



seismic ceiling
solutions
sales launch pack

april 2023

Disclaimer

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Siniat technical information is regularly updated. To ensure this document is current with the latest information, visit:

www.siniat.com.au

or contact Siniat's Customer Service Centre on

1300 724 505

Warranty

Siniat products are covered by a 10 Year Warranty.

Visit

www.siniat.com.au/warranty

April 2023



Seismic design is a regulatory requirement in Australia. Siniat offers design solutions to help meet the requirements of the NCC and applicable standards for both our stud ceiling and suspended ceiling systems.

Depending on the unique project requirements, you may choose between a suspended or steel stud ceiling solution. Siniat can offer seismic design solutions for both these systems.

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Introduction

Seismic design is a regulatory requirement in Australia.

During a moderate to severe earthquake, collapsing buildings and debris cause most of the injuries and deaths, and we need to design buildings that will withstand the effects of an earthquake.

It is important that both the structural and non-structural components of a building remain stable in the event of an earthquake as it significantly reduces the number of injuries or fatalities.

What buildings need to be designed for earthquakes?

- **Class 2:** Multi-residential building (apartments)
- **Class 3:** Hotels
- **Class 4:** Residential part of Class 5, 6, 7, 8 or 9 building
- **Class 5:** Office buildings
- **Class 6:** Retail building
- **Class 7:** Carpark or warehouse
- **Class 8:** Laboratory or factory
- **Class 9:** Health-care (hospital), school and aged-care

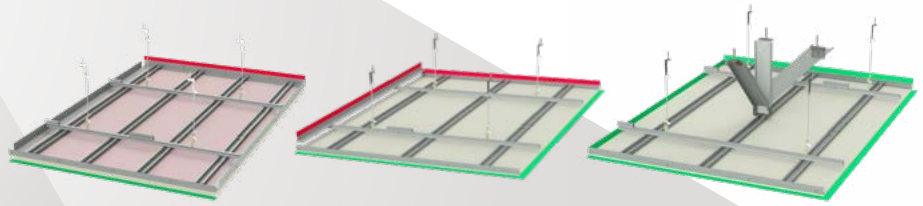
Not required - **Class 1:** Single and double storey houses, townhouses and the like, not over 8.5m in height.

Information needed to design seismic ceiling solutions

- Architectural Drawings (showing reflected ceiling plans and height of ceilings above ground level)
- Primary Engineer Drawings
- Any building movement report (if available)

Siniat seismic ceiling solutions

Suspended ceiling solution



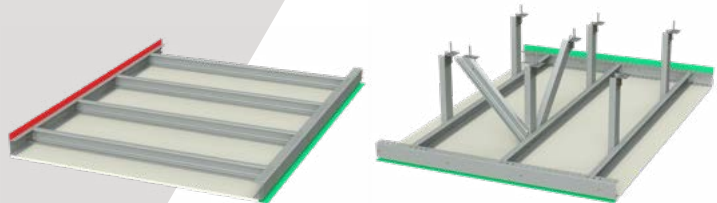
Suspended ceiling design allows the designer to bring the ceiling level down to the required height and provides space in the ceiling cavity for services such as air-conditioning and electrical cabling. Siniat offers three main design solutions for suspended ceiling systems to comply with the seismic design requirements of the particular project - Type A, B and C.

Siniat's suspended ceiling systems suspend a grid of Siniat Furring Channel and Siniat Top Cross Rails below a supporting structure by means of clips and hangers. The structure can be sheeted with Siniat plasterboard or Siniat's acoustic ceiling lining.

In terms of Section 8 of AS 1170.4 ceilings are a non-structural building component that needs to be designed to resist earthquake forces.

Siniat's suspended ceiling systems were tested for seismic performance and compliance at a leading facility in the USA. Here our systems were subjected to rigorous testing in real-world, large-scale conditions. The results have given us a better understanding of how our seismic ceiling solutions perform under seismic loads.

Steel stud ceiling solution



Steel stud ceiling systems are a good option for situations where it is difficult to install a suspended ceiling system. Siniat offers two main design solutions for steel stud ceilings to comply with the seismic design requirements of the particular project.

Siniat steel stud ceiling systems are designed using stud and track horizontally, which are fixed to supporting walls on either side.

They are typically used in corridors, bathrooms, kitchens and fire tunnels and often hide services such as aircon ducting or cabling.

Steel stud ceilings can be suitable for fire-rated and non-fire-rated applications.

In terms of Section 8 of AS 1170.4 ceilings are a non-structural building component that needs to be designed to resist horizontal and vertical earthquake forces.

