Target Fixings Ltd

Tim Flex

New Build Timber Frame Wall Tie

INTRODUCTION

Timber framed buildings have always presented a need to re-think how external skins of masonry are attached to the inner leaf i.e. the timber frame. Lack of, or inadequate fixing of ties, has been one reason why this method of construction attracted much adverse publicity in the past.

The Tim Flex tie overcomes a number of the problems that occurred due to ties being attached solely to the sheathing, ties fixed with plasterboard nails instead of screws or ties fixed in incorrect positions for bedding into mortar joints. The Tim Flex either fixes correctly or does not fix at all and is installed as the brickwork progresses.

The increased speed of construction using the timber frame system is complemented by using the Tim Flex tie. During the construction of the outer leaf, the Tim Flex tie is laid over the top of the masonry and hammer-driven into the timber frame. Where insulation panels are to be included within the wall cavity an insulation retaining clip is easily attached to the Tim Flex and 'wound' along the tie to hold the insulation panels securely in position.

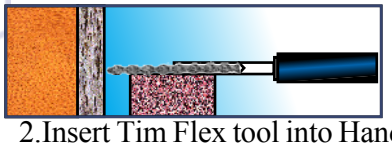
Both the design and manufacturing process of the Tim Flex ensure that flexibility of the tie is maintained to accommodate all normal building movements, yet is capable of transferring imposed loads in both tension and compression in cavity widths of up to 140 mm at normal densities.

For information regarding use of the Tim Flex ties in cavities over 140 mm please contact our Technical Department.

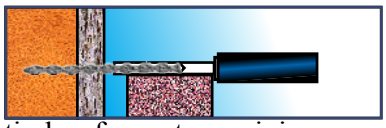
THE SYSTEM

The Tim Flex system of timber frame wall tie installation offers the advantages of a non-expanding mechanical fixing on the far leaf and a mortar fixing on the near leaf. Proof testing of the far leaf using a Target Fixings Universal Test Unit can be performed randomly as installation proceeds. Because the fixing method employed does not induce additional stresses into the substrate and it has a small diameter core, the Tim Flex complies with current timber codes and overcomes the possibility of splitting timbers.

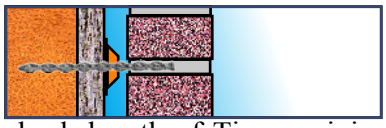
The design of the Tim Flex remedial tie ensures that any potential for installer error can be minimised. The multiple drip design of each fin allows the Tim Flex to be installed at an angle of up to 25° towards the inner leaf without the possibility of any water transfer across the cavity. It is recommended that each Tim Flex is installed horizontally.



1. Build up outer leaf to the level at which the wall tie is required.
2. Insert Tim Flex tool into Hand Support Tool and place horizontal on top of outer leaf masonry.



3. Use hammer to **gently** drive Tim Flex Tie into Inner leaf timber frame to a minimum penetration of 40 mm.



4. Remove Hand Support Tool leaving tie in place and check length of Tie remaining on outer leaf masonry. A minimum of 70 mm embedment is required in mortar joint.
5. Apply mortar to bed joint, covering Tie, and continue to build up until next level of Ties is required.

TESTING

It is recommended that testing is performed in accordance with the requirements of BRE Digest 401. This publication gives a wind zone chart and the various proof test requirements for different parts of the country in differing situations. Most of the information is in table form, which negates the need for complicated calculations. It must be understood that wall ties are designed as load sharing devices and as such there is no necessity to have a high point loading on any individual tie. Only in exceptional circumstances does the proof test load requirement exceed 1 kN per tie.

SPECIAL FEATURES

One piece design - no moving parts to lose
Immediate proof testing of connection
Multiple drip points to deter water transfer
Flexible design allows natural building movement
Fixes through insulation material
Quick and easy installation

Target Fixings Ltd

Fast Flex

Timber / Aircrete Fixings

INTRODUCTION

Fast Flex fixings offer the ease of use of a nail but the fixing capabilities of a screw and plug. They are available in two diameters - 6 mm and 8 mm - and a range of lengths from 50 mm. When fixing timber to Aircrete (ACC) blocks, using the 8 mm diameter Fast Flex, there is generally no need to pre drill.
Fast Flex may also be used for fixing into hard materials. A small pilot hole may be drilled through the timber and into the brickwork or concrete behind, the Fast Flex 6 mm is then simply driven home.
Because of their design, there is minimal finishing required once they are driven home. The Grade 304 stainless steel ensures that there is no unsightly staining or streaking of surface finishes, and they are not affected by any aggressive timber treatments.

PERFORMANCE REQUIREMENTS

Loading requirements to resist the wind suction based on CP3, Chapter V, Part 2, 1972, are given in the tables on Information Sheets TBF1 & TBF2, along with the minimum penetration depths, timber thickness and spacing guidance.
Testing of Fast Flex is possible using THE Target Load Test Unit to ensure that the correct tensile loading is achieved.

FIXINGS DETAILS

Fast Flex fixings can be used to fix battens, skirting, dado rails or door frames on to Aircrete blocks. They may be painted directly without fear of staining.
Fast Flex are also to be recommended when fixing through insulation materials. They offer a 'stand-off' fixing that will not crush the insulant even if they are over hit; and being stainless steel they may be used externally at will offering a good method of increasing thermal insulation on solid walls.
Battens for vertical tiling may be fixed either directly to the bricks / blocks or through the insulation material. Generally, the batten thickness will need to be a minimum of 25 mm, although 19 mm can be used in special circumstances. This not only ensures a good 'pull-through' value at the batten / fixing connection, but also allows an 'improved' nail to be used to additionally fix into the batten.
The fixing embedment into the brick, block or concrete will depend on the strength of the material, the wind loading and the weight to be supported. As a rule of thumb, concrete requires 30 mm, brick; 50-70 mm and Aircrete; 70+ mm. Reference should be made to Information Sheets TBF1 & TBF2, and the use of a load test unit should be considered.

SPECIAL FEATURES

Direct one-piece fixings into masonry
Drive like nails - grip like screws
Excellent end-grain fixing
Bridges gaps - no need for packing
Fixes firmly through insulation

ADDITIONAL USES

Fast Flex can be used in many unique and fascinating ways. They may be driven into the bottom of posts to fix them securely into a poured concrete base. Their design allows them to be placed very close to edges without danger of splitting the timber.
When fixing timber posts for gates or fences to brickwork, the Fast Flex offers an easy solution. A 5-6 mm pilot hole is drilled through the post and into the masonry whilst holding the post securely up against the wall, and then hammering the Fast Flex straight into the hole. Because they are stainless steel, there is no finishing requirement to resist and future possible corrosion.
Fast Flex may also be used to fix softwood noggins or rails into timber frames without splitting the timber or requiring and drilling.
Door frames can be similarly fitted to Aircrete blocks by staggering the fixings up it's length without danger of splitting the blocks as can occur with expansion type fixings.

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