

MASONRY CRACK STITCHING SYSTEM



CRACK STITCHING

DESCRIPTION

- High tensile helical reinforcing bars.
- Tensile strength twice that of rebar.
- Corrosion resistant stainless steel 304 and 316 grade.
- Use with WHO-60 high performance grout.
- Independently performance tested.

APPLICATIONS

- Reconnecting and strengthening cracked brickwork.
- Reinforcing masonry corners.

BENEFITS

- Deep interlocking helix offers excellent bonding characteristics.
- Increases tensile and shear strength of masonry.
- Accommodates thermal and moisture movement.
- Absorbs stress to redistribute load.
- Minimal disturbance and fully concealed repair.
- Quick, reliable and cost effective.

PRODUCT SPECIFICATION

Thor Helical crack stitching bars are available in 5, 6, 7, 8 and 9mm diameter, in standard lengths of: 1m and 2m



STEPS

- 1 Grind out mortar bed to a depth of 30mm for half brick wall or 40mm full brick wall, 500mm either side of the crack.



- 2 Clear debris from the slot and thoroughly flush out with water.

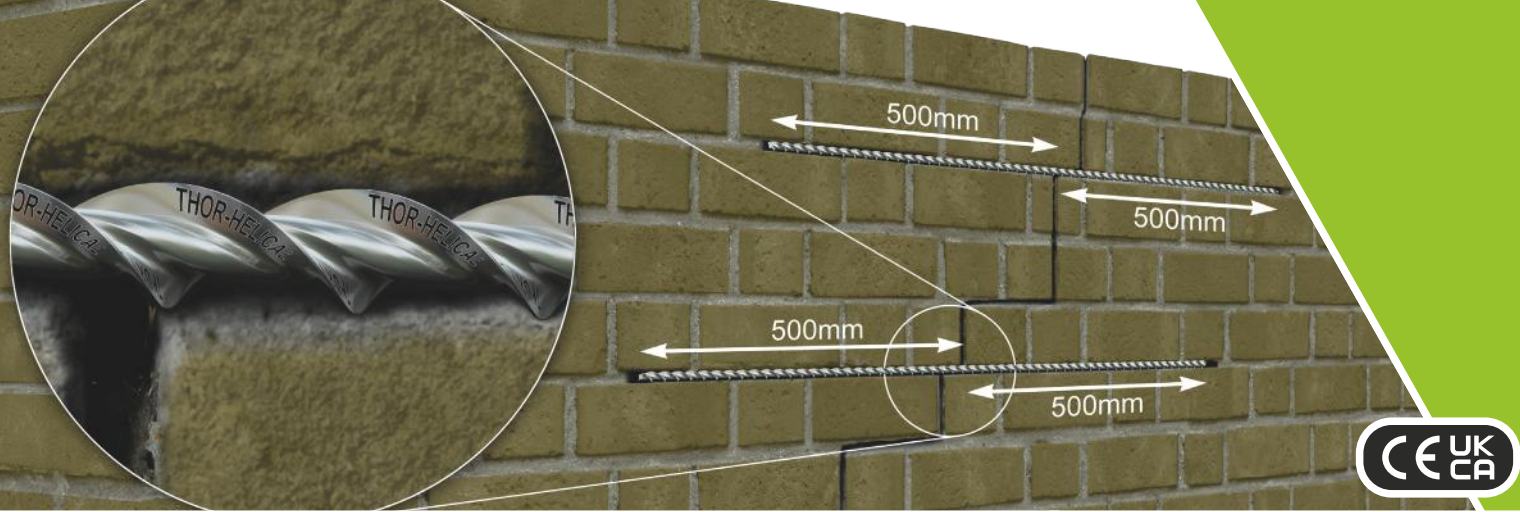


- 3 Pump a bead of WHO60 grout to the back of the slot to approximately 10mm from the surface.



- 4 Push Thor bar half way into the grout-filled slot, trowel back displaced grout and re-point.





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EN845-1 2013 +A1:2016
THB-15/220129

BS EN 845-1:2013 National Annex NA states that the bars need to provide an equivalent performance to the prescriptive 30mm x 5mm lateral restraint straps and the tension straps should have a declared mean tensile load capacity of at least 8kN.

TYPICAL TENSILE PERFORMANCE – CE MARK TESTING TO BS EN 845-1

Thor Helical Bed Joint Reinforcement in WHO-60 Grout

Bar Diameter	No. of Bars per Joint	Mean UTL (kN)	Mean Load at 2mm Deflection
6mm	1	8.39kN	6.26kN
7mm	1	9.57kN	6.41kN
8mm	1	11.06kN	8.73kN
9mm	1	11.50kN	8.40kN
6mm	2	16.00kN	10.86kN
7mm	2	17.65kN	11.99kN
8mm	2	17.65kN	10.67kN
5mm	3	14.34kN	6.89kN

Depth of test slot: 30mm for single bar - 40mm for multiple bars

Height of test slot: 3mm greater than diameter of crack stitching bars

Position of test bars: 400mm embedment with multiple bars spaced 10mm apart.

TYPICAL PROPERTIES OF THOR HELICAL BARS

Diameter	CSA (mm ²)	0.2% Proof Stress	Ult Tensile Strength*	Mean Tensile Capacity #
5mm	6mm ²	>880N/mm ²	1025-1225N/mm ²	7kN
6mm	8mm ²	>870N/mm ²	1025-1225N/mm ²	9kN
7mm	10mm ²	>880N/mm ²	1025-1225N/mm ²	11kN
8mm	13mm ²	>790N/mm ²	1025-1225N/mm ²	14kN
9mm	16mm ²	>850N/mm ²	1025-1225N/mm ²	17kN

* Ultimate Tensile Strength is measured within a calibrated tolerance of +/- 2%

Mean Tensile Capacity is an indicative value derived from CSA x Mean UTS

TYPICAL PROPERTIES OF WHO-60 Grout

Physical Properties	Strength
Compressive Strength – 7 days	35N/mm ²
Compressive – 28 days	55N/mm ²
Tensile Strength – 28 days	5N/mm ²
Flexural Strength – 28 days	12N/mm ²
Young's modulus (fully cured)	13kN/mm ²

