

**WALKWAYS + CANOPIES**



PARAGON

PARAGON ANTI-VANDAL

CLIFTON

SPECIAL DESIGNS

**MACEMAIN + AMSTAD**

DESIGNERS AND MANUFACTURERS OF ARCHITECTURAL STRUCTURES AND STREET FURNITURE

## WALKWAYS & CANOPIES

---

Macemain + Amstad specialise in the design and manufacture of waiting enclosures, architectural structures and street furniture.

Most projects can be met by choosing a combination of products from our standard ranges. Standardised components enable us to streamline the design and specification process, resulting in cost savings and significantly reduced lead times. Macemain + Amstad offer a full design, manufacture and installation service.

Extensive experience over many years with clients like Network Rail, Airport Authorities, Local Councils and leading Architects has led us to high profile projects such as the Transit Centre and Bus Station at the Blue Water Shopping Centre, Gatwick Fastway and the Falkirk Green Wheel.

Full details of all Macemain + Amstad products are available upon request and our technical sales advisers are qualified to answer most queries by telephone, fax or email.

### BASIC PRINCIPLES

Macemain + Amstad offer a standard range of walkways and canopies based around the modular components of our following brand names :

#### PARAGON

#### PARAGON ANTI-VANDAL

#### CLIFTON

Within each range is a wide choice of configurations covering spans, roof shapes, structural posts, glazing, services and accessories. Many of the components used within each range are also either common or compatible enabling specifiers to mix and match creating a virtually limitless portfolio of designs.

By working within this modular system we can offer the benefits of factory finished items but without the excessive cost associated with a bespoke product. Although we are still able to offer special elements fabricated for your project, costs are reduced and specification simplified through the use of standard components, sections and details.

### Special Design to Build Service

Although the modular concept of our components offers endless versatility to most projects we are aware that in certain cases requirements fall outside of the ordinary.

Therefore, our Special Projects team is able to offer a complete design to build service. Through our extensive experience with a wide diversity of prefabricated enclosure systems we can design a bespoke system from either an outline brief, a firm manufacturing specification or an open brief.

Our aim is to assist specifiers to achieve their preferred style of walkway or canopy, even if it is significantly different from our standard ranges, in a cost effective manner.

Standardisation of components wherever possible allows broad design flexibility while avoiding prohibitively high development costs. Macemain + Amstad use computer-aided design and manufacturing to ensure consistency across even the most complex special project designs.

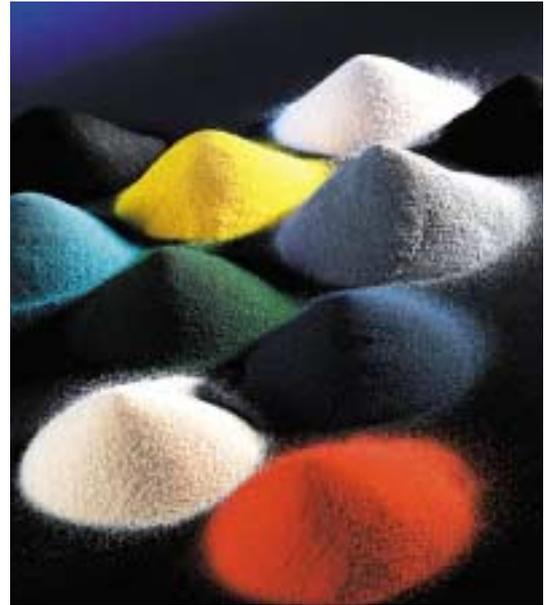
## Manufacture

On completion of the approved standard or special specification, Macemain + Amstad's precision manufacturing safeguards high levels of quality and consistency. Environmentally-friendly manufacturing processes are used and our project experience and manufacturing capability is outlined in our corporate brochure, a copy of which can be obtained from customer services on 01536 401331.

## Finishing

Aluminium components are alachromed (ISO 527) and electrostatically polyester powder coated to a thickness of 100 microns as standard, in the full range of RAL or BS colours.

Steel components are galvanised to BS 729, ISO 1461 iron phosphated to BS 3184 type 4, and then electrostatically polyester powder coated as standard, again in any of the full range of RAL or BS colours.



Specify colours in any combination.

## Installation

Macemain + Amstad offer a turnkey service. Thirty years experience has solved virtually every challenge, a specifier might encounter from simple seating right through to mass transportation passenger zones and special projects.

