

# Installation Guide

## Hard Line



**HØRNING Hard Line is a special floor made after a new and patented process.**

The product is composed by birch veneer, HDF core and 0.7 mm oak layer. But by adding wood powder, a hardness is achieved that is more than 2 times higher than normal for oak. You will thus get a natural wood floor that fits all environments, privately as publicly.

Hard Line comes in oak with several finished finishes and sorts. The total thickness is 11 mm

The G5 click system makes mounting fast and hassle free. There are micro bevel on all 4 sides.

Hard Line can be mounted floating or fully adhered to all solid and stable surfaces - also with under-floor heating.

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## Receipt of goods and quality control

By the delivery of the material the building must be dry and free of construction humidity, such as bricklaying and painting. Never have the floor delivered until the building is sealed, dry and warm, and the humidity levels are under control. Carry the material inside immediately after delivery, do not leave them outside under any circumstances.

Carry the floor into the room where it is to be installed – and stored before installation. Make sure to carry out a detailed quality check of the flooring as well as of other related materials that you have received before signing the freight note. Any complaints regarding visible defects must be made in writing before the floor is installed and no later than 8 days after receipt. A floor which has been installed has also automatically been approved.

## Contractions and expansions

The moisture content in wood floors will always seek to adjust in equal weight with air relative humidity (RH) and temperature. The tree absorbs and releases moisture by changes in the relative humidity. It happens in all the wooden floors, but the movement of wooden floors in form of contractions or expansions (swelling) depends on product type, wood species, thickness and surface treatment.

In practice, it is often necessary to know how much a floor-board or an entire floor contracts or expands. A commonly and internationally used realistic average used wooden floors of oak, Douglas, beech, oak, ash, birch and walnut, a mean of 2.2 mm contraction or expansion per meter meters can in practice be calculated for each 1% change in the humidity of the wooden floor.

## Preparations

The room temperature must be constantly 18-24 °C and the relative humidity should always be 35-65% (RH) before, during and after installation. If the humidity is less than 35% (RH), there is a risk of cracks and damage to the wooden floors, which is not covered by the warranty.

The building must be closed and heating must have been installed and be in operation. The residual humidity in the concrete floor must not exceed 85% (RH).

Any and all work, which may expose the building to humidity must have been finished before you start installing wooden floors, such as bricklaying and painting.

Wooden floors and any possible glue must be acclimatized in the rooms where they are to be installed for a minimum of 48 hours or until the temperature of the floors is the same as the room temperature, which may take more than 48 hours.

## Underlying sub-floor

The underlying sub-floor must be clean, dry, firm and ready to be glued. In order to test the solidity of the underlying sub-floor, you may apply the scratch and pull test (minimum solidity of 1.5 MPA). Suitable underlying sub-floors are, for instance, concrete, lightweight concrete, chip-board, plywood (preferably 16 mm birch/birch), plaster etc.

Use a two-metre straight-edge and check the entire area

thoroughly. If you find any unevenness of more than +/- 2 mm per 2 square metres, the underlying sub-floor must be primed and filled.

The surface which is to be fully glued must be completely clean and level. Make sure to carry out a pull test on the concrete floor with a minimum MPA of 1.5 in case of any residual humidity. This is particularly important if you suspect that the residual humidity is more than 65% (RH). When using 'HØRNING MS Flexlim' we allow residual humidity of up to 85% (RH). Use adhesive trowel no. 6 in order to distribute the correct amount of glue onto the surface, i.e. 1 litre per square metre.

## Walking comfort

You may improve the comfort when walking on the floor as well as the architectural acoustics by using HØRNING TF302 2 mm cork expansion strips on the underlying sub-floor. HØRNING TF302 2 mm cork expansion strips must be fully glued to the underlying sub-floor with the same glue as used for gluing the floor. Make sure that you use the correct adhesive trowel depending on the residual humidity. The glue must dry for at least 48 hours before the floor is fully glued to the cork expansion strips. HØRNING TF302 2 mm cork expansion strips are custom-made for products without tongue and groove and even out any variations in the floor and the underlying sub-floor.

**NB!** Please note that HØRNING TF302 2 mm cork expansion strips are not moisture barriers.

## Under-floor heating

HØRNING Strips may be used for floors with under-floor heating provided that the heat distribution is completely even and that the surface temperature does not exceed 27°C. The under-floor heating must be closed for at least two days before the installation is commenced and after installation, the temperature should be increased by a maximum of 3°C.

We do not recommend under-floor heating for floors made of beech, birch and elm. Under-floor heating may result in slightly larger cracks in the floor during the winter compared to using radiators.

