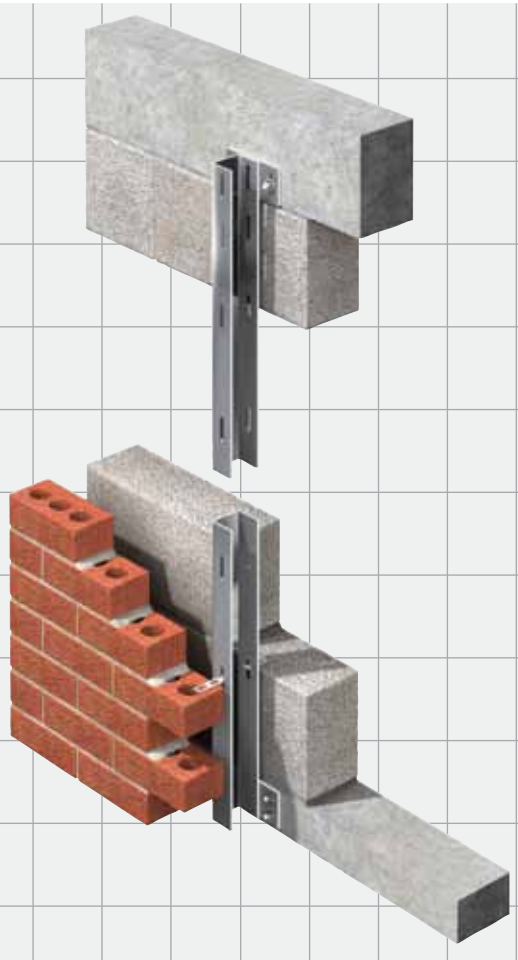
CI/SfB | | (31.9) | Hh2

BETTER BY
DESIGN

IG
STEEL LINTELS

MASONRY SUPPORT & WINDPOST SYSTEMS

MASONRY SUPPORT & WINDPOST RANGE



IG STEEL LINTELS

BETTER BY DESIGN

IG produce an innovative range of masonry support and windpost systems backed by bespoke design and industry leading technical support.

BBA British Board of Agrement Certificate No 05/4192 — BBA Certification

BSI — British Standards Institution ISO 9001 & ISO 14001

HBF Home Builders Federation — Home Builders Federation

NSSPlus — National Building Specification Approved

RIBA CPD Approved

BMF Builders Merchants Federation — Builders Merchants Federation

NHBC — National House Building Council

Investors in People — Investors in People Accreditation

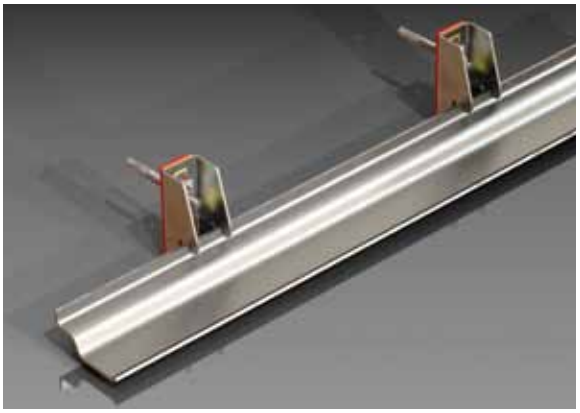
bre — Building Research Establishment

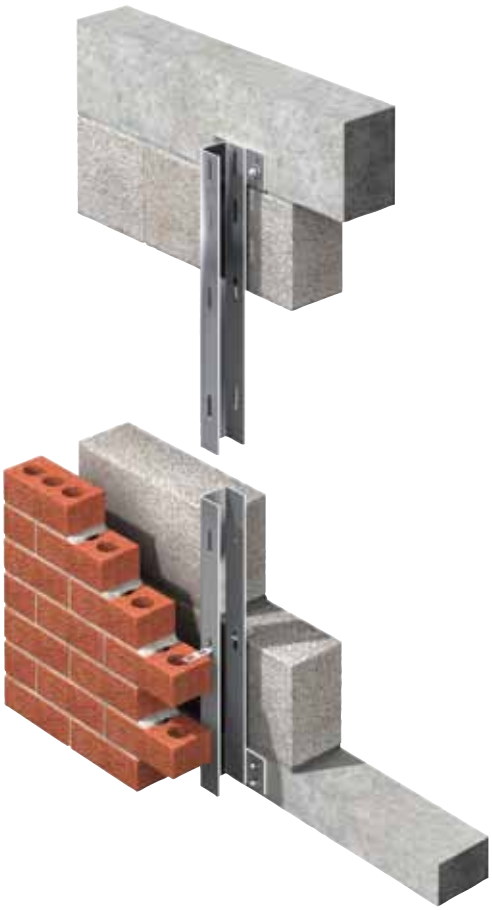
www.iglintels.com

Masonry Support & Windpost Systems

IG Support

With the largest range and more support, IG has over 50 years experience in delivering effective service and solutions.





MASONRY SUPPORT SYSTEMS

A masonry support system designed to save both time and money. It is suitable for use with any outer leaf material: brickwork, fairface blockwork, rendered blockwork, cut and reconstituted stone.

The system can be fixed to a concrete slab using mechanical expansion bolts, chemical anchors or via a cast-in channel; and to steel via a welded or mechanically-fixed cleat.

IG WINDPOSTS

Designed to provide additional lateral support between floors. Each Windpost is manufactured on a project by project basis so that they meet your exact requirements and are available in a wide range of sizes and gauge.

IG manufacture three types of windpost.
U Windpost, DU Windpost and LP Windpost.

IG gives a hassle free service from enquiry stage through to delivery on site. You can relax in the knowledge that your order is in the hands of experts.

TECHNICAL SUPPORT

IG provides comprehensive technical support for all products. Our free scheduling and specification service offers fast turnaround on masonry supports and windposts. IG leads the market with a bespoke design service for these systems, including on-site measurement and technical assistance.

By contacting our engineers at an early stage of your design process you will potentially gain significantly more design flexibility for the overall project. Please send your drawings to: **drawings@iglintels.com**

Detailed measuring advice and Fax Back Enquiry Forms are available for download at: **www.iglintels.com/technical**.

FASTRACK DATABASE FOR CAD

The IG Fastrack Database is accessible from the IG website and provides downloads of CAD files for a selection of IG Steel Lintels.

NBS PLUS

IG provides specification details via RIBA NBS Plus, accessible by subscribers to the NBS Plus system.

DELIVERY

IG's fast, efficient delivery service is renowned throughout the construction industry. Our logistics solution is recognised by our customers for superior supply chain management.

IG are committed to short lead times on the delivery of our standard systems. Masonry support and windpost systems may require an element of bespoke design and lead times will reflect this accordingly.

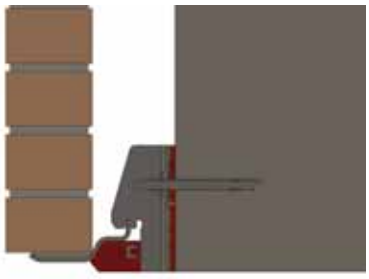
IG products are available through a national network of merchant suppliers. For information of merchant suppliers in your area please visit our website at: **www.iglintels.com/merchants**

Choosing a Masonry Support System

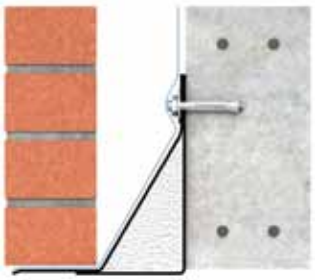
WHEN TO USE

Masonry support systems provide the solution when masonry and brick panels must be restricted in size to avoid stress caused by excessive loading or differential expansion.

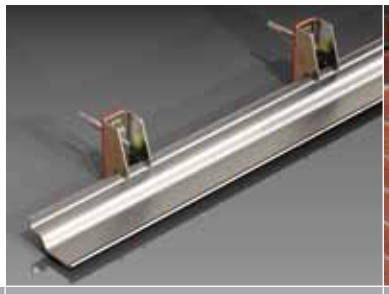
Masonry support systems may also be used in a conventional lintel application above openings in concrete and steel frame inner leaf applications.



Qwik-Fix®Angle



L8/RB Lintel

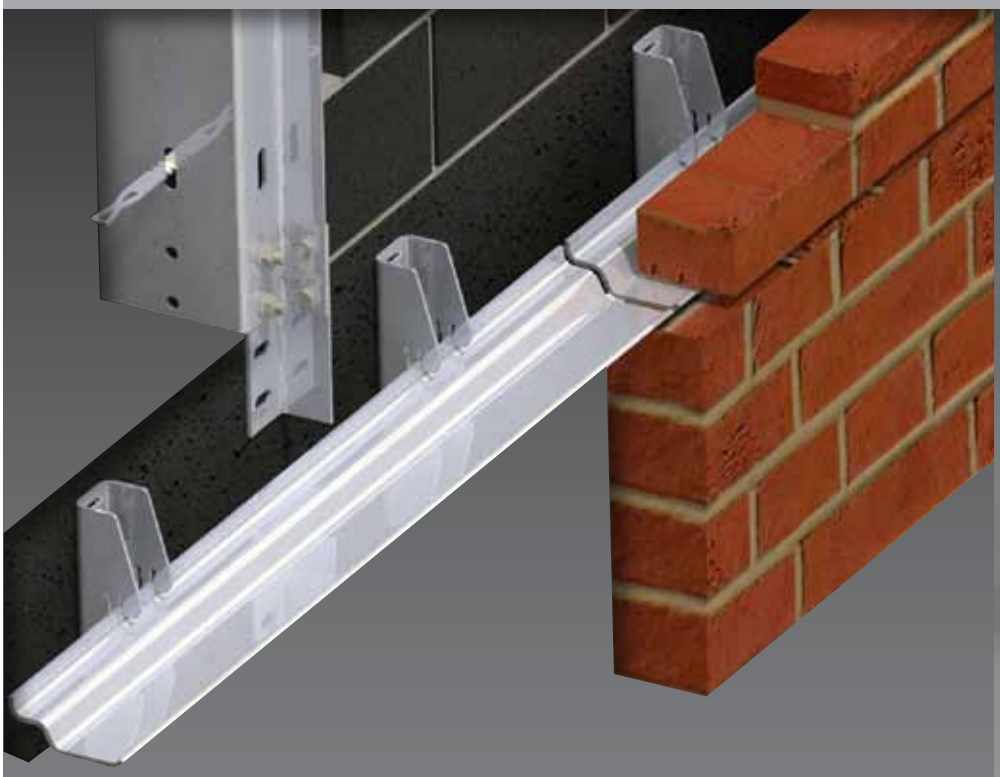


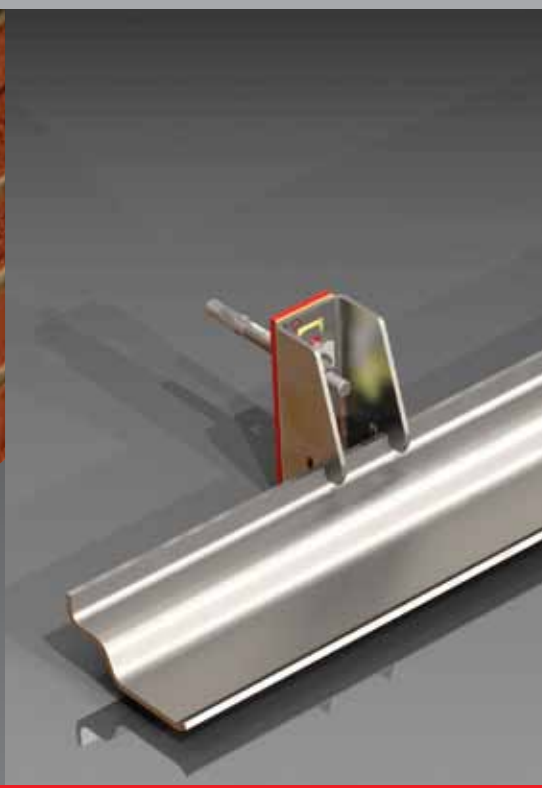
Design Criterion	Qwik-Fix®Angle	L8/RB Lintel
FACTORED LOAD CAPACITY		
≤10.5 kN/m	✔	✔
10.6 - 20 kN/m	✔	–
CAVITY		
50 - 70mm	–	✔
70 - 150mm	✔	✔
150 - 200mm	✔	•
ADJUSTABILITY ON-SITE		
Horizontal	✔	–
Vertical	✔	–
Cross Cavity	•	–
MATERIAL		
Galvanised Steel	•	✔
Stainless Steel	✔	•
FIXING TO STRUCTURE		
Concrete Beam	✔	✔
Steel Beam	✔	✔
Steel Plate	✔	✔
Block	•	•
OUTER LEAF		
100mm Brick	✔	✔
100mm Block & Render	•	•
>100mm	•	•
SPECIAL OPTIONS		
Radius Walls	•	•
Bowed Walls	•	•
Corner Units	•	•
Cavity Closer	•	✔
Integration with bespoke Brick Feature Lintels (BFL)	•	•

