CENTRE DRIVE CDTIE™

REMEDIAL STAINLESS STEEL HELICAL WALL TIES FOR CONSISTANT QUALITY MASONRY

2nd Generation Engineered "Precise Pitch" Product Upgrade

- Patented "Precise Pitch" Helical Consistency
- Precise Helical Interlock Anchorage
- Rapid cost effective hammer driven installation
- Self-tapping spiral penetration
- Enhanced Buckling Resistance
- Accurate tracking across wide cavities
- Combines Axial Strength with Flexibility
- Reliable in all types of masonry
- Robust and Corrosion Free
- 316 Grade Stainless Steel
- High Tensile Strength
- Stable, reliable and unobtrusive
- Temperature and climate tolerant
- Safe, Controlled and "close-quarter" installation

Intelligent design has delivered a low-cost, reliable setting tool and unique driving end arrangement, to permit safer, controlled and close-quarter installation of the CDTie™ allowing the operator to maintain both hands on his drill. This eases installation, improves control and eliminates the need for cumbersome and expensive telescopic tooling arrangements.

Thor Helical 9mm CDTies™ have large work hardened fins that extend radially along and around an unhardened core to form a screw-like fastening member with longitudinal helical threads. CDTies™ are formed from profile rolled wire that is manufactured with patented "precise pitch" technology to tolerance levels that have not previously been achievable, (0.001mm/m). The manufacturing processes, which are applied evenly along the length of the stainless steel, serve to greatly enhance the tensile strength of the wire. Enhanced buckling resistance reduces the requirements for cementitious grouts or chemicals for pinning thick masonry, (e.g. 470mm).

Proven through independent testing programs and over **25 years** of service use, helical screw ties, such as Thor Helical CDTie™, have been identified in the British Research Establishment Digest No.329 as being the only type of remedial tie that can be used in any particular situation irrespective of the substrate, compressive strength or the requirement for the tie to **maintain performance in the event of a fire**. Thor Helical 9mm impact driven ties are now accredited to carry the European Technical Approvals CE identification mark. **Note:** also refer to **AS3700**

Thor Helical 9mm CDTie™ Specification

Thor Helical 9.00mm nominal O.D., 316 grade stainless steel, helically roll-formed wire CDTies™ having a pitch accuracy variation of no more than 0.5%, impact driven into pre-determined diameter, pilot holes in dense materials, or directly into low strength soft materials at intervals determined by a qualified structural engineer.

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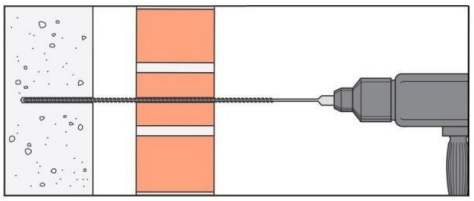
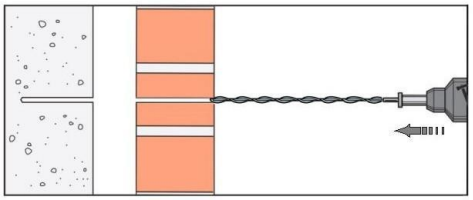
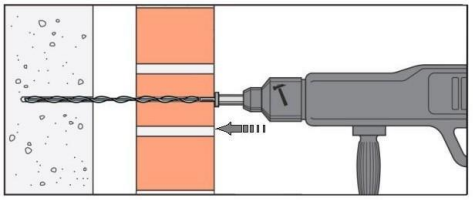
CDTie™ Installation Procedure







Drill pilot-hole, (6.0mm – 8.00mm), using appropriate masonry drill, to required depth using a depth gauge. To ensure drilling accuracy, allow the drill to **STOP ROTATING** prior to contacting and drilling the far-side leaf. The pilot-hole diameter is critical; to small and the tie may not penetrate, too large and the helical fins will not experience sufficient resistance to induce self-tapping spiral penetration. (Pilot holes are generally not required in A.A.C. or most softwood timbers).

Insert ThorHelical CDTie™ into the SDS support tool and drive into the pilot hole maintaining concentric alignment. Drive the tie to the required depth using the collar stop or a depth gauge, ensuring that it rotates at a constant rate whilst penetrating.

Continue driving to required depth until the tools' driving spindle recesses the tie beneath the brick face. Make good entry hole with material of similar colour, texture and porosity of wall surface.

The existence and location of any electrical, water or gas services that may be present in the wall or its cavities must be ascertained prior to drilling or cutting to minimise risk.

The table illustrates indicative Thor Helical CDTie™ lengths, given known materials and cavity widths. The following assumptions apply:

- Brick has a standard depth of 110mm
- Tie is recessed 0mm – 10mm below brick face
- Tie is driven into remote leaf to:
  - 60-70mm for brick
  - 45-55mm for concrete
  - 35-45mm for timber

CAVITY RANGE (mm)						
Tie Length (mm)	**Brick to Brick**		**Brick to Concrete**		**Brick to Timber**	
	Min	Max	Min	Max	Min	Max
180	0	20	15	35	25	45
205	25	45	40	60	50	70
230	50	70	65	85	75	95
255	75	95	90	110	100	120
280	100	120	115	135	125	145
305	125	145	140	160	150	170
350	150	190	165	190	175	195

Cavity Wall Tie Spacing:

Must be determined by a Consulting Structural Engineer – subject to minimum tensile proof loads being achieved and in accordance with A.S. 3700 2001, i.e. Maximum allowable spacing 600mm grid.

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The Thor Helical hydraulic load test unit is the only one of its type able to measure both tensile loads and corresponding elongation/slippage of the tie. This is an essential accessory for pre-contract testing and for in-process quality control management.

CDTie™ INDICATIVE PERFORMANCE GUIDE		
MATERIAL	**EMBEDMENT**	**LOAD**
AIRCRETE >3.5MPa	85mm	1.9kN
BRICK >10MPa	75mm	2.6kN
CONCRETE >20MPa	50mm	2.3kN
TIMBER SIDE-GRAIN	50mm	2.3kN
TIMBER END-GRAIN	75mm	2.3kN

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Specification subject to change at Thorhelical South Africa's discretion.

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