



ACOUSTIC SOLUTIONS™

The refined acoustic system

INSTALLATION GUIDE

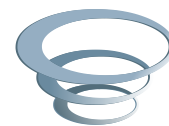
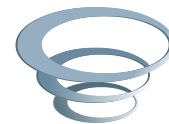


TABLE OF CONTENTS

1	TABLE OF CONTENTS
2	INTRODUCTION
3	OVERVIEW OF THE LINEA CEILING SYSTEM
4	HANDLING & STORAGE
5	PLUMBING PENETRATIONS
6	CONTROL JOINTS
7	FRAMING OVERVIEW
8	FRAMING PREPARATION
9	SUSPENDED CEILING
10	GRID INSTALLATION
11	PANEL INSTALLATION



LINEA CEILING SYSTEM

INTRODUCTION

Acoustic Solutions Linea Ceiling Systems is an attractive, economical and functional solution for commercial and industrial ceilings in offices, shops and shopping centres, hospitals and nursing homes, school and university buildings, clubs, restaurants, function centres and community buildings, warehouse and factory buildings. Acoustic Solutions Linea Ceiling Systems are suited both decorative and acoustic requirements.

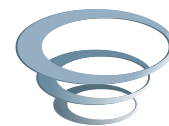
Advantages include:

- Fast, easy and inexpensive to install. Panels simply sit in a two-way grid suspension frame.
- Panels in grid systems provide ready access to services located above.
- Dimensionally stable panels that will not buckle, shrink or warp.
- Virtually maintenance free.
- Surfaces simply wipe clean with a water damp cloth.
- Systems easily adapt to accept flush mounted lighting systems.

Panels can be easily cut-on-site using a plunge cut saw or hole saw to fit around columns, sprinklers and to accommodate flush lighting systems, etc.

Our acoustic panels are manufactured locally from medium-density (750 kg/m³) fibre boards. They are also available in non-combustable imported gypsum to suit your fire safety specifications. The wood-based material used in our panels is hydroscopic, yielding an expansion/contraction coefficient of the core material of only 0.30%. They can be installed in environments of up to 70% humidity. The dimensional stability of the MDF core board is maintained by a perforated matrix pattern on the rear of all panels

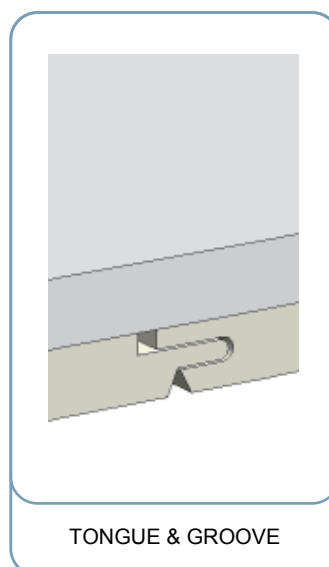
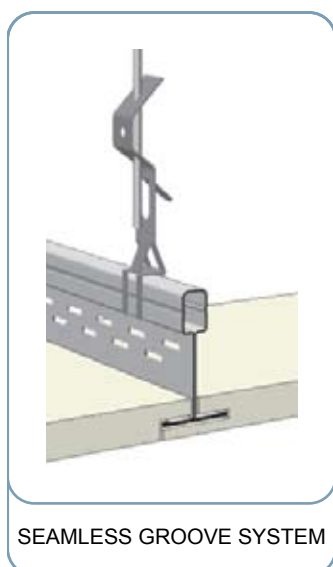
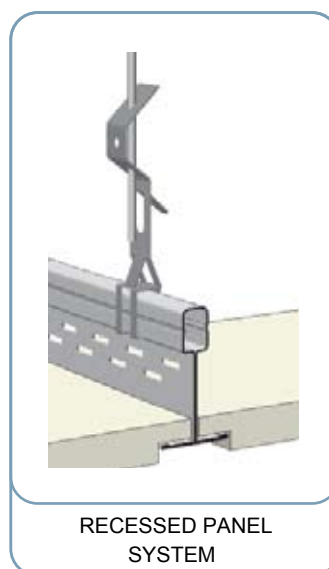
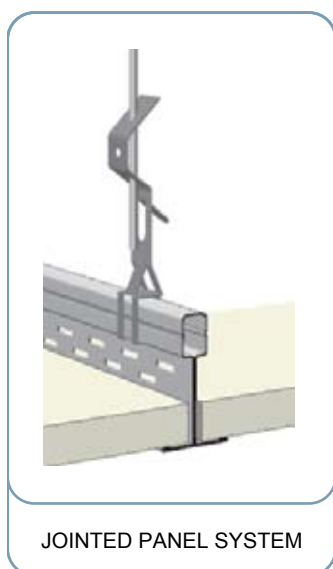
The acoustic panels can be mounted to present unlimited sequencing and an attractive, joint-free continuous surface, thanks to their precise tongue-and-groove design. Key to the acoustic shielding function of our panels is its unique grooved surface pattern. Available options are: Narrow-spaced grooves, which appear collectively as a textured surface; wider-spaced grooves, each individually visible to the eye.