We can advise on and provide foundation arrangements and ground fixings and, in conjunction with structural engineers, can provide calculations for building regulation approval as an additional service.

Finished products are transported to site in flat form enabling easy access and fast installation in any location.

For assistance with non-standard specifications, please contact the technical sales team on 01536 401331



## OPTIONS



PARAGON  
page 7



PARAGON Anti-Vandal  
page 9

<b>Roof shape</b>		
Low barrel	■	■
Barrel		
Flat		
Peaked	■	■
Gullwing		
<b>Roof infill</b>		
Polycarbonate	■	■
Metal	■	■
Stainless steel	■	■
<b>Glazing systems</b>		
Tab	■	
Mid-rail tab	■	
Rebated frame	■	■
Integral rebated systems	■	■
Integral mid-rail	■	■
<b>Glazing materials</b>		
Glass	■	■
Polycarbonate - various colours	■	■
Solid - 3mm mild steel	■	■
GRP	■	■
Trespa	■	■
<b>Electrical</b>		
Longitudinal integral lighting	■	■
Central roof		
Bulk head		
Solar panel system	■	■
Integral uplighting	■	■
<b>Finishes</b>		
Polyester	■	■
Galvanised	■	■
Stainless steel	■	■
<b>Rain management</b>		
Total integral	■	■
<b>Maximum span - distance between main column legs</b>		
3m	■	■
4m	■	■
6m +		





## PARAGON

The Paragon range is Macemain + Amstad's most widely used walkway and canopy system. The Paragon system extends to bus shelters, trolley bay enclosures, waiting rooms, smoking shelters, cycle enclosures, seating, litter and fire bins. Paragon is suitable for both simple or complex structures, from roof only to fully enclosed and carpeted building links.



Standard angled low vault



Monopitch with external glazing & infill panels



Weather tight panels



Pitched roof Paragon



Cantilever with tab fixed glass



**Paragon Anti Vandal – stainless steel**

Developed in 1998 the standard Paragon design was examined and modified to withstand vandalism and reduce maintenance costs. Extensive use of textured stainless steel has been introduced to reduce polyester powder coated components.

**Detail modification**

Developed in conjunction with the rail industry in 1998. The standard Paragon design was modified to withstand vandalism and reduce maintenance costs. Extensive use of textured stainless steel has replaced the majority of polyester powder coated components making it virtually impossible to deface. The major change was to the glazing format which was divided into 9 panels giving a smaller surface area to the glass to maximise its breakage resistance. The roof ribs were reinforced with a vertical upstand capable of withstanding a point loading of 150 kilos.

(see Shelters brochure for full design specification)



Wishbone internal service carrier



Tamper proof fixings



4m span with glazing



Anti vandal glazing detail



The Clifton range is available with three distinctive roof styles pitched, flat/monopitch and low vault and can be cantilevered or enclosed. Various glazing options can be achieved to compliment the numerous roof styles. This versatility makes the Clifton system the most popular and cost effective basis for most walkways and canopies offering maximum flexibility.



Curved roof only walkway



Pitch roof



Extra high glazing panels



Monopitch angled roof



5m span low vault roof



Open sided walkway

## DESIGN FEATURES

All Macemain + Amstad products are based on a wide range of standard components to streamline the design and specification process, reducing costs and lead-times.

All elements are compatible, complementary and can be arranged in any format.

Aluminium extrusions are used extensively with some structural elements in galvanised steel. The combination of structural steel and aluminium allows glazing to sit independently from the structure.

### Paragon & Paragon AV

Paragon's structural upright steel columns have a distinctive hollow cast aluminium 'wishbone' which connects to the wedge-shaped eaves and carries services such as drainage, electrics and/or fibre optics. The eaves extrusion is completely compartmentalised to separate services (see page 13 for detail). The low barrelled roof infill panels are usually clear UV stabilised polycarbonate or 3mm aluminium sheet.

Four glazing system options are available as standard using either 10mm toughened glass or 6mm UV stabilised polycarbonate. These can be replaced with Trespa, GRP or 3mm mild steel if preferred. Other materials upto 12mm thick can be specified.

The Paragon is based on a 1500mm modular construction along its length and width but is adaptable so that all site dimensions can be maximised. Because of the strength obtained from the major SHS steel columns, the Paragon can be specified for wide span areas of up to 4 metres without the need for additional supports. The roof overhangs the enclosure by 275mm to each side and 500mm at both ends.

