

mFLOR rigid core vinyl floors

Professional installation guide

US

mFLOR general guidelines

National regulations

When installing mFLOR, you must observe national regulations in accordance with installation standards for floorings as described in BS 8203 in the United Kingdom, VOB Part C, DIN 18365 in Germany and all other relevant European, national and local standards.

Suitability

- mFLOR is intended exclusively for indoor residential and contract use.

- mFLOR can be used on a screed with traditional water-based underfloor heating and cooling and/or thermostat-controlled electric underfloor heating integrated into the screed or in a levelling layer at least 9mm thick. The use of electric floor heating is not recommended unless it is incorporated into a 9mm screed or levelling layer or has an on/off switch instead of a continuous system.

- mFLOR can be installed on a range of hard, flat, non-sprung screeds/sub-floors, such as:
 - Concrete
 - Sand cement
 - Anhydrite
 - Wood, chipboard and MDF
 - Ceramic tiles
 - Magnesite
 - MDF underfloor such as Jumpax or Floorfixx

The screed and underfloor must meet the prescribed specifications (*see Checking and pre-treatment of screed and Evenness of screed*).

- mFLOR is water-resistant and can be used as a floating floor in damp rooms such as bathrooms, toilets or kitchens. mFLOR is not suitable for flooring in a shower, sauna, swimming pool or other wet rooms.

- mFLOR is designed to be installed as a floating floor system and must be able to expand and contract freely in response to changes in temperature. mFLOR must not be glued, nailed or fixed to the screed or to walls or any other part of the building.

Technical details

- mFLOR is more dimensionally stable than floating wooden floors, laminate or PVC click floors.
- mFLOR should preferably be installed at a room temperature of 18°C - 28°C. If conditions are cold during installation, the material will feel hard and stiff and is more difficult to cut, saw, trim and install. The click system could also be damaged.
- **NOTE: mFLOR itself should be at the optimum handling temperature of 18°C - 23°C.** If the product is colder or warmer than this optimum handling temperature or has been stored/transported under stress, the flooring should be acclimatised for at least 24 hours in the room to be floored so that the desired product temperature is reached and the product relaxes.
- If mFLOR is installed in surroundings with a length or width of more than 13 metres, an expansion profile must be used to divide the floor into two separate sections.
- Although mFLOR is water-resistant, it is not intended for use as an anti-damp system or as water-tight flooring.

CAUTION

Only the installation techniques described in this installation guide are covered by the warranty. No warranty is given for customised mFLOR installations, such as 45° degree mitred corners or corrugated edges.

Artwork, templates and/or different installation or finishing methods that may adversely affect mFLOR are excluded from any warranty.

Product control

Before installation, mFLOR must be inspected and checked for damage, defects or abnormalities. Check the batch number on the short side of each package and check that all the material has come from the same batch. Minor variations in colour across the same batch number help give mFLOR its natural look. To avoid intrusive colour variations, we recommend that you do not install material from different batch numbers within the same room. Check the panels for visible breaks during installation. Do not install panels that show imperfections and get in touch with your mFLOR contact person immediately. mFLOR is not liable for complaints in case of visible defects before installation.

Transport and storage

Boxes containing mFLOR should always be stored and/or transported on a flat and firm surface, in neat, straight stacks, flat and not overhanging and never vertically. Do not stack pallets when storing. Never store in a damp room. The temperature in the place of storage should never be lower than 6°C or higher than 35°C. The recommended temperature is between 15°C and 25°C.

National regulations and standards

The conditions on site and installation conditions must always comply with relevant national regulations and installation standards.

Checking and pre-treatment of the screed

Ensure that information relating to the composition, construction and quality of the screed is correct. The screed must be kept dry, level and clean, as described in DIN 18365. The screed must also be compression- and tension-resistant. If necessary, remove old glue residues and old or loosened levelling compound. Ensure that the screed is free from chemicals or other products that could affect it. Seek advice on the right type of moisture protection, primer, levelling compound and sub-floor required for professional screed preparation and installation. Choose a suitable chipboard or levelling compound to ensure that no irregularities can be seen through the surface of the finished floor. However, the choice of suitable material, such as chipboard, levelling compound and any additional products, depends on the purpose or application of the room. In addition, the supplier of the preparation products and the installer of the floor must agree to the choice. All preparation materials should be used in accordance with the manufacturer's recommendations and with the national standards for resilient floor coverings.

Evenness of screed

The screed must be flat and not have any unevenness greater than 3mm within a radius of 1.8 metres or 5mm within a radius of 3 metres.

