Low Thermal Conductor

Orchestrate improvements to wall U-values
with Ancon Low Thermal Conductivity Wall Ties

Ancon®
BUILDING PRODUCTS

Helping to deliver sustainable, energy efficient buildings

Wall Ties are an essential element in the strength and stability of cavity walls, but by crossing the cavity they act as a thermal bridge between the internal and external leaves. Generally speaking, the wider the insulated cavity, the more substantial the Wall Tie needs to be and the greater the effect the tie has on the U-value of the wall.

The challenge for the Wall Tie industry, set by the Government's ambitious energy efficiency targets, is to reduce the thermal conductivity of its products whilst continuing to meet the structural performance requirements of multi-storey and wide cavity construction.

Ancon has met this challenge, but then that's what Market Leaders do...

Ancon Low Thermal Conductivity Cavity Wall Ties

Ties which minimise heat transfer through thermal bridging, improving the energy-efficiency of a wall

Ancon TeploTie 'Basalt Fibre' Wall Ties

Ancon TeploTie composite wall ties comprise pultruded basalt fibres set in an epoxy resin and are the most thermally-efficient wall ties on the market. With a thermal conductivity of only 0.7W/mK, they can be used to reduce insulation thickness and wall footprint. A sand finish provides excellent mortar key.

For cavities from 50mm to 300mm

Ancon Teplo4 (Type 4)

Ancon Teplo1 (Type 1)

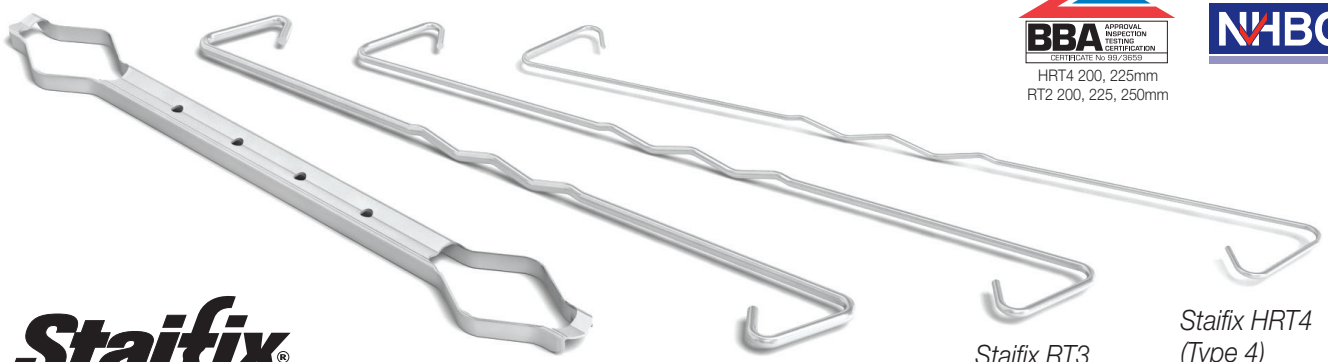
Ancon Teplo2 (Type 2)

Ancon 'Stainless Steel' Wall Ties

These stainless steel wall ties have been value-engineered to provide high performance at competitive prices. The effect Ancon's high tensile wire wall ties have on heat transfer is negligible and they can be excluded from U-value calculations to EN ISO 6946.

For cavities from 50mm to 150mm

HRT4 200, 225mm
RT2 200, 225, 250mm



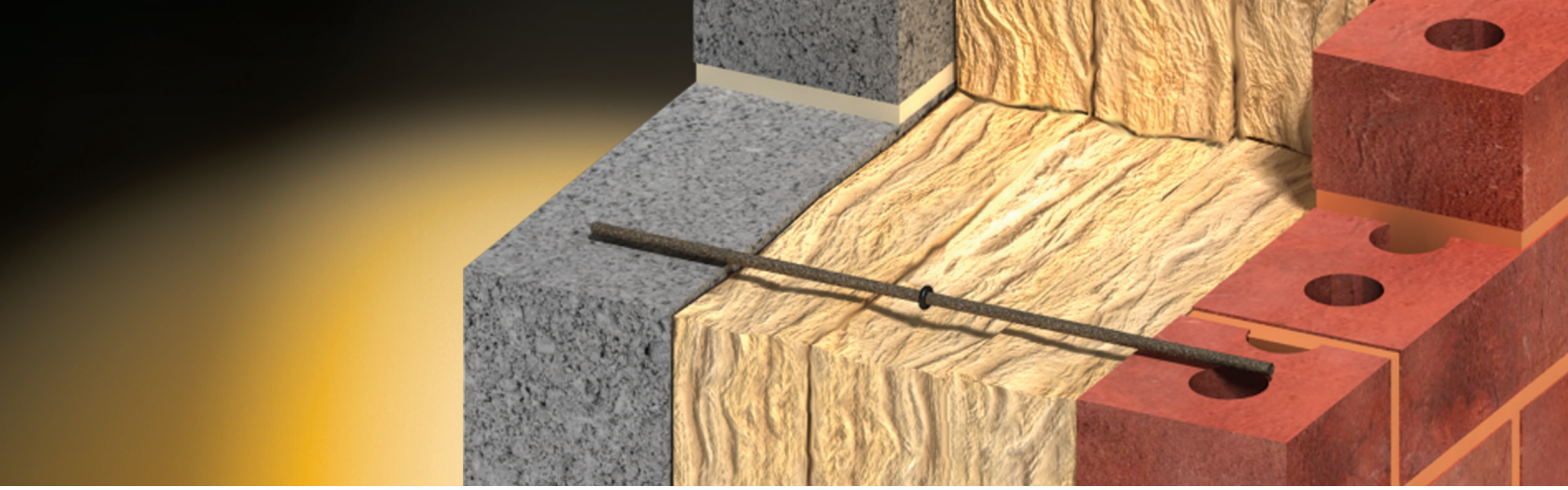
Staifix® Stainless steel wall ties

Ancon ST1 (Type 1)

