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L381+L41:P43	C42+D1:X421
CI/SfB	
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comar

ARCHITECTURAL ALUMINIUM SYSTEMS



complementing architecture

# company overview...

## The Parkside Group

The Parkside Group incorporates Comar Architectural Aluminium Systems, Alu-Timber, AXIM and DUCO.

This provides a unique opportunity for specifiers and fabricators to rely on a single source for architectural aluminium systems, hardware and ventilation control products.

## Comar

Comar Architectural Aluminium Systems is the largest British, privately owned aluminium systems company in Europe.

Comar designs, extrudes and distributes over 700 integrated profiles to a nationwide approved fabricator network for use in aluminium ground floor treatment, window, door and curtain walling applications.

Comar has built its reputation on delivery, over £5m of mill, white polyester powder coating, silver, bronze and anodised profiles are kept in stock. This means that 99% of orders are fulfilled by our customers weekly delivery.

## Alu-Timber

Alu-Timber is a range of aluminium/timber windows, doors, framing and curtain walling that combines sustainably grown FSC or PEFC timbers with 100% recyclable aluminium.

The Alu-Timber range merges material solutions, timber providing thermal efficiency, aluminium the protection.

## Axim

As part of the The Parkside Group, AXIM supply a full range of architectural hardware including: concealed transom closers, floor springs, surface mounted closers, flush bolts, panic exit devices, handles, letter plates and other ancillary items.

## Solar Shading

Solar Shading provides architects and specifiers with the opportunity to create facades of distinction.

Solar Shading integrates fully with Comar 6 Curtain Walling and can also be hung from the building envelope to provide shading over windows and doors.

Three systems are available which include under-slung, over-slung, inframe, pitched, aero-foils, moveable blades and aero-foils that follow the path of the sun.

## Ventilation

A range of trickle vents with acoustic options and in-frame window ventilators that provide maximum air-flow, directed upward to avoid draughts and discomfort and weather rating of up to 900 pa. All provide vandal resistance.

## Grilles & Louvres

Grilles and Louvres allow air flow through walls, partitions, ducts or doors and to fully co-ordinate with the project can be finished in a variety of colours. Grilles & Louvres can also provide directional air flow and volume control. The Comar-DUCO range includes a variety of bespoke shapes and sizes for different conditions such as offices, high abuse and exposure areas. The range expands to large scale projects such as continuous louvre walls and doors.



## Nationwide Architectural Specification Team

Comar Architectural Aluminium Systems have a Nationwide team of architectural advisors, who specialise in providing architects and specifiers with project support and NBS specifications.

## Nationwide Approved Fabricator Network

Once Comar has been specified, a Nationwide network of approved fabricators ensures the successful completion of projects. Your Comar architectural advisors can provide fabricators who specialise in commercial, new, refurbishment or public building work.

## Technical Back-up & Training

At every stage of the tender process, Comar's Technical Department provide support and advice. Staffed by CAD design engineers, new profiles, design drawings and calculations can be obtained.

To ensure the highest levels of fabrication and installation expertise, Comar offer a range of industry accredited and in-house training courses.

Groundfloor Framing	
Comar 1 & 3	Single & Double Glazed GFT
Comar 4	Single Glazed GFT
Comar 8	Fin/Bead GFT
Curtain Walling	
Comar 6	Curtain Walling, Stick Build & Ladder frame, Square Cut & Step Cut.
Comar 6 & 6EFT	Capped, 2sided S.G. & 4sided S.G.
Doors	
Comar 7	Doors, Folding, Sliding, Swing, Rebated & P.i Thermally efficient doors.
Windows	
Comar 5	Windows, 45mm, 50mm.
Comar 5Pi	Thermally efficient 60mm.
Comar 5Pi Eco	55mm & 75mm Casement Window.
Window Walling	
Comar 2	Window Walling, Thermally Broken.
Comar 9Pi	Advanced Window Walling.

...comar reassurance



# commercial

Statement of function is the key element of commercial building design. From designing industrial units to corporate headquarters the flexibility of Comar Aluminium Systems allows integration with panel systems and provides curtain

walling with opening vents and windows in a variety of configurations. Comar can powder coat the aluminium system to your RAL, BS or Syntha Pulvin colour to complement the façade.



