

Camatic Seating

MATRIX SEATING

SYSTEM SPECIFICATIONS

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CAMATIC
S E A T I N G

MATRIX SEATING SPECIFICATIONS

1. THE SYSTEM:

- Two piece shell with concealed hinges
- Gravity tilt mechanism.
- Tilt Seat mechanisms are safe guarded with no finger or clothing entrapments
- Chairs mounted as individual independent units at uniform centres.
- Corrosion resistant aluminium or galvanised steel mounting uprights.
- Floor (tread) or riser mounted
- Suitable for infinite centre positions from minimum of 470 mm
- Available with or without arm

2. CONFIGURATION / DIMENSIONS

Seat Dimensions:

Seat dimensions meet the following minimum requirements:

Seat Centres - without arm	- 470mm [18.5"]	(Minimum)
Seat Centres - with arm	- 470mm [18.5"]	(Minimum)
Seat Width	- 420mm [16.5"]	(Minimum)
Overall Dimension (seat Up)	- 300mm [12"]	(Maximum)
Overall Dimension (Seat Down)	- 580mm [23"]	(Maximum)
Back Height (above floor)	- 800mm [31.5"]	(Nominal)
Seat Height	- 430mm [17"]	(Nominal)

3. MATERIALS

Plastic Components:

Plastic seat and back components

Seat and Back components are injection moulded co-polymer polypropylene. Plastic formulation is fully compounded with ultra-violet inhibitors prior to the manufacturing process. UV inhibitors are added at a rate to ensure no significant colour or plastic deterioration for a period of 5 years. Minimum wall section thickness is 3.5mm [0.14"].

Hinge Mechanism:

The Hinge / pivot mechanism is injection moulded glass reinforced polyamide black in colour and contains ultra violet inhibitors.

Hinge / pivot mechanism will return the seat to a 3/4 position automatically through a gravity tilt counter-weight system, requiring no adjustment or lubrication for the life of the installation. Counter weight is fully enclosed in rear of seat component. No spring return systems are used. Hinge mechanisms perform to the requirements of ASTM F851-83 (remain operational after 100,000 cycles of operation).

Side Supports:

The side supports are injection moulded glass reinforced polyamide, black in colour and contain ultra violet inhibitors. Available with and without integral arm (for armrest details refer to Accessories)

Backrest Component:

The backrest has a minimum height of 400mm [15.5"] above the seat component, and extends below the seating surface to provide foot protection. The front face (sitting surface) is free of fasteners and textured to minimise slipping, and capable of accepting upholstery pad factory fitted or retro-fitted at a later date. Rear face is free of dirt or water traps, smooth, with minimal texture.

Seat Component:

The seat depth as measured from the 's' point of the backrest is a minimum of 420mm [16.5"]. Seat upper face (sitting surface) is free of fasteners and textured to minimise slipping, and capable of accepting upholstery pad factory fitted or retro-fitted at a later date. Lower face is free of dirt traps, smooth and with minimal texture. The leading edge of the seat includes an angled recessed location for seat number.

4. FIXINGS

Concrete Riser Mounting:

Anchors are to be installed to the Camatic specification, and meet the seat design loads. Std fixings for the respective riser mount configuration as follows:

Cast upright – "High Riser" (greater than 270mm riser height):

High Risers 271-320mm:

3 x M8 [5/16"] mechanically galvanised chemically set studs, minimum 65mm embedment, with mechanically galvanised nut and washer.

High Risers over 320mm:

3 x M8x30mm zinc plated HKD with mechanically galvanised high tensile hex. head bolts.
Option: 3 x M8 x 30mm Stainless Steel HKD with mechanically galvanised high tensile hex. head bolts.

Fabricated Upright – "Low Riser" (minimum of 160mm, up to 270mm):

Low Risers 160-199mm:

3 x M8 [5/16"] mechanically galvanised chemically set studs, minimum 65mm embedment, with mechanically galvanised nut and washer.

Low Risers 200-270mm:

3 x M8x30mm zinc plated HKD with mechanically galvanised high tensile hex. head bolts. Option: 3 x M8 x 30mm Stainless Steel HKD with mechanically galvanised high tensile hex. head bolts.

Concrete Tread Mounting:

Anchors are to be installed to the Camatic specification, and meet the seat design loads. Std fixings are 3 x M8 Zinc Plated with high tensile hex head bolts.

