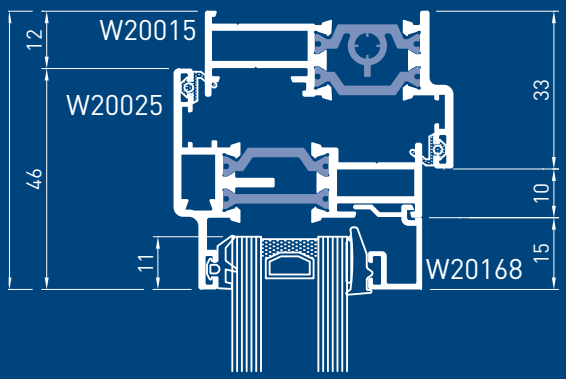
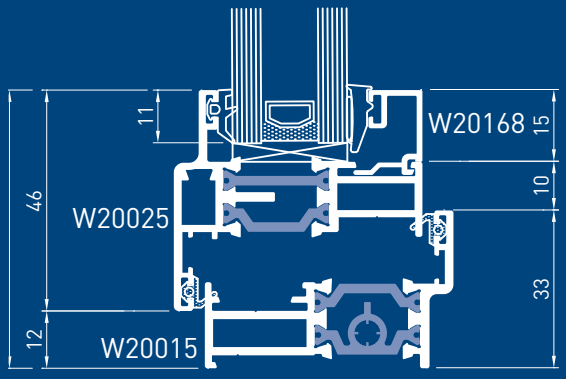
smart
architectural aluminium

Alitherm Heritage

The ideal window and door solution for heritage applications such as listed building renovations where planning regulations demand a like-for-like replacement window with optimum thermal performance.

- Window Energy Rating B
- U Value 1.5 W/m²K (using sealed unit 1.0 W/m²K)
- BS 6375 Part 1: 2009 Resistance to Weather





BES 668681 FM21582 EMS554307 OHS571955 ENMS634370

Project

Electricity House

Colston Avenue, Bristol, BS1 4TB

Architect

Stride Treglown

Bristol, BS8 3NE

Developer

Crest Nicholson

Chertsey, KT16 9GN

Summary

Situated within a conservation area, the imposing, Grade II-listed Electricity House has been restored to its former glory and has been transformed into a mixed-use development of 85 high-specification luxury apartments and commercial space.

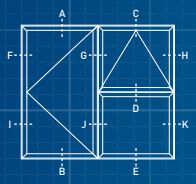
Many of the original Art Deco features have been recreated, including the style of the window and door systems from Smart, specified both for their authentic appearance and outstanding performance.

Smart's Alitherm Heritage system provided the perfect solution for windows from the first to the fifth floor of the building, with Smart EcoFutural system providing an equally elegant and thermally-efficient solution for the fifth-floor balcony doors. 10 Sets of double doors were also specified, together with seven sets of Smart Wall commercial doors for the ground floor retail areas – including one automatic door for the disabled access entrance.

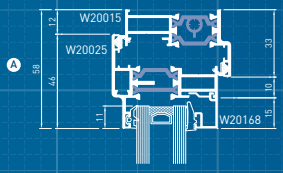
In excess of 300 windows were supplied and installed, and despite the exceptionally slim lines of the Alitherm Heritage system, the units accommodated 36mm double glazed units to cater for the different acoustic requirements of the project.

