

# drywall manual

**floors and  
ceilings section**

version **1.0.1**

publication date: July 2022



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

**Floors and Ceilings section**

This section has been rebranded and discontinued products removed since it was published in December 2018.

**Revision history**

<b>Version</b>	<b>Date of publication</b>
1.0.0	December 2018
1.0.1	July 2022: Rebranded, discontinued products removed, no technical review.

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

# floors and ceilings

GTEC Floor and Ceiling systems are used to achieve acoustic and fire rated solutions for both domestic and commercial building projects. A range of solutions are available; from direct soffit application to the creation of full supporting frames. They are suitable for varying building projects and can be built in large runs.

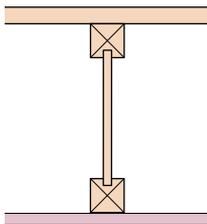
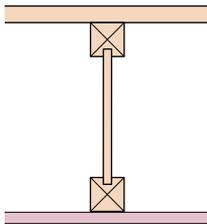
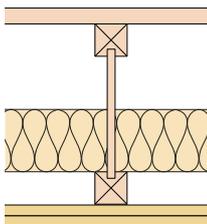
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## System performance tables

## GTEC engineered joist systems

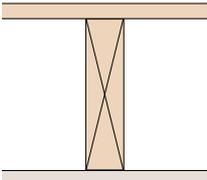
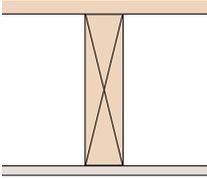
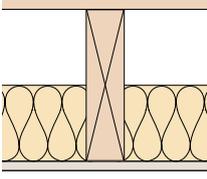
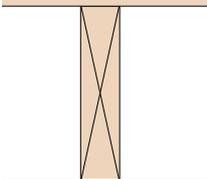
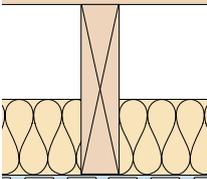
System Ref.	Component	System Weight (kg/m <sup>2</sup> )	Minimum Thickness (mm)	Fire Perf. BS 476-21 BS EN 1365-2 (mins)	Acoustic Perf. R <sub>w</sub> dB  (C <sub>tr</sub> where applicable)	Impact Sound Insulation  (L <sub>NW</sub> dB)
<b>REJ 028: Direct-to-Timber – see p35</b>						
	<b>Ceiling Inner Layer(s):</b> – <b>Ceiling Outer Layer(s):</b> 1x 12.5mm GTEC Fire Board <b>Accessories:</b> (Single GTEC Resilient Bar at max. 450mm centres recommended) <b>Insulation:</b> – <b>Structure:</b> min. 240mm engineered timber I-joists at 600mm centres <b>Flooring Make-up:</b> 22mm tongue and grooved chipboard	30	277 (294)	30 30	41	80
<b>REJ 029: Direct-to-Timber – see p35</b>						
	<b>Ceiling Inner Layer(s):</b> 1x 12.5mm GTEC Fire Board <b>Ceiling Outer Layer(s):</b> 1x 12.5mm GTEC Fire Board <b>Accessories:</b> (Single GTEC Resilient Bar at max. 450mm centres recommended) <b>Insulation:</b> – <b>Structure:</b> min. 240mm engineered timber I-joists at 600mm centres <b>Flooring Make-up:</b> 22mm tongue and grooved chipboard	38	287 (304)	60 –	41	80
<b>REJ 030: Direct-to-Timber – see p35</b>						
	<b>Ceiling Inner Layer(s):</b> 1x 15mm GTEC Universal Board <b>Ceiling Outer Layer(s):</b> 1x 15mm GTEC Universal Board <b>Accessories:</b> (Single GTEC Resilient Bar at max. 450mm centres recommended) <b>Insulation:</b> 100mm 10.5 kg/m <sup>3</sup> glass mineral wool <b>Structure:</b> min. 240mm engineered timber I-joists at 600mm centres <b>Flooring Make-up:</b> 22mm tongue and grooved chipboard	45	292 (309)	60 –	44	75

BS 476-21: Methods for determination of the fire resistance of load bearing elements of construction.

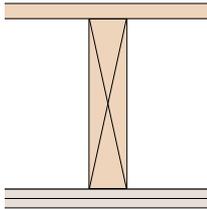
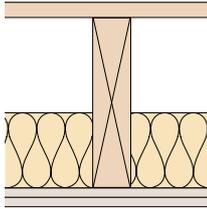
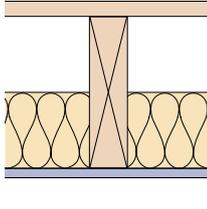
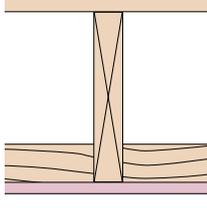
BS EN 1365-2: Fire resistance tests for load bearing elements. Floors and roofs.

See [page 15](#) for notes on alterations to floors and ceilings configuration.

## GTEC ceiling systems to timber floors

System Ref.	Component	System Weight (kg/m <sup>2</sup> )	Minimum Thickness (mm)	Fire Perf. BS 476-21 BS EN 1365-2 (mins)	Acoustic Perf. R <sub>w</sub> dB  (C <sub>tr</sub> where applicable)	Impact Sound Insulation  (L <sub>nw</sub> dB)
<b>RTC 052: Direct-to-Timber – see p35</b>						
	Ceiling Inner Layer(s): – Ceiling Outer Layer(s): 1x 15mm GTEC Standard Board Accessories: – Insulation: – Structure: 47mm x 200mm joists at 400mm centres without noggings Flooring Make-up: 18mm tongue and grooved chipboard	37	233	30 30	38	77
<b>RTC 012: Direct-to-Timber – see p35</b>						
	Ceiling Inner Layer(s): – Ceiling Outer Layer(s): 1x 12.5mm GTEC Standard Board Accessories: – Insulation: – Structure: 47mm x 200mm joists at 400mm centres without noggings Flooring Make-up: 22mm tongue and grooved chipboard	35	235	30 –	38	78
<b>RTC 065: Direct-to-Timber – see p35</b>						
	Ceiling Inner Layer(s): – Ceiling Outer Layer(s): 1x 12.5mm GTEC Standard Board Accessories: – Insulation: 100mm 10.5kg/m <sup>3</sup> glass mineral wool Structure: 47mm x 200mm joists at 400mm centres with noggings Flooring Make-up: 22mm tongue and grooved chipboard	38	235	30 –	40	79
<b>RTC 061: Direct-to-Timber – see p35</b>						
	Ceiling Inner Layer(s): – Ceiling Outer Layer(s): 1x 15mm GTEC Standard Board Accessories: Single GTEC Resilient Bar at max. 450mm centres Insulation: – Structure: 47mm x 200mm joists at 450mm centres Flooring Make-up: 22mm tongue and grooved chipboard	43	254	30 30	40	76
<b>RTC 017: Direct-to-Timber – see p35</b>						
	Ceiling Inner Layer(s): – Ceiling Outer Layer(s): 1x 12.5mm GTEC dB Board Accessories: Single GTEC Resilient Bar at max. 450mm centres Insulation: 100mm 10.5kg/m <sup>3</sup> glass mineral wool Structure: 47mm x 200mm joists at 600mm centres Flooring Make-up: 22mm tongue and grooved chipboard	38	252	30 30	52	69

## GTEC ceiling systems to timber floors continued

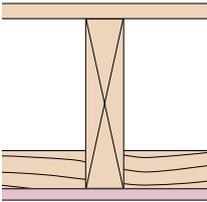
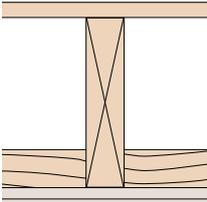
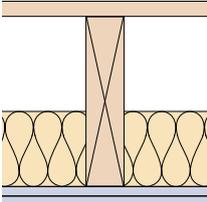
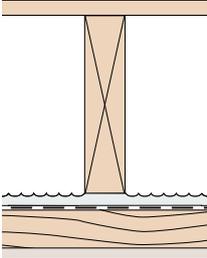
System Ref.	Component	System Weight (kg/m <sup>2</sup> )	Minimum Thickness (mm)	Fire Perf. BS 476-21 BS EN 1365-2 (mins)	Acoustic Perf. R <sub>w</sub> dB  (C <sub>tr</sub> where applicable)	Impact Sound Insulation  (L <sub>NW</sub> dB)
<b>RTC 003: Direct-to-Timber – see p35</b>						
	<b>Ceiling Inner Layer(s):</b> 1x 12.5mm GTEC Standard Board <b>Ceiling Outer Layer(s):</b> 1x 12.5mm GTEC Standard Board <b>Accessories:</b> – <b>Insulation:</b> – <b>Structure:</b> 47mm x 200mm joists at 600mm centres <b>Flooring Make-up:</b> 22mm tongue and grooved chipboard	48	247	30 30	40	78
<b>RTC 004: Direct-to-Timber – see p35</b>						
	<b>Ceiling Inner Layer(s):</b> 1x 12.5mm GTEC Standard Board <b>Ceiling Outer Layer(s):</b> 1x 12.5mm GTEC Standard Board <b>Accessories:</b> – <b>Insulation:</b> 100mm 10.5kg/m <sup>3</sup> glass mineral wool <b>Structure:</b> 47mm x 200mm joists at 600mm centres <b>Flooring Make-up:</b> 22mm tongue and grooved chipboard	48	247	30 30	42	75
<b>RTC 028: Direct-to-Timber – see p35</b>						
	<b>Ceiling Inner Layer(s):</b> – <b>Ceiling Outer Layer(s):</b> 1x 12.5mm GTEC dB Board <b>Accessories:</b> – <b>Insulation:</b> 100mm 10.5kg/m <sup>3</sup> glass mineral wool <b>Structure:</b> 47mm x 200mm joists at 600mm centres with noggings <b>Flooring Make-up:</b> 22mm tongue and grooved chipboard	38	235	30 30	44	75
<b>RTC 037: Direct-to-Timber – see p35</b>						
	<b>Ceiling Inner Layer(s):</b> – <b>Ceiling Outer Layer(s):</b> 1x 12.5mm GTEC Fire Board <b>Accessories:</b> – <b>Insulation:</b> – <b>Structure:</b> 47mm x 200mm joists at 600mm centres with noggings <b>Flooring Make-up:</b> 22mm tongue and grooved chipboard	34	235	30 30	41	77

BS 476-21: Methods for determination of the fire resistance of load bearing elements of construction.

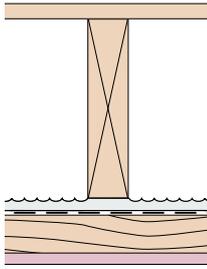
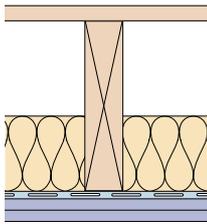
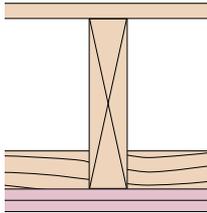
BS EN 1365-2: Fire resistance tests for load bearing elements. Floors and roofs.

See [page 15](#) for notes on alterations to floors and ceilings configuration.

GTEC ceiling systems to timber floors continued

System Ref.	Component	System Weight (kg/m <sup>2</sup> )	Minimum Thickness (mm)	Fire Perf. BS 476-21 BS EN 1365-2 (mins)	Acoustic Perf. R <sub>w</sub> dB  (C <sub>tr</sub> where applicable)	Impact Sound Insulation  (L <sub>nw</sub> dB)
<b>RTC 018: Direct-to-Timber – see p35</b>						
	<p><b>Ceiling Inner Layer(s):</b> –</p> <p><b>Ceiling Outer Layer(s):</b> 1x 15mm GTEC Fire Board (Fixed with 63mm GTEC High Thread screws)</p> <p><b>Accessories:</b> –</p> <p><b>Insulation:</b> –</p> <p><b>Structure:</b> 47mm x 200mm joists at 600mm centres with noggings</p> <p><b>Flooring Make-up:</b> 22mm tongue and grooved chipboard</p>	37	237	60 60	41	76
<b>RTC 016: Direct-to-Timber – see p35</b>						
	<p><b>Ceiling Inner Layer(s):</b> 1x 15mm GTEC Standard Board</p> <p><b>Ceiling Outer Layer(s):</b> 1x 15mm GTEC Standard Board</p> <p><b>Accessories:</b> –</p> <p><b>Insulation:</b> –</p> <p><b>Structure:</b> 47mm x 200mm joists at 600mm centres with noggings</p> <p><b>Flooring Make-up:</b> 22mm tongue and grooved chipboard</p>	50	252	60 30	43	72
<b>RTC 014: Direct-to-Timber – see p35</b>						
	<p><b>Ceiling Inner Layer(s):</b> 1x 12.5mm GTEC E Board</p> <p><b>Ceiling Outer Layer(s):</b> 1x 12.5mm GTEC E Board</p> <p><b>Accessories:</b> –</p> <p><b>Insulation:</b> 100mm 10.5kg/m<sup>3</sup> glass mineral wool</p> <p><b>Structure:</b> 47mm x 200mm joists at 450mm centres without noggings</p> <p><b>Flooring Make-up:</b> 22mm tongue and grooved chipboard</p>	52	247	30 30	44	75
<b>RTC 029: Direct-to-Timber – see p35</b>						
	<p><b>Ceiling Inner Layer(s):</b> Existing Lath &amp; Plaster with Chicken Wire &amp; Battens at 400mm centres</p> <p><b>Ceiling Outer Layer(s):</b> 1x 12.5mm GTEC Standard Board</p> <p><b>Accessories:</b> –</p> <p><b>Insulation:</b> –</p> <p><b>Structure:</b> 47mm x 200mm joists at 450mm centres without noggings</p> <p><b>Flooring Make-up:</b> 22mm tongue and grooved chipboard</p>	54	–	30 30	47	71

