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## **SECTION 1:**

### **INSTALLERS RESPONSIBILITY**

It is the installers responsibility to carry out the final inspection of the floor to ensure the colour, grade, quality, manufacture and factory finish of the product is acceptable. Additionally, the inspection of all flooring must be done before installation. Carefully examine the flooring for colour, finish and quality before installing it. The installer must use reasonable selectivity and hold out or cut off pieces with deficiencies, whatever the cause. If the product is deemed not acceptable for any reason, do not install it and contact your supplier immediately. The product must be checked with the end user to ensure the correct product has been supplied. Once a product has been laid, and later discovered to be incorrect, or any boards deemed to be defective, no financial assistance can be given, nor can the product be returned.

#### **IMPORTANT!**

To keep the wood in excellent condition it is imperative that the humidity level be controlled at all times, from delivery to laying the floor, and during the years that follow installation. The optimal humidity range for hardwood flooring is 45–65%; temperature should be maintained at about 18°C.

Flooring should never be stored outdoors, on a cement floor, in a garage or in any damp conditions. Care should be taken to store the wood flat; packs should never be lent against a wall. Pre-finished solid boards and all engineered boards should be left in the packaging in the room where it is to be laid until you are ready to lay the floor (at least overnight). Unfinished solid flooring packs should be open and the boards spread around the room in which they are to be laid for at least 5 days. In a new constructed building, the heating must have been in operation for at least 10 days, prior to the minimum 5 day acclimatisation period required for solid unfinished flooring. For pre-finished solid flooring and all engineered, this can be laid after the 10 day period mentioned. Upon delivery, check wood flooring moisture content with a moisture meter to establish a baseline for required acclimatisation. All flooring contractors should possess a moisture meter

A waste factor of 5-10% should be taken into account. The expansion required for any hardwood flooring installation will vary depending on the type of flooring (solid or multi-layer), timber species and the size of the room. As a general rule we recommend at least 10-15mm expansion gap for Engineered floors and 15-18mm for solid floors around the perimeter of the room, at doorways and any other vertical surfaces. These expansion gaps can be covered by mouldings which can be purchased from Atkinson & Kirby.

- Perimeter of the room:

If the skirting board has not been removed, the expansion gap can be covered using a Scotia.

- Doorways:

At doorways the floor should be broken with an expansion gap. The expansion gap should be covered with a Twin or Ramp moulding this will allow individual rooms to expand and contract within their own areas. Which moulding to use is determined by the floor covering on the other side of the doorway. If floors are equal in height a Twin should be used, if floors have differing heights a ramp should be used.

- Pipes, vents and other fixed objects:

Each can be unique, but the general rule is to measure very carefully before you cut and remember to leave a 12-18mm expansion gap between the object and the flooring. Cover the expansion gap with mouldings, vent covers or pipe rings when the floor is complete.

- Installations on stairs

Flooring on stairs must be fully nailed to the stairs. Stair Nosing mouldings should be installed using either screw type fasteners or nails.

- Contact with heat

In areas where the flooring comes into contact with a fireplace, stove, heating system or un-insulated hot air vents a layer of asphalt or wax paper should be laid first. This will prevent excess drying out of the wood flooring. Please also remember to leave the appropriate expansion gap.

#### **FOR EASE OF INSTALLATION SOME OR ALL OF THE FOLLOWING TOOLS ARE REQUIRED:**

Saw, Gripfill PVA Glue, Hammer (500g minimum), Tape Measure, Pencil, Professional Knocking Block, Professional Pull Bar, Drill, Wedges and a "T" square.

## PRE INSTALLATION

The choice of installation method depends on the specific circumstances and the requirements of the final floor. Before selecting an installation method the floor must be assessed for the following criteria:

Is the subfloor wet?

Moisture tests should be carried out on all ground floor installations and all new build upper floors levels where a screed has been used. The British standard method is to use a surface hygrometer; Moisture readings above 65% relative humidity (RH) indicate a damp floor. If this is the case a damp proof membrane (DPM) should be used.

If in doubt about the presence of moisture use a suitable DPM. (Please refer to DPM Manufacturer's instructions for more details).

Is the subfloor smooth?

