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AN ARCONIC COMPANY

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Other brochures available on request from Kawneer are:

- Architectural Aluminium Systems Finishes
- Door Systems
- Curtain Wall Systems
- Unitised Curtain Wall Systems
- AA®130 Brise Soleil System
  Solar Shading for Reduced Solar Heat Gain
- Window Systems
- Door and Window Sliding Systems
- Residential Aluminium Glazing Systems
- Specialist Horizontal Sliding Window Solutions for your Healthcare Project
- Fire Resistant Systems
- The Architects Guide to Aluminium in Building
- Sustainability
- Maintenance and Cleaning

Kawneer's continuous development and engineering programmes may bring about product changes. Kawneer reserves the right to introduce without notice such changes which will not detract from the product's performance
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February 2017

Front Cover: Fenstanton Primary School at City Heights Academy, Lambeth. Architect: Jestico + Whiles

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Framing Systems



ARCHITECTURAL ALUMINIUM GLAZING SYSTEMS

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Facing page
90 Hills Road, Cambridge
Architect: Barber Casanovas Ruffles

Framing Systems Product Selector

	451PT Framing	AA®4001 Semi-unitised Framing
Applications		
Commercial	■	
Retail	■	
Education	■	■
Key Features		
Dual colour option	■	■
Triple Glazing		■
Internal or External Glazing	■	■
100mm vent restriction	■*	■
Integral Vent		■
Choice of transoms	■	■
Trickle ventilation	■	■
Suites with AA®720 System	■	
Suites with AA®540 System	■	
Suites with AA®3610 Vertical Sliding Window	■	
Suites with 190/350 Door Systems	■	■
Suites with AA®130 Brise Soleil	■	■
Special Applications		
SCAPE	■	■
Performance		
Document F Compliant	■	■
Document L Compliant	■	■
Accessories		
Locking Handle	■*	■
Espagnolette Locking	■*	■
Multi-point Locking	■*	
Folding Opener	■*	■
Restrictors available	■*	■

Notes:
** Only when suited with AA®720 or AA®540 Systems*



Fenstanton Primary School at City Heights Academy, Lambeth
Architect: Jestico + Whiles
Photo: ©Tim Crocker

451PT Framing System

Introduction

The thermally efficient 451PT Framing System was designed in close collaboration with Scape. The system meets the needs of the education, refurbishment and new build markets. It is also suitable for use on commercial projects in the public sector and is also ideal for large display windows in the retail sector.

The 451PT Framing System provides slimline, dual colour, and multi-glazed framing modules of varying widths and heights that feature fixed lights, opening vents and insulated panels.

Product Features and Benefits

- Meets the thermal requirements of current building regulations
- Narrow sightlines of 50mm ensures visually pleasing aesthetics
- Can be used for large window displays, an excellent tried and tested solution for retail applications
- Flush glazed therefore easy to apply
- Concealed drained therefore moisture infiltration directed to the outside of the building
- Suites with AA®720 and AA®540 Series Windows, AA®3610 Vertical Sliding Window and all Door Systems

Construction

The 451PT Framing System uses shear block construction where contoured shear blocks are screw fixed to the verticals, forming a spigot for horizontal members.

