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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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Framing 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



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
- Suits 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

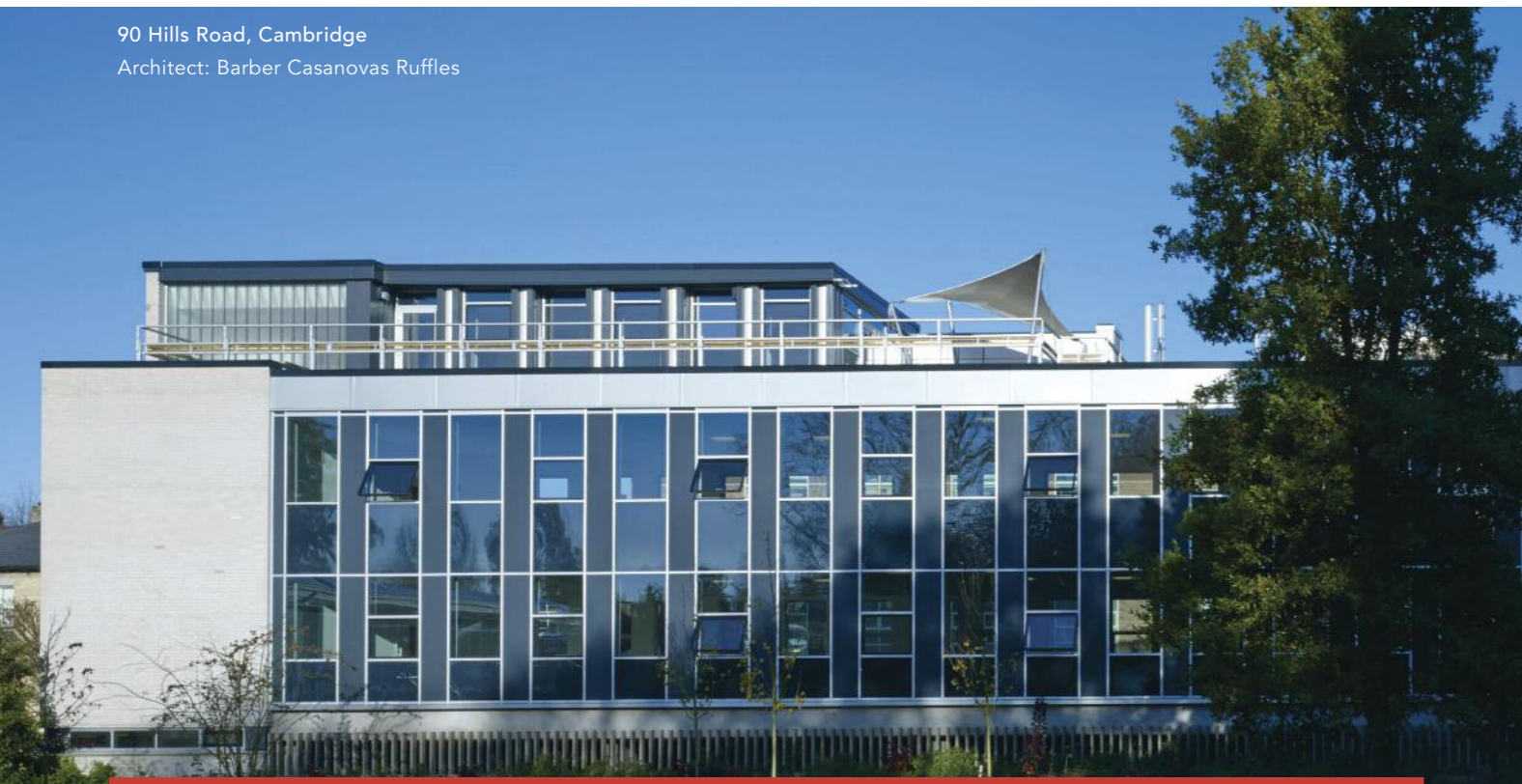
Glazing options between 24mm and 28mm can be accommodated.

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.

