

Lyric D4 Specifications – Theatre Seating

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PART 1 – GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions, apply to this section

1.2 SUMMARY

- A. This section includes the following:
 - 1. Common standard floor mounted chairs as detailed in Part 2 of these specifications.

1.3 SUBMITTALS

- A. Product data for each type of product specified. Include installation methods.
- B. Shop drawings, prepared for architectural drawings and from field dimensions, showing the seating layout, seat numbering sequence, chair sizes, and aisle widths. Also show a section view with profile dimensions of the seating and back-to-back dimensions.
- C. Samples for initial selection purposes in the form of manufacturer's color charts or samples of materials showing the full range of standard colors, finishes, and patterns.
 - 1. Fabric
 - 2. Metal Finishes
 - 3. Wood Finishes
 - 4. Plastic Finishes
- D. Statement signed by the theater seating manufacturer confirming that the products submitted complies with the specified requirements.

1.4 QUALITY ASSURANCE

- A. Provide installer's qualifications confirming the installer is qualified to install the manufacturer's chairs
- B. Provide seating that complies with California Technical Bulletin 117.
- C. Obtain each type of seating, including accessories and mounting components, from a single manufacturer.
- D. Design and install seating with end standards aligning from first to last row and with backs and seats varied in width to optimize sightlines. Comply with ADA rules and regulations.

1.5 PROJECT CONDITIONS

- A. Environmental Conditions: Do not install seating until space is enclosed and weatherproof, wet work in space is complete and 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 final occupancy values.

1.6 DELIVERY, STORAGE, AND HANDLING

- A. Deliver seating in manufacturer's unopened cartons clearly labeled with manufacturer's name and contents.
- B. Handle seating in a manner to prevent damage.

1.7 EXTRA MATERIALS

- A. Furnish from the same production run as the materials installed. Package materials with protective covering and identify with labels describing contents.
 - 1. Seat and back covers to be furnished in a quantity equal to 5 percent of the amount of chairs installed.

PART 2 – PRODUCTS

2.1 SEATING

- A. Provide from Theatre Solutions, Inc., 121 Park Avenue, Quakertown, PA 18951, the **Lyric "D4"** model as follows:
 - 1. Basic floor mounted chair

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2. Inner upholstered seat and back
 3. Outer injection-molded plastic back cover
 4. Outer injection-molded plastic seat cover
 5. Blow-molded plastic armrests
 6. Aisle lights where indicated on the drawings
 7. End panels where indicated on the drawings
- B. Model noted is based on the Theatre Solutions, Inc. Lyric “D4” model with the intent of establishing the high level of quality required for the project. Other brands submitted for approval will be given consideration provided that a full seating mock-up, along with a complete list of specification discrepancies between the proposed substitution and the product specified is received at least 10 working days prior to the bid date.
1. By offering a quote for this project, the bidder assumes full responsibility for complying with the specifications for this project and shall be totally responsible for any expenses incurred if the product quoted does not comply with the specifications.
- C. Failure to comply with the warranty described in Part 4 of these specifications will be cause for disqualification.

2.2 MATERIALS

- A. Padding material shall be high resiliency polyurethane foam which conforms to the standards of the California Bureau of Home Furnishings 117-75. The back shall be 1 1/4” thick. The seat shall be 1 3/4” thick.
- B. Seating fabric shall be _____ with the color to be selected from the standard choice of colors. All upholstery shall be first quality without creases, stretch lines, or wrinkles.
- C. The arms shall be blow-molded of high-density polyethylene.

2.3 FABRICATION, GENERAL

- A. Fabricate the theater seating in contoured form for maximum comfort using materials that are carefully selected to be free from defects, objectionable projections, or irregularities. Insure smooth round corners and edges to present the least possible snagging and pinching hazards.

2.4 MOUNTING

- A. Fabricate seating units for floor attachment, using standards that have been manufactured to conform to the slope of the floor while maintaining seat and back in same angular relationship to standards throughout.

2.5 METAL STANDARDS

- A. Frame shall be 3/4” x 2” x 16 gauge cold-rolled welded steel tubing; 1/4” x 3 1/2” hot-rolled steel plate, 1/4” x 2 1/8” hot-rolled steel plate and 11 gauge formed steel brackets welded into one integral freestanding structure upon which the seat, back, and arms are assembled. Pivot and stop pins shall be machined from cold-finished steel to tolerances of +0.000 -0.005. Floor mount plate shall be .100” thick hot-rolled pickled-in-oil steel formed and embossed for 1/4” mounting anchors. A molded plastic cap shall be fitted into the embossed mounting area to conceal the anchoring hardware. Exposed floor anchoring hardware will not be acceptable.

