L 10 WINDOWS / ROOFLIGHTS / SCREENS / LOUVRES

320 STEEL WINDOWS AND DOORS

- Manufacturer: Steel Window Service and Supplies Limited, 30 Oxford Road, London N4 3EY Tel: 020 7272 2294, Fax: 020 7281 2309, web: www.steelwindows.co.uk, email: post@steelwindows.co.uk
- Product reference: SMW range from the “F” series of mild steel window sections.
- Mild steel: To BS EN 10025-2 and cold straightened.
- Manufactured in accordance with BS 6510 and recognised good practice.
- Manufactured in the United Kingdom to ensure compliance with, and understanding of, relevant British Standards in addition to relevant harmonised European Standards.
- Weather tightness: To BS 6375-1 (1989 edition).
- Exposure category (design wind pressure): 1200 (Pa) unless otherwise specified.
- Air permeability, water-tightness and window resistance test data:

Window Type	**Air**	**Water**	**Wind**	**Exposure**
Fixed light	600 Pa	300 Pa	2400 Pa	2400 Pa
Top hung open out	300 Pa	200 Pa	2000 Pa	2000 Pa
Side hung open out	300 Pa	200 Pa	2000 Pa	2000 Pa
Bottom hung open in	200 Pa	100 Pa	1600 Pa	1200 Pa

- Operation and strength characteristics: To European harmonized testing methods specified in the window and door product standard BS EN 14351-1 and to BS 6375-2 Performance of Windows and Doors – Operation and Strength.
- Construction: Frames shall have welded corners, dressed square and flat, and be sized within olerances of +/- 2mm. Tee glazing bars shall be tenon riveted and/or welded to frames and interlock with rigid oints displaying face gaps of no more than 1mm.
- Hot dip galvanising: Frames and ancillary profiles (steel attachments, coupling members and ancillaries) shall be positively rustproofed by hot-dip galvanising to BS EN ISO 1461.
- Glazing details: Will accept single glazing up to 10mm thick.
- Thermal insulation: Approximately 5.7W/m²K combined frame and glass U values for most window Configurations using standard single glazing only.
- Acoustic insulation: Sound insulation of weather stripped windows/doors (approximate values averaged over a frequency range of 100 to 3150Hz) to be 20-28dB reduction (Single Glass) / 35-40dB reduction (with secondary window and 200mm cavity).
- Dual Weatherstripping: External and internal black EPDM self adhesive weather / air seals.
- Ironmongery / accessories: Refer to Steel Window Services for project specifics.
- Finish as delivered: Polyester colour coated to BS 6497 or BS EN 13438 in a standard RAL colour, or:
- Finish as delivered: Hot-dip galvanised to BS EN ISO 1461 ready for, if required, site priming (with Special Metals Primer suitable for galvanised steel surfaces), undercoating / final decorations by others.
- Sightlines (typical) of window range to be no more than:
- Fixed light: 32mm
- Opening window: 45mm
- Glazing bar (true steel “T” section – not face applied): 19, 25 or 29mm.
- Glazing bar (face applied cosmetic bar): 19 or 26mm.
- Section size (front to back): 25mm

328 IRONMONGERY / ACCESSORIES:

- Standard provisions: Refer to Steel Window Services.
- Hinged casements shall have rustproofed steel or brass hinges, face mounted and welded, screwed or riveted to the frame. A variety of handles, catches, stays and openers, with locking options, are available in chromed or toned brass, anodised or painted aluminium, and chromed or painted zinc alloy. Double fasteners shall be fitted on ventilators over 1200mm long or 1500mm high.

331 FINISH COATING
- Type / reference: Polyester powder coating to BS 6497 or BS EN 13438
- Preparation: Following galvanising, windows are chemically cleaned and pre-treated to provide a urface to which powder coating will adhere.
- Covering: Minimum 60 microns on all significant surfaces.
- Colours: Any standard RAL colour reference
- Gloss level: Standard matt (30% +/- 7% gloss level). Optional semi-gloss and full gloss levels available.
- Process: Coating will be undertaken by our specialised polyester powder coat applicator.

EXECUTION

710 PROTECTION COMPONENTS
- General: Do not deliver to site components that cannot be installed immediately, or placed in clean, dry-floored and covered storage.
- Stored components: Stack vertical or near vertical on level bearers, separated with spacers to prevent damage by and to, projecting ironmongery, beads etc. Windows must not be stacked near lime or ashes on site

750 BUILDING IN
- General: Not generally permitted unless indicated on drawings.
- Brace and protect components to prevent distortion and damage during construction of adjacent tructure.

730 PRIMING / SEALING
- Timber surfaces inaccessible after installation: Prime or seal as specified before fixing components.

