

METINNO®

Seismic Perimeter Trims & Clip

- Multiple fixing locations for universal grid application
- Industry-leading seismic design with superior travel
- Designed by contractors and endorsed by seismic experts



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Seismic Perimeter Trims & Clip

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About This Guide

This guide is intended to serve as an introductory resource in implementing Metinno seismic solutions for suspended grid systems. The design and application for Metinno's seismic solutions, including the bracing and fixing methods detailed in this guide, are formulated in compliance with the following standards:

- AS1170.4: 2007 (REC:2018) Structural Design Actions - Earthquake actions in Australia

In the event of an earthquake, inadequately designed suspended ceilings can lead to disastrous outcomes carrying a significant risk of injury or fatality due to:




- Obstructed evacuation routes
- Falling fixtures
- Exposed live electrical wires

Additionally, damage to the building can cause considerable delays in resuming business operations. Beyond earthquakes, numerous other sectors face similar hazards (such as blast protection), where employing proper seismic design can offer added security for the ceiling. These include:

- Defence facilities
- Energy production sites
- Chemical plants
- Transportation hubs

Product Overview

Product Code	Description	Quantity/ Carton	
SSL3600	Seismic Wall Angle Shadowline	20	
SST3600	Seismic Wall Angle Standard	20	
SBH3600	Seismic Bulkhead Trim	10	
M90	Metinno M90 Seismic Clip	50	
M90S	Metinno M90 Seismic Screw	500	

Product Code	Description	Quantity/ Carton	
2424	Suspension Clip	100	
SR5.0	5mm Suspension Rod	50	
QC3700	NCS Main Tee 3700mm	20	
QC1200	NCS Cross Tee 1200mm	60	
QC600	NCS Cross Tee 600mm	60	

Please note: For a Standard wall angle in a Floating connection, adjustments need to be made to the T-bar as depicted in Fig 1.



Fig 1. T-bar for Standard Wall Angle in Floating connection



Fig 2. T-bar for Standard in Fixed connection, Shadowline, and Bulkhead Wall Angle

Seismic Bracing Layout

For bracing the ceiling against lateral loading, Fixed and Floating connection details to the perimeter are required. Metinno M90 Clips are used to fix the ceiling to the perimeter on two adjacent sides as shown in Fig 3. M90 Clips are also installed on opposite sides, creating a seismic sliding connection. Lateral loads are transferred from the ceiling to the perimeter through the perimeter fixing.

