

AA®720 Outward Opening Window Systems

Introduction

The AA®720 Series has been developed to meet the latest European requirements for thermal performance.

To enable complete flexibility of design, performance and cost, the AA®720 is a modular system providing incremental levels of thermal performance, starting with the highest - AA®720 HI Reflex^{Plus}, the AA®720 HI Reflex, AA®720 HI and AA®720 HW.

In addition there is the AA®720 SL Slimline Casement which offers narrow sightlines for both contemporary, residential and heritage applications, with a choice of flush or standard sash frames.

The 72mm profiles incorporate the very latest thermal technology including; extruded polyamide and patented thermal breaks, insulated centre seals and foam isolators.

As well as being fully integrated, the range can suite with Kawneer's curtain walling and framing products and is suitable for installation in low or high rise buildings for commercial and domestic new build or refurbishment projects.

Construction

Crimped or pinned with mechanical corner cleats. Corner braces are also used.

Weathering is achieved by the use of single and dual durometer, EPDM gaskets.

Pressure equalised system.

Configurations

As well as flexibility in performance, the AA®720 offers versatility in design with the range encompassing a wide variety of integrated window and door configurations.

Design considerations for the outward opening window range are:

- Top Hung
- Side Hung
- Vertical Pivot (and Offset Pivot)
- Horizontal Pivot
- Parallel Opening

For information on Kawneer's AA®720 Series Door Systems please refer to the Door Systems section.

Glazing

Glazing and panels up to 56mm thickness can be accommodated enabling the use of triple glazing for when there is a requirement for the very highest thermal and acoustic performance.

Security*

The AA®720 and AA®720 SL Casements and AA®720 Parallel have been independently tested to PAS 24:2016.

* Does not refer to standard hardware, security hardware required.



Independently Weather Performance Tested to BS 6375-1: 2015

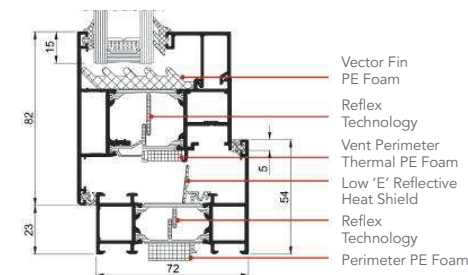
	Air Infiltration BS EN 12207	Watertightness BS EN 12208	Wind Resistance BS EN 12210
AA®720 Casement	Class 3-4 (600 Pa)	Class 9A (600 Pa)	Class E2400 (2400 Pa)
AA®720 SL Casement	Class 3-4 (600 Pa)	Class 9A (600 Pa)	Class E2400 (2400 Pa)
AA®720 Pivot	Class 3-4 (600 Pa)	Class 9A (600 Pa)	Class E2400 (2400 Pa)

All Windows comply with Operation and Strength Test BS 6375 Pt2: 2015

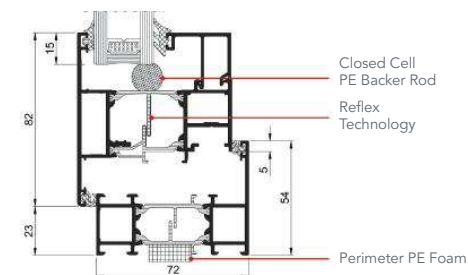
Details of the Kawneer product tests are available from the Technical Services Department at Runcorn.

