

FIXINOX

INVISIBLE CONNECTORS AND ANCHORS

Natural Stone Anchors



NATURAL STONE FIXING SYSTEMS AND DESIGN

The fixing method requests individual stone support to avoid that a lower stone bear an upper one

Stones are supported with stainless steel fixings in vertical or horizontal joints. The fixings provide 3 dimensional adjustability, which provide 20 mm tolerance. This is normally adequate even if normal construction tolerances of the concrete frame are exceeded.

Fixinox range includes four different systems :

- 1° FIXINOX FX SYSTEM using individual brackets
- 2° FIXINOX Mortar Fixing System using FIXGRIP (stainless rebars)
- 3° STANDARD CHANNEL SYSTEM using 41X21 and 41X41 channels
- 4° CUSTOM MADE STRUCTURE for Monuments or THERMAL REFURBISHMENT

The FX and the CHANNELS are fixed to the concrete using expanding bolts which allows for tolerances to be accommodated..

Brackets are located to miss reinforcement bars in the concrete wall.

Where channels are required, the brackets are fixed directly to the frame by setscrews.

The advantage of the system can be summarised as follows:

1. Fixings manufactured according EU Standards and tested to design criteria.
2. Frame, Fixings and Bolts are all corrosion resistant Stainless Steel. (A2 or A4)
3. No bridging of cavity can occur, as brackets do not transport moisture. An open cavity is kept which allows free ventilation.
4. The waterproof barrier is at the concrete face and this continued into the window without interruption.
5. Joints between the stones can be maintained at a uniform size.
6. Thermal and substrate movement is accommodated into the joint.
7. The risk of progressive collapse is eliminated.
8. Individual stones can be replaced.
9. The Fixing System greatly reduces damage to the cavity insulation and cold reduces bridging.

FIXINOX FX MECHANICAL SYSTEM

For reduced pre-planning they can be installed with drilled bolts. Different FIXINOX Bracket designs cover many applications from small to large cavities and from low to high loads.

Advantages:

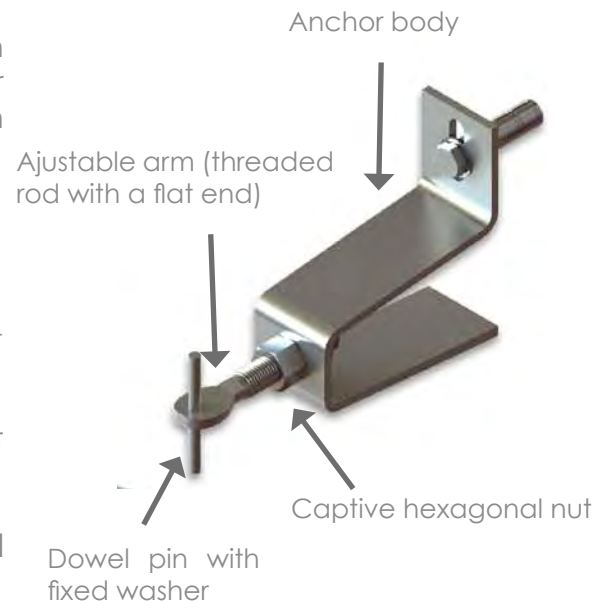
- Adjustable in three dimensions
- Flexible connection methods
- Toothed plate and washer: mechanical load transmission
- Independently tested
- Small drill holes: time and cost saving, reduced dust and sound pollution features

FXL, DU and LTA are load bearing fixing for vertical stones when CXL is a restrain anchor.

L'UPL and DFXL are typical ceiling anchors.



NATURAL STONE ANCHORS



FIXINOX MORTAR FIXING SYSTEM

FIXINOX Mortar fixing anchors are a simple and cost effective way of anchoring stone. They have a flat section or the cylinder cross section of the the FIXGRIP. These stainless re-bars with flat end allow the anchors to be used in both vertical or horizontal joints. Adjustment in three axes is achieved by positioning of the anchor in the oversize hole. Smaller diameter are used as restrain anchors.

Advantages:

- Cylinder cross-section: good load capacity in any orientation
- Smaller drill-holes compared to flat anchors
- Good adjustability in mortar
- Suitable for large cavities and high loads
- Suitable for a large variety of supports

FIXINOX STANDARD CHANNEL SYSTEMS

Channel systems are used for cladding on to non-load bearing walls often met on thermal refurbishment project or where there are high projection sizes. Plates, adjustable arms made of threaded rod and restraint brackets fasten the stone slabs to the standard 41 X 41 or 41X21 channels. Channels are attached by adjustable height bracket to the support (concrete wall concrete beam or steel beam)

Advantages:

- Minimized fastenings in load bearing structure then reducing thermal bridges, energy loss and pollution when installing
- High load bearing capability to fit projection sizes up to 360 mm.
- Greater projection sizes are achieved with special design.
- Installation friendly and fully adjustable and allows fast installation.



FIXINOX CUSTOM MADE STRUCTURE MONUMENTS AND THERMAL REFRUBISHMENT

FIXINOX designs self-supporting bearing structure for sculpture, fountains, totem or other monuments .

On thermal refurbishment projects, the ancient load bearing façade is of poor quality. Fixing systems need to ensure cladding of natural stones to all types of backing walls whether they are concrete walls, block work and masonry walls or steel structures.

MINIMUM DESIGN INFORMATION REQUESTED

The following points are taken into consideration when designing a fixing system for natural stone installations:

- Stone dimensions
- Cavity structure: projection size and isolation
- Application type: horizontal or vertical joint installation
- Joint size
- Structural wall backing
- Height of facade
 - Relevant dynamic loads such as wind and seismic loads
 - Design criteria of the project

FIXINOX offers and specially designs fixing systems according to individual project requirements.

Fixing to concrete with bolt anchors using expansion bolts. Insulation is cut at each anchoring point.



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