If the subfloor is not smooth enough to accommodate the wood flooring, apply a smoothing compound to level out the floor.

Is the substrate a sound strong material?

If not screeding of the floor will have to be carried out.

Is there a requirement for improved acoustics?

If so, use an adhesive that offers improved acoustic properties.

**NOT SUITABLE FOR:**

Asphalt subfloors.

Underfloor heating (Solid Flooring).

Before beginning the actual installation, spread out short and long lengths equally over the area where the floor is to be installed.

Work out of several packs at a time to ensure an even colour and shade distribution over the whole floor.

## **SECTION 2:**

### **GLUE DOWN INSTALLATION (SOLID & ENGINEERED FLOORING)**

#### **ESTABLISH A STARTING POINT**

Align the first row of planks to be sure that you have a good straight line from one side of the room to the other.

Put a chalk line at the desired distance from the wall to help align the planks. The end joints of the flooring should be staggered (minimum of 150mm) to achieve the best appearance in the finished floor. Important: Align the first piece on the chalk line. The groove side and end will be facing the starting wall.

Work out of several packs at a time to ensure an even colour and shade distribution over the whole floor.

#### **ENGINEERED FLOORING FULL STICK DOWN – USING A RIGID ADHESIVE (L16)**

For use on sound strong subfloors which are permeable.

Apply the adhesive using a V notched trowel with a minimum notch depth of 4.75mm and width 3mm.

Flooring must be adjusted with a block and mallet immediately after laying.

#### **SOLID & ENGINEERED FLOORING FULL STICK DOWN – USING A FLEXIBLE ADHESIVE (L19)**

For use on virtually all subfloors. Apply the adhesive using a V notched trowel with a minimum notch depth of 6mm and width 3mm. Wood should be laid within 40 minutes of the adhesive being applied. Flooring must be adjusted with a block and mallet immediately after laying. Use Laybond MS Wood Bond (L19) for installations of Engineered flooring over underfloor heating (see separate guidelines).

#### **SOLID STRIP & ENGINEERED FLOORING**

**BATTEN BONDING STICK DOWN – USING FLEXIBLE ADHESIVE** i.e. Sika At Universal Sausages

(This installation method is not suitable for use with underfloor heating)

The adhesive should be applied by cartridge or sausage using a nozzle cut to ensure a 10mm high by 8mm wide cordon. Beads should be laid at 100-250mm intervals (depending on the width of the board).

Wood should be laid within 30 minutes of applying the adhesive.

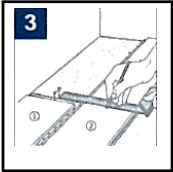
### **SECTION 3: FLOATING (ENGINEERED, T&G FLOORING)**



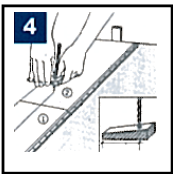
Ensure that the subfloor is sound, level and free of debris. Cover the area with an appropriate underlay as recommended by Atkinson & Kirby. If fitting over existing floorboards ensure that they are fixed solidly, this will avoid creaking.



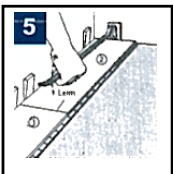
Lay out the first board ensuring the groove is towards the wall. Place a wedge between the end of the boards and the wall, this will ensure that you have an expansion gap (minimum 12mm). Complete the first line of the boards, do not glue the boards at this stage.



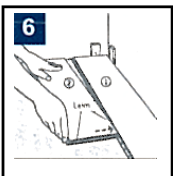
Turn over the last board of the first row, its tongue facing the tongue of the preceding board. Mark the cutting line on the back of the board and cut to length. Fit the board without glue.



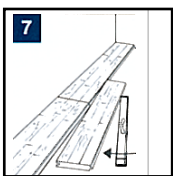
It is important that the boards follow the line of the wall. If the wall is not square, make a line parallel to the wall and cut the board accordingly.



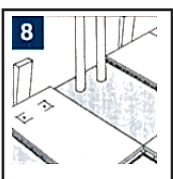
Lay out the boards along the wall (groove facing the wall) and insert wedges between the boards and the wall. P.V.A. adhesive should be put into the groove on the header joints (end of the board). The final board will need to be fitted using a pull bar; this should be fitted over the end of the board and then tapped into place.



