penetrations through rated linings.

Finishing

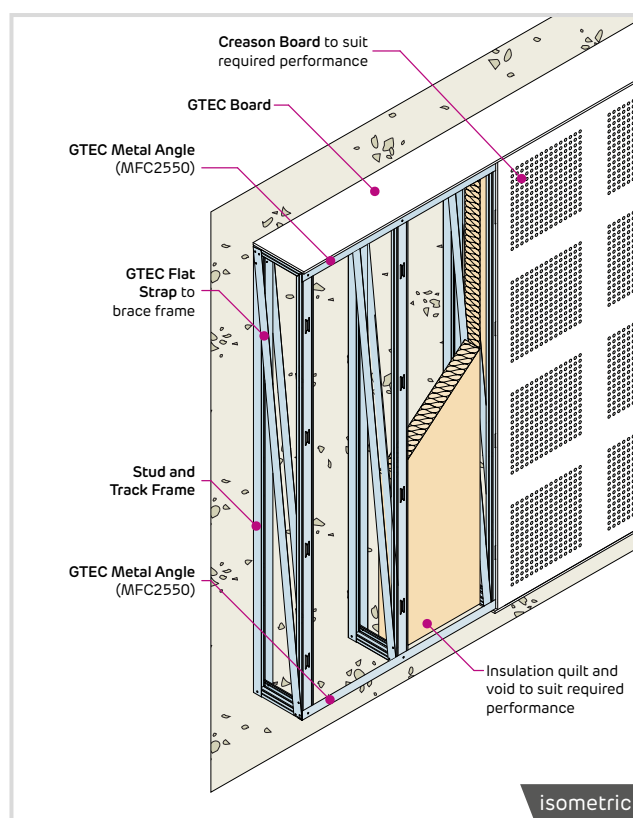
- ▶ All board joints to be taped, jointed or finished according to guidance in [annex a1: taping and jointing](#), [annex a2: skimming](#) and [annex a3: tiling](#) to achieve system performances.
- ▶ GTEC Creason Board to be sealed and painted with rollers to prevent blocking tissue backing and reducing absorption capability.
- ▶ GTEC Finish materials appropriate to board type to be used.

System continuity

- ▶ Bead of GTEC Intumescent Acoustic Sealant to be applied to perimeter of all runs and in all other locations specified in Construction Detail Drawings to prevent dust accumulation.
- ▶ Only areas with full system continuity will achieve rated performances.

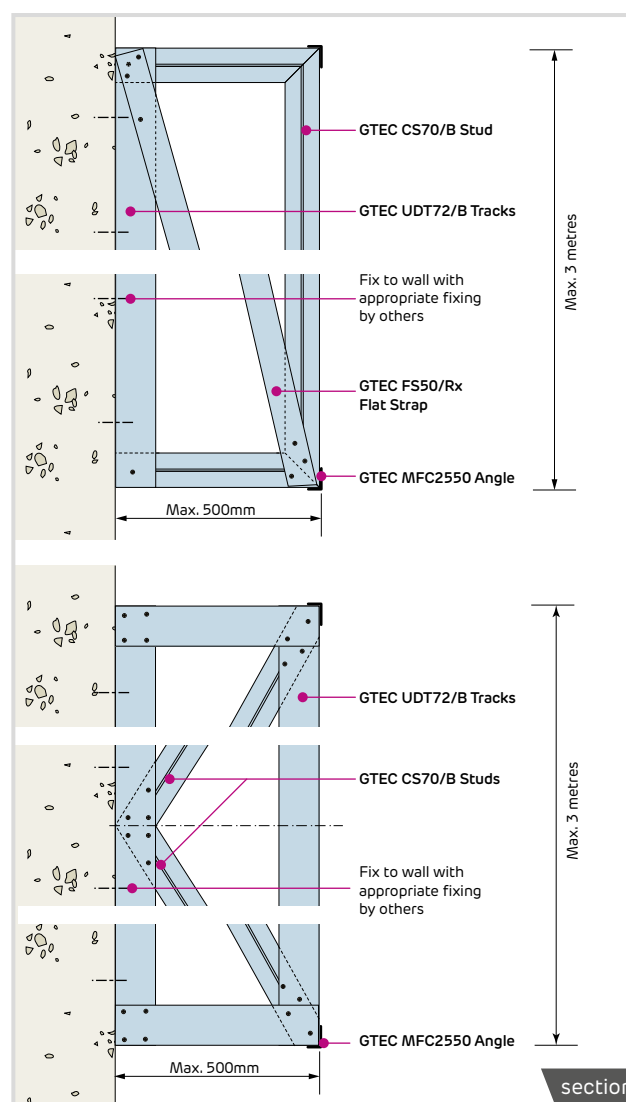
ACOUSTIC PANEL

LG-PG-002M-Creason Acoustic Panel



- ▶ GTEC Acoustic Panels are suitable for fixing to most, level, stable and secure substrates and should be fixed with appropriate fixings capable of supporting the load of the panel.
- ▶ Box to be positioned above height of pedestrian movement to prevent crowd loading, GTEC Acoustic Panels are self-supporting only.
- ▶ Board and insulation configuration to be selected according to acoustic absorption and pattern required, see [page 7](#).

LG-PG-103E-Acoustic Panel frame options



system guidance

GTEC dryliner lining systems

The GTEC Dryliner Lining system is a fully dry, light frame, drylining system. The cavity created behind the boards allows for heavier services and sound or thermal insulation.

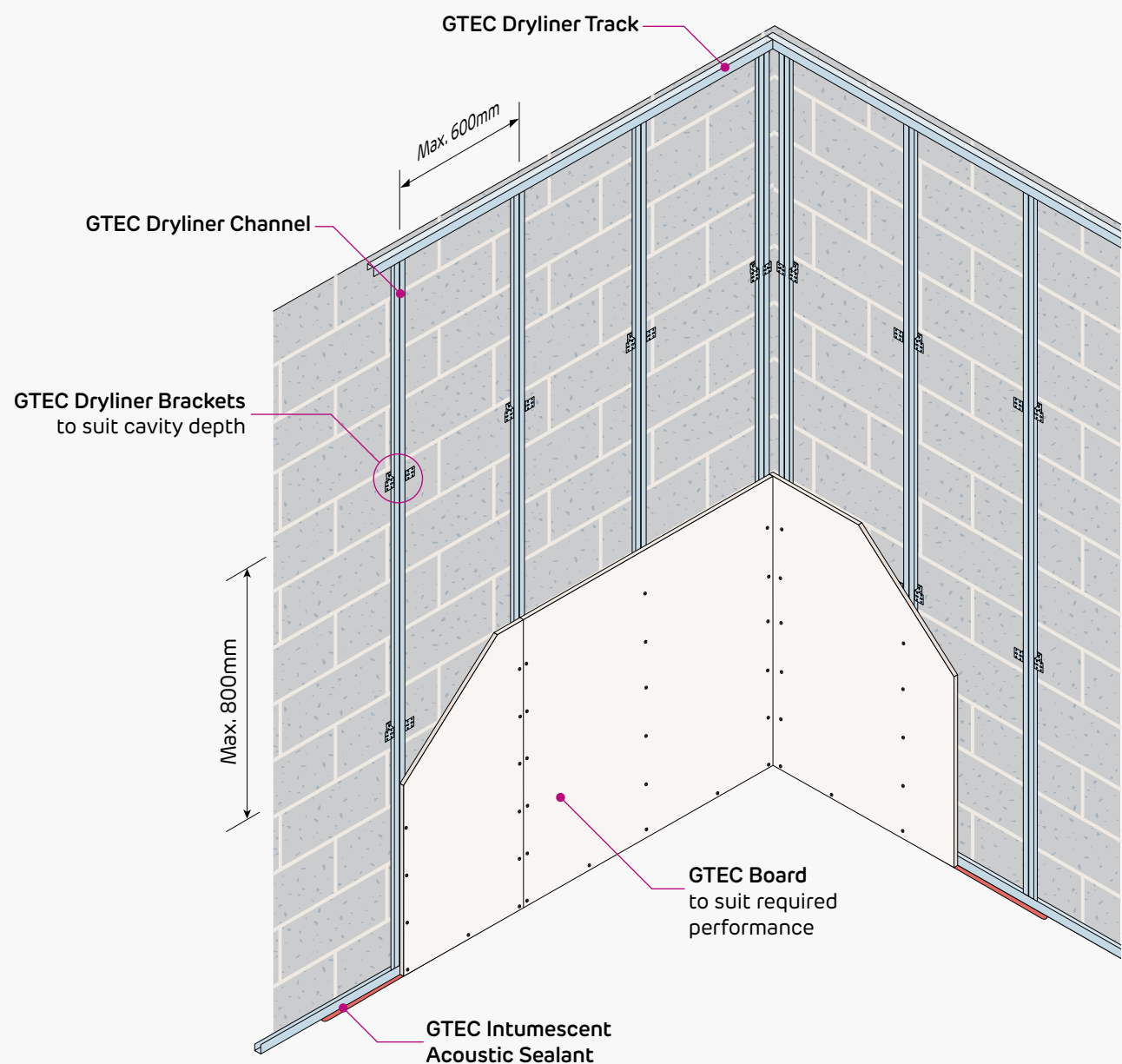
For stable, high performance drylining, the system uses GTEC Dryliner Brackets fixed to the substrate to support a frame of GTEC Dryliner Channel and Tracks.

Once complete, the GTEC Dryliner Lining system provides a clean, flat and easy to finish plasterboard surface with superior technical performance than shallow lining systems

Where to use:

- The GTEC Dryliner Lining system is ideal for most stable substrates where continuous cavities behind boards of up to 130mm are required and/or where high levels of substrate correction are needed.

Features	Benefits
Plasterboard finish	Easy to decorate flat surface
Cavity up to 130mm deep	Space for heavy duty services and insulation
Mechanical board fixing	Fixes all GTEC Boards
Cavity frame design	Achieves higher technical performances
Mechanical fixing bracket	Fixes to most stable substrates
Compatible with GTEC Thermal Boards	Improves U-values
Adjustable bracket design	Can adjust depth for high level of substrate correction



system components

boards



All GTEC Boards

Provides wall surface suitable for finishing in minimum thickness.

See [System performance tables, page 3 to 16](#)



All GTEC Thermal Boards

Provides wall surface suitable for finishing and thermal insulation.

See [System performance tables, page 3 to 16](#)

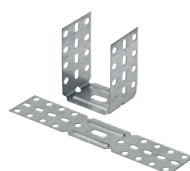
frame



GTEC Dryliner Channel

A galvanised steel furring channel for plasterboard fixing.

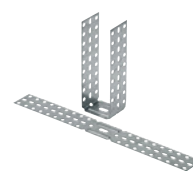
RD1



GTEC SR bracket

Adjustable bracket to brace GTEC Dryliner Channel to substrate.

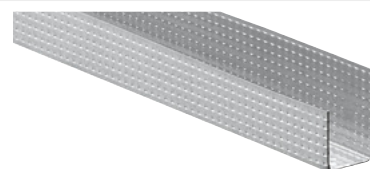
RD2



GTEC XR bracket

Adjustable, extended reach bracket to brace GTEC Dryliner Channel to substrate.

RD11



GTEC Dryliner Track

J shaped metal section used as a track and perimeter channel.

