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Information you will need
for a perfect result every time!

A guide to the installation of Junckers 20.5mm, 22mm and 14mm clip system floors

22mm and 20.5mm - sports, commercial and domestic
14mm - domestic, light-duty commercial

Please follow these simple instructions

We are concerned that your floor is a success and provides you with many years of trouble free service. Wood is a natural material and is, therefore, subject to infinite variations in colour, texture, knots and grain patterns.

Natural timber also contains characteristics which are not found in man-made materials such as surface splits, shakes etc., and sometimes filling is necessary. These are accepted as being normal features of many of our products and are not detrimental to the performance of the floor.

Wood is a hygroscopic material. Changes in humidity will cause natural expansion and contraction of the floor. Small gaps may occur.

Details given in this brochure are also shown in the Junckers T I system available in CD Rom version or on the Junckers internet site at www.junckers.com

Also see information sheets, Ref: C2.1.1, C5.1.1 and C3.1.1

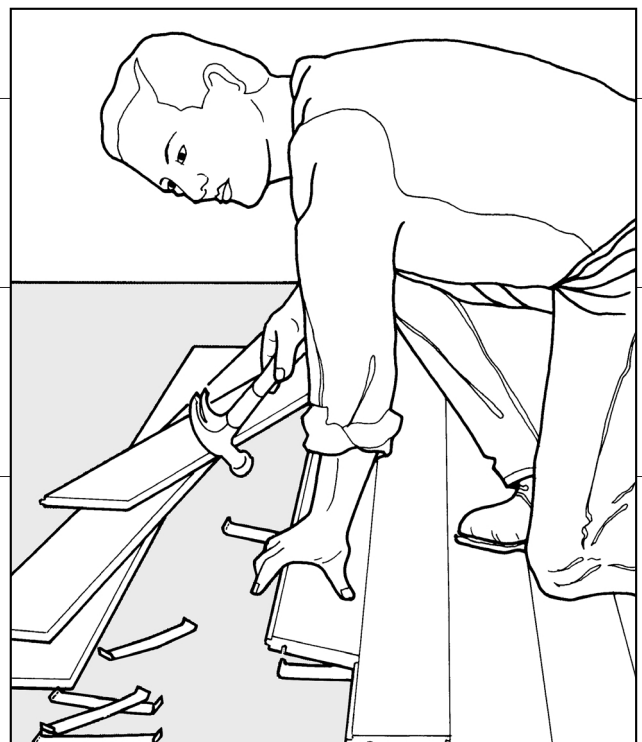
STAGE 1

BEFORE, DURING AND AFTER INSTALLATION – A dry environment

In the area where the floor is to be stored and laid, conditions must be the same as expected when the area will be in use. The room must be weathertight, heating system in operation and wet trades (eg. plaster and cement) must be fully dry. Any damp problems must be remedied first.

The relative humidity of the air should remain between 35% – 65% RH. Heating and/or ventilation may be necessary to maintain conditions. This is especially important in newly built or renovated properties, or those which may remain unoccupied for some time after the floor is laid.

The floor should be delivered as near as possible to the time when it is to be laid. The polythene wrapping is left intact during storage and the flooring must not be allowed to “acclimatise”. The polythene wrapping is not waterproof and must not be considered to be protection against damp. Packs can be opened for inspection upon delivery, but should be resealed until the time of fixing.



STAGE 2

SUB-FLOORS –

General notes and preparation

Junckers Clip System Floors can be laid upon most types of dry, level sub-floor, including sand and cement screed, and timber such as floor boards, chipboard etc.

