

SPECIFICATION
SuiteMax™ Axis™ 40" BC-SC Auditorium Seating

Section 12612: Fixed Audience Seating

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of contract apply to this section.

1.2 SUMMARY

- A. This specification includes the SuiteMax™ Axis™ BC-SC fixed audience seating model with fully upholstered back cushions, fully upholstered seat cushions, 5" flat end and intermediate armrests with the AXIS™ tablet arm including molded black ABS plastic writing surface, aisle panels and gravity counter balanced, non-pinch seat lift mechanisms, all manufactured by Series Seating in the quantity provided on the architectural drawings.
- B. Comply with ADA (Americans with Disabilities Act) rules and regulations by furnishing the required percentage of removable seating and removable aisle panels.

1.3 QUALITY ASSURANCE

- A. All seating designed and manufactured by a certified ISO 9001:2000 manufacturer.
- B. Obtain each type of seating, including accessories and mounting components, from a single manufacturer.
- C. Installer Qualifications: Engage a manufacturer-approved, experienced installer who regularly installs and services fixed audience seating similar in kind, quality, and extent to that indicated for project.
- D. Provide seating that complies with California Technical bulletin 117.
- E. Seating Layout: Design and install seating to conform with project requirements in a manner that produces a seating layout with stanchions spaced laterally in each row so end stanchions are in alignment from first to last row, regardless of whether aisles converge or are of constant width, and with back and seats varied in width so that sight lines are optimized.

1.4 SUBMITTALS

- A. Color keyed shop drawings prepared from Architect's drawings as follows:
 - 1. Color keyed shop drawings for critical dimensions or field dimension verification.
 - 2. Color keyed shop drawings for seating layout, showing chair widths, aisle dimensions, cross section showing floor and/or riser dimensions and elevation of product showing back-to-back row dimensions.
 - 3. Product dimension drawings.

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- B. Product data and electrical requirements for aisle lights
- C. Accessory data for approval
- D. Properly labeled samples for approval purposes in the form of samples of architects selected materials / finishes including:
 - 1. Paint: To be selected from standard colors
 - 2. Fabric: To be selected from standard fabric options and colors
 - 3. Laminate: To be selected from standard options and colors
 - 4. Polyurethane: To be standard black color
- E. Provide one fixed seat Mock-up incorporating final finish and accessory selections.

1.5 DELIVERY, STORAGE AND HANDLING

- A. Deliver product in manufacturer's cartons clearly labeled with manufacturer's name and contents.
- B. Packing list showing part description, number of boxes, quantity of parts per box, and total gross weight per box.
- C. Shipment received and unloaded by manufacturer's approved installers.
- D. Store seating in dry location protected from damage and soiling under environmental conditions acceptable to manufacturer.
- E. Seating shall be handled in a manner that shall prevent damage.

1.6 PROJECT SITE CONDITONS

Indoor Environmental Conditions: Do not install seating until space is enclosed and weatherproof, wet-work in space is complete and nominally dry, installation of finishes including painting is complete, and ceilings are complete. Do not install seating until ambient temperature and humidity conditions are continuously maintained at values near those indicated for final occupancy. Both electrical power and sufficient lighting shall be in place prior to start of installation.

Outdoor Environmental Conditions: Installation of product should not commence until construction, painting and other trades work is complete. Both electrical power and sufficient lighting shall be in place prior to start of installation.

1.7 EXTRA MATERIAL – PARTS STOCK

- A. Deliver parts stock to owner. Furnish parts stock from same production run as the products installed, packaged for storage in identified cartons with labels clearly describing the contents of each.

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- B. Parts stock, furnish a percentage in each size of the total chairs installed.
1. Complete Seat Component (total of X%)
 2. Complete Back Component (total of X%)
 3. Complete Intermediate support with armrest and Axis™ Tablet (total of X%)
 4. Complete Aisle Panel with armrest and Axis™ Tablet (right, X%)
 5. Complete Aisle Panel with armrest (total of X%, X% left, X% ADA Transfer)
 6. Additional Fabric sent to customer (X yards)
 7. Additional Fabric as sewn back and seat covers (X sets of back and seat covers)
 8. Additional Light Fixtures (total of X%)

1.8 WARRANTY

- A. Provide the original purchaser with a 10-year warranty for the audience seating products.
- B. Failure to provide a 10-year warranty shall be cause for disqualification.

