

## AUDITORIUM CHAIR WORKS

**Providing supplying and fixing of approved quality / make executive theatre chair with handle and self tip up mechanism seat and back frames shall be made out of ERW tube fabric shall be of approved quality make and shade. Arm rest without cup holder in graded plastic, seating arrangement numbering shall be clearly visible and of approved make. All structural connections, tapestry cushion etc. shall be as per Architects details and shall be as instructed by the Engineer - in - charge or his authorized agent / consultant.**

LEISURE model Self tilt up chair, roller / ball bearing type cushion, Injection molding PPCP shell, ERW tube / IS : 3074 1976 Grade I with noise free zigzag spring, High tensile head cap screws, approved quality and make of fabric tapestry, fire retardant FMV SS - 302 tapestry / California technical bulletin scotch guard treated fabric, 3 mm th. PU foam flame lamination, high density CFC free PU foam having density 50 + 5 KG / M3 JIS K 6401. High tensile grade steel bolts and nuts, flat / spring / both type of expansion bolts.

Exclusive theater chair with self tip-up cushion having roller & ball cage arrangement (roller/ball bearing type) for sliding mechanism, centre distance 21" / 22" (armrest to armrest) as specified by consultant, PP injection molding molded housing for seat & backrest. The cushion plastic housing should have acoustical perforation, back housing shall consist of one piece injection molding PPCP shell. Seat & back frames shall be made out of ERW tube/is: 3074 1976 grade 1, with noise free zigzag spring fitted with high tensile head cap screws. All sheet metal parts powder coated. Fabric shall be of approved quality/make/& shade of below specification. Flat jacquard woven with air texurised yarn and shelf woven design as/approved tapestry shall be fire retardant as perfmvss-302 or with California technical bulletin 117.scotch guard treated fabric shall be fitted with underlay of 3mm thk. PU foam flame lamination, supported with knitted back fabric for wrinkle free look, and also for better look with durability of fabric.

Cushion, backrest are molded with contoured, high density cfc free PU foam with inherently fire retardant properties. PU foam density shall be 50 + 5 kg/m<sup>3</sup> / J1S K 6401. Arm rest without cup holder, seating numbering shall be clearly visible from to passerby patrons from reasonable distance. Row numbers displaying seat no. in sequence should be made of high quality aluminum sheets in blank cutout without burrs & anodized in gold/silver.

All structural connection/assemblies shall be made with high tensile grade steel bolts, and nuts & provided with flat or spring or both type of washers of relevant is norms, seats pedestals shall be fitted with approved. Expansion bolts set in holes drilled to a depth minimum 40 mm in concrete, mechanism flat spring confirming to-is: 4454 1981 grade 2 and should be used & tested for 5,00,000 cycles. Basic rate of tapestry shall be rs,25Q/mtr.etc. Completed as/architects details & instruction Completed & fixed on site after approval of chair samples by consultants, & instructions and details. Completed & fixed on site after approval of all materials & workmanship by consultants, instructions and details.

The rate shall include the cost of all materials and labours involved in all the operation as described above. Rate shall be for a unit of one No.

## **SECTION 1: GENERAL SPECIFICATIONS**

- 1.1 SCOPE OF WORK: Deliver and install specified floor mounted auditorium chairs with center and aisle standards, upholstered back and seat, armrests, decorative end panels, with seat lifting to a full  $\frac{3}{4}$  upright uniform position when not occupied. Provide wheelchair spaces provided in compliance with ADA requirements.
- 1.2 ACCEPTANCE AND STUDY OF WORK ON SITE: A seating layout plan of the site is required. Defects in the floor which may influence the satisfactory completion and performance of the seating work will be corrected prior to the beginning of seating work. Seating shall not be installed until space is enclosed and weatherproofed.
- 1.3 FIELD MEASURE TO VERIFY: Take field measurements to verify finished dimensions and make necessary adjustments to shop drawings to reflect the actual field conditions.
- 1.4 SEATING LAYOUT: The complete seating plan developed from the contract drawings shall show the location of all chairs, sizes, wheelchair locations, aisle locations and alignment, and installation details. Assume complete responsibility for accuracy of all chair measurements shown on the seating plan.
- 1.5 QUALITY REQUESTS: Fully operational for strength, comfort and design, ergonomically confluent back seat contour for proper posture alignment.

