

Installation instructions

REFLEX M EVOLUTION

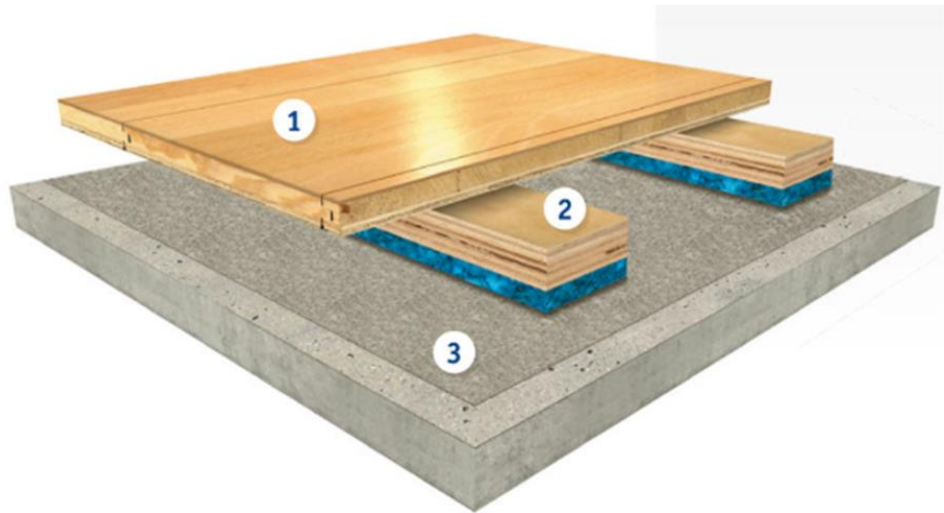


TECHNICAL DATA

1 – DESCRIPTION

Reflex M is an area elastic flooring compliant with EN 14904 norm and composed of:

- (1) Wooden multi-layer sports floor, 22mm 3 strips / Tongue & Groove ;
- (2) Single batten system with PU foam included ;
- (3) Tarfilm 200µ.



2 – PACKAGING

Tarfilm roll of 120 sqm (3m width x 40m length)
Joists with foam included 2440mm x 60mm x 34mm (22mm + 12mm)
packaged by 4 units = 9.76lm (1 pack = 2.63sqm installed)
Wooden boards 22mm: 4 planks/pack (1.95 sqm)

PREFACE

In order to provide the customer with the best use of product, this installation guide has to be followed carefully to guarantee conformity and ensure sports performance. If not, Tarkett Sports will not be responsible for damages following installation.

Any use of the product for purposes other than the ones set out, in the condition of use, should be submitted to Tarkett Sports for prior approval. If you need any further information, please contact your dealer who will provide you with the appropriate advice.



Check before installation, the quality of the delivered product. If the product is defective, contact Tarkett Sports. If installation is in process, it shall be stopped on the day the defect is noticed otherwise the Warranty shall not apply.

Reflex M Evolution is a wooden system and as a natural and living material, wood is moving due to relative humidity (RH). The wood shrinks in dry conditions and it expands in high relative humidity. In areas where the wood has been influenced by high or low RH for a longer period, damage in the wood may arise. Therefore it is important to always keep the RH in the hall between 40-60%.

SUBFLOOR

The subfloor must be dry, flat, clean, strong.

The moisture rate for concrete or cement screed must be in accordance with the local requirements.

For example : France \leq 4%, Germany $<$ 2%, Spain \leq 3%, (CCM method),...



Subfloor	Requirements
Surface appearance	Smooth
Flatness	\leq 6mm under 3m ruler
Altimetry	+/- 1cm compared to the average
Moister rates for concrete	Local standard compliant
Moister rates for anhydrite screed	$<$ 0,5%
Saw joints treatment	No
Cracks $<$ 1mm treatment	No

Levelling compound is necessary if the surface appearance is not smooth or if the flatness is not compliant.

If the concrete is exposed to capillary moisture surges, it's necessary to waterproof the subfloor by an epoxy resin (or equivalent) before applying the levelling compound, or for localized concrete repair, use a specific moisture-resistant levelling.