## Necessary tools

Fine toothed saw (carbide / diamond blade), such as Festo HM75 / 4,5, Bosch T130 RF HM or similar, angle, stroke in hardwood, stroke iron, spacers, miter nose, thumb, pencil and wedges.

## Installation

HØRNING 11 mm Hardline with click system mounted floating. Can also be fully bonded.

## Distances to walls etc.

Normally the minimum distance between wooden floors and walls, pipes, stairs, permanent fixtures etc. must be at least 10 mm. However, the minimum distance should be at least 1.5 mm per one metre of flooring. Please use distance floor wedges and leave them in until the glue is completely dry.

Wooden floors expand and shrink depending on the climate

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in the room. In certain instances, it is necessary to use an expansion joint. This applies, for instance, in the following circumstances:

- By doors and permanent walls
- If you are installing a floor covering through several rooms
- In case of climatic deviations across the floor area, for instance, if there is only under-floor heating in parts of the floor area
- If there are expansion gaps in the underlying sub-floor.

**Some projects may require an individual specification of distances. Contact HØRNING for further information.**

Expansion joints and movement gaps are to be filled with permanently elastic material, such as HØRNING cork expansion strips, joint filler or by using a special profile. Please always follow the manufacturer's instructions.

## Direction of installation

There are no requirements as regards the direction or the pattern of installation. However, you would normally install the floor lengthwise, as this creates the optical illusion of a larger room.

## Floating floors

The engineered flooring must be acclimatized in the room in which it is to be installed for at least 48 hours prior to installation. Please open 3-4 bundles, go through the boards to spot any possible damage or defects. Boards with minor defects may be used along the walls and any major defects should be sawed off, so that the boards may be used as a starting point or at the end of a row. However, do not open anymore bundles than you can install within 1-2 hours, seeing as any additional humidity may make the installation more difficult.

If work is going on for several days, it is important to close already opened packages so that they are sealed until the work is resumed.

HØRNING engineered flooring may be installed on any and all firm bases. The base must be level (+/- 2 mm measured by a two-metre straight-edge). The correct planeness may be achieved by filling or possibly by using a board. After any hard stopping has dried, please put down a base (floor felt or foam).

Please put down a base with a minimum moisture barrier of 0.2 mm on any non-organic bases (concrete, stone etc.). A 25 cm overlap is required and the joints of the base must be taped. The overlapping joints and the moisture barrier should be glued together with double-sided tape.

Wooden floors shrink and expand depending on the air humidity and temperature and consequently, it is important to ensure that the floor can move as much as required. Please ensure a minimum distance of 10 mm to any and all walls and permanent fixtures (kitchen units, pipes, woodburning stoves etc.).

## After installation

In the case of fully glued floors or floors, which have been glued in tongue/groove, please do not walk on your new

floor for at least 48 hours after installation or until the glue is completely dry.

48 hours after completing the installation of the floor you may remove the distance floor wedges, as the glue should then be completely dry.

When using 'HØRNING MS Flexlim', you must not start sanding any untreated floors until at least 2-4 days after installation depending on the climatic conditions in the room

For the best result, office chair mats should be laid out under office chairs. All chairs and table legs and other items that can scratch or mark marks on the surface should be fitted with felt. Remember to check the felt continuously and replace them if they get worn. Keep in mind that latex-containing pads, mats and black rubber wheels may leave marks on the surface of the wood floor.

Any oiling or lacquering of the floors after installation must be carried out in accordance with the manufacturer's instructions and you have to ensure that the oil or the lacquer is completely dry before the floor is uncovered or before you start walking on it.

May we suggest that you always cover the floor carefully in floor felt or a similarly appropriate material. If any additional building work is carried out in the room after installation and any surface treatment, the floor must be particularly well protected from dirt and pressure marks.

HØRNING always recommends that oiled floors should be re-treated with maintenance oil in order to achieve the best possible result. Oiled floors must not be washed or be subjected to water for at least 14 days after installation or the most recent oil treatment, as the oil dries when it comes into contact with air after installation. Please only use small quantities of water!

Wash lacquered floors with a neutral washing detergent and a firmly wrung cloth.

You should always clean the floor thoroughly before you start using it. Avoid any type of dirt. Use mats by the entrance doors etc.

Avoid any damage to your wooden floor: Use felt or felt caps under chairs and furniture, use chair mats under office chairs etc. Hoover and clean the floor regularly once you start using it.

*The installation guide is based on long-term experiences and accommodates the most normal conditions in most building constructions.*

*Hørning Parket accepts no legal responsibility in connection with this indicative information. If you are unsure how to install the floor, please contact Hørning Parket.*