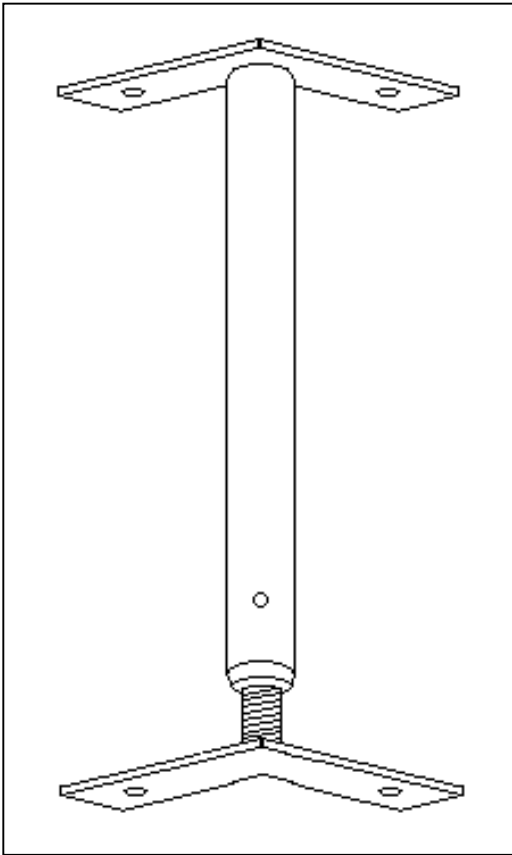


The  
**NICHOLLS AND COOKE**

ADJUSTABLE STRUCTURAL BAY POLE

Patent No. GB2370829



**Pole Sizes**

Manufactured in three outside wall diameters:

- 38mm
- 42mm (our standard pole)
- 48mm

(with 3mm [standard] wall thickness)

Other sizes available to order.

**Material**

Manufactured in galvanised steel BS EN ISO 1461, giving 3-4 times the strength of the equivalent in aluminium.

**Head and Feet Plates**

- Feet are 5mm steel plate with minimum load bearing area of **8500** sq. mm per plate.
- Available in all angles 90 to 180 including square plates, offset door base plates and cavity wall spreader plates.
- Feet are finished in zinc compound or electroplated.

**Profile Suitability**

These poles suit all the major profiles in the UK and Europe.

**Testing and Certification**

All poles are test certificated for Council and Housing Association requirements.  
(Test certificates delivered with poles)

**PRICES**

(Please phone for information)

## Calculations

Calculating imposed weights:

- Measure the areas of building to be supported (DEAD LOAD) in square meters e.g. area of roof, walls, floor etc.
- Check joist line, some end in the bay, which will potentially mean extra weight especially if supporting imposed loads.
- Multiply these areas by the weight of the materials and add together.

### Typical weights of materials

Floors - 220 kg per sq.m  
 Roof loading - 250kg per sq.m  
 Rendering or tile hung stud work - 100kg per sq.m  
 Single Wall Brickwork - 225kg per sq.m  
 Double Wall Brickwork - 450kg per sq.m

Add extra for upstairs window frames and glass, snow, other imposed weights and wind, all of which vary from site to site. Do not underestimate values.

- Divide the sum (Max possible imposed weight) by the number of poles requires on the bottom bay, thus giving you the load on each bay pole.

The next step is to choose the right pole for the load. All poles have different ratings depending on pole material, length, diameter and wall thickness.

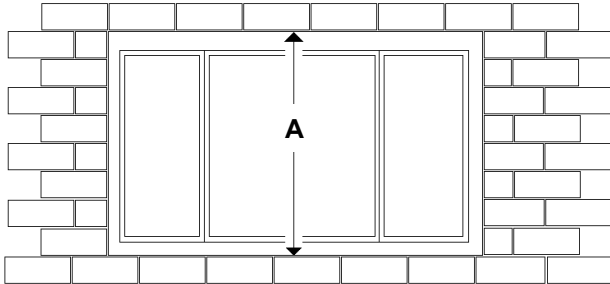
### All of our poles are load certificated.

#### Maximum Loading for Bay Poles – Hydraulic Test Results (Nicholls & Cooke)

Height of Pole (mm)	Max. Load 51 x 2mm Aluminium		Max. Load 38mm Steel Rehau Duraflex Kommerling Plusplan		Max. Load 42 mm Steel Eurocell Status 6318 Profile 22 Deceuninck		Max. Load 48 mm Steel Status 70 Deceuninck Shield	
	Kg	Kn	Kg	Kn	Kg	Kn	Kg	Kn
1000	1478	14.5	3500	34.34	4500	44.15	5000	49.05
1100	1376	13.5	3000	29.34	4000	39.29	5000	49.05
1200	1252	12.29	3000	29.34	4000	39.29	5000	49.05
1300	1159	11.37	3000	29.34	3500	34.34	5000	49.05
1400	1040	10.21	2500	24.52	3000	29.43	5000	49.05
1500	945	9.28	2000	19.62	3000	29.43	4000	39.29
1600	874	8.58	1500	14.72	2500	24.43	4000	39.29
1700	803	7.88	1000	9.81	2500	24.43	3500	34.34
1800	732	7.19	1000	9.81	2000	19.62	3500	34.34
1900	614	6.06	1000	9.81	2000	19.62	3000	29.43
2000	567	5.57	1000	9.81	1500	14.72	3000	29.43
2100	528	5.18	1000	9.81	1500	14.72	2500	24.43