1 SAND AND CEMENT SCREEDS

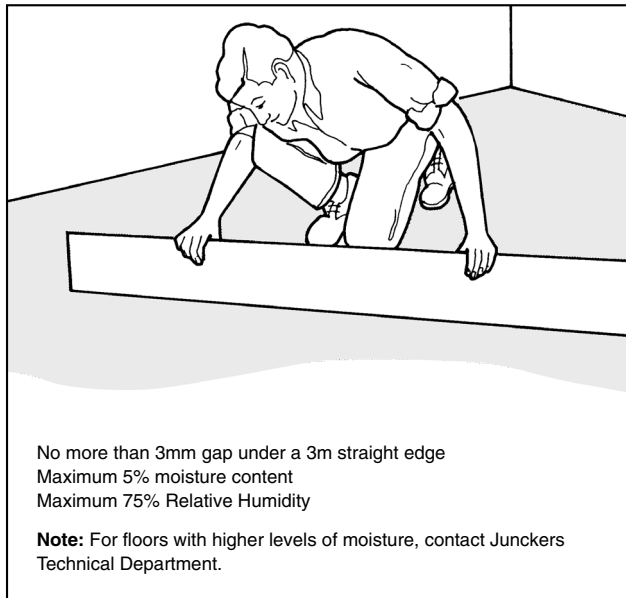


Figure 1

These must be flat and fully dry. This means the moisture content must be maximum 5% or 75% Relative Humidity. (Fig. 1). On ground and all cementitious floors, a surface moisture barrier of Junckers SylvaThene polythene, Sisalkraft Moistop 728 or PolyLay must be laid with the joints well lapped and taped, and turned up at the walls. The screed must be levelled to a tolerance of no more than a 3mm gap showing under a 3m straight edge. A self-levelling compound may help to achieve this tolerance if the base is found to be uneven. (Fig. 1).

2 TIMBER SUB-FLOORS

These may be floor boards, chipboard, ply or similar. Ensure the floor has adequate protection against damp from below. If the floor is on joists, ensure the void below is ventilated to building regulation standards. Air-bricks must not be blocked.

The moisture content of the timber base must be 12%–14%. It must be soundly fixed and flat. The base must be levelled to no more than a 3mm gap showing beneath a 3m straight edge. If the base is unlevel, it is sometimes possible to achieve a flat surface by sanding or securely nailing down plywood of sufficient thickness.

3 MIXED SUB-FLOORS

Junckers Clip System floors can be laid onto a base made from more than one material eg. part screed, part timber.

Clip System Floors may be laid onto polystyrene insulation, with a moisture membrane underneath. No additional underlay should be necessary.

Polystyrene must be tongue and groove jointed and have a minimum density of 20kg/m³ for 22mm and 20.5mm floors, and 40kg/m³ for 14mm floors.

STAGE 3

CHOOSING UNDERLAYS

The range of underlays is as follows:

For 22mm, 20.5mm and 14mm floors

PolyLay An **underlay and moisture barrier**. 1.5mm thick for use in domestic and commercial installations. Offers good step sound absorption and cushioning. For commercial or domestic floors laid onto timber sub-floors where a moderate amount of shock absorption is required. Additional moisture barrier is necessary if laid onto cementitious floors.

2mm SylvaFoam and 2mm SylvaFelt

For 22mm and 20.5mm floors

5mm MultiFoam Sports or multi-use applications where good shock absorption is needed. Moisture barrier is necessary when used over cementitious floors.

10mm ProFoam Sports floors where a floor fully complying with standards BS7044 Part 4 and DIN 18032 Part 2 is required. Moisture barrier is necessary when used over cementitious floors.

Note: With underfloor heating systems, a second layer of Junckers Sylvathene is also required. See separate Guide E4.1.

SELECTING THE CORRECT SIZE OF CLIP

Three Clip sizes are available, each to suit the humidity level expected when the building will be in use. Select the Clip size using the table below (see back page for further details).

| Site Conditions | Relative Humidity | Label Colour | Clip Type | Clip Size |
|---------------------------------------|-------------------|--------------|-------------|-----------|
| Dry, well heated constant conditions | 35%-50% | Green | One Hole | 129.1mm |
| Mostly well heated, some fluctuations | 45%-65% | Yellow | Two Holes | 129.4mm |
| Intermittently/rarely heated | 60%-90% | Mauve | Three Holes | 129.8mm |

CLIP CONSUMPTION

Domestic installations: 13 clips per m²
Commercial and Sports installations: 17 clips per m²
Wide Board Range Floors (20.5mm): 17 clips per m²

STAGE 4

EXPANSION ALLOWANCES

Gaps will be necessary around the floor's perimeter and ALL fixed points. (Fig. 2).

Gaps at "A" **must be left empty**. For 22mm and 20.5mm floors, these gaps must be 2mm for every metre of floor width at each side, **minimum gap 15mm**. For 14mm floors, 3mm for every metre of floor width at each side, **minimum gap 15mm**.

