

LANCASTER® BARIATRIC 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 or riser-mounted fixed auditorium seating including attachment, or other work required for installation unless otherwise noted.
- B. Related Sections
 - 1. Floor mounting anchors are provided as specified with every order.

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 are 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: Lancaster Bariatric Auditorium Seating
- C. Alternates or substitutes not accepted. "As Equal" products must be approved as meeting specification.

2.2 DESCRIPTION

- A. Lancaster Bariatric Auditorium Seating is manufactured by KI, Bonduel, WI., with extra wide seats and backs, reinforced internal tubing and uprights for bariatric use. Seating is floor-mounted with individual upright support assemblies with upholstered seat and back cushions. The fixed back accommodates three pitch positions at 16°, 19° and 22°. The back cushion is protected by a laminate or wood back shroud. The seat cushion is 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.
- Two bariatric seat widths are available for comfort and sight lines (30" and 36").
- 33.5" back height provides upper back support in addition to lumbar support.
- Vacuum-formed polystyrene seat shrouds and laminate back shrouds provide maximum strength and durability. Optional wood back panels enhance aesthetics.
- Powder-coated frames provide maximum durability.

2.3 CONSTRUCTION

- A. Seating will be manufactured in two seat- and back-widths to accommodate nominal seat-spacings of 30" and 36" seat-centers. Sight lines will be accommodated as indicated on the seating plans.

- B. Back Cushion Assembly

Structural back is constructed of a 15 mm Baltic Birch plywood inner structure bonded to 2" urethane foam. Foam density is 1.8 lb per cubic foot and 36 lb I.F.D. The upholstery fabric will be attached through C-Gex® upholstery methods. A laminate or wood veneer back shroud conceals the inner structure board and the foam. The fixed back assembly with shroud is mounted to the uprights by four screws bolted through the structural 14-gauge steel inner back brackets. Three pitch options are available, 16°, 19° and 22°, to be set during installation. Overall back height is 33.5".

The laminate or wood back panel is 1/4" thick, with MDF core and laminate or Maple veneer faces. The back panel will attach to the inner structure board and the foam with 1/4 -20 x 1-1/4" torx head bolts. Wood backs are available in stain finishes according to standard color offering.

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.

- C. Seat Cushion Assembly

The seat assembly is constructed of an inner structure consisting of 14-gauge steel ring covered with an upholstered cushion, made with an 18 mm Lauan plywood upholstery board and 3" urethane foam. Foam density is 2.55-2.64 lb per cubic foot and 46-50 lb I.F.D. The upholstery fabric will be placed around the seat foam and stapled to the plywood upholstery board. The bottom is covered by a vacuum-formed polystyrene seat shroud. All pivoting and positioning is to be accomplished within the seat cushion assembly, thereby eliminating all pinch points.

Flammability Rating

Lancaster upholstered products are manufactured to meet TB 117-2013 flammability testing requirements. Products will be labeled to indicate if flame retardant chemicals are used in the fabrics and foam.

D. Seat Pivot Assembly

Seat pivot is an integral part of the seat assembly. The seat pivots on a 3/4" diameter steel rod using oil free, self-lubricating, plastic bearings, joined to the seat ring by die-formed 11-gauge steel housings. Brackets made of 11-gauge formed steel and welded to the upright tubes support the seat assembly. Seat assembly is fastened to the upright brackets by 3/8" bolts. The seat return will be a gravity-lift which automatically returns the seat to a full fold position.

E. Uprights

Floor-mounted uprights are constructed of 14-gauge 1" x 3" rectangular steel column welded to an 11-gauge back plate with a 14-gauge steel top cap. The floor plate is 14-gauge, 2.5" x 7.5" floor plate attached to the upright by a concealed weldment. Each seat will require two individual uprights (cannot utilize shared uprights). 11-gauge reinforcement brackets are added to the upright assemblies for added seat support. Finish to be powder-coat painted according to standard color offerings.

F. Armcap

Plastic armcap is mounted on a 14-gauge steel, 1" wide by 10" long and welded to the upright by a concealed weldment. Armcap is injection-molded engineering grade thermoplastic, 2-5/16" wide by 11-1/2" long. Attached to the armcap support with four concealed screws. All plastic armcaps include an oval inset at the back of the armrest for optional row markers.

Optional wood armcaps will be machined 2-5/16" wide by 11-1/2" long and attached to the armcap support with four concealed screws. Not recommended for use with tablet arms. Wood armcaps can include pilot holes for the installation of optional row markers, when specified.

G. Cupholder Armcap - Plastic

Plastic cup holder is constructed of high-density polyethylene, 2" x 13-1/4" with a 3-3/4" diameter cupholder, molded into one integral unit. Will be sized to accept standard cup sizes and 12oz. cans with bottom element for support.

