

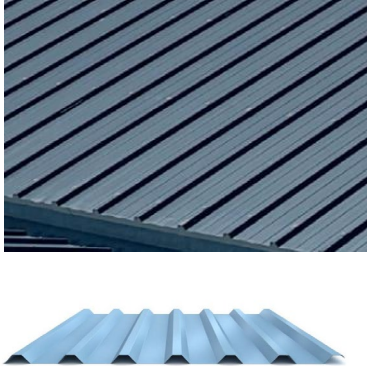
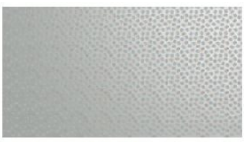
Material List and colours to Support Planning Condition 9
Application Number: 24/00453/VRCON

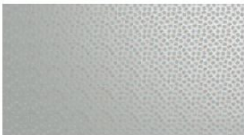
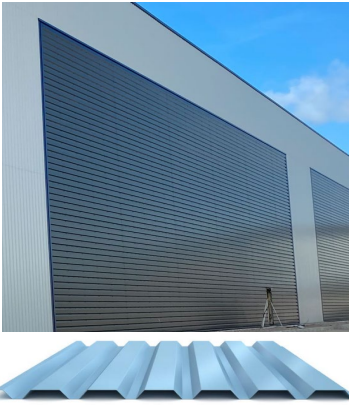
21033 Unit B, Birch Business Park

To be read in conjunction with the following planning drawing:-

21033_PL07_P02 - Proposed Elevations - Unit B

Material key - refer to drawings

Number	Description	Typical View (views do not represent actual colours)	Propopsed Colour	PDF Page Number
A	Roof HPS200 Ultra Coated roof sheeting Colour: RAL 7038 (Goosewing Grey)		 Goosewing Grey (RAL 7038)	4
B	Wall Built-Up Cladding Microrib MR300 panels Colour: RAL 7016 (Anthracite)		 Anthracite (RAL 7016)	4
C	Wall Built-Up Cladding Microrib MR300 panels Colour: RAL 7038 (Goosewing Grey)		 Goosewing Grey (RAL 7038)	4

D	Wall Built-Up Profiled Cladding - Vertical Trapezoidal profiled cladding. Colour: RAL 7038 (Goosewing Grey)		 Goosewing Grey (RAL 7038)	4
F	Wall Built-Up Profiled Cladding - Horizontal Trapezoidal profiled cladding. Colour: RAL 7016 (Anthracite)		 Anthracite (RAL 7016)	4
H	Portico Pressed metal Polyester Powder coated. Colour: RAL 5003 (Sargasso)		 Sargasso (RAL 5003)	-
J	Glazed Canopy Colour: RAL 7016 (Anthracite)		 Anthracite (RAL 7016)	-

K	Curtain Walling with Matching Doors PPC Aluminium framed double glazed doors and curtain walling. Frame colour: RAL 7016 (Anthracite)		 Anthracite (RAL 7016)	26
N	Fire Exit Doors Pre-finished insulated fire exit doors. Colour to match adjacent cladding..		 Anthracite (RAL 7016)	-
P	Loading Door Pre-finished insulated loading doors. Colour: RAL 5003 (Sargasso)		 Sargasso (RAL 5003)	64
Q	Dock Leveller Door Pre-finished insulated dock doors. Colour: RAL 5003 (Sargasso)		 Sargasso (RAL 5003)	64



CA | GROUP

CA Twin-Therm® Brochure



At CA Group we truly understand that buildings are an asset.

Our focus on quality, design and innovation successfully delivers schemes which offer high performance and present future-proofed, low-risk solutions to the demands of our clients and the aspirations of our architectural community.

The CA Twin-Therm® building envelope system is the UK's leading built-up metal cladding and roofing solution, with over 25 million square metres supplied and installed for global developers, backed by the CA Complete Assurance Guarantee.

Contents



Complete Assurance Guarantee

5



Twin-Therm® Roof

6

Performance Tables



Quantum Roof

8



Griffon Roof

9



System Components

10

Gutters

Therma-light Rooflight System

Therma-quilt Insulation

MatriX Spacer System

Flashings and Fabrications

Fixings, Fillers and Sealants



Twin-Therm® Walls

12

Performance Tables



Fire & Technical Certification

14

Fire Certification

Internal Liner

Therma-quilt Insulation

External Pre-finished Steel Profile

Acoustics

Air Tightness

Security - Secured By Design



CA Twin-Therm® Chronus & Chronus Ready

15



CA SolarWall®

16



Environment & Sustainability

16

Environmental Product Declarations (EPDs)

Sustainability

Tata Steel Confidex Sustain®

Solar Ready



Benefits

18

Speed and Practicality

Optimised Designs

Guarantee



Technical Support & Aftercare

19

Training

Accreditation

Complete Assurance Guarantee

CA Building Products (CABP) supply all components utilised within the complete envelope system, providing our clients with a robust, single source Complete Assurance Guarantee that is supported through rigorous testing and independently verified accreditation and certification.

Designed and manufactured in accordance with the latest regulatory, quality, and environmental standards, CA systems deliver proven performance, from each individual component, through to the complete cladding assembly. The CA Complete Assurance Guarantee encompasses industry leading technical support, offering specification and design advice, contractor installation training, quality inspections and after-care service for the entirety of the system guaranteed period, with options of 25, 30 or 40 years.

Features

- Unique single-source full-system guarantee for up to 40 years
- Independent testing as a complete system, fully traceable and verified
- Guarantee covers all components designed and tested to CA specification
- Contractor technical support, including thermal, wind and snow load calculations
- Installation training and support on site including inspections throughout installation, post completion and for the guaranteed life of the building
- PV ready for easy installation of renewable energy solutions

Benefits

- Peace of mind at every stage, during installation and throughout the guaranteed life of the asset
- Quality is improved leading to retained asset value and repeat business
- Single source guarantee removes concerns about third-party exclusion clauses
- Independent accreditation and full system testing reduces insurance risk
- Future proof design and non-combustible insulation help minimise impact of change of tenant, insurance requirements or legislation amendments

Confidex® Guarantee from Tata Steel

CA Twin-Therm® building envelope systems are supplied with external profiles manufactured from Colorcoat HPS200 Ultra® or Colorcoat Prisma® pre-coated steel. These materials come complete with the Tata Steel Confidex® Guarantee, offered directly to the building owner and provide cover for up to 40 years (subject to location).

Both the CA Complete Assurance Guarantee and the Confidex® Guarantee are fully transferable on change of building ownership and ensures no reduction in guarantee period when used in conjunction with framed, roof mounted Photovoltaic (PV) systems.



Confidex® Guarantee (Years)		Colorcoat HPS200 Ultra® colours		Colorcoat® Prisma colours	
		Signature Colour	Classic & Matt	Solid, Metallic & Matt	Element
Inland 	Roof	40	30	35	25
	Wall	40	40	40	30
Coastal 	Roof	30	25	25	20
	Wall	30	30	30	25

Twin-Therm® Roof

CA Twin-Therm® building envelope system is a proven, reliable, non-combustible site assembled roof and wall cladding system.

When fully fixed and sealed the system is walkable and provides a tested Non-Fragile assembly, with U-values as low as 0.11W/m²K, air permeability tested to less than 1.0 m³/hr.m² and up to a 40 year Complete Assurance Guarantee, subject to specification choice.

The system’s design and installation method allows for the insulation to be installed continuously, minimising thermal bridging. The sealed liner panel achieves a vapour resistivity significantly greater than that of a separate VCL (vapour control layer), eliminating the requirement for either a separate VCL or breather membrane for roof constructions up to humidity class 4.

CA Twin-Therm® offers developers, specifiers, contractors and architects a cost-effective roof and wall solution with a high degree of flexibility, enabling the building designer to choose a system that caters for their architectural needs. The minimum roof pitch for Twin-Therm® pitched roof system is 4.5° design, (minimum 3.0° after settlement and deflection).

Twin-Therm® internal liner is available as either Colorcoat® PE 15 standard bright white finish or as Colorcoat® High Reflect which has been proven to maximise natural daylighting, improve daylight factor, reducing requirements for artificial lighting which can reduce operational costs and CO₂ emissions.

Twin-Therm® complete system includes:

- Non-Fragile liner
- MatriX bar and bracket
- Euroclass 'A1' Therma-quilt insulation
- All fixings, sealants and fillers
- Non-Fragile Therma-light rooflights
- Non-Fragile and walkable outer sheet
- All flashings, gutters and associated ancillaries
- BS EN 13501-5 B_{ROOF}(t4) outersheet
- Independently assessed EPDs
- LPS 1181-1 Grade 'EXT-B' as standard
- Independent Agrément certification



Bracket Depth (mm)	Overall System Depth (mm)	U-Value (W/m²K)	
		CA 32 1000RL *	CA 17 1000L **
180	212	0.25	0.23
200	232	0.22	0.21
220	252	0.20	0.19
240	272	0.18	0.18
260	292	0.17	0.16
280	312	0.16	0.15
300	332	0.15	0.14
320	352	0.14	-
340	372	0.13	-
360	392	0.12	-
400	432	0.11	-

U-values calculated on average purlin spacings of 1,500mm.
For detailed information regarding U values, system weights and other specific performance data please refer to the CA Resource Hub and Technical Information Papers.
* average bracket spacings of 1167mm
** average bracket spacings of 1200mm

Quantum Roof



CA Twin-Therm® Quantum is a self-curved roof design running from gutter to gutter incorporating all the features and benefits of the standard Twin-Therm® system, with some additional advantages.

- Lower apex heights which can help to meet planning restrictions and reduce wasted roof space.
- More cost-effective solution than standing seam/secret fix systems.
- Rooflights can be integrated in the same manner as the metal roof sheets and span across the apex, improving light distribution.
- No ridge/hip ridge flashings eliminating the risk of water ingress and enhancing air tightness.
- Reductions in heating/cooling costs as a result of reduced roof volume.

- Greater roof area can be utilised for rooflights, or given over to rooftop solar PV arrays as there is no need to avoid a ridge apex.
- Often eliminates at least one run of secondary steelwork.
- Elimination of hips offers significant savings in steelwork, reduction in embodied carbon, materials, and reduction of programme.
- Can be used to eliminate parapet designs and the risk associated with internal boundary wall gutters.
- Maximum standard radius of 105 metres to facilitate a minimum end lap pitch of 4.0° design (2.5° after settlement and deflection). Greater radii may result in additional logistical issues.
- Roof design can help improve air tightness, reducing construction time and optimising overall costs.

Griffon Roof



CA Twin-Therm® Griffon uses the principles and benefits of Twin-Therm® Quantum, with roof profiles self-curved across the apex of the roof to achieve the required external sheet end lap. Below the curved apex the roof flows into a straight pitch to the eaves.

- Can facilitate a lower apex height than other designs and roof options.
- May be considered an option on larger spanning buildings, instead of standing seam or secret fix roof systems.
- CA Twin-Therm® Griffon utilises an external roof sheet spanning over the apex to the first end-lap position, after which the roof flows into a straight pitch design (minimum 4.0° design, 2.5° after settlement and deflection).

- External rooflights also span over the apex minimising internal shading and improving natural daylight distribution.
- Large span can reduce or eliminate internal valley gutters, reducing future risk of water ingress.
- Potential to significantly reduce build cost and reducing through-life maintenance requirements and cost.
- Large span buildings can reduce the number of columns, increase free internal areas and can be extremely effective for larger buildings.

System Components

Gutters

CA Cascade® Premier Gutter systems are manufactured from 1.2mm minimum, 1.5mm or 2.0mm thick galvanised steel, complete with a 1.2mm minimum thick pre-laminated membrane.

These gutters can be supplied as single skin (uninsulated) or twin-skin (insulated) using A1 rated non-combustible rock fibre mineral wool insulation.

Single skin gutters are supplied in 4m lengths as standard.

Insulated gutters can be supplied in lengths up to 7.2m (complete with lifting lugs) to reduce the number of site welded joints and speed up installation time.

All junctions, weirs, stop ends, T-sections, outlets (including siphonic outlets) can be factory fitted, and each gutter length punched with a unique identifier and weight. All of this combined reduces risk, improves quality and maximises speed of installation.



Membrane lined gutters offer a number of benefits:

- Help reduce maintenance throughout the building life
- Designed to be laid flat with standing water, reducing sensitivity to building tolerances and deflections
- Robust welded joints
- uPVC membrane coating offering minimum 25 year guarantee
- Easily repaired, patched, modified or adapted to accommodate building needs

CA Truline gutters also offer a simple solution for out-board gravity drained gutters.



Therma-light Rooflight System

CA Therma-light in-plane triple skin GRP rooflights are classified Non-Fragile for both liner and complete assemblies and are guaranteed for the same period as the roof system. GRP rooflights help to alleviate the risks associated with thermal movement when integrated within metal roof assemblies.

CA Therma-light GRP rooflights are tough and durable compared to some other rooflight materials and offer natural diffuse daylighting, decreasing the dependency on artificial lighting and helping reduce the building's carbon footprint. Good daylighting design can enhance the building's internal environment, improve well-being, and help comply with BREEAM requirements, especially when used in conjunction with Colorcoat® High Reflect liner.

Rooflight U-Values			
U-Value (W/m²K) Horizontal Plane	U-Value (W/m²K) Vertical Plane	Intermediate Core Code	Thickness (mm)
1.50	1.30	TC10	10
1.10	1.00	TC20	20
1.00	0.90	TC30	30

Typical Light Transmission: 58%
Typical G Value: 0.55
Other Light Transmission and G value options are available on request.
*** Contact CA Technical Department and refer to Technical Information Papers for more information on current rooflight U-value calculation methods.**

Therma-quilt Insulation

CA Therma-quilt glasswool mineral fibre insulation is unique to the cladding industry and is specifically formulated to provide superior moisture resistance and achieves zero ODP and zero GWP. CA Therma-quilt is Euroclass 'A1' rated for non-combustibility, is manufactured from recycled glass and is fully recyclable at the end of the building life. With single-roll depths up to 300mm and 1220mm width Therma-quilt is simple and easy to install and has excellent self-integrity properties reducing concerns of tearing during installation. For some FireWall applications Therma-rock insulation may be required.

MatriX Spacer System

The MatriX spacer system allows for deeper insulation and flexibility in design, and is independently tested and accredited to ensure the structural performance of the system. MatriX bar features a 50mm top flange and interlocking swaged ends.

CA Twin Therm® using MatriX enables the insulation to be installed below the bar without the need for cutting and tucking. Brackets are installed at maximum 1200mm centres, and twist-locked into place without 'feeding' from one end of the bar, making them simple to install at roof level, lifted to the roof in packs without the need to part-assemble at floor level. Simple, easy, cost effective, thermally broken and structurally excellent.



Flashings and Fabrications

CA Complete Assurance Guarantee requires all components to be procured from CA Building Products, including all flashings, fabrications, and feature details. Flashings are manufactured from pre-coated material from the same source coils as the main roofing and cladding elements, ensuring colour consistency throughout the envelope. Polyester powder coated aluminium can be provided for larger details and special architectural features.

CA Building Products can manufacture additional bespoke items including roof access hatches, rainwater hoppers, downpipes, and components to suit project specific requirements.

Fixings, Fillers and Sealants

All fixings, fillers, sealants and mastics are supplied as part of the complete Twin-Therm® system, ensuring that the assembly will perform as tested and specified in line with independent Agrément certification. The CA Twin-Therm® complete package is convenient and ensures the building envelope will achieve all the desired performance criteria.

Twin-Therm® Walls

CA Twin-Therm® cladding systems are intended to give the best possible aesthetic performance while simplifying the design. The liner arrangement is the same for all options, helping to future-proof the building envelope design with fire resistance as standard.

CA Twin-Therm® wall system has been tested to Loss Prevention Certification Board (LPCB) LPS 1181-1 and achieves Grade 'EXT-B' certification. The standard CA Twin-Therm® wall system provides 240 minutes integrity (E) and 15 minutes insulation (I) resistance. This fire performance is maintained across all available system depths and ensures that in the event of a fire the wall system will not contribute to the fire load. The FireWall performance can be enhanced to offer up to 120 minutes insulation resistance if required. Enhanced options to achieve LPS 1181-1 Grade 'EXT-A15' and 'EXT-A120' are also available. Please contact CA Technical Department for further information.

CA Twin-Therm® built up system utilising Euroclass 'A1' non-combustible insulation offers a low risk solution that can meet the requirements of insurance standards.

CA Twin-Therm® wall systems where the external wall profile is laid horizontally presents little additional challenge and provide a simple cost-effective solution to these aesthetically demanding designs. Offering all the same benefits of vertically laid cladding profiles, the orientation of the external profile horizontally is often selected for its striking visual appeal.

The CA 300MR profile offers a unique alternative to composite panels, while removing the need for additional tertiary steelwork, optimising fenestration design and reducing embodied carbon.

In the event of accidental damage individual panels can be removed and replaced without the need to expose the building or remove large areas of wall cladding.

CA's Installation Guide, system specification and training should be closely followed, as our years of experience have enabled us to offer a simple installation method that can make all the difference to the visual quality of an elevation. A range of standardised details and features are available to suit particular joint arrangements.

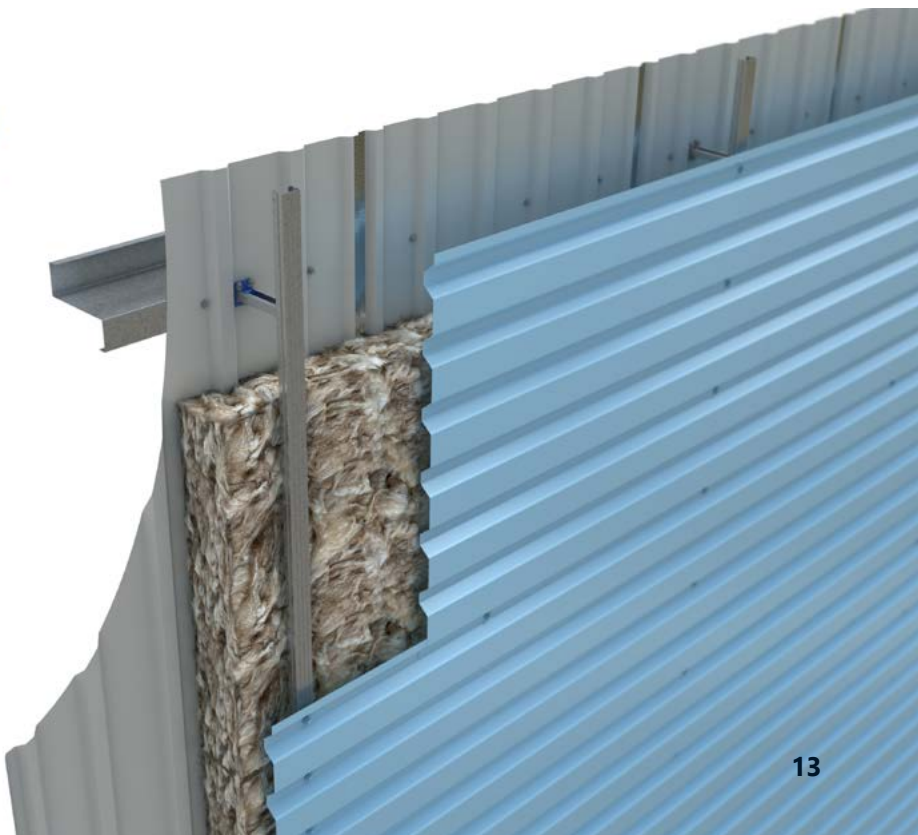
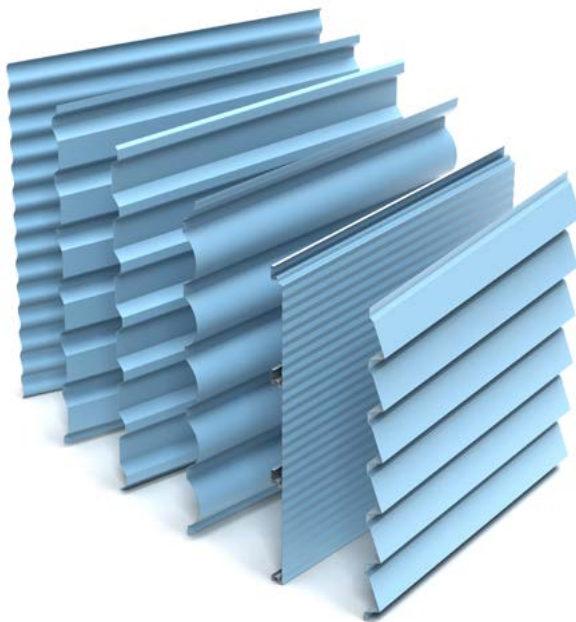
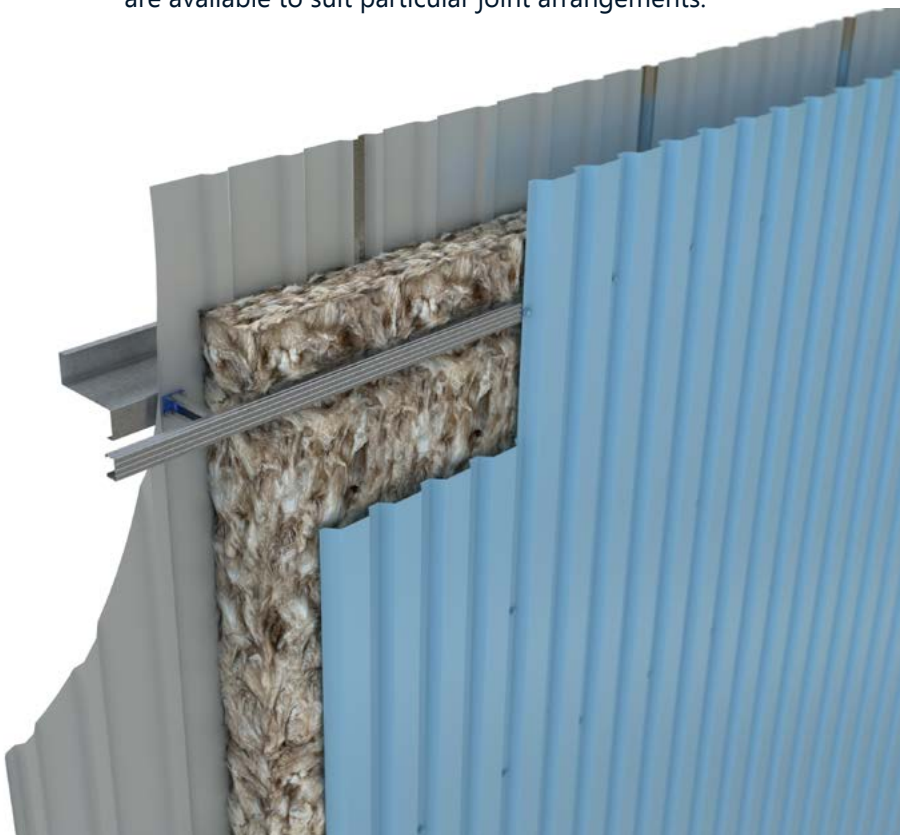
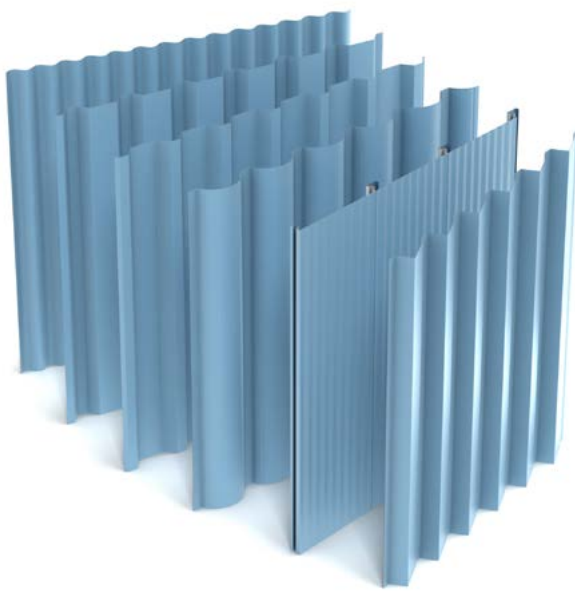
CA Twin-Therm® easily allows for different profile orientation to be used on the same elevation with no alteration to steelwork or liner system design, providing simple continuity of air tightness, fire resistance and weatherability across the façade.

CA Twin-Therm® complete system includes:

- Consistent liner profile throughout, maximising air tightness
- No requirement for additional tertiary steelwork or panel joint rails (PJR), thereby reducing embodied carbon
- External profiles can be orientated horizontally, vertically or even diagonally
- Euroclass 'A1' external sheet available
- MatriX spacer bar and bracket system
- Euroclass 'A1' non-combustible Therma-quilt insulation
- FireWall as standard (15 minutes insulation (I) / 240 minutes integrity (E) resistance)
- LPS 1181-1 Grade 'EXT-B' as standard
- Enhanced fire performance available (contact CA Technical Department)

Bracket Depth (mm)	Overall System Depth (mm) *	U-Value (W/m²K)
120	152	0.33
140	172	0.29
160	192	0.25
180	212	0.23
200	232	0.21
220	252	0.19
240	272	0.17
260	292	0.16
280	312	0.15
300	332	0.14

U-values calculated on average rail spacings of 1,500mm & bracket spacings of 1,200mm (vertical cladding) & bar spacings of 1,200mm (horizontal cladding).
*** when using 32mm outer profile, other profiles are available.**



Fire & Technical Certification

Fire System Certification

The standard Twin-Therm® roof and wall systems have been assessed in accordance with LPCB test LPS 1181-1 and achieve Grade 'EXT-B' certification. Twin-Therm® wall specifications are also available to provide LPS 1181-1 Grade 'EXT-A15' and Grade 'EXT-A120'. These FireWall systems are available across all external profile options and using Colorcoat Prisma® and Colorcoat HPS200 Ultra®.

FireWall fire resistance:

- **Twin-Therm® Wall – 240 minutes integrity (E) / 15 minutes insulation (I) (Therma-quilt)**
- **Twin-Therm® FW120 – 240 minutes integrity (E) / 120 minutes insulation (I) (Therma-rock)**

Twin-Therm® FireWall systems are also certified to LPCB LPS 1208 for internal compartmentation.

Internal Liner

Internal pre-coated steel liner profiles manufactured from minimum 0.4mm Colorcoat® PE15 meet the requirements of European Commission Decision 2010/737/EU and are therefore classified as Euroclass 'A1' in accordance with BS EN 13501-1. Colorcoat® High Reflect liner is also classified as Euroclass 'A1' in accordance with BS EN 13501-1.

Therma-quilt Insulation (Non-Combustible)

CA Therma-quilt glass mineral wool insulation utilised in our standard Twin-Therm® roof and wall systems achieves a reaction to fire Euroclass 'A1' in accordance with BS EN 13501-1.

External Pre-finished Steel Profile

- Colorcoat Prisma® pre-finished steel achieves a fire classification Euroclass 'A1' in accordance with BS EN 13501-1
- Colorcoat HPS200 Ultra® pre-finished steel achieves a fire classification 'C-s2, d0' in accordance with BS EN 13501-1
- Colorcoat HPS200 Ultra® achieves B_{ROOF}(t4) classification in accordance with BS EN 13501-5 for roof applications

Acoustics

Built-up metal roof and wall systems typically out perform other roofing and cladding systems for acoustic sound reduction, as well as offering the opportunity to introduce additional acoustic absorption solutions.

The use of perforated liner, acoustic membrane and denser insulation enables the provision of solutions to meet client specific requirements, addressing reverberation, external sound reduction and rain noise.

- CA Twin-Therm® wall system achieves a minimum tested Weighted Sound Reduction (Rw) of 43dB
- CA Twin-Therm® roof system achieves a minimum tested Weighted Sound Reduction (Rw) of 45dB

Bespoke solutions to meet client specific requirements can be provided. Please contact CA Technical Department for more information.

Air Tightness

CA Twin-Therm® building envelope system repeatedly deliver buildings with a performance between 1.0 – 2.0m³/hr.m² and project examples as low as 0.33m³/hr.m².

Security – Secured By Design

CA Twin-Therm® can be constructed to provide tested security rating compliant with LPS 1175, SR1 or SR2. Our systems can be used for a Secured By Design building specification, compliant with local police authority requirements and standards. Contact CA Technical Department for further information on CA Twin-Therm® SecureRoof and SecureWall systems.



Twin-Therm® Chronus & Chronus Ready

CA Twin-Therm® Chronus

CA Twin-Therm® Chronus building envelope system is uniquely suitable for use in controlled environment building applications (internal temperatures as low as +0°C) due to the unique nature of the system components and their combined integration within the specifically tailored cladding assembly. This system has been purposely developed to provide clients and developers with the most versatile and adaptable buildings possible, ensuring that they have an offering to attract the widest range of tenants throughout the building's operational life. This versatility allows the internal requirements to change from an ambient warehouse to a controlled environment after project completion, thereby mitigating the need to upgrade the building envelope (at significant cost) at a later date.

CA Twin-Therm® Chronus Ready

CA Twin-Therm® Chronus Ready is designed to future proof the building envelope. Should a tenant needing a controlled environment then occupy the building, the system can be easily adapted. The outer external rooflights can be removed with the use of our unique 'Quick Release' rooflight sealant, allowing the rooflight void to be 'in-filled' with Therma-quilt insulation thereby reducing solar gain and restoring the thermal performance of the rooflight to match the rest of the roof.

