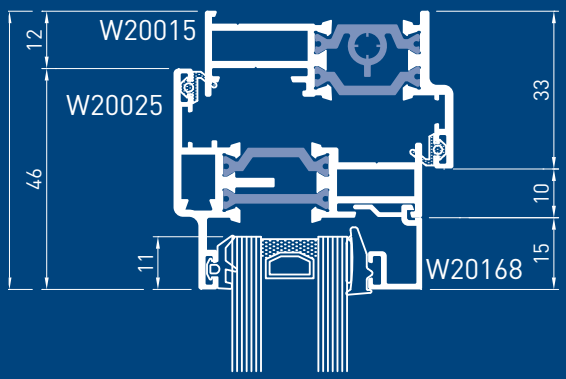
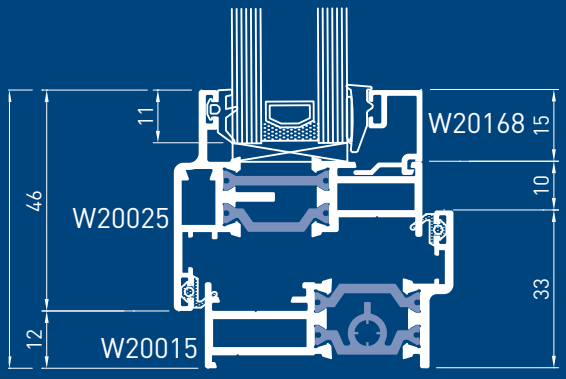
smart
architectural aluminium

# 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.

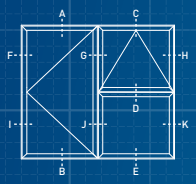
Many of the original Art Deco features have been recreated, including the style of the window and door systems from Smart, specified both for their authentic appearance and outstanding performance.

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.

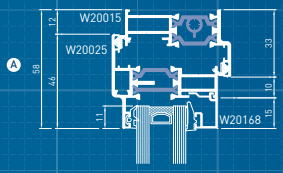
In excess of 300 windows were supplied and installed, and despite the exceptionally slim lines of the Alitherm Heritage system, the units accommodated 36mm double glazed units to cater for the different acoustic requirements of the project.