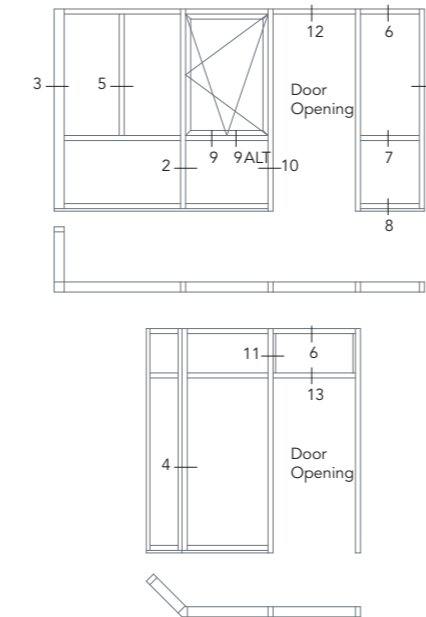
90 Hills Road, Cambridge
Architect: Barber Casanovas Ruffles



451PT Framing System Applications

Typical Elevations

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

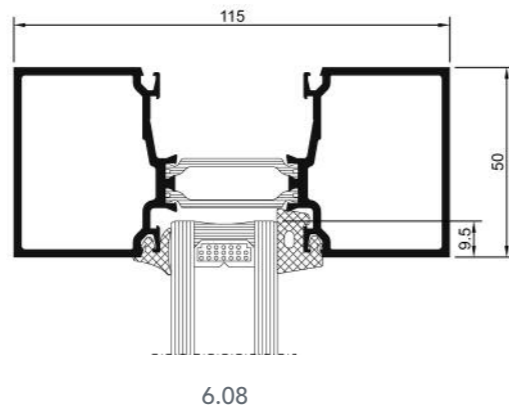


Elevation	Title	Website CAD ref. no.
1	Jamb	451PT 6.01
2	Mullion	451PT 6.02
3	90° Mullion	451PT 6.05
4	135° Mullion	451PT 6.06
5	Intermediate Mullion	451PT 6.07
6	Head Detail	451PT 6.08
7	Transom	451PT 6.09
8	Cill Detail	451PT 6.10
9	Transom with Window Adaptor (AA®720)	451PT 6.11
9 Alternative	Transom 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

