

## IMPORTANT POINTS TO NOTE

### Pedestal Adjustment

Once the level of the pedestal is determined it should be securely locked in position. It is imperative that pedestals are installed vertically (plumb) otherwise an uneven floor will result. This is the root cause of many installation problems.

### Pedestal Overlap

Never exceed the pedestal height limit. Ranges are set to ensure that enough of the pedestal head stud remains in the pedestal base to provide system safety and performance.

### Uplifting and Replacing Panels

Always use the Finoflor® suction lifters to remove or replace panels. Never try to remove panels using screwdrivers, or replace by kicking into position, as damage will occur.

### Panel Parallelogram

It is necessary that each panel is checked for level, position and stability as it is installed. Lines should be straight and corners meet equally – if there are any problems the condition will continue and become worse as the installation progresses. If this condition is allowed to progress it is extremely difficult to rectify at a later stage.

### Levelling

When using a laser level always take the elevation reference line from the centre of the beam. Always take the level reading off the same point on each pedestal and ensure that the pedestal is perpendicular before doing so.

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## HOW TO INSTALL A RAISED ACCESS FLOOR

### PREPARING TO INSTALL AN ACCESS FLOOR

Before installing a raised access floor, it is important to firstly make sure that:

- a) you have the right tools
- b) the sub floors are correctly prepared

### THE TOOLS REQUIRED

**1) Laser Level** - emits a narrow rotating beam of light and is the ideal levelling instrument for installing an access floor. It can be operated by one man only to level an entire installation quickly, easily and accurately. Alternatively more than one installer can use it to work simultaneously. Laser levels can also be used to quickly check sub-floors to ascertain if variations are within pedestal adjustment ranges. Some have the facility to emit beams at 90° for setting out purposes.

**2) Small Level** - suitable for checking that pedestals are perpendicular.

**3) Bandsaw** - a good quality bandsaw can save a great deal of time during installation, for cutting panels to perimeters neatly and accurately. The bandsaw should have the following:  
-A throat size (the distance between the blade and the body of the bandsaw) of 600mm, although 300mm will suffice  
-A bi-metal blade, 14-tooth, 12mm wide, 1.5mm thick. This blade will cut steel-encased chipboard panels, stringers, pedestals and other miscellaneous items

#### Other Tools

- |                    |                             |
|--------------------|-----------------------------|
| 1) Metal tape, 30m | 4) Electric or hand drill   |
| 2) Metal tape, 5m  | 5) Screwdrivers             |
| 3) Chalk line      | 6) Finoflor suction lifters |

### PREPARING THE SUB FLOOR

**Condition** - Sub-floors must be free of any dust, debris, oil, grease or other contaminants which may be detrimental to the pedestal adhesive bond. The overall level of the sub-floor should be checked to ensure that variations are within the adjustment range of the access floor support pedestals. The sub-floor surface should be reasonably flat and smooth to allow for satisfactory seating of the pedestal bases.

**Strength** - The dynamic impact test should be carried out on site by the fixing contractor to ascertain that the sub floors are of adequate strength, composition and general condition. One of the most common problems experienced is failure to fix the pedestal base to the concrete sub-floor. Detachment is usually caused by failure of the concrete, not the adhesive bond.

**Sealing** - Sealing of the sub-floor within the underfloor void is normally only required when the void is to be used as a HVAC plenum. Finoflor® floor sealant is compatible with Finoflor® pedestal adhesive.

**Other Sub-floors** -Existing sub-floors should be evaluated for suitability and compatibility with the access flooring. Sub-floors that deflect will cause deflection to occur in the access floor. The strength of the existing flooring bond must be strong enough to prevent failure. Mechanical fixings may be required for certain sub-floors.

## INSTALLATION

### Locating the Starting Point

The proper location of the starting point is one of the most important tasks of the entire installation. If the module lines are not determined by the architect's drawings then the flooring contractor should determine the grid layout. This will determine the location of the starting point.

Selection of the grid pattern will be based primarily on the following:

- 1) Economical use of materials
- 2) Co-ordination with other trades and services to be installed in the floor void
- 3) Avoid cut panels at doorways and other obstacles
- 4) Avoid very small cut panels (Less than 300mm) if possible
- 5) Select the longest and straightest wall to set out from, with full or half panels as determined.
- 6) Work should start from the farthest point of the room and proceed towards the doorway to avoid pedestrian trafficking or the movement of materials across the newly installed floor.