Thermal Performance - Outward Opening

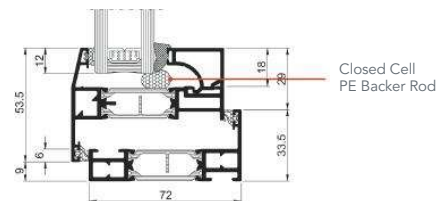
AA®720 HI Reflex^{Plus} Casement



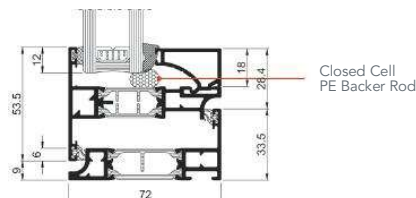
AA®720 HW Casement



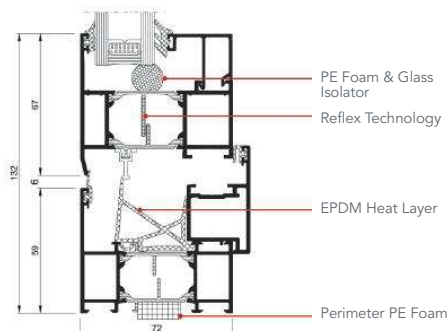
AA®720 SL Casement



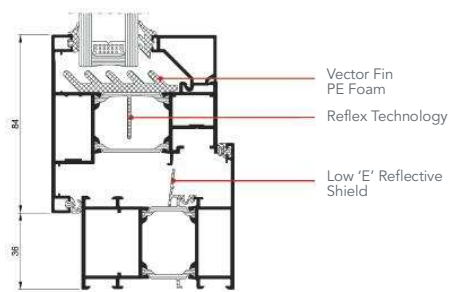
AA®720 SL Double Flush Casement



AA®720 HW Pivot



AA®720 HI Parallel



Thermal Performance

The AA®720 Casement, can be manufactured within 5 levels of thermal performance – providing flexibility in design, performance and cost.

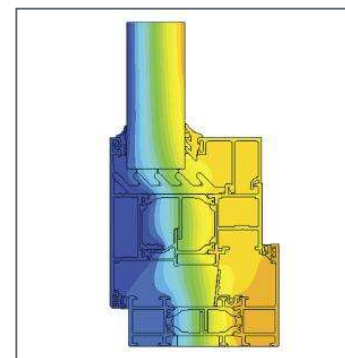
AA®720 HI Reflex^{Plus} – Highest Performance Level – Reflex Technology within the vent and frame profiles, closed cell PE vector fin glazing rebate foam, closed cell vent perimeter foam, closed cell frame perimeter foam insulation tape, low 'e' heat shield centre seal.

AA®720 HI Reflex – Reflex Technology within the vent and frame profiles, closed cell PE vector fin glazing rebate foam, closed cell vent perimeter foam, closed cell frame perimeter foam insulation tape.

AA®720 HI – Reflex Technology within the vent profile, closed cell PE vector fin glazing rebate foam, closed cell vent perimeter foam, closed cell frame perimeter foam insulation tape.

AA®720 HW – Reflex Technology within the vent profile, closed cell PE glazing rebate foam, closed cell frame perimeter foam insulation tape.

AA®720 SL – Standard polyamide thermal break within the vent profile, closed cell PE glazing rebate foam.



Thermal Evaluation of the AA®720 HI Reflex^{Plus} Casement Window

The AA®720 Reflex Technology

Due to the anticipated amendments to Approved Document L, and the continued market demands for high performance windows, Kawneer has developed a unique system it can apply to its polyamide thermal breaks to give further thermal improvements to the window, and reduce heat transfer through the profile.

The inclusion of a low emmissivity reflective foil to the thermal 'flags' allows the AA®720 Casement to achieve U-values as low as 1.0 W/m²K for a CEN size window with a warm edge spacer**

Additional Product Features

In addition to the features described, the AA®720 Casement Window offers market leading weight capabilities for a top hung window. With a capability of up to 130kg, high performance acoustic and/or security glass applications can be easily accommodated within the standard window without additional reinforcements or fabrication requirements.

With a choice of locking or non locking handles in a range of finishes, the system can be incorporated effectively in a number of applications.

The AA®720 Casement Window has been designed with flexibility and ease of fabrication as key requirements. The system provides the option of internal or external glaze options, to suit a variety of applications. The system incorporates a standard hardware groove, to provide cost effective locking hardware without compromising performance or security.

