

SMART ALITHERM HERITAGE 47

Technical Specification & Heritage Installation Detail

Project requirement: Replacement windows to existing heritage masonry/cemented openings, with no visible modern silicone or perimeter sealant to the external face. This document is a specification aid and schematic detail; final fabrication and fixing details must be confirmed against the current Smart Systems technical manual, approved drawings and site conditions.

1. System

- Smart Systems Alitherm Heritage 47 thermally broken aluminium window system.
- 47 mm frame depth; heritage-style slim sightlines suitable for conservation/refurbishment applications.
- Window configuration, opening lights, mullions/transoms and fixed lights to approved window schedule.
- Polyester powder-coated aluminium finish; colour to conservation approval / approved sample.

2. Glazing

- Double-glazed sealed units.
- Planitherm soft-coat low-emissivity glass, final glass type/thickness to be confirmed by the glass processor and approved thermal calculation.
- Warm-edge spacer bar to all sealed units.
- Argon gas filled sealed cavities.
- Sealed-unit overall thickness to suit the selected Alitherm Heritage 47 glazing arrangement; Smart lists 24, 28, 32 and 36 mm glazing options for the system.

3. Installation – heritage masonry/cemented frame

- Install into the existing prepared masonry/stone opening and recessed cement/mortar frame.
- No visible external silicone or modern perimeter sealant is to be applied to the face of the stone/masonry frame, subject to conservation officer approval.
- Window frames to be mechanically fixed through suitable concealed locations using corrosion-resistant fixings appropriate to the substrate.
- Frame to be accurately packed, plumbed, levelled and restrained without distorting the aluminium sections.
- Perimeter interface to provide the required air/water/weathering performance by an approved concealed method. Any sealant required within the proprietary window system or concealed construction joints shall remain compliant with the Smart Systems fabrication/installation requirements.
- External finish to be formed/reinstated in traditional cement/mortar to match the existing recessed frame, with no modern exposed sealant line.
- Existing masonry/stonework to be protected; any making-good to use compatible materials and finish.

4. Hardware

- Heritage-style handles and locking hardware to approved sample.
- Corrosion-resistant hardware suitable for the location.
- All opening restrictors, locks and stays to be coordinated with the final window schedule.

5. Performance / compliance

- System and fabrication to follow the current Smart Systems Alitherm Heritage Window technical manual and approved fabrication details.
- Final thermal performance to be confirmed from the actual glass make-up, spacer and frame configuration.

- Final structural, weathering, fixing and safety requirements to be checked against the project exposure, opening sizes, Building Regulations and local conservation requirements.

6. Site / approval notes

- Survey existing openings before manufacture; record opening width/height, reveal depth, sill condition, plumb and level.
- Confirm whether the existing cement/mortar frame is retained, repaired or locally rebuilt before installation.
- Submit final window elevations, frame sections, glazing make-up, colour, hardware and installation detail for approval before manufacture.
- Do not use the schematic drawing in this document as a fabrication drawing. Fabrication must use Smart Systems' current CAD/profile data and technical manual.

Item	Specified / to be confirmed
Window system	Smart Alitherm Heritage 47
Frame depth	47 mm
Glazing	Planitherm soft-coat low-E double glazing
Spacer	Warm-edge spacer bar
Cavity	Argon gas filled
External perimeter	No visible modern silicone/sealant to masonry/stone face
Interface	Existing cement/mortar recessed frame; concealed fixing/weathering strategy
Finish	Polyester powder coat; colour to approval

Manufacturer reference: Smart Systems publishes the Alitherm Heritage Window technical manual and Heritage window DWG/DXF/profile resources. Use the current manufacturer documents for fabrication, profile and system-joint requirements.

SCHEMATIC HERITAGE INSTALLATION DRAWING

Typical concept showing the Alitherm Heritage 47 window recessed into the existing cement/mortar frame. The drawing illustrates the intended heritage appearance and no-visible-seal principle; it is not a fabrication drawing.

SMART ALITHERM HERITAGE 47

TECHNICAL SPECIFICATION & INSTALLATION DETAIL (NO VISIBLE SEAL TO CEMENTED FRAME)

1. PRODUCT

Supply and install Smart Systems Alitherm Heritage 47 thermally broken aluminium window system. Designed for heritage and conservation applications to replicate traditional steel window aesthetics.

2. SYSTEM DESCRIPTION

- System: Smart Alitherm Heritage 47
- Frame depth: 47mm
- Sightline: 47mm (mullion) / 35.5mm (meeting stile)
- Construction: Aluminium, polyamide thermal break
- Finish: Polyester powder coat to any RAL colour
- Configuration: Fixed lights, casement or side hung as detailed on drawings.
- All aluminium extrusions to Smart Systems Alitherm Heritage 47 suite.

3. GLAZING SPECIFICATION

- Double glazed sealed units
- Outer pane: Planitherm soft coat Low-E glass
- Warm edge spacer bar
- Argon gas filled
- Overall sealed unit thickness: to suit system (24mm – 36mm as per Alitherm Heritage 47 glazing options)
- Glazing beads: Alitherm Heritage 47 internal bead – mitred corners.