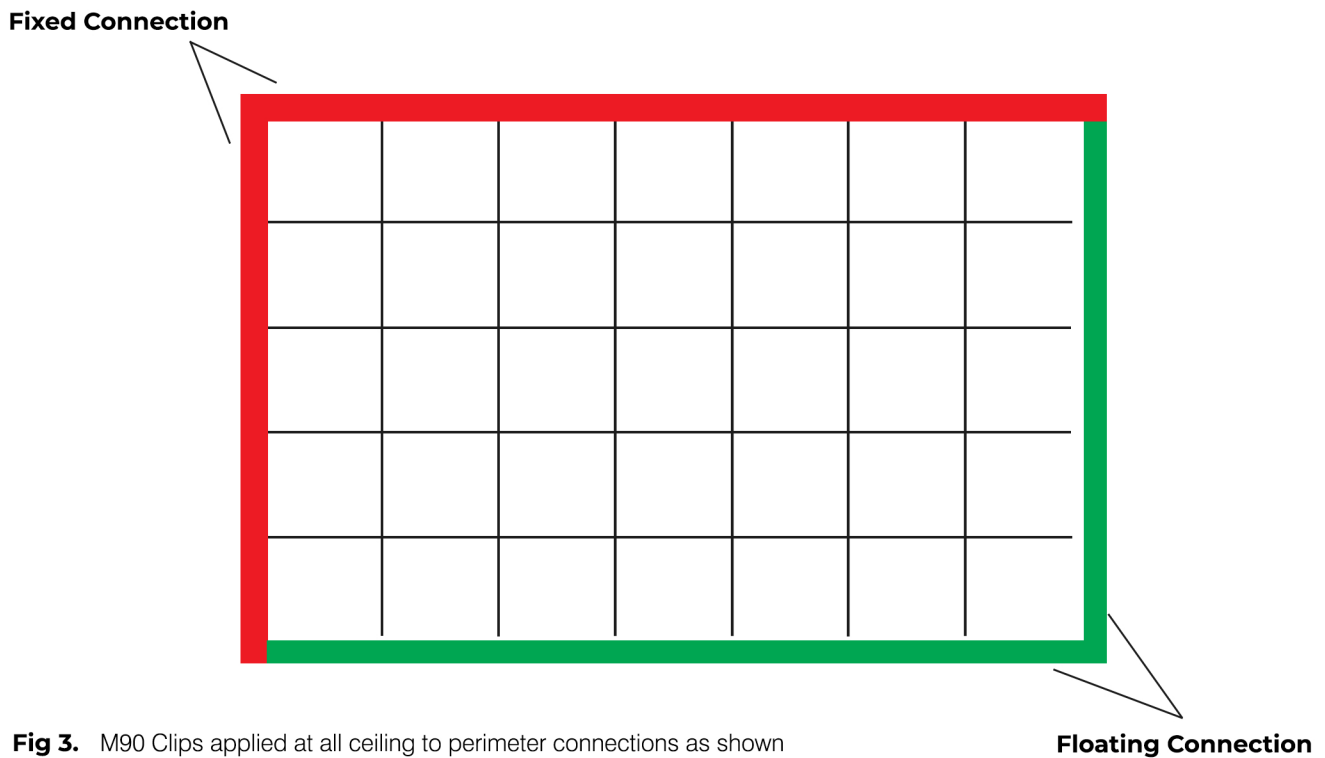


Fig 3. M90 Clips applied at all ceiling to perimeter connections as shown

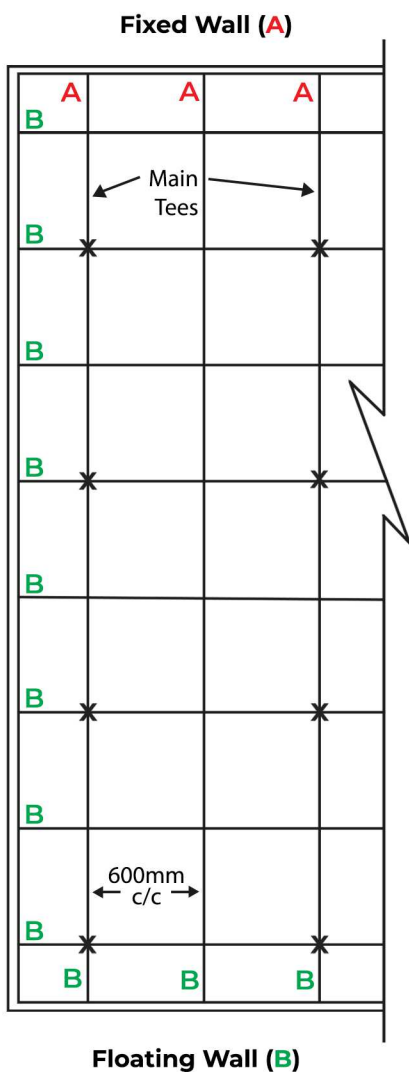
Fixing Specification	
Building Structure	Connection Type
Concrete	2 x Toge Seismic 6 x 50 Screw Anchors
Steel	2 x 10 x 16 Tek Screws
Timber	2 x 10 x 50 Tek Screws
M90 Clip to Trim	8 x 25 Self-Drilling Screw

Seismic Perimeter Solutions

The Metinno seismic grid solution requires consideration of the following three details at the perimeter:

1. Seismic Perimeter Trim (see Product Overview - Page 4)
2. M90 Clip (applied as per Fig 3 on Page 6). The M90 Clip also helps maintain the alignment of the ceiling grid during a seismic event, preventing the T-Bars' ends from separating and ensuring panels remain securely in place
3. Seismic Clearance for travel: To accommodate the movement of the T-bar in Floating configurations, it is necessary to have a 19mm clearance between the end of the grid and the vertical leg of the Perimeter Trim on two adjacent sides of the ceiling. See Fig 10 and Fig 12 on Pages 9 and 10 for details of this travel clearance created by the Metinno M90 Clip.