Gaps at board ends, B, are to be filled with **Junckers Cork or Rubber Strip**, ensure the strips are a close fit in the gaps. The size of these gaps to be 1mm for every metre of floor length, minimum 10mm at each end. The gaps and strips are usually covered with a skirting, quadrant or scotia moulding, available from Junckers.

See also "Edge Details and Other Tips".

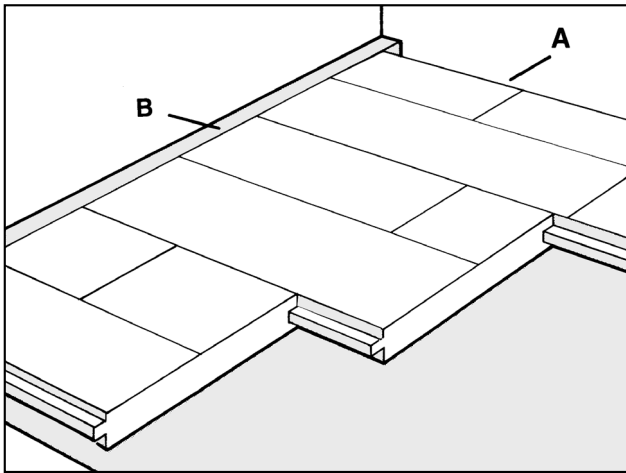


Figure 2.

STAGE 5

INSTALLING THE FLOOR

When installing a surface moisture barrier, ensure the sub-floor is free from loose particles.

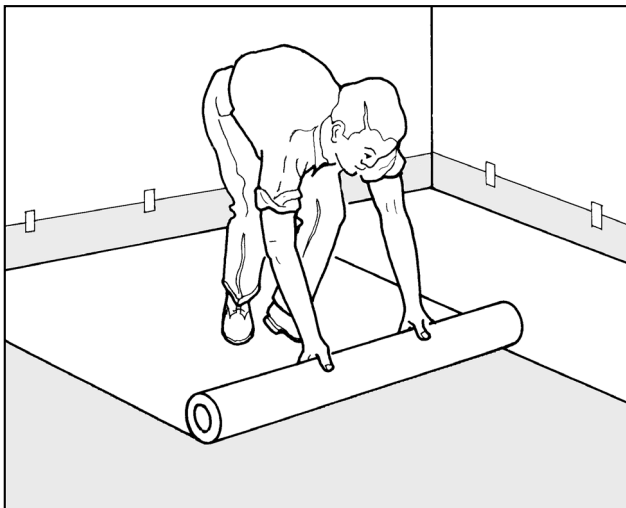


Figure 3.

Unroll the moisture barrier and extend it up the walls just over the finished height of the skirting. (To be trimmed off after the skirtings are fixed). (Fig. 3). Ensure the moisture content of the cementitious base is less than 5%. It is not possible to cover up a damp problem with a moisture barrier. It will protect the Junckers floor from residual moisture only. For SylvaThene and Sisalkraft, edges must be lapped by 100mm and taped with Junckers Waterproof Tape. Sisalkraft is placed black side downwards. The underlay is then placed over this. There is no need to fix the underlay or moisture barrier to the base.

PolyLay is laid felt side downwards with the polythene edges lapped. No additional moisture barrier should be necessary.

LAYING THE FIRST ROW OF BOARDS

See Figures 4 (Domestic) and 5 (Sports and Commercial Floors). Use temporary spacer blocks to form the correct size expansion gap between the wall and the first board. **Note: these must be removed upon completion.**

Note Clip spacings in Figs 4 and 5.

If the wall is not straight, it may be necessary to scribe the first row of boards to suit. Check the expansion gap can easily be covered.

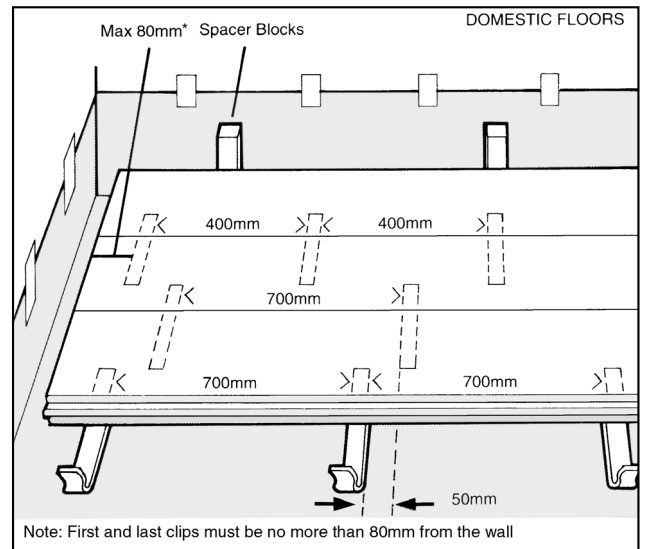


Figure 4.