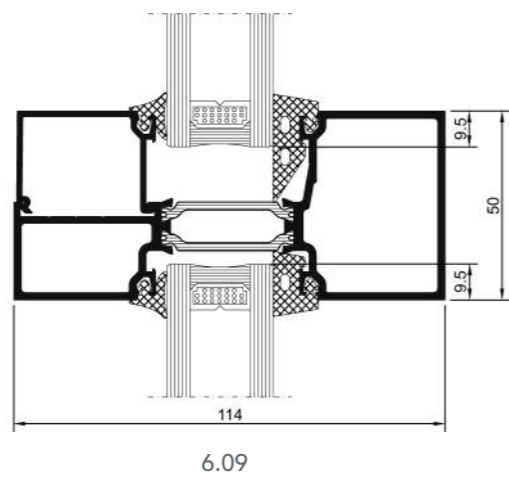
451PT Framing System

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

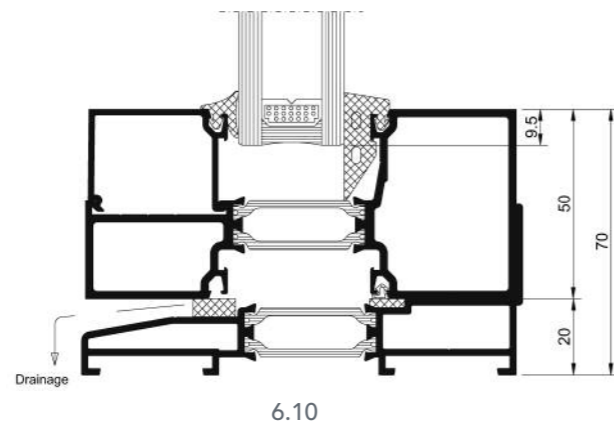
Typical Head Detail



Typical Transom Detail



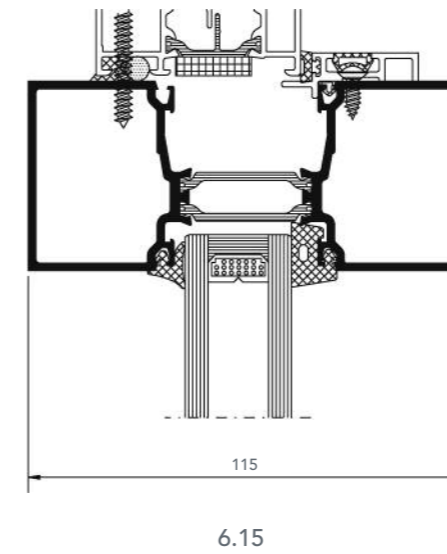
Typical Cill Detail



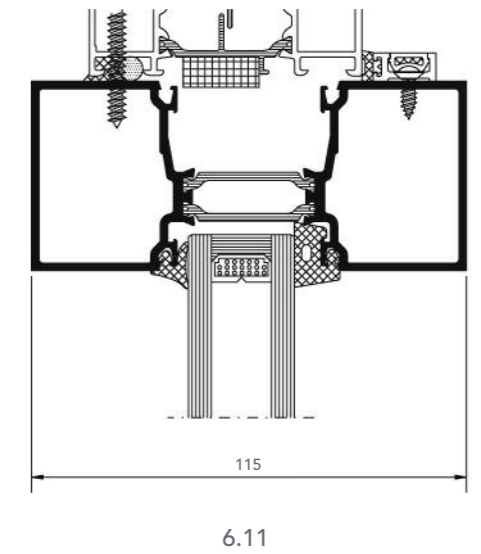
451PT Framing System

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

Transom with Window Adaptor (AA®540)



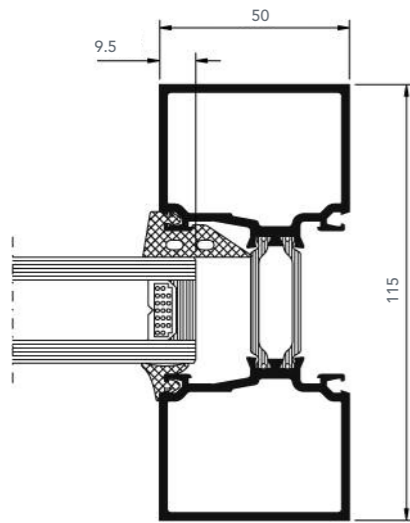
Transom with Window Adaptor (AA®720)



451PT Framing System

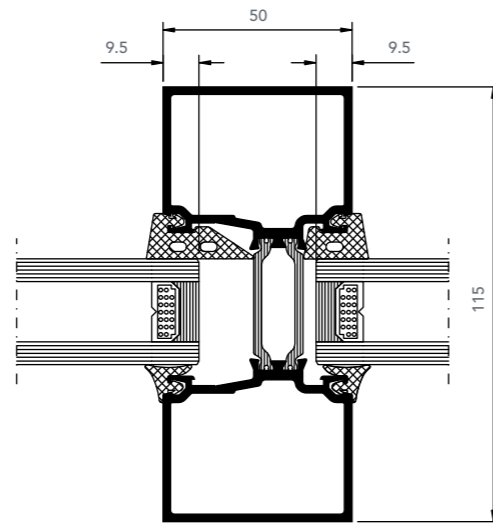
Full details can be downloaded from our website www.kawneer.co.uk