## GTEC ceiling systems to timber floors continued

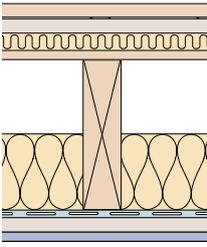
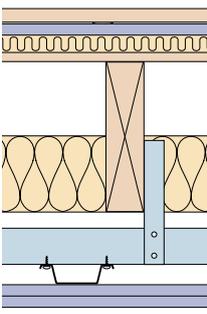
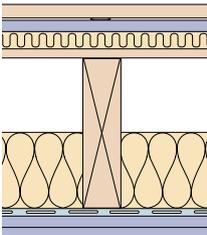
System Ref.	Component	System Weight (kg/m <sup>2</sup> )	Minimum Thickness (mm)	Fire Perf. BS 476-21 BS EN 1365-2 (mins)	Acoustic Perf. R <sub>w</sub> dB  (C <sub>tr</sub> where applicable)	Impact Sound Insulation  (L <sub>NW</sub> dB)
<b>RTC 020: Direct-to-Timber – see p35</b>						
	<b>Ceiling Inner Layer(s):</b> Existing Lath & Plaster with Chicken Wire & Battens at 400mm centres <b>Ceiling Outer Layer(s):</b> 1x 15mm GTEC Fire Board (Fixed with 63mm GTEC High Thread screws) <b>Accessories:</b> – <b>Insulation:</b> – <b>Structure:</b> 47mm x 200mm joists at 450mm centres without noggings <b>Flooring Make-up:</b> 22mm tongue and grooved chipboard	55	–	60 60	48	70
<b>RTC 051: Direct-to-Timber – see p35</b>						
	<b>Ceiling Inner Layer(s):</b> 1x 15mm GTEC dB Board <b>Ceiling Outer Layer(s):</b> 1x 15mm GTEC dB Board <b>Accessories:</b> Single GTEC Resilient Bar at max. 450mm centres <b>Insulation:</b> 100mm 10.5kg/m <sup>3</sup> glass mineral wool <b>Structure:</b> 47mm x 200mm joists at 450mm centres without noggings <b>Flooring Make-up:</b> 22mm tongue and grooved chipboard	55	269	60 60	55	62
<b>RTC 023: Direct-to-Timber – see p35</b>						
	<b>Ceiling Inner Layer(s):</b> 1x 15mm GTEC Fire Board (Fixed with 50mm GTEC High Thread screws) <b>Ceiling Outer Layer(s):</b> 1x 15mm GTEC Fire Board (Fixed with 75mm GTEC High Thread screws) <b>Accessories:</b> – <b>Insulation:</b> – <b>Structure:</b> 47mm x 200mm joists at 600mm centres with noggings <b>Flooring Make-up:</b> 22mm tongue and grooved chipboard	50	252	120 90	45	70

BS 476-21: Methods for determination of the fire resistance of load bearing elements of construction.

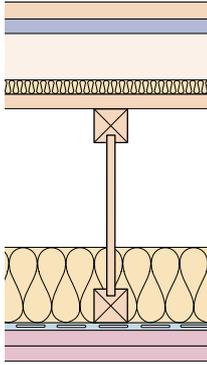
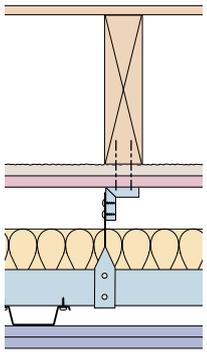
BS EN 1365-2: Fire resistance tests for load bearing elements. Floors and roofs.

See [page 15](#) for notes on alterations to floors and ceilings configuration.

## GTEC separating floor systems

System Ref.	Component	System Weight (kg/m <sup>2</sup> )	Minimum Thickness (mm)	Fire Perf. BS 476-21 BS EN 1365-2 (mins)	Acoustic Perf. R <sub>w</sub> dB  (C <sub>tr</sub> where applicable)	Impact Sound Insulation  (L <sub>nw</sub> dB)
<b>RTC 025</b>						
	<p><b>Ceiling Inner Layer(s):</b> 1x 19mm GTEC Plank  <b>Ceiling Outer Layer(s):</b> 1x 12.5mm GTEC dB Board  <b>Accessories:</b> Single GTEC Resilient Bar at max. 450mm centres  <b>Insulation:</b> 100mm 10.5kg/m<sup>3</sup> glass mineral wool  <b>Structure:</b> 47mm x 200mm joists at 600mm centres  <b>Flooring Make-up:</b> 18mm tongue and grooved chipboard  <b>(from external layer)</b>                      on 19mm GTEC Plank on 30mm 150kg/m<sup>3</sup> rock mineral wool on 12mm plywood or OSB</p>	70	323	60 60	61 -11 C <sub>tr</sub>	54
<b>RTC 049</b>						
	<p><b>Ceiling Inner Layer(s):</b> 1x 15mm GTEC dB Board  <b>Ceiling Outer Layer(s):</b> 1x 15mm GTEC dB Board  <b>Frame:</b> GTEC MF Ceiling Channels at max. 450mm centres  <b>Accessories:</b> GTEC Frame should be screw fixed  <b>Insulation:</b> 100mm 10.5kg/m<sup>3</sup> glass mineral wool  <b>Structure:</b> 47mm x 200mm joists at 400mm centres  <b>Flooring Make-up:</b> 18mm tongue and grooved chipboard  <b>(from external layer)</b>                      on 19mm GTEC Plank on 30mm 150kg/m<sup>3</sup> rock mineral wool on 12mm plywood or OSB</p>	71	–	60 60	60 -9 C <sub>tr</sub>	55
<b>RTC 050</b>						
	<p><b>Ceiling Inner Layer(s):</b> 1x 15mm GTEC dB Board  <b>Ceiling Outer Layer(s):</b> 1x 15mm GTEC dB Board  <b>Accessories:</b> Single GTEC Resilient Bar at max. 450mm centres  <b>Insulation:</b> 100mm 10.5kg/m<sup>3</sup> glass mineral wool  <b>Structure:</b> 47mm x 200mm joists at 400mm centres  <b>Flooring Make-up:</b> 18mm tongue and grooved chipboard  <b>(from external layer)</b>                      Spot bonded on GTEC 15mm dB Board on 30mm 150kg/m<sup>3</sup> rock mineral wool on 12mm plywood or OSB</p>	71	317	60 60	60 -9 C <sub>tr</sub>	55

## GTEC separating floor systems continued

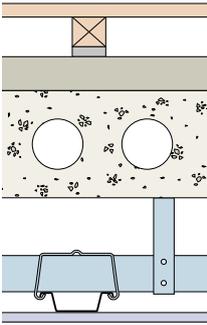
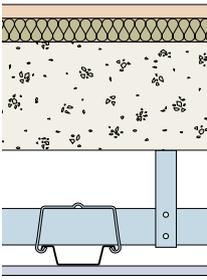
System Ref.	Component	System Weight (kg/m <sup>2</sup> )	Minimum Thickness (mm)	Fire Perf. BS 476-21 BS EN 1365-2 (mins)	Acoustic Perf. R <sub>w</sub> dB  (C <sub>f</sub> where applicable)	Impact Sound Insulation  (L <sub>NW</sub> dB)
<b>E-FT-1: Robust Detail</b>						
	<p><b>Ceiling Inner Layer(s):</b> 1x 15mm GTEC Fire Board</p> <p><b>Ceiling Outer Layer(s):</b> 1x 15mm GTEC Fire Board</p> <p><b>Accessories:</b> Single GTEC Resilient Bar at max. 450mm centres</p> <p><b>Insulation:</b> 100mm 10-33kg/m<sup>3</sup> glass mineral wool</p> <p><b>Structure:</b> min. 240mm engineered timber I-joists</p> <p><b>Flooring Make-up:</b> 18mm tongue and grooved chipboard (from external layer)</p> <p>Resilient Timber battens 13mm 33-36kg/m<sup>3</sup></p> <p>Rock mineral wool between battens on 15mm plywood or OSB</p>	72	–	60 60	Robust Detail Solution	Robust Detail Solution
<b>RCC 015 Modified: Refurbishment as Approved Doc. E 4-3</b>						
	<p><b>Ceiling Inner Layer(s):</b> 1x 12.5mm GTEC dB Board</p> <p><b>Ceiling Outer Layer(s):</b> 1x 12.5mm GTEC dB Board</p> <p><b>Frame:</b> GTEC MF Ceiling Channels at Max 450mm centres</p> <p><b>Accessories:</b> GTEC Frame should be screw fixed</p> <p><b>Insulation:</b> 100mm 10.5kg/m<sup>3</sup> glass mineral wool</p> <p><b>Existing Ceiling:</b> Existing Lath &amp; Plaster Ceiling plus 15mm GTEC Fire Board</p> <p><b>Flooring Make-up:</b> 18mm tongue and grooved chipboard</p>	80	–	60 60	–	–

BS 476-21: Methods for determination of the fire resistance of load bearing elements of construction.

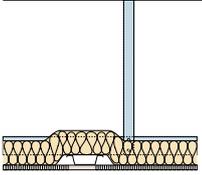
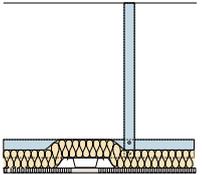
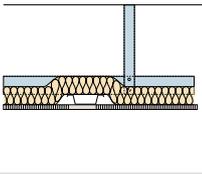
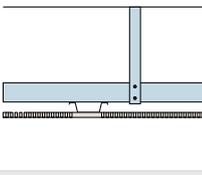
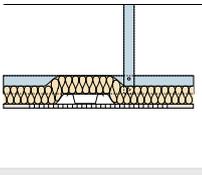
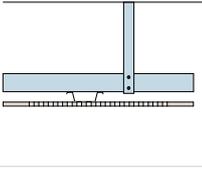
BS EN 1365-2: Fire resistance tests for load bearing elements. Floors and roofs.

See [page 15](#) for notes on alterations to floors and ceilings configuration.

GTEC separating floor systems continued

System Ref.	Component	System Weight (kg/m <sup>2</sup> )	Minimum Thickness (mm)	Fire Perf. BS 476-21 BS EN 1365-2 (mins)	Acoustic Perf. R <sub>w</sub> dB  (C <sub>r</sub> where applicable)	Impact Sound Insulation  (L <sub>nw</sub> dB)
<b>E-FC-1</b>						
	<p><b>Applicable Ceilings:</b></p> <p><b>(CT1) Metal ceiling system:</b> GTEC MF Ceiling system providing 100mm (min) ceiling void with one layer 12.5mm GTEC Standard Board</p> <p><b>(CT2) Timber battens and counter battens:</b> 50mm x 50mm softwood battens with 50mm x 50mm counter battens below and one layer 12.5mm GTEC Standard Board</p> <p><b>(CT3) Metal ceiling system (shown):</b> GTEC Dryliner SR or MF ceiling system providing 75mm (min) ceiling void with one layer 10+kg/m<sup>2</sup> GTEC Board</p> <p><b>(CT4) Timber battens and resilient bar:</b> 50mm x 50mm softwood with GTEC resilient bar RBD3000 mounted at 90° to softwood battens at 450mm c/c (max) and one layer 12.5mm GTEC E Board</p> <p><b>Floating floor:</b> 18mm tongue and groove floorboards on resilient composite timber battens type FFT1</p> <p><b>Screed:</b> 40mm sand/cement or similar, minimum 80kg/m<sup>2</sup></p> <p><b>Structural floor:</b> 150mm minimum precast concrete planks, minimum 300kg/m<sup>2</sup></p>	-	-	- -	Robust Detail Solution	Robust Detail Solution
<b>E-FC-2</b>						
	<p><b>Applicable Ceilings:</b></p> <p><b>Metal ceiling system (shown):</b> GTEC Dryliner SR or MF ceiling system providing 75mm (min) ceiling void with one layer 10+kg/m<sup>2</sup> GTEC Board</p> <p><b>Timber ceiling system:</b> Any ceiling system providing 75mm void with one layer 12.5mm GTEC E Board</p> <p><b>Floating floor:</b> 18mm tongue and groove floorboards on 25mm mineral wool batt insulation density 150kg/m<sup>3</sup> type FFT4</p> <p><b>Structural floor:</b> 250mm minimum in-situ concrete slab, minimum 2400kg/m<sup>3</sup> without screed</p>	-	-	-	Robust Detail Solution	Robust Detail Solution

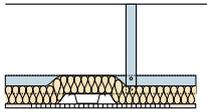
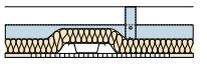
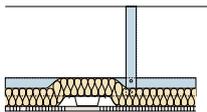
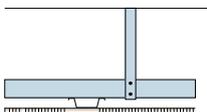
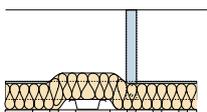
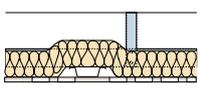
## Siniat Creason MF ceiling systems