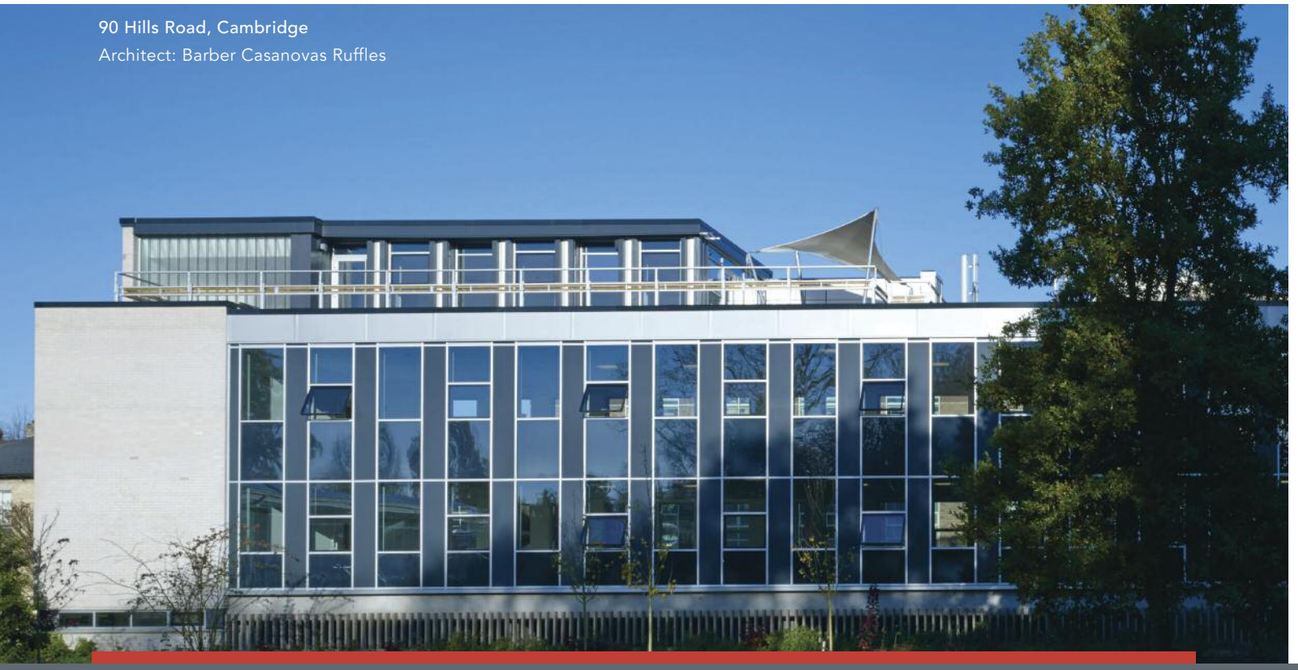
Glazing

Glazing options between 24mm and 28mm can be accommodated.

Independently Weather Performance Tested to BS 6375-1: 2015

	Air Infiltration BS EN 12207: 2000	Watertightness BS EN 12208: 2000	Wind Resistance BS EN 12210: 2000
451PT Framing	Class 4 (600 Pa)	Class 9A (600 Pa)	Class E2400 (2400 Pa)

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

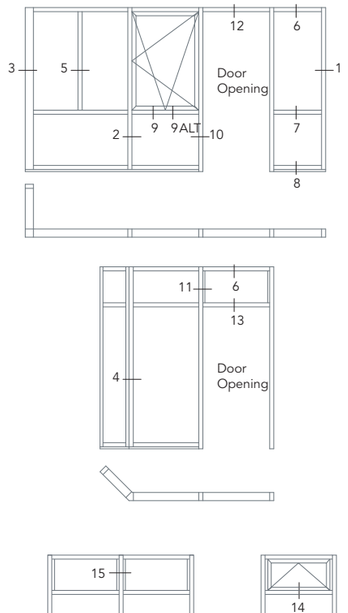


90 Hills Road, Cambridge
Architect: Barber Casanovas Ruffles

451PT Framing System Applications

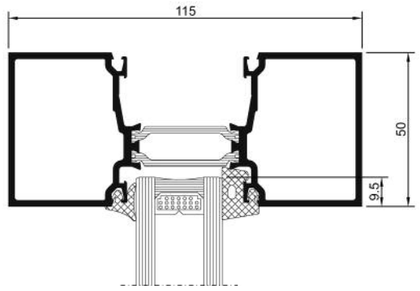
Typical Elevations

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



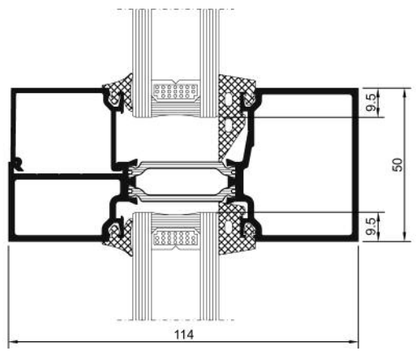
Elevation	Title	Website CAD ref. no.
1	Jamb	451PT 6.01
2	Mullion	451PT 6.02
3	90° Mullion	451PT 6.05
4	135° Mullion	451PT 6.06
5	Intermediate Mullion	451PT 6.07
6	Head Detail	451PT 6.08
7	Transom	451PT 6.09
8	Cill Detail	451PT 6.10
9	Transom with Window Adaptor (AA®720)	451PT 6.11
9 Alternative	Transom with Window Adaptor (AA®540)	451PT 6.15
10	Door Jamb	451PT 6.12
11	Door Jamb with Fanlight	451PT 6.13
12, 13	Door Head Rail	451PT 6.14
14	Door Jamb with Opening Fanlight (AA®720)	451PT 6.16
15	Jamb Fanlight back to back Door	451PT 6.17
	Framing Options	451PT 7.01
		451PT 7.02
		451PT 7.03

