

MASONRY ARCH PINNING



MASONRY ARCH PINNING SYSTEM

DESCRIPTION

- Hammer-driven tie for all types of masonry.
- Rapid SDS hammer insertion system.
- Work hardened helix induces self-tapping corkscrew action.
- Mechanical masonry-screw connection.
- Corrosion resistant stainless steel 304 and 316 grade.
- Independently performance tested.

APPLICATIONS

- Securing weakened Soldier Courses.
- Pinning barrel arches beneath vaults, tunnels and bridges.

BENEFITS

- Patented driving shank system for speed and simplicity .
- Patented precise pitch engineering for unrivalled reliability.
- Patented SDS tool for reduced tooling costs.
- Small pilot hole for minimal disturbance and visual impact.
- Longer and stronger than any other helical tie system.
- No adhesives - fire resistant and cold temperature tolerant.
- Quick, easy and cost effective installation.

PRODUCT SPECIFICATION

9mm Ties are available in standard lengths of: 155mm to 455mm (6" to 18") in 25mm (1") increments.

12mm Ties are available in standard lengths of: 610mm to 1370mm (24" to 54") in 150mm (6") increments.



STEPS

- 1 Drill pilot hole to a depth at least 10mm longer than length of the tie; refer to performance table for drill size; increase bore diameter in hard masonry.



- 2 Insert driving shank of the tie into SDS tool and hammer home using a light to medium-weight SDS drill.



- 3 Patch pilot hole with colour matched mortar.



* Good practice - Check tools & drills periodically for wear.



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

Wall Tie Diameter	Substrate	Pilot Hole Diameter	Tested Embedment Depth	Mean Load Capacity	Mean Load Capacity at 2mm Deflection
9mm	30.N/mm ² Brick	6mm	215mm	5.61kN	3.00kN
12mm	30.N/mm ² Brick	8mm	215mm	8.45kN	4.51kN

TYPICAL SHEAR PERFORMANCE – UKCA MARK TESTING TO BS EN 845-1

Wall Tie Diameter	Substrate	Pilot Hole Diameter	Off set Shear (Gap)	Mean Load Capacity	Mean Load Capacity No Deflection Limits
9mm	30.N/mm ² Brick	6mm	10-12mm	3.45kN	4.63kN
12mm	30.N/mm ² Brick	8mm	10-12mm	6.71kN	6.71kN

TYPICAL PROPERTIES OF THOR HELICAL ARCH PINNING TIES

Wall Tie Diameter	CSA (mm ²)	0.2% Proof Stress	Ult Tensile Strength*	Mean Tensile Capacity #
9mm	16mm ²	>850N/mm ²	1025-1225N/mm ²	17kN
12mm	28mm ²	>820N/mm ²	1025-1225N/mm ²	30kN

* Ultimate Tensile Strength is measured within a calibrated tolerance of +/- 2%
Mean Tensile Capacity is an indicative value derived from CSA x Mean UTS