760 REPLACEMENT WINDOW INSTALLATION
- Standard: To BS 8213-4.

765 WINDOW INSTALLATION GENERALLY
- Installation: Into prepared openings.
- Gap between frame edge and surrounding construction: Minimum: 2mm / Maximum: 8mm
- Distortion: Install windows without twist or diagonal racking.
- Operatives: When contracted to install, this to be carried out by Steel Window Service directly employed (not subcontracted) 100% CSCS card registered installers qualified to NVQ2/equivalent standard.
- Insurance: Minimum level of Public / Employers and Products Liability Insurance: £ 10,000,000.00.

780 FIXING OF WOOD FRAMES (timber subframes where required)
- Standard: As section Z20.
- Fasteners: Windows shall be supplied with rustproofed screws, plugs, and/or lugs to suit specified openings.
- Spacing: When not pre-drilled or specified otherwise, position fasteners not less than 150mm from ends of each jamb, adjacent to each hanging point of opening lights and at maximum 450mm centres.
- Sealing: When contracted to install, Steel Window Services shall apply appropriate external perimeter sealants.

781 FIXING OF STEEL FRAMES
- Standard: As section Z20.
- Fasteners: Windows shall be supplied with rustproofed screws, plugs, and/or lugs to suit specified openings.
- Spacing: When not pre-drilled or specified otherwise, position fasteners not less than 50mm and nor more than 190mm from ends of each jamb, adjacent to each hanging point of opening lights and at maximum 900mm centres.
- Composite assemblies: Shall be delivered in separate units to be coupled together on site.
- Sealing: When contracted to install, Steel Window Services shall apply appropriate external perimeter sealants.

800 BACKFILLING OF STEEL FRAME SECTIONS
- Windows fixed direct into openings: When required for weathering - after fixing, fill back of steel frame With waterproof cement fillet, or use an impregnated expanding sealing tape.

810 SEALANT JOINTS
- Sealant:
- Manufacturer: Selected to suit structural surround type.
- Product reference: Selected to suit structural surround type.
- Colours: White, Portland Stone, Buff, Brick Red, Brown, Grey, Mid Grey, Anthracite, Black, Translucent Or Magnolia, optional colours or RAL colour matched (consult Steel Window Services)
- Application: As section Z22 to prepared joints. Finish triangular fillets to a flat or slightly convex profile.

820 IRONMONGERY
- Fixing: Assemble and fix carefully and accurately using fasteners with matching finish supplied by Ironmongery manufacturer. Do not damage ironmongery and adjacent surfaces.
- Checking / adjusting / lubricating: Carry out at completion and ensure correct functioning.

L 40 GENERAL GLAZING

150 WORKMANSHIP GENERALLY
- Glazing:
- Generally: To BS 8000-7 / BS 6262.
- Integrity: Wind and watertight under all conditions with full allowance for deflections and other movements
- Panes / sheets to be within +/- 2mm of specified dimensions.
- Materials:
- Avoid contact between glazing panes / units and alkaline materials such as cement and lime.
- Keep materials dry until fixed. Keep insulating glass units and plastics glazing sheets protected from the sun and away from heat sources.
- Ensure that glass / plastics, surround materials, sealers, primers and paints / clear finishes to be used together are compatible. Comply with glazing and sealant manufacturer's recommendations.

152 PREPARATION:
- Clean surrounds, rebates, grooves and beads (where fitted) and prepare as specified before installing glazing.

155 GLASS GENERALLY:
- Glass:
- Standards: Generally to BS 952 (Glass for glazing) and the relevant part(s) of:
- BS EN 572 for basic soda lime silicate glass.
- BS EN 1096 for coated glass.
- BS EN 1748-1 for borosilicate glass.
- BS EN 1748-2 for ceramic glass.
- BS EN 1863 for heat strengthened soda lime silicate glass.
- BS EN 12150 for thermally toughened soda lime silicate safety glass.
- BS EN 12337 for chemically strengthened soda lime silicate glass.
- BS EN 13024 for thermally toughened borosilicate safety glass.
- BS EN ISO 12543 for laminated glass and laminated safety glass.
- Quality: Panes / sheets to be clean and free from obvious scratches, bubbles, cracks, rippling, dimples and other defects. Edges generally undamaged. Shells and chips not more than 2mm deep and extending not more than 5mm across the surface are acceptable if ground or polished out.
- Dimensional tolerances: Panes / sheets to be accurately sized.
- Material compatibility: Glass/ plastics, surround materials, sealers primers and paints / clear finishes to Be compatible.

160 LINEAR PATTERNED/WIRED GLASS (if applicable)
- Alignment: Vertical / Horizontal as appropriate and pattern matched across adjacent panes in close proximity.

