BRITAL
ALUMINIUM FACADE DESIGNS

SPECIFICATION
For the
Supply and Installation of

BRITAL SG-2-56-HFF

Two Sided Structurally Glazed Curtain Walling

(Horizontal Structural joints)

Issue date	Revision	Comment
01/05/09	R0	Draft
05/05/09	R1	Approved for Issue
06/10/15	R2	Revised to HFF

SG-2-56-H
2 Sided Structurally Glazed
CURTAIN WALLING

SPECIFICATION

1.0 Scope

1.1 Curtain walling shall be BRITAL SG-2-56-HFF, 2 sided horizontally structurally glazed CURTAIN WALLING with vertical caps, manufactured from extruded aluminium sections, to support insulated double glazed units or single glazed panels factory bonded to horizontal adaptor sections by means of structural silicone seals.

2.0 Materials

2.1 All extruded aluminium provided shall be grade 6063 T6 and shall be extruded to BSEN12020 and supplied only by BRITAL approved aluminium extrusion companies.

2.2 All assembly screws shall be grade A2 or A4 austenitic stainless steel (class 70).

2.3 All extruded gaskets, weather seals and setting blocks shall be EPDM material (silicone compatible as necessary) and shall be supplied by Technical Seal, the specified BRITAL gasket supplier as detailed in BRITAL Technical Manuals.

2.4 All opening shutters shall be either BRITAL structurally glazed opening shutters (designed specifically for use with BRITAL CURTAIN WALLING or shall be BRITAL window systems, specifically adapted for use with this Curtain Walling System.

2.5 Thermal Break shutters shall incorporate glass reinforced polyamide thermal breaks supplied by Technoform specifically for use on the BRITAL Window system.

2.6 Ironmongery for shutters shall be supplied only by BRITAL specified suppliers. Friction hinges shall be manufactured in stainless steel grade 304 or better. All other fittings shall be manufactured in material designed to resist corrosion.

2.7 The wall thickness of structural members (mullions and transoms) shall comply with the requirements of BS8118 Pt1 and for mullion sections shall not be less than 2.2 mm (nominal).

3.0 Construction

3.1 BRITAL SG-2-56-HFF shall be supplied either in stick format or in partially assembled frames,

3.2 All seals shown in BRITAL Fabrication Manuals shall be properly installed.

3.3 Transoms shall be constructed from 2-part sections with the outer part overlapping the rebate of the mullion to form a robust weather resistant joint.

3.4 All curtain walling shall be drained in accordance with the details in the BRITAL Technical Manual.

3.5 All glass and insulating glass units shall be supported by BRITAL EPDM setting block sections of Shore A hardness 85 +/-5, as detailed in BRITAL Technical Manuals.

3.6 BRITAL Extruded Aluminium fixing brackets shall be used to secure the curtain walling to the structural frames of the building using bolts of a size specified by a competent engineer and capable of resisting all applied loads. Fixings to the structure must be via cast in fixing channels, expanding anchors, chemical anchors or bolts (into steel) All anchors shall be used in accordance with the manufacturer's recommendations.

3.7 The nominal cover between the rebate of the sections and the glazing shall not be less than 15 mm.

3.8 All open out shutters will retain the glazing by means of a structural silicone seal between the glass and the frame, this seal shall be formed in a structural grade silicone from a BRITAL approved supplier. The structural sealant shall be used strictly in accordance with the sealant manufacturer's recommendations.

3.9 All glass and infill panels shall be manufactured and installed in accordance the relevant British Standard, such as BS 5713 or BS EN 1279 Pts 1to 6 inclusive. (or equal approved other national standard)

3.10 All insulated double glazed units will be constructed with an edge seal that shall be formed in a structural grade silicone from a BRITAL approved supplier. The structural sealant which shall be used strictly in accordance with the sealant manufacturer's recommendations. The horizontal edges of the insulated glazing units shall be provided with inserted aluminium channels (as shown in the BRITAL manual) to receive a fixing lug.

3.11 Single glazed spandrel panels shall be constructed with an aluminium adaptor section to the edges structurally silicone sealed on the back to maintain the front face of the glass with that of the vision panels and to allow the horizontal edge to be secured with the BRITAL fixing lug. The structural sealant shall be used strictly in accordance with the sealant manufacturer's recommendations. All structural sealant shall be applied in clean environmentally controlled factory conditions.