Typical Head Detail



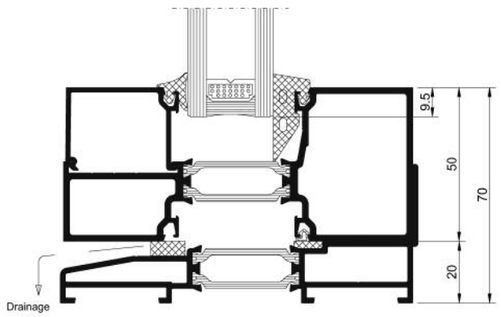
6.08

Typical Transom Detail



6.09

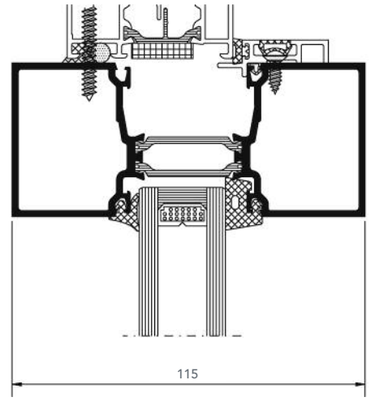
Typical Cill Detail



6.10

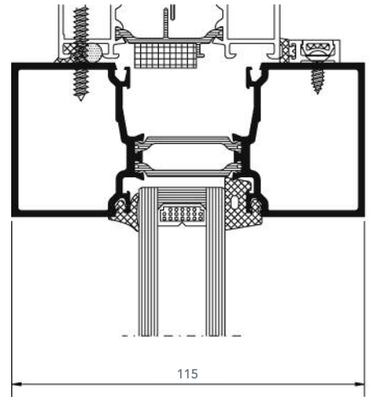
451PT Framing System
Full details can be downloaded from our website www.kawneer.co.uk

Transom with Window Adaptor (AA®540)



6.15

Transom with Window Adaptor (AA®720)



6.11



The Shoe Factory, Leicester

Architect: Metropolis Architecture
Photograph supplied by Pearmain Ltd

451PT Framing System

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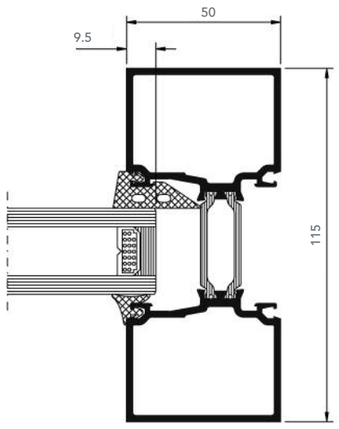
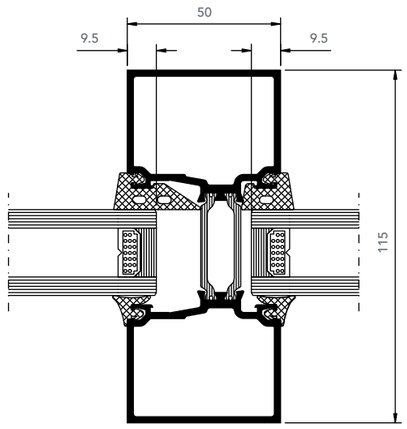
Framing Jamb