Acclimatisation

mFLOR should be acclimatised in the room where it is to be installed for at least 24 hours prior to installation, or until the product has reached the ambient temperature. The minimum temperature is 18°C. Ensure that the packages are laid flat and without stress during acclimatisation. Leave the panels in the packaging in small stacks away from sources of extreme heat or cold. The acclimatisation environment should be between 18°C and 28°C during this period and should be maintained within these levels after installation to ensure acceptable product performance.

Temperature conditions before, during and after installation

mFLOR should preferably be installed at a room temperature between 18°C and 28°C and a floor temperature above 15°C. Installation in spaces that are colder than recommended will adversely affect the user-friendly installation features of mFLOR. The panels will be less easy to handle and less flexible, and cutting will be more difficult, making it harder to cut out small pieces. The lower the temperature, the harder they are to handle. For installation in spaces that are warmer than the recommended temperature conditions, we recommend that you create the correct installation conditions by using fans, blinds, etc.

A constant temperature must be maintained for 3 days before, during and up to 7 days after installation. The temperature must not fluctuate by more than 5°C per day and must remain within the required room temperature of at least 18°C and no more than 28°C. The floor temperature must not fall below 15°C.

Underfloor heating

Ensure a comfortable ambient and screed temperature during acclimatisation and installation. If necessary, lower the water temperature of the underfloor heating by setting the pump thermostat to 20°C. If the screed temperature rises above 30°C due to the heating pipes, mFLOR may discolour from underneath. Prevent this at all times by using a thicker levelling layer and a suitable sub-floor and/or by adjusting the water temperature in the pipes. mFLOR can be used with traditional water-based floor heating and cooling systems. Electric systems are not recommended, unless the manufacturer or installer of the underfloor heating system can guarantee that the surface temperature will not rise above 27°C and that all temperature increases will be gradual/progressive and not sudden or immediate.

Remarks: Infrared-based electric systems require special care.

Such systems heat up immediately and warm very specific parts or layers of the flooring. This can lead to unpredictable behaviour and possible fire hazards. If in doubt, seek further advice from your underfloor heating supplier.

Underfloor cooling

mFLOR can also be installed on underfloor cooling systems. However, the supply temperature of the cooling water must not be lower than the dew point temperature. Temperatures below this point produce condensation and may therefore create a damp atmosphere under the flooring which can lead to the formation of mould, for example.

REMARKS

PVC floors may expand and shrink under the influence of temperature or climatic conditions. If mFLOR is not properly acclimatised or if the temperature fluctuates by more than 10°C over 12 hours, gaps and/or raised joints may occur which can cause irreparable damage. This can be prevented by following the installation instructions correctly.

Key factors regarding installation

Evenness tolerances of screed	Maximum height difference: 3mm over 1.8 metres or 5mm over 3 metres.
Vapour-tight membrane - 0.20mm	Not required, but advisable with a screed that is not dry.*
Sub-floor required	No
Acclimatisation requirements	Acclimatise in the room where the flooring is to be installed for at least 24 hours.** Optimum MFLOR product temperature during handling: between 18°C and 23°C
Expansion requirements for large rooms	Required in rooms larger than 150m ² or with a length/width greater than 13 metres.
Expansion requirements for door openings/thresholds	Required when temperature differences between connecting rooms are greater than 10°C. Required when connecting rooms together make up an area larger than 150m ² .
Installation over ceramic tile floor	Suitable if the joins are not broader or deeper than 3mm and no tiles or edges protrude upwards.
Installation by gluing	Not recommended
Maximum permitted residual moisture percentage of screed	< 0.2% anhydrite with underfloor heating < 0.5% anhydrite without underfloor heating < 1.8% sand cement with underfloor heating < 2.0% sand cement without underfloor heating < 14% wood and MDF
Suitable for underfloor heating	Approved, temperature of the screed surface must not exceed 30°C.
3-season/non-climate-controlled environments	Approved, subject to additional measures for extreme spaces.***
Expansion requirements	5mm around all walls, pipes and objects.
Optimum ambient temperature and relative humidity conditions	During installation: between 18°C and 28°C During lifetime: between 6°C and 35°C Relative humidity: between 40% and 70%
Definition of water-resistant	The dimensional stability, rigidity, click connectivity and strength must not decrease due to contact with moisture/water.

* A vapour-tight film prevents moisture coming into contact with the back of the MFLOR flooring. We are not responsible for any deterioration of the screed and/or the occurrence of mould. Inform your glue and levelling compound supplier in case of structural or design-related moisture problems.