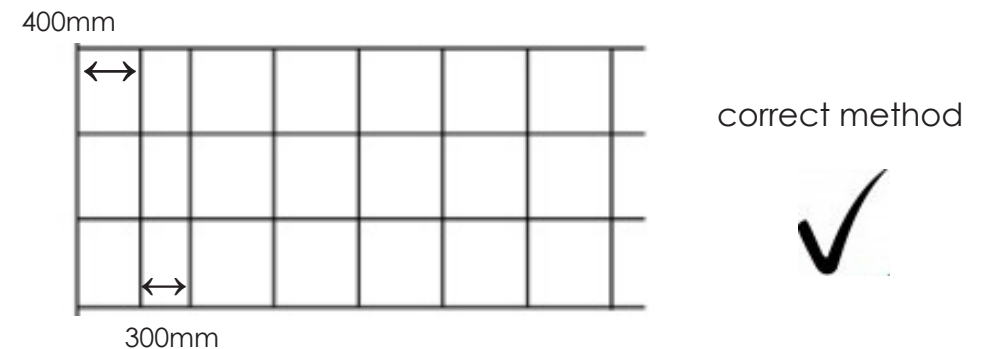
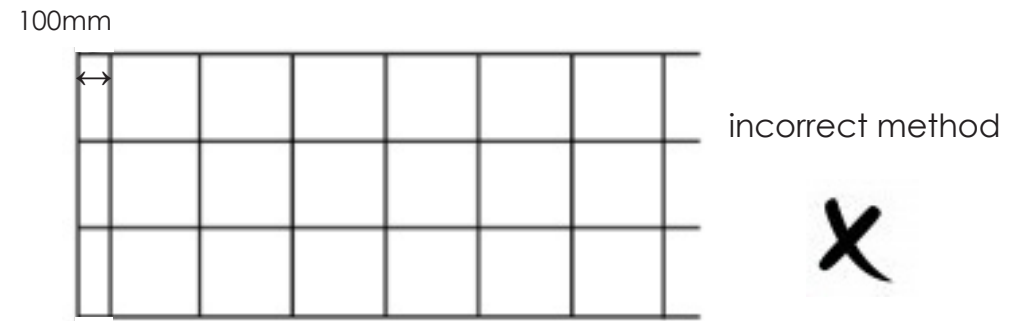
### Avoiding Small Perimeter Cut Panels

It may be necessary on occasions, due to specific grid layouts, that very small perimeter cut panels are necessary.

To avoid having to employ very small cut panels, the use of a "make up band" of panels can be used.

Basically the last row of panels before the small cut panels is reduced from a full 600mm panel to a 300mm cut panel. This will then make the perimeter panel the original dimension plus 300mm (see Diagram 6). This method requires no extra in terms of panels and pedestals and only a small amount of additional labour.

Diagram 6

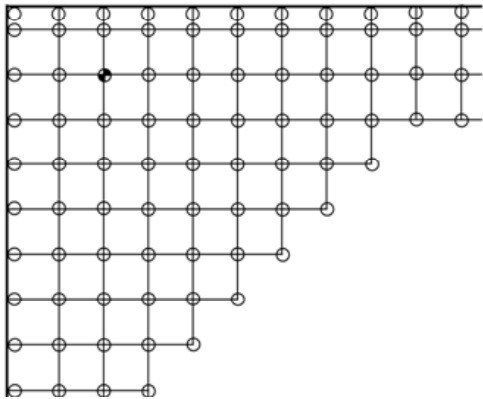


- Only pedestals which are loaded on all four quadrants of the pedestal head should be glued down. If this is not possible the pedestal must be left until such time that it can be glued and loaded with a panel on all four quadrants.

## Building the Floor

Using the L as a base, continue installing the floor by filling in the inside of the L one pedestal and one panel at a time, moving away from the starting point in a 45° direction, extending the legs of the L as required. (Diagram 5)

Diagram 5

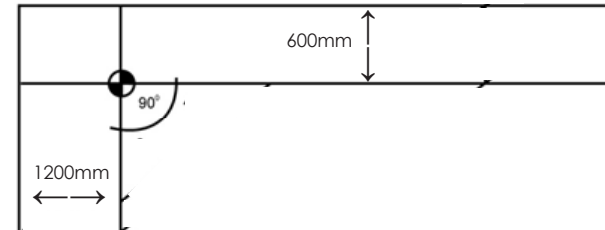


## Cutting Panels - Guidelines

- The maximum gap between panels when located in their respective positions should not exceed 1 mm.
- The system should not rely on perimeter walls, columns etc., for lateral stability. It should provide a close fit to all such interfaces whilst allowing for possible building movement in the floor system, but without any detrimental effect on the floor performance.
- At perimeters and around columns etc., the maximum gap should be 15mm, with the edge panels being positively located to prevent lateral movement of the floor assembly.
- A foam gasket should be fitted to the perimeter edge of the panel to provide a flexible seal.