Shadowline Wall Angle



X - Suspension Points



Fig 4. Fixed Ceiling-Wall Connection with M90 Clip (see also Fig 9 on Page 9)



Fig 5. Floating Ceiling-Wall Connection with M90 Clip (see also Fig 10 on Page 9)



Standard Wall Angle



Fig 6. Fixed Ceiling-Wall Connection with M90 Clip
(see also Fig 11 on Page 10)



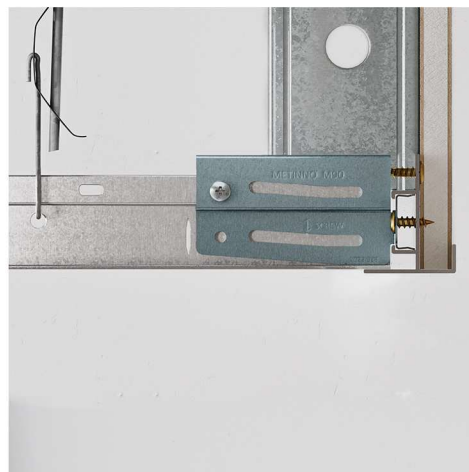
Fig 7. Floating Ceiling-Wall Connection with M90 Clip
(see also Fig 12 on Page 10)

Bulkhead Trim

Please note: The Seismic Bulkhead Trim (SBH3600) should only be applied in the Fixed position.



Fig 8. Fixed Ceiling-Wall Connection with M90 Clip
(see also Fig 13 on Page 11)



