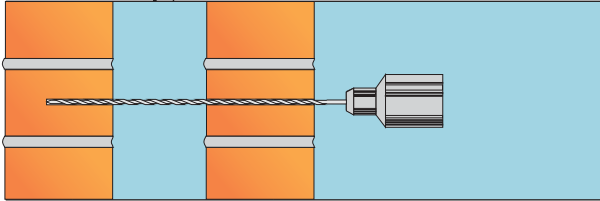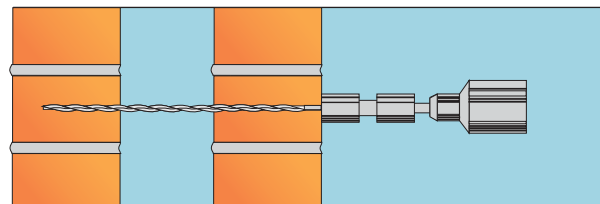# Fast-fix

Fast-fix wall tie replacement and masonry repair system can be used to re-tie and repair a wide range of differing materials like air-crete blocks, clay bricks, stone, concrete blocks and Timber studs.
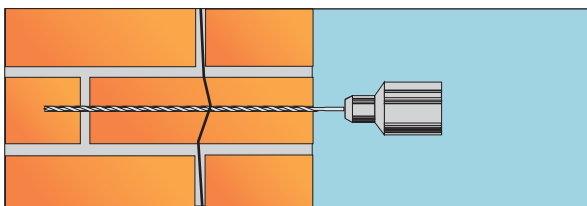
Installation Procedures

Adding wall ties

1) **Drill** pilot hole through outer leaf and then continue pilot hole if required until recommended depth in inner leaf is reached.
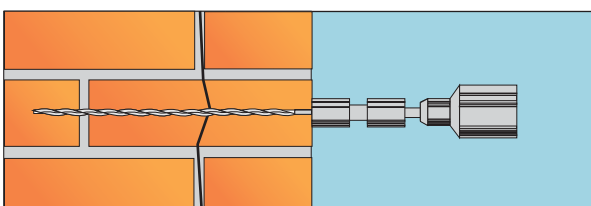
2) Insert tie into FAST-FIX tool, then position front of tie into pilot hole and **Drive** home.

Masonry crack repair

1) **Drill** pilot hole through masonry until recommended depth is reached.

2) Insert tie into FAST-FIX tool, then position front of tie into pilot hole and **Drive** home.

Remedial wall tie and masonry crack repair system with a stress free helical pinned fixings

Benefits

- Quick installation just drill and drive.
- Low labour costs.
- High tensile strength.
- Allows for thermal movement.
- Multi water drips.
- Easy installed through cavity insulation.
- Designed and tested to DD140.
- Insurance backed guarantees.

Features

- Easy and problem free installation.
- Austenitic 304 or 316 Stainless Steel.
- Effective in tying cavity and solid walls.
- No mechanical expansion problems.
- No resin, no rubber, high fire rating.

Fast-Fix tie classification DD140

Material	Tie Size	Tie density	Fixing
Air-crete blocks	8mm	2.5 m^2	Class 4
Timber studs	8mm	4.44 m^2	Class 5&6
Soft clay bricks	8mm	2.5 m^2	Class 3
Concrete blocks	8mm	2.5 m^2	Class 2
Hard clay bricks	8mm	2.5 m^2	Class 2
Engineering bricks	8mm	2.5 m^2	Class 2

TABLE A Tie selection

Cavity Range	Inner Leaf Embedment		
	50mm	70mm	90mm
25mm to 50mm	190mm	210mm	230mm
50mm to 75mm	210mm	230mm	250mm
75mm to 100mm	240mm	260mm	280mm
100mm to 125mm	260mm	280mm	300mm
125mm to 150mm	290mm	310mm	330mm

Cavity width

Embedment Depth

25mm Max
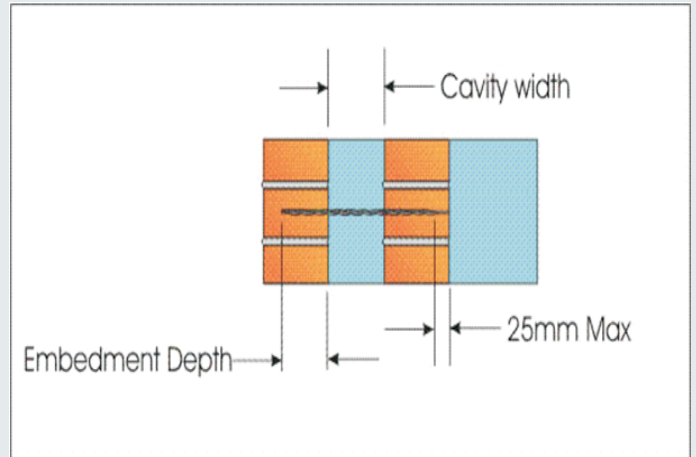
TABLE B pilot drill & depth selection