✔ Standard • **Option** – Not Available

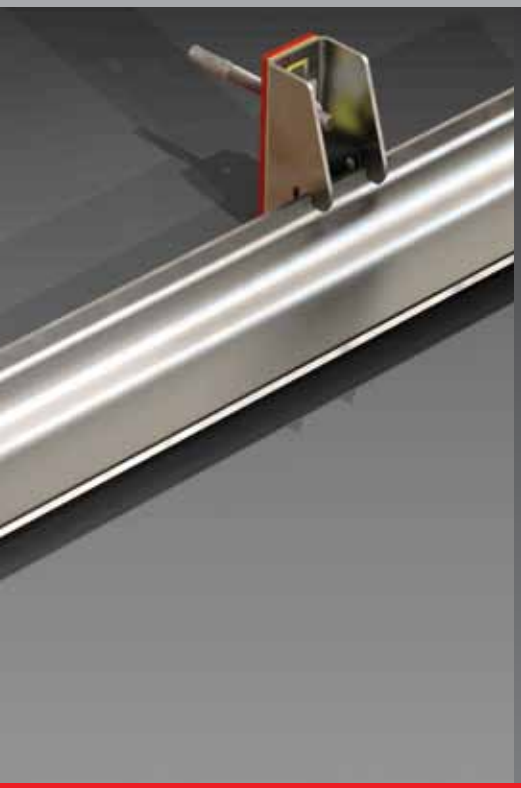
IG Qwik-Fix® Angle

Masonry Support System





A world class masonry support system, designed to save you time and money.



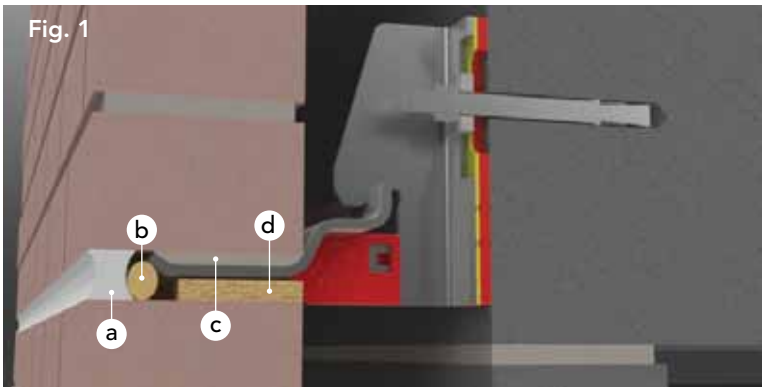
Qwik-Fix® Angle
saves you time and money because:

- It has industry leading adjustability - this mitigates for on-site conditions in the most cost effective way possible.
- It has the strongest angle section on the market - this means that compared to our next best competitor, up to 25% fewer support brackets are required.
- All configurations are available ex-stock - this makes it easier to specify and cheaper to source.

Qwik-Fix® Angle Overview

SIMPLE INSTALLATION - UNRIVALLED ADJUSTABILITY

- Convenient Angle Engagement - Entire system can be safely and accurately installed by one suitably instructed person.
- Vertical (y-axis) Adjustment - The indexed aperture at the back of the bracket allows up to 50mm of secure and accurate adjustment in the vertical plane.
- Horizontal (x-axis) Adjustment - Longitudinal fine adjustment is provided for by integrated seating tolerances.
- Cross Cavity (z-axis) Adjustment - Qwik-Fix® Angle is the first masonry support system to provide up to 15mm of integrated z-axis adjustment across the cavity, without the use of shims. Our standard brackets cover cavity widths upwards of 85mm.



a. Silicon Soft Joint
b. Compressible Backing Rod
c. Mortar
d. Compressible Filler

Fig. 1 Qwik-Fix® Angle installed; fixed to a concrete slab, using a mechanical expansion bolt. Image is for illustration purposes only and does not include detailing for DPC trays or insulation.

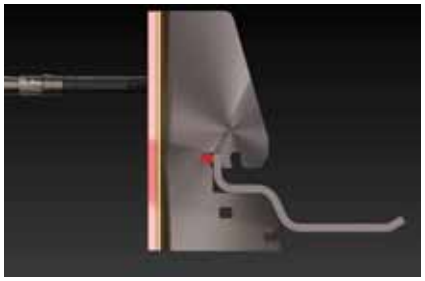


Fig. 3 Angle at inner condition without nylon extender shoe

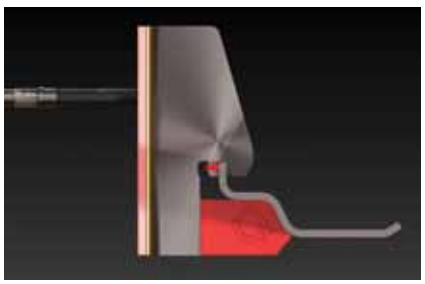


Fig. 4 Angle at outer condition with nylon extender shoe

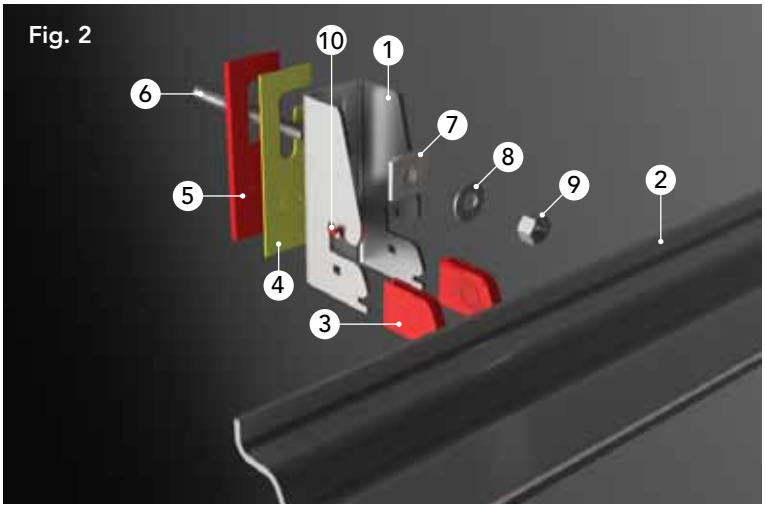


Fig. 2 Qwik-Fix® Angle assembly; exploded view

1. Adjustable Support Bracket
2. Shelf Angle Section
3. Nylon Polymer Extension Shoe*
4. 2mm Thermal Isolation Shim
5. 6mm Nylon Extension Shim*
6. A4 Stainless M12 Fixing Bolt
7. Adjustable Lock Washer
8. M12 Washer
9. M12 Lock Nut
10. Restraint Peg

*Components not universally required

BENEFITS OF IMPROVED ADJUSTABILITY

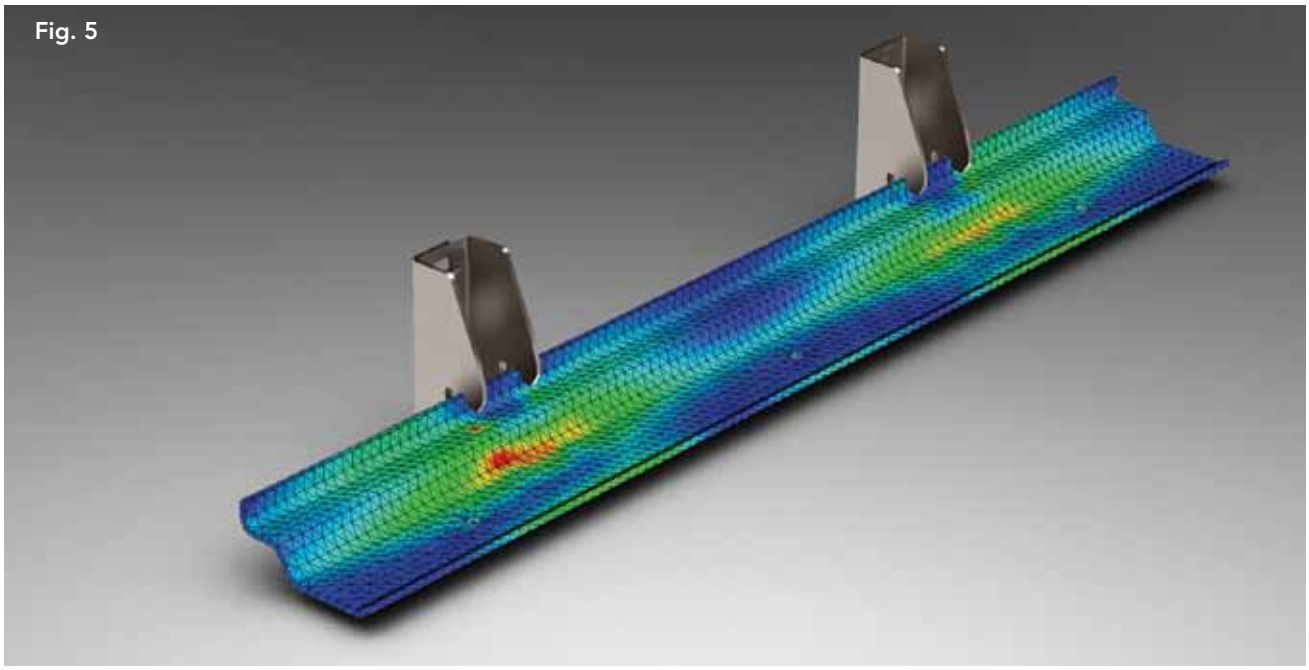


Fig. 5 Finite Element Analysis showing areas of maximum to minimum stress. The blue area at mid span between brackets illustrates minimal stress at the angle's critical leading edge. Areas of maximum stress are illustrated in red - centred in structurally non-critical areas.

- Major reduction in man hours required to install the system - between 17% and 66%, depending on frame of reference.
- Variations in blockwork can be mitigated for quickly on site; you will never have to re-order components.
- System can be installed easily and accurately around reinforcing bars.