The Benefits

- Building envelope fully adaptable to cater for variations in humidity or internal temperatures down to +0°C
- Easy remediation of rooflights to reduce solar gain
- Improved envelope energy performance & air tightness
- Potentially reduced rental voids
- Maximised storage volume – no need for secondary internal build
- Enhanced EPC ratings
- Easily sub-divided for multi-purpose storage without fire concerns



* CA Twin-Therm® Chronus [Pat. Pend] and CA Twin-Therm® Chronus Ready [Pat. Pend]

CA SolarWall®

Environmental & Sustainability

CA SolarWall® unglazed Transpired Solar Collector (uTSC) is a highly efficient solar air heating system that harnesses the sun's energy to heat fresh, outdoor air for buildings. Installed as an additional skin to a building's southerly facing façade, the SolarWall® technology provides a truly renewable heat source, with solar collection efficiencies as high as 80% and proven payback periods as low as three years.

Each SolarWall® system is specifically engineered to suit its intended application and can be designed to integrate seamlessly within the building design, or incorporated as a feature to stand out from the façade and promote the use of renewable technologies.

Over the past 30 years, the performance of the SolarWall® technology has been extensively tested and refined at the National Solar Test Facility (NSTF) in North America, with the technology Solar 'A' Mark certified for quality assurance by the Solar Air Heating World Industries Association (SAHWIA).

- Specifically engineered to heat fresh, outside air
- Renewable, low energy form of heating
- Significant savings in building ventilation costs
- Thermal output of up to 600Wp_{Th} per square metre
- Typical energy savings of 280 – 550kWh/annum per square metre
- Integrated within iSBEM and additional third-party simulation software for BRUKL analysis
- Can aid in additional BREEAM credits
- Simple form of building decarbonisation for both new and existing assets



Environmental Product Declarations – EPD

CA building envelope systems are covered by independently assessed, third party verified Environmental Product Declarations (EPD's), calculated in accordance with ISO 14025 and EN 15804. As part of each EPD, a full environmental impact assessment is calculated for the complete cladding assembly across multiple environmental metrics, of which the embodied carbon content (Global Warming Potential) of the system is included. The specification of cladding systems that are fully independently assessed and third party verified to determine their embodied carbon is an essential step towards recognising the environmental impact of construction products and executing strategies to achieve emission reduction targets in line with regulatory Net-Zero commitments.

CA recognise that the embodied carbon content of any cladding system will vary depending upon changes that are made to the system e.g. increased insulation thickness for enhanced U-values, or changes to internal liner or external wall profiles. As such, CA provide the corresponding embodied carbon values for the precise Twin-Therm® roof and wall systems specified, based on the exact systems that are installed on each individual project, rather than generic information which may not fully reflect the cladding systems supplied. This level of detail provides building designers with increased accuracy in their carbon assessments whilst also supporting any BREEAM accreditation that may be a stipulation of a project.



Sustainability

CA take environmental measures extremely seriously and regard sustainability as an essential business practice. As a manufacturer of building envelope systems, we recognise the impact that our manufacturing operations have on the global environment, and also the significant contribution our products play in the energy efficiency of the buildings constructed for and operated by our clients and developers. Driven through technical excellence, CA are committed to developing industry leading products and systems that are increasingly resistant to atmospheric conditions, offer improved durability and life expectancy, contain lower embodied carbon and contribute to reduced building energy emissions and operational costs.

With approximately 40% of global energy related carbon emissions attributable to the construction and operation of buildings, it is vital that industry responds both swiftly and tangibly to the climate emergency, addressing both upfront (embodied) carbon as well as in-use (operational) carbon. At the heart of CA's sustainability ethos lies our focused collaboration with our supply chain partners, customers and clients, developing robust processes and frameworks to measure & monitor performance, committing to meaningful targets and driving continuous improvement. Our adoption of the DMAIC technique (Define, Measure, Analyse, Improve, Control) is a driving force in our process improvements, creating meaningful change.

Supported through independent accreditation all Twin-Therm® building envelope systems are covered by Environmental Product Declarations, with the carbon emissions from our manufacturing operations third party audited and accredited through Planet Mark certification. Combined, this data forms the foundation for our strategic sustainability roadmap and our commitment towards Net Zero.



Tata Steel Confidex Sustain®

Confidex Sustain® was launched in 2007 as the world's first certified CarbonNeutral® building envelope Guarantee, in accordance with The CarbonNeutral Protocol. The CarbonNeutral Protocol provides a fully transparent and best-practice framework for carbon neutral claims.

CA were instrumental in supplying the first building envelope project under the Confidex® Sustain Guarantee and since then, we have delivered over 6 million square metres of Carbon Neutral floor space, offsetting over 135,000 tonnes of carbon dioxide. Over the duration of the scheme, high quality projects have been supported and verified to leading international standards; Gold Standard (GS), Verified Carbon Standard (VCS), and UN Clean Development Mechanism (UN CDM), which have been approved by the International Carbon Reduction Offsets Alliance (ICROA). To demonstrate the environmental impacts of the Twin-Therm® building envelope system CA offer independently assessed, third party verified product specific Environmental Product Declarations (EPDs) that comply to EN 15804 and ISO 14025.

Solar Ready

Developers, clients and building owners are continually striving to meet the energy reduction targets set upon them whilst demonstrating their commitment to environmental concerns and compliance with ever-stringent building regulations.

CA Twin-Therm® roofing systems are 'solar ready' as standard, which allows proprietary solar systems to be installed directly onto the outer roof profiles (subject to steelwork capabilities). Due to the multitude of solar systems available, CA Technical Department request that appropriate details of system attachment are provided prior to installation so that comments can be made on the suitability of the proposed fixing methods and layouts – meeting the normal maintenance and access requirements of the roofing system and PV. This ensures that any guarantees offered for the roofing system are not compromised and does not restrict the type of mounting systems used.

The Benefits of Twin-Therm® Roofing Systems and Built-Up Cladding

Speed and Practicality of Installation

The liner panel of built-up systems for both the roof and walls can be installed quickly, mainly due to its light weight and simplicity, non-fragile liner, making the building watertight and air-tight and achieving the necessary vapour control. Internal works can commence sooner, such as being able to pour the concrete slab earlier, reducing the overall building programme.

CA Twin-Therm® eliminates the need for PJRs (Panel Joint Rails) reducing the impact on steel, saving time and money. Removing tertiary steelwork and optimising secondary steelwork creates significant savings in cost, time and embodied carbon.

CA Twin-Therm® system is simple to install and has few heavy individual components, eliminating risks of manual handling, both on the ground and at height. CA liner panels (in all gauges 0.4mm and above) are classed as Non-Fragile (in accordance with ACR[M]001 'Test for Non-Fragility of Profiled Sheeted Roofing Assemblies'). The insulation is installed below the spacer, avoiding the need to cut and tuck, reducing the risk of any gaps in the insulation.

Optimised Designs

CA has been supplying steel envelope buildings for over 40 years, and has honed its solutions to provide systems that not only perform extremely well but also save time and money in construction, and reduce maintenance costs in-use. Simple solutions can reduce build costs for steelwork, drainage and assist in future-proofing the building for change of use.

CA Complete Assurance Guarantee

The greatest benefits of CA Twin-Therm® systems are our guarantee and our reputation for providing genuine, meaningful and high quality solutions. The level of technical support, training and inspection throughout construction and the entire guarantee period is testament to our commitment to quality, integrity and peace of mind.



Technical Support & Aftercare

The CA Complete Assurance Guarantee lies at the heart of each and every project and this commitment is delivered by an industry leading team of Technical and Field Service Engineers.

Continually developing, testing and enhancing the range of building envelope systems and products available, CA Technical Department are on hand to ensure that the entire design and construction teams, from Developer, through to Architect, Main Contractor and Cladding Contractor, are fully supported throughout every stage of the procurement and build process.

- Design and specification support
- Project specific detailing
- Thermal calculations and condensation risk analysis
- System specific detail drawings, Technical Information Papers and Installation Guides
- BIM & Revit support
- Wind and snow load calculations in line with the latest regulations and Eurocodes
- Gravity drainage calculations
- Regular on site installation inspections
- Training for all installers and designers
- Acoustic advice

- Independent system certification: Agrément; LPCB; Secured By Design; Planet Mark
- Quality, environmental and health & Safety: ISO 9001, ISO 14001 ISO 45001

Training

CA Field Services are on hand to provide contractor training and installation guidance, supported by routine site visits during the construction phase, as well as guarantee inspections upon project completion. These processes and services provide the Cladding Contractor with the knowledge and confidence to install CA building envelope systems to the highest possible standard, whilst providing the Client with the reassurance that their asset is covered by a robust cladding system guarantee.

Accreditation



2023



+44 (0) 1388 834242
enquiries@cagroup.co.uk
www.cagroup.co.uk

TATA STEEL



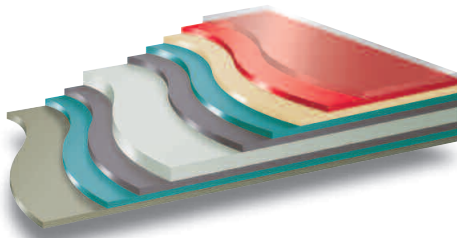
Colorcoat Prisma®

Aesthetics that last.
Guaranteed.

Performance

Colorcoat Prisma® uses the unique and proven Galvalloy® metallic coating by Tata Steel. Galvalloy® is made with a special mix of 95% Zinc (Zn) and 5% Aluminium (Al) that conforms to EN 10346:2015. The carefully developed proportions of Zinc and Aluminium in Galvalloy® offers a combination of increased barrier and sacrificial protection when compared with conventional Hot Dip Galv (HDG) coatings and provides unrivalled corrosion protection, even at the cut edges.

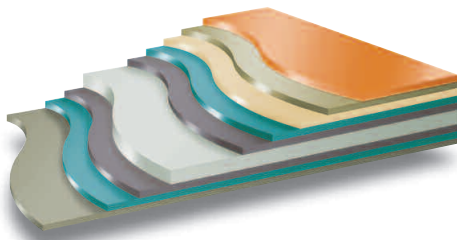
Colorcoat Prisma® Solid, Metallic & Matts



Key

15µm additional protective clear layer	Base steel substrate
25µm coloured layer with polyamide beads	Galvalloy® metallic coating
25µm corrosion resistant primer	Pre-treatment
Pre-treatment	High performance backing coat
Galvalloy® metallic coating	

Colorcoat Prisma® Elements



Key

10µm additional protective clear or coloured layer	Base steel substrate
20µm coloured or base polymer layer	Galvalloy® metallic coating
10µm corrosion resistant primer	Pre-treatment
Pre-treatment	High performance backing coat
Galvalloy® metallic coating	

For details and properties of Colorcoat Prisma® in a Textured finish please see dedicated literature.

Typical properties

Colorcoat Prisma®	Test Standard		
Nominal organic coating thickness			
Solids, Metallics, Matts	(µm)*	65	EN 13523-1
Elements	(µm)*	40	EN 13523-1
Specular gloss (60°):			
Solids, Metallics	(%)	25-35	EN 13523-2
Matts	(%)	<10	EN 13523-2
Elements	(%)	30-40	EN 13523-2
Scratch resistance:			
Solids, Metallics, Matts	(g)	>3000	EN 13523-12
Elements	(g)	>2500	EN 13523-12
Abrasion resistance:			
(Taber CS10 2x 1kg, 250 Rev)			
Solids, Metallics, Matts	(mg)	<15	EN 13523-16
Elements	(mg)	<15	EN 13523-16
Flexibility:			
Minimum bend radius	(T)	0.5T@16°C	EN 13523-7
Reverse impact	(J)	≥18	EN 13523-5
Adhesion (cross hatch)	(%)	100	EN 13523-6
Pencil hardness		H	EN 13523-4
Maximum continuous operating temperature	(°C)	90	
Corrosion resistance:			
Salt spray	(h)	1000	EN 13523-8
Humidity	(h)	5000	EN 13523-25
Corrosion resistance category		RC5+	EN 10169:2022
UV category		Ruv5	EN 10169:2022
Internal environment classification		CPI5	EN 10169:2022

*µm = micron

Notes

- The figures contained in this table are typical properties and do not constitute a specification. Tested in accordance with EN 13523. For details on test methods visit www.colorcoat-online.com
- For health and safety datasheets contact the Colorcoat Connection® helpline on +44 (0) 1244 892434.

Fire performance

Reaction to fire performance

Colorcoat Prisma® including Colorcoat Prisma® Element colours have been tested to EN 13823 and EN ISO 1716 and can be classified in accordance with EN 13501-1 as A1. This classification is valid for all gauges ≥ 0.4mm for all colours in the product range for single sided product. For double sided products contact Tata Steel.

Performance of roof coverings

Colorcoat Prisma® including Colorcoat Prisma® Element colours are deemed to satisfy, without the need for further testing, the requirements for external fire performance of roof covering products in accordance with Commission Decision 2000/553/EC. This is valid for all gauges ≥ 0.4mm and for all colours in the product range for single and double sided products.

Peace of mind guaranteed

Confidex® Guarantee

Confidex® is the product performance guarantee for Colorcoat Prisma®, when used in an external conventional building envelope application namely roof and wall cladding using single skin, built-up or composite panel construction in industrial and commercial buildings.

Confidex® offers the most comprehensive guarantee for pre-finished steel available in Europe with Colorcoat Prisma® being guaranteed for up to 40 years.

The Confidex® Guarantee is project specific and upon online registration provides a contractual relationship between Tata Steel and the building owner, meaning that in the case of a claim the contact with Tata Steel is direct rather than having to go through the supply chain, saving time and money. What's more this is transferable should the building owner change by simply filling in the form on the back of the guarantee certificate.

Who registers?

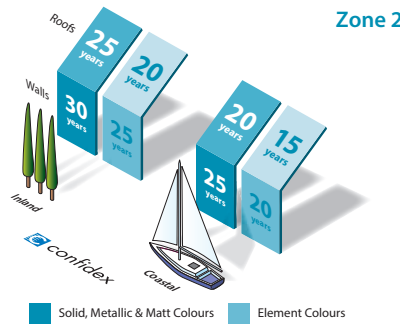
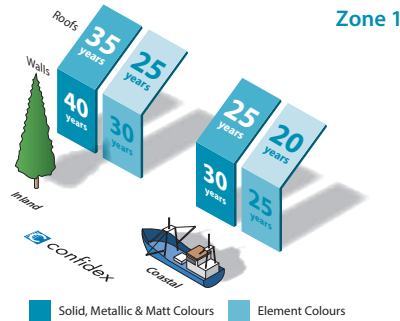
Usually the cladding contractor or the cladding system manufacturer, but anyone in the supply chain can apply online at: www.colorcoat-online.com/registration

If you want to check if your building has been registered contact the Colorcoat Connection® helpline on +44 (0) 1244 892434.



- Yellow box: Northern Europe – Zone 1
- Orange box: Southern Europe – Zone 2
- Green box: For areas outside of Confidex® zones please contact Tata Steel for more information.

Confidex® durations



Notes

- Figures under the Coastal heading are for buildings within 1 km of any coast.
- Full terms and conditions of the Confidex® Guarantee are on the online application form, available at www.colorcoat-online.com/registration
- Confidex® must be registered within 3 months of the building completion date for the guarantee to be valid.
- The Confidex® Guarantee periods on the diagram above are applicable to Zone 1 and Zone 2. For more information on other zones visit www.colorcoat-online.com/confidexmap

Colorcoat Prisma® Solid, Metallic or Matt colours now include the comprehensive Confidex® Guarantee for the pre-finished steel that is under the photovoltaic (PV) frame modules on a roof or wall. This provides the building owner with the confidence that the product is guaranteed to perform for the same duration of up to 40 years.

Breakthrough in colour

Due to the superior aesthetic properties of Colorcoat Prisma® a colour guarantee is uniquely included as part of the Confidex® Guarantee for up to 20 years in Zone 1 areas and up to 15 years in Zone 2 (see terms and conditions). This includes all 29 standard colours in the range, subject to location and use. For more information contact the Colorcoat Connection® helpline on +44 (0) 1244 892434.

Independent certification

British Board of Agrément Certificate

The long-term performance of Colorcoat Prisma® has been recognised within the BBA certificate 91/2717 and relates to the product use as external roofing and cladding or internal lining. *"Colorcoat Prisma® coating and metal treatment will protect the steel substrate against corrosion for a period in excess of 40 years in normal industrial, urban and rural environments".*

Testing according to Russian GOST standards

Colorcoat Prisma® has been tested by MISIS in Russia which concluded that when used in difficult climatic conditions (e.g. coastal areas) of medium aggressive environments, it should have its functional and aesthetic properties unchanged in Southern and Northern Russian regions with temperatures ranging from +60 to -60 degrees C.

U-mark certification

Colorcoat Prisma® has been tested by the Karlsruher Institut für Technologie according to DIN 55634.

ASTM

Colorcoat Prisma® has also been tested according to a variety of key ASTM test standards for corrosion and UV resistance. For markets that require ASTM test results please contact us.

ITB

The performance of Colorcoat Prisma® has been validated in Poland by the Institute of Building Technology (ITB). This validates the category RC5+ and the UV resistance in the Ruv5 category according to PL-EN 10169:2022 for the standard Solid, Metallic and Matt colours in the range.



Sustainability

Environmental Product Declarations

To demonstrate the environmental impacts, Tata Steel have published an Environmental Product Declaration (EPD) for each of the Colorcoat® assessed cladding systems, based on an initial Life Cycle Analysis. In addition Tata Steel have published an Environmental Product Declaration (EPD) for Colorcoat Prisma® that complies with EN 15804 and ISO 14025. Please visit www.colorcoat-online.com/epd for further details.

System environmental assessment

In the UK roof and wall systems using pre-finished steel achieve a Green Guide A+ rating. Manufacture and processing of Colorcoat Prisma® into building envelope products, through our approved supply chain, can meet the responsible sourcing criteria for BREEAM. Our manufacturing site has an environmental management system which has been certified to ISO 14001 as well as ISO 50001 Energy Management.

BES 6001 Responsible Sourcing

At Tata Steel we are committed to making the products society needs and to making them in the most responsible way. Our commitment to sustainability also means we actively manage our impacts and contribution throughout the full life of our products - with our suppliers, within our own operations, through the supply chains we serve and by taking responsibility for recycling steel. Colorcoat Prisma® is certified to the Building Research Establishment's standard for responsible sourcing of materials BES 6001. This reinforces our commitment to sustainability.

BREEAM and LEED

EN15804 compliant Environmental Product Declarations for Supply Chain Partner cladding systems using Colorcoat Prisma® and independent third party performance accreditation and can support your building certification schemes such as LEED and BREEAM.



Colorcoat® services

The Colorcoat® brand is recognised as the exclusive mark of quality and metal envelope expertise and is supported by a comprehensive range of services, technical advice and guidance.

Colorcoat® technical support team

If you are building to specific sustainability credentials or performance criteria, our dedicated team are available to assist you with queries relating to a range of metal building envelope systems to ensure you get the right solution for your building. Call the Colorcoat Connection® helpline to request a visit from your regional representative.

Colorcoat Connection® helpline

This dedicated helpline offers immediate and easily accessible advice and guidance on a wide range of building issues. Contact us on +44 (0) 1244 892434.

Colorcoat® technical papers

We have produced a number of technical papers that can help you address key issues in building design and construction.

Colorcoat® supply chain partners

Colorcoat® products are available through our market leading supply chain partners, who have products that are UKCA/CE marked and systems that provide the highest quality and service.

Colorcoat® Accredited Distributors

Our Colorcoat® Accredited Distributors can provide you with any colour from the Colorcoat Prisma® range in small quantities, with a 48 hour service.

Metal hand samples

Metal hand samples are available for all colours. For a truer representation of colour and effect, please obtain metal hand samples from the Colorcoat Connection® helpline or online at www.colorcoat-online.com/samples

Colorcoat® Life Building

Providing an interactive guide to sustainable building envelope design, it intends to ensure that sustainability is factored into projects from the outset. It provides all the support we give around design, all in one easy to use place. Please visit www.colorcoat-online.com for further details

Colour support

A range of the most popular colours are available on short production lead times, and all colours are available from our Colorcoat® Accredited Distributors in standard sizes. To check the quickest colour availability for your project contact us on the Colorcoat Connection® helpline on +44 (0) 1244 892434.

Colour consistency

If tonal consistency is critical, all cladding for a single elevation should come from the same production batch. All metallic shades and Element colours exhibit a degree of directionality.

Matching components

If accessories made from other materials are to be colour-matched to the roof or wall cladding, the best reference is the actual profiles or panels delivered to site, or material from the same batch.

Repertoire®

As an additional service, whether you want your building to stand out, or blend with the surroundings, we can create a unique identity for your building. Through our Repertoire® colour consultancy service we can match almost any solid colour for walls or roofs of your building, with a minimum order quantity of 5,000m², we can work from either physical swatches or reference standards. Any approved Repertoire® solid colour will have the appropriate Confidex® Guarantee duration. The colour guarantee is only available for the standard colours not for approved Repertoire® colours.

Colorcoat® Compass

Colorcoat® Compass is a digital colour system. It allows designers to scan objects to match specific colours, search the standard and previously matched colours, or search using RAL or British Standard colour codes to make an informed colour choice based on availability, feasibility and level of guarantee.

Colour availability

Colour reference table

Colour	BS	RAL	SRI	SSST
Pegasus	*	*	28	72
Aquarius	*	*	50	64
Atlantis	*	*	10	78
Helios	*	*	19	75
Kronos	*	*	2	82
Sirius	*	9006	50	63
Orion	*	9007	24	73
Zeus	*	*	19	75
Ephyra	*	*	38	68
Ariana	*	*	17	76
Hamlet	*	9002	73	55
Cream	*	1015	77	53
Oxide Red†	*	3009	20	75
Sargasso	*	5003	5	81
Black	00E53	9005	0	82
White	00E55	9010	95	46
Oyster	*	7035	61	60
Alaska Grey	*	7000	21	74
Slate Grey	*	7012	11	78
Anthracite	*	7016	5	81
Seren White	*	*	90	48
Seren Silver	*	*	49	64
Seren Gold	*	*	51	63
Seren Copper	*	*	41	67
Seren Black	*	*	0	83
White Matt	*	9010	91	48
Sirius Matt	*	9006	52	63
Orion Matt	*	9007	20	75
Zeus Matt	*	*	20	74

RAL references

4 digit numbers are RAL Classic references.

British Standard or RAL reference numbers shown in the table, represent the nearest colours and are not exact matches to Colorcoat Prisma®.

* These colours do not have equivalent BS/RAL references.

† Price extra applies.

SRI – Solar Reflective Index as per ASTM E 1980.

SSST – Steady State Surface Temperature as per ASTM E 1980.

Solar Reflective Index (SRI) and Steady State Surface Temperature (SSST)

The Solar Reflectance Index and Steady State Surface Temperature has been determined for all 29 standard colours according to ASTM E 1980 using the medium wind speed coefficient and values for reflectance and emissivity. Solar reflectivity or reflectance is the ability of a material to reflect solar energy from its surface back into the atmosphere, where the higher the SRI value the greater the ability of the Colorcoat Prisma® colour to reflect the solar radiation.

Depending on the pigment selection, the colours have a different SSST value with white colours having the lowest value, black the highest value and the other colours somewhere in between these extremities.

Thermal Emissivity (to ASTM E 1980) and Light Reflectance Values (LRV) (to BS 8493:2008+A1:2010) are also available for the standard colours. Please contact the Colorcoat Connection® helpline for these.

REACH

Colorcoat Prisma® is produced with both the surface treatment and primer free of chromates including hexavalent chromate (substances included in the Annex XIV list of REACH) and is fully compliant with the current REACH legislation. To assist customers, updates of REACH obligations as well as product health and safety datasheets are available.



Image courtesy of Atlas Weathering Services Group – South Florida laboratory.

For further details visit:
www.colorcoat-online.com or ring
the Colorcoat Connection® helpline
on +44 (0) 1244 892434

Colorcoat Prisma®

Introduction

Colorcoat Prisma® demonstrates a step change by utilising cutting edge three layer manufacturing technology to create an optimised, robust, chrome free pre-finished steel product.

This development in manufacturing and extensive testing, allows us to offer Colorcoat Prisma® in a greatly enhanced range of contemporary colours and effects, including natural metal shades, Confidex® guaranteed for up to 40 years, and colour stability for up to 20 years for standard colours.

Colorcoat Prisma® not only uniquely pushes the boundaries for UV performance but also outperforms the highest European corrosion resistance standards. This makes it the ideal choice for commercial, retail, warehouse, public sector and superior aesthetic buildings that are truly built to last.

Product benefits

- 3 layer coating technology, providing enhanced aesthetics, long term performance and durability.
- Solid, Metallic, Matt and Element colours meet Ruv5 and RC5+ as per EN 10169:2022 proving excellent colour and gloss retention and corrosion resistance.
- Confidex® Guarantee for up to 40 years for the weatherside of industrial and commercial buildings with no inspection or maintenance to maintain its validity except when used on a roof or wall that has a photovoltaic (PV) installation.
- Can be used under Photovoltaic (PV) frame modules with no reduction in guarantee length ensuring all parts of the roof or wall are covered for the same duration.
- Colour guarantee included as part of the Confidex® Guarantee for standard colours.
- Optimised Galvalloy® metallic coating for ultimate corrosion resistance and cut edge protection.
- Independently tested for liberation of volatile organic compounds (VOC) against EN ISO 16000-9 and achieved an A+ rating.
- Fully REACH compliant & free of chromates including hexavalent chrome.
- Made in the UK. Certified to BES 6001 Responsible Sourcing Standard.
- Fully supports BREEAM & LEED certification.
- Robust and durable topcoat for easier handling and processing.
- Reverse side branding making traceability easy.

Special metallics



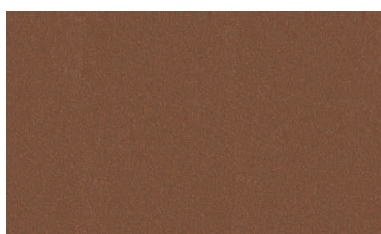
Pegasus



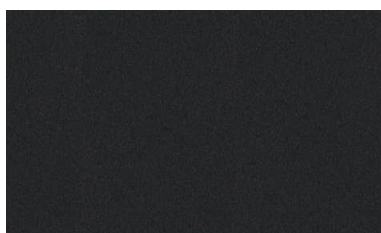
Aquarius



Atlantis



Helios



Kronos

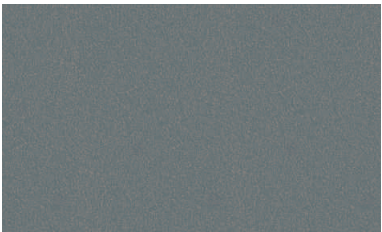
Special metallics



Sirius (RAL 9006)



Orion (RAL 9007)



Zeus

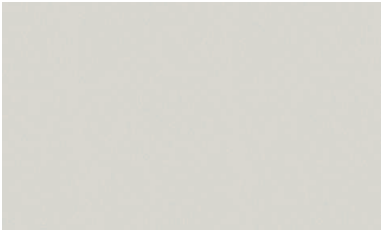


Ephyra

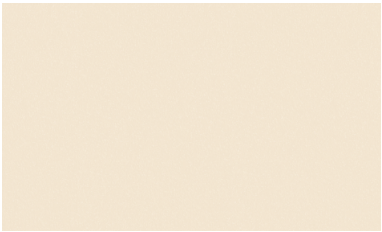


Ariana

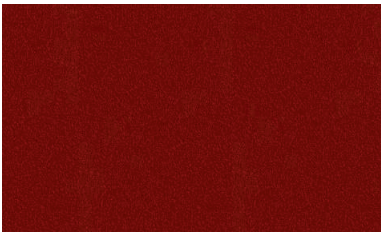
Solid colours



Hamlet (RAL 9002)



Cream (RAL 1015)



Oxide Red† (RAL 3009)



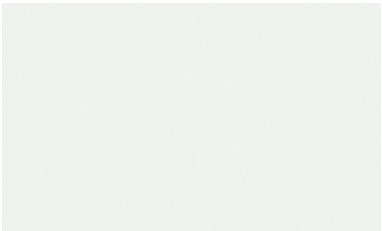
Sargasso (RAL 5003)



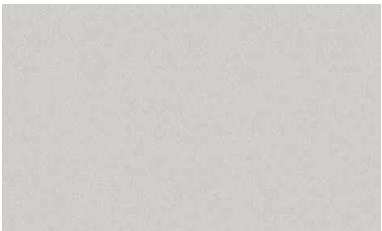
Black (RAL 9005)

†Price extra applies.

