

# Thor Double Neoprene Expander Tie

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## Features

The Thor Double Expanding 10mm wall Tie is manufactured from Austenetic 304 grade stainless steel bar and Neoprene expanding sleeves uniquely designed to ensure the compression washers fitted do not pull through the sleeves on expansion.. The neoprene sleeves avoid point loading and are remarkably tolerant to both hole and host material variation. A unique Shearnut offers a factory set torque level for the inner fixing.

## Application

- Effective remedial cavity wall tie of brick, blocks, concrete etc
- Ideal for conventional street housing.



## Method Statement (2 Fix)

1. Set depth gauge to allow the 10mm drill bit to penetrate into the inner leaf. Drill until the depth gauge meets the face of the outer wall. Minimum penetration to the inner leaf brickwork should be 65mm.
2. Screw the threaded fixing tool onto the threads at the top end of the tie and lock the tie onto the tool. Insert the tie into the clearance hole.
3. Turn clockwise to expand the inner leaf expander. Make final turns with torque wrench. Holding the lower section of the inner fixing tool, break the outer part, turning anti clockwise and remove from the tie. Undertake tensile load tests at this point, if required.
4. Fix the hex socket outer setting tool onto the outer end of the tie and tighten with a torque wrench.
5. The outer brick is then sealed using colour matched mortar or mastic.

## Method Statement (1 Fix)

1. Set depth gauge to allow the 10mm drill bit to penetrate into the inner leaf. Drill until the depth gauge meets the face of the outer wall. Minimum penetration to the inner leaf brickwork should be 65mm
2. Fit the Hex socket fixing tool into a cordless drill. Engage the fixing tool onto the brass torque nut.
3. Pull the trigger of the cordless drill. This action will expand the inner leaf section to a preset torque. The torque nut will then re- thread its self and complete the fixing of the outer leaf.
4. The outer brick is then sealed using colour matched mortar or mastic.

## TYPICAL TENSILE FAILURE IN ACCORDANCE WITH BSI DD 140 PART 1

BASE MATERIAL	COMPRESSIVE STRENGTH	6MM TIE ANCHORAGE	MINIMUM EMBEDMENT
Common Facing Brick	20 – 20.75	4.56	65
Deep Frogged Brick	20 – 20.50	4.00	65
Dense Concrete Block	7 – 10.	4.56	65
Lightweight Block	2.8 – 35.	1.78	65
Clearance Hole 10mm	Available lengths mm : 175 ; 200 ; 225 ; 250 , 300		

Test provide indicative values of the tie performance. The couplet test produces results of a conservative nature compared to actual wall tests

## SPECIFICATION NOTES

The following criteria are to be used unless specified otherwise:

**RE-TYING** - Locate and mark in white chalk the position of the old ties using a metal detector. Use these marks to establish the spacing of an alternative grid for the new wall ties.

It is important to ensure that the replacement wall ties are installed before treating the existing ties.

The drilling method adopted must ensure accuracy of the diameter of the hole and avoiding appreciable spalling.

Ties will be fitted into the centre of an external brick wherever possible.

It is imperative that the holes drilled should be to a recognised pattern i.e. diamond grid 900mm between centres horizontally and 450mm vertically. Generally the diamond pattern will commence with the first lines of holes 300mm up from damp proof course and 300mm in from the gable end. In brick columns of 300 mm or less a centre line will be drilled, spacing of 300mm vertically and 250mm horizontally out from the edge of the fenestration.

### Existing Tie Treatment

Depending on the specifiers recommendations ties can be isolated by either:-

- A) Uncovering the existing ties, and sleeving the ties in accordance with the Thor sleeve specification. This method has the advantage of containing the works within the mortar bed joint, and is less destructive than alternative methods.
- B) Ties can be cropped or removed. This method requires the removal and replacement of a brick adjacent to the tie.

## General Notes

These notes are for general use only. Should these notes not apply to your specific project, please consult the Thor Helical Remedial Technical Support Team on 0870 6006164. Thor Helical Remedial are able to offer a full project design service by either our in house design team or our National network of Approved installers. In most instances this service is provided free of charge. Projects completed by our network of approved installers offer the benefit of a fully underwritten insurance backed guarantee.