

ECCO

auditorium seating



TECHNICAL SPECIFICATIONS

PRODUCT DESCRIPTION

The ECCO is a seat with the best specifications, which could be set for a wide and diverse range of reunion places. With a unique propose value, this seat will let you have it everything: Beauty, comfort, economy and functionality

PRODUCT BENEFITS

- Replaceable back and seat covers, no staples or glue needed
- Assembly does not require specialized labor or tools
- Wide range of upholstery options, according to customer request.
- The shared centers provide a better use of space
- Complete range of sizes: Widths from 19" to 23" (482 to 584 mm) / Heights: 35", 38" and 40" (890, 965 and 1016 mm)
- Lineal, radial (26 ft / 8m minimum), or sloped installations are available for wood and concrete floor
- Serpentine springs add comfort, support and longer life to the seat bottom.
- Can add 15%-20% more patrons in same space, as quiet gravity lift seats fold up to a smaller envelope, enabling more rows.
- Metal exposed components are electrostatic powder-coat painted in black, which provides them high durability and resistance against hits, scratches, humidity, chemical components, etc.

GENERAL CONDITIONS

Compliance

ECCO seating is designed and manufactured in compliance with the following performance criteria:

- SEATING DURABILITY TEST - STATIC: There shall be no sudden and major change in the structural integrity of the product after applying a load of up to 330 lb for one minute.
- SEATING DURABILITY TEST – CYCLIC: There shall be no loss of serviceability to the chair after completion an impact test of 100.000 cycles with a 125 lb bag weight
- ARM STRENGTH TEST – VERTICAL – STATIC: There shall be no loss of serviceability after applying a load of up to 150 Kg for one minute.
- ARM STRENGTH TEST – HORIZONTAL – STATIC: A 220 lb proof load applied once shall cause no sudden and major change in the structural integrity of the unit.
- ARM DURABILITY TEST – CYCLIC: Structural breakage or loss of serviceability shall constitute failure after completion an impact test of 100.000 cycles with a 220 lb bag weight.

Scope

Seating will be installed on the floor by a set of vertical supports (with shared centers) . The fixed back accommodates three pitch positions at 15°, 18°, and 21°. The seat cushion is counterbalanced with a gravity lift to ensure an automatic return to vertical position when the seat is unoccupied

Sizes

Seating will accommodate five seat-spacings of 19", 20", 21", 22" and 23" (482, 508, 533, 558 and 584 mm) seat-centers. Sight lines will be accommodated as indicated on the seating plans. This seating model is available in 35", 38" and 40" (890, 965 and 1016 mm) height.

TECHNICAL SPECIFICATIONS

MATERIALS

Back assembly

High grade steel, one piece seat frame (10 gauge) for structural integrity. Cold molded polyurethane foam increasing from 2.7" to 4" (70 to 100mm) of thickness. Foam density ranges between 2.8 and 3.1 lb/ft³. The upholstery fabric will be bonded (if needed) to foam and attached through upholstery methods. The back assembly is mounted to the uprights by 14-gauge cold-rolled steel plates. 19", 20" (482 and 508 mm) backs include foam and structures dimensionally different than 21" - 23" (533-584mm) ones. Back covers could be fully upholstered, plastic, or wooden type.

Plastic back: An injected high-impact polypropylene back shroud wraps around the edge of the inner structure board and the foam. Embossed for strength.

Wooden back: An optional wood back panel is 1/2" (12mm) thick, constructed by 3 plywood layers. The back panel will attach to the inner structure and foam with 4 plates of 11-gauge steel sheet. It could be painted or covered with High-Pressure Laminate (edges will be painted in black).

Note: Plywood may have variations in pattern, grain, and coloring that can produce inconsistencies in the finished product when it has been painted. These variations are normal and cannot be avoided.

Seat cushion assembly

The seat assembly is constructed in High-grade cold-rolled steel, one-piece seat frame (18 gauge and 3/4" / 19mm diameter) for structural integrity. Cold cured molded polyurethane foam with an average thickness of 2" - 3" (50 -76mm). Foam density ranges between 2.8 and 3.1 lb/ft³. The upholstery fabric will be bonded (if needed) to foam and attached through upholstery methods. 10 gauge serpentine springs for a better seat cushion support. Bottom cover could be fully upholstered, plastic, or wooden type.

Plastic outer-back: A textured seat shroud made of injected high-impact polypropylene or an optional acoustical seat shroud (with drillings).

Wooden outer-back: An optional wood back panel is 1/2" (12mm) thick, constructed by 3 plywood layers that could be painted or covered with High-Pressure Laminate (edges will be painted in black).

Flammability rating

ECCO seat is manufactured to meet California TB 117-2013 flammability testing requirements in its foam, fabrics, and vinyl. Some of our fabric and vinyl options meet Crib 5 testing.