ADDED STRENGTH - LESS WORK

Independent comparative tests have shown that Qwik-Fix® Angle shows between 10-50% less deflection at the point of mid-span between support brackets than our competitors' angle sections. This means our support brackets can be installed at wider centres, which significantly reduces installation time.

Qwik-Fix® Angle Specification

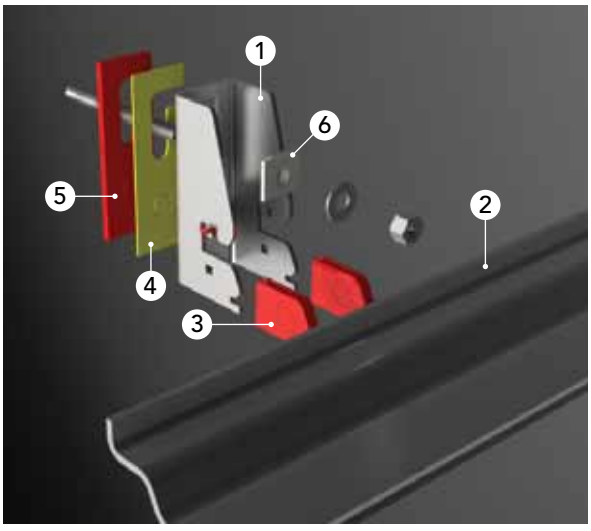
TECHNICAL CONSIDERATIONS

WHEN TO USE MASONRY SUPPORT SYSTEMS

Masonry and brick panels must be restricted in size to avoid facade cracking due to differential expansion and compressive stress fracturing. Differential expansion is caused by thermal fluctuations and moisture absorption.

Qwik-Fix® recommends masonry support angles should be provided at every single or second storey level when a building exceeds 9 metres in height.

For masonry panel design guidance please refer to BS 5628: Part 1: 2005 or Eurocode 6.



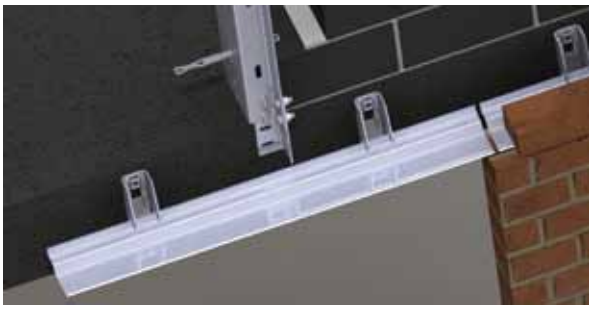
1. Adjustable Support Bracket
2. Shelf Angle Section
3. Nylon Polymer Extension Shoe
4. 2mm Thermal Isolation Shim
5. 6mm Nylon Extension Shim
6. Adjustable Lock Washer

MATERIALS:

Bracket, Lock Washer:
304 austenitic stainless steel (EN 1.4301)

Angle Section:
304 austenitic stainless steel (EN 1.4301)

Extender Shoes, Isolators & Shims:
Nylon 66



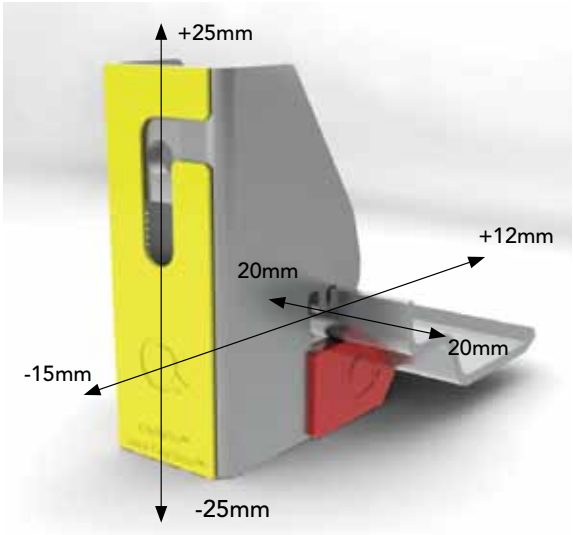
ADJUSTMENT TOLERANCES

Qwik Fix® Angle masonry support system provides significant adjustability in all three planes to ensure that building tolerances can be accommodated and contact with reinforcing bar can be avoided.

The indexed aperture at the back of the bracket allows up to 25mm of accurate adjustment in either direction on the vertical plane, without slippage.

Qwik-Fix® Angle is the first masonry support system to provide integrated adjustment across the cavity in both directions, without the use of shims (patent pending). If shims are required, overall fixing thicknesses should not exceed those specified on page 15. Qwik-Fix® Isolators (provided as standard) and packing shims provide favourable insulation, minimise thermal bridging and help prevent against bi-metallic corrosion.

SCOPE OF ADJUSTMENT

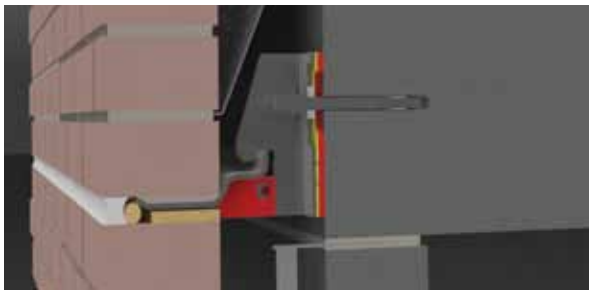


DESIGN CONSIDERATIONS

FIXING AND RESTRAINT CONSIDERATIONS

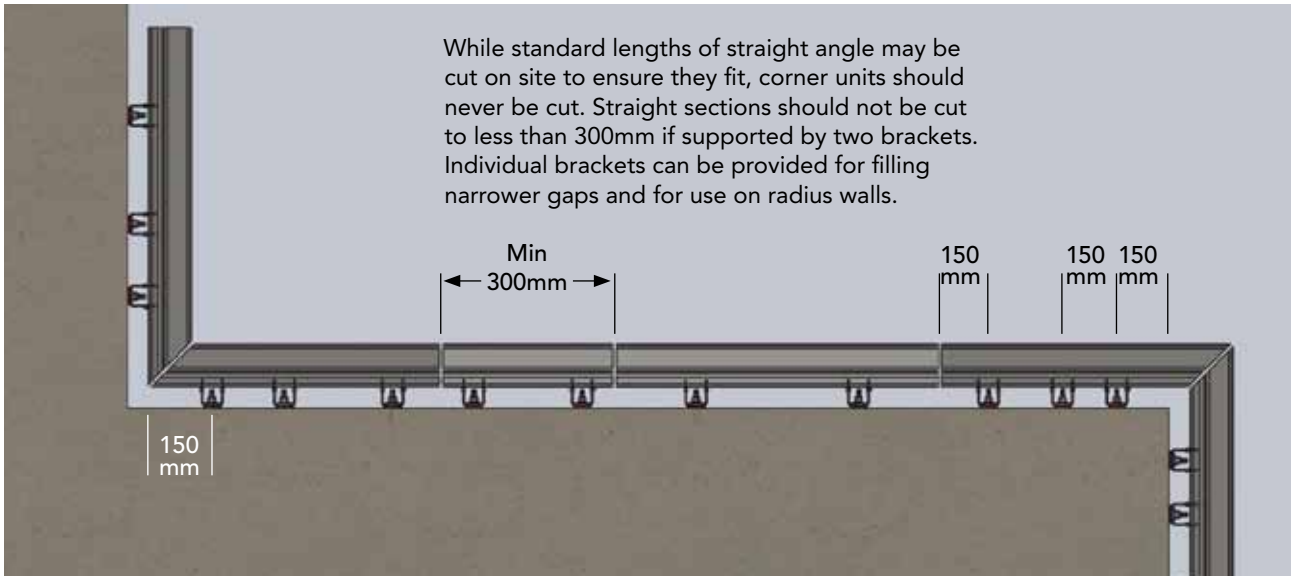
The minimum expansion gap should be at least 12mm where there is a single storey height of brickwork below the support system. The gap should be increased by 1mm for every additional metre in panel height.

Wall ties should support the panel no more than 300mm above and below the shelf angle.



SETTING OUT

System Reference	Factored Load (kN/m)	Nominal Length of Angle (mm)	Number of Brackets per Angle Length	Nominal Bracket Centres (mm)
K02	1 to 2	2000	2	1000
K04	3 to 4	1800	2	900
K06	5 to 6	1500	2	750
K10	7 to 10	1200	2	600
K12	11 to 12	1100	2	550
K14	13 to 14	1000	2	500
K16	15 to 16	900	2	450
K18	17 to 18	1000	3	330
K20	19 to 20	600	2	300



Qwik-Fix® Angle Specification

HOW TO SPECIFY QWIK-FIX ANGLE

Building a system specification for Qwik-Fix® Angle is a simple process. By following the format set out in the example below, you can provide us with all the required information.

FORMATTING EXAMPLE

SPECIFICATION ELEMENTS	SAMPLE VALUE	RESULTANT SPECIFICATION	PAGE REFERENCE
Load	14kN/m	K14	14
Cavity Width	130mm	130	14
Supporting Structure	Concrete	CN	15
Fixing Detail	Chemical Anchor	CA	17
Angle Arrangement	Standard non welded	SA	19
Extras	Plaster Key	PK	20

This specification will read as follows:
Qwik-Fix® Angle
K14-130-CN-CA-SA-PK

CODES - Support Structure

Concrete = CN
Steel = ST
Block = BL

Continue on to start building your system specification.

CAVITY WIDTH

All standard Qwik-Fix® Angle configurations are suitable for cavity widths ranging from 85mm to 200mm. Brackets for narrower cavities can be fabricated on a case by case basis. When designing for cavity widths greater than 150mm in width, we recommend you contact the IG technical department for design assistance on fixing details.

LOADING

Qwik Fix® Angle is supplied in configurations to accommodate factored loads ranging between 1kN/m and 20kN/m.

Qwik-Fix® Angle is suitable for use with most outer leaf materials: brickwork, fairface blockwork, rendered blockwork, exterior insulation panels, cut stone and reconstituted stone.

CALCULATING LOADS

Masonry Load Assumptions for Brick, Block & Render below are per BS 648 (1964). It is recommended to refer to manufacturer's guidelines for exact values.

MATERIAL	DENSITY Kg/m³	UNFACTORED PANEL LOAD kN/m²	FACTORED* PANEL LOAD kN/m²
Blockwork & Medium Density Clay Brickwork (100mm wide)	2150	2.15	3.01
Blockwork & Medium Density Clay Brickwork (215mm wide)	2150	4.62	6.50
Sand & Cement Render (12.7mm thick)	1888	0.24	0.34
High Density Clay Brickwork	2327	2.33	3.30

* Factored Panel Load = (Unfactored Characteristic Load x 1.4 Factor of Safety)

An overall partial safety factor for action of g = 1.4 is used. The partial safety factors for action depend on the type of loading and shall be taken from the national regulations. According to the British National Annex of Eurocode: Basis of Structural Design (BSEN1990), the partial safety factor is gG = 1.35 for permanent actions and gQ = 1.5 for variable actions.

