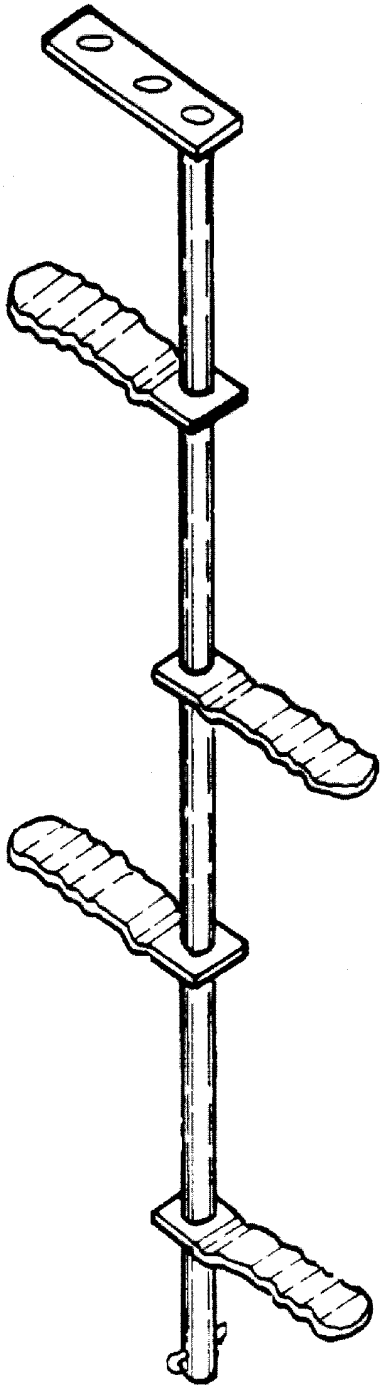
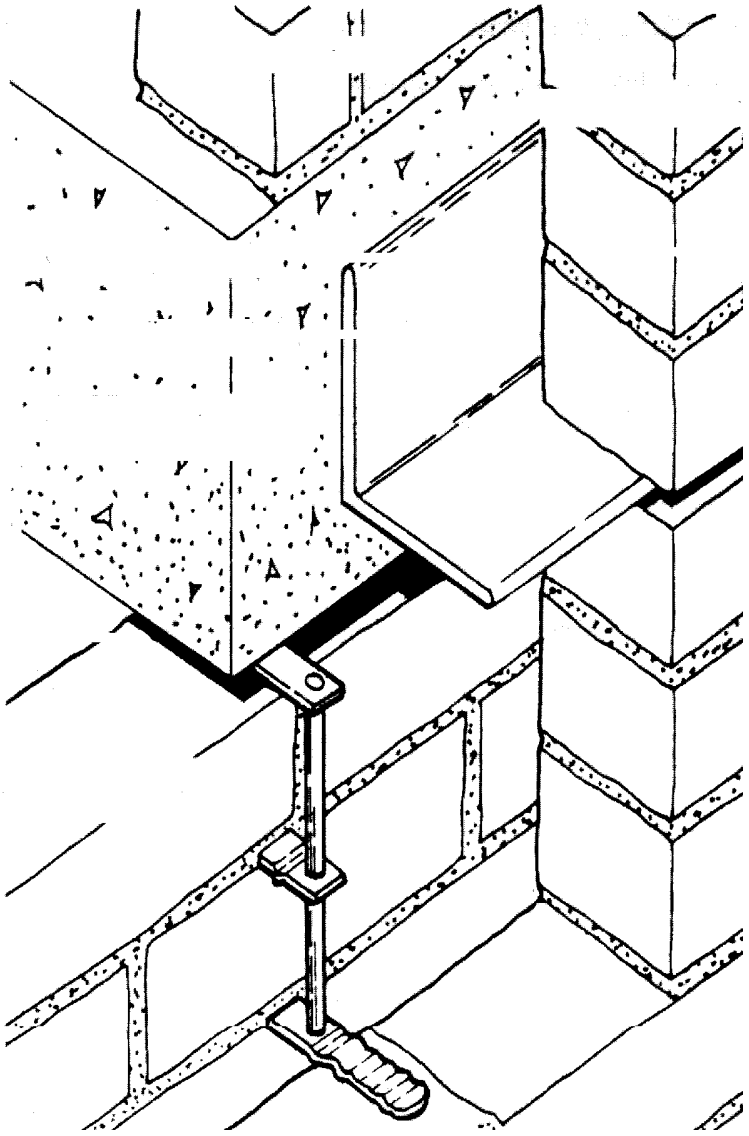
Masonry Flexible Anchors

SHELF ANGLES

MFA 1

(NO TEST DATA AVAILABLE)





SPECIFICATION

Overall Length:	500mm
Top Plate:	150mm x 40mm x 5mm
Sliding Ties:	140mm x 20mm x 3mm
Hole Fixing Plate:	12.5mm Diameter

Fixed to Underside of Slab by Approved Method x 2

Ties Available in Hot Dip Galvanised or Grade 316 Stainless Steel

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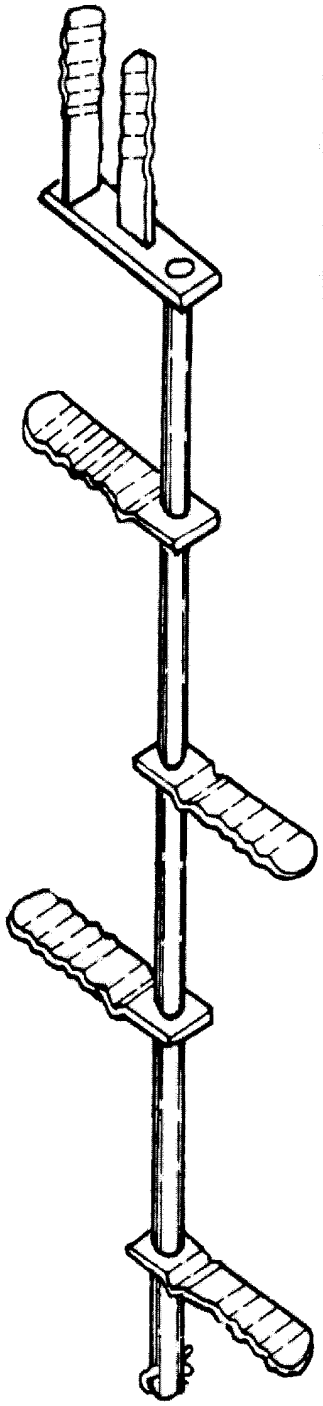
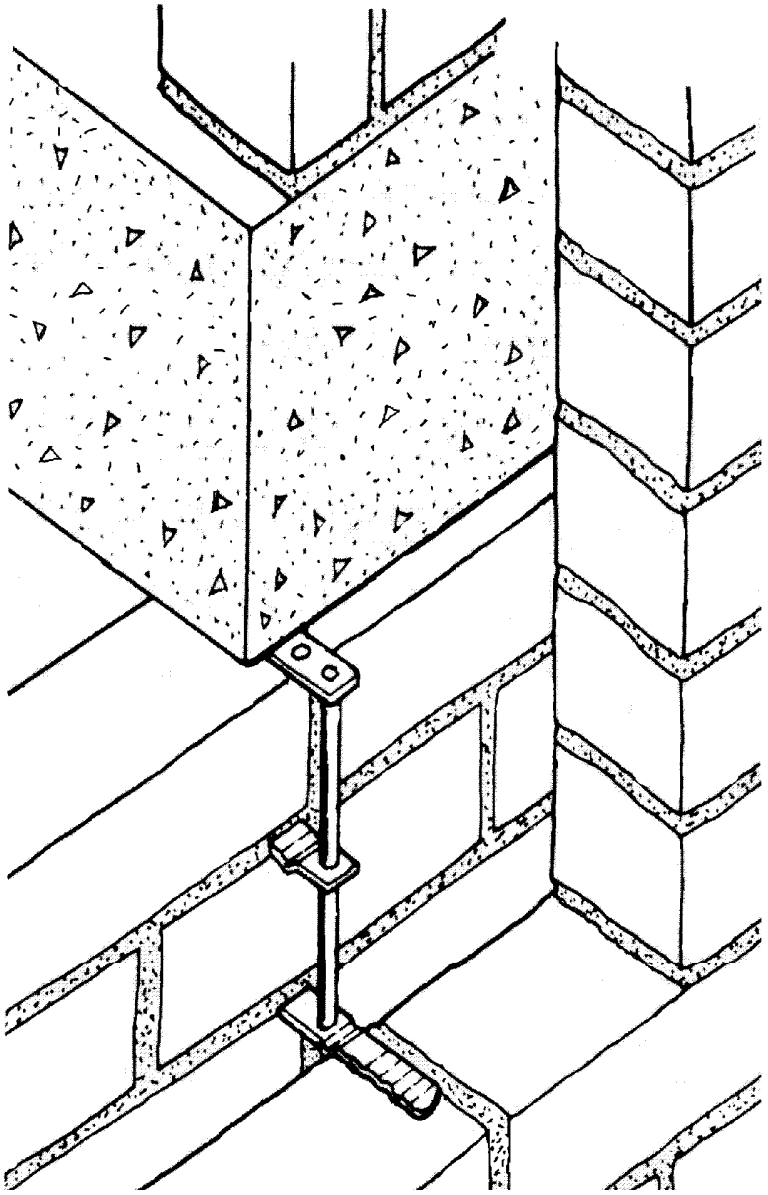
Masonry Flexible Anchors