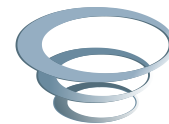


OVERVIEW

THE LINEA CEILING SYSTEM

The Linea Ceiling Systems offer lightweight, decorative and acoustic solutions for commercial applications. They are installed with a two-way suspended grid or directly fixed to wooden battens. The pre-coated face of the supporting grid or edge profile of the panels combine with various surface textures to form a decorative feature ceiling.

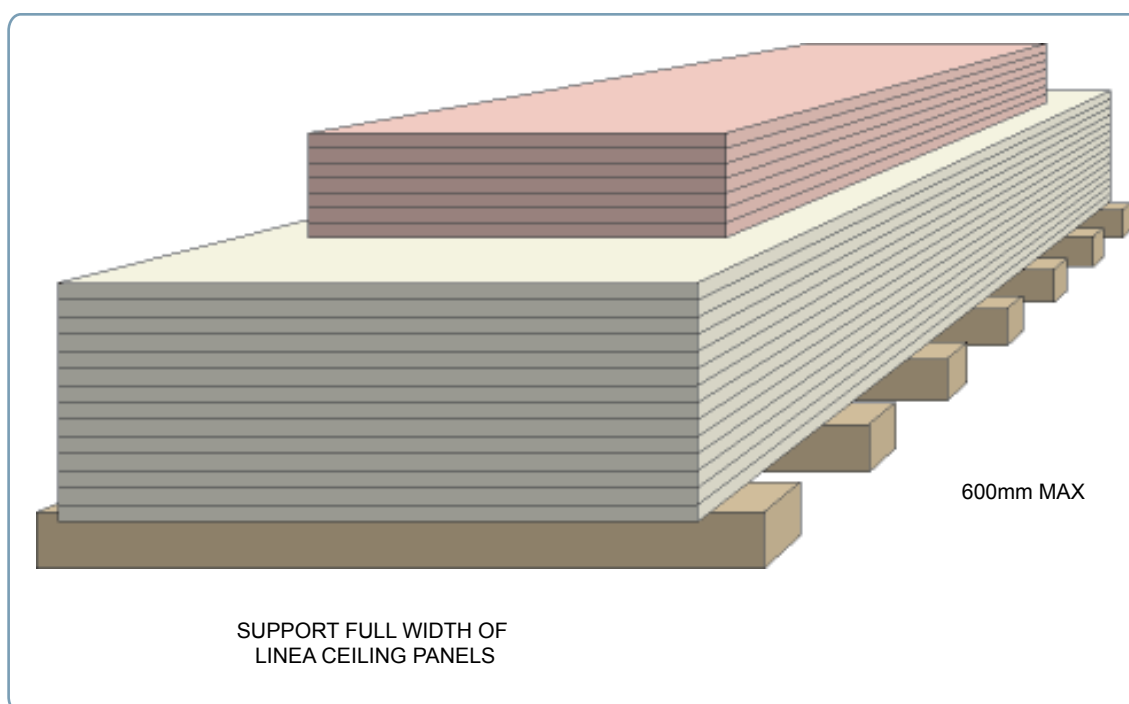


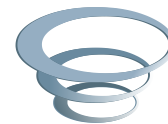


HANDLING & STORAGE

STACKING & SUPPORT OF CEILING PANELS

