



BOEN

**BOEN "Herringbone" 3-layer
hardwood flooring with
tongue and groove connection
Installation instructions for
full-surface glue down**

General information

Boen manufactures its hardwood flooring to European Parquet Standards EN 13489 and EN 14342 for interior use.

The flooring elements are packed in carton sized to fit and shrink-wrapped with diffusion-reducing PE film.



Structure/formats

Thickness:	13.2 mm
Top layer thickness:	ca. 2.7 mm Oak
Middle layer:	8.8 mm spruce
Bottom layer:	1.7 mm spruce

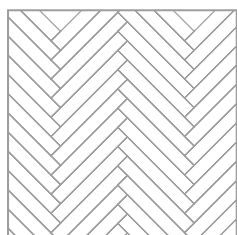
Formats:

- 1) 525 x 105 mm
- 2) 700 x 140 mm
- 3) 900 x 180 mm

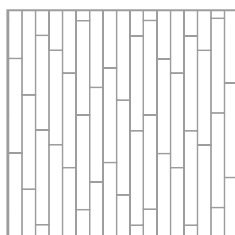
The strips have a tongue and groove connection profile along the long edges. The short sides are grooved and a loose connection tongue is supplied.

Design options

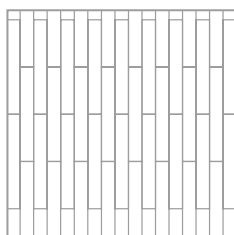
Many installation and design options are possible with Boen 3-layer herringbone strips. They can be installed in longstrip or brick pattern in regular and irregular layouts, or classic herringbone in simple layout, diagonal or parallel to the wall. When ordering, calculate about 10% extra for cutoffs.



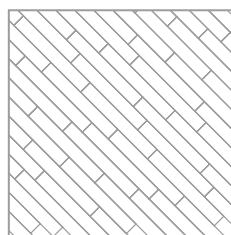
Herringbone



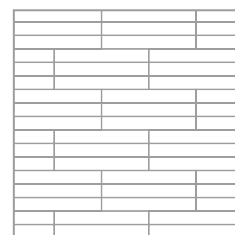
Longstrip,
irregular installation



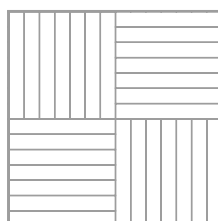
Longstrip,
brickbond



Diagonal



Brickbond triple



Checkerboard

Storage recommendations

The PE shrink-wrapped cardboard cartons must be treated with care to prevent damage. It is imperative to protect the cartons from moisture during storage and transportation, and before use. The cartons must be stacked horizontally in an absolutely dry room. 48 hours before installation, the flooring should be moved to the room where it will be installed, so it can acclimatize. The recommended storage temperature is +18°C, 35–60% RH. Do not open the cartons until immediately before installation.

Important installation information

Boen Herringbone flooring elements are suitable only for full-surface glue down installation. Floating installation is not recommended. Each board is individually inspected and graded by our quality controllers. Should visual defects nevertheless arise, any claims must be made prior to installation. Later claims cannot be accepted. During installation, try for the most even grading possible. Mix boards from different cartons, since this product shows a wide grading range from Andante to Vivo. Make sure to install from multiple cartons simultaneously. Bear in mind that the finished result is the responsibility of the installer. Installation should be carried out in accordance with DIN standards, especially DIN 18365 Flooring works and DIN 18356 Parquet flooring, or the national standards ÖNORM B 5236 or SIA 253.

For installation of Boen two-layer flooring, the room must be heated and dry. All windows and doors must be installed and all masonry and concrete work must be completed well in advance. We recommend that work which would negatively influence the room climate (such as painting or tiling) be completed before the flooring is laid.

If the humidity in the room is too high, the flooring will absorb too much moisture and the wood will swell. Therefore, steps must be taken to ensure that during installation the relative humidity remains under 75%, ideally 35–65% RH. The room temperature should be at least 18°C. If there is underfloor heating, the floor temperature should be in the 18–22°C range.

During the winter months, be aware that long transportation or storage can cause the cartons to get cold. Before installation, the flooring should be allowed to warm up to installation temperature in the unopened cartons. Installation must not be done at a material temperature below 15°C.

In general, and especially in new construction, it is always a good idea to lay the flooring as the last step on a construction site. If this is not possible, the finished floor surface should be covered with builders' paper, hardboard or other suitable material. Never use plastic film, as this would prevent moisture diffusion.

