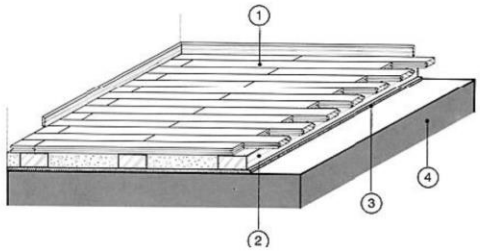
Laying of Solid Wood Flooring and Soloplank on Wooden Subfloors

Method A: Laying on wooden subfloors with loose fill or conventional insulating material

- Spread loose fill
- Bed in battens 40/80 mm
- Nail or screw solid wood planks to the battens
- In older buildings or buildings without a cellar, a hygrodiode (vapour barrier - plastic sheet) must be used!
- Untreated parquet must be sanded and varnished or oiled!



1) 20 mm solid wood flooring
2) 40 mm subfloor 40/80 mm,
intermediate space filled with loose fill or conventional insulating material
3) 10 mm impact sound insulation
(strips or continuous boards)
4) bare floor

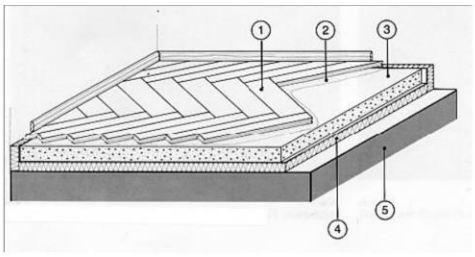
Method B: Laying on wooden subfloor with chipboard floor panels

- Position battens 40/80 mm
- Fill spaces with insulating material
- Screw V-100 tongue-and-groove chipboard floor panels to the battens
- Nail or screw the parquet to the chipboard panels or use floating installation (tongue-and-groove gluing with stabilisator)
- Untreated parquet must be sanded and varnished or oiled!

Laying of 2-layer & Solid Wood Parquet

Method 1: Laying on cement screed

- Check the screed for moisture (with carbide meter, e.g. IPS DARR MAX or CM device) and surface properties according to the European standards for screed
- If the screed is „sandy", pre-coating is necessary! (compatible with the make of glue used!)
- Lay parquet using full spread gluing
- Untreated parquet must be sanded and varnished or oiled!

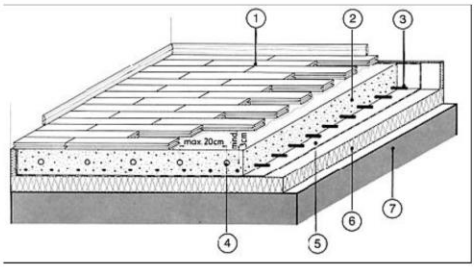


1) Parquet
2) Adhesive
3) 50 mm floating screed
4) 30 mm insulating layer with covering
5) Bare floor

Method 2: Laying on cement screed + underfloor heating („heating line")

NOT VALID FOR LONGLINE (Recommended: with Soloplank)

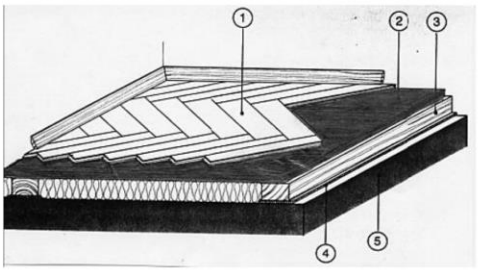
- Check the screed for moisture (with carbide meter, e.g. IPS DARR MAX or CM device) and surface properties according to the European standards for screed
- Pre-coating for underfloor heating (compatible with the make of glue) is absolutely essential!
- Before gluing the parquet flooring over the heating line you must ask the site manager for a heating protocol. If measuring points are marked on the screed, measurements must be taken with a carbide meter!
- It is recommended to lay only Exquisit and Select-grades as they have lower shrinkage and swelling parameters
- Lay parquet using full spread gluing with adhesive intended for underfloor heating
- Untreated parquet must be sanded and varnished or oiled!



