

# PRODUCT GUIDE



STRUCTURAL REFURBISHMENT AND RESTORATION



For more than twenty years Clan have provided their clients with a complete service in the field of structural engineering and remedial works to both the public and private sectors. Contracts undertaken have been diverse, from tower blocks and listed buildings to water treatment works and local authority housing estates.

# Success BUILT ON Innovation

Since the early 1980's, Clan have been at the forefront of remedial cavity wall tie technology designing new remedial wall ties, the Kontrakt tie, lateral restraint systems, the Clanbolt, and the unique isolation process for treatment of corroding wall ties, the Clansleeve.

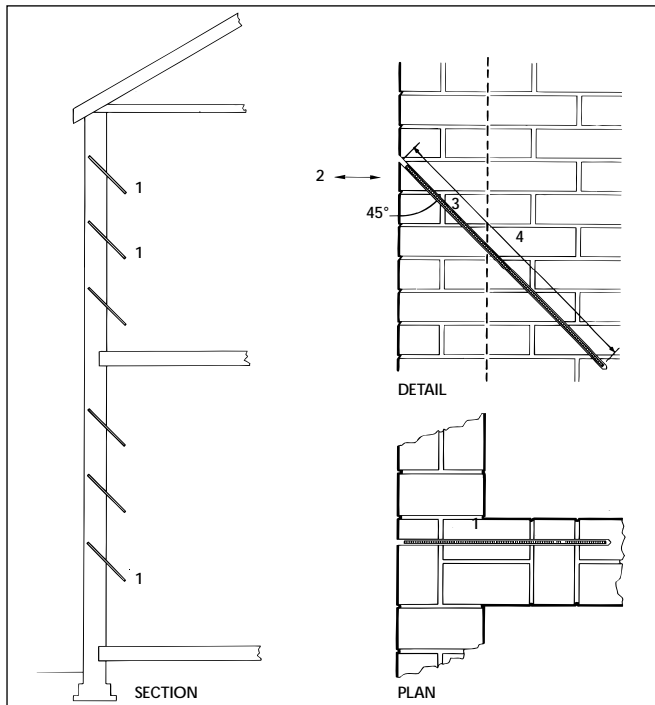
Over the years as we have been confronted with new problems within the refurbishment industry, we have introduced innovative solutions designed in conjunction with our structural engineers, with not just the specifier in mind, but also the contractor. A good product not only overcomes the structural problems but is simple to fix reducing operator error. All of our products are designed in accordance with the basic principles that Clan adhere to; a quick, simple and virtually unobtrusive repair.

In addition to our own range of structural fixings, Clan have brokered relationships with many European companies, exchanging ideas enabling us to introduce new methods of repair, such as Xypex crystalline waterproofing, high strength concrete repair materials and the latest carbon fibre technology for repairing structures.

Our range of services is continuing to grow with our sister company, Thin Joint Technology, which supplies tools, fixings and mortars for construction using thin jointed aerated blockwork. TJT also supply coloured render systems, external wall insulation systems and decorative plasters.

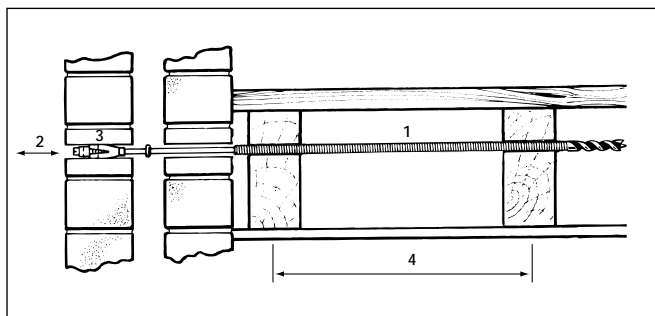
Specification Information is available in a number of formats. We can provide CAD drawings for our range of fixings, simple line drawings and boq pages in MS Word format.

This information is available from either our website - [clan.co.uk](http://clan.co.uk), or a complete version on CD can be obtained from our Liverpool Office. Tel: 0151 260 2000. Email: [sales@clan.co.uk](mailto:sales@clan.co.uk)