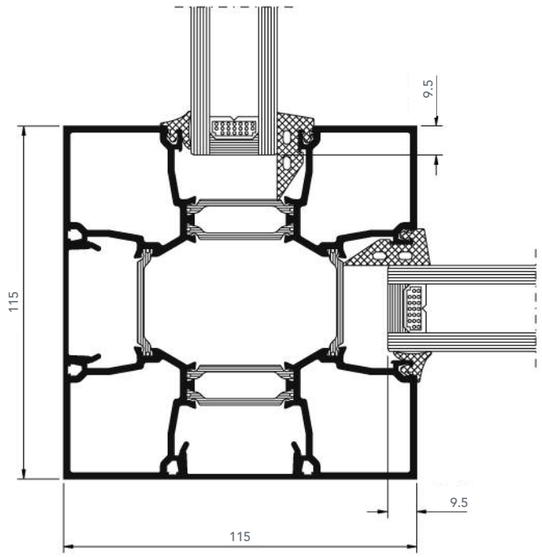
6.01

Framing Mullion



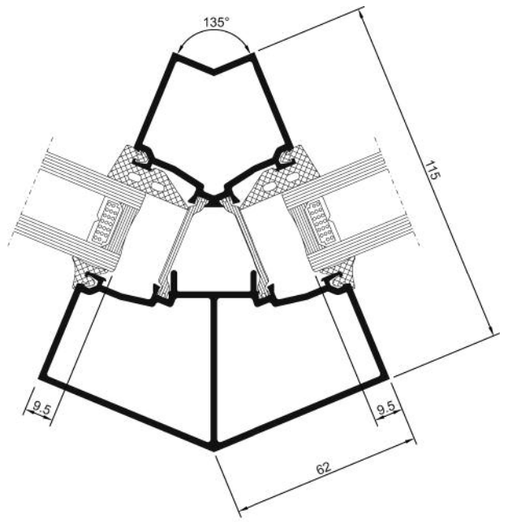
6.02

90° Mullion



6.05

135° Mullion

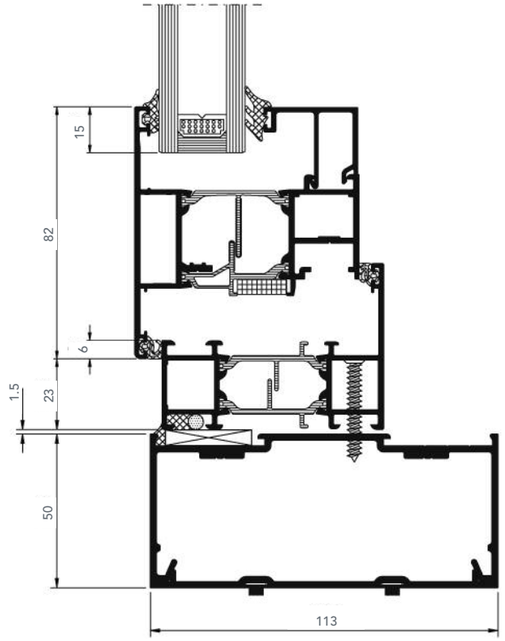


6.06

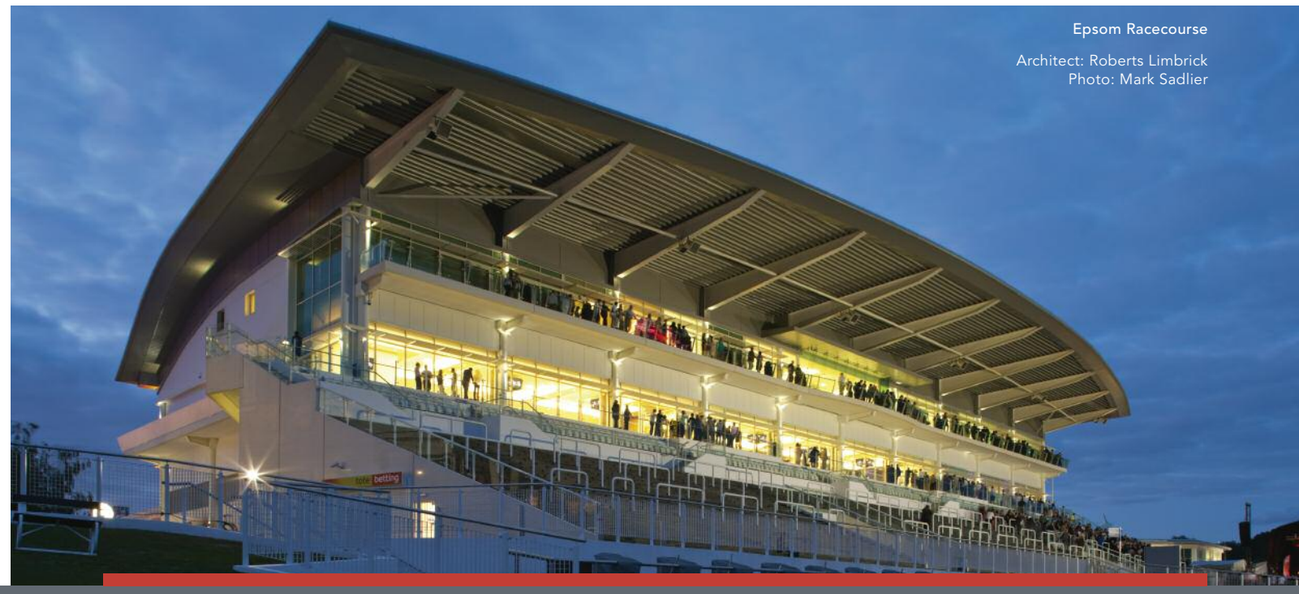
451PT Framing System

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

Framing System Door Transom with Opening Vent



6.16



Epsom Racecourse

Architect: Roberts Limbrick
Photo: Mark Sadlier

AA®4001 Semi-unitised Framing System

Introduction

The AA®4001 Semi-unitised Framing System, designed in line with the DfE's 'Building Schools For The Future' is compliant with current building regulations, acoustics BB93 and environmentally friendly classrooms BB95.