DESIGN LOAD (kN/m) = [Factored Panel Load (kN/m²) x Panel Height (m)]

FACTORED LOAD RANGE (kN/m)	SPECIFY AS FOLLOWS	
1-2	K02 - Cavity Width	mm
3-4	K04 - Cavity Width	mm
5-6	K06- Cavity Width	mm
7-10	K10 - Cavity Width	mm
11-12	K12 - Cavity Width	mm
13-14	K14 - Cavity Width	mm
15-16	K16 - Cavity Width	mm
17-18	K18 - Cavity Width	mm
19-20	K20 - Cavity Width	mm

SUPPORT STRUCTURE

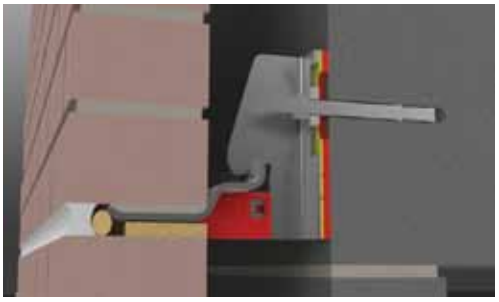
Qwik-Fix® Angle can be fixed to concrete, steel and blockwork. Adequate support at the heel of the bracket is a critical consideration when designing masonry support systems because failure to support the heel correctly could result in unacceptable deflection at the toe of the angle.

Fig. 7

Fig. 8

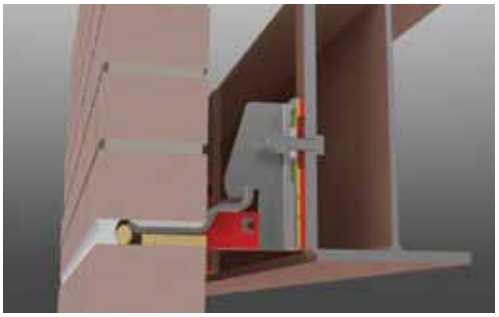
Fixing Back to Concrete: [Specify CN]

Concrete Standards: Working loads are based on a concrete of minimum class C20/25, to BS EN 206-1. **Edge Distances & Spacing:** Please refer to page 15 of this guide for information on fixing points and methods. **Minimum Reinforcement:** To be designed in accordance with BS 8110, or Eurocode 2.



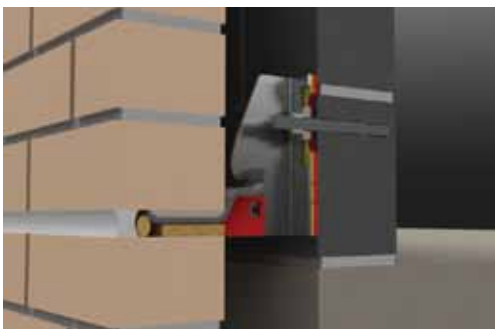
Fixing Back to Steel: [Specify ST]

Qwik-Fix® Angle can be fixed to back to uncased steel. The structural edge member must be designed to minimise deflections and accommodate the torsional forces created by eccentric loading from the brickwork. Bi metallic corrosion and thermal bridging is minimised by using the Qwik-Fix® Isolation Shim, which comes with every system as standard.



Fixing Back to Block: [Specify BL]

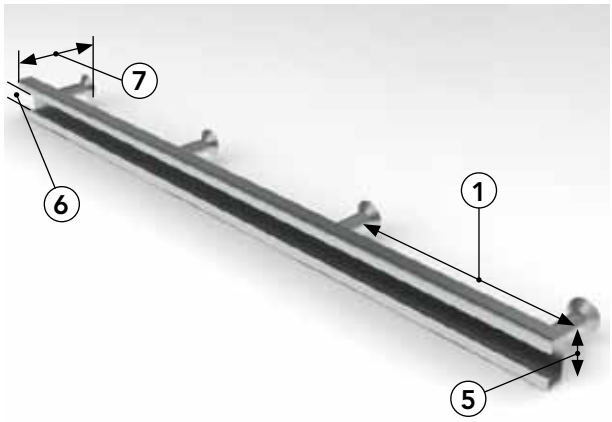
If fixing to blockwork walls is unavoidable, said walls must be designed by an engineer to take the resultant ultimate loads. Due to the variance in block densities, on site testing is required in all cases.

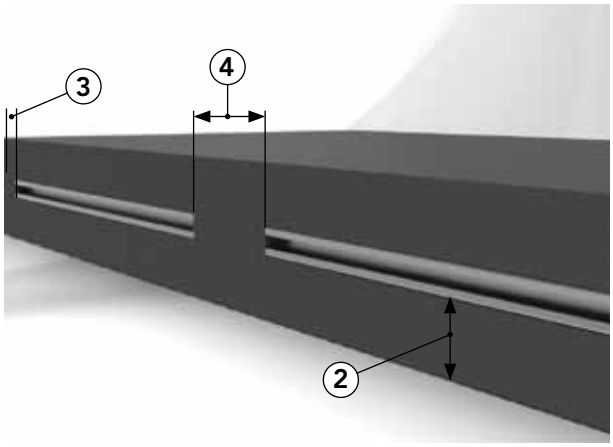


Qwik-Fix®Angle Fixings

FIXINGS FOR CONCRETE

CAST-IN CHANNEL:
[Specify CH]





Fixing to a cast-in stainless steel channel can speed up installation of Qwik-Fix® Angle considerably because it negates the need for on site drilling.

	K 38/17-200 A2 STAINLESS CHANNEL
Design Tensile Load Capacity (kN)	7.0 per anchor stud
Design Shear Load Capacity (kN)	8.0 per anchor stud
(1) Minimum Stud Centres (mm)*	200
(2) Minimum Edge Distance (mm)*	75
(3) Minimum Corner Distance (mm)*	50
(4) Minimum Spacing (mm)*	100
(5) Channel Width (mm)	38
Channel Gauge (mm)	3
(6) Channel Opening (mm)	18
(7) Anchoring Depth from Concrete Face (mm)	50mm
Material	A2 Stainless
Fixing Bolt	M12 T Head

* Load capacities shown are ultimate, based on non-cracked concrete C20/25 without axial spacing and edge influences. Where factors apply please contact the IG technical department for guidance.

CONCRETE POST-FIX – MECHANICAL EXPANSION BOLT:
[Specify EB]

	(EB) FAZ II 12/20 A4 HIGH PERFORMANCE BOLT
Design Tensile Load (kN)	10.67
Design Shear Load (kN)	23.6
Minimum Edge Distance (mm)*	55
Minimum Spacing (mm)*	50
Maximum Fixing Thickness (mm)	20
Material	A4 Stainless
Design Method	ETAG 001 Annex C
European Technical Approval No.	01/0015

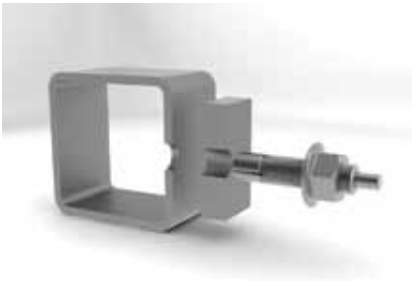
CONCRETE POST-FIX – CHEMICAL ANCHOR:
[Specify CA]

	(CA) FHB II-A S A4 M12 x 75/25 HIGH PERFORMANCE ANCHOR
Resin Capsule	FHB 11-PF 12.75
Design Tensile Load (kN)	15.59
Design Shear Load (kN)	26.96
Minimum Edge Distance (mm)*	40
Minimum Spacing (mm)*	40
Maximum Fixing Thickness (mm)	25
Curing Time @ Temp. (mins) -5°C – 0°C 1°C – 10°C 10°C – 20°C ≥20°C	 8 6 4 2
Design Method	ETAG 001 Annex C
European Technical Approval No.	05/164

* Loads shown are based on C20/25 concrete without axial spacing and edge influences.
Where factors apply please contact the IG technical department for guidance.

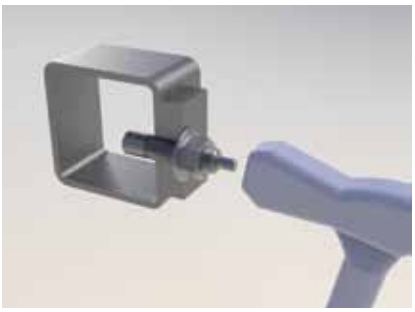
Qwik-Fix®Angle Fixings

FIXINGS FOR STEEL



BLIND FIXING:
[Specify BF]

When fixing to blind box section, Qwik-Fix® recommends the use of the peg bolt, which is at least as strong as a standard bolt and can be installed very efficiently.



PEG BOLT	(BF) M12 A4
Minimum Overall Length (mm)	Fixing Thickness (mm) + 18
Design Tensile Load (kN)	9.8
Factor of Safety – Tensile Load*	5:1
Design Shear Load (kN)	32.6
Factor of Safety – Shear Load*	1.5:1
Drill Hole Diameter (mm)*	12
Minimum Spacing (mm)	35
Minimum Edge Distances (mm)	12

* The Peg Bolt should not be anchored to irregular shaped holes or holes with clearances of greater than +0.1mm.

OPEN FIXING
[Specify OF]

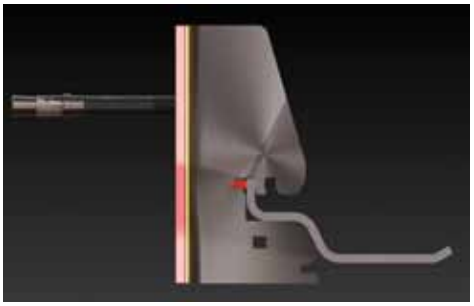
The standard solution when fixing back to uncased steel, the M12 stainless bolt can be used with all Qwik-Fix® Angle configurations.

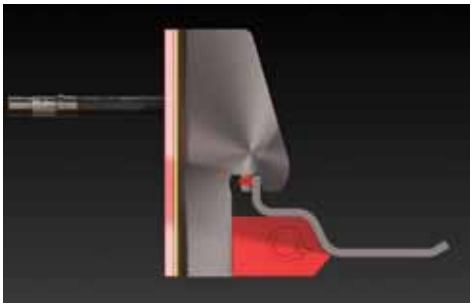
Set Screws	(OF) M12 A4
Design Tensile Load (kN)	25.2
Design Shear Load (kN)	17.4

QWIK-FIX ANGLE ARRANGEMENTS

STANDARD NON WELDED ANGLE:
[Specify SA]

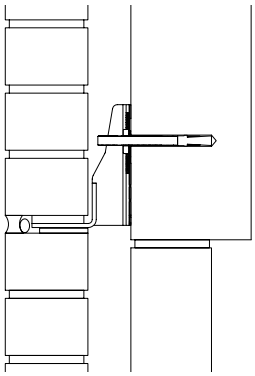
Our signature system, Qwik-Fix® Angle is fully adjustable on three planes and therefore mitigates for any complications which may arise on site. Added strength in the angle section gives engineers peace of mind and allows brackets to be spaced at up to 20% wider centres when compared with rival systems. Patent Pending.

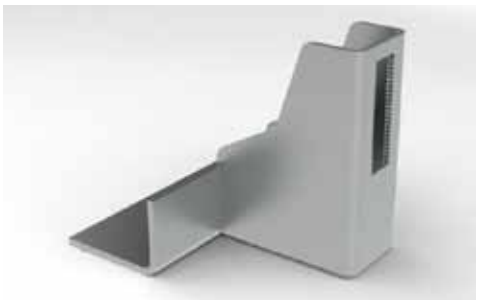




WELDED ANGLE:
[Specify WLD]

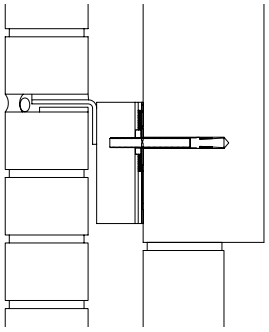
Welded systems are fabricated to engineers' specifications on a case by case basis, to fulfill off-standard load bearing requirements. Design assistance can be provided by the IG technical team, if required. As with non welded systems, Qwik-Fix® isolation shims are provided with welded systems as standard.