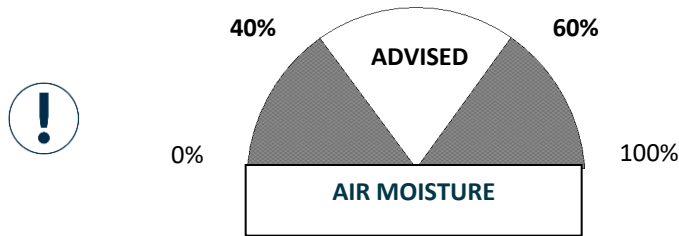
INSTALLATION

1 – GENERAL CONDITIONS



The timber products have to be stored on their respective palettes, in a closed, dry and heated room between 15 and 20°C (59 °F and 68°F).

The relative humidity must always be maintained between 40 and 60%.



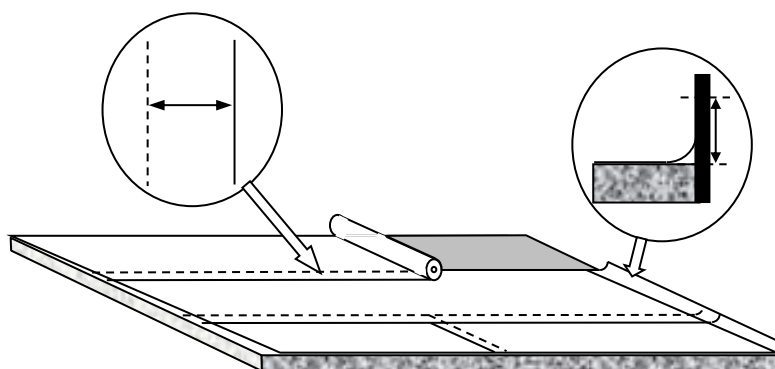
The packages of timber products must not be opened before being installed. Timber products must be acclimatized in the hall for 24 hours before installation.

During installation, the temperature needed, in a room for a Reflex M Evolution system should be between 15 and 20°C (between 59 °F and 68°F).

2 – TARFILM (VAPOUR BARRIER)

Lay the first sheet on the ground. The second sheet is laid with 20cm overlapping the first, then tape the both sheets together. We recommend to use strong adhesive tapes PVC. Do not forget to leave 10cm of Tarfilm along the edges against the walls. Ref. 1027006 (1 roll = 3m width x 40m length = 120sqm, thickness 200µ).

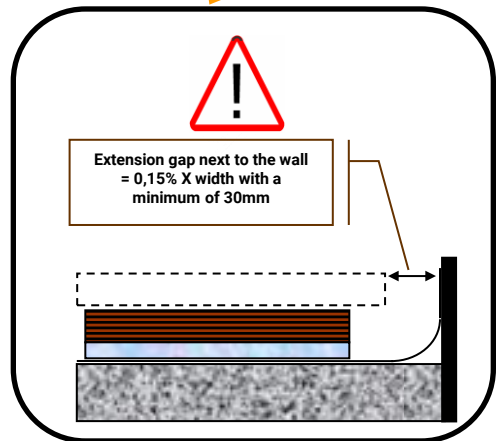
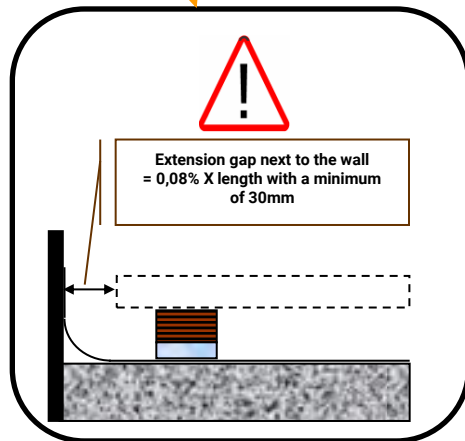
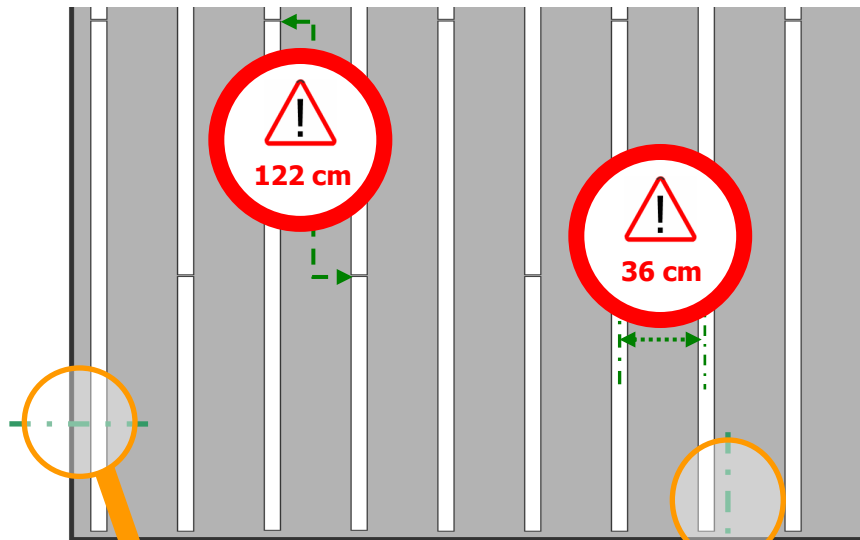
Please note that on an asphalt screed or any other sub-floor with a risk of pollution or possible high humidity content, you will have to double the layers but in a 90° direction.



