

The Clement SMW Steel Window Technical Specification

Product Summary

The Standard Metal Window (SMW) 'F' Series window range has been manufactured since the early 20th century. Available only single glazed, SMW windows are primarily used today for highly sensitive replacement work in Conservation Areas and Listed Buildings, where a suitable geometric match is required and double glazing is not an option.

Part L Regulations

Single glazed option not approved for Part L.

Manufacturing Specification

Made to suit your individual requirements SMW 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 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 to BS EN ISO 13438 from the RAL colour range, exceeding the minimum paint thickness over the zinc of 60 microns.

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

Glazing

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

- Clear glazing
- Genuine T bars
- Genuine leaded lights, using real lead that is soldered by hand in a diamond or rectangular pattern in variable widths of lead.

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.

Silicone fronted to replicate traditional face putty. Single glazed. Windows shall be prepared for glazing on site from outside with single glass, bedding and capping sealants in accordance with BS 8000-7.

In accordance with Glass & Glazing Federation best practice, Clement steel windows are factory glazed, however, our concealed fixings mean that fixed light windows need to be glazed on site after the frames have been installed. Glazing beads are made of aluminium.

SMW windows can be supplied shaped, with shaped heads, and 'curved on plan'.

Dimensions (Provided for guidance purposes only)

Nominal profile width	25mm
Typical sight lines: fixed lights perimeter	< 40mm
Hinged casements	< 50mm

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	1350	3800
Bottom hung	300	1200	300	1200	4800

BS 6375-1:1989

Air permeability was measured in terms of opening joint length (m³/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 m³/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