

Installation - O.R.C.A. Moisture Defense Technology

Important notice: prior to and during the flooring installation, please read the installation instructions completely! The flooring procedure is accomplished according to ATV DIN 18365.

Follow these instructions precisely, in order to retain full rights to claims under the guarantee.

Various possibilities for installation are offered depending on the surface area to be used:

1. Quick and easy installation without glue

2. Installation with Clickguard™: Optionally, floors laid in commercially used rooms as well as in bathrooms for private use can be sealed. Clickguard™ protects the flooring from the top down for the long-term against the effects of moisture. The floor lamination can be removed later and newly installed. When using Clickguard™, please follow the installation instructions. In the event that a sealant is to be used, sufficient quantities of Clickguard™ are to be applied to the tongue-spring side [9i] (1 layer lengthwise and 1 layer for the width). The excess Clickguard™ should be scraped off from the surface with a plastic spatula after max. 15 – 20 minutes. Eventual remnants (residue) can be removed with household solvent cleanser.

Preparation: Please store the packets 48 hours prior to installation under the same climatic conditions (temperature and moisture) as the actual installation process [1]. Important pre-condition for proper fitting and long-term durability of the laminated flooring is a room temperature of 15 – 30°C / 59 – 86°F and a relative humidity of around 40 – 70%.

Necessary Materials and Tools: polyethylene-foil, aluminium jointing tape, separation shims, footfall sound insulation, saw, pencil, folding ruler [2]. If necessary: spacers, hammer, Clickguard™ joint sealant.

The sub-surface that the laminate flooring will be applied to must be furnished in such a way that the laminate flooring can be installed as required by the manufacturer's instructions. Appropriate sub-surfaces are, among others, mineral sub-surfaces (such as floor screed, concrete, asphalt), particle-board sheets and timber floor boards. The sub-surface must be absolutely even, dry, clean and stable. Floor irregularities measuring more than 2 mm per 1 meter / 0.08" per 40" length must be evened out by a professional (according to DIN 18202) [3]. The evenness of the sub-surface can be best ascertained by means of a straightedge or a spirit level. When installing onto a mineral sub-surface such as concrete, cement-screed, anhydrite-screed or flagstone (among others), a moisture measurement must first be carried out. The following remnant-moisture levels in the screed may not be exceeded, prior to installation [9b]:

Cement-screed: without underfloor heating < 2,0% CM
Anhydrite-screed: without underfloor heating < 0,5% CM

No offsets, steps or similar unevenness must be present. Construction rubble such as plaster residue or similar must be removed completely. Cracks in the ground must also be considered as critical. In order to assert full claims for damages, the provisions of ATV DIN 18365 and § 4 para. 3 VOB/B must be observed.

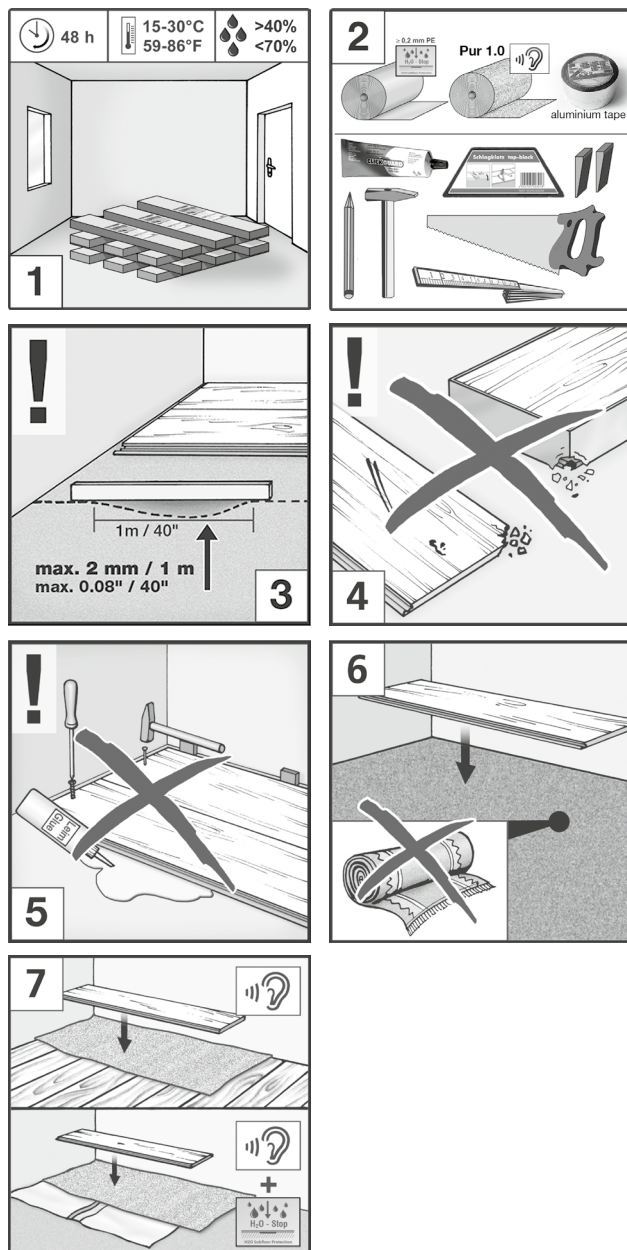
Check the panels under good lighting conditions for irregularities. Boards with visible defects outside the applicable tolerances, such as deviations in height, gloss, dimensional and color, must be sorted out and replaced free-of-charge [4]. For already-fitted or previously-worked panels, a reclamation claim from you is no longer possible.