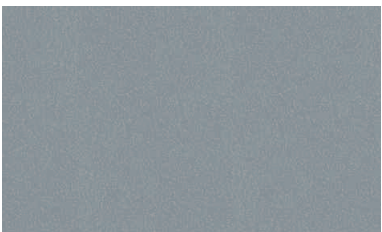
Solid colours



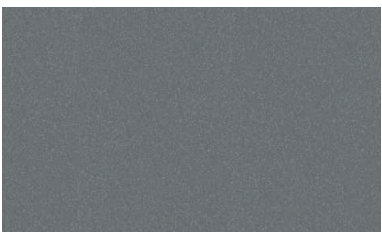
White (RAL 9010)



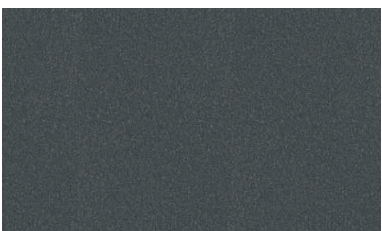
Oyster (RAL 7035)



Alaska Grey (RAL 7000)

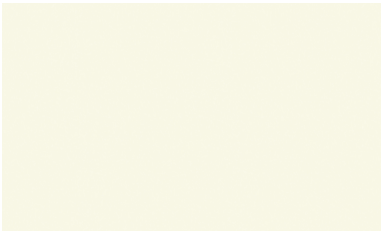


Slate Grey (RAL 7012)

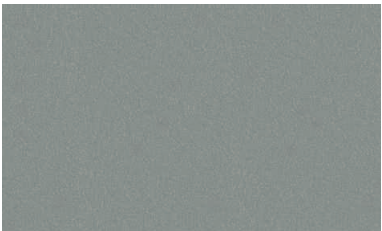


Anthracite (RAL 7016)

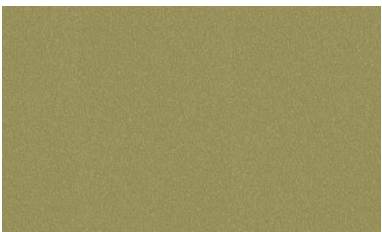
Elements



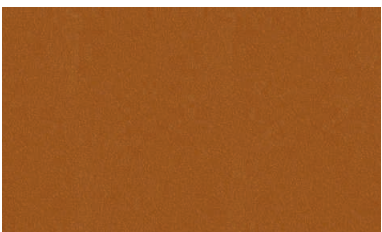
Seren White



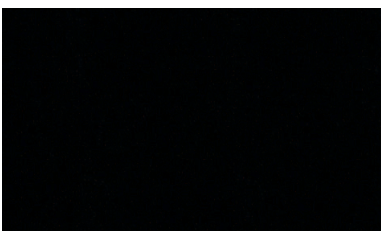
Seren Silver



Seren Gold

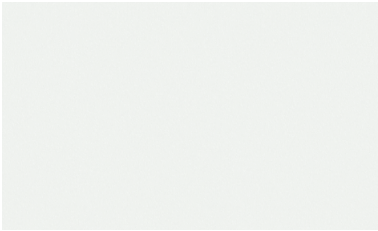


Seren Copper



Seren Black

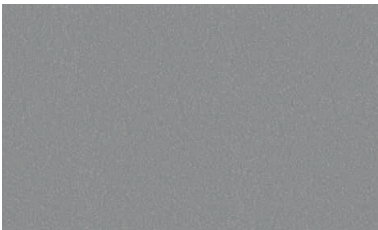
Matt colours



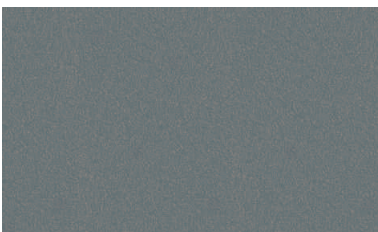
White Matt (RAL 9010)



Sirius Matt (RAL 9006)



Orion Matt (RAL 9007)



Zeus Matt

Product options

Specification

To secure the peace of mind that comes from a rigorously manufactured and world wide tested product from Tata Steel, please ensure Colorcoat® as well as the individual product name is specified: Colorcoat Prisma® by Tata Steel with Galvalloy® metallic coating.

Other colours

Due to the exceptional colour performance of Colorcoat Prisma®, other colours are available that are not shown on the colour card - these include heavily pigmented colours such as reds and oranges subject to minimum order quantities and additional costs.

Double sided option

Colorcoat Prisma® is provided with a high performance backing coat as standard, but is also available in double sided in a limited range of colours for the reverse side.

For more information please contact the Colorcoat Connection® helpline on +44 (0) 1244 892434.



For further details visit:
www.colorcoat-online.com or ring
the Colorcoat Connection® helpline
on +44 (0) 1244 892434

www.colorcoat-online.com

Trademarks of Tata Steel

Aquarius, Atlantis, Colorcoat, Colorcoat Connection, Colorcoat Prisma, Compass, Confidex, Galvalloy, Hamlet, Helios, Kronos, Orion, Pegasus, Repertoire, Seren, Sirius and Zeus are trademarks of Tata Steel.

Whilst the Colorcoat Connection® helpline takes care in giving out information or advice, it does so only on the basis of the facts supplied. Tata Steel Europe Limited and its subsidiaries do not accept any liability for providing inaccurate, misleading or incomplete information or advice or any reliance which may be placed on such information or advice. The recipient should satisfy itself of the accuracy and appropriateness of any information or advice before relying on it.

While care has been taken to ensure that the information contained in this publication is accurate, neither Tata Steel, nor its subsidiaries, accept responsibility or liability for errors or for information which is found to be misleading. Suggestions for, or descriptions of, the end use or application of products or methods of working are for information only and Tata Steel Europe Limited and its subsidiaries accept no liability in respect thereof.

Before using products or services supplied or manufactured by Tata Steel and its subsidiaries, customers should satisfy themselves as to their suitability.



Scan for the latest version of this literature.

Sales Contact Details

Tata Steel

Shotton Works, Deeside
Flintshire CH5 2NH
United Kingdom
T: +44 (0) 1244 812345

Colorcoat Connection® helpline

T: +44 (0) 1244 892434
E: colorcoat.connection@tatasteelurope.com

Copyright 2024 Tata Steel UK Limited.

Registered Office: 18 Grosvenor Place, London, SW1X 7HS.

Registered in England No. 2280000

Language English UK 1024

ARCHITECTURAL ALUMINIUM GLAZING SYSTEMS

CURTAIN WALL SYSTEMS





BTR Towers, Erie Basin, Salford Quays
Architect: Sheppard Robson
Photo: David Millington Photography

CONTENTS

- 04**
Curtain Wall Design Considerations
- 05**
Zone or Mullion Drained?
- 06**
Curtain Wall Product Characteristics/Regulations
- 08, 14-31**
AA®100 50mm Curtain Wall System
- 10, 18**
AA®100 HI Curtain Wall System
- 08, 14-31**
AA®110 65mm Curtain Wall System
- 32**
Windows and Doors into Curtain Walling
- 38**
AA®100 and AA®110 Concealed Vent (CV)
- 42**
AA®100 and AA®110 Horizontally Capped (HC) and Vertically Capped (VC) Gasket System
- 56**
AA®100 and AA®110 Structurally Silicone Glazed (SSG)
- 62**
AA®100 and AA®110 PFL
- 68**
Case Study – Citylabs 2.0, Manchester
- 70**
Supporting Your Projects

CURTAIN WALL DESIGN CONSIDERATIONS

Today's fast paced construction schedules demand it all – design innovation, flexibility, high quality, fast installation, simplified fabrication and superior performance. Kawneer's curtain wall systems have been designed and engineered to meet these demands and more.

Please note this is for guidance only.

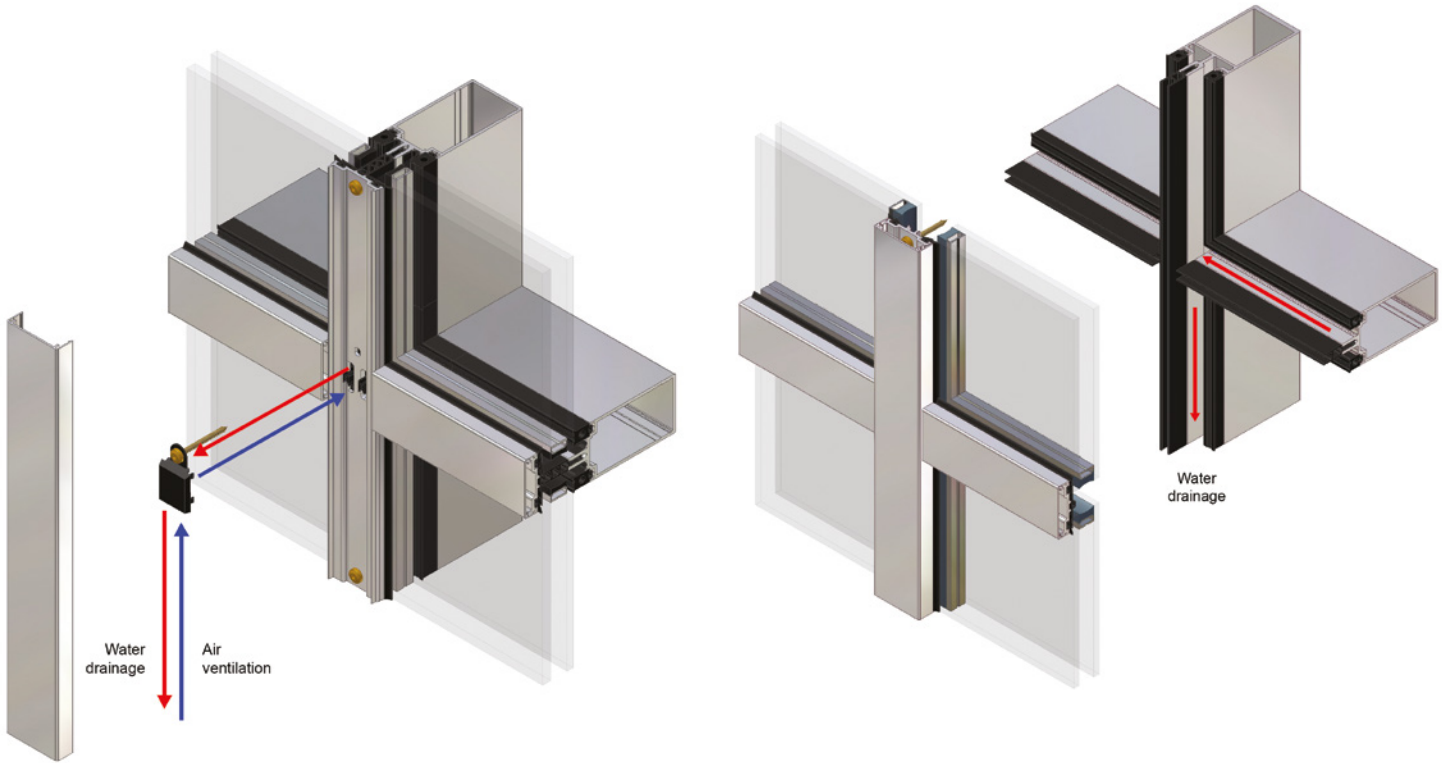
Our curtain wall systems have been tested and assessed in accordance with the relevant BS EN and Centre for Window and Cladding Technology (CWCT) Curtain Wall Standards.



How many stories is your building?	Low rise e.g. < 10 stories	AA®100 50mm / AA®100 HI / AA®110 65mm
	High rise e.g. > 10 stories	Consider AA®201 Unitised Consider AA®265 Unitised
Do you need to cater for increased live-load movements or accommodate barrier-load edge cover (15mm)?	Yes	AA®110 65mm AA®201 Unitised AA®265 Unitised
	No	AA®100 50mm / AA®100 HI
Is Fire Resistance a requirement?	Yes	AA®100 Fire Rated
	No	AA®100 50mm / AA®100 HI / AA®110 65mm
What is your aesthetic requirement?	Highlight horizontal features	AA®100 Horizontally Capped (HC)
	Highlight vertical features	AA®100 Vertically Capped (VC)
	Picture frame effect *	AA®100 50mm PFL AA®110 65mm PFL
	Standard capped curtain walling	AA®100 50mm / AA®100 HI / AA®110 65mm
	Structural silicone glazed	AA®100 50mm AA®110 65mm
	Non-standard Face Caps	Subject to assessment

* Project Specific (Non Standard)

ZONE OR MULLION DRAINED?



ZONE DRAINAGE

Zone drainage systems feature simple butt jointed mullions and transoms, with each panel acting as an individual unit.

Drainage and ventilation slots are located in the vertical pressure plate. Transoms are square cut at the ends to incorporate EPDM mouldings and gaskets to maintain each zone.

Transoms are fitted with a 'Batman gasket' to maintain the thermal performance.

Benefits

- Each panel is individually pressure equalised and drained via its transom, enabling the curtain wall to quickly react to fluctuating wind pressure

MULLION DRAINAGE

Mullion (or point) drainage systems feature overlapping joints. Drainage and ventilation slots are located in the vertical pressure plate. Transoms are overlapped to the mullion which incorporates an EPDM gasket to seal between mullion and transom.

Transoms are fitted with a 'Batman gasket' to maintain the thermal performance.

Benefits

- Suitable for slope glazing

CURTAIN WALL PRODUCT CHARACTERISTICS/REGULATIONS

System	BS EN 13830 & CWCT Test	Expansion Joint	Facets	Barrier Loading Required?	Concealed Vent
AA®100	■	■	■	■ *	■
AA®100 HC	■		■	■	■
AA®100 VC	■	☎	■	■	■
AA®100 Slope Glazing	■		■		
AA®100 SSG	■	■	☎	■	☎
AA®100 PFL	☎				
AA®100 HI	■	■		■ *	
AA®100 Fire Resistant	■	■			
AA®110	■	■ **	■	■	■
AA®110 HC	CWCT Assessment	■	■	■	■
AA®110 VC	CWCT Assessment	■	■	■	■
AA®110 SSG	CWCT Assessment	■ ▲	☎	■	☎
AA®110 Slope Glazing	☎		■	■	
AA®110 PFL	☎			■	
AA®201 Unitised	■	■	☎	■	☎
AA®201 Unitised HC/VC	■	■	☎	■	☎
AA®201 Unitised SSG	■	■	☎	■	☎
AA®265 Unitised	■	■	☎	■	☎

Key:
■ = Available ☎ = Project dependant; contact our advisory line * = Subject to Structural Assessment
** = For the +/- 15mm AA®110 Large Movement Joint, see pages 12-13 and contact the Technical Services Team for advice
▲ = For the +/- 5mm AA®110 SSG Large Movement Joint, see pages 56-57 and contact the Technical Services Team for advice
HC = Horizontally Capped VC = Vertically Capped SSG = Structurally Silicone Glazed PFL = Picture Frame Look-Alike
Note: HI version cannot be faceted

System	Thermal compliance in line with current Building Regulations	Compatibility with Kawneer Doors and Windows	Glazing	Drainage Method	Acoustic Performance Doc E
AA®100	■	■	Upto 40mm - 50mm	Zone or Mullion	■
AA®100 HC	■	■	Upto 40mm - 50mm	Zone or Mullion	■
AA®100 VC	■	■	Upto 40mm - 50mm	Zone or Mullion	■
AA®100 Slope Glazing	■	■	Upto 40mm - 50mm	Mullion	■
AA®100 SSG	■	■	Upto 4mm - 40mm	Mullion	
AA®100 PFL	■	■	Upto 40mm - 50mm	Zone or Mullion	
AA®100 HI	■	■	Upto 60mm	Zone or Mullion	■
AA®100 Fire Resistant	■	■	Upto 40mm - 50mm	Zone	
AA®110	■	■	Upto 40mm - 50mm	Zone or Mullion	■
AA®110 HC	■	■	Upto 50mm	Zone or Mullion	■
AA®110 VC	■	■	Upto 50mm	Zone or Mullion	■
AA®110 SSG	■	■	Upto 4mm - 40mm	Mullion	
AA®110 Slope Glazing	■	■	Upto 40mm - 50mm	Mullion	■
AA®110 PFL	■	■	Upto 40mm - 50mm	Zone or Mullion	
AA®201 Unitised	■	■	Infill panels/glass upto 32mm	Zone	■
AA®201 Unitised HC/VC	■	■	Infill panels/glass upto 32mm	Zone	■
AA®201 Unitised SSG	■	■	Infill panels/glass upto 32mm	Zone	■
AA®265 Unitised	■	■	Upto 50mm	Zone	

Key:
■ = Available ☎ = Project dependant; contact our advisory line * = Subject to Structural Assessment
** = For the +/- 15mm AA®110 Large Movement Joint, see pages 12-13 and contact the Technical Services Team for advice
▲ = For the +/- 5mm AA®110 SSG Large Movement Joint, see pages 56-57 and contact the Technical Services Team for advice
HC = Horizontally Capped VC = Vertically Capped SSG = Structurally Silicone Glazed PFL = Picture Frame Look-Alike
Note: HI version cannot be faceted



Criminal Justice Centre, Aberdeen
Architect: Ryder Architecture

AA®100 50MM CURTAIN WALL SYSTEM

INTRODUCTION

A stick-frame assembly with weather performance achieved by drainage and ventilation of the glazing rebates. Drainage and ventilation occurs at every mullion and transom connection in a zone drained system and at the base and above mullion joints in a mullion drained system.

The system is available in a variety of mullion depths which combined with several thermal break options, including an enhanced thermal performance option, and aesthetic external capping allows a specifier the flexibility of design to make their own statement. The system has outstanding performance and its ease of installation makes it possible to suit individual project requirements.

The AA®100 is suitable for vertical and sloped applications including faceted walls.

DESIGN CONSIDERATIONS

A comprehensive range of mullions and transoms allow façades to be designed with minimal structural support. The selection of mullion is dependent on several factors:

- The span (the distance between the fixings to supporting structure)
- The mullion centres (up to 3.0m using AA®100 curtain walling)*
- Windload (up to 2400 Pa)
- Maximum weight of infill (up to 600kg)
- The deflection limitations of the glazing system
- The drainage method required; i.e. zone or mullion

Guidance on this element of the curtain wall design should be sought from the Kawneer Architectural Services Team.

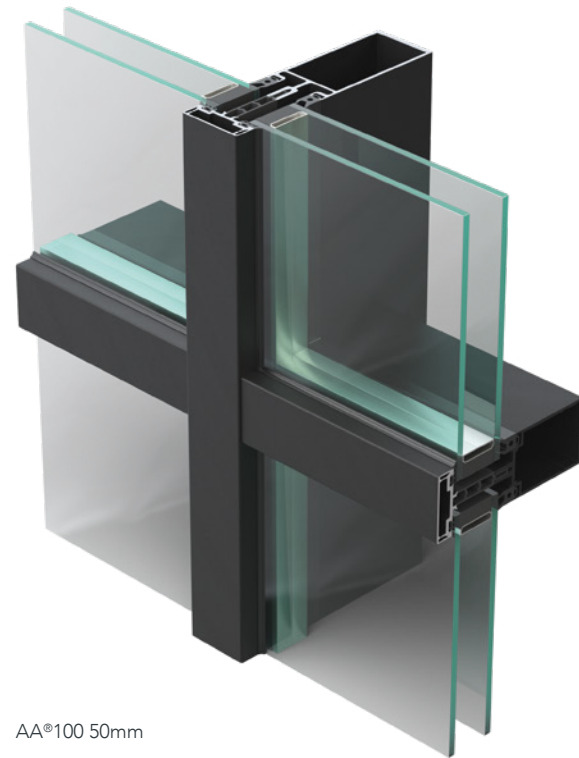
* For mullion centres greater than 3.0m contact the Technical Services Team at Runcorn.

PRODUCT FEATURES AND BENEFITS

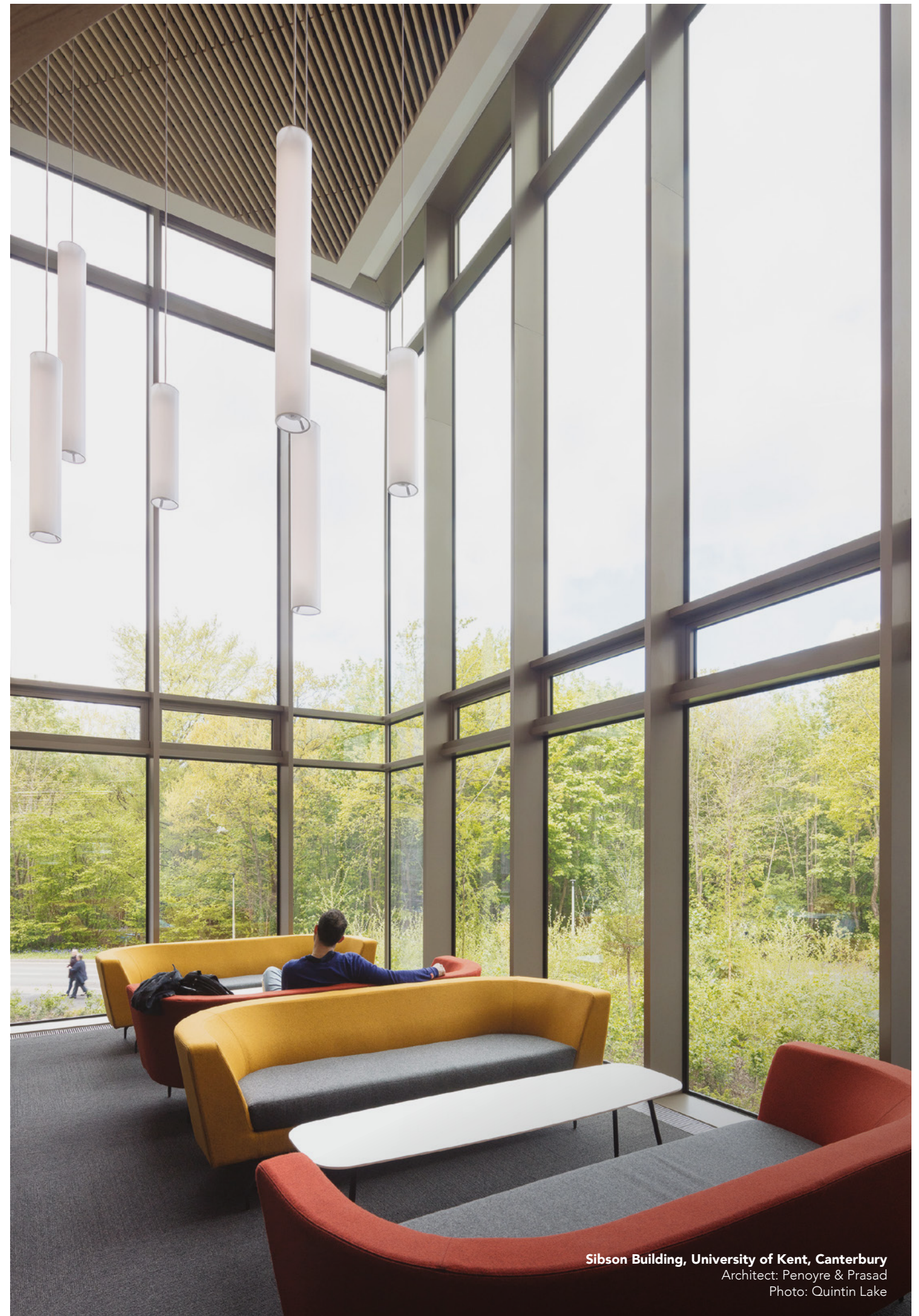
- Concealed zone drainage - each pane acts as an individual self-draining unit or mullion drainage - ventilation and drainage via the mullions
- Glazing up to 50mm
- Large choice of face caps to enable total design flexibility to suit your individual aesthetic requirements
- Bespoke face caps available (subject to approval)
- Fire resistant solution providing uniformity of the façade in accordance with Pr EN 1364-3, with up to 30 minutes integrity and insulation
- Patented transom overlap detail which gives the uniform aesthetic finish
- Market leading product tested and certified in accordance with CWCT Sequence B
- Range of mullion, transom and face cap options with 50mm sightlines
- Enhanced thermal performance to meet or exceed current Building Regulations
- Facilitates the integration of opening window products including a concealed vent option
- HC/VC gasket system provided as an alternative to structural glazed solutions

AA®100 HC/VC (HORIZONTAL/VERTICAL CAP)

The Horizontal/Vertical Cap provides the specifier the opportunity to highlight the horizontal or vertical features across the building envelope and gives the building its individual signature. The variety of distinctive face caps gives total flexibility in design. The system has been exclusively designed, developed and supplied by Kawneer, with installation contracts carried out by approved Dealers.



AA®100 50mm



Sibson Building, University of Kent, Canterbury
Architect: Penoyre & Prasad
Photo: Quintin Lake

AA[®]100 HI CURTAIN WALL SYSTEM

INTRODUCTION

Our market-leading stick-frame assembly featuring Passive House performance criteria with additional weather performance achieved by drainage and ventilation of the glazing rebates. Drainage and ventilation occurs at every mullion and transom connection in a zone drained system and at the base and above mullion joints in a mullion drained system.

The system is available in a variety of mullion depths which combined with several thermal break options and aesthetic external capping allows a specifier the flexibility of design to make their own statement. The system has outstanding performance and its ease of installation makes it possible to suit individual project requirements.

DESIGN CONSIDERATIONS

A comprehensive range of mullions and transoms allow façades to be designed with minimal structural support. The selection of mullion is dependent on several factors:

- The span (the distance between the fixings to supporting structure)
- The mullion centres (up to 3.0m using AA[®]100 curtain walling)*
- Windload (up to 2400 Pa)
- Maximum weight of infill (up to 700kg)
- The deflection limitations of the glazing system
- The drainage method required; i.e. zone or mullion

Guidance on this element of the curtain wall design should be sought from the Kawneer Architectural Services Team.

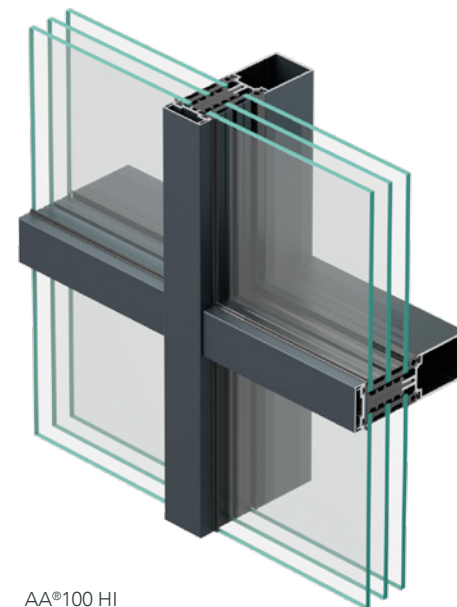
* For mullion centres greater than 3.0m contact the Technical Services Team at Runcorn.



PRODUCT FEATURES AND BENEFITS

- Concealed zone drainage - each pane acts as an individual self-draining unit or mullion drainage - ventilation and drainage via the mullions
- Glazing up to 60mm
- Large choice of face caps to enable total design flexibility to suit your individual aesthetic requirements
- Bespoke face caps available (subject to approval)
- Patented transom overlap detail which gives the uniform aesthetic finish
- Market leading product tested and certified in accordance with CWCT Sequence B
- Range of mullion, transom and face cap options with 50mm sightlines
- Enhanced thermal performance to meet or exceed current Building Regulations
- Passive House certified solution available
- Facilitates the integration of opening window products including a concealed vent option

Contact our Technical Services Team at Runcorn regarding specific infill options for Passive House.



AA[®]100 HI



St Sidwell's Point Leisure Centre, Exeter
Architect: Gale & Snowden Architects

AA®110 65MM CURTAIN WALL SYSTEM

INTRODUCTION

The AA®110 65mm curtain wall system is designed as a stick-frame assembly with weather performance achieved by drainage and ventilation of the glazing rebates. Drainage and ventilation occurs at every mullion and transom connection in a zone drained system and at the base and above mullion joints in a mullion drained system. The system is available in a variety of mullion depths which combined with several thermal break options and aesthetic external capping provide flexibility of design, outstanding performance and ease of installation to suit individual project requirements.

The AA®110 is suitable for vertical and sloped applications including faceted walls. A deeper glazing rebate meets the requirements for barrier loading and enables façades to stand up to high levels of building movement.

Allowances for slab deflection of +/- 15mm can be achieved. Large glass panels can be used allowing more natural light penetration. In addition, less metal results in an aesthetically pleasing building – on the whole better for both the environment and the building occupier.

The system has been exclusively designed, developed and supplied by Kawneer, with installation contracts carried out by approved Dealers.

DESIGN CONSIDERATIONS

A comprehensive range of mullions and transoms allow façades to be designed with minimal structural support. The selection of mullion is dependent on several factors:

- The span (the distance between the fixings to supporting structure)
- The mullion centres (up to 3.5m using AA®110 curtain walling)*
- Windload (up to 2400 Pa)
- Maximum weight of infill (up to 600kg)
- The deflection limitations of the glazing system
- The drainage method required; i.e. zone or mullion
- Floor slab live load deflection

Guidance on this element of the curtain wall design should be sought from the Kawneer Architectural Services Team.

* For mullion centres greater than 3.5m contact the Technical Services Team at Runcorn.

PRODUCT FEATURES AND BENEFITS

- Concealed zone drainage – each pane acts as an individual self-draining unit or mullion drainage – ventilation and drainage via the mullions
- Fully capped (zone drained and mullion drained with wide choice of facecap options)
- Bespoke face caps available (subject to approval)
- Glazing up to 50mm

- Thermal performance to meet or exceed current Building Regulations
- Tested and certified in accordance with CWCT Sequence B
- Range of mullion, transom and face cap options with 65mm sightlines
- Facilitates the integration of opening window products including a concealed vent option
- A range of thermal break options are available
- Offers a cost effective solution for barrier loading
- Floor slab live load deflection of +/- 15mm is achievable**

** Contact the Technical Services Department at Runcorn for advice..

AA®110 HC/VC (HORIZONTAL/VERTICAL CAP)

The Horizontal/Vertical Cap provides the specifier the opportunity to highlight the horizontal or vertical features across the building envelope and gives the building its individual signature. The variety of distinctive face caps gives total flexibility in design. The system has been exclusively designed, developed and supplied by Kawneer, with installation contracts carried out by approved Dealers.



AA®110 Large Movement Joint

INCREASED BUILDING MOVEMENT ALLOWANCE

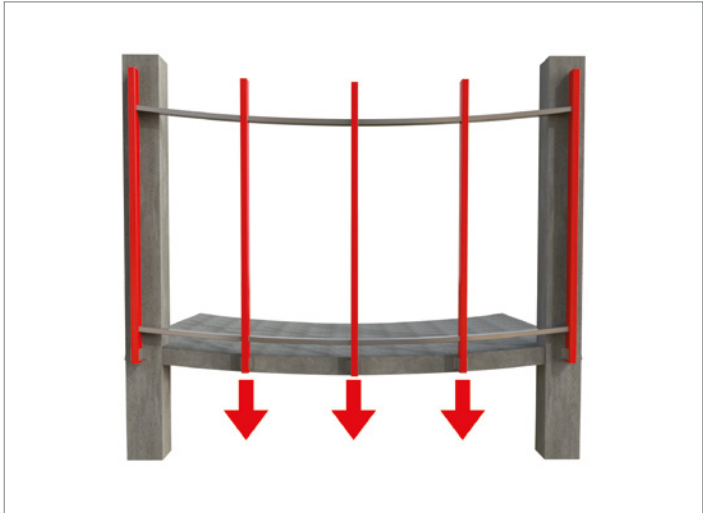
INTRODUCTION

Glazing and cladding systems need to be designed to allow for building movement without compromising the performance or safety of the system.