### **BASE SPECIFICATION:**

**SPECIFIED**  
Preferred Seating

**FIXED CHAIR**  
Ultima Auditorium Chair

### **1.6 APPROVALS**

Any manufacturer that has prior approval must meet the specifications as written, no deviations.

### **1.7 BIDDERS RESPONSIBILITIES:** The bidder shall provide the following with his bid:

Minimal requirement:

- a. A complete set of descriptive literature showing the model of chair proposed, including dimensional details.
- b. A complete set of specifications.
- c. Complete seating layout.

### **1.8 DELIVERY:**

Deliver the seating at jobsite for timely installation with the other trades in the building.

### 1.9 WORKMANSHIP AND MATERIALS:

- a. All new materials of colors and designs as specified.
- b. Sign off completed work to the owner in undamaged condition.
- c. Provide highest quality to the owners of workmanship in skilled labor and materials to complete job.

### 2.0 WARRANTY:

- a. Preferred Seating warrants the Ultima Seat for a period of five years from the date of shipment against manufacturing defects at the time of completion and signoff of job.
- b. Replacements or repairs of the Ultima Seat due to defects in manufacturing or materials are fully covered in this warranty. Normal deterioration of products due to weather, wear and tear, or other causes that do not affect functional use are not covered by Preferred Seating. Improper installation, assemblage, accidental incidents, abuse and vandalism are not covered in this warranty.
- c. All warrantee problems must be arranged through Preferred Seating and have a warrantee authorization number before Preferred Seating sends a crew out to replace/repair any problem that may occur.

## **SECTION 2: MATERIAL SPECIFICATIONS**

### 2.1 PLASTIC COMPONENTS:

- a. High density injection molded plastic shall be one-piece, high impact, linear polypropylene with built-in ultra-violet light inhibitors to retard fading, and anti-static compounds to retard dirt attraction.
- b. Plastic shall have a maximum burn rate of 1" per minute when tested in accordance with ASTM D635, or Department of Transportation Motor Vehicle Safety Standard No. 302.
- c. The component materials for this chair meet the requirements specified in this table: Plastic has impact resistant automotive grade application.

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|-------------------------|--------------------------------------------------------------------------------------------------------------------|
| 1. Tensile Strength:    | 4600 psi on no break polypropylene inner panels and wings. 11,500 psi on protective hinge casing                   |
| 2. Flexural Strength:   | no break IZOD factor of 15 on no break polypropylene inner panels and wings. 15,000 psi on protective hinge casing |
| 3. Melting Temperature: | 320 degrees F on no break polypropylene inner panels and wings. 550 degrees F on protective hinge casing           |
| 4. Flammability Rating: | No flash point, no combustion                                                                                      |

- d. Color as selected by the Architect

### 2.2 HARDWARE:

All hardware used for assembling the seat will be rust resistant and stainless steel.

### 2.3 PADDING MATERIAL:

a. BASF chemical company tested resin-585 grams, 255 isocyanate foam which meets the flammability requirements of California Bulletin #117 with Federal Test Method Standard 191, Method 5903.2. Molded resilient polyurethane foam padding material. Foam is flame retardant in accordance.

2.4 METALS: 14 gauge steel and or cast iron.

2.5 WOOD: Exposed or concealed plywood shall be hardwood. All plywood shall be hot press laminated, using high frequency process. Exposed exterior will be Class 1. Interior plies will be Class 3 or better. Solid hardwood shall be clear and be selected as to color. Particleboard core shall be 55-pound density.

### 2.6 FINISH:

- a. Plastic Parts: Color of plastic shall be selected from manufacturer's standard color range. Custom colors available.
- b. Wood Materials: All surfaces that are exposed will be color stained and coated with lacquer of sufficient film depth to afford wear resistance of institutional quality.

## **SECTION 3: CONSTRUCTION**

### 3.1 UPHOLSTERED CHAIR BACKS:

The back is upholstered with an inner panel of no break polypropylene with padding and an injection molded plastic outer panel. The inner upholstered panel is contoured to fit the shape of the decorative rear panel.

The rear of the back is totally enclosed with an injection molded, high resistant, high impact injection molded polypropylene textured plastic shell with multiple curves that ergonomically supports the lumbar region of the back. The back panel is 29" in length with an overall back height of 36". 36" is the necessary height to give support to the shoulders. The back goes 4" below the back of seat cushion to protect the pad from any rear damage. The textured grain reduces denting and is damage and scratch resistant.

