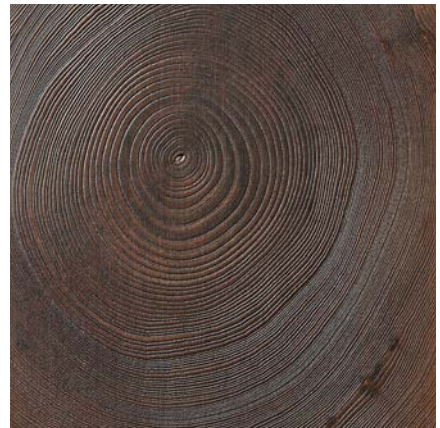


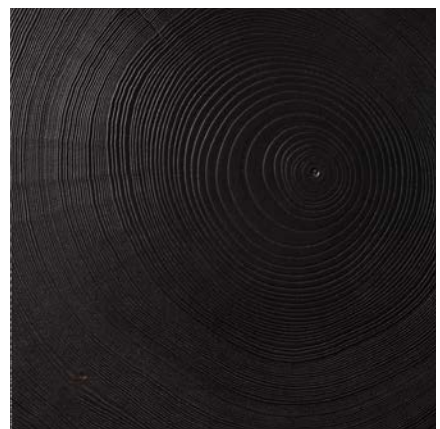
Collection



Graincut Empire light



Graincut Empire medium



Graincut Empire dark


GRAINCUT EMPIRE

resilient, timeless
& refined

**Schotten
& Hansen**

Graincut Empire

Product specifications

Description	Construction: Multi-layer engineered board Top-layer: Ash graincut veneer Carrier: Birch plywood
Length and Width¹	Square and rectangular formats: 150 × 150 mm; 150 × 300 mm; 300 × 300 mm
Thickness¹	17.0 mm (± 0.5 mm)
Top-Layer¹	2.5 mm; glued waterproof and formaldehyde-free.
Surface	Schotten & Hansen pre-finished, permeable surface. Surface treatment with natural oils, resins and waxes. Schotten & Hansen surfaces can be regenerated without sanding or mechanical treatment. Avoid strongly acidic and alkaline agents.
Wood moisture content	On delivery: approx. 8 % ex works.
Emissions	Formaldehyde emission according to EN 14342: Class E1, measured according to EN 717- 1 VOC emissions according to AgBB scheme < 1 mg / m ³ 
Fire behavior	Dfl – s1 nach EN 13501-1:2010
Profile processing	Circumferential groove. Chamfer approx. 0.7 mm, 30°. Connection by means of external springs (11 mm wide, 4 mm thick) supplied. Traces of surface treatment may be visible on the sides of the segments, but will not be visible after the flooring has been installed.
Installation	Full-surface bonding with permanently elastic adhesive. Installation in accordance with DIN 18356. Subfloor requirements: Subfloor ready for installation according to DIN 18356 and DIN 18202 table 3, line 4 increased requirements. Recommended adhesive: BONA Quantum or equivalent (The parquet adhesive used must be approved by the building authorities). The adhesive must be suitable for gluing the parquet elements to a screed subfloor.
Underfloor heating	Schotten & Hansen products are suitable for combination with hot water or electric underfloor heating. Thermal conductivity 0.180λ [W/(m*K)]: Top layer (calculated according to EN 14342:2013) Thermal resistance R 0.097 [m²K/W]: Top layer (calculated according to EN 14342:2013) Maximum surface temperature of the segments: 29° C.
Cleaning & Care	Schotten & Hansen cleaning and caring products. Schotten & Hansen recommends the use of a floor polishing machine. For further information please see the cleaning and caring instructions or contact our service department: service@schotten-hansen.com
Recycling	Our wood products can be recycled in accordance with category A2 of the Waste Wood Ordinance.