Shadowline Wall Angle Configuration

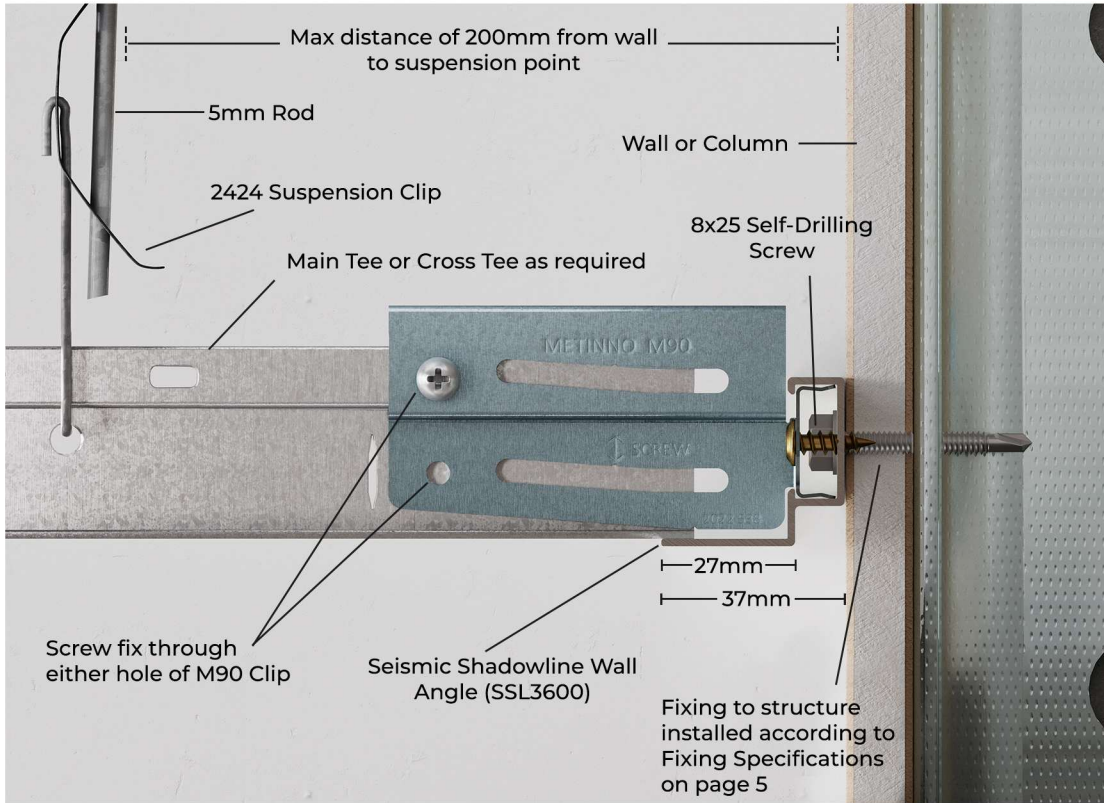


Fig 9. Fixed Ceiling-Wall Connection with M90 Clip

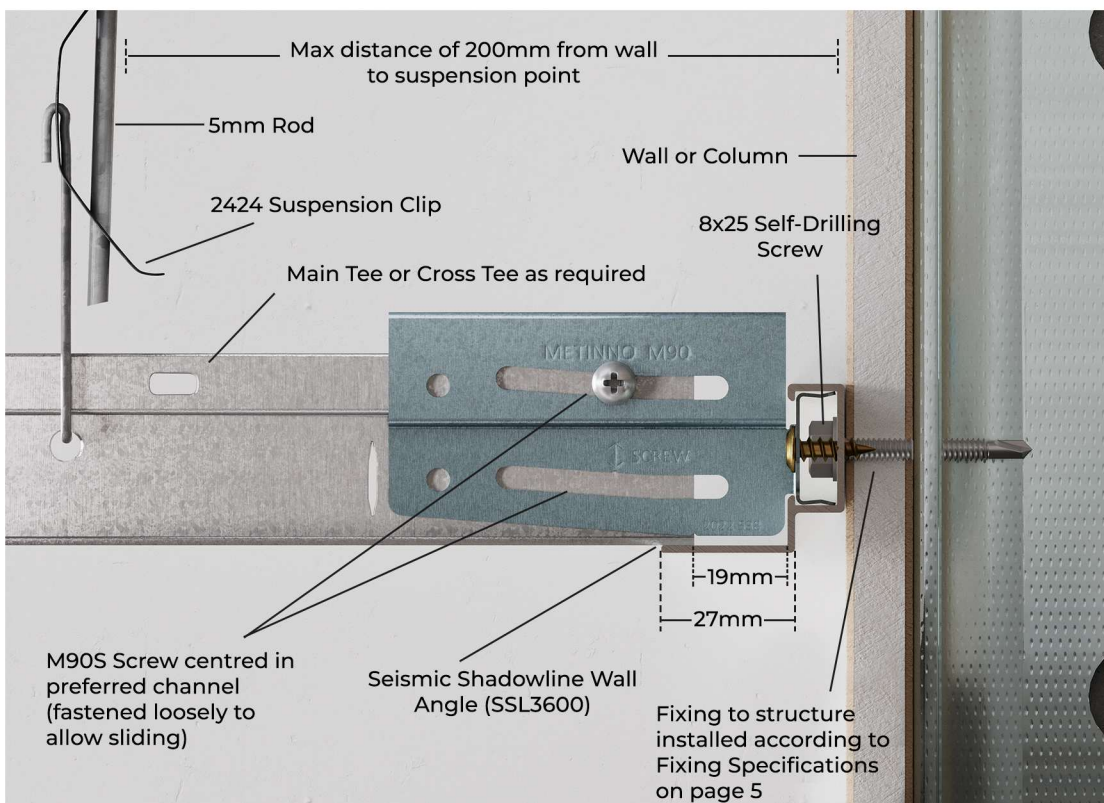


Fig 10. Floating Ceiling-Wall Connection with M90 Clip

