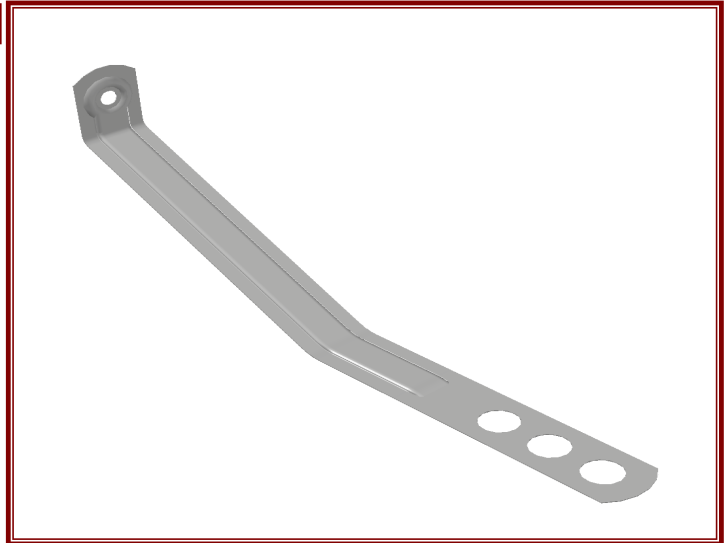


**REPORT OF TESTS ON VISTA ENGINEERING LTD  
75MM CAVITY TIMBER FRAME TIES TO EN 845-1:2003**

**Certificate No. 387 . Test Reference: 093989 Issue Date: 2/11/09**

**Product**

Timber Frame Wall Ties nominally 150mm long supplied by Vista Engineering Limited were tested in tension and compression over a nominal cavity width of 75mm in accordance with BS EN 846-6 Methods of Test for Ancillary Components for Masonry. Part 6: Determination of tensile and compressive load capacity and load displacement characteristics of wall ties (Single End test).



**Client**



**Vista Engineering Ltd**  
Carr Brook Works  
Shallcross Mill Road  
Whaley Bridge  
High Peak  
SK23 7J

**Test Results**

**Summary of Maximum Declared Values of 0.5mm, 150mm long Type 6 Timber Frame Wall Ties Tested in Tension and Compression at a Standard Cavity Width of 75mm**

Test	Mode	Type of Test	Maximum Declared Value at ultimate Load(N)
Tension	Fixed to timber Studding with a 50x3.35mm annular Ring nail	Fixed to timber as rec'd	660
Compression			639
Tension		24mm simulated timber movement	663
Compression			449
Tension	Built into couplets with 1:2:9 mortar	Mortared end	1466
Compression			604

**Guidance**

The manufacturer can declare a value of not greater than the values given in the table above for each end and mode of test of the tie. This is based on the requirements of BS EN 845-1. Also no individual specimen shall be less than 70% of the value declared by the manufacturer. The tests over the working cavity +15mm should not give loads of less than 50% of the value declared by the manufacturer. At 1mm serviceability deflection the mean tensile or compressive load shall be greater than one third of the ultimate tensile or compressive load declared by the manufacturer. At the extended cavity, the tie shall not give loads less than 50% of one third of the value declared by the manufacturer.

Comparing the performance of the wall tie against the guidance in BS DD140: Part 2: Wall Ties Recommendations for Design, the tie would be equivalent to a type 6 tie. Suitable for tying masonry outer cladding to softwood structural framework of domestic dwellings and industrial commercial/buildings up to 4 storeys and not greater than 15mm in height. Suitable at a density of 4.4 ties per square meter for buildings anywhere in the South East of England where the basic wind speed does not exceed 44m/s and for buildings on town and city sites in areas where the basic wind speed does not exceed 52m/s. In more severe situations the tie density should be increased to 7 ties per square meter.

**Assessment**

The Vista Engineering Ltd 75mm cavity Timber Frame Wall Tie having being assessed by CERAM Building Technology against BS EN845-1 would meet with the appropriate parts of NHBC standards when tested at a cavity width of 75mm.

Full test results are reported in CERAM Building Technology Report No. 093989-18298

**Authorised by:**

*Joanne Booth*

**Joanne Booth**  
**(Manager, Structures Group)**

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**SUMMARY REPORT**