Seat pivot assembly

Seat pivot is an integral part of the seat assembly, it works by a counterbalanced mechanism that is maintenance-free and noiseless. Pivot includes an axle of 1/2" (12mm) diameter AISI 1020 steel, with a stamped 8-gauge steel sheet internal pivot stop. Seat pivots bushings are made in Nylon 6.6, and are attached to the seat by steel screws. The seat accommodates at 75° for the standard version and 90° for SSE (Space-saving envelope).

Uprights

Floor mounted uprights are constructed of 14 gauge steel 1" x 2" (25 x 50 mm) rectangular, seamless construction, welded to an anchoring floor plate made out of 3/4" (6mm) steel sheet by a robotic MIG welding, 4 hole foot for obstruction flexibility during installations. Powder-coat painted finish.

TECHNICAL SPECIFICATIONS

MATERIALS

Armcaps

Armcaps are mounted on 13 gauge steel support, welded to the upright.

Plastic: Injected polypropylene, attached to the armcap support with bristol screws.

With cupholder: Injected polypropylene, molded into one integral unit. Sized to accept standard cup sizes and cans.

Thermolaminated: Machined in a medium-density fibreboard, constructed with a durable and decorative surface (PVC foil: Thickness: + 0.5 - 0.3mm) on the face and edges. Attached to the armcap support with bristol screws.

Wood: Machined in pinewood and painted, attached to the armcap support with self-tapping screws. The SSE version includes smaller wood armcaps than the standard version.

Aisle light (optional)

12V AC/DC Guide lighting fixture uses highbrightness LEDs to provide glare-free, nonintrusive illumination of aisles and steps. LED colors: Yellow, White and Warm White are standard, Red and Blue available. Optional row indicator with improved wider view window (150% larger than original) with edge lit illumination and etched alphanumeric display

LED Aisle light	
Light size	2.25" diameter
Voltage	12 V AC or DC
LEDs per fixture	9
Power per aisle	0.72W (1.3W with optional Row Indicator)
LED Color temperature	2500°k to 3100°k for warm white and 5000° to 6000°K for white
Operating fixture life	Yellow LED – 100,000-hour. White, Warm White LED – 50,000-hour
Lumens per fixture	29.56
Wire	Integrated wireway and end cap system available. 8" length

*Transformers are provided.

Decorative end panels

Constructed from 20 gauge steel sheet, upholstered or laminated and fitted to the uprights.

TECHNICAL SPECIFICATIONS

MATERIALS

Seat numbers (optional)

Optional white seat numbers are stamped on black polypropylene pieces, and are available for assembly into elliptical-shaped recesses on the front of the plastic seat shrouds, by self-tapping screws.

Row markers for end panels (optional)

Row markers are stamped on PMMA 2.3" (60mm) diameter pieces are available for assembly into end panels by self tapping screws.

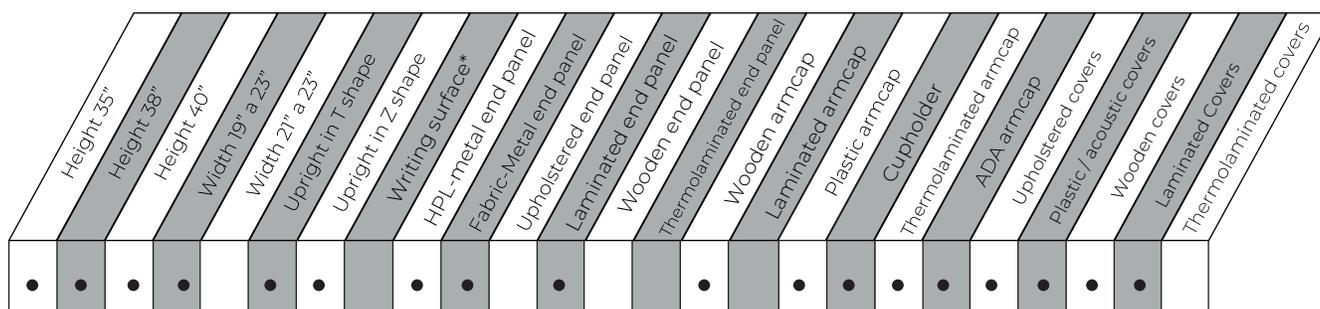
3D Headrest support

Option with a better headrest support is available with a 3D effect.

Designated Aisle Seat - ADA Arm

Armcap support has a mechanism that makes it able to flip up and provides easy access for limited mobility occupants.

AVAILABLE CONFIGURATIONS



*Ask for an independent technical sheet specs.

FLOOR REQUIREMENTS

Concrete floor:

- Concrete with a strength of at least 3,000 PSI
- A minimum thickness of 4" (100mm).
- Each chair must be installed to the floor with two (2) expansion anchor bolts delivered and specified by INORCA SAS
- Must be installed diagonally on the fixing floor plate of each standard.