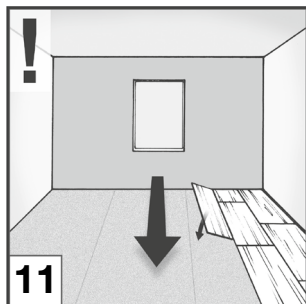
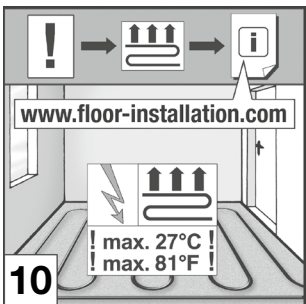
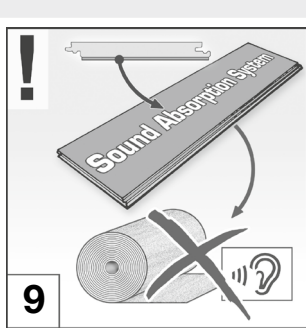
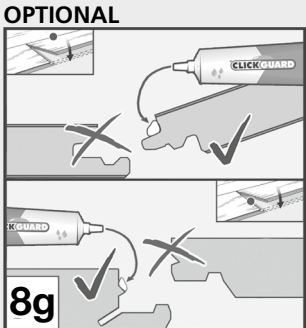
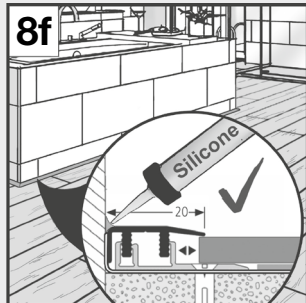
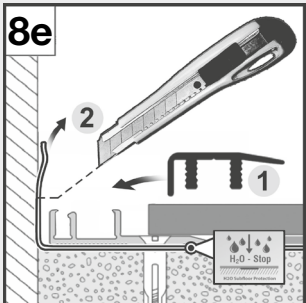
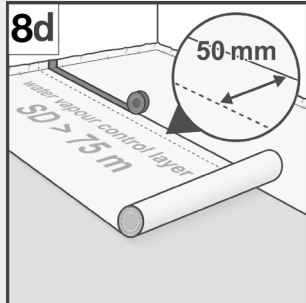
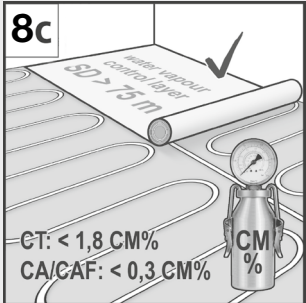
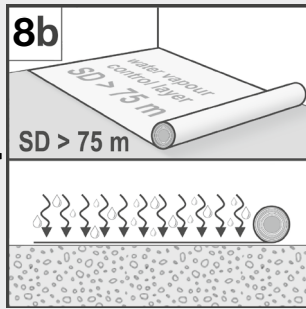
The floor is installed as a floating floor and must not be glued, screwed down, nailed or fixed in any other way to the subfloor. The placement of very heavy objects, such as fitted kitchens, also has a fixing effect. It is recommended to install fitted kitchens and cupboards before laying and to lay laminate floor only up to behind the plinth panel. In the event of failure to comply with these requirements any claims for damages shall be excluded [5]!

If gluing is chosen, the following adhesives have been tested and approved by the manufacturer: UZIN MK92s-KE86, MAPEI ULTRABOND ECO S958 1K. Other adhesives must be agreed with the adhesive manufacturer for the area of application. The installer is under the seller's warranty to provide professional adhesion.