Project:	Kings Point Complex
Architect:	Sheppard Robson & AEW Architects
Contractor:	Caddick Construction Ltd
Fabricator:	K2 Aluminium System Ltd
System Used:	Comar 6 EFT, Comar 7P.i Doors
Location:	Oldham, Lancs



Project:	Saville House
Architect:	Archial Architects Ltd (Leeds)
Contractor:	Tolent Construction
Fabricator:	APIC (UK) Ltd
System Used:	Comar 6 EFT
Location:	Sheffield

# retail

Inherent strength and slim sight-lines make Comar aluminium the specification product of choice for all retail outlets. Comar offers extensive systems which integrate to provide aesthetic appeal to potential retail customers.

Step through Comar 7, an extensive range of sliding, automatic, folding or swing doors. Overhead Comar 6 creates sloped, pitched or barrel vaults which cast light throughout the retail complex or outlet. Comar 1, 3, 4 & 8 integrate with Comar 7 to provide ground floor framing with various angle returns and height capability. Comar 6 curtain walling houses the envelope with a variety of cover caps which complement panels and glazing.



Project:	Tesco Store
Architect:	Collado Collins
Contractor:	McLarens
Fabricator:	Ridgeway Glazing Ltd
System Used:	Comar 6EFT 4SSG & Capped, Comar 7
Location:	Higham Park, London E4



Project:	Marks & Spencer
Architect:	Holder Mathias Architects
Contractor:	Mowlem
Fabricator:	RPM Shopfronts
System Used:	Comar 6 & Comar Brise Soliel
Location:	Brigend, Wales



# education & public buildings

Comar have worked in conjunction with Local Authorities to design specific products for use in the education and public building sector. The nature of public building construction demands cost effective, robust solutions. Comar 2 is a cost saving alternative to curtain walling, creating glazed façades for medium

rise buildings, stairwells and entrances. Comar 2 integrates with Comar 5 windows with espagnolette locking handles to provide security and Comar 7 Doors with anti-finger traps to provide safety. Comar's integrated systems ensure a cost effective, aesthetic façade with security and safety as standard.



Project:	Somerset College
Architect:	Lacey, Hickie & Caley
Contractor:	Rokbuild
System Used:	Comar 2, 5Pi, 5lt, 6 and 7
Location:	Taunton



Project:	Barking Town Hall, London
Architect:	Allford Hall Monaghan Morris
Contractor:	Ardmore Construction
Fabricator:	Barking Shopfronts Ltd
System Used:	Comar 6EFT & 7
Location:	Essex

# leisure

The pursuit of leisure activities is now a major part of British culture. Buildings for leisure, such as sports stadia, leisure centres and community centres, must attract all sections of the public; providing accessibility, function and visual appeal. Comar's aluminium systems, due to their inherent integration, provide comprehensive façade solutions as well as robust sections for high usage leisure facilities.



Project:	Harborne Pool & Leisure
Architect:	Saunders Boston
Contractor:	Wates Construction
Fabricator:	K2 Aluminium
System Used:	Comar 5P.i Comar 6 (Step Cut) & Comar 7P.i
Location:	Birmingham



Project:	Cambridge City Football Club
Architect:	Sharman Knowles Partnership
Contractor:	Carlton Builders
Fabricator:	P.A.G.E. Group (Peterborough) Ltd
System Used:	Comar 5lt
Location:	Cambridge

# window walling



Comar 2 Window Walling was developed in conjunction with Local Authorities to provide a cost effective alternative to low rise curtain walling. The close development of Comar 2, with Local Authorities, has resulted in over £100m of completed projects and the system is now the market leading window walling system in the UK. Comar 2 is a versatile window walling system, which provides slim sight lines for use in entrances, stairwells and medium rise applications.

## comar<sup>2</sup>

For the most demanding design briefs, profiles are designed for maximum strength to weight ratios and special high span mullions are available. Comar 2 is available in a two part channel and plate mullion which clip together to form 100mm x 45mm or 100mm x 30mm box section, with co-ordinating 98mm transoms.

The versatility of Comar 2 includes 3-way glazing profiles, 90° and 135° corners and variable angle façades.

Comar 2 incorporates a wide range of beads which means that panels and glass from 4mm to 71mm can be glazed, either internally or externally.