Siniat offers two main designs for steel stud ceilings to help architects and designers comply with the seismic design requirements of the particular project - Type A and Type C.



New metal brackets - product details

Suspended TCR & FCh - Type C

	image	width (mm)	bmt (mm)	length (mm)	weight* (approx. kg/piece)	short code	material code (SAP)	pack size (min order 1 pack)
45° soffit bracket (bag of 50)		35	2.0	65	0.029	SB45	4088269	x
seismic ceiling bracket (bag of 50)		50	1.50	94.4	0.029	SCB	4088270	x
Lead time	Price for pack orders placed on Siniat stock, as per normal trading terms							
	Standard item in Beenleigh, Queensland - next day delivery For other states - maximum 5 days delivery							
	For enquiries regarding lead times for large quantities please contact the Customer Service Centre.							

Related products (complete solution)

Suspended TCR & FCh - Type C

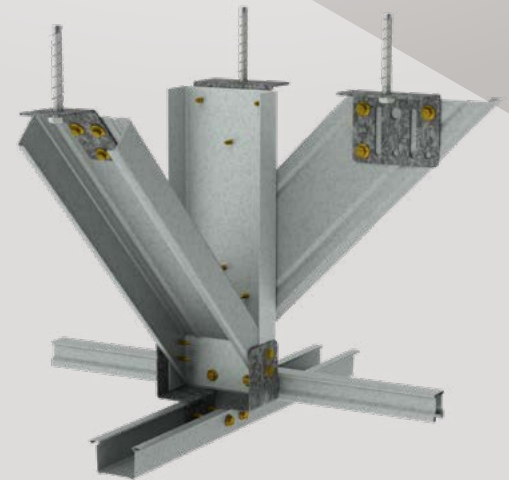



	image	width (mm)	bmt (mm)	length (mm)	weight* (approx. kg/piece)	short code	material code (SAP)	pack size (min order 1 pack)
universal bracket 80 (bag of 50)		80	2.0	35	0.15	UB80	741490	x
Lead time	Price for pack orders placed on Siniat stock, as per normal trading terms							
	Standard item in Beenleigh, Queensland - next day delivery For other states - maximum 5 days delivery							
	For enquiries regarding lead times for large quantities please contact the Customer Service Centre.							



Key selling propositions

Top three benefits to the Siniat Seismic Solutions

- Extensive range of seismic ceiling systems;
- Extensively tested & fully warranted solution;
- Siniat's Type A suspended ceiling options do not need one-way stud bracing in the ceiling plenum.

Competitive Advantage

Siniat Complete System Solution

Siniat is the only manufacturer that can offer complete metal framing and plasterboard systems.

Value Proposition

- We are the only supplier in Australia to offer fire-rated and non-fire-rated seismic ceiling systems that have been extensively tested and offer a system warranty.
- Siniat's rigorous testing has provided our engineers with an in-depth understanding of how ceiling systems behave under seismic loads.
- Customers can trust our solution because we have done the testing and the research.



Frequently asked questions (FAQ's)

Why have the new brackets been introduced?

Our engineers designed and developed the new brackets for the installation of the Type C suspended ceiling design solution. The Type C solution does not rely on any perimeter fixing but rather uses a ceiling plenum bracing system to stabilise the ceiling during a seismic event.

Where can they be used?

The new brackets can be used on suspended ceiling Type C (Fire rated and Non-fire rated): 2-way plenum brace with four sides free. This solution is suitable for ceilings of all sizes.

How do the Siniat solutions compare to competitors' solutions?

The Siniat suspended ceiling systems have been subjected to large-scale, real-world seismic testing conditions. We have discovered flaws in our competitors' designs and rectified them. We can design for non-fire rated and fire rated ceiling systems.

How are Siniat's systems different from our competitors' solutions?

The Siniat suspended ceiling systems have been subjected to large-scale and rigorous seismic testing regimes in the US. They are fully warranted.

Which chapters of the Blueprint manual relate to the seismic ceiling systems?

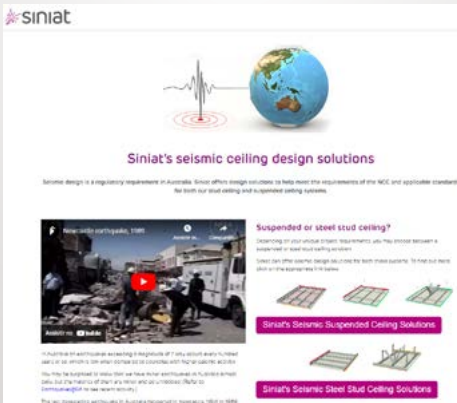
[Chapters 5.1 \(ceilings\)](#) and [5.3 \(steel stud ceilings\)](#).