The consequences of failing to provide sufficient allowance for in-service building movement can range from a reduction in weather performance to glass breakage and significant system failure.

One of the main complexities in designing a façade is the accommodation of slab movement/deflection.

Due to the extension of structural spans seen in todays building designs, slab deflection is increasing. This places additional demands on the façade design team to accommodate movement between slab and façade.



When building designs require façades to withstand high slab deflections one solution is to incorporate unitised curtain wall systems which, due to their construction, can provide greater movement allowance. However, unitised curtain walling is most appropriate for large façades and are generally only undertaken by specialist fabricators and installers.

Conventional stick curtain walling is widely specified in the UK and offers a cost-effective façade solution particularly on buildings which do not have a requirement for significant movement allowance.

AA®110 LARGE MOVEMENT JOINT

Kawneer have recognised that a capacity for greater movement allowance within a stick curtain walling system would extend the scope of applications for which such systems can be specified. The AA®110 has been developed to accommodate up to +/- 15mm differential vertical movement between the façade and the supporting substructure.

This has been achieved through the design of an expansion joint for connecting vertical mullions. The joint, located at each slab level and therefore concealed by spandrel glass or panels, uses specialised engineered foam seals which expand and contract with the movement of the structure. In conjunction with this, a unique transom profile at each floor level provides allowance for the increased movement of the spandrel infill whilst maintaining air and weathertightness of the façade. Also incorporated into the design is a bespoke breather membrane which directs any ingress into the glazing rebates to the internal drainage channels.



The system has undergone rigorous testing during its' development to ensure performance in all UK conditions. Working closely with the CWCT an enhanced version of the Standard for Systemised Building Envelope: Sequence B test program was successfully carried out. This included testing while the expansion joint was in compression, extension and in the neutral position.

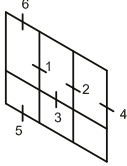
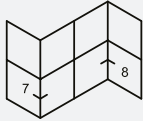
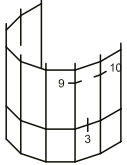
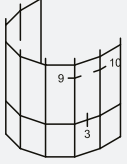
TECHNICAL SUPPORT

Kawneer offers a Façade Workshop consisting of a team of specialists who work collaboratively with developers, architects and engineers during the early stages of a project. This unique design and consultancy service, working across every aspect of the façade, ensures the design intent is realised on all projects.

AA®100 50MM AND AA®110 65MM ZONE DRAINED FAÇADE APPLICATIONS

TYPICAL ELEVATIONS

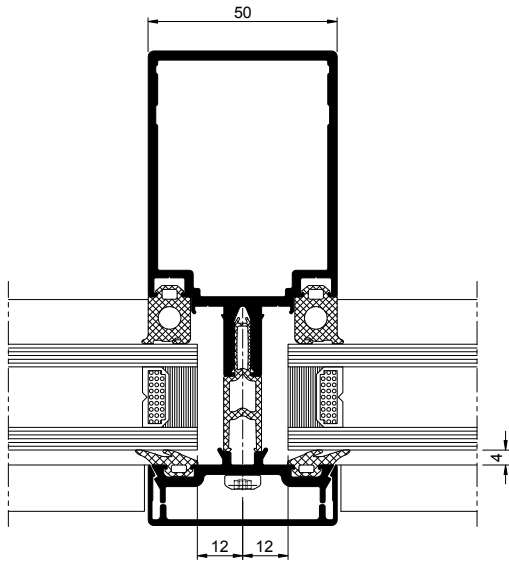
Full details can be downloaded from our website www.kawneer.co.uk

Elevation	Title	Website CAD ref. no.
	1 Intermediate Mullion	H1 02.01
	2 Expansion Mullion	H1 03.01
	3 Intermediate Transom	H1 04.01
	4 Jamb detail (generic)	H1 10.01
	5 Cill detail (generic)	H1 11.01
	6 Head detail (generic)	H1 12.01
	7 External Corner	H1 05.01
	8 Internal Corner	H1 06.01
	3 Intermediate Transom	H1 04.01
	9 Convex Faceted Mullion	H1 07.01
	10 Convex Faceted Mullion	H1 08.01
	3 Intermediate Transom	H1 04.01
	11 Convex Faceted Mullion	H1 09.01

AA®100 50MM AND AA®110 65MM ZONE DRAINED FAÇADE

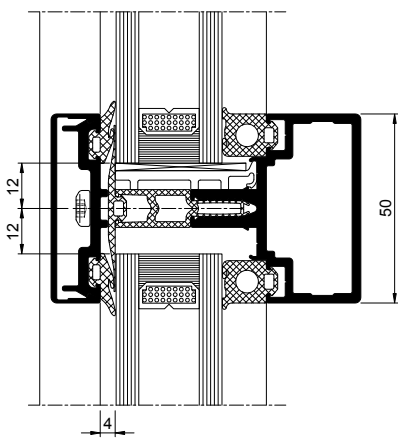
Full details can be downloaded from our website www.kawneer.co.uk

MULLION



H1 02.01

TRANSOM



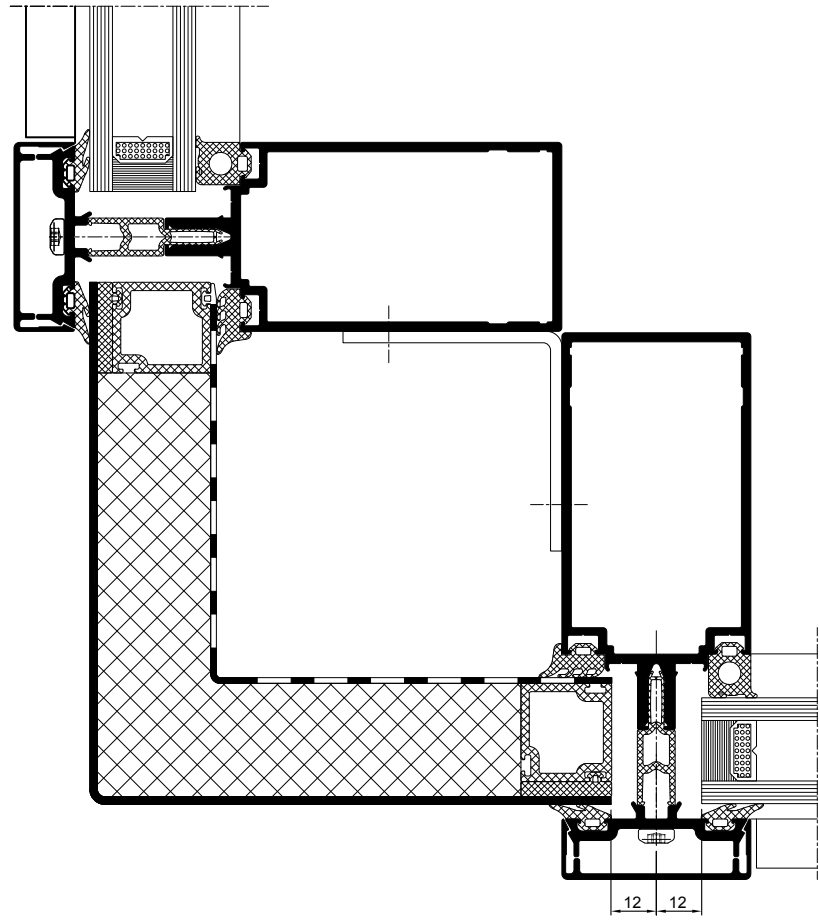
H1 04.01



AA®100 50MM AND AA®110 65MM ZONE DRAINED FAÇADE

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

EXTERNAL CORNER

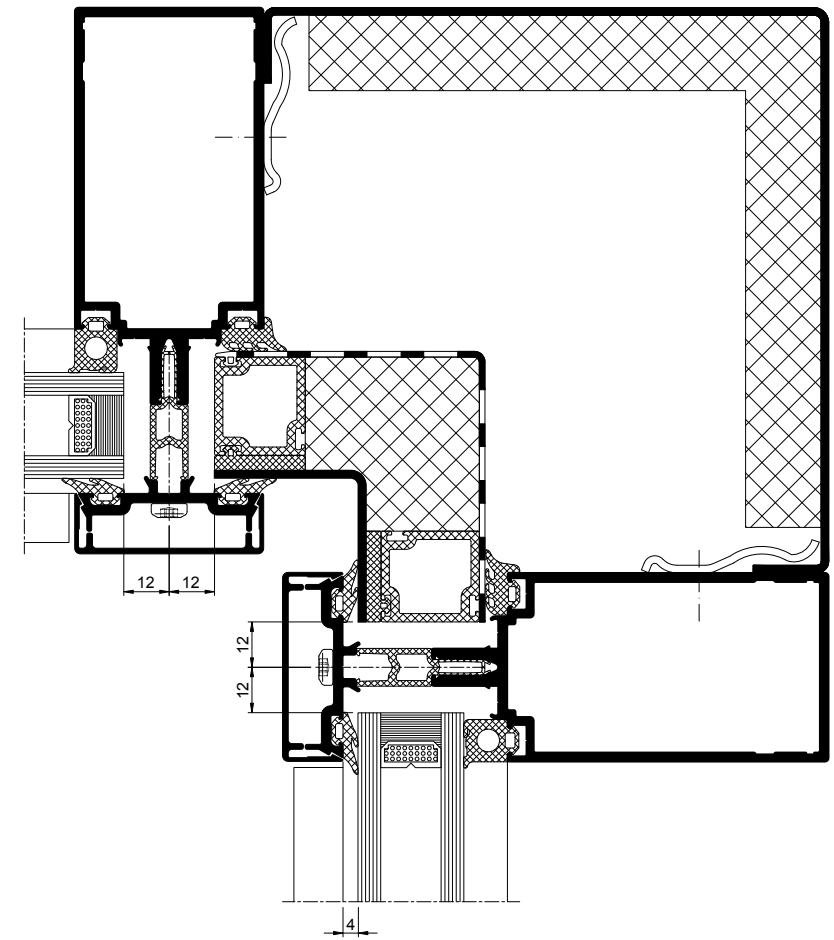


H1 05.01

AA[®]100 50MM AND AA[®]110 65MM ZONE DRAINED FAÇADE

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

INTERNAL CORNER

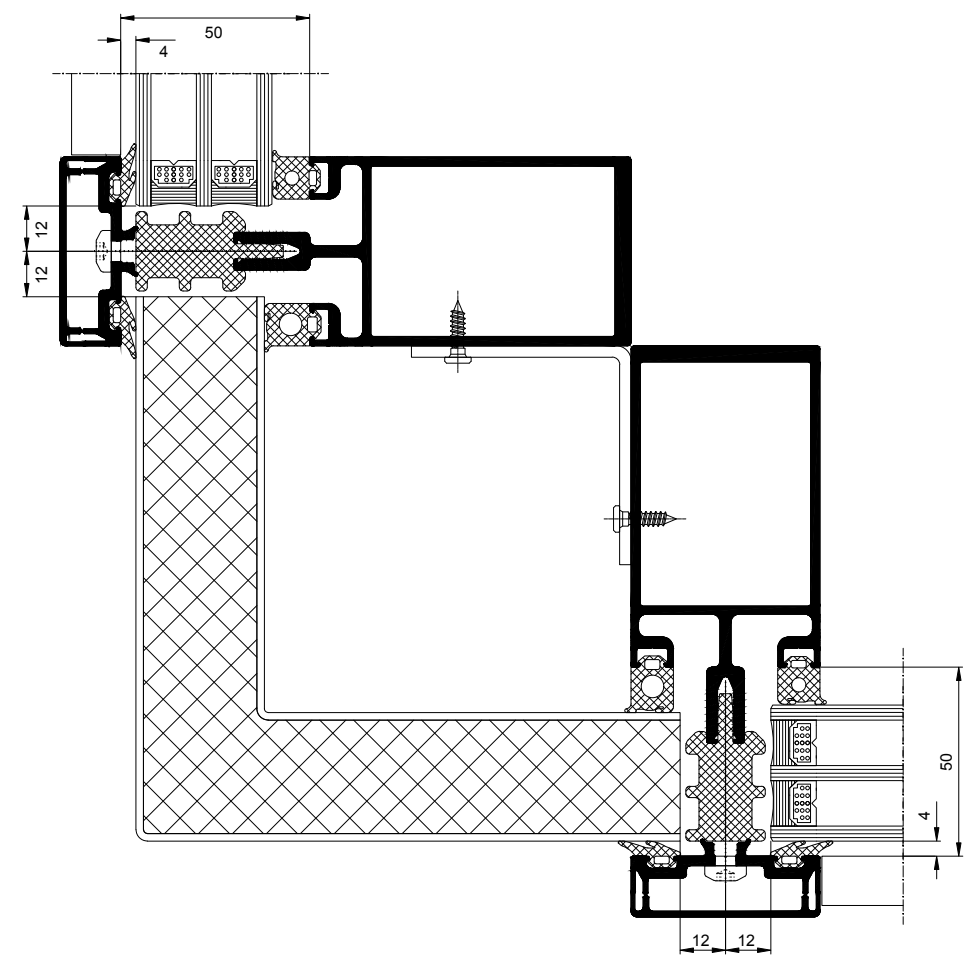


H1 06.01

AA[®]100 HI SYSTEM

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

EXTERNAL CORNER

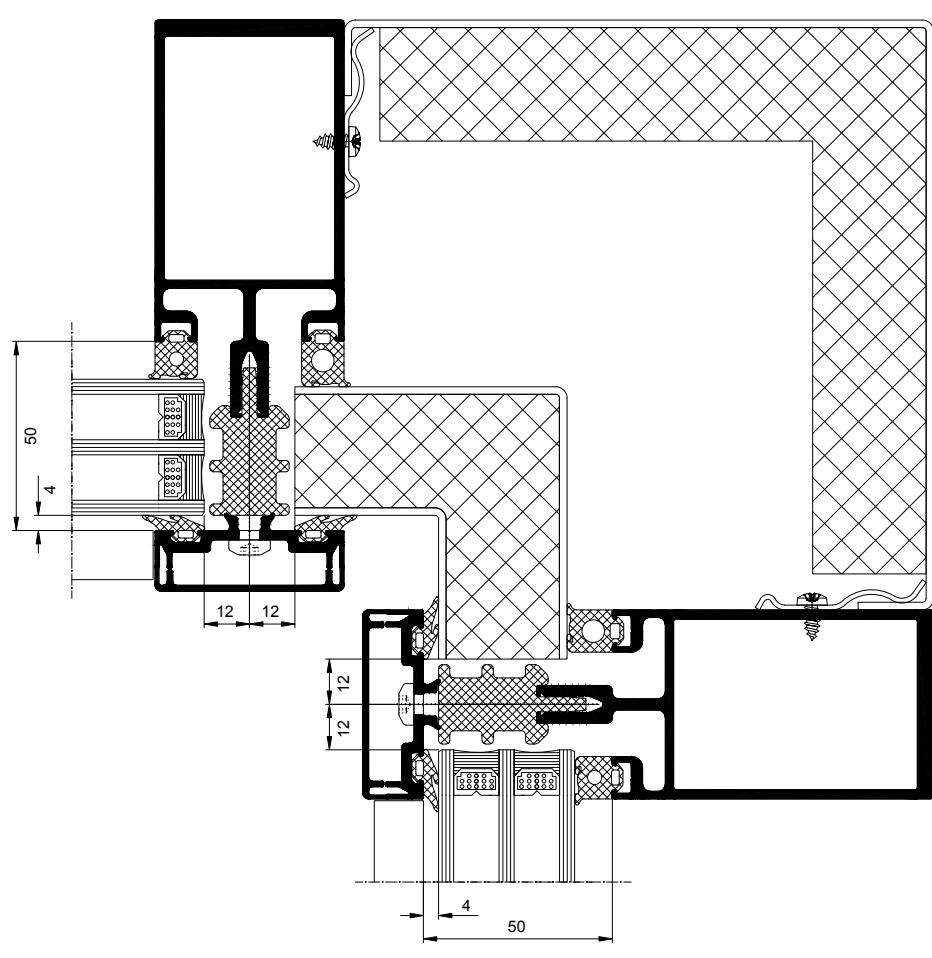


H2 01.01

AA[®]100 HI SYSTEM

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

INTERNAL CORNER

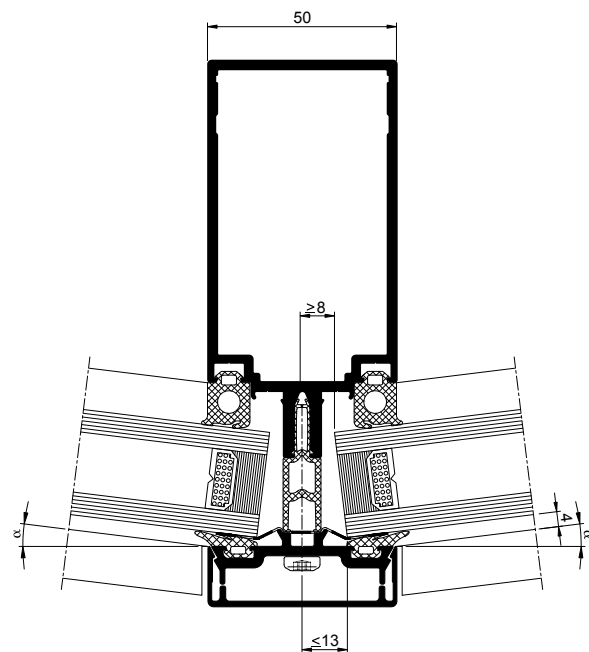


H2 01.01

AA[®]100 50MM AND AA[®]110 65MM ZONE DRAINED FAÇADE

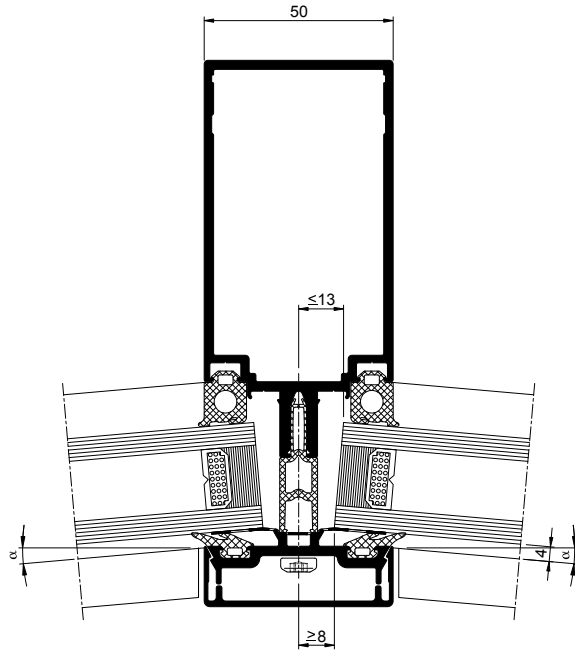
Full details can be downloaded from our website www.kawneer.co.uk

EXTERNAL FACET



H1 07.01

INTERNAL FACET



H1 09.01



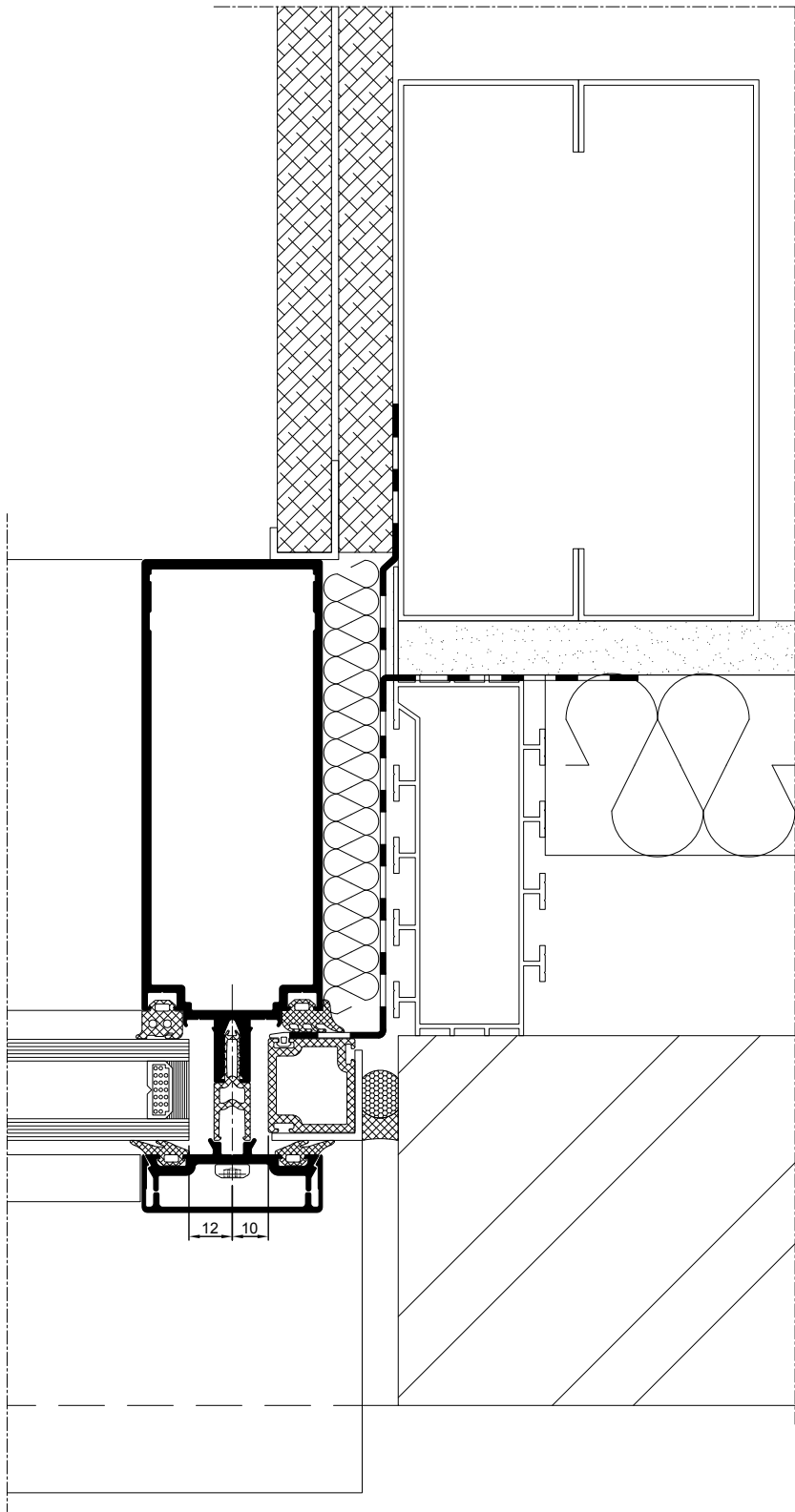
Canolfan S4C Yr Egin, University of Wales, Carmarthen
Architect: BDP
Photo: © Craig Auckland/fotohaus

AA[®]100 50MM AND AA[®]110 65MM ZONE DRAINED FAÇADE

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

JAMB INTERFACE DETAIL

(Example)

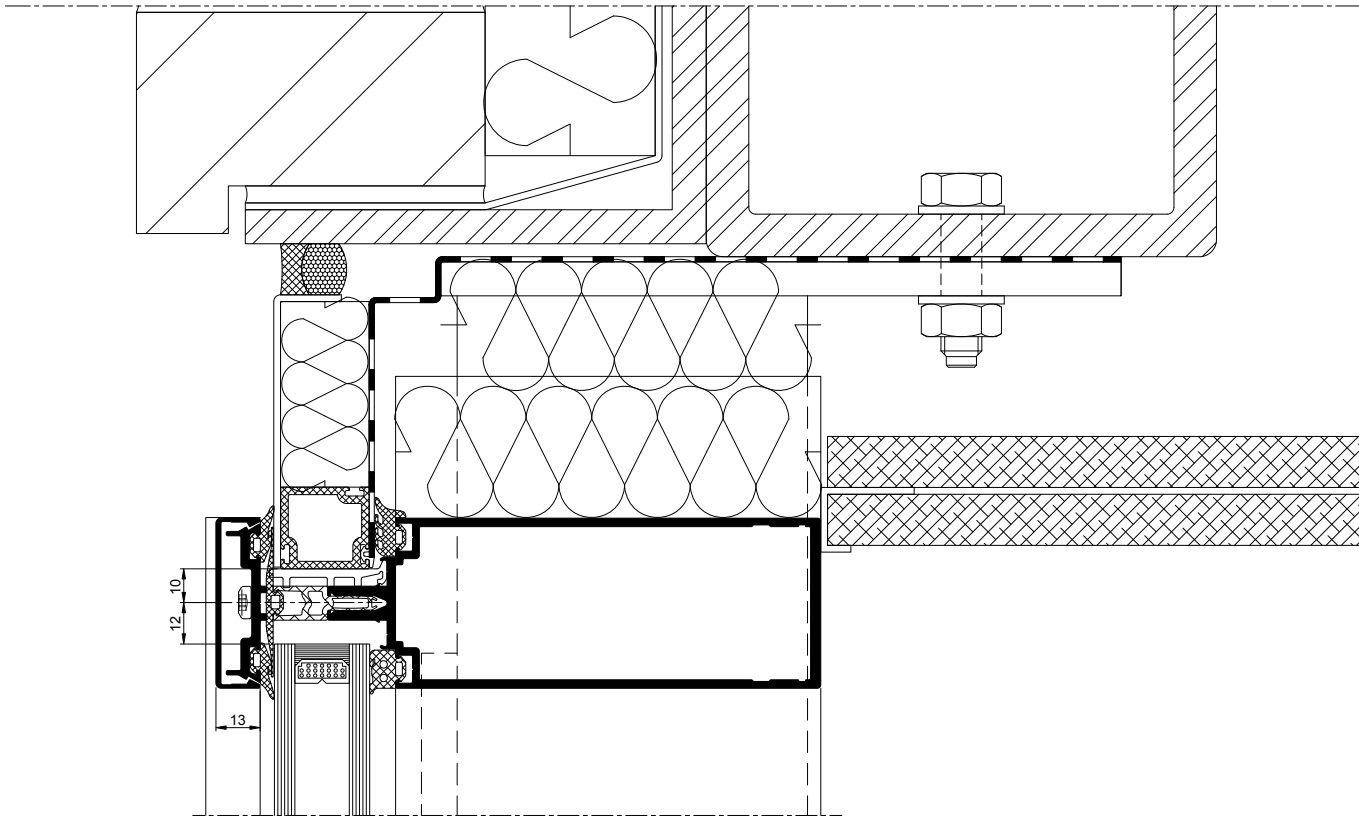


H1 10.01

AA®100 50MM AND AA®110 65MM ZONE DRAINED FAÇADE

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

HEAD DETAIL

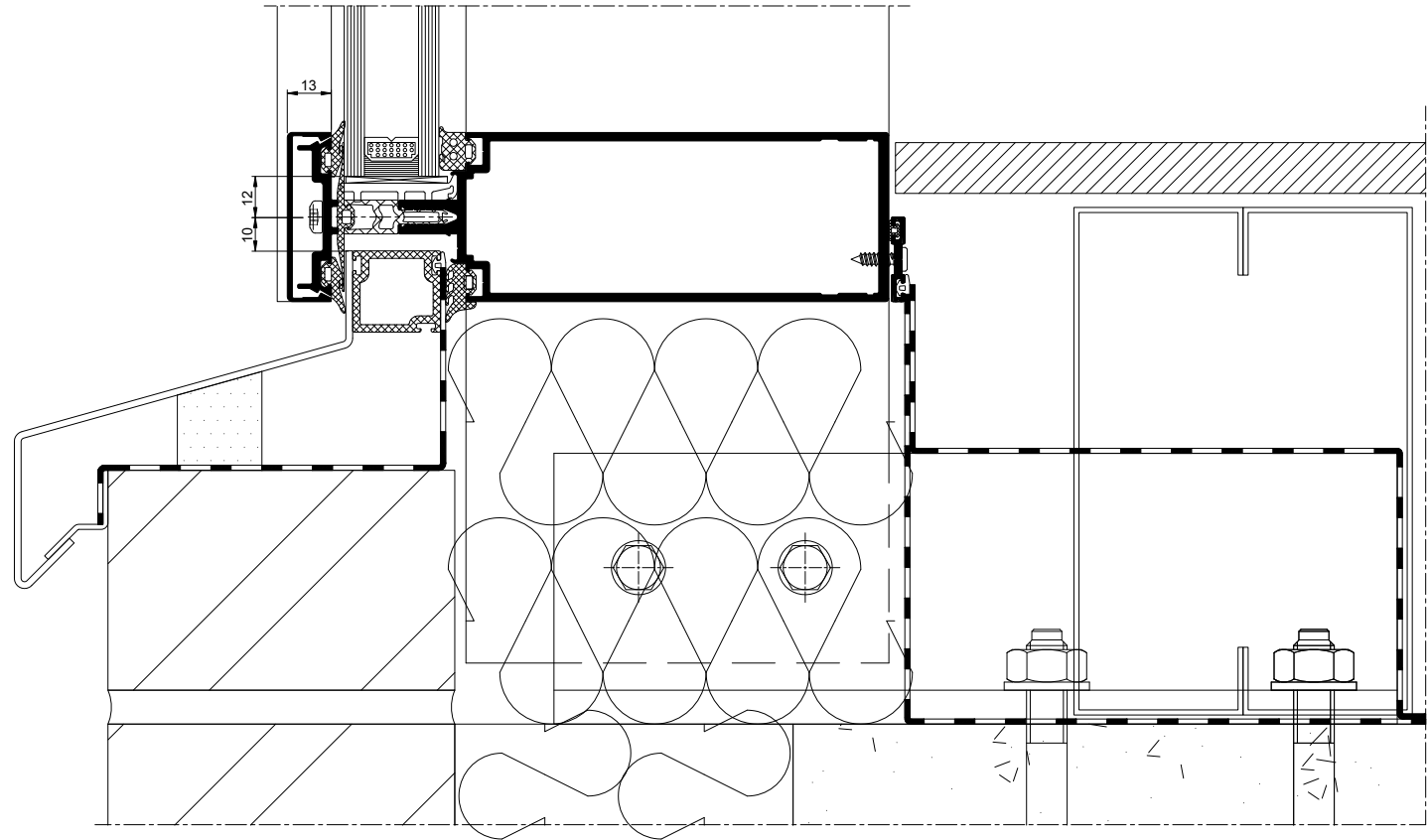


H1 12.01

AA®100 50MM AND AA®110 65MM ZONE DRAINED FAÇADE

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

CILL DETAIL

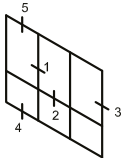
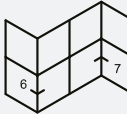
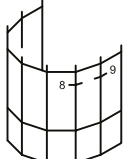
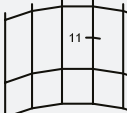
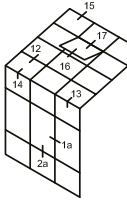
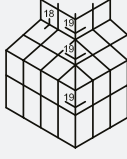
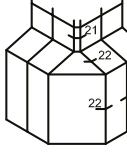
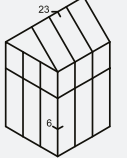