2.6 UPHOLSTERED CHAIRS

- A. General: Fabricate theater seating with padding, fabric covering and injection-molded seat and back covers. Equip each seat with a gravity self-rising mechanism so that unoccupied seats return to an upright position perpendicular to the base line of floor of auditorium. Spring compensating mechanism will not be acceptable. Chair profile with the seat in the upright position and without a tablet arm, cannot exceed 18”.
- B. Seat Construction: Seat construction is comprised of an injection-molded polypropylene cover fastened securely to an inner upholstered structural steel frame assembly. The outer seat cover shall have a textured exterior surface and internal molded reinforcing ribs for a solid warp-free construction. The inner seat frame assembly shall consist of a 7/8” dia. X 16 gauge steel tube formed with a waterfall front edge and welded into a rigid assembly with (2) 11 gauge X 1” steel brackets and (1) 1/4” diameter steel rod. The seat frame shall be fitted with a cast iron counterweight to insure automatic self-rising without the aid of springs. A series of (7) 2” wide elastic suspension straps shall be stretched and woven in place and fastened to the steel seat frame with 1/8” dia. steel hooks. Arch-spring and/or S-spring construction will not be acceptable. A layer of 1 3/4” thick molded polyurethane foam shall be applied over the elastic webbing.

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Foam shall be fire retardant and conform to the California Bureau of Home Furnishings Technical Bulletin 117. The upholstery cover shall be sewn and fitted to the seat assembly with collapsible assembly rings and nylon tension cord.

The outer injection-molded seat cover and upholstered inner seat assembly shall be joined together with cast aluminum mounting brackets. Seat widths of 19" and 21" shall be fitted with narrow style mounting brackets. Seat widths of 20" and 22" shall be fitted with width-extending mounting brackets. The complete seat assembly shall be assembled to the seat hinges using (2) special purpose M10 Hinge Bolts and (2) special purpose M10 Hinge Pins which are specifically designed to accommodate installation tolerances.

- C. Back Construction: Back construction is comprised of an injection-molded polypropylene cover fastened securely to an inner upholstered structural steel frame assembly. The outer back cover shall have a textured exterior surface and internal molded reinforcing ribs for a solid warp-free construction. The inner back frame assembly shall consist of a 7/8" dia. X 16 gauge steel tube formed into an ergonomically derived radius and welded into a rigid assembly with (2) 11 gauge X 1" steel brackets and (3) 1/4" diameter steel rods. A series of (5) 2" wide elastic suspension straps shall be stretched and woven in place and fastened to the steel seat frame with 1/8" dia. steel hooks. Arch-spring and/or S-spring construction will not be acceptable. A layer of 1 1/4" thick molded polyurethane foam shall be applied over the elastic webbing. Foam shall be fire retardant and conform to the California Bureau of Home Furnishings Technical Bulletin 117. The upholstery cover shall be sewn and fitted to the seat assembly with collapsible assembly rings and nylon tension cord.

The outer injection-molded back cover and upholstered inner back assembly shall be joined together with cast aluminum mounting brackets. Back widths of 19" and 21" shall be fitted with 3/8" thick mounting brackets. Back widths of 20" and 22" shall be fitted with 7/8" thick mounting brackets. The complete back assembly shall be supported by two 13 gauge formed steel brackets and two 3/8-16 hex head bolts and shall be attached to the frame with (2) 1/4-20 machine screws.

- D. Armrests: Shall be blow-molded high density polyethylene and curved to match the leg mounting plate. The armrest will be fastened to the steel frame arm support with three #8 sheet metal screws.
- E. Hinge: Shall be injection-molded of DuPont™ Zytel® 801 nylon. The hinge shall be molded with provisions to provide positive stop locations for the seat in both occupied and unoccupied positions. The hinge shall be fitted with a plastic cover to eliminate all pinch points and shall include (2) 7/16" thick urethane rubber pads to dampen noise upon the seat stop in both the vertical and horizontal positions.