Cupholder Armcap - Wood

Wood cup holder is constructed of White Oak or Maple wood, 4" x 14" with a 2.69" diameter cupholder, formed into one integral armcap unit. Will be sized to accept standard cup sizes and 12oz. cans.

H. 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 are attached to the outside of an end panel. Wiring for the light feeds down through the upright tube and out the inside of the upright. Aisle light wiring must be hard-wired to the building power source by a certified electrician. Transformers are not provided.

Available with incandescent or LED light tubes.

Incandescent Aisle Light

Light Size = 3" long

Voltage = 24 VAC

Current per lamp = 0.04 amps

Lamps per aisle light = 2

Power per aisle light = 1.8 watts

Operating lamp life = 30,000 hours

Wire: 25G AWG insulated copper wire, 48" long.

Candlepower

@5" = 2.4

@10" = 0.9

@15" = 0.5

@20" = 0.3

At floor, under light = 0.6

LED Aisle Light

Light Size = 3" long

Candlepower

Voltage = 12 VDC

At floor, under light = 2.4

Current per lamp = 0.02 amps

Lamps per aisle light = 3

Power per aisle light = .24 watts

LED Color Temperature = 6250k Cool White

Operating lamp life = 40,000 hours

Wire: 22-gauge, 2- conductor multi-strand copper, black jacket, copper+ and silver-, 72" long.

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

- I. Decorative End Panels – Recommended for All Aisle Ends
Plastic end panel are injection-molded polypropylene, attached to the upright with one 14-gauge U-shaped bracket and four screws. Not available on Designated Aisle Seat (ADA Swing Arm).

Laminate end panel consists of 3/8" thick MDF particleboard core with .040" high-pressure laminate on both sides, attached to uprights with one 14-gauge bracket and four screws.

Wood end panel consists of 15mm thick Baltic Birch plywood core with veneer on both sides, stained to standard finish specifications. Edges are stained to match veneer faces.
- J. Row Markers for Plastic Armcaps
Adhesive-backed elliptical shaped row markers, 0.78" tall by 1.18" wide, are available for application into elliptical shaped recesses atop plastic arm caps. Adhesive-backed row markers for plastic armcaps are available in a Lexan film material in cool grey color, aluminum in silver color, or aluminum in gold color.
- K. Row Markers for Wood Armcaps
Elliptical shaped row markers, 0.78" tall by 1.18" wide, are available for application atop wood armcaps. When applicable, the wood armcaps will have two pilot holes for securing the row markers with two small brads. Row markers for wood armcaps are available in aluminum in silver color, or aluminum in gold color.
- L. Designated Aisle Seat - ADA Swing Arm
Armcap support is hinged at the rear to allow armrest to flip up, providing easy access for limited mobility occupants.
- 2.4 FINISHES
Powder-coated finish is standard on all frames. Standard KI fabrics available; COM (customer's own material) fabrics require factory approval. All finishes and colors to be selected by architect. Refer to KI Color Addendum for standard finishes. Custom colors and finishes available; contact factory.
- 2.5 TEST REQUIREMENTS
"Lancaster" seating is designed and manufactured in compliance with the intent of ANSI/BIFMA X5.4-2005. Seating exceeds all applicable BIFMA performance test criteria. Lancaster bariatric seats were tested to KI's bariatric testing standard of 500 lbs. functional load and 750 lbs. proof load. Lancaster is Greenguard Indoor Air Quality certified.

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"
 - 4" thick free of obstructions for 2-1/2" for riser mount
 - Riser to be plumb within 1/8 degree
 - Minimum anchor embedment 1-1/2" for floor mount or 2-1/2" for riser mount
- 2. Wood Floors
 - Minimum two layers of 3/4" thickness tongue & groove
 - APA rated grade plywood
 - Allow minimum embedment 1-1/2" with lag screws
 - Use toggle bolt if less than 1-1/2" embedment
- 3. Raised-Access Floors
 - Minimum rating of 125 PSF
 - Must be installed with grade 3 or better 3/8" diameter bolt, washers and nuts

Note: Warranty null and void if KI product is installed on flooring not meeting minimum structural requirements stated above. For non-typical floors not stated above, contact KI.

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. Concrete Risers
 - 1/4" x 3" Hilti KH-EZ
 - Max. torque: 18 ft. lbs.
 - Two anchor assemblies required per plate
- 3. Wood Floors
 - 3/8" x 2-1/2" Hex washer head tapping screw
 - Two screw assemblies required per base
- 4. Raised-Access Floors
 - 3/8-16 x 2-1/2" Grade 3 bolt (2-1/2" minimum length), 3/8" Grade 3 washer (quantity of 2), 3/8" Grade 3 lock washer, 3/8-16 Grade 3 nut
 - Two bolt assemblies required per base

Note: Floor mounting anchors are provided as specified with every order.