Do not tape the covering material directly to the wood floor surface, as the tape can damage the surface treatment.

Subfloor requirements

Boen wood floors can be glued down on any floor that has been properly installed and prepared in accordance with DIN/EN standards or national standards ÖNORM B 5236 and SIA 253.

This includes cement, anhydrite, mastic asphalt and dry screeds (mineral panels) as well as chipboard or plywood panels. Prior to the start of installation, the subfloor must be examined properly in accordance with applicable standards.

The subfloor must meet the usual requirements for laying parquet (dry, even, firm, crack-free, clean, etc.). If any of these requirements are not met, appropriate preparatory measures must be taken.

Special attention must be paid to standards-compliant evenness per DIN/ÖNORM 18202, Table 3, Line 4 (increased requirements) or SIA 414/2. Failure to do this can lead to air pockets and noises (creaks, knocks) when walking, because the flooring strips cannot compensate for differences in level.

30-65% RH
+18° - + 28° C
(+64,4° - +82,4° F)
← 2 m (6 3/4') → +/- 3 mm (1/8")
Max: 0.1m= +/- 0.5mm (1/64")
0.6m= +/- 1.0mm (3/64")
1.0m= +/- 1.5mm (1/16")
1.5m= +/- 2.0mm (5/64")

Uneven areas must be smoothed out with a suitable filler prior to installation. We recommend always working with a single manufacturer's system of primer, filler and flooring adhesive. Existing elastic or textile utility coverings are not suitable installation surfaces and must be removed in their entirety.

Boen hardwood flooring is very well suited for full-surface glue down on subfloors with underfloor heating. The heating effect must not exceed 60 W/m².

In very dry room conditions, joints and gaps can expand in the winter. This can be counte-

racted through air humidification and maintenance of a healthy room climate (20 to 22°C and 35 to 45% room humidity during the heating season).

For warm water low-temperature underfloor heating per EN/DIN 1264, a maximum of 29°C (27°C for Scandinavian markets, 80.6°F) is recommended as a limit value for the surface temperature; this temperature must also not be exceeded in edge zones. The same applies to electrical underfloor heating with soft warmup characteristics. All forms of trapped heat from large surface objects such as shelves, futon beds or carpets should be avoided.

As a rule, significantly lower surface temperatures are advantageous, and are beneficial for ecological and health reasons. They can be achieved through precise dimensioning and proper heating system regulation techniques. **If a surface heating system is also used for cooling, water condensation must not be allowed to occur. Therefore, Boen hardwood floor strips must always be glued down full-surface if there is surface cooling. In such cases, consult our Applications Technicians.**

The residual moisture of the subfloor and the requisite workability must be examined in accordance with DIN/SIA/ÖNORM standards and the state of the art.

screed moisture values

Cement screed max. 2.0 CM% (1.8 CM% on underfloor heating)

Anhydrite screed max. 0.5 CM% (0.3 CM% on underfloor heating)

Lower values are preferable.

On screeds with chemical additives like accelerators, observe the manufacturer's information.

Alternatively, in addition to CM measurement, the corresponding humidity can be measured by KRL. Per Work Instruction, TKB Bulletin 18. (max. 75%). Functional heating and screed curing must be done to standards and documented in the corresponding records. For screeds with chemical additives, curing must be done in accordance with manufacturer instructions.

General installation information

Boen hardwood floors are not limited as to the area they can cover in full-surface glue down. Theoretically, surfaces exceeding 100 m² are possible. This requires a full-surface floor panel without expansion joints. If these are present, the top layer must have joints correspond exactly to them. Clearance to walls and other structural elements should be dimensioned for the room size and be about 1.5 mm per metre of floor width, and at least 10 mm. Near door penetrations, the floor must be separated with an expansion joint. This can be covered with a suitable skirting, or closed off with elastic sealant.



In long, narrow spaces such as hallways, parquet should always be laid lengthwise, not crosswise.

A wooden tapping block for lightly tapping the boards into place is scarcely necessary as a rule. Care must always be taken to avoid damage to the cover layer. It is imperative to avoid blows to the cover layer.

Gluing

Boen hardwood flooring is glued down along its entire bottom surface, but without adhesive in the tongue and groove on the long edge. The loose short edge tongues should be glued into the corresponding short edge grooves.

The choice of adhesive will depend on the subfloor and the conditions at the site. Use only adhesives intended for wood flooring.