Thermally broken, Comar 2 integrates with Comar 5 to provide tilt and turn, pivot, side hung, top and bottom hung opening vents. For a full façade solution the comprehensive range of Comar 7 doors can be incorporated. Doors can be operated by overhead, concealed closers incorporating an anti-finger trap for protection. If automatic doors are required, Comar's unique door beams offer aesthetically pleasing finished applications.

## Performance & Standards

In absence of a British Standard for framing systems, Comar 2 conforms to industry standards adopted by trade associations such as CWCT & elements of BS 4873.





# curtain walling

Creating façades of distinction, coupled with design reassurance from the first stroke of the pencil, is often the desire of even the most innovative practice. Comar 6 and Comar 6EFT deliver the capability.

With an extensive range of profiles and accessories, Comar 6 and Comar 6EFT is one of the most comprehensive curtain walling ranges on the market today.

Minimalist lines through sheer glazed façades is a design requirement. Comar 6 and Comar 6EFT have been developed to provide specifiers with a range of transoms and mullions with a 50mm sight-line. Where the façade demands multi-storey spans and performance, a range of high lxx value mullion and transoms achieve the design brief, keeping the same 50mm sight-line.

Comar 6EFT suite includes options for 4-sided structural glazing; 2-sided structural glazing with horizontal or vertical capping and concealed vents.

## Performance & Standards

Air permeability:	Pass 750Pa
Water tightness:	Pass 750Pa
Wind resistance:	Pass 2400Pa Safety 3600Pa
Tested to BS 6375 Part 1	
Tested to CWCT Standards	

## comar6EFT



For faceted curtain walls, corner mullions are adjustable from 15° to 145° in Comar 6 and from 7.5° to 165° in Comar 6EFT. This means that roof-glazing applications, such as barrel vaults, pyramids and sloped glazing, can be achieved.

Two forms of constructions are available: stick and ladder frame.

The transoms can be square cut or step cut, the latter providing a true mullion drained system.

Glass, mirrored, tinted or opaque, provides the façade with feature and distinction; incorporating panels can also add to the façade. To allow panels and glass of different widths to integrate into the same curtain wall, without the need to step-cut, Comar have specifically designed a range of gaskets and pressure plates to provide glazing options from 3mm to 50mm.

Comar 6 and Comar 6EFT develop with the demands of design: new profiles are continually added and tested to the highest standards. This approach delivers the most innovative design brief coupled with reassured performance.



# windows

The Comar 5 aluminium window range is designed to take into account the needs of the users of aluminium window systems now and in the future.

The users are the designing specifiers and architects who care about delivering an aesthetic solution with long term performance, the fabricator who wants systems that are economical, easy to fabricate and delivered on time and, finally, the end user who wants a building that will stand the test of time.

Comar 5 has three high performing suites, ensuring that even the most demanding project can be completed from a single source.

The Comar 5 range includes all window configurations, such as: side-hung, bottom-hung, top-hung, horizontal and vertical pivot, tilt and turn, top-swing reversible and sliding windows. Comar 5 integrates with all Comar products to provide doors and opening vents to window walling, curtain walling and ground floor treatment.

Comar 5 is Document L compliant and available in 5 profile widths: 45mm, 50mm, 55mm, 60mm, 75mm with glazing options from 4mm to 45mm.

The 60mm system, Comar 5Pi, is a polyamide system that provides exceptional thermal efficiency for applications where accurate U-value trade-offs are required.



Comar 5Pi keeps a building warmer for longer as it actively reduces heat loss. This provides an intrinsic benefit for clients due to the long term reduction in energy costs.

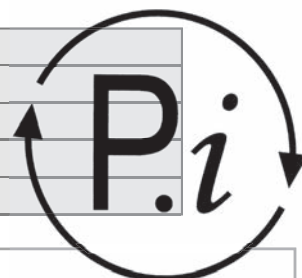
Comar 5 offers outstanding weather performance, exceeding the requirements of the very latest weather tightness tests: BS ENs 1026, 1027 & 12211.