System Ref.	Component	System Weight (kg/m <sup>2</sup> )	Acoustic Absorption Class, BS EN ISO 11654	Absorption co-efficient ( $\alpha_w$ ), BS EN ISO 11654
<b>PGC 001: Creason MF – see p29</b>				
	<b>Ceiling Inner Layer(s):</b> – <b>Ceiling Outer Layer(s):</b> 1x Siniat Creason C10no8 <b>Frame:</b> GTEC MF Ceiling Channels at Max 600mm centres <b>Accessories:</b> GTEC Frame should be screw fixed <b>Insulation:</b> 75mm glass mineral wool and 600mm void <b>Structure:</b> Any suitable soffit	12	B	0.80
<b>PGC 002: Creason MF – see p29</b>				
	<b>Ceiling Inner Layer(s):</b> – <b>Ceiling Outer Layer(s):</b> 1x Siniat Creason C10no8 <b>Frame:</b> GTEC MF Ceiling Channels at Max 600mm centres <b>Accessories:</b> GTEC Frame should be screw fixed <b>Insulation:</b> 50mm glass mineral wool and 600mm void <b>Structure:</b> Any suitable soffit	12	C	0.75
<b>PGC 003: Creason MF – see p29</b>				
	<b>Ceiling Inner Layer(s):</b> – <b>Ceiling Outer Layer(s):</b> 1x Siniat Creason C10no8 <b>Frame:</b> GTEC MF Ceiling Channels at Max 600mm centres <b>Accessories:</b> GTEC Frame should be screw fixed <b>Insulation:</b> 50mm glass mineral wool and 300mm void <b>Structure:</b> Any suitable soffit	12	C	0.70
<b>PGC 004: Creason MF – see p29</b>				
	<b>Ceiling Inner Layer(s):</b> – <b>Ceiling Outer Layer(s):</b> 1x Siniat Creason C10no8 <b>Frame:</b> GTEC MF Ceiling Channels at Max 600mm centres <b>Accessories:</b> GTEC Frame should be screw fixed <b>Insulation:</b> 300mm void <b>Structure:</b> Any suitable soffit	12	C	0.60
<b>PGC 101: Creason MF – see p29</b>				
	<b>Ceiling Inner Layer(s):</b> – <b>Ceiling Outer Layer(s):</b> 1x Siniat Creason R12no2 <b>Frame:</b> GTEC MF Ceiling Channels at Max 600mm centres <b>Accessories:</b> GTEC Frame should be screw fixed <b>Insulation:</b> 50mm glass mineral wool and 300mm void <b>Structure:</b> Any suitable soffit	12	C	0.7
<b>PGC 102: Creason MF – see p29</b>				
	<b>Ceiling Inner Layer(s):</b> – <b>Ceiling Outer Layer(s):</b> 1x Siniat Creason R12no2 <b>Frame:</b> GTEC MF Ceiling Channels at Max 600mm centres <b>Accessories:</b> GTEC Frame should be screw fixed <b>Insulation:</b> 300mm void <b>Structure:</b> Any suitable soffit	12	C	0.65

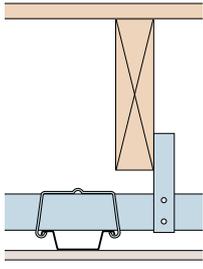
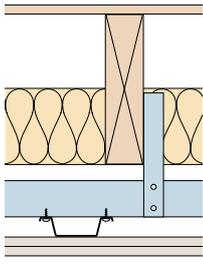
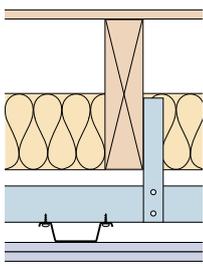
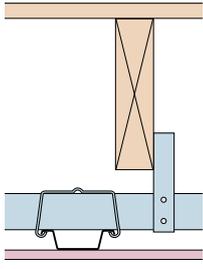
BS EN ISO 11654: Sound absorbers for use in buildings. Rating of sound absorption.

See [page 15](#) for notes on alterations to floors and ceilings configuration.

## Siniat Creason MF ceiling systems continued

System Ref.	Component	System Weight (kg/m <sup>2</sup> )	Acoustic Absorption Class, BS EN ISO 11654	Absorption co-efficient ( $\alpha_w$ ), BS EN ISO 11654
<b>PGC 201: Creason MF – see p29</b>				
	Ceiling Inner Layer(s): – Ceiling Outer Layer(s): 1x Siniat Creason R15no1 Frame: GTEC MF Ceiling Channels at Max 600mm centres Accessories: GTEC Frame should be screw fixed Insulation: 50mm glass mineral wool and 600mm void Structure: Any suitable soffit	12	C	0.70
<b>PGC 202: Creason MF – see p29</b>				
	Ceiling Inner Layer(s): – Ceiling Outer Layer(s): 1x Siniat Creason R15no1 Frame: GTEC MF Ceiling Channels at Max 600mm centres Accessories: GTEC Frame should be screw fixed Insulation: 30mm glass mineral wool and 50mm void Structure: Any suitable soffit	12	C	0.7
<b>PGC 301: Creason MF – see p29</b>				
	Ceiling Inner Layer(s): – Ceiling Outer Layer(s): 1x Siniat Creason R15no8 Frame: GTEC MF Ceiling Channels at Max 600mm centres Accessories: GTEC Frame should be screw fixed Insulation: 50mm glass mineral wool and 300mm void Structure: Any suitable soffit	12	C	0.60
<b>PGC 302: Creason MF – see p29</b>				
	Ceiling Inner Layer(s): – Ceiling Outer Layer(s): 1x Siniat Creason R15no8 Frame: GTEC MF Ceiling Channels at Max 600mm centres Accessories: GTEC Frame should be screw fixed Insulation: 300mm void Structure: Any suitable soffit	12	D	0.50
<b>PGC 401: Creason MF – see p29</b>				
	Ceiling Inner Layer(s): – Ceiling Outer Layer(s): 1x Siniat Creason L5x80no8 Frame: GTEC MF Ceiling Channels at Max 600mm centres Accessories: GTEC Frame should be screw fixed Insulation: 80mm glass mineral wool and 300mm void Structure: Any suitable soffit	12	D	0.55
<b>PGC 402: Creason MF – see p29</b>				
	Ceiling Inner Layer(s): – Ceiling Outer Layer(s): 1x Siniat Creason L5x80no8 Frame: GTEC MF Ceiling Channels at Max 600mm centres Accessories: GTEC Frame should be screw fixed Insulation: 80mm glass mineral wool and 100mm void Structure: Any suitable soffit	12	D	0.55

## GTEC suspended MF ceiling systems to timber floors

System Ref.	Component	System Weight (kg/m <sup>2</sup> )	Minimum Thickness (mm)	Fire Perf. BS 476-21 BS EN 1365-2 (mins)	Acoustic Perf. R <sub>w</sub> dB  (Ctr if applicable)	Impact Sound Insulation (L <sub>NW</sub> dB)
<b>RCC 011: Suspended MF – see p17</b>						
	<b>Ceiling Inner Layer(s):</b> – <b>Ceiling Outer Layer(s):</b> 1x 12.5mm GTEC Standard Board <b>Frame:</b> GTEC Ceiling Channels at max. 450mm centres <b>Accessories:</b> GTEC Connecting Clips <b>Insulation:</b> – <b>Structure:</b> Min. 50mm x 225mm Joists at 450mm centres <b>Floor:</b> Min. 18mm tongue and grooved boarding or similar	33	n/a	30 –	43	72
<b>RCC 042: Suspended MF – see p17</b>						
	<b>Ceiling Inner Layer(s):</b> 1x 12.5mm GTEC Standard Board <b>Ceiling Outer Layer(s):</b> 1x 12.5mm GTEC Standard Board <b>Frame:</b> GTEC Ceiling Channels at max. 450mm centres <b>Accessories:</b> GTEC Frame should be screw fixed <b>Insulation:</b> 100mm 37kg/m <sup>3</sup> rock mineral wool <b>Structure:</b> 50mm x 225mm Joists at 600mm centres <b>Floor:</b> Min. 18mm tongue and grooved boarding or similar	40	n/a	60 –	44	72
<b>RCC 012: Suspended MF – see p17</b>						
	<b>Ceiling Inner Layer(s):</b> 1x 12.5mm GTEC dB Board <b>Ceiling Outer Layer(s):</b> 1x 12.5mm GTEC dB Board <b>Frame:</b> GTEC Ceiling Channels at max. 450mm centres <b>Accessories:</b> GTEC Frame should be screw fixed <b>Insulation:</b> 100mm 37kg/m <sup>3</sup> rock mineral wool <b>Structure:</b> Min. 50mm x 225mm Joists at 600mm centres <b>Floor:</b> Min. 18mm tongue and grooved boarding or similar	42	n/a	60 –	46	69
<b>RCC 013: Suspended MF – see p17</b>						
	<b>Ceiling Inner Layer(s):</b> – <b>Ceiling Outer Layer(s):</b> 1x 12.5mm GTEC Fire Board <b>Frame:</b> GTEC Ceiling Channels at max. 450mm centres <b>Accessories:</b> GTEC Connecting Clips <b>Insulation:</b> – <b>Structure:</b> 50mm x 225mm Joists at 600mm centres <b>Floor:</b> Min. 18mm tongue and grooved boarding or similar	34	n/a	60 –	44	70

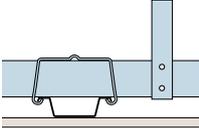
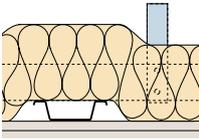
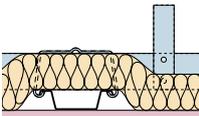
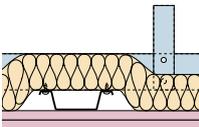
BS 476-21: Methods for determination of the fire resistance of load bearing elements of construction.

BS EN 1365-2: Fire resistance tests for load bearing elements. Floors and roofs.

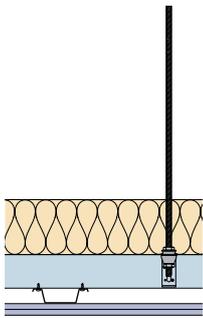
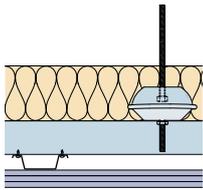
See [page 15](#) for notes on alterations to floors and ceilings configuration.



## GTEC suspended MF ceiling systems to protect structure

System Ref.	Component	System Weight (kg/m <sup>2</sup> )	Fire Perf. BS 476-23 (mins)	Acoustic Perf. R <sub>w</sub> dB (C <sub>tr</sub> if applicable)	Impact Sound Insulation (L <sub>nw</sub> dB)
<b>RCC 016: Suspended MF – see p17</b>					
	<b>Ceiling Inner Layer(s):</b> – <b>Ceiling Outer Layer(s):</b> 1x 12.5mm GTEC Standard Board <b>Frame:</b> GTEC Ceiling Channels at max. 450mm centres <b>Accessories:</b> GTEC Connecting Clips <b>Insulation:</b> – <b>Structure:</b> Any suitable soffit	11	–	–	–
<b>RCC 017: Suspended MF – see p17</b>					
	<b>Ceiling Inner Layer(s):</b> 1x 12.5mm GTEC Standard Board <b>Ceiling Outer Layer(s):</b> 1x 12.5mm GTEC Standard Board <b>Frame:</b> GTEC Ceiling Channels at max. 450mm centres <b>Accessories:</b> GTEC Frame should be screw fixed <b>Insulation:</b> 100mm 10.5kg/m <sup>3</sup> glass mineral wool <b>Structure:</b> Any suitable soffit	22	30	–	–
<b>RCC 018: Suspended MF – see p17</b>					
	<b>Ceiling Inner Layer(s):</b> – <b>Ceiling Outer Layer(s):</b> 1x 12.5mm GTEC Fire Board <b>Frame:</b> GTEC Ceiling Channels at max. 450mm centres <b>Accessories:</b> GTEC Connecting Clips <b>Insulation:</b> 50mm 24kg/m <sup>3</sup> glass mineral wool <b>Structure:</b> Any suitable soffit	13	30	–	–
<b>RCC 019: Suspended MF – see p17</b>					
	<b>Ceiling Inner Layer(s):</b> 1x 12.5mm GTEC Fire Board <b>Ceiling Outer Layer(s):</b> 1x 12.5mm GTEC Fire Board <b>Frame:</b> GTEC Ceiling Channels at max. 450mm centres <b>Accessories:</b> GTEC Frame should be screw fixed <b>Insulation:</b> 50mm 10.5kg/m <sup>3</sup> glass mineral wool <b>Structure:</b> Any suitable soffit	26	60	–	–

## GTEC mass barrier ceilings

System Ref.	Component	System Weight (kg/m <sup>2</sup> )	Fire Perf. BS 476-23 (mins)	Acoustic Perf. R <sub>w</sub> dB (C <sub>tr</sub> if applicable)	Impact Sound Insulation (L <sub>nw</sub> dB)
<b>RCC 060: Suspended MF – see p17</b>					
	<b>Ceiling Inner Layer(s):</b> 1x 12.5mm GTEC dB Board <b>Ceiling Outer Layer(s):</b> 1x 12.5mm GTEC dB Board <b>Frame:</b> GTEC Ceiling Channels at max. 450mm centres <b>Heavy Duty Primary channels UT52/Y at 900mm Centres</b> <b>Accessories:</b> Phonissimo Acoustic Hangers as 1200mm Centres <b>Insulation:</b> 100mm 10.5kg/m <sup>3</sup> glass mineral wool <b>Structure:</b> Any suitable soffit	30	60	–	–
<b>RCC 061: Suspended MF – see p17</b>					
	<b>Ceiling Inner Layer(s):</b> 1x 15mm GTEC dB Board <b>Ceiling Outer Layer(s):</b> 2x 15mm GTEC dB Board <b>Frame:</b> GTEC Ceiling Channels at max. 450mm centres <b>Heavy Duty Primary channels UT52/Y at 900mm Centres</b> <b>Accessories:</b> Phonistar Acoustic Hangers as 1200mm Centres <b>Insulation:</b> 100mm 10.5kg/m <sup>3</sup> glass mineral wool <b>Structure:</b> Any suitable soffit	50	90	–	–

BS 476-23: Methods for determination of the contribution of components to the fire resistance of a structure.

See below for notes on alterations to floors and ceilings configuration.