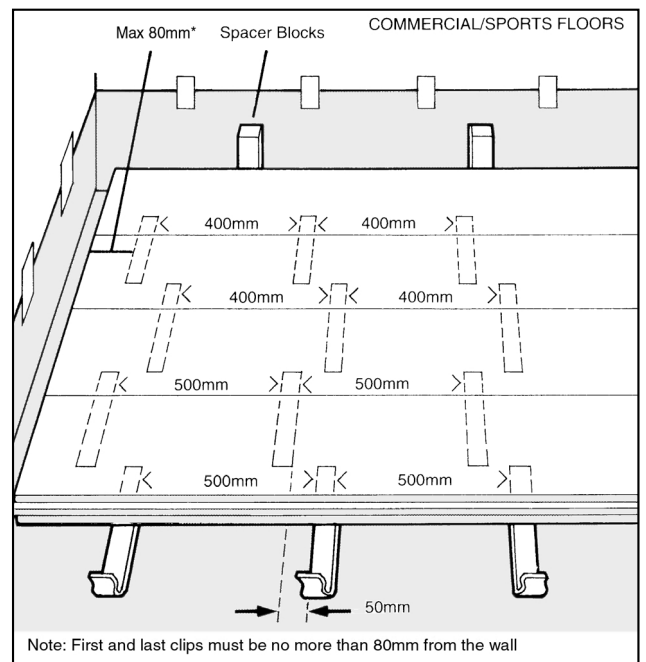


Figure 5.

With a hammer, tap the correct end of the Clip into the groove on the back of the board. This is the end with the holes. The plain end of the Clip must point towards the board's tongue, as shown in Fig 6.

Note: take care to align the Clip correctly before hammering. One firm tap with the hammer is usually necessary. Excessive or repeated hammer blows may cause the Clips to become loose.

Note: The Clips and boards must NEVER be fixed directly to the sub-floor!

Lay the board in place, tongue pointing away from the wall. Continue to the end of the row, cutting the last board to length. The offcut will be used later.

All board header (end) joints must be glued with Junckers SylvaFix Adhesive. Excess adhesive must be wiped from the surface with a damp cloth (Fig. 7).

Never apply glue to the long joints (except last board - see below).

SECOND AND SUBSEQUENT ROWS

The off-cut from one row of boards is then used to begin the next row. Ensure the board and stave (strip) end joints are staggered to produce a random strip pattern. They must not fall into line on adjacent boards (Fig. 8). Ensure the stave ends on adjoining boards are no closer than 80mm and header (board end) joints

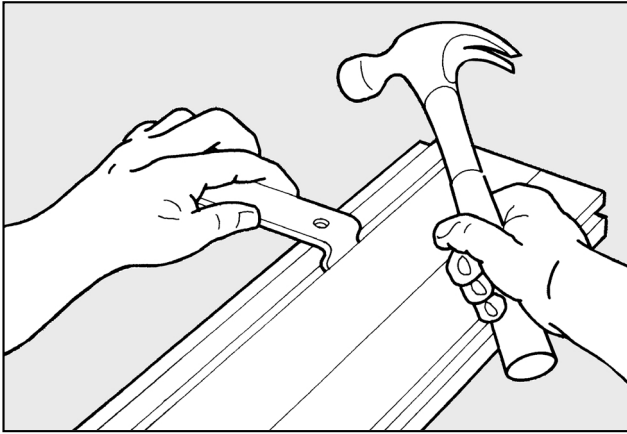


Figure 6.

are no closer than 250mm. When tapping Clips into the new board, take care to ensure they are no closer than 50mm to the Clips on the last row.