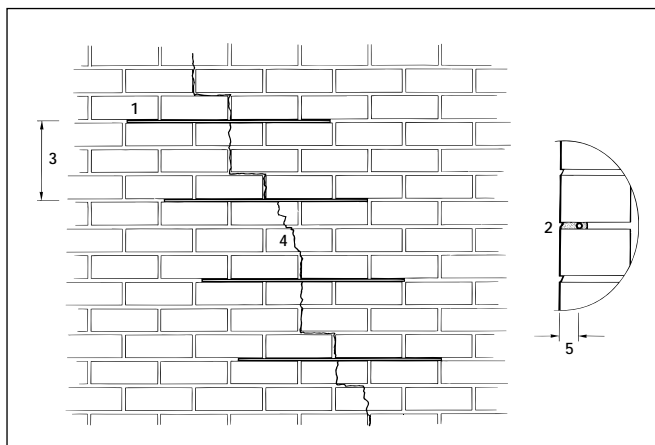
**CLANSTITCH**

- 1 Stud: 8mm Ø grade 304 stainless steel
- 2 Safe Load: 2.0KN
- 3 Grout: 2 part epoxy resin GT4 Grout or RT12 Shell
- 4 Length: 750mm



**CLANBOLT**

- 1 Shaft: 9mm Ø grade 304 stainless steel (length variable)
- 2 Safe Load: working load 2.0KN
- 3 Anchor: RT12 Shell or GP3 Resin
- 4 Joist Centres: Variations accommodated



**CRACKTIE**

- 1 Tie: 6mm Ø grade 304 stainless steel stud/750mm long, deformed along its length
- 2 Mortar: GP3 Resin, GT4 Grout, Lime Grout
- 3 Centres: 3 courses vertically
- 4 Repair: Fill cracks and renew badly broken bricks
- 5 Cover: 30mm

**COVERAGE 25 KG BAG 1M<sup>2</sup>:**

Yield in Litres/bag	5mm	10mm	15mm	20mm
10	2.00	1.00	0.67	0.50
11	2.20	1.10	0.73	0.55
12	2.40	1.20	0.80	0.60
13	2.60	1.30	0.87	0.65
14	2.80	1.40	0.93	0.70
15	3.00	1.50	1.00	0.75
16	3.20	1.60	1.06	0.80
17	3.40	1.70	1.13	0.85
18	3.60	1.80	1.20	0.90
19	3.80	1.90	1.26	0.95
20	4.00	2.00	1.33	1.00

**N.B.**

Yield of 25 Kg bag Mapegrout T40

Specific gravity 1-25 Kg/L

Yield = 25/1.25

Yield = 20 Litres

**CONVERSION INFORMATION:**

Volume of a cylinder:  $\pi r^2 \times L$

Volume of a rectangle:  $L \times b \times h$

Annulus resin and rod  $(D+d) \times (D-d) \times L \times \frac{\pi}{4}$

1 cm = 0.394 inch

1 inch = 2.54cm

1 Pascal = 0.000001N/mm<sup>2</sup>

1 Pascal = 1 N/m<sup>2</sup>

1 MPa = 10<sup>6</sup> N/m<sup>2</sup>

1 GPa = 10<sup>9</sup> N/m<sup>2</sup>

1 MPa = 1 N/mm<sup>2</sup>

1 GPa = 1000 N/mm<sup>2</sup>

10 mm = 0.3935 inch

1 mm<sup>3</sup> = 1000 Litres

1 mm<sup>3</sup> = 35.31 ft<sup>3</sup>

1 cm<sup>3</sup> = 0.000001m<sup>3</sup>

1 m<sup>3</sup> = 1000 Litres

**WEB ADDRESSES**

**Adjudication Society:**  
oxfordinformation.com

**Barbour Index:**  
barbour-index.co.uk

**British Architecture and Surveying Institute:**  
asi.org.uk

**British Institute of Architectural Technologists:**  
biat.org.uk

**British Wall Tie Association:**  
bwta.org.uk

**Building Research Establishment:**  
bre.gov.uk

**Department of Trade and Industry:**  
dti.gov.uk

**Department of Transport Local Government & the Regions:**  
dtrlr.gov.uk

**Construction Industry Training Board:**  
citb.org.uk

**Health and Safety Executive:**  
hse.gov.uk

**Institute of Civil Engineers:**  
ice.org.uk

**Institute of Clerk of Works of Great Britain Incorporated:**  
icwgb.com

**Institute of Structural Engineers:**  
istructe.org.uk

**Royal Institute of British Architects:**  
architecture.com

**Royal Institute of Chartered Surveyors:**  
rics.org.uk

**Society of Construction Law:**  
scl.org.uk



Unit 3  
Albright Road  
Speke Approaches Industrial Estate  
WA8 8FY  
Liverpool  
L6 1AU

Tel: +44 (0)151 422 8000

Fax: +44 (0)151 422 8001

E-mail: [sales@clan.co.uk](mailto:sales@clan.co.uk)

Web: [www.clan.co.uk](http://www.clan.co.uk)