Framing Jamb



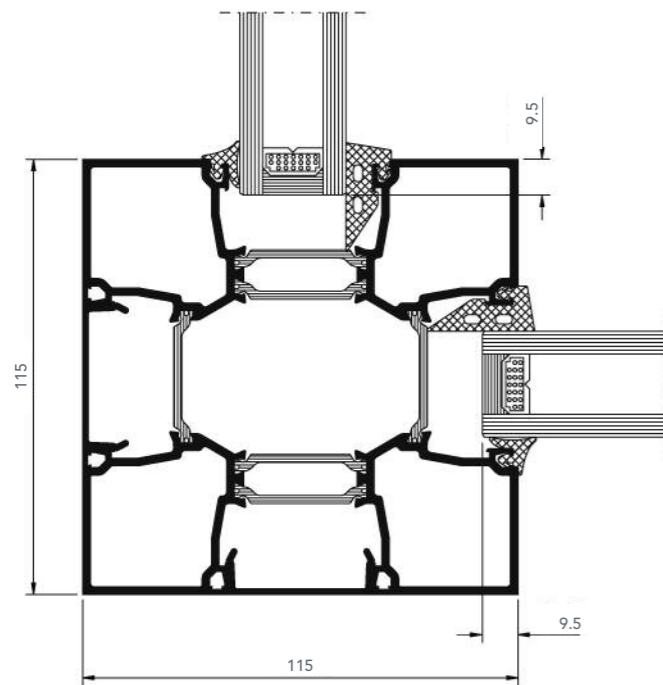
6.01

Framing Mullion



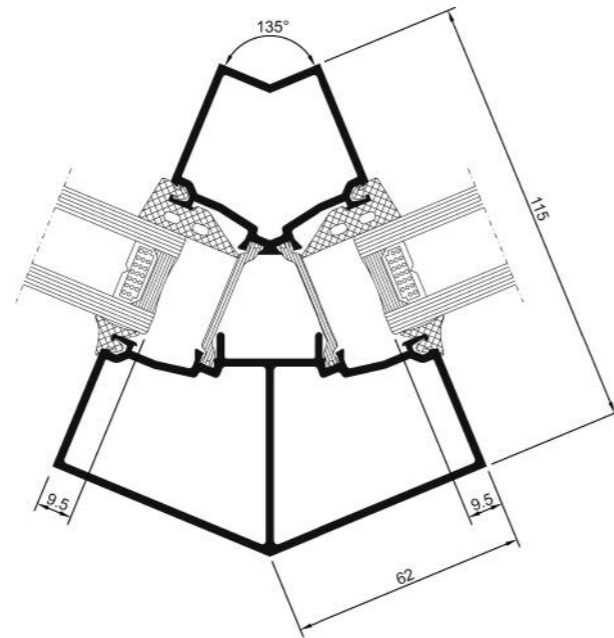
6.02

90° Mullion



6.05

135° Mullion

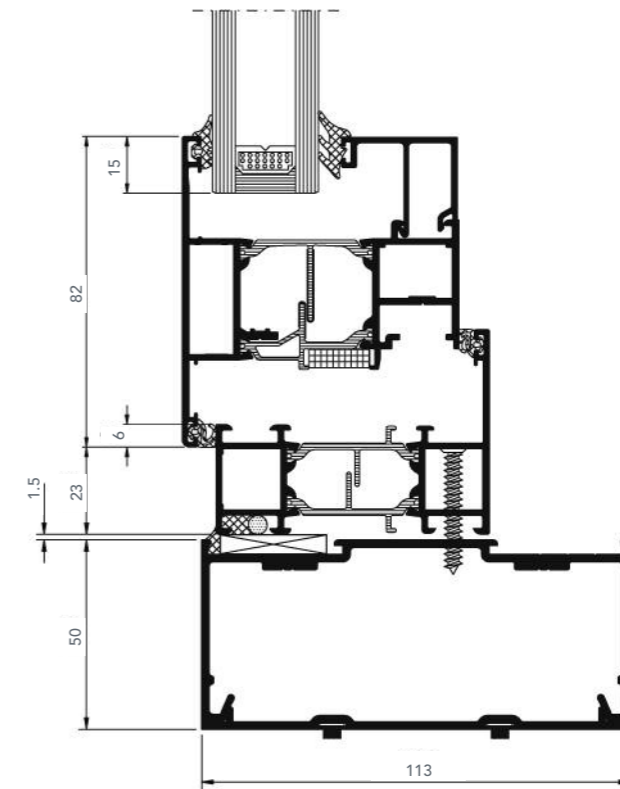


6.06

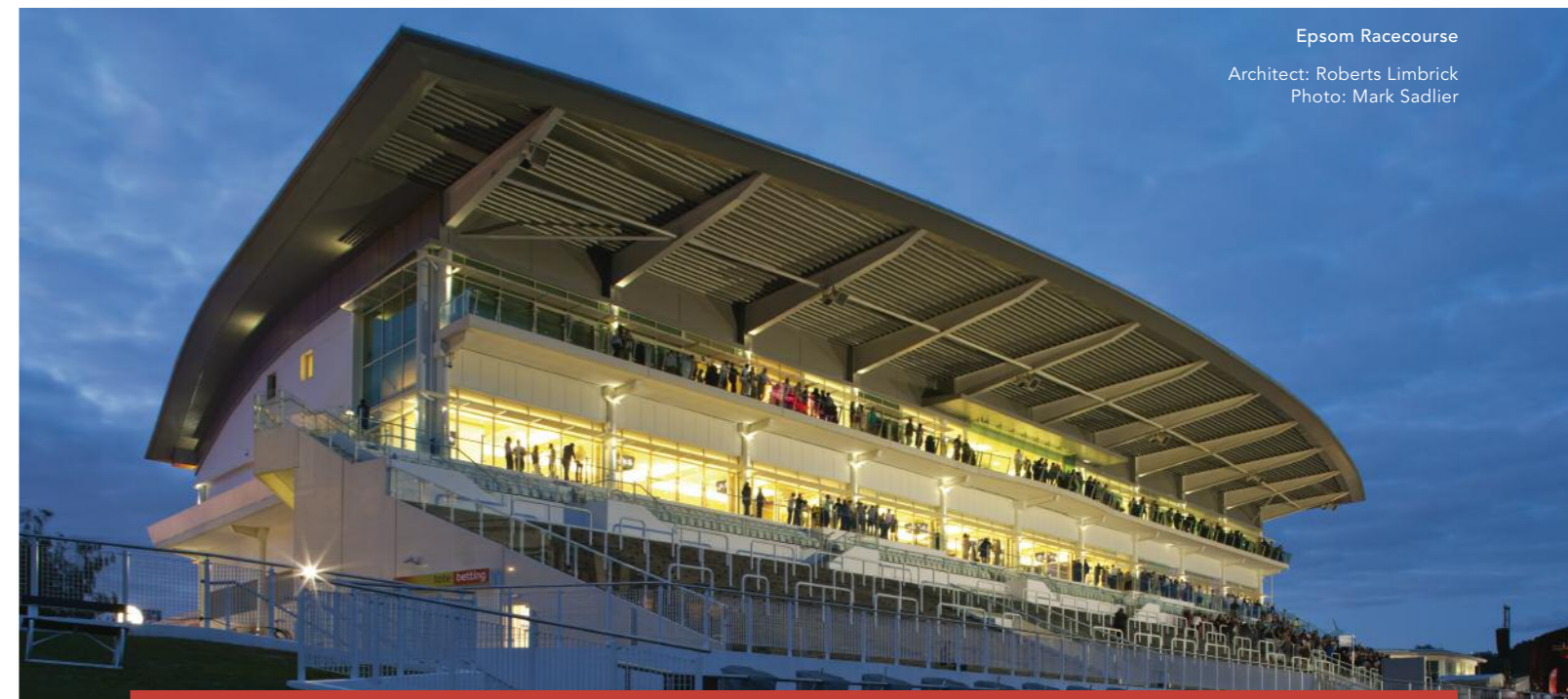