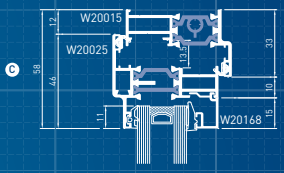
Casement Window

Examples of Typical Section Drawings

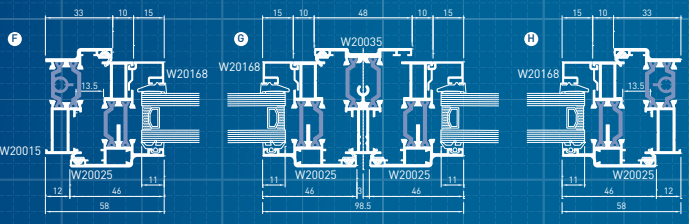


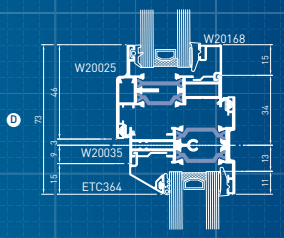
VERTICAL VIEWS

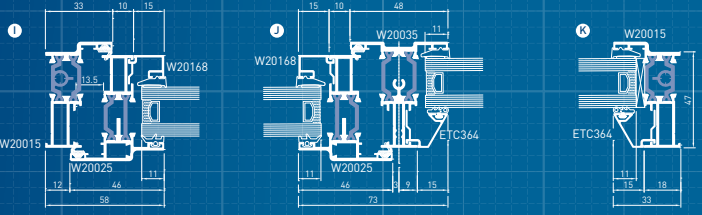


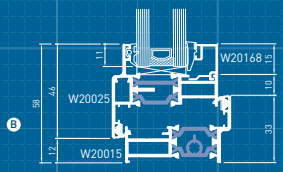


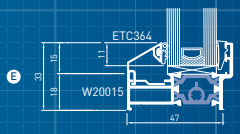
HORIZONTAL VIEWS





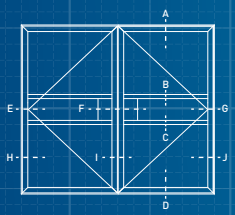




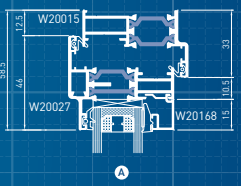


Double Door

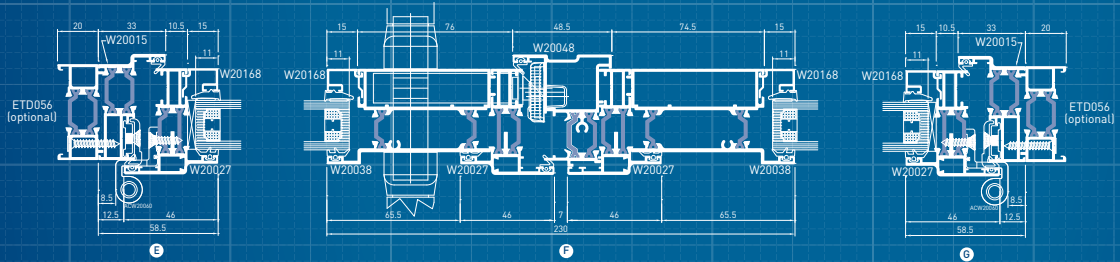
Examples of Typical Section Drawings

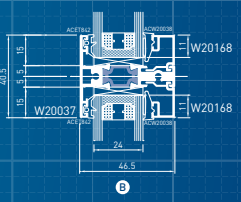


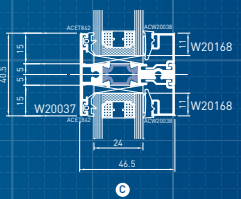
VERTICAL VIEW



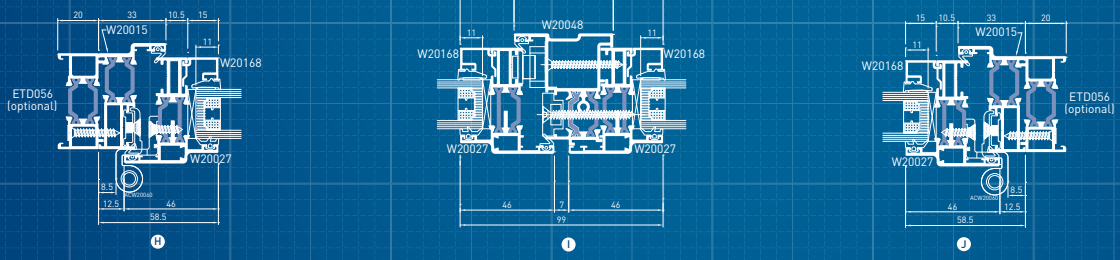
HORIZONTAL SECTION THROUGH LOCK

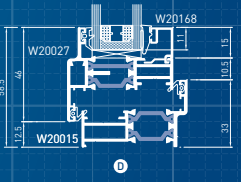






HORIZONTAL VIEW





Note: Diagrams not to scale.

