

# Bay Window Restraint Scheme in Solid or Cavity wall using Thor Heliforce Bar & Thor Drive Fix Restraint Ties

## Method Statement

1. Use an appropriate chasing tool to cut out horizontal slots in the masonry face as required by the specification. For clean, dust free cutting use a vacuum attachment on the chasing unit.

**Note.** When installing bar in a mortar bed joint ensure all the mortar is removed from the joint. Failure to do so will result in reduced effectiveness of the repair.

- 1A. Where required cut a slot through the thickness of the wall to connect the internal and external slots.
2. Remove all dust and debris from the slot and thoroughly soak with clean water. Use Thor Primer to seal faces of slot where substrate is very porous or water can't be used.
3. Cut the required number of Thor Heliforce bars to the appropriate lengths, ensuring they fit into the prepared slots.
4. Mix the Thor WHO Grout constituents together, as directed, in the bucket provided using a powered mixing paddle. Additional liquid should not be added.
5. Load the Thor WHO Grout into the Thor Crack Stitch Gun.
6. Inject a 10-15mm thick bead of grout into the back of the prepared slot. Insert the Thor Heliforce bar pushing the bar to the back of the slot to ensure full embedment in the grout.
7. Inject a further 10mm thick bead of grout.
8. Insert the second Thor Heliforce bar and cover with a third 10mm thick bead of grout and compress the grout and bar composite into the slot using a suitable finger trowel.
9. The grout should be finished approx. 10mm below the surface of the finished masonry level to allow the application of a colour matched mortar pointing to finish the repair.
10. **Note.** Re-pointing can be commenced when grout has begun to set.  
**Note.** Thor WHO Grout has an accelerated gelling time. Should the grout become too stiff to inject, empty the contents of the grout gun back into the mixing bucket and re-mix using the powered mixing paddle without adding additional liquid. Reload the injection gun and proceed as before.
11. Mark the positions of the ends of the floor joists on the external masonry and drill 12mm dia. clearance holes through the masonry and remove all dust.

## Method Statement Cont.

12. Insert the Thor Drive Fix Restraint Tie into the tie support tool attached to an SDS hammer drill. Fire the tie home into the end of the joist to a depth of approx. 75mm.
13. Insert the resin stop sleeve over the tie end and push the stop min. 90mm into the masonry
14. Tensile load testing can be carried out at this stage if required.
15. Load the Thor Poly Resin into the applicator gun and attach the mixer nozzle and extension tube
16. Inject the Thor Poly Resin over the end of the tie to completely fill the hole. If required, finish resin back from the face of the masonry to allow application of a colour matched mortar.

## SPECIFICATION NOTES

The following criteria are to be used unless specified otherwise:

- A. Finished depth of slot: Cavity walls 40-55mm. Solid walls 55-70mm. (plus thickness of plaster on internal face, where appropriate)
- B. The top and bottom chords of each masonry beam should be spaced vertically as far apart as possible upto a maximum spacing of 900mm.
- C. Overlaps in Thor Heliforce bars should be a minimum of 500mm at staggered centres.
- D. Heliforce bars are to extend a minimum of 500mm to each side of the bay.
- E. Masonry fractures within the "beam zone" must be stabilised as appropriate (e.g. backfilling with Thor Epoxy resin, deep repointing etc.)
- F. Masonry is to be secured to every joist end.
- G. The integrity of the connection of the window bay joists to bressummer beam should be checked.
- H. In poor ground conditions, it may be necessary for the installation of Thor Helical Shire Stabilizers to supplement the support from the bay window foundation.
- I. **Climatic Conditions.** In hot conditions Thor WHO 60 grout should be stored and mixed in the shade to maximize the working life of the mixed product. As Thor WHO 60 grout is a cementitious product it should not be used when the temperature is +4°C and falling

## RECOMMENDED TOOLING

- A. Appropriate chasing tool.
- B. 12mm dia. drill bit of appropriate length.
- C. Power mixing paddle.
- D. Thor Grout gun and injection nozzle.
- E. Thor Drive Fix Tie installation tool.
- F. Suitable finger trowel for mortar finishing.
- G. Thor Poly resin applicator gun and extension tubes
- H. 2.5kg SDS hammer drill

## 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.