The upholstered inner back panel consists of no break polypropylene plastic with compound curves for body support, a polyurethane pad 2" thick and covered with the specified fabric. The molded pad is securely attached to the inner no break polypropylene panel with glue and two decorative tie-back tufts.

The back is available in 21" (533mm) and 22" (559mm) widths center armrest to center armrest.

### 3.2 UPHOLSTERED SELF-LIFTING SEAT:

- a. Gravity assisted system with lifting seat hinge. The seat self lifts automatically to the  $\frac{3}{4}$  - fold position, 100% if preferred, when unoccupied and rotates on

two 5/16ths" high strength steel hinge rods. The seat shall be a torsion spring gravity assisted operation utilizing a 2 heavy teflon coated 8 gauge torsion spring system for quiet operation. Our outer enclosed automotive grade no break super tough nylon protective casing never wears out. The seat is available in 21" (533mm) and 22" (559mm) widths, center armrest to center armrest. Seat will pass a 800 pound static test load at edge of seat. Seat is formed to fit the contour of the body when in the sitting position. The multiple curves give the spectator long time support. The waterfall at the front of the cushion reduces pressure points. The seat bottom and seat-lifting mechanism is totally enclosed by an injection molded polypropylene plastic seat pan. The seat pan is designed to complement the contour of the back with matching colors and texture.

b. The seat shall also be certified to pass seat cycle oscillation testing, ASTM Designation F851-87 Test Method for Self-Rising Seat Mechanism, and sand bag testing.

### 3.3 STANDARDS: Available in steel and or cast iron.

Steel standards shall be pedestal design. Center and end standards are fabricated of 12 gauge, meg welded tubular steel, 3" by 1" rectangular column. Standards are fixed to the floor with 2 bolts.

Armrest is securely adjoined to top of column by threaded steel dovetail bolt attachment.

A formed 12 gauge, 1/4" thick, steel foot plate shall be welded to the bottom of the rectangular column.

Automotive powder coat finish that is run with the Toyota automotive line. Part shall be cleaned and pretreated in a multi-stage high temperature system consisting of a minimum of alkaline cleaning and phosphate conversion coating. The topcoat shall consist of polyester or polyester hybrid pigmented resins baked on to a cured thickness of 2-3 mils. Color to be provided by specifier.

All end standards have a decorative end panel, fabric covered, plastic laminate, wood or cast iron.

### 3.4 ARMRESTS:

Armrests shall be constructed of plastic, solid hardwood stained to the finish selected, upholstered. Plastic armrests shall be high impact injection molded polypropylene plastic to compliment the seat design. Option: Armless intermediary support standard.

### 3.5 NUMBER AND LETTER PLATES:

Number and letter plates, ." by 1 .", shall be provided as shown on the approved seating layout. The number plates shall be secured to the seat pan by 2 rivets. Letter plates will be secured to the aisle standard armrest by two pins. Attaching hardware will match the plate finish.

### 3.6 MOVABLE CHAIR BASES:

Provide movable bases as shown on the drawings for singles, double or triple chair groupings. The bases shall be of the skid base design and attached to the floor with removable hardware to allow for quick and easy removal of the chair grouping.

### 3.7 MAINTENANCE MATERIALS:

Back and seat upholstery covers to be supplied. Using the same fabric as materials for chair construction, covers shall be supplied and given to the owner upon completion of the seating installation. Quantity of covers shall be adequate to re-cover xxx of chairs.

## **SECTION 4: EXECUTION**

### 4.1 SCOPE OF WORK:

Installation work to be performed by factory trained professional personnel engaged in installation of seating under the direction of a capable installation superintendent, in a manner satisfactory to the Architect, and the job turned over to the owner with all chairs complete and ready to use.

### 4.2 METHOD OF INSTALLATION:

The seating layout shall be reproduced on the risers or floor and all dimensions checked against the approved seating plan with necessary adjustments made in the layout for all discrepancies. Chairs shall be attached to the floor/risers by means of an approved lead shield expansion bolts. Floor mount seats shall be attached with ¼" expansion bolts not less than 2" long. Riser mount chairs shall be attached with 3/8" double lead expansion bolts not less than 3" long. Two (2) bolts per standard acceptable.

### 4.3 SEATING LAYOUT:

The seating layout shall be reproduced on the risers or floor and all dimensions checked against the approved seating plan with necessary adjustments made in the layout for all discrepancies.

4.4 CLEANING: Remove all debris caused by this work from the premises.