

# Installation Manual

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*Note: Where carpet installation recommendations differ to the Taiwan standards, the manufacturer recommendations take precedence.*

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*This manual has been prepared by the technical division to assist professional contractors and layers in the installation of modular carpet.*

*These instructions cover the most common installation circumstances.*

*If modular carpet is installed before construction is complete, any resulting staining, soiling, contamination or damage caused by building construction may void the end user's product warranty. The contractor should inform the appropriate person of this warranty implication.*

## 01 Before Starting

Before the installation, that material supplied conforms to owner's specifications, including correct product, colour and quantity.

Labels on each carton contain important information including: product, colour and manufacturing batch (dye lot information).

It is not recommended to mix dye lots in the same area.

## 02 Conditioning of Materials

The installation location and all products and materials used in the installation, must be at temperature between 15 degrees C - 35 degrees C for a period of 48 - 72 hours before the installation begins. The temperature must remain within this range throughout the installation.

Relative humidity in the area should be 45%  $\pm$  10%.

## 03 Floor Preparation

The subfloor must be rigid, dry, smooth, flat, level, sound, clean and free from harmful materials. When installing modular carpet products, no bitumen based substance must come in contact with the backing.

The subfloor must be rigid to stop modular carpet from cupping.

Old carpet, under felt, loose laid vinyl, cushion backed vinyl and any old adhesive must be removed and floor scraped clean.

**A clean floor** - Floor should be free from all dirt, dust and harmful materials. Before applying vacuum the subfloor to remove all dust. Concrete or timber floors must be primed with an approved primer.

**A dry floor** - All floors must be dry. New concrete floors must be checked for moisture.

Moisture content must not exceed levels as indicated in Appendix 1 of the FCFC carpet Installation Manual. If the moisture content is above the recommended maximum readings STOP and DO NOT PROCEED with the installation. Refer to carpet tile moisture & pH guidelines or seek further advice from FCFC carpet before proceeding.

**A low pH floor** - The subfloor should have an alkalinity level of between pH7 & pH9 to be suitable for carpet installation.





*Note : When installing non impervious backed floor coverings, water based adhesives, apart from pressure sensitive adhesives, cannot be used on a sealed floor.*

## Identify the Type of Floor

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**New concrete floors** - Must be smooth, level and dry .

**Old concrete floors** - Remove paint, sealer, grease, oil, adhesive and any harmful materials, especially bituminous based substances which are not compatible with modular carpet products. All existing adhesive must be removed from the floor. Fill and level all cracks and holes. This levelling compound needs to be compatible with the backing system.

Any existing carpet, under felt, loose laid vinyl, cushion back vinyl and all existing adhesive must be removed and the floor scraped clean.

**Vinyl Tiles** - Damaged & loose vinyl tiles must be replaced or patched and all existing wax coated products are to be removed. Any existing bituminous based adhesive or underlay are to be removed when installing modular carpet products.

Ensure that the bond between vinyl tiles and subfloor will last the service life of the modular carpet.

If a sealer is used, any reaction shall be the contractor and end-user's responsibility.

**Ceramic and quarry tiles** - All joints are to be filled and levelled. Use rough Sandpaper to remove surface glaze.

**Wood Floors** - Unless the subfloor is free from grooves, ridges, gaps, holes or similar imperfections, the use of a hard underlay is recommended.

**Underlay** - The underlay should be either reduced density, or medium density fibrous cement sheet known as hard underlay. The underlay and the fixing material must be compatible with the modular carpet and adhesive.

## 04 Installation Set Out

### General

In setting up, a point in the room shall be determined from which modular carpet can be laid to ensure that they are parallel to the longest wall.

### Procedure

The procedure for setting out shall be in accordance with the following, as shown in Figure 1.

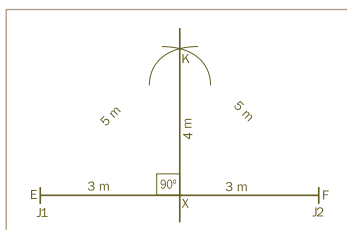


Figure 1

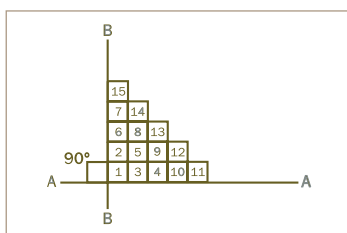


Figure 2

#### Step 1

Mark a line EF parallel to the longest wall.

#### Step 2

Mark point X along line EF at a distance to ensure that the requirements of perimeter modular carpet are a minimum of 1/3 width.

