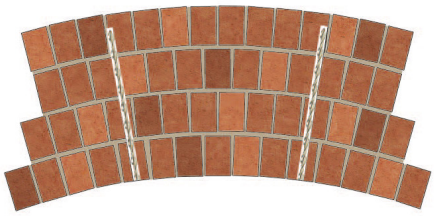
Masonry Arch Pinning of Separated Brick Rings, Through Brick Faces, Using CemTies

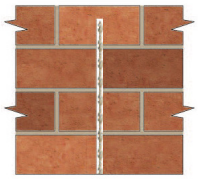
METHOD STATEMENT

1. Mark locations for the pins onto the underside of the arch at the required spacing.
2. When using 8mm CemTies, drill 14mm clearance holes (16mm if the CemTie is longer than 450mm) to the required depth and at the specified spacing. (If using 10mm CemTies drill an 18mm diameter hole).
3. Clean out ALL dust from the hole and thoroughly flush with water. Where the substrate is very porous or flushing with water is inappropriate, use HeliPrimer WB. Ensure the hole is damp or primed prior to commencing step 8.
4. Attach the required length of CemTie pinning nozzle to the gun.
5. Mix HeliBond cementitious grout with a power mixer and load into the Helifix Pointing Gun HD.
6. Pump grout to fill the nozzle.
7. Wind the CemTie into the nozzle and ensure that it is fully covered in grout.
8. Insert the nozzle to the full depth of the drilled hole and pump the grout.
9. Make good all holes at the surface with brick dust or matching mortar.
10. Clean tools with clean, fresh water.

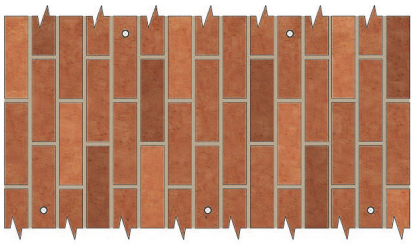
N.B. If there is a lot of movement in the arch then the ties will have to be installed in phases. After each phase the ties should be left for 24 hours for the grout to achieve initial set. After 24 hours continue with the next phase.



Elevation



Section



Plan

RECOMMENDED TOOLING

- **For drilling**
  Rotary percussion 3-jaw-chuck drill
- **For mixing HeliBond**
  3-jaw-chuck drill with mixing paddle
- **For insertion of the CemTies**
  Helifix Pointing Gun HD with pinning nozzle or Pneumatic Pointing Gun

Specification Notes

The following criteria are to be used unless specified otherwise:

A. Place CemTies on a staggered 450mm x 450mm grid.

B. Depth of hole to be CemTie length +25mm.

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C. Where arch rings are badly delaminated and/or brickwork is very loose, the CemTies will have to be installed in phases. In this case consideration should be given to using extra ties to help stabilise the brickwork prior to installing the first phase of CemTies. Depending on the condition of the brickwork it may be possible to use Helifix DryFix ties for this purpose.

D. In hot conditions ensure the masonry is well wetted or primed to prevent premature drying of the HeliBond due to rapid de-watering. Ideally additional wetting of the hole or priming with HeliPrimer WB should be carried out just prior to inserting the CemTie.

E. Do not use HeliBond when the air temperature is +4°C and falling or apply over ice. In all instances the hole must be thoroughly damp or primed with HeliPrimer WB prior to injection of the HeliBond grout.

The above specification notes are for general guidance only and Helifix reserves the right to amend details/notes as necessary.

GENERAL NOTES

If your application differs from this repair detail or you require specific advice on your particular project or Helifix products, call our Technical Sales Team on **020 8735 5222**.

Our Technical Department can provide you with a full support service including:

- Advice, assistance and recommendations on all structural repair matters
- Devising and preparing complete repair proposals for specific situations
- An insurance-backed warranty via our Approved Installers scheme

For all structural bridge or tunnel repairs refer to the Helifix Technical Department.