LOADBEARING BRICKWORK

MFA 2

(NO TEST DATA AVAILABLE)





SPECIFICATION

Overall Length: 500mm

Top Plate: 150mm x 40mm x 5mm

Sliding Ties: 140mm x 20mm x 3mm

Ties Available in Hot Dip Galvanised or Grade 316 Stainless Steel

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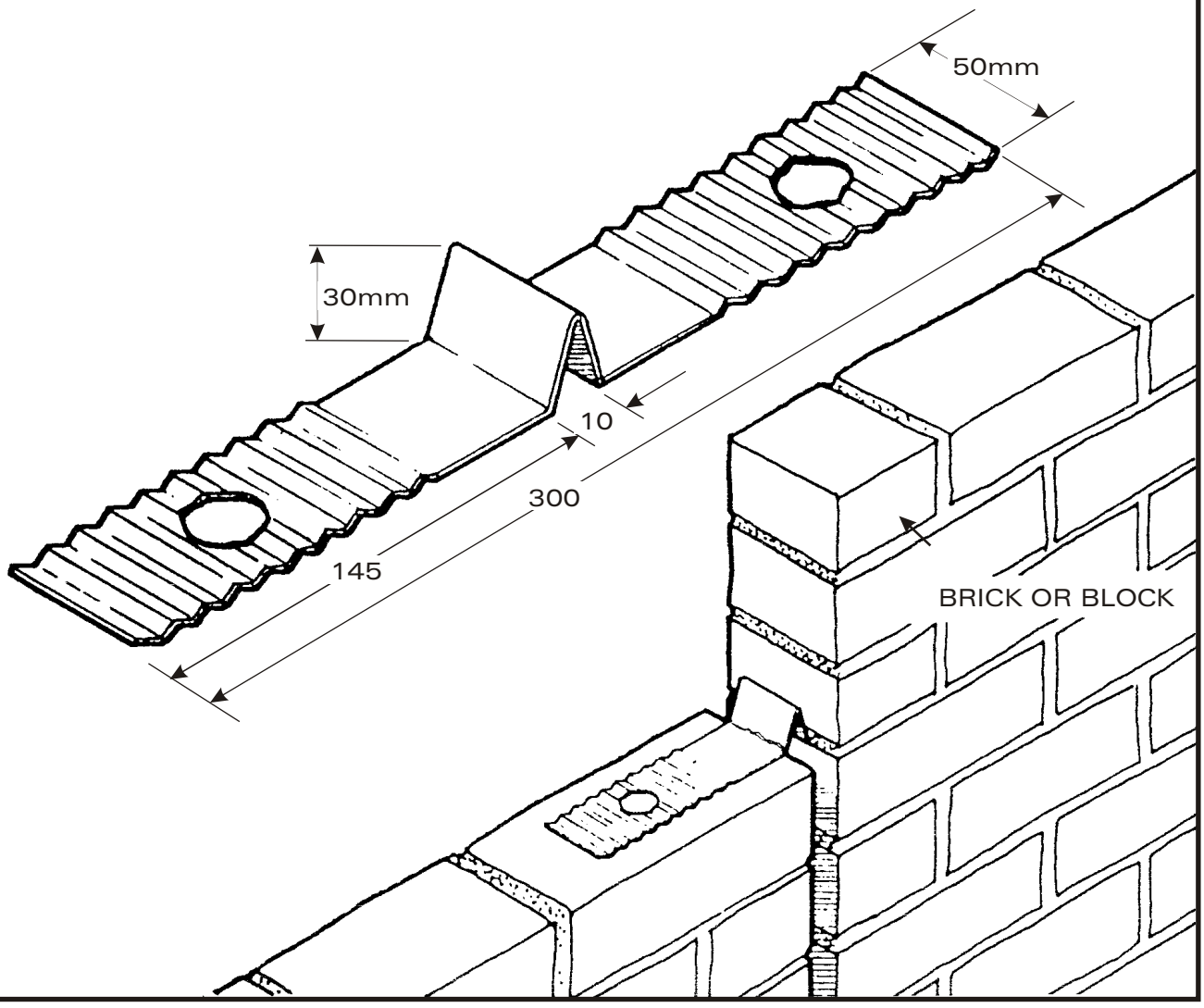
Masonry Flexible Anchors

MFA 3/1

BDRI test certificate
No B1807
Average factor of safety
against ultimate failure
of $\frac{2.15}{1.82} = 1.2$



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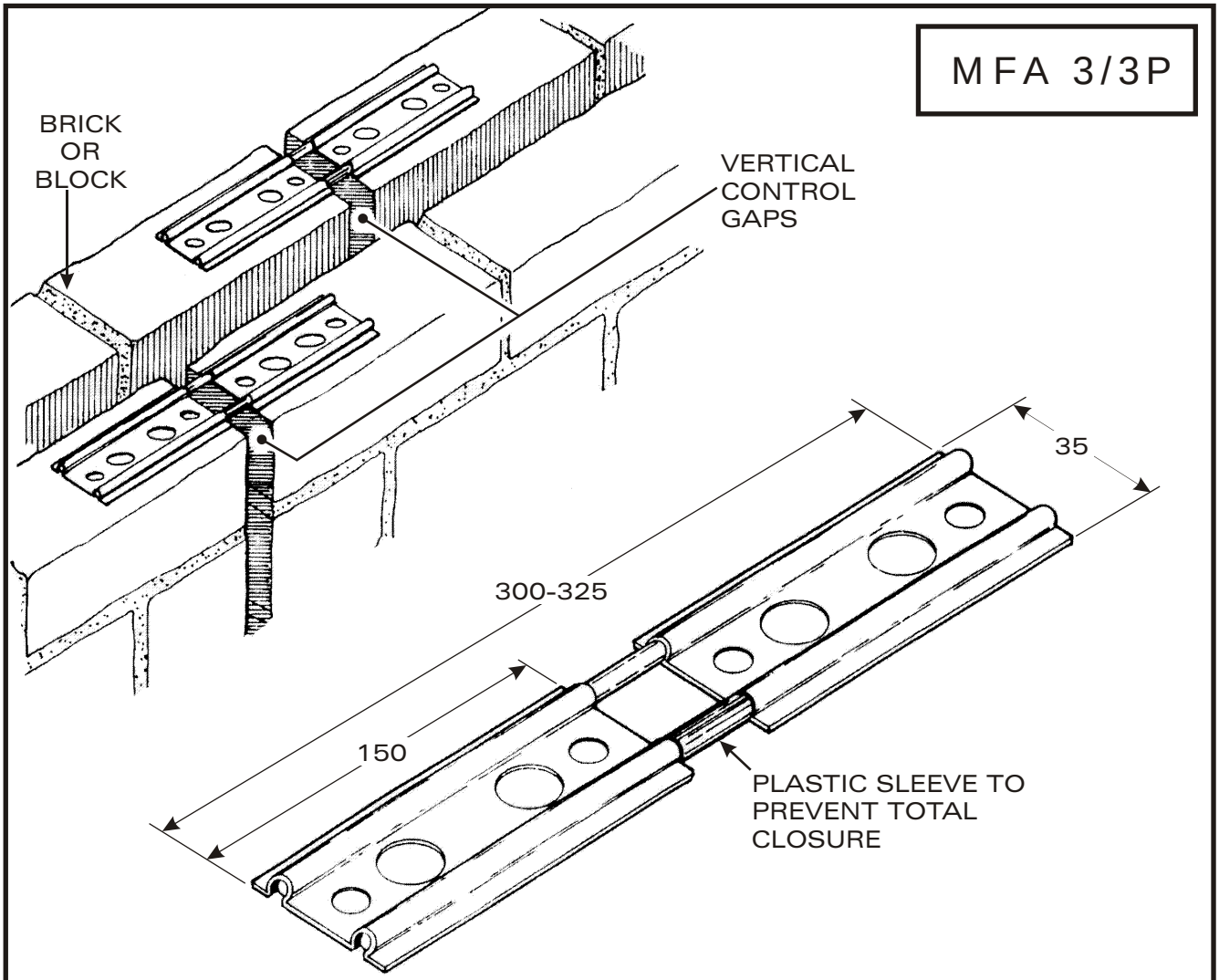
Masonry Flexible Anchors



VERTICAL CONTROL JOINTS

The MFA 3/3 is without doubt the most recognised Masonry Flexible Anchor in the range since its inception in 1978. Conventional Control joints are 10-15mm in width. This new 3/3 expansion tie is unique in design and manufacture due to the use of uP.V.C.-plastic keepers, having now replaced the metal keepers.

Flexibility of design now allows this tie to be used with conventional Galvanised 5.6mm diameter rods or for only a minor increase in price Grade 316 Stainless Steel there by providing a completely non corrosive tie. The uP.V.C.keepers are fully compatible with mortar and lime and any other masonry additive, whilst still allowing an improved performance criteria.

TECHNICAL DATA-: DEAKIN UNIVERSITY

DATE OF TEST: 19/11/90 TYPE OF TIE: CONTROL JOINT TIE. CAVITY WIDTH: Up to 15mm Gap in control joint
TIE DESCRIPTION: TWO 5.6mm diam. Galvanised steel rods clipped into two plastic keepers (uPVC) each 140mm long.

Mean	0.68 KN	Coefficient of Variation 0.26 KN
Standard Deviation	0.17 KN	Characteristic 0.39 KN at 1.5mm Deflection.