Standard Wall Angle Configuration

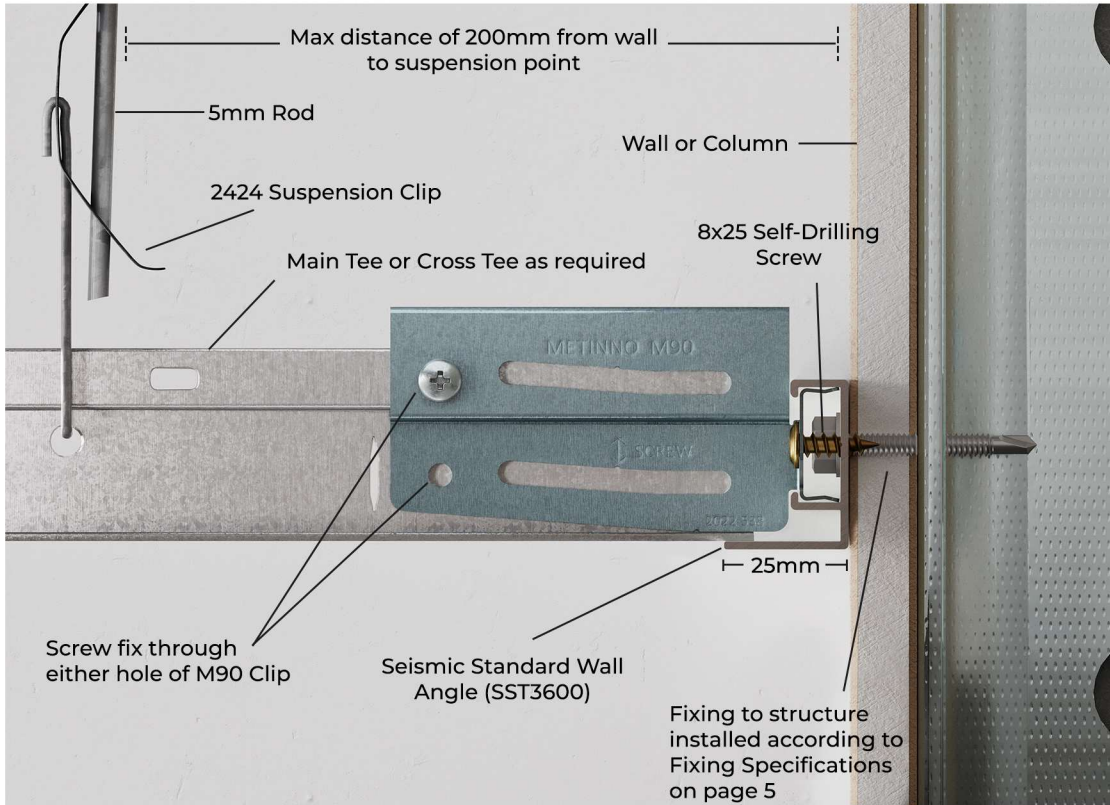


Fig 11. Fixed Ceiling-Wall Connection with M90 Clips

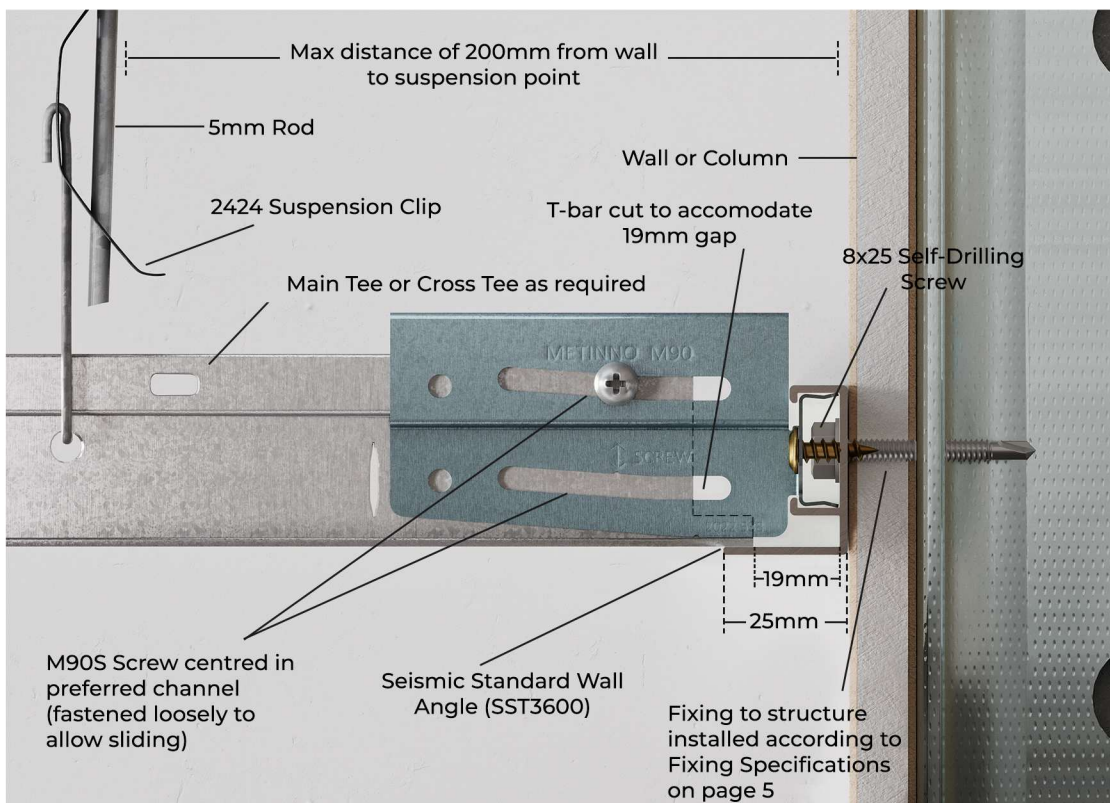


