

Designed to stabilise a structure and to provide superior & safer fitting access. Create openings up to 3,150mm when using the Brick Brace safety system half set.

Mark onto the wall the exact position of the required opening which is usually 400-500mm longer than the finished aperture. Ensure all three points of the triangle of brickwork above the opening are intact and the brickwork is free of any voids. Calculate and mark the number of insertion points required; safety tools are fitted within the course directly above the proposed opening at a maximum 3 bricks apart in a cement mortar mix and a maximum of 2.5 bricks apart within a weak or lime mortar mix.



A scaffold tube is fitted before any alterations take place when using more than one safety tool. For correct position of couplers measure & mark for the pilot holes; a minimum of 100mm past both sides of the opening, at 120mm above the proposed opening height.

Opening's greater than 2,250mm require a further coupler fitted central. Fit the half couplers to the wall by using the supplied anchor bolts and washers. Fit the length of scaffold tube at a minimum of 100mm past the end couplers and tighten with a 21mm scaffold spanner.

Anchor-bolt fixing instructions; drill pilot holes by using an 8mm masonry drill bit at a depth of 80mm. Place provided washer onto the re-usable anchor bolt and pass through the coupler and into the pilot hole; use a 13 mm socket wrench. If resistance is felt, unscrew the bolt one turn then continue to re-tighten.

For best results of removing the mortar from the perp joints to fit safety tools; use a hammer drill fitted with a 10mm masonry drill bit. Fit the hook over the scaffold tube & place the Brick Brace safety tool into the joint, remove both nuts from the tool and join the hook and tool together by marrying up the hook holes to the tools rear set screws. Fit the hook and hand tighten the nuts back onto the tool to secure the hook.

To expand the Brick Brace safety tools; use a 19mm spanner/torque wrench to tighten the central set screw approximately 40Nm. Ensure both plates of the tool run parallel with each other. Repeat the process on each tool in sequence from left to right until all tools are fitted & tightened.

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Cutting out to fit a permanent support; remove the masonry beds within a cement mortar mix by stitch drilling and a light set hammer drill with the correct chisel fitting to remove brickwork carefully. No club hammers as this only weakens a structure. A masonry saw or a traditional hand saw is sufficient in a lime or weak mortar mix and cut out the minimum depth of the opening to fit the permanent support at this stage.

Lintels; once the lintel is fitted, including cavity trays and soldier courses where required, carefully remove the rest of the opening in full. When fitting within existing face brickwork, ensure the lintel has minimum bearings of 225mm; this extra bearing will help support the lintel over the eventually toothed out brickwork below when removing the rest of the opening in full and when bonding the new reveals into the existing face brickwork. Fit/drill suitable vertical wall ties within both reveals every 225mm throughout the height of new opening.

Steel beams; Once steels have been correctly fitted and packed and the mortar cured, remove the rest of the opening to the full depth. The Brick Brace can be released by reversing the fitting method, make good/re- point the drilled perp joints. Clean the Brick Brace safety tools with a damp cloth and dry ready for storage or for further use.

Tool parts; When tightening the Brick Brace Safety tools do not exceed a torque of 50Nm as bending may occur, the plates can be reversed on the following occasions of use where distorted. The Brick Brace safety tools are supplied with Hi-tensile set screws, if lost or damaged replace with a minimum of 8.8 Hi-tensile. If in doubt please contact us to purchase.

Important; When the Brick Brace system is sold, hired or borrowed please provide copies of the instructions, it's the owner's duty to share this information including updates which are available to print/download via our website; www.brickbrace.com

Additional tools required for best results; 4" grinder fitted with a m14 mortar rake, 9-12" disc cutter, masonry saw, hammer drill, 7, 8, 10 & 11mm masonry drill bits, 13/19/21mm sockets, ratchet/torque wrench.

The Brick Brace Safety System is designed to stabilise the unpredictable lateral strength of a structure and to provide superior fitting/working access upon the external fitting side when the internal skin can be propped separately from inside and when fitting external lintels within older properties and a further aid for most remedial works.

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Single Brick Brace Safety Tool

Fitting. Use a hammer drill with an 8-10mm masonry bit to remove the mortar from the required perpendicular joint. Whether left or right-handed insert the Brick Brace safety tool into the drilled out joint with the centre set screw being on your favoured side and engage fully to the angled plate. Ensure the rear nuts allow both plates to run parallel with each other when the tool is expanding within the joint. To increase tool life, do not hammer the tools when joints are tight, use either an 11mm masonry drill bit, mechanical mortar raker or a file. Use a 19mm spanner/torque wrench to tighten the central set screw approximately 40Nm. The masonry is now reinforced and ready for safer alterations, clearer access and superior results.

A single tool is used to create openings of up to six brick lengths upon 4" brickwork within a cement mortar mix, supporting all 15 bricks within the triangle of masonry above, at any height with nothing to obstruct the fitting area. And a five-brick length opening is achievable within a lime mortar mix. Ensure all three points of the triangle of brickwork above the opening are intact and the brickwork is free of voids.

When an opening is required within both sides of a cavity or 9" wall, it is recommended (when suitable) to brace externally and prop internally, leaving the external face side clear for working/fitting access.

Brick Brace Safety Tools are fitted within the course directly above a proposed opening at a maximum of three bricks apart in a cement mortar mix and a maximum of two and a half bricks apart within a weak or lime mortar mix. Single safety tools are used to stabilise the unpredictable lateral strength of a structure, to re-instate a load-point which safely reduces the weight of the load and used as an aid to support the un-held brickwork in between props to reduce the risk of collapse when propping, example below.



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What Is A Load-Point?

A 45-degree angle upon half bonded block work, a 35-degree angle in a Stretcher bond and a 25-degree angle upon Flemish or English bond. From both ends of the opening, carrying up through the bed and perp joints to the central perpendicular joint where both angles meet is the location of a load-point. When an opening is made and a load point is intact, this triangle of brickwork is the only masonry that could collapse, therefore this is the only masonry that requires temporary support.



Upon larger openings within a typical two storey residential property and any of the 3 points of the triangle do not remain, this law changes and the weight of the storey height above will rest back over the length of the opening (including roof loads, when they apply) due to the masonry above not arching. This masonry and other loads can weigh over 10 times more in most cases than just the small triangle.



Re-instate the load-point and avoid collapse through overloading by fitting Brick Brace Safety tools through the broken triangle, which safely reduces the weight of the load.



When steels are specified, it is usually for larger openings and/or for supporting higher loads when no load-point exists and/or for supporting all the structure above including floor, roof, live, static & dynamic loads, which is a good indication that eccentrically loading an Acrow prop that has a variable safe working load is not the most suitable method.

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