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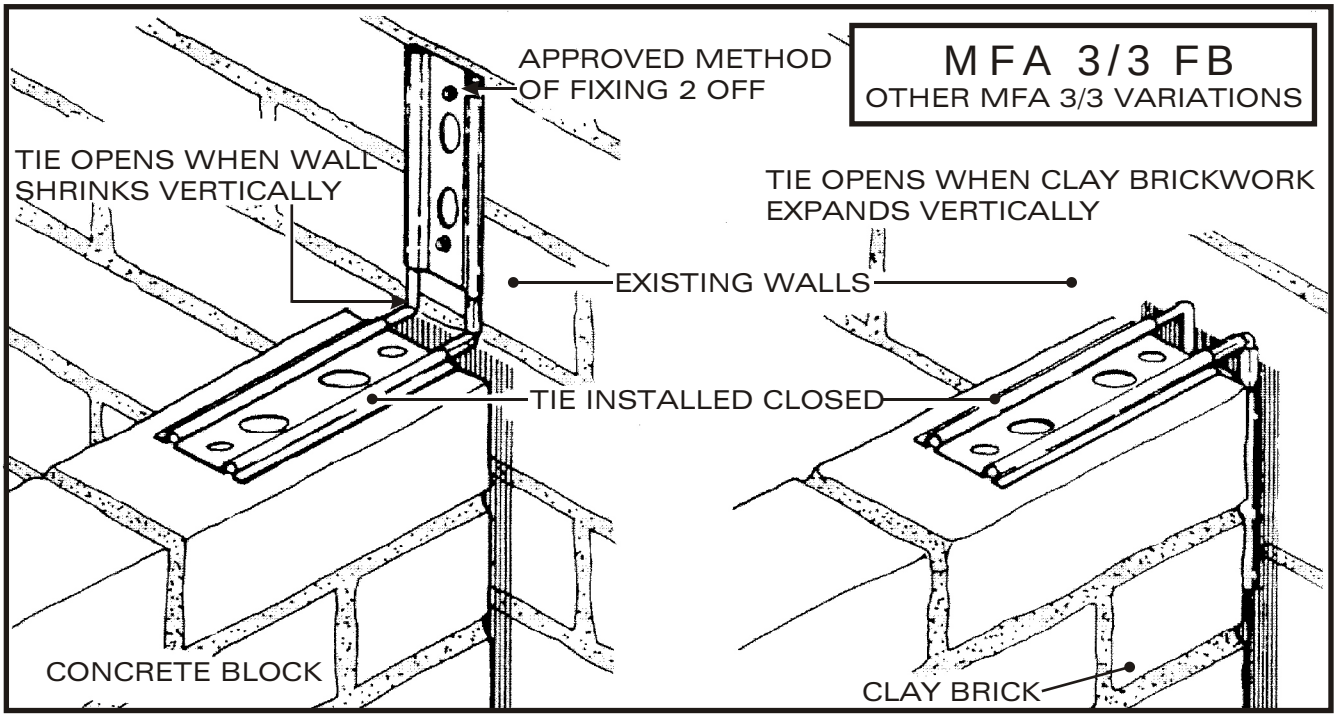
Masonry Flexible Anchors

CONNECTION OF NEW TO EXISTING WALLS



CONNECTION IN STEEL OR CONCRETE FRAME CONSTRUCTION

TEST DATA
BDRI TEST CERTIFICATE
NO B1990
TEST DATE 24/10/83
STRENGTH AND DEFLECTION
CHART IN SHEAR.

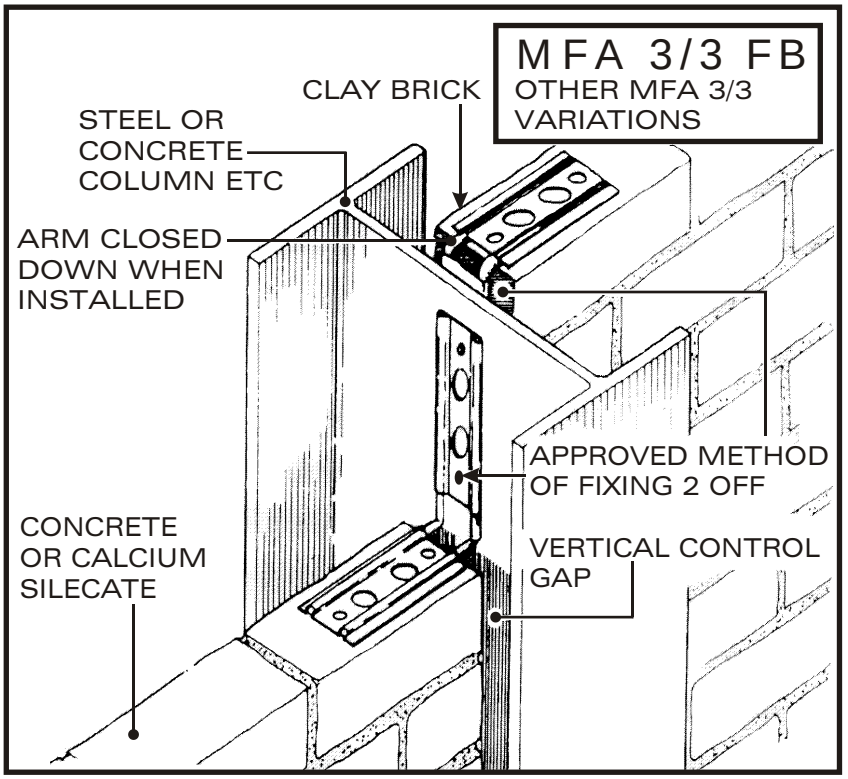
TESTED TO A.S.2699

CHARACTERISTIC STRENGTH
CALCULATED ON THE LOAD
CAUSING A DEFLECTION
OF 1.5MM = 0.41

METAL AND PLASTIC KEEPERS
35MM WIDE X 140MM LONG

AVAILABLE IN GALVANISED
STEEL Z600 OR
316 STAINLESS STEEL

RODS: 5.6MM



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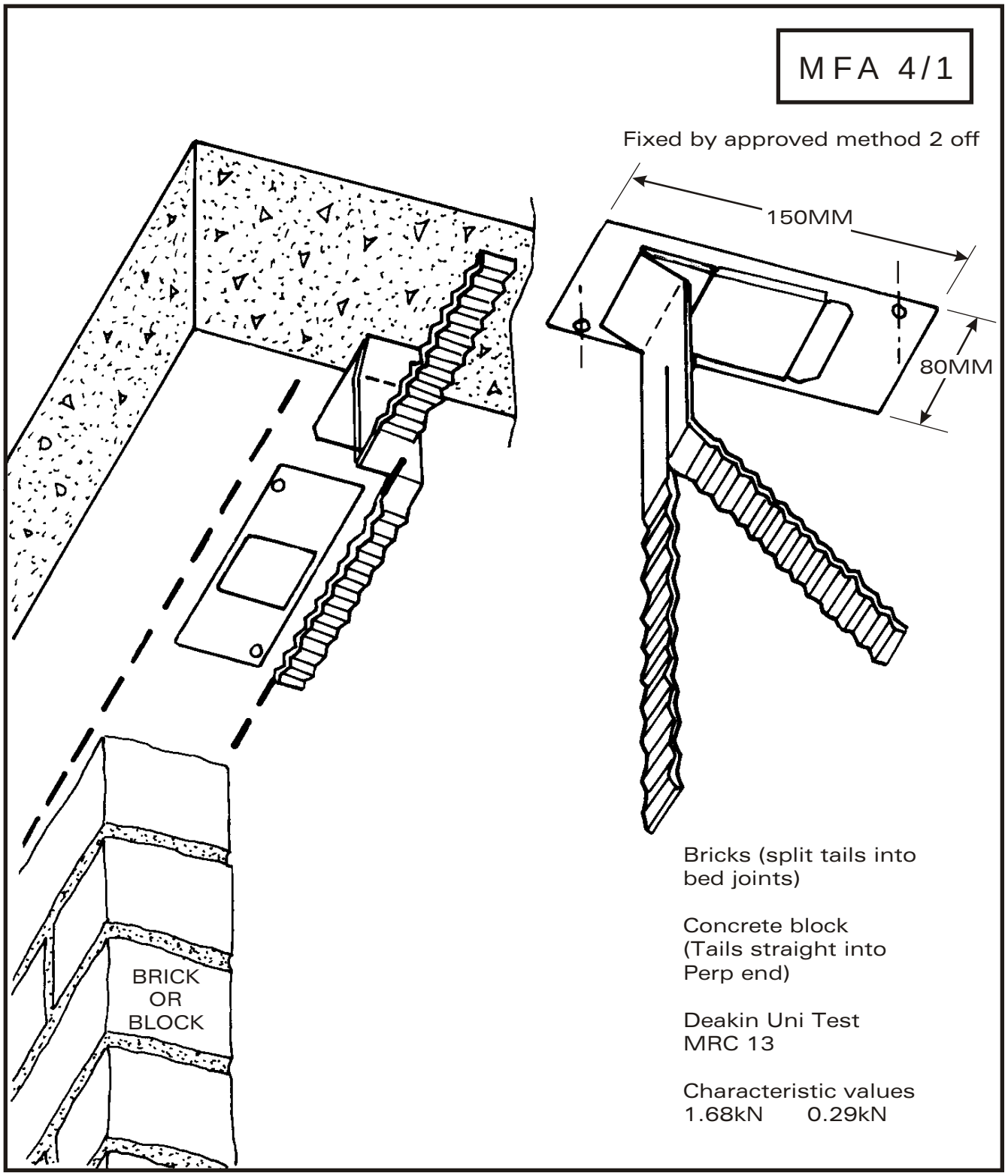
Masonry Flexible Anchors