Providing the off cut from the first row is at least 300mm in length, this should now be used to start the second row. Care should be taken that the header joints are staggered across the floor.



A continuous bead of P.V.A. adhesive should be placed on the upper edge of the groove on the board; the header joint should also be glued. Join the boards by placing the tongue into the groove of the previous board; ensuring that the header joint is closed, they should now be knocked home with the use of a (600mm) knocking block. The knocking block should be used on the tongue in a flicking action. Hold one end of the block against the board, the other should be at an angle of approximately 45° away from the board. Flick the block against the tongue with a sharp action, this will knock the board up; continue down the full length of the board, if necessary tap the board home using a hammer on the knocking block. Continue across the floor making sure to clean any P.V.A. adhesive off the face of the floor with a damp cloth.



Wherever there is a central heating pipe or anything else protruding from the floor, place a board into the next row, take exact measurements and mark the sections to be cut on the back of the board.



Drill or cut out the area needed, remembering to leave an expansion gap.



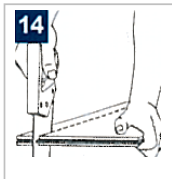
Cut the board at an angle of 45°.



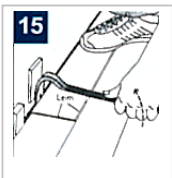
Apply P.V.A. adhesive to the edges of the cut board and fit into place. Care should be taken to leave an expansion gap between the board and the wall.



Door frames and other wooden elements should be sawn off to allow the board to slide underneath.



To calculate the exact width of the last board, lay the board over the last but one line of boards (tongue facing the wall). Place another board face down over the board to be cut, remembering to leave the expansion gap, mark the board to be cut.



Place the last line in place and knock up using a professional pull bar.

## **SECTION 4:**

### **SECRET NAILING (SOLID & ENGINEERED FLOORING)**

#### **ESTABLISH A STARTING POINT**

Before beginning the actual installation, spread out short and long lengths equally over the area where the floor is to be installed. Remember: Flooring is to be installed at right angles to the floorboards and if possible in the longest dimension of the room. Work out of several packs at a time to ensure an even colour and shade distribution over the whole floor.

Align the first row of planks to be sure that you have a good straight line from one side of the room to the other. Put a chalk line at the desired distance from the wall to help align the planks. The end joints of the flooring should be staggered (minimum of 150mm) to achieve the best appearance in the finished floor.

Important: With large areas it is advisable to use 2mm thick spacers between strips at 1m intervals.

#### **INSTALLING THE FLOOR**

Align the first piece on the chalk line. The groove side and end will be facing the starting wall. Pre-Drill holes and drive 7D or 8D finish nails or screw type flooring nails into the face of the board every 200-250mm approximately 10-15mm (engineered flooring) 15-18mm (solid flooring) from the edge closest to the starting wall and within 50-75mm from the ends and in the darker grain of the wood.

Edge nail the plank by driving the same type nails at a 45° angle through the tongue of the first piece, spacing the nails every 200-250mm and within 50-75mm from the ends. This process should be repeated for each piece in the entire first row. Upon completion of the first row, go back and sink the face nails with a nail punch. If it appears that the holes will not be covered by the wall base or quarter round trim, fill the holes with hardwood flooring putty, which blends with your floor.

Begin installing the second row by repeating the edge nailing.

(Do not face nail as in the first row).

Note: Typically the first few rows must be edge nailed by hand rather than with a nailing machine, due to vertical wall obstruction. When clearance allows, an edge nailing machine, which drives 50mm fasteners with an appropriate mallet, can be used to simplify and speed up the nailing process.

Install each succeeding row of planks by edge nailing and tongue side every 200-250mm to within 50–75mm from the board ends. Be attentive to staggering the ends of the boards at least 150mm in adjacent rows to avoid the clustering of end joints. Any short boards should be locked in either side by longer boards ensuring that at least one end is nailed to the joist.

