EXTOL™ AUDITORIUM SEATING

Section 12 61 00: Fixed Audience Seating

PART 1 GENERAL

1.1 SUMMARY

A. Work Included in this section: Provision of cushioned floor-mounted fixed auditorium seating including attachment, or other work required for installation unless otherwise noted.

B. Related Sections

1. Section 26 00 00: Electrical
2. Floor mounted anchors not included unless specified.

1.2 SUBMITTALS

A. Product Data including manufacturer's assembly instructions.

B. Code Requirements - Compliance with the required local and national building and safety codes is the sole responsibility of the Owner/Architect/Contractor. Shop drawings are based on code requirements for assembly seating as found in IBC (International Building Code). Code information above is offered for informational purposes only and strictly as a courtesy to the Owner/Architect/Contractor. This is in no way an assumption of duty on the part of KI relative to code interpretation and compliance. KI personnel are not trained for, nor are they experts at code compliance or interpretation.

C. Field Verification **-** Shop drawings incorporate building information compiled from various sources associated with this project and deemed as reliable. Conditions directly affecting the product or its installation must be field verified.

D. Drawing Review - Shop drawings are produced to assure compliance with the contract. Drawings must be reviewed by the Owner/Architect/Contractor, or other appropriate owner's representative. If drawings are correct, mark them as such; if incorrect, note corrections to be made and return to KI for corrections. Any deviations from the contract included in the shop drawing must be approved in writing from the Owner/Architect/Contractor. Drawing must be signed by authorized personnel including title, company or affiliation, and date. When power is specified, all locations of electrical and data infeeds must be verified and approved by a signature on the drawings by the responsible party. Manufacture of product shown is not scheduled until drawing review is complete and an authorized signature is received.

1.3 DELIVERY, STORAGE, AND HANDLING

A. Store delivered in clean, safe, dry area.

1.4 SCHEDULING

A. Schedule installation of items to occur after application of exposed finishes wherever installation will not damage exposed finish surfaces and completion of finishes will not impede installation.

PART 2 PRODUCTS

2.1 ACCEPTABLE MANUFACTURERS

A. Manufacturer: KI

B. Product: Extol™ Auditorium Seating

C. Alternates or substitutes not accepted. “As Equal” products must be approved as meeting specification.

2.2 DESCRIPTION

A. Seating shall be the "Extol" as distributed by KI, Tupelo, MS.
Seating shall be floor mounted with common upright support assemblies with upholstered seat and back cushions. The fixed back shall accommodate three pitch positions at 16, 20 and 24 degrees. The back cushion is protected by an injection-molded polypropylene back shroud. The seat cushion shall be counter-balanced with a gravity lift to insure an automatic return when the seat is unoccupied. Sloped floors will be accommodated.

B. Product Benefits:
- Gravity-lift seat return maintains constant seat return.
- Five seat widths are available for comfort and sight lines (20", 21”, 22”, 23”, 24").
- 34" back height provides upper back support in addition to lumbar support.
- Polypropylene seat and back shrouds provide maximum strength and durability.
- One-motion tablet arms provide safety and ease in exiting.
- Powder-coated frames provide maximum durability.

2.3 CONSTRUCTION

A. Seating will be manufactured in five seat- and back-widths to accommodate five nominal seat-spacings of 20", 21”, 22", 23” and 24” seat-centers. View lines will be accommodated as indicated on the seating plans. Seating with left- or right-hand (as seated) tablet arms will be manufactured to accommodate 20", 21”, 22", 23” and 24" seat center spacings. Tablet arms are not supported on 20” and 23” seat center spacing on a radius.

B. Back Cushion Assembly
Structural back shall be a 11-ply, 15 mm (.6”) molded plywood inner structure bonded within 55mm (2 1/8”) urethane foam. Foam density shall be 55 kg per cubic meter (3.4 lb per cubic ft). The upholstery fabric shall be bonded to the foam and attached through stapling upholstery methods. An injection-molded polypropylene back shroud wraps around the edge of the inner structure board and the foam. The fixed back assembly with integral shroud is mounted to the uprights by four screws bolted through the structural 2mm (.08”) steel inner back brackets. Three pitch options shall be available, 16, 20 and 24 degrees, to be set during installation. Overall back height shall be 864 mm (34”).

C. Seat Cushion Assembly
The seat assembly shall be constructed of an inner structure consisting of a 14-gauge 25% glass-filled polypropylene ring spanned with 4 mm (.16”) steel springs and covered with 110 mm (4.33”) molded urethane foam cushion of 55 kg per cubic meter (3.4 lb per cubic ft) density. The upholstery fabric shall be placed around the seat foam and stapled to a molded plastic ring. The bottom shall be covered by an injection molded polypropylene seat shroud. All pivoting and positioning shall be accomplished within the seat cushion assembly, thereby eliminating all pinch points.

D. Seat Pivot Assembly
Seat pivot shall be an integral part of the seat assembly. The seat pan shall pivot on a 70 mm (2.75”) shaft. Brackets made of 5 mm (.70”) formed steel and welded to the upright tubes, shall support the seat assembly. Seat assembly shall be fastened to the upright brackets by M8 bolts. The seat return shall be a gravity-lift which automatically returns the seat to a full fold position.

E. Uprights

Floor-mounted uprights shall be 1.5 mm x 25 mm x 75 mm (.06" x 1" x 3") rectangular steel column welded to a 3 mm (.125") back plate with a 2 mm (.08"), steel top cap. The floor plate shall be 3 mm x 280 mm x 25 mm (.125" x 10" x 1.8") with a hole-to-hole mounting dimension of 240 mm (9.45") center to center. Floor plate is attached to the upright by a concealed weld. Finish to be powder coated according to standard color offering.