** Acclimatisation allows MFLOR to reach the ideal handling temperature of 18°C to 23°C and relieves the material of any stresses occurring, for example, during transport, storage or installation.

*** Extreme spaces and extreme conditions are areas in which the potential surface temperatures are between 0°C and 60°C, such as verandas, uninhabited holiday homes, etc. In these environments, an extra-large expansion gap of 10mm must be maintained.

Installing MFLOR

Installation direction

MFLOR is easiest to install when laid from left to right.

Even distribution to left and right

Calculate the width of the (main) room to get an even distribution of fitting strips to left and right. This may mean that you will need to reduce the width of the first row of strips.

Recommended tools:

- Tape measure
- Pencil
- Try square
- Flooring knife (utility knife)
- Hand saw, jigsaw or laminate cutter
- Core drill
- Teflon hammer
- Stop block
- Pulling bar for the last row
- Adjustable spacers to compensate for uneven walls.

Spacers

Place adjustable spacers along the long wall and at the ends. **Ensure a clearance of at least 5mm around all walls, window frames and objects to allow stress-free installation.**

Cutting, sawing or trimming MFLOR

- The panels can be cut to size using a flooring knife. Cut the panel several times along a guide to create a deep score mark and carefully break the panel along the cutting line.
- The panels can be sawn using a hand saw or electric saw. Mark the cut with a pencil and saw carefully along the line.
- The panels can be trimmed using a laminate or PVC cutter. Mark the cutting line with a pencil and cut the panel to size.
- A hole, required for stress-free installation around heating pipes, can be drilled using a core drill.

Edge finishing with high or low skirtings

After installation, a minimum clearance of 5mm must be incorporated around the floor and against all objects. For this purpose, choose a high or low skirting board and install it according to the manufacturer's specifications.

- High skirting boards must be mounted on the wall so that the floor can move freely underneath it.
- Low skirting boards are glued to the floor so that they can move together.
- Never use silicone putty or other flexible pastes or putties to fill the 5mm minimum clearance.

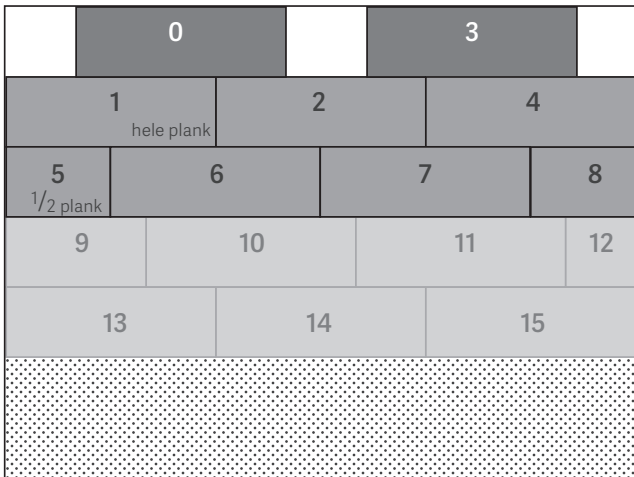
Installation

You can install MFLOR after completing the preparatory work, such as checking the screed and materials.

Important

Installation can only take place once the floor layer has assessed and approved the screed, the (external) conditions and the products to be installed.

Installation



Step 1

Decide the laying pattern

The floor panels are to be laid in an irregular bond. The distance between the end joints of the different floor panels must be at least 30 cm.

Step 2

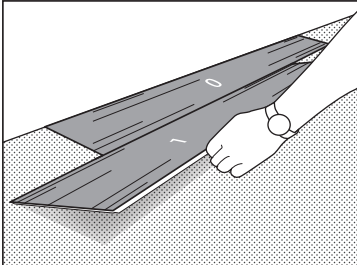
Floor preparation

If the floor is uneven or not level, carry out preparations as described. Check the panels for any damage.

Step 3

Ensure straight alignment

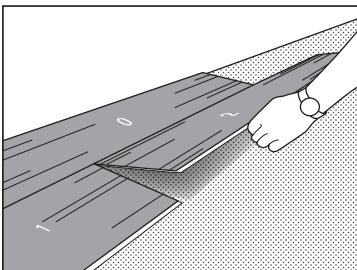
It is very important to ensure that the first row is laid straight. Use some loose panels to straighten out the first row.



Step 4

Install the first board

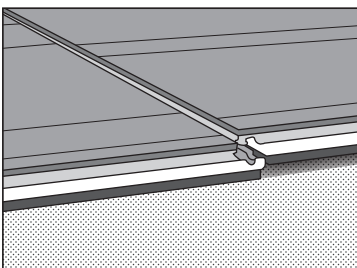
Place board 0 with the tongue side against the wall. Install board 1 by positioning the long side of board 1 at an angle of about 45 degrees to board 0. Lower board 1 to click the long sides together.