As well as traditional stick build and semi-unitising, the system offers the advantage of fully unitised assembly and also enables it to meet the demands of fast track work schedules and restricted working conditions.

The AA®4001 Semi-unitised Framing System is adaptable to any new construction project, and due to the fact that it can be quickly installed in occupied buildings with minimal disturbance, the system is ideal for refurbishment projects.

Product Features and Benefits

- Semi-unitised fabrication and assembly in the factory ensures safer and faster installation off-site
- Selection of mullion and transom profiles ensure maximum flexibility in design
- One vent profile for both open in and open out options resulting in a streamlined offer
- Fixed bead offering good security
- Snap on glazing beads accommodates insulated panels up to 72mm
- Choice of internal and external bead glazing for fixed applications
- Concealed vent, top hung open out and bottom hung open in options are available offering optimum ventilation options

Construction

The AA®4001 Semi-unitised Framing System uses shear block construction and is a fully drained and pressure equalised system offering optimal weather performance. Concealed vents are cleated and crimped.

Glazing

Glazing options between 22mm and 38mm can be accommodated.

Independently Weather Performance Tested to BS 6375-1: 2015

	Air Infiltration BS EN 12207: 2000	Watertightness BS EN 12208: 2000	Wind Resistance BS EN 12210: 2000
AA®4001 Semi-unitised Framing	Class 4 (600 Pa)	Class 9A (600 Pa)	Class E2400 (2400 Pa)

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

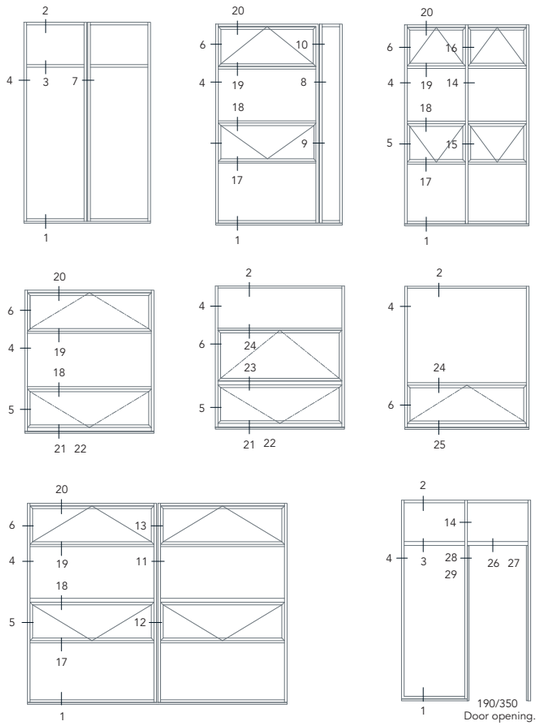


Willowgarth Primary School, Barnsley
Architect: Aedas Architects

AA®4001 Semi-unitised Framing System Applications

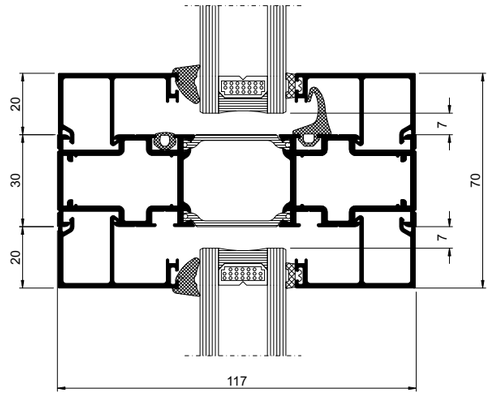
Typical Elevations

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



Elevation	Title	Website cad ref no.
1, 2	Cill and head fixed light	H02.01
3	Transom - fixed light above fixed light	H03.01
4	Jamb - fixed light	H04.01
5	Jamb - open in vent	H05.01
6	Jamb - open out vent	H06.01
7	Coupling Mullion - fixed light	H07.01
8	Coupling Mullion - fixed light	H08.01
9	Coupling Mullion - open vent/fixed light	H09.01
10	Coupling Mullion - open vent/fixed light	H10.01
11	Coupling Mullion - fixed light	H11.01
12	Coupling Mullion - open in vent/open in vent	H12.01
13	Coupling Mullion - open out vent/ open out vent	H13.01
14	Mullion - fixed light	H14.01
15	Mullion - open in vent/open in vent	H15.01
16	Mullion - open out vent/open out vent	H16.01
17	Transom - open in vent above fixed light	H17.01
18	Transom - fixed light above open vent	H18.01
19	Transom - open out vent above fixed light	H19.01
20	Head - open out vent	H20.01
21	Cill - open in vent	H21.01
22	Cill - open in vent	H22.01
23	Transom - open out vent above open out vent	H23.01
24	Transom - fixed light above open out vent	H24.01
25	Cill - open out vent	H25.01
26	Transom - fixed light above single action door	H26.01
27	Transom - fixed light above double action door	H27.01
28	Jamb - fixed light above single action door	H28.01
29	Jamb - fixed light above double action door	H29.01

