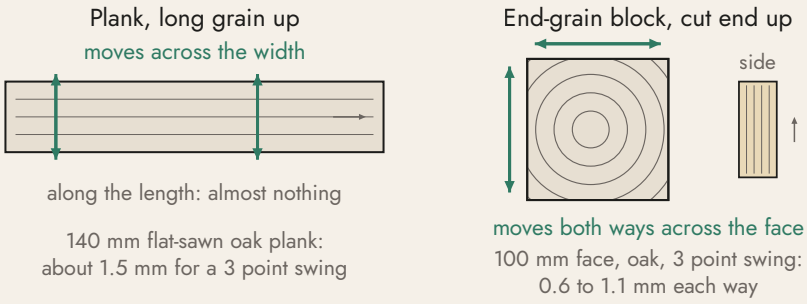
End-grain timber block flooring: *specification*, installation and movement

There is no industry standard for end-grain block flooring. A block with its end grain up moves both ways across its face and hardly at all in depth. The sources differ on conditioning and gaps: ask the maker, and write moisture readings into the specification.

AT A GLANCE

Item	What the sources say	Ask for or check
Block depth	No standard. Examples: 19 mm (NWFA magazine); 6 to 8 mm top layers on 10 to 12 mm ply (our range pages)	State the depth, or top layer and carrier
Face size and bond	No standard. Example: strips 92 mm wide (NWFA magazine); loose blocks in half bond (distributor)	Draw the pattern and bond
Subfloor	Flat to SR1, 3 mm under a 2 m straight edge; fully bonded to cementitious, ply or a bonded underlay (distributor)	One flatness test, moisture recorded
Room conditions	45 to 65% RH and 15 to 25 °C (distributor); a steady climate all year (NWFA)	Hold them for the life of the floor
Conditioning	72 hours or more in the room (distributor); none if delivered at the in-use moisture content (NWFA)	Moisture readings, not days
Gaps	Round each block acceptable (distributor); 3/4 in perimeter, 1/8 to 1/4 in inside (NWFA); under 1 mm (our range pages)	Ask the maker which applies
Underfloor heating	Compatible with some systems; run at up to 27 °C for 2 weeks first, then up by no more than 3 °C a day (distributor)	Maker confirms, project by project
Sanding	10 days after fitting; progressive grits; resin and fine sawdust filler; then finish (distributor)	Agree the sequence on a sample

Sources: a UK distributor (Nov 2022), NWFA's magazine, our range pages. None is a standard.



Which way a plank and an end-grain block move, with oak figures worked in the movement table. Original drawing by Make Bespoke Studio.

MOVEMENT OF AN OAK BLOCK (OUR ARITHMETIC FROM WOOD HANDBOOK VALUES)

Oak, 3 point change in moisture content	Radial	Tangential
50 mm face	0.3 mm	0.5 mm
100 mm face	0.6 mm	1.1 mm
Depth of a 20 mm block	0.002 to 0.004 mm	

SPECIFICATION WORDING

THE PRODUCT

End-grain [oak] floor, construction [loose blocks / blocks in strips / pre-assembled tiles on a [ ] mm ply carrier with a [ ] mm top layer], block depth [ ] mm, face [ ] x [ ] mm, laid in [half bond / pattern ref] to the workshop drawing [ref]. Finish [oil / varnish, ref]. Maker's installation instructions [ref] form part of this specification and prevail.

SUBFLOOR AND CONDITIONS

Subfloor [cementitious screed / plywood] flat to [SR1: no gap over 3 mm under a 2 m straight edge] and dry to the maker's limit of [ ], tested and recorded before delivery. Building weathertight and wet trades dry. Room held at [15 to 25] degrees C and [45 to 65] % relative humidity from before delivery for the life of the floor. Block moisture content recorded on delivery; conditioning [as the maker instructs: ref].

BONDING AND MOVEMENT

Fully bonded with [flexible adhesive named by the maker], full coverage, notched trowel [ ] mm. Blocks drawn from at least [three] packs. Perimeter gap [ ] mm, covered by [skirting / shadow gap]; movement provision inside the field [none / as drawing ref]; gaps between blocks [ ] mm at fitting. Joints [left unfilled / filled with [ ] after [ ] days]. Doorway gaps covered by [T-section].

HEATING, SANDING AND CARE

Underfloor heating [none / system ref], commissioned and run to a maximum floor temperature of [27] degrees C for [2] weeks before fitting, probes [ref], raised after fitting by no more than [3] degrees C a day. Floor left for [10] days before sanding. Sanding sequence [ref] agreed on a sample. Care and re-finishing schedule supplied by the maker at handover.

TERMS USED

Half bond

A laying pattern in which each row of blocks is offset by half a block from the row before, like brickwork.

Radial and tangential movement

In a log, timber shrinks and swells about twice as much along the growth rings (tangential) as along a radius (radial), and hardly at all along the grain. An end-grain block moves radially and tangentially across its face.

STANDARDS AND SOURCES

- No industry standard for end-grain block installation was found: BS 8201:2011 (code of practice for wood flooring) named; not read. Parquet product standards not read.
- A UK distributor's end grain installation guidelines (Nov 2022): read in full; not a trade body.
- NWFA, Hardwood Floors magazine (2017, 2019): read.
- USDA Forest Products Laboratory, Wood Handbook ch. 4 (FPL-GTR-282, 2021): read: Table 4-3.

Full guide: https://makebespoke.com/trade/technical/end-grain-timber-block-flooring. Make Bespoke Studio coordinates manufacture through its partner workshops. Figures are guidance only and your specification governs; some may be superseded, so contact the studio to verify.