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3 – EXPANSION GAP

- ! Respect extension gap all around the room for the joists and also for the 22mm wooden planks;

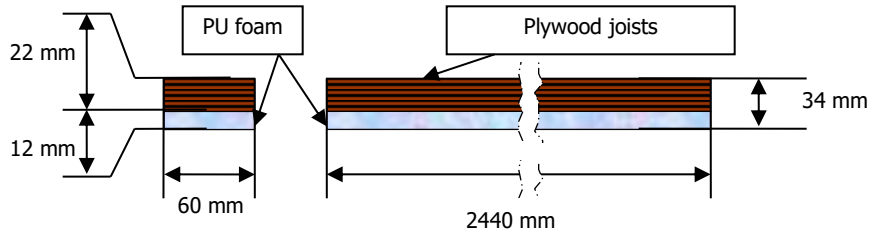


- If we consider a 44 x 24m gymnasium
- $44000 \text{ mm} \times 0,08\% = 35,2 \text{ mm}$ along the wall lengthwise
 - $24000 \text{ mm} \times 0,15\% = 36 \text{ mm}$ along the walls widthwise.

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4 – SINGLE JOISTS

Single joist presentation: joists are made of a 22mm thick plywood glued on a 12mm PU foam.



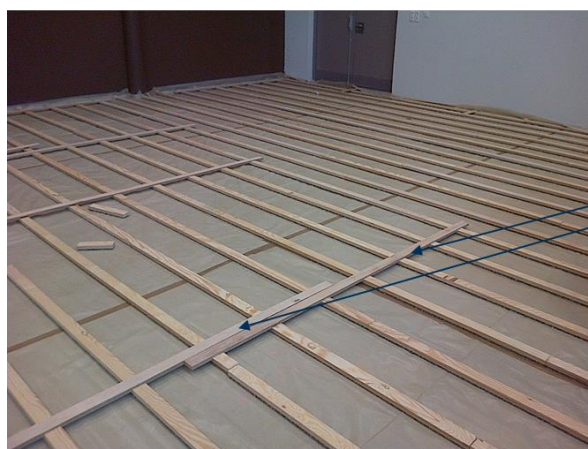
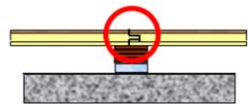
Tarkett Sports recommend to install 22mm wooden planks in the play direction so the joists must be perpendicular to them.

The first joist row : you must pay attention to the distance to be considered between the wall and the first joist line. Place the first row of joists at least at 5cm from the wall.

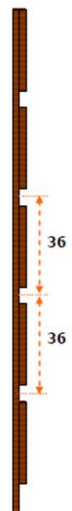


Other joist rows : the end of the 22mm wooden top covering planks must have a central position on joists, this, to avoid any weak point. The joists must be separated of a 36cm space, which will be defined by using the batten spacers.

Move the batten spacers when you forward with the wooden planks installation.