### Floors and ceilings 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.
- Any alterations may impair the quoted performance. Contact Technical Services for further system configurations and their resulting performances.

- Insulation shown may be replaced with thicker and/or heavier quilt material without impairing the quoted performances.
- For maximum framing centres, joist connector and bracket centres and loading see tables within system guidance pages.



## system guidance

# GTEC suspended MF ceiling systems

The GTEC Suspended MF Ceilings are used to create 'false ceilings' which house services between the ceiling and soffit. The large voids created also improve acoustic, fire and thermal performance.

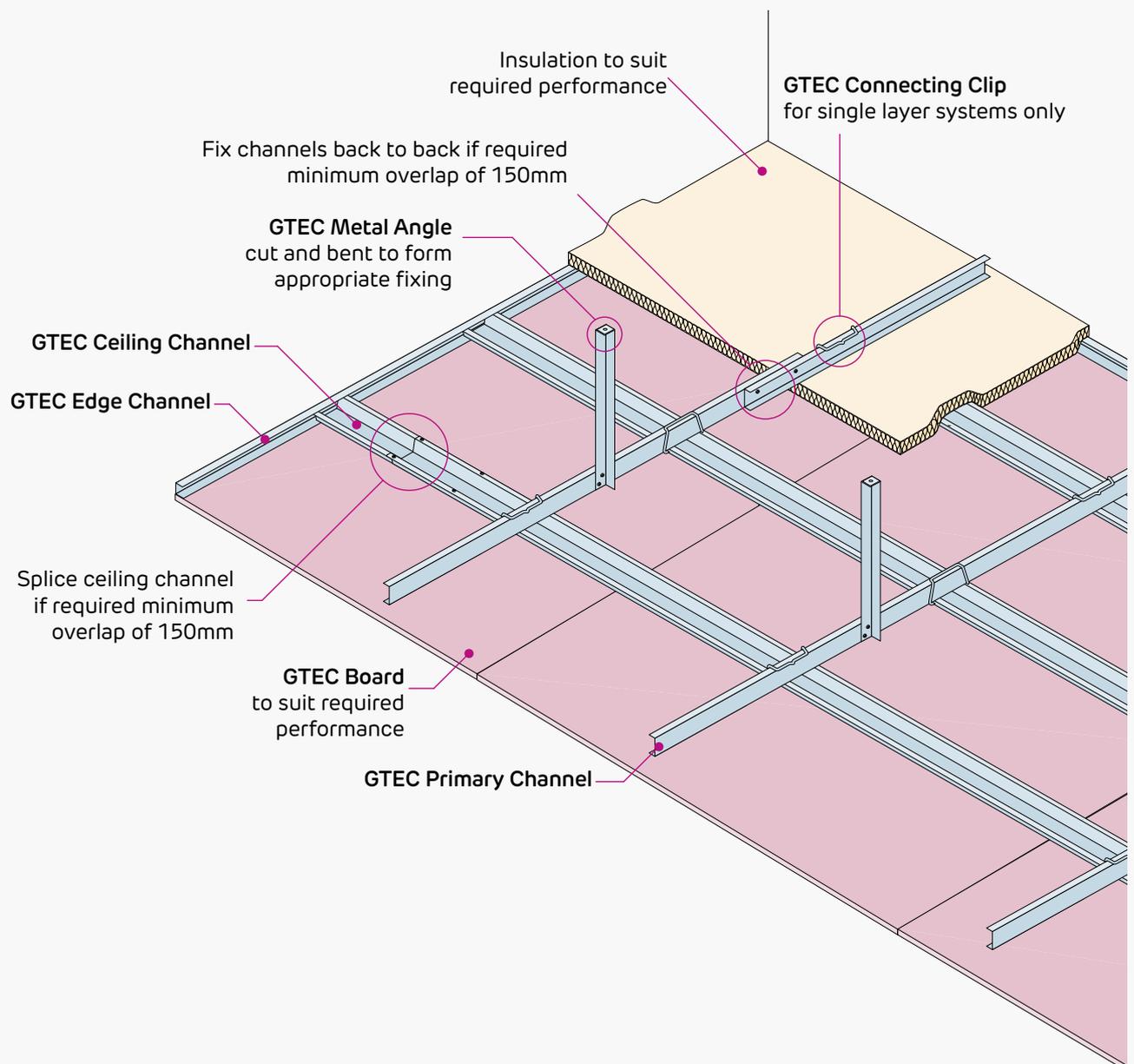
GTEC Suspended MF Ceilings are formed from a series of GTEC Primary Channels hung from the soffit. Attached to these channels are GTEC Ceiling Channels, slotted into GTEC Edge Channel to form the frame.

GTEC Board is fixed to the MF frame to complete the system. Refer to the System Performance Tables on [pages 13 to 15](#)

## Where to use:

- ▶ GTEC Suspended MF Ceilings are used for commercial applications where services are required below the soffit.
- ▶ For ceilings with enhanced fire and acoustic performance in commercial and residential applications.

Features	Benefits
Variable cavity depth	Optimisable cavity size for service and insulation requirements
High acoustic, fire and thermal capabilities	Required performance levels are easily achieved
Creates a 'false ceiling'	Can be used to upgrade or protect existing structures
Demountable	Easy to renovate
Flat finish	Provides a smooth surface for decorating



## system components

### boards



#### All GTEC Board

Provides wall surface suitable for finishing.

See [System performance tables, page 3 to 15](#)

### frame



#### GTEC Ceiling Channel

Steel channel to support boards.

MFCC50



#### GTEC Primary Channel

Steel channel to support GTEC Ceiling Channel.

MFCP44



#### GTEC Heavy Gauge Primary Channel

Heavy duty steel channel to support GTEC Ceiling Channel.

UT52/Y



#### GTEC Edge Channel

Steel channel used to form perimeter board support.

MFCE26



#### GTEC Metal Angle

Multi-purpose galvanized metal section..

MFC2525, MFC2550, MFC2330



#### GTEC Connecting Clip

Steel clip for joining GTEC Ceiling Channel to GTEC Primary Channel.

MFCCLIP



#### GTEC Phonistar Acoustic Hanger

A heavy duty (up to 120kg) acoustic suspended ceiling hanger bracket.

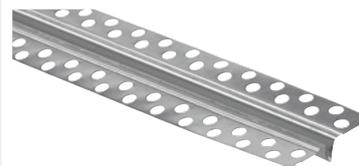
PHONI



#### GTEC Phonissimo Acoustic Hanger

A medium duty (up to 50kg) acoustic suspended ceiling hanger bracket.

PHONIMO



#### GTEC Movement Control Joint

Flexible metal profile to create movement joint.

MCJ304D

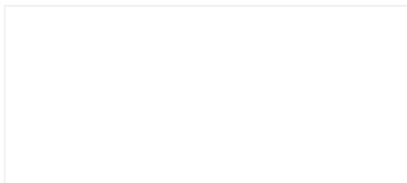
## fix



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

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

## insulation



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

## finishing



**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](#)

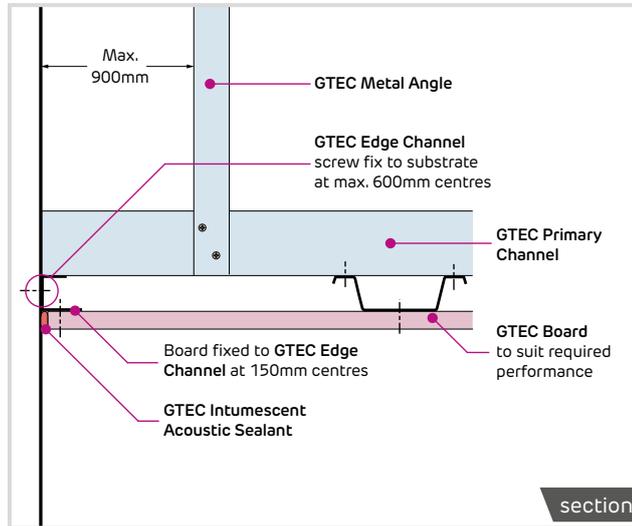


**GTEC Sealer**  
To seal plasterboard prior to decoration.

## system guidance

### Frame

FC-MF-101S-Ceiling perimeter



- ▶ GTEC Edge Channel to be fixed to structure at perimeter of ceiling run and around any obstructions within the ceiling, e.g. columns. Fix at 600mm centres using appropriate fixings. Allow for board depth when positioning channel.
- ▶ GTEC Metal Angle suspension hangers at maximum 1200mm centres along Primary Channel to be fixed to structural soffit with appropriate structural fixings by others.
- ▶ Hangers to be at maximum of 900mm from ceiling perimeter.

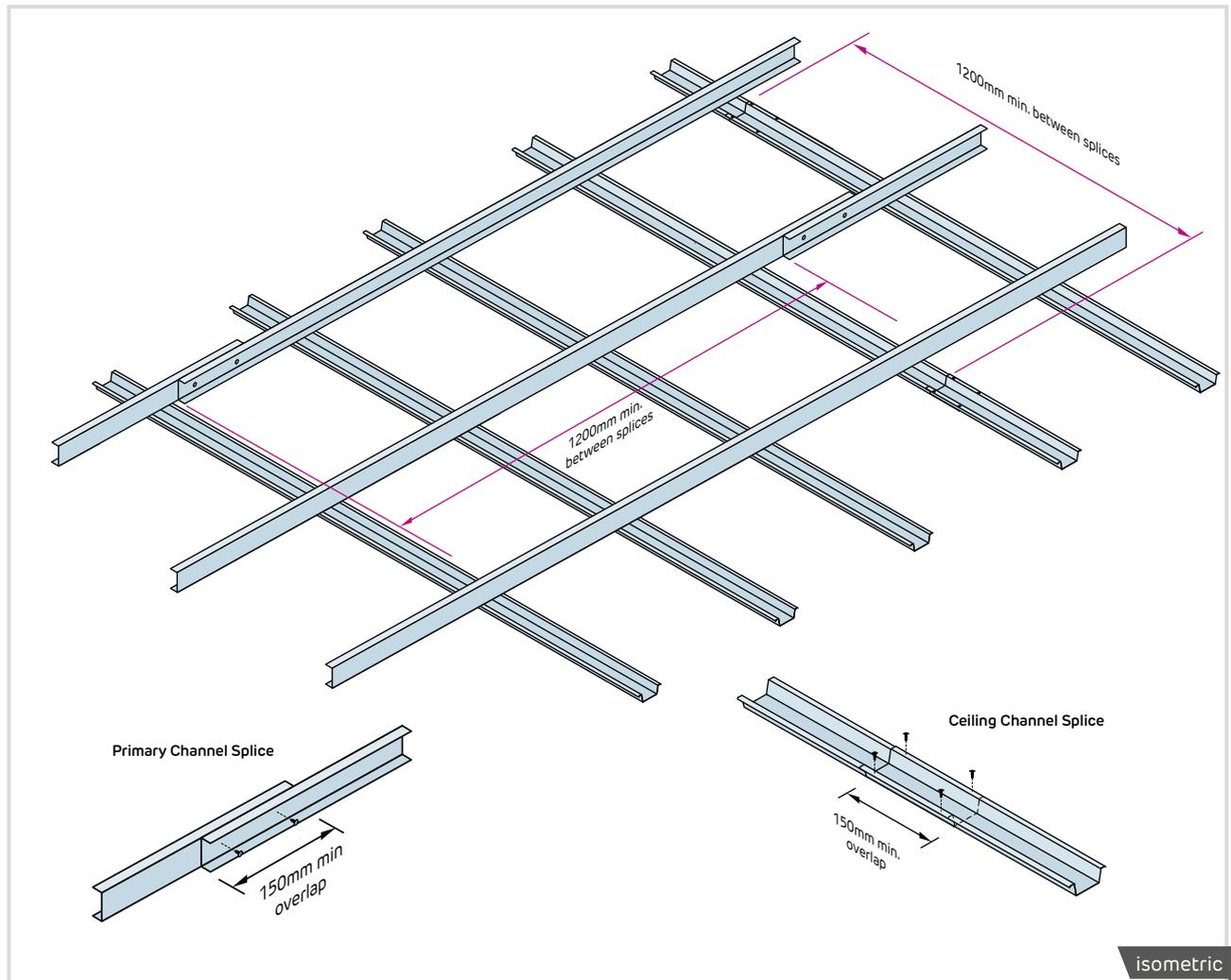
- ▶ GTEC Primary Channels to be arranged at maximum centres (see table) according to expected loadings including system and board weight (as indicated in performance tables). Channels to be fixed to hangers using appropriate GTEC Drywall Screws.

Max. primary channel centres	Maximum loading: Including system and board weight
600mm	74kg/m <sup>2</sup>
900mm	50kg/m <sup>2</sup>
1200mm	35kg/m <sup>2</sup>

- ▶ GTEC Ceiling Channels at maximum 450mm centres to be located into GTEC Edge Channel and fixed at right angles to GTEC Primary Channel.
- ▶ Fixing between Ceiling and Primary channels to be made using appropriate GTEC Drywall Screws.
- ▶ GTEC Connecting Clips may only be used to connect GTEC Ceiling Channel to Primary Channel in single board layer systems with no additional loadings. GTEC Connecting Clips to be alternated in direction to counteract any movement.
- ▶ GTEC Primary Channels may be spliced if necessary by fixing back-to-back with minimum four appropriate GTEC Drywall Screws.
- ▶ GTEC Ceiling Channels may be jointed by overlapping profiles by minimum 150mm and fixing with minimum four appropriate GTEC Drywall Screws.