Carpet flooring must be removed and is not suitable as a sub-surface for the lamination flooring. The carpet under the floor causes a springiness and too much pressure in the edge areas when walking on the floor. This destroys the groove-tongue connection and leads to the formation of a gap. The carpet flooring must also be removed for hygienic reasons. Resulting moisture may result in mold and bacteria forming [6].

In the case of a wooden sub-surface such as installed sheets or floorboards, no polyethylene foil may be installed. Prior to installing the laminate flooring on a mineral-based sub-surface, (concrete, screed, etc.) it is crucial that a suitable vapour barrier sheet (PE-foil) is put down (with 1-2 centimetre/0.40"-0.80" 90° edging at the sides- like a shallow tub) as a protection against moisture. The tile channels are installed next to one another and overlapping each other by about 50 mm / 2", and fixed with special aluminium jointing tape. On all substrates, a system-based insulation underlay is recommended to improve sound minimization. The insulation underlay is installed edge to edge, i.e. is not overlapping [7]. It is important to ensure that the joints of the





insulation underlay do not lie directly under the floor joints.

This laminate is suitable for use in private bathrooms. Please always observe the installation instructions [8a - 8g]!

The use of underfloor heating (hot water / electric) is only possible if expertly laid and provided that the heating operates properly [10]. The supply and installation of the underfloor heating system must be state of the art and it must be commissioned by a specialist company in accordance with the relevant heating criteria. Accordingly, a signed heating-up and cooling-down protocol must be in place. Underfloor heating must be laid and operated across the full area of the room. Partial underfloor heating is not permitted. A temperature of 27°C on the surface adjacent to the underside of the flooring should not be exceeded at any time anywhere over the area. Any complaints in connection with the operation or the installation of a floor heating system is excluded if the requirements described above are not met. Claims can be asserted solely within the scope of our general warranty and guarantee provisions. For underfloors with or without underfloor heating, the specialist installer must perform and record the necessary CM measurement prior to installing the floor. The following limit values apply to residual humidity [8c]:

| | |
|-----------------------------|---------------------------------|
| with calcium sulfate screed | 0.3% CM with underfloor heating |
| with cement screed | 1.8% CM with underfloor heating |

The water vapour diffusion resistance SD of the installed vapour barrier foil [8c] must have a value of > 75 m according to EN 12086. The film must be installed in a way that guarantees an overlap of at least 50 mm. Then the joints are sealed completely using tape.

The requirements made of the tape are identical to those made of the film, and the tape must ensure permanent adhesion [8d]. For hygienic reasons, we do not recommend using underlay material in bathrooms.

The edges need to be sealed by pulling the vapour barrier foil upwards to the adjacent parts. After the closing rail with a top profile has been mounted, the film is cut off above the top profile so that it is flush with this part [8e].

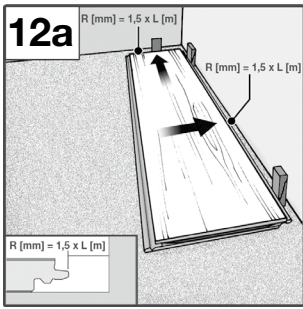
Then the joint is sealed with a silicon sealant for bathrooms [8f].

In order to avoid water penetrating into the flooring, optionally, during installation every tongue side of each panel can be coated with ClickGuard™ before being clicked in and sealed accordingly [8g]. Always ensure that sealing is applied without any gaps, otherwise water can penetrate the floor and cause mould and unpleasant odours.

For floating installation, the thermal resistance of the floor and the insulating substrate must be observed. The total of the thermal resistance of all components must be ≤ 0.15 m² K/W in accordance with the requirements of DIN EN 14041. When using the insulating materials which do not come as part of the range of accessories, any warranty is excluded in the case of floating installation on heating screeds with regard to compliance with the effective maximum permissible thermal resistance of the overall construction.

If the laminate floor already has an integrated insulation underlay, then no additional insulation underlay should be used [10].

It is recommended that the panels be sorted according to the desired pattern lines and (if necessary) colour nuances prior to installation. You should start working with packages of laminate flooring immediately after opening!



| Length(L) | 8 m |
|-----------|-----------|
| 8 m | R = 12 mm |
| 10 m | R = 15 mm |
| 12 m | R = 18 mm |
| 15 m | R = 23 mm |
| 20 m | R = 30 mm |

Installation: It is recommended that you lay out the panels in the direction of the length and the source of light [11].

