

Installation instructions

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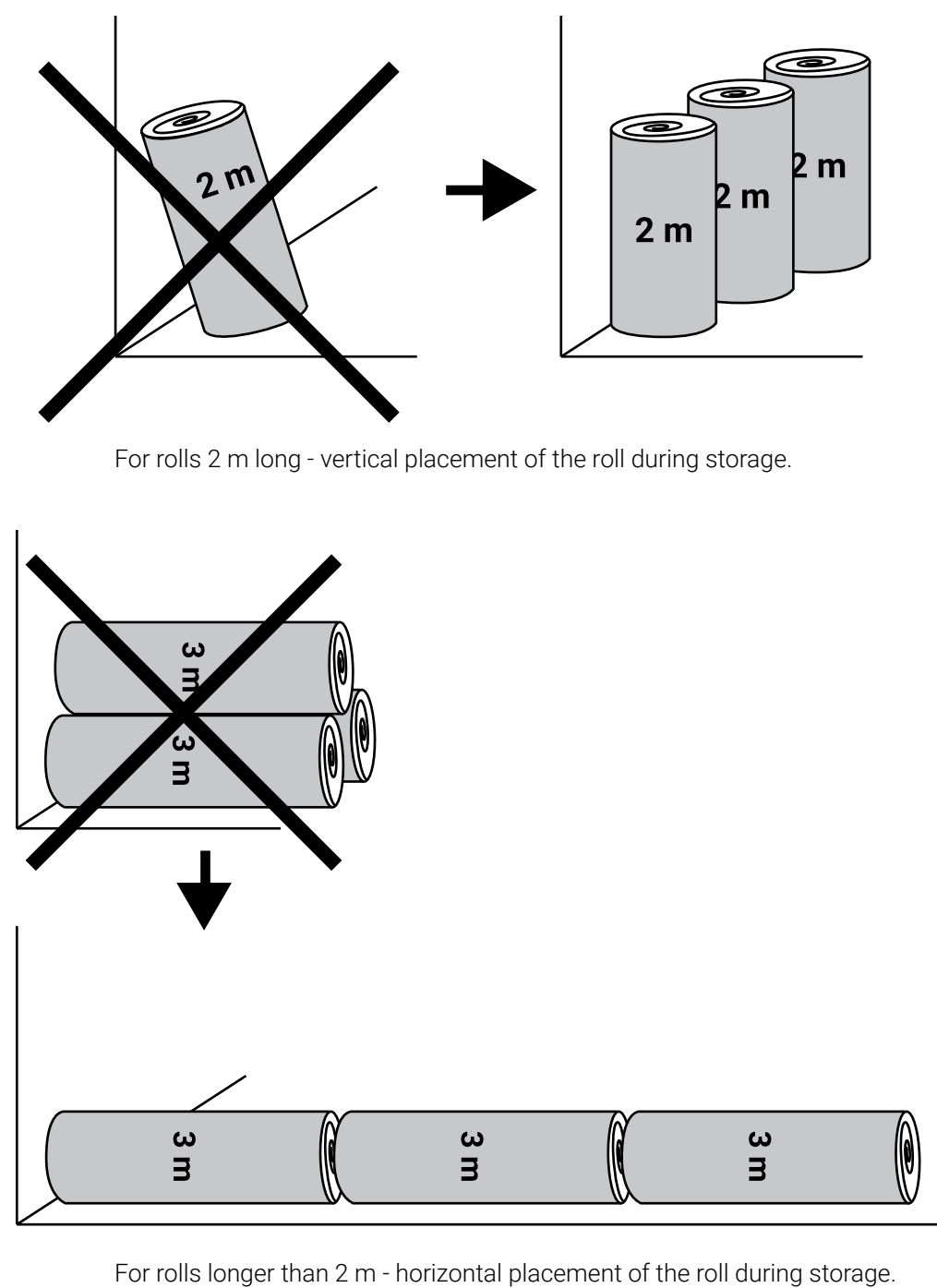
STORAGE

Rolls of vinyl flooring should be stored in a safe, clean and dry enclosed space, protected from any kind of pollution. The rolls must be protected from extreme temperatures (heat and cold), moisture, rust, rot, protected from any kind of contamination, impact or heavy damage.

