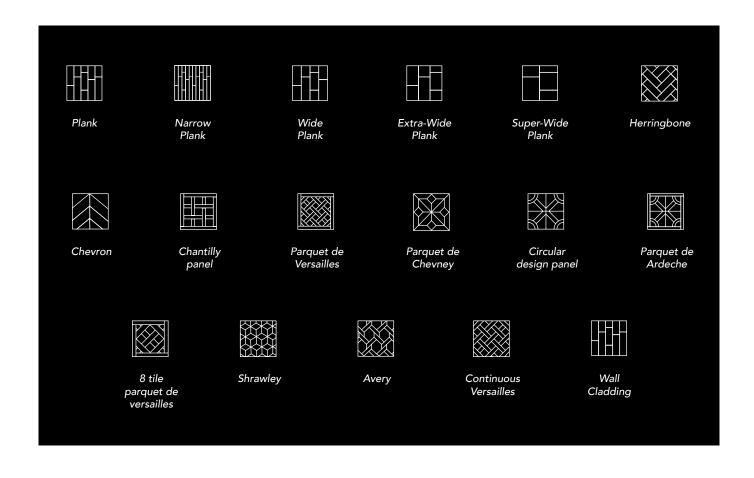


INSTALLATION GUIDE



TECHNICAL GUIDELINES

CHAPTER #7

Installation of Herringbone

Fully Bonded

INSTALLATION OF: HERRINGBONE - FULLY BONDED

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

Fully-Bonded (Glued down) using Ted Todd MS Flex adhesive. 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. After acclimatizing, 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.
- Please note that in any patterned installation, the normal expansion and contraction of the wood blocks through natural humidity change will be enough to cause small gaps in the installation. Please check with the end client that this is acceptable and that the end-client has seen the appropriate large-format display panels in a Ted Todd Partner showroom or elsewhere.
- If the end client requires an installation with a seamless accuracy, then the best results will be obtained by installing unfinished wood elements which can be filled and sanded after installation and finished on site.



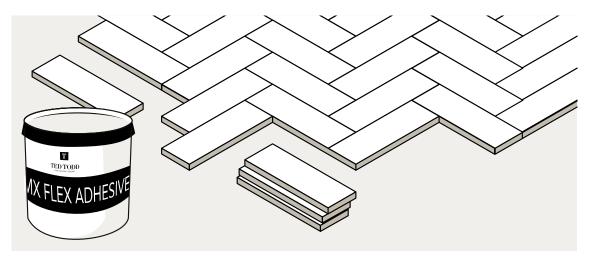


Figure 1: A typical herringbone arrangement, bonded down with MX Flex.

TECHNICAL GUIDELINES

CHAPTER #7

Installation of Herringbone

Fully Bonded

INSTALLATION OF: HERRINGBONE - FULLY BONDED

7.1 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.

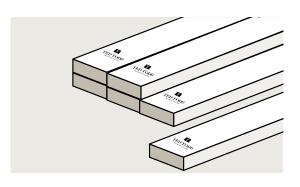
7.2 Acceptable Sub Floors

- 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 parquet flooring. Any unevenness in the subfloor can cause the pattern to run-out across the floor resulting in gaps between the elements.

7.3 Installation Guidelines, All Parquet installations.

7.3.1 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





TECHNICAL GUIDELINES

CHAPTER #7

Installation of Herringbone

Fully Bonded

INSTALLATION OF: HERRINGBONE - FULLY BONDED

7.3.2 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.



MX FLEX ADHESIVE: 1.45 Kg/Ltr. Coverage 700/1200 g/m² depending on the subfloor. Free from water, solvents, amines, epoxy resins and isocyanates. Suitable for underfloor heating.

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.

7.3.3 Other methods of fixing

We do not recommend floating installation for Herringbone 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 Herringbone patterns. See Chapter 8 for instructions on using Universal Bond high-grab underlay.

7.3.4 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/m². Suitable for underfloor heating. Single coat. Fast drying within 45-50min







TECHNICAL GUIDELINES

CHAPTER #7

Installation of Herringbone

Fully Bonded

INSTALLATION OF: HERRINGBONE - FULLY BONDED

7.3.5 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.