Material		Tie size	Inner leaf		Outer leaf	
			Minium Embedment Depth	Pilot hole diameter	Minium Embedment Depth	Pilot hole diameter
Air Crete block	$2.8N/mm^2$	8mm	90mm	N/A	90mm	N/A
Leca block	$3.5N/mm^2$	8mm	70mm	N/A	70mm	N/A
Concrete block	$7N/mm^2$	8mm	70mm	5.5mm	70mm	5.5mm
Old soft brick	$< 5N/mm^2$	8mm	70mm	5.0mm	70mm	5.0mm
Old med brick	$> 5N/mm^2$	8mm	70mm	5.0mm	70mm	5.0mm
Most modern bricks	$>11N/mm^2$	8mm	70mm	5.5mm	70mm	5.5mm
Semi engineering bricks	$30N/mm^2$	8mm	50mm	6.0mm	50mm	6.0mm

TABLE D Tie spacings and densities
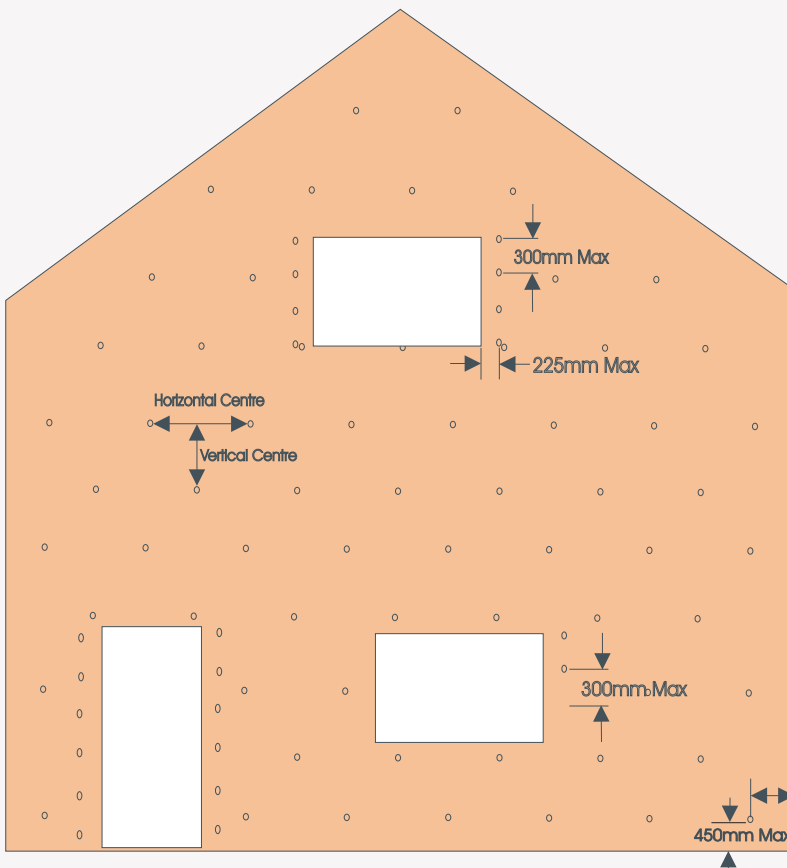
- • New tie position
- — Old tie position

300mm Max

225mm Max

Horizontal Centre

Vertical Centre

300mm Max

450mm Max

Horizontal Centre
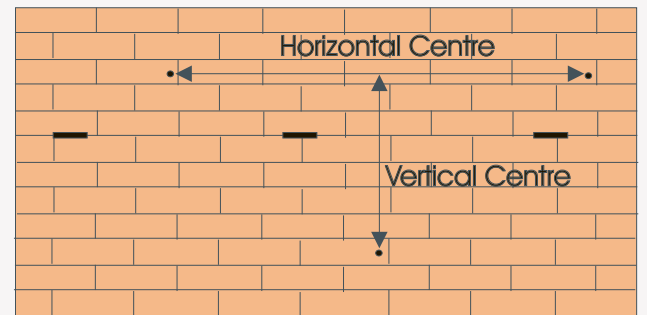
Vertical Centre

Always try to vertically space new ties either side of existing ties

Tie densities and spacing		
Ties per M^2	Vertical Centres	Horizontal Centres
$2.47M^2$	450mm	900mm
$2.96M^2$	450mm	750mm
$3.29M^2$	450mm	675mm
$4.94M^2$	450mm	450mm
$5.92M^2$	375mm	450mm
$7.40M^2$	300mm	450mm
$9.86M^2$	300mm	338mm
$13.12M^2$	255mm	338mm