451PT Framing System

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 created 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.

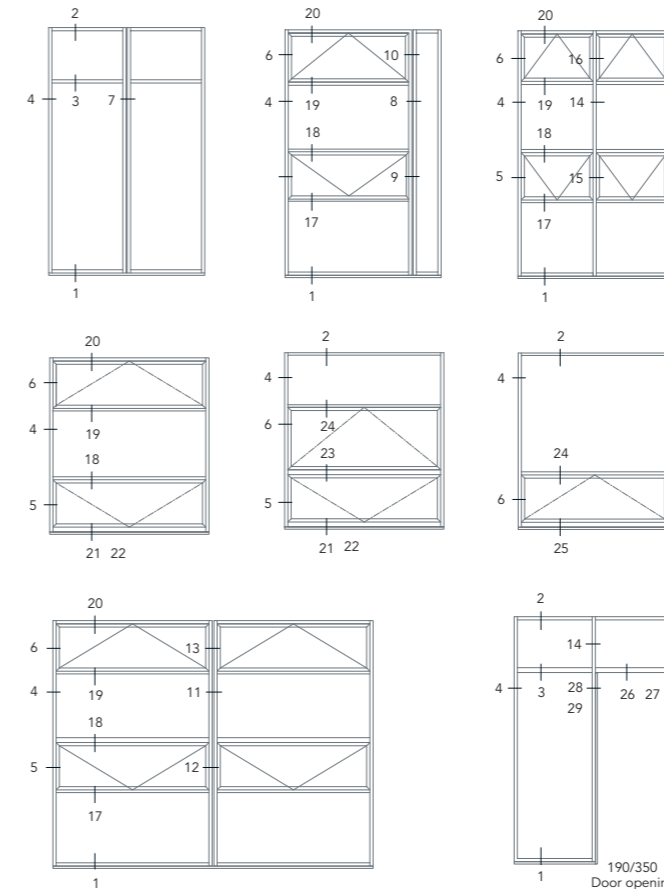
Willowgarth Primary School, Barnsley
Architect: Aedas Architects