## Performance & Standards

Comar 5Pi	
Air permeability:	Pass 600Pa
Water tightness:	Pass 600Pa
Wind resistance:	Pass 2400Pa
Tested to BS 6375-1	

## comar5

Comar 5Pi ECO	
Air permeability:	Pass 600Pa
Water tightness:	Pass 750Pa
Wind resistance:	Pass 2400Pa
Tested to BS 6375-1	



**Def:- P.i./n/ :-** (1) Polyamide Insulation.

(2) Comar Architectural Aluminium's new range of thermally efficient polyamide insulated windows and doors. (3) Architectural aluminium products with added P.i to achieve the requirements set out in documents L1 & L2. (4) The ability of suppliers to provide accurate u-Value calculations, to perform trade-offs for whole building thermal efficiency. (5) Environmentally friendly product, incorporating all the recyclable and sustainable elements of aluminium. (6) Trade-mark The Parkside Group.





# doors

Comar 7 is the specifier and installer preferred aluminium commercial door system throughout the UK.

The extensive profile range, designed specifically for ease of fabrication and installation and developed for bespoke projects, provides combinations such as sliding, folding, rebated, swing, Armoured Glass (A.G.) and pivot doors.

Four ranges are available: Comar 7, Comar 7 high performance Tempest, Comar 7Pi and Comar 7Pi ECO polyamide doors. Comar 7Pi provides durability and maximum thermal efficiency that exceeds the requirements of Document L.

Comar 7 is face drained and has a variety of drained or non-drained thresholds, including low ramp thresholds to comply with the latest building regulations such as the Disability Discrimination Act (D.D.A.).

With an extensive range of door stiles with sight lines ranging from 28mm to 110mm and rails from 10mm to 200mm, that can be internally or externally beaded, Comar 7 provides the capability to achieve durability, performance and visual appeal.

These profile options allow construction of combinations of single leaf doors up to 1200mm wide and 2400mm high. However, dependent on the location, glass type, hardware and door type larger configurations, such as vehicle access, sliding doors can be manufactured. Please contact Comar's Technical Department for advice on specific projects.

Doors can be glazed with panels or glass up to 51mm.



Comar 7 has developed over 30 years to provide solutions; evidence of this lies in its unique Automatic Door Beams. These door beams are a single extrusion that support automatic door gearing. They offer maximum strength whilst enhancing the appearance of sliding or swing doors by reducing the need for unsightly aluminium panels and timber packing. Comar 7 Auto Door Beams have been designed to accept virtually all types of bolt-on operating gear.

Comar 7 integrates into Comar's ground floor framing, curtain walling suites and couples to window suites to provide fixed and opening fan and side light options.

Comar 7Pi doors have exceeded the requirements of PAS 23 reporting no water leakage at 600pa. Security concerns are alleviated with the knowledge that Comar 7 has passed PAS 24: 2012, BSEN1627 and LPS 1175 enhanced security test.

Comar 7 utilises AXIM architectural hardware. The AXIM range includes transom closers, panic devices, flush bolts, letter-plates, locks, paddle handles, lever handles which can be delivered in a variety of finishes, including co-ordinating polyester powder coating. Therefore, from a single source, Comar 7 offers a complete solution.

## Performance & Standards

Air permeability:	Pass 600Pa
Water tightness:	Pass 600Pa
Wind resistance:	Pass 2400Pa
Tested to PAS 23, 24:2012 and LPS 1175	

comar7

# ground floor framing

Comar's four integrated suites of ground floor framing provides distinctive single storey framing to schools, retail outlets, shopping centres and corporate headquarters.

Whether it's a single storey building that's curved and angled, with large expanses of glazing, such as a car showroom or an entrance to provide a focal point to the building, Comar's extensive range of ground floor framing systems contain variable angle corners and three way glazing options with high lxx value transom and mullions to ensure that maximum spans can be achieved.

To complete the envelope the four suites integrate with Comar 7 high performance doors and Comar 5 windows to provide opening lights.

Comar 1 and Comar 3 are single and double glazed ground floor framing suites. A two part channel and plate mullion clip together to form a 100mm x 45mm box section enabling modular sash construction. Both systems include 3-way glazing option, corner profiles to allow 90° and 135° returns, variable angle corners with special beads and carriers to accommodate glass and panels from 4mm to 36mm.

Comar 4 is a 45mm x 45mm system which integrates fully with Comar 1 and is often the perfect solution for partitions or less demanding façade work. Glazing pockets suit 4mm to 13.5mm glazing and a wide range of profiles and components are available to support aluminium or timber doors.



For traditional fin and bead systems, Comar 8 provides a fast and cost effective store frontage.