H1 11.01

AA®100 50MM AND AA®110 65MM MULLION DRAINED FAÇADE AND ROOF APPLICATIONS

TYPICAL ELEVATIONS

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

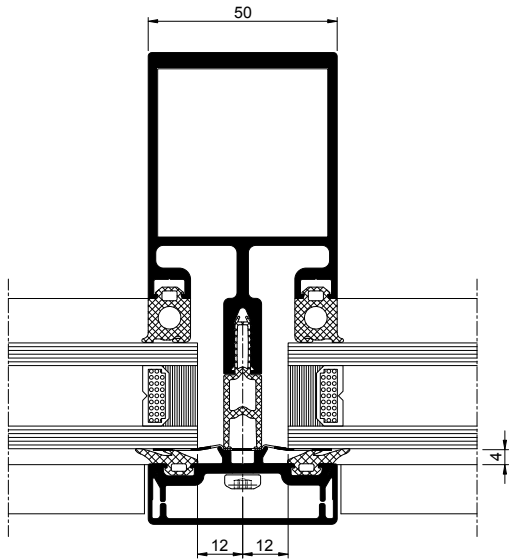
Elevation	Title	Website CAD ref. no.
	1 Intermediate Mullion	H2 02.01
	2 Intermediate Transom	H2 03.01
	3 Jamb detail (generic)	H2 26.01
	4 Cill detail (generic)	H2 25.01
	5 Head detail (generic)	H2 24.01
	6 External Corner	H2 08.01
	7 Internal Corner	H2 09.01
	8 Convex Faceted Mullion	H2 10.01, H2 11.01, H2 12.01 H2 11.01
	9 Convex Faceted Mullion	
	11 Concave Faceted Mullion	H2 22.01, H2 23.01
	1a Intermediate Mullion	H2 02.01
	2a Intermediate Transom	H2 03.01
	12 Intermediate Purlin	H2 04.01
	13 Eaves (slope - vertical)	H2 06.01, H2 07.01
	14 Eaves Gutter	H2 19.01
	15 Wall Plate	H2 20.01
	16 Slope Vent (lower end)	H2 17.01
	17 Slope Vent (upper end)	H2 18.01
	18 Vertical - slope connection	H2 05.01
	19 Hip	H2 13.01
	20 Intermediate Mullion	H2 14.01
	21 Corner	H2 15.01
	22 Hip/Facet	H2 16.01
	6 External Corner 23 Ridge	H2 08.01 H2 27.01



AA®100 50MM AND AA®110 65MM MULLION DRAINED FAÇADE AND ROOF

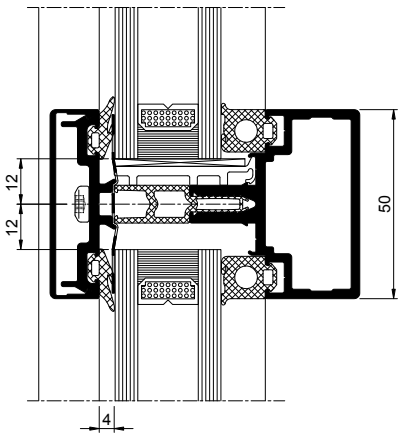
Full details can be downloaded from our website www.kawneer.co.uk

INTERMEDIATE RAFTER



H2 02.01

INTERMEDIATE PURLIN

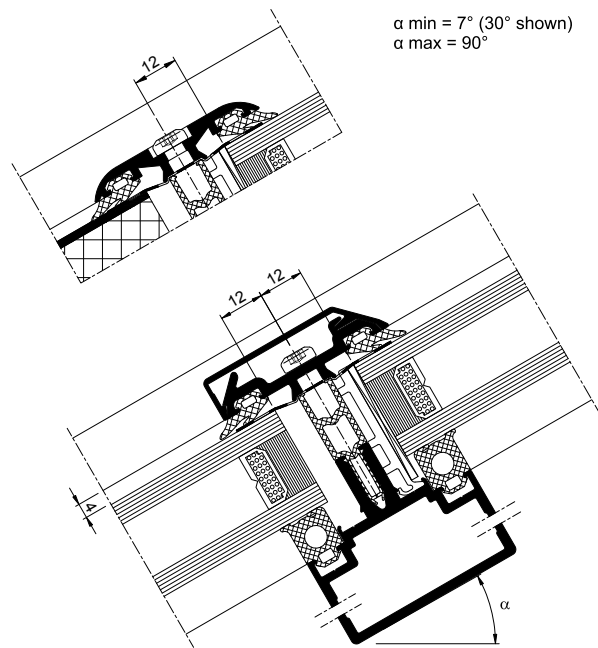


H2 03.01

AA[®]100 50MM AND AA[®]110 65MM MULLION DRAINED FAÇADE AND ROOF

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

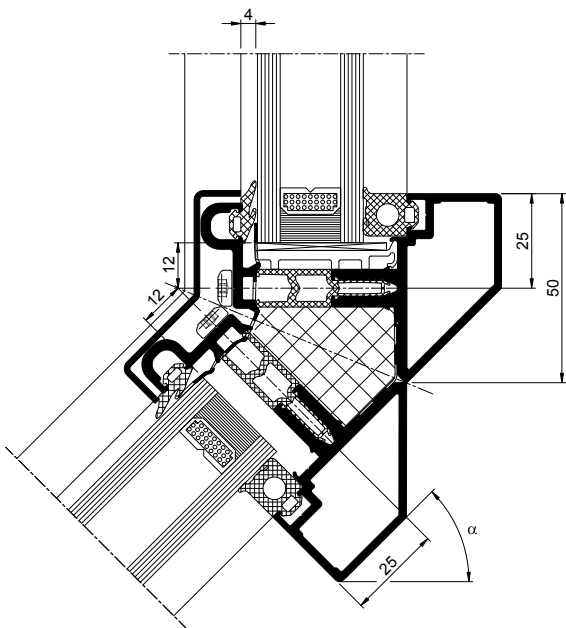
PURLIN



α min = 15°

H2 04.01

SLOPE/VERTICAL CONNECTION



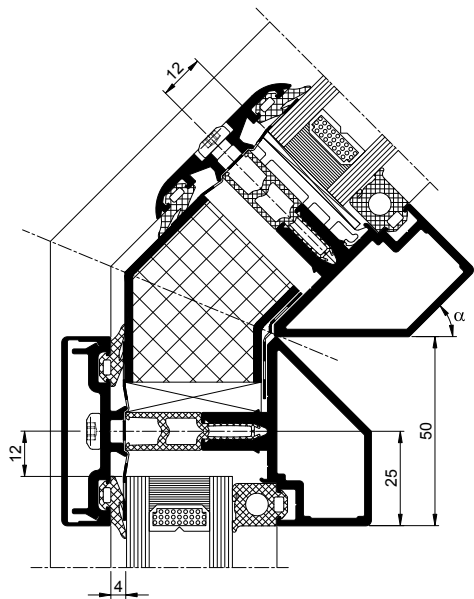
α min = 40° thermal break 16mm
45° thermal break 20mm
50° thermal break 26mm
55° thermal break 36mm
 α max = 90°

H2 05.01

AA[®]100 50MM AND AA[®]110 65MM MULLION DRAINED FAÇADE AND ROOF

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

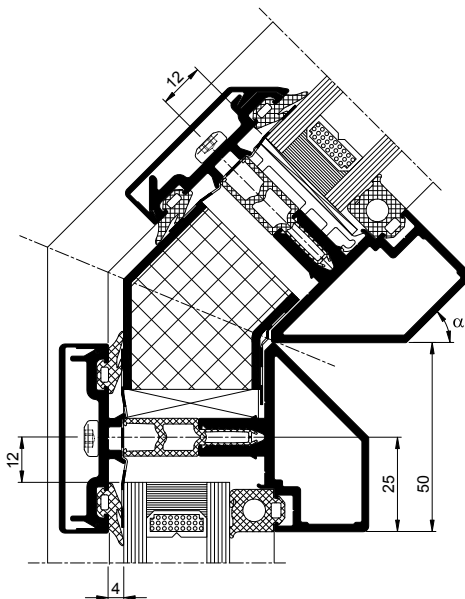
EAVES DETAIL
(7° to 90° Pitch)



α min = 7°
 α max = 90°

H2 07.01

EAVES DETAIL
(15° to 90° Pitch)



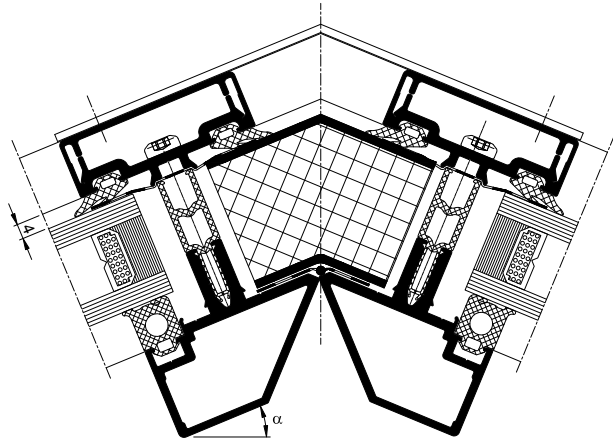
α min = 15°
(45° shown)
 α max = 90°

H2 06.01

AA[®]100 50MM AND AA[®]110 65MM MULLION DRAINED FAÇADE AND ROOF

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

APEX
(Generic)



α min = 5°
 α max = 45°

H2 27.01



British Gas at Oxford Business Park
Architect: Frank Shaw Associates
Photo: Martin Cleveland Photography

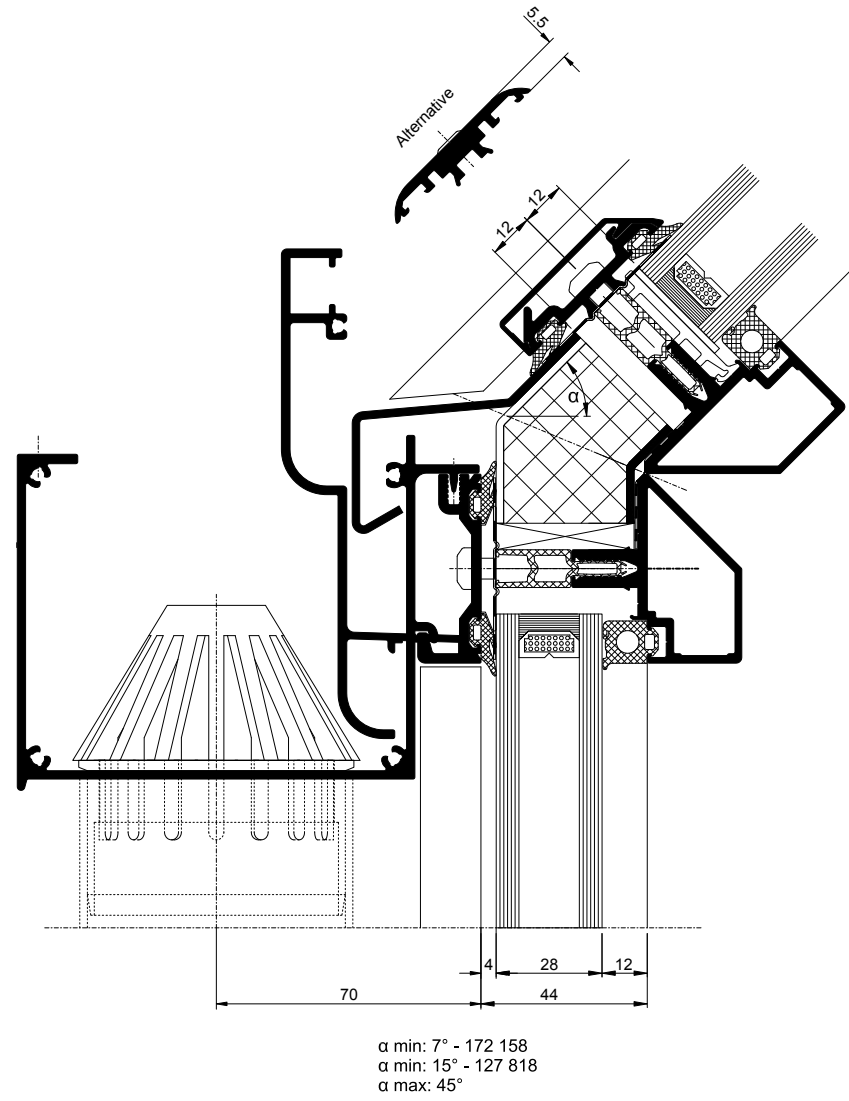


London Designer Outlet, Wembley, North London
Architect: Leslie Jones Architects
Photo: London Designer Outlet

AA®100 50MM AND AA®110 65MM MULLION DRAINED FAÇADE AND ROOF

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

GUTTER DETAIL

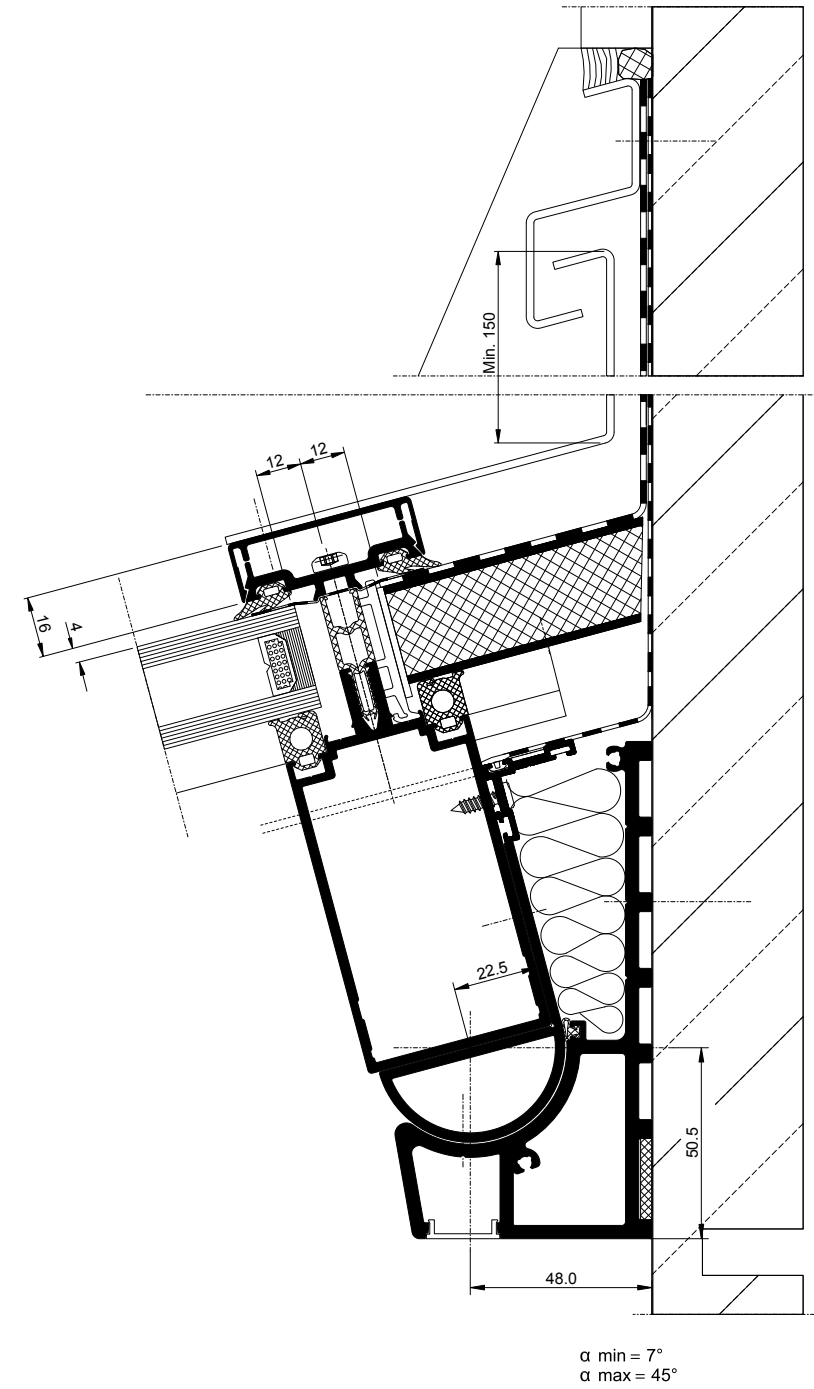


H2 19.01

AA®100 50MM AND AA®110 65MM MULLION DRAINED FAÇADE AND ROOF

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

WALL PLATE



H2 20.01



WINDOWS AND DOORS INTO CURTAIN WALLING

INTRODUCTION

Ventilation through curtain walling façades can be achieved with the introduction of opening windows into the screens' design. All window options from the AA®720, KWD92 UT+ and AA®3610 systems include perimeter adaptors enabling them to be simply glazed into the curtain wall.

Additionally, the AA®100 CV 'Concealed Vent' is designed specifically for the AA®100 curtain walling system. Utilising a structurally bonded double glazed unit, it allows the windows to be installed into the façade with no obvious external indication of their location.

The AA®100 and AA®110 systems can also offer a purpose designed window for slope glazing installations. As well as natural ventilation this vent can be used for smoke ventilation and has been tested to BS EN 12101-2.

Through the incorporation of perimeter adaptors, it is also possible to install doors from the AA®720 range and the AA®545 door directly into the curtain walling façade. Adaptors are also available for installing the AA®190 TB heavy/severe door into curtain walling.

DESIGN CONSIDERATIONS

The Kawneer window range offers a ventilation solution to satisfy all project requirements.

When considering the type of window to install it is necessary to consider the following points:

- Height and width size limits are different for each window type
- Required free air area for each window
- Thermal performance

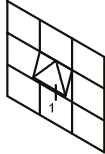
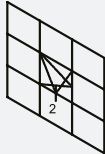
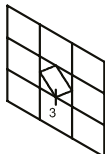
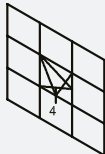
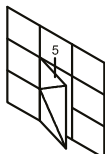
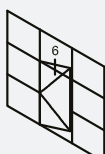
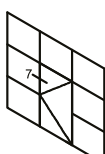
PRODUCT FEATURES AND BENEFITS

- Inward opening and outward opening window inserts available
- Vertical sliding window inserts for optimum ventilation configuration
- Automation of windows is possible
- AA®720 windows offer frames with a range of thermal performance
- All windows are weather tested to BS 6375
- AA®720 Tiltturn tested to CWCT standard
- AA®100 Slope Vent tested to BS EN 12101-2 for smoke ventilation
- Full range of door locking and function options

WINDOWS AND DOORS INTO CURTAIN WALLING APPLICATIONS

TYPICAL ELEVATIONS

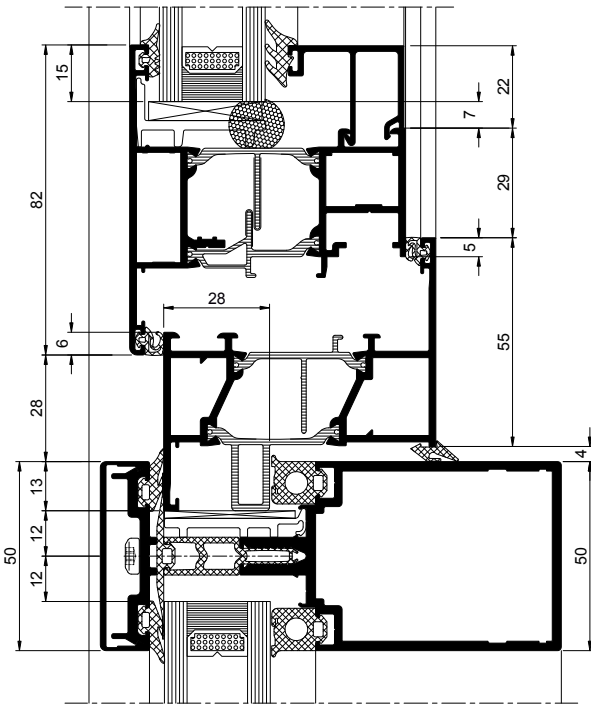
Full details can be downloaded from our website www.kawneer.co.uk

Elevation	Title	Website CAD ref. no.
	1 Top Hung Vent	H3 05.01
	2 Tiltturn Vent	H3 06.01
	3 Pivot Vent	H3 07.01
	4 Integral Tiltturn Vent	H3 08.01
	5 Open Out Door	H3 09.01
	6 Open In Door	H3 10.01
	7 Dual Action Door	H3 11.01

WINDOWS AND DOORS INTO CURTAIN WALLING

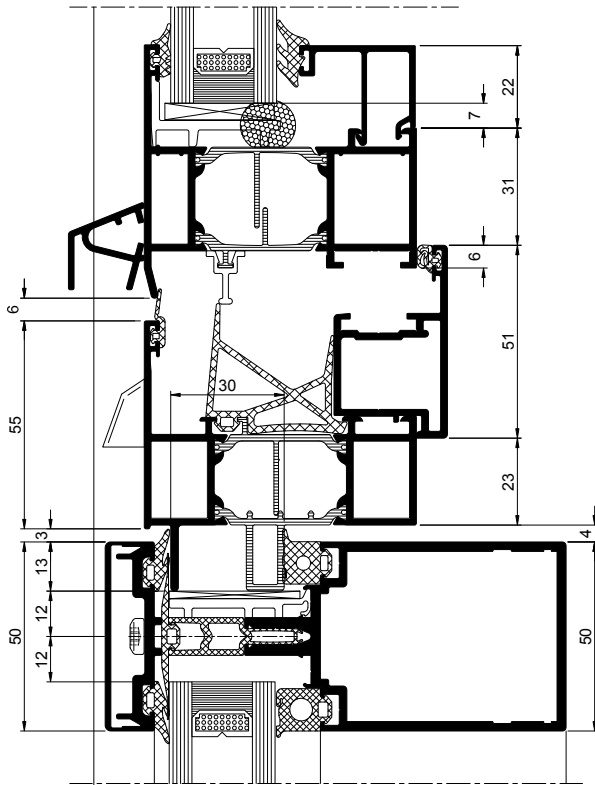
Full details can be downloaded from our website www.kawneer.co.uk

AA®100 INCLUDING AN AA®720 CASEMENT



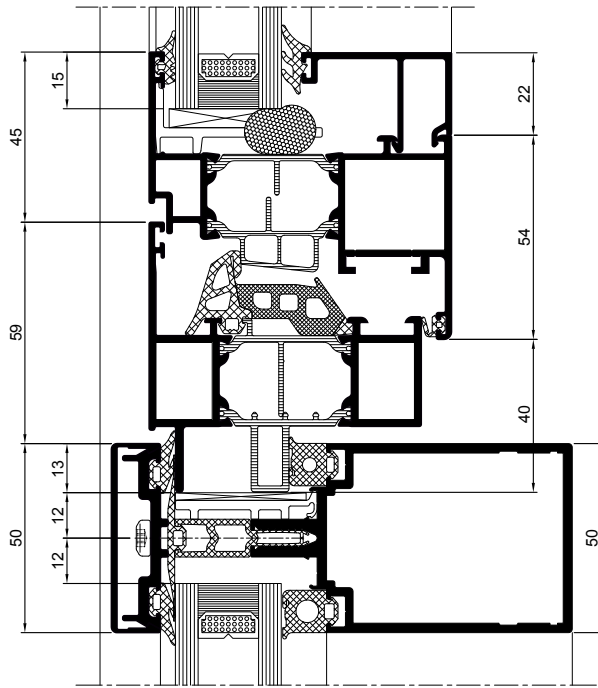
H3 05.01

AA®100 INCLUDING AN AA®720 PIVOT



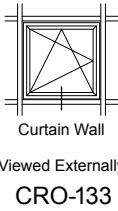
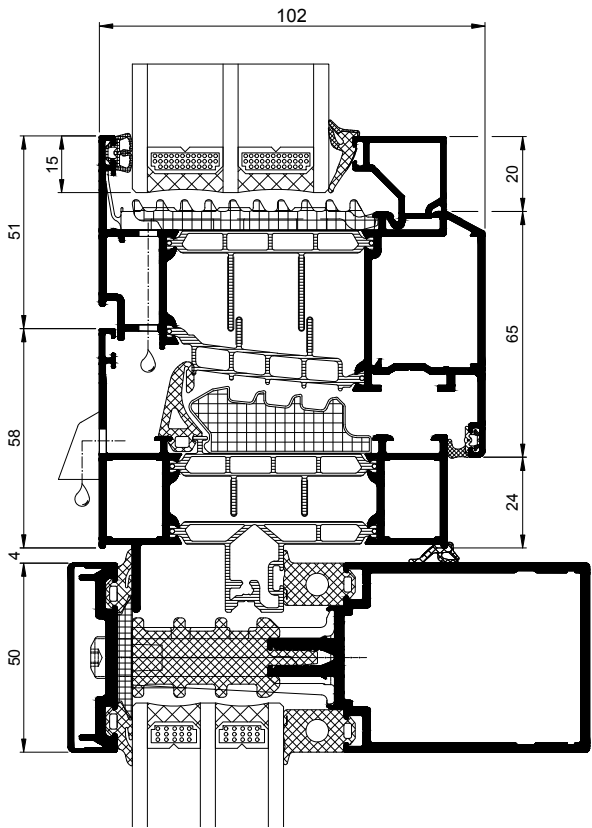
H3 07.01

AA®100 INCLUDING AN AA®720 TILTUP



H3 06.01

AA® 100 HI INCLUDING KWD92 UT+



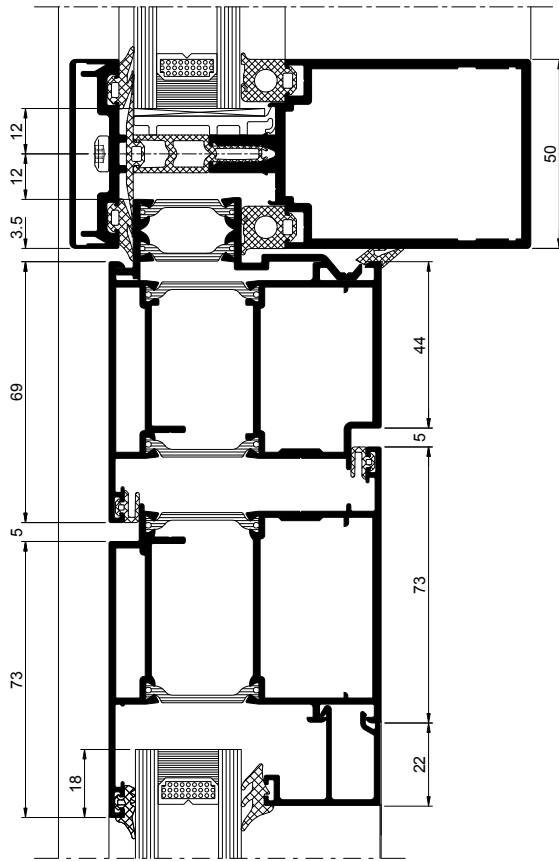
WINDOWS AND DOORS INTO CURTAIN WALLING

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

WINDOWS AND DOORS INTO CURTAIN WALLING

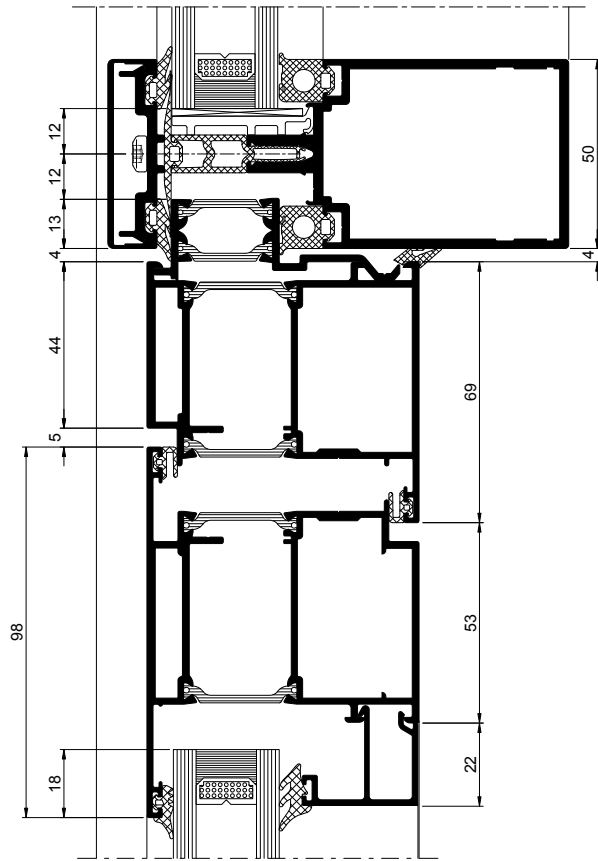
Full details can be downloaded from our website www.kawneer.co.uk

AA®100 INCLUDING AN INWARD
OPENING AA®720 DOOR



H3 10.01

AA®100 INCLUDING AN OUTWARD
OPENING AA®720 DOOR



H3 09.01



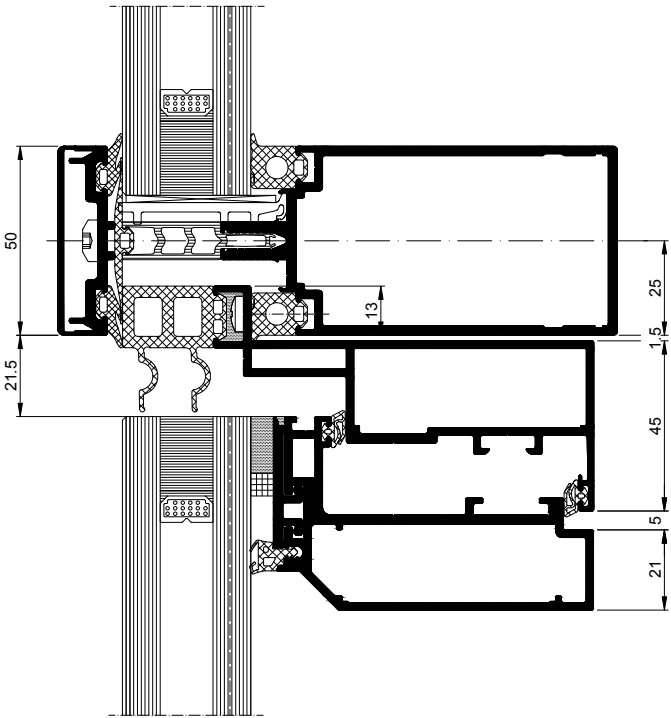
Cardiff and Vale College
Architect: BDP
Photo: Gareth Gardner



AA®100 AND AA®110 CONCEALED VENT OPEN OUT

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

HEAD DETAIL



H1 12

AA®100 AND AA®110 CONCEALED VENT (CV)

INTRODUCTION

The AA®100 and AA®110 Concealed Vent is designed to suite with the AA®100 and AA®110 systems in either capped or SSG variants. The Concealed Vent provides architectural flexibility and freedom to maintain flush seamless visuals externally, with no visible aluminium framing, whilst providing occupancy comfort where ventilation requirements are a key driver.