Step 5

Install the second board

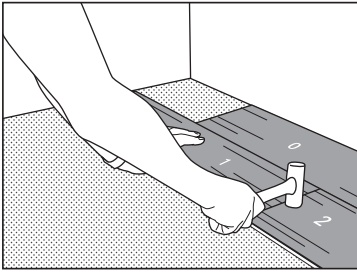
Repeat the previous step and install board 2 on the long side of board 0. Then slide board 2 to the left until the short side of board 2 lies above the short side of board 1.



Step 6

Join the second board to the short side (part 1)

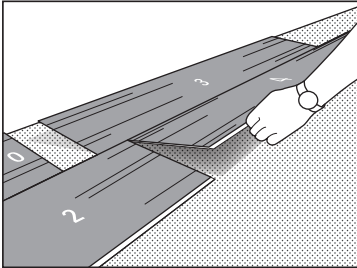
Lower the short side of board 2 onto the short side of board 1.



Step 7

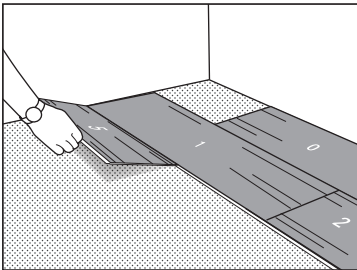
Join the second board to the short side (part 2)

Tap the joints on the short sides lightly with a Teflon hammer to click them together.



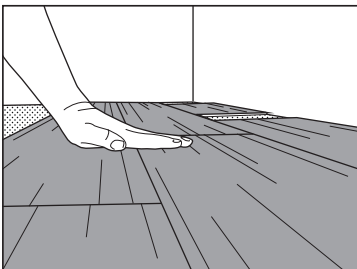
Step 8

To ensure straight alignment, place a loose strip against the wall (board 3). Repeat from step 5 onwards to install board 4.



Step 9

Start installing the second row with a half-board.

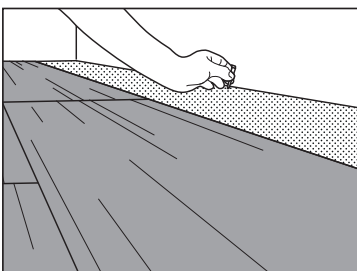


Step 10

Then fit board 6 in the same way as board 2 in step 5.

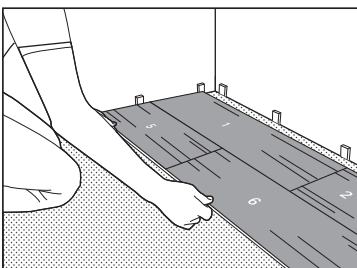
Step 11

Complete the rest of the second row. Check continuously that there are no gaps or height differences.



Step 12

Remove boards 0 and 3. Insert spacers to create an expansion joint of at least 5mm.



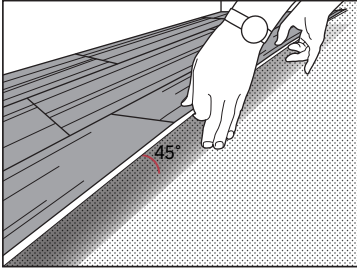
Step 13

Slide the two installed rows against the spacers.

Step 14

Complete the installation of the floor. Remove the spacers and finish with a skirting. Note that the expansion joint must always be kept free and must not be sealed.

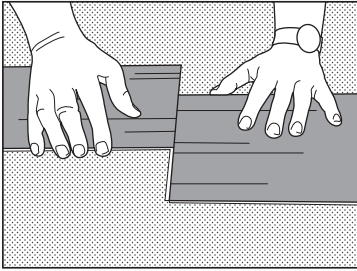
Disassembly



Step 1

Disassemble the long side

Lift the entire row at the same angle as during installation (approx. 45°) and slide the rows apart.

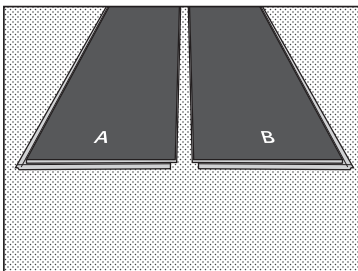


Step 2

Disassemble the short side

Disassemble the row by sliding the boards apart at the short ends. Do not try to click the short sides apart as this will damage the click connection.