Note: Dupont™ and Zytel® are registered trademarks of E.I. du Pont de Nemours and Co. or its affiliates

PART 3 – OPTIONS

3.1 VENEER END PANEL

- A. Provide manufacturer's standard end panel at the end of the row. The configuration of the panel shall follow the angle of the frame and back at the rear, and shall be vertical at the front edge. The panel shall be constructed of 3/4" thick plywood with veneer on both sides and 1/8" thick solid wood on the vertical edges. The end panel shall be stained to match the outer wood seat, back, and armrests.

3.2 POWDER-COATED END PANEL

- A. Provide manufacturer's standard end panel at the end of the row. The configuration of the panel shall follow the angle of the frame and back at the rear, and shall be vertical at the front edge. The panel shall be constructed of 3/4" thick medium density fiberboard with a durable powder-coated black finish.

3.3 AISLE LIGHT

- A. Aisle lights shall be provided in accordance to the locations shown on the architectural drawings. The units shall be of low voltage (24v) type and the light tube shall fit into a recessed area on the underside of the armrest. The chair frame shall be prepared to accept the power wire. The necessary access holes and blank cover plates shall be provided. The chair manufacturer shall also provide the necessary transformers. All wiring and electrical connections shall be conducted at the job site and shall be the responsibility of others.

3.4 SEAT IDENTIFICATION TAGS

- A. Provide manufacturer's standard shape polycarbonate number plates. Font shall be Times Roman. The number plates shall fit into a recessed area at the top edge of the seat and shall be adhered with high-strength pressure-sensitive tape.

3.5 ROW IDENTIFICATION AND DONOR TAGS

- A. Provide manufacturer's standard shape polycarbonate letter plates. Font shall be Times Roman.

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3.6 REMOVABLE CHAIR

- A. Provide the manufacturer's standard one, two or three chair Removable units which shall include an integrated steel sled-base that is engineered to conform to the row radii and includes two through holes per chair for floor mounting.

3.7 FREESTANDING REMOVABLE CHAIR

- A. Provide manufacturer's standard freestanding removable chair which shall include an integrated steel sled-base that is engineered to conform to the row radii and includes extended length floor plates to allow the chairs to remain stable with no physical attachment to the floor.

3.8 BOOKRACK

- A. The bookrack shall be constructed of hardwoods and hardwood plywood. Bookrack shall be assembled with tongue and groove construction and finished with a catalyzed lacquer. The bookrack shall be attached to the outer surface of the chair back. An optional attachment configuration shall consist of a steel weldment attached to the chair leg. This configuration allows the bookrack to be located between chair backs.

3.9 FLAT WOOD ARMREST

- A. Shall be kiln-dried solid hardwood, nominally 1" thick x 2-1/2" wide x 12" long, stained to match the outer back panel. The armrest will be fastened to the steel frame arm support with one 10-24 x 7/8" flat head machine screw and one 10-24 x 2-1/4" flat head machine screw into threaded inserts on the underside of the armrest.

3.10 CURVED WOOD ARMREST

- A. Shall be kiln-dried solid hardwood, nominally 1 1/8" thick x 2 1/4" wide x 12 3/4" long, stained to match the outer back panel. The armrest will be fastened to the steel frame arm support with three #8 x 5/8" pan head sheet metal screws.

PART 4 – WARRANTY

4.1 The theater seating manufacturer must provide a Lifetime Warranty to the original purchaser of the seating as follows:

- A. The seating manufacturer shall warrant its products against failures and manufacturing defects for the life of the product. This warranty applies to the original purchaser and is non-transferable. The seating manufacturer will provide parts and labor to replace defective parts for the first two years after the installation. Thereafter, the manufacturer will provide replacement parts for the life of the product.
- B. This warranty shall not cover damage from abuse, misuse, neglect, or act of God. Damage caused by modifications to the product by anyone other than a TSI authorized seating installation technician will void this warranty. This warranty does not apply to fabrics or products not installed by TSI authorized seating installation technicians.

PART 5 - EXECUTION

5.1 EXAMINATION

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

5.2 GENERAL

- A. Comply with seating manufacturer's printed installation instructions applicable to products.
- B. Locate seating in locations indicated on approved shop drawings, with required clearances.
- C. Install standards in locations conforming to seating layout, with each standard attached to substrate by no less than two anchoring devices of size and type required to insure that chairs are stable under conditions of actual use.
- D. Install chairs using manufacturer's recommended hardware and fasteners. Insure that chairs in curved rows are installed on proper radius and are oriented toward the center point of the radius. Verify that moving components operate smoothly and quietly.

5.3 ADJUSTING

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

END OF SPECIFICATION