Wood floor:

- The floor must be hardwood
- A minimum thickness of 1" (25mm).
- Each chair must be installed to the floor with four (4) self-tapping screws supplied and specified by INORCA SAS, one in each hole of the fixing plate.

FINISH GUIDE

BACK COVER.
Plastic
Wood / Laminated
Fully Upholstered

BACK CUSHION
Fabric / Vynil

SEAT CUSHION
Fabric / Vynil

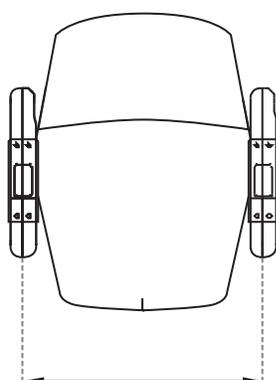
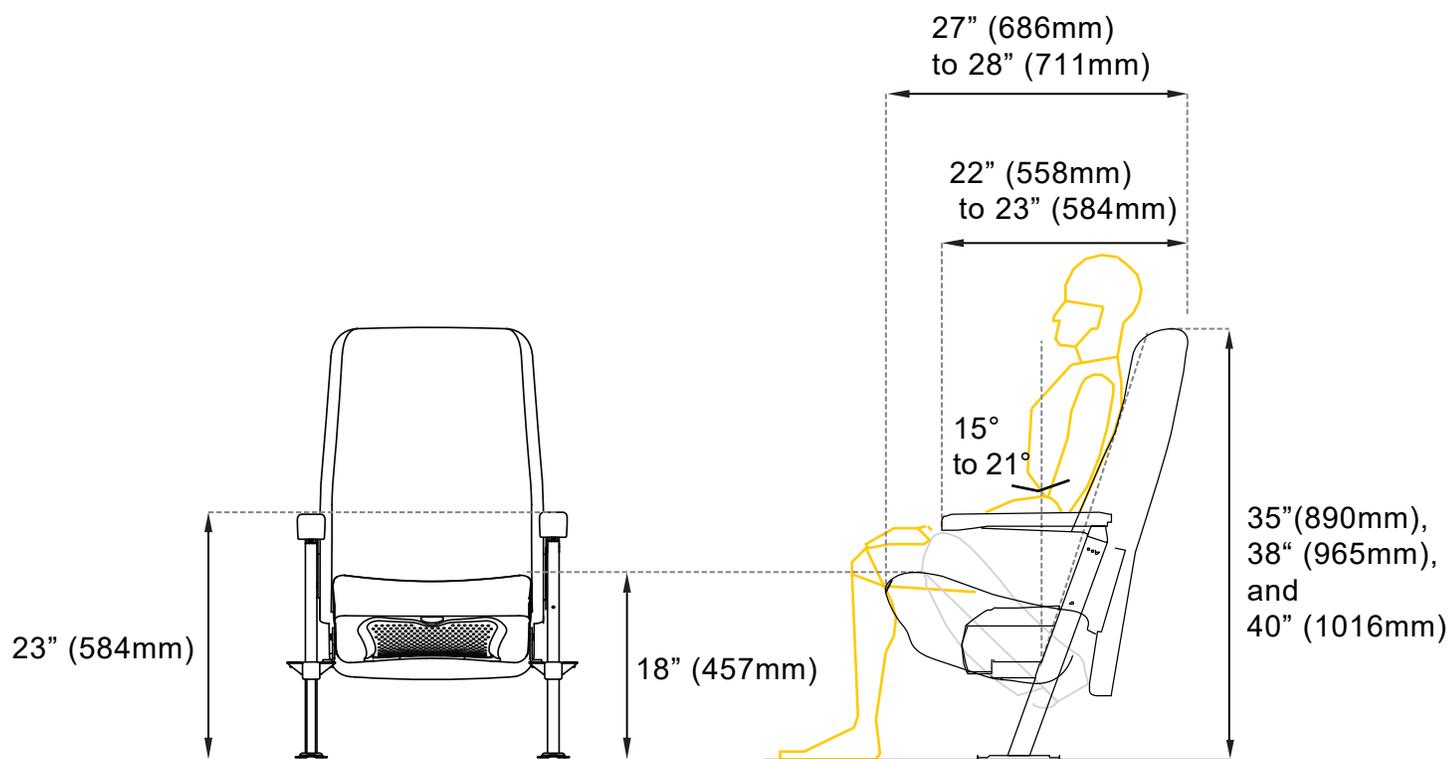
ARMCAP
Plastic
Thermolaminated
Wood

END PANEL
Fabric / Vinyl - Metal
Laminated / Metal
Laminated

SEAT COVER
Plastic
Wood / Laminated
Fully Upholstered



DIMENSIONS (INCHES AND MILLIMETRES)



19" (482mm)
to 23" (584mm)