Performance Testing - Smoke Vent

The AA®720 open out casement window has been successfully tested to BS EN 12101-2, meeting smoke vent standards that are now a mandatory requirement, especially in high rise residential schemes.

The introduction of the Construction Products Regulations in 2013 has resulted in the need to CE mark any product placed onto the market that has a harmonised European standard.

Vertical options for top, side and bottom hung open out applications are available with a single or twin actuator offering opening widths of up to 900mm to meet required free area requirements.

	HI Reflex ^{Plus} Casement		HI Reflex Casement		HI Casement		HW Casement		SL Casement	
Glass	1.0 Ug*	0.6 Ug**	1.0 Ug*	0.6 Ug**	1.0 Ug*	0.6 Ug**	1.0 Ug*	0.6 Ug**	1.0 Ug*	0.6 Ug**
Overall Uw	1.3 W/m²K	1.0 W/m²K	1.4 W/m²K	1.1 W/m²K	1.4 W/m²K	1.1 W/m²K	1.5 W/m²K	1.2 W/m²K	1.4 W/m²K	1.1 W/m²K

Based on a 34mm Outer Frame/34mm Inside Glaze vent Combination

* Window Energy Ratings and U-values based on CEN size windows (1230mm x 1480mm) using 1.0 W/m²K double glazing with warm edge (0.048 W/m²K) spacer.

** U-values based on CEN size windows (1230mm x 1480mm) using 0.6 W/m²K triple glazing with warm edge (0.043 W/m²K) spacer.

AA®720 Standard Casement Window

Introduction

The AA®720 Casement Window is part of the AA®720 range of Windows and Doors. In line with the existing range, the AA®720 Casement is available in a range of increasing levels of thermal performance – incorporating Kawneer's latest Reflex unique thermal break technology.

The AA®720 Casement Windows are available as top hung or side hung windows and can be either internally or externally glazed. Additional advantages of the advanced thermal break technology include the options of dual colour finishes, to provide design flexibility in various applications.

Product Features and Benefits

- BRE Green Guide 'A' Rated Frame* for projects that require sustainable and environmental advantages
- Range of locking options available - for flexibility. Choose from standard Espagnolette locking to enhanced security in line with PAS 24:2016
- Option of Trickle Ventilation - can help meet the requirements of Document F
- Projected top hung or side hung or butt hinge options - total flexibility, suits most casement project applications
- Suites with the AA®720 series, AA®100/AA®110 Curtain Walling, 451PT Framing and Door Systems
- Offset handle position for side hung windows. Safety in use – suitable for 'Lifetime Homes' Specification
- Choice of restrictors available to 100mm. Design flexibility. Compliant with the HTM 55 regulations and BS 8213 of 100mm initial opening
- Folding Openers with Link Bars offer safety in use
- Maximum size 2300mm(W) x 2500mm(H) - suitable in even the most demanding of applications
- Suited hardware - compatible hardware to compliment the AA®720, AA®540 and AA®3720 ranges
- Outside glaze option (not PAS 24 compliant)

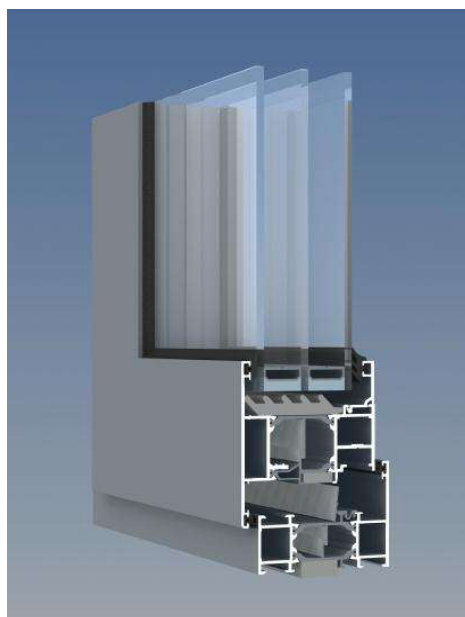
Security**

The AA®720 Casement Window has been independently tested to PAS 24:2016.

