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.*

Secured by Design

SBD

Official Police Security Initiative

Independently Weather Performance Tested to BS 6375-1: 2015

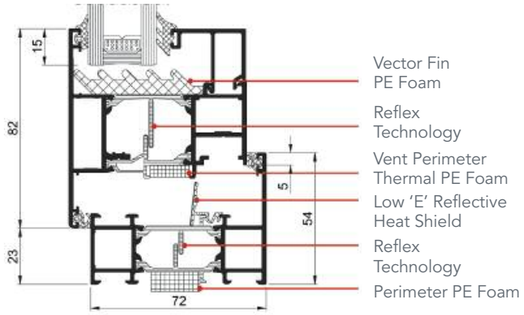
	Air Infiltration BS EN 12207	Watertightness BS EN 12208	Wind Resistance BS EN 12210
AA®720 Casement	Class 3-4 (600 Pa)	Class 9A (600 Pa)	Class E2400 (2400 Pa)
AA®720 SL Casement	Class 3-4 (600 Pa)	Class 9A (600 Pa)	Class E2400 (2400 Pa)
AA®720 Pivot	Class 3-4 (600 Pa)	Class 9A (600 Pa)	Class E2400 (2400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

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

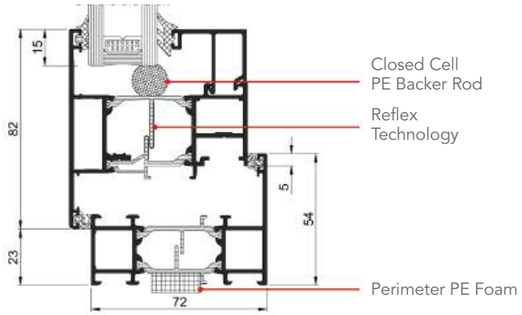
Details of the Kawneer product tests are available from the Technical Services Department at Runcorn.

Thermal Performance - Outward Opening

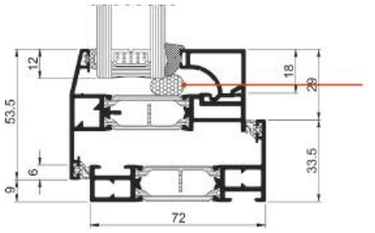
AA®720 HI Reflex^{Plus} Casement



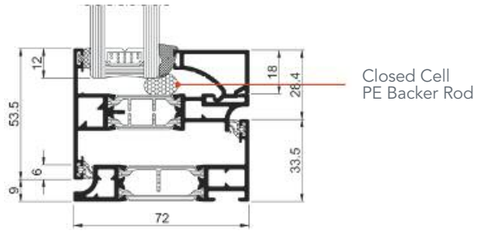
AA®720 HW Casement



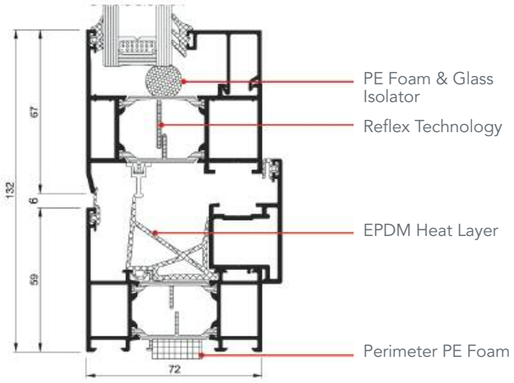
AA®720 SL Casement



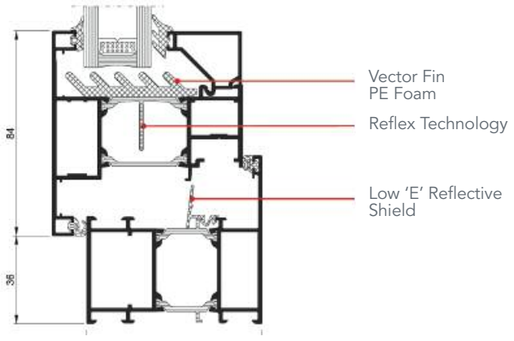
AA®720 SL Double Flush Casement



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.

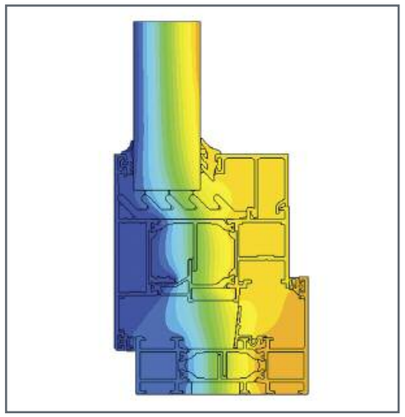
AA®720 HI Reflex^{Plus} – Highest Performance Level – Reflex Technology within the vent and frame profiles, closed cell PE vector fin glazing rebate foam, closed cell vent perimeter foam, closed cell frame perimeter foam insulation tape, low 'e' heat shield centre seal.

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 it's polyamide thermal breaks to give further thermal improvements to the window, and reduce heat transfer through the profile.

The inclusion of a low emmisivity 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.*