## Frame continued

FC-MF-102M and 103M-Ceiling channel splicing

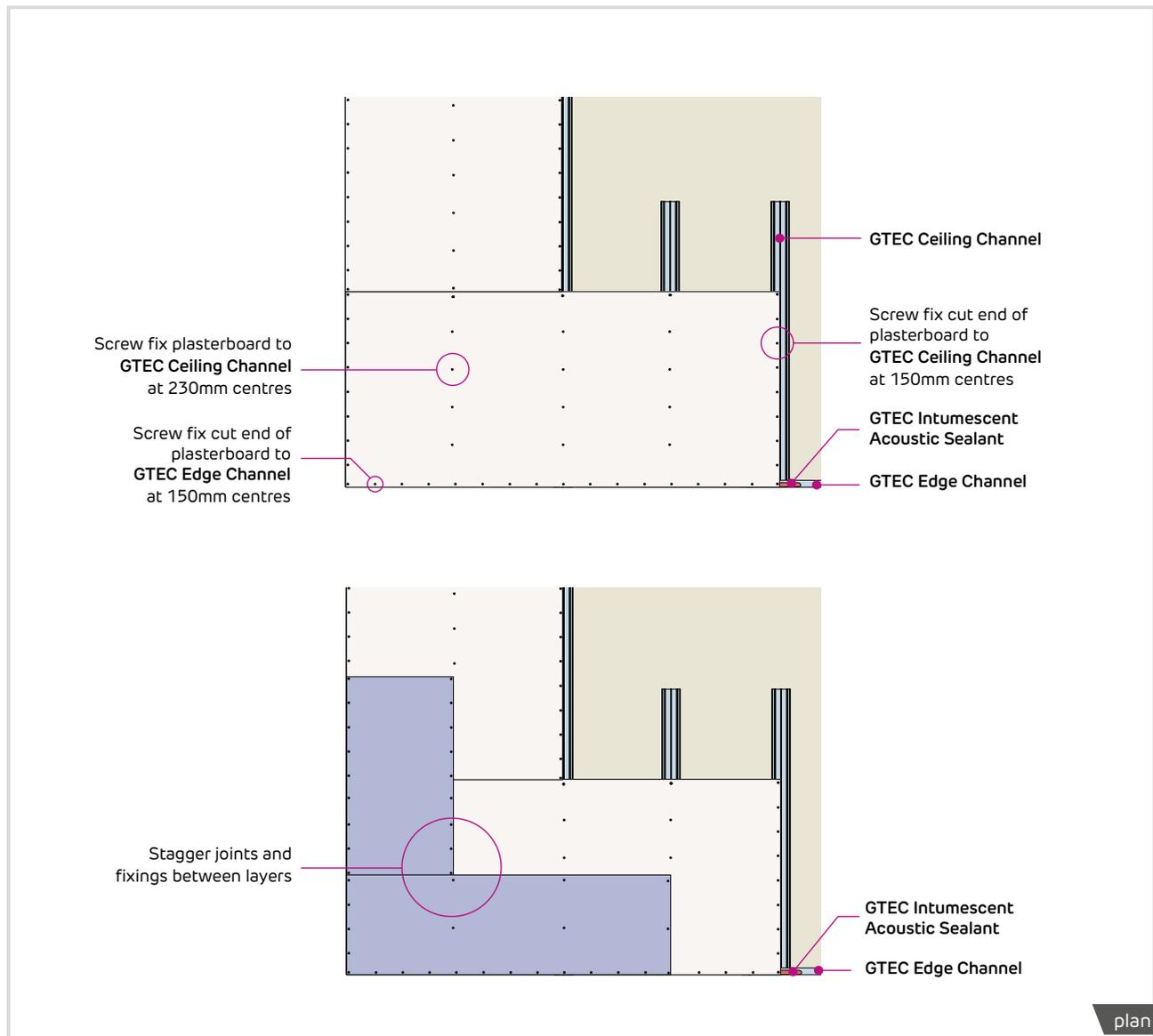


## Insulation

- ▶ Any insulation to be of type and thickness to achieve performance and installed in a continuous layer between primary channels and over ceiling channels and boards.

## Boarding

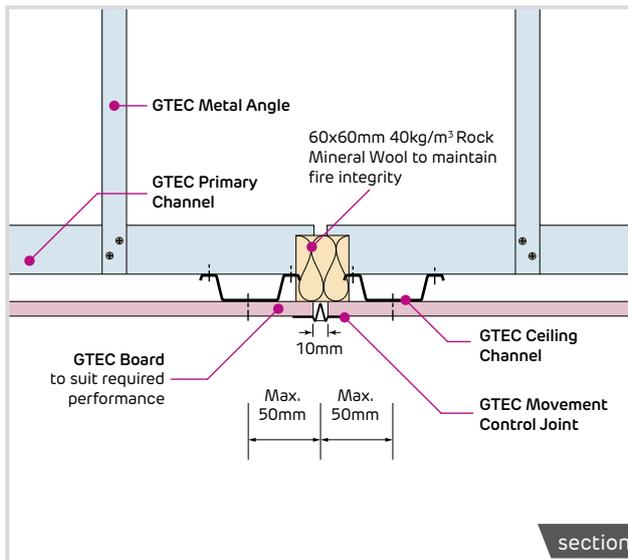
FC-MF-201M & 202M Board Layout



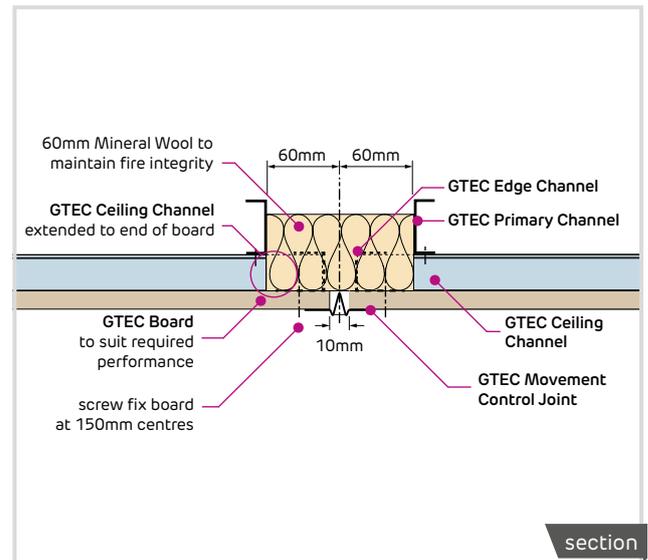
- ▶ GTEC Suspended MF Ceiling system is suitable for single, double and multiple layer boarding.
- ▶ Select base layer(s) and finishing layer(s) GTEC Boards by consulting System Performance Tables ([pages 13 to 15](#)) and Product Specification see [annex b: product reference](#) to achieve required performance.
- ▶ Boards to span across GTEC Ceiling Channels. Joints between boards must occur at centre of channels.
- ▶ Board ends and joints to be centred over channels.
- ▶ Boards to be mechanically fixed to GTEC Edge Channel at 150mm centres using appropriate GTEC Drywall Screws. See [annex d: screw selection guide](#).
- ▶ Boards to be mechanically fixed to GTEC Ceiling Channels at 230mm centres in centre of board or at bound edges and at 150mm centres at cut edges, using appropriate GTEC Drywall Screws. See [annex d: screw selection guide](#).
- ▶ Board joints to be staggered between layers.
- ▶ Any GTEC Fire Board, or other GTEC Type F (BS EN 520) board, required by the system performance, to be installed as the outermost/ finishing layer.

### Movement control joints

FC-MF-301S-Movement joint – parallel to c. channels



FC-MF-302S-Movement joint – perpendicular to c. channels

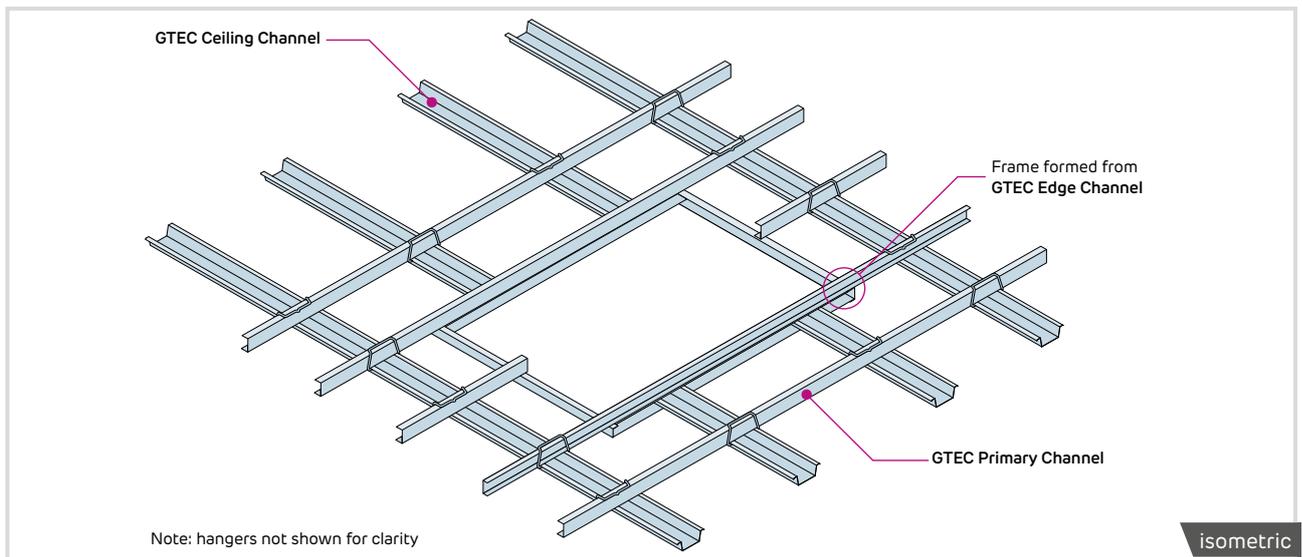


- ▶ Form movement control joints at maximum 10m intervals in any direction in ceiling run.
- ▶ Form movement control joints where ceiling crosses a structural movement joint.

- ▶ Fix GTEC Movement Control Joint, butted end-to-end, to board with sheradised or galvanised staples.
- ▶ Follow measures to ensure fire resistance and stability as shown in Construction Details.

### Openings

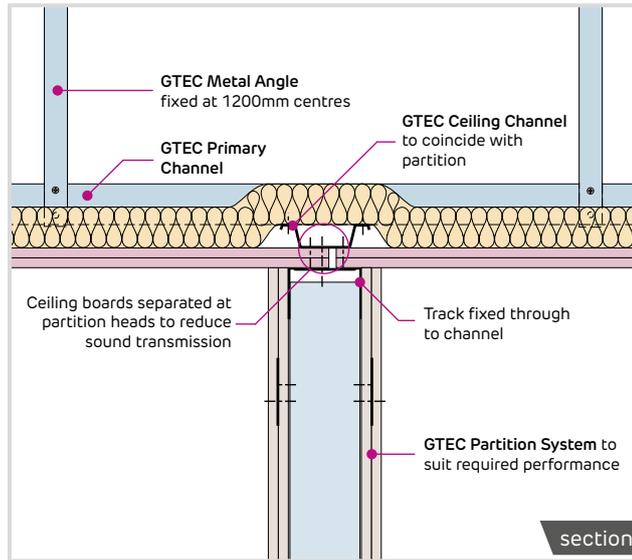
FC-MF-401M-Opening in ceiling



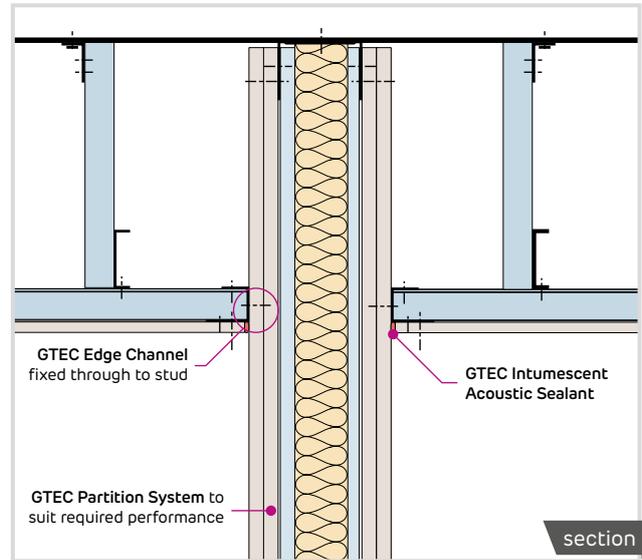
- ▶ Frames around openings and large penetrations in ceiling to be formed from GTEC Edge Channel with additional GTEC Primary Channel to support opening frame and GTEC Ceiling Channels.

