



HELIFIX

SUSTAINABLE STRUCTURAL SOLUTIONS

Products & Applications Overview



About Helifix

Helifix is a technically led company with an on-going product development programme backed by thorough independent testing. Having created the original one-piece stainless steel helical fixing 30 years ago, Helifix continues to develop its range of specialist helical wall ties, fixings and masonry repair systems from its UK-based sales and manufacturing headquarters.

Engineering Excellence

With an enviable reputation for product quality, engineering excellence and comprehensive customer service, Helifix has considerable experience and technical expertise, which it continues to develop. It prides itself on possessing the necessary in-house skills to undertake all aspects of any project including advice and support, on-site back-up and high quality designed repairs using innovative, non-disruptive, concealed installation techniques.

Helifix continues to lead the way in the development of specialist helical wall ties, fixings and masonry repair systems.

The Helifix process is at the core of its operational capabilities and unrivalled service. It enables Helifix personnel to be involved at each stage of the project, working closely with clients and their appointed construction professionals to ensure that an effective and reliable solution is delivered efficiently and cost-effectively.

Operating throughout the UK and in many parts of the world, Helifix products are highly regarded, well proven and widely used as well as being recommended by the principal manufacturers of complementary construction materials.

Innovation

Helifix, as the originator of the one-piece stainless steel helical tie, has always been recognised as a leader in the design and engineering of innovative construction ties, fixings and reinforcements for both new build and remedial applications.

Together with their associated concealed, non-disruptive, installation techniques, Helifix products provide many outstanding benefits from the simplicity of their design to their ease of installation and long term performance. They combine the required strength with flexibility, durability and great holding power in all commonly used building materials to produce secure and lasting connections in new build applications and sustainable remedial solutions that greatly extend the life of existing structures.

An on-going programme of research and development has, over the years, produced a variety of innovative products such as RetroTie, the first remedial stainless steel helical wall tie, DryFix, a remedial wall tie requiring no grouts, resins or mechanical expansion and Helibeam which uses the existing masonry to reinforce the structure and spread loads.

All Helifix products, manufactured to exacting standards in our UK factory, have undergone extensive independent testing and are recognised by bodies such as the BRE, TRADA and TRL.



Our Process

Helifix projects are logged from start to finish in a comprehensive technical audit. This detailed documentation ensures that all aspects of any given project are recorded to provide a complete picture of all operations and to create a comprehensive record for future reference should it be required.

Detailed survey information is recorded on a Helibeam Project Form (HPF), which is at the core of the project documentation. This will include key details of the structure such as the construction type and the materials used, the contact details of all involved parties, site investigations, other reports, problem diagnosis including project drawings and site photographs, repair specifications, contractor's details and all relevant dates.

Work is generally, (although not exclusively), undertaken by a member of Helifix's nationwide network of fully trained Approved Installers who, with years of experience, are specialists in structural repair work and are registered with Helifix's insurers.

The designed schematic repairs are covered by Helifix's Professional Indemnity Insurance and 10 year warranties are available, via the



Approved Installer and signed off by Helifix, for the repair works that are undertaken. To provide further security and peace of mind, and to complete what is probably the most detailed and comprehensive repair process available, each warranty is also bonded by the CPA (Consumer Protection Association).



1 Survey

A thorough structural survey is undertaken either by Helifix or one of its Approved Installers, to assess the situation and establish the nature of the problem.

2 Diagnosis

The exact cause of the problem is carefully diagnosed by an experienced engineer. This is essential in order to devise an appropriate solution.

3 Design & Specification

A Helifix engineer devises the most suitable repair programme to overcome the identified structural faults and cost effectively restore structural integrity with minimal disturbance to the building fabric.

4 Tender

The repairs are then put out to tender so as to obtain best value for the client, who negotiates directly with the contractor independently of Helifix.

5 Installation

The repairs, as specified in the Helifix schematic design, are normally undertaken by one of Helifix's fully trained Approved Installers who, collectively, provide national coverage.

6 Guarantees

10 year insurance-backed warranties are available. These include design, products and installation and are bonded by the CPA. They are in addition to Helifix Professional Indemnity insurance.

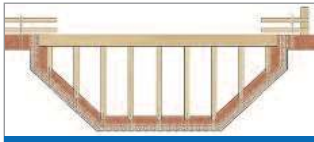


Masonry Repair Strategies

Masonry may deteriorate, crack, delaminate and fail for a variety of reasons. Most problems can be overcome by using various combinations of Helifix's extremely versatile and adaptable remedial ties, fixings and masonry reinforcement products.

