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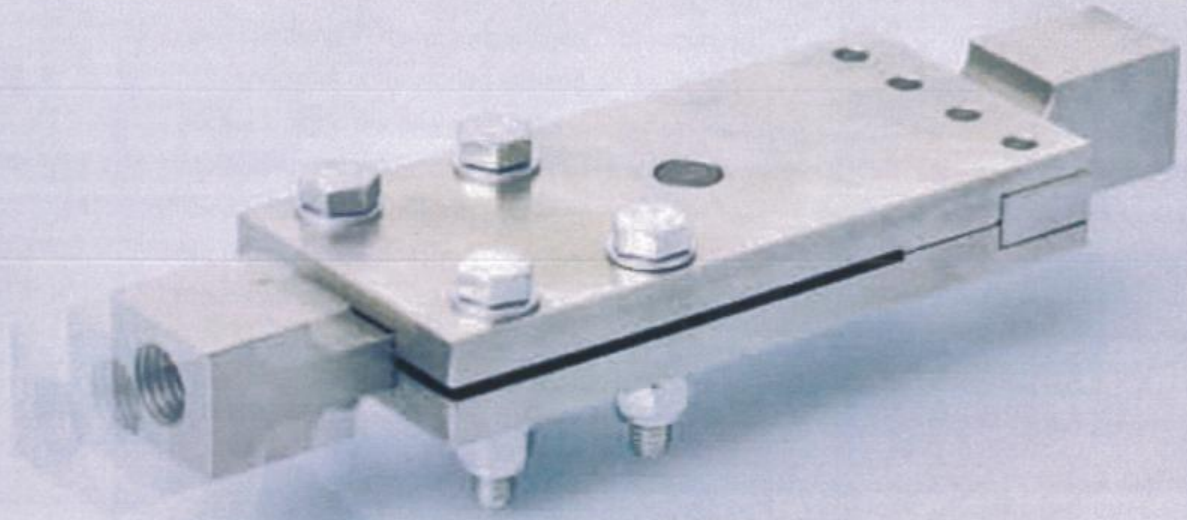

Dissipative anchor device

preserving the past for the future

Friction masonry anchor

Cintec have devised a new type of friction anchor to use with their tried-and-tested wall anchor system. This device is specifically for use on heritage structures particularly in seismically prone areas.

Our friction wall tie introduces the key features of ductility and energy dissipation into a strengthening system that avoids any elements that would hinder the aesthetic appearance of the building.

The standard Cintec anchor sytem of grouted cross ties restores the box-like behaviour to masonry structures without interfering with the original layout, however there is a possiblity of pull-out damage at the anchorage head due to the differing deformability of metal and masonry. The friction device solves this problem by allowing for small relative displacements by a sliding mechanism.

The Cintec friction anchor consists of a set of stainless steel plates to which four bolts apply perpendicular pressure, creating friction in the horizontal plane to an adjustable degree. There are built-in stops to restrict the sliding motion range and threaded connectors which link to Cintec's standard anchor rods.

It is designed to activate at the damage limitation threshold when cracks appear and the dissipative elements become active. The connection between wall panels is maintained, pull-out damage prevented and drift controlled. Full technical details and test data available on request.

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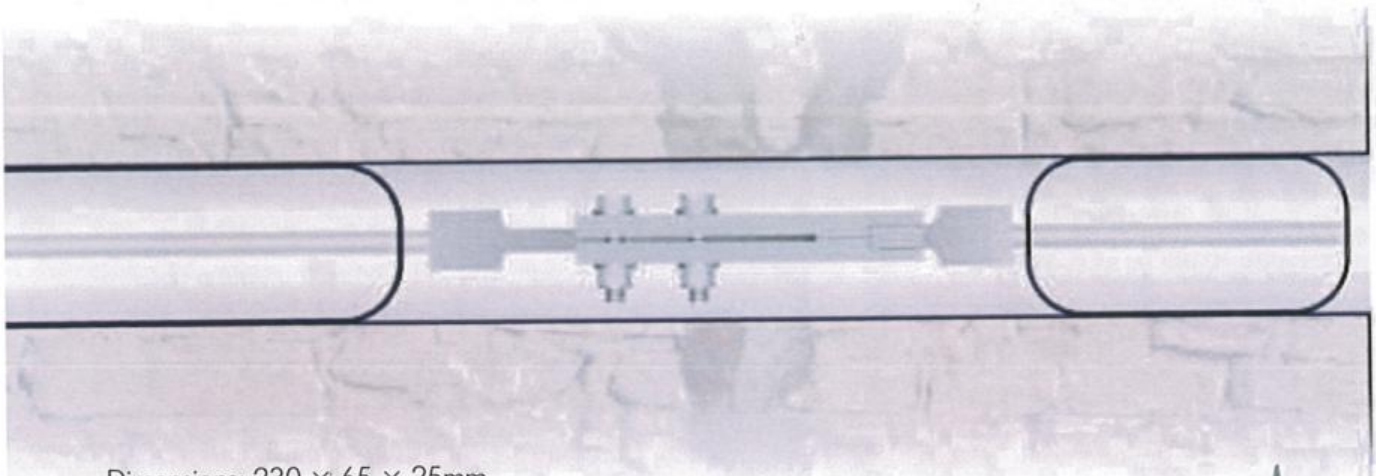
Product background

The latest design codes from active seismic areas such as California and Italy recommend repair and strengthening techniques for heritage structures that involve ductility and energy dissipation. Yet, strength-only systems such as RC or steel ring beams, jacketing, and RC column ties are still allowed. These exterior elements usually spoil the original aesthetics of historic buildings contrasting with the minimum intervention criteria. Moreover poorly designed connections to the masonry panels, being incompatible with the substratum due to excessive mass and stiffness, often result in unneccessary collapses.

Cintec anchor shown in position



Dimensions: 230 × 65 × 25mm
Maximum displacement ±10mm
Maximum tensile capacity: 100kN

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CINTEC
REINFORCEMENT SYSTEMS

We design and manufacture the world's most innovative anchoring and reinforcing system

As the designer and manufacturer of the pre-eminent anchoring solution for masonry structures, Cintec has cemented its reputation internationally. For a quarter of a century, Cintec has secured and reinforced historic and historical buildings, masonry bridges, monuments, railway structures, retaining walls and harbour walls.

The patented Cintec anchoring system is straightforward: injecting a proprietary cementitious fluid grout into an anchor surrounded by a fabric sock, which has already been placed in an oversized drilled hole. The system's ingenuity lies in its versatility. Drawing on decades of experience and testing, our designers can customise it to any specification.

Our engineered solution reinforces an array of materials – stone, concrete, clay, terra cotta, adobe, and even timber. It can be used under water and in weak substrates. Even as it restores, stabilises, strengthens, and repairs, the system does not compromise the parent material. And because the anchoring system becomes part of the structure, it does not visibly alter a structure's appearance.

From intricate wall ties to solid bar anchors over 30 metres (100 feet) long, Cintec will develop the anchoring solution that will fit your project.

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Visit our website for up-to-date information and test data together with information on the various projects carried out worldwide.