It is best to store vinyl rolls in special shelves, made for that purpose. The shelves should be adjusted to the length of the rolls stored in them, so that the goods rest on the floor of the shelf with their entire length, a maximum of one row of rolls in the shelf. The floor of the shelf must also be clean and flat, without hard microparticles or sharp edges. Rolls can also be kept on the floor of the hall, if all the above conditions are met.

It is not allowed to store rolls of vinyl floor coverings together with organic solvents, nor with materials and objects that contain them.

The temperature in the room should not be below 10° C. When transporting rolls of vinyl floor coverings, they must not be thrown away or deformed, they must be protected from atmospheric precipitation. Cut pieces / cuts / of rolls of vinyl floor coverings must be transported in the form of rolls (rolled), with a tube obligatorily, if they will stay wound for longer. It is not allowed to press a piece of vinyl floor covering. Care must also be taken to transport vinyl flooring at temperatures below 0 degrees C.



UNPACKING AND HANDLING

Unpacking of the roll vinyl floor covering after its delivery to the facility where it is installed is planned in accordance with the temperature during transport: if the transport was at a temperature lower than 0°C, the roll must be unwound and relaxed at room temperature not lower than 15°C for 48 h. If the transport of the roll was at a temperature of 0 to 15°C, it is enough to unroll and relax the roll at room temperature not lower than 15°C for a period of 24 hours.

For best results, follow the manufacturer's installation instructions and use the tools and additional range recommended by the manufacturer. It is necessary to handle vinyl floor coverings with special care, and to ensure that all safety procedures are followed in order to avoid injury or damage to the floor covering. Before installation, it is necessary to check whether the vinyl floor covering has any visible damage, and if something is noticed, the current condition should be reported immediately to the representative of the manufacturer Tarkett.

If more than one roll is installed in the same room, rolls from the same production batch should be used and installed in order. The batch number is printed on the roll labels, for more information contact the Tarkett manufacturer's representative.

INSTALLATION

Installing vinyl flooring is easier than installing any other type of flooring. However, like any other work, installation requires certain skills when preparing the floor surface before installation, as well as for arranging, cutting PVC floor and gluing it to the surface. That is why it is better to entrust the installation to experts who have a certificate for performing this type of finishing work. It is important to remember that the manufacturer's warranty is valid **ONLY in the case of professional installation of flooring.**

SUBSTRATE TYPE AND THEIR PREPARATION

Substrate preparation

Quality substrate is the first condition that must be met in order for the installation to be done successfully, so you should check that the substrate is in good condition before starting the installation. It should also be noted that in most countries, the installer is responsible for accepting (approving) the substrate on which to install the installation and is responsible in case of any potential litigation or complaint.

The substrate must be flat, clean, free of debris of any kind, solid, without markings of any kind (no traces of felt-tip pens, pens, paint, markers of any kind, no traces of paint that could migrate through the back and cause discoloration), dry, hard, smooth.

Substrate absorbance must be checked and the substrate must not be exposed to moisture. The preparation and drying of the substrate and the installation process itself must be in accordance with the current standards of the country in which the vinyl floor covering is installed. The moisture content of the solid substrate must be below the maximum allowed, which is also regulated by relevant standards in different countries. Only graphite pencil is allowed for marking.