** Does not refer to standard hardware, security hardware required.



* Corresponds to the BRE Global Green Guide online generic specification for windows and achieves a summary rating of A for non-domestic schemes. www.thegreenguide.org.uk
Element Number 1231500007



AA®720 HI Reflex® Casement Window

Casement Product Selector

Performance	AA®720 Casement*	AA®720 SL Casement	AA®541 Casement
Weather Performance (BS 6375)	■	■	■
Security to PAS 24:2016	■	■	■
Uw (Double Glazing)	1.5 W/m²K	1.6 W/m²K	1.8 W/m²K
Uw (Double Glazing with warm edge spacer)**	1.3 W/m²K	1.4 W/m²K	1.6 W/m²K
Uw (Triple Glazing)	1.2 W/m²K	1.2 W/m²K	1.5 W/m²K
Uw (Triple Glazing with warm edge spacer)***	1.0 W/m²K	1.1 W/m²K	1.3 W/m²K
Special Features			
BRE Green Guide Rating ^o	A	A	A+
Design Features			
Dual Colour Option	■	■	■
Composite Windows	■	■	■
Ribbon Windows	■	■	■
Punched Out Openings	■	■	■
Triple Glazing	■	■	■+
Infills:	upto 56mm	upto 42mm	upto 39mm
Standard Hardware Groove	■	■	■
Multi-Point / Single Sided Locking Options	■	■	■
100mm Restriction	■	■	■
Trickle Ventilation	■	■	■
Locking Handles	■	■	■
Folding Openers	■	■	■
Cockspur Handle	■	■	■
Espagnolette Handle	■	■	■
Friction Hinges	■	■	■
Butt Hinges	■	■	■
Variable Angle Corner Post	■	■	■
System Depth			
54mm	■	■	■
72mm	■	■	■
Maximum Window Sizes^o			
Projected Top Hung ^o	2300mm(W) x 2500mm(H)	1500mm(W) x 1500mm(H)	1800mm(W) x 1800mm(H)
Projected Side Hung ^o	845mm(W) x 1900mm(H)	900mm(W) x 1500mm(H)	845mm(W) x 1800mm(H)
Top Hung with Butt Hinges ^o	1800mm(W) x 1600mm(H)		1800mm(W) x 1600mm(H)
Side Hung with Butt Hinges ^o	900mm(W) x 1900mm(H)		900mm(W) x 1800mm(H)
Applications			
New Build	■	■	■
Refurbishment	■	■	■

Notes:

* Based on the AA®720 HI Reflex^{plus}

** Window Energy Ratings and U-values based on CEN size windows (1230mm x 1480mm) using 1.0 W/m²K double glazing with warm edge (0.048 W/m²K) spacer.

*** U-values based on CEN size windows (1230mm x 1480mm) using 0.6 W/m²K triple glazing with warm edge (0.043 W/m²K) spacer.

+ Optional/Limited

o Height and Width Limitations vary dependant on glass weights and hardware requirements – please check with the Technical Services Department

o Corresponds to the BRE Global Green Guide online generic specification for windows and achieves a summary rating of A and A+ for non-domestic schemes. www.thegreenguide.org.uk Element Number 1231500011 (A+) Element Number 1231500007 (A)