# Adjustable Bay Pole Ordering

Please use your fax machine to supply the following information on your letter headed paper:



1. The Quantity
2. The height of **A**  
(under the sill to the head)
3. The internal angle(s) of the bay **B**
4. The Pole size  
Standard 38mm, 42mm or 48mm OD  
(Please phone for details of other available sizes)



5. Date required
6. Contact name
7. Order/reference number

Fax orders to: 02380 787171

E-mail orders to: [info@nichollsandcooke.com](mailto:info@nichollsandcooke.com)

Telephone orders: 02380 778583

(Our preferred form of ordering is via letter headed fax)

(See back of brochure for Bay Pole Standard Order Form)

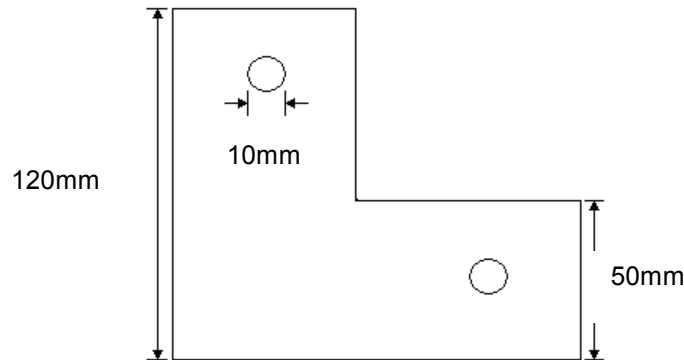
## Head & Base Plates (Feet)

- The Nicholls & Cooke system is based on 5mm thick steel finished by electroplating
- Each plate is drilled with two 10mm diameter holes for securing
- Standard plates are 50mm wide with a long edge of 120mm  
(This enables a large load spreading area of approx 8500 sq.mm depending on internal angle of plate)

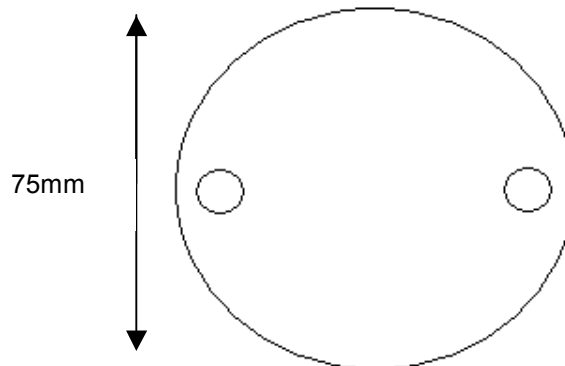
### Off the shelf plate options:

- ✓ All angles between 90 – 180
- ✓ Square plates – 75mm, 100mm, 125mm and 150mm
- ✓ Offset 180 feet for doors etc.
- ✓ Cavity wall spreader plates  
(Male and female fitting set in the centre of the cavity unless requested otherwise)

### Standard Feet example:

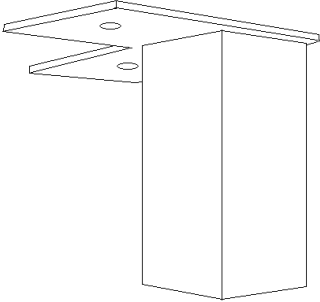


### Base and Top plates for UNIVERSAL poles and Slack Adjuster Kits:

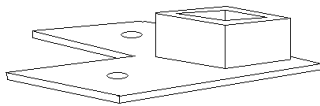


Our patented **3 Part System** reduces the excess pressure that other systems offered by different companies incur. Other systems made up of more than 3 parts tend to have reduced load bearing capabilities which can result in the pole bending inside the window.

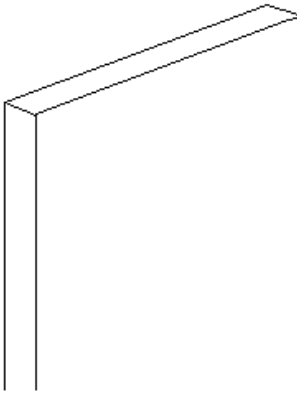
## New Build Box Support



- 60mm x 60mm x 3mm wall
- Galvanised to BS EN ISO 1461
- Fitted with N&C standard feet
- Two plate angles available: 90° and 180°
- 1500mm length rated at 4 tonne
- 2100mm length rated at 3 tonne
- Bespoke posts available P.O.A.



## Anti-Bounce Bar



- 100mm x 6mm Galvanised Plate
- 100mm x 6mm x 1500mm
- 100mm x 6mm x 2100mm
- Longer lengths available P.O.A.