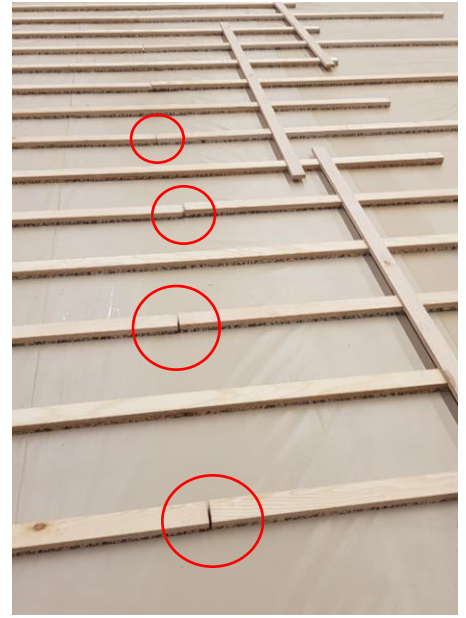
Batten spacers



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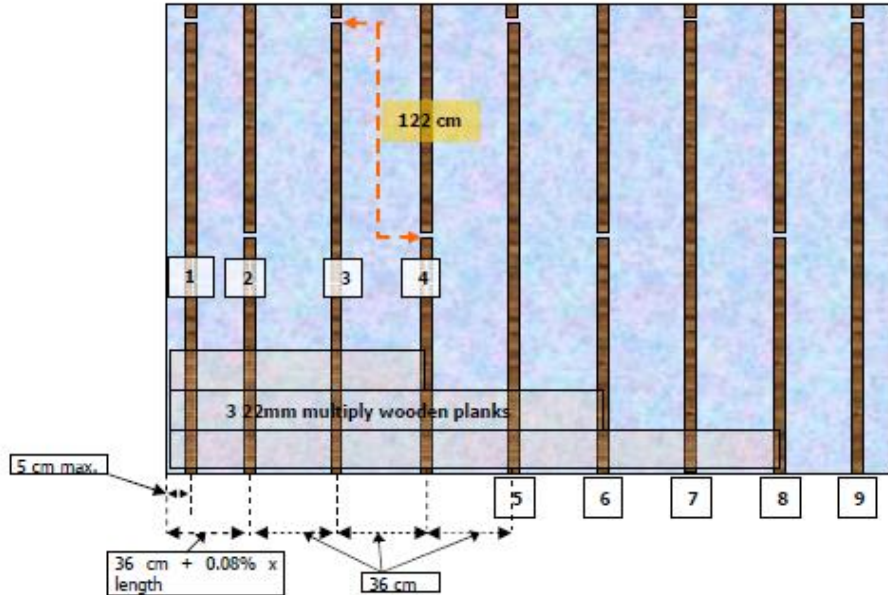
4 – SINGLE JOISTS

The joists must be 122 cm staggered every two rows and on the same line, the joists are placed end to end; this allows the wooden floor to shrink and swell without creating any weak points.

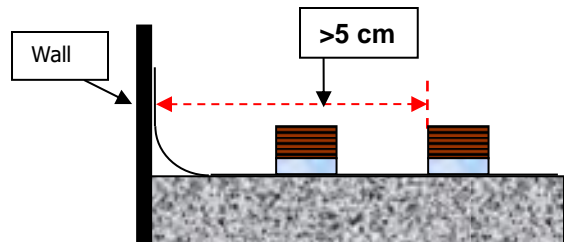


Joists are laid with a 36cm space between one to the other (from axis to axis), except for the 2 first rows which are closer.

As previously mentioned, the 22mm wooden top planks measure 2.52m long, as matter of fact, 8 joists are laid under a complete Multiply 22mm plank. One plank: $252\text{cm} / 36\text{cm} = 7$ spaces of 36cm => 8 joists.



Last joist row : if distance between the last row joist and the wall is higher than 5cm, another row of joists must be laid to welcome the end of the 22mm wooden planks.