4. PERFORMANCE (TYPICAL)

- Thermal Performance: Uw down to 1.5 W/m²K (with suitable glazing)
- Air Permeability: Class 4 (BS EN 12207)
- Water Tightness: E750 (BS EN 12208)
- Wind Resistance: Class C5 (BS EN 12210)

5. INSTALLATION REQUIREMENTS

- Windows to be installed in existing cemented masonry/stone openings.
- No external silicone or modern perimeter sealant to be applied to the face of the masonry/stone frame (no visible seal).
- Frames to be mechanically fixed through the jambs and head using stainless steel fixings suitable for the substrate.
- Perimeter gaps to be packed with non-absorbent packers to ensure alignment and stability.
- Internal perimeter to be finished with mortar/cement to match existing, formed back from the face of the stone/masonry in the traditional manner.
- External finish to match existing cemented recessed frame. No sealant to be visible.
- All works to be carried out in accordance with BS 8213-4, BS 5534 and manufacturer's installation guidelines.

6. HARDWARE

- Heritage style monkey tail/peardrop handles and stays as selected.
- Espag locking system.
- All hardware to be corrosion resistant.

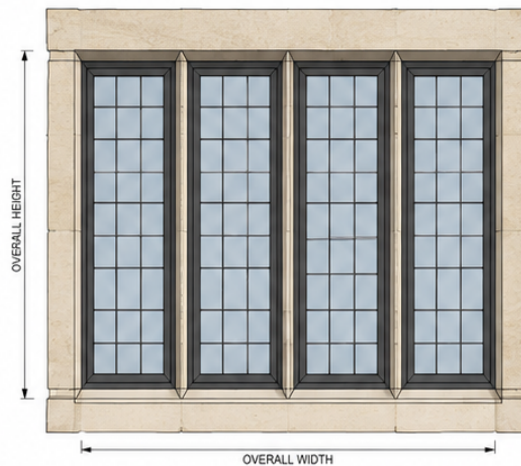
7. FINISH

- Polyester powder coated finish to aluminium profiles.
- Colour: As selected.

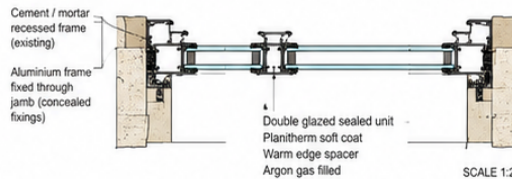
8. GENERAL

All materials, workmanship and installation to be in accordance with the relevant British Standards, manufacturer's recommendations and local authority conservation requirements.

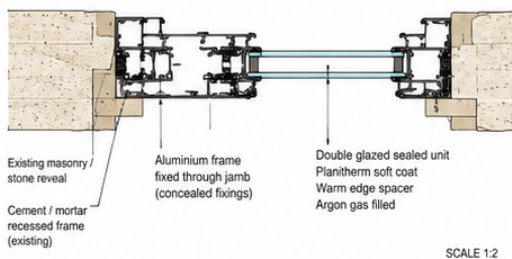
TYPICAL ELEVATION (EXTERNAL VIEW)



HORIZONTAL SECTION (THROUGH SILL)



TYPICAL PLAN SECTION (THROUGH JAMB)



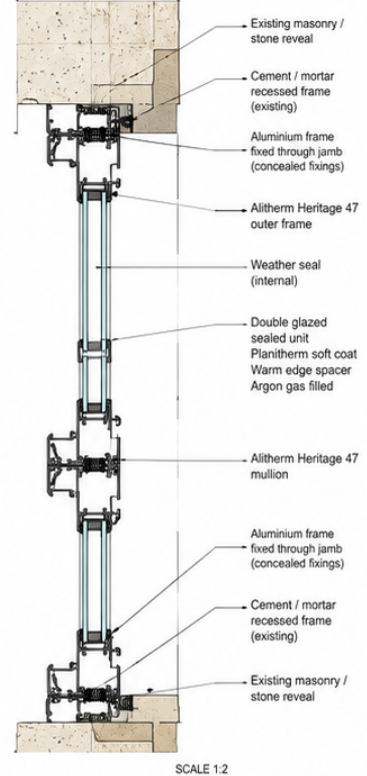
NOTES

- All dimensions to be checked on site.
- Drawings for illustration only – refer to Smart Systems Alitherm Heritage 47 fabrication manual for full details.
- Conservation officer / local authority to approve final details and finishes.

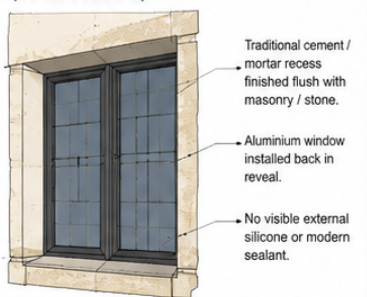
SYSTEM REFERENCE

Smart Systems
Alitherm Heritage 47
Heritage Aluminium Window System

VERTICAL SECTION (THROUGH MULLION)



INSTALLATION PRINCIPLE (NO VISIBLE SEAL)



All external joints to match existing traditional cemented appearance.

smart
architectural aluminium

Critical note: "No visible seal" should be read as no visible modern external perimeter silicone/sealant to the heritage masonry face. It should not be interpreted as a requirement to omit proprietary seals, gaskets, or concealed weather/air seals that are part of the window system or approved installation method.