1) Parquet
2) Screed with edge insulation strips
3) Reinforcement
4) Heating pipe of underfloor heating system
5) Vapour barrier
6) Heat insulation
7) Bare floor

Method 3: Laying on wooden subfloor with chipboard floor panels

- Position battens 40/80 mm
- Fill spaces with insulating material
- Screw V-100 tongue-and-groove chipboard floor panels to the battens
- Apply parquet to the chipboard panels using full spread gluing
- Untreated parquet must be sanded and varnished or oiled!



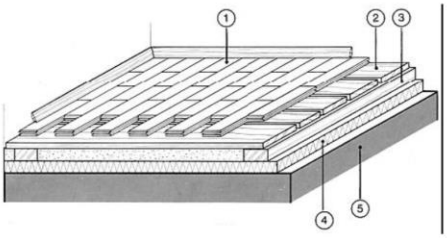
1)Parquet
2) V-100 chipboard floor panels
3) 40 mm battens 40/80 mm, intermediate spaces filled with loose fill or conventional insulating material
4) 40 mm heat insulation
5) Bare floor

Method 4: Laying on wooden subfloor with loose fill

- Spread loose fill
- Bed in battens 40/80 mm
- Make wooden subfloor by nailing on approx. 20 mm boards, planed both sides, with separation distances over the entire area
- Nail the wood block flooring to the boards of the subfloor

According to the ÖNORM every third block must be nailed

- In older buildings or buildings without a cellar, a hygrodiode (vapour barrier – plastic sheet) must be used in addition!
- Untreated parquet must be sanded and varnished or oiled!



1)22 mm Solid wood parquet
2) 20 mm subfloor
3) 40 mm battens 40/80 mm, intermediate space filled with loose fill or conventional insulating material (Method 5)
4) 40 mm heat insulation
5) Bare floor

Method 5: Laying on wooden subfloor with conventional insulating material

- Position battens 40/80 mm
- Fill spaces with insulating material
- In addition, sound insulating boards can be laid beneath the battens
- Continue as shown in Method 4

General Laying Instructions:

Storing and Laying Parquet:

In order to make sure your parquet floor can be laid without difficulty, the following recommendations should be considered:

- Store parquet protected from damp.
- Do not open packs until shortly before starting to lay!
- Laying the parquet floor should not be started until all the other workers have left the construction site – otherwise cover up the floor.
- All wet works must have been completed. (e.g. laying tiles and bricks, plastering walls and ceilings, paintwork, etc.)
- Windows and outside doors (including window panes) must already be fully installed.
- The heating system must be functional.
- Connections to stairs must be done in agreement with the stair builder
- Solid wood parquet flooring is stored with a wood moisture content of approx. 9 %.

Wood is a hygroscopic building material whose moisture content adapts to the prevailing air humidity. Excessive absorption of moisture by the parquet causes the wood to swell. Do not lay parquet at an ambient humidity greater than 75 % or a room and material temperature below 14°C. Subsequent loss of moisture during the heating period will cause cracks to form. Solid wood parquet flooring should always be delivered shortly before it is laid.

- Newly sealed/oiled floors must not be walked on for 24 hours.

The longer the sealed or oiled floor is left untouched during the first few days, the longer the sealing will last.

Do not use the floor fully for 8 – 14 days! During the first few weeks only clean dry and do not lay any carpets. Take care when bringing in furniture and other heavy objects after the floor has been laid. The care procedure should be performed before the first demanding usage. The cleaning and care of your parquet floor must be done using special parquet care products.

The recommendations in these laying instructions are based on extensive practical experience. Because of the diversity of conditions prevailing at different construction sites, neither guarantees nor liability claims can be derived from our recommendations.

Indoor Climate:

The room temperature should not be lower than 15°C during the laying process. The relative humidity should be between 50 and 60 %. Oxydatively oiled surfaces suffer from high humidity. An additional application of wax might diminish that effect.

Choice of Adhesive:

The choice of adhesive depends on the subfloor, the type of parquet and the type of wood. An overview of glue system recommendations is enclosed, although it is not possible to take account of the type of parquet because of their diversity. For that reason it is essential to discuss this with the parquet manufacturer before laying.