The Concealed Vent is available as a top hung vent or as a parallel opening window. Both window types have the option to be manually operated or motorised. As part of our system development, the Concealed Vent underwent full CWCT Sequence B testing as part of a larger curtain wall assembly, so carries proven weather performance.

With a fresh design, and enhanced features, the system can carry glazing up to 50mm in the capped system. Motorised operation of the vents is also possible using chain drives and integrated locking drives, which can also be neatly concealed giving a seamless internal finish with concealed hardware.

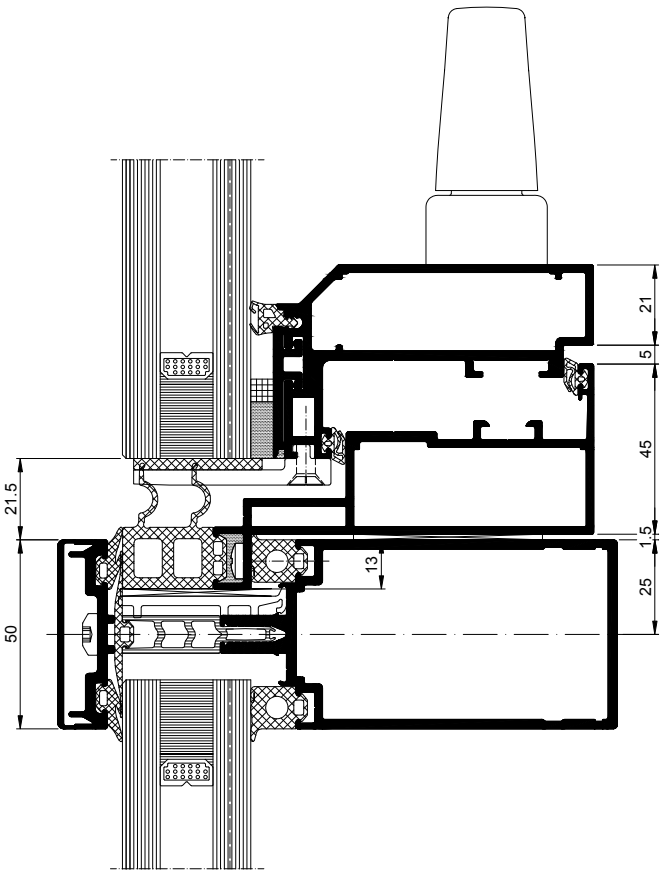
As a system designed for integration into our curtain wall system, the window has been security tested to EN 1627 to RC2, therefore carrying the same security classification as our AA®100 and AA®110 curtain wall systems.

PRODUCT FEATURES AND BENEFITS

- Suites with AA®100 and AA®110 systems in either capped or SSG variants
- Top Hung or Parallel Opening Vent (POV) options
- Glazing up to 50mm
- Manual or motorised operation with concealed hardware option
- RC2 Security tested to EN 1627
- Thermal performance to meet current Building Regulations
- Tested and certified in accordance with CWCT Sequence B and relevant UK/EN Standards
- Silicone Bonded Vent*
- Top Hung option on Friction stay maximum size 2400mm(W) or 2500mm(H)
- Parallel Opening stays for maximum size 2000mm(W) or 3000mm(H)
- Maximum weight 180kg.

* Contact our Technical Services Department for further information.

CILL DETAIL

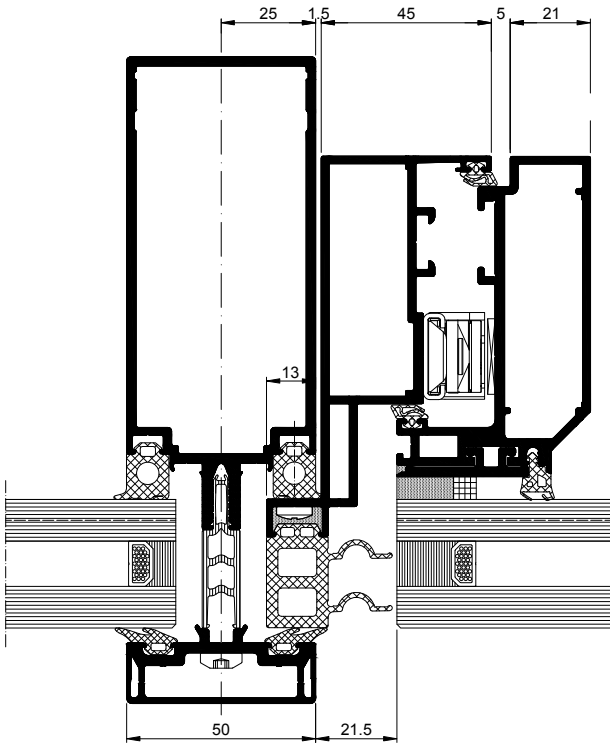


H1 14

AA[®]100 AND AA[®]110 CONCEALED VENT OPEN OUT

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

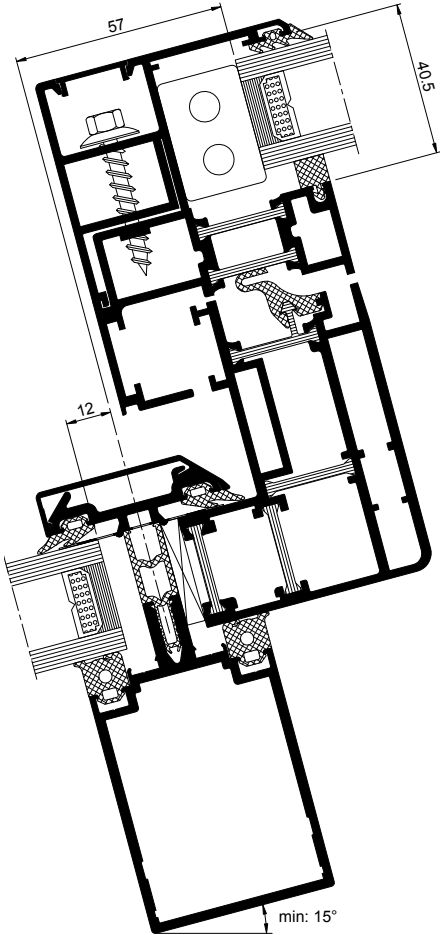
JAMB DETAIL – ZONE DRAINED



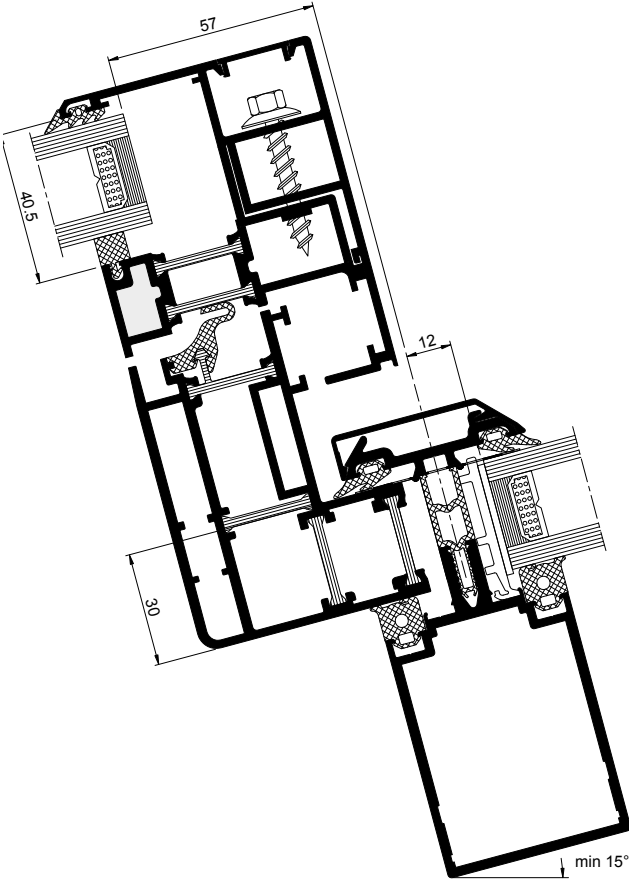
H1 6

AA[®]100 AND AA[®]110 SLOPED VENT DETAILS

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



H2 17.01



H2 18.01

AA [®] 100/AA [®] 110			
Max glass area	2.15m ²		
Max height	1800mm	Min height	600mm
Max width	1500mm	Min width	500mm
Min glass thickness	16mm (units)	Max glass thickness	34mm (units)
Min roof angle	15°		

AA®100 AND AA®110 HORIZONTALLY CAPPED (HC) AND VERTICALLY CAPPED (VC) GASKET SYSTEM

INTRODUCTION

The AA®100 and AA®110 HC/VC options provide the specifier with an alternative to traditional (SSG) Structurally glazed silicone joints.

The low profile EPDM gasket system enables specifiers to maintain the look of a structurally glazed system whilst maintaining the benefits of a capped system.

On an AA®100/AA®110 HC façade the vertical glazing joints are secured and sealed with a discreet pressure plate and EPDM cover gasket. The horizontal face caps run continuously across the glazing and are enhanced by the unobtrusive vertical gasket system.

On an AA®100/AA®110 VC façade utilises the same principle but with the EPDM gasket in a horizontal application between vertical caps.

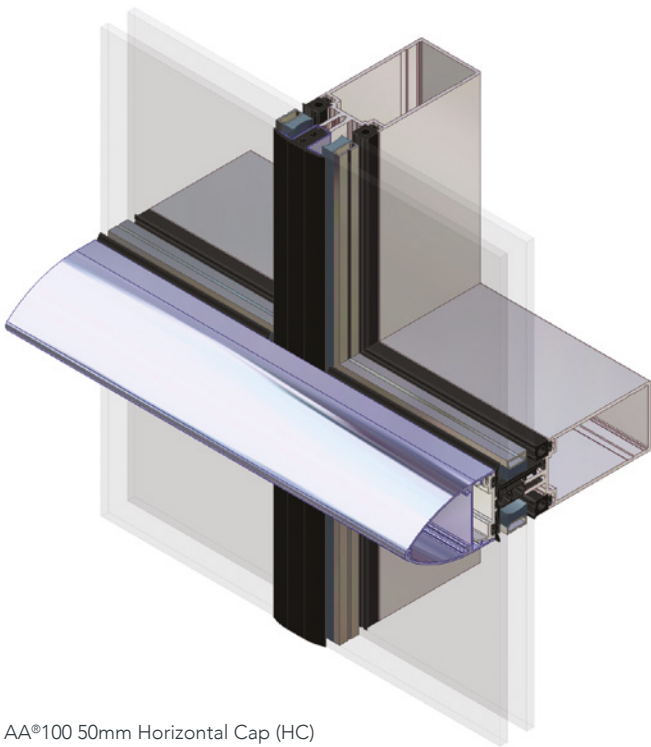
In addition, we are also able to offer a wide variety of face caps to accentuate the visual look of the building façade, giving the building its own individual signature.

The system has been exclusively designed, developed and supplied by Kawneer in conjunction with our approved Dealer network.



PRODUCT FEATURES AND BENEFITS

- Cost effective alternative to traditional SSG structurally glazed silicone joints
- Retains all of the full range of AA®100 and AA®110 mullions and transoms
- Large range of face caps available to compliment the discreet EPDM gasket
- Improved installation speeds compared to traditional SSG
- Ease of glass replacement due to pressure plate / gasket arrangement
- Maximum glazing up to 50mm
- Maximum infill weight 600kg
- Market leading product tested and certified to CWCT Sequence B



AA®100 50mm Horizontal Cap (HC)



AA®100 HORIZONTALLY CAPPED (HC) APPLICATIONS

TYPICAL ELEVATIONS

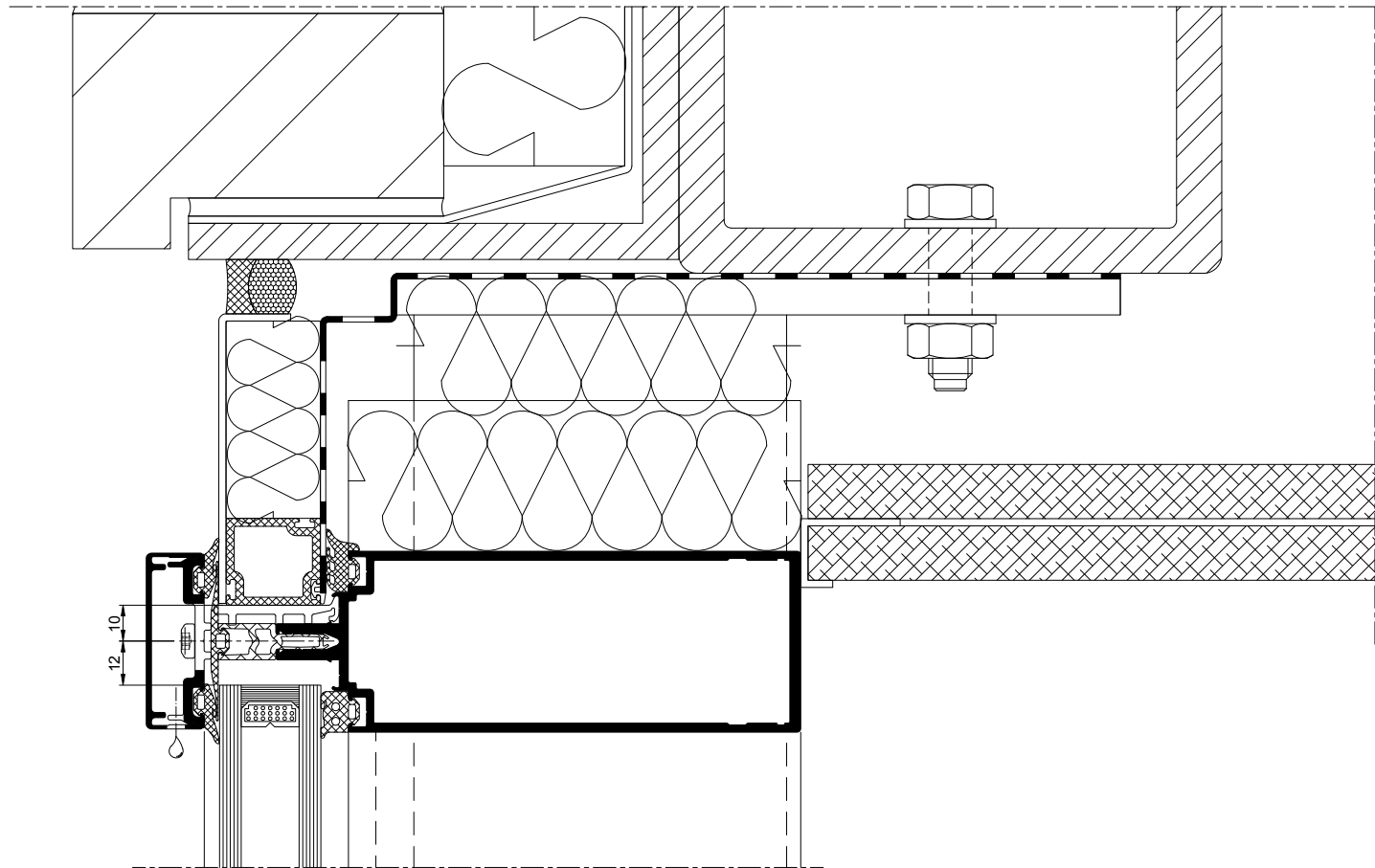
Full details can be downloaded from our website www.kawneer.co.uk

Elevation	Title	Website CAD ref. no.
	1 Head Detail (generic)	H4 02.01
	2 Intermediate Transom	H4 03.01
	3 Cill Detail (generic)	H4 04.01
	4 Jamb Detail (generic)	H4 05.01, H4 06.01
	5 Intermediate Mullion	H4 07.01

AA®100 HORIZONTALLY CAPPED (HC)

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

HEAD DETAIL (GENERIC)

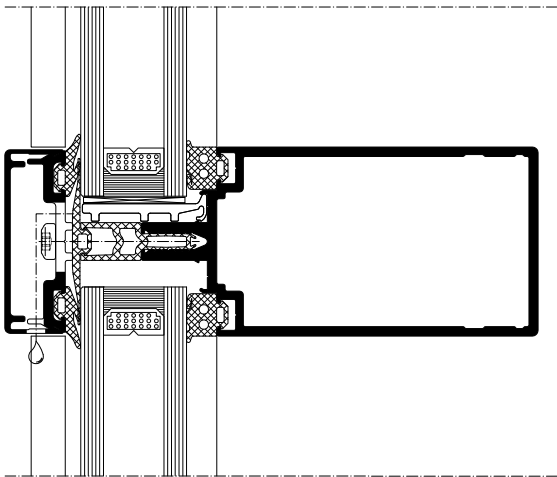


H4 02.01

AA®100 HORIZONTALLY CAPPED (HC)

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

TRANSOM DETAIL



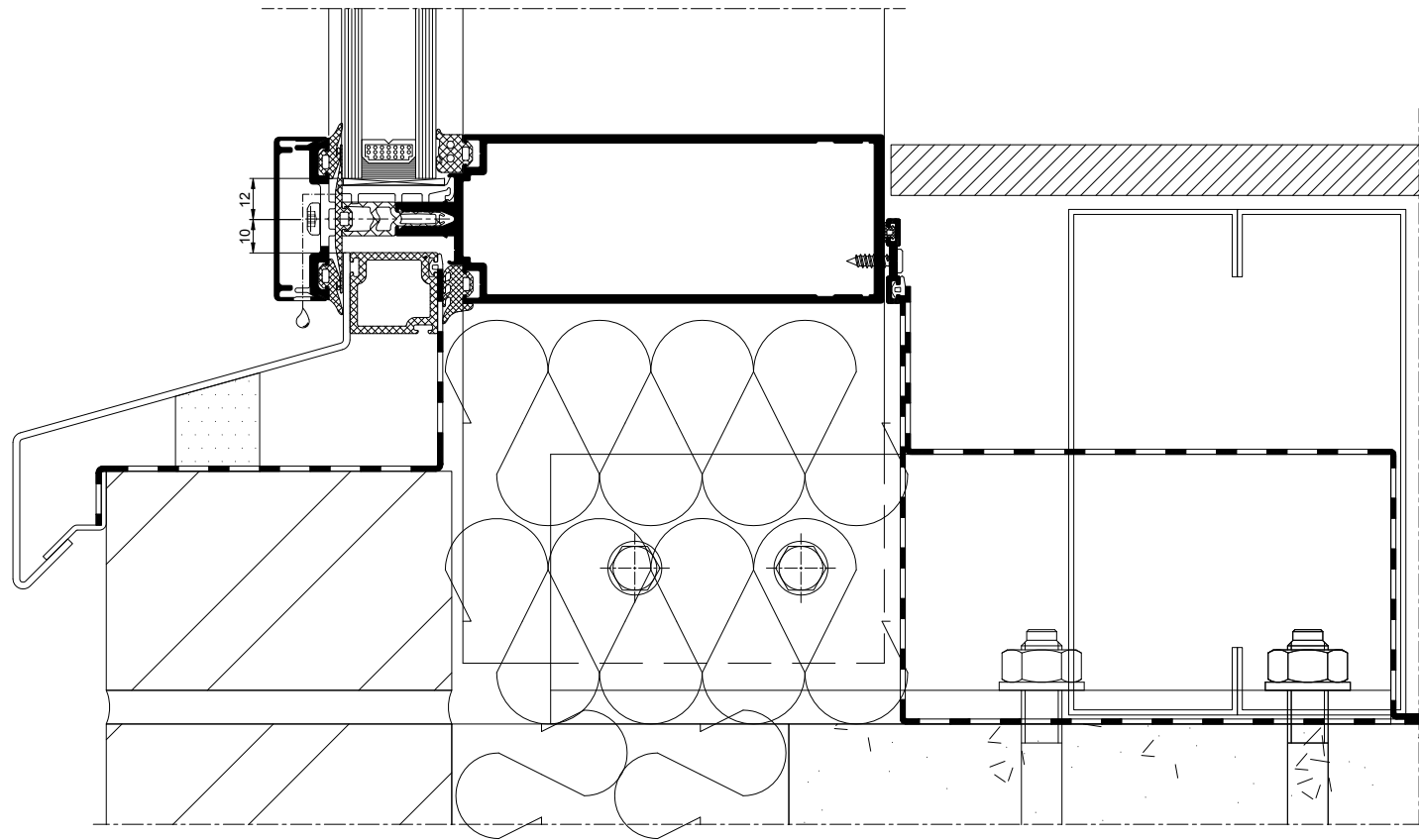
H4 03.01



AA[®]100 HORIZONTALLY CAPPED (HC)

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

CILL DETAIL (GENERIC)

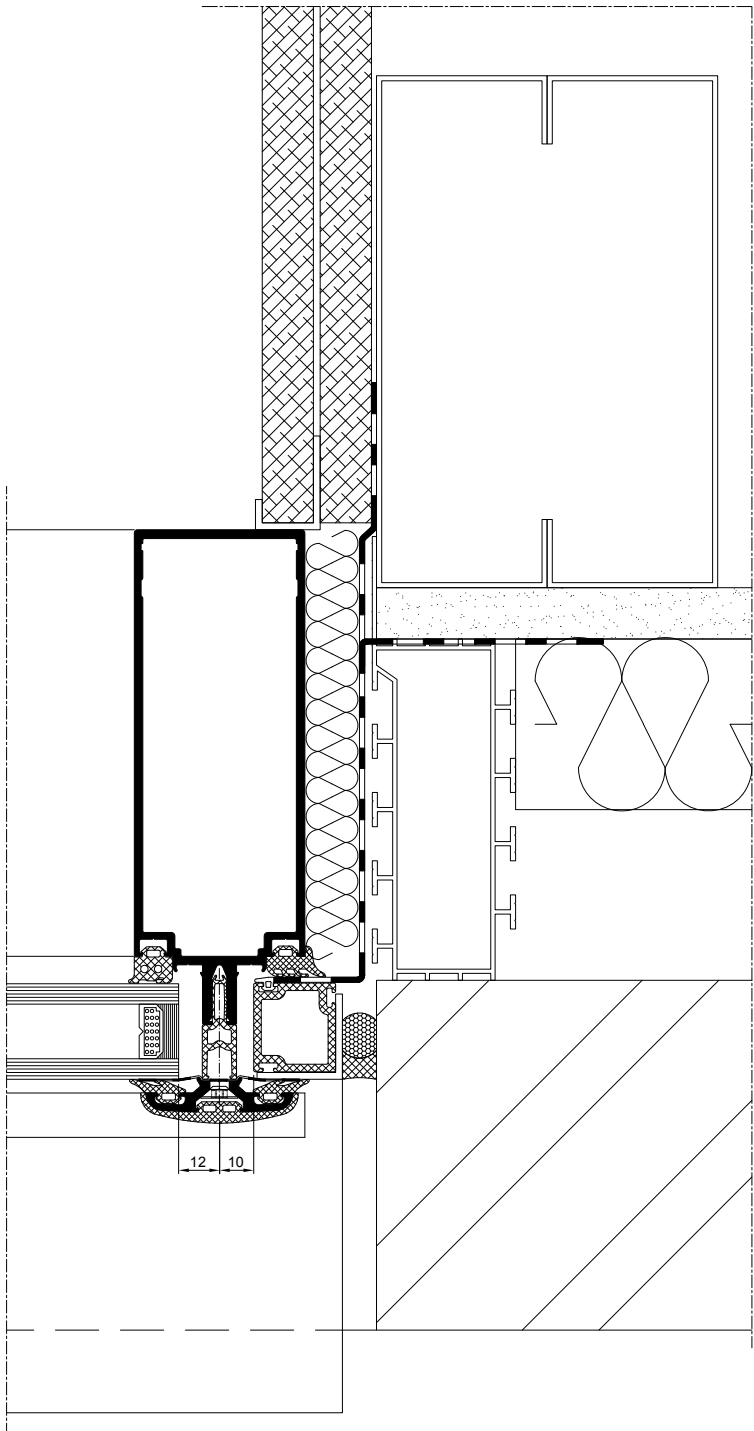


H4 04.01

AA[®]100 HORIZONTALLY CAPPED (HC)

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

JAMB DETAIL (GENERIC)

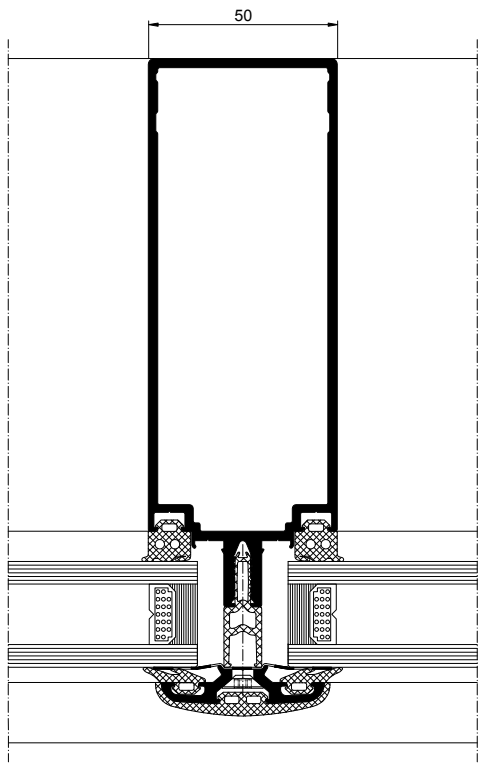


H4 05.01

AA[®]100 HORIZONTALLY CAPPED (HC)