INVERTED ANGLE:
[Specify INV]

Inverted systems allow for secure fixing if the support height must be towards the top or above the support beam to which the bracket will be fixed.



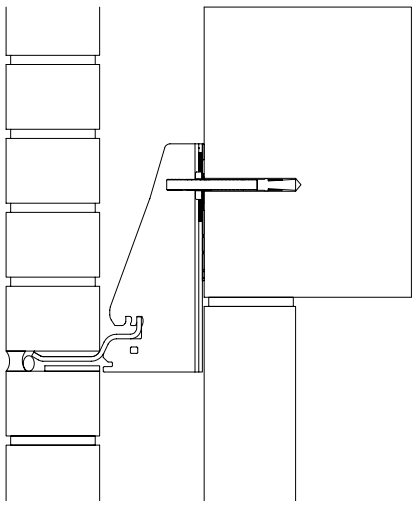
Qwik-Fix®Angle Extras

SPECIALIST & ANCILLARY PRODUCTS

DROP BRACKETS:
[Specify DB]

Drop brackets are taller than other standard brackets and may be required if the support height must be situated substantially lower than the bottom of support beam to which the bracket will be fixed.

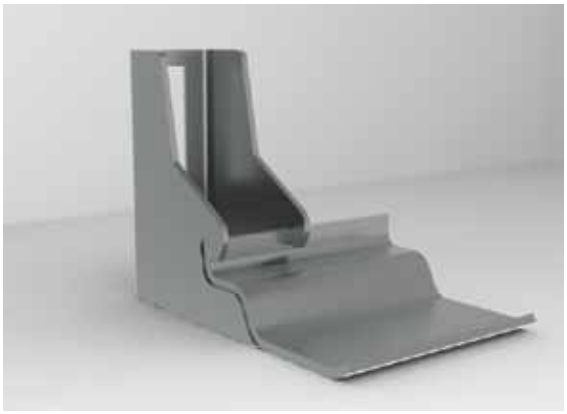
Our standard drop brackets allow for an overhang of up to 100mm below the bottom of the support beam, and the IG technical team can design and certify special assemblies to allow even greater overhangs.

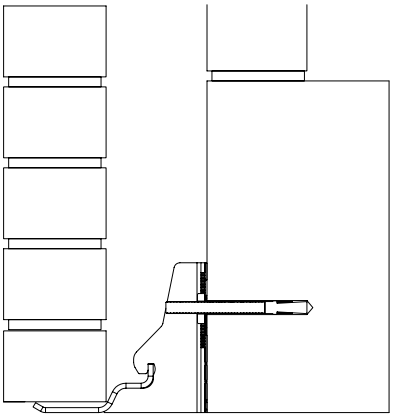


FLUSH ANGLE/BRACKET:
[Specify FB]

A flush angle and bracket arrangement will be specified if the masonry support system is required to provide support at head level, effectively acting as a lintel. This is often the case where wide-span windows and corner openings form part of the building's design.

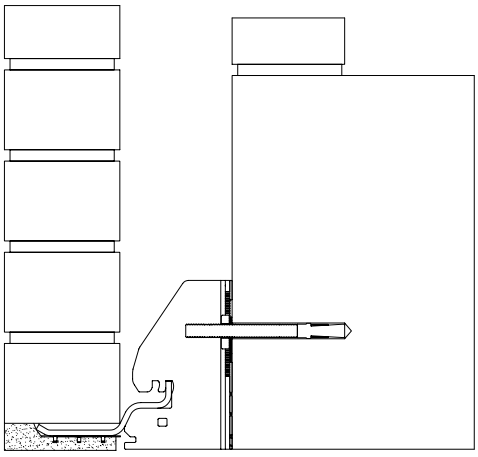
Flush brackets are often used together with a plaster key or cavity closer plate, and the IG technical team will gladly provide design assistance, if required.





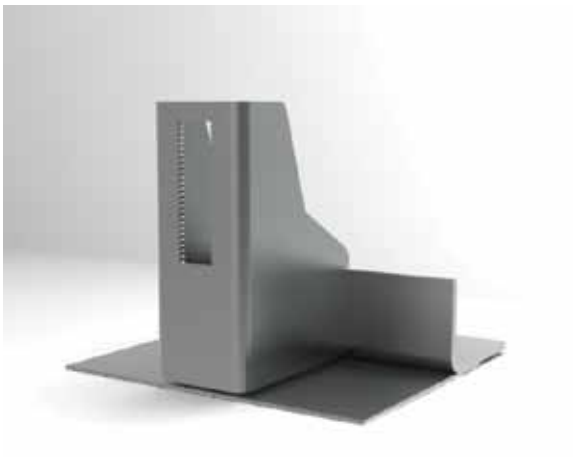
PLASTER KEY:
[Specify PK]

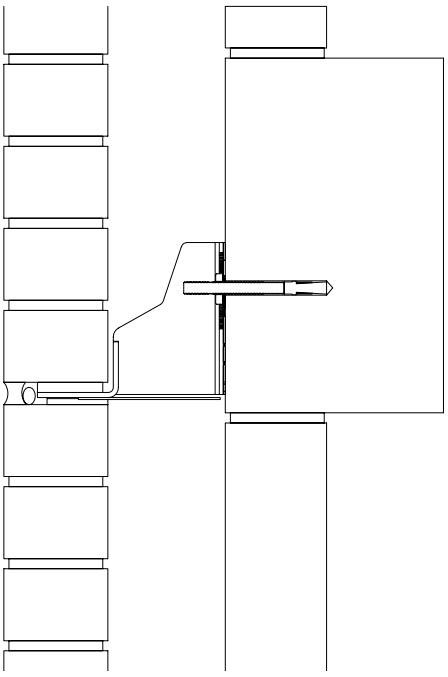
If you do not wish to leave stainless steel exposed in an opening, a profiled stainless steel strip is welded to the underside of the support angle so as to provide a key for retaining plaster or render. The plaster key is a standard item which requires no specific design and it can be used with any bracket type or angle arrangement.



CAVITY CLOSER:
[Specify CC]

If you prefer to close the cavity, stainless steel plates can be welded to the underside of the support angle and carried through to the back of the bracket. The main benefits of this include restricting fire, air flow and movement of vermin in the cavity. Cavity closers are only available with flush bracket-angle arrangements.





Qwik-Fix®Angle Extras

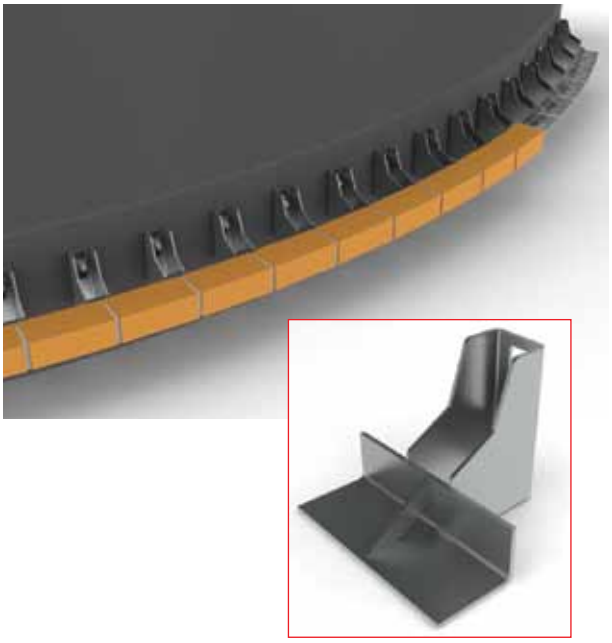
INDIVIDUAL BRACKETS:

[Specify IB]

Individual brackets are designed to conform to BS EN 845-1 and provide masonry support above expansion gaps on radius walls and may be used as infill pieces on straight runs in certain circumstances. Individual brackets should be specified separately, citing loading specification, cavity width, supporting structure, desired fixing method and outside wall radius if applicable.

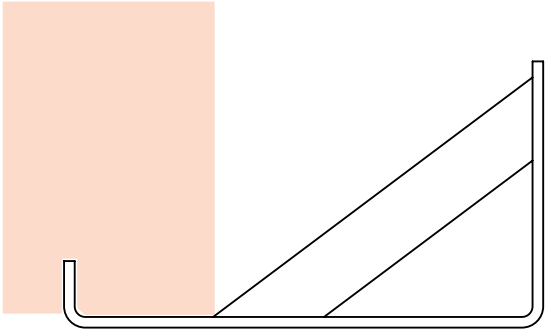
Example: You require Individual Brackets to carry a 14kN/m factored load over a 130mm cavity. You want to fix to a concrete slab using a high performance expansion bolt. The outside radius of your veneer wall is 3350mm. You require 6.5 linear metres of this specification:

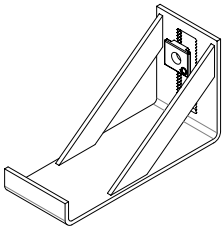
Specify: Qwik-Fix® Angle
IB-K14-130-CN-EB-R3350 x 6.5 linear metres

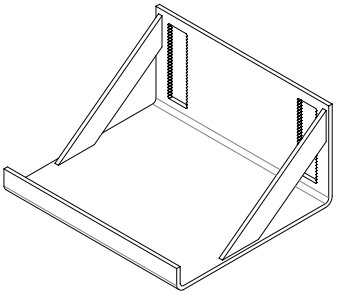


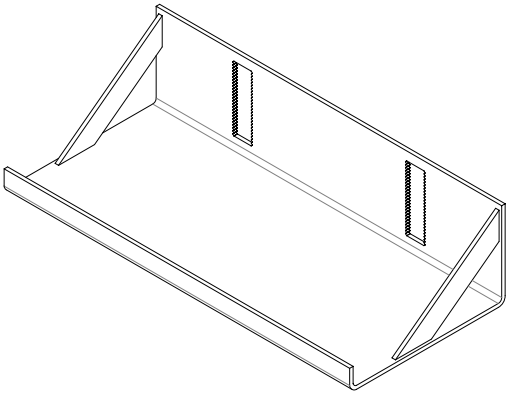
LOAD BEARING STONE FACADE BRACKETS:

IG offers custom design and manufacturing on load bearing brackets which suit natural stone panel facades. Each bracket features the same vertical adjustability and thermal isolators as our Qwik-Fix® Angle masonry support system. Please contact the IG design team for assistance.