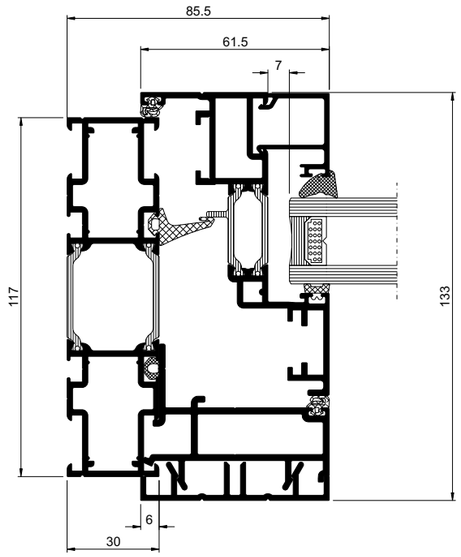
Transom – Fixed Light above Fixed Light

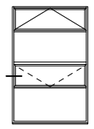




H03.01

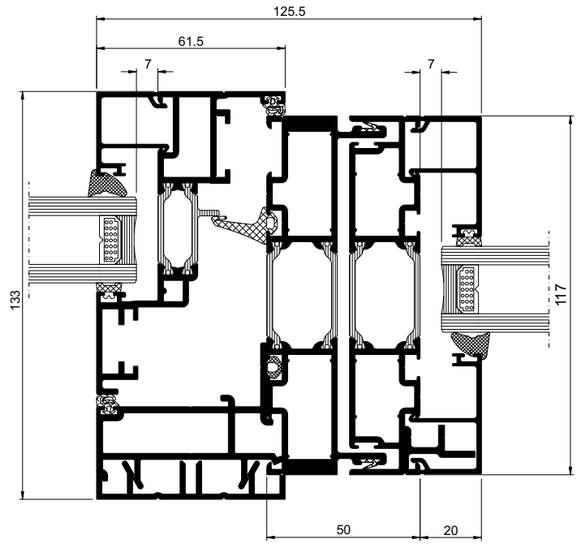
Jamb - Open in Vent

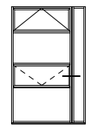




H05.01

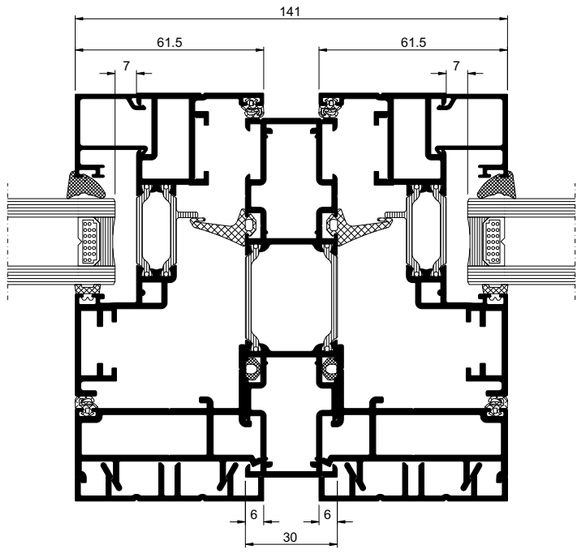
Coupling Mullion – Open In Vent/Fixed Light

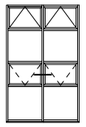




H09.01

Mullion – Open In Vent/Open In Vent

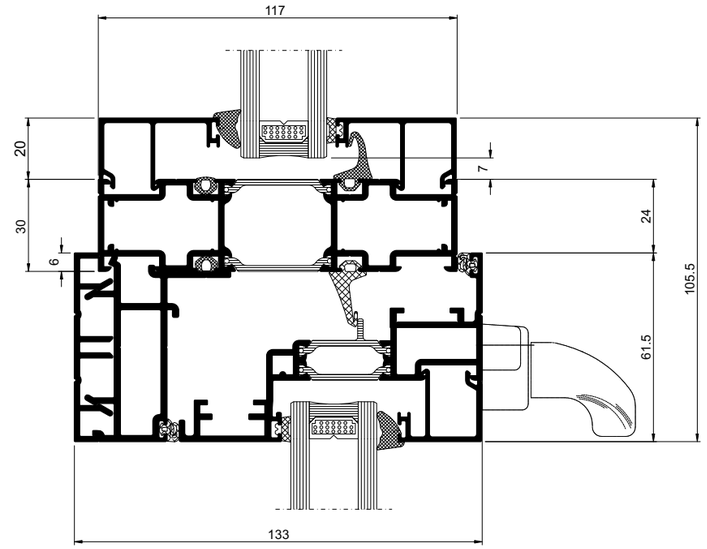


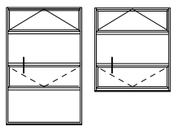


H15.01

AA®4001 Semi-unitised Framing System
Full details can be downloaded from our website **www.kawneer.co.uk**