Unit 3.5 Central Point, Kirpal Rd Portsmouth, PO3 6FH TEL 023 92298443 Fax 023 9229 8445 Web wallfast.co.uk

WALLFAST
Limited
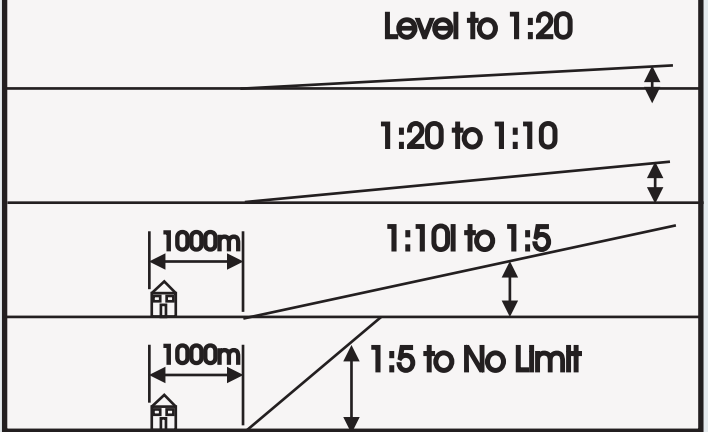
Wind speed zones

A=44m/s

B=52m/s

C=56m/s

Topography Factor S1

Topography allows for the influence of landforms like hills and cliffs which will increase the wind speed expected by any site within a 1000 metre radius

Level to 1:20

1:20 to 1:10

1000m **1:10l to 1:5**

1000m **1:5 to No Limit**

S2 Ground roughness, building size and height above ground factor worse case class A, HEIGHT 15 METRES

I	Open country with no windbreaks and seafronts
II	Open country with scattered windbreaks
III	Suburban country with many wind breaks; small towns, out skirts of large cities
IIIV	Urban surface with large and frequent obstructions, i.e. City centres

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TABLE E Tie loads for different site condition, explanatory notes can be provided on request

TIE DENSITY 2.47m²	A (44 m/s)				B (52 m/s)				C (56 m/s)			
	I	II	III	IIIV	I	II	III	IIIV	I	II	III	IIIV
Level to 1:20	-1000N	-940N	-730N	-520N	-1400N	-1320N	-1020N	-720N	-1620N	-1520N	-1180N	-840N
1:20 to 1:10	-1260N	-1180N	-910N	-650N	-1750N	-1650N	-1280N	-900N	-2040N	-1910N	-1480N	-1050N
1:10 to 1:5	-1540N	-1450N	-1120N	-790N	-2140N	-2020N	-1570N	-1110N	-2490N	-2350N	-1820N	-1290N
1:5 to No Limit	-1850N	-1740N	-1350N	-960N	-2580N	-2430N	-1890N	-1330N	-3000N	-2820N	-2190N	-1550N

2.47 Ties per metre square require 900mm horizontal centres and 450mm vertical centres

TIE DENSITY 4.94m²	A (44 m/s)				B (52 m/s)				C (56 m/s)			
	I	II	III	IIIV	I	II	III	IIIV	I	II	III	IIIV
Level to 1:20	-500N	-470N	-360N	-260N	-700N	-660N	-510N	-360N	-810N	-760N	-600N	-420N
1:20 to 1:10	-630N	-590N	-460N	-320N	-870N	-830N	-640N	-450N	-1020N	-960N	-740N	-520N
1:10 to 1:5	-770N	-720N	-560N	-400N	-1070N	-1010N	-780N	-550N	-1240N	-1180N	-900N	-640N
1:5 to No Limit	-930N	-870N	-670N	-480N	-1300N	-1220N	-950N	-670N	-1500N	-1410N	-1090N	-770N

4.94 Ties per metre square require 450mm horizontal centres and 450mm vertical centres

NOTE you can use other tie densities shown in TABLE D by selecting the required tie load for your particular site conditions from one of the above two table, then multiply your selected tie load by the tie density of that table, to give you the load per metre squired. Then divide the load per metre squired by any of the tie densities shown in TABLE D,to get the required tie load for that density. You must then install ties to the required vertical and horizontal spacing centres of the selected tie density.