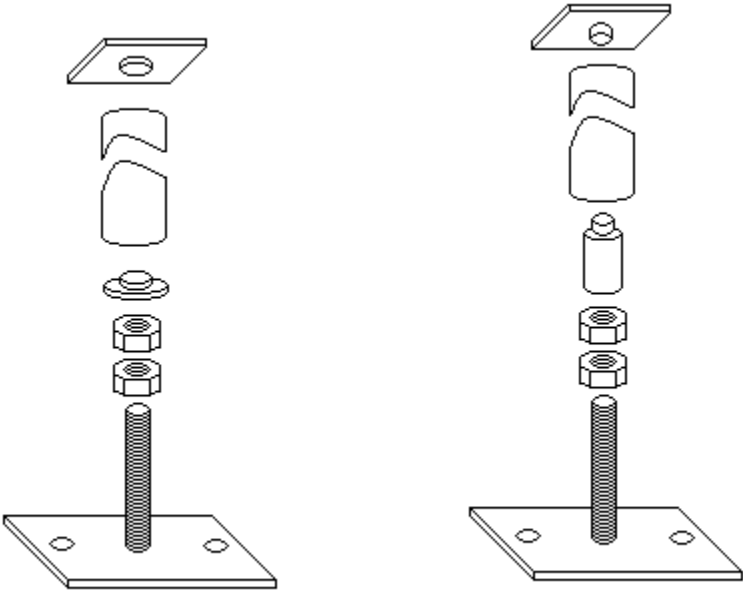
## Base and Top Plates

- Locating plates designed for non-load bearing poles
- 5mm Standard N&C galvanised angle plates with locating ring

# Basic Budget Jacks

From just £4 per set.

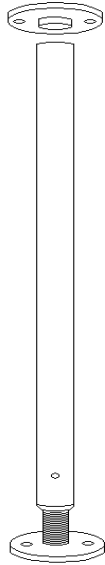
These jack supports are available to suit any profile. They are manufactured in electroplated steel with a 16mm thread. These have been tested to 6000 Kg and have a SWL of 2000 Kg.



All sizes and proportions are dependant upon the profile used.

# The Nicholls & Cooke Patented Adjustable Bay Pole

## Universal style galvanized steel bay poles



48mm OD x 2.1m rated at 3000kg

48mm OD x 1.5m rated at 4000kg

42mm OD x 2.1m rated at 2000kg

42mm OD x 1.5m rated at 3000kg

38mm OD x 2.1m rated at 1000kg

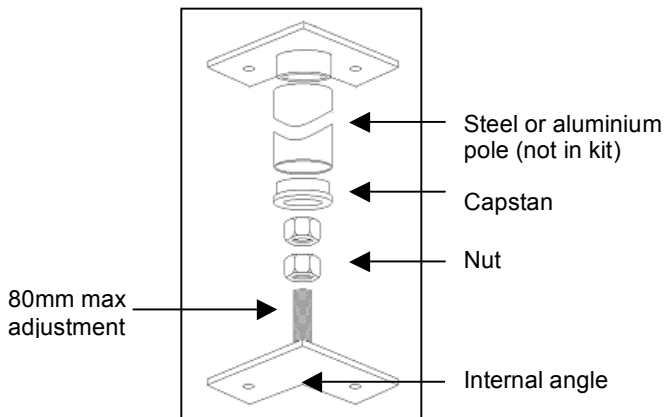
38mm OD x 1.5m rated at 1500kg

80mm Adjustment  
(including sill)

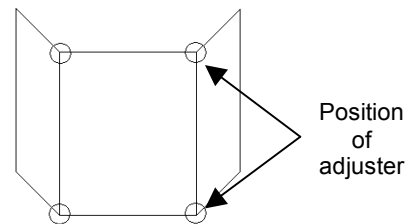
### Slack Adjuster Kits

(Designed for the adjusting and securing of steel or aluminum bay poles)

A five part kit for use in any manufacturers system. We require the name of the your profile manufacturer and a sample cross section of the pole you are going to use on your first order (once added to our database we will not require another sample).



- 5 part kit
- Four kits per box
- Discount for volume orders
- Round capstans, square plates and other shape adaptors available
- Please phone for prices



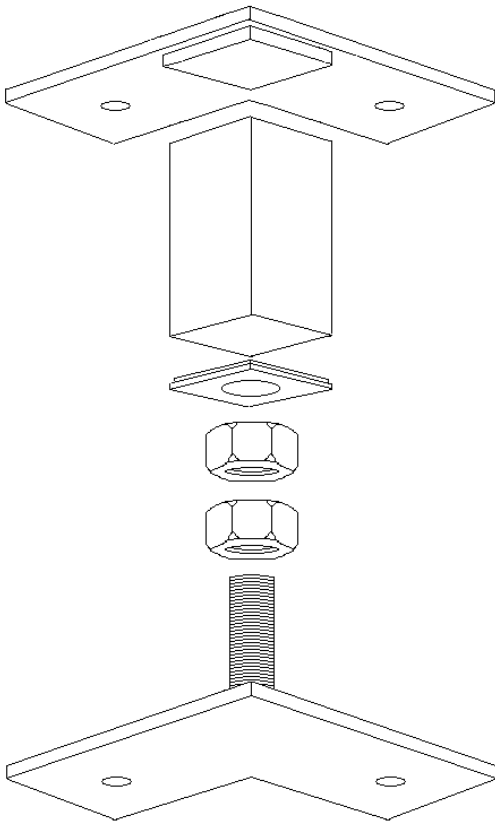
We also manufacturer cavity wall spreader plates that will fit any part of our system. .  
When ordering please state male or female and internal angle.