### Clifton

Three standard roof profiles are available. Pitched and low vault roofs are constructed from clear UV stabilised polycarbonate with flat roofs being either a composite panel or 3mm aluminium sheet.

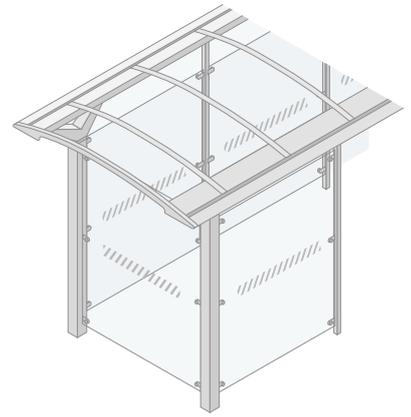
Side glazing as a standard would be 6mm toughened glass or 6mm clear UV stabilised polycarbonate restrained on all sides with optional mid-rail. This creates the flexibility to provide a combination of glazing materials and a solid kick panel.

The Clifton is based on a 1000mm modular construction along its length and width with standard spans of upto 3000mm between leg centres. Spans of more than 3000mm can be achieved by adding extra supports.

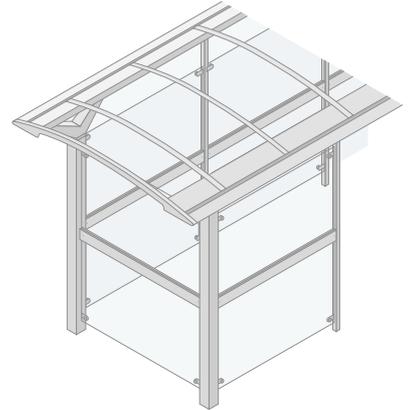
The maximum projection of a standard cantilever design is 1500mm but again greater widths can be specified when extra support is added. (See Special Projects).

## Glazing Options Paragon

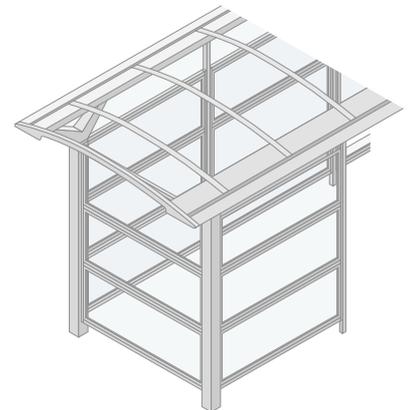
Tab fixed glazing



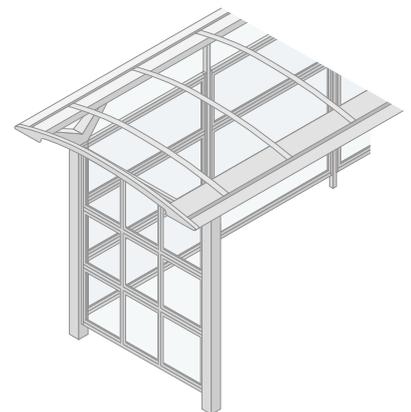
Tab fixed mid rail arrangement



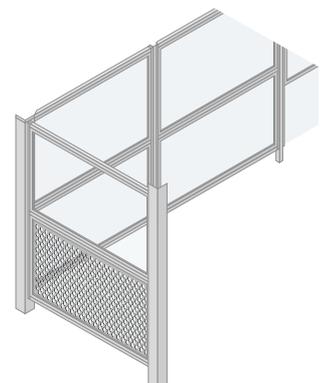
Rebated frame with single or double midrails