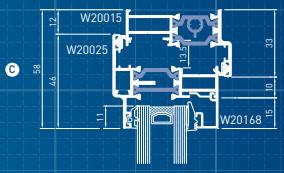
# Casement Window

## Examples of Typical Section Drawings

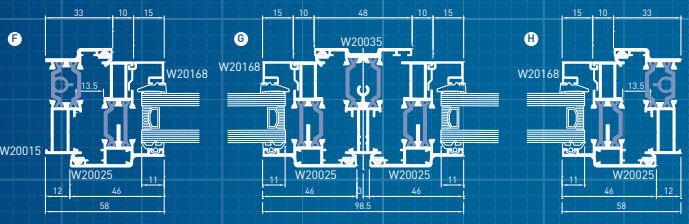


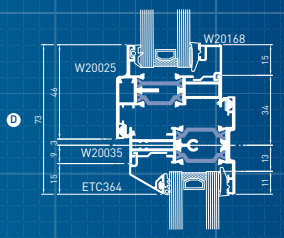

### VERTICAL VIEWS

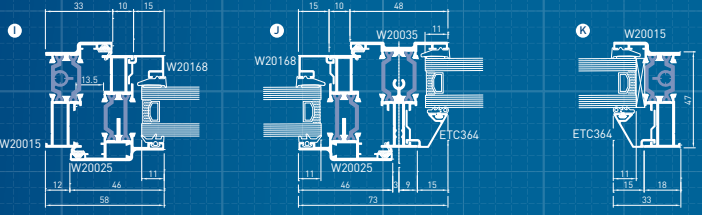


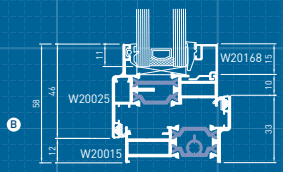



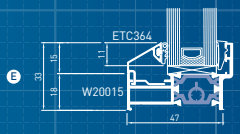

### HORIZONTAL VIEWS



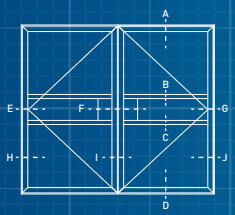



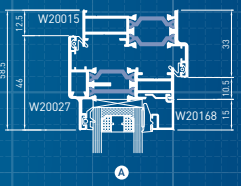




# Double Door

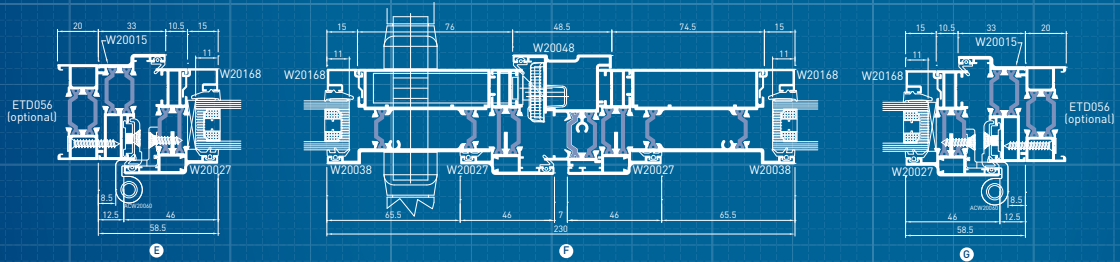
## Examples of Typical Section Drawings

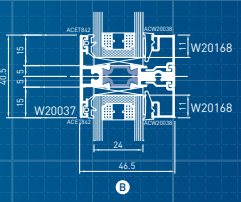


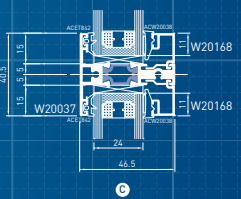

### VERTICAL VIEW



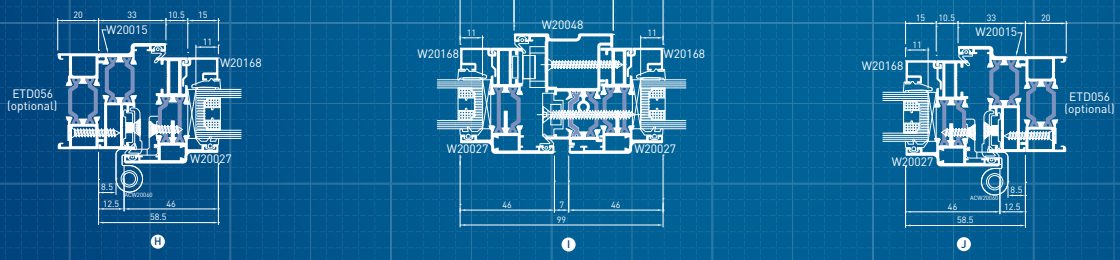

### HORIZONTAL SECTION THROUGH LOCK

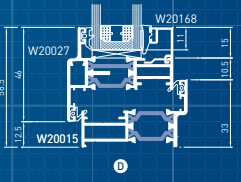



### HORIZONTAL VIEW




**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

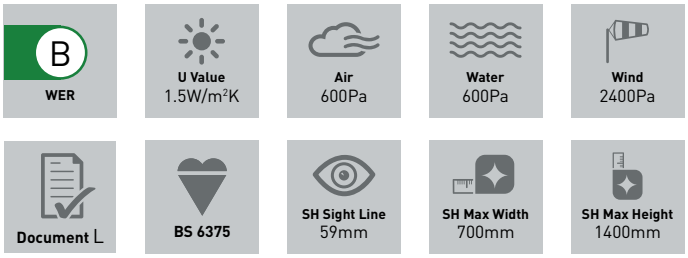
| | |
|---|---|
| **Frame Depth** | 47mm |
| **Glass** | 24mm, 28mm, 32mm & 36mm |

## 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

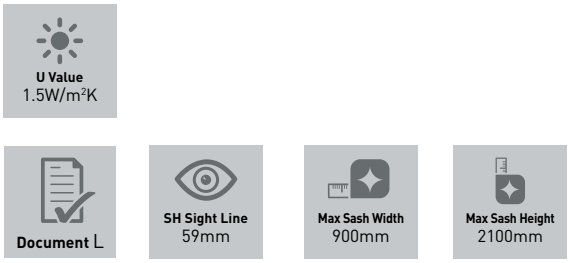
- Slim sightlines
- Tape or gasket glazed
- Multi point locking and face mounted shoot bolts

## 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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