Option:

3 x M8 x 30mm Stainless Steel HKD with mechanically galvanised high tensile hex. head bolts.

Mounting Uprights {Tread / Riser}:

Mounting uprights available to suit tread, low riser (270mm or less) , high riser (over 270mm) and wall mount applications . High riser uprights are high pressure die cast aluminium with natural finish & cater for 3 x M8 anchors. Tread & low riser uprights are fabricated steel with galvanised finish, and cater for a minimum of 3 x M8 {5/16"} anchors

Removable Mounting Brackets:

Mounting brackets can be supplied to convert fixed stadium chair design to one (1), two (2) and three (3) seat removable units. The two (2) & three (3) seat units provide the required stability and portability to be free standing, but are able to be fixed with M10 [3/8"] anchors with hand-wheels, that require no tools to remove and remain attached to bracket when not in use.

5. MATRIX ACCESSORIES – (where chosen and installed)

Arm Rests

Injection moulded glass reinforced polyamide armrests black in colour and containing Ultra Violet inhibitors are available as an option. The armrest is incorporated into the side support moulding and must be specified at time of seat order.

Cup-holders:

Rear-mount Cup-holders are designed specifically for attachment to the chair, by utilising the purpose designed bush on the rear of the backrest. The cup-holder is injection moulded co-polymer polypropylene compounded with ultra-violet inhibitors prior to the manufacturing process. Colour to match that of the seat and backrest.

Seat Pad:

Seat pad is fixed at no less than five (5) positions, one (1) in each corner and an additional centre front fixing point. The pad is constructed of injection moulded polypropylene inner (typical wall thickness 3.5mm) with a 25mm [1"] moulded polyurethane foam cushion. Cover is upholstered in marine grade vinyl:

Backrest Pad:

Back pad is fixed at no less than five (5) positions, one (1) in each corner and an additional in centre at top of back. Pad is constructed of injection moulded polypropylene inner (typical wall thickness 3.5mm) with a 12mm [1/2"] polyurethane foam covering. Cover is upholstered in marine grade vinyl.

Seat Numbers:

Seat numbers snap in to front edge of seat and angle upward, with an option to have a further mechanical fixing if required. The seat number plate is black injection moulded polypropylene with white numbering and provides for up to three (3) digits of nominal 12mm [1/2"] in height.

Row Identification:

Row identification is a photo etched black anodised aluminium disc set into the chair side support at the end of row. The etched numeral height is a nominal 30mm (1.18").

6. PERFORMANCE / STANDARDS / REFERENCES

General:

The completed Matrix chair installation will provide the following minimum performance requirements.

Anchor Bolts:	All concrete fixings are non-corrosive material.
Fasteners:	All fasteners Non corrosive.
Metal Finishes:	All finishes are suitable for outdoor exposure / marine environments.
Plastic Components:	Exterior grade plastics. UV Stable
Seat Pivot:	Seat will raise without assistance, by gravity system. Spring systems not used
Seating Envelope:	Maximum chair envelope is 300mm. To comply with NFPA 101.
FIFA	The Matrix complies with the FIFA recommendations for stadium seating.

Manufacture:

The following manufacturing standards are adhered to:

Available on request

Plastic Ultra Violet Deterioration

Matrix seat and backrest exceed the following test requirements:

Available on request

Flammability:

The Matrix chair and / or materials used in its manufacture comply with the standards listed below:

Available on request

Management Systems:

Camatic seating is accredited through DLCS for the following:

ISO 9001:2008 Quality Management Systems

7. INSTALLATION

General:

Install stadium chairs in locations indicated and fasten securely to substrates according to manufacturer's recommendations and approved submittals. Riser mounting is recommended where riser height is 200mm and above.

Layout and Setting Fixings:

The Layout of chairs and setting of anchor bolts must be completed in such a way to achieve the following:

Available on request

Testing:

Non destructive testing should be carried out to a total of 1% of all anchor bolts. The test load should exceed the design load by 30%, and any failures should be reported to the project manager.

Installation of Seats:

On site installation should occur in the following sequence:

Available on request

Cleaning

General: Removal of bags and final clean by others.

8. WARRANTY

General:

The warranty shall be in addition to and not a limitation of the other rights the Owner may have against the Contractor, installer, or Manufacturer, under the Contract Documents.

Camatic provides a warranty for the replacement of stadium chairs found to be defective in appearance or unusable due to defects in performance, as outlined below

Available on request