# Adjustable Box Corner Posts

(An alternative to the Standard N&C Pole)

A six part system complete with 60mm x 60mm x 3mm galvanized (BS EN ISO 1461) box post in two lengths – customer cuts to suit.

(Please phone for prices)



## Component List – 2100mm

Top plate (standard N&C)

2100mm box post

Square adaptor

Two M20 nuts

Bottom plate (standard N&C)

Rated at 3 tonne

## Component list – 1500mm

Top plate (standard N&C)

1500mm box post

Square adaptor

Two M20 nuts

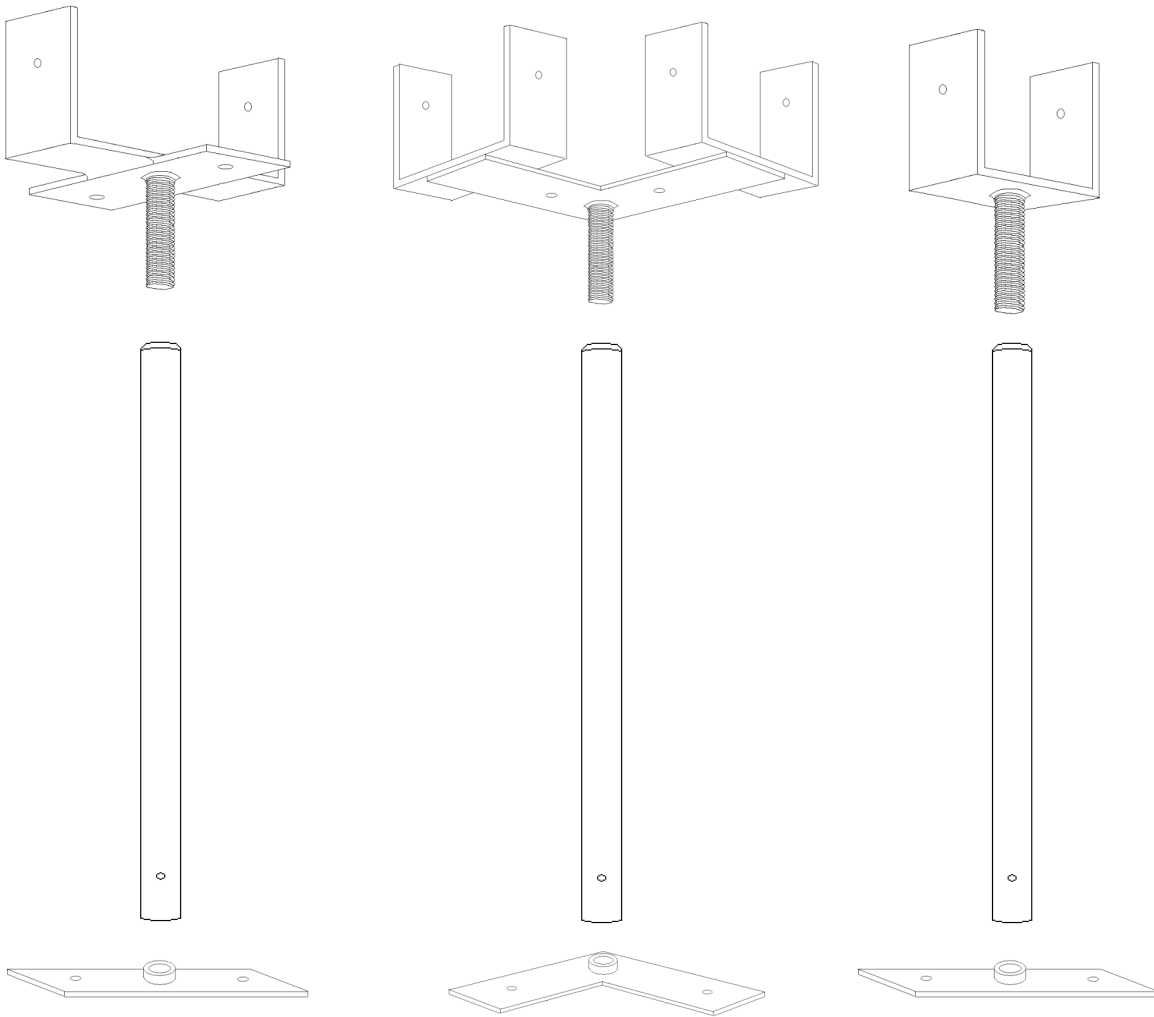
Bottom plate (standard N&C)

Rated at 4 tonne

## Orangery Poles and Plates

We produce load bearing poles and plates which can be integrated into a traditional orangery construction.