7.3.6 Herringbone 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.



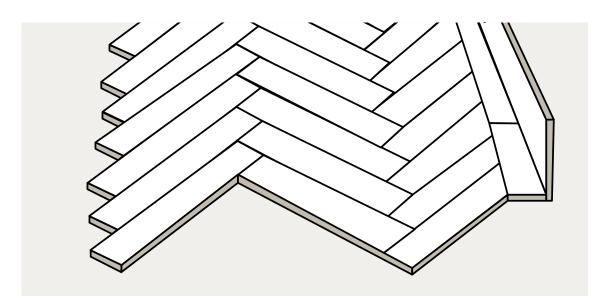


Figure 2: consider the use of planks or narrow plank flooring to finish the perimeter of the pattern

TECHNICAL GUIDELINES

CHAPTER #7

Installation of Herringbone

Fully Bonded

INSTALLATION OF: HERRINGBONE - FULLY BONDED

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.

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.



TECHNICAL GUIDELINES

CHAPTER #7

Installation of Herringbone

Fully Bonded

INSTALLATION OF: HERRINGBONE - FULLY BONDED

7.4 Guidance on how to set out your floor.

7.4.1 How to achieve a square layout from the Centre of the Room

Start by snapping a chalk line through the centre of the room (line Y).

The next line (X) must be exactly 90 degrees to line Y to form a perfect square corner. See figure 3 below.

To ensure this angle, do the following:

- From the centre point (A) of line Y, measure 800mm along line Y and mark that point (B); From the same centre point, measure 600mm in the general direction of where line X will be and scribe an arc.
- Return to the original 800mm mark on line Y and measure 1000mm, scribing an arc that crosses (point C) the 600mm arc you made in the previous step (double check for accuracy by following a similar measurement and arc-scribing process on the other side of line Y and the opposite side from the expected position of line X)
- Snap a chalk line through the conjunction of the two arcs at point C and the centre point of line Y. This will be line X, at an exact 90-degree angle to line Y.



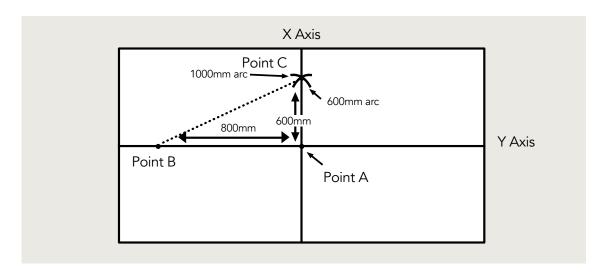


Figure 3: How to achieve a square layout from the Centre of the Room

TECHNICAL GUIDELINES

CHAPTER #7

Installation of Herringbone

Fully Bonded

INSTALLATION OF: HERRINGBONE - FULLY BONDED

7.4.2 How to achieve a diagonal Layout from the Centre of the Room

From the centre point, measure 800mm down in each direction on lines X and Y, which you have already determined by the method described above.

From each of these points, measure 800mm and scribe an arc. The conjunction of these arcs creates points D and E. Snap a chalk line between points D and E, and the centre point. This line represents a 45 degree angle. See figure 4 below.

Y Axis Point D Point E

Figure 4: How to achieve a diagonal layout from the Centre of the Room

7.4.3 Installation of Herringbone Using Square or Diagonal Layout

Use reference lines throughout the area that is being installed as shown in figure 5

For basket weave and similar patterns the multiple of the width should equal the exact length of the piece. If the width of the product varies, this will cause separations at the end of the herringbone pieces. Herringbone parquet can be laid out parallel or at a 45-degree angle to the room. Regardless of direction, Herringbone parquet will require a centreline and two working lines (See Figure 5). Begin by laying out a few alternating slats. Snap lines A & B through the corners of the alternating slats (See Figure 5) Measure the distance from Line A to Line B. Line C should be ½ that distance and run parallel to Lines A & B. The centreline of the room and the centre of the pattern is represented by Line C.

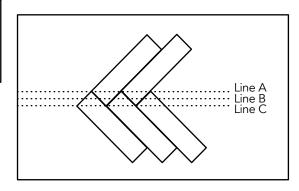


Figure 5: Installation of Herringbone using square or diagonal layout



TECHNICAL GUIDELINES

CHAPTER #7

Installation of Herringbone

Fully Bonded

INSTALLATION OF: HERRINGBONE - FULLY BONDED

7.4.4 Alternative Herringbone Installation Using Square or Diagonal Layout

To begin installation on working Line B (See Figure 6), cut a square piece of plywood the size of the herringbone pattern. For example, if the herringbone pattern is 70mm by 230mm, cut a 230mm x 230mm square of plywood.

Fasten the piece of plywood at your starting point on Line B, with one corner of the square pointing in the direction of the pattern.