## Performance & Standards

In absence of a British Standard for framing systems, Comar 1, 3, 4 and 8 conforms to industry standards adopted by trade associations such as CWCT and elements of BS 4873

# comar1,3,4,8





# window walling advanced

After extensive research and consultation with key supply partners, Comar Architectural Aluminium Systems unveil the new Comar 9Pi High Performance Framing, Window and Door System.

Market research indicated that a thermally efficient future-proof facade system was required, with off-site manufacture and value engineered solutions that actively seek to reduce material content.

There are two levels of thermal performance: Standard Pi and Enhanced Pi, creating U-values between 1.6 and 1.0 for a typical grid size with opening vents.

Comar 9Pi high performance framing offers two options of construction: ladder frame or mitre frame. 9Pi windows and 9Pi doors hang directly from the frame, reducing the need for additional outer frames, creating a truly integrated solution.

Building typologies differ from refurbishment to new build, so Comar 9Pi has profile widths of 80mm or 120mm creating greater design flexibility.

Comar 9Pi has slim 65mm sight lines to ensure that architecturally demanded aesthetics are achieved. Glazing lines are flush, maintaining consistent lines for a sleek external facade that provides straight interfacing for walls, internal floors and partitions. Consideration is also given for plaster lines with profiles to cater for differing situations.

Comar 9Pi windows can be open-in or open-out; side, top or bottom hung; or tilt and turn offering unobtrusive top light ventilation. Comar 5Pi Vertical Sliding Windows and Horizontal Windows can be integrated into the Comar 9Pi framing. All window configurations have passed BS7950 and BS6375.



Comar 9Pi doors can be open-in, open out, single or double rebated doors. With options for anti-finger trap stiles and low-rise thresholds the door-sets have passed PAS 23 and PAS 24.

Glazing sizes have been catered for up to 62mm. This means that future requirements for high performing acoustic or triple glazed solutions can be specified.

On test, Comar 9Pi windows and doors exceeded the requirements of BS6375 Part 1 and PAS 23

2400Pa	Special Resistance to wind load
600Pa	Water tightness
600Pa	Air tightness

Security is assured with Comar 9Pi. The system on test has exceeded the standards:

Comar 9Pi Casement Tilt & Turn	BS7950
Comar 9Pi Door	PAS 24

comar9Pi





# standards

BS EN ISO 14001:	Comar is an ISO 14001 registered firm, certificate number: EMS 555373
BS EN ISO 9001:	Comar is an ISO 9001 registered firm, certificate number: BSI: FM553615
BS-EN 755:	Aluminium alloy extrusion
BS EN 485:	Aluminium alloy sheet
BS-EN515:	Aluminium and aluminium alloys – Wrought products temper designations
BS 4255 Part-1:	Gaskets
BS-EN573-3:	Aluminium and aluminium alloys – Chemical composition – Wrought products – part3
BS-EN755-2:	Aluminium and aluminium alloys – Extruded profiles – part 2: Mechanical properties.
BS-EN755-9:	Aluminium and aluminium alloys – Extruded profiles – part 9: Profile tolerances.
BS-EN12020-1:	Aluminium and aluminium alloys – Extruded precision profiles – part1: inspection and delivery
BS-EN12020-2:	Aluminium and aluminium alloys – Extruded precision profiles – part 2: tolerances on dimension and form.
BS 4873:	Specification for aluminium alloy windows.
BS6375 Part 1:	Classification for weather tightness.
BS368:	Method of testing windows
BS 5713:	Hermetically sealed flat double glazed units
BS6262:	Code of practice for glazing of buildings
BS6496:	Specification for powder organic coatings to aluminium alloys for external architectural purposes
BS1615:	Method of specifying anodic oxidation coatings on aluminium and its alloy
BS3987:	Specification for anodic oxide coatings for external architectural purposes
BS6399 Part 2:	Code of practice for wind loads
C.W.C.T.	(Centre for Window & Cladding Technology)

## Kitemark BSI Licences:

KM 578159 - BS 4873 - Systems Supplier	Aluminium alloy windows
KM 578160 - BS 4873/PAS24 - Enhanced security performance of windows for domestic applications	
KM 590092 - PAS 23-1 & PAS 24-1 - System Supplier - General and Enhanced Security Performance Requirements for Door Assemblies	
KM 593756 - BS 4873/PAS24 - Doors System Supplier	

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BSI: ISO 14001



BSI: ISO 9001