



Type 2 and Type 4 Stainless Steel Masonry to Masonry Wall Ties

WTS2: Type 2 Wall Ties: Masonry General Purpose

Type 2 wall ties are suitable for general purpose applications such as domestic and small commercial buildings up to 15m in height. They can also be used in buildings with heights exceeding 15m, but should only be used in those situations if shown to be of adequate performance by calculation. Use in flat sites where the basic wind speed is up to 31 m/s and the altitude is not more than 150m above sea level.

WTS4: Type 4 Wall Ties: Masonry Light Duty

Type 4 wall ties are light duty, suitable for box-form dwellings up to 10 metres high with leaves of similar thickness, including internal separating cavity walls. Use in flat sites in towns and cities where the basic wind speed does not exceed 25 m/s and the altitude is not more than 150m above sea level.

WTS4: Type A Approval

WTS4 ties meet the requirements of Approved Document E: Resistance to the Passage of Sound and are suitable for use in separating party walls of new build attached dwellings.

Minimum Requirements for Wall Ties to BS 5628-1:2005

Type	Minimum Mortar Class and Designation	Tensile Load Capacity (N)	Tensile Load at 1mm Displacement (N)	Compressive Load Capacity (N)	Compressive Load at 1mm Displacement (N)
WTS2	M2 (iv)	1800	600	1300	433
WTS4	M2 (iv)	650	217	450	150

Recommended Masonry to Masonry Tie Length

Cavity Width (mm)	Length of Wall Tie (mm)	BS 5628-1 Wall Tie Item Code
50-75	200	WTS2-200
		WTS4-200
76-100	225	WTS2-225
		WTS4-225
101-125	250	WTS2-250



Recommended Positioning and Density

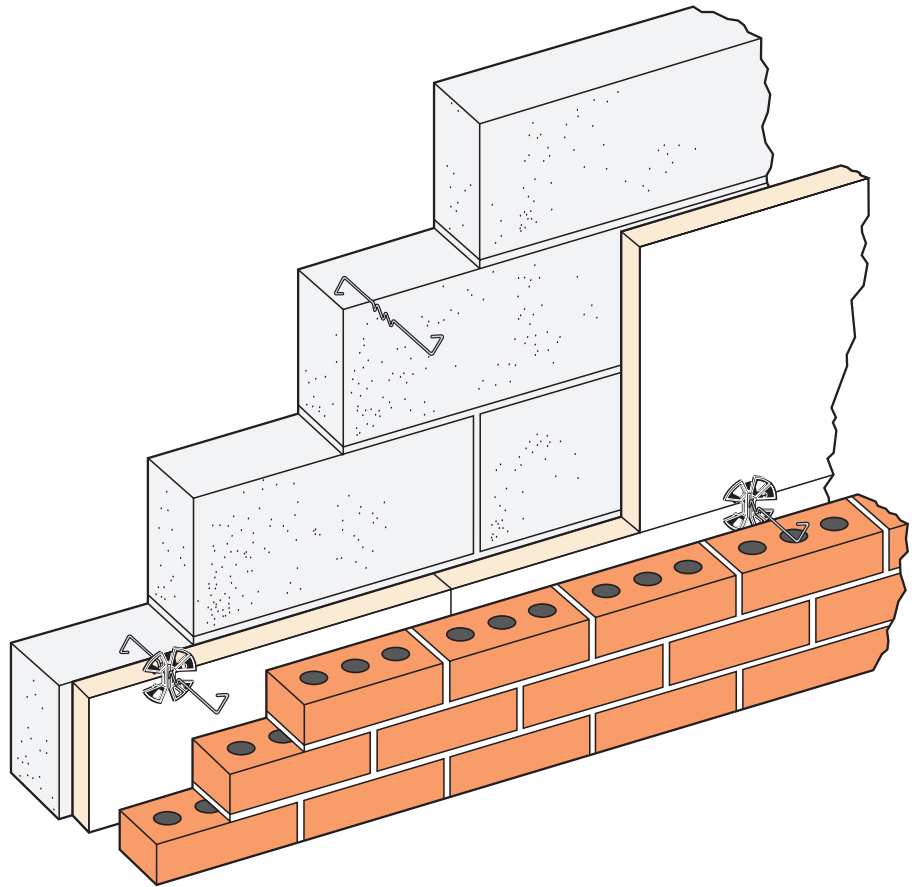
For walls in which both leaves are 90mm or thicker, masonry ties need to be placed at not less than 2.5 per square metre (900mm horizontal x 450mm vertical centres).

The ties should be evenly distributed throughout the wall area, with the exception of around openings and should be staggered where possible.

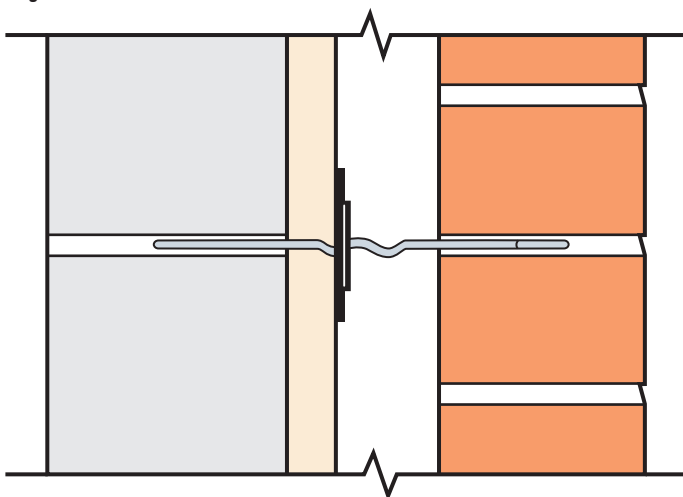
Insulation Board

Where insulation board is installed within the cavity and restrained by ties with insulation retaining clips (Simpson Strong-Tie ref. IRC001), it may be necessary to reduce the horizontal spacing of the ties to 600mm.

At vertical edges of an opening, unreturned or unbonded edges, and vertical expansion joints - additional ties should be used at a rate of one per 300mm (height) and located not more than 225mm from the edge.



Length of Tie and Embedment



Wall ties should be of the correct length to ensure they are fully embedded in the masonry.

The tie should have a minimum embedment of 50mm in each leaf, but also allow for site tolerances relating to the cavity width and centring of the tie.

The recommended tie lengths will therefore achieve an embedment of between 62.5mm and 75mm.

For the most suitable tie length, see the "Recommended Masonry to Masonry Tie Length" table overleaf.