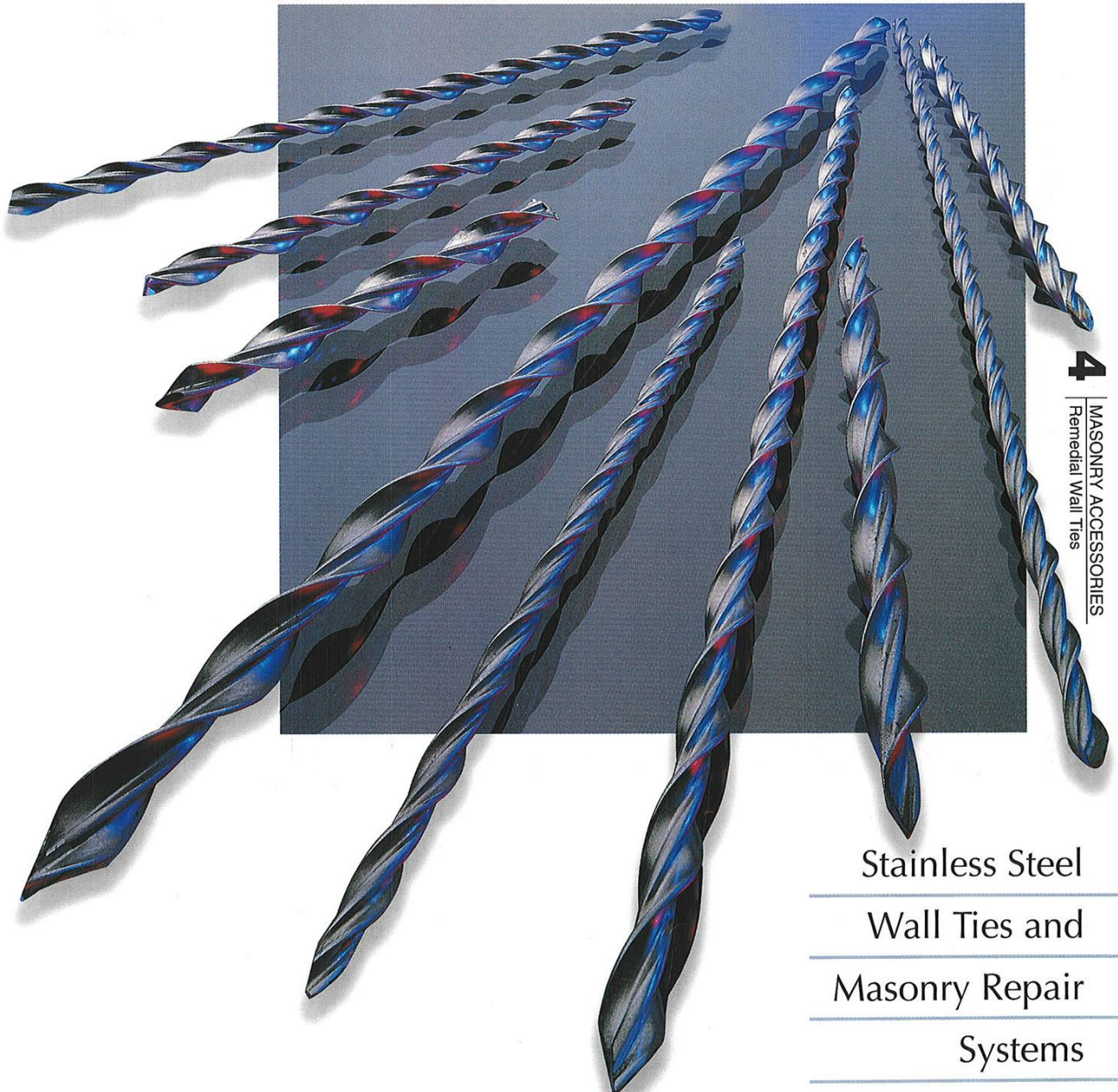


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# HELLIFIX<sup>®</sup>

NORTH AMERICA CORPORATION



**4** MASONRY ACCESSORIES  
Remedial Wall Ties

Stainless Steel  
Wall Ties and  
Masonry Repair  
Systems

Toll Free: 888-992 9989

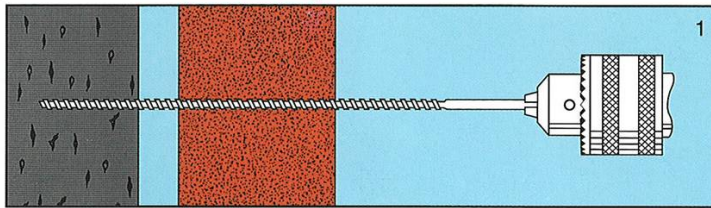
# HELIFIX<sup>®</sup> DRYFIX<sup>®</sup> MASONRY PINNING