Fig 12. Floating Ceiling-Wall Connection with M90 Clips

Bulkhead Trim Configuration

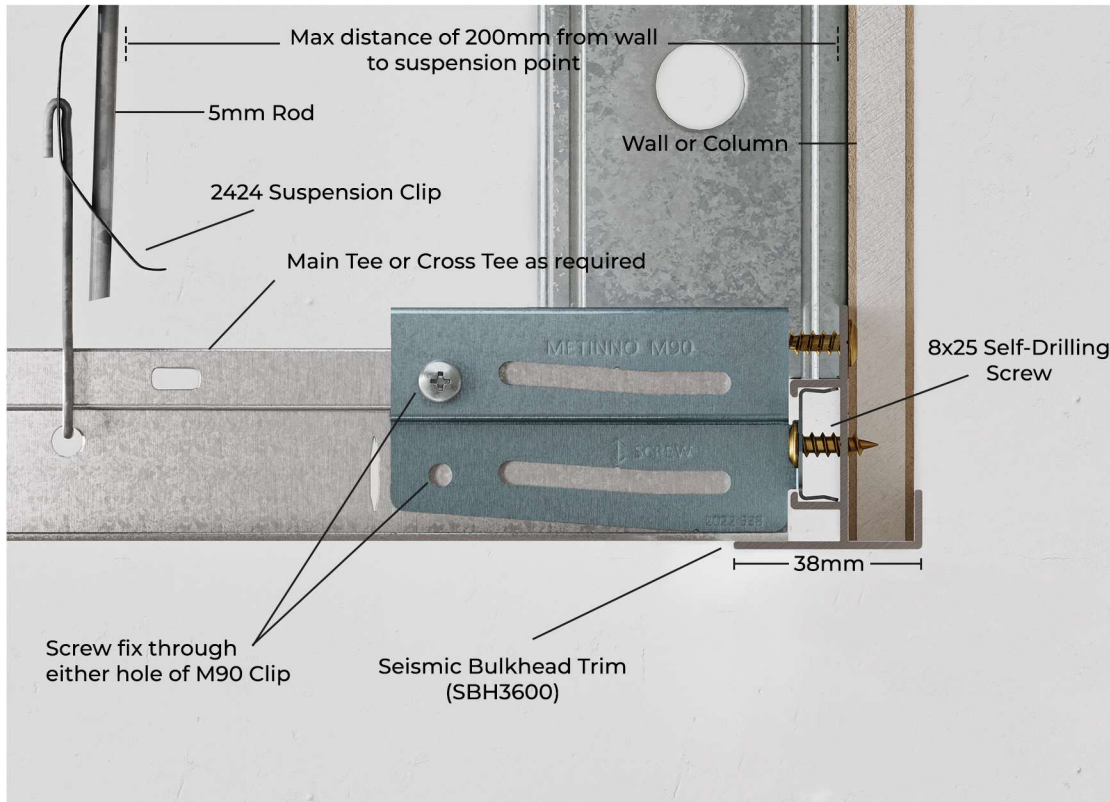


Fig 13. Fixed Ceiling-Wall Connection with M90 Clips



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