Head plates come as standard with either 60mm or 90mm openings into which the glue laminated girders of the ring beam sit. Other sizes are available on request.

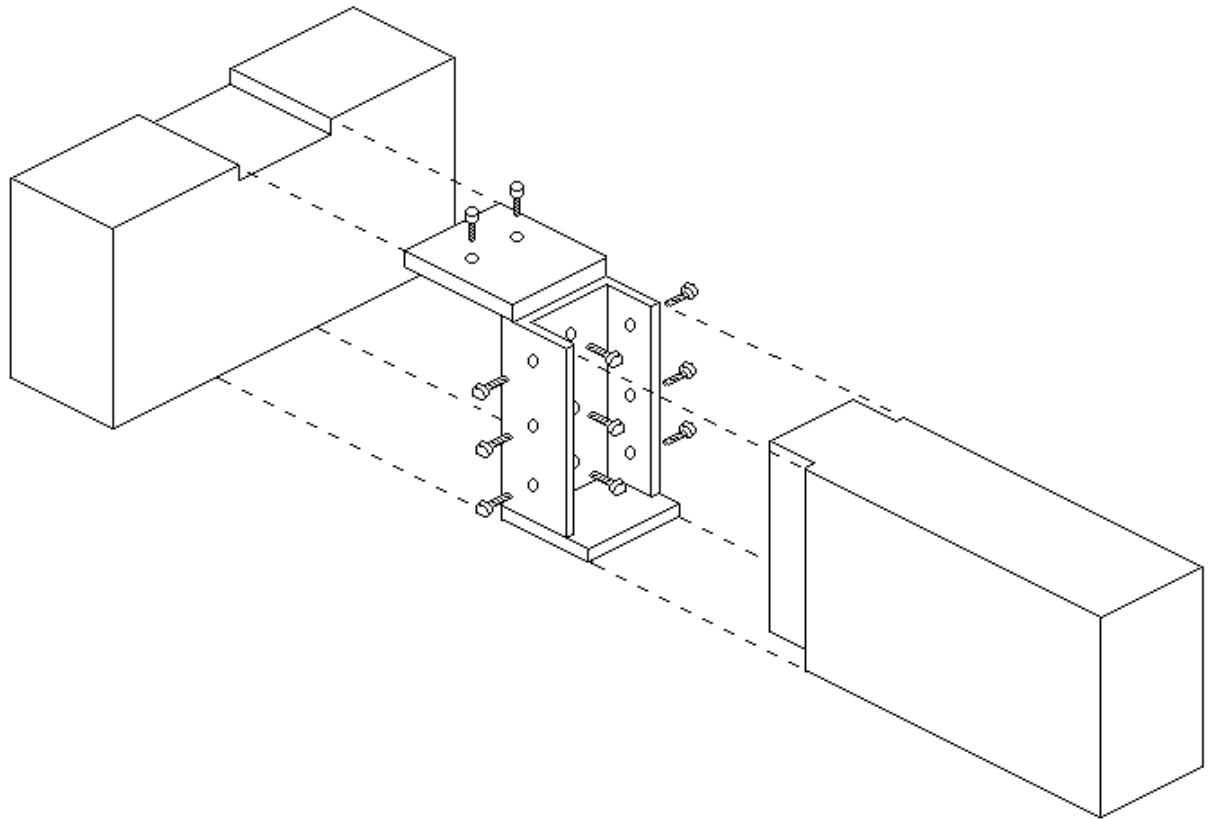


Standard pole sizes are 34mm, 38mm and 42mm OD.  
(Please enquire as to other possible sizes)

We can also fabricate any bespoke design to suit your requirements.