Used as HEAD RESTRAINT

MFA 4/1



Bricks (split tails into bed joints)

Concrete block (Tails straight into Perp end)

Deakin Uni Test
MRC 13

Characteristic values
1.68kN 0.29kN

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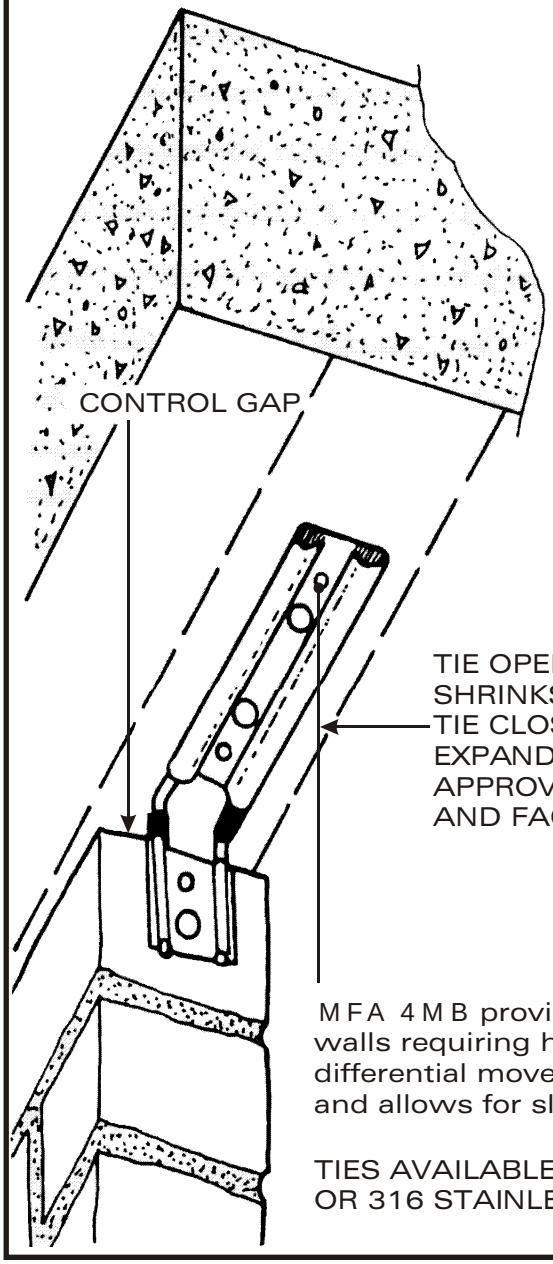
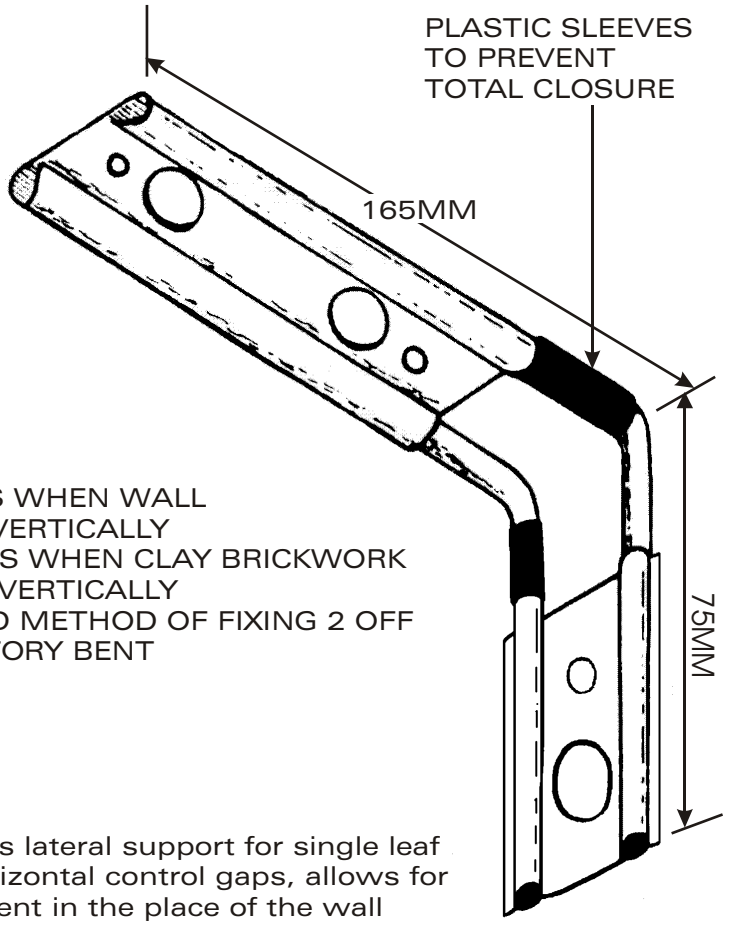
Masonry Flexible Anchors

LATERAL SUPPORT FOR SINGLE LEAF WALLS

TEST DATA:- DURAC LTD (DEAKIN UNIVERSITY)
27TH OCTOBER 1982
CHARACTERISTIC STRENGTH AT
1.5 MM DEFLECTION - 1.27 KN.
METAL KEEPER: 140MM X 35MM
PLASTIC KEEPERS: 65MM X 35MM
RODS: 5.6MMO

MFA 4 MB





TIE OPENS WHEN WALL
SHRINKS VERTICALLY
TIE CLOSES WHEN CLAY BRICKWORK
EXPANDS VERTICALLY
APPROVED METHOD OF FIXING 2 OFF
AND FACTORY BENT

MFA 4MB provides lateral support for single leaf walls requiring horizontal control gaps, allows for differential movement in the place of the wall and allows for slab deflection.

TIES AVAILABLE IN GALVANISED STEEL Z600
OR 316 STAINLESS STEEL.

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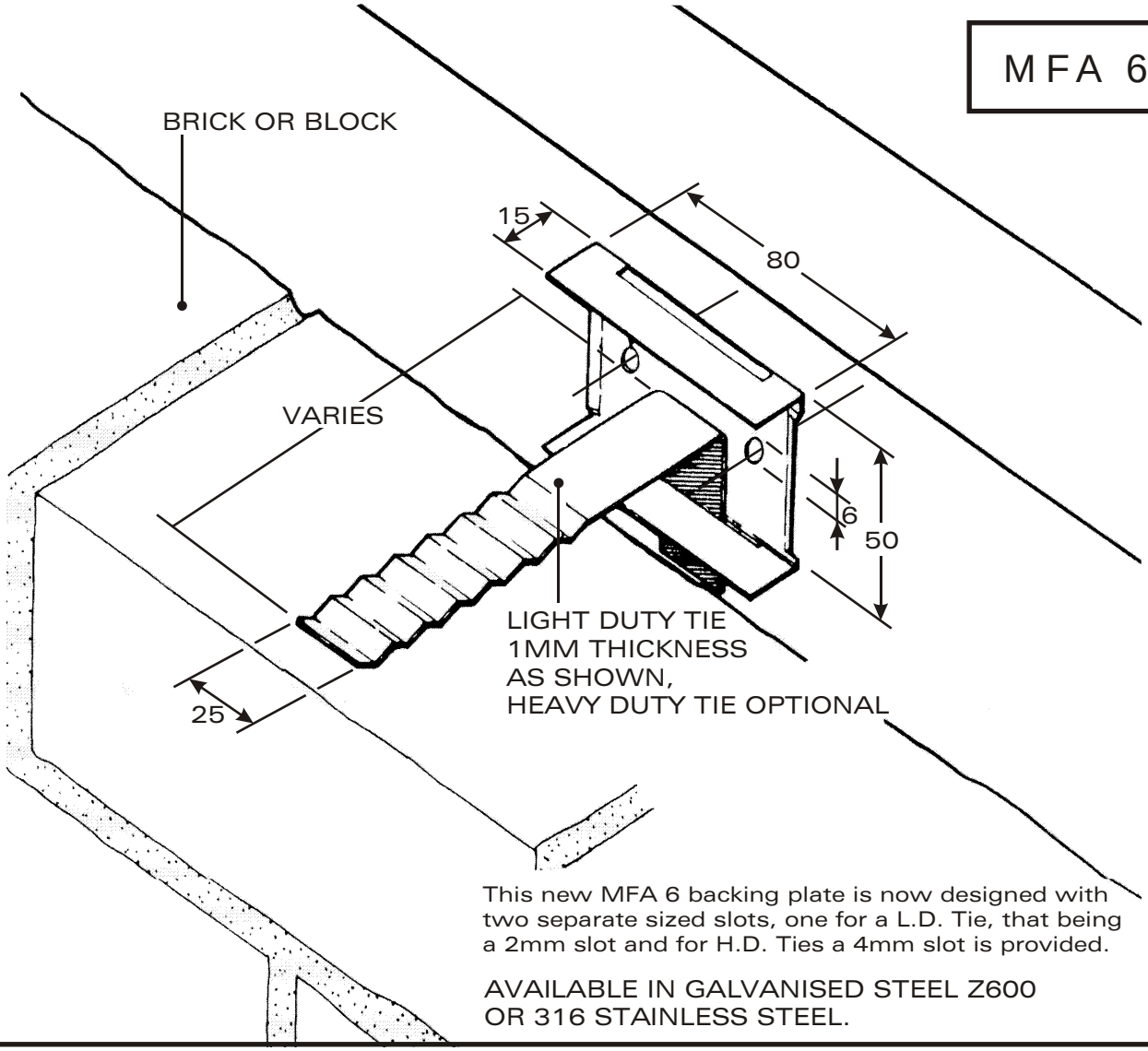
Masonry Flexible Anchors

ATTACHING MASONRY VENEERS TO POURED CONCRETE



This new MFA 6 backing plate is now designed with two separate sized slots, one for a L.D. Tie, that being a 2mm slot and for H.D. Ties a 4mm slot is provided.