For unusual wall angles, you must first transfer the profile of the wall-line to the first row of panels and saw the panels accordingly. Measure the spatial dimensions of the room prior to installation. In the event that the first row of panels proves to have a width of less than 5 cm / 2", you must then evenly partition the remaining length (excess length) among the first and last row of panels in such a manner that both rows are cut to size with the same (symmetrical) panel-width.

Recommendation: For improved ease of installation, a system-based insulation underlay is recommended. If no such insulating base is used, then the hammer and hammering block should be used for secure transverse joint locking.

Begin your installation in the left corner of the room. Lay out the first panels with the tongue-spring side facing the wall and secure the edge separation (gap) with shims. An edge gap R (expansion gap in mm) to the wall is essential. Maintain the gap around heating pipes, pillars, door stoppers, etc. [12a, 12b]. Use the following formula to calculate the wall gap:

$$R \text{ [mm]} = 1.5 \times L \text{ [m]}$$

Insert a second panel with the facing edge (short side) at an angle of 30° into the groove profile of the previously laid panel [13] and then lay flat on the floor. Make sure that the longitudinal edges are aligned. Ensure that they are not offset and form a straight line. This is necessary to insert the panels without gaps into the longitudinal profile when laying the second row of panels.

Click in further panels until the end of the first row in the same manner.

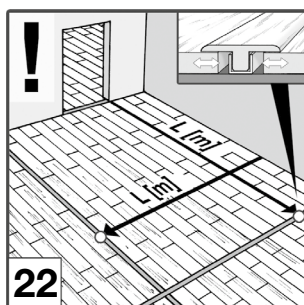
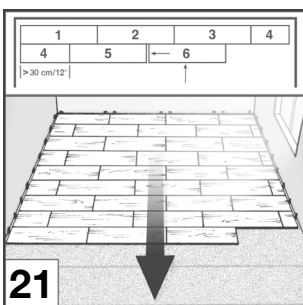
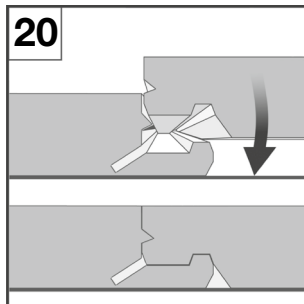
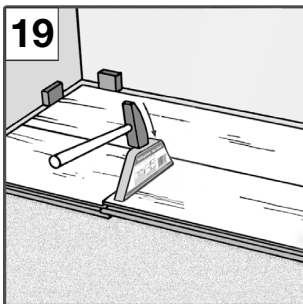
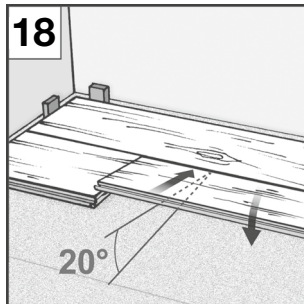
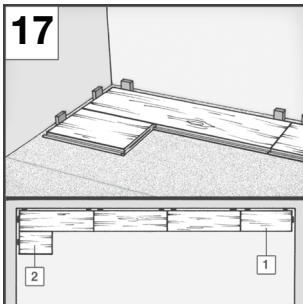
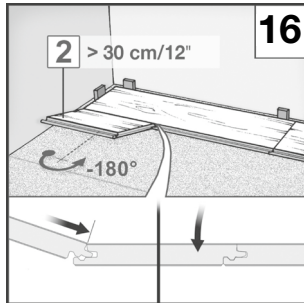
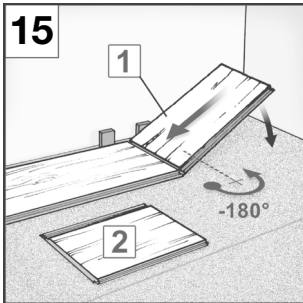
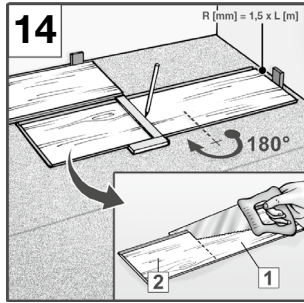
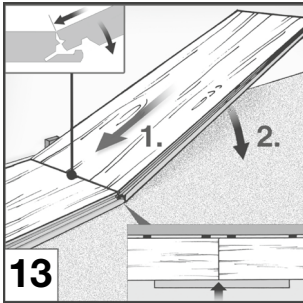
Turn the last panel in the row [14] by 180° for adjustment / trimming; place the decorated side up next to the existing row (groove cheek to groove cheek) on the right side of the wall. Take into account the edge gap R (expansion gap in mm) on the front side. Mark and cut the panel lengths. The last panel of the 1st row is also inserted at an angle of 30° into the groove profile of the previously laid first panel and then laid. Make sure that the longitudinal edges are aligned [15]. Ensure that they are not offset and form a straight line.