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

INTERMEDIATE MULLION



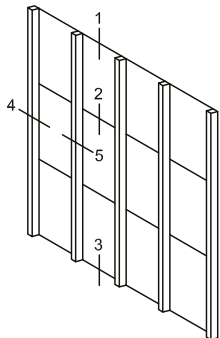
H4 07.01





AA®100 VERTICALLY CAPPED (VC) APPLICATIONS

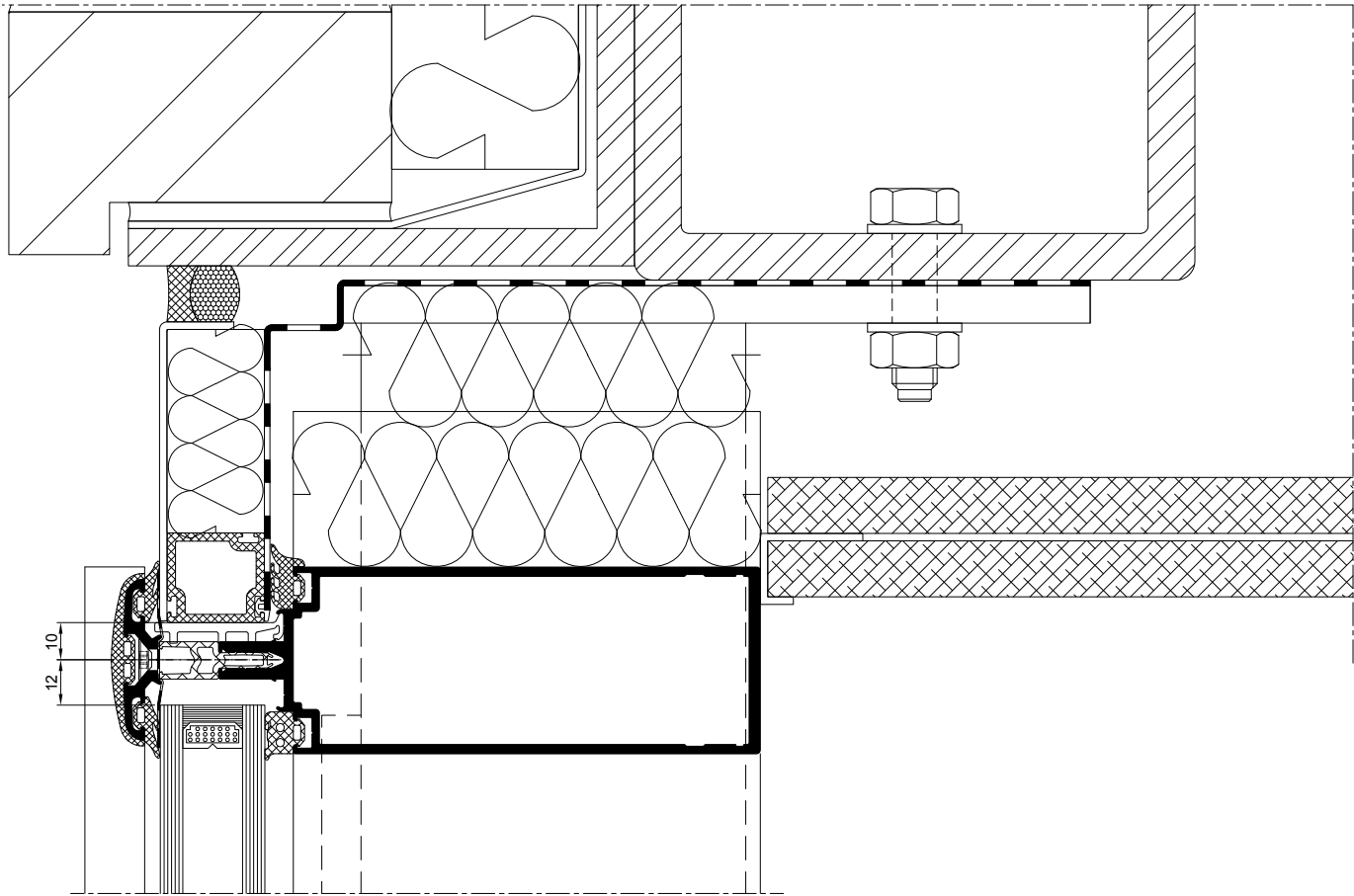
TYPICAL ELEVATIONS
Full details can be downloaded from our website www.kawneer.co.uk

Elevation	Title	Website CAD ref. no.
	1 Head Detail (generic)	H4 10.01, H4 11.01
	2 Intermediate Transom	H4 12.01
	3 Cill Detail (generic)	H4 13.01, H4 14.01
	4 Jamb Detail (generic)	H4 15.01, H4 16.01
	5 Intermediate Mullion	H4 17.01, H4 18.01

AA®100 VERTICALLY CAPPED (VC)

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

HEAD DETAIL (GENERIC)

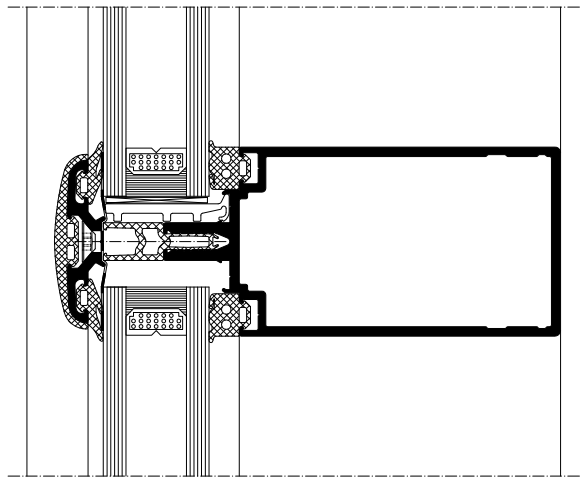


H4 10.01

AA[®]100 VERTICALLY CAPPED (VC)

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

TRANSOM DETAIL



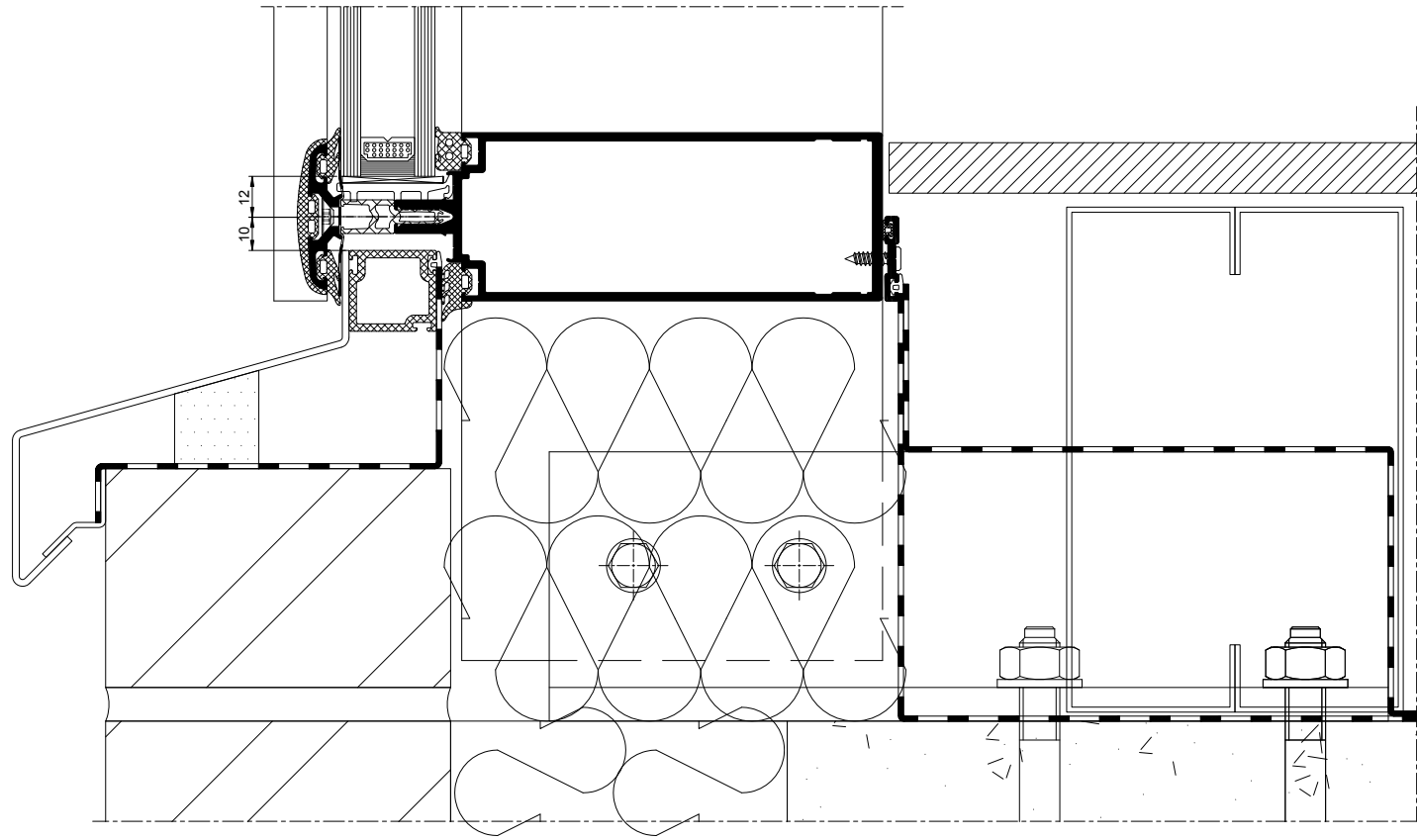
H4 12.01



AA[®]100 VERTICALLY CAPPED (VC)

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

CILL DETAIL (GENERIC)

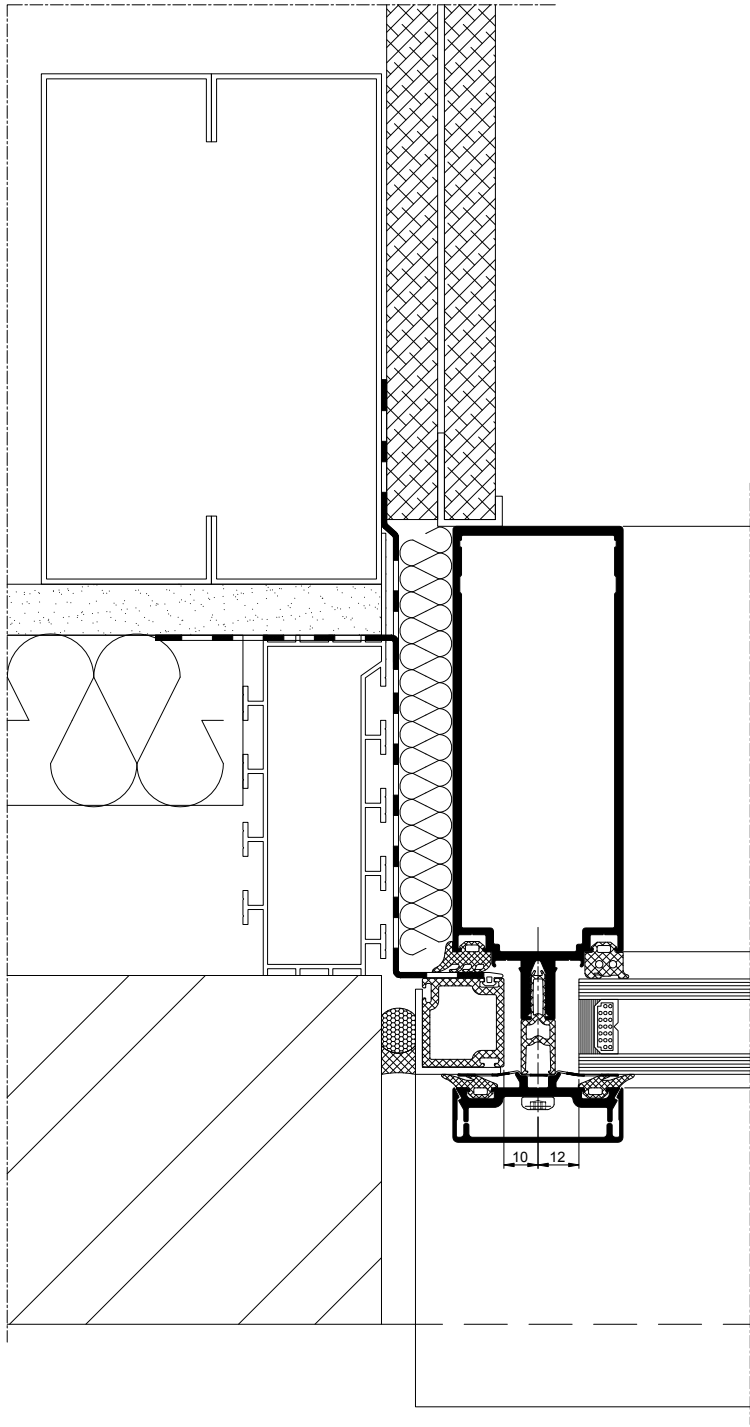


H4 13.01

AA[®]100 VERTICALLY CAPPED (VC)

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

JAMB DETAIL (GENERIC)

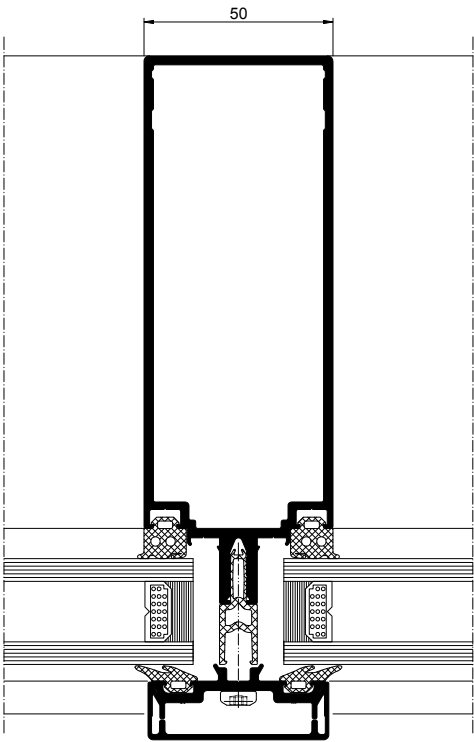


H4 15.01

AA[®]100 VERTICALLY CAPPED (VC)

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

INTERMEDIATE MULLION



H4 17.01

AA®100 AND AA®110 STRUCTURALLY SILICONE GLAZED (SSG)

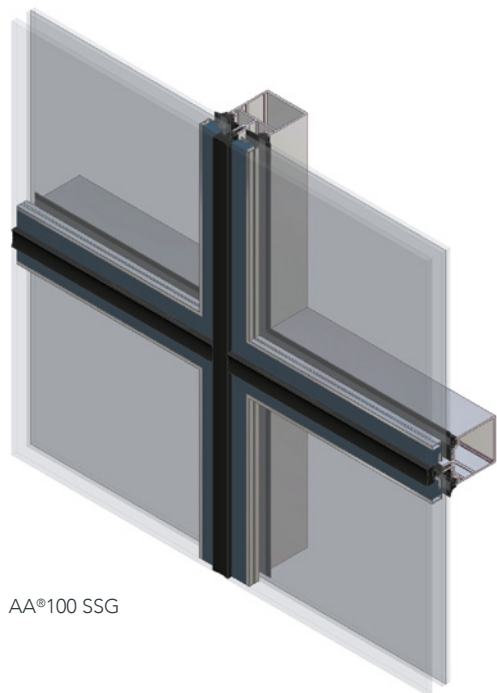
INTRODUCTION

The AA®100 and AA®110 SSG is a variant of our flagship AA®100 and AA®110 curtain wall systems, which allows glazing of the curtain walling to be achieved without the use of conventional pressure plate and face caps, giving an aesthetically pleasing appearance with flush glazing to the exterior.

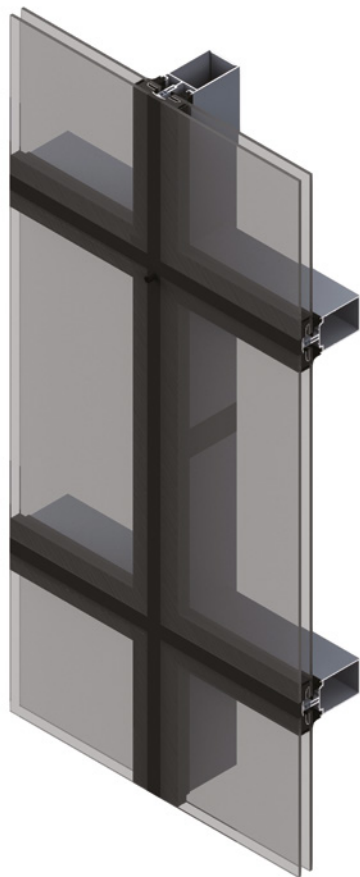
The grid construction replicates the AA®100 and AA®110 mullion drained system, so carries the same ease of installation. The flush external appearance is provided by specially manufactured insulated glazing units constructed with the use of structural silicone sealant and contain an integrated channel profile around the perimeter of the glazing cavity. Toggle clips positioned on the mullions and transoms locate into the channel profile to provide the mechanical retention to secure the pane to the curtain wall. The glazing unit is deadload supported by the transom using a combination of setting blocks and glass supports, additionally the final aesthetics of the façade is enhanced by use of a flush seal between the glass units by means of a UV resistant weatherproofing silicone sealant.

In a further development available only in the AA®110 SSG system, we have introduced an enhanced movement joint, providing +/- 5mm of vertical movement. This will provide market leading movement capabilities whilst maintaining the flush silicone glazed external appearance.

Architects and specifiers can now benefit from increased design flexibility where typically modern construction methods would rule out the use of a typical SSG system*.



AA®100 SSG



AA®110 SSG Large Movement Joint

PRODUCT FEATURES AND BENEFITS

- Dry jointing method using specially designed EPDM moulding
- Mullion drainage
- Glazing from 30mm to 58mm for increased design flexibility
- Maximum glass weight up to 700kg
- Thermal performance can meet current Building Regulations
- Tested and certified in accordance with CWCT Sequence B
- Maximised structural capability and design with a range of mullions and transoms
- Integration with both AA®100 and AA®110 curtain wall systems
- Can accommodate triple glazing retained using a toggle system
- Silicone sealed glass to glass joint
- Maximum screen height of 16m in AA®100 SSG
- +/- 5mm movement joint available in AA®110 SSG variant, with enhanced toggle and glazing options*

* Contact our Technical Services Department for further information.

INCREASED BUILDING MOVEMENT ALLOWANCE

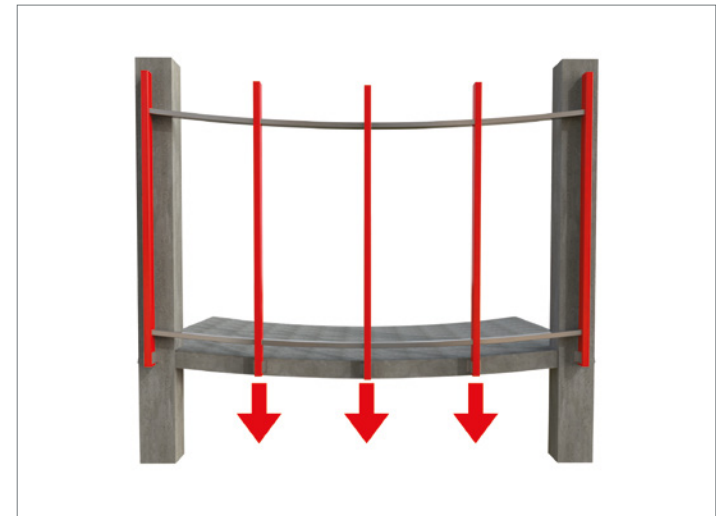
INTRODUCTION

Glazing and cladding systems need to be designed to allow for building movement without compromising the performance or safety of the system.

The consequences of failing to provide sufficient allowance for in-service building movement can range from a reduction in weather performance to glass breakage and significant system failure.

One of the main complexities in designing a façade is the accommodation of slab movement/deflection.

Due to the extension of structural spans seen in todays building designs, slab deflection is increasing. This places additional demands on the façade design team to accommodate movement between slab and façade.



When building designs require façades to withstand high slab deflections one solution is to incorporate unitised curtain wall systems which, due to their construction, can provide greater movement allowance. However, unitised curtain walling is most appropriate for large façades and are generally only undertaken by specialist fabricators and installers.

Conventional stick curtain walling is widely specified in the UK and offers a cost-effective façade solution particularly on buildings which do not have a requirement for significant movement allowance.

AA®110 SSG ENHANCED MOVEMENT JOINT

Page 11 details our AA®110 capped system which has been developed to accommodate up to +/- 15mm differential vertical movement between the façade and the supporting sub-structure.

This development was designed for use in a traditional capped system, where principally increased movement is accommodated through a combination of the space within the system glazing cavity and through the design of a unique expansion joint for connecting vertical mullions.

SSG systems differ slightly in their glazing retention methodology, so movement limits are defined by relevant standards, so the engagement limits of the toggle within the channel are often the limiting factor. Naturally, movement capabilities are reduced when comparing to the AA®110 capped variant. The AA®110 SSG enhanced movement joint utilises similar technology to our capped movement joint, using the engineered expanding foam seals, in conjunction with a deeper toggle channel and extended toggle profile. This allows increased vertical movement capabilities of +/- 5mm whilst maintaining the required toggle engagement.



The system has undergone rigorous testing during its development to ensure performance in all UK conditions. Working closely with the CWCT an enhanced version of the Standard for Systemised Building Envelope: Sequence B test program was successfully carried out. This included testing while the expansion joint was in compression, extension and in the neutral position.

TECHNICAL SUPPORT

Kawneer offers a Façade Workshop consisting of a team of specialists who work collaboratively with developers, architects and engineers during the early stages of a project. This unique design and consultancy service, working across every aspect of the façade, ensures the design intent is realised on all projects.

BBC Cymru, Cardiff
Architect: Foster + Partners
Photo: Hannah Gasparutti/Foster + Partners



AA®100 STRUCTURALLY SILICONE GLAZED (SSG) APPLICATIONS

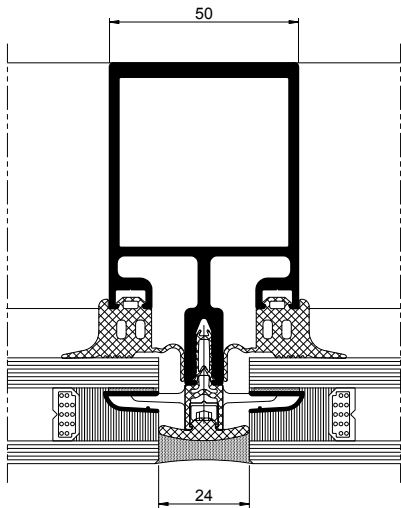
TYPICAL ELEVATIONS
Full details can be downloaded from our website www.kawneer.co.uk

Elevation	Title	Website CAD ref. no.
	1 Mullion	AA®100 SSG H 02.01
	2 Jamb Interface	AA®100 SSG H 03.01
	2a Jamb Interface with Face Cap	AA®100 SSG H 04.01
	3 Transom	AA®100 SSG H 05.01
	4 Cill	AA®100 SSG H 06.01
	4a Capped Cill	AA®100 SSG H 06.01
	5 Head	AA®100 SSG H 08.01

AA®100 AND AA®110 STRUCTURALLY SILICONE GLAZED (SSG)

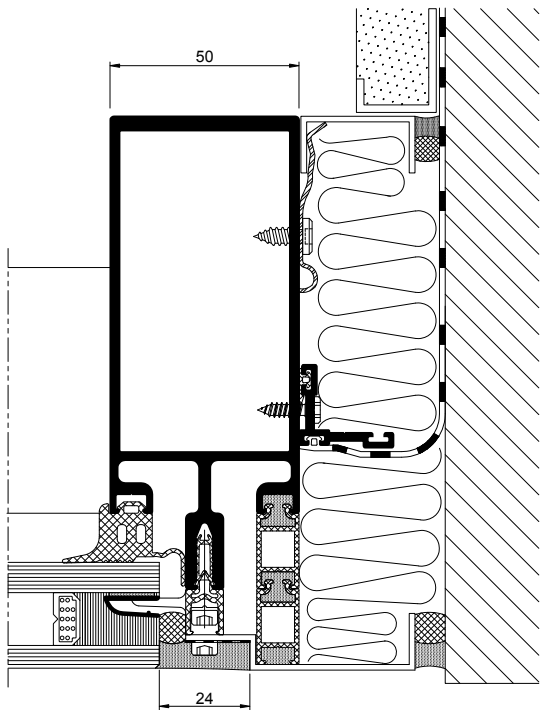
Full details can be downloaded from our website www.kawneer.co.uk

MULLION DETAIL



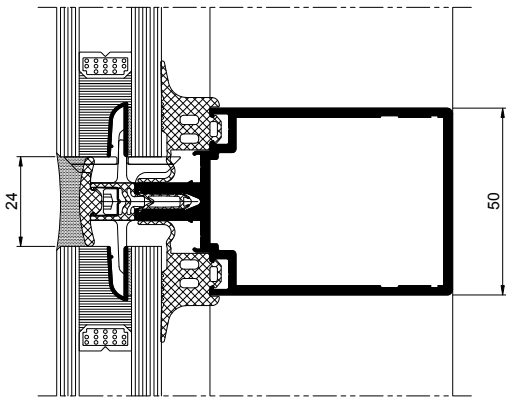
H 02.01

JAMB INTERFACE



H 03.01

TRANSOM DETAIL

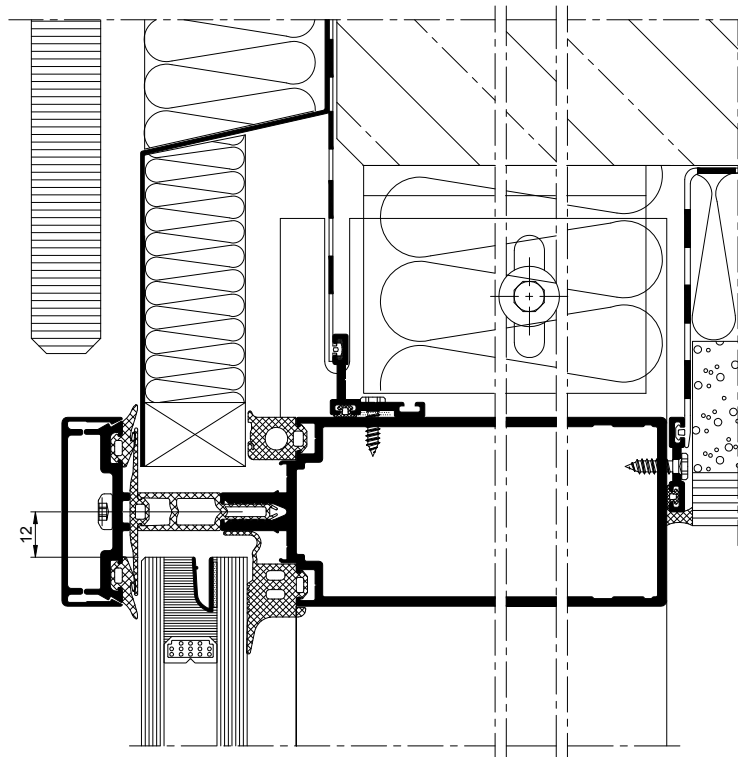


H 05.01

AA[®]100 STRUCTURALLY SILICONE GLAZED (SSG)

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

HEAD DETAIL (EXAMPLE)

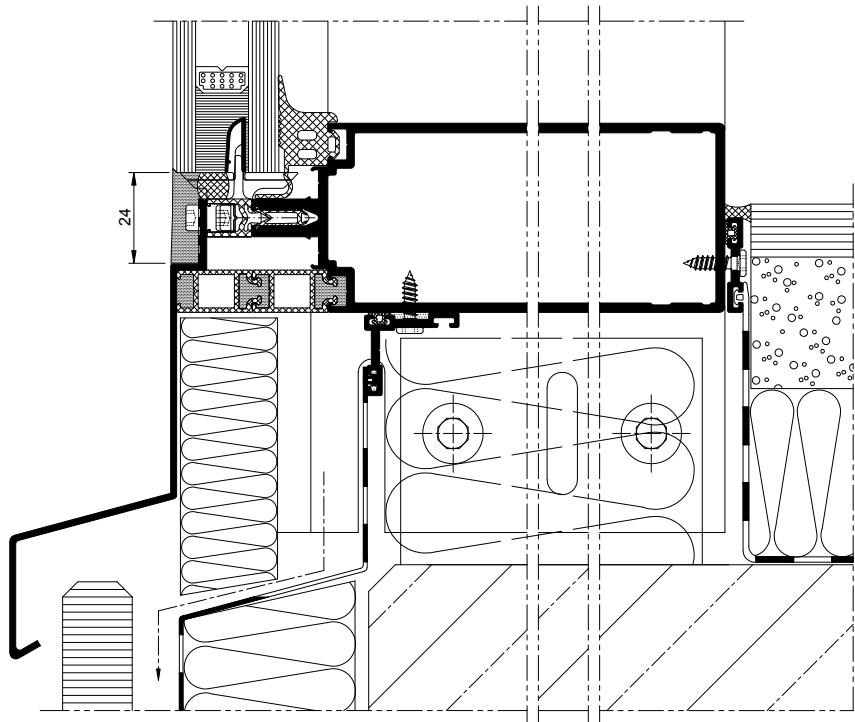


H 08.01

AA[®]100 STRUCTURALLY SILICONE GLAZED (SSG)

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

CILL DETAIL



H 06.01

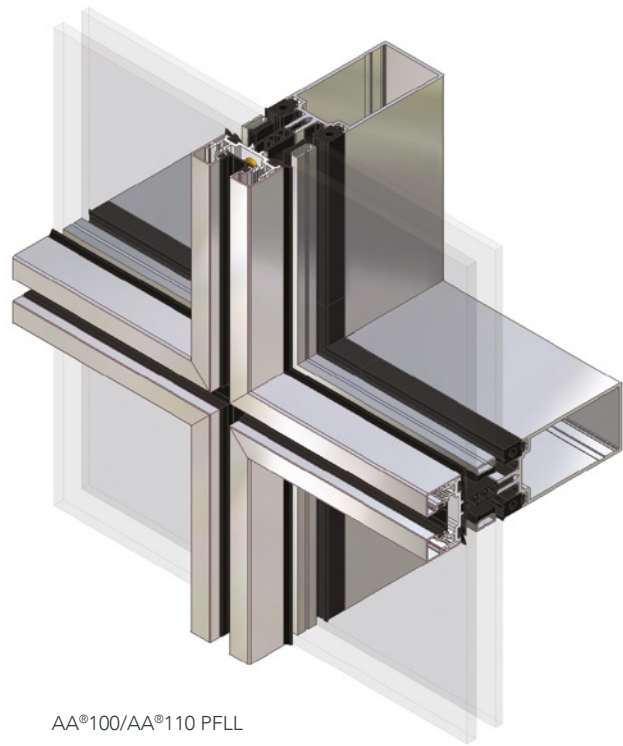
AA®100 AND AA®110 PFL

INTRODUCTION

A curtain walling system that looks like a picture frame system but is quicker and easier to install using the traditional stick build system. The PFL system is suitable where the build characteristics of a typical semi-unitised picture frame system are not essential or possible and where installation can be achieved in one stage resulting in time reduction, a benefit for both contractors and installers.