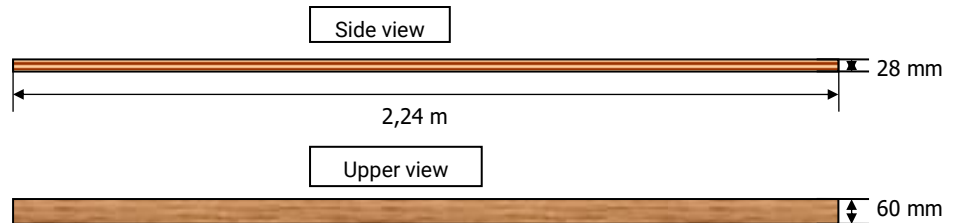


INSTALLATION

5 – REINFORCEMENT BATTENS

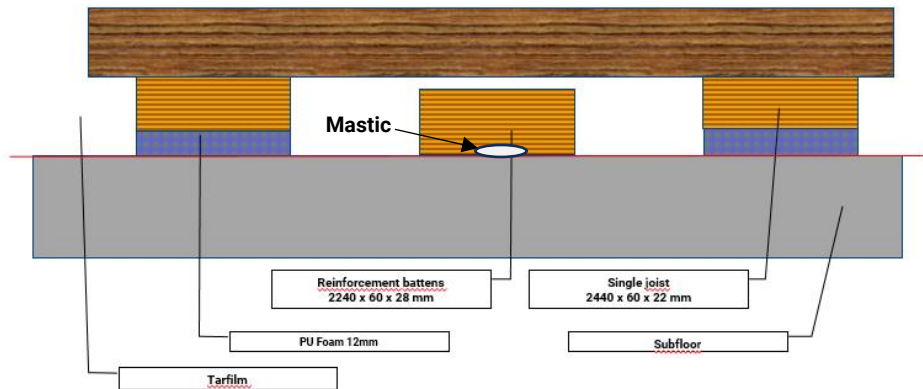
Their function is to reinforce the areas subject to high mechanical stresses.

These reinforcement battens should be glued to the Tarfilm (PE film) in dotted lines using PU or MS polymer mastic.

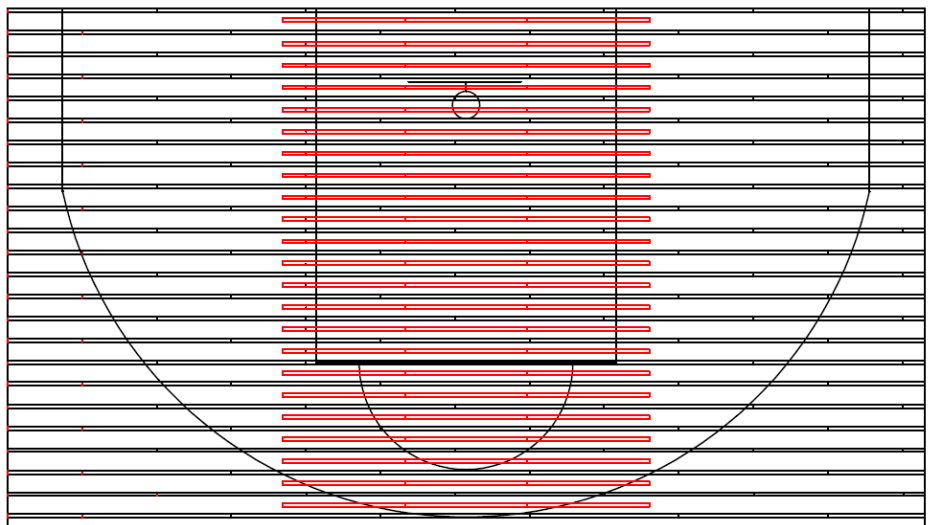


Some areas around the playing court must be reinforced :

- Under bleachers or mobile bleachers;
- Under heavy basket-ball hoop (parking place and wheel track).



- For a basket-ball court, it is mandatory to install reinforcement battens inside the bottle in accordance with the below drawing.

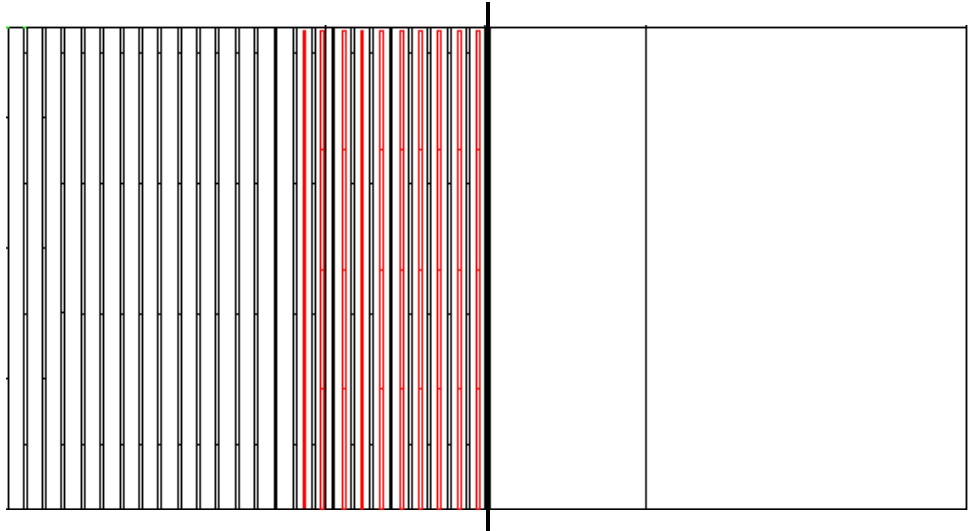


The reinforcement battens (in red) must be installed between single joists and place end to end, 3 by line. 69 battens per bottle, 138 in total.

