

# INSTALLATION GUIDE



TECHNICAL GUIDELINES

## CHAPTER #9

Installation of Chevrons

Fully Bonded

# INSTALLATION OF: CHEVRONS - FULLY BONDED

The main method recommended for installing Ted Todd Chevron should be:

Fully-Bonded (Glued down) using Ted Todd MS Flex adhesive.

It is also possible to use Ted Todd Universal Bond, high-grab underlay. See Chapter 10.

Always check with the end-user that the correct product has been delivered and that they are happy with the grade and visual appearance of the floor. Open several packs at a time and mix the pieces to ensure a good selection pieces so the installation is visually well-balanced.

- Agree on the laying pattern and the orientation of the pattern within each room. Normally the longest run of the room is the direction the pattern should be laid, but do consider other factors such as lighting, windows and doors.
- All installations should comply with BS8201.

## 9.1 Site Checks

Before commencing installation ensure the requirements have been met for:

- Jobsite Conditions, Moisture Testing and Acclimatisation (Chapter 1A, 1B and 1C).
- Ambient temperature range of 16 to 24°C.
- Ambient relative humidity of RH of 45 to 65%
- Subfloors, see Chapter 2 for a full check list.



Figure 1: A typical chevron arrangement, bonded down with MX Flex.

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Chevron

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## 9.2 Acceptable Sub Floors

- For Wood based subfloors there should be no more than 12%MC and should be no more than +/- 2% Moisture Content difference to the Wood Flooring.
- Concrete / Screed. For concrete screeds moisture content should not exceed 2% (calcium carbide measure) or RH of 65%. Anhydrite-based screeds with MC of no more than 0.5% (0.3% with UFH).
- Tiles when flat and overlayed with minimum 9mm ply
- Subfloors must be Dry and Flat. See Chapter 2.
- The flatness of subfloors is absolutely critical in obtaining a good installation when installing Chevron flooring. Any unevenness in the subfloor can cause the pattern to run-out across the floor resulting in gaps between the elements.

# 9.3 Installation Guidelines, All Parquet installations.

### 9.3.1 Material check

- Please check that the correct product has been ordered and delivered
- It is important to understand any critical visual elements that are required laying directions, staggering of joints, mixing of tones across a floor for example
- Please always inspect material to decide on how the material needs to be installed to meet the projects objectives, ie if certain elements are best positioned in particular locations
- It is vital that you ensure that the quantity of material you have is sufficient to complete the area you are installing. It is normal in all natural products for there to be some batch-to-batch variation and if you need to order another batch to complete the area please expect some variation.
- Also consider ordering planks or strip flooring to finish off the perimeter of the parquet pattern





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### 9.3.2 Fixing method – only fully bonded

We only recommend fully bonded installation method for our patterns & panels floors

We only recommend Ted Todd MS Flex, this is a high tensile, high bond adhesive designed for high quality installations.

Ms flex should be evenly applied to a timber sub-floor with a 3mm notched trowel and to concrete and screeded floors with a 5mm notched trowel.

Care should be taken to not get the adhesive on the finished face of the floor, as the adhesive is made to adhere and is therefore difficult to remove once dry.

If you do get it on the face, it should either be removed quickly or left to dry.

We do not recommend intermittent lines of adhesive, as this will not give you an adequate bond. Ms flex is a full spread adhesive and will give you an unrivalled bond across the whole floor.

Always open several packs at a time and mix the elements to ensure that the installation is visually well-balanced.

### 9.3.3 Other methods of fixing

We do not recommend floating installation for Chevron as it can be difficult to avoid gaps between elements if the patterns run-out.

However a high-grab adhesive underlay, such as Ted Todd Universal Bond may be used for straightforward Chevron patterns. See chapter 10 for instructions on using Universal Bond high-grab underlay.

#### 9.3.4 Subfloor Priming

It is good practise to prime prepared screeded and concrete floors with Ted Todd Primerfast.

A single coat of Primerfast aids the spread and adhesion of the MS Flex full bond adhesive. However a second coat of Primerfast, for use where there is no underfloor heating, provides a moisture barrier too.

Primerfast dries within an hour and the installation can commence using Ms Flex full bond adhesive.



**PRIMERFAST:** Application with nylon roller, coverage 6kg tub =120-450g/m<sup>2</sup>. Suitable for underfloor heating. Single coat. Fast drying within 45-50min

**MX FLEX ADHESIVE:** 1.45 Kg/Ltr. Coverage 700/1200 g/m<sup>2</sup> depending on the subfloor. free from water, solvents, amines, epoxy resins and isocyanates. Suitable for underfloor heating.



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### 9.3.5 Expansion

Expansion and contraction of patterned floors is more even in direction when compared to Plank floors.

Plank floors move predominantly across the width, but patterned floors which have different elements, or wood pieces, laid with the grain in different orientations move more evenly across the room.

A minimum expansion space of 15mm must be left around all of the perimeter and round all obstructions.



Figure 2: Consider the use of planks to finish the perimeter and always maintain a 15mm gap from any walls or obstructions to allow for natural expansion of the wood.

## 9.3.6 Chevron Pattern Layouts.

A key factor is how the floor is laid out across the space it will be installed in.

The laying direction and the mapping of the pattern within the space is also very important.

The standard approach is for the centre line in the space to be the starting point, with the floor installed down this line and then working out to the perimeter.

But this may not always be the best approach and understanding where the pattern finishes on the perimeters may dictate that it makes more sense to move the layout away from the centre line to achieve a better finish point of the pattern around the perimeters.