RD9



GTEC Metal Angle

Multi-purpose metal section.

MFC2330, MFC2525, MFC2550



GTEC Movement Control Joint

Flexible metal profile to create movement joint.

MCJ3048

fix



GTEC Drywall Screws (as appropriate)

For mechanical fixing of boards to GTEC Shallow Wall Channel.

See [annex d: screw selection guide](#)



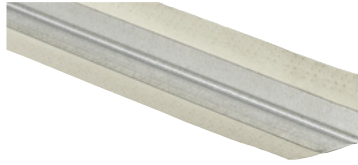
GTEC Insulation Hold

Secures insulation to prevent slump.

INSR

insulation

finishing



GTEC Corner and Edge beads
Corner and edge reinforcement.



Siniat Joint Tape
Joint reinforcement in conjunction with GTEC Jointing Compounds.



GTEC Intumescent Acoustic Sealant
Perimeter sealing to restrict smoke, sound and fire penetration to achieve quoted performances.



Siniat Compounds
To finish joints between boards and bed corner beads prior to decorating. Ensures system performance.

See [annex b: product reference](#)



GTEC Sealer
To seal plasterboard prior to decoration.



GTEC Socket Pad
To maintain acoustic and fire integrity at sockets.

PAD1&2

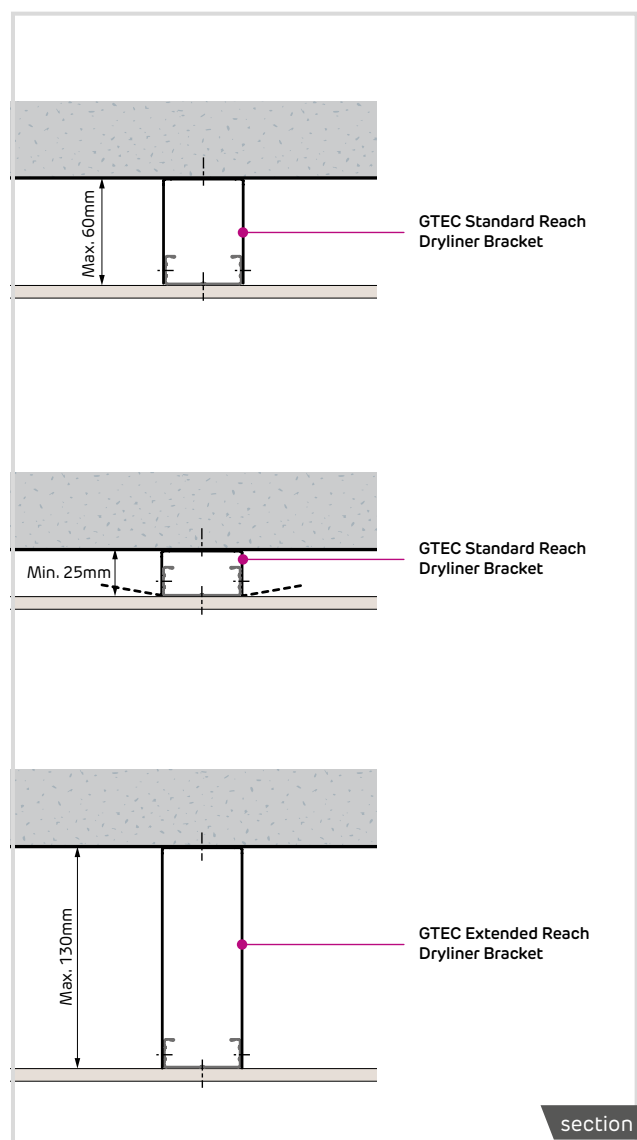
system guidance

Substrate

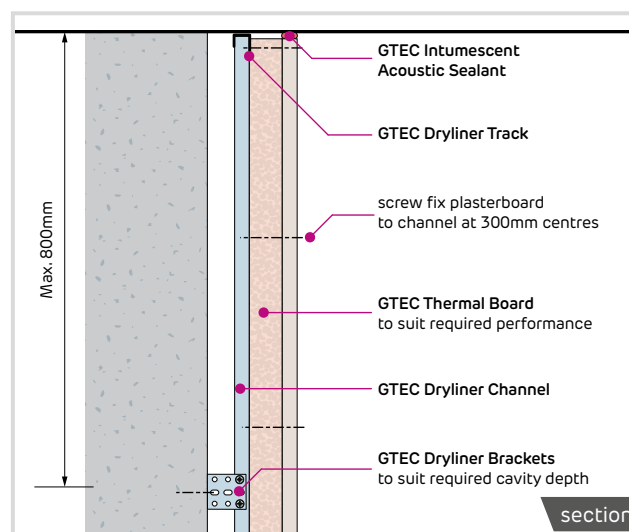
- ▶ GTEC Dryliner Lining system is suitable for most stable substrates where fixing of bracket will be structurally secure.
- ▶ Finished substrates may be fixed to provided bracket fixing penetrates into structure.
- ▶ GTEC Independent Wall Lining system to be used for substrates subject to uncontrolled moisture ingress.

Frame

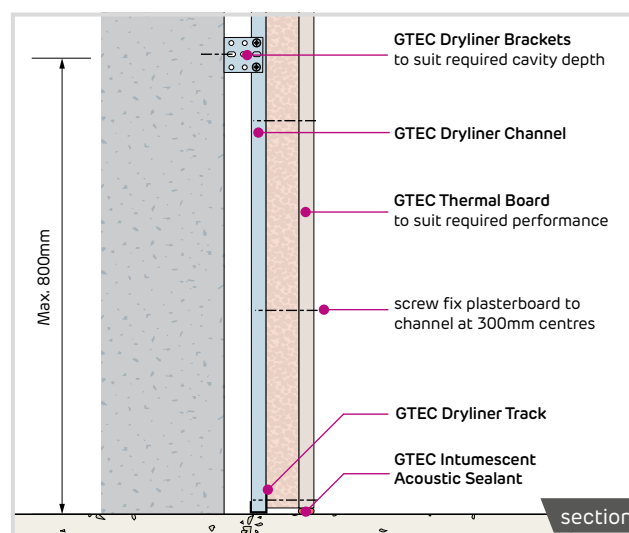
LG-DY-002P-Cavity size range



LG-DY-102S-Head detail – GTEC Thermal Boards

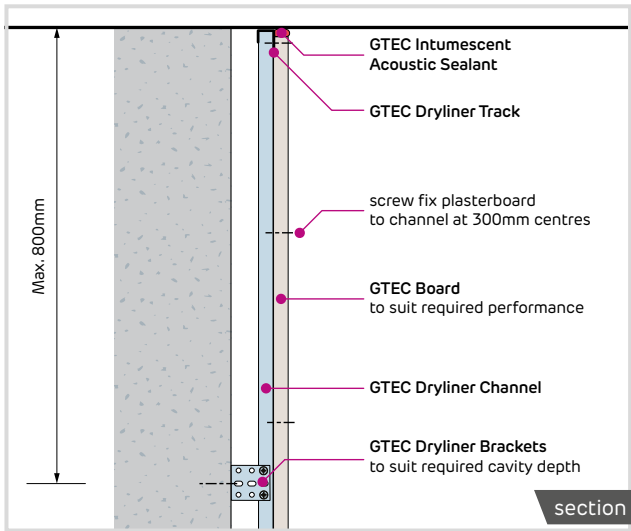


LG-DY-104S-Base detail – GTEC Thermal Boards

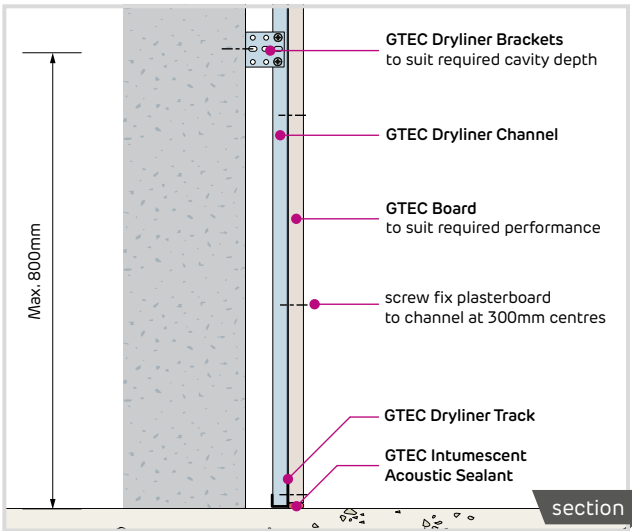


Frame continued

LG-DY-101S-Head detail



LG-DY-103S-Base detail



- ▶ GTEC Dryliner Track to be fixed to structure at perimeter of lining run. Fix at 600mm centres using appropriate fixings. Allow for board depth when positioning channel and to achieve required cavity depth.
- ▶ Select GTEC Dryliner Brackets (SR and XR) to suit cavity depth required:

GTEC Dryliner Bracket	Cavity Depth Range
GTEC SR Bracket	25mm-60mm
GTEC XR Bracket	25mm-130mm

- ▶ GTEC Dryliner Channel to be positioned at maximum 600mm centres for GTEC Board and at maximum 400mm horizontal centres for GTEC Thermal Boards.

- ▶ GTEC Dryliner Brackets to be fixed to structure in a line at maximum 800mm vertical centres to receive GTEC Dryliner Channel.
- ▶ GTEC SR and XR Brackets to be fixed using appropriate structural fixing supplied by others.
- ▶ GTEC Dryliner Channel to be 5mm shorter than floor to ceiling height, located into GTEC Dryliner Track.
- ▶ GTEC Dryliner Channel to be attached to both GTEC Dryliner Bracket legs with appropriate GTEC Drywall Screws ([annex d: screw selection guide](#)) and levelled by adjusting brackets. Excess bracket leg length to be removed or bent back.

Insulation

- ▶ Any insulation to be of type and thickness to achieve performance and tightly installed in a continuous layer between brackets and behind channels.
- ▶ Where insulation may be expected to slump suspend from GTEC Insulation Hold strips 150mm from top of partition and at 1200mm vertical centres.
- ▶ 10mm clear gap to be maintained between substrate and insulation.

Boarding

- ▶ The GTEC Dryliner lining system is suitable for single, double and multiple layer boarding.
- ▶ Select base layer(s) and finishing layer(s) GTEC Boards by consulting [System performance tables, page 9 to page 16](#), Boards to be 5mm less than floor to ceiling height.
- ▶ Board edges to be centred over channels.
- ▶ Boards to be mechanically fixed to channels and track at 300mm centres using appropriate GTEC Drywall Screws. See [annex d: screw selection guide](#).
- ▶ Board joints to be staggered between layers.

Over-height single layer boarding:

- ▶ Where partition height exceeds board height fix boards to continuous band of GTEC Flat Strap FS90/W or GTEC MFIX behind all horizontal joints to maintain fire integrity.

Over-height multiple layer boarding only:

- ▶ Where partition height exceeds board height for double or multiple layer boarding fix outer layer of boards to continuous band of GTEC Flat Strap FS50/RX behind all horizontal joints.