## Height change and junctions

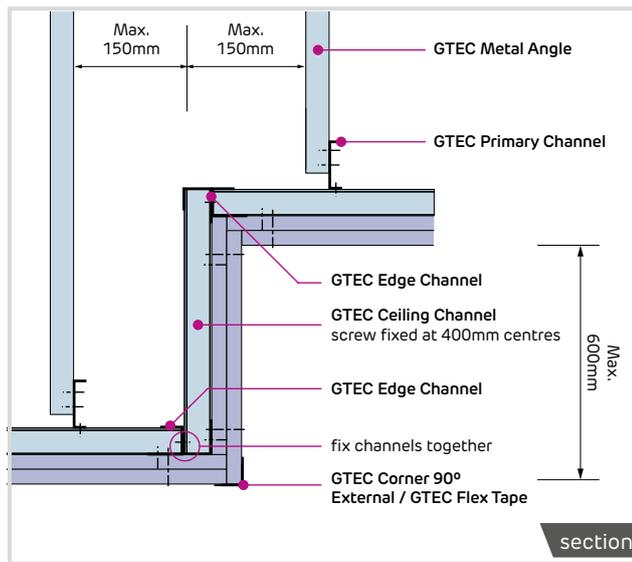
FC-MF-501S-Junction of partition to ceiling



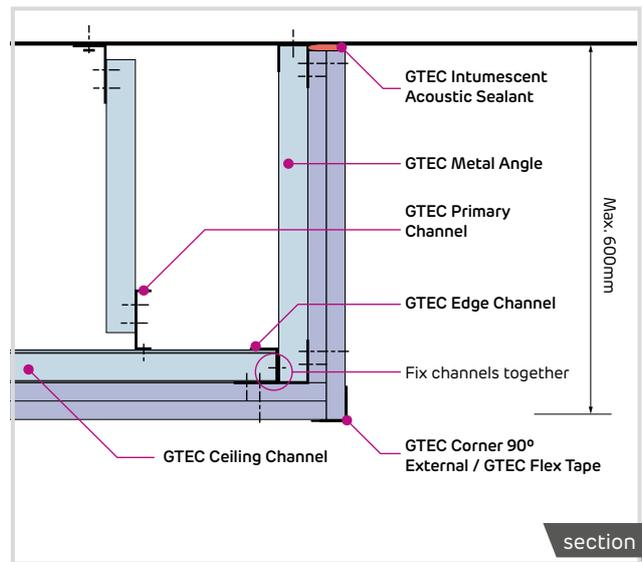
FC-MF-502S-Junction of ceiling to partition



FC-MF-503S-Change in ceiling height



FC-MF-504S-Bulkhead



- ▶ Abutting partitions to coincide with and fix to GTEC Ceiling Channel, install additional intermediate 'pick-up' channels if required.
- ▶ Separate boards at partition head to reduce sound transmission.
- ▶ Where ceiling abuts partition fix GTEC Edge Channel through to stud.

- ▶ Form 90° junction in ceiling by fixing GTEC Edge Channels at right angle with GTEC Ceiling Channel spanning vertically as required. Hangers to be positioned at maximum 150mm from change in height.

### Fixtures

- ▶ Where possible fixtures and loadings to be suspended from structural soffit and not GTEC Suspended MF Ceiling system.
  - ▶ Loads suspended from ceiling to be fixed to frame not boards. Framing centres to suit total load, see guidance on centres in 'Frame' guidance section, and appropriate fixings selected to suit full loadings.
  - ▶ Services running through ceiling void to be supported by structural soffit and not GTEC Suspended MF Ceiling System.
- 

### Penetrations

- ▶ M&E runs and other services to be pre-planned to minimise or eliminate penetrations through rated ceilings.
  - ▶ Any penetrations must be fully sealed with GTEC Intumescent Acoustic Sealant or other fire and sound resisting material.
- 

### Finishing

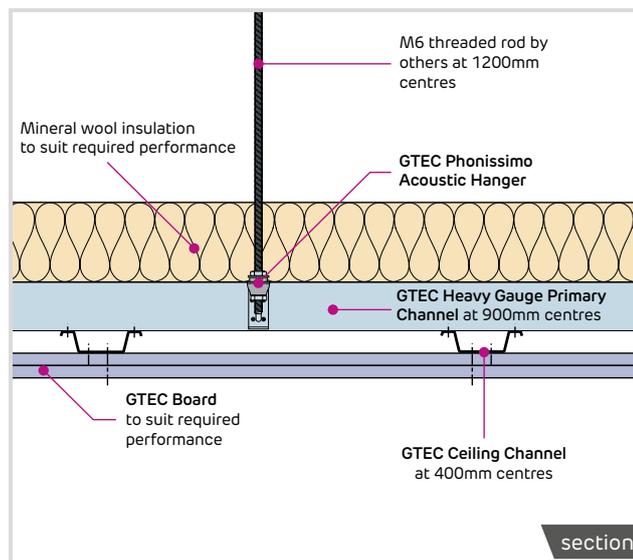
- ▶ All board joints to be taped, jointed or finished according to guidance in [annex a1: taping and jointing](#) through to [annex a4: cove](#) to achieve system performances. Where a ceiling is not intended to be decorated GTEC Intumescent Sealant to be used to seal board joints.
  - ▶ GTEC Finish materials appropriate to board type to be used.
- 

### System continuity

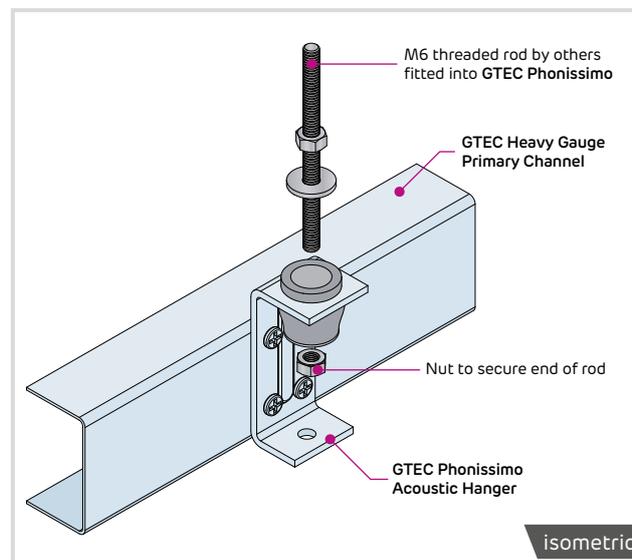
- ▶ Full, imperforate system continuity to be maintained to achieve rated performances.
- ▶ Bead of GTEC Intumescent Acoustic Sealant to be applied to perimeter of all runs and in all other locations specified in Construction Detail Drawings.
- ▶ GTEC Intumescent Acoustic Sealant to seal all other acoustic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

## Acoustic mass barrier ceilings

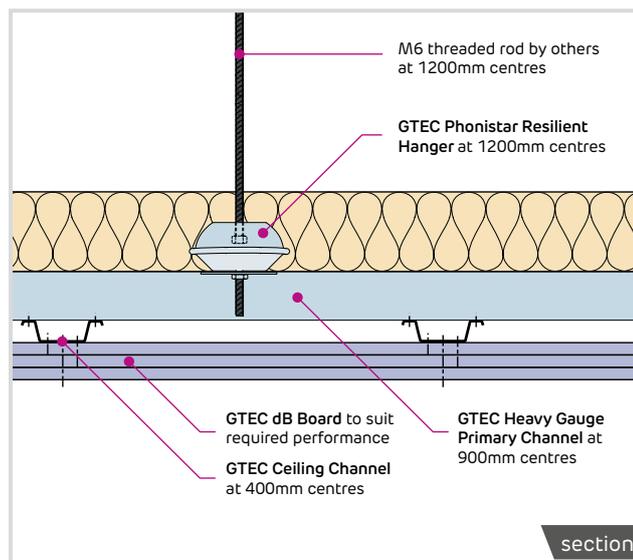
FC-MF-002S-Phonissimo Acoustic Hanger – general arrangement



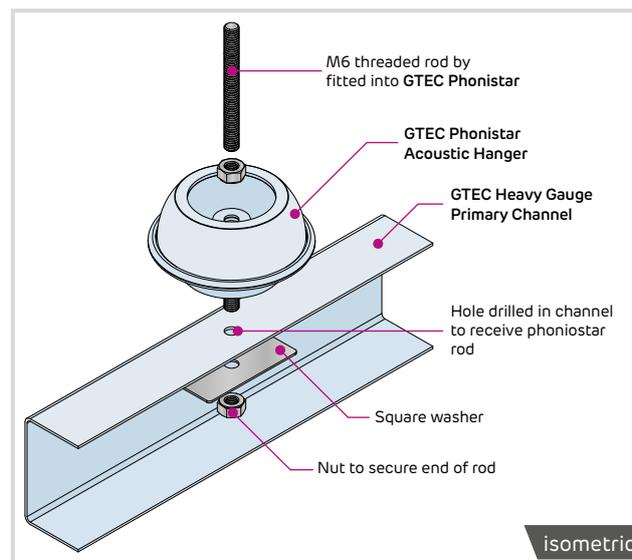
FC-MF-003M-Phonissimo Acoustic Hanger – assembly



FC-MF-004S-Phonistar Resilient Hanger – general arrangement



FC-MF-005M-Phonistar Resilient Hanger – assembly



- ▶ For Acoustic Mass Barrier system configurations suspend frame from GTEC Phonistar or GTEC Phonissimo hangers at maximum 1200mm centres using M6 threaded rod.
- ▶ GTEC Phonissimo and GTEC Phonistar hangers are acoustically dampened, high strength hangers to support higher mass ceilings which offer the highest acoustic insulation.
- ▶ GTEC Heavy Gauge Primary Channel UT52/Y to be used instead of GTEC Primary Channel.



## system guidance

# Siniat Creason MF ceiling systems

The Siniat Creason MF Ceiling system is used for creating sound absorbing ceilings to control sound reflection in larger spaces, creating a more comfortable level of sound and improved audibility.

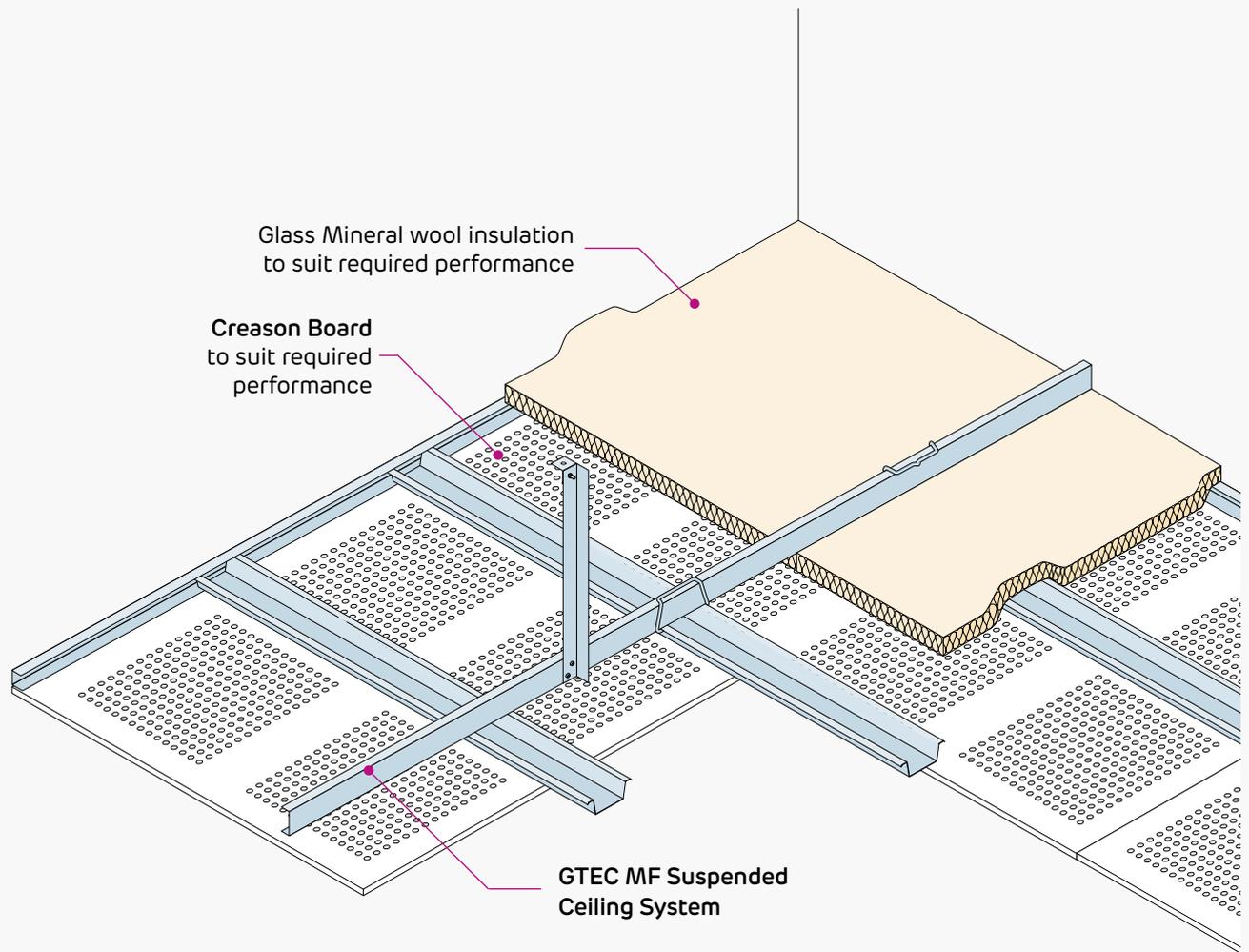
Siniat Creason MF Ceilings combine the easy to install advantages of the GTEC Suspended MF Ceiling with the sound absorption capability of GTEC Creason Board. Using frame components from the GTEC Suspended MF system enables flexible design and specification.

Siniat Creason board is perforated in a range of patterns for attractive designs and reduction in the reflective surface of the board to limit echo or reverberation. Refer to the System Performance Tables on [pages 11 to 12](#) for full performance details.

## Where to use:

- ▶ Siniat Creason MF ceilings are used in commercial applications where large, hard-surfaced and uninterrupted spaces would otherwise suffer from echoing.
- ▶ Siniat Creason MF ceilings are also required for corridors and stairwells in residential blocks to reduce sound travel through the building.

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



## system components

### boards



**All GTEC Board**  
Provides wall surface suitable for finishing.

See [System performance tables, page 3 to 15](#)

### frame



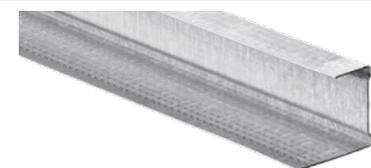
**GTEC Ceiling Channel**  
Steel channel to support boards.