AA[®]4001 Semi-unitised Framing System Applications

Typical Elevations

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



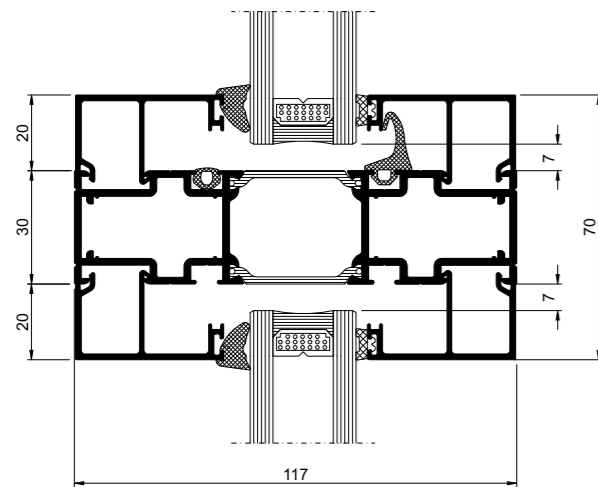
Elevation	Title	Website cad ref no.
1, 2	Cill and head fixed light	H02.01
3	Transom - fixed light above fixed light	H03.01
4	Jamb - fixed light	H04.01
5	Jamb - open in vent	H05.01
6	Jamb - open out vent	H06.01
7	Coupling Mullion - fixed light	H07.01
8	Coupling Mullion - fixed light	H08.01
9	Coupling 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



AA®4001 Semi-unitised Framing System

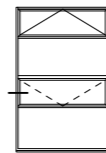
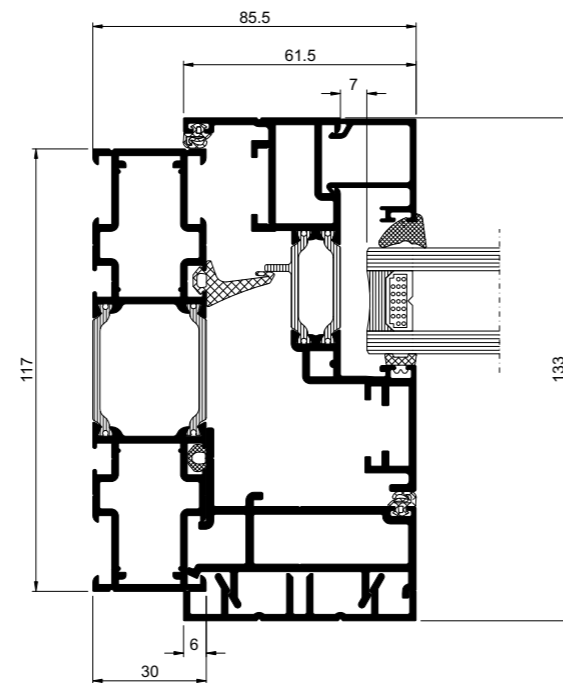
Full details can be downloaded from our website www.kawneer.co.uk

Transom – Fixed Light above Fixed Light



H03.01

Jamb - Open in Vent

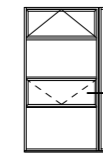
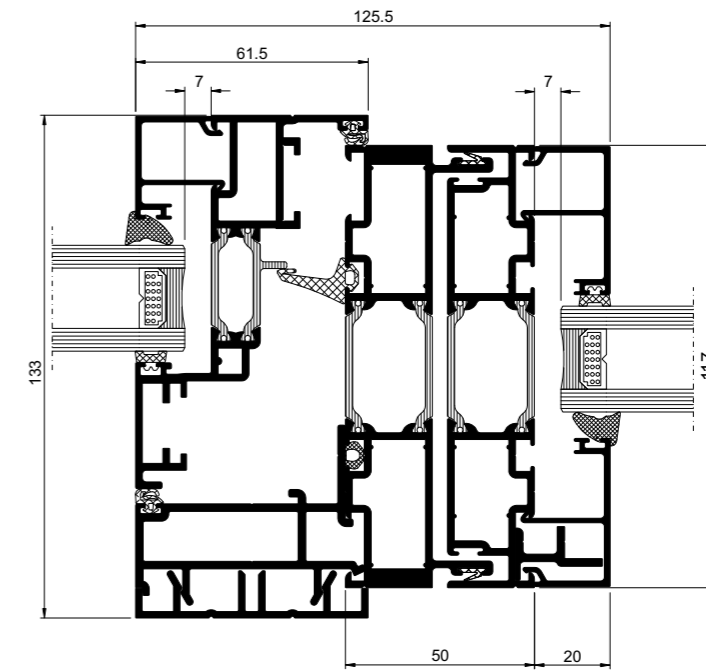