Thermal boards only:

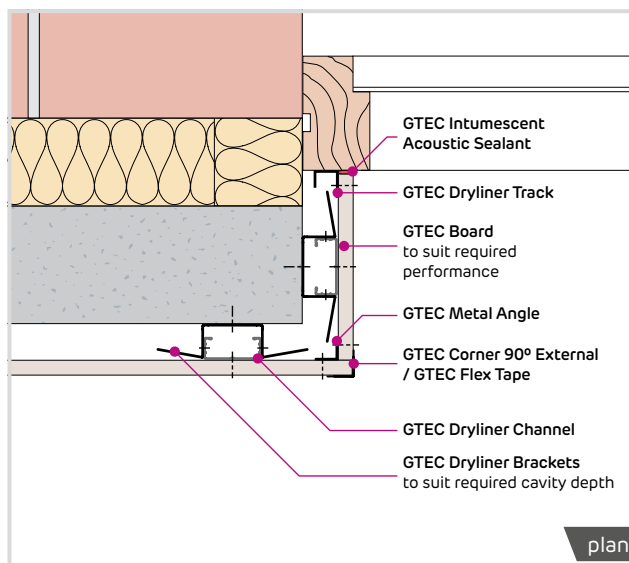
- ▶ Select GTEC Thermal Board type and thickness according to desired thermal value and requirement for vapour barrier.
- ▶ GTEC Thermal Board thickness may be reduced by utilising higher insulation grade boards, e.g. GTEC Thermal PIR Board.

Movement control joints

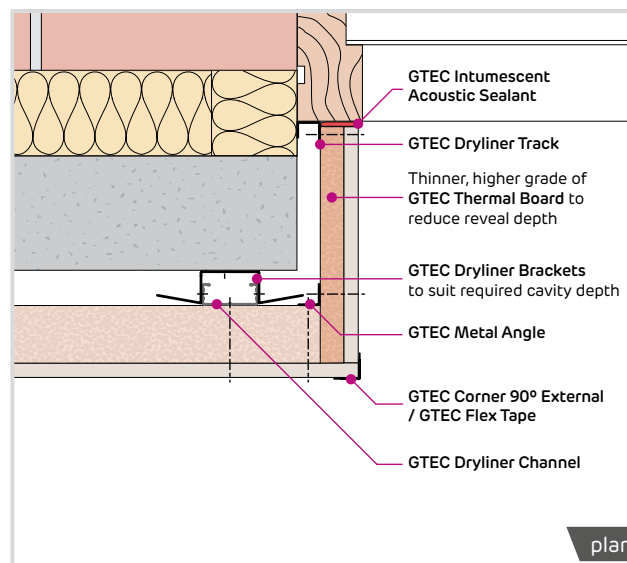
- ▶ Form movement control joints at maximum 10m intervals in the lining run.
 - ▶ Form movement control joints where the lining crosses a structural movement joint.
 - ▶ Fix GTEC Movement Control Joint, butted end-to-end, to board with sheradised or galvanised staples.
-

Openings and corners

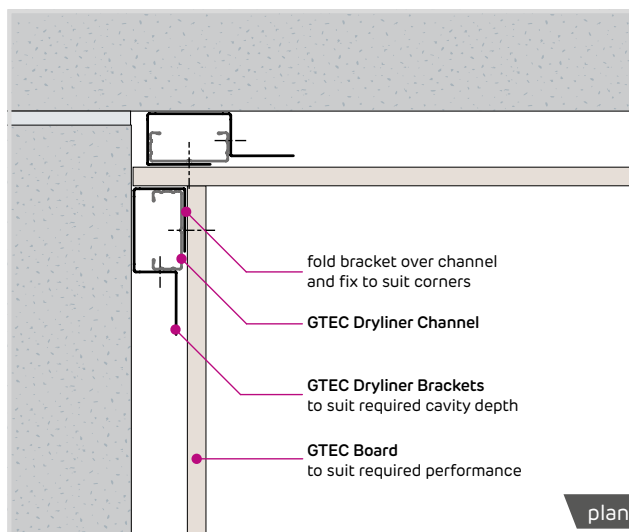
LG-DY-401P-Window reveal



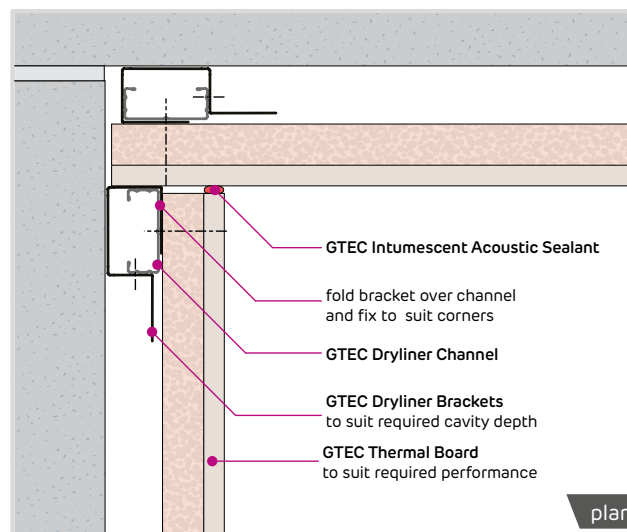
LG-DY-402P-Window reveal – GTEC Thermal Boards



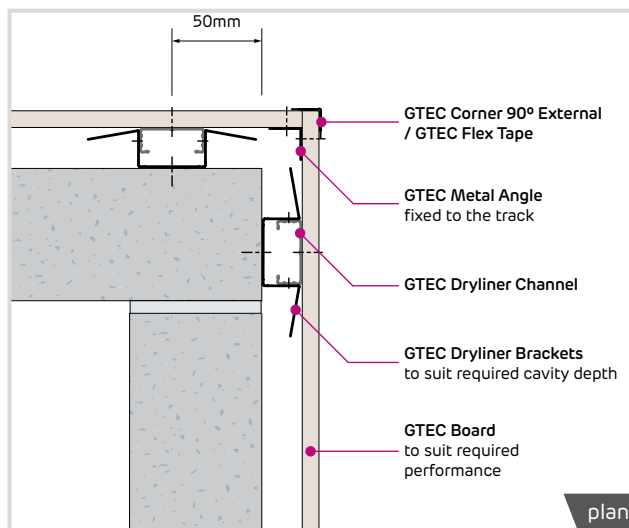
LG-DY-501P-Internal Corner



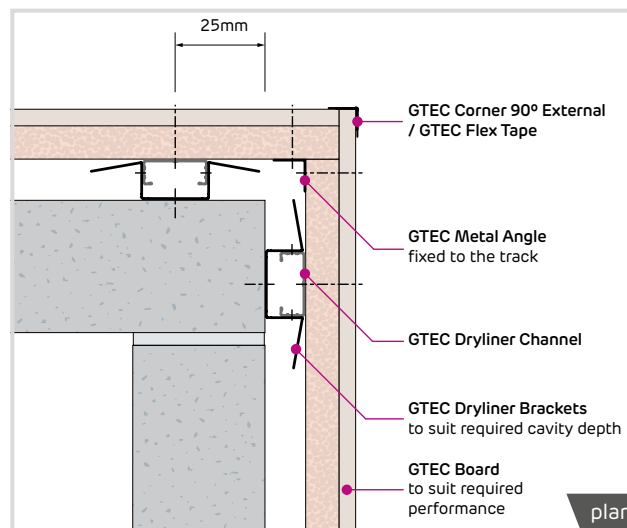
LG-DY-502P-Internal corner – GTEC Thermal Boards



LG-DY-503P-External corner

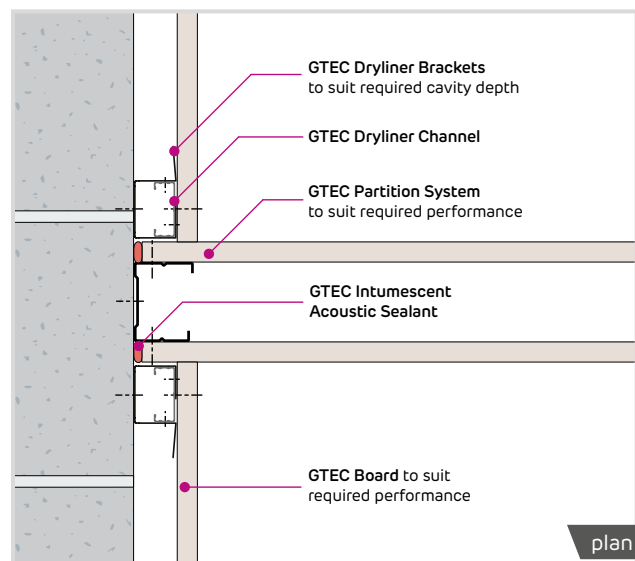


LG-DY-504P-External corner – GTEC Thermal Boards

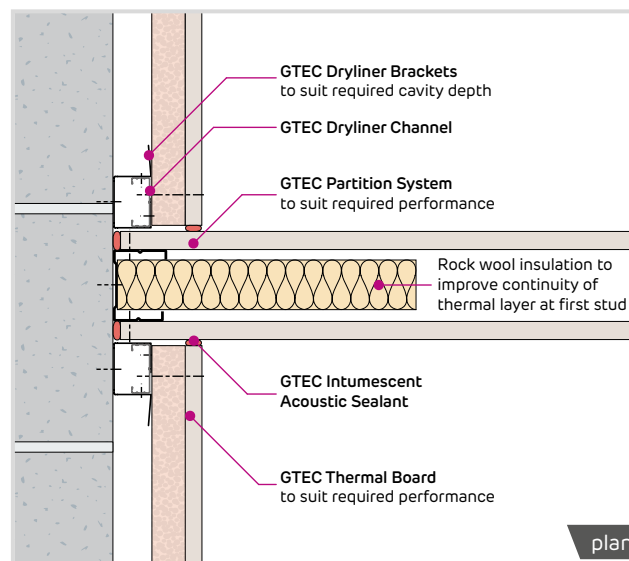


Openings and corners continued

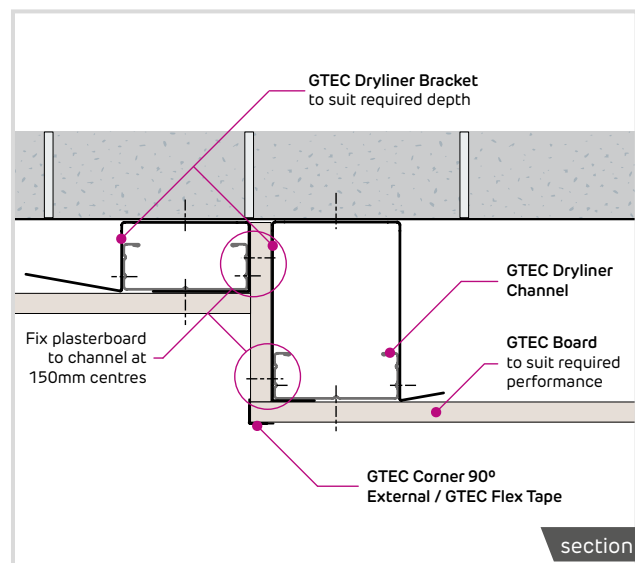
LG-DY-505P-Partition junction



LG-DY-506P-Partition junction – GTEC Thermal Boards



LG-DY-507P-Change in lining depth



- At external corners GTEC Dryliner Channel and brackets to be positioned maximum of 25mm from edge of substrate. GTEC Metal Angle to be fixed to head and base track to provide internal reinforcement and fixing substrate.