Alitherm Heritage Window

Alitherm Heritage provides the ideal solution for heritage applications such as listed building renovations and large scale replica-refurbishment projects where planning constraints are to be considered. The Alitherm Heritage window is designed to be built as a series of horizontal modules which can be stacked using horizontal couplers to form a multi-part window featuring a specially design drip bar between modules.

Application

- Fixed windows
- Single or double sash, side hung open out casements
- Top hung open out casements
- Tilt & turn windows

Features

- Polyamide thermal break provides enhanced thermal performance
- Designed as a direct replacement for steel windows

Finish

Single or dual colour, marine quality polyester powder coat as standard

Technical Performance

WER Rating	B
U Value	1.5 W/m²K (using sealed unit 1.0 W/m²K)
Air	Class 4, 600Pa
Water	Class 9A, 600Pa
Wind	Class AE, 2400Pa
Document L Compliant	

Dimensions

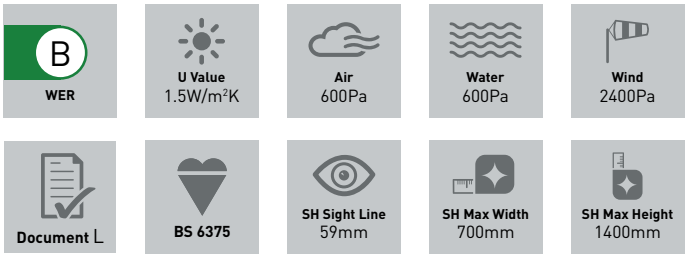
Frame Depth	47mm
Glass	24mm, 28mm, 32mm & 36mm

Test Certification

BS 6375 Part 1	2009 Resistance to Weather

Recommended Design Limits

Side Hung Vent Max o/a width	700mm
Side Hung Vent Min o/a width	300mm
Side Hung Vent Max o/a height	1400mm
Maximum Vent weight	40kg
Top Hung Vent Max o/a width	1400mm
Top Hung Vent Max o/a height	1300mm
Top Hung Vent Min o/a height	275mm
Maximum Vent weight	40kg



Alitherm Heritage Door

The Smart Alitherm Heritage door is the ideal replacement for steel balcony doors on heritage applications such as building renovations or apartment conversions. The Alitherm Heritage door provides the solution for conservation areas where planning regulations require a like-for-like product replacement. Alitherm Heritage door profiles feature the system's signature slim sightlines and elegant lines that complement Smart's existing Alitherm Heritage window and mimic those of steel doors. The system has all the advantages of modern aluminium profiles that feature polyamide thermal breaks, allowing the system to achieve a U Value of 1.5 W/m²k when installed with a suitable sealed unit.

Application

- Single or double doors

Features

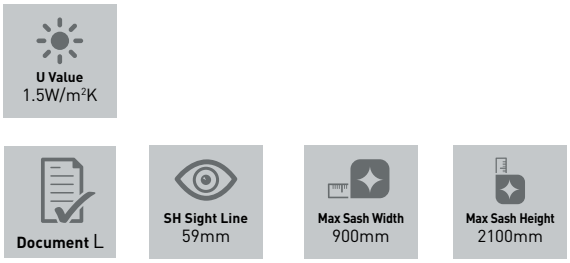
- Slim sightlines
- Tape or gasket glazed
- Multi point locking and face mounted shoot bolts

Technical Performance

U Value	1.5 W/m²K (using sealed unit 1.0 w/m²K)
Air	Test result pending
Water	Test result pending
Wind	Test result pending
Glass	24mm – 32mm
Typical Sightlines	59mm

Recommended Design Limits

Max Sash Width	900mm
Max Sash Height	2100mm



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