The PFL system was developed with just three new parts to suite with the CWCT tested AA®100 50mm and AA®110 65mm dry jointed curtain walling systems.

An external pressure plate, face cap and weatherseal enables the system to provide all the robust aesthetics of a picture frame system on a proven grid, which integrates totally with the AA®100 and AA®110 existing systems.



AA®100/AA®110 PFL

AA®100 AND AA®110 PFL APPLICATIONS

TYPICAL ELEVATIONS

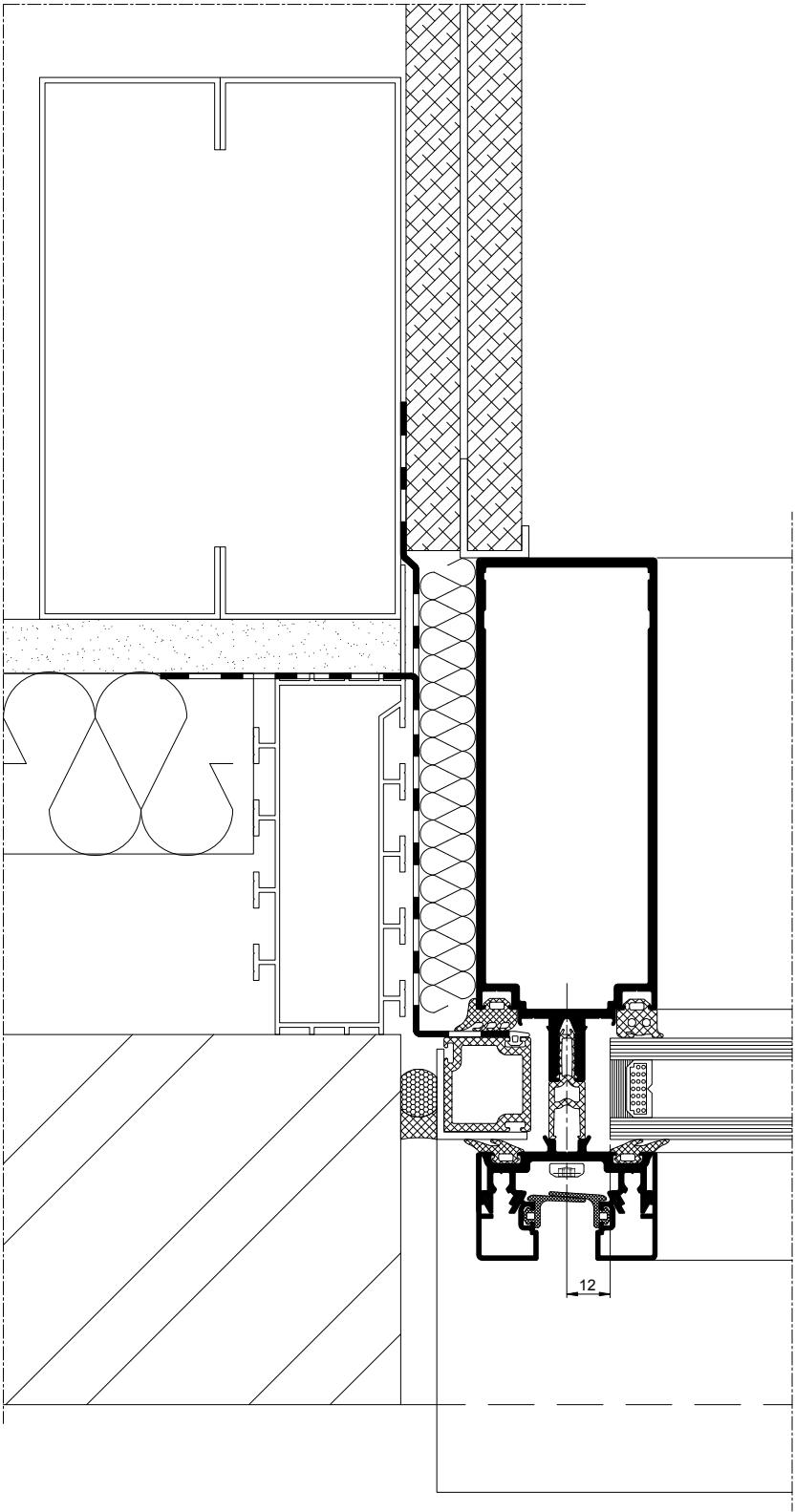
Full details can be downloaded from our website www.kawneer.co.uk

Elevation	Title	Website CAD ref. no.
	1 Jamb Detail (generic)	H6 02.01
	2 Intermediate Mullion	H6 03.01
	3 Cill Detail (generic)	H6 04.01
	4 Intermediate Transom	H6 05.01
	5 Head Detail (generic)	H6 06.01

AA®100 AND AA®110 PFL

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

JAMB DETAIL (GENERIC)

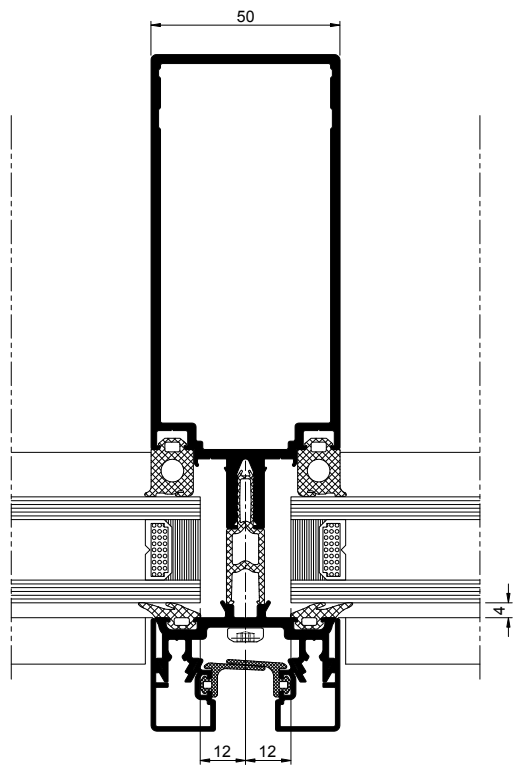


H6 02.01

AA[®]100 AND AA[®]110 PFL

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

INTERMEDIATE MULLION

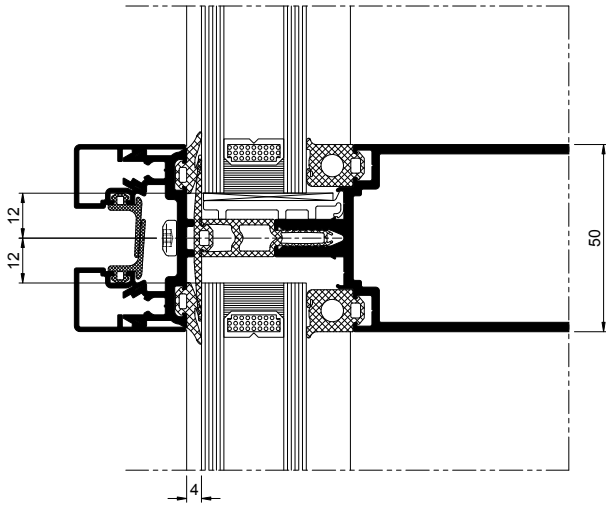


H6 03.01

AA[®]100 AND AA[®]110 PFL

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

INTERMEDIATE TRANSOM

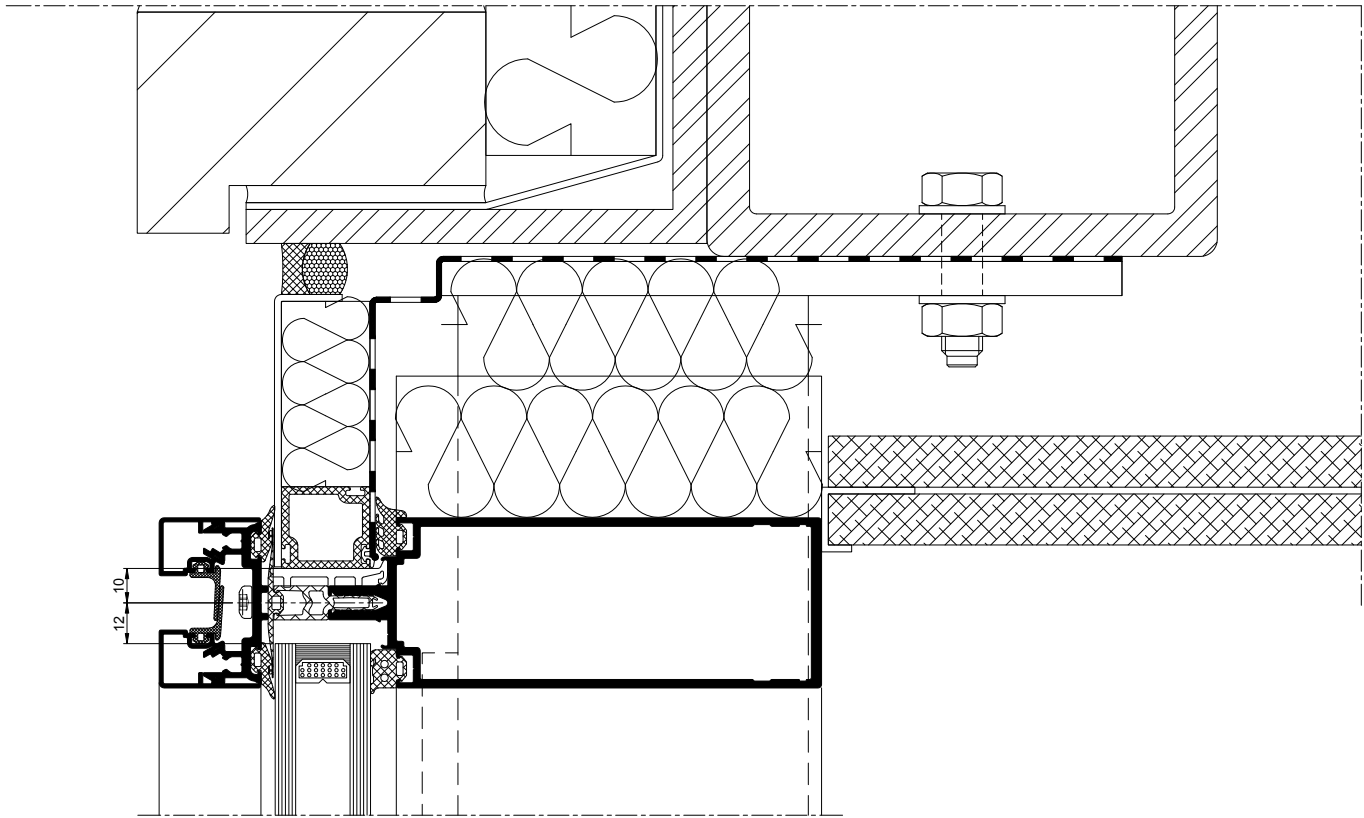


H6 05.01

AA[®]100 AND AA[®]110 PFL

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

HEAD DETAIL (GENERIC)

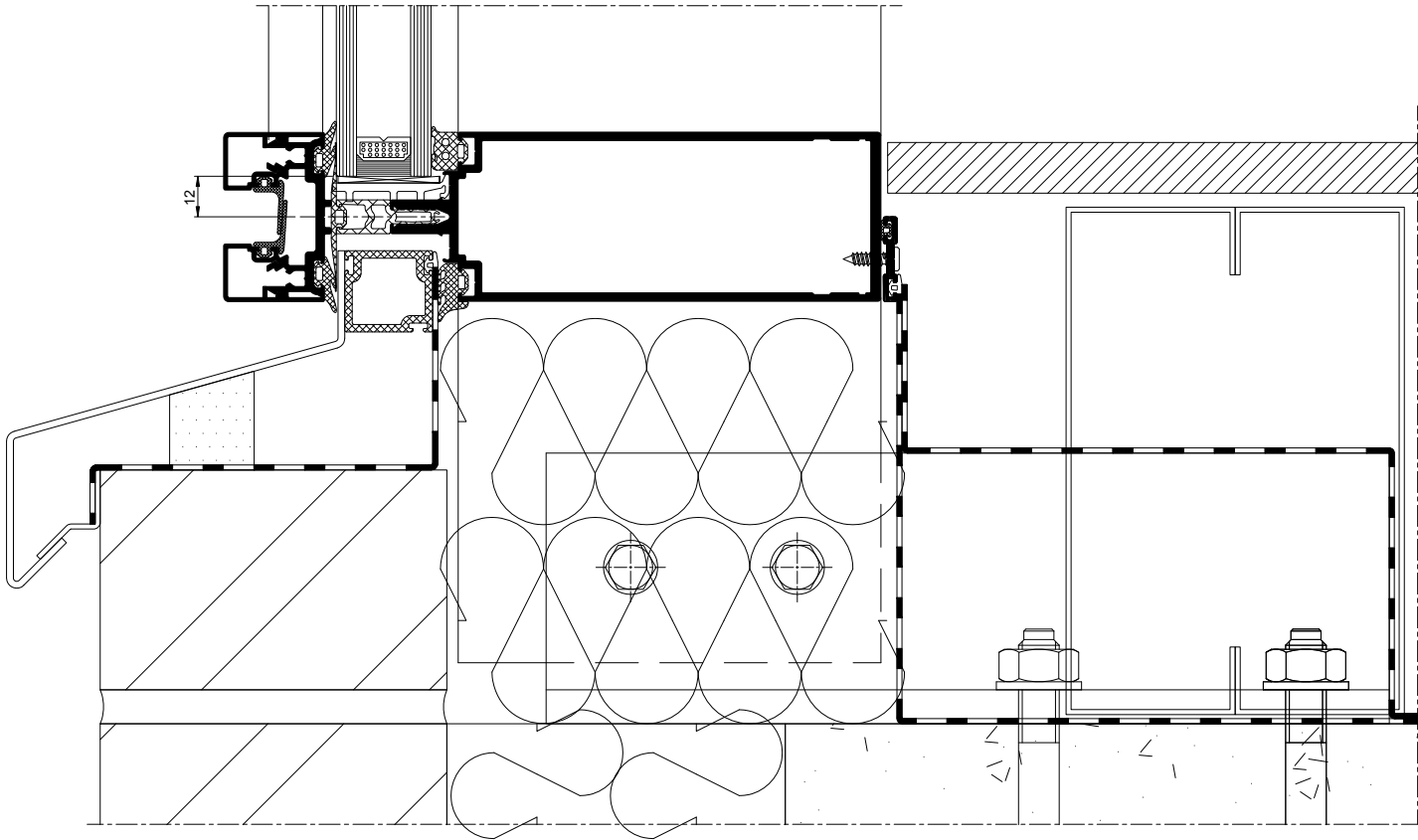


H6 06.01

AA[®]100 AND AA[®]110 PFL

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

CILL DETAIL (GENERIC)



H6 04.01



CASE STUDY CITYLABS 2.0, MANCHESTER

KAWNEER CURTAIN WALLING HOLDS A UNIQUE KEY TO A GATEWAY BUILDING

Meeting a quartet of criteria, Kawneer's AA®110 SSG (Structurally Silicone Glazed) and AA®100 capped aluminium curtain walling almost completely wraps the new £25 million Citylabs 2.0 development within the Oxford Road Corridor innovation district in Manchester, at the gateway to Europe's largest clinical-academic campus.

Citylabs 2.0 is part of a £95 million expansion to the Citylabs campus which is located at Manchester University NHS Foundation Trust's (MFT) Oxford Road hub and is a partnership between MFT and the UK's leading property provider to the science and tech sector, Bruntwood SciTech. The project builds on the success of Citylabs 1.0 which opened in 2014 and is fully-let, and Citylabs 2.0 will provide world-class lab and office space for global diagnostics company QIAGEN who have 100% pre-let the building for their Global Centre of Excellence for Precision Medicine.

Kawneer's AA®110 SSG curtain walling with flush silicone sightlines has been used throughout, while the AA®100 version with 50mm sightlines features on the ground floor entrance of the 8,500m² state-of-the-art building designed by frequent Kawneer specifiers, architects Sheppard Robson.

The practice conceived Citylabs 2.0 as a block of accommodation with one elevational treatment, with recessed areas carved out of the main block clad in alternative materials. To realise this concept, the main body was formed in the Kawneer AA®110 flush cap-less curtain walling, with a digitally printed design to the glazing.

The concrete frame of the building provides clear open floor plates to support different work typologies while the post-pensioned floor slabs provide clear, uninterrupted soffits for ease of services distribution.

The recesses at level 5 and the plant room are clad in ribbed fibre cement panels, the recess on the Hathersage Road elevation is clad in louvres, and the recess to the main entrance is the Kawneer full-height AA®100 curtain walling with accentuated vertical caps. The set back edges, and entrance canopy soffit, are clad in a bright coloured red anodised metal panel.

Sheppard Robson associate Mary-Ann Crompton said: "The sub-contractor chose Kawneer as the best product to realise the design intent and it achieved the required performance specification in terms of aesthetics, thermal, acoustic and movement requirements."

The AA®110 SSG curtain walling, with its wider 65mm back box, is typically specified to minimise building movement and at Citylabs 2.0 was complemented by the fritted glazing and spandrel panels.

"The existing adjacent buildings are Grade 2 listed and the cutbacks to Citylabs 2.0 have been organised to respond to the location and scale of them. The etched design to the glazing refers to details within the retained chapel which is to be refurbished as part of further future developments for Citylabs 3.0. The glazed elements of the curtain walling form the major component of the elevational design and has helped to fulfil the aesthetic aspirations for the project. In addition, aluminium is totally recyclable and is therefore a good material to use. This characteristic helps towards achieving a sustainable design."

The Kawneer systems were installed for main contractor Sir Robert McAlpine over six months by teams of up to eight people from Kawneer-approved specialist sub-contractor Bennett Architectural Aluminium Solutions.

Director Rob Bennett said: "The project was fully enclosed in Kawneer curtain wall. It was a large project for us and had to be installed within 25 weeks. The AA®110 curtain walling allowed increased building movement capability. "The glass on it was quite unique. We worked with the architect and designed a frit pattern that was used as part of solar control. It has a very unique whirl and is quite striking."

Mary-Ann said: "We have used Kawneer on many of our projects over the years and have found that the technical and sales departments are very helpful with providing information at the early stages of design."

Businesses which locate to Citylabs have direct access to MFT's specialist clinical resources and expertise from researchers, clinicians and procurement teams as well as Bruntwood SciTech's specialist growth support and events programme, including access to funding, talent, new markets and academic connections.



Photos: Adrian Lambert

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 4255 Part 1
Specification for non-cellular gaskets

CWCT
Sequence B Standard for Systemised Building Envelopes

BS EN 12152
Curtain Walling. Air Permeability. Performance requirements and classifications

BS EN 12153
Curtain Walling. Air Permeability. Test method

BS EN 12154
Curtain Walling. Watertightness. Performance requirements and classifications

BS EN 12155
Curtain Walling. Watertightness. Laboratory test under static pressure

BS EN 13116
Curtain Walling. Resistance to Windload. Performance requirements

BS EN 12179
Curtain Walling. Resistance to Windload. Test method

BS EN 14019
Curtain Walling impact resistance. Performance requirements

BS 476-22
Fire tests on building materials and structures

EN 1991-1-1
Eurocode 1: Actions on structures – Part 1-1: General actions – Densities, self-weight, imposed loads for buildings

EN 1991-1-4
Eurocode 1: Actions on structures – Part 1-4: General actions – Wind actions

EN 1363-1
Fire Resistance tests – Part 1: General requirements

EN 1364-1
Fire resistance tests on non-loadbearing elements – Part 1: Walls

EN 1364-3
Fire resistance tests on non-loadbearing elements – Part 3: Curtain Walling

EN 13830
Product standard curtain walls

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
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 Building and Construction Systems, and enjoys the extensive resources of the entire Kawneer 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.



John Bradfield Centre, Cambridge
Architect: Aukett Swanke

A FULL RANGE OF GUARANTEED COLOURS AVAILABLE

Established in the UK for over 60 years and powder coating profiles at its Runcorn base for 50 years, Kawneer has deep knowledge and experience in the specification and application of colour and paint systems.

The existing powder coating facility was converted to 'chrome free' – the first existing plant in the UK to be upgraded to this environmentally friendlier pre-treatment system – which gave Kawneer additional impetus to become a QUALICOAT approved applicator.

Quality and consistency of quality continues to be the main feature of QUALICOAT UK & Ireland, which includes third party testing of all certified powder formulations and pre-treatment systems that make up the QUALICOAT approval process. Kawneer has achieved 'Seaside' specification standard with this third party accreditation programme.

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.



OTHER BROCHURES AVAILABLE ON REQUEST FROM KAWNEER ARE:

- Finishes
- Door Systems
- Framing Systems
- Unitised Curtain Wall Systems
- Window Systems
- K-Vantage Systems
- LouvreShield
- Sliding Solutions
- Fire Resistant Systems
- Passive House Façade Solutions
- Suited Handle Range
- Sustainability
- Maintenance and Cleaning
- Education
- Residential
- Perspectives
- The Architects Guide to Aluminium in Building

To download these brochures please visit www.kawneer.co.uk

Front Cover: Zurich Insurance, Unity Place, Swindon

June 2024



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.

© KAWNEER UK LTD



Kawneer UK Ltd
Astmoor Road
Astmoor Industrial Estate
Runcorn
Cheshire
WA7 1QQ
United Kingdom
Tel: +44 (0) 1928 502500

London Office
12 Berwick Street
Soho
London
W1F 0PN
Tel: +44 (0) 207 287 5911

Architectural Services Team
Tel: +44 (0) 1928 502604
Email: kawneerAST@arconic.com
www.kawneer.co.uk

Finish Options



Authorities

ISO 9001

Quality Management System

BS EN 12206-1

Paint and varnishes. Coating of aluminium and aluminium alloys for architectural purposes

BS 3987

Specification for anodic coatings

A full range of guaranteed colours available

Established in the UK for over 50 years and powder coating profiles at its Runcorn base for 40 years, Kawneer has deep knowledge and experience in the specification and application of colour and paint systems.

The existing powder coating facility was converted to 'chrome free' – the first existing plant in the UK to be upgraded to this environmentally friendlier pre-treatment system – which gave Kawneer additional impetus to become a QUALICOAT approved applicator.

Quality and consistency of quality continues to be the main feature of QUALICOAT UK & Ireland, which includes third party testing of all certified powder formulations and pre-treatment systems that make up the QUALICOAT approval process. Kawneer has achieved 'Seaside' specification standard with this third party accreditation programme.

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

Email: kawneerAST@arconic.com



Overhead sectional door

ASSA ABLOY OH1042P

ASSA ABLOY
Entrance Systems

Experience a safer
and more open world



The next generation of overhead sectional doors

Modern, robust and flexible, the new ASSA ABLOY OH1042P from ASSA ABLOY Entrance Systems is designed to keep your business moving – for all duties and in all weathers. Filled with innovation, and superbly well insulated, this rugged, attractive overhead sectional door gives you the highest number of options at the lowest possible running cost. This high quality door is the perfect choice for warehouses, logistics centers and all kinds of business premises.

Each part of the ASSA ABLOY OH1042P overhead sectional door is built to the highest standards. The combination of wind-resistant reinforced panels and a class 3 certification for water tightness, wind load and air permeability give you a door that looks better and performs longer. Small innovations that make a big difference to the buildings they protect.

Choosing from eleven standard outdoor colors, or your own factory painted color for both the inside and outside. Available with different sizes, panels, window configurations, locks, handles and pass doors, the ASSA ABLOY OH1042P overhead sectional door is perfectly suited to every kind of industrial need.

Glazing

Glazing alternatives vary from full-vision panels to individual windows in a rectangular or oval shape. The windows are available in acrylic or hardened glass.

Pass-door option

The pass-door width is 900 mm, satisfying today's market demands. This low threshold pass-door is designed with a sturdy, wide aluminum profile of only 30 mm. The profile gives an unobstructed passage and is ribbed, minimizing the risk of slipping.

Standard colours

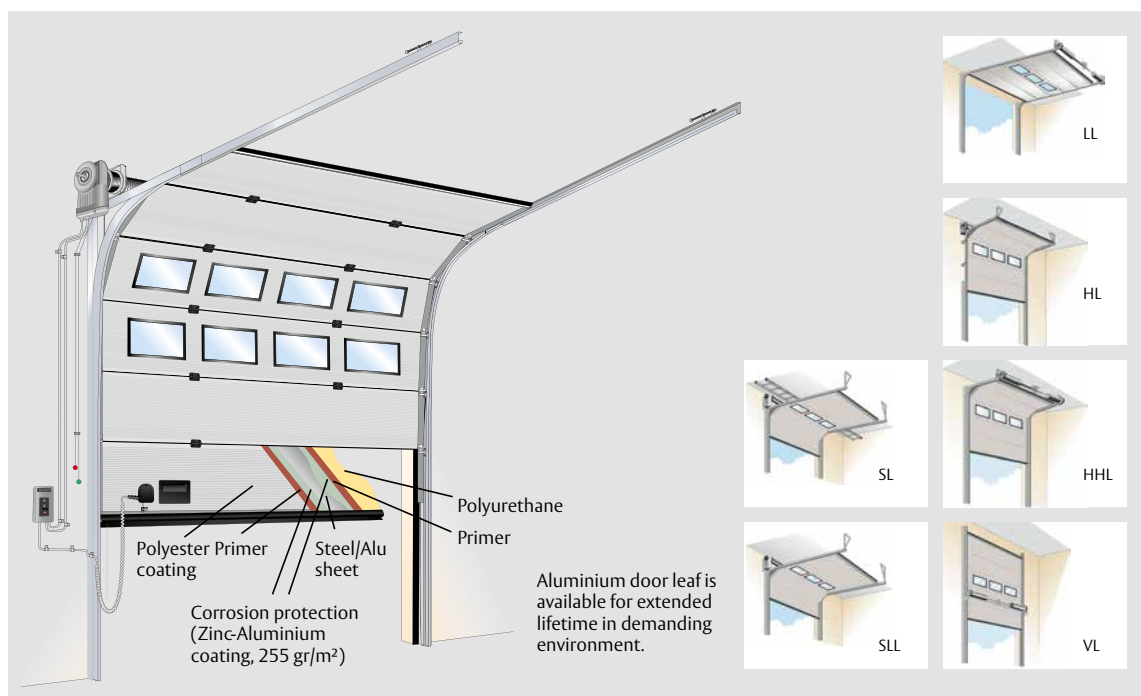
The steel ASSA ABLOY OH1042P overhead sectional door is available in 11 pre-coated outside colours. The inside colour is RAL 9002, Grey white. The aluminium ASSA ABLOY OH1042P is available in 3 pre-coated outside colours with natural aluminium inside.

Technical Data

Standard size up to (W x H) ¹	8000 x 6000 mm
Panel thickness	42 mm
Windows	optional
Pass-door	optional
Access and Automation	optional
Wind load, EN 12424 ²	class 3
Thermal transmittance, EN 12428 ³	
Full panel steel door	1,0 W/(m ² K)
Full panel aluminium door	1,1 W/(m ² K)
Water penetration, EN 12425 ⁴	class 3
Air permeability, EN 12426 ⁴	class 3

¹) Other sizes on request ²) Without pass-door. Higher wind load classification on request ³) Door size 5000 x 5000 mm ⁴) Without pass-door

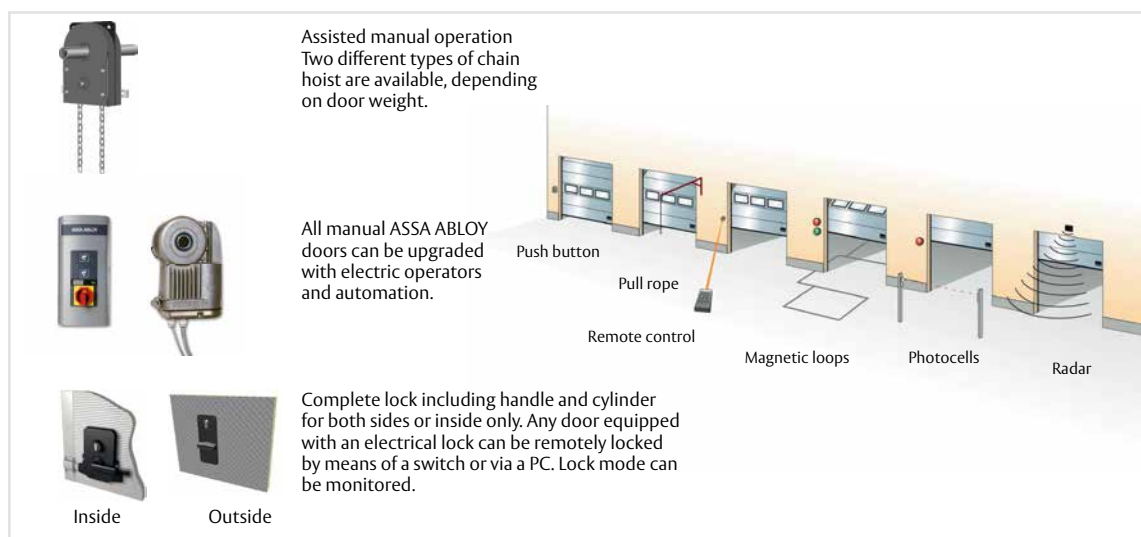
Dimensional specifications



Panel options



Options access and automation



Standard available outside colours