Upon reaching the last row to be installed, the planks should be ripped to allow a 10-15mm (engineered flooring) 15-18mm (solid flooring) expansion space. The last row must be fastened by face nailing approximately 12–18mm from the back edge of the board every 200-250mm. The same process of counter sinking the face nails and applying hardwood putty should be repeated.

## **SECTION 5:**

### **CLICK (UNILIN PROFILE)**

IF THERE IS UNDERFLOOR HEATING PRESENT PLEASE REFER TO THE UNDERFLOOR HEATING GUIDELINES PRIOR TO LAYING.

Begin in one corner and work from left to right with the tongue sides of the boards towards the wall. The gap between the long side and the wall can be adjusted later when three rows have been laid. Remember that it is often simpler to start the row of boards at the door.

1. Place the first row of boards in position, and knock together by tapping the headers with a knocking block
2. Cut the last board of the first row to the correct length and begin the next row with the left over piece. The end joints between boards must be staggered by a minimum of 500mm (Min 300mm for 1.2m boards).
3. Press the floorboard in at an angle against the board in front. Using a knocking block, lightly tap the board while pressing it down.
4. Press the end of the next board into position at an angle.
5. Using a knocking block, tap on the long side while carefully pressing the board down. This will locate it more easily.
6. Using a knocking block, tap the header joint up to the adjacent board.
7. The gap between the floor and the walls can be adjusted when three rows have been laid. Place wedges between the floor and the wall.
8. The first row sometimes requires adjustments to suit a wall that is not true. Draw the contours of the wall on the floorboards then detach the boards in the first row by gripping the long side and pulling upwards while tapping gently against the joint. Saw along the line you draw.
9. Then replace the sawn floorboards from left to right. Press the board in at an angle on the long side as described in points 5-7. Place wedges between the floor and the wall.
10. Mark holes in the boards for radiator pipes. The diameter of the holes must be at least 10mm bigger than the pipe. Cut out accordingly. When fitting the boards, glue and cut out in position and cover the holes with pipe collars.
11. If you need to trim an architrave use a floorboard as a guide to get the correct height. If you need to tap the boards lengthways use an end off cut to protect the joint.
12. The last row of boards must be cut to the correct width. Rest the last board on top of the last but one row of boards, offset towards the wall by about 5mm. Mark where the saw cut should be. Lay the cut board. Do the same with the next one. Fit the skirting boards without trapping the floor.
13. If necessary you can lay the boards from any direction. Contract Click is also easy to take up; this helps when laying at doors.
14. Proceed as follows if it is not possible to angle a board in under the architrave or low radiator. Cut away 2/3 of the locking edge, glue and push the board into position

## CLICK (5G PROFILE)

The guidelines below can be used for installation of wood flooring with a 2G + 5Gc locking system.

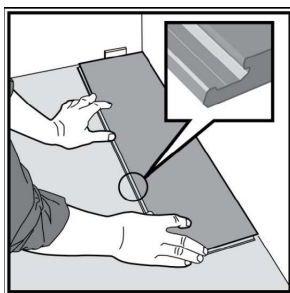


Fig 1. First Row  
Leave a 10mm expansion gap and begin in one corner working from left to right with the tongue sides of the board towards the wall.

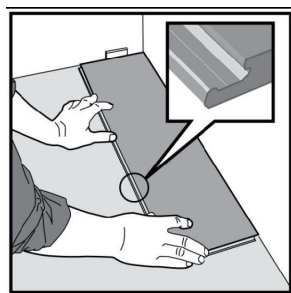


Fig 2.  
Place the second floorboard at an angle at the end of the first row.

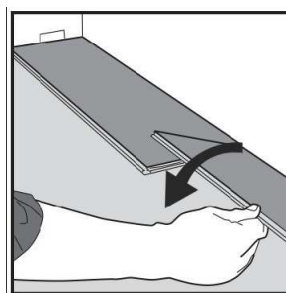


Fig 3.  
Fold the panel down in a single movement, making sure the panels are tight against each other. Afterwards press or slightly knock at the end you have just installed.