MFC50



**GTEC Primary Channel**  
Steel channel to support GTEC Ceiling Channel.

MFCP44



**GTEC Edge Channel**  
Steel channel used to form perimeter board support.

MFC26



**GTEC Metal Angle**  
Multi-purpose galvanized metal section..

MFC2525, MFC2550, MFC2330



**GTEC Connecting Clip**  
Steel clip for joining GTEC Ceiling Channel to GTEC Primary Channel.

MFCCLIP



**GTEC Movement Control Joint**  
Flexible metal profile to create movement joint.

MCJ304D

### fix



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

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

### finishing



**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.

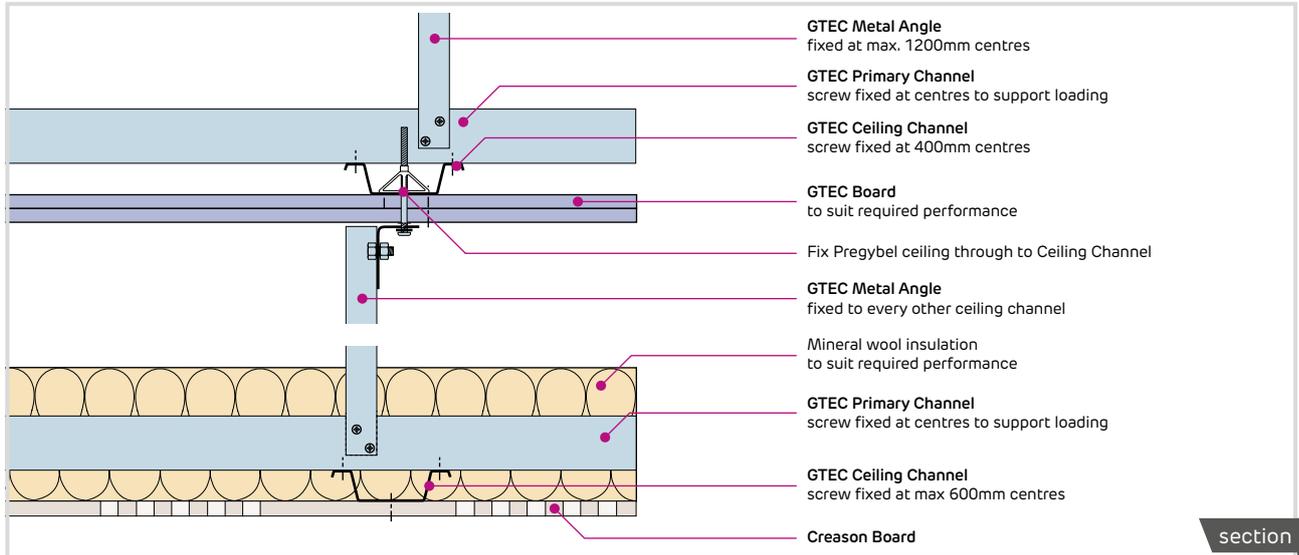
*Mineral wool insulation: Increases fire and acoustic insulation performance. (See performance tables supplied by others.)*

## system guidance

See guidance in GTEC Suspended MF section and additional considerations given below:

### Frame

FC-PG-101S-Creason Secondary Ceiling



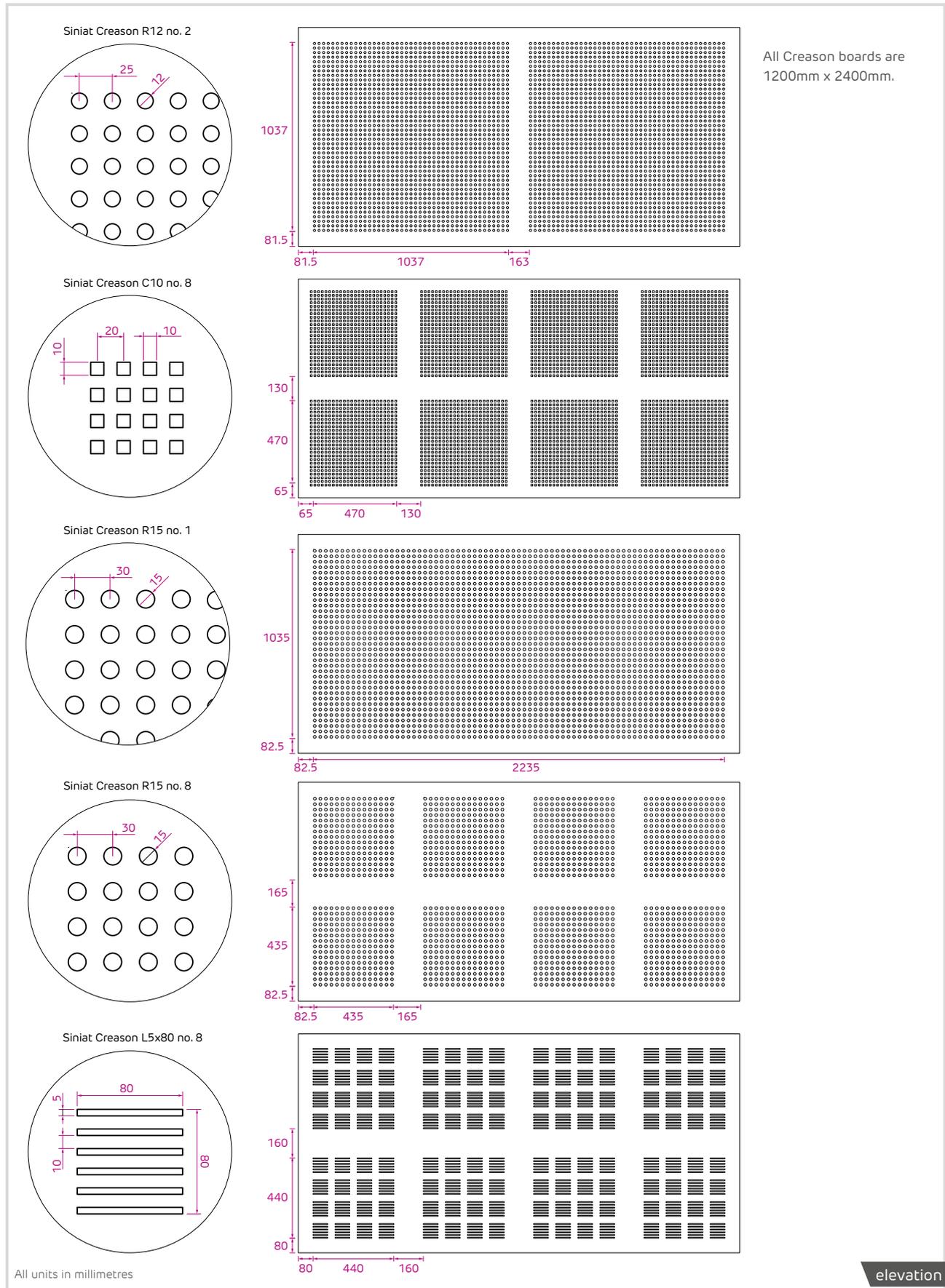
- ▶ GTEC Connecting Clips may be used to connect GTEC Ceiling Channel to Edge Channel in all single layer Siniat Creason MF systems providing no additional loads are being carried.
- ▶ GTEC Ceiling Channel to be at maximum 600mm centres to coincide with unperforated areas of board.

### Insulation

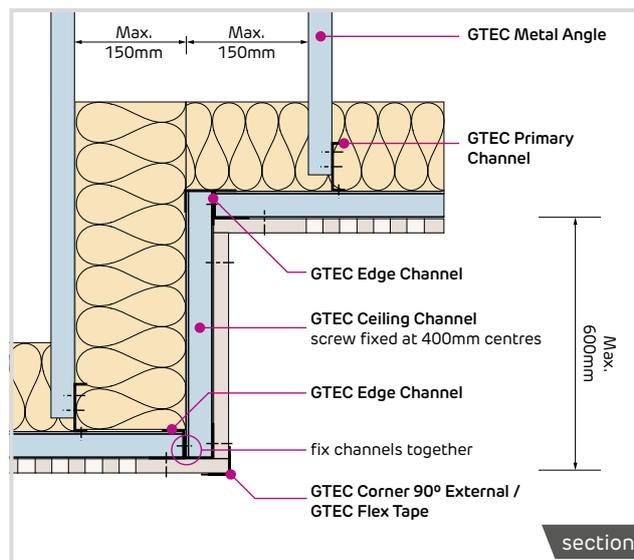
- ▶ Any insulation to be of type and thickness to achieve performance and installed in a continuous layer between primary channels and over ceiling channels and boards.

## Boarding

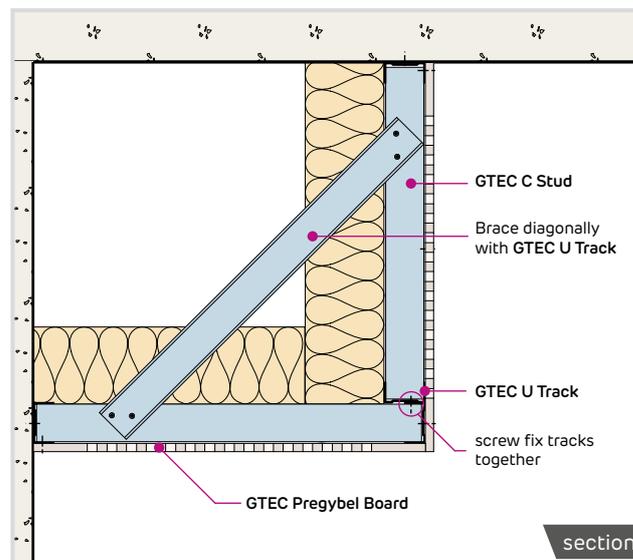
FC-PG-201E-Creason board designs



FC-PG-501S-Creason Ceiling Height Change



FC-PG-002S-Creason Standalone Bulkhead



### Penetrations

- ▶ M&E runs and other penetrating services to be pre-planned to minimise or eliminate penetrations through rated ceilings.
- ▶ Any penetrations must be fully sealed with GTEC Intumescent Acoustic Sealant or other fire and sound resisting material.

### 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.

### Finishing

- ▶ All board joints to be taped, jointed or finished according to guidance in the [annex a1: taping and jointing](#) through to [annex a4: cove](#) to achieve system performances.
- ▶ Siniat Creason Board, once sealed, to be painted with rollers to prevent paint blocking tissue backing and reducing absorption capacity.
- ▶ GTEC Finish materials appropriate to board type to be used.
- ▶ Siniat Creason MF Ceiling system is suitable for single layer boarding.
- ▶ Select Siniat Creason Board according to acoustic performance required and desired perforation pattern.
- ▶ Siniat Creason boards to be arranged to achieve desired board pattern. Siniat 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.
- ▶ Boards to span across GTEC Ceiling Channels.

## system guidance

# GTEC direct-to-timber ceiling systems

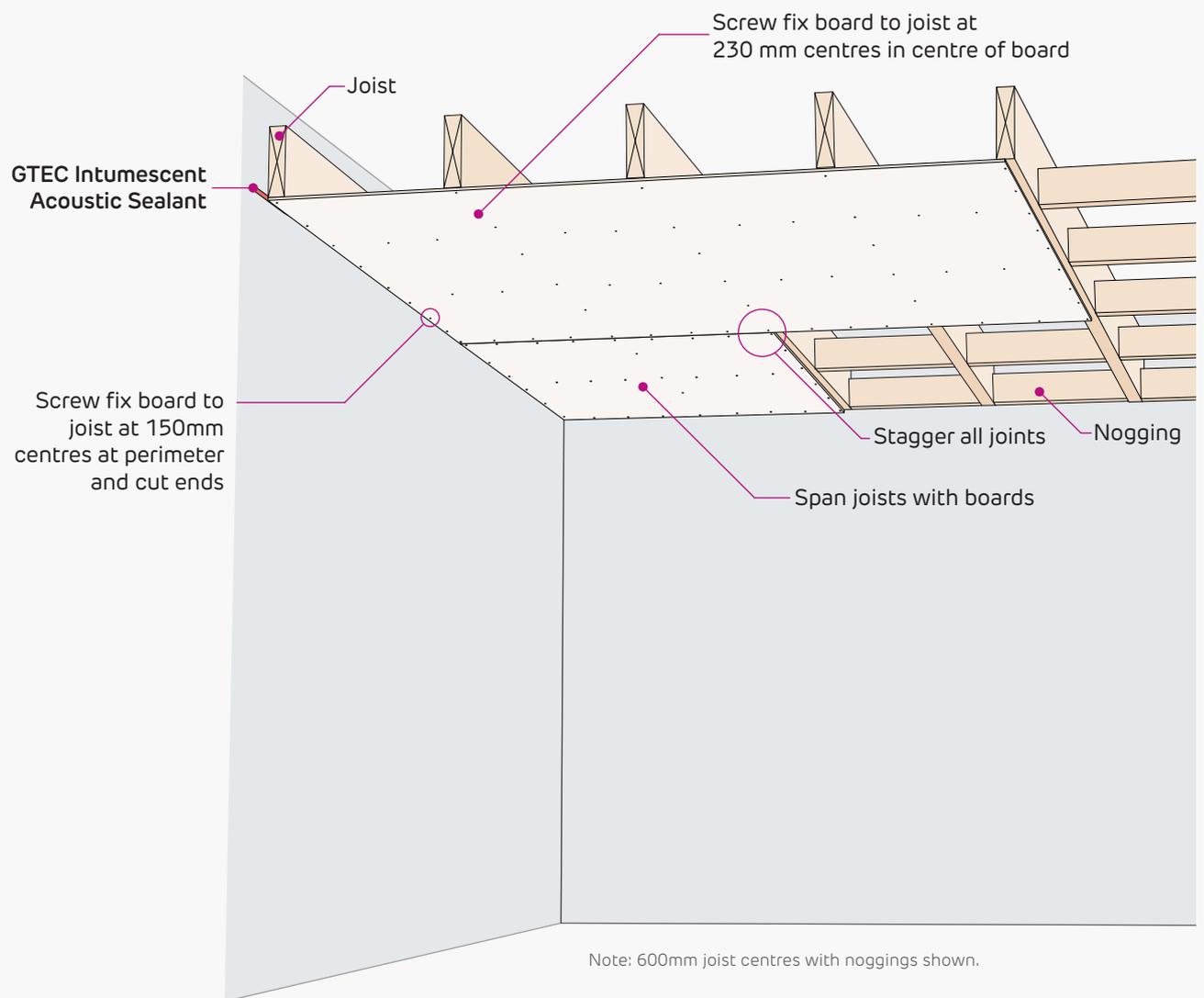
The GTEC Direct-to-Timber Ceiling system is the simplest method of creating a flat ceiling surface for decoration and achieving excellent fire performance.