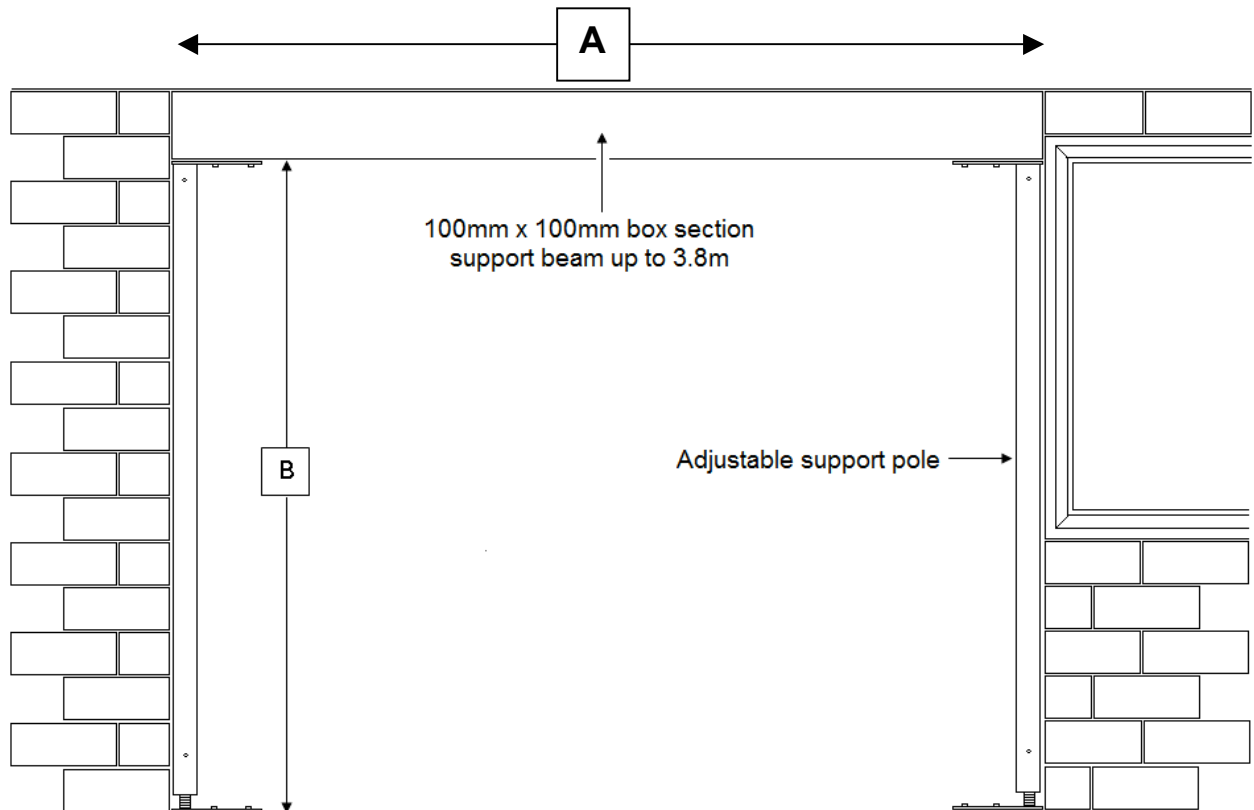
# Heavy Duty Joist Hangers

For timber beams (e.g. Glulams)



## Bi-fold Door Support System

We can now supply a very reasonably priced simple bridging system. It can be integrated into other systems to take the weight of a glass or plastic roof when a bi-fold door up to 3.8 meters is required.



This bi-fold door system can be incorporated into a brick wall, our ring beam system or a standard conservatory.

The support beam can be double-coated with red oxide on the outside or initially galvanized and then coated.

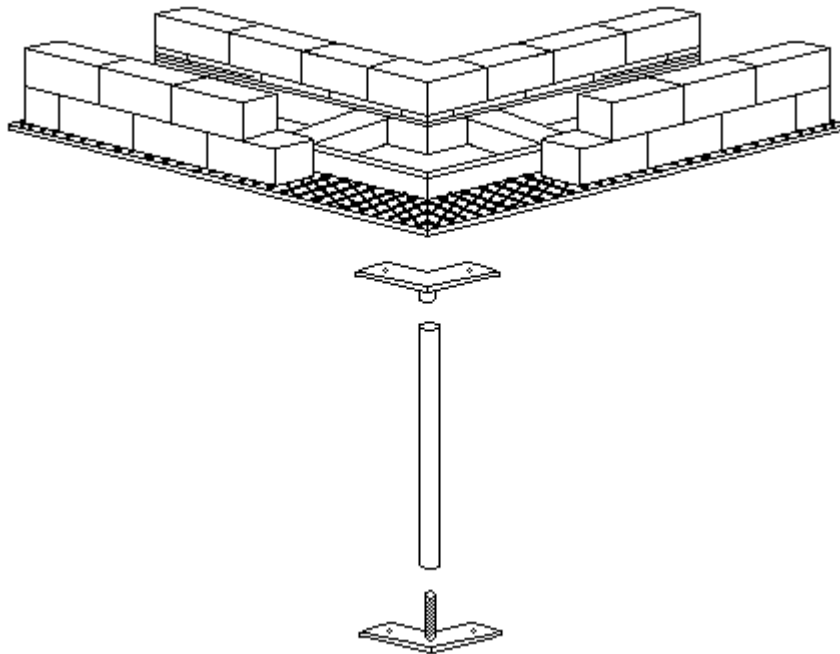
Using our standard 48mm pole we manufacture this system to suit your design.

Information required when making an order:

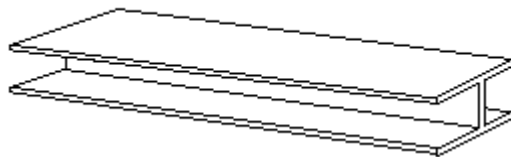
- Roof weight
- Measurement A
- Measurement B
- Support beam coating
- Any extra information to allow us to deliver a product which can be easily fitted and with full satisfaction

## Bespoke Steel Lintels

We manufacture steel lintels specially designed to suit windows and doors when two brick courses are required above the casements. We also supply standard I beams made to measure for general load bearing purposes.