210 PUTTY FRONTED SINGLE GLAZING
- Pane material: Project specific, permissible thickness up to 10mm.
- Surround: Mild steel window frame
- Putty side: Outside
- Sealer: Not required
- Type of putty: Natural coloured (for galvanised finished frames) or self-coloured “Colourglaze” black / white nonsetting metal casement putty (for polyester powder coated frames) or rapid-set non-setting metal casement putty (when decoration required shortly after glazing).
- Glass installation:
- Glass: Located centrally in surround using setting and location blocks, and secured with glazing sprigs / cleats /clips at 300 mm centres.
- Finished thickness of back bedding after inserting glazing (minimum): 1.5mm.
- Front putty: Finished to a smooth, neat triangular profile stopping 2 mm short of sight line, surface lightly Brushed to seal putty to glass and left smooth with no brush marks.
- Opening lights: Keep in closed position until putty has set sufficiently to prevent displacement of glazing When opened.
- Sealing and decorating putty: Refer to M60-80.
- Rustproofed glazing sprigs (spring clips) to be used where required.

260 BEAD FIXED SINGLE GLAZING
- Pane material: Project specific, permissible thickness up to 10mm.
- Surround/ bead: Galvatite pre-galvanised steel rectangular or square channel beads or aluminium extruded beads
- Preparation: Polyester powder coat if windows not supplied plain galvanised finish.
- Bead location: Outside.
- Bead fixing: Beads clip over brass, aluminium or rust-proofed steel mushroom studs which are screwed to glazing rebates. No visible fixings when glazed. Galvatite rectangular corner clips protect steel glazing bead junctions.
- Glazing compound: Silicone mastic sealant.
- Glazing installation:
- Glass: Located centrally in surround using setting and location blocks and distance pieces.
- Finished thickness of back bedding after inserting glazing (minimum): 3 mm.
- Front bedding: Fully bedded in glazing compound.
- Beads: Solid bedded in glazing compound and fixed securely.
- Visible edge of glazing compound: Finish internally and externally with a smooth chamfer.

M60 PAINTING / CLEAR FINISHES

80 PUTTY GLAZING (where site decorating by others)
- Setting: Allow putty to set for seven days.
- Sealing:
- Within a further 14 days, seal with an oil based primer.
- Fully protect putty with coating system as soon as it is sufficiently hard
- Extend finishing coats on to glass up to sight line.

Z 20 FIXINGS / ADHESIVES

310 FASTENERS GENERALLY
- Materials: To have:
- Bimetallic corrosion resistance appropriate to items being fixed.
- Atmospheric corrosion resistance appropriate to fixing location.
- Appearance: Submit samples on request.

320 PACKINGS
- Materials: Non-compressible, non-corrodible, rot proof.
- Area of packings: Sufficient to transfer loads.

340 MASONRY FIXINGS
- Light Duty: Plugs and screws
- Heavy Duty: Expansion anchors or chemical anchors

350 PLUGS
- Type: Proprietary types to suit substrate, loads to be supported and conditions expected in use.

360 ANCHORS
- Types:
- Expansion: For use in substrate strong enough to resist forces generated by expansion of anchor.
- Adhesive or chemical: For use in substrate where expansion of anchor would fracture substrate. For use in irregular substrate where expansion anchors cannot transfer load on anchor.
- Cavity: For use where the anchor is retained by toggles of the plug locking onto the inside face of the cavity.

370 WOOD SCREWS
- Type:
- Wood screws (traditional pattern).
  Standard: To BS 1210.
- Wood screws.
  Pattern: Parallel, fully threaded shank or twin thread types.
- Washers and screw cups: Where required are to be of same material as screw.

380 MISCELLANEOUS SCREWS
- Type: To suit the fixing requirement of the components and substrate.
- Pattern: Self-tapping, metallic drive screws, or power driven screws.
- Washers and screw cups: Where required to be of same material as screw.

EXECUTION

610 FIXING GENERALLY
- Integrity of supported components: Select types, sizes, quantities and spacing of fixings, fasteners and packings to retain supported components without distortion or loss of support.
- Components, substrates, fixings and fasteners of dissimilar metals: Isolate with washers/ sleeves to avoid bimetallic corrosion.
- Appearance: Fixings to be in straight lines at regular centres.

620 FIXING THROUGH FINISHES
- Penetration of fasteners and plugs into substrate: To achieve a secure fixing.

630 FIXING PACKINGS
- Function: To take up tolerances and prevent distortion of materials and components.
- Limits: Do not use packings beyond thicknesses recommended by fixings and fasteners manufacturer.
- Locations: Not within zones to be filled with sealant.

660 SCREW FIXING
- Finished level of countersunk screw heads:
- Exposed: Flush with timber surface.
- Concealed (holes filled or stopped): Sink minimum 2 mm below surface.