Staifix RT2 (Type 2)

Staifix RT3 (Type 3)

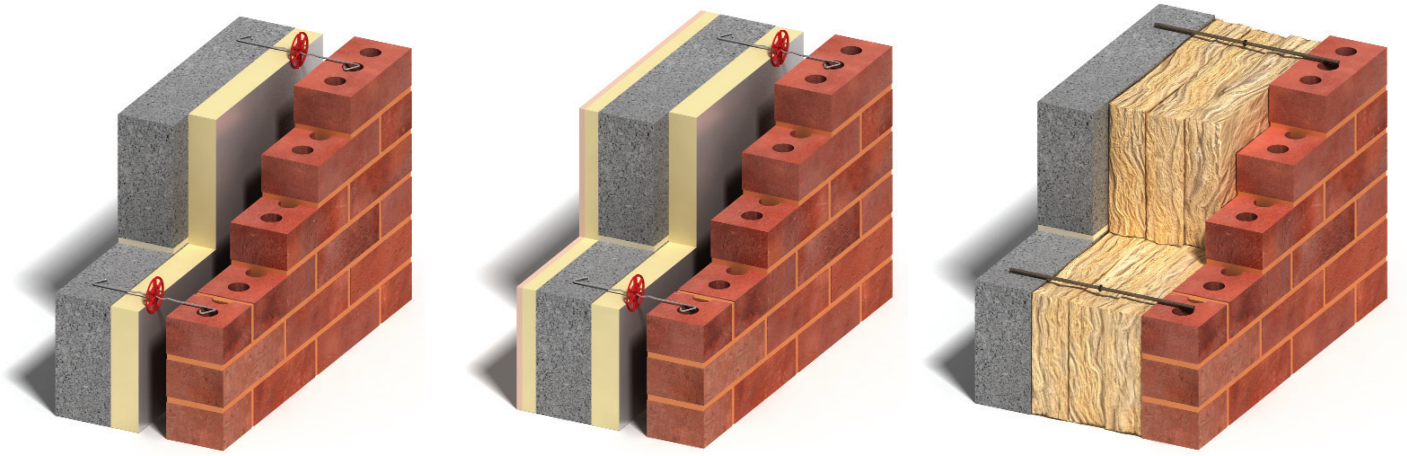
Staifix HRT4 (Type 4)



Futureproofing for Traditional Masonry Cavity Construction

Ancon's low thermal conductivity wall ties can be used in insulated cavity walls to meet the Code for Sustainable Homes levels 3 to 6. It is widely accepted that to comply with the higher code levels the emphasis shifts from the thermal performance of the structure to the use of renewable energies.

Example Wall Profiles



Ancon Low Thermal Conductivity Wall Ties are available to suit cavities from 50mm to 300mm.

U-value Calculations

It is important to use the actual cross-sectional area and thermal conductivity of the Wall Tie being used when calculating the U-value of a wall, rather than allowing a program to apply default values. This can make a considerable difference to the U-value calculated; default values will generally overestimate the effect of the Wall Ties.

Cross-Sectional Areas and Thermal Conductivity Values

Ancon Tie Reference	Wall Tie Type*	Cavity Width (mm)	Tie Length (mm)	Area (mm^2)	Thermal Conductivity (W/mk)
Ancon Teplo4	4	50-125	200, 225, 250	12.6	0.7
Ancon Teplo2	2	50-125 126-200 201-300	200, 225, 250 275, 300, 325 350, 375, 400, 425	19.6 28.3 38.5	0.7
Ancon Teplo1	1**	50-150	200, 225, 250, 275	38.5	0.7
Staifix HRT4	4	50-75 76-100 101-125	200 225 250	3.5 4.2 6.2	17
Staifix RT3	3	50-100 101-125	200, 225 250	6.2 7.5	17
Staifix RT2	2	50-100 101-125	200, 225 250	7.5 8.6	17
Ancon ST1	1	50-125 126-150	200, 225, 250 275, 300	19.5 23.4	17

Notes: *Masonry-to-masonry ties are usually installed at 900mm horizontal centres and 450mm vertical centres; this is equivalent to 2.5ties/m^2.*

* *Wall ties are selected by the Types detailed in BS5628-1:2005. For more information on wall tie types please refer to Ancon's 'Wall Ties & Restraint Fixings' literature available from www.ancon.co.uk or contact Ancon's Technical Services Team on +44 (0) 114 275 5224.*

** *Due to the testing completed to date the use of Type 1 TeploTies is restricted to buildings up to 18m in height.*

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