AVAILABLE IN GALVANISED STEEL Z600
OR 316 STAINLESS STEEL.

MFA 6 provides a secure means of attaching masonry veneers to poured concrete structual elements while permitting in-plane differential movements to safely occur. Available to normal or heavy duty specification. It is installed closed down for clay brickwork, open for concrete or calcium silicate masonry.

TECHNICAL DATA

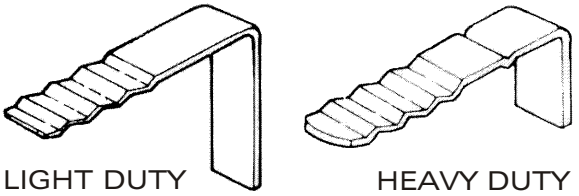
BDRI - Report dated 1/12/76
- Updated 24/7/90

HD tie 20mm x 3mm

At 1.5mm deflection
Compression Characteristic strength 0.44 KN

Tension Characteristic strength 0.47 KN

OPTION OF LIGHT DUTY OR HEAVY DUTY ARMS



LIGHT DUTY HEAVY DUTY

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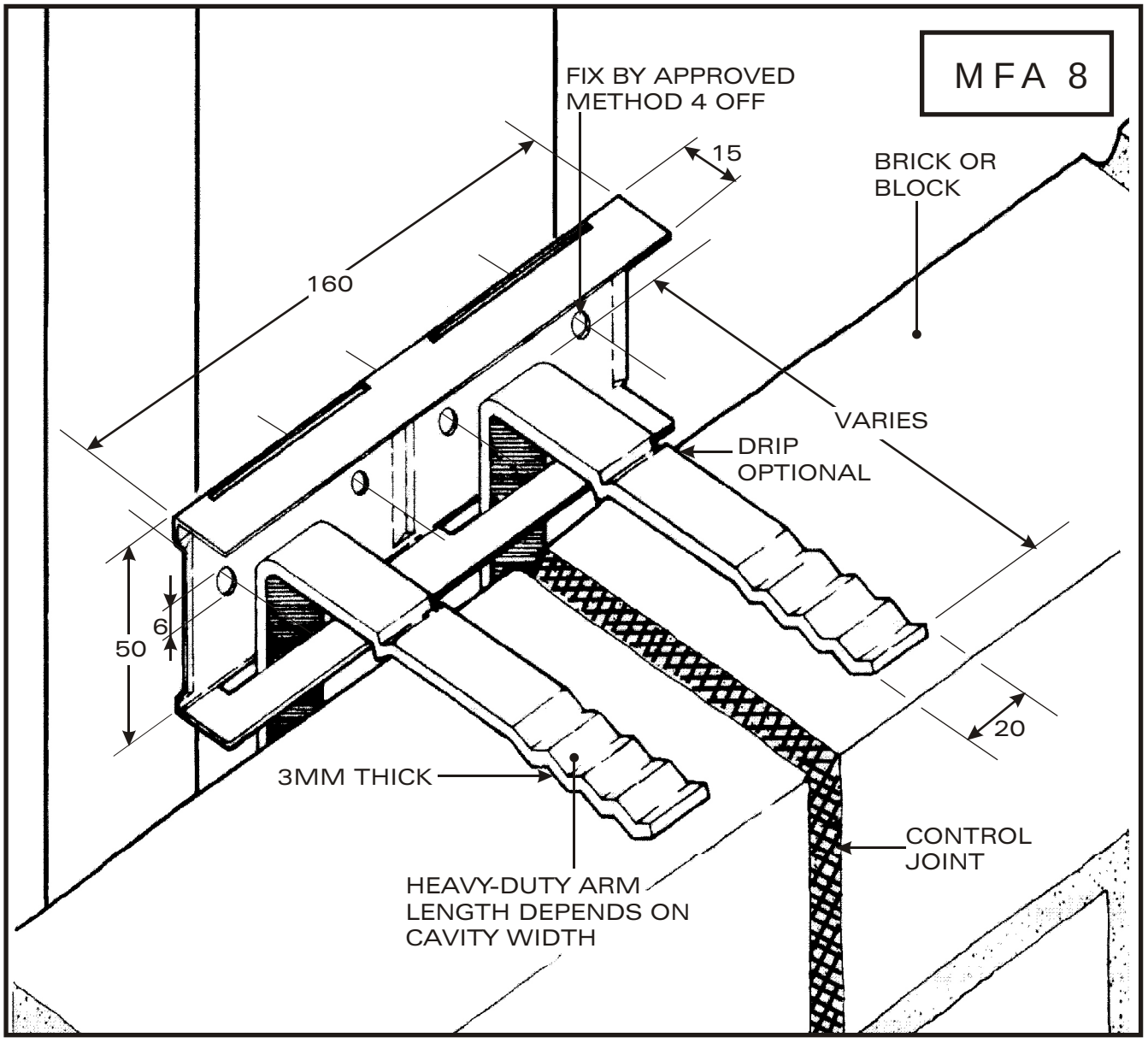
Masonry Flexible Anchors

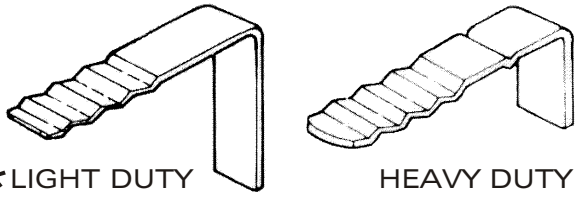
ATTACHING BRICK WALLS TO VERTICAL COLUMNS



TECHNICAL DATA

MFA 8 is a light-duty alternative to MFA 3/3 to provide anchorage between masonry wall and columns at vertical control gaps. The arms should be installed closed down for clay brickwork, open to concrete or calcium silicate masonry.
AVAILABLE IN GALVANISED STEEL Z600 OR 316 STAINLESS STEEL.

