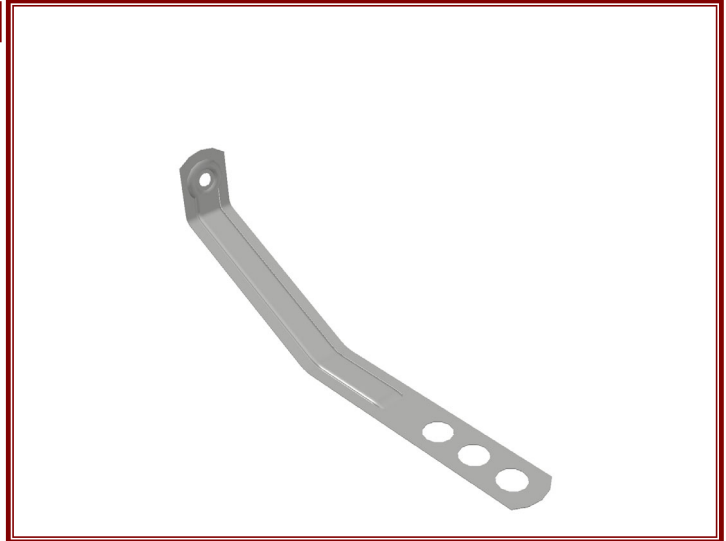


**REPORT OF TESTS ON VISTA ENGINEERING LTD
50MM CAVITY TIMBER FRAME TIES TO EN 845-1:2003**

Certificate No. 388 . Test Reference: 093989 Issue Date: 9/11/09

Product

Timber Frame Wall Ties nominally 125mm long supplied by Vista Engineering Limited were tested in tension and compression over a nominal cavity width of 50mm 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, 125mm long Type 6 Timber Frame Wall Ties Tested in Tension and Compression at a Standard Cavity Width of 50mm

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	633
Compression			531
Tension	Built into couplets with 1:2:9 mortar	24mm simulated timber movement	663
Compression		Mortared end	450
Tension			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 50mm 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 50mm.

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