Finishing

- ▶ All board joints to be taped, jointed or finished according to guidance in [annex a1: taping and jointing](#), [annex a2: skimming](#) and [annex a3: tiling](#) to achieve system performances.
 - ▶ GTEC Finish materials appropriate to board type to be used.
-

Penetrations

- ▶ M&E runs and other services to be pre-planned to minimise or eliminate penetrations through rated linings.
 - ▶ Pipe penetrations of 40mm or less may be sealed with GTEC Intumescent Acoustic Sealant (for cPVC pipes use Promat HPex Sealant).
-

Fixtures

- ▶ Fixtures may be fixed through to substrate using appropriate fixings or fixed through board to channels.
 - ▶ Fixtures may be attached directly to board provided adequate provision has been made, see section on [partitions systems](#).
-

System continuity

- ▶ Bead of GTEC Intumescent Acoustic Sealant to be applied to perimeter of all runs and in all other locations specified in Construction Detail Drawings.
- ▶ GTEC Intumescent Acoustic Sealant to seal all other acoustic or air paths to prevent fire/smoke spread and acoustic transmission.
- ▶ Full, imperforate system continuity to be maintained to achieve rated performances.
- ▶ There are no inherent restrictions on height provided loads are fully transferred to substrate. Contact Technical Services for further guidance.

system guidance

GTEC shallow wall lining systems

The GTEC Shallow Wall Lining system is an alternative to the GTEC Direct Bond Lining system. It provides a mechanical fix for boards which are unsuitable for use with GTEC Universal Bonding Compound.

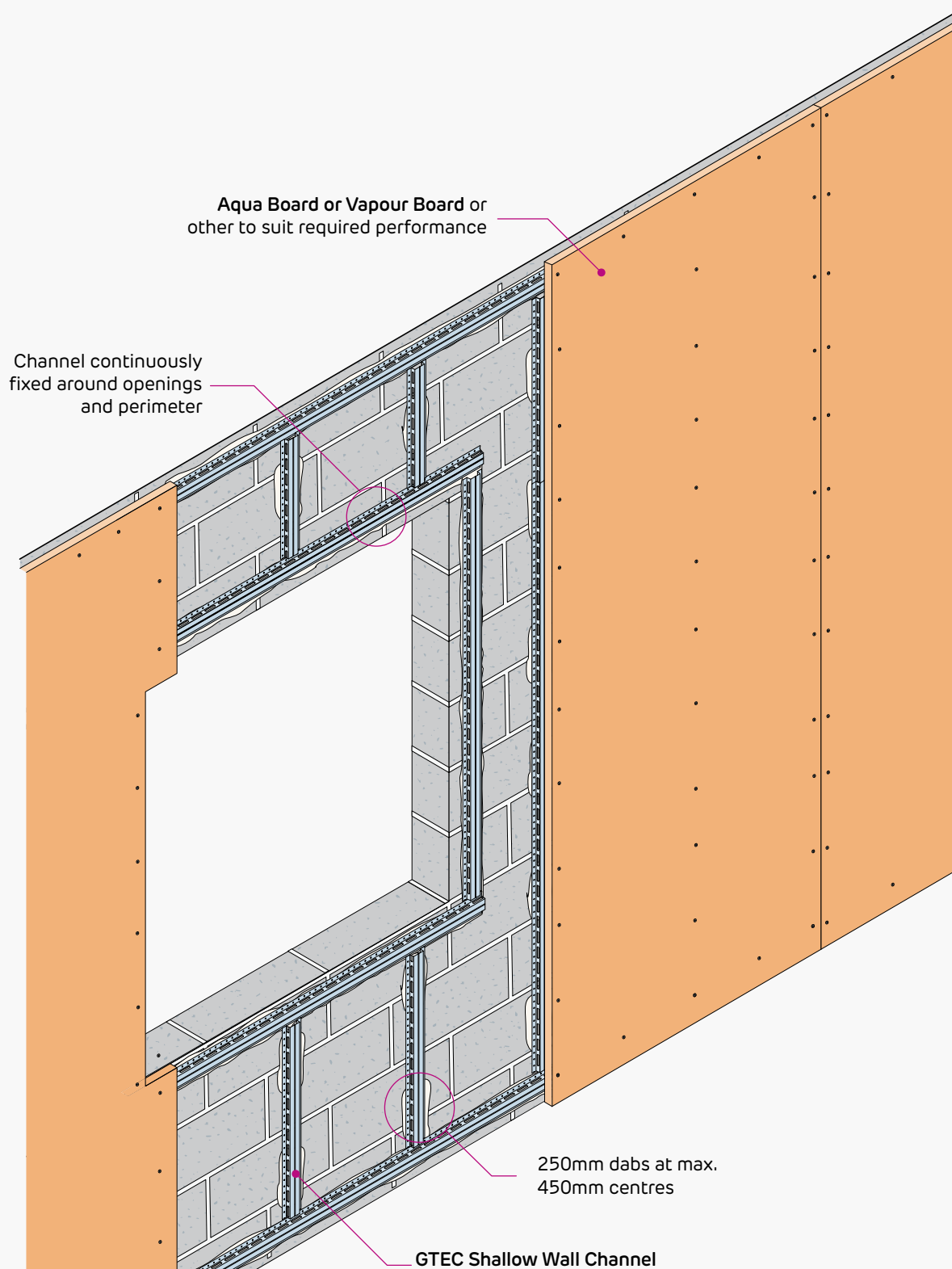
It can also create a fully mechanically fixed option where the substrate cannot be bonded, such as some concrete walls. The system uses GTEC Universal Bonding Compound to attach GTEC Shallow Wall Channels to the substrate providing a fixing surface for GTEC Boards.

When bonded, it can correct minor surface irregularities through minimal levelling adjustment of the shallow channel before the dabs have cured. Alternatively, the GTEC Shallow Wall Channels can be fixed directly into the substrate.

Where to use:

- The GTEC Shallow Wall Lining system is suitable for most project types and masonry substrates.

Features	Benefits
Plasterboard finish	Easy to decorate flat surface
Intermittent cavity up to 25mm deep	Space for small conduits and services
Mechanical board fixing	Substrate for all GTEC Boards
Mechanical or adhesive channel fixing	Fixes to most substrates
Compatible with GTEC Thermal Boards	Improves U-Values
Perforated channel for bonding key	Strong and easy to fix



system components

boards



All GTEC Boards

Provides wall surface suitable for finishing in minimum thickness.

See [System performance tables, page 3 to 16](#)

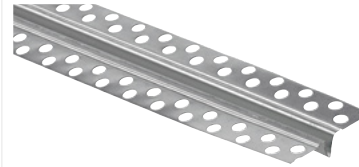
frame



GTEC Shallow Wall Channel

Dabbed or fixed to wall to provide fixing substrate for boards.

MFCS/RX



GTEC Movement Control Joint

Flexible metal profile to create movement joint.

MCJ304D

fix



GTEC Universal Bonding Compound

Gypsum based compound for bonding GTEC Shallow Wall Channel to walls. Suitable for GTEC Thermal boards.

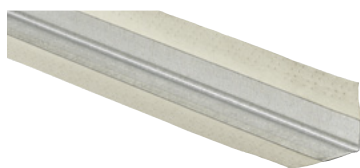


GTEC Drywall Screws (as appropriate)

For mechanical fixing of boards to GTEC Shallow Wall Channel.

See [annex d: screw selection guide](#)

finish



GTEC Corner and Edge beads

Corner and edge reinforcement.



Siniat Joint Tape

Joint reinforcement in conjunction with GTEC Jointing Compounds.



GTEC Intumescent Acoustic Sealant

Perimeter sealing to restrict smoke, sound and fire penetration to achieve quoted performances.



Siniat Compounds

To finish joints between boards and bed corner beads prior to decorating. Ensures system performance.

See [annex b: product reference](#)



GTEC Sealer

To seal plasterboard prior to decoration.



GTEC Socket Pad

To maintain acoustic and fire integrity at sockets.

PAD1&2

system guidance

Substrate

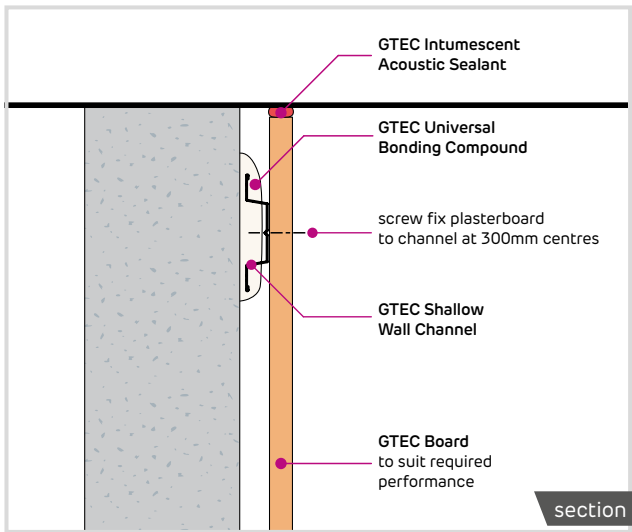
- ▶ GTEC Shallow Wall Lining system is suitable for most level, masonry substrates and may be bonded or mechanically fixed.
- ▶ All substrates to be clean and dust free with all loose material removed. All grease, oil and contaminants to be removed; chemical cleaning may be required.
- ▶ Substrate treatment for bonding:

Substrate	Treatment
Very low suction	May require mechanical fixing
Low and medium suction	None
High suction	PVAC bonding agent

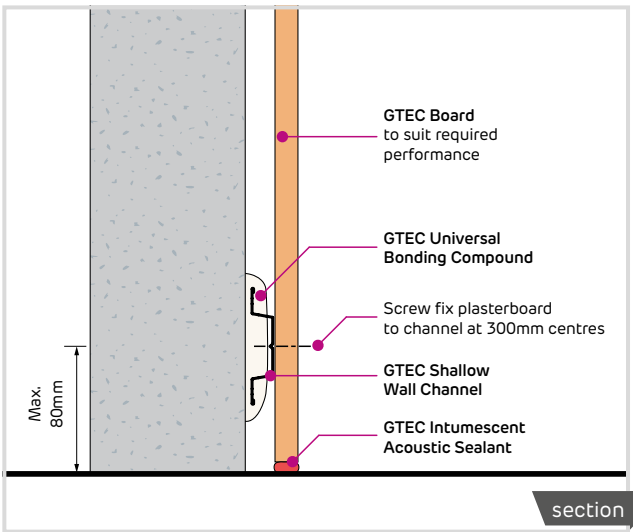
- ▶ All loose plasterwork to be removed. Existing plasterwork in good condition may be suitable for GTEC Universal Bonding Compound provided all paint has been removed and key is established by treating with a PVAC bonding agent according to manufacturer's instructions.
- ▶ Substrates subject to moisture ingress require mechanical fixing of GTEC Shallow Wall Channels. External solid walls with render finishes exposed to severe frosts are not suitable for bonding.