Highlighted are some of the most commonly occurring structural faults that can affect every type of residential and commercial property of all ages and construction. Helifix masonry repair

strategies provide reliable and lasting solutions to these and many other situations. If you have a particular problem and require assistance, call our technical support team who will be pleased to help.



1 Repair of bay windows



2 Repairing brick arch lintels



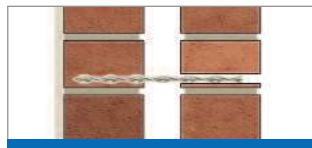
3 Repairing cracks near corners and openings



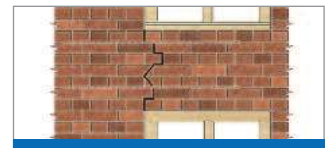
4 Reconnecting internal walls with external walls



5 Stabilising bowed or disconnected walls into floors



6 Replacing cavity wall ties



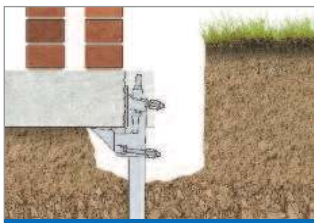
7 Crack stitching



8 Creating masonry beams



9 Repairing or creating flat arch lintels



10 Overcoming foundation settlement



Applications

Helifix remedial products are extremely versatile and adaptable and have wide ranging applications. Successfully used to overcome most commonly occurring structural faults, they will reliably, economically and sympathetically restore

integrity to virtually every type of structure and have proven to be effective in most common construction materials including bricks, blocks, stone, timber, concrete and a variety of regional materials such as Cob and Wychert.



Crack Stitching

A quick, simple, effective and permanent means of stabilising cracked masonry, Helifix crack stitching involves bonding stainless steel HeliBars into appropriate bed joints or cut slots, in bricks, blocks or stonework, with HeliBond cementitious grout.



Lintel Repair & Creation

Where lintels have lost their load-bearing capabilities the traditional solution is to cut out the brickwork, mechanically support the masonry above and install a new lintel. Helifix systems, for lintel repair and creation using the existing masonry, are less disruptive, time consuming and expensive.



Replacing Failed or Omitted Wall Ties

Wall tie failure is a major cause of masonry cracking and, if not addressed, can lead to catastrophic collapse of the outer masonry leaf. Helifix remedial wall ties, with rapid easy installation, provide a secure and reliable connection between the inner and outer leaves.



Creating Load Bearing Masonry Beams

Where masonry has cracked and failed as a result of ground movement, component failure, weathering or increased loads and stresses, the innovative and versatile HeliBeam System ties the masonry together and creates deep masonry beams within the existing masonry.



Restraining Bowed or Disconnected External Walls

The bowing external walls of a building can be stabilised quickly and simply by securing them to internal floor or roof joists using BowTies or BowTie HDs. The SockFix grouted sock anchor is ideal where there are voids in the substrate, such as hollow concrete floor slabs.



Reconnecting Separated Walls

Cracked internal walls which have separated from the main outer walls can be repaired and reconnected both internally and externally.



Repairing Masonry Arches

The versatile HeliBeam System can be used to reinstate the structural integrity of all forms of arches, from doorways and lintels to tunnels and bridges.



Stabilising Rubble-Filled Walls

As rubble-filled walls age the fill will often settle and the walls bulge outwards. To stabilise the wall fully grouted CemTies are installed to secure the inner and outer leaves.



Overcoming Foundation Settlement

Innovative Dixie micro-piles are simply screwed into the ground, using lightweight hand-held equipment, until they reach load bearing strata and are then secured beneath the foundations to rapidly and economically support the affected area and prevent further settlement.



Bay Windows

Bay windows may crack and separate from the main structure due to foundation movement or because differing materials were used on the bay and the main house building. Helifix systems provide a concealed, non-disruptive means of securing the bay to the main structure.



Securing Parapet Walls

There are a variety of different parapet wall constructions, with both cavity and solid walls, in use on building roofs and bridges. If they are cracked or unstable they can be repaired, strengthened and reconnected using a combination of Helifix remedial products.



Creating Movement Joints

Where movement joints have been omitted and masonry cracking has resulted, Helifix has a simple cost-effective solution. HeliBars are installed across a vertically cut joint and bonded at one end with the other end allowed to move freely inside a bonded sleeve.