The DryFix patented method of masonry stabilization involves simply driving a Helifix stainless steel tie through the masonry, via a small pilot hole, using a unique installation tool. The self-tapping DryFix tie cuts a threaded groove into the masonry as it is driven into position to provide a solid connection between wythes without the use of toxic chemicals, mechanical expanders or rigid rod connections. Helifix ties are engineered from austenitic stainless steel and have a unique helical Hi-Fin design. They combine axial

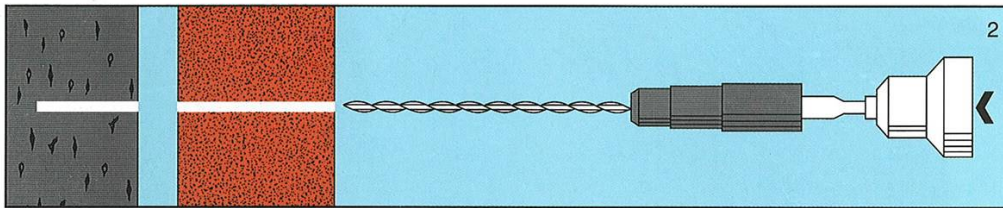
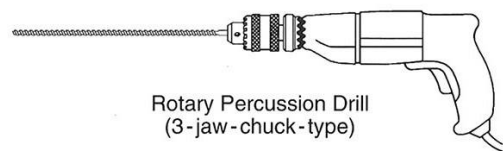
strength to withstand all anticipated wind loadings in both tension and compression with sufficient flexibility to accommodate normal building movement.

The DryFix system provides effective and economical stress-free connection between all commonly used materials in cavity and solid masonry constructions and has been widely used in high rise, domestic and commercial applications throughout North America and other parts of the world.

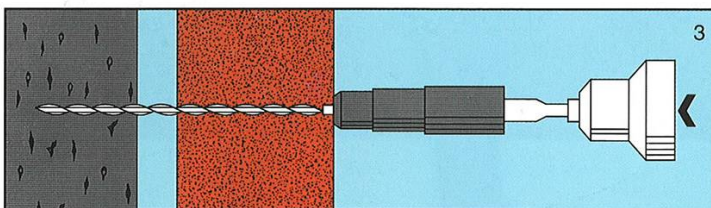
## Installation



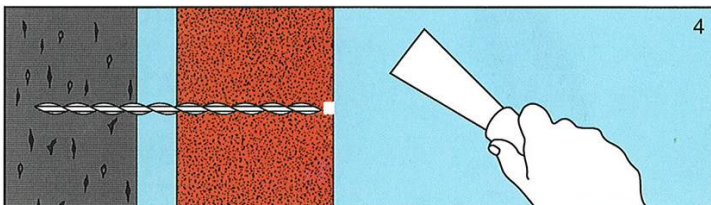
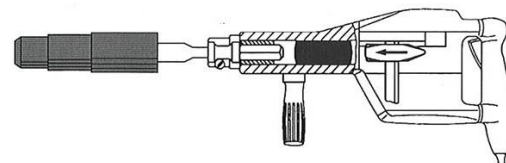
1. A small pilot hole is drilled through the masonry and into the backup material, to a predetermined depth, using a rotary percussion drill (3-jaw-chuck-type).



2. The DryFix masonry tie is loaded into the special patented insertion tool which is fitted to an electric hammer drill (SDS type).



3. The tie is power driven into position until the outer end of the tie is automatically recessed below the face of the masonry by the insertion tool.



4. The entry hole is finished over with matching materials.

DRILLING TECHNIQUES have been developed to optimize the performance of the DryFix System.

Procedures for drilling are available together with product specifications for typical masonry stabilization problems.

Rotary percussion drilling usually achieves the best results, SDS hammer drilling may be required where masonry material is extremely hard or dense.