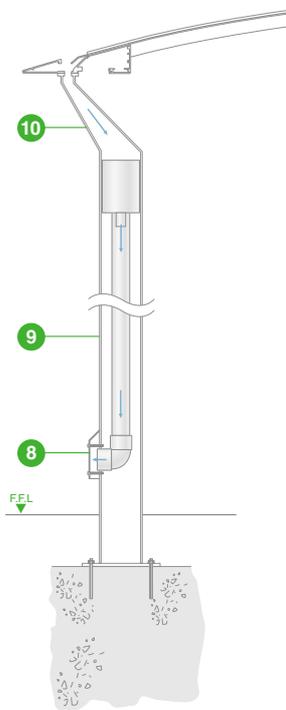


Paragon AV9 frame

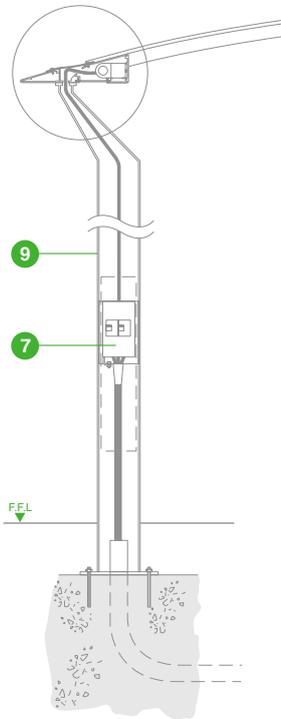


Clifton  
Rebated frame

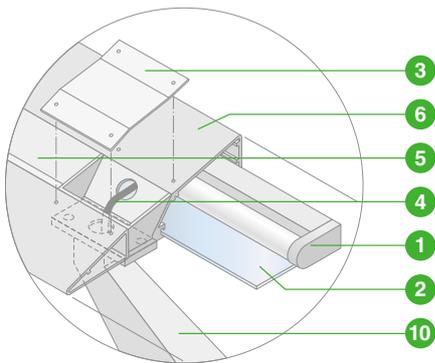




TYPICAL SECTION THROUGH DRAINAGE COLUMN



TYPICAL SECTION THROUGH ELECTRICAL COLUMN



Drainage and electrical services built into the structure of the shelter.

**Drainage and electrical services** (see diagram above)

1. **Fluorescent light fitting.**
2. **Flush fitting opaque diffuser.**
3. **Cover plate.**
4. **Electrical feed.**
5. **Drainage gutter.**
6. **Longitudinal wedge extrusion.**
7. **Electrical control gear.**
8. **Stainless steel rainwater outlet.**
9. **Structural columns.**
10. **Aluminium cast wishbone.**



Lean-to construction



Paragon AV9 frame



Paragon rebated frame with double midrails



Tab fixed glass with pignose fixings



Roof frame connections



Reading Interchange

**Special Design Service**

Our special projects team will assist specifiers to achieve their preferred style through either an outline brief, a fully detailed manufacturing specification or an open brief.

We are careful to match the standard of specification to the actual performance requirements ensuring that the result is neither over nor under designed.

Our service starts from below ground and works upwards. Having encountered numerous challenging locations, we can offer the best advice on foundation arrangements and ground fixing solutions. In conjunction with consulting structural engineers we can offer calculations for building control approval as an additional service.

Standardisation of components wherever possible allows broad design flexibility while avoiding prohibitively high development costs.

For further information on bespoke designs please contact our Technical Sales Team on 01536 401331