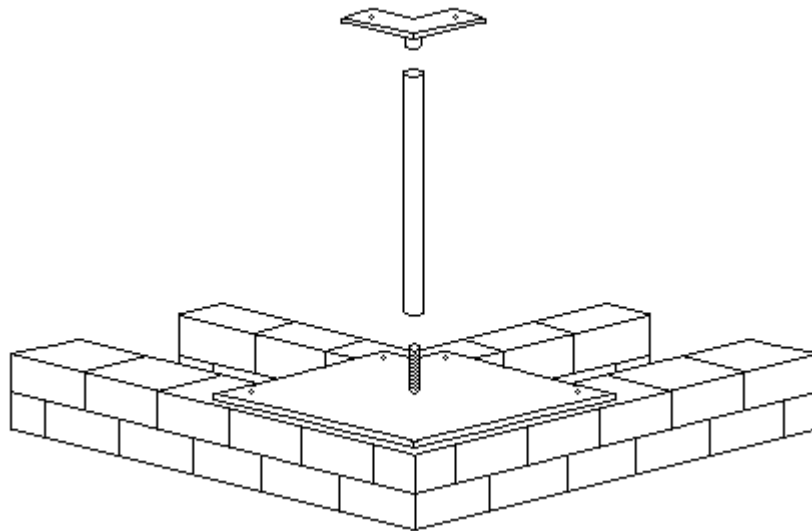
Can be supplied with or without bay pole system.



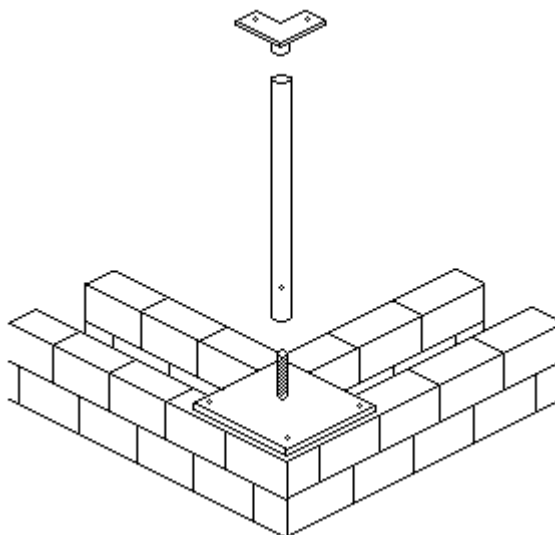
Standard I beams also available.

## Cavity Spreader Plates

These plates are designed to suit new build window bays where the bay pole is required to fit centrally between the cavity. They are suitable for 90 and 135 degree bays. They are available in standard or heavy duty formats and with any size pole dependant on anticipated loadings and window profile. The plates are manufactured in electroplated steel. As with our standard bay poles these kits are fully load certificated. These are also available as a basic window jack (i.e. with no pole supplied).



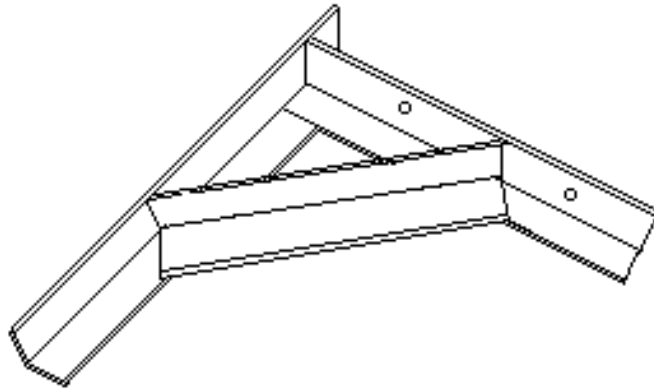
135° (Victorian bay)



90°

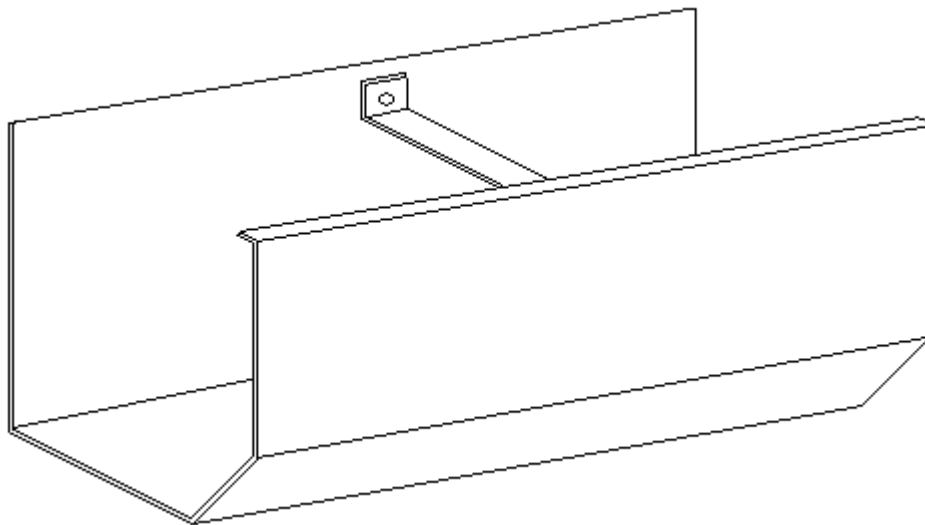
## Gallows Brackets

We manufacture gallows brackets for chimney stack removal or for various other structural building requirements. These are made to order and are priced very competitively.