¹ Due to manufacturing tolerances, dimensions may vary slightly

Graincut Empire

Collection Colours



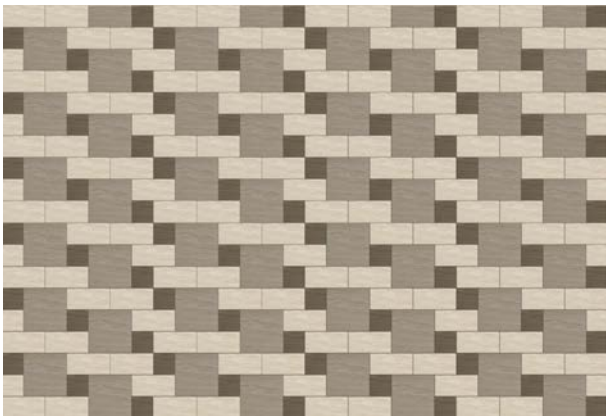
Character Selection

Nature	Very lively wood structure, with characteristic cracks, small holes and knots, repaired by hand. The formats predominantly depict annual ring segments, whereby the pith is shown sporadically.
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Treatment

1 Brushed	Accentuate the wood's typical grain structure by brushing out early wood.
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Colour between segments is subject to variations and display exhibits or samples, as far as these are due to the natural quality of the used material as well as customary.



Model of the Roman pattern. The different shades of colour are for illustrative purposes only.



Detailed view per m²

The three formats are divided per square metre to match the Roman bond.

**Schotten
& Hansen**

Further Information

Indoor climate and wooden floor

Wood is a natural material that is adjusting to the indoor climate. Wood absorbs moisture from the air and releases it again.

We would like to point out that during the heating period, the floorboards might strongly dry out and thus develop shrinkage cracks. Cracks caused by low air humidity during the heating period do not justify complaint.

With the maintenance of a comfortable and healthy indoor climate of 20° C and 50% relative humidity during the heating season, you can largely avoid the negative effects of this natural phenomena.

Thermal- and hygrometers control the air in your rooms easily. In case the air is too dry, suitable measures for humidifying the air must be taken. We recommend you a humidifier control - hygrostat for obtaining a constant air humidity.

Installation should be carried out professionally by a trained Schotten & Hansen partner.

Bonding

The preparation of the subsoil is to be carried out in accordance with the guidelines of the adhesive manufacturer and relevant DIN standards.

For the bonding of all Schotten & Hansen floor products we recommend a solvent-free and elastic adhesive e.g. BONA Quantum or equivalent product (the parquet adhesive used must be approved by the building authorities).

In the process of glueing, full bonding to the subsoil and a sufficient contact pressure during the setting has to be ensured.

Bonding on Screed

First, an inspection of the subsoil and the application requirements has to be conducted according to VOB Part B DIN 1961, Part C DIN 18356 and DIN 18202 Table 3, line 4 increased requirement.

Due to the large lengths and widths of some flooring products, increased care is required for the evenness of the subsoil.

Installation on underfloor heating

All Schotten & Hansen long boards are to be fully bonded with elastic adhesive to underfloor heating. Prior to this, a thorough inspection of the heating screed's readiness for installation has to be carried out – in particular the heating protocol and the details of test points (pursuant to DIN standards) have to be documented by the screed layer. The adhesive must be suitable for bonding on an underfloor heating system.

Please observe the maximum surface temperature of 29° C.

Additionally, during a heating-period the air humidity should be improved. Otherwise the floorboards might strongly dry out and develop shrinkage cracks. Cracks caused by low air humidity during the heating period do not justify complaint.

Important measurements prior to installation:

- Let the unpacked workpieces acclimatise in the final room conditions for approx. one week until the equilibrium moisture content is reached.
- Switch off underfloor heating three days before installation.
- Measure moisture content of the screed.
- Keep room climate constant at 45 % ± 5 % relative air humidity. This also applies for the next few days after the installation (during this time increase underfloor heating by 5° C per day).
- Prepare a heating protocol.

Screw on wooden substructures

Available wood or particle board, the boards can be obliquely screwed into the spring. The spacing of the joists should not exceed 35 cm. A sufficient sound insulation has to be ensured. Felt or cork strips to the battens limit a creaking noise.

All information on this data sheet is to be considered as advice and is based on empirical investigations according to today's state of the art. Therefore, all provided information on the suitability, processing and application of our products, as well as technical advice and further particulars, do explicitly not release the customer and/or user from verifying the products' suitability by means of their own tests.

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