To lay subsequent rows of boards, fit the Clips as before and offer the tongue and groove together. Using a wooden block, (or installation kit for 14mm floors), gently tap the joint together, working evenly along the board, taking care not to put weight upon the new board until the joint is nearly closed. Moderate downward pressure will then push the Clips home. With some types of Clip it is normal for there to be small gaps between the boards.

The last row of boards will probably require cutting to width to fit. **This row is glued along the tongue and groove joint only if a Clip cannot be fixed and is the only board to be glued this way.** Do not forget to leave the appropriate clear expansion gap.

Use a joint puller to fully close the joint (Fig. 9).

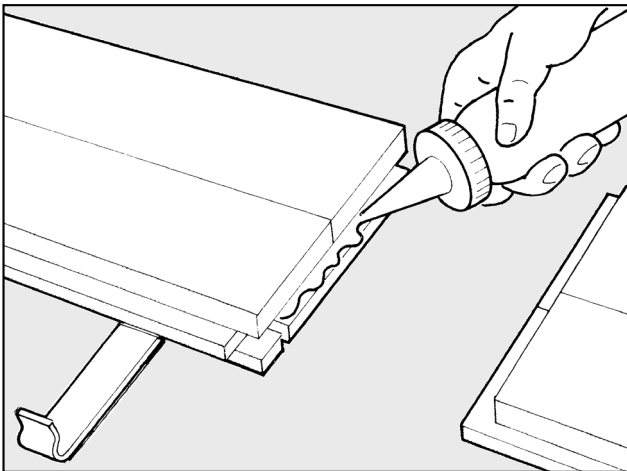


Figure 7.

FINISHING THE JOB

Remove all temporary wooden spacers at the perimeter.

EDGE DETAILS AND OTHER TIPS

1. The Perimeter Gaps can usually be covered with Junckers skirting, scotia or quadrant. These are usually nailed, screwed or glued to the wall or existing skirting. Large installations such as sports halls, due to the relative size of expansion gaps, may require special section skirtings or cover-strip edge details.

2. Radiator Pipes

Drill a hole in the board to accommodate the radiator pipe. The space around the pipe must be the same as the expansion gap at the wall (Fig. 10 (a) and (b)).

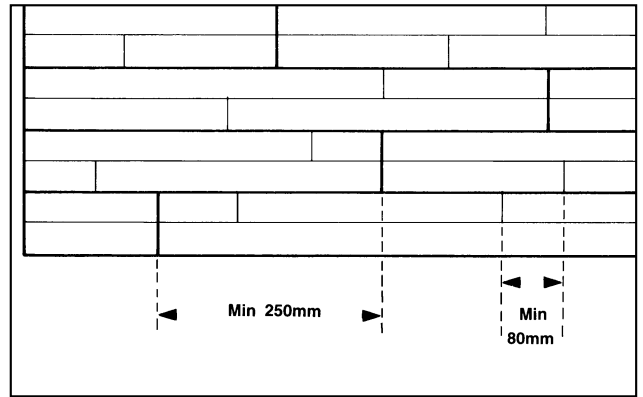


Figure 8.

A tapered wedge is then cut from the board as shown and this is glued back into place after the board is laid. The gap around the pipe is then covered with a Junckers radiator pipe cover, available in hardwood or plastic.

3. Door Frames and Architraves

The boards must be fitted under door frames and architraves, allowing the appropriate expansion gaps. Use an off-cut of flooring plus underlay to make the cut at the correct level (Fig. 11).

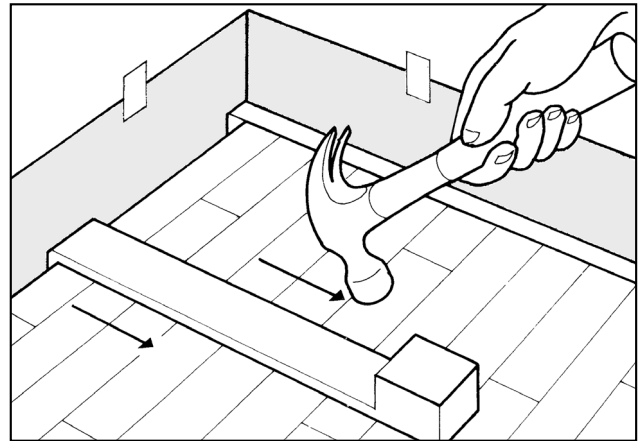


Figure 9.