#### Step 3

Mark points J1 and J2 at a distance of 3 m each side of X.

#### Step 4

At J1 and J2 scribe an arc at a distance of 5 m to establish point K where arcs intersect.

#### Step 5

Draw a line through points K and X which will be 90 degrees to line EF.

### Single Room Installation

#### Step 1

Establish two chalk lines at 90 degrees as shown in Figure 1. This line may be established slightly off centre to enable you to meet other requirements, such as placing uncut modular carpet in traffic areas.

#### Step 2

Commencing only at the cross point of the two chalk lines, complete one row of modular carpet on each side of the centre line.

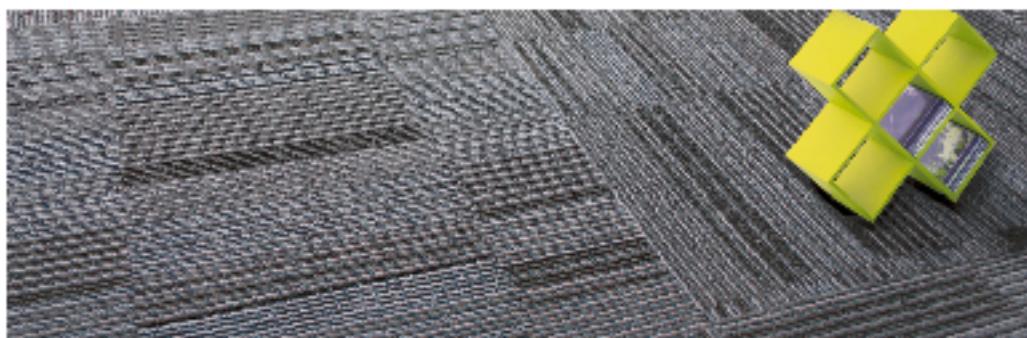
#### Step 3

Anchor your basic installation as shown in Figure 2. Complete the body of the installation by laying in a triangular method.

#### Step 4

Complete the remaining quadrants, section by section.

*Note: Where practical there should be uncut modular carpet tiles in door ways and high traffic areas.*



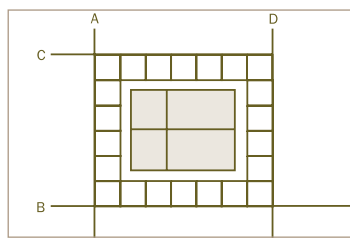


Figure 3a

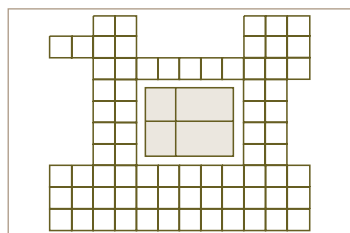


Figure 3b

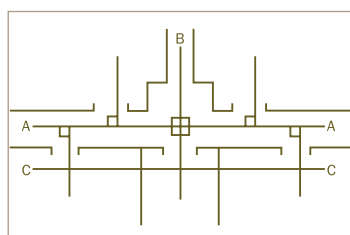


Figure 4

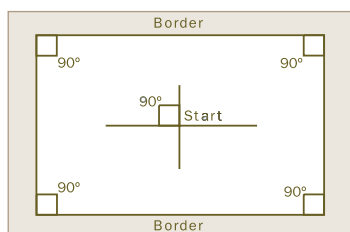


Figure 5

## Large Area with Obstacles

Example: An Elevator

### Step 1

Establish your starting point as shown in Figure 3a, with the A-B at 90 degrees.

### Step 2

Pass your obstacle along line A and B with a minimum of 1 and 1/3 modular carpet. At this point you will establish line C and D, parallel to line B and A.

### Step 3

Complete modular carpet between A and B. (Notice, only a single row of modular carpet is used for this exercise).

### Step 4

Continue to anchor your installation. Fill in the remaining quadrants as shown in Figure 3b.

## Office Complex

### Step 1

The crossover point, centre corridor, centre hall is the starting point for this example as shown in Figure 4. Line A and B should again be at 90 degree angles.

Lay a row of modular carpet on each side along chalk line A. At the entrance of each office passed, a chalk line is projected into that office at 90 degrees. Complete your corridor including cutting.

### Step 2

Lay the modular carpet into the offices and anchor the installation. This will create line C parallel to line A. The total installation is lined out. Complete the body of installation by laying in a triangular method as shown in Figure 3.

### Step 3

Complete all cut modular carpet in the corridor, including door ways. Lay and anchor modular carpet along line C. Fill in the remaining parts.