OPTION OF LIGHT DUTY OR HEAVY DUTY ARMS



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Masonry Flexible Anchors

HEAVY DUTY ALTERNATIVE

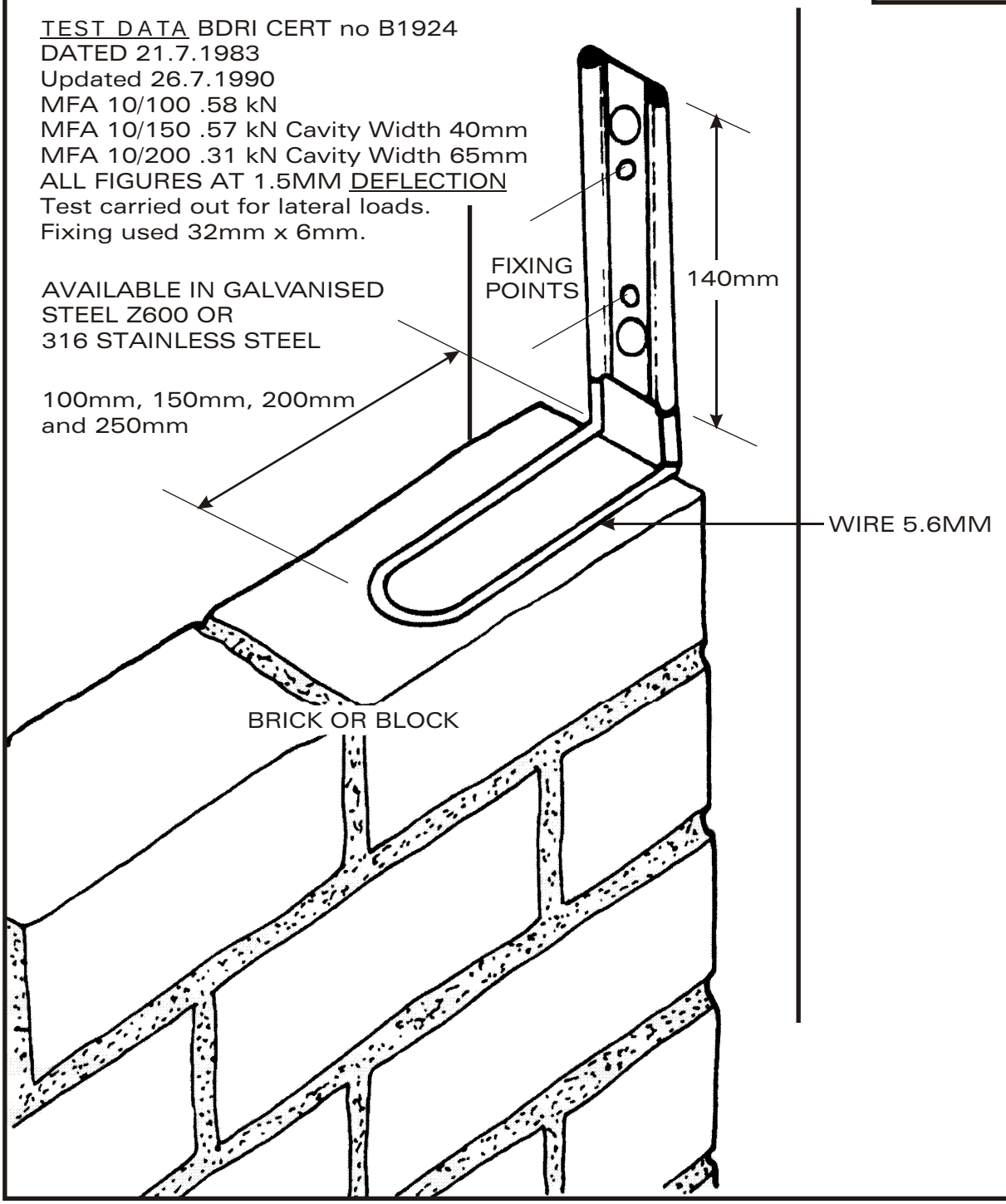
MFA 10

MFA 10 provides a heavy duty alternative
Could be used with MFA 2 where no shelf angle exists.

TEST DATA BDRI CERT no B1924
DATED 21.7.1983
Updated 26.7.1990
MFA 10/100 .58 kN
MFA 10/150 .57 kN Cavity Width 40mm
MFA 10/200 .31 kN Cavity Width 65mm
ALL FIGURES AT 1.5MM DEFLECTION
Test carried out for lateral loads.
Fixing used 32mm x 6mm.

AVAILABLE IN GALVANISED
STEEL Z600 OR
316 STAINLESS STEEL

100mm, 150mm, 200mm
and 250mm



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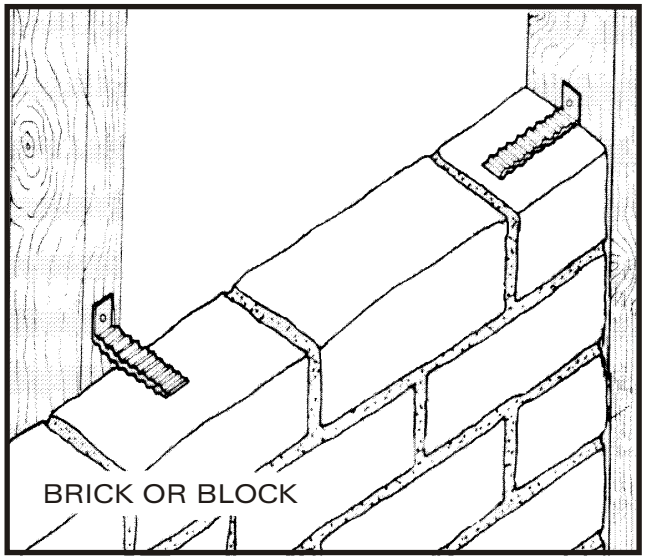
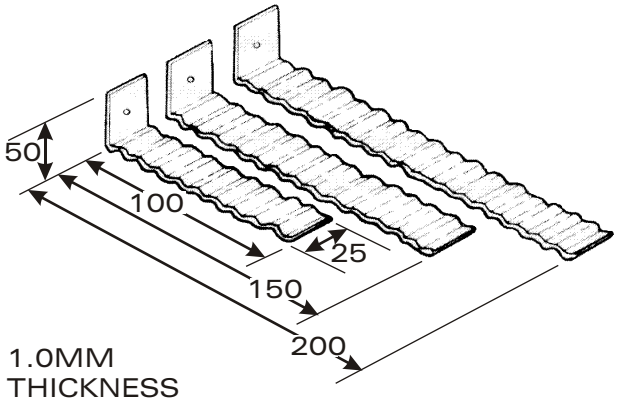
Masonry Flexible Anchors

RIGID WALL-TIES

Three lengths of light duty face fix ties are manufactured suitable for brick-veneer construction and as jamb-ties. They are particulary convenient as brick-veneer ties when used in conjunction with reflective foil insulation. The face-fixing method overcomes the need to puncture the foil during installation. The ties should be fixed with a 2.5mm dia galvanised clout not less than 25mm in length.

MFA 12



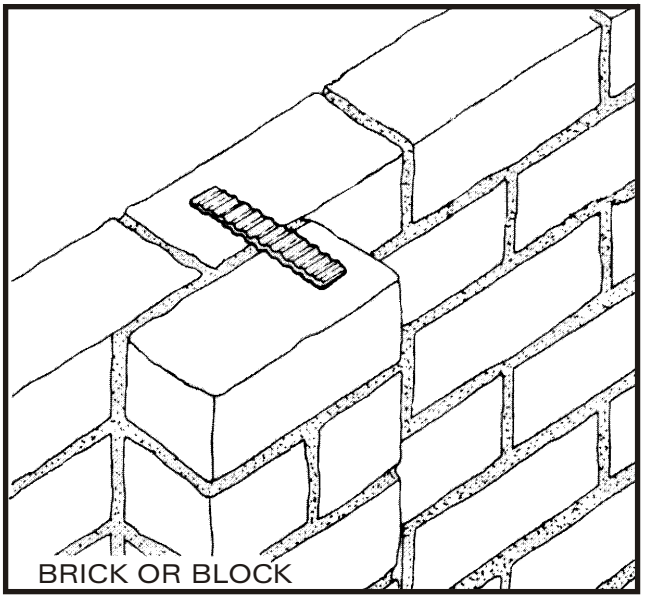


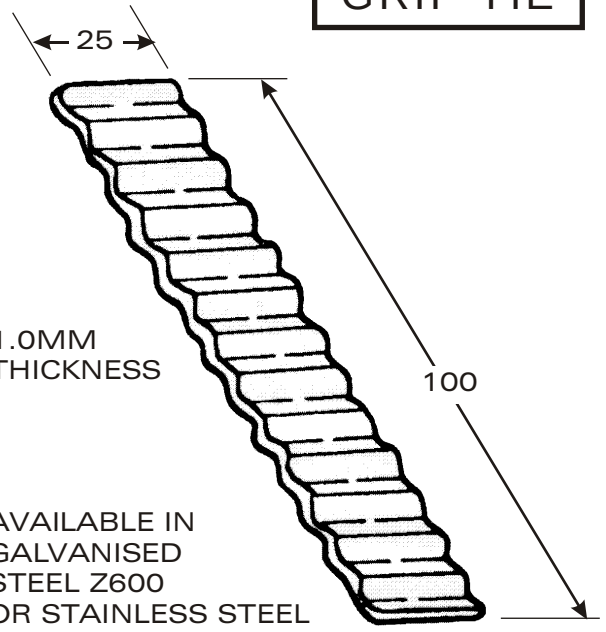
1.0MM
THICKNESS

AVAILABLE IN GALVANISED STEEL Z600
OR STAINLESS STEEL

The Grip-ties make it possible to construct bonded walls (twin leaf solid walls) and piers without the use of header ties. The Grip-tie should be used at the rate of one tie per 0.2m^2 in bonded walls and **one tie per course for all (engaged) piers.**

MFA GRIP-TIE





1.0MM
THICKNESS

AVAILABLE IN
GALVANISED
STEEL Z600
OR STAINLESS STEEL

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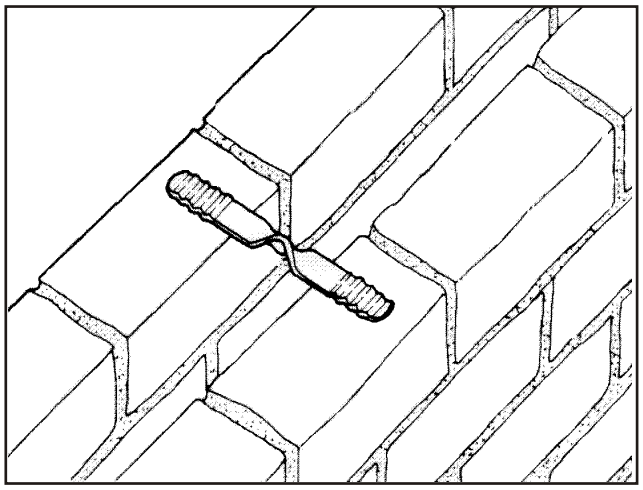
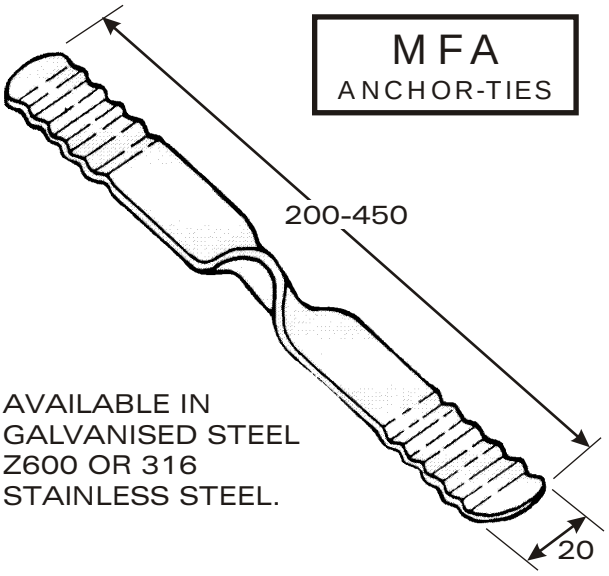
Masonry Flexible Anchors