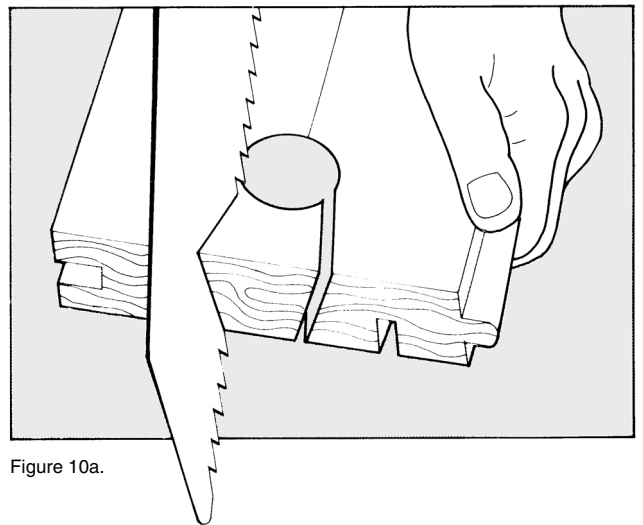


Figure 10a.

4. Door Thresholds

An expansion allowance will usually be necessary. Where levels do not change, the gap can be covered with a Junckers Threshold Strip in hardwood or polished brass.

Where levels reduce, a Junckers Ramp section may be suitable. To ensure the expansion of the floor is not restricted,

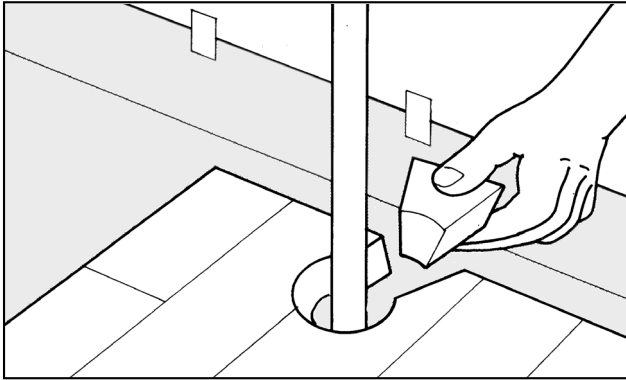


Figure 10b.

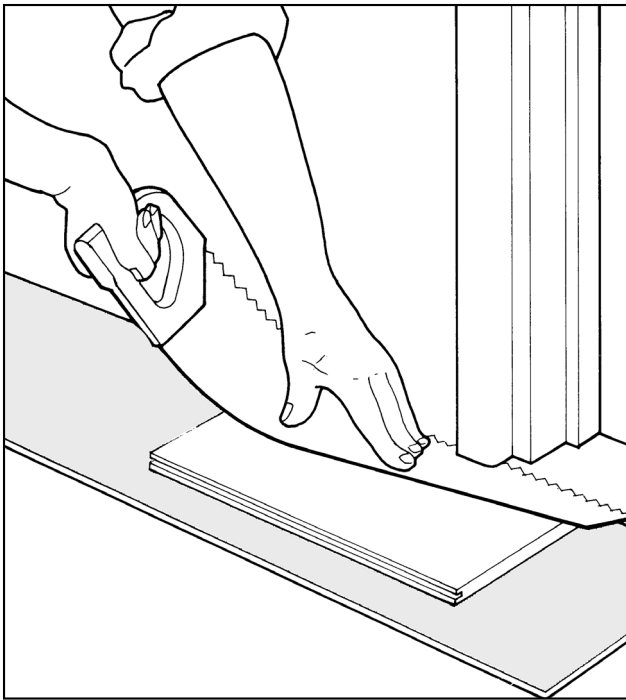


Figure 11.

ramps are best fitted to the edge of the Junckers boards and not the sub-floor. The ramp can be supported by hardboard or ply instead of underlay if the underlay is 2mm or thicker. This would also apply to junctions with mat wells.

Floors over 12m wide, or those in irregularly shaped rooms should be laid starting from the centre.

A special Double Clip is available and is used with a loose tongue which is glued to one side (Fig. 12).

These methods are also useful for floors which are laid diagonally or where changing the laying direction.