PART 2 - PRODUCTS

2.1 MANUFACTURER

- A. Seating is based on the **SuiteMax™ Axis™ 40" BC-SC** model manufactured by **SERIES® SEATING** specifically for preferred distribution partner DreamSeat. All customer inquiries must be through DreamSeat at the following address and phone number. Dreamseat 150 Motor Parkway Suite #204, Hauppauge, NY 11788, phone: 631-656-1066.
- B. Substitutions: Other brands submitted for approval shall be given consideration provided that the bidder submits the following to the architect no less than 10 working days prior to bid date:
1. A full chair sample including an intermediate stanchion and an end stanchion.
 2. A complete list of specifications and an itemized summary of discrepancies between the proposed substitution and the product specified.
 3. Qualification data, manufacturer must be able to demonstrate capabilities and experience by providing a list of completed projects with project name, addresses, names of Architects and Owners if requested.
- C. Patents and Copyrights: Manufacturer shall defend, indemnify and save harmless the Architect, Contractor and Owner from and against any claim, cost, expense or liability (including attorneys' fees) arising out of or resulting from infringement or alleged infringement of any patent rights or copyrights in connection with the product, except to the extent that Owner may have assumed responsibility therefore under the Contract Documents. Manufacturer shall pay all royalties, license fees and similar charges for patented or copyrighted material used in or incorporated in the Work.

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2.2 MATERIALS

- A. Steel Tubing 2.36" x 2.36" - 12-gauge steel conforming to AISI/SAE1008/1010/1015, ASTM A500.
- B. High Resiliency Polyurethane Molded Surrounded Foam Padding: Shall conform to the standards of California Technical Bulletin 117.
- C. Fabric: Selected from manufacturer's standard offerings and colors
- D. Pivot Mechanism Injection Molded Plastic: nylon reinforced with fiberglass
- E. High Pressure Laminate: Selected from manufacturer's standard offerings and colors

2.3 FABRICATION, GENERAL (Fixed Audience Seating)

- A. Fabricate fixed audience seating through careful ergonomic engineering to maximize comfort, using materials that are carefully selected to be free of defects, objectionable projections, or irregularities. Smooth round corners and edges to present the least possible snagging and pinching hazard, using floor mount stanchions which have been manufactured to conform to the slope of the floor while maintaining the seat and back in the same angular relationship to stanchions throughout, or riser mount stanchions which have been manufactured to conform with the riser height while maintaining the same angular relationship to stanchions throughout. All floor and riser mount stanchions shall be manufactured in such a way that any riser mount stanchion can be replaced with a floor mount stanchion without affecting the alignment of the seat within the row.
- B. All upholstery shall be first quality, without creases, stretch lines, or wrinkles. All welds shall be made at the factory by welders that are certified on the equipment and its processes. All structural connections shall be made with S.A.E. stress rated zinc plated or black oxide bolts, washers and nuts.
- C. Chairs shall be made using the SuiteMax™ Axis™ accordion system, with widths ranging in center-to-center chair sizes of 24" to 28". The model consists of a drop-in upholstered back, a drop-in self-lifting upholstered seat which automatically returns to such a position so that the underside of seat is in alignment with the front of the aisle panel and the top of the seat in the folded position harmonizes well with the top of the armrest. **Seats that protrude above the height of the armrest and in front of the aisle panel while seat is in the upright position shall not be accepted.**
 - 1. Chairs shall return to the full upright position by means of a totally enclosed, non-pinching, gravity counter balanced weight system, without the use of springs. **Spring activated seats or seats that bolt in place will not be accepted. Mechanisms with pinching points will not be accepted.**
- D. The **Closed Depth** Envelope of the chair is the dimension measured from the outermost edge of the rear of the back to the outermost edge of the front of the armrest on chairs with arms, and to outermost surface of the seat for chairs without arms, in the closed position. The closed depth shall not exceed 20 9/16".