The working instructions provided by the glue manufacturer must always be followed exactly!

Inspection Obligation

Inspection Obligation:
The following inspections need to be made right after receiving and before laying the parquet flooring:

- Transport damage
- Grading
- Surface
- Wood moisture (with carbide meter, e.g. IPS DARR MAX)
- Dimensional stability

General Laying Instructions

Subfloor:
Careful and proper construction of the subfloor is important for achieving high quality with all types of covering:

a) Moisture content
High level of moisture content in the subfloor will lead to a damaged wood floor. The moisture content therefore must comply with those given in the Table in every case. If vapour barriers, seals against moisture and/or insulating layers are necessary for a floor structure because of the structural situation, this shall be the responsibility of the client.

Types of Base	Max. permissible moisture content
Screeds:	
Cement screed	2,0 %
Cement screed+underfloor heating	1,8 %
Anhydrite screed	0,3 %
Loose fill materials: e.g. sands lacking in fine particles, granulate, pumice slag, stone chippings, blast furnace slag	On inspection at the beginning of the laying work, loose fill materials must appear dry down to the lowest level
Subfloors	Must comply with the moisture content of the parquet flooring

1) Measured with carbide meter (CM)
2) A dark colouration can be regarded as a sign of any existing residual moisture

b) Flatness
The base may deviate from perfect flatness by a maximum of 3 mm along a 1.2 m measurement stretch.

c) Surface strength of screeds and bare floors
Screeds and bare floors to which it is intended to glue a covering floor must not be sanding and must not exhibit any poorly attached layers on their upper surface.

d) Shrinkage gaps (dummy joints) and cracks in screeds and raw floors
must be properly filled by the client.
The dummy joints left in large areas of screed must be filled with polyester, epoxy resin or similar before the floor is laid.
Structural expansion joints or dilatation joints regarded as essential by the heating engineer must be taken over in the upper floor level.

Minor deviations from the different local recommendations are possible.
Basically, lower values are advantageous and therefore to be aimed at.

Laying Underfloor Heating

Before the laying of the parquet, the screed needs to be dried by a special „heating programme". In order to control the process, the person responsible for the laying will receive a "heating protocol".
On account of the technological and hygroscopic properties of wood it is possible for fine or even small gaps to open up during the heating period.
These are normally evenly distributed and must simply be tolerated since they are unavoidable.
Maintaining a healthy indoor climate (20-22°C and approx. 40-50 % humidity) during as well as after the laying can counteract the tendency for gaps to form.
Moreover, installing humidifiers helps to improve the well-being of the residents and is therefore to be recommended during the heating period.
From a technical point of view a wood floor and underfloor heating make a good combination. Wood has a favourable thermal resistance. A certain level of thermal resistance is desirable in order to achieve a uniform surface temperature (not higher than 26°C). However, the thermal resistance should not exceed ca 0.17 m2K/W.
Parquet floors are within the ideal range, being mostly between 00.35 and 0.14 m2K/W.
Very important for laying parquet on underfloor heating is a constant surface temperature that must be higher than 26°C at any time.
To control this you have to install an instrument for heat measurement (Fidbox)!
IMPORTANT: Parquet should always be fully spread glued on underfloor heating!
At the beginning of every heating period the floor must be heated up in stages.
The equilibrated wood moisture content will be approx. 5 – 7 % after the heating period. The moisture content at laying should therefore not exceed 7 – 8 % in order to keep the formation of gaps in the parquet to a minimum.
When selecting the wood floor it should be borne in mind that simple wood (vertical annual rings) works less than wood with grain. For this reason the gradings Exquisit, Select and possibly Natur are recommended.

Table: Thermal resistance	
Product	m^2K/W
Epico top	0,0612
Epico trend	0,0568
Epico 140	0,0568
ACTUS XL	0,0612
ACTUS Emocion	0,0612
ACTUS 3.0	0,0568
ACTUS 4.0	0,0612
ACTUS 6.0	0,069
COMPACT	0,0612
ACTUS Elements	0,0612
2-layer Prefinished parquet, floating	0,169
Solid Wood Parquet, glued, 22 mm, Oak	0,105