Substrate characteristics:

1. **Humidity:** Tarkett's recommendation is to check local regulations and humidity tests. It takes about 2 weeks for 1 cm of layer to dry the cement screed. Humidity should be below 2% (according to DIN standard relative humidity test, calcium carbide system).*
2. **Substrate absorption and porosity:** there are local regulations that should be checked before installing vinyl flooring. In general, the substrate is considered too absorbent if the cement screed absorbs a drop of water in a period shorter than one minute. In that case, it is necessary to use a primer before the leveling compound, the first coat to be diluted 1/3. The substrate is said to be non-absorbent, when the time of absorbing a drop of water is more than 10-15 minutes. In that case, the primer should be used undiluted. Normally absorbent substrate is from one to ten minutes. Before using the primer, be sure to check the manufacturer's instructions and follow the same.
3. **Substrate levelness:** Tarkett's recommendation is to check local standards and regulations. Example: The DIN 18202 standard allows 4 mm uneven surfaces at a distance of 2 m.
4. **Cracks:** all cracks in the substrate must be repaired before installation. Microcracks should be primed. Cracks and working dilatations in the substrate should be deepened with a concrete cutting tool, cleaned, vacuumed and filled with epoxy or PU resin and sprinkled with quartz sand. Expansion gaps (structural joints of the building, i.e. the facility) are closed by inserting or folding special profile strips. Leveling compound and floor coverings are interrupted on both sides of the expansion or construction gap during installation. Insulation joints are filled with soft materials (sponge or styrofoam).

*(relative humidity test, calcium carbide system ...)
For example: in the UK, the relative humidity of a concrete surface must be lower than 75%, and less than 2% measured by the CCM method.
- In North America, the ASTM F-170 recommends a water-cement ratio of 0.40 to 0.45.
- DIN 18560 : Cement screed <2%; anhydride <0.5%

NEW SUBSTRATE

Concrete / cement screed, preparation: water-based primer + leveling compound adapted to the class of use of vinyl flooring.
Important: Concrete and cement screed must be waterproofed.

Wood, chipboard and plywood:

1. Chipboard must be moisture resistant, at least 19 mm thick;

2. Plywood must be moisture resistant, at least 12 mm thick;

3. Chipboard (both chipboard and plywood) must be processed by a machine;

4. Wooden boards (chipboard and plywood) must be arranged as follows: screws, nails and glue; fixations at a distance of 15 cm from the edge of the plate, at 30 cm from each other (screws or nails). Screws and nails must be well fastened and screwed so that their head does not protrude on the surface of the plate. After fastening, sanding is done so that all wooden boards are at the same level. The distance between the panel construction and the wall should be at least 10 mm.

Preparation of wooden boards before installation:
The first method is to treat the panel joints with an appropriate coating (fillers) plus a primer for wooden substrates over the entire surface.
The second method: treating the entire surface with a special primer for wood substrates or resin, plus leveling compounds with fibers, because the wood substrate is elastic, regular mass would crack.

BITUMEN BASE: emulsion basis (primer) or bitumen-based primer plus leveling compound adapted for bitumen. (Bitumen is no longer used as a substrate due to its fire-fighting properties, as it is flammable).

PLASTER BASE (moisture must be below 0.5%). Plaster substrate is made faster than cement and dries faster, it is poured and easier to self-level. The plaster base is sanded after drying and then the appropriate primer is applied (for this purpose), it is not necessary to do the leveling, i.e. a self-leveling compound is applied.

METAL: anti-corrosion primer and glue are applied, after the substrate is thoroughly cleaned of any dirt and oil residues.

OLD SUBSTRATE

TERAZZO OR CERAMIC TILES: the first step is to check whether the tiles are still well glued to the substrate, for stability (as with wooden boards) and whether there is waterproofing under them. It is very important to thoroughly clean / wash the tiles or terrace from the remains of cleaning agents and fillers. An appropriate emulsion primer and a suitable leveling compound are then applied.

PARQUET (It is assumed that it is glued, and not a floating installation, because vinyl flooring must not be installed over floating parquet): the first step is to check that all boards and pieces are in place and fixed to the substrate. After that, a suitable primer adapted to the wooden substrate is applied, as well as a fiber-reinforced leveling compound used for this purpose, i.e. a wooden substrate.)

INSTALLATION OVER THE OLD FLOOR COVERING

TEXTILE FLOOR COVERINGS: textile floor coverings must be completely removed, scraped, and then a leveling compound intended for that suitable space (use class) is applied.