7.4.5 Square Layout from the Wall (See Figure 7)

Panels or basket weave parquet can be laid wall to wall without Centring the product in the room. The results will not be balanced but the products have no edge treatment to delineate the difference in sizes when unbalanced. More intricate patterns generally require the flooring to be centred.



Double Herringbone

Basketweave

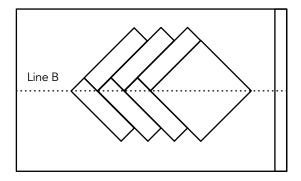


Figure 6: How to achieve a diagonal layout from the Centre of the Room

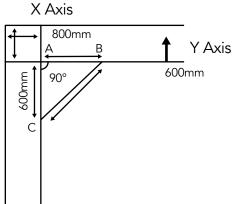


Figure 7: Square Layout from the Wall

TECHNICAL GUIDELINES

CHAPTER #7

Installation of Herringbone

Fully Bonded

INSTALLATION OF: HERRINGBONE - FULLY BONDED

If the room dimensions allow, in at least two places from the corner, measure out and establish a chalk line parallel to and the width of 2 panels plus 15mm away from the starting wall opposite the entrance doorway.

Start by snapping a chalk line and the width of 2 panels plus 13mm from the starting wall, opposite the entrance doorway (Line Y). The next line (X) must be exactly 90° to Line Y to form a perfect square corner. To ensure this angle:

Measure and the width of 2 panels plus 13mm along Line Y from the right-angle wall and mark it Point A. From Point A, measure 800mm along Line Y and mark that Point B. From Point A, measure 600mm in the general direction of where line X will be and scribe an arc.

From Point B measure 1000mm, scribing an arc that crosses Point C. Verify all measurements before proceeding.

If correct, snap a chalk line through Point A and the conjunction of the two arcs at point C. This will be Line X, at an exact 90° angle to Line Y

Make any necessary adjustments to allow for walls out of square before proceeding.



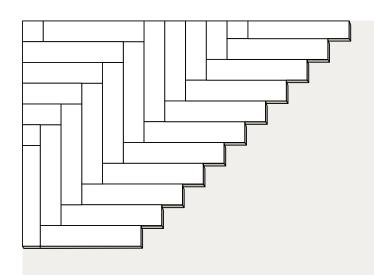


Figure 8: Square Layout from the Wall

TECHNICAL GUIDELINES

CHAPTER #7

Installation of Herringbone

Fully Bonded

INSTALLATION OF: HERRINGBONE - FULLY BONDED

7.4.6 Installation Using Wall Layout

For patterns such as basket weave, the pattern can run out if installed wall to wall without checking for fitting tolerances.

To avoid this, it is recommend fitting the blocks in a 5×5 pyramid pattern which will allow you to keep a constant check to ensure the pattern is not running out.

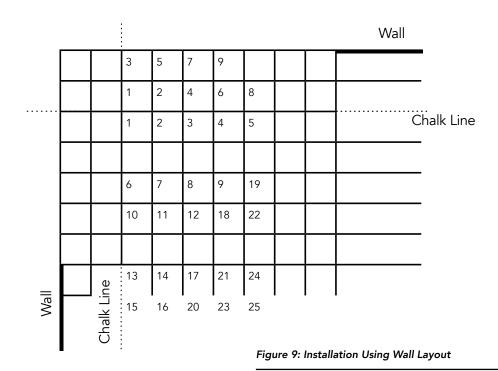
After setting out as described above build the pattern as shown. Once the pattern has been completed continue repeating this pattern across the floor. The border can be completed along with the main area or left for completion after the main area has cured, when completing this area use a staggered pattern as shown.

After both chalk lines (at 90 degrees to each other) have been snapped, start spreading the Ted Todd MS Flex adhesive in the area to be Installed.

Continue spreading the adhesive in the working area. Be careful not to spread adhesive beyond the chalk line.

Immediately lay the product on the newly spread adhesive.





TECHNICAL GUIDELINES

CHAPTER #7

Installation of Herringbone

Fully Bonded

INSTALLATION OF: HERRINGBONE - FULLY BONDED

7.5 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.

7.6 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.

In any wood floor installation there will always be small tolerances at the edges of the T&G's (known as Lipping). Any lipping in a pre-finished floor is usually not noticed because of the rounded edges or bevels. In an unfinished block installation, the edges between the blocks may be square and after installation the complete surface will be sanded before a final surface finish is applied. This means that the edges between the block elements will be perfectly smooth.

