

APPENDIX 2

L10 400A

1.1. TIMBER / ALUMINIUM COMPOSITE WINDOWS

Drawing References: L(00) 01-06, L(00) 15-17, A(00) 01,02, A(31) 01-03.
Manufacturer: VELFAC LTD, The Old Livery, Hildersham, Cambridge, CB21 6DR.
Telephone: 01223 897100 Web site: www.velfac.co.uk

Product reference: VELFAC 200 SERIES COMPOSITE WINDOWS.

Type: Windows and window walling are to be a unitised composite aluminium/wood system, with an independent thermally isolated aluminium sash. Aluminium sash profiles will be fully ventilated and drained through concealed drainage channels and incorporate an aluminium glazing rebate. The window system will have slim 54mm external profiles and all opening and fixed lights will have consistent sightlines. Framing will facilitate the integration of concealed trickle ventilators and electrically controlled window actuators where required. All elements will be delivered fully finished with all ironmongery fitted and factory dry glazed with EPDM co-extruded single piece gaskets and internal glazing beads.

Manufacture: Window production facilities will operate an ISO 9001 quality control system.

Warranty & design life: The window system will have an expected design life of at least 40 years and a schedule of maintenance will be provided. The complete window inclusive of framing, gaskets, ironmongery and glazing will be covered by a 12 year warranty from date of manufacture.

Environment: Manufacturing facilities will operate an ISO 14001 environmental policy as will key suppliers. All timber will be fully FSC® certified, and 85% of aluminium will be procured from hydro-electric sources with a recycled content of at least 50%.

2. MATERIALS

2.1. INTERNAL FRAMING:

VACUMAT preservative treated and factory finished with two coats of solvent free, micro-porous clear lacquer or acrylic paint containing anti-mould fungicide, in accordance with EN 152-1:1998. Dipped, brushed or site applied finishes will not be acceptable. Minimum dry film thickness: 100 – 225 microns.
Colour: TO BE CONFIRMED to gloss level 20%

2.2. EXTERNAL SASH:

Extruded aluminium profiles in accordance with BS EN 755-2 (mechanical properties), BS EN 12020-2 & BS EN 755-9 (dimensional accuracy).
Alloys: EN AW-6060 T5, EN AW-6063 T5, EN AW-6082, EN AW-6005
Dimensions: 54 mm face dimension.

2.2.1. Finish:

Polyester powder coat in compliance with BS EN 6496, BS EN 6497, & DIN 50939 with applicators to be registered under the European Qualicoat and/or GSB quality assurance schemes.
Minimum dry film thickness: 60–120 microns
Colour: TO BE CONFIRMED to gloss level 77%.

3. IRONMONGERY/ACCESSORIES

3.1. LOCKING SYSTEM

- 3.1.1. Concealed espagnolette multipoint locking system operated by a single handle per sash (or two handles per sliding window/door). Locking points to incorporate anti-tamper locking pins on espagnolette bolts and double stage keeps providing secure night ventilation.
- 3.1.2. Handles to be a matt chrome finish and include integrated key locking facility where applicable.
- 3.1.3. Concealed opening restrictors incorporating a socket key release mechanism providing an approximate clear opening of 210mm.
- 3.1.4. Automated Windows (where required)

Electrically controlled opening sashes via fully concealed, 24 volt factory fitted chain actuators. Where multiple actuators are placed within one opening window they shall be fully synchronised through direct communication to ensure that no adverse forces are applied to the window system resulting in twist or racking of the opening sash. Surface mounted actuators will not be acceptable.
Chain stroke: 260MM TO ALLOW 210MM CLEAR OPENING

3.2. VENTILATION

- 3.2.1. Background ventilators: Externally concealed trickle ventilators will be incorporated into the framing sections to provide a free area of 4000mm². Equivalent free areas will be tested in accordance with BS EN 13141-1: 2004 and will provide 2418mm² when ventilators are placed in the frame head and 2800mm² when ventilators are placed in the frame jamb. The windows will be marked with the equivalent area (EA) of each background ventilator.

4. GLAZING/INFILLS

4.1. VISION GLAZING:

To comply with SBD standards. 6.8mm laminated inner pane to the ground floor and accessible area.

Inner pane: 4MM CLEAR, OR 6.4MM LAMINATED WHERE REQUIRED

Cavity: 12/14MM ARGON FILLED

Outer pane: 4MM/6MM CLEAR, OR CLEAR TOUGHENED WHERE REQUIRED

glazing to achieve a G value of 0.63

INFILL PANELS

- V280 Rain screen panels as per window schedule: Dwg Nos. A(31) 01-03
- V200 sandwich panels to opening lights requiring aluminium PPC infill panels as per schedule.

4.2. SECURITY:

The window system will be tested to BS 7950: 1997 and independently certified to the requirements of Secured by Design through accredited factory audits and shall be registered as a licensed product.

4.3. THERMAL PROPERTIES:

4.3.1. The window system shall be tested in accordance with BS EN ISO 10077-2: 2003. All thermal data and calculations supplied must be for the complete window units. Centre pane U-values for insulating glazing units alone will not be acceptable. A thermal data sheet must be supplied to detail all individual U-values for each window type, and a weighted average U-value for all units within the same order for CA approval.

Thermal transmittance (U-value) calculated in accordance with BS EN 673: 1998: not exceeding 1.2 W/m²K

Other requirement

- External cleaning strategy to utilise fully reversible windows above ground floor.
- Where outward opening windows are unable to be used, the VELFAC In system is to be applied
- Windows must comply with Lifetime Homes and Code for Sustainable Homes Level 4
- SBD to the ground floor and accessible areas