Monopitch roof with gable



Bluewater Transit Centre



Elevated walkway



Cantilever canopy at Twickenham Station



Gable end detail



Pitched roof canopy



Bluewater Transit Centre

**SPECIAL DESIGN SERVICE**

---



Elevated enclosed walkway

Maidstone Hospital



5m span low vault

Meadow School, Dudley



Cantilever walkway with bespoke lighting to the front

Central Bus Station, Heathrow Airport

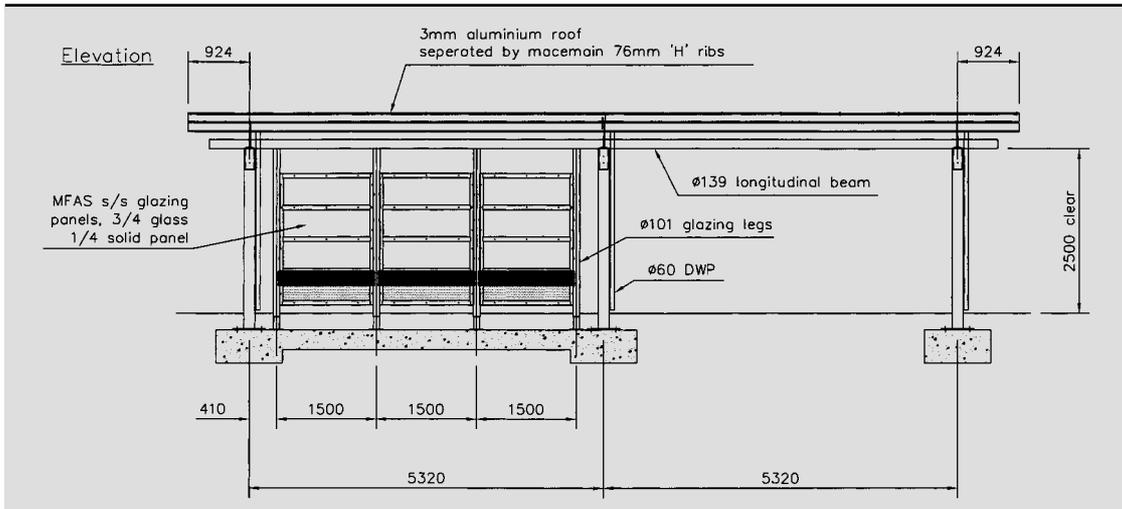
**SPECIAL DESIGN SERVICE**



3D model of conceptual walkway



## SPECIAL DESIGN SERVICE



From concept CAD drawing



To 3D model



To manufacture and installation

## CLIENTS

Macemain + Amstad is trusted by leading specifiers in the public and private sectors.

### Transport

Railtrack Plc  
All 25 Train Operating Companies  
W.M.P.T.E.  
S.W.Y.P.T.E.  
W.Y.P.T.E.  
Strathclyde P.T.E.  
G.M.P.T.E.  
B.A.A.  
Heathrow Airport  
Gatwick Airport  
Manchester Airport

### Architect/Q.S.

B.D.P.  
Benoy  
Chapman Taylor  
Ove Arup  
W S Atkins  
Austin Smith Lord  
Owen Williams  
Aspen

### Local Authority

Cheshire C.C.  
Neath & Port Talbot C.B.C.  
Gwynedd Council  
Isle of Man Government  
Carlisle D.C.  
Harlow D.C.  
Devizes T.C.  
Salisbury B.C.  
Canterbury C.C.  
Kent C.C.  
Stockton-on-Tees B.C.  
Newcastle-under-Lyme B.C.

### General

Sainsburys  
Tesco  
Matalan  
Thames Water  
Waitrose  
Safeway

### Projects Completed

Holyhead Ferry Terminals  
Ivanhoe Line  
Handforth Ticket Office  
Bluewater  
Cribbs Causeway  
Keppel Street  
Redcar Redevelopment  
Midland Tramslink  
Barclaycard  
Middlesborough F.C.  
Nottingham Forest F.C.  
Handforth Shopping Centre  
Ipswich Route 66  
Gatwick Fastway

### Overseas

Hong Kong Jockey Club  
Tse Wan H.K. Phase II  
Lisbon Underground  
French Metro  
Gibraltar Bus Regeneration  
Stuttgart Tramway

**MACEMAIN + AMSTAD**

## ARCHITECTURAL STRUCTURES AND STREET FURNITURE : WALKWAYS + CANOPIES

### FURTHER INFORMATION

For further information please call Macemain + Amstad customer services on 01536 401331. Our technical sales advisers are able to assist with preparation of specification clauses and Bills of Quantity. Further information on all Macemain + Amstad products can be found on our website at [www.macemainamstad.co.uk](http://www.macemainamstad.co.uk)

Macemain + Amstad products may be specified with disabled facilities.

### STANDARD COLOURS

Macemain + Amstad offer eleven standard colours for thermal plastic coating. Other colours are available upon request.



Colours shown are not 100% accurate due to printing restrictions. Finished swatches are available upon request from Customer Services.

\* PPA spray only (not available for thermal plastic coating)

## MACEMAIN + AMSTAD

MACEMAIN + AMSTAD LTD  
BOYLE ROAD  
WILLOWBROOK INDUSTRIAL ESTATE  
CORBY  
NORTHANTS NN17 5XU

Telephone: 01536 401331  
Fax: 01536 401298  
Email: [sales@macemainamstad.com](mailto:sales@macemainamstad.com)  
Web: [www.macemainamstad.com](http://www.macemainamstad.com)

We reserve the right to change the design and specification of any item shown herein although where possible notification will be made. All dimensions shown are in millimetres and are approximate.

### COMPLEMENTARY PRODUCTS + SYSTEMS

#### SHELTERS

DUG-OUTS, TROLLEY BAYS AND KIOSKS  
LITTER BINS, FIRE BINS AND TICKET BINS  
PICNIC UNITS, TABLES AND STOOLS  
CYCLE RACKS AND BOLLARDS  
METAL AND TIMBER SEATING  
INFORMATION BOARDS  
SPECIAL PROJECTS