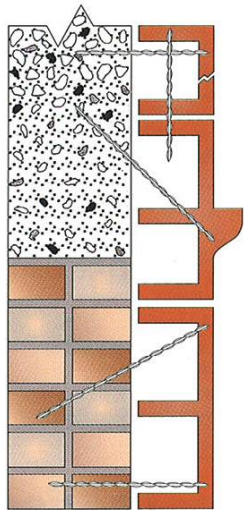
**NOTE:** The SDS hammer drill is ALWAYS used with the DryFix insertion tool to set the Helifix tie in place.

## Features and Benefits

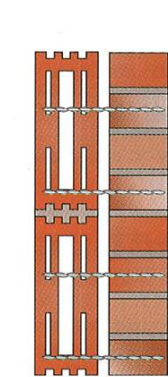
- A one-piece, austenitic stainless steel wall tie
- Quick and easy to install
- Requires only a small diameter pilot hole
- No toxic chemicals or expansion devices involved
- Easily site tested immediately after installation
- Used in all common masonry materials and wood
- Withstands cyclic loading
- Accommodates differential movement between materials
- Combines flexibility with strength
- Does not stress or fracture fragile substrates
- Usable in all weathers, environments, temperatures and seasons
- Minimal special equipment and labor training involved
- Widely used across North America

## Standard DryFix® Procedures

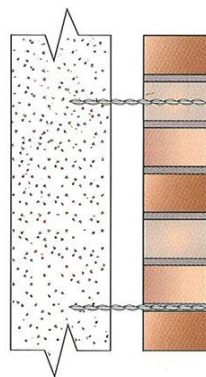
The DryFix techniques below involve different installation procedures, specialty drills and tools. A job-site survey should be carried out prior to start-up to determine material strengths, pilot hole size, appropriate drilling techniques and the correct tie length and optimum spacing. Standard procedures are available for common situations.



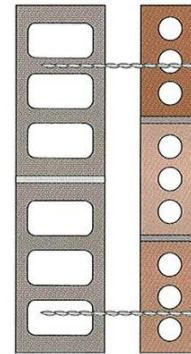
a. Fine terra cotta to masonry



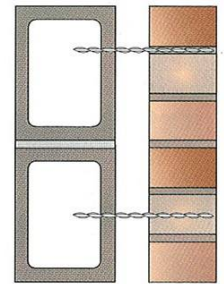
b. Brick to clay tile



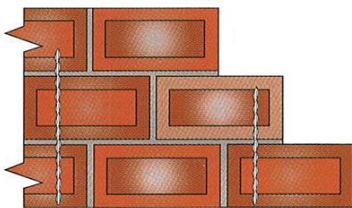
c. Brick to concrete (mortar joint or solid brick)



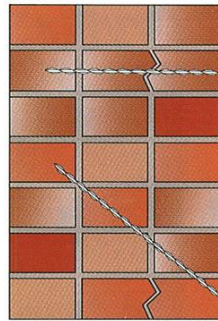
d. Brick to concrete block



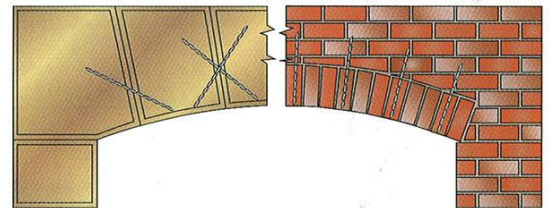
e. Brick to concrete block (mortar joint or solid brick)



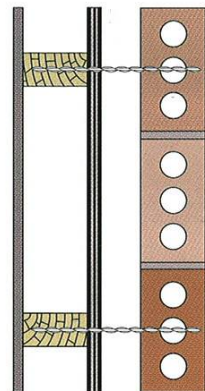
f. Brick multi wythes (Plan)



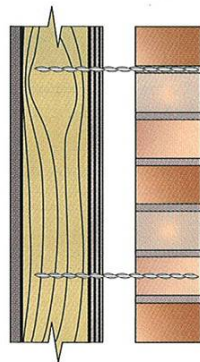
f. Brick multi wythes (Section)



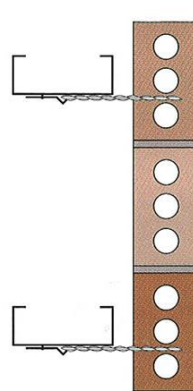
g. Repairing limestone/sandstone or brick arches and lintels



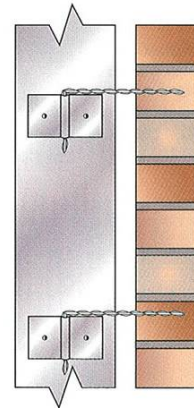
h. Brick to wood stud (Plan) (mortar joint or solid brick)