3.12 The horizontal gaps between the insulated glass units and other forms of infill shall be sealed with a neutral grade weather seal into a backing of non-gassing polyethylene foam backer rod. This sealant shall be installed prior to the vertical pressure plates and caps and shall run behind them. The minimum depth of the seal shall be strictly in accordance with the silicone sealant manufacturer's recommendations. All site applied sealant shall be applied onto properly cleaned and prepared surfaces.

3.13 The performance of the curtain walling glazing and spandrel panels shall also be in accordance with the requirements of any local building codes / regulations.

3.14 At each floor level and between separate fire compartments; a suitable fire / smoke stop shall be provided to give the required period of fire separation as required by the local building codes/ regulations or recognised building standard. This separation shall extend between the building structure and the inside face of the curtain walling. The fire/ smoke stop shall be supported on the building structure by means of regularly positioned supports. The whole shall be non-combustible.

4.0 Performance

4.1 BRITAL Curtain Walling constructed in accordance with the Brital Fabrication Manuals shall perform in accordance with the Centre for Window and Cladding Technology(CWCT) standards for weather resistance.

4.2 Air Permeability shall:

i. For fixed glazing not exceed 1.5$m^3/h/m^2$ at a static test pressure of 600 Pa.
ii. For opening shutter not exceed 2.0$m^3/h/m$ at a static test pressure of 600 Pa.

(A lower level of performance should be expected for doors and opening windows, refer to relevant BRITAL product specification)

4.3 Water Resistance

There shall be no leakage through to curtain walling at test pressures up to and including 600 Pa for both static and dynamic testing.

(A lower level of performance should be expected for doors and opening windows, refer to relevant BRITAL product specification)

4.4 All BRITAL curtain walling shall be site hose tested in accordance with the CWCT test method for site hose testing (5% of all significant joints).

4.5 The curtain walling shall be designed to resist the maximum expected 3 second wind gust with a return period of 50 years.

4.6 Wind Resistance

At the maximum design wind load, the maximum deflection on the Brital Curtain Walling members shall not exceed:

Span (mm)	Allowable Deflection
Span ≤ 3000	≤ SPAN/200
3000 <SPAN< 7500	≤ 5+(SPAN/300)
7500 < SPAN	≤ SPAN/250

4.7 Impact Resistance

All glazing / infill in risk areas as defined in BS 6262 part 4 shall be manufactured from safety glass that shall be marked to show its type and manufacturer.

4.8 Restrictors

All windows designed to open shall be restricted to a degree that will prevent the risk of someone falling out of the building, such as according to BS 8213 pt. 1

5.0 Finishes

All exposed aluminium extrusion surfaces shall be finished to either:

5.1 Polyester Powder Coat

Polyester Powder coating shall be applied in accordance with either BS6496 or BSEN 12206. The film thickness shall be no less than 40 µm and on average no less than 50 µm.

5.2 Anodising

Anodised aluminium should be either Natural (silver) or coloured to BS1615, BS3987 or BSEN 12373. Minimum thickness of anodic coating shall not be less than 25 µm.

6.0 Supply & Installation

6.1 BRITAL Curtain Walling shall only be supplied and installed by Approved contractors.

6.2 The design and installation shall be in accordance with BRITAL Fabrication and Installation Manual.

6.3 All working drawings produced by the approved BRITAL fabricator shall be submitted to BRITAL for review and comment prior to the commencement of erection on site.

7.0 Submissions

7.1 Prior to fabrication, the approved BRITAL sub-contractor shall submit sample boards showing samples of all relevant extrusions, gasket and ironmongery, relevant to the project.

8.0 Protection and Cleaning

8.1 All visible surfaces of the aluminium sections shall after finishing be protected with self-adhesive low-tack tape.

8.2 The low-tack tape shall be removed prior to hand over, either by the Curtain Wall Fabricator or the Main Contractor (subject to agreement between the two).

8.3 The protective tape shall not be left on the aluminium sections longer than necessary.

9.0 Operation and Maintenance

9.1 The curtain walling shall be operated and maintained in accordance with the recommendations found in the relevant section of the BRITAL Specifiers Manual

9.2 All replacement glazing shall be carried out in accordance with the recommendations found in the relevant section of the BRITAL Specifiers Manual