All materials must be kept dry, preferably stored inside. Care should be taken to avoid sagging or damage to ends, edges and surfaces of sheets. All Linea acoustic panels must be stacked flat, properly supported on a level platform or on support members which extend the full width of the panels and which are spaced at a maximum of 600mm centres. If stored outside, panels must be stored off the ground, stacked as previously detailed and protected from the weather.

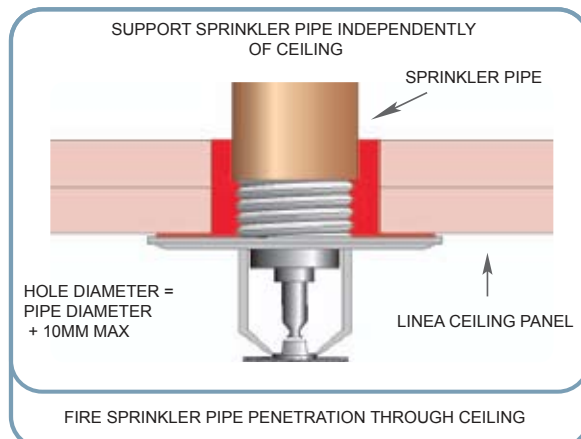
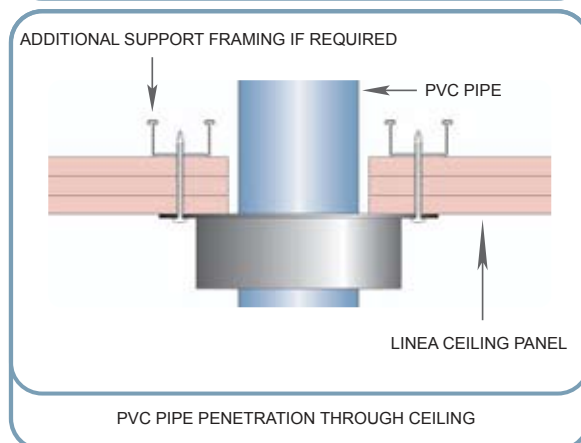
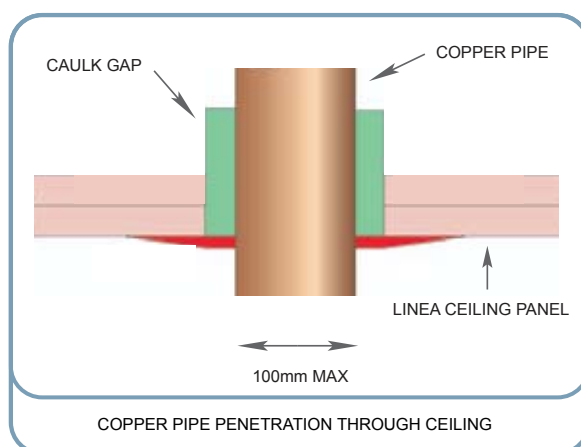