Frame

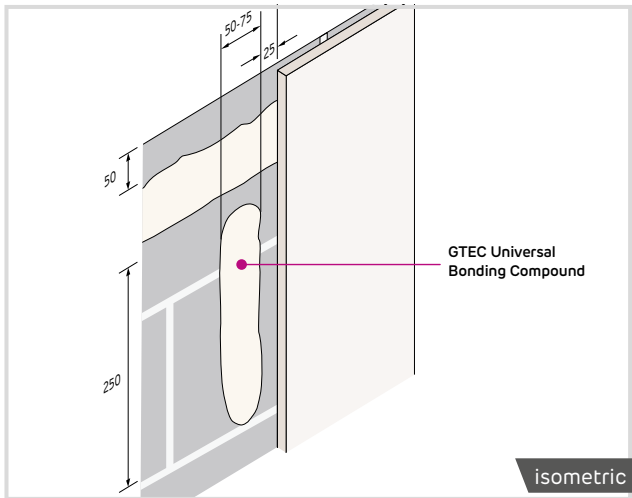
LG-ML-101S-Head Detail



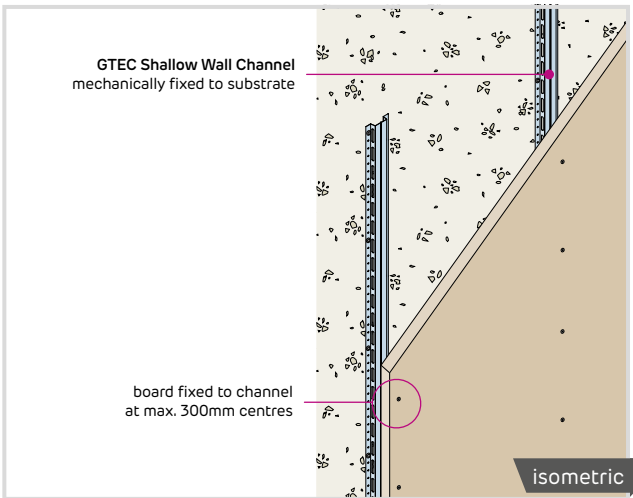
LG-ML-102S-Base Detail



LG-DB-180M-Dab sizing



LG-ML-181M-Mechanical fixing



Frame continued

- ▶ GTEC Shallow Wall Channel to be fixed to substrate in continuous vertical lengths at 600mm horizontal centres using dabs of GTEC Universal Bonding Compound or mechanically fixed using appropriate fixings by others.
- ▶ GTEC Shallow Wall Channels may be shot fired to dense substrates following fixing manufacturer's instructions.
- ▶ Horizontal lengths of GTEC Shallow Wall Channel to be fixed maximum 50mm from head and base of lining.

Bonding dabs to be:

- ▶ 250mm x 50-75mm.
- ▶ Minimum 10mm thick and up to 25mm to provide board levelling.
- ▶ At 450mm maximum vertical centres.
- ▶ Minimum of two dabs per channel not exceeding vertical centres above.
- ▶ Minimum 25mm from board edges.
- ▶ Continuous ribbons of bonding compound to be provided 50mm from head and base of board and around perimeter of walls and openings to provide fixing for horizontal channel.
- ▶ Socket boxes to be surrounded by continuous ribbon of bonding compound.

Boarding

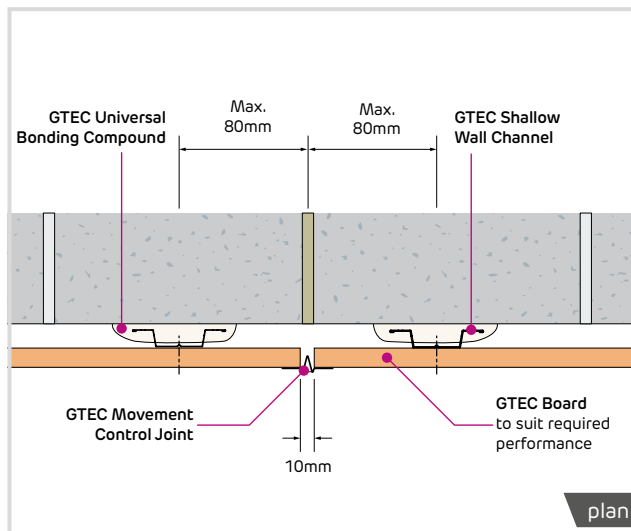
- ▶ The GTEC Shallow Wall lining system is suitable for single layer boarding only.
- ▶ Boards to be 5mm less than floor to ceiling height.
- ▶ Board edges to be centred over channels.
- ▶ Boards to be mechanically fixed to channels at 300mm centres using appropriate GTEC Drywall Screws. See [annex d: screw selection guide](#).
- ▶ Height of GTEC Shallow Wall linings should not exceed two boards in height in one operation. Safety precautions should be taken when bonding boards above single board height.

Thermal Boards only:

- ▶ Select GTEC Thermal Board type and thickness according to desired thermal value and requirement for vapour barrier.
- ▶ GTEC Thermal Board thickness may be reduced by utilising higher insulation grade boards, e.g. GTEC Thermal PIR Board.

Movement control joints

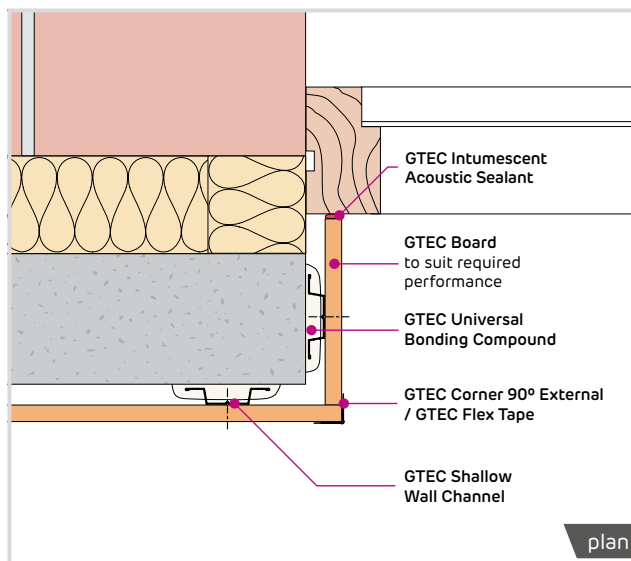
LG-ML-301P-Movement joint



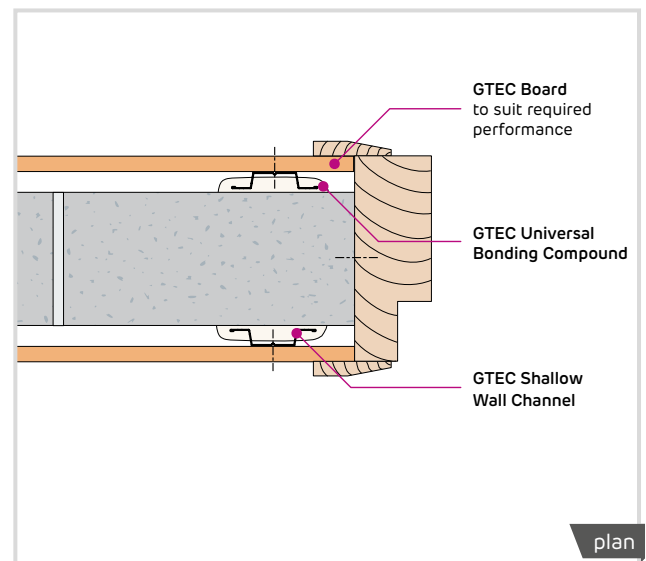
- Form movement control joints at maximum 10m intervals in the lining run.
- Form movement control joints where the lining crosses a structural movement joint.
- Fix GTEC Movement Control Joint, butted end-to-end, to board with sheradised or galvanised staples.

Openings and corners

LG-ML-401P-Window reveal

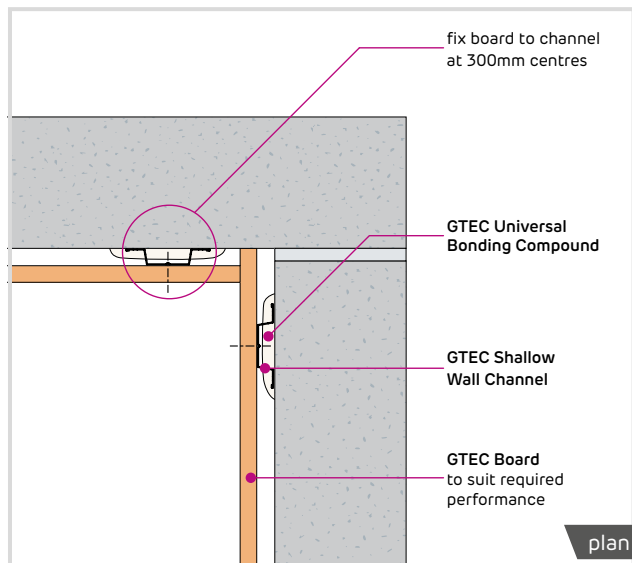


LG-ML-402P-Door jamb

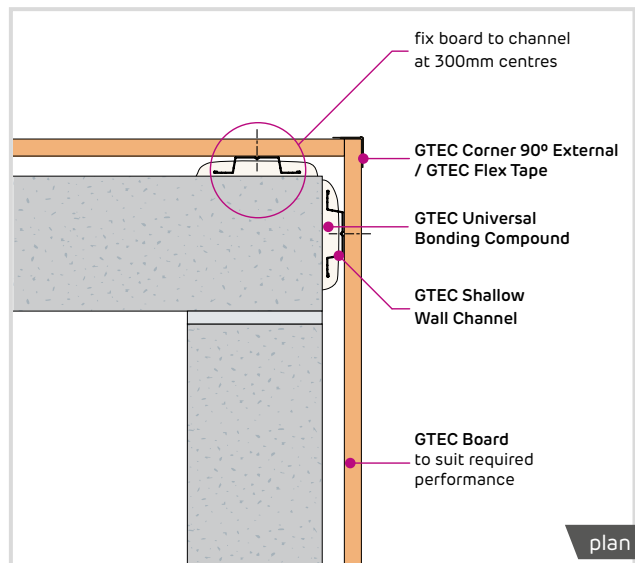


Openings and corners continued

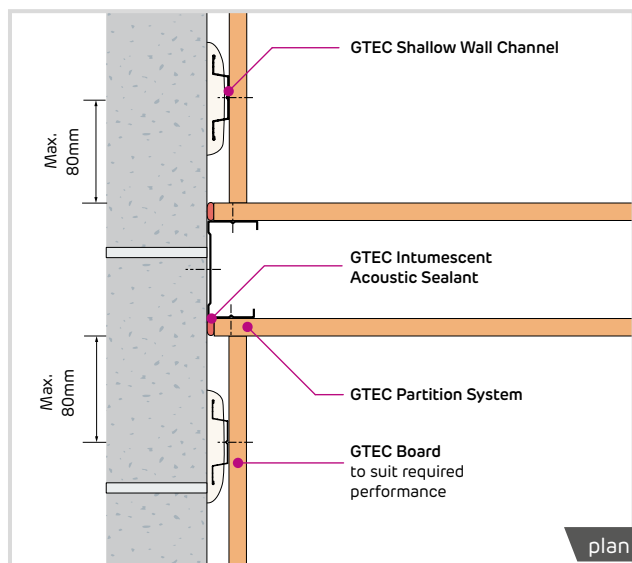
LG-ML-501P-Internal corner



LG-ML-502P-External corner



LG-ML-503P-Junction with partition



- ▶ GTEC Shallow Wall Channel to be fixed vertically and horizontally around openings to provide maximum 50mm of unsupported board.
- ▶ At corners GTEC Shallow Wall Channel to be fixed vertically to provide maximum 50mm of unsupported board.

