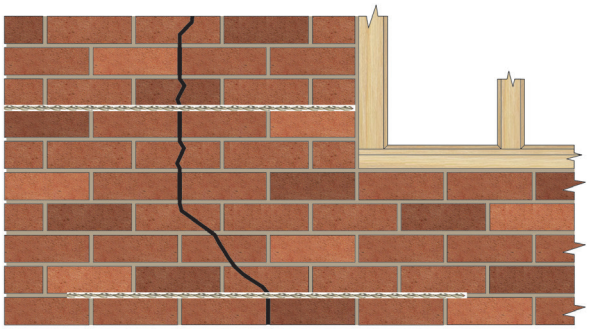
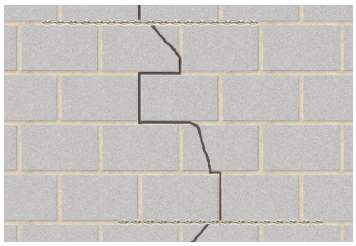
Crack Stitching

A reliable and cost-effective means of repairing and stabilising cracked masonry

APPLICATIONS

- Rapid and permanent solution to cracked masonry
- Suitable for all forms of masonry structure





Over 100 standard repair specifications are available online, covering all common structural faults.

Relevant Repair Details: RDs CS01 to CS14

FEATURES

- Fully concealed, non-disruptive repair solution
- More reliable than crack injection methods
- HeliBond cementitious grout is injectable and rapidly produces high compressive strength
- HeliBars and HeliBond grout combine to create excellent tensile strength within the masonry
- No additional stresses are introduced during installation
- Masonry remains flexible enough to accommodate normal building movement
- Tensile loads are redistributed
- Reduces likelihood of further cracking nearby
- Avoids costly and disruptive taking down and rebuilding

HeliBar is inserted into HeliBond grout with a cut slot

For full product information, case studies and downloadable repair details go to:
www.helifix.co.uk/products/remedial-products/crack-stitching

TECHNICAL SPECIFICATIONS

CRACK STITCHING	
Material	Austenitic stainless steel Grade 304 (1.4301) or 316 (1.4401)
Diameter	6mm (or 4.5mm for thin mortar joints)
Tensile strength (6mm HeliBar)	10 kN
0.2% Proof stress (6mm HeliBaR)	900N/mm^2
Length	To extend 500mm either side of the crack or outer cracks, if more than one
Standard lengths	1m, 1.5m and 2m – in packs of 10. May be cut to length on site
Height of slot	Full height of mortar bed or approx. 10mm if cut through the masonry unit
Bonding agent	HeliBond cementitious grout. 1 x 3ltr HeliBond = 10 linear metres of crack stitching

RECOMMENDED TOOLING	
For cutting slot up to 40mm deep:	Twin-bladed cutter with vacuum attachment or angle grinder or hammer and mortar chisel
For mixing HeliBond grout:	3-jaw-chuck drill with mixing paddle
For injection of HeliBond into slots:	Helifix Pointing Gun CS with mortar nozzle
For smoothing pointing:	Standard finger trowel
For inserting HeliBar:	HeliBar insertion tool

SLOTH DEPTH AND SPACING				
	Single skin/ Cavity wall	Solid Masonry		
		Up to 102.5mm	102.5mm to 225mm	Over 225mm
Depth of slot	25 – 35mm		25 – 40mm	25 – 40mm on both sides
Vertical spacing	Every 4 – 6 courses, 300 – 450mm			

INSTALLATION PROCEDURES

1. HeliBar to be long enough to extend a minimum of 500mm either side of the crack or 500mm beyond the outer cracks if two or more adjacent cracks are being stitched using one rod.
2. Where a crack is less than 500mm from the end of a wall or an opening, the HeliBar is to be continued for at least 200mm around the corner and bonded into the adjoining wall or bent back and fixed into the reveal, avoiding any DPC.
3. For solid masonry in excess of 300mm thick and in a cavity wall where both leaves are cracked, the wall must be crack stitched on both sides.
4. If there is render, this thickness must be added to the depth of slot. Crack stitching must be installed in the masonry and never in the render.
5. Ensure the masonry is well wetted or primed to prevent premature drying of the HeliBond due to rapid de-watering, especially in hot conditions. Ideally additional wetting of the slot should be carried out 1 to 2 minutes prior to injecting the HeliBond grout.
6. Do not use HeliBond when the air temperature is +4°C and falling or apply over ice. In all instances the slot must be thoroughly damp or primed prior to injection of the HeliBond grout.

1. Rake out or cut slots into the horizontal mortar beds, a minimum of 500mm either side of the crack.

2. Clean out slots and flush with clean water and thoroughly soak the substrate within the slot.

3. Using the Helifix Pointing gun, inject a bead of HeliBond along the back of the slot.

4. Using the HeliBar insertion tool, push one HeliBar into the grout toobtain good coverage.

5. Insert a further bead of HeliBond over the exposed HeliBar, finishing 12mm from the face, and 'iron' firmly into the slot using the HeliBar insertion tool.

6. Re-point the mortar bed and make good the vertical crack with CrackBond TE3.