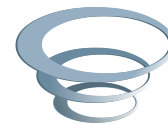


PLUMBING

PIPE PENETRATIONS

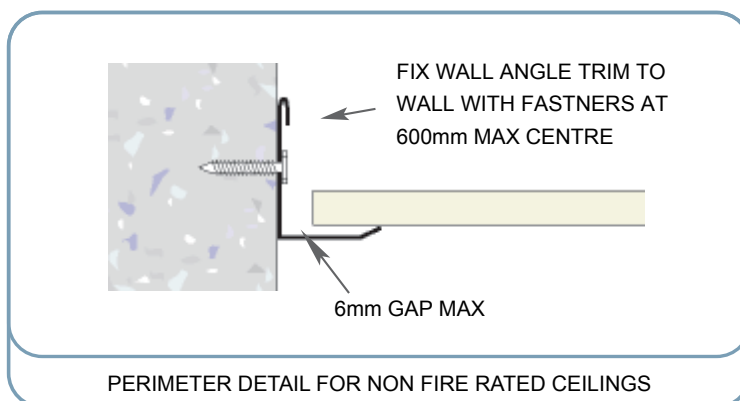
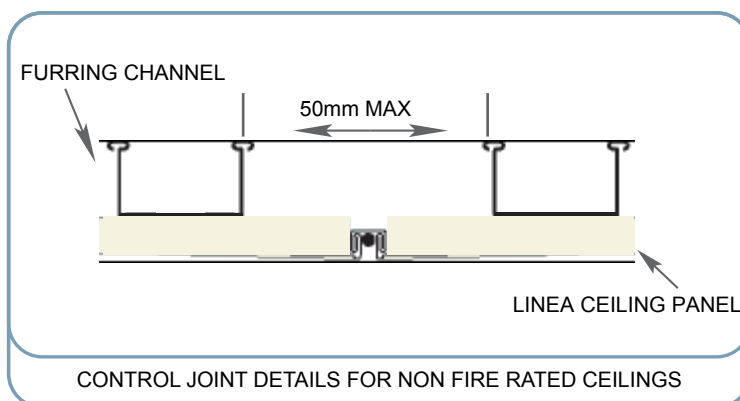
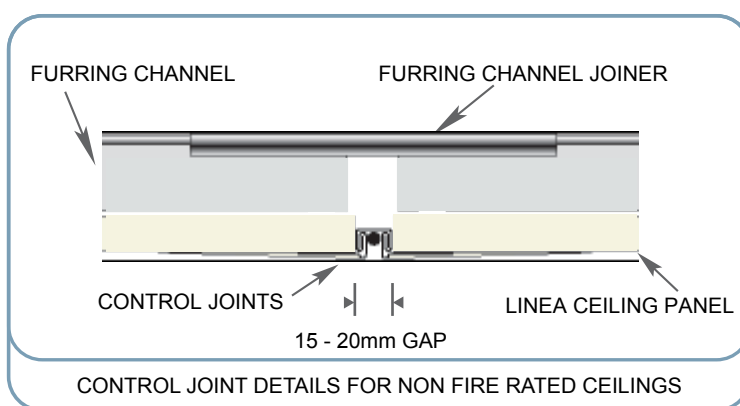
SPRINKLER PIPES: The penetration through fire rated ceilings for sprinkler pipes should not exceed the pipe diameter plus 10mm. The hole must be cut using a hole saw. Once the pipe is in position caulk around the sprinkler.

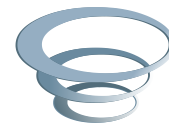




CONTROL JOINTS

Linea Ceiling System must have control joints at 12m maximum spacing in both directions control joint details for ceiling systems.





FRAMING

FRAMING OVERVIEW

INTRODUCTION

This manual details the minimum requirements for various common timber and steel framing systems, and recommended installation methods.

TIMBER FRAMING

Timber members to which plasterboard will be fixed must:

- be spaced at no more than 600mm centres.
- have a minimum fixing face width of 35mm.
- have a timber moisture content at the time of lining of no more than 16%.

Unseasoned timber framing shall be given sufficient drying time in the construction programme to minimise the possibility of shrinkage after the fixing of linings. Kiln-dried timber framing must be protected from wetting during storage and erection.

STEEL FRAMING

Steel framing to which ceiling panels will be fixed must:

- be spaced at no more than 600mm centres.
- have a minimum fixing face width of 32mm.
- be no greater than 1.2mm base metal thickness.