Finishing

- ▶ All board joints to be taped, jointed or finished according to guidance in [annex a1: taping and jointing](#), [annex a2: skimming](#) and [annex a3: tiling](#) to achieve system performances.
 - ▶ GTEC Finish materials appropriate to board type to be used
-

Penetrations

- ▶ M&E runs and other services to be pre-planned to minimise or eliminate penetrations through rated linings.
 - ▶ Pipe penetrations of 40mm or less may be sealed with GTEC Intumescent Acoustic Sealant (for cPVC pipes use Promat HPex Sealant).
-

Fixtures

- ▶ All fixtures to be fixed through to substrate using appropriate fixings.
-

System continuity

- ▶ Bead of GTEC Intumescent Acoustic Sealant to be applied to perimeter of all runs and in all other locations specified in Construction Detail Drawings.
- ▶ GTEC Intumescent Acoustic Sealant to seal all other acoustic or air paths to prevent fire/smoke spread and acoustic transmission.
- ▶ Full, imperforate system continuity to be maintained to achieve rated performances.
- ▶ Where channels are mechanically fixed there are no inherent restrictions on height providing board loads are fully transferred to substrate.

system guidance

GTEC direct bond lining systems

The GTEC direct bond lining system is the simplest option for single layer drylining of masonry substrates.

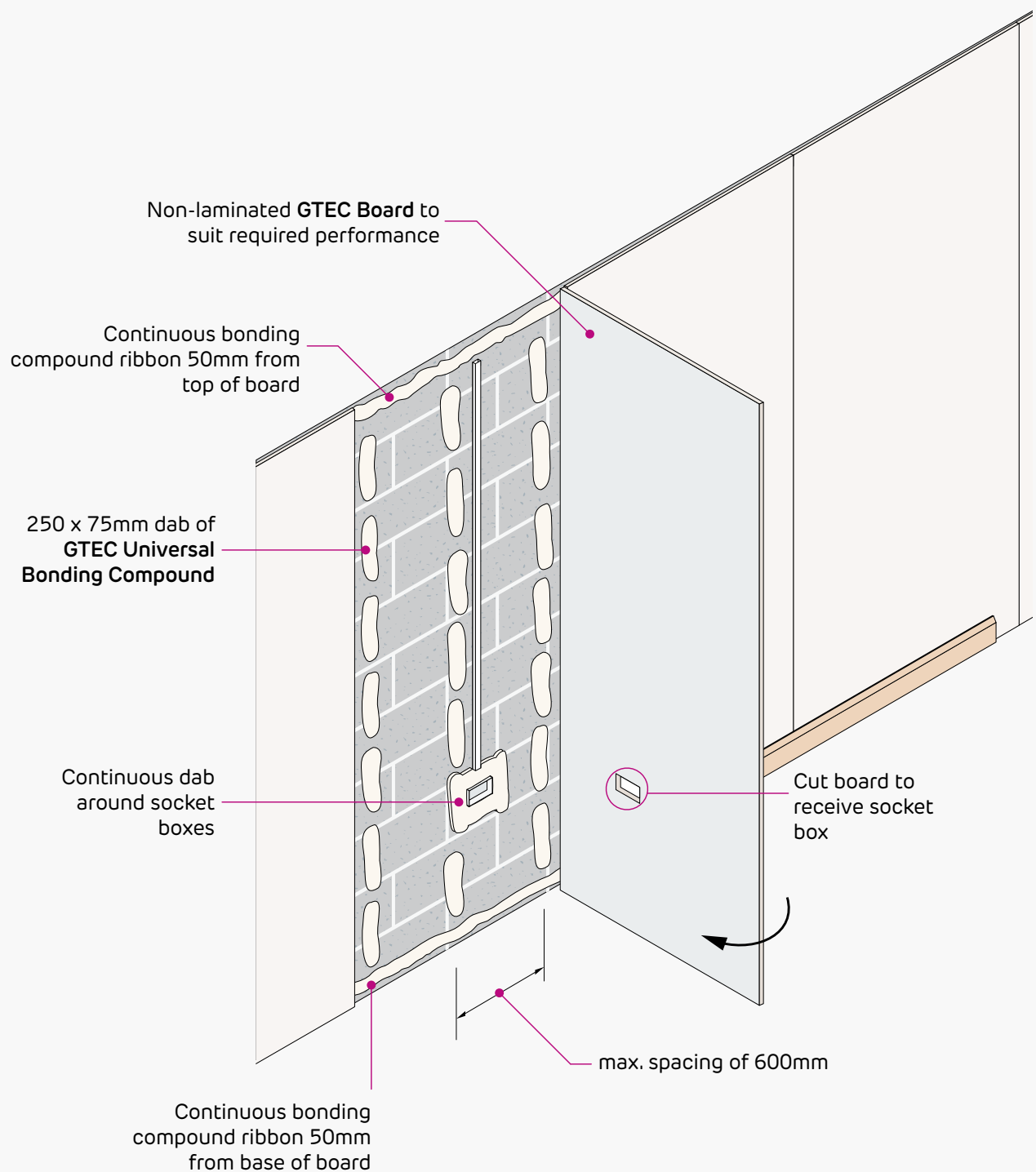
It provides a clean, flat and easy to finish surface by bonding GTEC board to the masonry substrate. This construction method reduces drying out time speeding up internal fit-out.

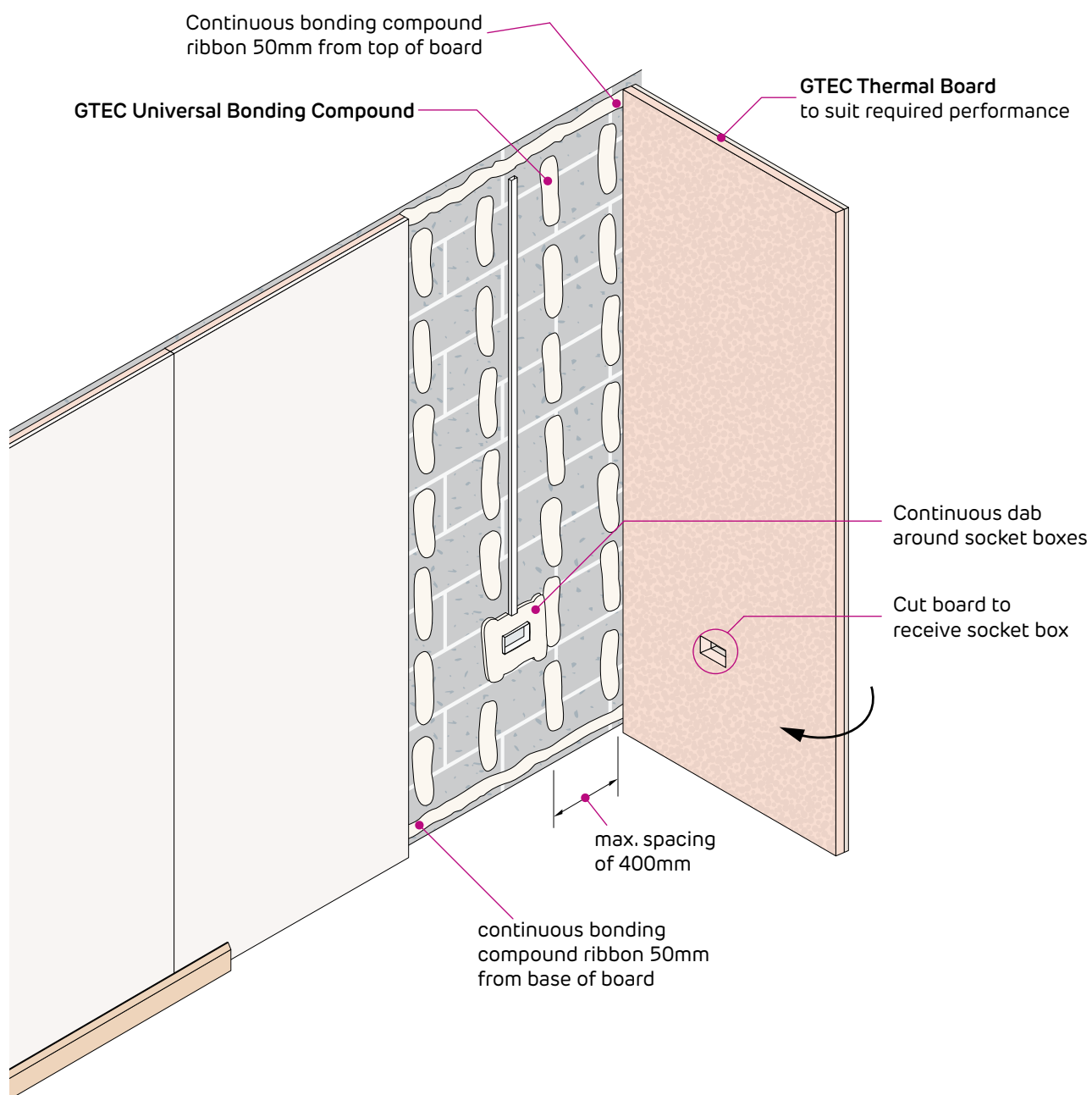
The system uses GTEC Universal Bonding Compound to directly attach GTEC Plasterboards to the wall and corrects minor surface irregularities. GTEC Thermal Boards can also be bonded to increase thermal performance through the wall.

Where to use:

- GTEC Direct Bond Lining systems are used in new build residential and general renovation projects.

Features	Benefits
Few products required	Low installation cost
Limited increase in wall thickness	Minimal effect on room size and achieves the required finish
Service cavity of 10-25mm can be created	Allows installation of conduits and small services material costs
Suitable for GTEC Thermal Boards	One-fix method of achieving required thermal performance
Workable bonding compound	Easily achieves air tightness by bonding around the wall perimeter. Allows adjustment during boarding
Bonds to the majority of masonry substrates	Suits most construction projects and corrects surface irregularities





system components

boards



All GTEC Boards, except Aquaboard™ and GTEC Vapour Board
Provides wall surface suitable for finishing.

See [System performance tables, page 3 to 16](#)



All GTEC Thermal Boards
Provides wall surface suitable for finishing and thermal insulation.

See [System performance tables, page 3 to 16](#)

fix

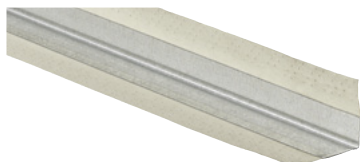


GTEC Universal Bonding Compound
Directly bonds plasterboard to walls.



Nailable Plug
Mechanical secondary fixing of GTEC Thermal Boards.

finish



GTEC Corner and Edge beads
Corner and edge reinforcement.



Siniat Joint Tape
Joint reinforcement in conjunction with GTEC Jointing Compounds.



GTEC Intumescent Acoustic Sealant
Perimeter sealing to restrict smoke, sound and fire penetration to achieve quoted performances.