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2.4 FABRICATION, DETAILS

A. SuiteMax™ Axis™ - Back:

1. **BC – Back fully upholstered cover** – All back surfaces shall be fully upholstered. The back inner structure shall consist of structural tubular steel pipe frame. That entire unit is encapsulated in patented Surround Foam™ creating one integral unit. **Molded plastic backs will not be accepted.**
2. **Back Foam** – patented Surround Foam™ consists of contour-molded, high-density, open cell, cold cured foam fully surrounding the back structure to help create clean upholstery. This molded foam cushioning in back shall be 2.8 pounds per cubic foot, in a contoured shape of nominally 2.5" thick at the top of the back and nominally 5" at thickest lumbar portion. **Back foam that is not contour-molded, high-density, open cell, cold cured foam, or with a density of less than 2.8 pcf will not be accepted.**
3. **Back Fastening** – Back shall be fastened with drop-in assembly and two machine screws. There shall be no visible fasteners for attaching the back seen from above. **Backs with wings, backs with more than two fasteners, or backs with visible fasteners will not be accepted.**
4. **Back Performance Testing** - Chairs shall be certified to withstand swing impacts to back of chair with 40lbs. from 6", 8", 10" and 12", 25,000 times each at a rate of 20 cycles per minute for a total of 100,000 impacts without failure.

B. SuiteMax™ Axis™ - Seat:

1. **SC – Seat fully upholstered Cover** – All seat surfaces shall be fully upholstered and closed at the bottom with a zippered fastener for ease of re-upholstery. The seat inner structure shall consist of a structural tubular steel pipe frame that receives furniture grade flexible mesh affixed across the entire frame. That entire unit is encapsulated in patented Surround Foam™ creating one integral unit. **Molded plastic or steel seat pans, seats with hollow chambers and/or seats without zippered fasteners will not be accepted.**
2. **Seat Foam** – patented Surround Foam™ consists of contour-molded, high-density, open cell, cold cured foam fully surrounding the seat structure to help create clean upholstery. This molded foam cushioning for the seat shall be 3.4 pounds per cubic foot, in a contoured shape of nominally 5" thick. **Seat foam that is not contour-molded, high-density, open cell, cold cured foam, or a density less than 3.4 pounds per cubic ft. will not be accepted.**
3. **Seat Lift Mechanism:** Seat shall consist of a drop-in gravity actuated seat lift mechanism. The seat hinge shall consist of a steel counterweight in the seat and an axle that provides a pivot point for the seat's self-rising motion. The axle drops into a completely contained lock hinge mechanism located on the supports with no pinching points. This is accomplished without the use of springs. The position of the axle and the weight in the seat provides a gravity counter balanced weight system that will not require periodic adjustment or lubrication. The system allows the seat to rise in an extremely quiet motion and rest at a

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full-fold / perpendicular position or slightly less than perpendicular position / ¾ position. **Compensating and/or spring activated hinges and/or hinges that bolt in place will not be accepted.**

4. **Seat Performance Testing** - Seats shall be certified to withstand 300,000 lifting cycles, 600 lbs. static load for one hour and vertical drop impact with 40 lbs. from 6" 8" 10" and 12", 25,000 times each at a rate of 18 cycles per minute for a total of 100,000 impacts without failure. Seats to be able to support 600 lbs. of weight, on the front edge of the seat and 1700 lbs. of weight, through the middle of the seat.

- C. **SuiteMax™ Axis™ Armrests:** Armrests shall be flat in shape and 5" wide. All edges shall be eased for comfort and will house the Axis tablet arm. All edges Armrests shall be certified to withstand a horizontal load of 200lb and a vertical load of 300lb without failure.

- D. **Intermediate Stanchions:** Intermediate metal stanchion frames shall be 9-gauge, cold rolled, de-scaled, and welded structural steel tubing with a 1/4" plate, continuously MiG-welded to the tubing for mounting the hinge mechanism and a 1/4" plate, continuously MiG welded foot plate making one integral freestanding structure upon which the seat is installed. The floor mounting plate provides four holes, two selected diagonally for initial concrete installation. Chairs shall be floor mounted, riser mounted, or track mounted and conform to either a level or sloped floor.