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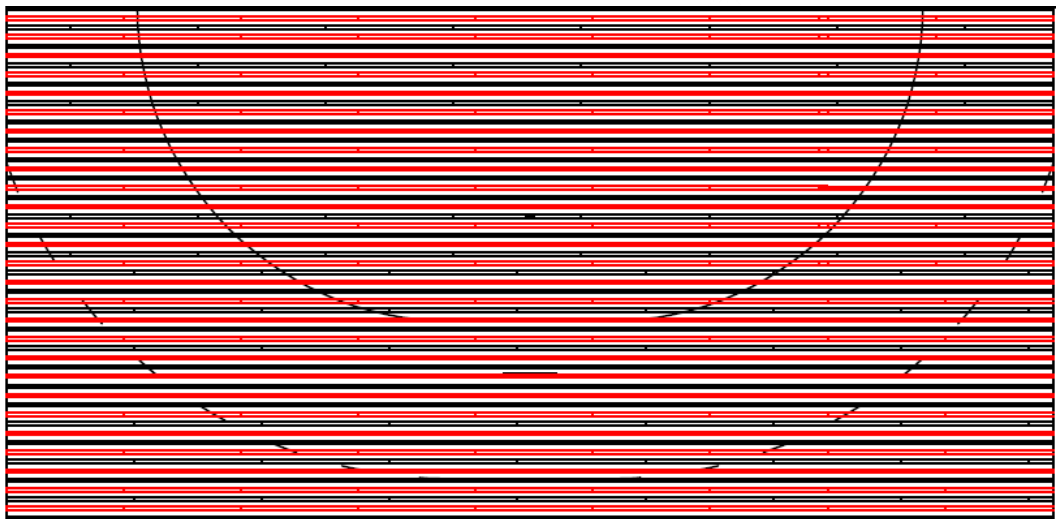
5 – REINFORCEMENT BATTENS

- For a volley-ball court, it is mandatory to install reinforcement battens inside 3 meters area on each side of the net in accordance with the below drawing.



The reinforcement battens (in red) must be installed between single joists and place end to end, 4 by line. 40 battens per area, 80 in total.

- For a handball court, it is mandatory to install reinforcement battens inside 9 meters area in accordance with the below drawing.



The reinforcement battens (in red) must be installed between single joists and place end to end, 9 by line. 243 battens per area, 486 in total.

INSTALLATION

6 – 22 mm WOODEN PLANKS

Starting process of boards :

Wood floor planks must always be fixed on minimum three joists.

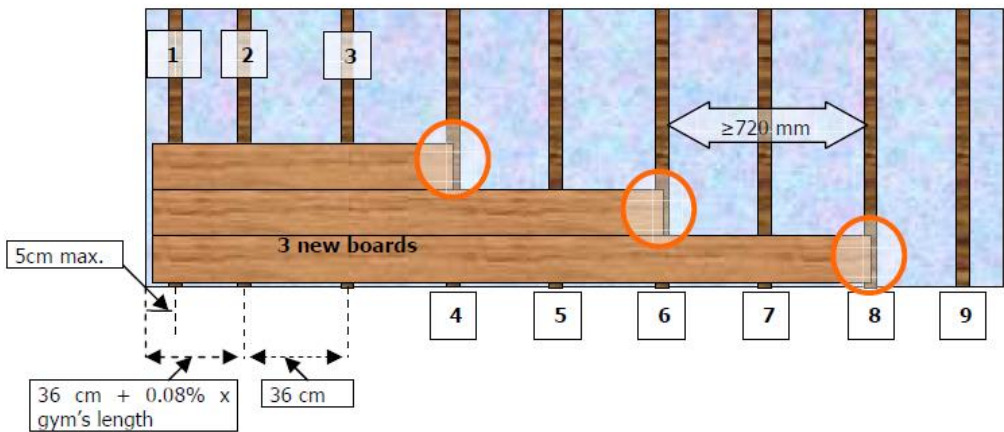
Start installing the first three rows of wood floor with a full plank.

The first row must be glued on joists with a specific wood glue D3 in bottle.

The planks must be installed staggered, it is the easiest way to be sure that all the extremities of them are laid on a batten.