The starting point is then determined approximately 1200mm from the two adjacent walls where the full panels are used or 900mm for half panels (Diagram 1). The grids should be set so that full panels do not exceed the maximum 15mm permissible gap or can be cut to accommodate variations in the perimeter wall.

Diagram 1



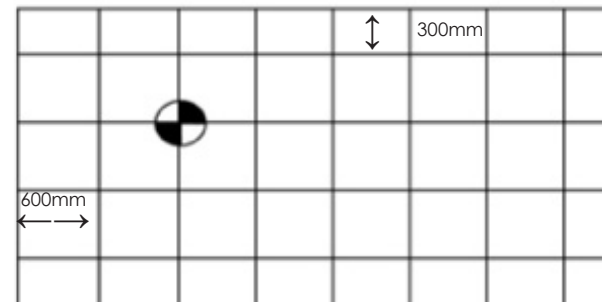
## Establishing the Starting Line

After determining the starting point, set out from that point lines at 90° which do not exceed 1200mm (900mm for half panel perimeters) from the adjacent walls. Check the 90° angle using a laser with 90° facility.

## Setting out the Grid

With the starting lines established, a 600mm x 600mm grid can now be set out to act as a guide for positioning pedestals and to allow other trades to install under floor services without interfering with pedestal positions. (Diagram 2).

Diagram 2:



## Establishing the Floor Height

When establishing the floor height, the same reference datum should be used throughout the area and not transferred from point to point.

Check that the proposed floor height is compatible with other building elements, this can prevent difficulties later in the contract.

Check that the pedestals selected have sufficient adjustment to cope with the sub-floor variations on site.

## Installation – The Right Angle Method:

This method is widely regarded as the best way to plan the installation of an access floor.

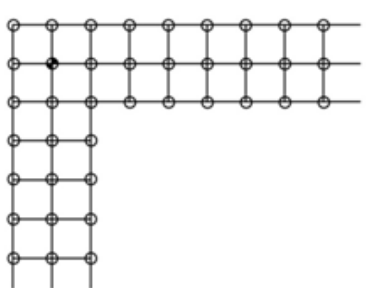
After confirming the starting lines and finished floor height, the first section of the floor is ready for installation.

The L shape is the most important factor in establishing the quality of the finished installation. Extra time spent ensuring the accuracy and quality of the L will result in a superior quality installation with fewer problems at later stages and a shorter installation time.

At the starting point established on the sub-floor, the first pedestal should be accurately centred and permanently anchored, using adhesive and mechanical fixing.

Place additional pedestals at 600mm centres along the starting lines so that a two panel wide section of flooring can be built into an "L" shape with each leg being approximately 12 panels long (Diagram 3).

Diagram 3



Determine accurately the height of the pedestal at the starting point, remembering to account for the thickness of the floor panel.

## Securely lock the pedestals at this height

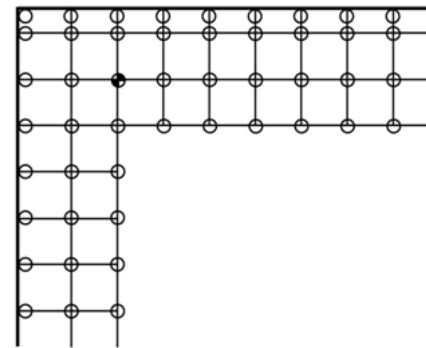
Use this pedestal to establish the datum line of the laser or string line as this will be used to set the level of all other pedestals.

Apply adhesive to pedestals along one leg of the L and adjust level. Repeat the above for the other leg of the L.

## Fixing the next panels

Once the L shape has been established it is advisable, especially with free-standing systems, to fix the full or cut panels to the perimeters to ensure that the basic L is not disturbed as additional panels are added. Pedestals are added at 600mm centres around the perimeter walls. (Diagram 4)

Diagram 4



## Potential Problems

- If for any reason perimeter panels can not be fixed at this point, then the pedestals adjacent to the perimeter which only have panels on one half of the pedestal head should be positioned without the adhesive.
- Pedestals not loaded with a panel on all four quadrants are susceptible to tipping very slightly within the pedestal adhesive, which will cause panel lipping or rocking at later stages when panels are located on the other quadrants of the head. This is also true for pedestals installed at the end of the work day.