

# TECHNICAL GUIDANCE

## WALL TIES AT JAMBS WITH FULL FILL CAVITY BOARD INSULATION

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(First Issue)

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### QUESTION

Where 450 mm high full fill cavity insulation boards are used how can the recommended 300mm maximum vertical spacings for wall ties at the jambs be achieved?

### CONSIDERATIONS

- NHBC Standards clause 6.1.18 Table 10 says wall ties at jamb openings should be installed within 225mm of the opening and at maximum 300mm spacings vertically. The same recommendation is given in PD 6697:2010 'Recommendations for the design of masonry structures to BS EN 1996-1-1 and BS EN 1996-2'
- Installing wall ties at the recommended vertical spacings at jambs would involve cutting through the insulation board which could induce a path for water penetration.
- Spacing the wall ties at 450mm vertical centres to coincide with the board joints would reduce the density of wall ties and the structural stability of the wall.

### ANSWER

Only full fill cavity insulation boards which have a third party assessment acceptable to NHBC should be used.

The third party assessments for these type of cavity insulation boards advise that the boards should not be pierced to install wall ties as it may introduce an unacceptable risk of water penetration.

To avoid piercing the boards and to maintain the density of wall ties to satisfy the structural requirements of the wall at the jambs the recommendation is to provide two wall ties at each board joint, i.e. at 450mm spacings vertically.

Each pair of wall ties should be installed within 225mm of the opening.

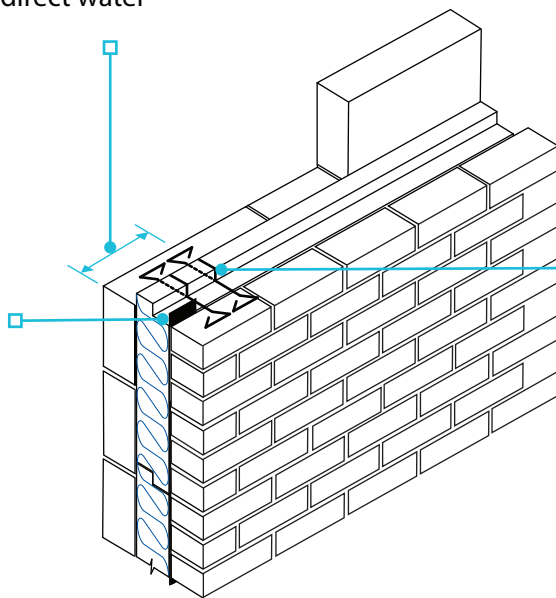
The rebated upstand on the board to board joint should be neatly cut to tightly accommodate the wall ties.

Each wall tie should be installed with a slight slope to help direct water towards the outer leaf.

(See diagram for a typical installation).

Two wall ties within 225mm maximum of all openings at each board course (i.e. 450mm centres vertically). Ties to slope slightly to help direct water towards outer leaf

Vertical DPC or cavity closer (not shown) when required for fire protection



Rebated upstand in insulation board to be cut neatly to accommodate wall ties

Jamb detail with double ties