Apply the adhesive with a toothed spatula. This ensures application of the correct quantity of the respective type of adhesive. Make sure to apply the adhesive evenly for good adhesion. Always carefully follow the technical datasheets of the respective adhesives and the handling instructions of the adhesive manufacturer.

Do not apply adhesive to a larger area than you can lay during the open time of the adhesive.

Never apply too much adhesive (for example, to smooth out uneven spots). Marking the reference lines helps with precise adhesive application.

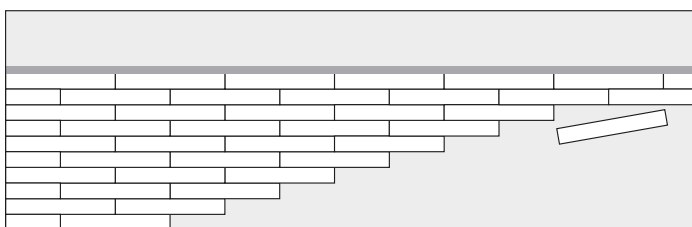
Lay the flooring strip in front of the longitudinal profile by hand and push it into the adhesive bed. Do not let parquet adhesive get on the upper surface of the boards. Any adhesive that does must be cleaned off immediately with a suitable cleaner. Use shims to maintain the necessary wall gap. Remove them after laying, so the floor can expand and adapt to the room climate.

Special care must be taken when pressing the boards in and/or down at the edges, since screeds are often uneven there. Freshly laid wooden floors should be walked on as little as possible for a few hours after installation.

Installation, layouts, guide strings and wall clearance

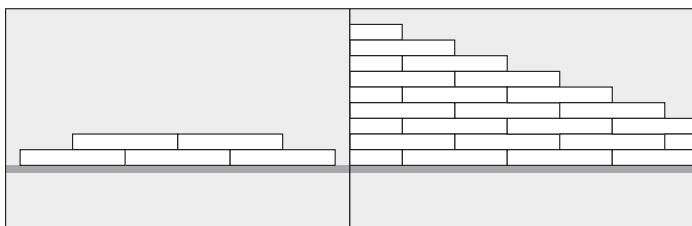
The layouts and guide strings for the start of installation depend on the chosen layout pattern. When installing longstrip or brickbond longstrip pattern, it is advantageous to lay the strips lengthwise to the main source of light. In this case, installation should start along one of the long walls. For other patterns, start from the middle of the room, i.e. place the guide string either diagonal to the room or centred lengthwise or crosswise. Maintain a clearance of 8 to 10 mm to all fixed structural elements. This gap should be covered later with skirtings and/or elastic silicone-free sealant.

Staggered laying is recommended (see sketch) to avoid “curving”, i.e. open joints in larger rooms.



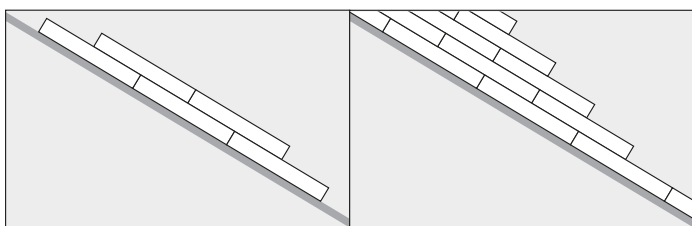
Installing a regular pattern – longstrip/brickbond

Using a straight edged timber or chalk line, draw a guideline for installation at an equivalent width of 4–6 strips, plus an expansion gap of 8–10 mm. Use square lumber, roof battens or the like to make a firm edge to work against. From here, work into the room. When this area is finished, remove the shims. Further installation should continue only after the adhesive under this area of the floor has set sufficiently (refer to the adhesive manufacturer’s instructions).



Diagonal installation of regular or irregular patterns

These patterns should be started from the middle of the room. After determining the diagonal of the room, use square lumber, roof battens or the like to make a firm edge to work against along the diagonal line. Remove the edge once the first half of the room is completely floored. Lay the other half of the room after the adhesive under this area has set firmly (refer to the adhesive manufacturer’s instructions) To ensure a joint-free appearance when laying either a straight or diagonal floor, it is advisable to install the strips staggered.

