

AirTwist™ Remedial wall ties

Description

AirTwist remedial wall ties are designed by Thor Helical to have longitudinal blades with sufficient reactive interface angle to cut an accurate self tapping penetrative path into a wide variety of masonry elements upon being driven by a series of axial impacts.

Proven through independent testing programs and 25 years of use, helical wall ties are identified in B.R.E. Digest 329 (Table 5) as being suitable for use in all remedial situations, irrespective of the buildings substrate or its fire performance criteria.

The AirTwist wall tie has a circumscribed diameter of 9mm and is typically driven into a tiny pilot hole to minimize disturbance to the masonry as installation proceeds at remarkable speed and great simplicity.

- **Reliable in all types of masonry**
- **Robust & corrosion free**
- **Engineered product upgrade**
- **Patented helix consistency**

Benefits

The mechanical interlock anchorage of the AirTwist helical wall tie exerts no expansive stress, does not rely on adhesion and is not affected by temperature extremes or fire.

The cross sectional profile of the spiral wall tie includes a wide portion, to maximise grip, and a narrow portion, to accommodate differential movements in all directions. The deep and continuous helical troughs prevent migration of water across the cavity.

When under load, the continuous helical blades interact with the host building material to impart an accumulative cone of forces at tangential angles to the helix. Loads are spread evenly along the full penetrative length of the tie to ensure reliability of connection in a wide variety of construction materials.

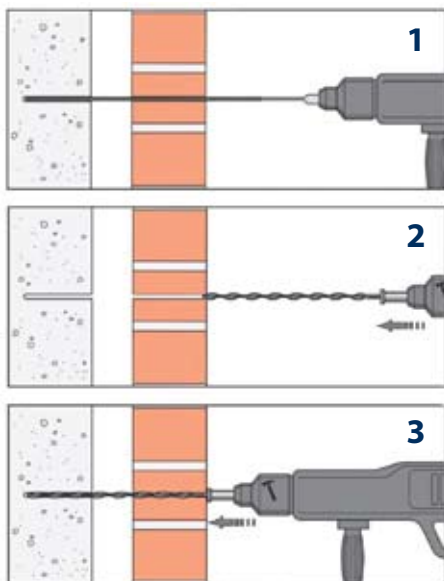
- **Rapid cost effective installation**
- **Precise helical interlock anchorage**
- **Combines axial strength with flexibility**
- **Stable, reliable & unobtrusive**

Distinction

Traditional helical wall ties are twisted by clamping one end of the wire & spinning the other. In contrast Thor Helical wall ties are engineered with advanced twisting die technology to accurately control the pitch of the tie.

The advanced precise pitch of the Thor Helical AirTwist (Pat EP1307303) forms tightly mating threads within masonry to ensure a superior interlock performance.

A unique driving end arrangement (Pat GB2439633) permits safe, controlled and close-quarter installation of the AirTwist that, allows the operator to maintain both hands on his drill. This eases installation and eliminates the need for cumbersome and expensive telescopic tooling arrangements.



View product videos on our website.

Method statement

1. DRILL pilot hole of appropriate diameter using a light percussive hammer drill. Stop drill rotating prior to drilling the remote wall layer to prevent 'whipping'.
2. Insert 9mm \varnothing Thor Helical wall tie into SDS support tool and DRIVE the tie into the masonry using a lightweight roto-hammer drill.
3. Once tool recesses the tie beneath the wall face FINISH by disguising entry bore with suitable filler compacted around the ties driving shank portion.

Product specification

Product: Thor Helical 9mm \varnothing Tie
Lengths (mm): 205, 230, 255, 280 & 305mm
Material: Austenitic Stainless steel -(304)
Ultimate Tensile Strength: => 15kN
Buckling Strength (over 100mm): => 4.4kN
Pitch Deviation on Tie: < 0.5%
Expansion Force Exerted by Tie: = none

CHARACTERISTIC TENSILE RESISTANCE (3MM DEFLECTION)

MATERIAL	PILOT \varnothing	DEPTH	LOAD
Aircrete >3.5N/mm ²	none	85mm	1.9kN
Brick >10N/mm ²	6mm	75mm	2.6kN
Concrete >20N/mm ²	6mm	50mm	2.3kN

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