Are Siniat's ceiling systems covered by the Siniat Warranty?

Yes, Siniat's advanced system engineering and rigorous testing regimes give us the confidence to offer you a warranty that can cover your whole ceiling system, when installed as a complete system in accordance to our recommendations.



Marketing support material



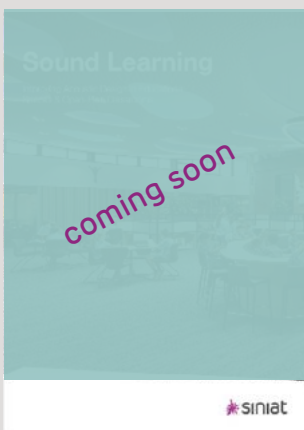
- [seismic ceiling design solutions landing page](#)
Available now



- [seismic ceiling solutions brochure](#)
Due: April/23



- [Siniat website](#)
Available now



- [white paper](#)
Due: May/23

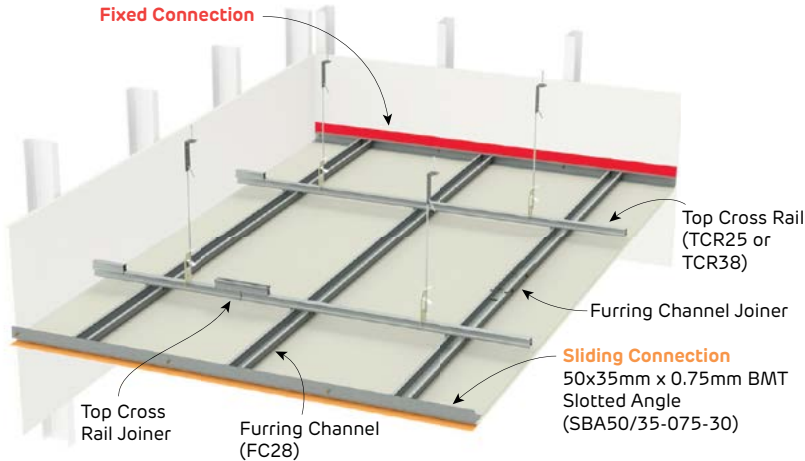


Suspended ceiling seismic solutions

Summary

Suspended Ceiling Frame - Type A

One side **Fixed** and the opposite side **Sliding**

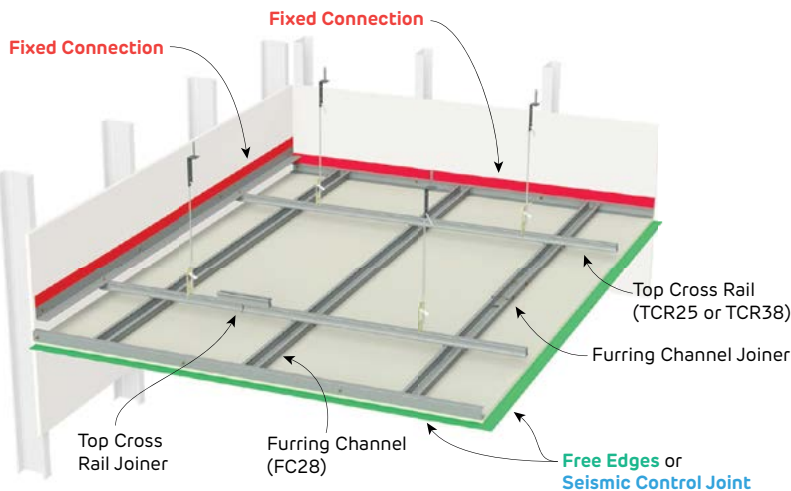


- Suited to rooms up to 12m wide and corridors
- No plenum bracing required for corridors
- Perimeter track on 2 sides only (unless fire or acoustic rated)



Suspended Ceiling - Type B1 and B2

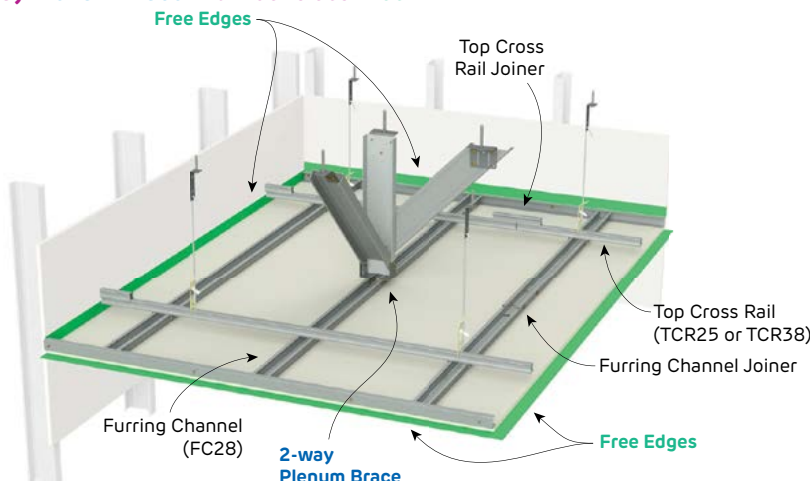
Two adjacent sides **Fixed** and two adjacent sides **Free**