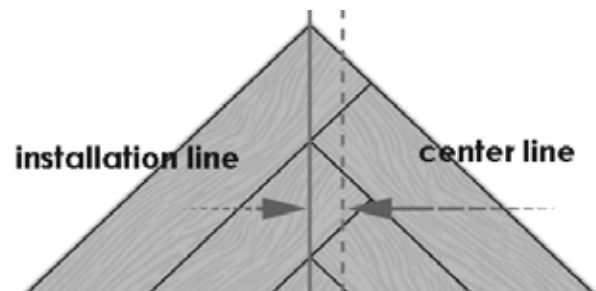
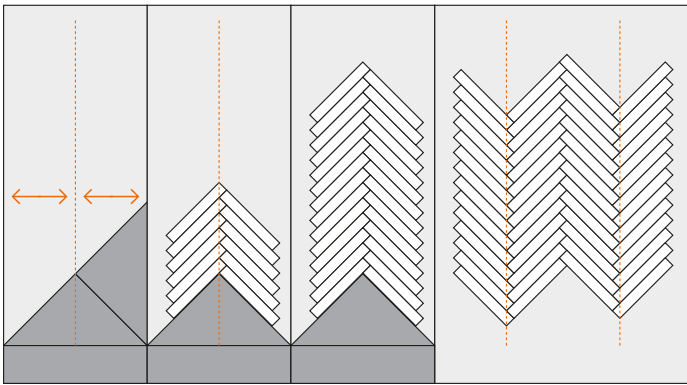


Installing a herringbone pattern

First put a few strips together like a plait, according to the pattern. Then stretch a string (laying line) from the centre of the room offset by a half strip width, along which the tips of the plait can be aligned so it is straight in the room. The offset between the centre of the room and the laying line is as follows:

Format 1.	525 x 105 mm = 37 mm
Format 2.	700 x 140 mm = 49.5 mm
Format 3.	900 x 180 mm = 63.5 mm

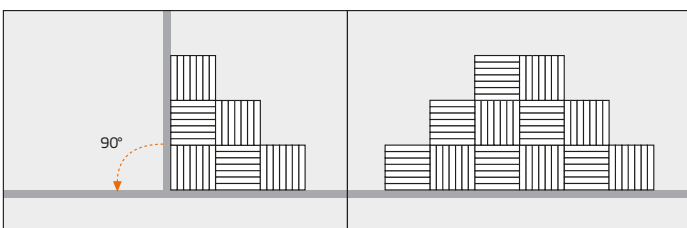
Once this first plait has been glued down, the adhesive should be allowed to set firmly (see adhesive manufacturer's setting time information) before continuing with further installation. We recommend repeating the chalk string occasionally during installation for confirmation.



Installing squares or chessboard pattern

When installing a square chessboard pattern, assemble an appropriate number of strips into square panels and install these at 90° to each other. Start at a distance of the chosen product dimension (strip or panel) plus 8-10 mm wall clearance, starting at a right angle from the middle of the most visually suitable wall (eye-catcher).

After determining the laying line, set up a firm working edge using square lumber, roof battens or the like. Lay the individual strips from this right angle. After installing about 3-4 m² of flooring, let the adhesive set (see adhesive manufacturer's setting time information) before continuing with further installation. Then remove the working edge and continue installation along the area that has already been glued down. It's a good idea to always start in the middle of the room and proceed outwards towards the walls.



General information

Wood is a natural product which can vary in colour and structure based on its growth. Exposure to sunlight causes a natural change in the colour shade (darkening or lightening). In areas of strong sunlight, like near terrace windows, these colour changes can also be partial. This effect is exacerbated by modern floor-length window designs.

Please ensure that rooms remain at a moderate temperature and constant room climate even after installation (see Installation on underfloor heating).

ATTENTION! Rugs, especially ones with insulating bases (plastic, rubber etc.) can cause heat build-up and discolouration.

Always use products that contain no softeners!

Surface protection, cleaning and care

The surface of Boen Herringbone parquet is treated with our Live Natural oil and ready for use.

The oiled surface is oxidatively hardened. The oil gives the surface a discreet matt-silky sheen, and makes it water- and stain-resistant. Oiled floors need more care than sealed floors.

Depending on how hard it is used, the floor will be subject to natural wear.

After installation and before first use, apply an initial treatment with Boen care products. We recommend our special cleaning and care products for Boen hardwood flooring oiled with Live Natural (see Boen cleaning and care instructions).

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Felt protectors under table and chair legs and the like will prevent unnecessary scratches and damage to the floor surface. They should be periodically checked and cleaned or replaced if necessary.