## Guttering including Conservatory Box Guttering

We can supply Aluminum guttering. These are made to order.

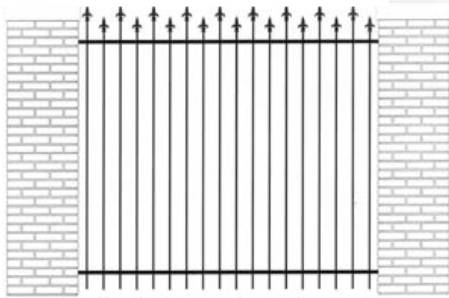


## General Fabrication

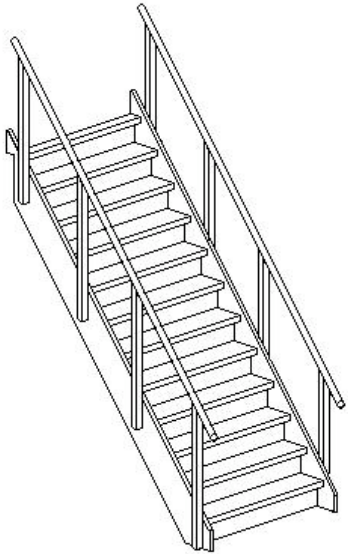
We also undertake any steel fabrication work you may require. This includes fencing, hand rails, gates, security doors, staircases. If it is made of steel we will give you a quote.

All welding conforms to the BSEN287-1 standard.

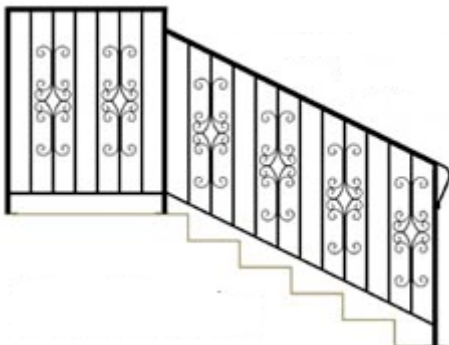
### Fencing and Gates



### Fire Escapes and Staircases



### Handrails



# The Regulations

## The Document A (Structures) Requirements relating to loading states;

(1) The building shall be constructed so that the combined dead, imposed and wind loads are sustained and transmitted by it to the ground-

(a) safely; and

(b) without causing such deflection or deformation of any part of the building or such movement of the ground, as will impair the stability of any part of another building.

(2) In assessing whether a building complies with sub paragraph (1) regard shall be had to the imposed and wind loads to which it is likely to be subject in the ordinary course of its use for the purpose for which it is intended.

### **Definitions:**

**DEAD LOAD** The load due to the weight of all walls, permanent partitions, floors, roofs and finishes including services and all other permanent construction.

**IMPOSED LOAD** The load assumed to be produced by the intended occupancy or use, including the weight of movable partitions, distributed, concentrated, impact, inertia and snow load but excluding wind loads. This would include furniture with contents, beds, TV's etc.

**WIND LOAD** The load due to the effort of wind pressure or suction.

## When fitting windows by FENSA members, the technical advice issued, relating to BAY WINDOWS states:

**Installers are required to fit BAY POLES with header and spreader plates on all Load Bearing Bay Windows.** However, it is understood that some designs of bay windows are not load bearing, e.g. those at ground level with a flat roof and do not in this instance need reinforcement. Bay poles resting on reinforced sills and reinforcement poles drilled through sills to the sound masonry are acceptable methods of fixing.

For maximum security, safety and easy adhesion to Document A, **Bay Poles must go through the sill.** The poles should be secured to the head and the wall under the sill via large spreader plates.

The adjustment of the bay poles must be either a jacking device, such as a screw system capable of taking the load plus safety margin, or with some shims. If shims are used they should be or a non-compressible substance such as metal, unable to be moved relative to the pole and incapable of working loose due to vibration caused by wind, traffic etc.

Spreader and header bearing plates should be thick enough and of enough area to spread the imposed weight to prevent damage or undue pressure on the head or under sill wall.

For persons outside the FENSA scheme, the onus is on the installer to satisfy the building inspector. On the day of inspection, the installer has to prove any imposed weight on the window is carried through, or around (use of lintel) the window, by any method to satisfy the regulations i.e. **NO WEIGHT to be taken on frames or casements.**

Nicholls & Cooke manufacture a patented Three Part Adjustable Bay Pole system that ensures adhesion to the regulations every time.