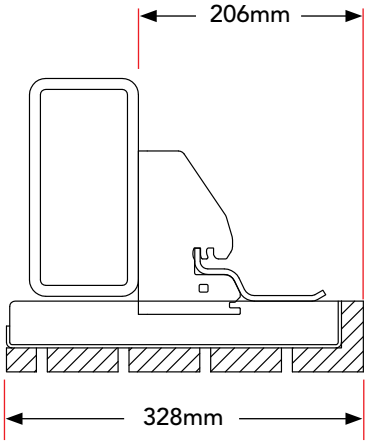


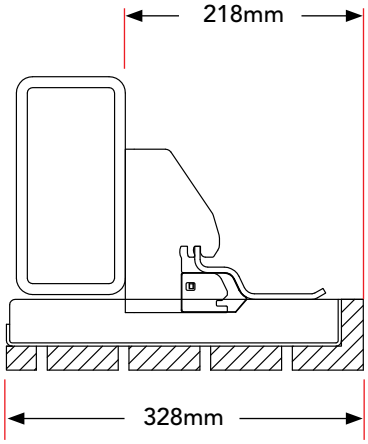


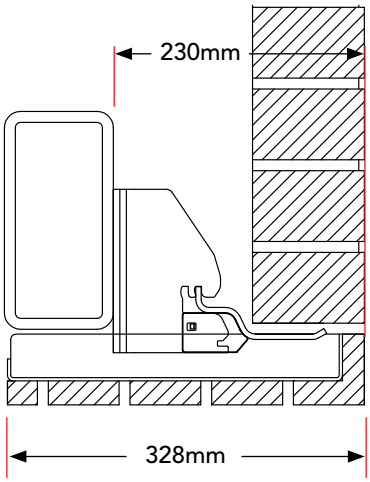
Bespoke Solutions

BESPOKE MASONRY SUPPORT SOLUTIONS

TYPICAL SOFFIT AND MASONRY SUPPORT DETAILS



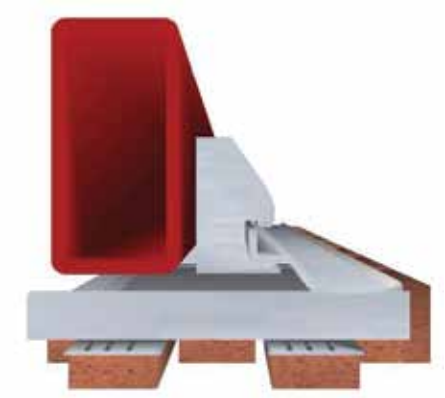




IG specialises in designing and manufacturing bespoke solutions, and integrating them with masonry support systems.

These illustrations show a suspended feature brick soffit assembly.

Bespoke, prefabricated Brickwork Feature Lintels and soldier course assemblies may also be suspended from IG's Qwik-Fix® Masonry Support System.



Brick soffit assembly suspended from IG's Qwik-Fix® Masonry Support System.

Single Leaf L8/RB Lintel & Masonry Support

For use with integral concrete ring beams. The L8 RB type lintel must be bolted to the concrete ring beam at 400mm c/c using M16 anchor bolts.

The L8 RB type range can be supplied to facilitate various cavity widths: e.g. specify L8 RB 50, L8 RB 75, L8 RB 100.

Design Criterion	L8/RB
FACTORED LOAD CAPACITY	
≤10.5 kN/m	✔
10.6 - 20 kN/m	–
CAVITY	
50 - 70mm	✔
70 - 150mm	✔
150 - 200mm	•
ADJUSTABILITY ON-SITE	
Horizontal	–
Vertical	–
Cross Cavity	–
MATERIAL	
Galvanised Steel	✔
Stainless Steel	•
FIXING TO STRUCTURE	
Concrete Beam	✔
Steel Beam	✔
Steel Plate	✔
Block	•
OUTER LEAF	
100mm Brick	✔
100mm Block & Render	•
>100mm	•
SPECIAL OPTIONS	
Radius Walls	•
Bowed Walls	•
Corner Units	•
Cavity Closer	✔
Integration with bespoke Brick Feature Lintels (BFL)	•

✔ Standard • Option – Not Available

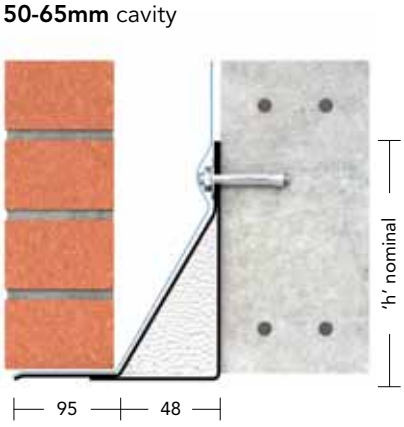
L8/RB

For use with integral concrete ring beams. The L8 RB type lintel must be bolted to the concrete ring beam at 400mm c/c using M16 anchor bolts. The L8 RB type range can be supplied to facilitate various cavity widths: e.g. specify L8 RB 50, L8 RB 75, L8 RB 100.

L8/RB 50

Manufactured length 150mm increments	600-1500	1650-2400	2550-4800
Height 'h'	200	200	200
Thickness	2.5	2.9	3.2
Total UDL kN	7.5	7.5	7.5

50-65mm cavity

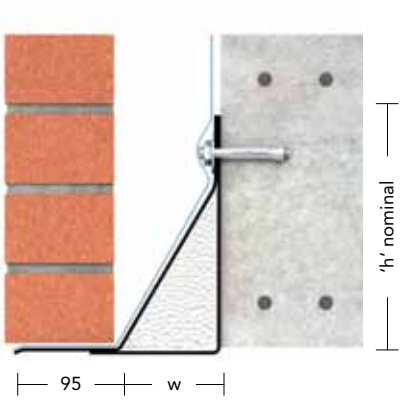


L8/RB W (Specify 75mm or 100mm cavity)

Manufactured length 150mm increments	600-1500	1650-2400	2550-4800
Height 'h'	200	200	200
Thickness	2.5	2.9	3.2
Total UDL kN	7.5	7.5	7.5

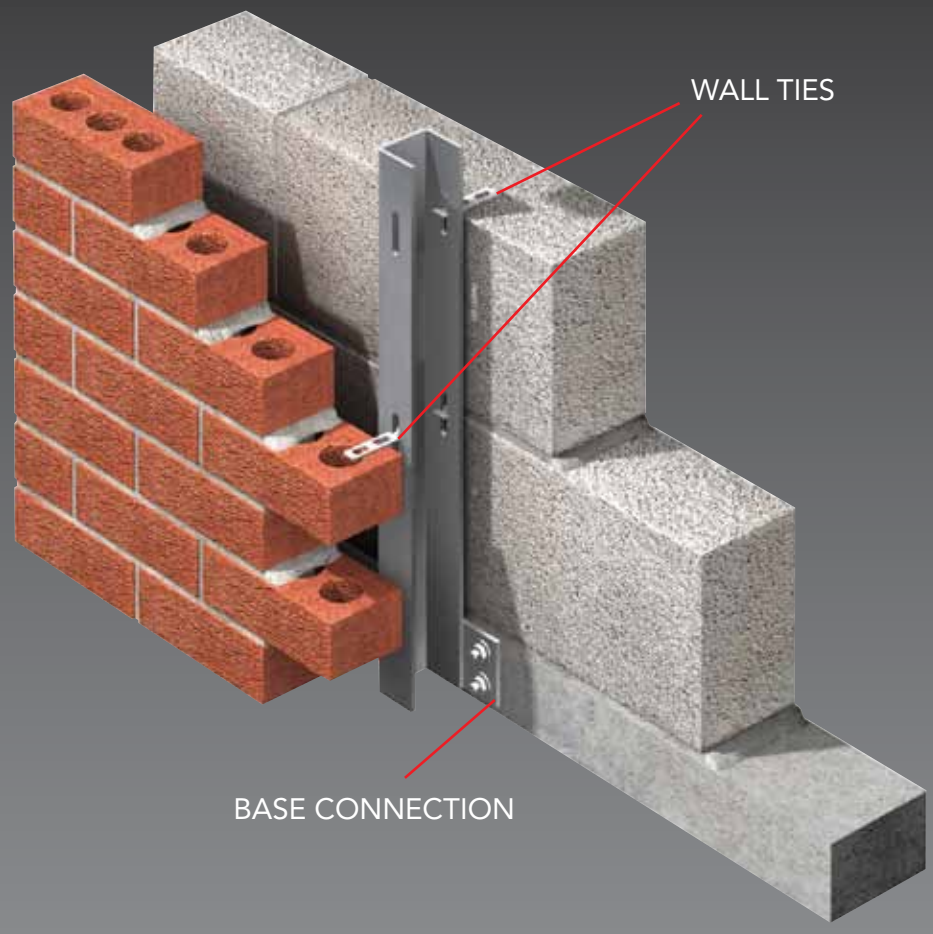
W = cavity width of 75mm or 100mm
Order L8/RB W and specify cavity width

Specified cavity width



IG Windposts

Lateral support systems for masonry.



IG Windposts span vertically between floors to provide additional lateral support for large panels of brickwork or large panels with openings.

IG U type windpost shown is fixed at the base to concrete and at the top to the underside of a steel beam.

IG continually set the standard in windpost design, with a nationwide team of experienced engineers at your disposal, we continue to set ourselves apart from the rest.

WINDPOSTS

IG manufacture three types of windpost.

U Windpost

The U windpost is a channel section designed for standard loading conditions and is installed within the cavity.

DU Windpost

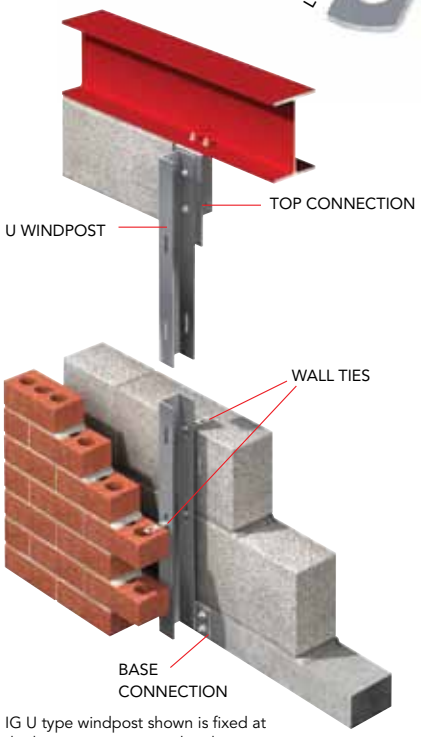
The DU windpost is a "back to back" channel section designed for heavier loading conditions and is installed within the cavity.

LP Windpost

The LP Windpost is an "L" shaped section designed to suit a range of loading conditions and is built into the inner skin of the cavity wall.

Material Specification

IG Windposts are manufactured from grade 304 stainless steel. The IG Technical Team will provide full product specification and schedules.



IG U type windpost shown is fixed at the base to concrete and at the top to the underside of a steel beam.

Windpost Connections & Wall Ties

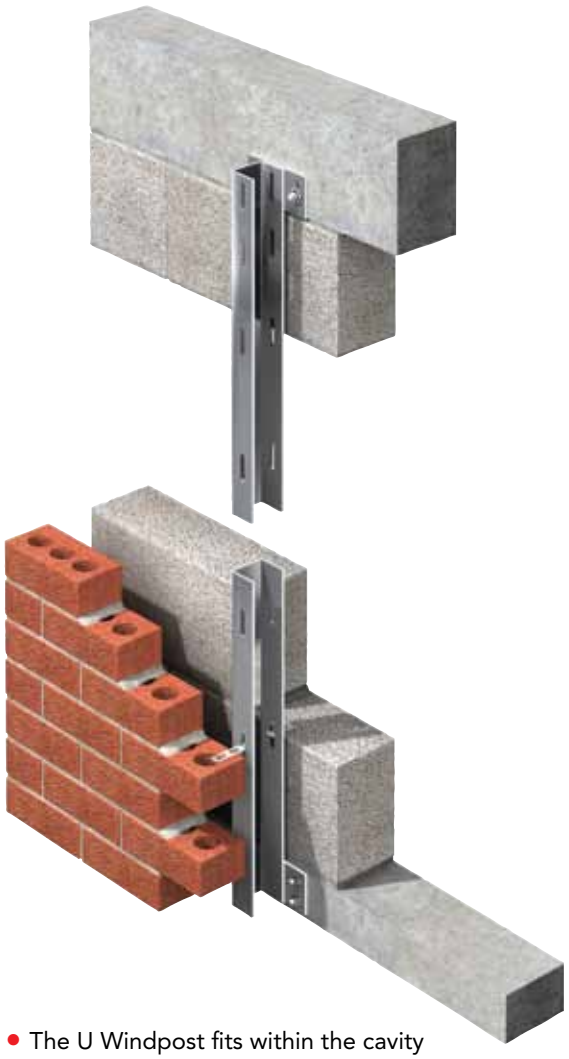
All IG Windposts are supplied with specifically designed base and top connections. They are also supplied with a suitable number of wall-ties which will vary in relation to the post type used and the cavity width. There are five types of wall ties available.