- E. **AXIS™ Tablet Arm:** All seats shall be equipped with the AXIS™ tablet arm with molded black ABS plastic writing surface, as large as possible while still meeting row to row spacing clearances. All dual-handed tablet arms shall be rigid and stable while in use and originate from the right-hand side. The anti-panic operation shall allow the user to stand in emergency and automatically store the tablet arm. The tablet shall be tested to support at least 150lbs. of static weight on the far leading edge without failure and shall be tested to provide 100,000 cycles of anti-panic operation.

- F. **Finishes:**
 1. **Metal components:** Shall be finished with electrostatic epoxy-polyester oven baked powder coating in a semi luster textured finish, and colors selected from standard options
 2. **Fabric:** Selected from standard options and colors
 3. **Integral Skin Polyurethane:** To be standard black color

2.5.1 SuiteMax™ Axis™ Options:

1. **Chair widths:** Chair widths to range for 24" to 28" center arm to center arm measurement using patented accordion system.
2. **Back Heights:** There are three different back height options. Standard 40" back height, and optional 44" and 46" back heights using integrated headrest to achieve the extra heights
3. **Back Widths:** Back widths to be 18.5" and 20.5".
4. **Seat Widths:** Seat widths to be 17.5" and 19.5".

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5. **Supports:** Floor supports for flat and sloped floors; Riser supports for riser heights between 6" to 24" and Tracking mounting using Track Mounting System. Track mounting system must be able to mount to riser faces 5" or higher.
6. **End Panels:** Engineered wood panel – 18 ply 2" substructure covered in upholstery or high-pressure laminate.
7. **Rocker Mechanism**
8. **Hot dipped galvanized coating:** Used with outdoor paint to prevent rust on steel components.

G. **Non-Aisle Ends:** Row ends not at a visible aisle shall have no aisle panel.

2.5.1 ACCESSORIES:

1. **Aisles Lights:** LED 12 or 24 volts – soft warm white 2700-3000K, natural white 3600-4100K or cool white daylight 5000-6500K.
2. **Aisle Letter Signage:** To Be Selected from Manufacturer's standard offering.
3. **Seat Number Signage:** To Be Selected from Manufacturer's standard offering.
4. **Designated Aisle Seats:** Transfer panels allowing unhindered, sideways access into the chair shall be located as shown on architectural drawings. Signage shall be provided to designate and identify these locations. Signage finishes shall match aisle letter selection.
5. **Slip on Back Cover with Embroidered Logo**
6. **Power System:** Four wire two circuit UL listed manufacturer wiring system. Capacity to be 20 amps per circuit (Circuit 1 and 2 only), maximum 13- duplex or USB receptacles per circuit, and 26- 15-amp duplex or USB receptacles maximum per power infeed.
7. **XZipit removable logo System:** Patented Embroidered interchangeable logo system with zip on logo panels by DreamSeat.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine conditions, with installer present, for compliance with requirements for construction tolerance, material properties as they affect anchors and fasteners and location of junction boxes.
- B. Do not proceed with installation until unsatisfactory conditions have been corrected.

3.2 INSTALLATION

- A. General: Comply with seating manufacturer's printed installation instructions applicable to products and applications indicated.
- B. Locate seating in locations indicated on approved shop drawing with required clearances, elevation, and sight lines.
- C. Install stanchions in locations conforming to seating layout, with each end and intermediate stanchions attached to substrate by no less than 2 anchoring devices of size and type required to produce chairs free from rocking or instability under conditions of actual use.

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- D. Install backs to stanchions using hardware provided by manufacturer and install seat in lock socket mechanism located on stanchion. Ensure that chairs in curved row are installed at the proper radius and verify that moving components operate smoothly and quietly.

3.3 ADJUSTING

- A. Adjust as required to assure that seats in each row are aligned when in upright position.
- B. Touch-up minor abrasions and imperfections in painted finishes with coating which matches factory-applied finish.
- C. Replace any upholstery which has been damaged in installation.