

## The Clement Brooking Steel Window Technical Specification

### Product Summary

Developed in collaboration with the Hampstead Garden Suburb Trust and other conservation bodies, the Brooking range of windows takes its name from The Brooking National Collection of historic windows and doors whose Founder, Charles Brooking, is an internationally renowned collector and conservationist.

Providing a traditional appearance, these windows are specifically for use in very sensitive fenestration projects.

### Manufacturing Specification

Made to suit your individual requirements Brooking windows are generally manufactured in accordance with BS 6510:2010 specifications for hot rolled steel windows. The mild steel sections used for Clement window and door frames are precision rolled in Switzerland using only recycled steel to suit Clement's unique profiles and tolerances. All frames and ancillary profiles are hot dip galvanised to BS EN ISO 1461 and available with a factory applied polyester powder coating, well exceeding the minimum paint thickness called for by BS EN ISO 13438.

### Manufacturing Description

Frames are manufactured from hot rolled mild steel profiles with corner joints mitred, welded and dressed square and flat. Small panes can be formed with T glazing bars whose ends are tenon riveted and/or welded to the frame and cross joints are interlocked and welded with rigid joints. Composite windows can be assembled by connecting windows horizontally and/or vertically with mullions and/or transoms of hot rolled slim steel profiles. Box sections are available as tubes or as box mullions which can be either hot rolled or manufactured from sheet steel. Pressed metal cills are available in a choice of profiles. Trickle vents can be fitted in accordance with Part F of the Building Regulations.

### Locking system

The Brooking range of windows is available with traditional single point locking and other security devices if required.

### Fixing

Brooking windows can be fitted into timber subframes, or fixed direct to brickwork, concrete or stone. Windows are fixed either direct or with fixing lugs using stainless steel screws that are appropriate to the structural opening.

### Glazing

Brooking can be supplied with various glazing options, from both inside or outside including:

- Silicone fronting to simulate traditional putty.
- Clear glazing.
- Traditional T bars.
- Double glazing.
- Real, hand crafted, single glazed leaded lights.
- Double glazed simulated leaded lights. Using genuine lead. A 16mm insulated glass unit offering an 8mm cavity, krypton gas filled.

Combinations of fixed lights, top hung, side hung and bottom hung windows are available as well as single and double doors in both 'open in' and 'open out' configurations.

Brooking windows accommodate single and insulating glass units of 16mm. These GGF approved windows are recognised and specified by many local and national conservation bodies.

In accordance with Glass & Glazing Federation best practice, Clement steel windows are generally factory glazed, however, our concealed fixings mean that fixed light windows need to be glazed on site after the frames have been installed. Metal glazing beads are optional and provided colour coded to match the frame.

Brooking windows can be supplied with semi, round or gothic style heads, and 'curved on plan'.

## Dimensions (Provided for guidance purposes only)

Nominal profile width	25mm
Typical sight lines: fixed lights perimeter	< 37mm
Hinged casements	< 52mm

Windows and doors for composite panels are purpose made, generally within the limits shown in the table below; sizes outside these limits may be discussed with one of our sales consultants.

WINDOWS					
	Width		Height		Perimeter
	Min	Max	Min	Max	Max
Fixed light	300	1800	300	1800	7200
Top hung	300	1800	300	1300	4800
Side hung	300	600	300	1300	3800
Bottom hung	300	1200	300	1200	4800
DOORS					
	Width		Height		Perimeter
	Min	Max	Min	Max	Max
Single	600	900	2000	2100	6000
Double	900	1200	2000	2100	6600

## Sound

The average Sound Reduction Index (SRI) of a single glazed unit is approximately 30 dB, but this varies with window type, size and glass thickness.

## BS 6375-1:1989

Air permeability was measured in terms of opening joint length (m<sup>3</sup>/h/m) against progressively increasing test pressures through 200Pa (class A), 300Pa (class B) up to 600Pa (class C). Class B, or a maximum value at 300Pa of about 16 m<sup>3</sup>/h/m, was the UK standard requirement. Water tightness was measured in resistance to leakage at progressively increasing test pressures, 300Pa being considered the most severe UK requirement. Wind load resistance entailed deflection and gusting tests at pressures ranging from 1200Pa to 2400Pa.

WINDOW TYPE	BS 6375-1 Test Pressure Class 1989 edition			
	Air	Water	Wind	BS 6375-1 Exposure Category
Fixed light	600	300	2400	2400
Top hung	300	200	2000	2000
Side hung (open out)	300	200	2000	2000
Bottom hung	200	100	1600	1200

Source: Steel Window Association

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