VINYL FLOOR COVERINGS: the recommendation of the manufacturer Tarkett is to remove the old vinyl floor covering (for safety, fire-fighting characteristics, ... etc). After uninstalling and removing the old vinyl floor covering, an emulsion primer and leveling compound are applied to the substrate, adapted to the space where the new vinyl floor covering is installed. As an exception, it is possible to install vinyl flooring over old homogeneous vinyl, which is in good condition and well attached to the substrate, and this can only be done in smaller spaces, with lower frequency and lower class of use. There are two possibilities. The first is the thorough cleaning and degreasing of the surface and then the installation directly after the application of the acrylic-based adhesive which is intended for the installation of vinyl over vinyl. Another possibility is the application of cement-based leveling compound, in accordance with the manufacturer's recommendation.

Note: for installation over old floor coverings, specific safety measures must be observed, as well as local regulations. In high-frequency spaces, the old floor covering must be removed before installing a new one.

UNDERFLOOR HEATING

Underfloor heating should be switched off at least 48 hours before application (screed application) and / or floor covering installation. Underfloor heating can be switched on again 48 hours after installation. Initial temperature 5 degrees and then gradually increase by 5 degrees C every day.
In the case of under-floor heating, it is recommended to do hot welding with electrodes, i.e. to weld the joints. This rule also applies in low-frequency residential areas (such as the bedroom). It is important that there is a self-regulating under-floor heating system, pipes installed in the screed, hot water or electricity. Under-floor heating should be checked before insertion, i.e. installation of floor coverings.

Important note: Heterogeneous vinyl floor coverings on the textile backing are not recommended for installation in rooms with under-floor heating.

The temperature of under-floor heating should never exceed 27 degrees C. It should also be taken into account that when installing vinyl floor coverings, the air temperature in the room should not be below 15 ° C.

INSTALLATION MATERIALS

PRIMER: There are different types: water-based, solvent-based, polyurethane, epoxy (used for vapor barrier, i.e. moisture barrier). Regulates the absorbency of the substrate, where the drying time could be short. (Note: check the absorbency of the substrate, this is the first step). Improves the ability to bind the leveling compound to the substrate. Applying a leveling compound without prior application of a primer can cause delamination or cracks in the leveling compound. As a rule, the primer is applied with a brush or roller, the amount applied depends on the plane of the substrate on which it is applied, on average from 80 to 120 g per m². It is important to always follow the manufacturer's recommendations.

LEVELING MASS: a smooth cement-based mass used as a final coating for interiors where floor coverings are going to be installed. The function of the leveling mass is to correct the porosity of the substrate and to level the substrate and allows even application and drying of the adhesive over the entire surface. Strictly follow the manufacturer's recommendation during use.

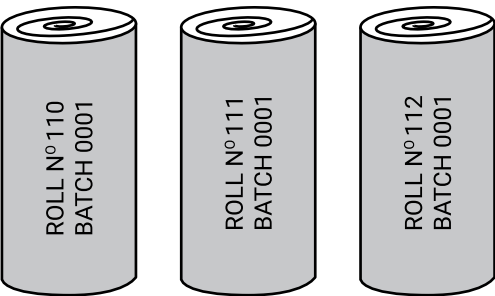
AGHESIVES: Although Tarkett may recommend adhesives from certain manufacturers, Tarkett does not guarantee recommended adhesives. It is the responsibility of the adhesive manufacturer and the contractor to use the appropriate products (adhesives intended for the appropriate premises, i.e. purpose, substrate and vinyl floor covering) and to ensure that the manner in which they are used is in accordance with the manufacturer's recommendation. For a good choice of adhesive, it is necessary to check: compatibility with the back of the floor covering, characteristics of the back (whether it is smooth, lattice, etc.), porosity of the floor covering, porosity of the substrate (whether it is absorbent or not), product quality and performance.

The type of floor covering, its use, as well as the type of base on which it will be installed, determine which type of spatula and adhesive will be used. In accordance with the manufacturer's instructions, as well as the conditions at the installation site, time of drying and installation are determined. Applying the glue is done with a notched spatula.