RIGID WALL-TIES - A RANGE OF RIGID TIES TO SUIT ALL CAVITY WALL REQUIREMENTS

This is an improved tie especially for use with larger than normal cavity widths. The use of such a tie is prescribed for cavities of 90mm or more in width. It is available in lengths between 200 and 450mm in increments of 50mm. The new design is safer and more convenient to handle than old "fish-tail" wall tie



MFA
ANCHOR-TIES



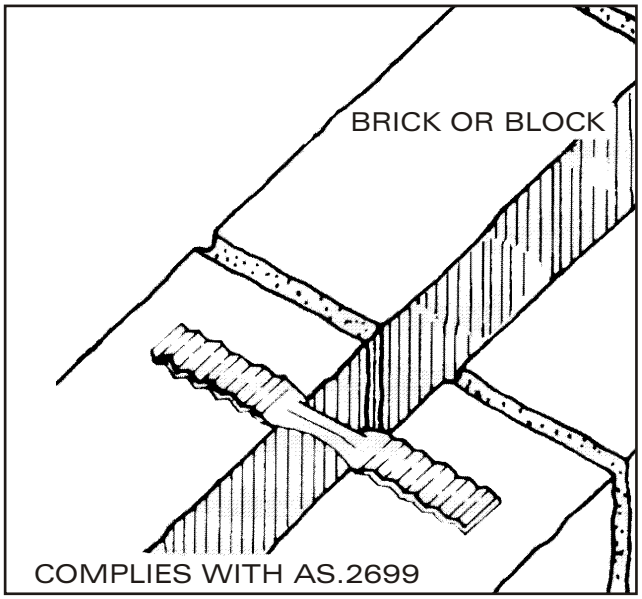
AVAILABLE IN
GALVANISED STEEL
Z600 OR 316
STAINLESS STEEL.

STRENGTH SUMMARY (BDRI) Test Cert. No BO 1151)

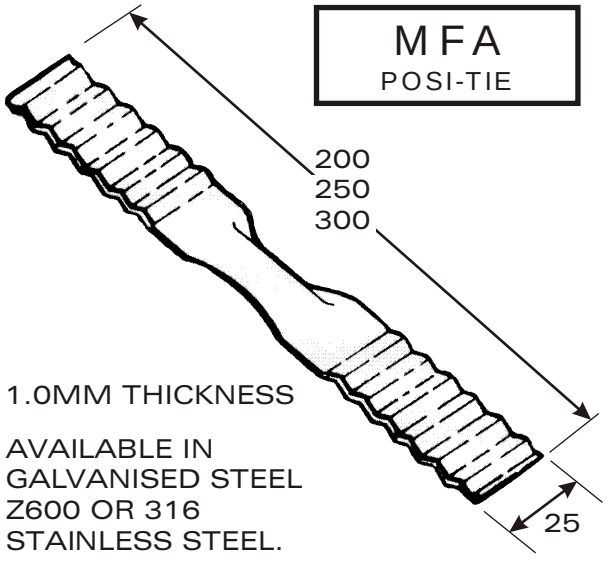
Characteristic strenghth-Compression	1.88kN*
Characteristic strenghth-Tension	2.87kN*

*Tested with a cavity width of 140mm

This is a heavy duty corrugated tie for conventional cavity wall construction. Its use is recommended in high wind and cyclonic areas.



MFA
POSI-TIE



1.0MM THICKNESS

AVAILABLE IN
GALVANISED STEEL
Z600 OR 316
STAINLESS STEEL.

STRENGTH SUMMARY (BDRI) Test Cert. 12.1.76)

Characteristic strenghth-Compression	2.12kN
Characteristic strenghth-Tension	1.76kN

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Masonry Flexible Anchors

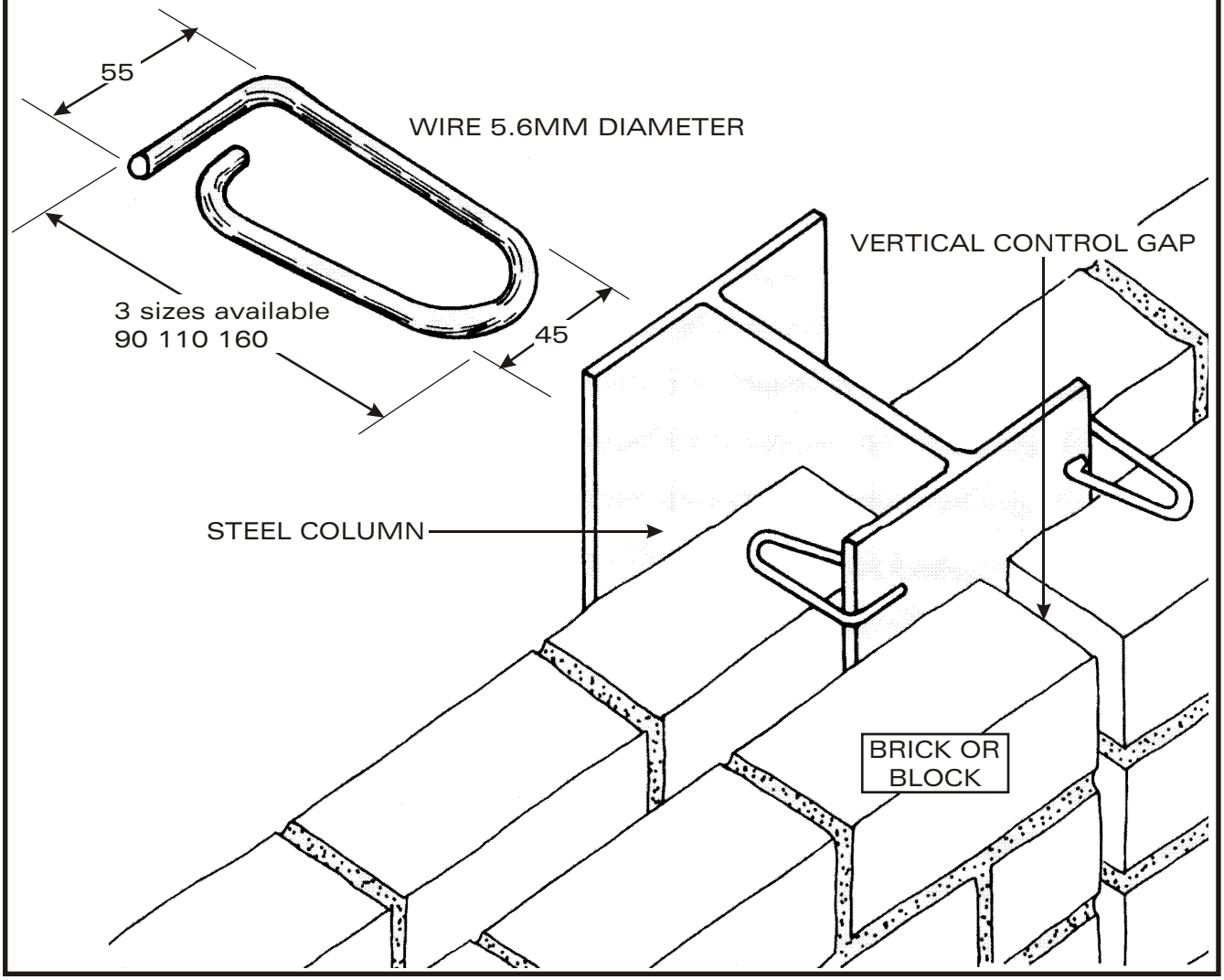
FOR LOCATING MASONRY TO STEEL COLUMNS

COLGRIP is a revolutionary method of locating masonry to steel columns.
It eliminates costly welding or power fixing, takes seconds to install, suits all flange thicknesses and copes with both vertical and horizontal differential movements.