Installing Parva herringbone floors



Step 1

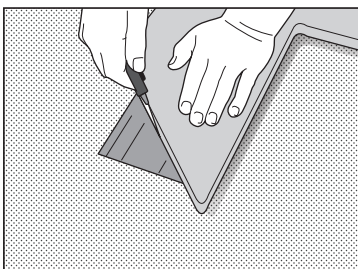
Sort the strips

A MFLOR Parva click floor consists of two different strips: A and B. The difference lies in the position of the tongue and the groove; see illustration. Divide the strips into a stack A and a stack B.

Step 2

Prepare the floor

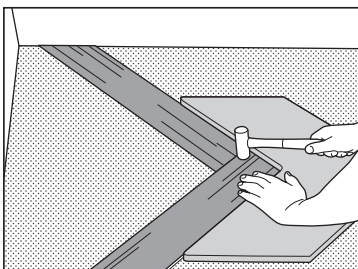
If the floor is uneven or not level, carry out preparations as described. Check the strips for any damage.



Step 3

Cut the first strip

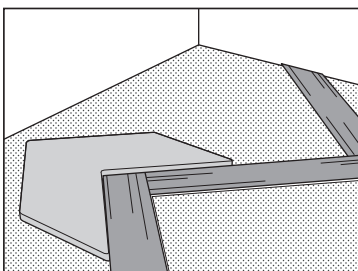
Take a strip A and cut it precisely from the corner of the strip at an angle of 45 degrees.



Step 4

Lay the first strips

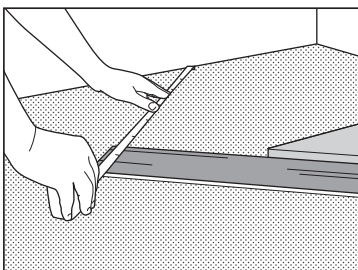
Place strip A with the cut side facing towards the side wall, keeping 5mm free for the expansion joint. Place a strip B against the end of strip A. Use a try square to get the strips perfectly aligned and lightly tap the joint with a Teflon hammer to click it together.



Step 5

Lay subsequent strips

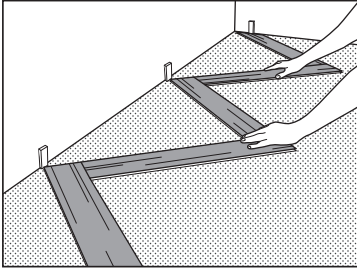
Repeat by laying a strip A against the end of a strip B, then lay a strip B against the end of a strip A. Use a try square to get the strips perfectly aligned. Make sure that the tongue side is facing inwards.



Step 6

Last strip of the row

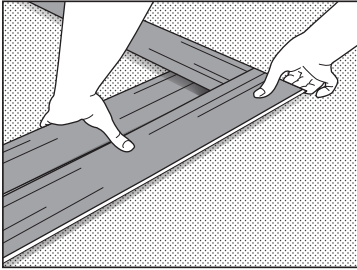
Measure the distance to the wall, including the width of the next-to-last strip, minus 5mm for the expansion joint along the side wall. Cut the strip at a 45-degree angle and put it in place.



Step 7

Slide the strips towards the wall

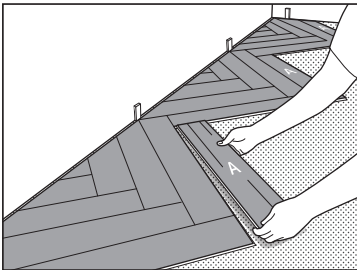
Place spacers against the back and side walls to create an expansion gap of 5mm. Carefully slide the first row of strips against the spacers.



Step 8

Fill the gaps

Fill the gaps by the wall by cutting strips to size. Start with strip B. Lift the installed strips and slide the cut strip B underneath. Lay down the installed strips and lightly tap the joints with a Teflon hammer to click them together. Repeat this alternately with strips A and B until the gaps are completely filled. Allow for the 5mm expansion gap along the wall.



Step 9

First A, then B

Continue with the second row by placing all strips A first. Then place all strips B. Repeat until you have reached the opposite wall. Fill the gaps by the wall as indicated in step 8, likewise allowing for the 5mm expansion gap along the wall.

Step 10

Complete installation

Remove the spacers and finish the whole thing off with a skirting. Note that the expansion joint must always be kept free and must not be sealed.

Disassembly

Use a disassembly wedge to disassemble the strips. Place the bottom of the wedge under the short side of the strip and press gently. Keep pushing the disassembly wedge under the strip until the top of the wedge is under the strip and push downwards. Repeat these steps on the long side of the strip.