## Borders

Set out chalk lines at the required distance for the border and/or field colour modular carpet. Ensure all 90 degree angles are correct. Use these chalk lines as wall lines and cut modular carpet up to these lines. Cut border modular carpet in from chalk line to compensate for any irregularities in the wall. Refer to Figure 5.



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## 05 Commencing the Installation

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### Alignment

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As modular carpet is butted against each other, continually check (with fingers) that the joints are properly aligned. Do not install modular carpet that is out of square by more than 1mm.

### Tension

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Ensure an even tension throughout the installation as this is vital to the overall appearance.

Lack of tension and pile entrapment may cause poor performance and will impair the appearance of the finished installation.

Over tension of the installation may cause peaking of the tile.

### Cutting

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FORMOSA modular carpet must be cut from the backing side by overlaying the modular carpet, marking and cutting. A template should be used around columns.

Step 1 Firstly effect a light cut without attempting to cut right through.

Step 2 Then crack the modular carpet along the line cut.

Step 3 Complete by cutting right through the fibres with a straight utility or hook knife.

*NOTE: Modular carpet cut on an angle or a cut edge that is exposed to heavy foot or wheeled traffic may need to be sealed with latex.*

*NOTE : When cutting carpet up to a hard surface finish or edge trim the top of the carpet pile should be level with the top of the hard surface or edge trim. If the carpet pile sits higher than the hard surface or edge trim and is exposed to high levels of traffic this may cause damage to the carpet edge.*





## APPENDICES

# 001 Concrete Subfloor Requirements

## 1 Construction

Concrete subfloor shall be finished off true to grade and in accordance with good building practice and shall be free from rising moisture .

## 2 Surface

### a - Planeness

When a straight edge 3m long is placed on the surface at any position, no part of the surface is more than 5mm above or below the straight edge.

### b - Smoothness

When straight edge 150mm long is placed on the surface position, no part of the surface shall be more than 1 mm below the straight edge.

### c - Finish

New concrete floors shall be steel troweled to a smooth surface but not to a glass finish. They shall be free from score marks, grooves, depressions and scraped free of foreign materials.

## 3 Dryness

Before installation commences, the dryness of subfloor should be determined. For modular carpet the moisture content measured by Hygrometer shall not be greater than 90% RH by In Situ Probe and 80% RH by Sealed Hood with max pH9 for application of Fosatac Pressure Sensitive adhesive.

Moisture testing should be conducted by Hygrometer RH moisture test meters either In Situ Probe or Sealed Hood Hygrometers. FCFC carpet do not recommend measuring substrate moisture content with any method other than Relative Humidity test methods.

*If the moisture content is above the recommended maximum readings  
Stop and do not proceed with the installation.*

*Seek further advice from FCFC carpet before proceeding.*

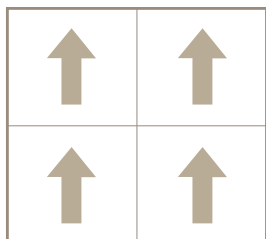
## 4 Cleanliness

Before installation begins, foreign materials such as grease, oil, paint, existing floorcovering and any other harmful materials, should be removed. Any surface treatment or old adhesive that will effect the new adhesive or the holding power of the modular carpet should be treated or removed. The floor shall be vacuumed and washed to ensure a perfect bond.

## 002 Installation Methods

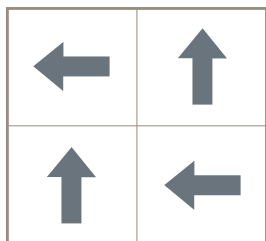
### DIRECTIONAL Installation

An arrow is printed on the back of each modular tile to indicate pile direction. Make sure the arrows point in the same direction throughout your installation.



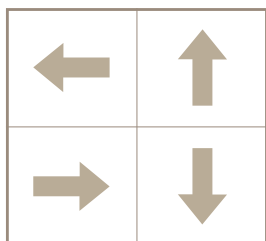
### QUARTER TURN Installation

In this case, the arrows should be turned 90 degrees every other modular tile.



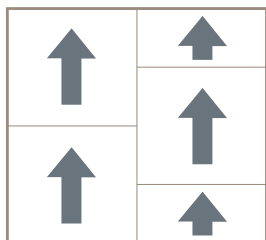
### RANDOM Installation

This pattern allows installation of modular tiles without regard to arrow direction.



### ASHLAR Installation

This pattern is created by offsetting the side joins of the modular tiles. All arrows should point in the same direction.



### BRICK Installation

This pattern is created by offsetting the front and back joins of the modular tiles. All arrows should point in the same direction.