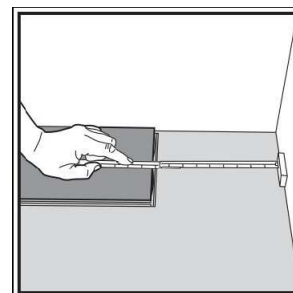


Fig 4.  
Put a 10mm expansion gap at the wall and measure the distance needed for the last plank.

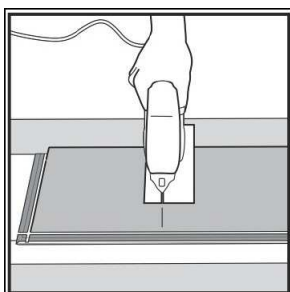


Fig 5.  
Cut down to the required size with a jigsaw or a hand saw.

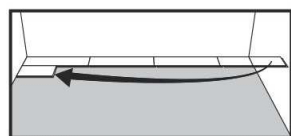


Fig 6.  
Begin the second row with the piece left over from the previous cut.

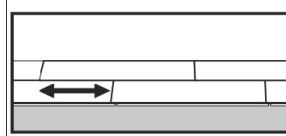


Fig 7.  
Ensure header joints are no less than 400mm apart.

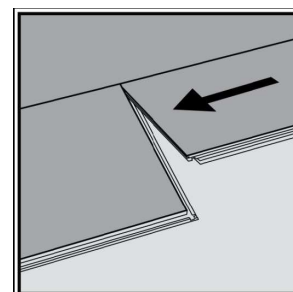


Fig 8a.  
Place the second floorboard at an angle at the end of the first row.

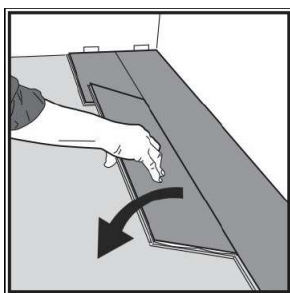


Fig 8b.  
Fold the panel down in a single movement, making sure the panels are tight against each other. Afterwards press or slightly knock at the end you have just installed.

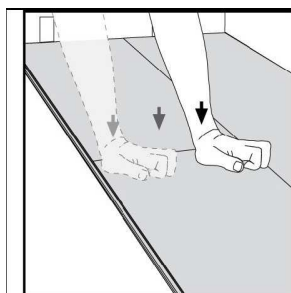


Fig 8c.  
Press or knock slightly along the short end of the installed panel.

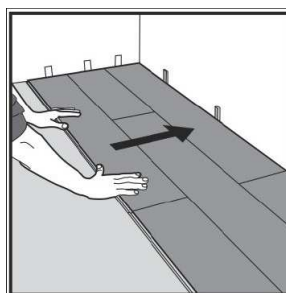


Fig 9.  
After 2 to 3 rows adjust the distances to the front or back wall by 10mm.

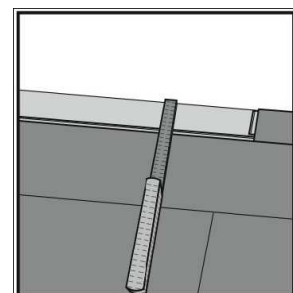


Fig 10.  
When it comes to the last row leave a 10mm expansion gap and make sure the pieces installed are of a minimum width of 50mm.

**Disassembling (without a tool)** your floor can easily be disassembled, which enables a quicker replacement during installation.

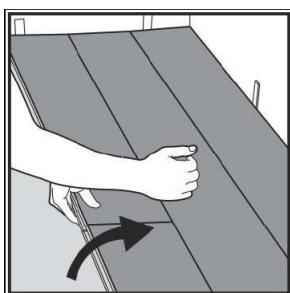


Fig 13.  
Separate the whole row by carefully lifting it up and gently knocking just above the joint. Lift up and release the whole long side.



Fig 14.  
Disassemble the panels by sliding horizontally. (Do not lift up.)

## **SECTION 6:**

### **INSTALLATION OVER UNDERFLOOR HEATING**

#### Hot Water Pipe Systems Engineered Hardwood Flooring Only

#### GENERAL GUIDANCE

The maximum temperature at the point of contact (where the heating meets the underside of the hardwood floor) is 27°C. In order to ensure that this is adhered to, we recommend the use of an underfloor heating system that is controlled by a floor sensors - a probe and allows for a gradual increase of the temperature. UFH must be properly commissioned with correct heat up and heat down carried out this should be a written document confirming this has been carried out. Further information regarding UFH heat up is contained within BS8201.