- Suited to rooms up to 12m x 12m
- Can be used for rooms up to 24m x 24m using control joints

Suspended Ceiling - Type C, 2-way Plenum Braced

2-way **Plenum Brace** with four sides **Free**



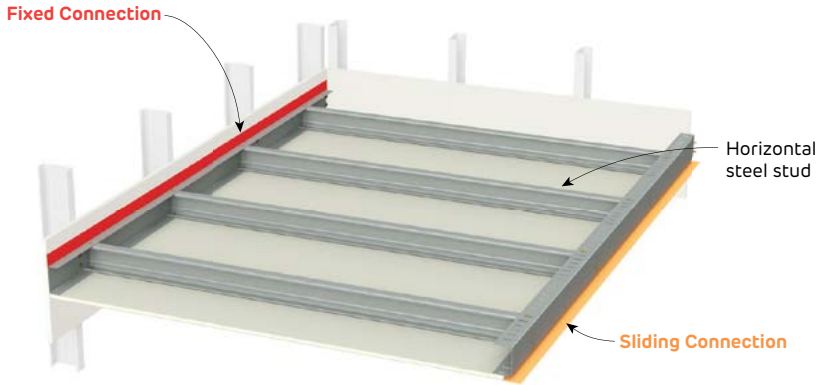
- Suited to larger rooms but can be used for small rooms
- Can be built in modules for very large ceilings
- Perimeter walls are independent of the ceiling

Stud ceiling seismic solutions

Summary

Stud Ceiling - Type A1

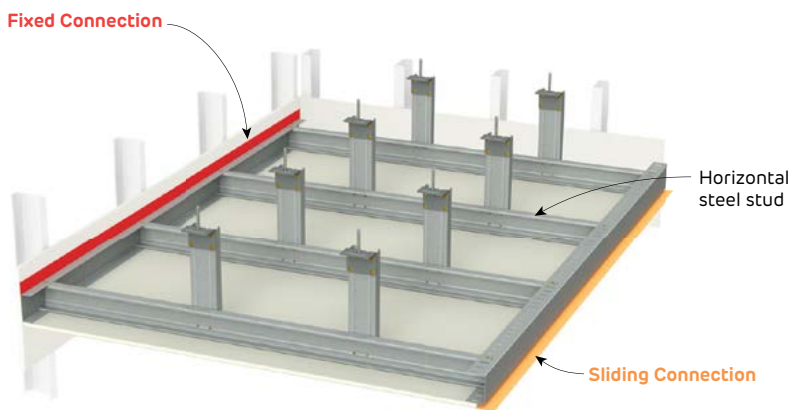
One side **Fixed** and the opposite side **Sliding**



- Suited to corridors and smaller width rooms
- No plenum bracing required for corridors
- Perimeter track on 2 sides only (unless fire or acoustic rated)

Stud Ceiling - Type A2

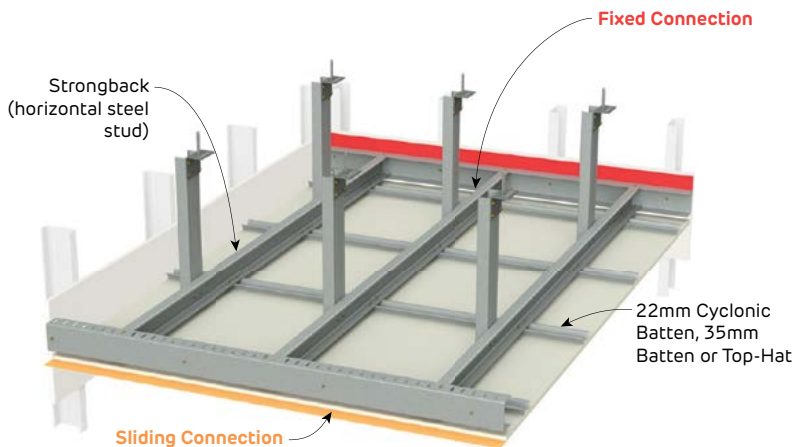
One side **Fixed** and the opposite side **Sliding**