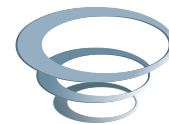
CEILING SUSPENSION SYSTEMS

They are not trafficable unless stated, and are designed to carry the weight of the ceiling only.

- Strengthen suspension systems to support light fittings and access panels.
- Any additional loads are not to be placed upon, or carried by the suspension system.

CORROSION PROTECTION

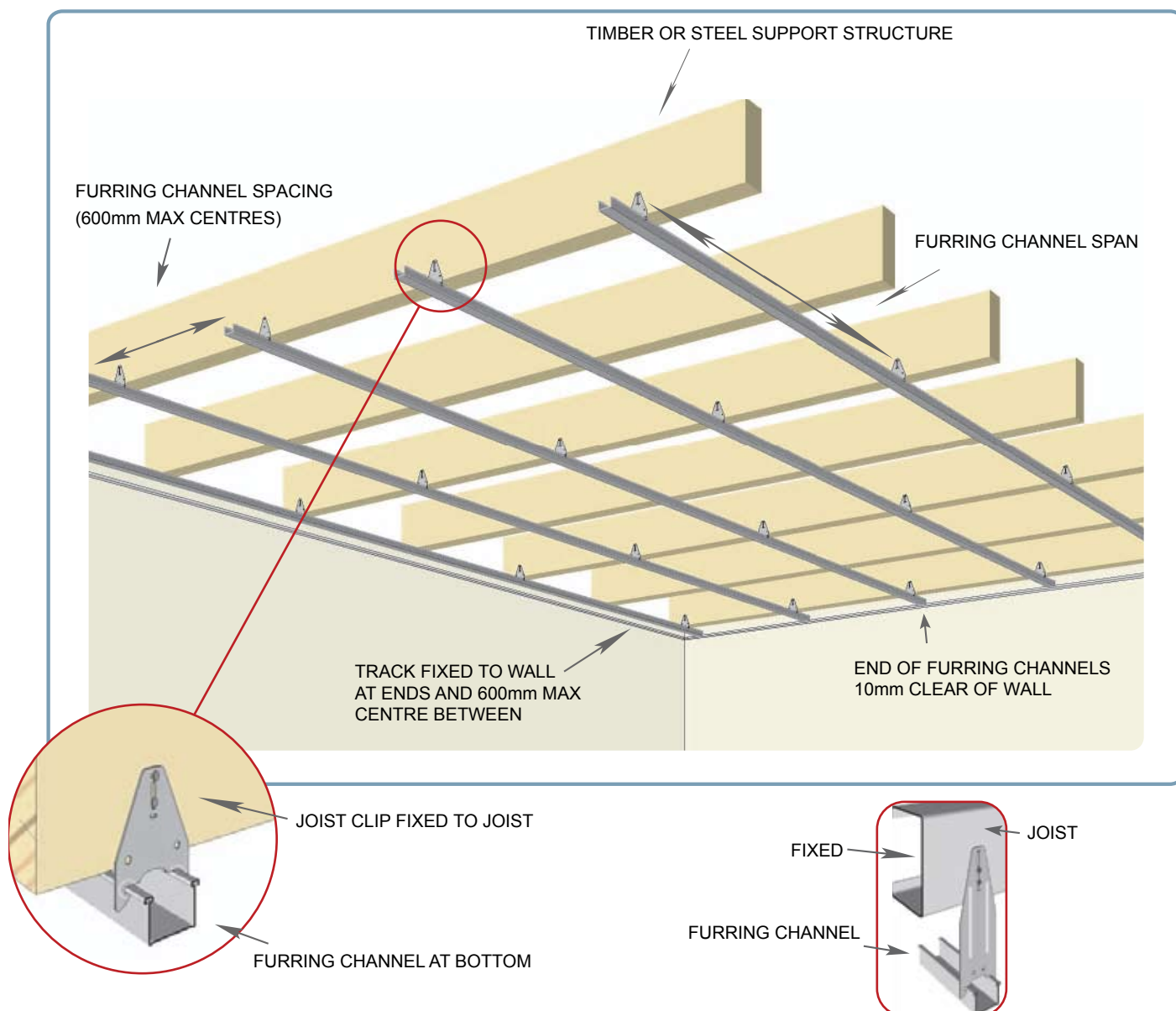
For steel components in external environments, in heavy industrial areas or within 1km of the coast, additional coatings may be required.