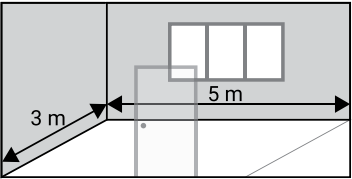
Before the vinyl is placed on the substrate on which the glue was previously applied, it is necessary to check whether the water and other volatile substances have evaporated ("finger test"). The roller must be used for bonding, to ensure the bonding of the floor covering to the adhesive.

INSTALLATION PROCESS

General rules: joints should be located away from the busiest places in the room. The rollers should be installed in the direction of the light. In hallways, rolls should be installed in the direction of travel. For each continuous surface, rolls from the same production batch should be used and rolls should be installed in that order.

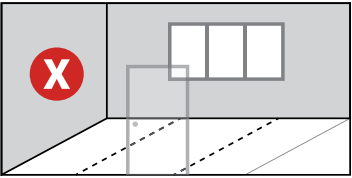


1. Room dimensions



If the room is of a regular square shape, the rolls are placed in the direction in which the light falls. In long rooms (e.g. hallways), it is best to place the roll along the length of the room.

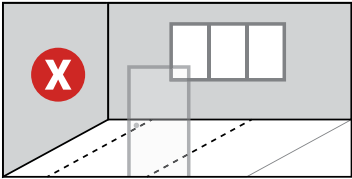
3. Incorrect installation



✗ Poor material utilization.

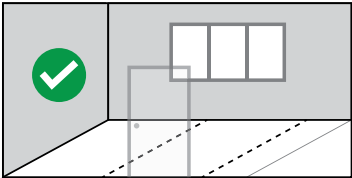
Measuring: It is necessary to measure the maximum width and length of the floor surface in the room, including niches and wooden openings. Taking into account the curvature of the walls, it is necessary to add 5 to 10 cm to each measure. In order to avoid seams, it is necessary to choose the width of the roll that best suits the width of the room in which the floor is installed.

2. Incorrect installation



✗ The connection is located at the entrance to the room.

4. Proper setup



✓ Good material efficiency.

If the vinyl floor covering in the room is installed in several parts, it is necessary to take into account the tolerance due to the choice of pattern / pattern. A reference line should be determined in the room in relation to which the pieces of vinyl floor covering to be installed in that room will be "aligned".

Unpacking: heterogeneous vinyl flooring should be unpacked in a dry and clean room at a temperature not lower than 15 ° C. (Note: see unpacking and handling section)

Preparation: vinyl flooring is laid with a pattern on top. If the wall is flat along its entire length, the vinyl floor covering is placed so that it fits directly against the wall itself. If the wall is not flat, then the vinyl floor covering is placed so that it overlaps the wall by a few centimeters.

Cutting edges: before cutting the material, it should be firmly fixed with pieces of adhesive tape on both sides, in order to prevent movement. To cut the outer corners, press the floor covering to the point of contact between the wall and the floor, make a small incision (0.3-0.5 cm) at the bottom of the wall corner right to the floor (to prevent tearing) and spread the floor covering. To cut the inner corners, gradually cut the corner of the piece diagonally, parallel to the floor, until the material lies exactly in the corner. In order to accurately trim the edge, it is necessary to press the vinyl floor covering under the arm, against the wall. With scissors, draw a line at the place where the floor is bent, and cut off the excess floor with a knife, pressing it against the wall with a metal ruler or spatula. After cutting, the material must not rest directly on the wall ; in order to avoid deformation, it is necessary to leave more material, 5-10 mm from each wall. **The final cutting should be done gradually, only when the material sticks:** the excess material can always be cut off, the lack can not be compensated.

Fitting of patterns and seam joints: in order for the seams to remain invisible, it is necessary for the contact edges to overlap with each other until the pattern fits, then it is necessary to press the joint with a heavy object and cut the seams with a metal ruler, both layers immediately. Then all that remains is to remove the cut pieces. In order to differentiate the shades of the patterns of the joined pieces of vinyl floor covering as little as possible, it is necessary to connect the end of one piece with the beginning of the other, i.e. to place the pieces according to their position in the roll.