Siniat Compounds
To finish joints between boards and bed corner beads prior to decorating. Ensures system performance.

See [annex b: product reference](#)



GTEC Sealer
To seal plasterboard prior to decoration.



GTEC Socket Pad
To maintain acoustic and fire integrity at sockets.

PAD1&2

system guidance

Substrate

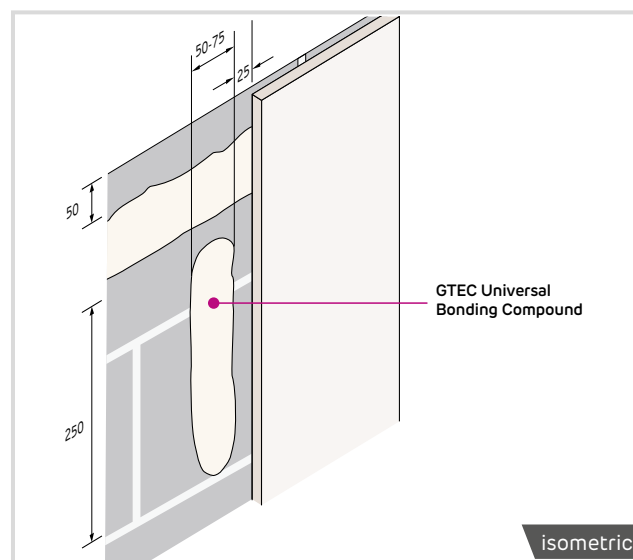
- ▶ GTEC Direct Bond Lining system is suitable for most level, masonry substrates.
- ▶ All substrates to be clean and dust free with all loose material removed. All grease, oil and contaminants to be removed; chemical cleaning may be required.
- ▶ Substrate treatment for bonding:

Substrate	Treatment
Very low suction	May require mechanical fixing
Low and medium suction	None
High suction	PVAC bonding agent

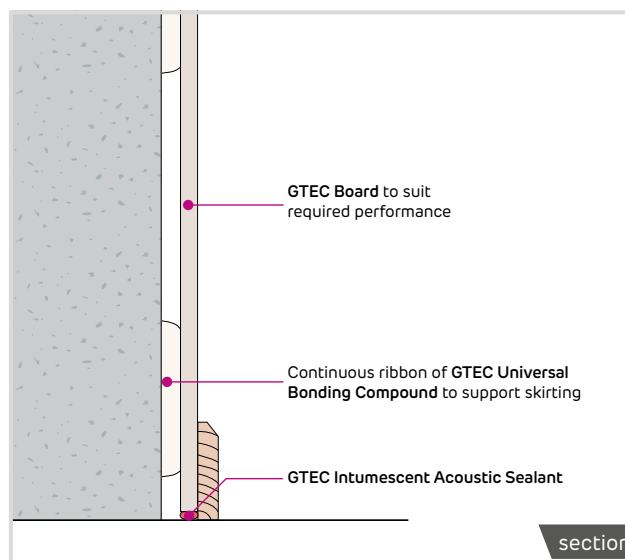
- ▶ All loose plasterwork to be removed. Existing plasterwork in good condition may be suitable for GTEC Direct Bonding provided all paint has been removed and adequate key is established by treating with a PVAC bonding agent according to manufacturer's instructions.
- ▶ Substrates subject to moisture ingress to use mechanical fixing system. External solid walls with render finishes exposed to severe frosts are not suitable for bonding.

Bonding

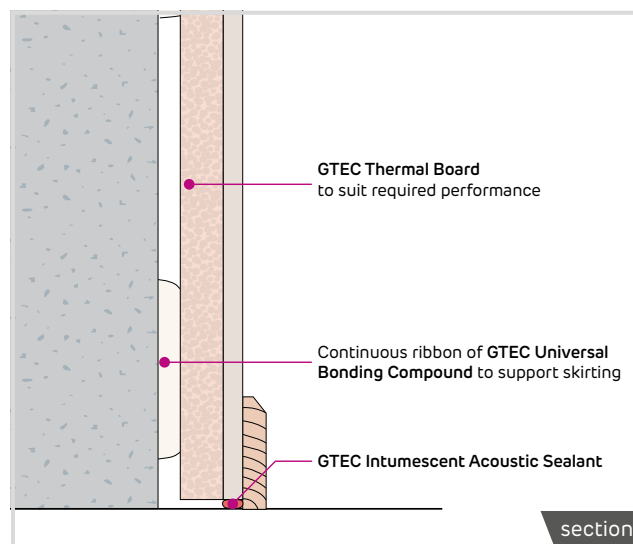
LG-DB-180M-Dab sizing



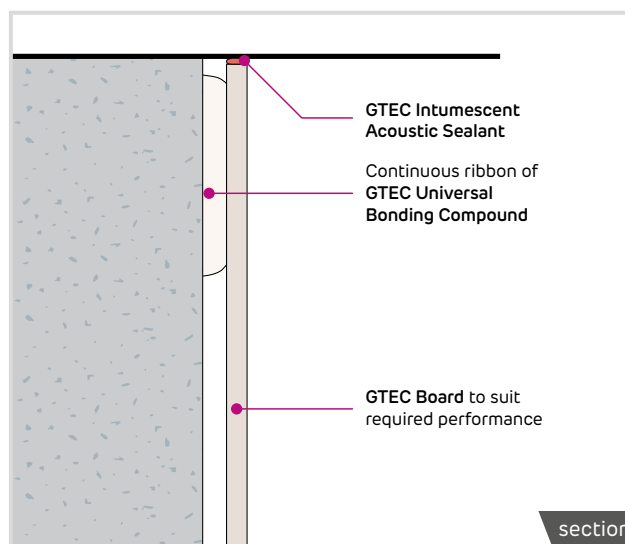
LG-DB-181S-Base detail



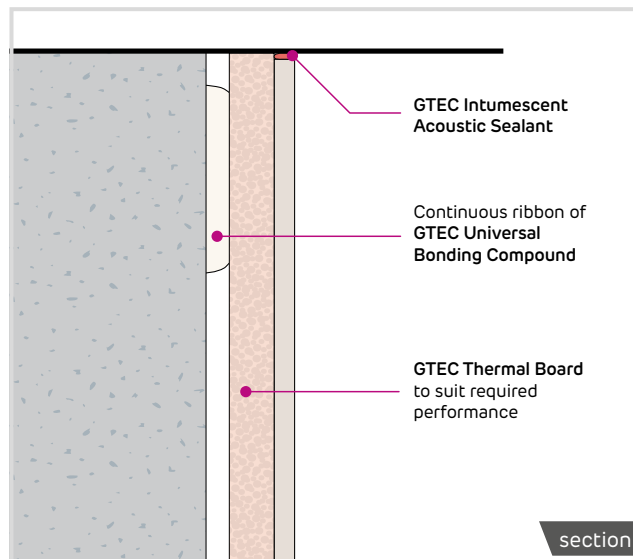
LG-DB-182S-Base detail – GTEC Thermal Boards



LG-DB-183S-Head detail



LG-DB-184S-Head detail – GTEC Thermal Boards



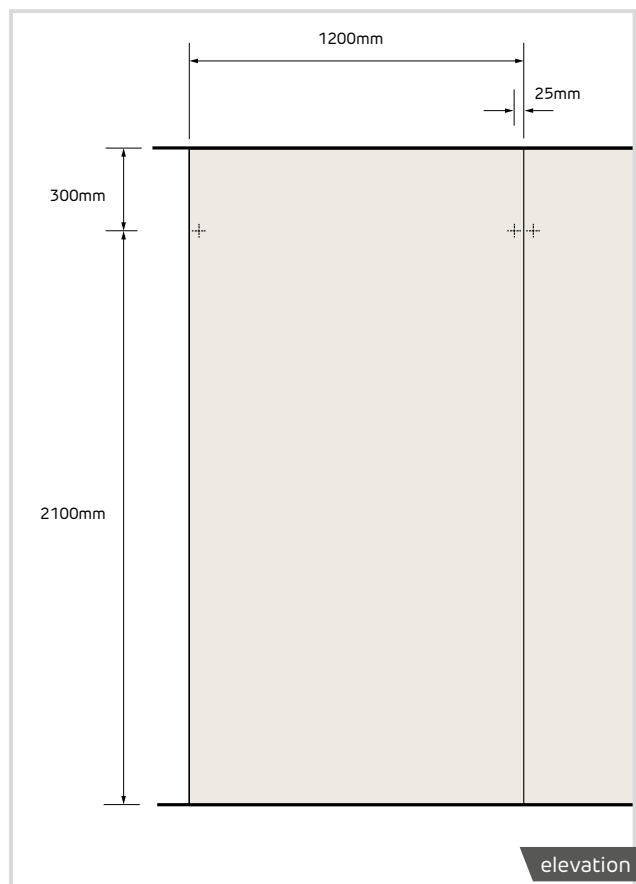
- ▶ Boards to be fixed to substrate using GTEC Universal Bonding Compound. Minimum 20% contact area between boards and dabs.

Bonding dabs to be:

- ▶ 250mm x 50-75mm.
- ▶ Minimum 10mm thick and up to 25mm to provide board levelling.
- ▶ At 600mm maximum horizontal centres and 300mm maximum vertical centres.
- ▶ At 400mm maximum horizontal centres and 300mm vertical centres for GTEC Thermal Boards.
- ▶ Minimum of three 'columns' of dabs per board.
- ▶ Minimum 25mm from board edges.
- ▶ Continuous ribbons of bonding compound to be provided 50mm from head and base of each board and around perimeter of walls to ensure air-tightness and provide robust fixing for trims.
- ▶ Socket boxes to be surrounded by continuous ribbon of bonding compound.

Boarding

LG-DB-201E-Nailable plug arrangement



- ▶ The GTEC Direct Bond lining system is suitable for single layer boarding only.
- ▶ Select finishing layer GTEC Board by consulting [System performance tables, page 3 to 16](#).
- ▶ GTEC Vapour Board and Aquaboard™ cannot be bonded using the GTEC Direct Bond lining system.
- ▶ Boards to be 5mm less than floor to ceiling height.

Thermal boards only:

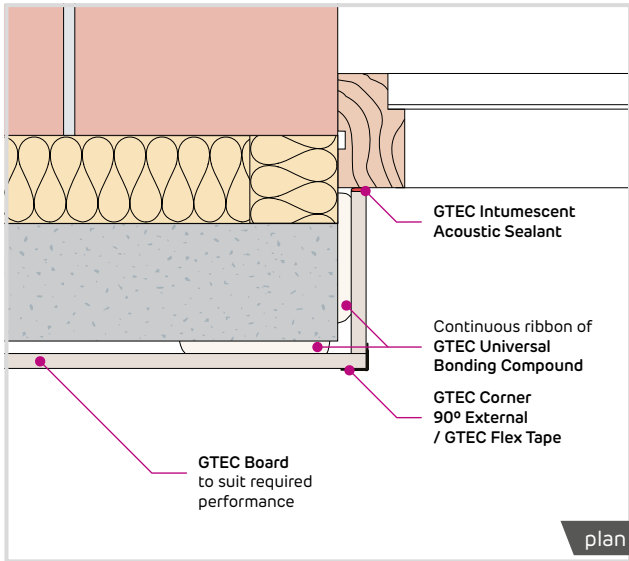
- ▶ Select GTEC Thermal Board type and thickness according to desired thermal value and requirement for vapour barrier.
- ▶ GTEC Thermal Board thickness may be reduced by utilising higher insulation grade boards, e.g. GTEC Thermal PIR Board.
- ▶ Retain each GTEC Thermal Board with two Nailable Plugs to suit board depth, fitted through holes drilled in board, through cavity and penetrating 25mm into masonry substrate. Render or plaster should not be regarded as a stable substrate for Nailable Plug penetration.

