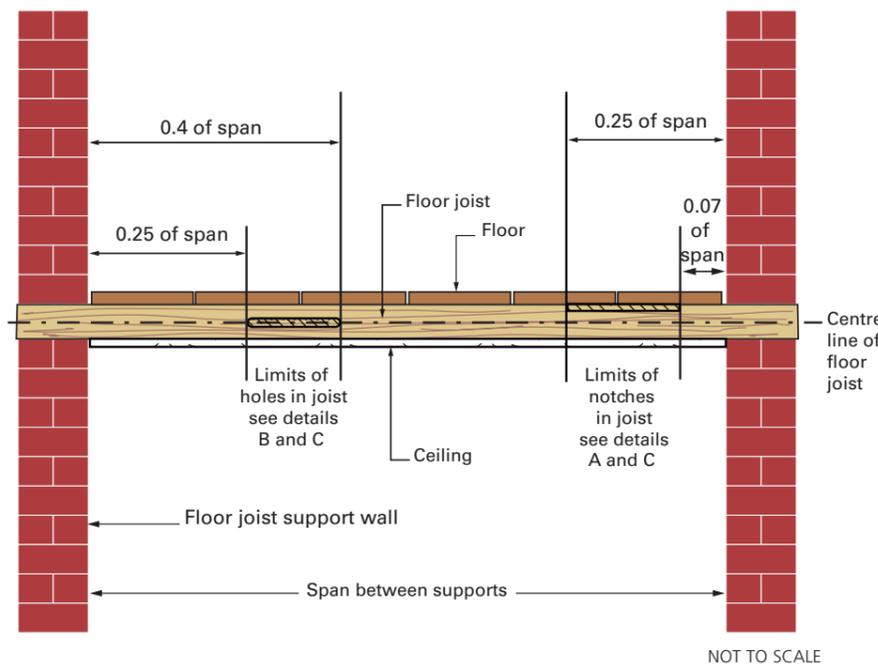


Notches and holes made in supported floor and roof joists



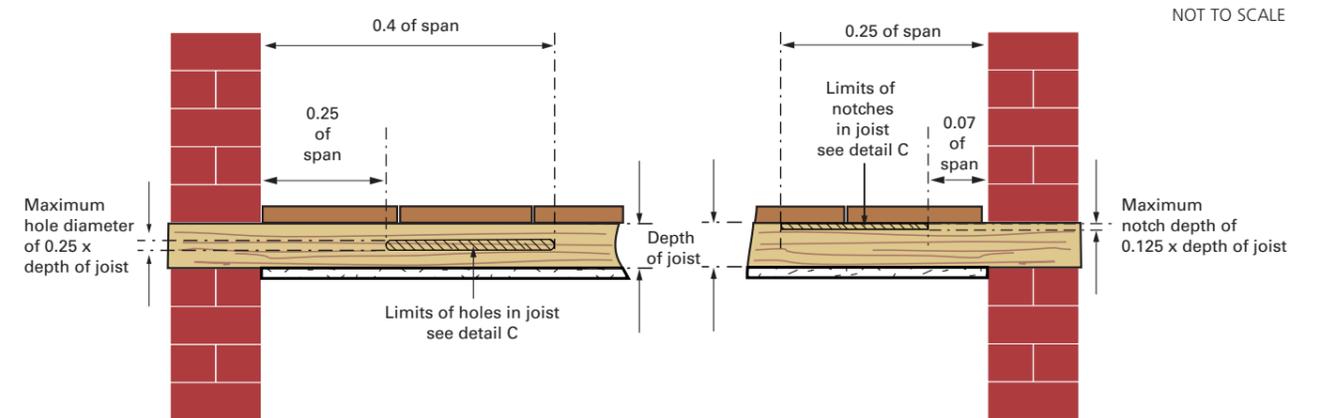
Electrical installers often need to drill holes and cut notches in the joists of supported floors and roof joists, for the passage of cables.

Regulation 522-12-03 of BS 7671 requires that wiring systems must not penetrate an element of building construction which is intended to be load bearing unless the integrity of the load-bearing element can be assured after such penetration.

Furthermore, to meet the requirements of Part A - Structure in Schedule 1 of the Building Regulations for England and Wales, it is important that a building structure is not weakened when notches or holes are made in joists; these should never be made larger than necessary.

For single family houses of not more than 3 storeys, guidance on the structural requirements of Part A of the Building Regulations for notches and holes in simply supported* floor and roof joists is explained in paragraph 1 B6 of Approved Document A (1992 edition with 1994 and 2000 amendments). That guidance follows together with illustrated examples.

* 'Simply supported' means supported at each end of a floor or roof joist.



Example of limits of holes in a floor joist, detail B

Example limits of notches in a floor joist, detail A

Holes

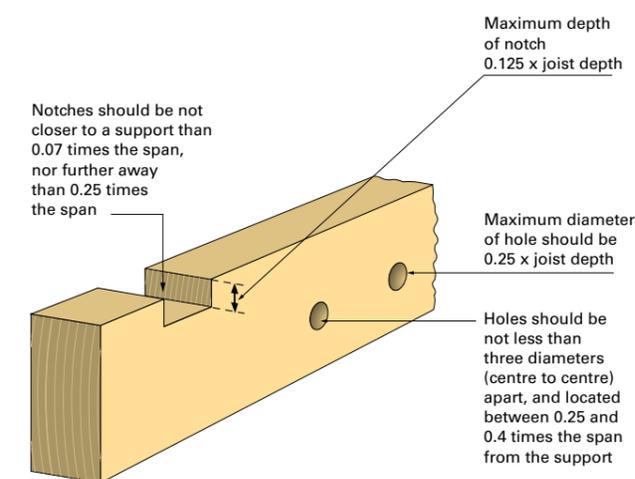
Holes should be within the following limits:

- no greater diameter than 0.25 times the depth of the joist
- drilled at the neutral axis (where the joist is under least tension, normally at the centre line of the joist depth)
- not be less than 3 diameters (centre to centre) apart
- located between 0.25 and 0.4 times the span from the support.

Notches

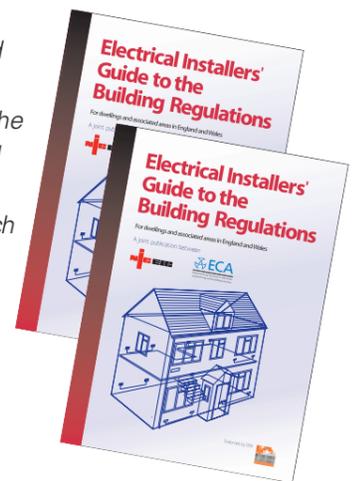
Notches should be within the following limits:

- no deeper than 0.125 times the depth of a joist
- not closer to the support than 0.07 of the span
- not further away from the support than 0.25 times the span.



Example limits of holes and notches in a floor joist, detail C

Further information on the requirements of Part A and other parts of the Building Regulations is covered in the NICEIC and ECA 'Electrical Installers' Guide to the Building Regulations', which has been endorsed by the District Surveyors Association. The book is available from NICEIC Sales telephone 01582 539700.



For further information about the NICEIC Approved Contractor or Domestic Installer Scheme, visit www.niceic.org.uk, call 0800 013 0900