Gluing: Tarkett's recommendation is that vinyl flooring is glued to the substrate, regardless of the surface of the room. It is necessary to carefully twist one third of the prepared material and apply the appropriate adhesive to the substrate with the appropriate tools, following the instructions of the adhesive manufacturer (Figure 1). Slowly unroll, lay the material in place, taking care that air residues do not form bubbles, and leaving the necessary gap to the wall. It is important to use a cork press, when unrolling the roll and laying it on the substrate on which we previously applied the glue (Figure 2). This prevents air debris from forming bubbles. After that, it is passed over the surface of the installed vinyl floor covering with a roller, rolling it, so that the gluing is flat and even. The weight of the roller should be at least 50 kg (Figure 3). To install a vinyl floor covering with a joint, adhesive is also applied to the substrate (from the middle to the end) and one strip is bent, the glue is distributed evenly on the surface with a spatula or brush. Then a strip of vinyl flooring is laid on the substrate (before laying, a finger test must be done) and the roller is passed over the entire surface (except for the joints), in the direction from the middle to the ends. The same is repeated with another strip of vinyl flooring that is installed in the same room, with the obligatory check of the fit of the drawing. The edges should be closed with a skirting board. After gluing, the floor must be dried for at least 24 hours at a temperature of at least 15°C and humidity of 70% or less.

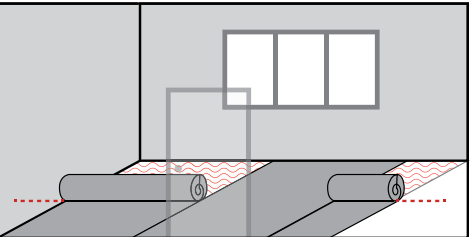


Figure 1.

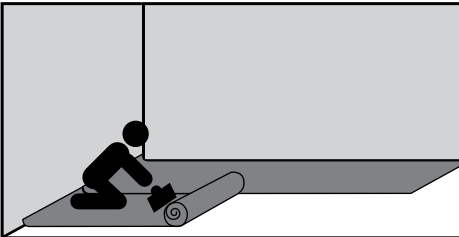


Figure 2.

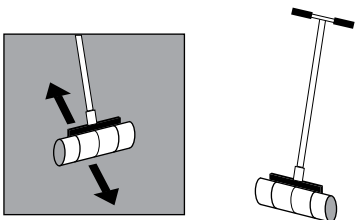


Figure 3.

Closing joints with cold weld: Cold welding is done 24 hours after installation. The ends of the two pieces are joined together so that the designs, i.e. the patterns, fit together. The part where the parts of the two materials are folded is cut in one or two strokes, if it is a thicker material. After that, the joint is glued with a special tape that is centered over the joint, then a special knife is used to make a slit in the tape and special glue for cold weld is applied deep into the seam, i.e. into the slot. It is important to apply enough glue along the entire length of the slit.

The needle tip of the tube is placed in the joint and slowly moved along the joints (seams) so that the glue penetrates through the entire depth. Ten minutes after applying the adhesive, the tape should be dry and should be carefully removed. The joints become visually invisible. The joints can be trampled after 24 hours.

For heterogeneous vinyl floor coverings installed in high-frequency and commercial spaces, it is necessary to work with warm weld.

For rooms with an area of less than 20 m² (home use, without wheelchairs), it is possible to install a floor covering without gluing to the substrate by fixing the vinyl floor covering with double-sided adhesive tape in places where it is assumed to have the highest load. It is necessary to unscrew the ends of the PVC floor and stick pieces of double-sided adhesive tape 20 cm wide in the shape of a cross in places where it is assumed that there will be the greatest load. Then the floor covering is unwound and checked for flatness. After we have made sure that the floor covering is installed correctly, we press the adhesive tape.

