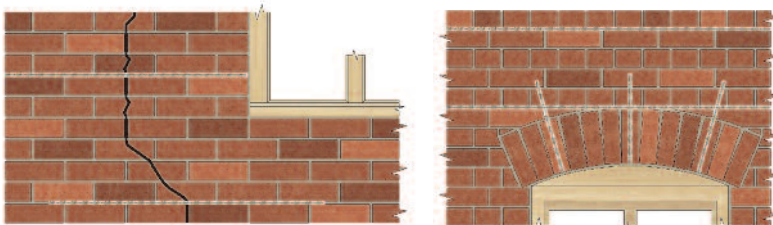


HeliBar

Helical stainless steel reinforcing bar for masonry repair and strengthening in both remedial and new build situations

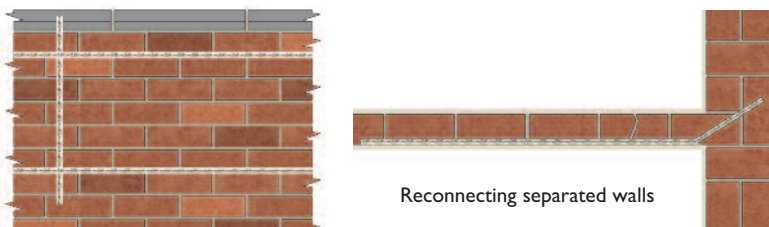
Applications

- Crack stitching
- Lintel repair and creation
- Forming deep masonry beams
- Horizontal structural restraint (when used with BowTie systems)
- Reconnecting separated walls
- Securing parapet walls
- Support existing masonry when creating new openings
- Reinforcing new build masonry
- Seismic upgrades for existing masonry
- Repairing bridges, tunnels and arches



Crack stitching

Lintel reinstatement



Securing parapet walls

Reconnecting separated walls

Over 50 standard repair specifications are available online, covering all common structural faults.

Relevant Repair Details: CS01 to CS03; LB01 & LB04; LR01 & LR10; PW02; RVW03; SC01; SN01; NH03



Scan the QR Code for full Product Information, Case Studies and downloadable Repair Details



Features

- Austenitic stainless steel helical bars
- Combines great axial strength with flexibility
- Accommodates differential building movement
- No additional stresses introduced into structure
- Generates high tensile strength with mortar (new build only) or HeliBond grout
- Extremely economical compared with alternative methods
- May remove or reduce the need for mass underpinning
- Fully concealed once installed
- Avoids expensive taking down and rebuilding
- Minimal disruption to building's fabric or occupants
- Spreads structural loads to avoid secondary cracking
- Reduces the potential for cracking in shrinkable materials



HeliBar is inserted into HeliBond grout within a cut slot

Installation Procedures

Example Application: Crack Stitching

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 230mm 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/plaster, 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



4. Using the HeliBar Insertion Tool push one HeliBar into the grout to obtain good coverage



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



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



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



6. Inject CrackBond TE3 into the crack leaving enough space for making it good. Re-point the bed joints with matching mortar and make good the crack.

Slot Depth and Spacing

	Single skin/ Cavity wall	Solid Masonry		
		Up to 102.5mm	102.5mm to 225mm	Over 230mm
Depth of slot	25 – 35mm	25 – 40 mm	25 – 40mm On both sides	
Vertical Spacing	Every 4 courses (approx. 340mm)			

Characteristic Material Properties

HeliBar Diameter	4.5mm	6.0mm	SuperSix	8.0mm	10.0mm
Product Code	HBR45	HBR60	HBR60S	HBR80	HBR10
Cross Sectional Area (mm ²)	5.6	8.1	9.4	10.0	15.0
Stock Length (m)	7.0	7.0	7.0	7.0	7.0
Pitch (mm)	25	29	30	39	45
Ultimate Tensile Strength (MPa)	1400	1112	1200	1100	1088
Tensile Strength (kN)	8.0	9.5	11.2	11.4	16.7
0.2% Proof Stress (MPa)	1150	840	1000	860	770
Shear Strength — Averaged (MPa)	900	650	770	700	750
Grade of Stainless Steel	ASTM304	ASTM316	ASTM304	ASTM316	ASTM316
Weight (g/m)	53	58	73	80	120