Pay attention to preserve a 720mm difference between the extremity of the first plank and the end of the adjacent one (see the drawing below).



This picture shows clearly where the extremities shall be installed. It is required to do so



If necessary, the planks can be inserted together with an hammer and a nylon wedge before to be stapled.



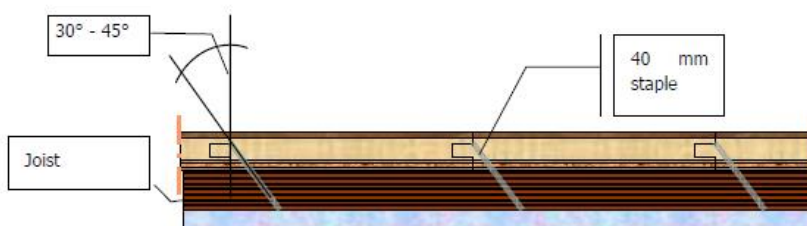
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6 – 22 mm WOODEN PLANKS

Fix planks :

The 22mm planks shall be fixed to all joists using 40mm staples. Affix the plank to the joist through the tongue.

Position the staples at the back of the tongue and drive it diagonally (around from 30° to 45° angle) into the plank.



At the junction of the two planks (short sides), affix the planks to the joist with two staples.



To put staples, use a compressor and an air gun.
A compressor of minimum 10 bars needed to drive the staples properly.



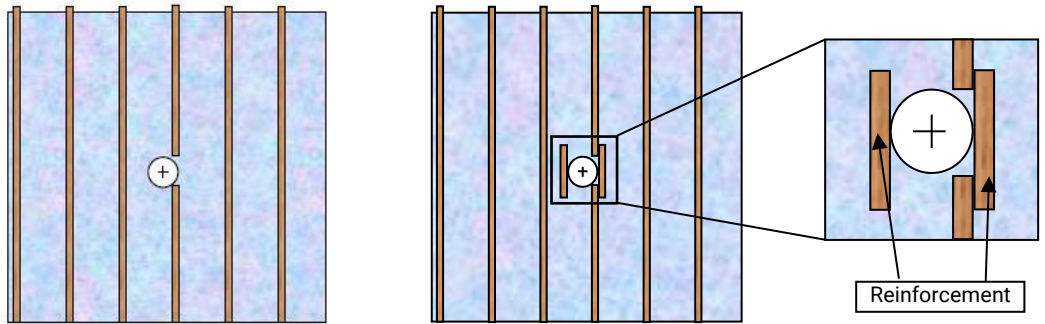
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7 – TRAP DOOR

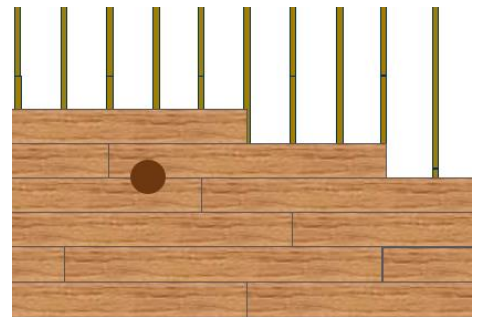
Install the trap door :

On the area of trap door, you must cut the joist, this location becomes a weak point which must be reinforced.

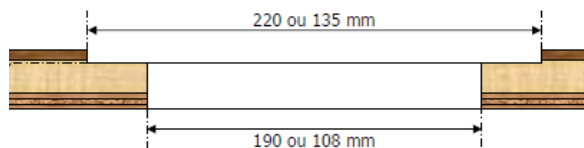
To reinforced wooden floor around the trap door, install joists all around.



The 22mm wooden planks must be fixed on the reinforced joists with staples.
During the installation of the 22mm wooden planks, locate the center of anchor .



Form a circular recess according to the trap door, check the diameter and the depth of each part of the trap door, before perforating the wooden floor.
Use a jig saw and a hand-held router.