AA®720 Standard Casement Window Applications

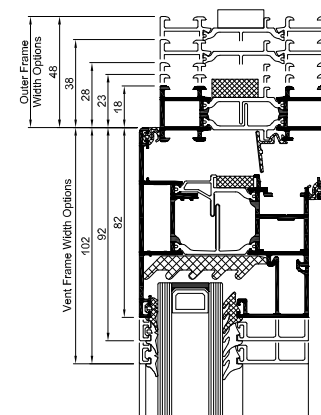
Typical Elevations

Full details can be downloaded from our website www.kawneer.co.uk

Elevation	Title	Website CAD ref. no.			
		AA®720 HI Reflex ^{plus}	AA®720 HI Reflex	AA®720 HI	AA®720 HW
	1, 2				
	3, 4	H24-3	H4-3	H4-3	H4-53
	5, 6	H24-5	H4-5	H4-5	H4-55
	7, 8	H24-6	H4-6	H4-6	H4-56
	9	H24-9	H4-9	H4-9	H4-59
	10	H24-7 & H24-8	H4-7 & H4-8	H4-7 & H4-8	H4-57 & H4-58
	11	H24-10	H4-10	H4-10	H4-60
	12	H24-11	H4-11	H4-11	H4-61
	13	H24-12	H4-12	H4-12	H4-62
	14, 15	H24-13	H4-13	H4-13	H4-63
	16, 17	H24-13	H4-13	H4-13	H4-63
	18, 19	H24-14	H4-14	H4-14	H4-64
	20, 21	H24-14	H4-14	H4-14	H4-64

Elevation	Title	Website CAD ref. no.			
		AA®720 HI Reflex ^{plus}	AA®720 HI Reflex	AA®720 HI	AA®720 HW
	22	H24-15	H4-15	H4-15	H4-65
	23	H24-16	H4-16	H4-16	H4-66
	24	H24-17	H4-17	H4-17	H4-67
	25	H24-18	H4-18	H4-18	H4-68
	26, 27	H24-19	H4-19	H4-19	H4-69
	28	H24-20	H4-20	H4-20	H4-70
	29	H24-21	H4-21	H4-21	H4-71
	30	H24-23	H4-23	H4-23	H4-73
	31	H24-24	H4-24	H4-24	H4-74

Frame and Vent Size Options

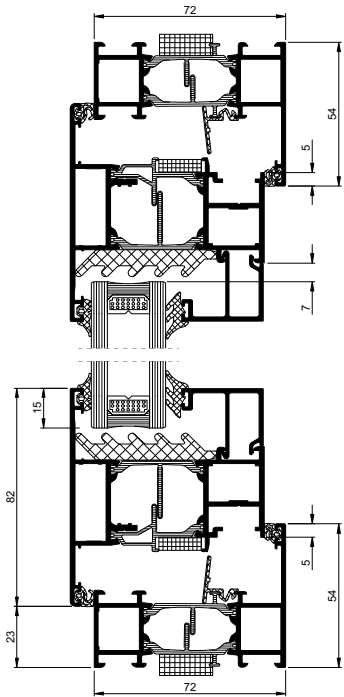


AA®720 Standard Casement Window

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AA®720 HI Reflex^{Plus}

Head & Cill Detail



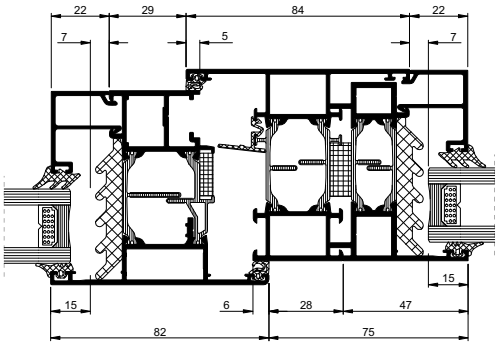
H24-13

AA®720 Standard Casement Window

Full details can be downloaded from our website www.kawneer.co.uk

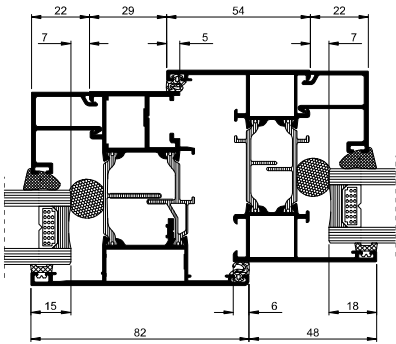
AA®720 HI Reflex^{Plus}

Vent/Fixed Light Muntin Detail



H24-18

Vent/Fixed Light Z-Muntin Detail



H18-01