Transom – Fixed Light above Open In Vent





H18.01

Supporting Your Projects



Authorities

ISO 9001
Quality Management System

BS EN 12020
Extruded precision aluminium profiles

BS EN 12206-1
Paint and varnishes. Coating of aluminium and aluminium alloys for architectural purposes

BS 3987
Specification for anodic coatings

BS 6375 Part 1
Classification for weathertightness

BS 6375 Part 2
Specification for operation and strength

BS 4873
Specification for aluminium alloy windows and doorsets

BS 4255 Part 1
Specification for non-cellular gaskets

A full range of guaranteed colours available

Kawneer Permacover™ is a high quality polyester powder paint finish, offering a wide range of solid and metallic colours providing outstanding resistance to environmental conditions. Kawneer Permacover™ has a 15 year gloss and 30 year matt and metallic guarantees subject to application and Kawneer acceptance in marine, industrial, swimming pools or other aggressive atmospheres.

To ensure the highest quality finish, powder coating is carried out in house as part of our single-source responsibility.

Kawneer Permanodic® is a range of subtle anodised colours which have been specifically developed for architectural glazing systems. Kawneer Permanodic® is a tried and tested anodising process, proven in accelerated laboratory tests, extensive field trials and contract experience. Subject to compliance with Kawneer's requirements, a 25 year finishes guarantee can be obtained.

Project Assistance

Kawneer's regionally based team of Architectural Advisers and the Architectural Services Team based at our Head Office in Runcorn are able to provide project advice and support:

Tel: 01928 502604 / Fax: 01928 502512
Email: kawneerAST@arconic.com

Information on Kawneer's extensive range of Curtain Wall, Window, Framing, Door, Fire Resistant and Sliding Solutions can also be obtained from our Head Office by calling:

Tel: 01928 502612

Kawneer UK Ltd is part of Arconic Building and Construction Systems, and enjoys the extensive resources of the entire Arconic organisation, allied to the specific glazing systems experience of Kawneer's many operations around the world. As a result of this our partners and customers have direct access to one of the largest pools of technical expertise in the construction industry.



90 Hills Road, Cambridge
Architect: Barber Casanovas Ruffles

Q.A. INSPECTION PROCEDURES PHASE 1 (Windows)

	Item	Test/Inspection Required	Frequency	Checked By
1	Surrounding structure in place and adequate	Check the supporting structure is in place, undamaged and suitable for fixing into.	Every frame before installation	Jointly by site supervisor and the M.C.
2	Datums and frame positions agreed and available	Check that any grid lines/datums/frame positions are available.	Every opening/frame position	Jointly by site supervisor and the M.C.
3	Site condtions suitable for works to commence	Check the surrounding area is clear of other trades, debris and there equipment/materials.	All areas before installation	Jointly by site supervisor and the M.C.
	Hold point until the above has been checked			
4	Correct fixings and lugs available	Check the fixings and lugs available on site are as detailed in the specification	Every frame before installation	Jointly by the site supervisor and the installers fixing the frame
5	Fixings/lugs at the correct centres. 150mm from the corners and the mullions/transoms.	Check the lugs are positioned as the centres noted	Every frame during installation	Jointly by the site supervisor and the installers fixing the frame
6	Fixings/lugs at the correct centres. 400mm Maximum centres inbetween	Check the lugs are positioned as the centres noted	Every frame during installation	Jointly by the site supervisor and the installers fixing the frame
7	Frames lined and levelled	Check for Plumb, Level and offsets against the site grids	Every frame before installation	Jointly by the site supervisor and the installers fixing the frame
8	No frame damage	Visibly examine the frame sections for scratches or damage	All frames	The installer during installation and by the supervisor prior to handover to the M.C.
9	All perimerter fixings in place	Check all the lugs are fully fixed with the correct fixing	Every frame during and after installation	The installer during installation and by the supervisor prior to handover to the M.C.
	Q.A. Manager to check the above items during site inspection visit's			

Q.A. INSPECTION PROCEDURES PHASE 2 (Windows)