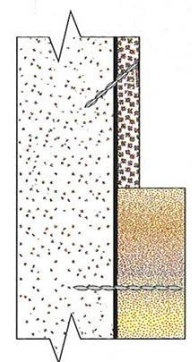
h. Brick to wood stud (Section) (mortar joint or solid brick)



i. Brick to steel stud (Plan). Interior installation



i. Brick to steel stud (Section). Interior installation

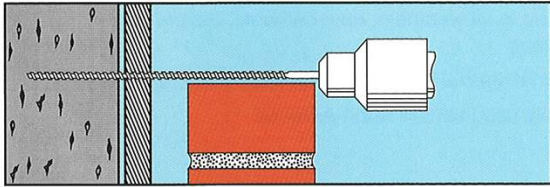


j. Stone, marble or granite panels to concrete

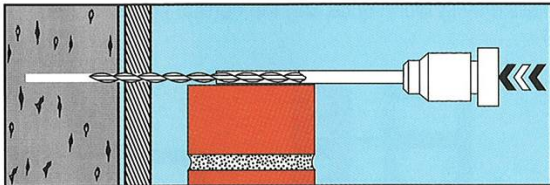
NOTE: Detail 'h' may also be installed from the interior as in detail 'i'

## Masonry Refacing / New Construction

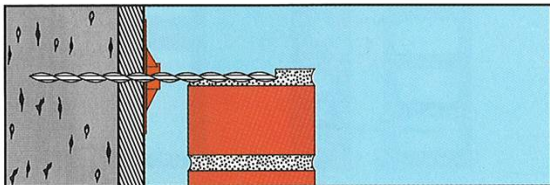
As the new outer masonry wythe is constructed, Helifix ties are installed at a predetermined spacing as specified by the designer.



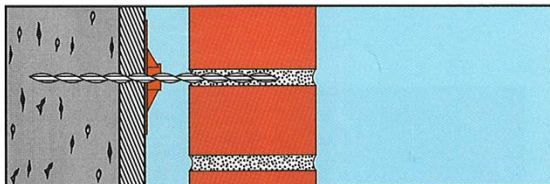
1. A pilot hole is drilled into the backup substrate to a predetermined depth.



2. The Helifix stainless steel masonry tie is loaded into the support tool and driven into position.



3. Where required, an insulation retainer is snapped into position over the Helifix tie.



4. The Helifix tie may be angle bent through 90° before being 'wet set' in mortar prior to the next brick course being laid.

## Site Testing

Helifix ties can be proof tested immediately after insertion into the backup to check the strength of the connection. The Helifix 675lbf (3kN) load test unit (right) is custom designed for this purpose.

The quick release collet-key is placed over the tie and a test load applied. The gauge gives an immediate direct reading. For quick general testing, the collet-key can be used on it's own with just a manual pull.



Load Test Unit

## Load Requirements

The primary function of a wall tie system is to enable the outer masonry to withstand wind loads while allowing differential movement between adjacent layers.

Masonry walls should not be considered as a continuous panel but rather as a series of load sharing units.

In this context Helifix remedial wall ties function as a flexible load sharing device for masonry walls rather than as a rigid anchoring mechanism.

The use of rigid anchoring systems should be avoided as their inability to accommodate normal building movement could lead to wall failure.

A minimum pull-out load of 225 lbf (1kN) will usually be obtained from even the weakest masonry with much higher results from normal materials.

Tie performance in weak masonry is allowed for by reducing the tie spacing thereby increasing the tie density.

## Product Testing

Helifix ties have been subjected to extensive testing in a wide range of materials. Standard data are based upon the test results. However, few, if any, buildings match laboratory conditions and wherever possible site tests should be conducted to determine the physical dimensions of the wall and the pull-out loads achievable. From this information a specification can be produced based upon reality and not theory.

## Tie Selection

1. Material: Austenitic stainless steel grade 304. For severely corrosive conditions ties in grade 316 are available.
2. Ties are available in two diameters: 8mm and 10mm.
3. Tie diameter and length are dependent upon the strength of the wythes, the cavity width and the outer wythe thickness.
4. Tie spacing is set to match the anticipated wind loads with the pull-out loads achievable and must take into account any local building codes.

## DryFix® Tools & Accessories



Everything required for the DryFix system is available from Helifix and is detailed in the relevant standard procedure.

### WARRANTY

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