After installation, it is necessary to clean the work surface from traces of glue, stains and dust. Prevent contamination by protecting the surface. The space can be trampled after 24 hours from installation, used 48 hours after installation, and furniture can be brought into the space 72 hours after installation.

HOT WELDING

The goal of hot welding is to efficiently and permanently connect the edges of two vinyl floor coverings, when they are installed in the same room. The recommendation of the manufacturer Tarkett is that hot welding must be done when installing heterogeneous vinyl floor coverings in commercial spaces with a high frequency of people, as well as rooms where there is underfloor heating. It is also mandatory in rooms where water could spill.

Hot welding with electrodes provides permanent protection against the penetration of water, dirt and dust into the joints between two pieces of vinyl flooring that are placed (glued) in one room.

Grooving should provide good contact between the welding electrode and the vinyl floor covering and is done when at least 24 hours have passed since gluing. Before grooving, the two pieces of floor covering should be glued to each other, without gaps or folded with a double cut. The recommendation of the manufacturer Tarkett for heterogeneous vinyl floor coverings is that the depth of the groove (channel for hot lime) should be 2/3 of the total thickness for compact floors, and for foam it is recommended that the depth of the channel be up to the back foam layer. The injector should be HOT SPEED, temperature 350 degrees C; speed 2m per min, pad thickness used for first cutting 0.5mm for compacts and 0.7mm for foam vinyl floor coverings. Grooving of hot weld channels can be done with an electric grooving machine or manually, with a chisel.

Welding: it is done with an electrode, a welding rope, diameter 4 mm. The electrode is placed under a jet of hot air to connect the edges of the two floor coverings. How successfully a hot welding is made depends mostly on the following factors :

- Welding machine temperatures
- The speed at which we weld
- The pressure applied to the electrode.

Hot welding can be done

- Manually, with a hot air blower or high speed syringe.
- With a special machine for hot welding.

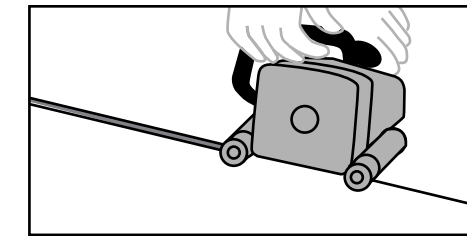
Cutting - is done after welding, with a special knife, to remove excess electrodes. The knives used are the "crescent" or "burek knife", as well as the Mozart knife.

The first cutting is done immediately, with a pad of appropriate thickness. The second cutting is done after about 15 minutes, when the electrode cools down (during cooling it shrinks), without a pad.

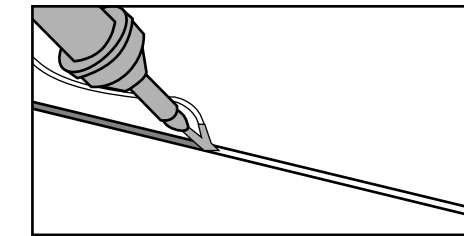
The problems that most often occur with hot welding are:

- Excess electrode is not scraped in 2 strokes, one after the other;
- The furrow is too deep or too large;
- The electrode did not cool before the second cut;
- The syringe temperature was too high or welding was not done fast enough;
- The syringe temperature was not high enough or welding was done too fast.

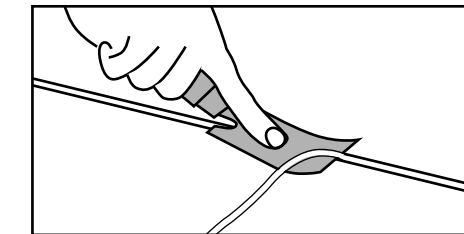
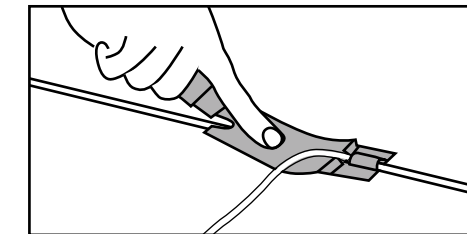
1. Grooving