MFA COLGRIP

STRENGTH SUMMARY
Characteristic strength at 1.55mm deflection
1.8kN Compression (at 40mm span)
0.40kN Tension (at 40mm span)
0.37kN Tension (at 10mm span)

TIES AVAILABLE IN
GALVANISED FINISH OR
316 STAINLESS STEEL



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Masonry Flexible Anchors

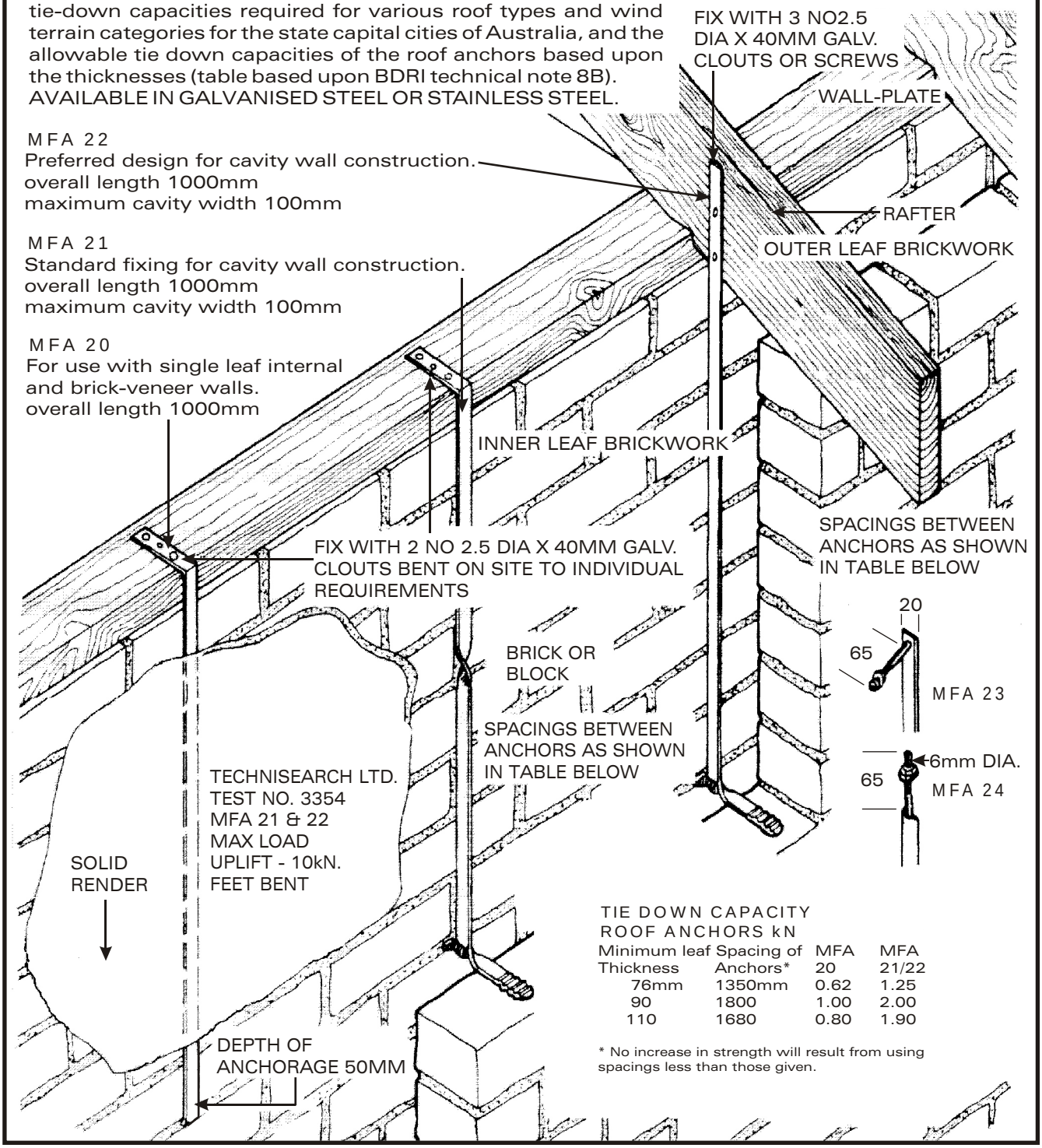
The MFA range of roof anchors replaces unreliable hoop iron straps for roof anchorage purposes. Each unit is safe rated for maximum tie down capacity without reliance upon brick bond strength. Each unit may be obtained with the alternative head fitting shown in the inset. The tables below show the average tie-down capacities required for various roof types and wind terrain categories for the state capital cities of Australia, and the allowable tie down capacities of the roof anchors based upon the thicknesses (table based upon BDRI technical note 8B). AVAILABLE IN GALVANISED STEEL OR STAINLESS STEEL.

MFA ROOF STRAPS

MFA 22
Preferred design for cavity wall construction.
overall length 1000mm
maximum cavity width 100mm

MFA 21
Standard fixing for cavity wall construction.
overall length 1000mm
maximum cavity width 100mm

MFA 20
For use with single leaf internal and brick-veneer walls.
overall length 1000mm



TIE DOWN CAPACITY
ROOF ANCHORS kN

Minimum leaf Thickness	Spacing of Anchors*	MFA 20	MFA 21/22
76mm	1350mm	0.62	1.25
90	1800	1.00	2.00
110	1680	0.80	1.90

* No increase in strength will result from using spacings less than those given.

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Masonry Flexible Anchors

FOR LOCATING MASONRY TO STEEL TUBES

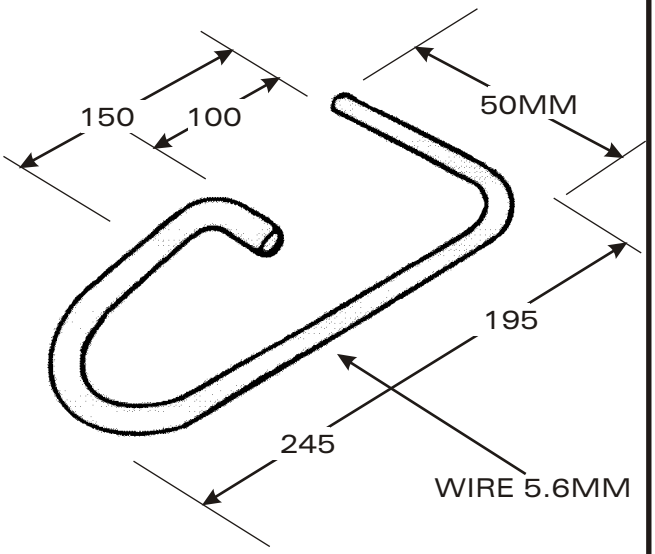
TUBE GRIPS

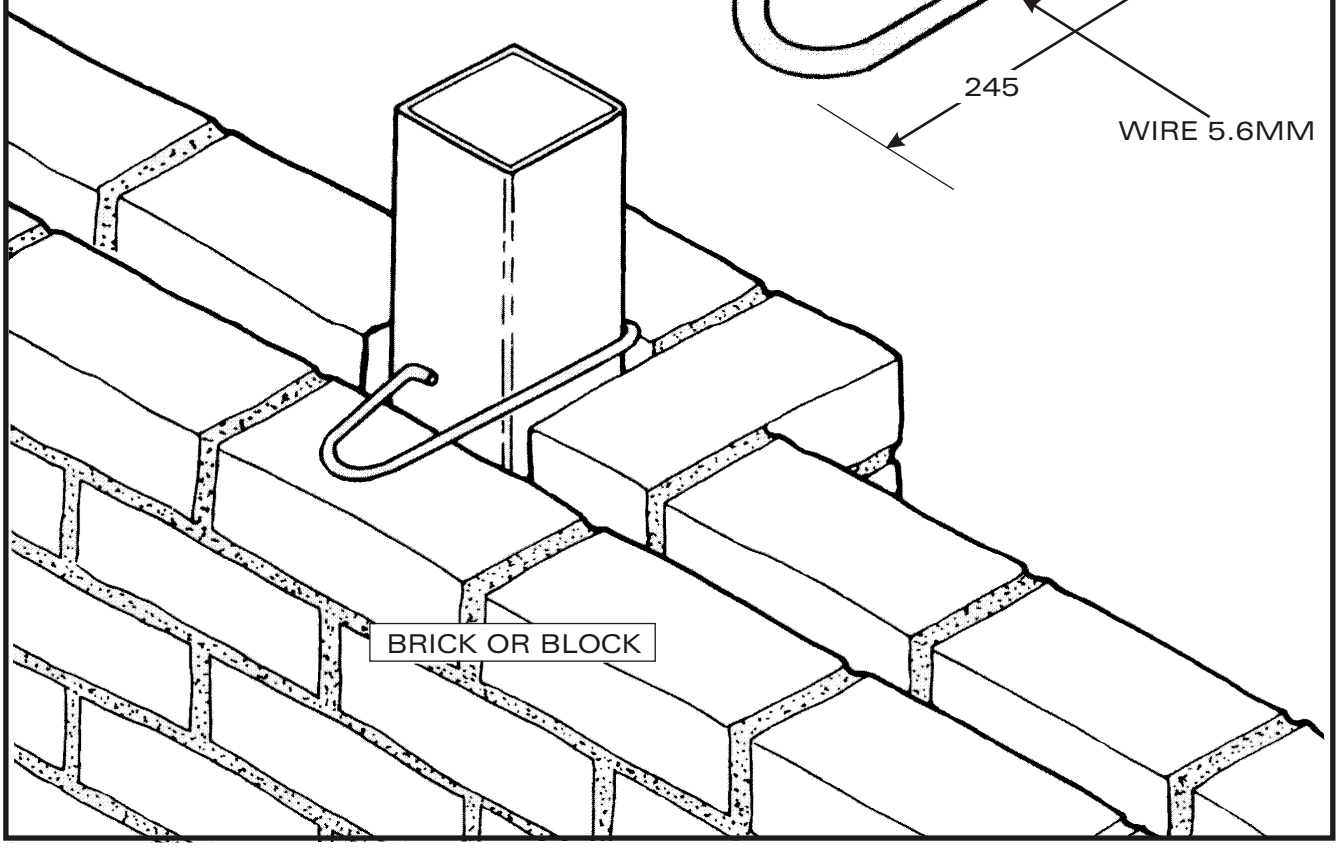
NO TESTS AVAILABLE

BRICKWORK-EVERY 4TH COURSE
BLOCKWORK-EVERY 2ND COURSE

TIES AVAILABLE IN GALVANISED STEEL
OR 316 STAINLESS STEEL

SIZES: 100MM TO SUIT 100MM SHS
150MM TO SUIT 150MM SHS





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