GTEC Plasterboard is attached directly to the underside of floor joists or to the bottom chords of roof trusses with insulation between rafter to boost acoustic and fire performance. Refer to the System Performance Tables on [pages 3 to 7](#) for full details.

## Where to use:

- ▶ The GTEC Direct-to-Timber system is used in both renovation and new-build domestic applications.

Features	Benefits
Only requires board and screws	Cavity size can be optimised for service and insulation requirements
Compatible with GTEC Board options	Achieves required fire performance
Flat finish	Provides easy to decorate surface
Can be used with GTEC Resilient Bar	Improves acoustic performance and reliability with some engineered joists



## system components

### boards



#### All GTEC Board

Provides wall surface suitable for finishing.

See [System performance tables, page 3 to 15](#)

### frame



#### GTEC Resilient Bar

An acoustic isolation bar for improving the sound separation between frame and boards.

RBD3000/RX

### fix



#### GTEC Drywall Screws (as appropriate)

For mechanical fixing of boards to GTEC Shallow Wall Channel.

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

### finishing



#### 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

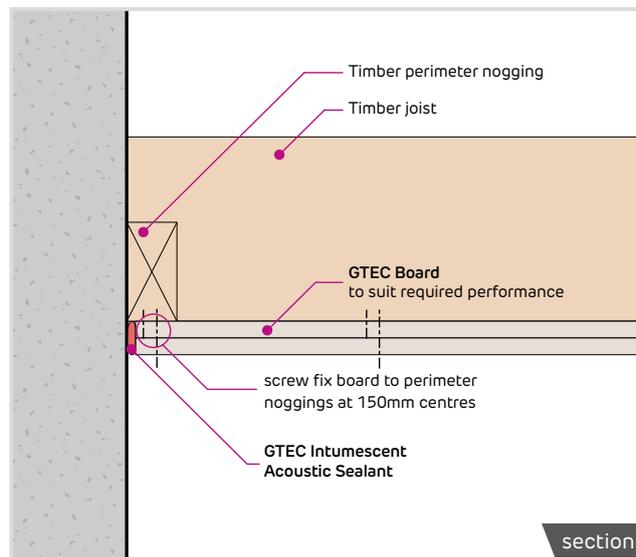
To seal plasterboard prior to decoration.

*Timber frame:* Structural frame forming part of an external or internal wall. Supplied by others.

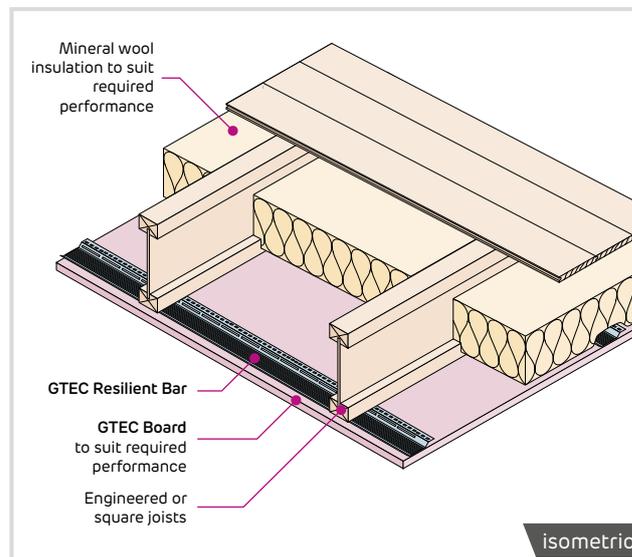
## system guidance

### Frame

FC-DT-101S-Perimeter detail



FC-DT-102M-Timber ceiling with resilient bar



Board type	Maximum joist centres	
	With noggings	Without noggings
12.5mm GTEC Board	600mm	450mm
15mm GTEC Board / 19mm GTEC Plank Board	600mm	600mm
GTEC Thermal Boards	600mm	450mm

Noggings to be fitted around perimeter of ceiling, around any obtrusions such as columns and between joists (see table) to provide board fixing at bound board edges.

Joists and noggings to have minimum bearing face of 44mm. Trusses to BS 5268-3 may have bearing face of minimum 38mm.

Inclusion of GTEC Resilient Bar is recommended when fixing boards to engineered joists to mitigate potential for differential movement between substrate and board.

#### GTEC Resilient Bar option only:

GTEC Resilient Bar to be installed across joists at maximum 450mm centres and fixed to each joist with suitable GTEC High Thread Drywall Screws (see [annex d: screw selection guide](#)).

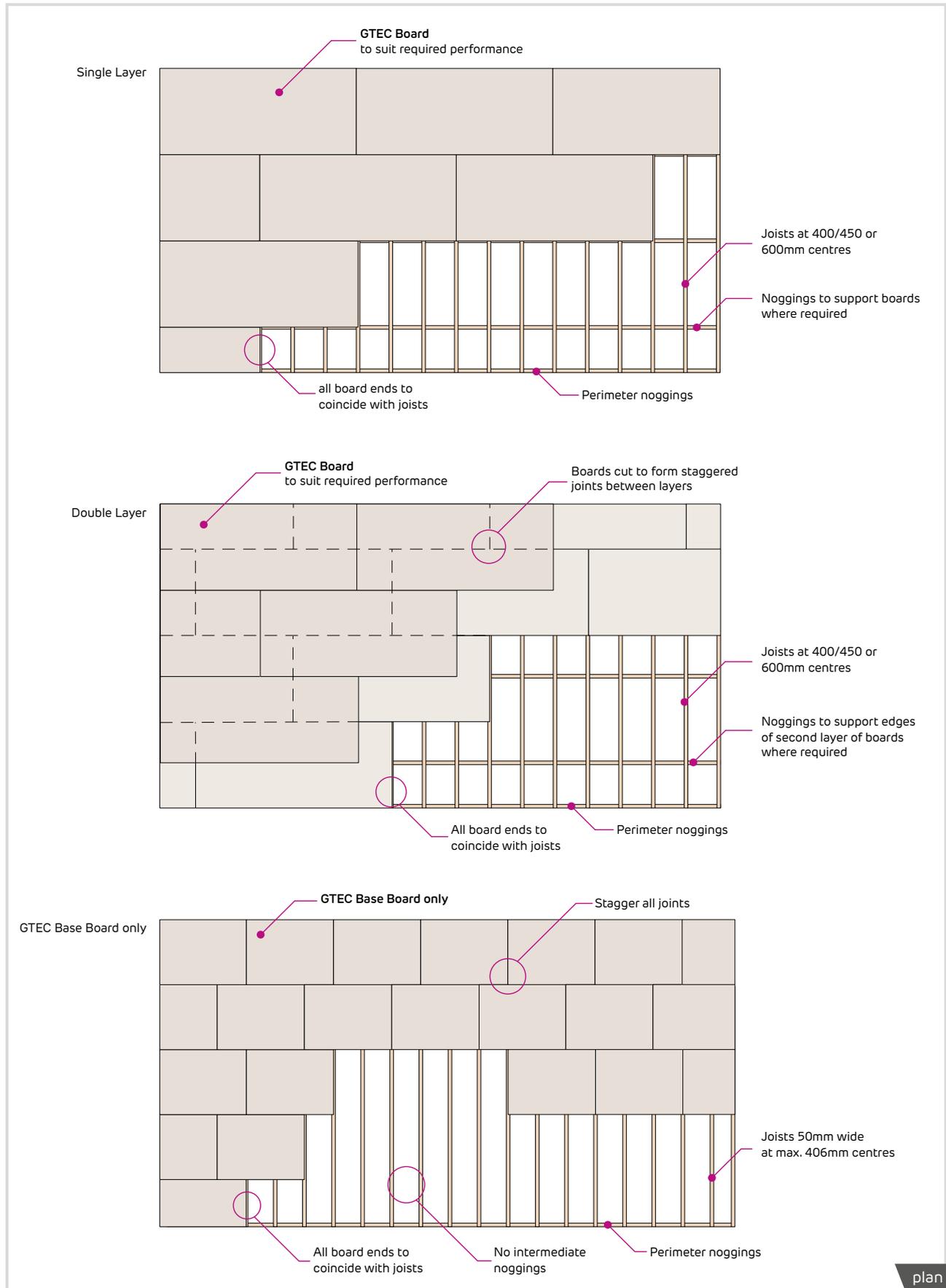
GTEC Resilient Bar to be spliced if necessary by overlapping at joists and fixing both sections to joist. Pieces of Resilient Bar required to provide fixing of boards at perimeter of ceiling.

### Insulation

- ▶ Any insulation to be of type and thickness to achieve performance and tightly installed in a continuous layer between joists.

## Boarding

FC-DT-201, 202 & 203P-Board Layout – single layer



plan

GTEC Direct-to-Timber Ceiling 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 ([pages 3 to 7](#)) and Product Specification see [annex b: product reference](#) to achieve required performance.

Boards to be supported by joists or intermediate noggings where required.

Boards to be mechanically fixed to perimeter noggings at 150mm centres using appropriate GTEC High Thread Drywall Screws. See [annex d: screw selection guide](#).

Boards to be mechanically fixed to joists or intermediate noggings at 230mm centres in centre of board or bound edges and at 150mm centres at cut edges, using appropriate GTEC High Thread Drywall Screws. See [annex d: screw selection guide](#).

Board joints to be staggered between layers. Any GTEC Fire Board, or other GTEC Type F (BS EN 520) board, required by the system performance, to be installed as the outermost/finishing layer.

**GTEC Resilient Bar option only:**

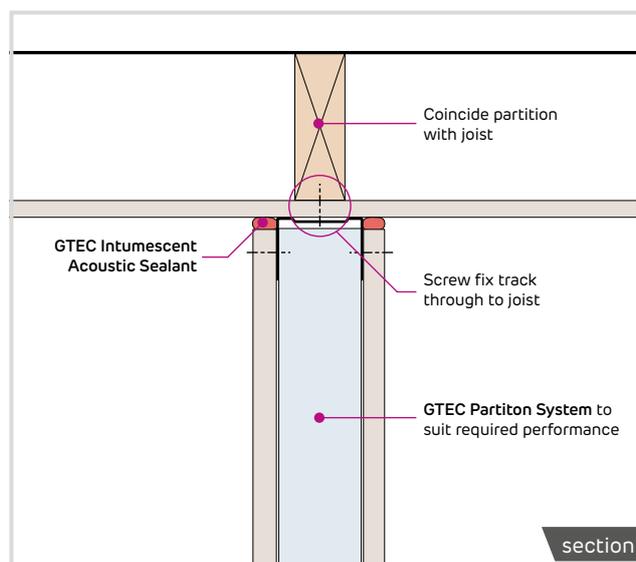
GTEC Resilient Bar is suitable for single and double layer boarding.

Boards to be mechanically fixed to GTEC Resilient Bar only at 150mm centres for cut edges and perimeter and at 230mm centres in centre of board and bound edges, using shortest appropriate GTEC Drywall Screws. See [annex d: screw selection guide](#).

Boards to be fixed to GTEC Resilient Bar only to ensure acoustic performance. Screws must not penetrate through to substrate.

**Junction**

FC-DT-501S-Junction of partition to ceiling



- ▶ Abutting partitions to coincide with and fix to joist install additional intermediate 'pick-up' joists/ noggings as required.
- ▶ Separate boards at partition head to reduce sound transmission.

## Fixtures

- ▶ Fixtures and loadings to be suspended from structural soffit/joist and not GTEC Board.
  - ▶ Services running through ceiling void to be supported by structural soffit/joist and not GTEC Board.
- 

## Penetrations

- ▶ M&E runs and other services to be pre-planned to minimise or eliminate penetrations through rated ceilings.
  - ▶ Any penetrations must be fully sealed with GTEC Intumescent Acoustic Sealant or other fire and sound resisting material.
- 

## Finishing

- ▶ All board joints to be taped, jointed or finished according to our guidance in [annex a1: taping and jointing](#) through to [annex a4: cove](#) achieve system performances. Where ceiling is not intended to be decorated GTEC Intumescent Acoustic Sealant to be used to seal board joints.
  - ▶ GTEC Finish materials appropriate to board type to be used.
- 

## System continuity

- ▶ Full, imperforate system continuity to be maintained to achieve rated performances.
- ▶ 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.



**Ysgol Bae Baglan**  
Port Talbot, Wales, UK

Sector: **Education**  
Project Value: **£40 million**  
Client: **Neath Port Talbot County Borough Council**  
Architect: **Stride Treglown**  
Main Contractor: **Bouygues UK**  
Sub Contractor: **Richard Kemble Contracts**  
Siniat Innovations: **Megadeco, Creason, Siniat Weather Defence™**

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