MATERIAL SELECTION

Junckers Floors are graded in accordance with established criteria. However, it must be expected that for certain grades of flooring, the laying process will include some on site filling, selection and making good. Factory filling may not always provide a perfect result as it may become dislodged during the handling and laying process. Junckers are able to provide tubes of filler for this purpose. As a general rule, most floors will require a 3% allowance for cutting and selection.

TECHNICAL ASSISTANCE

Junckers can provide a full range of technical assistance for anyone who is specifying or laying Junckers floors. Contact our Witham Office.

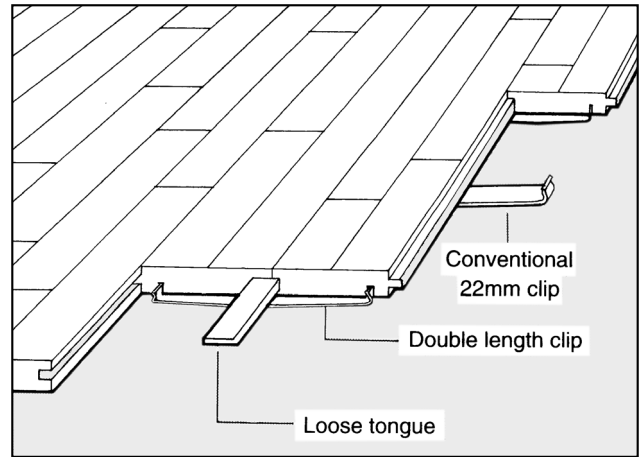


Figure 12.

ADDITIONAL POINTS TO REMEMBER

1. Wood will expand and contract with changes in the environment. Therefore, expect to see wooden floorboards close together in the summer months and slightly apart in the winter.
2. In kitchens, Agas or similar heat sources will dry the environment which may result in small gaps appearing between boards.
3. Use 22mm or 20.5mm boards in conservatories.
4. Junckers lacquered boards laid in kitchens can have an additional coat of Junckers Isolacquer, Junckers STRONG or Junckers Sport High Performance lacquer applied immediately after installation. This helps to reduce the effects of spillages and splashes upon the floor. Spillages must be wiped up immediately.
5. Junckers floors are not suitable for use in bathrooms or other wet areas. Water left upon the surface can cause damage.
6. Junckers 14mm, 20.5mm and 22mm Clip System Floors can be laid over most types of underfloor heating. Contact Junckers for specific recommendations and refer to information sheets ref: E 4.0 and E 4.1.
7. The Clip System must NOT be used directly over joists or battens. Boards must be laid onto an existing sub-floor. 22mm and 20.5mm boards can, however, be secret nailed to joists or battens, see separate instructions.
8. The polythene backing on the underside of the boards is a balancing membrane and must not be removed.
9. Clip System floors are floating floors and must never be directly fixed down to the sub-floor.
10. Due to the staining process, SylvaRed colour may vary from batch to batch.

CLEANING AND MAINTENANCE

Use only recommended Junckers cleaning and maintenance products upon the floor. Maintenance instructions are available from your supplier or direct from Junckers. Do not leave puddles of water to dry upon the surface, as moisture damage may occur. Junckers cannot be held responsible for problems associated with lacquers, oils and cleaning products from other manufacturers.

NB Every Junckers product is manufactured from selected material and is subject to the Company's stringent quality control procedures. The Company cannot take responsibility for the installation of their systems which is dependent upon the condition of the sub-floor and the standard of work of individual contractors.

Recommendations for Clip Selection

Note: Remember, the Clip size is chosen to suit the environment of the building when in normal use, based on the expected maximum relative humidity during the year. It is not necessarily based on the relative humidity of the day of installation, especially in new buildings.

| <i>Commercial Buildings</i> | <i>Clip Size</i> |
|--|---|
| Air conditioned aerobics and gym clubs Art galleries and museums Retirement homes Air conditioned offices Retail outlets in shopping centres | 129.1mm |
| High street shops and restaurants Sports centres Offices - non air conditioned Hotels and public buildings Schools | 129.4mm |
| Village halls Community centres (irregularly heated) Holiday homes Sports halls (irregularly heated) | 129.8mm |
| Homes | 129.1 or 129.4mm dependent on location in UK and Ireland Consult Junckers for advice. |

Note: This list is not definitive and may be subject to amendment.
Please contact Junckers for advice or clarification.



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