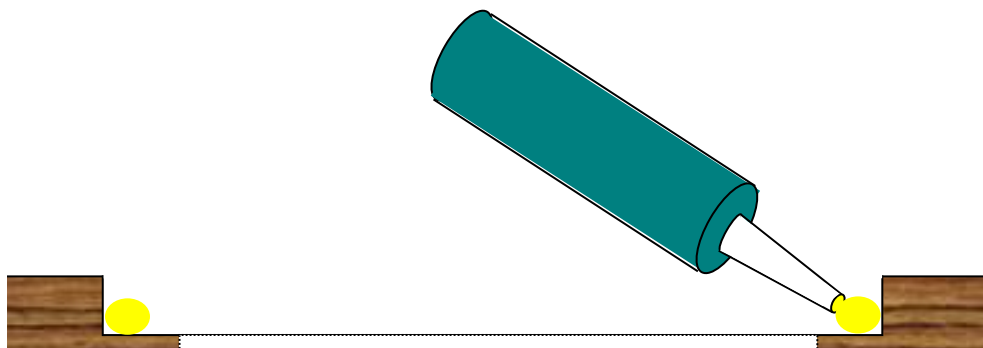


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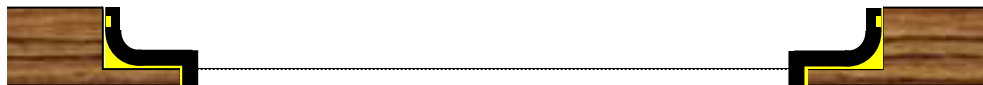
7 – TRAP DOOR

Fix the trap door :

Put the PU mastic all around the upper recess you created.



Clean the frame carefully with acetone and place the trap door in the hole.



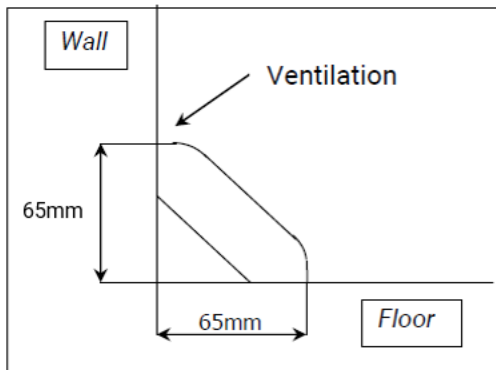
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8 – SKIRTING

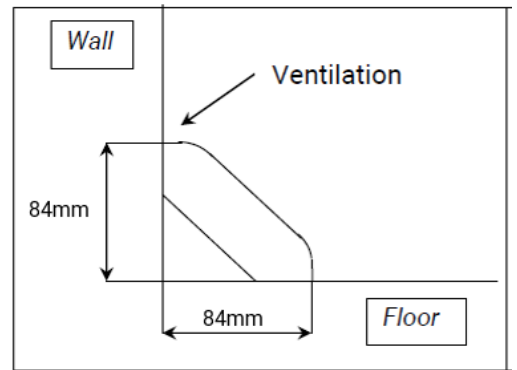
Install skirting :

Ventilated wooden skirting are designed to cover expansion gap and allow the ventilation of the floor.

Warning: the opening all along the skirting let the air circulate, it will always be placed against the wall.



Standard

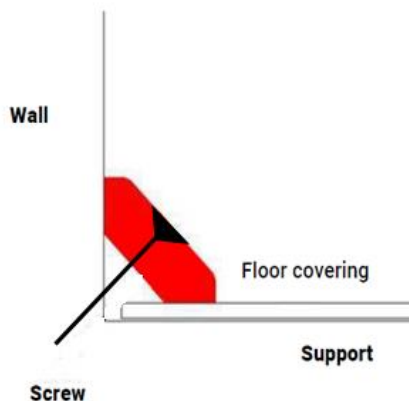


Wide

Fix skirting :

Skirting should be fixed on the wall (never on the floor) with screws (5.0 x 100mm).

For uneven walls skirting can be glued in addition to screws for perfect finishing.



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9 – GAME LINES MARKING

Permanent marking :

A two-component polyurethane paint is used to draw game lines.

A protective tape is used during the painting to fix the shape.

The floor must be cleaned.

The paint is applied with roller or paint brush.

Two coats should be applied for quality marking; avoiding applying a damp coat on top of a damp coat (the first coat should be dry by touch). Similarly, the covering power of a game line is obtained by applying two coats. Too much paint can cause micro cracking on the surface.

Paints recommended by Tarkett Sports :

- Blanchon Thixo Tracé – Blanchon SA – Tel: +33 4 72 89 06 00

www.blanchon.com

- Kipp 2K PUR Indoor for lines marking and Kipp 2K PUR Surface Paint for the surfaces

www.kipp-markierungen.de

- Bona SuperSport Line Paint – Bona – Tel: +4640385500 - E-mail: bona@bona.com

www.bona.com

Always follow the manufacturer's installation recommendations.