U Tie	For use with U & DU Windposts.
L50	Tie – For use with LP Windposts (50mm cavity).
L75 Tie	For use with LP Windposts (75mm cavity).
L100 Tie	For use with LP Windposts (100mm cavity).
L Shear Tie	For use with LP Windposts.

Note: L Shear Tie can be supplied with a de-bonding sleeve if the windpost is positioned at a vertical movement joint.

IG WINDPOST RANGE

U WINDPOST

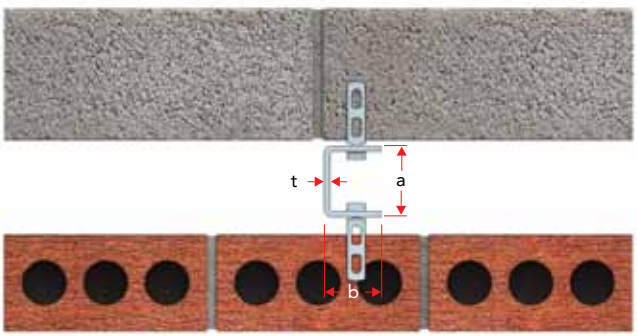


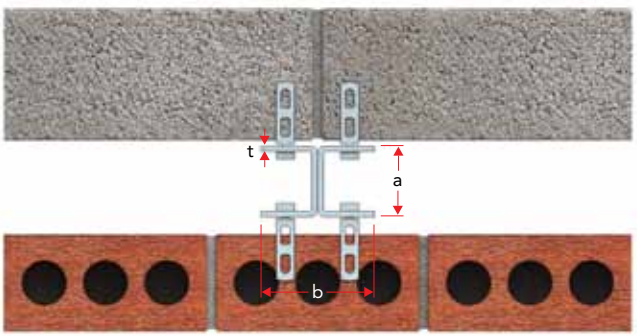
- The U Windpost fits within the cavity and normally spans between floor structures.
- The inner leaf of the cavity wall is totally undisturbed.
- Available in shorter lengths for parapets or below windows (see Parapet & Spandrel Windposts section).
- See loading tables on page 34.

DU WINDPOST

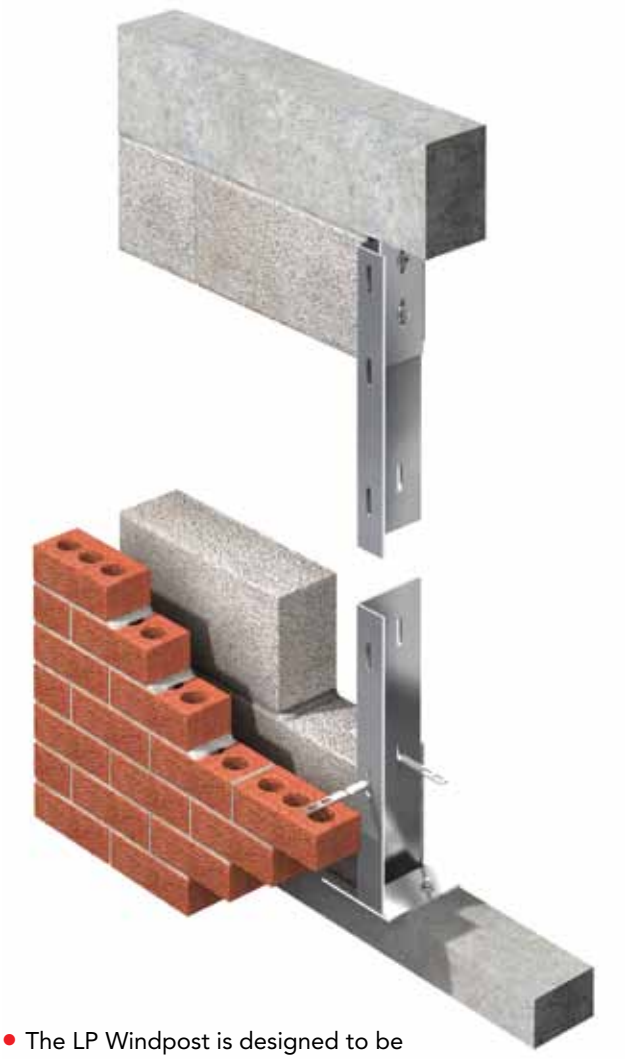
- The DU Windpost fits within the cavity and normally spans between floor structures.
- The inner leaf of the cavity wall is totally undisturbed.
- The DU Windpost is a heavier duty variant of the U Windpost.
- Available in shorter lengths for parapets or below windows (see Parapet & Spandrel Windposts section).
- See loading tables on page 34.

U WINDPOST AND TIES



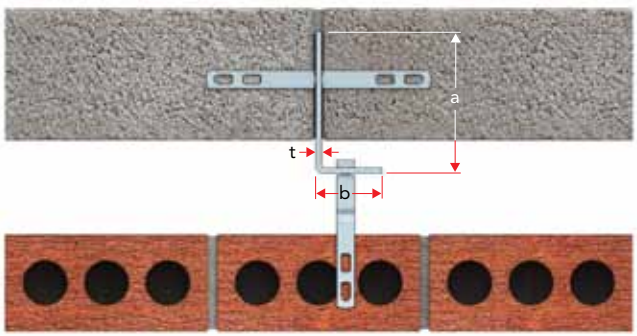


LP WINDPOST



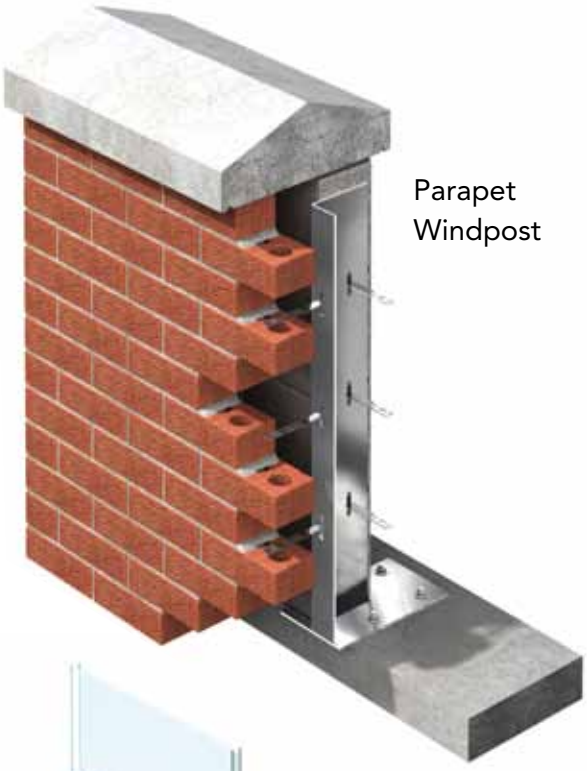
- The LP Windpost is designed to be built into the inner skin of the cavity wall and will normally span between floor structures.
- The LP Windpost is designed to suit a range of of loading conditions
- Available in shorter lengths for parapets or below windows (see Parapet & Spandrel Windposts section).
- See loading tables on page 34.

LP WINDPOST AND TIES



PARAPET & SPANDREL WINDPOST

All three windposts designs are available in shorter length to provide the same level of stability to parapets or below windows, commonly termed parapets or spandrel windposts respectively. These posts are designed as cantilevers and are rarely more than 1.6 metres in height. The base connection is engineered to resist bending moment.



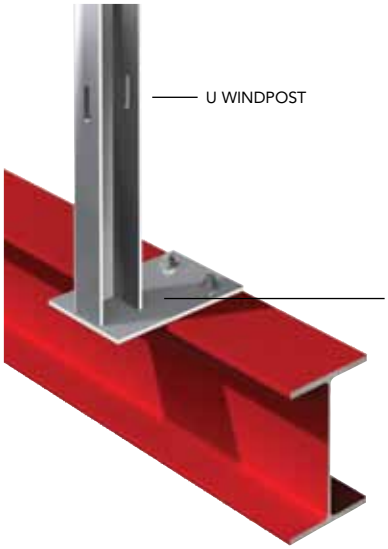
Parapet Windpost

Spandrel Windpost

IG WINDPOST CONNECTIONS

All IG windposts are designed with top and base plate connections for fixing to the super structure of the building. It is important that windposts are fully fixed before commencement of the brickwork.

TYPICAL BASE CONNECTIONS



BC-UST

U WINDPOST BASE CONNECTION TO A STEEL BEAM

BC-LST

LP WINDPOST BASE CONNECTION TO A STEEL BEAM

BC-UCN

U WINDPOST BASE CONNECTION TO A CONCRETE FLOOR SLAB

BC-LCN

LP WINDPOST BASE CONNECTION TO A CONCRETE FLOOR SLAB

BC-DUI

DU WINDPOST BASE CONNECTION TO AN INTERMEDIATE TIMBER FLOOR

BC-LIW

LP WINDPOST BASE CONNECTION TO AN INTERMEDIATE TIMBER FLOOR

These connector examples are just a few of the possible configurations, please contact our technical department for assistance with your exact requirements.

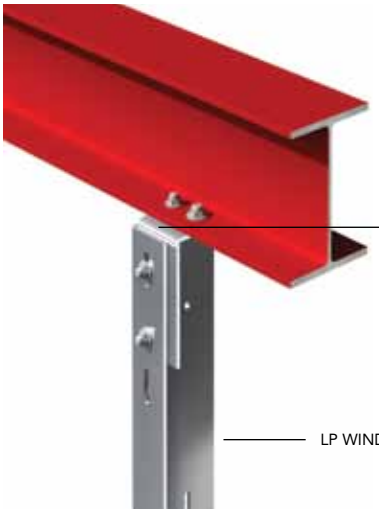
Pages 32 and 33 illustrate some typical examples of top and base connections for windposts. Connections can be designed and manufactured to suit other applications, please contact our technical team to detail your exact requirements.

TYPICAL TOP CONNECTIONS

Please note: The top connection allows for shrinkage or vertical movement of the frame.