- Suited to wider corridors and larger width rooms
- Perimeter track on 2 sides only (unless fire or acoustic rated)

Stud Ceiling - Type A3

One side **Fixed** and the opposite side **Sliding**



- Suited to larger rooms
- Perimeter track on 2 sides only (unless fire or acoustic rated)

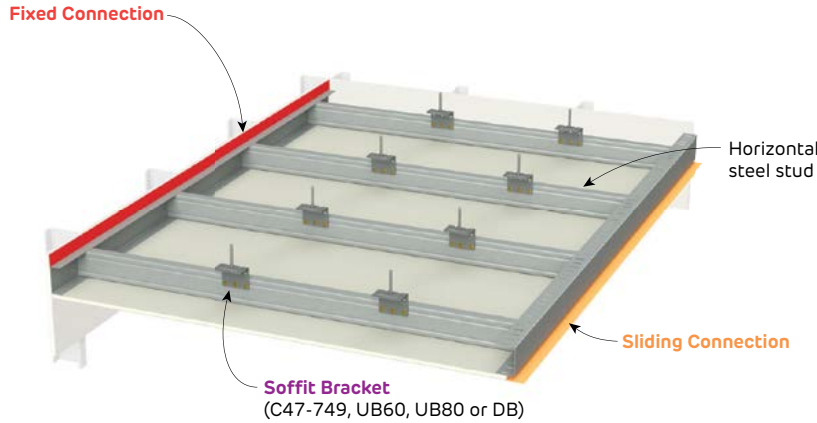


Stud ceiling seismic solutions

Summary

Stud Ceiling - Type A4

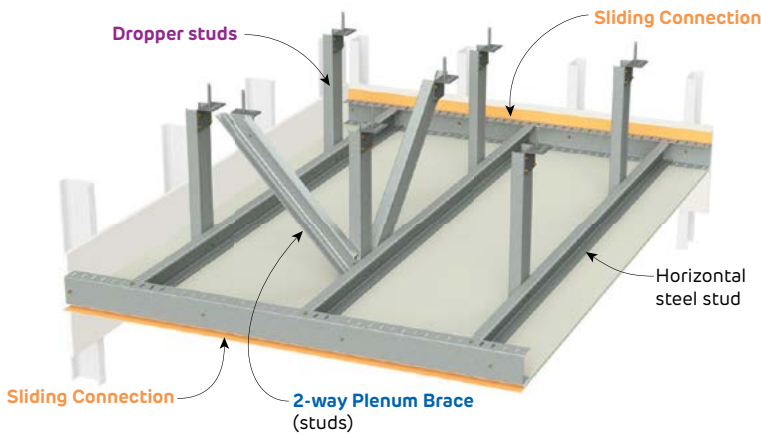
One side **Fixed** and the opposite side **Sliding**



- Suited to rooms requiring a low ceiling cavity
- Perimeter track on 2 sides only (unless fire or acoustic rated)

Stud Ceiling - Type C1

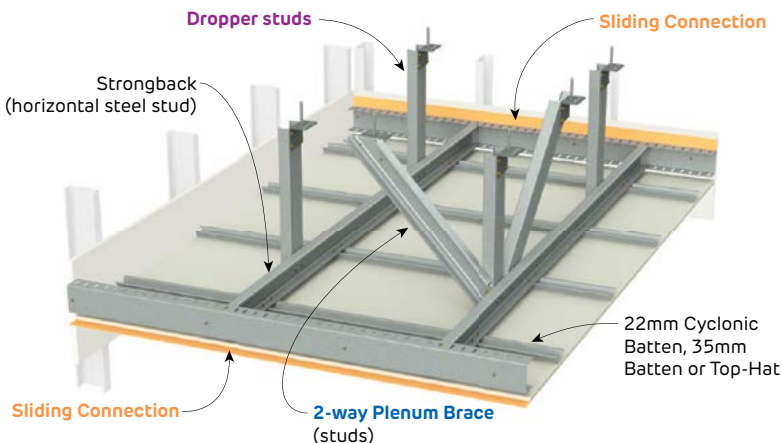
2-way Plenum Braced



- Suited to larger rooms but can be used for small rooms
- Can be built in modules for very large ceilings

Stud Ceiling - Type C2

2-way Plenum Braced



- Suited to larger rooms but can be used for small rooms
- Can be built in modules for very large ceilings



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warranty

Siniat's products are guaranteed
by a 10 Year Warranty.
For details visit siniat.com.au/warranty

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