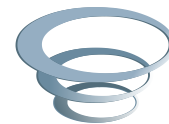


FRAMING PREPARATION

STEEL FURRING CHANNEL DIRECT TO FRAMING

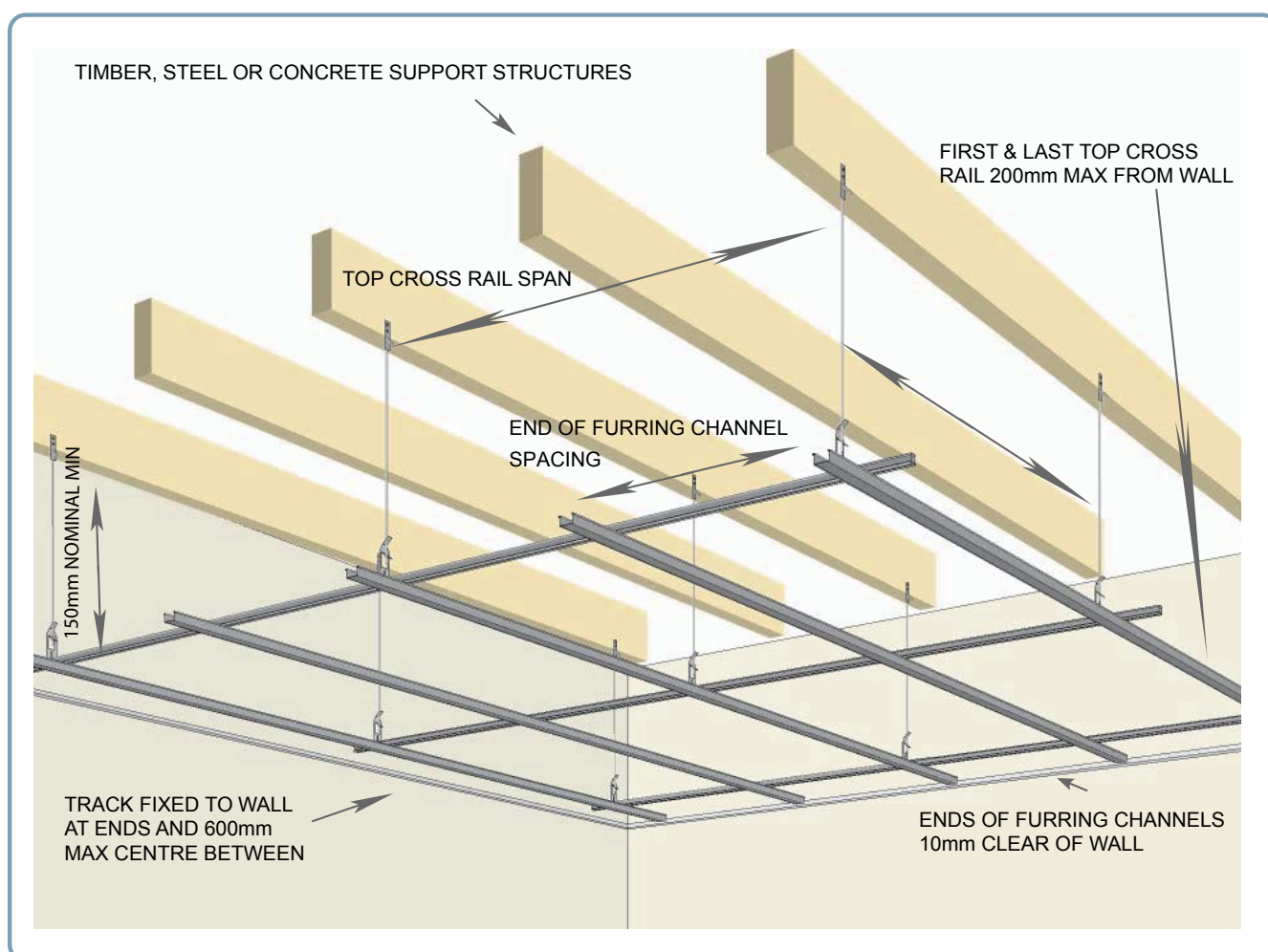
Linea Ceiling System may be fixed directly to steel furring which is held by appropriate direct fixing clips attached to a structural support. Direct fixing clips provide some vertical adjustment to enable accurate levelling of the furring. After levelling, the nail/screw fix type brackets should be permanently fixed in place by nails/screws. Furring channels then snap fit into the clips. The ceiling drop should be limited to 200mm maximum with these attachment systems. Install brackets to ensure there is a clearance between joist and furring of 10mm minimum. The furring channel should be spaced at 600mm centres and with fixing clips at 1200mm maximum centres.