Movement control joints

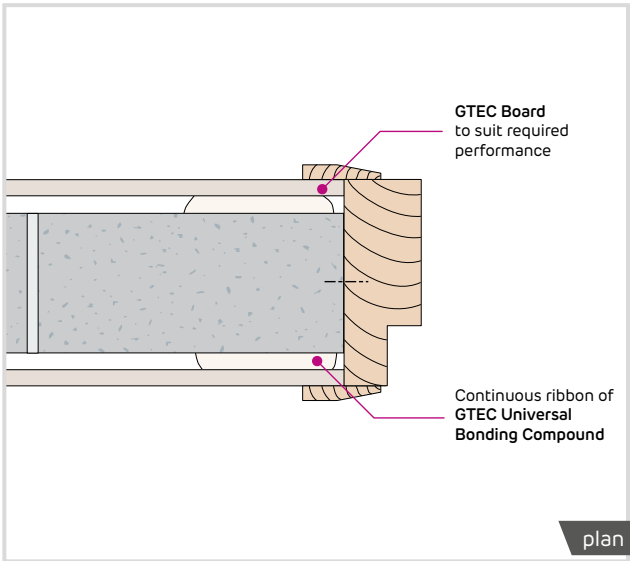
- ▶ Form movement control joints at maximum 10m intervals in the lining run.
- ▶ Form movement control joints where the lining crosses a structural movement joint.
- ▶ Fix GTEC Movement Control Joint, butted end-to-end, to board with sheradised or galvanised staples.
- ▶ Continuous ribbon of GTEC Universal Bonding Compound to be provided either side of movement control joint.

Openings

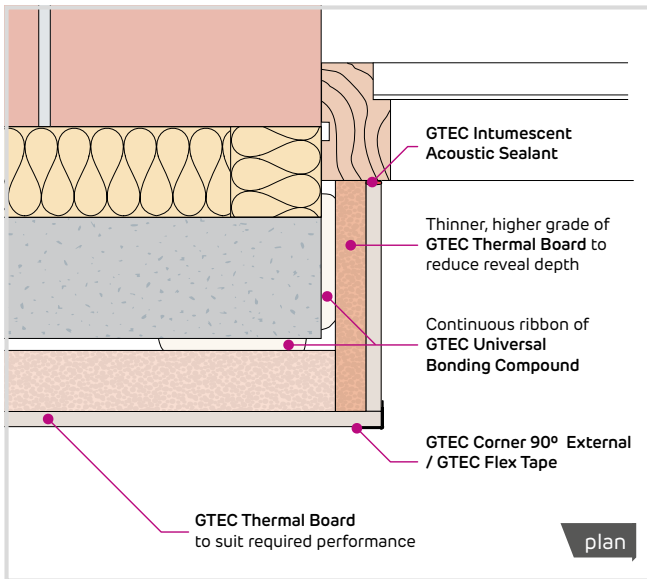
LG-DB-401P-Window reveal



LG-DB-402P-Door jamb



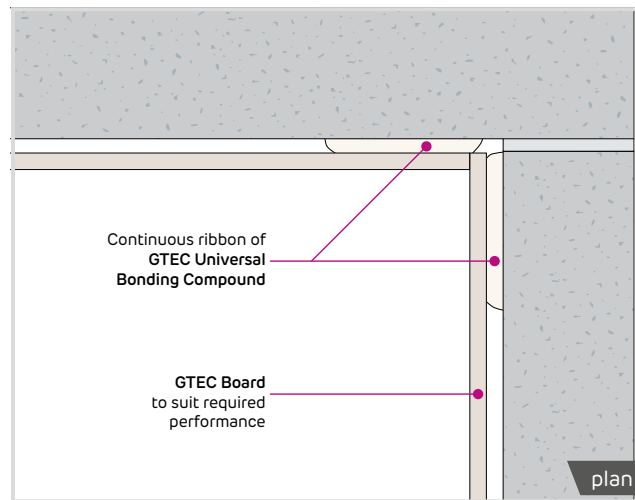
LG-DB-403P-Window reveal – GTEC Thermal Boards



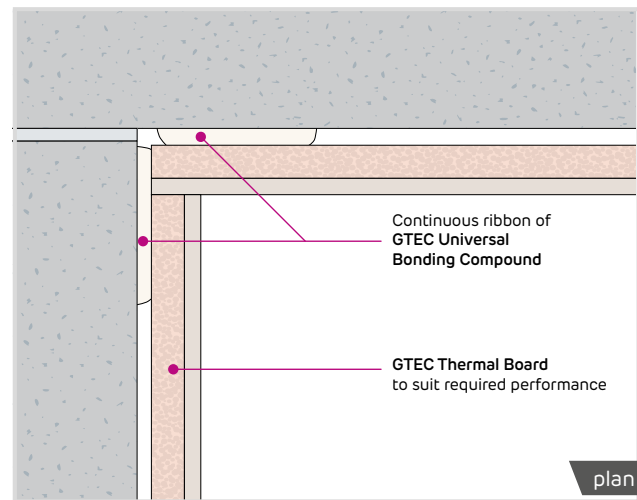
► See Construction Details Drawings for further guidance on arrangement and fixing.

Corners and junctions

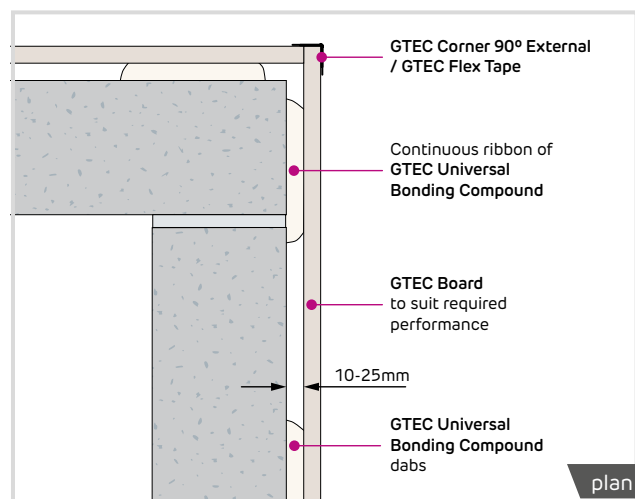
LG-DB-501P-Internal corner



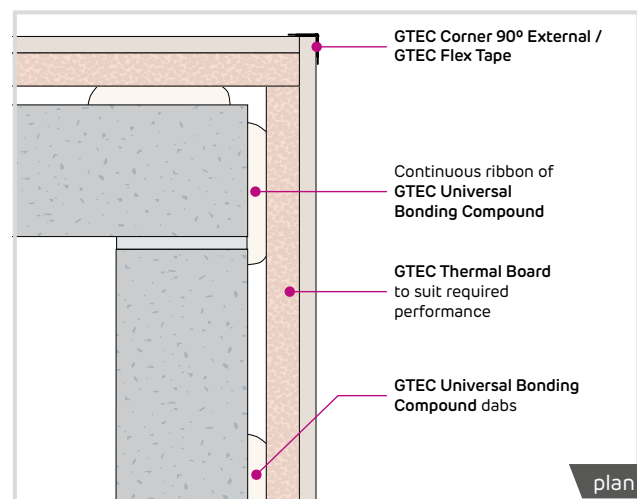
LG-DB-502P-Internal corner – GTEC Thermal Boards



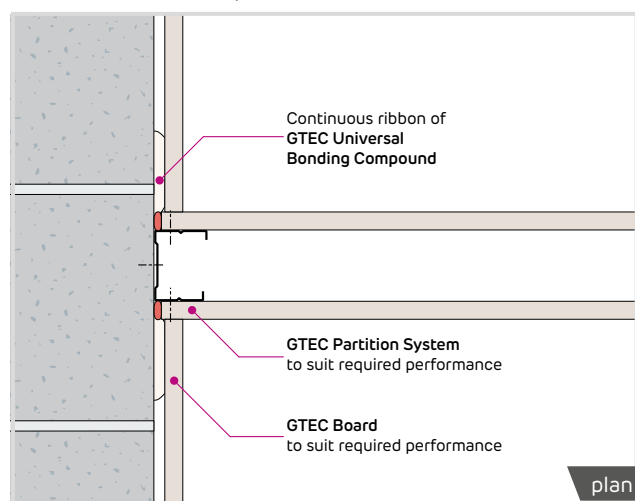
LG-DB-503P-External corner



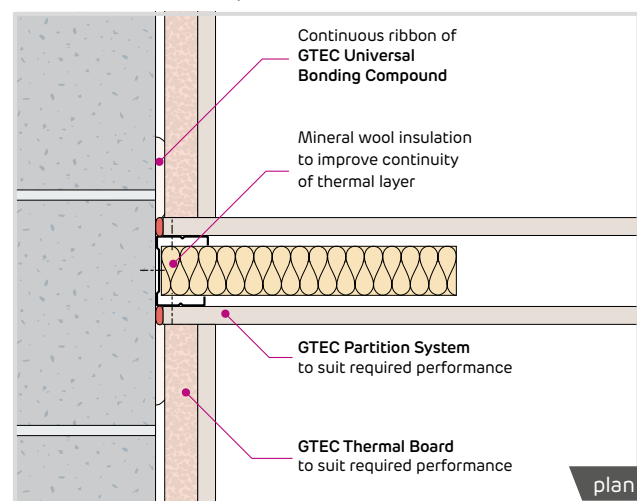
LG-DB-504P-External corner – GTEC Thermal Boards



LG-DB-505P-Partition junction



LG-DB-506P-Partition junction – GTEC Thermal Boards



- ▶ See Construction Details Drawings for further guidance on arrangement and fixing.

Finishing

- ▶ All board joints to be taped, jointed or finished according to guidance in [annex a1: taping and jointing](#), [annex a2: skimming](#) and [annex a3: tiling](#) to achieve system performances.
- ▶ GTEC Finish materials appropriate to board type to be used.

Penetrations

- ▶ M&E runs and other services to be pre-planned to minimise or eliminate penetrations through rated linings.
- ▶ Pipe penetrations of 40mm or less may be sealed with GTEC Intumescent Acoustic Sealant (for cPVC pipes use Promat HPex Sealant).

Fixtures

- ▶ All fixtures to be fixed through to substrate using appropriate fixings.

System continuity

- ▶ Bead of GTEC Intumescent Acoustic Sealant to be applied to perimeter of all runs and in all other locations specified in Construction Detail Drawings.
- ▶ GTEC Intumescent Acoustic Sealant to seal all other acoustic or air paths to prevent fire/smoke spread and acoustic transmission.
- ▶ Full, imperforate system continuity to be maintained to achieve rated performances.

Technical services

Technical advice and project enquiries.

☎ 0800 145 6033 or 01275 377 789

@ technical.siniat@etexbp.co.uk

GB orderline

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