TC-UST

U WINDPOST
TOP CONNECTION
TO A STEEL BEAM

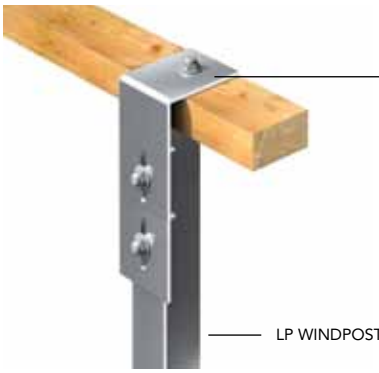


TC-LST

LP WINDPOST
TOP CONNECTION
TO A STEEL BEAM

TC-UWP

U WINDPOST
TOP CONNECTION
TO A TIMBER
WALL PLATE



TC-LWP

LP WINDPOST
TOP CONNECTION
TO A TIMBER
WALL PLATE

TC-DUS

DU WINDPOST
TOP CONNECTION
TO A CONCRETE
FLOOR SLAB

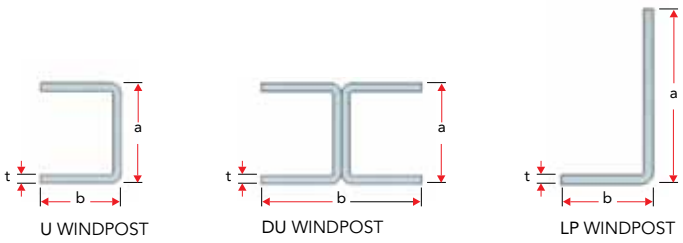
TC-UIW

U WINDPOST
TOP CONNECTION
TO AN INTERMEDIATE
TIMBER FLOOR

These connector examples are just a few of the possible configurations, please contact our technical department for assistance with your exact requirements.

WINDPOST LOADING FIGURES

Windposts can be made to order at various sizes on a project basis. Posts taken as a simple support/cantilever beam. SWL's quoted are assuming adequate base and top fixing to concrete.



U WINDPOST DU WINDPOST LP WINDPOST

Dimensions and Performance of U, DU and LP Windposts

	Code	Size (mm) a x b x t	Maximum unfactored wind load for height of windpost UDL (kN)							
			2500mm	3000mm	3500mm	4000mm	4500mm	5000mm	5500mm	6000mm
U WINDPOSTS 	U1	60 x 60 x 4	3.0	2.1	-	-	-	-	-	-
	U2	60 x 60 x 5	3.5	2.5	1.8	-	-	-	-	-
	U3	60 x 60 x 6	5.5	3.8	2.8	2.2	-	-	-	-
	U4	75 x 60 x 4	4.9	3.4	2.5	1.9	-	-	-	-
	U5	75 x 60 x 5	5.9	4.1	3.0	2.3	1.8	-	-	-
	U6	75 x 60 x 6	6.9	4.8	3.5	2.7	2.1	-	-	-
	U7	115 x 60 x 4	13.2	9.2	6.7	5.2	4.1		-	-
	U8	115 x 60 x 5	16.1	11.2	8.2	6.3	5.0	4.0	3.3	-
	U9	115 x 60 x 6	18.8	13.0	9.6	7.3	5.8	4.7	3.9	3.3
LP WINDPOSTS 	LP1	125 x 70 x 4	9.0	6.2	4.6	3.5	-	-	-	-
	LP2	125 x 70 x 5	11.0	7.7	5.7	4.3	3.4	-	-	-
	LP3	125 x 70 x 6	13.1	9.1	6.7	5.1	4.1	3.3	-	-
	LP4	150 x 70 x 4	12.5	10.2	7.5	5.7	4.5	3.7	3.0	-
	LP5	150 x 70 x 5	15.5	12.6	9.3	7.1	5.6	4.5	3.8	3.2
	LP6	150 x 70 x 6	18.5	15.0	11.0	8.4	6.7	5.4	4.5	3.7
	LP7	170 x 70 x 4	15.8	13.1	10.5	8.1	6.4	5.2	4.3	3.6
	LP8	170 x 70 x 5	19.0	16.3	13.0	10.0	7.9	6.4	5.3	4.4
	LP8	170 x 70 x 6	19.0	19.0	15.5	11.8	9.4	7.6	6.3	5.3
	LP10	200 x 70 x 4	19.0	17.8	16.3	12.5	9.9	8.0	6.6	5.6
	LP11	200 x 70 x 5	19.0	19.0	18.9	15.5	12.2	9.9	8.2	6.9
	LP12	200 x 70 x 6	19.0	19.0	19.0	18.4	14.5	11.8	9.7	8.2
DU WINDPOSTS 	DU3	60 x 60 x 6 (2)	11.0	7.7	5.6	4.3	3.4	2.8	-	-
	DU6	70 x 60 x 6 (2)	13.7	9.5	7.0	5.4	4.2	3.4	2.8	-
	DU9	115 x 60 x 6 (2)	27.0	26.1	19.2	14.7	11.6	9.4	7.8	6.5

Spandrel & Parapet Windpost Loading Tables

	Code	Size (mm) a x b x t	Maximum unfactored wind load for height of windpost UDL (kN)						
			800mm	1000mm	1200mm	1400mm	1600mm	1800mm	2000mm
U SPANDREL & PARAPET WINDPOSTS 	U1	60 x 60 x 4	6.0	3.9	2.7	2.0	1.5	-	-
	U2	60 x 60 x 5	7.2	4.6	3.2	2.4	1.8	-	-
	U3	60 x 60 x 6	8.8	7.0	5.0	3.7	2.8	-	-
	U4	75 x 60 x 4	8.5	6.4	4.5	3.3	2.5	-	-
	U5	75 x 60 x 5	9.3	7.5	5.4	3.9	3.0	-	-
	U6	75 x 60 x 6	9.3	7.5	6.2	4.6	3.5	-	-
	U7	115 x 60 x 4	9.3	7.5	6.2	5.3	4.6	-	-
	U8	115 x 60 x 5	9.3	7.5	6.2	5.3	4.6	-	-
	U9	115 x 60 x 6	9.3	7.5	6.2	5.3	4.6	-	-
LP SPANDREL & PARAPET WINDPOSTS 	LP1	125 x 70 x 4	7.0	5.6	4.6	4.0	3.5	3.1	2.8
	LP2	125 x 70 x 5	8.0	6.9	5.8	4.9	4.3	3.8	3.5
	LP3	125 x 70 x 6	8.0	8.0	6.8	5.9	5.1	4.6	4.1
	LP4	150 x 70 x 4	8.0	7.8	6.5	5.6	4.9	4.3	3.9
	LP5	150 x 70 x 5	8.0	8.0	8.0	8.0	6.1	5.4	4.9
	LP6	150 x 70 x 6	8.0	8.0	8.0	8.0	7.2	6.4	5.8
	LP7	170 x 70 x 4	8.0	8.0	8.0	7.0	6.2	5.5	4.9
	LP8	170 x 70 x 5	8.0	8.0	8.0	8.0	7.7	6.8	6.1
	LP8	170 x 70 x 6	8.0	8.0	8.0	8.0	8.0	8.0	7.3
	LP10	200 x 70 x 4	8.0	8.0	8.0	8.0	8.0	7.4	6.7
	LP11	200 x 70 x 5	8.0	8.0	8.0	8.0	8.0	8.0	8.0
	LP12	200 x 70 x 6	8.0	8.0	8.0	8.0	8.0	8.0	8.0

Design Data Sheet

To enable us to provide you with an accurate and cost effective solution, please complete all sections.
submit to IG Technical Department on **fax 01633 486495** or email **drawings@iglintels.com**

Name: _____

Company: _____

Tel: _____ Mobile: _____

Email: _____

Job Ref: _____

1 Cavity Wall Construction — Outer Leaf mm | Cavity Width mm | Inner Leaf mm

2 Windpost Type

☐ U WINDPOST 

☐ DU WINDPOST 

☐ LP WINDPOST 

3 Windpost Dimensions — Length (a): mm | Breadth (b): mm | Thickness (t): mm

4 Quantity Required — Windposts

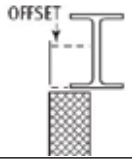
5 Top Connection — Tick type required

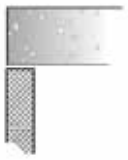
☐ Steel Beam | ☐ Concrete | ☐ Intermediate Timber Floor | ☐ Timber Wall Plate

Off-set distance mm

Beam Size eg: 203 x 133 x 30 UB

x x



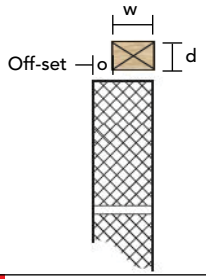


Dimensions of wall plate

w = mm

d = mm

o = mm



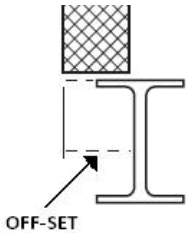
6 Base Connection — Tick type required

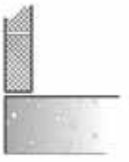
☐ Steel Beam | ☐ Concrete | ☐ Intermediate Timber Floor

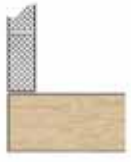
Off-set distance mm

Beam Size eg: 203 x 133 x 30 UB

x x



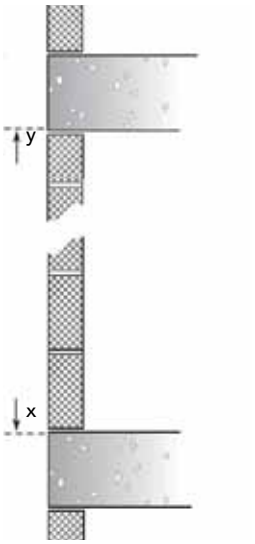




7 Structural Opening

Distance between structural elements

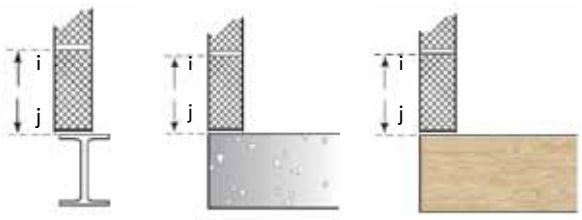
x ⟷ y = mm



8 Distance to first tie slot

Distance from base to first bed joint of inner leaf

i ⟷ j = mm



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Please forward any relevant architects or structural engineers drawings to aid us in the preparation of your quotation.

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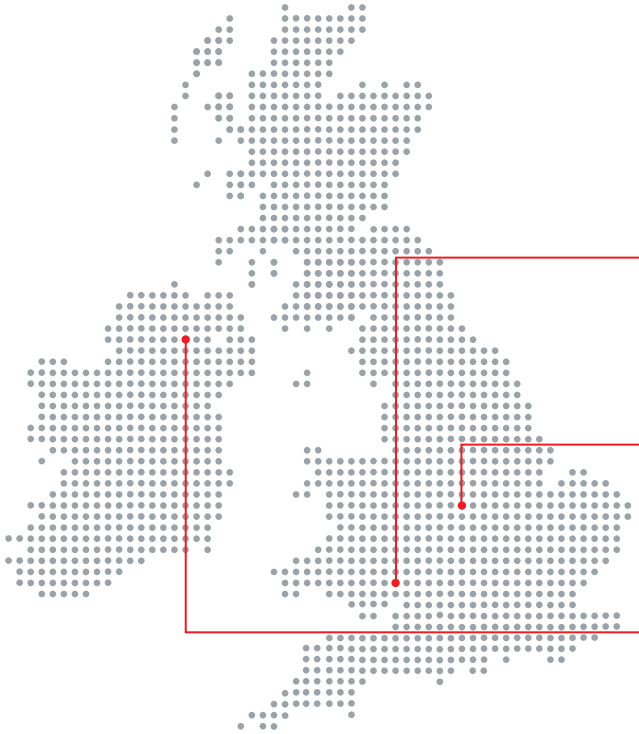

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