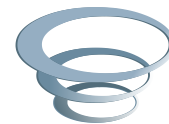




SUSPENDED CEILING

The Linea Ceiling System may be fixed directly to steel furring which is part of a concealed grid suspended ceiling. These systems are NON-TRAFFICABLE and are not designed to resist the weight of foot traffic. The Linea Ceiling Systems comprise of suspension brackets fixed to the supporting structure, suspension rods/wire, suspension clips/wire, top cross rails. Where top cross rails are not continuous, they must be joined. Joins must be aligned with hanging points. A system comprising of top cross rails at 1200mm maximum spacings, suspension points at 1200mm maximum centres, furring channel at 600mm maximum spacings. No provision has been made for the support of services or lighting systems. Adequate independent or additional support must be provided for services and lighting systems.





GRID INSTALLATION

The following information assumes the room is square and the ceiling panels are to be installed in a standard square-on-square pattern. Installation methods will need to be modified to allow for out of square rooms or other grid patterns, such as brick pattern, and to allow for light fittings, etc.

• For best appearance, the panels closest to the walls may need to be cut to size to provide a symmetrical pattern. To determine the position of the grid, determine the number of 1200mm panels that will fit the room dimension. Determine any remainder and add 1200mm. Divide this total by 2. This is the margin along each side of the room. Now determine the number of 600mm panels that will fit the room dimension. Determine any remainder and add 600mm. Divide this total by 2. This is the margin at each end of the room