Remedial Products

Helifix products are made from high tensile Grade 304 (1.4301) or 316 (1.4401) stainless steel to a unique helical design. This creates a slim profile with a large surface area that ensures a secure and lasting connection, with or without grouts or resins, in bricks, blocks, stone, concrete and wood as well as local building materials. It also means all products have great axial strength combined with flexibility which allows

natural structural movement and avoids the introduction of any additional stresses.

Quick, easy and economical to install, the self-tapping properties of Helifix products provide excellent holding power and avoid splitting timber or masonry. Once installed, all products are fully concealed and leave the building structurally secure but virtually unmarked.



HeliBar

HeliBar, despite its relatively small cross section, adds substantial tensile properties to the masonry when combined with HeliBond cementitious grout which locks between the fins in a composite action and bonds to the masonry. Consequently, HeliBars have a variety of remedial and new build applications.

HeliBond

Injectable, cementitious grout.

Crack Stitching

Repairing and stabilising cracked brickwork or stonework is best achieved by bonding HeliBars into appropriate bed joints or cut slots with HeliBond grout.

Helibeam

Pairs of long length HeliBars are bonded into pre-determined mortar beds or cut slots in the existing masonry to form deep masonry beams that reinforce the masonry and redistribute the structural loads.

Helibeam System

A complete masonry repair solution, comprising any combination of products from the Helifix range.

DryFix

Dry mechanical pinning and remedial tying system.

Render Pin

Stainless steel helical pin that rapidly secures separated render.

Asymmetric Tie

Secures relatively soft outer leaf material to harder inner leaf material.

Terracotta Tie

Secures fragile terracotta facings, delicate decorations and features which have become loose or are suffering from stress fractures.





BowTie & BowTie HD

Remedial ties for restraining bowed walls.

RetroTie

Remedial wall tie with a mechanical fixing into the far leaf with resin bonding in the near leaf.

ResiTie

Remedial wall tie with a resin bond at both ends.

CemenTie

Remedial wall tie for use with thin wall far leaves and in buildings over four storeys high.

CemTie

Versatile grouted tie for stabilising all forms of solid masonry.

SockFix

Grouted sock anchor; A mechanical and chemical anchor system for stabilising masonry structures.

Micro-pile

Proven, low cost and rapidly installed structural support system to stabilise foundations.

PatchPin

Provides a strong mechanical key when patch repairing reinforced concrete.

PolyPlus

General purpose polyester resin.

PolyPlus SF

Styrene-free polyester resin.

CrackBond TE

General purpose epoxy resin.

CrackFix

Crack-injection kit for concrete.



New Build Products

These simple, yet highly effective, one piece products are rapidly installed to provide a secure and lasting connection. Where appropriate, they can be installed through insulation with minimal effect on its thermal properties and their helical design provides multiple cross-cavity drip points.



InSkew

High performance timber fixing for pitched warm roof construction.

Headed TurboFast

High performance fixing for securing structural plywood composite insulation board on flat roofs.

TurboTie

For securing outer leaf masonry to inner leaf aircrete blocks.

TurboFast

For securing timber or MDF to aircrete blocks, blocks and concrete.

TimTie

For securing masonry to timber; through insulation, in timber frame construction.

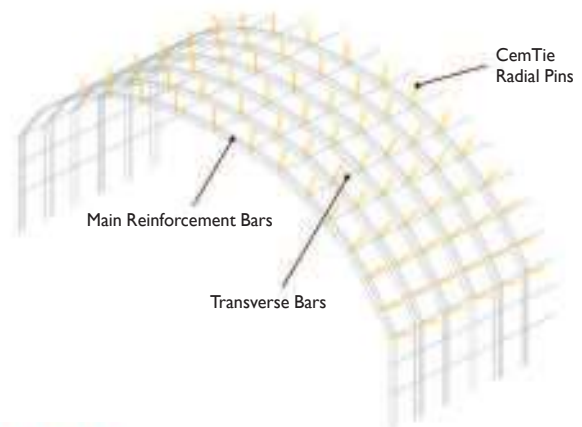
StarTie

For extending or securing a new leaf to an existing brick, stone or concrete wall.

Masonry Arch Bridge Repairs

Helifix offers turnkey packages that include computer analysis, schematic designs and the concealed cost-effective repair of all structural faults together with the necessary reinforcement to upgrade bridges and enable them to meet modern load bearing requirements.

Our innovative concealed systems both repair and enhance bridges without affecting their appearance and causing minimal inconvenience to the public or disruption to road and rail traffic.



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