

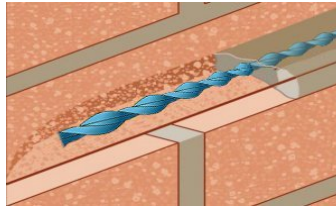
# THOR HELICAL<sup>®</sup> CRACK STICHING REPAIRS



## DESCRIPTION

Thor Helical reinforcement bars are available in lengths of 1, 1.5 and 2 meters. They are grouted into existing walls to reconnect cracked masonry and increase its flexural strength.

Radial fins and ribs are formed on stainless steel wire in a cold rolling process that significantly increases its tensile strength. The profiled wire is twisted via torsional stresses that are so evenly applied that the resulting helix is formed with patented precise pitch accuracy, making Thor Helical crack repair rods the most consistent and reliable helical wire products available.



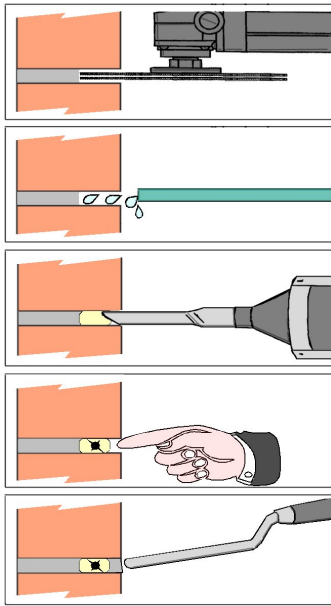
WHO60<sup>®</sup> is a thixotropic, shrink compensated cement-based grout with polymer additives and is formulated to bond helical reinforcement rods to masonry. The grout sets in & around the troughs of the highly deformed helix and rapidly develops compressive strength to restrict axial deflection of the wire under load conditions.

## BENEFITS

Anchored across fractures the grouted helical crack repair ties generate excellent compressive and axial strength to reinstate the structural integrity of distressed masonry to its pre-cracked strength & to provide resilience against further cracking.

Under axial loads the crack stitch tie becomes stressed within the wall. This torsional build up enables the spiral bar to progressively accumulate load & to disperse it at tangential angles to its helix. The redistribution of stress along the rods full length alleviates the incidence of sudden and catastrophic failures.

## METHOD STATEMENT



1. Chase slots at 300mm intervals along a length of wall that extends 500mm each side of crack.
2. Clear loose detritus from slots and flush thoroughly with water,
3. Pump bead of WHO60<sup>®</sup> cement grout to rear of slot, filling it evenly to approximately two thirds full.
4. Push Thor Helical crack stitching tie into grout to approximately two thirds of slot depth. Trowel displaced grout to firmly encapsulate rod.
5. Make good wall chase to disguise slot. Repair cracks between the helically reinforced masonry with appropriate and discreet filler.

## PRODUCT SPECIFICATION

### Reinforcing Bar

**Material:** Austenitic Stainless steel (304)

**Ult. Tensile Strength:** = 1050-1200N/mm<sup>2</sup>

**5mm Rod – Nom. CSA** = 6 mm<sup>2</sup>

**6mm Rod – Nom. CSA** = 7mm<sup>2</sup>

**7mm Rod – Nom. CSA** = 9mm<sup>2</sup>

**8mm Rod – Nom. CSA** = 12mm<sup>2</sup>

**9mm Rod – Nom. CSA** = 15mm<sup>2</sup>

### WHO60<sup>®</sup> Grout at 28 Days at 20°C

**Compressive Strength:** = 55N/mm<sup>2</sup>

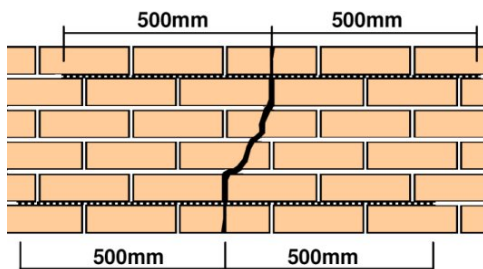
**Tensile Strength:** = 5N/mm<sup>2</sup>

**Flexural Strength:** = 12N/mm<sup>2</sup>

**Youngs Modulus:** = 13N/mm<sup>2</sup>

Where cracks are within 500mm of corners, the helical reinforcement should be pre-bent & bonded into the corner.

Rendered walls can have crack stitch ties installed directly into masonry units to bind them together and, where shear strength is an issue, to permit use of diagonal reinforcement and/or use of the heavier helical crack control rods.



## CRACK REPAIR GUIDE

Tolerances = + 5mm / - 0mm)

MASONRY	DEPTH OF		
	SLOT	GROUT	ROD
102mm	30mm	20mm	20mm
215mm	45mm	30mm	30mm

## CRACK REPAIRS - SIMPLE & DISCREET

- NO REBUILDING - NO UPHEAVAL - NO MESS - NO FUSS - 100% RECYCLABLE STAINLESS STEEL -

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**THORHELICAL<sup>®</sup>**

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### AVAILABILITY

Ancon<sup>®</sup> 0114 275 5224 [www.ancon.co.uk](http://www.ancon.co.uk)

Twistfix<sup>®</sup> 0845 123 6006 [www.twistfix.co.uk](http://www.twistfix.co.uk)

Wykamol 0845 400 6666 [www.thorremedial.com](http://www.thorremedial.com)