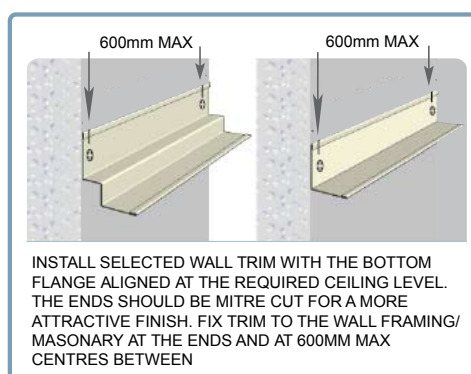
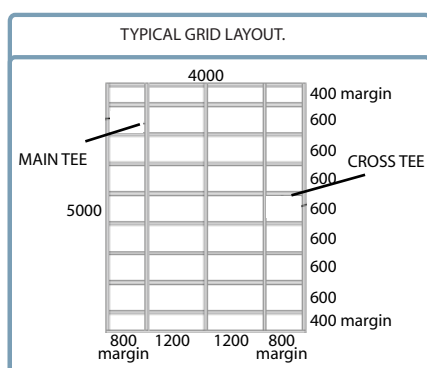
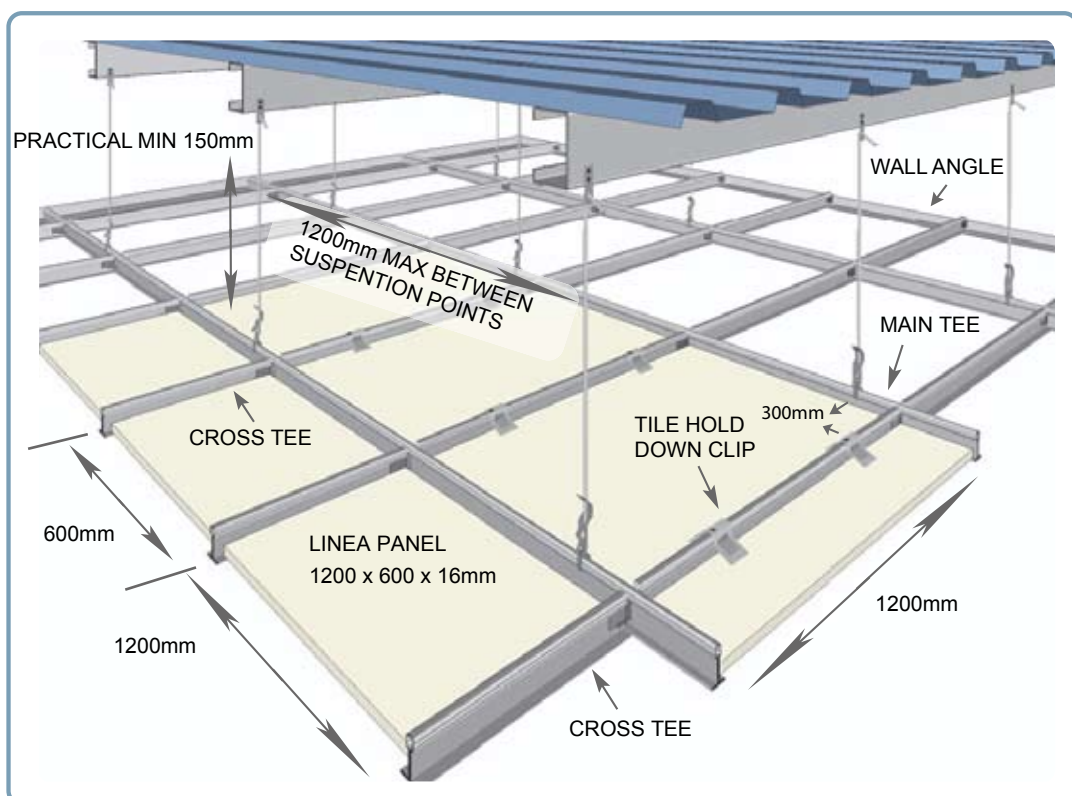
Example Grid Calculations:

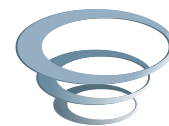
Main Tee Grid

$4000 \div 1200 = 3.3$ modules
 $4000 - 3600$ (3 panels) = 400
 $400 + 1200 = 1600$
 $1600 \div 2 = 800$ margin
on each side of the room.

Cross Tee Grid

• $5000 \div 600 = 8.3$ modules
 $5000 - 4800$ (8 panels) = 200
 $200 + 600 = 800$
 $800 \div 2 = 400$ margin
at each end of the room.





PANEL INSTALLATION

Clean hands or gloves are essential to prevent soiling of panel face during installation.

- Lift the panel through the grid with position facing down on the bottom flanges of the grid main/cross tees.
- Fit Hold-down Clips to cross tees top flange, and bend hold-down flanges downward to prevent panels lifting.
- Accurately align and level the grid. The suspension clips can be adjusted to either a string line or laser.
- To assist with stabilising the grid system in large ceiling areas, the Wall Trim Stabiliser should be attached to the wall trim at every second or third main/cross tee.