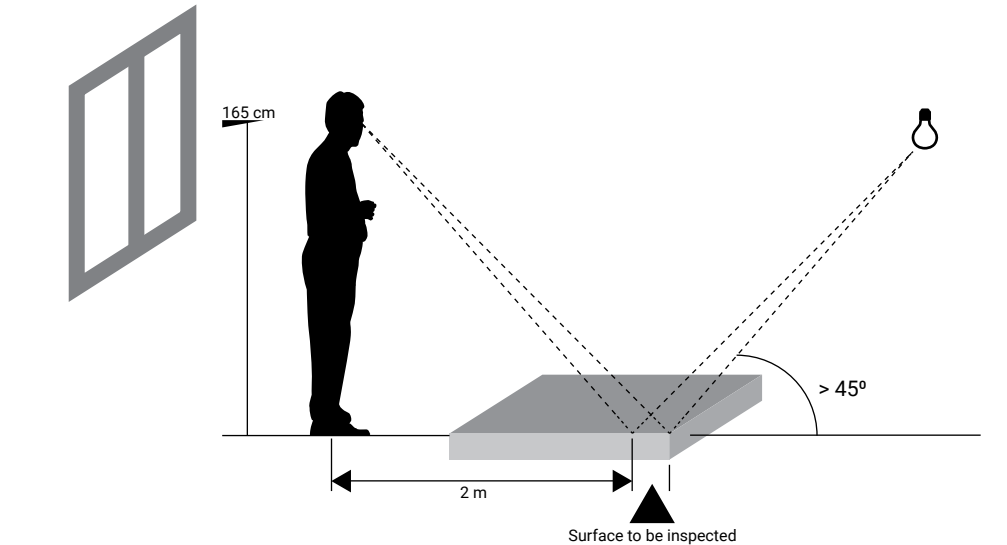
2. Welding



3. Removal excess (x2)

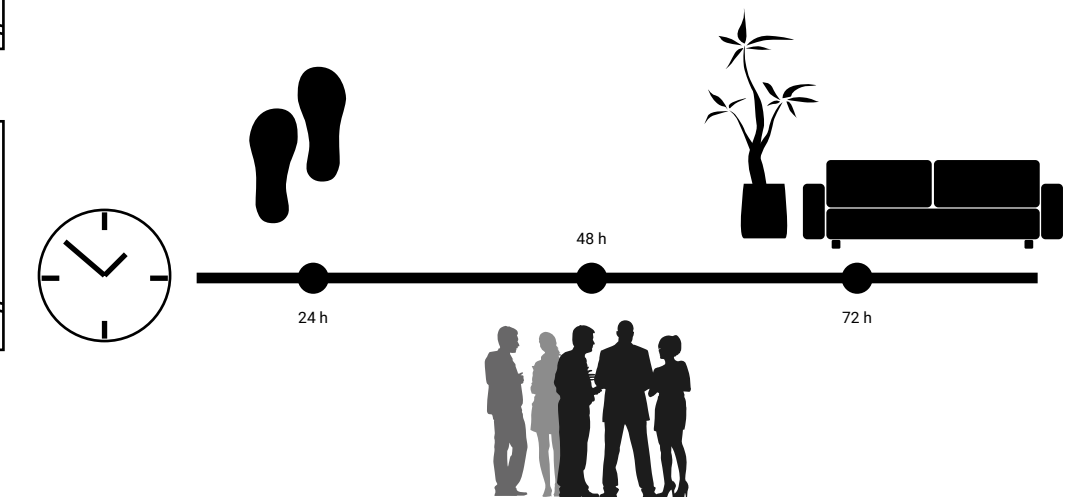


CHECK



Windows and glass portals should be located behind the observer, and artificial light (bulb, neon lamp ...) should come at an angle greater than 45 °.

AFTER INSTALLATION



Walking on the installed floor is allowed after 24 hours. A higher frequency of passes is allowed after 48 hours. Entering furniture and moving in after 72h.