H05.01

AA®4001 Semi-unitised Framing System

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

Coupling Mullion – Open In Vent/Fixed Light

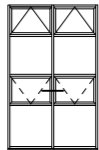
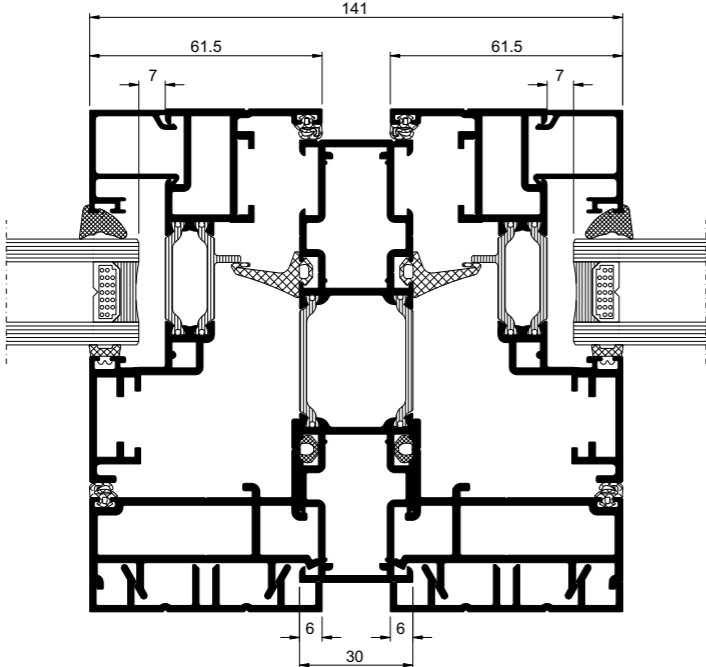


H09.01

AA®4001 Semi-unitised Framing System

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

Mullion – Open In Vent/Open In Vent

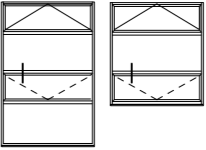
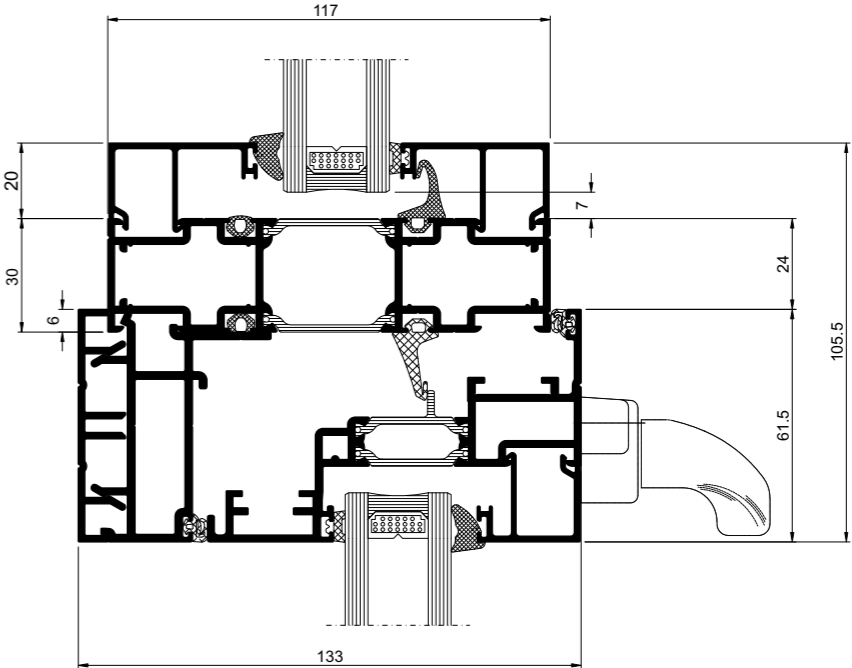


H15.01

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