Also consider the use of planks or narrow plank flooring to finish the perimeter of the pattern.

Designing layouts in CAD can be time well spent for highly complex installations, especially where borders are incorporated into the floor.







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### Do remember:

- Where possible, expansion gaps must be left though doorways/archways and covered with T-sections to break up large areas of installation. A minimum expansion space of 15mm must be left around the perimeter and all vertical obstructions.
- Remember that the floor must be allowed to expand and contract under the thresholds, skirting and other joint covers.
- Door architraves can be undercut to allow for the floor elements to fit underneath and still permit the expansion and contraction of the floor.
- Consider how the perimeter expansion gaps will be covered after installation. Skirting boards or scotia and other profiled shapes are available for this. They must be installed to allow for movement of the flooring below.
- For installations with Under Floor Heating we recommend the use of the Ted Todd Fidboxes for monitoring the temperature and humidity conditions inside the wood floor. See Chapter 13 for detailed information.

# 9.4 Guidance on how to set out your floor

**Chevron Nuances** 

#### 9.4.1 Overview

The evenness of the subfloor is critical for all Chevron floors.

The end of each Chevron element is produced at an angle to a fish tail type design and these joints all need to line up.

For most Chevron installation the floor is laid out from the centre line. Care should also be taken to consider the starting position in this line as it will determine the finishing point of the Chevron along the length of the room.

Historic style Chevron floors and modern often differ in their objectives with the prior accepting a more open, natural feel. These objectives should be considered at both the specification and installation stage, as some floors lend themselves far better to achieving a seamless outcome than others. This is especially the case with handmade chevrons when compared to machine made.

Installation of Chevron requires a high degree of technical ability and should only be performed by a qualified and experienced professional wood floor installer.

It is not suitable as a DIY project nor suitable for installation by joiners or builders unless they are fully qualified professional wood floor installers.





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Site conditions must be perfect and fully comply with the guidelines in Chapter1A -Site Planning, Chapter 1B – Acclimatisation, Chapter 1C – Moisture measurement, Chapter 2 – Subfloors.

It is very rare for installation problems not to be traced back to an inadequately levelled sub floor, given that they mostly relate to out of line installation.

#### 9.4.2 Accuracy

Please note that in any chevron installation, the normal expansion and contraction of the wood blocks through natural humidity change will be enough to cause small gaps in the installation.

This situation is particularly apparent with any installation of pre-finished chevron wood blocks. Please check with the end client that this is acceptable and that the end-client has seen the appropriate largeformat display panels in a Ted Todd Partner showroom or elsewhere. If the end client requires a chevron installation with a seamless accuracy, then the best results will be obtained by installing unfinished chevron blocks which can be filled and sanded after installation and finished on site.

#### 9.4.3 Chevron Installation considerations.

Please note that the chevron blocks will be either Left-Handed or Right-Handed.

We normally deliver these in opposite pairs in the same pack, or the left and right-handed pieces in the separate packs.

Determine the layout for the floor and the direction the pattern will run. Once the sub-floor preparation is complete, mark the centre lines or angled lines in accordance with section TT website installation guidelines page 22 diagrams 3 and 4



Figure 3: From point A (the centre of the room ) measure 800mm to point B and 600mm to point c, scribing an arc to act as a guide. Figure 4: Measure 800mm from the center up and across. Scribe arcs to create points D and E. Join points D to E to form a  $45^{\circ}$  angle.





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Y Axis

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Precise measurements are essential when laying a chevron pattern. Verify measurements and check row alignment frequently to ensure the pattern is being laid accurately and evenly.

To use as a guide to begin the installation, prepare a perfectly square piece of plywood 500mm x 500mm.

Select your starting area in the middle of the room and affix the plywood guide to the subfloor in a diamond position with the top and bottom points aligned with the centre line. (See Figure 5 below)

Open several packs of the chevron blocks, inspect the boards and loose lay the first section of flooring, both left and right sides. Ensure that the pattern is correct, that the points meet cleanly and that the short lengths make a perfectly straight line following the chalk line



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# 9.4.4 Installation using square section of plywood as a guide

Once you are happy that the installation will be acceptable, fully apply the Ted Todd MS flex adhesive with a notched trowel to the sub-floor and complete the installation of the first line both left and right sides.

Allow this to dry completely (up to 24 hours) and then use this initial column of glued-down chevrons as a start point for the remaining columns, having accurately marked out the centre, left and right chalk lines for each new column of chevrons.

If the short (header) joints are not already T&G profiled, consider using a loose tongue. That will minimise lipping at the points.

Remember to allow for normal expansion joint considerations around the perimeter and any fixed objects.

## 9.5 Summary

- Subfloor preparation must be flat to a high degree
- Fully bonded (glue down) installation
- Layout and planning of the pattern is critical
- Mark out the room to locate the centre and mark out the starting line.

## 9.6 FAQ's

#### Is all of the above really necessary?

The success of a good wood floor installation depends upon many factors. In instances where things go wrong, the problems will almost certainly be traceable back to failure to correctly follow some of the guidelines listed above. Even in apparently simple installation projects all of the above points must be checked to ensure compliance.

#### Why must the subfloor be so flat?

Any deviation in the subfloor will very quicky throw out the pattern leaving uneven joints and gaps. This is especially true with a chevron pattern where any inconsistencies will show up at the sharp points of the pattern.

#### Are all chevron patterns at 45 degrees?

There are some Chevrons with a 30-degree angle in the Ted Todd and Woodworks ranges.





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