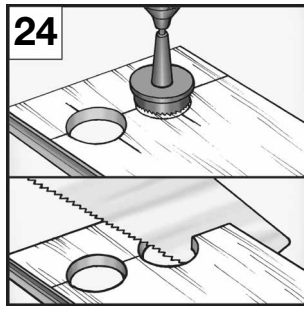
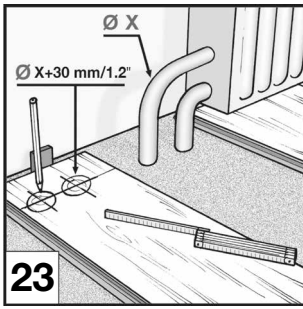
In order to avoid splintering of the edges, the decorated side should face down when using electrical jigsaws or hand-held circular saws. Otherwise, cut down from the top of the panel. Begin each new row with the remnants (at least 30 cm / 12" in length) of the previous row [21].

Begin the second row with a half panel (length < 95 cm / 37.40") or with a remnant panel (length > 30 cm / 12") [16, 17]. Insert the panel section length-wise in the groove profiling in the first row and lock it in place / bend it [17, 18]. The transverse joint must be offset by at least 30 cm / 12" from row to row.

Place a second panel length-wise in the groove profiling of the panel area and push it to the left at an angle of 20° to the panel already in place [19]. Then push it downwards and press from above until you hear an audible click [20, 21]. In doing so, ensure that the panel is inserted and guided cleanly through the longitudinal profile. If no system-related insulation underlay has been used, use a hammering block and a hammer [20] to lock the two panels.

Expansion gaps are recommended (at least 2 cm wide) for installation areas greater than 12 m in length or width, and in rooms with a lot of corners and rooms with different climatic conditions. [22]. This allows the floor to respectively expand or contract during climatic changes. Keep this in mind when installing flooring through one room to another. In this case, the surfaces in the area of the door frame must be interrupted. Expansion joints can be properly masked with corresponding profiles. The movement gaps may not be filled with cables or other materials. Please observe the requirements of the ATV DIN 18365. The floor screed joints from the ground need to be adopted. The design of the movement joints must allow for the same movement options.





For heating-radiator pipes, holes that are drilled 3 cm / 1.2" larger than the pipe diameter must be avoided. A "fitting piece" should be cut out, glued, fitted in and fixed in place with a wedge until the glue has dried. Then cover the recesses with a radiator-sleeve [23, 24, 25].

Wooden doorframes should be shortened enough that a panel with footfall sound insulation including 2 – 3 mm / 0.8" – 1.2" gap can fit underneath [26, 27].

After installation, remove the separation wedges.

Achieve a perfect finish by fastening the skirting board clips along the wall with a spacing of 40 - 50 cm and attach the matching O.R.C.A. skirting boards [30].

Cleaning and Maintenance

Remove dirt by sweeping or with a vacuum suitable for hard floors [32].

Only use the cleaner recommended by the floor manufacturer for routine maintenance cleaning of floors with O.R.C.A. technology. Polish and cleaner containing care additives, such as wax, oil or similar, are not suitable for cleaning floor surfaces. The floor must not be polished.

Wipe up foot-prints and dirt with a thoroughly-squeezed and drip-free cloth. Standing water should be avoided in all circumstances. This increases the accident risk! Wet to be wiped up immediately [32].

Be particularly careful with flower pots, vases, etc. placed on the floor. Use a waterproof base.

Stubborn spots should be selectively cleaned and removed with a suitable cleanser spray or acetone. Do not apply additional sealants to the floor surface.

Attention! Protect the flooring from scratches or indentations! Use a sufficiently large doormat around the entry areas.

Furniture feet made of wood, metal or plastic must be furnished with felt protectors. Office chairs with soft rollers (DIN 12529) are only to be used [33], or lay down a commercial quality protective matt. Following these instructions will help maintain the value of your floor and retain the full warranty claims.

Lifting or removing

It is possible to replace or remove panels that have been laid as floating flooring in living areas and commercial areas without causing damage by first releasing the whole row along the long side by angling it to free it from the locking mechanism [34]. Next, the panels, while lying flat on the floor on the head side, should be bent on the narrow side and released from the bonding [35]. Please be particularly diligent and careful when undertaking this work in order to avoid damaging the tongue-and-groove sections.