F. Arm Cap

Arm cap shall be injection-molded polypropylene, 60 mm (2.36") wide x 305 mm (12") long and attached to the arm cap support with four concealed screws.

Optional wood arm caps shall be machined Ash 60 mm (2.36") wide x 305 mm (12") long and attached to the armcap support with four concealed screws. Not available for use with tablet uprights.

NOTE: Natural wood and wood veneers may have variations in pattern, grain, and coloring that can produce inconsistencies in the finished product. The inconsistencies may show up as dark patches or lines, color variations between light and dark, and various grain patterns. These variations are normal and cannot be avoided.

G. Cupholder Armcap - Plastic

Shall be constructed of polypropylene, 95 mm (3.75") x 393 mm (15.5") with a 78 mm (3") diameter cupholder, molded into one integral unit. Cannot be specified with tablet uprights.

H. Tablet Arm

Tablet shall be a self-storing, gravity-activated one-motion tablet arm, consisting of a storable writing surface constructed of a core of 11-ply eucalyptus core, .8 mm (.03") high-pressure laminate on the face and back measuring 10" x 15.5" (131 sq. in.) capable of supporting a laptop computer. The tablet arm mechanism shall consist of a pivot arm, pivot mount bracket and support bracket constructed of 3 mm (.125") thick steel with controlled 90 degree side-to-side rotation and 86 degree up-and-down rotation. Tablet arm will store between the seats.

I. Aisle Light

Aisle lights are mounted inside a molded plastic rectangular housing approximately 1"h x 3-3/8"w and approximately 11-1/2" off the floor on flat floors. The light and housing shall be attached to the outside of an end panel. Wiring for the light shall feed down through the upright tube and out the inside of the upright. Aisle light wiring shall be hard-wired to the building power source by a certified electrician. Transformers are not provided.

Available with LED lights.

LED Aisle Light

Voltage = 12VDC

Current per lamp = 0.04 amps

Lamps per aisle light = 4

Power per aisle light = .48 watts

Operating lamp life = 40,000 hours

Candlepower

At floor, under light = 2.4

Wire: 22-gauge, 2-conductor multi-strand copper, clear jacket, copper+ and silver-, 48" long

NOTE: A 12 VDC class II power supply is required for LED aisle lights. (Power supply not provided by KI)

J. Decorative End Panels – Recommended for All Aisle Ends

Plastic end panel shall be injection-molded polypropylene, attached to the upright with four screws.

Laminate end panel shall be 18 mm (.71") thick MDF particleboard core with .8 mm (.03") high-pressure laminate on both sides, attached to uprights with four screws.

Wood end panel shall be 13-ply 18 mm (.71") eucalyptus core with veneer on both sides, stained to standard finish specifications. Edges shall be stained to match veneer faces.

NOTE: Natural wood and wood veneers may have variations in pattern, grain, and coloring that can produce inconsistencies in the finished product. The inconsistencies may show up as dark patches or lines, color variations between light and dark, and various grain patterns. These variations are normal and cannot be avoided.

K. Row Markers and Seat Numbers
Seat markers shall be 18 mm (.71") x 42 mm (1.65") x .3 mm (.012") thick brass plate, secured with screws. Seat numbers shall be recessed on the front of the seat shroud. Row markers shall be secured to the decorative end panel.

L. ADA Swing Arm
Arm cap support shall be hinged at rear to allow armrest to flip up, providing easy access for limited mobility occupants.

M. ADA Removable Units
Chairs requiring mobility for handicapped access shall be mounted to a 7-gauge welded frame and shall include 4 glides per upright. One-, two- and three-seat units are available.

2.4 FINISHES
Powder-coated finish is standard on all frames. Standard KI Extol fabrics available. All finishes and colors to be selected by architect. Refer to KI Color Addendum for standard finishes.

2.5 TEST REQUIREMENTS
"Extol" seating shall be designed and manufactured in compliance with the intent of BIFMA X5.4-2012. Seating shall exceed all applicable BIFMA performance test criteria.

PART 3 EXECUTION

3.1 PREPARATION

A. Coordination details with other work supporting, adjoining, or otherwise contracting items as required to insure proper installation.

B. Examine construction to verify that:

1) Dimensions are correct to manufacturer's specifications.

C. Do not install items until unsatisfactory conditions have been corrected.

3.2 INSTALLATION

A. Install items in strict accordance to manufacturer's Assembly Instructions and approved Shop Drawings.

B. FLOOR MOUNTING REQUIREMENTS

Minimum Floor Construction Required for Upright Installation

1) Concrete Floors
   - 3000 psi concrete compressive strength
   - 3" thick free of obstructions for 1-1/2"
   - Minimum anchor embedment 1-1/2" for floor mount

2) Wood Floors
   - Minimum two layers of ¾" thickness tongue & groove
   - APA rated grade plywood
   - Allow minimum embedment 1-1/2" with lag screws

   NOTE: Warranty null and void if KI product is installed on flooring not meeting minimum structural requirements stated above.

Floor Fastener Requirements

1) Concrete Floors
   - 1/4" x 2-5/8" Hilti KH-EZ
   - Max. torque: 18 ft. lbs.
   - Two anchor assemblies required per base

2) Wood Floors
   - 3/8 –16 x 2-1/2" min. Grade 3 nut, bolt, and washer
   - Two bolt assemblies required per base

NOTE: Floor mounting anchors are not provided, unless specified.