	Item	Test/Inspection Required	Frequency	Checked By
1	Correct glass for the location	Check the glass specification on the label matches the specification on the drawing for the position it is being fitted.	Every frame before and during glass installation	Jointly by the site supervisor and the installers fixing the frame
2	Correct glazing support trays fitted	Check the glazing trays fitted are the system supplied type and fitted per as the manual	Every frame before and during glass installation	Jointly by the site supervisor and the installers fixing the frame
	Hold point until the above has been checked			
3	Packers support both panes on the DGU	Check both panes of the DGU are supported by the glass packers and the glazing support	Every DGU before and during glass installation	The installer during installation and by the supervisor prior to handover to the M.C.
4	Glass free from damage	Visibly examine the glass for scratches or damage	Every DGU before and after installation	The installer during installation and by the supervisor prior to handover to the M.C.
	Louvres free from damage	Visibly examine the louvres for scratches or damage	Every opening before and after installation	The installer during installation and by the supervisor prior to handover to the M.C.
6	Glass labels removed	Check the glass label and the glue residue is removed only after the glass specification has been checked.	Every DGU before after installation	The installer during installation and by the supervisor prior to handover to the M.C.
7	Glazing beads fitted straight	Check the glazing beads are fully engaged and not twisted	Every frame after gasketing has been completed	The installer during installation and by the supervisor prior to handover to the M.C.
8	Wedge gasket installed the correct length and without ripples	Check the wedge gasket has been installed with an allowance for shrinkage and smoothed out against the frame	Every frame after gasketing has been completed	The installer during installation and by the supervisor prior to handover to the M.C.
9	Opening vents operate freely	Check the vent opens and closes without catching, the handle locks and the pins fully locate.	Every frame after gasketing has been completed	The installer during installation and by the supervisor prior to handover to the M.C.
	Q.A. Manager to check the above items during site inspection visit's			

Q.A. INSPECTION PROCEDURES PHASE 3 (Windows)

	Item	Test/Inspection Required	Frequency	Checked By
	Weather conditions suitable	Check the temperature is above 5 degrees and the frame and substrate are dry	On commencement and at regular intervals	Jointly by the site supervisor and the installers fitting the EPDM
	Hold point until the above has been checked			
	EPDM Continuous around the frame were possible	Check the EPDM is in one piece or has the minimum of joints the application allows	Every frame during and after EPDM installation	The installer during installation and by the supervisor prior to handover to the M.C.
	Correct lapping of the EPDM	Check the EPDM has sufficient lap onto the adjacent surfaces and any joints that have had to be introduced	Every frame during and after EPDM installation	The installer during installation and by the supervisor prior to handover to the M.C.
	100mm on Primed concrete, Cement board, concrete block and brickwork			
	25mm on steelwork, window and curtain wall frames			
	50mm EPDM to EPDM			
	All joints are secure	Check the integrity of any joints.	Every frame during and after EPDM installation	The installer during installation and by the supervisor prior to handover to the M.C.
	EPDM is free from damage	Check the EPDM is intact and free from any site contaminations	Every frame during and after EPDM installation	The installer during installation and by the supervisor prior to handover to the M.C.
	Q.A. Manager to check the above items during site inspection visit's			

Q.A. INSPECTION PROCEDURES PHASE 4 (Windows)

	Item	Test/Inspection Required	Frequency	Checked By
1	Cills fitted were required	Check the cills are fitted, are the correct length, the correct projection and are undamaged	Every frame during and after installation	The installer during installation and by the supervisor prior to handover to the M.C.
2	Cill fixing screws touched up	Check the cill fixing screws have had the heads painted in a cordinating colour	Every frame during and after installation	The installer during installation and by the supervisor prior to handover to the M.C.
3	Opening vents restricted	Check the vents are restricted to 100mm.	Every frame after installation	The installer after installation and by the supervisor prior to handover to the M.C.
4	Wedge gaskets even and fully located	Check the wedge gaskets are inserted fully and smoothed out	Every frame after installation	The installer after installation and by the supervisor prior to handover to the M.C.
5	Perimeter tolerances are not excessive	Check the perimeter tolerances will allow for a complete seal	Every frame after installation	The installer during installation and by the supervisor prior to handover to the M.C.
6	Sealant applied all round the frame	Check that the perimeter seal is continuous and has been smoothed out	Every frame after installation	The installer during installation and by the supervisor prior to handover to the M.C.
7	Protective tape removed	Remove the protective tape after handover, unless instructed by the main contarctor to leave it on for their removal at a later date.	Every frame after installation	The installer after installation
	Q.A. Manager to check the above items during site inspection visit's			