Please refer to Underfloor Heating Manufacturer's instructions for more details.

## **SECTION 7:**

### **BLOCK INSTALLATION**

IF THE BASKET PATTERN IS REQUIRED, IT WILL BE NECESSARY TO SPECIFY SPECIAL SIZED BLOCKS.

Draw a line down the centre of the room. This line is known as the crown line.

Lay the first line of blocks down the crown line with the tongue facing inwards. For herringbone pattern, the apex of the joints should fall down the crown line.

Continue to lay the floor outwards from the crown line until a space remains around the perimeter of the floor, sufficient for a border of two blocks wide plus a provision for an expansion gap.

Without adhesive, lay the last two lines of blocks, fringing the border area and mark and cut these blocks using a suitable template the width of two blocks plus a 10-15mm (engineered flooring) 15-18mm (solid flooring) for expansion gap.

Cut blocks and finally the border blocks are then stuck down.

Finally, sand and seal the floor, using a suitable seal for the traffic conditions of the floor.

Advice given is for general guidance only. It is the responsibility of the floor layer to ensure that site conditions are suitable for hardwood flooring. If specific advice is required, please contact Atkinson & Kirby.

Hardwood Block Flooring is a very accurately machined product, allowing a floor to be laid interlocked with tongues and grooves in a range of timbers. The finished floor provides a natural resilient, hardwearing and easily renovated floor under almost all traffic conditions, including industrial wheeled traffic.

The plan of the finished floor is decided, and then the blocks are built into the design pattern, e.g. Herringbone, Brick, or Basket.

Blocks of different species can be mixed to give a more decorative floor.

We recommend the use of Laybond Wood Bond Adhesive (L16) adhesive for bonding the blocks to a suitably prepared sub floor. Do not apply more adhesive than can be worked in 10 minutes.



## **SECTION 8:**

### **POST INSTALLATION**

Heating systems may have to be utilised throughout the year to maintain the correct humidity level. The installation of a humidifier or an air exchange system can prove indispensable in controlling humidity.

Above all don't forget that wood is a natural, living material and that we must look after it for life. A proper maintenance program should always be carried out. Barrier matting should be placed at all exterior doorways.

Remember that pets claws, stiletto heels, and dirt/grit left on the floor can scratch wood; regular maintenance should be carried out to prevent this.

## **SECTION 9**

### **GENERAL MAINTENANCE**

As with all Hardwood Floors maintenance is the key to lifelong service and beauty.

By following these simple maintenance guidelines you will maintain the natural beauty of the floor and it will remain attractive and give many years of use. You should always remember, wood is a natural product; its looks will improve as the floor matures.

#### **Important Do's and Don'ts**

<b>Do</b>	<b>Don't</b>
Clean the floor regularly.	Allow liquid to stand on the floor, this can cause the wood to expand.
Wipe up any spilt liquids immediately (wood will absorb liquids and expand).	Use a wet mop to clean the floor. Always use a damp mop.
Use protective pads under all furniture legs.	Use abrasive cleaners, these will damage the seal.
Use barrier mats at all external doors.	Allow sharp or abrasive objects to come into contact with the floor.
Protect your floor from grit.	
Keep the ambient temperature to 18-20°C.	

#### **Routine Maintenance**

Dirt and grit can cause damage to all Wooden Floors. Make sure that a sturdy doormat is in place both inside and outside all exterior access doorways.

Always protect the floor by using felt pads on furniture legs.

Sharp objects such as pets claws and stiletto heels can cause damage to your floor.

We recommend Bona and Woca products for periodic cleaning of the floor.

Please refer to the Manufacturer's instructions when using any cleaning products.

**A FULL RANGE OF ACCESSORIES AND MAINTENANCE PRODUCTS IS AVAILABLE  
FROM ATKINSON & KIRBY  
[www.akirby.co.uk](http://www.akirby.co.uk)**



# Flooring Installation & Maintenance Guidelines

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